10A, 400V - 800V 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

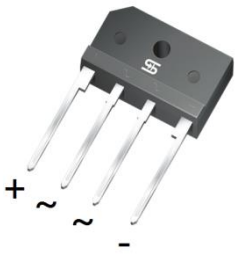
- Switching mode power supply (SMPS)
- Adapters
- TV
- Monitor

MECHANICAL DATA

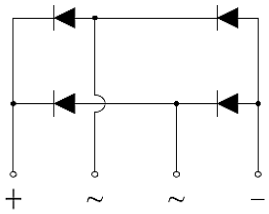
- Case: TS4K
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Polarity: As marked
- Mounting torque: 0.92 N·m maximum
- Weight: 4.1 g (approximately)

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
I_F	10	A
V_{RRM}	400 - 800	V
I_{FSM}	150	A
$T_{J\ MAX}$	150	°C
Package	TS4K	
Configuration	Quad	

Pb-Free RoHS COMPLIANT



TS4K



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)					
PARAMETER	**SYMBOL**	**TS10K40-A**	**TS10K60-A**	**TS10K80-A**	**UNIT**
Marking code on the device		TS10K40	TS10K60	TS10K80	
Repetitive peak reverse voltage	V_{RRM}	400	600	800	V
Reverse voltage, total rms value	$V_{R(RMS)}$	280	420	560	V
Forward current at T_C=70°C	I_F	10			A
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode	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"x3"x0.25" Al-Plate.

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

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode (1)	I_F = 5A, T_J = 25°C	V_F	-	1.0	V
	I_F = 5A, 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	1 MHz, V_R=4.0V	C_J	58	-	pF

Notes:

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

ORDERING INFORMATION

ORDERING CODE	PACKAGE	PACKING
TS10K40-A D3	TS4K	20 / TUBE
TS10K60-A D3	TS4K	20 / TUBE
TS10K80-A D3	TS4K	20 / TUBE
TS10K40-A D3G	TS4K	20 / TUBE
TS10K60-A D3G	TS4K	20 / TUBE
TS10K80-A D3G	TS4K	20 / TUBE

