

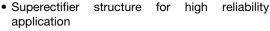
Vishay General Semiconductor

Clamper/Damper Glass Passivated Fast Plastic Rectifier



PRIMARY CHARACTERISTICS			
I _{F(AV)}	2.5 A		
V_{RRM}	1500 V		
I _{FSM}	50 A		
t _{rr}	2000 ns		
I _R	5.0 μΑ		
V_{F}	1.6 V		
T _J max.	150 °C		
Package	DO-201AD		
Diode variation	Single die		

FEATURES





RoHS

· Cavity-free glass-passivated junction

Low forward voltage drop

• 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 and freewheeling diodes specially designed for clamping circuits, horizontal deflection systems and damper applications.

MECHANICAL DATA

Case: DO-201AD, 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	BY228GP	UNIT	
Maximum non repetitive peak reverse voltage	V _{RSM}	1650	V	
Maximum repetitive peak reverse voltage	V _{RRM}	1500	V	
Maximum RMS voltage	V _{RMS}	1050	V	
Maximum DC blocking voltage	V _{DC}	1500	V	
Maximum average forward rectified current 0.375" (9.5 mm) lead length at T _A = 50 °C	I _{F(AV)}	2.5	А	
Peak forward surge current 10 ms single half sine-wave superimposed on rated load	I _{FSM}	50	А	
Working peak forward current at T _A = 75 °C	I _{FWM}	5.0	Α	
Peak repetitive forward surge current at T _A = 75 °C	I _{FRM}	10	А	
Operating junction temperature range	TJ	-65 to +150	°C	
Storage temperature range	T _{STG}	-65 to +200	°C	



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ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)					
PARAMETER	TEST CONDITIONS		SYMBOL	BY228GP	UNIT
Maximum instantaneous forward voltage	I _F = 2.5 A		V_F ⁽¹⁾	1.6	V
Maximum reverse current	V _R = 1500 V	T _A = 25 °C	I _R	5.0	- μΑ
Maximum reverse current	V _R = 1500 V	T _J = 140 °C		200	
Maximum reverse recovery time	$I_F = 1.0 \text{ A}, I_R = 50 \text{ mA},$ $dI/dt = 50 \text{ mA/}\mu\text{s}$		t _{rr}	20	μs
	$I_F = 0.5 \text{ A}, I_R = 1.0 \text{ A},$ typical maximum	typical	t _{rr}	0.5	- µs
		maximum		2.0	
Maximum forward recovery time	$I_F = 5.0 \text{ A with } t_r = 0.1 \mu\text{s}$		t _{fr}	1.0	μs
Typical junction capacitance	4.0 V, 1 MHz		C_{J}	40	pF

Note

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

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)			
PARAMETER SYMBOL BY228GP UNI			
Typical thermal resistance	R _{0JA} (1)	20	°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
BY228GP-E3/54	1.28	54	1400	13" diameter paper tape and reel
BY228GP-E3/73	1.28	73	1000	Ammo pack packaging

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

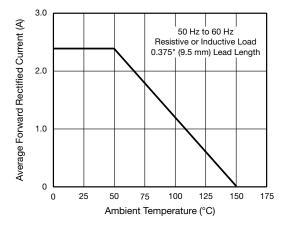


Fig. 1 - Forward Current Derating Curve

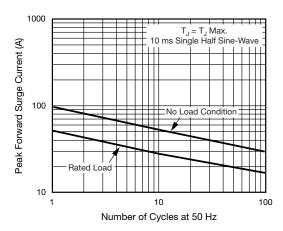


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current



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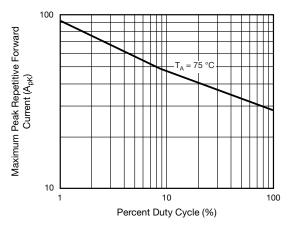


Fig. 3 - Maximum Peak Repetitive Forward Surge Current

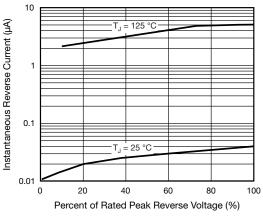


Fig. 5 - Typical Reverse Characteristics

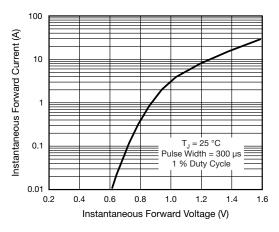


Fig. 4 - Typical Instantaneous Forward Characteristics

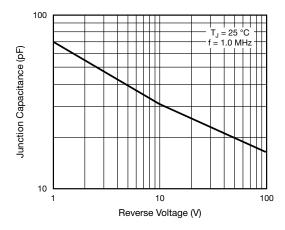
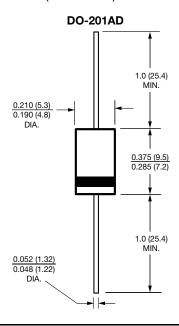


Fig. 6 - Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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