ER500 THRU ER506

SUPERFAST RECOVERY RECTIFIERS

VOLTAGE - 50 to 600 Volts CURRENT - 5.0 Amperes

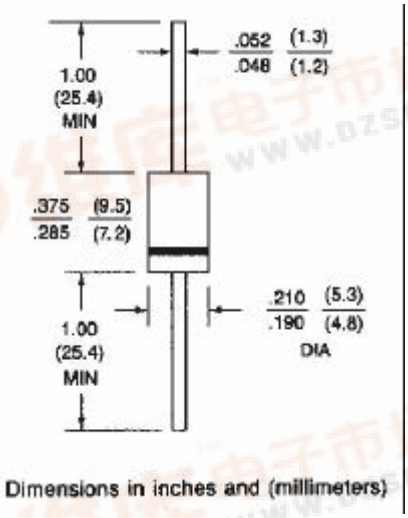
FEATURES

- 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 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	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							A
Maximum DC Reverse Current at Rated DC Blocking Voltage T_A=125	300							A
Maximum Reverse Recovery Time(Note 1)	35.0							ns
Typical Junction capacitance (Note 2)	45							pF
Typical Junction Resistance(Note 3) R JA	25.0							/W
Operating and Storage Temperature Range T_J	-55 to +150							

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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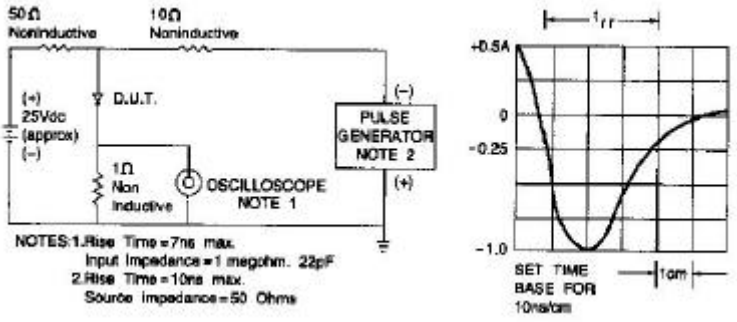

Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

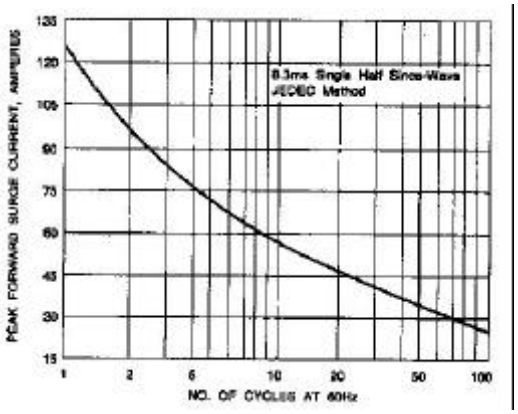

Fig. 2- MAXIMUM AVERAGE FORWARD CURRENT RATING

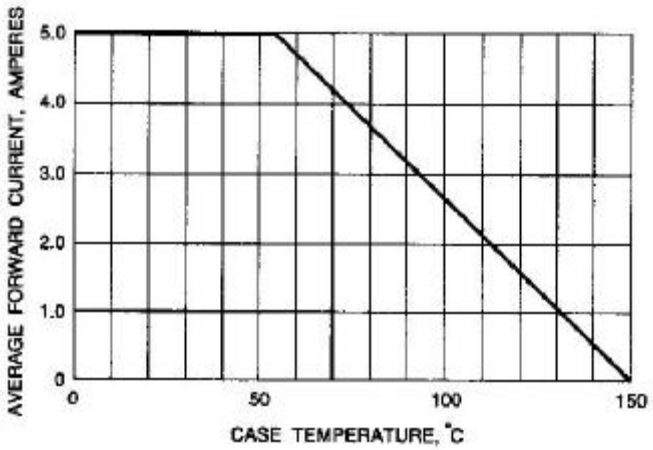

Fig. 3- MAXIMUM AVERAGE FORWARD CURRENT RATING

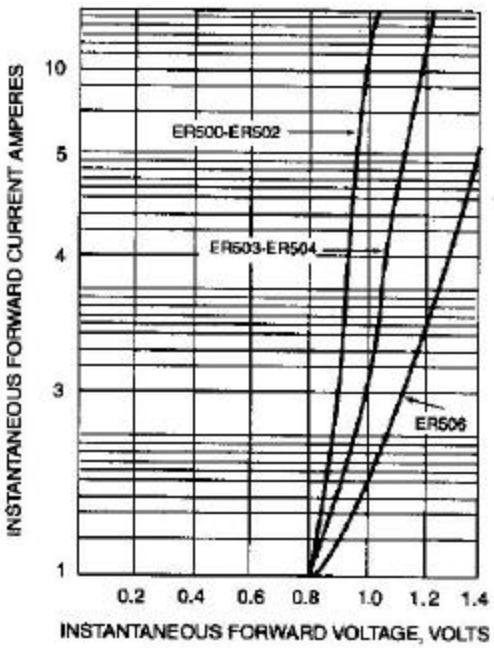

Fig. 4-FORWARD CURRENT DERATING CURVE

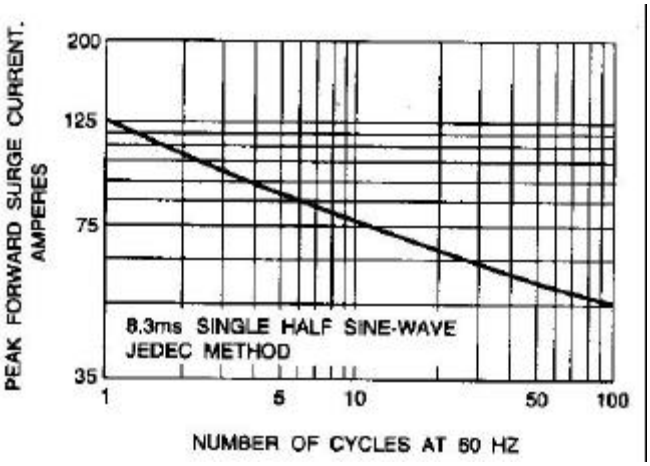

Fig. 5-MAXIMUM NON-REPETITIVE SURGE CURRENT

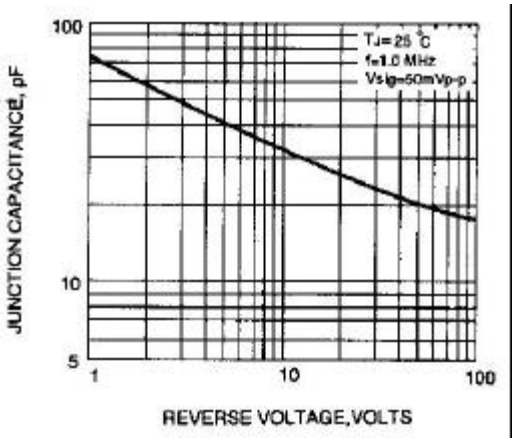

Fig. 6-TYPICAL JUNCTION CAPACITANCE