

Power Diodes



Ultra-Fast Recovery



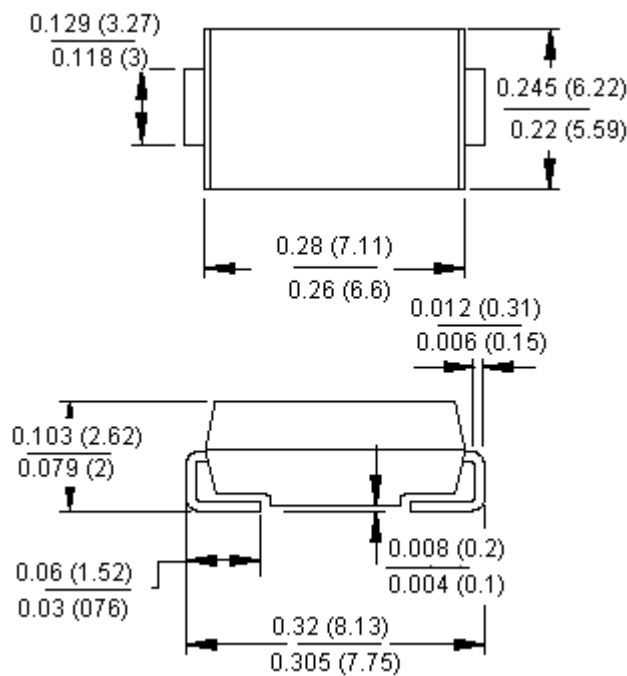
Features:

- Glass passivated junction chip
- For surface mounted application
- Low profile package
- Built-in strain relief
- Ideal for automated placement
- Easy pick and place
- Superfast recovery time for high efficiency
- High temperature soldering : 250°C / 10 seconds at terminals

Mechanical Data:

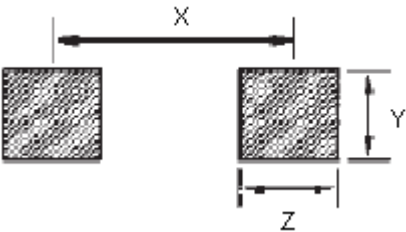
Cases : Moulded plastic
Terminals : Solder plated
Polarity : Indicated by cathode band

SMC/DO-214AB



Dimensions : Inches (Millimetres)

Foot Print



Dimensions

Length	Width	Depth	X	Y	Z
8.13	6.22	2.62	6.5	3.2	1.8

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	ES3B	ES3C	ES3D	ES3G	Unit
Maximum Recurrent Peak Reverse Voltage	100	150	200	400	V
Maximum RMS Voltage	70	105	140	280	
Maximum DC Blocking Voltage	100	150	200	400	
Maximum Average Forward Rectified Current (See Figure 1)	3				A
Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) at T _L = 100°C	100				
Maximum Instantaneous Forward Voltage at 3 A	0.95			1.3	V
Maximum DC Reverse Current at T _A = 25°C at Rated DC Blocking Voltage at T _A = 100°C	10 500				μA
Maximum Reverse Recovery Time (Note 1)	35				μS
Typical Junction Capacitance (Note 2)	45			30	pF
Typical Thermal Resistance (Note 3) RθJA RθJL	47 12				°C / W
Operating Temperature Range T _J	-55 to +150				°C
Storage Temperature Range T _{STG}					

Notes :

- Reverse recovery test conditions : $I_F = 0.5 \text{ A}$, $I_R = 1 \text{ A}$, $I_{RR} = 0.25 \text{ A}$
- Measured at 1 MHz and applied $V_R = 4 \text{ V}$
- Units mounted on PCB with 0.31×0.31 inches ($8 \times 8 \text{ mm}$) copper pad areas

Ratings and Characteristic Curves

Figure 1 Maximum Forward Current Derating Curve

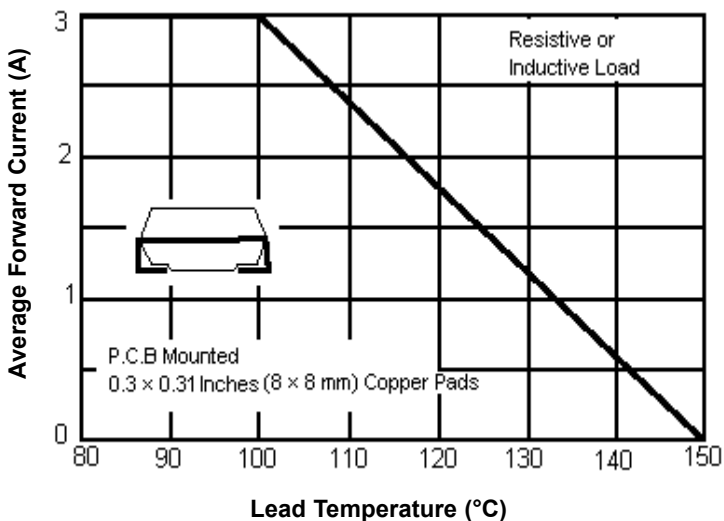
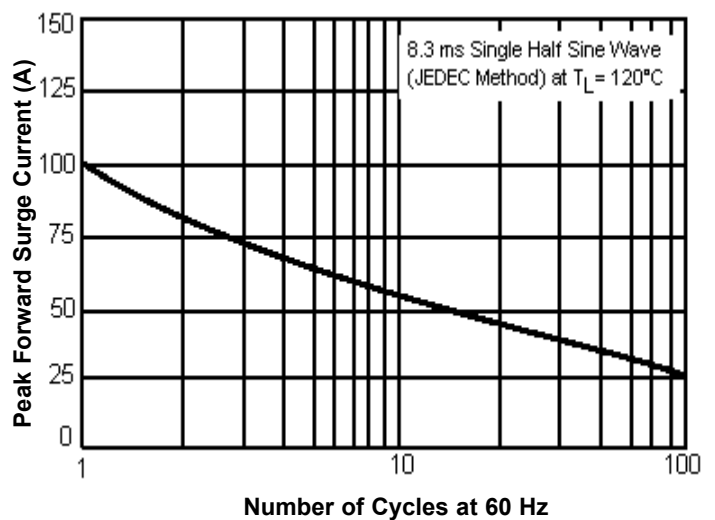


