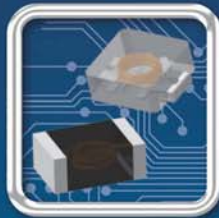


Total Solution Provider for Power, EMI and RF.

## Inductors SMD Components

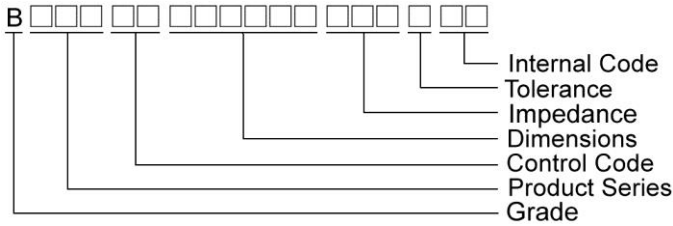


## Multilayer Ferrite Chip Beads

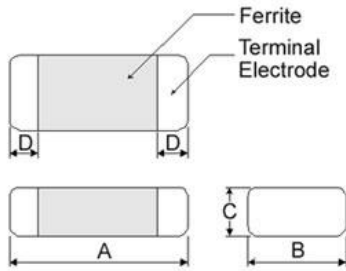


Chilisin offers a wide range of multi-layered ferrite chip beads with various sizes, frequency characteristics, and impedance values for EMI solutions. These ferrite formulas are used to compose seven types of EMI suppression chip beads: BBSY, BBBK, BBSJ, BBGK, BBPY, BBUP, BBNQ, BBFY, BBFJ and BBHV series.

### Product Identification



### Shape and Dimensions



Dimensions in mm

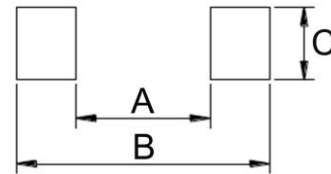
TYPE	A	B	C	D
①060303	0.6±0.03	0.30±0.03	0.3±0.03	0.15±0.05
②100505	1.0±0.10	0.50±0.10	0.5±0.10	0.25±0.10
③160805	1.6±0.15	0.80±0.15	0.5±0.15	0.3±0.2
④160808	1.6±0.15	0.80±0.15	0.8±0.15	0.3±0.2
⑤201209	2.0±0.20	1.25±0.20	0.9±0.20	0.5±0.3
⑥321611	3.2±0.20	1.60±0.20	1.1±0.20	0.5±0.3
⑦453215	4.5±0.25	3.20±0.20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

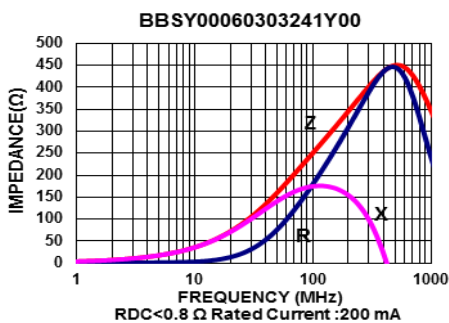
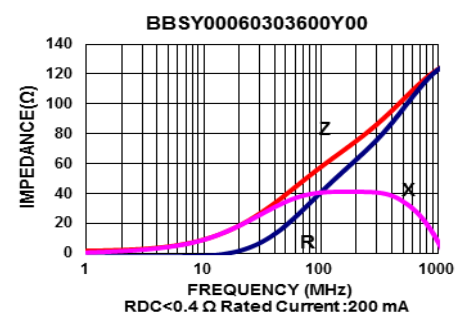
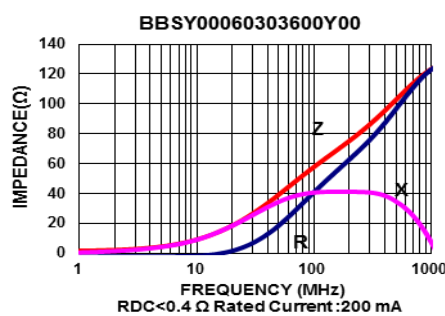
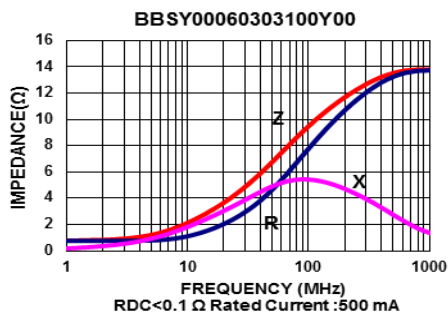
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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 :  $Y \pm 25\%$**

- 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

### Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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

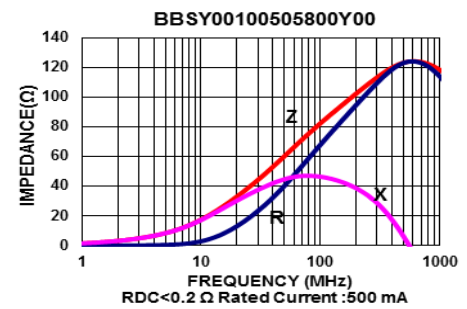
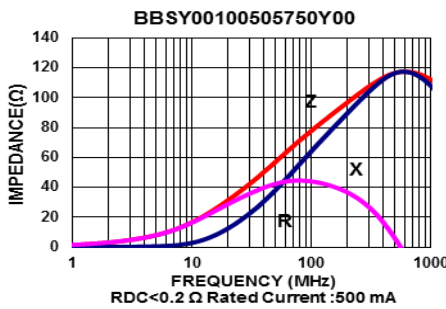
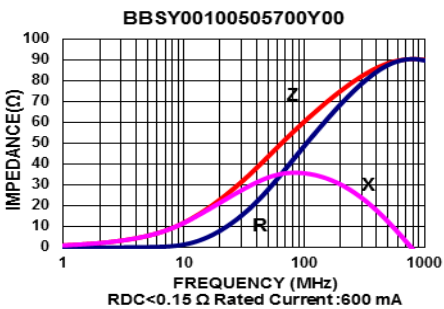
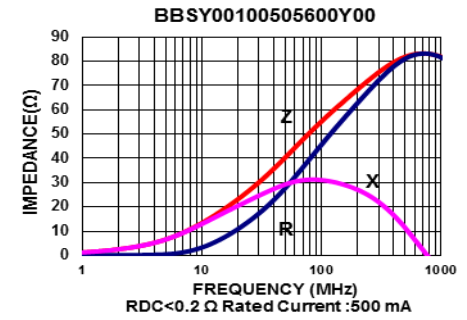
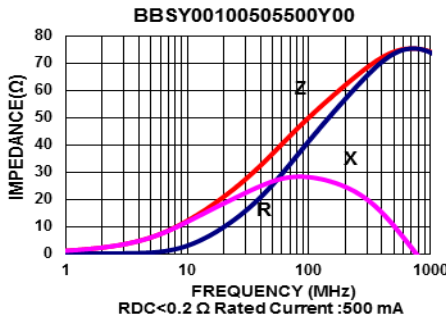
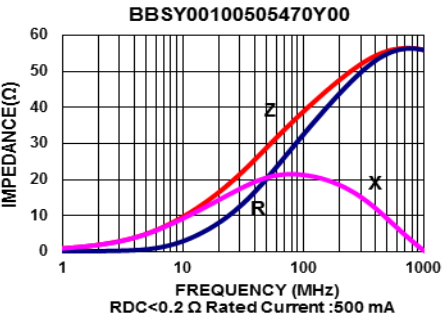
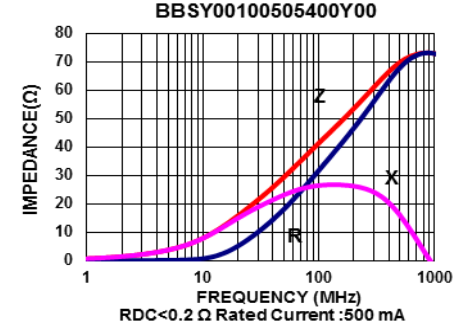
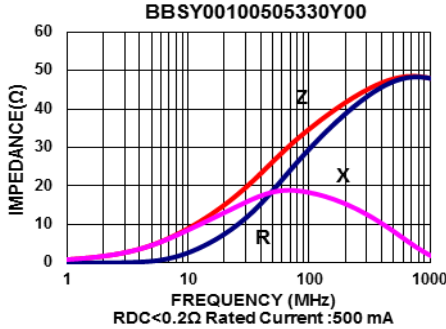
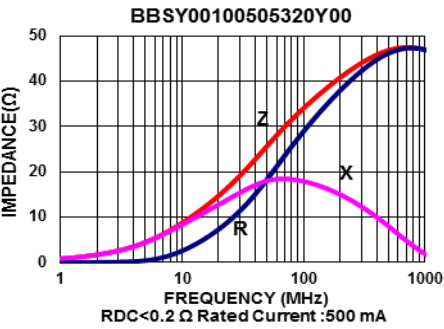
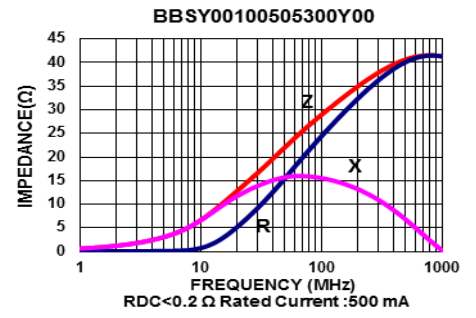
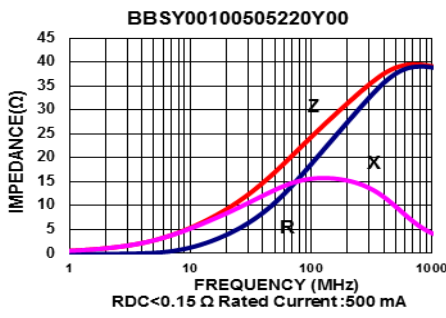
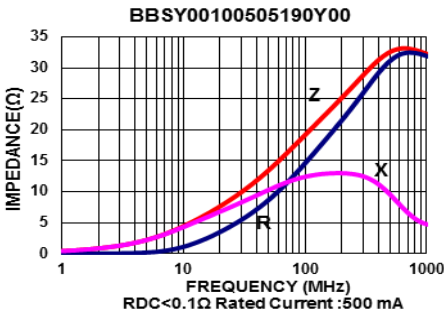
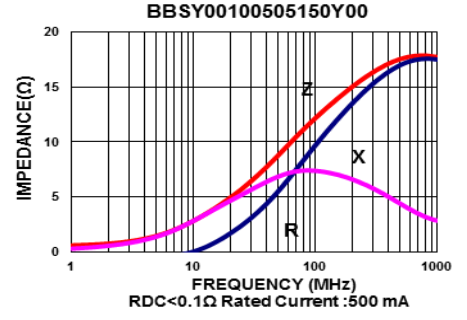
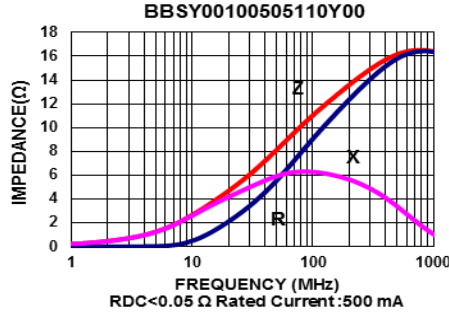
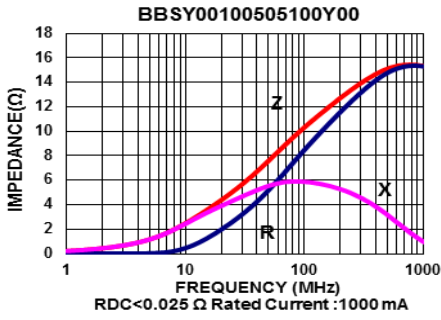
**Note: When ordering, please specify tolerance code. Tolerance :  $Y = \pm 25\%$**

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- 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 – BBSY/BBBK Series

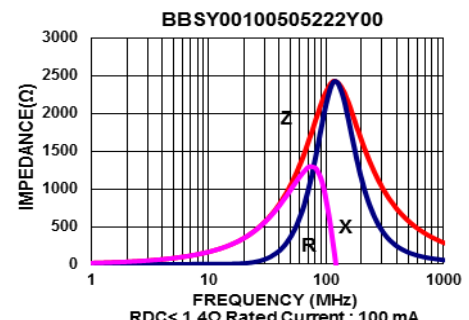
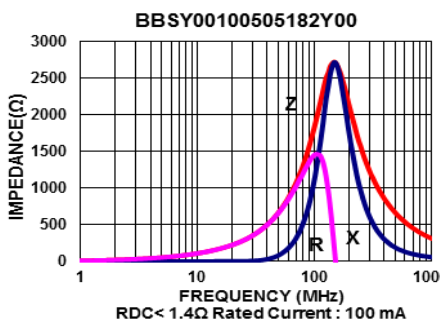
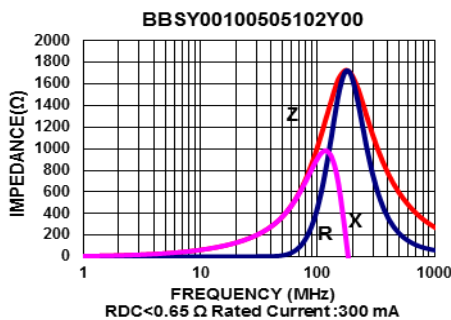
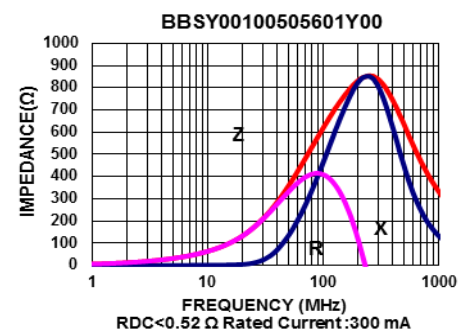
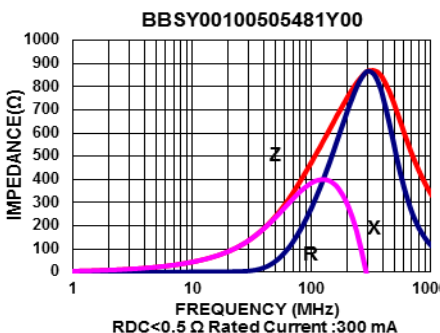
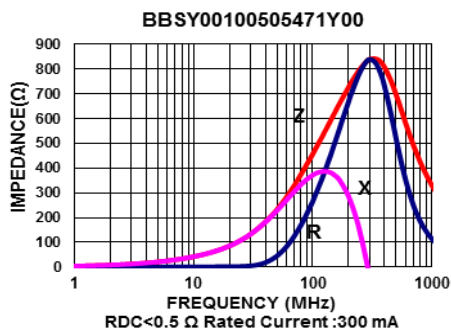
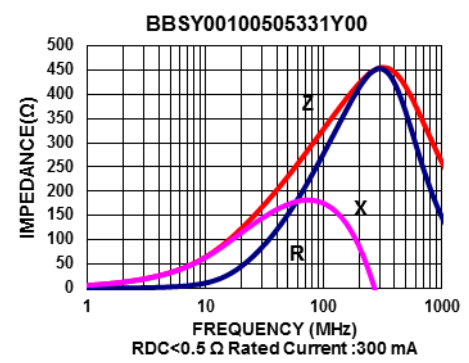
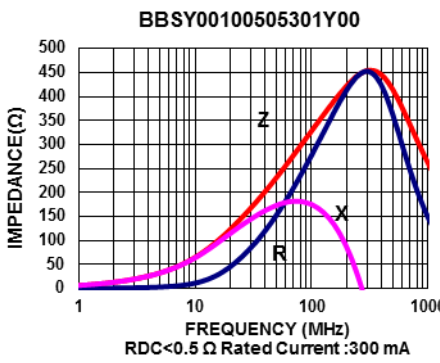
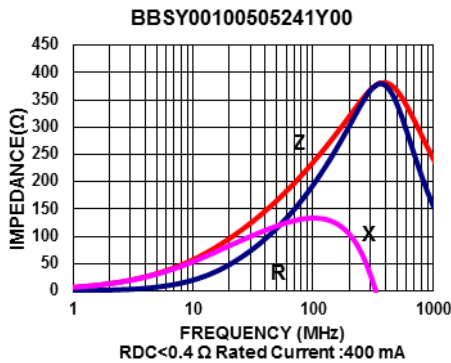
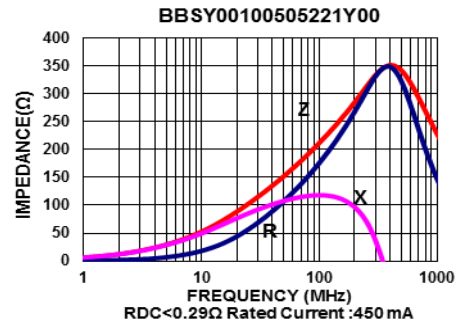
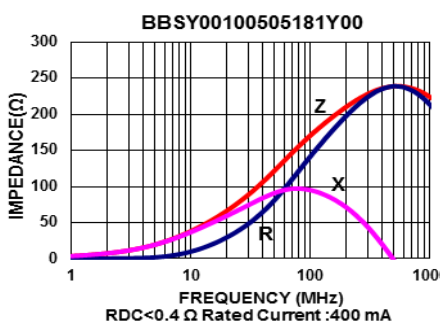
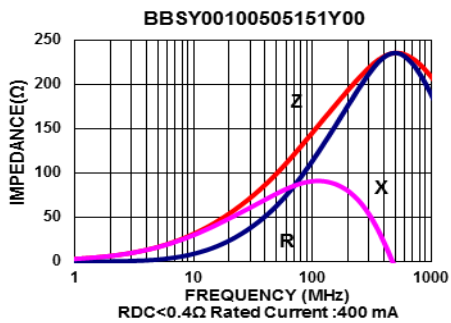
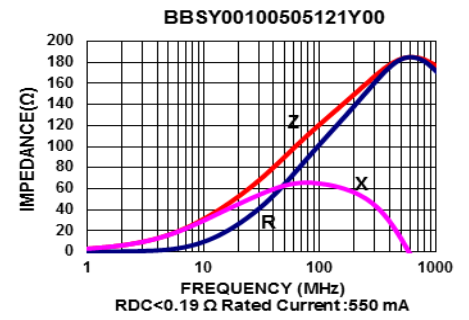
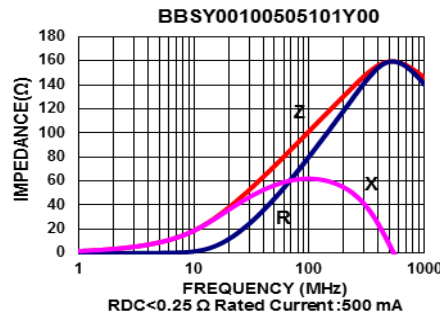
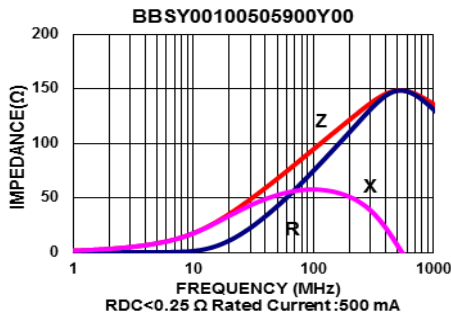
Test Instruments : Agilent E4991A Impedance / Material Analyzer



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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

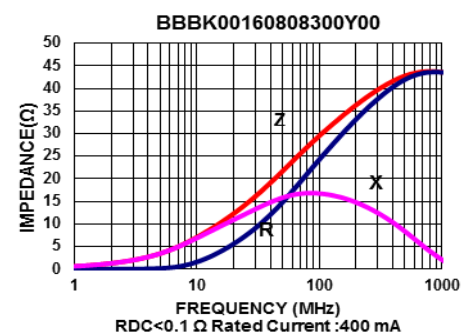
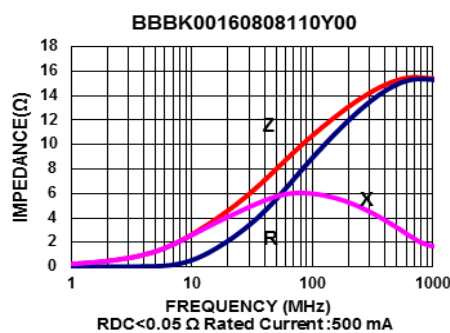
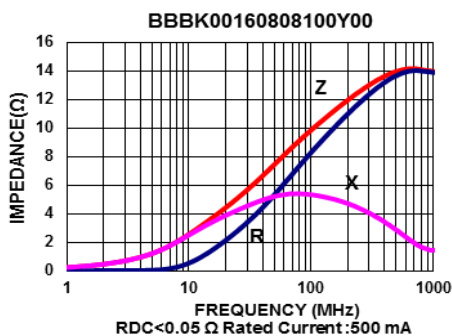
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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  
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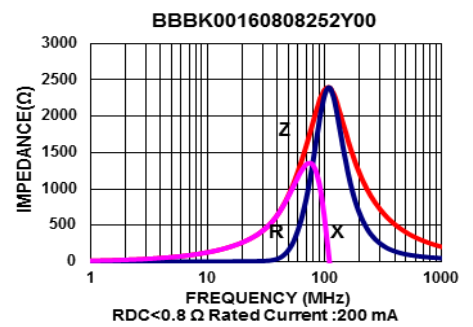
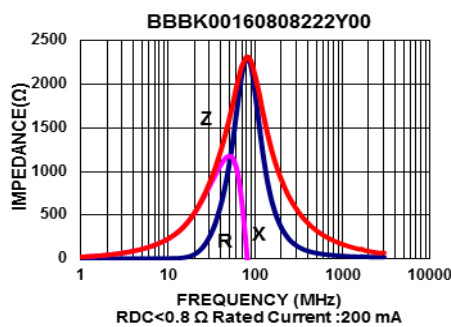
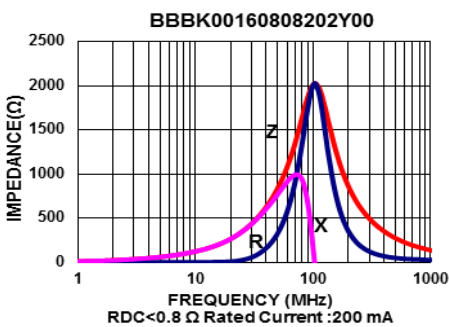
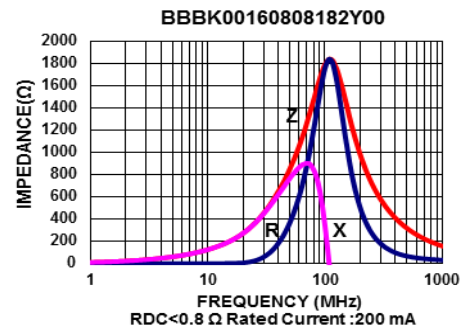
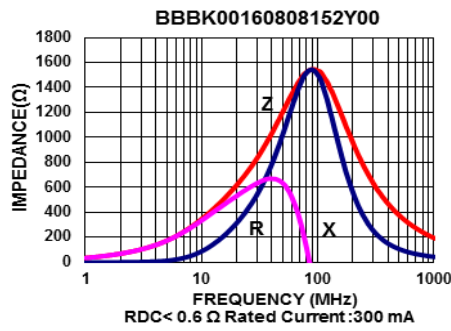
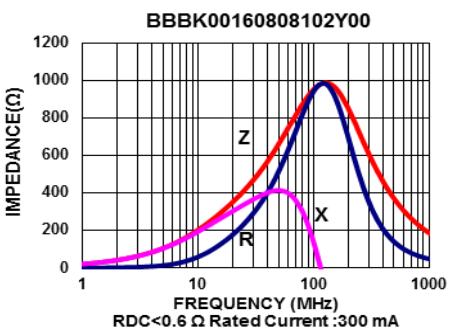
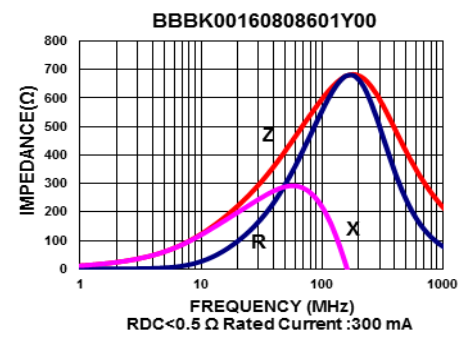
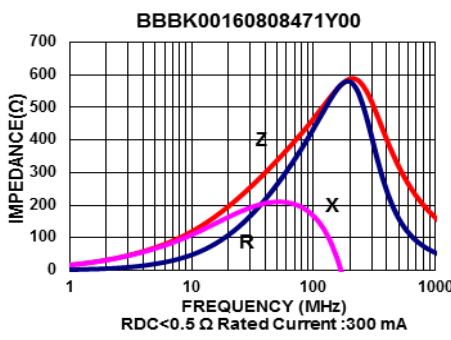
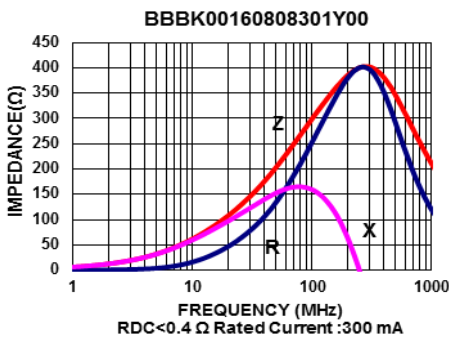
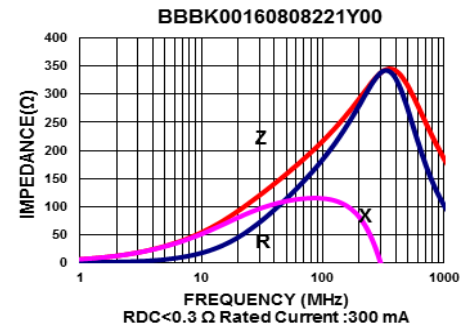
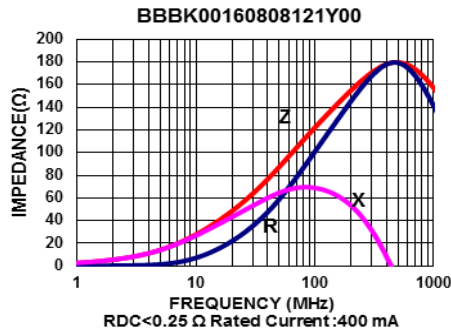
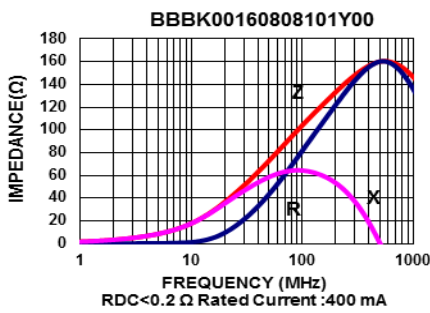
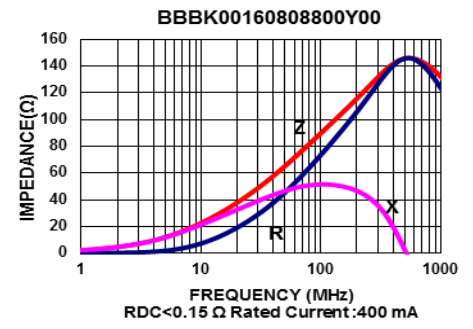
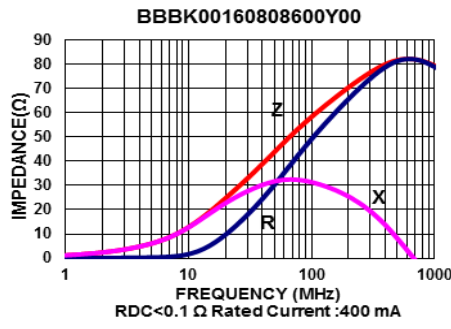
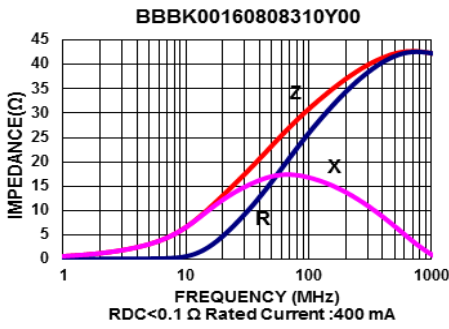
## Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – SBY/SBK Series

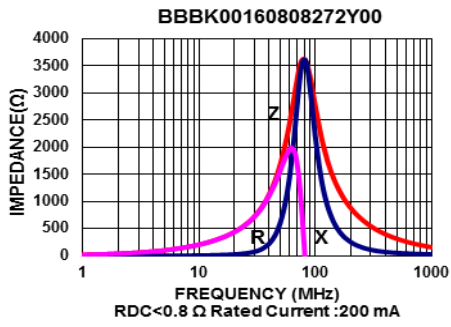
Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBSY/BBBK Series

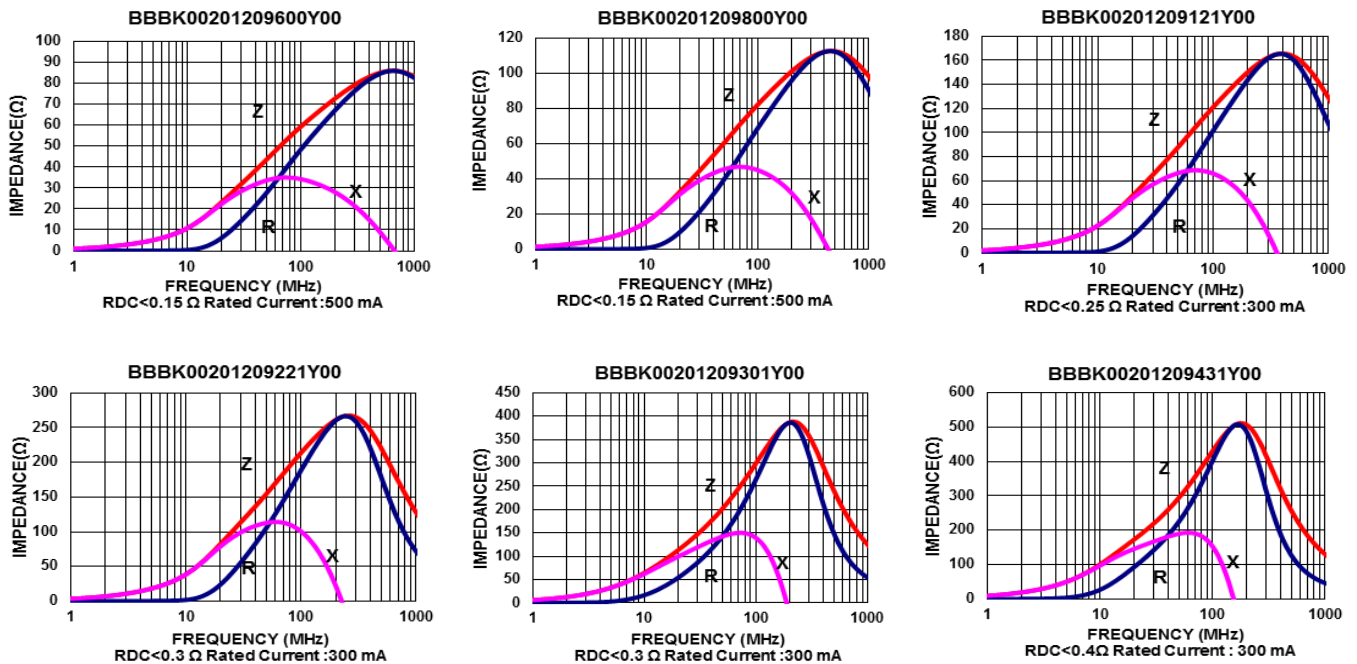
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	DC Resistance ( $\Omega$ ) Max	Rated current (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=±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

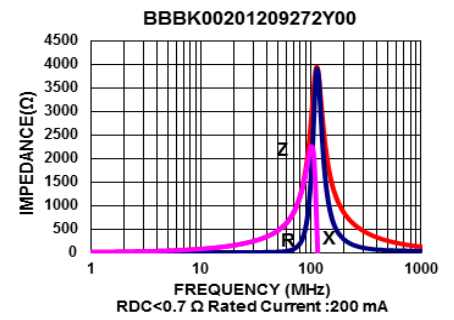
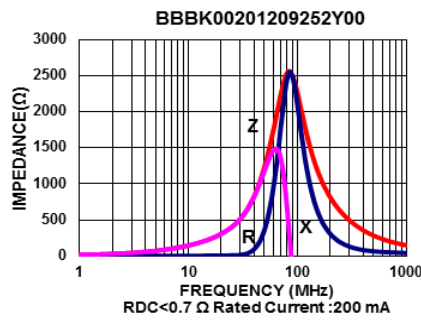
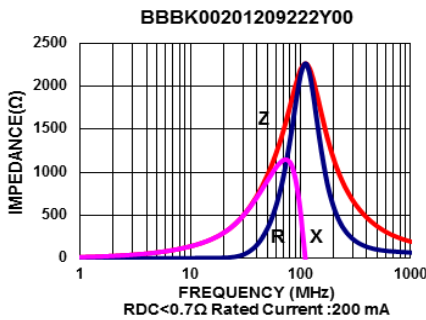
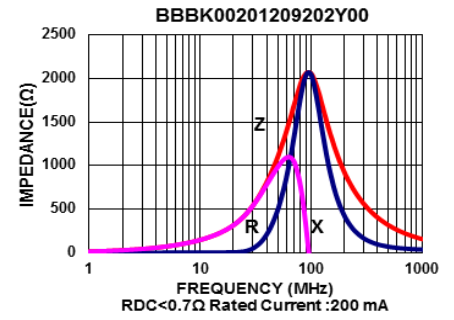
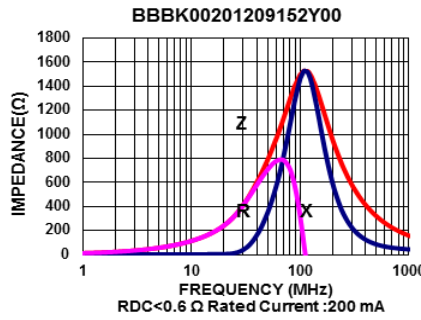
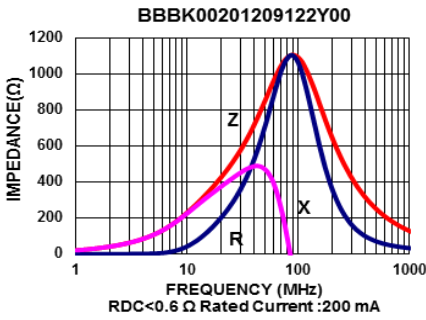
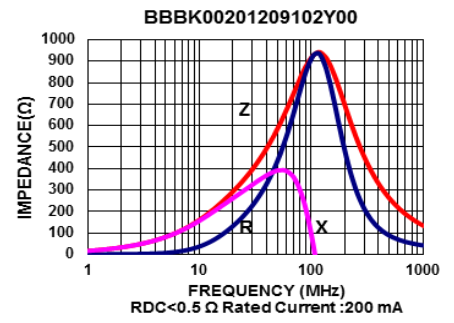
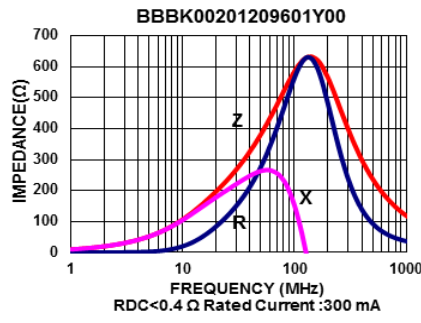
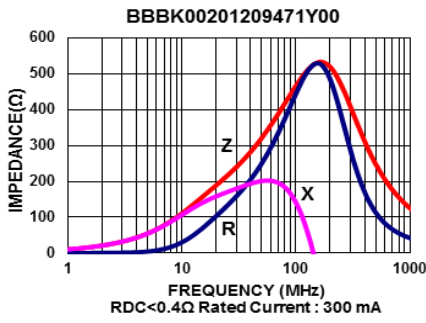


