

## Glass Passivated Junction Rectifier



DO-201AD

Patented\*

\* Glass-plastic encapsulation technique is covered by Patent No. 3,996,602, and brazed-lead assembly by Patent No. 3,930,306

### FEATURES

- Superectifier structure for High Reliability application 
- Cavity-free glass-passivated junction
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- Meets environmental standard MIL-S-19500
- Solder Dip 260 °C, 40 seconds
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

### 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

Epoxy meets UL 94V-0 flammability rating

**Terminals:** Matte tin plated leads, solderable per J-STD-002B and JESD22-B102D

E3 suffix for commercial grade, HE3 suffix for high reliability grade (AEC Q101 qualified)

**Polarity:** Color band denotes cathode end

MAJOR RATINGS AND CHARACTERISTICS	
$I_{F(AV)}$	3.0 A
$V_{RRM}$	200 V to 800 V
$I_{FSM}$	125 A
$I_R$	5.0 $\mu$ A
$V_F$	0.95 V
$T_j$ max.	175 °C

MAXIMUM RATINGS ( $T_A = 25$ °C unless otherwise noted)						
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				$\mu$ A
* Operating junction and storage temperature range	$T_J, T_{STG}$	- 65 to + 175				°C

\* JEDEC registered values

# 1N5624GP thru 1N5627GP

Vishay General Semiconductor



ELECTRICAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)								
PARAMETER	TEST CONDITIONS	SYMBOL	1N5624GP	1N5625GP	1N5626GP	1N5627GP	UNIT	
* Maximum instantaneous forward voltage <sup>(1)</sup>	at 3.0 A T <sub>A</sub> = 25 °C T <sub>A</sub> = 70 °C	V <sub>F</sub>	1.0 0.95					V
Maximum DC reverse current at rated DC blocking voltage	T <sub>A</sub> = 25 °C T <sub>A</sub> = 150 °C	I <sub>R</sub>	5.0					μA
			300		200			
Typical reverse recovery time	at I <sub>F</sub> = 0.5 A, I <sub>R</sub> = 1.0 A, I <sub>rr</sub> = 0.25 A	t <sub>rr</sub>	3.0					μs
Typical junction capacitance	at 4.0 V, 1 MHz	C <sub>J</sub>	40					pF

**Note:**

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

\* JEDEC registered values

THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)							
PARAMETER	SYMBOL	1N5624GP	1N5625GP	1N5626GP	1N5627GP	UNIT	
Typical thermal resistance <sup>(1)</sup>	R <sub>θJA</sub>	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				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
1N5626GP-E3/54	1.28	54	1400	13" Diameter Paper Tape & Reel
1N5626GP-E3/73	1.28	73	1000	Ammo Pack Packaging

## RATINGS AND CHARACTERISTICS CURVES

(T<sub>A</sub> = 25 °C unless otherwise noted)

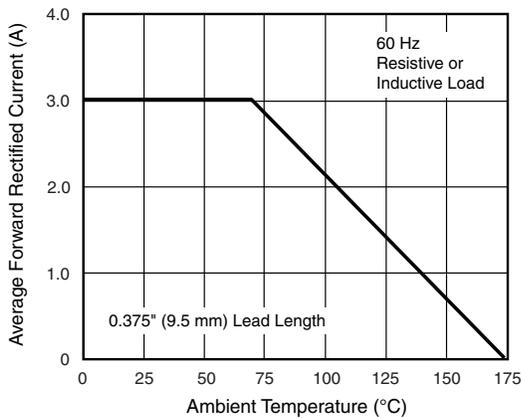


Figure 1. Forward Current Derating Curve

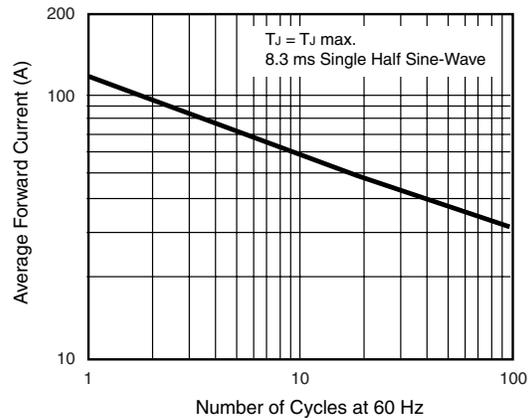


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

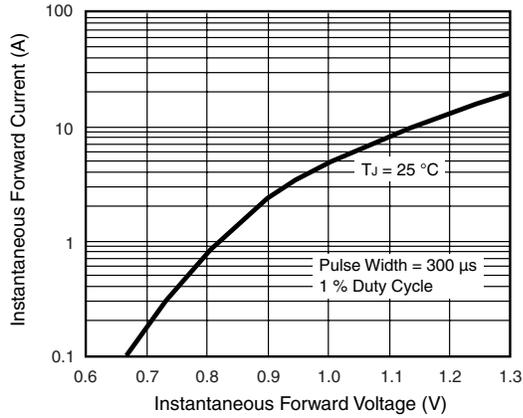


Figure 3. Typical Instantaneous Forward Characteristics

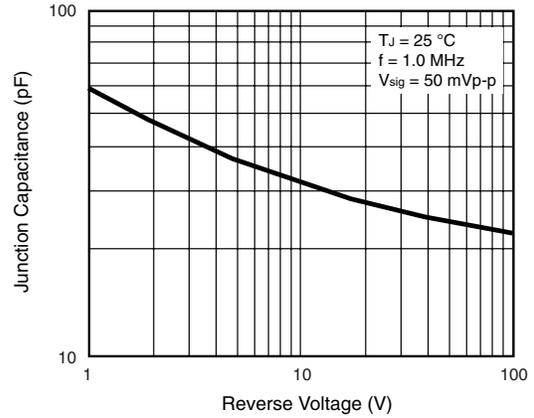


Figure 5. Typical Junction Capacitance

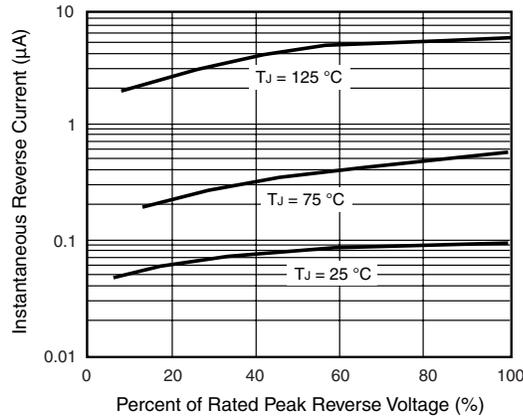
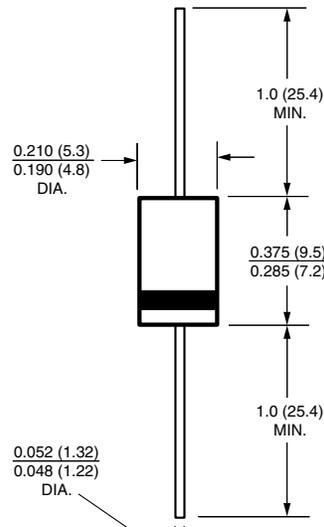


Figure 4. Typical Reverse Characteristics

**PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)

**DO-201AD**





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