

15A, 600V - 1000V Standard Bridge Rectifier

FEATURES

- Ideal for printed circuit board
- High surge current capability
- UL Recognized File # E-326243
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

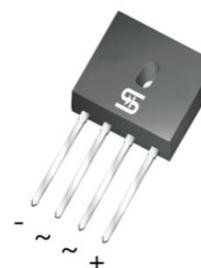
APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- TV
- Monitor

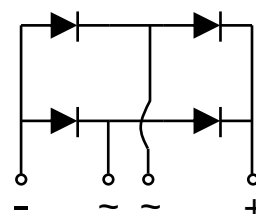
MECHANICAL DATA

- Case: GBU
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1 whisker test
- Polarity: As marked
- Weight: 3.96g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
I_F	15	A
V_{RRM}	600 - 1000	V
I_{FSM}	220	A
$T_J \text{ MAX}$	150	°C
Package	GBU	
Configuration	Quad	



GBU



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	SYMBOL	GBU1505	GBU1506	GBU1507	UNIT
Marking code on the device		GBU1505	GBU1506	GBU1507	
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	15			A
Surge peak forward current single half sine-wave superimposed on rated load per diode	$t = 8.3\text{ms}$	220			A
	$t = 1.0\text{ms}$				
Rating of fusing ($t < 8.3\text{ms}$)	I^2t	200			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	$R_{\theta JL}$	1.5	°C/W
Junction-to-ambient thermal resistance	$R_{\theta JA}$	7.5	°C/W
Junction-to-case thermal resistance	$R_{\theta JC}$	1.0	°C/W

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

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode ⁽¹⁾	$I_F = 7.5\text{A}, T_J = 25^\circ\text{C}$	V_F	0.93	-	V
	$I_F = 15\text{A}, T_J = 25^\circ\text{C}$		1.00	1.10	V
	$I_F = 7.5\text{A}, T_J = 125^\circ\text{C}$		0.82	-	V
	$I_F = 15\text{A}, T_J = 125^\circ\text{C}$		0.92	-	V
Reverse current @ rated V_R per diode ⁽²⁾	$T_J = 25^\circ\text{C}$	I_R	-	5	μA
	$T_J = 125^\circ\text{C}$		-	500	μA
Junction capacitance per diode	1MHz, $V_R = 4.0\text{V}$	C_J	79	-	pF

Notes:

1. Pulse test with $PW = 0.3\text{ms}$
2. Pulse test with $PW = 30\text{ms}$

ORDERING INFORMATION

ORDERING CODE ⁽¹⁾	PACKAGE	PACKING
GBU150x	GBU	20 / Tube

Notes:

1. "x" defines voltage from 600V(GBU1505) to 1000V(GBU1507)

