# Silicon Diode

# FESF8GT

Fast Efficient Rectifier

400V / 8A

# DATASHEET

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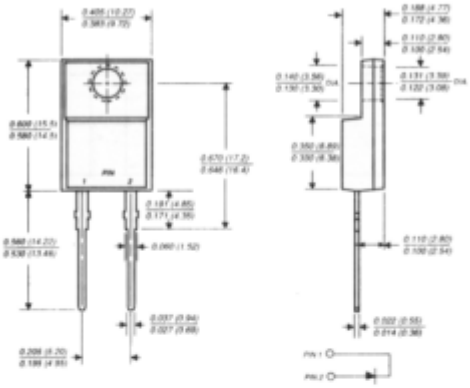
# FESF8AT THRU FESF8JT

## FAST EFFICIENT PLASTIC RECTIFIER

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

**ITO-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, 0.25" (6.35mm) from case for 10 seconds

### MECHANICAL DATA

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

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

| | SYMBOLS | FESF 8AT | FESF 8BT | FESF 8CT | FESF 8DT | FESF 8FT | FESF 8GT | FESF 8HT | FESF 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) | $R_{\theta JC}$ | 5.0 | | | | | | | | °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 case mounted on heatsink

## RATINGS AND CHARACTERISTIC CURVES FESF8AT THRU FESF8JT

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVES

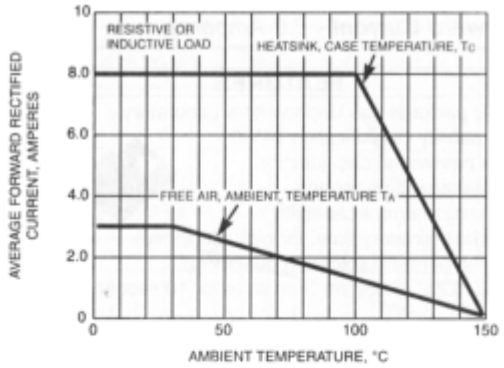



FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

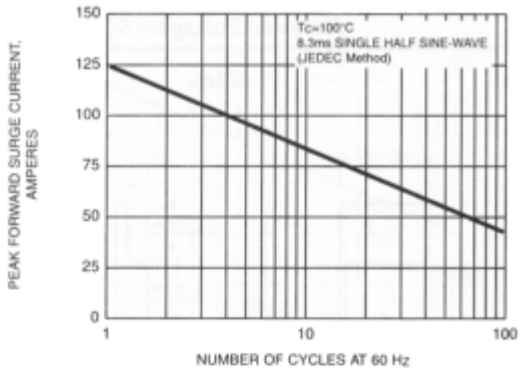



FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

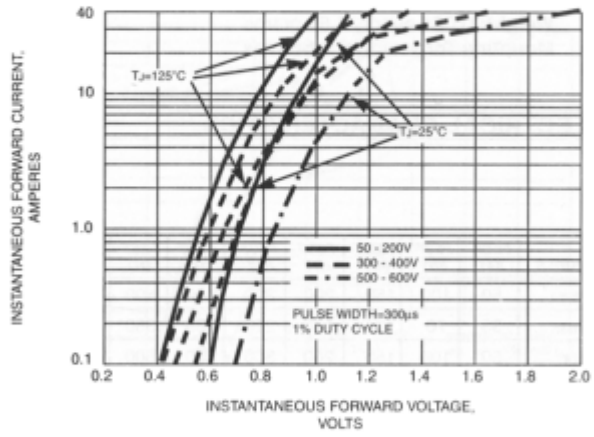



FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

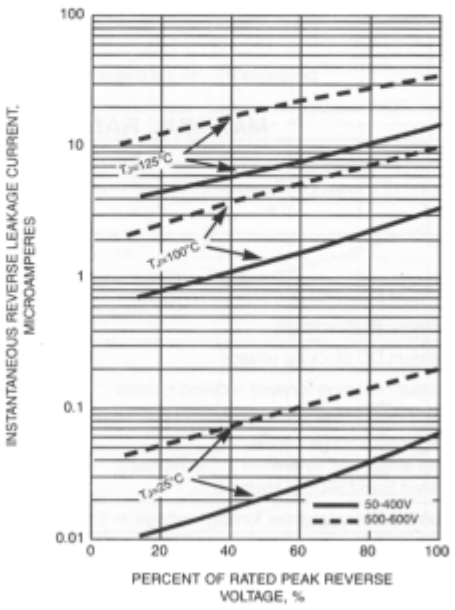



FIG. 5 - TYPICAL JUNCTION CAPACITANCE