



Micro Commercial Components
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ER2A THRU ER2M

Features

- For Surface Mount Applications
- Extremely Low Thermal Resistance
- Easy Pick And Place
- High Temp Soldering: 250°C for 10 Seconds At Terminals
- Superfast Recovery Times For High Efficiency

2 Amp Super 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; 20°C/W Junction To Lead

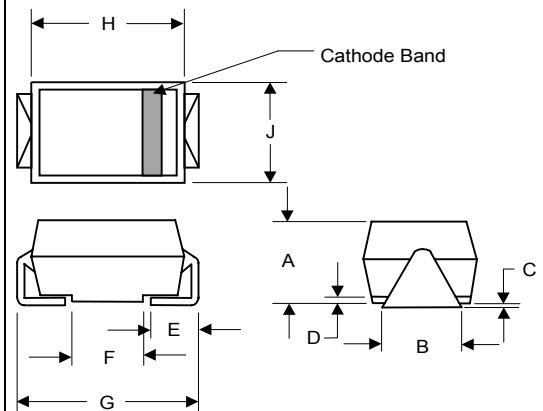
| MCC Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------|----------------|--|---------------------|-----------------------------|
| ER2A | ER2A | 50V | 35V | 50V |
| ER2B | ER2B | 100V | 70V | 100V |
| ER2C | ER2C | 150V | 105V | 150V |
| ER2D | ER2D | 200V | 140V | 200V |
| ER2G | ER2G | 400V | 280V | 400V |
| ER2J | ER2J | 600V | 420V | 600V |
| ER2K | ER2K | 800V | 560V | 800V |
| ER2M | ER2M | 1000V | 700V | 1000V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|--------------------------------------|---|
| Average Forward Current | $I_{F(AV)}$ | 2.0A | $T_J = 75^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 50A | 8.3ms, half sine |
| Maximum Instantaneous Forward Voltage | V_F | .975V 1.35V 1.60V | $I_{FM} = 2.0A$; $T_J = 25^\circ\text{C}^*$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 5 μA 150 μA | $T_J = 25^\circ\text{C}$ $T_J = 100^\circ\text{C}$ |
| Maximum Reverse Recovery Time | T_{rr} | 50ns 60ns 100ns | $I_F=0.5A, I_R=1.0A,$ $I_{rr}=0.25A$ |
| Typical Junction Capacitance | C_J | 25pF | Measured at 1.0MHz, $V_R=4.0V$ |

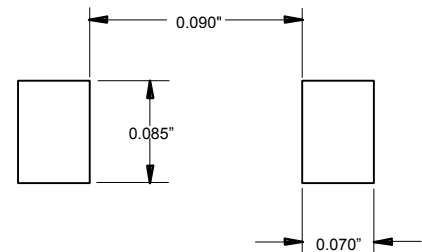
*Pulse test: Pulse width 200 μsec , Duty cycle 2%

DO-214AA (SMBJ) (Round Lead)



