

# FR2A-L THRU FR2M-L

## 2.0 Amp Fast Recovery Rectifier 50 to 1000 Volts

### Features

- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Higher Temp Soldering: 260°C for 10 Seconds At Terminals
- Available on Tape and Reel
- Halogen free available upon request by adding suffix "-HF"

### Maximum Ratings

- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C

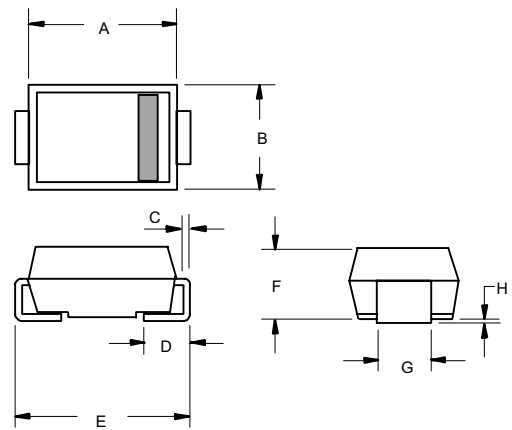
MCC Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR2A-L	FR2A	50V	35V	50V
FR2B-L	FR2B	100V	70V	100V
FR2D-L	FR2D	200V	140V	200V
FR2G-L	FR2G	400V	280V	400V
FR2J-L	FR2J	600V	420V	600V
FR2K-L	FR2K	800V	560V	800V
FR2M-L	FR2M	1000V	700V	1000V

### Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	2.0A	$T_J=90^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	50A	8.3ms half sine
Maximum Instantaneous Forward Voltage	$V_F$	1.30V	$I_{FM}=2.0A$ $T_A=25^\circ\text{C}^*$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	5.0uA	$T_J=25^\circ\text{C}$
Maximum Reverse Recovery Times FR2A-L~FR2G-L FR2J-L FR2K-L~FR2M-L	$t_{rr}$	150ns 250ns 500ns	$I_F=0.5A,$ $I_R=1.0A,$ $I_{rr}=0.25A$
Typical Junction Capacitance	$C_j$	50pF	Measured at 1.0MHz, $V_R=4.0V$

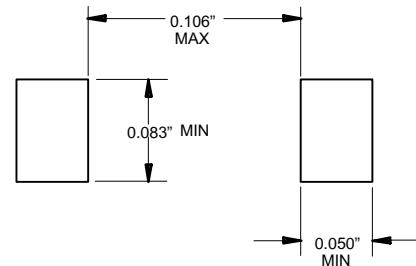
Note:1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.  
 \*Pulse test: Pulse width 300 usec, duty cycle 2%.

### DO-214AA (SMB) (LEAD FRAME)



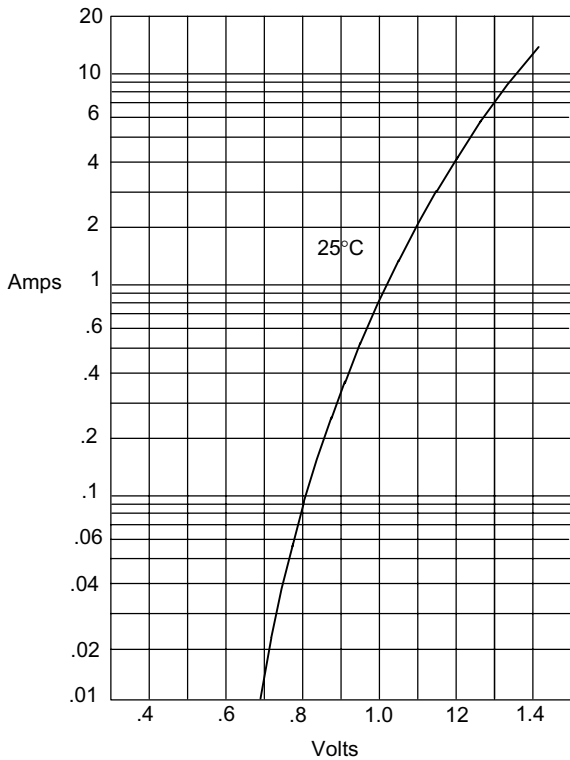
DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	.160	.180	4.06	4.57	
B	.130	.155	3.30	3.94	
C	.006	.012	0.15	0.31	
D	.030	.060	0.76	1.52	
E	.205	.220	5.21	5.59	
F	.079	.103	2.01	2.62	
G	.077	.087	1.96	2.21	
H	.002	.008	0.05	0.20	