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# SMD Multilayer Ferrite Chip Beads – BBSY/BBBK Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBSY/BBBK Series

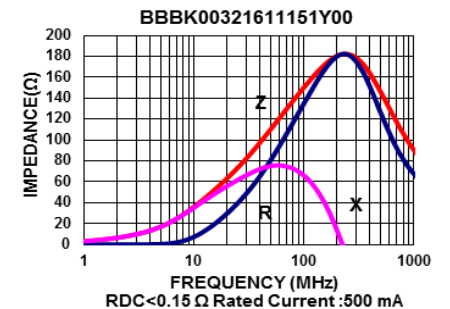
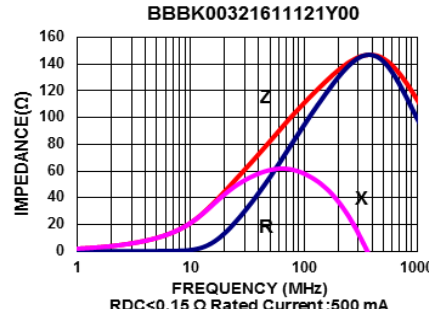
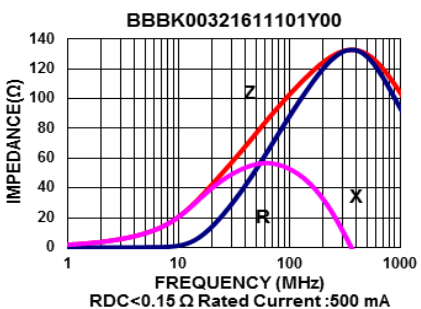
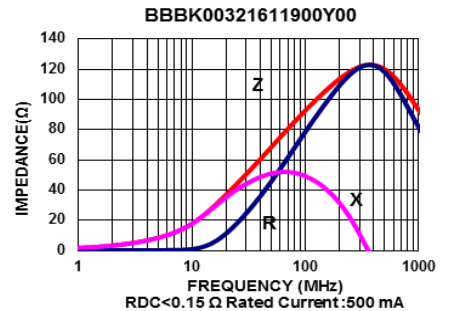
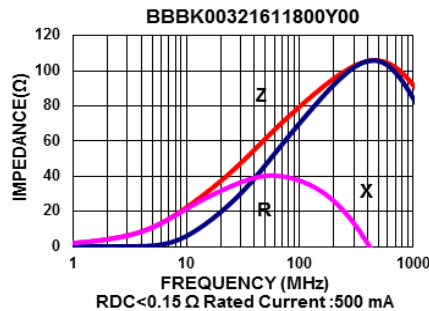
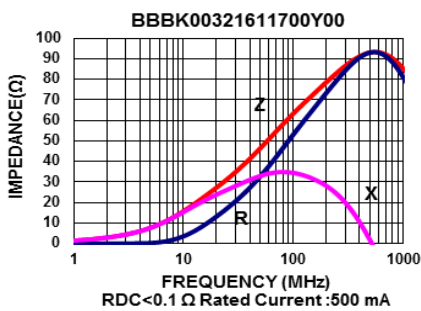
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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

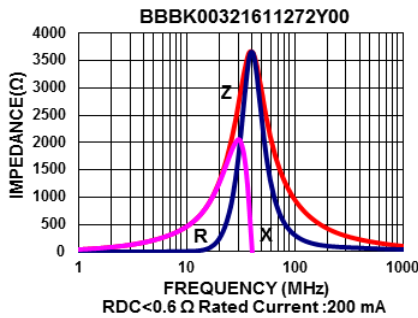
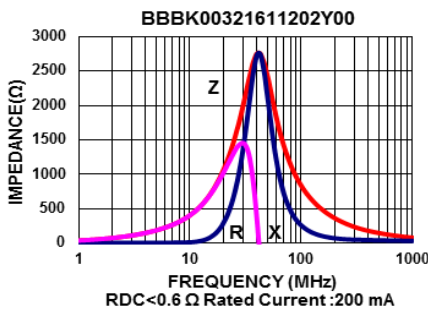
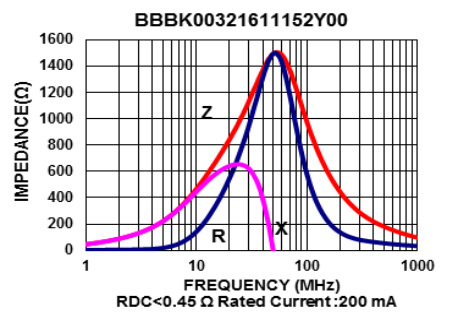
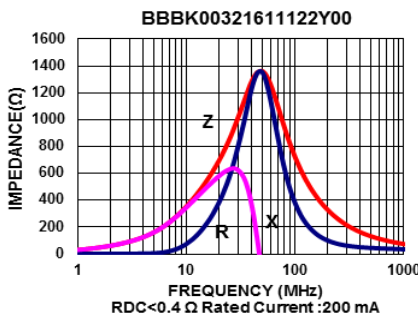
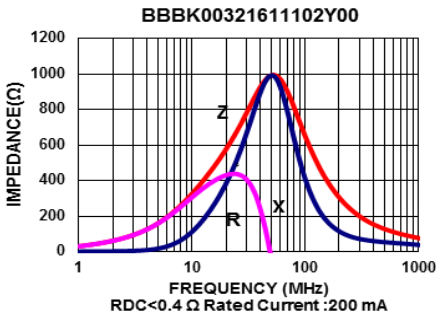
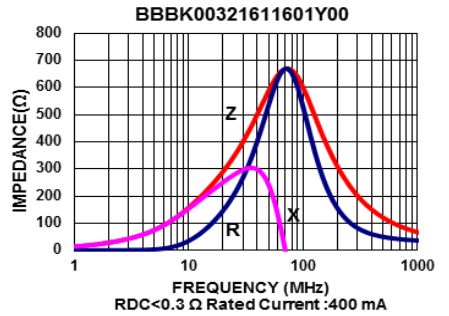
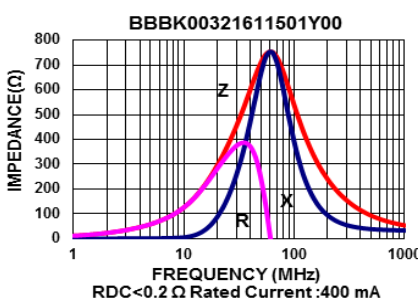
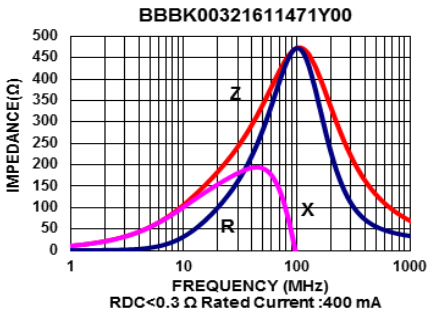
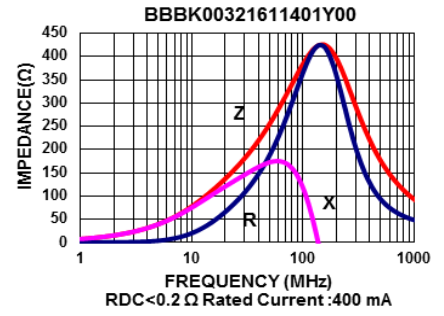
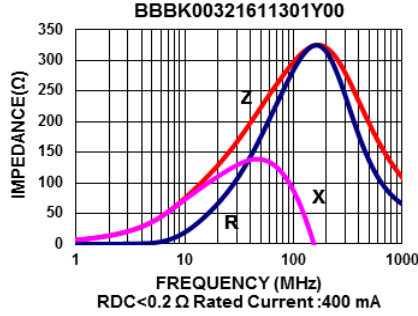
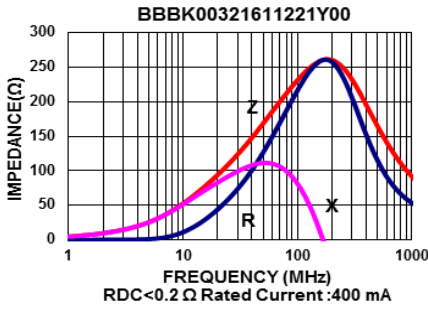
## Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBSY/BBBK Series

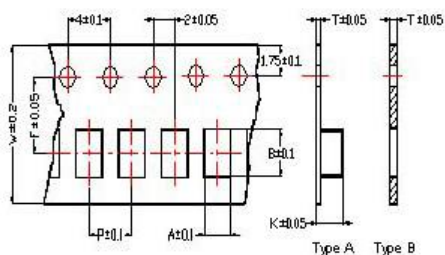
Test Instruments : Agilent E4991A Impedance / Material Analyzer



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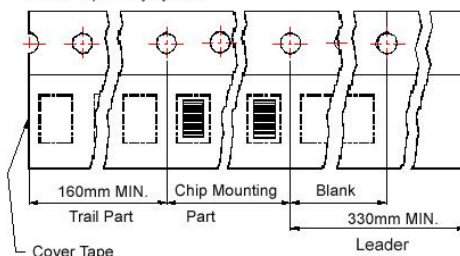
## Packaging Specifications

### Tape Dimensions

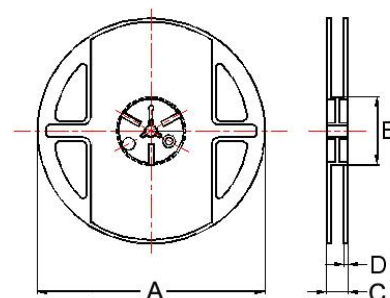


### Tape Material

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

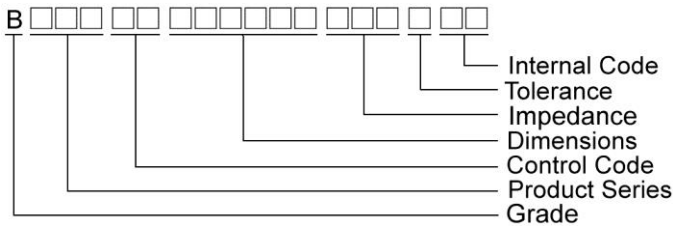
TYPE	Tape Dimensions								Reel Dimensions				Quantity PCS / REEL
	A	B	T	W	P	F	K	Tape	A	B	C	D	
①060303	0.37	0.67	0.42	8.0	2.0	3.5	-	B	178	60	10	2	15000
②100505	0.62	1.12	0.60	8.0	2.0	3.5	-	B	178	60	12	2	10000
③160805	1.05	1.85	0.60	8.0	2.0	3.5	-	B	178	60	12	2	10000
④160808	1.05	1.85	0.95	8.0	4.0	3.5	-	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

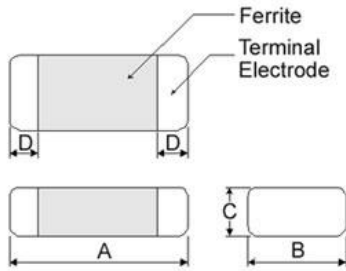


Chilisin offers a wide range of multi-layered ferrite chip beads with various sizes, frequency characteristics, and impedance values for EMI solutions. These ferrite formulas are used to compose seven types of EMI suppression chip beads: BBSY, BBBK, BBSJ, BBGK, BBPY, BBUP, BBNQ, BBFY, BBFJ and BBHV series.

### Product Identification



### Shape and Dimensions



Dimensions in mm

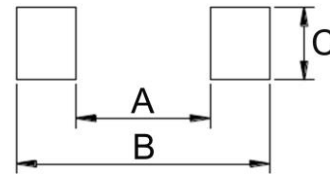
TYPE	A	B	C	D
①060303	0.6±0.03	0.30±0.03	0.3±0.03	0.15±0.05
②100505	1.0±0.10	0.50±0.10	0.5±0.10	0.25±0.10
③160805	1.6±0.15	0.80±0.15	0.5±0.15	0.3±0.2
④160808	1.6±0.15	0.80±0.15	0.8±0.15	0.3±0.2
⑤201209	2.0±0.20	1.25±0.20	0.9±0.20	0.5±0.3
⑥321611	3.2±0.20	1.60±0.20	1.1±0.20	0.5±0.3
⑦453215	4.5±0.25	3.20±0.20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

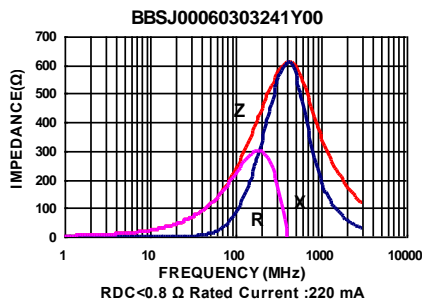
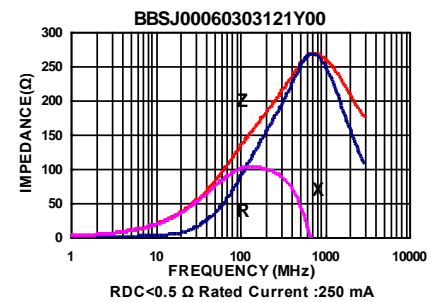
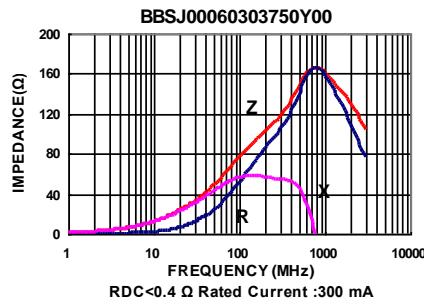
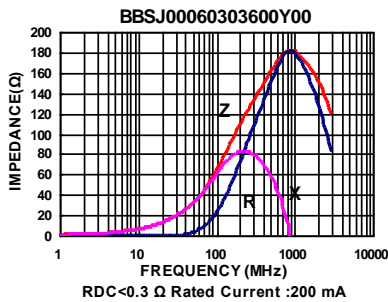
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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

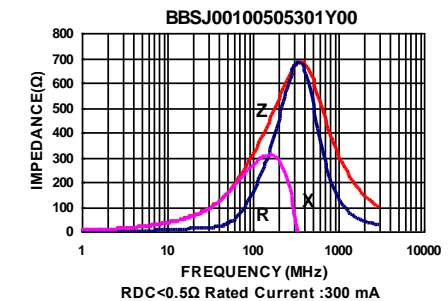
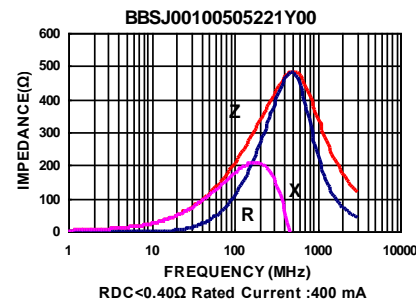
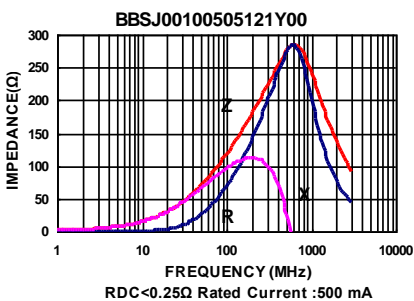
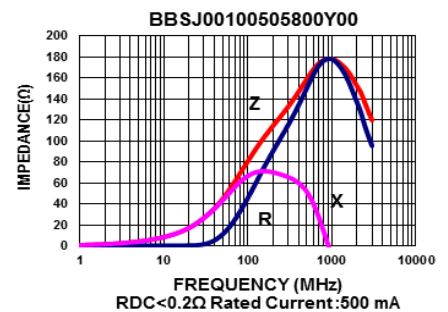
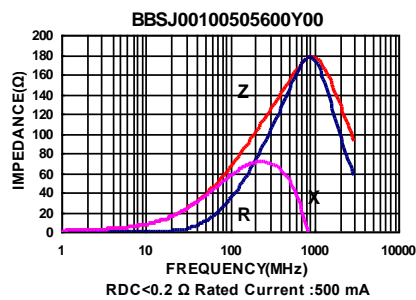
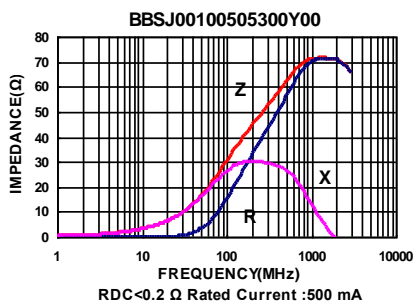
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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

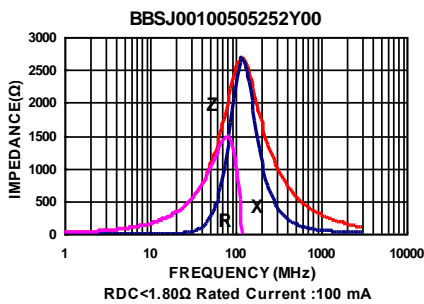
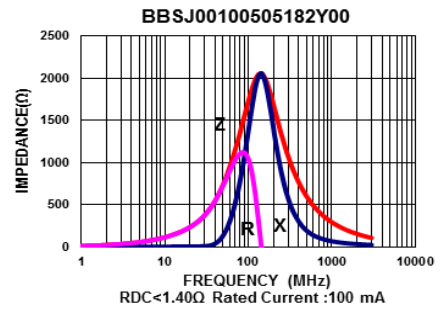
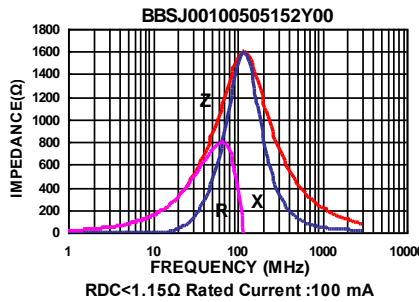
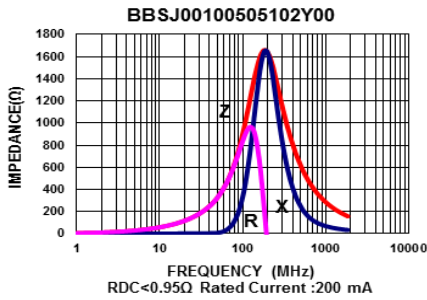
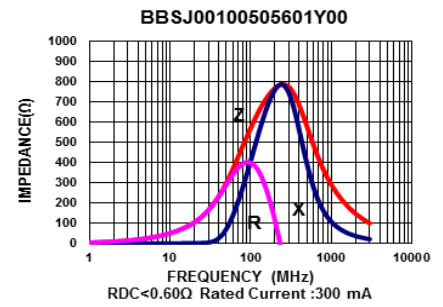
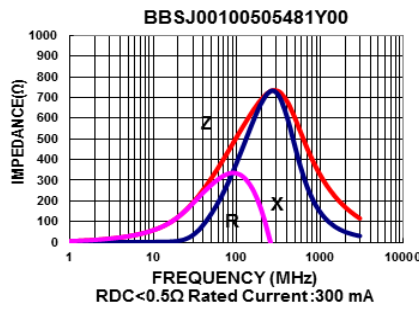
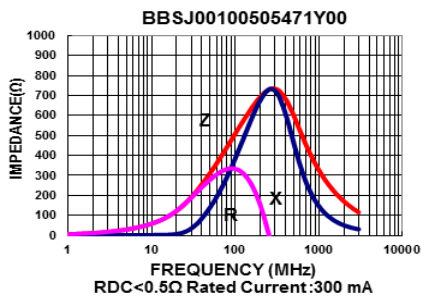
**Test Instruments : Agilent E4991A Impedance / Material Analyzer**



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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

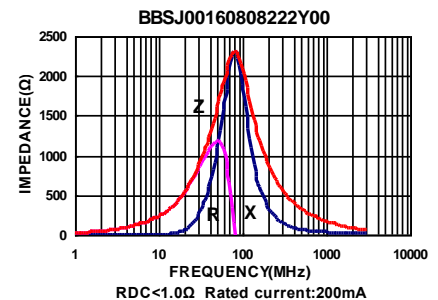
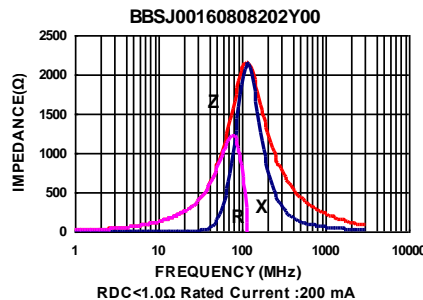
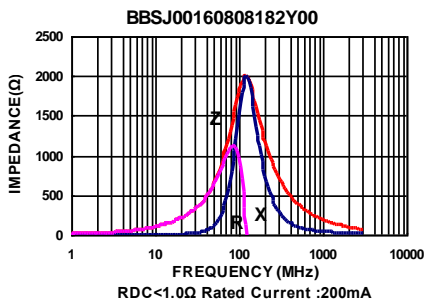
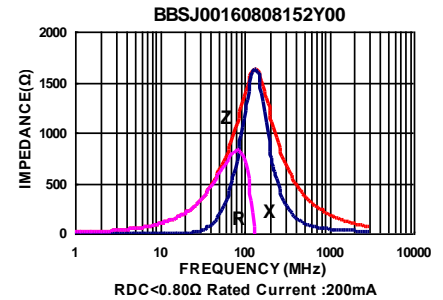
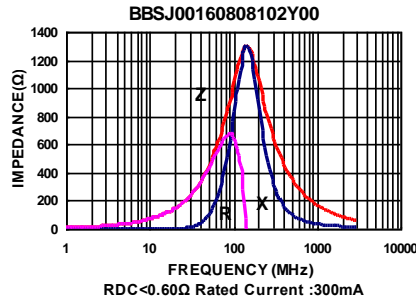
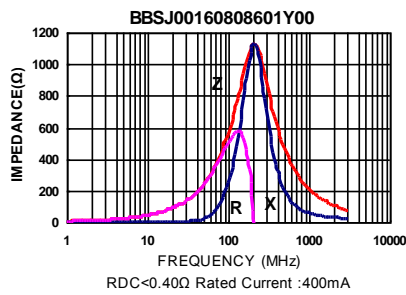
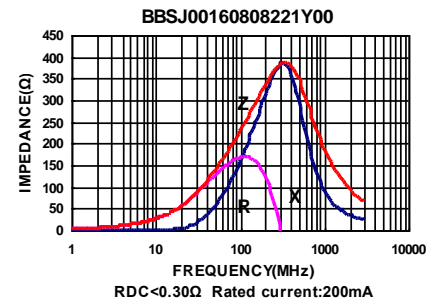
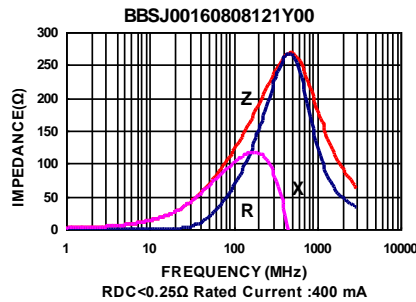
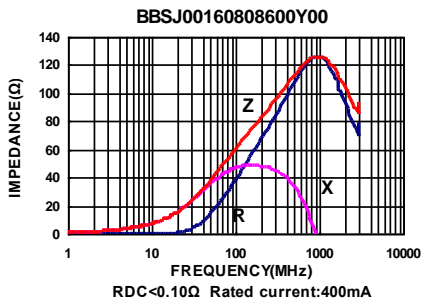
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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

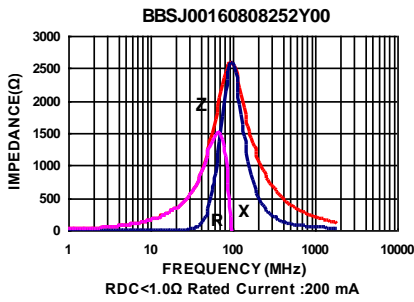
**Test Instruments : Agilent E4991A Impedance / Material Analyzer**



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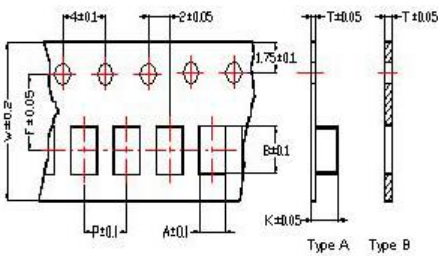
# SMD Multilayer Ferrite Chip Beads – BBSJ Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer

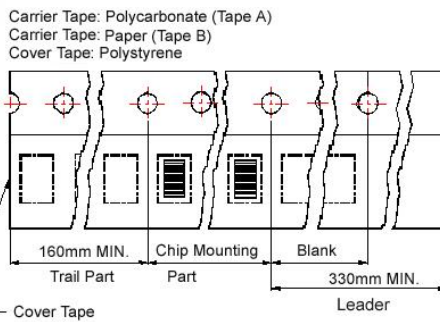


## Packaging Specifications

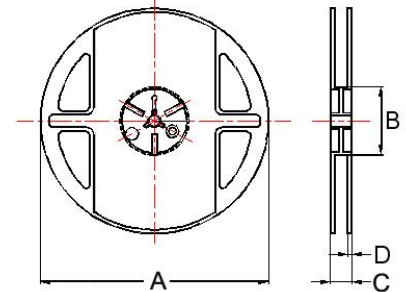
### Tape Dimensions



### 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 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

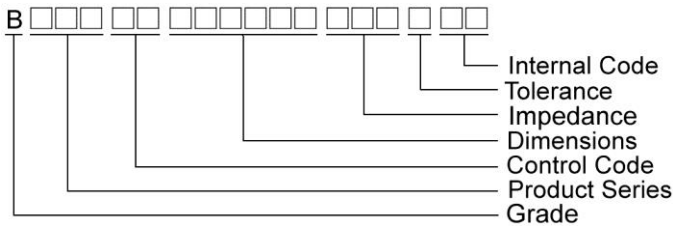
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## Multilayer Ferrite Chip Beads

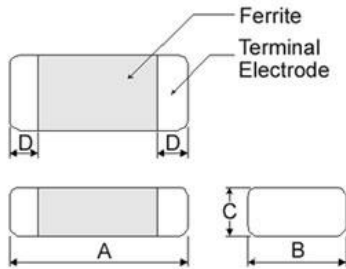


Chilisin offers a wide range of multi-layered ferrite chip beads with various sizes, frequency characteristics, and impedance values for EMI solutions. These ferrite formulas are used to compose seven types of EMI suppression chip beads: BBSY, BBBK, BBSJ, BBGK, BBPY, BBUP, BBNQ, BBFY, BBFJ and BBHV series.

### Product Identification



### Shape and Dimensions



Dimensions in mm

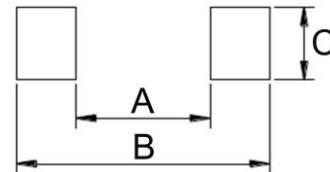
TYPE	A	B	C	D
①060303	0.6±0.03	0.30±0.03	0.3±0.03	0.15±0.05
②100505	1.0±0.10	0.50±0.10	0.5±0.10	0.25±0.10
③160805	1.6±0.15	0.80±0.15	0.5±0.15	0.3±0.2
④160808	1.6±0.15	0.80±0.15	0.8±0.15	0.3±0.2
⑤201209	2.0±0.20	1.25±0.20	0.9±0.20	0.5±0.3
⑥321611	3.2±0.20	1.60±0.20	1.1±0.20	0.5±0.3
⑦453215	4.5±0.25	3.20±0.20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

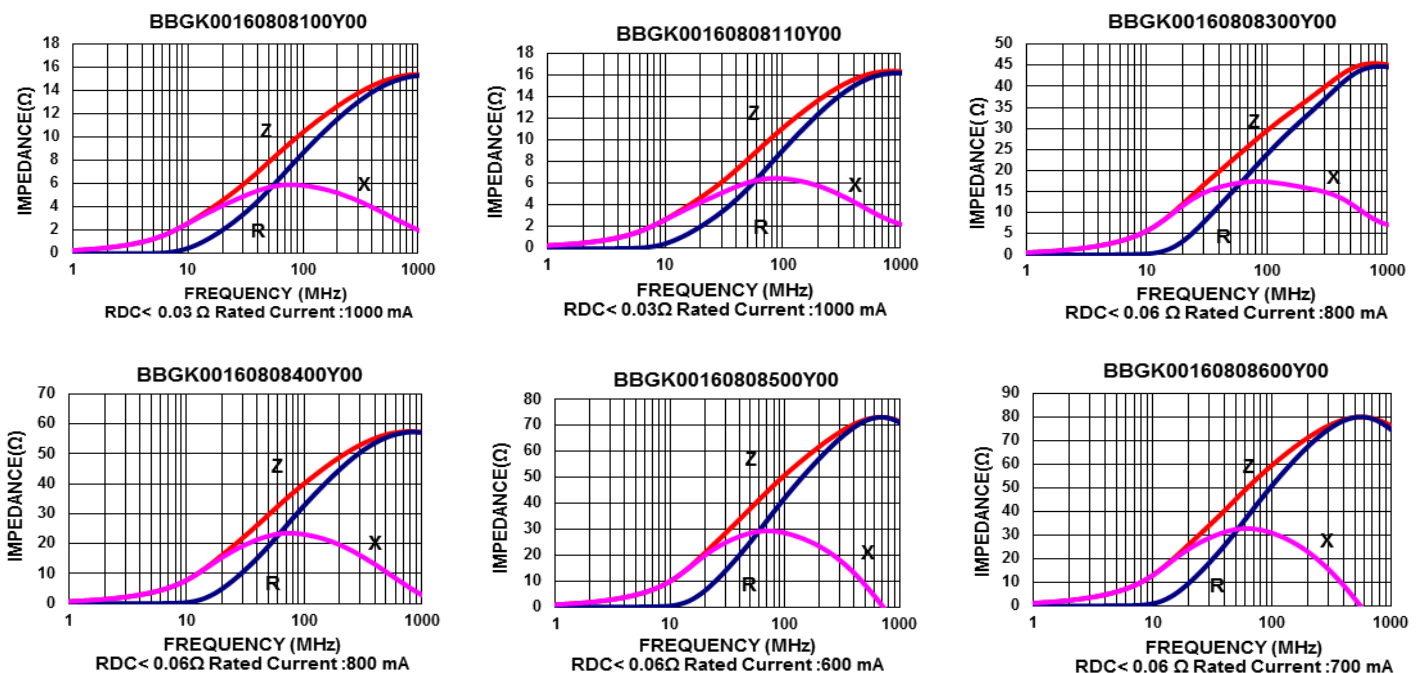
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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

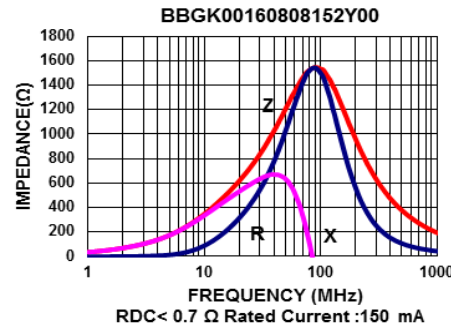
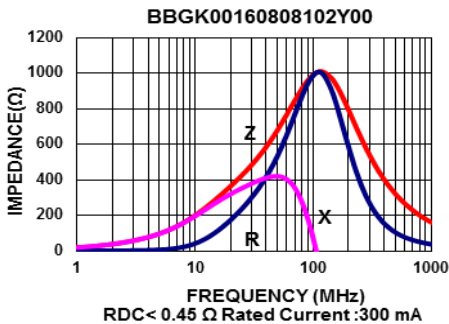
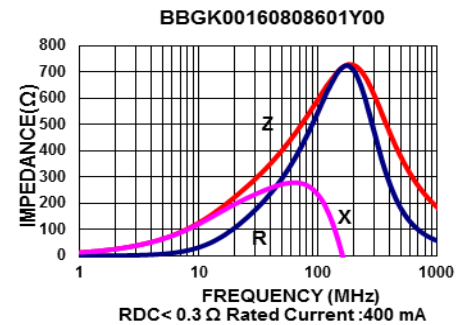
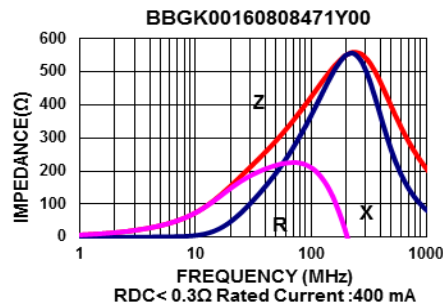
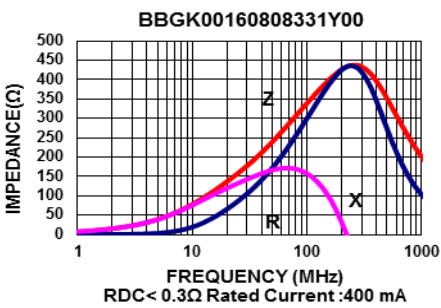
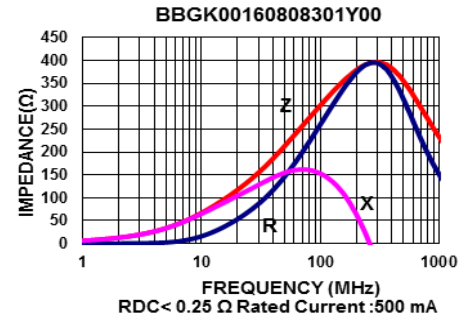
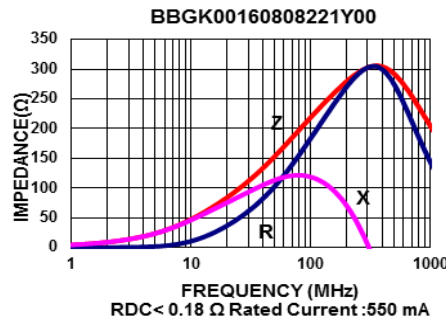
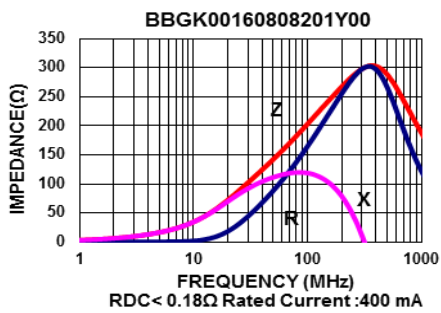
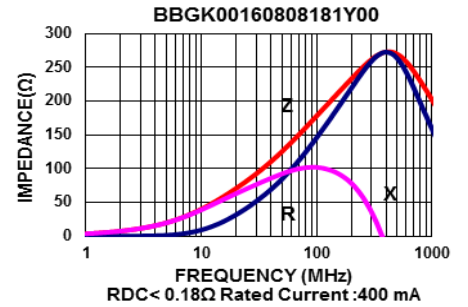
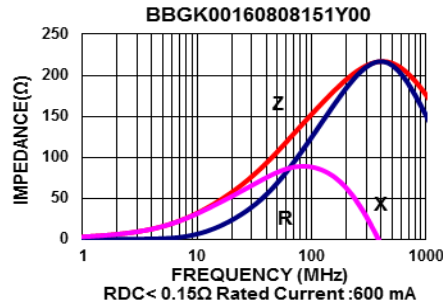
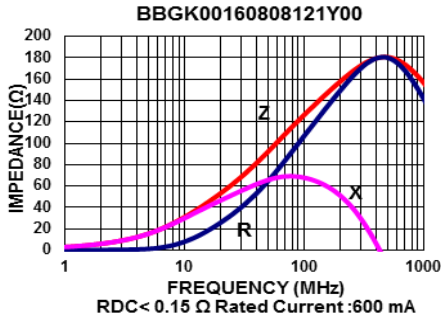
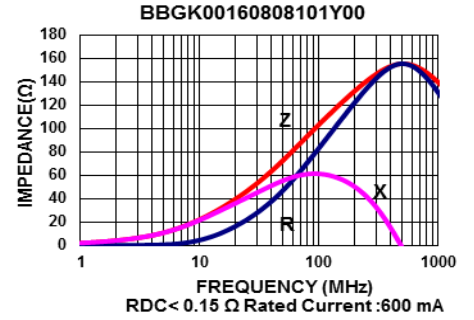
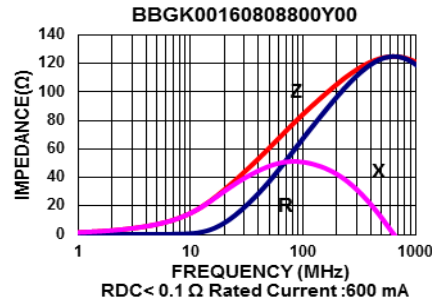
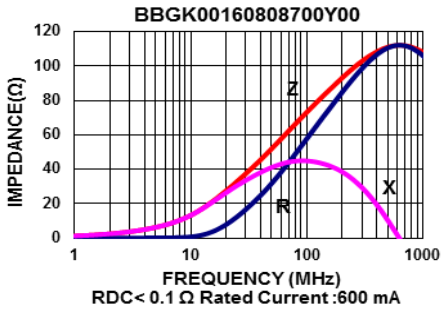


