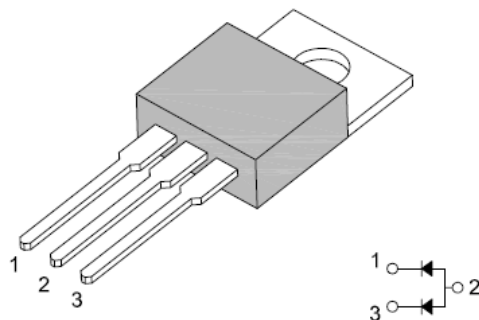


16A Fast Efficient Rectifiers

Features

- High surge current capability
- Low power loss, high efficiency
- Glass passivated chip junction
- 150°C operation junction temperature
- Low stored charge majority carrier conduction
- Low forward voltage, high current capability
- High switching speed 35 nanosecond recovery time



TO-220

Mechanical Data

Case:	TO-220, molded plastic
Epoxy:	Plastic package has UL flammability classification 94V-0
Terminals:	Lead, solderable per MIL-STD-202, Method 208
Polarity:	As marked
Mounting Torque:	10 in-lbs maximum
Weight:	0.08 ounces, 2.24 grams

Maximum Ratings and Electrical Characteristics ($T_A=25^\circ\text{C}$ unless noted otherwise)

Symbol	Description	FEN16AT	FEN16BT	FEN16CT	FEN16DT	Unit	Conditions
VRRM	Maximum Repetitive Peak Reverse Voltage	50	100	150	200	V	
VRMS	Maximum RMS Voltage	35	70	105	140	V	
VDC	Maximum DC Blocking Voltage	50	100	150	200	V	
IF(AV)	Maximum Average Forward Rectified Current	8.0				A	$T_C=125^\circ\text{C}$, per leg
		16				A	$T_C=125^\circ\text{C}$, per total device
IFM	Peak Repetitive Forward Current	16				A	Rate VR, Square Wave, 20KHz, $T_C=125^\circ\text{C}$
IFSM	Non-Repetitive Peak Forward Surge Current per leg	150				A	Surge applied at rate load conditions half wave, single phase, 60Hz

16A Fast Efficient Rectifiers

FEN16AT - FEN16DT

Symbol	Description	FEN16AT	FEN16BT	FEN16CT	FEN16DT	Unit	Conditions
V_F	Maximum Instantaneous Forward Voltage	0.975				V	I _F =8.0A, T _C =25° C
		0.880					I _F =8.0A, T _C =100° C
I_R	Maximum DC Reverse Current at Rated DC Blocking Voltage	10				μA	T _C =25° C
		500					T _C =125° C
T_{rr}	Typical Reverse Recovery Time	35				nS	I _F =0.5A, I _R =1A, I _{rr} =0.25A
C_J	Typical Junction Capacitance	120				pF	V _R =4V, f=1MHz
T_J, T_{STG}	Operating Junction and Storage Temperature Range	-65 to +150				° C	

