



Surface Mount Schottky Barrier Rectifier

Major Ratings and Characteristics

$I_{F(AV)}$	3.0 A
V_{RRM}	20 V to 60 V
I_{FSM}	100 A
E_{AS}	20 mJ
V_F	0.5 V, 0.75 V
$T_j \text{ max.}$	125 °C, 150 °C



DO-214AB (SMC)

Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- Low forward voltage drop
- High surge capability
- Meets MSL level 1, per J-STD-020C
- Solder Dip 260 °C, 40 seconds



Mechanical Data

Case: DO-214AB (SMC)

Epoxy meets UL 94V-0 flammability rating

Terminals: Matte tin plated leads, solderable per J-STD-002B and JESD22-B102D

E3 suffix for commercial grade, HE3 suffix for high reliability grade (AEC Q101 qualified)

Polarity: Color band denotes the cathode end

Typical Applications

For use in low voltage high frequency inverters, free-wheeling, dc-to-dc converters, and polarity protection applications

Maximum Ratings

($T_A = 25\text{ °C}$ unless otherwise specified)

Parameter	Symbol	SS32	SS33	SS34	SS35	SS36	Unit
Device marking code		S2	S3	S4	S5	S6	
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	50	60	V
Maximum RMS voltage	V _{RMS}	14	21	28	35	42	V
Maximum DC blocking voltage	V _{DC}	20	30	40	50	60	V
Maximum average forward rectified current at T _L (see Fig. 1)	I _{F(AV)}	3.0					A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	100					A
Non-repetitive avalanche energy at T _A = 25 °C, I _{AS} = 2.0 A, L = 10 mH	E _{AS}	20					mJ
Voltage rate of change (rated V _R)	dv/dt	10000					V/μs
Operating junction temperature range	T _J	- 55 to + 125			- 55 to + 150		°C
Storage temperature range	T _{STG}	- 55 to + 150					°C

Electrical Characteristics

($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

Parameter	Test condition	Symbol	SS32	SS33	SS34	SS35	SS36	Unit
Maximum instantaneous forward voltage	at 3.0 A ⁽¹⁾	V _F	0.5			0.75		V
Maximum DC reverse current at rated DC blocking voltage ⁽¹⁾	T _A = 25 °C	I _R	0.5					mA
	T _A = 100 °C		20			10		

Notes:

(1) Pulse test: 300 μs pulse width, 1 % duty cycle

Thermal Characteristics

($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	SS32	SS33	SS34	SS35	SS36	Unit
Typical thermal resistance ⁽¹⁾	R _{θJA}	55					°C/W
	R _{θJL}	17					

Notes:

