

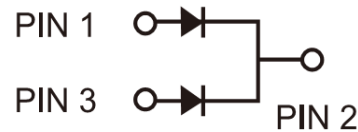
Trench Schottky Rectifier

FEATURES

- Patented Trench Schottky technology
- Excellent high temperature stability
- Low forward voltage
- Lower power loss/ High efficiency
- 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 definition



ITO-220AB



MECHANICAL DATA

Case: ITO-220AB

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - halogen-free

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

Meet JESD 201 class 1A whisker test

Polarity: As marked

Mounting torque: 0.56Nm max.

Weight: 1.7g (approximately)

| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted) | | | | | | |
|---|---------------------|---------------------|--------------|------|------|--------------|
| PARAMETER | | SYMBOL | TSF30U60C | | | UNIT |
| Maximum repetitive peak reverse voltage | | V_{RRM} | 60 | | | V |
| Maximum average forward rectified current | per device | $I_{F(AV)}$ | 30 | | | A |
| | per diode | | 15 | | | |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode | | I_{FSM} | 250 | | | A |
| Peak repetitive reverse surge current (Note 1) | | I_{RRM} | 3 | | | A |
| Isolation voltage from terminal to heatsink t = 1 min | | V_{AC} | 2000 | | | V |
| Breakdown voltage ($I_R = 1.0mA, T_a = 25^\circ C$) | | V_{BR} | MIN. | TYP. | MAX. | V |
| | | | 60 | - | - | |
| Maximum instantaneous forward voltage per diode (Note 2) | $I_F = 15A$ | $T_J = 25^\circ C$ | V_F | - | 0.57 | V |
| | $I_F = 15A$ | $T_J = 125^\circ C$ | V_F | - | 0.53 | |
| Maximum instantaneous reverse current per diode at rated reverse voltage | $T_J = 25^\circ C$ | | I_R | - | 500 | μA |
| | $T_J = 125^\circ C$ | | | - | 60 | mA |
| Typical thermal resistance per diode | | $R_{\theta JC}$ | 3 | | | $^\circ C/W$ |
| Operating junction temperature range | | T_J | - 55 to +150 | | | $^\circ C$ |
| Storage temperature range | | T_{STG} | - 55 to +150 | | | $^\circ C$ |

Note 1: 2.0 μs Pulse Width, f=1.0 kHz

Note 2: Pulse Test with Pulse Width=300 μs , 1% Duty Cycle

| ORDERING INFORMATION | | | | |
|----------------------|--------------|---------------------|-----------|-----------|
| PART NO. | PACKING CODE | GREEN COMPOUND CODE | PACKAGE | PACKING |
| TSF30U60C | C0 | Suffix "G" | ITO-220AB | 50 / Tube |

| EXAMPLE | | | | |
|---------------|-----------|--------------|---------------------|----------------|
| PREFERRED P/N | PART NO. | PACKING CODE | GREEN COMPOUND CODE | DESCRIPTION |
| TSF30U60C C0 | TSF30U60C | C0 | | |
| TSF30U60C C0G | TSF30U60C | C0 | G | Green compound |