CHARACTERISTICS CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

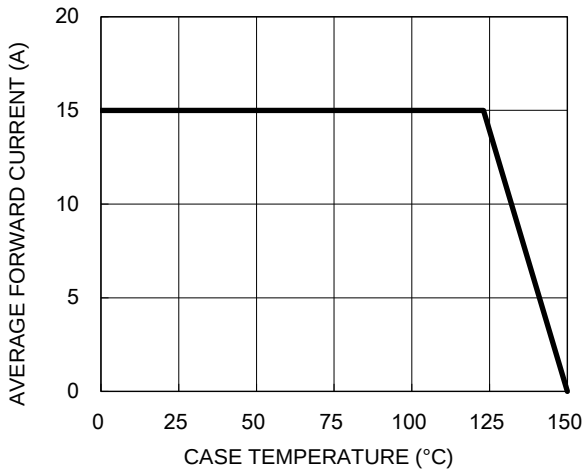


Fig.2 Typical Junction Capacitance

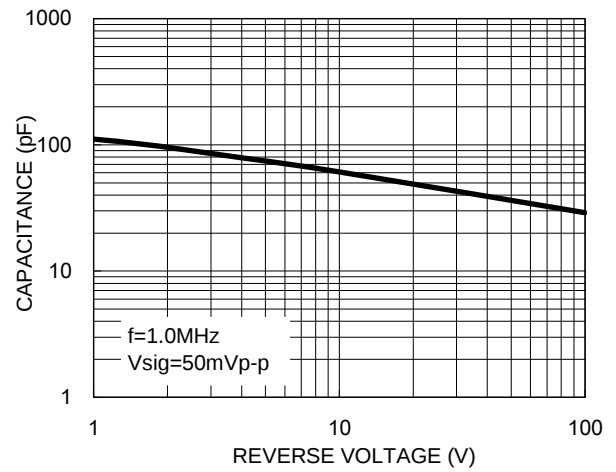


Fig.3 Typical Reverse Characteristics

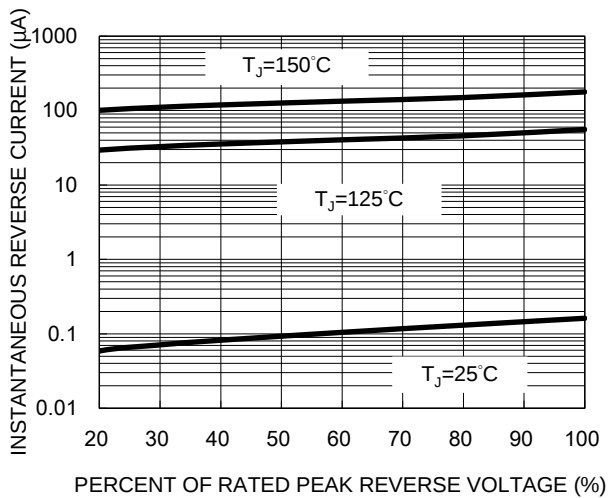
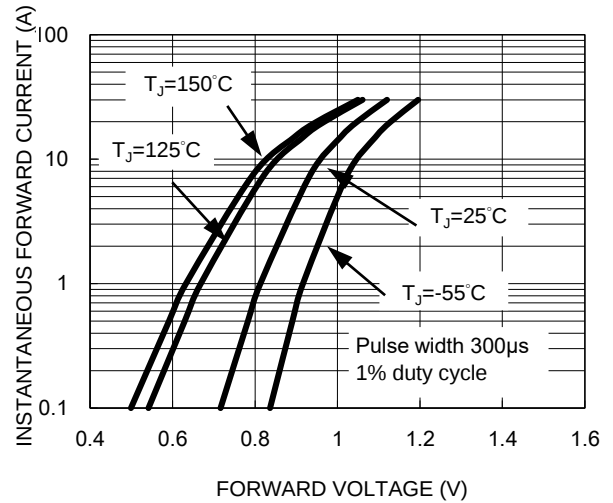
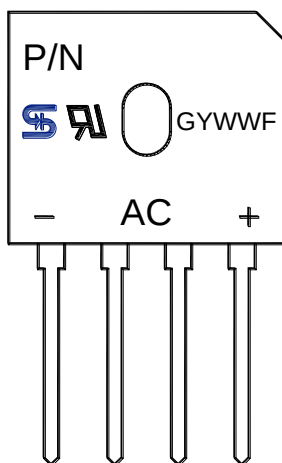
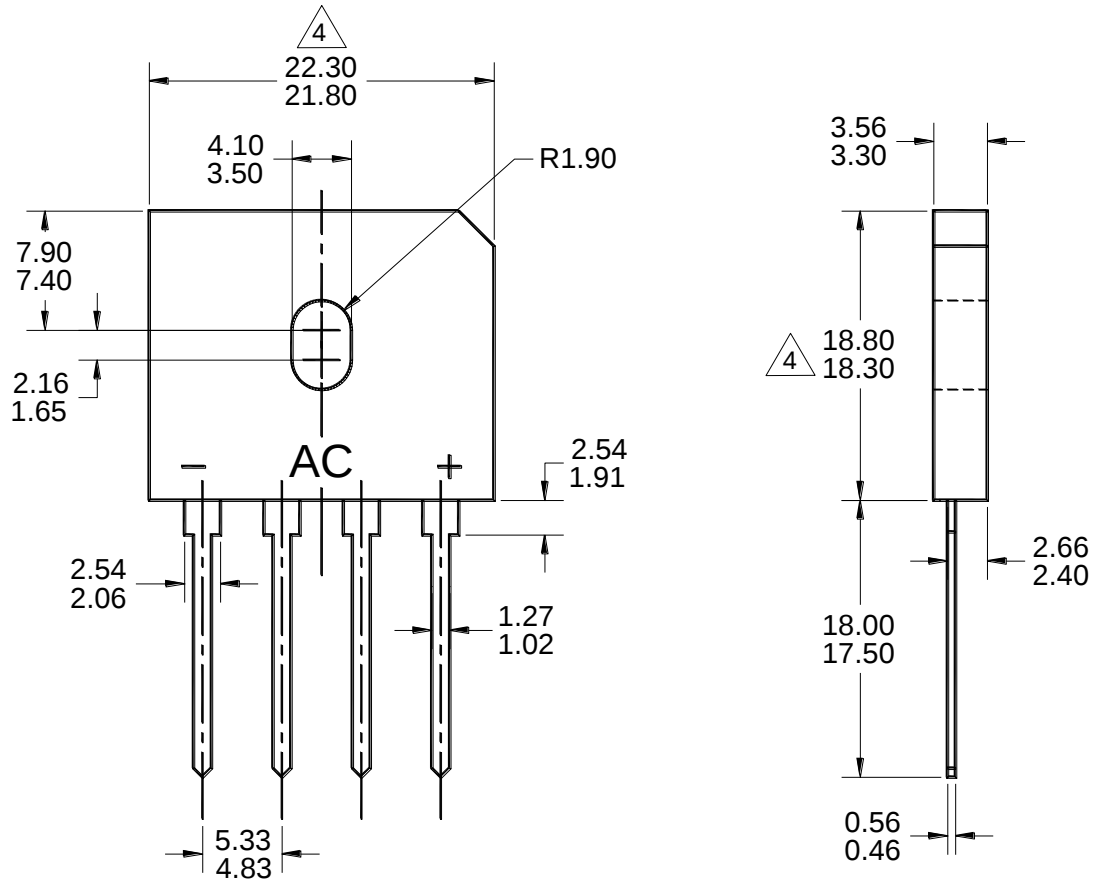


Fig.4 Typical Forward Characteristics



PACKAGE OUTLINE DIMENSIONS

GBU



MARKING DIAGRAM

P/N = MARKING CODE
 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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