FAIRCHILD SEMICONDUCTOR®

October 2013

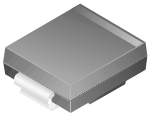
SS32 - S310
Schottky Rectifier

Features

- Metal to Silicon Rectifiers, Majority Carrier Conduction
- Low-Forward Voltage Drop
- Easy Pick and Place
- High-Surge Current Capability

Description

The SS32-S310 series includes a high-efficiency, low power loss, general-propose Schottky rectifiers. The clip-bonded leg structure provides high thermal performance and low electrical resistance. These rectifiers are suited for free wheeling, secondary rectification, and reverse polarity protection applications.



SMC/DO-214AB
COLOR BAND DENOTES CATHODE

Ordering Information

Part Number	Marking	Package	Packing Method
SS32	SS32	DO-214AB	Tape and Reel
SS33	SS33		
SS34	SS34		
SS35	SS35		
SS36	SS36		
SS38	SS38		
SS39	SS39		
S310	S310		

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°C unless otherwise noted.

Symbol	Parameter	Value								Units
		SS32	SS33	SS34	SS35	SS36	SS38	SS39	S310	
V_{RRM}	Maximum Repetitive Reverse Voltage	20	30	40	50	60	80	90	100	V
$I_{F(AV)}$	Maximum Average Forward Current at T_A = 75°C	3.0								A
I_{FSM}	Non-Repetitive Peak Forward Surge Current: 8.3 ms Single Half-Sine Wave	100								A
T_{STG}	Storage Temperature Range	-55 to +150								°C
T_J	Operating Junction Temperature	-55 to +150								°C

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Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	2.27	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient[1]	55	°C/W
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	17	°C/W

Note:

1. Device mounted on FE-4 PCB 0.55 x 0.55 inch (14 x 14 mm).

Electrical Characteristics

Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Test Conditions	Value								Units
			SS32	SS33	SS34	SS35	SS36	SS38	SS39	S310	
V_F	Forwarded Voltage	I_F = 3.0 A	500			750		850			mV
I_R	Reverse Current at Rated V_R	T_A = 25°C	0.5								mA
		T_A = 100°C	20			10					

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Typical Performance Characteristics

