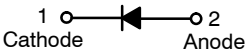
# Schottky Rectifier

# SS32 - S310

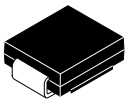



### Description

The SS32−S310 series includes a high−efficiency, low power loss, general−propose Schottky rectifiers. The clipbonded leg structure provides high thermal performance and low electrical resistance. These rectifiers are suited for free wheeling, secondary rectification, and reverse polarity protection applications.

### Features

- Metal to Silicon Rectifiers, Majority Carrier Conduction
- Low−Forward Voltage Drop
- Easy Pick and Place
- High−Surge Current Capability
- This Device is Pb−Free and Halide Free



**SMC**
**CASE 403AG**

### MARKING DIAGRAM




| | |
|---|---|
| $Y | = Logo |
| &Z | = Assembly Plant Code |
| &3 | = Date Code |
| Sxyz | = Specific Device Code<br>x = S or 3<br>y = 1 or 3<br>z = 0 or 2−9 |

### ORDERING INFORMATION

| Device | Package | Shipping† |
|---|---|---|
| SS32<br>SS33<br>SS34<br>SS35<br>SS36<br>SS38<br>SS39<br>S310 | SMC<br>(Pb−Free,<br>Halide−Free) | 3000 /<br>Tape & Reel |

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, BRD8011/D.

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**ABSOLUTE MAXIMUM RATINGS** Values are at $T_A$ = 25°C unless otherwise noted.

| Symbol | Parameter | Value | | | | | | | | Units |
|---|---|---|---|---|---|---|---|---|---|---|
| | | SS32 | SS33 | SS34 | SS35 | SS36 | SS38 | SS39 | S310 | |
| $V_{RRM}$ | Maximum Repetitive Reverse Voltage | 20 | 30 | 40 | 50 | 60 | 80 | 90 | 100 | V |
| $I_{F(AV)}$ | Maximum Average Forward Current at $T_A$ = 75°C | 3.0 | | | | | | | | A |
| $I_{FSM}$ | Non−Repetitive Peak Forward Surge Current: 8.3 ms Single Half−Sine Wave | 100 | | | | | | | | A |
| dV/dt | Maximum Voltage Rate of Change | 10000 | | | | | | | | V/μS |
| $T_{STG}$ | Storage Temperature Range | −55 to +150 | | | | | | | | °C |
| $T_J$ | Operating Junction Temperature | −55 to +150 | | | | | | | | °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**

| Symbol | Parameter | Value | Unit |
|---|---|---|---|
| $P_D$ | Power Dissipation | 2.27 | W |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient (Note 1) | 55 | °C/W |
| $R_{\theta JL}$ | Thermal Resistance, Junction to Lead | 17 | °C/W |

1. Device mounted on FE−4 PCB 0.55 x 0.55 inch (14 x 14 mm).

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

| Symbol | Parameter | Test Conditions | Value | | | | | | | | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | SS32 | SS33 | SS34 | SS35 | SS36 | SS38 | SS39 | S310 | |
| $V_F$ | Forwarded Voltage | $I_F$ = 3.0 A | 500 | | | 750 | | 850 | | | mV |
| $I_R$ | Reverse Current at Rated $V_R$ | $T_A$ = 25°C | 0.5 | | | | | | | | mA |
| | | $T_A$ = 100°C | 20 | | | 10 | | | | | |

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.

