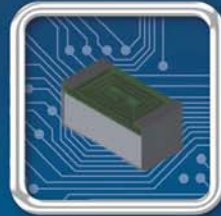
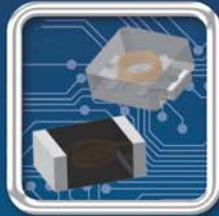


Total Solution Provider for Power, EMI and RF.

## Inductors SMD Components

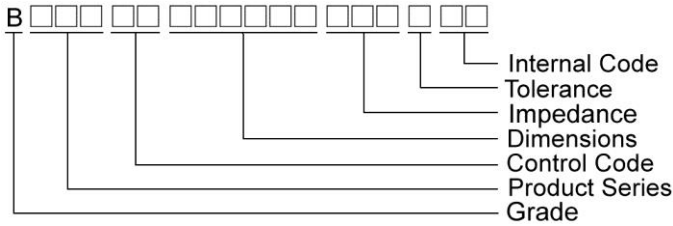


## Multilayer Ferrite Chip Beads

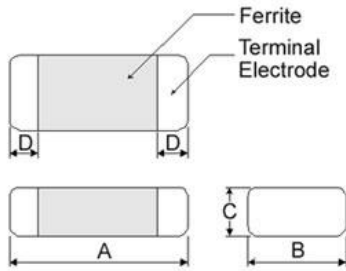


Chilisin offers a wide range of multi-layered ferrite chip beads with various sizes, frequency characteristics, and impedance values for EMI solutions. These ferrite formulas are used to compose seven types of EMI suppression chip beads: BBSY, BBBK, BBSJ, BBGK, BBPY, BBUP, BBNQ, BBFY, BBFJ and BBHV series.

### Product Identification



### Shape and Dimensions



Dimensions in mm

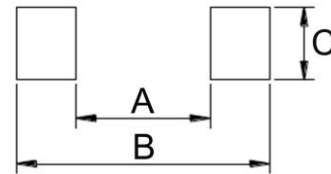
| TYPE    | A        | B         | C        | D         |
|---------|----------|-----------|----------|-----------|
| ①060303 | 0.6±0.03 | 0.30±0.03 | 0.3±0.03 | 0.15±0.05 |
| ②100505 | 1.0±0.10 | 0.50±0.10 | 0.5±0.10 | 0.25±0.10 |
| ③160805 | 1.6±0.15 | 0.80±0.15 | 0.5±0.15 | 0.3±0.2   |
| ④160808 | 1.6±0.15 | 0.80±0.15 | 0.8±0.15 | 0.3±0.2   |
| ⑤201209 | 2.0±0.20 | 1.25±0.20 | 0.9±0.20 | 0.5±0.3   |
| ⑥321611 | 3.2±0.20 | 1.60±0.20 | 1.1±0.20 | 0.5±0.3   |
| ⑦453215 | 4.5±0.25 | 3.20±0.20 | 1.5±0.20 | 0.5±0.3   |

- ① : BBSY / BBSJ / BBNQ / BBPY
- ② : BBSY / BBSJ / BBNQ / BBPY / BBUP / BBFY / BBFJ
- ③ : BBUP ④ : BBBK / BBSJ / BBGK / BBPY / BBNQ / BBUP / BBHV
- ⑤ : BBBK / BBGK / BBPY / BBUP ⑥ : BBSY / BBBK / BBPY / BBUP
- ⑦ : BBPY / BBUP

### Dimension Conversion

| Code   | Dimension in mm (AxBxC) | EIA  |
|--------|-------------------------|------|
| 060303 | 0.6X0.3X0.3             | 0201 |
| 100505 | 1.0X0.5X0.5             | 0402 |
| 160805 | 1.6x0.8x0.5             | 0603 |
| 160808 | 1.6x0.8x0.8             | 0603 |
| 201209 | 2.0x1.2x0.9             | 0805 |
| 321611 | 3.2x1.6x1.1             | 1206 |
| 453215 | 4.5x3.2x1.5             | 1812 |

### Recommended Pattern



Dimensions in mm

| TYPE    | A         | B           | C         |
|---------|-----------|-------------|-----------|
| ①060303 | 0.2 ~ 0.3 | 0.75 ~ 1.05 | 0.3       |
| ②100505 | 0.4       | 1.2 ~ 1.4   | 0.5       |
| ③160805 | 0.7 ~ 0.8 | 1.8 ~ 2.0   | 0.6 ~ 0.8 |
| ④160808 | 0.7 ~ 0.8 | 1.8 ~ 2.0   | 0.6 ~ 0.8 |
| ⑤201209 | 1.0 ~ 1.2 | 2.6 ~ 4.0   | 1.0 ~ 1.4 |
| ⑥321611 | 2.0 ~ 2.4 | 4.2 ~ 5.2   | 1.3 ~ 1.9 |
| ⑦453215 | 3.0       | 5.5 ~ 6.5   | 2.4       |

\* Don't apply narrower pattern than listed above to BBPY and BBUP  
Narrow pattern might cause excessive heat or open circuit.

# SMD Multilayer Ferrite Chip Beads – BBSY/BBBK Series

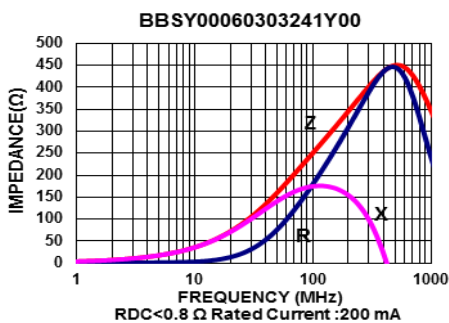
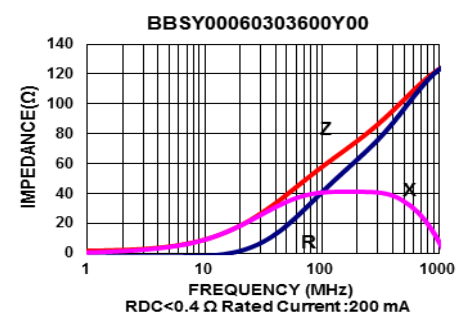
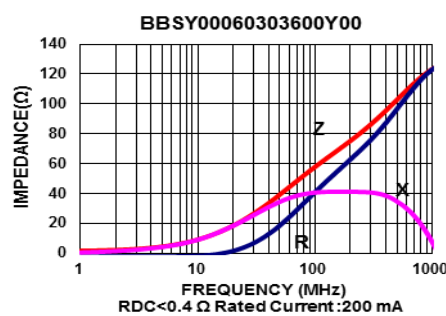
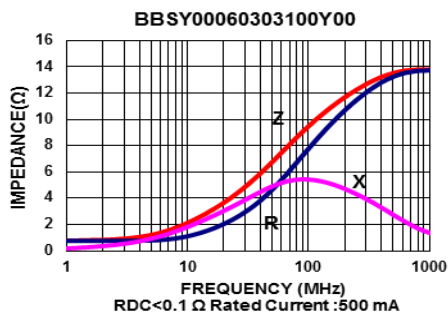
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBSY00060303100Y00 | 10                                 | 100                     | 0.1                     | 500                       |
| BBSY00060303600Y00 | 60                                 | 100                     | 0.4                     | 200                       |
| BBSY00060303121Y00 | 120                                | 100                     | 0.5                     | 200                       |
| BBSY00060303241Y00 | 240                                | 100                     | 0.8                     | 200                       |

**Note: When ordering, please specify tolerance code. Tolerance : Y=±25%**

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

## Test Instruments : Agilent E4991A Impedance / Material Analyzer



## SMD Multilayer Ferrite Chip Beads – BBSY/BBBK Series

### Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBSY00100505100Y00 | 10                                 | 100                     | 0.025                   | 1000                      |
| BBSY00100505110Y00 | 11                                 | 100                     | 0.05                    | 500                       |
| BBSY00100505150Y00 | 15                                 | 100                     | 0.10                    | 500                       |
| BBSY00100505190Y00 | 19                                 | 100                     | 0.10                    | 500                       |
| BBSY00100505220Y00 | 22                                 | 100                     | 0.15                    | 500                       |
| BBSY00100505300Y00 | 30                                 | 100                     | 0.20                    | 500                       |
| BBSY00100505320Y00 | 32                                 | 100                     | 0.20                    | 500                       |
| BBSY00100505330Y00 | 33                                 | 100                     | 0.20                    | 500                       |
| BBSY00100505400Y00 | 40                                 | 100                     | 0.20                    | 500                       |
| BBSY00100505470Y00 | 47                                 | 100                     | 0.20                    | 500                       |
| BBSY00100505500Y00 | 50                                 | 100                     | 0.20                    | 500                       |
| BBSY00100505600Y00 | 60                                 | 100                     | 0.20                    | 500                       |
| BBSY00100505700Y00 | 70                                 | 100                     | 0.15                    | 600                       |
| BBSY00100505750Y00 | 75                                 | 100                     | 0.20                    | 500                       |
| BBSY00100505800Y00 | 80                                 | 100                     | 0.20                    | 500                       |
| BBSY00100505900Y00 | 90                                 | 100                     | 0.25                    | 500                       |
| BBSY00100505101Y00 | 100                                | 100                     | 0.25                    | 500                       |
| BBSY00100505121Y00 | 120                                | 100                     | 0.19                    | 550                       |
| BBSY00100505151Y00 | 150                                | 100                     | 0.40                    | 400                       |
| BBSY00100505181Y00 | 180                                | 100                     | 0.40                    | 400                       |
| BBSY00100505221Y00 | 220                                | 100                     | 0.29                    | 450                       |
| BBSY00100505241Y00 | 240                                | 100                     | 0.40                    | 400                       |
| BBSY00100505301Y00 | 300                                | 100                     | 0.50                    | 300                       |
| BBSY00100505331Y00 | 330                                | 100                     | 0.50                    | 300                       |
| BBSY00100505471Y00 | 470                                | 100                     | 0.50                    | 300                       |
| BBSY00100505481Y00 | 480                                | 100                     | 0.50                    | 300                       |
| BBSY00100505601Y00 | 600                                | 100                     | 0.52                    | 300                       |
| BBSY00100505102Y00 | 1000                               | 100                     | 0.65                    | 300                       |
| BBSY00100505182Y00 | 1800                               | 100                     | 1.40                    | 100                       |
| BBSY00100505222Y00 | 2200                               | 100                     | 1.40                    | 100                       |

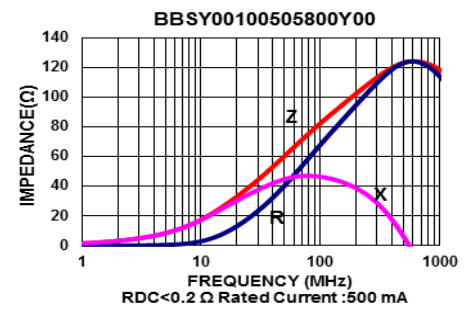
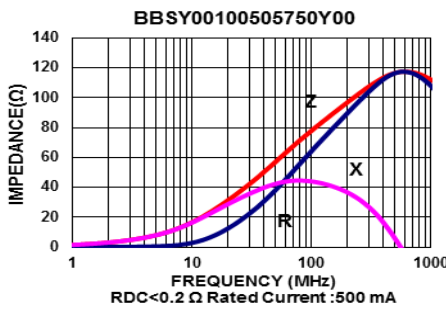
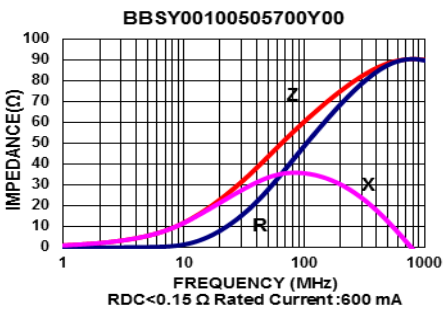
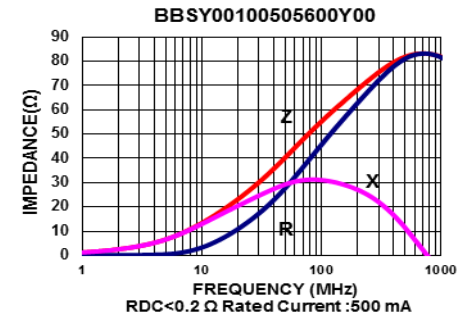
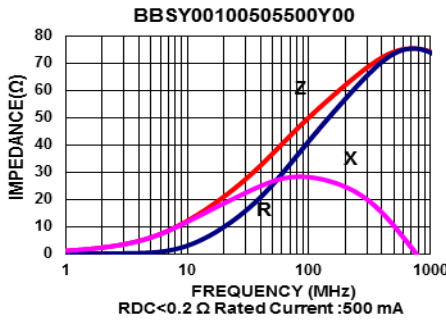
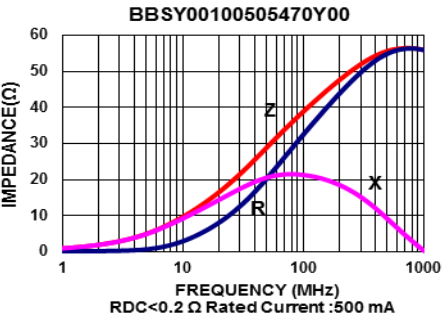
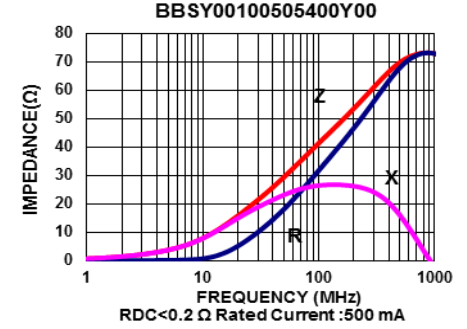
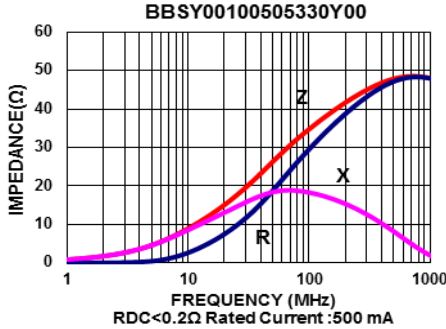
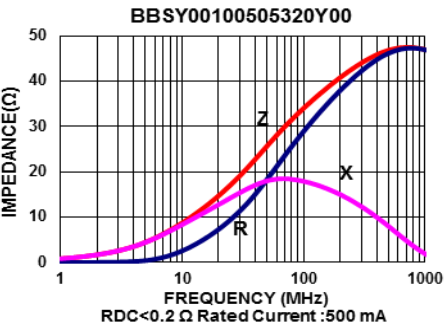
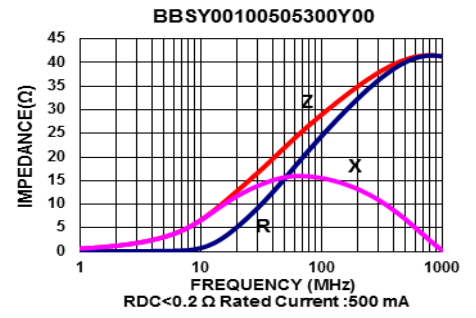
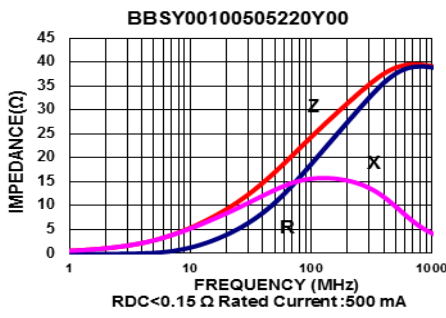
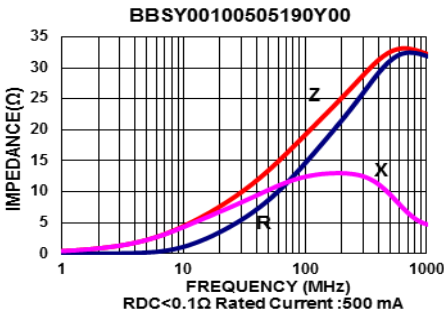
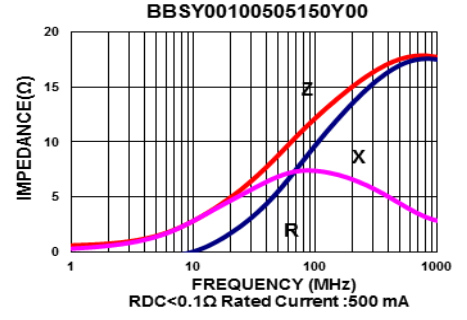
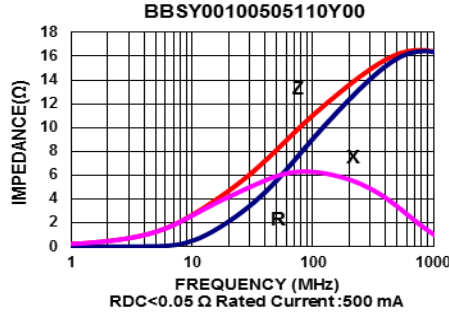
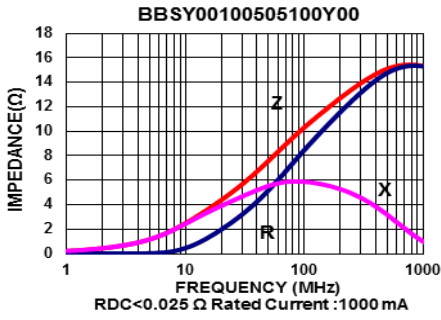
**Note: When ordering, please specify tolerance code. Tolerance :  $Y = \pm 25\%$**

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

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# SMD Multilayer Ferrite Chip Beads – BBSY/BBBK Series

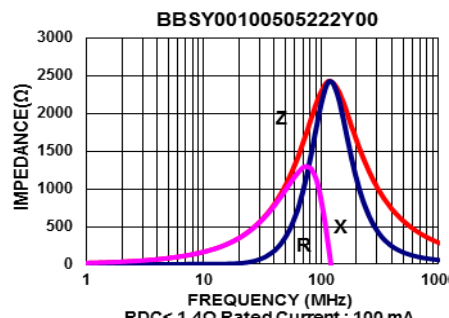
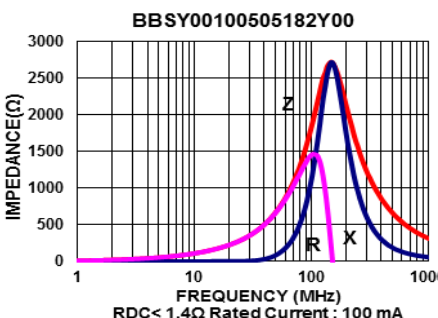
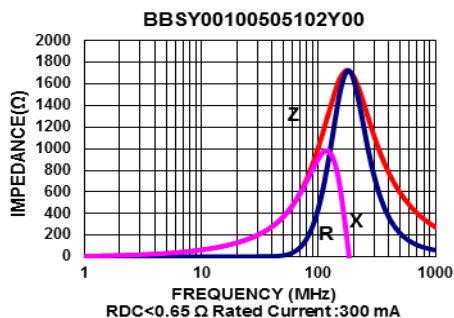
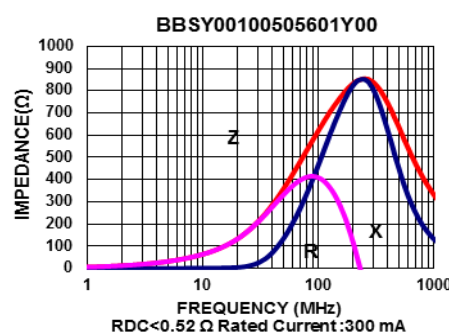
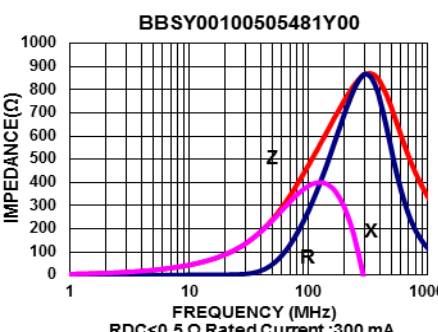
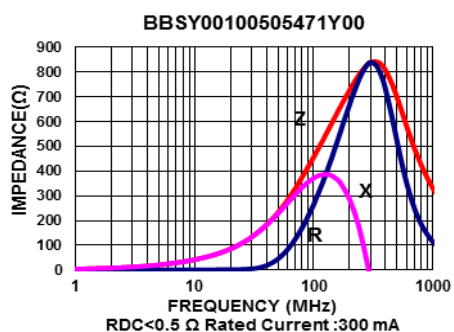
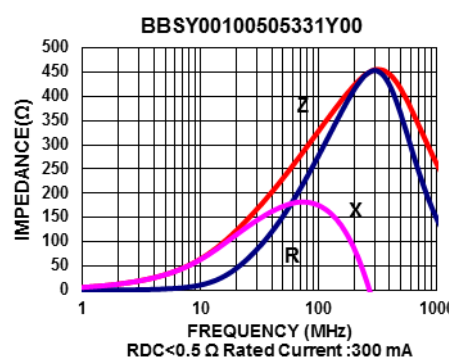
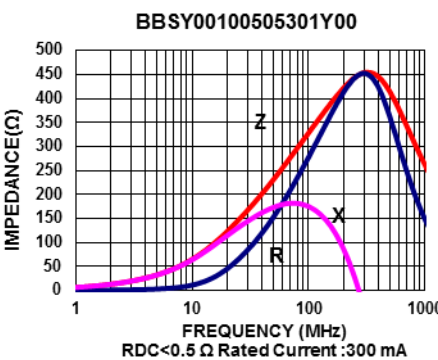
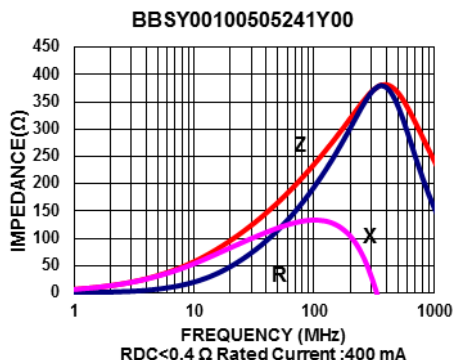
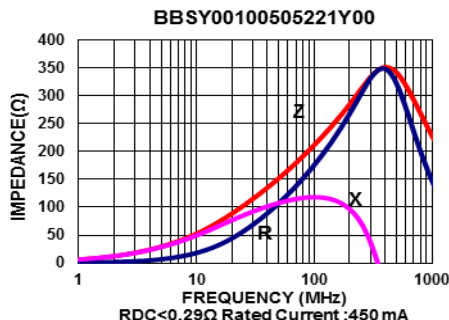
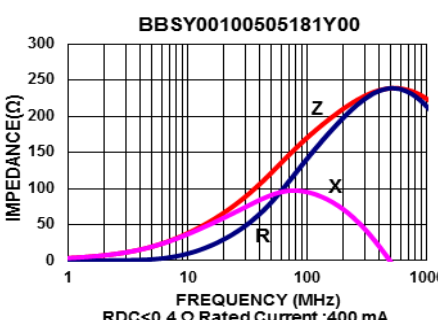
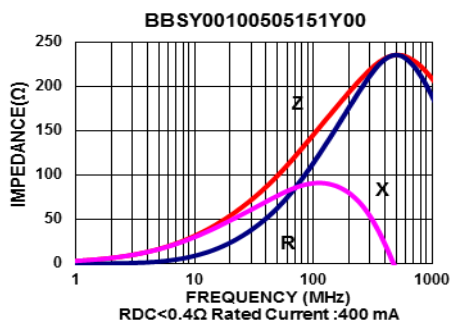
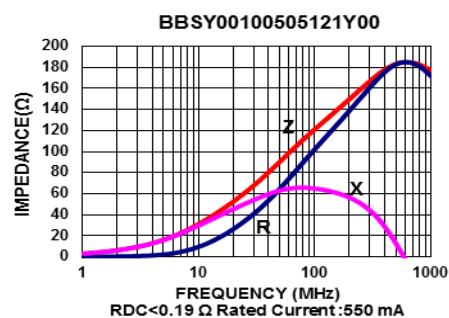
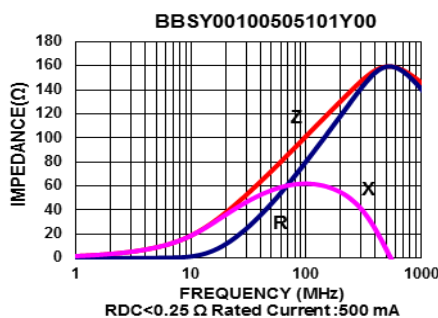
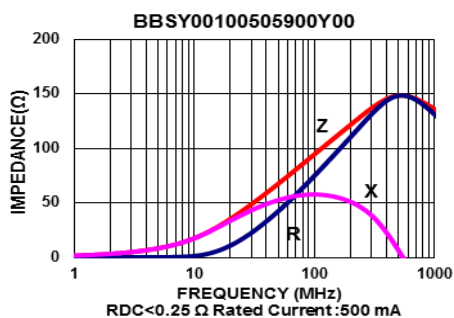
Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBSY/BBBK Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBSY/BBBK Series

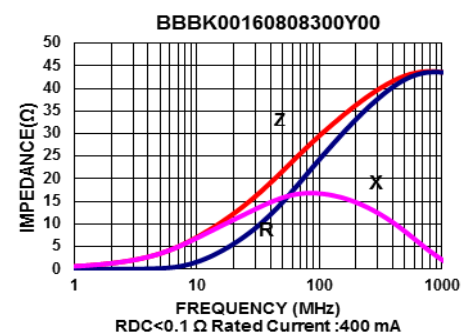
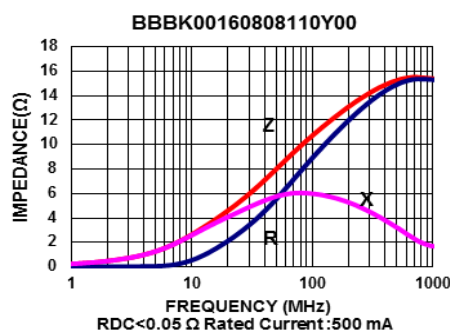
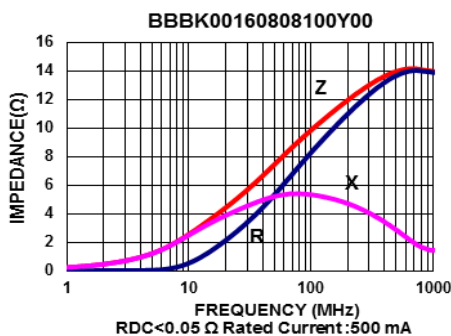
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBBK00160808100Y00 | 10                                 | 100                     | 0.05                    | 500                       |
| BBBK00160808110Y00 | 11                                 | 100                     | 0.05                    | 500                       |
| BBBK00160808300Y00 | 30                                 | 100                     | 0.10                    | 400                       |
| BBBK00160808310Y00 | 31                                 | 100                     | 0.10                    | 400                       |
| BBBK00160808600Y00 | 60                                 | 100                     | 0.10                    | 400                       |
| BBBK00160808800Y00 | 80                                 | 100                     | 0.15                    | 400                       |
| BBBK00160808101Y00 | 100                                | 100                     | 0.20                    | 400                       |
| BBBK00160808121Y00 | 120                                | 100                     | 0.25                    | 400                       |
| BBBK00160808221Y00 | 220                                | 100                     | 0.30                    | 300                       |
| BBBK00160808301Y00 | 300                                | 100                     | 0.40                    | 300                       |
| BBBK00160808471Y00 | 470                                | 100                     | 0.50                    | 300                       |
| BBBK00160808601Y00 | 600                                | 100                     | 0.50                    | 300                       |
| BBBK00160808102Y00 | 1000                               | 100                     | 0.60                    | 300                       |
| BBBK00160808152Y00 | 1500                               | 100                     | 0.60                    | 300                       |
| BBBK00160808182Y00 | 1800                               | 100                     | 0.80                    | 200                       |
| BBBK00160808202Y00 | 2000                               | 100                     | 0.80                    | 200                       |
| BBBK00160808222Y00 | 2200                               | 100                     | 0.80                    | 200                       |
| BBBK00160808252Y00 | 2500                               | 100                     | 0.80                    | 200                       |
| BBBK00160808272Y00 | 2700                               | 100                     | 0.80                    | 200                       |

**Note:** When ordering, please specify tolerance code. Tolerance : Y= $\pm 25\%$

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

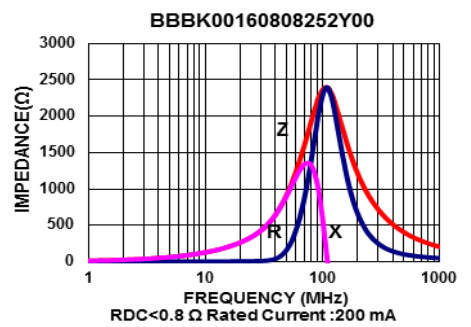
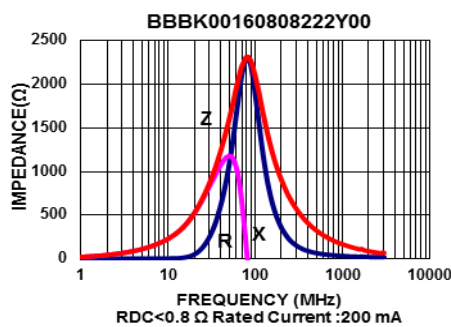
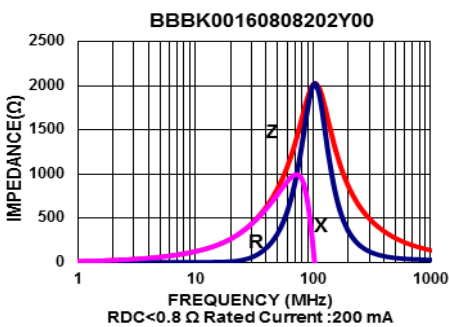
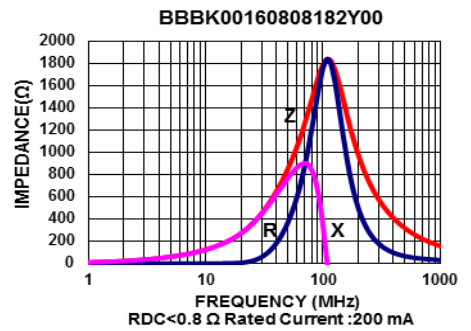
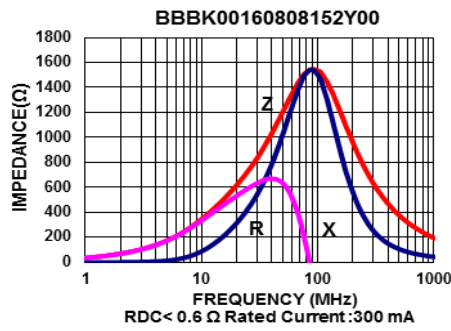
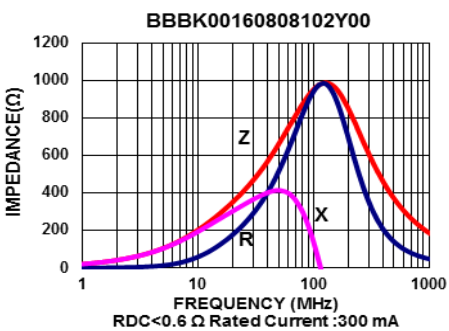
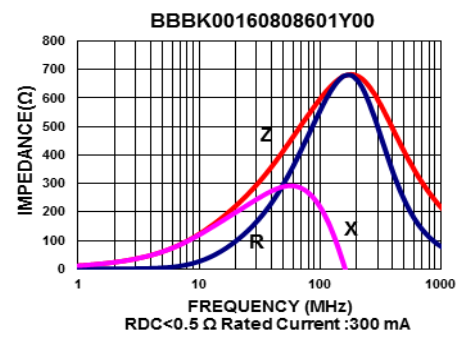
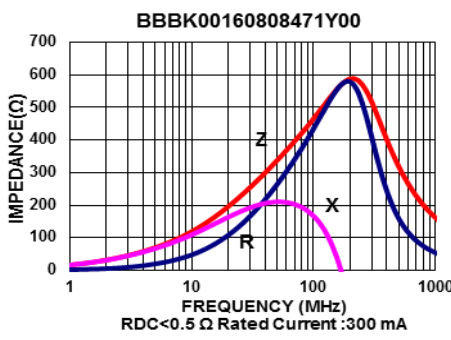
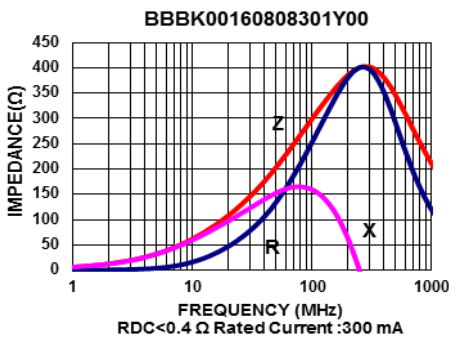
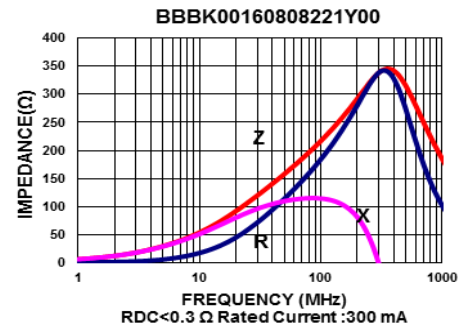
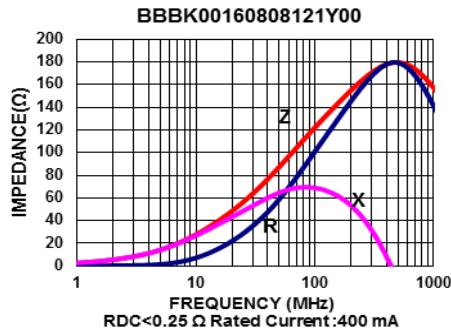
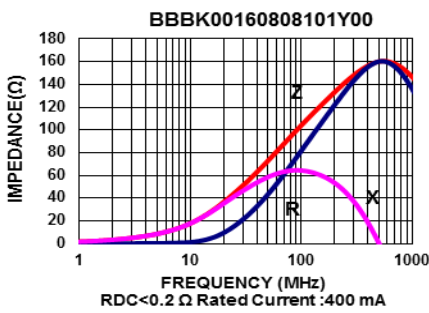
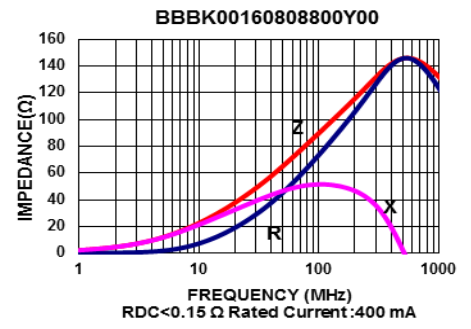
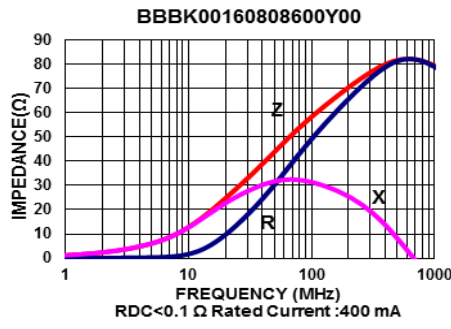
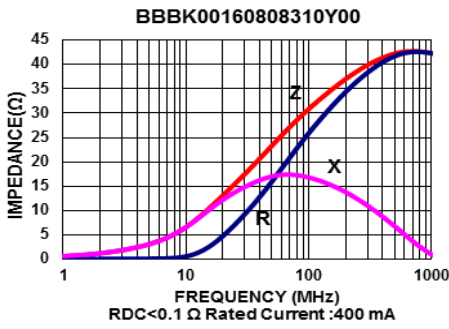
**Test Instruments :** Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – SBY/SBK Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer

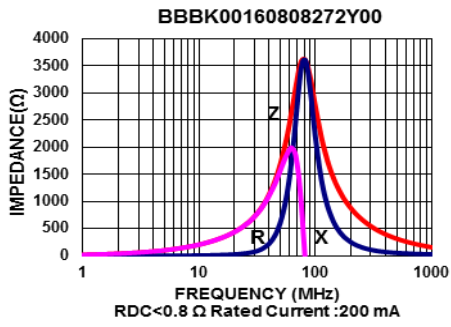


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# SMD Multilayer Ferrite Chip Beads – SBY/SBK Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBSY/BBBK Series

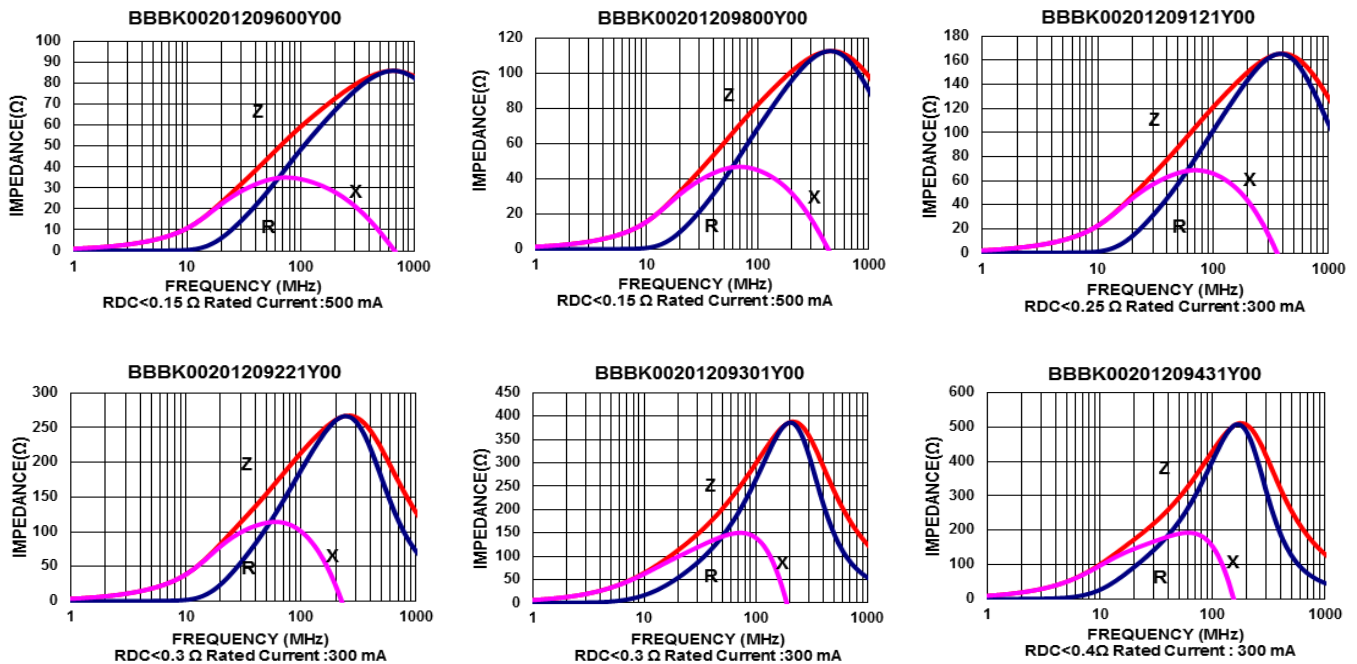
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | DC Resistance<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-----------------------------------|---------------------------|
| BBBK00201209600Y00 | 60                                 | 100                     | 0.15                              | 500                       |
| BBBK00201209800Y00 | 80                                 | 100                     | 0.15                              | 500                       |
| BBBK00201209121Y00 | 120                                | 100                     | 0.25                              | 300                       |
| BBBK00201209221Y00 | 220                                | 100                     | 0.30                              | 300                       |
| BBBK00201209301Y00 | 300                                | 100                     | 0.30                              | 300                       |
| BBBK00201209431Y00 | 430                                | 100                     | 0.40                              | 300                       |
| BBBK00201209471Y00 | 470                                | 100                     | 0.40                              | 300                       |
| BBBK00201209601Y00 | 600                                | 100                     | 0.40                              | 300                       |
| BBBK00201209102Y00 | 1000                               | 100                     | 0.50                              | 200                       |
| BBBK00201209122Y00 | 1200                               | 100                     | 0.60                              | 200                       |
| BBBK00201209152Y00 | 1500                               | 100                     | 0.60                              | 200                       |
| BBBK00201209202Y00 | 2000                               | 100                     | 0.70                              | 200                       |
| BBBK00201209222Y00 | 2200                               | 100                     | 0.70                              | 200                       |
| BBBK00201209252Y00 | 2500                               | 100                     | 0.70                              | 200                       |
| BBBK00201209272Y00 | 2700                               | 100                     | 0.70                              | 200                       |

**Note:** When ordering, please specify tolerance code. Tolerance : Y= $\pm 25\%$

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

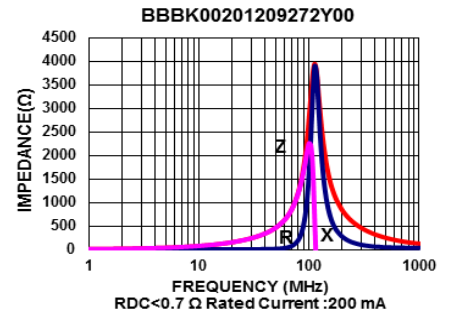
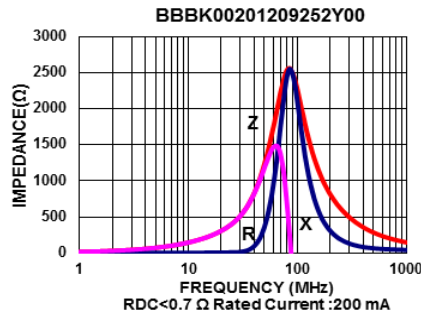
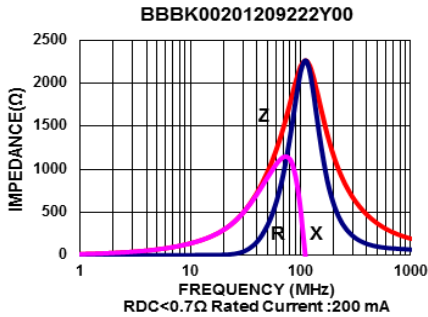
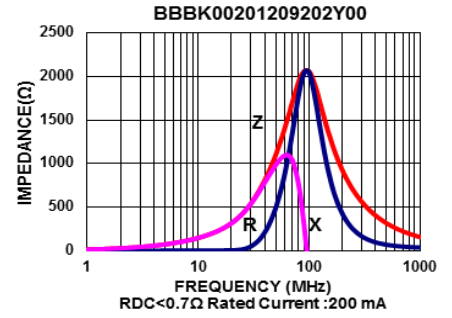
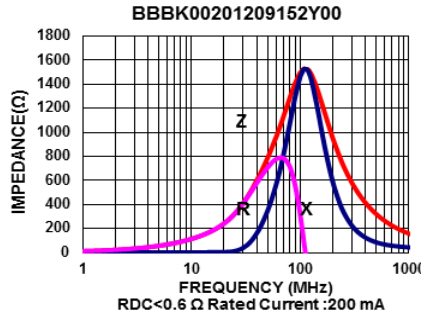
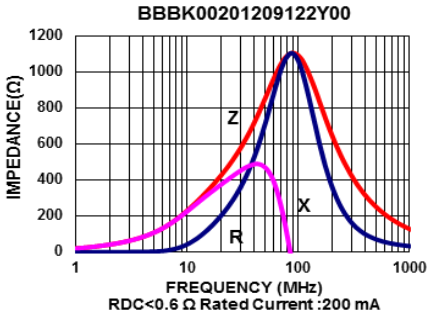
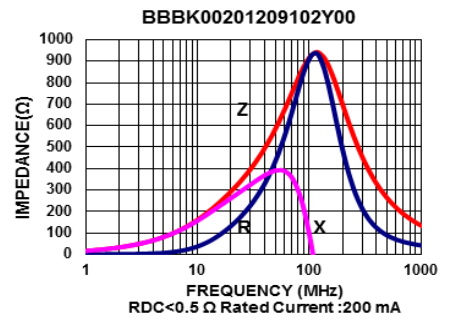
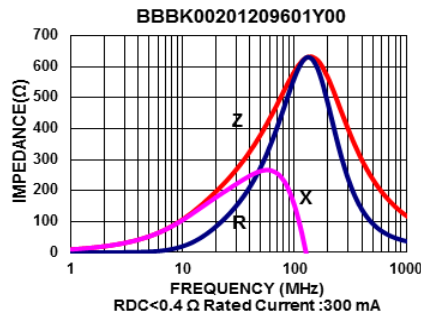
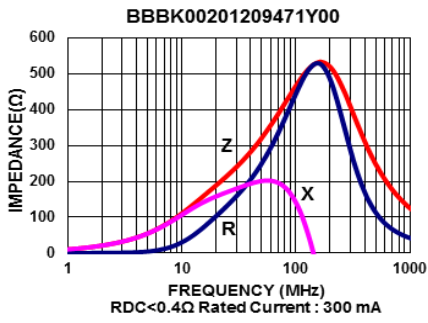
## Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBSY/BBBK Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBSY/BBBK Series

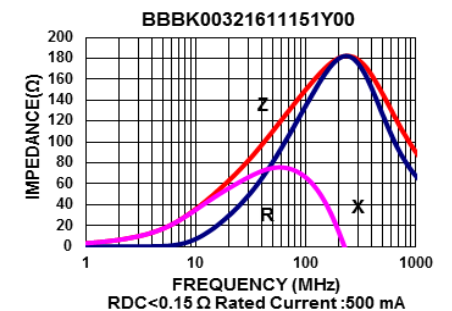
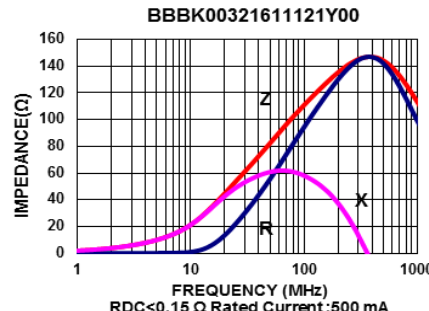
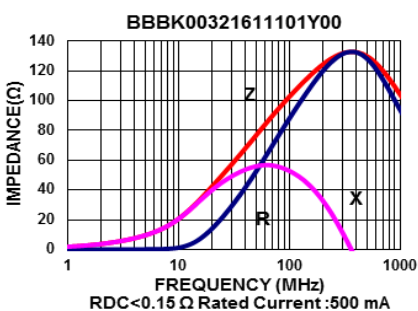
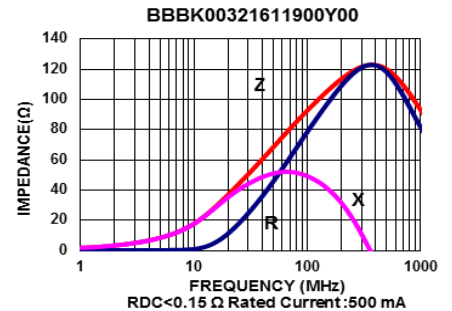
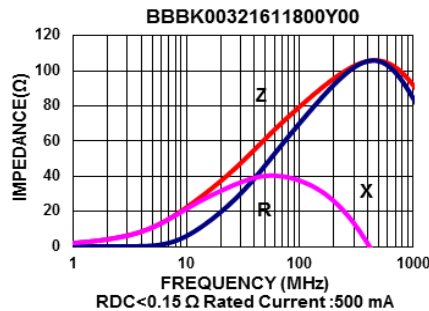
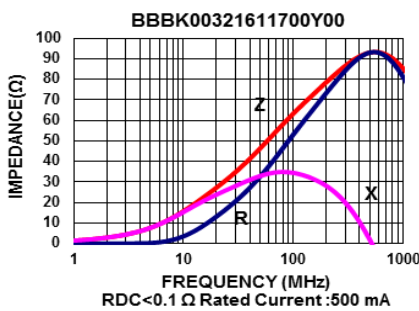
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBBK00321611700Y00 | 70                                 | 100                     | 0.10                    | 500                       |
| BBBK00321611800Y00 | 80                                 | 100                     | 0.15                    | 500                       |
| BBBK00321611900Y00 | 90                                 | 100                     | 0.15                    | 500                       |
| BBBK00321611101Y00 | 100                                | 100                     | 0.15                    | 500                       |
| BBBK00321611121Y00 | 120                                | 100                     | 0.15                    | 500                       |
| BBBK00321611151Y00 | 150                                | 100                     | 0.15                    | 500                       |
| BBBK00321611221Y00 | 220                                | 100                     | 0.20                    | 400                       |
| BBBK00321611301Y00 | 300                                | 100                     | 0.20                    | 400                       |
| BBBK00321611401Y00 | 400                                | 100                     | 0.20                    | 400                       |
| BBBK00321611471Y00 | 470                                | 100                     | 0.20                    | 400                       |
| BBBK00321611501Y00 | 500                                | 100                     | 0.20                    | 400                       |
| BBBK00321611601Y00 | 600                                | 100                     | 0.30                    | 400                       |
| BBBK00321611102Y00 | 1000                               | 50                      | 0.40                    | 200                       |
| BBBK00321611122Y00 | 1200                               | 50                      | 0.40                    | 200                       |
| BBBK00321611152Y00 | 1500                               | 50                      | 0.45                    | 200                       |
| BBBK00321611202Y00 | 2000                               | 30                      | 0.60                    | 200                       |
| BBBK00321611272Y00 | 2700                               | 30                      | 0.60                    | 300                       |

