

Glass Passivated Junction Plastic Rectifier



FEATURES

- Superrectifier 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

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

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 μ A
V_F	0.95 V
T_J max.	175 °C
Package	DO-201AD
Diode variations	Single die

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				μ A
Operating junction and storage temperature range	T_J, T_{STG}	- 65 to + 175				°C

Note

⁽¹⁾ JEDEC® registered values

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)							
PARAMETER	TEST CONDITIONS	SYMBOL	1N5624GP	1N5625GP	1N5626GP	1N5627GP	UNIT
Maximum instantaneous forward voltage	3.0 A	$T_A = 25^\circ\text{C}$ $T_A = 70^\circ\text{C}$	V_F ⁽¹⁾⁽²⁾	1.0			V
				0.95			
Maximum DC reverse current at rated DC blocking voltage		$T_A = 25^\circ\text{C}$ $T_A = 150^\circ\text{C}$	I_R	5.0			μA
				300	200		
Typical reverse recovery time	$I_F = 0.5 \text{ A}$, $I_R = 1.0 \text{ A}$, $I_{rr} = 0.25 \text{ A}$	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 ($T_A = 25^\circ\text{C}$ unless otherwise noted)							
PARAMETER	SYMBOL	1N5624GP	1N5625GP	1N5626GP	1N5627GP	UNIT	
Typical thermal resistance	R_{0JA} ⁽¹⁾	20		$^\circ\text{C/W}$			

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

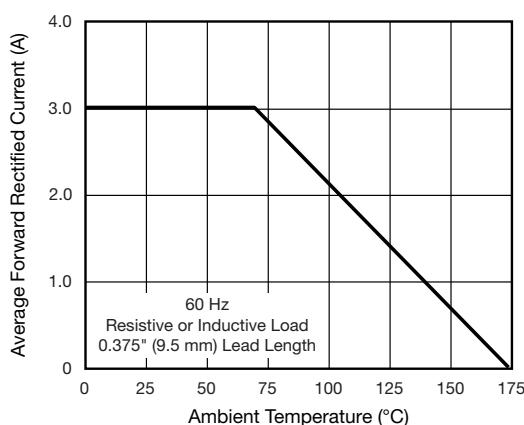
RATINGS AND CHARACTERISTICS CURVES ($T_A = 25^\circ\text{C}$ unless otherwise noted)


Fig. 1 - Forward Current Derating Curve

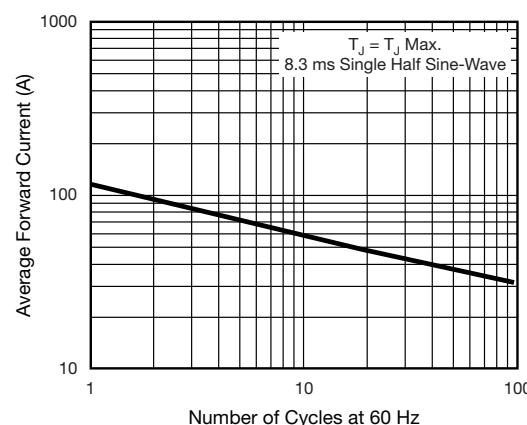


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

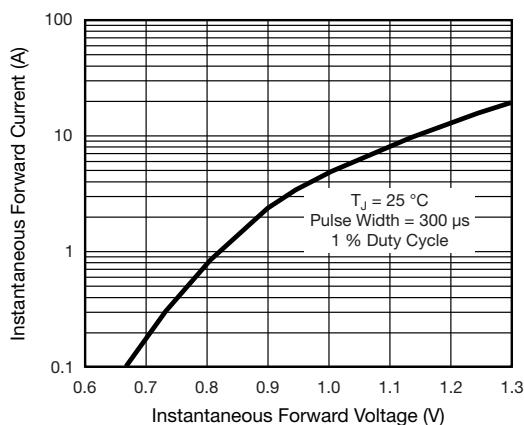


Fig. 3 - Typical Instantaneous Forward Characteristics

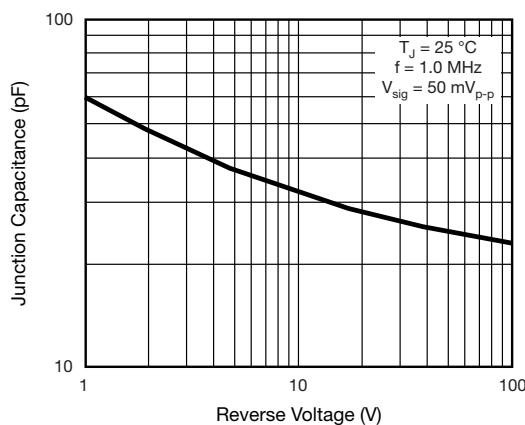


Fig. 5 - Typical Junction Capacitance

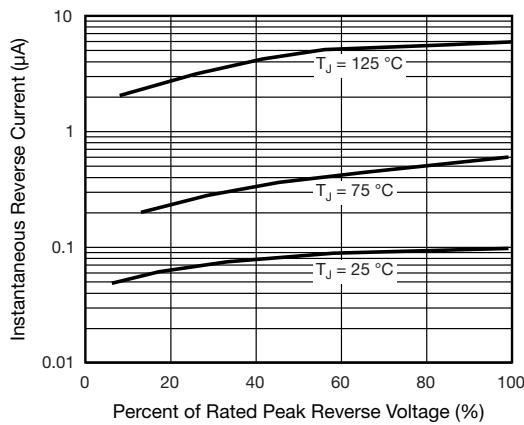
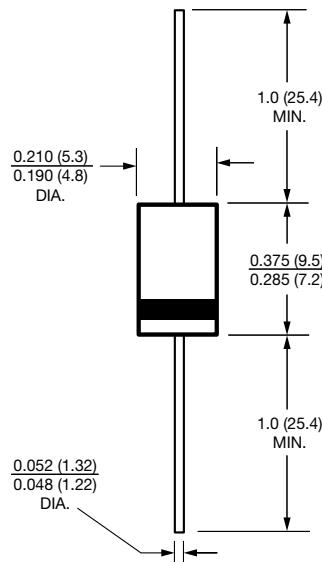


Fig. 4 - Typical Reverse Characteristics

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

DO-201AD



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