10A, 600V - 1000V Standard Bridge Rectifier

FEATURES

- Glass passivated chip junction
- High case dielectric strength of 2000V_{RMS}
- High surge current capability
- UL Recognized File # E-326243
- RoHS Compliant
- Halogen-free

APPLICATIONS

- General purpose
- AC to DC
- Switching mode power supply (SMPS)

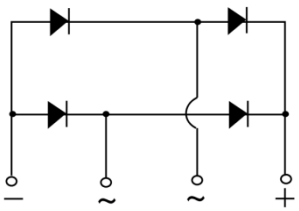
MECHANICAL DATA

- Case: GBU
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Polarity: As marked
- Weight: 3.70g (approximately)

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
I_F	10	A
V_{RRM}	600 - 1000	V
I_{FSM}	200	A
$T_{J\ MAX}$	150	°C
Package	GBU	
Circuit Configuration	In-line	

Pb-Free RoHS COMPLIANT HALOGEN FREE

GBU



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

PARAMETER		SYMBOL	GBU10J GA	GBU10K GA	GBU10M GA	UNIT
Repetitive peak reverse voltage		V_{RRM}	600	800	1000	V
Reverse voltage, total rms value		$V_{R(RMS)}$	420	560	700	V
Forward current		I_F	10			A
Surge peak forward current, single half sine-wave superimposed on rated load per diode	t = 8.3ms	I_{FSM}	200			A
	t = 1.0ms		530			
Rating for fusing (t<8.3ms)		I^2t	166			A^2s
Junction temperature		T_J	- 55 to +150			°C
Storage temperature		T_{STG}	- 55 to +150			°C

THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	UNIT
Junction-to-lead thermal resistance	$R_{\Theta JL}$	2	°C/W
Junction-to-ambient thermal resistance	$R_{\Theta JA}$	8	°C/W
Junction-to-case thermal resistance	$R_{\Theta JC}$	1.8	°C/W

Thermal Performance Note: Mounted on Heat sink with 4" x 6" x 0.25" Al-plate

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	0.92	1.0	V
	I_F = 5A, T_J = 125°C		0.80	-	V
Reverse current @ rated V_R per diode(2)	T_J = 25°C	I_R	-	5	μA
	T_J = 125°C		-	100	μA
Junction capacitance per diode	1MHz, V_R = 4.0V	C_J	68	-	pF

Notes:

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

ORDERING INFORMATION

ORDERING CODE	PACKAGE	PACKING	DEVICE MARKING
GBU10JGA	GBU	20 / Tube	GBU10JGA
GBU10KGA	GBU	20 / Tube	GBU10KGA
GBU10MGA	GBU	20 / Tube	GBU10MGA