Typical Characteristics Curves

Fig.1-Forward Current Derating Curve

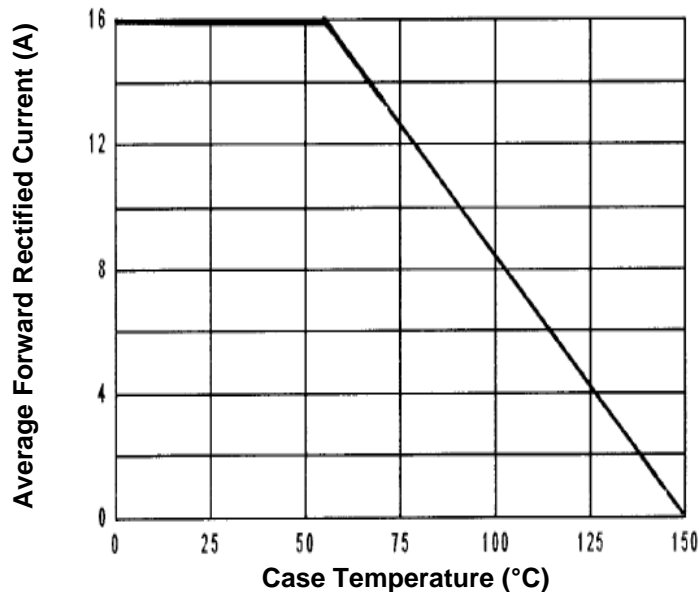
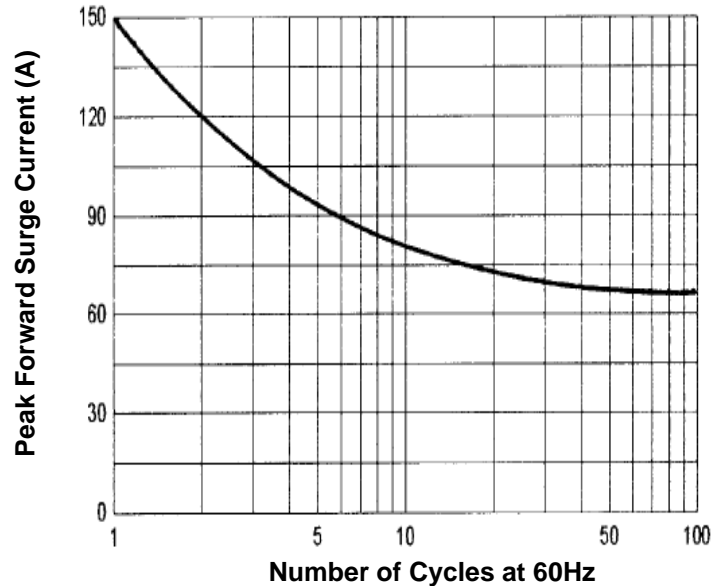


