

TM

# FR6A THRU FR6M

## Features

- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Fast Switching Speed For High Efficiency
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL rating 1
- Marking : Cathode band and type number

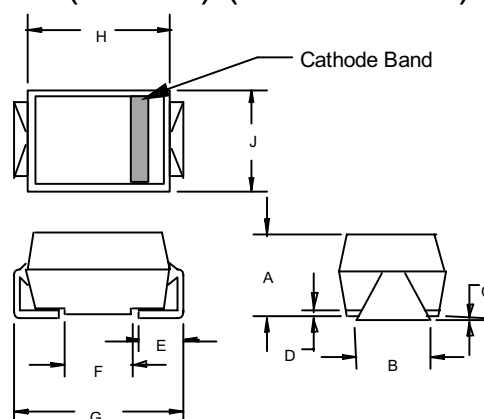
## Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

MCC Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR6A	50V	35V	50V
FR6B	100V	70V	100V
FR6D	200V	140V	200V
FR6G	400V	280V	400V
FR6J	600V	420V	600V
FR6K	800V	560V	800V
FR6M	1000V	700V	1000V

## 6 Amp Fast Recovery Rectifier 50 to 1000 Volts

### DO-214AB (HSMC) (Round Lead)



## Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	6 A	$T_A = 55^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	300A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	$V_F$	1.30V	$I_{FM} = 6.0A;$ $T_A = 25^\circ\text{C}^*$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	10µA 50µA	$T_A = 25^\circ\text{C}$ $T_A = 55^\circ\text{C}$
Maximum Reverse Recovery Time	$T_{rr}$	150ns 250ns 500ns	$I_F=0.5A, I_R=1.0A,$ $I_{rr}=0.25A$
			FR6A-FR6G FR6J FR6K-FR6M

\*Pulse Test: Pulse Width 300µsec, Duty Cycle 1%

Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.200	.214	5.08	5.43	
B	.177	.203	4.70	5.30	
C	.002	.005	.05	.13	
D	—	.02	—	.51	
E	.047	.056	1.20	1.42	
F	.168	.179	4.27	4.55	
G	.309	.322	7.85	8.18	
H	.239	.243	6.08	6.18	
J	.234	.240	5.95	6.10	

### SUGGESTED SOLDER PAD LAYOUT

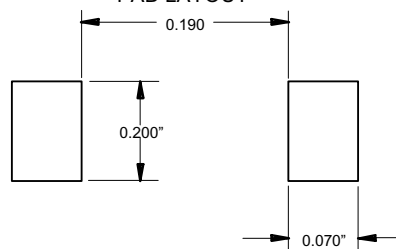
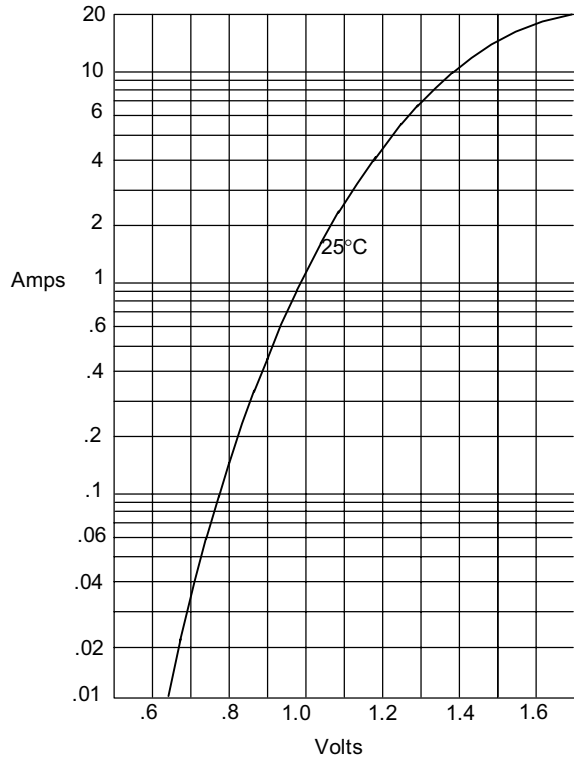


