

# ER1600 THRU ER1604

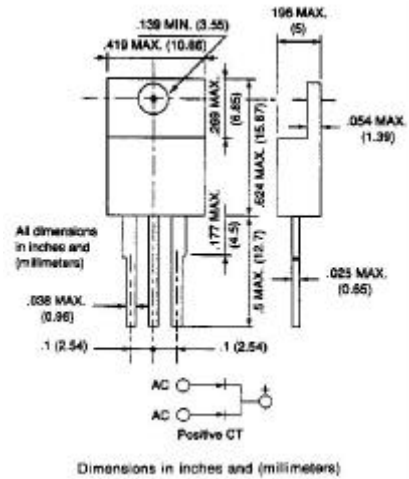
## SUPERFAST RECOVERY RECTIFIERS

VOLTAGE - 50 to 400 Volts CURRENT - 16.0 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
- Dual rectifier (Epitaxial chip) construction

### TO-220AB



### MECHANICAL DATA

Case: TO-220AB molded plastic  
 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 ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

	ER1600	ER1601	ER1601A	ER1602	ER1603	ER1604	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 $T_C=90$	16.0						A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	125						A
Maximum Forward Voltage at 8.0A per element	0.95			1.30			V
Maximum DC Reverse Current at $T_a=25$ DC Blocking Voltage per element $T_a=125$	10			500			A
Typical Junction capacitance (Note 1)	85						pF
Maximum Reverse Recovery Time(Note 2)	35			50			ns
Typical Junction 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

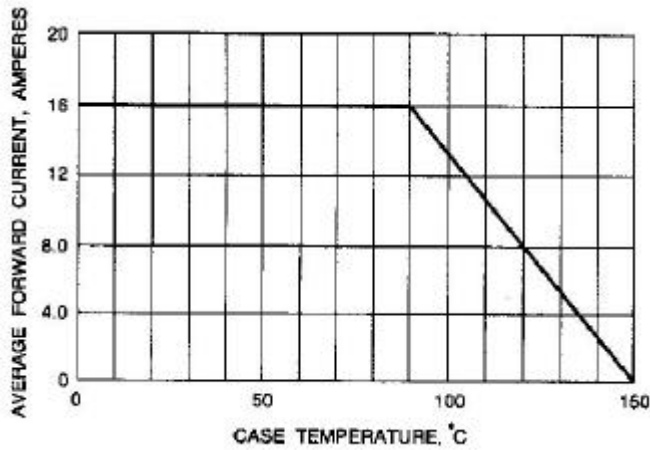


Fig. 1-FORWARD CURRENT DERATING CURVE

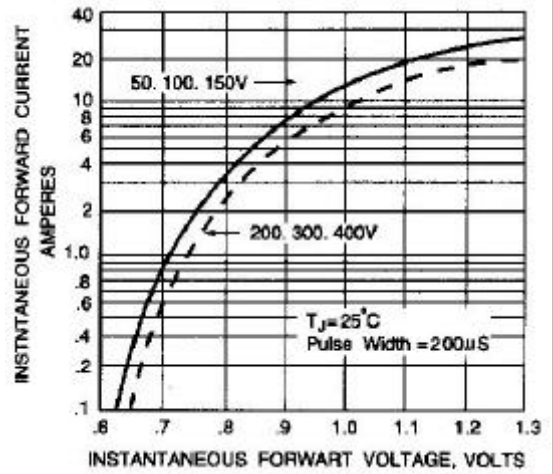


Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

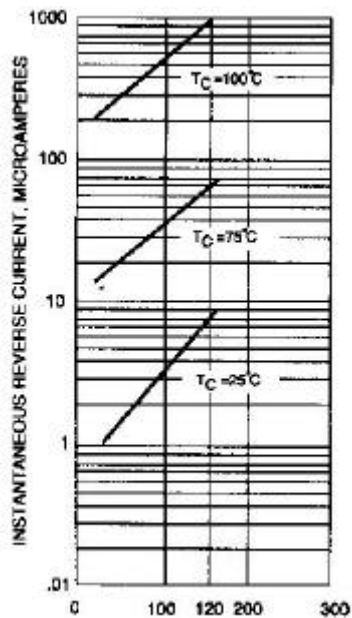


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

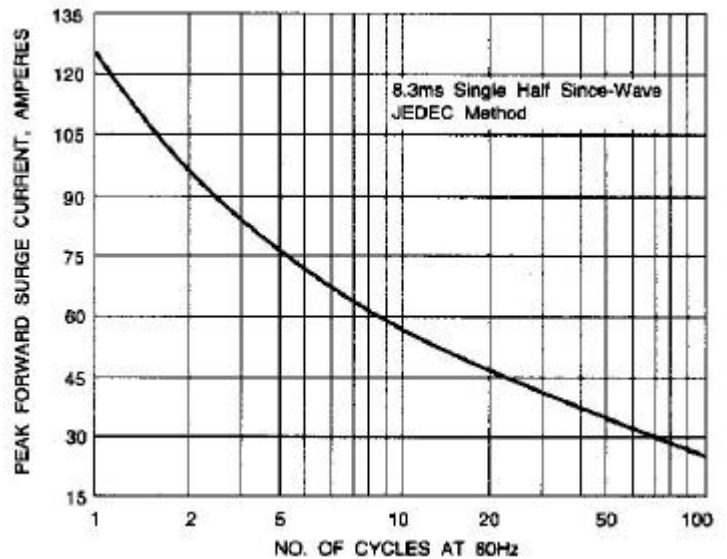


Fig. 4-MAXIMUM NON-REPETITIVE SURGE CURRENT

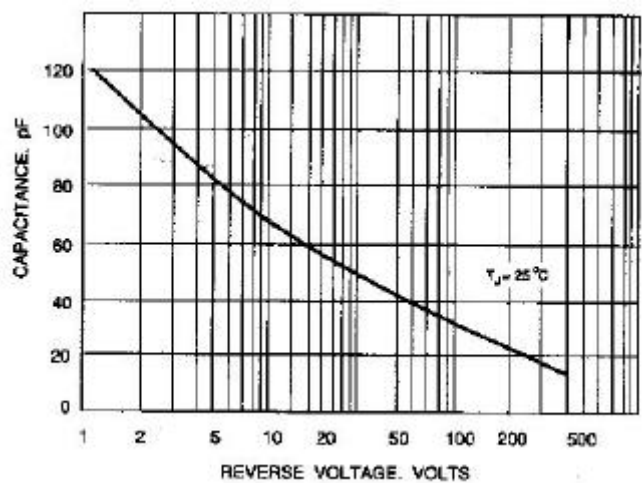


Fig. 5-TYPICAL JUNCTION CAPACITANCE