

# Surface Mount Schottky Barrier Rectifier

## SSA36

### Features

- UL Flammability 94V-0 Classification
- MSL 1
- Green Mold Compound
- These Devices are Pb-Free and are RoHS Compliant

### ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

| Symbol      | Parameter                                                                           | Value       | Unit             |
|-------------|-------------------------------------------------------------------------------------|-------------|------------------|
| $V_{RRM}$   | Recurrent Peak Reverse Voltage                                                      | 60          | V                |
| $V_{RMS}$   | RMS Reverse Voltage                                                                 | 42          | V                |
| $V_{DC}$    | DC Blocking Voltage                                                                 | 60          | V                |
| $I_{F(AV)}$ | Average Rectified Current at $T_L = 75^\circ\text{C}$                               | 3           | A                |
| $I_{FSM}$   | Peak Forward Surge Current: 8.3 ms Single Half Sine-Wave Superimposed on Rated Load | 80          | A                |
| $T_J$       | Operating Junction Temperature Range                                                | -55 to +150 | $^\circ\text{C}$ |
| $T_{STG}$   | Storage Temperature Range                                                           | -55 to +150 | $^\circ\text{C}$ |

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

### THERMAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

| Symbol          | Parameter                                         | Value | Unit                      |
|-----------------|---------------------------------------------------|-------|---------------------------|
| $\Psi_{JL}$     | Junction-to-Lead Thermal Characteristics (Note 2) | 30    | $^\circ\text{C}/\text{W}$ |
| $R_{\theta JA}$ | Typical Thermal Resistance, Junction-to-Ambient   | 180   | $^\circ\text{C}/\text{W}$ |

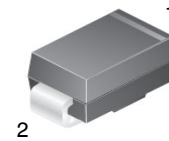
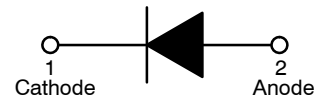
1. Per JESD51-3 recommended thermal test board. Device mounted on FR-4 PCB, board size = 76.2 mm x 114.3 mm.
2. Thermocouple soldered at cathode lead.

### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

| Symbol   | Parameter                | Conditions                                                     | Min | Typ   | Max  | Unit |
|----------|--------------------------|----------------------------------------------------------------|-----|-------|------|------|
| $V_F$    | Forward Voltage (Note 3) | $I_F = 3.0\text{ A}$                                           | –   | –     | 0.75 | V    |
| $I_R$    | DC Reverse Current       | $V_R = 60\text{ V}$                                            | –   | –     | 0.1  | mA   |
|          |                          | $V_R = 60\text{ V}, T_A = 100^\circ\text{C}$                   | –   | –     | 20   |      |
| $T_{rr}$ | Reverse Recovery Time    | $I_F = 0.5\text{ A}, I_R = 1\text{ A}, I_{rr} = 0.25\text{ A}$ | –   | 10.74 | –    | ns   |

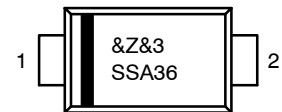
Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

3. Pulse test with Pulse width = 300  $\mu\text{s}$ , 1% duty cycle.



SMA  
CASE 403AE

### MARKING DIAGRAM



Color Band Denotes Cathode

&Z = Assembly Plant Code  
 &3 = 3-Digit Date code format (Year & Week)  
 SSA36 = Specific Device Code

### ORDERING INFORMATION

| Device | Package                          | Shipping <sup>†</sup> |
|--------|----------------------------------|-----------------------|
| SSA36  | SMA<br>(Pb-Free,<br>Halide Free) | 7500 /<br>Tape & Reel |

<sup>†</sup>For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, [BRD8011/D](http://BRD8011/D).

