

# Power Diodes

## Ultra-Fast Recovery



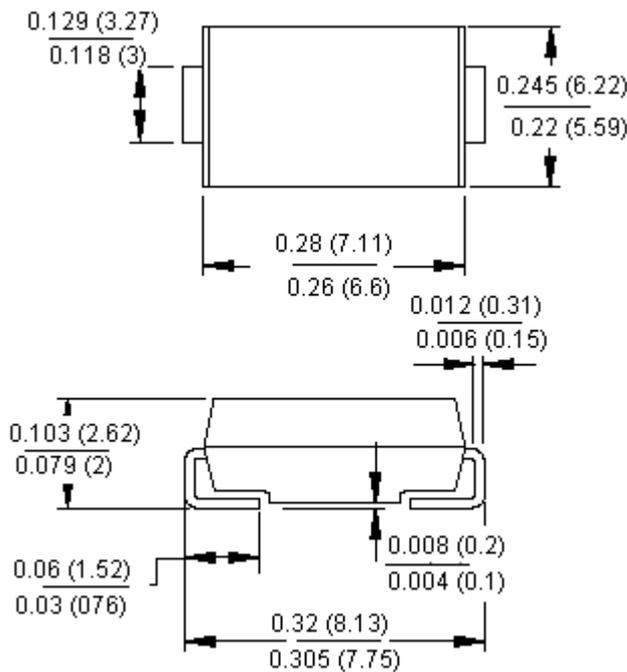
### Features:

- 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:

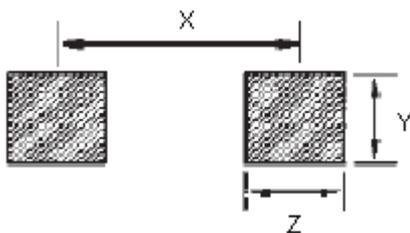
Cases : Moulded plastic  
 Terminals : Solder plated  
 Polarity : Indicated by cathode band

### 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 $T_L = 100^\circ\text{C}$	100				
Maximum Instantaneous Forward Voltage at 3 A	0.95		1.3		V
Maximum DC Reverse Current at $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage at $T_A = 100^\circ\text{C}$	10 500				$\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	35				$\mu\text{s}$
Typical Junction Capacitance (Note 2)	45		30		pF
Typical Thermal Resistance (Note 3) $R_{\theta JA}$ $R_{\theta JL}$	47 12				$^\circ\text{C} / \text{W}$
Operating Temperature Range $T_J$	-55 to +150				$^\circ\text{C}$
Storage Temperature Range $T_{STG}$					

### Notes :

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

### Ratings and Characteristic Curves

Figure 1 Maximum Forward Current Derating Curve

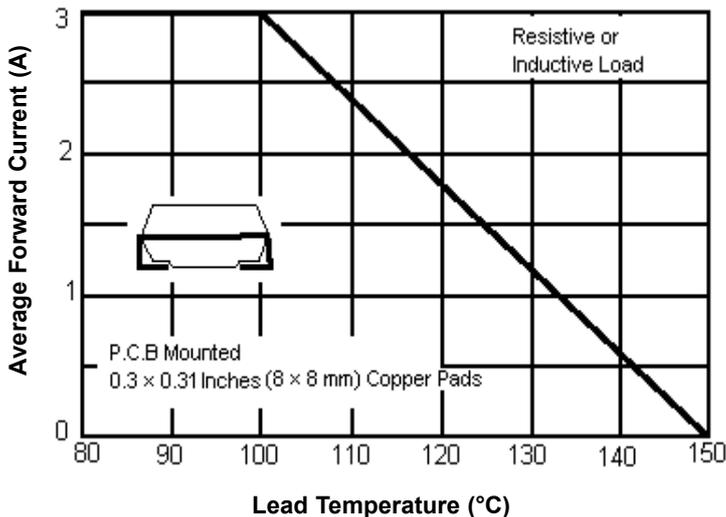
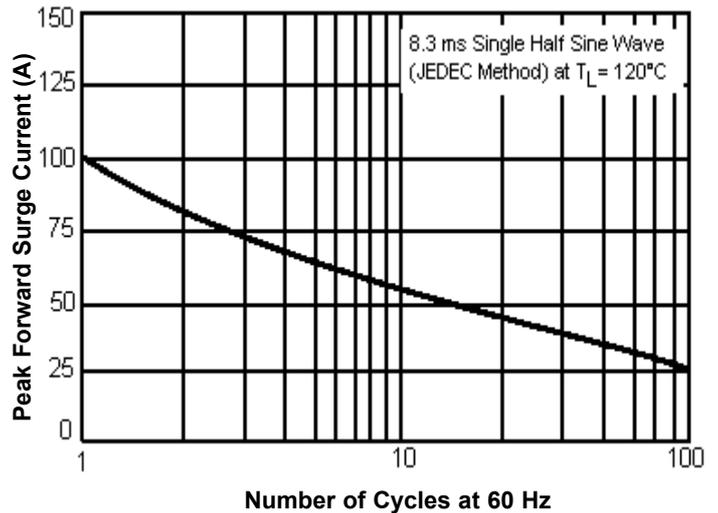


