



S2A thru S2Y



General Purpose Rectifiers Glass Passivation Junction



DO-214AA(SMB)

| Primary Characteristics | | |
|-------------------------|-------------|----|
| I_F | 2 | A |
| V_{RRM} | 50~2000 | V |
| I_{FSM} | 60 | A |
| V_F | 1.1、1.2、1.3 | V |
| T_J max | 175 | °C |

| Features |
|---|
| <ul style="list-style-type: none"> • High current capability • High surge current capability • Low reverse current • Component in accordance to RoHS 2002/95/EC |

| Mechanical Data |
|---|
| • Cases: DO-214AA(SMB) |
| • Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 |
| • Terminals: Lead free Plating (Tin Finish) Solderable per MIL-STD-202, Method 208 |
| • Polarity: Cathode Band |
| • Weight: 0.095 grams (approximate) |

| Ordering Information | | | |
|----------------------|--------------------|---------|--------------------|
| Part No. | Remark | Package | Packing |
| S2x | General | SMB | 3000 / Tape & Reel |
| S2x-H | Halogen Free | | |
| S2x-Q | AEC-Q101 qualified | | |

| Maximum Ratings (TA=25°C unless otherwise noted) | | | | | | | | | | | | | | |
|--|-----------------|-------------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|
| PARAMETER | SYMBOL | S2A | S2B | S2D | S2G | S2J | S2K | S2M | S2T | S2W | S2X | S2Y | UNIT | |
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | 1300 | 1600 | 1800 | 2000 | V | |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | 910 | 1120 | 1260 | 1400 | V | |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | 1300 | 1600 | 1800 | 2000 | V | |
| Maximum average forward rectified current | I_F | 2 | | | | | | | | | | | A | |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load | I_{FSM} | 60 | | | | | | | | | | | A | |
| Maximum Instantaneous Forward Voltage IF=2A @ 25°C | V_F | 1.1 | | | | | | | | 1.2 | | 1.3 | | V |
| Maximum DC Reverse Current @ TA=25°C at Rated DC Blocking Voltage @ TA=100°C | I_R | 5 | | | | | | | | 100 | | | | uA |
| Typical Junction Capacitance(NOTE1) | C_j | 10 | | | | | | | | | | | | pF |
| Typical Thermal Resistance | $R_{\theta JC}$ | 40 | | | | | | | | | | | | °C/W |
| Operating Temperature Range | T_J | -55 to +175 | | | | | | | | | | | °C | |
| Storage Temperature Range | T_{STG} | -55 to +175 | | | | | | | | | | | °C | |
| Marking Code | | S2A | S2B | S2D | S2G | S2J | S2K | S2M | S2T | S2W | S2X | S2Y | | |

NOTES:

1. Measured at 1.0MHZ and applied reverse voltage of 4.0V DC



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Rating and Characteristics Curvers

