



**Dual Fast Recovery Power Rectifier**

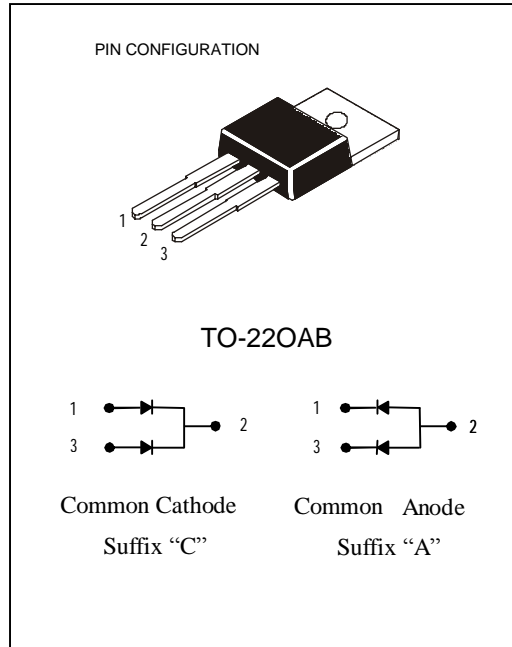
Designer for used the switching power supply. Inverter, free wheeling, and polarity protection application.

**Features**

- \*Glass passivation chip junction.
- \*Fast switching for high efficiency
- \*High reliability
- \*Low forward voltage ,high current capacity

**Mechanical Data**

- \*Case:TO-220AB molded plastic
- \*Epoxy: UL 94V-0 rate flame retardant
- \*Terminals: Pure tin plate, lead free, solderable per MIL-STD-202, method 208 guaranteed
- \*Polarity: as marked



**Maximum Ratings and Electrical Characteristics**

Characteristics	Symbol	Typical data	Final Spec	Unit
Peak Repetitive Reverse Voltage	V <sub>rrm</sub>			
Working Peak Reverse Voltage	V <sub>rwm</sub>	250-350	230	V
DC Blocking Voltage	V <sub>r</sub>			
RMS reverse Voltage	V <sub>r(rms)</sub>		150	V
Average Rectifier Forward Current Per Leg T <sub>c</sub> =125C	I <sub>F(AV)</sub>		6	A
Total Device			12	
Peak Repetitivity Forward Current (Rate V <sub>r</sub> , Square Wave,20kHz)	I <sub>FM</sub>		12	A
Non-Repetitivity Peak Surge Current Maximum Instantaneous Forward	I <sub>FSM</sub>		100	A
Forward Voltage @6A	V <sub>F</sub>	0.95-1.05	1.1	V
Maximum Instanteous Reverse Current (Rated DC Voltage ,T <sub>c</sub> =25C) (Rated DC Voltage,T <sub>c</sub> =125c)	I <sub>R</sub>	<1	5 100	uA
Reverse Recovery Time (I <sub>f</sub> =0.5A,I <sub>r</sub> =1.0, I <sub>rr</sub> =0.25A)	T <sub>rr</sub>	60-80	100	ns
Typical Juntion Capacitance (Reverse Voltage of 4 volts &f=1MHz)	C <sub>p</sub>		55	pF
Operation and Storage Temp Range	T <sub>j</sub> ; T <sub>stg</sub>		-65to150	°C

