



DATA SHEET

ER1000~ER1004

SUPERFAST RECOVERY RECTIFIERS

VOLTAGE 50 to 400 Volts

CURRENT 10 Amperes

TO-220AC

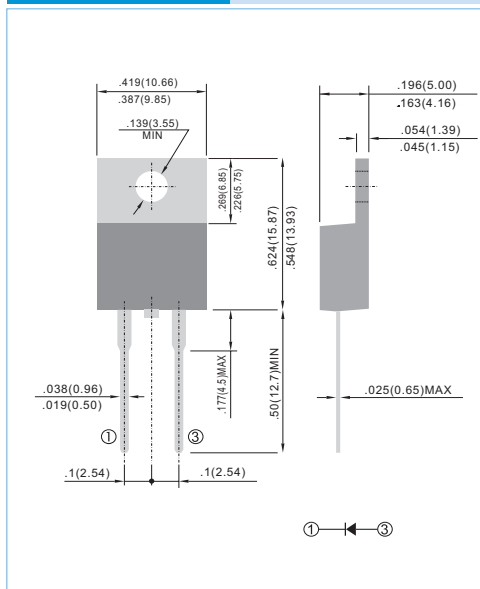
Unit : inch (mm)

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Exceeds environmental standards of MIL-S-19500/228
- Low power loss, high efficiency.
- Low forward voltage, high current capability
- High surge capacity.
- Super fast recovery times, high voltage.
- Both normal and Pb free product are available :
Normal : 80~95% Sn, 5~20% Pb
Pb free: 98.5% Sn above

MECHANICAL DATA

Case: ITO-220AC Molded plastic
Terminals: Lead solderable per MIL-STD-202, Method 208
Polarity: As marked.
Standard packaging: Any
Weight: 0.08 ounces, 2.24grams.



MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%

PARAMETER	SYMBOL	ER1000	ER1001	ER1001A	ER1002	ER1003	ER1004	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	V
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	V
Maximum Average Forward Current .375"(9.5mm) lead length at T _c =100°C	I _{AV}	10.0						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 10A, per element	V _F	0.95				1.30		V
Maximum DC Reverse Current at TA=25°C Rated DC Blocking Voltage TA=100°C	I _R	10 500						uA
Maximum Reverse Recovery Time (Note 2)	T _{RR}	35				50		ns
Typical Junction capacitance (Note 1)	C _J	62						pF
Maximum Thermal Resistance	R _{θJC}	3.0						°C / W
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-50 TO +150						°C

NOTES:

- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- Reverse Recovery Test Conditions: I_F=.5A, I_R=1A, I_{rr}=.25A.
- Both Bonding and Chip structure are available.



RATING AND CHARACTERISTIC CURVES

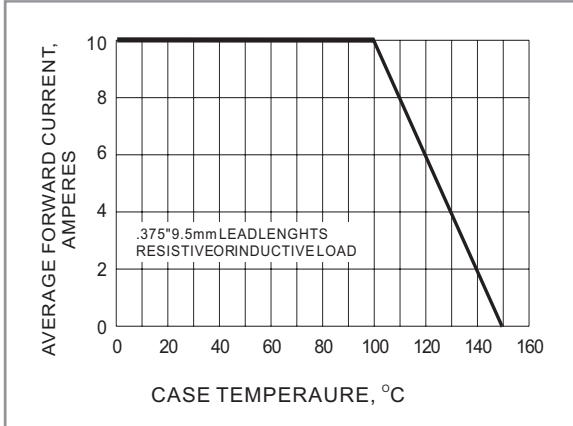


Fig.1- FORWARD CURRENT DERATING CURVE

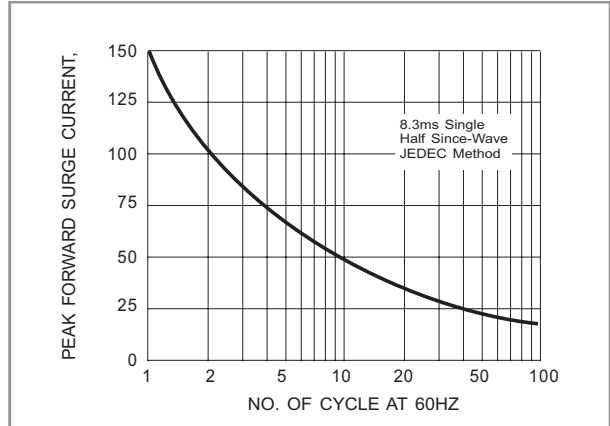


Fig.2- MAXIMUM NON - REPETITIVE SURGE CURRENT

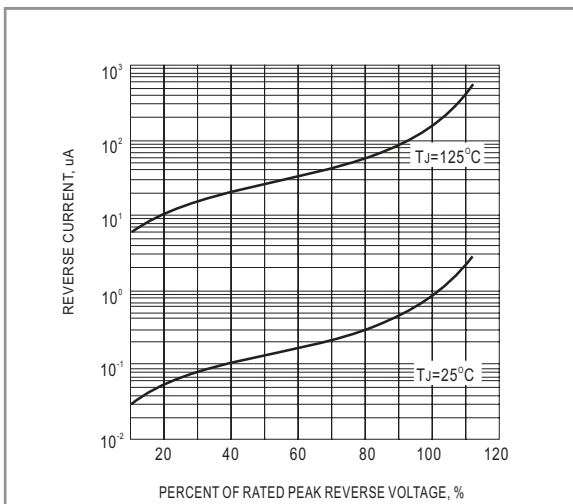


Fig.3- TYPICAL REVERSE CHARACTERISTIC

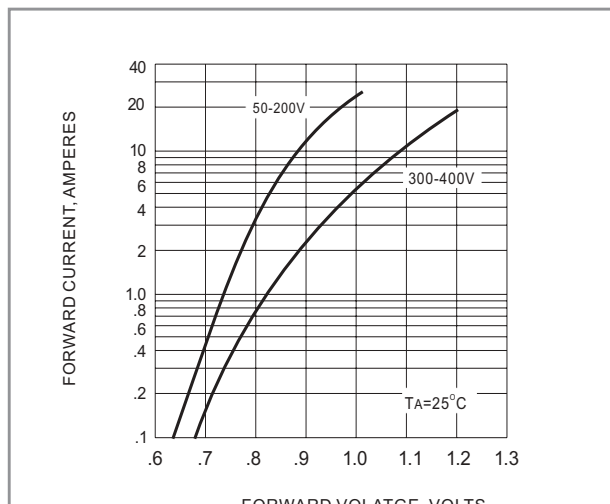


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC