

SS1 Series



Controlled Avalanche Power Diodes



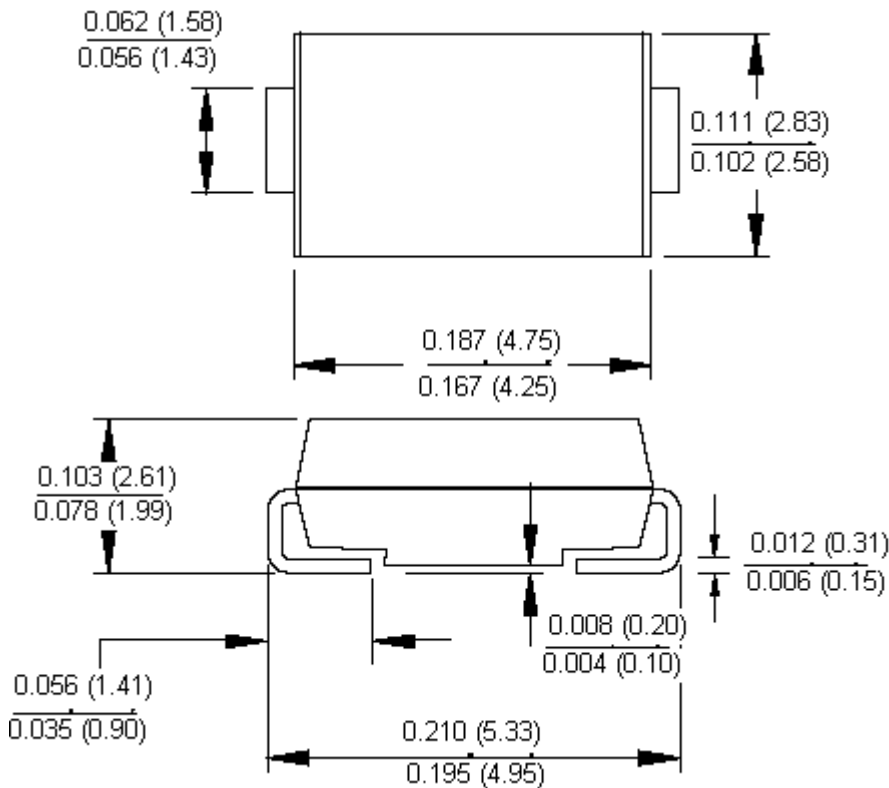
Features:

- 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: 250°C/10 seconds at terminals.

Mechanical Data:

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

SMA/DO-214AC



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	SS14	SS16	SS110	Unit
Maximum recurrent peak reverse voltage	40	60	100	V
Maximum RMS voltage	28	42	70	
Maximum DC blocking voltage	40	60	100	
Maximum average forward rectified current at T_L (See Figure 1)	1.0			A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	30			
Maximum Instantaneous forward voltage (Note) at 1.0A	0.5	0.75	0.80	V
Maximum DC reverse current at $T_A = 25^\circ\text{C}$ at rated DC blocking voltage at $T_A = 100^\circ\text{C}$	0.5		0.05	mA
	10	5.0	0.5	
Typical thermal resistance (Note 2) $R_{\theta JL}$ $R_{\theta JA}$	28			$^\circ\text{C/W}$
	88			
Operating temperature range T_J	-65 to +125	-65 to +150		$^\circ\text{C}$
Storage temperature range T_{STG}	-65 to +150			

Notes:

1. Pulse test with $PW = 300\mu\text{sec}$, 1% duty cycle.
2. Measured on PC Board with 0.2×0.2 " ($5.0 \times 5.0\text{mm}$) copper pad areas.

