

# Standard Recovery Power Diodes



## S1 Series



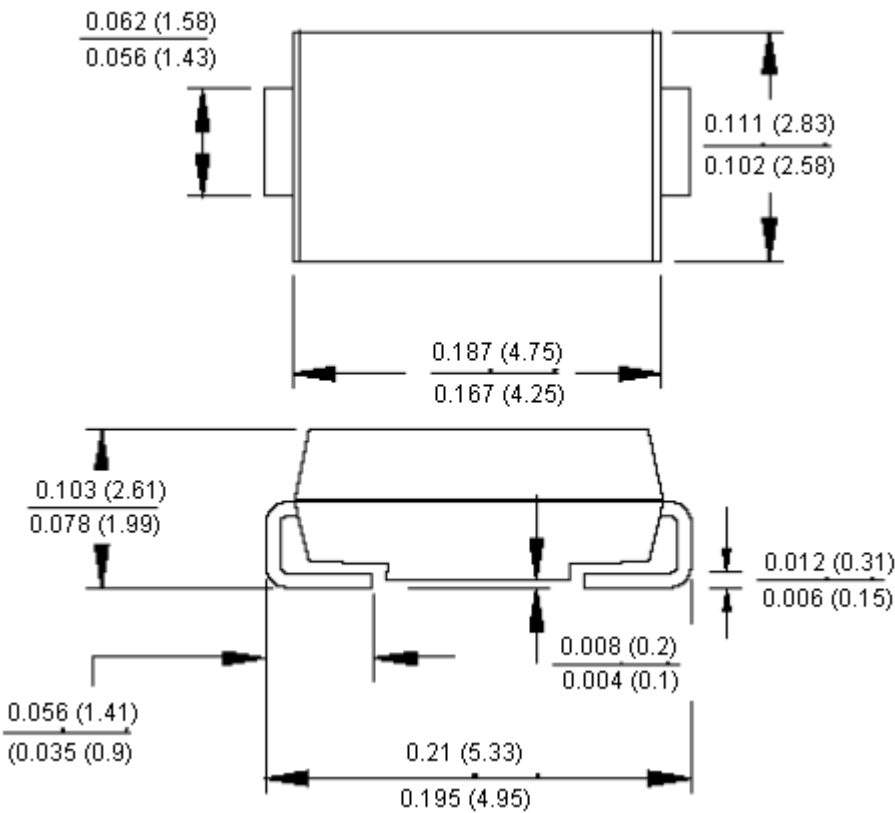
### Features:

- For surface mounted application
- Glass passivated junction chip
- Low forward voltage drop
- Easy pick and place
- High surge current capability
- High temperature soldering : 250°C / 10 seconds at terminals

### Mechanical Data:

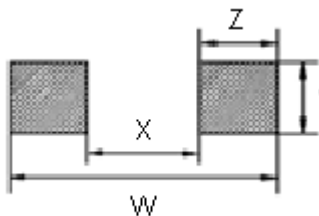
Cases : Moulded plastic  
 Terminals : Solder plated  
 Polarity : Indicated by cathode band

### SMA/DO-214AC



Dimensions : Inches (Millimetres)

### Foot Print



### Dimensions

Length	Depth	Width	X	Y	Z
5.33	2.61	2.83	2.3	1.71	8

Dimensions : Millimetres

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### 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	S1A	S1B	S1D	S1G	S1J	Units
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	V
Maximum RMS Voltage	35	70	140	280	420	
Maximum DC Blocking Voltage	50	100	200	400	600	
Maximum Average Forward Rectified Current at $T_L = 110^\circ\text{C}$	1					A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method )	30					
Maximum Instantaneous Forward Voltage at 1 A	1.1					V
Maximum DC Reverse Current at $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage at $T_A = 125^\circ\text{C}$	5 50					$\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	1.8					$\mu\text{S}$
Typical Junction Capacitance (Note 2)	12					pF
Operating Temperature Range $T_J$	-55 to +150					$^\circ\text{C}$
Storage Temperature Range $T_{STG}$						