FIG. 1-Typical Forward Current Derating Curve

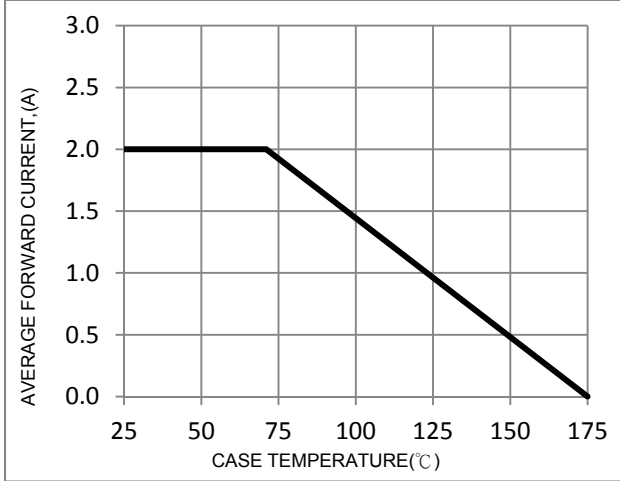


FIG. 2-Typical Forward Characteristics

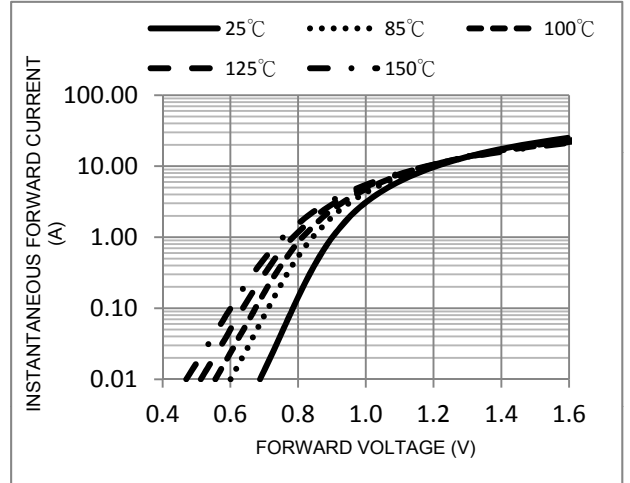


FIG. 3-Maximum Non-Repetitive Forward Surge Current

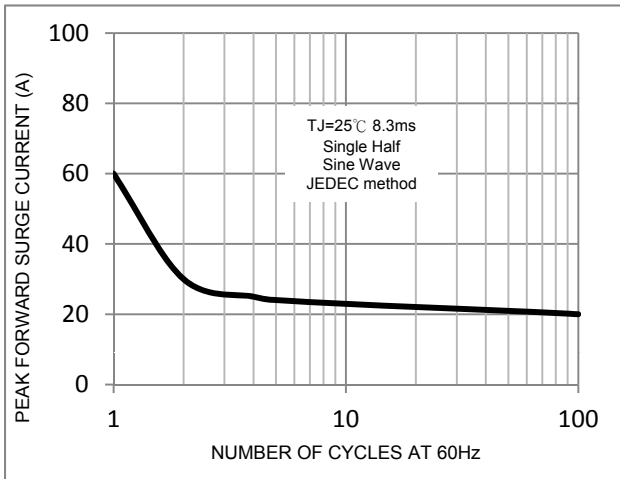


FIG. 4-Typical Reverse Characteristics

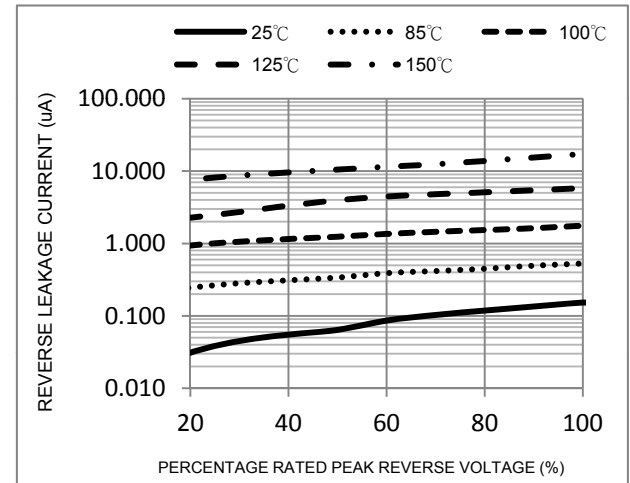
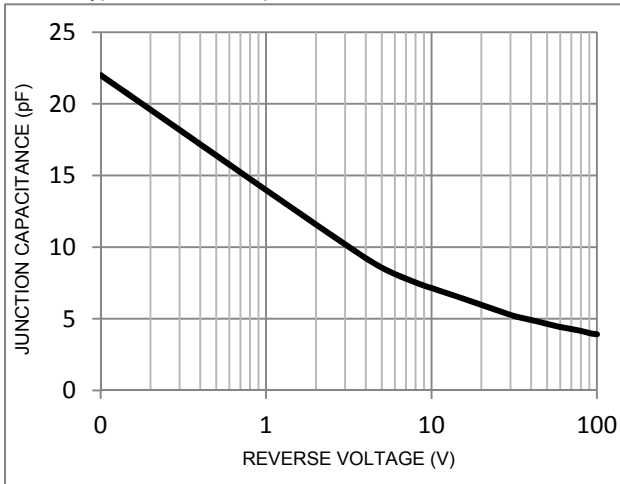


