

1U1 THRU 1U7

ULTRAFAST SWITCHING RECTIFIER

VOLTAGE - 50 to 1000 Volts CURRENT - 1.0 Ampere

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound
- 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

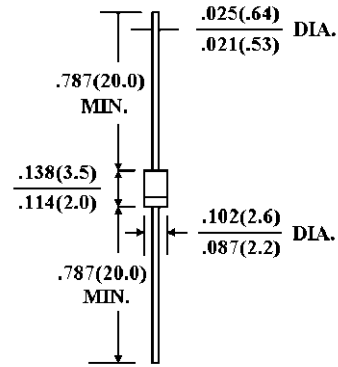
Terminals: Axial leads, solderable per MIL-STD-202, Method 208

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, 60 Hz, resistive or inductive load.

	1U1	1U2	1U3	1U4	1U5	1U6	1U7	UNITS
Peak Reverse Voltage, Pepetitive ; V_{RM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
DC Blocking Voltage; VR	50	100	200	400	600	800	1000	V
Average Forward Rectified, Io @TA=55 ºC 3/8" lead length, 60Hz, resistive or inductive load	1.0							A
Peak Forward Surge Current IFM (surge) 8.3msec. single half sine-wave superimposed on rated load (JEDEC method)	30.0							A
Maximum Forward Voltage VF @ 1.0A, 25 ºC	1.00			1.10	1.70			V
Maximum Reverse Current, @ Rated TJ=25 ºC	10.0							g A
Reverse Voltage TJ=100 ºC	500							g A
Typical Junction capacitance (Note 1) CJ	17							pF
Typical Thermal Resistance (Note 2) R KJA	65.0							J/W
Maximum Reverse Recovery Time IF=.5A, IR=1A, Irr=.25A	50	50	50	50	75	75	75	ns
Operating and Storage Temperature Range	-55 TO +150							J

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 length 0.375"(9.5mm) P.C.B. mounted

RATING AND CHARACTERISTIC CURVES 1U1 THRU 1U7

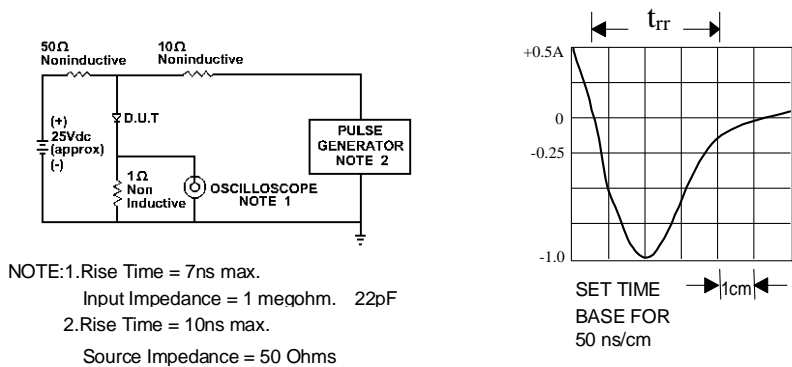


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

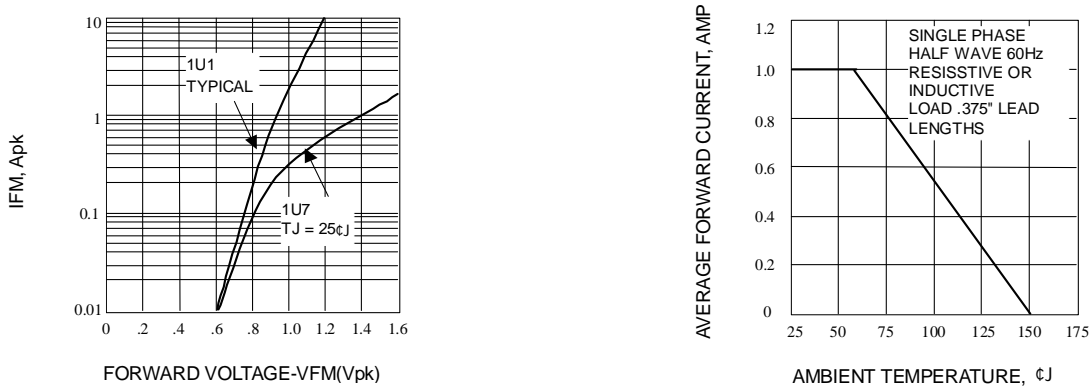


Fig. 2-FORWARD CHARACTERISTICS

Fig. 3-FORWARD CURRENT DERATING CURVE

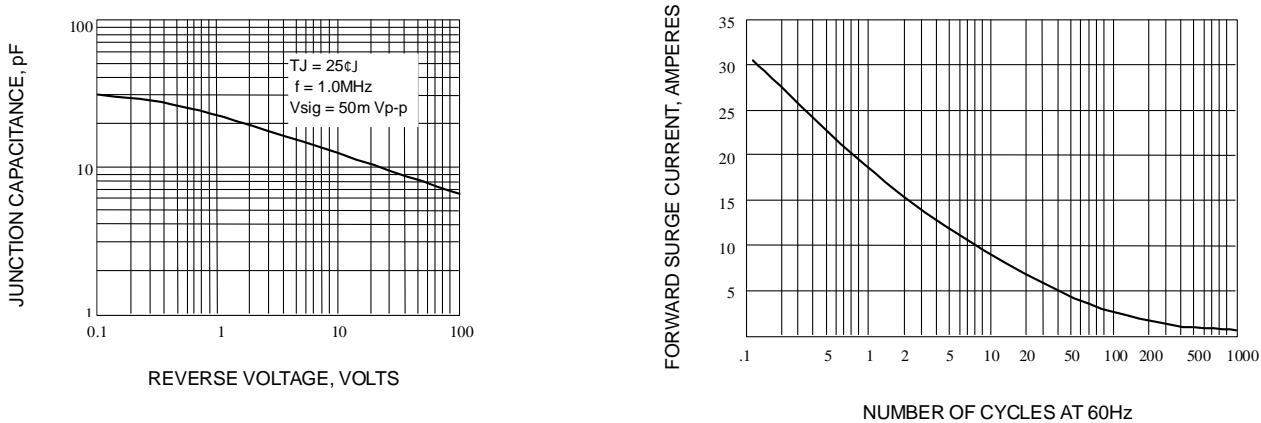


Fig. 4-TYPICAL JUNCTION CAPACITANCE

Fig. 5-PEAK FORWARD SURGE CURRENT