**Note:** When ordering, please specify tolerance code. Tolerance :  $Y = \pm 25\%$

- Operating temperature range - 55°C ~ 125°C (Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

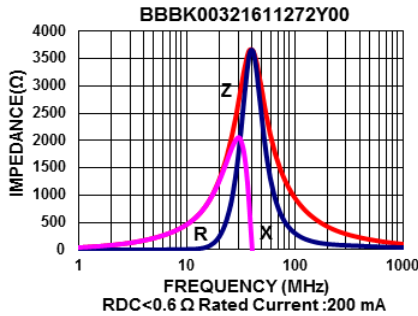
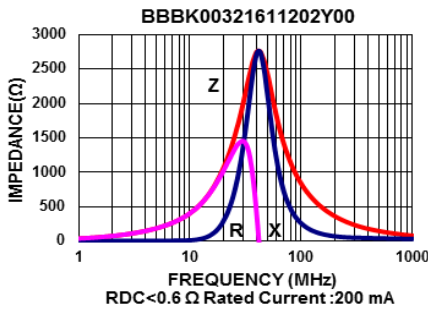
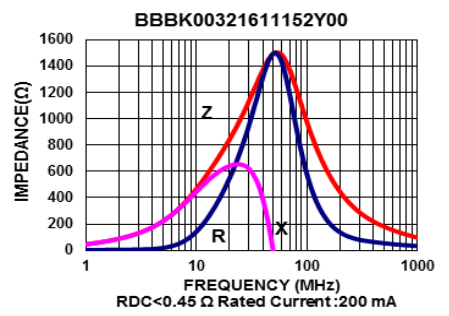
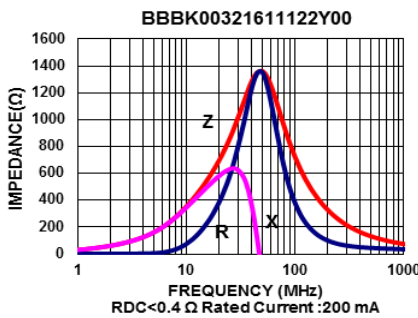
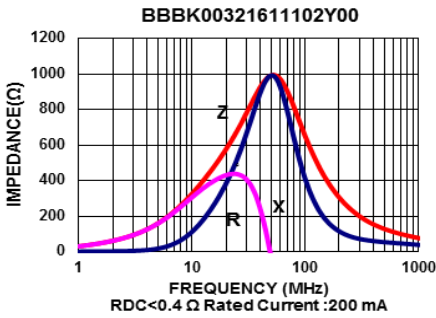
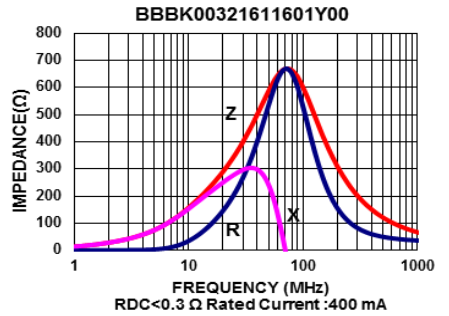
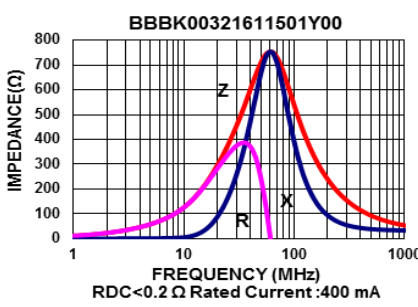
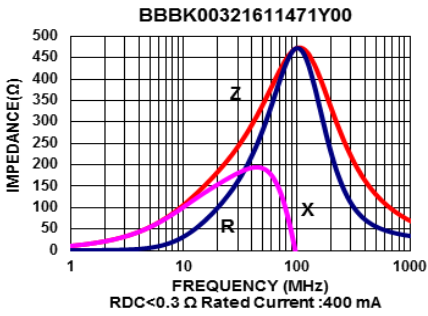
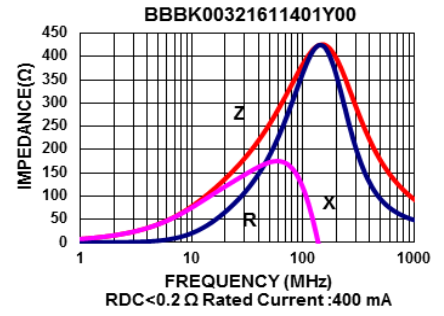
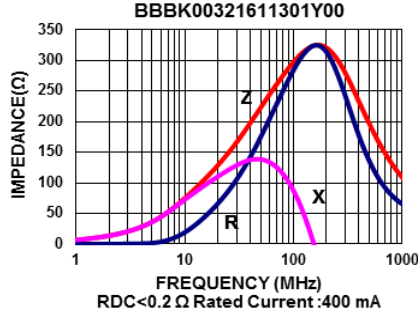
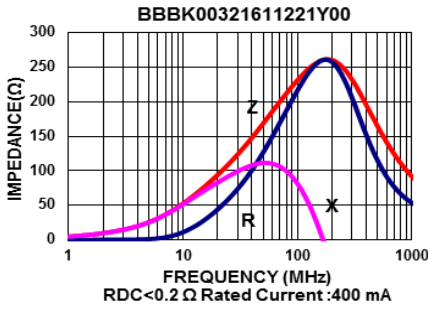
## Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBSY/BBBK Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer

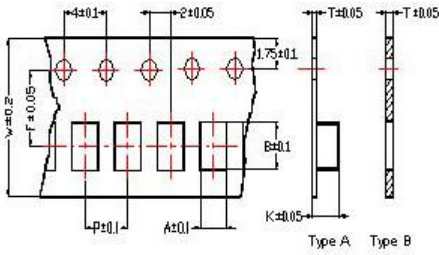


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# SMD Multilayer Ferrite Chip Beads

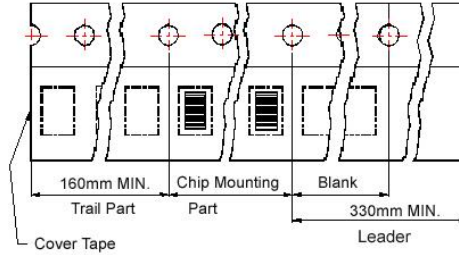
## Packaging Specifications

### Tape Dimensions

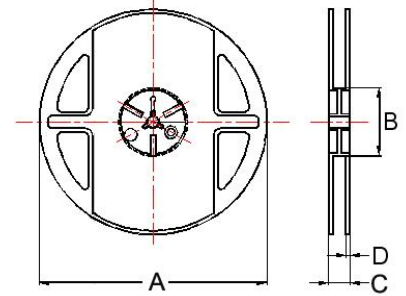


### Tape Material

Carrier Tape: Polycarbonate (Tape A)  
Carrier Tape: Paper (Tape B)  
Cover Tape: Polystyrene



### Reel Dimensions



- ① : BBSY/BBSJ/BBNQ/BBPY    ③ : BBUP
- ② : BBSY/BBSJ/BBNQ/BBPY/BBUP/BBFY/BBFJ
- ④ : BBBK/BBSJ/BBGK/BBPY/BBNQ/BBUP/BBHV
- ⑤ : BBBK/BBGK/BBPY/BBUP
- ⑥ : BBSY/BBBK/BBPY/BBUP
- ⑦ : BBPY/BBUP

### Dimensions in mm

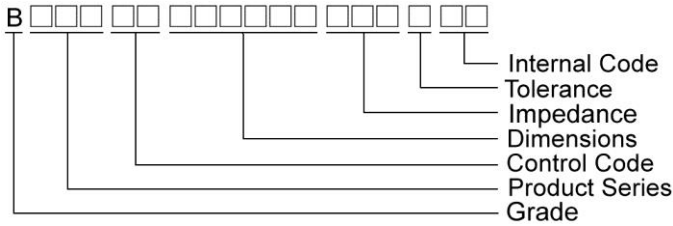
| TYPE    | Tape Dimensions |      |      |     |     |     |      |      | Reel Dimensions |    |    |   | Quantity<br>PCS / REEL |
|---------|-----------------|------|------|-----|-----|-----|------|------|-----------------|----|----|---|------------------------|
|         | A               | B    | T    | W   | P   | F   | K    | Tape | A               | B  | C  | D |                        |
| ①060303 | 0.37            | 0.67 | 0.42 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 10 | 2 | 15000                  |
| ②100505 | 0.62            | 1.12 | 0.60 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 10000                  |
| ③160805 | 1.05            | 1.85 | 0.60 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 10000                  |
| ④160808 | 1.05            | 1.85 | 0.95 | 8.0 | 4.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 4000                   |
| ⑤201209 | 1.50            | 2.30 | 0.97 | 8.0 | 4.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 4000                   |
| ⑥321611 | 1.88            | 3.50 | 0.22 | 8.0 | 4.0 | 3.5 | 1.27 | A    | 178             | 60 | 12 | 2 | 3000                   |
| ⑦453215 | 3.66            | 4.95 | 0.24 | 12  | 8.0 | 5.5 | 1.85 | A    | 178             | 60 | 14 | 2 | 1000                   |

## Multilayer Ferrite Chip Beads

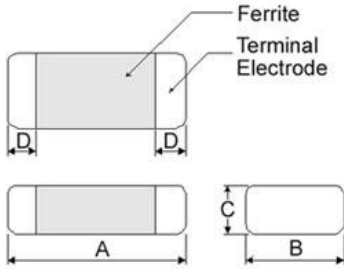


Chilisin offers a wide range of multi-layered ferrite chip beads with various sizes, frequency characteristics, and impedance values for EMI solutions. These ferrite formulas are used to compose seven types of EMI suppression chip beads: BBSY, BBBK, BBSJ, BBGK, BBPY, BBUP, BBNQ, BBFY, BBFJ and BBHV series.

### Product Identification



### Shape and Dimensions



Dimensions in mm

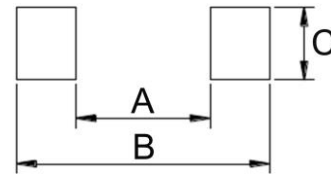
| TYPE    | A        | B         | C        | D         |
|---------|----------|-----------|----------|-----------|
| ①060303 | 0.6±0.03 | 0.30±0.03 | 0.3±0.03 | 0.15±0.05 |
| ②100505 | 1.0±0.10 | 0.50±0.10 | 0.5±0.10 | 0.25±0.10 |
| ③160805 | 1.6±0.15 | 0.80±0.15 | 0.5±0.15 | 0.3±0.2   |
| ④160808 | 1.6±0.15 | 0.80±0.15 | 0.8±0.15 | 0.3±0.2   |
| ⑤201209 | 2.0±0.20 | 1.25±0.20 | 0.9±0.20 | 0.5±0.3   |
| ⑥321611 | 3.2±0.20 | 1.60±0.20 | 1.1±0.20 | 0.5±0.3   |
| ⑦453215 | 4.5±0.25 | 3.20±0.20 | 1.5±0.20 | 0.5±0.3   |

- ① : BBSY / BBSJ / BBNQ / BBPY
- ② : BBSY / BBSJ / BBNQ / BBPY / BBUP / BBFY / BBFJ
- ③ : BBUP ④ : BBBK / BBSJ / BBGK / BBPY / BBNQ / BBUP / BBHV
- ⑤ : BBBK / BBGK / BBPY / BBUP ⑥ : BBSY / BBBK / BBPY / BBUP
- ⑦ : BBPY / BBUP

### Dimension Conversion

| Code   | Dimension in mm<br>(AxBxC) | EIA  |
|--------|----------------------------|------|
| 060303 | 0.6X0.3X0.3                | 0201 |
| 100505 | 1.0X0.5X0.5                | 0402 |
| 160805 | 1.6x0.8x0.5                | 0603 |
| 160808 | 1.6x0.8x0.8                | 0603 |
| 201209 | 2.0x1.2x0.9                | 0805 |
| 321611 | 3.2x1.6x1.1                | 1206 |
| 453215 | 4.5x3.2x1.5                | 1812 |

### Recommended Pattern



Dimensions in mm

| TYPE    | A         | B           | C         |
|---------|-----------|-------------|-----------|
| ①060303 | 0.2 ~ 0.3 | 0.75 ~ 1.05 | 0.3       |
| ②100505 | 0.4       | 1.2 ~ 1.4   | 0.5       |
| ③160805 | 0.7 ~ 0.8 | 1.8 ~ 2.0   | 0.6 ~ 0.8 |
| ④160808 | 0.7 ~ 0.8 | 1.8 ~ 2.0   | 0.6 ~ 0.8 |
| ⑤201209 | 1.0 ~ 1.2 | 2.6 ~ 4.0   | 1.0 ~ 1.4 |
| ⑥321611 | 2.0 ~ 2.4 | 4.2 ~ 5.2   | 1.3 ~ 1.9 |
| ⑦453215 | 3.0       | 5.5 ~ 6.5   | 2.4       |

\* Don't apply narrower pattern than listed above to BBPY and BBUP  
Narrow pattern might cause excessive heat or open circuit.

# SMD Multilayer Ferrite Chip Beads – BBSJ Series

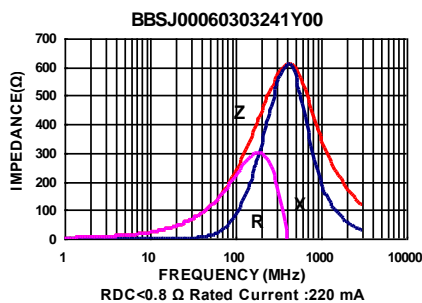
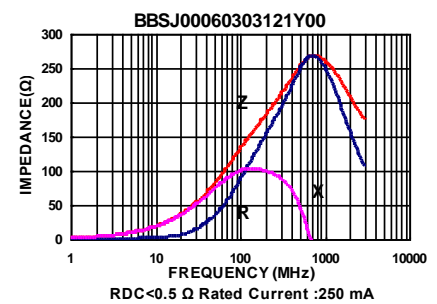
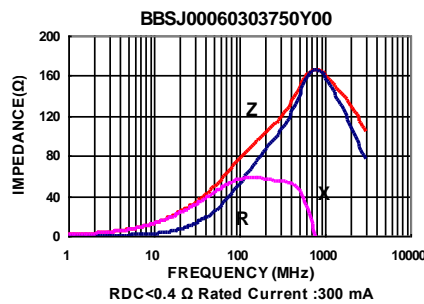
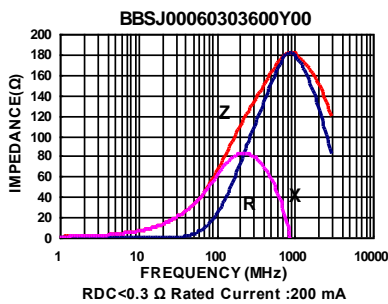
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBSJ00060303600Y00 | 60                                 | 100                     | 0.3                     | 200                       |
| BBSJ00060303750Y00 | 75                                 | 100                     | 0.4                     | 300                       |
| BBSJ00060303121Y00 | 120                                | 100                     | 0.5                     | 250                       |
| BBSJ00060303241Y00 | 240                                | 100                     | 0.8                     | 220                       |

**Note: When ordering, please specify tolerance code. Tolerance : Y= $\pm 25\%$**

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

**Test Instruments : Agilent E4991A Impedance / Material Analyzer**



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# SMD Multilayer Ferrite Chip Beads – BBSJ Series

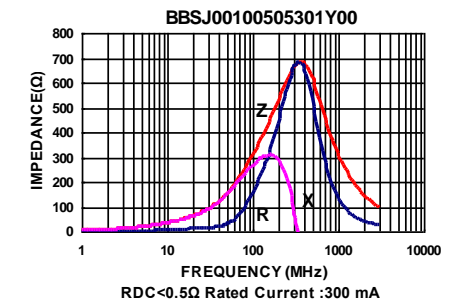
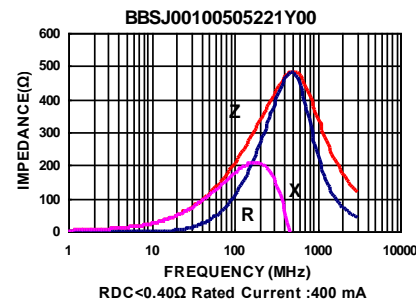
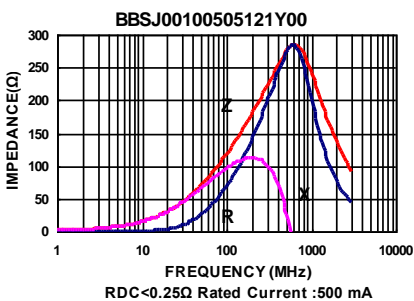
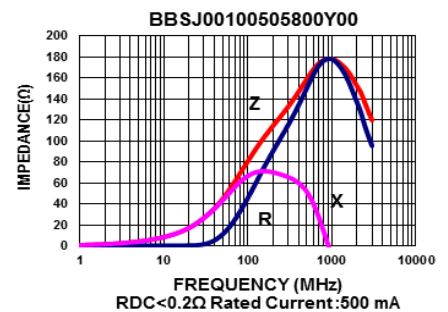
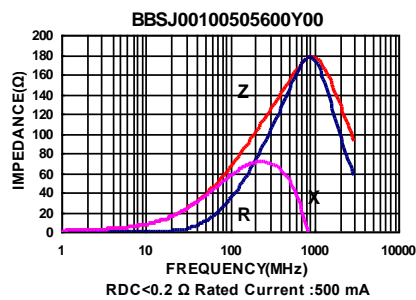
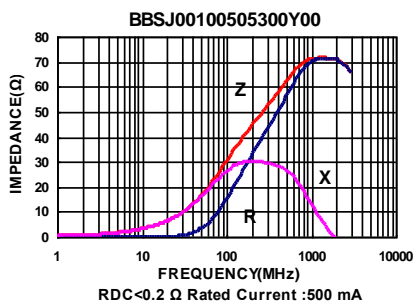
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBSJ00100505300Y00 | 30                                 | 100                     | 0.20                    | 500                       |
| BBSJ00100505600Y00 | 60                                 | 100                     | 0.20                    | 500                       |
| BBSJ00100505800Y00 | 80                                 | 100                     | 0.20                    | 500                       |
| BBSJ00100505121Y00 | 120                                | 100                     | 0.25                    | 500                       |
| BBSJ00100505221Y00 | 220                                | 100                     | 0.40                    | 400                       |
| BBSJ00100505301Y00 | 300                                | 100                     | 0.50                    | 300                       |
| BBSJ00100505471Y00 | 470                                | 100                     | 0.50                    | 300                       |
| BBSJ00100505481Y00 | 480                                | 100                     | 0.50                    | 300                       |
| BBSJ00100505601Y00 | 600                                | 100                     | 0.60                    | 300                       |
| BBSJ00100505102Y00 | 1000                               | 100                     | 0.95                    | 200                       |
| BBSJ00100505152Y00 | 1500                               | 100                     | 1.15                    | 100                       |
| BBSJ00100505182Y00 | 1800                               | 100                     | 1.40                    | 100                       |
| BBSJ00100505252Y00 | 2500                               | 100                     | 1.80                    | 100                       |

**Note:** When ordering, please specify tolerance code. Tolerance : Y= $\pm 25\%$

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

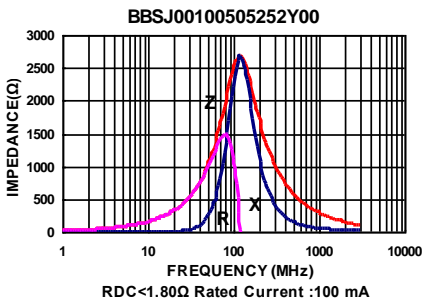
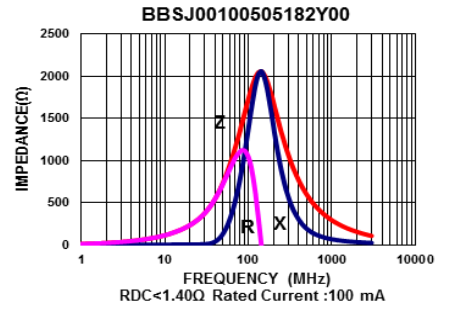
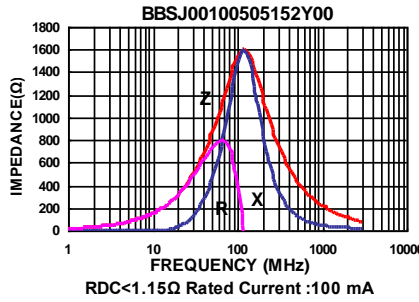
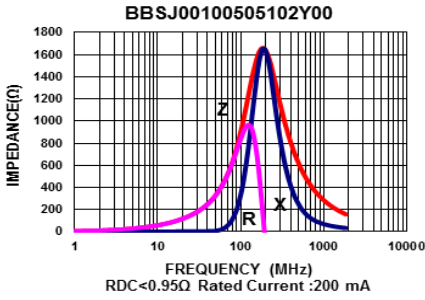
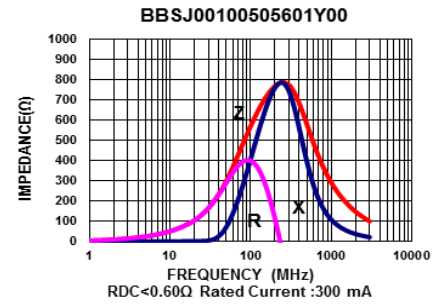
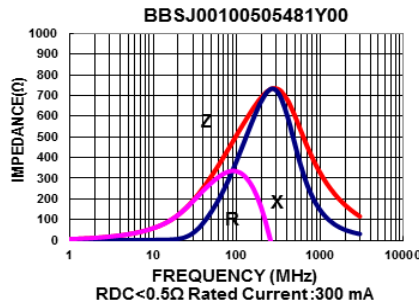
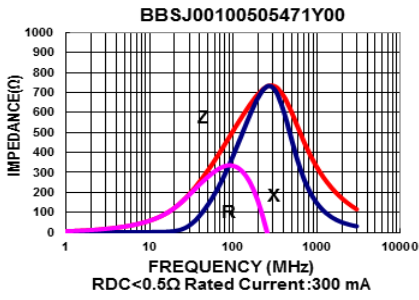
**Test Instruments :** Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBSJ Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBSJ Series

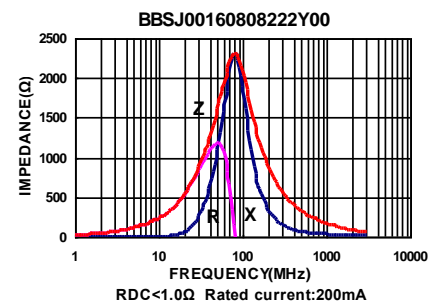
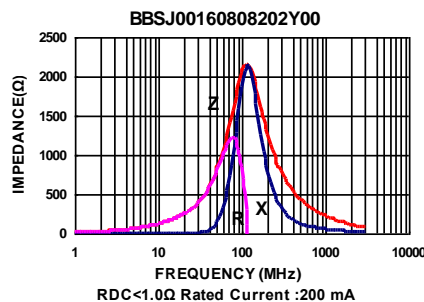
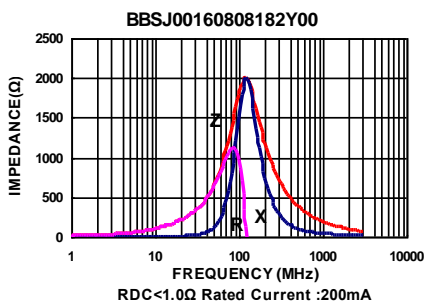
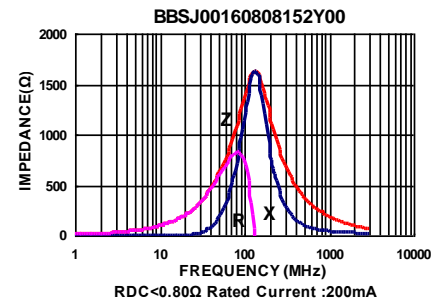
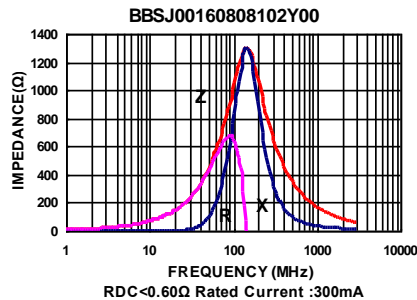
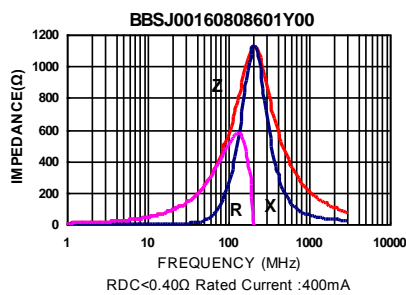
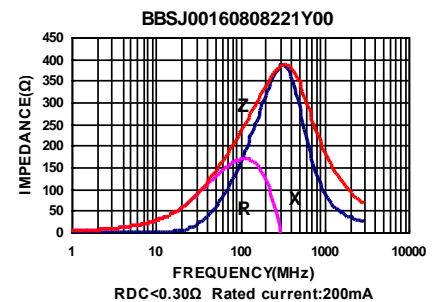
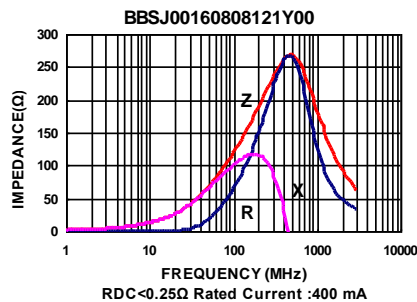
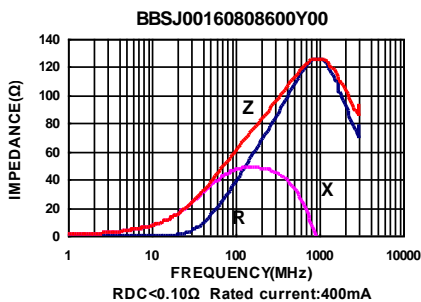
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBSJ00160808600Y00 | 60                                 | 100                     | 0.10                    | 400                       |
| BBSJ00160808121Y00 | 120                                | 100                     | 0.25                    | 400                       |
| BBSJ00160808221Y00 | 220                                | 100                     | 0.30                    | 400                       |
| BBSJ00160808601Y00 | 600                                | 100                     | 0.40                    | 400                       |
| BBSJ00160808102Y00 | 1000                               | 100                     | 0.60                    | 300                       |
| BBSJ00160808152Y00 | 1500                               | 100                     | 0.80                    | 200                       |
| BBSJ00160808182Y00 | 1800                               | 100                     | 1.0                     | 200                       |
| BBSJ00160808202Y00 | 2000                               | 100                     | 1.0                     | 200                       |
| BBSJ00160808222Y00 | 2200                               | 100                     | 1.0                     | 200                       |
| BBSJ00160808252Y00 | 2500                               | 100                     | 1.0                     | 200                       |
| BBSJ00160808272Y00 | 2700                               | 100                     | 1.0                     | 200                       |

**Note: When ordering, please specify tolerance code. Tolerance :  $Y \pm 25\%$**

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

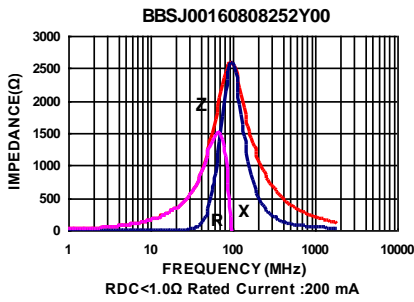
**Test Instruments : Agilent E4991A Impedance / Material Analyzer**



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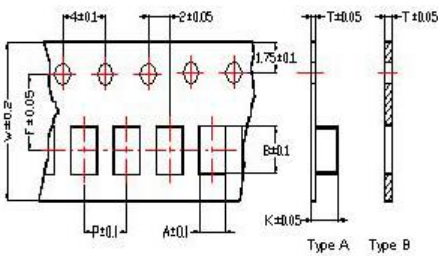
# SMD Multilayer Ferrite Chip Beads – BBSJ Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer

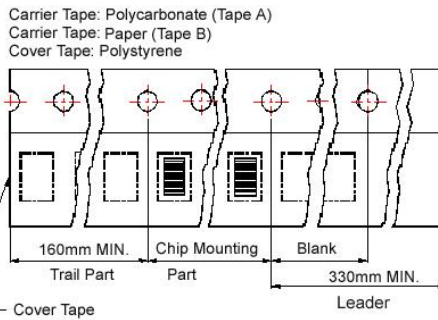


## Packaging Specifications

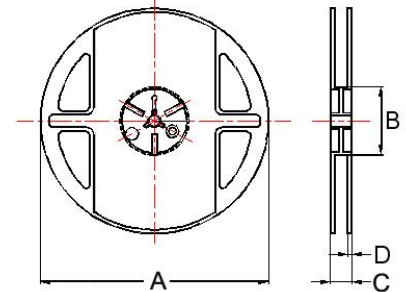
### Tape Dimensions



### Tape Material



### Reel Dimensions



- ① : BBSY/BBSJ/BBNQ/BBPY    ③ : BBUP
- ② : BBSY/BBSJ/BBNQ/BBPY/BBUP/BBFY/BBFJ
- ④ : BBBK/BBSJ/BBGK/BBPY/BBNQ/BBUP/BBHV
- ⑤ : BBBK/BBGK/BBPY/BBUP
- ⑥ : BBSY/BBBK/BBPY/BBUP
- ⑦ : BBPY/BBUP

## Dimensions in mm

| TYPE    | Tape Dimensions |      |      |     |     |     |      |      | Reel Dimensions |    |    |   | Quantity<br>PCS / REEL |
|---------|-----------------|------|------|-----|-----|-----|------|------|-----------------|----|----|---|------------------------|
|         | A               | B    | T    | W   | P   | F   | K    | Tape | A               | B  | C  | D |                        |
| ①060303 | 0.37            | 0.67 | 0.42 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 10 | 2 | 15000                  |
| ②100505 | 0.62            | 1.12 | 0.60 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 10000                  |
| ③160805 | 1.05            | 1.85 | 0.60 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 10000                  |
| ④160808 | 1.05            | 1.85 | 0.95 | 8.0 | 4.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 4000                   |
| ⑤201209 | 1.50            | 2.30 | 0.97 | 8.0 | 4.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 4000                   |
| ⑥321611 | 1.88            | 3.50 | 0.22 | 8.0 | 4.0 | 3.5 | 1.27 | A    | 178             | 60 | 12 | 2 | 3000                   |
| ⑦453215 | 3.66            | 4.95 | 0.24 | 12  | 8.0 | 5.5 | 1.85 | A    | 178             | 60 | 14 | 2 | 1000                   |

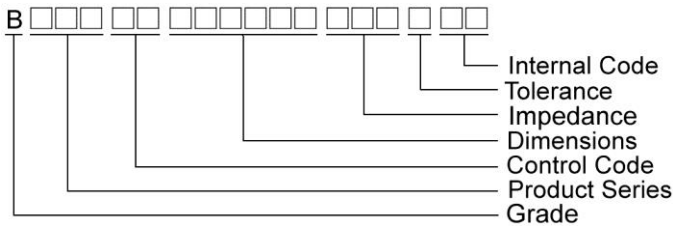
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## Multilayer Ferrite Chip Beads

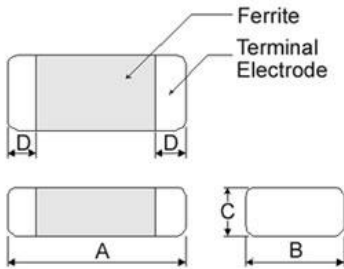


Chilisin offers a wide range of multi-layered ferrite chip beads with various sizes, frequency characteristics, and impedance values for EMI solutions. These ferrite formulas are used to compose seven types of EMI suppression chip beads: BBSY, BBBK, BBSJ, BBGK, BBPY, BBUP, BBNQ, BBFY, BBFJ and BBHV series.

### Product Identification



### Shape and Dimensions



Dimensions in mm

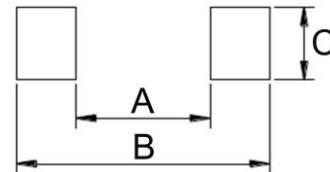
| TYPE    | A        | B         | C        | D         |
|---------|----------|-----------|----------|-----------|
| ①060303 | 0.6±0.03 | 0.30±0.03 | 0.3±0.03 | 0.15±0.05 |
| ②100505 | 1.0±0.10 | 0.50±0.10 | 0.5±0.10 | 0.25±0.10 |
| ③160805 | 1.6±0.15 | 0.80±0.15 | 0.5±0.15 | 0.3±0.2   |
| ④160808 | 1.6±0.15 | 0.80±0.15 | 0.8±0.15 | 0.3±0.2   |
| ⑤201209 | 2.0±0.20 | 1.25±0.20 | 0.9±0.20 | 0.5±0.3   |
| ⑥321611 | 3.2±0.20 | 1.60±0.20 | 1.1±0.20 | 0.5±0.3   |
| ⑦453215 | 4.5±0.25 | 3.20±0.20 | 1.5±0.20 | 0.5±0.3   |

- ① : BBSY / BBSJ / BBNQ / BBPY
- ② : BBSY / BBSJ / BBNQ / BBPY / BBUP / BBFY / BBFJ
- ③ : BBUP ④ : BBBK / BBSJ / BBGK / BBPY / BBNQ / BBUP / BBHV
- ⑤ : BBBK / BBGK / BBPY / BBUP ⑥ : BBSY / BBBK / BBPY / BBUP
- ⑦ : BBPY / BBUP

### Dimension Conversion

| Code   | Dimension in mm<br>(AxBxC) | EIA  |
|--------|----------------------------|------|
| 060303 | 0.6X0.3X0.3                | 0201 |
| 100505 | 1.0X0.5X0.5                | 0402 |
| 160805 | 1.6x0.8x0.5                | 0603 |
| 160808 | 1.6x0.8x0.8                | 0603 |
| 201209 | 2.0x1.2x0.9                | 0805 |
| 321611 | 3.2x1.6x1.1                | 1206 |
| 453215 | 4.5x3.2x1.5                | 1812 |

### Recommended Pattern



Dimensions in mm

| TYPE    | A         | B           | C         |
|---------|-----------|-------------|-----------|
| ①060303 | 0.2 ~ 0.3 | 0.75 ~ 1.05 | 0.3       |
| ②100505 | 0.4       | 1.2 ~ 1.4   | 0.5       |
| ③160805 | 0.7 ~ 0.8 | 1.8 ~ 2.0   | 0.6 ~ 0.8 |
| ④160808 | 0.7 ~ 0.8 | 1.8 ~ 2.0   | 0.6 ~ 0.8 |
| ⑤201209 | 1.0 ~ 1.2 | 2.6 ~ 4.0   | 1.0 ~ 1.4 |
| ⑥321611 | 2.0 ~ 2.4 | 4.2 ~ 5.2   | 1.3 ~ 1.9 |
| ⑦453215 | 3.0       | 5.5 ~ 6.5   | 2.4       |

\* Don't apply narrower pattern than listed above to BBPY and BBUP  
Narrow pattern might cause excessive heat or open circuit.

# SMD Multilayer Ferrite Chip Beads – BBGK Series

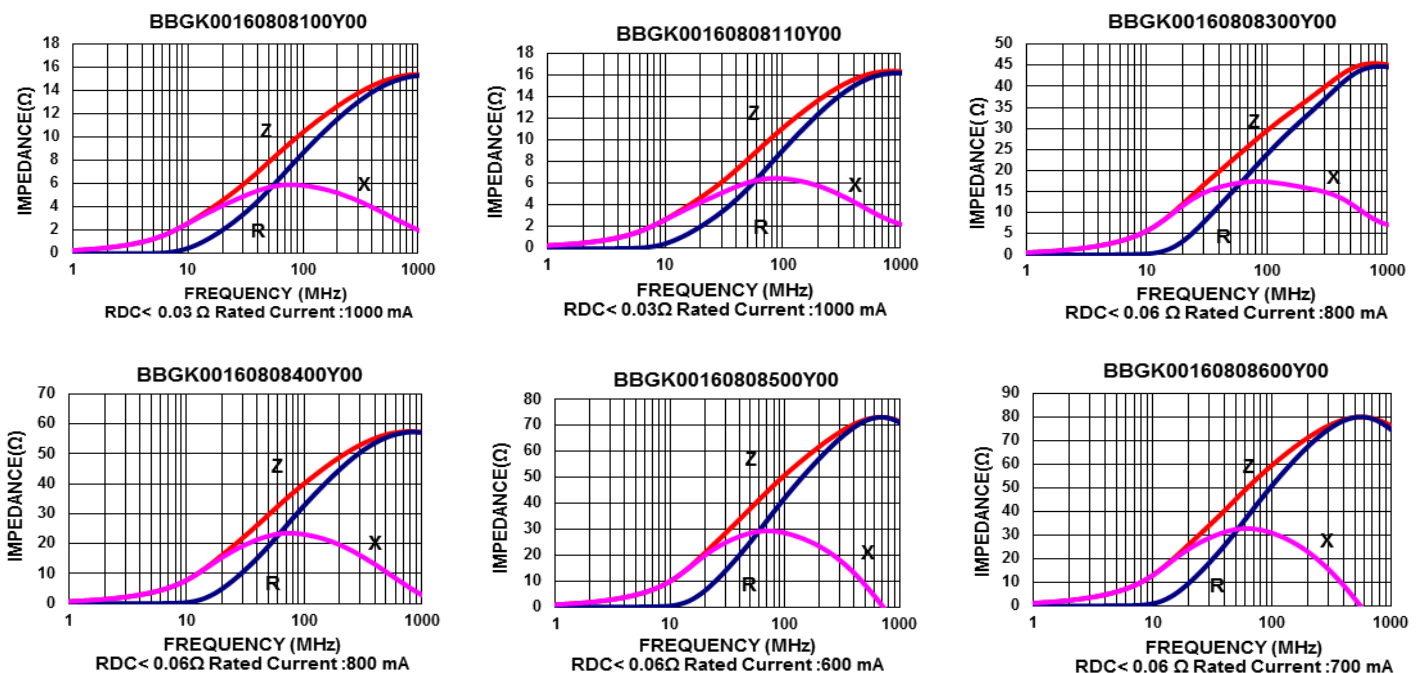
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBGK00160808100Y00 | 10                                 | 100                     | 0.03                    | 1000                      |
| BBGK00160808110Y00 | 11                                 | 100                     | 0.03                    | 1000                      |
| BBGK00160808300Y00 | 30                                 | 100                     | 0.06                    | 800                       |
| BBGK00160808400Y00 | 40                                 | 100                     | 0.06                    | 800                       |
| BBGK00160808500Y00 | 50                                 | 100                     | 0.06                    | 600                       |
| BBGK00160808600Y00 | 60                                 | 100                     | 0.06                    | 700                       |
| BBGK00160808700Y00 | 70                                 | 100                     | 0.10                    | 600                       |
| BBGK00160808800Y00 | 80                                 | 100                     | 0.10                    | 600                       |
| BBGK00160808101Y00 | 100                                | 100                     | 0.15                    | 600                       |
| BBGK00160808121Y00 | 120                                | 100                     | 0.15                    | 600                       |
| BBGK00160808151Y00 | 150                                | 100                     | 0.15                    | 600                       |
| BBGK00160808181Y00 | 180                                | 100                     | 0.18                    | 400                       |
| BBGK00160808201Y00 | 200                                | 100                     | 0.18                    | 400                       |
| BBGK00160808221Y00 | 220                                | 100                     | 0.18                    | 550                       |
| BBGK00160808301Y00 | 300                                | 100                     | 0.25                    | 500                       |
| BBGK00160808331Y00 | 330                                | 100                     | 0.30                    | 400                       |
| BBGK00160808471Y00 | 470                                | 100                     | 0.30                    | 400                       |
| BBGK00160808601Y00 | 600                                | 100                     | 0.30                    | 400                       |
| BBGK00160808102Y00 | 1000                               | 100                     | 0.45                    | 300                       |
| BBGK00160808152Y00 | 1500                               | 100                     | 0.70                    | 150                       |

**Note:** When ordering, please specify tolerance code. Tolerance : Y= $\pm 25\%$

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

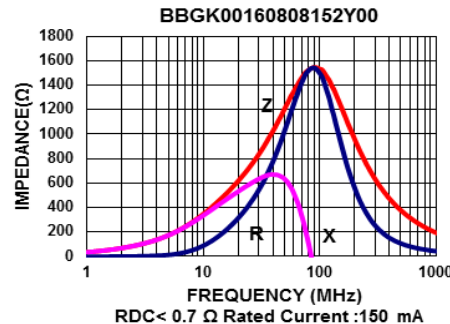
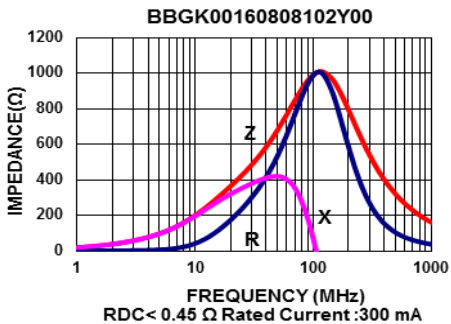
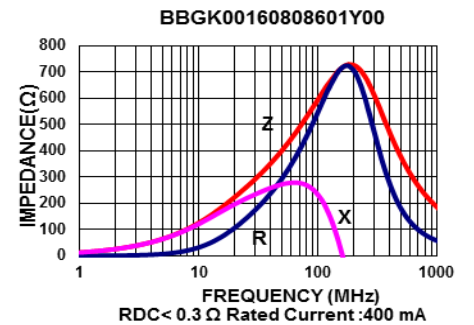
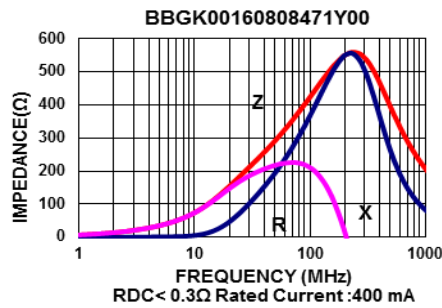
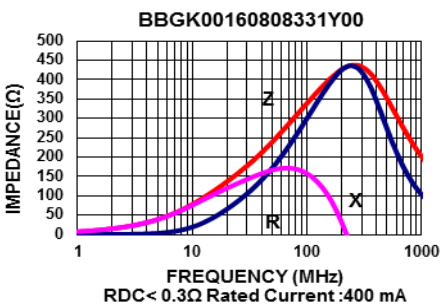
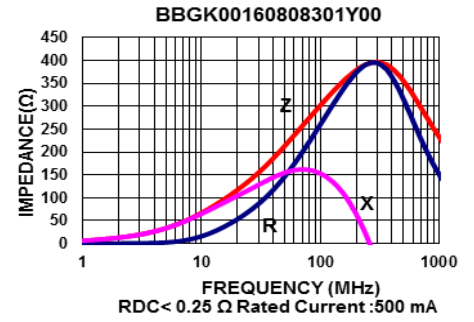
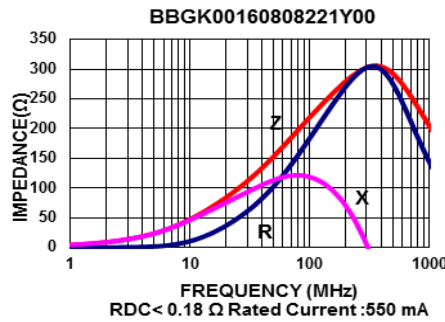
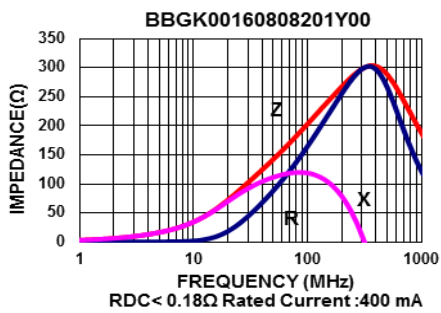
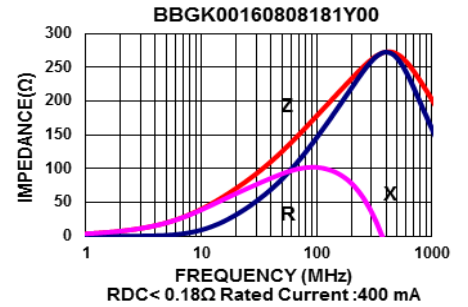
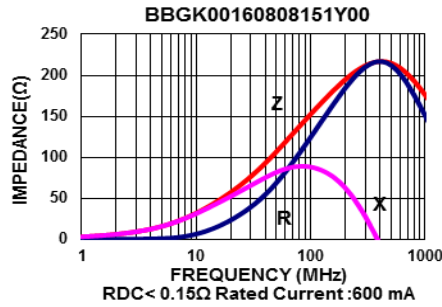
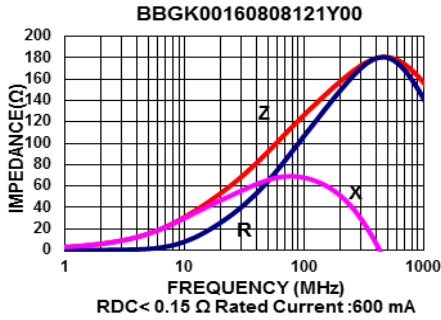
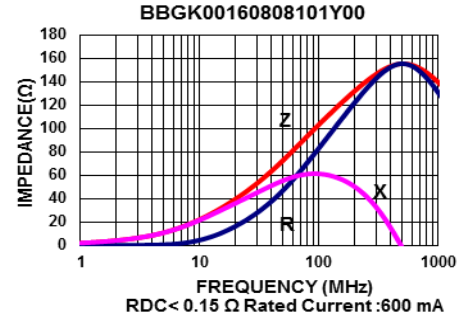
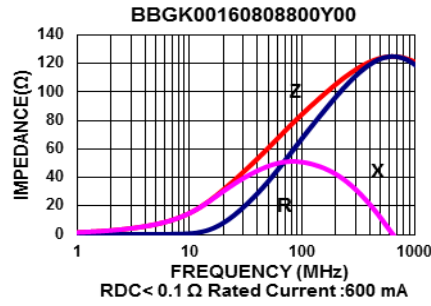
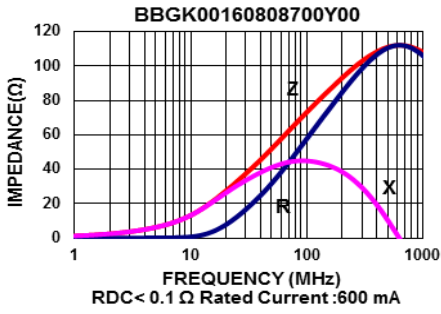
## Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBGK Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBGK Series

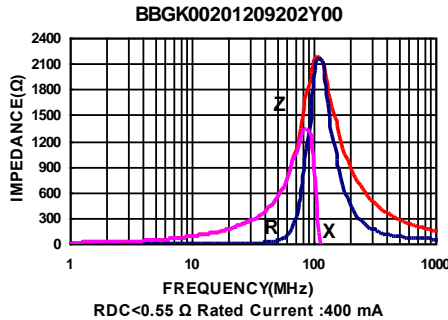
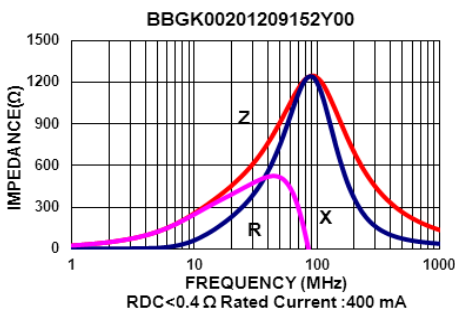
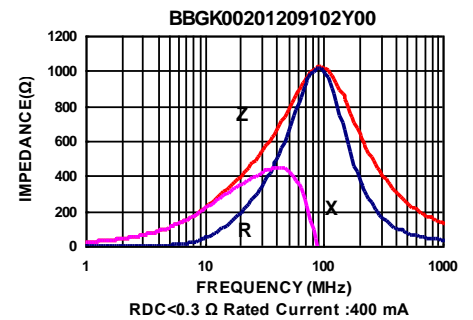
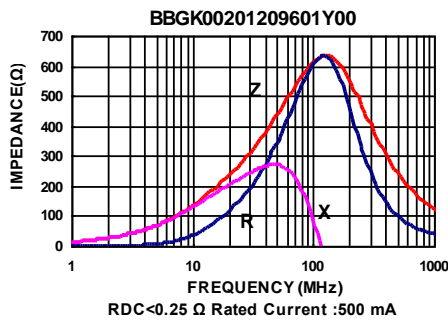
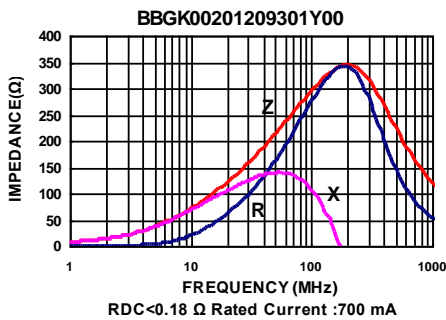
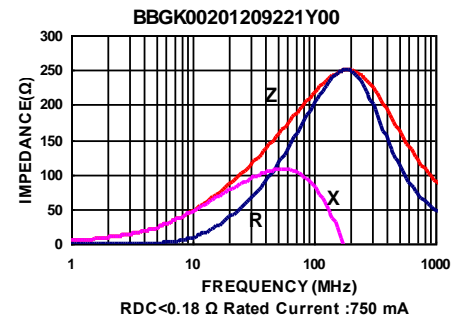
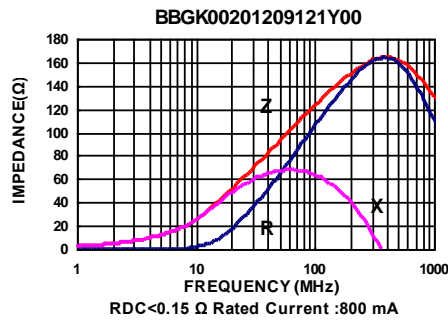
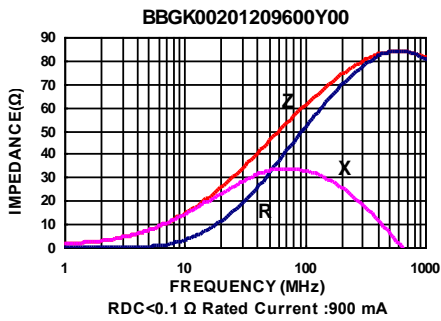
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBGK00201209600Y00 | 60                                 | 100                     | 0.10                    | 900                       |
| BBGK00201209121Y00 | 120                                | 100                     | 0.15                    | 800                       |
| BBGK00201209221Y00 | 220                                | 100                     | 0.18                    | 750                       |
| BBGK00201209301Y00 | 300                                | 100                     | 0.18                    | 700                       |
| BBGK00201209601Y00 | 600                                | 100                     | 0.25                    | 500                       |
| BBGK00201209102Y00 | 1000                               | 100                     | 0.30                    | 400                       |
| BBGK00201209152Y00 | 1500                               | 100                     | 0.40                    | 400                       |
| BBGK00201209202Y00 | 2000                               | 100                     | 0.55                    | 400                       |

**Note: When ordering, please specify tolerance code. Tolerance : Y $\pm$ 25%**

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

**Test Instruments : Agilent E4991A Impedance / Material Analyzer**



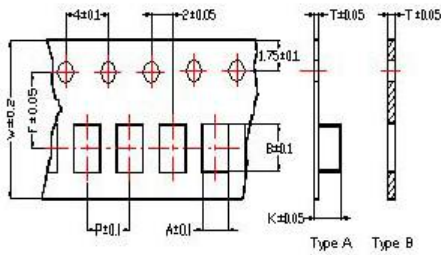
Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin approval. Please contact our sales department before ordering.



