

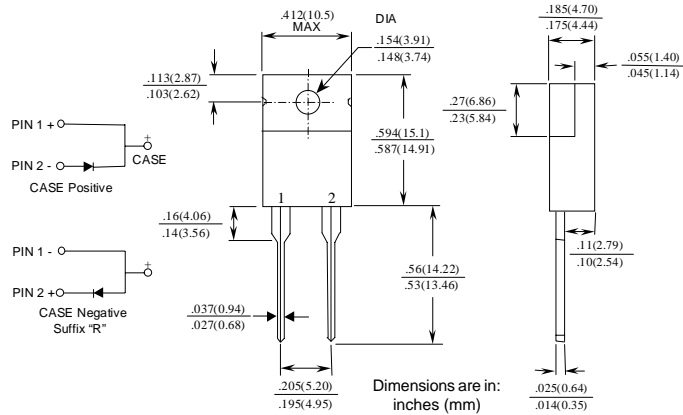
FES16AT - FES16JT

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°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.

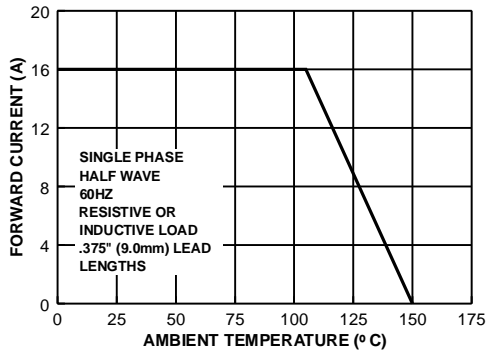
Electrical Characteristics

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

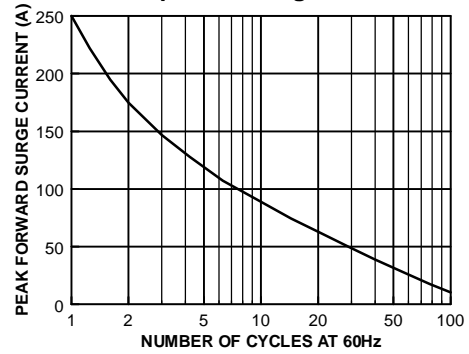
Parameter	Device								Units
	16AT	16BT	16CT	16DT	16FT	16GT	16HT	16JT	
Peak Repetitive Reverse Voltage	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	35	70	105	140	210	280	350	420	V
DC Blocking Voltage (Rated V_R)	50	100	150	200	300	400	500	600	V
Maximum Reverse Current @ rated V_R $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	10 500								μA μA
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

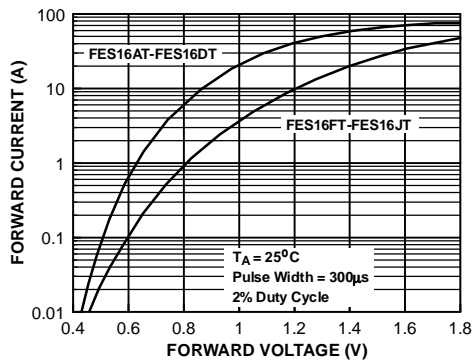
Forward Current Derating Curve



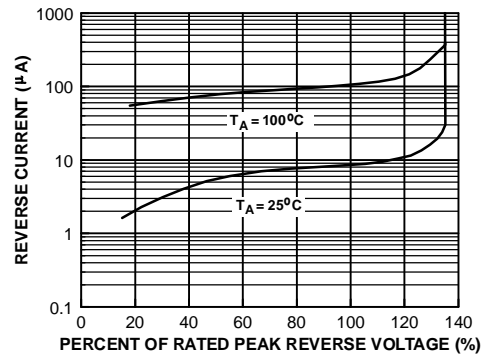
Non-Repetitive Surge Current



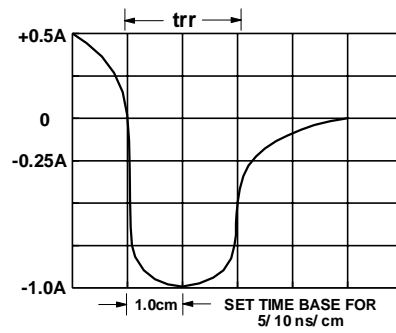
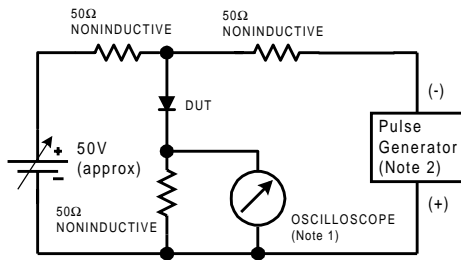
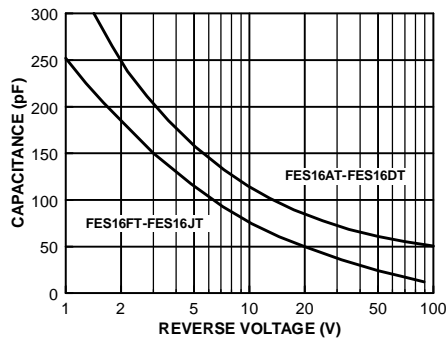
Forward Characteristics



Reverse Characteristics



Junction Capacitance



Reverse Recovery Time Characteristic and Test Circuit Diagram

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FASTr™	SuperSOT™-6
GTO™	SuperSOT™-8
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