

# ES1JFW-AH

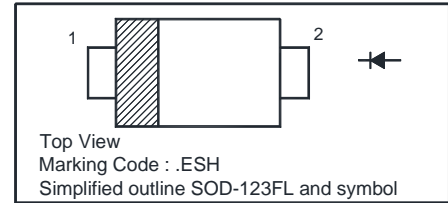
## Surface Mount Superfast Recovery Rectifiers Reverse Voltage - 600 V Forward Current - 1 A

### Features

- Easy pick and place
- For surface mounted applications
- Low profile package
- Superfast recovery times for high efficiency
- AEC-Q101 Qualified
- Halogen and Antimony Free(HAF), RoHS compliant

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

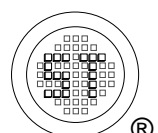


### Absolute Maximum Ratings and Characteristics

Ratings 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%.

Parameter	Symbols	Value	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	600	V
Maximum RMS Voltage	$V_{RMS}$	420	V
Maximum DC Blocking Voltage	$V_{DC}$	600	V
Maximum Average Forward Rectified Current $T_C = 125^\circ\text{C}$	$I_{F(AV)}$	1	A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	30	A
Maximum Forward Voltage at 1 A	$V_F$	1.7	V
Maximum Reverse Current at $T_a = 25^\circ\text{C}$ at Rated DC Blocking Voltage at $T_a = 125^\circ\text{C}$	$I_R$	5 100	$\mu\text{A}$
Typical Junction Capacitance at $V_R = 4\text{ V}$ , $f = 1\text{ MHz}$	$C_J$	15	pF
Maximum Reverse Recovery Time at $I_F = 0.5\text{ A}$ , $I_R = 1\text{ A}$ , $I_{rr} = 0.25\text{ A}$	$t_{rr}$	35	ns
Typical Thermal Resistance <sup>1)</sup>	$R_{\theta JA}$	85	$^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	$T_j, T_{stg}$	- 55 to + 150	$^\circ\text{C}$

<sup>1)</sup> P.C.B. mounted with 2.0 X 2.0" (5 X 5 cm) copper pad areas.



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## Electrical characteristic curves

