

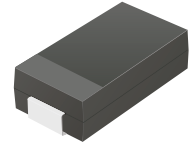
## CDBB240-HF Thru. CDBB2100-HF

Reverse Voltage: 40 to 100 Volts

Forward Current: 2.0 Amp

RoHS Device

Halogen Free

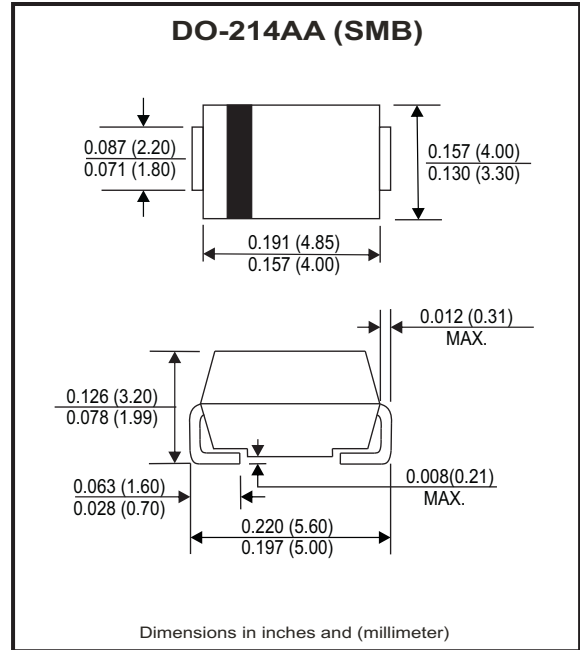


### Features

- Low Profile surface mount applications in order to optimize board space.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guard ring for overvoltage protection.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.

### Mechanical data

- Epoxy: UL94-V0 rate flame retardant.
- Case: Molded plastic, DO-214AA / SMB
- Terminals: solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- weight: 0.091 grams



### Maximum Ratings and Electrical Characteristics

Ratings at Ta=25°C unless otherwise noted.  
 Single phase, half wave, 60Hz, resistive or inductive loaded.  
 For capacitive load, derate current by 20% .

| Parameter  | Symbol           | CDBB 240-HF | CDBB 260-HF | CDBB 2100-HF | Units |
|--|------------------|-------------|-------------|--------------|-------|
| Max. Repetitive peak reverse voltage                           | V <sub>RRM</sub> | 40          | 60          | 100          | V     |
| Max. DC blocking voltage                                       | V <sub>DC</sub>  | 40          | 60          | 100          | V     |
| Max. RMS voltage   | V <sub>RMS</sub> | 28          | 42          | 70           | V     |
| Max. instantaneous forward voltage @2.0A, T <sub>A</sub> =25°C | V <sub>F</sub>   | 0.50        | 0.70        | 0.81         | V     |
| Operating Temperature  | T <sub>J</sub>   | -50 to +150 |             |              | °C    |

| Parameter                  | Conditions   | Symbol           | MIN. | TYP. | MAX. | Units |
|----------------------------|--|------------------|------|------|------|-------|
| Forward rectified current  | see Fig.1  | I <sub>o</sub>   |      |      | 2.0  | A     |
| Forward surge current      | 8.3ms single half sine-wave superimposed on rate load (JEDEC method) | I <sub>FSM</sub> |      |      | 50   | A     |
| Reverse Current            | V <sub>R</sub> =V <sub>RRM</sub> T <sub>A</sub> =25°C                | I <sub>R</sub>   |      |      | 0.5  | mA    |
|                            | V <sub>R</sub> =V <sub>RRM</sub> T <sub>A</sub> =100°C               | I <sub>R</sub>   |      |      | 20   | mA    |
| Thermal Resistance         | Junction to ambient  | R <sub>θJA</sub> |      | 50   |      | °C/W  |
| Diode Junction capacitance | f=1MHz and applied 4V DC reverse Voltage                             | C <sub>J</sub>   |      | 30   |      | pF    |
| Storage temperature        |  | T <sub>STG</sub> | -50  |      | +175 | °C    |

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## RATING AND CHARACTERISTIC CURVES (CDBB240-HF Thru. CDBB2100-HF)

