

15A, 600V - 800V Low V_F Standard Bridge Rectifier

FEATURES

- AEC-Q101 qualified available
- Low Forward drop enhance the efficiency
- Oxide Planar chip junction
- High surge current capability
- UL Recognized File # E-326243
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

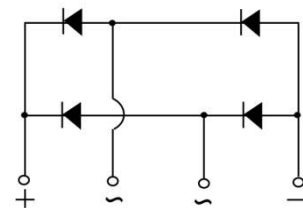
APPLICATIONS

- 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 2 whisker test
- Mounting torque: 0.80 N·m maximum
- Polarity: As marked
- Weight: 7.15g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
I_F	15	A
V_{RRM}	600 - 800	V
I_{FSM}	200	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	TS15PL05G	TS15PL06G	UNIT
Marking code on the device		TS15PL05G	TS15PL06G	
Repetitive peak reverse voltage	V_{RRM}	600	800	V
Reverse voltage, total rms value	$V_{R(RMS)}$	420	560	V
Forward current	I_F	15		A
Surge peak forward current, single half sine-wave superimposed on rated load	$t = 8.3\text{ms}$	200		A
	$t = 1.0\text{ms}$	630		A
Rating of fusing ($t < 8.3\text{ms}$)	I^2t	166		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-case thermal resistance	$R_{\theta JC}$	1	°C/W

Thermal Performance Note: Mounted on heat sink with 4" x 6" x 0.25" Al-Plate

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)						
PARAMETER		CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode ⁽¹⁾	TS15PL05G	$I_F = 7.5\text{A}, T_J = 25^\circ\text{C}$	V_F	-	0.90	V
	TS15PL06G			-	0.93	V
Reverse current @ rated V_R per diode ⁽²⁾		$T_J = 25^\circ\text{C}$	I_R	-	5	μA
		$T_J = 125^\circ\text{C}$		-	150	μA

Notes:

1. Pulse test with $PW = 0.3\text{ms}$
2. Pulse test with $PW = 30\text{ms}$

ORDERING INFORMATION		
ORDERING CODE ⁽¹⁾⁽²⁾	PACKAGE	PACKING
TS15PLxG	TS-6P	15 / Tube
TS15PLxGH	TS-6P	15 / Tube

Notes:

1. "x" defines voltage from 600V(TS15PL05G) to 800V(TS15PL06G)
2. "H" means AEC-Q101 qualified

