

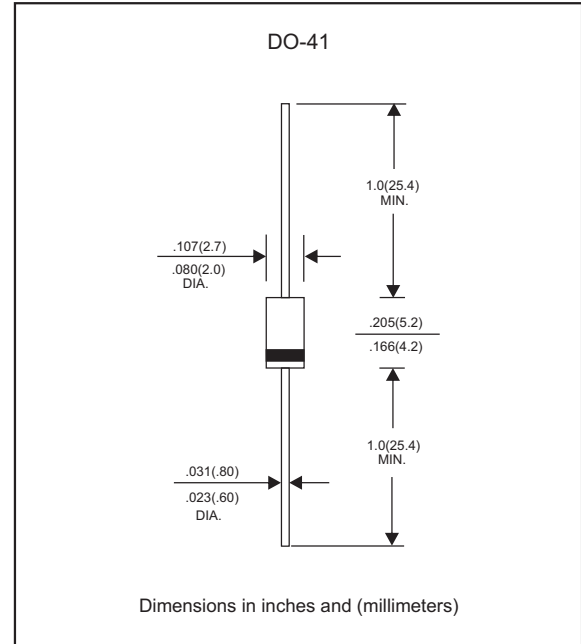
Features

- Axial lead type devices for through hole design.
- High current capability.
- Fast switching for high efficiency.
- High surge current capability.
- Glass passivated chip junction structure
- Lead-free parts meet RoHS requirements.
- Suffix "-H" indicates Halogen-free parts, ex. FR101G-H.

Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, DO-41
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position : Any
- Weight : Approximated 0.33 gram

Package outline



Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

| PARAMETER | CONDITIONS | Symbol | MIN. | TYP. | MAX. | UNIT |
|----------------------------|---|-----------|------|------|------|------------------|
| Forward rectified current | See Fig.1 | I_o | | | 1.0 | A |
| Forward surge current | 8.3ms single half sine-wave (JEDEC methode) | I_{FSM} | | | 30 | A |
| Reverse current | $V_R = V_{RRM} T_J = 25^\circ\text{C}$ | I_R | | | 5.0 | μA |
| | $V_R = V_{RRM} T_J = 125^\circ\text{C}$ | | | | 100 | |
| Diode junction capacitance | f=1MHz and applied 4V DC reverse voltage | C_J | | 15 | | pF |
| Storage temperature | | T_{STG} | -65 | | +175 | $^\circ\text{C}$ |

| SYMBOLS | V_{RRM}^{*1} (V) | V_{RMS}^{*2} (V) | V_R^{*3} (V) | V_F^{*4} (V) | t_{rr}^{*5} (ns) | Operating temperature $T_J, (^\circ\text{C})$ |
|---------|-----------------------|-----------------------|-------------------|-------------------|-----------------------|--|
| FR101G | 50 | 35 | 50 | 1.30 | 150 | -55 to +150 |
| FR102G | 100 | 70 | 100 | | | |
| FR103G | 200 | 140 | 200 | | | |
| FR104G | 400 | 280 | 400 | | 250 | |
| FR105G | 600 | 420 | 600 | | | |
| FR106G | 800 | 560 | 800 | | | |
| FR107G | 1000 | 700 | 1000 | 500 | | |

- *1 Repetitive peak reverse voltage
- *2 RMS voltage
- *3 Continuous reverse voltage
- *4 Maximum forward voltage@ $I_F=1.0\text{A}$
- *5 Maximum Reverse recovery time, note 1

Note 1. Reverse recovery time test condition, $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

Rating and characteristic curves (FR101G THRU FR107G)

