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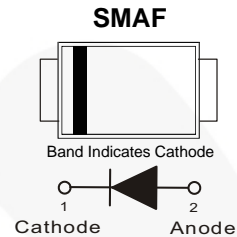


August 2015

# 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
  - RoHS Compliant / Green Mold Compound
  - Industrial Device Qualified per AEC-Q101 Standards.
- \* see authorized use policy



## Ordering Information

Part Number	Top Mark	Package	Packing Method
FSV240AF	FSV240AF	DO-214AD (SMAF)	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  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	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	$^\circ\text{C}$

FSV240AF — Surface Mount Schottky Barrier Rectifier

## Thermal Characteristics<sup>(1)</sup>

Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Value	Unit
$\Psi_{JL}$	Typical Thermal Characteristics, Junction-to-Lead <sup>(2)</sup>	15	$^\circ\text{C}/\text{W}$
$R_{\theta JA}$	Typical Thermal Resistance, Junction-to-Ambient	120	$^\circ\text{C}/\text{W}$

### Note:

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

Values are at  $T_A = 25^\circ\text{C}$  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

### Typical Performance Characteristics

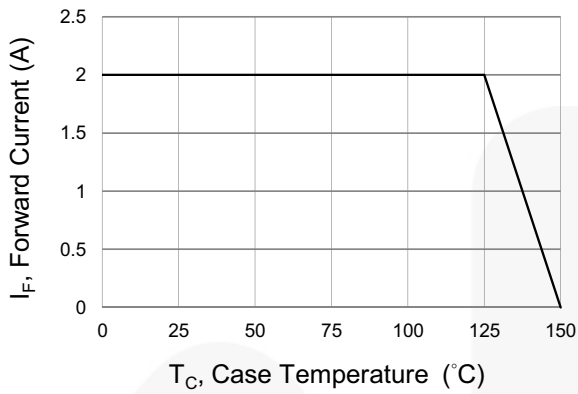


Figure 1. Forward Current Derating Curve

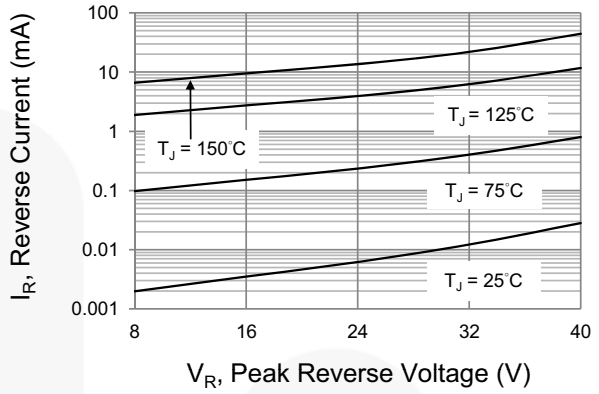


Figure 2. Typical Reverse Characteristics

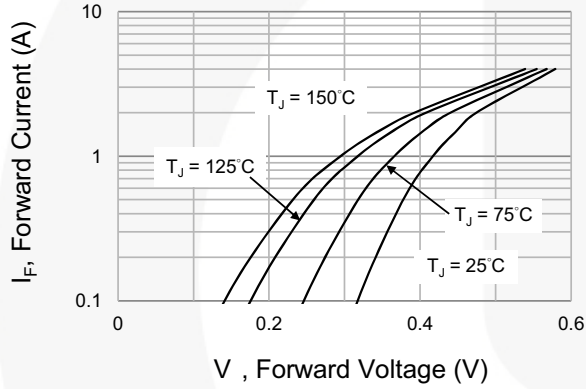


Figure 3. Typical Forward Characteristics

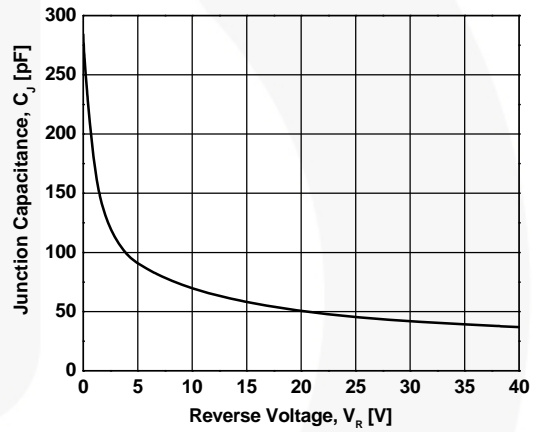
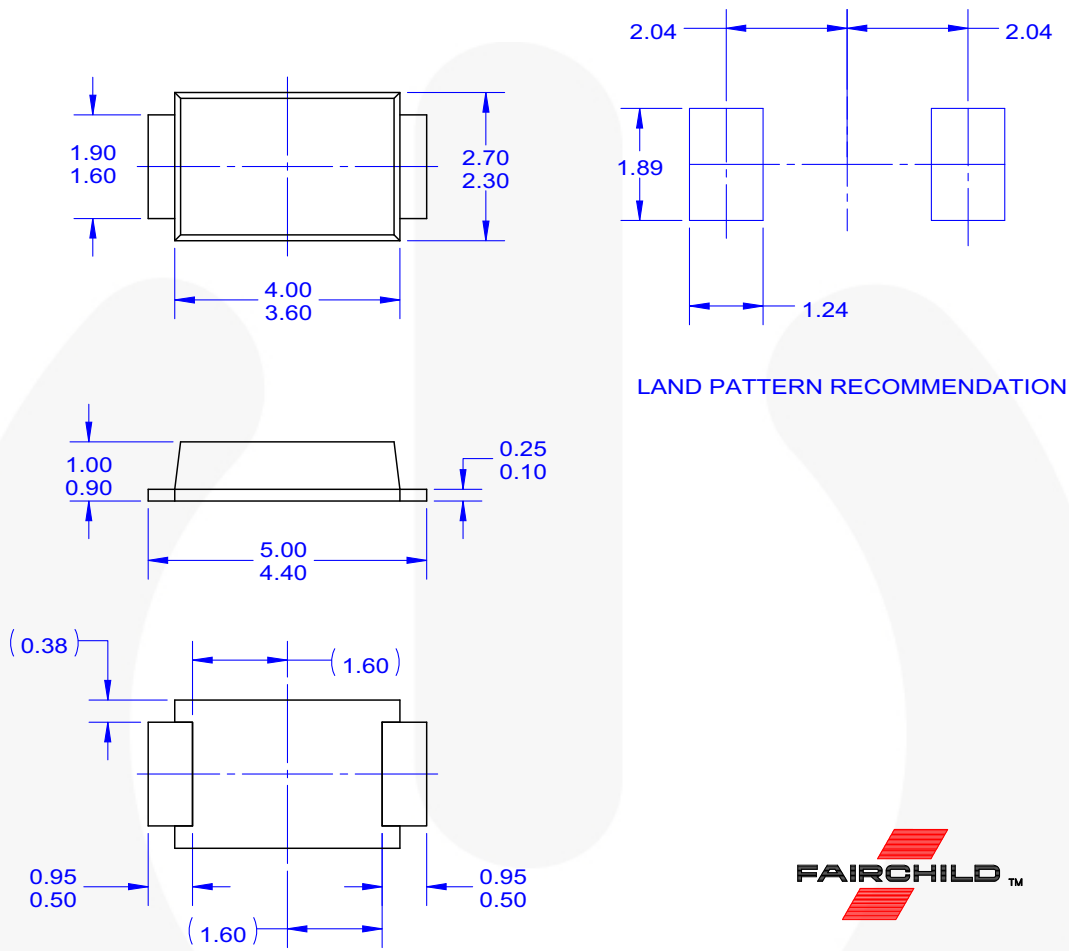


Figure 4. Typical Junction Capacitance

Physical Dimensions



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.
- D. LAND PATTERN RECOMMENDATION PER IPC SODFL4725X110N
- E. DRAWING FILE NAME: MKT-DO214AD REV2

Figure 5. 2-LEAD, SMAF, NON JEDEC FLAT LEAD



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No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
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