## TYPICAL CHARACTERISTICS

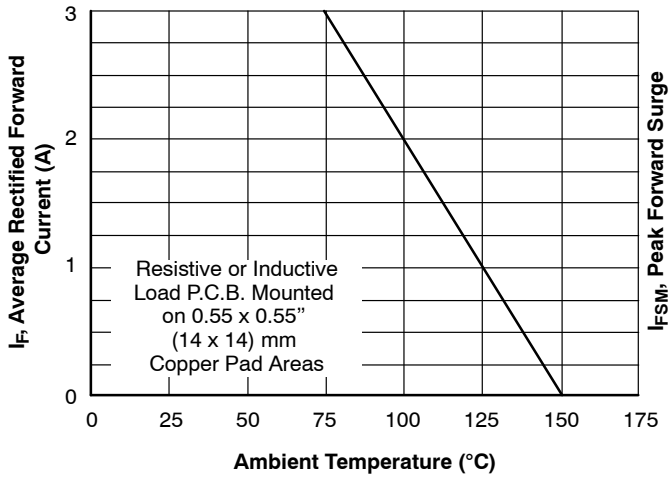



**Figure 1. Forward Current Derating Curve**

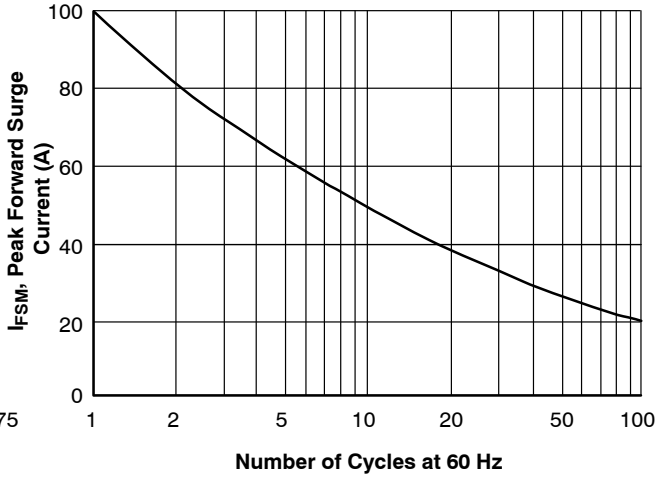



**Figure 2. Non−Repetitive Surge Current**

## TYPICAL CHARACTERISTICS

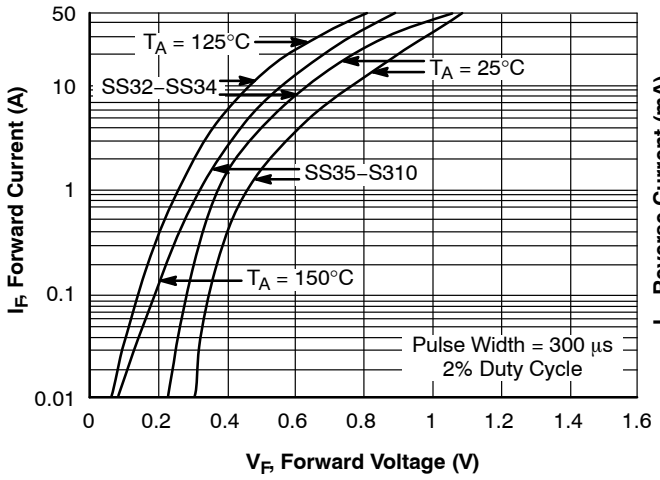



**Figure 3. Forward Voltage Characteristics**

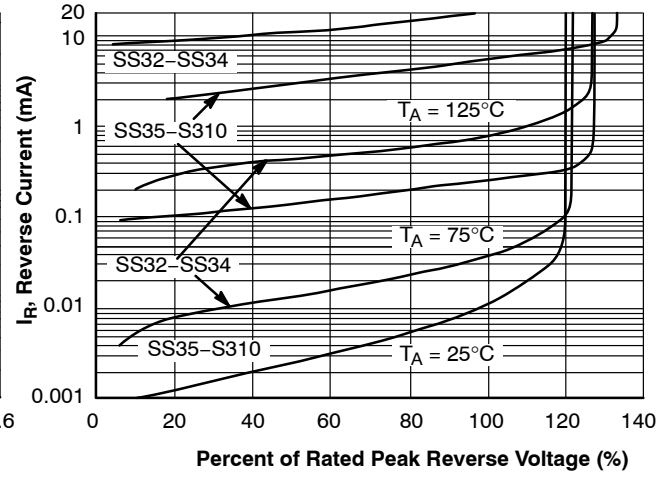



**Figure 4. Reverse Current vs. Reverse Voltage**

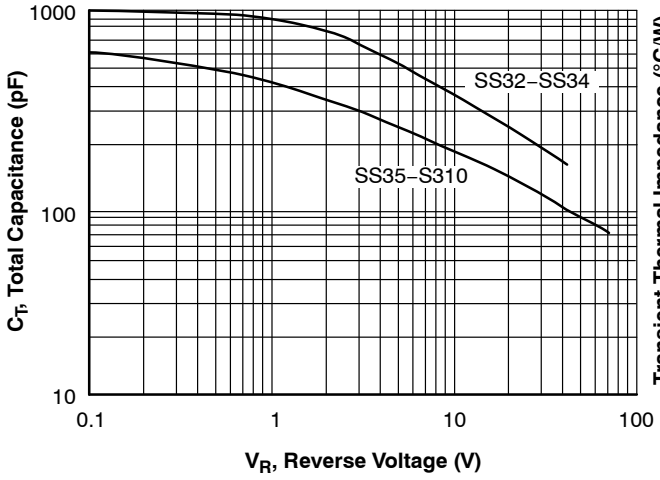



**Figure 5. Total Capacitance**

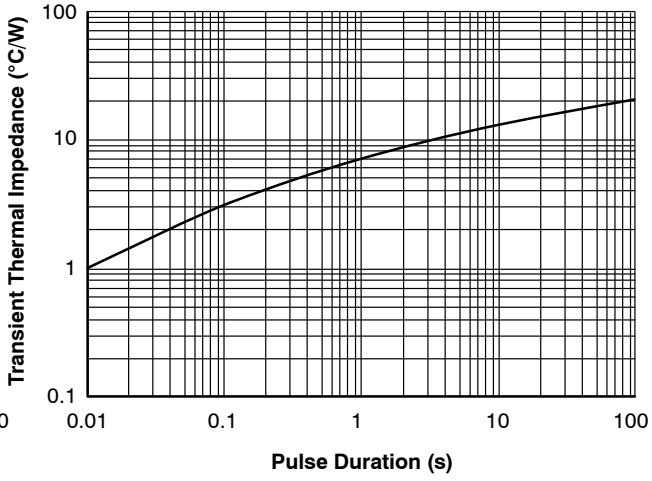
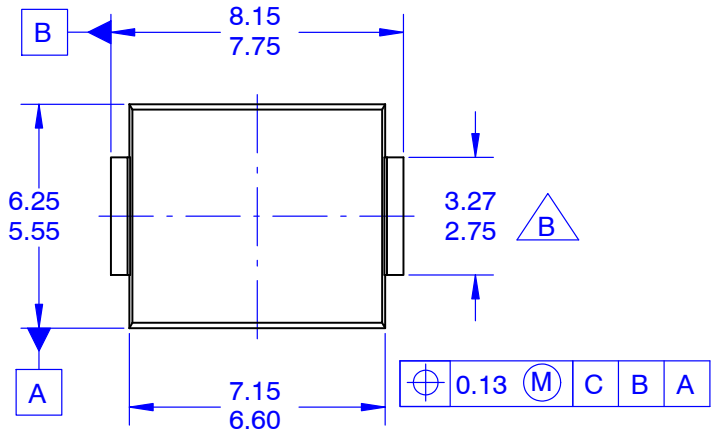


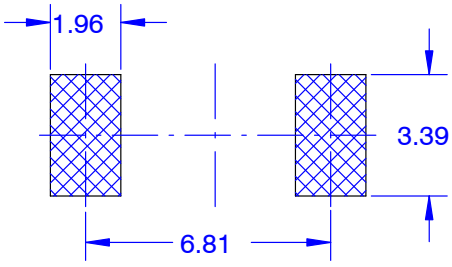

