

1.5A Surface Mount Rectifier

Features

- Low profile surface mounted package
- Ideal for automated placement
- Glass passivated chip junction
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering: 250 °C / 10 seconds at terminals
- RoHS compliant



DO-214AA
(SMB)



Mechanical Data

| | |
|-------------------|--|
| Case: | JEDEC DO-214AA (SMB) molded plastic |
| Epoxy: | Plastic package has UL flammability classification 94V-0 |
| Terminals: | Solder plated, solderable per MIL-STD-750, Method 2026 |
| Polarity: | Color band denotes cathode end |
| Weight: | 0.003 ounce, 0.093 gram |

Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted)

| Symbol | Description | S2A | S2B | S2D | S2G | S2J | S2K | S2M | Unit | Conditions |
|-----------------|--|------------|-----|-----|-----|-----|-----|------|------|---|
| VRRM | Maximum Repetitive Peak Reverse Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| VRMS | Maximum RMS Voltage | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V | |
| VDC | Maximum DC Blocking Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| IF(AV) | Maximum Average Forward Rectified Current | 1.5 | | | | | | | A | TL=100°C |
| IFSM | Peak Forward Surge Current | 50 | | | | | | | A | 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) |
| TJ, TSTG | Operating Junction and Storage Temperature Range | -55 to 150 | | | | | | | °C | |

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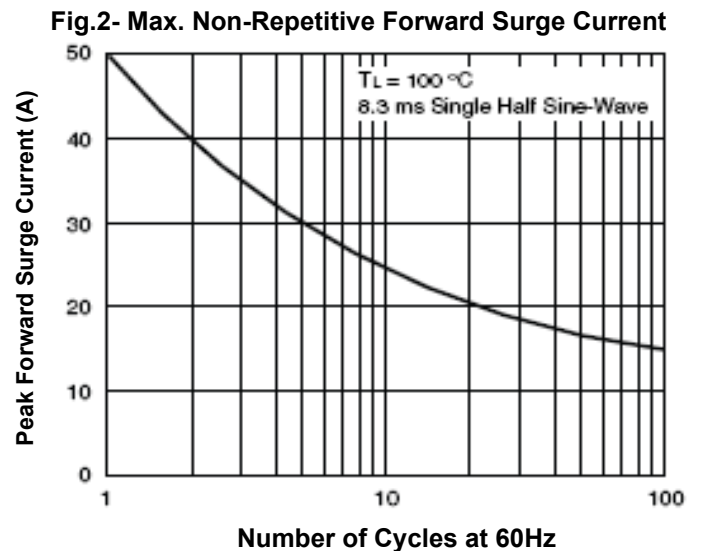
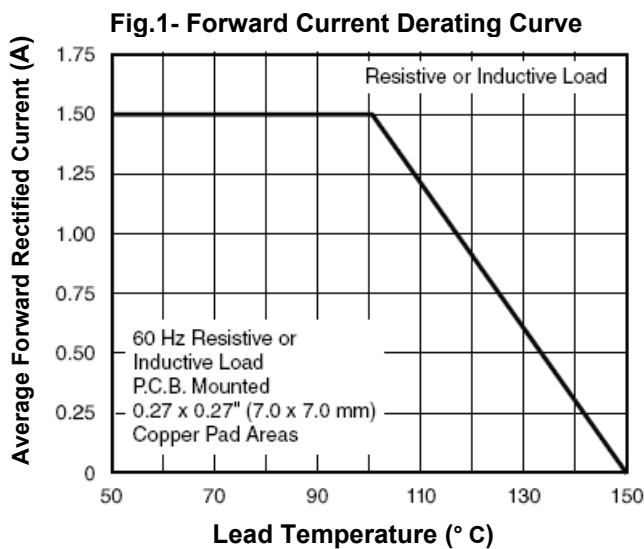
S2A - S2M

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted)

| Symbol | Description | S2A | S2B | S2D | S2G | S2J | S2K | S2M | Unit | Conditions |
|-----------------|---|-----|-----|-----|-----|-----|-----|-----|---------------|------------------------------------|
| V_F | Maximum Instantaneous Forward Voltage | 1.1 | | | | | | | V | $I_F=1.5 A$ |
| I_R | Maximum DC Reverse Current at Rated DC Blocking Voltage | 1.0 | | | | | | | μA | $T_A=25^{\circ}C$ |
| | | 125 | | | | | | | | $T_A=125^{\circ}C$ |
| T_{rr} | Typical Reverse Recovery Time | 2.0 | | | | | | | μS | $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$ |
| C_J | Typical Junction Capacitance | 30 | | | | | | | pF | $V_R=4V, f=1MHz$ |
| $R_{\theta-JA}$ | Typical Thermal Resistance | 53 | | | | | | | $^{\circ}C/W$ | Note 1 |
| $R_{\theta-JL}$ | | 16 | | | | | | | | |

- Note:** (1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3 x 0.3" (8.0 x 8.0mm) copper pad areas.
- (2) Single phase half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Typical Characteristics Curves



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S2A - S2M

Fig.3- Typical Instantaneous Forward Characteristics

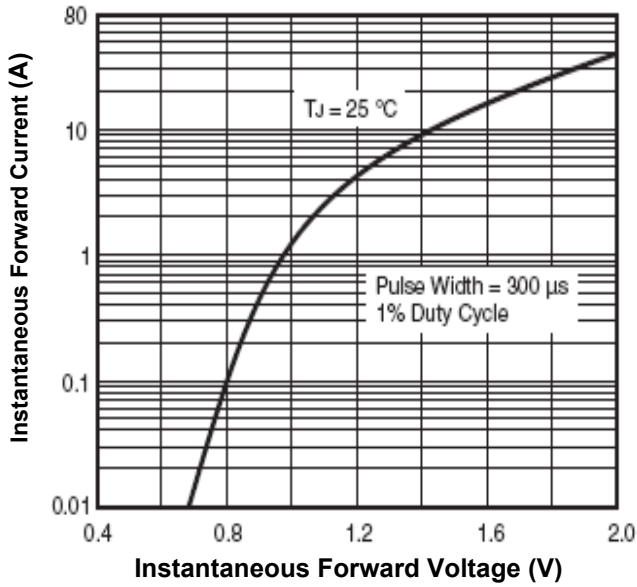


Fig.4- Typical Reverse Characteristics

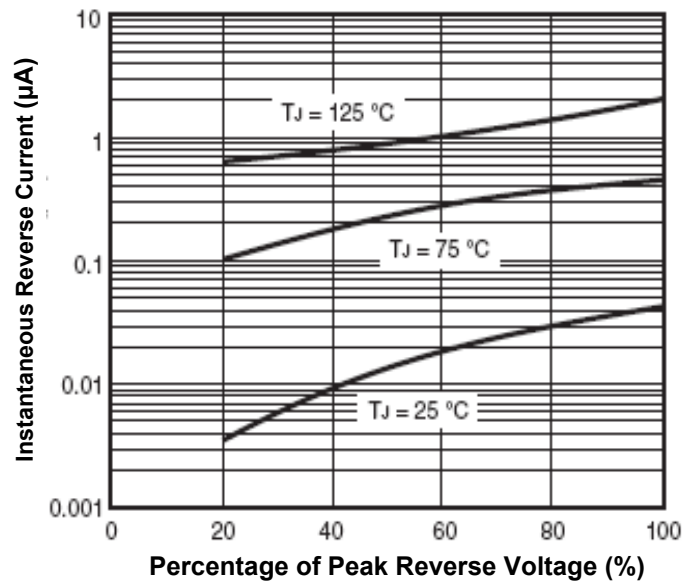
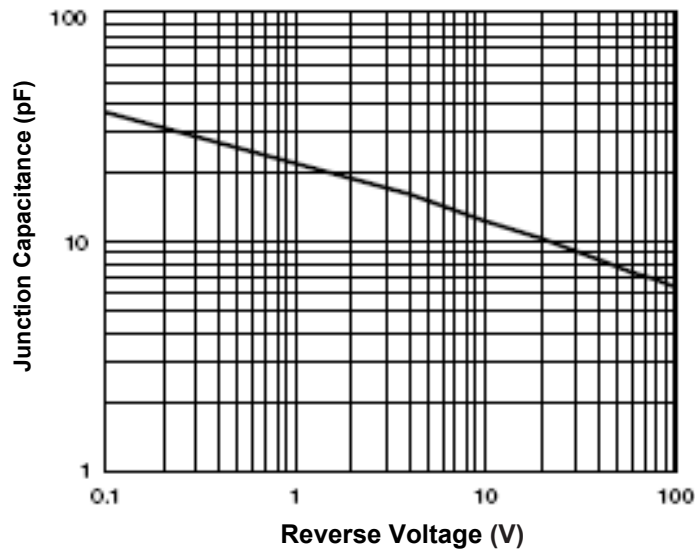


