

Standard Recovery Power Diodes

S1 Series

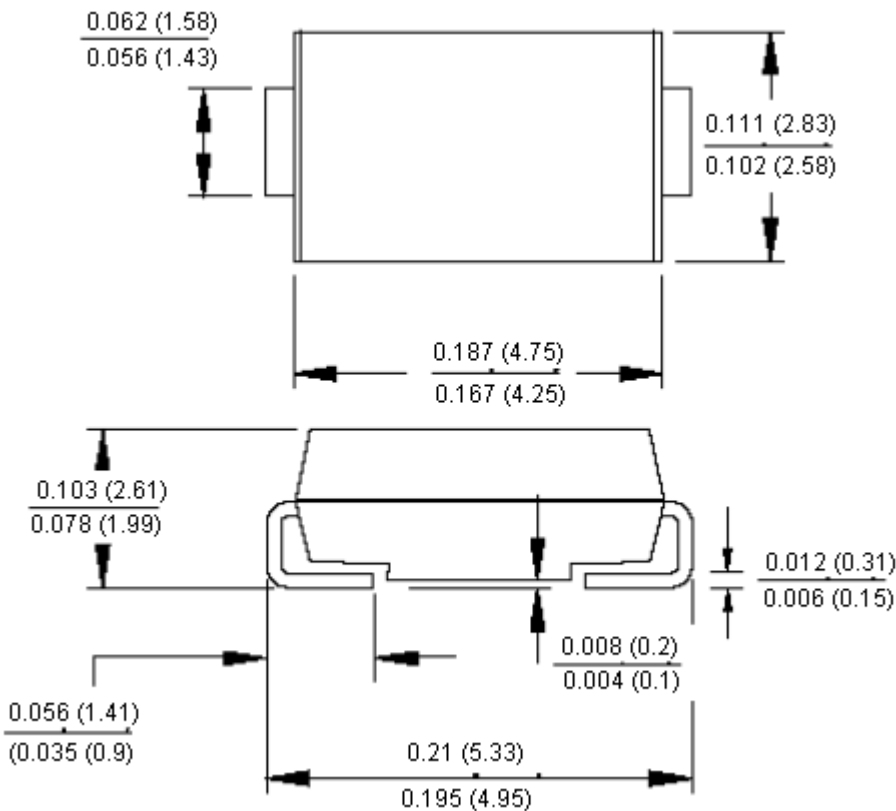


- Features:**
 - For surface mounted application
 - Glass passivated junction chip
 - Low forward voltage drop
 - Easy pick and place
 - High surge current capability
 - High temperature soldering : 250°C / 10 seconds at terminals

Mechanical Data:

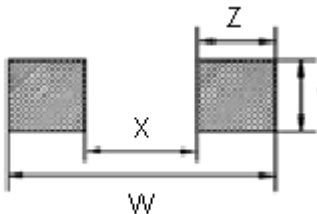
Cases : Moulded plastic
Terminals : Solder plated
Polarity : Indicated by cathode band

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°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°C at Rated DC Blocking Voltage at T _A = 125°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					°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

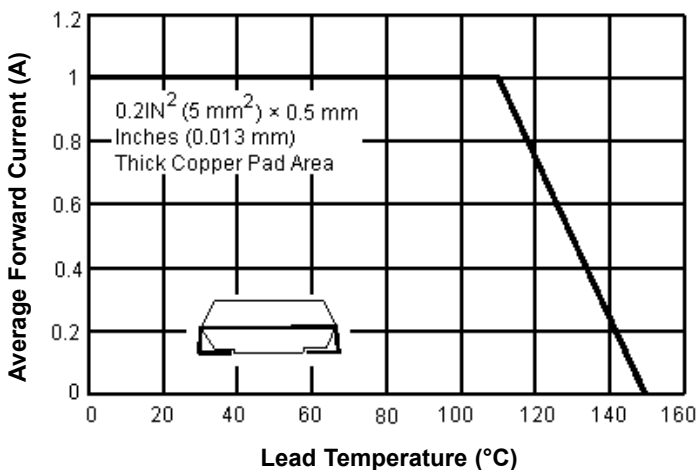
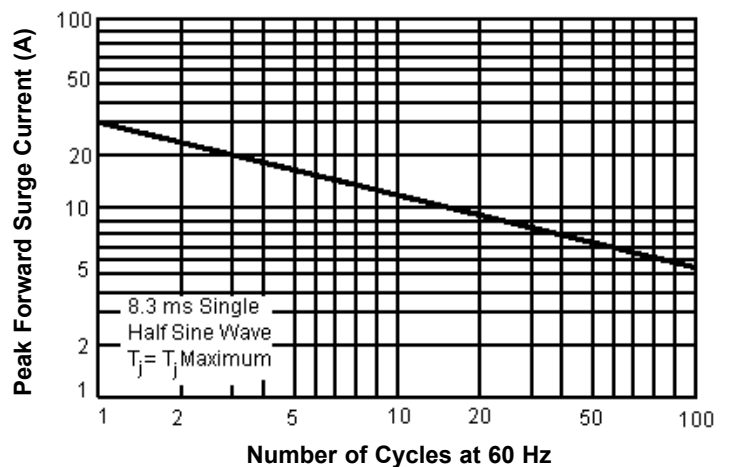


