

S3 Series



Standard Recovery Power Diodes



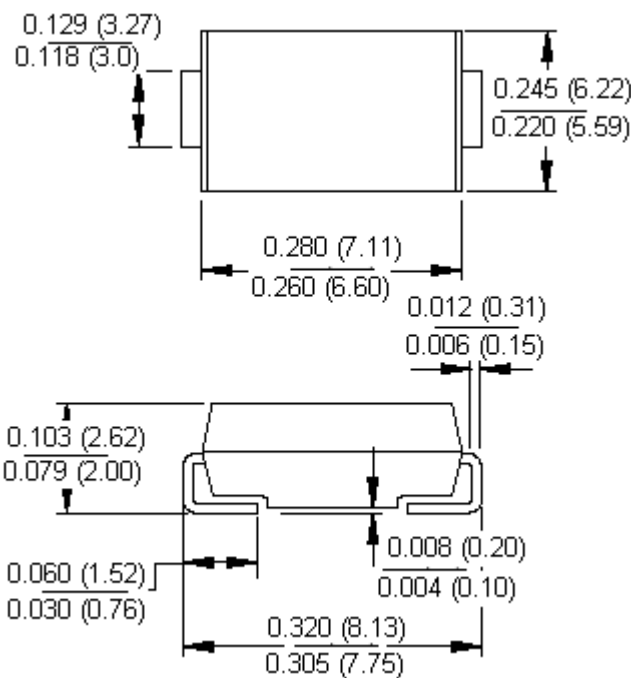
Features:

- 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:

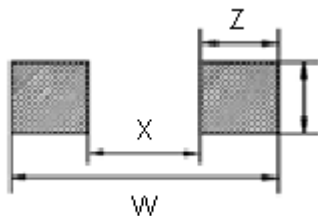
Cases : Moulded plastic.
Terminals : Solder plated.
Polarity : Indicated by cathode band.

SMC/DO-214AB



Dimensions : Inches (Millimetres)

Foot Print



Dimensions

Length	Depth	Width	X	Y	Z
8.13	2.62	6.22	5.08	3.2	1.52

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	S3A	S3D	S3G	S3J	Unit
Maximum recurrent peak reverse voltage	50	200	400	600	V
Maximum RMS voltage	35	140	280	420	
Maximum DC blocking voltage	50	200	400	600	
Maximum average forward rectified current at T _L = 75°C	3.0				A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	100				
Maximum Instantaneous forward voltage at 3.0A	1.15				V
Maximum DC reverse current at T _A = 25°C at rated DC blocking voltage at T _A = 125°C	10.0 250				μA
Maximum reverse recovery time (Note 1)	2.5				μS
Typical junction capacitance (Note 2)	60				pF
Operating temperature range T _J	-55 to +150				°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

