



SS32L THRU SS3150L

VOLTAGE RANGE

20 to 150 Volts

CURRENT

3.0 Ampere



Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 260 C/10 seconds at terminals



DO-214AA (SMB J-Bend)

Mechanical Data

- Case: Transfer molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead :Solder plated, solderable per MIL-STD-750 method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.003ounce, 0.093 gram

Maximum Ratings and Electrical Characteristics

- Ratings at 25°C ambient temperature unless otherwise specified
- Single phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

| TYPE NUMBER | SYMBOL | SS 32L | SS 34L | SS 35L | SS 36L | SS 38L | SS 310L | SS 3150L | UNIT |
|--|---------------------------|-------------|--------|--------|--------|--------|---------|----------|---------------------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 20 | 40 | 50 | 60 | 80 | 100 | 150 | Volts |
| Maximum RMS Voltage | V_{RMS} | 14 | 28 | 35 | 42 | 56 | 70 | 105 | Volts |
| Maximum DC Blocking Voltage | V_{DC} | 20 | 40 | 50 | 60 | 80 | 100 | 150 | Volts |
| Maximum Average Forward Rectified Current at T_l , see figure 1 $T_l = 100^\circ\text{C}$ | $I_{(AV)}$ | 3.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 80 | | | | | | | Amps |
| Maximum Instantaneous Forward Voltage @ 3.0A ^(Note1) | V_F | 0.45 | 0.55 | | 0.70 | | 0.78 | | Volts |
| Maximum DC Reverse Current at rated DC Blocking Voltage per element | $T_A = 25^\circ\text{C}$ | 0.5 | | | 0.3 | | | | mA |
| | $T_A = 125^\circ\text{C}$ | 20 | | | 10 | | | | |
| Typical Thermal Resistance ^(Note 2) | $R_{\theta JA}$ | 50 | | | | | | | $^\circ\text{C}/\text{W}$ |
| | $R_{\theta JL}$ | 15 | | | | | | | |
| Diode junction capacitance ^(Note 3) | C_j | 200 | | | | | | | pF |
| Operating and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | | | | | | | $^\circ\text{C}$ |

Notes:

1. Pulse test: 300 μs pulse width, 1% duty cycle.
2. Thermal resistance from Junction to ambient and from junction to lead mounted on PCB. with 0.3 \times 0.3"(8.0 \times 8.0mm) copper pad areas.
3. $f=1\text{MHz}$ and applied 4V DC reverse voltage.

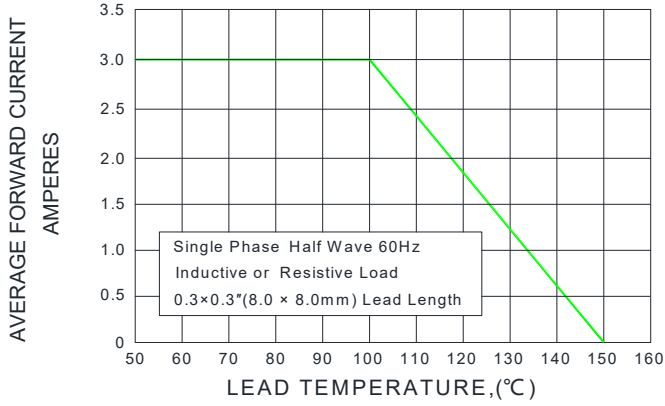


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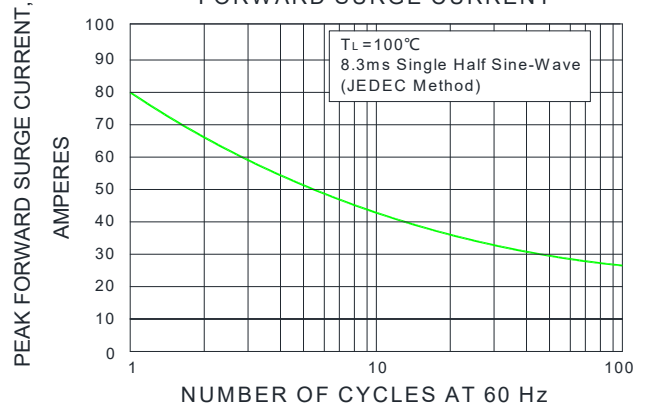
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Ratings and Characteristic Curves ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

