

# Power Diodes

## Ultra Fast Recovery



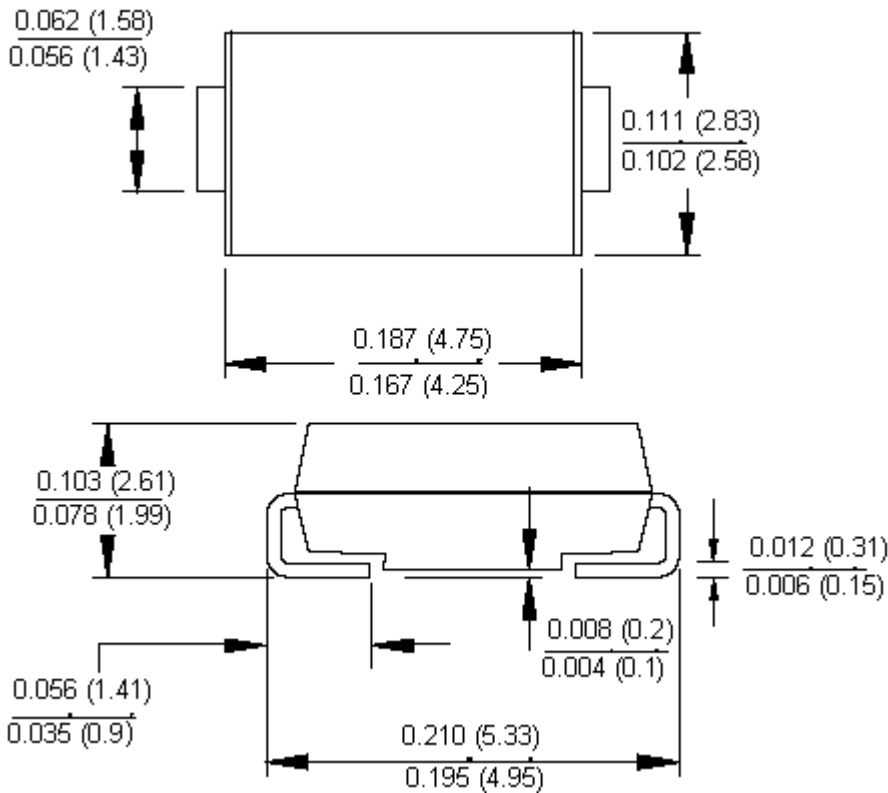
### Features:

- 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:

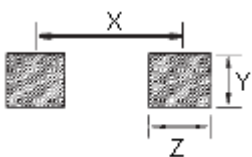
Cases : Moulded plastic  
 Terminals : Solder plated  
 Polarity : Indicated by cathode band

### SMA / DO-214AC



Dimensions : Millimetres

### Foot Print



### Dimensions

Length	Width	Depth	X	Y	Z
5.33	2.83	2.61	4.1	1.7	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	ES1B	ES1C	ES1D	Unit
Maximum Recurrent Peak Reverse Voltage	100	150	200	V
Maximum RMS Voltage	70	105	140	
Maximum DC Blocking Voltage	100	150	200	
Maximum Average Forward Rectified Current (See Figure 1)	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	0.95			V
Maximum DC Reverse Current at $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage at $T_A = 100^\circ\text{C}$	5 100			$\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	35			nS
Typical Junction Capacitance (Note 2)	10			$\text{pF}$
Typical Thermal Resistance (Note 3) $R_{\theta\text{JL}}$ $R_{\theta\text{JA}}$	85 35			$^\circ\text{C} / \text{W}$
Operating Temperature Range $T_J$	-55 to +150			$^\circ\text{C}$
Storage Temperature Range $T_{\text{STG}}$				

#### Notes:

- Reverse recovery test conditions:  $I_F = 0.5 \text{ A}$ ,  $I_R = 1 \text{ A}$ ,  $I_{\text{RR}} = 0.25 \text{ A}$
- Measured at 1 MHz and applied  $V_R = 4 \text{ V}$
- PCB mounted on  $0.2 \times 0.2$  inches ( $5 \times 5 \text{ mm}$ ) copper pad area

### Ratings and Characteristic Curves

Figure 1 Maximum Forward Current Derating Curve

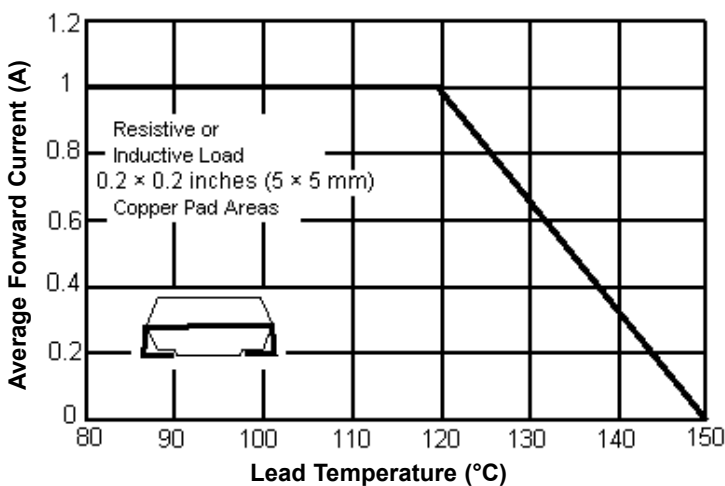
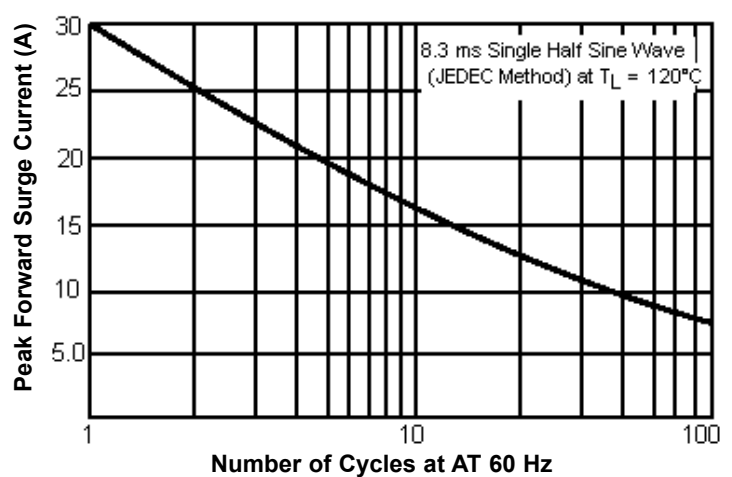


