Power Diodes

Ultra Fast Recovery

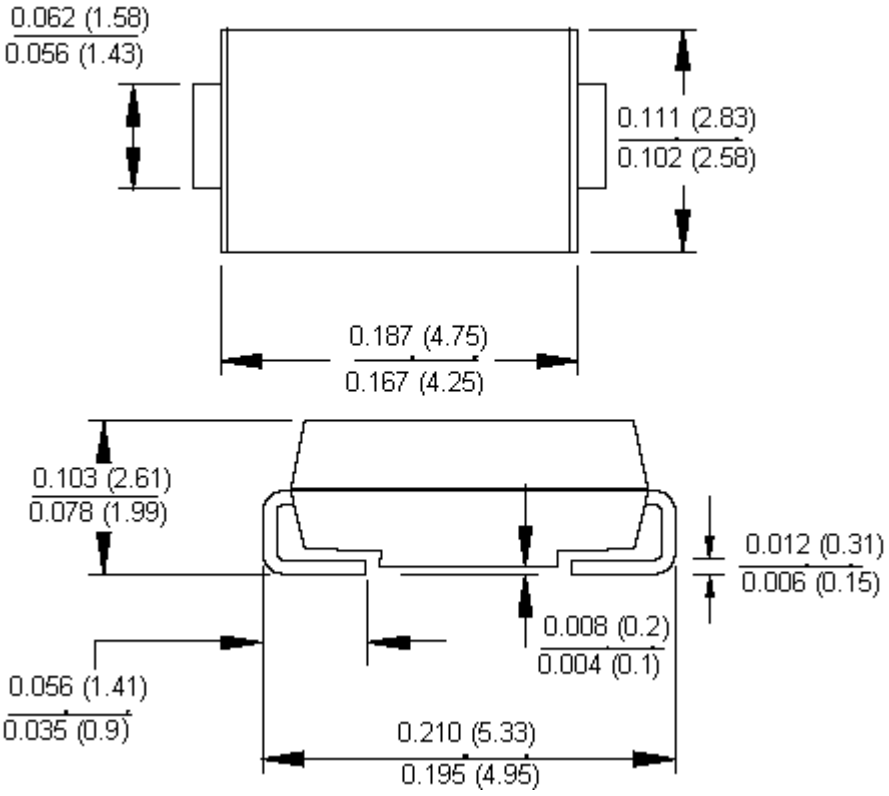
Features:

- 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:

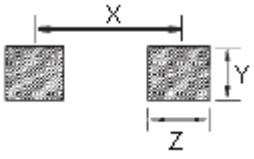
Cases	: Moulded plastic
Terminals	: Solder plated
Polarity	: Indicated by cathode band

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°C at Rated DC Blocking Voltage at T_A = 100°C	5 100			µA
Maximum Reverse Recovery Time (Note 1)	35			nS
Typical Junction Capacitance (Note 2)	10			p^F
Typical Thermal Resistance (Note 3) RθJL RθJA	85 35			°C / W
Operating Temperature Range T_J	-55 to +150			°C
Storage Temperature Range T_{STG}				

Notes:

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

Ratings and Characteristic Curves

Figure 1 Maximum Forward Current Derating Curve

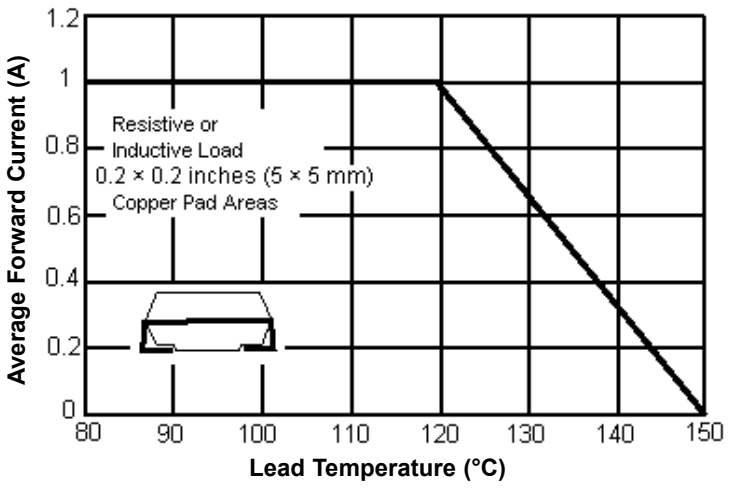


Figure 2 Maximum Non-Repetitive Forward Surge Current

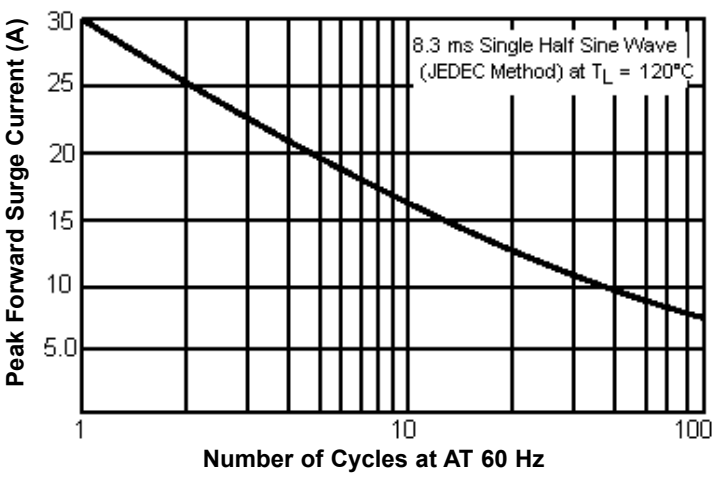


Figure 3 Typical Forward Characteristics

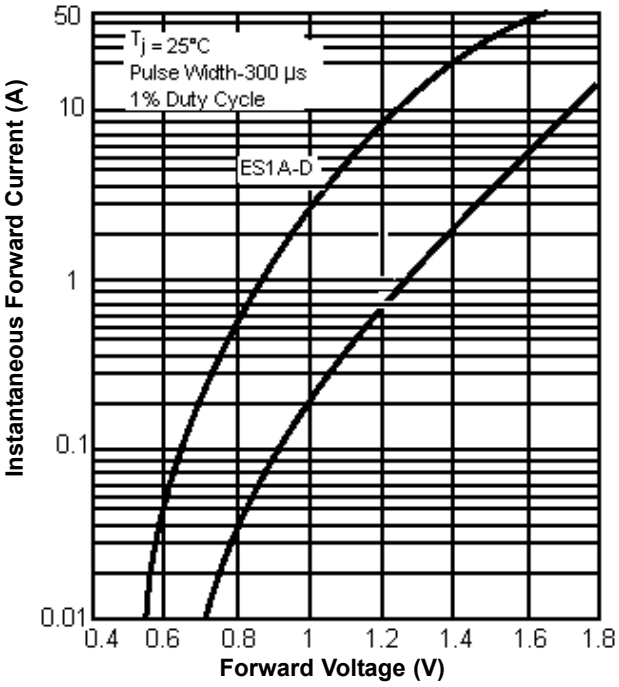


Figure 4 Typical Reverse Characteristics

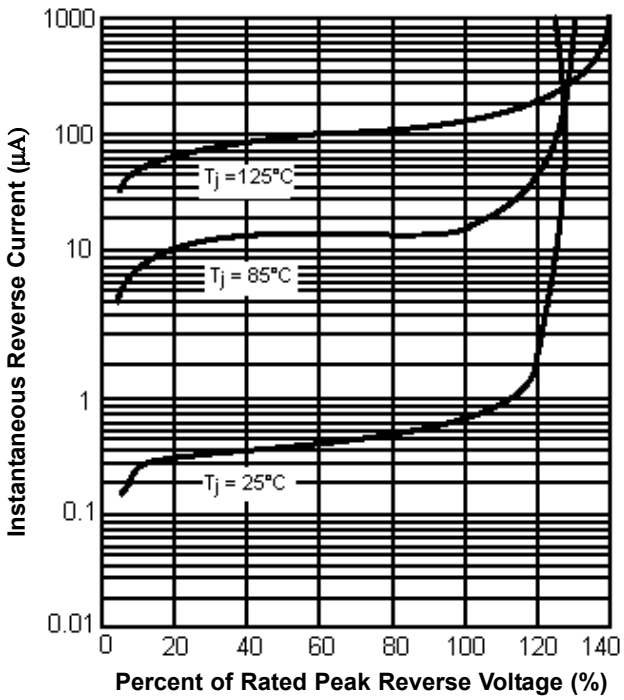
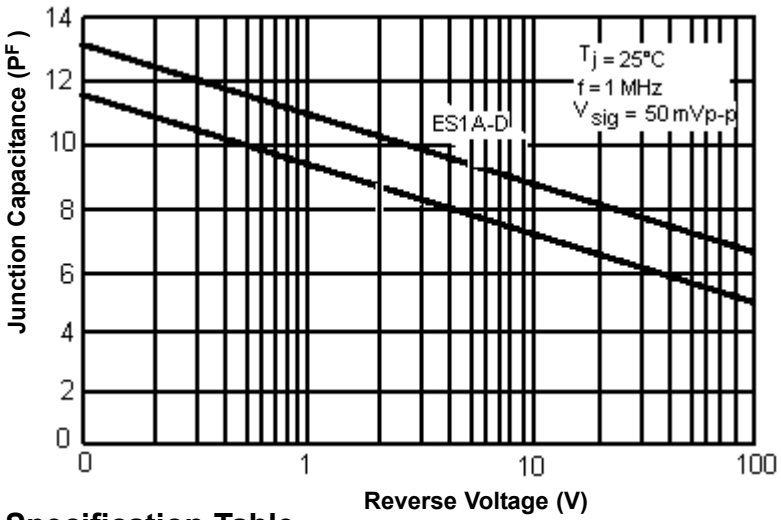


Figure 5 Typical Junction Capacitance



Specification Table

$I_{F\ (AV)}$ (A)	V_{RRM} (V)	I_{FSM} (A)	t_{rr} maximum (n^S)	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