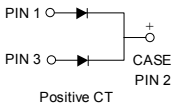
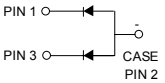
FAIRCHILD SEMICONDUCTOR TM

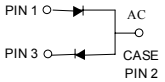
FEP16AT - FEP16JT



Positive CT



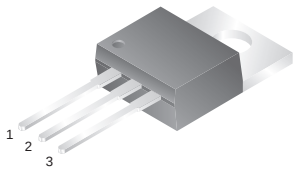
Negative CT
Suffix "A"



Doubler
Suffix "D"

Features

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



TO-220AB

16 Ampere Glass Passivated Super Fast Rectifiers

Absolute Maximum Ratings*

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
$I_{F(AV)}$	Average Rectified Current .375 " lead length @ T_A = 100°C	16	A
I_{FSM}	Non-repetitive 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.

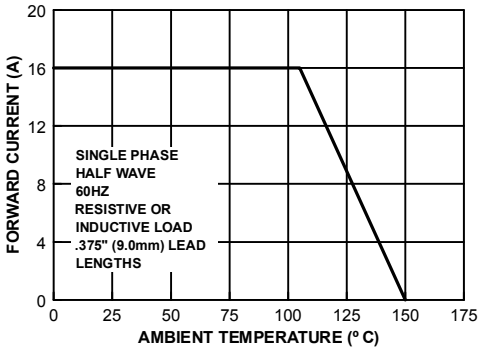
Electrical Characteristics

T_A = 25°C unless otherwise noted

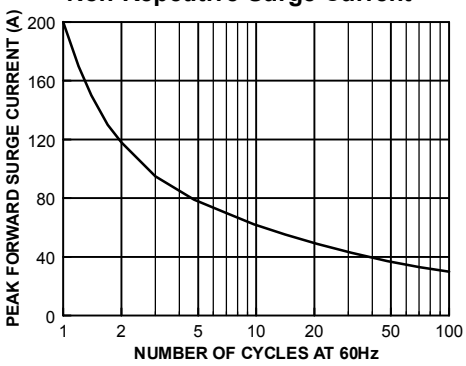
Symbol	Parameter	Device								Units
		16AT	16BT	16CT	16DT	16FT	16GT	16HT	16JT	
V_{RRM}	Maximum Repetitive Reverse Voltage	50	100	150	200	300	400	500	600	V
V_{RMS}	Maximum RMS Voltage	35	70	105	140	210	280	350	420	V
V_R	DC Blocking Voltage (Rated V_R)	50	100	150	200	300	400	500	600	V
I_{RM}	Maximum Instantaneous Reverse Current @ rated V_R T_A = 25°C T_A = 100°C	10 500								 µA µA
t_{rr}	Maximum Reverse Recovery Time I_F = 0.5 A, I_R = 1.0 A, I_{RR} = 0.25 A	35				50				ns
V_{FM}	Maximum Instantaneous Forward Voltage @ 8.0A	0.95				1.3		1.5		V
C	Typical Junction Capacitance V_R = 4.0. f = 1.0 MHz	85						60		pF

