



10A, 600V Isolated Ultra Fast Rectifier

FEATURES

- High efficiency, low VF
- High current capability
- High reliability
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21







MECHANICAL DATA

Case: ITO-220AB

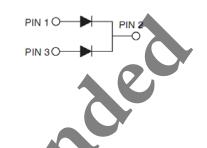
Molding compound: UL flammability classification rating 94V-0 Packing code with suffix "G" means green compound (halogen-free) **Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 2 whisker test

Polarity: As marked

Mounting torque: 0.56 Nm max. **Weight:** 1.7 g (approximately)

ITO-220AB



| MAXIMUM RATINGS AND ELECTRICAL CHAP | RACTERIS | STICS (T _A =25°C unless otherwise noted) | |
|---|--------------------|---|------|
| PARAMETER | SYMBOL | UGF10L08G | 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 | А |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load | I _{FSM} | 70 | А |
| Maximum instantaneous forward voltage (Note 1) I_F = 5 A | V _F | 1.7 | V |
| T _J =25°C | I _R | 10 | μА |
| Maximum reverse current @ rated V _R | | 100 | |
| Maximum reverse recovery time (Note 2) | t _{rr} | 25 | ns |
| Typical thermal resistance | $R_{	heta JC}$ | 4 | °C/W |
| Operating junction temperature range | TJ | - 55 to +150 | °C |
| Storage temperature range | T _{STG} | - 55 to +150 | °C |

Note 1: Pulse test with PW=300 μ s, 1% duty cycle Note 2: Test conditions: I_F =0.5A, I_R =1.0A, I_{RR} =0.25A

Taiwan Semiconductor

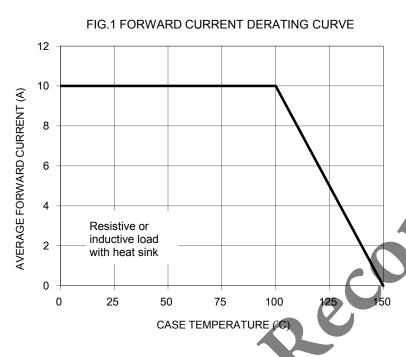
| ORDERING INFORMATION | | | | | |
|-----------------------|--------------|------------------------|-----------|-----------|--|
| PART NO. | PACKING CODE | PACKING CODE SUFFIX | PACKAGE | PACKING | |
| UGF10L08G (Note 1) | C0 | G | ITO-220AB | 50 / Tube | |

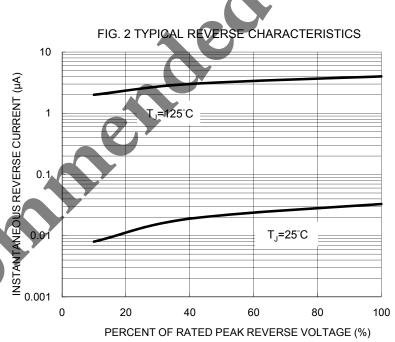
Note 1: Whole series with green compound

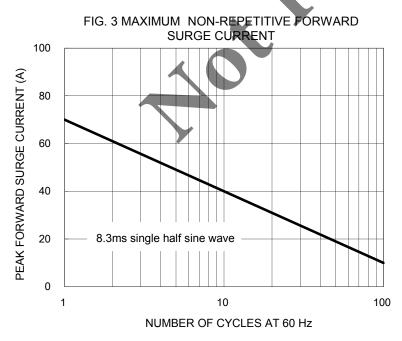
| EXAMPLE | | | | | |
|---------------|-----------|--------------|------------------------|----------------|--|
| EXAMPLE P/N | PART NO. | PACKING CODE | PACKING CODE SUFFIX | DESCRIPTION | |
| UGF10L08G C0G | UGF10L08G | C0 | G | Green compound | |

RATINGS AND CHARACTERISTICS CURVES

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







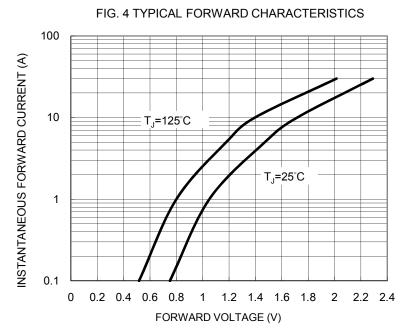
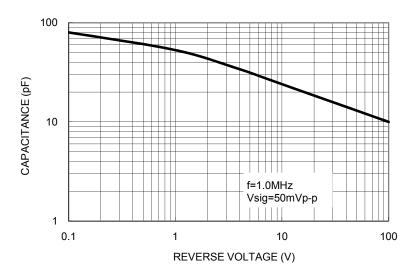


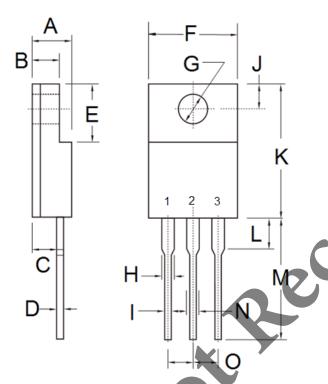


FIG. 5 TYPICAL JUNCTION CAPACITANCE



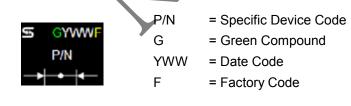
PACKAGE OUTLINE DIMENSIONS

ITO-220AB



| DIM. | Unit | (mm) | Unit (inch) | | |
|--------|-------|-------|-------------|-------|--|
| DIIVI. | Min | Max | Min | Max | |
| Α | 4.30 | 4.70 | 0.169 | 0.185 | |
| В | 2.50 | 3.16 | 0.098 | 0.124 | |
| С | 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 | |
| Ī | 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 | 1 | 0.161 | |
| М | 12.60 | 13.80 | 0.496 | 0.543 | |
| N | - | 1.80 | - | 0.071 | |
| 0 | 2.41 | 2.67 | 0.095 | 0.105 | |

MARKING DIAGRAM







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.