Ratings and Characteristic Curves

Figure 1 Maximum Forward Current Derating Curve

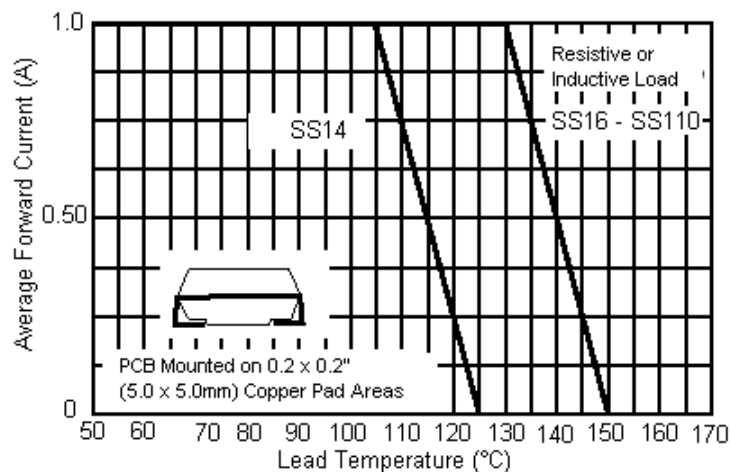


Figure 2 Maximum Non-Repetitive Forward Surge Current

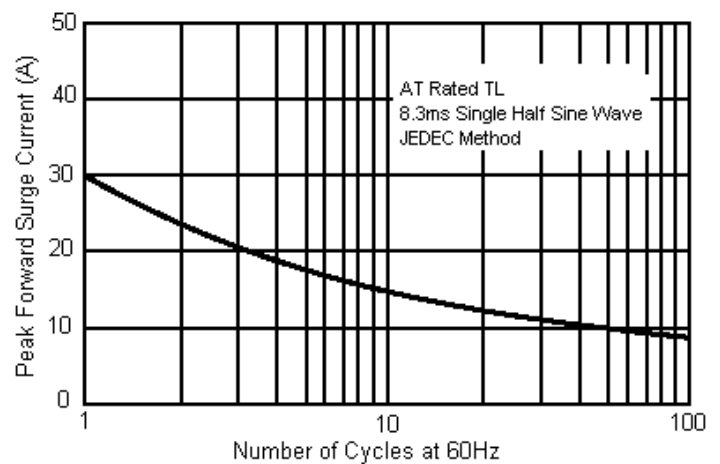


Figure 3 Typical Forward Characteristics

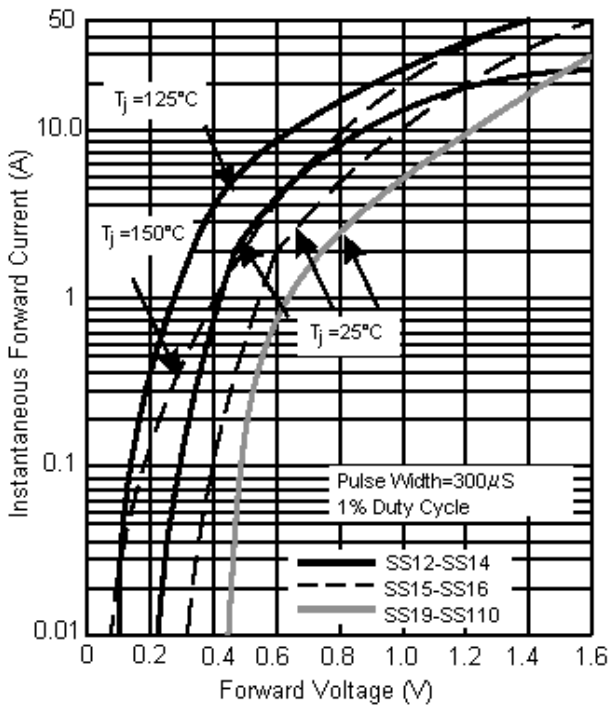


Figure 4 Typical Reverse Characteristics

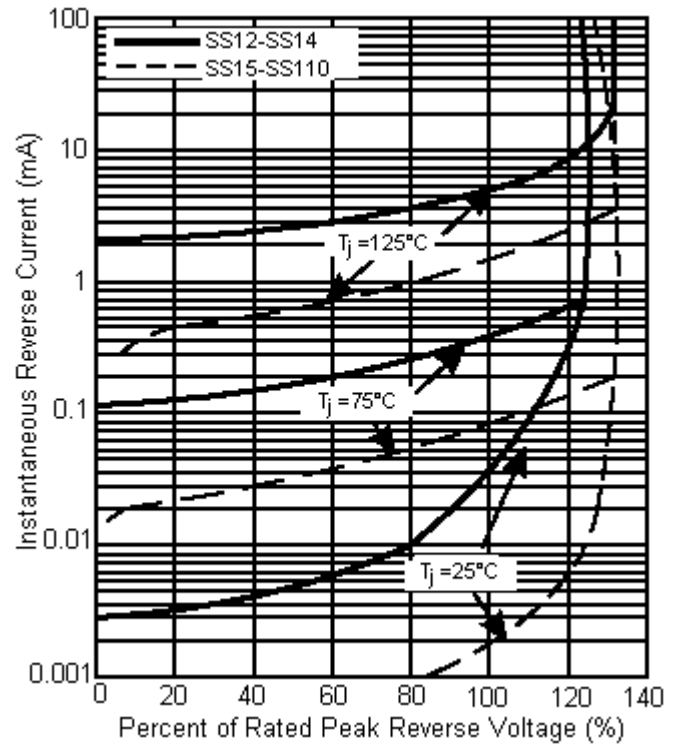
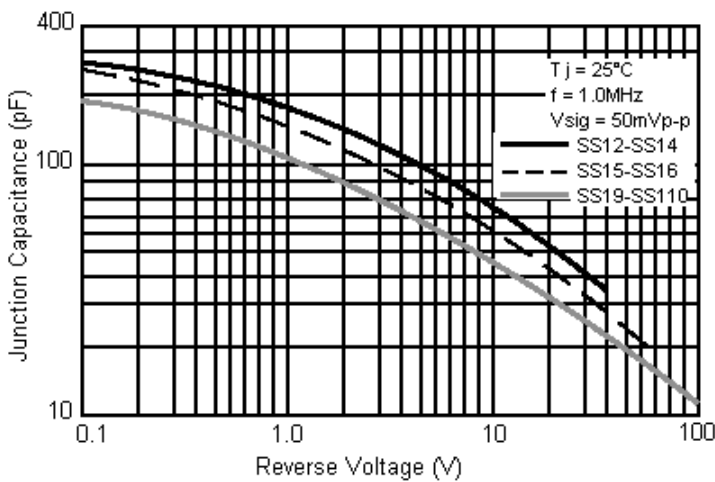


Figure 5 Typical Junction Capacitance



Specifications

I_F (AV) (A)	T_C ($^\circ\text{C}$)	V_{RRM} (V)	V_{FM} maximum (V)	I_{RM} maximum (mA)	Package	Part Number
1	105	40	0.5	0.5	DO-214AC (SMA)	SS14
		60	0.75			SS16
		100	0.8	0.05		SS110

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Notes:

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