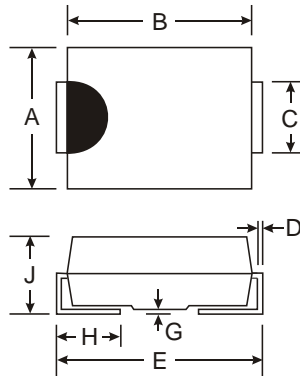


**Features**

- Glass Passivated Die Construction
- Super-Fast Recovery Time For High Efficiency
- Low Forward Voltage Drop and High Current Capability
- Surge Overload Rating to 75A Peak
- Ideally Suited for Automated Assembly
- **Lead Free Finish/RoHS Compliant (Note 4)**



SMC		
Dim	Min	Max
A	5.59	6.10
B	6.60	7.11
C	2.75	3.18
D	0.15	0.31
E	7.75	8.13
G	0.10	0.20
H	0.76	1.52
J	2.00	2.41
All Dimensions in mm		

**Mechanical Data**

- Case: SMC
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208
- Marking: U3D
- Polarity: Cathode Band or Cathode Notch
- Weight: 0.21 grams (approximate)

**Maximum Ratings and Electrical Characteristics** @ T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	200	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	140	V
Average Rectified Output Current @ T <sub>L</sub> = 140°C	I <sub>O</sub>	3.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	75	A
Forward Voltage @ I <sub>F</sub> = 3.0A, T <sub>J</sub> = 25°C @ I <sub>F</sub> = 3.0A, T <sub>J</sub> = 150°C	V <sub>FM</sub>	0.875 0.71	V
Peak Reverse Current at Rated DC Blocking Voltage @ T <sub>J</sub> = 25°C @ T <sub>J</sub> = 150°C	I <sub>RM</sub>	5.0 100	µA
Reverse Recovery Time (Note 3)	t <sub>rr</sub>	25	ns
Maximum Forward Recovery Time (Note 5)	t <sub>fr</sub>	25	ns
Typical Total Capacitance (Note 2)	C <sub>T</sub>	45	pF
Typical Thermal Resistance, Junction to Lead (Note 1)	R <sub>JL</sub>	11	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175	°C

- Notes:
1. Unit mounted on PC board with 5.0 mm<sup>2</sup> (0.013 mm thick) copper pads as heat sink.
  2. Measured at 1.0MHz and applied reverse voltage of 0V DC.
  3. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 0.25A. See Figure 5.
  4. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.
  5. Measured with I<sub>F</sub> = 1.0A, di/dt = 100A/µs, Recovery to 1.0V.

