

20A, 800V Low V_F Standard Bridge Rectifier

FEATURES

- Glass passivated chip junction
- High case dielectric strength of 2500V_{RMS}
- High surge current capability
- UL Recognized File # E-326243
- RoHS Compliant
- Halogen-free

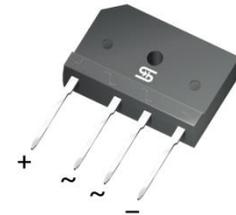
APPLICATIONS

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

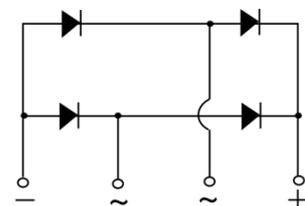
MECHANICAL DATA

- Case: TS-6P
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Polarity: As marked
- Weight: 6.43g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
I_F	20	A
V_{RRM}	800	V
I_{FSM}	380	A
$T_{J\ MAX}$	150	°C
Package	TS-6P	
Circuit Configuration	In-line	



TS-6P



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	$t = 8.3\text{ms}$	380	A
	$t = 1.0\text{ms}$	720	
Rating for fusing ($t < 8.3\text{ms}$)	I^2t	599	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	$R_{\theta JL}$	1.2	°C/W
Junction-to-ambient thermal resistance	$R_{\theta JA}$	6.8	°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⁾	$I_F = 10\text{A}, T_J = 25^\circ\text{C}$	V_F	0.90	0.92	V
	$I_F = 10\text{A}, T_J = 125^\circ\text{C}$		0.80	-	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	102	-	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
GBJ20KGLV	TS-6P	15 / Tube

