



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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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

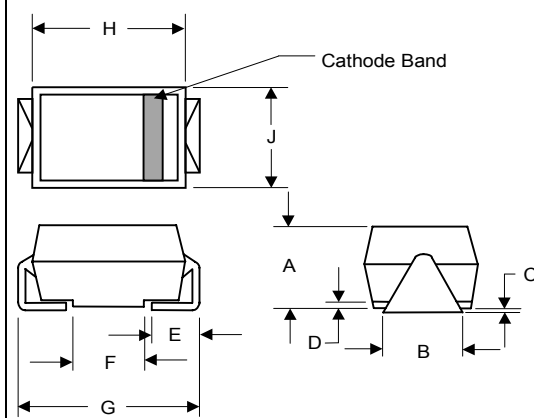
**2 Amp Fast Recovery
Silicon Rectifier
50 to 1000 Volts**

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 |

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

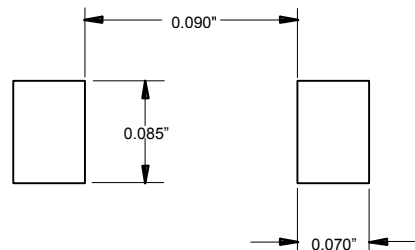


Electrical Characteristics @ 25°C Unless Otherwise Specified

| Parameter | Symbol | Value | Conditions |
|---|-------------|--------------------------------------|---|
| 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 | $I_{FM} = 2.0A$; $T_J = 25^\circ\text{C}^*$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 5 μA 200 μA | $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$ |
| Maximum Reverse Recovery Time | T_{rr} | 150ns 250ns 500ns | $I_F=0.5A, I_R=1.0A,$ $I_{rr}=0.25A$ |
| Typical Junction Capacitance | C_J | 40pF | Measured at 1.0MHz, $V_R=4.0V$ |

| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|------|------|------|------|
| | INCHES | | MM | | |
| 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

