GI1-1200GP, GI1-1400GP, GI1-1600GP

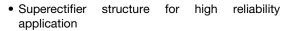
Vishay General Semiconductor

Miniature High Voltage Glass Passivated Plastic Rectifier



PRIMARY CHARACTERISTICS					
I _{F(AV)}	1.0 A				
V _{RRM} 1200 V, 1400 V, 1600					
I _{FSM}	30 A				
I _R	10 μΑ				
V_{F}	1.1 V				
T _J max.	175 °C				
Package	DO-15 (DO-204AC)				
Circuit configuration	Single				

FEATURES





- · Cavity-free glass-passivated junction
- Low forward voltage drop
- Typical I_R less than 0.1 μA
- Typical I_R less than 0.1 μA
- High forward surge capability
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

TYPICAL APPLICATIONS

For use in high voltage rectification of power supplies, inverters, converters, freewheeling diodes applications

MECHANICAL DATA

Case: DO-15 (DO-204AC), molded epoxy over glass 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	GI1-1200GP	GI1-1400GP	GI1-1600GP	UNIT	
Maximum repetitive peak reverse voltage	V_{RRM}	1200	1400	1600	V	
Maximum RMS voltage	V _{RMS}	840	980	1120	V	
Maximum DC blocking voltage	V_{DC}	1200	1400	1600	V	
Maximum average forward rectified current 0.375" (9.5 mm) lead length at T _A = 75 °C	I _{F(AV)}	1.0			А	
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	30			А	
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +175			°C	



GI1-1200GP, GI1-1400GP, GI1-1600GP

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ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)							
PARAMETER	TEST CONDITIONS		SYMBOL	GI1-1200GP	GI1-1400GP	GI1-1600GP	UNIT
Maximum instantaneous forward voltage	I _F = 1.0 A I _F = 3.14 A		V _F ⁽¹⁾	1.1			V
				1.3			
Maximum reverse current	Rated V _R	T _A = 25 °C	I _R ⁽¹⁾	10		μА	
	nated v _R	T _A = 100 °C	'R ''	100			
Maximum reverse recovery time	I _{FM} = 20 mA, I _{RM} = 2 mA		t _{rr}	25		μs	
Reverse recovery time	I _F = 0.5 A, I _R = 1.0 A,	typical	+	0.7		- µs	
	$I_{rr} = 0.25 \text{ A}$	maximum	t _{rr}	1.5			
Maximum forward recovery time	I _{FM} = 20 mA		t _{fr}	1.0		μs	
Typical junction capacitance	4.0 V, 1 MHz		CJ	15		pF	

Note

 $^{^{(1)}}$ Pulse test: 300 μs pulse width, 1 % duty cycle

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)					
PARAMETER	SYMBOL	GI1-1200GP	GI1-1400GP	GI1-1600GP	UNIT
Typical thermal resistance	R _{0JA} (1)	55			°C/W

Note

⁽¹⁾ Thermal resistance from junction to ambient 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			
GI1-1200-E3/54	0.425	54	4000	13" diameter paper tape and reel			
GI1-1200-E3/73	0.425	73	2000	Ammo pack packaging			

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RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

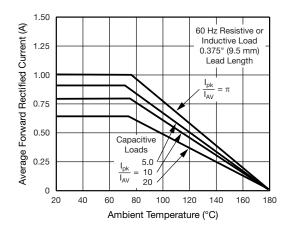


Fig. 1 - Forward Current Derating Curve

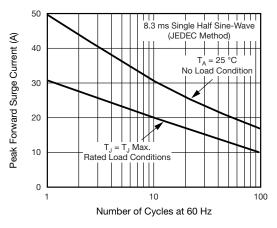


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

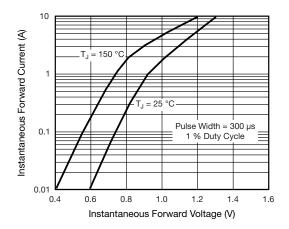


Fig. 3 - Typical Instantaneous Forward Characteristics

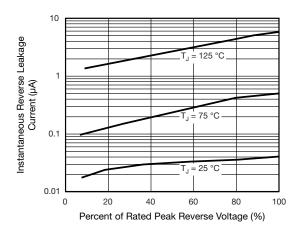


Fig. 4 - Typical Reverse Characteristics

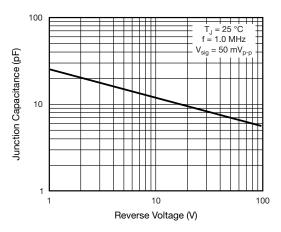


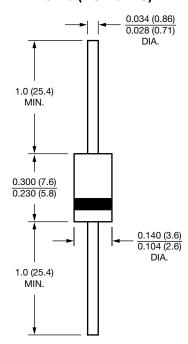
Fig. 5 - Typical Junction Capacitance

GI1-1200GP, GI1-1400GP, GI1-1600GP

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PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

DO-15 (DO-204AC)





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