Micro Commercial Components

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FR3AB THRU FR3MB

3 Amp Fast Recovery Silicon Rectifier 50 to 1000 Volts

Features

- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Easy Pick And Place
- High Temp Soldering: 260°C for 10 Seconds At Terminals\
- Fast Recovery Times For High Effieciency

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 10°C/W Junction To Lead

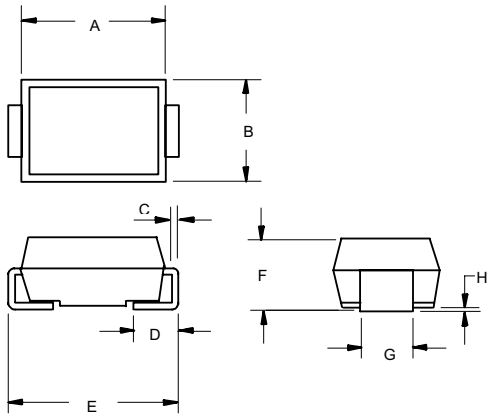
MCC Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR3AB	FR3AB	50V	35V	50V
FR3BB	FR3BB	100V	70V	100V
FR3DB	FR3DB	200V	140V	200V
FR3GB	FR3GB	400V	280V	400V
FR3JB	FR3JB	600V	420V	600V
FR3KB	FR3KB	800V	560V	800V
FR3MB	FR3MB	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	3.0A	T_J = 120°C
Peak Forward Surge Current	I_{FSM}	100A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.30V	I_{FM} = 3.0A; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10μA 250μA	T_J = 25°C T_J = 100°C
Maximum Reverse Recovery Time FR3AB-GB FR3JB FR3KB-MB	T_{rr}	 150ns 250ns 500ns	 I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	80pF	Measured at 1.0MHz, V_R=4.0V

*Pulse test: Pulse width 200 μsec, Duty cycle 2%

DO-214AA
(SMB) (LEAD FRAME)



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.160	.185	4.06	4.70	
B	.130	.155	3.30	3.94	
C	.006	.012	0.15	0.31	
D	.030	.060	0.76	1.52	
E	.200	.220	5.08	5.59	
F	.079	.103	2.01	2.62	
G	.075	.087	1.91	2.21	
H	.002	.008	0.05	0.203	

SUGGESTED SOLDER PAD LAYOUT

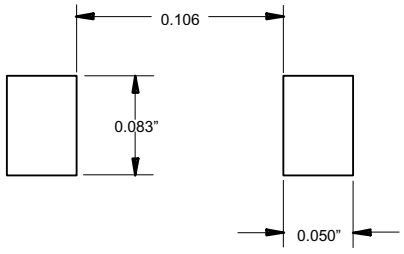
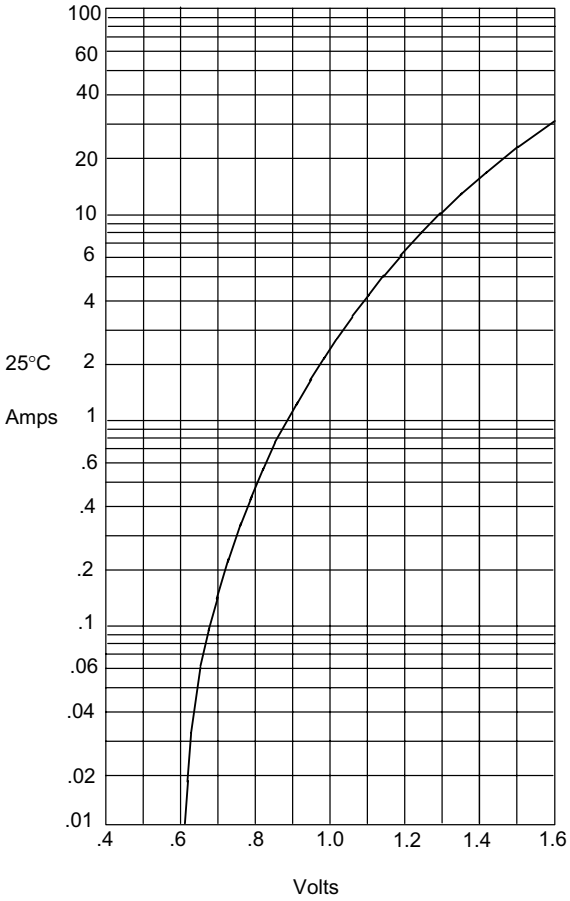
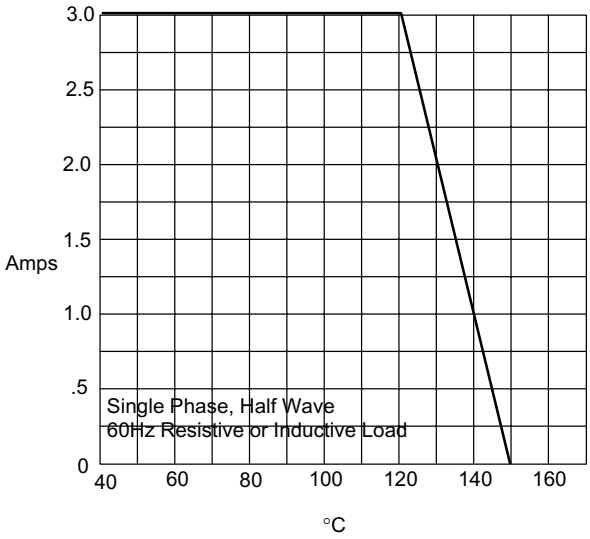


