6A, 400V - 800V Standard Bridge Rectifier

FEATURES

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

APPLICATIONS

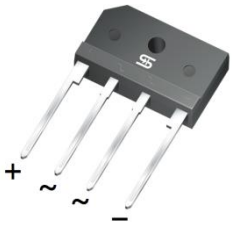
- Switching mode power supply (SMPS)
- Adapters
- Lighting application

MECHANICAL DATA

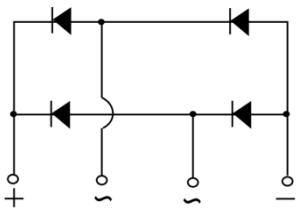
- Case: TS4K
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Mounting torque: 0.92 N·m maximum
- Polarity: As marked
- Weight: 4.10g (approximately)

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
I_F	6	A
V_{RRM}	400 - 800	V
I_{FSM}	150	A
$T_{J\ MAX}$	150	°C
Package	TS4K	
Configuration	Quad	

Pb-Free RoHS COMPLIANT HALOGEN FREE



TS4K



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)					
PARAMETER	**SYMBOL**	**TS6K40-T**	**TS6K60-T**	**TS6K80-T**	**UNIT**
Marking code on the device		TS6K40	TS6K60	TS6K80	
Repetitive peak reverse voltage	V_{RRM}	400	600	800	V
Reverse voltage, total rms value	$V_{R(RMS)}$	280	420	560	V
Forward current	I_F	6			A
Surge peak forward current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150			A
Rating of fusing (t<8.3ms)	I^2t	93			A^2s
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	$R_{\Theta JL}$	6	°C/W
Junction-to-ambient thermal resistance	$R_{\Theta JA}$	17	°C/W
Junction-to-case thermal resistance	$R_{\Theta JC}$	5	°C/W

Thermal Performance Note: Mounted on heat sink size of 2" x 3" x 0.25" Al -plate

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode[1]	I_F = 3A, T_J = 25°C	V_F	-	1.0	V
	I_F = 3A, T_J = 125°C		-	0.9	V
Reverse current @ rated V_R per diode[2]	T_J = 25°C	I_R	-	10	μA
	T_J = 125°C		-	500	μA
Junction capacitance per diode	1MHz, V_R = 4.0V	C_J	43	-	pF

Notes:

1. Pulse test with PW = 0.3ms
2. Pulse test with PW = 30ms

ORDERING INFORMATION

ORDERING CODE[1]	PACKAGE	PACKING
TS6Kx-A	TS4K	20 / Tube

Notes:

1. "x" defines voltage from 400V(TS6K40-T) to 800V(TS6K80-T)

