



THE DATASHEET OF SS34FA



SS34FA-S310FA

Schottky Barrier Rectifiers, Surface Mount, 3 A, 40 V-100 V

Features

- Low Power Loss, High Efficiency
- Guard Ring for Overvoltage Protection
- High Surge Current Capability
- UL Flammability 94V-0 Classification
- MSL 1 per J-STD-020
- NRVB Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable
- This Device is Pb-Free and RoHS Compliant

ABSOLUTE MAXIMUM RATINGS

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

Symbol	Parameter	SS34FA	SS36FA	S310FA	Unit
V_{RRM}	Repetitive Peak Reverse Voltage	40	60	100	V
V_{RMS}	RMS Reverse Voltage	28	42	70	V
V_R	DC Blocking Voltage	40	60	100	V
$I_{F(AV)}$	Average Forward Rectified Current	3			A
I_{FSM}	Peak Forward Surge Current: 8.3 ms Single Half Sine-Wave Superimposed on Rated Load	80			A
T_J	Operating Junction Temperature Range	-55 to +125	-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.

THERMAL CHARACTERISTICS

(Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted) (Note 1)

Symbol	Parameter	Value	Unit
ψ_{JL}	Thermal Characteristics, Junction-to-Lead	16	$^\circ\text{C}/\text{W}$
$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient	152	$^\circ\text{C}/\text{W}$

1. Per JESD51-3 Recommended Thermal Test Board. Device mounted on FR-4 PCB, board size = 76.2 mm × 114.3 mm.

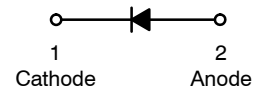


ON Semiconductor®

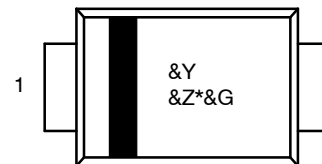
www.onsemi.com



SOD-123FL
CASE 425AB



MARKING DIAGRAM



&Y = Binary Calendar Year Coding Scheme
&Z = Assembly Plant Code
* = Specific Device Code (34L, 36L or 30L)
&G = Single Digit Weekly Datecode

ORDERING INFORMATION

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

SS34FA–S310FA

ELECTRICAL CHARACTERISTICS (Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Conditions	SS34FA	SS36FA	S310FA	Unit
V_F	Maximum Instantaneous Forward Voltage (Note 2)	$I_F = 3\text{ A}$	0.50	0.75	0.85	V
I_R	Maximum Reverse Current at Rated V_R	$T_J = 25^\circ\text{C}$	0.5		0.1	mA
		$T_J = 125^\circ\text{C}$	60	10	5	
C_J	Typical Junction Capacitance	$V_R = 4\text{ V}$, $f = 1\text{ MHz}$	152	117	78	pF
T_{rr}	Typical Reverse Recovery Time	$I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{RR} = 0.25\text{ A}$	12	11	8	ns

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.

2. Pulse test with $PW = 300\ \mu\text{s}$, 1% duty cycle.

ORDERING INFORMATION

Part Number	Top Mark	Package	Shipping [†]
SS34FA, NRVBSS34FA*	34L	SOD-123FL (Pb-Free)	3,000 / Tape & Reel
SS36FA, NRVBSS36FA*	36L	SOD-123FL (Pb-Free)	3,000 / Tape & Reel
S310FA, NRVBS310FA*	30L	SOD-123FL (Pb-Free)	3,000 / 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.

