

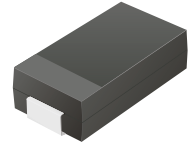
## CDBB520-HF Thru. CDBB5100-HF

Reverse Voltage: 20 to 100 Volts

Forward Current: 5.0 Amp

RoHS Device

Halogen Free

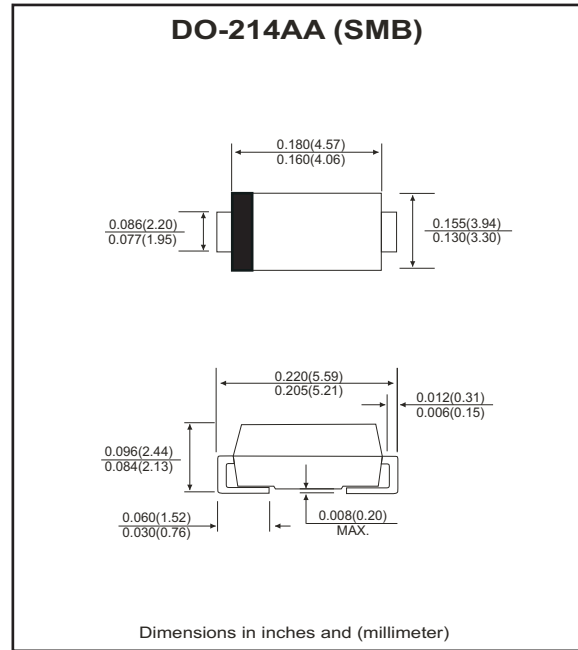


### Features

- Ideal for surface mount applications.
- For use in low voltage, high frequency inverters.
- Epitaxial construction.
- Metal-semiconductor junction with guarding.
- High current capability.
- Low forward voltage drop.

### Mechanical data

- Case: JEDEC DO-214AA, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.
- Approx. weight: 0.093 grams



### Maximum Ratings and Electrical Characteristics

| Parameter  | Symbol                             | CDBB 520-HF | CDBB 530-HF | CDBB 540-HF | CDBB 550-HF | CDBB 560-HF | CDBB 580-HF | CDBB 5100-HF | Units         |
|--|------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|---------------|
| Max. repetitive peak reverse voltage   | $V_{RRM}$                          | 20          | 30          | 40          | 50          | 60          | 80          | 100          | V             |
| Max. DC blocking voltage   | $V_{DC}$                           | 20          | 30          | 40          | 50          | 60          | 80          | 100          | V             |
| Max. RMS voltage   | $V_{RMS}$                          | 14          | 21          | 28          | 35          | 42          | 56          | 70           | V             |
| Peak surge forward current, 8.3ms single half sine-wave superimposed on rate load (JEDEC method) | $I_{FSM}$                          | 175         |             |             |             |             |             |              | A             |
| Max. average forward rectified current at $T_L=90^{\circ}C$                                      | $I_{(AV)}$                         | 5.0         |             |             |             |             |             |              | A             |
| Max. instantaneous forward voltage at 5.0A DC @ $T_c=100^{\circ}C$                               | $V_F$                              | 0.55        |             |             | 0.70        |             |             | V            |               |
| Max. DC reverse current at $T_J=25^{\circ}C$ rated DC blocking voltage $T_J=100^{\circ}C$        | $I_R$                              | 0.5<br>20   |             |             |             |             |             |              | mA            |
| Max. operating junction temperature  | $C_J$                              | 300         |             |             |             |             |             |              | PF            |
| Max. thermal resistance  | $R_{\theta JA}$<br>$R_{\theta JL}$ | 50<br>10    |             |             |             |             |             |              | $^{\circ}C/W$ |
| Max. operating junction temperature  | $T_J$                              | -55 to +125 |             |             |             |             |             |              | $^{\circ}C$   |
| Storage temperature  | $T_{STG}$                          | -55 to +150 |             |             |             |             |             |              | $^{\circ}C$   |

Notes: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.  
2. Thermal resistance junction to lead.