(1) P.C.B. mounted 0.55 x 0.55" (14 x 14 mm) copper pad areas

Ratings and Characteristics Curves

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

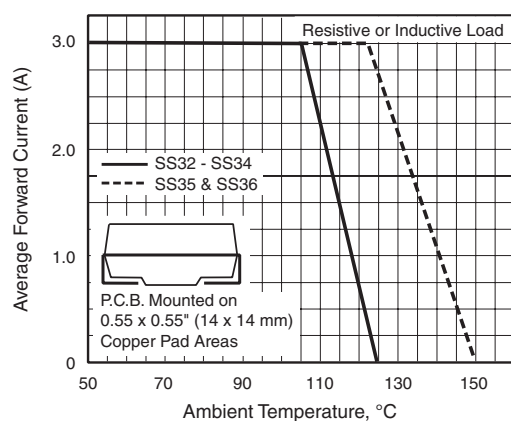


Figure 1. Forward Current Derating Curve

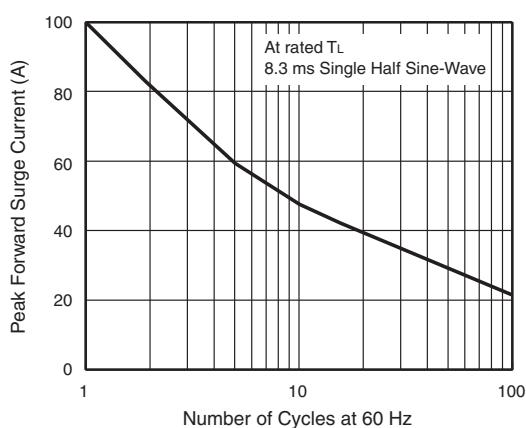


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

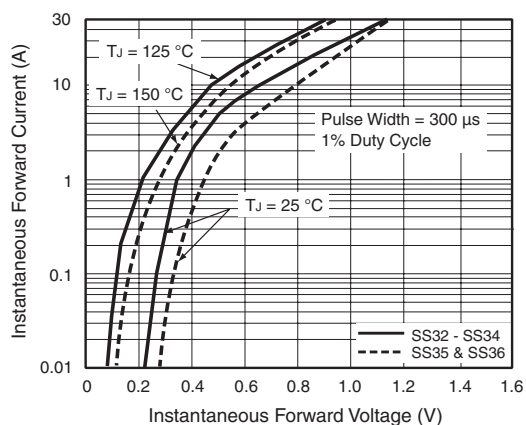


Figure 3. Typical Instantaneous Forward Characteristics

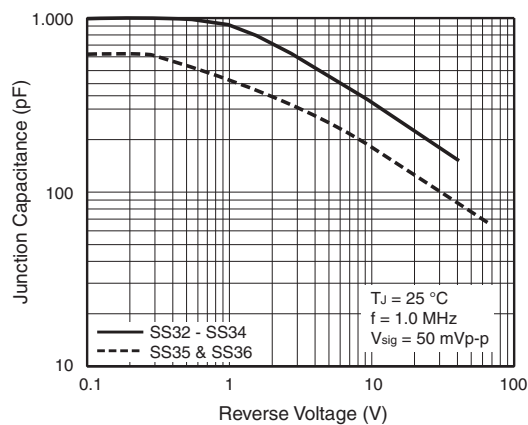


Figure 5. Typical Junction Capacitance

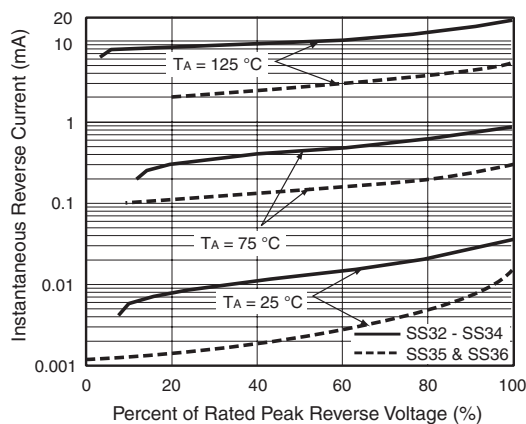


Figure 4. Typical Reverse Current Characteristics

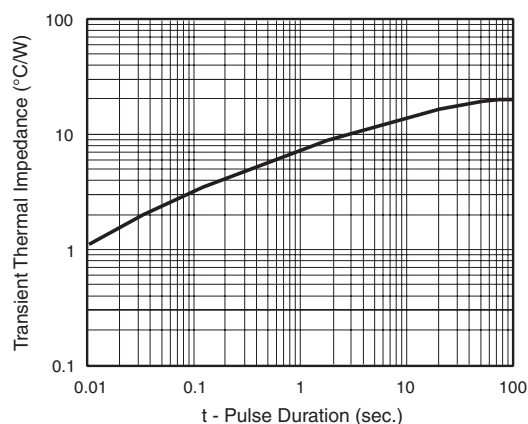
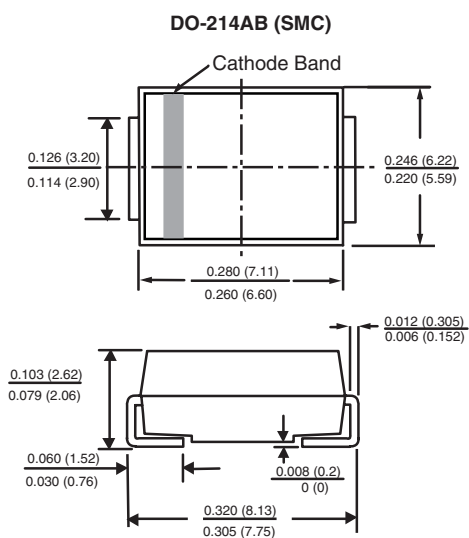
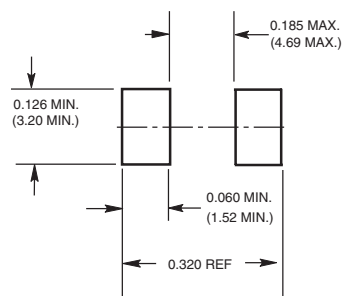


Figure 6. Typical Transient Thermal Impedance

Package outline dimensions in inches (millimeters)



Mounting Pad Layout





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