# TE300R THRU TE308R

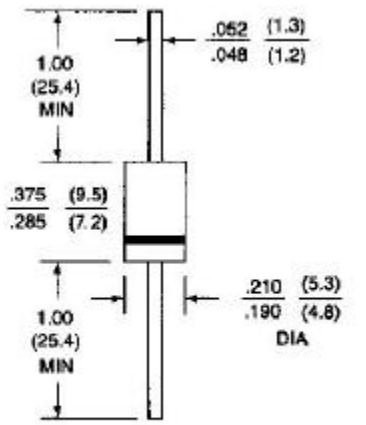
## GLASS PASSIVATED JUNCTION FAST SWITCHING RECTIFIER

## VOLTAGE - 50 to 800 Volts CURRENT - 3.0 Amperes

**FEATURES**

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O Utilizing Flame Retardant Epoxy Molding Compound
- Glass passivated junction in a DO-201AD package
- 3 ampere operation at $T_A$=55 with no thermal runaway
- Exceeds environmental standards of MIL-S-19500/228
- Fast switching for high efficiency

**DO-201AD**




Dimensions in inches and (millimeters)

**MECHANICAL DATA**

Case: Molded plastic, DO-201AD

Terminals: axial leads, solderable per MIL-STD-202, Method 208

Mounting Position: Any

Weight: 0.04 ounce, 1.1 grams

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| | TE300R | TE301R | TE302R | TE304R | TE306R | TE308R | UNITS |
|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | 50 | 100 | 200 | 400 | 600 | 800 | V |
| Maximum RMS Voltage | 35 | 70 | 140 | 280 | 420 | 560 | V |
| Maximum DC Blocking Voltage | 50 | 100 | 200 | 400 | 600 | 800 | V |
| Maximum Average Forward Rectified Current .375", 9.5mm Lead Length at $T_A$=55 | 3.0 | | | | | | A |
| Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load(JECEC method) | 125 | | | | | | A |
| Maximum Forward Voltage at 3.0A | 1.3 | | | | | | V |
| Maximum Reverse Current at Rated DC $T_a$=25<br>Blocking Voltage $T_a$=100 | 5.0<br>300 | | | | | | A |
| Typical Junction capacitance (Note 1) CJ | 60 | | | | | | $_P$F |
| Typical Thermal Resistance (Note 2) R JA | 22.0 | | | | | | /W |
| Maximum Reverse Recovery Time(Note 3) | 150 | 150 | 150 | 150 | 250 | 500 | ns |
| Operating and Storage Temperature Range $T_A$ | -55 to +150 | | | | | | |

NOTES:

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

RATING AND CHARACTERISTIC CURVES

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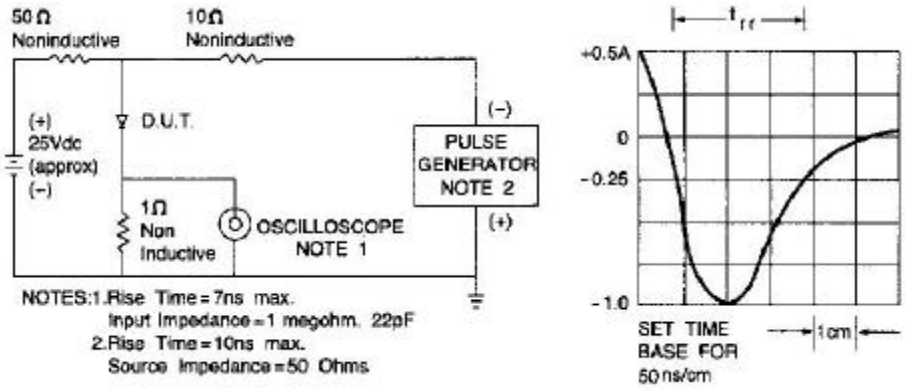


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

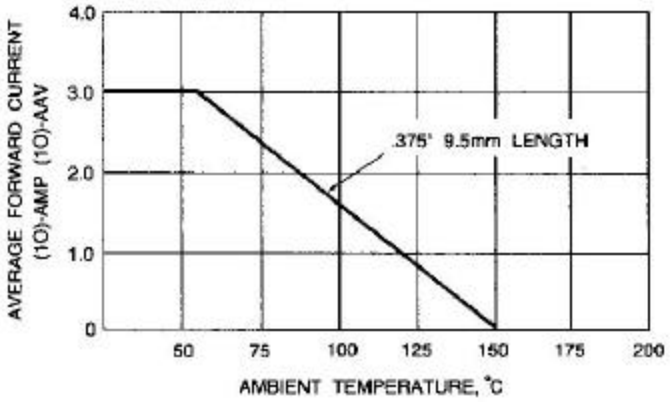


Fig. 2- FORWARD CURRENT DERATING CURVE

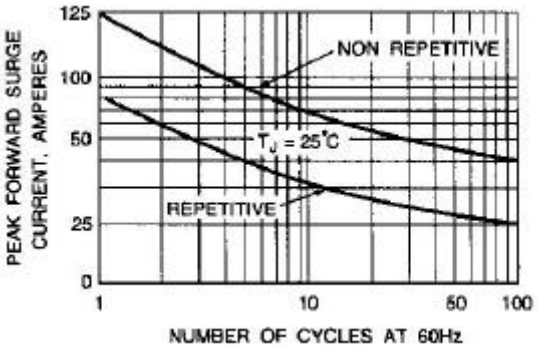


Fig. 3-PEAK FORWARD SURGE CURRENT

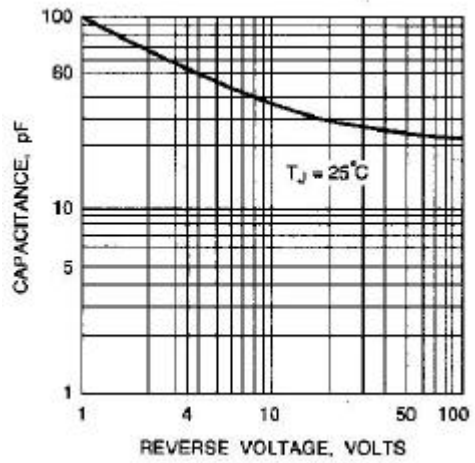


Fig. 4-TYPICAL JUNCTION CAPACITANCE

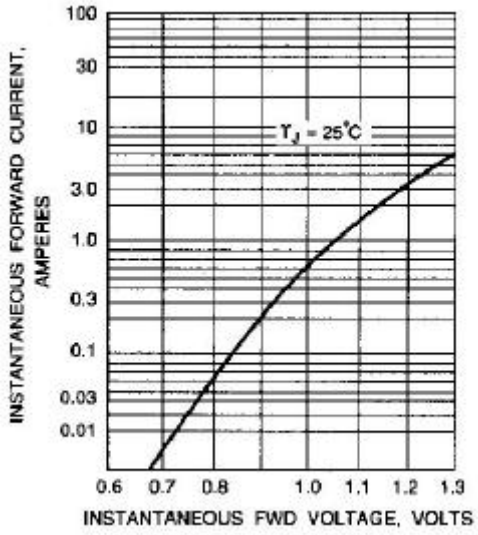


Fig. 5-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC