



SDM20U30

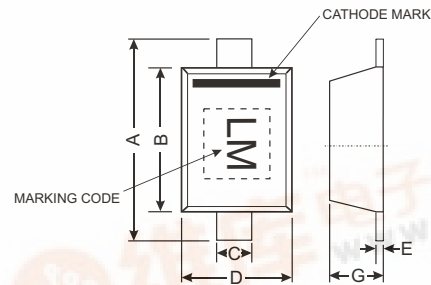
SURFACE MOUNT SCHOTTKY BARRIER DIODE

Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Negligible Reverse Recovery Time
- Low Reverse Capacitance
- Ultra-Small Surface Mount Package

Mechanical Data

- Case: SOD-523, Plastic
- Case material - UL Flammability Rating Classification 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Finish - Matte Tin (Note 1)
Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking Code: LM
- Weight: 0.002 grams (approx.)



SOD-523		
Dim	Min	Max
A	1.50	1.70
B	1.10	1.30
C	0.25	0.35
D	0.70	0.90
E	0.10	0.20
G	0.50	0.70
All Dimensions in mm		

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Mean Rectifying Current (Note 2)	I_O	200	mA
Peak Forward Surge Current 8.3ms Half Sine	I_{FSM}	1.0	A
Power Dissipation (Note 2)	P_d	150	mW
Thermal Resistance, Junction to Ambient Air (Note 2)	$R_{\theta JA}$	667	$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +125	$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Breakdown Voltage	$V_{(BR)R}$	30	—	—	V	$I_R = 150\mu\text{A}$
Forward Voltage Drop	V_F	—	—	0.35 0.50	V	$I_F = 20\text{mA}$ $I_F = 200\text{mA}$
Peak Reverse Current (Note 3)	I_R	—	—	150 30	μA μA	$V_R = 30\text{V}$ $V_R = 10\text{V}$
Total Capacitance	C_T	—	20	—	pF	$V_R = 0\text{V}, f = 1.0\text{MHz}$

Ordering Information (Note 4)

Device	Packaging	Shipping
SDM20U30-7	SOD-523	3000/Tape & Reel

- Note:
1. If lead-bearing terminal plating is required, please contact your Diodes Inc. sales representative for availability and minimum order details.
 2. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 3. Short duration pulse test used so as to minimize self-heating effect.
 4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