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

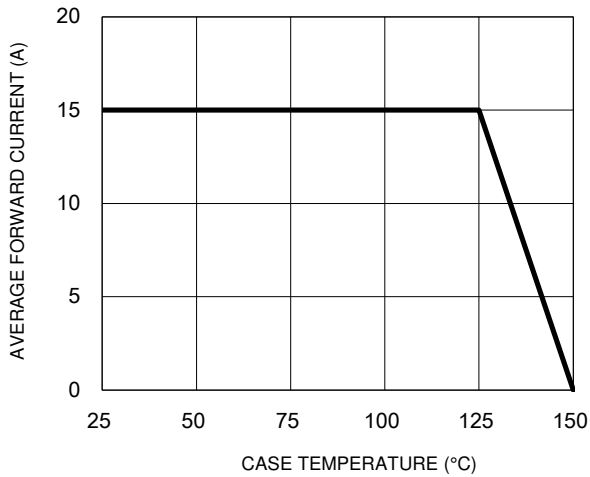


Fig.2 Typical Junction Capacitance

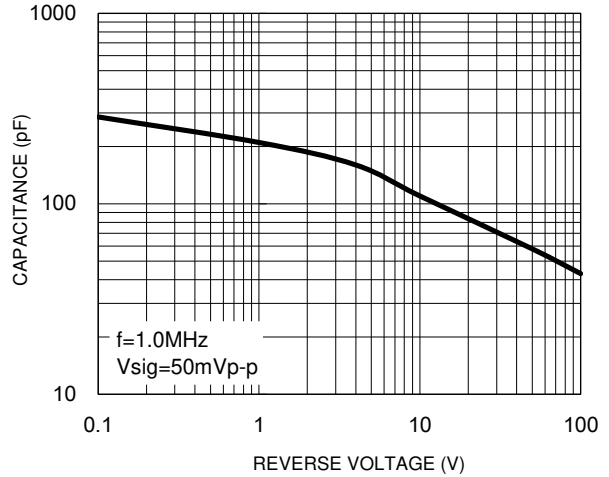


Fig.3 Typical Reverse Characteristics

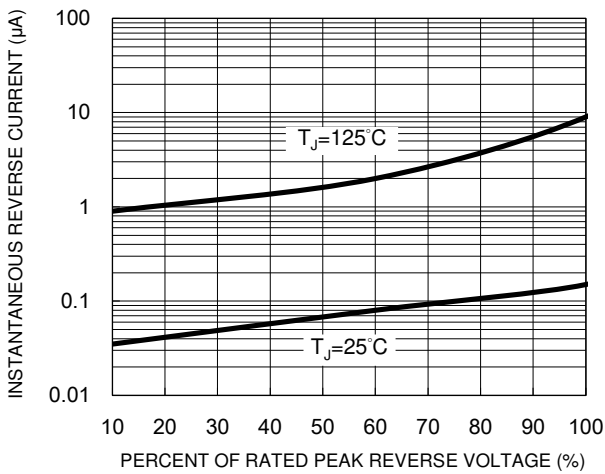


Fig.4 Typical Forward Characteristics

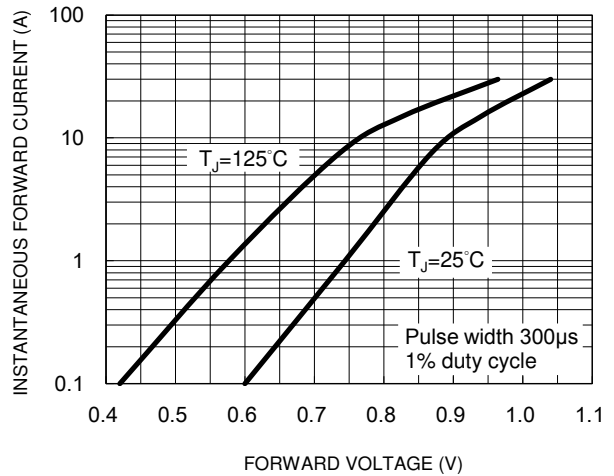
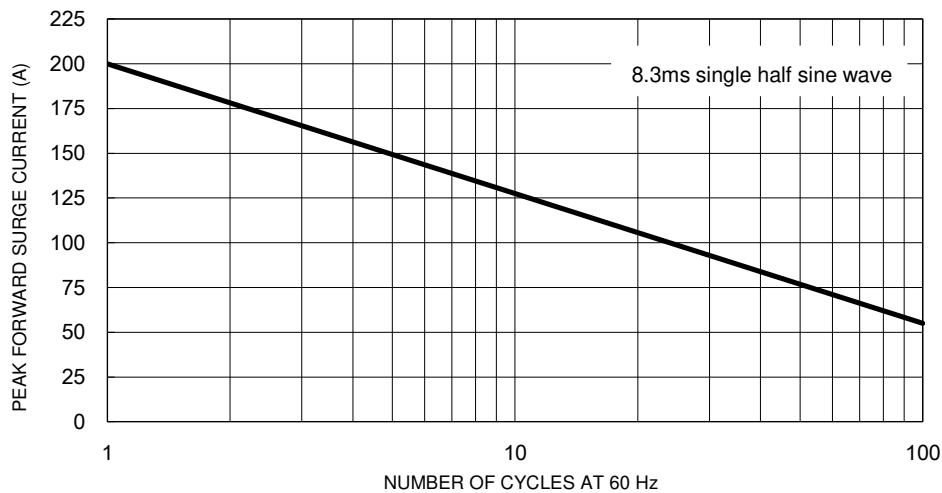


Fig.5 Maximum Non-Repetitive Forward Surge Current



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