| 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 | |

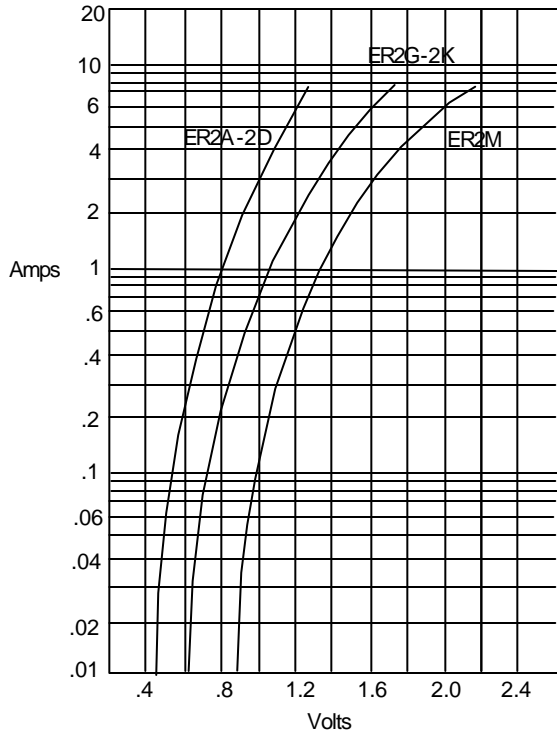
SUGGESTED SOLDER PAD LAYOUT



ER2A thru ER2M

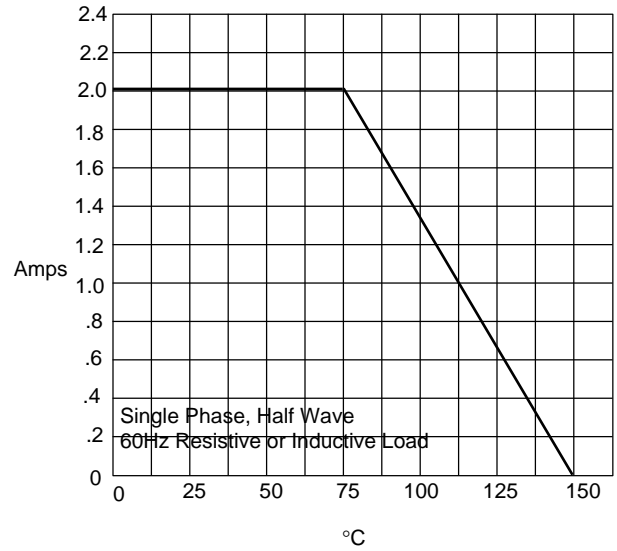


Figure 1
Typical Forward Characteristics



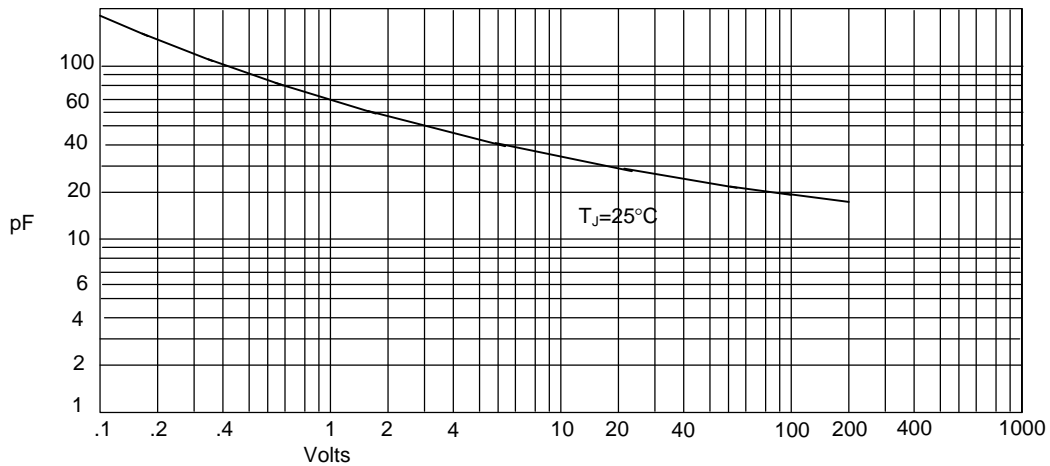
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



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

Figure 3
Junction Capacitance

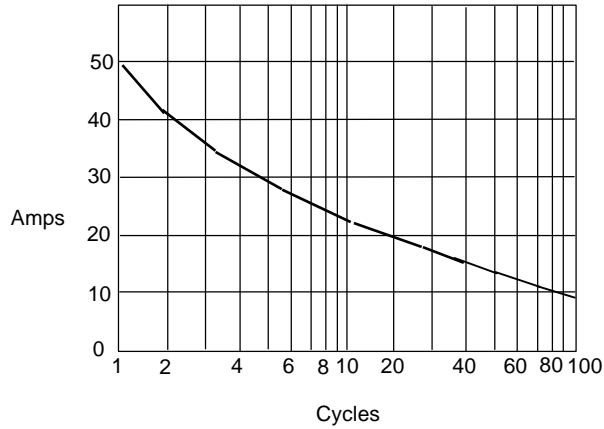


Junction Capacitance - pF *versus*
Reverse Voltage - Volts

ER2A thru ER2M



Figure 4
Peak Forward Surge Current



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

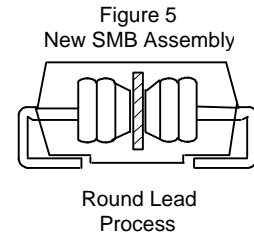
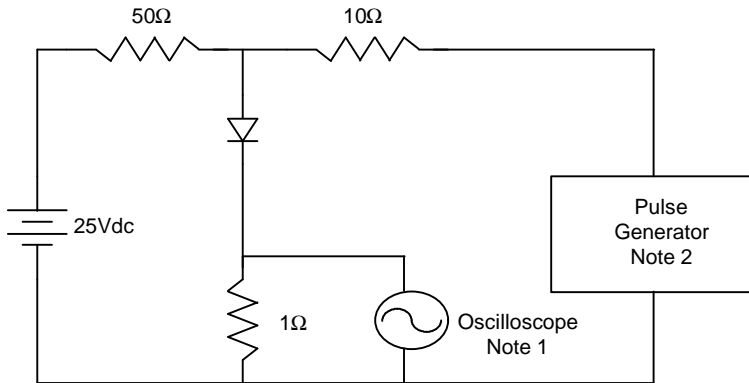


Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



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

