

T-03-17

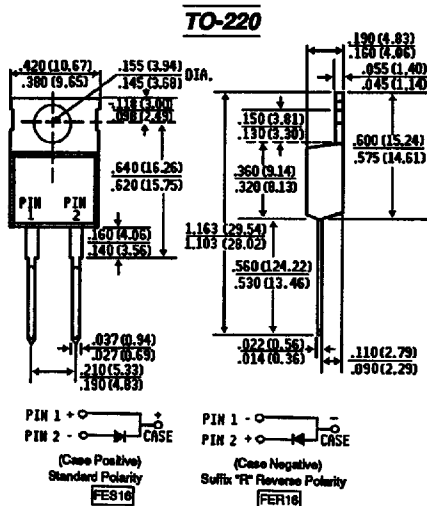
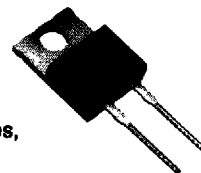
FES16AT THRU FES16JT

FAST EFFICIENT GLASS PASSIVATED RECTIFIER

Voltage - 50 to 600 Volts Current - 16.0 Amperes

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Glass passivated chip junctions
- ◆ Low power loss
- ◆ Low forward voltage, high current capability
- ◆ High surge capability
- ◆ Superfast recovery times, for high efficiency
- ◆ High temperature soldering guaranteed: 250°C, .25", (6.35mm) from case for 10 seconds



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case: JEDEC TO-220 molded plastic

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

Polarity: As marked

Mounting Position: Any

Weight: 0.08 ounce, 2.24 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Resistive or inductive load.

For capacitive load, derate current by 20%.

		FES SYMBOLS	FES 16AT	FES 16BT	FES 16CT	FES 16DT	FES 16FT	FES 16GT	FES 16HT	FES 16JT	UNITS
Maximum Recurrent Peak Reverse Voltage		V _{RRM}	50	100	150	200	300	400	500	600	Volts
Maximum RMS Voltage		V _{RMS}	35	70	105	140	210	280	350	420	Volts
Maximum DC Blocking Voltage		V _{DC}	50	100	150	200	300	400	500	600	Volts
Maximum Average Forward Rectified Current at T _C =100°C		I _(AV)	16.0								Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)		I _{FSM}	250.0								Amps
Maximum Instantaneous Forward Voltage at 16A		V _F	0.95				1.3		1.5		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _C =25°C T _C =100°C	I _R	10.0				500.0				μA
Maximum Reverse Recovery Time (NOTE 2) T _J =25°C		T _{RR}	35.0				50.0				nS
Typical Junction Capacitance (NOTE 1)		C _J	175.0						145.0		pf
Typical Thermal Resistance (NOTE 3)		R _{θJC}	1.5								°C/w
Operating and Storage Temperature Range		T _J ,T _{STG}	-65 to +150								°C

NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

2. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, recover to 0.25A.

3. Thermal Resistance from Junction to Case.

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RATINGS AND CHARACTERISTIC CURVES FES16AT THRU FES16JT SERIES

Fig. 1 — FORWARD CURRENT DERATING CURVE

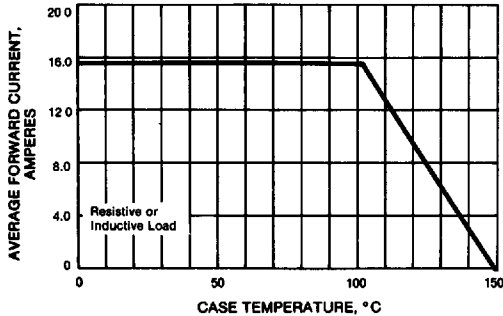


FIG. 2 — MAXIMUM NON REPETITIVE PEAK FORWARD SURGE CURRENT

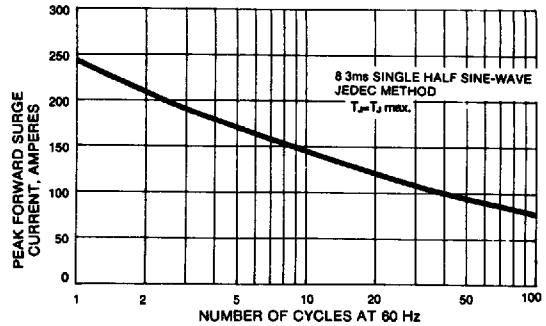


FIG. 3 — TYPICAL REVERSE CHARACTERISTICS

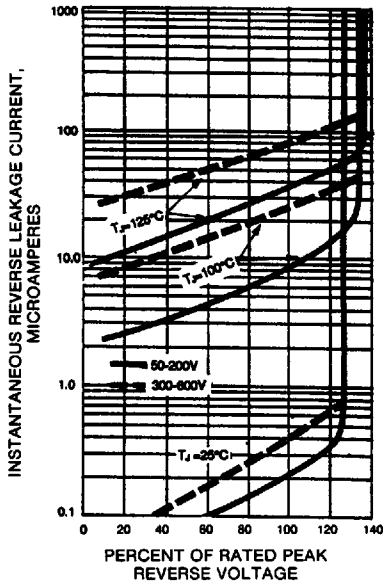


Fig. 4 — TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

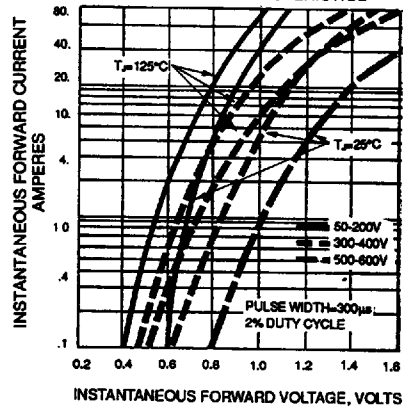


FIG. 5 — TYPICAL JUNCTION CAPACITANCE

