



SDM10U45

SURFACE MOUNT SCHOTTKY BARRIER DIODE

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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 .
- "Green" Device, Note 4 and 5

Mechanical Data

- Case: SOD-523
- Case Material: Molded Plastic, "Green" Molding . Compound, Note 5. 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)

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	lo	100	mA
Maximum (Peak) Forward Current	I _{FM}	300	mA
Non-Repetitive Peak Forward Surge Current @ $t \le 10ms$	I _{FSM}	1	А

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 2)	Pd	150	mW
Thermal Resistance, Ambient Air (Note 2)	R _{0JA}	667	°C/W
Operating and Storage Temperature Range	T _{j,} T _{STG}	-40 to +125	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

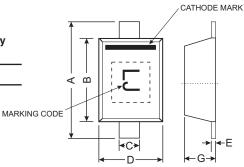
Characteristic	Symbol	Min	Тур	Max	Unit	Test Conditions
Reverse Breakdown Voltage (Note 3)	V _{(BR)R}	30		—	V	I _R = 100μA
Forward Voltage Drop	VF	_	280 360 470 580	 550 800	mV	$\begin{array}{l} I_F = 1.0mA\\ I_F = 15mA\\ I_F = 50mA\\ I_F = 100mA \end{array}$
Reverse Current (Note 3)	IR			1.0	μA	$V_R = 25V$
Total Capacitance	CT	—	4	15	pF	V _R = 10V, f = 1.0 MHz

1. No purposefully added lead. Note:

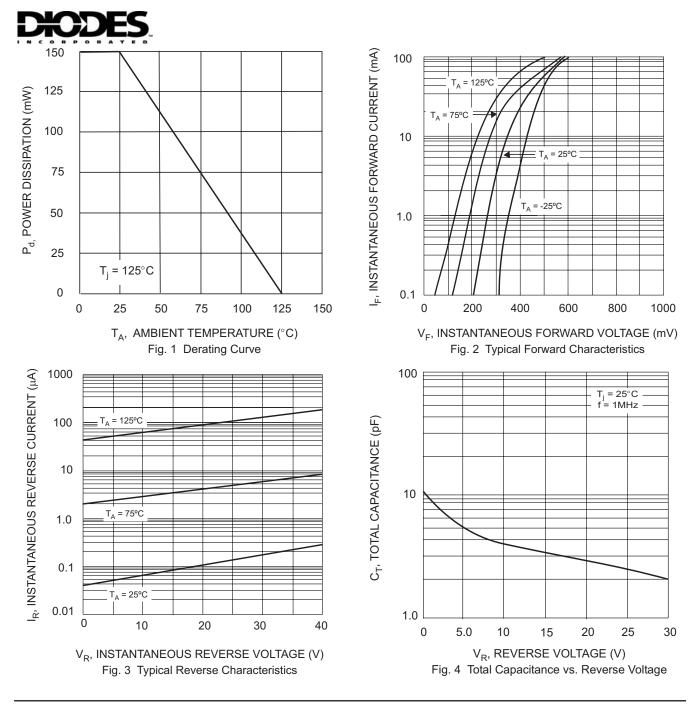
2. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf. @ T_A = 25°C.

3. Short duration pulse test used so as to minimize self-heating effect.

- 4. Diodes Inc.'s "Green" Policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
- 5. Product manufactured with date code 0609 (week 9, 2006) and newer are built with Green Molding Compound. Product manufactured prior to date code 0609 are built with Non-Green Molding Compound and may contain Halogens or Sb2O3 Fire Retardants.



	SOD-523			
Dim	Min	Max		
Α	1.50	1.70		
В	1.10	1.30		
С	0.25	0.35		
D	0.70	0.90		
E	0.10	0.20		
G	0.55	0.65		
All Dimensions in mm				



Ordering Information (Note 5 & 6)

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

Note: 5. Product manufactured with date code 0609 (week 9, 2006) and newer are built with Green Molding Compound. Product manufactured prior to date code 0609 are built with Non-Green Molding Compound and may contain Halogens or Sb2O3 Fire Retardants.

6. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.



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