

10A, 50V - 1000V Glass Passivated Bridge Rectifier

FEATURES

- Glass passivated junction
- Ideal for printed circuit board
- Typical I_R less than $0.1\mu A$
- High surge current capability
- UL Recognized File # E-326243
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC

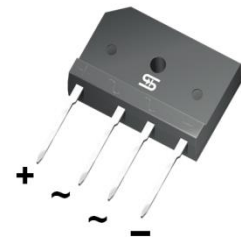
APPLICATIONS

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

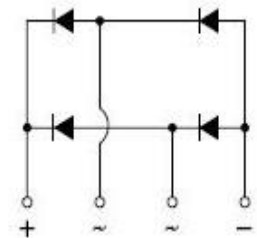
MECHANICAL DATA

- Case: TS-6P
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: As marked
- Mounting torque: 0.92 Nm max
- Weight: 7.15 g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$I_{F(AV)}$	10	A
V_{RRM}	50 - 1000	V
I_{FSM}	200	A
T_{JMAX}	150	°C
Package	TS-6P	
Configuration	Quad	



TS-6P



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

PARAMETER	SYMBOL	TS10P 01G-K	TS10P 02G-K	TS10P 03G-K	TS10P 04G-K	TS10P 05G-K	TS10P 06G-K	TS10P 07G-K	UNIT
Marking code on the device		TS10P 01G	TS10P 02G	TS10P 03G	TS10P 04G	TS10P 05G	TS10P 06G	TS10P 07G	
Repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Reverse voltage, total rms value	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Forward current	$I_{F(AV)}$	10							A
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	200							A
I^2t value (of a surge on-state current)	I^2t	166							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-case thermal resistance	$R_{\theta JC}$	1.4	°C/W

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

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode ⁽¹⁾	$I_F = 5\text{A}, T_J = 25^\circ\text{C}$	V_F	-	1.0	V
	$I_F = 10\text{A}, T_J = 25^\circ\text{C}$		-	1.1	V
Reverse current @ rated V_R per diode ⁽²⁾	$T_J = 25^\circ\text{C}$	I_R	-	10	μA
	$T_J = 125^\circ\text{C}$		-	500	μA

Notes:

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

ORDERING INFORMATION

ORDERING CODE (Note 1,2)	PACKAGE	PACKING
TS10P0xG-K C7	TS-6P	15 / TUBE
TS10P0xG-K C7G	TS-6P	15 / TUBE

Note 1:

"x" defines voltage from 50V (TS10P01G-K) to 1000V (TS10P07G-K)

Note 2:

"G" means green compound (halogen free)