- Notes:** 1. Reverse recovery test conditions :  $I_F = 0.5\text{ A}$ ,  $I_R = 1\text{ A}$ ,  $I_{RR} = 0.25\text{ A}$   
 2. Measured at 1 MHz and applied  $V_R = 0.4\text{ V}$

### Ratings and Characteristic Curves

Fig. 1 Maximum Forward Current Derating Curve

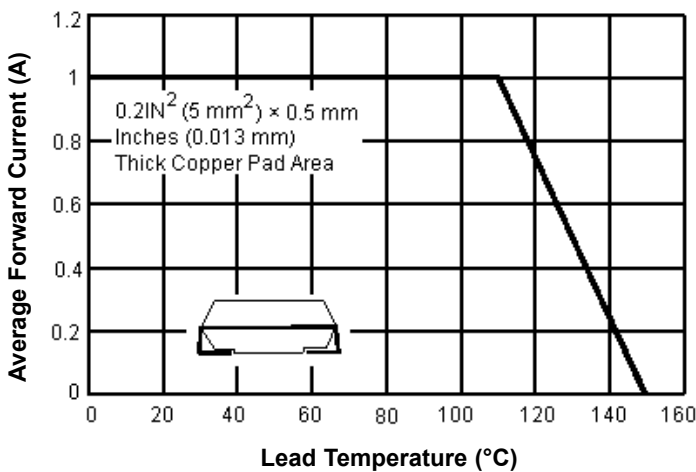
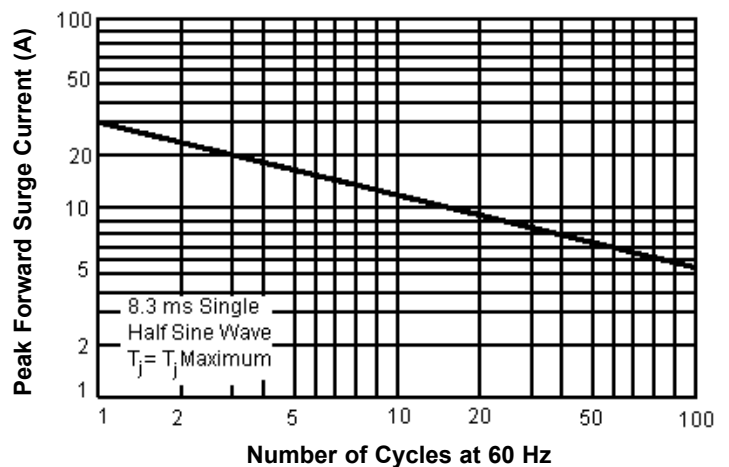


Fig. 2 Maximum Non-Repetitive Forward Surge Current



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### Ratings and Characteristic Curves

Fig. 3 Typical Forward Characteristics

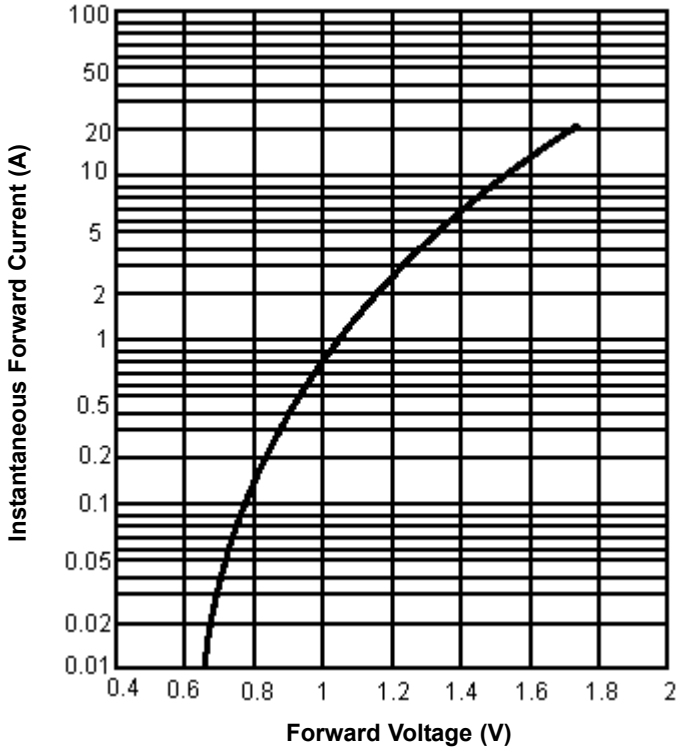


Fig. 4 Typical Reverse Characteristics

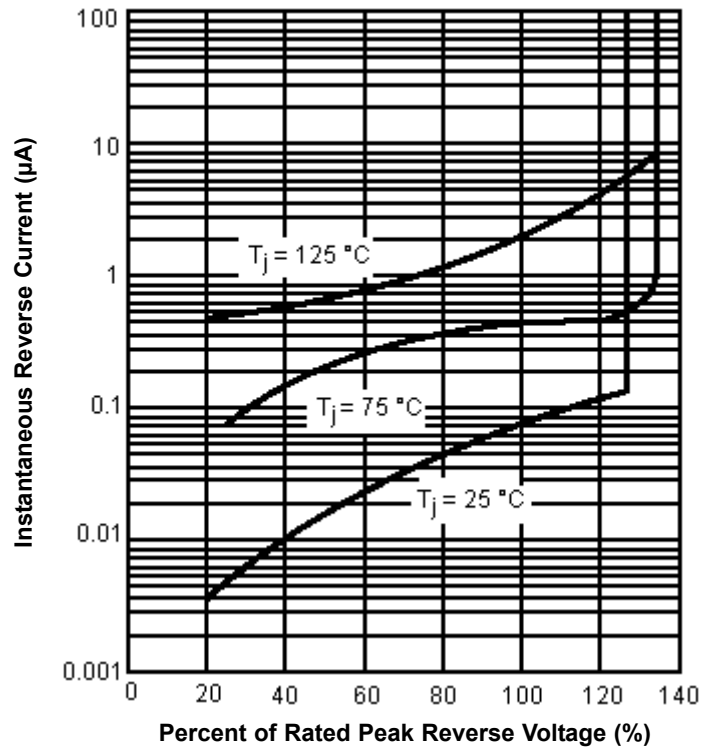
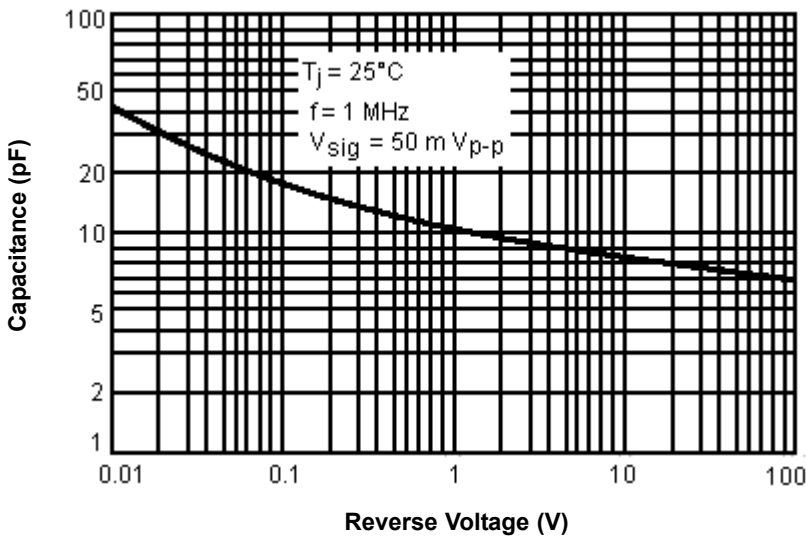


Fig. 5 Typical Junction Capacitance



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### Specification Table

$V_{RRM}$ Maximum (V)	$I_{AV}$ (A)	$I_{FSM}$ (A)	$V_F$ (V) at $I_F = 1$ A at 25°C	Package	Part Number
50	1	30	1	DO-214AC (SMA)	S1A
100					S1B
200					S1D
400					S1G
600					S1J

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