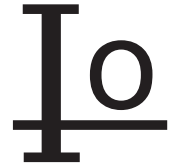


MBR0520



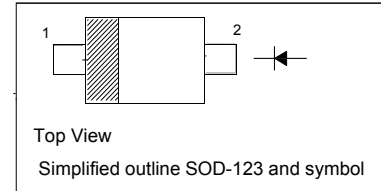
Surface Mount Schottky Barrier Diode

Features

- Very low forward voltage
- High Current Capability
- * Lead Free Finish/RoHS Compliant

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V_{RRM}	20	V
Working Peak Reverse Voltage	V_{RWM}	20	V
DC Reverse Voltage	V_R	20	V
Average Rectified Forward Current	$I_{F(AV)}$	0.5	A
Non-Repetitive Peak Forward Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60 Hz)	I_{FSM}	5.5	A
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	340	$^\circ\text{C/W}$
Thermal Resistance Junction to Lead	$R_{\theta JL}$	150	$^\circ\text{C/W}$
Junction Temperature	T_j	- 65 to + 150	$^\circ\text{C}$
Storage Temperature	T_{stg}	- 65 to + 150	$^\circ\text{C}$

¹⁾ Following any rated load condition and with rated V_{RRM} applied.

Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Max.	Unit
Forward Voltage at $I_F = 0.1\text{ A}$, $T_j = 25\text{ }^\circ\text{C}$ at $I_F = 0.5\text{ A}$, $T_j = 25\text{ }^\circ\text{C}$ at $I_F = 0.1\text{ A}$, $T_j = 100\text{ }^\circ\text{C}$ at $I_F = 0.5\text{ A}$, $T_j = 100\text{ }^\circ\text{C}$	V_F	0.375 0.44 0.26 0.36	V
Reverse Current at $V_R = 10\text{ V}$, $T_j = 25\text{ }^\circ\text{C}$ at $V_R = 20\text{ V}$, $T_j = 25\text{ }^\circ\text{C}$ at $V_R = 10\text{ V}$, $T_j = 100\text{ }^\circ\text{C}$ at $V_R = 20\text{ V}$, $T_j = 100\text{ }^\circ\text{C}$	I_R	40 150 3 7	μA μA mA mA
Total Capacitance at $V_R = 5\text{ V}$ (test signal range 100 KHz to 1 MHz), $T_j = 25\text{ }^\circ\text{C}$	C_{tot}	110	pF