Typical Characteristics

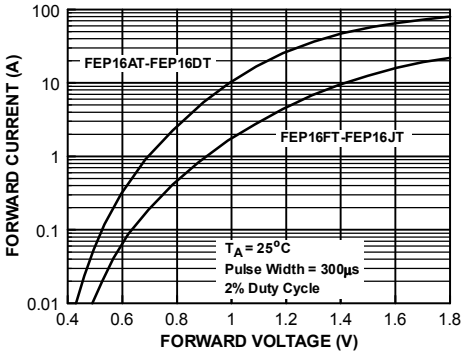
Forward Current Derating Curve



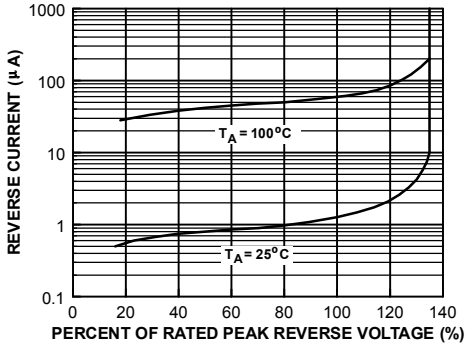
Non-Repetitive Surge Current



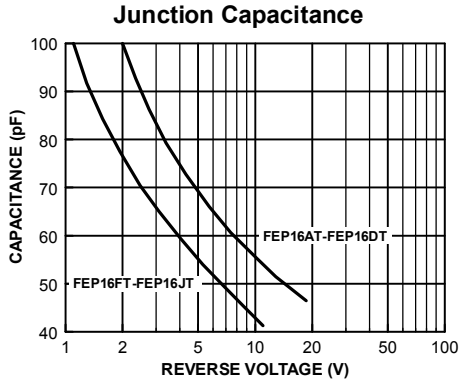
Forward Characteristics

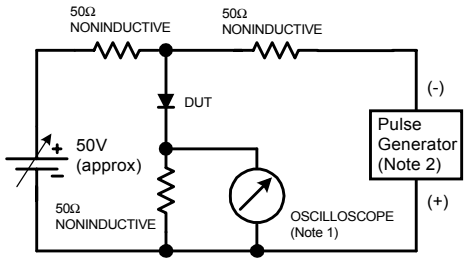


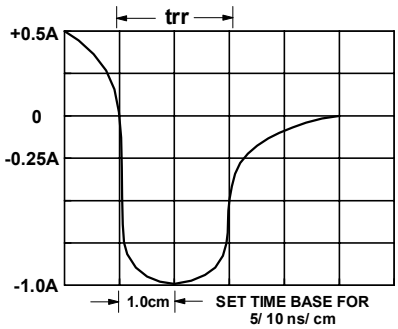
Reverse Characteristics



Junction Capacitance





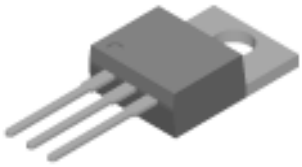


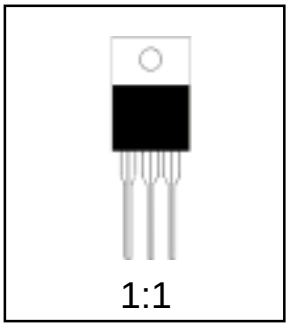
Reverse Recovery Time Characterstic and Test Circuit Diagram

TO-220AB Package Dimensions

FAIRCHILD SEMICONDUCTOR™

TO-220AB (FS PKG Code P8)

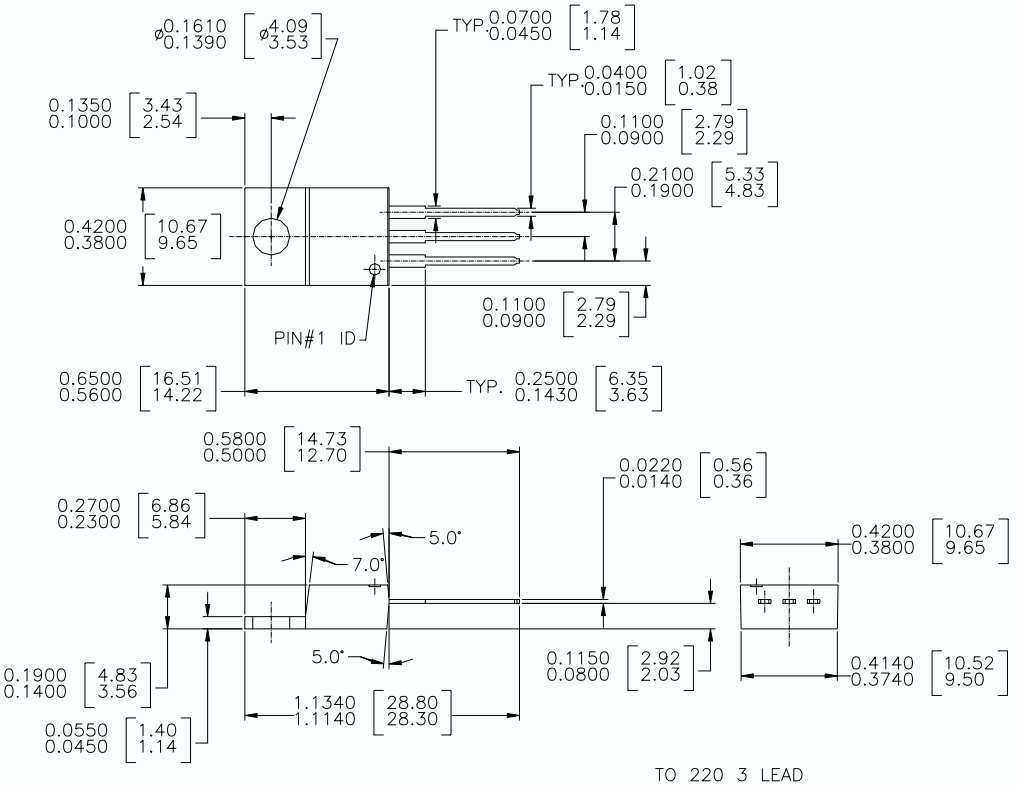




Scale 1:1 on letter size paper

Dimensions shown below are in:
inches [millimeters]

Part Weight per unit (gram): 2.24



NOTE : UNLESS OTHERWISE SPECIFIED

1. STANDARD LEAD FINISH :
200 MICROINCHES / 5.08 MICRON MINIMUM
LEAD / TIN 15/85 ON OLIN 194 COPPER OR EQUIVALENT

2. DIMENSION BASED ON JEDEC STANDARD TO-220
VARIATION AB, ISSUE J, DATED 3/24/87

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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
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.