TAYCHIPST

GLASS PASSIVATED JUNCTION FAST SWITCHING RECTIFIER

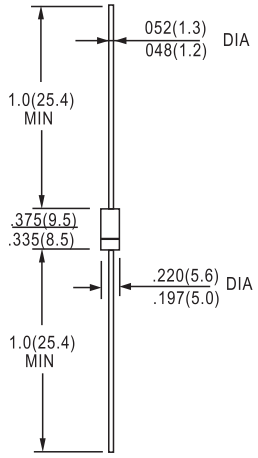
# PG300R THRU PG308R

50V-800V 3.0A

## 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-27




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.

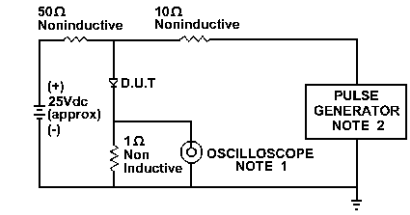
For capacitive load, derate current by 20%.

| | PG300R | PG301R | PG302R | PG304R | PG306R | PG308R | 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 ¢J | 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 ¢J<br>Blocking Voltage $T_a$=100 ¢J | 5.0<br>300 | | | | | | A |
| Typical Junction capacitance (Note 1) CJ | 60 | | | | | | pF |
| Typical Thermal Resistance (Note 2) R £KJA | 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

## RATINGS AND CHARACTERISTIC CURVES PG300R THRU PG308R




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

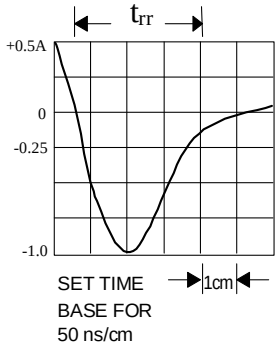



Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

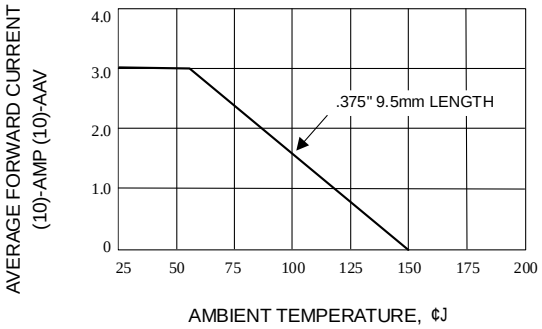



Fig. 2-FORWARD CURRENT CURVE

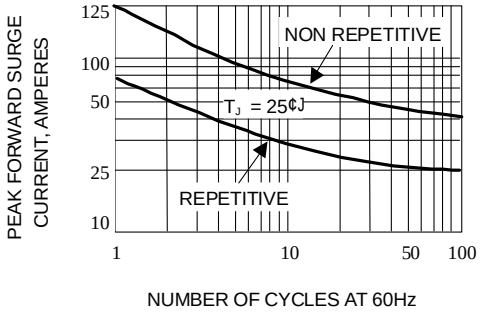



Fig. 3-PEAK FORWARD SURGE CURRENT

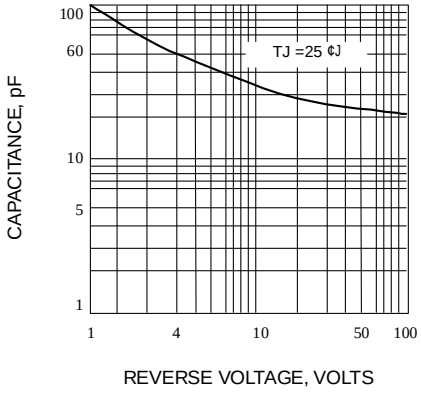



Fig. 4-TYPICAL JUNCTION CAPACITANCE

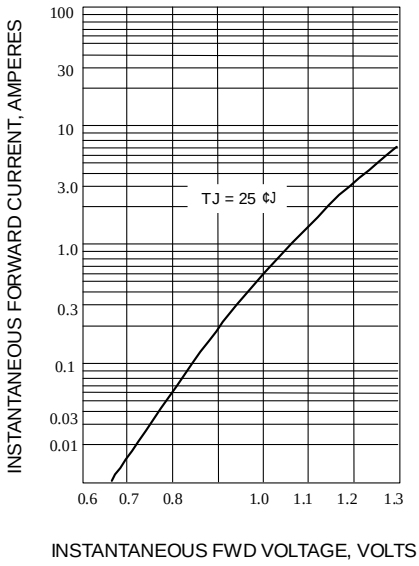



Fig. 5-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC