FAIRCHILD SEMICONDUCTOR®

September 2013

SS12 - S100
Schottky Rectifier

Features

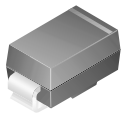
- Glass-Passivated Junctions
- High-Current Capability, Low V_F

Applications

- Low Voltage
- High-Frequency Inverters
- Free Wheeling
- Polarity Protection

Description

The SS series is a high efficiency, low power loss general propose Schottky rectifier. The clip bonded leg structure provides high thermal performance and low electrical resistance. this rectifier is exclusively suits for free wheeling, secondary rectification and reverse polarity protection applications.



SMA/DO-214AC
COLOR BAND DENOTES CATHODE

Ordering Information

Part Number	Marking	Package	Packing Method
SS12	SS12	DO-214AC	Tape and Reel
SS13	SS13		
SS14	SS14		
SS15	SS15		
SS16	SS16		
SS18	SS18		
SS19	SS19		
S100	S100		

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
		12	13	14	15	16	18	19	100	
V_{RRM}	Maximum Repetitive Reverse Voltage	20	30	40	50	60	80	90	100	V
$I_{F(AV)}$	Maximum Average Forward Current: 0.375 inch Lead Length at T_A = 75°C	1.0								A
I_{FSM}	Non-Repetitive Peak Forward Surge Current: 8.3 ms Single Half-Sine-Wave	40								A
T_{STG}	Storage Temperature Range	-65 to +150								°C
T_J	Operating Junction Temperature	-65 to +125								°C

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	1.1	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient(1)	88	°C/W

Note:

1. Device mounted on FE-4 PCB 0.013 mm.

Electrical Characteristics

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

Symbol	Parameter	Test Conditions	Value								Units
			12	13	14	15	16	18	19	100	
V_F	Forwarded Voltage	1.0 A	500			700		850			mV
I_R	Reverse Current at rated V_R	T_A = 25°C	0.2								mA
		T_A = 100°C	10								

