

Features

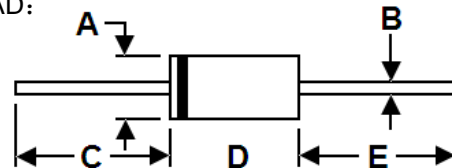
- * Low Forward Voltage Drop
- * High Current Capability
- * High Reliability
- * High Surge Current Capability



RoHS
COMPLIANT

Package Outline Dimensions

DO-201AD:



| DIM. | Unit (mm) | | Unit (inch) | |
|------|-----------|-----|-------------|-------|
| | Min | Max | Min | Max |
| A | 4.8 | 5.3 | 0.189 | 0.209 |
| B | 1.2 | 1.3 | 0.047 | 0.051 |
| C | 25.4 | - | 1.0 | - |
| D | 7.2 | 9.6 | 0.283 | 0.378 |
| E | 25.4 | - | 1.0 | - |

Mechanical Data

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting Position: Any

Maximum Ratings and Electrical Characteristics

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

| Type Number | Symbol | FR 301G | FR 302G | FR 303G | FR 304G | FR 305G | FR 306G | FR 307G | Unit |
|---|---------------|-------------|---------|---------|---------|---------|---------|---------|------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum D.C Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current .375" (9.5mm)Lead Length @ $T_A=55^\circ C$ | $I_{F(AV)}$ | 3.0 | | | | | | | A |
| Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load(JEDEC method) | I_{FSM} | 125 | | | | | | | A |
| Maximum Instantaneous Forward Voltage at 3.0A | V_F | 1.3 | | | | | | | V |
| Maximum D.C Reverse Current @ $T_A=25^\circ C$ at Rated D.C Blocking Voltage @ $T_A=125^\circ C$ | I_R | 5.0 100 | | | | | | | μA |
| Maximum Reverse Recovery Time(Note1) | T_{rr} | 150 | | | | 250 | 500 | | nS |
| Typical Junction Capacitance(Note2) | C_J | 60 | | | | | | | pF |
| Operating and Storage Temperature Range | T_J/T_{STG} | -55 to +150 | | | | | | | $^\circ C$ |

Note:1、 Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$. 2、 Measured at 1MHz and Applied Reverse Voltage of 4.0V D.C.

Ratings and Characteristic Curves

FIG. 1 – TYPICAL FORWARD CURRENT DERATING CURVE

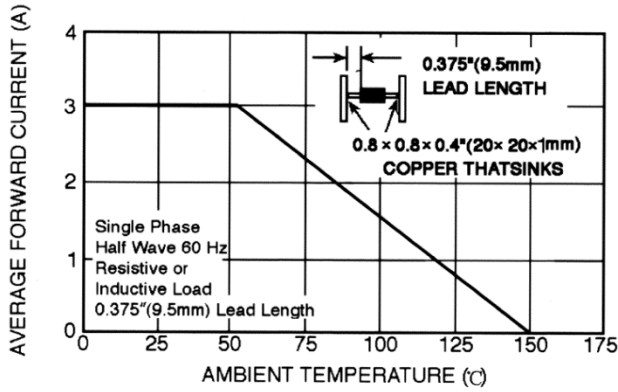


FIG. 2 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

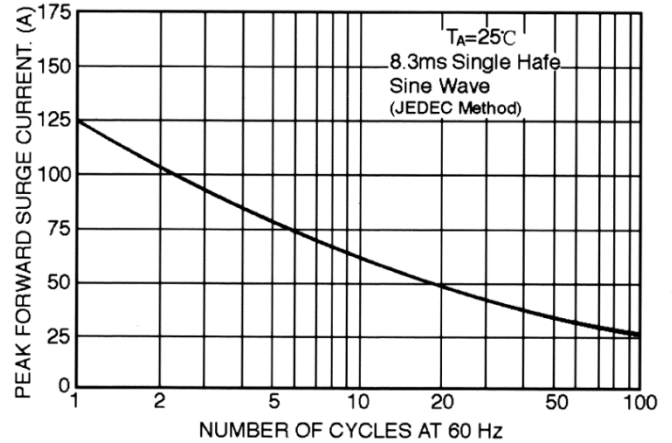


FIG. 3 – TYPICAL FORWARD CHARACTERISTICS

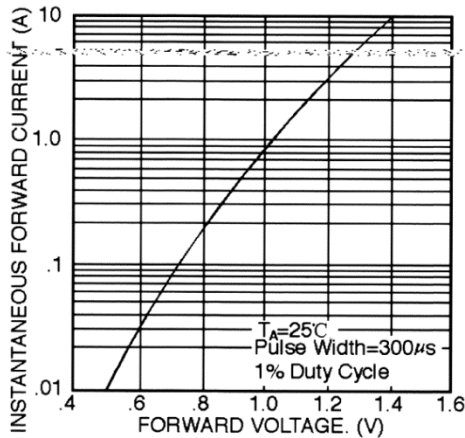


FIG. 4 – TYPICAL JUNCTION CAPACITANCE

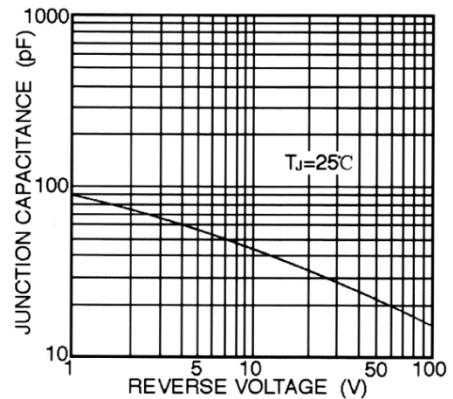
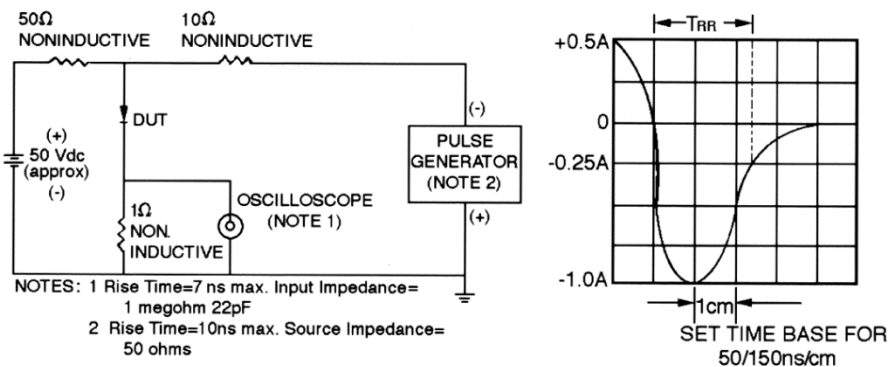


FIG. 5 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS





FR301G THRU FR307G

3.0 Amps. Glass Passivated Fast Recovery Rectifiers

Ordering Information

| Part No. | Package | Packing |
|---------------|----------|---------------------|
| FR301G~FR307G | DO-201AD | 0.8K/AMMO box |
| FR301G~FR307G | DO-201AD | 1.2K/AMMO box |
| FR301G~FR307G | DO-201AD | 1.25K/AMMO box |
| FR301G~FR307G | DO-201AD | 1.2K/13" Paper reel |
| FR301G~FR307G | DO-201AD | 0.5K/Bulk packing |