10A, 500V - 600V Ultra Fast Rectifier

FEATURES

- AEC-Q101 qualified available
- High efficiency, low V_F
- High current capability
- High surge current capability
- Low power loss
- UL Recognized File # E-326243
- RoHS Compliant
- Halogen-free

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
I_F	10	A
V_{RRM}	500 - 600	V
I_{FSM}	70	A
$T_{J\ MAX}$	150	°C
Package	ITO-220AB	
Configuration	Dual dies	

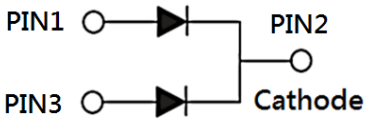
APPLICATIONS

- DC to DC converter
- Switching mode converters and inverters
- Freewheeling application

MECHANICAL DATA

- Case: ITO-220AB
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Mounting torque: 0.56 N·m maximum
- Meet JESD 201 class 2 whisker test
- Polarity: As marked
- Weight: 1.70g (approximately)
- Base P/N_X (_"X" denotes revision code e.g. A, B, ...)

ITO-220AB



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)				
PARAMETER	**SYMBOL**	**UGF1007G**	**UGF1008G**	**UNIT**
Repetitive peak reverse voltage	V_{RRM}	500	600	V
Reverse voltage, total rms value	$V_{R(RMS)}$	350	420	V
Forward current	I_F	10		A
Surge peak forward current, 8.3ms single half sine wave superimposed on rated load	I_{FSM}	70		A
Junction temperature	T_J	-55 to +150		°C
Storage temperature	T_{STG}	-55 to +150		°C

THERMAL PERFORMANCE			
PARAMETER	**SYMBOL**	**TYP**	**UNIT**
Junction-to-case thermal resistance	$R_{\Theta JC}$	6	°C/W

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)					
PARAMETER	**CONDITIONS**	**SYMBOL**	**TYP**	**MAX**	**UNIT**
Forward voltage per diode(1)	I_F = 5A, T_J = 25°C	V_F	-	1.70	V
Reverse current @ rated V_R per diode(2)	T_J = 25°C	I_R	-	10	μA
	T_J = 125°C		-	100	μA
Reverse recovery time	I_F = 0.5A, I_R = 1.0A I_{rr} = 0.25A	t_{rr}	-	25	ns

Notes:

1. Pulse test with PW = 0.3ms
2. Pulse test with PW = 30ms

ORDERING INFORMATION			
ORDERING CODE(1)	**PACKAGE**	**PACKING**	**DEVICE MARKING**
UGF1007G	ITO-220AB	50 / Tube	UGF1007G
UGF1008G	ITO-220AB	50 / Tube	UGF1008G
UGF1007GH_A	ITO-220AB	50 / Tube	UGF1007G
UGF1008GH_A	ITO-220AB	50 / Tube	UGF1008G

Notes:

1. “H” means AEC-Q101 qualified

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

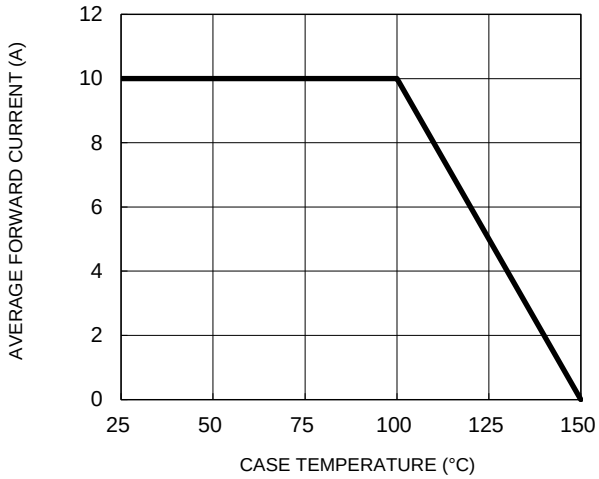


Fig.2 Typical Junction Capacitance

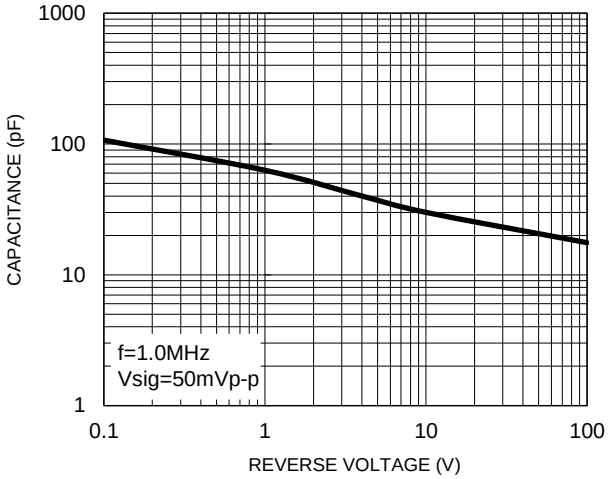


Fig.3 Typical Reverse Characteristics

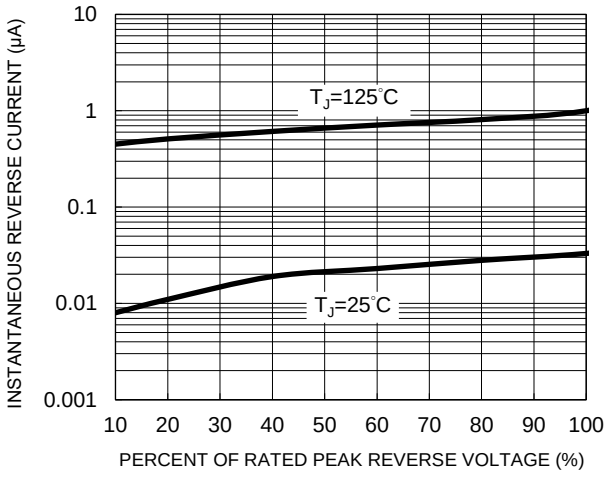


Fig.4 Typical Forward Characteristics

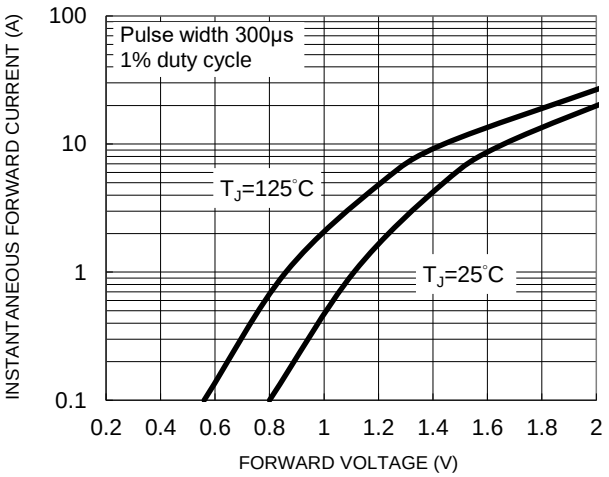
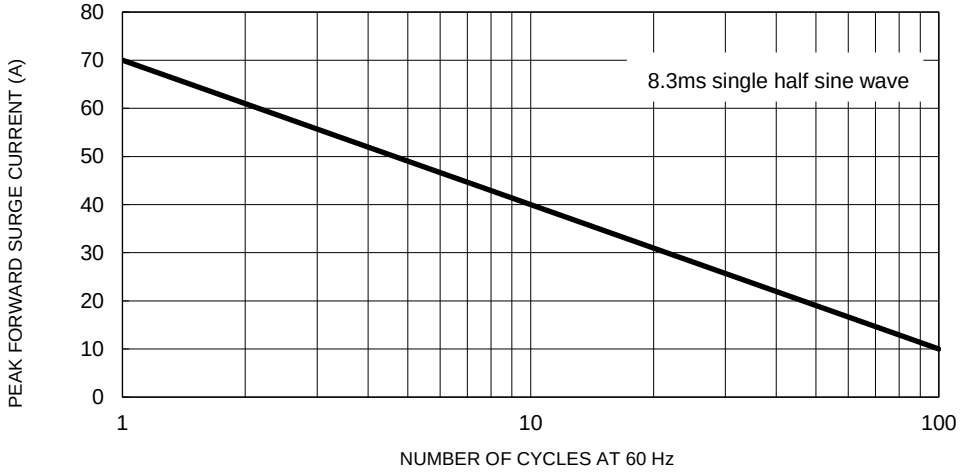
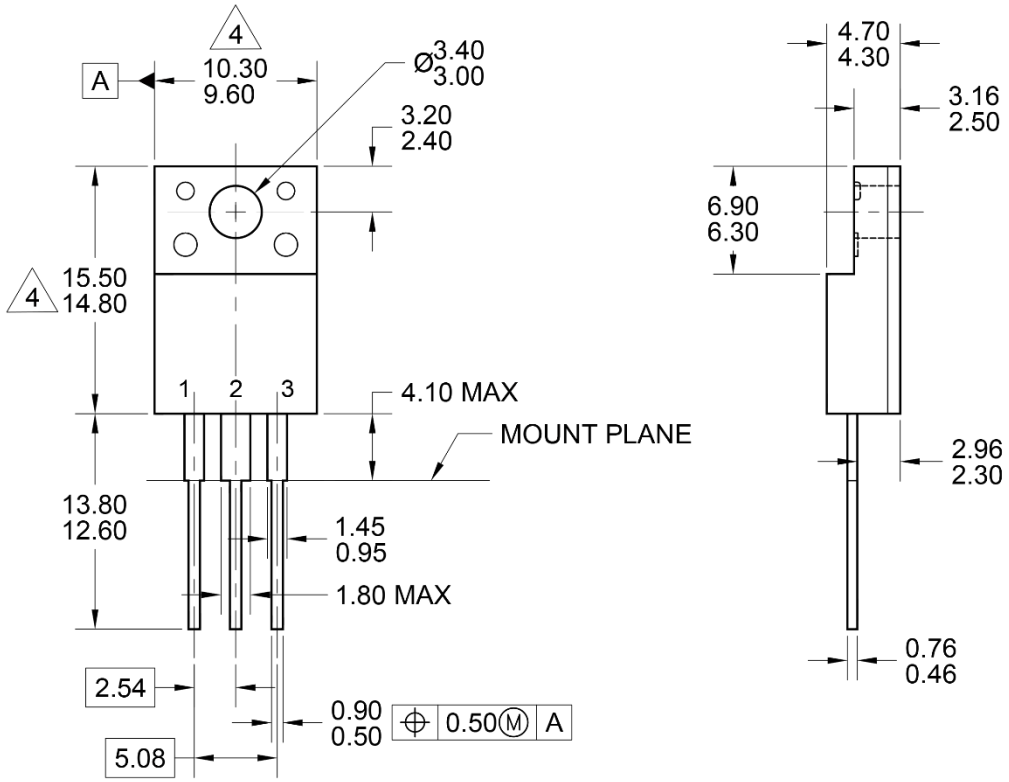


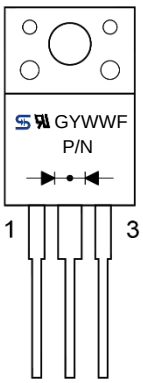
Fig.5 Maximum Non-Repetitive Forward Surge Current



PACKAGE OUTLINE DIMENSIONS

ITO-220AB





NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
3. PACKAGE OUTLINE REFERENCE: EIAJ ED-7500A-1, SC-91.
4. THIS DO NOT INCLUDE MOLD FLASH. THESE DIMENSIONS ARE MEASURED AT THE OUTERMOST EXTREME OF THE PLASTIC BODY.
5. DWG NO. REF: HQ2SD07-ITO220AB-063 REV A.

MARKING DIAGRAM

P/N = Device marking
G = Green compound
YWW = Date code
F = Factory code

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