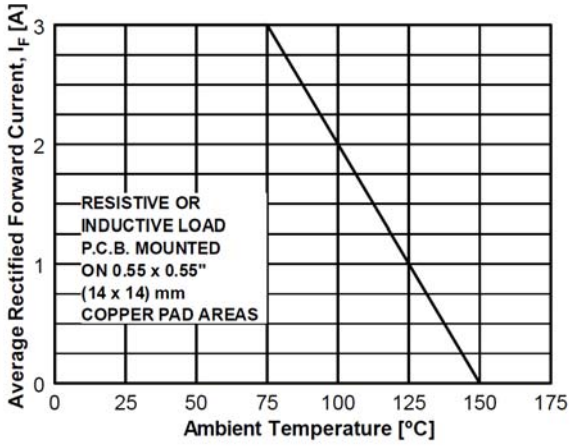

Figure 1. Forward Current Derating Curve

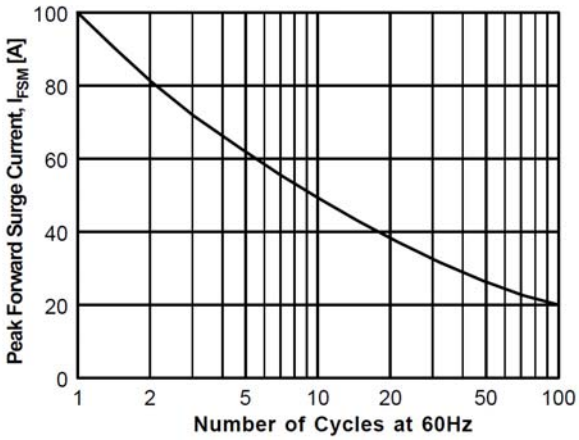

Figure 2. Non-Repetitive Surge Current

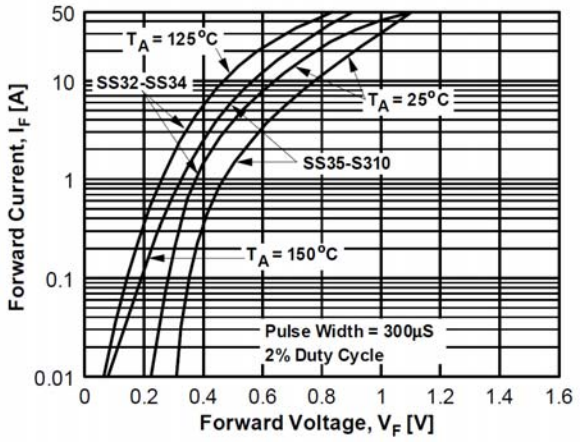

Figure 3. Forward Voltage Characteristics

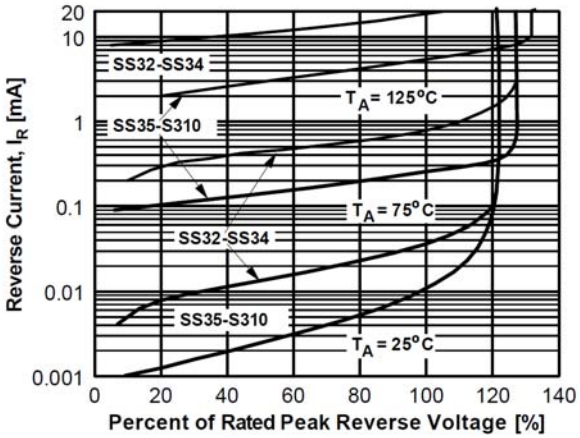

Figure 4. Reverse Current vs. Reverse Voltage

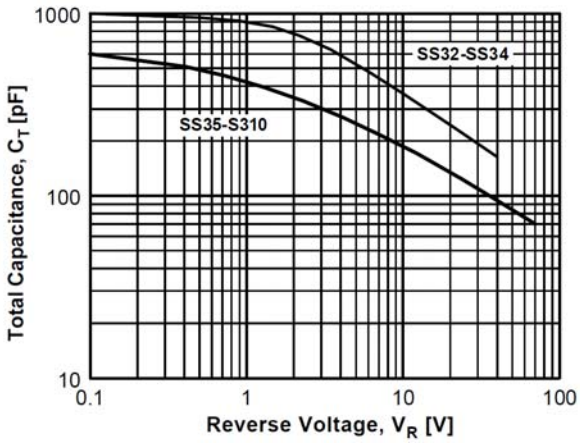

Figure 5. Total Capacitance

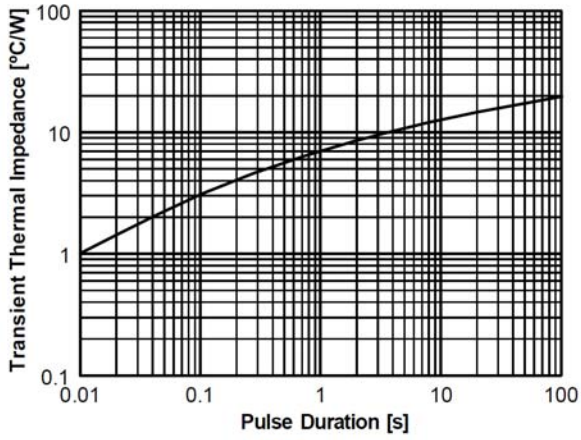

Figure 6. Thermal Impedance Characteristics

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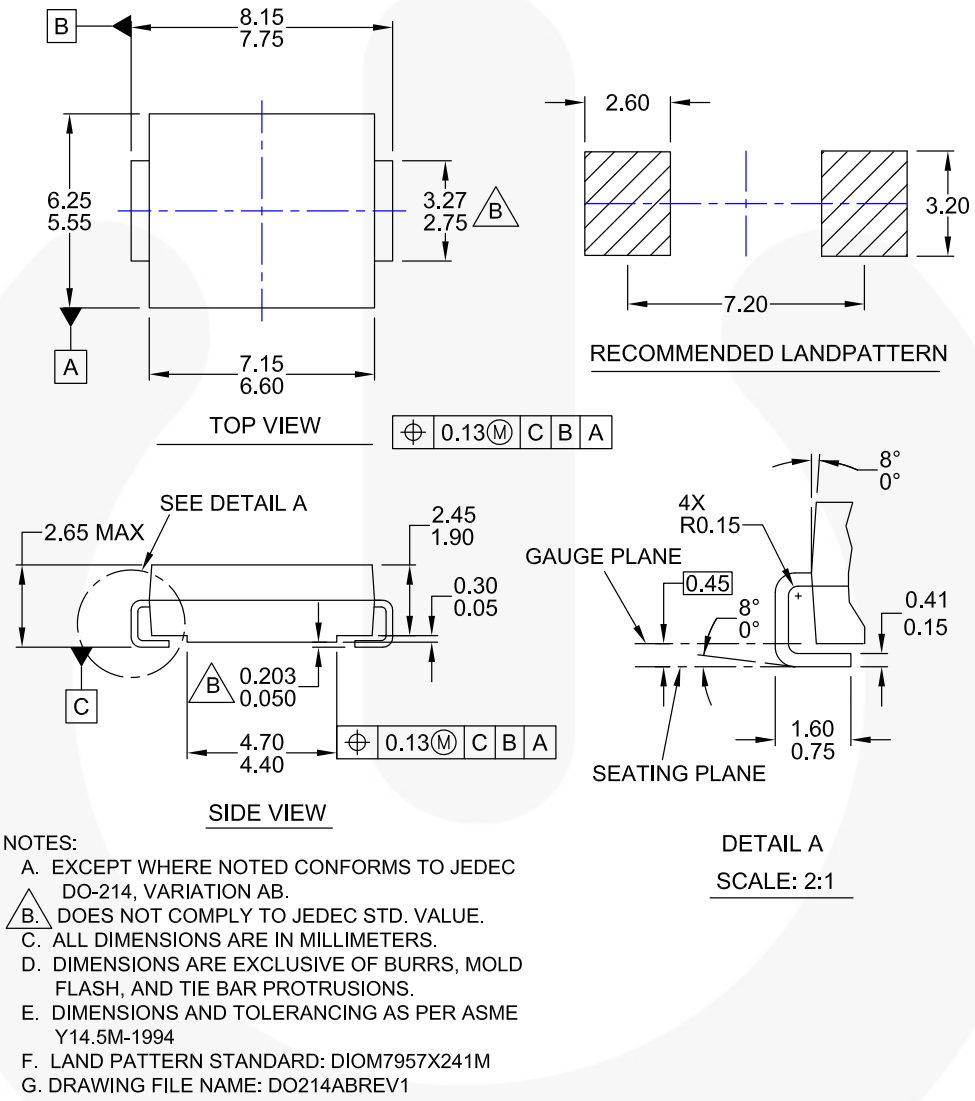
Physical Dimension

DO-214AB



NOTES:

A. EXCEPT WHERE NOTED CONFORMS TO JEDEC DO-214, VARIATION AB.
B. DOES NOT COMPLY TO JEDEC STD. VALUE.
C. ALL DIMENSIONS ARE IN MILLIMETERS.
D. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, AND TIE BAR PROTRUSIONS.
E. DIMENSIONS AND TOLERANCING AS PER ASME Y14.5M-1994
F. LAND PATTERN STANDARD: DIOM7957X241M
G. DRAWING FILE NAME: DO214ABREV1

Figure 7. 2-LEAD, SMC, JEDEC DO-214, VARIATION AB (ACTIVE)

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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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