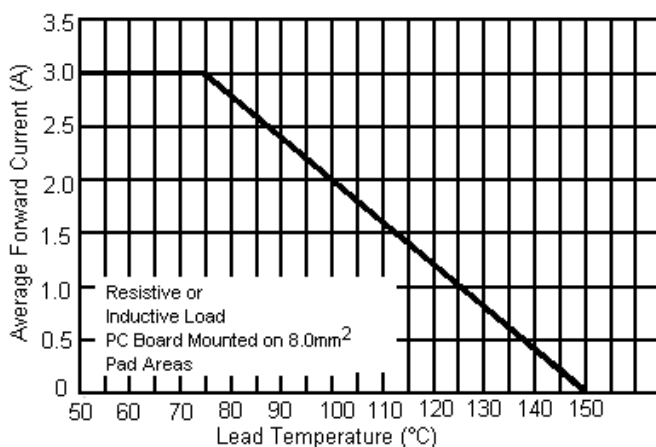


Figure 2 Maximum Non-Repetitive Forward Surge Current

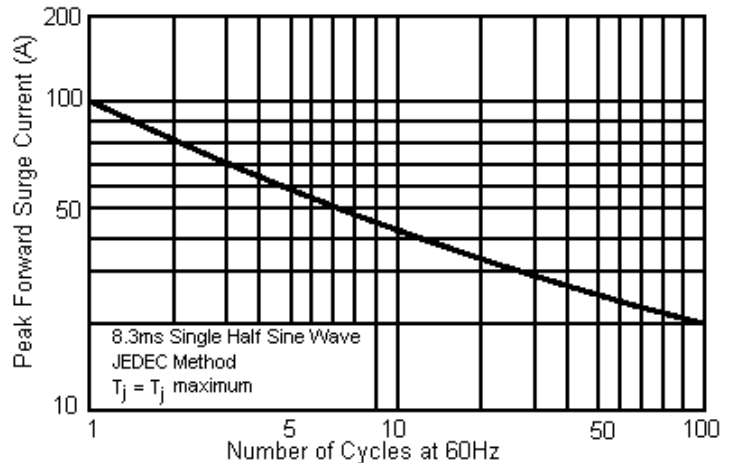


Figure 3 Typical Forward Characteristics

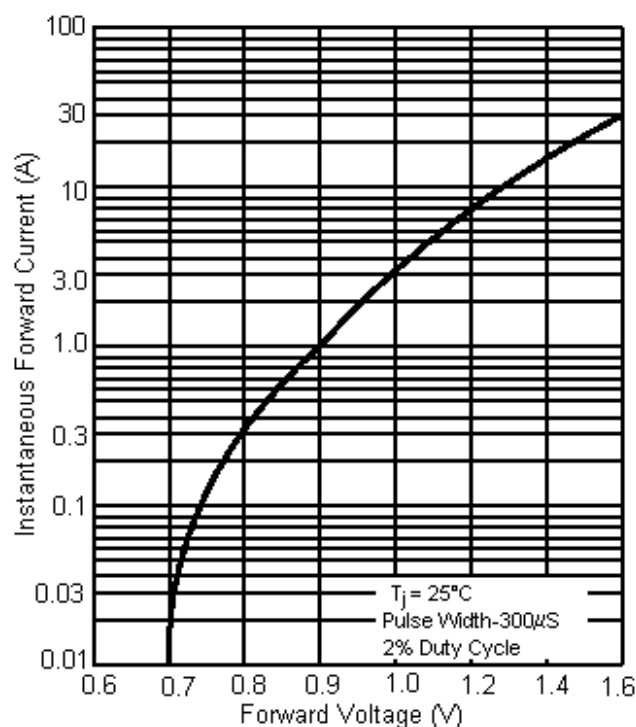


Figure 4 Typical Reverse Characteristics

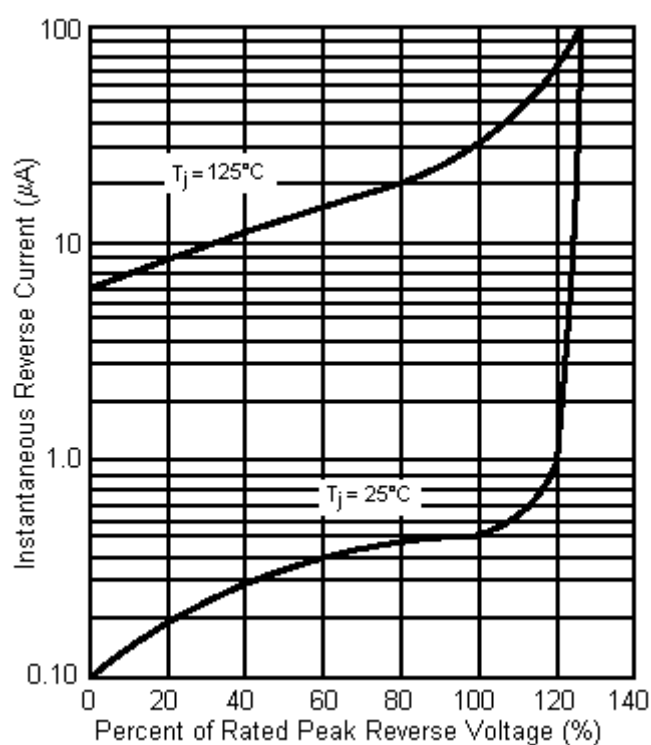
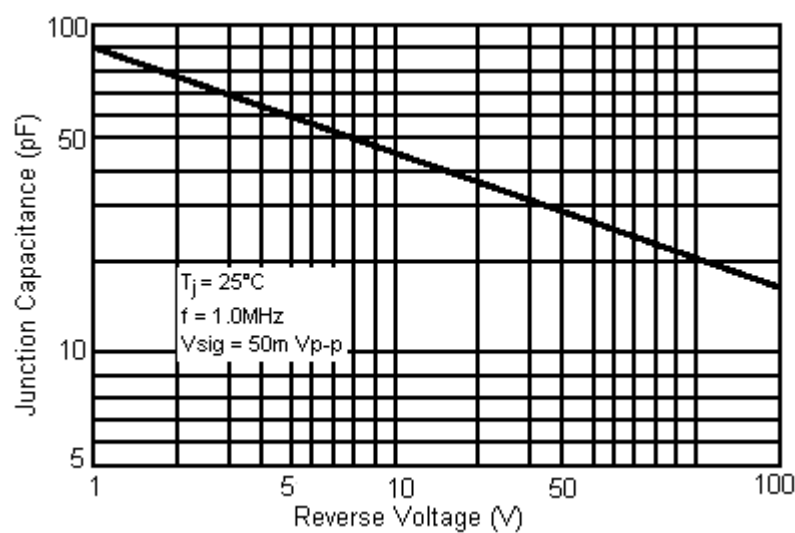


Figure 5 Typical Junction Capacitance



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Specifications

V_{RRM} maximum (V)	I_{AV} (A)	I_{FSM} (A)	V_F (V) at $I_F = 1A$ at 25°C	Package	Part Number
50	3	100	1.15	DO-214AB (SMC)	S3A
200					S3D
400					S3G
600					S3J

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Notes:

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