

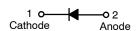
Schottky Rectifier SS32 - S310

Description

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

Features

- Metal to Silicon Rectifiers, Majority Carrier Conduction
- Low-Forward Voltage Drop
- Easy Pick and Place
- High-Surge Current Capability
- This Device is Pb-Free and Halide Free





SMC CASE 403AG

MARKING DIAGRAM



\$Y = Logo

&Z = Assembly Plant Code

&3 = Date Code

Sxyz = Specific Device Code

x = S or 3 y = 1 or 3z = 0 or 2-9

ORDERING INFORMATION

Device	Package	Shipping [†]
SS32	SMC	3000 /
SS33	(Pb-Free,	Tape & Reel
SS34	Halide-Free)	·
SS35	,	
SS36		
SS38		
SS39		
S310		

[†]For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, BRD8011/D.

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

		Value								
Symbol	Parameter		SS33	SS34	SS35	SS36	SS38	SS39	S310	Units
V _{RRM}	Maximum Repetitive Reverse Voltage		30	40	50	60	80	90	100	V
I _{F(AV)}	Maximum Average Forward Current at $T_A = 75^{\circ}C$	3.0		Α						
I _{FSM}	Non-Repetitive Peak Forward Surge Current: 8.3 ms Single Half-Sine Wave	100		Α						
dV/dt	Maximum Voltage Rate of Change	10000		V/μS						
T _{STG}	Storage Temperature Range	-55 to +150		°C						
TJ	Operating Junction Temperature	-55 to +150		°C						

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

THERMAL CHARACTERISTICS

Symbol	Parameter	Value	Unit
P _D	Power Dissipation	2.27	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient (Note 1)	55	°C/W
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	17	°C/W

^{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.

			Value								
Symbol	Parameter	Test Conditions	SS32	SS33	SS34	SS35	SS36	SS38	SS39	S310	Units
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								

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

TYPICAL CHARACTERISTICS

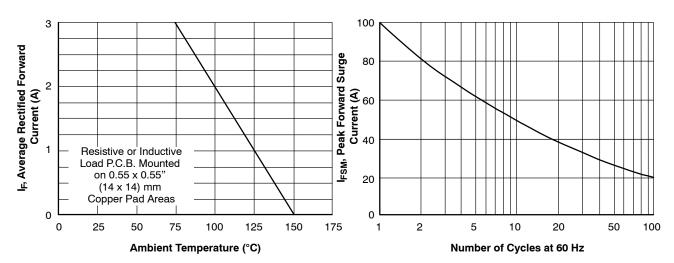


Figure 1. Forward Current Derating Curve

Figure 2. Non-Repetitive Surge Current

TYPICAL CHARACTERISTICS

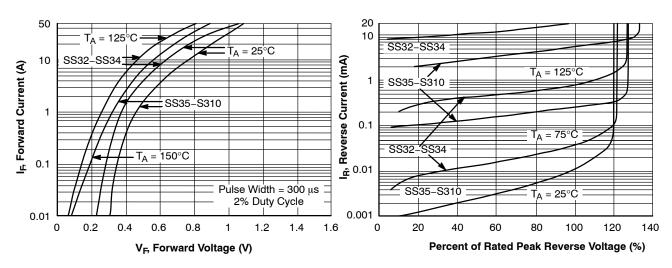


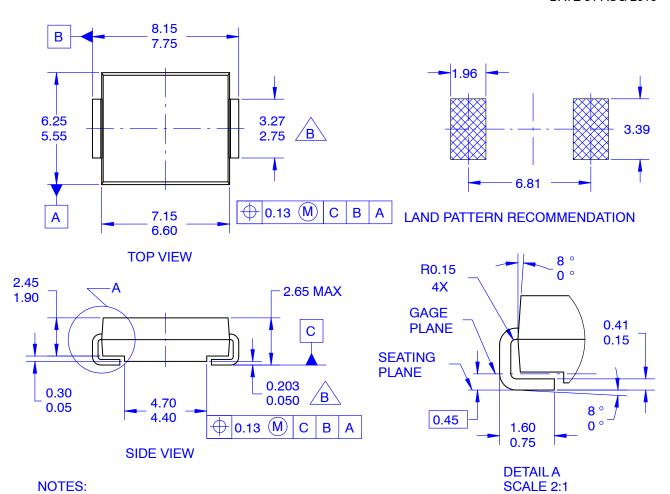
Figure 3. Forward Voltage Characteristics Figure 4. Reverse Current vs. Reverse Voltage 1000 100 Transient Thermal Impedance (°C/W) SS32-SS34 C_T, Total Capacitance (pF) 10 100 10 0.1 0.01 10 100 0.1 10 100 1 V_R, Reverse Voltage (V) Pulse Duration (s)

Figure 5. Total Capacitance

Figure 6. Thermal Impedance Characteristics



DATE 31 AUG 2016



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 Y14.5-2009
- F. LAND PATTERN STANDARD: DIOM7957X241M

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