

FSV240AF

Surface Mount Schottky Barrier Rectifier

Features

- Low Forward Voltage Drop: 0.5 V Maximum at 2 A, $T_A = 25^\circ\text{C}$
- Ultra Thin Profile – Maximum Height of 1.0 mm
- High Surge Capacity
- UL Flammability 94V-0 Classification
- MSL 1
- Green Mold Compound
- These Devices are Pb-Free, Halogen Free and are RoHS Compliant

Specifications

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

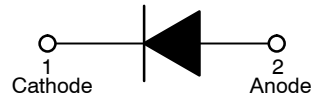
| Symbol | Rating | Value | Unit |
|-------------|----------------------------------------------------------------------------------------------------|-------------|------------------|
| V_{RRM} | Recurrent Peak Reverse Voltage | 40 | V |
| V_{RMS} | RMS Reverse Voltage | 28 | V |
| V_R | DC Blocking Voltage | 40 | V |
| $I_{F(AV)}$ | Average Forward Current | 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 | $^\circ\text{C}$ |
| 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.

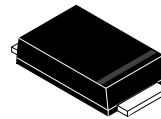


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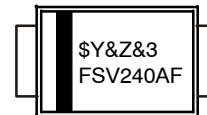


Schottky Barrier Rectifier



DO-214AD
(SMAF)
CASE 403AD

MARKING DIAGRAM



Band Indicates Cathode

\$Y = ON Semiconductor Logo
&Z = Assembly Plant Code
&3 = Data Code (Year & Week)
FSV240AF = Specific Device Code

ORDERING INFORMATION

See detailed ordering and shipping information on page 2 of this data sheet.

FSV240AF

THERMAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted) (Note 1)

| Symbol | Characteristic | Value | Unit |
|-----------------|------------------------------------------------------------|-------|--------------------|
| Ψ_{JL} | Typical Thermal Characteristics, Junction-to-Lead (Note 2) | 15 | $^\circ\text{C/W}$ |
| $R_{\theta JA}$ | Typical Thermal Resistance, Junction-to-Ambient | 120 | $^\circ\text{C/W}$ |

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 | $I_F = 2.0 \text{ A}$ | - | - | 0.5 | V |
| I_R | Reverse Current | $V_R = 40 \text{ V}$ | - | - | 0.1 | mA |
| T_{rr} | Reverse Recovery Time | $I_F = 0.5 \text{ A}, I_R = 1 \text{ A}, I_{rr} = 0.25 \text{ A}$ | - | 9.65 | - | ns |
| C_J | Junction Capacitance | $V_R = 4 \text{ V}, f = 1 \text{ MHz}$ | - | 98 | - | pF |

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.

ORDERING INFORMATION

| Part Number | Top Mark | Package | Shipping† |
|-------------|----------|-------------------------------------------|---------------------|
| FSV240AF | FSV240AF | DO-214AD (SMAF) (Pb-Free/Halogen Free) | 10000 / 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.

FSV240AF

TYPICAL PERFORMANCE CHARACTERISTICS

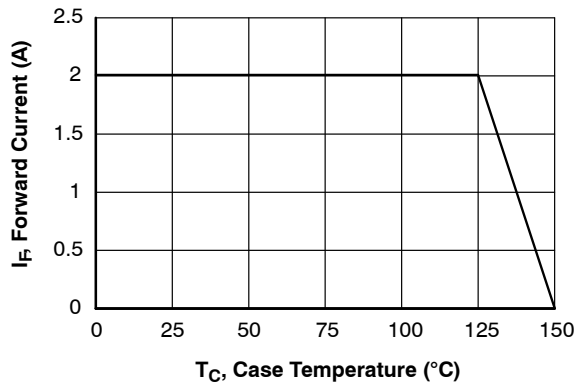


Figure 1. Forward Current Derating Curve

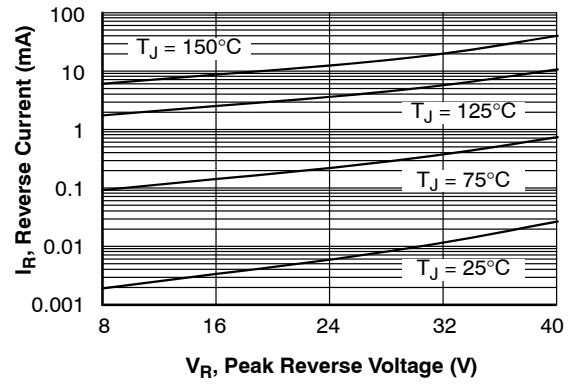


Figure 2. Typical Reverse Characteristics

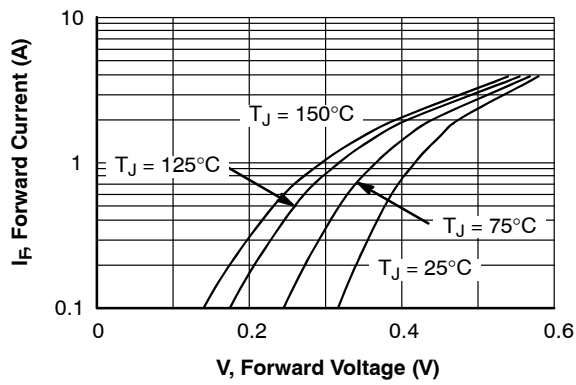


Figure 3. Typical Forward Characteristics

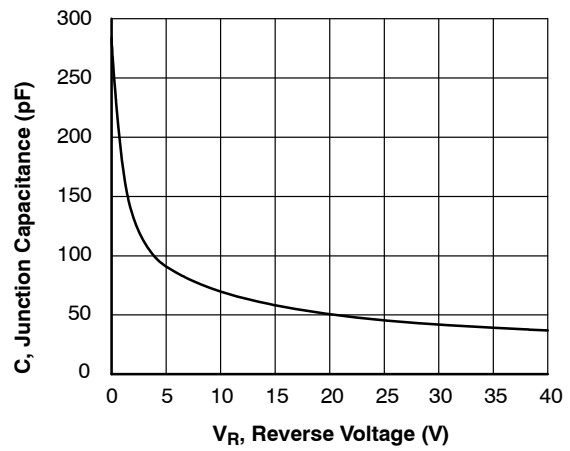


Figure 4. Typical Junction Capacitance

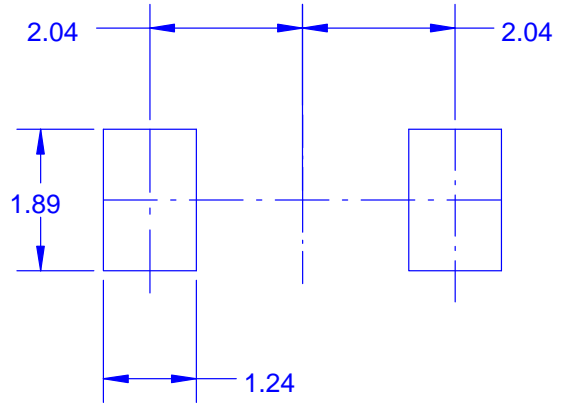
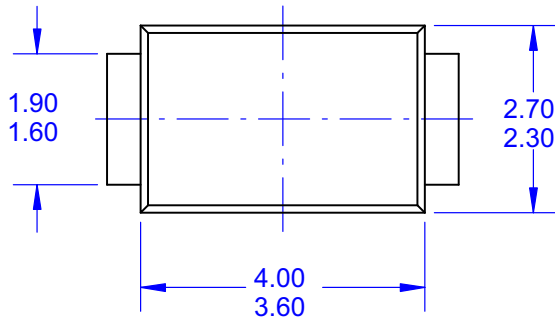
MECHANICAL CASE OUTLINE
PACKAGE DIMENSIONS

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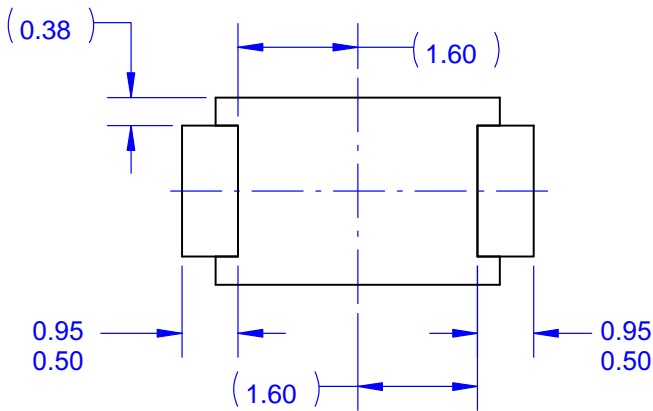
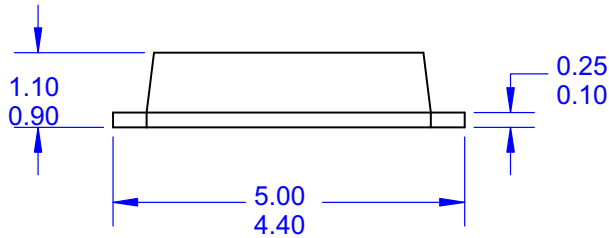


SMA-FL
CASE 403AD
ISSUE O

DATE 31 AUG 2016



LAND PATTERN RECOMMENDATION



NOTES:

- A. THIS PACKAGE DOES NOT CONFORM TO ANY STANDARDS.
- B. ALL DIMENSIONS ARE IN MILLIMETERS.
- C. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR PROTRUSIONS.

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| NEW STANDARD: | | |
| DESCRIPTION: | SMA-FL | PAGE 1 OF 2 |



| ISSUE | REVISION | DATE |
|-------|------------------------------------------------------------------------------------|-------------|
| O | RELEASED FOR PRODUCTION FROM FAIRCHILD DO214AD TO ON SEMICONDUCTOR. REQ. BY B. NG. | 31 AUG 2016 |
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