Fig.2-Max. Non-Repetitive Peak Forward Surge Current



16A Fast Efficient Rectifiers

FEN16AT - FEN16DT

Fig.3- Typical Forward Characteristics

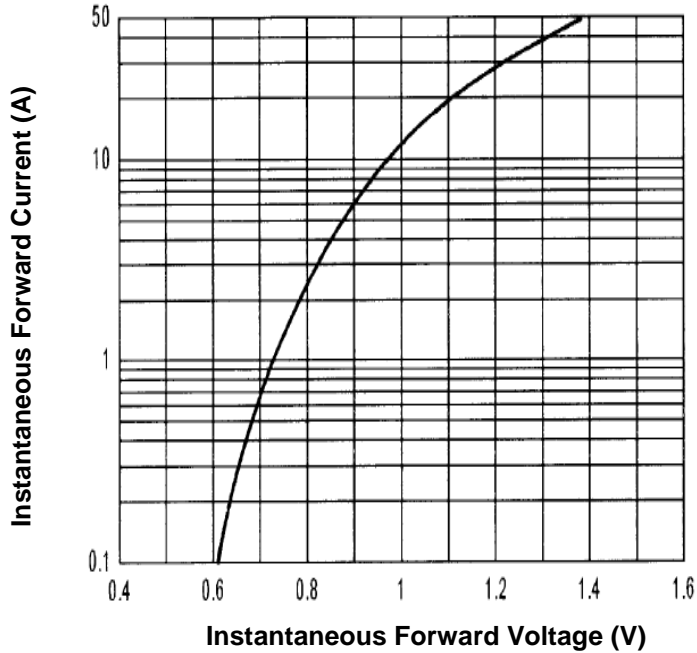


Fig.4-Typical Reverse Characteristics

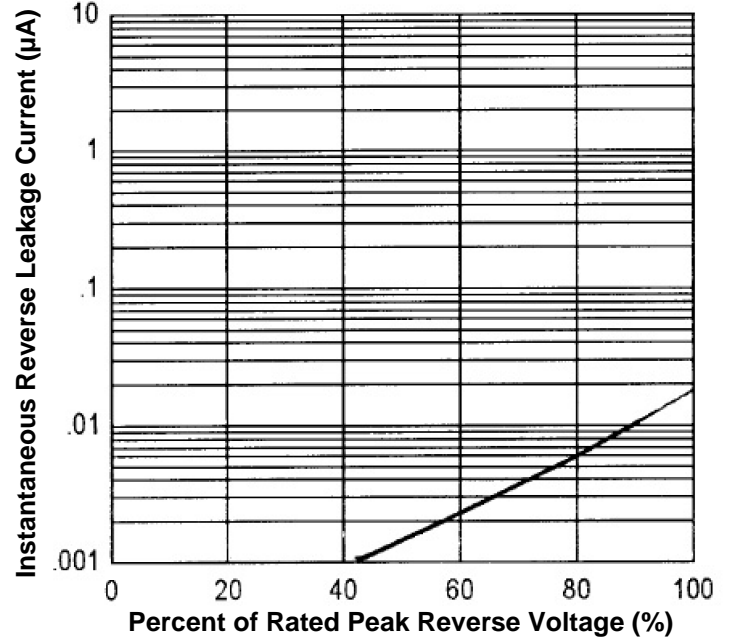


Fig.5- Typical Junction Capacitance

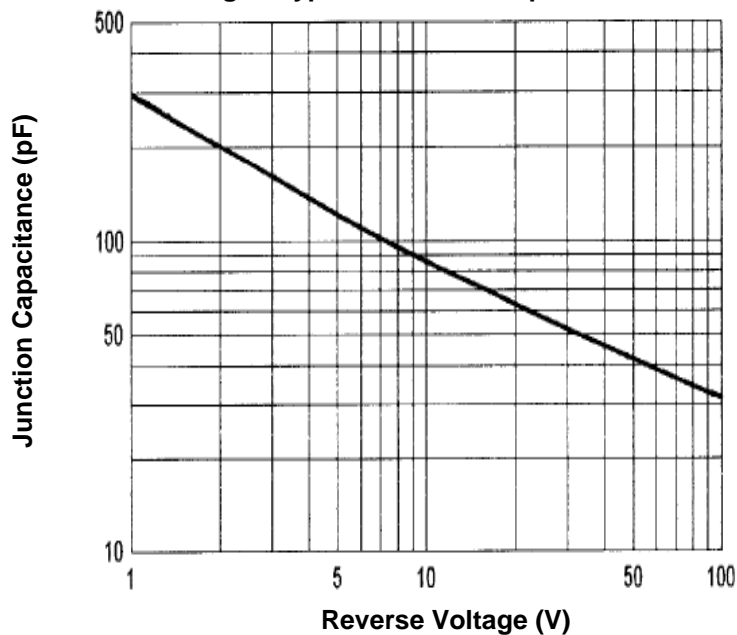
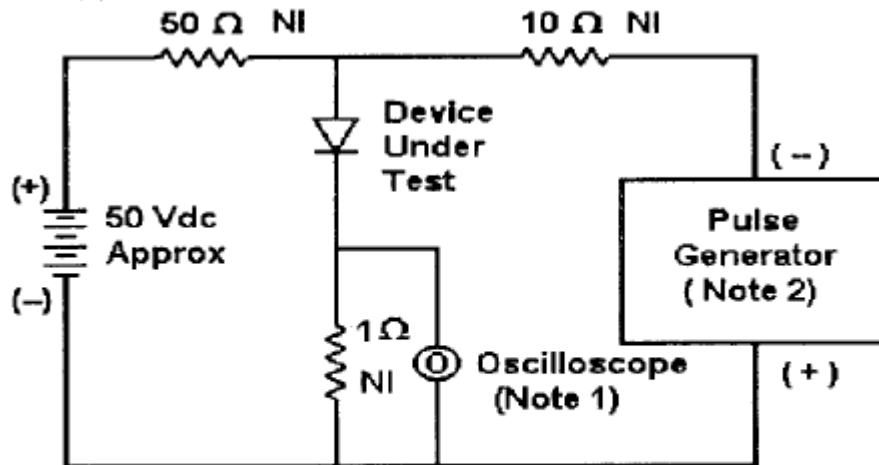
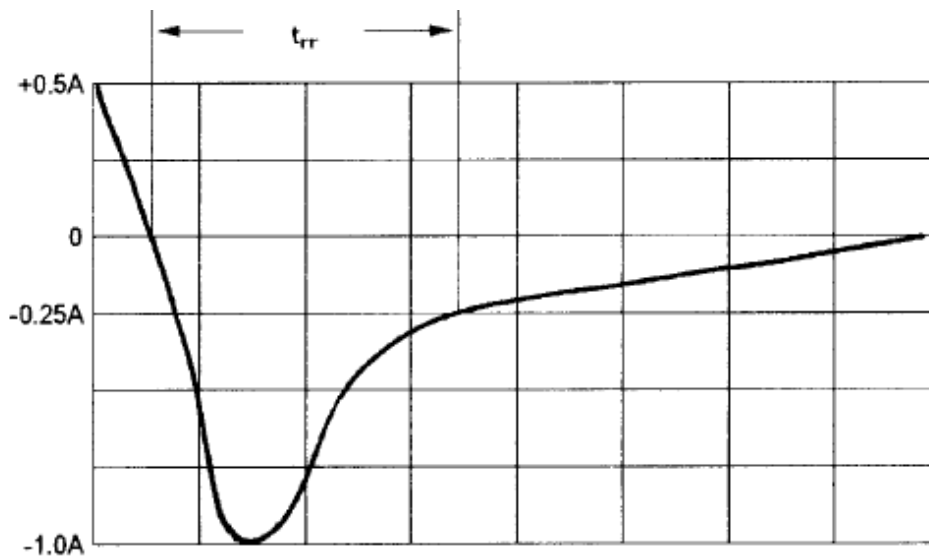


