

SS3 Series



Controlled Avalanche Power Diodes



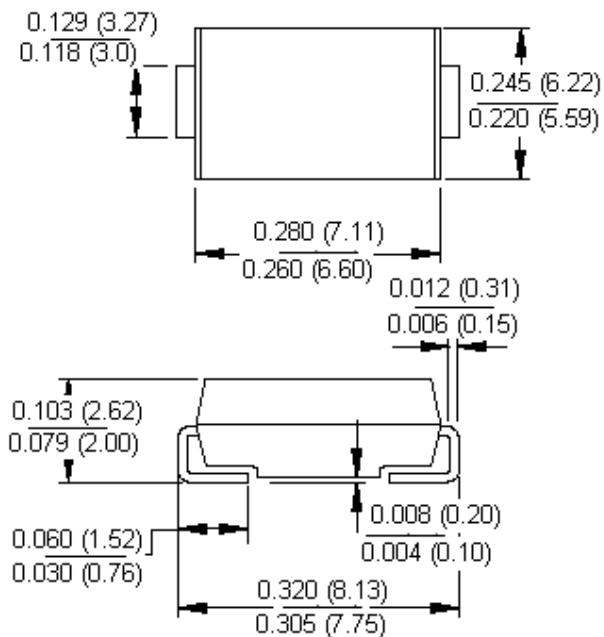
Features:

- For surface mounted application.
- Metal to silicon rectifier, majority carrier conduction.
- Low forward voltage drop.
- Easy pick and place.
- High surge current capability.
- Epitaxial construction
- High temperature soldering: 260°C/10 seconds at terminals.

Mechanical Data:

Case : Moulded plastic.
Terminals : Solder plated.
Polarity : Indicated by cathode band.

SMC/DO-214AB



Dimensions : Inches (Millimetres)



Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Type Number	Symbol	SS34	SS36	Unit
Maximum recurrent peak reverse voltage	V_{RRM}	40	60	V
Maximum RMS voltage	V_{RMS}	28	42	
Maximum DC blocking voltage	V_{DC}	40	60	
Maximum average forward rectified current at T_L (See Figure 1)	$I_{(AV)}$	3.0		A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	100		
Maximum Instantaneous forward voltage (Note 1) at 3.0A	V_F	0.5	0.75	V
Maximum DC reverse current at $T_A = 25^\circ\text{C}$ at rated DC blocking voltage at $T_A = 100^\circ\text{C}$	I_R	0.5		mA
		20	10.0	
Typical thermal resistance (Note 2)	$R_{\theta JL}$	17		$^\circ\text{C/W}$
	$R_{\theta JA}$	55		
Operating temperature range	T_J	-55 to +125	-55 to +150	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150		

Notes:

1. Pulse test with $PW = 300\mu\text{sec}$, 1% duty cycle.
2. Measured on PC Board with 0.6×0.6 " (16 x 16mm) copper pad areas.

Ratings and Characteristic Curves

Figure 1 Maximum Forward Current Derating Curve

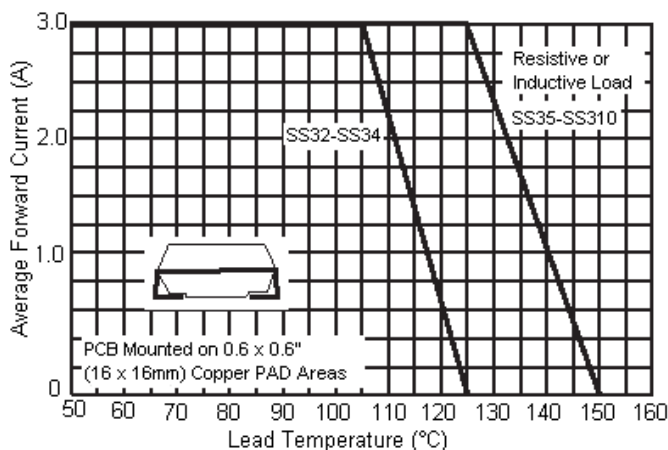
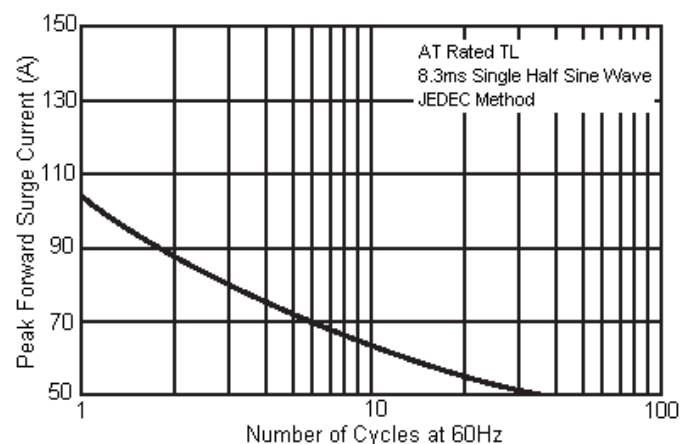