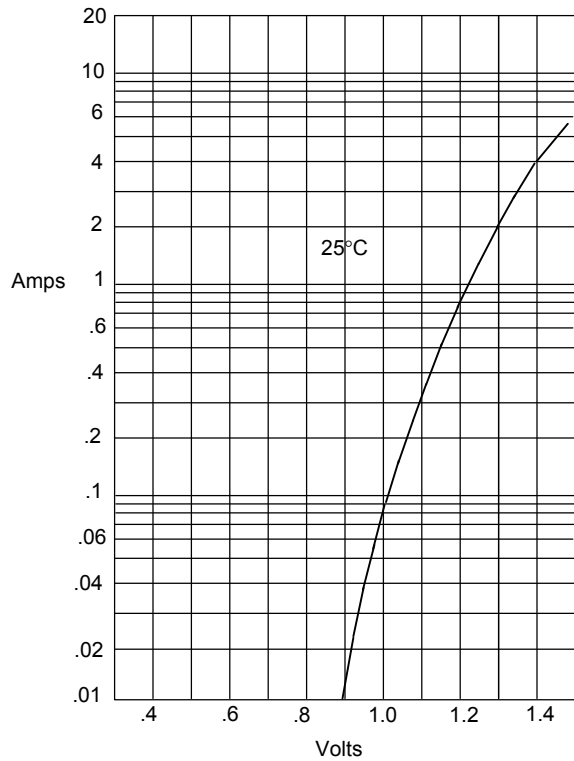


*Pulse test: Pulse width 300 μsec , Duty cycle 1%

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

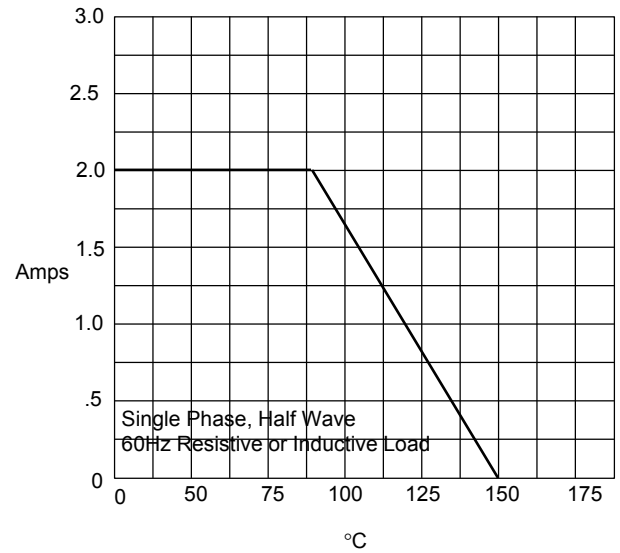
FR2A thru FR2M

Figure 1
Typical Forward Characteristics



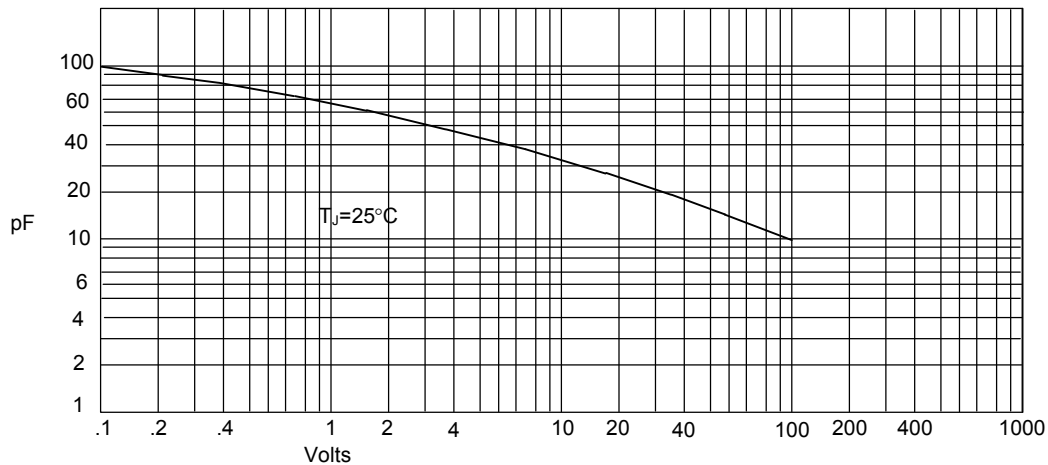
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



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

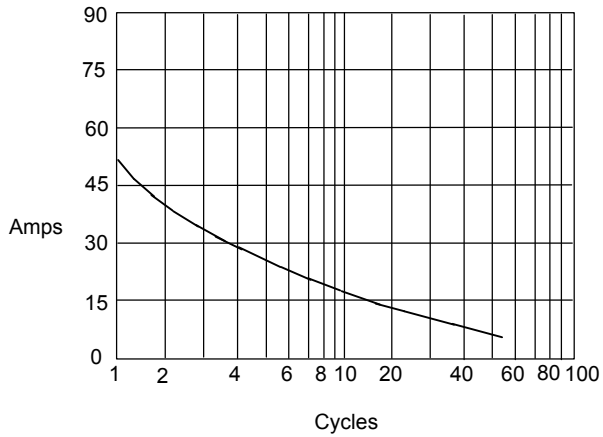
Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

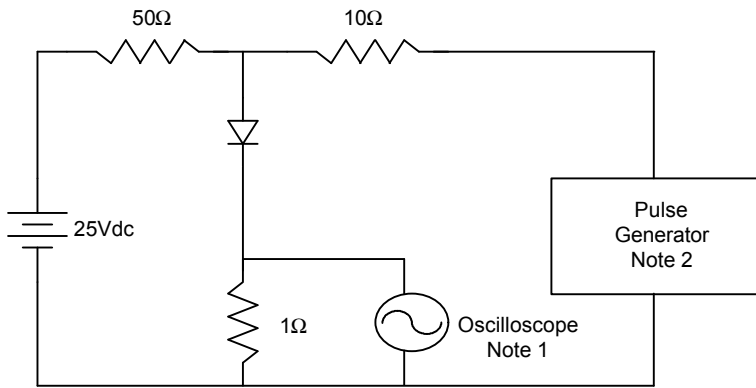
FR2A thru FR2M

Figure 4
Maximum Non-Repetitive Forward Surge Current

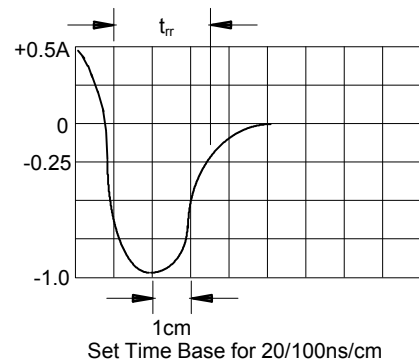


Peak Forward Surge Current - Amperes versus
Number Of Cycles At 60Hz - Cycles

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





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Ordering Information :

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

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