MOSPEC

F16C30 thru F16C60

Switchmode
Dual Fast Recovery Power Rectifiers

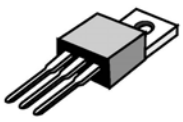
... Designed for use in switching power supplies. inverters and as free wheeling diodes. These state-of-the-art devices have the following features.

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

* *Pb Free*
* *In compliance with EU RoHs directives*

FAST RECOVERY RECTIFIERS

16 AMPERES
300 -- 600 VOLTS



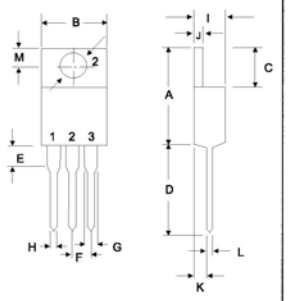
TO-220AB

MAXIMUM RATINGS

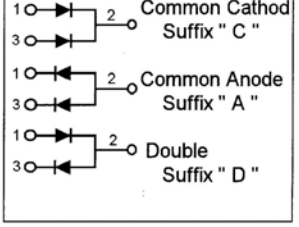
Characteristic	Symbol	F16C				Unit
		30	40	50	60	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	300	400	500	600	V
RMS Reverse Voltage	$V_{R(RMS)}$	210	280	350	420	V
Average Rectifier Forward Current Per Leg T_C=125°C Per Total Device	$I_{F(AV)}$	8.0 16				A
Peak Repetitive Forward Current (Rate V_R ,Square Wave,20kHz,T_C=125°C)	I_{FM}	16				A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware,single phase,60Hz)	I_{FSM}	125				A
Operating and Storage Junction Temperature Range	T_J , T_{stg}	- 65 to + 150				°C

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	F16C				Unit
		30	40	50	60	
Maximum Instantaneous Forward Voltage (I_F=8.0 Amp, T_C = 25 °C)	V_F	1.30				V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25 °C) (Rated DC Voltage, T_C = 125 °C)	I_R	10 500				uA
Reverse Recovery Time (I_F = 0.5 A, I_R =1.0 , I_{rr} =0.25 A)	T_{rr}	250				ns
Typical Junction Capacitance (Reverse Voltage of 4 volts & f=1 MHz)	C_P	70				pF



DIM	MILLIMETERS	
	MIN	MAX
A	14.68	16.00
B	9.78	10.42
C	5.02	6.60
D	13.00	14.62
E	3.10	4.19
F	2.41	2.67
G	1.10	1.67
H	0.69	1.01
I	3.21	4.98
J	1.14	1.40
K	2.20	3.30
L	0.28	0.61
M	2.48	3.00
O	3.50	4.00



