

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 MURS360 makes it suitable for boost diode in discontinuous or critical mode power factor corrections. The device is also intended for use as a free-wheeling diode in power supplies and other power switching applications.

Features and Benefits

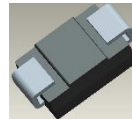
- Glass Passivated Die Construction
- Super-Fast Recovery Time for High Efficiency
- Surge Overload Rating to 100A Peak
- Ideally Suited for Automated Assembly
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](#) or your local Diodes representative.**
<https://www.diodes.com/quality/product-definitions/>

Mechanical Data

- Case: SMC
- Case 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 208③
- Polarity: Cathode Band or Cathode Notch
- Weight: 0.249 grams (Approximate)

SMC (Type C)


Top View

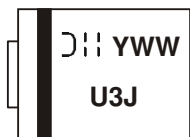


Bottom View

Ordering Information (Note 4)

| Part Number | Compliance | Case | Packaging |
|-------------|------------|--------------|-------------------|
| MURS360-13 | Commercial | SMC (Type C) | 3,000/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: 1 for 2021)
 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 |

Thermal Characteristics

| Characteristic | Symbol | Value | Unit |
|---|-----------------------------------|-------------|------|
| Typical Thermal Resistance, Junction to Air (Note 5) | R _{θJA} | 48 | °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 | — | — | 3.0 150 | μA | V _R = 600V, T _A = +25°C 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 glass epoxy substrate 1oz/ft 10mm x 10mm copper pad.
6. Short duration pulse test used to minimize self-heating effect.

