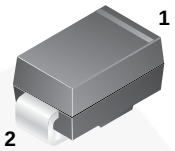
August 2015

# SSA24
# Surface Mount Schottky Barrier Rectifier

## Features

- UL Flammability 94V-0 Classification
- MSL 1
- RoHS Compliant / Green Mold Compound
- Industrial Device Qualified per AEC-Q101 Standards.
  * see authorized use policy




**SMA/DO-214AC**

COLOR BAND DENOTES CATHODE


## Ordering Information

| Part Number | Top Mark | Package | Packing Method |
|---|---|---|---|
| SSA24 | SSA24 | DO-214AC (SMA) | Tape and Reel |

## Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_A$ = 25°C unless otherwise noted.

| Symbol | Parameter | Value | Unit |
|---|---|---|---|
| $V_{RRM}$ | Recurrent Peak Reverse Voltage | 40 | V |
| $V_{RMS}$ | RMS Voltage | 28 | V |
| $V_{DC}$ | DC Blocking Voltage | 40 | V |
| $I_{F(AV)}$ | Average Forward Current at $T_L$ = 75°C | 2 | A |
| $I_{FSM}$ | Peak Forward Surge Current: 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) | 50 | A |
| $T_J$ | Operating Junction Temperature Range | -55 to +150 | °C |
| $T_{STG}$ | Storage Temperature Range | -55 to +150 | °C |

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## Thermal Characteristics

Values are at $T_A$ = 25°C unless otherwise noted.

| Symbol | Parameter | Value | Unit |
|---|---|---|---|
| $\psi_{JL}$ | Typical Thermal Characteristics, Junction-to-Lead(1) | 20 | °C/W |
| $R_{\theta JA}$ | Typical Thermal Resistance, Junction-to-Ambient(1) | 75 | °C/W |

**Note:**

1. Mounted on P.C.Board with 8mm$^2$ (0.013 mm thick) copper pad areas.

## Electrical Characteristics

Values are at $T_A$ = 25°C unless otherwise noted.

| Symbol | Parameter | Conditions | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| $V_F$ | Forward Voltage(2) | $I_F$ = 2.0 A | | | 0.5 | V |
| $I_R$ | DC Reverse Current | $V_R$ = 40 V | | | 0.2 | mA |
| | | $V_R$ = 40 V, $T_A$ = 100°C | | | 20 | |
| $T_{rr}$ | Reverse Recovery Time | $I_F$ = 0.5 A, $I_R$ = 1 A, $I_{rr}$ = 0.25 A | | 9.84 | | ns |

**Note:**

2. Pulse test with Pulse width = 300 μs, 1% duty cycle.

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## Typical Performance Characteristics