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

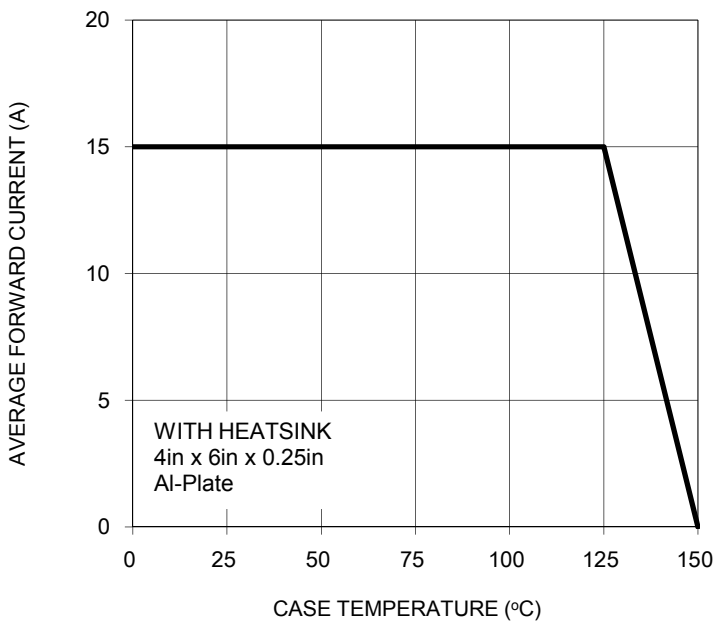


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

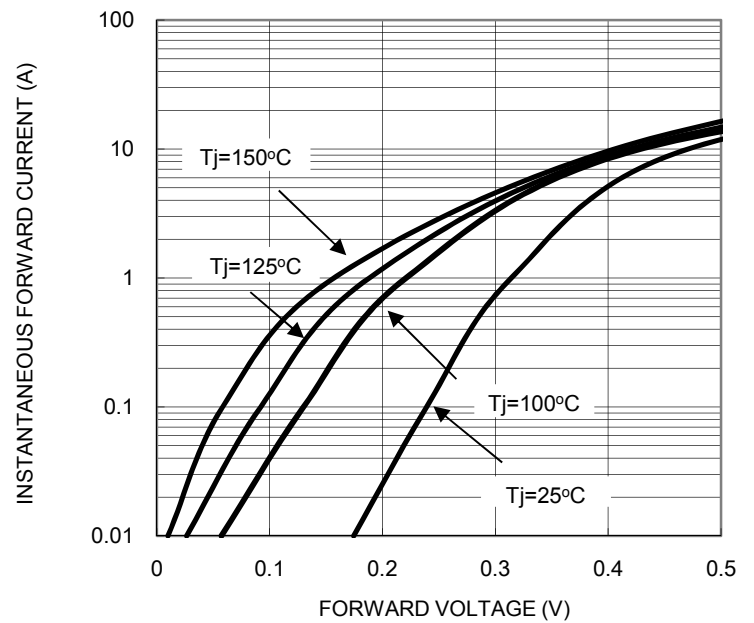


FIG. 3 TYPICAL REVERSE CHARACTERISTICS

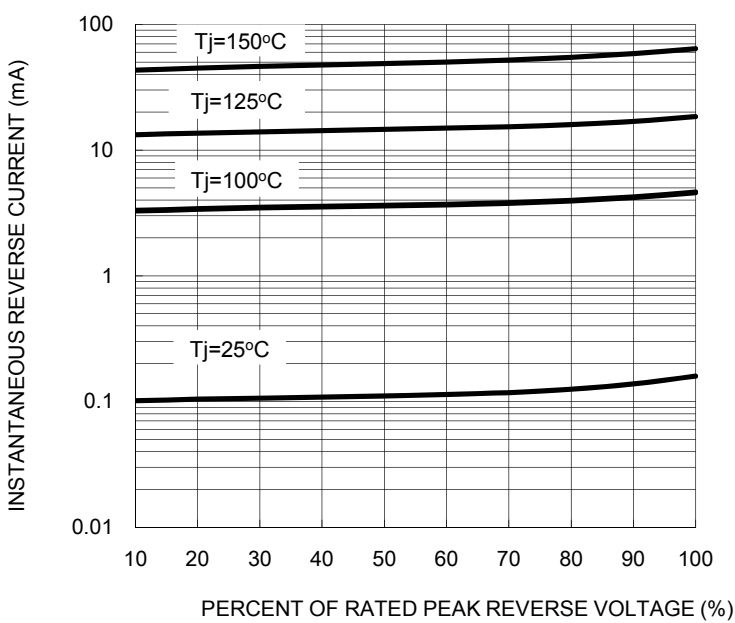
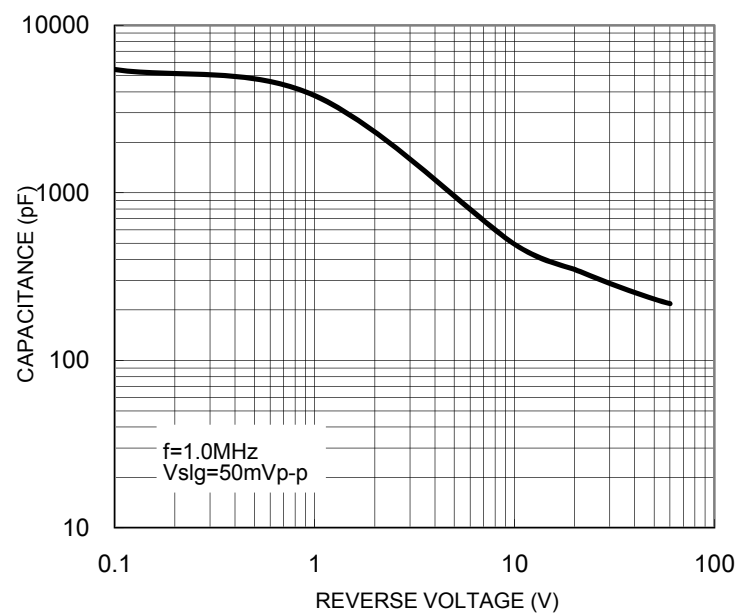
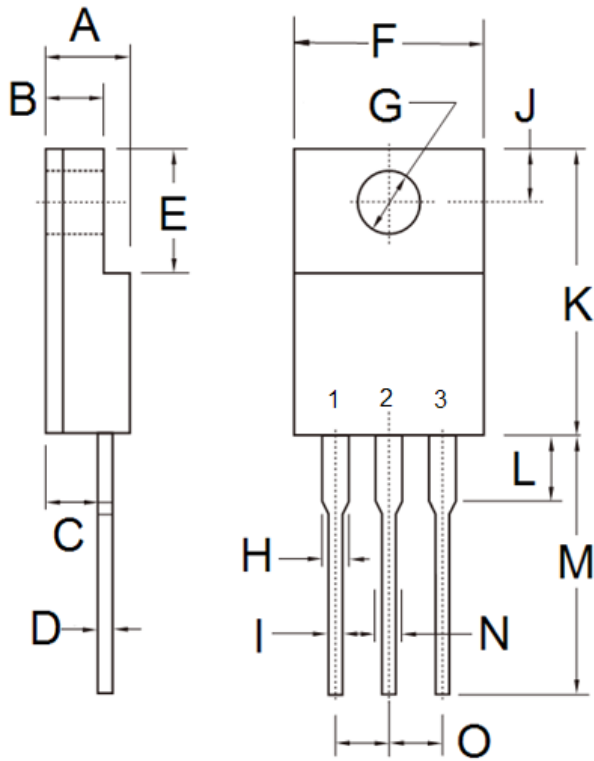


FIG. 4 TYPICAL JUNCTION CAPACITANCE



PACKAGE OUTLINE DIMENSIONS



| 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 | 0.95 | 1.45 | 0.037 | 0.057 |
| I | 0.50 | 0.90 | 0.020 | 0.035 |
| J | 2.40 | 3.20 | 0.094 | 0.126 |
| K | 14.80 | 15.50 | 0.583 | 0.610 |
| L | - | 4.10 | - | 0.161 |
| M | 12.60 | 13.80 | 0.496 | 0.543 |
| N | - | 1.45 | - | 0.057 |
| O | 2.41 | 2.67 | 0.095 | 0.105 |

MARKING DIAGRAM



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

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