

## FEP16AT-G-FEP16JT-G

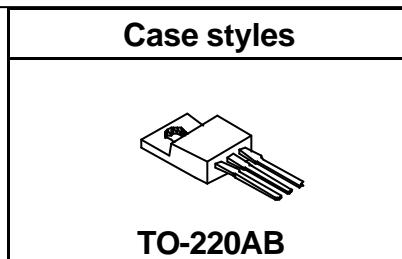
## ULTRAFAST PLASTIC RECTIFIER

## Mechanical Data

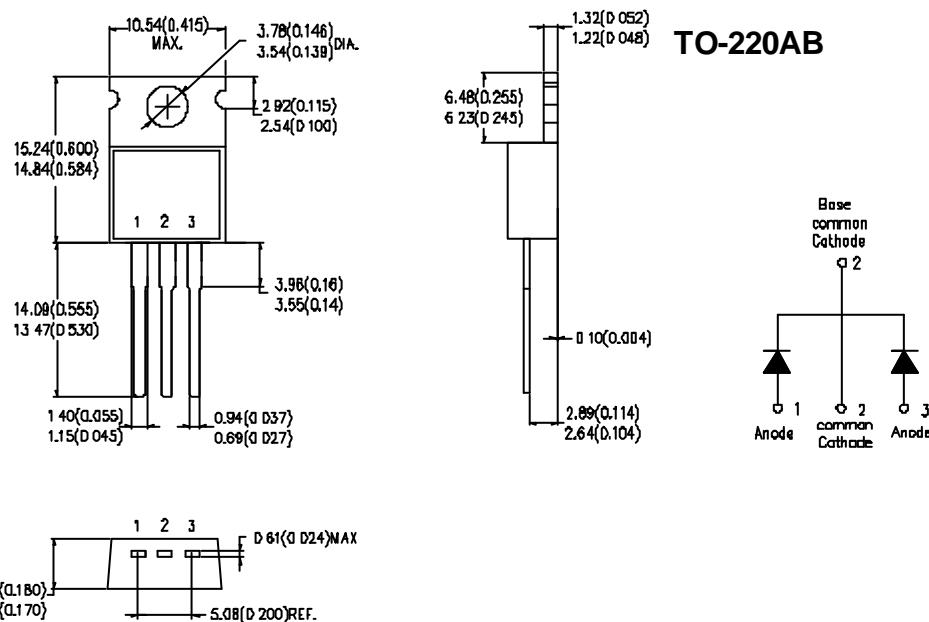
- Case: JEDEC TO-220AB molded plastic body over passivated chips
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026
- Polarity: As marked
- Mounting Position: Any
- Mounting Torque: 5 in. - lbs. max.
- Weight: 0.08 ounce, 2.24 grams

## Features:

- Low forward voltage drop
- High surge current capacity
- High current capability
- High reliability
- Superfast recovery times for high efficiency
- Dual rectifier construction, positive centertap
- Green Products in Compliance with the RoHS Directive



#### **Mechanical Dimensions: In Inches / mm**



**Maximum Ratings and Thermal Characteristics** Ratings at 25°C ambient temperature unless otherwise noted.

Parameter	Symbol	FEP 16AT-G	FEP 16BT-G	FEP 16CT-G	FEP 16DT-G	FEP 16FT-G	FEP 16GT-G	FEP 16HT-G	FEP 16JT-G	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	150	200	300	400	500	600	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	105	140	210	280	350	420	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	150	200	300	400	500	600	V
Maximum average forward rectified current at TC = 100°C	I <sub>F(AV)</sub>					16				A
Peak forward surge current 8.3 ms single halfsine wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>					200				A
Typical thermal reisistance (NOTE 3)	R <sub>θJA</sub> R <sub>θJC</sub>			15.0						°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>					-55 to +150				°C/W

**Electrical Characteristics**

Parameter	Symbol	FEP 16AT-G	FEP 16BT-G	FEP 16CT-G	FEP 16DT-G	FEP 16FT-G	FEP 16GT-G	FEP 16HT-G	FEP 16JT-G	Unit
Maximum instantaneous forward voltage per leg at 8.0 A	V <sub>F</sub>		0.95			1.3		1.5		V
Maximum DC reverse current at rated DC blocking voltage per leg	I <sub>R</sub>	T <sub>C</sub> = 25°C T <sub>C</sub> = 100°C			10 500					µA
Maximum reverse recovery time per leg (NOTE 1)	t <sub>rr</sub>		35			50				ns
Typical junction capacitance per leg (NOTE 2)	C <sub>J</sub>			85.0				60		pF

