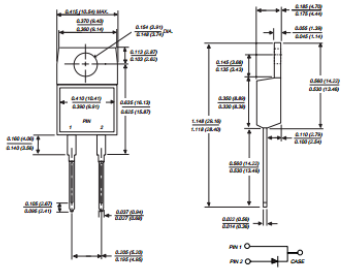
FES8AT THRU FES8JT

FAST EFFICIENT PLASTIC RECTIFIER

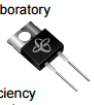
***Reverse Voltage** - 50 to 600 Volts* ***Forward Current** - 8.0 Amperes*

TO-220AC



Dimensions in inches and (millimeters)

FEATURES



- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated chip junction
- Low leakage, high voltage
- High surge current capability
- Superfast recovery time, for high efficiency
- High temperature soldering guaranteed: 250°C, 0.16" (4.06mm) from case for 10 seconds

MECHANICAL DATA

Case: JEDEC TO-220AC fully overmolded plastic body over passivated chip
Terminals: Plated lead solderable per MIL-STD-750, Method 2026
Polarity: As marked
Mounting Position: Any
Mounting Torque: 5 in. - lbs. max.
Weight: 0.064 ounce, 1.81 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	FES 8AT	FES 8BT	FES 8CT	FES 8DT	FES 8FT	FES 8GT	FES 8HT	FES 8JT	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	$I_{(AV)}$	8.0								Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	125.0								Amps
Maximum instantaneous forward voltage at 8.0A	V_F	0.95				1.3		1.5		Volts
Maximum DC reverse current at rated DC blocking voltage T_C=25°C / at T_C=100°C	I_R	10.0 / 500.0								µA
Maximum reverse recovery time (NOTE 1)	t_{rr}	35.0				50.0				ns
Typical junction capacitance (NOTE 2)	C_J	85.0						60.0		pF

Typical thermal resistance (NOTE 3) (NOTE 4)	$R_{\theta JA}$ / $R_{\theta JC}$	15.0 / 2.2	°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +150	°C

NOTES:
(1) Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
(3) Thermal resistance from junction to ambient in free air, no heatsink
(4) Thermal resistance from junction to case mounted on heatsink

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVES

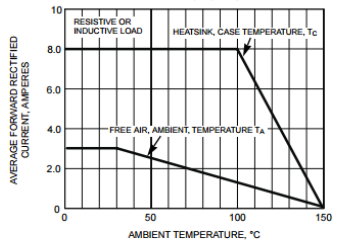


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

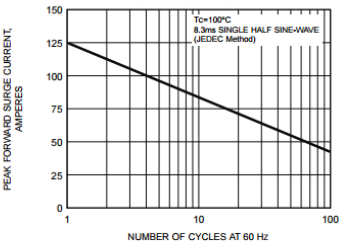


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

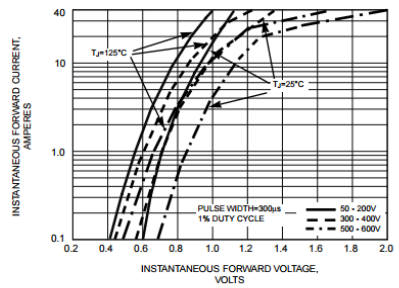


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

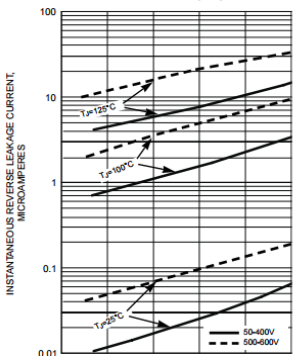


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

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