FSV330AF

Schottky Barrier Rectifier

Features

- Low Forward Voltage Drop: 0.5 V Maximum at 3 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

Specifications

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

Symbol	Rating	Value	Unit
V_{RRM}	Recurrent Peak Reverse Voltage	30	V
V_{RMS}	RMS Reverse Voltage	21	V
V_R	DC Blocking Voltage	30	V
$I_{F(AV)}$	Average Forward Current	3	A
I_{FSM}	Peak Forward Surge Current: 8.3 ms Single Half Sine–Wave Superimposed on Rated Load (JEDEC Method)	80	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.

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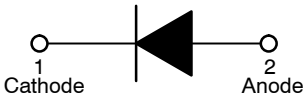
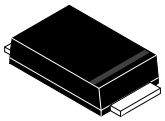
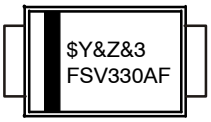


Schottky Barrier Rectifier



DO–214AD
(SMAF)
CASE 403AD

MARKING DIAGRAM



Band Indicates Cathode

$Y	= ON Semiconductor Logo
&Z	= Assembly Plant Code
&3	= Data Code (Year & Week)
FSV330AF	= Specific Device Code

ORDERING INFORMATION

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

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

Symbol	Characteristic	Value	Unit
Ψ_{JL}	Typical Thermal Characteristics, Junction−to−Lead (Note 1)	20	°C/W
$R_{\theta JA}$	Typical Thermal Resistance, Junction−to−Ambient (Note 2)	150	°C/W

1. Mounted on FR4 PCB, single−sided cooper, with 48 cm^2 pad area.
2. Mounted on FR4 PCB, single−sided cooper, mini pad

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V_F	Forward Voltage	I_F = 3 A	−	−	0.5	V
I_R	Reverse Current	$V_R = V_{DC}$, T_A = 85°C	−	−	100	μA
Trr	Reverse Recovery Time	I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A	−	12.50	−	ns
C_J	Junction Capacitance	V_R = 0 V, f = 1 MHz	−	485	−	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†
FSV330AF	FSV330AF	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

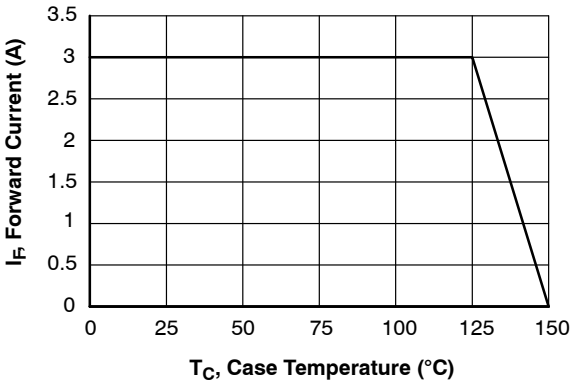

Figure 1. Forward Current Derating Curve

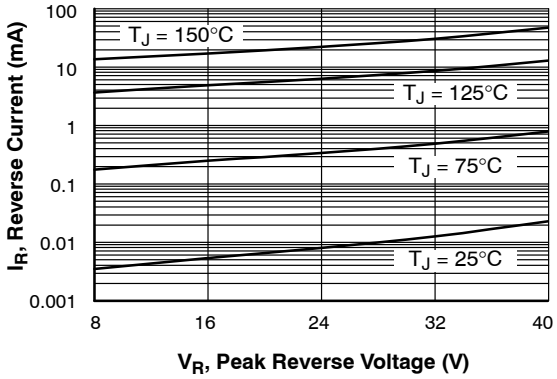

Figure 2. Typical Reverse Characteristics

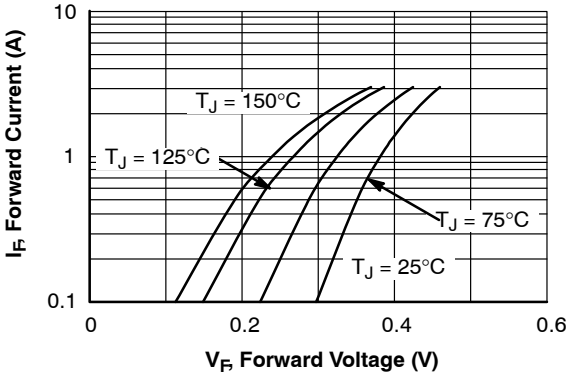

Figure 3. Typical Forward Characteristics

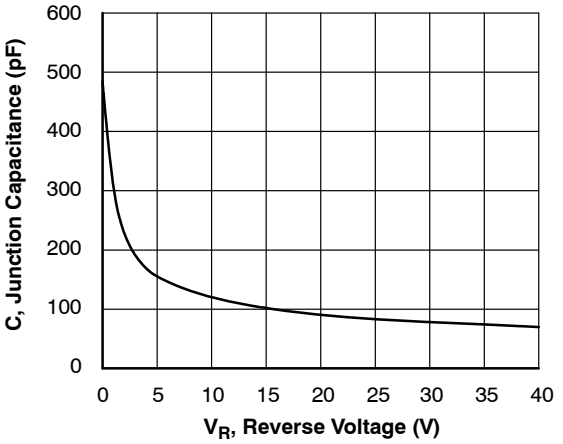

Figure 4. Typical Junction Capacitance

MECHANICAL CASE OUTLINE
PACKAGE DIMENSIONS

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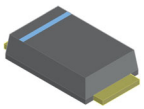

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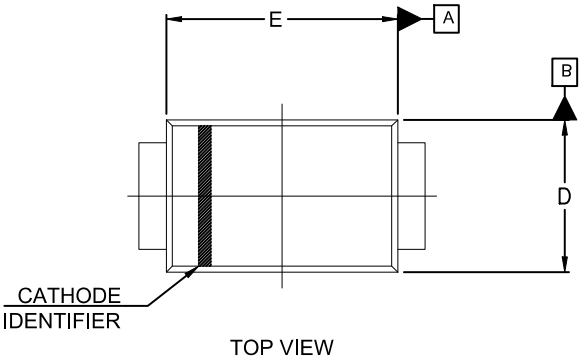
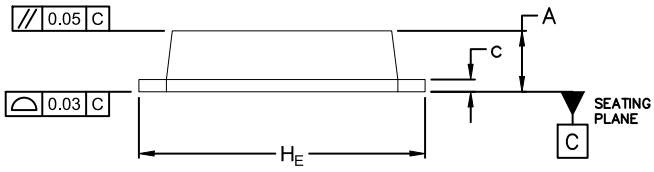
ISSUE A

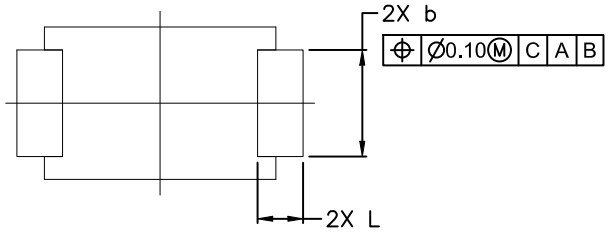
DATE 14 JUL 2020



TOP VIEW



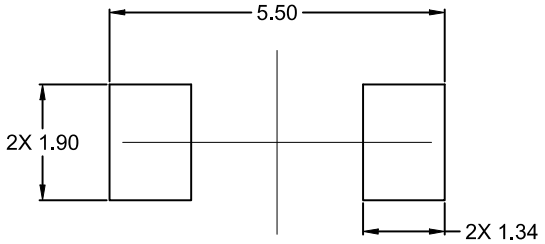
SIDE VIEW



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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