

# Power Diodes

## Controlled Avalanche



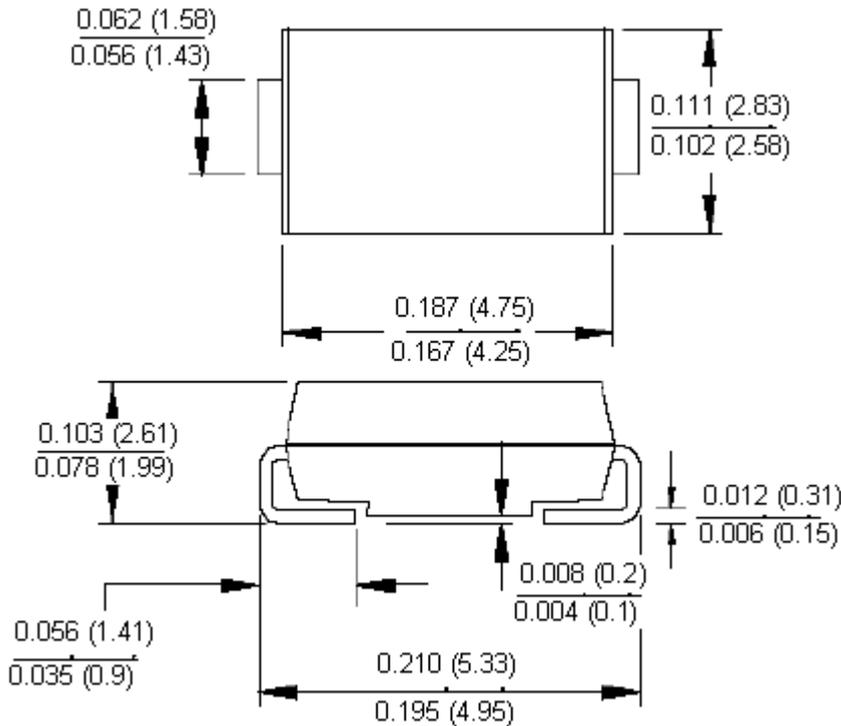
### Features:

- 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	

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Type Number	SS14	SS16	SS110	Unit
Maximum average forward rectified current at $T_L$ (See Figure 1)	1			A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	30			
Maximum Instantaneous forward voltage (Note) at 1 A	0.5	0.75	0.8	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	0.5	
Typical thermal resistance (Note 2) $R_{\theta JL}$ $R_{\theta JA}$	28			$^\circ\text{C} / \text{W}$
	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  $PW = 300 \mu$  seconds, 1% duty cycle
2. Measured on PC Board with  $0.2 \times 0.2$  inches ( $5 \times 5$  mm) copper pad areas

## Ratings and Characteristic Curves

Figure 1 Maximum Forward Current Derating Curve

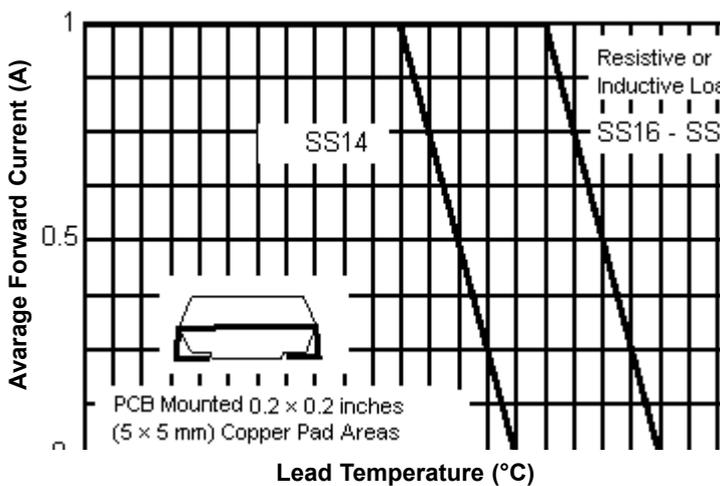
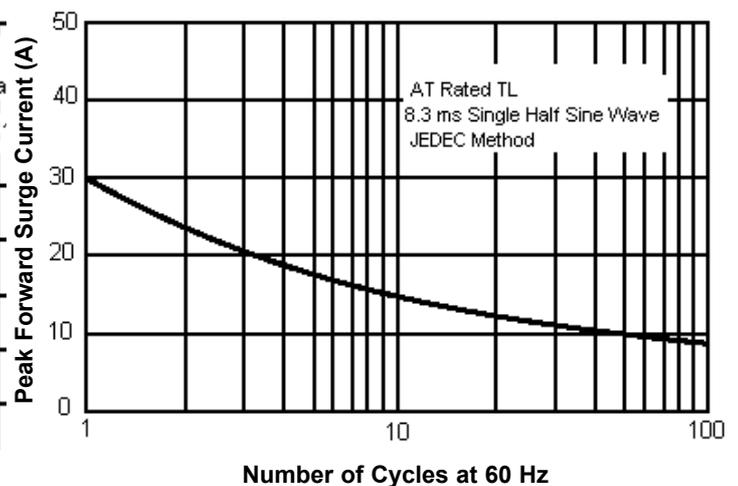


