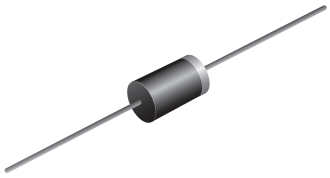
Glass Passivated Junction Plastic Rectifier

SUPERECTIFIER®



DO-201AD

FEATURES

- Superectifier structure for high reliability application
- Cavity-free glass-passivated junction
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- AEC-Q101 qualified
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

RoHS COMPLIANT

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	3.0 A
V_{RRM}	200 V, 400 V, 600 V, 800 V
I_{FSM}	125 A
I_R	5.0 µA
V_F	0.95 V
T_J max.	175 °C
Package	DO-201AD
Diode variations	Single die

TYPICAL APPLICATIONS

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes application.

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
Base P/NHE3 - RoHS-compliant, AEC-Q101 qualified

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102
E3 suffix meets JESD 201 class 1A whisker test, HE3 suffix meets JESD 201 class 2 whisker test

Polarity: Color band denotes cathode end

MAXIMUM RATINGS (T_A = 25 °C unless otherwise noted) (1)

PARAMETER	SYMBOL	1N5624GP	1N5625GP	1N5626GP	1N5627GP	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	200	400	600	800	V
Maximum DC blocking voltage	V_{DC}	200	400	600	800	V
Maximum average forward rectified current 0.375" (9.5 mm) lead length at T_A = 70 °C	$I_{F(AV)}$	3.0				A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	125				A
Maximum full load reverse current, full cycle average 0.375" (9.5 mm) lead length at T_A = 70 °C	$I_{R(AV)}$	200				µA
Operating junction and storage temperature range	T_J, T_{STG}	- 65 to + 175				°C

Note

(1) JEDEC® registered values

ELECTRICAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)								
PARAMETER	**TEST CONDITIONS**		**SYMBOL**	**1N5624GP**	**1N5625GP**	**1N5626GP**	**1N5627GP**	**UNIT**
Maximum instantaneous forward voltage	3.0 A	T_A = 25 °C	V_F (1)(2)	1.0				V
		T_A = 70 °C		0.95				
Maximum DC reverse current at rated DC blocking voltage		T_A = 25 °C	I_R	5.0				μA
		T_A = 150 °C		300		200		
Typical reverse recovery time	I_F = 0.5 A, I_R = 1.0 A, I_{rr} = 0.25 A		t_{rr}	3.0				μs
Typical junction capacitance	4.0 V, 1 MHz		C_J	40				pF

Notes

(1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) JEDEC registered values

THERMAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)						
PARAMETER	**SYMBOL**	**1N5624GP**	**1N5625GP**	**1N5626GP**	**1N5627GP**	**UNIT**
Typical thermal resistance	$R_{\theta JA}$ (1)	20				°C/W

Note

(1) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5 mm) lead length, P.C.B. mounted

ORDERING INFORMATION (Example)				
PREFERRED P/N	**UNIT WEIGHT (g)**	**PREFERRED PACKAGE CODE**	**BASE QUANTITY**	**DELIVERY MODE**
1N5626GP-E3/54	1.28	54	1400	13" diameter paper tape and reel
1N5626GP-E3/73	1.28	73	1000	Ammo pack packaging
1N5626GPHE3/54 (1)	1.28	54	1400	13" diameter paper tape and reel
1N5626GPHE3/73 (1)	1.28	73	1000	Ammo pack packaging

