



SDM10U45LP

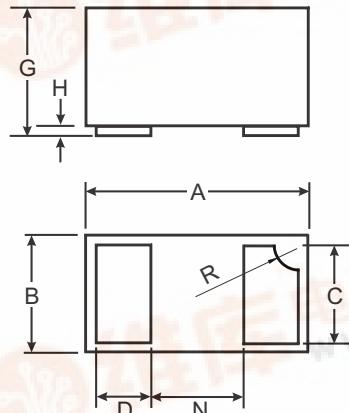
SURFACE MOUNT SCHOTTKY BARRIER DIODE

Features

- Low Forward Voltage Drop
- Guard Ring Die Construction for Transient Protection
- Low Capacitance
- Lead Free By Design/RoHS Compliant (Note 1)
- "Green" Device (Note 2)
- Qualified to AEC-Q101 Standards for High Reliability

Mechanical Data

- Case: DFN1006-2
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminal Connections: Cathode Dot
- Terminals: Finish — NiPdAu annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208
- Marking Code: LJ, Dot Denotes Cathode Side
- Ordering Information: See Last Page
- Weight: 0.001 grams



DFN1006-2			
Dim	Min	Max	Typ
A	0.95	1.075	1.00
B	0.55	0.675	0.60
C	0.45	0.55	0.50
D	0.20	0.30	0.25
G	0.47	0.53	0.50
H	0	0.05	0.03
N	—	—	0.40
R	0.05	0.15	0.10

All Dimensions in mm

Maximum Ratings @ $T_A = 25^\circ\text{C}$ 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_0	100	mA
Maximum (Peak) Forward Current	I_{FM}	300	mA
Non-Repetitive Peak Forward Surge Current @ $t \leq 10\text{ms}$	I_{FSM}	1	A
Operating and Storage Temperature Range	T_J, T_{STG}	-40 to +125	°C

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

Characteristic	Symbol	Value	Unit
Power Dissipation	P_d	250	mW
Thermal Resistance, Ambient Air	$R_{\theta JA}$	400	°C/W

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Breakdown Voltage (Note 3)	$V_{(BR)R}$	30	—	—	V	$I_R = 100\mu\text{A}$
Forward Voltage Drop	V_F	—	280 360 470 580	— — 550 800	mV	$I_F = 1.0\text{mA}$ $I_F = 15\text{mA}$ $I_F = 50\text{mA}$ $I_F = 100\text{mA}$
Reverse Current (Note 3)	I_R	—	—	1.0	μA	$V_R = 25\text{V}$
Total Capacitance	C_T	—	7	15	pF	$V_R = 10\text{V}$, $f = 1.0\text{ MHz}$

Note: 1. No purposefully added lead.
2. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
3. Short duration pulse test used so as to minimize self-heating effect.

