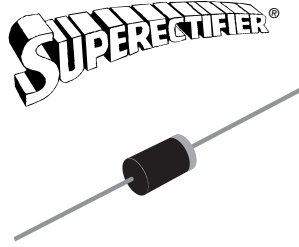


## Glass Passivated Junction Rectifier



Patented\*

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

DO-201AD

### FEATURES

- Superrectifier 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 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



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

Epoxy meets UL 94V-0 flammability rating

**Terminals:** Matte tin plated leads, solderable per J-STD-002 and JESD22-B102

E3 suffix for consumer grade, meets JESD 201 class 1A whisker test, HE3 suffix for high reliability grade (AEC Q101 qualified), 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 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) <sup>(1)</sup>						
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

**Note:**

(1) JEDEC registered values



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>(1,2)</sup>	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	I <sub>R</sub>	5.0				μA
		T <sub>A</sub> = 150 °C		300	200			
Typical reverse recovery time	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	4.0 V, 1 MHz		C <sub>J</sub>	40				pF

**Notes:**

- (1) Pulse test: 300 μs pulse width, 1 % duty cycle
- (2) 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>0JA</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 (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 <sup>(1)</sup>	1.28	54	1400	13" diameter paper tape and reel
1N5626GPHE3/73 <sup>(1)</sup>	1.28	73	1000	Ammo pack packaging

**Note:**

- (1) Automotive grade AEC Q101 qualified

## RATINGS AND CHARACTERISTICS CURVES

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

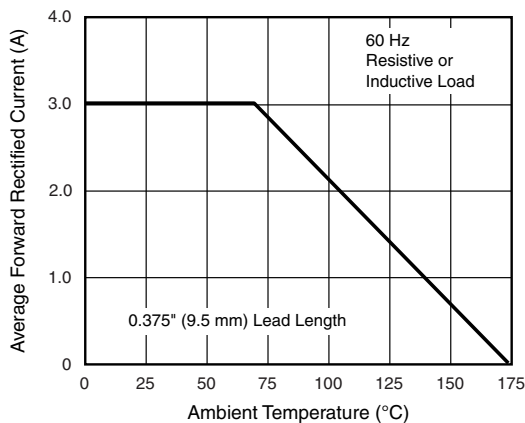


Figure 1. Forward Current Derating Curve

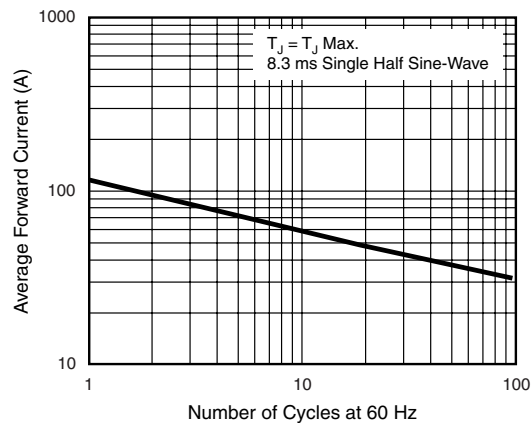


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

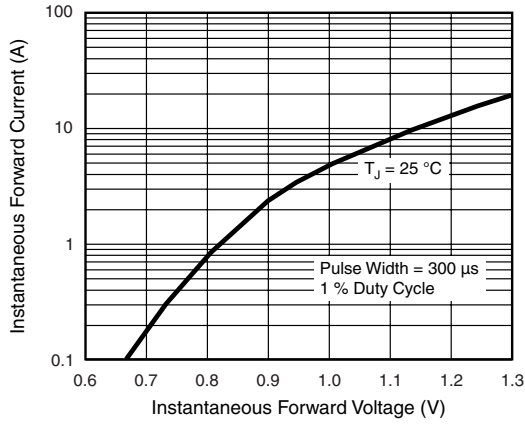


Figure 3. Typical Instantaneous Forward Characteristics

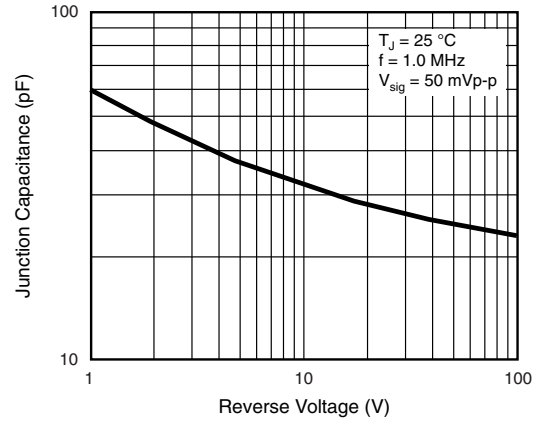


Figure 5. Typical Junction Capacitance

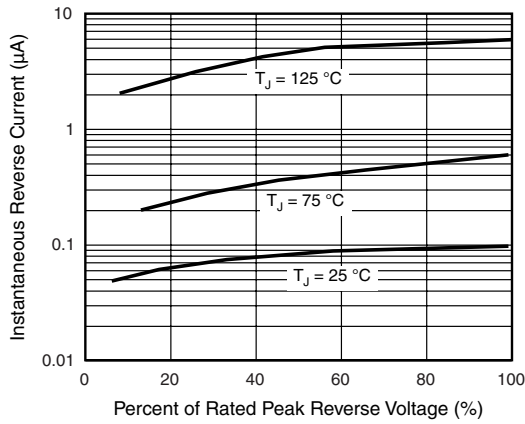
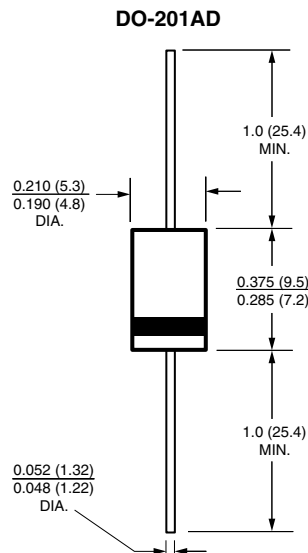


Figure 4. Typical Reverse Characteristics

## PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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