Fig 1. Reverse Characteristics

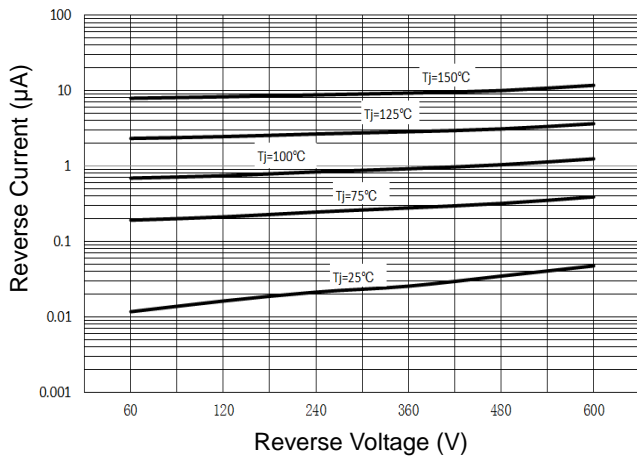


Fig 2. Forward Characteristics

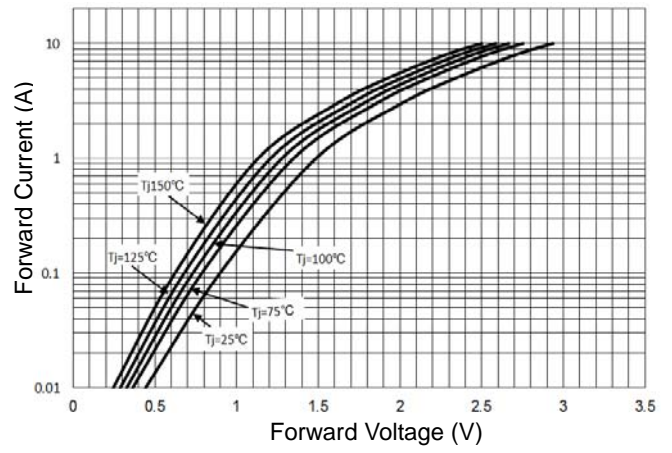


Fig 3. Forward Current Derating Curve

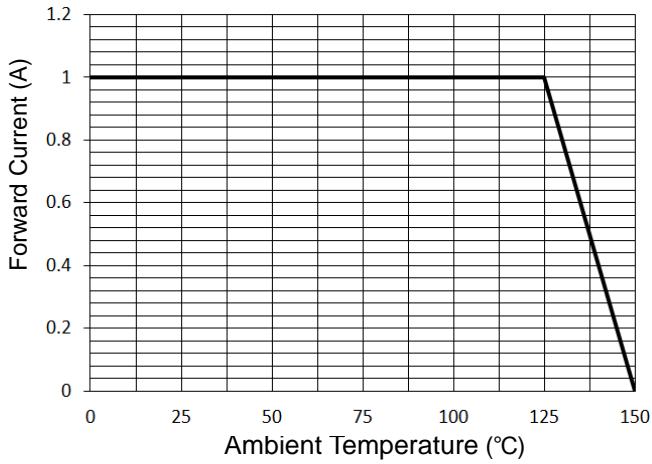
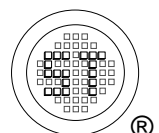
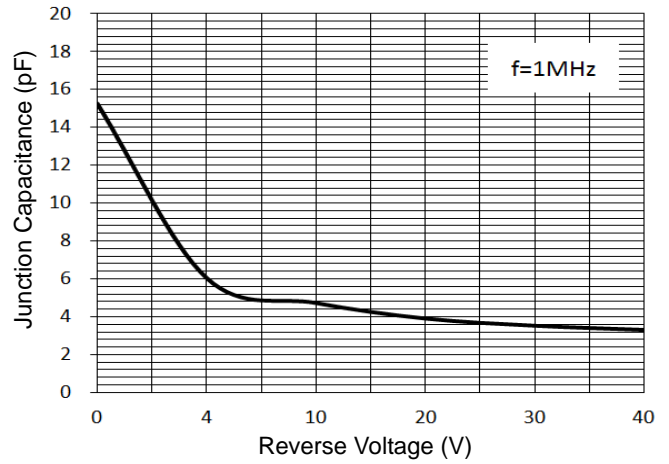


Fig 4. Junction Capacitance

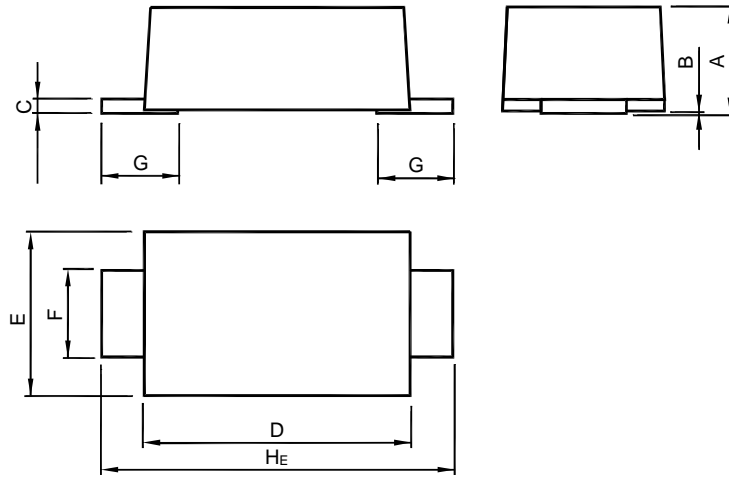


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## PACKAGE OUTLINE

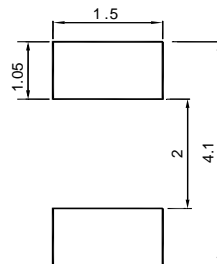
Plastic surface mounted package; 2 leads

SOD-123FL



UNIT	A	B	C	D	E	F	G	H <sub>E</sub>
mm	1.08	0.1	0.2	2.9	1.9	1.1	0.85	3.9
	0.88	0	0.1	2.7	1.7	0.8	0.45	3.5

### Recommended Soldering Footprint



### Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOD-123FL	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

### Marking information

" III " = Cathode line

" • " = HAF (Halogen and Antimony Free)

"ESH " = Part No.

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