

GR3A THRU GR3M Fast Recovery Rectifier

Features

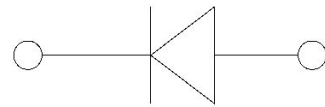
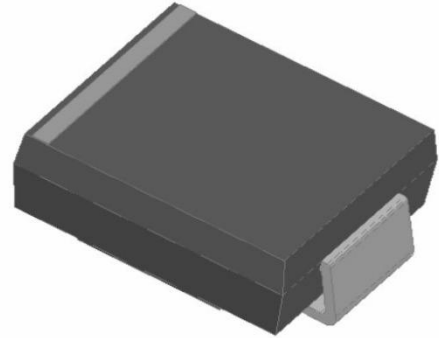
- High efficiency
- High current capability
- High reliability
- High surge current capability
- Low power loss
- Glass passivated chip junction
- Solder dip 265 °C max. 10 s, per JESD 22-B106

Typical Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, and telecommunication.

Mechanical Data

- Package: SMC
- Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: Color band denotes cathode end



■ Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER | Symbol | Unit | GR3 | | | | | | |
|---|-------------------|------------------|------------|-----|-----|-----|-----|-----|------|
| | | | A | B | D | G | J | K | M |
| Maximum Repetitive Peak Reverse Voltage | V _{RRM} | V | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Maximum RMS Voltage | V _{RMS} | V | 35 | 70 | 140 | 280 | 420 | 560 | 700 |
| Maximum DC blocking Voltage | V _{DC} | V | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Average Forward Current @Half-sine wave, Resistance load, Tc(Fig.1) | I _o | A | 3.0 | | | | | | |
| Forward Surge Current (Non-repetitive) @60HZ sine wave, 1 cycle, Ta=25°C | I _{FSM} | A | 100 | | | | | | |
| Current squared time @1ms≤t8.3≤ms Ta=25°C, Rating of per diode | I ² t | A ² s | 41.5 | | | | | | |
| Thermal Resistance(Typical) @Between junction and ambient | R _{θJ-A} | °C/W | 50 | | | | | | |
| Storage Temperature | T _{stg} | °C | -55 ~ +150 | | | | | | |
| Junction Temperature | T _j | °C | -55 ~ +150 | | | | | | |

■ Electrical Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER | Symbol | Unit | Conditions | GR3 | | | | | |
|-------------------------------|------------------|------|---|-----|---|---|-----|-----|---|
| | | | | A | B | D | G | J | K |
| Peak Forward Voltage | V _{FM} | V | I _F = 3.0A | 1.3 | | | | | |
| Peak Reverse Current | I _{RRM} | μA | VR = V _{DC} @Ta=25°C | 10 | | | | | |
| | | | VR = V _{DC} @Ta=125°C | 250 | | | | | |
| Maximum reverse recovery time | T _{rr} | ns | I _F =0.5A, I _R =1.0A, I _{rr} =0.25A | 150 | | | 250 | 500 | |



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■ Characteristics (Typical)

