

Controlled Avalanche Power Diodes

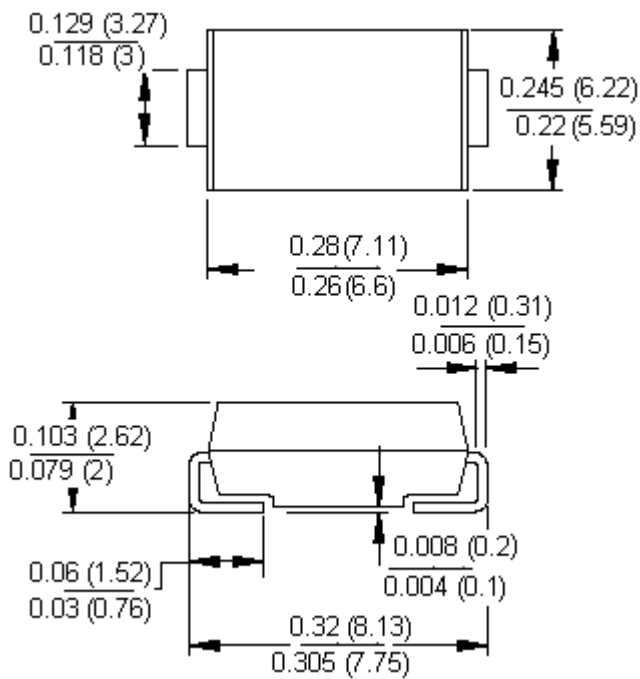
SS3 Series



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

SMC/DO-214AB



Dimensions : Inches (Millimetres)

Mechanical Data:

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

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SS3 Series

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, 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		A
Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	100		
Maximum Instantaneous Forward Voltage (Note 1) at 3 A	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	
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	17		$^\circ\text{C} / \text{W}$
	$R_{\theta JA}$	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 $PW = 300 \mu\text{s}$, 1% duty cycle
 2. Measured on PC Board with 0.6×0.6 inches (16×16 mm) copper pad areas

Ratings and Characteristic Curves

Figure 1 Maximum Forward Current Derating Curve

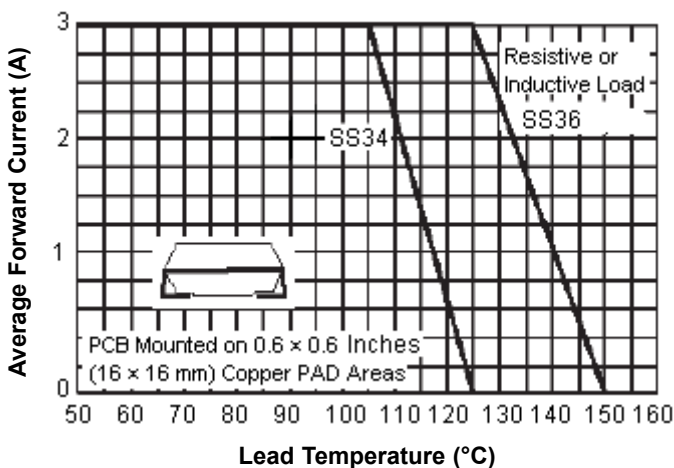
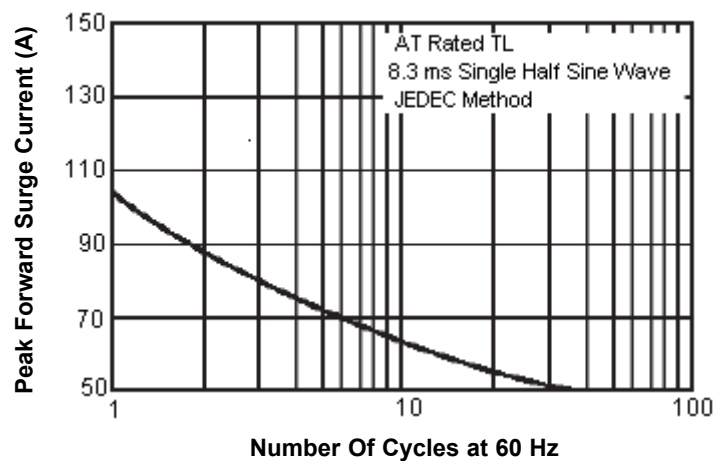


Figure 2 Maximum Non-Repetitive Forward Surge Current



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Figure 3 Typical Forward Characteristics