Figure 2 Maximum Non-Repetitive Forward Surge Current



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### Rating and Characteristic Curves

Figure 3 Typical Forward Characteristics

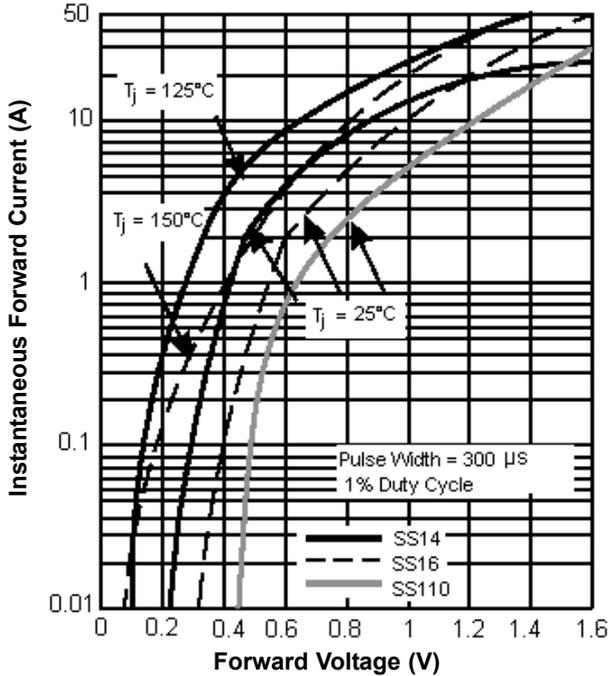


Figure 4 Typical Reverse Characteristics

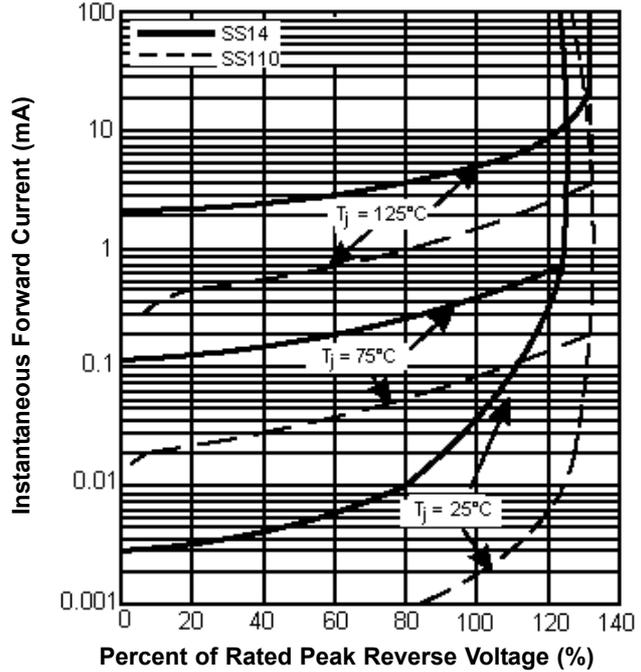
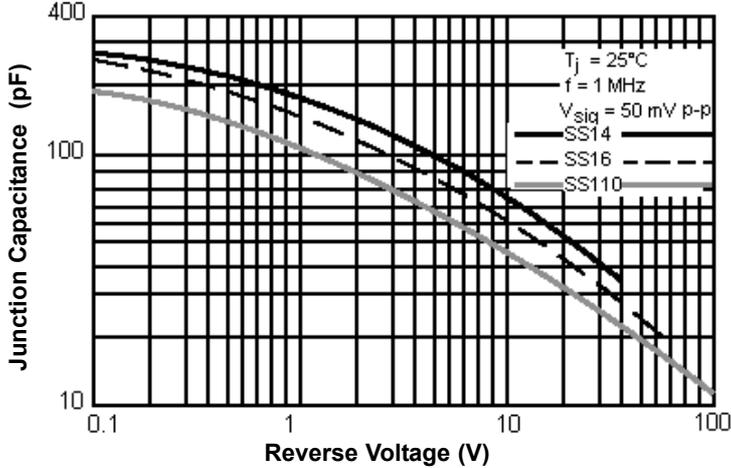


Figure 5 Typical Junction Capacitance



### Specification Table

$I_F$ (AV) (A)	$T_C$ (°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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