

Pb Free Plating Product

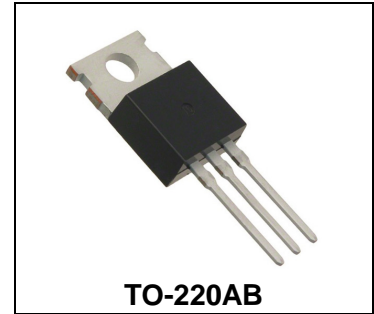
# F20C05 thru F20C20



Switchmode Dual Fast Recovery Power Rectifiers

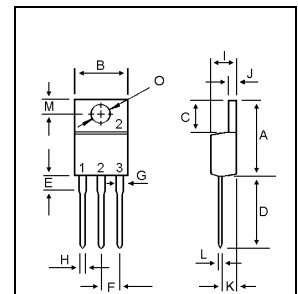
Designed for use in switching power supplies, inverters and as free wheeling diodes. These state-of-the-art devices have the following features:

- \* Glass Passivated chip junctions
- \* Low Reverse Leakage Current
- \* Fast Switching for High Efficiency
- \* 150 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



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	F20C05C	F20C10C	F20C15C	F20C20C	Unit
		F20C05A	F20C10A	F20C15A	F20C20A	
		F20C05D	F20C10D	F20C15D	F20C20D	
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 $T_C=125$ Per Total Device	$I_{F(AV)}$	10 20				A
Peak Repetitive Forward Current (Rate $V_R$ , Square Wave, 20kHz)	$I_{FM}$	20				A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase, 60Hz)	$I_{FSM}$	175				A
Operating and Storage Junction Temperature Range	$T_J, T_{stg}$	-65 to +150				



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

Characteristic	Symbol	F20C05C	F20C10C	F20C15C	F20C20C	Unit
		F20C05A	F20C10A	F20C15A	F20C20A	
		F20C05D	F20C10D	F20C15D	F20C20D	
Maximum Instantaneous Forward Voltage ( $I_F=10$ Amp $T_C=25$ )	$V_F$	1.30				V
Maximum Instantaneous Reverse Current ( Rated DC Voltage, $T_C=25$ ) ( Rated DC Voltage, $T_C=125$ )	$I_R$	10 200				$\mu A$
Reverse Recovery Time ( $I_F=0.5$ A, $I_R=1.0$ , $I_{rr}=0.25$ A )	$T_{rr}$	150				ns
Typical Junction Capacitance (Reverse Voltage of 4 volts & f=1 MHz)	$C_P$	55				pF

