

■ Features

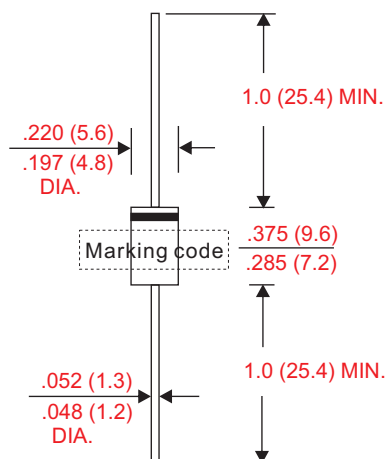
- Axial lead type devices for through hole design.
- High current capability.
- High surge capability.
- Glass passivated chip junction inside.
- Suffix "G" indicates Halogen-free part, ex. GR3005G.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, DO-201AD / DO-27
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity : Color band denotes cathode end
- Weight : Approximated 1.10 gram

■ Outline

DO-27(DO-201AD)



■ Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| Parameter | Conditions | Symbol | MIN. | TYP. | MAX. | UNIT |
|----------------------------|--|-----------|------|------|------|------|
| Forward rectified current | | I_O | | | 3.0 | A |
| Forward surge current | 8.3ms single half sine-wave superimposed on rate load (JEDEC method) | I_{FSM} | | | 100 | A |
| Reverse current | $V_R = V_{RRM} \quad T_A = 25^\circ\text{C}$ | I_R | | | 5.0 | uA |
| | $V_R = V_{RRM} \quad T_A = 125^\circ\text{C}$ | | | | 100 | |
| Thermal resistance | Junction to ambient | R_{BJA} | | 47 | | °C/W |
| Diode junction capacitance | f=1MHz and applied 4V DC reverse voltage | C_J | | 60 | | pF |
| Storage temperature | | T_{STG} | -55 | | +150 | °C |

| Symbol | Marking code | Max. repetitive peak reverse voltage V_{RRM} (V) | Max. RMS voltage V_{RMS} (V) | Max. DC blocking voltage V_R (V) | Max. forward voltage @3A, $T_A = 25^\circ\text{C}$ V_F (V) | Operating temperature T_J (°C) |
|--------|--------------|--|--------------------------------|------------------------------------|--|----------------------------------|
| GR3005 | GR3005 | 50 | 35 | 50 | 1.10 | -55 ~ +150 |
| GR301 | GR301 | 100 | 70 | 100 | | |
| GR302 | GR302 | 200 | 140 | 200 | | |
| GR304 | GR304 | 400 | 280 | 400 | | |
| GR306 | GR306 | 600 | 420 | 600 | | |
| GR308 | GR308 | 800 | 560 | 800 | | |
| GR310 | GR310 | 1000 | 700 | 1000 | | |

■ Rating and characteristic curves

Fig. 1 - Forward Current Derating Curve

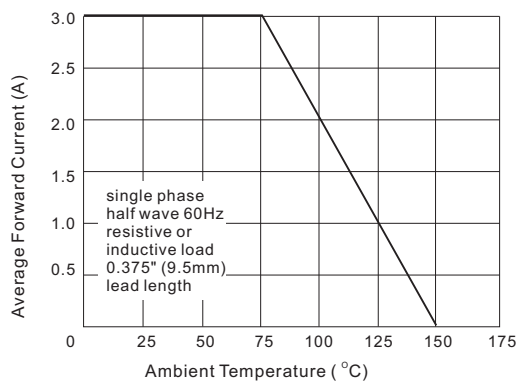


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

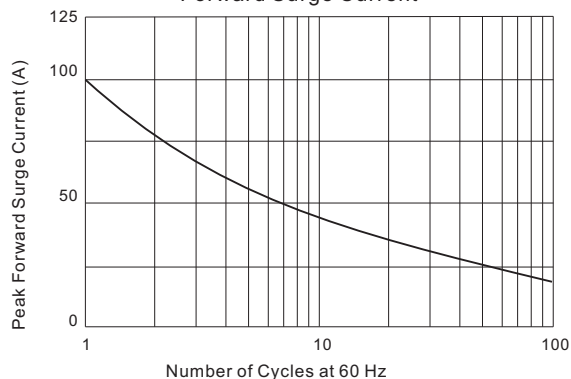


Fig. 3 - Typical Instantaneous Forward Characteristics

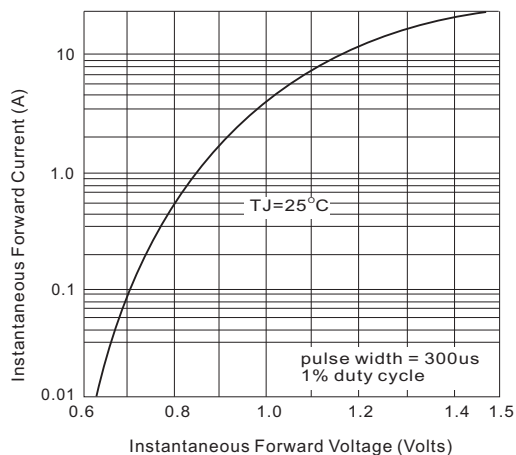


Fig. 4 - Typical Reverse Characteristics

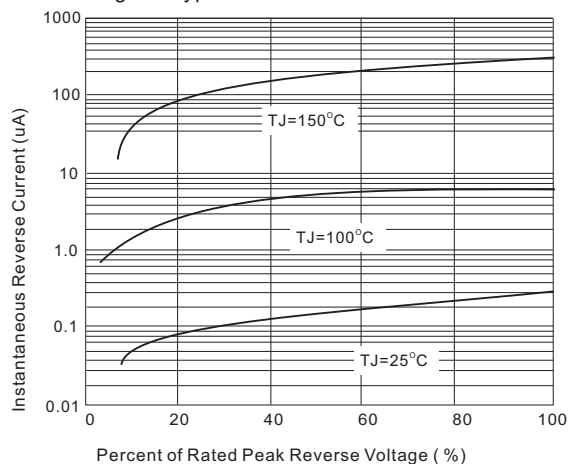
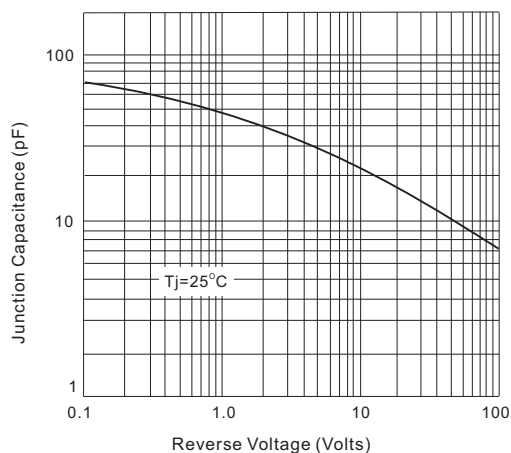


Fig. 5 - Typical Junction Capacitance



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