15A, 50V - 1000V Standard Bridge Rectifier

FEATURES

- AEC-Q101 qualified available
- Glass passivated chip junction
- Ideal for printed circuit board
- Typical IR less than 0.1μA
- High surge current capability
- UL Recognized File # E-326243
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

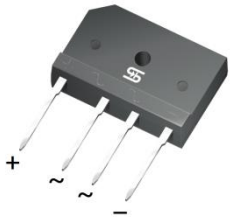
KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
I_F	15	A
V_{RRM}	50 - 1000	V
I_{FSM}	240	A
$T_{J\ MAX}$	150	°C
Package	TS-6P	
Configuration	Quad	

APPLICATIONS

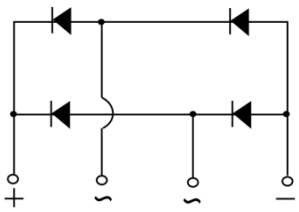
- Switching mode power supply (SMPS)
- Adapters
- Lighting application

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



TS-6P



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	TS15P 01G	TS15P 02G	TS15P 03G	TS15P 04G	TS15P 05G	TS15P 06G	TS15P 07G	UNIT
Marking code on the device		TS15P 01G	TS15P 02G	TS15P 03G	TS15P 04G	TS15P 05G	TS15P 06G	TS15P 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	15							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	240							A
Rating of fusing (t<8.3ms)	I^2t	239.04							A^2s
Junction temperature	T_J	- 55 to +150							°C
Storage temperature	T_{STG}	- 55 to +150							°C

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THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	UNIT
Junction-to-case thermal resistance	$R_{\Theta JC}$	0.8	°C/W

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

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode(1)	I_F = 7.5A, T_J = 25°C	V_F	-	1.0	V
	I_F = 15.0A, T_J = 25°C		-	1.1	V
Reverse current @ rated V_R per diode(2)	T_J = 25°C	I_R	-	10	μA
	T_J = 125°C		-	500	μA

Notes:

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

ORDERING INFORMATION

ORDERING CODE(1)(2)	PACKAGE	PACKING
TS15PxG	TS-6P	15 / Tube
TS15PxGH	TS-6P	15 / Tube

Notes:

1. "x" defines voltage from 50V(TS15P01G) to 1000V(TS15P07G)
2. “H” means AEC-Q101 qualified

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CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