# SMD Multilayer Ferrite Chip Beads

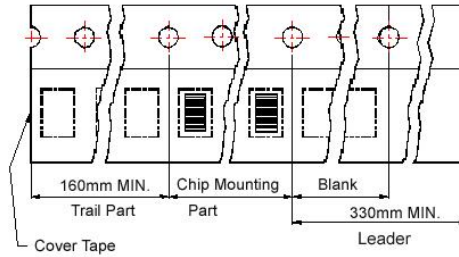
## Packaging Specifications

### Tape Dimensions

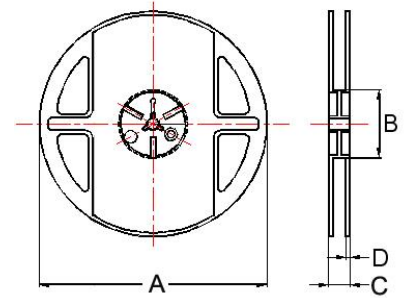


### Tape Material

Carrier Tape: Polycarbonate (Tape A)  
Carrier Tape: Paper (Tape B)  
Cover Tape: Polystyrene



### Reel Dimensions



- ① : BBSY/BBSJ/BBNQ/BBPY    ③ : BBUP
- ② : BBSY/BBSJ/BBNQ/BBPY/BBUP/BBFY/BBFJ
- ④ : BBBK/BBSJ/BBGK/BBPY/BBNQ/BBUP/BBHV
- ⑤ : BBBK/BBGK/BBPY/BBUP
- ⑥ : BBSY/BBBK/BBPY/BBUP
- ⑦ : BBPY/BBUP

### Dimensions in mm

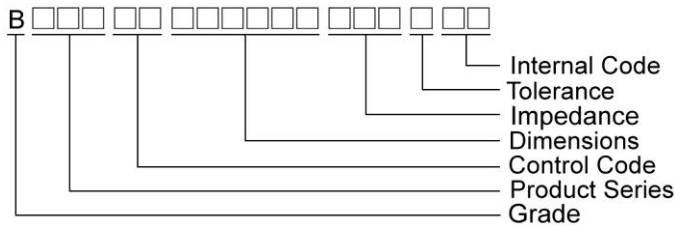
| TYPE    | Tape Dimensions |      |      |     |     |     |      |      | Reel Dimensions |    |    |   | Quantity<br>PCS / REEL |
|---------|-----------------|------|------|-----|-----|-----|------|------|-----------------|----|----|---|------------------------|
|         | A               | B    | T    | W   | P   | F   | K    | Tape | A               | B  | C  | D |                        |
| ①060303 | 0.37            | 0.67 | 0.42 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 10 | 2 | 15000                  |
| ②100505 | 0.62            | 1.12 | 0.60 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 10000                  |
| ③160805 | 1.05            | 1.85 | 0.60 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 10000                  |
| ④160808 | 1.05            | 1.85 | 0.95 | 8.0 | 4.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 4000                   |
| ⑤201209 | 1.50            | 2.30 | 0.97 | 8.0 | 4.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 4000                   |
| ⑥321611 | 1.88            | 3.50 | 0.22 | 8.0 | 4.0 | 3.5 | 1.27 | A    | 178             | 60 | 12 | 2 | 3000                   |
| ⑦453215 | 3.66            | 4.95 | 0.24 | 12  | 8.0 | 5.5 | 1.85 | A    | 178             | 60 | 14 | 2 | 1000                   |

## Multilayer Ferrite Chip Beads

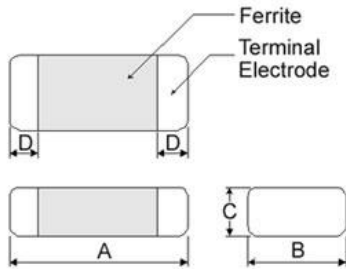


Chilisin offers a wide range of multi-layered ferrite chip beads with various sizes, frequency characteristics, and impedance values for EMI solutions. These ferrite formulas are used to compose seven types of EMI suppression chip beads: BBSY, BBBK, BBSJ, BBGK, BBPY, BBUP, BBNQ, BBFY, BBFJ and BBHV series.

### Product Identification



### Shape and Dimensions



Dimensions in mm

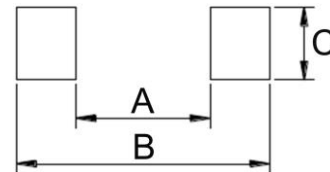
| TYPE    | A        | B         | C        | D         |
|---------|----------|-----------|----------|-----------|
| ①060303 | 0.6±0.03 | 0.30±0.03 | 0.3±0.03 | 0.15±0.05 |
| ②100505 | 1.0±0.10 | 0.50±0.10 | 0.5±0.10 | 0.25±0.10 |
| ③160805 | 1.6±0.15 | 0.80±0.15 | 0.5±0.15 | 0.3±0.2   |
| ④160808 | 1.6±0.15 | 0.80±0.15 | 0.8±0.15 | 0.3±0.2   |
| ⑤201209 | 2.0±0.20 | 1.25±0.20 | 0.9±0.20 | 0.5±0.3   |
| ⑥321611 | 3.2±0.20 | 1.60±0.20 | 1.1±0.20 | 0.5±0.3   |
| ⑦453215 | 4.5±0.25 | 3.20±0.20 | 1.5±0.20 | 0.5±0.3   |

- ① : BBSY / BBSJ / BBNQ / BBPY
- ② : BBSY / BBSJ / BBNQ / BBPY / BBUP / BBFY / BBFJ
- ③ : BBUP ④ : BBBK / BBSJ / BBGK / BBPY / BBNQ / BBUP / BBHV
- ⑤ : BBBK / BBGK / BBPY / BBUP ⑥ : BBSY / BBBK / BBPY / BBUP
- ⑦ : BBPY / BBUP

### Dimension Conversion

| Code   | Dimension in mm<br>(AxBxC) | EIA  |
|--------|----------------------------|------|
| 060303 | 0.6X0.3X0.3                | 0201 |
| 100505 | 1.0X0.5X0.5                | 0402 |
| 160805 | 1.6x0.8x0.5                | 0603 |
| 160808 | 1.6x0.8x0.8                | 0603 |
| 201209 | 2.0x1.2x0.9                | 0805 |
| 321611 | 3.2x1.6x1.1                | 1206 |
| 453215 | 4.5x3.2x1.5                | 1812 |

### Recommended Pattern



Dimensions in mm

| TYPE    | A         | B           | C         |
|---------|-----------|-------------|-----------|
| ①060303 | 0.2 ~ 0.3 | 0.75 ~ 1.05 | 0.3       |
| ②100505 | 0.4       | 1.2 ~ 1.4   | 0.5       |
| ③160805 | 0.7 ~ 0.8 | 1.8 ~ 2.0   | 0.6 ~ 0.8 |
| ④160808 | 0.7 ~ 0.8 | 1.8 ~ 2.0   | 0.6 ~ 0.8 |
| ⑤201209 | 1.0 ~ 1.2 | 2.6 ~ 4.0   | 1.0 ~ 1.4 |
| ⑥321611 | 2.0 ~ 2.4 | 4.2 ~ 5.2   | 1.3 ~ 1.9 |
| ⑦453215 | 3.0       | 5.5 ~ 6.5   | 2.4       |

\* Don't apply narrower pattern than listed above to BBPY and BBUP  
Narrow pattern might cause excessive heat or open circuit.

# SMD Multilayer Ferrite Chip Beads – BBNQ Series

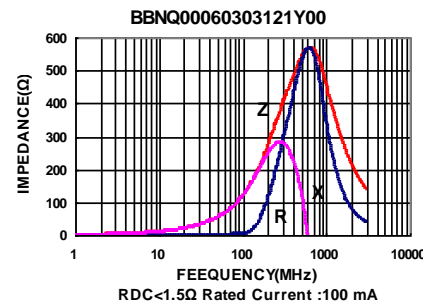
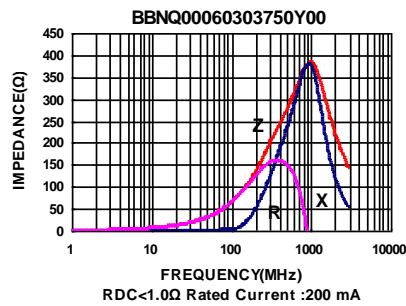
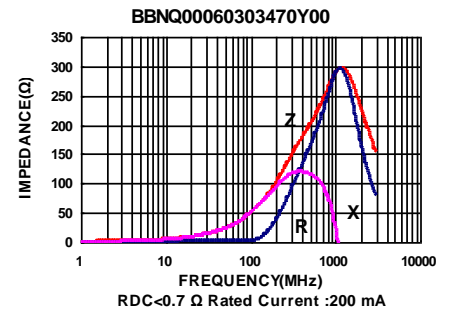
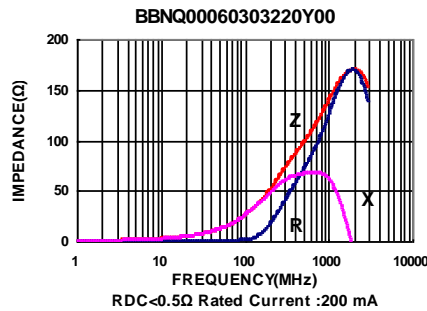
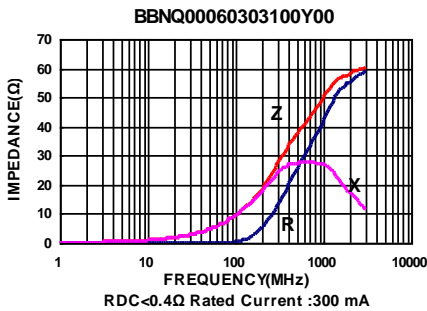
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBNQ00060303100Y00 | 10                                 | 100                     | 0.4                     | 300                       |
| BBNQ00060303220Y00 | 22                                 | 100                     | 0.5                     | 200                       |
| BBNQ00060303470Y00 | 47                                 | 100                     | 0.7                     | 200                       |
| BBNQ00060303750Y00 | 75                                 | 100                     | 1.0                     | 200                       |
| BBNQ00060303121Y00 | 120                                | 100                     | 1.5                     | 100                       |

**Note:** When ordering, please specify tolerance code. Tolerance :  $Y = \pm 25\%$

- Operating temperature range - 55°C ~ 125°C (Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

## Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBNQ Series

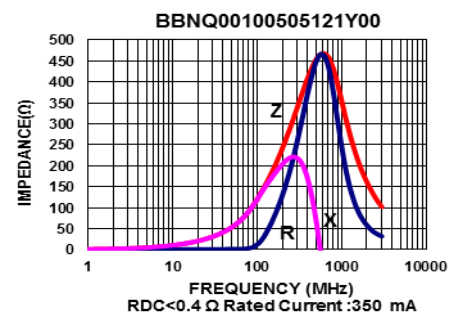
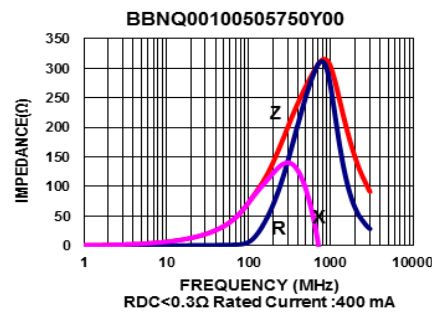
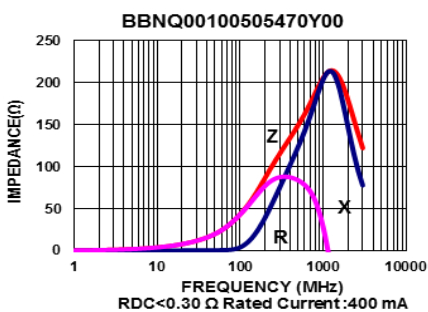
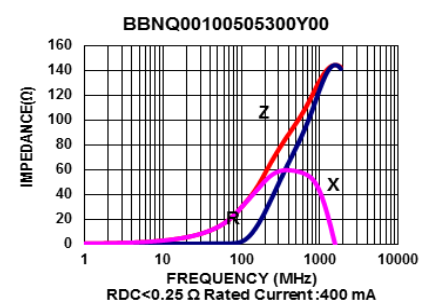
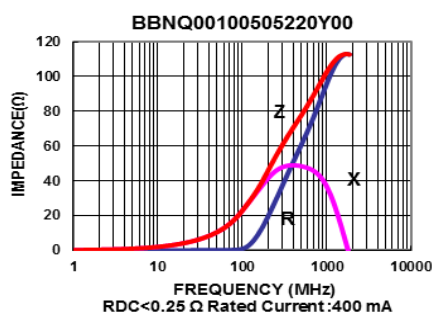
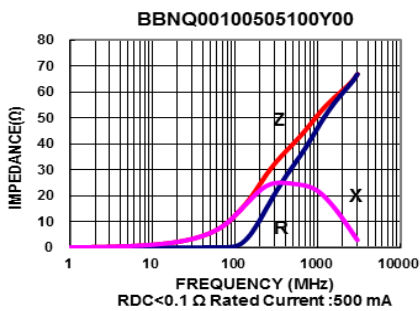
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBNQ00100505100Y00 | 10                                 | 100                     | 0.10                    | 500                       |
| BBNQ00100505220Y00 | 22                                 | 100                     | 0.25                    | 400                       |
| BBNQ00100505300Y00 | 30                                 | 100                     | 0.25                    | 400                       |
| BBNQ00100505470Y00 | 47                                 | 100                     | 0.30                    | 400                       |
| BBNQ00100505750Y00 | 75                                 | 100                     | 0.30                    | 400                       |
| BBNQ00100505121Y00 | 120                                | 100                     | 0.40                    | 350                       |
| BBNQ00100505221Y00 | 220                                | 100                     | 0.60                    | 200                       |
| BBNQ00100505301Y00 | 300                                | 100                     | 0.80                    | 200                       |
| BBNQ00100505471Y00 | 470                                | 100                     | 1.10                    | 200                       |
| BBNQ00100505601Y00 | 600                                | 100                     | 1.20                    | 200                       |

**Note:** When ordering, please specify tolerance code. Tolerance : Y= $\pm 25\%$

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

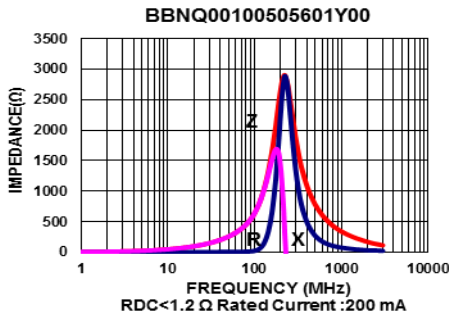
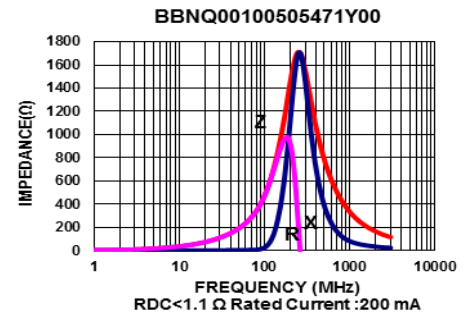
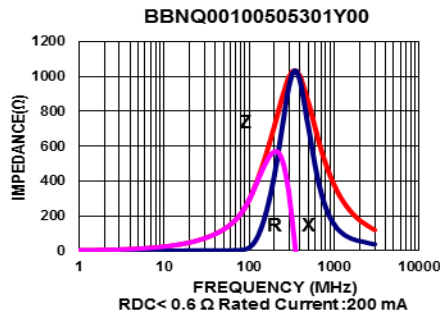
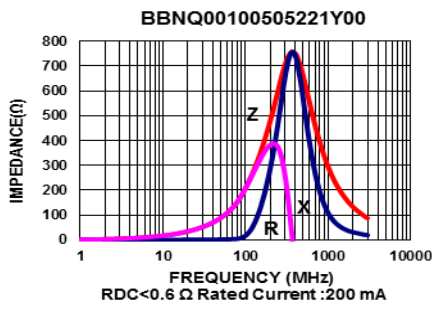
## Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBNQ Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBNQ Series

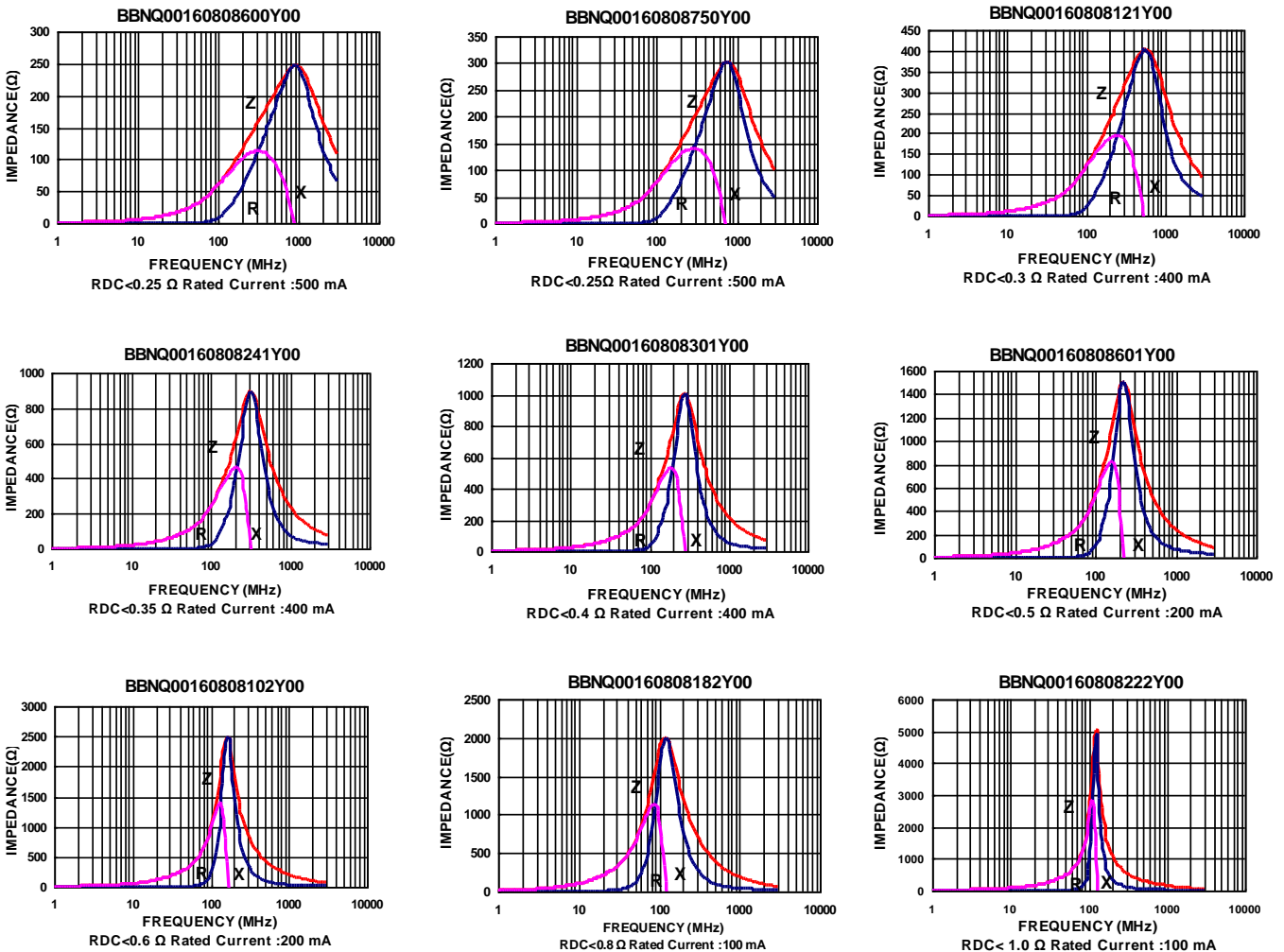
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBNQ00160808600Y00 | 60                                 | 100                     | 0.25                    | 500                       |
| BBNQ00160808750Y00 | 75                                 | 100                     | 0.25                    | 500                       |
| BBNQ00160808121Y00 | 120                                | 100                     | 0.30                    | 400                       |
| BBNQ00160808241Y00 | 240                                | 100                     | 0.35                    | 400                       |
| BBNQ00160808301Y00 | 300                                | 100                     | 0.40                    | 400                       |
| BBNQ00160808601Y00 | 600                                | 100                     | 0.50                    | 200                       |
| BBNQ00160808102Y00 | 1000                               | 100                     | 0.60                    | 200                       |
| BBNQ00160808182Y00 | 1800                               | 100                     | 0.80                    | 100                       |
| BBNQ00160808222Y00 | 2200                               | 100                     | 1.0                     | 100                       |
| BBNQ00160808252Y00 | 2500                               | 100                     | 1.0                     | 100                       |

**Note:** When ordering, please specify tolerance code. Tolerance : Y= $\pm 25\%$

- Operating temperature range - 55°C ~ 125°C (Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

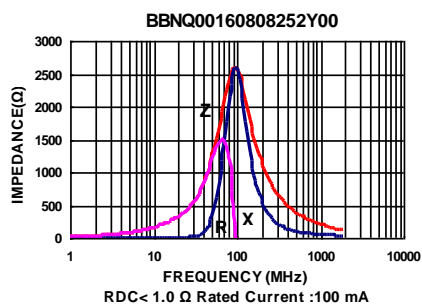
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## SMD Multilayer Ferrite Chip Beads – BBNQ Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBNQ Series

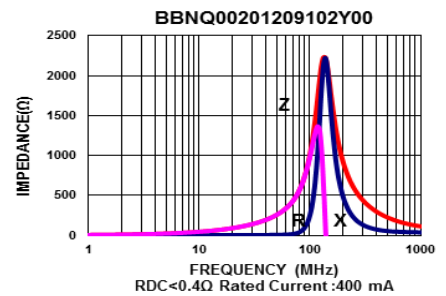
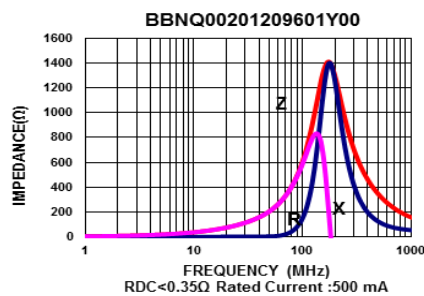
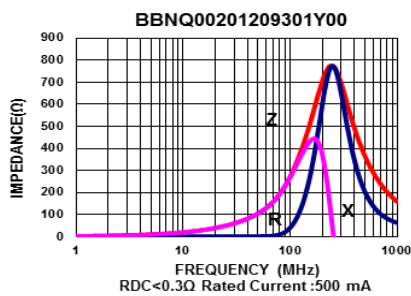
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBNQ00201209301Y00 | 300                                | 100                     | 0.3                     | 500                       |
| BBNQ00201209601Y00 | 600                                | 100                     | 0.35                    | 500                       |
| BBNQ00201209102Y00 | 1000                               | 100                     | 0.4                     | 400                       |

**Note: When ordering, please specify tolerance code. Tolerance : Y=±25%**

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

**Test Instruments :** Agilent E4991A Impedance / Material Analyzer

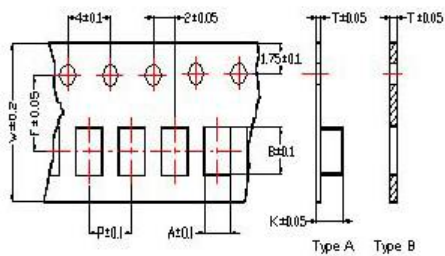




# SMD Multilayer Ferrite Chip Beads – BBNQ Series

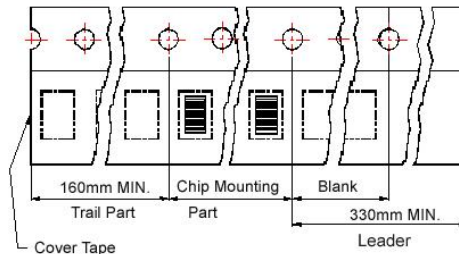
## Packaging Specifications

### Tape Dimensions

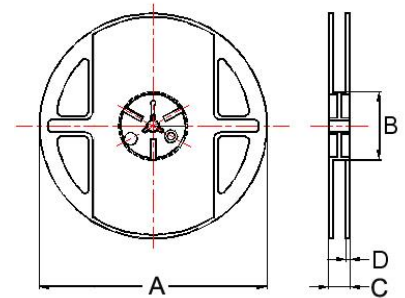


### Tape Material

Carrier Tape: Polycarbonate (Tape A)  
Carrier Tape: Paper (Tape B)  
Cover Tape: Polystyrene



### Reel Dimensions



- ① : BBSY/BBSJ/BBNQ/BBPY    ③ : BBUP
- ② : BBSY/BBSJ/BBNQ/BBPY/BBUP/BBFY/BBFJ
- ④ : BBBK/BBSJ/BBGK/BBPY/BBNQ/BBUP/BBHV
- ⑤ : BBBK/BBGK/BBPY/BBUP
- ⑥ : BBSY/BBBK/BBPY/BBUP
- ⑦ : BBPY/BBUP

### Dimensions in mm

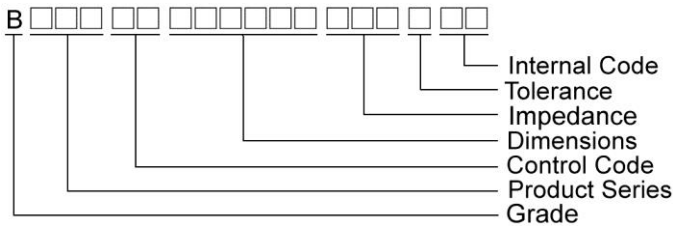
| TYPE    | Tape Dimensions |      |      |     |     |     |      |      | Reel Dimensions |    |    |   | Quantity<br>PCS / REEL |
|---------|-----------------|------|------|-----|-----|-----|------|------|-----------------|----|----|---|------------------------|
|         | A               | B    | T    | W   | P   | F   | K    | Tape | A               | B  | C  | D |                        |
| ①060303 | 0.37            | 0.67 | 0.42 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 10 | 2 | 15000                  |
| ②100505 | 0.62            | 1.12 | 0.60 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 10000                  |
| ③160805 | 1.05            | 1.85 | 0.60 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 10000                  |
| ④160808 | 1.05            | 1.85 | 0.95 | 8.0 | 4.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 4000                   |
| ⑤201209 | 1.50            | 2.30 | 0.97 | 8.0 | 4.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 4000                   |
| ⑥321611 | 1.88            | 3.50 | 0.22 | 8.0 | 4.0 | 3.5 | 1.27 | A    | 178             | 60 | 12 | 2 | 3000                   |
| ⑦453215 | 3.66            | 4.95 | 0.24 | 12  | 8.0 | 5.5 | 1.85 | A    | 178             | 60 | 14 | 2 | 1000                   |

## Multilayer Ferrite Chip Beads

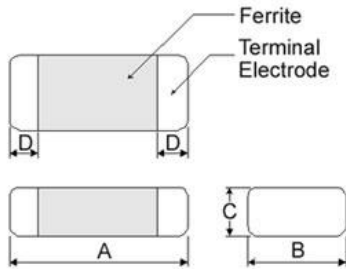


Chilisin offers a wide range of multi-layered ferrite chip beads with various sizes, frequency characteristics, and impedance values for EMI solutions. These ferrite formulas are used to compose seven types of EMI suppression chip beads: BBSY, BBBK, BBSJ, BBGK, BBPY, BBUP, BBNQ, BBFY, BBFJ and BBHV series.

### Product Identification



### Shape and Dimensions



Dimensions in mm

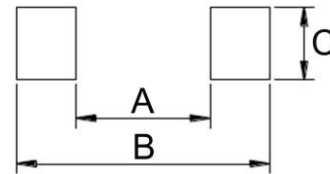
| TYPE    | A        | B         | C        | D         |
|---------|----------|-----------|----------|-----------|
| ①060303 | 0.6±0.03 | 0.30±0.03 | 0.3±0.03 | 0.15±0.05 |
| ②100505 | 1.0±0.10 | 0.50±0.10 | 0.5±0.10 | 0.25±0.10 |
| ③160805 | 1.6±0.15 | 0.80±0.15 | 0.5±0.15 | 0.3±0.2   |
| ④160808 | 1.6±0.15 | 0.80±0.15 | 0.8±0.15 | 0.3±0.2   |
| ⑤201209 | 2.0±0.20 | 1.25±0.20 | 0.9±0.20 | 0.5±0.3   |
| ⑥321611 | 3.2±0.20 | 1.60±0.20 | 1.1±0.20 | 0.5±0.3   |
| ⑦453215 | 4.5±0.25 | 3.20±0.20 | 1.5±0.20 | 0.5±0.3   |

- ① : BBSY / BBSJ / BBNQ / BBPY
- ② : BBSY / BBSJ / BBNQ / BBPY / BBUP / BBFY / BBFJ
- ③ : BBUP ④ : BBBK / BBSJ / BBGK / BBPY / BBNQ / BBUP / BBHV
- ⑤ : BBBK / BBGK / BBPY / BBUP ⑥ : BBSY / BBBK / BBPY / BBUP
- ⑦ : BBPY / BBUP

### Dimension Conversion

| Code   | Dimension in mm<br>(AxBxC) | EIA  |
|--------|----------------------------|------|
| 060303 | 0.6X0.3X0.3                | 0201 |
| 100505 | 1.0X0.5X0.5                | 0402 |
| 160805 | 1.6x0.8x0.5                | 0603 |
| 160808 | 1.6x0.8x0.8                | 0603 |
| 201209 | 2.0x1.2x0.9                | 0805 |
| 321611 | 3.2x1.6x1.1                | 1206 |
| 453215 | 4.5x3.2x1.5                | 1812 |

### Recommended Pattern



Dimensions in mm

| TYPE    | A         | B           | C         |
|---------|-----------|-------------|-----------|
| ①060303 | 0.2 ~ 0.3 | 0.75 ~ 1.05 | 0.3       |
| ②100505 | 0.4       | 1.2 ~ 1.4   | 0.5       |
| ③160805 | 0.7 ~ 0.8 | 1.8 ~ 2.0   | 0.6 ~ 0.8 |
| ④160808 | 0.7 ~ 0.8 | 1.8 ~ 2.0   | 0.6 ~ 0.8 |
| ⑤201209 | 1.0 ~ 1.2 | 2.6 ~ 4.0   | 1.0 ~ 1.4 |
| ⑥321611 | 2.0 ~ 2.4 | 4.2 ~ 5.2   | 1.3 ~ 1.9 |
| ⑦453215 | 3.0       | 5.5 ~ 6.5   | 2.4       |

\* Don't apply narrower pattern than listed above to BBPY and BBUP  
Narrow pattern might cause excessive heat or open circuit.

# SMD Multilayer Ferrite Chip Beads – BBPY Series

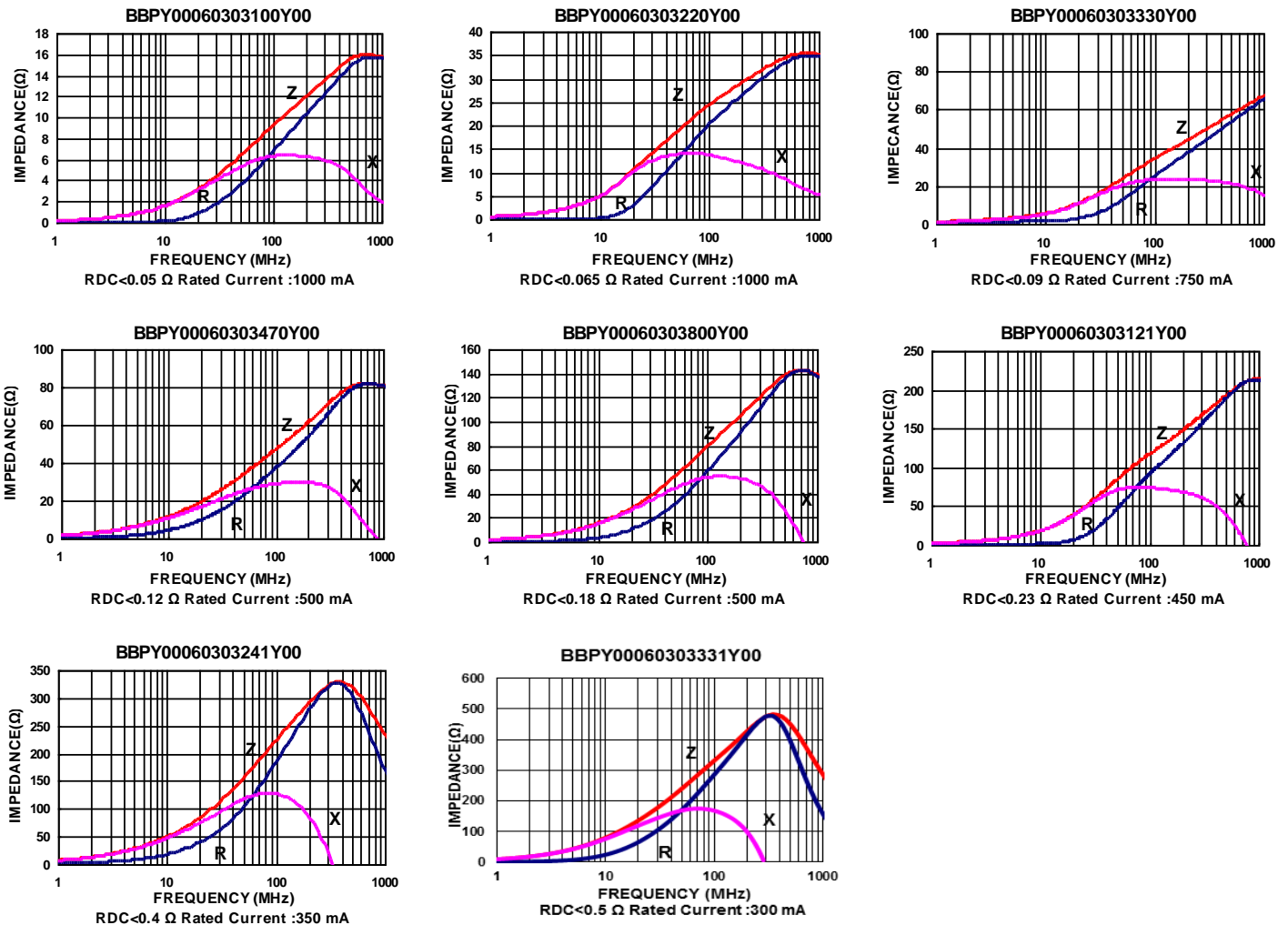
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBPY00060303100Y00 | 10                                 | 100                     | 0.050                   | 1000                      |
| BBPY00060303220Y00 | 22                                 | 100                     | 0.065                   | 1000                      |
| BBPY00060303330Y00 | 33                                 | 100                     | 0.090                   | 750                       |
| BBPY00060303470Y00 | 47                                 | 100                     | 0.120                   | 500                       |
| BBPY00060303800Y00 | 80                                 | 100                     | 0.180                   | 500                       |
| BBPY00060303121Y00 | 120                                | 100                     | 0.230                   | 450                       |
| BBPY00060303241Y00 | 240                                | 100                     | 0.400                   | 350                       |
| BBPY00060303331Y00 | 330                                | 100                     | 0.500                   | 300                       |

**Note:** When ordering, please specify tolerance code. Tolerance : Y= $\pm 25\%$

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

## Test Instruments : Agilent E4991A Impedance / Material Analyzer



Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin approval. Please contact our sales department before ordering.

# SMD Multilayer Ferrite Chip Beads – BBPY Series

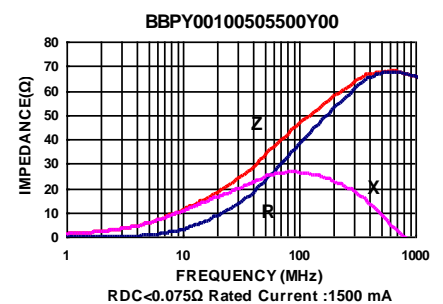
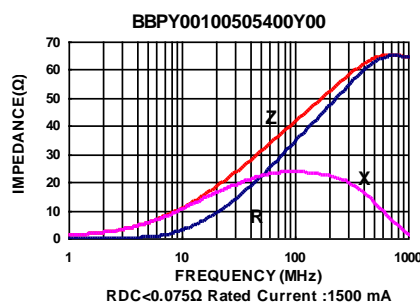
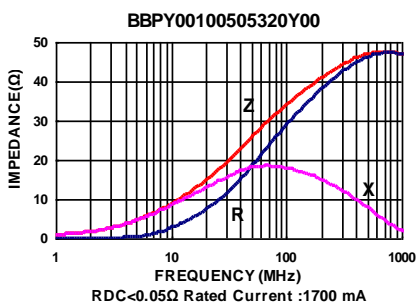
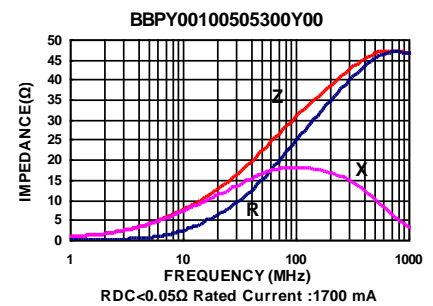
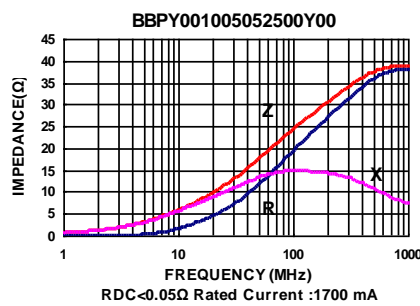
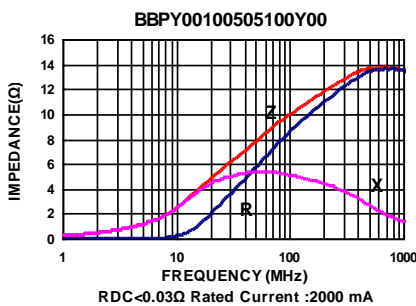
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBPY00100505100Y00 | 10                                 | 100                     | 0.03                    | 2000                      |
| BBPY00100505250Y00 | 25                                 | 100                     | 0.05                    | 1700                      |
| BBPY00100505300Y00 | 30                                 | 100                     | 0.05                    | 1700                      |
| BBPY00100505320Y00 | 32                                 | 100                     | 0.05                    | 1700                      |
| BBPY00100505400Y00 | 40                                 | 100                     | 0.075                   | 1500                      |
| BBPY00100505500Y00 | 50                                 | 100                     | 0.075                   | 1500                      |
| BBPY00100505600Y00 | 60                                 | 100                     | 0.075                   | 1500                      |
| BBPY00100505680Y00 | 68                                 | 100                     | 0.09                    | 1200                      |
| BBPY00100505700Y00 | 70                                 | 100                     | 0.09                    | 1200                      |
| BBPY00100505800Y00 | 80                                 | 100                     | 0.09                    | 1200                      |
| BBPY00100505101Y00 | 100                                | 100                     | 0.09                    | 1200                      |
| BBPY00100505121Y00 | 120                                | 100                     | 0.09                    | 1400                      |
| BBPY00100505151Y00 | 150                                | 100                     | 0.14                    | 1400                      |
| BBPY00100505181Y00 | 180                                | 100                     | 0.14                    | 900                       |
| BBPY00100505221Y00 | 220                                | 100                     | 0.18                    | 1100                      |
| BBPY00100505601Y00 | 600                                | 100                     | 0.34                    | 700                       |
| BBPY00100505102Y00 | 1000                               | 100                     | 0.49                    | 500                       |

**Note:** When ordering, please specify tolerance code. Tolerance : Y= $\pm 25\%$

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

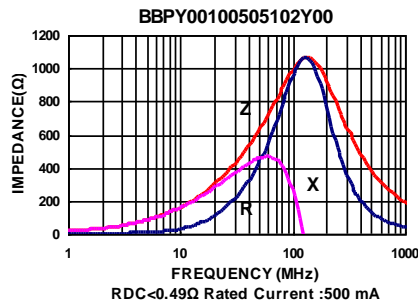
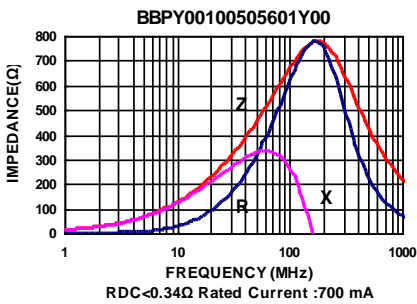
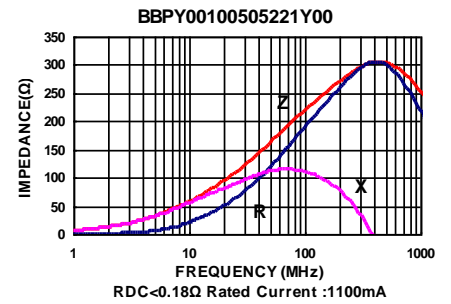
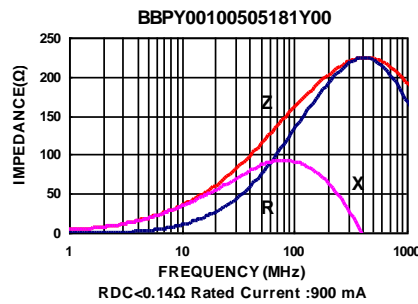
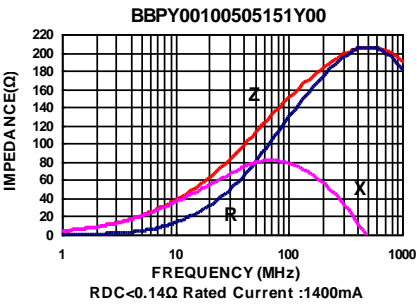
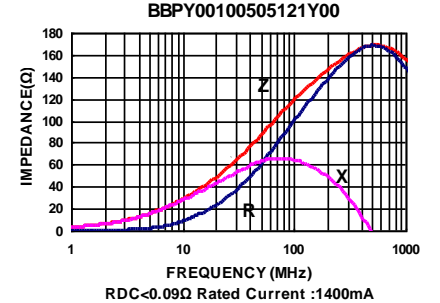
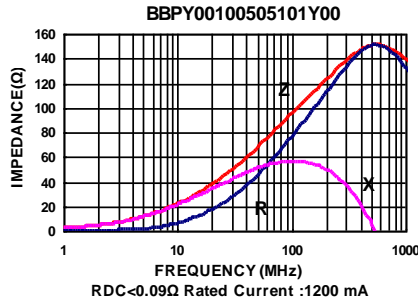
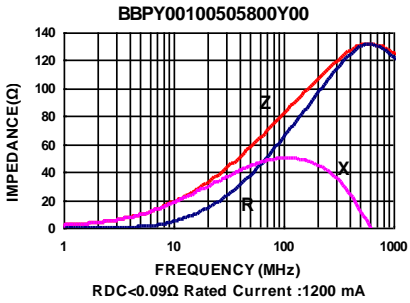
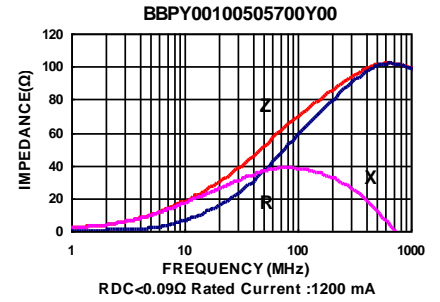
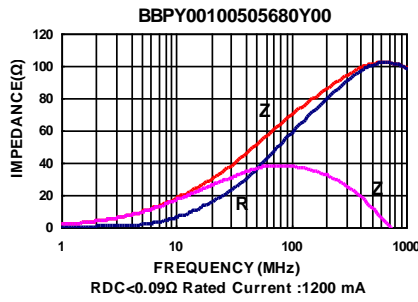
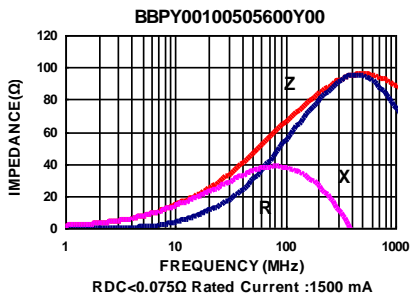
## Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBPY Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer



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## SMD Multilayer Ferrite Chip Beads – BBPY Series

### Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBPY00160808100Y00 | 10                                 | 100                     | 0.020                   | 4000                      |
| BBPY00160808110Y00 | 11                                 | 100                     | 0.020                   | 4000                      |
| BBPY00160808190Y00 | 19                                 | 100                     | 0.03                    | 3000                      |
| BBPY00160808220Y00 | 22                                 | 100                     | 0.030                   | 3000                      |
| BBPY00160808250Y00 | 25                                 | 100                     | 0.03                    | 3000                      |
| BBPY00160808260Y00 | 26                                 | 100                     | 0.03                    | 3000                      |
| BBPY00160808300Y00 | 30                                 | 100                     | 0.030                   | 3000                      |
| BBPY00160808330Y00 | 33                                 | 100                     | 0.035                   | 3000                      |
| BBPY00160808400Y00 | 40                                 | 100                     | 0.035                   | 3000                      |
| BBPY00160808470Y00 | 47                                 | 100                     | 0.04                    | 3000                      |
| BBPY00160808500Y00 | 50                                 | 100                     | 0.04                    | 3000                      |
| BBPY00160808600Y00 | 60                                 | 100                     | 0.040                   | 3000                      |
| BBPY00160808680Y00 | 68                                 | 100                     | 0.05                    | 2500                      |
| BBPY00160808700Y00 | 70                                 | 100                     | 0.05                    | 2500                      |
| BBPY00160808750Y00 | 75                                 | 100                     | 0.05                    | 2500                      |
| BBPY00160808800Y00 | 80                                 | 100                     | 0.050                   | 2500                      |
| BBPY00160808101Y00 | 100                                | 100                     | 0.050                   | 2500                      |
| BBPY00160808121Y00 | 120                                | 100                     | 0.080                   | 2500                      |
| BBPY00160808151Y00 | 150                                | 100                     | 0.085                   | 2000                      |
| BBPY00160808181Y00 | 180                                | 100                     | 0.090                   | 2000                      |
| BBPY00160808201Y00 | 200                                | 100                     | 0.095                   | 2000                      |
| BBPY00160808221Y00 | 220                                | 100                     | 0.100                   | 2000                      |
| BBPY00160808241Y00 | 240                                | 100                     | 0.12                    | 1500                      |
| BBPY00160808301Y00 | 300                                | 100                     | 0.120                   | 1500                      |
| BBPY00160808331Y00 | 330                                | 100                     | 0.120                   | 1500                      |
| BBPY00160808471Y00 | 470                                | 100                     | 0.150                   | 1500                      |
| BBPY00160808601Y00 | 600                                | 100                     | 0.200                   | 1000                      |
| BBPY00160808102Y00 | 1000                               | 100                     | 0.250                   | 800                       |
| BBPY00160808122Y00 | 1200                               | 100                     | 0.250                   | 800                       |
| BBPY00160808152Y00 | 1500                               | 100                     | 0.400                   | 500                       |