Typical Performance Characteristics

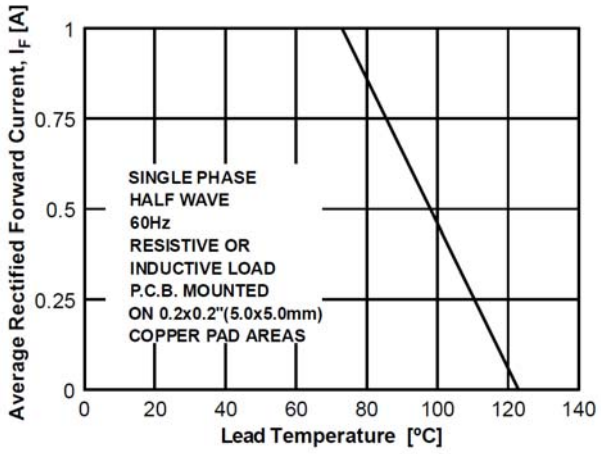


Figure 1. Forward Current Derating Curve

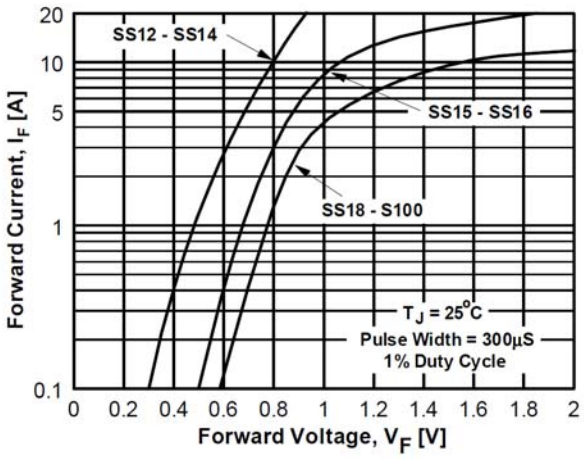


Figure 2. Forward Current Characteristics

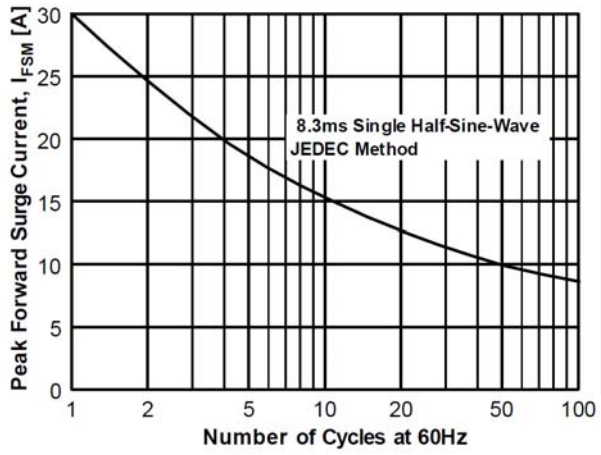


Figure 3. Non-Reverse Surge Current

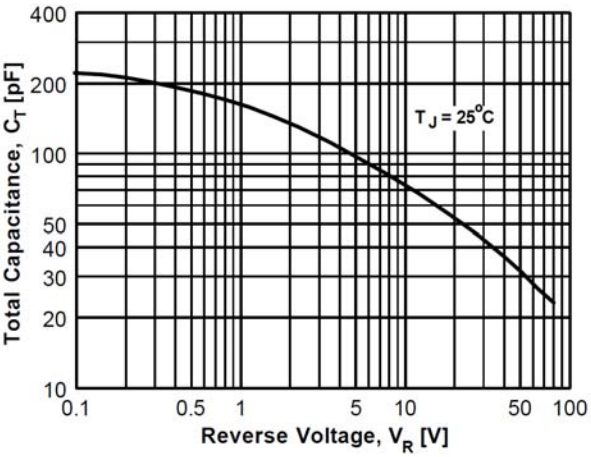
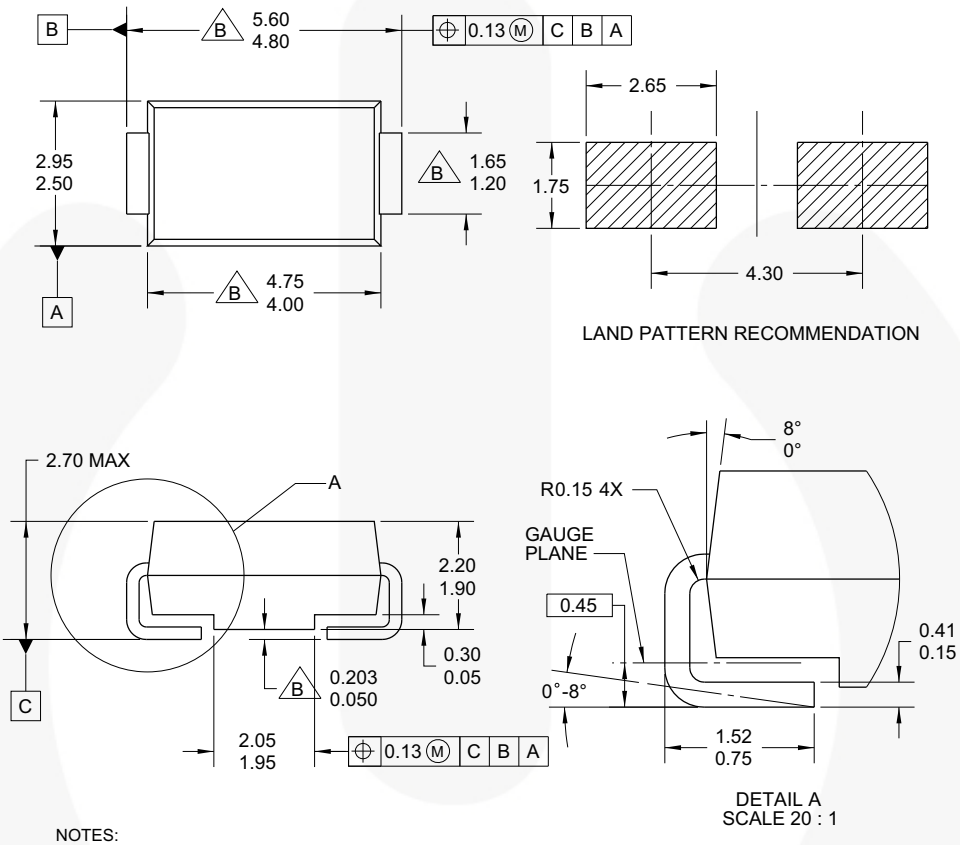


Figure 4. Total Capacitance

Physical Dimensions

DO-214AC



NOTES:

A. EXCEPT WHERE NOTED CONFORMS TO JEDEC DO214 VARIATION AC.
B. DOES NOT COMPLY JEDEC STD. VALUE.
C. ALL DIMENSIONS ARE IN MILLIMETERS.
D. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR PROTRUSIONS.
E. DIMENSION AND TOLERANCE AS PER ASME Y14.5-1994.
F. LAND PATTERN STD. DIOM5025X231M.
G. DRAWING FILE NAME: DO214ACREV1

Figure 5. 2-LEAD, SMA, JEDEC DO-214, VARIATION AC (ACTIVE)

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http://www.fairchildsemi.com/dwg/DO/DO214AC.pdf.

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