



Discrete POWER & Signal Technologies

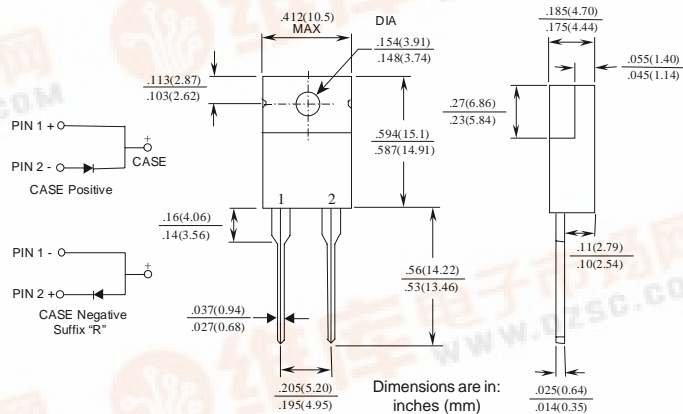
FES16AT - FES16JT

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
$I_{f(\text{surge})}$	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	$^\circ\text{C/W}$
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	1.2	$^\circ\text{C/W}$
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

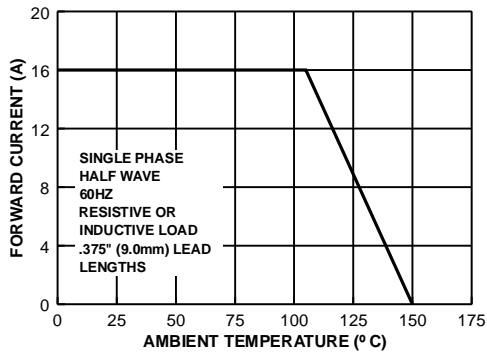
$T_A = 25^\circ\text{C}$ unless otherwise noted

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°C T _A = 100°C	10 500								μA μA
Maximum Reverse Recovery Time I _F = 0.5 A, I _R = 1.0 A, I _{RR} = 0.25 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 MHz	170						145		pF

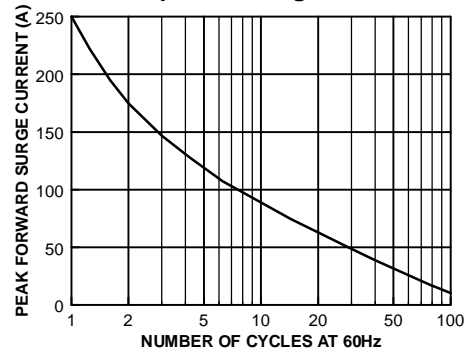
FES16AT - FES16JT

Typical Characteristics

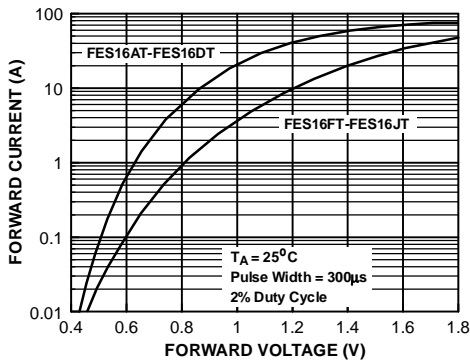
Forward Current Derating Curve



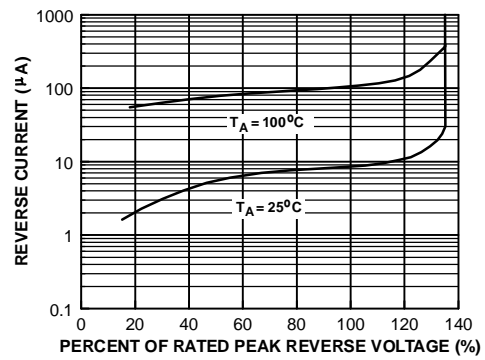
Non-Repetitive Surge Current



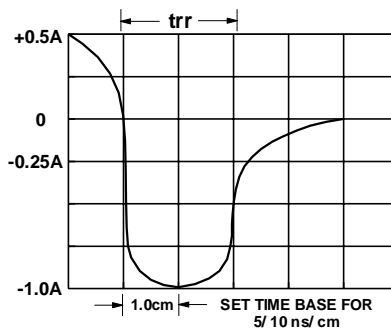
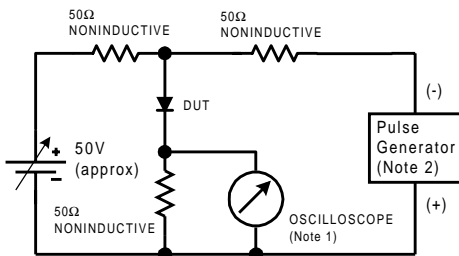
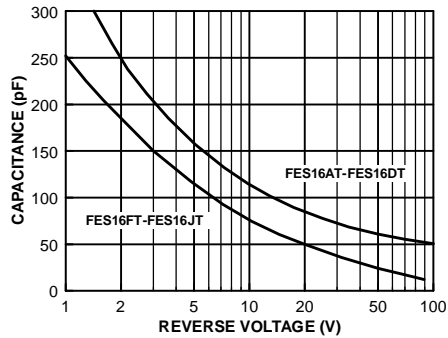
Forward Characteristics



Reverse Characteristics



Junction Capacitance



Reverse Recovery Time Characteristic and Test Circuit Diagram

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