

## S2A-L THRU S2M-L

### Features

- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- High Current Capability
- Low Forward Voltage Drop.
- For Surface Mount Applications
- High Temp Soldering: 260°C for 10 Seconds At Terminals
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

### Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Typical Thermal Resistance; 20°C/W Junction To Lead

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|----------------------------------------|---------------------|-----------------------------|
| S2A-L           | S2A            | 50V                                    | 35V                 | 50V                         |
| S2B-L           | S2B            | 100V                                   | 70V                 | 100V                        |
| S2D-L           | S2D            | 200V                                   | 140V                | 200V                        |
| S2G-L           | S2G            | 400V                                   | 280V                | 400V                        |
| S2J-L           | S2J            | 600V                                   | 420V                | 600V                        |
| S2K-L           | S2K            | 800V                                   | 560V                | 800V                        |
| S2M-L           | S2M            | 1000V                                  | 700V                | 1000V                       |

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

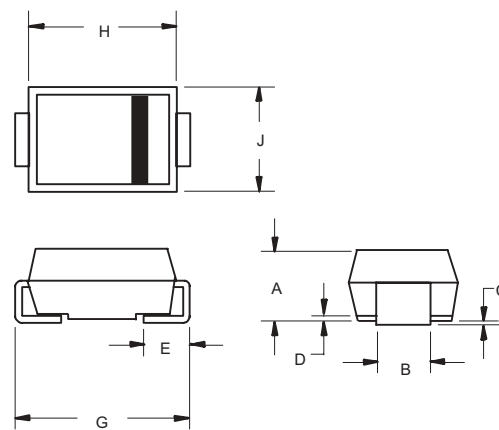
|                                                         |             |                                        |                                                       |
|---------------------------------------------------------|-------------|----------------------------------------|-------------------------------------------------------|
| Average Forward current                                 | $I_{F(AV)}$ | 2.0A                                   | $T_L = 100^\circ\text{C}$                             |
| Peak Forward Surge Current                              | $I_{FSM}$   | 50A                                    | 8.3ms, half sine wave                                 |
| Maximum Instantaneous Forward Voltage                   | $V_F$       | 1.15V                                  | $I_{FM} = 2.0A$ ;<br>$T_J = 25^\circ\text{C}^*$       |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 5.0 $\mu\text{A}$<br>125 $\mu\text{A}$ | $T_J = 25^\circ\text{C}$<br>$T_J = 125^\circ\text{C}$ |
| Typical Junction Capacitance                            | $C_J$       | 20pF                                   | Measured at 1.0MHz, $V_R = 4.0V$                      |

\*Pulse test: Pulse width 300  $\mu\text{sec}$ , Duty cycle 2%

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

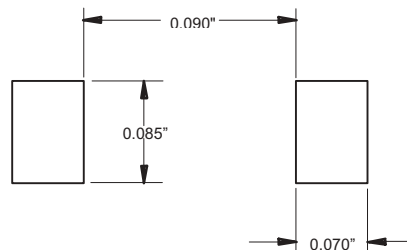
## 2.0 Amp Glass Passivated Silicon Rectifier 50 to 1000 Volts

### DO-214AA (SMB) (Lead Frame)



| DIM | INCHES |      | MM   |      | NOTE |
|-----|--------|------|------|------|------|
|     | MIN    | MAX  | MIN  | MAX  |      |
| A   | .075   | .095 | 1.91 | 2.41 |      |
| B   | .077   | .083 | 1.96 | 2.10 |      |
| C   | .002   | .008 | .05  | .20  |      |
| D   | ----   | .02  | ---- | .51  |      |
| E   | .030   | .060 | .76  | 1.52 |      |
| G   | .200   | .220 | 5.08 | 5.59 |      |
| H   | .160   | .187 | 4.06 | 4.75 |      |
| J   | .130   | .155 | 3.30 | 3.94 |      |