## TYPICAL PERFORMANCE CHARACTERISTICS

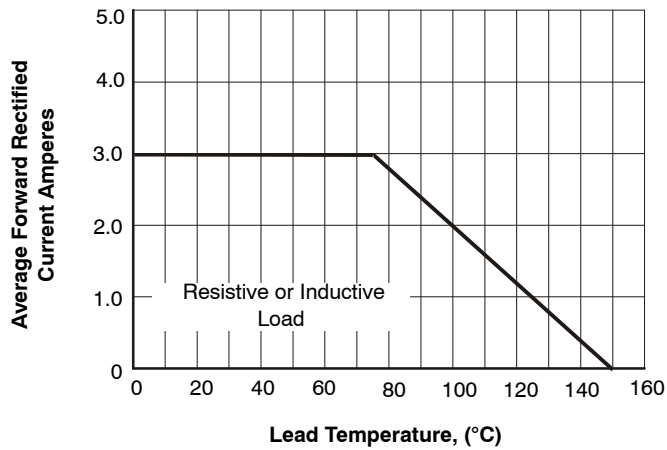


Figure 1. Forward Current Derating Curve

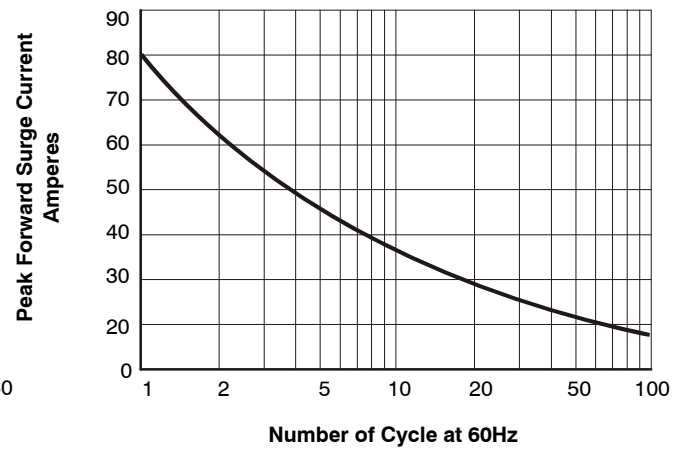


Figure 2. Maximum Non-Repetitive Surge Current

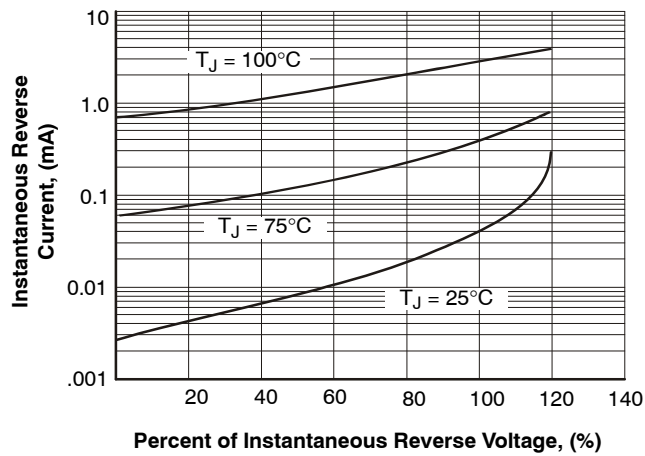


Figure 3. Typical Reverse Characteristic

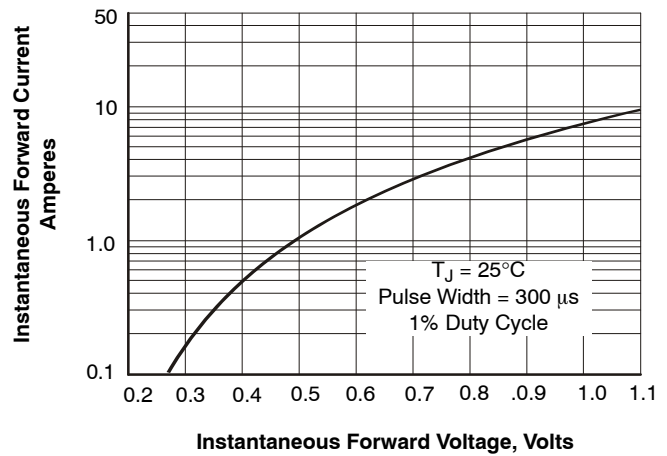


Figure 4. Typical Instantaneous Forward Characteristics

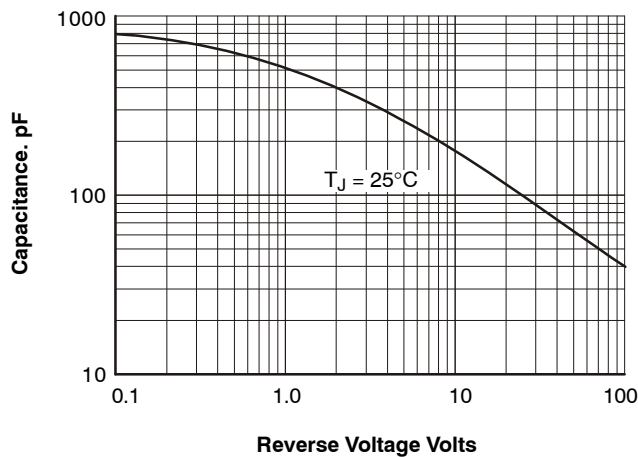


Figure 5. Typical Junction Capacitance

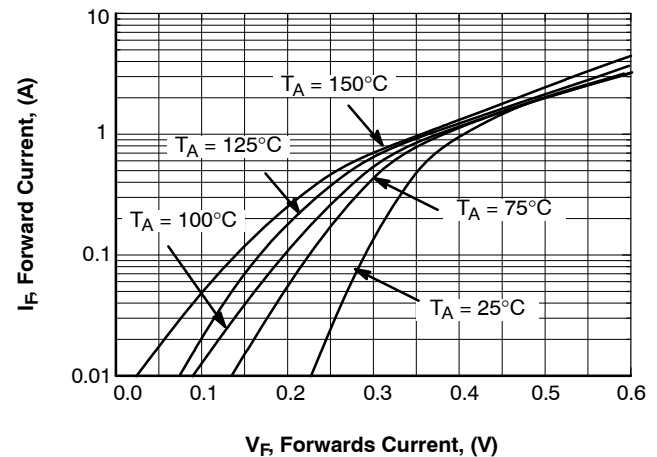
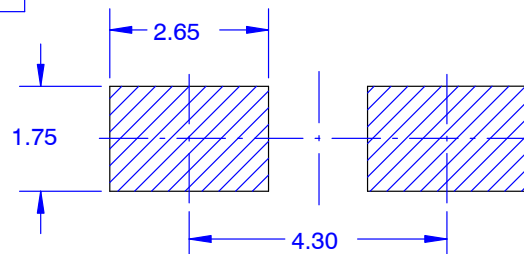
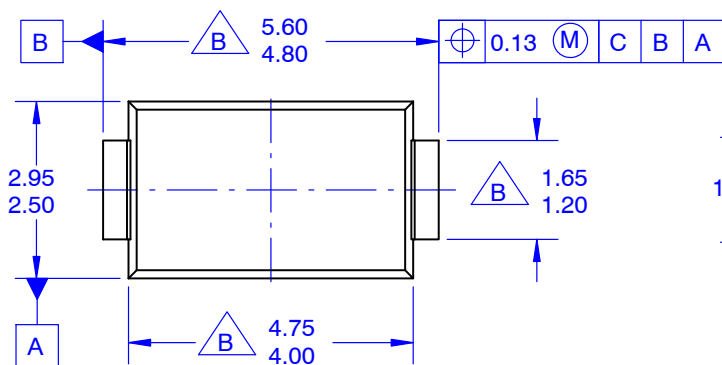


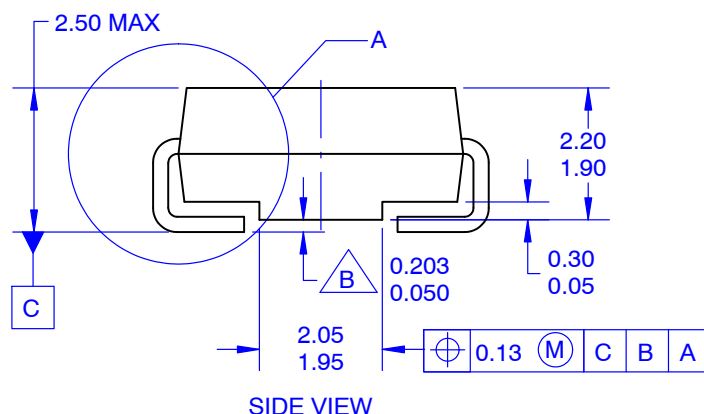
Figure 6. Typical Forward Characteristics

**SMA**  
**CASE 403AE**  
**ISSUE O**

DATE 31 AUG 2016



