



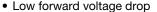
Vishay General Semiconductor

General Purpose Plastic Rectifier

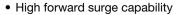


PRIMARY CHARACTERISTICS						
I _{F(AV)}	3.0 A					
V _{RRM}	200 V, 400 V, 600 V, 800 V,1300 V					
I _{FSM}	150 A					
I _R	5.0 μA					
V _F	1.1 V					
T _J max.	150 °C					
Package	DO-201AD					
Diode variations	Single die					

FEATURES







• 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 general purpose rectification of power supplies, inverters, converters, and freewheeling diodes application.

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	BY251P	BY252P	BY253P	BY254P	BY255P	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	200	400	600	800	1300	V
Maximum RMS voltage	V _{RMS}	140	280	420	560	910	V
Maximum DC blocking voltage	V_{DC}	200	400	600	800	1300	V
Maximum average forward rectified current 10 mm lead length	I _{F(AV)}	3.0					А
Peak forward surge current 10 ms single half sine-wave superimposed on rated load	I _{FSM}	150					Α
Maximum full load reverse current, full cycle average 10 mm lead length	I _{R(AV)}	100					μA
Operating junction and storage temperature range	T _J , T _{STG}	- 55 to + 150					°C

ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)									
PARAMETER	TEST (CONDITIONS	SYMBOL	BY251P	BY252P	BY253P	BY254P	BY255P	UNIT
Maximum instantaneous forward voltage	3.0 A		V _F	1.1					V
Maximum reverse current at rated DC blocking voltage		T _A = 25 °C	I _R	5.0				μΑ	
Maximum reverse recovery time	I _F = 0.5 I _{rr} = 0.2	5 A, I _R = 1.0 V, 25 A	t _{rr}	3.0			μs		
Typical junction capacitance	4.0 V,	1 MHz	CJ	40			pF		



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THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)							
PARAMETER	SYMBOL	BY251P	BY252P	BY253P	BY254P	BY255P	UNIT
Typical thormal reciptance	R _{0JA} (1)	20					°C/W
Typical thermal resistance	R _{0JL} (1)	10					5/44

Note

⁽¹⁾ Thermal resistance from junction to ambient and from junction to lead 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				
BY253P-E3/54	1.1	54	1400	13" diameter paper tape and reel				
BY253P-E3/73	1.1	73	1000	Ammo pack packaging				

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

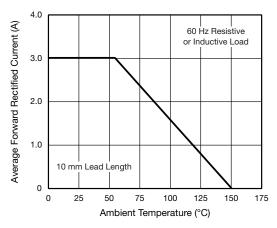


Fig. 1 - Forward Current Derating Curve

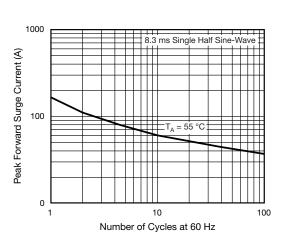


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

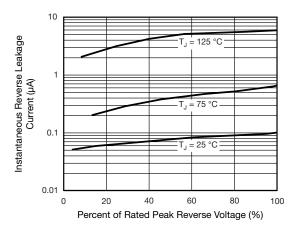


Fig. 3 - Maximum Non-repetitive Peak Forward Surge Current

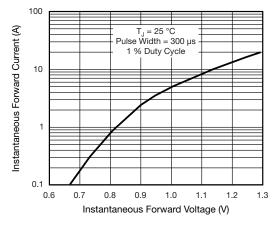


Fig. 4 - Typical Instantaneous Forward Characteristics

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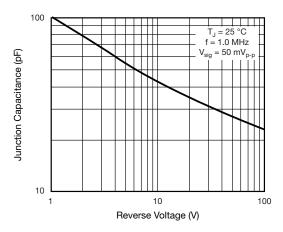
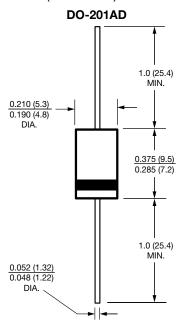


Fig. 5 - Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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