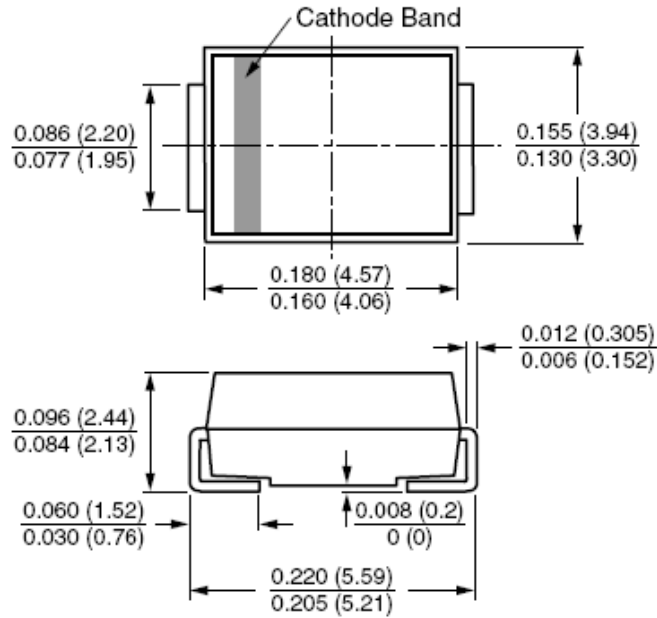
Fig.5- Junction Capacitance



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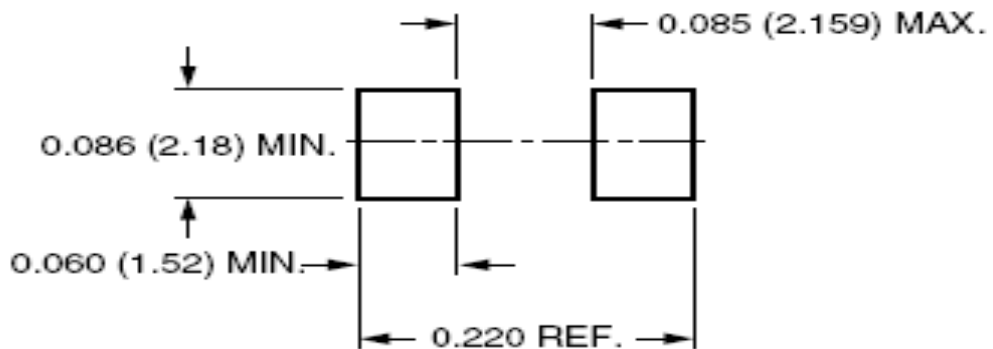
S2A - S2M

Dimensions in inch (mm)



DO-214AA
(SMB)

Mounting Pad Layout in inch (mm)



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