

SMD Schottky Barrier Diode



SMD Diodes Specialist

CDBFR42/43 (RoHS Device)

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

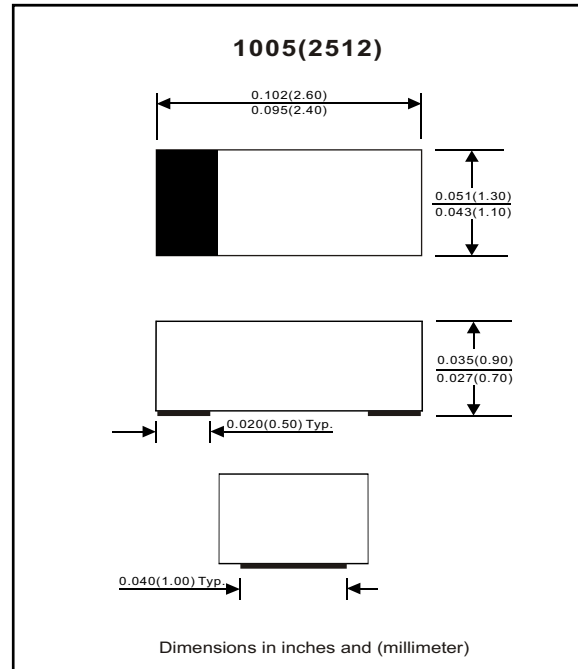


Features

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

Mechanical data

- Case: 1005(2512) 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 | $I_F = 200\text{mA}$ $I_F = 10\text{mA}$ $I_F = 50\text{mA}$ $I_F = 2\text{mA}$ $I_F = 15\text{mA}$ | V_F | | | 1 0.4 0.65 0.33 0.45 | V |
| Reverse current | $V_R = 25\text{V}$ | I_R | | | 0.5 | μA |
| 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 |

REV:A

RATING AND CHARACTERISTIC CURVES (CDBFR42/43)

Fig. 1 - Forward characteristics

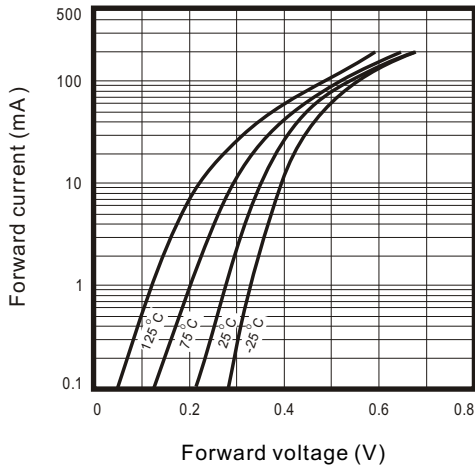


Fig. 2 - Reverse characteristics

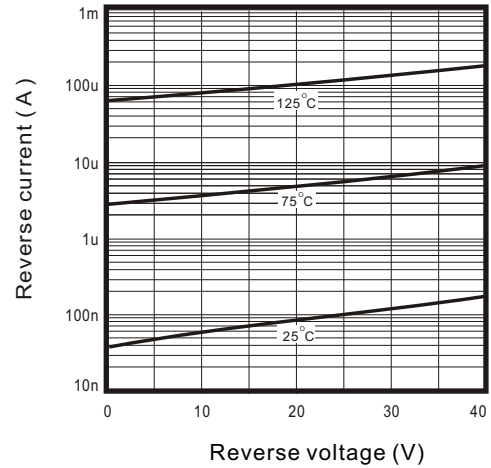


Fig.3 - Capacitance between terminals characteristics

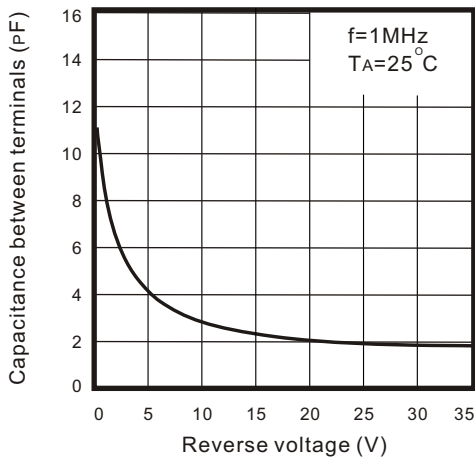


Fig.4 - Current derating curve