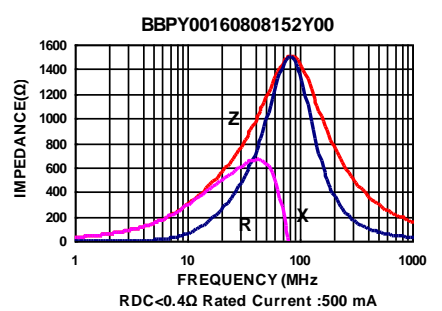
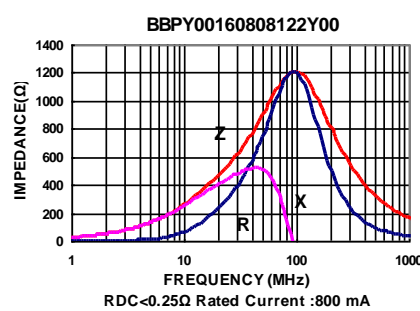
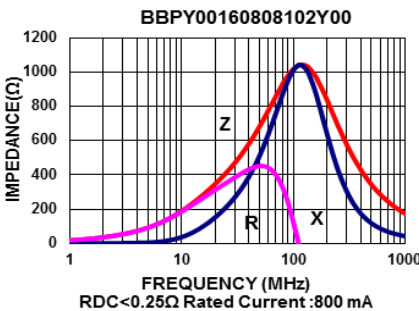
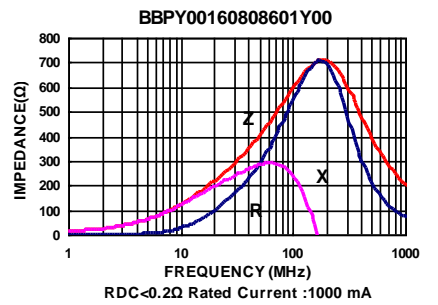
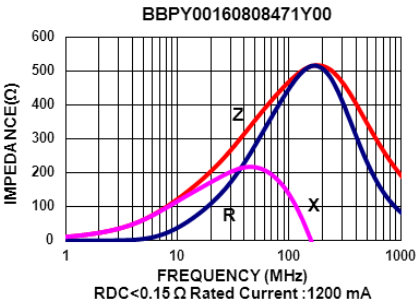
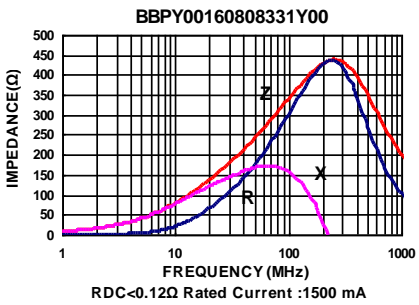
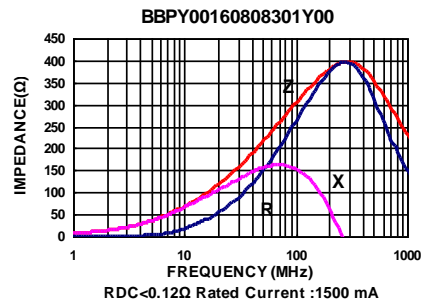
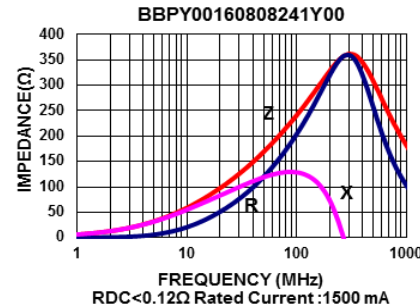
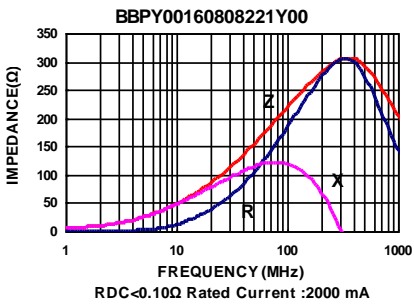
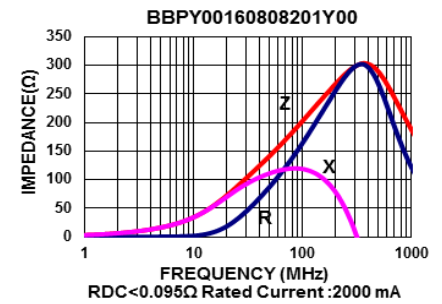
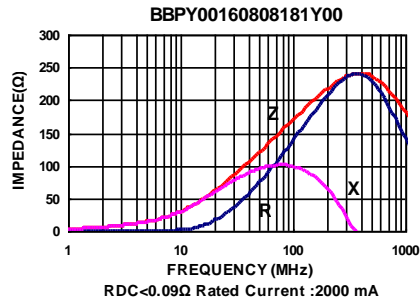
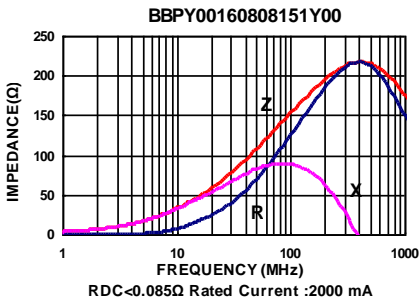
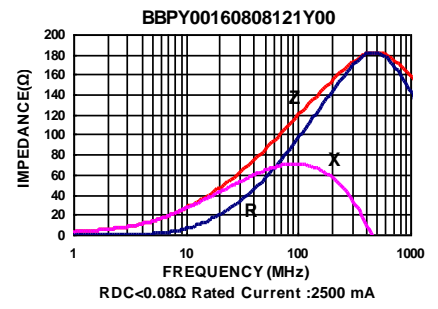
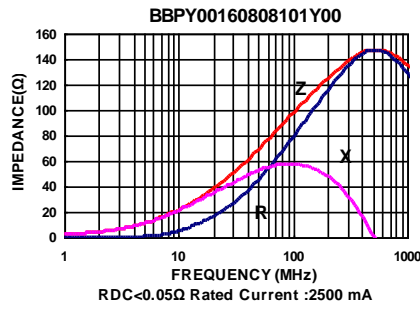
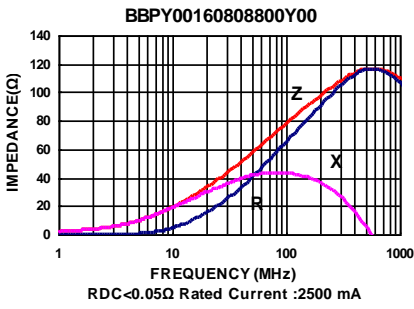
**Note: When ordering, please specify tolerance code. Tolerance : Y= $\pm 25\%$**

- Operating temperature range - 55°C~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502



# SMD Multilayer Ferrite Chip Beads – BBPY Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBPY Series

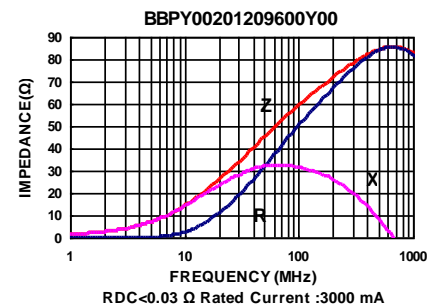
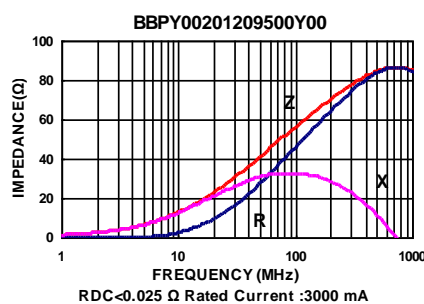
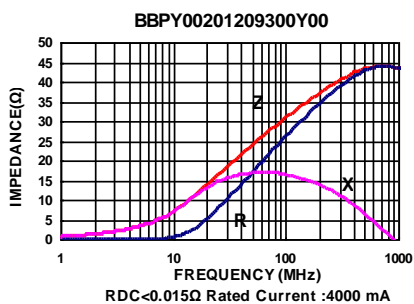
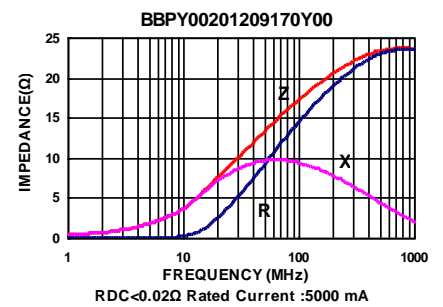
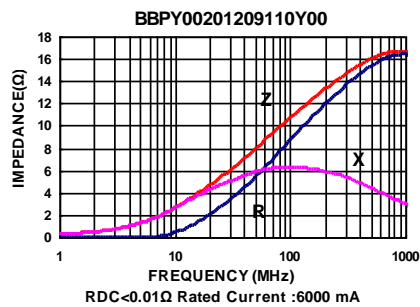
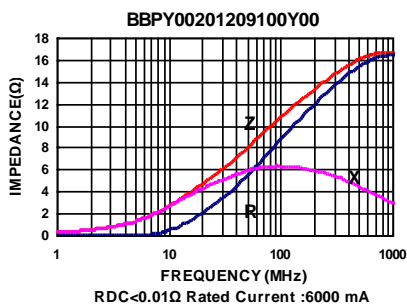
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBPY00201209100Y00 | 10                                 | 100                     | 0.01                    | 6000                      |
| BBPY00201209110Y00 | 11                                 | 100                     | 0.01                    | 6000                      |
| BBPY00201209170Y00 | 17                                 | 100                     | 0.02                    | 5000                      |
| BBPY00201209300Y00 | 30                                 | 100                     | 0.015                   | 4000                      |
| BBPY00201209500Y00 | 50                                 | 100                     | 0.025                   | 3000                      |
| BBPY00201209600Y00 | 60                                 | 100                     | 0.03                    | 3000                      |
| BBPY00201209700Y00 | 70                                 | 100                     | 0.04                    | 3000                      |
| BBPY00201209800Y00 | 80                                 | 100                     | 0.04                    | 3000                      |
| BBPY00201209101Y00 | 100                                | 100                     | 0.04                    | 3000                      |
| BBPY00201209121Y00 | 120                                | 100                     | 0.04                    | 3000                      |
| BBPY00201209221Y00 | 220                                | 100                     | 0.08                    | 2000                      |
| BBPY00201209301Y00 | 300                                | 100                     | 0.08                    | 2000                      |
| BBPY00201209331Y00 | 330                                | 100                     | 0.08                    | 2000                      |
| BBPY00201209471Y00 | 470                                | 100                     | 0.10                    | 2000                      |
| BBPY00201209601Y00 | 600                                | 100                     | 0.10                    | 2000                      |
| BBPY00201209102Y00 | 1000                               | 100                     | 0.12                    | 1500                      |
| BBPY00201209152Y00 | 1500                               | 100                     | 0.30                    | 1000                      |

**Note:** When ordering, please specify tolerance code. Tolerance : Y= $\pm 25\%$

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :
  - Z : HP4291A
  - RDC : HP4338B or CHEN HWA 502

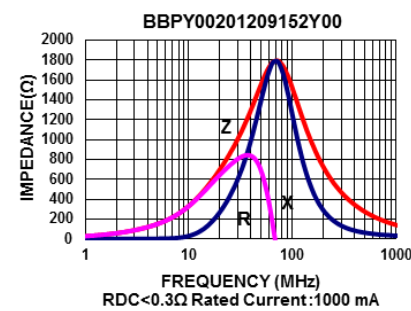
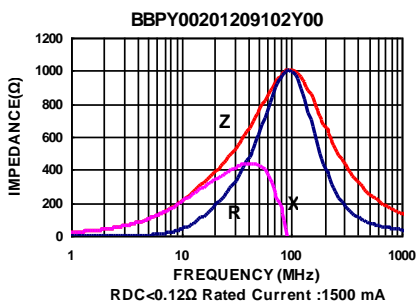
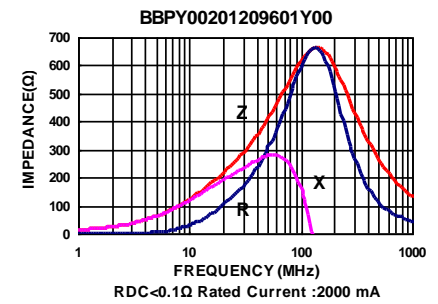
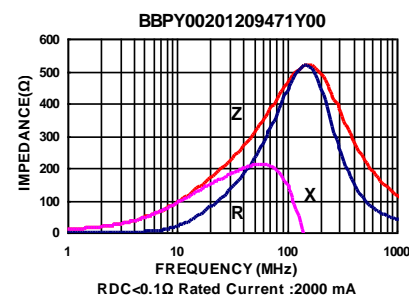
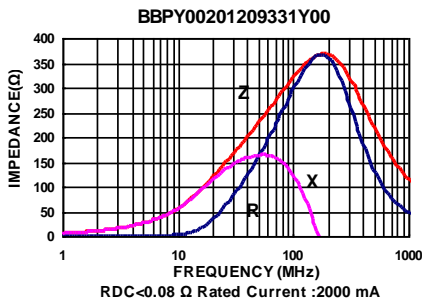
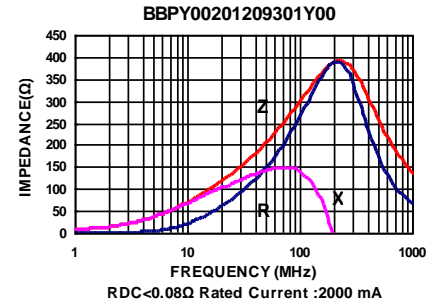
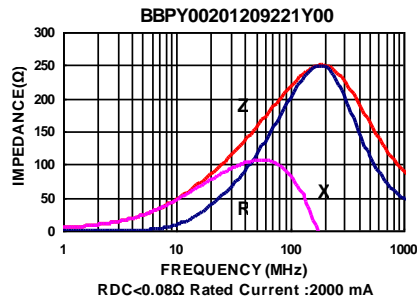
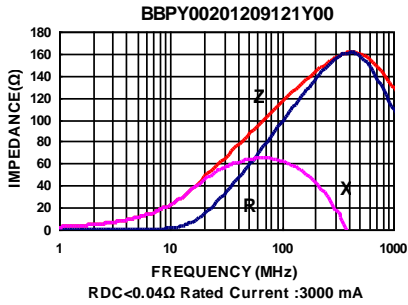
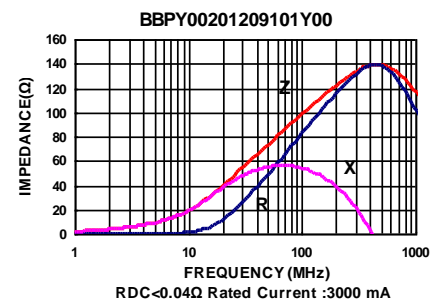
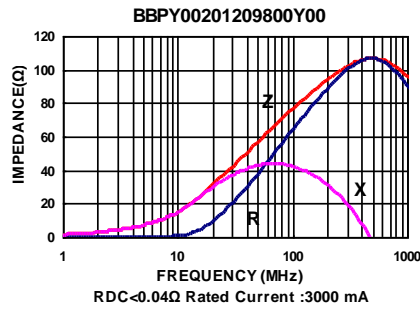
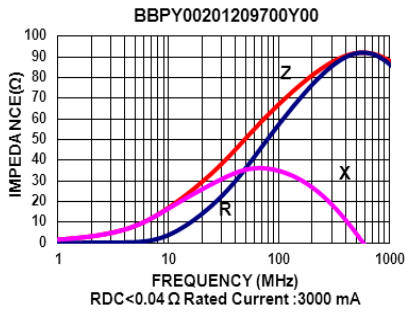
## Test Instruments : Agilent E4991A Impedance / Material Analyzer



Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin approval. Please contact our sales department before ordering.

# SMD Multilayer Ferrite Chip Beads – BBPY Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer



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## SMD Multilayer Ferrite Chip Beads – BBPY Series

### Electrical Characteristics

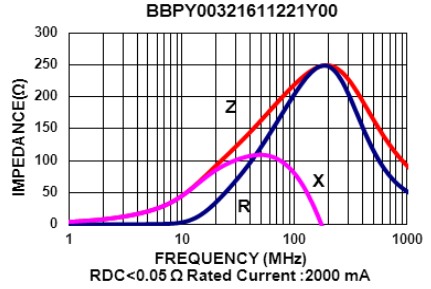
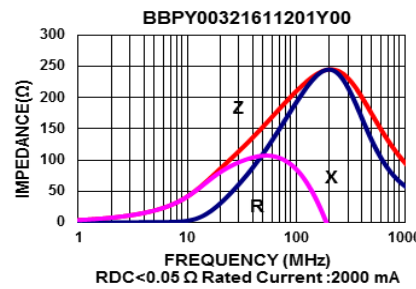
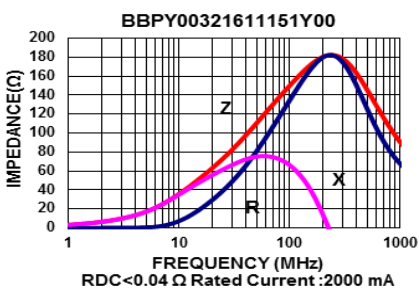
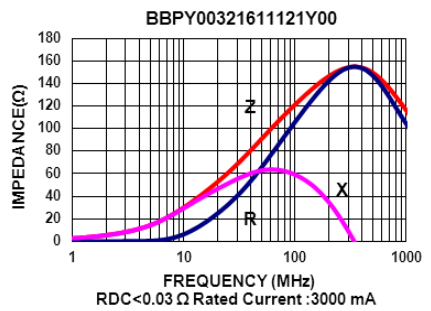
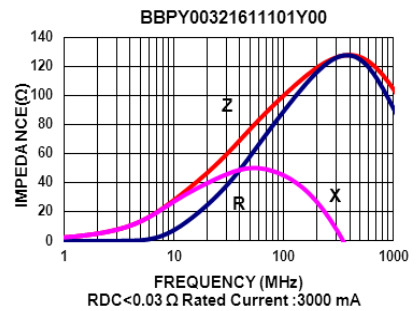
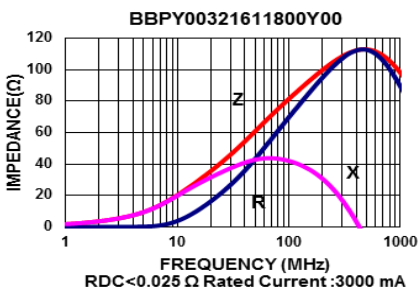
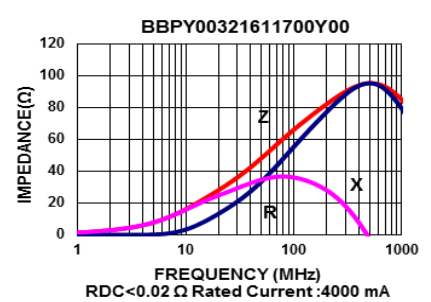
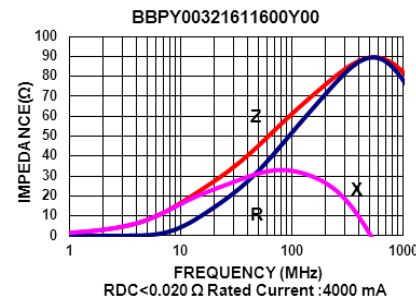
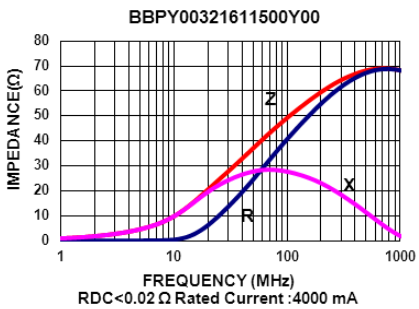
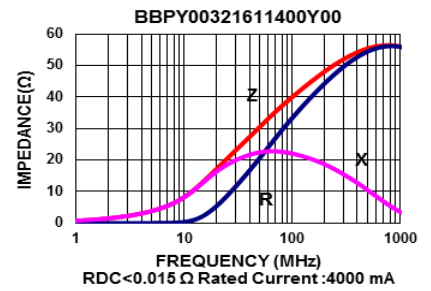
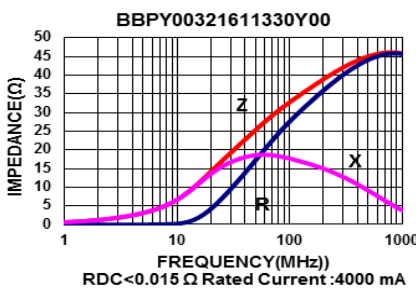
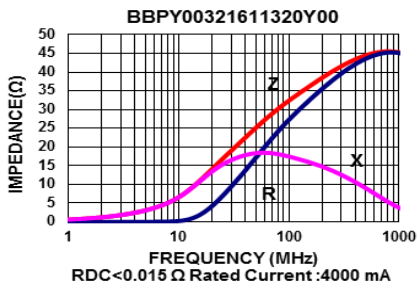
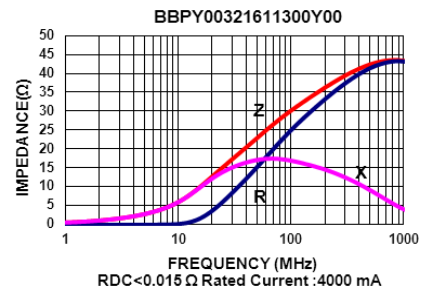
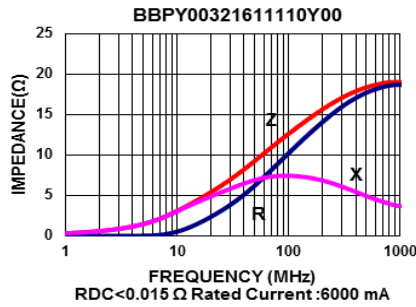
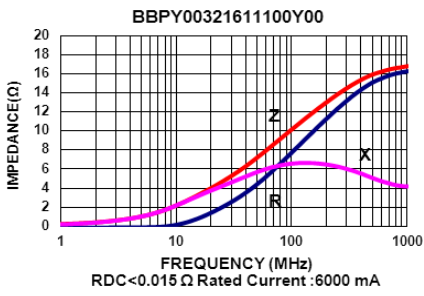
| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBPY00321611100Y00 | 10                                 | 100                     | 0.015                   | 6000                      |
| BBPY00321611110Y00 | 11                                 | 100                     | 0.015                   | 6000                      |
| BBPY00321611300Y00 | 30                                 | 100                     | 0.015                   | 4000                      |
| BBPY00321611320Y00 | 32                                 | 100                     | 0.015                   | 4000                      |
| BBPY00321611330Y00 | 33                                 | 100                     | 0.015                   | 4000                      |
| BBPY00321611400Y00 | 40                                 | 100                     | 0.015                   | 4000                      |
| BBPY00321611500Y00 | 50                                 | 100                     | 0.02                    | 4000                      |
| BBPY00321611600Y00 | 60                                 | 100                     | 0.02                    | 4000                      |
| BBPY00321611700Y00 | 70                                 | 100                     | 0.02                    | 4000                      |
| BBPY00321611800Y00 | 80                                 | 100                     | 0.025                   | 3000                      |
| BBPY00321611101Y00 | 100                                | 100                     | 0.03                    | 3000                      |
| BBPY00321611121Y00 | 120                                | 100                     | 0.03                    | 3000                      |
| BBPY00321611151Y00 | 150                                | 100                     | 0.04                    | 2000                      |
| BBPY00321611201Y00 | 200                                | 100                     | 0.05                    | 2000                      |
| BBPY00321611221Y00 | 220                                | 100                     | 0.05                    | 2000                      |
| BBPY00321611301Y00 | 300                                | 100                     | 0.06                    | 2000                      |
| BBPY00321611331Y00 | 330                                | 100                     | 0.06                    | 2000                      |
| BBPY00321611391Y00 | 390                                | 100                     | 0.06                    | 2000                      |
| BBPY00321611401Y00 | 400                                | 100                     | 0.1                     | 2000                      |
| BBPY00321611471Y00 | 470                                | 100                     | 0.1                     | 2000                      |
| BBPY00321611501Y00 | 500                                | 100                     | 0.1                     | 2000                      |
| BBPY00321611601Y00 | 600                                | 100                     | 0.1                     | 2000                      |
| BBPY00321611102Y00 | 1000                               | 50                      | 0.15                    | 1200                      |
| BBPY00321611122Y00 | 1200                               | 50                      | 0.18                    | 1000                      |
| BBPY00321611152Y00 | 1500                               | 50                      | 0.2                     | 800                       |

**Note: When ordering, please specify tolerance code. Tolerance : Y= $\pm 25\%$**

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

# SMD Multilayer Ferrite Chip Beads – BBPY Series

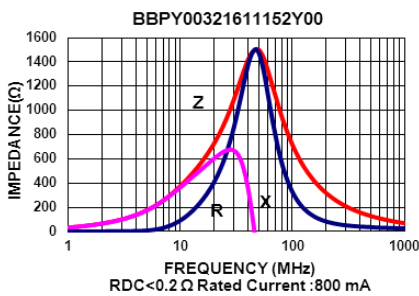
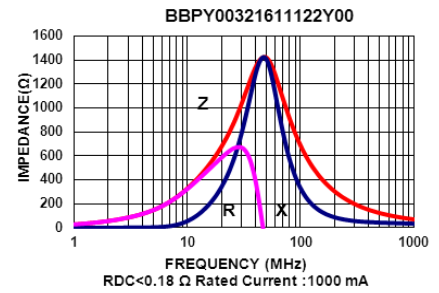
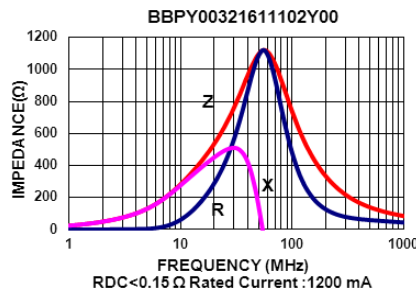
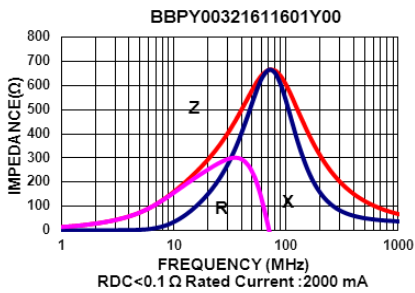
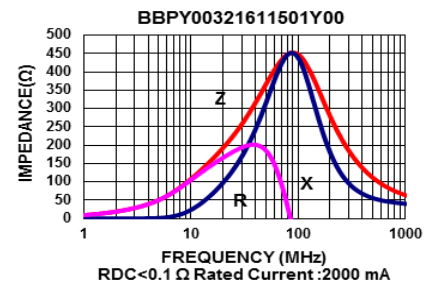
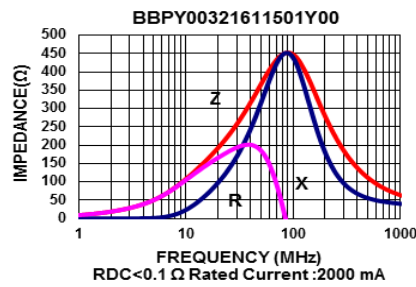
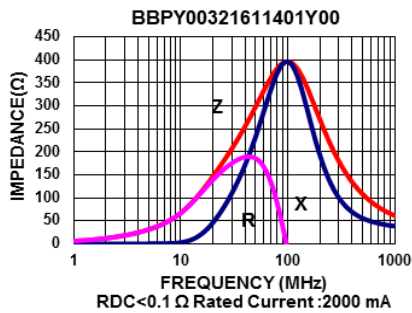
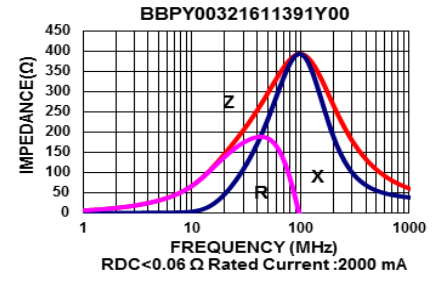
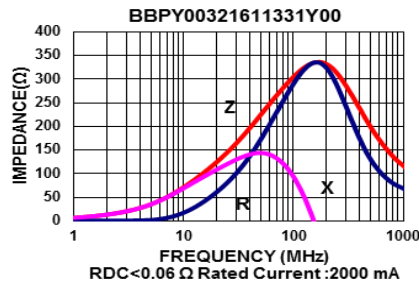
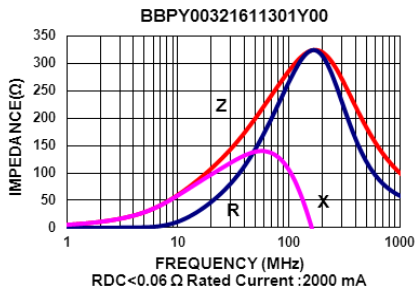
Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBPY Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBPY Series

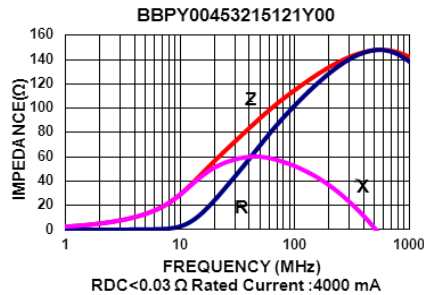
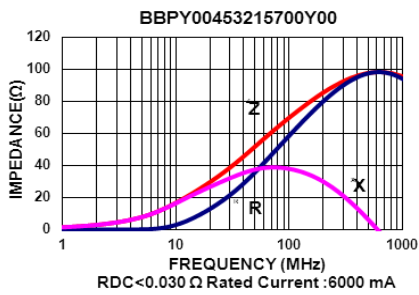
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | DC Resistance<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-----------------------------------|---------------------------|
| BBPY00453215700Y00 | 70                                 | 100                     | 0.030                             | 6000                      |
| BBPY00453215121Y00 | 120                                | 100                     | 0.030                             | 4000                      |

**Note: When ordering, please specify tolerance code. Tolerance : Y= $\pm 25\%$**

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

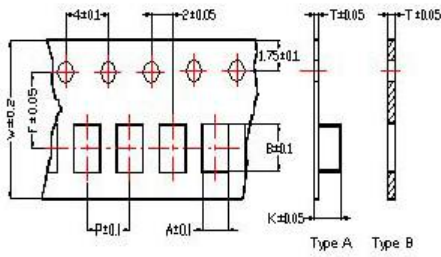
**Test Instruments :** Agilent E4991A Impedance / Material Analyzer



# SMD Multilayer Ferrite Chip Beads

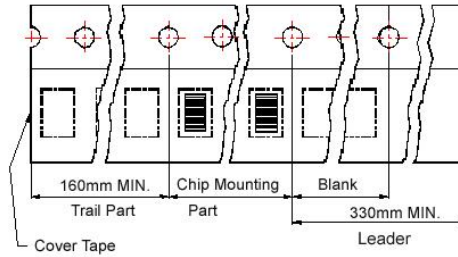
## Packaging Specifications

### Tape Dimensions

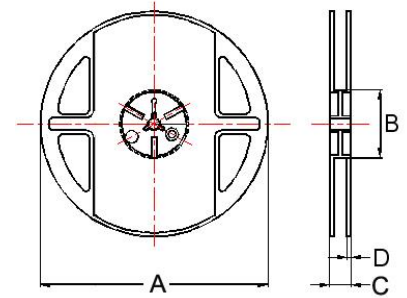


### Tape Material

Carrier Tape: Polycarbonate (Tape A)  
Carrier Tape: Paper (Tape B)  
Cover Tape: Polystyrene



### Reel Dimensions



- ① : BBSY/BBSJ/BBNQ/BBPY    ③ : BBUP
- ② : BBSY/BBSJ/BBNQ/BBPY/BBUP/BBFY/BBFJ
- ④ : BBBK/BBSJ/BBGK/BBPY/BBNQ/BBUP/BBHV
- ⑤ : BBBK/BBGK/BBPY/BBUP
- ⑥ : BBSY/BBBK/BBPY/BBUP
- ⑦ : BBPY/BBUP

### Dimensions in mm

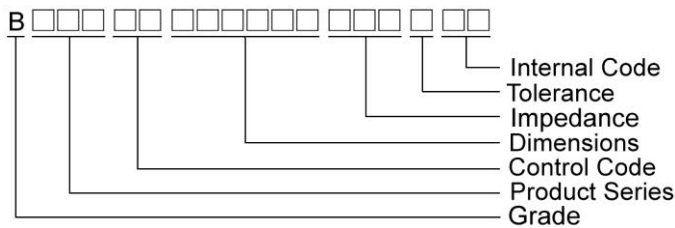
| TYPE    | Tape Dimensions |      |      |     |     |     |      |      | Reel Dimensions |    |    |   | Quantity<br>PCS / REEL |
|---------|-----------------|------|------|-----|-----|-----|------|------|-----------------|----|----|---|------------------------|
|         | A               | B    | T    | W   | P   | F   | K    | Tape | A               | B  | C  | D |                        |
| ①060303 | 0.37            | 0.67 | 0.42 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 10 | 2 | 15000                  |
| ②100505 | 0.62            | 1.12 | 0.60 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 10000                  |
| ③160805 | 1.05            | 1.85 | 0.60 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 10000                  |
| ④160808 | 1.05            | 1.85 | 0.95 | 8.0 | 4.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 4000                   |
| ⑤201209 | 1.50            | 2.30 | 0.97 | 8.0 | 4.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 4000                   |
| ⑥321611 | 1.88            | 3.50 | 0.22 | 8.0 | 4.0 | 3.5 | 1.27 | A    | 178             | 60 | 12 | 2 | 3000                   |
| ⑦453215 | 3.66            | 4.95 | 0.24 | 12  | 8.0 | 5.5 | 1.85 | A    | 178             | 60 | 14 | 2 | 1000                   |

## Multilayer Ferrite Chip Beads

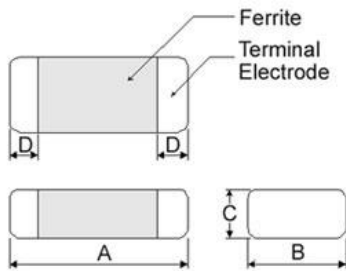


Chilisin offers a wide range of multi-layered ferrite chip beads with various sizes, frequency characteristics, and impedance values for EMI solutions. These ferrite formulas are used to compose seven types of EMI suppression chip beads: BBSY, BBBK, BBSJ, BBGK, BBPY, BBUP, BBNQ, BBFY, BBFJ and BBHV series.

### Product Identification



### Shape and Dimensions



Dimensions in mm

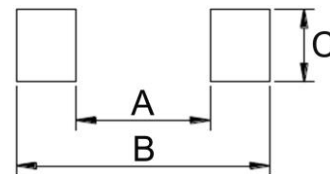
| TYPE    | A        | B         | C        | D         |
|---------|----------|-----------|----------|-----------|
| ①060303 | 0.6±0.03 | 0.30±0.03 | 0.3±0.03 | 0.15±0.05 |
| ②100505 | 1.0±0.10 | 0.50±0.10 | 0.5±0.10 | 0.25±0.10 |
| ③160805 | 1.6±0.15 | 0.80±0.15 | 0.5±0.15 | 0.3±0.2   |
| ④160808 | 1.6±0.15 | 0.80±0.15 | 0.8±0.15 | 0.3±0.2   |
| ⑤201209 | 2.0±0.20 | 1.25±0.20 | 0.9±0.20 | 0.5±0.3   |
| ⑥321611 | 3.2±0.20 | 1.60±0.20 | 1.1±0.20 | 0.5±0.3   |
| ⑦453215 | 4.5±0.25 | 3.20±0.20 | 1.5±0.20 | 0.5±0.3   |

- ① : BBSY / BBSJ / BBNQ / BBPY
- ② : BBSY / BBSJ / BBNQ / BBPY / BBUP / BBFY / BBFJ
- ③ : BBUP ④ : BBBK / BBSJ / BBGK / BBPY / BBNQ / BBUP / BBHV
- ⑤ : BBBK / BBGK / BBPY / BBUP ⑥ : BBSY / BBBK / BBPY / BBUP
- ⑦ : BBPY / BBUP

### Dimension Conversion

| Code   | Dimension in mm<br>(AxBxC) | EIA  |
|--------|----------------------------|------|
| 060303 | 0.6X0.3X0.3                | 0201 |
| 100505 | 1.0X0.5X0.5                | 0402 |
| 160805 | 1.6x0.8x0.5                | 0603 |
| 160808 | 1.6x0.8x0.8                | 0603 |
| 201209 | 2.0x1.2x0.9                | 0805 |
| 321611 | 3.2x1.6x1.1                | 1206 |
| 453215 | 4.5x3.2x1.5                | 1812 |

### Recommended Pattern



Dimensions in mm

| TYPE    | A         | B           | C         |
|---------|-----------|-------------|-----------|
| ①060303 | 0.2 ~ 0.3 | 0.75 ~ 1.05 | 0.3       |
| ②100505 | 0.4       | 1.2 ~ 1.4   | 0.5       |
| ③160805 | 0.7 ~ 0.8 | 1.8 ~ 2.0   | 0.6 ~ 0.8 |
| ④160808 | 0.7 ~ 0.8 | 1.8 ~ 2.0   | 0.6 ~ 0.8 |
| ⑤201209 | 1.0 ~ 1.2 | 2.6 ~ 4.0   | 1.0 ~ 1.4 |
| ⑥321611 | 2.0 ~ 2.4 | 4.2 ~ 5.2   | 1.3 ~ 1.9 |
| ⑦453215 | 3.0       | 5.5 ~ 6.5   | 2.4       |

- \* Don't apply narrower pattern than listed above to BBPY and BBUP  
Narrow pattern might cause excessive heat or open circuit.



# SMD Multilayer Ferrite Chip Beads – BBHV Series

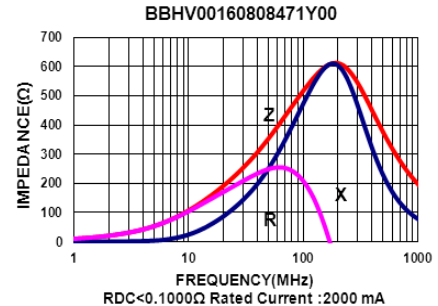
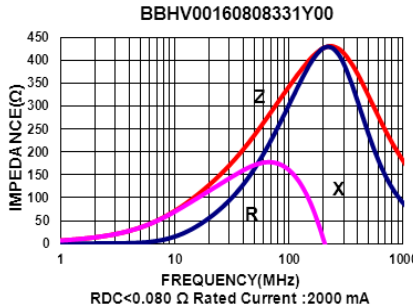
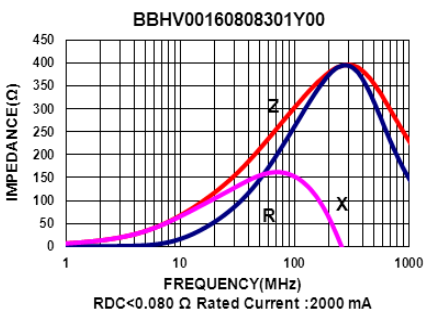
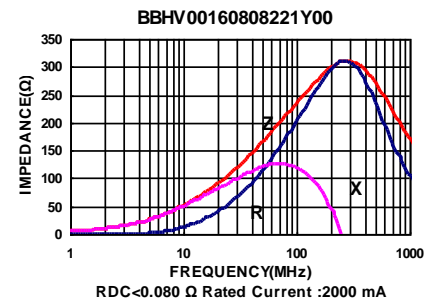
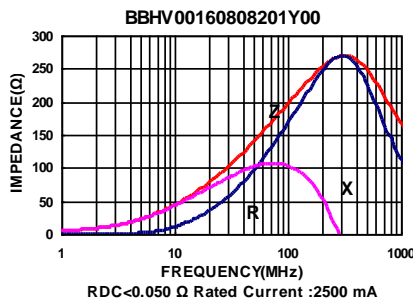
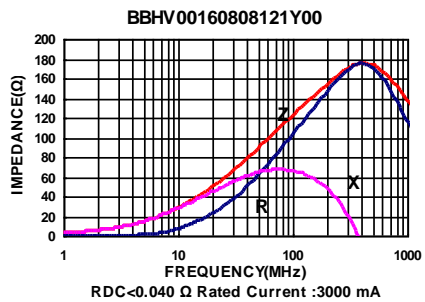
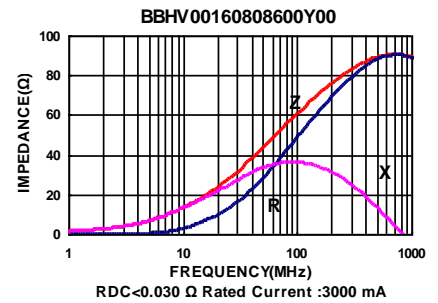
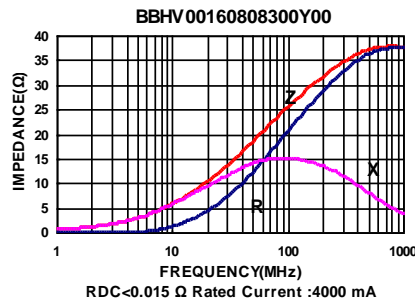
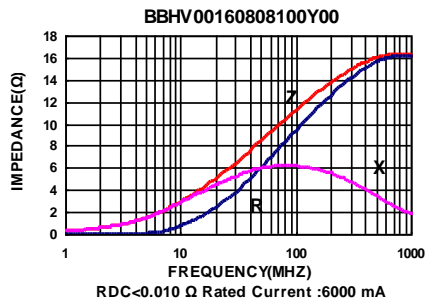
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBHV00160808100Y00 | 10                                 | 100                     | 0.010                   | 6000                      |
| BBHV00160808300Y00 | 30                                 | 100                     | 0.015                   | 4000                      |
| BBHV00160808600Y00 | 60                                 | 100                     | 0.030                   | 3000                      |
| BBHV00160808121Y00 | 120                                | 100                     | 0.040                   | 3000                      |
| BBHV00160808201Y00 | 200                                | 100                     | 0.050                   | 2500                      |
| BBHV00160808221Y00 | 220                                | 100                     | 0.080                   | 2000                      |
| BBHV00160808301Y00 | 300                                | 100                     | 0.080                   | 2000                      |
| BBHV00160808331Y00 | 330                                | 100                     | 0.080                   | 2000                      |
| BBHV00160808471Y00 | 470                                | 100                     | 0.100                   | 2000                      |
| BBHV00160808601Y00 | 600                                | 100                     | 0.100                   | 2000                      |

**Note: When ordering, please specify tolerance code. Tolerance : Y= $\pm 25\%$**

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

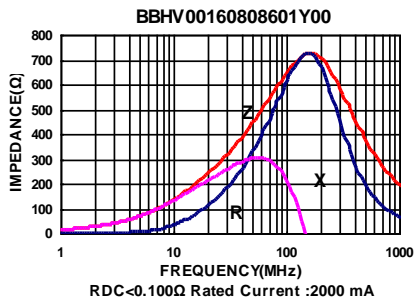
**Test Instruments : Agilent E4991A Impedance / Material Analyzer**



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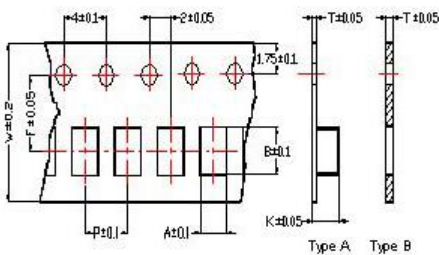
# SMD Multilayer Ferrite Chip Beads – BBHV Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer

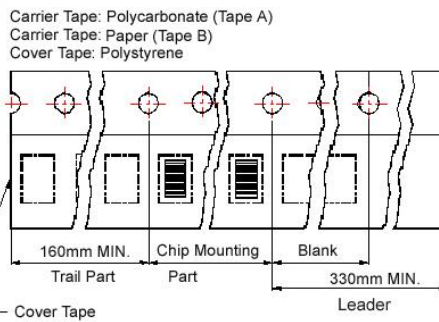


## Packaging Specifications

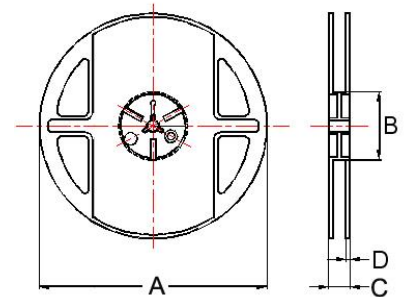
### Tape Dimensions



### Tape Material



### Reel Dimensions



- ① : BBSY/BBSJ/BBNQ/BBPY    ③ : BBUP
- ② : BBSY/BBSJ/BBNQ/BBPY/BBUP/BBFY/BBFJ
- ④ : BBBK/BBSJ/BBGK/BBPY/BBNQ/BBUP/BBHV
- ⑤ : BBBK/BBGK/BBPY/BBUP
- ⑥ : BBSY/BBBK/BBPY/BBUP
- ⑦ : BBPY/BBUP

### Dimensions in mm

| TYPE    | Tape Dimensions |      |      |     |     |     |      |      | Reel Dimensions |    |    |   | Quantity<br>PCS / REEL |
|---------|-----------------|------|------|-----|-----|-----|------|------|-----------------|----|----|---|------------------------|
|         | A               | B    | T    | W   | P   | F   | K    | Tape | A               | B  | C  | D |                        |
| ①060303 | 0.37            | 0.67 | 0.42 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 10 | 2 | 15000                  |
| ②100505 | 0.62            | 1.12 | 0.60 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 10000                  |
| ③160805 | 1.05            | 1.85 | 0.60 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 10000                  |
| ④160808 | 1.05            | 1.85 | 0.95 | 8.0 | 4.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 4000                   |
| ⑤201209 | 1.50            | 2.30 | 0.97 | 8.0 | 4.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 4000                   |
| ⑥321611 | 1.88            | 3.50 | 0.22 | 8.0 | 4.0 | 3.5 | 1.27 | A    | 178             | 60 | 12 | 2 | 3000                   |
| ⑦453215 | 3.66            | 4.95 | 0.24 | 12  | 8.0 | 5.5 | 1.85 | A    | 178             | 60 | 14 | 2 | 1000                   |

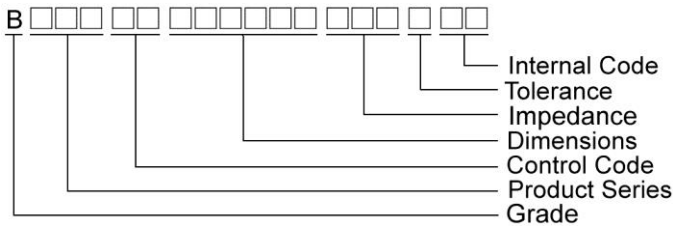
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## Multilayer Ferrite Chip Beads

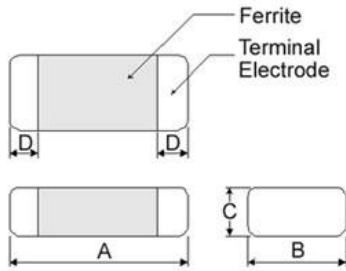


Chilisin offers a wide range of multi-layered ferrite chip beads with various sizes, frequency characteristics, and impedance values for EMI solutions. These ferrite formulas are used to compose seven types of EMI suppression chip beads: BBSY, BBBK, BBSJ, BBGK, BBPY, BBUP, BBNQ, BBFY, BBFJ and BBHV series.

### Product Identification



### Shape and Dimensions



Dimensions in mm

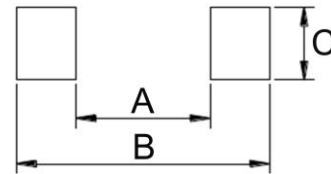
| TYPE    | A        | B         | C        | D         |
|---------|----------|-----------|----------|-----------|
| ①060303 | 0.6±0.03 | 0.30±0.03 | 0.3±0.03 | 0.15±0.05 |
| ②100505 | 1.0±0.10 | 0.50±0.10 | 0.5±0.10 | 0.25±0.10 |
| ③160805 | 1.6±0.15 | 0.80±0.15 | 0.5±0.15 | 0.3±0.2   |
| ④160808 | 1.6±0.15 | 0.80±0.15 | 0.8±0.15 | 0.3±0.2   |
| ⑤201209 | 2.0±0.20 | 1.25±0.20 | 0.9±0.20 | 0.5±0.3   |
| ⑥321611 | 3.2±0.20 | 1.60±0.20 | 1.1±0.20 | 0.5±0.3   |
| ⑦453215 | 4.5±0.25 | 3.20±0.20 | 1.5±0.20 | 0.5±0.3   |

- ① : BBSY / BBSJ / BBNQ / BBPY
- ② : BBSY / BBSJ / BBNQ / BBPY / BBUP / BBFY / BBFJ
- ③ : BBUP ④ : BBBK / BBSJ / BBGK / BBPY / BBNQ / BBUP / BBHV
- ⑤ : BBBK / BBGK / BBPY / BBUP ⑥ : BBSY / BBBK / BBPY / BBUP
- ⑦ : BBPY / BBUP

### Dimension Conversion

| Code   | Dimension in mm<br>(AxBxC) | EIA  |
|--------|----------------------------|------|
| 060303 | 0.6X0.3X0.3                | 0201 |
| 100505 | 1.0X0.5X0.5                | 0402 |
| 160805 | 1.6x0.8x0.5                | 0603 |
| 160808 | 1.6x0.8x0.8                | 0603 |
| 201209 | 2.0x1.2x0.9                | 0805 |
| 321611 | 3.2x1.6x1.1                | 1206 |
| 453215 | 4.5x3.2x1.5                | 1812 |

### Recommended Pattern



Dimensions in mm

| TYPE    | A         | B           | C         |
|---------|-----------|-------------|-----------|
| ①060303 | 0.2 ~ 0.3 | 0.75 ~ 1.05 | 0.3       |
| ②100505 | 0.4       | 1.2 ~ 1.4   | 0.5       |
| ③160805 | 0.7 ~ 0.8 | 1.8 ~ 2.0   | 0.6 ~ 0.8 |
| ④160808 | 0.7 ~ 0.8 | 1.8 ~ 2.0   | 0.6 ~ 0.8 |
| ⑤201209 | 1.0 ~ 1.2 | 2.6 ~ 4.0   | 1.0 ~ 1.4 |
| ⑥321611 | 2.0 ~ 2.4 | 4.2 ~ 5.2   | 1.3 ~ 1.9 |
| ⑦453215 | 3.0       | 5.5 ~ 6.5   | 2.4       |

\* Don't apply narrower pattern than listed above to BBPY and BBUP  
Narrow pattern might cause excessive heat or open circuit.

