

Descriptions

Surface Mount Superfast Recovery Rectifiers, Reverse Voltage: 50 to 600V, Forward Current: 1.0A, SAMF thin package.

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

Applications

- Case: SMAF
- Terminals: Solderable per MIL-STD-750 , Method 2026
- Approx . Weight: 27mg / 0.00095oz

Equivalent Circuit & Pinning



PIN	DESCRIPTION
1	Cathode
2	Anode

Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbols	ES1AF	ES1BF	ES1CF	ES1DF	ES1EF	ES1GF	ES1JF	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 _c = 125 °C	I _{F(AV)}	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I _{FSM}	30							A
Maximum Forward Voltage at 1 A	V _F	1				1.25		1.68	V
Maximum DC Reverse Current T _a = 25 °C at Rated DC Blocking Voltage T _a = 125 °C	I _R	5 100							μA
Typical Junction Capacitance at V _R =4V, f= 1 MHz	C _j	15							pF
Maximum Reverse Recovery Time ^(1)	t _{rr}	35							ns
Typical Thermal Resistance ^(2)	R _{θJA}	80							°C/W
Operating and Storage Temperature Range	T _J , T _{stg}	-55 ~ +150							°C

(1) Measured with $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$.

(2) P.C. B . mounted with 2 .0" X 2 .0" (5 X 5 cm) copper pad areas .

Electrical Characteristic Curve

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram

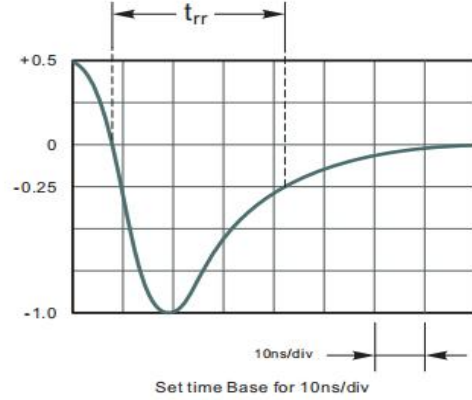
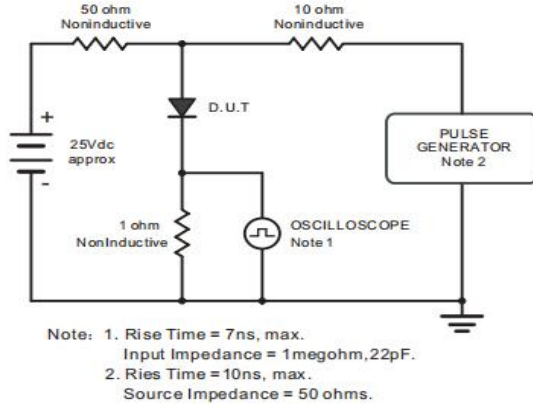