## RATING AND CHARACTERISTIC CURVES (CDBB520-HF thru CDBB5100-HF)

Fig.1 - Forward Current Derating Curve

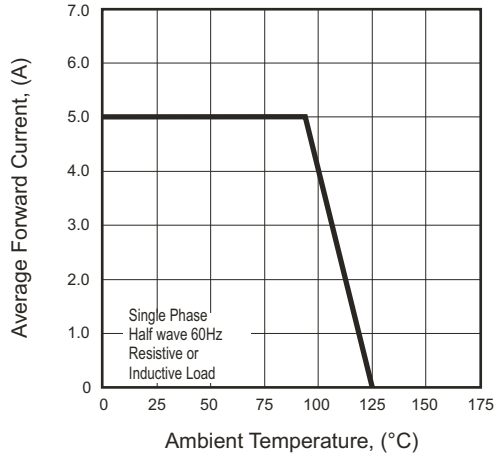


Fig.2 - Maximum Non-Repetitive Surge Current

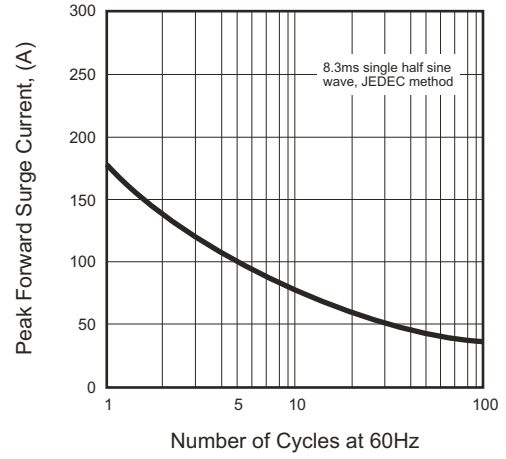


Fig.3 - Typical Instantaneous Forward Characteristics

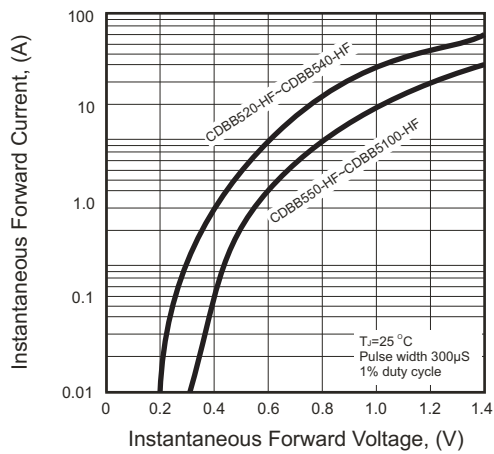


Fig.4 - Typical Junction Capacitance

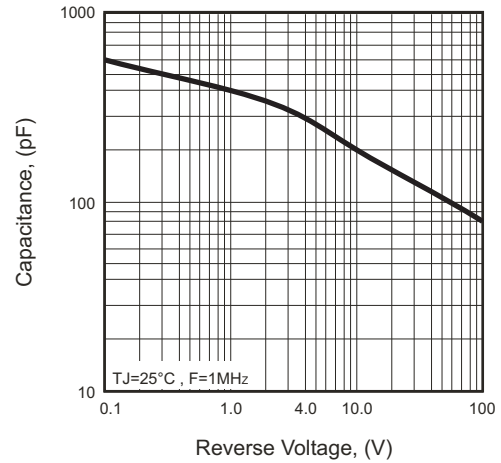
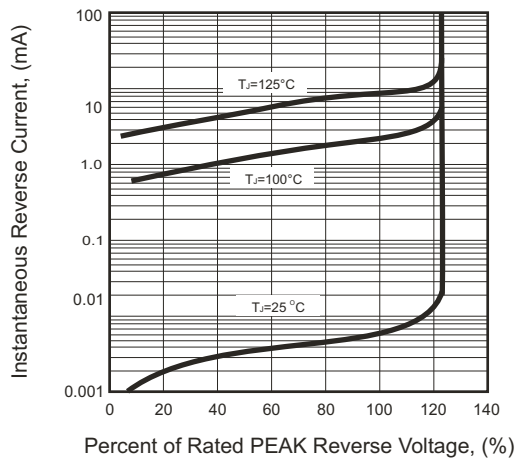
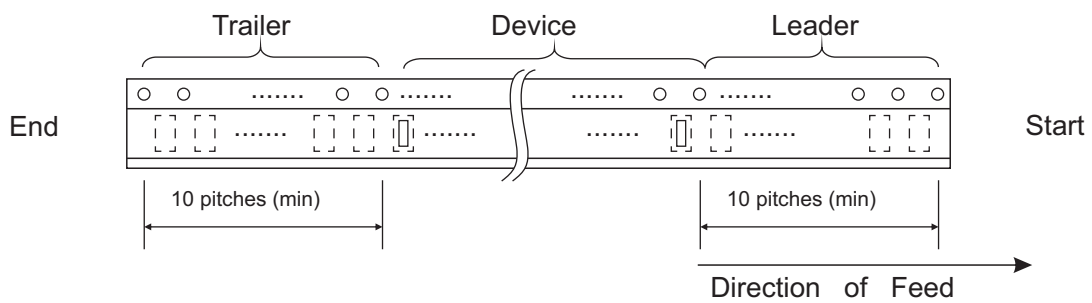
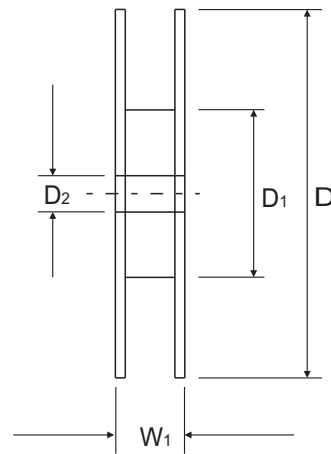
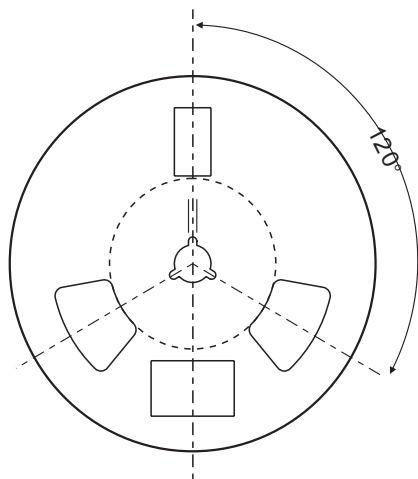
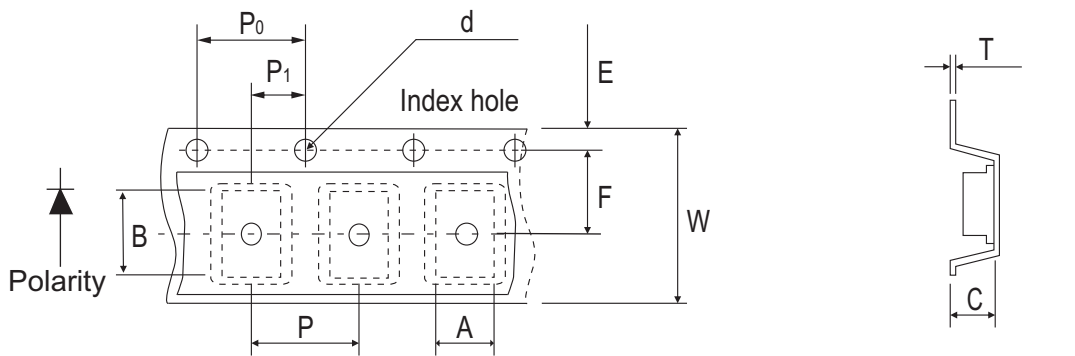