Fig.1 - Typical Forward Current Derating Curve

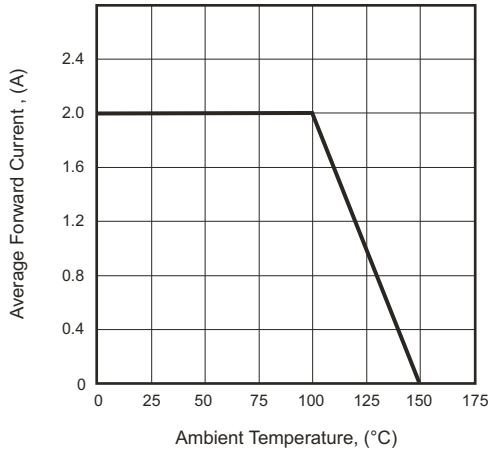


Fig.2 - Typical Forward Characteristics

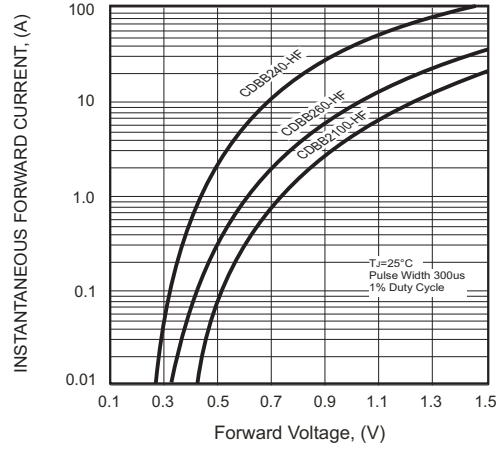


Fig.3 - Maximum Non-repetitive Forward Surge Current

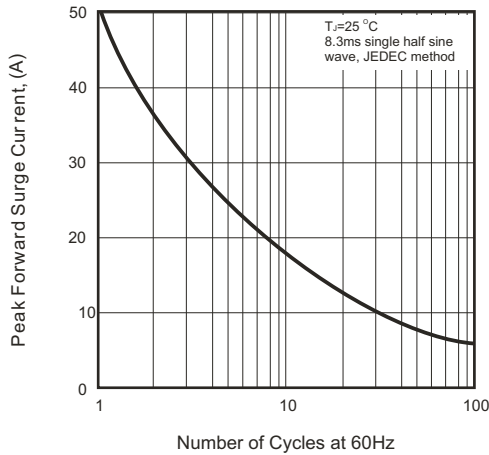


Fig.4 - Typical Junction Capacitance

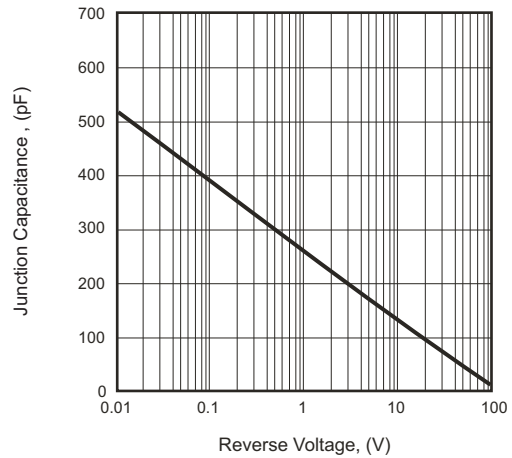
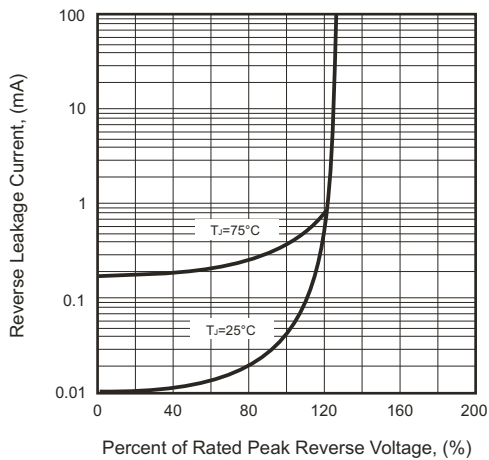
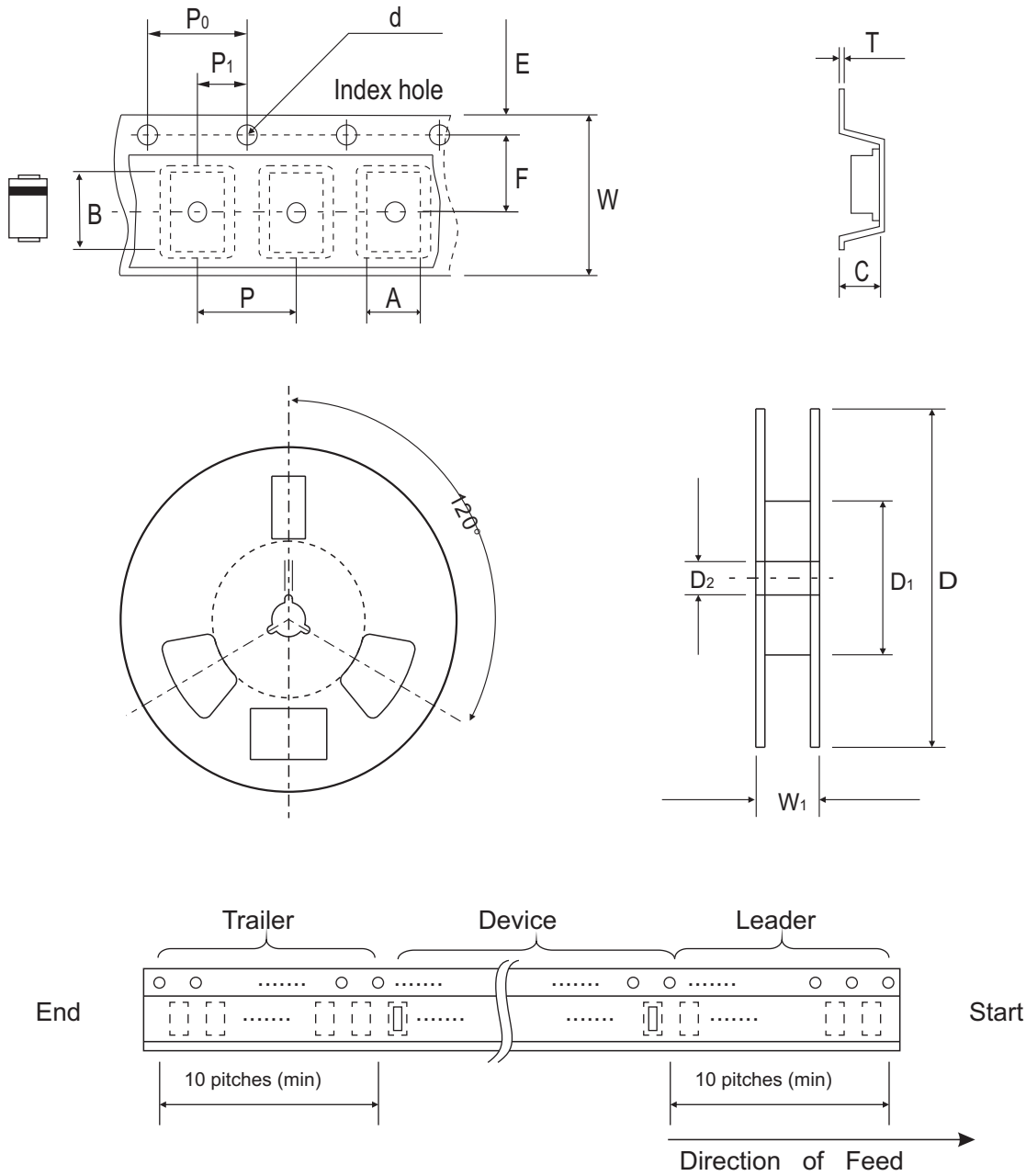


Fig.5 - Typical Reverse Characteristics



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## Reel Taping Specification



| DO-214AA<br>(SMB) | SYMBOL | A             | B             | C             | d             | D             | D1         | D2            |
|-------------------|--------|---------------|---------------|---------------|---------------|---------------|------------|---------------|
|                   | (mm)   | 4.00 ± 0.10   | 5.90 ± 0.10   | 3.00 ± 0.10   | 1.50 ± 0.10   | 330 ± 2.00    | 50.0 MIN.  | 13.50 ± 0.50  |
|                   | (inch) | 0.157 ± 0.004 | 0.232 ± 0.004 | 0.118 ± 0.004 | 0.059 ± 0.004 | 12.99 ± 0.079 | 1.969 MIN. | 0.531 ± 0.020 |

| DO-214AA<br>(SMB) | SYMBOL | E             | F             | P             | P0            | P1            | T             | W             | W1            |
|-------------------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                   | (mm)   | 1.75 ± 0.10   | 5.50 ± 0.10   | 8.00 ± 0.10   | 4.00 ± 0.10   | 2.00 ± 0.10   | 0.60 ± 0.10   | 12.0 ± 0.30   | 18.4 ± 1.00   |
|                   | (inch) | 0.069 ± 0.004 | 0.217 ± 0.004 | 0.315 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.236 ± 0.004 | 0.472 ± 0.012 | 0.724 ± 0.040 |

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