



GN1A thru GN1M

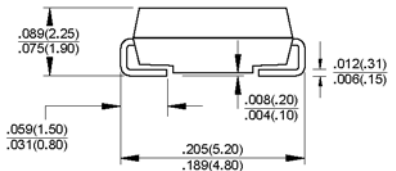
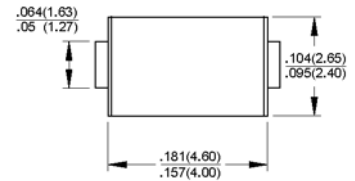
Surface Mount Glass Passivated Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 1.0 Ampere

Features

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Built-in strain relief, ideal for automated placement
- ◆ Glass passivated chip junction
- ◆ High temperature soldering:
250°C/10 seconds at terminals



DO-214AC (SMA)



Dimensions in inches and (millimeters)

Mechanical Data

- ◆ Case: JEDEC DO-214AC (SMA) molded plastic over glass passivated chip
- ◆ Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- ◆ Polarity: Color band denotes cathode end
- ◆ Weight: 0.002 ounce, 0.064 gram

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter | Symbols | GN1A | GN1B | GN1D | GN1G | GN1J | GN1K | GN1M | Units |
|---|-----------------|-------------|------|------|------|------|------|------|--------------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum average forward rectified current (see fig.1) | $I_{F(AV)}$ | 1.0 | | | | | | | Amp |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load(JEDEC Method) $T_L=110^\circ\text{C}$ | I_{FSM} | 40.0 | | | | 30.0 | | | Amps |
| Maximum instantaneous forward voltage at 1.0A | V_F | 1.10 | | | | | | | Volts |
| Maximum DC reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=125^\circ\text{C}$ | I_R | 1.0 | | | | 5.0 | | | μA |
| Typical reverse recovery time at $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_F=0.25\text{A}$ | t_{rr} | 1.0 | | | | | | | μS |
| Typical junction capacitance at 4.0V, 1MHz | C_J | 12 | | | | | | | pF |
| Typical thermal resistance (NOTE 1) | $R_{\theta JA}$ | 75 | | | | 85 | | | $^\circ\text{C/W}$ |
| | $R_{\theta JL}$ | 27 | | | | 30 | | | |
| Operating junction temperature range | T_J | -55 to +150 | | | | | | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -55 to +150 | | | | | | | $^\circ\text{C}$ |

Notes: 1. Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas

RATINGS AND CHARACTERISTIC CURVES

Fig. 1 – Forward Current Derating Curve

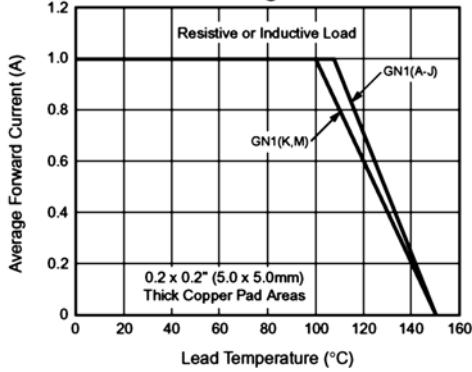


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

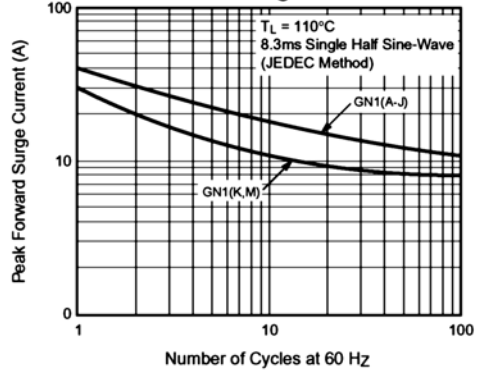


Fig. 3 – Typical Instantaneous Forward Characteristics

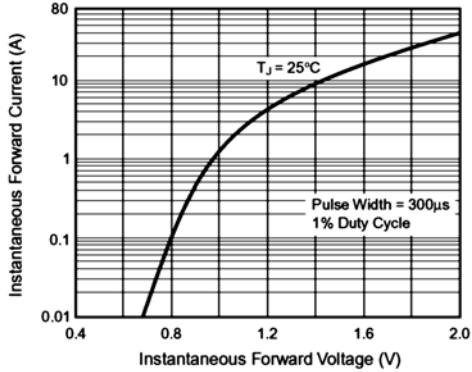


Fig. 4 – Typical Reverse Leakage Characteristics

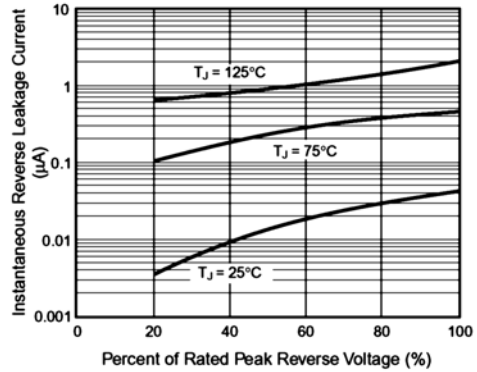


Fig. 5 – Typical Junction Capacitance

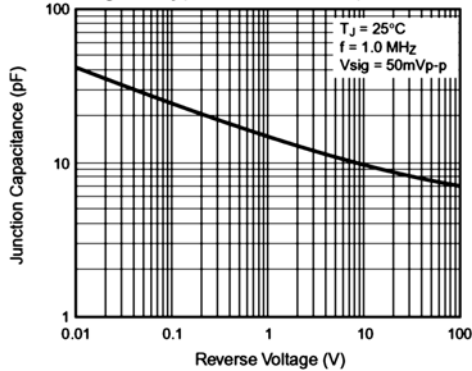
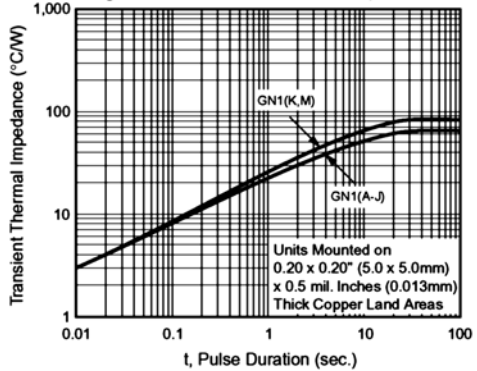


Fig. 6 – Transient Thermal Impedance



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