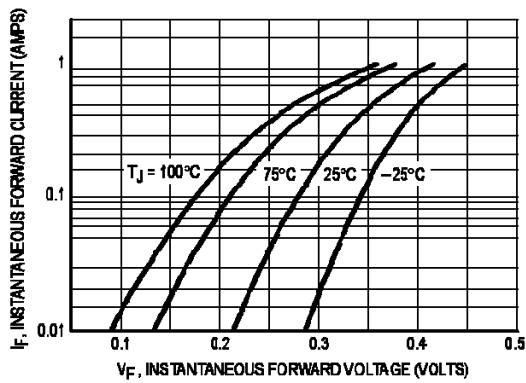


Figure 1. Typical Forward Voltage

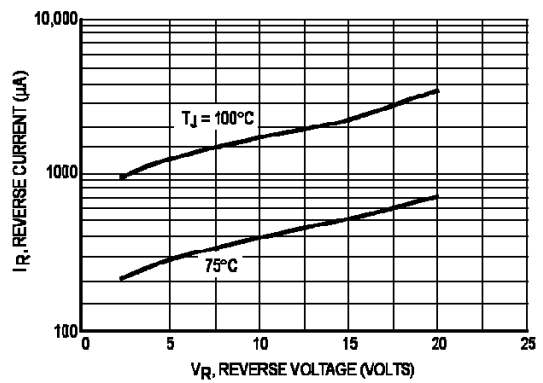


Figure 2. Typical Reverse Current

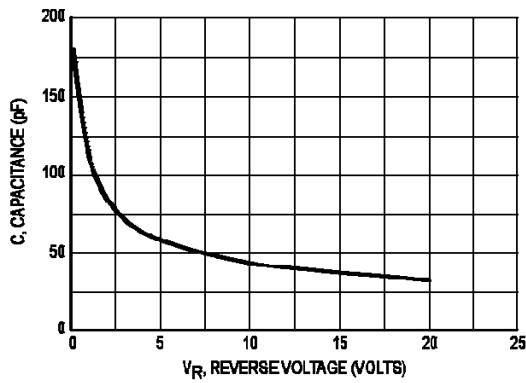


Figure 3. Typical Capacitance

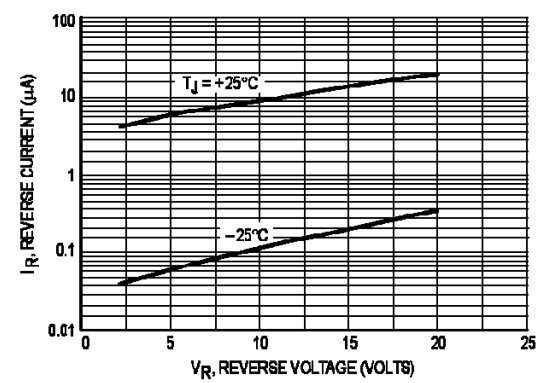


Figure 4. Typical Reverse Current

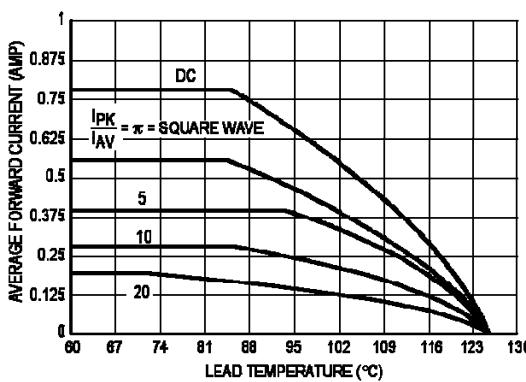


Figure 5. Current Derating (Lead)

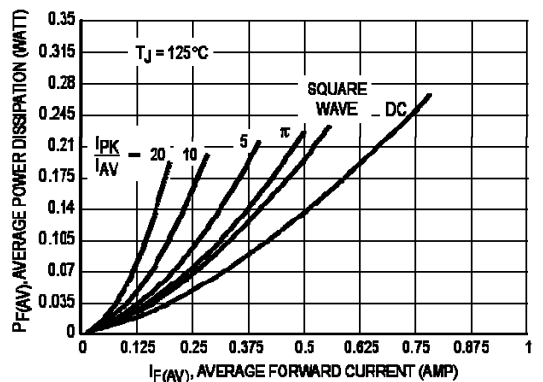
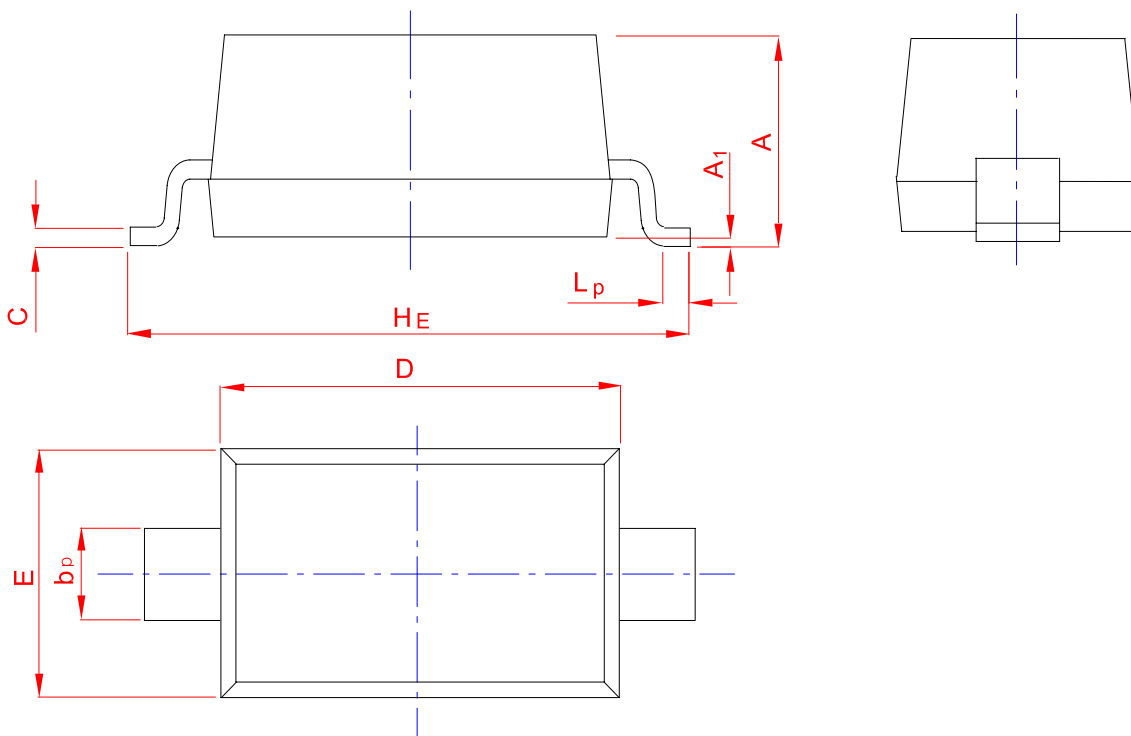
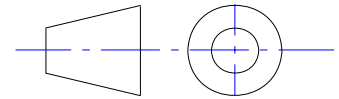


Figure 6. Power Dissipation

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123



UNIT	A	bp	C	D	E	HE	A1	Lp
mm	1.20	0.60	0.135	2.75	1.65	3.85	0.10	0.50
	0.90	0.50	0.100	2.55	1.55	3.55	0.01	0.20