

SMD Schottky Barrier Diode

COMCHIP
SMD Diodes Specialist

CDBF0540 (Lead-free 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

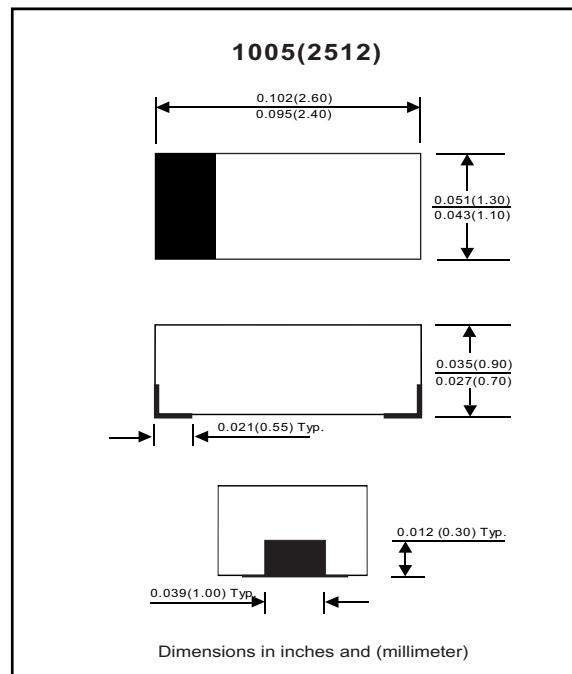
Case: SOD-323F (2512) Standard package , molded plastic.

Terminals: Gold plated, solderable per MIL-STD-750, method 2026.

Polarity: Indicated by cathode band.

Mounting position: Any.

Weight: 0.006 gram (approximately).



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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Repetitive peak reverse voltage		V_{RRM}			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	-40		+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	$IF = 0.5 \text{ A} @ T_a = 25^\circ\text{C}$	V_F			0.51	V
	$IF = 1 \text{ A} @ T_a = 25^\circ\text{C}$	V_F			0.64	V
	$IF = 0.5 \text{ A} @ T_a = 100^\circ\text{C}$	V_F			0.46	V
	$IF = 1 \text{ A} @ T_a = 100^\circ\text{C}$	V_F			0.62	V
Reverse current	$VR = 20 \text{ V} @ T_a = 25^\circ\text{C}$	I_R			10	uA
	$VR = 40 \text{ V} @ T_a = 25^\circ\text{C}$	I_R			20	uA
	$VR = 20 \text{ V} @ T_a = 100^\circ\text{C}$	I_R			2	mA
	$VR = 40 \text{ V} @ T_a = 100^\circ\text{C}$	I_R			5	mA
Capacitance between terminals	$f = 1\text{MHz}$, and 0 VDC reverse voltage	C_T			170	pF
Reverse recovery time	$IF=IR=10\text{mA}, Irr= 0.1 \times I_R, RL=100 \text{ ohm}$	T_{rr}		22		ns

RATING AND CHARACTERISTIC CURVES (CDBF0540)

Fig. 1 - Forward characteristics

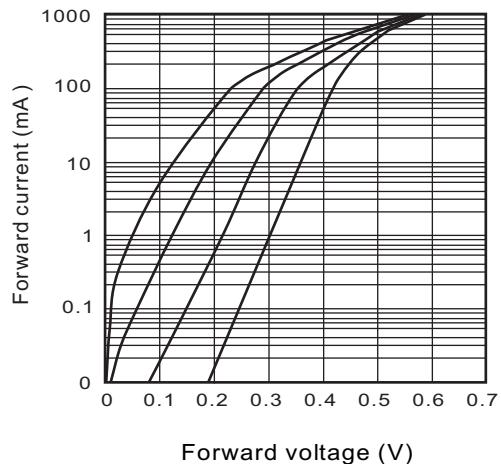


Fig. 2 - Reverse characteristics

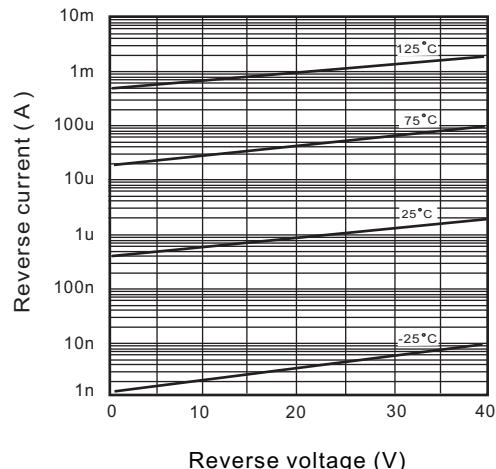


Fig. 3 - Capacitance between terminals characteristics

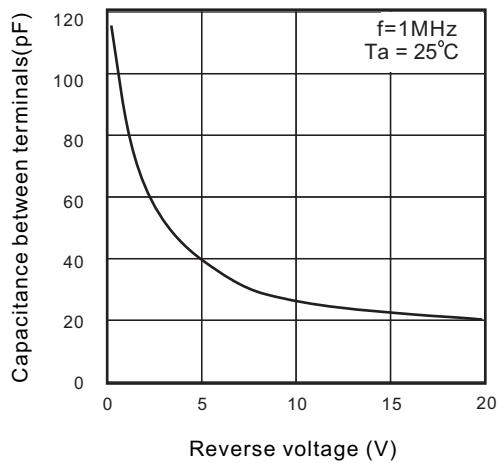


Fig. 4 - Current derating curve

