



TE 4942 THRU TE4948

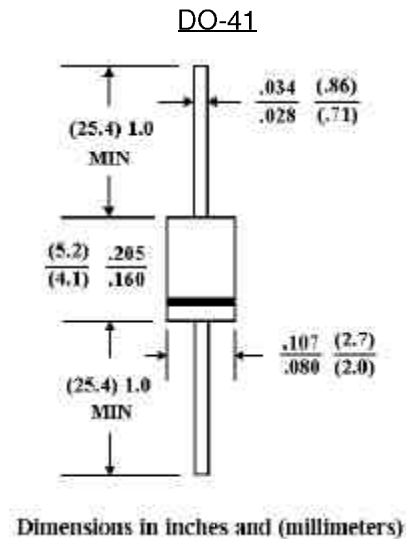
GLASS PASSIVATED JUNCTION FAST SWITCHING RECTIFIER
 VOLTAGE - 200 to 1000 Volts CURRENT - 1.0 Ampere

FEATURES

- High surge current capability
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0 Utilizing Flame Retardant Epoxy Molding Compound
- 1.0 ampere operation at $T_A=55^\circ\text{C}$ with no thermal runaway
- Fast switching for high efficiency
- Exceeds environmental standards of MIL-S-19500/228
- Glass passivated junction in DO-41 package

MECHANICAL DATA

- Case: Molded plastic, DO-41
- Terminals: Axial leads, solderable per MIL-STD-202, Method 208
- Polarity: Band denotes cathode
- Mounting Position: Any
- Weight: 0.012 ounce, 0.3 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| | TE 4942 | TE 4944 | TE 4946 | TE 4947 | 4948 | UNITS |
|---|-------------|---------|---------|---------|------|--------------------|
| Maximum Recurrent Peak Reverse Voltage | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current .375"(9.5mm) lead length at $T_A=55^\circ\text{C}$ | 1.0 | | | | | A |
| Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load(JEDEC method) | 30 | | | | | A |
| Maximum Forward Voltage at 1.0A | 1.3 | | | | | V |
| Maximum Reverse Current $T_a=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_a=100^\circ\text{C}$ | 5.0 | | | | | μgA |
| | 150 | | | | | μgA |
| Typical Junction capacitance (Note 1) C _J | 12 | | | | | pF |
| Typical Thermal Resistance (Note 3) R _{θJKJA} | 67 | | | | | $^\circ\text{C/W}$ |
| Maximum Reverse Recovery Time(Note 2) | 150 | 150 | 250 | 250 | 500 | ns |
| Operating and Storage Temperature Range | -55 to +150 | | | | | $^\circ\text{C}$ |

NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC
2. Reverse Recovery Test Conditions: $I_F=.5\text{A}$, $I_R=1\text{A}$, $I = .25\text{A}$
3. Thermal resistance from junction to ambient at 0.375"(9.5mm) lead length P.C.B. mounted

RATING AND CHARACTERISTIC CURVES

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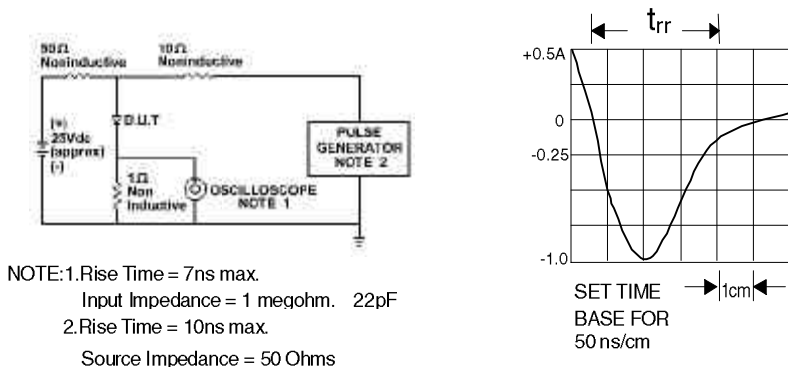


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

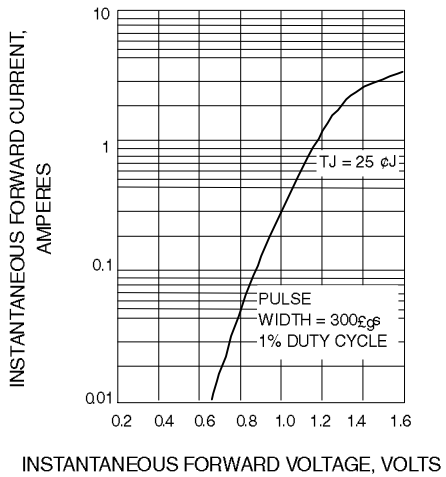


Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

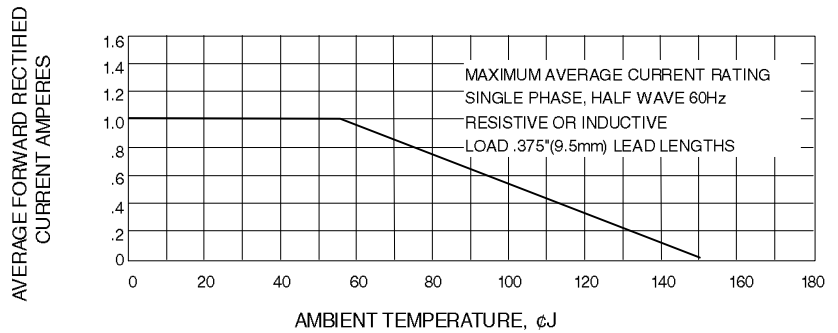


Fig. 3-FORWARD CURRENT DERATING CURVE

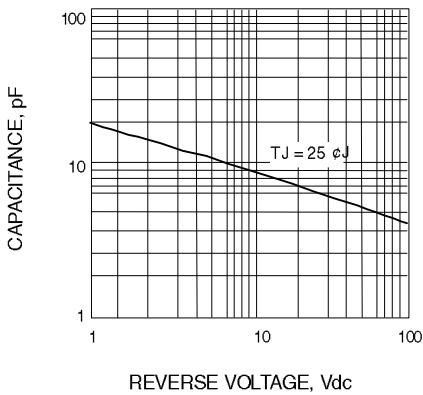


Fig. 4-TYPICAL JUNCTION CAPACITANCE

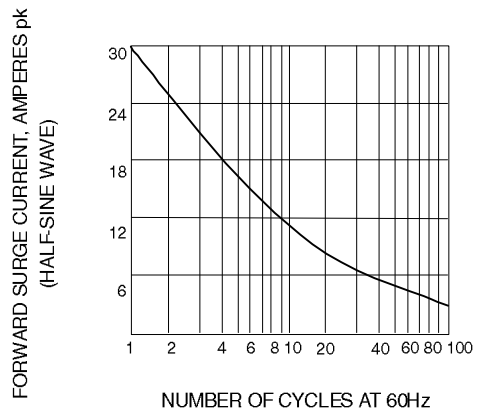


Fig. 5-PEAK FORWARD SURGE CURRENT