Glass Passivated Junction Rectifier

Major Ratings and 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 µA
T_j max.	150 °C

Case Style P600

Features

- Glass passivated chip junction
- Low forward voltage drop
- Low leakage current, typical I_R less than 0.2 µA
- High forward surge capability
- Meets environmental standard MIL-S-19500
- Meets MSL level 1, per J-STD-020C

Mechanical Data

Case: P600, molded plastic over passivated junction

Epoxy meets UL-94V-0 Flammability rating

Terminals: Matte tin plated (E3 Suffix) leads, solderable per J-STD-002B and MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Typical Applications

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

Maximum Ratings

(T_A = 25 °C unless otherwise noted)

Parameter	Symb.	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 condition	Symb.	GPP60A	GPP60B	GPP60D	GPP60G	Unit
Maximum instantaneous forward voltage	at 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	at 4.0 V, 1 MHz	C_J	110				pF

Thermal Characteristics

(T_A = 25 °C unless otherwise noted)

Parameter	Symb.	GPP60A	GPP60B	GPP60D	GPP60G	Unit
Typical thermal resistance(1)	$R_{\theta JA}$ $R_{\theta JL}$	20 4.0				°C/W

Notes:

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

Ratings and Characteristics Curves

(T_A = 25 °C unless otherwise noted)

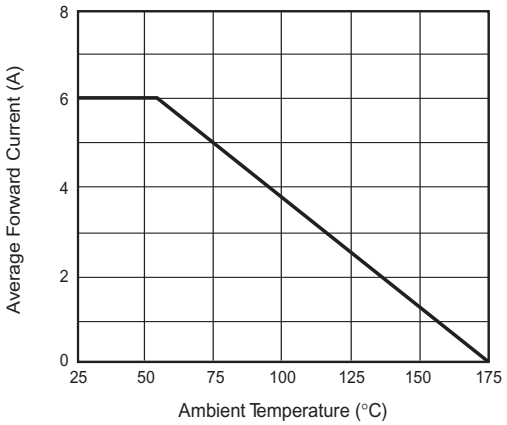


Figure 1. Forward Current Derating Curve

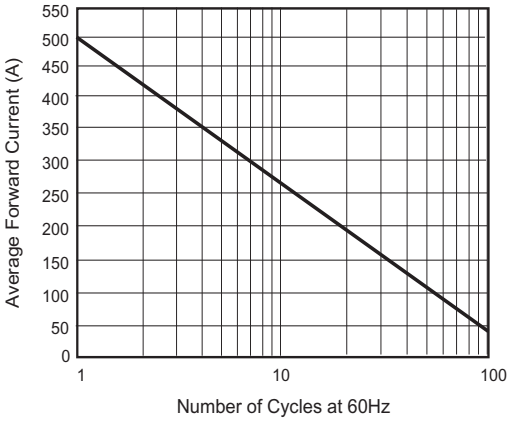


Figure 2. Maximum Non-repetitive Forward Surge Current

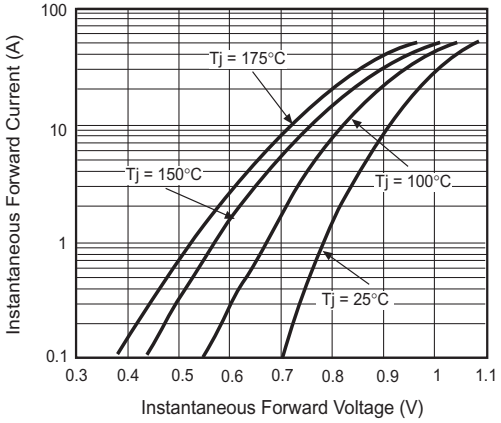


Figure 3. Typical Instantaneous Forward Characteristics

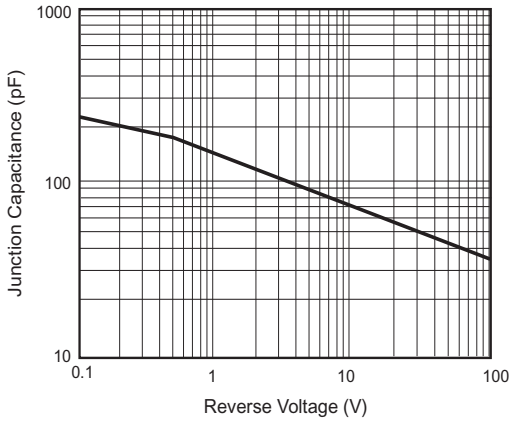


Figure 5. Typical Junction Capacitance

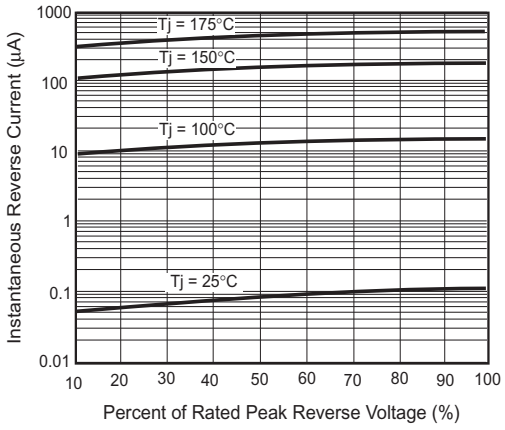
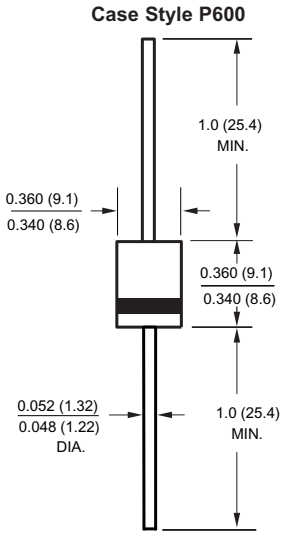


Figure 4. Typical Reverse Characteristics

Package outline dimensions in inches (millimeters)



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