**Figure 6. Thermal Impedance Characteristics**

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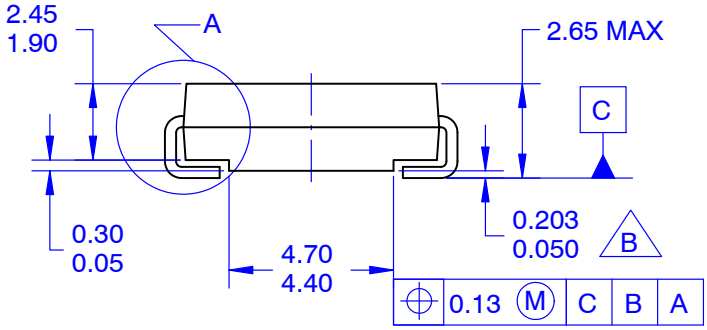
DATE 31 AUG 2016



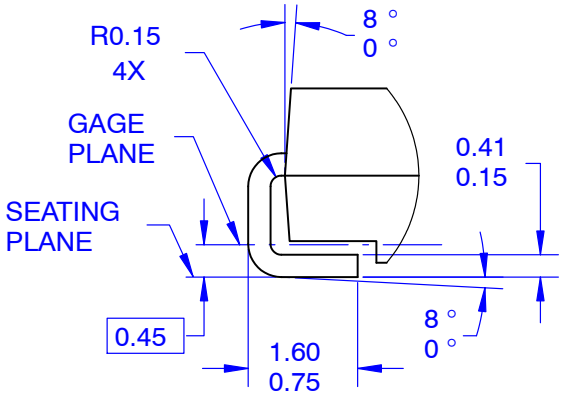

TOP VIEW




LAND PATTERN RECOMMENDATION




SIDE VIEW




DETAIL A
SCALE 2:1

NOTES:

A. EXCEPTWHERE NOTED, CONFORMS TO JEDEC DO−214, VARIATION AB

B DOES NOT COMPLY TO JEDEC STD. VALUE
C. ALL DIMENSIONS ARE IN MILLIMETERS
D. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, AND TIE BAR PROTRUSIONS.
E. DIMENSIONS AND TOLERANCING AS PER ASME Y14.5−2009
F. LAND PATTERN STANDARD: DIOM7957X241M

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