Figure 2 Maximum Non-Repetitive Forward Surge Current



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Figure 3 Typical Instantaneous Forward Characteristics

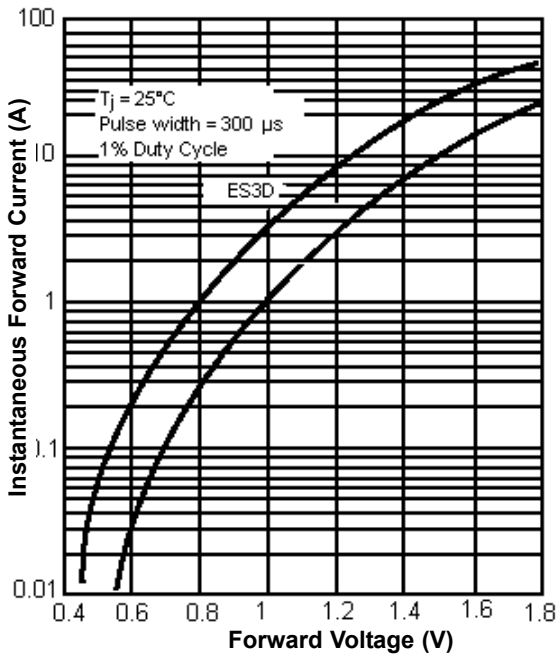


Figure 4 Typical Reverse Characteristics

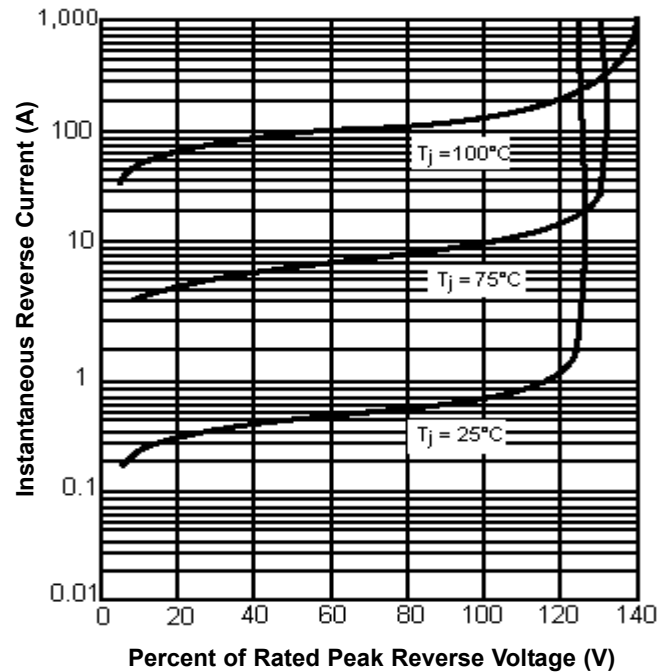
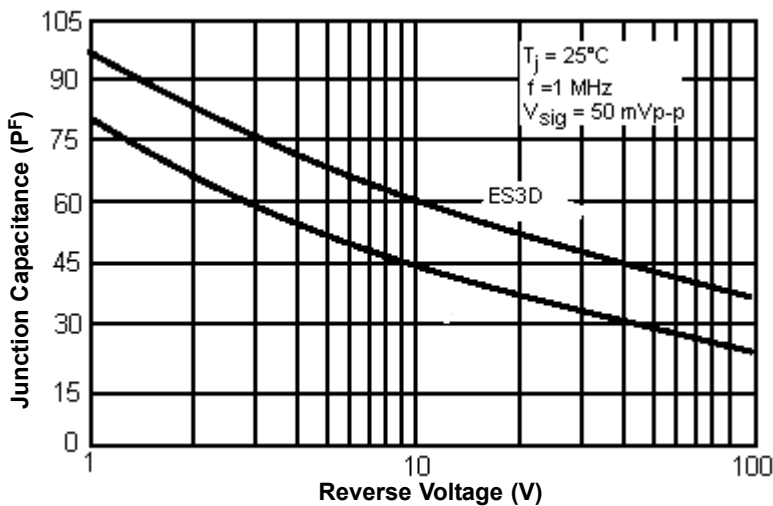


Figure 5 Typical Junction Capacitance



Specification Table

I_F (A) (A)	V_{RRM} (V)	I_{FSM} (A)	t_{rr} Maximum (nS)	V_F (V) at $I_F = 3$ A	Package	Part Number
3	100	100	35	0.95	DO-214AB (SMC)	ES3B
	150					ES3C
	200					ES3D
	400			1.3		ES3G

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