**NEW PRODUCT**

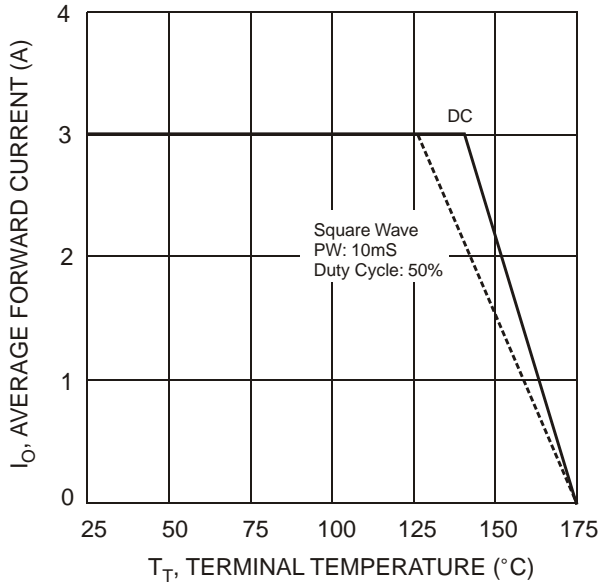


Fig. 1 Forward Current Derating Curve

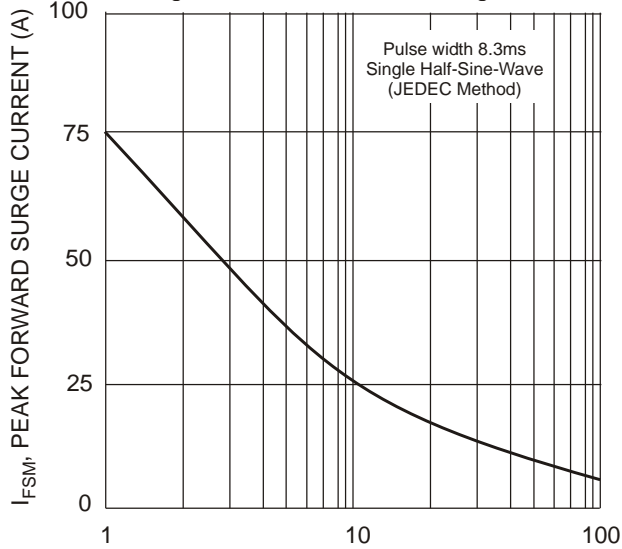


Fig. 3 Surge Current Derating Curve

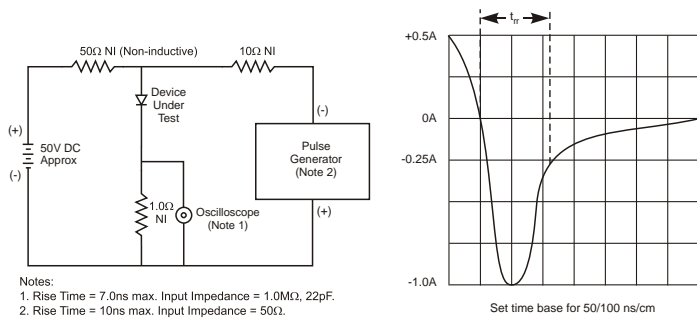


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

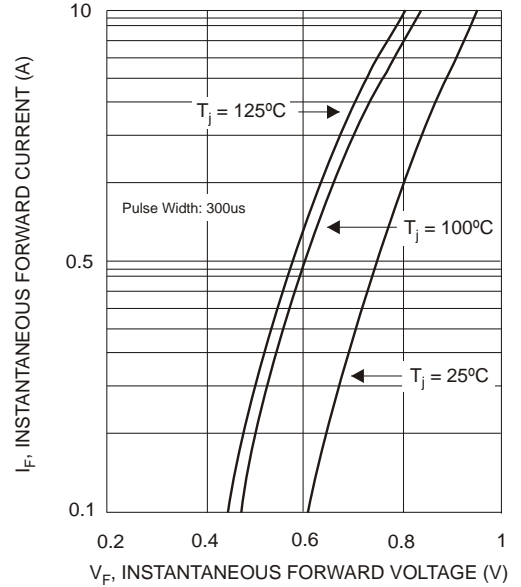


Fig. 2 Typical Forward Characteristics

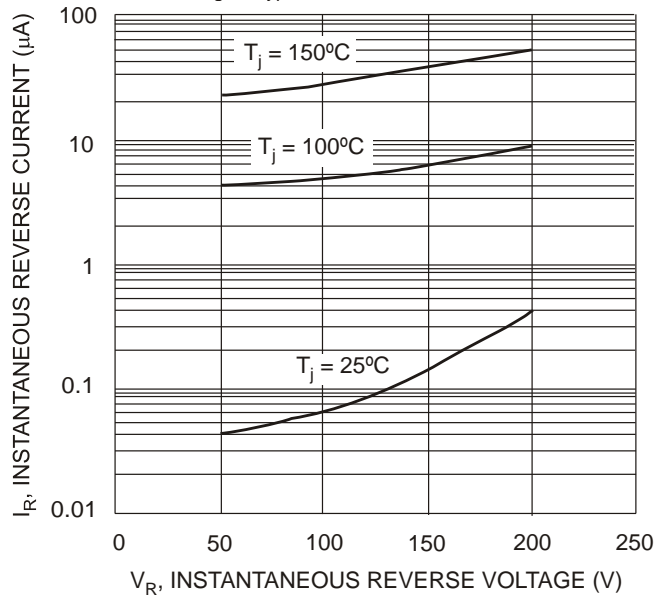


Fig. 4 Typical Reverse Characteristics

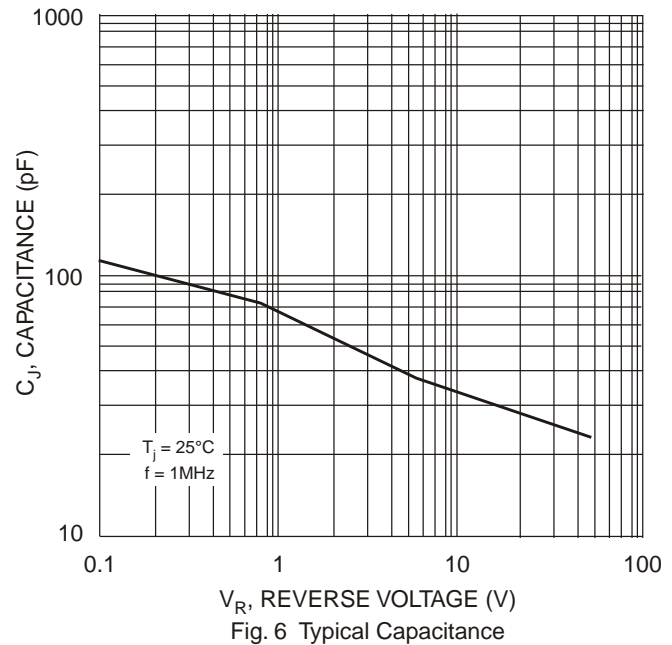


Fig. 6 Typical Capacitance

**Ordering Information** (Note 6)

Device	Packaging	Shipping
MURS320-13-F	SMC	3K/Tape & Reel, 13-inch

Notes: 6. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02007.pdf>

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