Figure 2 Maximum Non-Repetitive Forward Surge Current



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Figure 3 Typical Forward Characteristics

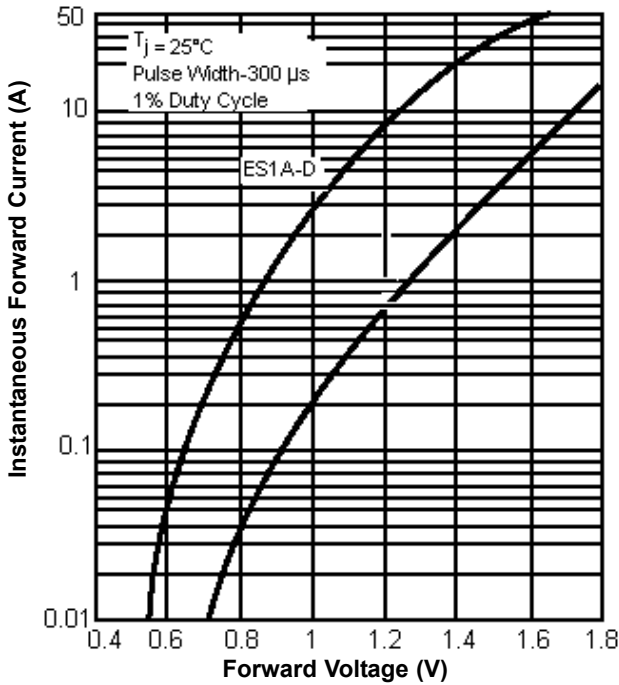


Figure 4 Typical Reverse Characteristics

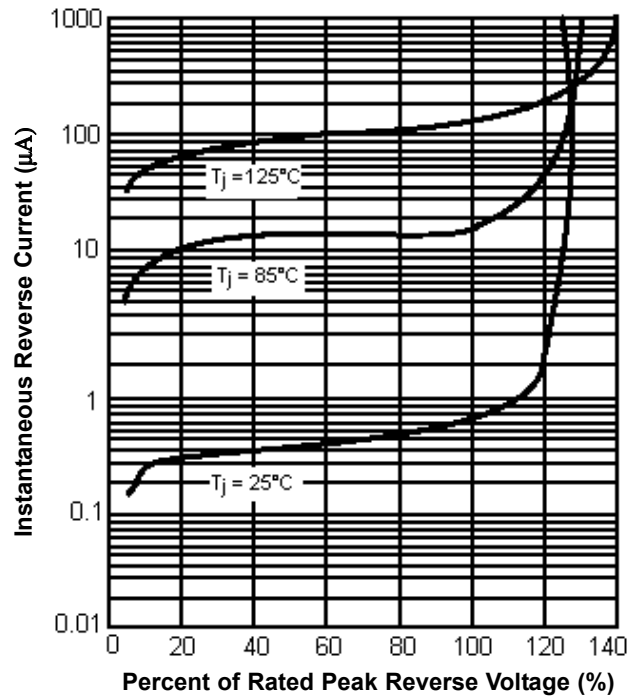
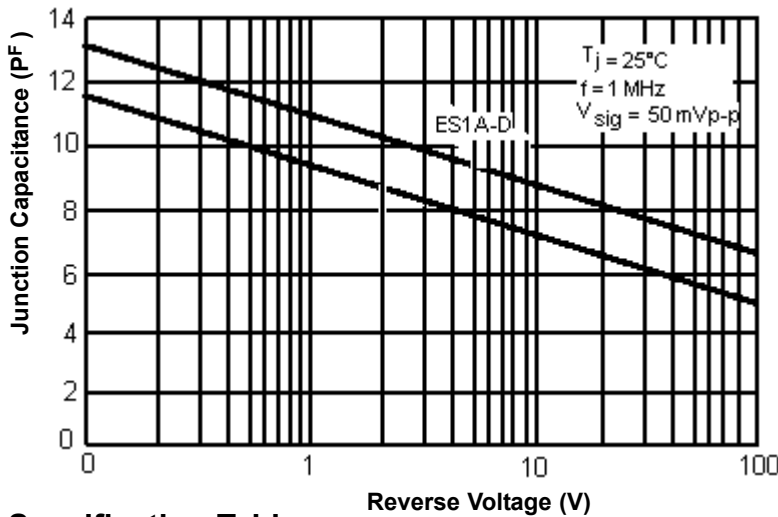


Figure 5 Typical Junction Capacitance



### Specification Table

$I_F$ (AV) (A)	$V_{RRM}$ (V)	$I_{FSM}$ (A)	$t_{rr}$ maximum (nS)	$V_F$ (V) at $I_F = 1$ A	Package	Part Number
1	100	30	35	0.95	DO -214 AC (SMA)	ES1B
	150					ES1C
	200					ES1D

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