FAIRCHILD SEMICONDUCTOR™

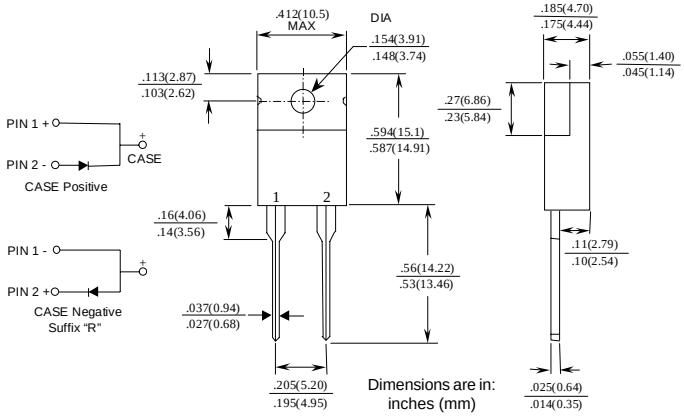
Discrete POWER & Signal Technologies

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°C unless otherwise noted

Symbol	Parameter	Value	Units
I_O	Average Rectified Current .375 " lead length @ T_A = 100°C	16	A
$i_{f(surge)}$	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/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	16	°C/W
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	1.2	°C/W
T_{stg}	Storage Temperature Range	-65 to +150	°C
T_J	Operating Junction Temperature	-65 to +150	°C

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

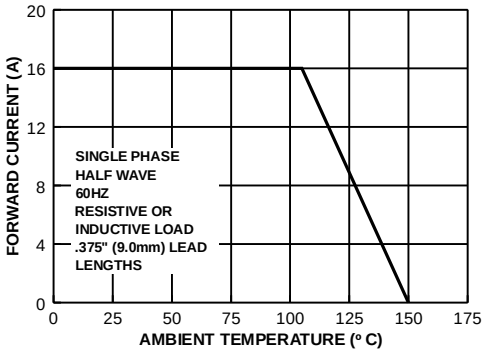
Electrical Characteristics

T_A = 25°C unless otherwise noted

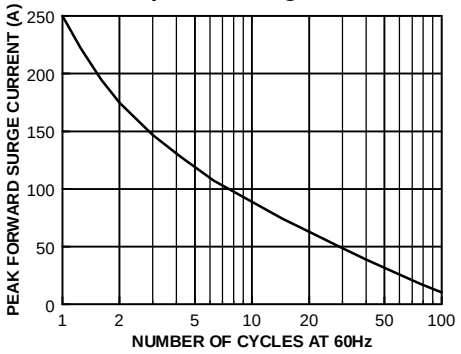
Parameter	Device								Units
	16AT	16BT	16CT	16DT	16FT	16GT	16HT	16JT	
Peak Repetitive Reverse Voltage	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	35	70	105	140	210	280	350	420	V
DC Blocking Voltage (Rated V_R)	50	100	150	200	300	400	500	600	V
Maximum Reverse Current @ rated V_R T_A = 25°C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

Typical Characteristics

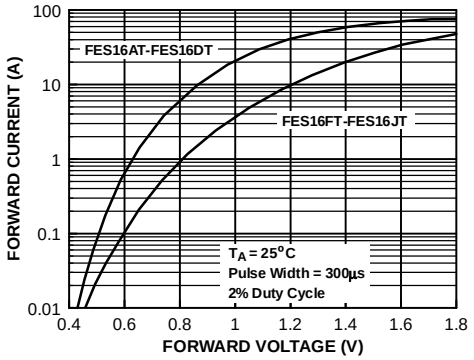
Forward Current Derating Curve



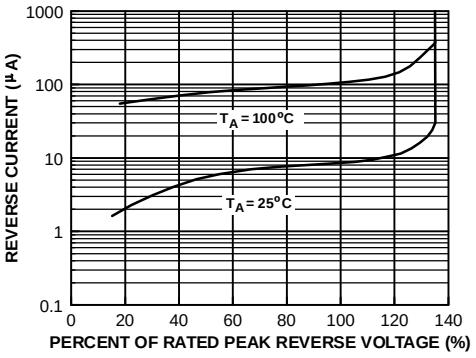
Non-Repetitive Surge Current



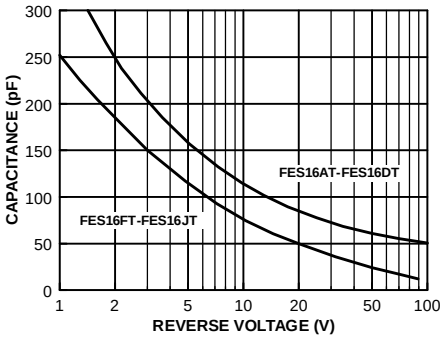
Forward Characteristics

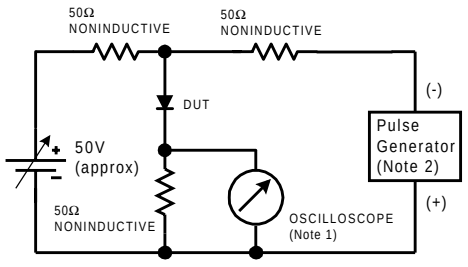


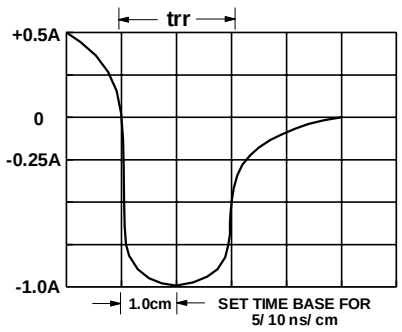
Reverse Characteristics



Junction Capacitance







Reverse Recovery Time Characterstic and Test Circuit Diagram

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