

SMD Schottky Barrier Diode

CDBF0520L (Lead-free Device)

$I_o = 500\text{ mA}$
 $V_R = 20\text{ Volts}$

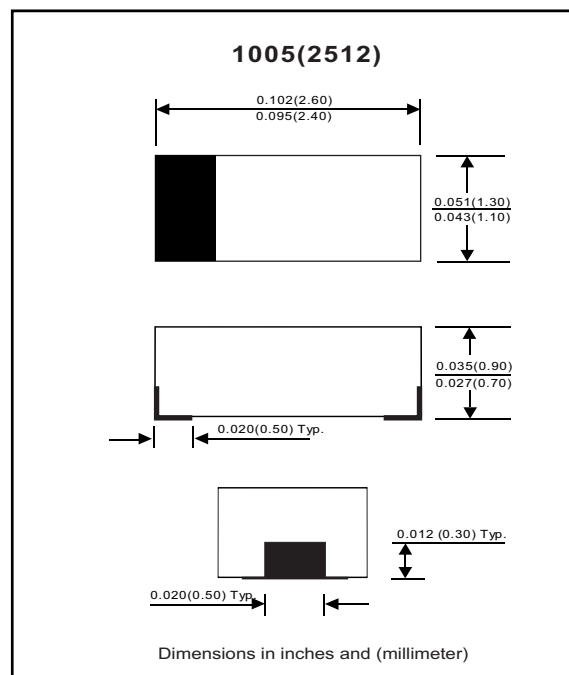


Features

- 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 $T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Repetitive peak reverse voltage		V_{RRM}			20	V
Reverse voltage		V_R			20	V
Average forward rectified current		I_o			0.5	A
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	$I_F = 100\text{ mA}$ @ $T_A = 25\text{ }^{\circ}\text{C}$	V_F			300	mV
	$I_F = 500\text{ mA}$ @ $T_A = 25\text{ }^{\circ}\text{C}$	V_F			385	mV
	$I_F = 100\text{ mA}$ @ $T_A = 100\text{ }^{\circ}\text{C}$	V_F			220	mV
	$I_F = 500\text{ mA}$ @ $T_A = 100\text{ }^{\circ}\text{C}$	V_F			330	mV
Reverse current	$V_R = 10\text{ V}$ @ $T_A = 25\text{ }^{\circ}\text{C}$	I_R			75	μA
	$V_R = 20\text{ V}$ @ $T_A = 25\text{ }^{\circ}\text{C}$	I_R			250	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 (CDBF0520L)

Fig. 1 - Forward characteristics

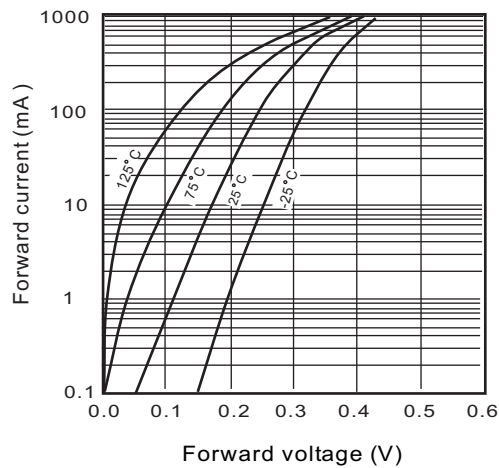


Fig. 2 - Reverse characteristics

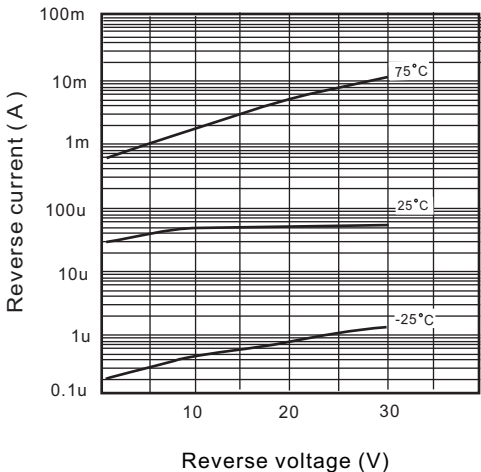


Fig. 3 - Capacitance between terminals characteristics

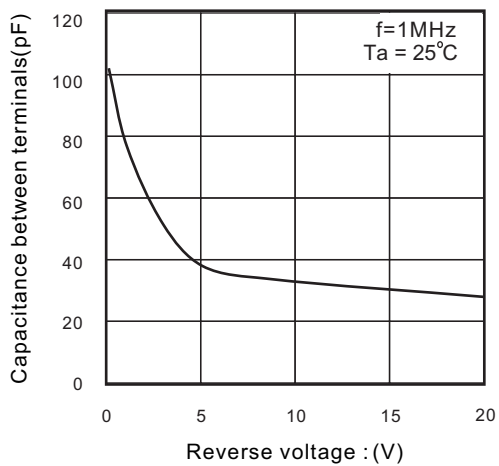


Fig. 4 - Current derating curve

