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January 2015

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 SS12-S100 series includes 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.



Ordering Information

Part Number	Top Mark	Package	Packing Method		
SS12	SS12	DO-214AC (SMA) Tape and Re			
SS13	SS13	DO-214AC (SMA) Tape and Ree			
SS14	SS14	DO-214AC (SMA)	Tape and Reel		
SS15	SS15	DO-214AC (SMA) Tape and Re			
SS16	SS16	DO-214AC (SMA) Tape and Re			
SS18	SS18	DO-214AC (SMA) Tape and Re			
SS19	SS19	DO-214AC (SMA) Tape and Re			
S100	S100	DO-214AC (SMA) Tape and Reel			

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 $T_A = 25^{\circ}\text{C}$ unless otherwise noted.

Symbol	Parameter	Value								Unit
Syllibol	i arameter	SS12	SS13	SS14	SS15	SS16	SS18	SS19	S100	O.III
V_{RRM}	Maximum Repetitive Reverse Voltage		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			Α					
I _{FSM}	Non-Repetitive Peak Forward Surge Current: 8.3 ms Single Half-Sine Wave	40			Α					
T _{STG}	Storage Temperature Range	-65 to +150			°C					
TJ	Operating Junction Temperature	-65 to +125			°C					

Thermal Characteristics

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

Symbol	Parameter	Value	Unit
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	Conditions	Value						Unit	
Cyllibol	T didilicter		SS12	SS13	SS14	SS15	SS16	SS18	SS19	S100
V _F	Maximum Forward Voltage	I _F = 1.0 A	500		700		850		mV	
	Maximum Reverse	T _A = 25°C	0.2						mA	
IR	Current at Rated V _R	T _A = 100°C	10					IIIA		

Typical Performance Characteristics

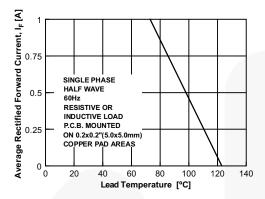


Figure 1. Forward Current Derating Curve

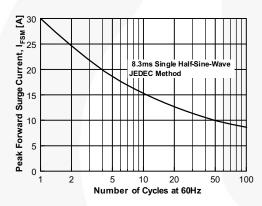


Figure 3. Non-Repetitive Surge Current

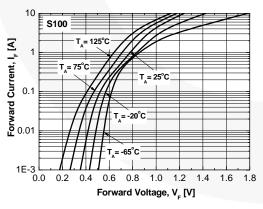


Figure 5. Low-Current Forward Voltage Characteristics

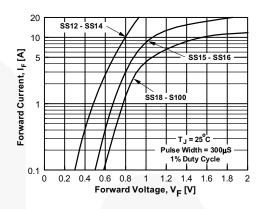


Figure 2. Foward Voltage Characteristics

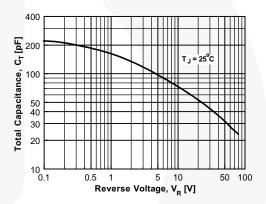


Figure 4. Total Capacitance

Physical Dimension

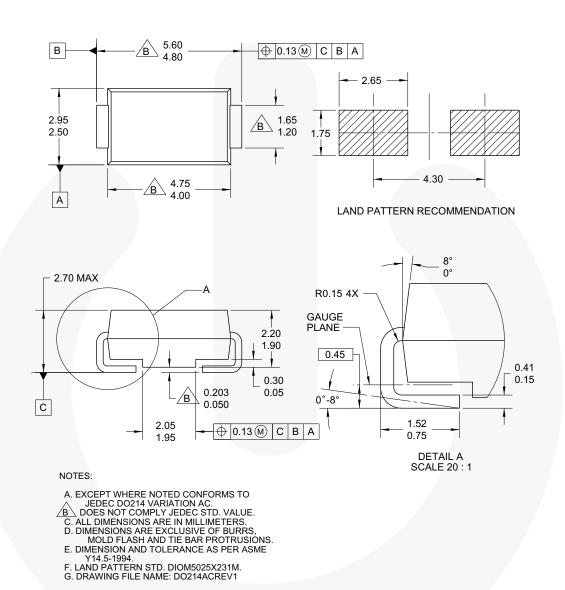


Figure 6. 2-LEAD, SMA, JEDEC DO-214, VARIATION AC





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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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