

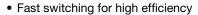
Vishay General Semiconductor

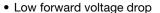
Medium Switching Plastic Rectifier



PRIMARY CHARACTERISTICS						
I _{F(AV)}	3.0 A					
V_{RRM}	50 V to 800 V					
I _{FSM}	100 A					
t _{rr}	750 ns					
I _R	10 μA					
V _F	1.25 V					
T _J max.	150 °C					

FEATURES





• Low leakage current

· 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





COMPLIANT

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: DO-201AD, 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	GI910	GI911	GI912	GI914	GI916	GI917	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 average forward rectified current 0.375" (9.5 mm) lead length at $T_A = 90$ °C	I _{F(AV)}	3.0					А	
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	100					А	
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 CONDITIONS		SYMBOL	GI910	GI911	GI912	GI914	GI916	GI917	UNIT
Maximum instantaneous	3.0 A	T _A = 25 °C	V _F	1.25						
forward voltage	9.4 A	T _J = 175 °C	VF	1.10						V
Maximum DC reverse current		T _A = 25 °C		10						
at rated DC blocking voltage		T _A = 100 °C	I _R	300						μA
Maximum reverse recovery time		A, V _R = 30 V, 50 Α/μs, % Ι _{RM}	t _{rr}	750						ns
Maximum reverse recovery current	dl/dt =	$ I_F = 1.0 \text{ A, } V_R = 30 \text{ V,} \\ dI/dt = 50 \text{ A/}\mu\text{s,} \\ I_{rr} = 10 \text{ \% } I_{RM} $ $ I_{RM(REC)} $			2.0					А
Typical junction capacitance	4.0 V, 1 MHz C _J			28						pF

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)								
PARAMETER	SYMBOL GI910 GI911 GI912 GI914 GI916 GI917 UNIT						UNIT	
Typical thermal resistance	R _{0JA} (1)	22						°C/W
Typical mermal resistance	R ₀ JL (1)	8.0						C/VV

Note

⁽¹⁾ Thermal resistance from junction to ambient and from junction to lead 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				
GI916-E3/54	1.1	54	1400	13" diameter paper tape and reel				
GI916-E3/73	1.1	73	1000	Ammo pack packaging				

RATINGS AND CHARACTERISTICS CURVES

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

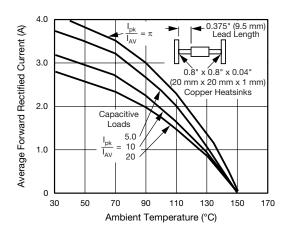


Fig. 1 - Forward Current Derating Curves

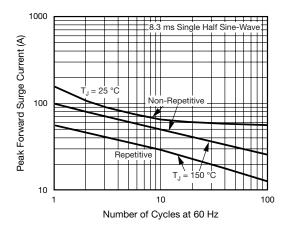


Fig. 2 - Maximum Peak Forward Surge Current



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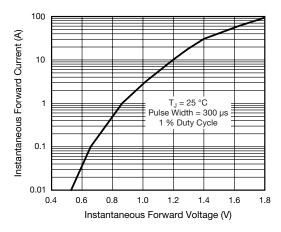


Fig. 3 - Typical Instantaneous Forward Characteristics

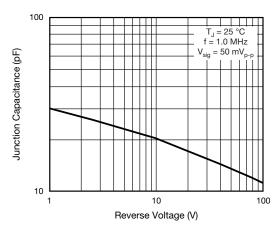


Fig. 5 - Typical Junction Capacitance

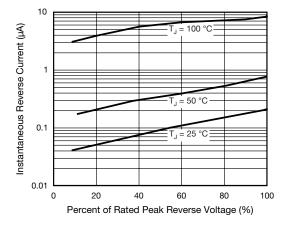
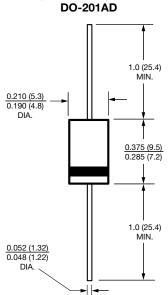


Fig. 4 - Typical Reverse Characteristics

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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