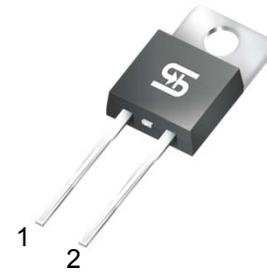


## 8A, 600V Glass Passivated Low VF Super Fast Rectifier

### FEATURES

- Low conduction loss for high efficiency
- Excellent high temperature stability
- High forward surge capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21


**TO-220AC**


### TYPICAL APPLICATIONS

MUR8L60 is especially suited as boost diode in discontinuous mode power factor correction or as a free wheeling diode in other power supply applications.

### MECHANICAL DATA

**Case:** TO-220AC

Molding compound, UL flammability classification rating 94V-0

Part no. with suffix "H" means AEC-Q101 qualified

Packing code with suffix "G" means green compound (halogen-free)

**Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meets JESD 201 class 2 whisker test

**Polarity:** As marked

**Mounting torque:** 0.56 Nm maximum

**Weight:** 1.85g (approximately)

| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)      |                    |                       |      |
|---|--------------------|-----------------------|------|
| PARAMETER   | SYMBOL             | MUR8L60               | UNIT |
| Maximum repetitive peak reverse voltage   | V <sub>RRM</sub>   | 600                   | V    |
| Maximum RMS Voltage   | V <sub>RMS</sub>   | 420                   | V    |
| Maximum DC Blocking Voltage   | V <sub>DC</sub>    | 600                   | V    |
| Maximum average forward rectified current   | I <sub>F(AV)</sub> | 8                     | A    |
| Non-repetitive peak forward surge current<br>8.3ms single sine-wave                               | I <sub>FSM</sub>   | 100                   | A    |
| Maximum instantaneous forward voltage (Note 1)<br>I <sub>F</sub> = 8 A                            | V <sub>F</sub>     | 1.3                   | V    |
| Maximum reverse current @ rated V <sub>R</sub>  | I <sub>R</sub>     | T <sub>J</sub> =25°C  | 5    |
|   |                    | T <sub>J</sub> =125°C | 200  |
| Maximum reverse recovery time<br>I <sub>F</sub> =0.5A, I <sub>R</sub> =1A, I <sub>RR</sub> =0.25A | t <sub>rr</sub>    | 65                    | ns   |
| Typical thermal resistance  | R <sub>θJC</sub>   | 2.5                   | °C/W |
|   | R <sub>θJA</sub>   | 7.0                   |      |
| Operating junction temperature range  | T <sub>J</sub>     | - 55 to +175          | °C   |
| Storage temperature range   | T <sub>STG</sub>   | - 55 to +175          | °C   |

Note 1: Pulse test with PW=300μs, 1% duty cycle

| ORDERING INFORMATION |                 |              |                     |          |           |
|----------------------|-----------------|--------------|---------------------|----------|-----------|
| PART NO.             | PART NO. SUFFIX | PACKING CODE | PACKING CODE SUFFIX | PACKAGE  | PACKING   |
| MUR8L60              | H               | C0           | G                   | TO-220AC | 50 / Tube |

| EXAMPLE       |          |                 |              |                     |                                   |
|---------------|----------|-----------------|--------------|---------------------|-----------------------------------|
| PREFERRED P/N | PART NO. | PART NO. SUFFIX | PACKING CODE | PACKING CODE SUFFIX | DESCRIPTION                       |
| MUR8L60HC0G   | MUR8L60  | H               | C0           | G                   | AEC-Q101 qualified Green compound |

