

ER1000 THRU ER1004

SUPERFAST RECOVERY RECTIFIERS

VOLTAGE: 50 to 400 Volts CURRENT: 10.0 Amperes

TO-220AB

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing 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
- Epitaxial chip construction

MECHANICAL DATA

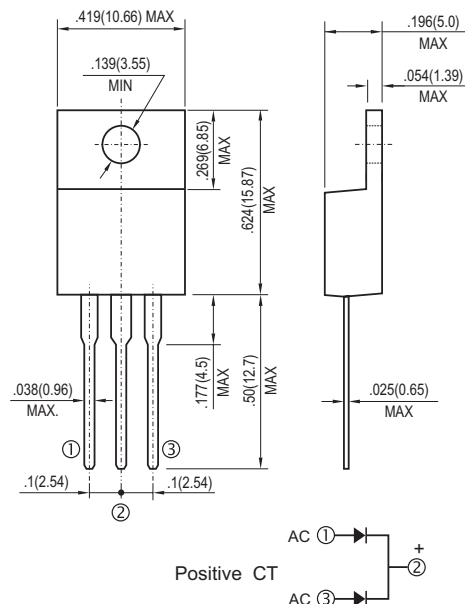
Case: TO-220AB molded plastic

Terminals: Lead, solderable per MIL-STD-202, Method 208

Polarity: As marked

Mounting Position: Any

Weight: 0.08 ounces, 2.24 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, Resistive or inductive load.

For capacitive load, derate current by 20%.

	ER1000	ER1001	ER1001A	ER1002	ER1003	ER1004	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	150	200	300	400	V
Maximum RMS Voltage	35	70	105	140	210	320	V
Maximum DC Blocking Voltage	50	100	150	200	300	400	V
Maximum Average Forward Rectified $T_C=100^\circ\text{C}$	10	10	10	10	10	10	A
Peak Forward Surge Current, IFM (surge):8.3ms single half sine-wave superimposed on rated load (JEDEC method)	75	75	75	75	75	75	A
Maximum Forward Voltage at 10.0A per element.	0.95	0.95	0.95	0.95	1.30	1.30	V
Maximum DC Reverse Current at Rated $T_A=25^\circ\text{C}$	10	10	10	10	10	10	μA
DC Blocking Voltage per element $T_A=125^\circ\text{C}$	500	500	500	500	500	500	μA
Typical Junction capacitance (Note 1)	62	62	62	62	62	62	pF
Maximum Reverse Recovery Time(Note 2)	35	35	35	35	50	50	ns
Typical Junction Resistance(Note 3) R θJC	3.0	3.0	3.0	3.0	3.0	3.0	$^\circ\text{C/W}$
Operating and Storage Temperature Range T_J	-55 to +150						$^\circ\text{C}$

NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC
2. Reverse Recovery Test Conditions: $I_F=.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$
3. Thermal resistance junction to CASE

RATING AND CHARACTERISTIC CURVES ER1000 THRU ER1004

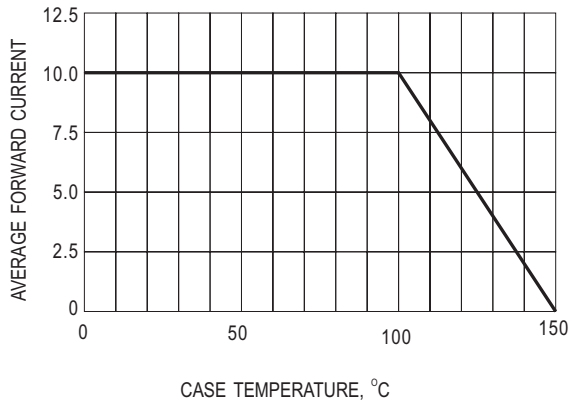


Fig.1- FORWARD CURRENT DERATING CURVE

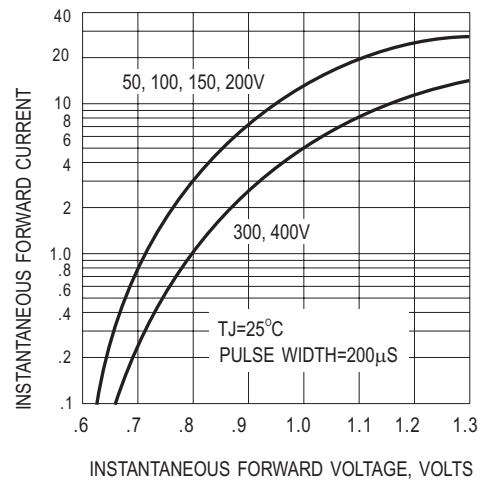


Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

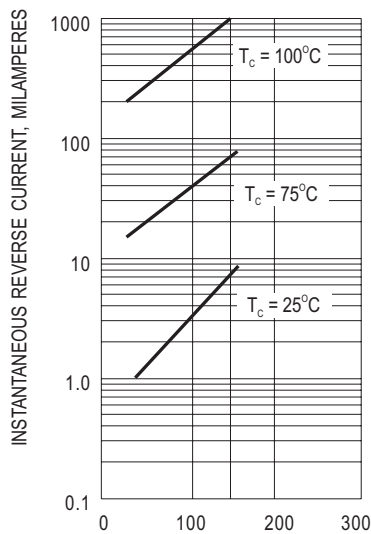


Fig.3- TYPICAL REVERSE CHARACTERISTIC

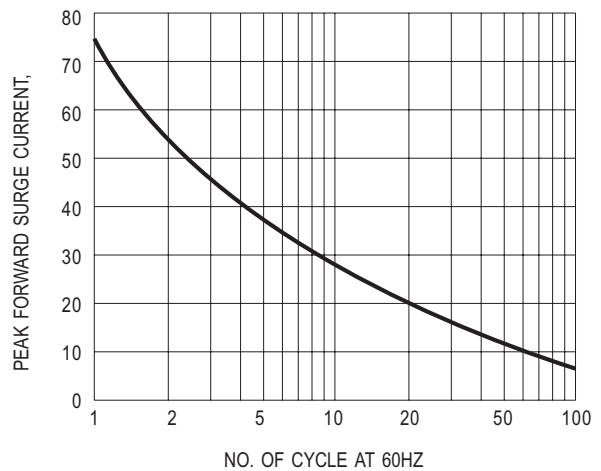


Fig.4- MAXIMUM NON-REPETITIVE SURGE CURRENT

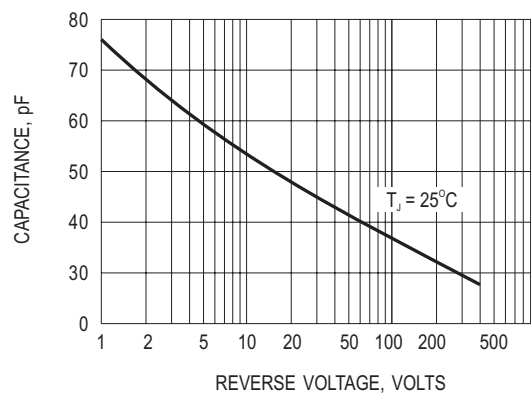


Fig.5- TYPICAL JUNCTION CAPACITANCE