

20A, 800V Low V_F 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

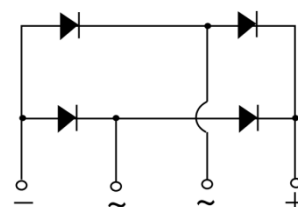
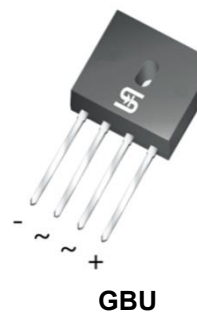
APPLICATIONS

- 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	20	A
V_{RRM}	800	V
I_{FSM}	330	A
$T_{J\ MAX}$	150	°C
Package	GBU	
Circuit Configuration	In-line	



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

PARAMETER	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage	V_{RRM}	800	V
Reverse voltage, total rms value	$V_{R(RMS)}$	560	V
Forward current	I_F	20	A
Surge peak forward current, single half sine-wave superimposed on rated load per diode	I_{FSM}	330	A
		810	
Rating for fusing ($t < 8.3\text{ms}$)	I^2t	451	A ² s
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	$R_{\theta JL}$	1.6	°C/W
Junction-to-ambient thermal resistance	$R_{\theta JA}$	8	°C/W
Junction-to-case thermal resistance	$R_{\theta JC}$	1.2	°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⁾	$I_F = 10\text{A}, T_J = 25^\circ\text{C}$	V_F	0.90	0.92	V
	$I_F = 10\text{A}, T_J = 125^\circ\text{C}$		0.81	-	V
Reverse current @ rated V_R per diode ⁽²⁾	$T_J = 25^\circ\text{C}$	I_R	-	5	μA
	$T_J = 125^\circ\text{C}$		22	-	μA
Junction capacitance per diode	1MHz, $V_R = 4.0\text{V}$	C_J	103	-	pF

Notes:

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

ORDERING INFORMATION

ORDERING CODE	PACKAGE	PACKING
GBU20KGLV	GBU	20 / Tube

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

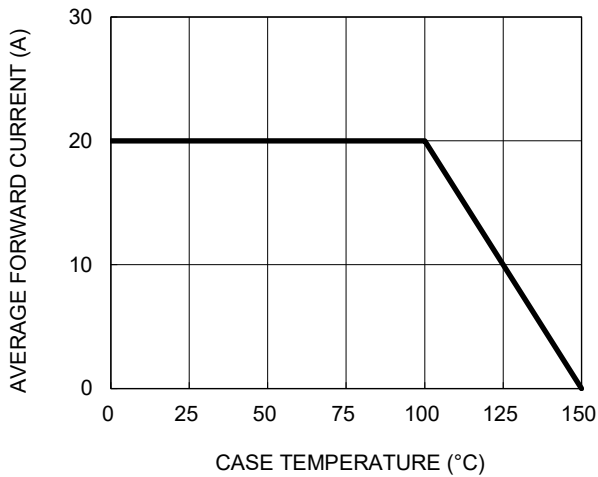


Fig.2 Typical Junction Capacitance

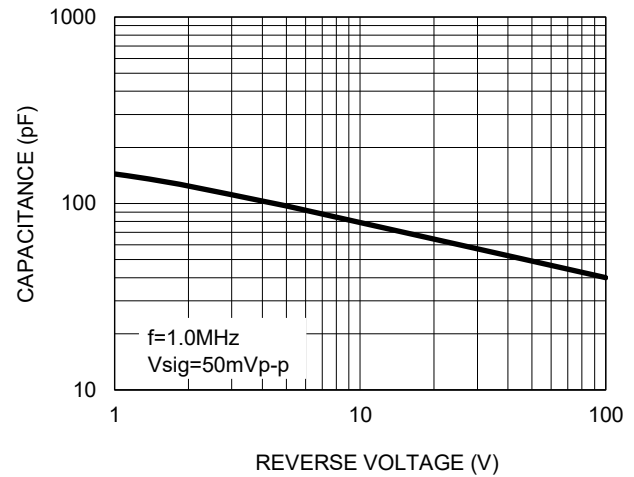


Fig.3 Typical Reverse Characteristics

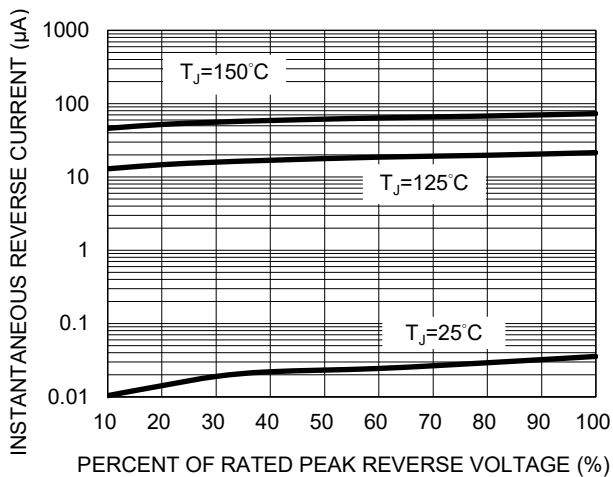


