

Switchmode Dual Fast Recovery Power Rectifiers

Designed for use in switching power supplies, inverters and as free wheeling diodes. These state-of-the-art devices have the following features:

- *Glass Passivated chip junctions
- *Low Reverse Leakage Current
- *Fast Switching for High Efficiency
- *150°C Operating Junction Temperature
- *Low Stored Charge Majority Carrier Conduction
- *Low Forward Voltage , High Current Capability
- *Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O

FAST RECOVERY RECTIFIERS

**10 AMPERES
50-200 VOLTS**



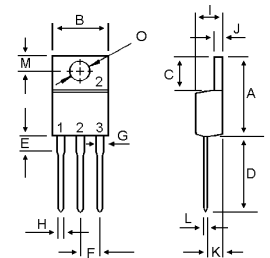
TO-220AB

MAXIMUM RATINGS

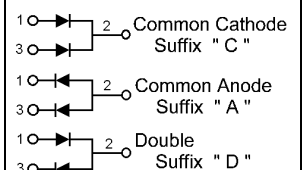
Characteristic	Symbol	F10C				Unit
		05	10	15	20	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	150	200	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	105	140	V
Average Rectifier Forward Current Per Leg $T_C=125^\circ\text{C}$ Per Total Device	$I_{F(AV)}$	5.0 10				A
Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz)	I_{FM}	10				A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase, 60Hz)	I_{FSM}	100				A
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +125				$^\circ\text{C}$

ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	F10C				Unit
		05	10	15	20	
Maximum Instantaneous Forward Voltage ($I_F = 5 \text{ Amp } T_C = 25^\circ\text{C}$)	V_F	1.30				V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25^\circ\text{C}$) (Rated DC Voltage, $T_C = 125^\circ\text{C}$)	I_R	5.0 100				μA
Reverse Recovery Time ($I_F = 0.5 \text{ A}, I_R = 1.0, I_{rr} = 0.25 \text{ A}$)	T_{rr}	150				ns
Typical Junction Capacitance (Reverse Voltage of 4 volts & $f=1 \text{ MHz}$)	C_P	55				pF



DIM	MILLIMETERS	
	MIN	MAX
A	14.68	15.32
B	9.78	10.42
C	5.02	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	1.38
K	2.20	2.98
L	0.33	0.55
M	2.48	2.98
O	3.70	3.90



