

# 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

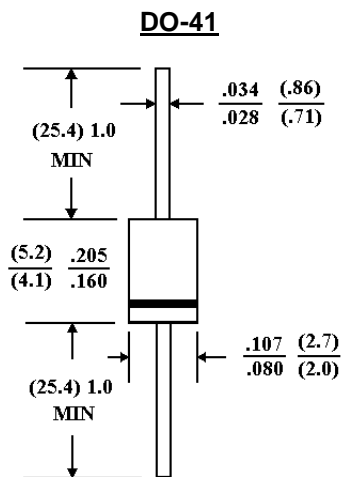
Case: Molded plastic, DO-41

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						$\text{Eg A}$
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A=100\text{ }^{\circ}\text{C}$	150						$\text{Eg A}$
Maximum Reverse Recovery Time(Note 1)	150	150	150	150	250	500	ns
Typical Junction capacitance (Note 2) $C_J$	15						pF
Typical Thermal Resistance (Note 3) $R_{\theta\text{KJA}}$	67						$^{\circ}\text{C/W}$
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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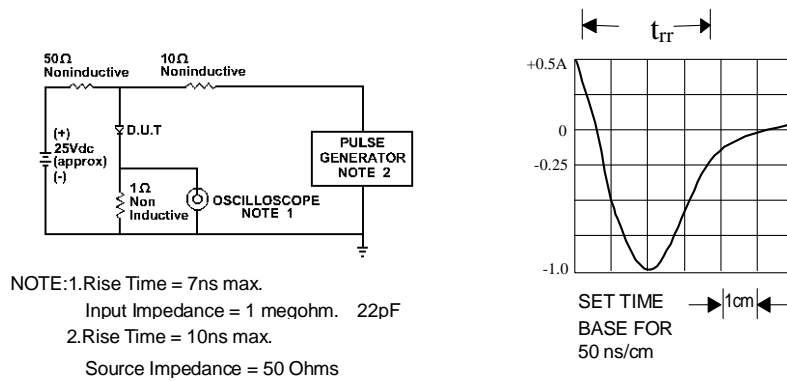
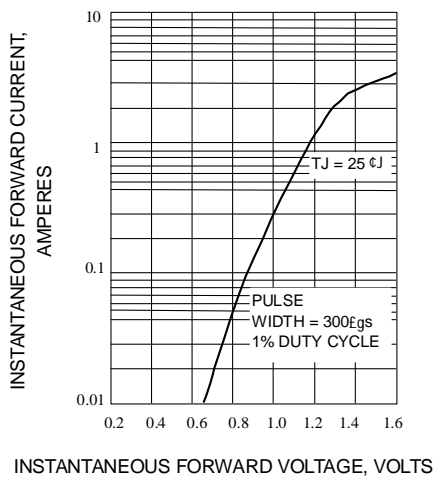


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

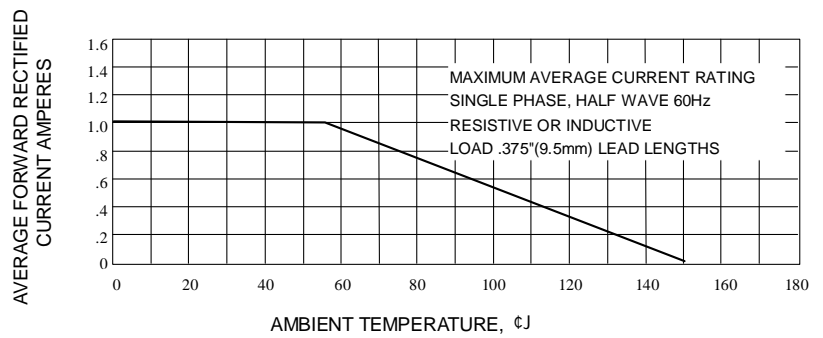


Fig. 3-FORWARD CURRENT DERATING CURVE

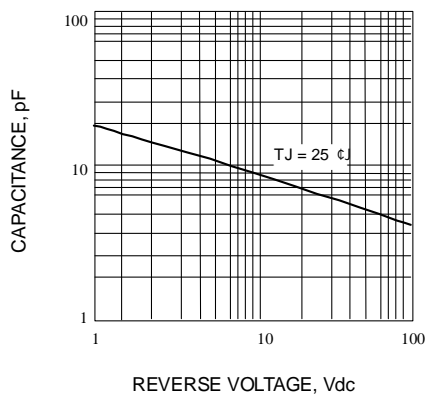


Fig. 4-TYPICAL JUNCTION CAPACITANCE

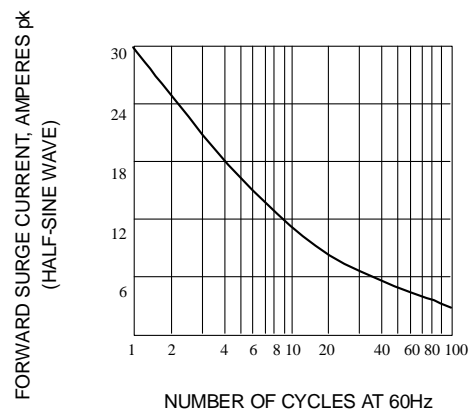


Fig. 5-PEAK FORWARD SURGE CURRENT