

## 25A, 600V - 1000V Glass Passivated Bridge Rectifier

### FEATURES

- Glass passivated junction
- Ideal for printed circuit board
- High surge current capability
- UL Recognized File # E-326243
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC

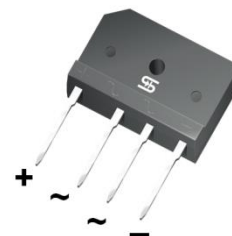
### APPLICATIONS

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

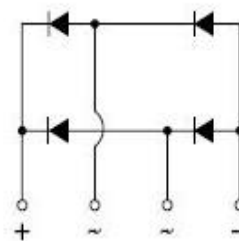
### MECHANICAL DATA

- Case: TS-6P
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Polarity: As marked
- Mounting torque: 0.92 N·m maximum
- Weight: 6.5 g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$I_F$	25	A
$V_{RRM}$	600 - 1000	V
$I_{FSM}$	350	A
$T_{J\ MAX}$	150	°C
Package	TS-6P	
Configuration	Quad	



TS-6P



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

PARAMETER	SYMBOL	TS25P 05G-K	TS25P 06G-K	TS25P 07G-K	UNIT
Marking code on the device		TS25P 05G	TS25P 06G	TS25P 07G	
Repetitive peak reverse voltage	$V_{RRM}$	600	800	1000	V
Reverse voltage, total rms value	$V_{R(RMS)}$	420	560	700	V
Forward current	$I_F$	25			A
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode	$I_{FSM}$	350			A
Rating of fusing ( $t < 8.3\text{ms}$ )	$I^2t$	508			A <sup>2</sup> 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	$R_{\theta JC}$	1.3	°C/W

**Thermal Performance Note:** Ideal heat sink

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

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode <sup>(1)</sup>	$I_F = 12.5\text{A}, T_J = 25^\circ\text{C}$	$V_F$	-	1.1	V
	$I_F = 12.5\text{A}, T_J = 125^\circ\text{C}$		-	1.0	V
Reverse current @ rated $V_R$ per diode <sup>(2)</sup>	$T_A = 25^\circ\text{C}$	$I_R$	-	10	$\mu\text{A}$
	$T_A = 125^\circ\text{C}$		-	500	$\mu\text{A}$
Junction capacitance	1 MHz, $V_R = 4.0\text{V}$	$C_J$	119	-	pF

**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
TS25P0xG-K C7	TS-6P	15 / TUBE
TS25P0xG-K C7G	TS-6P	15 / TUBE

**Note 1:**

"x" defines voltage from 600V (TS25P05G-K) to 1000V (TS25P07G-K)

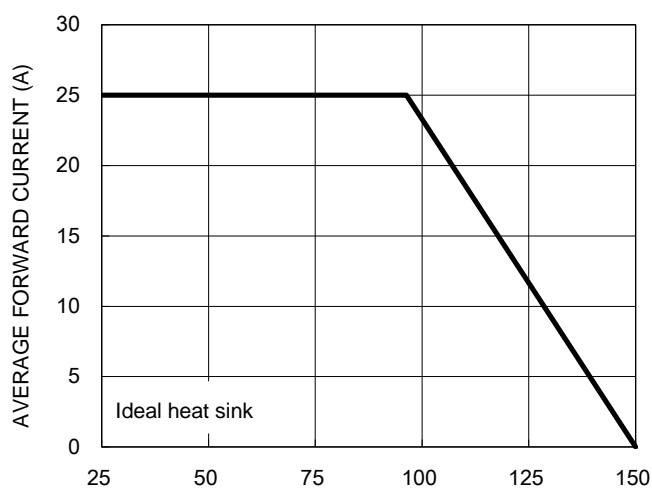
**Note 2:**

"G" means green compound (halogen free)