# SMD Multilayer Ferrite Chip Beads – BBUP Series

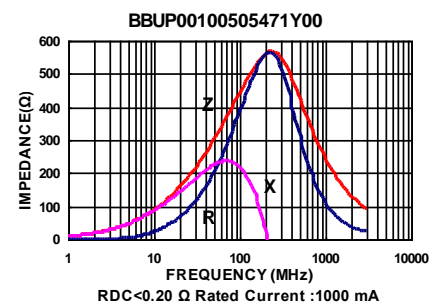
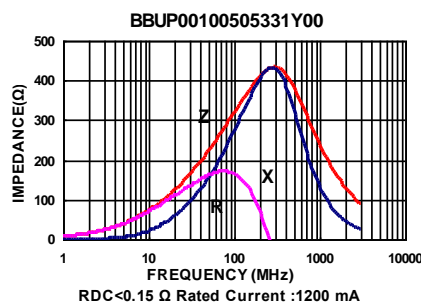
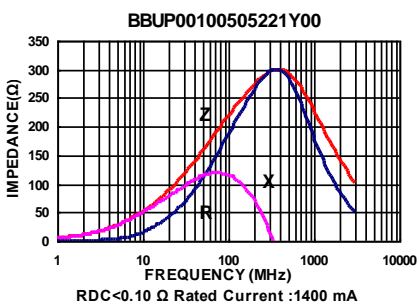
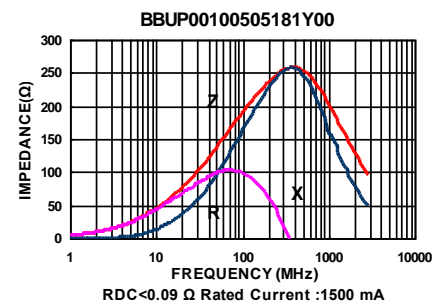
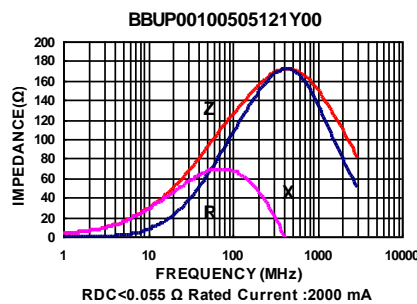
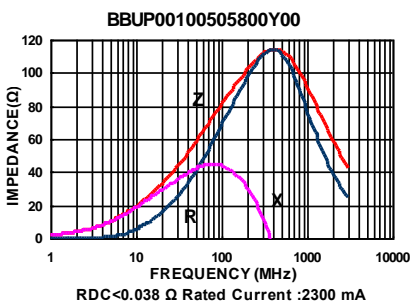
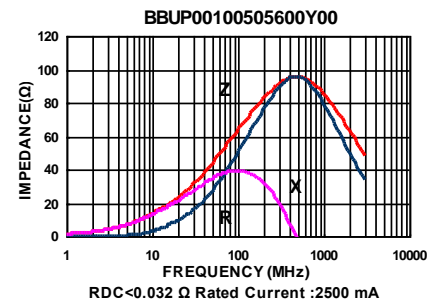
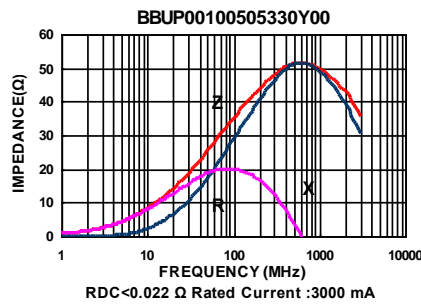
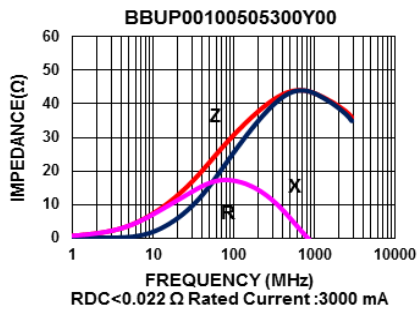
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBUP00100505300Y00 | 30                                 | 100                     | 0.022                   | 3000                      |
| BBUP00100505330Y00 | 33                                 | 100                     | 0.022                   | 3000                      |
| BBUP00100505600Y00 | 60                                 | 100                     | 0.032                   | 2500                      |
| BBUP00100505800Y00 | 80                                 | 100                     | 0.038                   | 2300                      |
| BBUP00100505121Y00 | 120                                | 100                     | 0.055                   | 2000                      |
| BBUP00100505181Y00 | 180                                | 100                     | 0.090                   | 1500                      |
| BBUP00100505221Y00 | 220                                | 100                     | 0.100                   | 1400                      |
| BBUP00100505331Y00 | 330                                | 100                     | 0.150                   | 1200                      |
| BBUP00100505471Y00 | 470                                | 100                     | 0.200                   | 1000                      |

**Note:** When ordering, please specify tolerance code. Tolerance : Y= $\pm 25\%$

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

## Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBUP Series

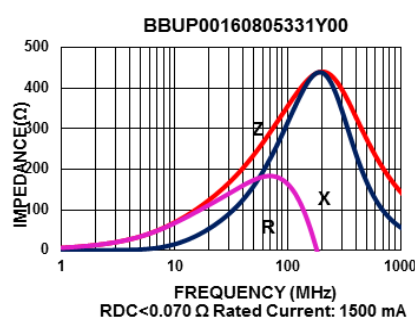
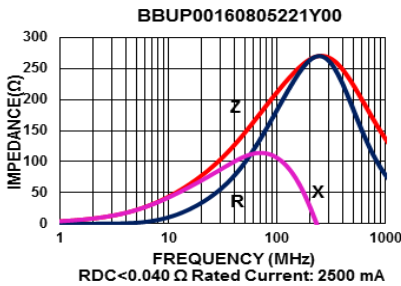
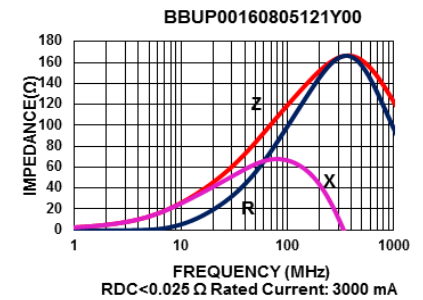
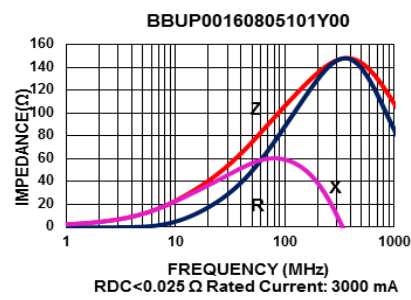
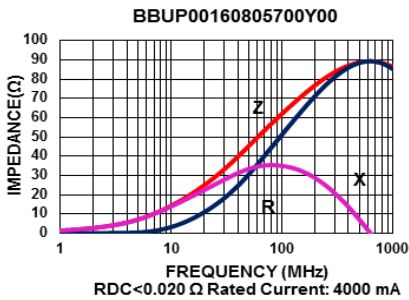
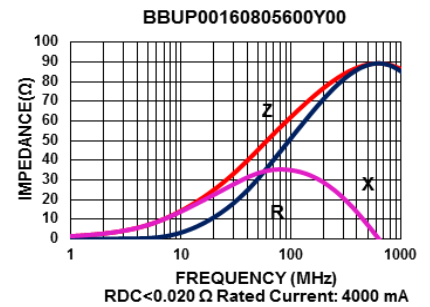
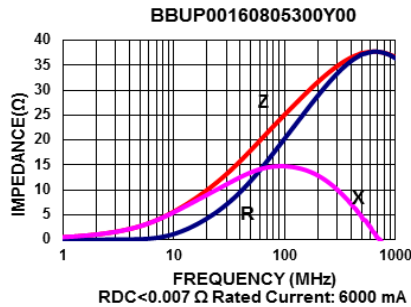
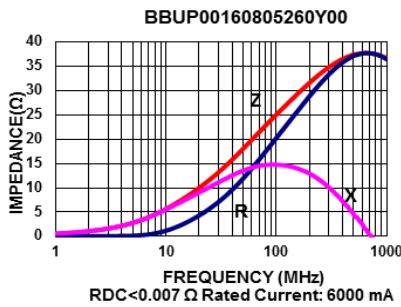
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBUP00160805260Y00 | 26                                 | 100                     | 0.007                   | 6000                      |
| BBUP00160805300Y00 | 30                                 | 100                     | 0.007                   | 6000                      |
| BBUP00160805600Y00 | 60                                 | 100                     | 0.020                   | 4000                      |
| BBUP00160805700Y00 | 70                                 | 100                     | 0.020                   | 4000                      |
| BBUP00160805101Y00 | 100                                | 100                     | 0.025                   | 3000                      |
| BBUP00160805121Y00 | 120                                | 100                     | 0.025                   | 3000                      |
| BBUP00160805221Y00 | 220                                | 100                     | 0.040                   | 2500                      |
| BBUP00160805331Y00 | 330                                | 100                     | 0.070                   | 1500                      |

**Note:** When ordering, please specify tolerance code. Tolerance : Y= $\pm 25\%$

- Operating temperature range - 55°C ~ 125°C (Including self - temperature rise)
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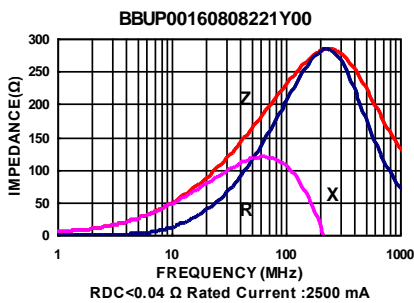
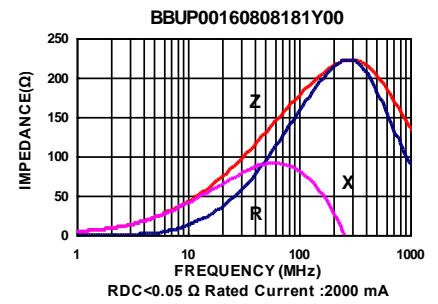
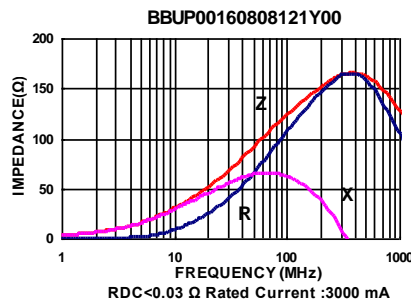
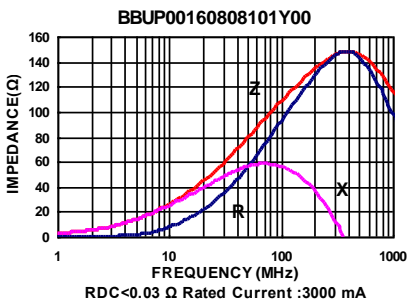
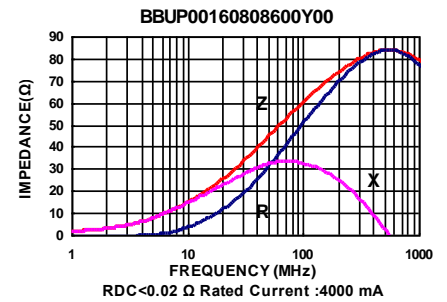
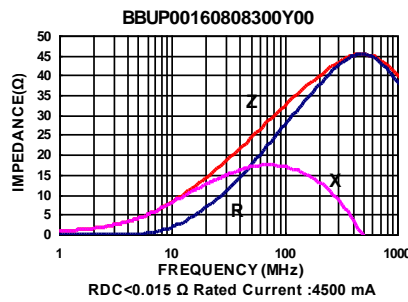
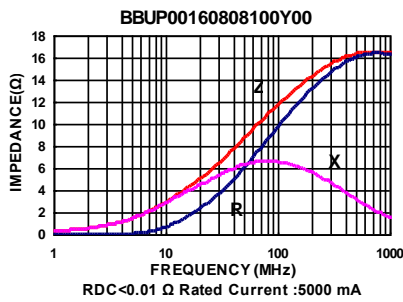
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBUP00160808100Y00 | 10                                 | 100                     | 0.010                   | 5000                      |
| BBUP00160808300Y00 | 30                                 | 100                     | 0.015                   | 4500                      |
| BBUP00160808600Y00 | 60                                 | 100                     | 0.020                   | 4000                      |
| BBUP00160808700Y00 | 70                                 | 100                     | 0.020                   | 4000                      |
| BBUP00160808101Y00 | 100                                | 100                     | 0.030                   | 3000                      |
| BBUP00160808121Y00 | 120                                | 100                     | 0.030                   | 3000                      |
| BBUP00160808181Y00 | 180                                | 100                     | 0.050                   | 2000                      |
| BBUP00160808221Y00 | 220                                | 100                     | 0.040                   | 2500                      |

Note: When ordering, please specify tolerance code. Tolerance : Y= $\pm 25\%$

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

## Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBUP Series

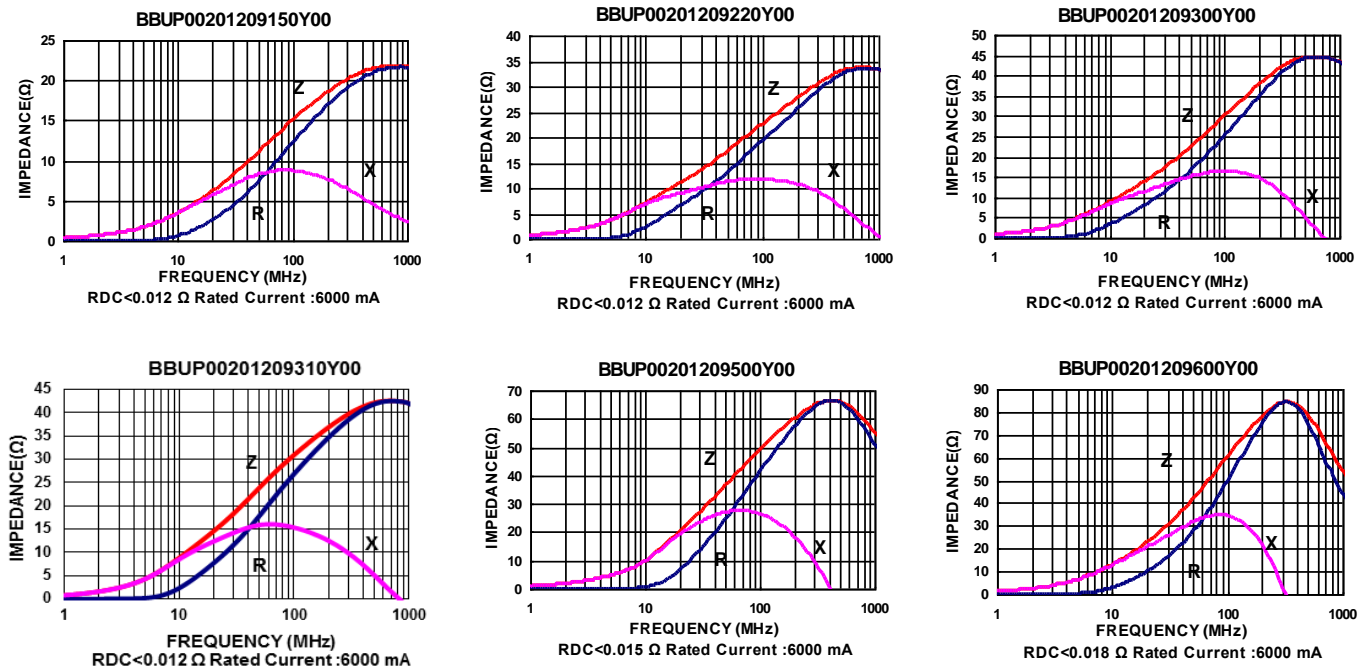
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBUP00201209150Y00 | 15                                 | 100                     | 0.012                   | 6000                      |
| BBUP00201209220Y00 | 22                                 | 100                     | 0.012                   | 6000                      |
| BBUP00201209300Y00 | 30                                 | 100                     | 0.012                   | 6000                      |
| BBUP00201209310Y00 | 31                                 | 100                     | 0.012                   | 6000                      |
| BBUP00201209500Y00 | 50                                 | 100                     | 0.015                   | 6000                      |
| BBUP00201209600Y00 | 60                                 | 100                     | 0.018                   | 6000                      |
| BBUP00201209800Y00 | 80                                 | 100                     | 0.02                    | 6000                      |
| BBUP00201209101Y00 | 100                                | 100                     | 0.02                    | 5000                      |
| BBUP00201209121Y00 | 120                                | 100                     | 0.02                    | 5000                      |
| BBUP00201209201Y00 | 200                                | 100                     | 0.04                    | 3000                      |
| BBUP00201209221Y00 | 220                                | 100                     | 0.04                    | 3000                      |
| BBUP00201209301Y00 | 300                                | 100                     | 0.05                    | 3000                      |
| BBUP00201209331Y00 | 330                                | 100                     | 0.05                    | 3000                      |

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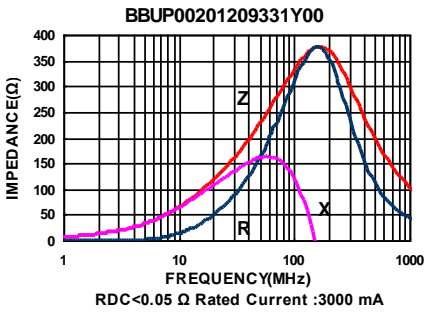
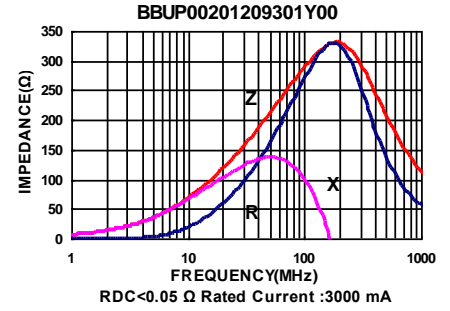
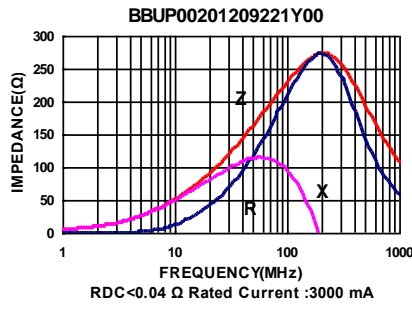
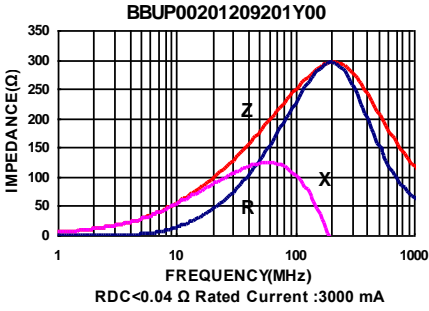
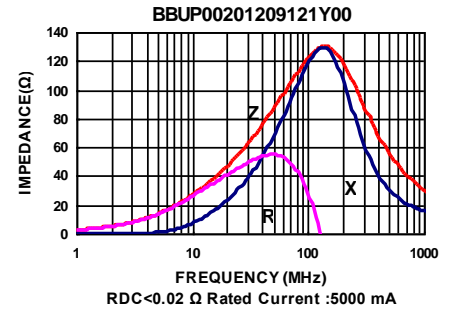
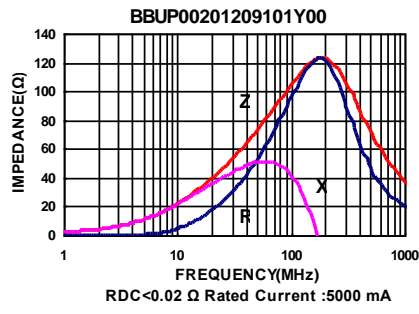
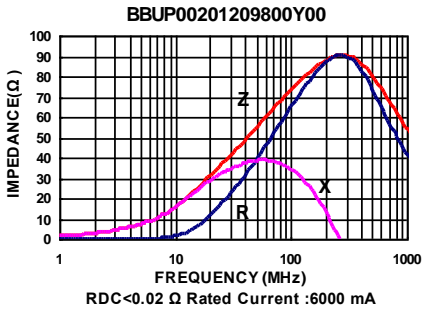
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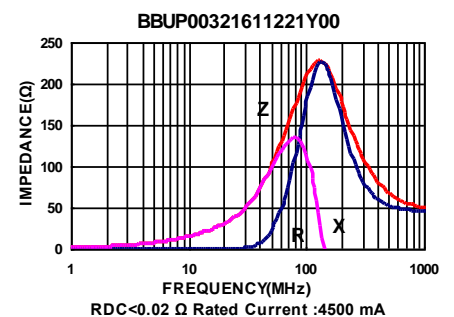
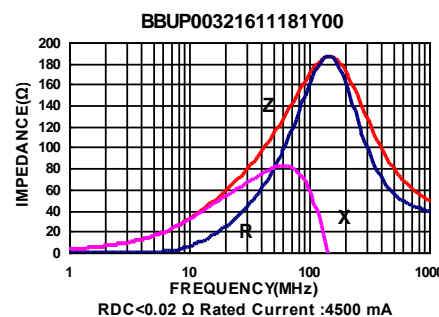
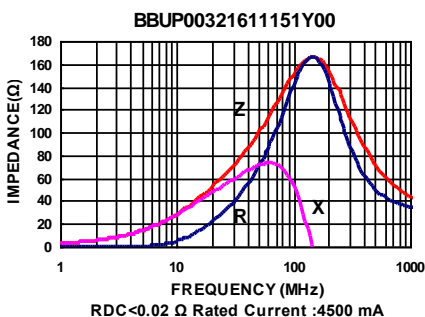
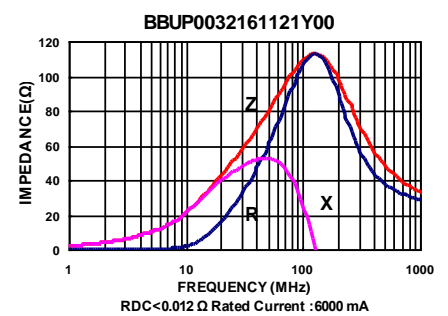
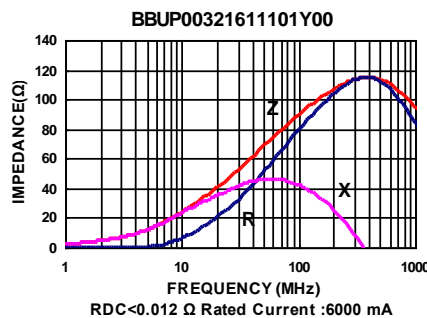
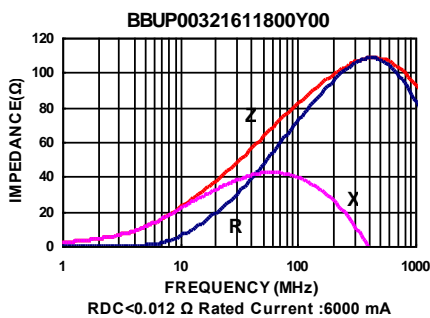
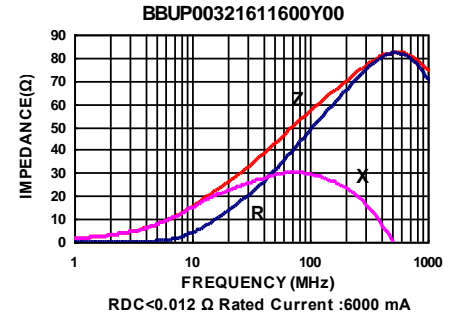
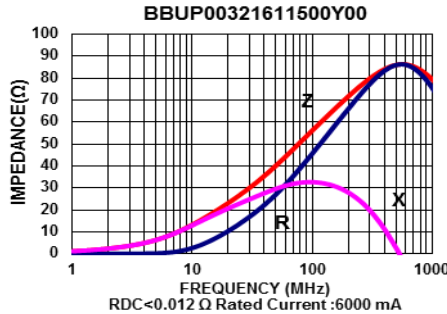
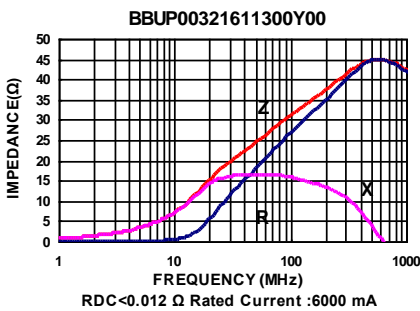
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBUP00321611300Y00 | 30                                 | 100                     | 0.012                   | 6000                      |
| BBUP00321611500Y00 | 50                                 | 100                     | 0.012                   | 6000                      |
| BBUP00321611600Y00 | 60                                 | 100                     | 0.012                   | 6000                      |
| BBUP00321611800Y00 | 80                                 | 100                     | 0.012                   | 6000                      |
| BBUP00321611101Y00 | 100                                | 100                     | 0.012                   | 6000                      |
| BBUP00321611121Y00 | 120                                | 100                     | 0.012                   | 6000                      |
| BBUP00321611151Y00 | 150                                | 100                     | 0.020                   | 4500                      |
| BBUP00321611181Y00 | 180                                | 100                     | 0.020                   | 4500                      |
| BBUP00321611221Y00 | 220                                | 100                     | 0.020                   | 4500                      |

**Note: When ordering, please specify tolerance code. Tolerance : Y= $\pm 25\%$**

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

**Test Instruments : Agilent E4991A Impedance / Material Analyzer**



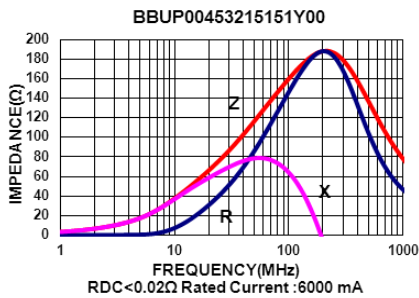
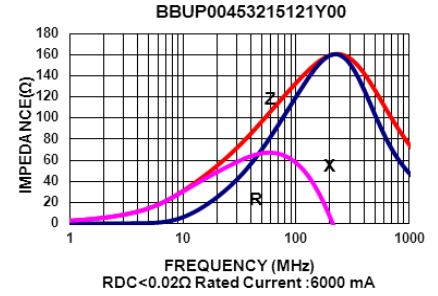
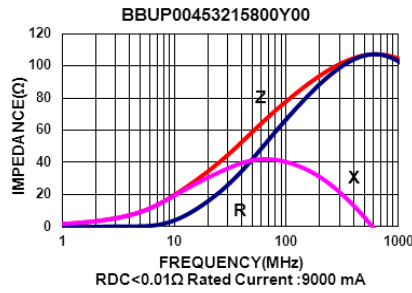
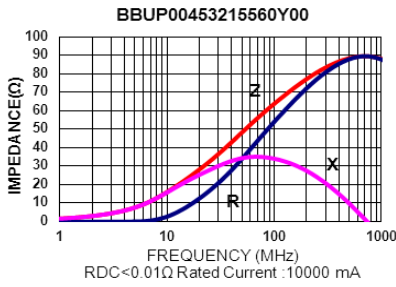
Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin approval. Please contact our sales department before ordering.

# SMD Multilayer Ferrite Chip Beads – BBUP Series

## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | DC Resistance<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|-----------------------------------|---------------------------|
| BBUP00453215560Y00 | 56                                 | 100                     | 0.010                             | 9000                      |
| BBUP00453215800Y00 | 80                                 | 100                     | 0.010                             | 9000                      |
| BBUP00453215121Y00 | 120                                | 100                     | 0.020                             | 6000                      |
| BBUP00453215151Y00 | 150                                | 100                     | 0.020                             | 6000                      |

Test Instruments : Agilent E4991A Impedance / Material Analyzer

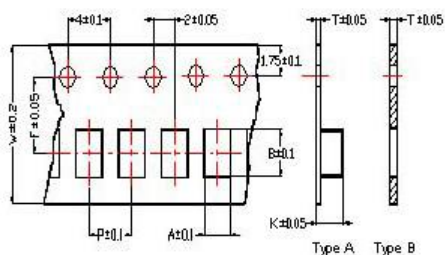


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# SMD Multilayer Ferrite Chip Beads

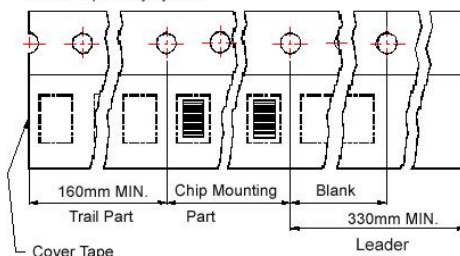
## Packaging Specifications

### Tape Dimensions

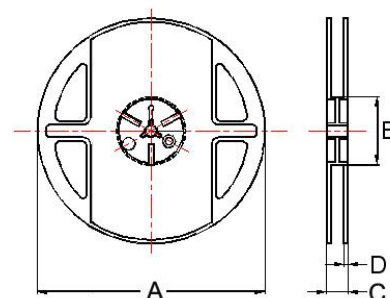


### Tape Material

Carrier Tape: Polycarbonate (Tape A)  
Carrier Tape: Paper (Tape B)  
Cover Tape: Polystyrene



### Reel Dimensions



- ① : BBSY/BBSJ/BBNQ/BBPY    ③ : BBUP
- ② : BBSY/BBSJ/BBNQ/BBPY/BBUP/BBFY/BBFJ
- ④ : BBBK/BBSJ/BBGK/BBPY/BBNQ/BBUP/BBHV
- ⑤ : BBBK/BBGK/BBPY/BBUP
- ⑥ : BBSY/BBBK/BBPY/BBUP
- ⑦ : BBPY/BBUP

### Dimensions in mm

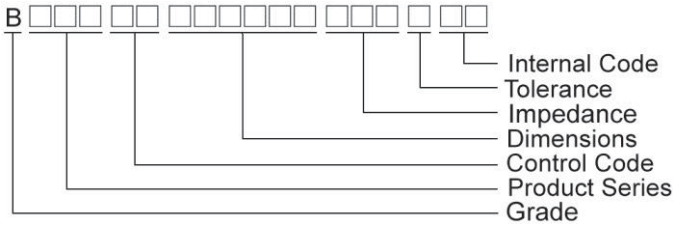
| TYPE    | Tape Dimensions |      |      |     |     |     |      |      | Reel Dimensions |    |    |   | Quantity<br>PCS / REEL |
|---------|-----------------|------|------|-----|-----|-----|------|------|-----------------|----|----|---|------------------------|
|         | A               | B    | T    | W   | P   | F   | K    | Tape | A               | B  | C  | D |                        |
| ①060303 | 0.37            | 0.67 | 0.42 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 10 | 2 | 15000                  |
| ②100505 | 0.62            | 1.12 | 0.60 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 10000                  |
| ③160805 | 1.05            | 1.85 | 0.60 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 10000                  |
| ④160808 | 1.05            | 1.85 | 0.95 | 8.0 | 4.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 4000                   |
| ⑤201209 | 1.50            | 2.30 | 0.97 | 8.0 | 4.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 4000                   |
| ⑥321611 | 1.88            | 3.50 | 0.22 | 8.0 | 4.0 | 3.5 | 1.27 | A    | 178             | 60 | 12 | 2 | 3000                   |
| ⑦453215 | 3.66            | 4.95 | 0.24 | 12  | 8.0 | 5.5 | 1.85 | A    | 178             | 60 | 14 | 2 | 1000                   |

## Multilayer Ferrite Chip Beads

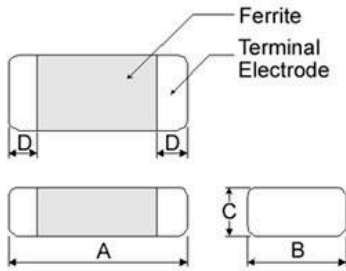


Chilisin offers a wide range of multi-layered ferrite chip beads with various sizes, frequency characteristics, and impedance values for EMI solutions. These ferrite formulas are used to compose seven types of EMI suppression chip beads: BBSY, BBBK, BBSJ, BBGK, BBPY, BBUP, BBNQ, BBFY, BBFJ and BBHV series.

### Product Identification



### Shape and Dimensions



Dimensions in mm

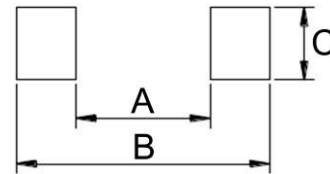
| TYPE    | A        | B         | C        | D         |
|---------|----------|-----------|----------|-----------|
| ①060303 | 0.6±0.03 | 0.30±0.03 | 0.3±0.03 | 0.15±0.05 |
| ②100505 | 1.0±0.10 | 0.50±0.10 | 0.5±0.10 | 0.25±0.10 |
| ③160805 | 1.6±0.15 | 0.80±0.15 | 0.5±0.15 | 0.3±0.2   |
| ④160808 | 1.6±0.15 | 0.80±0.15 | 0.8±0.15 | 0.3±0.2   |
| ⑤201209 | 2.0±0.20 | 1.25±0.20 | 0.9±0.20 | 0.5±0.3   |
| ⑥321611 | 3.2±0.20 | 1.60±0.20 | 1.1±0.20 | 0.5±0.3   |
| ⑦453215 | 4.5±0.25 | 3.20±0.20 | 1.5±0.20 | 0.5±0.3   |

- ① : BBSY / BBSJ / BBNQ / BBPY
- ② : BBSY / BBSJ / BBNQ / BBPY / BBUP / BBFY / BBFJ
- ③ : BBUP ④ : BBBK / BBSJ / BBGK / BBPY / BBNQ / BBUP / BBHV
- ⑤ : BBBK / BBGK / BBPY / BBUP ⑥ : BBSY / BBBK / BBPY / BBUP
- ⑦ : BBPY / BBUP

### Dimension Conversion

| Code   | Dimension in mm<br>(AxBxC) | EIA  |
|--------|----------------------------|------|
| 060303 | 0.6X0.3X0.3                | 0201 |
| 100505 | 1.0X0.5X0.5                | 0402 |
| 160805 | 1.6x0.8x0.5                | 0603 |
| 160808 | 1.6x0.8x0.8                | 0603 |
| 201209 | 2.0x1.2x0.9                | 0805 |
| 321611 | 3.2x1.6x1.1                | 1206 |
| 453215 | 4.5x3.2x1.5                | 1812 |

### Recommended Pattern



Dimensions in mm

| TYPE    | A         | B           | C         |
|---------|-----------|-------------|-----------|
| ①060303 | 0.2 ~ 0.3 | 0.75 ~ 1.05 | 0.3       |
| ②100505 | 0.4       | 1.2 ~ 1.4   | 0.5       |
| ③160805 | 0.7 ~ 0.8 | 1.8 ~ 2.0   | 0.6 ~ 0.8 |
| ④160808 | 0.7 ~ 0.8 | 1.8 ~ 2.0   | 0.6 ~ 0.8 |
| ⑤201209 | 1.0 ~ 1.2 | 2.6 ~ 4.0   | 1.0 ~ 1.4 |
| ⑥321611 | 2.0 ~ 2.4 | 4.2 ~ 5.2   | 1.3 ~ 1.9 |
| ⑦453215 | 3.0       | 5.5 ~ 6.5   | 2.4       |

\* Don't apply narrower pattern than listed above to BBPY and BBUP  
Narrow pattern might cause excessive heat or open circuit.

# SMD Multilayer Ferrite Chip Beads – BBFY Series

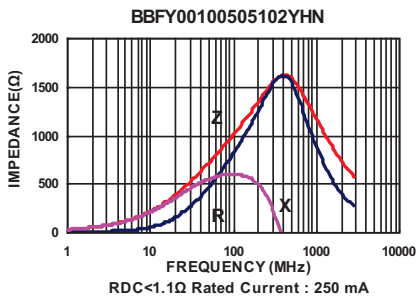
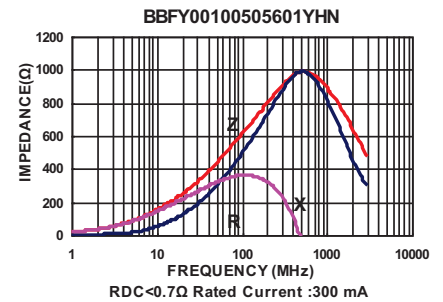
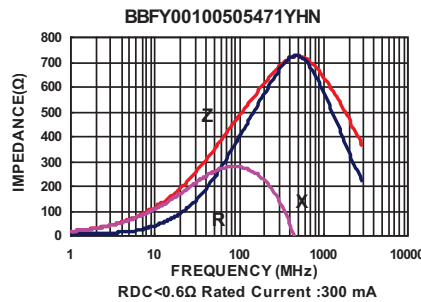
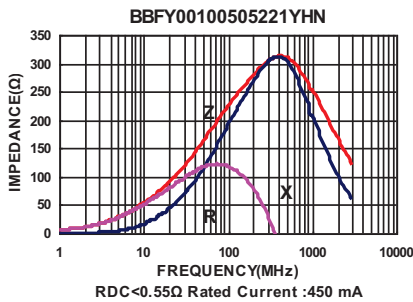
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | Impedance<br>( $\Omega \pm 40\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBFY00100505221YHN | 220                                | 100                     | 270                                | 1000                    | 0.55                    | 450                       |
| BBFY00100505301YHN | 300                                | 100                     | 450                                | 1000                    | 0.55                    | 350                       |
| BBFY00100505471YHN | 470                                | 100                     | 650                                | 1000                    | 0.60                    | 300                       |
| BBFY00100505601YHN | 600                                | 100                     | 1000                               | 1000                    | 0.7                     | 300                       |
| BBFY00100505102YHN | 1000                               | 100                     | 1400                               | 1000                    | 1.1                     | 250                       |

**Note: When ordering, please specify tolerance code. Tolerance : Y= $\pm 25\%$**

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

## Test Instruments : Agilent E4991A Impedance / Material Analyzer

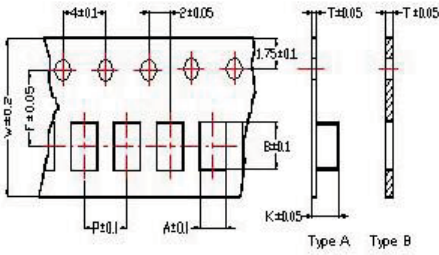


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# SMD Multilayer Ferrite Chip Beads

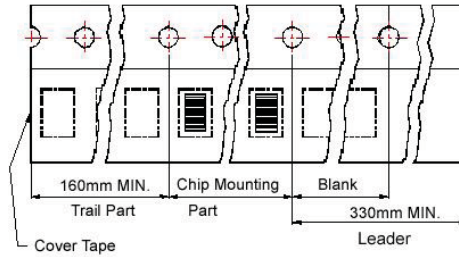
## Packaging Specifications

### Tape Dimensions

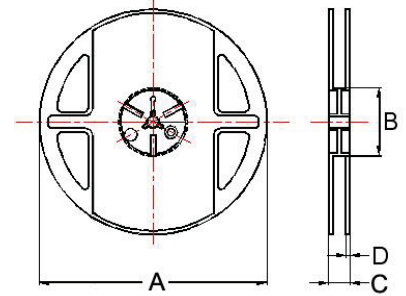


### Tape Material

Carrier Tape: Polycarbonate (Tape A)  
Carrier Tape: Paper (Tape B)  
Cover Tape: Polystyrene



### Reel Dimensions



- ① : BBSY/BBSJ/BBNQ/BBPY    ③ : BBUP
- ② : BBSY/BBSJ/BBNQ/BBPY/BBUP/BBFY/BBFJ
- ④ : BBBK/BBSJ/BBGK/BBPY/BBNQ/BBUP/BBHV
- ⑤ : BBBK/BBGK/BBPY/BBUP
- ⑥ : BBSY/BBBK/BBPY/BBUP
- ⑦ : BBPY/BBUP

### Dimensions in mm

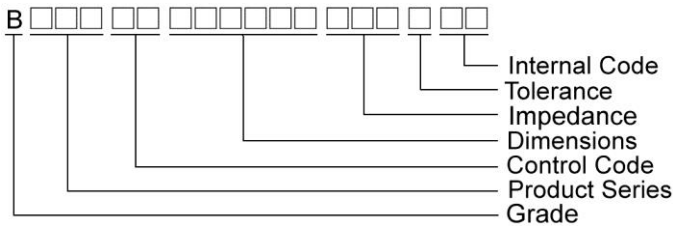
| TYPE    | Tape Dimensions |      |      |     |     |     |      |      | Reel Dimensions |    |    |   | Quantity<br>PCS / REEL |
|---------|-----------------|------|------|-----|-----|-----|------|------|-----------------|----|----|---|------------------------|
|         | A               | B    | T    | W   | P   | F   | K    | Tape | A               | B  | C  | D |                        |
| ①060303 | 0.37            | 0.67 | 0.42 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 10 | 2 | 15000                  |
| ②100505 | 0.62            | 1.12 | 0.60 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 10000                  |
| ③160805 | 1.05            | 1.85 | 0.60 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 10000                  |
| ④160808 | 1.05            | 1.85 | 0.95 | 8.0 | 4.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 4000                   |
| ⑤201209 | 1.50            | 2.30 | 0.97 | 8.0 | 4.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 4000                   |
| ⑥321611 | 1.88            | 3.50 | 0.22 | 8.0 | 4.0 | 3.5 | 1.27 | A    | 178             | 60 | 12 | 2 | 3000                   |
| ⑦453215 | 3.66            | 4.95 | 0.24 | 12  | 8.0 | 5.5 | 1.85 | A    | 178             | 60 | 14 | 2 | 1000                   |

## Multilayer Ferrite Chip Beads

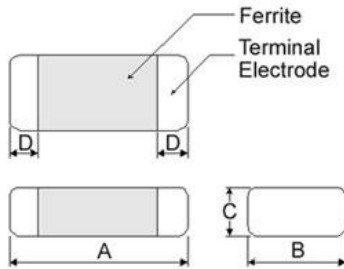


Chilisin offers a wide range of multi-layered ferrite chip beads with various sizes, frequency characteristics, and impedance values for EMI solutions. These ferrite formulas are used to compose seven types of EMI suppression chip beads: BBSY, BBBK, BBSJ, BBGK, BBPY, BBUP, BBNQ, BBFY, BBFJ and BBHV series.

### Product Identification



### Shape and Dimensions



Dimensions in mm

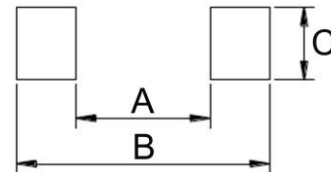
| TYPE    | A        | B         | C        | D         |
|---------|----------|-----------|----------|-----------|
| ①060303 | 0.6±0.03 | 0.30±0.03 | 0.3±0.03 | 0.15±0.05 |
| ②100505 | 1.0±0.10 | 0.50±0.10 | 0.5±0.10 | 0.25±0.10 |
| ③160805 | 1.6±0.15 | 0.80±0.15 | 0.5±0.15 | 0.3±0.2   |
| ④160808 | 1.6±0.15 | 0.80±0.15 | 0.8±0.15 | 0.3±0.2   |
| ⑤201209 | 2.0±0.20 | 1.25±0.20 | 0.9±0.20 | 0.5±0.3   |
| ⑥321611 | 3.2±0.20 | 1.60±0.20 | 1.1±0.20 | 0.5±0.3   |
| ⑦453215 | 4.5±0.25 | 3.20±0.20 | 1.5±0.20 | 0.5±0.3   |

- ① : BBSY / BBSJ / BBNQ / BBPY
- ② : BBSY / BBSJ / BBNQ / BBPY / BBUP / BBFY / BBFJ
- ③ : BBUP ④ : BBBK / BBSJ / BBGK / BBPY / BBNQ / BBUP / BBHV
- ⑤ : BBBK / BBGK / BBPY / BBUP ⑥ : BBSY / BBBK / BBPY / BBUP
- ⑦ : BBPY / BBUP

### Dimension Conversion

| Code   | Dimension in mm (AxBxC) | EIA  |
|--------|-------------------------|------|
| 060303 | 0.6X0.3X0.3             | 0201 |
| 100505 | 1.0X0.5X0.5             | 0402 |
| 160805 | 1.6x0.8x0.5             | 0603 |
| 160808 | 1.6x0.8x0.8             | 0603 |
| 201209 | 2.0x1.2x0.9             | 0805 |
| 321611 | 3.2x1.6x1.1             | 1206 |
| 453215 | 4.5x3.2x1.5             | 1812 |

### Recommended Pattern



Dimensions in mm

| TYPE    | A         | B           | C         |
|---------|-----------|-------------|-----------|
| ①060303 | 0.2 ~ 0.3 | 0.75 ~ 1.05 | 0.3       |
| ②100505 | 0.4       | 1.2 ~ 1.4   | 0.5       |
| ③160805 | 0.7 ~ 0.8 | 1.8 ~ 2.0   | 0.6 ~ 0.8 |
| ④160808 | 0.7 ~ 0.8 | 1.8 ~ 2.0   | 0.6 ~ 0.8 |
| ⑤201209 | 1.0 ~ 1.2 | 2.6 ~ 4.0   | 1.0 ~ 1.4 |
| ⑥321611 | 2.0 ~ 2.4 | 4.2 ~ 5.2   | 1.3 ~ 1.9 |
| ⑦453215 | 3.0       | 5.5 ~ 6.5   | 2.4       |

\* Don't apply narrower pattern than listed above to BBPY and BBUP  
Narrow pattern might cause excessive heat or open circuit.

# SMD Multilayer Ferrite Chip Beads – BBFJ Series

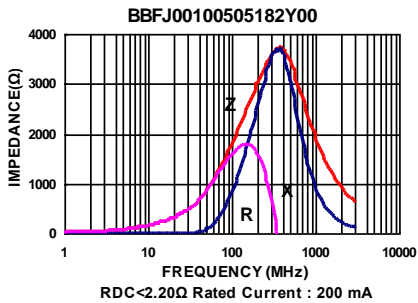
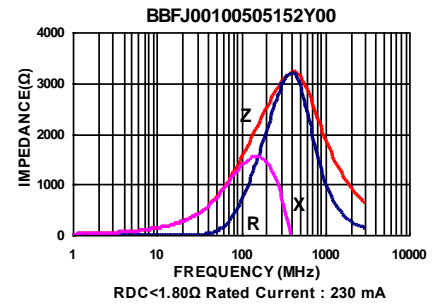
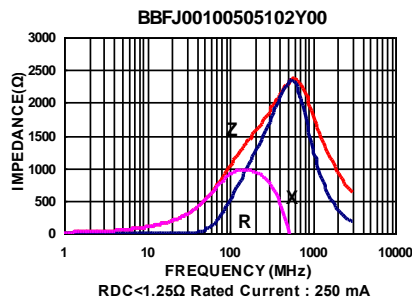
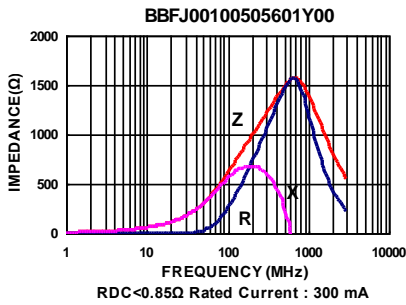
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | Impedance<br>( $\Omega \pm 40\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBFJ00100505601Y00 | 600                                | 100                     | 1400                               | 1000                    | 0.85                    | 300                       |
| BBFJ00100505102Y00 | 1000                               | 100                     | 2000                               | 1000                    | 1.25                    | 250                       |
| BBFJ00100505152Y00 | 1500                               | 100                     | 2400                               | 1000                    | 1.80                    | 230                       |
| BBFJ00100505182Y00 | 1800                               | 100                     | 2700                               | 1000                    | 2.20                    | 200                       |

**Note: When ordering, please specify tolerance code. Tolerance : Y=±25%**

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

## Test Instruments : Agilent E4991A Impedance / Material Analyzer



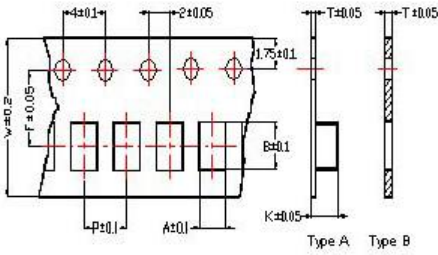
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# SMD Multilayer Ferrite Chip Beads

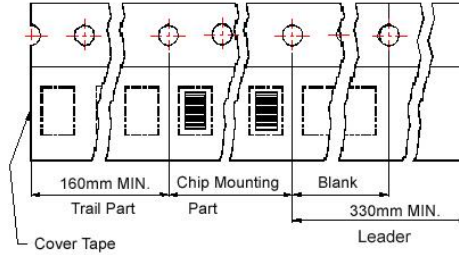
## Packaging Specifications

### Tape Dimensions

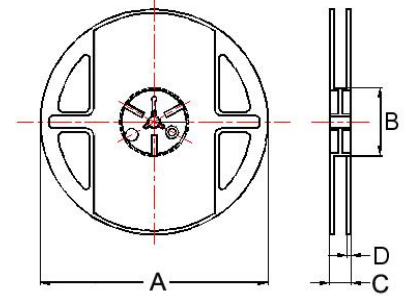


### Tape Material

Carrier Tape: Polycarbonate (Tape A)  
Carrier Tape: Paper (Tape B)  
Cover Tape: Polystyrene



### Reel Dimensions



- ① : BBSY/BBSJ/BBNQ/BBPY    ③ : BBUP
- ② : BBSY/BBSJ/BBNQ/BBPY/BBUP/BBFY/BBFJ
- ④ : BBBK/BBSJ/BBGK/BBPY/BBNQ/BBUP/BBHV
- ⑤ : BBBK/BBGK/BBPY/BBUP
- ⑥ : BBSY/BBBK/BBPY/BBUP
- ⑦ : BBPY/BBUP

### Dimensions in mm

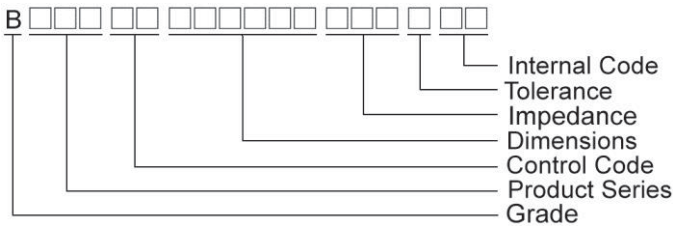
| TYPE    | Tape Dimensions |      |      |     |     |     |      |      | Reel Dimensions |    |    |   | Quantity<br>PCS / REEL |
|---------|-----------------|------|------|-----|-----|-----|------|------|-----------------|----|----|---|------------------------|
|         | A               | B    | T    | W   | P   | F   | K    | Tape | A               | B  | C  | D |                        |
| ①060303 | 0.37            | 0.67 | 0.42 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 10 | 2 | 15000                  |
| ②100505 | 0.62            | 1.12 | 0.60 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 10000                  |
| ③160805 | 1.05            | 1.85 | 0.60 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 10000                  |
| ④160808 | 1.05            | 1.85 | 0.95 | 8.0 | 4.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 4000                   |
| ⑤201209 | 1.50            | 2.30 | 0.97 | 8.0 | 4.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 4000                   |
| ⑥321611 | 1.88            | 3.50 | 0.22 | 8.0 | 4.0 | 3.5 | 1.27 | A    | 178             | 60 | 12 | 2 | 3000                   |
| ⑦453215 | 3.66            | 4.95 | 0.24 | 12  | 8.0 | 5.5 | 1.85 | A    | 178             | 60 | 14 | 2 | 1000                   |

## Multilayer Ferrite Chip Beads

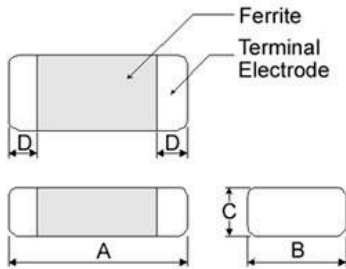


Chilisin offers a wide range of multi-layered ferrite chip beads with various sizes, frequency characteristics, and impedance values for EMI solutions. These ferrite formulas are used to compose seven types of EMI suppression chip beads: BBSY, BBBK, BBSJ, BBGK, BBPY, BBUP, BBNQ, BBFY, BBFJ and BBHV series.

