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January 2015

SS12 - S100 Schottky Rectifier

Features

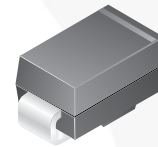
- Glass-Passivated Junctions
- High-Current Capability, Low V_F

Applications

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

Description

The SS12-S100 series includes high-efficiency, low power loss, general-purpose 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.



SMA/DO-214AC

COLOR BAND DENOTES CATHODE

Ordering Information

Part Number	Top Mark	Package	Packing Method
SS12	SS12	DO-214AC (SMA)	Tape and Reel
SS13	SS13	DO-214AC (SMA)	Tape and Reel
SS14	SS14	DO-214AC (SMA)	Tape and Reel
SS15	SS15	DO-214AC (SMA)	Tape and Reel
SS16	SS16	DO-214AC (SMA)	Tape and Reel
SS18	SS18	DO-214AC (SMA)	Tape and Reel
SS19	SS19	DO-214AC (SMA)	Tape and Reel
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
		SS12	SS13	SS14	SS15	SS16	SS18	SS19	S100	
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 $T_A = 75^\circ\text{C}$	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								$^\circ\text{C}$
T_J	Operating Junction Temperature	-65 to +125								$^\circ\text{C}$

Thermal Characteristics

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

Symbol	Parameter	Value	Unit
P_D	Power Dissipation	1.1	W
$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient ⁽¹⁾	88	$^\circ\text{C}/\text{W}$

Note:

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

Electrical Characteristics

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

Symbol	Parameter	Conditions	Value							Unit
			SS12	SS13	SS14	SS15	SS16	SS18	SS19	
V_F	Maximum Forward Voltage	$I_F = 1.0\text{ A}$	500			700	850			mV
I_R	Maximum Reverse Current at Rated V_R	$T_A = 25^\circ\text{C}$	0.2							mA
		$T_A = 100^\circ\text{C}$	10							