*NRVB Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable

SS34FA-S310FA

TYPICAL PERFORMANCE CHARACTERISTICS

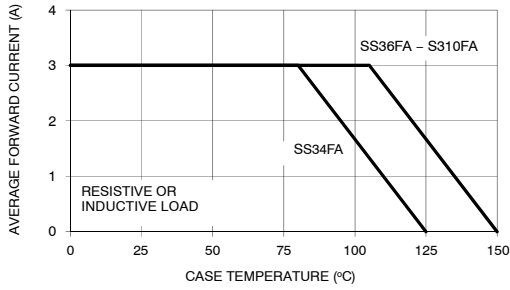


Figure 1. Forward Current Derating Curve

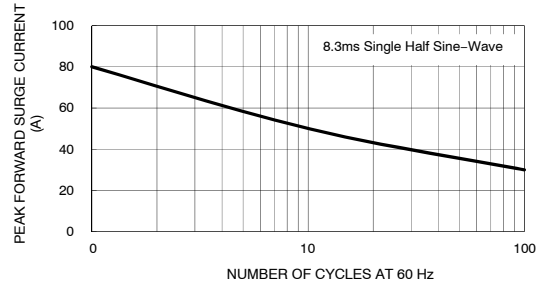


Figure 2. Maximum Non-Repetitive Forward Surge Current

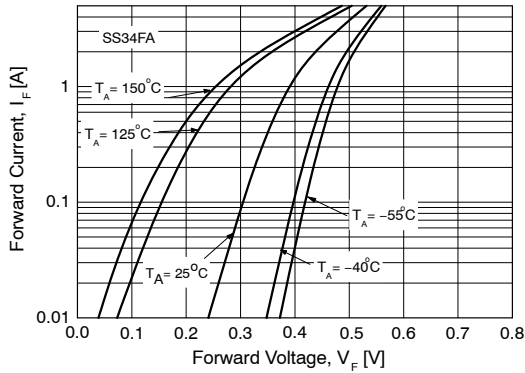


Figure 3. Typical Forward Characteristics

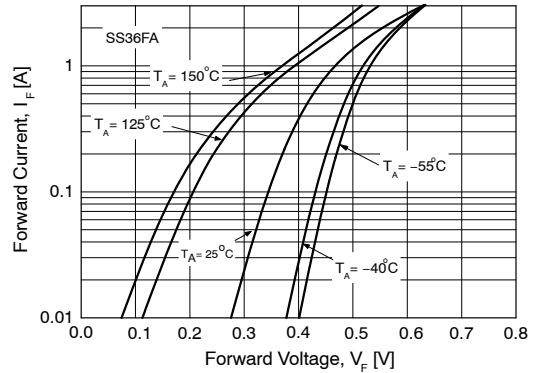


Figure 4. Typical Forward Characteristics

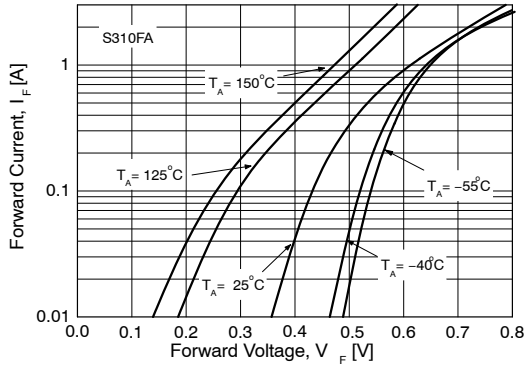


Figure 5. Typical Forward Characteristics

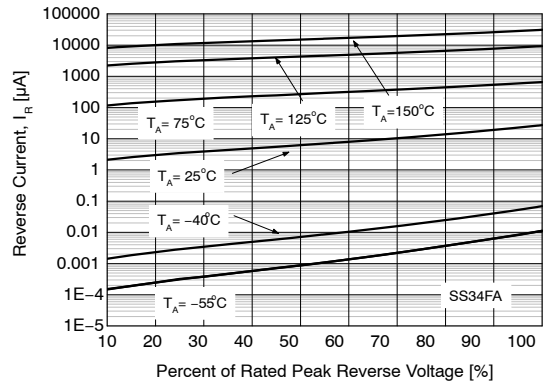


Figure 6. Typical Reverse Characteristics

SS34FA-S310FA

TYPICAL CHARACTERISTICS (Continued)

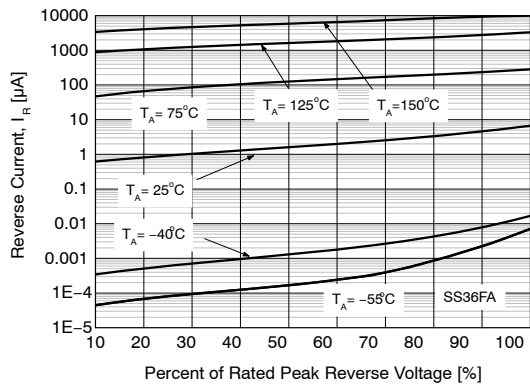


Figure 7. Typical Reverse Characteristics

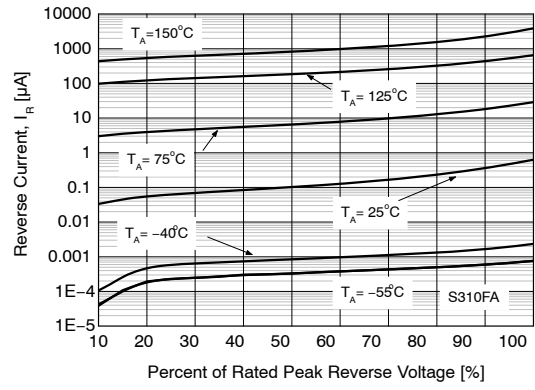


Figure 8. Typical Reverse Characteristics

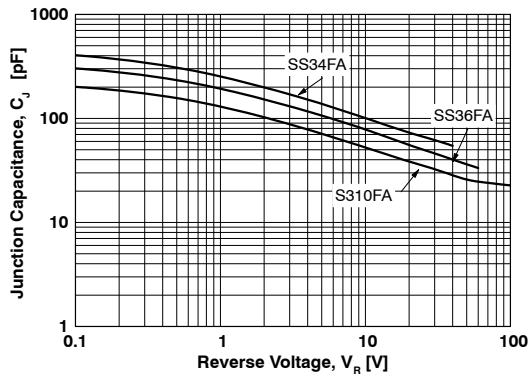
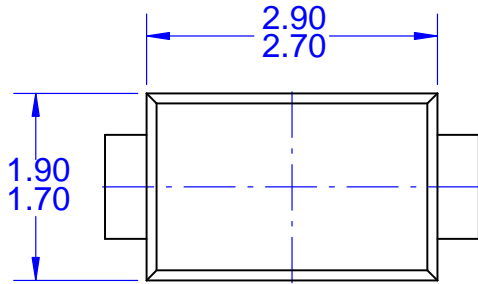