F16C30 Thru F16C60

FIG-1 TYPICAL FORWARD CHARACTERISTICS

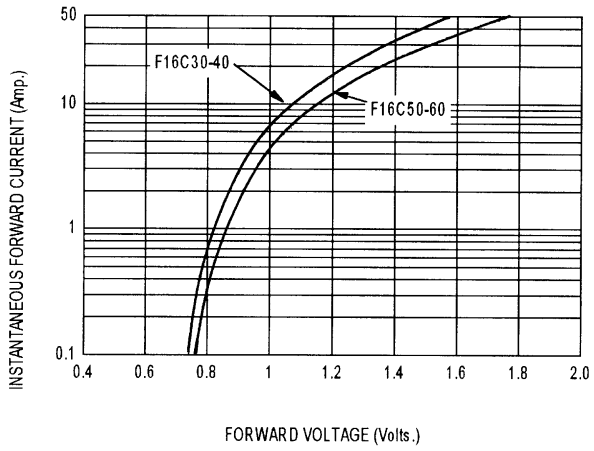
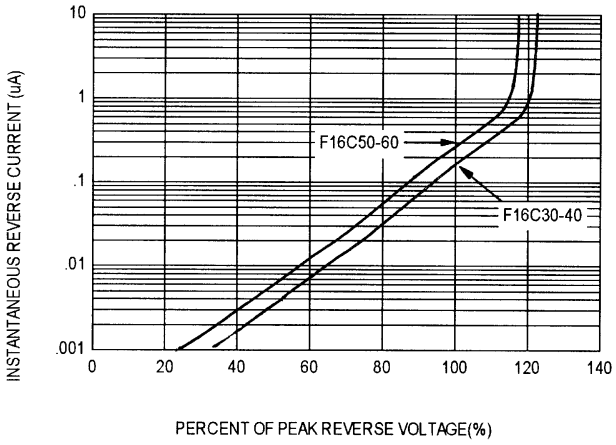
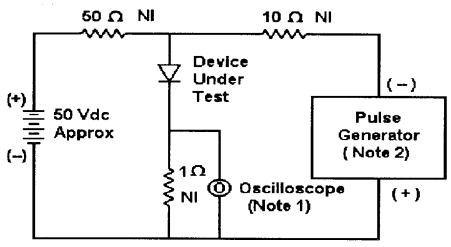


FIG-2 TYPICAL REVERSE CHARACTERISTICS





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

FIG-3 FORWARD CURRENT DERATING CURVE

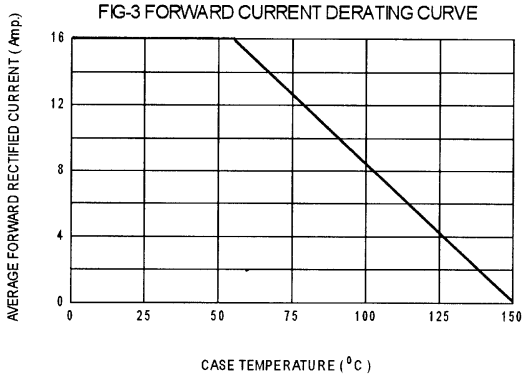


FIG-4 TYPICAL JUNCTION CAPACITANCE

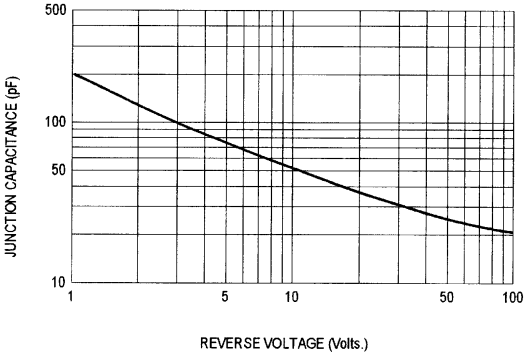
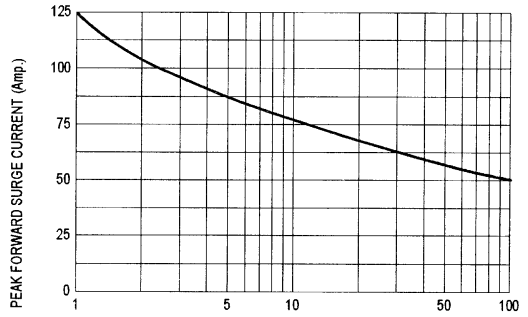


FIG-5 PEAK FORWARD SURGE CURRENT



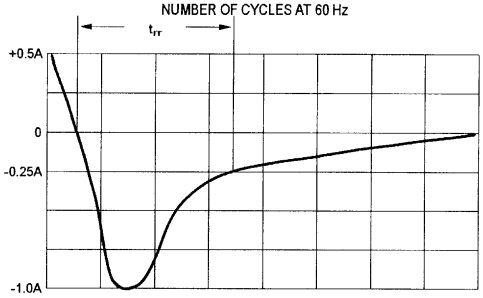


Fig-6 Reverse Recovery Time Characteristic and Test Circuit Diagram

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