SDM10K45

SURFACE MOUNT SCHOTTKY BARRIER DIODE

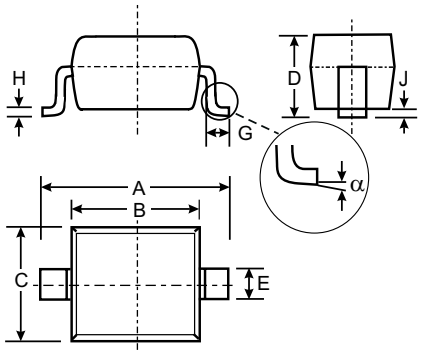
NEW PRODUCT

Features

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- High Conductance

Mechanical Data

- Case: SOD-323, Molded Plastic
- Case material - UL Flammability Rating Classification 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Marking: See Sheet 2
- Weight: 0.006 grams (approx.)
- Ordering Information: See Below



SOD-323		
Dim	**Min**	**Max**
A	2.30	2.70
B	1.60	1.80
C	1.20	1.40
D	1.05 Typical	
E	0.25	0.35
G	0.20	0.40
H	0.10	0.15
J	0.05 Typical	
α	0°	8°
All Dimensions in mm		

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	45	V
RMS Reverse Voltage	$V_{R(RMS)}$	40	V
Average Rectified Forward Current	I_O	100	mA
Forward Surge Current @ t < 8.3ms	I_{FSM}	1.0	A
Power Dissipation (Note 1)	P_d	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	500	°C/W
Operating and Storage Temperature Range	T_j , T_{STG}	-40 to +125	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	45	—	—	—	I_R = 100μA
Forward Voltage (Note 2)	V_{FM}	—	370	450	mV	I_F = 10mA
Reverse Leakage Current (Note 2)	I_{RM}	—	0.07	1.0	μA	V_R = 10V
Total Capacitance	C_T	—	6.0	—	pF	V_R = 10V, f = 1.0MHz

Ordering Information (Note 3)

Device	Packaging	Shipping
SDM10K45-7	SOD-323	3000/Tape & Reel

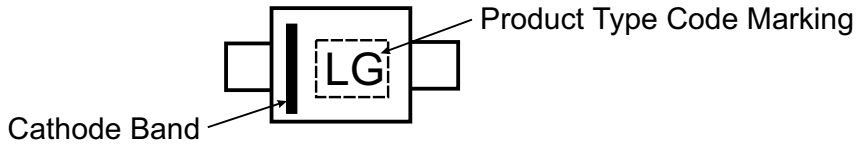
Note: 1. Device mounted on FR-5 PCB 1.0 x 0.75 x 0.062 inch pad layout as shown on Diodes, Inc. suggested pad layout AP02001, which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf.

2. Short duration pulse test to minimize self-heating effect.

3. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

NEW PRODUCT

Marking Information



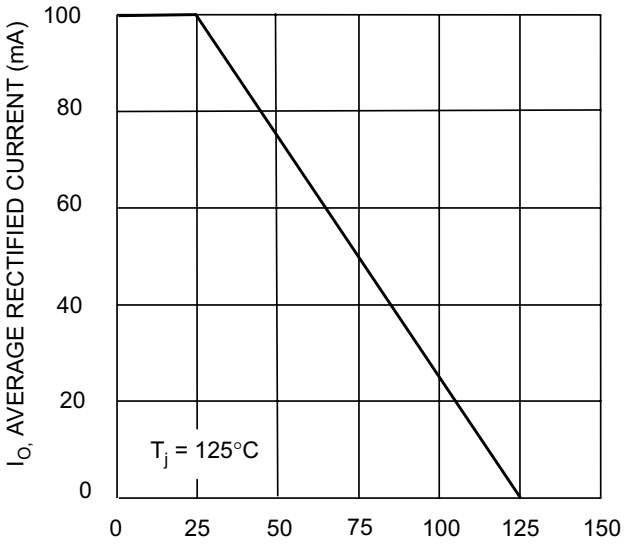


Fig. 1 Forward Current Derating Curve

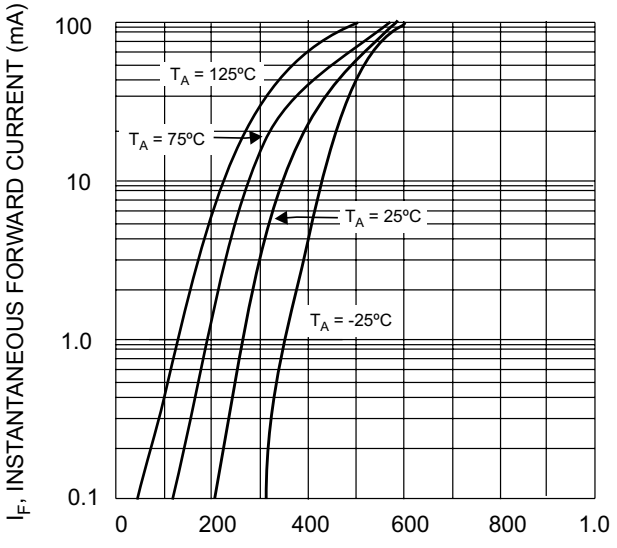


Fig. 2 Typical Forward Characteristics

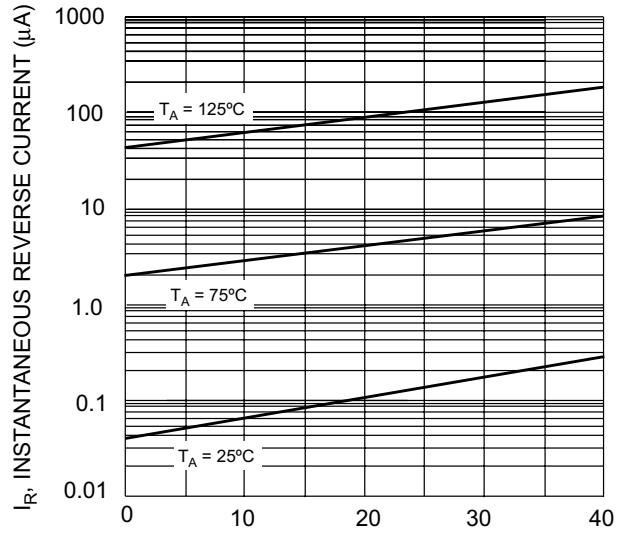


Fig. 3 Typical Reverse Characteristics

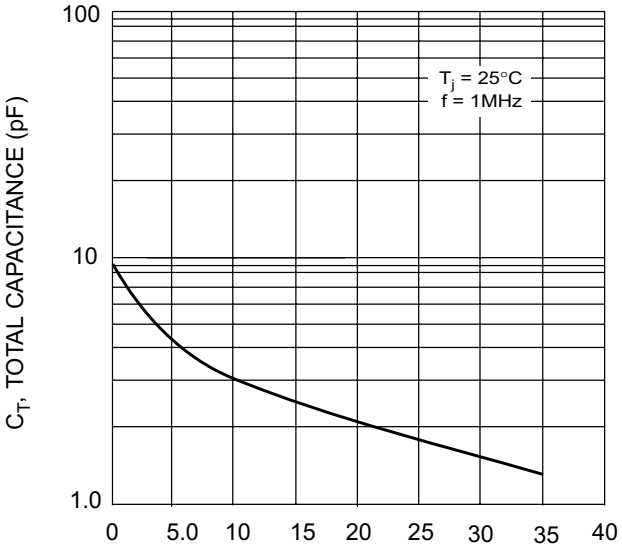


Fig. 4 Total Capacitance vs. Reverse Voltage