

PG100R THRU PG108R

GLASS PASSIVATED JUNCTION FAST SWITCHING RECTIFIER

VOLTAGE - 50 to 800 Volts CURRENT - 1.0 Ampere

FEATURES

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

MECHANICAL DATA

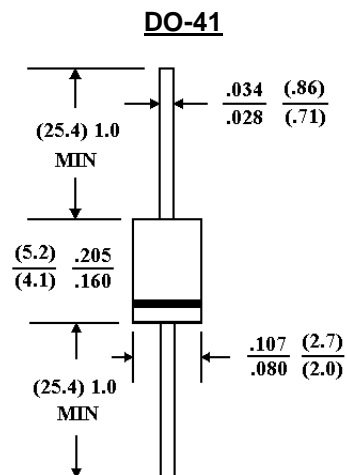
Case: Molded plastic, DO-41

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

Polarity: Color band denotes cathode

Mounting Position: Any

Weight: 0.012 ounce, 0.3 gram



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at $25\text{ }^{\circ}\text{C}$ ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

| | PG100R | PG101R | PG102R | PG104R | PG106R | PG108R | 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 $T_A=55\text{ }^{\circ}\text{C}$ | 1.0 | | | | | | A |
| Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load(JECEC method) | 30 | | | | | | A |
| Maximum Forward Voltage at 1.0A | 1.3 | | | | | | V |
| Maximum Full Load Reverse Current Full Cycle Average, .375",9.5mm Lead Length at $T_A=55\text{ }^{\circ}\text{C}$ | 5.0 | | | | | | mg A |
| Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A=100\text{ }^{\circ}\text{C}$ | 150 | | | | | | mg A |
| Maximum Reverse Recovery Time(Note 1) | 150 | 150 | 150 | 150 | 250 | 500 | ns |
| Typical Junction capacitance (Note 2) CJ | 15 | | | | | | pF |
| Typical Thermal Resistance (Note 3) R θ KJA | 67 | | | | | | $^{\circ}\text{C}/\text{W}$ |
| Operating and Storage Temperature Range T_J | -55 to +150 | | | | | | $^{\circ}\text{C}$ |

NOTES:

1. Measured with $I_F=.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=.25\text{A}$
2. Measured at 1 MHz and applied reverse voltage of 4.0 VDC
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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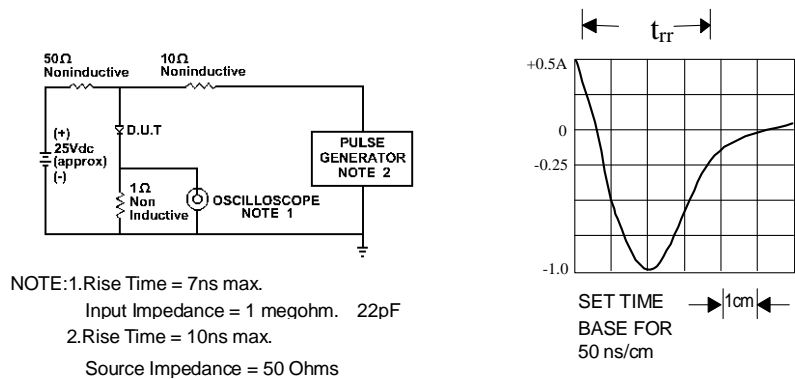


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

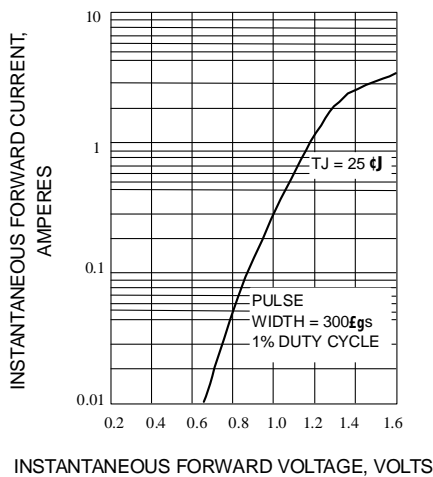


Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

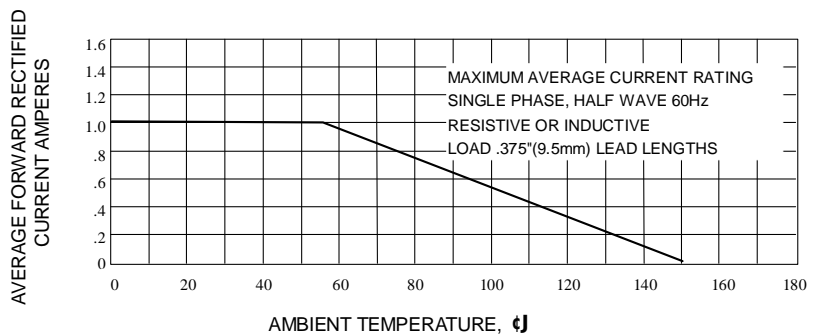


Fig. 3-FORWARD CURRENT DERATING CURVE

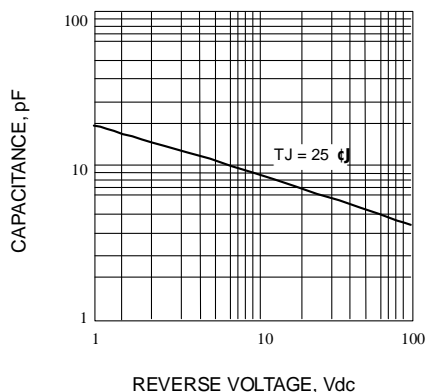


Fig. 4-TYPICAL JUNCTION CAPACITANCE

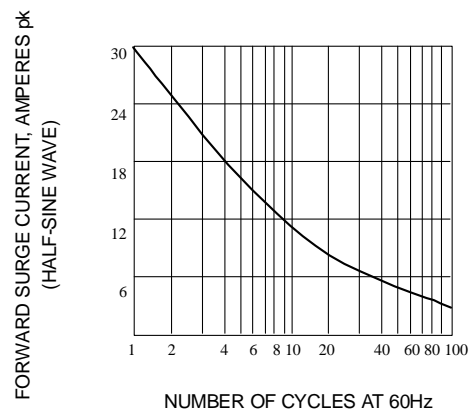


Fig. 5-PEAK FORWARD SURGE CURRENT