Note

(1) AEC-Q101 qualified

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

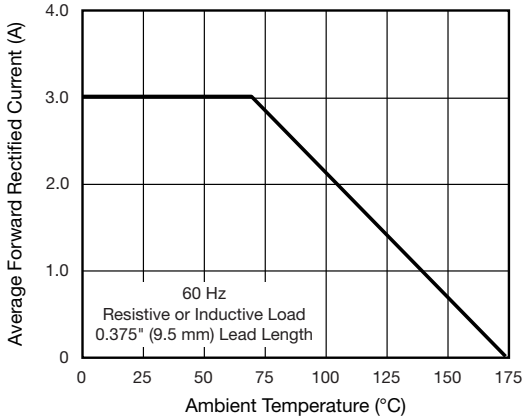


Fig. 1 - Forward Current Derating Curve

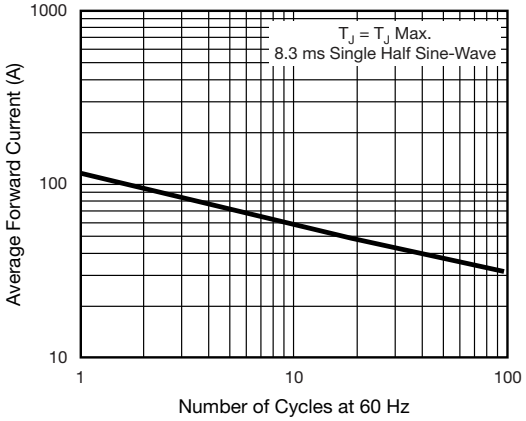


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

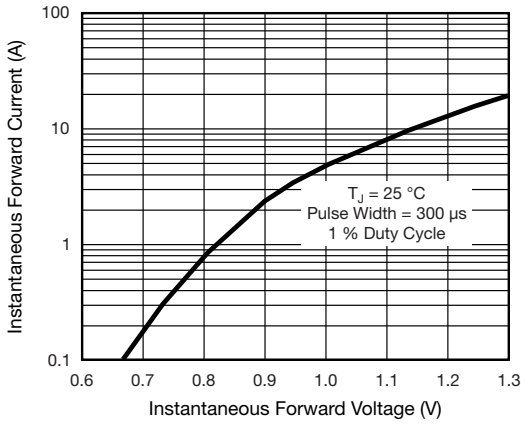


Fig. 3 - Typical Instantaneous Forward Characteristics

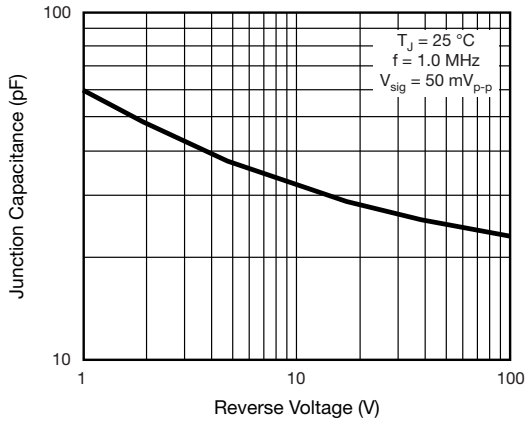


Fig. 5 - Typical Junction Capacitance

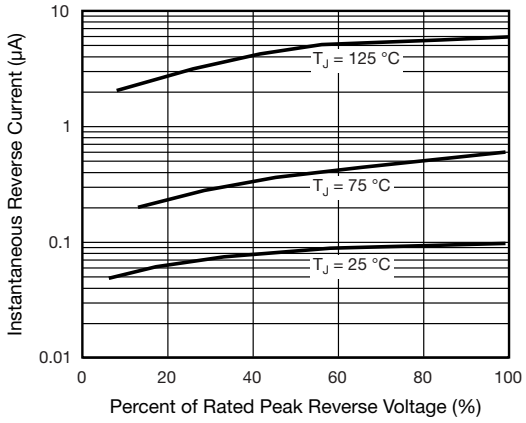
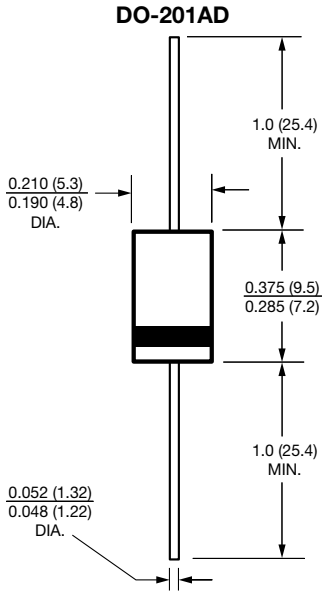


Fig. 4 - Typical Reverse Characteristics

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



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