Micro Commercial Components
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FR6A THRU FR6M

6 Amp Fast Recovery Rectifier 50 to 1000 Volts

Features

- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Fast Switching Speed For High Efficiency

Maximum Ratings

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

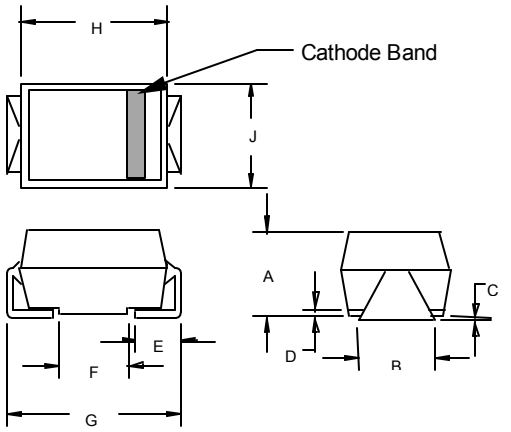
MCC Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR6A	50V	35V	50V
FR6B	100V	70V	100V
FR6D	200V	140V	200V
FR6G	400V	280V	400V
FR6J	600V	420V	600V
FR6K	800V	560V	800V
FR6M	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	6 A	T_A = 55°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°C
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 50µA	T_A = 25°C T_A = 55°C
Maximum Reverse Recovery Time FR6A-FR6G FR6J FR6K-FR6M	T_{rr}	 150ns 250ns 500ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A

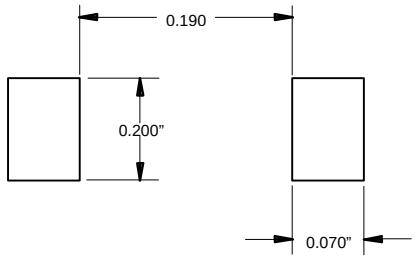
*Pulse Test: Pulse Width 300µsec, Duty Cycle 1%

DO-214AB (SMCJ) (Round Lead)



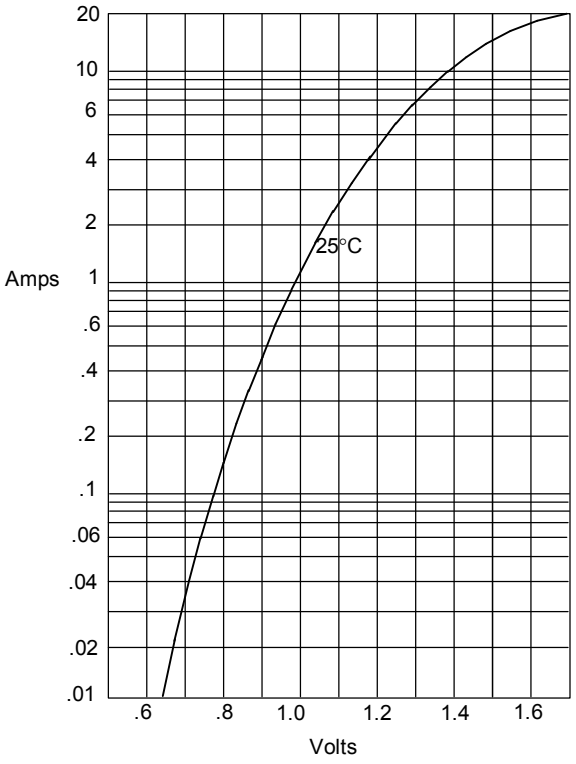
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.200	.214	5.08	5.43	
B	.177	.203	4.70	5.30	
C	.002	.005	.05	.13	
D	---	.02	---	.51	
E	.053	.067	1.35	1.70	
F	.168	.179	4.27	4.55	
G	.320	.330	8.13	8.38	
H	.239	.243	6.08	6.18	
J	.234	.240	5.95	6.10	