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# SMD Multilayer Ferrite Chip Beads – BBGK Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBGK Series

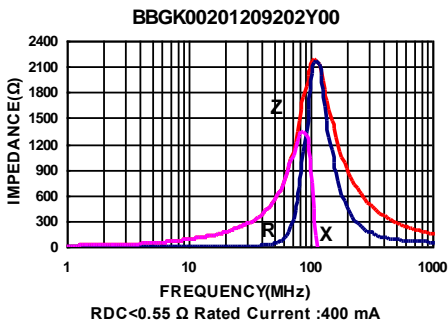
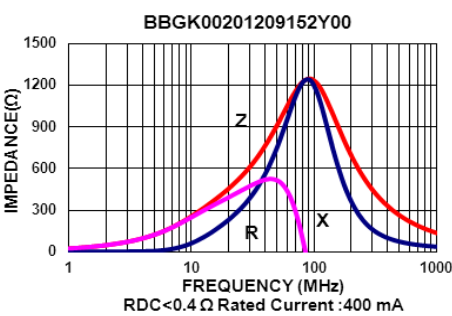
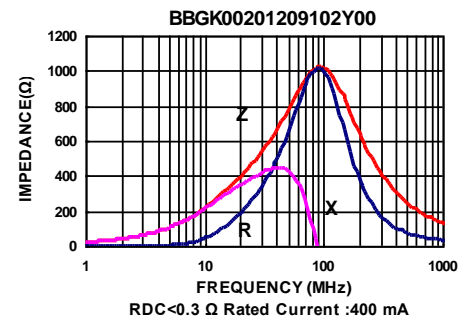
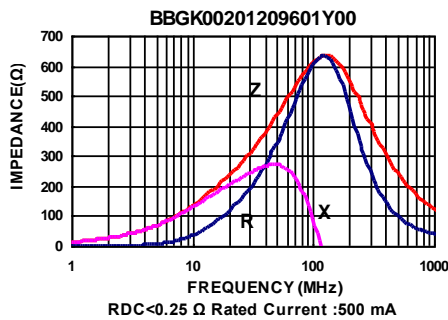
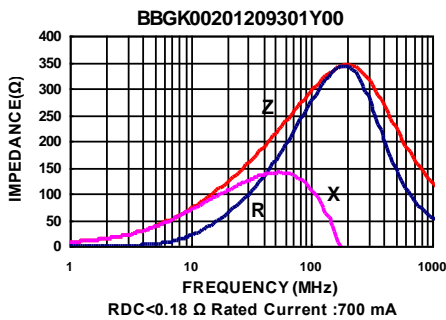
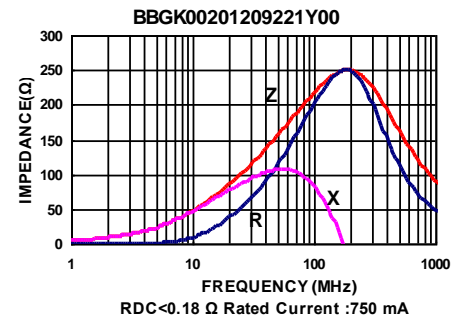
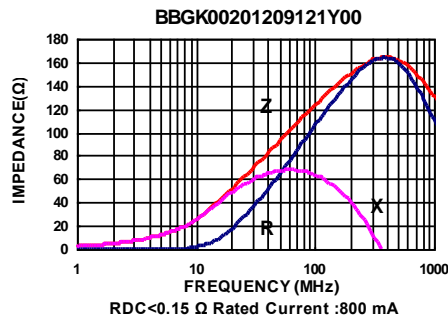
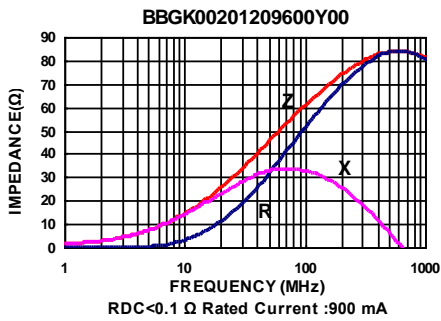
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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**

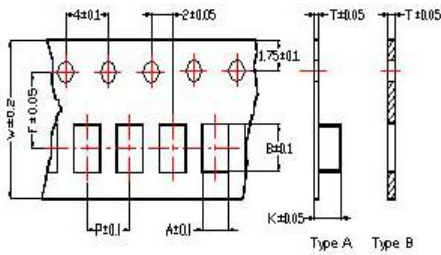


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# SMD Multilayer Ferrite Chip Beads

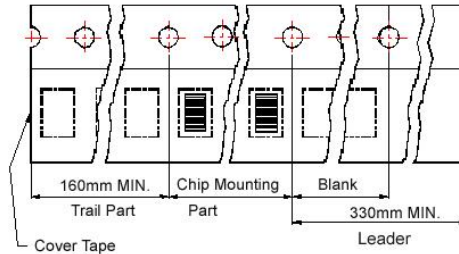
## Packaging Specifications

### Tape Dimensions

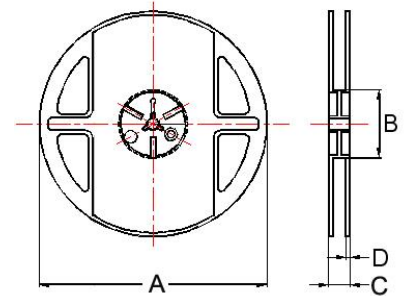


### Tape Material

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

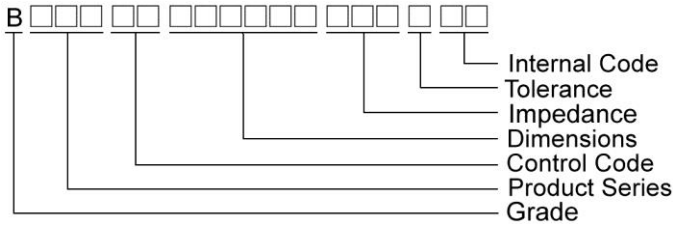
TYPE	Tape Dimensions								Reel Dimensions				Quantity PCS / REEL
	A	B	T	W	P	F	K	Tape	A	B	C	D	
①060303	0.37	0.67	0.42	8.0	2.0	3.5	-	B	178	60	10	2	15000
②100505	0.62	1.12	0.60	8.0	2.0	3.5	-	B	178	60	12	2	10000
③160805	1.05	1.85	0.60	8.0	2.0	3.5	-	B	178	60	12	2	10000
④160808	1.05	1.85	0.95	8.0	4.0	3.5	-	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

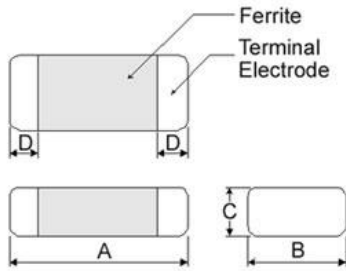


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### Product Identification



### Shape and Dimensions



Dimensions in mm

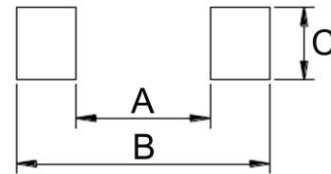
TYPE	A	B	C	D
①060303	0.6±0.03	0.30±0.03	0.3±0.03	0.15±0.05
②100505	1.0±0.10	0.50±0.10	0.5±0.10	0.25±0.10
③160805	1.6±0.15	0.80±0.15	0.5±0.15	0.3±0.2
④160808	1.6±0.15	0.80±0.15	0.8±0.15	0.3±0.2
⑤201209	2.0±0.20	1.25±0.20	0.9±0.20	0.5±0.3
⑥321611	3.2±0.20	1.60±0.20	1.1±0.20	0.5±0.3
⑦453215	4.5±0.25	3.20±0.20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

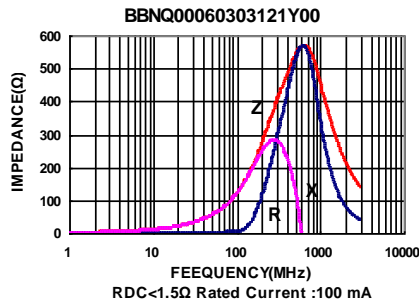
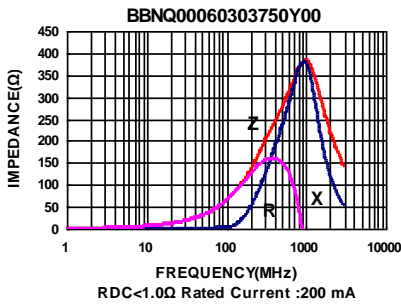
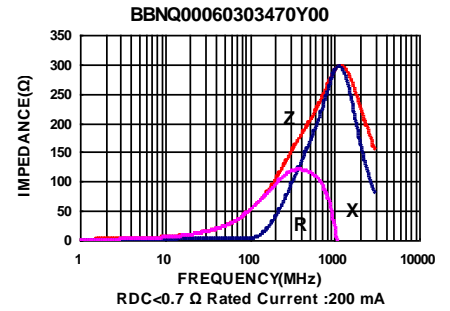
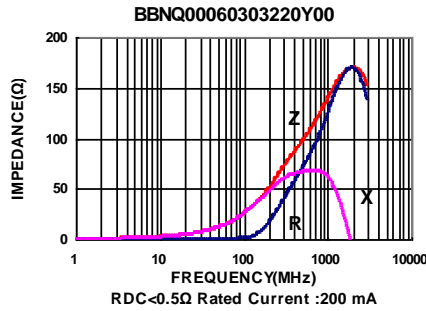
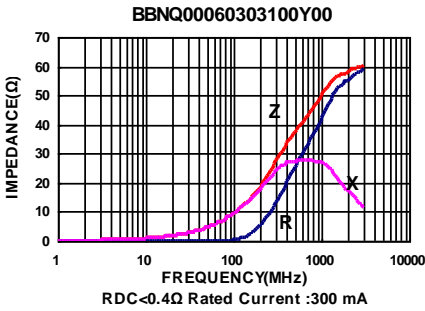
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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



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 – BBNQ Series

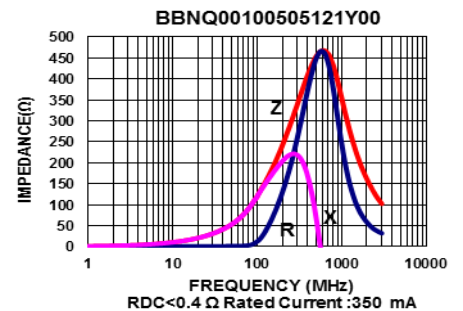
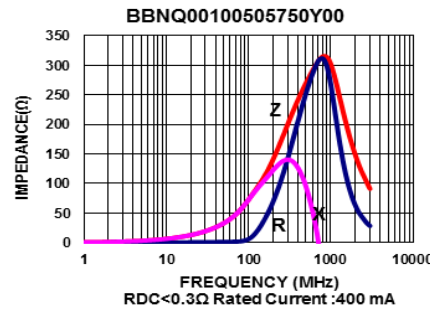
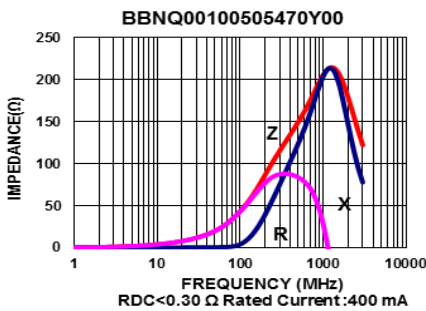
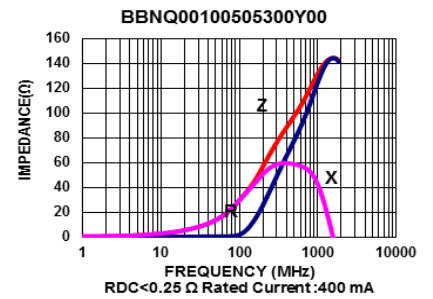
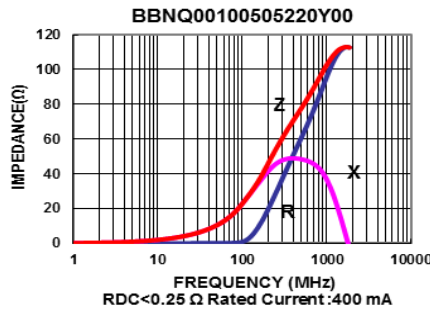
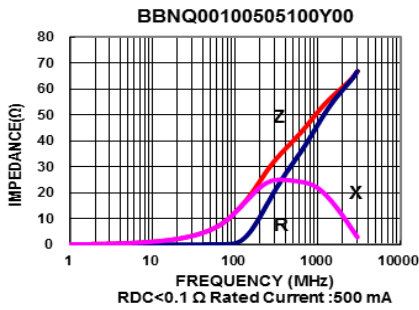
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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

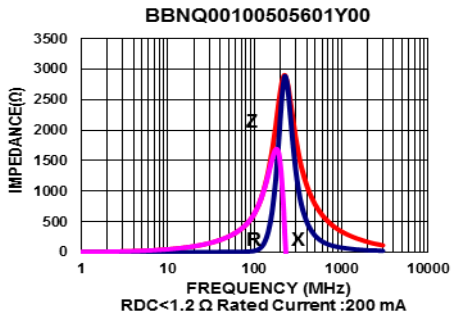
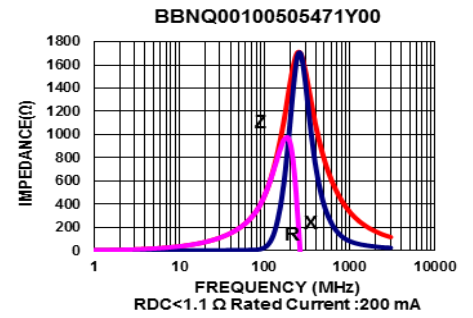
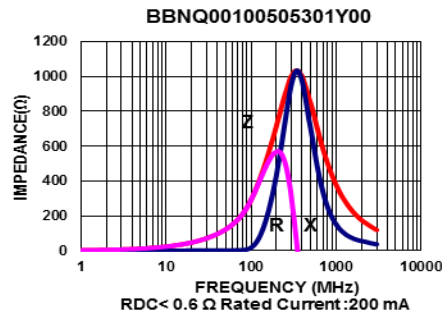
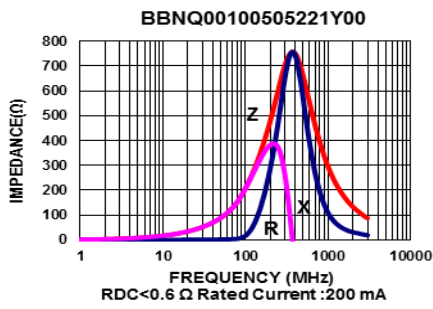


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# SMD Multilayer Ferrite Chip Beads – BBNQ Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBNQ Series

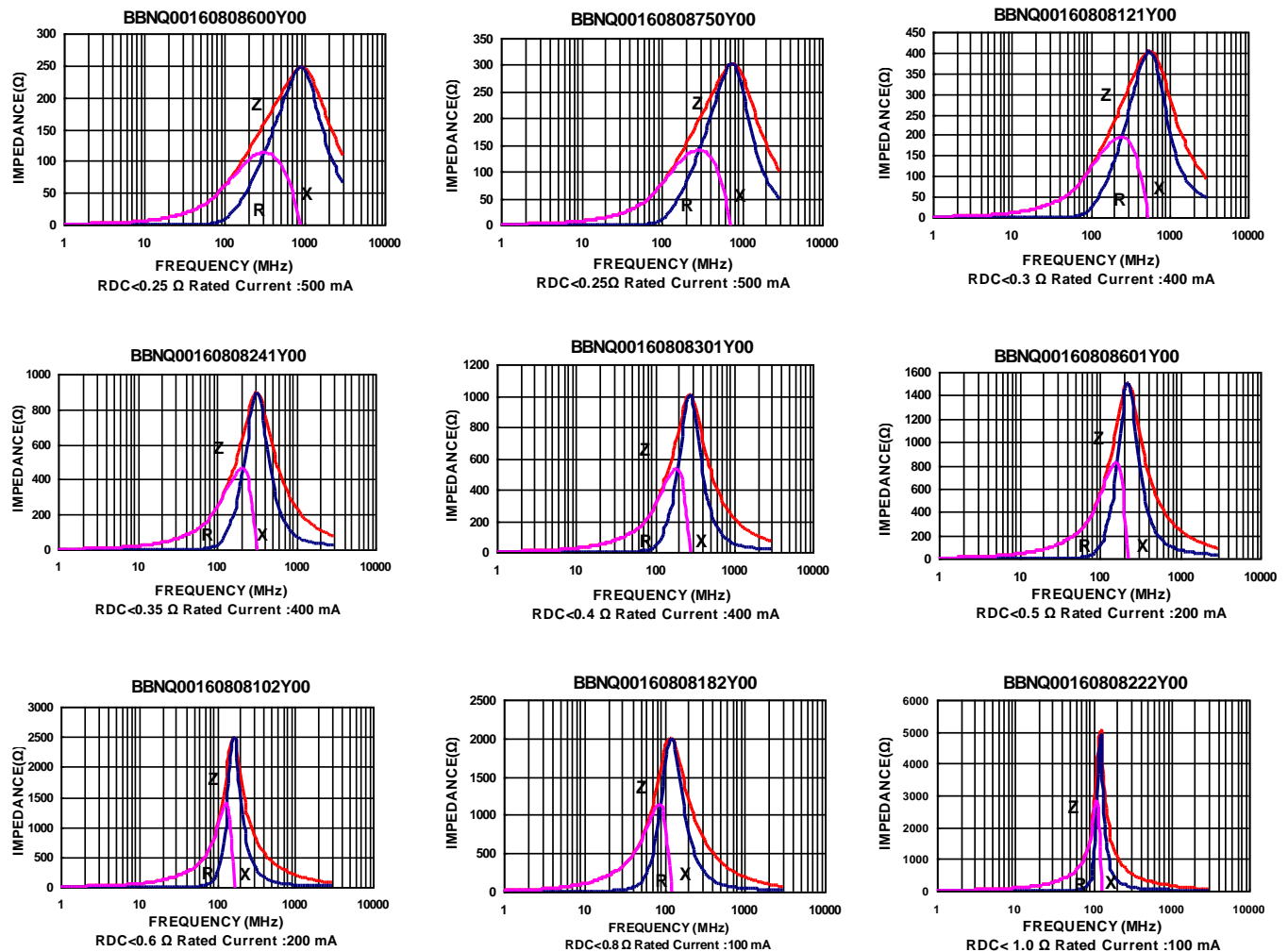
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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

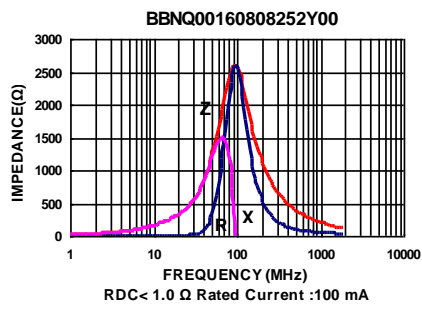
## Test Instruments : Agilent E4991A Impedance / Material Analyzer



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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

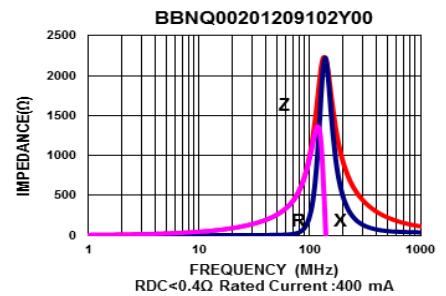
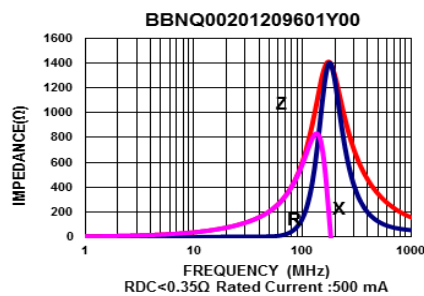
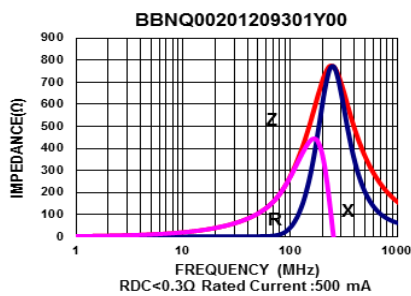
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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

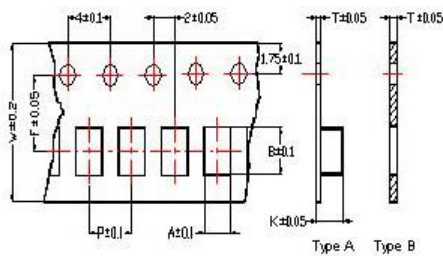
**Test Instruments :** Agilent E4991A Impedance / Material Analyzer



# SMD Multilayer Ferrite Chip Beads – BBNQ Series

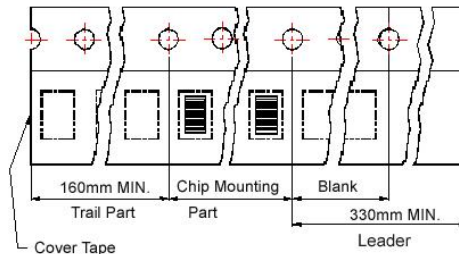
## Packaging Specifications

### Tape Dimensions

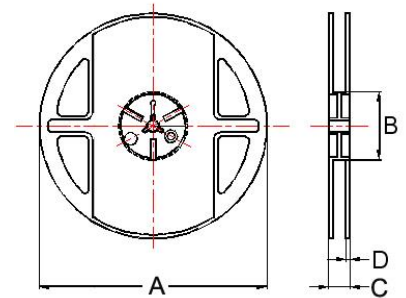


### Tape Material

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

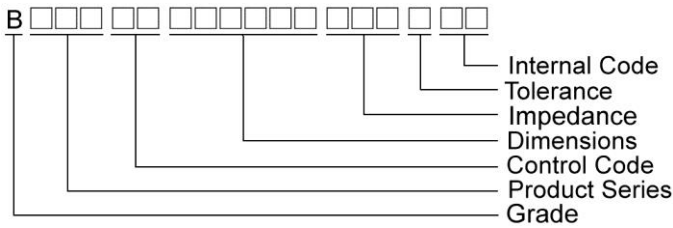
TYPE	Tape Dimensions								Reel Dimensions				Quantity PCS / REEL
	A	B	T	W	P	F	K	Tape	A	B	C	D	
①060303	0.37	0.67	0.42	8.0	2.0	3.5	-	B	178	60	10	2	15000
②100505	0.62	1.12	0.60	8.0	2.0	3.5	-	B	178	60	12	2	10000
③160805	1.05	1.85	0.60	8.0	2.0	3.5	-	B	178	60	12	2	10000
④160808	1.05	1.85	0.95	8.0	4.0	3.5	-	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

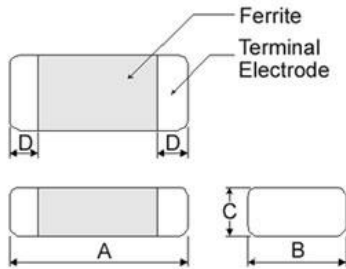


Chilisin offers a wide range of multi-layered ferrite chip beads with various sizes, frequency characteristics, and impedance values for EMI solutions. These ferrite formulas are used to compose seven types of EMI suppression chip beads: BBSY, BBBK, BBSJ, BBGK, BBPY, BBUP, BBNQ, BBFY, BBFJ and BBHV series.

### Product Identification



### Shape and Dimensions



Dimensions in mm

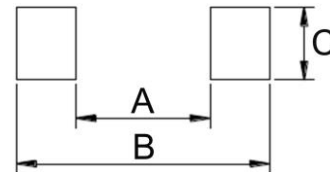
TYPE	A	B	C	D
①060303	0.6±0.03	0.30±0.03	0.3±0.03	0.15±0.05
②100505	1.0±0.10	0.50±0.10	0.5±0.10	0.25±0.10
③160805	1.6±0.15	0.80±0.15	0.5±0.15	0.3±0.2
④160808	1.6±0.15	0.80±0.15	0.8±0.15	0.3±0.2
⑤201209	2.0±0.20	1.25±0.20	0.9±0.20	0.5±0.3
⑥321611	3.2±0.20	1.60±0.20	1.1±0.20	0.5±0.3
⑦453215	4.5±0.25	3.20±0.20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

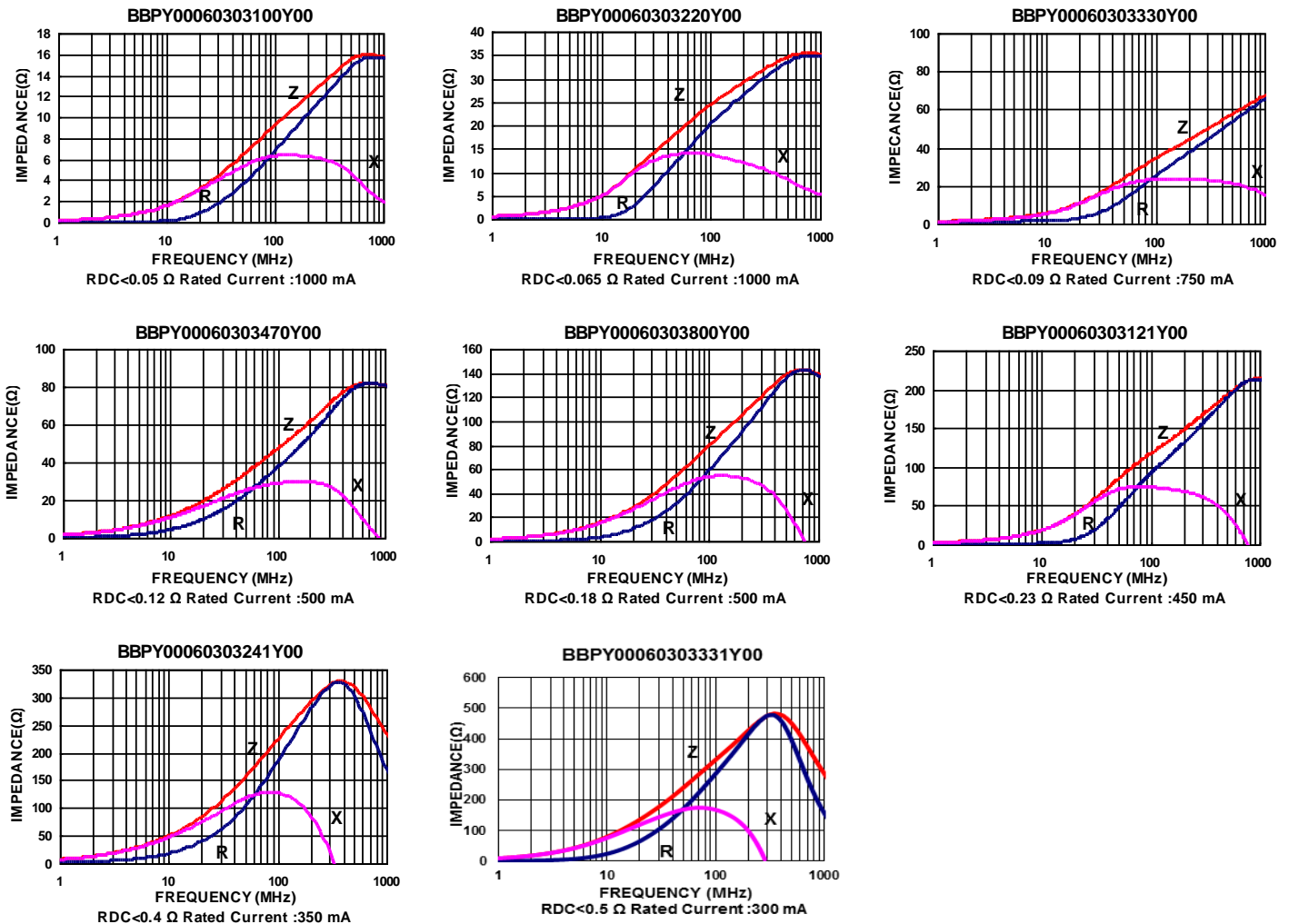
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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

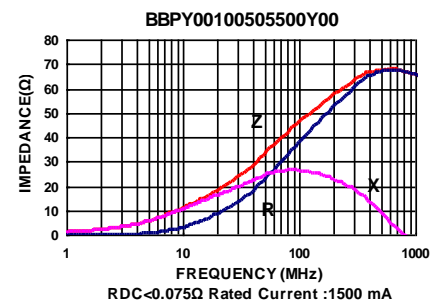
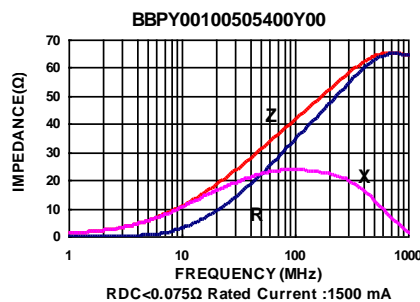
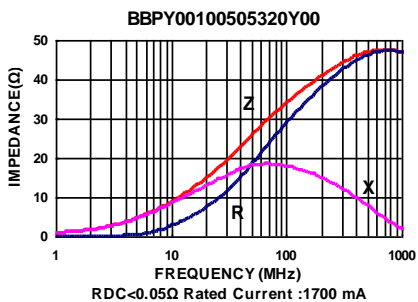
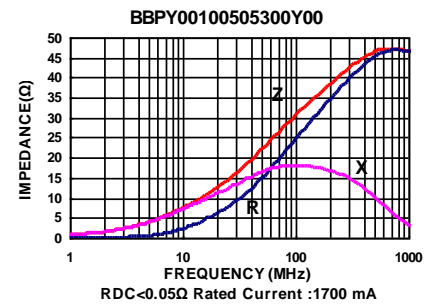
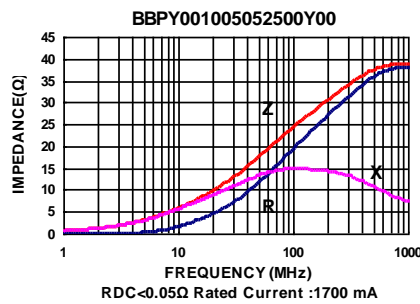
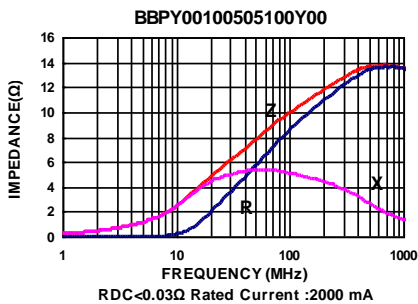
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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