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

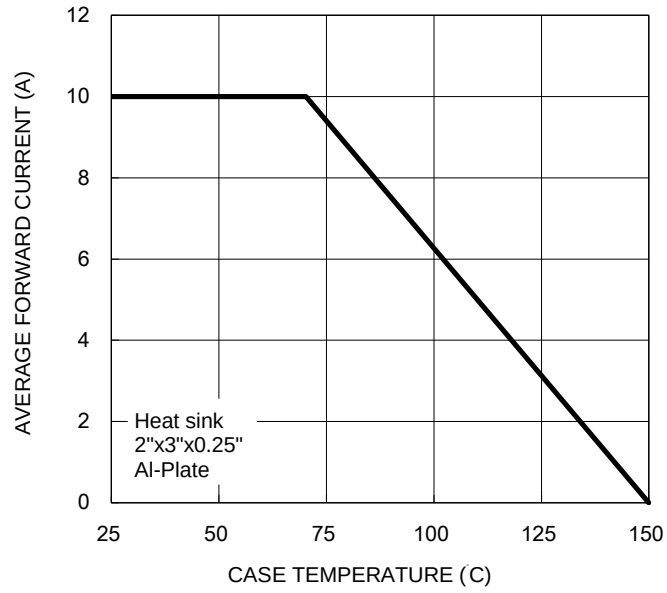


Fig.2 Typical Junction Capacitance

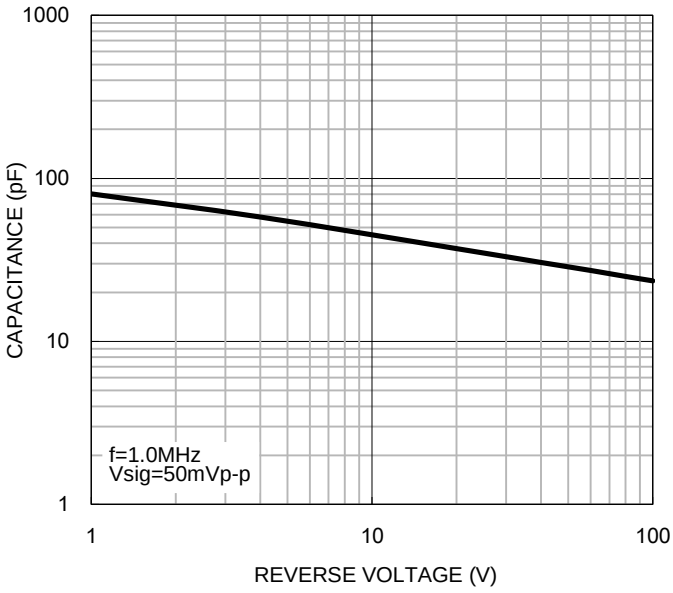


Fig.3 Typical Reverse Characteristics

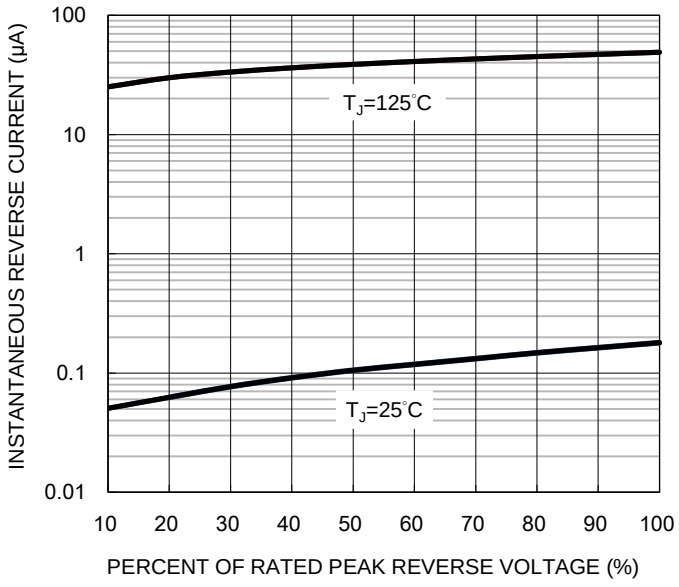
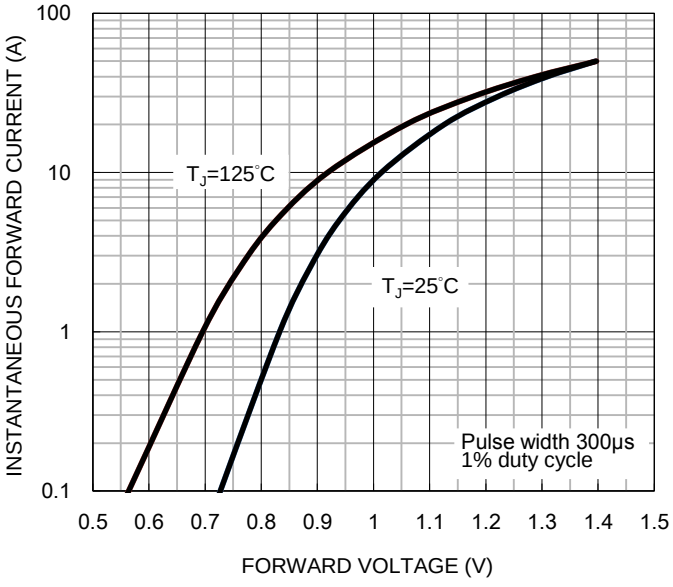
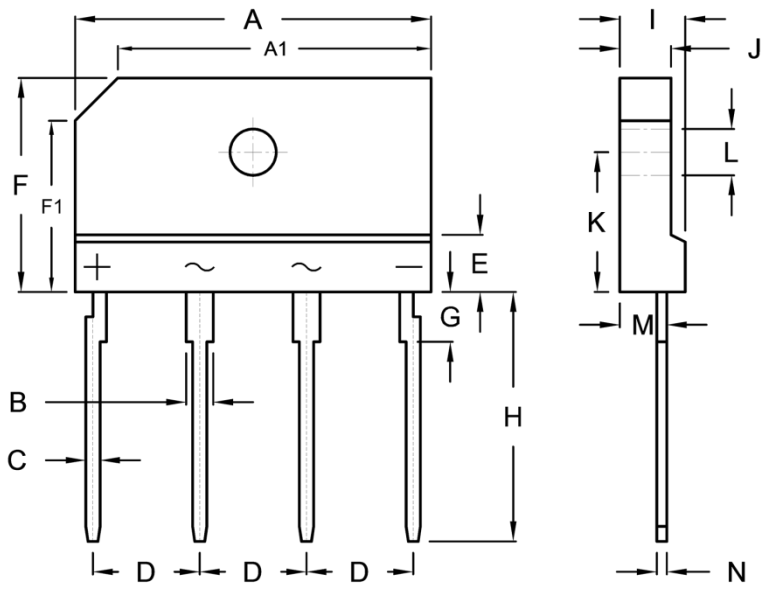


Fig.4 Typical Forward Characteristics



PACKAGE OUTLINE DIMENSIONS

TS4K



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	24.70	25.30	0.972	0.996
A1	21.50	22.50	0.846	0.886
B	1.70	2.10	0.067	0.083
C	0.90	1.10	0.035	0.043
D	7.30	7.70	0.287	0.303
E	3.80	4.20	0.150	0.165
F	14.70	15.30	0.579	0.602
F1	11.50	12.50	0.453	0.492
G	3.30	3.70	0.130	0.146
H	17.00	18.00	0.669	0.709
I	4.40	4.80	0.173	0.189
J	3.40	3.80	0.134	0.150
K	9.50	10.10	0.374	0.398
L	3.10	3.40	0.122	0.134
M	3.20	3.40	0.126	0.134
N	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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