



DATA SHEET

ER500~ER506

SUPERFAST RECOVERY RECTIFIERS

VOLTAGE 50 to 600 Volts **CURRENT** 5.0 Amperes

DO-201AD

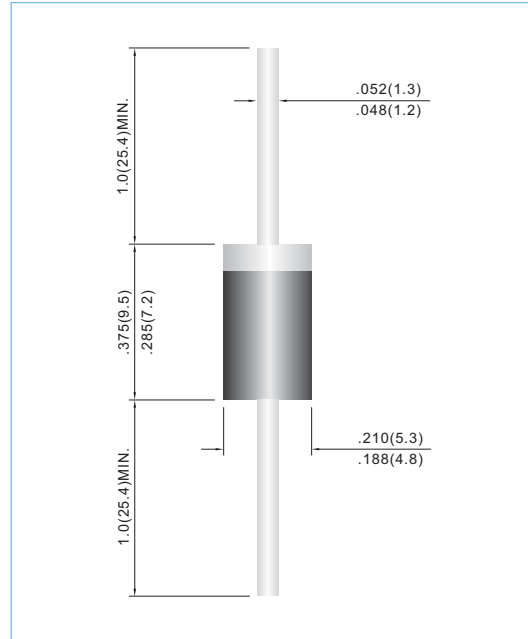
Unit: inch(mm)

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.
- Both normal and Pb free product are available :
Normal : 80~95% Sn, 5~20% Pb
Pb free: 98.5% Sn above

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 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.

PARAMETER	SYMBOL	ER500	ER501	ER501A	ER502	ER503	ER504	ER506	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Current .375" (9.5mm) lead length at $T_A=55^\circ C$	I_{AV}	5.0							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150							A
Maximum Forward Voltage at 5.0A	V_F	0.95			1.25		1.70		V
Maximum DC Reverse Current $T_A=25^\circ C$ at Rated DC Blocking Voltage $T_A=125^\circ C$	I_R	5.0			300		uA		
Maximum Reverse Recovery Time (Note 1)	T_{RR}	35			ns				
Typical Junction capacitance (Note 2)	C_J	65			pF				
Typical Junction Resistance (Note 3)	$R_{\theta JA}$	20			$^\circ C / W$				
Operating and Storage Temperature Range	T_J, T_{STG}	-55 TO +150							$^\circ C$

NOTES: 1. Reverse Recovery Test Conditions: $I_F=5A, I_R=1A, I_T=.25A$
 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

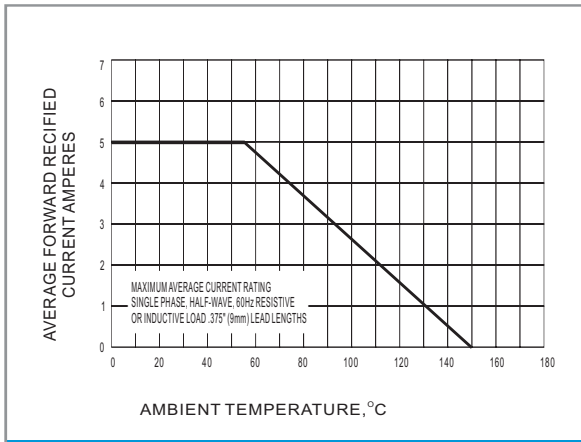


FIG. 1 MAXIMUM AVERAGE FORWARD CURRENT RATING

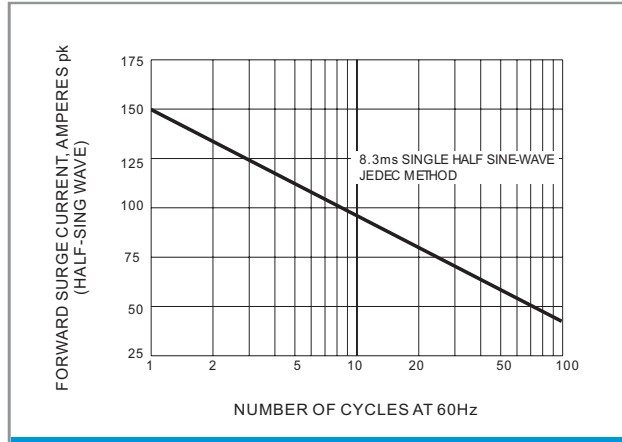


FIG. 2 MAXIMUM NON-REPEITIVE SURGE CURRENT

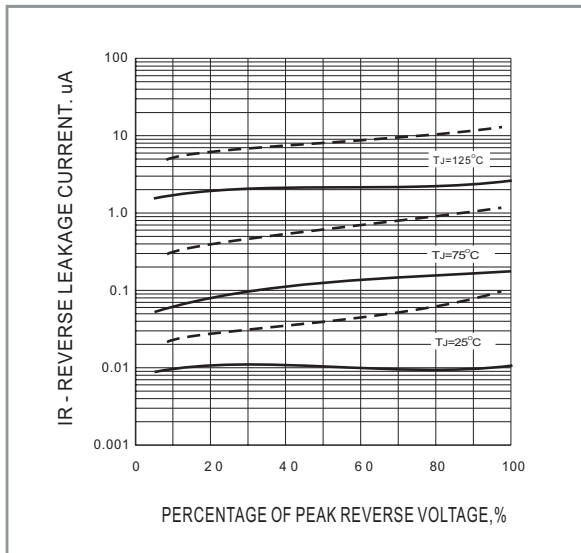


FIG. 3 TYPICAL REVERSE CHARACTERISTICS

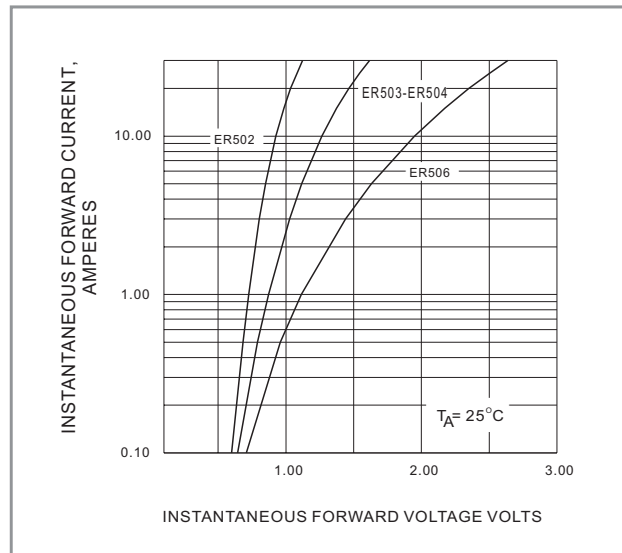


FIG. 4 TYPICAL JUNCTION CAPACITANCE