### Product Identification



### Shape and Dimensions



Dimensions in mm

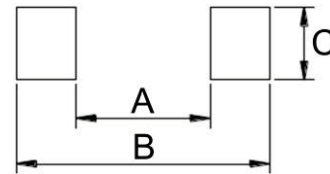
| TYPE    | A        | B         | C        | D         |
|---------|----------|-----------|----------|-----------|
| ①060303 | 0.6±0.03 | 0.30±0.03 | 0.3±0.03 | 0.15±0.05 |
| ②100505 | 1.0±0.10 | 0.50±0.10 | 0.5±0.10 | 0.25±0.10 |
| ③160805 | 1.6±0.15 | 0.80±0.15 | 0.5±0.15 | 0.3±0.2   |
| ④160808 | 1.6±0.15 | 0.80±0.15 | 0.8±0.15 | 0.3±0.2   |
| ⑤201209 | 2.0±0.20 | 1.25±0.20 | 0.9±0.20 | 0.5±0.3   |
| ⑥321611 | 3.2±0.20 | 1.60±0.20 | 1.1±0.20 | 0.5±0.3   |
| ⑦453215 | 4.5±0.25 | 3.20±0.20 | 1.5±0.20 | 0.5±0.3   |

- ① : BBSY / BBSJ / BBNQ / BBPY
- ② : BBSY / BBSJ / BBNQ / BBPY / BBUP / BBFY / BBFJ
- ③ : BBUP ④ : BBBK / BBSJ / BBGK / BBPY / BBNQ / BBUP / BBHV
- ⑤ : BBBK / BBGK / BBPY / BBUP ⑥ : BBSY / BBBK / BBPY / BBUP
- ⑦ : BBPY / BBUP

### Dimension Conversion

| Code   | Dimension in mm<br>(AxBxC) | EIA  |
|--------|----------------------------|------|
| 060303 | 0.6X0.3X0.3                | 0201 |
| 100505 | 1.0X0.5X0.5                | 0402 |
| 160805 | 1.6x0.8x0.5                | 0603 |
| 160808 | 1.6x0.8x0.8                | 0603 |
| 201209 | 2.0x1.2x0.9                | 0805 |
| 321611 | 3.2x1.6x1.1                | 1206 |
| 453215 | 4.5x3.2x1.5                | 1812 |

### Recommended Pattern



Dimensions in mm

| TYPE    | A         | B           | C         |
|---------|-----------|-------------|-----------|
| ①060303 | 0.2 ~ 0.3 | 0.75 ~ 1.05 | 0.3       |
| ②100505 | 0.4       | 1.2 ~ 1.4   | 0.5       |
| ③160805 | 0.7 ~ 0.8 | 1.8 ~ 2.0   | 0.6 ~ 0.8 |
| ④160808 | 0.7 ~ 0.8 | 1.8 ~ 2.0   | 0.6 ~ 0.8 |
| ⑤201209 | 1.0 ~ 1.2 | 2.6 ~ 4.0   | 1.0 ~ 1.4 |
| ⑥321611 | 2.0 ~ 2.4 | 4.2 ~ 5.2   | 1.3 ~ 1.9 |
| ⑦453215 | 3.0       | 5.5 ~ 6.5   | 2.4       |

\* Don't apply narrower pattern than listed above to BBPY and BBUP  
Narrow pattern might cause excessive heat or open circuit.

# SMD Multilayer Ferrite Chip Beads – BBFY Series

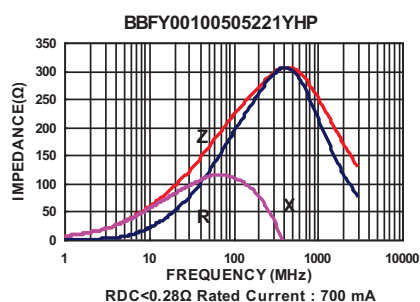
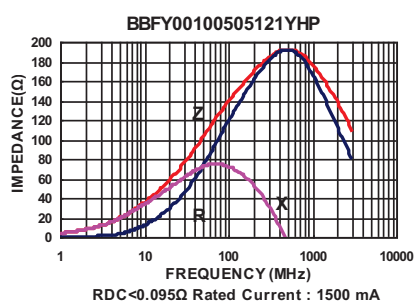
## Electrical Characteristics

| Part Number        | Impedance<br>( $\Omega \pm 25\%$ ) | Test Frequency<br>(MHz) | Impedance<br>( $\Omega \pm 40\%$ ) | Test Frequency<br>(MHz) | RDC<br>( $\Omega$ ) Max | Rated current<br>(mA) Max |
|--------------------|------------------------------------|-------------------------|------------------------------------|-------------------------|-------------------------|---------------------------|
| BBFY00100505121YHP | 120                                | 100                     | 150                                | 1000                    | 0.095                   | 1500                      |
| BBFY00100505221YHP | 220                                | 100                     | 270                                | 1000                    | 0.280                   | 700                       |

**Note: When ordering, please specify tolerance code. Tolerance : Y= $\pm 25\%$**

- Operating temperature range - 55°C ~ 125°C(Including self - temperature rise)
- Rate Current : Applied the current to coils, the temperature rise shall not be more than 30°C
- Measure Equipment :  
Z : HP4291A  
RDC : HP4338B or CHEN HWA 502

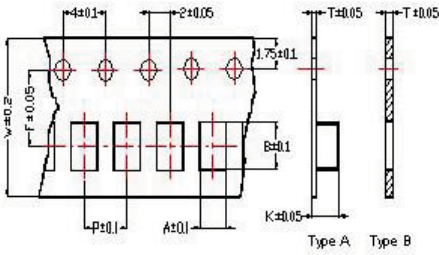
**Test Instruments :** Agilent E4991A Impedance / Material Analyzer



# SMD Multilayer Ferrite Chip Beads

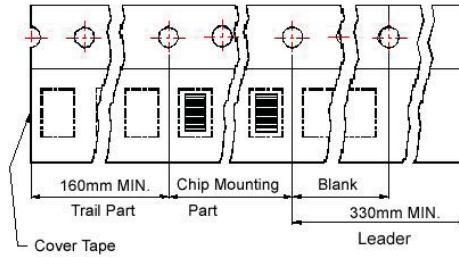
## Packaging Specifications

### Tape Dimensions

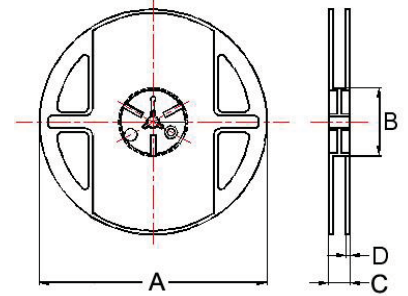


### Tape Material

Carrier Tape: Polycarbonate (Tape A)  
Carrier Tape: Paper (Tape B)  
Cover Tape: Polystyrene



### Reel Dimensions



- ① : BBSY/BBSJ/BBNQ/BBPY    ③ : BBUP
- ② : BBSY/BBSJ/BBNQ/BBPY/BBUP/BBFY/BBFJ
- ④ : BBBK/BBSJ/BBGK/BBPY/BBNQ/BBUP/BBHV
- ⑤ : BBBK/BBGK/BBPY/BBUP
- ⑥ : BBSY/BBBK/BBPY/BBUP
- ⑦ : BBPY/BBUP

### Dimensions in mm

| TYPE    | Tape Dimensions |      |      |     |     |     |      |      | Reel Dimensions |    |    |   | Quantity<br>PCS / REEL |
|---------|-----------------|------|------|-----|-----|-----|------|------|-----------------|----|----|---|------------------------|
|         | A               | B    | T    | W   | P   | F   | K    | Tape | A               | B  | C  | D |                        |
| ①060303 | 0.37            | 0.67 | 0.42 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 10 | 2 | 15000                  |
| ②100505 | 0.62            | 1.12 | 0.60 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 10000                  |
| ③160805 | 1.05            | 1.85 | 0.60 | 8.0 | 2.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 10000                  |
| ④160808 | 1.05            | 1.85 | 0.95 | 8.0 | 4.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 4000                   |
| ⑤201209 | 1.50            | 2.30 | 0.97 | 8.0 | 4.0 | 3.5 | -    | B    | 178             | 60 | 12 | 2 | 4000                   |
| ⑥321611 | 1.88            | 3.50 | 0.22 | 8.0 | 4.0 | 3.5 | 1.27 | A    | 178             | 60 | 12 | 2 | 3000                   |
| ⑦453215 | 3.66            | 4.95 | 0.24 | 12  | 8.0 | 5.5 | 1.85 | A    | 178             | 60 | 14 | 2 | 1000                   |

## BPPB Series



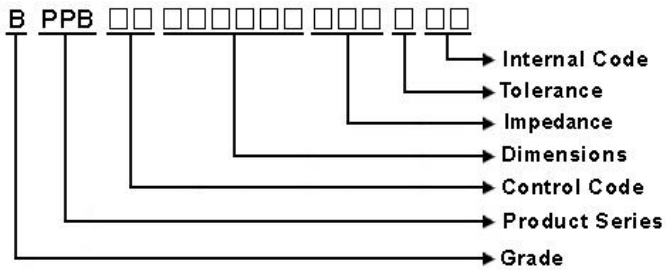
### Features

- RoHS Compliant
- Special designs for surface mounting
- Available in various sizes for wide range of application and usage
- Highly resistant against heat and humidity

### Applications

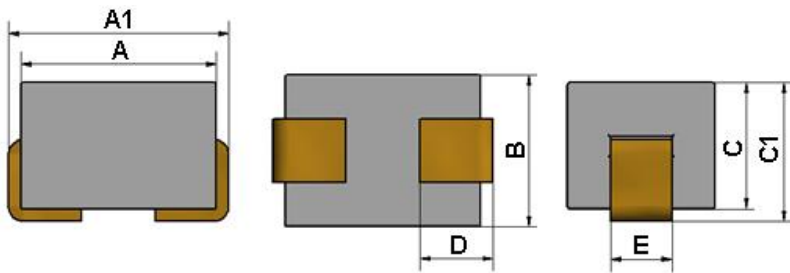
- Stereo
- Car radio
- Mobile telephone
- VCRs
- Computer disk drive and PC board

### Product Identification

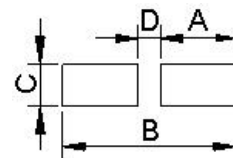


### Shapes and Dimensions

BPPB00403025\_AE



### Recommended Pattern



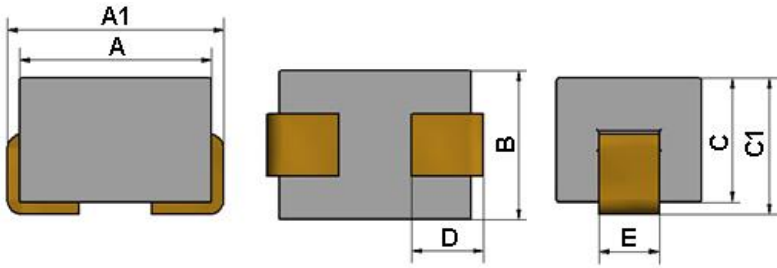
Dimensions in mm

| TYPE            | Shape and Dimensions |         |           |           |         |          |      | Recommended Pattern |      |      |      |
|-----------------|----------------------|---------|-----------|-----------|---------|----------|------|---------------------|------|------|------|
|                 | A                    | A1      | B         | C         | C1      | D        | E    | A                   | B    | C    | D    |
| BPPB00403025_AE | 4.06±0.1             | 5.08Max | 3.05±0.15 | 2.54±0.15 | 3.05Max | 1.52±0.5 | 1.27 | 2.77                | 6.35 | 1.47 | 0.81 |

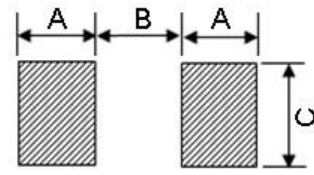
# SMD Shielded Power Inductors – BPPB Series

## Shapes and Dimensions

BPPB00403025



## Recommended Pattern

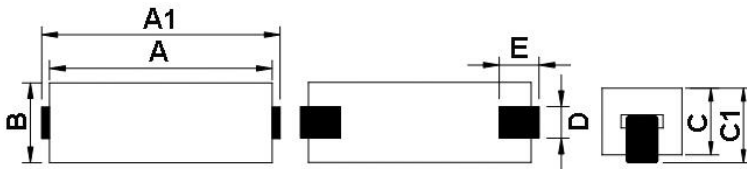


Dimensions in mm

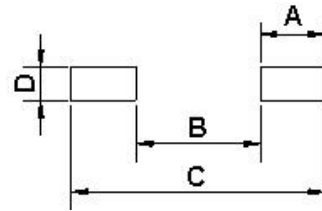
| TYPE         | Shape and Dimensions |         |           |           |         |          |      | Recommended Pattern |     |     |
|--------------|----------------------|---------|-----------|-----------|---------|----------|------|---------------------|-----|-----|
|              | A                    | A1      | B         | C         | C1      | D        | E    | A                   | B   | C   |
| BPPB00403025 | 4.00±0.2             | 5.08Max | 3.10±0.15 | 2.54±0.15 | 3.05Max | 1.50±0.5 | 1.25 | 1.5                 | 2.0 | 2.5 |

## Shapes and Dimensions

BPPB00853025\_AE



## Recommended Pattern

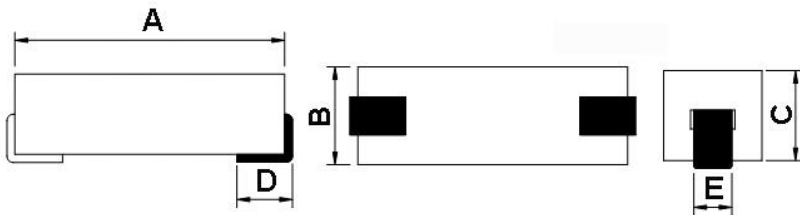


Dimensions in mm

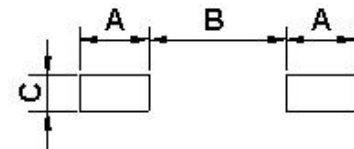
| TYPE            | Shape and Dimensions |         |          |          |         |          |      | Recommended Pattern |     |     |     |
|-----------------|----------------------|---------|----------|----------|---------|----------|------|---------------------|-----|-----|-----|
|                 | A                    | A1      | B        | C        | C1      | D        | E    | A                   | B   | C   | D   |
| BPPB00853025_AE | 8.51±0.23            | 9.53Max | 3.02±0.2 | 2.54±0.2 | 3.05Max | 1.52±0.5 | 1.27 | 2.2                 | 5.4 | 9.8 | 1.5 |

## Shapes and Dimensions

BPPB00853025



## Recommended Pattern



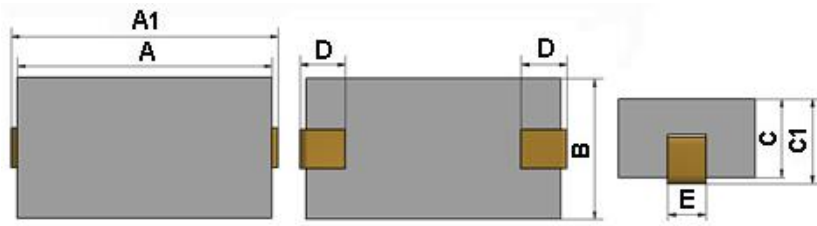
Dimensions in mm

| TYPE         | Shape and Dimensions |          |           |     |      | Recommended Pattern |     |     |
|--------------|----------------------|----------|-----------|-----|------|---------------------|-----|-----|
|              | A                    | B        | C         | D   | E    | A                   | B   | C   |
| BPPB00853025 | 8.5±0.3              | 3.1±0.15 | 2.54±0.15 | 1.5 | 1.35 | 2.0                 | 5.0 | 1.5 |

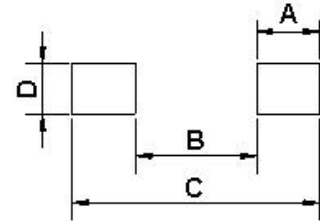
# SMD Shielded Power Inductors – BPPB Series

## Shapes and Dimensions

BPPB00854625



## Recommended Pattern

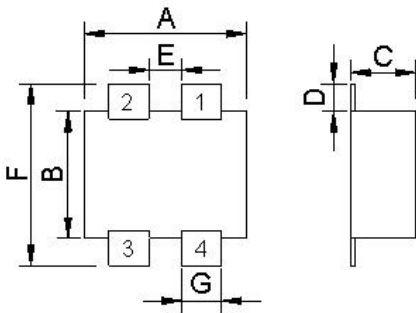


Dimensions in mm

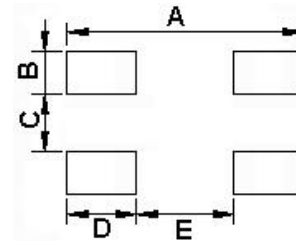
| TYPE         | Shape and Dimensions |         |         |          |         |          |      | Recommended Pattern |      |      |      |
|--------------|----------------------|---------|---------|----------|---------|----------|------|---------------------|------|------|------|
|              | A                    | A1      | B       | C        | C1      | D        | E    | A                   | B    | C    | D    |
| BPPB00854625 | 8.51±0.23            | 9.53Max | 4.6±0.2 | 2.4±0.25 | 3.05Max | 1.52±0.5 | 1.27 | 2.77                | 5.26 | 10.8 | 1.47 |

## Shapes and Dimensions

BPPB00070628



## Recommended Pattern



Dimensions in mm

| TYPE         | Shape and Dimensions |         |         |              |         |         |         | Recommended Pattern |     |     |     |     |
|--------------|----------------------|---------|---------|--------------|---------|---------|---------|---------------------|-----|-----|-----|-----|
|              | A                    | B       | C       | D            | E       | F       | G       | A                   | B   | C   | D   | E   |
| BPPB00070628 | 5.7±0.2              | 4.6±0.3 | 2.8±0.3 | 0.9+0.2/-0.1 | 2.0±0.2 | 6.7±0.2 | 1.2±0.2 | 7.0                 | 1.4 | 1.8 | 1.8 | 3.4 |

## SMD Shielded Power Inductors – BPPB Series

### Standard Specifications

| Part Number        | Impedance( $\Omega$ )<br>@1MHz,0.5V | Impedance( $\Omega$ )<br>@100MHz,0.5V | RDC<br>(m $\Omega$ )Max. | Rated current<br>(A)Typ |
|--------------------|-------------------------------------|---------------------------------------|--------------------------|-------------------------|
| BPPB00403025420XAE | 14Min                               | 34Min(42Typ)                          | 0.75                     | 10                      |

**Note: When ordering, please specify tolerance code.**

- Operating temperature range – 40°C ~ 125°C (Including self - temperature rise)
- Rated Current : Based on temperature rise ( $\Delta T$ :40°C Typ.)
- Measure Equipment :  
Z : HP 4291B IMPEDANCE ANALYZER (or equivalent)  
RDC : CHROMA MODEL 16502 MILLIOHMMETER (or equivalent)



## SMD Shielded Power Inductors – BPPB Series

### Standard Specifications

| Part Number        | Impedance( $\Omega$ )<br>@25MHz,0.5V | Impedance( $\Omega$ )<br>@100MHz,0.5V | RDC<br>(m $\Omega$ )Max. | Rated current<br>(A)Typ |
|--------------------|--------------------------------------|---------------------------------------|--------------------------|-------------------------|
| BPPB00403025470X00 | 30 $\pm$ 25%                         | 47 $\pm$ 25%                          | 0.6                      | 10                      |

**Note: When ordering, please specify tolerance code.**

- Operating temperature range – 40°C ~ 125°C (Including self - temperature rise)
- Rated Current : Based on temperature rise ( $\Delta T$ :40°C Typ.)
- Measure Equipment :  
Z : HP 4291B IMPEDANCE ANALYZER (or equivalent)  
RDC : CHROMA MODEL 16502 MILLIOHMMETER (or equivalent)

## SMD Shielded Power Inductors – BPPB Series

### Standard Specifications

| Part Number        | Impedance( $\Omega$ )<br>@10MHz,0.5V | RDC<br>(m $\Omega$ )Max. | Rated current<br>(A)Typ |
|--------------------|--------------------------------------|--------------------------|-------------------------|
| BPPB00853025100XAE | 90Typ                                | 1.0                      | 10                      |

**Note: When ordering, please specify tolerance code.**

- Operating temperature range—40°C ~ 125°C (Including self - temperature rise)
- Rated Current : Based on temperature rise ( $\Delta T$ :40°C Typ.)
- Measure Equipment :  
Z : HP 4291B IMPEDANCE ANALYZER (or equivalent)  
RDC : CHROMA MODEL 16502 MILLIOHMMETER (or equivalent)

## SMD Shielded Power Inductors – BPPB Series

### Standard Specifications

| Part Number        | Impedance( $\Omega$ )<br>@25MHz,0.5V | Impedance( $\Omega$ )<br>@100MHz,0.5V | RDC<br>(m $\Omega$ )Max. | Rated current<br>(A)Typ |
|--------------------|--------------------------------------|---------------------------------------|--------------------------|-------------------------|
| BPPB00853025100X00 | 60 $\pm$ 25%                         | 90 $\pm$ 25%                          | 0.9                      | 10                      |

**Note: When ordering, please specify tolerance code.**

- Operating temperature range – 40°C ~ 125°C (Including self - temperature rise)
- Rated Current : Based on temperature rise ( $\Delta T$ :40°C Typ.)
- Measure Equipment :  
Z : HP 4291B IMPEDANCE ANALYZER (or equivalent)  
RDC : CHROMA MODEL 16502 MILLIOHMETER (or equivalent)

## SMD Shielded Power Inductors – BPPB Series

### Standard Specifications

| Part Number        | Impedance( $\Omega$ )<br>@10MHz,0.5V | RDC<br>(m $\Omega$ )Max. | Rated current<br>(A)Typ |
|--------------------|--------------------------------------|--------------------------|-------------------------|
| BPPB00854625121X0E | 115 $\pm$ 25%                        | 1.0                      | 10                      |

**Note: When ordering, please specify tolerance code.**

- Operating temperature range –40°C ~ 125°C (Including self - temperature rise)
- Rated Current : Based on temperature rise ( $\Delta T$ :40°C Typ.)
- Measure Equipment :  
Z : HP 4291B IMPEDANCE ANALYZER (or equivalent)  
RDC : CHROMA MODEL 16502 MILLIOHMETER (or equivalent)

## SMD Shielded Power Inductors – BPPB Series

### Standard Specifications

| Part Number        | Impedance( $\Omega$ )<br>@100MHz,0.5V | RDC<br>(m $\Omega$ )Max. | Rated current<br>(A)Typ |
|--------------------|---------------------------------------|--------------------------|-------------------------|
| BPPB00070628330Y2E | 33 $\pm$ 25%                          | 3.0                      | 10                      |

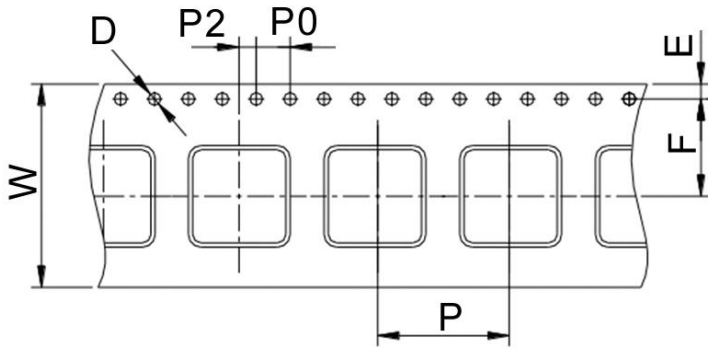
**Note: When ordering, please specify tolerance code.**

- Operating temperature range –40°C ~ 125°C (Including self - temperature rise)
- Rated Current : Based on temperature rise ( $\Delta$ T:40°C Typ.)
- Measure Equipment :  
Z : HP 4291B IMPEDANCE ANALYZER (or equivalent)  
RDC : CHROMA MODEL 16502 MILLIOHMMETER (or equivalent)

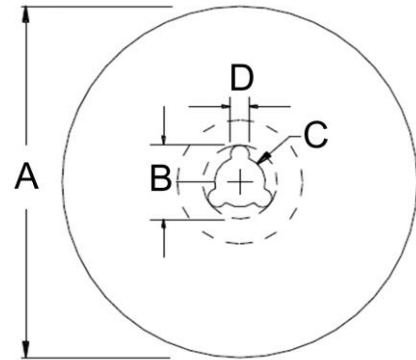
# SMD Shielded Power Inductors – BPPB Series

## Packaging Specifications

Tape Dimensions



Reel Dimensions



Dimensions in mm

| TYPE         | Tape Dimensions |     |      |     |    |    |    | Reel Dimensions |    |    |   | Quantity<br>PCS / Reel |
|--------------|-----------------|-----|------|-----|----|----|----|-----------------|----|----|---|------------------------|
|              | W               | D   | E    | F   | P  | P0 | P2 | A               | B  | C  | D |                        |
| BPPB00403025 | 12              | 1.5 | 1.75 | 5.5 | 8  | 4  | 2  | 178             | 20 | 13 | 2 | 500                    |
| BPPB00853025 | 16              | 1.5 | 1.75 | 7.5 | 8  | 4  | 2  | 178             | 20 | 13 | 2 | 500                    |
| BPPB00854625 | 16              | 1.5 | 1.75 | 7.5 | 8  | 4  | 2  | 178             | 20 | 13 | 2 | 500                    |
| BPPB00070628 | 16              | 1.5 | 1.75 | 7.5 | 12 | 4  | 2  | 330             | 20 | 13 | 2 | 1500                   |

## BWCU\_02 Series For USB 2.0, IEEE1394b, LVDS Applications



A full series of common mode choke is designed for excellent noise attenuation with compact sizing for use in wide range of applications. Both standard series and custom designs are available.

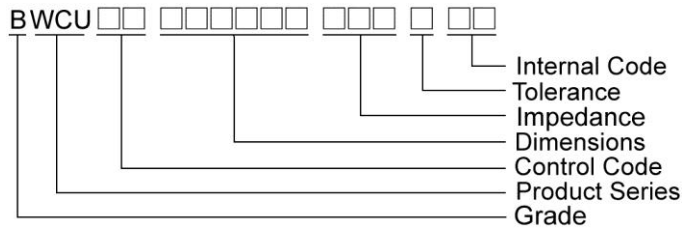
### Features

- RoHS Compliant
- Miniature SMD type common mode filter for fully automated assembly
- Wide impedance range (30Ω ~ 2200Ω) for noise suppression
- Excellent solderability

### Applications

- USB line for personal computers and peripheral
- IEEE 1394 line for personal computers, DVC, STB
- LVDS, panel line for liquid display panels, graph card, etc.

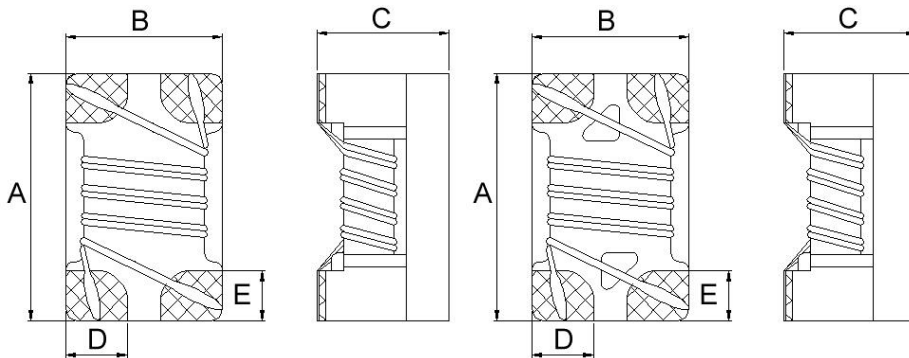
### Product Identification



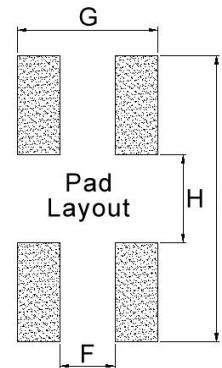
### Shape and Dimensions

BWCU00160811/ 121008/ 321619

BWCU00201212



### Recommended Pattern

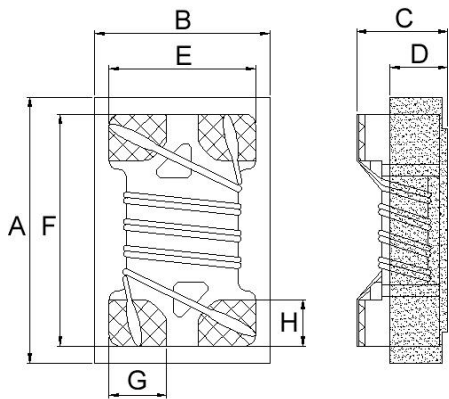


Dimensions in mm

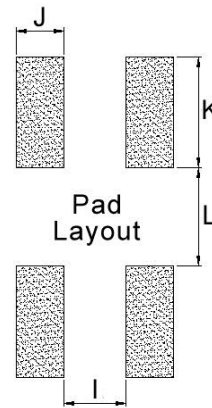
| TYPE         | A        | B        | C        | D    | E    | F    | G    | H    | I    |
|--------------|----------|----------|----------|------|------|------|------|------|------|
| BWCU00160811 | 1.60±0.2 | 0.80±0.2 | 1.10±0.2 | 0.25 | 0.33 | 0.25 | 0.75 | 0.61 | 2.29 |
| BWCU00121008 | 1.25±0.2 | 1.00±0.2 | 0.8±0.1  | 0.32 | 0.33 | 0.36 | 1.00 | 0.59 | 1.75 |
| BWCU00201212 | 2.05±0.2 | 1.25±0.2 | 1.20±0.2 | 0.50 | 0.40 | 0.50 | 1.27 | 0.80 | 2.60 |
| BWCU00321619 | 3.20±0.2 | 1.60±0.2 | 1.90±0.2 | 0.50 | 0.60 | 0.40 | 1.60 | 1.60 | 3.70 |

## Shape and Dimensions

**BWCU00231512**



## Recommended Pattern



Dimensions in mm

| TYPE         | A                  | B                  | C                  | D   | E    | F    | G   | H    | I   | J    | K   | L   |
|--------------|--------------------|--------------------|--------------------|-----|------|------|-----|------|-----|------|-----|-----|
| BWCU00231512 | 2.29 <sup>+0</sup> | 1.52 <sup>+0</sup> | 1.20 <sup>+0</sup> | 0.5 | 1.27 | 2.03 | 0.5 | 0.40 | 0.5 | 0.38 | 0.9 | 0.8 |



# SMD Common Mode Choke – BWCU\_02 Series

## Electrical Characteristics

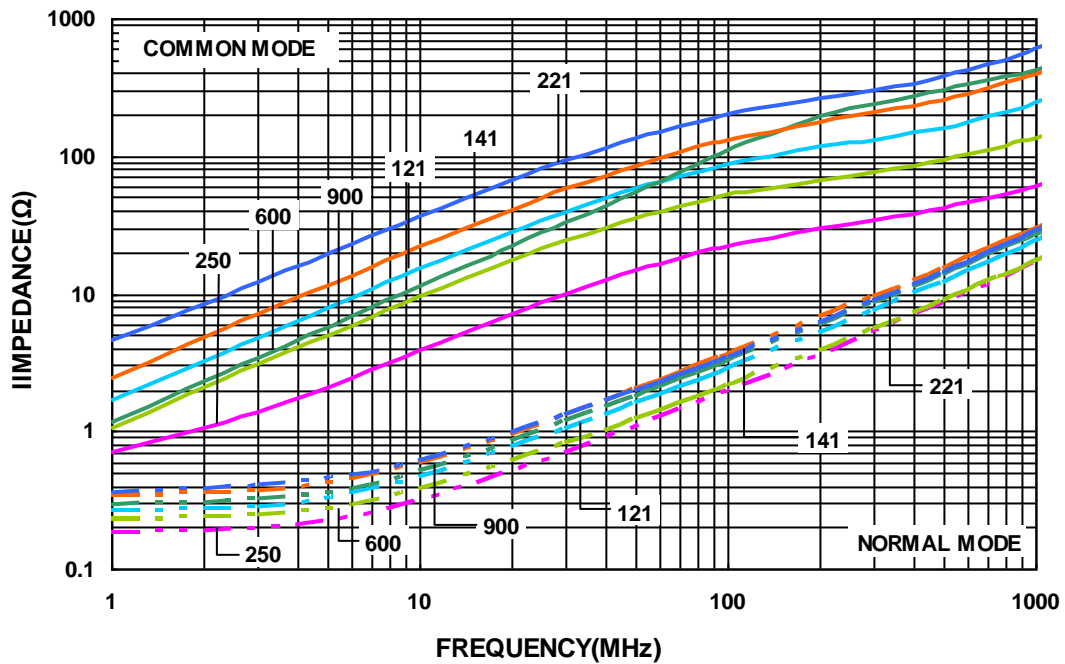
| Part Number        | Impedance (Ω) | Tolerance (±%) | Test Frequency (MHz) | RDC (Ω) Max | I <sub>rms</sub> (mA) Max | Rated Voltage (Vdc) | Withstand Voltage (Vdc) | Insulation Resistance (MΩ) Min |
|--------------------|---------------|----------------|----------------------|-------------|---------------------------|---------------------|-------------------------|--------------------------------|
| BWCU00160811250M02 | 25            | 20,25          | 100                  | 0.077       | 500                       | 50                  | 125                     | 10                             |
| BWCU00160811600M02 | 60            | 20,25          | 100                  | 0.109       | 500                       | 50                  | 125                     | 10                             |
| BWCU00160811900M02 | 90            | 20,25          | 100                  | 0.142       | 500                       | 50                  | 125                     | 10                             |
| BWCU00160811121M02 | 120           | 20,25          | 100                  | 0.160       | 500                       | 50                  | 125                     | 10                             |
| BWCU00160811141M02 | 140           | 20,25          | 100                  | 0.174       | 500                       | 50                  | 125                     | 10                             |
| BWCU00160811221M02 | 220           | 20,25          | 100                  | 0.209       | 500                       | 50                  | 125                     | 10                             |

**Note: When ordering, please specify tolerance code. Tolerance: M=±20% , Y=±25%**

- Operating temperature range - 40°C ~ 105°C(Including self - temperature rise)
- rms for 20°C rise from 25°C ambient
- Measure Equipment :  
 Z : Agilent HP4287A+Agilent 16197A  
 RDC : HP4338B or Chroma 16502 (Single Wire Test Value)  
 I<sub>rms</sub> : HP4284A+HP42841A/HP4285A+HP42841A  
 Insulation Resistance : Agilent HP4339B

**Test Instruments :** HP4287A Material/Impedance Analyzer

**Typical Impedance vs. Frequency**



Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin approval. Please contact our sales department before ordering.

# SMD Common Mode Choke – BWCU\_02 Series

## Electrical Characteristics

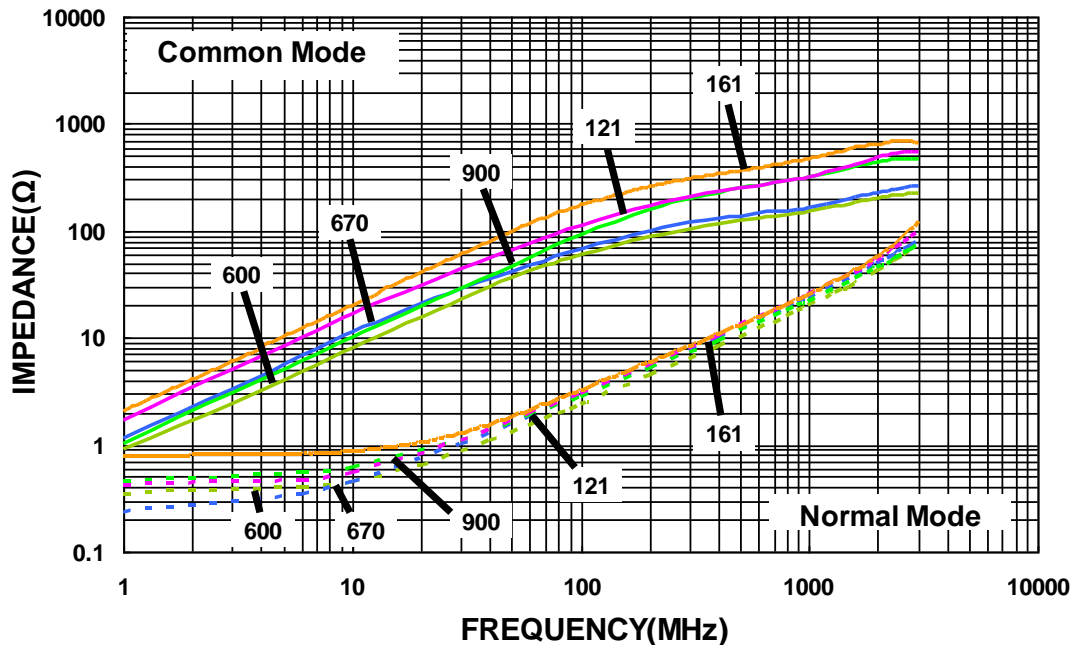
| Part Number        | Impedance (Ω) | Tolerance (±%) | Test Frequency (MHz) | RDC (Ω) Max | IDC (mA) | Rated Voltage (Vdc) | Withstand Voltage (Vdc) | Insulation Resistance (MΩ) Min |
|--------------------|---------------|----------------|----------------------|-------------|----------|---------------------|-------------------------|--------------------------------|
| BWCU00121008250T02 | 25            | 30             | 100                  | 0.30        | 400      | 50                  | 125                     | 100                            |
| BWCU00121008600M02 | 60            | 20             | 100                  | 0.40        | 300      | 50                  | 125                     | 100                            |
| BWCU00121008670M02 | 67            | 20             | 100                  | 0.25        | 300      | 50                  | 125                     | 100                            |
| BWCU00121008900M02 | 90            | 20             | 100                  | 0.30        | 250      | 50                  | 125                     | 100                            |
| BWCU00121008121M02 | 120           | 20             | 100                  | 0.40        | 200      | 50                  | 125                     | 100                            |
| BWCU00121008161M02 | 160           | 20             | 100                  | 0.43        | 160      | 50                  | 125                     | 100                            |
| BWCU00121008201M02 | 200           | 20             | 100                  | 0.80        | 120      | 50                  | 125                     | 100                            |
| BWCU00121008331Y02 | 330           | 25             | 100                  | 1.30        | 100      | 50                  | 125                     | 100                            |

**Note:** When ordering, please specify tolerance code. Tolerance: M=±20% , Y=±25% , T=±30%

- Operating temperature range - 40°C ~ 105°C(Including self - temperature rise)
- IDC for Inductance drop 10% from its value without current
- Measure Equipment :  
 Z : Agilent HP4287A+Agilent 16197A  
 RDC : Chroma 16502 (Single Wire Test Value)  
 IDC : HP4284A+HP42841A/HP4285A+HP42841A  
 Insulation Resistance : Agilent HP4339B

**Test Instruments :** HP4287A Material/Impedance Analyzer

Typical Impedance vs. Frequency



Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin approval. Please contact our sales department before ordering.

# SMD Common Mode Choke – BWCU\_02 Series

## Electrical Characteristics

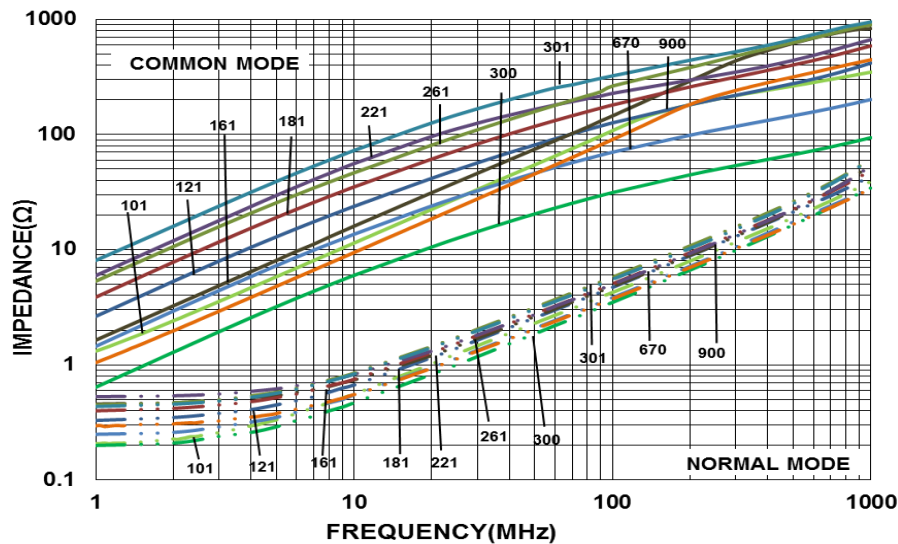
| Part Number        | Impedance (Ω) | Tolerance (±%) | Test Frequency (MHz) | RDC (Ω) Max | IDC (mA) | Rated Voltage (Vdc) | Withstand Voltage (Vdc) | Insulation Resistance (MΩ) Min |
|--------------------|---------------|----------------|----------------------|-------------|----------|---------------------|-------------------------|--------------------------------|
| BWCU00201212300M02 | 30            | 20             | 100                  | 0.20        | 450      | 50                  | 125                     | 10                             |
| BWCU00201212670M02 | 67            | 20             | 100                  | 0.25        | 400      | 50                  | 125                     | 10                             |
| BWCU00201212750M02 | 75            | 20             | 100                  | 0.30        | 360      | 50                  | 125                     | 10                             |
| BWCU00201212900M02 | 90            | 20             | 100                  | 0.35        | 330      | 50                  | 125                     | 10                             |
| BWCU00201212121M02 | 120           | 20             | 100                  | 0.30        | 400      | 50                  | 125                     | 10                             |
| BWCU00201212161M02 | 160           | 20             | 100                  | 0.35        | 350      | 50                  | 125                     | 10                             |
| BWCU00201212181M02 | 180           | 20             | 100                  | 0.35        | 330      | 50                  | 125                     | 10                             |
| BWCU00201212201M02 | 200           | 20             | 100                  | 0.35        | 330      | 50                  | 125                     | 10                             |
| BWCU00201212221M02 | 220           | 20             | 100                  | 0.35        | 310      | 50                  | 125                     | 10                             |
| BWCU00201212261M02 | 260           | 20             | 100                  | 0.40        | 300      | 50                  | 125                     | 10                             |
| BWCU00201212301M02 | 300           | 20             | 100                  | 0.40        | 290      | 50                  | 125                     | 10                             |
| BWCU00201212361M02 | 360           | 20             | 100                  | 0.45        | 280      | 50                  | 125                     | 10                             |
| BWCU00201212371M02 | 370           | 20             | 100                  | 0.45        | 280      | 50                  | 125                     | 10                             |
| BWCU00201212501M02 | 500           | 20             | 100                  | 0.55        | 170      | 50                  | 125                     | 10                             |
| BWCU00201212671M02 | 670           | 20             | 100                  | 0.60        | 140      | 50                  | 125                     | 10                             |
| BWCU00201212801M02 | 800           | 20             | 100                  | 0.88        | 300      | 50                  | 125                     | 10                             |
| BWCU00201212901M02 | 900           | 20             | 100                  | 0.60        | 80       | 50                  | 125                     | 10                             |

**Note:** When ordering, please specify tolerance code. Tolerance: M=±20%

- Operating temperature range - 40°C ~ 105°C(Including self - temperature rise)
- IDC for Inductance drop 10% from its value without current
- Measure Equipment :  
 Z : Agilent HP4287A+Agilent 16197A  
 RDC : Chroma 16502 (Single Wire Test Value)  
 IDC : HP4284A+HP42841A/HP4285A+HP42841A  
 Insulation Resistance : Agilent HP4339B

**Test Instruments :** HP4291A Material/Impedance Analyzer

*Typical Impedance vs. Frequency*



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# SMD Common Mode Choke – BWCU\_02 Series

## Electrical Characteristics

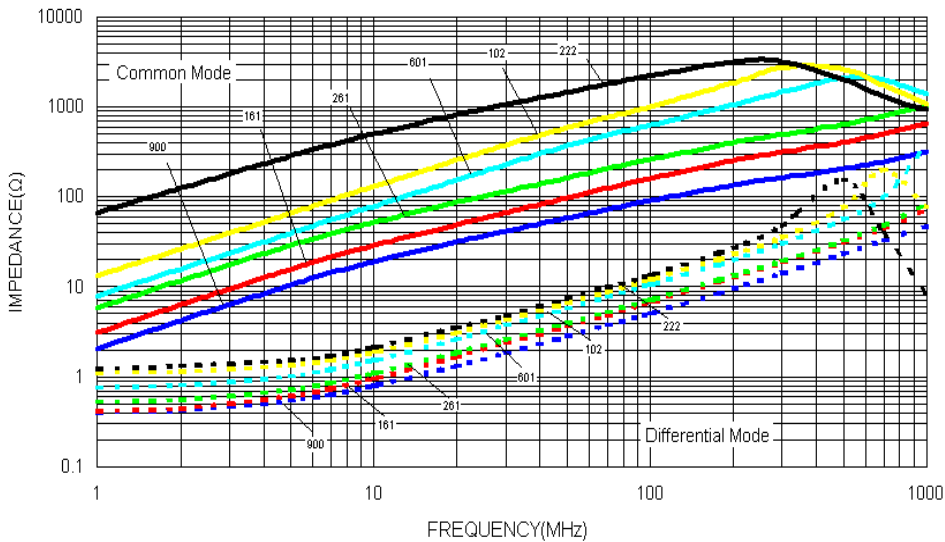
| Part Number        | Impedance (Ω) | Tolerance (±%) | Test Frequency (MHz) | RDC (Ω) Max | IDC (mA) | Rated Voltage (Vdc) | Withstand Voltage (Vdc) | Insulation Resistance (MΩ) Min |
|--------------------|---------------|----------------|----------------------|-------------|----------|---------------------|-------------------------|--------------------------------|
| BWCU00321619900M02 | 90            | 20             | 100                  | 0.3         | 370      | 50                  | 125                     | 10                             |
| BWCU00321619121M02 | 120           | 20             | 100                  | 0.3         | 370      | 50                  | 125                     | 10                             |
| BWCU00321619161M02 | 160           | 20             | 100                  | 0.4         | 340      | 50                  | 125                     | 10                             |
| BWCU00321619221M02 | 220           | 20             | 100                  | 0.4         | 320      | 50                  | 125                     | 10                             |
| BWCU00321619261M02 | 260           | 20             | 100                  | 0.5         | 310      | 50                  | 125                     | 10                             |
| BWCU00321619601M02 | 600           | 20             | 100                  | 0.8         | 260      | 50                  | 125                     | 10                             |
| BWCU00321619102M02 | 1000          | 20             | 100                  | 1.0         | 230      | 50                  | 125                     | 10                             |
| BWCU00321619222M02 | 2200          | 20             | 100                  | 1.2         | 200      | 50                  | 125                     | 10                             |

**Note: When ordering, please specify tolerance code. Tolerance: M=±20%**

- Operating temperature range - 40°C ~ 105°C(Including self - temperature rise)
- IDC for Inductance drop 10% from its value without current
- Measure Equipment :
  - Z : Agilent HP4287A+Agilent 16197A
  - RDC : Chroma 16502 (Single Wire Test Value)
  - IDC : HP4284A+HP42841A/HP4285A+HP42841A
  - Insulation Resistance : Agilent HP4339B

**Test Instruments :** HP4291A Material/Impedance Analyzer

### Typical Impedance vs. Frequency



Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin approval. Please contact our sales department before ordering.

