

High Voltage UltraFast Rectifiers

FEATURES

- High forward surge capability
- High reliability
- Ultra fast recovery time
- Low power loss
- 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 : TO-220AC

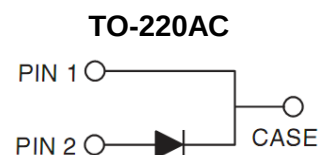
Molding compound, UL flammability classification rating 94V-0
 Base P/N with suffix "G" on packing code - halogen-free, RoHS compliant

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 : 1.8 gram (approximately)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)				
PARAMETER	SYMBOL	UG10G	UG10J	UNIT
Maximum repetitive peak reverse voltage	V _{RRM}	400	600	V
Maximum RMS voltage	V _{RMS}	280	420	V
Maximum DC blocking voltage	V _{DC}	400	600	V
Maximum average forward rectified current	I _{F(AV)}	10		A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	90		A
Maximum instantaneous forward voltage (Note 1) IF=10 A	V _F	1.25	2.00	V
Maximum reverse current @ rated VR T _J =25 °C T _J =125 °C	I _R	10	30	μA
		100	200	
Maximum reverse recovery time (Note 2)	T _{rr}	25		nS
Typical thermal resistance (Note 3)	R _{θJC}	3		°C/W
Operating junction temperature range	T _J	- 55 to + 175	- 55 to + 150	°C
Storage temperature range	T _{STG}	- 55 to + 175	- 55 to + 150	°C

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

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

Note 3: Mount on Heatsink size of 4" x 6" x 0.25" Al-plate

ORDERING INFORMATION				
PART NO.	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
UG10x (Note 1)	C0	Suffix "G"	TO-220AC	50 / Tube

Note 1: "x" defines voltage from 400V (UG10G) to 600V (UG10J)

EXAMPLE				
PREFERRED P/N	PART NO.	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
UG10G C0	UG10G	C0		
UG10G C0G	UG10G	C0	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

