ER500 THRU ER506

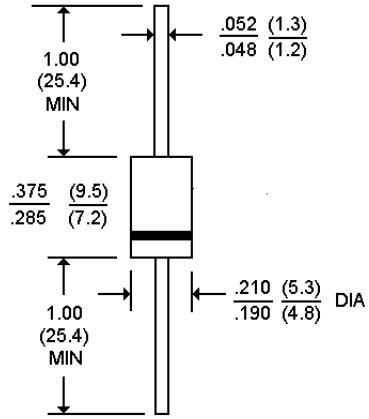
SUPERFAST RECOVERY RECTIFIERS

VOLTAGE - 50 to 600 Volts CURRENT - 5.0 Amperes

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

DO-201AD



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case: Molded plastic, DO-201AD

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

Polarity: Color Band denotes cathode end

Mounting Position: Any

Weight: 0.04 ounce, 1.12 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 ¢J ambient temperature unless otherwise specified.

Resistive or inductive load, 60Hz.

	ER500	ER501	ER501A	ER502	ER503	ER504	ER506	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 at T_A=55 ¢J	5.0							A
Peak Forward Surge Current, I_{FM} (surge): 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	150.0							A
Maximum Forward Voltage at 5.0A DC	.95				1.25		1.7	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	5.0							£g A
Maximum DC Reverse Current at Rated DC Blocking Voltage T_A=125 ¢J	300							£g A
Maximum Reverse Recovery Time(Note 1)	35.0							ns
Typical Junction capacitance (Note 2)	45							pF
Typical Junction Resistance(Note 3) R £KJA	25.0							¢J/W
Operating and Storage Temperature Range T_J	-55 to +150							¢J

NOTES:

1. Reverse Recovery Test Conditions: I_F=.5A, I_R=1A, Irr=.25A
2. Measured at 1 MHz and applied reverse voltage of 4.0 VDC
3. Thermal resistance from junction to ambient and from junction to lead length 0.375”(9.5mm) P.C.B. mounted

RATING AND CHARACTERISTIC CURVES

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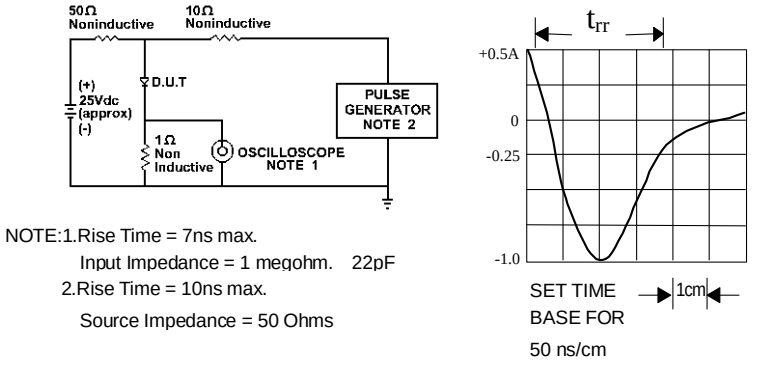

Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

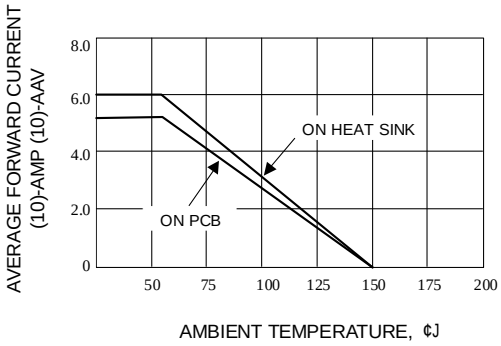

Fig. 2-MAXIMUM AVERAGE FORWARD CURRENT RATING

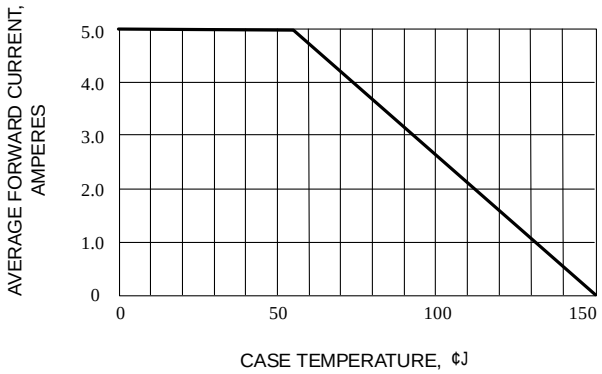

Fig. 3-MAXIMUM AVERAGE FORWARD CCURRENT RATING

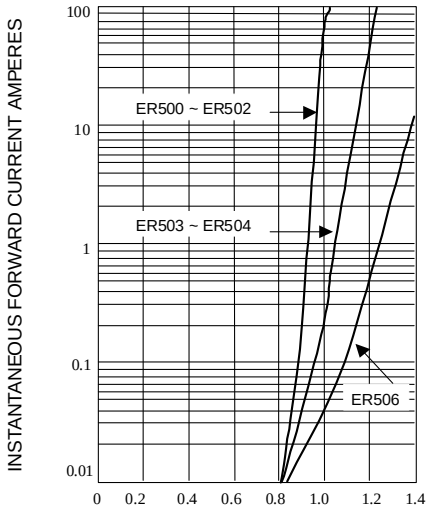

Fig. 4-FORWARD CURRENT DERATING CURVE

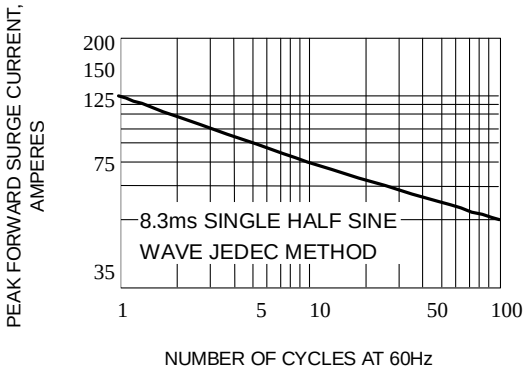

Fig. 5-MAXIMUM NON-REPETITIVE SURGE CURRENT

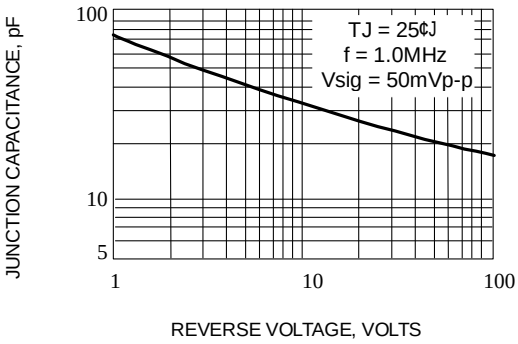

Fig. 6-TYPICAL JUNCTION CAPACITANCE