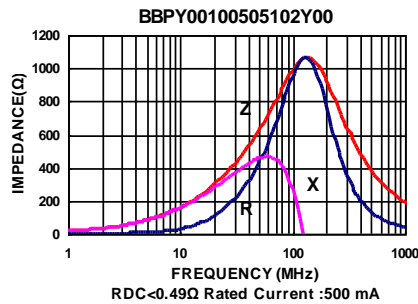
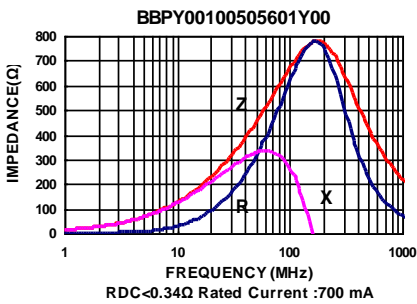
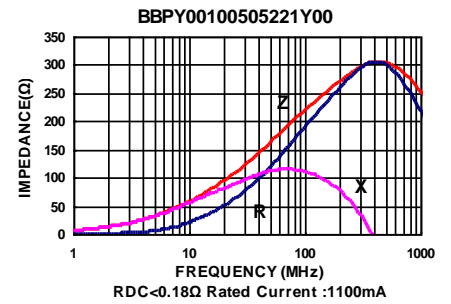
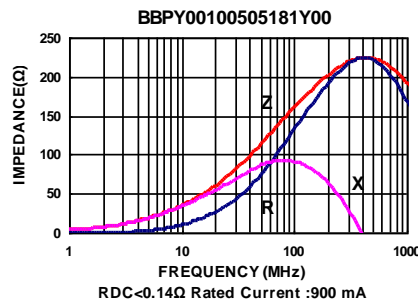
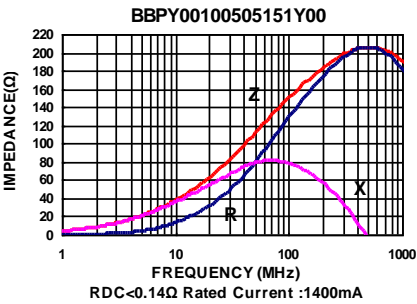
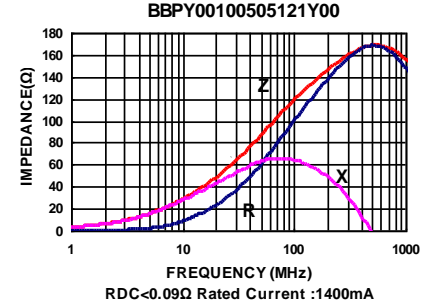
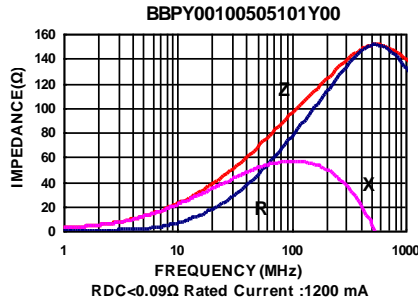
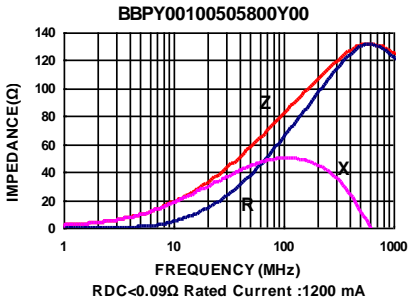
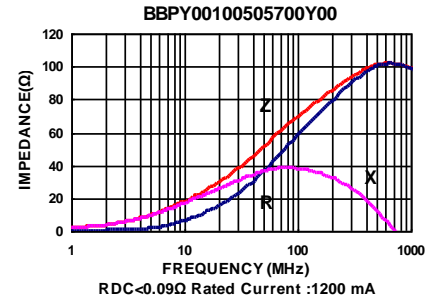
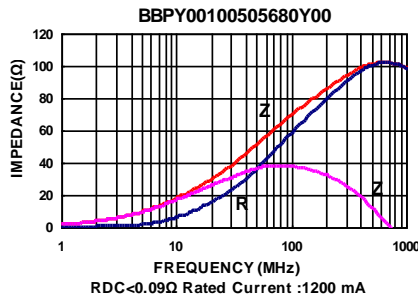
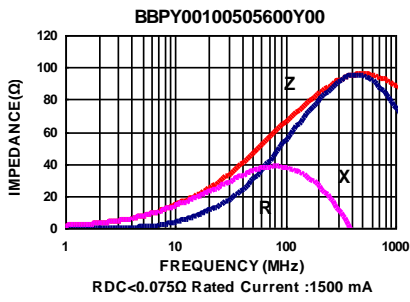
## Test Instruments : Agilent E4991A Impedance / Material Analyzer



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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 ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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

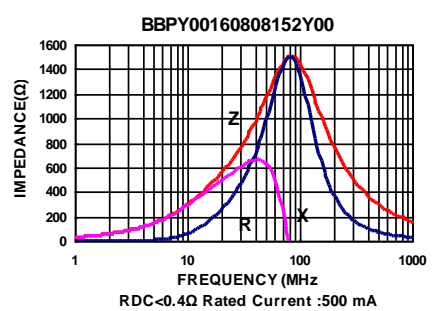
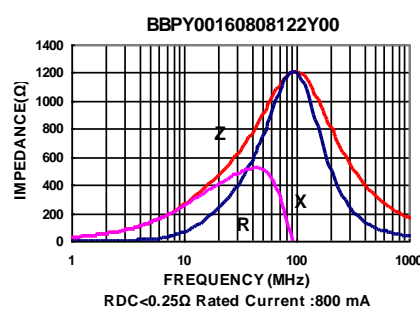
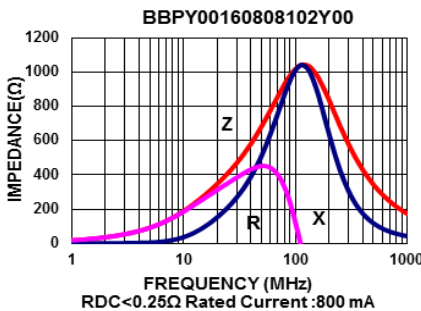
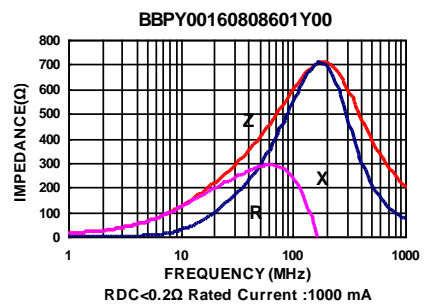
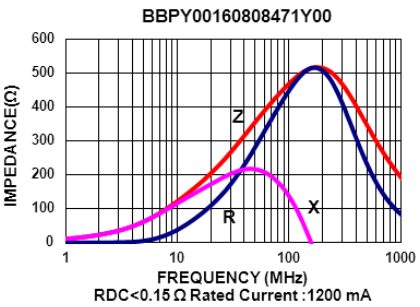
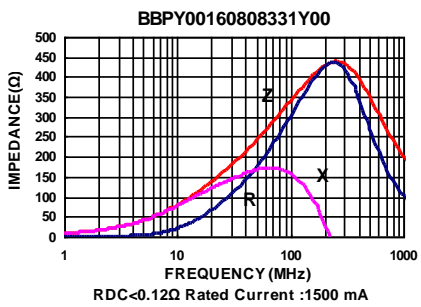
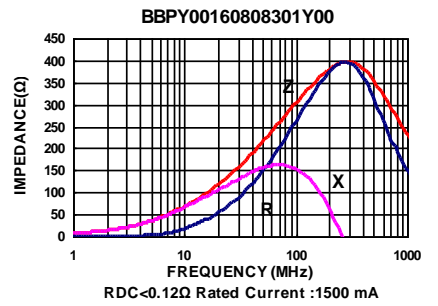
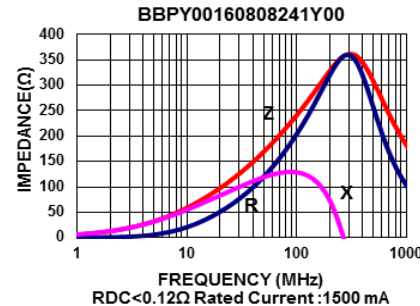
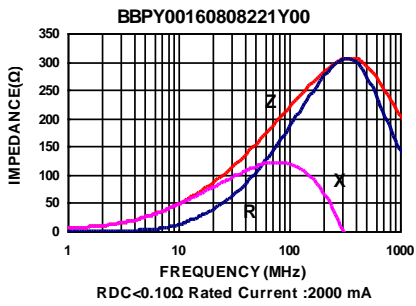
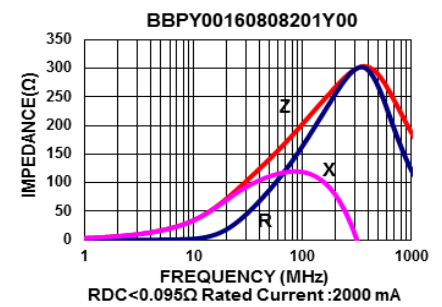
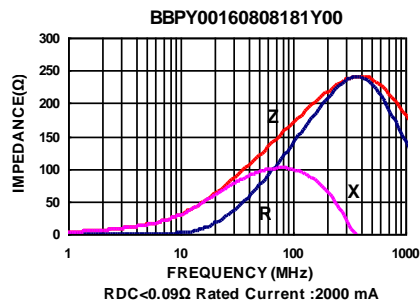
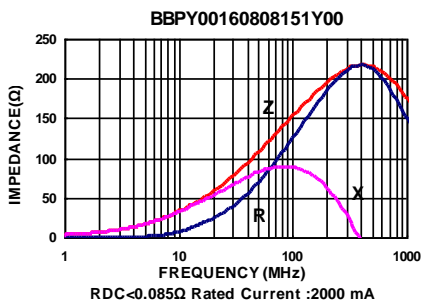
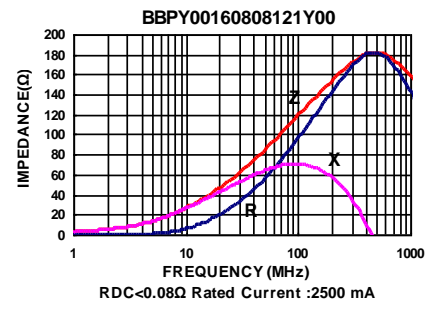
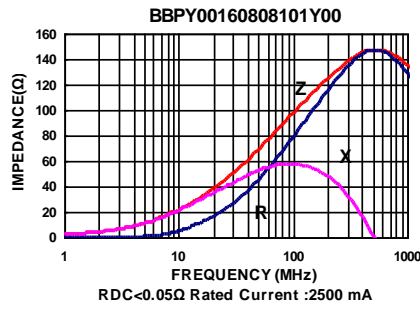
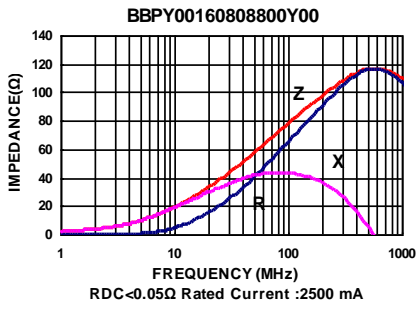
**Note: When ordering, please specify tolerance code. Tolerance :  $Y=\pm 25\%$**

- 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

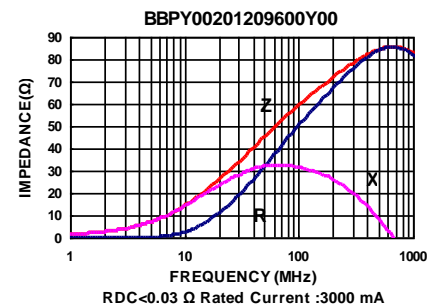
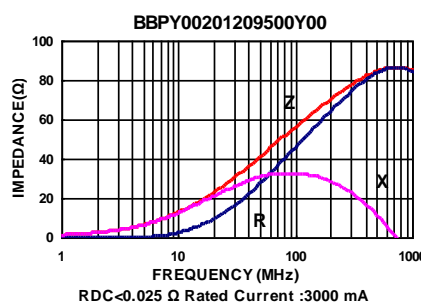
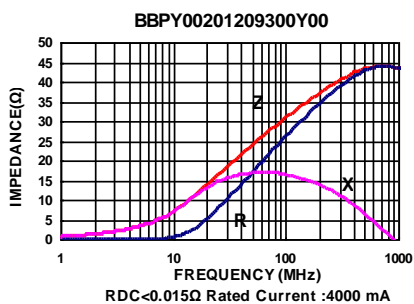
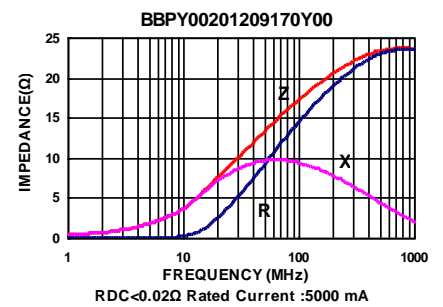
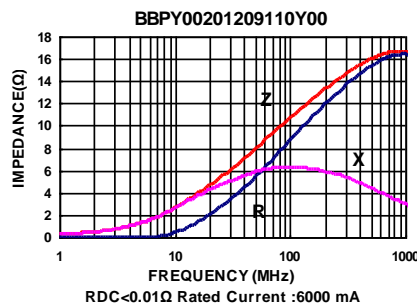
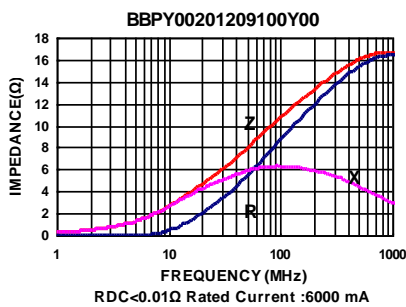
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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

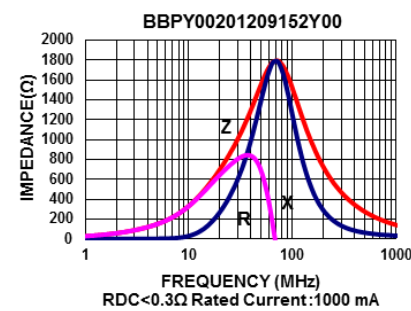
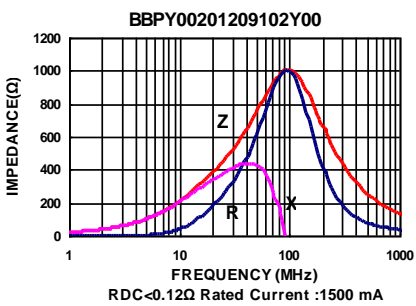
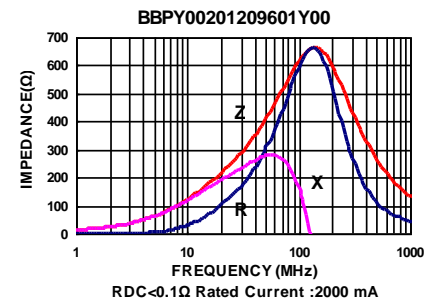
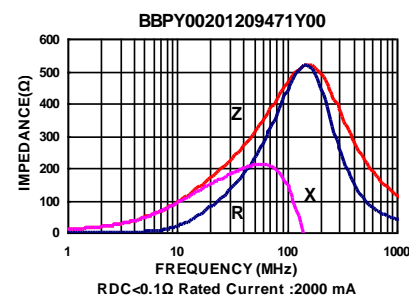
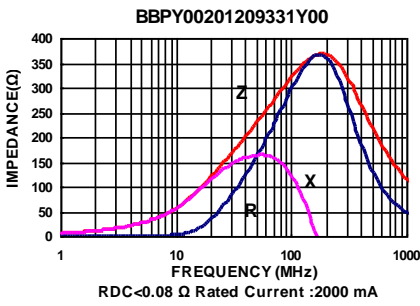
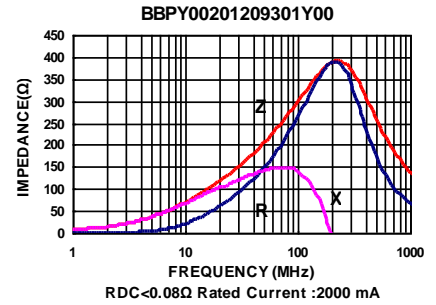
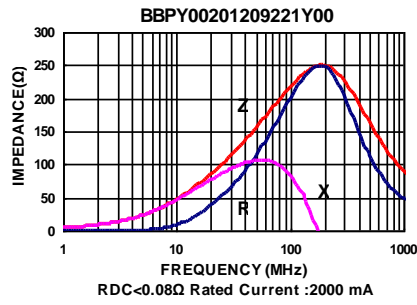
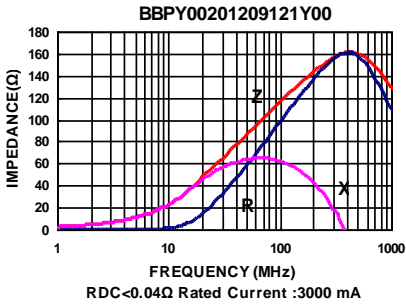
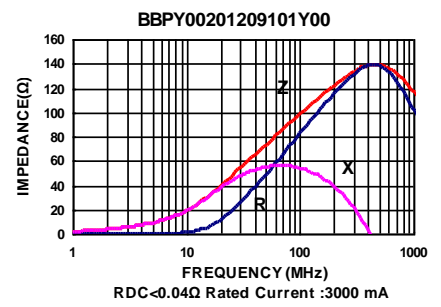
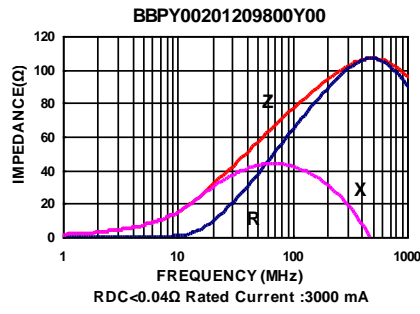
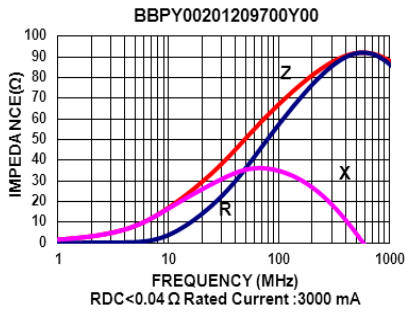
## Test Instruments : Agilent E4991A Impedance / Material Analyzer



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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

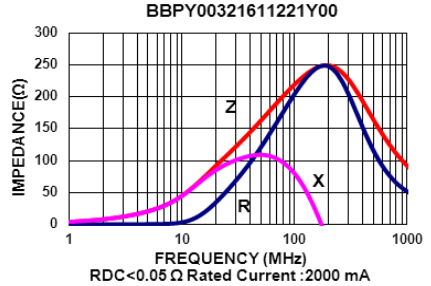
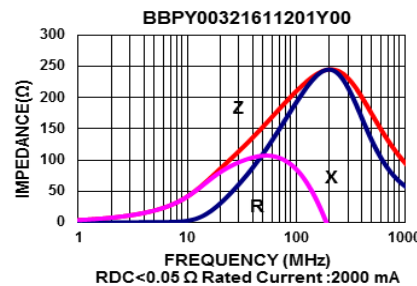
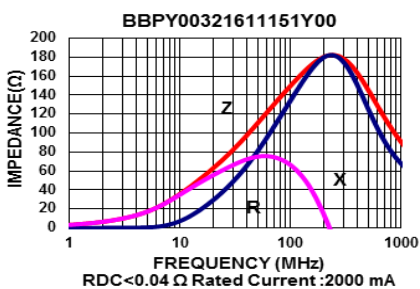
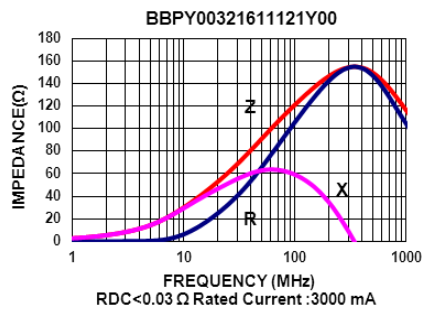
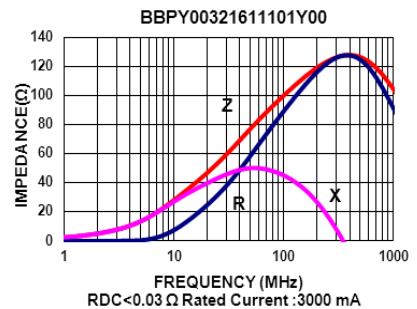
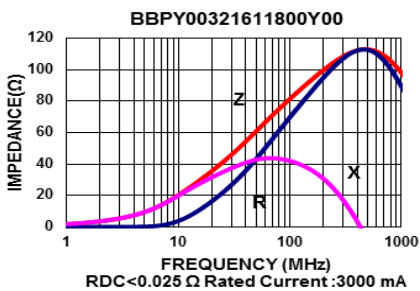
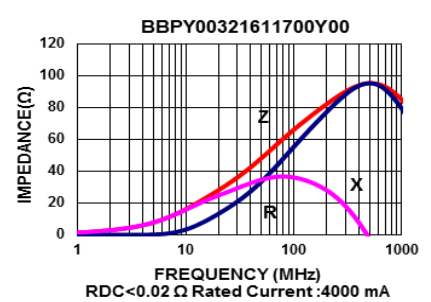
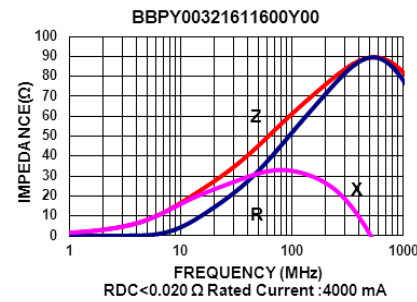
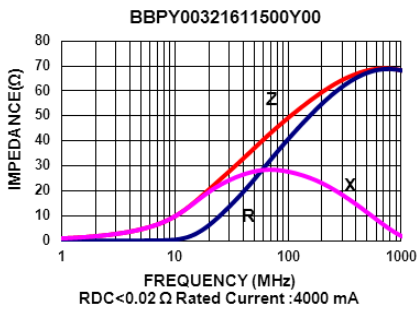
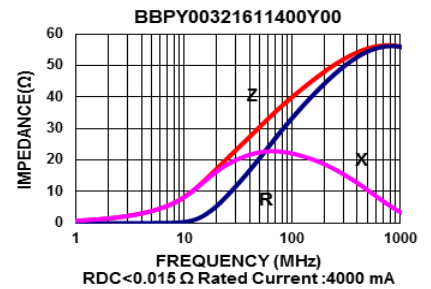
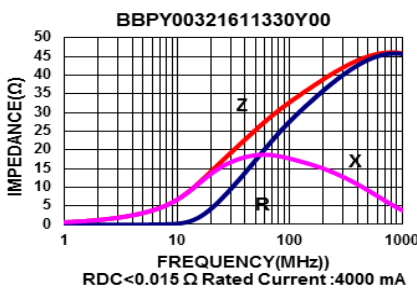
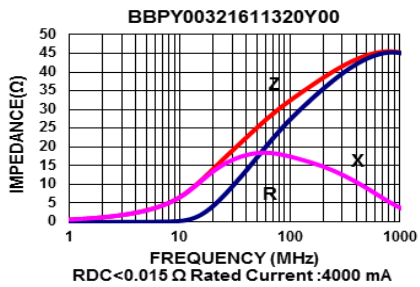
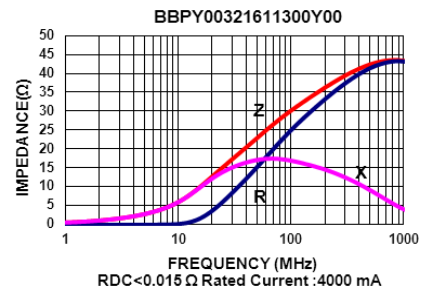
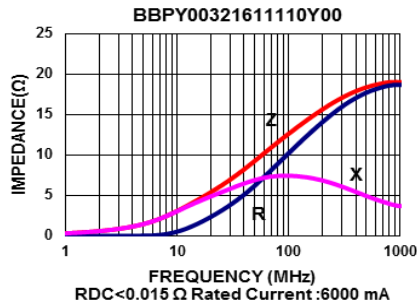
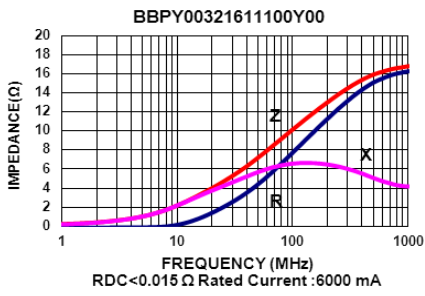
Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (mA) Max
BBPY00321611100Y00	10	100	0.015	6000
BBPY00321611110Y00	11	100	0.015	6000
BBPY00321611300Y00	30	100	0.015	4000
BBPY00321611320Y00	32	100	0.015	4000
BBPY00321611330Y00	33	100	0.015	4000
BBPY00321611400Y00	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  
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# SMD Multilayer Ferrite Chip Beads – BBPY Series

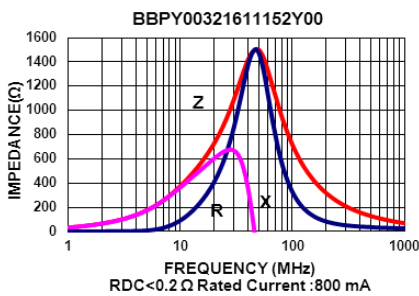
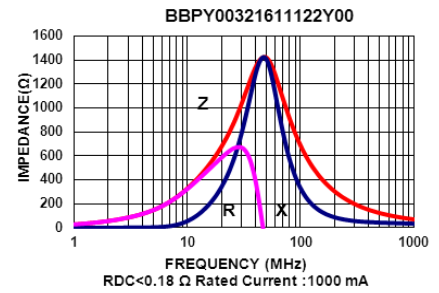
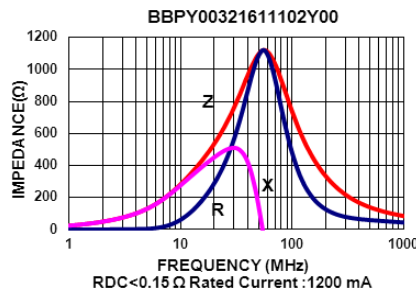
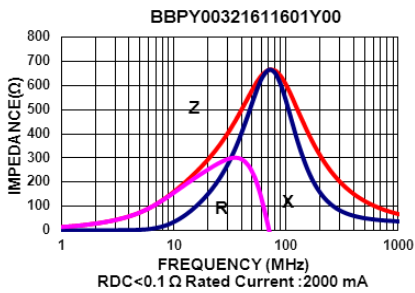
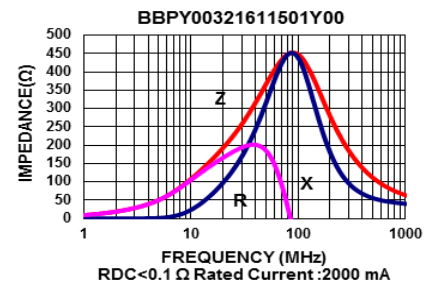
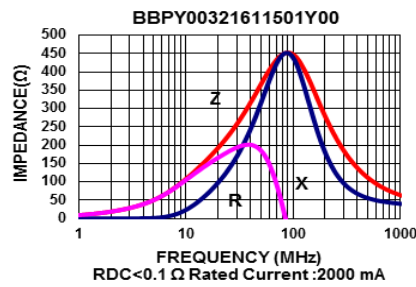
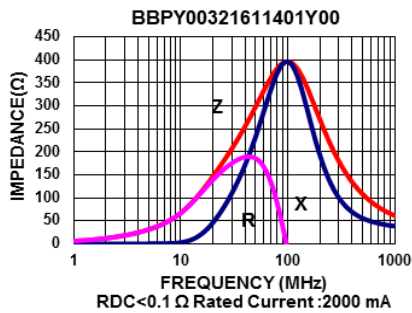
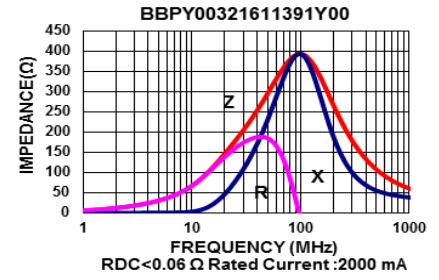
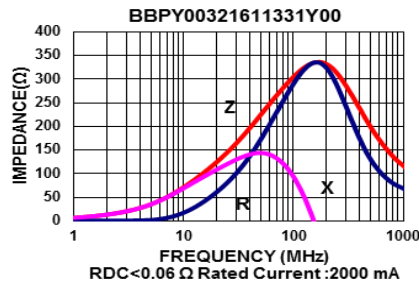
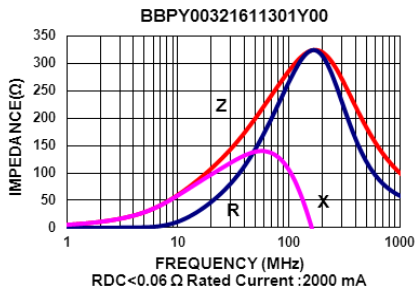
Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBPY Series

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

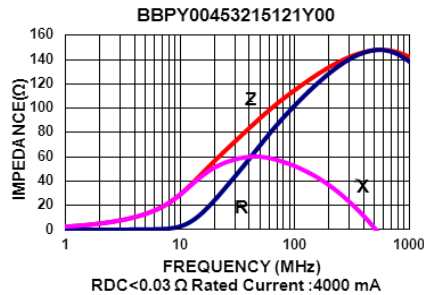
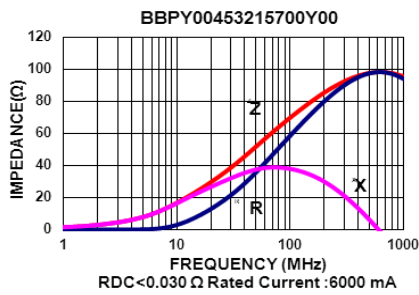
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	DC Resistance ( $\Omega$ ) Max	Rated current (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

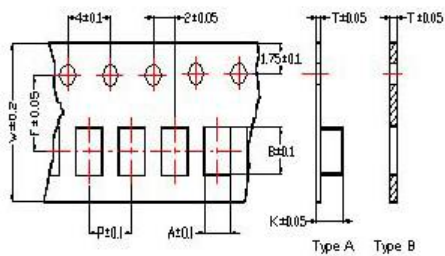




# SMD Multilayer Ferrite Chip Beads

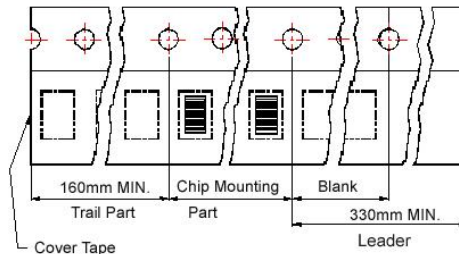
## Packaging Specifications

### Tape Dimensions

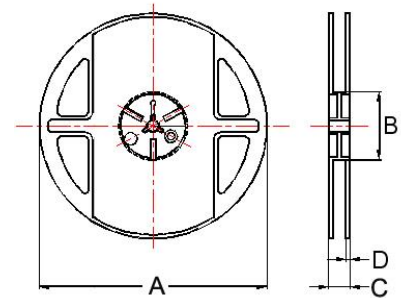


### Tape Material

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

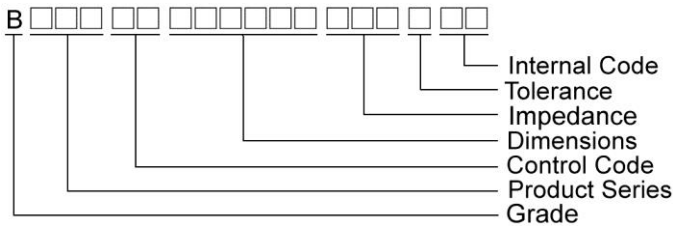
TYPE	Tape Dimensions								Reel Dimensions				Quantity PCS / REEL
	A	B	T	W	P	F	K	Tape	A	B	C	D	
①060303	0.37	0.67	0.42	8.0	2.0	3.5	-	B	178	60	10	2	15000
②100505	0.62	1.12	0.60	8.0	2.0	3.5	-	B	178	60	12	2	10000
③160805	1.05	1.85	0.60	8.0	2.0	3.5	-	B	178	60	12	2	10000
④160808	1.05	1.85	0.95	8.0	4.0	3.5	-	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

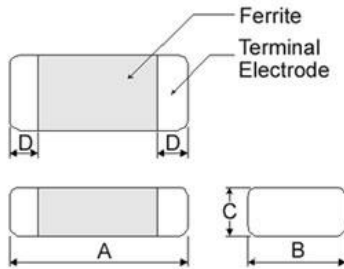


Chilisin offers a wide range of multi-layered ferrite chip beads with various sizes, frequency characteristics, and impedance values for EMI solutions. These ferrite formulas are used to compose seven types of EMI suppression chip beads: BBSY, BBBK, BBSJ, BBGK, BBPY, BBUP, BBNQ, BBFY, BBFJ and BBHV series.