**NOTES:** (1) Reverse recovery test conditions: I<sub>F</sub> = 0.5 A, I<sub>R</sub> = 1.0 A, I<sub>rr</sub> = 0.25 A  
 (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 V  
 (3) Thermal resistance from junction to ambient and from junction to case per leg mounted on heatsink

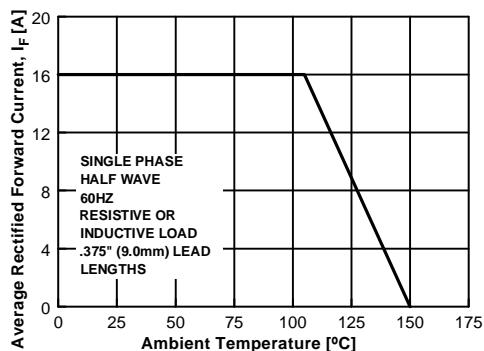


Figure 1. Forward Current Derating Curve

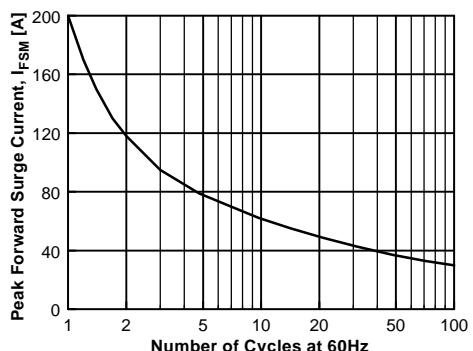


Figure 2. Non-Repetitive Surge Current Reverse Characteristics

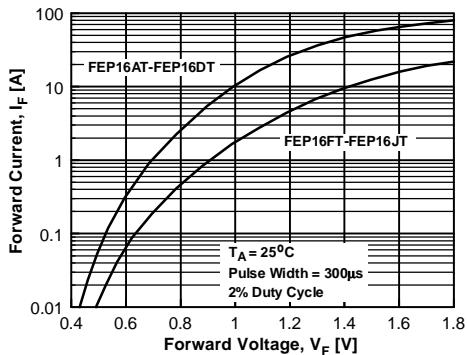


Figure 3. Forward Voltage Characteristics

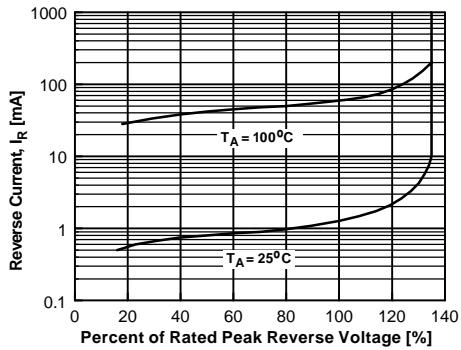


Figure 4. Reverse Current vs Reverse Voltage

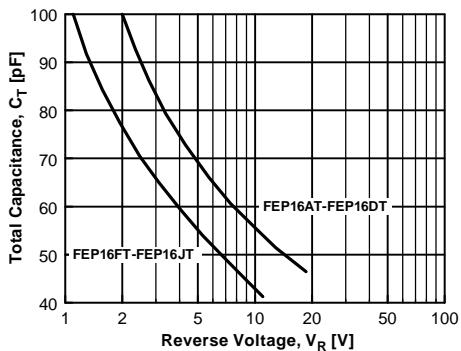
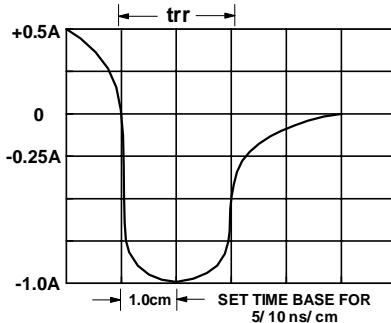
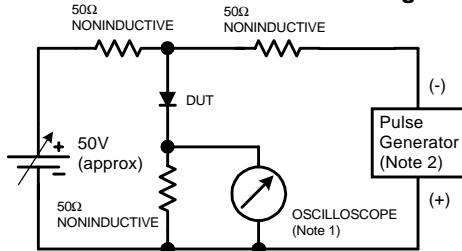


Figure 5. Total Capacitance



Reverse Recovery Time Characteristic and Test Circuit Diagram

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