SUGGESTED SOLDER PAD LAYOUT



FR6A thru FR6M

Figure 1
Typical Forward Characteristics



Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve

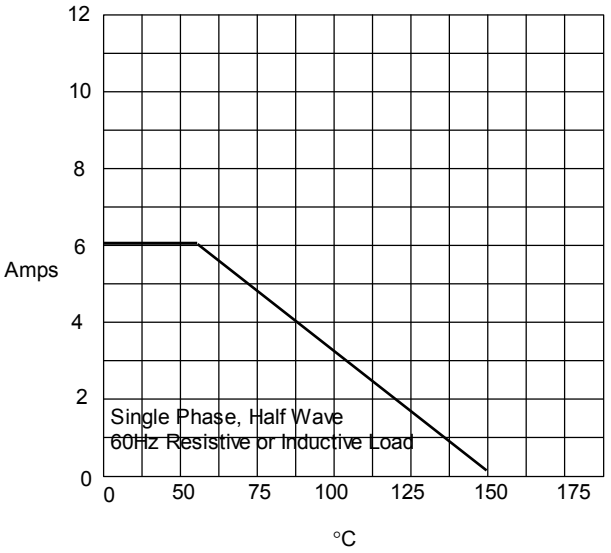
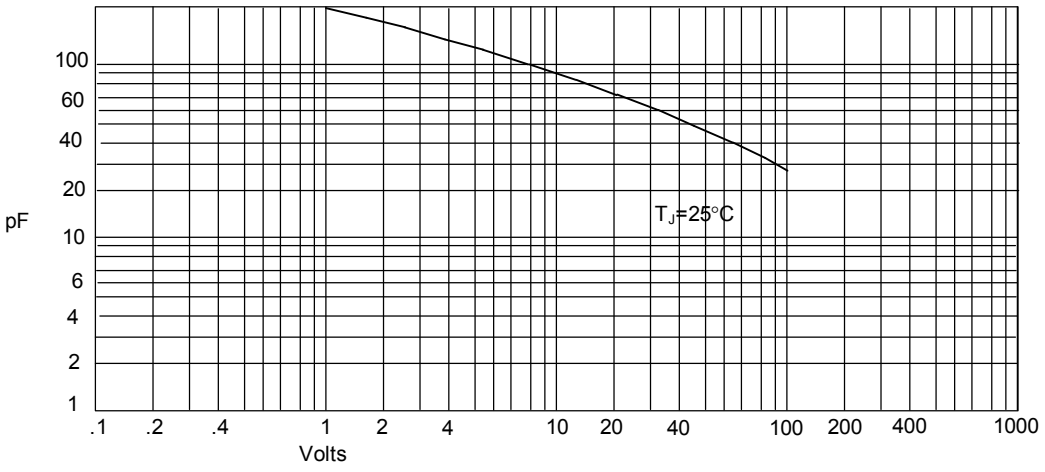


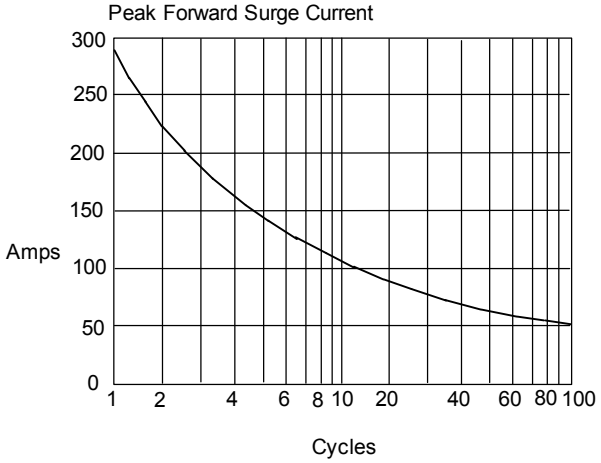
Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

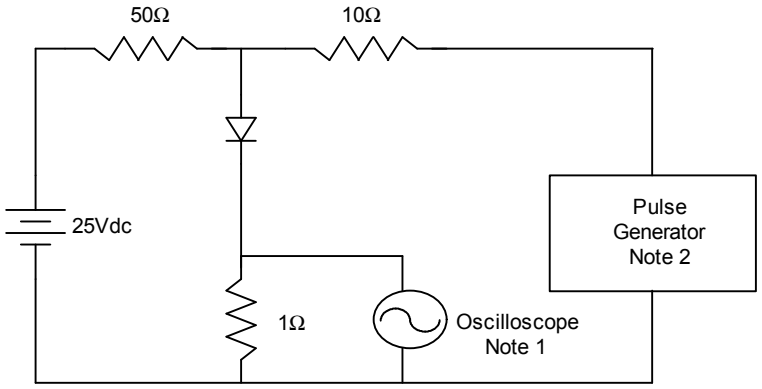
FR6A thru FR6M

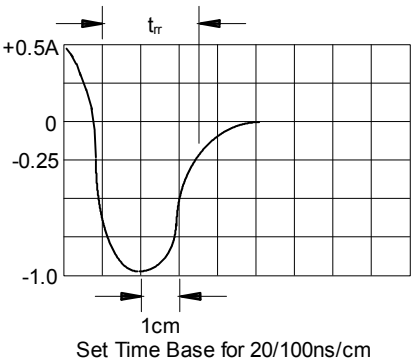
Figure 4
Peak Forward Surge Current



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

Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram





Set Time Base for 20/100ns/cm

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