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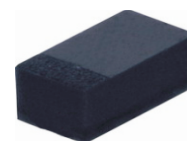
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## SMD Schottky Barrier Diode



# CDBFR42/43

$I_o = 200 \text{ mA}$   
 $V_R = 30 \text{ Volts}$   
 RoHS Device

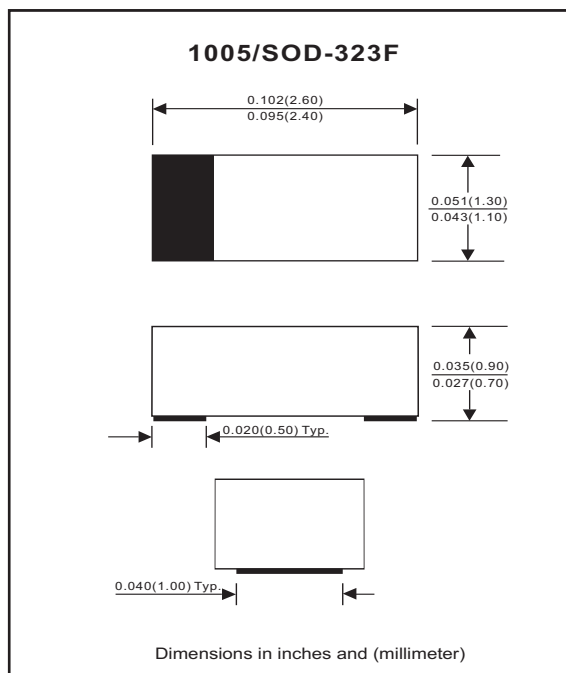


### Features

- Low forward voltage.
- Designed for mounting on small surface.
- Extremely thin / leadless package.
- Majority carrier conduction.

### Mechanical data

- Case: 1005/SOD-323F standard package molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Mounting position: Any
- Weight: 0.006 gram(approx.).



### Maximum Rating (at $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter                                  | Conditions   | Symbol          | Min | Typ | Max  | Unit                      |
|--|--|-----------------|-----|-----|------|---------------------------|
| Peak reverse voltage                       |  | $V_{RM}$        |     |     | 30   | V                         |
| Reverse voltage                            |  | $V_R$           |     |     | 30   | V                         |
| RMS reverse voltage                        |  | $V_{R(RMS)}$    |     |     | 21   | V                         |
| Average forward rectified current          |  | $I_o$           |     |     | 200  | mA                        |
| Repetitive peak forward current            |  | $I_{FRM}$       |     |     | 0.5  | A                         |
| Forward current,surge peak                 | 8.3 ms single half sine-wave superimposed on rate load(JEDEC method) | $I_{FSM}$       |     |     | 4    | A                         |
| Power Dissipation                          |  | $P_D$           |     |     | 200  | mW                        |
| Thermal resistance junction to ambient air |  | $R_{\theta JA}$ |     |     | 500  | $^\circ\text{C}/\text{W}$ |
| Storage temperature                        |  | $T_{STG}$       | -55 |     | +125 | $^\circ\text{C}$          |
| Junction temperature                       |  | $T_j$           |     |     | +125 | $^\circ\text{C}$          |

### Electrical Characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter                     | Conditions   | Symbol   | Min | Typ | Max                              | Unit          |
|-------------------------------|--|----------|-----|-----|----------------------------------|---------------|
| Forward voltage               | CDBFR42/43 $I_F = 200\text{mA}$<br>CDBFR42 $I_F = 10\text{mA}$<br>CDBFR42 $I_F = 50\text{mA}$<br>CDBFR43 $I_F = 2\text{mA}$<br>CDBFR43 $I_F = 15\text{mA}$ | $V_F$    |     |     | 1<br>0.4<br>0.65<br>0.33<br>0.45 | V             |
| Reverse current               | $V_R = 25\text{V}$   | $I_R$    |     |     | 0.5                              | $\mu\text{A}$ |
| Capacitance between terminals | $f = 1 \text{ MHz}$ , and 1 VDC reverse voltage  | $C_T$    |     |     | 10                               | pF            |
| Reverse recovery time         | $I_F=I_R=10\text{mA}$ , $I_{rr}=0.1 \times I_R$ , $R_L=100 \text{ ohm}$  | $T_{rr}$ |     |     | 5                                | nS            |

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## RATING AND CHARACTERISTIC CURVES (CDBFR42/43)

Fig. 1 - Forward characteristics

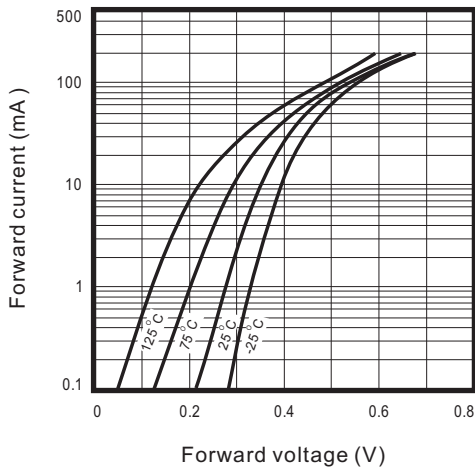


Fig. 2 - Reverse characteristics

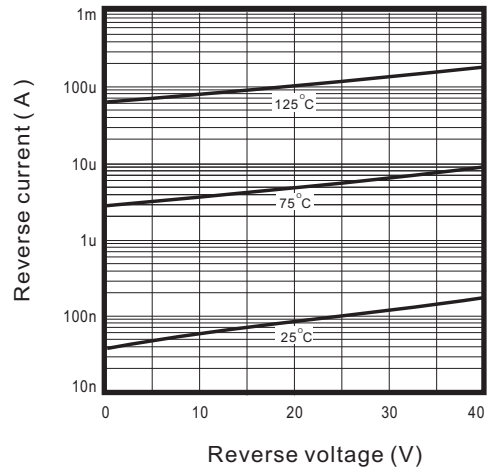


Fig.3 - Capacitance between terminals characteristics

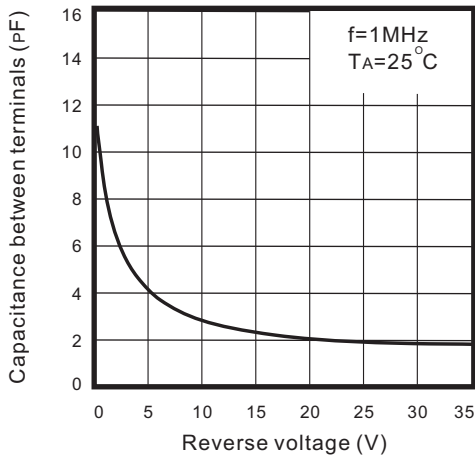


Fig.4 - Current derating curve

