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August 2016

# SS32 - S310

## Schottky Rectifier

### Features

- Metal to Silicon Rectifiers, Majority Carrier Conduction
- Low-Forward Voltage Drop
- Easy Pick and Place
- High-Surge Current Capability

### Description

The SS32-S310 series includes a 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.



SMC/DO-214AB  
COLOR BAND DENOTES CATHODE

### Ordering Information

Part Number	Marking	Package	Packing Method
SS32	SS32	DO-214AB	Tape and Reel
SS33	SS33		
SS34	SS34		
SS35	SS35		
SS36	SS36		
SS38	SS38		
SS39	SS39		
S310	S310		

### 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								Units
		SS32	SS33	SS34	SS35	SS36	SS38	SS39	S310	
$V_{RRM}$	Maximum Repetitive Reverse Voltage	20	30	40	50	60	80	90	100	V
$I_{F(AV)}$	Maximum Average Forward Current at $T_A = 75^\circ\text{C}$	3.0								A
$I_{FSM}$	Non-Repetitive Peak Forward Surge Current: 8.3 ms Single Half-Sine Wave	100								A
$dV/dt$	Maximum Voltage Rate of Change	10000								V/ $\mu\text{s}$
$T_{STG}$	Storage Temperature Range	-55 to +150								$^\circ\text{C}$
$T_J$	Operating Junction Temperature	-55 to +150								$^\circ\text{C}$

## Thermal Characteristics

Symbol	Parameter	Value	Units
$P_D$	Power Dissipation	2.27	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient <sup>(1)</sup>	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  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Test Conditions	Value								Units
			SS32	SS33	SS34	SS35	SS36	SS38	SS39	S310	
$V_F$	Forwarded Voltage	$I_F = 3.0 \text{ A}$	500		750		850				mV
$I_R$	Reverse Current at Rated $V_R$	$T_A = 25^\circ\text{C}$			0.5						mA
		$T_A = 100^\circ\text{C}$		20			10				

