

# ER1000FCT THRU ER1004FCT

## ISOLATION SUPERFAST RECOVERY RECTIFIERS

### VOLTAGE - 50 to 400 Volts    CURRENT - 10.0 Amperes

#### 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

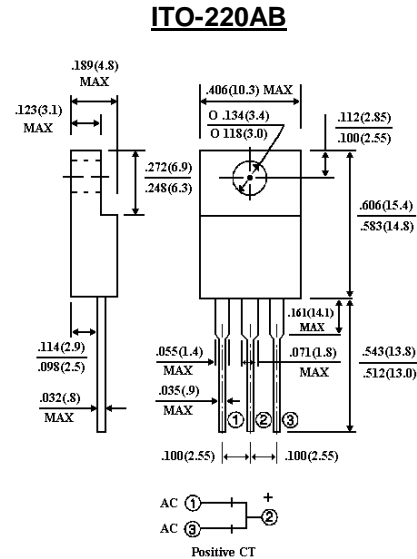
Case: ITO-220AB full molded plastic package

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

Polarity: As marked

Mounting Position: Any

Weight: 0.08 ounces, 2.24 grams



Dimensions in inches and (millimeters)

#### 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%.

	ER1000FC T	ER1001FC T	ER1001A FCT	ER1002FC T	ER1003FC T	ER1004FC T	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 Current at T <sub>C</sub> =100 °C	10.0						A
Peak Forward Surge Current, 8.3ms single half sine-Wave superimposed on rated load(JEDEC method)	150						A
Maximum Forward Voltage at 5.0A per element	0.95				1.30		V
Maximum DC Reverse Current at Rated T <sub>C</sub> =25 °C	5						µA
DC Blocking Voltage per element T <sub>C</sub> =100 °C	500						
Typical Junction capacitance (Note 1)	42						pF
Maximum Reverse Recovery Time(Note 2)	35				50		ns
Typical Thermal Resistance(Note 3) R <sub>θJA</sub>	3.0						°C/W
Operating and Storage Temperature Range T <sub>J</sub>	-55 to +150						°C

#### NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC
2. Reverse Recovery Test Conditions: I<sub>F</sub>=.5A, I<sub>R</sub>=1A, I<sub>rr</sub>=.25A
3. Thermal resistance junction to CASE

## RATING AND CHARACTERISTIC CURVES ER1000FCT THRU ER1004FCT

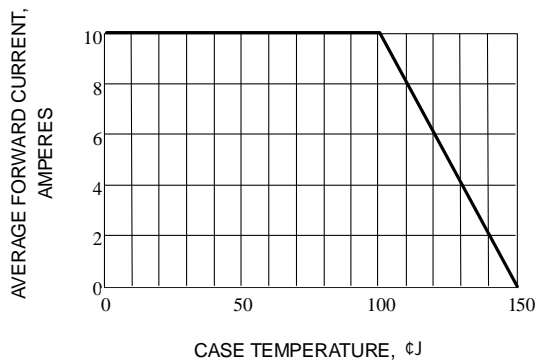


Fig. 1-FORWARD CURRENT DERATING CURVE

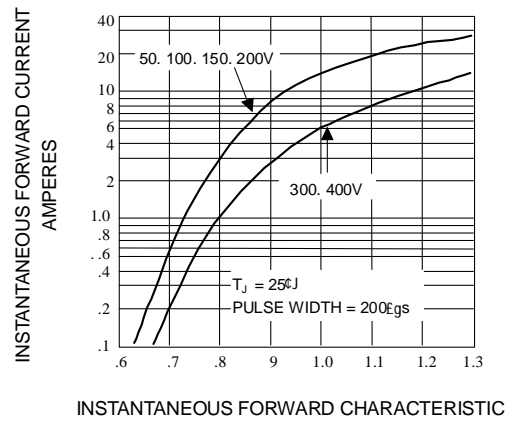


Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

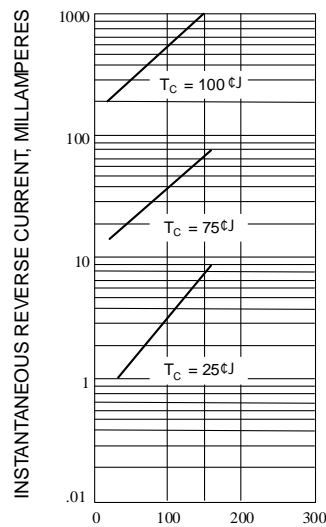


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

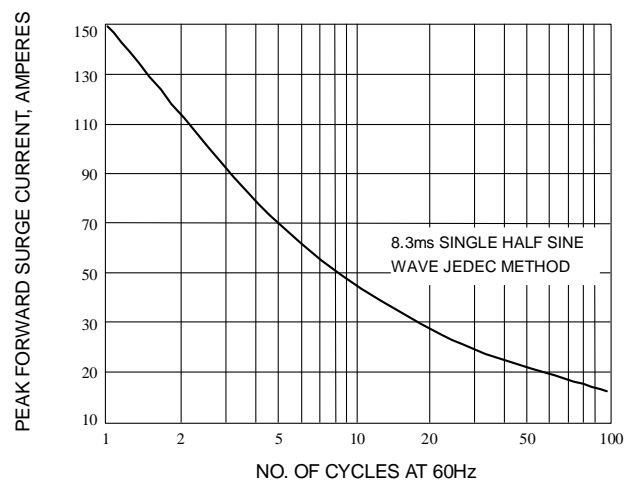


Fig. 4-MAXIMUM NON-REPETITIVE SURGE CURRENT

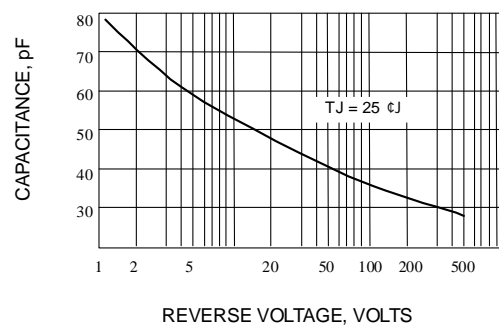


Fig. 5-TYPICAL JUNCTION CAPACITANCE