SS13FL, SS14FL

Surface Mount Schottky Barrier Rectifier

Features

- Ultra Thin Profile – Maximum Height of 1.08 mm
- 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	Parameter	Value		Unit
		SS13FL	SS14FL	
V_{RRM}	Peak Reverse Voltage	30	40	V
V_R	Reverse Voltage	30	40	V
$I_{F(AV)}$	Average Rectified Current at T_A = 75°C	1.0		A
I_{FSM}	Non–Repetitive Peak Forward Surge Current at t = 8.3 ms	40		A
T_J	Operating Junction Temperature Range	–55 to +125		°C
T_{STG}	Storage Temperature Range	–55 to +125		°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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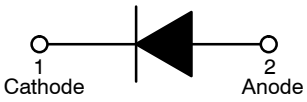
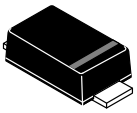
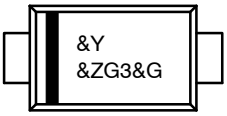


Schottky Barrier Rectifier



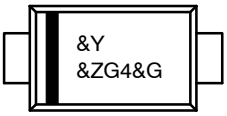
SOD–123F
CASE 425AD

MARKING DIAGRAMS



Band Indicates Cathode

&Y = Binary Calendar Year Coding Scheme
&Z = Assembly Plant Code
G3 = Specific Device Code
&G = Single Digit Weekly Data Code



Band Indicates Cathode

&Y = Binary Calendar Year Coding Scheme
&Z = Assembly Plant Code
G4 = Specific Device Code
&G = Single Digit Weekly Data Code

ORDERING INFORMATION

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

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)	25	°C/W
$R_{\theta JA}$	Typical Thermal Resistance, Junction−to−Ambient	140	°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
BV_R	Reverse Breakdown Voltage	I_R = 500 μA	SS13FL	30	–	–	V
			SS14FL	40	–	–	
V_F	Forward Voltage	I_F = 1.0 A		–	–	0.55	V
I_R	Reverse Leakage Current	$V_R = V_{RRM}$		–	–	30	μA
T_{rr}	Reverse Recovery Time	I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A	SS13FL	–	5.875	–	ns
			SS14FL	–	5.695	–	
C_J	Junction Capacitance	V_R = 0		–	60	–	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†
SS13FL	G3	SOD−123F (Pb−Free/Halogen Free)	3000 / Tape & Reel
SS14FL	G4	SOD−123F (Pb−Free/Halogen Free)	3000 / 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

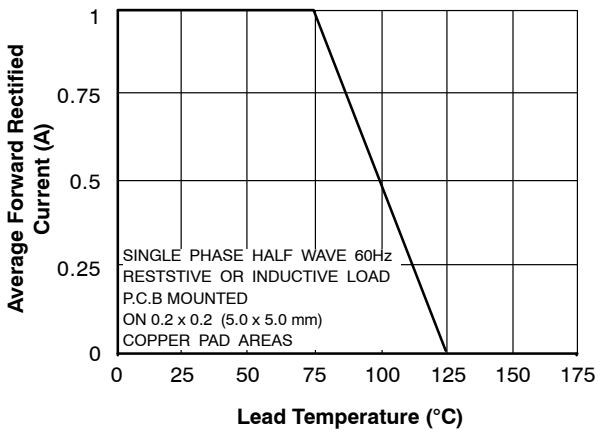


Figure 1. Forward Current Derating Curve

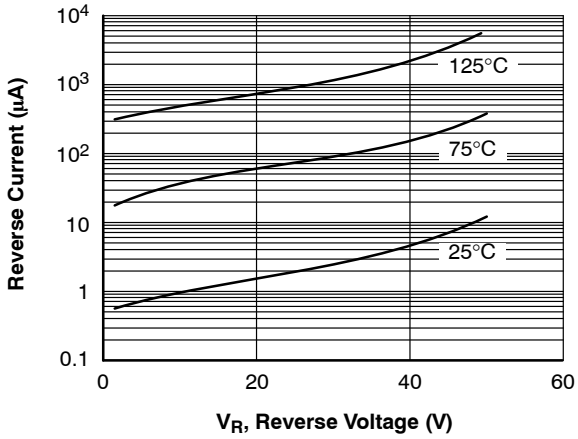


Figure 2. Typical Reverse Characteristics

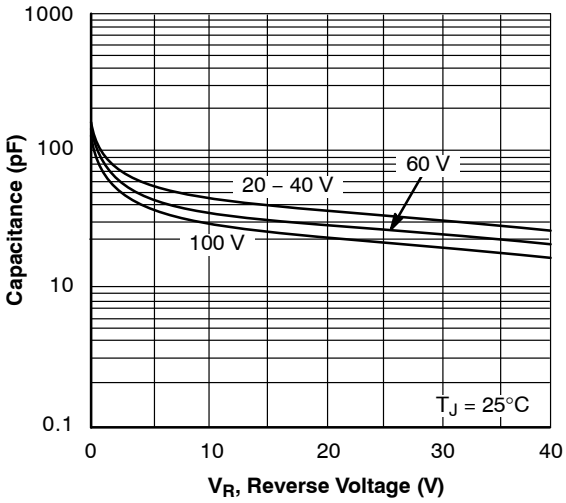


Figure 3. Typical Junction Characteristics

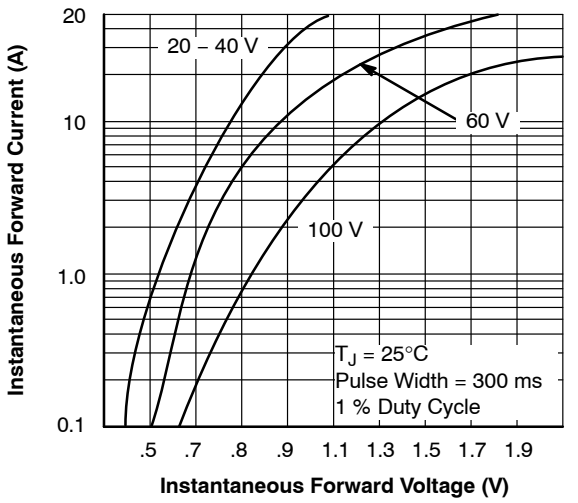
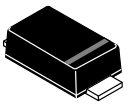


Figure 4. Typical Instantaneous Forward Characteristics

MECHANICAL CASE OUTLINE
PACKAGE DIMENSIONS

ON Semiconductor®

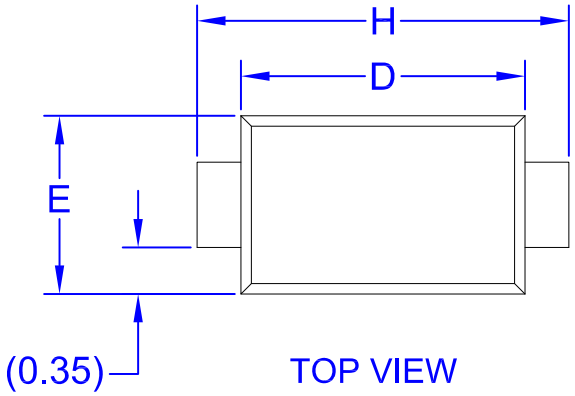


SCALE 4:1

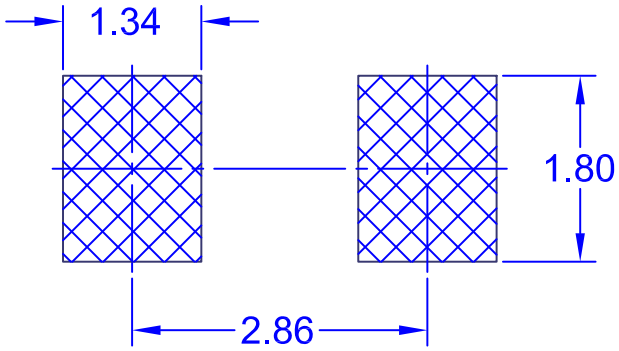
SOD−123FL
CASE 425AD
ISSUE A

DATE 04 AUG 2017

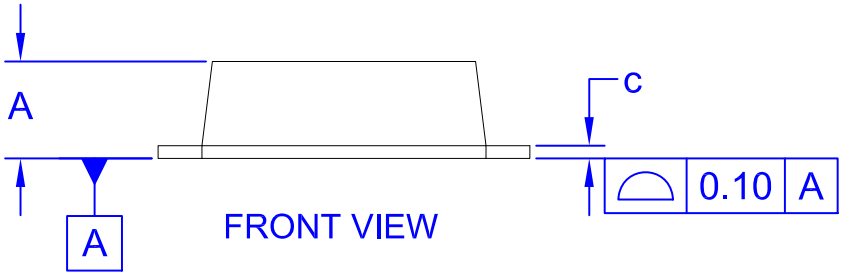
NOTES:
A. NO INDUSTRY STANDARD APPLIES TO THIS PACKAGE
B. ALL DIMENSIONS ARE IN MILLIMETERS
C. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR PROTRUSIONS.



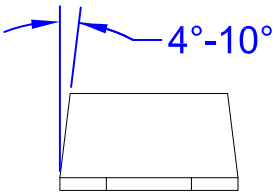
TOP VIEW



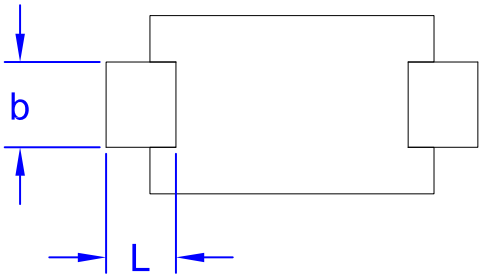
LAND PATTERN RECOMMENDATION



FRONT VIEW



SIDE VIEW



BOTTOM VIEW

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
A	0.031	0.043	0.80	1.08
b	0.020	0.045	0.50	1.15
c	0.002	0.008	0.05	0.20
D	0.098	0.118	2.50	3.00
E	0.059	0.077	1.50	1.95
H	0.130	0.154	3.30	3.90
L	0.018	0.035	0.45	0.90

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STATUS:	**ON SEMICONDUCTOR STANDARD**		
NEW STANDARD:			
DESCRIPTION:	**SOD−123FL**		**PAGE 1 OF 2**

ISSUE	REVISION	DATE
O	RELEASED FOR PRODUCTION FROM FAIRCHILD MA02B TO ON SEMICONDUCTOR. REQ. BY B. NG.	31 AUG 2016
A	CONVERTED TO ONSEMI FORMAT AND ADDED BACKSIDE FOOT LENGTH. REQ. BY H. ALLEN.	04 AUG 2017

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
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