Fig.6- Reverse Recovery Time Characteristic and Test Circuit Diagram



Notes:

1. Rise Time = 7 ns max. Input Impedance = 1 M Ω , 22 pF
2. Rise Time = 10 ns max. Input Impedance = 50 Ω

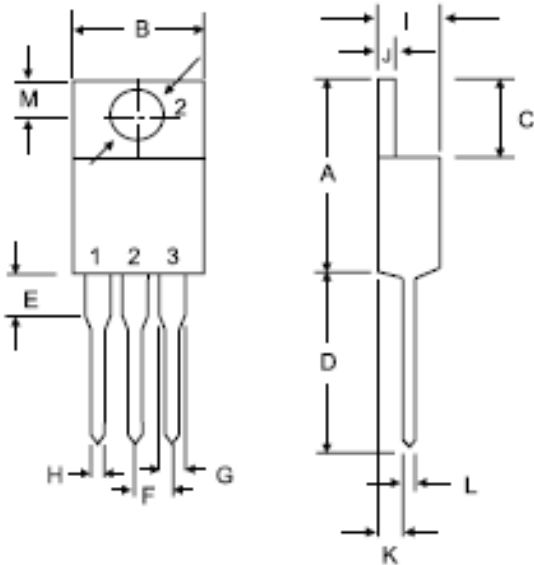


Set time base for 10 ns/div

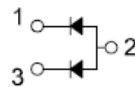
16A Fast Efficient Rectifiers

FEN16AT - FEN16DT

Dimensions in inches (mm)



DIM	MILLIMETERS	
	MIN	MAX
A	14.68	15.32
B	9.78	10.42
C	6.01	6.52
D	13.06	14.62
E	3.57	4.07
F	2.42	2.66
G	1.12	1.36
H	0.72	0.96
I	4.22	4.98
J	1.14	1.36
K	2.20	2.97
L	0.33	0.55
M	2.48	2.98
O	3.70	3.90



TO-220

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