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

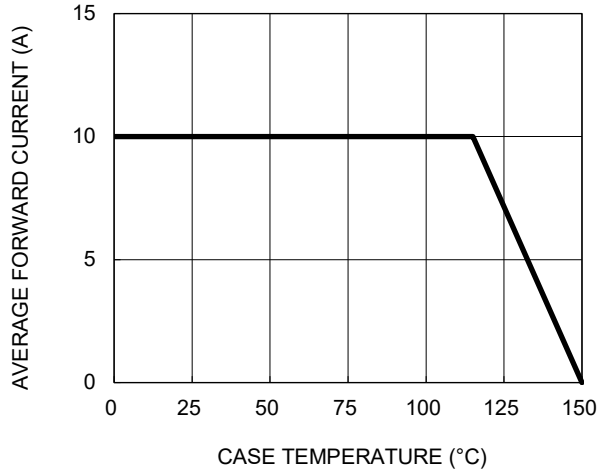


Fig.2 Typical Junction Capacitance

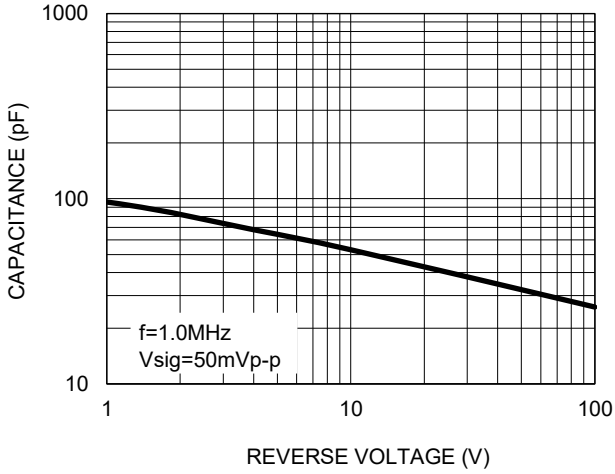


Fig.3 Typical Reverse Characteristics

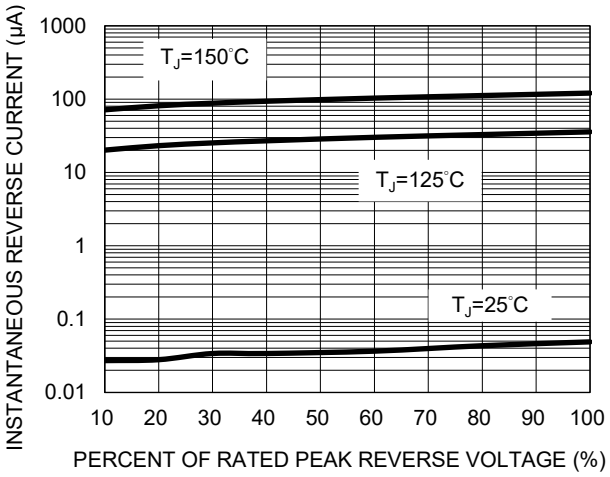


Fig.4 Typical Forward Characteristics

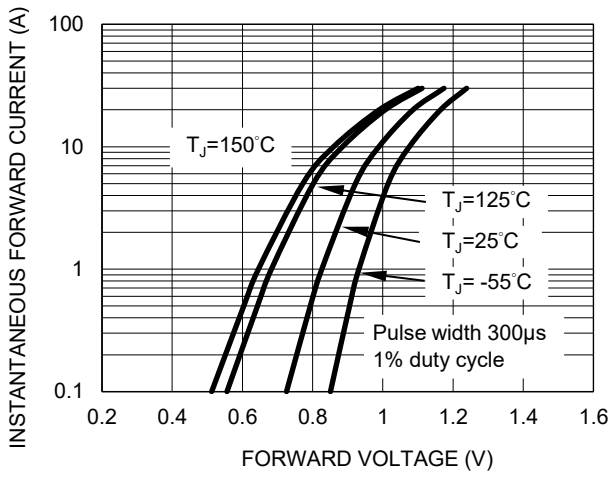
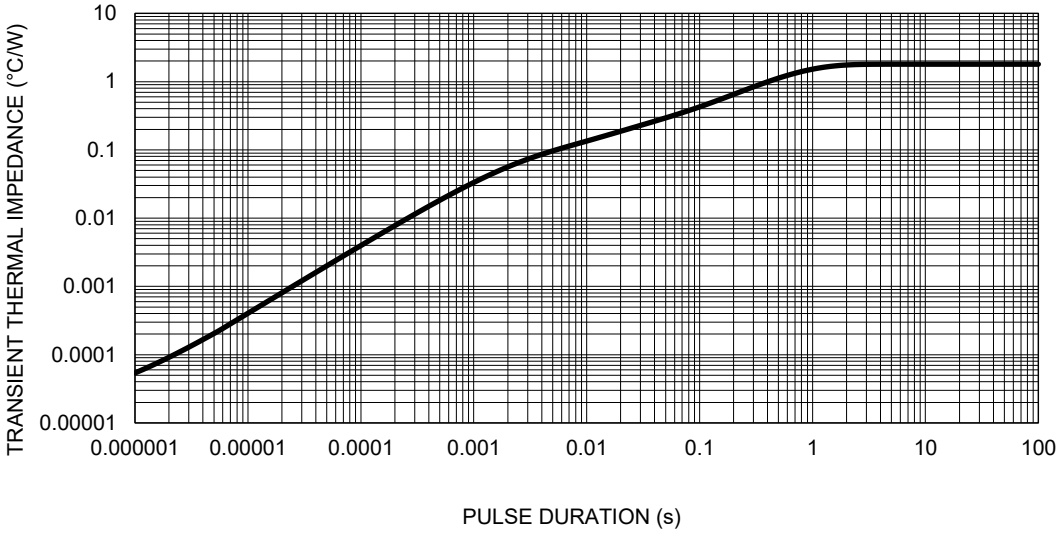
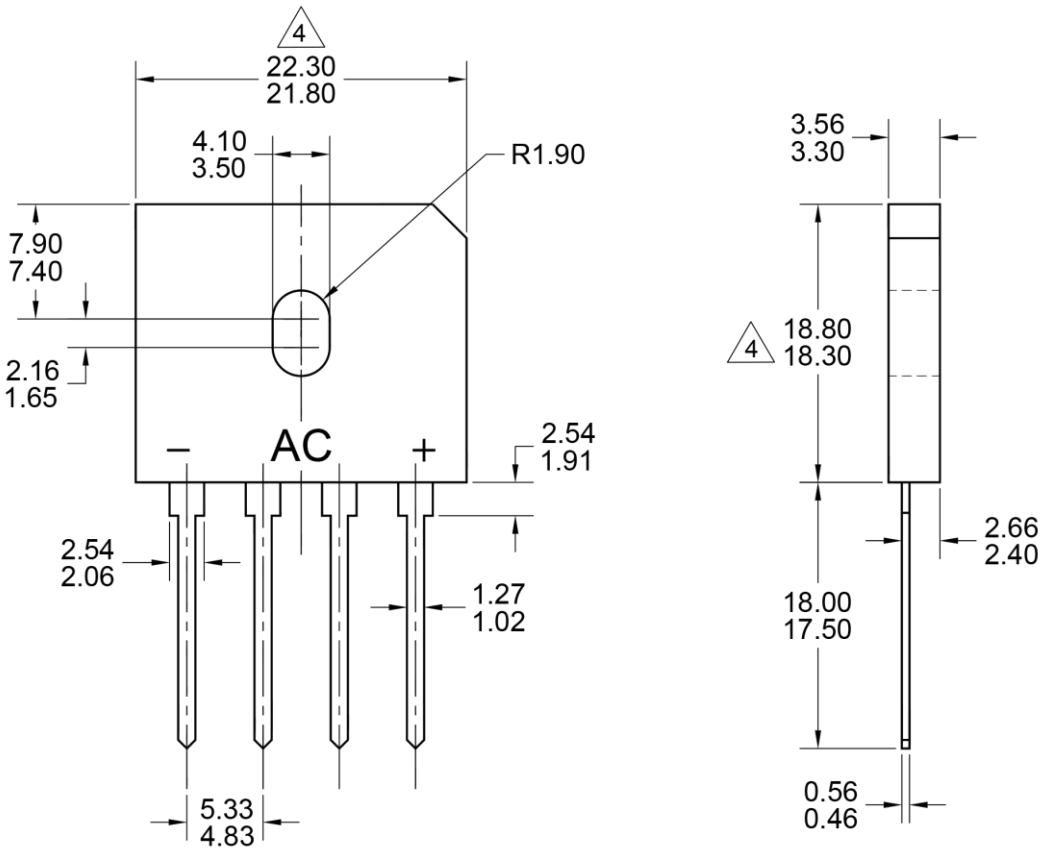


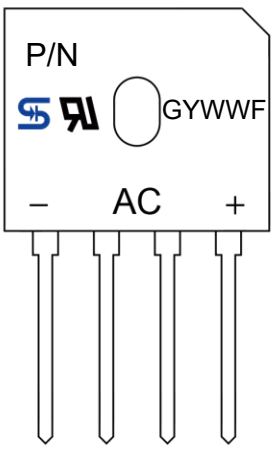
Fig.5 Typical Transient Thermal Impedance



PACKAGE OUTLINE DIMENSIONS

GBU





MARKING DIAGRAM

P/N	= DEVICE MARKING
G	= GREEN COMPOUND
YWW	= DATE CODE
F	= FACTORY CODE

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
3. THERE IS NO EXISTING PACKAGE OUTLINE INDUSTRY STANDARD FOR THIS PACKAGE.
4. MOLDED PLASTIC BODY DIMENSIONS DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.
5. DWG NO. REF: HQ2SD07-GBUK-102 REV A.

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