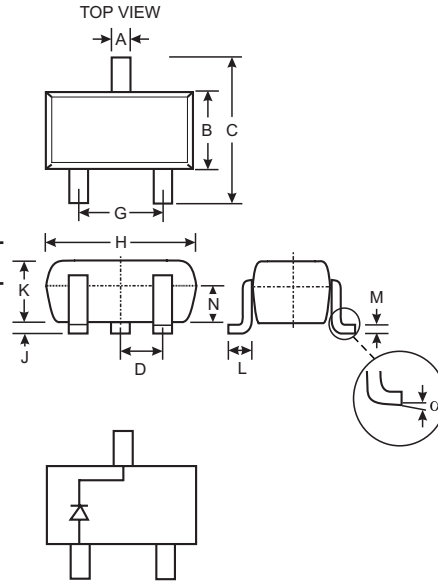


Features

- Ultra-Small Surface Mount Package
- Low Forward Voltage Drop
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection
- **Lead Free/RoHS Compliant (Note 3)**
- **Qualified to AEC-Q101 Standards for High Reliability**

Mechanical Data

- Case: SOT-523
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Polarity: See Diagram
- Marking: LG (See Page 2)
- Weight: 0.002 grams (approximate)
- Ordering Information, See Page 2



SOT-523			
Dim	Min	Max	Typ
A	0.15	0.30	0.22
B	0.75	0.85	0.80
C	1.45	1.75	1.60
D	—	—	0.50
G	0.90	1.10	1.00
H	1.50	1.70	1.60
J	0.00	0.10	0.05
K	0.60	0.80	0.75
L	0.10	0.30	0.22
M	0.10	0.20	0.12
N	0.45	0.65	0.50
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
Forward Continuous Current (Note 1)	I _{FM}	100	mA
Forward Surge Current @ t < 8.3ms	I _{FSM}	1.0	A
Power Dissipation (Note 1)	P _d	120	mW
Thermal Resistance Junction to Ambient Air (Note 1)	R _{θJA}	833	°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	V _F	—	370 470	450 600	mV	I _F = 10mA I _F = 50mA
Reverse Leakage Current (Note 2)	I _R	—	0.07	1.0	μA	V _R = 10V
Total Capacitance	C _T	—	6.0	—	pF	V _R = 10V, f = 1.0MHz

- Notes:
1. Device mounted on FR-4 PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 2. Short duration test pulse to minimize self-heating effect.
 3. No purposefully added lead.

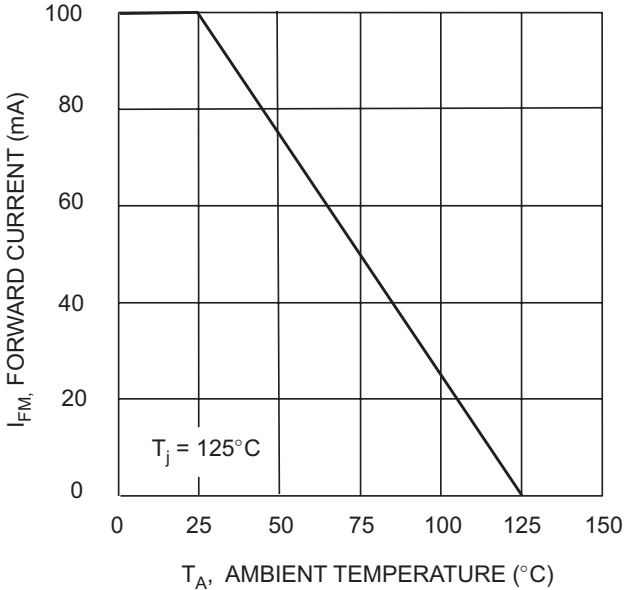


Fig. 1 Forward Current Derating Curve

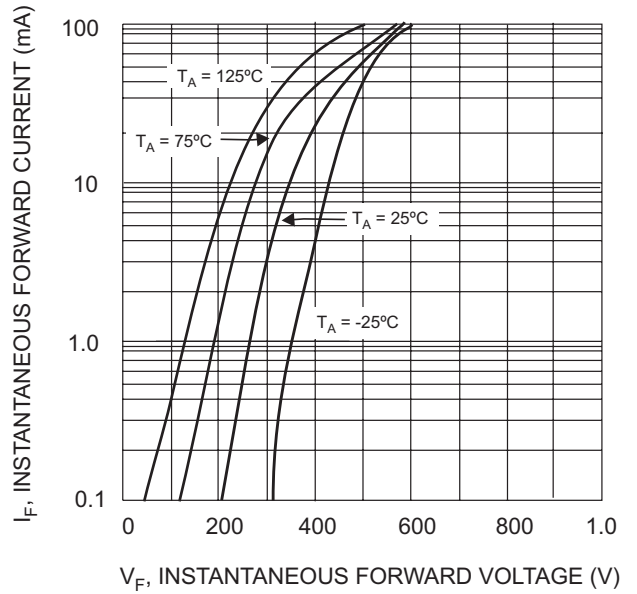


Fig. 2 Typical Forward Characteristics

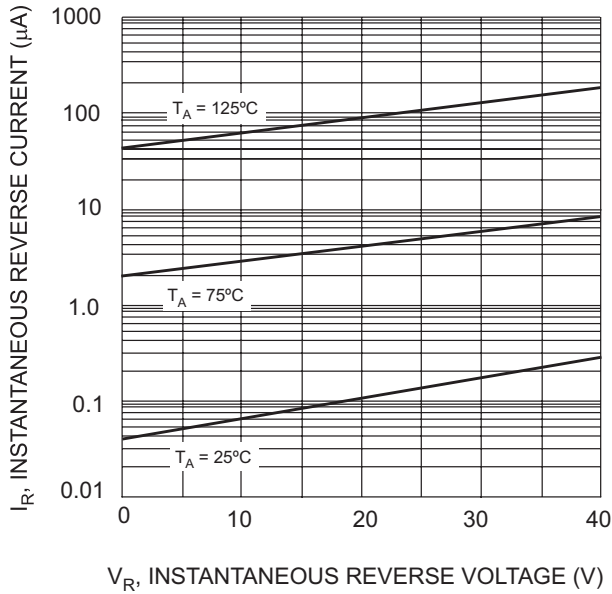


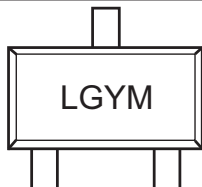
Fig. 3 Typical Reverse Characteristics

Ordering Information (Note 4)

Device	Packaging	Shipping
SDM10P45-7-F	SOT-523	3000/Tape & Reel

Notes: 4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



LG = Product Type Marking Code
 YM = Date Code Marking
 Y = Year (ex: T = 2006)
 M = Month (ex: 9 = September)

Date Code Key

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Code	N	P	R	S	T	U	V	W	X	Y	Z

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

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