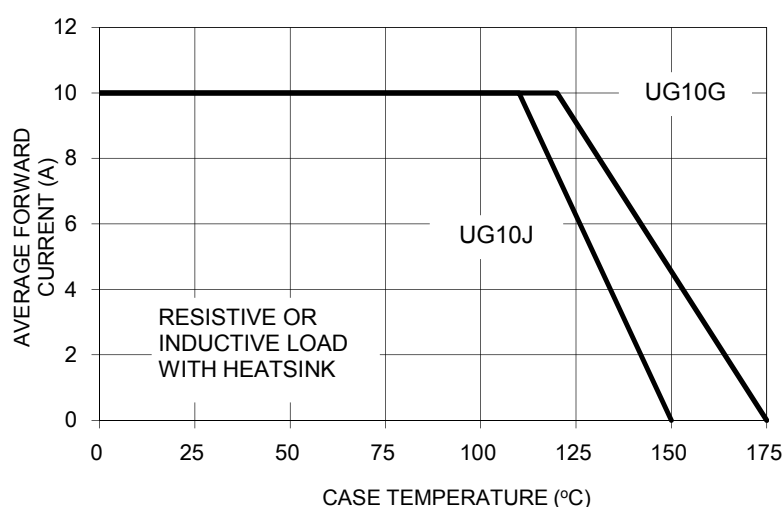


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

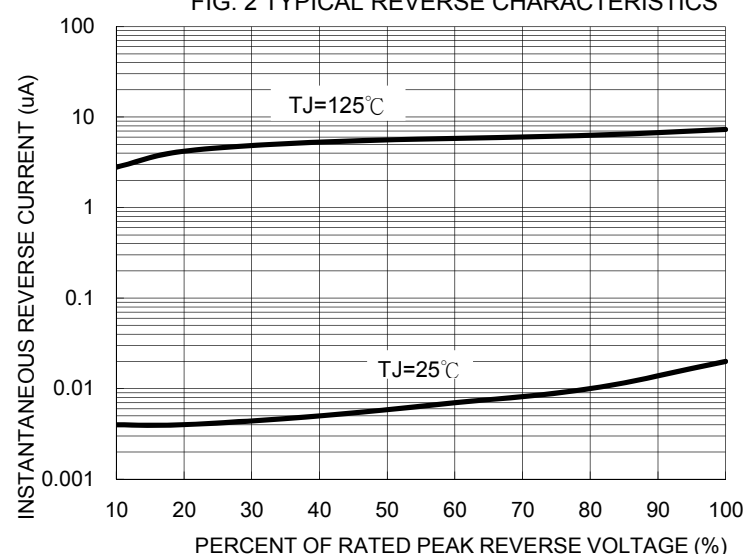


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

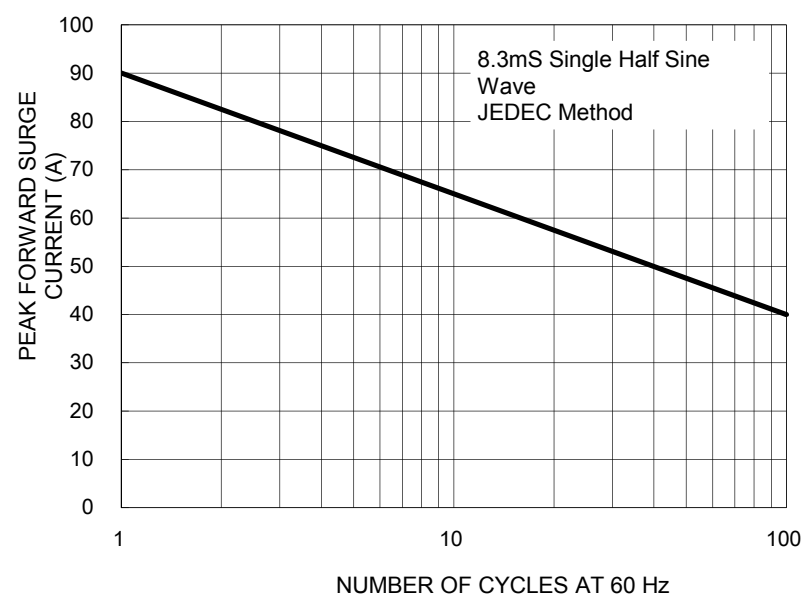


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

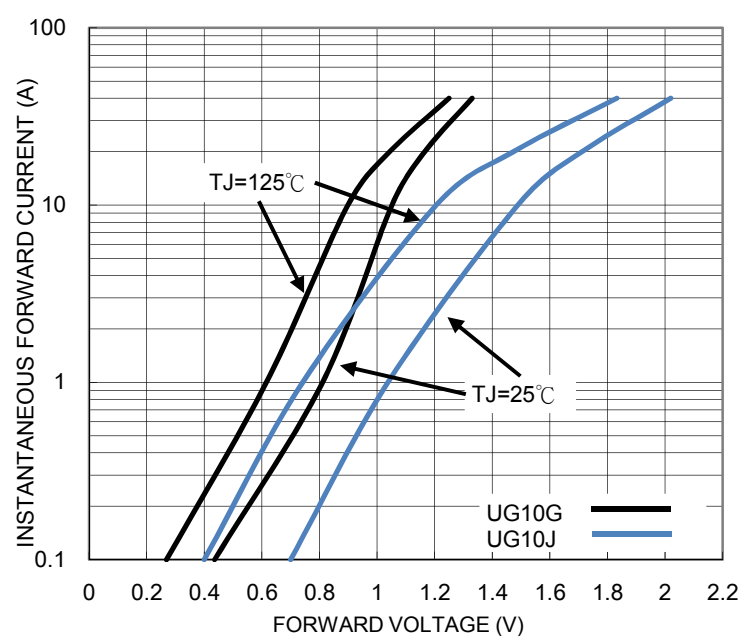
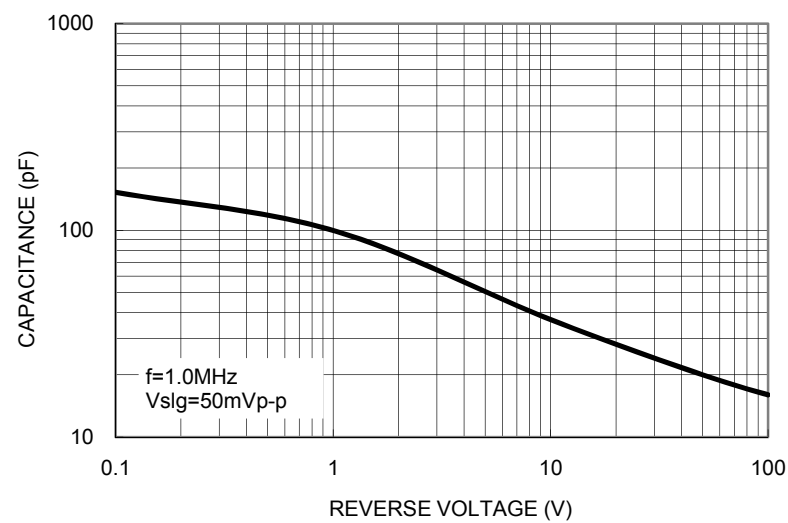
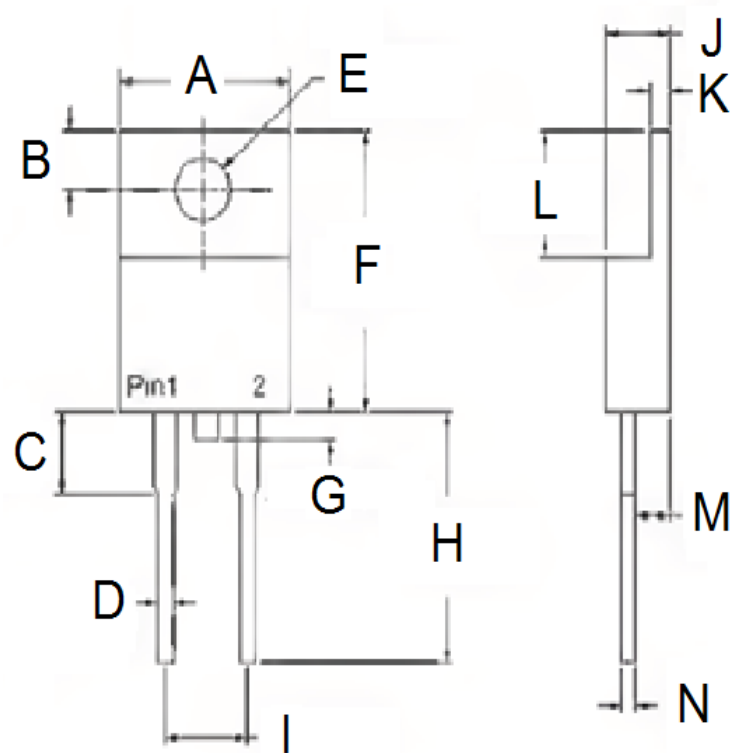


FIG. 5 TYPICAL JUNCTION CAPACITANCE



PACKAGE OUTLINE DIMENSIONS



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 = Marking Code
- G = Green Compound
- YWW = Date Code
- F = Factory Code