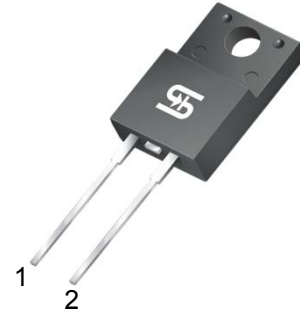# 10A, 600V Glass Passivated Low VF High Efficient Rectifier

## 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

## TYPICAL APPLICATIONS

MURF10L60 is especially suited as boost diode in discontinuous mode power factor correction or as a free wheeling diode in other power supply applications.

**ITO-220AC**

PIN 1
PIN 2
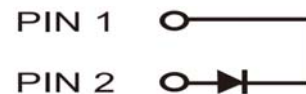
## MECHANICAL DATA

**Case:** ITO-220AC

Molding compound, UL flammability classification rating 94V-0

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

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

Meets JESD 201 class 1A whisker test

**Polarity:** As marked

**Mounting torque:** 0.56 Nm maximum

**Weight:** 1.85g (approximately)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ($T_A$=25°C unless otherwise noted)

| PARAMETER | SYMBOL | | MURF10L60 | UNIT |
|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | | 600 | V |
| Maximum RMS Voltage | $V_{RMS}$ | | 420 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | | 600 | V |
| Maximum average forward rectified current | $I_{F(AV)}$ | | 10 | A |
| Non-repetitive peak forward surge current 8.3ms single sine-wave | $I_{FSM}$ | | 100 | A |
| Maximum instantaneous forward voltage (Note 1) $I_F$= 10 A | $V_F$ | | 1.3 | V |
| Maximum reverse current @ rated $V_R$ | $T_J$=25°C | $I_R$ | 5 | μA |
| | $T_J$=125°C | | 200 | |
| Maximum reverse recovery time $I_F$=0.5A, $I_R$=1A, $I_{RR}$=0.25A | $t_{rr}$ | | 65 | ns |
| Typical thermal resistance | $R_{\theta JC}$ | | 3.5 | °C/W |
| | $R_{\theta JA}$ | | 10 | |
| Operating junction temperature range | $T_J$ | | - 55 to +150 | °C |
| Storage temperature range | $T_{STG}$ | | - 55 to +150 | °C |

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

## ORDERING INFORMATION

| PART NO. | PACKING CODE | PACKING CODE SUFFIX | PACKAGE | PACKING |
|---|---|---|---|---|
| MURF10L60 | C0 | G | ITO-220AC | 50 / Tube |

Note: Whole series with green compound

## EXAMPLE

| EXAMPLE P/N | PART NO. | PACKING CODE | PACKING CODE SUFFIX | DESCRIPTION |
|---|---|---|---|---|
| MURF10L60 C0G | MURF10L60 | C0 | G | Green compound |

## RATINGS AND CHARACTERISTICS CURVES

($T_A$=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE
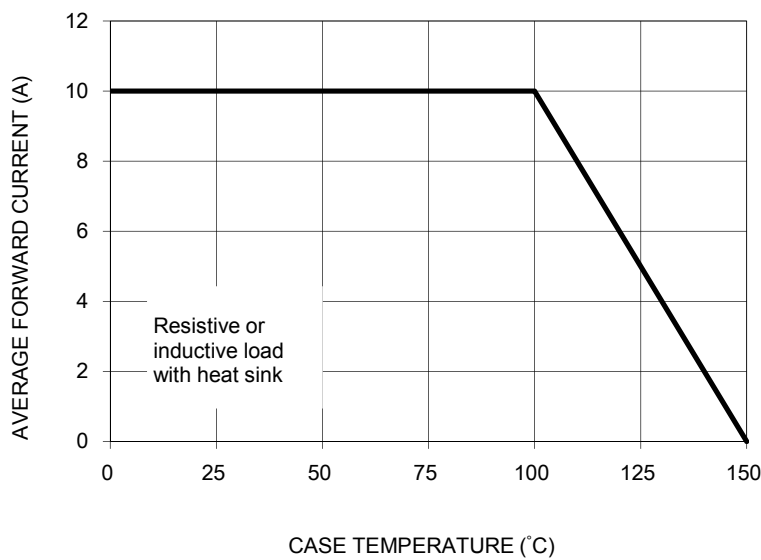


