

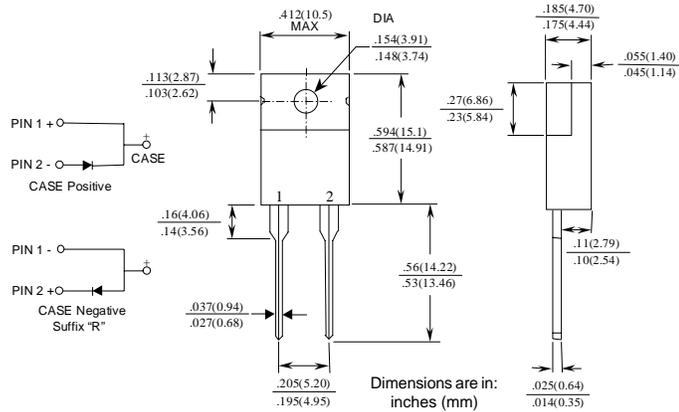
## FES16AT - FES16JT

### Features

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



TO-220AC



## 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
$I_{(surge)}$	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	250	A
$P_D$	Total Device Dissipation Derate above $25^\circ\text{C}$	7.81 62	W mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	16	$^\circ\text{C}/\text{W}$
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	1.2	$^\circ\text{C}/\text{W}$
$T_{stg}$	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.

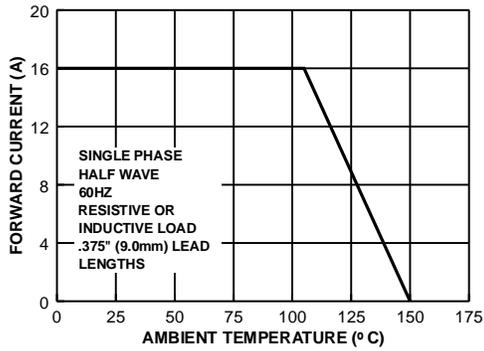
### Electrical Characteristics

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

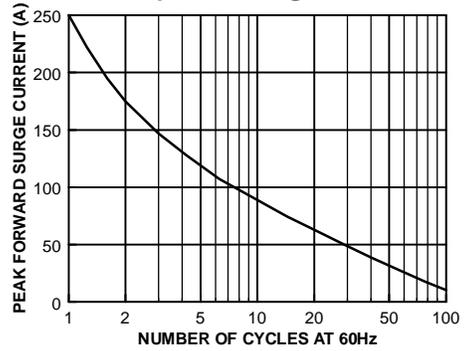
Parameter	Device								Units
	16AT	16BT	16CT	16DT	16FT	16GT	16HT	16JT	
Peak Repetitive Reverse Voltage	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	35	70	105	140	210	280	350	420	V
DC Blocking Voltage (Rated $V_R$ )	50	100	150	200	300	400	500	600	V
Maximum Reverse Current @ rated $V_R$ $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	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 @ 16.0A	0.975				1.3		1.5		V
Typical Junction Capacitance $V_R = 4.0$ , $f = 1.0\text{ MHz}$	170						145		pF

## Typical Characteristics

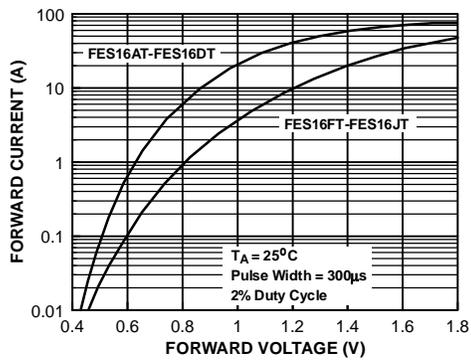
### Forward Current Derating Curve



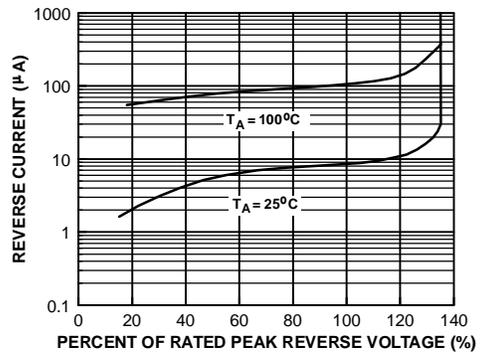
### Non-Repetitive Surge Current



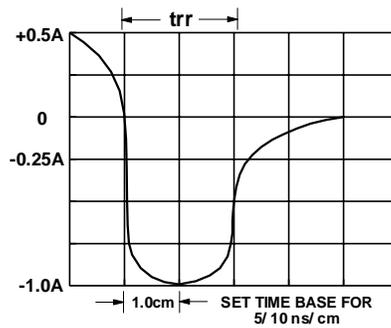
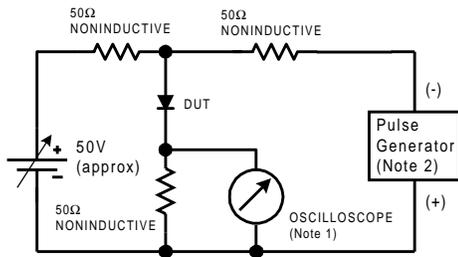
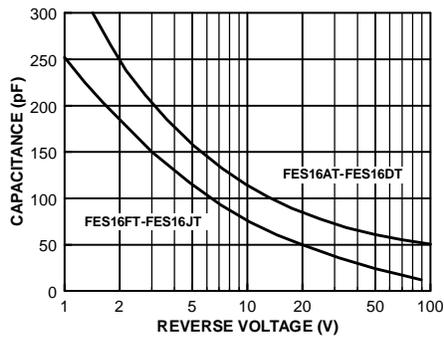
### Forward Characteristics



### Reverse Characteristics



### Junction Capacitance



### Reverse Recovery Time Characteristic and Test Circuit Diagram

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