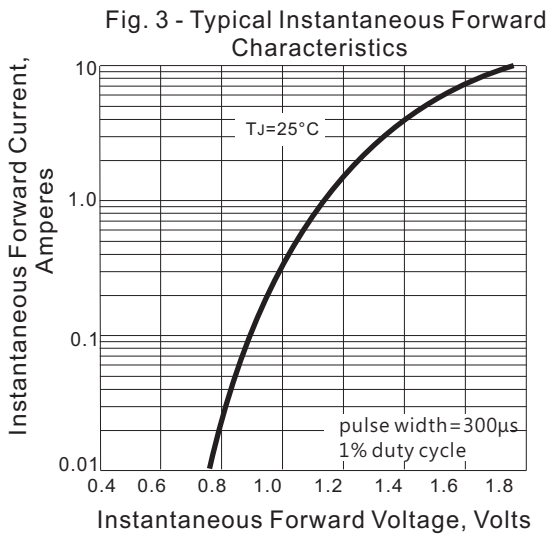
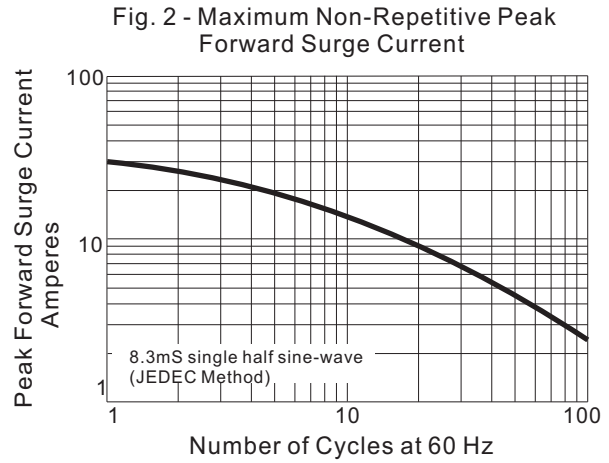
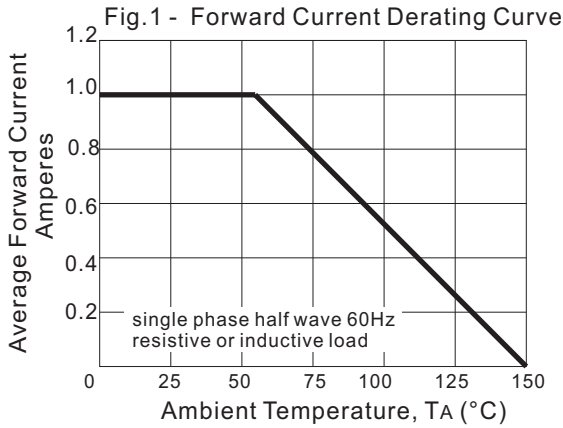
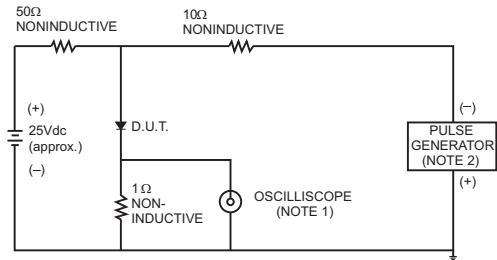
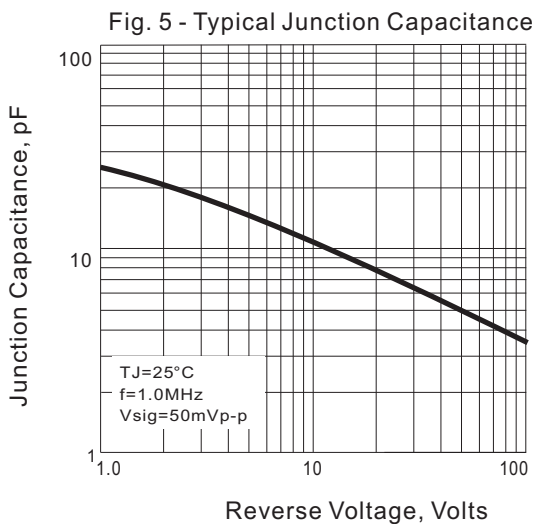
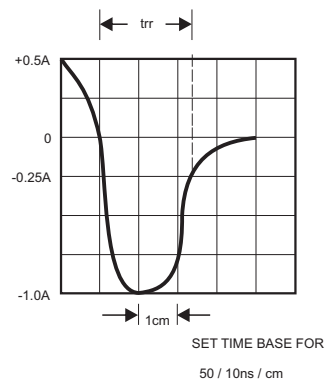




Fig. 4 - Test Circuit Diagram and Reverse Recovery Time Characteristic



NOTES: 1. Rise Time = 7ns max., Input Impedance = 1 megohm, 22pF.
2. Rise Time = 10ns max., Source Impedance = 50 ohms.



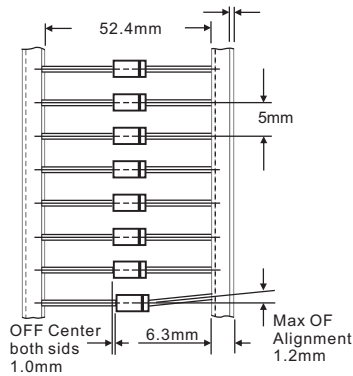
Pinning information

| Pin | Simplified outline | Symbol |
|----------------------------|--|---|
| Pin1 cathode Pin2 anode |  |  |

Marking

| Type number | Marking code |
|-------------|--------------|
| FR101G | FR101G |
| FR102G | FR102G |
| FR103G | FR103G |
| FR104G | FR104G |
| FR105G | FR105G |
| FR106G | FR106G |
| FR107G | FR107G |

Taping specifications for AXIAL devices



AMMO PACKING

| DEVICE CASE TYPE | Q'TY 1 (PCS / BOX) | INNER BOX SIZE (m/m) | CARTON SIZE (m/m) | Q'TY 2 (PCS / CARTON) | APPROX. CROSS WEIGHT(kg) |
|------------------|--------------------|----------------------|-------------------|-----------------------|--------------------------|
| DO-41 | 5,000 | 260 * 83 * 160 | 440 * 270 * 340 | 50,000 | 20.0 |