



Micro Commercial Components



Micro Commercial Components  
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**FR2A  
THRU  
FR2M**

## 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
- Easy Pick And Place
- High Temp Soldering: 260°C for 10 Seconds At Terminals
- Superfast Recovery Times For High Efficiency

## Maximum Ratings

- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C
- Maximum Thermal Resistance: 15°C/W Junction To Lead

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

## Electrical Characteristics @ 25°C Unless Otherwise Specified

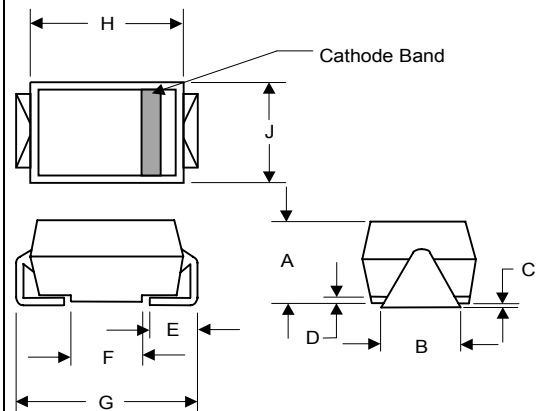
|                                                         |             |                         |                                                       |
|---------------------------------------------------------|-------------|-------------------------|-------------------------------------------------------|
| Average Forward current                                 | $I_{F(AV)}$ | 2.0A                    | $T_A = 90^\circ\text{C}$                              |
| Peak Forward Surge Current                              | $I_{FSM}$   | 50A                     | 8.3ms, half sine                                      |
| Maximum Instantaneous Forward Voltage                   | $V_F$       | 1.30V                   | $I_{FM} = 2.0A$ ;<br>$T_J = 25^\circ\text{C}^*$       |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 5μA<br>200μA            | $T_J = 25^\circ\text{C}$<br>$T_J = 125^\circ\text{C}$ |
| Maximum Reverse Recovery Time                           | $T_{rr}$    | 150ns<br>250ns<br>500ns | $I_F = 0.5A$ , $I_R = 1.0A$ ,<br>$I_{rr} = 0.25A$     |
| Typical Junction Capacitance                            | $C_J$       | 40pF                    | Measured at 1.0MHz, $V_R = 4.0V$                      |

\*Pulse test: Pulse width 300 μsec, Duty cycle 1%

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

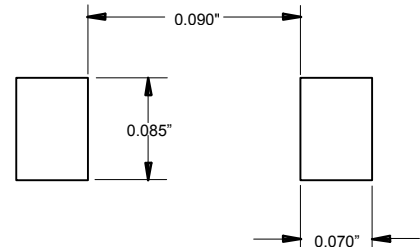
## 2 Amp Fast Recovery Silicon Rectifier 50 to 1000 Volts

### DO-214AA (HSMB) (Round Lead)



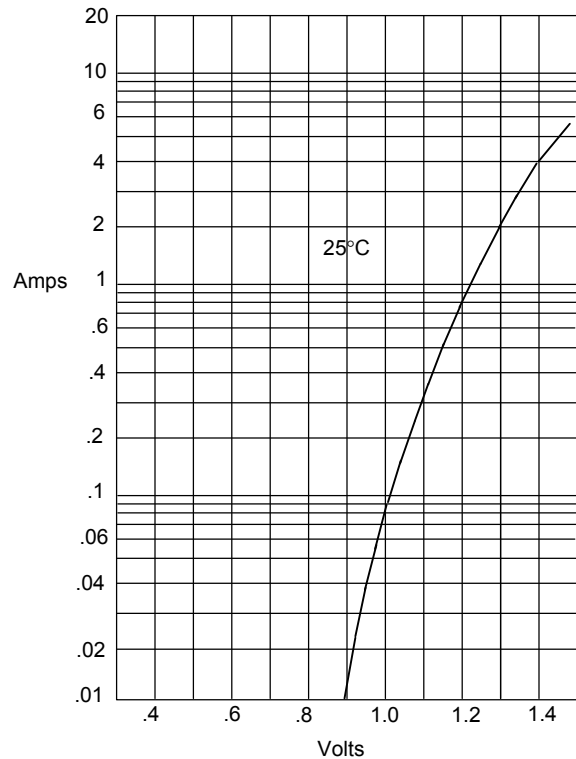
| DIMENSIONS |        |      |      |      |      |
|------------|--------|------|------|------|------|
| DIM        | INCHES |      | MM   |      | NOTE |
|            | MIN    | MAX  | MIN  | MAX  |      |
| A          | .078   | .116 | 1.98 | 2.95 |      |
| B          | .075   | .089 | 1.90 | 2.25 |      |
| C          | .002   | .008 | .05  | .20  |      |
| D          | ----   | .02  | ---- | .51  |      |
| E          | .035   | .055 | .90  | 1.40 |      |
| F          | .065   | .091 | 1.65 | 2.32 |      |
| G          | .205   | .224 | 5.21 | 5.69 |      |
| H          | .160   | .180 | 4.06 | 4.57 |      |
| J          | .130   | .155 | 3.30 | 3.94 |      |

### SUGGESTED SOLDER PAD LAYOUT



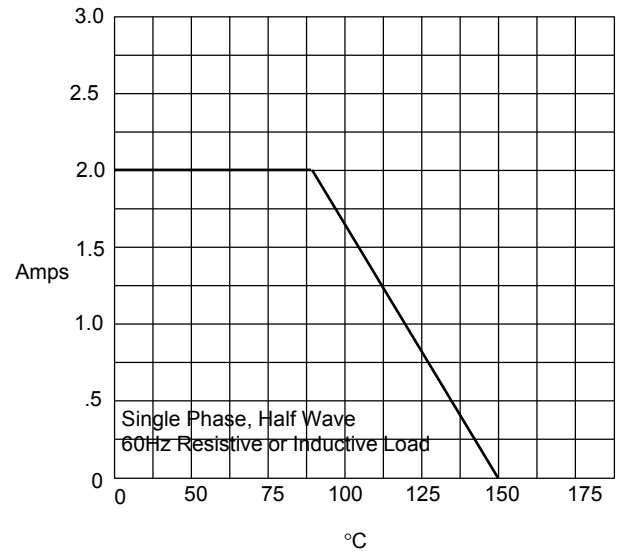
# FR2A thru FR2M

Figure 1  
Typical Forward Characteristics



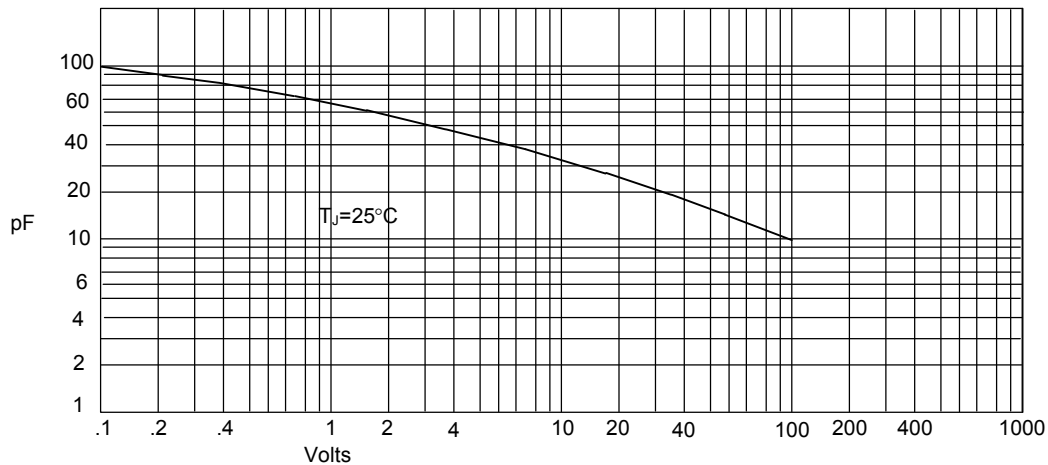
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