Typical Performance Characteristics

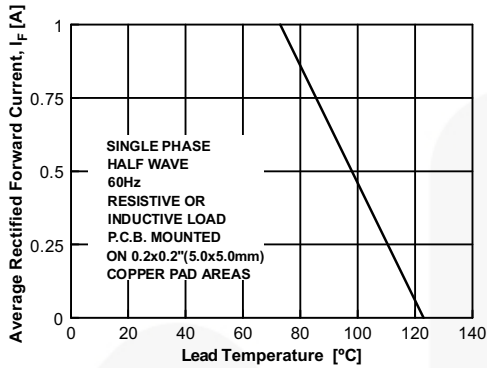


Figure 1. Forward Current Derating Curve

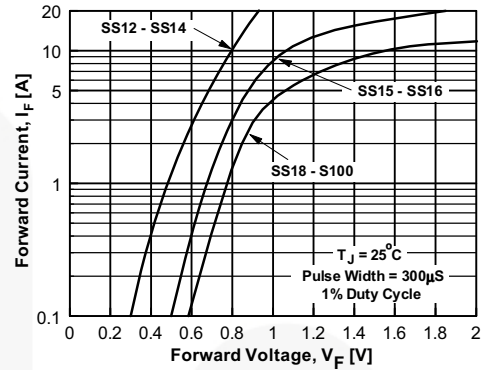


Figure 2. Forward Voltage Characteristics

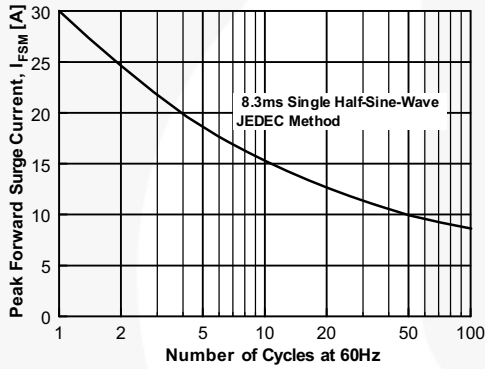


Figure 3. Non-Repetitive Surge Current

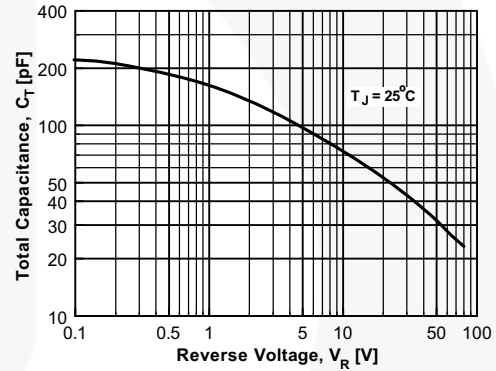


Figure 4. Total Capacitance

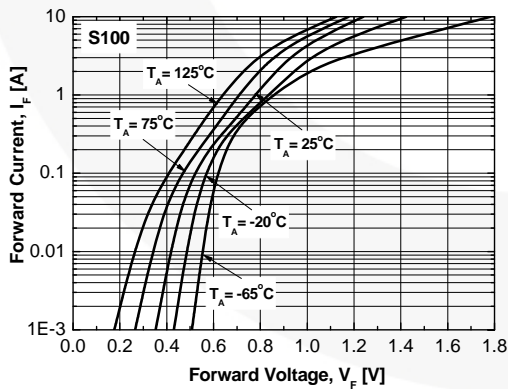
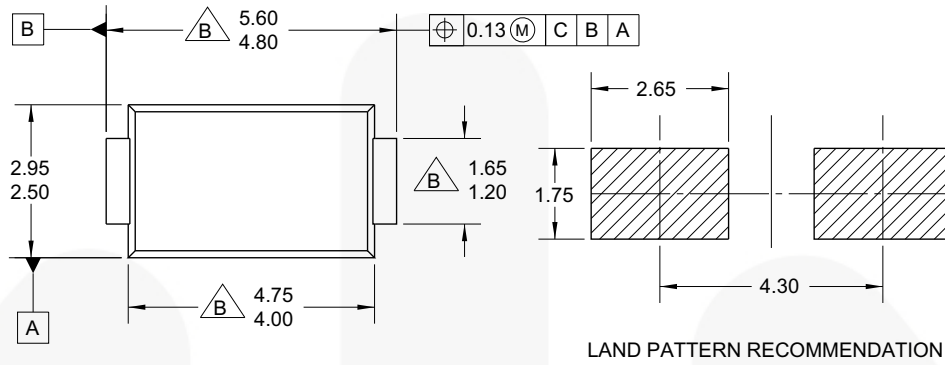
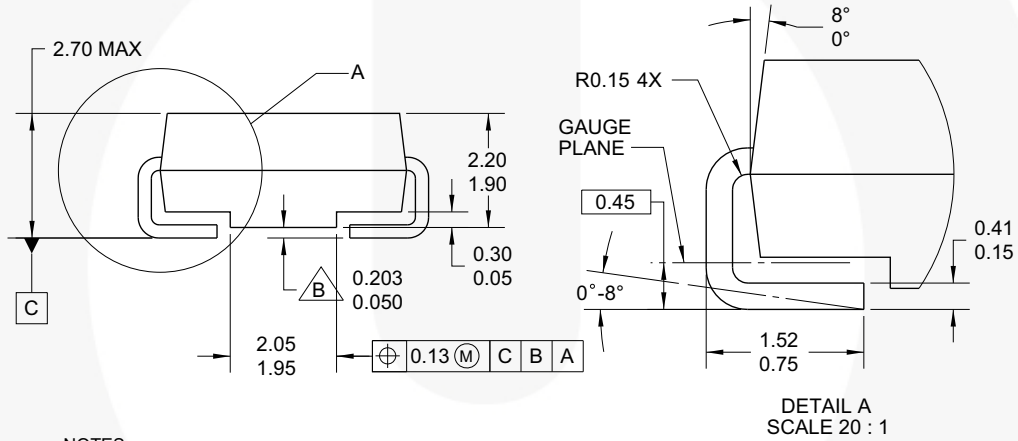


Figure 5. Low-Current Forward Voltage Characteristics

Physical Dimension



LAND PATTERN RECOMMENDATION



DETAIL A
SCALE 20 : 1

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





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