

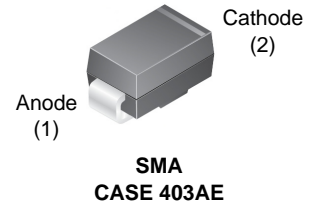


THE DATASHEET OF SS15



Schottky Rectifier

SS12 - S100



Description

The SS12-S100 series includes high-efficiency, low power loss, general-purpose schottky rectifiers. The clip-bonded 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

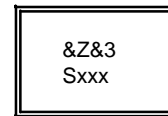
- Glass-Passivated Junctions
- High-Current Capability, Low V_F
- These Devices are Pb-Free, Halogen Free and are RoHS Compliant

Applications

- Low Voltage
- High-Frequency Inverters
- Free Wheeling
- Polarity Protection



MARKING DIAGRAM



- &Z = Assembly Plant Code
- &3 = Date Code (Year & Week)
- Sxxx = Specific Device Code

ORDERING INFORMATION

| Part Number | Top Mark | Package | Shipping† |
|-------------|----------|-------------------------------|--------------------|
| SS12 | SS12 | SMA (Pb-Free/Halogen Free) | 7500 / Tape & Reel |
| SS13 | SS13 | SMA (Pb-Free/Halogen Free) | 7500 / Tape & Reel |
| SS14 | SS14 | SMA (Pb-Free/Halogen Free) | 7500 / Tape & Reel |
| SS15 | SS15 | SMA (Pb-Free/Halogen Free) | 7500 / Tape & Reel |
| SS16 | SS16 | SMA (Pb-Free/Halogen Free) | 7500 / Tape & Reel |
| SS18 | SS18 | SMA (Pb-Free/Halogen Free) | 7500 / Tape & Reel |
| SS19 | SS19 | SMA (Pb-Free/Halogen Free) | 7500 / Tape & Reel |
| S100 | S100 | SMA (Pb-Free/Halogen Free) | 7500 / Tape & Reel |

†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.

SS12 – S100

Specifications

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

| Symbol | Parameter | Value | | | | | | | | Unit |
|-------------|--|-------------|------|------|------|------|------|------|------|------------------|
| | | SS12 | SS13 | SS14 | SS15 | SS16 | SS18 | SS19 | S100 | |
| V_{RRM} | Peak Repetitive Reverse Voltage | 20 | 30 | 40 | 50 | 60 | 80 | 90 | 100 | V |
| $I_{F(AV)}$ | Maximum Average Forward Current: 0.375-inch Lead Length at $T_A = 75^\circ\text{C}$ | 1.0 | | | | | | | | A |
| I_{FSM} | Non-Repetitive Peak Forward Surge Current: 8.3 ms Single Half-Sine Wave | 40 | | | | | | | | A |
| T_J | Operating Junction Temperature | -65 to +125 | | | | | | | | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature Range | -65 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 | Characteristic | Value | Unit |
|-----------------|--|-------|---------------------------|
| P_D | Power Dissipation | 1.1 | W |
| $R_{\theta JA}$ | Thermal Resistance, Junction-to-Ambient (Note 1) | 88 | $^\circ\text{C}/\text{W}$ |

1. Device mounted on FE-4 PCB 0.013 mm.

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

| Symbol | Parameter | Conditions | Value | | | | | | | Unit |
|--------|--|---------------------------|-------|------|------|------|------|------|------|------|
| | | | SS12 | SS13 | SS14 | SS15 | SS16 | SS18 | SS19 | |
| V_F | Maximum Forward Voltage | $I_F = 1.0\text{ A}$ | 500 | | | 700 | | 850 | | mV |
| I_R | Maximum Reverse Current at Rated V_R | $T_A = 25^\circ\text{C}$ | 0.2 | | | | | | | mA |
| | | $T_A = 100^\circ\text{C}$ | 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 PERFORMANCE CHARACTERISTICS