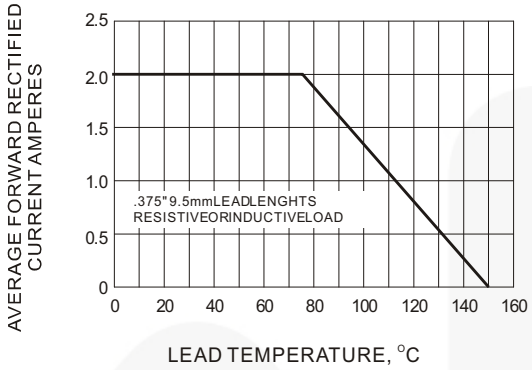


**Figure 1. Forward Current Derating Curve**

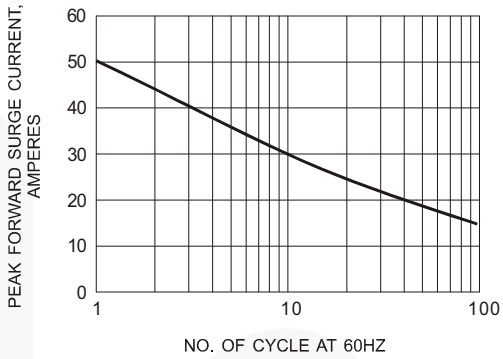


**Figure 2. Maximum Non-Repetitive Peak Forward Surge Current**

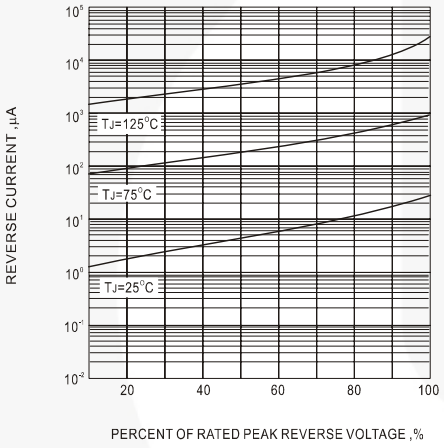


**Figure 3. Typical Reverse Characteristic**

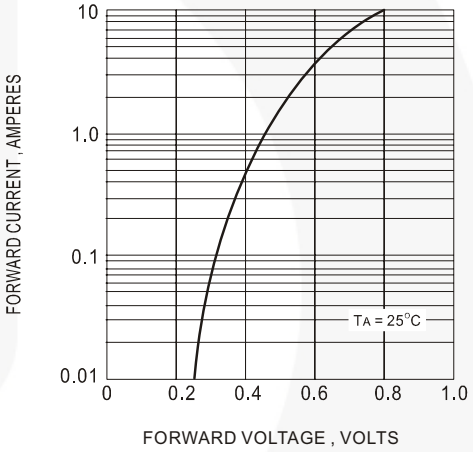


**Figure 4. Typical Instantaneous Forward Characteristics**

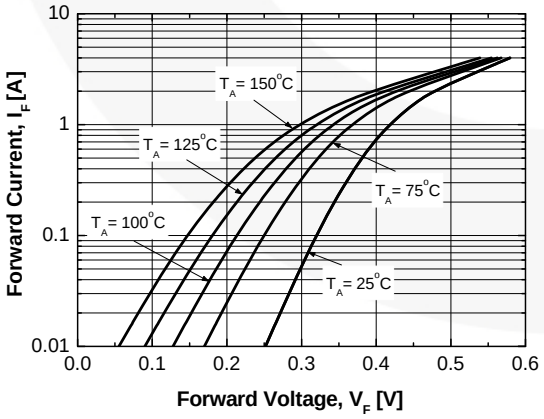


**Figure 5. Typical Forward Characteristics**

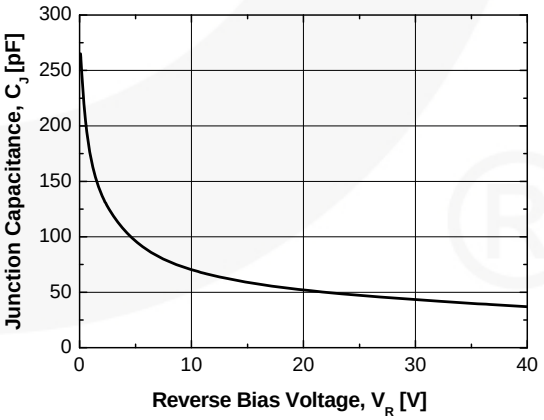


**Figure 6. Typical Junction Capacitance**



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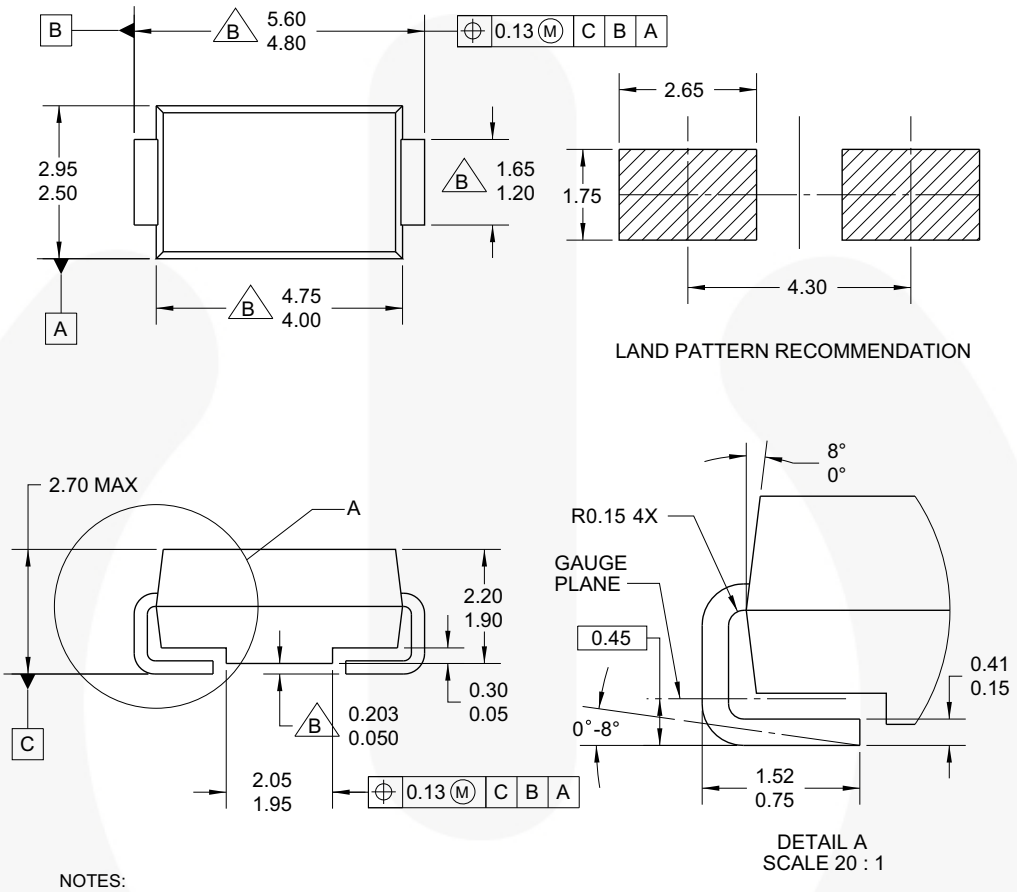
## Physical Dimensions




NOTES:

A. EXCEPT WHERE NOTED CONFORMS TO JEDEC DO214 VARIATION AC.
B. DOES NOT COMPLY JEDEC STD. VALUE.
C. ALL DIMENSIONS ARE IN MILLIMETERS.
D. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR PROTRUSIONS.
E. DIMENSION AND TOLERANCE AS PER ASME Y14.5-1994.
F. LAND PATTERN STD. DIOM5025X231M.
G. DRAWING FILE NAME: DO214ACREV1

**Figure 7. 2-LEAD, SMA, JEDEC DO-214, VARIATION AC**

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