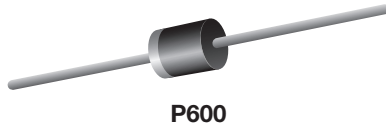


Glass Passivated Junction Rectifier



FEATURES

- Glass passivated chip junction
- Low forward voltage drop
- Low leakage current, typical I_R less than $0.2 \mu\text{A}$
- High forward surge capability
- Meets environmental standard MIL-S-19500
- Solder dip $275 \text{ }^\circ\text{C}$ max. 10 s, per JESD 22-B106
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC


RoHS
COMPLIANT

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	$5.0 \mu\text{A}$
$T_J \text{ max.}$	$175 \text{ }^\circ\text{C}$

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
Molding compound meets UL 94 V-0 flammability rating
Base P/N-E3 - RoHS compliant, commercial grade
Base P/NHE3 - RoHS compliant, AEC-Q101 qualified

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

E3 suffix meets JESD 201 class 1A whisker test, HE3 suffix meets JESD 201 class 2 whisker test

Polarity: Color band denotes cathode end

MAXIMUM RATINGS ($T_A = 25 \text{ }^\circ\text{C}$ 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 $T_A = 55 \text{ }^\circ\text{C}$	$I_{F(AV)}$	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				$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ 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	$T_A = 25\text{ }^\circ\text{C}$	I_R	5.0				μA
	$T_A = 100\text{ }^\circ\text{C}$		100				
Maximum reverse recovery time	$I_F = 0.5\text{ A}, I_R = 1.0\text{ A}, I_{rr} = 0.25\text{ A}$	t_{rr}	5.5				μs
Typical junction capacitance	4.0 V, 1 MHz	C_J	110				pF

THERMAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)							
PARAMETER	SYMBOL	GPP60A	GPP60B	GPP60D	GPP60G	UNIT	
Typical thermal resistance	$R_{\theta JA}^{(1)}$	20				$^\circ\text{C/W}$	
	$R_{\theta JL}^{(1)}$	4.0					

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) AEC-Q101 qualified

RATINGS AND CHARACTERISTICS CURVES

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

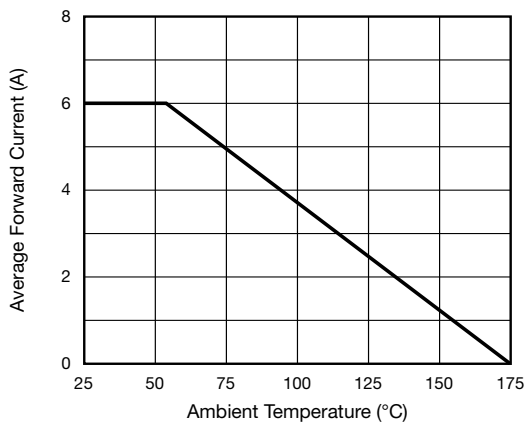


Fig. 1 - Forward Current Derating Curve

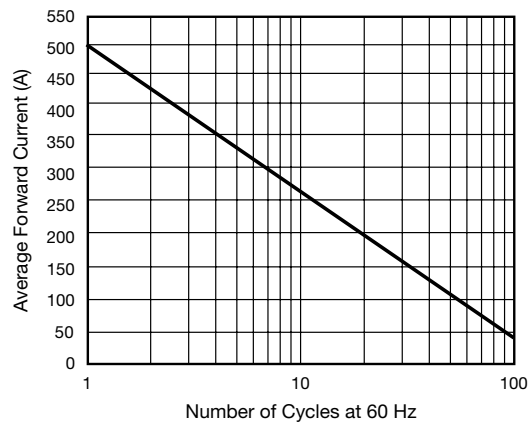


Fig. 2 - Maximum Non-repetitive Forward Surge Current

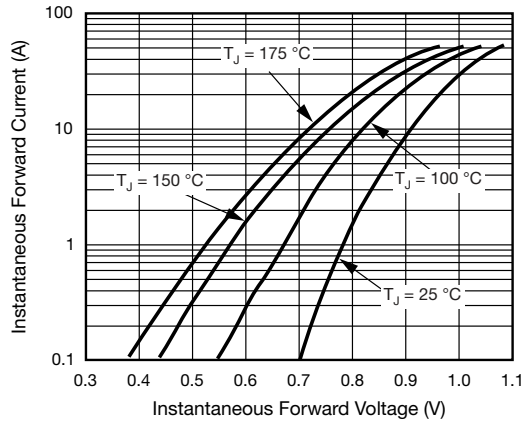


Fig. 3 - Typical Instantaneous Forward Characteristics

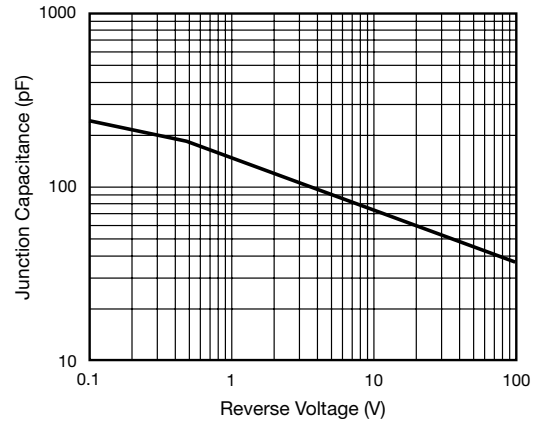


Fig. 5 - Typical Junction Capacitance

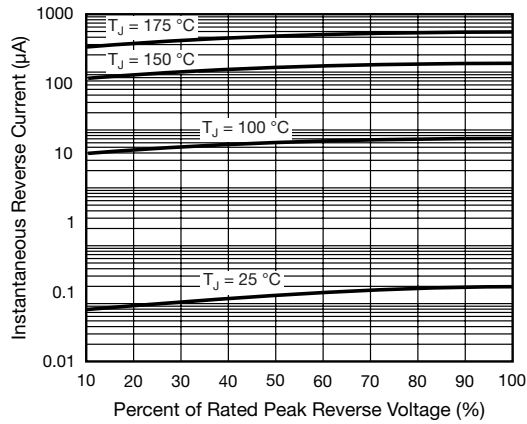
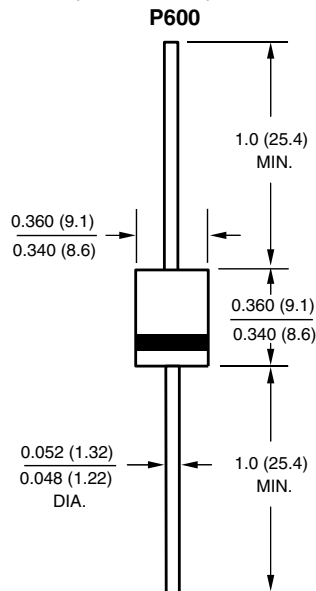


Fig. 4 - Typical Reverse Characteristics

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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