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1N5624GP, 1N5625GP, 1N5626GP, 1N5627GP

Vishay General Semiconductor

RoHS

COMPLIANT

Glass Passivated Junction Plastic Rectifier



| 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 | | | | | |

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
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

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

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

E3 suffix meets JESD 201 class 1A 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 $T_A = 70 ^{\circ}\text{C}$ | I _{F(AV)} | | А | | | | |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | I _{FSM} | 125 | | | | А | |
| 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



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| ELECTRICAL CHARACTERISTICS ($T_A = 25 \text{ °C}$ unless otherwise noted) | | | | | | | | |
|---|---|-----------------------------------|----------------------------------|----------|----------|----------|----------|------|
| PARAMETER | TEST CONDITIONS | | SYMBOL | 1N5624GP | 1N5625GP | 1N5626GP | 1N5627GP | UNIT |
| Maximum instantaneous forward voltage | 3.0 A | $T_A = 25 ^{\circ}C$ | | | 1 | .0 | | V |
| | T _A = 70 °C | | V _F ⁽¹⁾⁽²⁾ | 0.95 | | | | v |
| Maximum DC reverse current | | T _A = 25 °C | - I _B | 5.0 | | | μA | |
| at rated DC blocking voltage | | T _A = 150 °C | | 30 | 300 200 | | 00 | μΑ |
| Typical reverse recovery time | I _F = 0.5 I _{rr} = 0.2 | A, I _R = 1.0 A, 5 A | t _{rr} | 3.0 | | | μs | |
| Typical junction capacitance | 4.0 V, 1 | MHz | CJ | 40 | | | pF | |

Notes

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

(2) JEDEC registered values

| THERMAL CHARACTERISTICS ($T_A = 25 \text{ °C}$ 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, PCB 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 | | | |

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

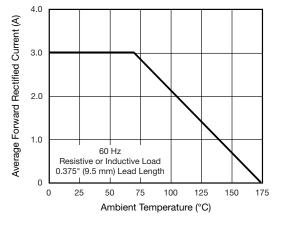


Fig. 1 - Forward Current Derating Curve

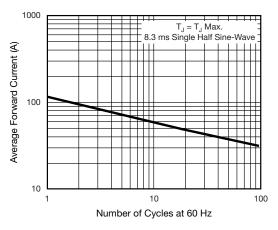


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current



1N5624GP, 1N5625GP, 1N5626GP, 1N5627GP

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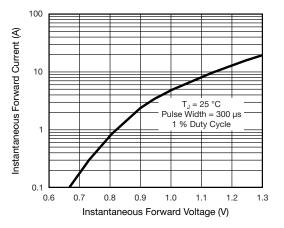


Fig. 3 - Typical Instantaneous Forward Characteristics

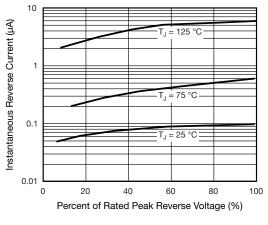
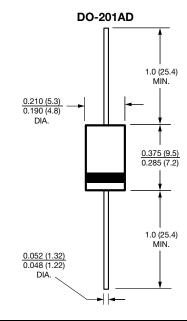


Fig. 4 - Typical Reverse Characteristics

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



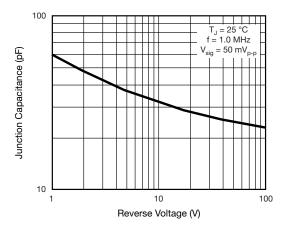


Fig. 5 - Typical Junction Capacitance

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