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

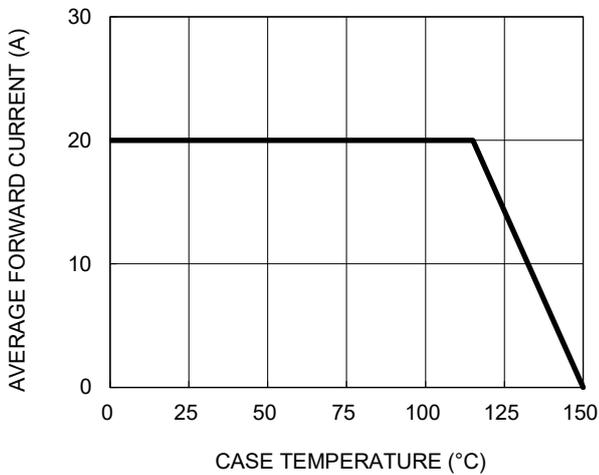


Fig.2 Typical Junction Capacitance

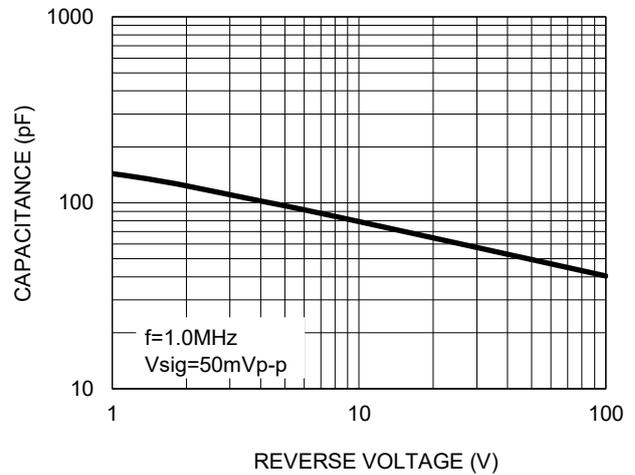


Fig.3 Typical Reverse Characteristics

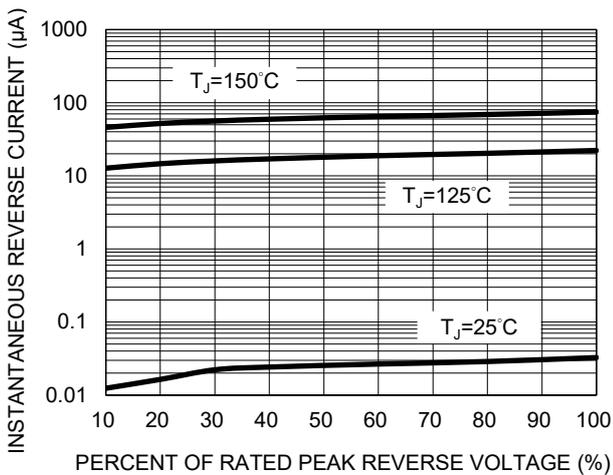


Fig.4 Typical Forward Characteristics

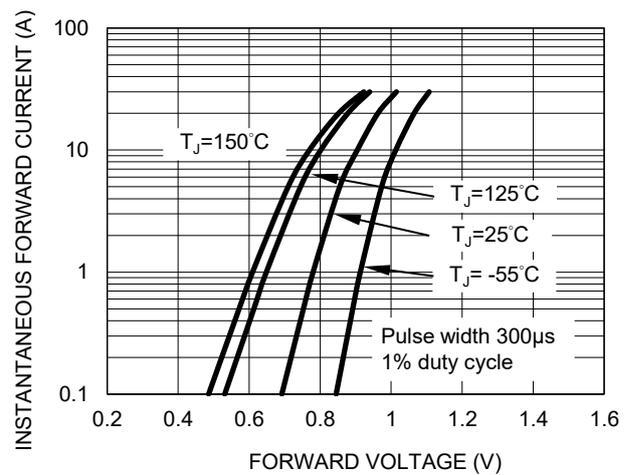
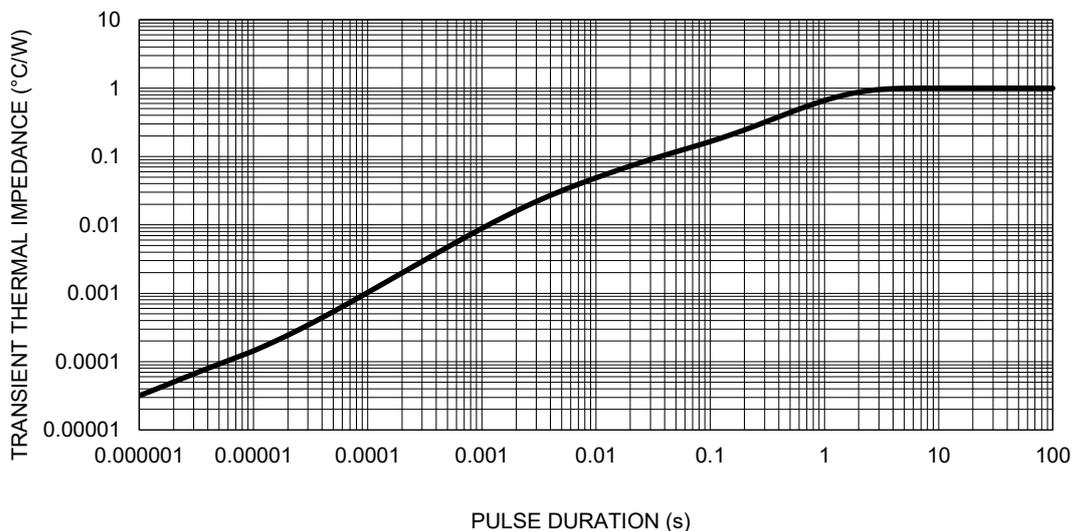
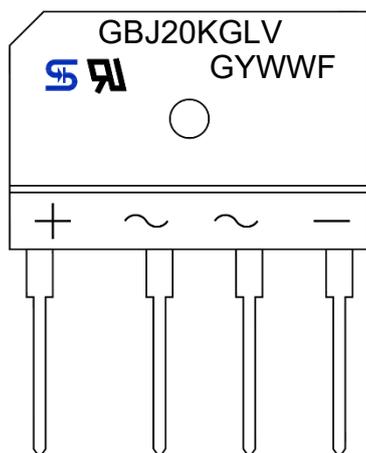
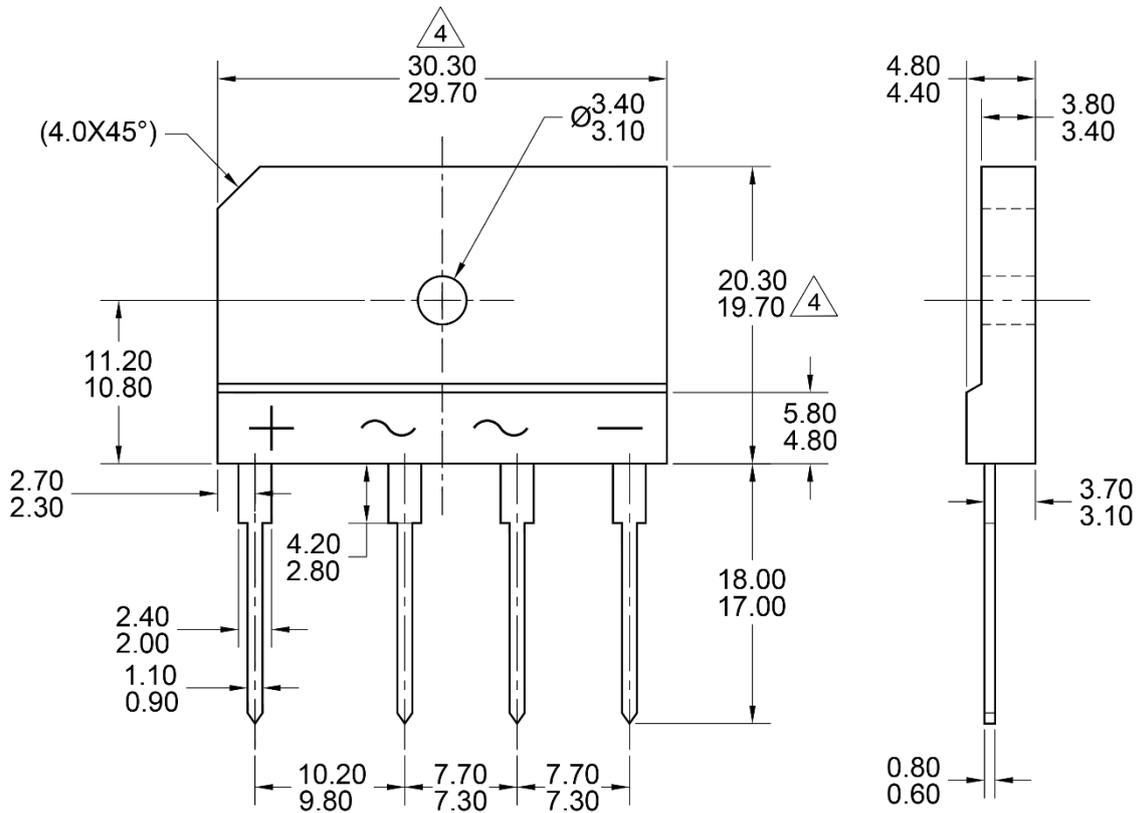


Fig.5 Typical Transient Thermal Impedance



PACKAGE OUTLINE DIMENSIONS

TS-6P



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-TS6PAM-142 REV A.

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