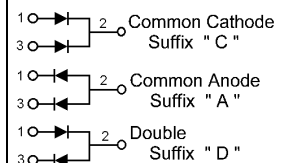


FIG-1 TYPICAL FORWARD CHARACTERISTICS

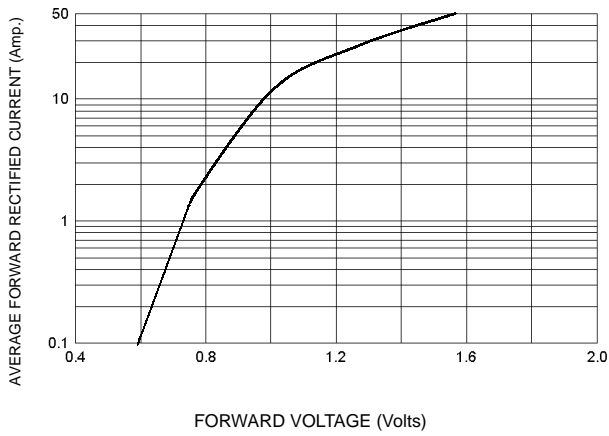


FIG-3 FORWARD CURRENT DERATING CURVE

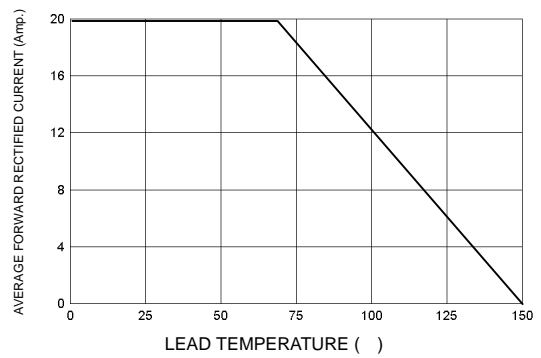


FIG-2 TYPICAL REVERSE CHARACTERISTICS

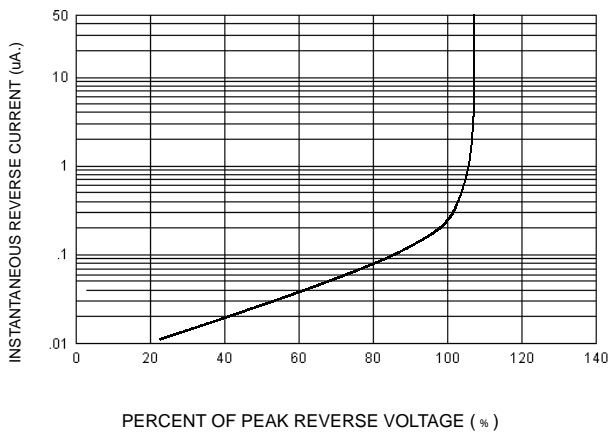


FIG-4 TYPICAL JUNCTION CAPACITANCE

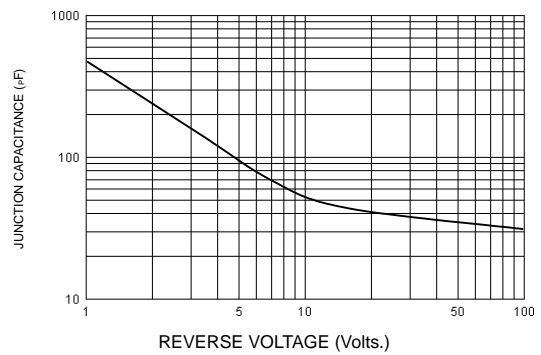
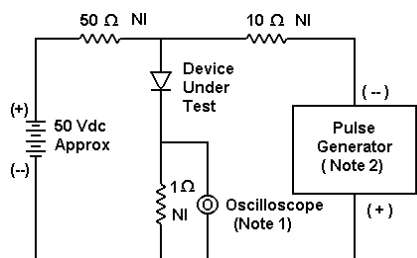
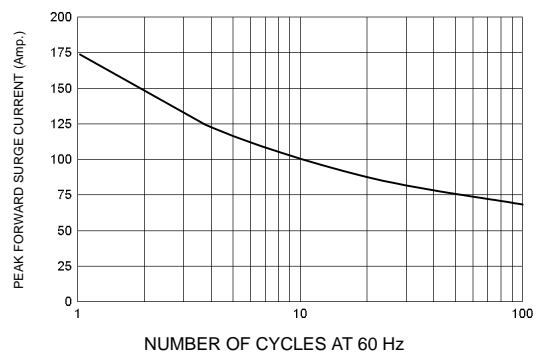
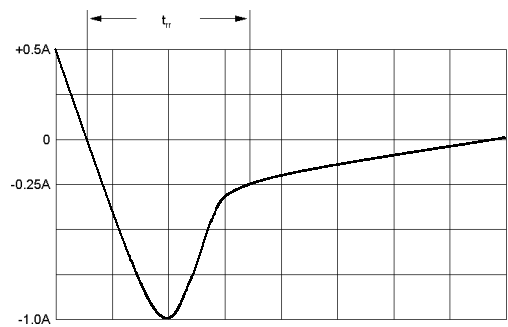


FIG-5 PEAK FORWARD SURGE CURRENT



Notes:  
 1. Rise Time = 7 ns max. Input Impedance = 1 M  $\Omega$  , 22 pF  
 2. Rise Time = 10 ns max. Input Impedance = 50  $\Omega$



Set time base for 20/50 ns/cm

FIG-6 Reverse Recovery Time Characteristic and Test Circuit Diagram