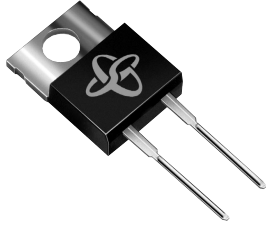


Ultrafast Plastic Rectifier

Reverse Voltage 50 to 600V

Forward Current 8A



TO-220AC

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 molded plastic body over passivated chips

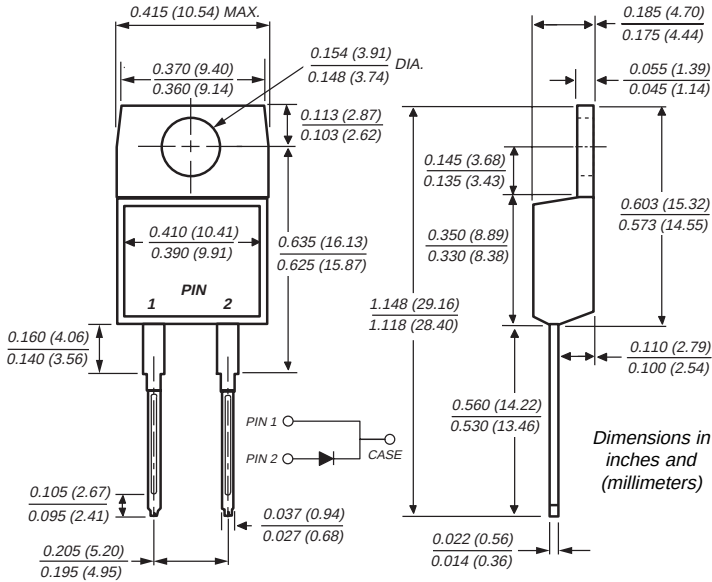
Terminals: Plated lead solderable per MIL-STD-750, Method 2026

Polarity: As marked

Mounting Position: Any

Mounting Torque: 10 in. - lbs. max.

Weight: 0.064 ounce, 1.81 grams



Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	Symbol	FES 8AT	FES 8BT	FES 8CT	FES 8DT	FES 8FT	FES 8GT	FES 8HT	FES 8JT	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	350	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	500	600	V
Maximum average forward rectified current at $T_C=100^\circ\text{C}$	$I_{F(AV)}$	8.0								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_C = 100^\circ\text{C}$	I_{FSM}	125								A
Typical thermal resistance (NOTE 1)	$R_{\theta JA}$	15								$^\circ\text{C/W}$
(NOTE 1)	$R_{\theta JC}$	2.2								
Operating storage and temperature range	T_J, T_{STG}	-65 to +150								$^\circ\text{C}$

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	Symbol	FES 8AT	FES 8BT	FES 8CT	FES 8DT	FES 8FT	FES 8GT	FES 8HT	FES 8JT	Unit
Maximum instantaneous forward voltage per leg at 8.0 A	V _F	0.975				1.30		1.50		V
Maximum DC reverse current per leg at rated DC blocking voltage T _C =25°C T _C =100°C	I _R	10 500								μA
Maximum reverse recovery time per leg at I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	t _{rr}	35				50				ns
Typical junction capacitance per leg at 4.0V, 1MHz	C _J	85						60		pF

Notes: (1) Thermal resistance from junction to ambient in free air, no heatsink
(2) Thermal resistance from junction to case mounted on heatsink

