

## 6A, 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

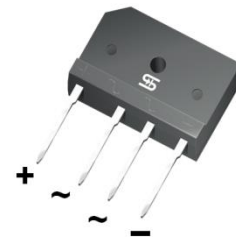
### APPLICATIONS

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

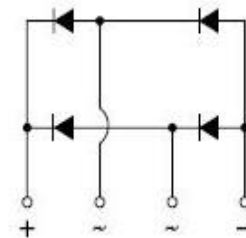
### MECHANICAL DATA

- 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
$I_{F(AV)}$	6	A
$V_{RRM}$	50 - 1000	V
$I_{FSM}$	150	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	TS6P 01G-K	TS6P 02G-K	TS6P 03G-K	TS6P 04G-K	TS6P 05G-K	TS6P 06G-K	TS6P 07G-K	UNIT
Marking code on the device		TS6P 01G	TS6P 02G	TS6P 03G	TS6P 04G	TS6P 05G	TS6P 06G	TS6P 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	$I_{F(AV)}$	6							A
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	150							A
$I^2t$ value (of a surge on-state current)	$I^2t$	93							$A^2s$
Junction temperature	$T_J$	- 55 to +150							°C
Storage temperature	$T_{STG}$	- 55 to +150							°C

<b>THERMAL PERFORMANCE</b>			
<b>PARAMETER</b>	<b>SYMBOL</b>	<b>LIMIT</b>	<b>UNIT</b>
Junction-to-case thermal resistance	$R_{\theta JC}$	1.8	°C/W

<b>ELECTRICAL SPECIFICATIONS</b> ( $T_A = 25^\circ\text{C}$ unless otherwise noted)					
<b>PARAMETER</b>	<b>CONDITIONS</b>	<b>SYMBOL</b>	<b>TYP</b>	<b>MAX</b>	<b>UNIT</b>
Forward voltage per diode <sup>(1)</sup>	$I_F = 3\text{A}, T_J = 25^\circ\text{C}$	$V_F$	-	1.0	V
	$I_F = 6\text{A}, T_J = 25^\circ\text{C}$		-	1.1	V
Reverse current @ rated $V_R$ per diode <sup>(2)</sup>	$T_J = 25^\circ\text{C}$	$I_R$	-	10	$\mu\text{A}$
	$T_J = 125^\circ\text{C}$		-	500	$\mu\text{A}$

**Notes:**

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

<b>ORDERING INFORMATION</b>			
<b>PART NO.</b>	<b>PACKING CODE</b>	<b>PACKAGE</b>	<b>PACKING</b>
TS6P0xG-K (Note 1)	C7	TS-6P	15 / TUBE

**Note:**

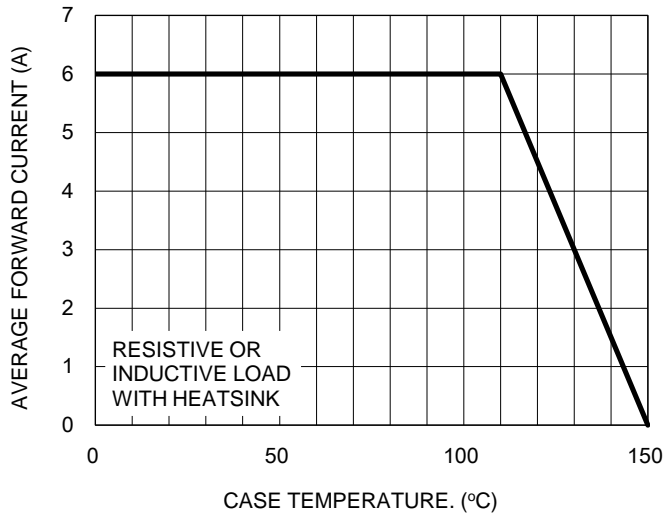
1. "xx" defines voltage from 50V (TS6P01G-K) to 1000V (TS6P07G-K)

