

Product Summary (@T_A = +25°C)

V _{RRM} (V)	I _O (A)	V _F (V)	I _R (μA)	t _{RR} (ns)
600	3	1.25	3	50

Description and Applications

The super-fast recovery time of the MURS360Q makes it suitable for boost diodes in discontinuous or critical mode power factor corrections. The device is also intended for use as a freewheeling diode in power supplies and other power switching applications.

Features and Benefits

- Glass Passivated Die Construction
- Super-Fast Recovery Time for High Efficiency
- Surge Overload Rating to 100A Peak
- Ideally Suited for Automated Assembly
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **The MURS360Q is suitable for automotive applications requiring specific change control; this part is AEC-Q101 qualified, PPAP capable, and manufactured in IATF 16949 certified facilities.**

<https://www.diodes.com/quality/product-definitions/>

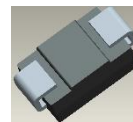
Mechanical Data

- Package: SMC
- Package Material: Molded Plastic.
UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Lead Free Plating (Matte Tin Finish).
Solderable per MIL-STD-202, Method 208 Ⓔ
- Polarity: Cathode Band or Cathode Notch
- Weight: 0.249 grams (Approximate)

SMC (Type C)



Top View

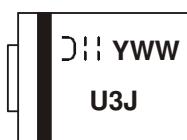


Bottom View

Ordering Information (Note 4)

Orderable Part Number	Package	Packing	
		Qty.	Carrier
MURS360Q	SMC (Type C)	3000	Tape & Reel

- Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
 2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

Marking Information


U3J = Product Type Marking Code
 ⌋⌋ = Manufacturer's Code Marking
 YWW = Date Code Marking
 Y = Last Digit of Year (ex: 4 for 2024)
 WW = Week Code (01 to 52)

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage (Note 6)	V _{RRM} V _{RWM} V _R	600	V
Average Rectified Output Current @T _C = +140°C	I _O	3.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	100	A
Single Pulse Avalanche Energy L = 15mH	E _{AS}	10.8	mJ
ESD Rating	HBM Body Model	4	kV
	Charged Device Model	1	

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Air (Note 5)	R _{θJA}	58	°C/W
Typical Thermal Resistance, Junction to Case (Note 5)	R _{θJC}	10	°C/W
Typical Thermal Resistance, Junction to Lead (Note 5)	R _{θJL}	16	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +175	°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 6)	V _{(BR)R}	600	—	—	V	I _R = 3μA
Forward Voltage	V _F	—	—	1.25	V	I _F = 3A, T _A = +25°C
Leakage Current (Note 6)	I _R	—	—	3.0	μA	V _R = 600V, T _A = +25°C
		—	—	150		V _R = 600V, T _A = +150°C
Reverse-Recovery Time	t _{RR}	—	—	50	ns	I _F = 0.5A, I _R = 1.0A, I _{RR} = 0.25A
Total Capacitance	C _T	—	40	—	pF	V _R = 4V, f = 1.0MHz

Notes: 5. Unit mounted on FR-4 substrate PCB 12mm × 12mm, 2oz.
6. Short duration pulse test used to minimize self-heating effect.

