



ES2AF THRU ES2JF

Surface Mount Superfast Rectifiers

Reverse Voltage – 50 to 600 V

Forward Current –2 A

FEATURES

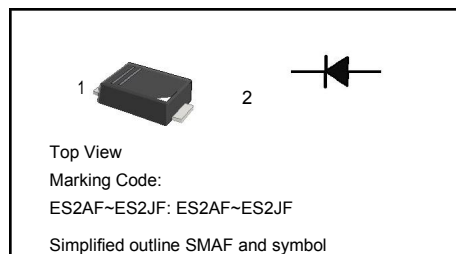
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Superfast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- Case: SMAF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 27mg 0.00086oz

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	ES2AF	ES2BF	ES2CF	ES2DF	ES2EF	ES2GF	ES2JF	Units
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current at T _L = 100 °C	I _{F(AV)}	2							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	50							A
Maximum Forward Voltage at 2A	V _F	1				1.25		1.7	V
Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta =125 °C	I _R	5 100							μA
Typical Junction Capacitance at VR=4V, f=1MHz	Cj	60							pF
Maximum Reverse Recovery Time at IF=0.5A, IR=1A, Irr=0.25A	t _{rr}	35							ns
Operating and Storage Temperature Range	T _j , T _{stg}	-55 ~ +150							°C

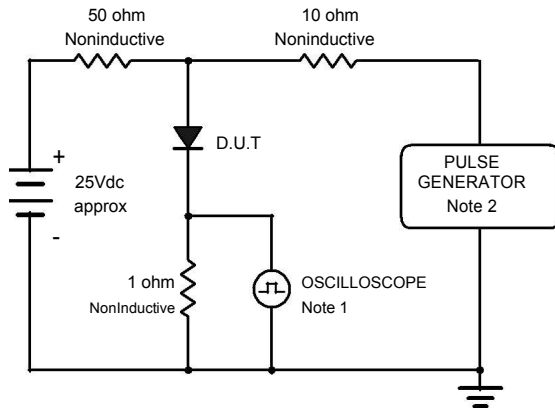


ES2AF THRU ES2JF

Surface Mount Superfast Rectifiers

Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



Note: 1. Rise Time = 7ns, max.
Input Impedance = 1megohm, 22pF.
2. Rise Time = 10ns, max. Source Impedance = 50 ohms.