Fig.2 Maximum Average Forward Current Rating

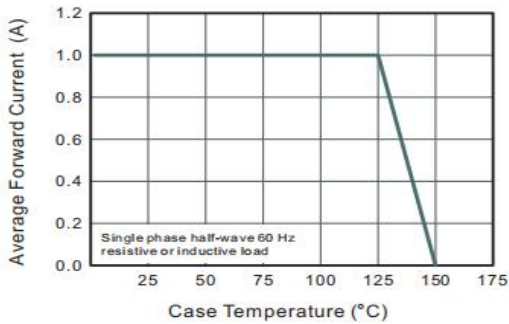


Fig.3 Typical Reverse Characteristics

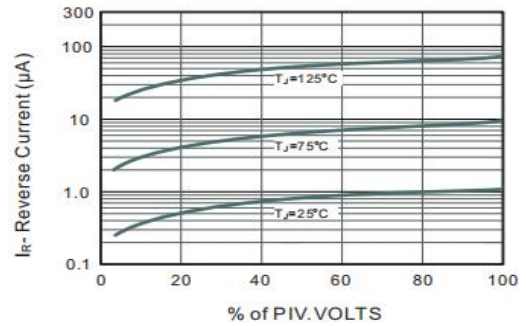


Fig.4 Typical Forward Characteristics

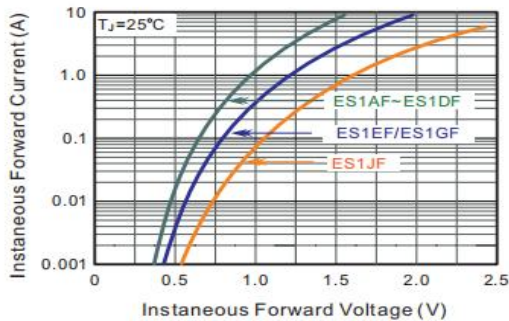


Fig.5 Typical Junction Capacitance

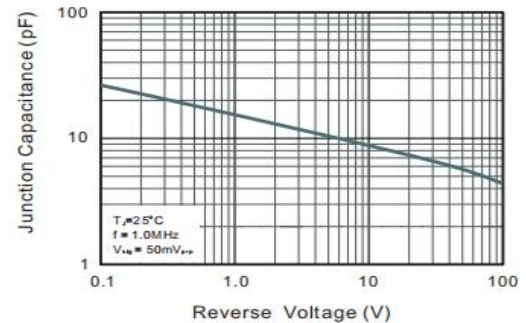
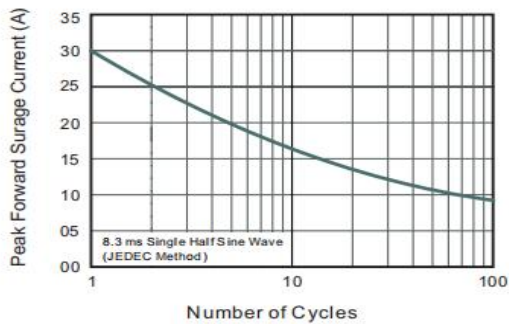


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current

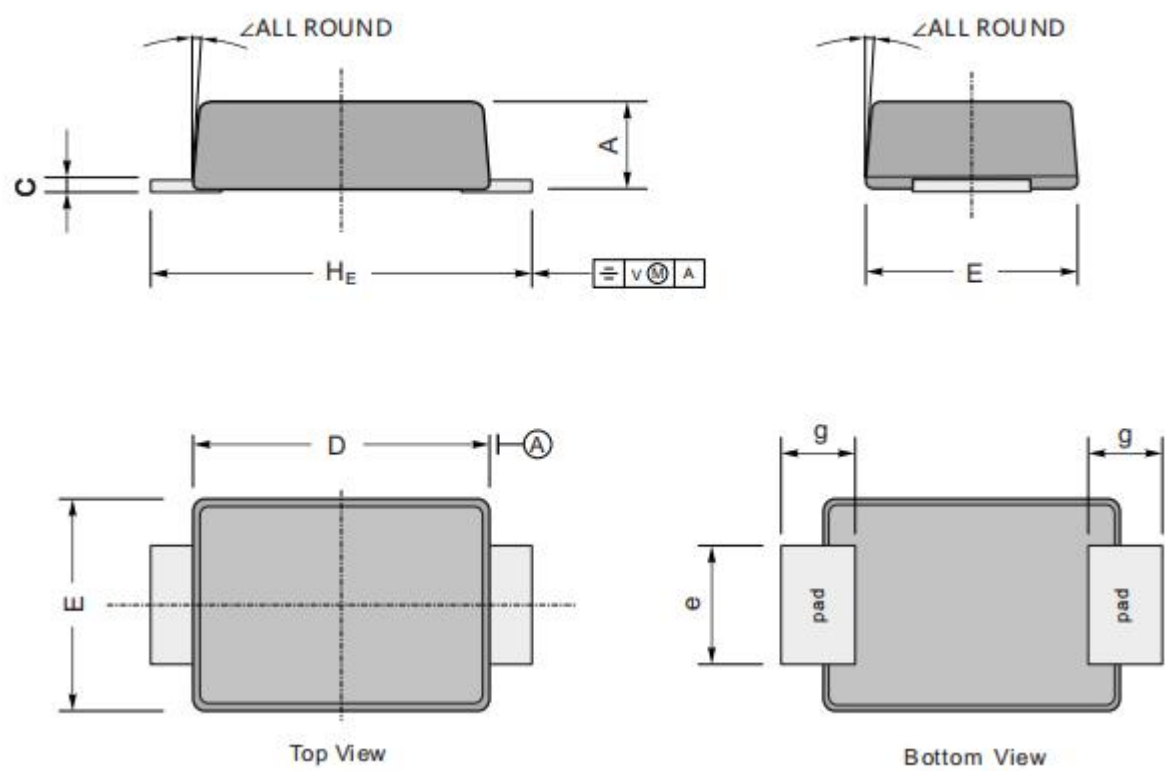


Marking

ES1A

Type number	Marking code
ES1AF	ES1A
ES1BF	ES1B
ES1CF	ES1C
ES1DF	ES1D
ES1EF	ES1E
ES1GF	ES1G
ES1JF	ES1J

Package Outline Dimensions



UNIT		A	C	D	E	e	g	H _E	L
mm	max	1.2	0.20	3.7	2.7	1.6	1.2	4.9	7°
	min	0.9	0.12	3.3	2.4	1.3	0.8	4.4	
mil	max	47	7.9	146	106	63	47	193	
	min	35	4.7	130	94	51	31	173	