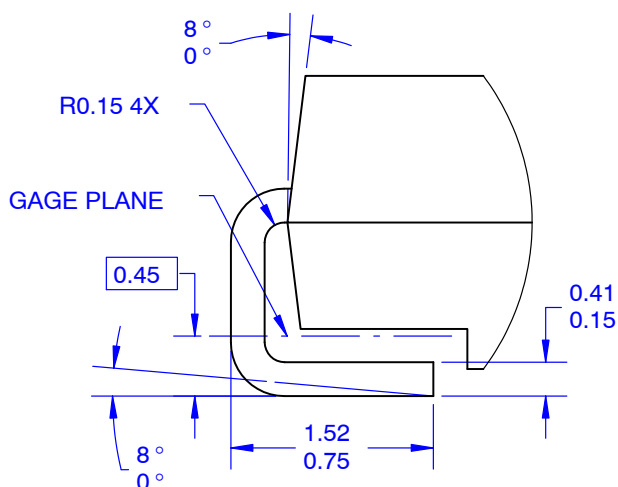
LAND PATTERN RECOMMENDATION



SIDE VIEW

**NOTES:**

- A. EXCEPT WHERE NOTED, CONFORMS TO JEDEC DO214 VARIATION AC.
- B. DOES NOT COMPLY JEDEC STANDARD VALUE.
- C. ALL DIMENSIONS ARE IN MILLIMETERS.
- D. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR PROTRUSIONS.
- E. DIMENSIONS AND TOLERANCE AS PER ASME Y14.5-2009.
- E. LAND PATTERN STD. DIOM5025X231M



DETAIL A  
SCALE 20 : 1

|                         |                    |                                                                                                                                                                                     |
|-------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
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