FIG-1 TYPICAL FORWARD CHARACTERISTICS

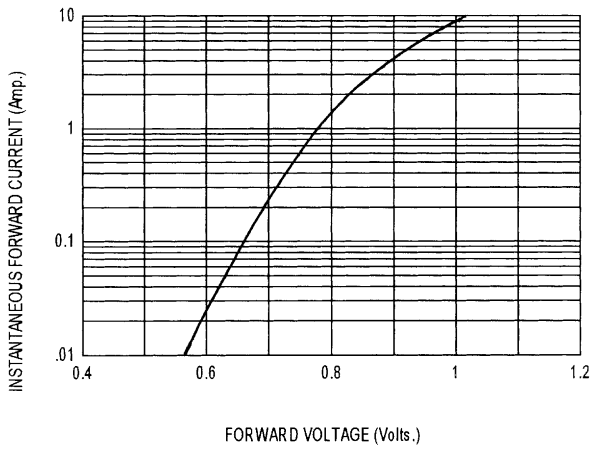


FIG-2 TYPICAL REVERSE CHARACTERISTICS

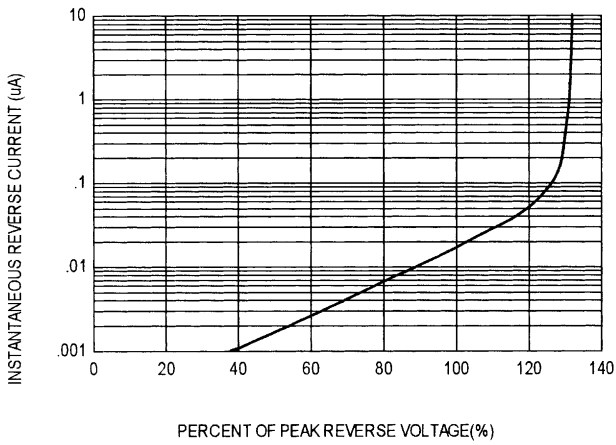


FIG-3 FORWARD CURRENT DERATING CURVE

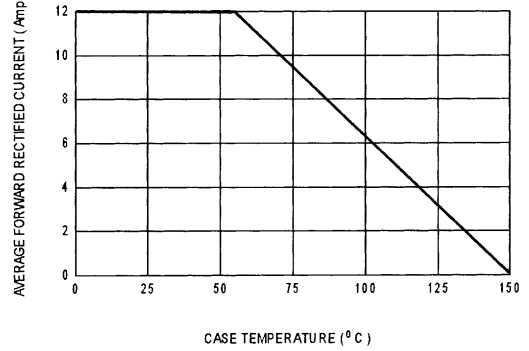


FIG-4 TYPICAL JUNCTION CAPACITANCE

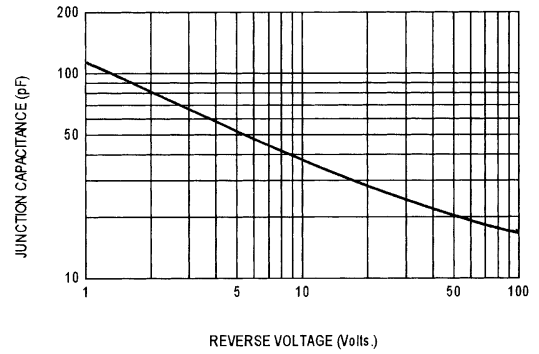
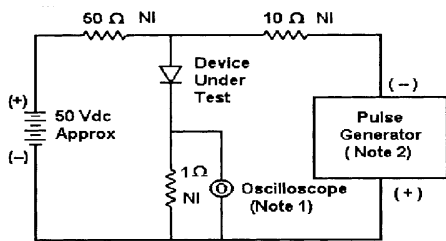
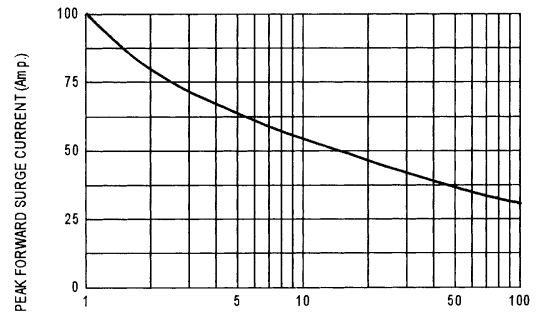
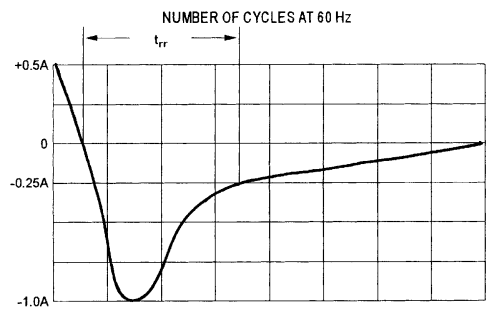


FIG-5 PEAK FORWARD SURGE CURRENT



- 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 50 ns/div

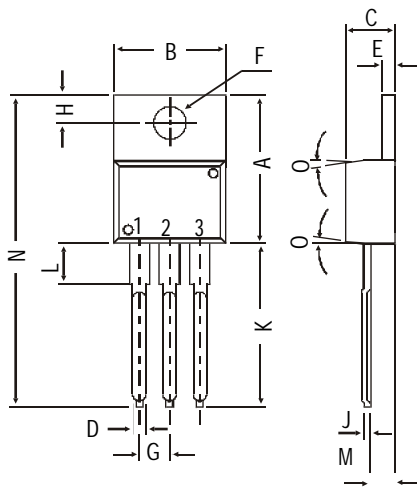
Fig-6 Reverse Recovery Time Characteristic and Test Circuit Diagram

# F12C20

## 28 series

### PACKAGE MECHANICAL DATA

TO-220AB (Plastic)



All dimensions in mm.

DIM	MIN.	MAX.
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
DO		.90
E	1.15	1.40
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
JO		.56
K	12.70	14.73
L	2.80	4.07
M	2.03	2.92
N		31.24
OD	EG	

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### OTHER INFORMATION

Part Number	Marking	Weight	Base quantity	Packing mode
F12C20C	F12C20C	2.3 g	50	Tube
F12C20A	F12C20A	2.3 g	50	Tube