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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

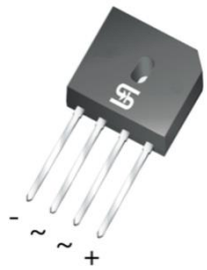
- Switching mode power supply (SMPS)
- Adapters
- TV
- Monitor

MECHANICAL DATA

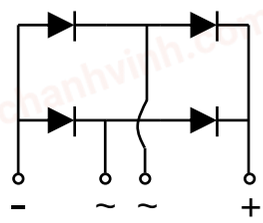
- Case: GBU
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1 whisker test
- Polarity: As marked
- Weight: 3.96g (approximately)

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

Pb-Free RoHS COMPLIANT HALOGEN FREE



GBU



ABSOLUTE MAXIMUM RATINGS (T_A = 25°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 = 8.3ms	I_{FSM}	220			A
	t = 1.0ms		600			
Rating of fusing (t<8.3ms)		I^2t	200			A^2s
Junction temperature		T_J	- 55 to +150			°C
Storage temperature		T_{STG}	- 55 to +150			°C

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

Notes:

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

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

Notes:

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

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CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

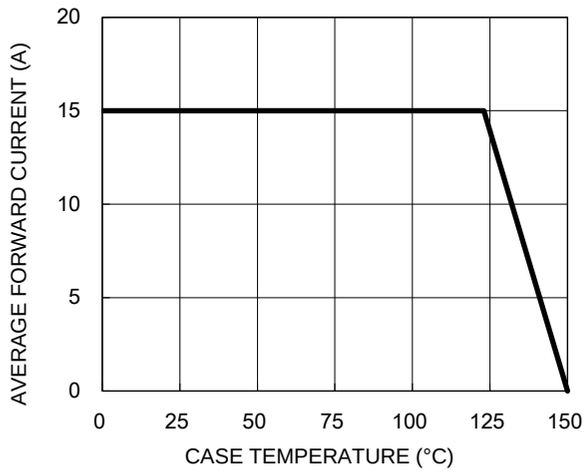


Fig.2 Typical Junction Capacitance

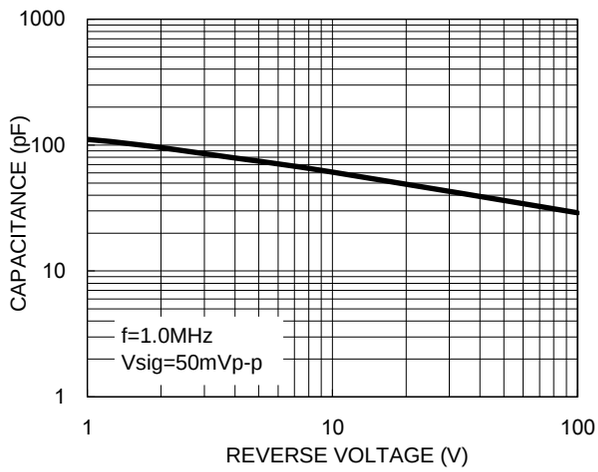


Fig.3 Typical Reverse Characteristics

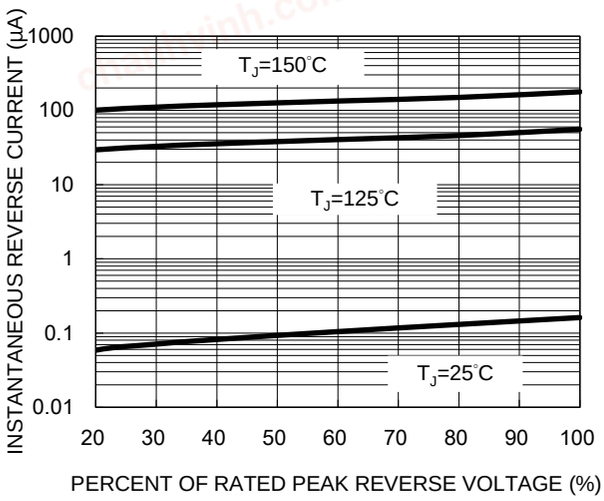
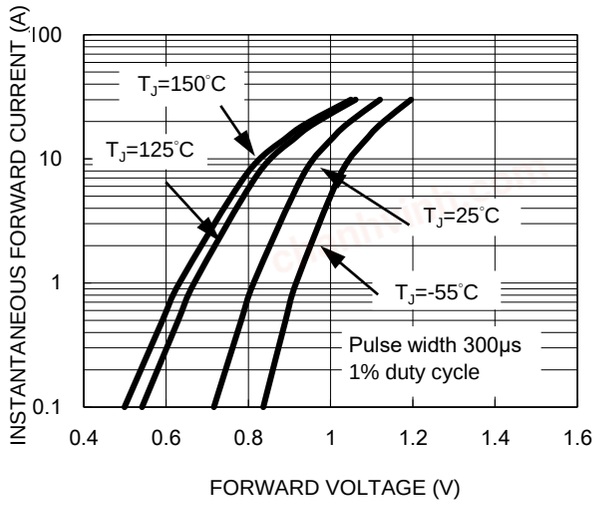


