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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-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.



Ordering Information

Part Number	Marking	Package	Packing Method
SS32	SS32		
SS33	SS33		
SS34	SS34		
SS35	SS35	DO-214AB	Tape and Reel
SS36	SS36	DO-214AB	Tape and neer
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
	i didiletei	SS32	SS33	SS34	SS35	SS36	SS38	SS39	S310	Onits
V _{RRM}	Maximum Repetitive Reverse Voltage		30	40	50	60	80	90	100	V
I _{F(AV)}	Maximum Average Forward Current at $T_A = 75$ °C	3.0						Α		
I _{FSM}	Non-Repetitive Peak Forward Surge Current: 8.3 ms Single Half-Sine 100 Wave						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				

Thermal Characteristics

Symbol	Parameter	Value	Units
P _D	Power Dissipation	2.27	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient ⁽¹⁾	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 $T_A = 25$ °C unless otherwise noted.

Symbol	Parameter	Test	Value								l leite		
		Conditions	SS32	SS33	SS34	SS35	SS36	SS38	SS39	S310	Units		
V _F	Forwarded Voltage	I _F = 3.0 A	500			75	50	850			mV		
1-	Reverse Current	T _A = 25°C	0.5						mA				
^I R	at Rated V _R	T _A = 100°C		20				10					

Typical Performance Characteristics

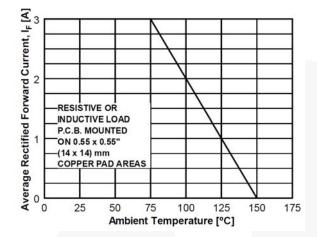


Figure 1. Forward Current Derating Curve

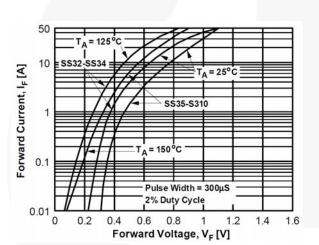


Figure 3. Forward Voltage Characteristics

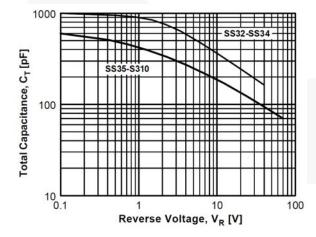


Figure 5. Total Capacitance

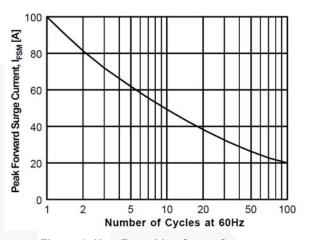


Figure 2. Non-Repetitive Surge Current

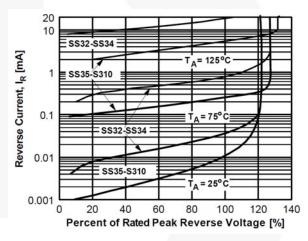


Figure 4. Reverse Current vs. Reverse Voltage

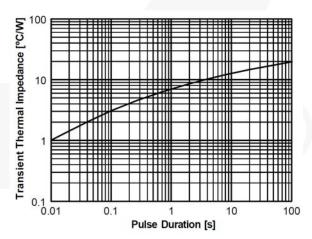
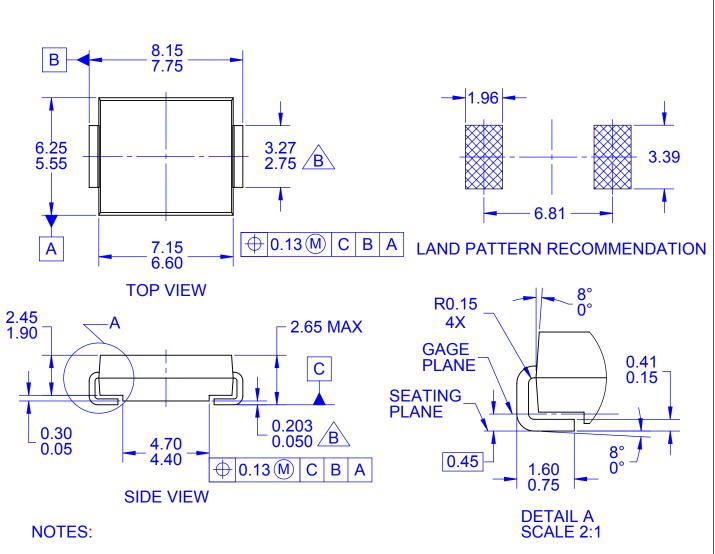


Figure 6. Thermal Impedance Characteristics



- 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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