# SMD Common Mode Choke – BWCU Series

## Electrical Characteristics

| Part Number        | Impedance (Ω) | Tolerance (±%) | Test Frequency (MHz) | RDC (Ω) Max | IDC (mA) | Rated Voltage (Vdc) | Withstand Voltage (Vdc) | Insulation Resistance (MΩ) Min |
|--------------------|---------------|----------------|----------------------|-------------|----------|---------------------|-------------------------|--------------------------------|
| BWCU00231512300M02 | 30            | 20             | 100                  | 0.20        | 1300     | 50                  | 125                     | 10                             |
| BWCU00231512420M02 | 42            | 20             | 100                  | 0.20        | 1300     | 50                  | 125                     | 10                             |
| BWCU00231512670M02 | 67            | 20             | 100                  | 0.25        | 1200     | 50                  | 125                     | 10                             |
| BWCU00231512900M02 | 90            | 20             | 100                  | 0.27        | 1000     | 50                  | 125                     | 10                             |
| BWCU00231512121M02 | 120           | 20             | 100                  | 0.30        | 900      | 50                  | 125                     | 10                             |
| BWCU00231512181M02 | 180           | 20             | 100                  | 0.40        | 700      | 50                  | 125                     | 10                             |
| BWCU00231512261M02 | 260           | 20             | 100                  | 0.60        | 700      | 50                  | 125                     | 10                             |

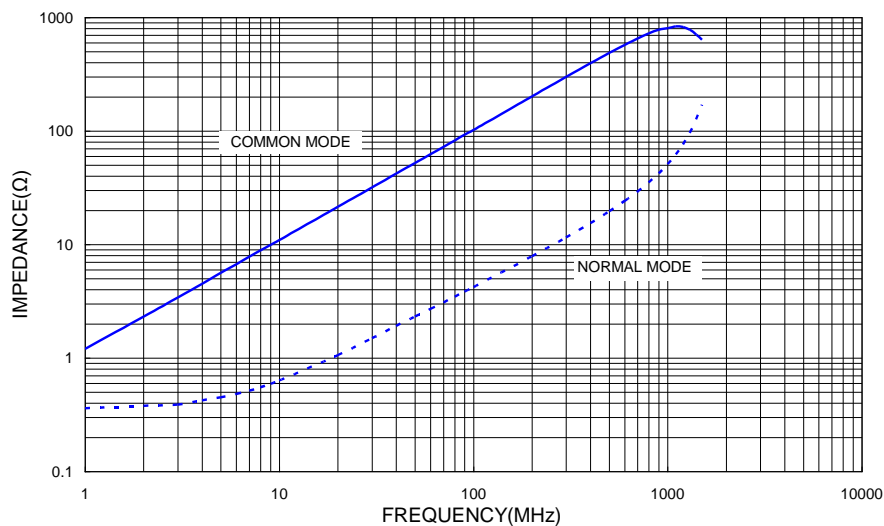
**Note: When ordering, please specify tolerance code. Tolerance: M=±20%**

- Operating temperature range - 40°C ~ 105°C(Including self - temperature rise)
- IDC for Inductance drop 10% from its value without current.
- Measure Equipment :  
 Z : Agilent HP4291A  
 RDC : HP4338B or Chroma 16502 (Single Wire Test Value)  
 IDC : HP4284A+HP42841A/HP4285A+HP42841A  
 Insulation Resistance : Agilent HP4339B

**Test Instruments :** HP4291A Material/Impedance Analyzer

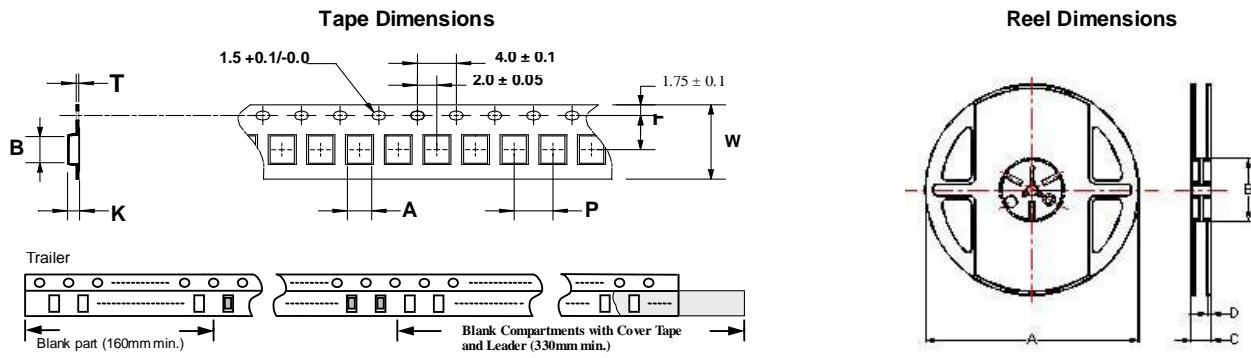
**Typical Impedance vs. Frequency**

### BWCU00231512900M02



Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin approval. Please contact our sales department before ordering.

## Packaging Specifications



### Dimensions in mm

| TYPE         | Tape Dimensions |      |      |   |   |     |      | Reel Dimensions |    |    |     | Quantity<br>PCS / Reel |
|--------------|-----------------|------|------|---|---|-----|------|-----------------|----|----|-----|------------------------|
|              | A               | B    | T    | W | P | F   | K    | A               | B  | C  | D   |                        |
| BWCU00160811 | 0.95            | 1.70 | 0.24 | 8 | 4 | 3.5 | 1.15 | 178             | 60 | 12 | 1.5 | 2000                   |
| BWCU00121008 | 1.15            | 1.45 | 0.24 | 8 | 4 | 3.5 | 1.00 | 178             | 60 | 12 | 1.5 | 2000                   |
| BWCU00201212 | 1.50            | 2.25 | 0.24 | 8 | 4 | 3.5 | 1.35 | 178             | 60 | 12 | 1.5 | 2000                   |
| BWCU00231512 | 1.60            | 2.42 | 0.26 | 8 | 4 | 3.5 | 1.14 | 178             | 60 | 12 | 1.5 | 2000                   |
| BWCU00321619 | 1.76            | 3.47 | 0.22 | 8 | 4 | 3.5 | 2.05 | 178             | 60 | 12 | 1.5 | 2000                   |

## BWCC Series For USB 2.0, IEEE1394b, LVDS



A full series of common mode choke is designed for excellent noise attenuation with compact sizing for use in wide range of applications. Both standard series and custom designs are available.

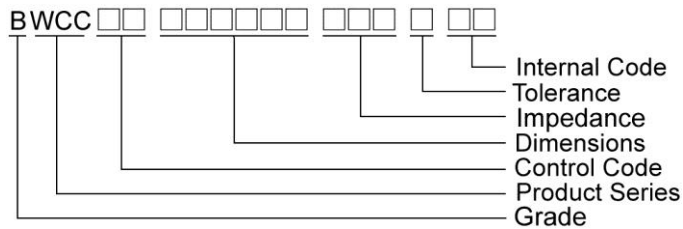
### Features

- RoHS Compliant
- Miniature SMD type common mode filter for fully automated assembly
- Excellent solderability

### Applications

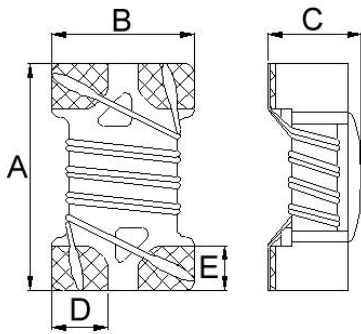
- USB line for personal computers and peripheral
- IEEE 1394 line for personal computers, DVC, STB
- LVDS, panel line for liquid display panels, graph card etc

### Product Identification

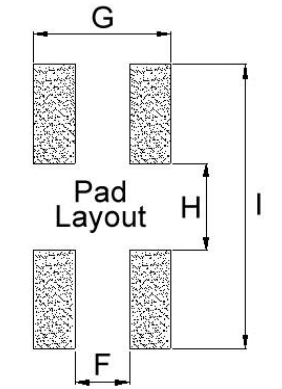


### Shape and Dimensions

**BWCC00201208**



### Recommended Pattern



Dimensions in mm

| TYPE         | A       | B       | C       | D   | E   | F   | G    | H   | I   |
|--------------|---------|---------|---------|-----|-----|-----|------|-----|-----|
| BWCC00201208 | 2.0±0.2 | 1.2±0.2 | 0.8±0.1 | 0.5 | 0.4 | 0.5 | 1.27 | 0.8 | 2.6 |

# SMD Common Mode Choke – BWCC Series

## Electrical Characteristics

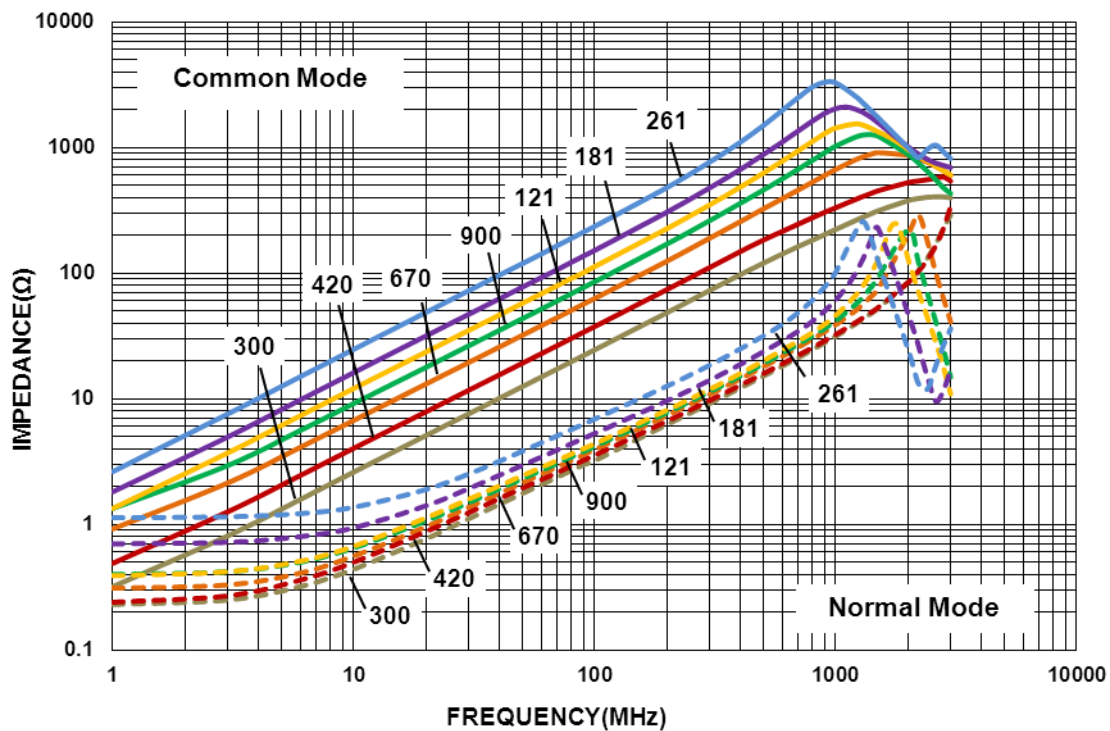
| Part Number        | Impedance (Ω) | Tolerance (±%) | Test Frequency (MHz) | RDC (Ω) Max | IDC (mA) | Rated Voltage (Vdc) | Withstanding Voltage (Vdc) | Insulation Resistance (MΩ) Min |
|--------------------|---------------|----------------|----------------------|-------------|----------|---------------------|----------------------------|--------------------------------|
| BWCC00201208300□02 | 30            | 20             | 100                  | 0.20        | 1300     | 50                  | 125                        | 10                             |
| BWCC00201208420□02 | 42            | 20             | 100                  | 0.20        | 1300     | 50                  | 125                        | 10                             |
| BWCC00201208670□02 | 67            | 20             | 100                  | 0.25        | 1200     | 50                  | 125                        | 10                             |
| BWCC00201208900□02 | 90            | 20             | 100                  | 0.27        | 1000     | 50                  | 125                        | 10                             |
| BWCC00201208121□02 | 120           | 20             | 100                  | 0.30        | 900      | 50                  | 125                        | 10                             |
| BWCC00201208181□02 | 180           | 20             | 100                  | 0.40        | 700      | 50                  | 125                        | 10                             |
| BWCC00201208261□02 | 260           | 20             | 100                  | 0.60        | 700      | 50                  | 125                        | 10                             |

**Note: When ordering, please specify tolerance code. Tolerance: M=±20%**

- Operating temperature range - 40°C ~ 105°C(Including self - temperature rise)
- RDC : SINGLE WIRE TEST VALUE
- IDC for Inductance drop 10% from its value without current.
- Measure Equipment :
  - Z : Agilent HP4291A
  - RDC : HP4338B or Chroma 16502 (Single Wire Test Value)
  - IDC : HP4284A+HP42841A/HP4285A+HP42841A
  - Insulation Resistance : Agilent HP4339B

**Test Instruments :** HP4291A Material/Impedance Analyzer

### Typical Impedance vs. Frequency

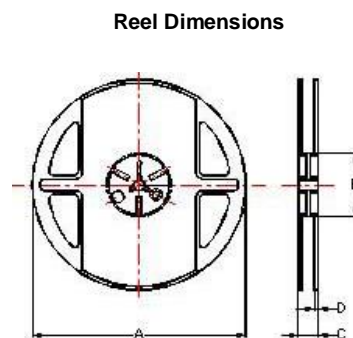
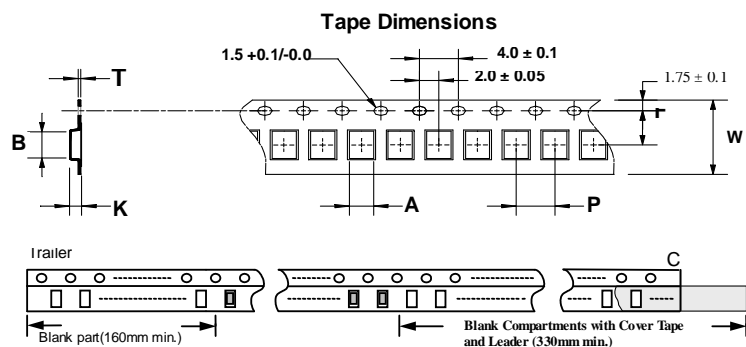


Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin approval. Please contact our sales department before ordering.



# SMD Common Mode Choke - BWCC Series

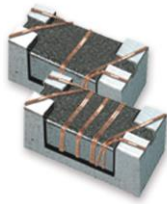
## Packaging Specifications



### Dimensions in mm

| TYPE         | Tape Dimensions |     |      |   |   |     |     | Reel Dimensions |    |    |     | Quantity<br>PCS / Reel |
|--------------|-----------------|-----|------|---|---|-----|-----|-----------------|----|----|-----|------------------------|
|              | A               | B   | T    | W | P | F   | K   | A               | B  | C  | D   |                        |
| BWCC00201208 | 1.46            | 2.3 | 0.23 | 8 | 4 | 3.5 | 1.1 | 178             | 60 | 12 | 1.5 | 2000                   |

## BWCU\_03 Series For HDMI, USB 3.0



A full series of common mode choke is designed for excellent noise attenuation and compact sizing for use in wide range of applications. Both standard series and custom designs are available.

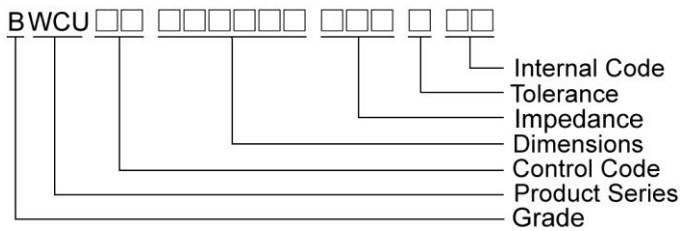
### Features

- RoHS Compliant
- Miniature SMD type common mode filter for fully automated assembly
- Excellent solderability

### Applications

- HDMI
- USB lines (for personal computers and peripheral), DVC, STB, LVDS, panel line for liquid display panels, etc.

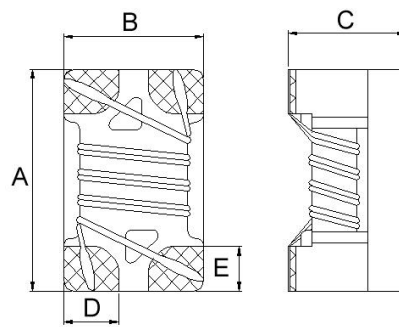
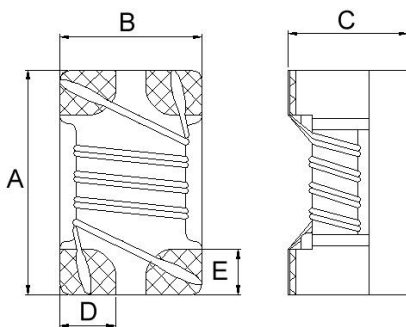
### Product Identification



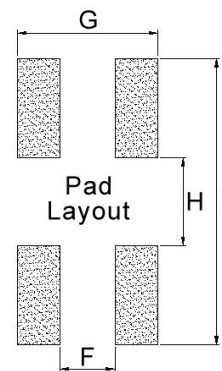
### Shape and Dimensions

**BWCU00121008**

**BWCU00201212**



### Recommended Pattern



Dimensions in mm

| TYPE         | A        | B        | C        | D    | E    | F    | G    | H    | I    |
|--------------|----------|----------|----------|------|------|------|------|------|------|
| BWCU00121008 | 1.25±0.2 | 1.00±0.2 | 0.80±0.1 | 0.32 | 0.33 | 0.36 | 1.00 | 0.59 | 1.75 |
| BWCU00201212 | 2.05±0.2 | 1.25±0.2 | 1.20±0.2 | 0.50 | 0.40 | 0.50 | 1.27 | 0.80 | 2.60 |

# SMD Common Mode Choke – BWCU\_03 Series

## Electrical Characteristics

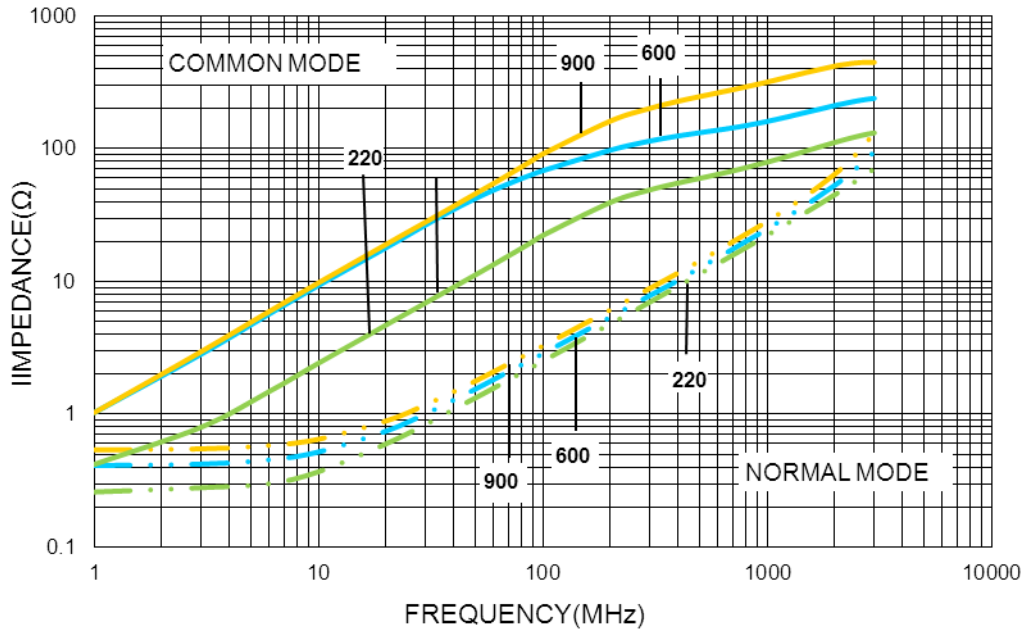
| Part Number        | Impedance (Ω) | Tolerance (±%) | Test Frequency (MHz) | RDC (Ω) Max | IDC (mA) Max | Rated Voltage (Vdc) | Withstand Voltage (Vdc) | Insulation Resistance (MΩ) Min |
|--------------------|---------------|----------------|----------------------|-------------|--------------|---------------------|-------------------------|--------------------------------|
| BWCU00121008220Y03 | 22            | 25             | 100                  | 0.20        | 400          | 50                  | 125                     | 100                            |
| BWCU00121008600Y03 | 60            | 25             | 100                  | 0.40        | 250          | 50                  | 125                     | 100                            |
| BWCU00121008900Y03 | 90            | 25             | 100                  | 0.30        | 250          | 50                  | 125                     | 100                            |

**Note:** When ordering, please specify tolerance code. Tolerance: Y=±25%

- Operating temperature range - 40°C ~ 105°C(Including self - temperature rise)
- IDC for Inductance drop 10% from its value without current.
- Measure Equipment :  
 Z : HP4286A/HP4287A/Agilent E4991A+Agilent16197A  
 RDC : Chroma 16502 (Single Wire Test Value)  
 IDC : HP4284A+HP42841A/HP4285A+HP42841A  
 Insulation Resistance : Agilent HP4339B

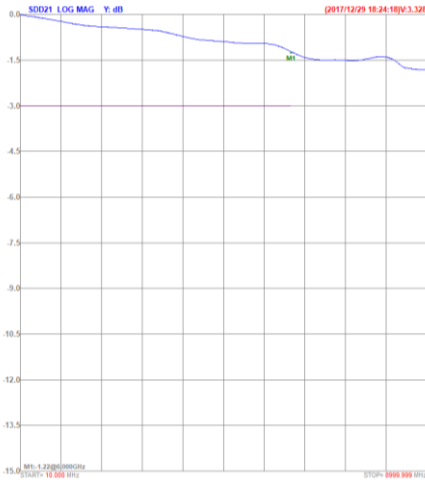
**Test Instruments :** HP4291A Material/Impedance Analyzer

### Typical Impedance vs. Frequency

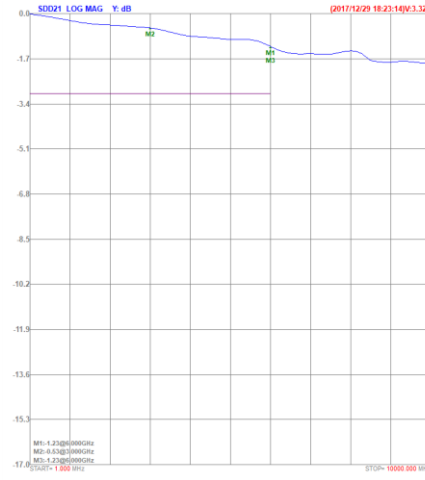


## BWCU00121008220Y03

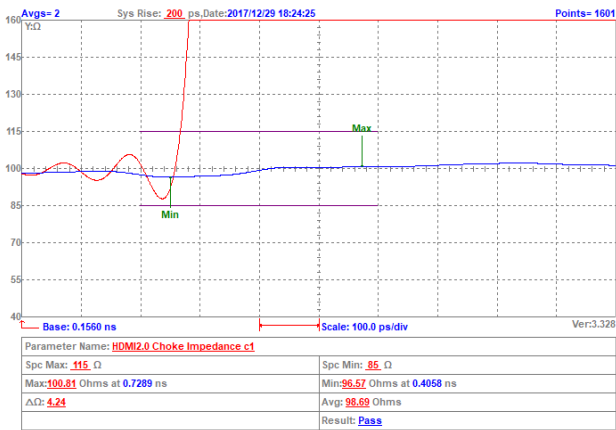
### Insertion Loss For HDMI2.0 Testing:



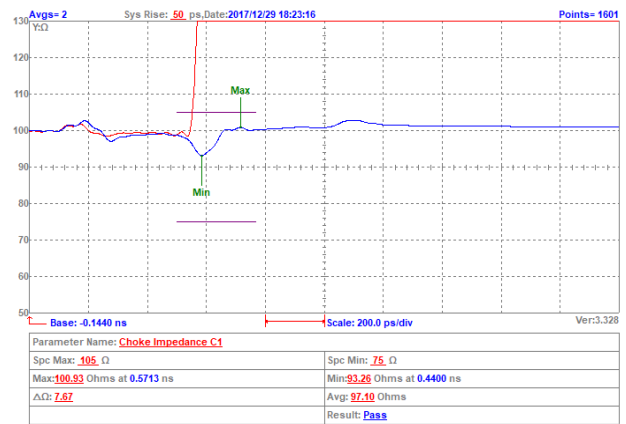
### Insertion Loss For USB3.0 Testing:



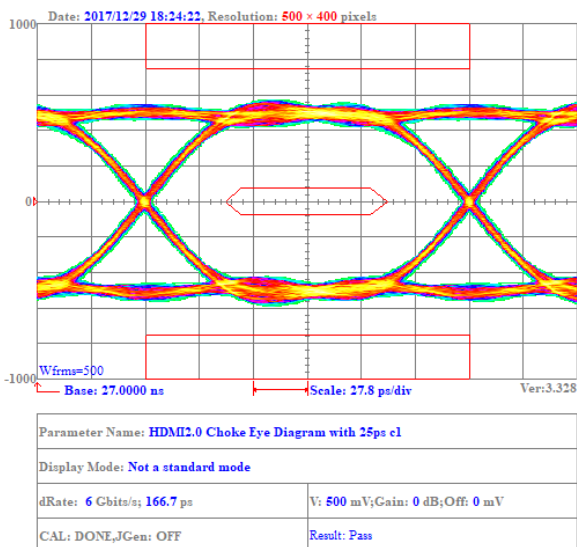
### TDR For HDMI2.0 Testing:



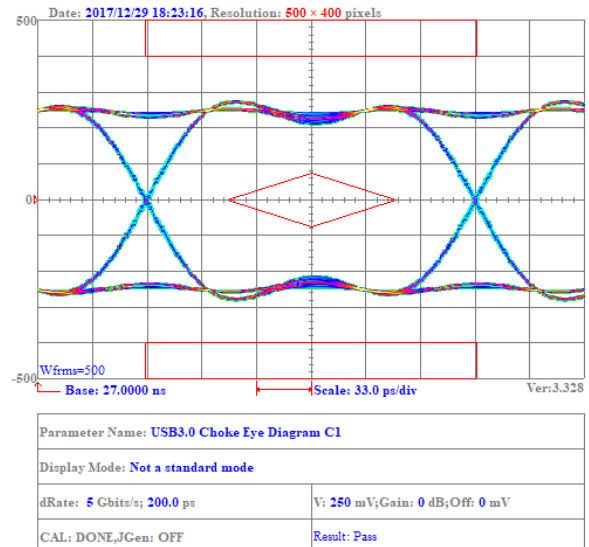
### TDR For USB3.0 Testing:



### Eye Diagram For HDMI2.0 Testing:



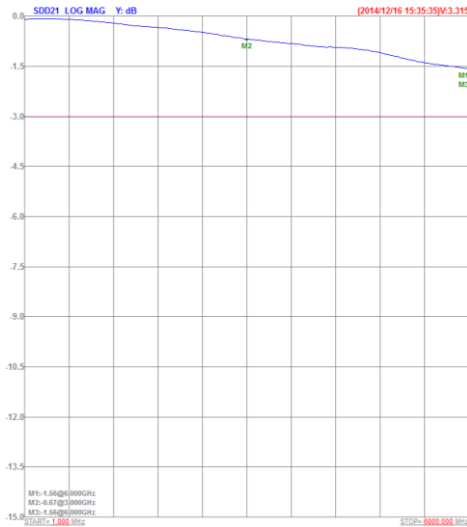
### Eye Diagram For USB3.0 Testing:



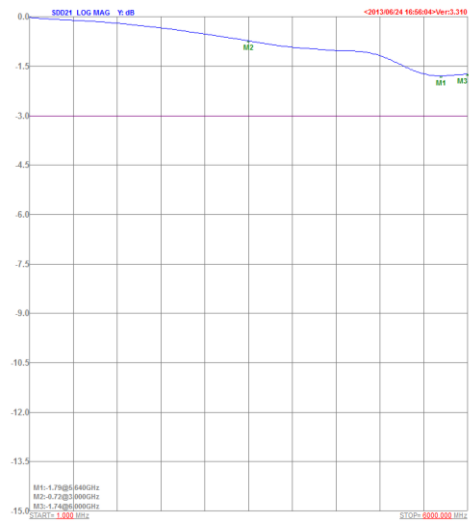
Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin approval. Please contact our sales department before ordering.

## BWCU00121008600Y03

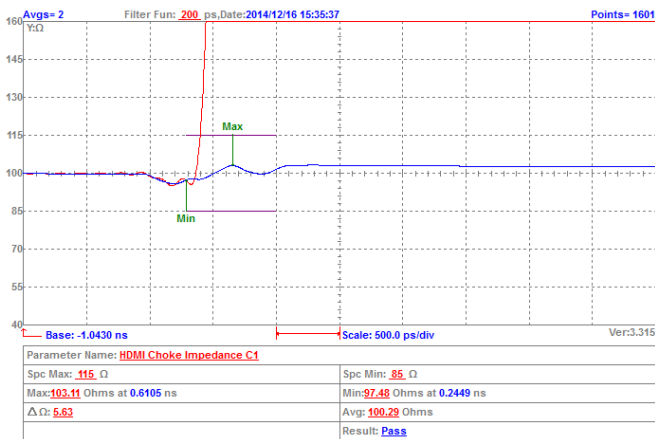
### Insertion Loss For HDMI2.0 Testing:



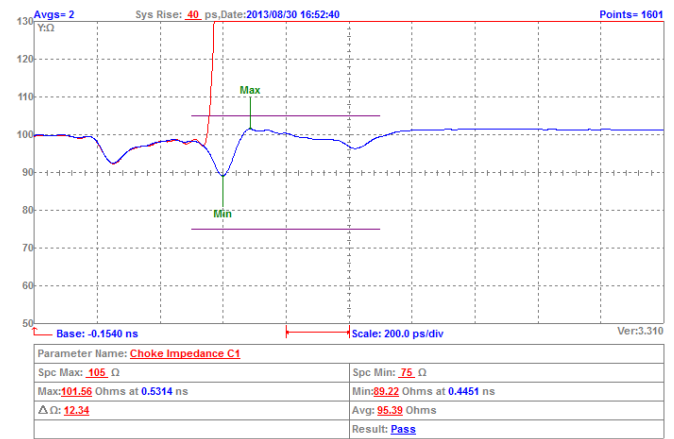
### Insertion Loss For USB3.0 Testing:



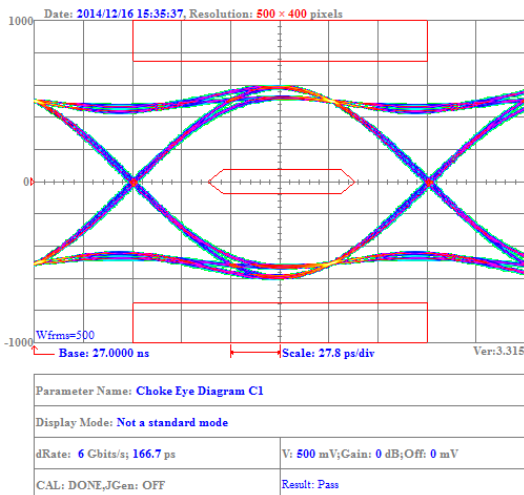
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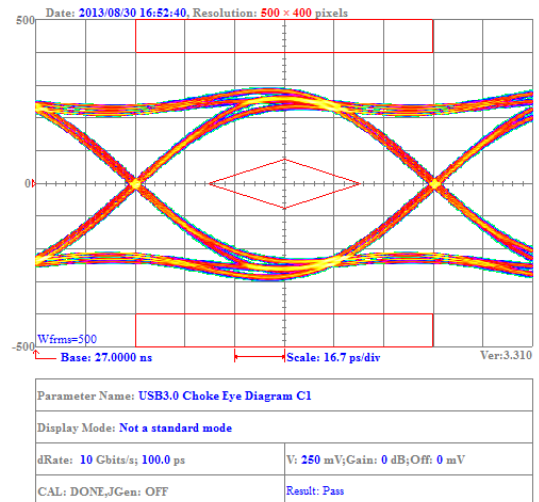
### TDR For USB3.0 Testing:



### Eye Diagram For HDMI2.0 Testing:



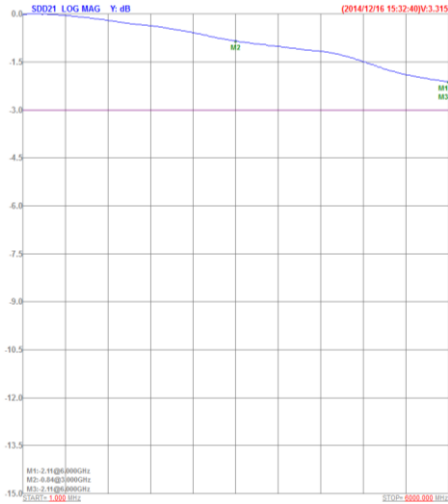
### Eye Diagram For USB3.0 Testing:



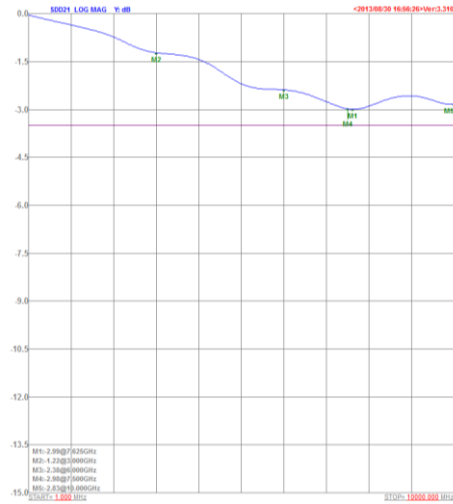
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## BWCU00121008900Y03

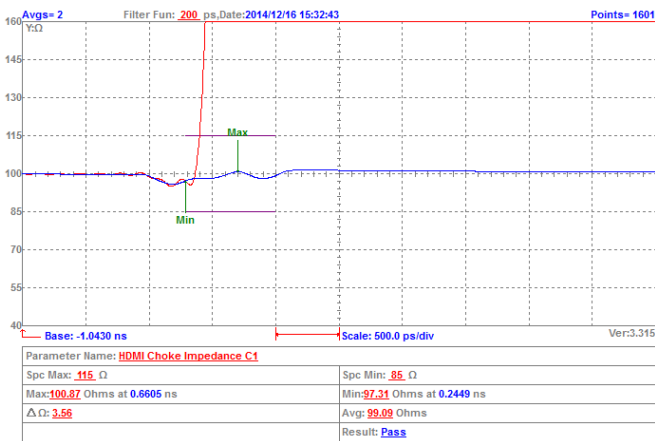
### Insertion Loss For HDMI2.0 Testing:



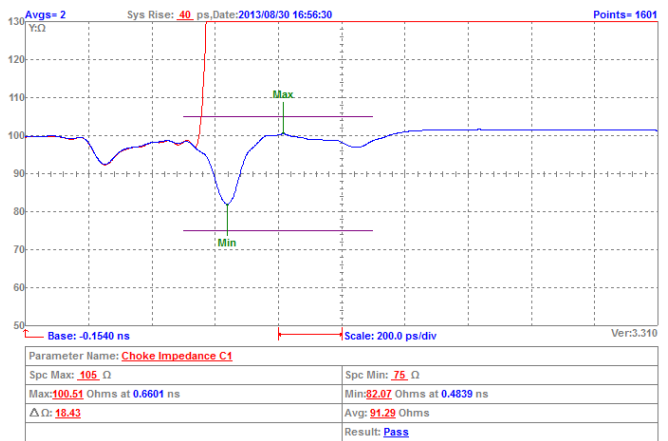
### Insertion Loss For USB3.0 Testing:



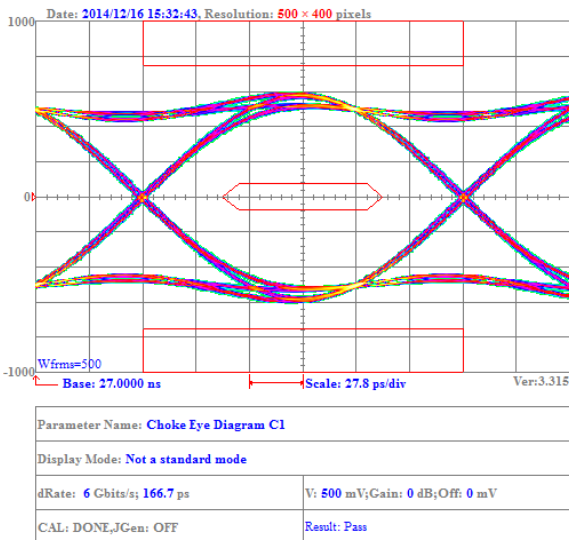
### TDR For HDMI2.0 Testing:



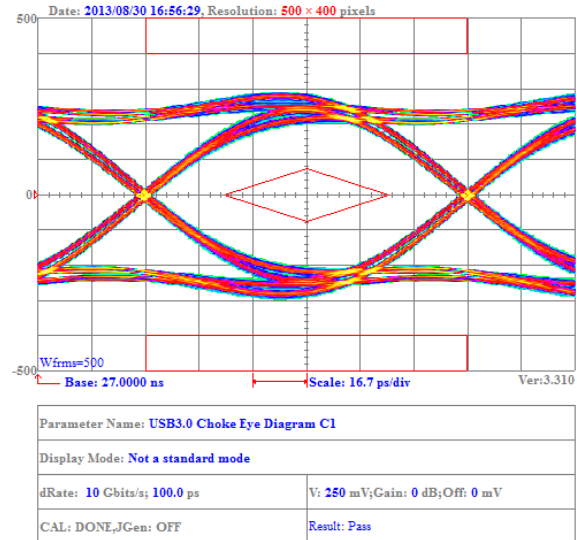
### TDR For USB3.0 Testing:



### Eye Diagram For HDMI2.0 Testing:



### Eye Diagram For USB3.0 Testing:



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# SMD Common Mode Choke – BWCU\_03 Series

## Electrical Characteristics

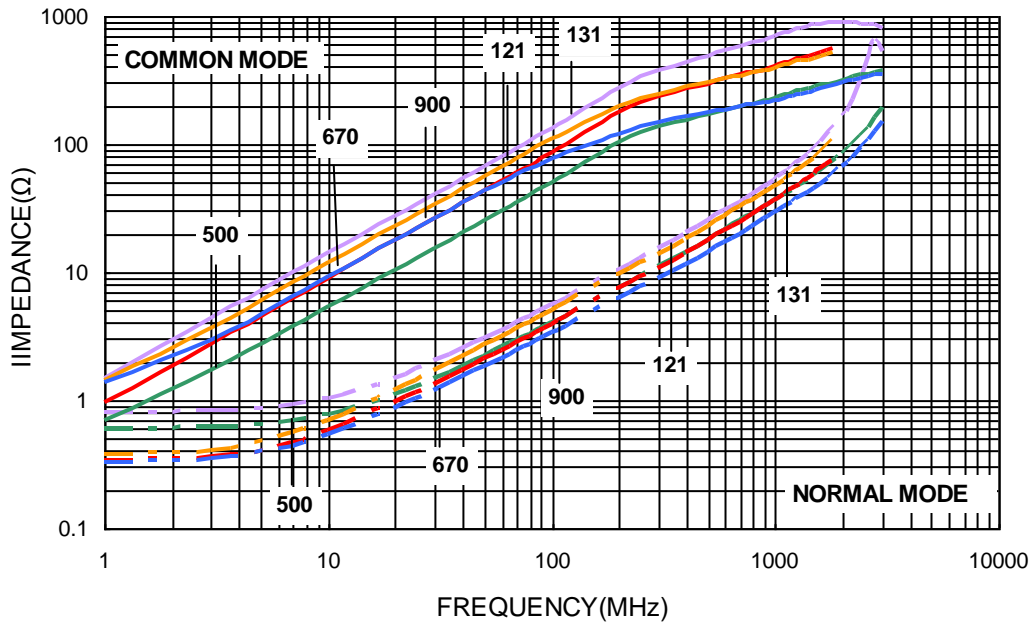
| Part Number        | Impedance (Ω) | Tolerance (±%) | Test Frequency (MHz) | RDC (Ω) Max | IDC (mA) Max | Rated Voltage (Vdc) | Withstand Voltage (Vdc) | Insulation Resistance (MΩ) Min |
|--------------------|---------------|----------------|----------------------|-------------|--------------|---------------------|-------------------------|--------------------------------|
| BWCU00201212500Y03 | 50            | 25             | 100                  | 0.20        | 500          | 50                  | 125                     | 10                             |
| BWCU00201212670Y03 | 67            | 25             | 100                  | 0.30        | 500          | 50                  | 125                     | 10                             |
| BWCU00201212900Y03 | 90            | 25             | 100                  | 0.30        | 500          | 50                  | 125                     | 10                             |
| BWCU00201212121Y03 | 120           | 25             | 100                  | 0.35        | 330          | 50                  | 125                     | 10                             |
| BWCU00201212131Y03 | 130           | 25             | 100                  | 0.40        | 300          | 50                  | 125                     | 10                             |

**Note: When ordering, please specify tolerance code. Tolerance: Y=±25%**

- Operating temperature range - 40°C ~ 105°C(Including self - temperature rise)
- IDC for Inductance drop 10% from its value without current.
- Measure Equipment :  
 Z : HP4286A/HP4287A/Agilent E4991A+Agilent16197A  
 RDC : Chroma 16502 (Single Wire Test Value)  
 IDC : HP4284A+HP42841A/HP4285A+HP42841A  
 Insulation Resistance : Agilent HP4339B

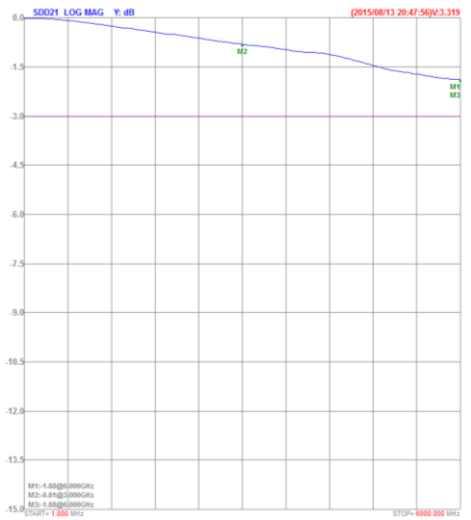
**Test Instruments :** HP4291A Material/Impedance Analyzer

### Typical Impedance vs. Frequency

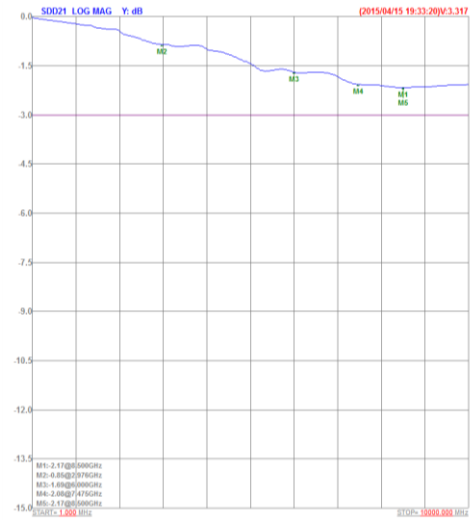


## BWCU00201212500Y03

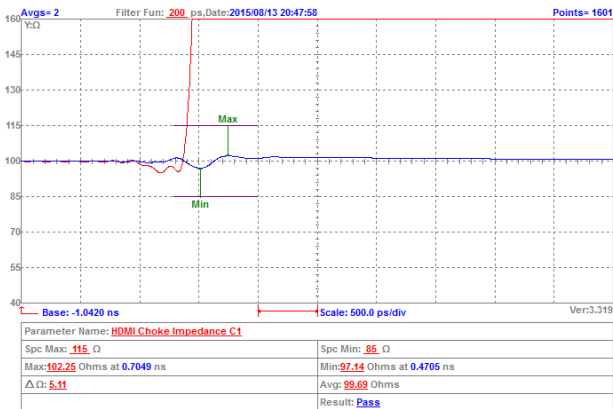
### Insertion Loss For HDMI2.0 Testing:



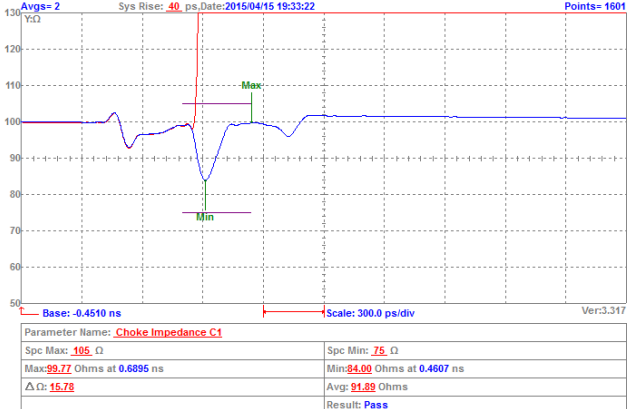
### Insertion Loss For USB3.0 Testing:



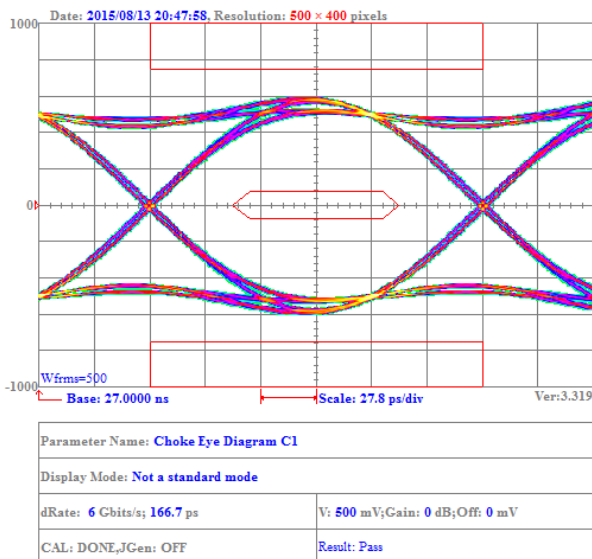
### TDR For HDMI2.0 Testing:



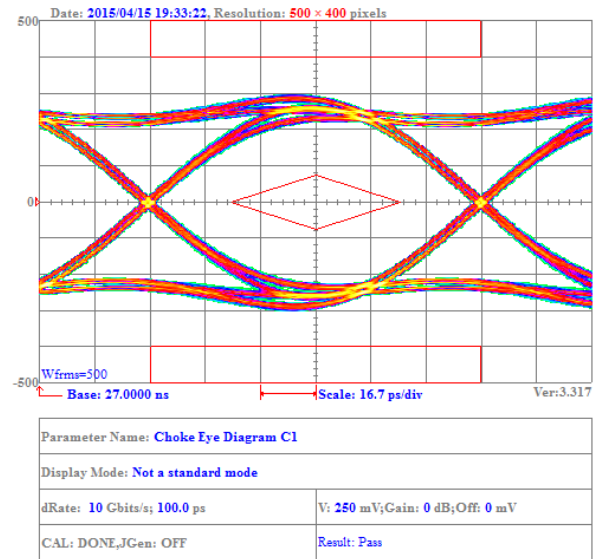
### TDR For USB3.0 Testing:



### Eye Diagram For HDMI2.0 Testing:



### Eye Diagram For USB3.0 Testing:

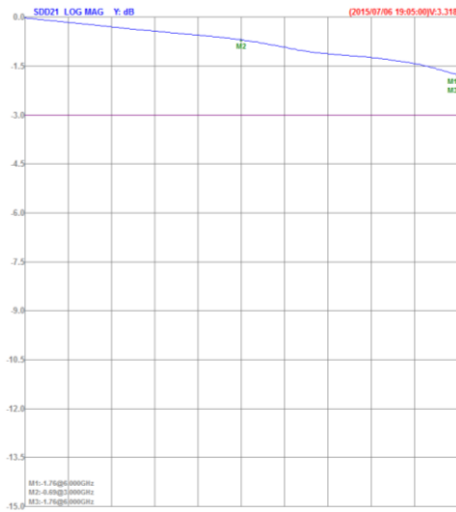


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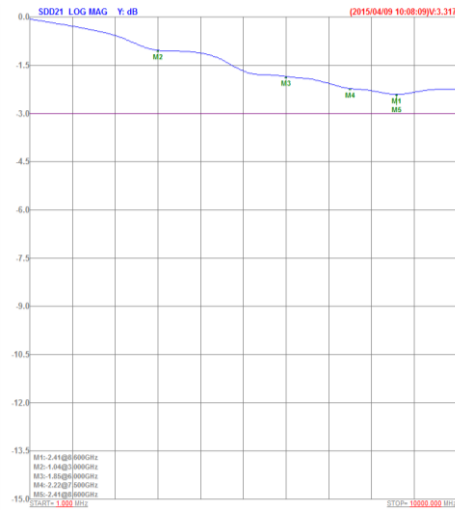