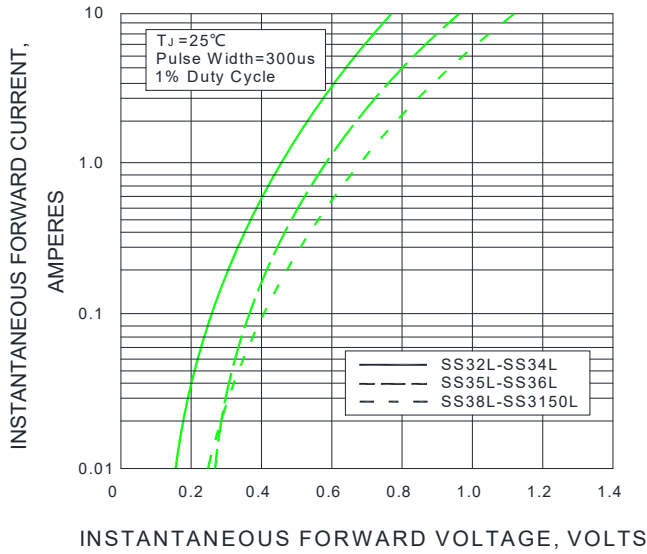
F1G.1-FORWARD CURRENT DERATING CURVE



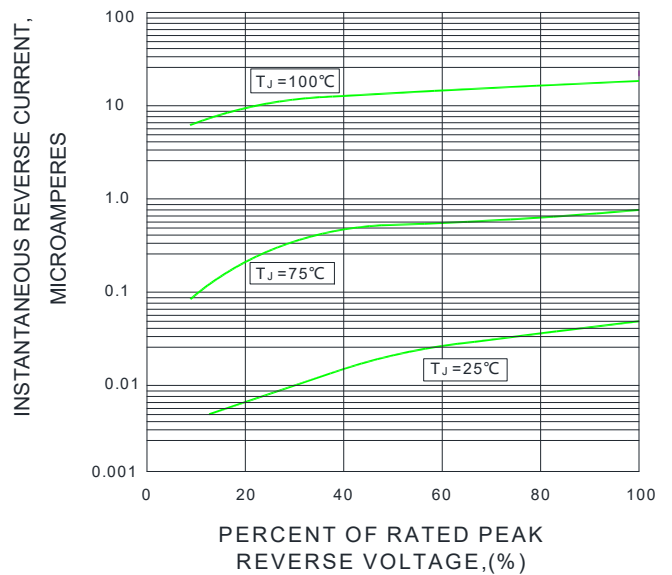
F1G.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



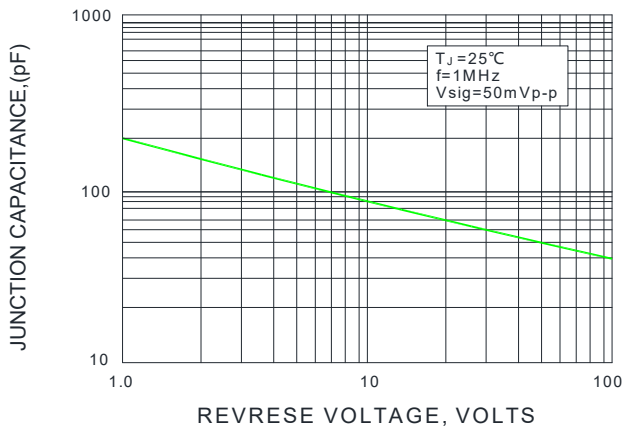
F1G.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



