

Features

- For surface mount applications
- Glass passivated chip junction
- Superfast reverse recovery time

SMAF



1.Cathode  2.Anode

Marking Code:

ES1AF-TN:ES1A
ES1BF-TN:ES1B
ES1CF-TN:ES1C
ES1DF-TN:ES1D
ES1EF-TN:ES1E
ES1GF-TN:ES1G
ES1JF-TN:ES1J

Maximum Ratings and Electrical Characteristics

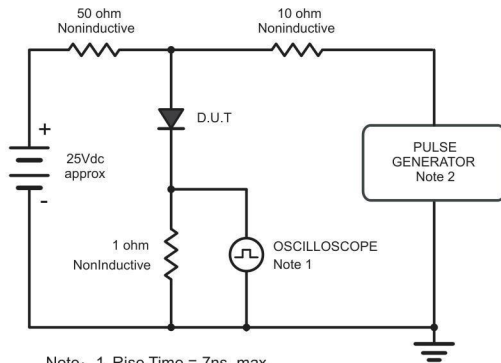
Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	ES1AF-TN	ES1BF-TN	ES1CF-TN	ES1DF-TN	ES1EF-TN	ES1GF-TN	ES1JF-TN	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)}	1.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I _{FSM}	30							A
Maximum Instantaneous Forward Voltage at 1 A	V _F	1.0				1.25		1.68	V
Maximum DC Reverse Current at Rated DC Blocking Voltage T _A = 25°C T _A = 125°C	I _R	5 100							μA
Typical Junction Capacitance ^{Note1}	C _j	15							pF
Typical Thermal Resistance ^{Note2}	R _{θJA}	80							°C/W
Maximum Reverse Recovery Time ^{Note3}	T _{rr}	35							nS
Junction Temperature	T _J	150							°C
Storage Temperature Range	T _{STG}	-55 to +150							°C

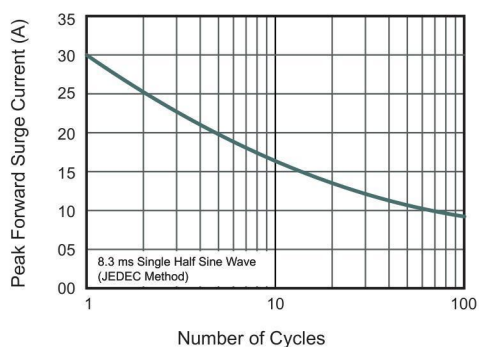
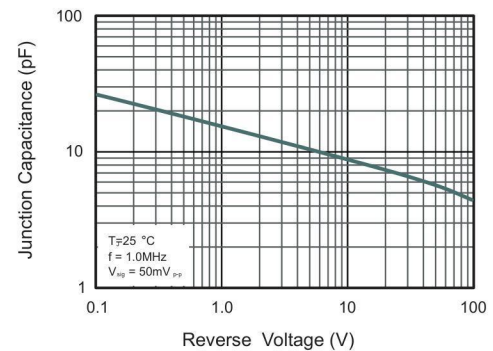
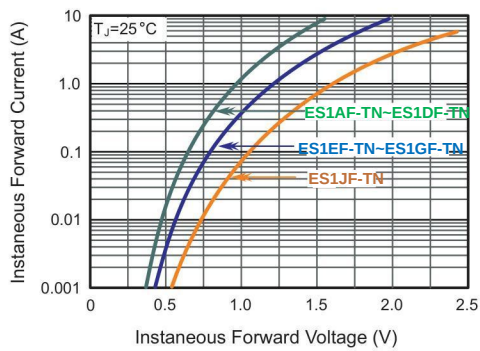
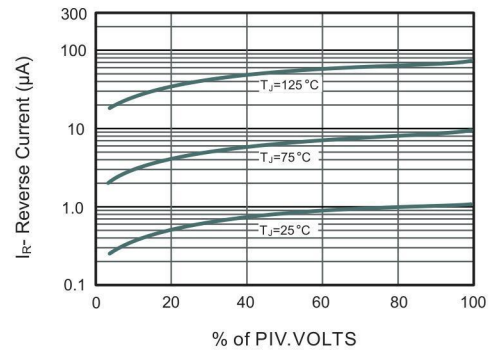
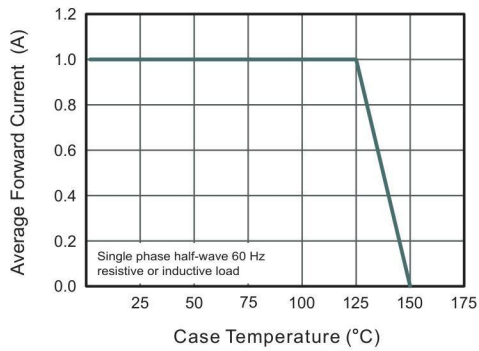
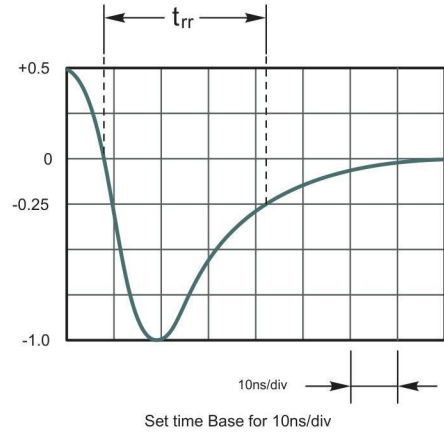
Note:

1. Measured at 1 MHz and applied reverse voltage of 4 V D.C
2. P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.
3. Measured with $I_F = 0.5 \text{ A}$, $I_R = 1 \text{ A}$, $I_{rr} = 0.25 \text{ A}$

Typical Characteristic Curves



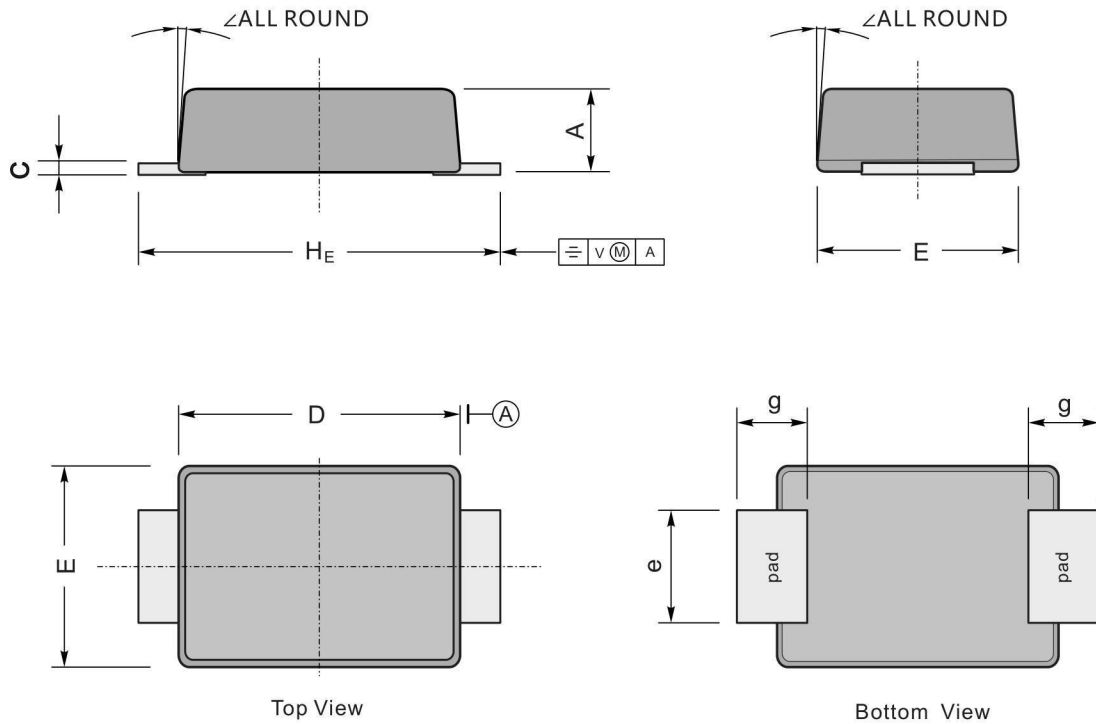
Note: 1. Rise Time = 7ns, max.
Input Impedance = 1megohm, 22pF.
2. Rise Time = 10ns, max.
Source Impedance = 50 ohms.



Package Outline

SMAF

Dimensions in mm



UNIT		A	C	D	E	e	g	H _E	∠
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	