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT
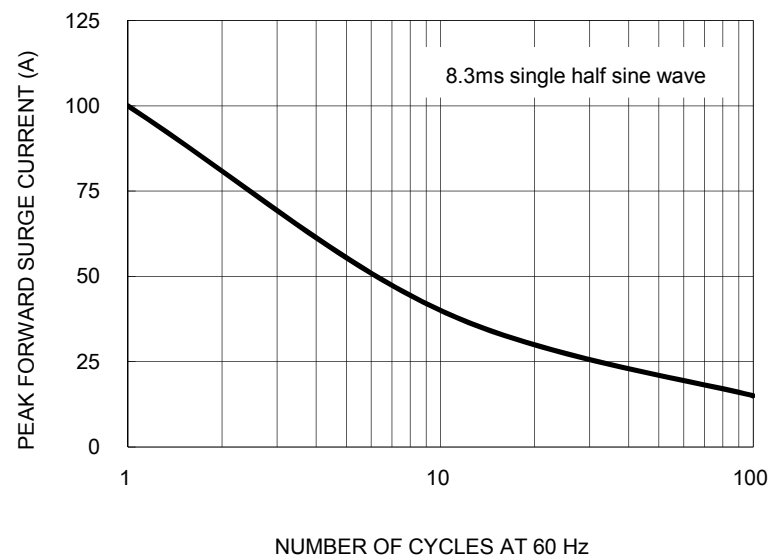


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS
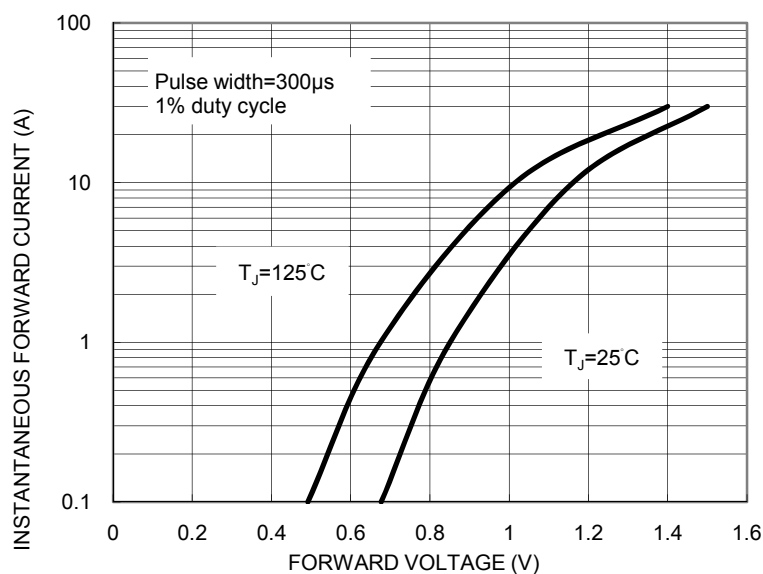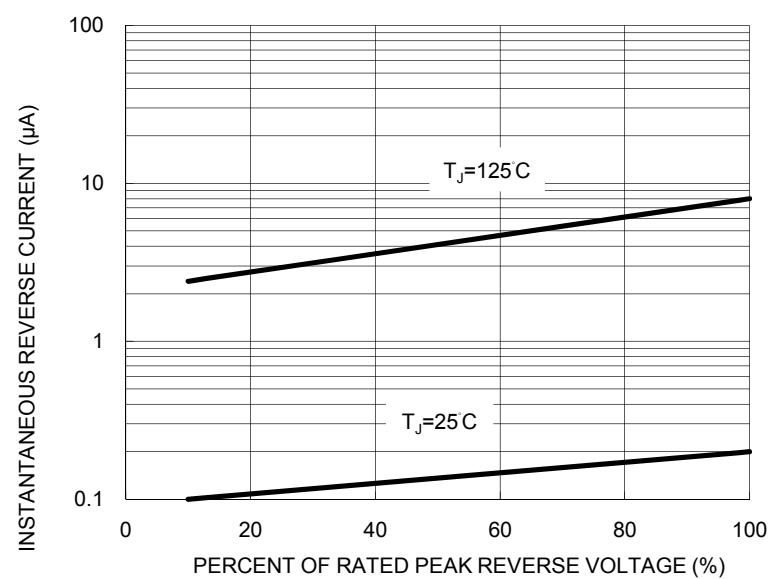