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

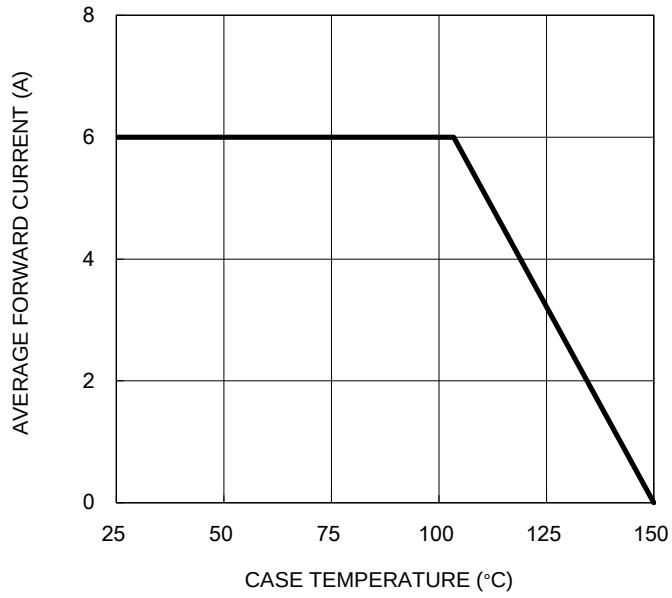


Fig.2 Typical Junction Capacitance

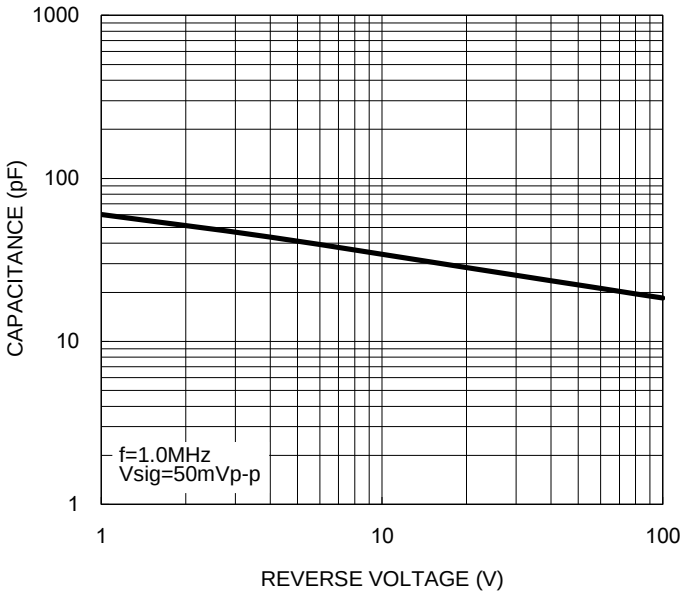


Fig.3 Typical Reverse Characteristics

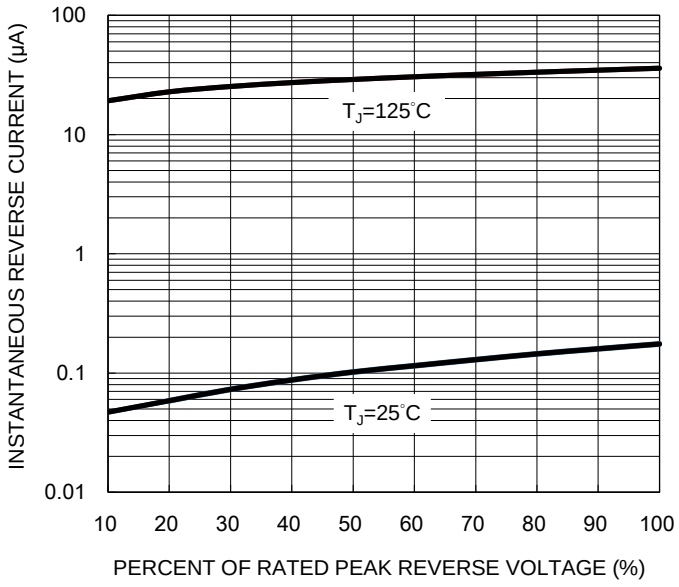
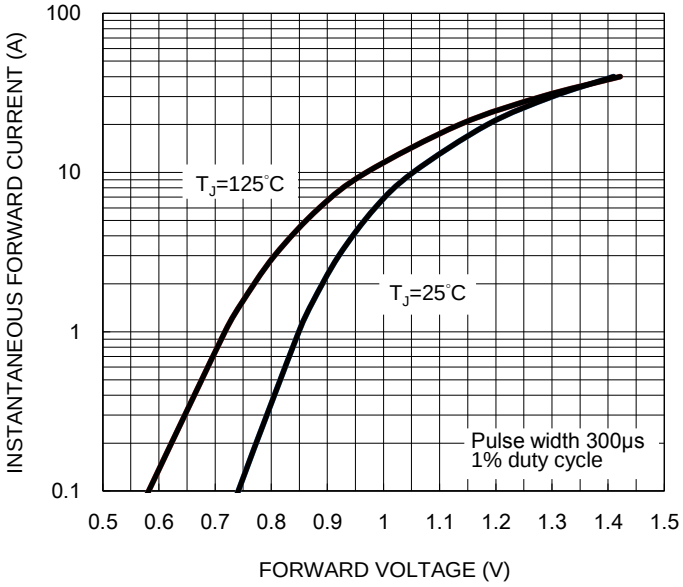
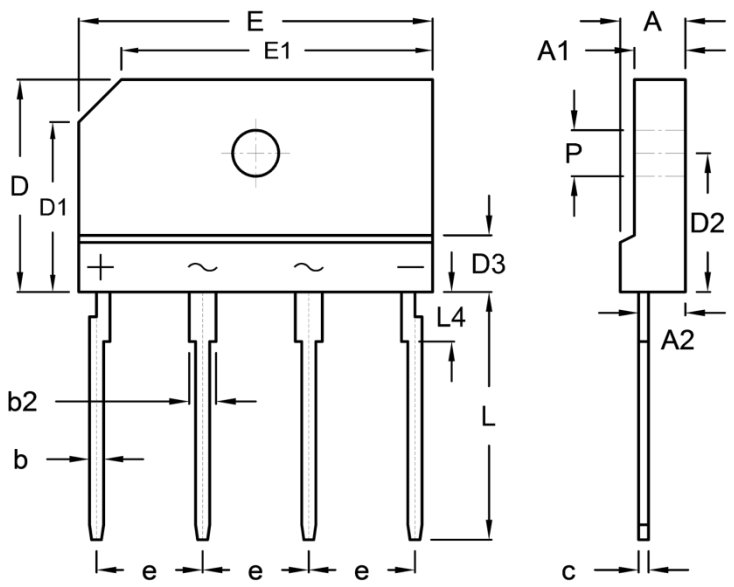


Fig.4 Typical Forward Characteristics



PACKAGE OUTLINE DIMENSIONS

TS4K



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	3.20	3.40	0.126	0.134
b	0.90	1.10	0.035	0.043
b2	1.70	2.10	0.067	0.083
c	0.60	0.80	0.024	0.031
D	14.70	15.30	0.579	0.602
D1	11.50	12.50	0.453	0.492
D2	9.50	10.10	0.374	0.398
D3	3.80	4.20	0.150	0.165
E	24.70	25.30	0.972	0.996
E1	21.50	22.50	0.846	0.886
e	7.30	7.70	0.287	0.303
L	17.00	18.00	0.669	0.709
L4	3.30	3.70	0.130	0.146
P	3.10	3.40	0.122	0.134

MARKING DIAGRAM

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

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