

6A, 50V - 1000V Standard Bridge Rectifier

FEATURES

- Glass passivated chip junction
- Ideal for printed circuit board
- Typical IR less than 0.1 μ A
- High surge current capability
- UL Recognized File # E-326243
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- Lighting application

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
- Mounting torque: 0.92 N·m maximum
- Polarity: As marked
- Weight: 7.15g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
I_F	6	A
V_{RRM}	50 - 1000	V
I_{FSM}	150	A
$T_{J\ MAX}$	150	$^{\circ}$ C
Package	TS-6P	
Configuration	Quad	


TS-6P


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

PARAMETER	SYMBOL	TS6P	TS6P	TS6P	TS6P	TS6P	TS6P	TS6P	UNIT
		01G-K	02G-K	03G-K	04G-K	05G-K	06G-K	07G-K	
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	6							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150							A
Rating of fusing ($t < 8.3ms$)	I^2t	93.37							A ² s
Junction temperature	T_J	- 55 to +150							$^{\circ}$ C
Storage temperature	T_{STG}	- 55 to +150							$^{\circ}$ C

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

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode ⁽¹⁾	$I_F = 3\text{A}, T_J = 25^\circ\text{C}$	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 ⁽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⁽¹⁾	PACKAGE	PACKING
TS6PxG-K	TS-6P	15 / Tube

Notes:

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

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

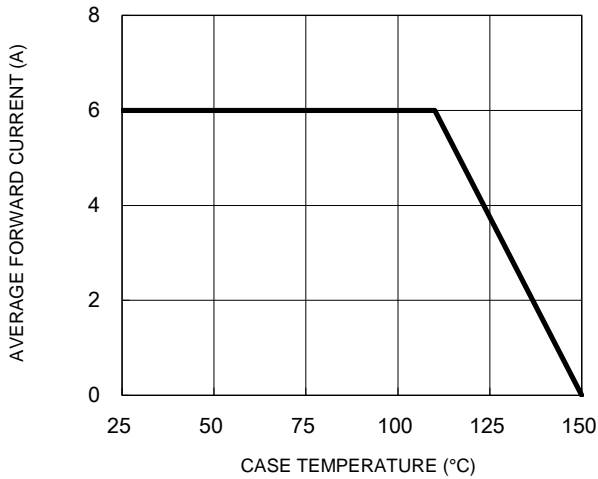


Fig.2 Typical Junction Capacitance

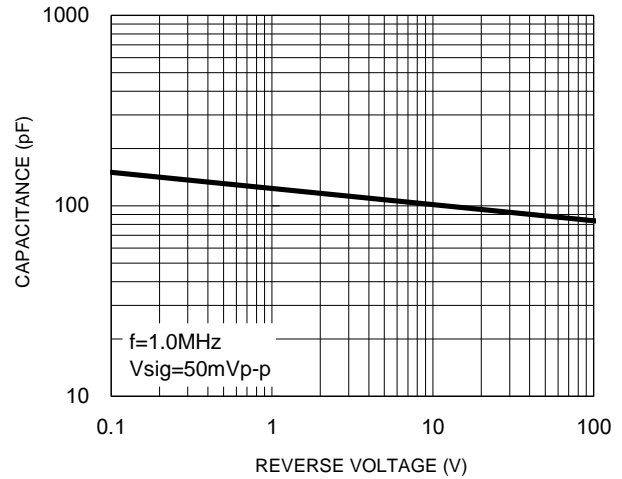


Fig.3 Typical Reverse Characteristics

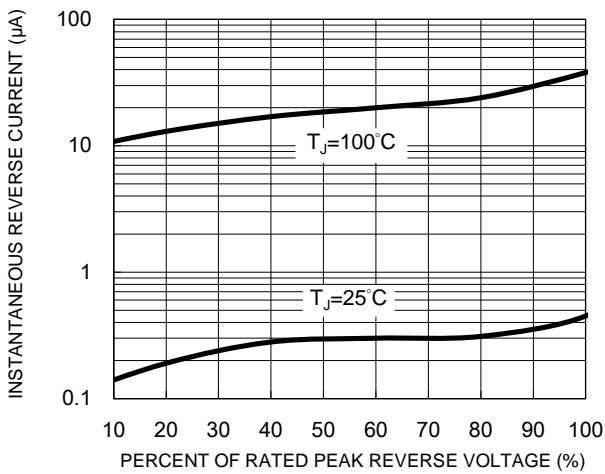


Fig.4 Typical Forward Characteristics

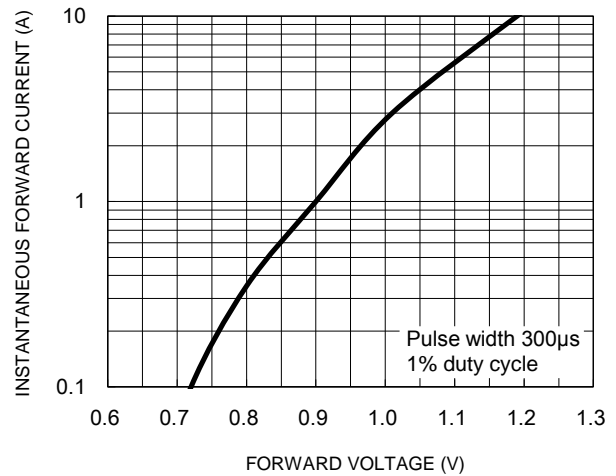
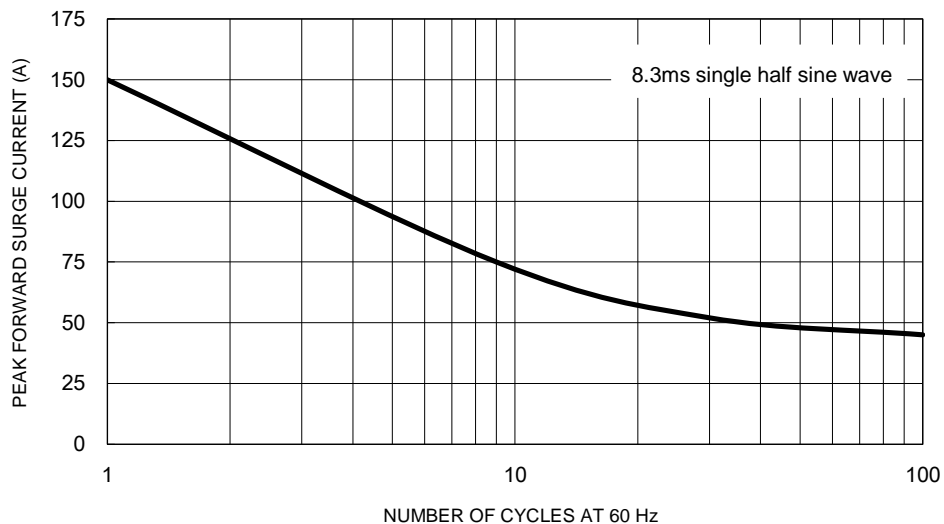
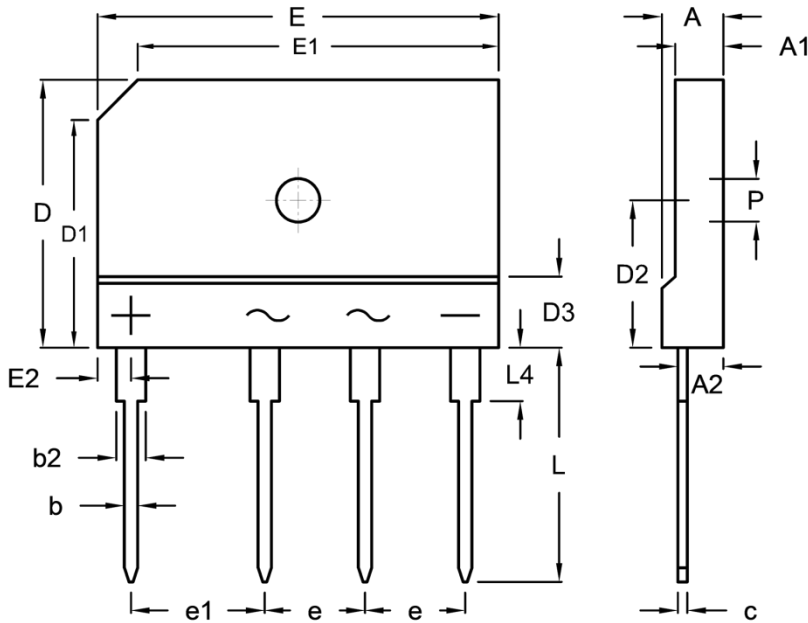


Fig.5 Maximum Non-Repetitive Forward Surge Current



PACKAGE OUTLINE DIMENSIONS

TS-6P



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	4.40	4.80	0.173	0.189
A1	3.40	3.80	0.134	0.150
A2	3.10	3.70	0.122	0.146
b	0.90	1.10	0.035	0.043
b2	2.00	2.40	0.079	0.094
c	0.60	0.80	0.024	0.031
D	19.70	20.30	0.776	0.799
D1	16.50	17.50	0.650	0.689
D2	10.80	11.20	0.425	0.441
D3	4.80	5.80	0.189	0.228
E	29.70	30.30	1.169	1.193
E1	26.50	27.50	1.043	1.083
E2	2.30	2.70	0.091	0.106
e	7.30	7.70	0.287	0.303
e1	9.80	10.20	0.386	0.402
L	17.00	18.00	0.669	0.709
L4	3.80	4.20	0.150	0.165
P	3.10	3.40	0.122	0.134

MARKING DIAGRAM



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

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Purchasers are solely responsible for the choice, selection, and use of TSC products and TSC assumes no liability for application assistance or the design of Purchasers' products.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.