### Product Identification



### Shape and Dimensions



Dimensions in mm

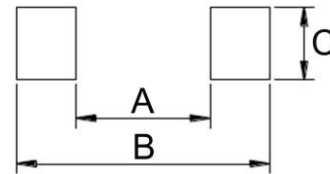
TYPE	A	B	C	D
①060303	0.6±0.03	0.30±0.03	0.3±0.03	0.15±0.05
②100505	1.0±0.10	0.50±0.10	0.5±0.10	0.25±0.10
③160805	1.6±0.15	0.80±0.15	0.5±0.15	0.3±0.2
④160808	1.6±0.15	0.80±0.15	0.8±0.15	0.3±0.2
⑤201209	2.0±0.20	1.25±0.20	0.9±0.20	0.5±0.3
⑥321611	3.2±0.20	1.60±0.20	1.1±0.20	0.5±0.3
⑦453215	4.5±0.25	3.20±0.20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

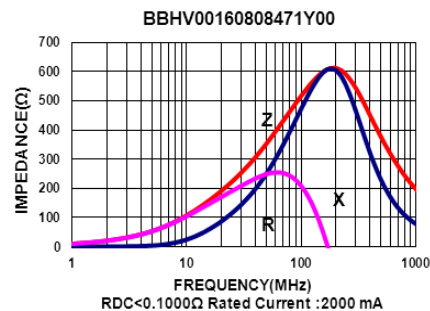
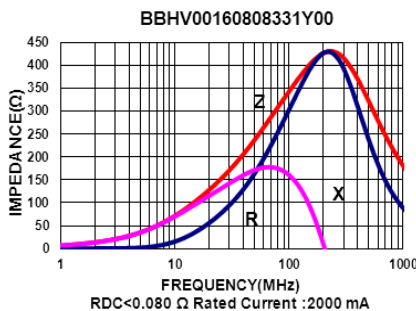
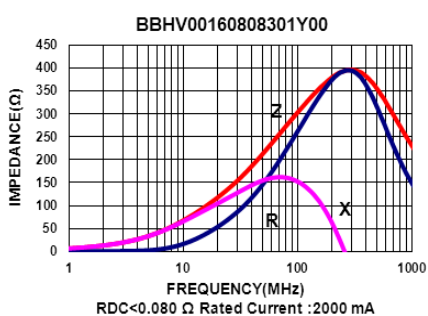
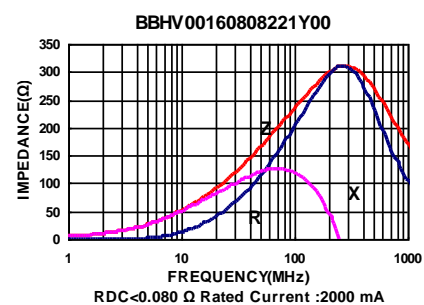
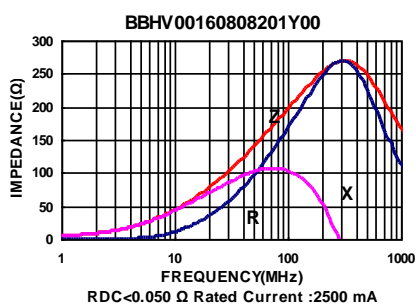
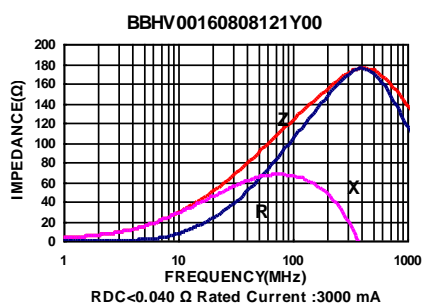
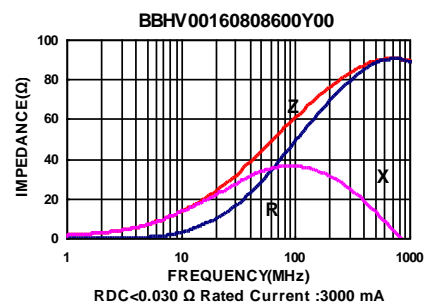
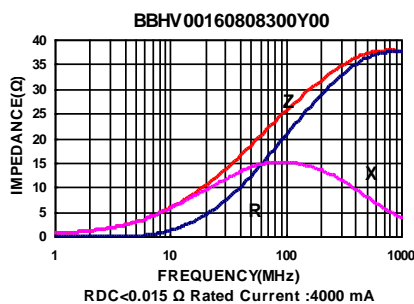
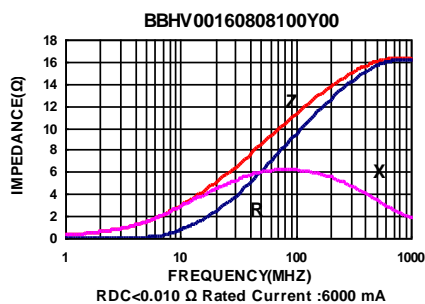
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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

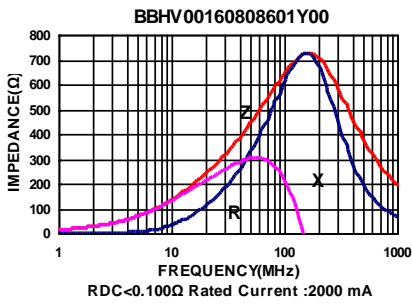
**Test Instruments : Agilent E4991A Impedance / Material Analyzer**



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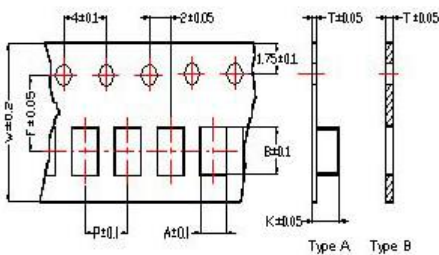
# SMD Multilayer Ferrite Chip Beads – BBHV Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer



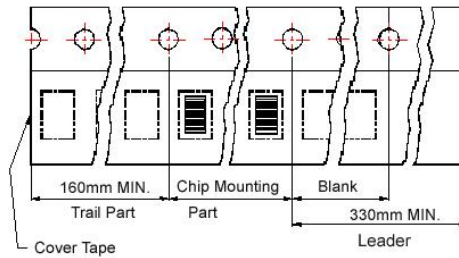
## Packaging Specifications

### Tape Dimensions

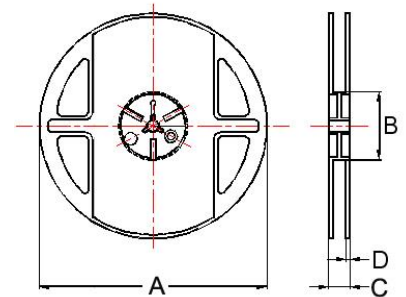


### Tape Material

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 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

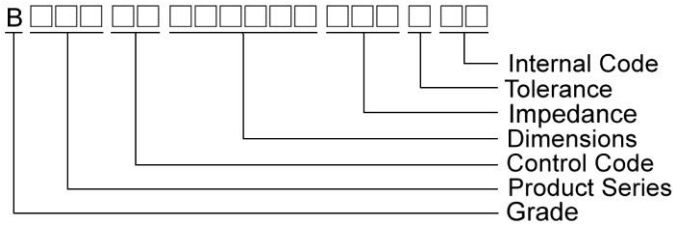
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## Multilayer Ferrite Chip Beads

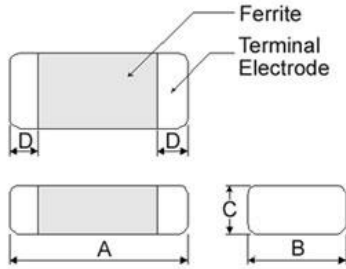


Chilisin offers a wide range of multi-layered ferrite chip beads with various sizes, frequency characteristics, and impedance values for EMI solutions. These ferrite formulas are used to compose seven types of EMI suppression chip beads: BBSY, BBBK, BBSJ, BBGK, BBPY, BBUP, BBNQ, BBFY, BBFJ and BBHV series.

### Product Identification



### Shape and Dimensions



Dimensions in mm

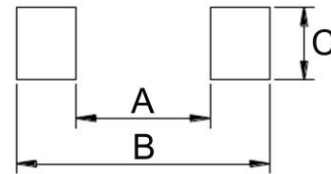
TYPE	A	B	C	D
①060303	0.6±0.03	0.30±0.03	0.3±0.03	0.15±0.05
②100505	1.0±0.10	0.50±0.10	0.5±0.10	0.25±0.10
③160805	1.6±0.15	0.80±0.15	0.5±0.15	0.3±0.2
④160808	1.6±0.15	0.80±0.15	0.8±0.15	0.3±0.2
⑤201209	2.0±0.20	1.25±0.20	0.9±0.20	0.5±0.3
⑥321611	3.2±0.20	1.60±0.20	1.1±0.20	0.5±0.3
⑦453215	4.5±0.25	3.20±0.20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

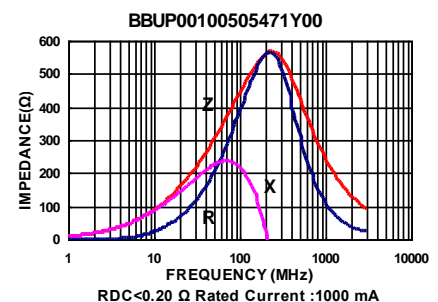
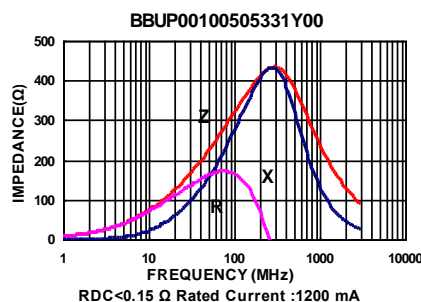
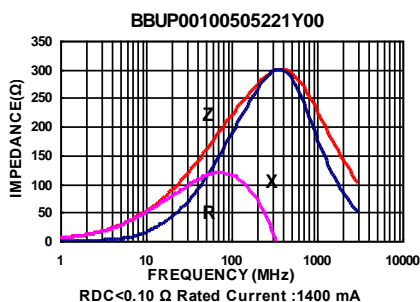
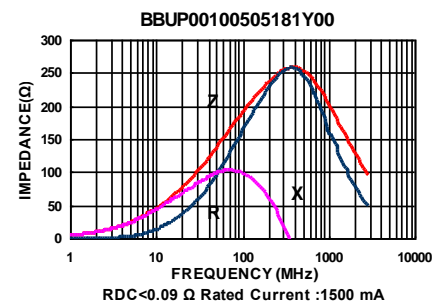
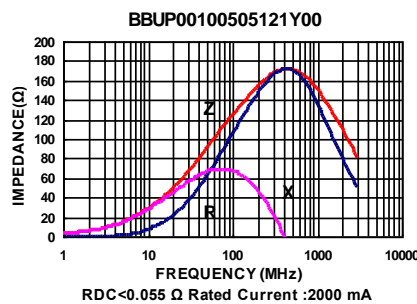
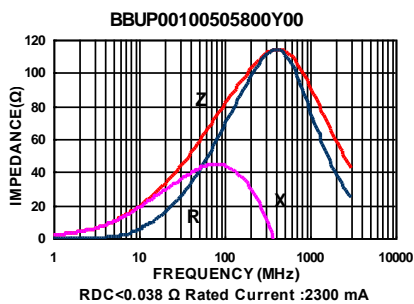
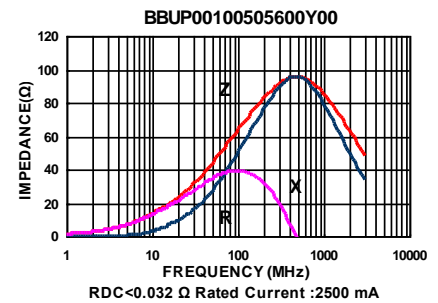
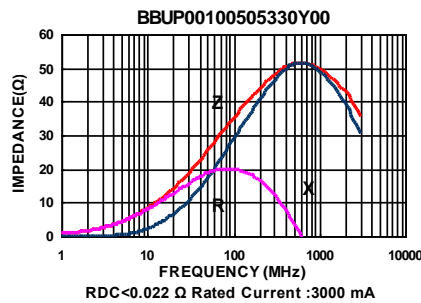
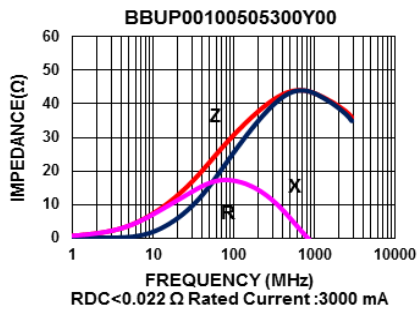
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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 :  
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RDC : HP4338B or CHEN HWA 502

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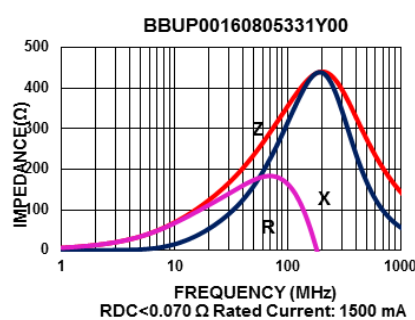
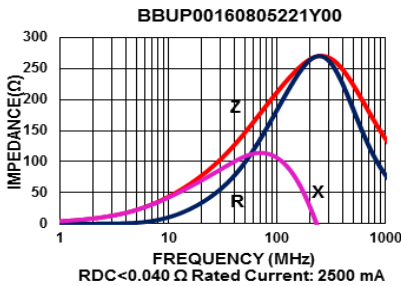
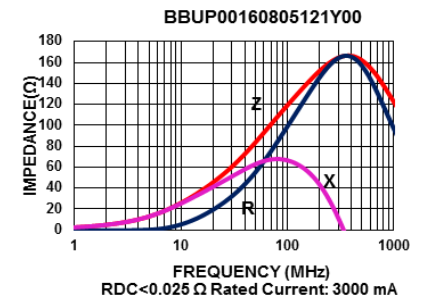
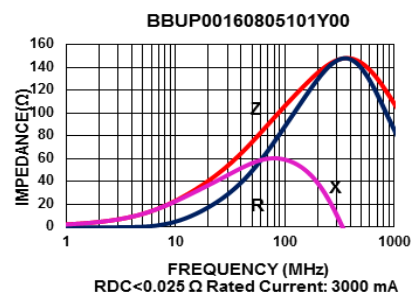
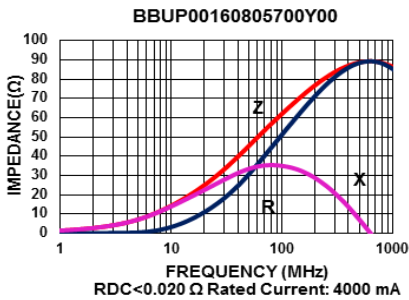
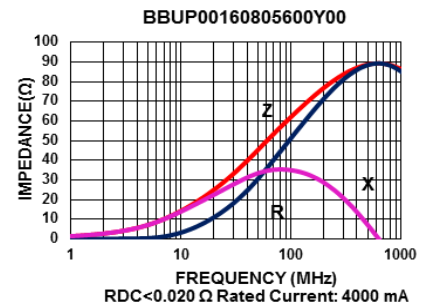
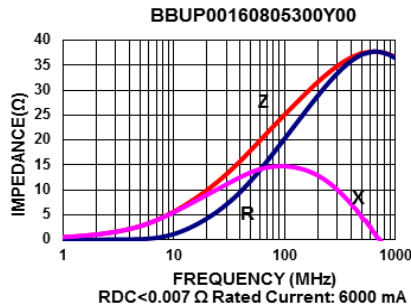
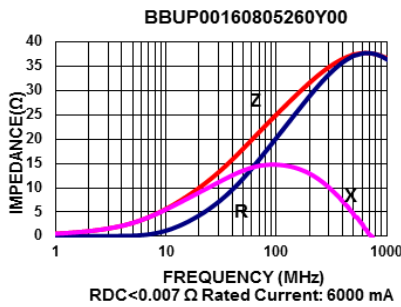
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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)
- 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

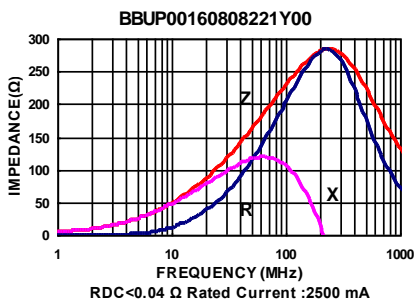
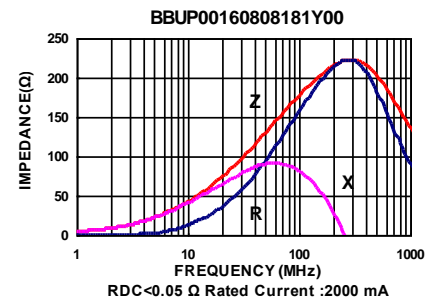
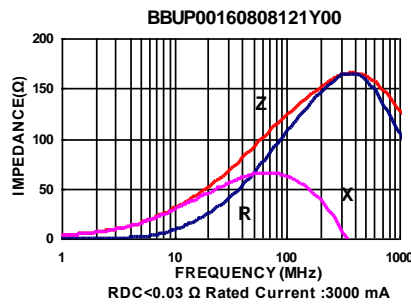
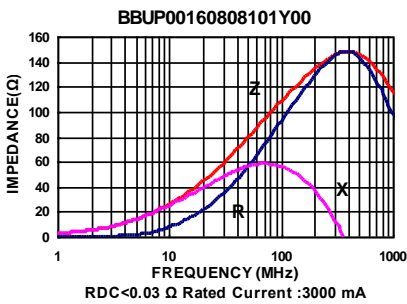
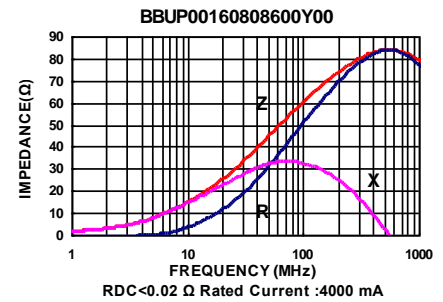
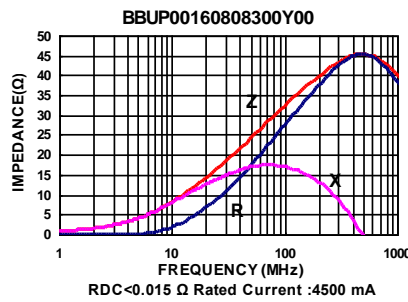
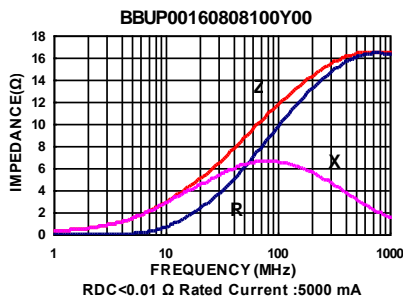
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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



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

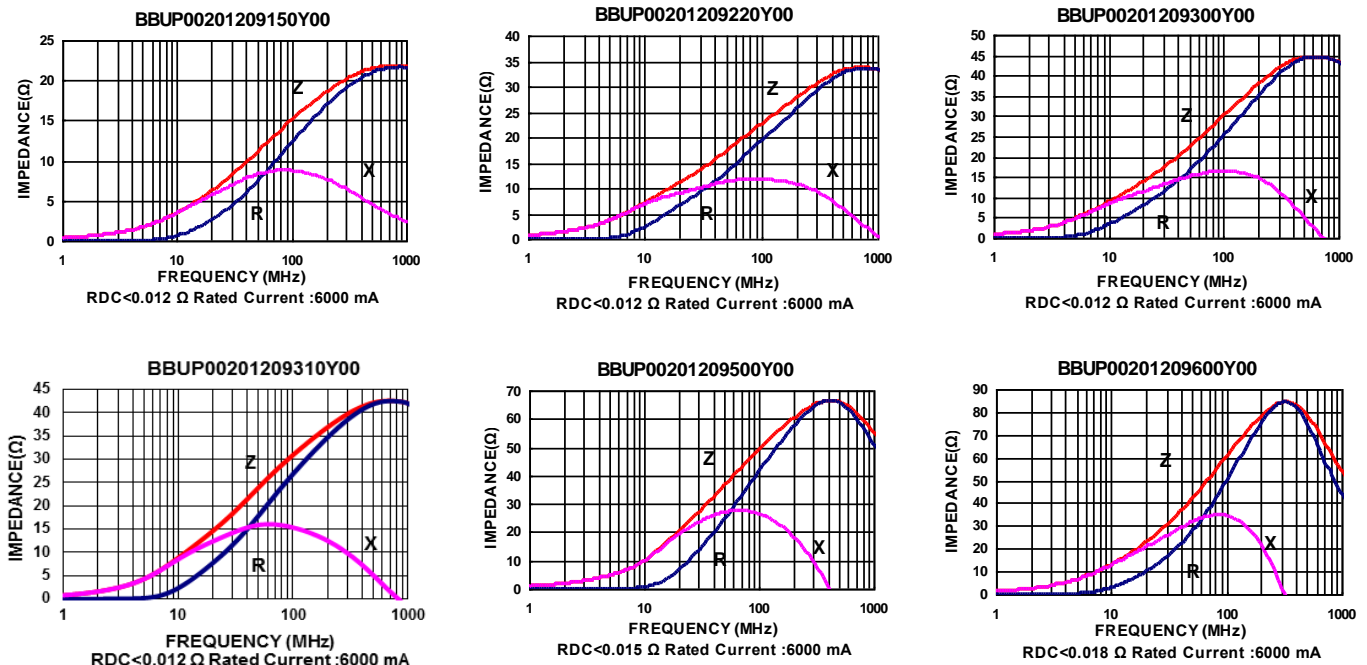
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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

**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

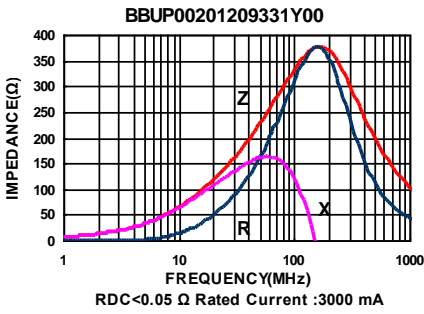
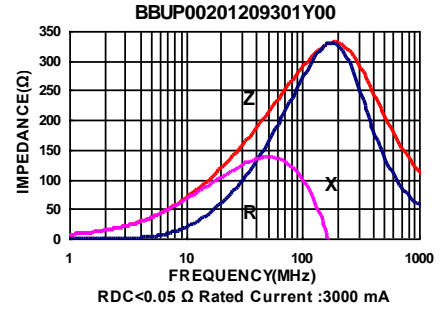
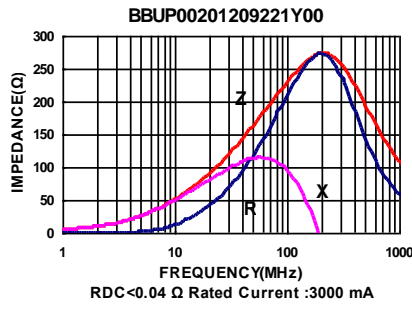
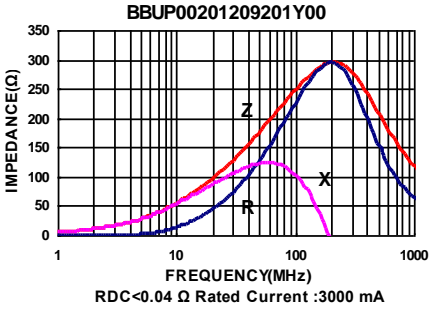
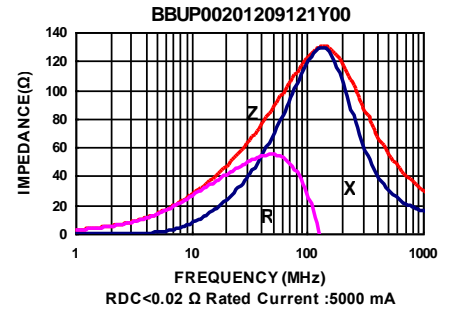
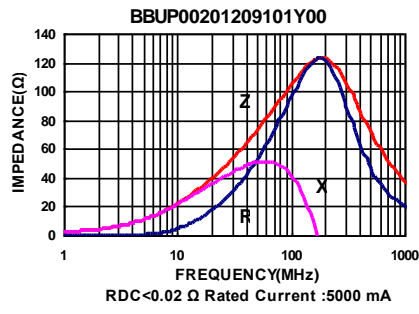
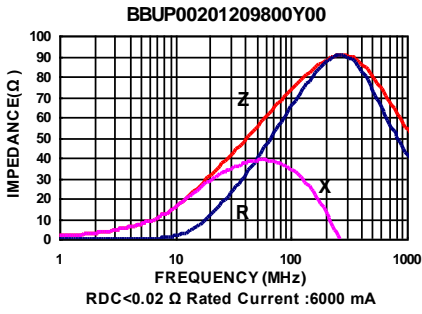
## Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBUP Series

Test Instruments : Agilent E4991A Impedance / Material Analyzer



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# SMD Multilayer Ferrite Chip Beads – BBUP Series

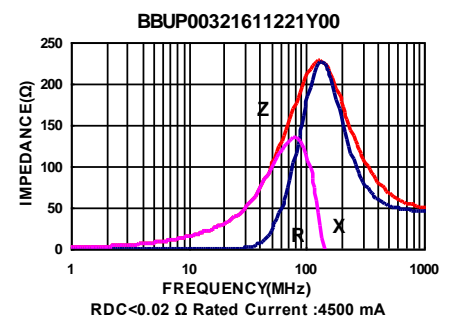
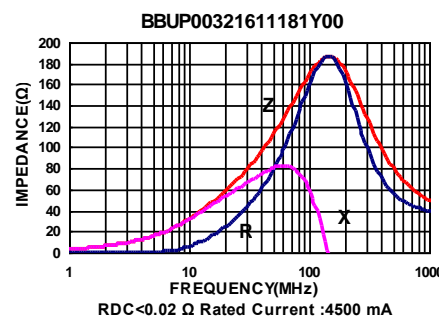
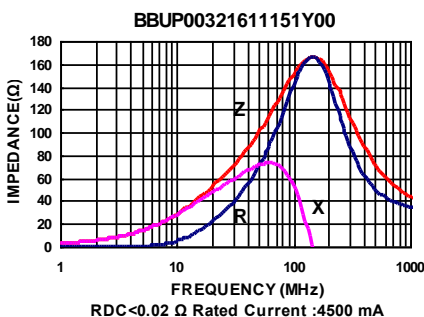
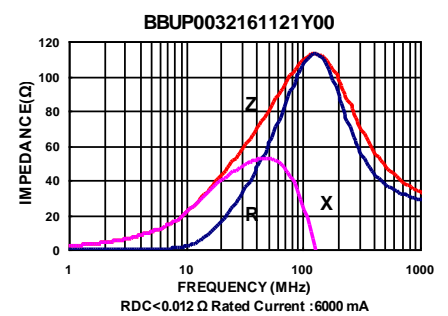
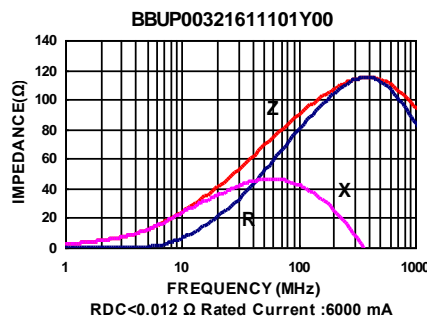
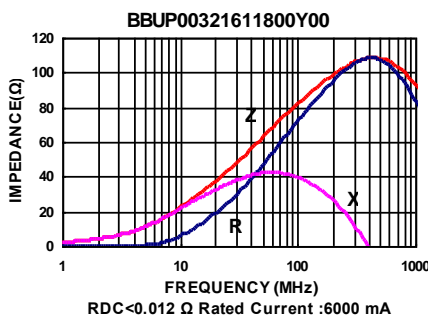
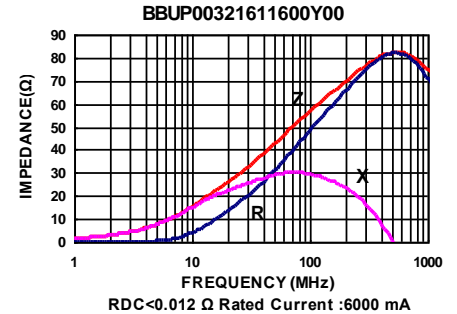
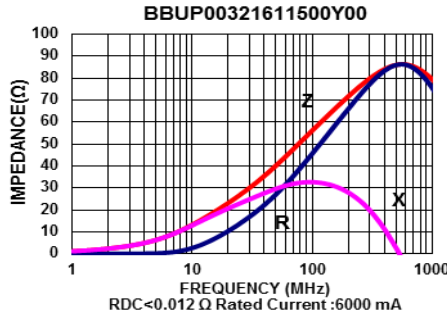
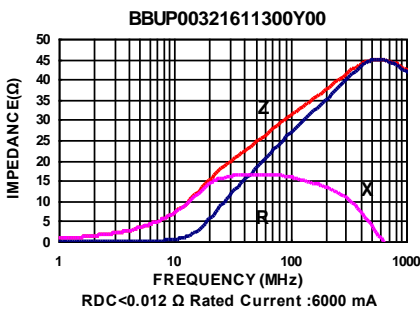
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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**



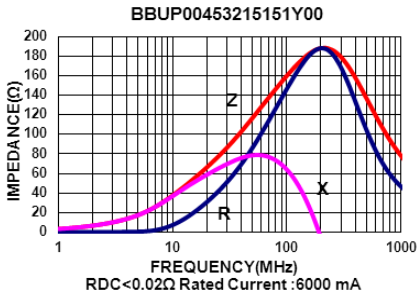
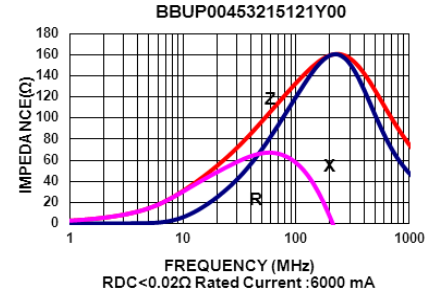
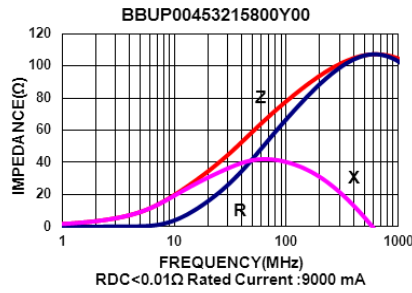
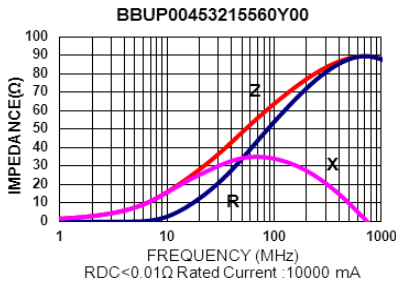
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# SMD Multilayer Ferrite Chip Beads – BBUP Series

## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	DC Resistance ( $\Omega$ ) Max	Rated current (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

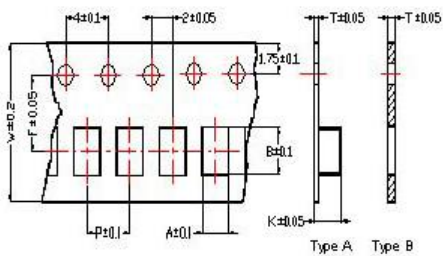


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# SMD Multilayer Ferrite Chip Beads

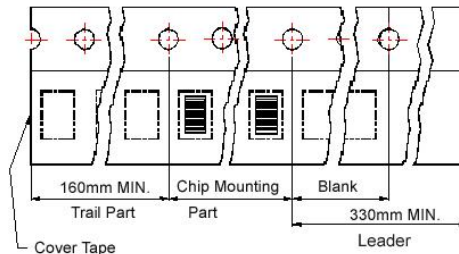
## Packaging Specifications

### Tape Dimensions

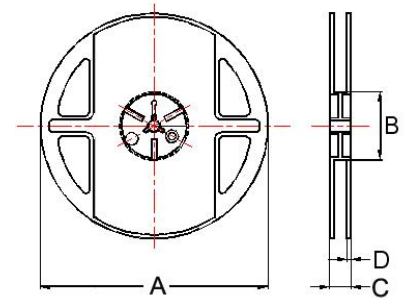


### Tape Material

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 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

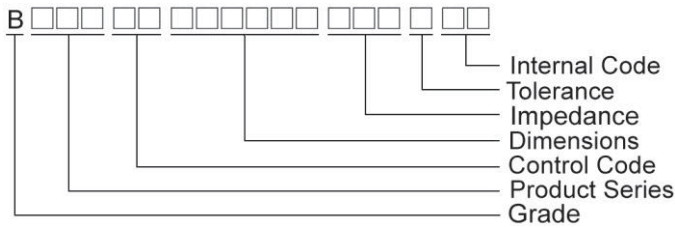


## Multilayer Ferrite Chip Beads

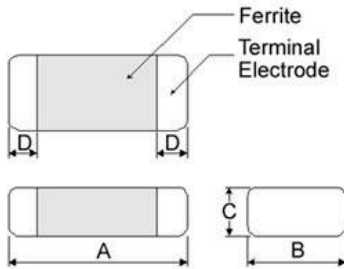


Chilisin offers a wide range of multi-layered ferrite chip beads with various sizes, frequency characteristics, and impedance values for EMI solutions. These ferrite formulas are used to compose seven types of EMI suppression chip beads: BBSY, BBBK, BBSJ, BBGK, BBPY, BBUP, BBNQ, BBFY, BBFJ and BBHV series.

### Product Identification



### Shape and Dimensions



Dimensions in mm

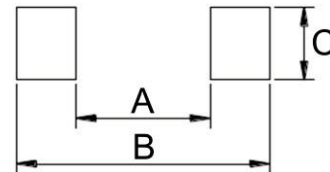
TYPE	A	B	C	D
①060303	0.6±0.03	0.30±0.03	0.3±0.03	0.15±0.05
②100505	1.0±0.10	0.50±0.10	0.5±0.10	0.25±0.10
③160805	1.6±0.15	0.80±0.15	0.5±0.15	0.3±0.2
④160808	1.6±0.15	0.80±0.15	0.8±0.15	0.3±0.2
⑤201209	2.0±0.20	1.25±0.20	0.9±0.20	0.5±0.3
⑥321611	3.2±0.20	1.60±0.20	1.1±0.20	0.5±0.3
⑦453215	4.5±0.25	3.20±0.20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

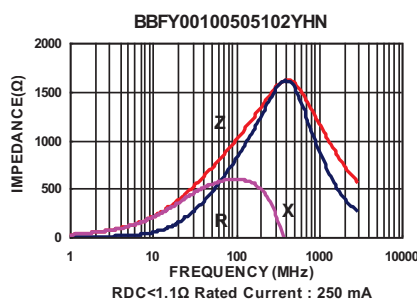
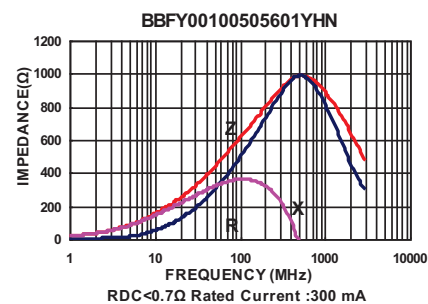
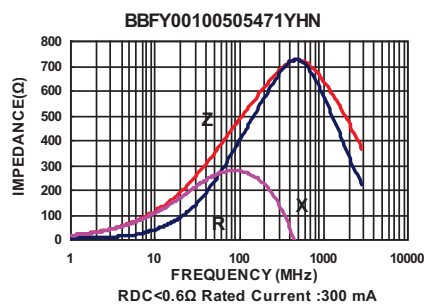
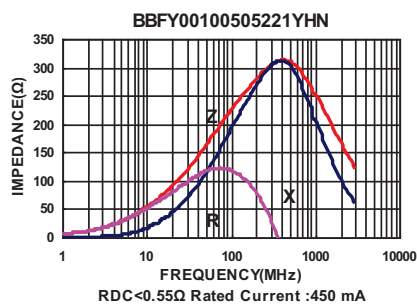
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	Impedance ( $\Omega \pm 40\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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

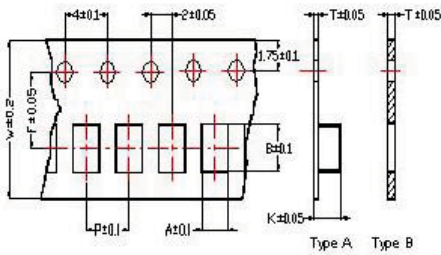


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# SMD Multilayer Ferrite Chip Beads

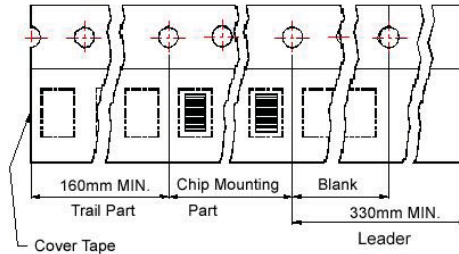
## Packaging Specifications

### Tape Dimensions

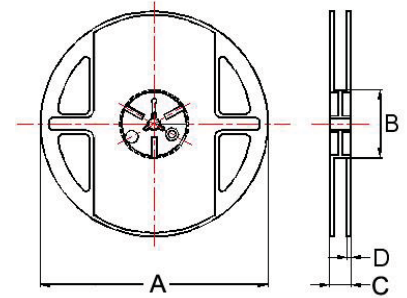


### Tape Material

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

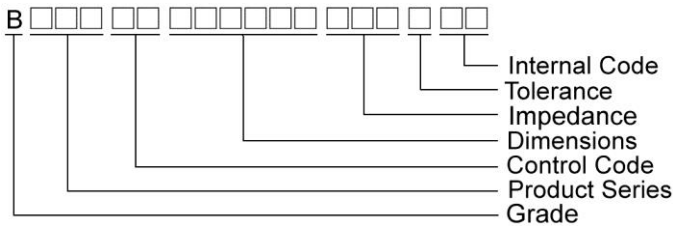
TYPE	Tape Dimensions								Reel Dimensions				Quantity PCS / REEL
	A	B	T	W	P	F	K	Tape	A	B	C	D	
①060303	0.37	0.67	0.42	8.0	2.0	3.5	-	B	178	60	10	2	15000
②100505	0.62	1.12	0.60	8.0	2.0	3.5	-	B	178	60	12	2	10000
③160805	1.05	1.85	0.60	8.0	2.0	3.5	-	B	178	60	12	2	10000
④160808	1.05	1.85	0.95	8.0	4.0	3.5	-	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

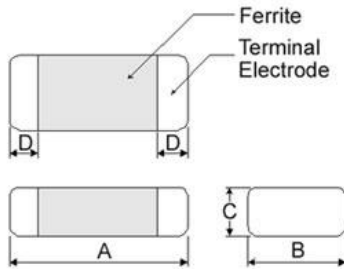


Chilisin offers a wide range of multi-layered ferrite chip beads with various sizes, frequency characteristics, and impedance values for EMI solutions. These ferrite formulas are used to compose seven types of EMI suppression chip beads: BBSY, BBBK, BBSJ, BBGK, BBPY, BBUP, BBNQ, BBFY, BBFJ and BBHV series.

### Product Identification



### Shape and Dimensions



Dimensions in mm

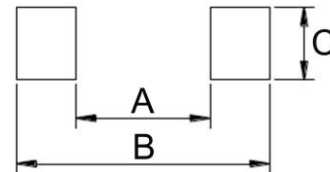
TYPE	A	B	C	D
①060303	0.6±0.03	0.30±0.03	0.3±0.03	0.15±0.05
②100505	1.0±0.10	0.50±0.10	0.5±0.10	0.25±0.10
③160805	1.6±0.15	0.80±0.15	0.5±0.15	0.3±0.2
④160808	1.6±0.15	0.80±0.15	0.8±0.15	0.3±0.2
⑤201209	2.0±0.20	1.25±0.20	0.9±0.20	0.5±0.3
⑥321611	3.2±0.20	1.60±0.20	1.1±0.20	0.5±0.3
⑦453215	4.5±0.25	3.20±0.20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

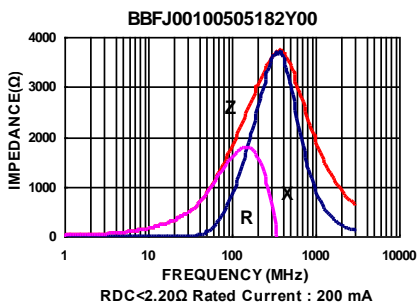
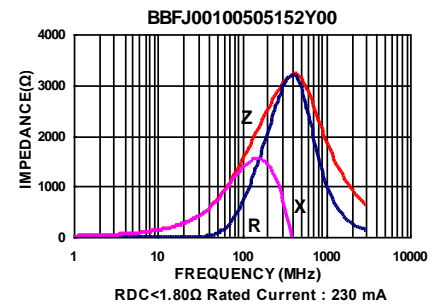
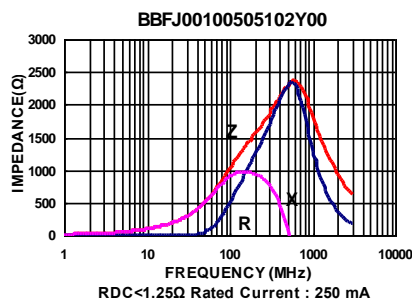
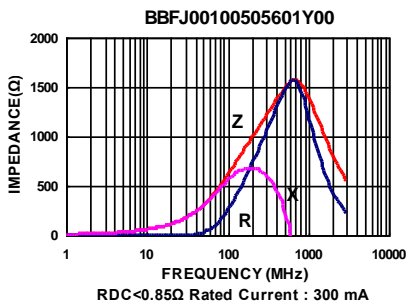
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	Impedance ( $\Omega \pm 40\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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

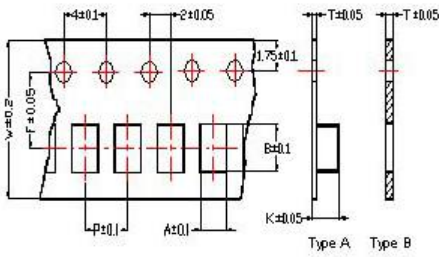


Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin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

# SMD Multilayer Ferrite Chip Beads

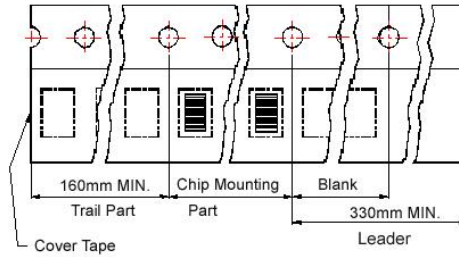
## Packaging Specifications

### Tape Dimensions

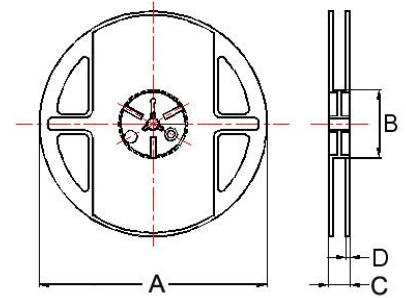


### Tape Material

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

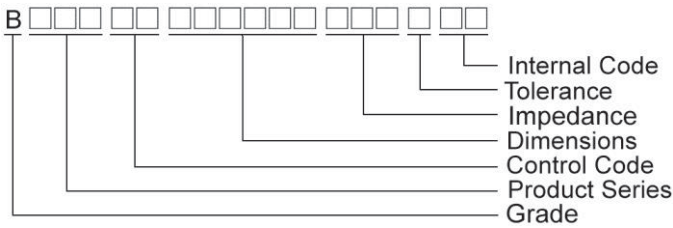
TYPE	Tape Dimensions								Reel Dimensions				Quantity PCS / REEL
	A	B	T	W	P	F	K	Tape	A	B	C	D	
①060303	0.37	0.67	0.42	8.0	2.0	3.5	-	B	178	60	10	2	15000
②100505	0.62	1.12	0.60	8.0	2.0	3.5	-	B	178	60	12	2	10000
③160805	1.05	1.85	0.60	8.0	2.0	3.5	-	B	178	60	12	2	10000
④160808	1.05	1.85	0.95	8.0	4.0	3.5	-	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

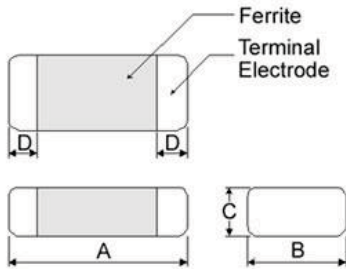


Chilisin offers a wide range of multi-layered ferrite chip beads with various sizes, frequency characteristics, and impedance values for EMI solutions. These ferrite formulas are used to compose seven types of EMI suppression chip beads: BBSY, BBBK, BBSJ, BBGK, BBPY, BBUP, BBNQ, BBFY, BBFJ and BBHV series.

### Product Identification



### Shape and Dimensions



Dimensions in mm

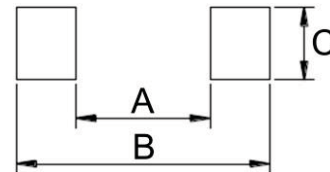
TYPE	A	B	C	D
①060303	0.6±0.03	0.30±0.03	0.3±0.03	0.15±0.05
②100505	1.0±0.10	0.50±0.10	0.5±0.10	0.25±0.10
③160805	1.6±0.15	0.80±0.15	0.5±0.15	0.3±0.2
④160808	1.6±0.15	0.80±0.15	0.8±0.15	0.3±0.2
⑤201209	2.0±0.20	1.25±0.20	0.9±0.20	0.5±0.3
⑥321611	3.2±0.20	1.60±0.20	1.1±0.20	0.5±0.3
⑦453215	4.5±0.25	3.20±0.20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

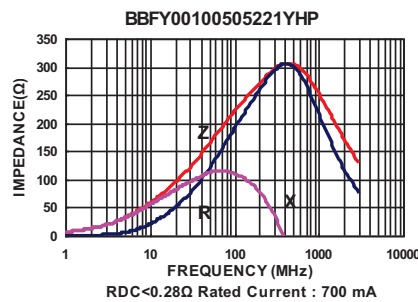
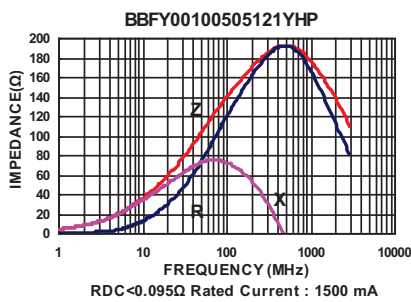
## Electrical Characteristics

Part Number	Impedance ( $\Omega \pm 25\%$ )	Test Frequency (MHz)	Impedance ( $\Omega \pm 40\%$ )	Test Frequency (MHz)	RDC ( $\Omega$ ) Max	Rated current (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

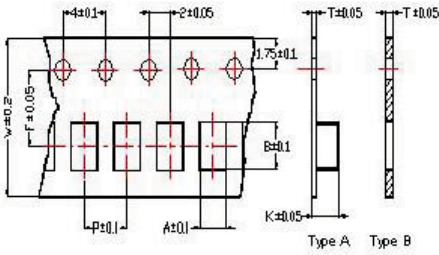
**Test Instruments :** Agilent E4991A Impedance / Material Analyzer



# SMD Multilayer Ferrite Chip Beads

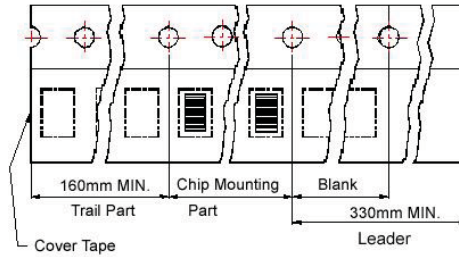
## Packaging Specifications

### Tape Dimensions

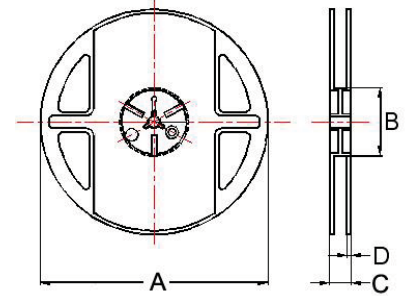


### Tape Material

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



### Reel Dimensions

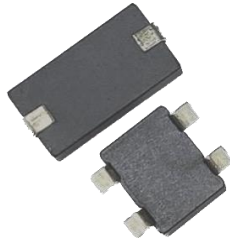


- ① : BBSY/BBSJ/BBNQ/BBPY    ③ : BBUP
- ② : BBSY/BBSJ/BBNQ/BBPY/BBUP/BBFY/BBFJ
- ④ : BBBK/BBSJ/BBGK/BBPY/BBNQ/BBUP/BBHV
- ⑤ : BBBK/BBGK/BBPY/BBUP
- ⑥ : BBSY/BBBK/BBPY/BBUP
- ⑦ : BBPY/BBUP

### Dimensions in mm

TYPE	Tape Dimensions								Reel Dimensions				Quantity 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



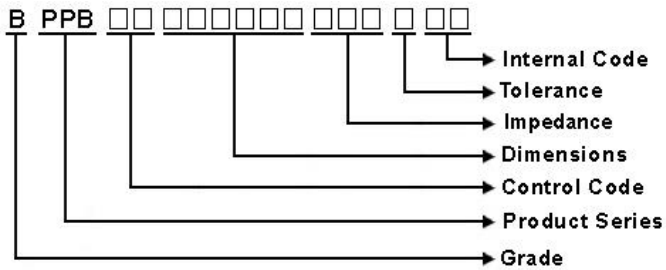
### Features

- 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

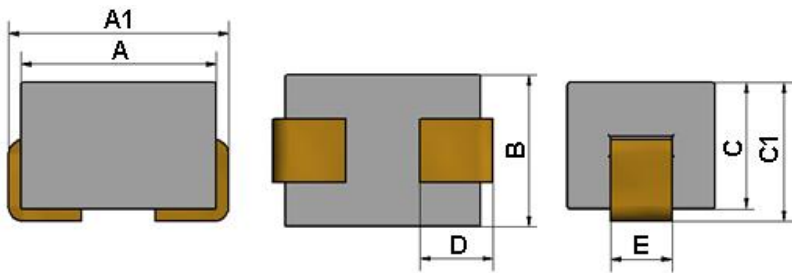
- Stereo
- Car radio
- Mobile telephone
- VCRs
- Computer disk drive and PC board

### Product Identification

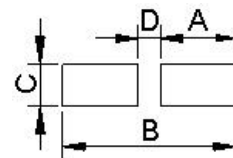


### Shapes and Dimensions

**BPPB00403025\_AE**



### Recommended Pattern



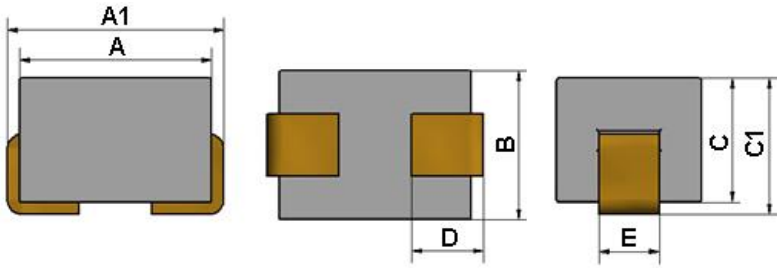
Dimensions in mm

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

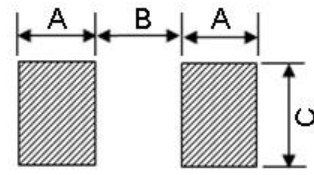
# SMD Shielded Power Inductors – BPPB Series

## Shapes and Dimensions

BPPB00403025



## Recommended Pattern

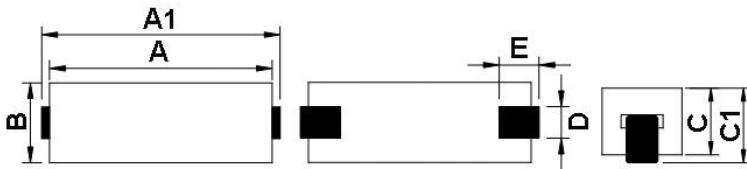


Dimensions in mm

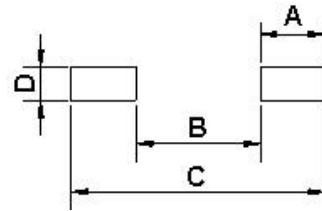
TYPE	Shape and Dimensions							Recommended Pattern		
	A	A1	B	C	C1	D	E	A	B	C
BPPB00403025	4.00±0.2	5.08Max	3.10±0.15	2.54±0.15	3.05Max	1.50±0.5	1.25	1.5	2.0	2.5

## Shapes and Dimensions

BPPB00853025\_AE



## Recommended Pattern

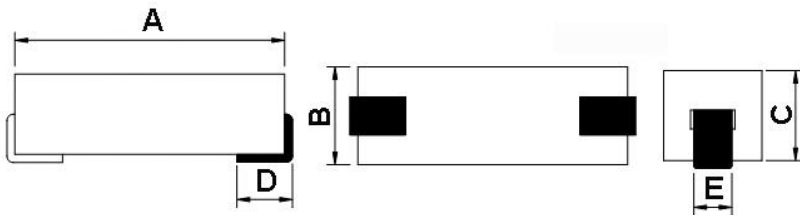


Dimensions in mm

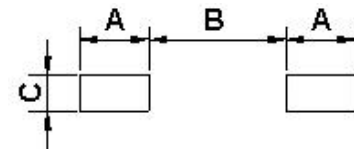
TYPE	Shape and Dimensions							Recommended Pattern			
	A	A1	B	C	C1	D	E	A	B	C	D
BPPB00853025_AE	8.51±0.23	9.53Max	3.02±0.2	2.54±0.2	3.05Max	1.52±0.5	1.27	2.2	5.4	9.8	1.5

## Shapes and Dimensions

BPPB00853025



## Recommended Pattern



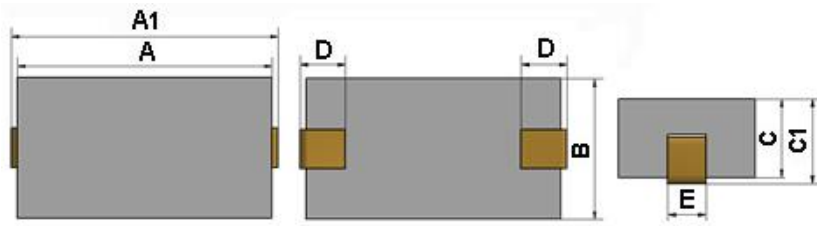
Dimensions in mm

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

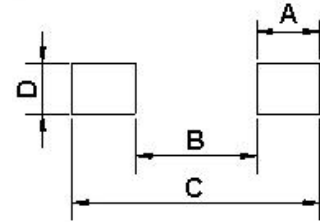
# SMD Shielded Power Inductors – BPPB Series

## Shapes and Dimensions

BPPB00854625



## Recommended Pattern

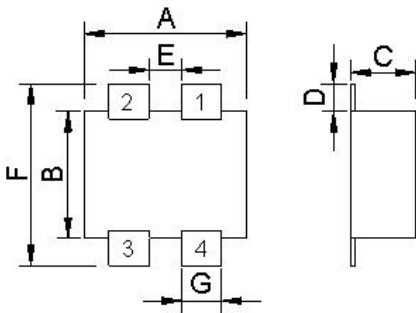


Dimensions in mm

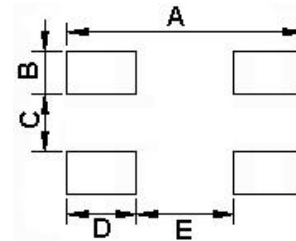
TYPE	Shape and Dimensions							Recommended Pattern			
	A	A1	B	C	C1	D	E	A	B	C	D
BPPB00854625	8.51±0.23	9.53Max	4.6±0.2	2.4±0.25	3.05Max	1.52±0.5	1.27	2.77	5.26	10.8	1.47

## 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( $\Omega$ ) @1MHz,0.5V	Impedance( $\Omega$ ) @100MHz,0.5V	RDC (m $\Omega$ )Max.	Rated current (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( $\Omega$ ) @25MHz,0.5V	Impedance( $\Omega$ ) @100MHz,0.5V	RDC (m $\Omega$ )Max.	Rated current (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( $\Omega$ ) @10MHz,0.5V	RDC (m $\Omega$ )Max.	Rated current (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( $\Omega$ ) @25MHz,0.5V	Impedance( $\Omega$ ) @100MHz,0.5V	RDC (m $\Omega$ )Max.	Rated current (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( $\Omega$ ) @10MHz,0.5V	RDC (m $\Omega$ )Max.	Rated current (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 MILLIOHMMETER (or equivalent)

## SMD Shielded Power Inductors – BPPB Series

### Standard Specifications

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

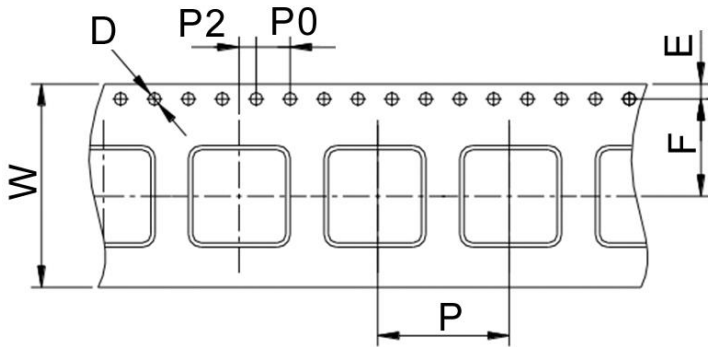
**Note: When ordering, please specify tolerance code.**

- 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)

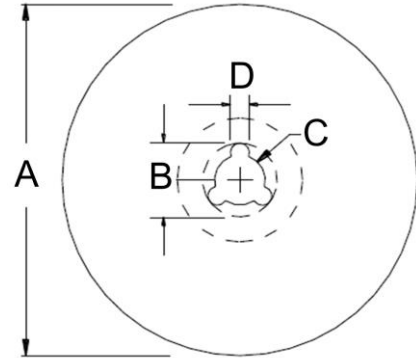
# SMD Shielded Power Inductors – BPPB Series

## Packaging Specifications

Tape Dimensions



Reel Dimensions



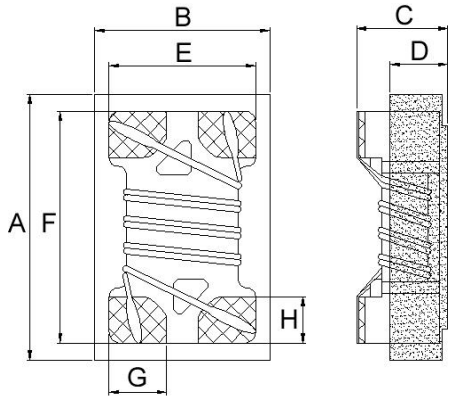
Dimensions in mm

TYPE	Tape Dimensions							Reel Dimensions				Quantity 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

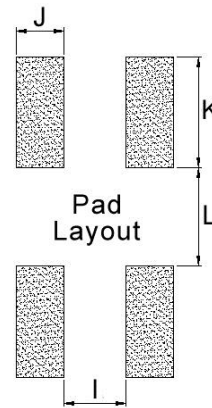


## Shape and Dimensions

**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

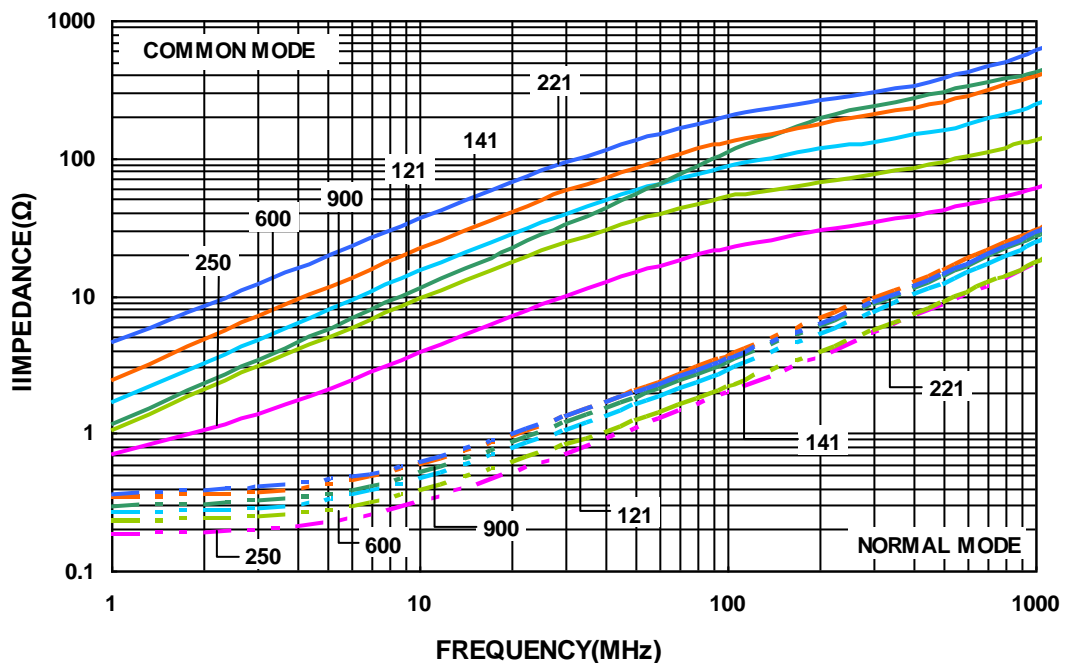
Part Number	Impedance (Ω)	Tolerance (±%)	Test Frequency (MHz)	RDC (Ω) Max	I <sub>rms</sub> (mA) Max	Rated Voltage (Vdc)	Withstand Voltage (Vdc)	Insulation Resistance (MΩ) Min
BWCU00160811250M02	25	20,25	100	0.077	500	50	125	10
BWCU00160811600M02	60	20,25	100	0.109	500	50	125	10
BWCU00160811900M02	90	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

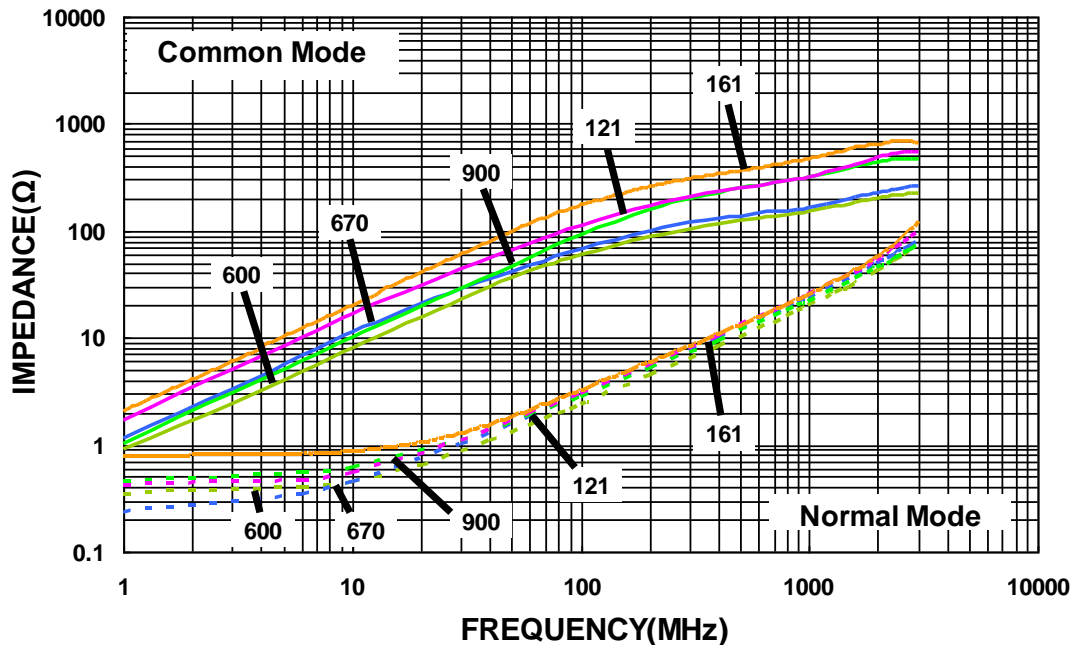
Part Number	Impedance (Ω)	Tolerance (±%)	Test Frequency (MHz)	RDC (Ω) Max	IDC (mA)	Rated Voltage (Vdc)	Withstand Voltage (Vdc)	Insulation Resistance (MΩ) Min
BWCU00121008250T02	25	30	100	0.30	400	50	125	100
BWCU00121008600M02	60	20	100	0.40	300	50	125	100
BWCU00121008670M02	67	20	100	0.25	300	50	125	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

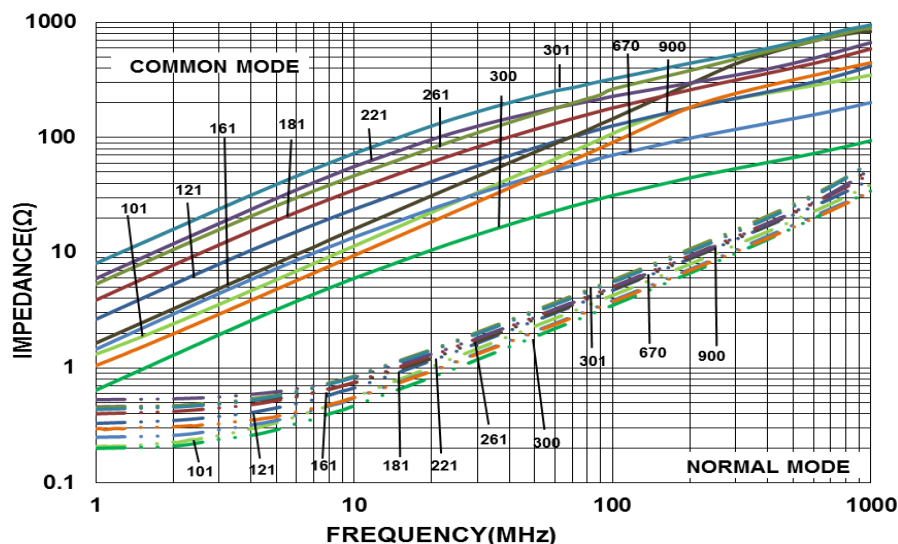
Part Number	Impedance (Ω)	Tolerance (±%)	Test Frequency (MHz)	RDC (Ω) Max	IDC (mA)	Rated Voltage (Vdc)	Withstand Voltage (Vdc)	Insulation Resistance (MΩ) Min
BWCU00201212300M02	30	20	100	0.20	450	50	125	10
BWCU00201212670M02	67	20	100	0.25	400	50	125	10
BWCU00201212750M02	75	20	100	0.30	360	50	125	10
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*



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

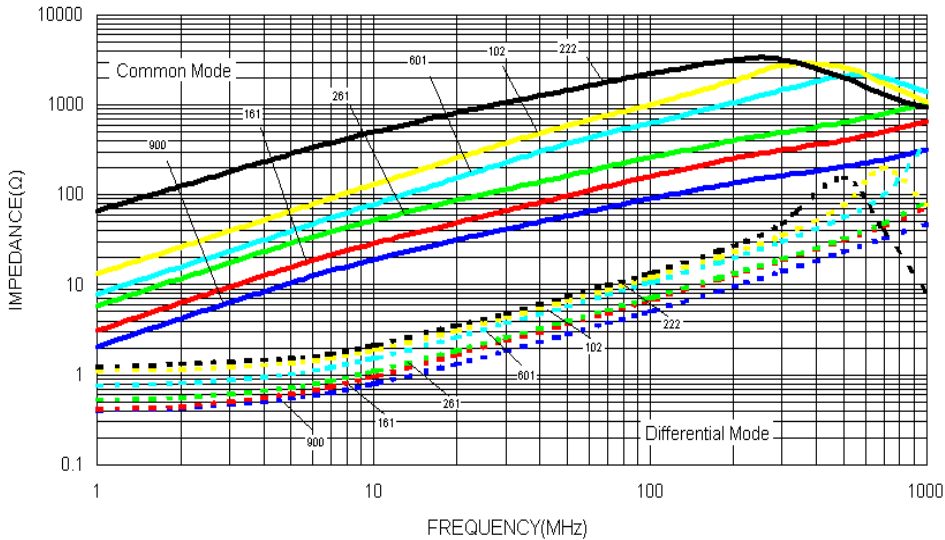
Part Number	Impedance (Ω)	Tolerance (±%)	Test Frequency (MHz)	RDC (Ω) Max	IDC (mA)	Rated Voltage (Vdc)	Withstand Voltage (Vdc)	Insulation Resistance (MΩ) Min
BWCU00321619900M02	90	20	100	0.3	370	50	125	10
BWCU00321619121M02	120	20	100	0.3	370	50	125	10
BWCU00321619161M02	160	20	100	0.4	340	50	125	10
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



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# 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

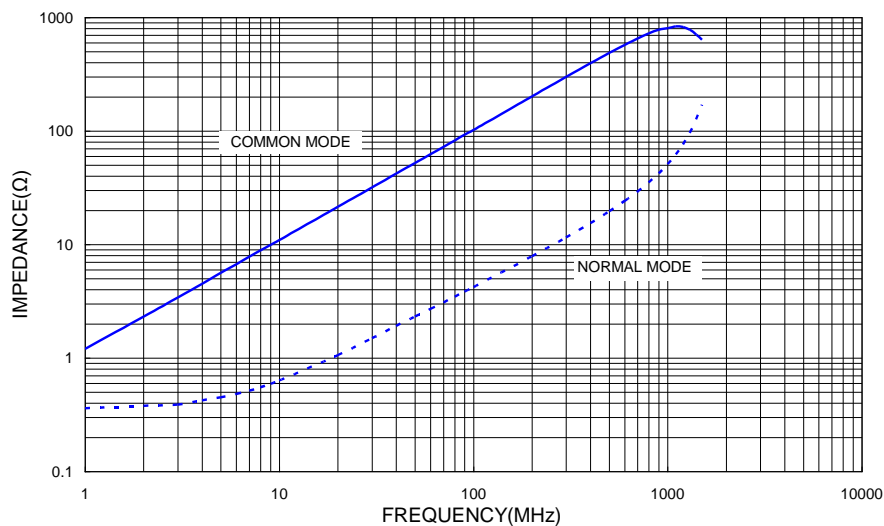
**Note: When ordering, please specify tolerance code. Tolerance: M=±20%**

- 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

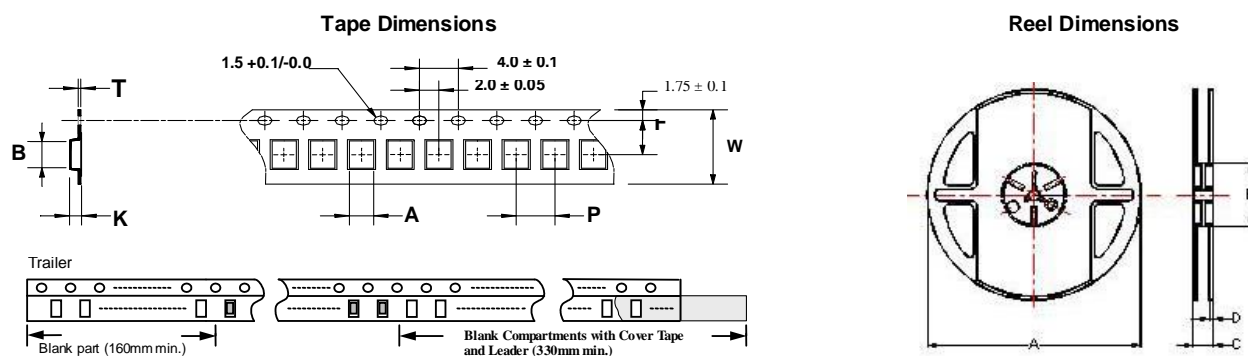
**Test Instruments : HP4291A Material/Impedance Analyzer**

**Typical Impedance vs. Frequency**

### BWCU00231512900M02



## Packaging Specifications



### Dimensions in mm

TYPE	Tape Dimensions							Reel Dimensions				Quantity 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.

