

Glass Passivated Junction Rectifier



Case Style P600

FEATURES

- Glass passivated chip junction
- Low forward voltage drop
- Low leakage current, typical I_R less than $0.2 \mu A$
- High forward surge capability
- Meets environmental standard MIL-S-19500
- Solder dip $260^\circ C$, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC


RoHS
COMPLIANT

TYPICAL APPLICATIONS

For use in general purpose rectification of power supplies, inverters, converters and freewheeling diodes application.

MECHANICAL DATA

Case: P600, molded epoxy over passivated junction

Epoxy meets UL 94V-0 flammability rating

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD22-B102

E3 suffix for consumer grade, meets JESD 201 class 1A whisker test, HE3 suffix for high reliability grade (AEC Q101 qualified), meets JESD 201 class 2 whisker test

Polarity: Color band denotes cathode end

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	6.0 A
V_{RRM}	50 V to 400 V
I_{FSM}	500 A
V_F	1.1 V
I_R	$5.0 \mu A$
$T_J \text{ max.}$	$175^\circ C$

MAXIMUM RATINGS ($T_A = 25^\circ C$ unless otherwise noted)						
PARAMETER	SYMBOL	GPP60A	GPP60B	GPP60D	GPP60G	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	V
Maximum average forward rectified current 0.375" (9.5 mm) lead length at $T_A = 55^\circ C$	$I_{F(AV)}$	6.0				A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	500				A
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 175				$^\circ C$

ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)							
PARAMETER	TEST CONDITIONS	SYMBOL	GPP60A	GPP60B	GPP60D	GPP60G	UNIT
Maximum instantaneous forward voltage	6.0 A	V _F		1.1			V
Maximum reverse current at rated DC blocking voltage	T _A = 25 °C T _A = 100 °C	I _R		5.0 100			μA
Maximum reverse recovery time	I _F = 0.5 A, I _R = 1.0 A, I _{rr} = 0.25 A	t _{rr}		5.5			μs
Typical junction capacitance	4.0 V, 1 MHz	C _J		110			pF

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	GPP60A	GPP60B	GPP60D	GPP60G	UNIT
Typical thermal resistance ⁽¹⁾	R _{θJA} R _{θJL}		20 4.0			°C/W

Note:

(1) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5 mm) lead length, P.C.B. mounted

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
GPP60J-E3/54	2.0	54	800	13" diameter paper tape and reel
GPP60J-E3/73	2.0	73	300	Ammo pack packaging
GPP60JHE3/54 ⁽¹⁾	2.0	54	800	13" diameter paper tape and reel
GPP60JHE3/73 ⁽¹⁾	2.0	73	300	Ammo pack packaging

Note:

(1) Automotive grade AEC Q101 qualified

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

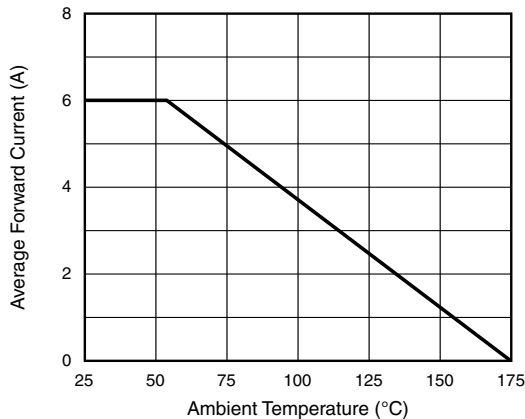


Figure 1. Forward Current Derating Curve

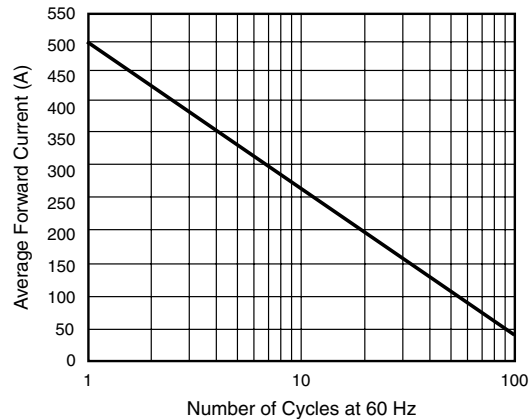


Figure 2. Maximum Non-repetitive Forward Surge Current

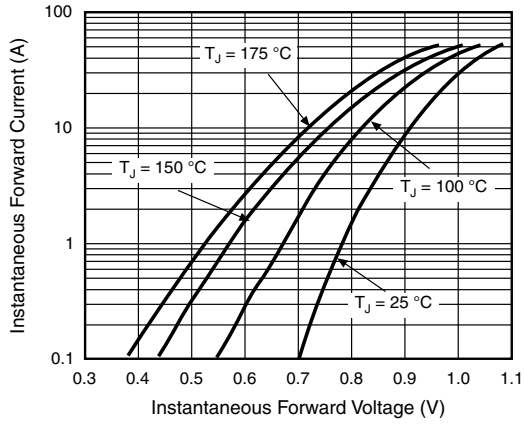


Figure 3. Typical Instantaneous Forward Characteristics

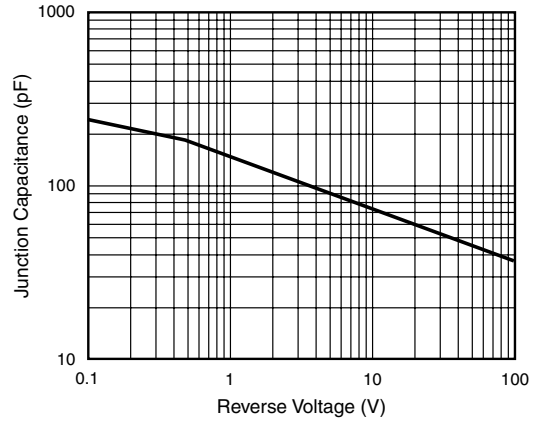


Figure 5. Typical Junction Capacitance

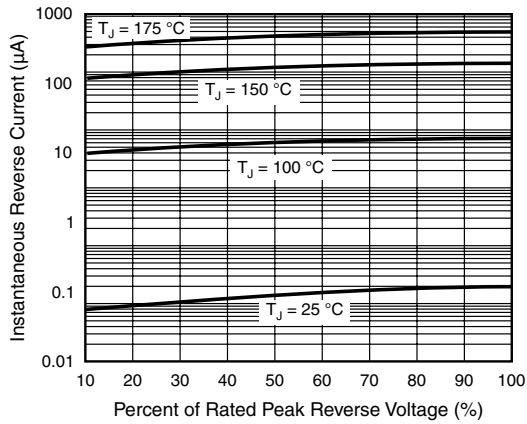
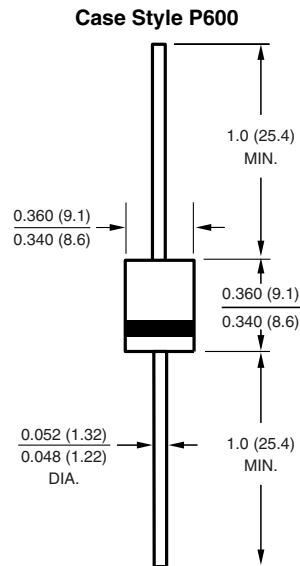


Figure 4. Typical Reverse Characteristics

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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