F10C05 Thru F10C20

FIG-1 TYPICAL FORWARD CHARACTERISTICS

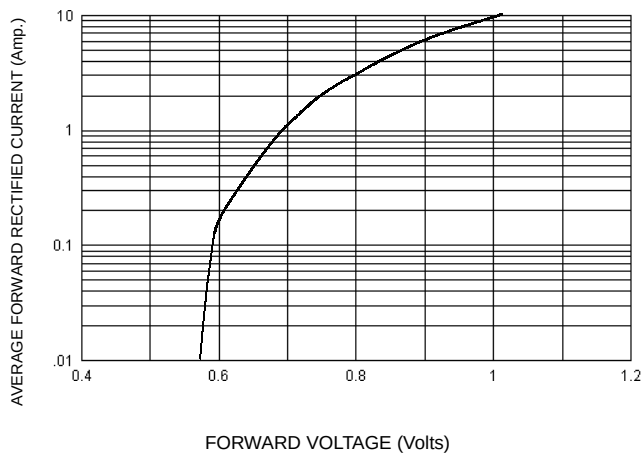


FIG-2 TYPICAL REVERSE CHARACTERISTICS

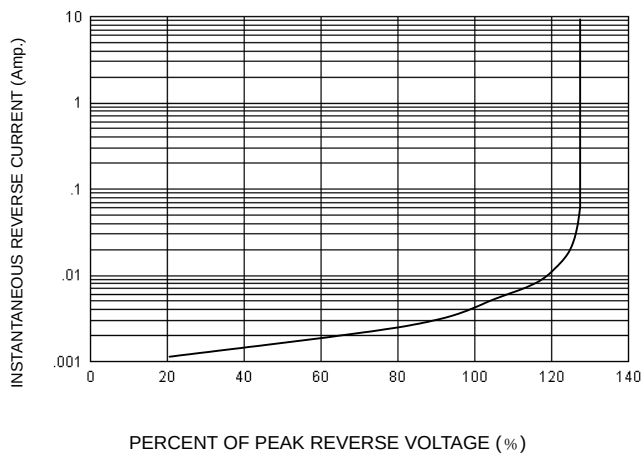


FIG-3 FORWARD CURRENT DERATING CURVE

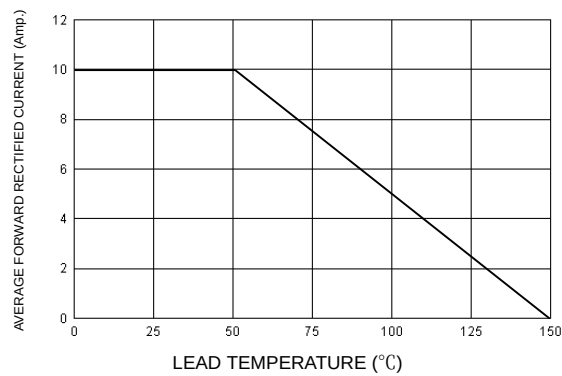


FIG-4 TYPICAL JUNCTION CAPACITANCE

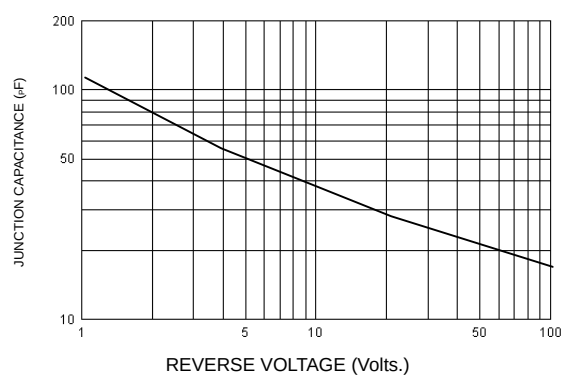
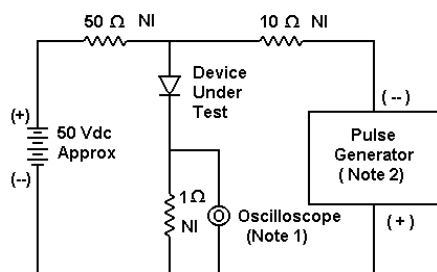
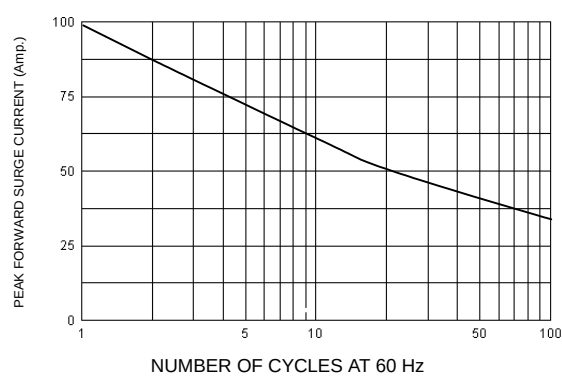
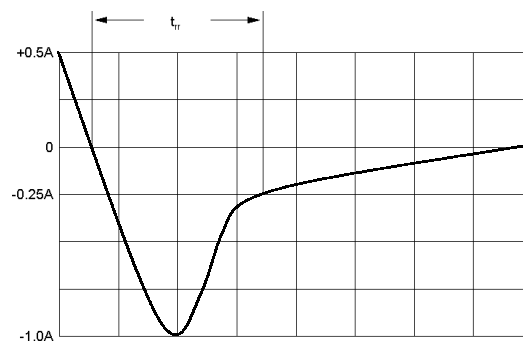


FIG-5 PEAK FORWARD SURGE CURRENT



- Notes:
1. Rise Time = 7 ns max. Input Impedance = 1 MΩ, 22 pF
 2. Rise Time = 10 ns max. Input Impedance = 50 Ω



Set time base for 10/20 ns/cm

FIG-6 Reverse Recovery Time Characteristic and Test Circuit Diagram