<b>EXAMPLE</b>			
<b>EXAMPLE P/N</b>	<b>PART NO.</b>	<b>PACKING CODE</b>	<b>DESCRIPTION</b>
TS6P07G-K C7	TS6P07G-K	C7	

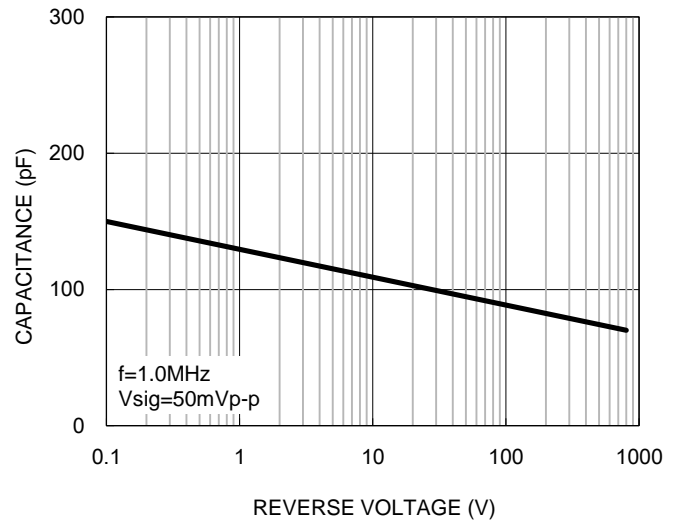
**CHARACTERISTICS CURVES**

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

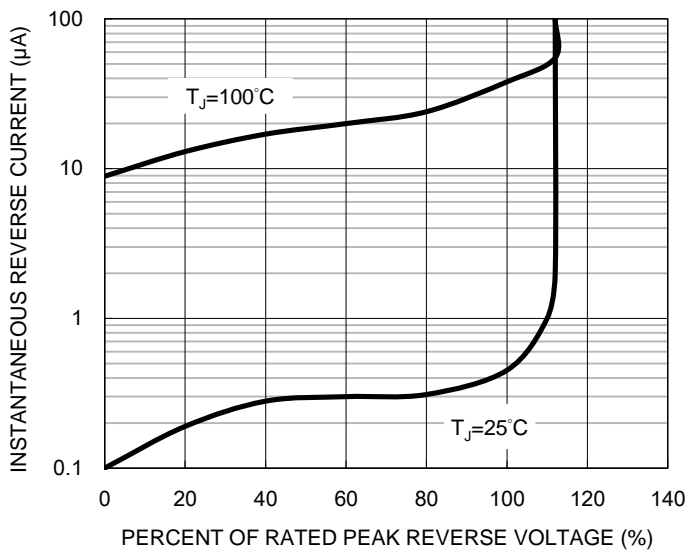
**Fig.1 Forward Current Derating Curve**



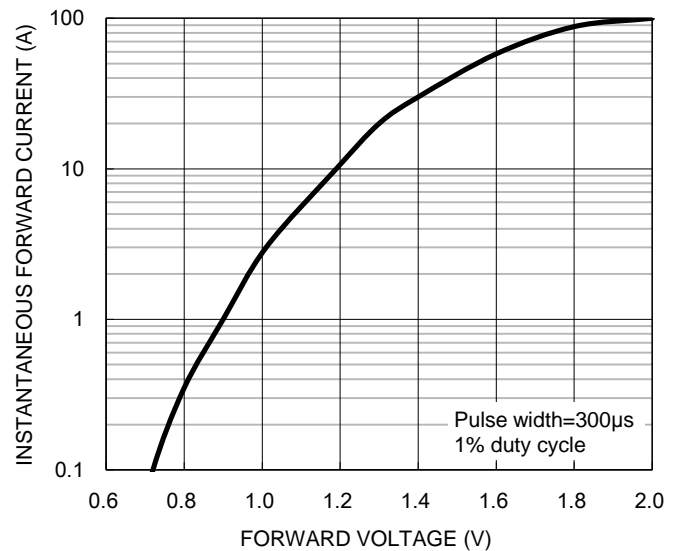
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



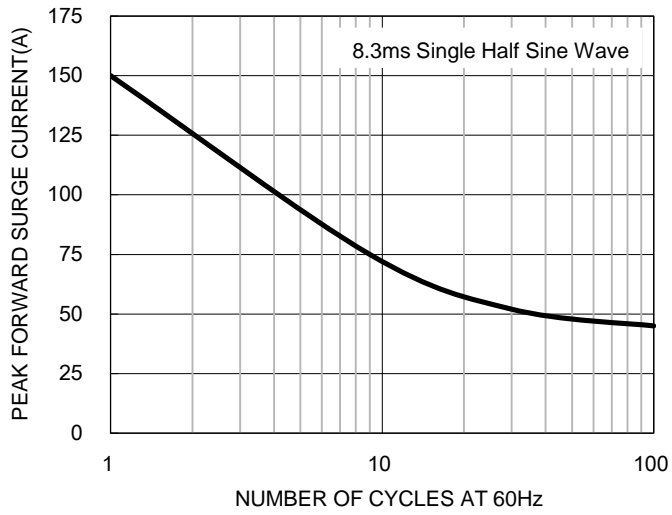
**Fig.4 Typical Forward Characteristics**



**CHARACTERISTICS CURVES**

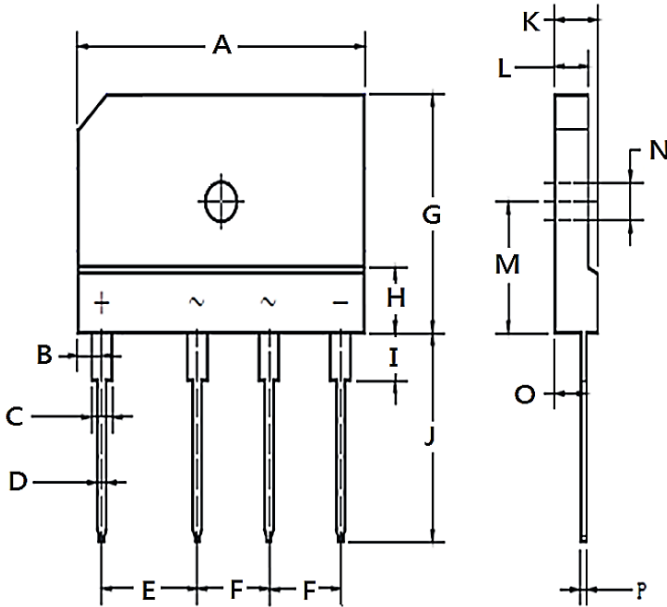
( $T_A = 25^\circ\text{C}$  unless otherwise noted)

**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
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
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  
YWW = Date Code  
F = Factory Code

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