

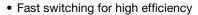
Vishay General Semiconductor

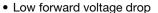
Fast Switching Plastic Rectifier



PRIMARY CHARACTERISTICS						
I _{F(AV)}	5.0 A					
V_{RRM}	50 V to 800 V					
I _{FSM}	300 A					
t _{rr}	200 ns					
V_{F}	1.05 V					
I _R	10 μΑ					
T _J max.	150 °C					

FEATURES





Low leakage current

• High forward current operation

• High forward surge capability

• Solder dip 275 °C max. 10 s, per JESD 22-B106

 Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC



ROHS

TYPICAL APPLICATIONS

For use in fast switching rectification of power supply, inverters, converters and freewheeling diodes for consumer and telecommunication.

Note

• These devices are not AEC-Q101 qualified.

MECHANICAL DATA

Case: P600, void-free molded epoxy body

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

Terminals: Matte tin plated leads, solderable per

J-STD-002 and JESD 22-B102

E3 suffix meets JESD 201 class 1A whisker test **Polarity:** Color band denotes cathode end

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)								
PARAMETER	SYMBOL	GI820	GI821	GI822	GI824	GI826	GI828	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	V
Maximum non-repetitive peak reverse voltage	V _{RSM}	75	150	250	450	650	880	V
Maximum average forward rectified current 0.375" (9.5 mm) lead length at T _A = 55 °C	I _{F(AV)}	5.0						А
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	300					Α	
Operating junction and storage temperature range	T _J , T _{STG}	- 50 to + 150						°C

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ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)										
PARAMETER	TEST CO	SYMBOL	GI820	GI821	GI822	GI824	GI826	GI828	UNIT	
Maximum instantaneous	5.0 A	T _J = 25 °C	\/	1.10						
forward voltage	15.7 A	T _J = 100 °C	V _F	1.05						- V
Maximum DC reverse current at rated DC		T _A = 25 °C		10						
blocking voltage		T _A = 100 °C	I _R	1.0						- μA
Typical junction capacitance	4.0 V, 1 MHz	CJ	300						pF	
Maximum reverse recovery time	I _F = 1.0 A, V _R = dI/dt = 50 A/μs	t _{rr}	200						ns	
Maximum reverse recovery current	I _F = 1.0 A, V _R = dI/dt = 50 A/μs	I _{RM(REC)}	2.0						Α	

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)								
PARAMETER	SYMBOL	GI820	GI821	GI822	GI824	GI826	GI828	UNIT
Typical thermal resistance	R _{0JA} (1)	10					°C/W	

Note

⁽¹⁾ Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length with both leads equally heat sink

ORDERING INFORMATION (Example)								
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE				
GI826-E3/54	2.1	54	800	13" diameter paper tape and reel				
GI826-E3/73	2.1	73	300	Ammo pack packaging				

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

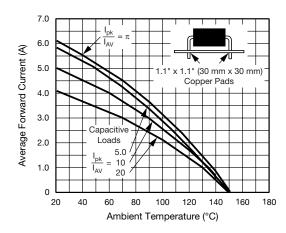


Fig. 1 - Forward Current Derating Curves

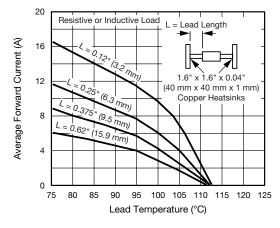


Fig. 2 - Forward Current Derating Curve



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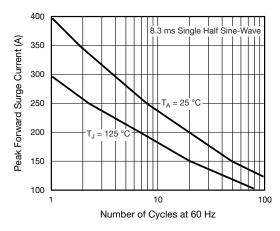
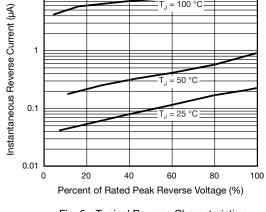


Fig. 3 - Maximum Non-Repetitive Peak Forward Surge Current



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Fig. 5 - Typical Reverse Characteristics

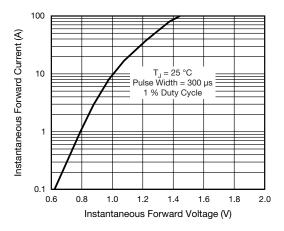


Fig. 4 - Typical Instantaneous Forward Characteristics

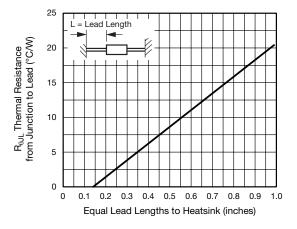
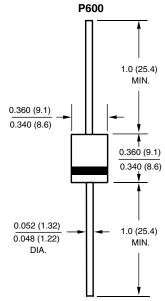


Fig. 6 - Typical Thermal Resistance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)







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