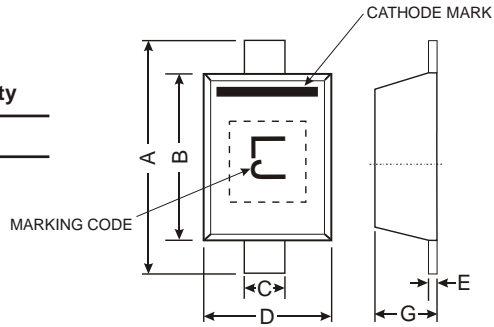


Features

- Low Forward Voltage Drop
- Guard Ring Die Construction for Transient Protection
- Ideal for low logic level applications
- Low Capacitance
- **Lead Free By Design/RoHS Compliant (Note 1)**
- **Qualified to AEC-Q101 Standards for High Reliability**

Mechanical Data

- Case: SOD-523
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminal Connections: Cathode Band
- Terminals: Finish - Matte Tin annealed over Alloy 42 leadframe. Solderable per MIL-STD-202, Method 208
- Marking Code: LJ
- Ordering Information: See Last Page
- Weight: 0.002 grams (approximate)



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	0.55	0.65
All Dimensions in mm		

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Maximum Peak Reverse Voltage	V _{RM}	45	V
Reverse Voltage	V _R	40	V
RMS Reverse Voltage	V _{R(RMS)}	28	V
Average Forward Current	I _O	100	mA
Maximum (Peak) Forward Current	I _{FM}	300	mA
Non-Repetitive Peak Forward Surge Current @ t = 10ms	I _{FSM}	1	A
Operating and Storage Temperature Range	T _j , T _{STG}	-40 to +125	°C

Thermal Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 2)	P _d	150	mW
Thermal Resistance, Ambient Air (Note 2)	R _{JA}	667	°C/W

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Breakdown Voltage (Note 3)	V _{(BR)R}	30			V	I _R = 100µA
Forward Voltage Drop	V _F		280 360 470 580	550 800	mV	I _F = 1.0mA I _F = 15mA I _F = 50mA I _F = 100mA
Reverse Current (Note 3)	I _R			1.0	µA	V _R = 25V
Total Capacitance	C _T		7	15	pF	V _R = 10V, f = 1.0 MHz

- Note:
1. No purposefully added lead.
 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.

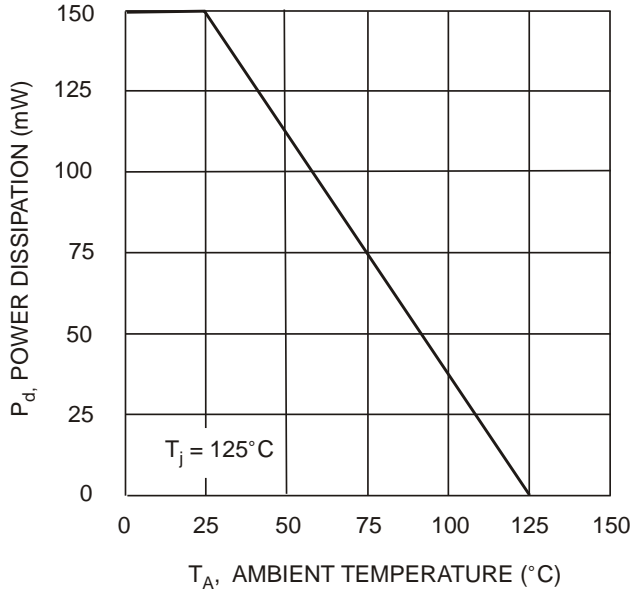


Fig. 1 Derating Curve

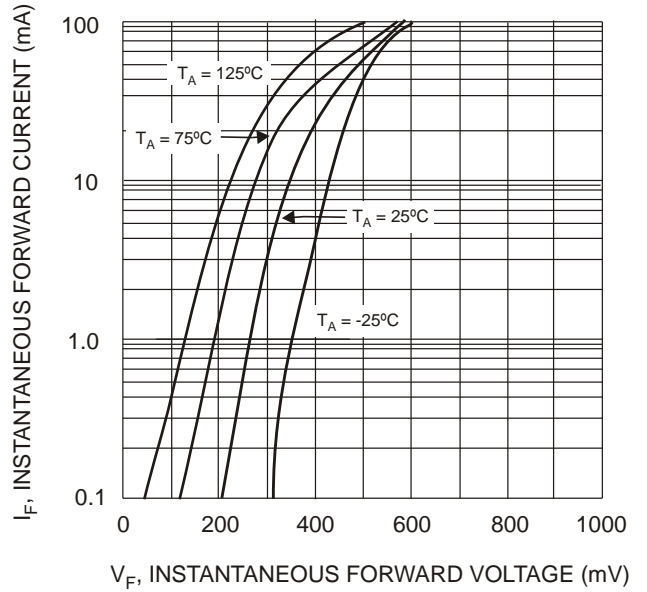


Fig. 2 Typical Forward Characteristics

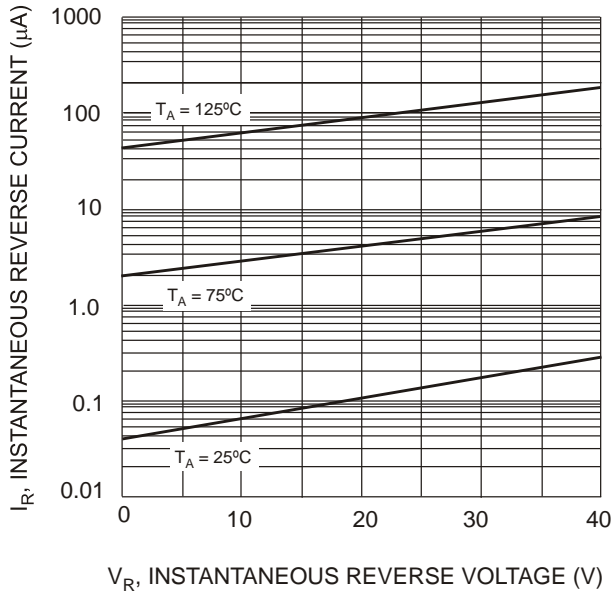


Fig. 3 Typical Reverse Characteristics

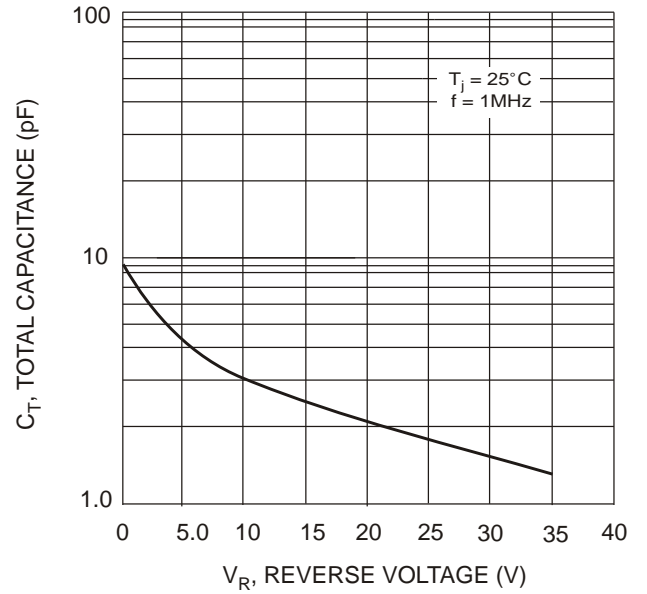


Fig. 4 Total Capacitance vs. Reverse Voltage

Ordering Information (Note 4)

Device	Packaging	Shipping
SDM10U45-7	SOD-523	3000/Tape & Reel
SDM10U45-76K	SOD-523	6000/Tape & Reel

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