FES8AT thru FES8JT

Ratings & Characteristic Curves

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVES

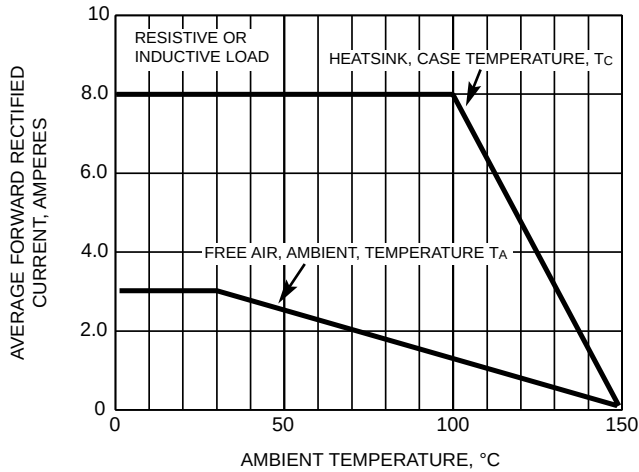


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

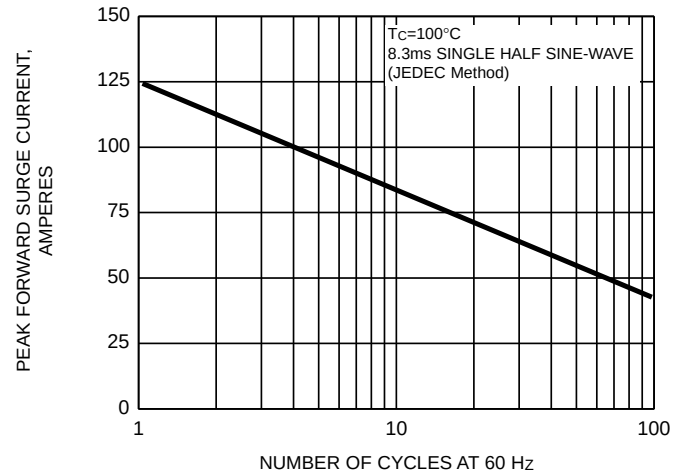


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

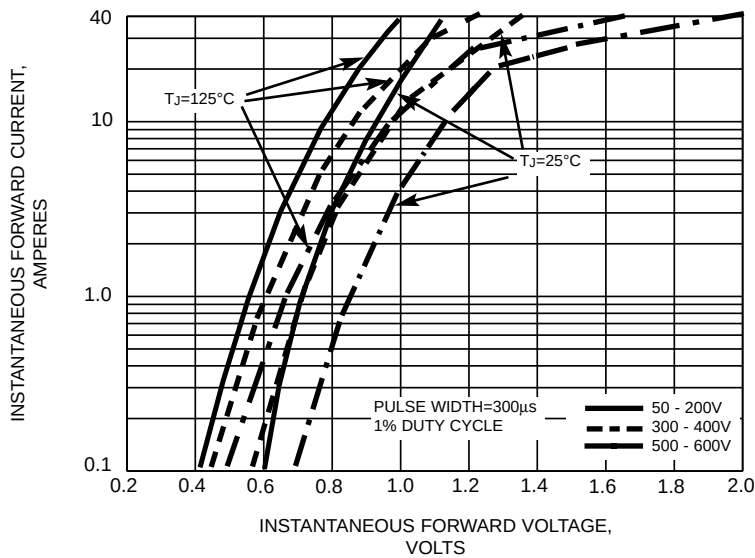


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

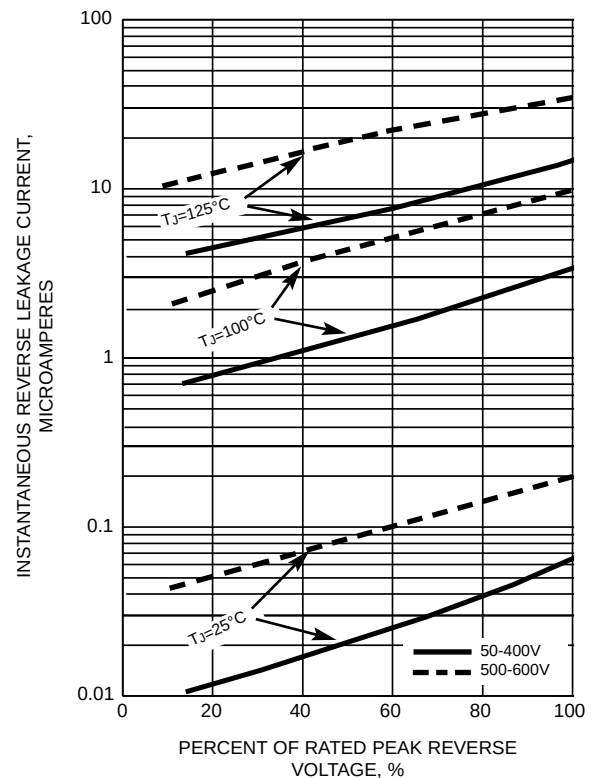


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