### SUGGESTED SOLDER PAD LAYOUT



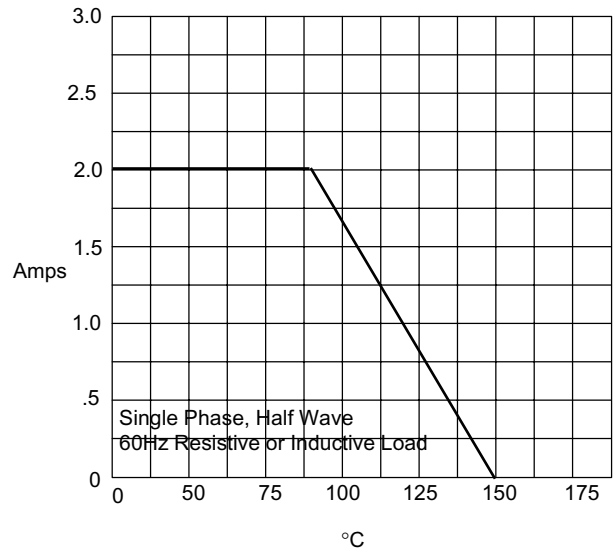
# FR2A-L thru FR2M-L

Figure 1  
Typical Forward Characteristics



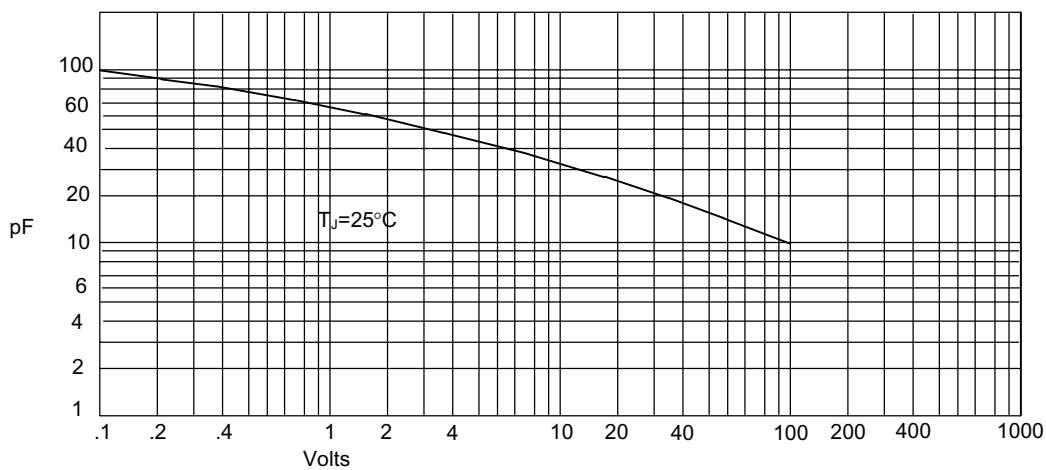
Instantaneous Forward Current - Amperes *versus*  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



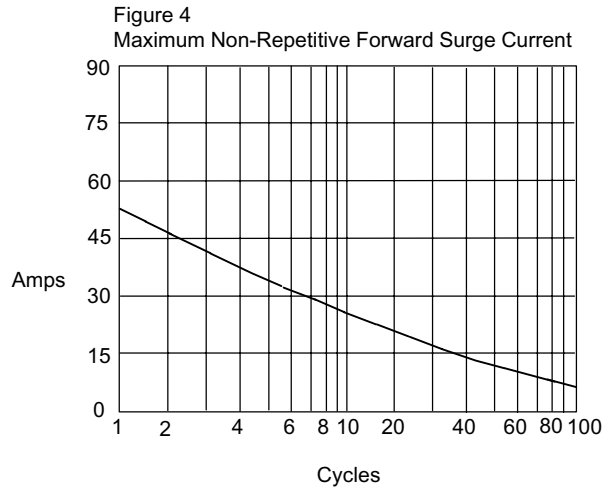
Average Forward Rectified Current - Amperes *versus*  
Ambient Temperature - °C

Figure 3  
Junction Capacitance



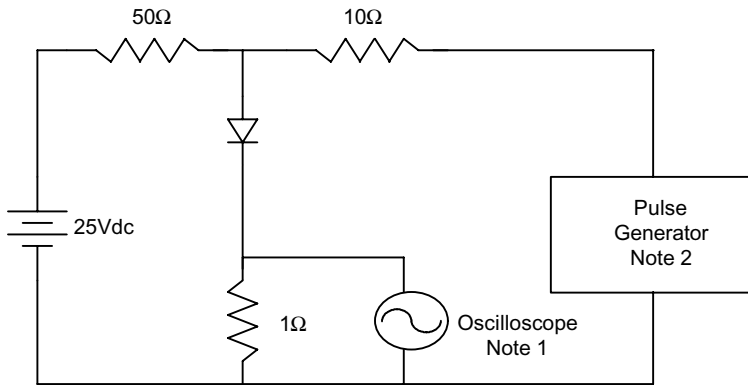
Junction Capacitance - pF *versus*  
Reverse Voltage - Volts

# FR2A-L thru FR2M-L

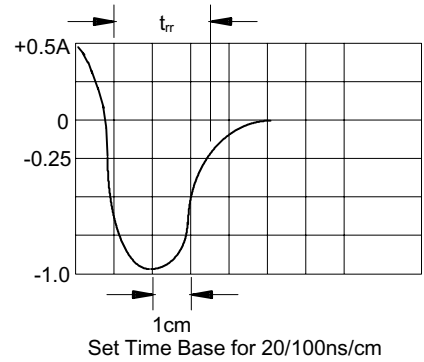


Peak Forward Surge Current - Amperes versus Number Of Cycles At 60Hz - Cycles

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





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### Ordering Information :

Device	Packing
FR2A-LTP~FR2M-LTP	Tape&Reel: 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. FR2A-LTP-HF~FR2M-LTP-HF

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