

S1 Series



Standard Recovery Power Diodes



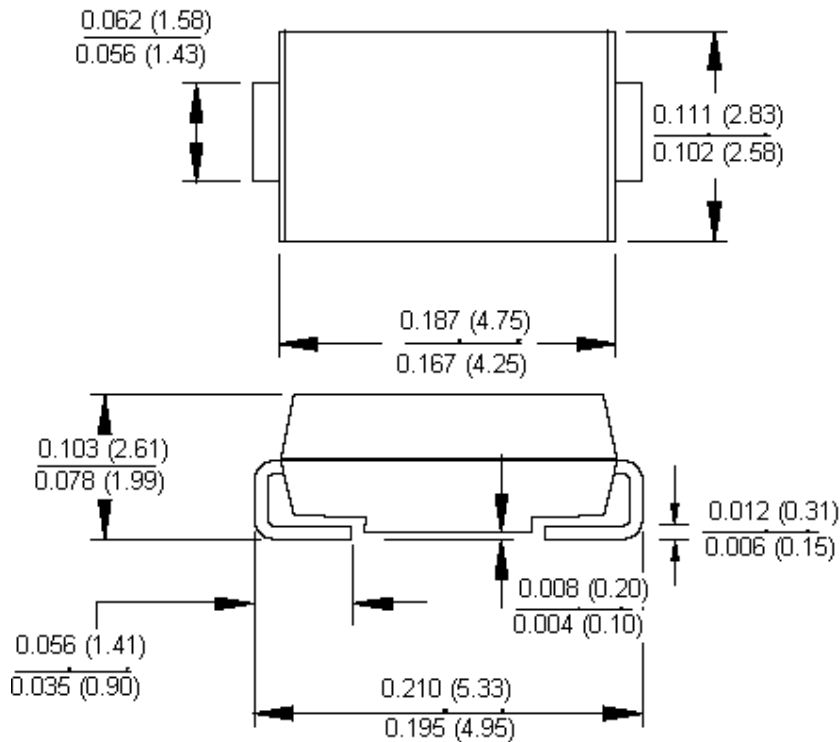
Features:

- 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:

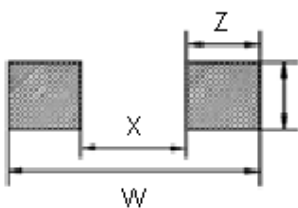
Cases : Moulded plastic.
 Terminals : Solder plated.
 Polarity : Indicated by cathode band.

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, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Type Number	S1A	S1B	S1D	S1G	S1J	Unit
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 $T_L = 110^\circ\text{C}$	1.0					A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	30					
Maximum Instantaneous forward voltage at 1.0A	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					μA
Maximum reverse recovery time (Note 1)	1.8					μS
Typical junction capacitance (Note 2)	12					pF
Operating temperature range T_J	-55 to +150					$^\circ\text{C}$
Storage temperature range T_{STG}						

Notes:

- Reverse recovery test conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$.
- Measured at 1MHz and applied $V_R = 4.0$ Volts.

Ratings and Characteristic Curves

Figure 1 Maximum Forward Current Derating Curve

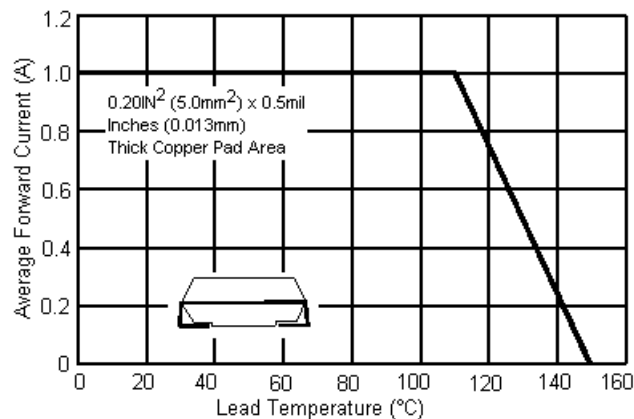


Figure 2 Maximum Non-Repetitive Forward Surge Current

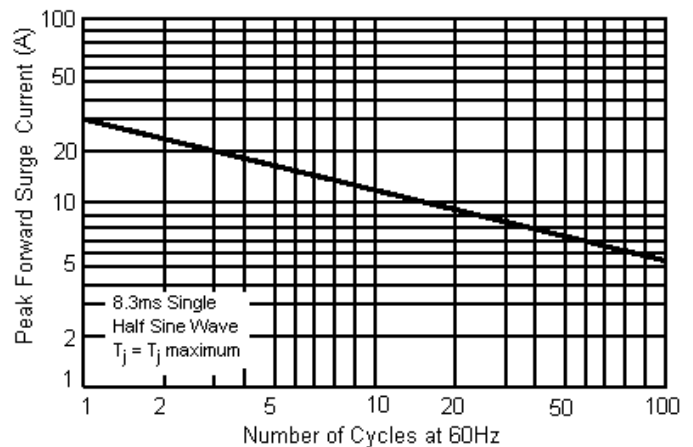


Figure 3 Typical Forward Characteristics

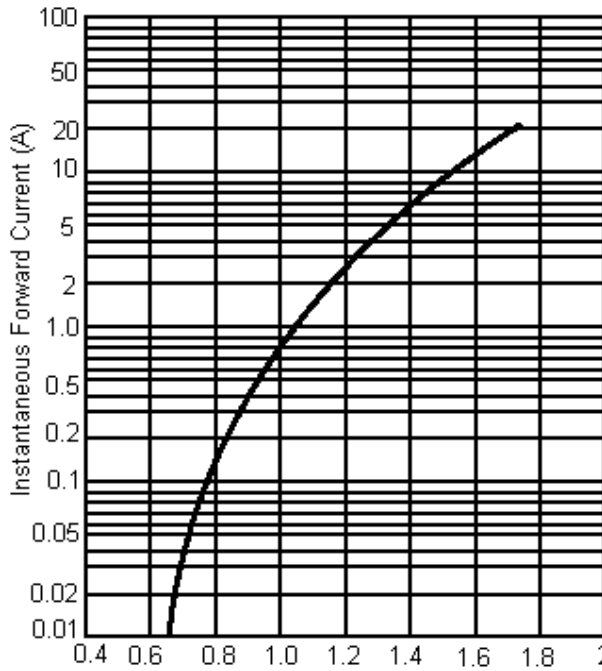


Figure 4 Typical Reverse Characteristics

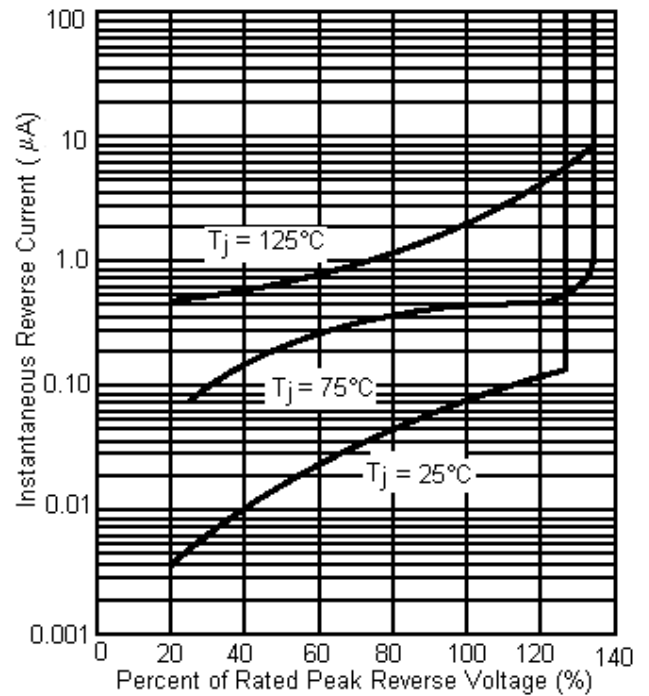
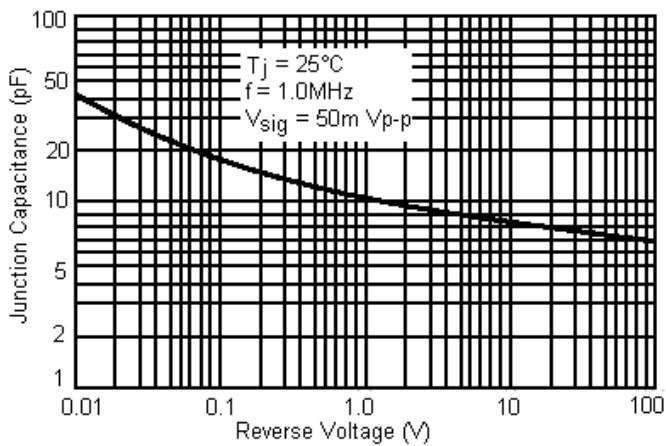


Figure 5 Typical Junction Capacitance



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Specifications

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



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Notes:

International Sales Offices:



AUSTRALIA – Farnell InOne
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