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

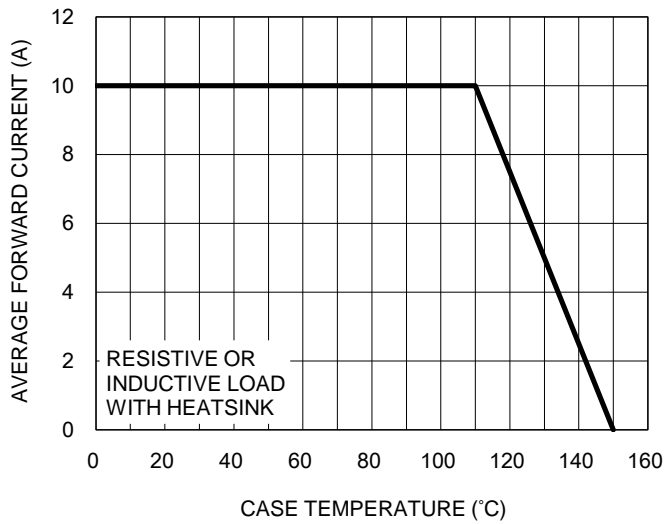


Fig.2 Typical Junction Capacitance

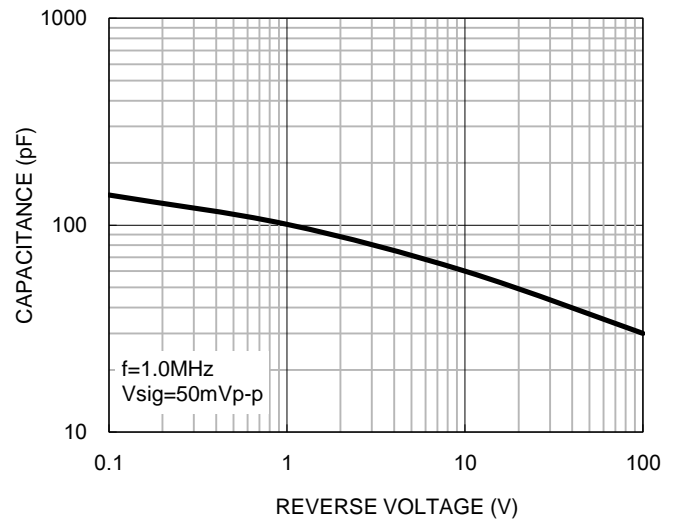


Fig.3 Typical Reverse Characteristics

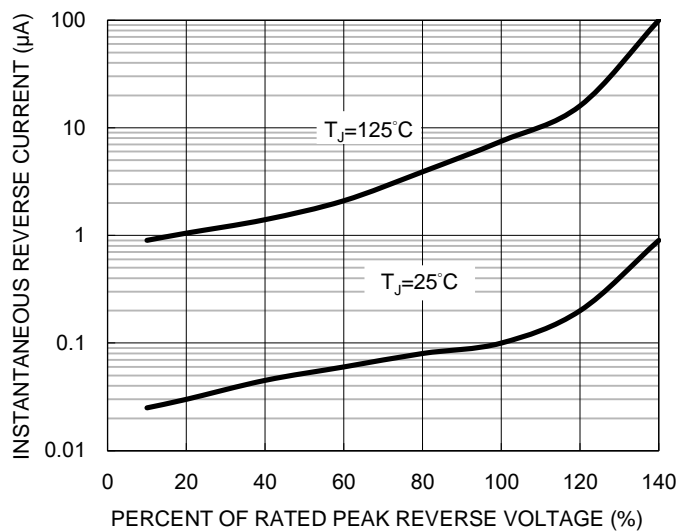
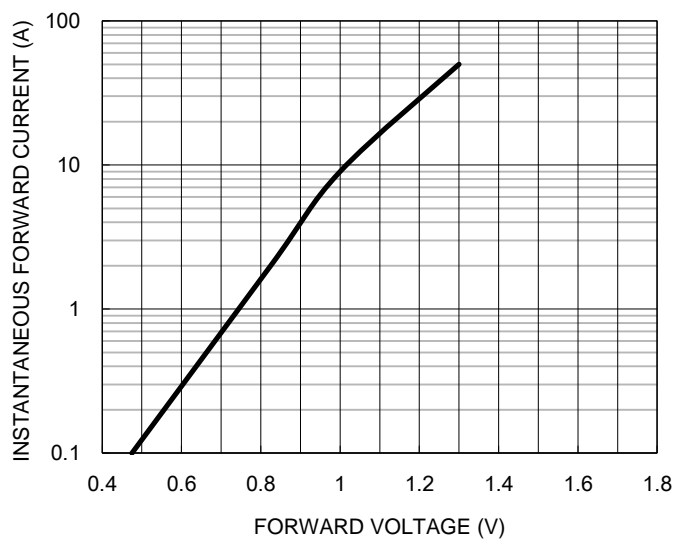


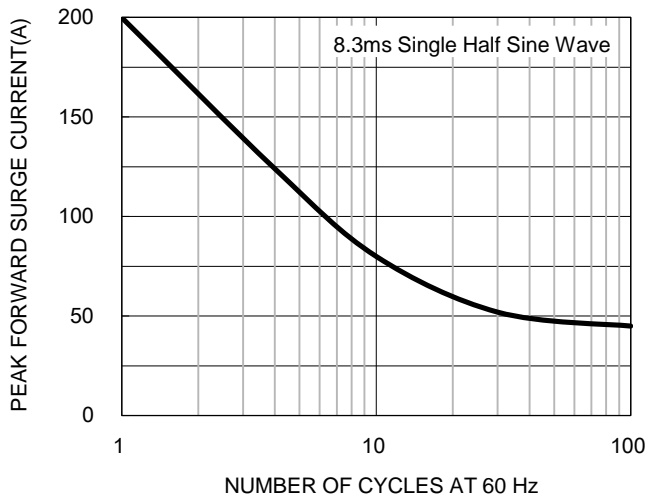
Fig.4 Typical Forward Characteristics



CHARACTERISTICS CURVES

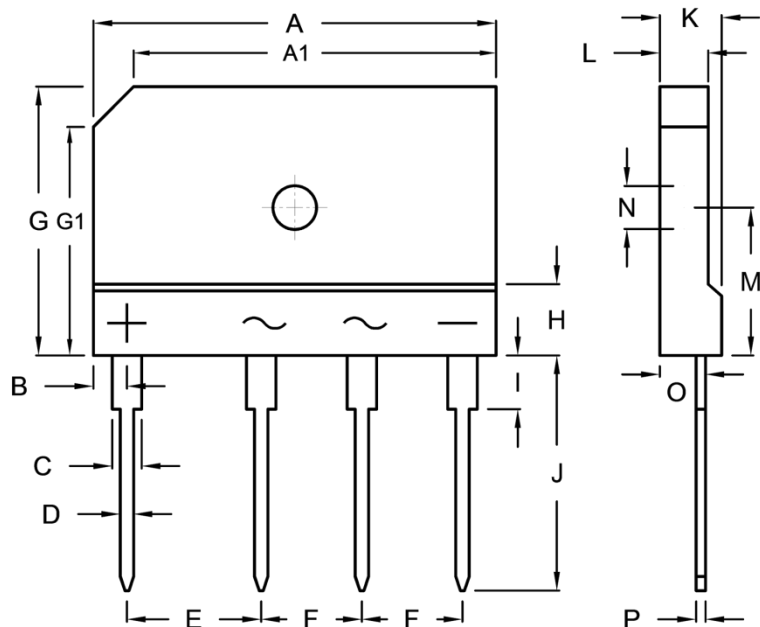
($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.5 Maximum Non-repetitive Forward Surge Current



PACKAGE OUTLINE DIMENSIONS

TS-6P



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	29.70	30.30	1.169	1.193
A1	26.50	27.50	1.043	1.083
B	2.30	2.70	0.091	0.106
C	2.00	2.40	0.079	0.094
D	0.90	1.10	0.035	0.043
E	9.80	10.20	0.386	0.402
F	7.30	7.70	0.287	0.303
G	19.70	20.30	0.776	0.799
G1	16.50	17.50	0.650	0.689
H	4.80	5.80	0.189	0.228
I	3.80	4.20	0.150	0.165
J	17.00	18.00	0.669	0.709
K	4.40	4.80	0.173	0.189
L	3.40	3.80	0.134	0.150
M	10.80	11.20	0.425	0.441
N	3.10	3.40	0.122	0.134
O	3.10	3.70	0.122	0.146
P	0.60	0.80	0.024	0.031

MARKING DIAGRAM



P/N = Marking Code
 G = Green compound
 YWW = Date Code
 F = Factory Code

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