Fig.4 Typical Forward Characteristics

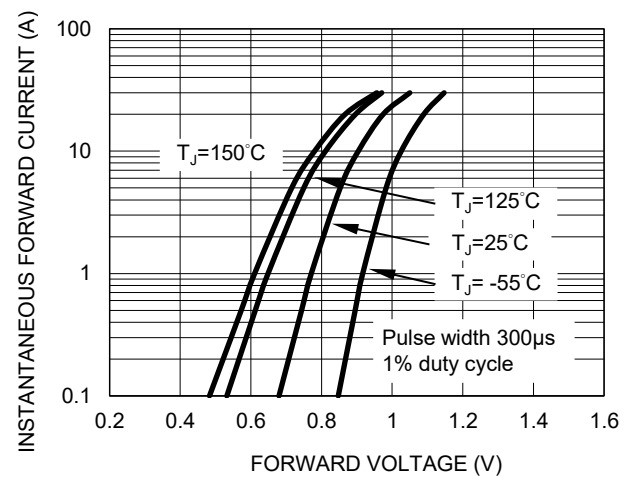
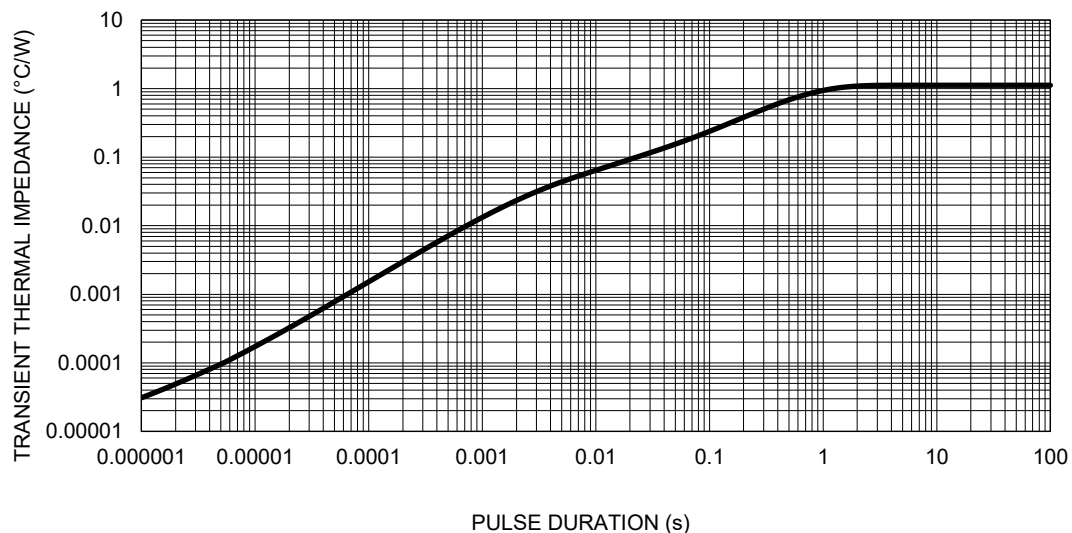
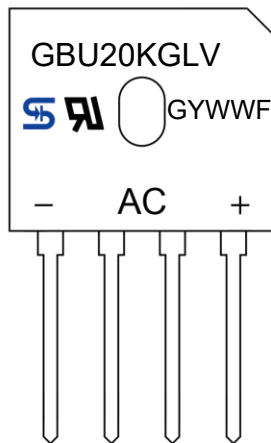
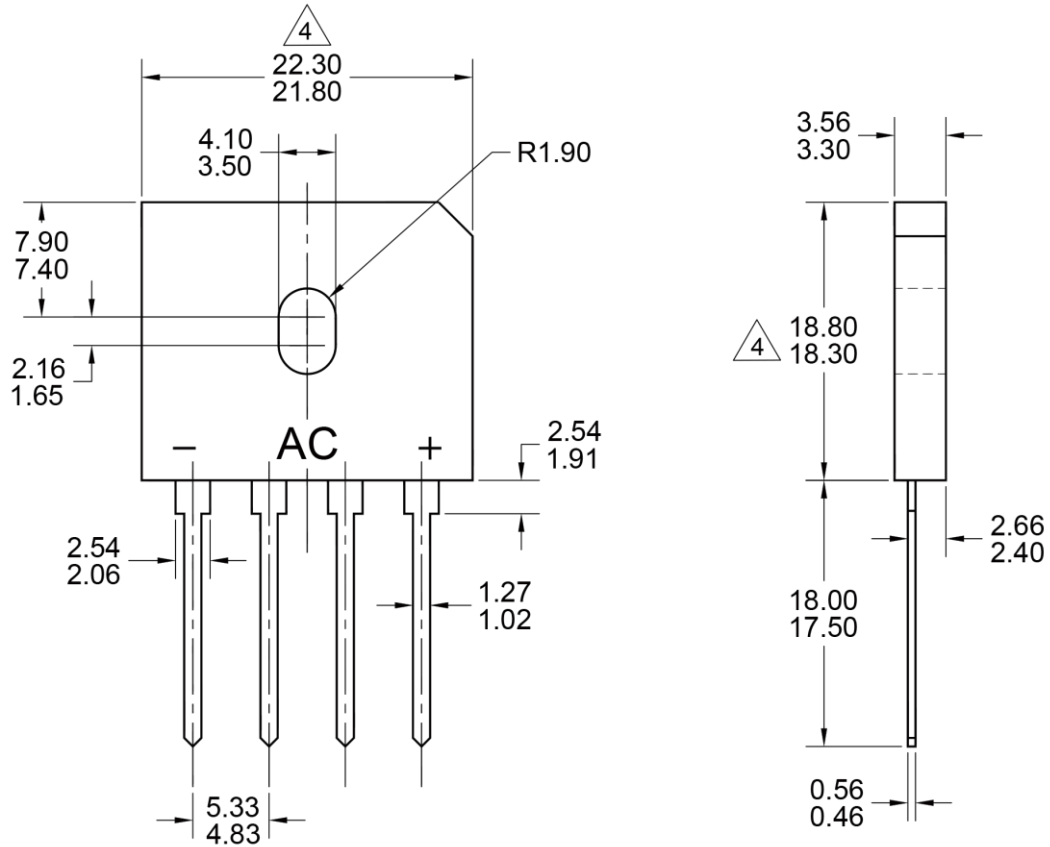


Fig.5 Typical Transient Thermal Impedance



PACKAGE OUTLINE DIMENSIONS

GBU



MARKING DIAGRAM

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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