



# ES1001FL-AU~ES1006FL-AU

## SMALL SURFACE MOUNT SUPER FAST DIODES

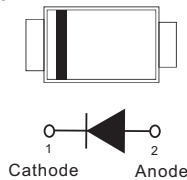
**VOLTAGE** 100 to 600 Volt **CURRENT** 1 Ampere

### FEATURES

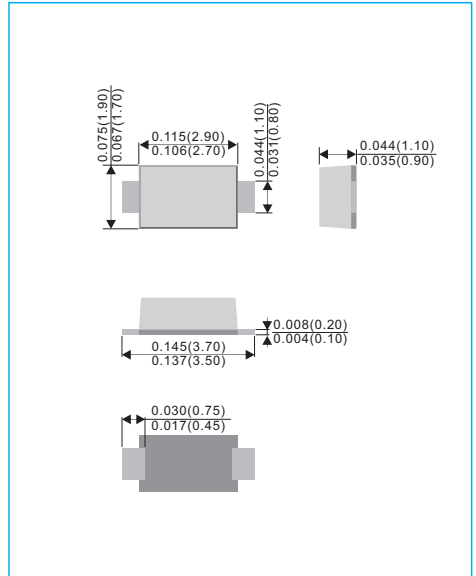
- For surface mounted applications in order to optimize board space
- Ideal for automated placement
- Glass passivated
- High temperature soldering : 260°C / 10 seconds at terminals
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case: SOD-123FL, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Weight: 0.0006 ounces, 0.0173 grams
- Polarity: Color band denotes cathode end



### SOD-123FL Unit : inch(mm)



### ABSOLUTE RATINGS

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Test condition	Symbol	ES1001FL-AU	ES1002FL-AU	ES1004FL-AU	ES1006FL-AU	Units
Marking Code		-	E1B	E1D	E1G	E1J	-
Maximum repetitive peak reverse voltage		V <sub>RRM</sub>	100	200	400	600	V
Maximum RMS voltage		V <sub>RMS</sub>	70	140	280	420	V
Maximum DC blocking voltage		V <sub>DC</sub>	100	200	400	600	V
Maximum average forward current	T <sub>L</sub> =120°C	I <sub>F(AV)</sub>	1				A
Peak forward surge current 8.3ms single half sine-wave	T <sub>L</sub> =25°C	I <sub>FSM</sub>	30				A
Maximum instantaneous forward voltage	1.0A	V <sub>F</sub>	0.95		1.25	1.7	V
Maximum DC reverse current at rated DC blocking voltage	T <sub>J</sub> =25°C T <sub>J</sub> =100°C	I <sub>R</sub>		0.5 10			μA
Reverse recovery time	I <sub>F</sub> =0.5A I <sub>R</sub> =1A I <sub>RR</sub> =0.25A	T <sub>RR</sub>		35			ns
Typical capacitance	4V,1MHz	C <sub>J</sub>		7			pF

### ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

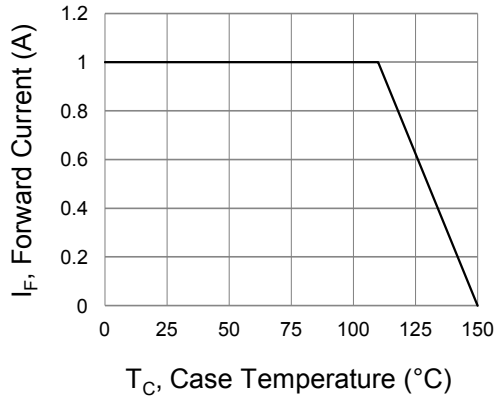
Parameter	Symbol	ES1001FL-AU	ES1002FL-AU	ES1004FL-AU	ES1006FL-AU	Units
Typical Thermal Resistane (Notes 1) (Notes 2)	R <sub>θJA</sub> R <sub>θJC</sub>			200 30		°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>			-55 to +150		°C

NOTES : 1.Mounted on a FR4 PCB, single-sided copper, mini pad.

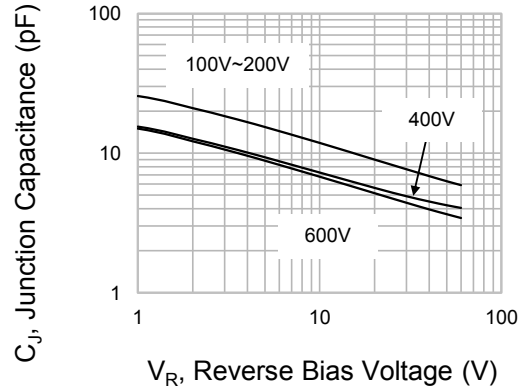
2.Mounted on a FR4 PCB, single-sided copper, with 10cm\*10cm copper pad area.



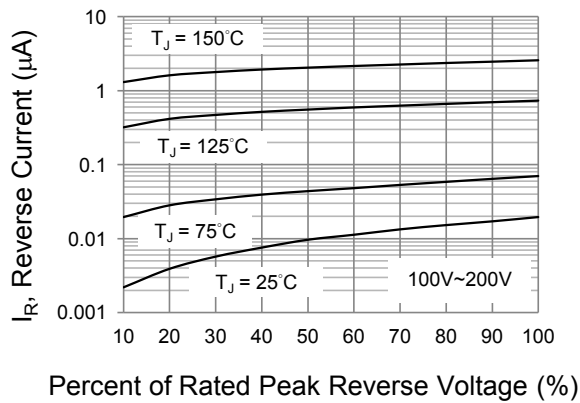
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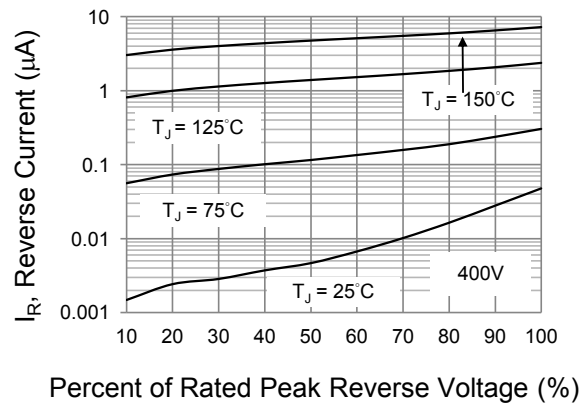
**Fig.1 Forward Current Derating Curve**



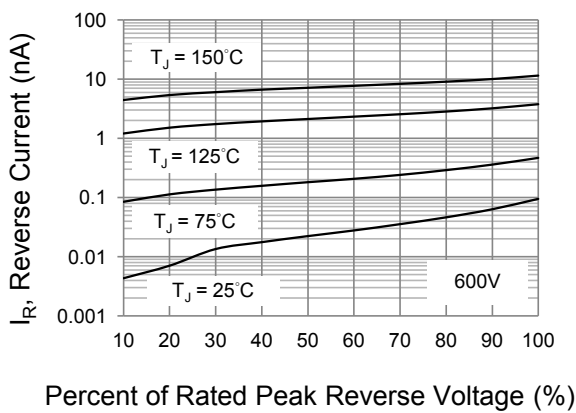
**Fig.2 Typical Junction Capacitance**



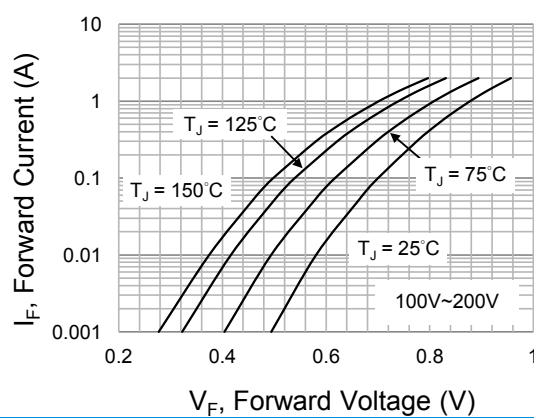
**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Reverse Characteristics**



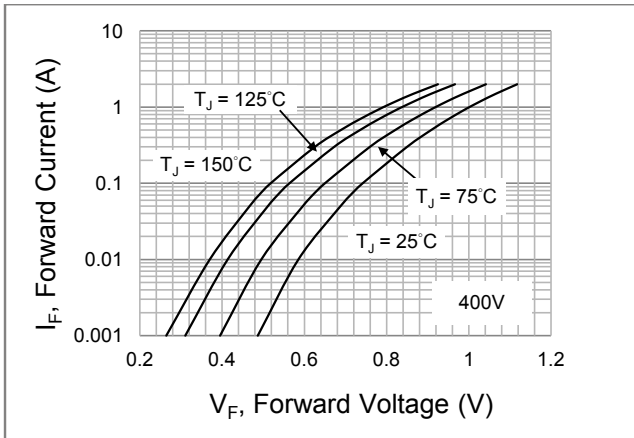
**Fig.5 Typical Reverse Characteristics**