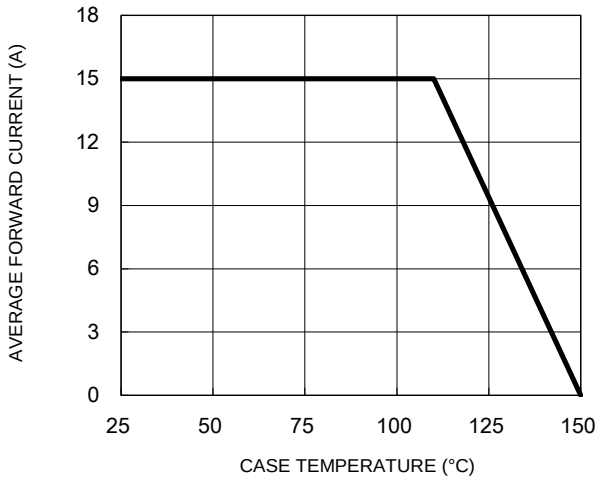


Fig.2 Typical Junction Capacitance

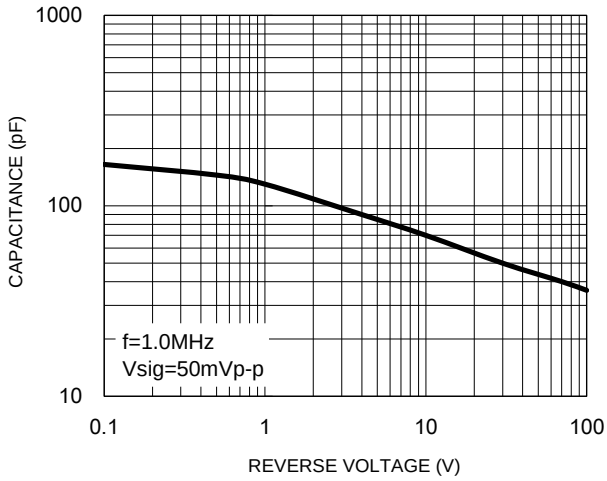


Fig.3 Typical Reverse Characteristics

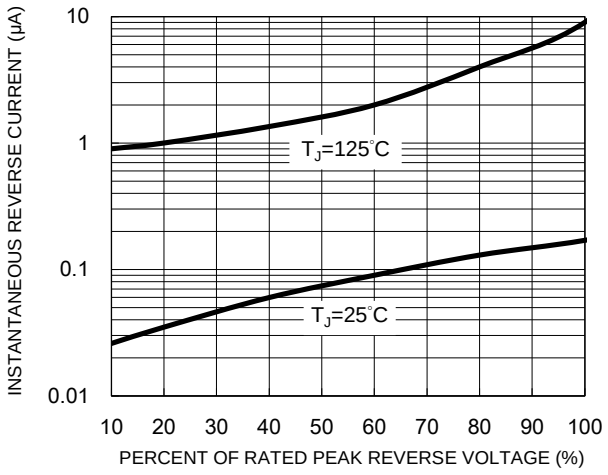


Fig.4 Typical Forward Characteristics

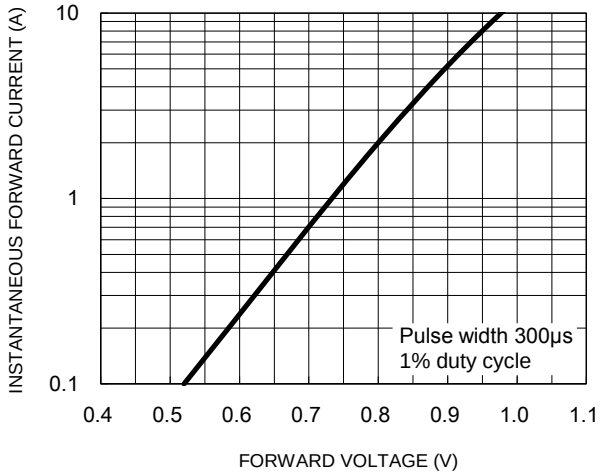
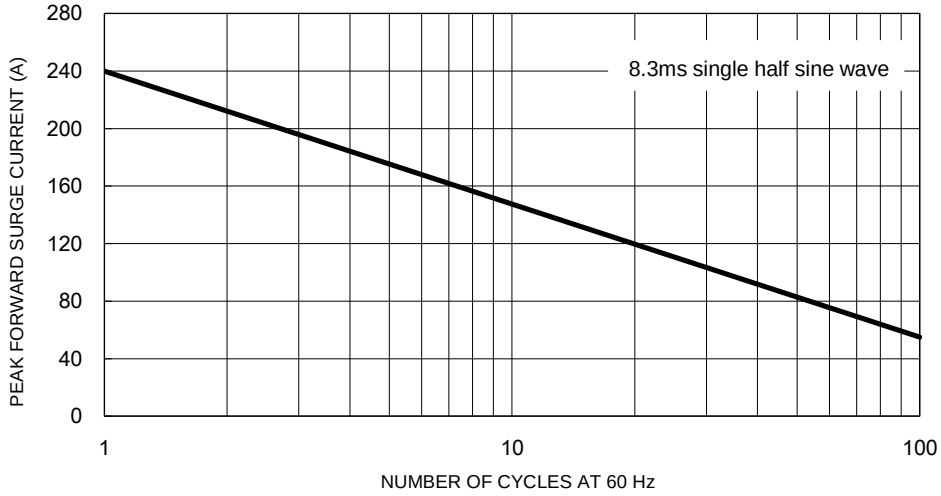


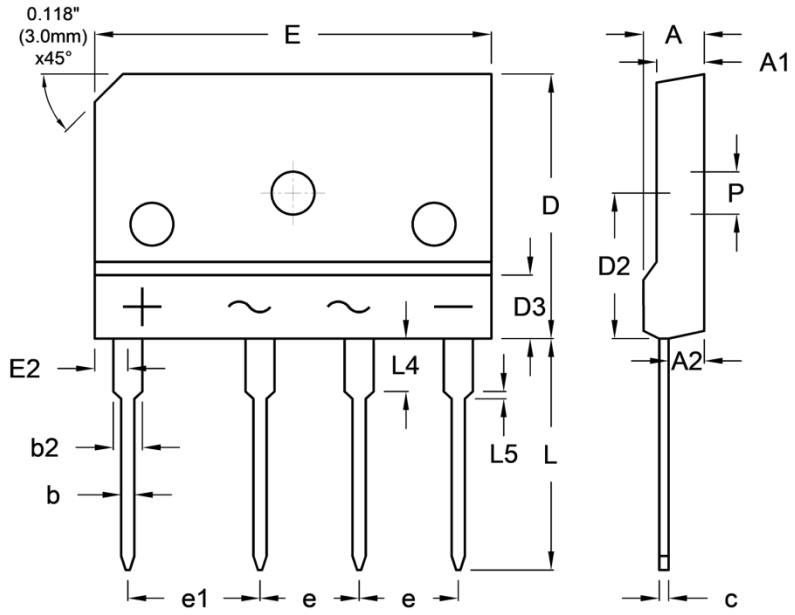
Fig.5 Maximum Non-Repetitive Forward Surge Current



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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	2.50	2.90	0.098	0.114
b	0.90	1.10	0.035	0.043
b2	2.00	2.40	0.079	0.094
c	0.65	0.75	0.026	0.030
D	19.70	20.30	0.776	0.799
D2	10.80	11.20	0.425	0.441
D3	-	4.80	-	0.189
E	29.70	30.30	1.169	1.193
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
L5	0.45	0.65	0.018	0.026
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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