TRANSYS ELECTRONICS LIMITED

TS300R THRU T S3010R

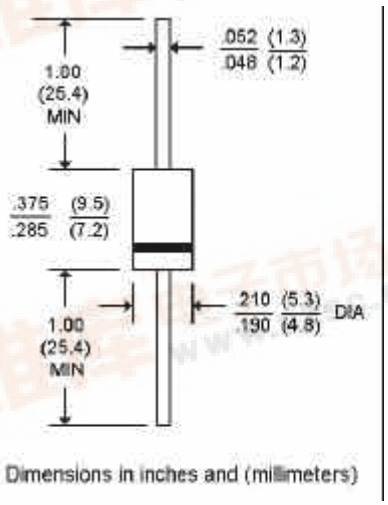
FAST SWITCHING PLASTIC RECTIFIER

VOLTAGE - 50 to 1000 Volts CURRENT - 3.0 Amperes

FEATURES

- High surge current capabi ty
- Plastic package has Underwriters Laboratory
- Flammab ity Classification 94V-O ut izing
- Flame Retardant Epoxy Molding Compound
- Void-free Plastic in DO-201AD package
- 3 ampere operation at T_A=55 ¢J with no thermal runaway
- Exceeds environmental standards of MIL-S-19500/228
- Fast switching for high efficiency

DO-201AD



MECHANICAL DATA

Case: Molded plastic , DO-201AD

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

Polarity: Band denotes cathode

Mounting Position: Any

Weight: 0.04 ounce, 1.1 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 ¢J ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

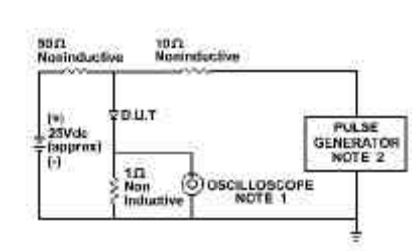
	TS300R	TS301R	TS302R	TS304R	TS306R	TS308R	TS3010R	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at T_A=55 ¢J	3.0							A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	200							A
Maximum Forward Voltage at 3.0A	1.3							V
Maximum Reverse Current T_J=25 ¢J	5.0							£gA
at Rated DC Blocking Voltage T_J=100 ¢J	500							£gA
Maximum Reverse Recovery Time(Note 1)	150	150	150	150	250	500	500	ns
Typical Junction capacitance (Note 2) CJ	60							pF
Typical Thermal Resistance (Note 3) R£KJA	22							¢J/W
Operating and Storage Temperature Range	-55 TO +150							¢J

NOTES:

1. Reverse Recovery Test Conditions: I_F=.5A, I_R=1A, I =.25A
2. Measured at 1 MHz and applied reverse voltage of 4.0 VDC
3. Thermal Resistance from Junction to Ambient and from junction to lead at 0.375"(9.5mm) lead length with both leads equa y heatsink.

RATING AND CHARACTERISTIC CURVES

TS300R THRU TS3010R



NOTE:1.Rise Time = 7ns max.
Input Impedance = 1 megohm. 22pF
2.Rise Time = 10ns max.
Source Impedance = 50 Ohms

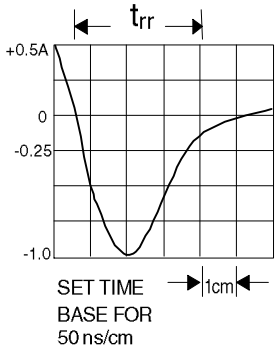


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

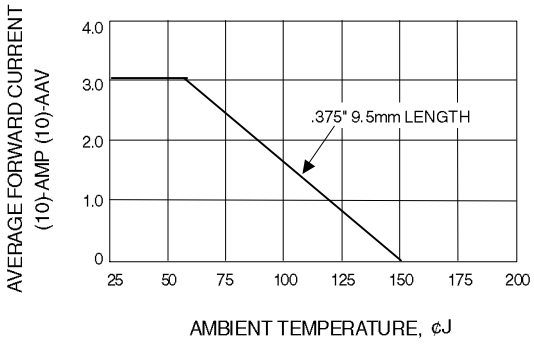


Fig. 2-FORWARD CURRENT DERATING CURVE

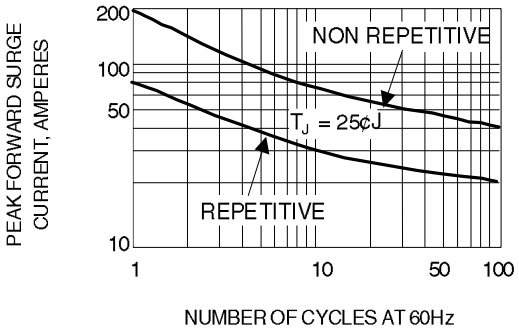


Fig. 3-PEAK FORWARD SURGE CURRENT

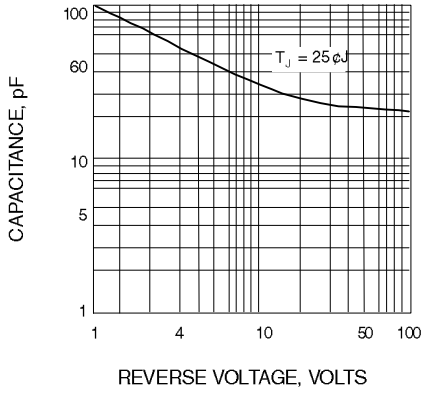


Fig. 4-TYPICAL JUNCTION CAPACITANCE

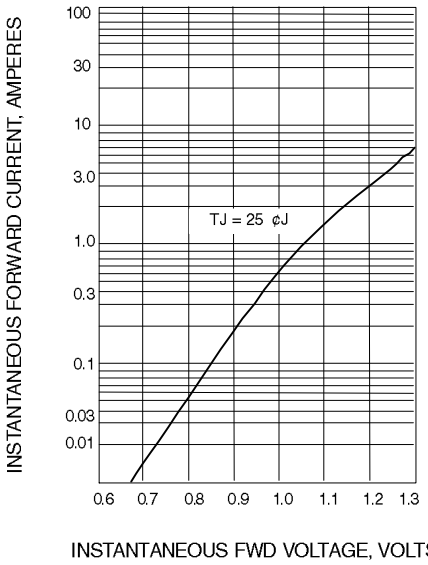


Fig. 5-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS