FSV240AF

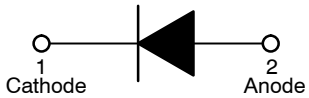
Surface Mount Schottky Barrier Rectifier

ON Semiconductor®

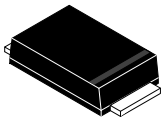
www.onsemi.com

Features

- Low Forward Voltage Drop: 0.5 V Maximum at 2 A, T_A = 25°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 Free and are RoHS Compliant



Schottky Barrier Rectifier



DO–214AD
(SMAF)
CASE 403AD

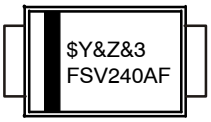
Specifications

ABSOLUTE MAXIMUM RATINGS (T_A = 25°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	°C
T_{STG}	Storage Temperature Range	–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.

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.

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May, 2018 – Rev. 2

Publication Order Number:
FSV240AF/D

THERMAL CHARACTERISTICS (T_A = 25°C unless otherwise noted) (Note 1)

Symbol	Characteristic	Value	Unit
Ψ_{JL}	Typical Thermal Characteristics, Junction−to−Lead (Note 2)	15	°C/W
$R_{\theta JA}$	Typical Thermal Resistance, Junction−to−Ambient	120	°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°C unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V_F	Forward Voltage	I_F = 2.0 A	–	–	0.5	V
I_R	Reverse Current	V_R = 40 V	–	–	0.1	mA
Trr	Reverse Recovery Time	I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A	–	9.65	–	ns
C_J	Junction Capacitance	V_R = 4 V, f = 1 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.

TYPICAL PERFORMANCE CHARACTERISTICS

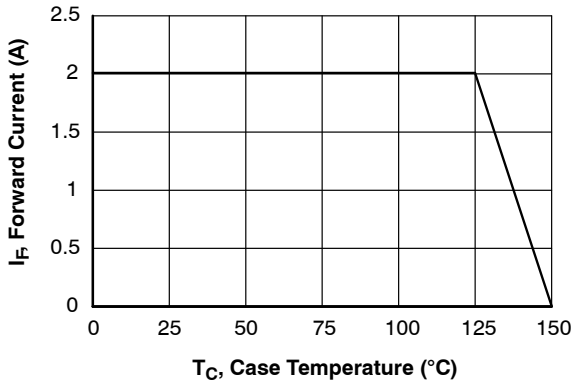


Figure 1. Forward Current Derating Curve

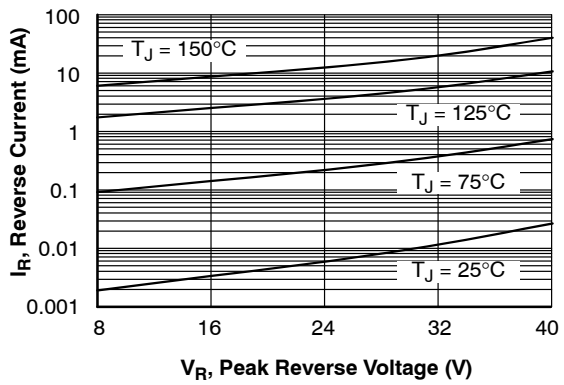


Figure 2. Typical Reverse Characteristics

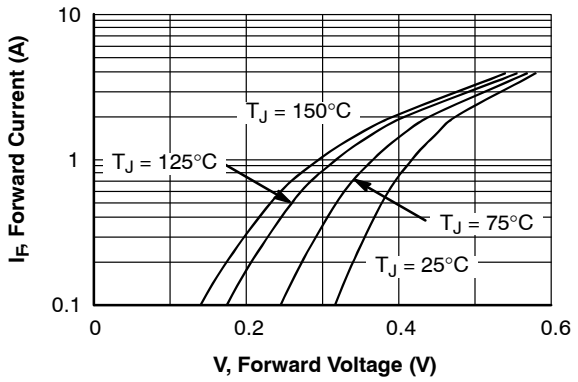


Figure 3. Typical Forward Characteristics

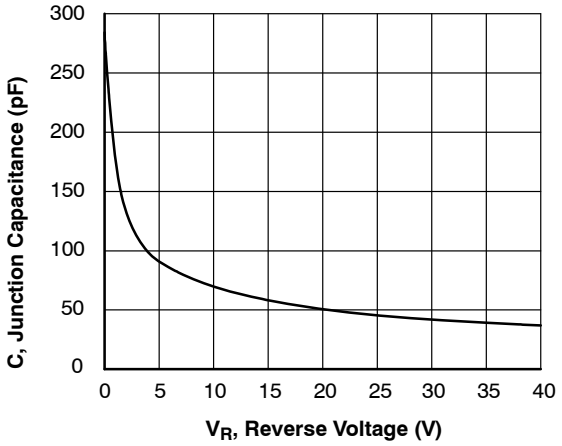
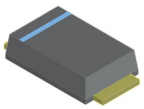
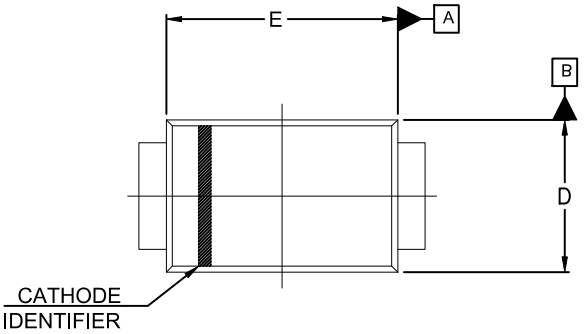


Figure 4. Typical Junction Capacitance

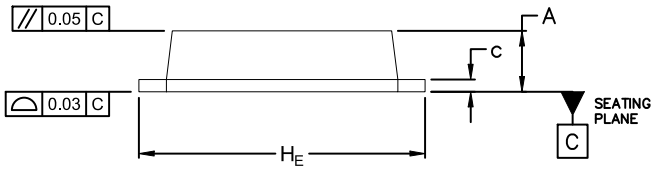


SMA−FL
CASE 403AD
ISSUE A

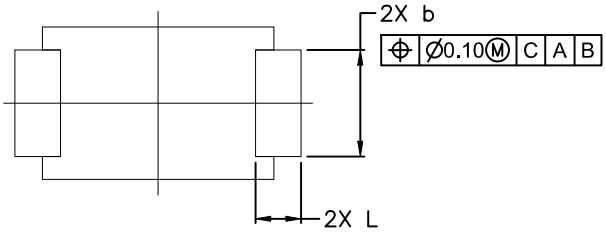
DATE 14 JUL 2020



TOP VIEW



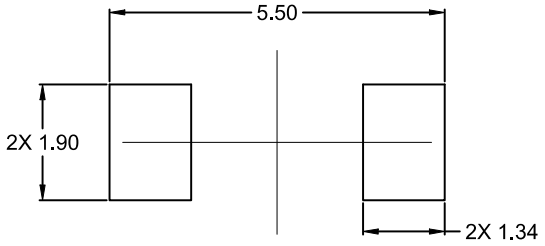
SIDE VIEW



BOTTOM VIEW

NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 2009.
2. CONTROLLING DIMENSION: MILLIMETERS
3. DIMENSIONS D & E ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR EXTRUSIONS.

DIM	MILLIMETERS		
	MIN.	NOM.	MAX.
A	0.90	1.00	1.10
b	1.25	1.60	1.90
c	0.10	—	0.25
D	2.30	2.50	2.70
E	3.60	3.95	4.30
H_E	4.40	4.80	5.20
L	0.50	0.75	0.95



RECOMMENDED
MOUNTING FOOTPRINT*

* For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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