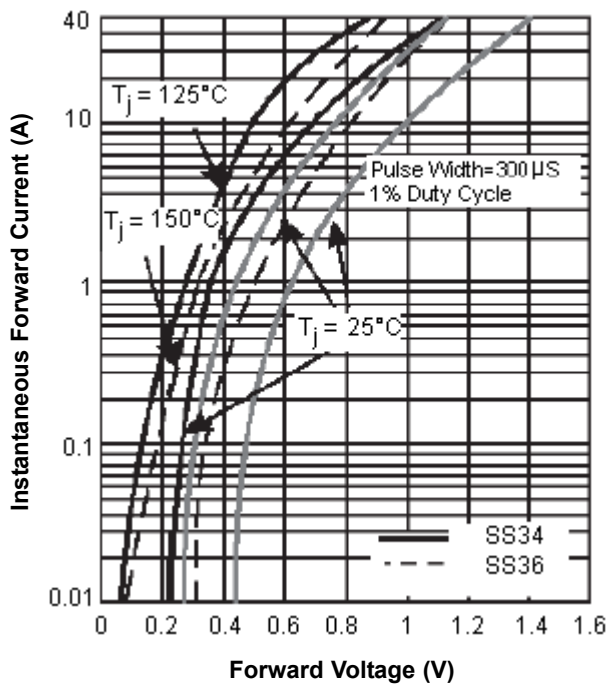


Figure 4 Typical Reverse Characteristics

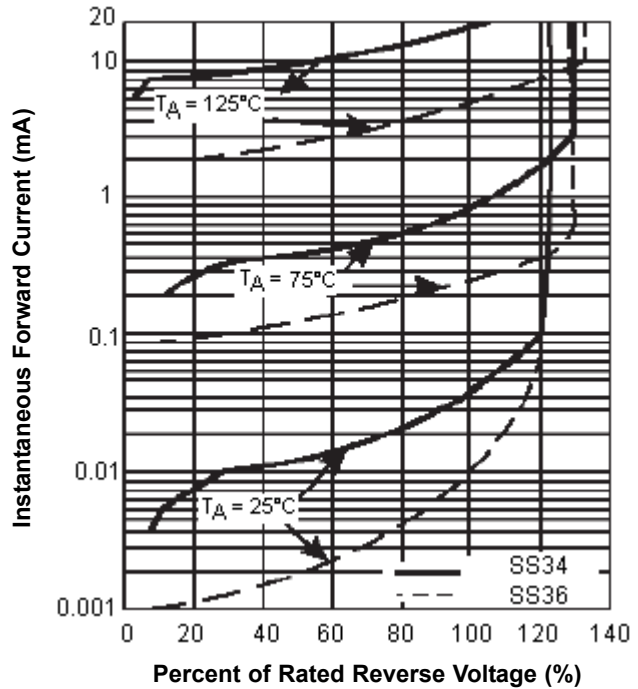


Figure 5 Typical Junction Capacitance

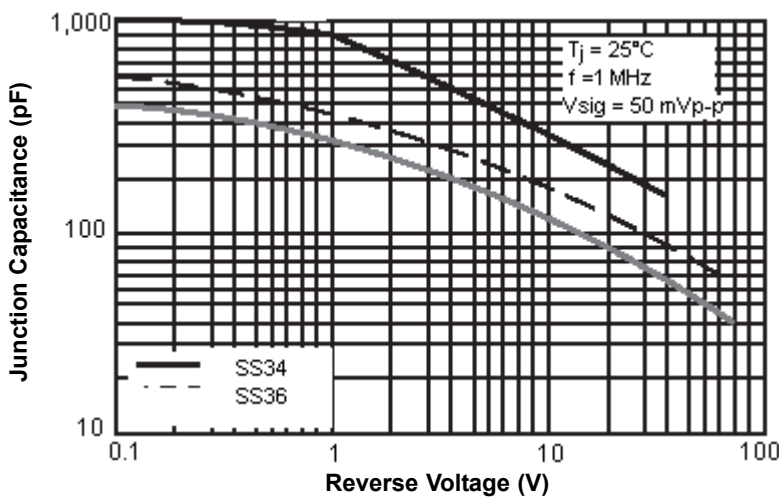
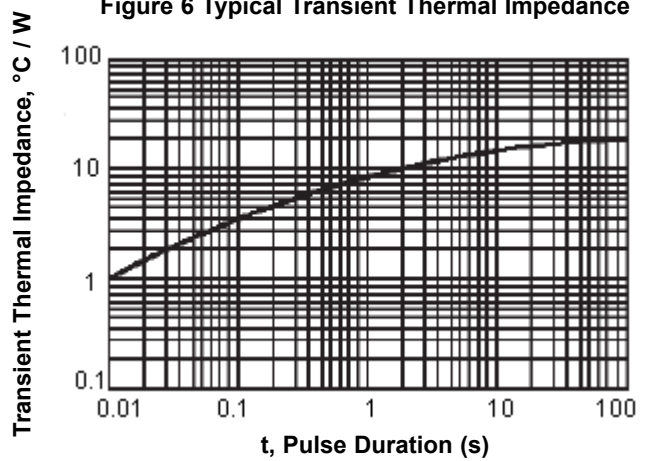


Figure 6 Typical Transient Thermal Impedance



Specification Table

I_F (AV) (A)	T_C ($^\circ\text{C}$)	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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