## Typical Performance Characteristics

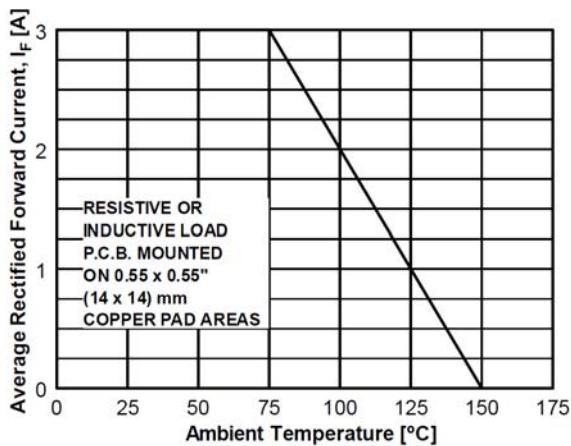


Figure 1. Forward Current Derating Curve

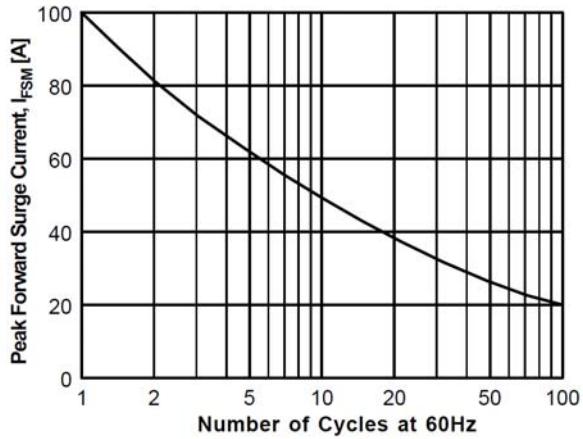


Figure 2. Non-Repetitive Surge Current

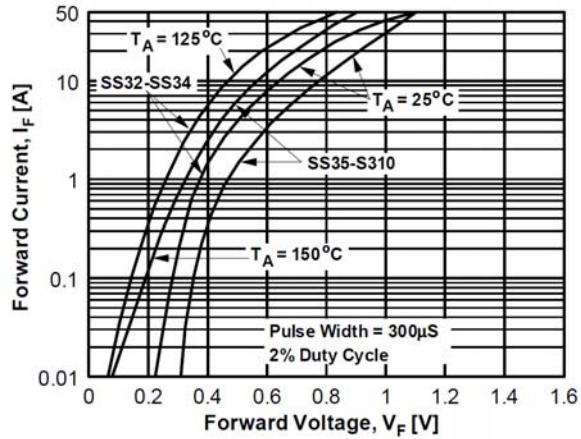


Figure 3. Forward Voltage Characteristics

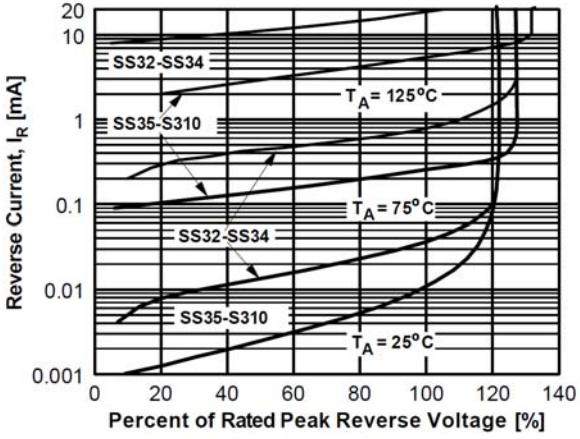


Figure 4. Reverse Current vs. Reverse Voltage

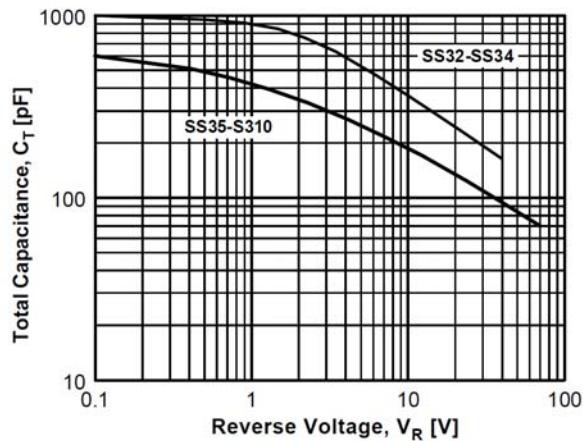


Figure 5. Total Capacitance

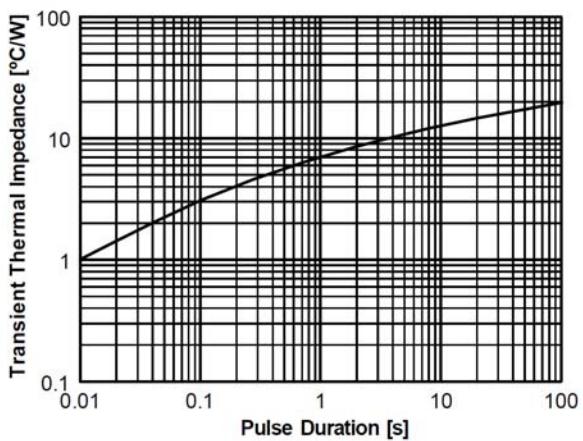
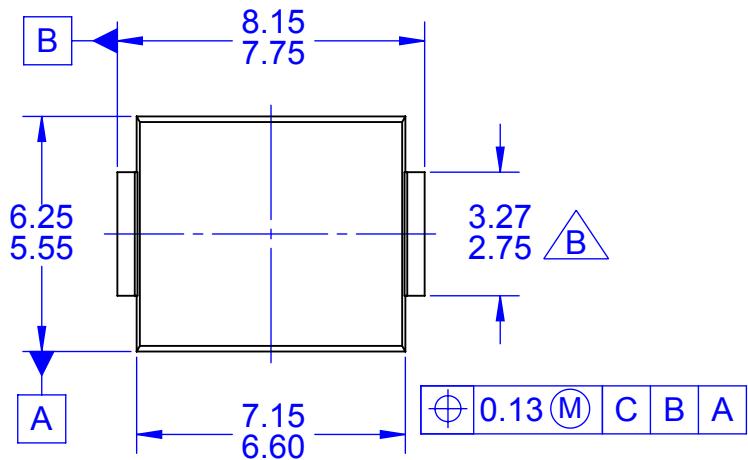
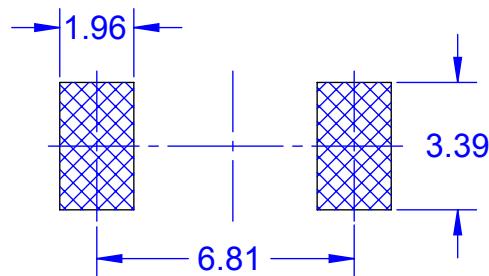


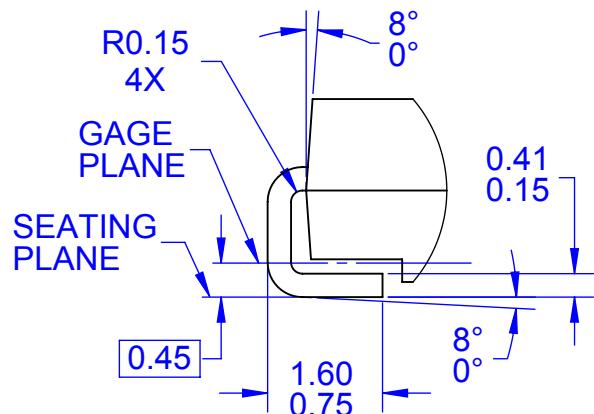
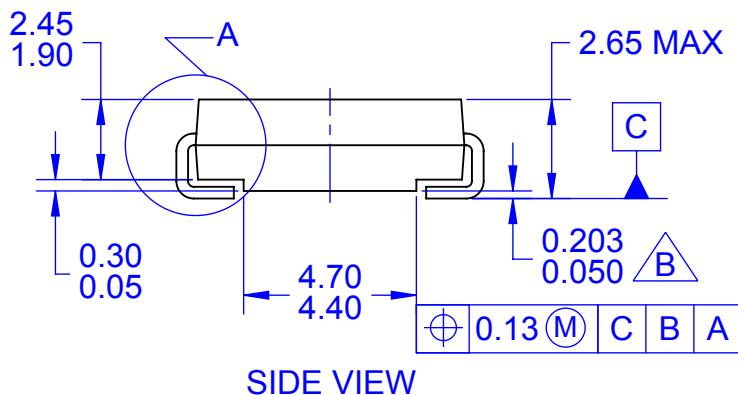
Figure 6. Thermal Impedance Characteristics



TOP VIEW



LAND PATTERN RECOMMENDATION



DETAIL A  
SCALE 2:1

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 Y14.5-2009
- F. LAND PATTERN STANDARD: DIOM7957X241M
- G. DRAWING FILENAME: MKT-DO214ABrev2

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