



# 10A, 600V - 1000V 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: TS-6PL

• Molding compound meets UL 94V-0 flammability rating

• Terminal: Matte tin plated leads, solderable per J-STD-002

• Meet JESD 201 class 1 whisker test

• Mounting torque: 0.78 N⋅m maximum

Polarity: As marked

• Weight: 4.40g (approximately)

KEY PARAMETERS					
PARAMETER	VALUE	UNIT			
I <sub>F</sub>	10	Α			
$V_{RRM}$	600 - 1000	٧			
I <sub>FSM</sub>	144	Α			
$T_{JMAX}$	150 °C				
Package	TS-6PL				
Configuration	Quad				





TS-6PL

PARAMETER		SYMBOL	T10JA05G-K	T10JA06G-K	T10JA07G-K	UNIT
Marking code on the device			T10JA05G	T10JA06G	T10JA07G	
Repetitive peak reverse volta	epetitive peak reverse voltage		600	800	1000	V
Reverse voltage, total rms va	llue	V <sub>R(RMS)</sub>	420 560 700		700	٧
Forward current		I <sub>F</sub>	10			Α
Peak forward surge current, single half sine-wave superimposed on rated load $t = 1.0 \text{ms}$			144		Α	
		I <sub>FSM</sub>		436		Α
Rating of fusing (t<8.3ms)		l <sup>2</sup> t	86		A <sup>2</sup> s	
Junction temperature		TJ	- 55 to +150		°C	
Storage temperature		T <sub>STG</sub>	- 55 to +150		°C	

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THERMAL PERFORMANCE						
PARAMETER	SYMBOL	TYP	UNIT			
Junction-to-lead thermal resistance	R <sub>eJL</sub>	11	°C/W			
Junction-to-ambient thermal resistance	R <sub>eJA</sub>	17	°C/W			
Junction-to-case thermal resistance	R <sub>eJC</sub>	6	°C/W			

Thermal Performance Note: Mounted on heat sink size of 4" x 6" x 0.25" Al-plate

ELECTRICAL SPECIFICATIONS (T <sub>A</sub> = 25°C unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode <sup>(1)</sup>	I <sub>F</sub> = 5A, T <sub>J</sub> = 25°C	V <sub>F</sub>	0.93	-	V
	I <sub>F</sub> = 10A, T <sub>J</sub> = 25°C		1.01	1.10	V
	I <sub>F</sub> = 5A, T <sub>J</sub> = 125°C		0.83	-	V
	I <sub>F</sub> = 10A, T <sub>J</sub> = 125°C		0.92	1.03	V
Reverse current @ rated V <sub>R</sub> per diode <sup>(2)</sup>	T <sub>J</sub> = 25°C	I <sub>R</sub>	-	5	μΑ
	T <sub>J</sub> = 125°C		-	300	μΑ
Junction capacitance per diode	1MHz, V <sub>R</sub> = 4.0V	CJ	43.9	-	рF

### Notes:

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

ORDERING INFORMATION					
ORDERING CODE <sup>(1)</sup>	PACKAGE	PACKING			
T10JA0xG-K	TS-6PL	15 / Tube			

### Notes:

1. "x" defines voltage from 600V(T10JA05G-K) to 1000V(T10JA07G-K)



## **CHARACTERISTICS CURVES**

(T<sub>A</sub> = 25°C unless otherwise noted)

**Fig.1Forward Current Derating Curve** 

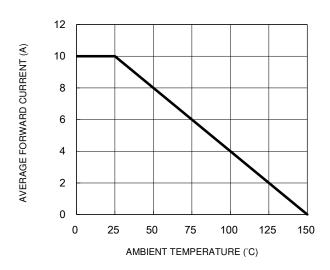


Fig.3 Typical Reverse Characteristics

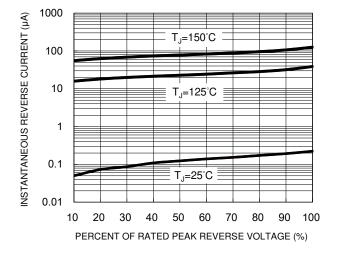
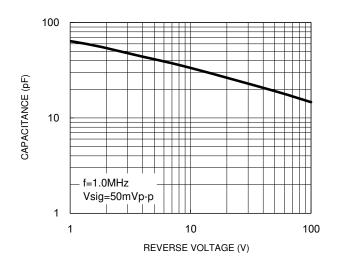
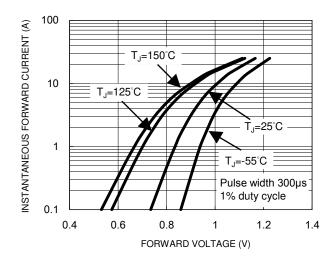


Fig.2 Typical Junction Capacitance



**Fig.4 Typical Forward Characteristics** 

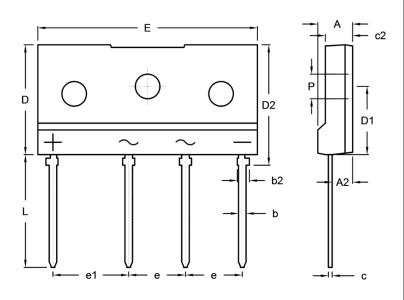




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## **PACKAGE OUTLINE DIMENSIONS**

TS-6PL



DIM.	Unit (mm)		Unit (inch)		
DIIVI.	Min.	Max.	Min.	Max.	
Α	4.30	4.90	0.169	0.193	
A2	2.50	2.90	0.098	0.114	
b	0.90	1.10	0.035	0.043	
b2	1.50	1.70	0.059	0.067	
С	0.40	0.60	0.016	0.024	
c2	3.30	3.90	0.130	0.154	
D	14.20	14.80	0.559	0.583	
D1	8.70	9.30	0.343	0.366	
D2	15.60	16.20	0.614	0.638	
E	28.70	29.30	1.130	1.154	
е	7.30	7.70	0.287	0.303	
e1	9.80	10.20	0.386	0.402	
L	14.60	15.20	0.575	0.598	
Р	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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