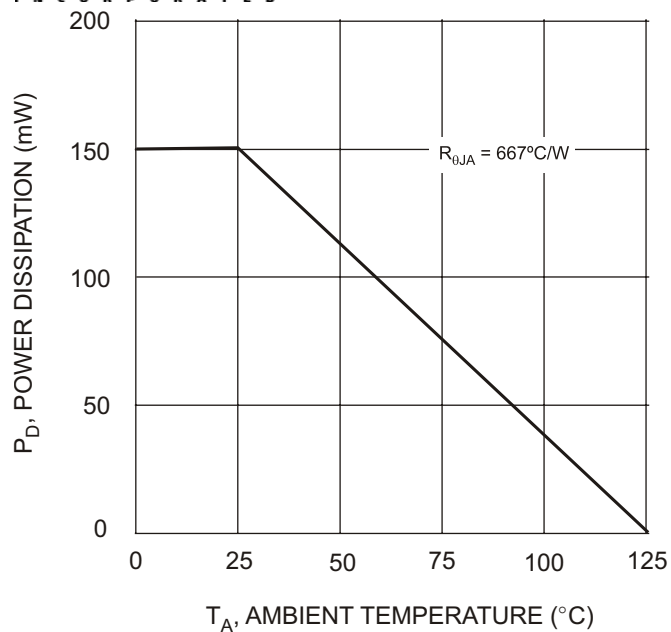


Fig. 1 Derating Curve

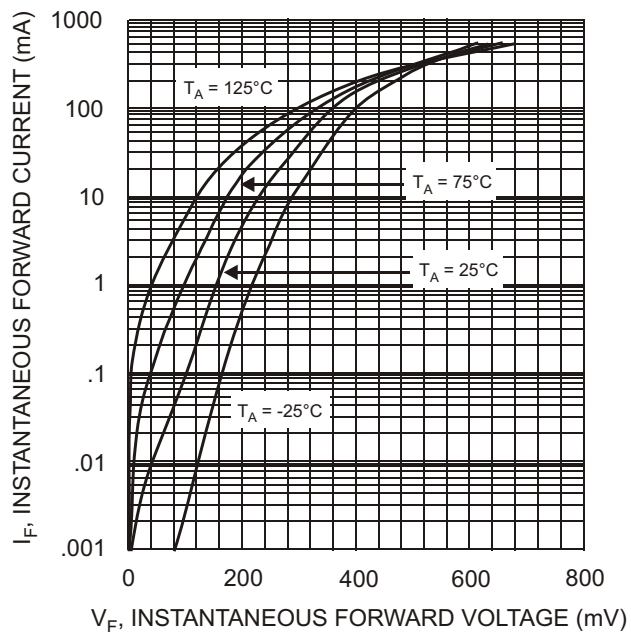


Fig. 2 Typical Forward Characteristics

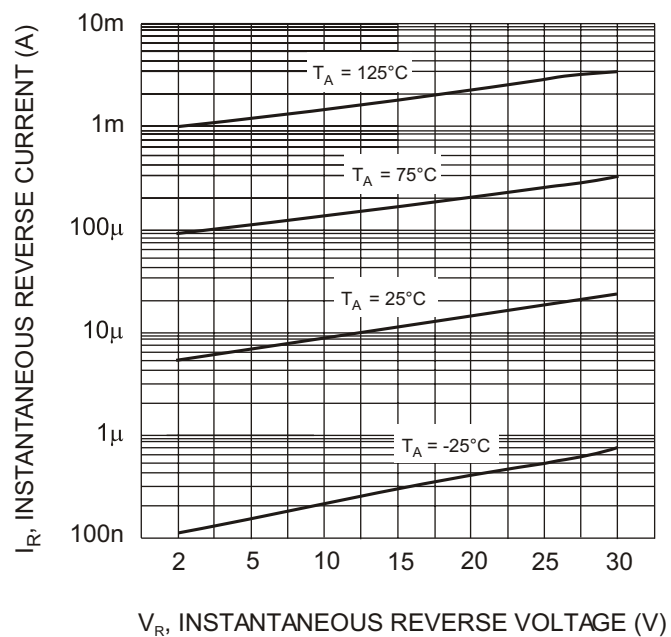


Fig. 3 Typical Reverse Characteristics

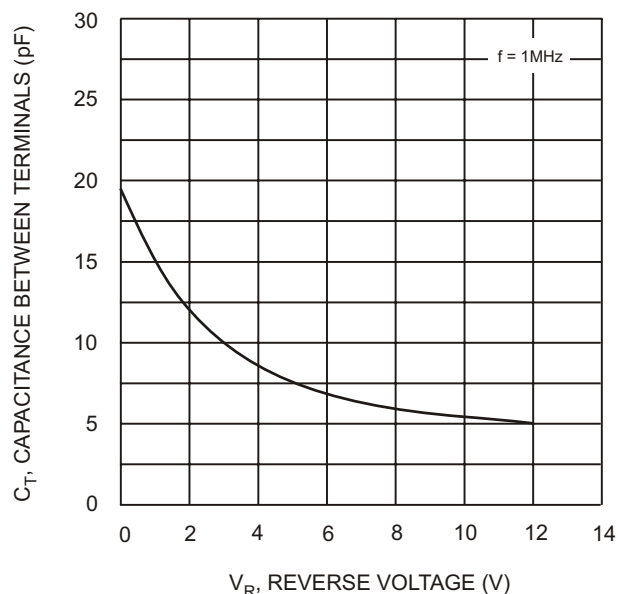


Fig. 4 Typical Capacitance Between Terminals Characteristics