FIG. 5-Typical Junction Capacitance



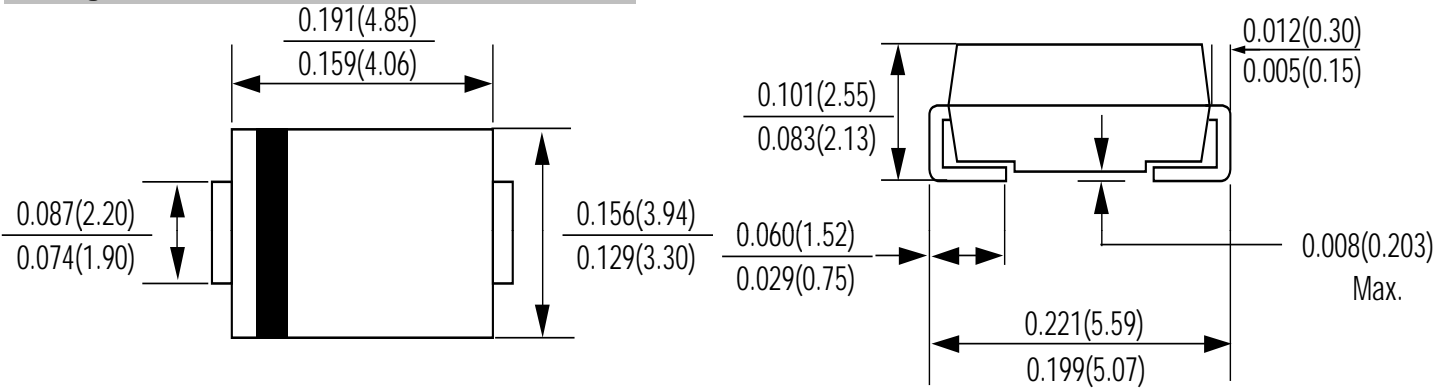


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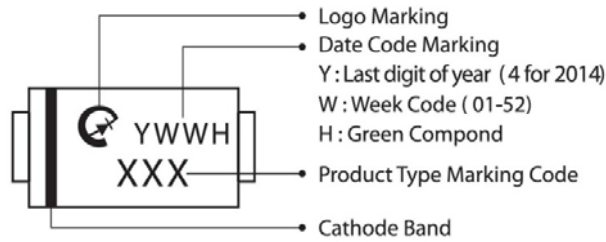
Package Outline Dimensions



DO-214AA(SMB)

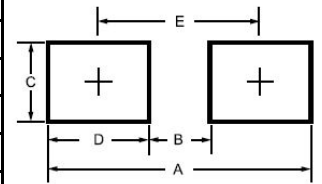
Dimensions in inches and (millimeters)

Marking Information



Suggested Pad Layout

| Dimension | Outline | SMB (DO-214AA) |
|-----------|---------|----------------|
| A | | 6.80 |
| B | | 1.80 |
| C | | 2.30 |
| D | | 2.50 |
| E | | 4.30 |



Tap & Reel Specification

| ITEM | SYMBOL | SMB(mm) DO-214AA |
|------------------------|--------|---------------------|
| Carrier width | A | 4.0(max) |
| Carrier length | B | 5.9(max) |
| Carrier depth | C | 3.0(max) |
| Sprocket hole | d | 1.50±0.1 |
| Reel outside diameter | D | 330±2.0 |
| Feed hole diameter | D0 | 13.5±1 |
| Reel inner diameter | D1 | 50 (min.) |
| Sprocket hole position | E | 1.75±0.1 |
| Punch hole position | F | 5.5±0.05 |
| Sprocket hole pitch | P | 8.0±0.1 |
| Sprocket hole pitch | Po | 4.0±0.1 |
| Embossment center | P1 | 2.0±0.05 |
| Overall tape thickness | T | 0.6 (max) |
| Tape width | W | 12.0±0.3 |
| Reel width | W2 | 18.4 (max) |
| Reel width | W1 | 14.4 (max) |