Fig.4 Typical Forward Characteristics



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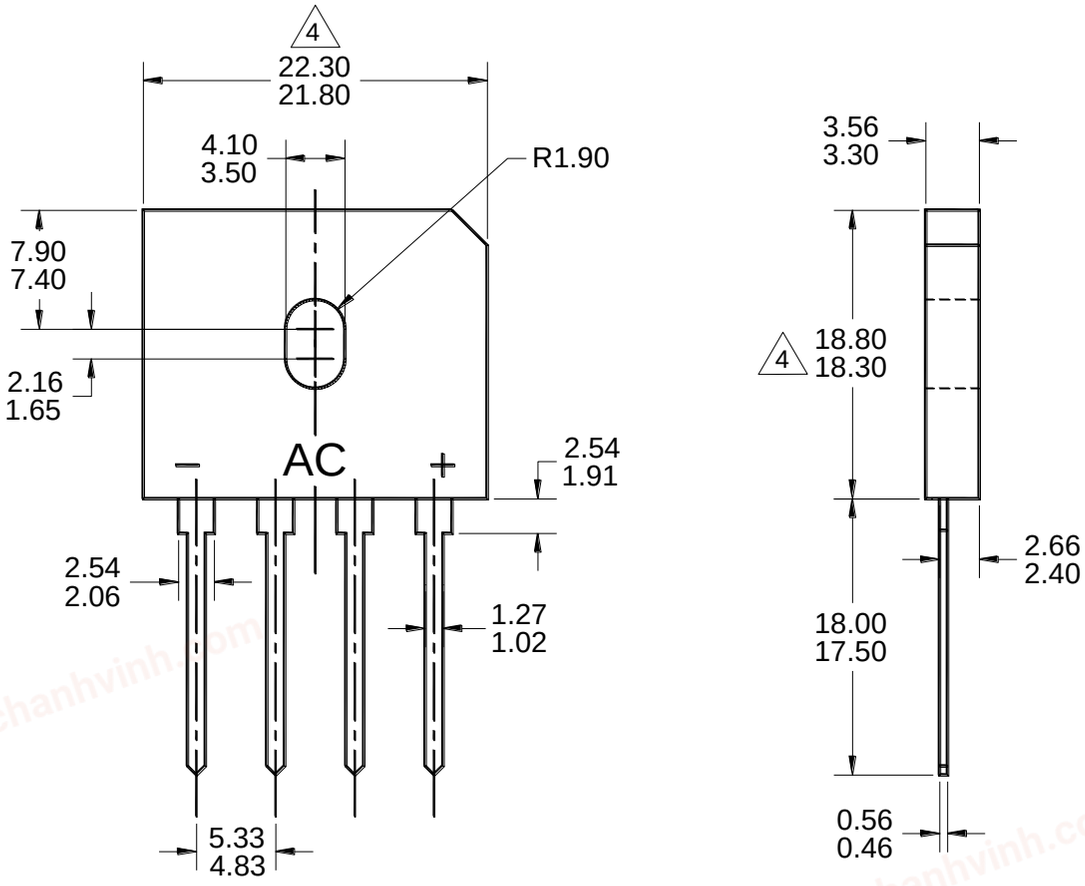
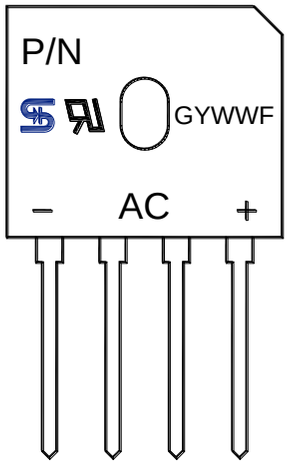
PACKAGE OUTLINE DIMENSIONS

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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