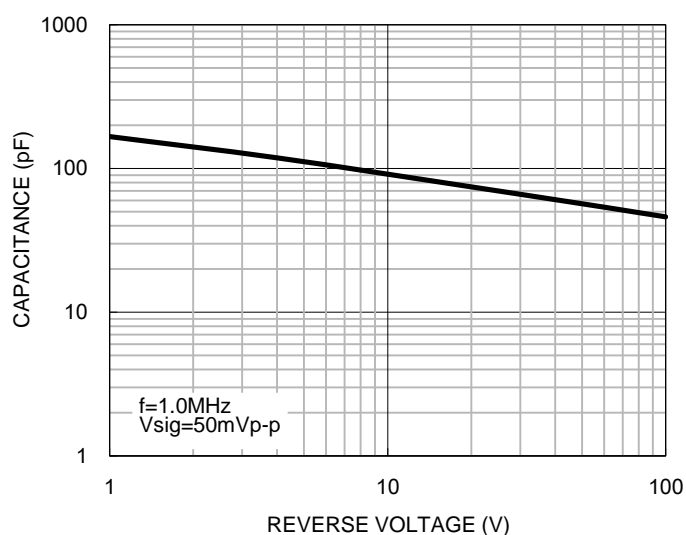
## CHARACTERISTICS CURVES

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

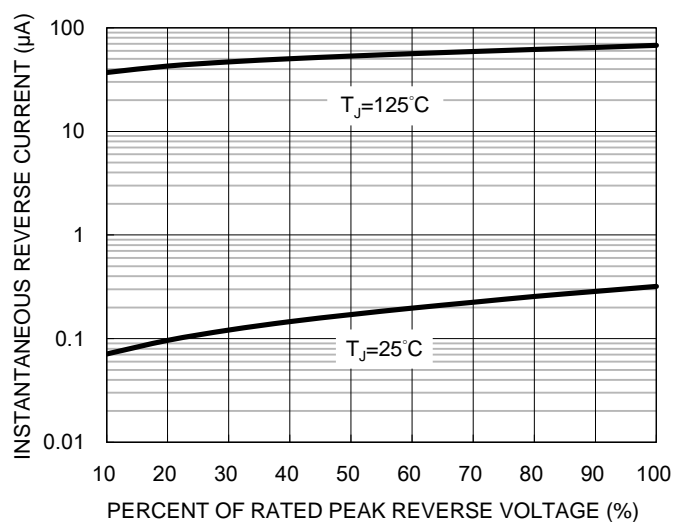
**Fig.1 Forward Current Derating Curve**



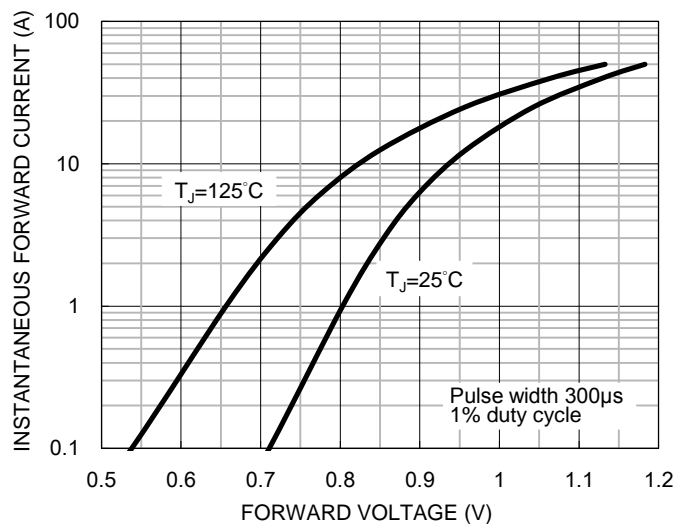
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**

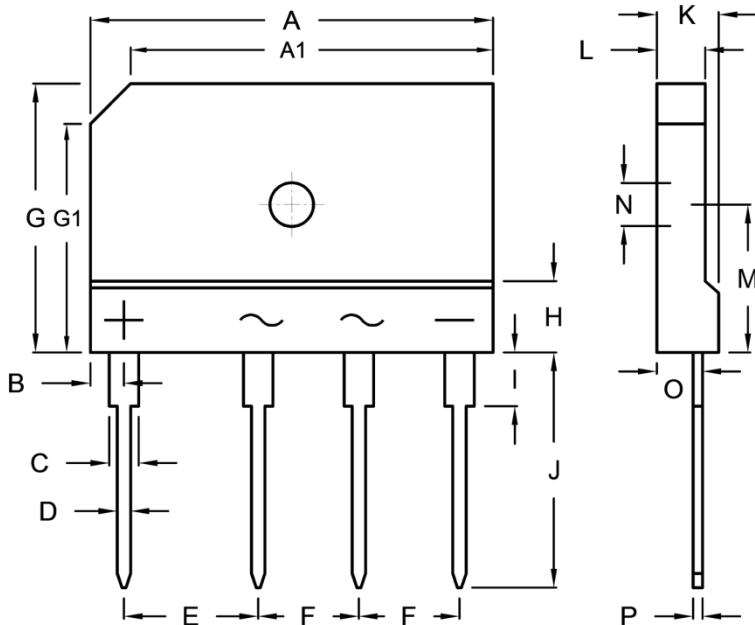


**Fig.4 Typical Forward Characteristics**



## 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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