Fig.5 - Typical Reverse Characteristics



## Reel Taping Specification

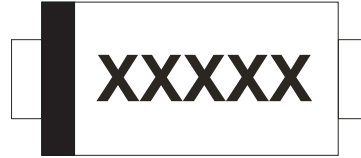


| DO-214AA<br>(SMB) | SYMBOL | A          | B          | C          | d                            | D             | D1         | D2            |
|-------------------|--------|------------|------------|------------|------------------------------|---------------|------------|---------------|
|                   | (mm)   | 4.00 MAX.  | 5.90 MAX.  | 3.00 MAX.  | 1.50 ± 0.10 <sub>DIA</sub>   | 330 ± 2.00    | 50.0 MIN.  | 13.50 ± 1.0   |
|                   | (inch) | 0.157 MAX. | 0.232 MAX. | 0.118 MAX. | 0.059 ± 0.004 <sub>DIA</sub> | 12.99 ± 0.079 | 1.969 MIN. | 0.531 ± 0.039 |

| DO-214AA<br>(SMB) | SYMBOL | E             | F             | P             | P0            | P1            | T             | W             | W1        |
|-------------------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------|
|                   | (mm)   | 1.75 ± 0.10   | 5.50 ± 0.05   | 8.00 ± 0.10   | 4.00 ± 0.10   | 2.00 ± 0.05   | 0.60 MAX      | 12.0 ± 0.30   | 18.4 MAX. |
|                   | (inch) | 0.069 ± 0.004 | 0.217 ± 0.002 | 0.315 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.236 ± 0.004 | 0.472 ± 0.012 | 0.724 MAX |

## Marking Code

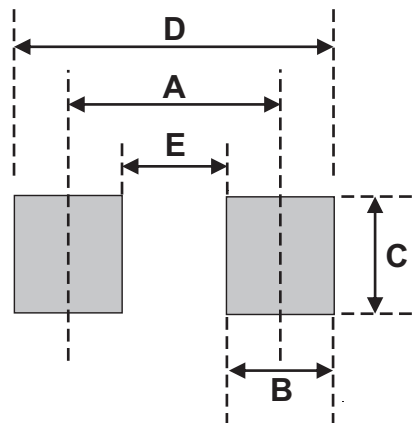
| Part Number | Marking Code |
|-------------|--------------|
| CDBB520-HF  | SS52         |
| CDBB530-HF  | SS53         |
| CDBB540-HF  | SS54         |
| CDBB550-HF  | SS55         |
| CDBB560-HF  | SS56         |
| CDBB580-HF  | SS58         |
| CDBB5100-HF | SS510        |



xxxxx = Product type marking code

## Suggested PAD Layout

| SIZE | DO-214AA(SMB) |        |
|------|---------------|--------|
|      | (mm)          | (inch) |
| A    | 4.30          | 0.169  |
| B    | 2.50          | 0.098  |
| C    | 2.30          | 0.091  |
| D    | 6.80          | 0.268  |
| E    | 1.80          | 0.071  |



## Standard Packaging

| Case Type      | REEL PACK    |                  |
|----------------|--------------|------------------|
|                | REEL ( pcs ) | Reel Size (inch) |
| DO-214AA (SMB) | 3,000        | 13               |