**RATINGS AND CHARACTERISTICS CURVES**

( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

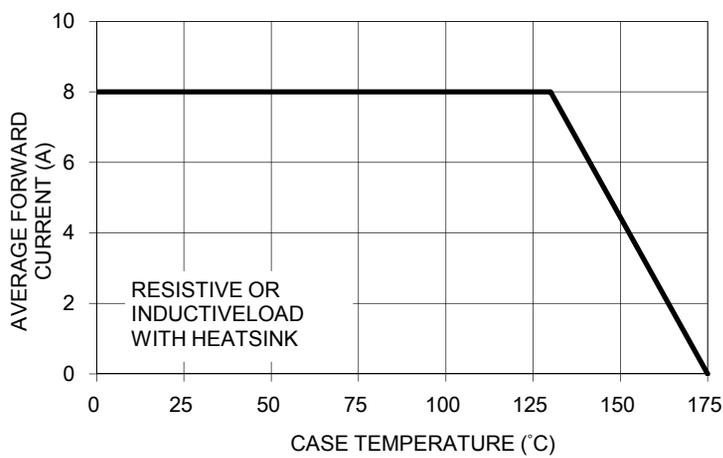


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

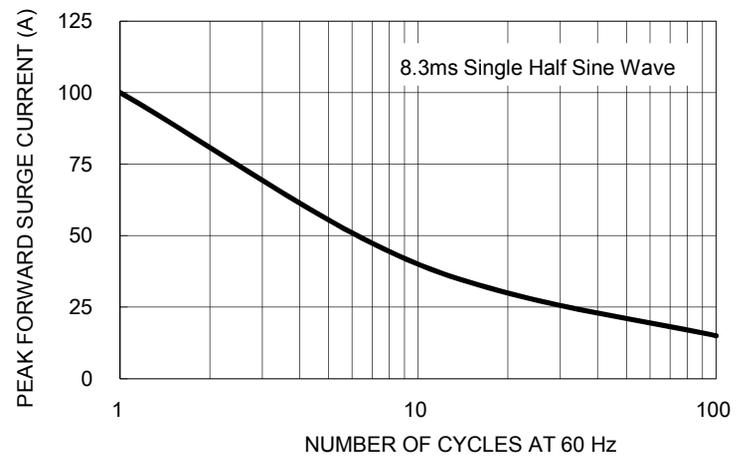


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

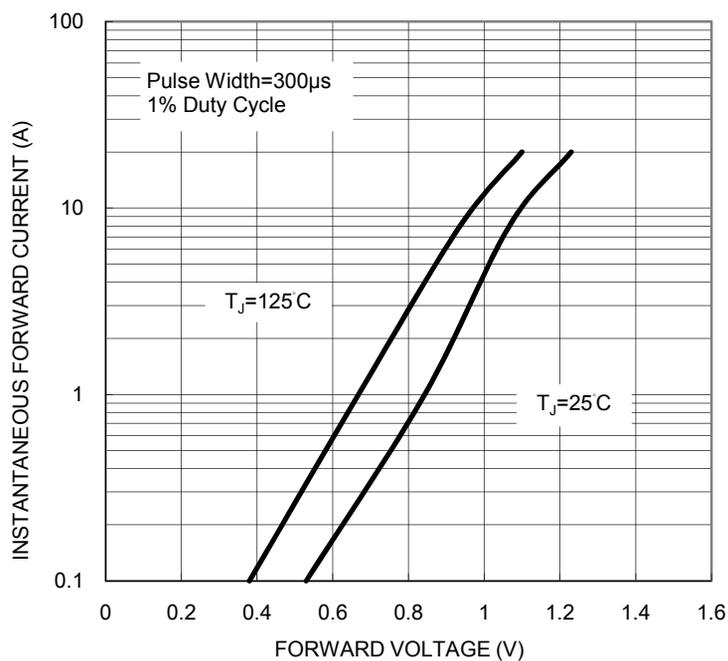


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

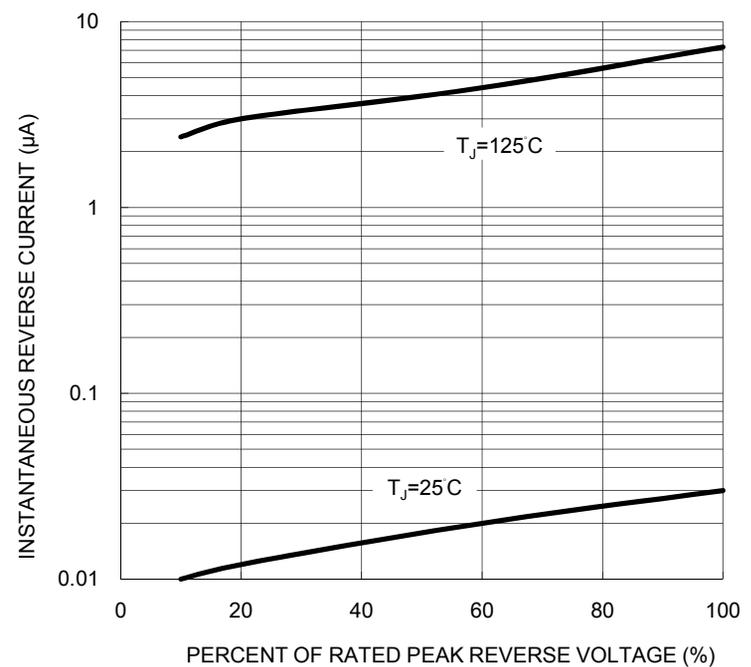
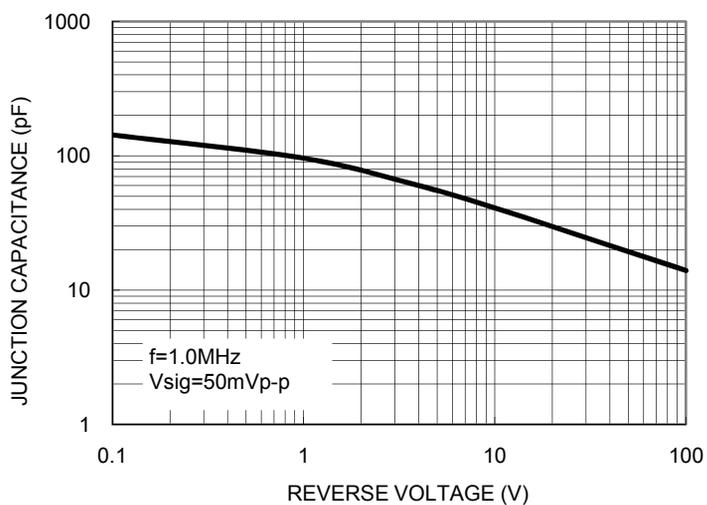
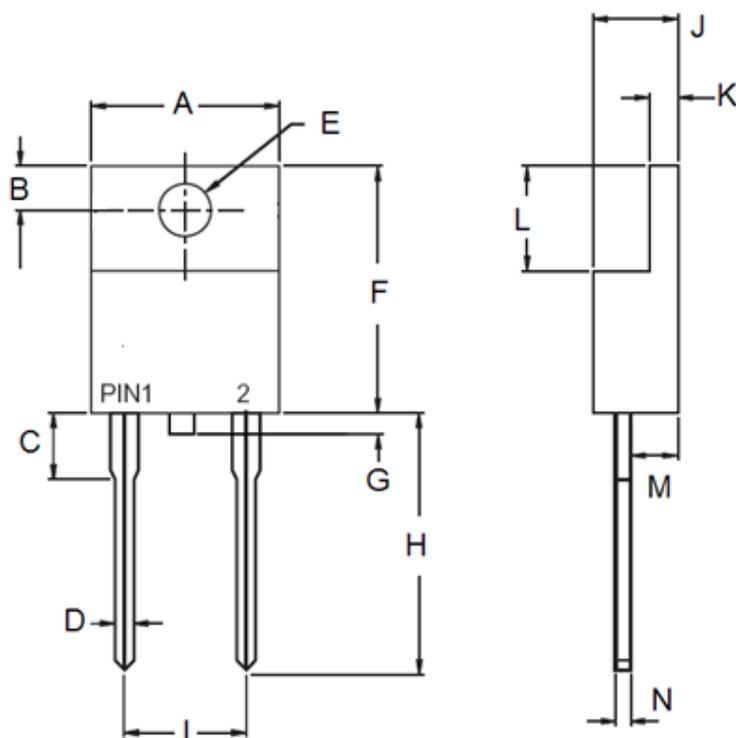


FIG. 5 TYPICAL JUNCTION CAPACITANCE



PACKAGE OUTLINE DIMENSIONS  
**TO-220AC**



| DIM. | Unit (mm) |       | Unit (inch) |       |
|------|-----------|-------|-------------|-------|
|      | Min       | Max   | Min         | Max   |
| A    | -         | 10.50 | -           | 0.413 |
| B    | 2.62      | 3.44  | 0.103       | 0.135 |
| C    | 2.80      | 4.20  | 0.110       | 0.165 |
| D    | 0.68      | 0.94  | 0.027       | 0.037 |
| E    | 3.54      | 4.00  | 0.139       | 0.157 |
| F    | 14.60     | 16.00 | 0.575       | 0.630 |
| G    | 0.00      | 1.60  | 0.000       | 0.063 |
| H    | 13.19     | 14.79 | 0.519       | 0.582 |
| I    | 4.95      | 5.20  | 0.195       | 0.205 |
| J    | 4.42      | 4.76  | 0.174       | 0.187 |
| K    | 1.14      | 1.40  | 0.045       | 0.055 |
| L    | 5.84      | 6.86  | 0.230       | 0.270 |
| M    | 2.20      | 2.80  | 0.087       | 0.110 |
| N    | 0.35      | 0.64  | 0.014       | 0.025 |

MARKING DIAGRAM



- P/N = Specific Device Code
- G = Green Compound
- YWW = Date Code
- F = Factory Code

## Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.