F1G.4-TYPICAL REVERSE CHARACTERISTICS



F1G.5-TYPICAL JUNCTION CAPACITANCE

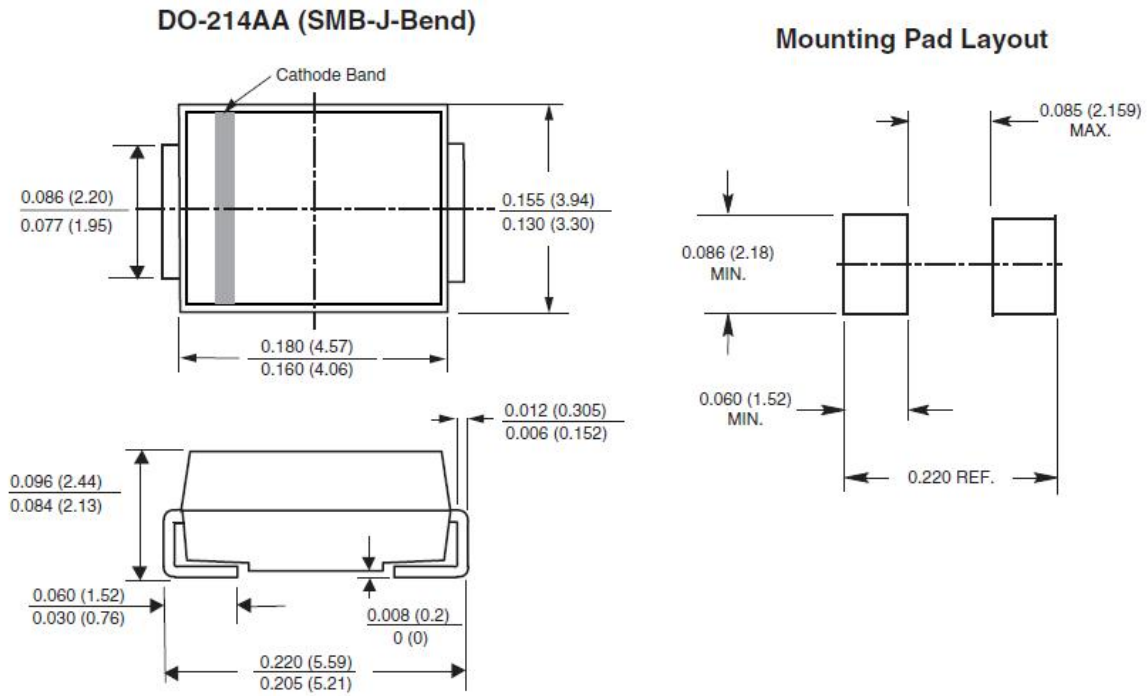




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Package Outline Dimensions in inches (millimeters)





SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

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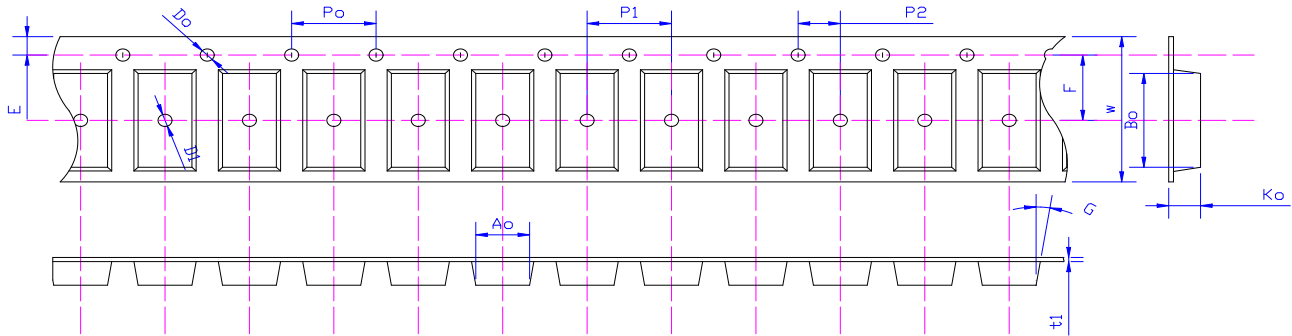
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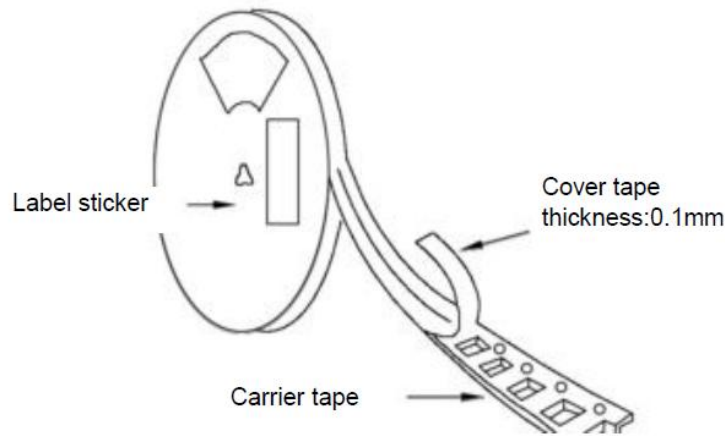
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Package Reel Information