### SUGGESTED SOLDER PAD LAYOUT

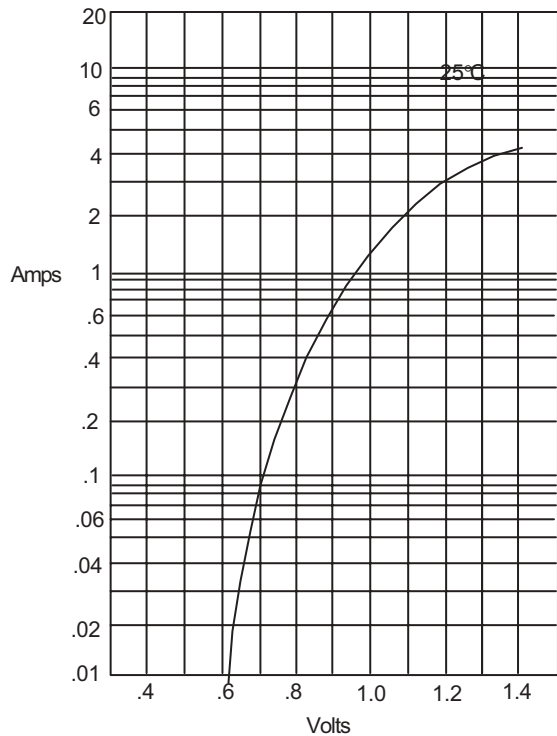


# S2A-L thru S2M-L



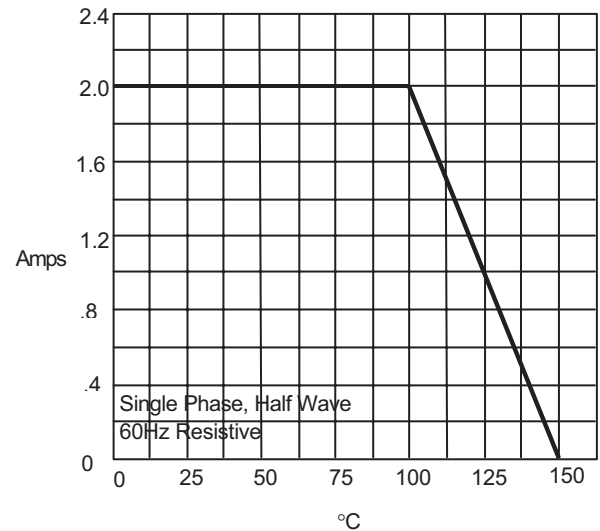
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Figure 1  
Typical Forward Characteristics



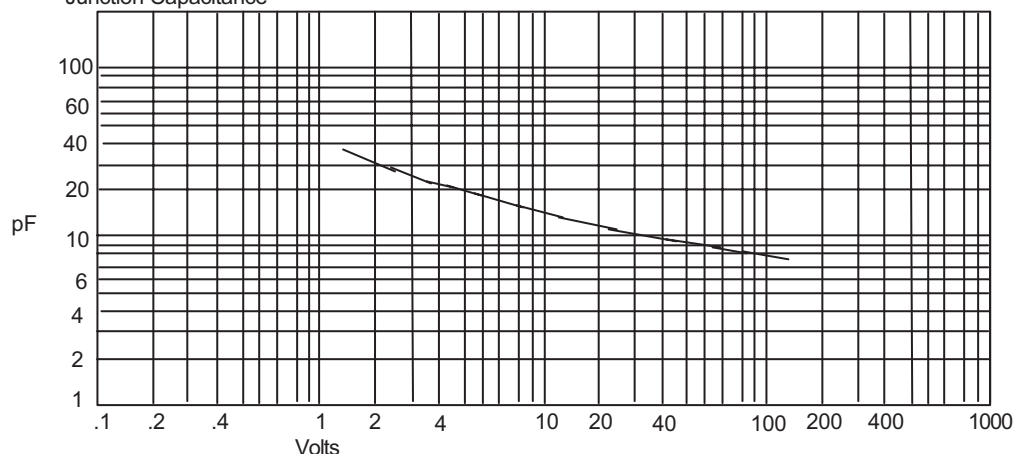
Instantaneous Forward Current - Amperes *versus*  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



Average Forward Rectified Current - Amperes  
*versus*

Figure 3  
Junction Capacitance

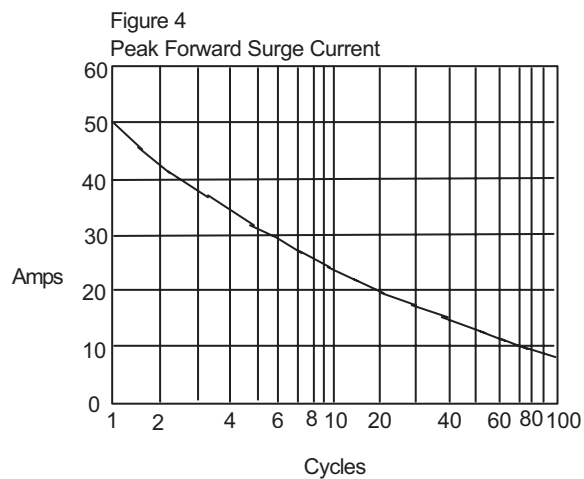


Junction Capacitance - pF *versus*  
Reverse Junction Potential (Applied V + 0.7 Volts) - Volts

## S2A-L thru S2M-L



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

## Ordering Information :

| Device          | Packing               |
|-----------------|-----------------------|
| S2A-LTP~S2M-LTP | Tape&Reel: 3Kpcs/Reel |

Note : Adding "-HF" suffix for halogen free, eg. S2A-LTP-HF~S2M-LTP-HF

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