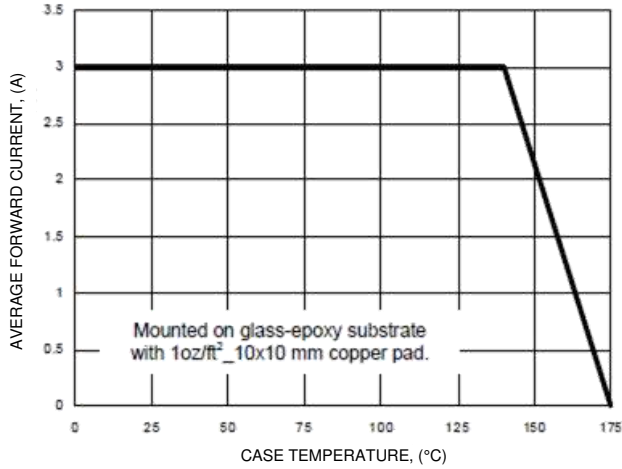


Figure 1. Forward Current Derating

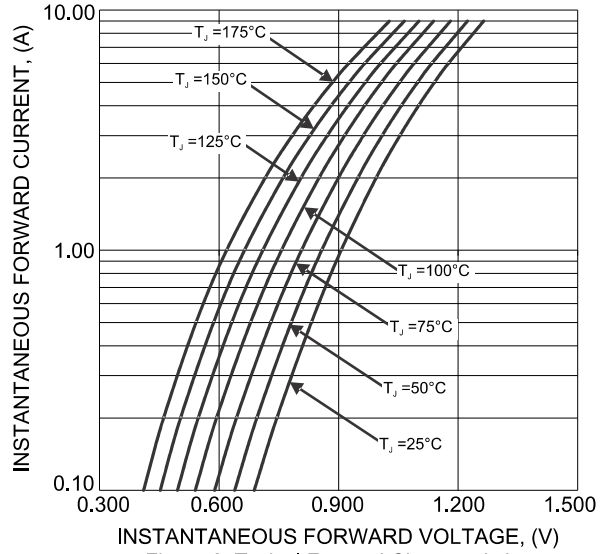


Figure 2. Typical Forward Characteristics

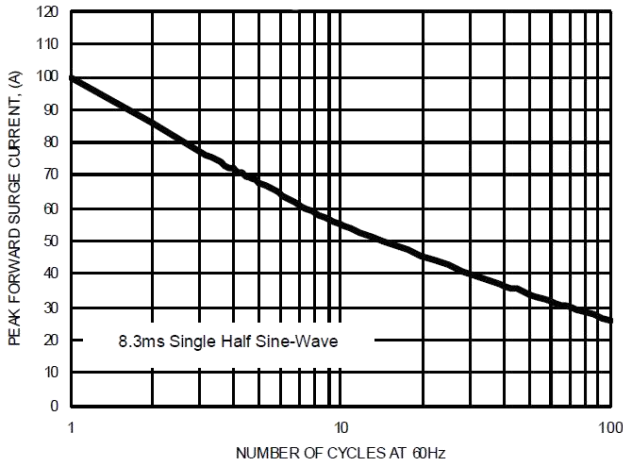


Figure 3. Maximum Non-Repetitive Surge Current

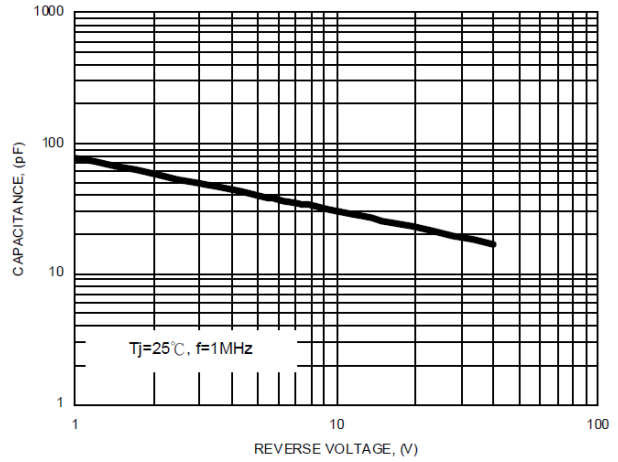


Figure 4. Typical Total Capacitance

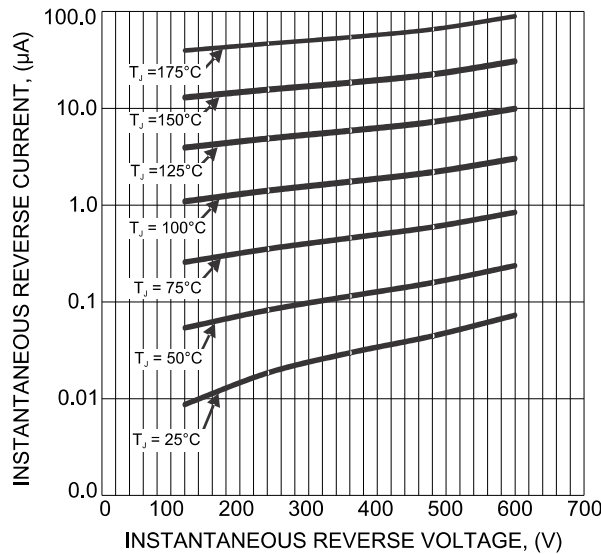
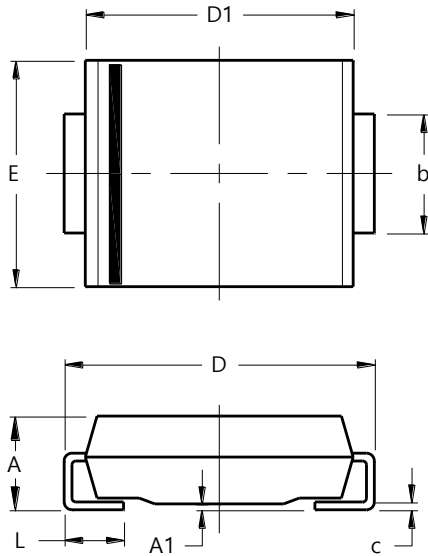


Figure 5. Typical Reverse Characteristics

Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

SMC (Type C)

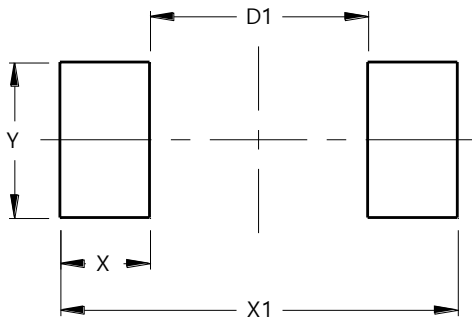


SMC (Type C)			
Dim	Min	Max	Typ
A	2.01	2.50	--
A1	0.05	0.20	--
b	2.92	3.18	--
c	0.15	0.31	--
D	7.75	8.13	--
D1	6.60	7.11	--
E	5.59	6.22	--
L	0.76	1.52	--
All Dimensions in mm			

Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

SMC (Type C)



Dimensions	Value (in mm)
G	5.60
X	2.30
X1	10.20
Y	4.00

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