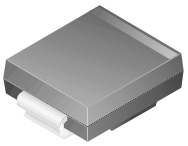
FAIRCHILD SEMICONDUCTOR®

June 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



SMC/DO-214AB
COLOR BAND DENOTES CATHODE

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
		32	33	34	35	36	38	39	310	
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

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
			32	33	34	35	36	38	39	310	
V_F	Forwarded Voltage	3.0 A	500			700		850			mV
I_R	Reverse Current at Rated V_R	T_A = 25°C	0.5								mA
		T_A = 100°C	20			10					

Typical Performance Characteristics

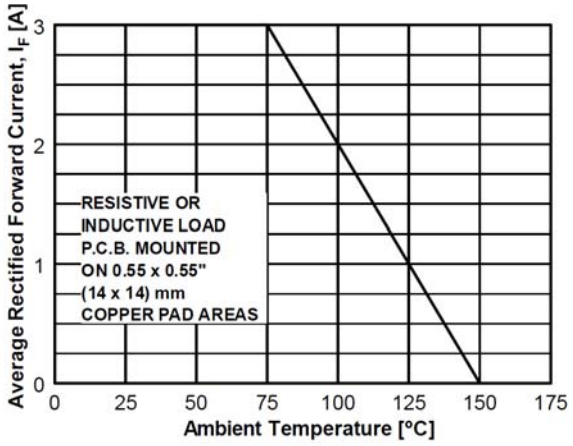


