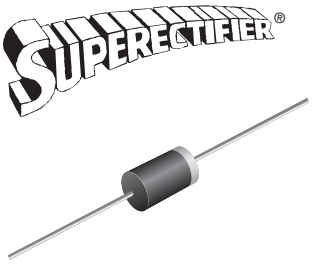
1N5624GP thru 1N5627GP

Vishay General Semiconductor

Glass Passivated Junction Rectifier

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 µA
V_F	0.95 V
T_j max.	175 °C



DO-201AD

* 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

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

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

Electrical Characteristics

(T_A = 25 °C unless otherwise noted)

Parameter	Test condition	Symbol	1N5624GP	1N5625GP	1N5626GP	1N5627GP	Unit
* Maximum instantaneous forward voltage	at 3.0 A (1) T_A = 25 °C	V_F	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	at I_F = 0.5 A, I_R = 1.0 A, I_{rr} = 0.25 A	t_{rr}	3.0				µs
Typical junction capacitance	at 4.0 V, 1 MHz	C_J	40				pF

Notes:

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

Thermal Characteristics

(T_A = 25 °C unless otherwise noted)

Parameter	Symbol	1N5624GP	1N5625GP	1N5626GP	1N5627GP	Unit
Typical thermal resistance(1)	$R_{\theta JA}$	20				°C/W

Notes:

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

* JEDEC registered values

Ratings and Characteristics Curves

(T_A = 25 °C unless otherwise noted)

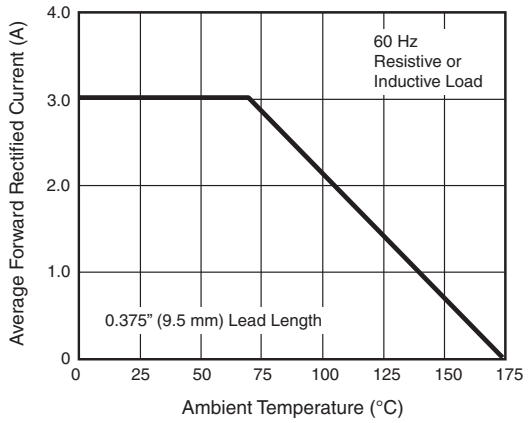


Figure 1. Forward Current Derating Curve

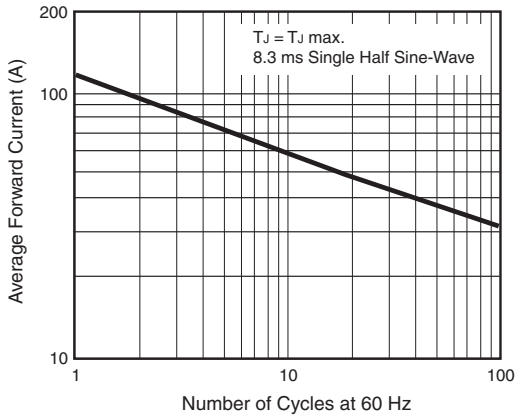


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

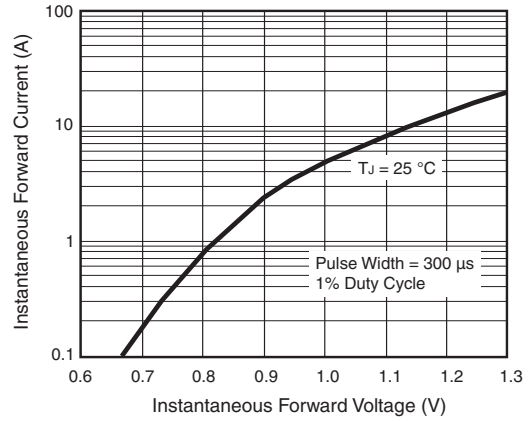


Figure 3. Typical Instantaneous Forward Characteristics

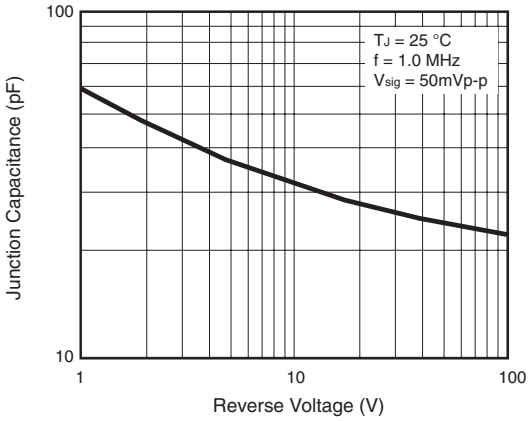


Figure 5. Typical Junction Capacitance

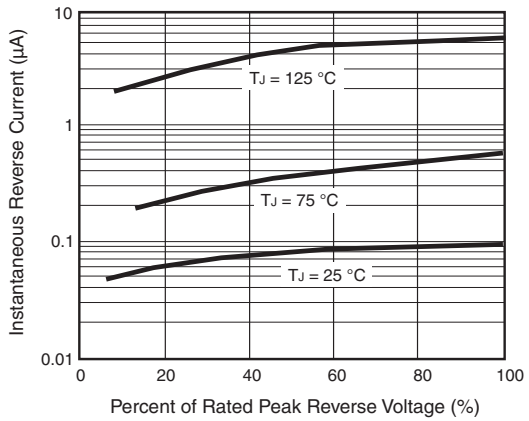
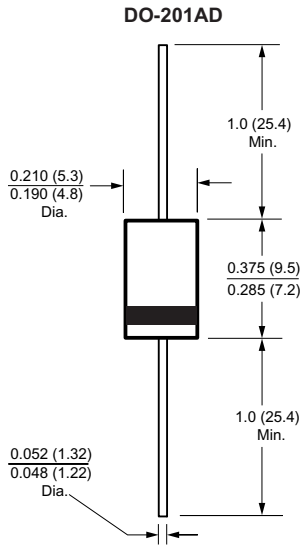


Figure 4. Typical Reverse Characteristics

Package outline dimensions in inches (millimeters)



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