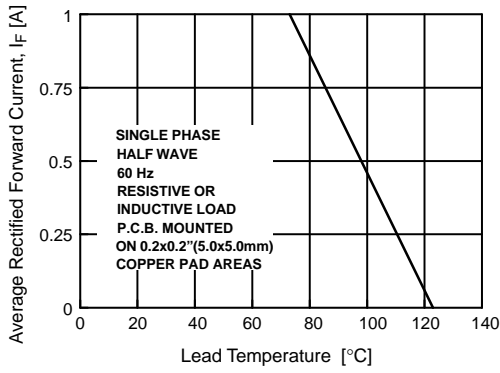


Figure 1. Forward Current Derating Curve

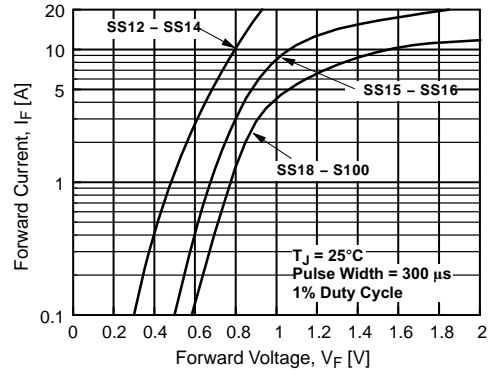


Figure 2. Forward Voltage Characteristics

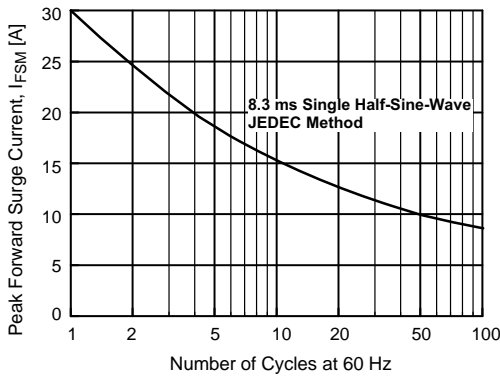


Figure 3. Non-Repetitive Surge Current

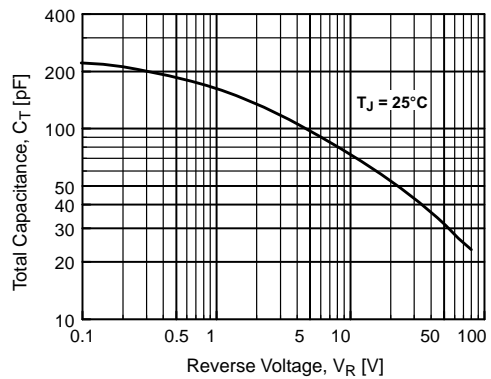


Figure 4. Total Capacitance

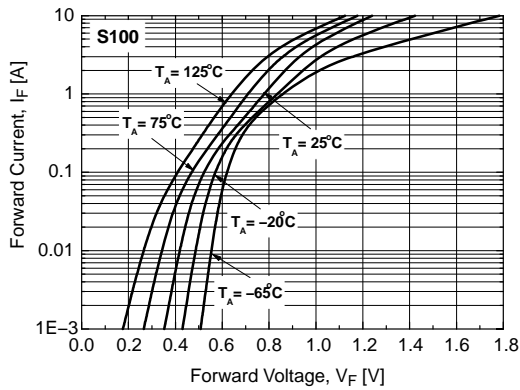
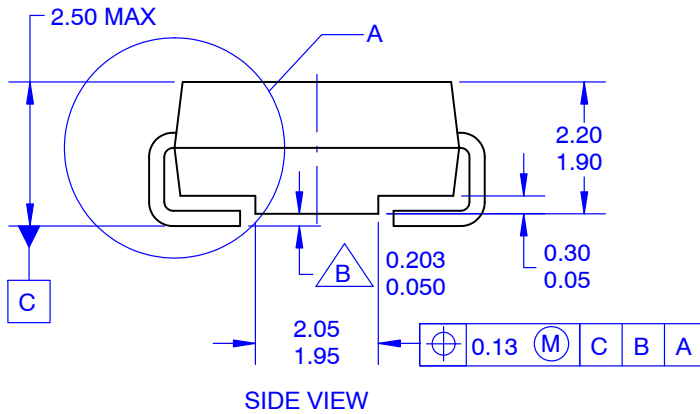
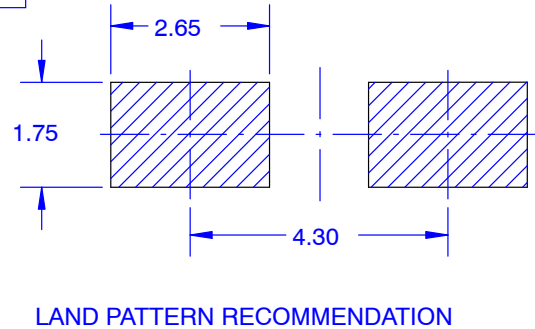
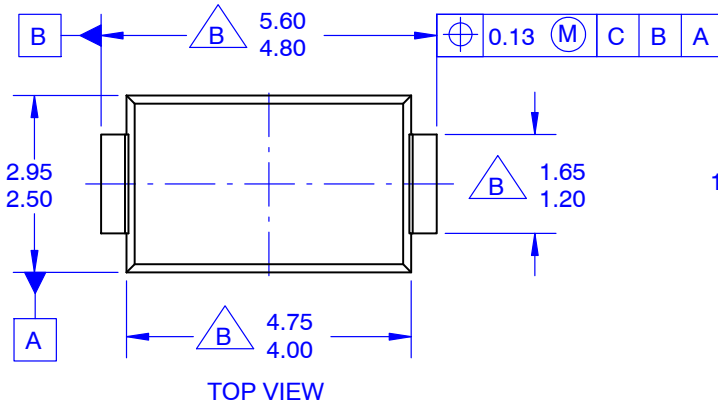


Figure 5. Low-Current Forward Voltage Characteristics

MECHANICAL CASE OUTLINE
PACKAGE DIMENSIONS

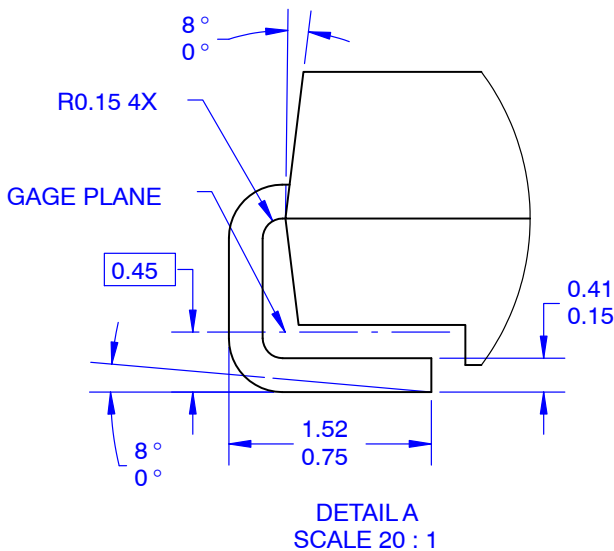
SMA
CASE 403AE
ISSUE O

DATE 31 AUG 2016



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



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