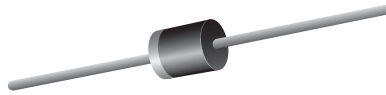


Glass Passivated Junction Plastic Rectifier


P600

FEATURES

- Glass passivated pallet chip junction
- Low forward voltage drop
- Low leakage current, typical I_R less than 0.2 μA
- High forward surge capability
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- AEC-Q101 qualified
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	6.0 A
V_{RRM}	50 V, 100 V, 200 V, 400 V
I_{FSM}	500 A
V_F	1.1 V
I_R	5.0 μA
T_J max.	175 °C
Package	P600
Diode variations	Single die

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 ($T_A = 25$ °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 $T_A = 55$ °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				°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	I_R	5.0				μA
	$T_A = 100$ °C		100				
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 ($T_A = 25\text{ }^\circ\text{C}$ 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, PCB mounted

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
GPP60A-E3/54	2.0	54	800	13" diameter paper tape and reel
GPP60A-E3/73	2.0	73	300	Ammo pack packaging
GPP60AHE3/54 (1)	2.0	54	800	13" diameter paper tape and reel
GPP60AHE3/73 (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)

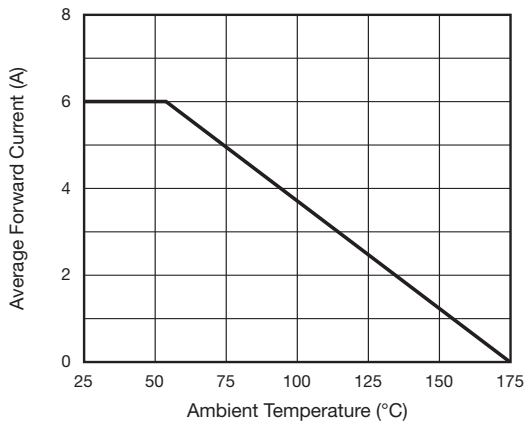


Fig. 1 - Forward Current Derating Curve

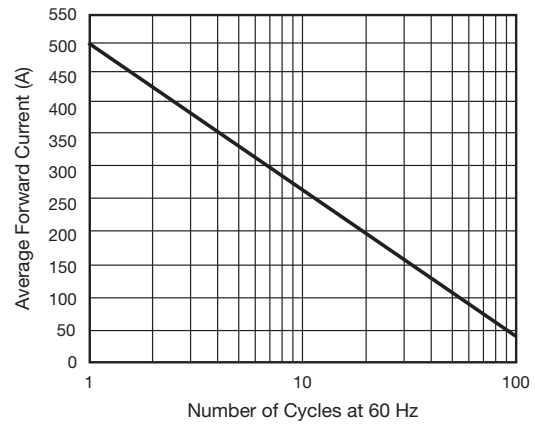


Fig. 3 - Maximum Non-repetitive Forward Surge Current

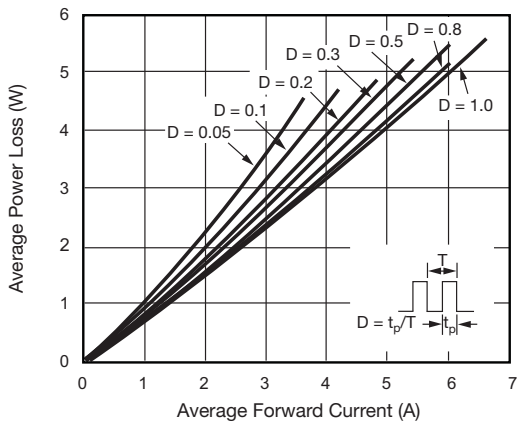


Fig. 2 - Forward Power Loss Characteristics

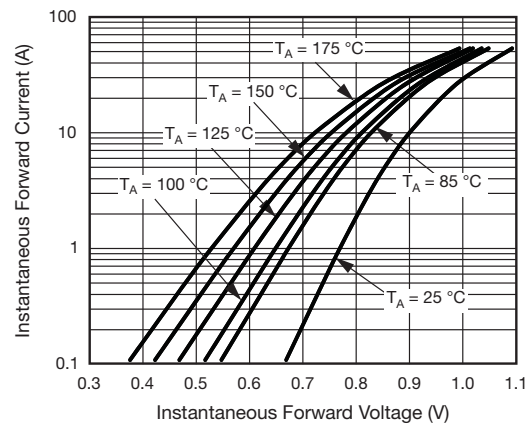


Fig. 4 - Typical Instantaneous Forward Characteristics

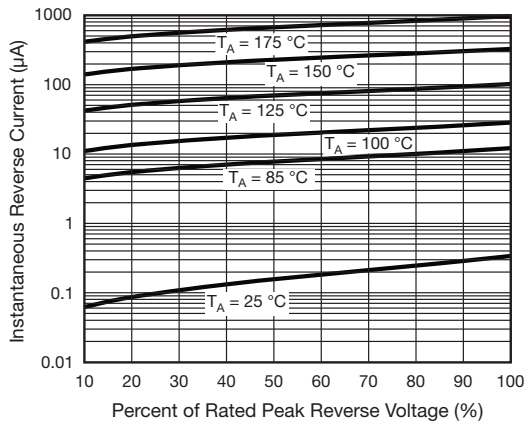


Fig. 5 - Typical Reverse Characteristics

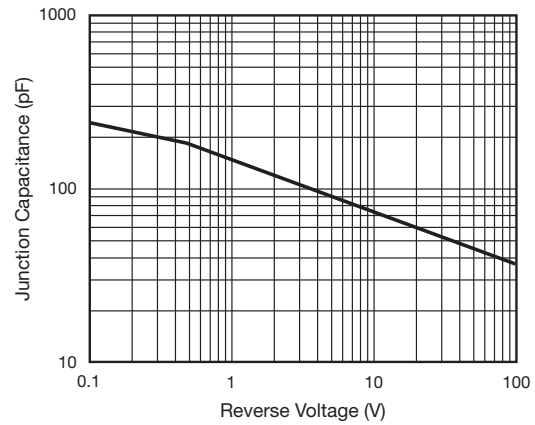
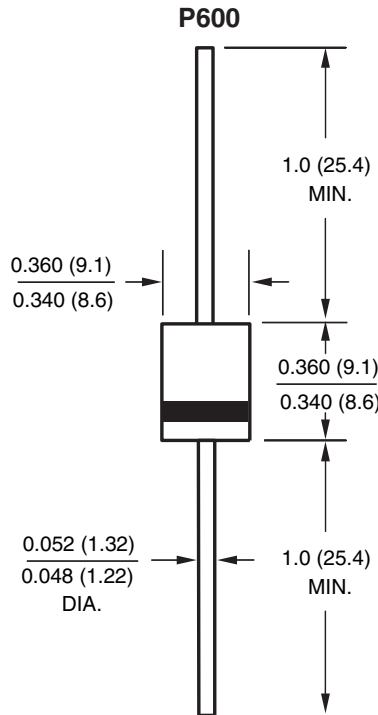


Fig. 6 - Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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