Figure 1
Typical Forward Characteristics



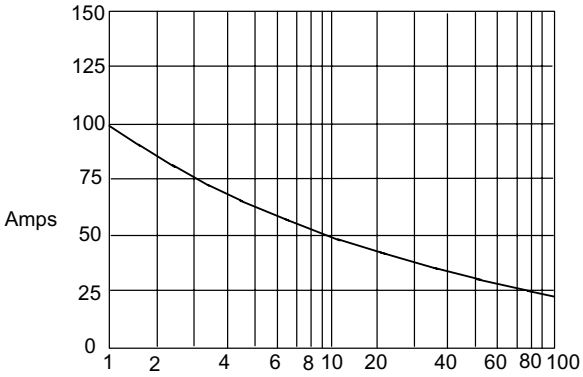
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



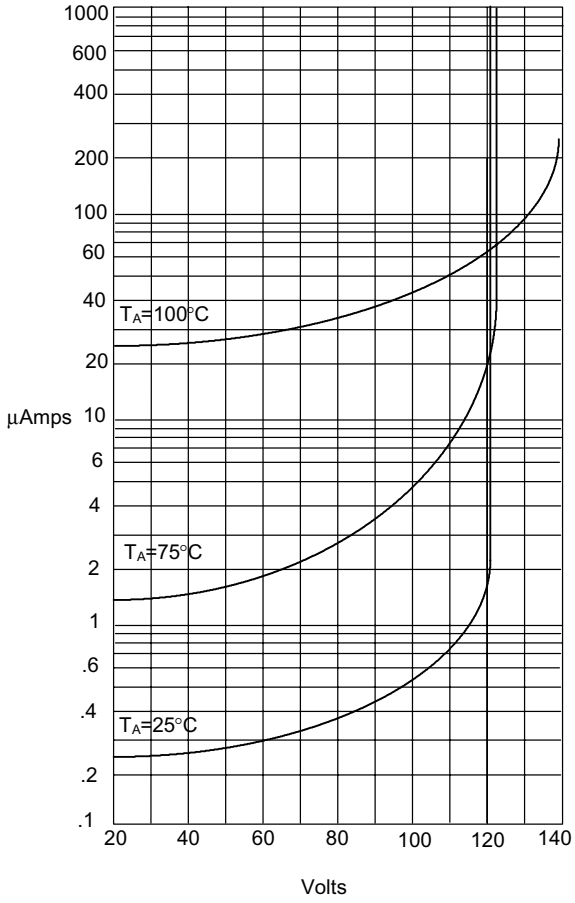
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature -°C

Figure 3
Peak Forward Surge Current



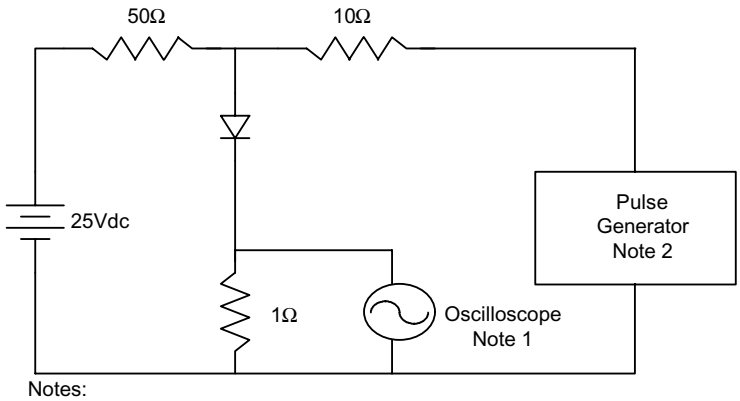
Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

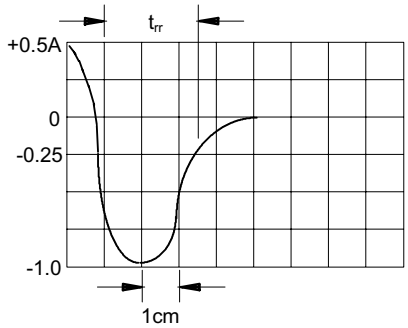
Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

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

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