Figure 2 Maximum Non-Repetitive Forward Surge Current



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Figure 3 Typical Forward Characteristics

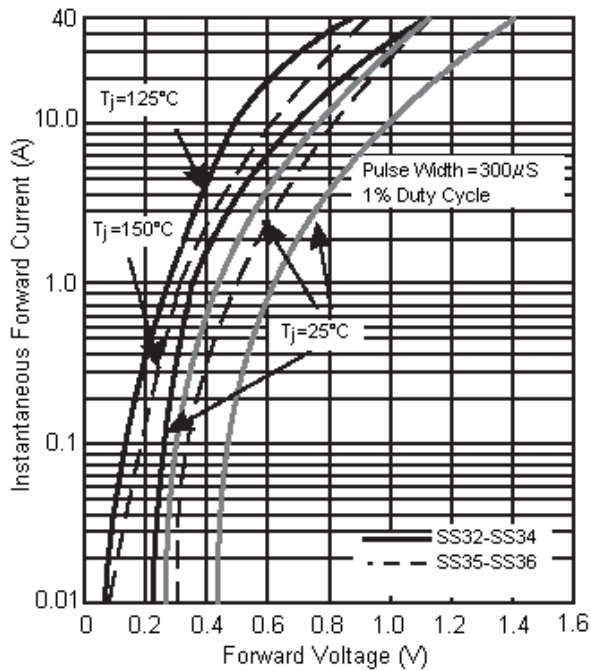


Figure 4 Typical Reverse Characteristics

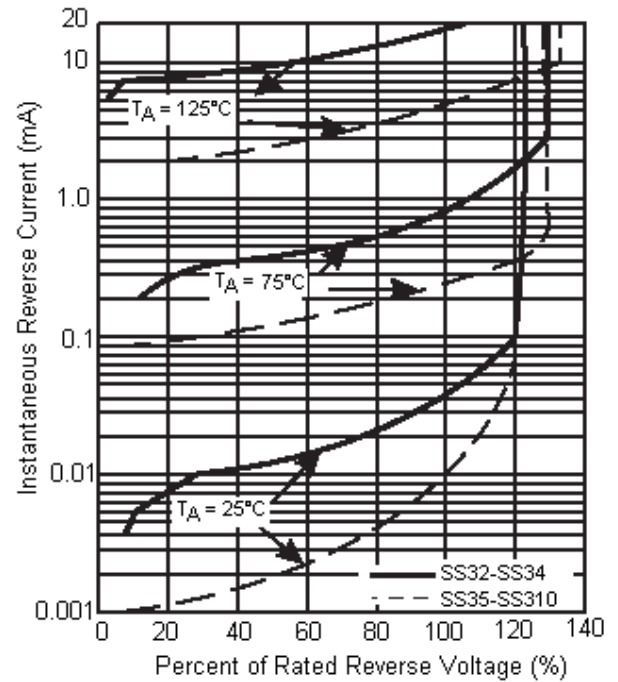


Figure 5 Typical Junction Capacitance

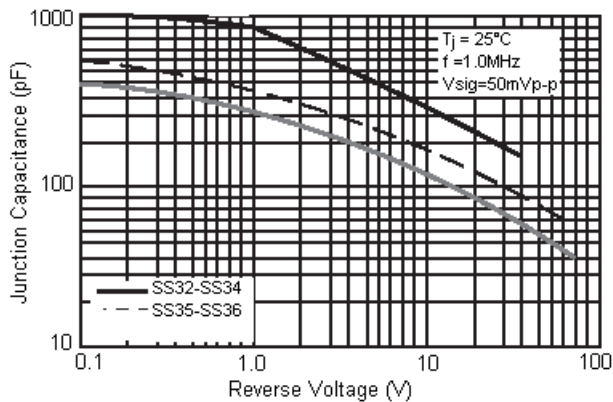
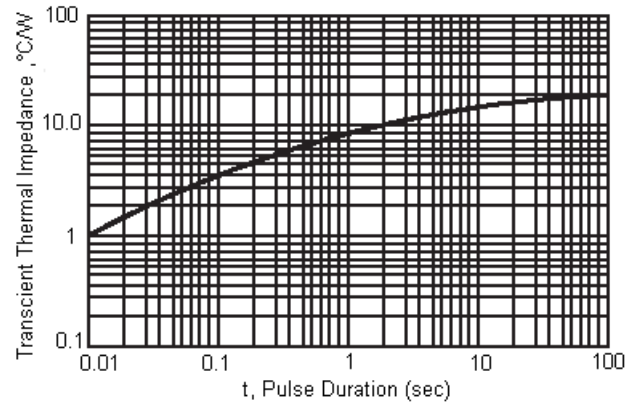


Figure 6 Typical Transient Thermal Impedance



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Specifications

I_F (AV) (A)	T_C (°C)	V_{RRM} (V)	V_{FM} maximum (V)	I_{RM} maximum (mA)	Package	Part Number
3	105	40	0.5	0.5	DO-214AB (SMC)	SS34
		60	0.75			SS36



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Notes:

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