

# 1U1G THRU 1U6G

## GLASS PASSIVATED JUNCTION ULTRAFAST 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 in R-1 package
- 1 ampere operation at  $T_A=55\text{ }^{\circ}\text{C}$  with no thermal runaway
- Exceeds environmental standards of MIL-S-19500/228
- Ultra Fast switching for high efficiency

### MECHANICAL DATA

Case: Molded plastic, R-1

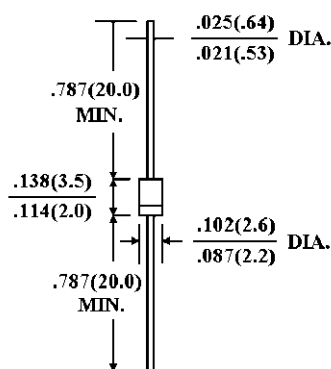
Terminals: axial leads, solderable per MIL-STD-202, Method 208

Polarity: Band denotes cathode

Mounting Position: Any

Weight: 0.0064 ounce, 0.181 gram

**R-1**



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

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

	1U1G	1U2G	1U3G	1U4G	1U5G	1U6G	UNITS
Peak Reverse Voltage, Repetitive; $V_{RM}$ :	50	100	200	400	600	800	V
Maximum RMS Voltage	35	70	140	280	420	560	V
DC Reverse Voltage; $V_R$	50	100	200	400	600	800	V
Average Forward Current, $I_o$ @ $T_A=55\text{ }^{\circ}\text{C}$ 3/8" lead length, 60 Hz, resistive or inductive load	1.0						A
Peak Forward Surge Current, $I_{FM}$ (surge) 8.3msec. single half sine wave superimposed on rated load(JECEC method)	30						A
Maximum Forward Voltage $V_F$ @ 1.0A, 25 $^{\circ}\text{C}$	1.00		1.30		1.70		V
Maximum Reverse Current, @ Rated $T_J=25\text{ }^{\circ}\text{C}$	10.0						$\text{Eg A}$
Reverse Voltage $T_J=100\text{ }^{\circ}\text{C}$	150						$\text{Eg A}$
Typical Junction capacitance (Note 1) $C_J$	17.0						$\mu\text{F}$
Typical Junction Resistance (Note 2) $R_{\text{E}KJA}$	60						$\text{ }^{\circ}\text{C/W}$
Reverse Recovery Time $I_F=.5A, I_R=1A, I_{rr}=.25A$	50	50	50	50	100	100	ns
Operating and Storage Temperature Range	-55 to +150						$^{\circ}\text{C}$

### NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC
2. Thermal resistance from junction to ambient and from junction to lead at 0.375"(9.5mm) lead length P.C.B. mounted

# RATING AND CHARACTERISTIC CURVES

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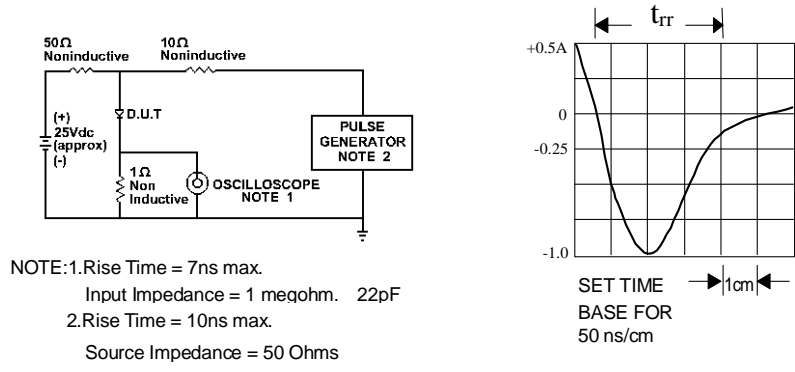


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

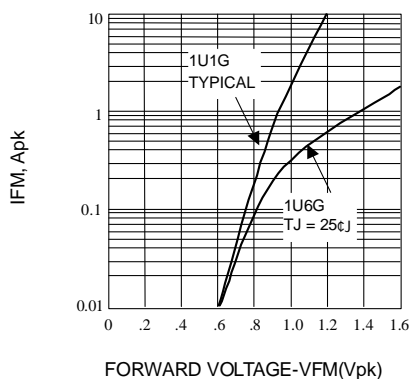


Fig. 2-FORWARD CHARACTERISTICS

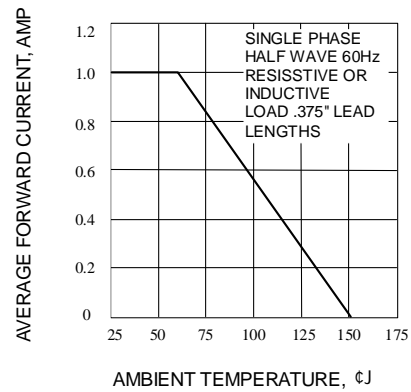


Fig. 3-FORWARD CURRENT DERATING CURVE

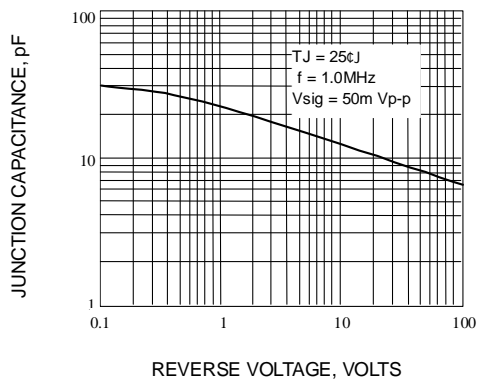


Fig. 4-TYPICAL JUNCTION CAPACITANCE

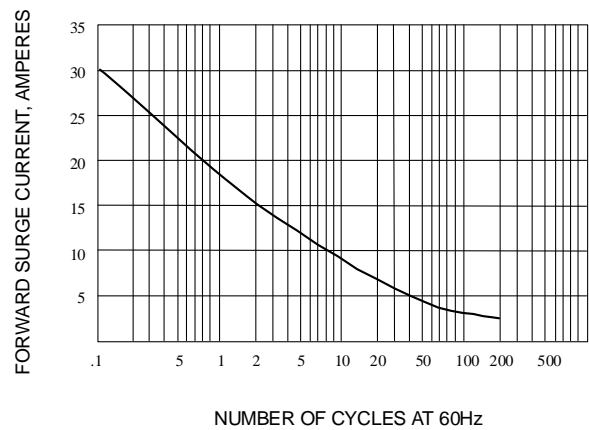


Fig. 5-PEAK FORWARD SURGE CURRENT