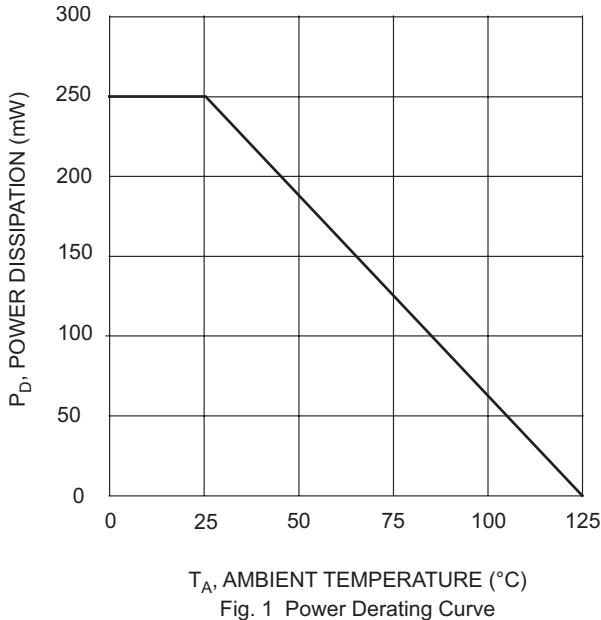


Fig. 1 Power Derating Curve

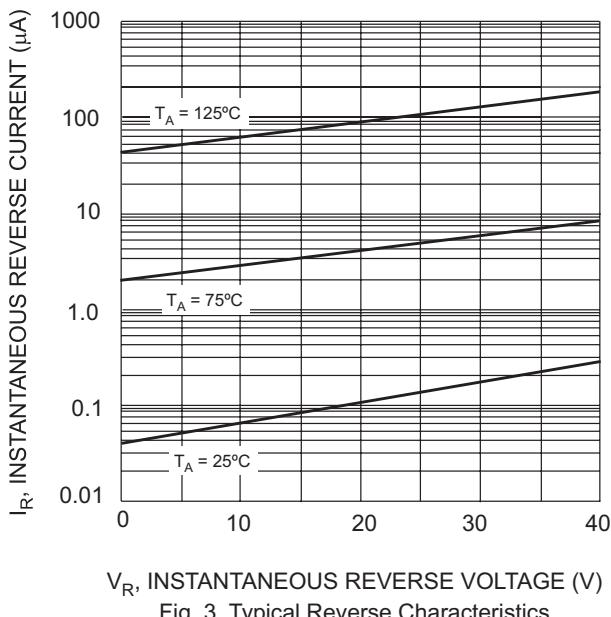


Fig. 3 Typical Reverse Characteristics

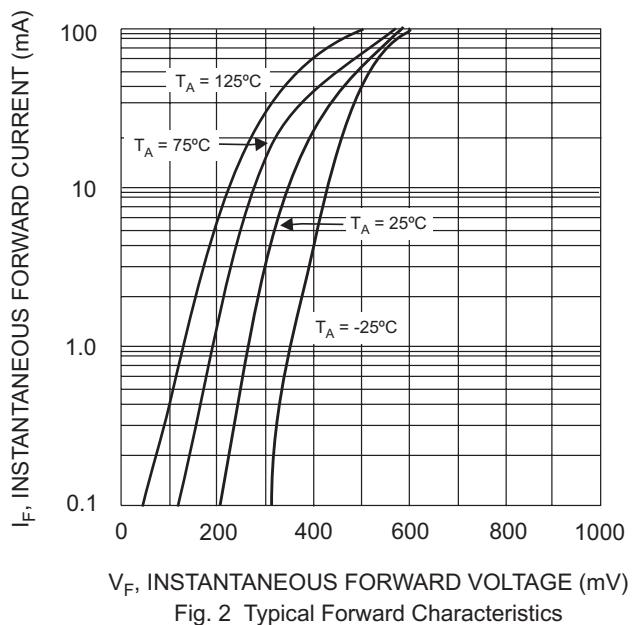


Fig. 2 Typical Forward Characteristics

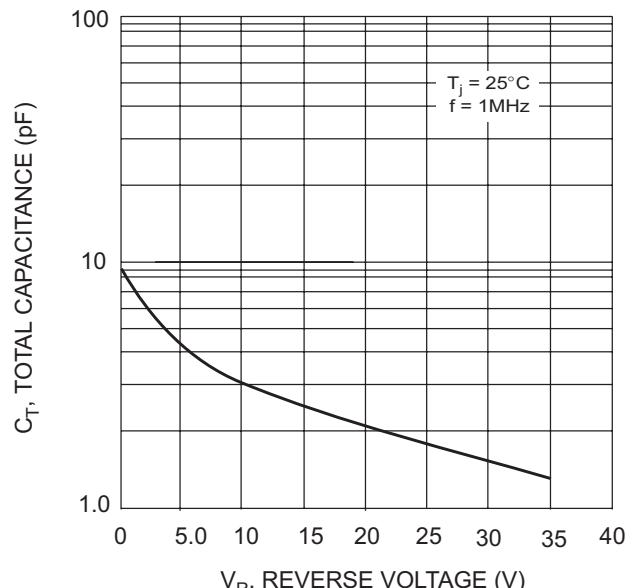


Fig. 4 Total Capacitance vs. Reverse Voltage

Ordering Information (Note 4)

Device	Packaging	Shipping
SDM10U45LP-7	DFN1006-2	3000/Tape & Reel

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

Marking Information



LJ = Product Type Marking Code, Dot Denotes Cathode Side



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