

SMD Schottky Barrier Diode



SMD Diodes Specialist

CDBFR0540 (RoHs Device)

$I_o = 500 \text{ mA}$

$V_R = 40 \text{ Volts}$

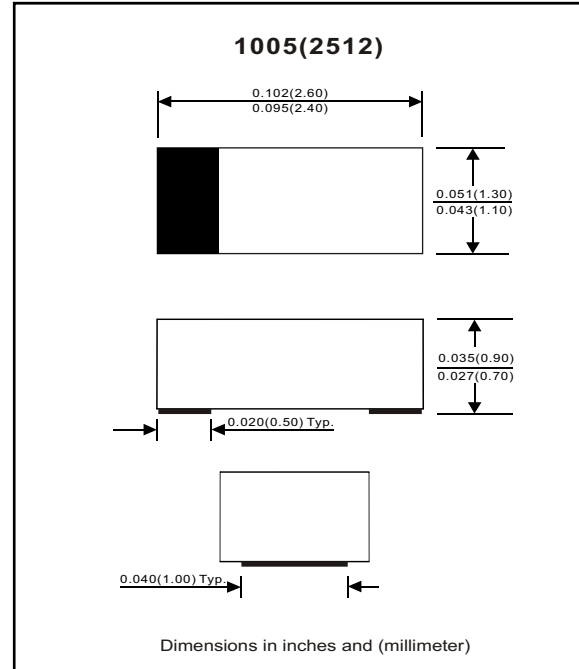


Features

- 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
Repetitive Peak reverse voltage		V_{RM}			40	V
Reverse voltage		V_R			40	V
Average forward rectified current		I_o			500	mA
Forward current, surge peak	8.3 ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}			5.5	A
Storage temperature		T_{STG}	-40		+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	$I_F = 0.5 \text{ A}$ @ $T_a = 25^\circ\text{C}$ $I_F = 1 \text{ A}$ @ $T_a = 25^\circ\text{C}$ $I_F = 0.5 \text{ A}$ @ $T_a = 100^\circ\text{C}$ $I_F = 1 \text{ A}$ @ $T_a = 100^\circ\text{C}$	V_F			0.51 0.64 0.46 0.62	V
Reverse current	$V_R = 20\text{V}$ @ $T_a = 25^\circ\text{C}$ $V_R = 40\text{V}$ @ $T_a = 25^\circ\text{C}$ $V_R = 20\text{V}$ @ $T_a = 100^\circ\text{C}$ $V_R = 40\text{V}$ @ $T_a = 100^\circ\text{C}$	I_R			10 20 2 5	μA
Capacitance between terminals	$f = 1 \text{ MHz}$, and 0 VDC reverse voltage	C_T			170	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}		22		ns

RATING AND CHARACTERISTIC CURVES (CDBFR0540)

Fig. 1 - Forward characteristics

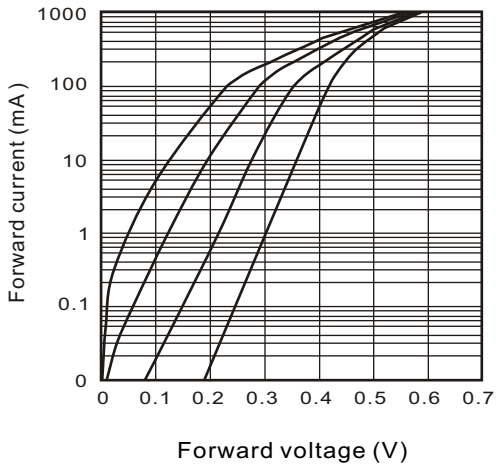


Fig. 2 - Reverse characteristics

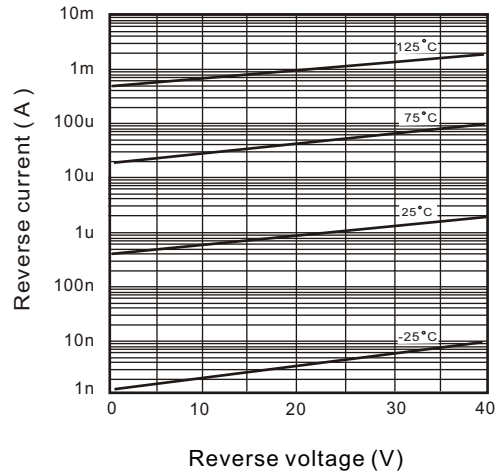


Fig. 3 - Capacitance between terminals characteristics

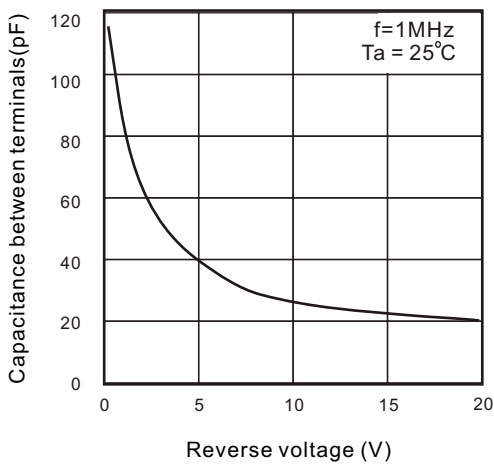


Fig. 4 - Current derating curve