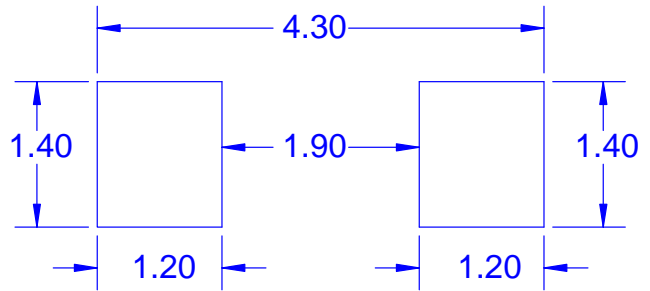
Figure 9. Typical Junction Capacitance

SOD-123FL
CASE 425AB
ISSUE O

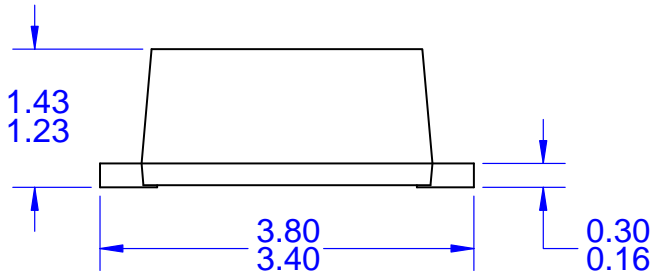
DATE 31 AUG 2016



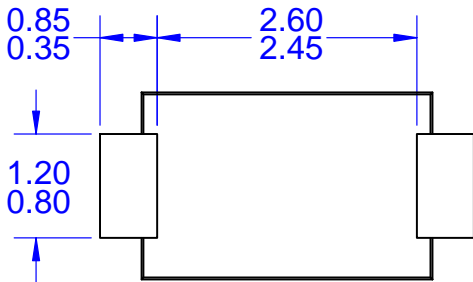
TOP VIEW



LAND PATTERN RECOMMENDATION



FRONT VIEW




BOTTOM VIEW

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.

DOCUMENT NUMBER:	98AON13722G	Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red.
STATUS:	ON SEMICONDUCTOR STANDARD	
NEW STANDARD:		
DESCRIPTION:	SOD-123FL	PAGE 1 OF 2

ON Semiconductor and  are trademarks of Semiconductor Components Industries, LLC dba ON Semiconductor or its subsidiaries in the United States and/or other countries. ON Semiconductor owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of ON Semiconductor's product/patent coverage may be accessed at www.onsemi.com/site/pdf/Patent-Marking.pdf. ON Semiconductor reserves the right to make changes without further notice to any products herein. ON Semiconductor makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does ON Semiconductor assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. Buyer is responsible for its products and applications using ON Semiconductor products, including compliance with all laws, regulations and safety requirements or standards, regardless of any support or applications information provided by ON Semiconductor. "Typical" parameters which may be provided in ON Semiconductor data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. ON Semiconductor does not convey any license under its patent rights nor the rights of others. ON Semiconductor products are not designed, intended, or authorized for use as a critical component in life support systems or any FDA Class 3 medical devices or medical devices with a same or similar classification in a foreign jurisdiction or any devices intended for implantation in the human body. Should Buyer purchase or use ON Semiconductor products for any such unintended or unauthorized application, Buyer shall indemnify and hold ON Semiconductor and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that ON Semiconductor was negligent regarding the design or manufacture of the part. ON Semiconductor is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all applicable copyright laws and is not for resale in any manner.

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:

Literature Distribution Center for ON Semiconductor
19521 E. 32nd Pkwy, Aurora, Colorado 80011 USA
Phone: 303-675-2175 or 800-344-3860 Toll Free USA/Canada
Fax: 303-675-2176 or 800-344-3867 Toll Free USA/Canada
Email: orderlit@onsemi.com

N. American Technical Support: 800-282-9855 Toll Free
USA/Canada
Europe, Middle East and Africa Technical Support:
Phone: 421 33 790 2910

ON Semiconductor Website: www.onsemi.com

Order Literature: <http://www.onsemi.com/orderlit>

For additional information, please contact your local
Sales Representative

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- ⊖ [View SS34FA on WIN SOURCE](#)
- ⊖ [Fairchild/ON Semiconductor Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

- ✓ Global Sourcing Solution
- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management