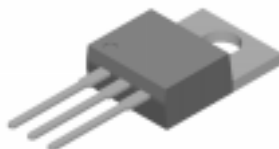


# FEP16AT - FEP16JT

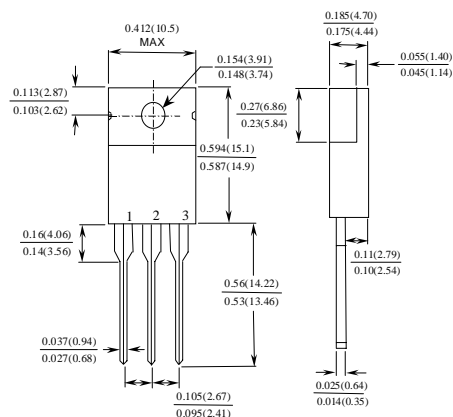
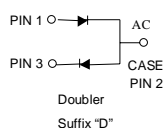
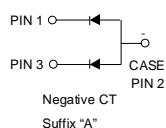
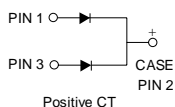
## Features

- Low forward voltage drop.
- High surge current capacity.
- High current capability.
- High reliability.



**TO-220AB**

Dimensions are in: inches (mm)



## 16 Ampere Glass Passivated Super Fast Rectifiers

### Absolute Maximum Ratings\*

$T_A = 25^\circ\text{C}$  unless otherwise noted

Symbol	Parameter	Value	Units
$I_O$	Average Rectified Current .375" lead length @ $T_A = 100^\circ\text{C}$	16	A
$i_f(\text{surge})$	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	200	A
$P_D$	Total Device Dissipation Derate above $25^\circ\text{C}$	8.33 66	W mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	15	$^\circ\text{C}/\text{W}$
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	2.2	$^\circ\text{C}/\text{W}$
$T_{\text{stg}}$	Storage Temperature Range	-65 to +150	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	-65 to +150	$^\circ\text{C}$

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

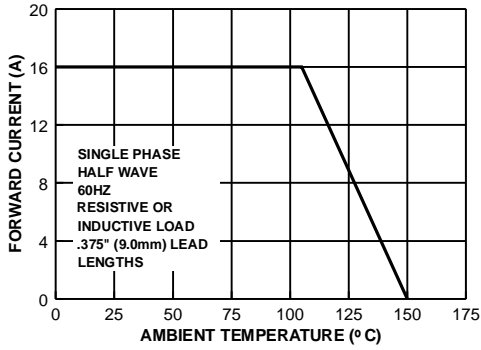
### Electrical Characteristics

$T_A = 25^\circ\text{C}$  unless otherwise noted

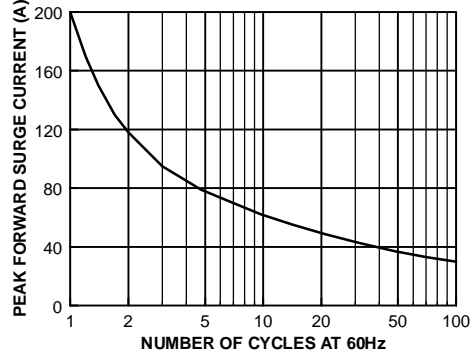
Parameter	Device								Units
	16AT	16BT	16CT	16DT	16FT	16GT	16HT	16JT	
Peak Repetitive Reverse Voltage	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	35	70	105	140	210	280	350	420	V
DC Blocking Voltage (Rated $V_R$ )	50	100	150	200	300	400	500	600	V
Maximum Reverse Current @ rated $V_R$ $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	10 500								$\mu\text{A}$ $\mu\text{A}$
Maximum Reverse Recovery Time $I_F = 0.5 \text{ A}$ , $I_R = 1.0 \text{ A}$ , $I_{RR} = 0.25 \text{ A}$	35				50				nS
Maximum Forward Voltage @ 8.0A	0.95				1.3		1.5		V
Typical Junction Capacitance $V_R = 4.0$ , $f = 1.0 \text{ MHz}$	85						60		pF

# Typical Characteristics

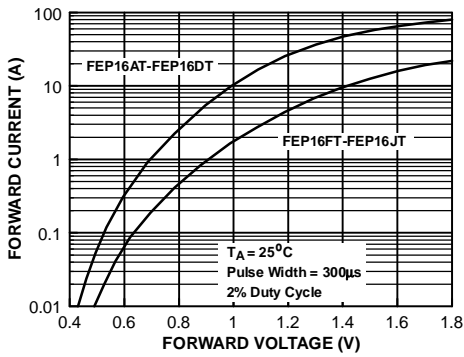
**Forward Current Derating Curve**



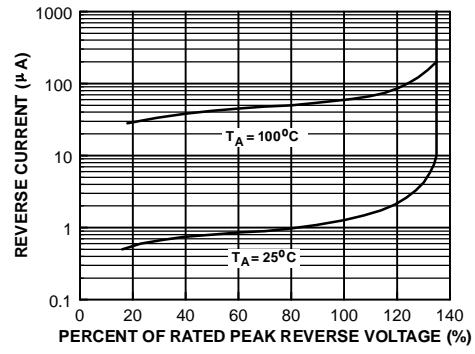
**Non-Repetitive Surge Current**



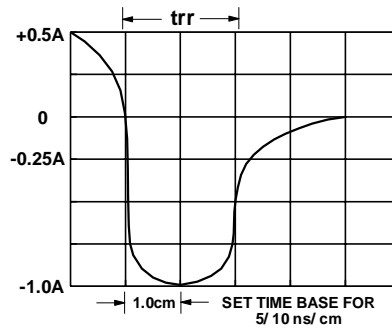
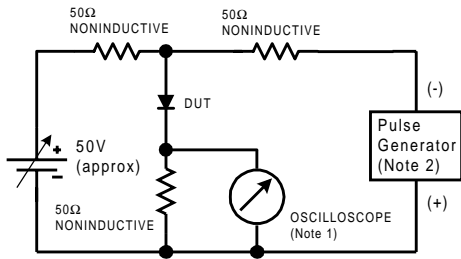
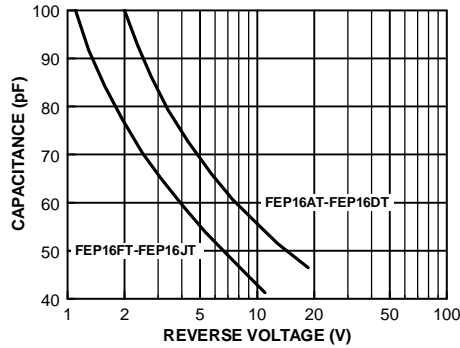
**Forward Characteristics**



**Reverse Characteristics**



**Junction Capacitance**



**Reverse Recovery Time Characteristic and Test Circuit Diagram**

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FACT™	QS™
FACT Quiet Series™	Quiet Series™
FAST®	SuperSOT™-3
FASTr™	SuperSOT™-6
GTO™	SuperSOT™-8
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