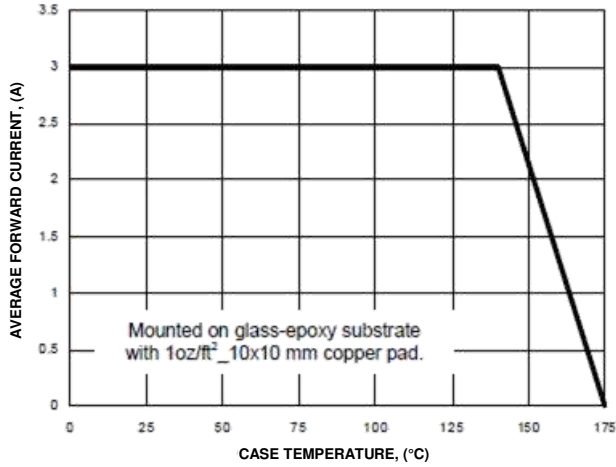


Figure 1. Forward Current Derating

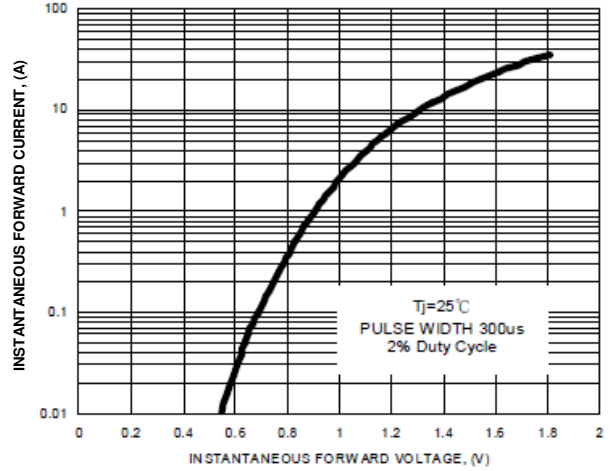


Figure 2. Typical Forward Characteristic

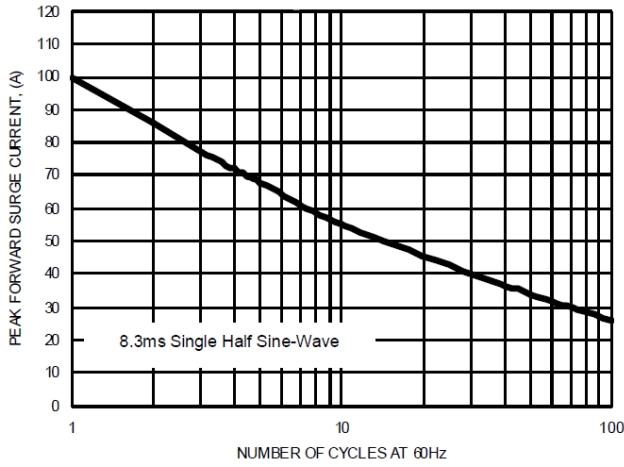


Figure 3. Maximum Non-Repetitive Surge Current

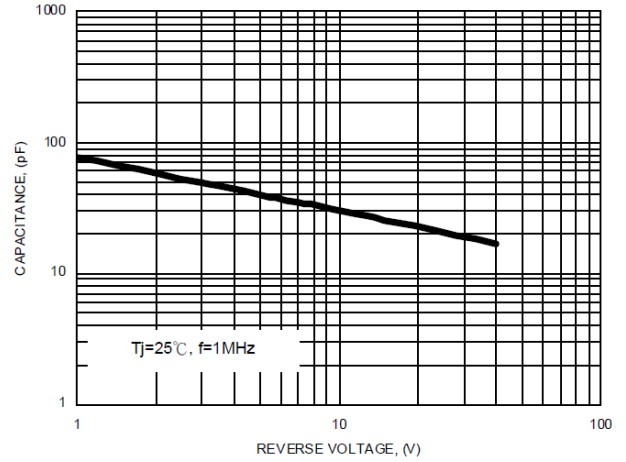


Figure 4. Typical Total Capacitance

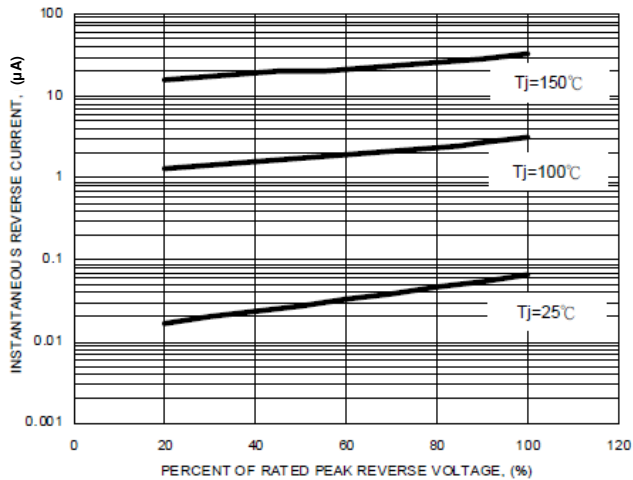
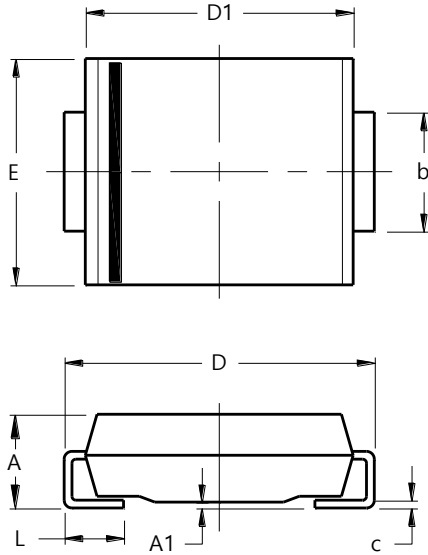


Figure 5. Typical Reverse Characteristics

Package Outline Dimensions

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

SMC (Type C)

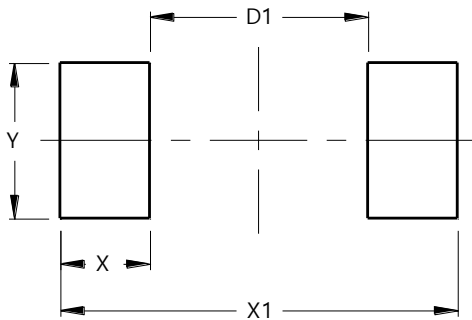


| SMC (Type C) | | | |
|----------------------|------|------|-----|
| Dim | Min | Max | Typ |
| A | 2.01 | 2.50 | -- |
| A1 | 0.05 | 0.20 | -- |
| b | 2.92 | 3.18 | -- |
| c | 0.15 | 0.31 | -- |
| D | 7.75 | 8.13 | -- |
| D1 | 6.60 | 7.11 | -- |
| E | 5.59 | 6.22 | -- |
| L | 0.76 | 1.52 | -- |
| All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