Fig. 2 Maximum Non-Repetitive Forward Surge Current



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Ratings and Characteristic Curves

Fig. 3 Typical Forward Characteristics

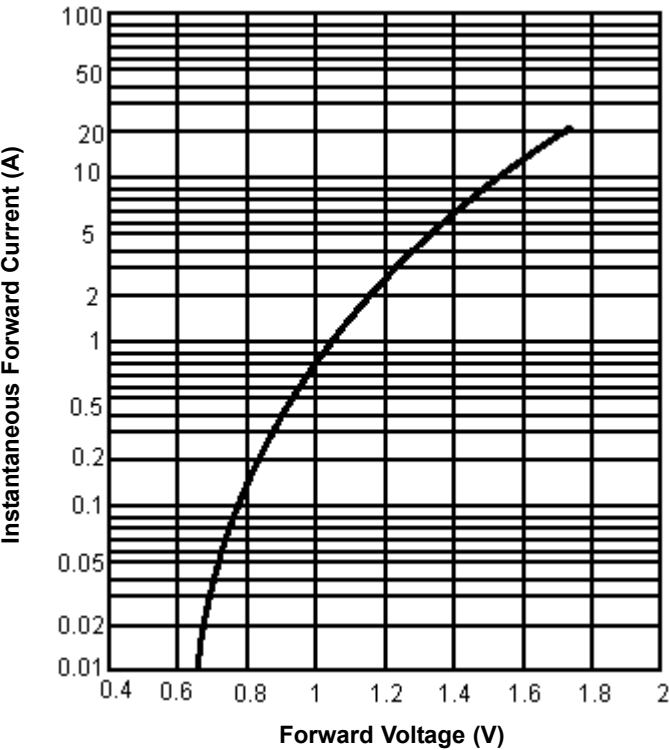


Fig. 4 Typical Reverse Characteristics

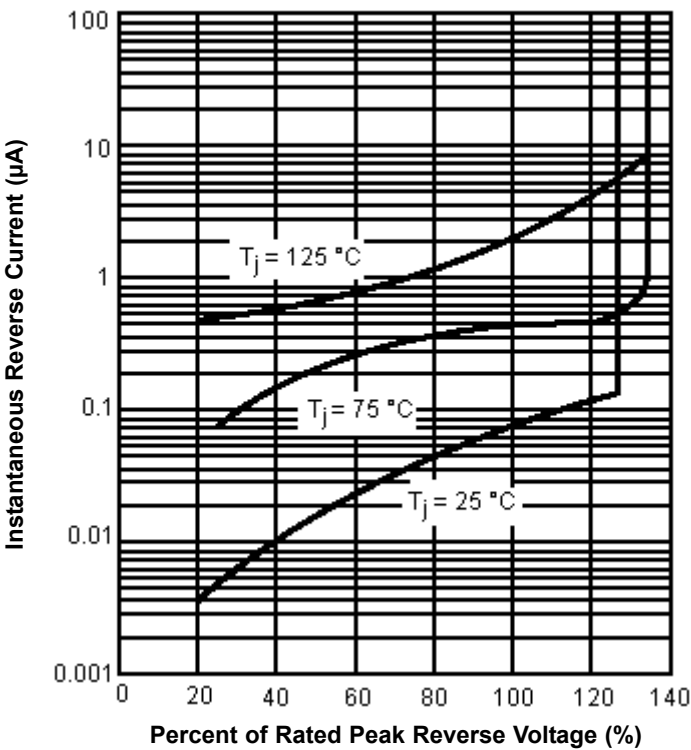
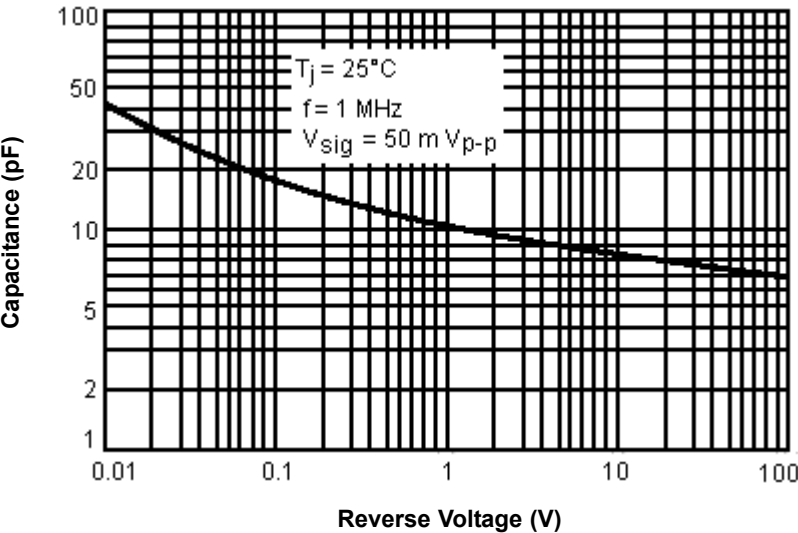


Fig. 5 Typical Junction Capacitance



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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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