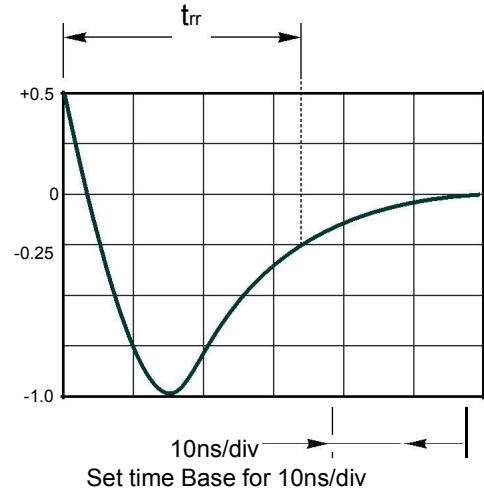


Fig.2 Maximum Average Forward Current Rating

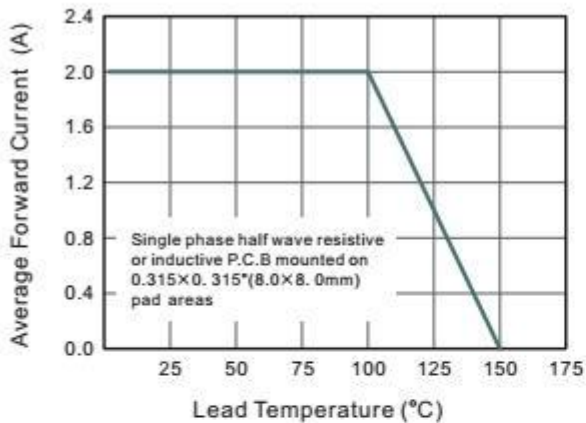


Fig.3 Typical Reverse Characteristics

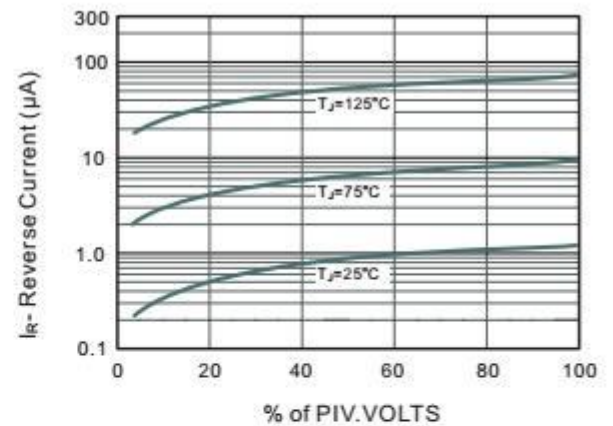


Fig.4 Typical Forward Characteristics

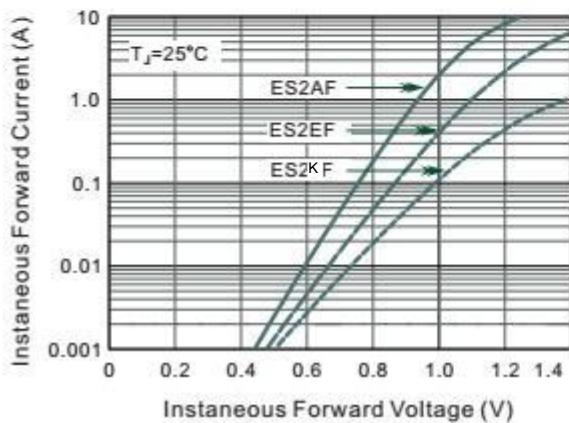
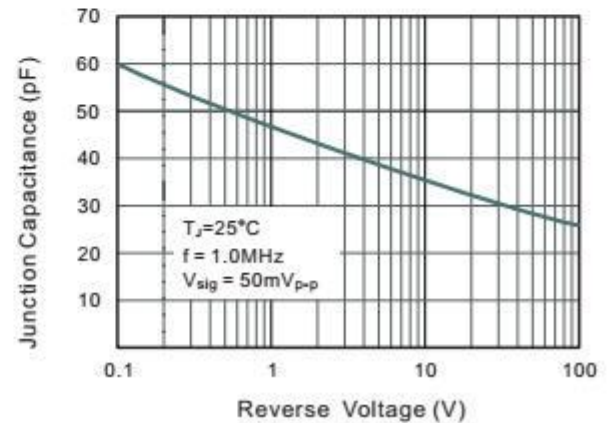


Fig.5 Typical Junction Capacitance





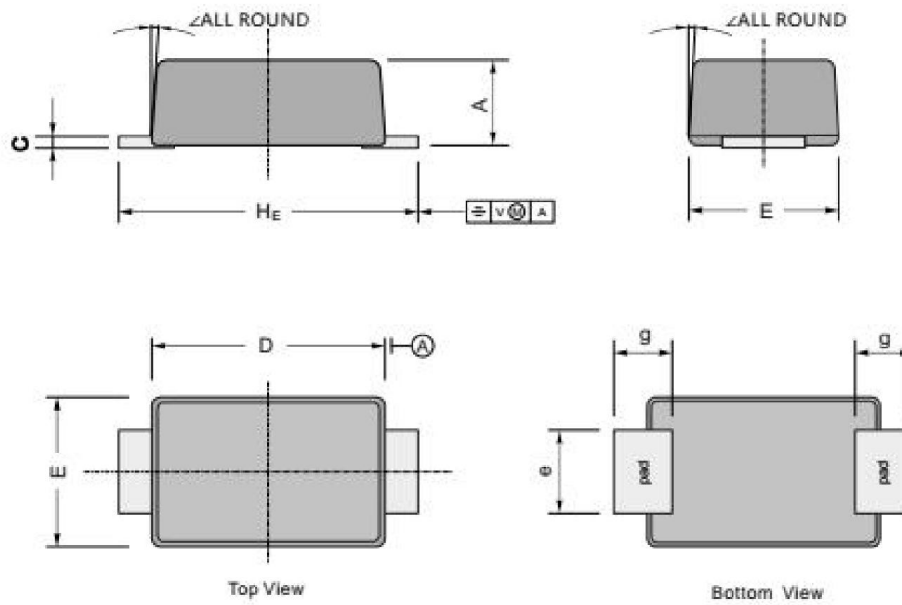
ES2AF THRU ES2JF

Surface Mount Superfast Rectifiers

PACKAGE OUTLINE

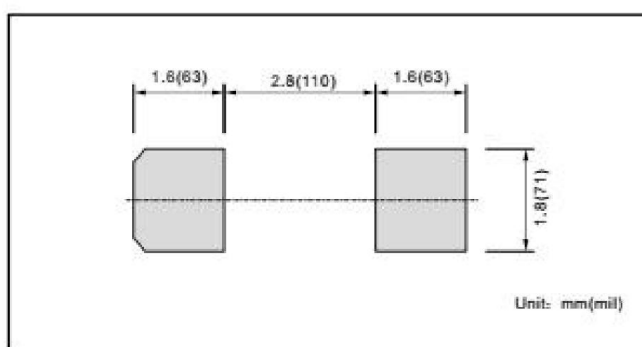
Plastic surface mounted package; 2 leads

SMAF



UNIT		A	C	D	E	e	g	H _E	∠
mm	max	1.2	0.23	3.7	2.7	1.6	1.3	4.9	7°
	min	0.9	0.18	3.3	2.4	1.3	1.0	4.4	
mil	max	47	9.1	146	106	63	51	193	
	min	35.4	7.1	130	94	51	39	173	

The recommended mounting pad size



Marking

Type number	Marking code
ES2AF	ES2AF
ES2BF	ES2BF
ES2CF	ES2CF
ES2DF	ES2DF
ES2EF	ES2EF
ES2GF	ES2GF
ES2JF	ES2JF