FIG. 4 TYPICAL REVERSE CHARACTERISTICS



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FIG. 5 TYPICAL JUNCTION CAPACITANCE
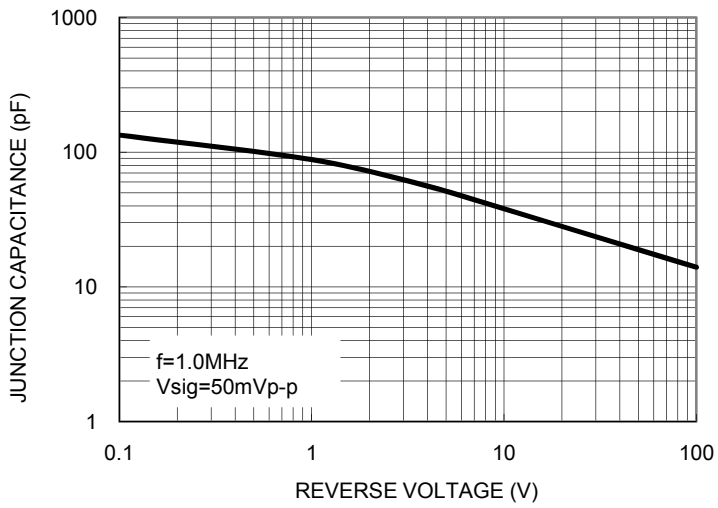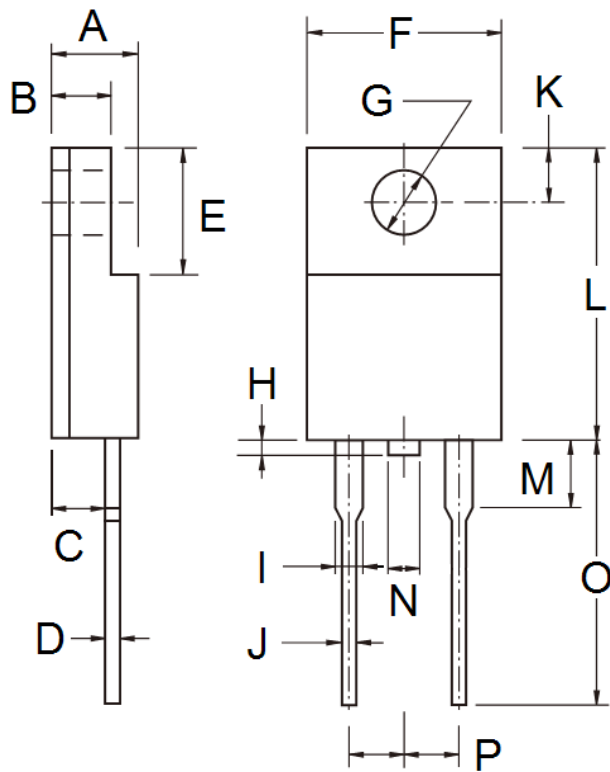


## PACKAGE OUTLINE DIMENSIONS
### ITO-220AC



| DIM. | Unit (mm) | | Unit (inch) | |
|---|---|---|---|---|
| | Min | Max | Min | Max |
| A | 4.30 | 4.70 | 0.169 | 0.185 |
| B | 2.50 | 3.16 | 0.098 | 0.124 |
| C | 2.30 | 2.96 | 0.091 | 0.117 |
| D | 0.46 | 0.76 | 0.018 | 0.030 |
| E | 6.30 | 6.90 | 0.248 | 0.272 |
| F | 9.60 | 10.30 | 0.378 | 0.406 |
| G | 3.00 | 3.40 | 0.118 | 0.134 |
| H | 0.00 | 1.60 | 0.000 | 0.063 |
| I | 0.95 | 1.45 | 0.037 | 0.057 |
| J | 0.50 | 0.90 | 0.020 | 0.035 |
| K | 2.40 | 3.20 | 0.094 | 0.126 |
| L | 14.80 | 15.50 | 0.583 | 0.610 |
| M | - | 4.10 | - | 0.161 |
| N | - | 1.80 | - | 0.071 |
| O | 12.60 | 13.80 | 0.496 | 0.543 |
| P | 4.95 | 5.20 | 0.195 | 0.205 |

## MARKING DIAGRAM



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

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**Notice**

Version: A1601