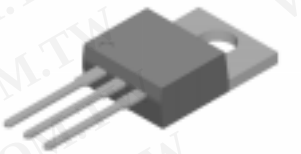
FAIRCHILD SEMICONDUCTOR TM

Discrete POWER & Signal Technologies

FEP16AT - FEP16JT

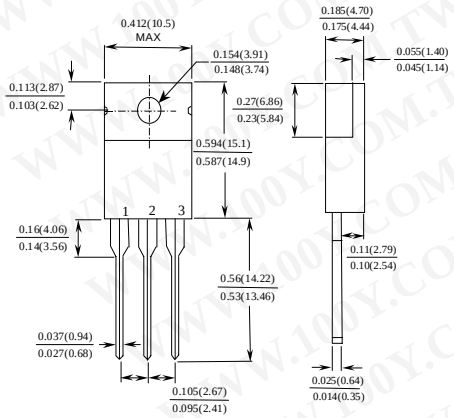
Features

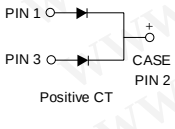
- Low forward voltage drop.
- High surge current capacity.
- High current capability.
- High reliability.



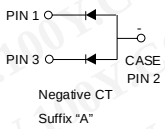
TO-220AB

Dimensions are in: inches (mm)

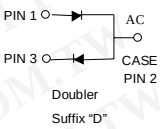




Positive CT



Negative CT
Suffix "A"



Doubler
Suffix "D"

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)	200	A
P_D	Total Device Dissipation Derate above 25°C	8.33 66	W mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	15	°C/W
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	2.2	°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.

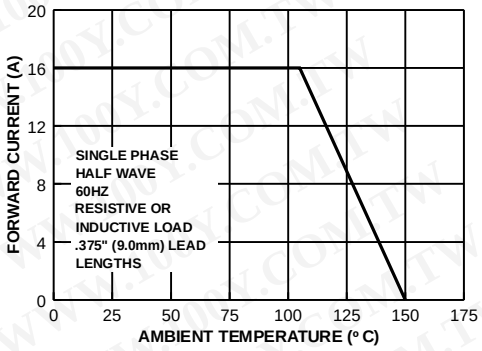
Electrical Characteristics

T_A = 25°C unless otherwise noted

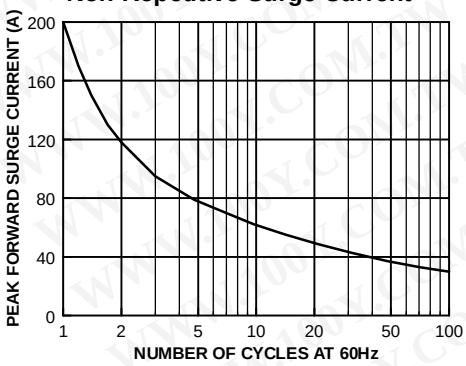
Parameter	Device								Units
	16AT	16BT	16CT	16DT	16FT	16GT	16HT	16JT	
Peak Repetitive Reverse Voltage	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	35	70	105	140	210	280	350	420	V
DC Blocking Voltage (Rated V_R)	50	100	150	200	300	400	500	600	V
Maximum Reverse Current @ rated V_R T_A = 25°C 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 @ 8.0A	0.95				1.3		1.5		V
Typical Junction Capacitance V_R = 4.0. f = 1.0 MHz	85						60		pF

Typical Characteristics

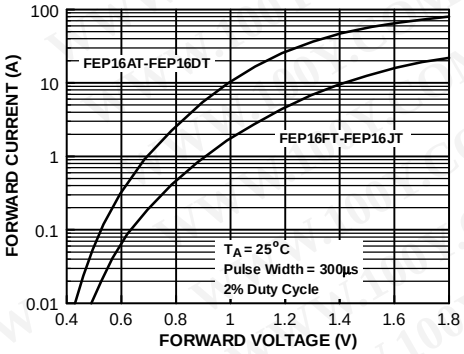
Forward Current Derating Curve



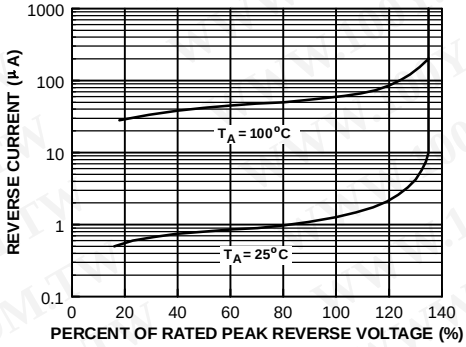
Non-Repetitive Surge Current



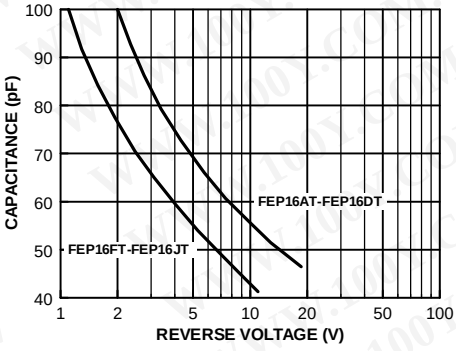
Forward Characteristics

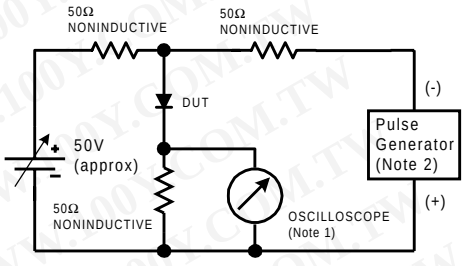


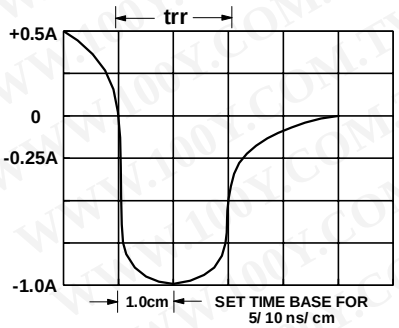
Reverse Characteristics



Junction Capacitance







Reverse Recovery Time Characterstic and Test Circuit Diagram

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
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