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 thru FR2M

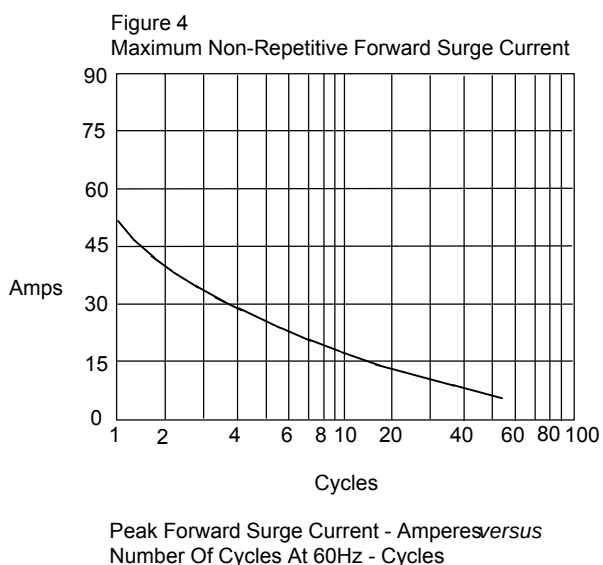
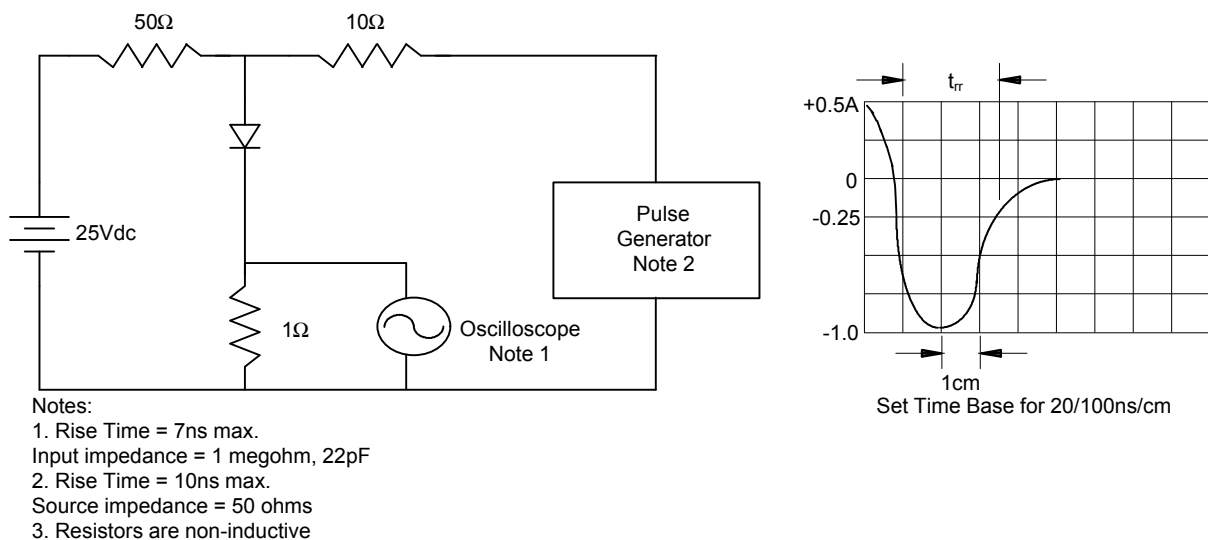


Figure 5  
Reverse Recovery Time Characteristic And Test Circuit Diagram





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## Ordering Information :

| Device         | Packing               |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

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