

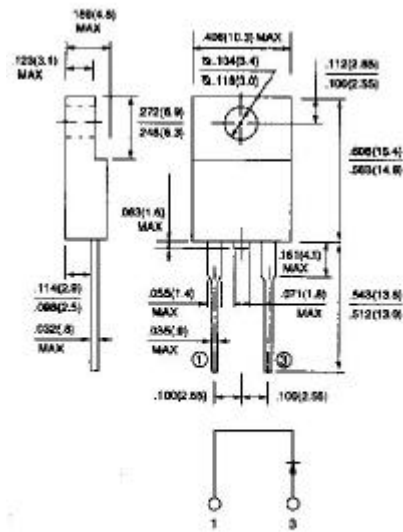
# ER1000F THRU ER1004F

## 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

### ITO-220AC



Dimensions in inches and (millimeters)

### MECHANICAL DATA

Case: ITO-220AC 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

### 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%.

|  | ER1000F     | ER1001F | ER1001AF | ER1002F | ER1003F | ER1004F | 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 $T_C=100$   | 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 10.0A per element   | 0.95        |         |          |         | 1.30    |         | V     |
| Maximum DC Reverse Current at Rated $T_a=25$<br>DC Blocking Voltage per element $T_a=125$        | 10<br>500   |         |          |         |         |         | A     |
| Typical Junction capacitance (Note 1)  | 62          |         |          |         |         |         | pF    |
| Maximum Reverse Recovery Time(Note 2)  | 35          |         |          |         | 50      |         | ns    |
| Typical Thermal Resistance(Note 3) R <sub>JC</sub>   | 3.0         |         |          |         |         |         | /W    |
| Operating and Storage Temperature Range $T_J$  | -55 to +150 |         |          |         |         |         |       |

### NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC
2. Reverse Recovery Test Conditions:  $I_F=.5A$ ,  $I_R=1A$ ,  $I_{rr}=.25A$

3. Thermal resistance junction to CASE  
 RATING AND CHARACTERISTIC CURVES  
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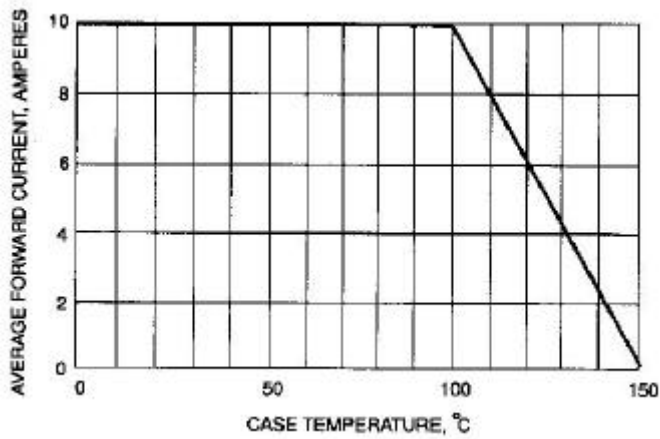


Fig. 1-FORWARD CURRENT DERATING CURVE

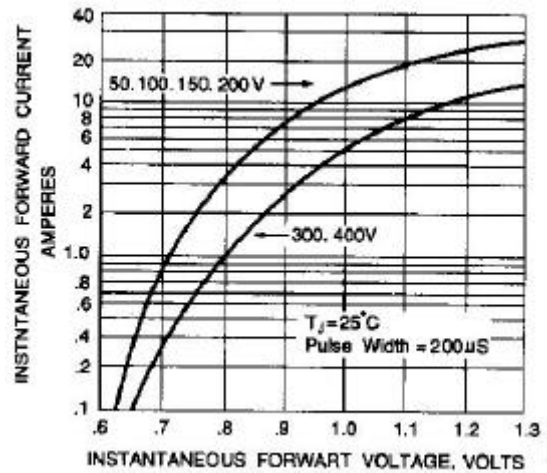


Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

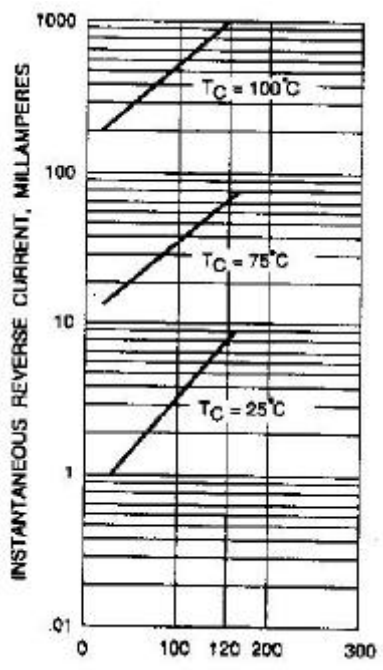


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

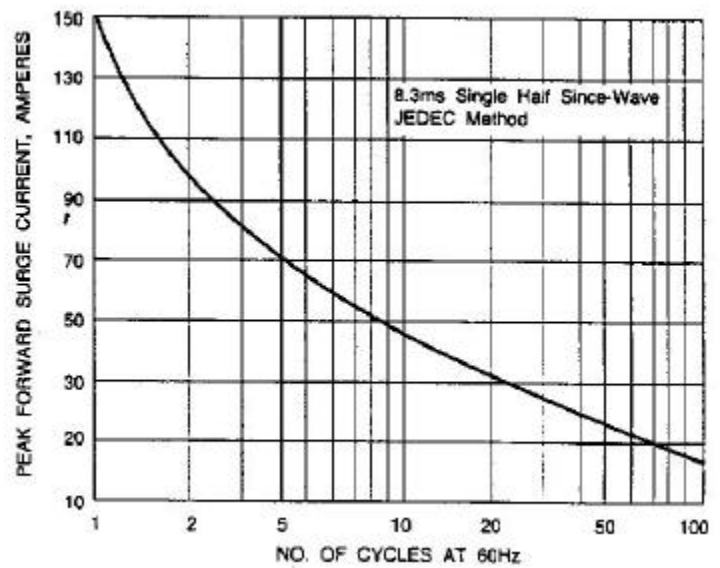


Fig. 4-MAXIMUM NON-REPETITIVE SURGE CURRENT

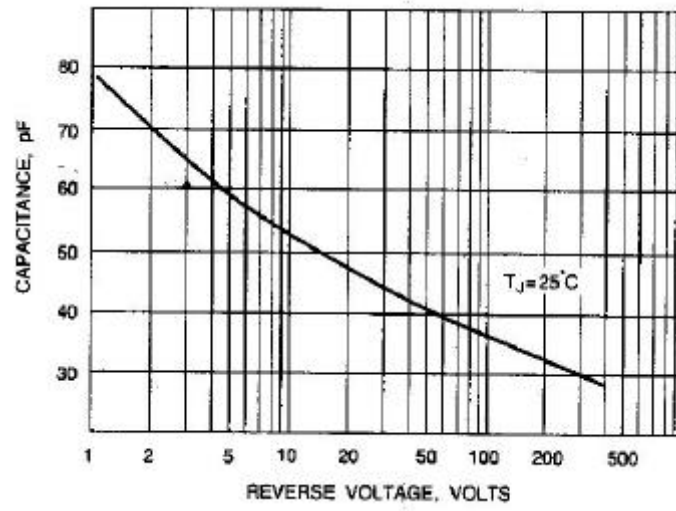


Fig. 5-TYPICAL JUNCTION CAPACITANCE