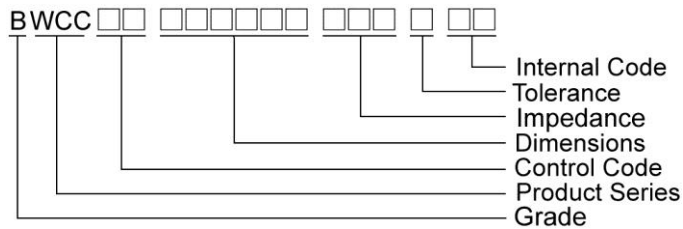
### Features

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

### Applications

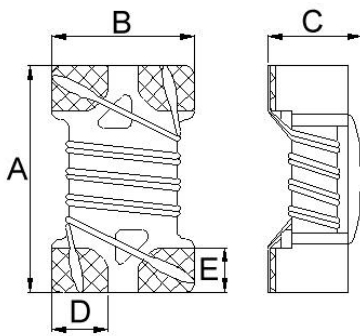
- USB line for personal computers and peripheral
- IEEE 1394 line for personal computers, DVC, STB
- LVDS, panel line for liquid display panels, graph card etc

### Product Identification

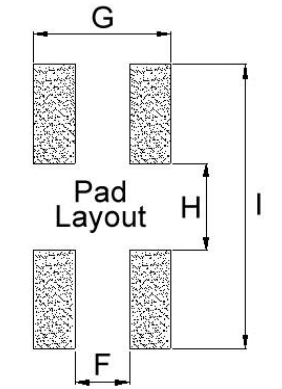


### Shape and Dimensions

**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

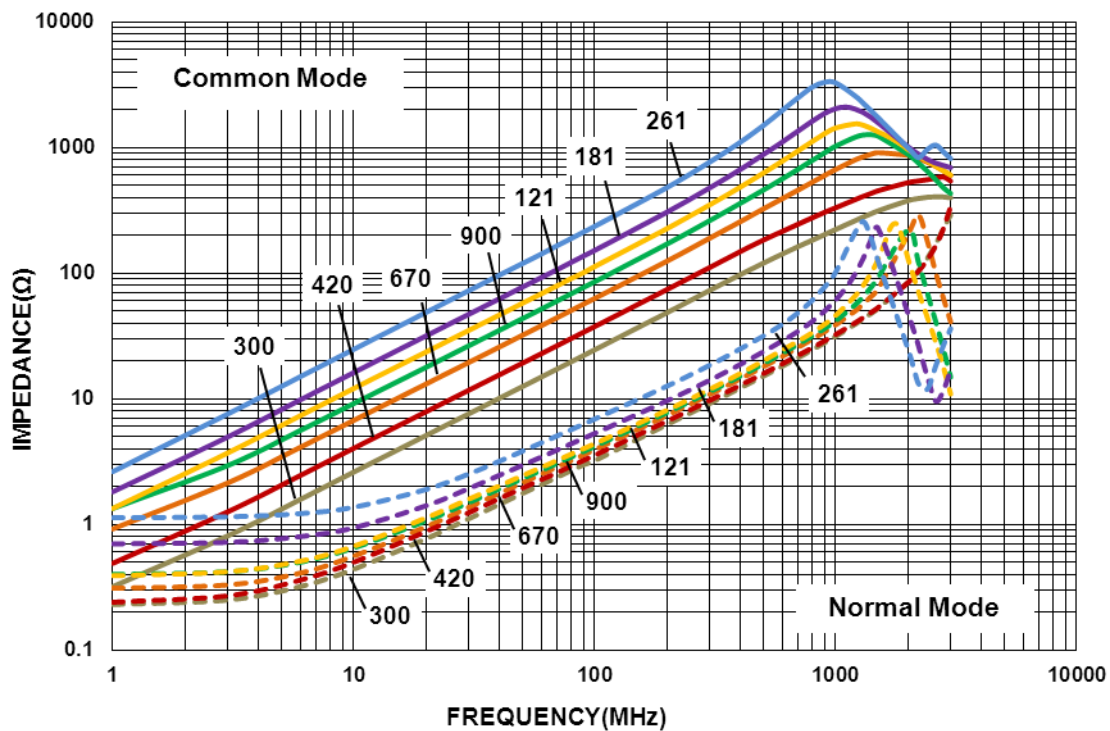
Part Number	Impedance (Ω)	Tolerance (±%)	Test Frequency (MHz)	RDC (Ω) Max	IDC (mA)	Rated Voltage (Vdc)	Withstanding Voltage (Vdc)	Insulation Resistance (MΩ) Min
BWCC00201208300□02	30	20	100	0.20	1300	50	125	10
BWCC00201208420□02	42	20	100	0.20	1300	50	125	10
BWCC00201208670□02	67	20	100	0.25	1200	50	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

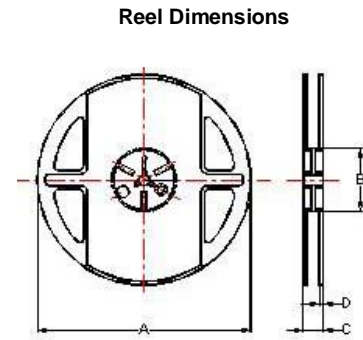
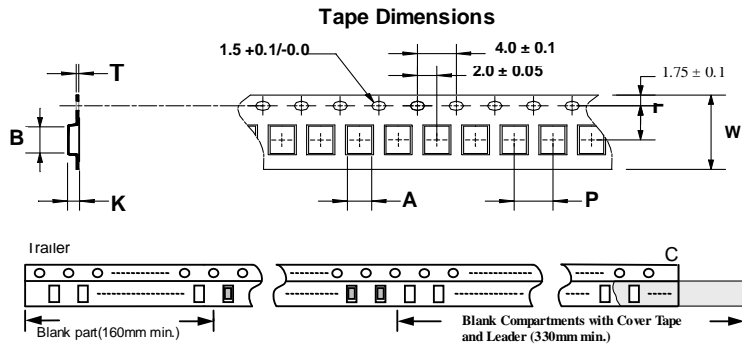
### Typical Impedance vs. Frequency



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

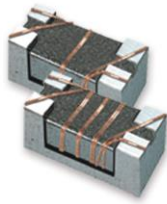
## Packaging Specifications



### Dimensions in mm

TYPE	Tape Dimensions							Reel Dimensions				Quantity 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.

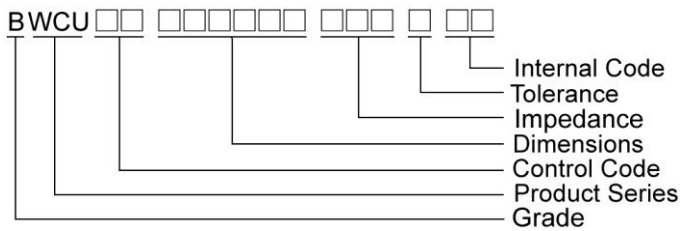
### Features

- 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.

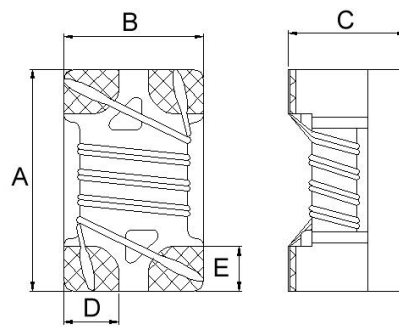
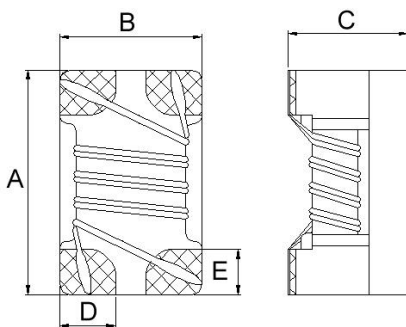
### Product Identification



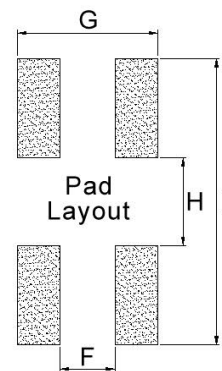
### Shape and Dimensions

**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

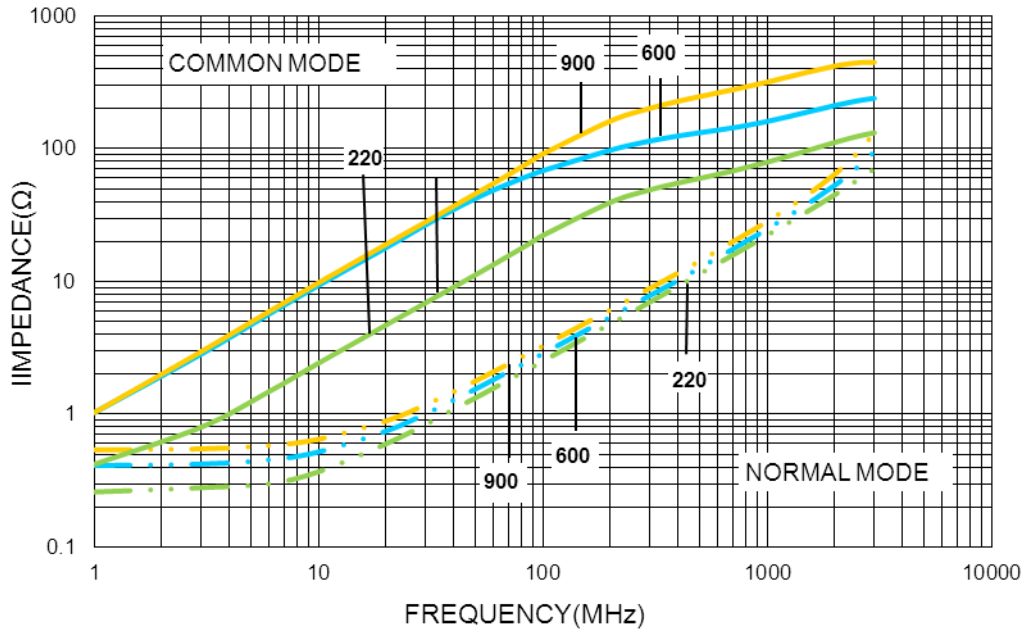
Part Number	Impedance (Ω)	Tolerance (±%)	Test Frequency (MHz)	RDC (Ω) Max	IDC (mA) Max	Rated Voltage (Vdc)	Withstand Voltage (Vdc)	Insulation Resistance (MΩ) Min
BWCU00121008220Y03	22	25	100	0.20	400	50	125	100
BWCU00121008600Y03	60	25	100	0.40	250	50	125	100
BWCU00121008900Y03	90	25	100	0.30	250	50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

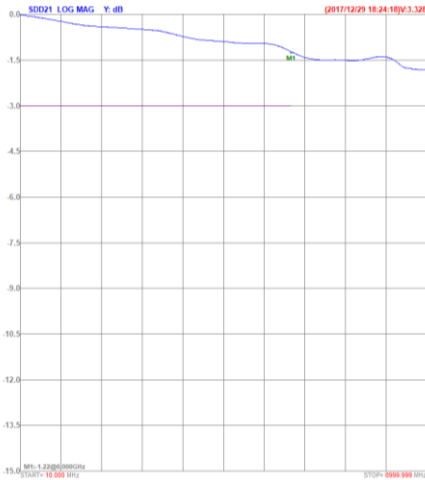
**Test Instruments :** HP4291A Material/Impedance Analyzer

### Typical Impedance vs. Frequency

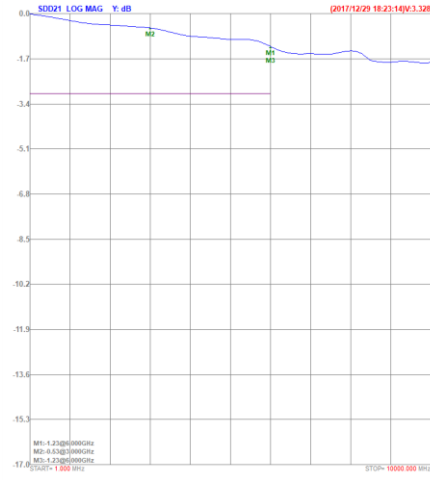


## BWCU00121008220Y03

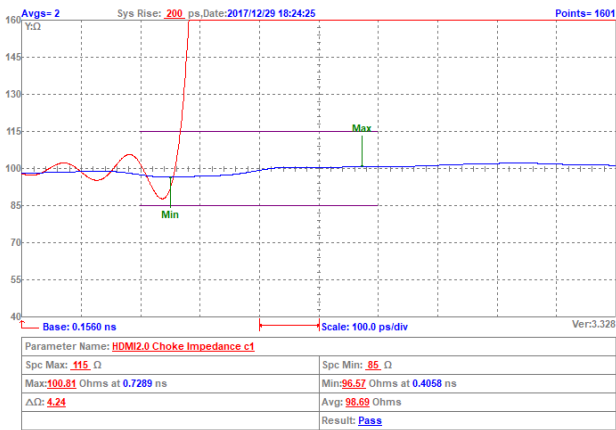
### Insertion Loss For HDMI2.0 Testing:



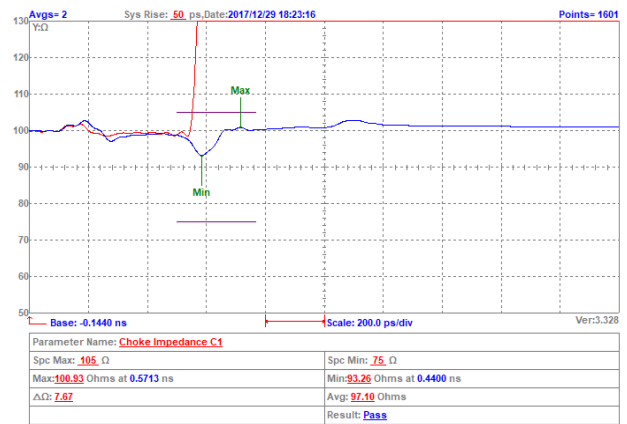
### Insertion Loss For USB3.0 Testing:



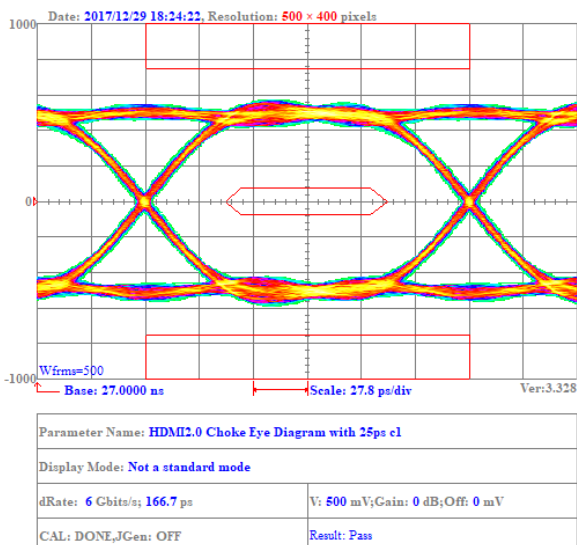
### TDR For HDMI2.0 Testing:



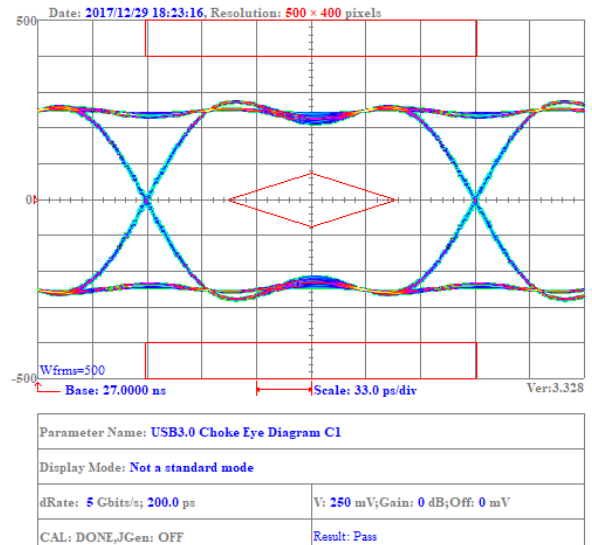
### TDR For USB3.0 Testing:



### Eye Diagram For HDMI2.0 Testing:



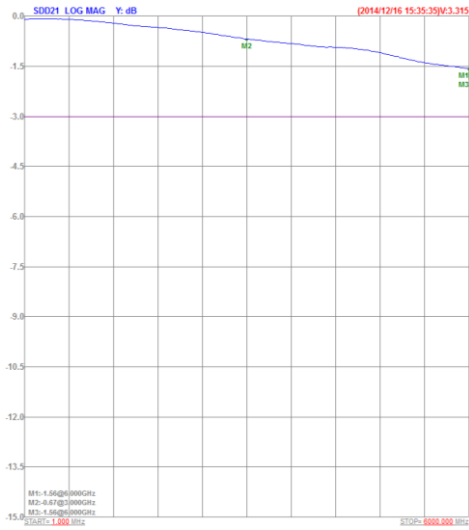
### Eye Diagram For USB3.0 Testing:



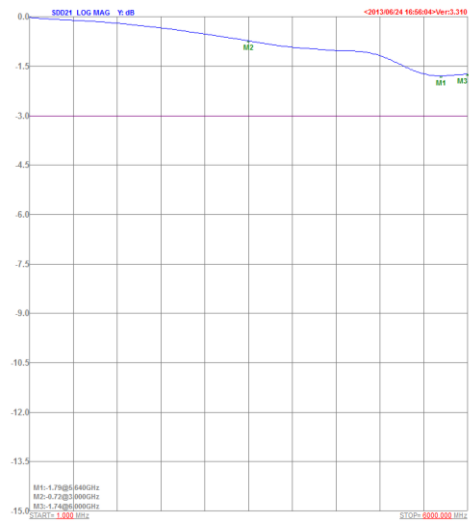
Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin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

## BWCU00121008600Y03

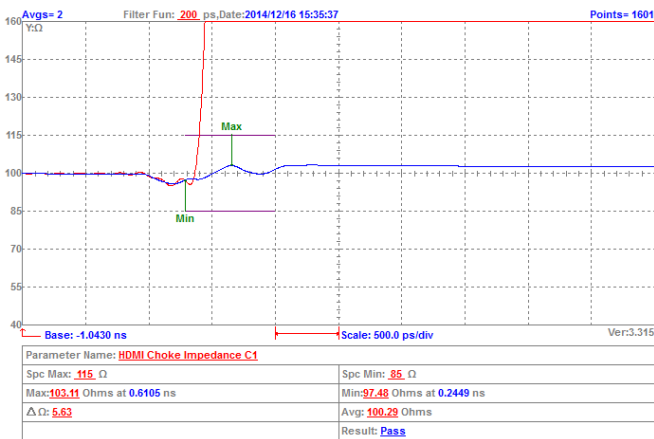
### Insertion Loss For HDMI2.0 Testing:



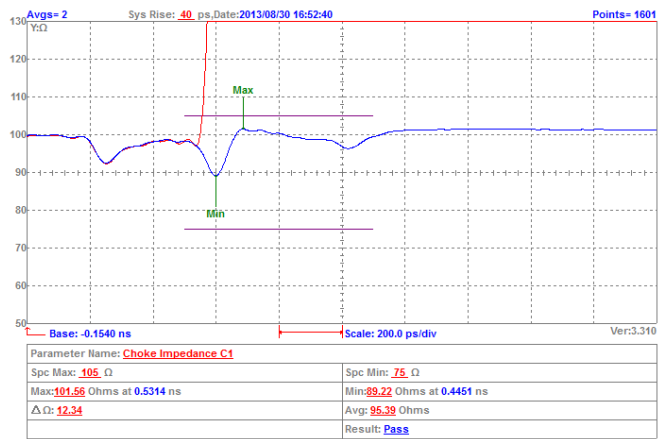
### Insertion Loss For USB3.0 Testing:



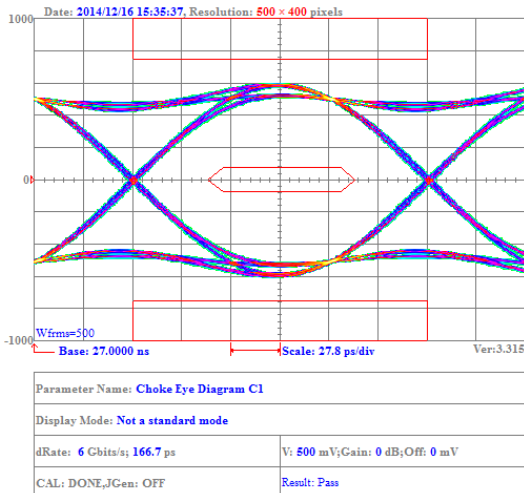
### TDR For HDMI2.0 Testing:



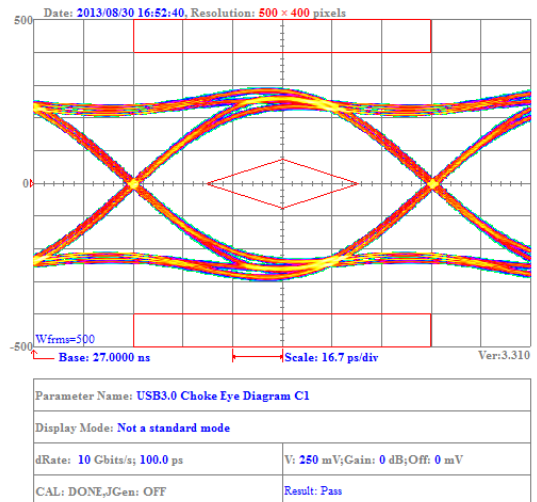
### TDR For USB3.0 Testing:



### Eye Diagram For HDMI2.0 Testing:



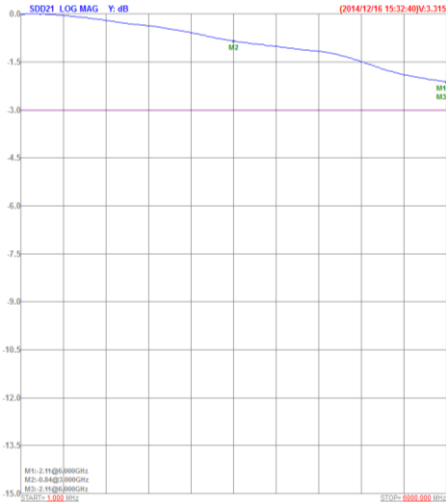
### Eye Diagram For USB3.0 Testing:



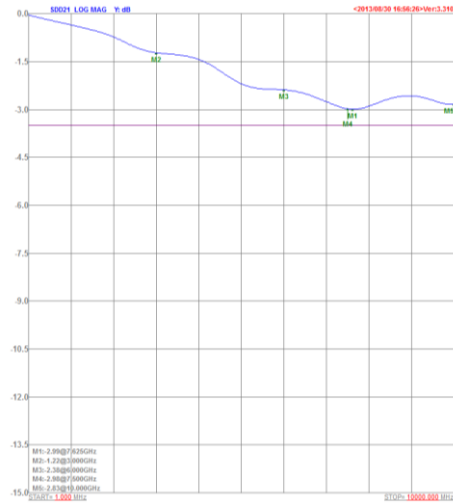
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## BWCU00121008900Y03

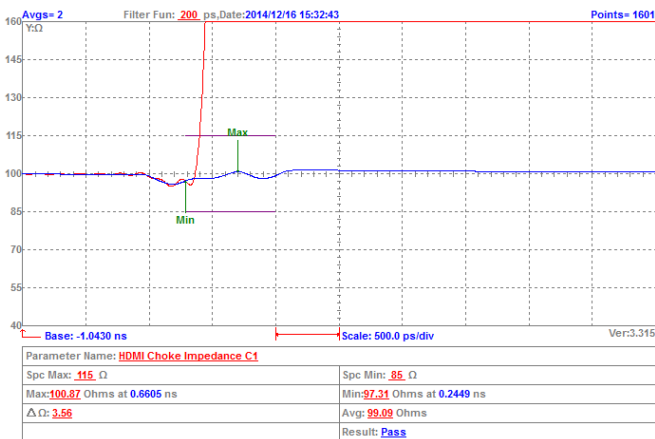
### Insertion Loss For HDMI2.0 Testing:



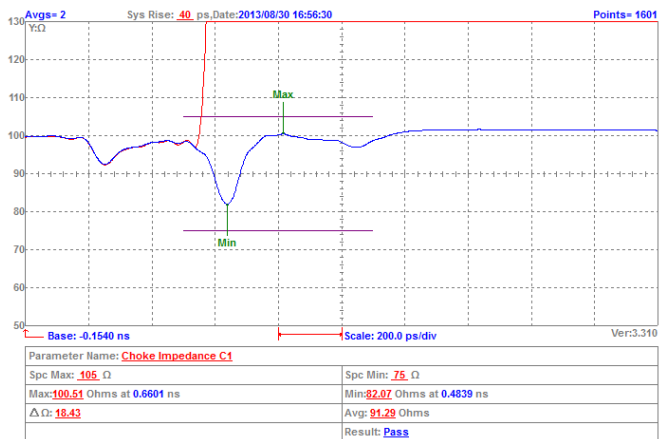
### Insertion Loss For USB3.0 Testing:



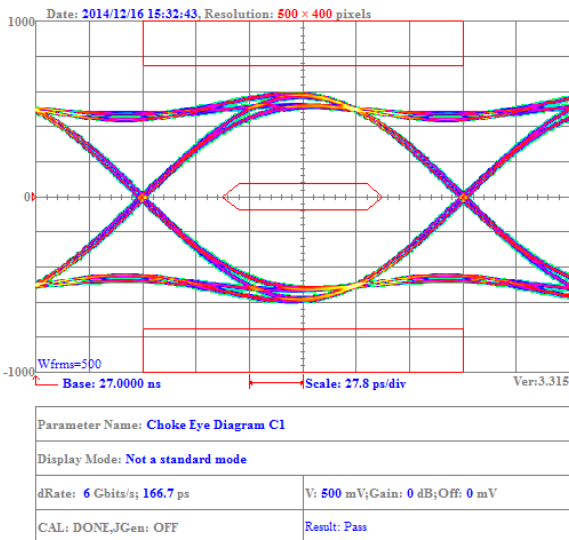
### TDR For HDMI2.0 Testing:



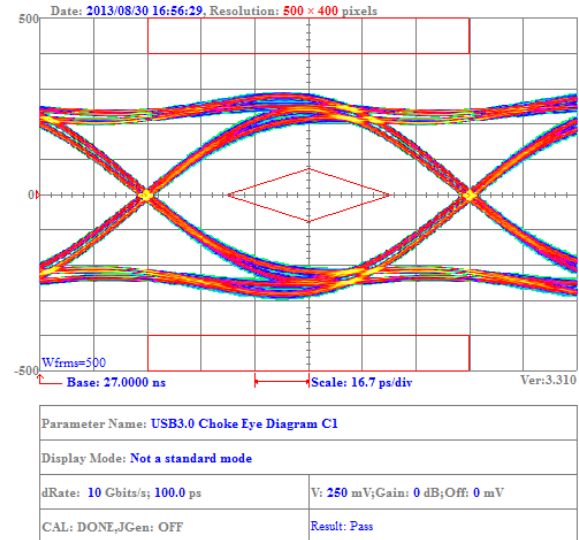
### TDR For USB3.0 Testing:



### 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

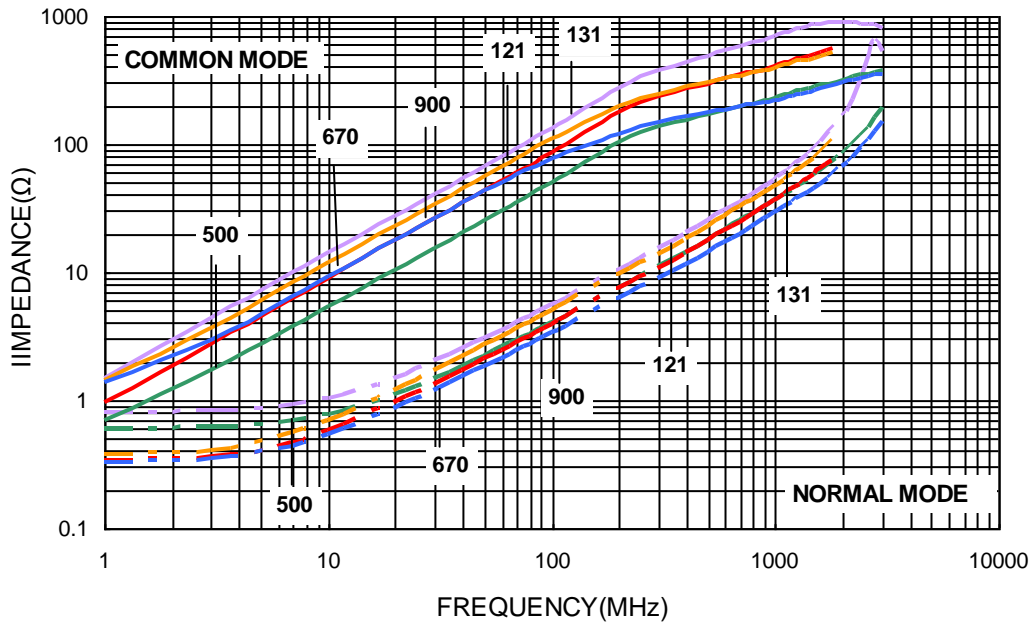
Part Number	Impedance (Ω)	Tolerance (±%)	Test Frequency (MHz)	RDC (Ω) Max	IDC (mA) Max	Rated Voltage (Vdc)	Withstand Voltage (Vdc)	Insulation Resistance (MΩ) Min
BWCU00201212500Y03	50	25	100	0.20	500	50	125	10
BWCU00201212670Y03	67	25	100	0.30	500	50	125	10
BWCU00201212900Y03	90	25	100	0.30	500	50	125	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

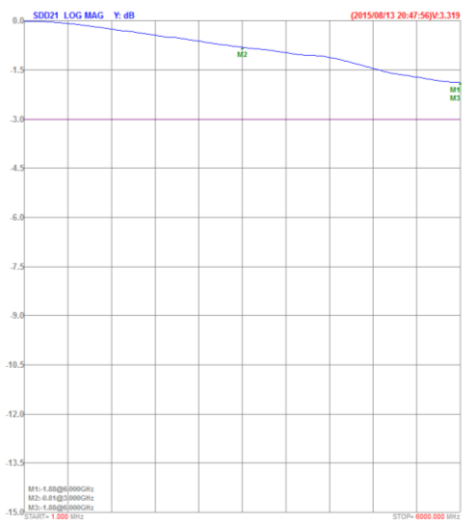
**Test Instruments :** HP4291A Material/Impedance Analyzer

### Typical Impedance vs. Frequency

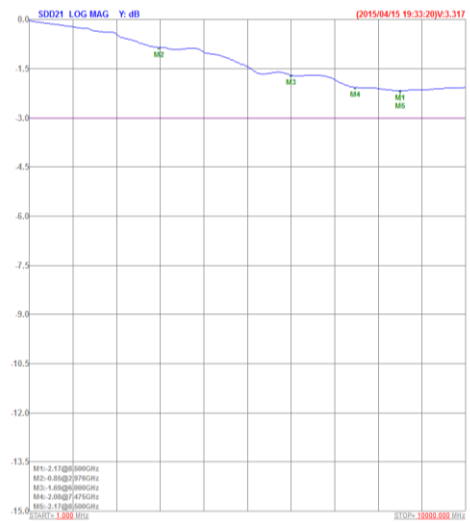


## BWCU00201212500Y03

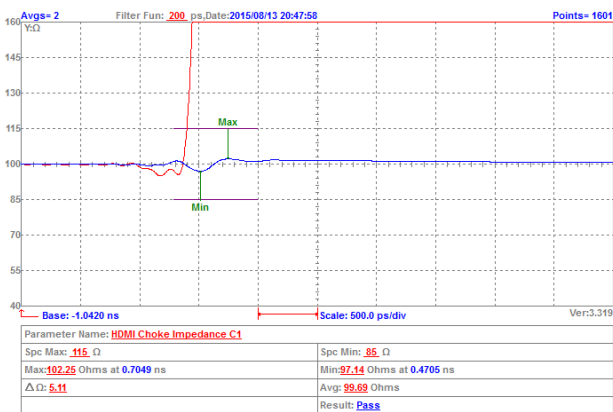
### Insertion Loss For HDMI2.0 Testing:



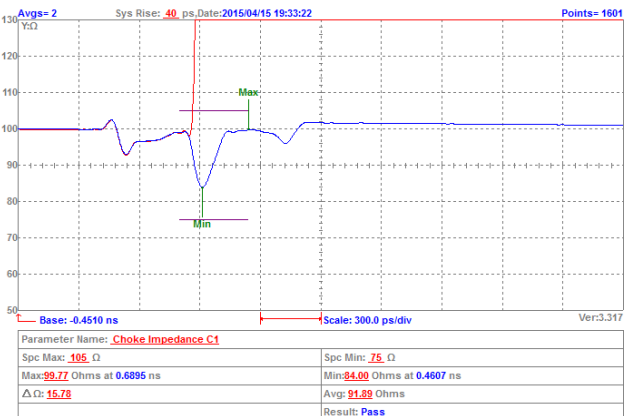
### Insertion Loss For USB3.0 Testing:



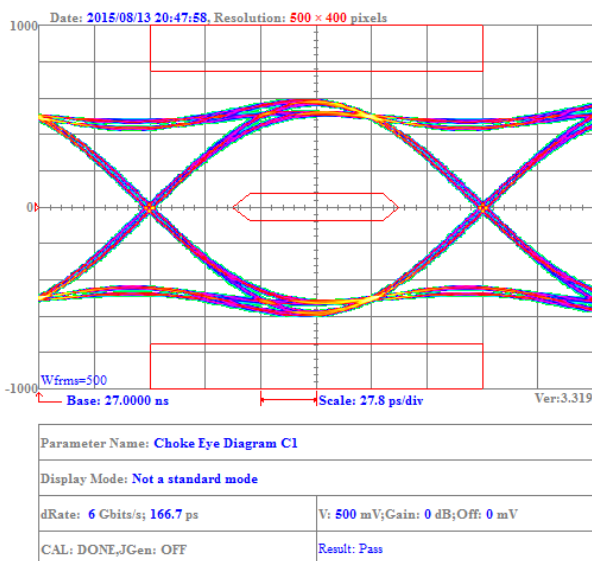
### TDR For HDMI2.0 Testing:



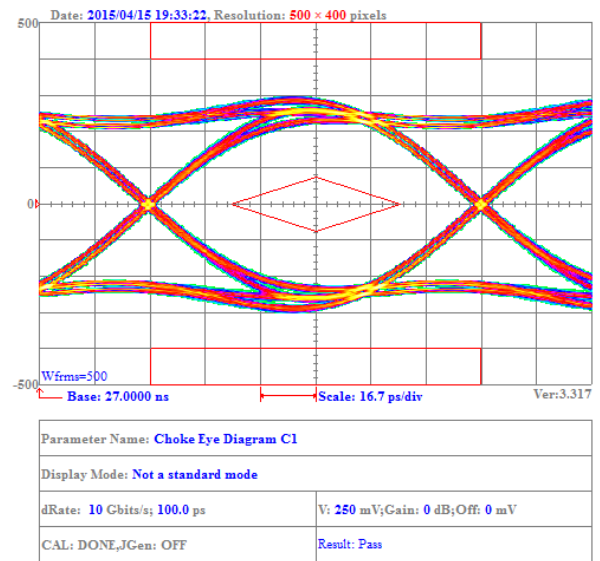
### TDR For USB3.0 Testing:



### Eye Diagram For HDMI2.0 Testing:



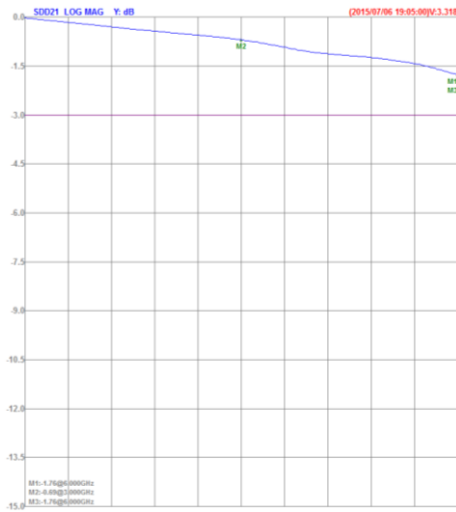
### Eye Diagram For USB3.0 Testing:



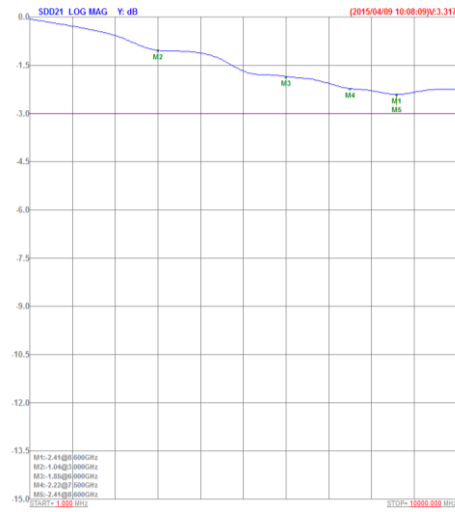
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## BWCU00201212670Y03

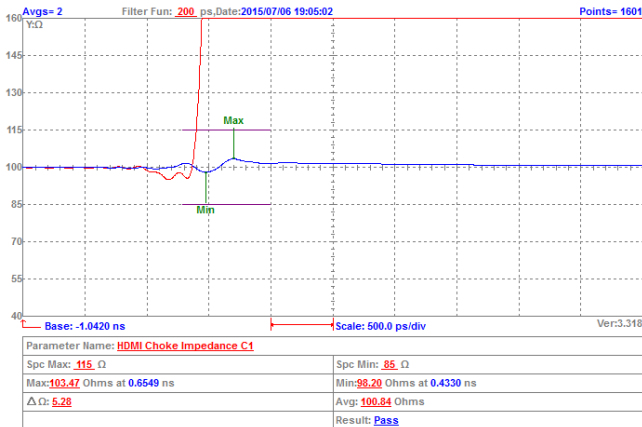
### Insertion Loss For HDMI2.0 Testing:



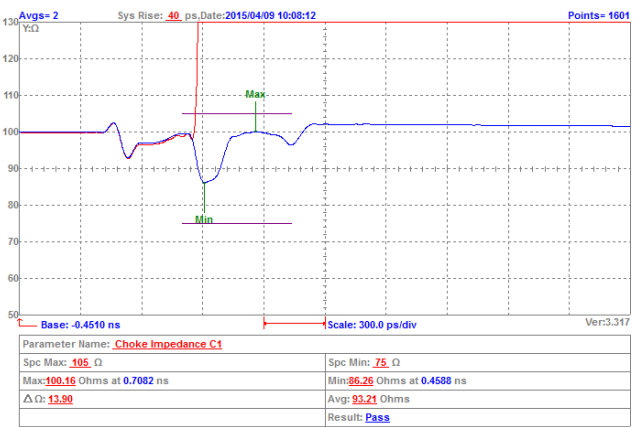
### Insertion Loss For USB3.0 Testing:



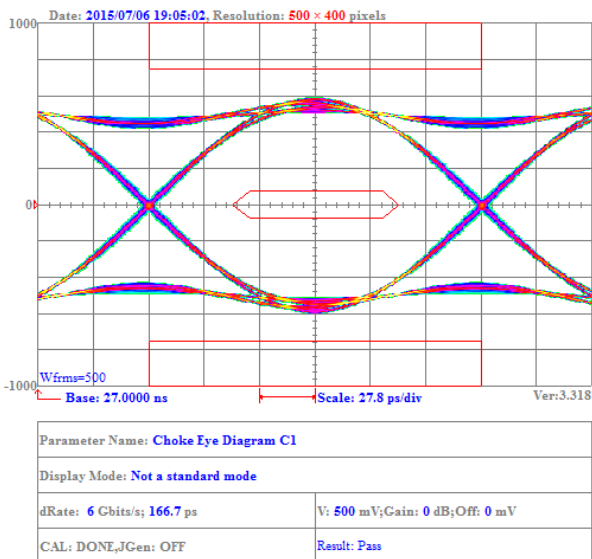
### TDR For HDMI2.0 Testing:



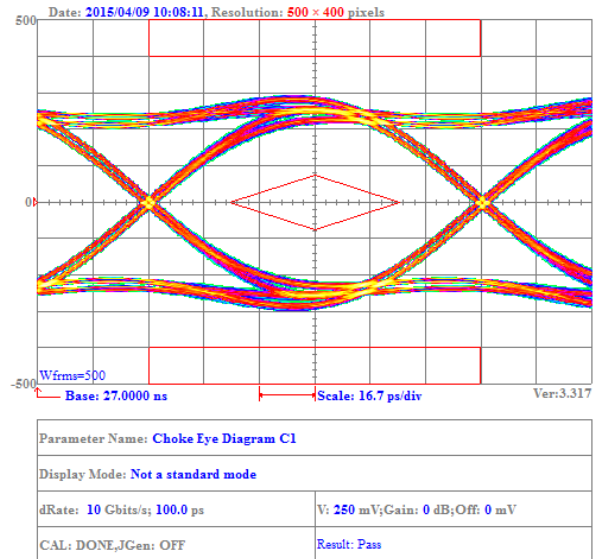
### TDR For USB3.0 Testing:



### Eye Diagram For HDMI2.0 Testing:



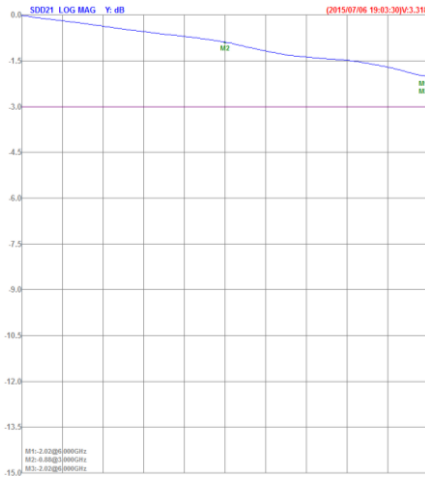
### Eye Diagram For USB3.0 Testing:



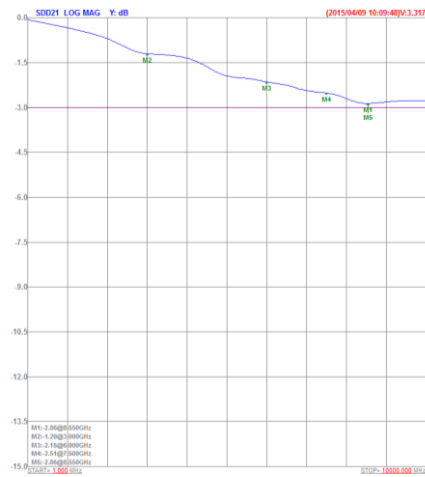
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## BWCU00201212900Y03

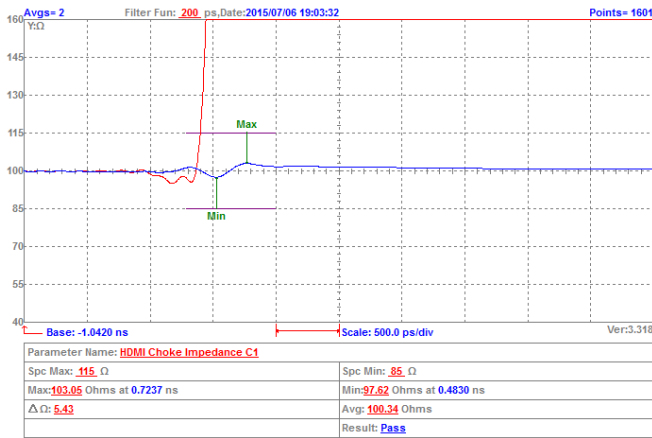
### Insertion Loss For HDMI2.0 Testing:



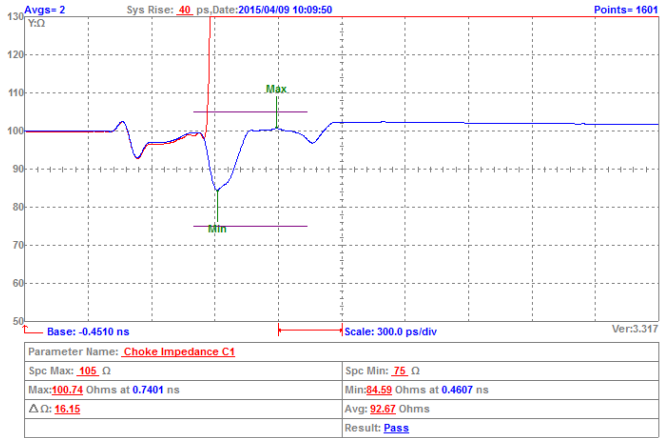
### Insertion Loss For USB3.0 Testing:



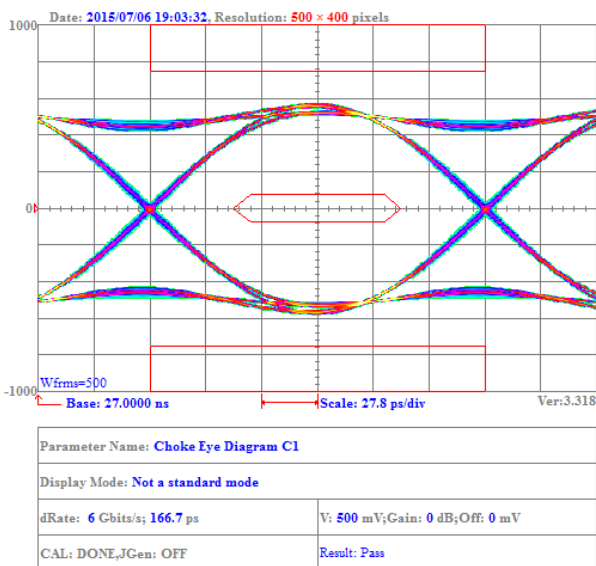
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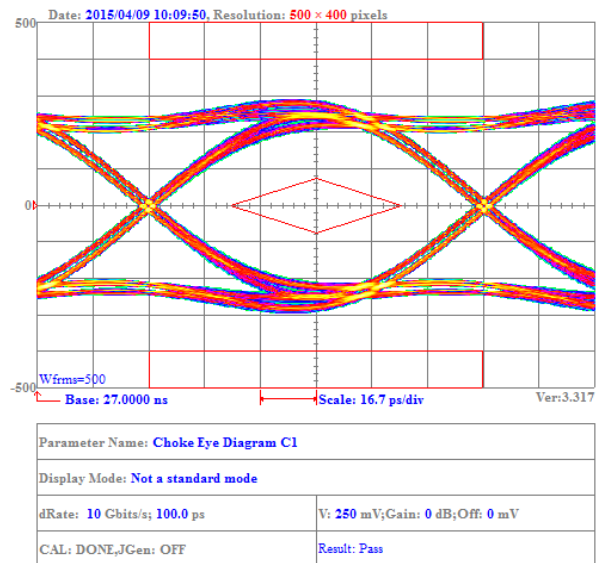
### TDR For USB3.0 Testing:



### Eye Diagram For HDMI2.0 Testing:



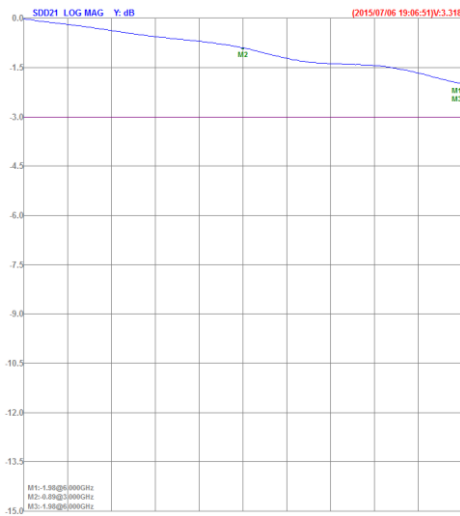
### Eye Diagram For USB3.0 Testing:



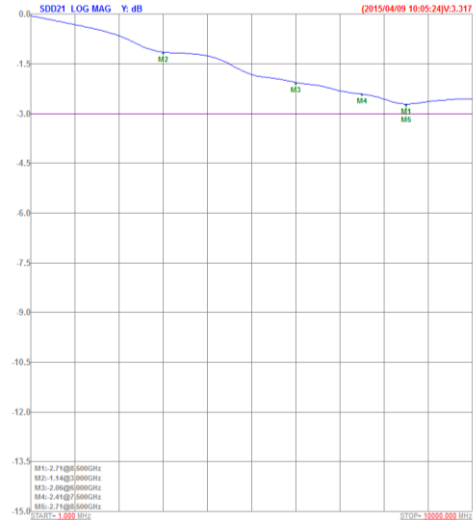
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## BWCU00201212121Y03

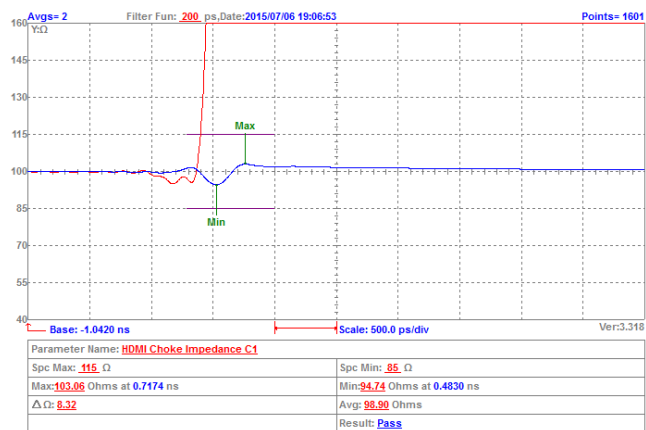
### Insertion Loss For HDMI2.0 Testing:



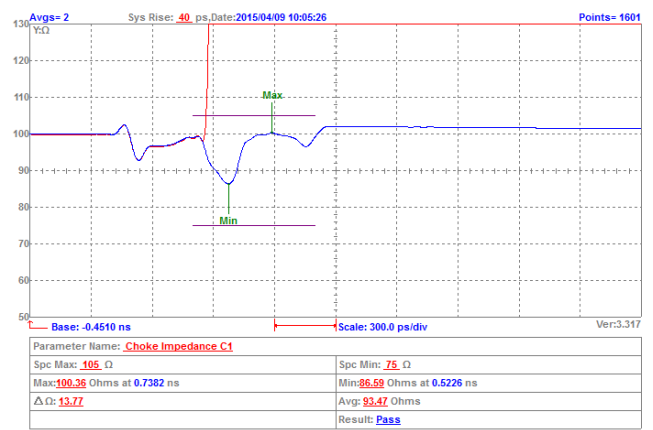
### Insertion Loss For USB3.0 Testing:



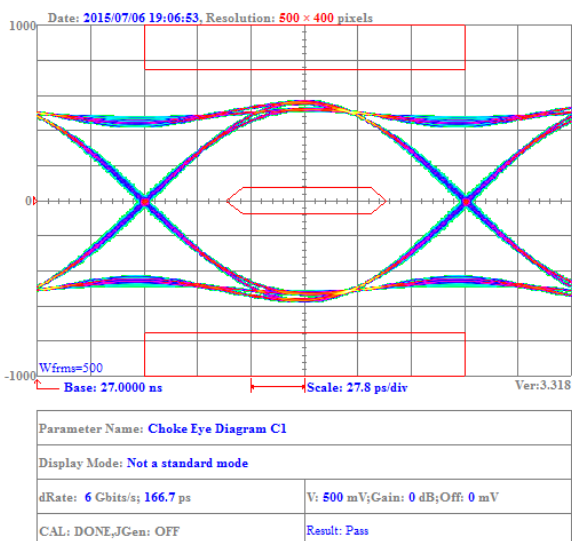
### TDR For HDMI2.0 Testing:



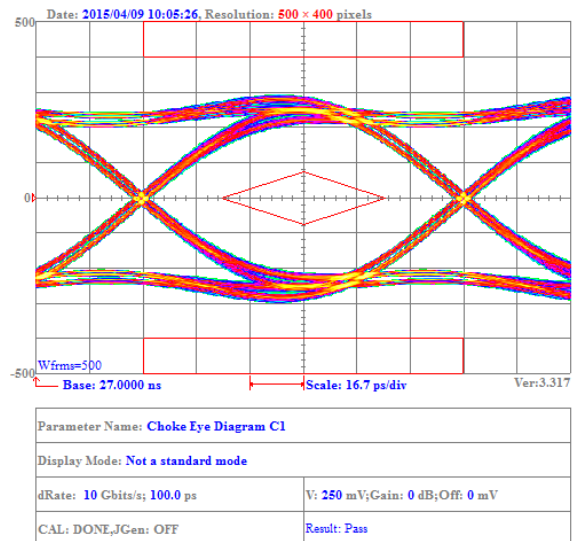
### TDR For USB3.0 Testing:



### Eye Diagram For HDMI2.0 Testing:



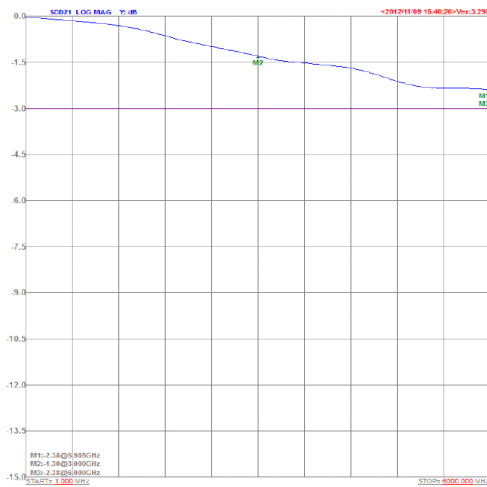
### Eye Diagram For USB3.0 Testing:



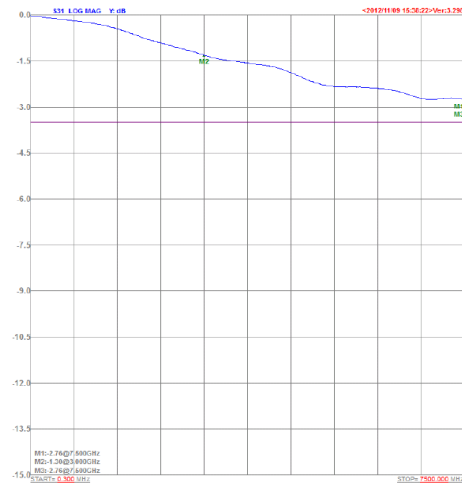
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## BWCU00201212131Y03

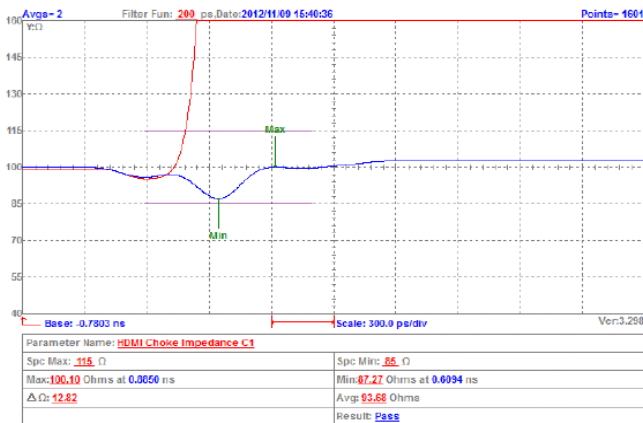
### Insertion Loss For HDMI Testing:



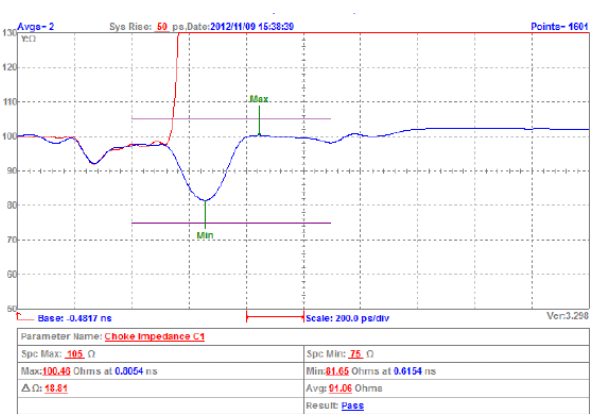
### Insertion Loss For USB3.0 Testing:



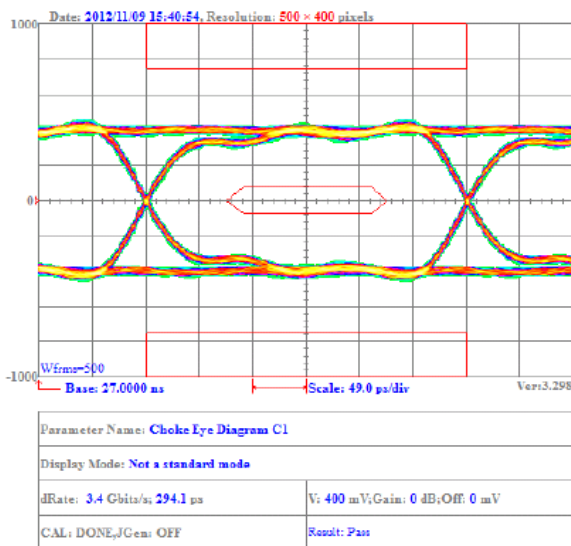
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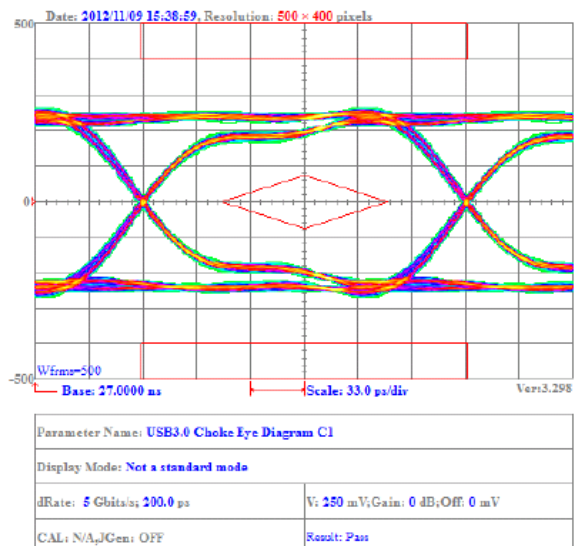
### TDR For USB3.0 Testing:



### Eye Diagram For HDMI Testing:

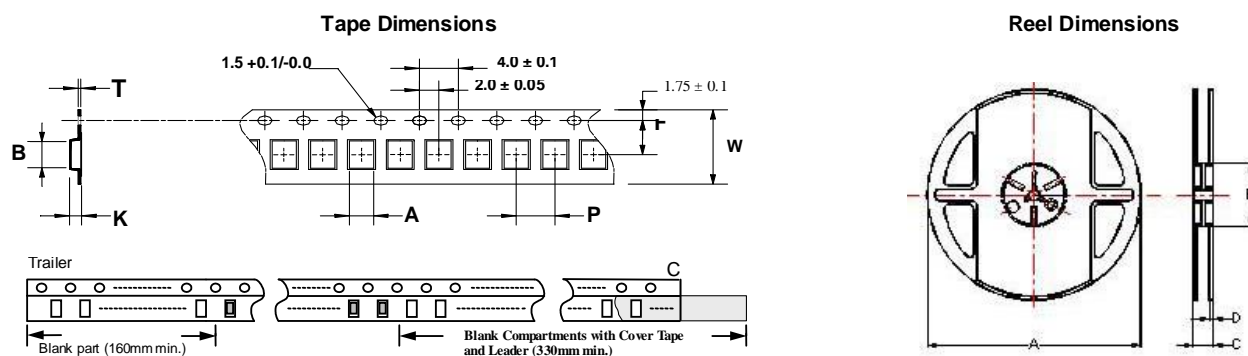


### Eye Diagram For USB3.0 Testing:



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## Packaging Specifications

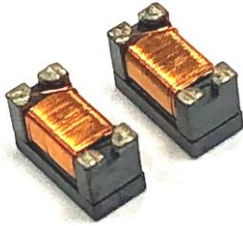


### Dimensions in mm

TYPE	Tape Dimensions							Reel Dimensions				Quantity 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.

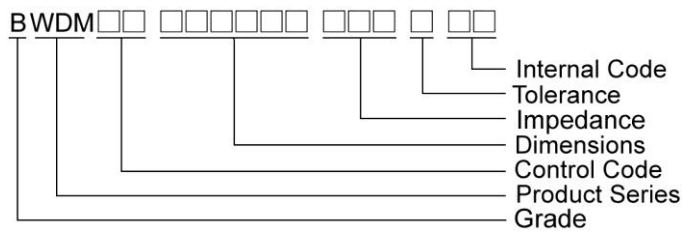
### Features

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

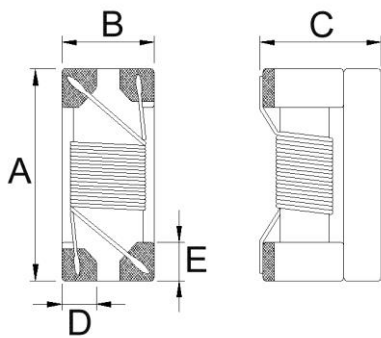
### Applications

- 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

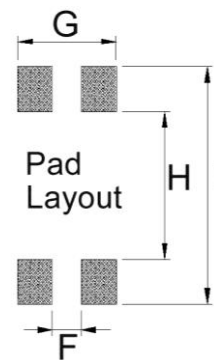
### Product Identification



### 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

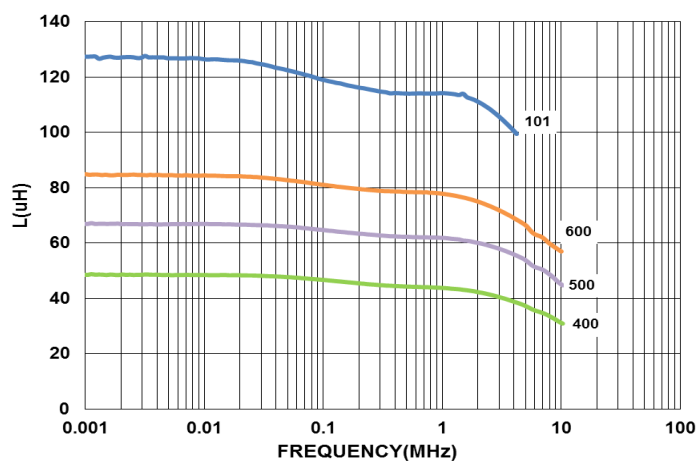
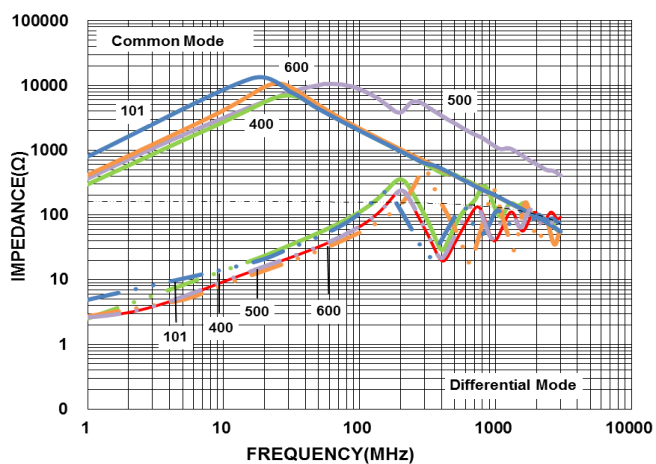
# SMD Common Mode Choke – BWDM Series

## 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 :

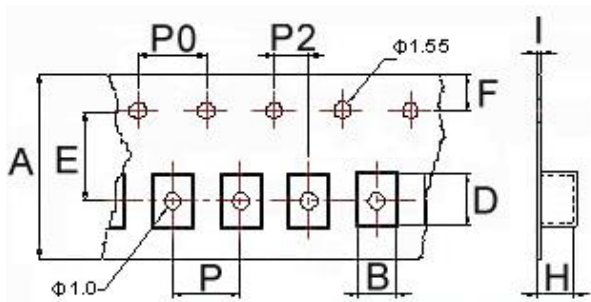


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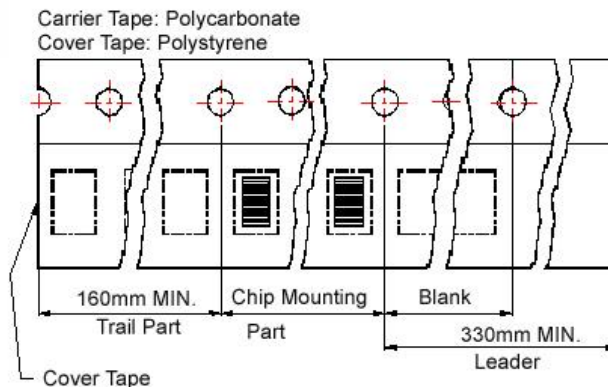
# SMD Common Mode Choke – BWDM Series

## Packaging Specifications

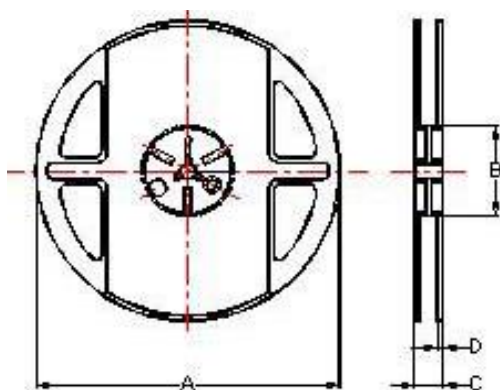
Tape Dimensions



Tape Material



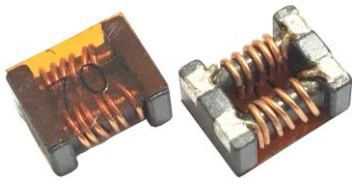
Reel Dimensions



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.

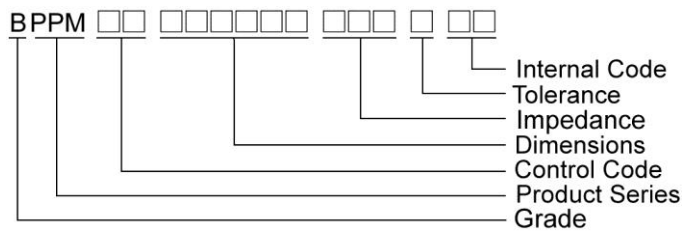
## Features

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

## Applications

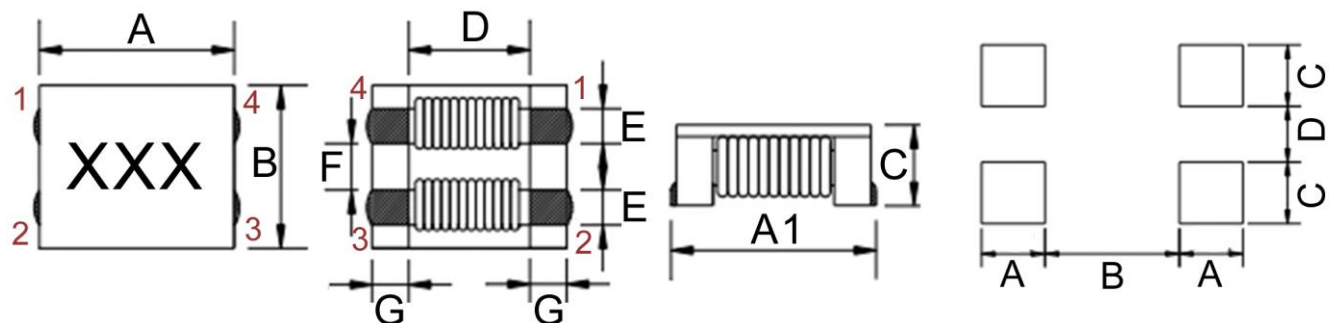
- USB line for personal computers and peripheral
- IEEE 1394 line for personal computers, DVC, STB
- LVDS, panel line for liquid display panels, graph card, etc.

## Product Identification



## Shape and Dimensions

BPPM00050520/ 070638/ 090748/ 121164/ 151360



Dimensions in mm

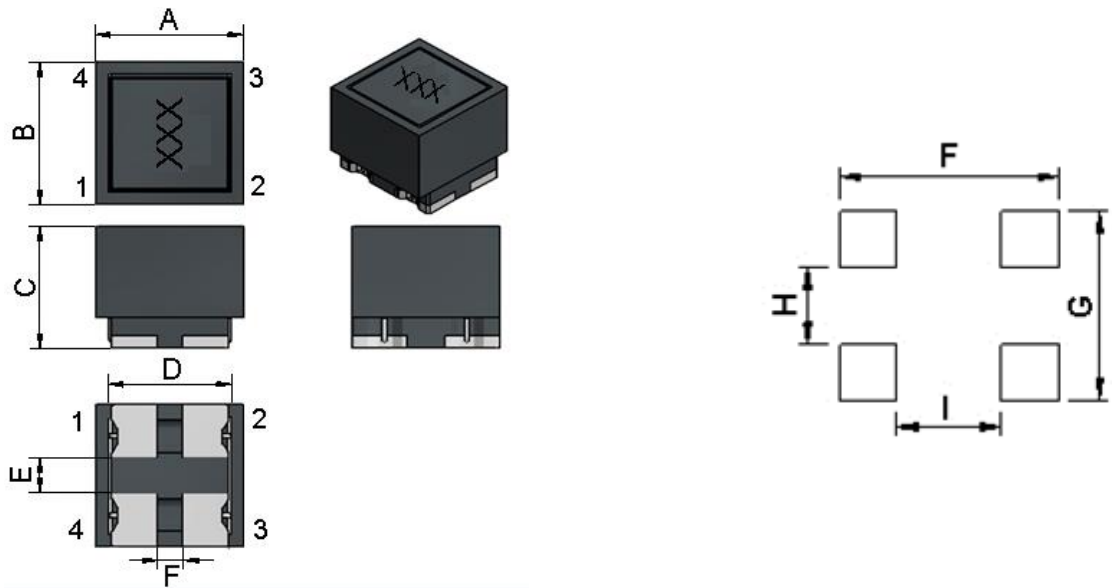
TYPE	Shape and Dimensions								Recommended Pattern			
	A	A1	B	C	D	E	F	G	A	B	C	D
BPPM00050520	4.7±0.5	-	4.5±0.5	2.0 Max	2.7	0.75	1.25	1.0	1.45	2.2	1.2	1.05
BPPM00070638	7.0±0.5	7.5±0.5	6.0±0.5	3.8 Max	3.5	1.5±0.2	1.5±0.2	1.75±0.2	2.9	3.2	1.9	1.3
BPPM00090748	9.0±0.5	9.5±0.5	7.0±0.5	4.8 Max	5.6	1.5±0.2	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( $\Omega$ ) Typ.		RDC (m $\Omega$ ) $\pm 40\%$	I <sub>rms</sub> (A)Max.	Rated Voltage (V)Max.	Withstanding voltage (V)Max.	Insulation Resistance (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)