Figure 1. Forward Current Derating Curve

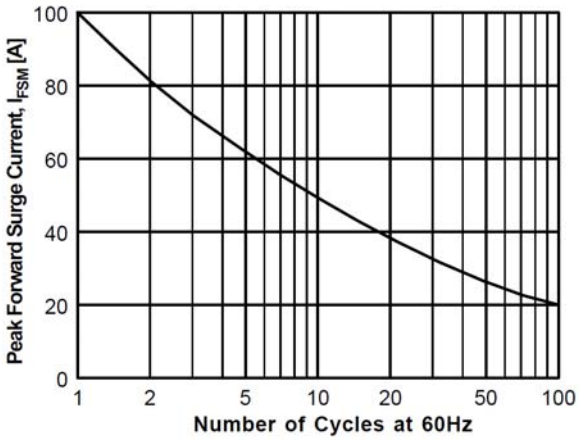


Figure 2. Non-Repetitive Surge Current

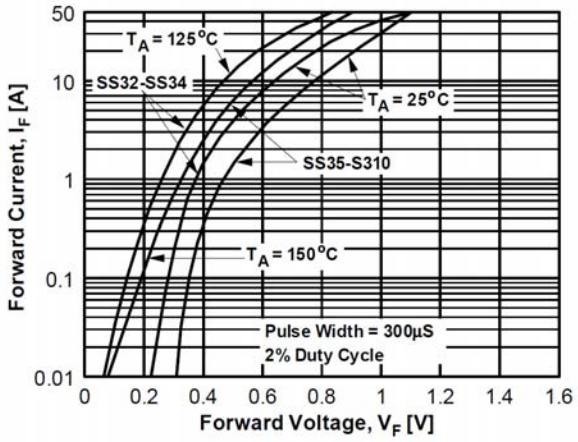


Figure 3. Forward Voltage Characteristics

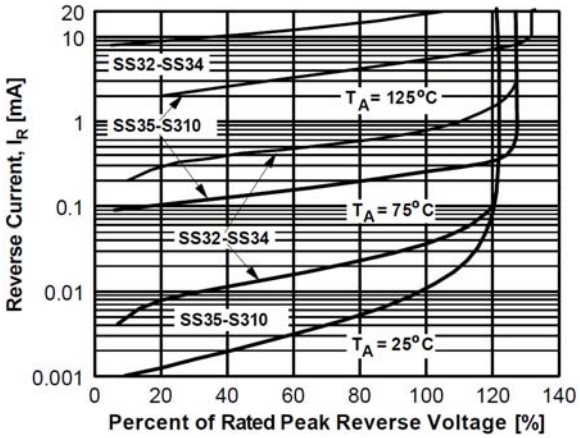


Figure 4. Reverse Current vs. Reverse Voltage

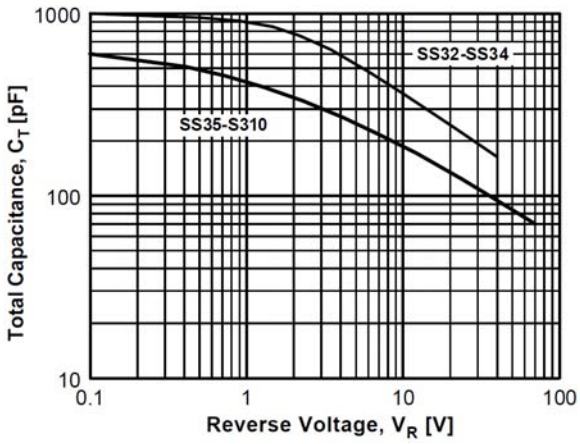


Figure 5. Total Capacitance

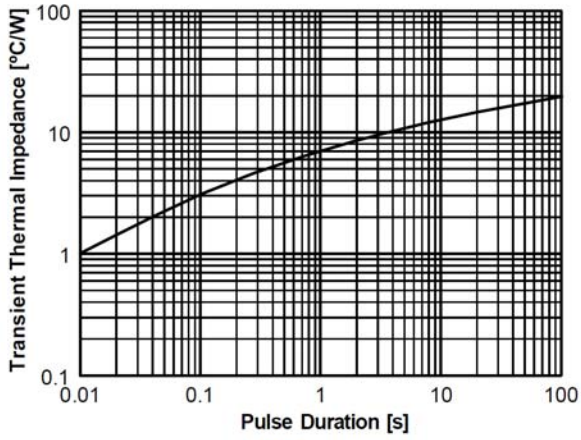
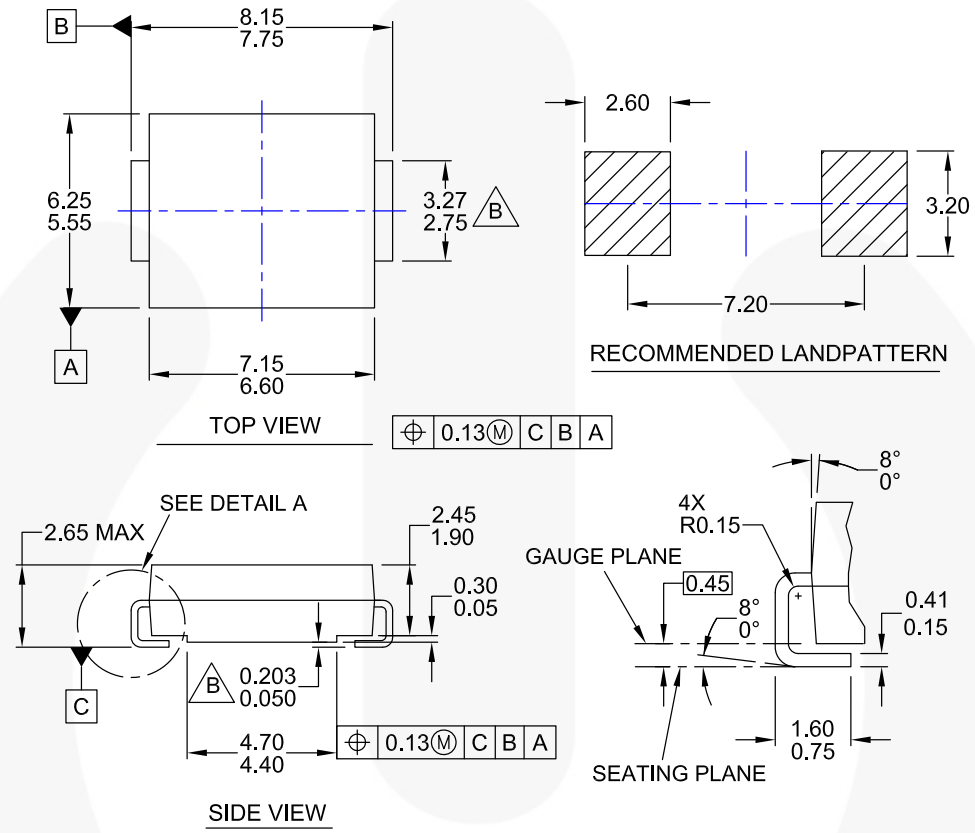


Figure 6. Thermal Impedance Characteristics

Physical Dimensions

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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