Figure 2 Maximum Non-Repetitive Forward Surge Current



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Figure 3 Typical Instantaneous Forward Characteristics

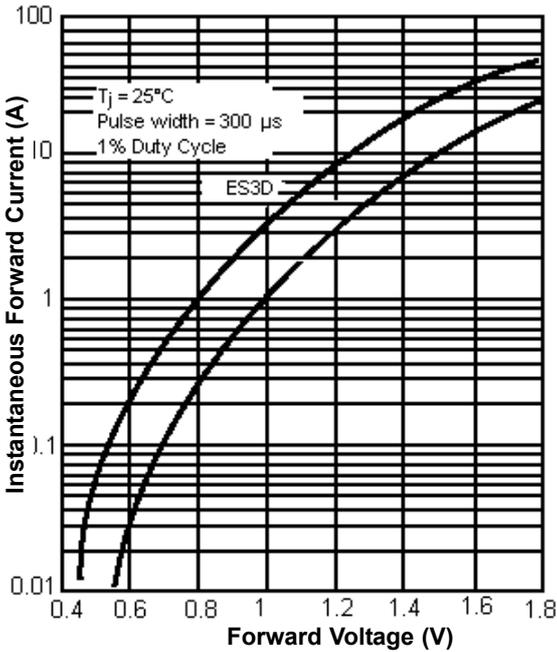


Figure 4 Typical Reverse Characteristics

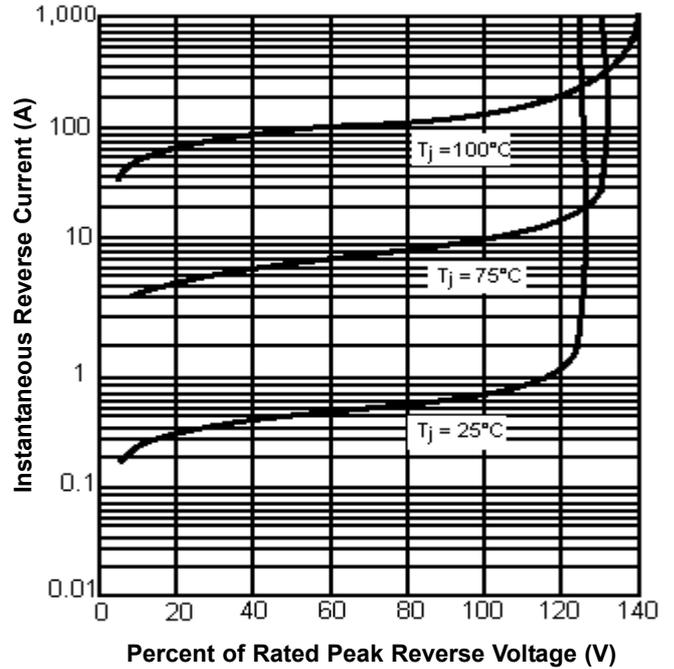
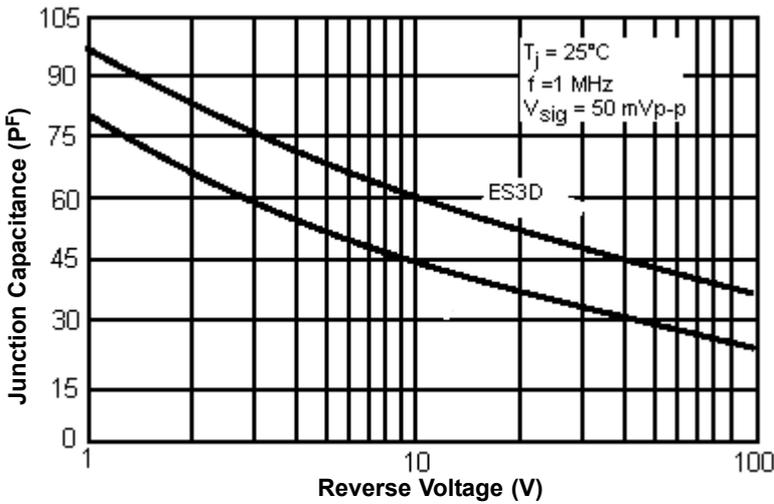


Figure 5 Typical Junction Capacitance



### Specification Table

$I_F$ (AV) (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			ES3G		
				1.3		

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