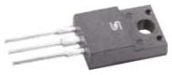
TAIWAN SEMICONDUCTOR

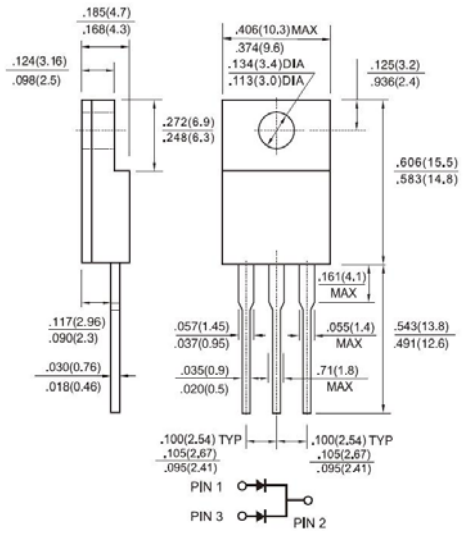
RoHS COMPLIANCE

UGF1606G

16.0AMPS. Isolated Glass Passivated Super Fast Rectifiers

ITO-220AB





Features

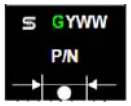
- ✧ High efficiency, low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Low power loss
- ✧ For use in low voltage, high frequency inverter, Freewheeling, and polarity protection application
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

- ✧ Case: ITO-220AB
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Terminals: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: As marked
- ✧ High temperature soldering guaranteed: 260℃/10 seconds.
- ✧ Weight: 2.24 grams

Dimensions in inches and (millimeters)

Marking Diagram



P/N = Specific Device Code
G = Green Compound
Y = Year
WW = Work Week

Maximum Ratings and Electrical Characteristics

Rating at 25 ℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Type Number	Symbol	UGF1606G	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	400	V
Maximum RMS Voltage	V_{RMS}	280	V
Maximum DC Blocking Voltage	V_{DC}	400	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	16	A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	90	A
Maximum Instantaneous Forward Voltage (Note 1) @ 8 A / T_A=25℃	V_F	1.25	V
Maximum DC Reverse Current at Rated T_A=25 ℃ DC Blocking Voltage T_A=125 ℃	I_R	10 100	uA
Maximum Reverse Recovery Time (Note 2)	Trr	25	nS
Typical Thermal Resistance	$R_{\theta jC}$	5	^{O}C/W
Operating Temperature Range	T_J	- 55 to + 175	^{O}C
Storage Temperature Range	T_{STG}	- 55 to + 175	^{O}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

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RATINGS AND CHARACTERISTIC CURVES (UGF1606G)

FIG.1 FORWARD CURRENT DERATING CURVE

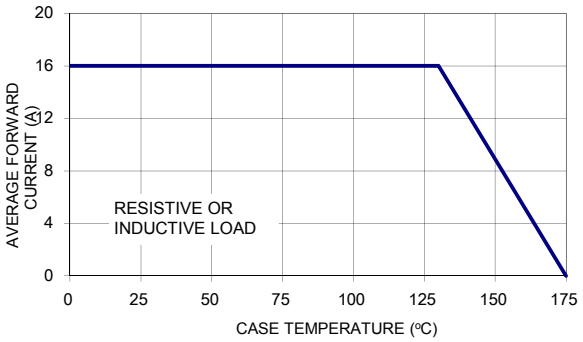

FIG. 2 TYPICAL REVERSE CHARACTERISTICS

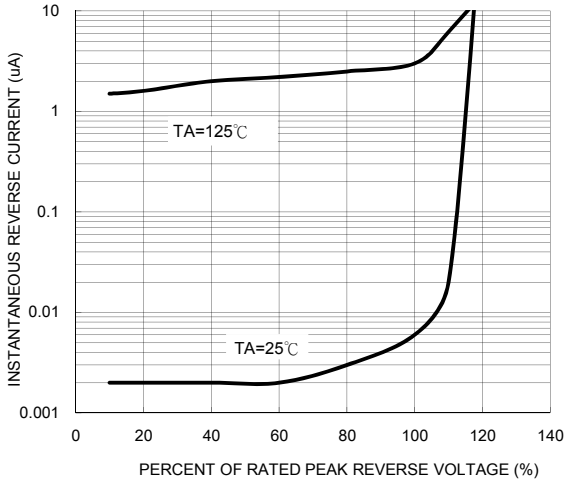

FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

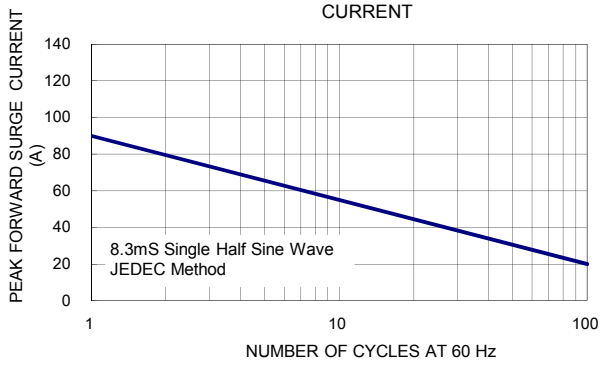

FIG. 4 TYPICAL FORWARD CHARACTERISRICS

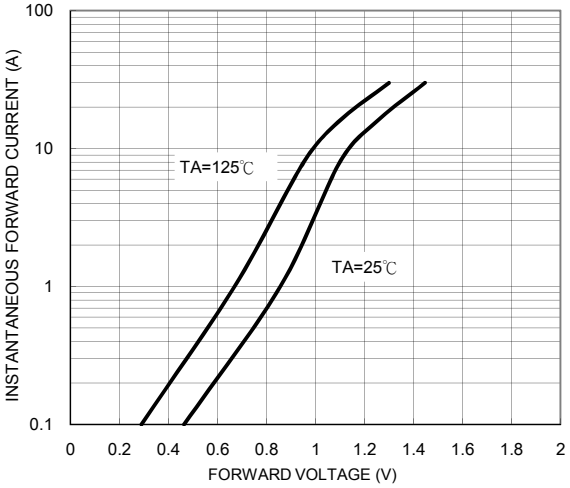

FIG. 5 TYPICAL JUNCTION CAPACITANCE