

# **Isolated High Voltage Ultrafast Rectifiers**

#### **FEATURES**

- High forward surge capability
- High reliability
- Ultra fast recovery time
- Low power loss
- UL Recognized File # E-326243
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition





#### **MECHANICAL DATA**

Case: ITO-220AC

Molding compound, UL flammability classification rating 94V-0 Base P/N with suffix "G" on packing code - halogen-free

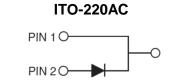
**Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

Polarity: As marked

Mounting torque: 5 in-lbs maximum

Weight: 1.7g (approximately)





MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)				
PARAMETER	SYMBOL	UGF5J	UNIT	
Maximum repetitive peak reverse voltage	$V_{RRM}$	600	V	
Maximum RMS voltage	$V_{RMS}$	420	V	
Maximum DC blocking voltage	V <sub>DC</sub>	600	V	
Maximum average forward rectified current	I <sub>F(AV)</sub>	5	Α	
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	65	А	
Maximum instantaneous forward voltage (Note 1) $I_F$ = 5 A	V <sub>F</sub>	3.00	V	
Maximum reverse current @ Rated V <sub>R</sub> T <sub>J</sub> =25 ℃	,	30		
T <sub>J</sub> =125 ℃	I <sub>R</sub>	200	μA	
Maximum reverse recovery time (Note 2)	Trr	25	ns	
Typical thermal resistance	$R_{ heta JC}$	5.5	°C/W	
Operating junction temperature range	T <sub>J</sub>	- 55 to +150	οС	
Storage temperature range	T <sub>STG</sub>	- 55 to +150	οС	

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

Note 2: Reverse Recovery Test Conditions:  $I_F$ =0.5A,  $I_R$ =1.0A,  $I_{RR}$ =0.25A

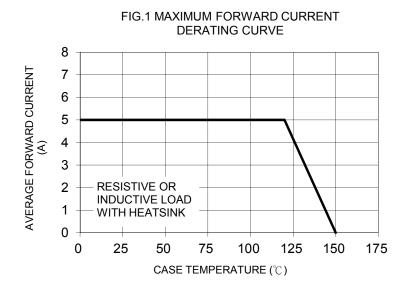


ORDERING INFORMATION					
PART NO.	PACKING CODE	GREEN COMPOUND PACKAGE CODE		PACKING	
UGF5J	C0	Suffix "G"	ITO-220AC	50 / Tube	

EXAMPLE						
PREFERRED P/N	N PART NO. PACKING CODE GREEN COMPOUND CODE		DESCRIPTION			
UGF5J C0	UGF5J	C0				
UGF5J C0G	UGF5J	C0	G	Green compound		

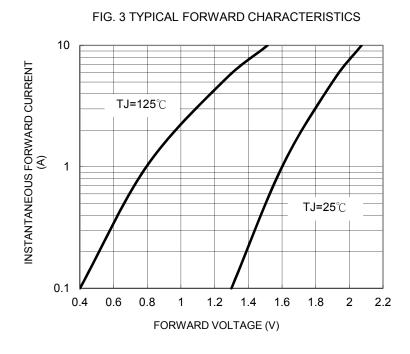
## **RATINGS AND CHARACTERISTICS CURVES**

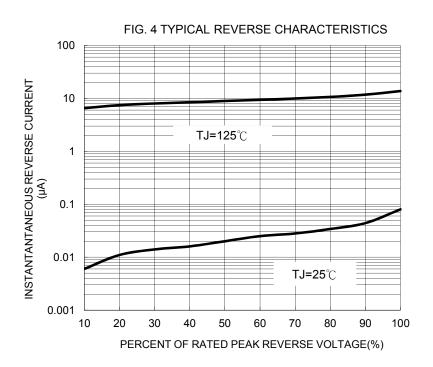
(TA=25°C unless otherwise noted)



80
70
8.3ms Single Half Sine Wave
60
50
40
30
20
1
10
NUMBER OF CYCLES AT 60 Hz

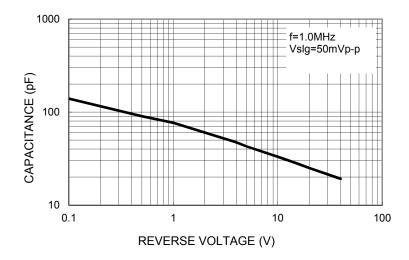
FIG. 2 MAXIMUM FORWARD SIRGE CURRENT



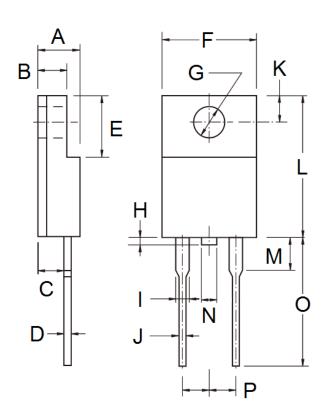




#### FIG. 5 TYPICAL JUNCTION CAPACITANCE



### PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
DIIVI.	Min	Max	Min	Max
Α	4.30	4.70	0.169	0.185
В	2.50	3.10	0.098	0.122
С	2.30	2.90	0.091	0.114
D	0.46	0.76	0.018	0.030
Е	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
Н	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
М		4.10		0.161
N	-	1.80	-	0.071
0	12.60	13.80	0.496	0.543
Р	4.95	5.20	0.195	0.205

### **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 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 seling 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.

Document Number: DS\_D1401029 Version: G14