## BWCU00201212670Y03

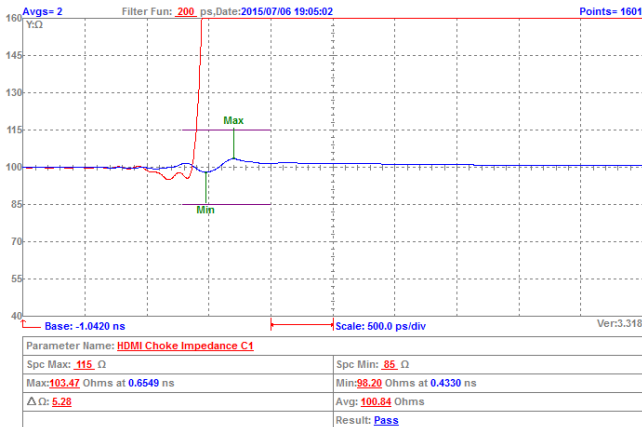
### Insertion Loss For HDMI2.0 Testing:



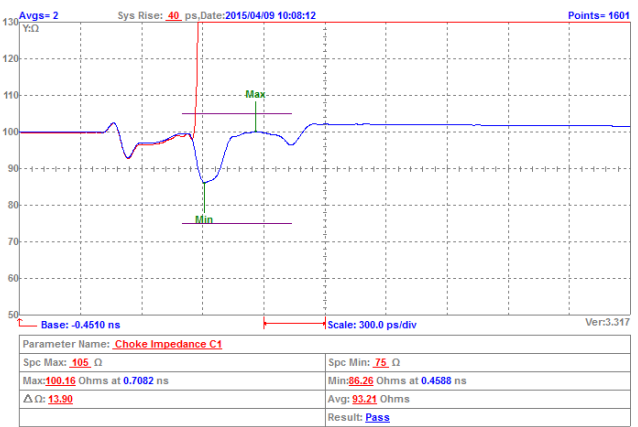
### Insertion Loss For USB3.0 Testing:



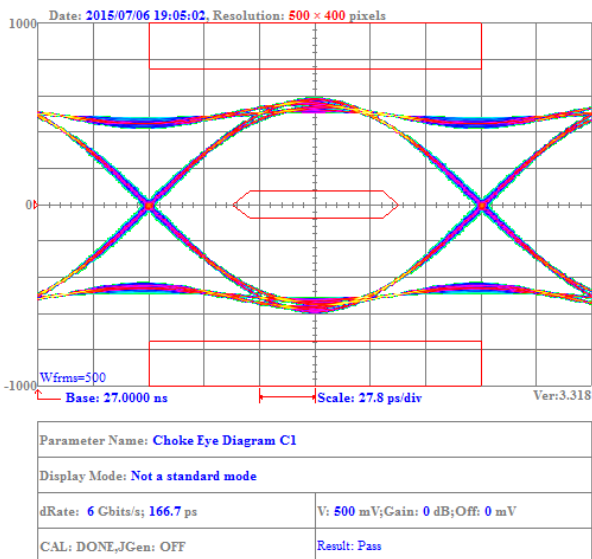
### TDR For HDMI2.0 Testing:



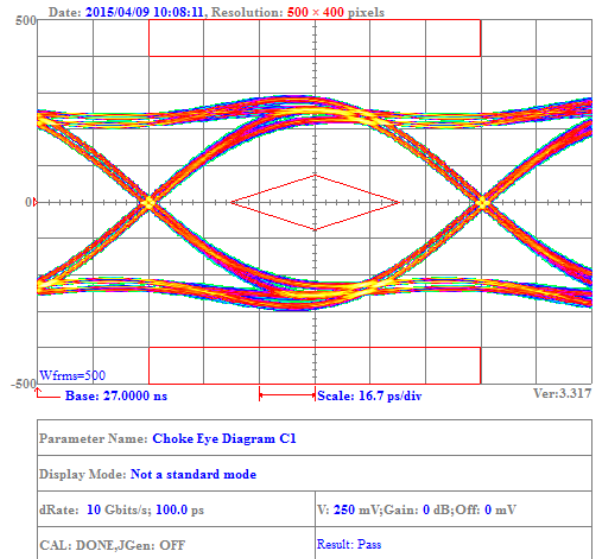
### TDR For USB3.0 Testing:



### Eye Diagram For HDMI2.0 Testing:



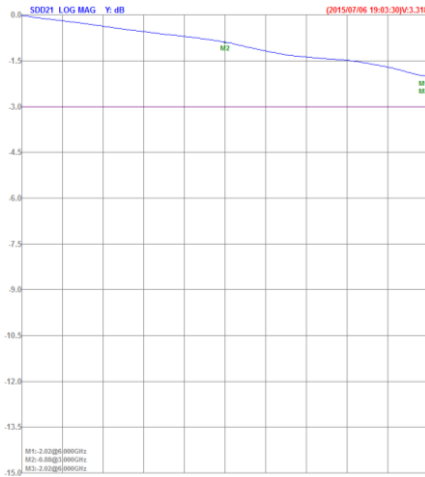
### Eye Diagram For USB3.0 Testing:



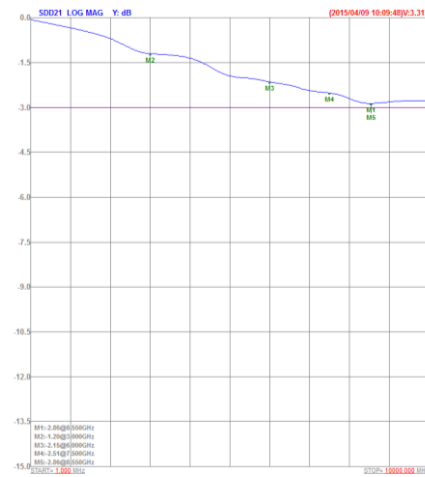
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## BWCU00201212900Y03

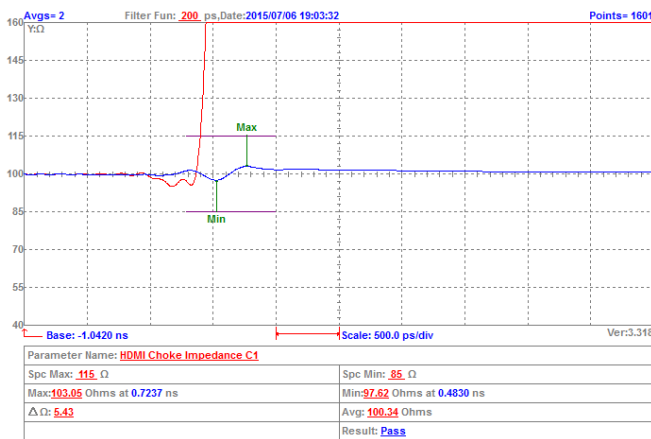
### Insertion Loss For HDMI2.0 Testing:



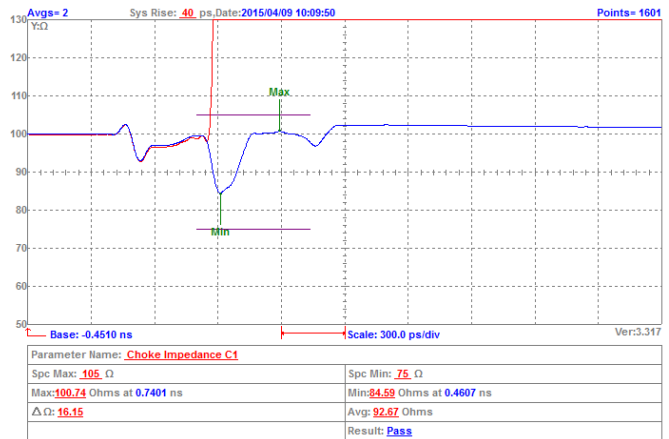
### Insertion Loss For USB3.0 Testing:



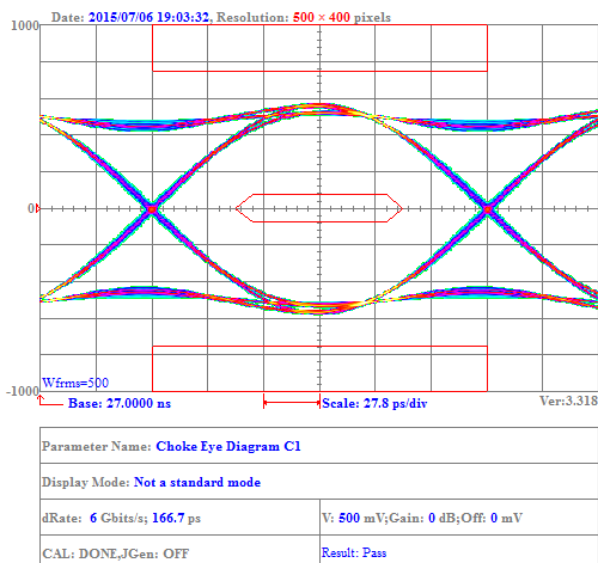
### TDR For HDMI2.0 Testing:



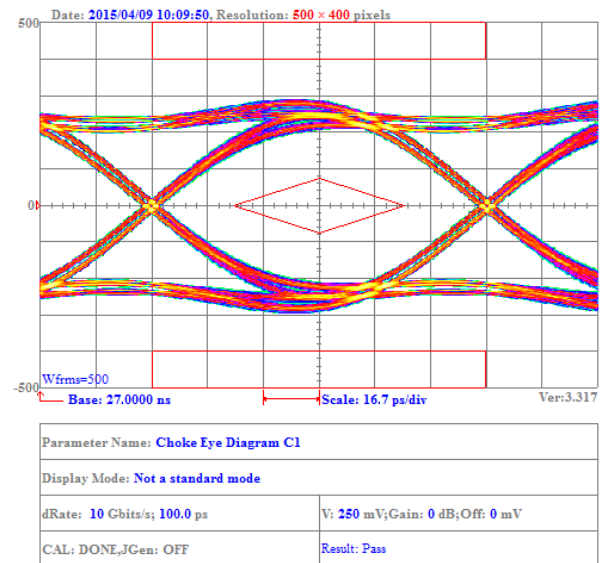
### TDR For USB3.0 Testing:



### Eye Diagram For HDMI2.0 Testing:



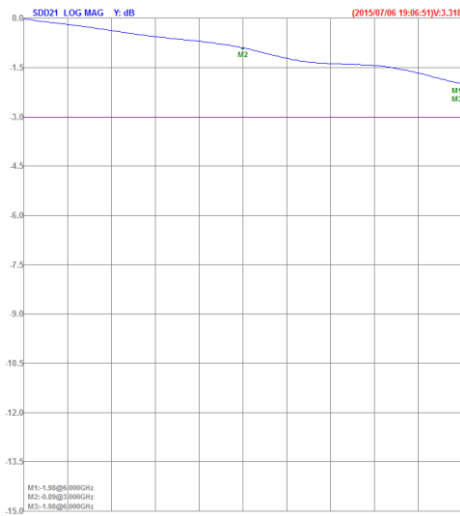
### Eye Diagram For USB3.0 Testing:



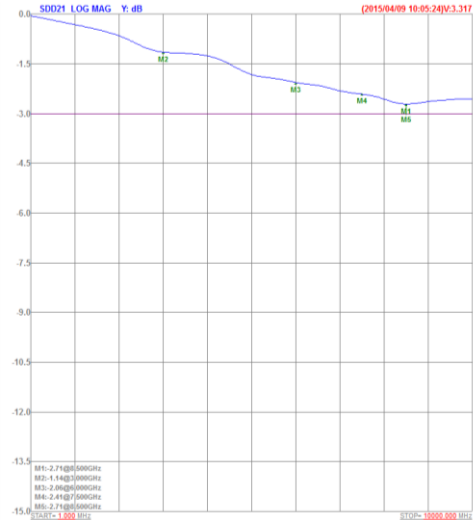
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## BWCU00201212121Y03

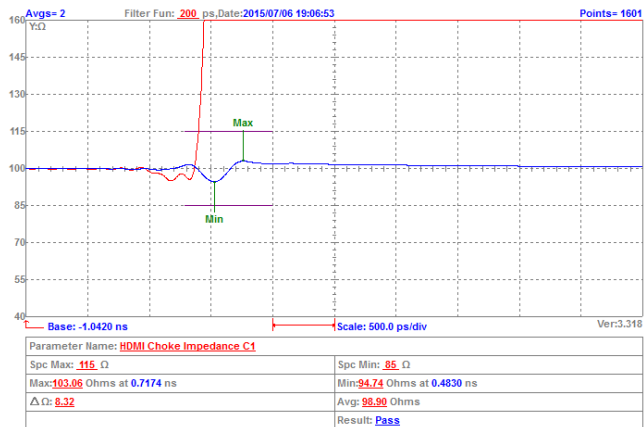
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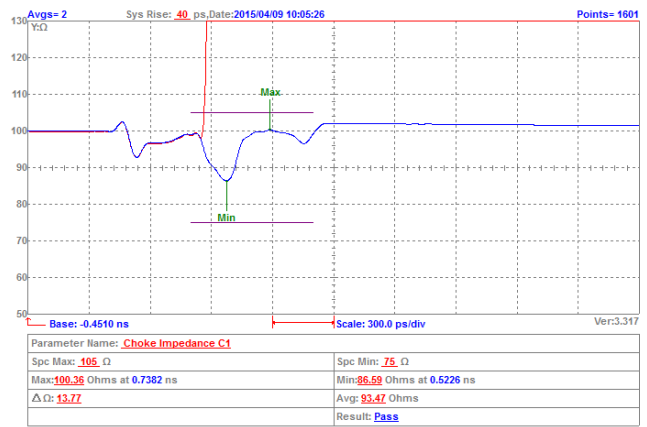
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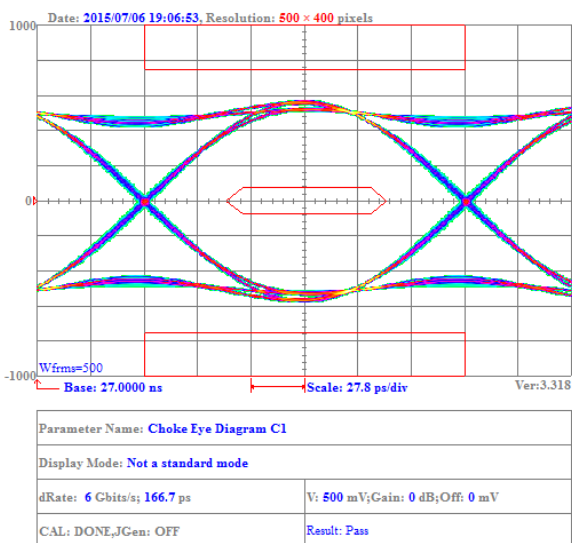
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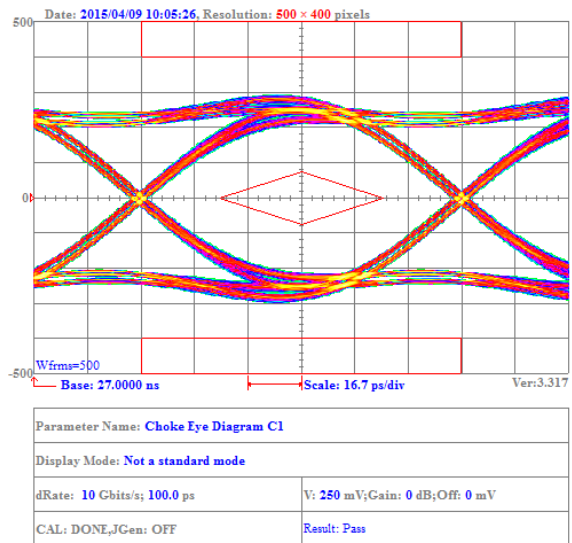
### TDR For USB3.0 Testing:



### Eye Diagram For HDMI2.0 Testing:



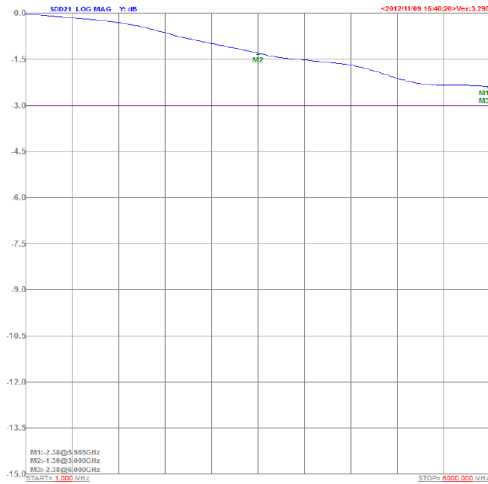
### Eye Diagram For USB3.0 Testing:



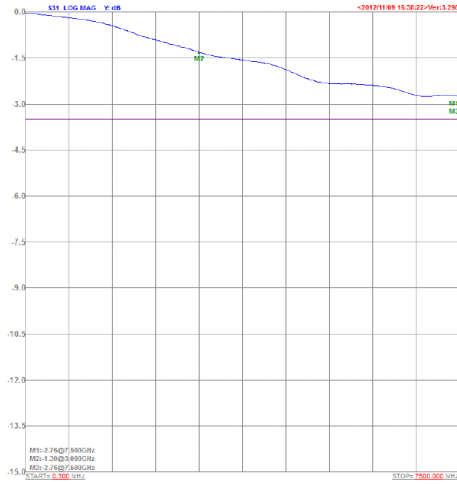
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## BWCU00201212131Y03

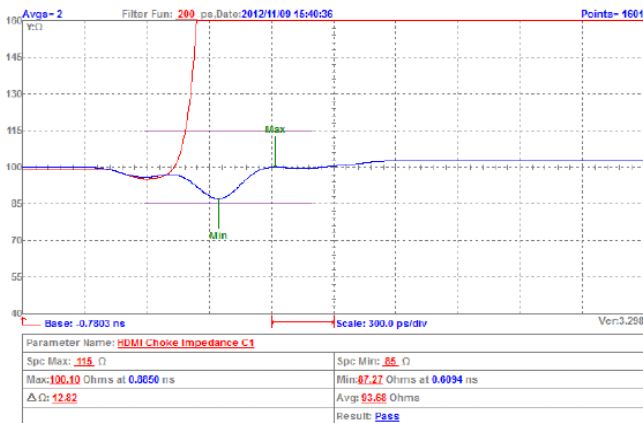
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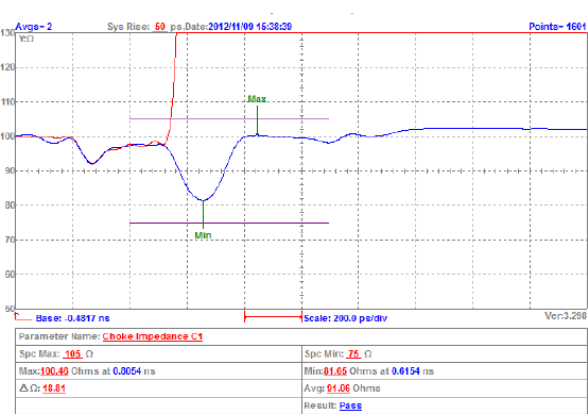
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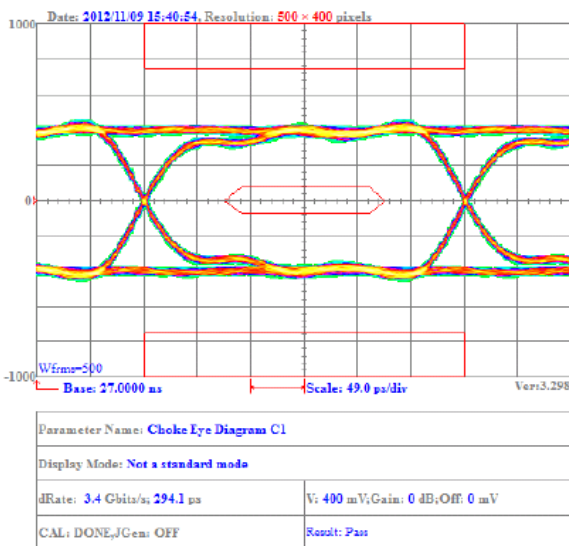
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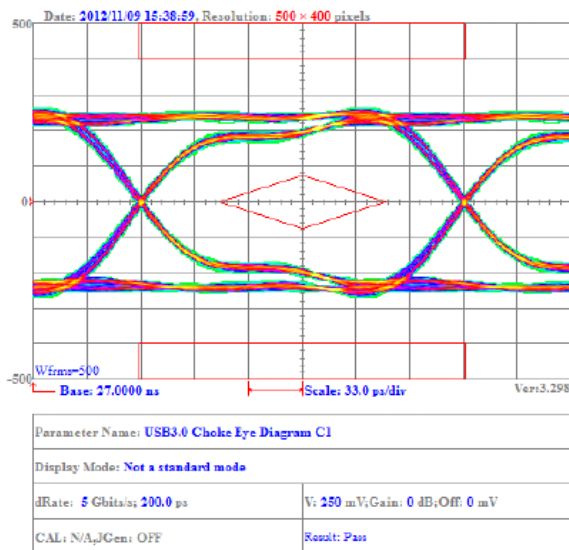
### TDR For USB3.0 Testing:



### Eye Diagram For HDMI Testing:

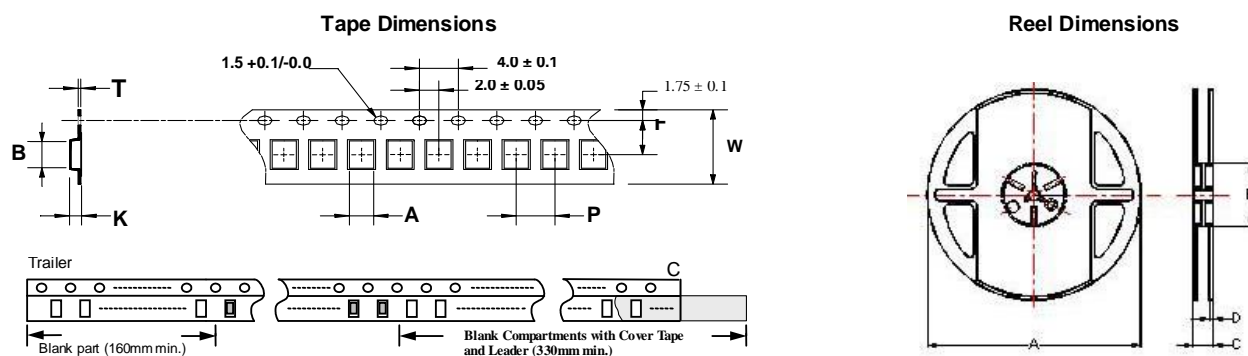


### Eye Diagram For USB3.0 Testing:



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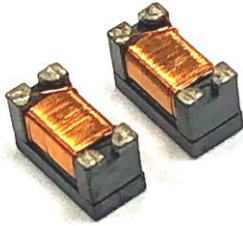
## Packaging Specifications



### Dimensions in mm

| TYPE         | Tape Dimensions |      |      |   |   |     |      | Reel Dimensions |    |    |     | Quantity<br>PCS / Reel |
|--------------|-----------------|------|------|---|---|-----|------|-----------------|----|----|-----|------------------------|
|              | A               | B    | T    | W | P | F   | K    | A               | B  | C  | D   |                        |
| BWCU00121008 | 1.15            | 1.45 | 0.25 | 8 | 4 | 3.5 | 1.00 | 178             | 60 | 12 | 1.5 | 2000                   |
| BWCU00201212 | 1.50            | 2.25 | 0.24 | 8 | 4 | 3.5 | 1.35 | 178             | 60 | 12 | 1.5 | 2000                   |

## BWDM Series



A full series of common mode choke is designed for excellent noise attenuation with compact sizing for use in wide range of applications. Both standard series and custom designs are available.

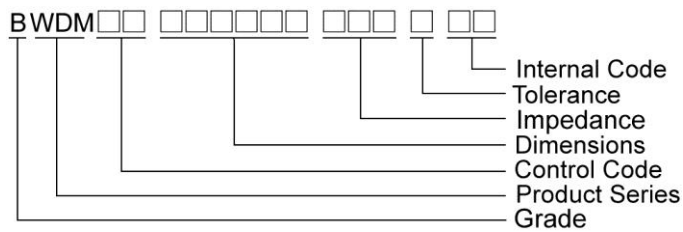
### Features

- RoHS Compliant
- Miniature SMD type common mode filter for fully automated assembly
- High Inductance at high frequency effects excellent noise suppression performance
- Excellent solderability

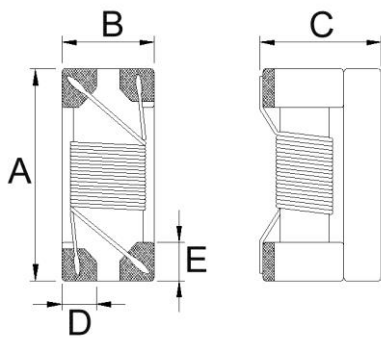
### Applications

- USB line for personal computers and peripheral
- IEEE 1394 line for personal computers, DVC, STB
- LVDS, panel line for liquid display panels, graph card etc

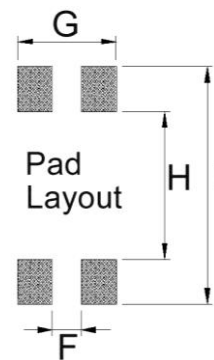
### Product Identification



### Shape and Dimensions



### Recommended Pattern



Dimensions in mm

| TYPE         | A       | B       | C       | D   | E   | F   | G   | H   | I   |
|--------------|---------|---------|---------|-----|-----|-----|-----|-----|-----|
| BWDM00341620 | 3.4±0.2 | 1.6±0.2 | 2.0±0.2 | 0.6 | 0.6 | 0.5 | 1.7 | 2.3 | 3.7 |

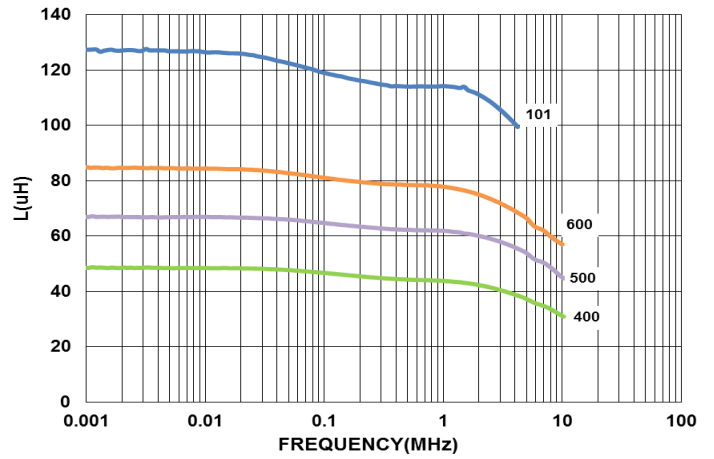
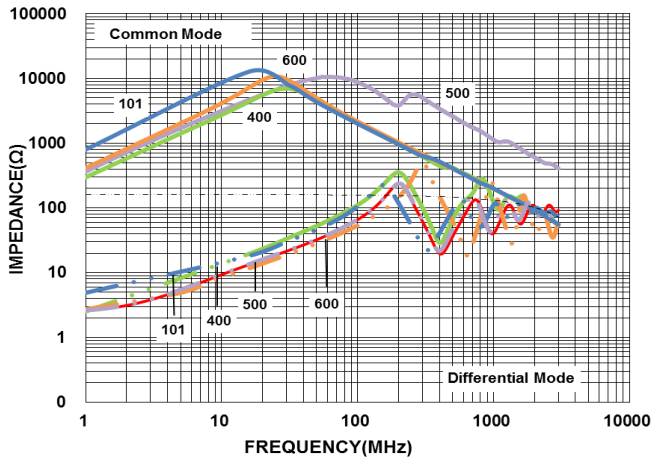
# SMD Common Mode Choke – BWDM Series

## Electrical Characteristics

| Part Number        | Inductance (uH) Min | Test Frequency (kHz) | RDC ( $\Omega$ ) Max | I <sub>rms</sub> (mA) Max | Rated Voltage (Vdc) | Withstanding Voltage (Vdc) | Insulation Resistance (M $\Omega$ ) Min |
|--------------------|---------------------|----------------------|----------------------|---------------------------|---------------------|----------------------------|---|
| BWDM00341620400X00 | 40                  | 100                  | 1.5                  | 300                       | 50                  | 125                        | 10                                      |
| BWDM00341620600X00 | 60                  | 100                  | 1.7                  | 200                       | 50                  | 125                        | 10                                      |
| BWDM00341620101X00 | 105                 | 100                  | 3.0                  | 120                       | 50                  | 125                        | 10                                      |

- Operating temperature range - 40°C ~ 105°C(Including self - temperature rise)
- I<sub>rms</sub> for a 20°C temperature rise from 25°C ambient.
- Measure Equipment :  
 L : Agilent HP4286A / HP4287A / AgilentE4991A  
 RDC : Chroma 16502 (Single Wire Test Value)  
 I<sub>rms</sub> : HP4284A+HP42841A/HP4285A+HP42841A  
 Insulation Resistance : Agilent HP4339B

## Test Instruments :

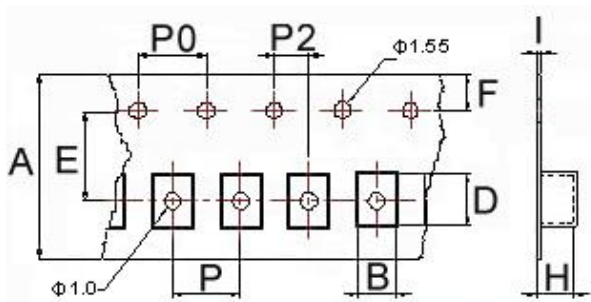


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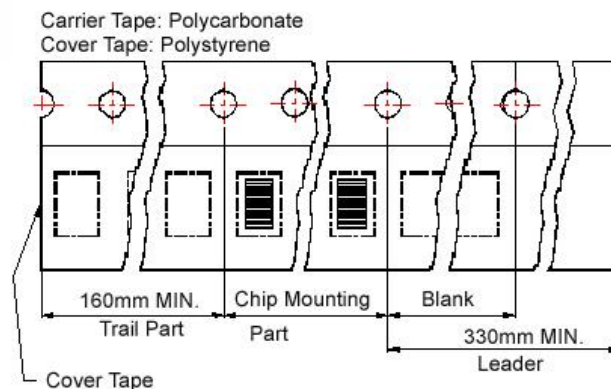
# SMD Common Mode Choke – BWDM Series

## Packaging Specifications

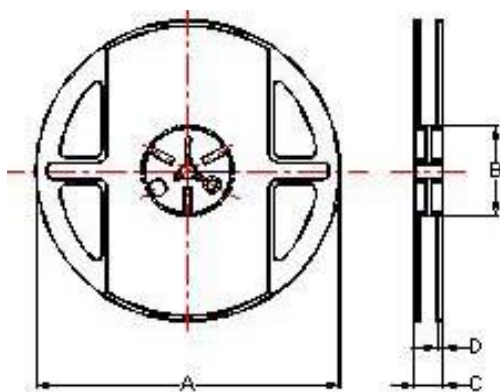
Tape Dimensions



Tape Material



Reel Dimensions

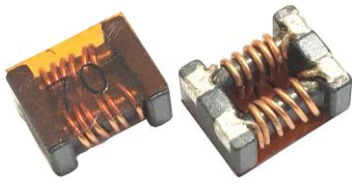


Dimensions in mm

| TYPE         | Tape Dimensions |      |      |     |      |      |      |   |    |    |     | Reel Dimensions |    |     |            | Quantity |
|--------------|-----------------|------|------|-----|------|------|------|---|----|----|-----|-----------------|----|-----|------------|----------|
|              | A               | B    | D    | E   | F    | H    | I    | P | P0 | P2 | A   | B               | C  | D   | PCS / Reel |          |
| BWDM00341620 | 8               | 1.76 | 3.47 | 3.5 | 1.75 | 2.05 | 0.22 | 4 | 4  | 2  | 178 | 60              | 12 | 1.5 | 2000       |          |



# SMD Common Mode Filter – BPPM Series



A full series of common mode choke is designed for excellent noise attenuation with compact sizing for use in wide range of applications. Both standard series and custom designs are available.

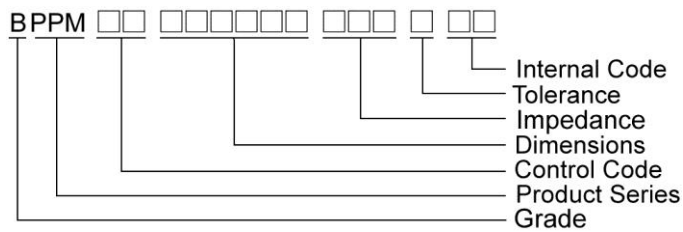
## Features

- RoHS Compliant
- Miniature SMD type common mode filter for fully automated assembly
- Wide impedance range (70Ω ~ 3000Ω) for EMI suppression
- Excellent solderability

## Applications

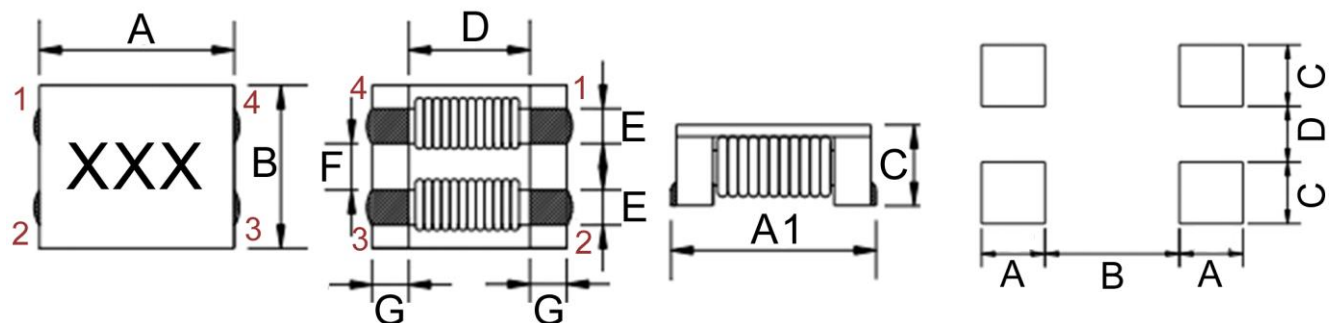
- USB line for personal computers and peripheral
- IEEE 1394 line for personal computers, DVC, STB
- LVDS, panel line for liquid display panels, graph card, etc.

## Product Identification



## Shape and Dimensions

BPPM00050520/ 070638/ 090748/ 121164/ 151360



Dimensions in mm

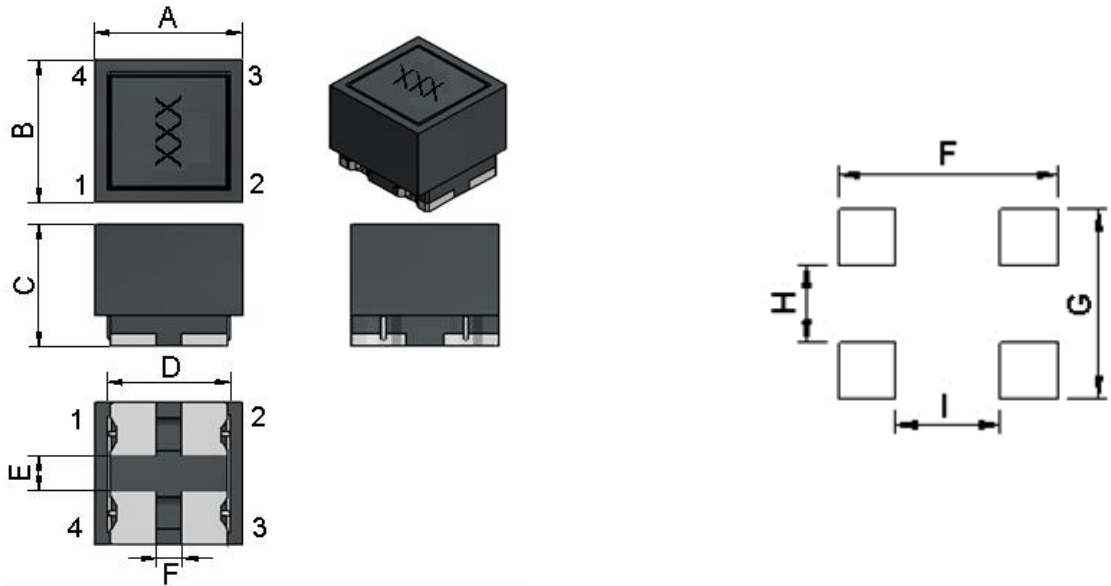
| TYPE         | Shape and Dimensions |          |          |         |     |         |         |          | Recommended Pattern |     |      |      |
|--------------|----------------------|----------|----------|---------|-----|---------|---------|----------|---------------------|-----|------|------|
|              | A                    | A1       | B        | C       | D   | E       | F       | G        | A                   | B   | C    | D    |
| BPPM00050520 | 4.7±0.5              | -        | 4.5±0.5  | 2.0 Max | 2.7 | 0.75    | 1.25    | 1.0      | 1.45                | 2.2 | 1.2  | 1.05 |
| BPPM00070638 | 7.0±0.5              | 7.5±0.5  | 6.0±0.5  | 3.8 Max | 3.5 | 1.5±0.2 | 1.5±0.2 | 1.75±0.2 | 2.9                 | 3.2 | 1.9  | 1.3  |
| BPPM00090748 | 9.0±0.5              | 9.5±0.5  | 7.0±0.5  | 4.8 Max | 5.6 | 1.5±0.2 | 2.0±0.2 | 1.7±0.2  | 3.0                 | 5.0 | 1.75 | 1.5  |
| BPPM00121164 | 12±0.5               | 12.5±0.5 | 10.8±0.5 | 6.4 Max | 7.0 | 2.7±0.2 | 2.5±0.2 | 2.5±0.2  | 3.6                 | 6.6 | 3.6  | 2.1  |
| BPPM00151360 | 15±0.5               | 15.5±0.5 | 13±0.4   | 6.0 Max | 9.0 | 3.4Typ. | 2.8Typ. | 3.0Typ.  | 3.5                 | 8.7 | 3.0  | 3.2  |

# SMD Common Mode Filter – BPPM Series

## Shape and Dimensions

## Recommended Pattern

**BPPM00485023**



Dimensions in mm

| TYPE         | Shape and Dimensions |         |         |         |         |         | Recommended Pattern |     |     |     |
|--------------|----------------------|---------|---------|---------|---------|---------|---------------------|-----|-----|-----|
|              | A                    | B       | C       | D       | E       | F       | F                   | G   | H   | I   |
| BPPM00485023 | 4.8±0.3              | 5.0±0.3 | 2.3±0.2 | 3.5±0.2 | 2.2±0.2 | 1.1±0.2 | 4.4                 | 5.5 | 2.0 | 0.9 |

## SMD Common Mode Filter – BPPM Series

### Electrical Characteristics

| Part Number        | Impedance( $\Omega$ ) |      | Test Frequency (MHz) | RDC (m $\Omega$ )Max | Rated Current (A)Max | Insulation Resistance (M $\Omega$ )Min | Rated Voltage (V)Max | Marking |
|--------------------|-----------------------|------|----------------------|----------------------|----------------------|--|----------------------|---------|
|                    | Min                   | Typ  |                      |                      |                      |  |                      |         |
| BPPM00050520301X0E | 100                   | 300  | 100                  | 45                   | 3.0                  | 10                                     | 50                   | 301     |
| BPPM00050520401X0E | 200                   | 400  | 100                  | 50                   | 2.5                  | 10                                     | 50                   | 401     |
| BPPM00050520701X0E | 500                   | 700  | 100                  | 59                   | 2.2                  | 10                                     | 50                   | 701     |
| BPPM00050520102X0E | 800                   | 1000 | 100                  | 68                   | 2.1                  | 10                                     | 50                   | 102     |
| BPPM00050520122X0E | 1000                  | 1200 | 100                  | 74                   | 2.0                  | 10                                     | 50                   | 122     |
| BPPM00050520142X0E | 1200                  | 1400 | 100                  | 81                   | 1.9                  | 10                                     | 50                   | 142     |

**Note: When ordering, please specify tolerance code.**

- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
- Rated Current : Based on temperature rise ( $\Delta T$ :40°C Typ.)
- Measure Equipment :
  - Z : HP 4291B IMPEDANCE ANALYZER (or equivalent)
  - RDC : CHROMA MODEL 16502 MILLIOHMMETER (or equivalent)
  - Insulation Resistance : CHROMA MODEL 19073 AC/DC/IR HIPOT TESTER (or equivalent)

## SMD Common Mode Filter – BPPM Series

### Electrical Characteristics

| Part Number        | Impedance( $\Omega$ ) |      | Test Frequency (MHz) | RDC (m $\Omega$ )Max | Rated Current (A)Max | Insulation Resistance (M $\Omega$ )Min | Rated Voltage (V)Max | Marking |
|--------------------|-----------------------|------|----------------------|----------------------|----------------------|--|----------------------|---------|
|                    | Min                   | Typ  |                      |                      |                      |  |                      |         |
| BPPM00070638400X00 | 40                    | 70   | 100                  | 5                    | 15                   | 10                                     | 125                  | 400     |
| BPPM00070638101X00 | 100                   | 140  | 100                  | 10                   | 9                    | 10                                     | 125                  | 101     |
| BPPM00070638301X00 | 225                   | 300  | 100                  | 10                   | 5                    | 10                                     | 125                  | 301     |
| BPPM00070638501X00 | 275                   | 350  | 100                  | 10                   | 5                    | 10                                     | 125                  | 501     |
| BPPM00070638701X00 | 500                   | 700  | 100                  | 15                   | 4                    | 10                                     | 125                  | 701     |
| BPPM00070638102X00 | 800                   | 1020 | 100                  | 17                   | 3                    | 10                                     | 125                  | 102     |
| BPPM00070638132X00 | 910                   | 1300 | 100                  | 21                   | 2.5                  | 10                                     | 125                  | 132     |
| BPPM00070638272X00 | 2000                  | 2700 | 100                  | 63                   | 1                    | 10                                     | 125                  | 272     |
| BPPM00070638302X00 | 2500                  | 3000 | 100                  | 75                   | 0.9                  | 10                                     | 125                  | 302     |

**Note: When ordering, please specify tolerance code.**

- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
- Rated Current : Based on temperature rise ( $\Delta T$ :40°C Typ.)
- Measure Equipment :
  - Z : HP 4291B IMPEDANCE ANALYZER (or equivalent)
  - RDC : CHROMA MODEL 16502 MILLIOHMMETER (or equivalent)
  - Insulation Resistance : CHROMA MODEL 19073 AC/DC/IR HIPOT TESTER (or equivalent)

## SMD Common Mode Filter – BPPM Series

### Electrical Characteristics

| Part Number        | Impedance( $\Omega$ ) |      | Test Frequency (MHz) | RDC (m $\Omega$ )Max | Rated Current (A)Max | Insulation Resistance (M $\Omega$ )Min | Rated Voltage (V)Max | Marking |
|--------------------|-----------------------|------|----------------------|----------------------|----------------------|--|----------------------|---------|
|                    | Min                   | Typ  |                      |                      |                      |  |                      |         |
| BPPM00090748301X00 | 225                   | 300  | 100                  | 6                    | 6                    | 10                                     | 80                   | 301     |
| BPPM00090748501X00 | 450                   | 600  | 100                  | 8                    | 5.5                  | 10                                     | 80                   | 501     |
| BPPM00090748701X00 | 500                   | 700  | 100                  | 10                   | 5                    | 10                                     | 80                   | 701     |
| BPPM00090748102X00 | 750                   | 1000 | 100                  | 13                   | 4                    | 10                                     | 80                   | 102     |
| BPPM00090748152X00 | 1100                  | 1500 | 100                  | 18                   | 3.5                  | 10                                     | 80                   | 152     |
| BPPM00090748222X00 | 1700                  | 2200 | 100                  | 60                   | 2.5                  | 10                                     | 80                   | 222     |
| BPPM00090748272X00 | 2000                  | 2700 | 100                  | 86                   | 2                    | 10                                     | 80                   | 272     |

**Note: When ordering, please specify tolerance code.**

- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
- Rated Current : Based on temperature rise ( $\Delta T$ :40°C Typ.)
- Measure Equipment :
  - Z : HP 4291B IMPEDANCE ANALYZER (or equivalent)
  - RDC : CHROMA MODEL 16502 MILLIOHMMETER (or equivalent)
  - Insulation Resistance : CHROMA MODEL 19073 AC/DC/IR HIPOT TESTER (or equivalent)

## SMD Common Mode Filter – BPPM Series

### Electrical Characteristics

| Part Number        | Impedance( $\Omega$ ) |      | Test Frequency (MHz) | RDC (m $\Omega$ )Max | Rated Current (A)Max | Insulation Resistance (M $\Omega$ )Min | Rated Voltage (V)Max | Marking |
|--------------------|-----------------------|------|----------------------|----------------------|----------------------|--|----------------------|---------|
|                    | Min                   | Typ  |                      |                      |                      |  |                      |         |
| BPPM00121164800X00 | 80                    | 230  | 100                  | 2.2Typ               | 10                   | 10                                     | 80                   | 800     |
| BPPM00121164701X00 | 500                   | 700  | 100                  | 6                    | 8                    | 10                                     | 80                   | 701     |
| BPPM00121164801X00 | 600                   | 800  | 100                  | 8                    | 8                    | 10                                     | 80                   | 801     |
| BPPM00121164102X00 | 750                   | 1000 | 100                  | 14                   | 6                    | 10                                     | 80                   | 102     |
| BPPM00121164222X00 | 2200                  | 2500 | 10                   | 35                   | 1.8                  | 10                                     | 80                   | 222     |
| BPPM00121164272X00 | 2300                  | 2700 | 10                   | 50                   | 1.5                  | 10                                     | 80                   | 272     |

**Note: When ordering, please specify tolerance code.**

- Operating temperature range - 40°C ~ 125°C(Including self - temperature rise)
- Rated Current : Based on temperature rise ( $\Delta T$ :40°C Typ.)
- Measure Equipment :
  - Z : HP 4291B IMPEDANCE ANALYZER (or equivalent)
  - RDC : CHROMA MODEL 16502 MILLIOHMMETER (or equivalent)
  - Insulation Resistance : CHROMA MODEL 19073 AC/DC/IR HIPOT TESTER (or equivalent)

## SMD Common Mode Filter – BPPM Series

### Electrical Characteristics

| Part Number        | Impedance ( $\Omega$ ) |      | Test Frequency (MHz) | RDC ( $m\Omega$ )Max | Rated Current (A)Max | Insulation Resistance ( $M\Omega$ )Min | Rated Voltage (V)Max | Marking |
|--------------------|------------------------|------|----------------------|----------------------|----------------------|--|----------------------|---------|
|                    | Min                    | Typ  |                      |                      |                      |  |                      |         |
| BPPM00151360301X00 | 250                    | 300  | 100                  | 4.7                  | 13                   | 10                                     | 80                   | 301     |
| BPPM00151360551X00 | 450                    | 550  | 100                  | 3.8 $\pm$ 20%        | 10                   | 10                                     | 80                   | 551     |
| BPPM00151360701X00 | 500                    | 700  | 100                  | 7                    | 10                   | 10                                     | 80                   | 701     |
| BPPM00151360152X00 | 1100                   | 1500 | 100                  | 9                    | 8.5                  | 10                                     | 80                   | 152     |

**Note: When ordering, please specify tolerance code.**

- Operating temperature range - 40°C ~ 125°C (Including self - temperature rise)
- Rated Current : Based on temperature rise ( $\Delta T$ : 40°C Typ.)
- Measure Equipment :
  - Z : HP 4291B IMPEDANCE ANALYZER (or equivalent)
  - RDC : CHROMA MODEL 16502 MILLIOHMETER (or equivalent)
  - Insulation Resistance : CHROMA MODEL 19073 AC/DC/IR HIPOT TESTER (or equivalent)

## SMD Common Mode Filter – BPPM Series

### Electrical Characteristics

| Part Number        | Impedance( $\Omega$ )<br>Typ. |         | RDC<br>(m $\Omega$ )<br>$\pm 40\%$ | I <sub>rms</sub><br>(A)Max. | Rated Voltage<br>(V)Max. | Withstanding<br>voltage<br>(V)Max. | Insulation<br>Resistance<br>(M $\Omega$ )Min. | Marking |
|--------------------|-------------------------------|---------|------------------------------------|-----------------------------|--------------------------|------------------------------------|---|---------|
|                    | @10MHz                        | @100MHz |                                    |                             |                          |                                    |   |         |
| BPPM00485023251X00 | 20                            | 250     | 14                                 | 5                           | 50                       | 125                                | 10  | 251     |
| BPPM00485023501X00 | 30                            | 500     | 19                                 | 4                           | 50                       | 125                                | 10  | 501     |
| BPPM00485023102X00 | 60                            | 1000    | 24                                 | 3                           | 50                       | 125                                | 10  | 102     |
| BPPM00485023142X00 | 100                           | 1400    | 40                                 | 2                           | 50                       | 125                                | 10  | 142     |
| BPPM00485023152X00 | 100                           | 1500    | 40                                 | 2                           | 50                       | 125                                | 10  | 152     |

**Note: When ordering, please specify tolerance code.**

- Operating temperature range  $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$  (Including self - temperature rise)
- I<sub>rms</sub>:Based on temperature rise ( $\Delta T:40^{\circ}\text{C}$  TYP)
- Measure Equipment :  
 Z : HP 4291B IMPEDANCE ANALYZER (or equivalent)  
 RDC : CHROMA MODEL 16502 MILLIOHMETER (or equivalent)  
 Insulation Resistance : CHROMA MODEL 19073 AC/DC/IR HIPOT TESTER (or equivalent)