

# 1E1 THRU 1E5

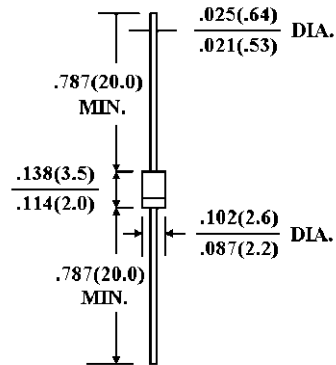
## SUPERFAST RECOVERY RECTIFIERS

VOLTAGE - 50 to 600 Volts CURRENT - 1.0 Ampere

### FEATURES

- Superfast recovery times-epitaxial construction
- Low forward voltage, high current capability
- Exceeds environmental standards of MIL-S-19500/228
- Hermetically sealed
- Low leakage
- High surge capability
- Plastic package has Underwriters Laboratories Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound

### R-1



Dimensions in inches and (millimeters)

### MECHANICAL DATA

Case: Molded plastic, R-1

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

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.0064 ounce, 0.181 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

Resistive or inductive load, 60 Hz.

	1E1	1E2	1E2A	1E3	1E3A	1E4	1E5	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	150	200	300	400	600	V
Maximum RMS Voltage	35	70	105	140	210	320	420	V
Maximum DC Blocking Voltage	50	100	150	200	300	400	600	V
Maximum Average Forward Current .375"(9.5mm) lead length $T_A=55$ °C	1.0							A
Peak Forward Surge Current $I_{FM}$ (surge): 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	30.0							A
Maximum Forward Voltage at 1.0A DC	.95				1.25	1.7		V
Maximum DC Reverse Current At Rated DC Blocking Voltage	5.0							µg A
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A=125$ °C	150							µg A
Maximum Reverse Recovery Time(Note 1)	35.0							ns
Typical Junction capacitance (Note 2)	17							pF
Operating and Storage Temperature Range $T_J$	-55 to +150							°C

### NOTES:

1. Reverse Recovery Test Conditions:  $I_F=.5A$ ,  $I_R=1A$ ,  $I_{rr}=.25A$
2. Measured at 1 MHz and applied reverse voltage of 4.0 VDC

RATING AND CHARACTERISTIC CURVES

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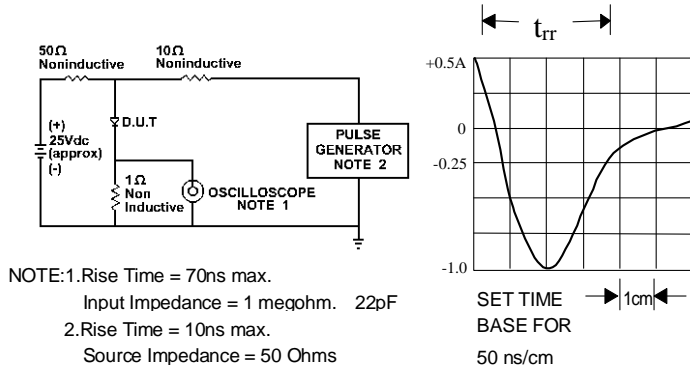


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

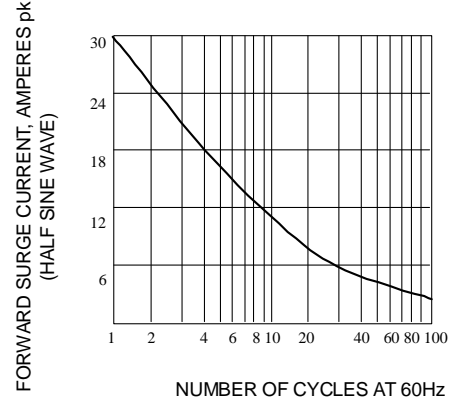


Fig. 2-MAXIMUM NON-REPEITIVE SURGE CURRENT

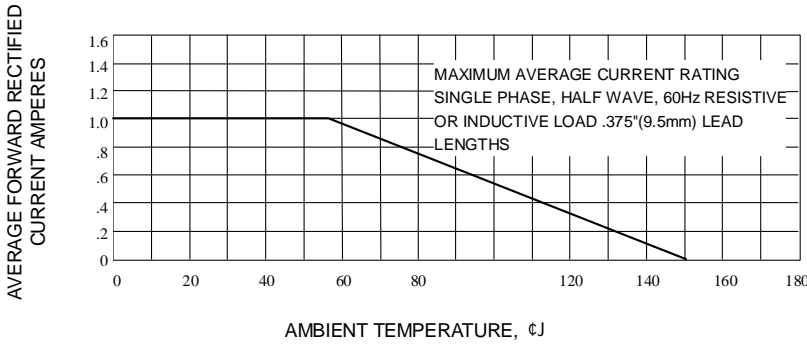


Fig. 3-MAXIMUM AVERAGE FORWARD CURRENT RATING

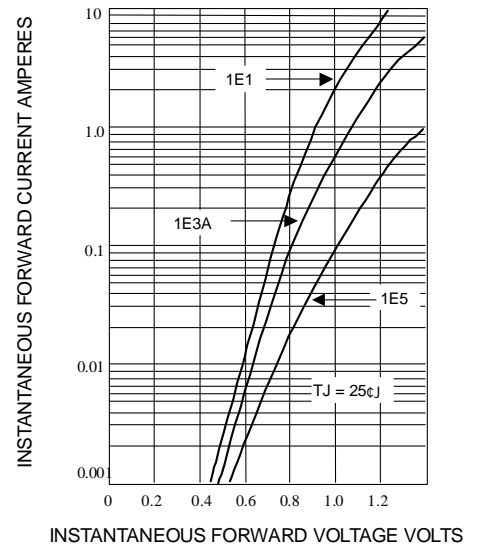


Fig. 4-FORWARD CURRENT DERATING CURVE

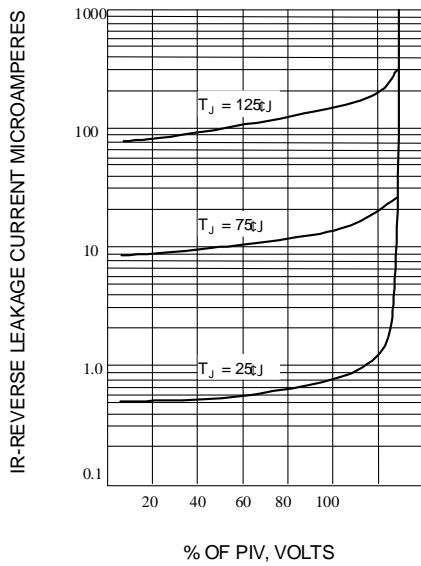


Fig. 5-TYPICAL REVERSE CHARACTERISTICS

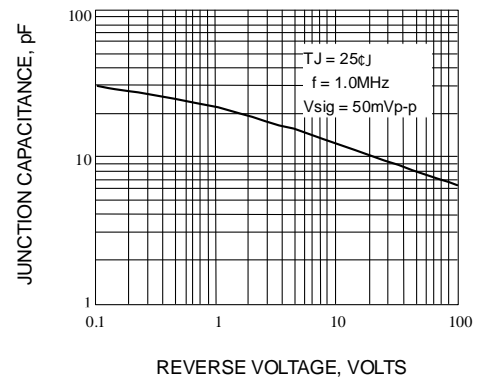


Fig. 6-TYPICAL JUNCTION CAPACITANCE



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