

# Power Diode

## Ultra Fast Recovery



RoHS  
Compliant



### 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

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

### 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%

Characteristics	Symbol	ES1B+	ES1D+	Unit
Max. Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	100	200	V
Max. RMS Voltage	V <sub>RMS</sub>	70	140	
Max. DC Blocking Voltage	V <sub>DC</sub>	100	200	
Max. Average Forward Rectified Current	I <sub>(AV)</sub>	1		A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	30		
Max. Instantaneous Forward Voltage at 1 A	V <sub>F</sub>	0.95		V
Maximum DC Reverse Current @T <sub>A</sub> = 25°C at Rated DC Blocking Voltage @T <sub>A</sub> = 100°C	I <sub>R</sub>	5 100		µA
Maximum Reverse Recovery Time (Note 1)	T <sub>RR</sub>	35		nS
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	10		pF
Typical Thermal Resistance (Note 3)	R <sub>θJL</sub> R <sub>θJA</sub>	85 35		°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +150		°C
Storage Temperature Range	T <sub>STG</sub>			

**Notes :** 1. Measured with  $I_F = 0.5A$ ,  $I_R = 1A$ ,  $I_{RR} = 0.25A$   
2. Measured at 1MHz and applied  $V_R = 4V$   
3. PCB mounted on 0.2 × 0.2 inches (5 × 5 mm) copper pad area

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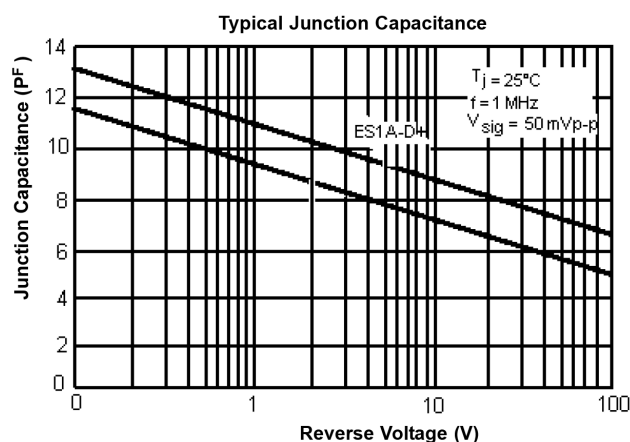
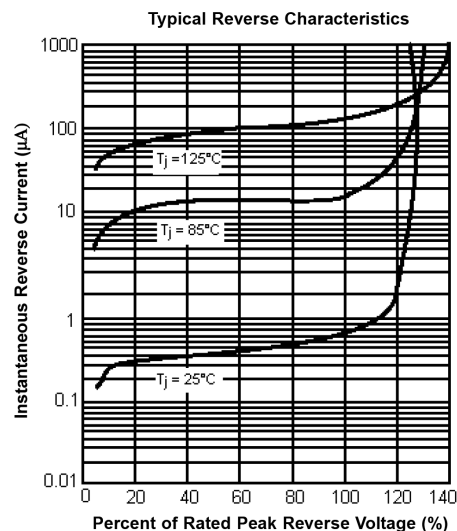
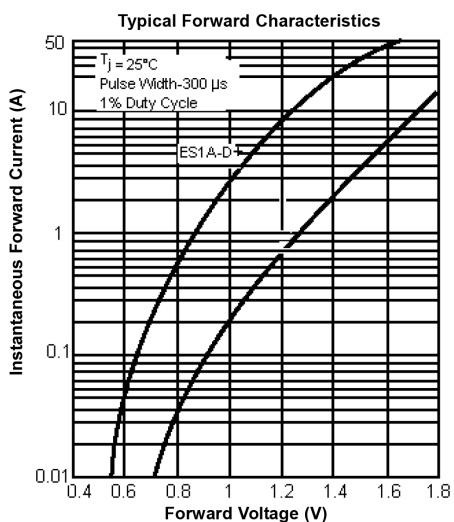
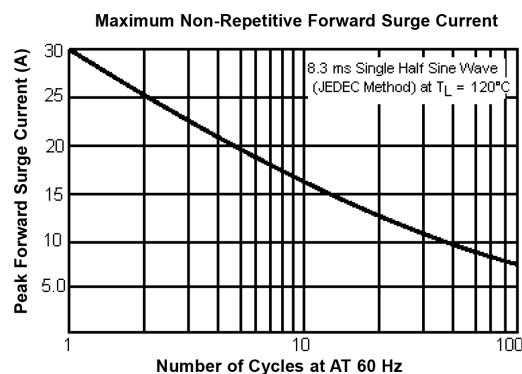
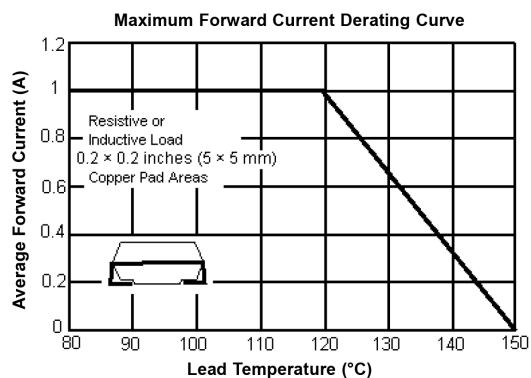


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### Ratings and Characteristic Curves



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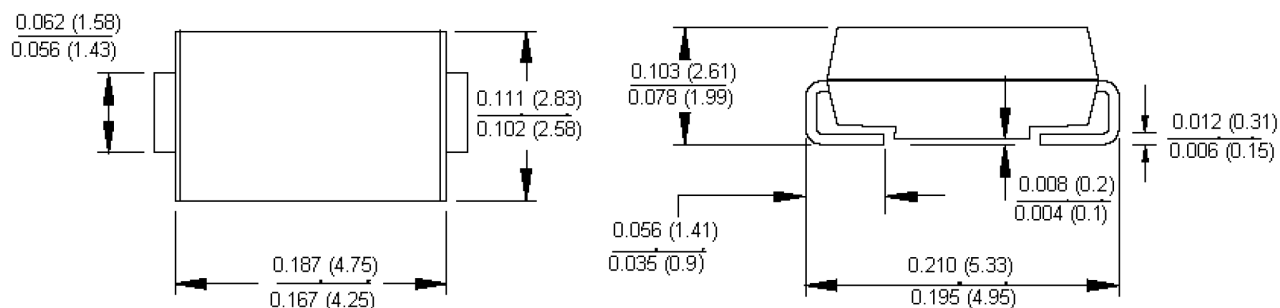


### Specification Table

$I_F(AV)$ (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+
	200					ES1D+

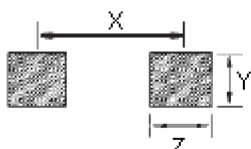
### Dimensions:

#### SMA / DO-214AC



Dimensions : Inches (Millimetres)

### Foot Print



#### Dimensions

Length	Width	Depth	X	Y	Z
5.33mm	2.83mm	2.61mm	4.1mm	1.7mm	1.8mm

### Part Number Table

Description	Part Number
Ultrafast Diode, 1A, 100V	ES1B+
Ultrafast Diode, 1A, 200V	ES1D+

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