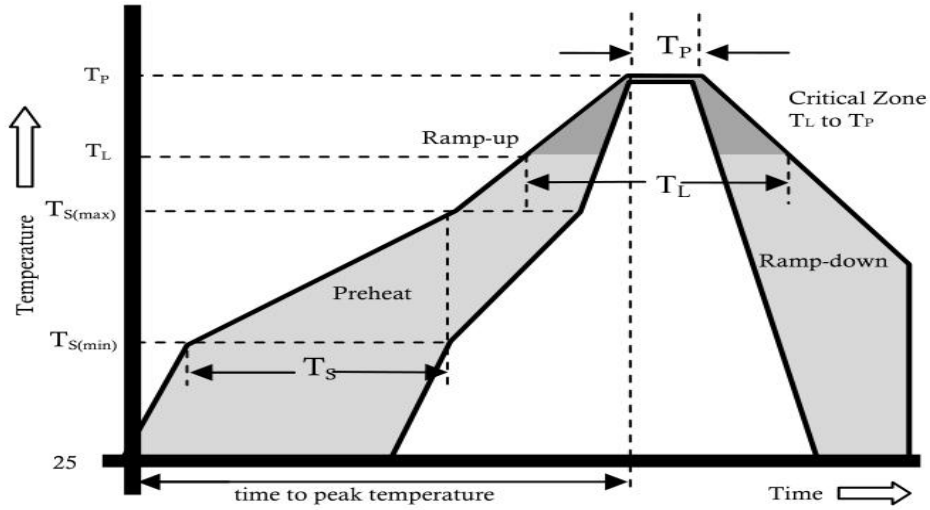
| Specifications | Ao | Bo | Ko | Po | W | t1 |
|----------------|-----------|-----------|-----------|----------|-----------|-----------|
| SMB | 3.77±0.10 | 5.70±0.10 | 2.67±0.10 | 4.00±0.1 | 12.0±0.05 | 0.23±0.02 |



| DEVICE TYPE | Tape Width | 13"Reel | | | 07"Reel | | | |
|-------------|------------|----------------|-------------|------------------|----------------|----------|-------------|------------------|
| | | Q'TY/REEL(pcs) | BOX/CARTOON | Q'TY/CARTON(pcs) | Q'TY/REEL(pcs) | REEL/BOX | BOX/CARTOON | Q'TY/CARTON(pcs) |
| SMB | 12mm | 3000 | 8 | 48000 | NA | NA | NA | NA |



Reflow Profile



| Reflow Condition | | Pb-Free Assembly |
|--|---------------------------------|------------------|
| Pre Heat | Temperature Min. | +150°C |
| | Temperature Max. | +200°C |
| | Time(Min to Max) | 60-180 secs. |
| Average ramp up rate(Liquidus Temp(T_L) to peak) | | 3°C/sec. Max. |
| T_S (max) to T_L - Ramp-up Rate | | 3°C/sec. Max. |
| Reflow | Temperature (T_L)(Liquidus) | +217°C |
| | Temperature (T_L) | 60-150 secs. |
| Peak Temp (T_P) | | +(260+0/-5)°C |
| Time within 5°C of actual Peak Temp (T_P) | | 25 secs. |
| Ramp-down Rate | | 6°C/sec. Max. |
| Time 25°C to peak Temp (T_P) | | 8 min. Max. |
| Do not exceed | | +260°C |



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Disclaimer

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