FIG.1: Io-TL Curve

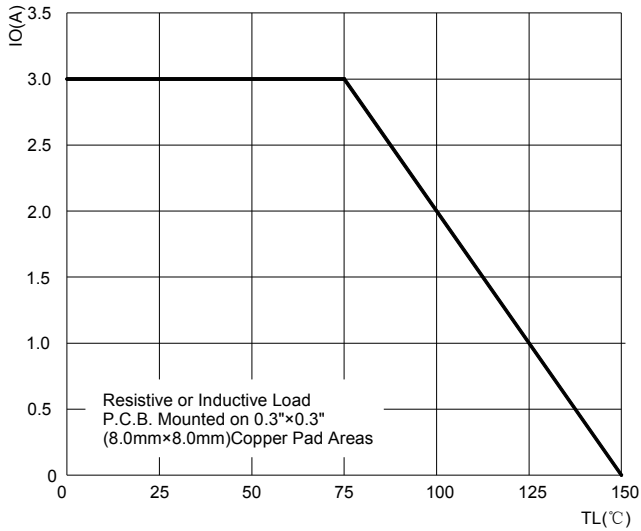


FIG.2: Forward Surge Current Capability

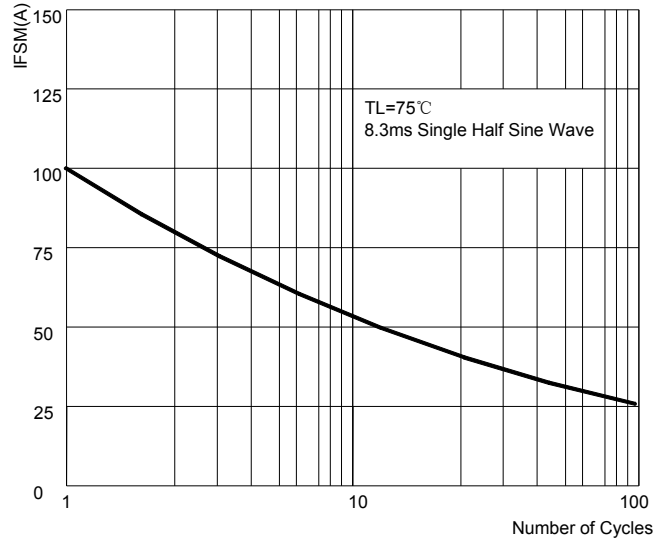


FIG.3: Forward Voltage

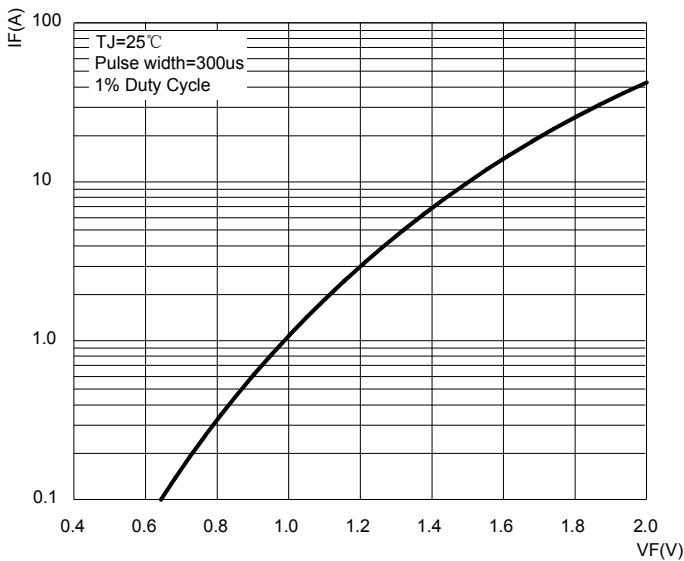


FIG.4: Typical Reverse Characteristics

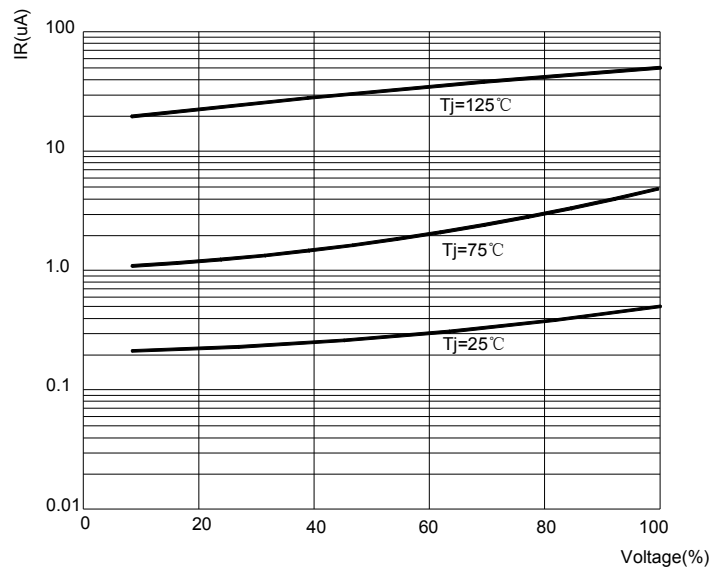
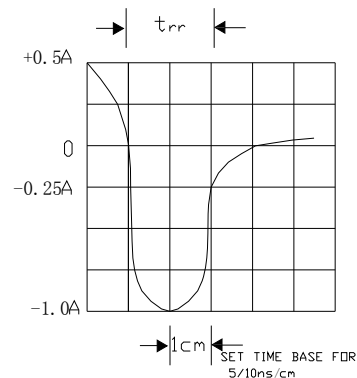
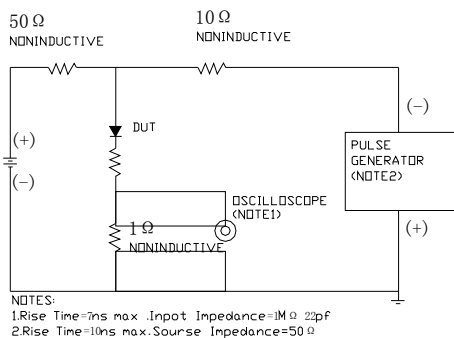


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



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■ Ordering Information (Example)

| PREFERED | PACKAGE CODE | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|----------------|--------------|----------------------|-------------------------|----------------------------|---------------|
| GR3A THRU GR3M | SMC | 3000 | 6000 | 42000 | 13"reel |

■ Outline Dimensions