Figure 1  
Typical Forward Characteristics



Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve

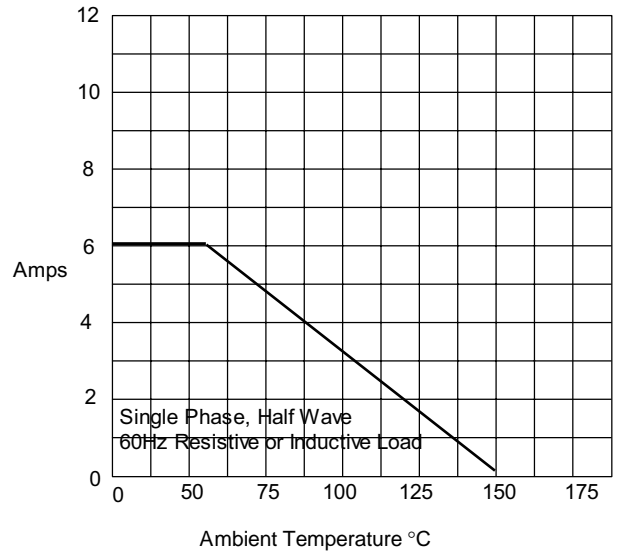
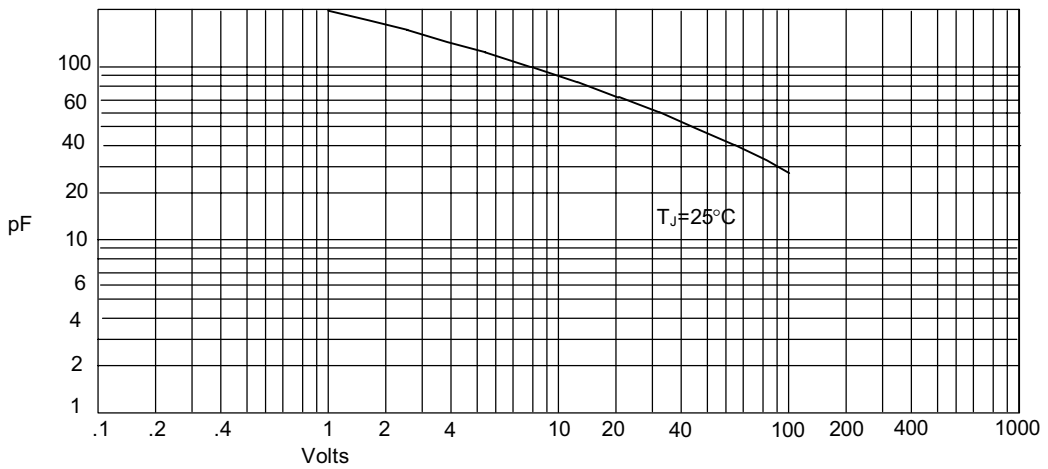


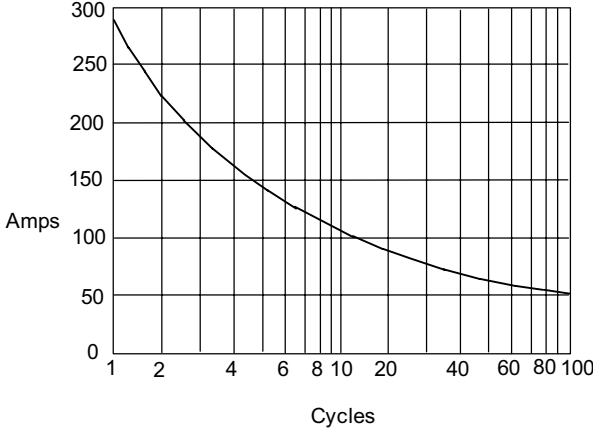
Figure 3  
Junction Capacitance



Junction Capacitance - pF versus  
Reverse Voltage - Volts

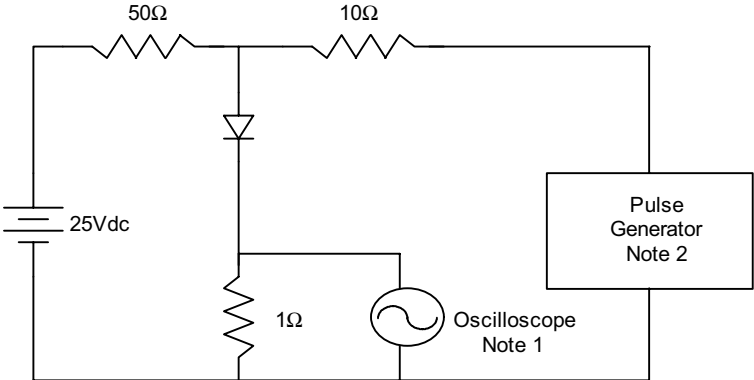
# FR6A thru FR6M

Figure 4  
Peak Forward Surge Current

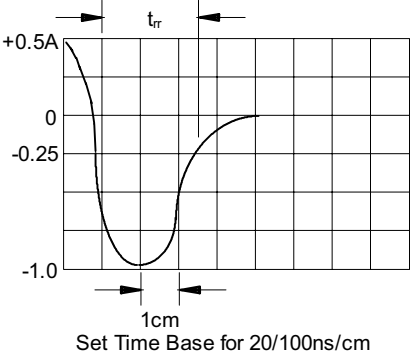


Peak Forward Surge Current - Amperes versus  
Number Of Cycles At 60Hz - Cycles

Figure 5  
Reverse Recovery Time Characteristic And Test Circuit Diagram



- Notes:
1. Rise Time = 7ns max.  
Input impedance = 1 megohm, 22pF
  2. Rise Time = 10ns max.  
Source impedance = 50 ohms
  3. Resistors are non-inductive



## Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel;1.5Kpcs/Reel

■

■

■

---