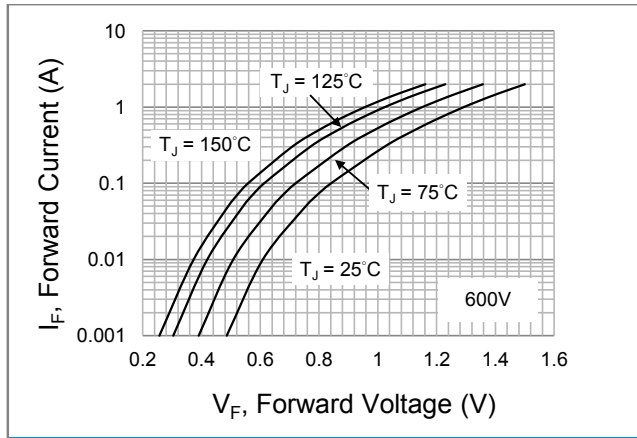
**Fig.6 Typical Forward Characteristics**



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**Fig.7 Typical Forward Characteristics**

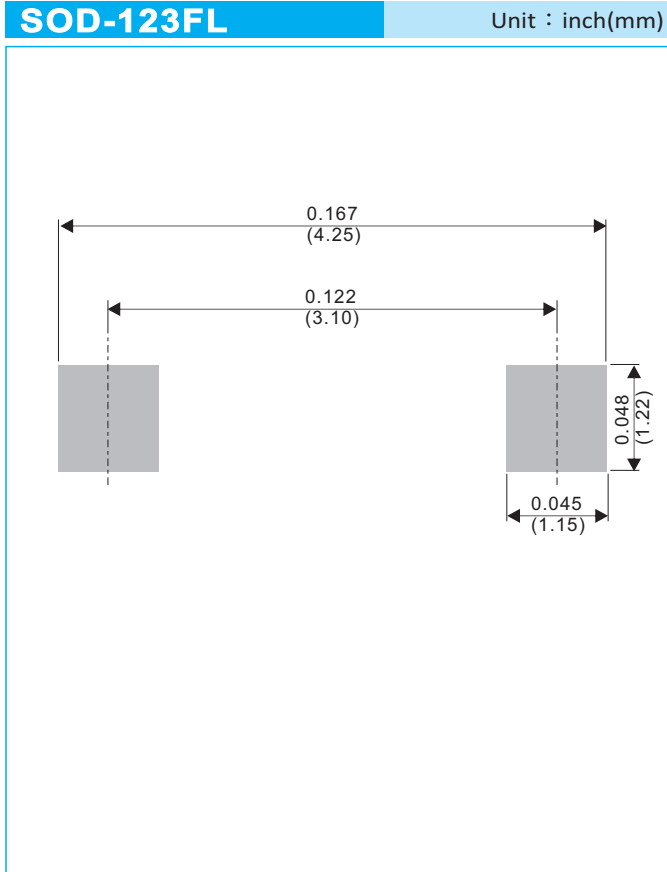


**Fig.8 Typical Forward Characteristics**



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information  
T/R - 10K per 13" plastic Reel  
T/R - 3K per 7" plastic Reel



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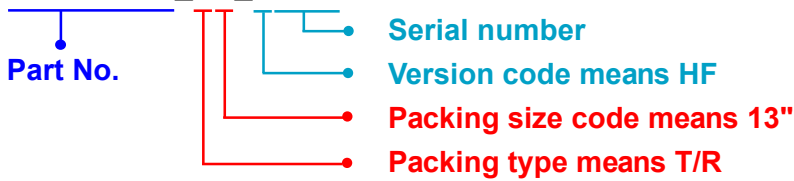
**Part No.\_packing code\_Version**

ES1001FL-AU\_R1\_000A1

ES1001FL-AU\_R2\_000A1

For example :

**RB500V-40\_R2\_00001**



Packing Code XX				Version Code XXXXX		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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