



## DESCRIPTION

The ES1AF~ES1JF is available in SMAF package

## ORDERING INFORMATION

Package Type	Part Number
SMAF	ES1AF
	ES1BF
	ES1CF
	ES1DF
	ES1EF
	ES1GF
	ES1JF
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

## FEATURES

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Superfast reverse recovery time
- Available in SMAF package

## MECHANICAL DATA

Case: SMAF

Terminals: Solderable per MIL-STD-750,  
Method 2026

Approx. Weight: 27mg 0.00086oz

## PIN DESCRIPTION





## ABSOLUTE MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

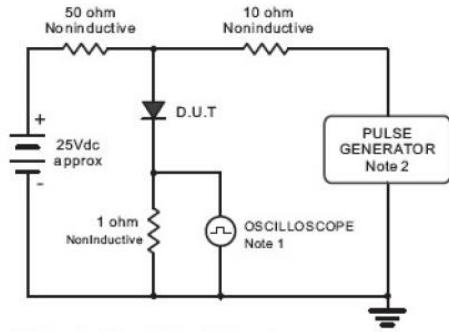
Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%

Parameter	Symbol	ES1AF	ES1BF	ES1CF	ES1DF	ES1EF	ES1GF	ES1JF	Unit
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 $T_L=100^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	25							A
Maximum Forward Voltage at 1A	$V_F$	1.0				1.25		1.7	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$					5.0			uA
						100			
Typical Junction Capacitance at $V_R=4\text{V}$ , $f=1\text{MHz}$	$C_J$	10							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
Operating and Storage Temperature Range	$T_J$ , $T_{STG}$	-55 ~ 150							°C

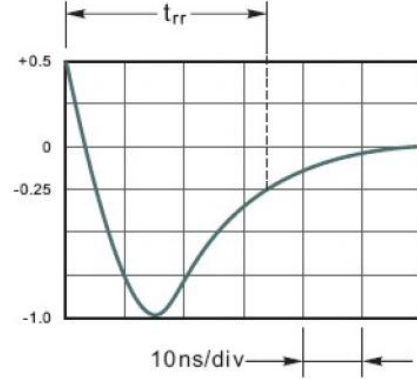


**TYPICAL CHARACTERISTICS**

Figure. 1 Reverse Recovery Time Characteristic And Test Circuit Diagram



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



Set time Base for 10ns/div

Figure. 2 Maximum Average Forward Current Rating

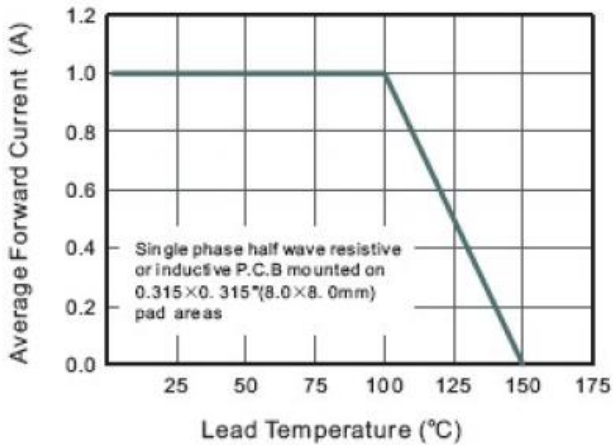


Figure. 3 Typical Reverse Characteristics

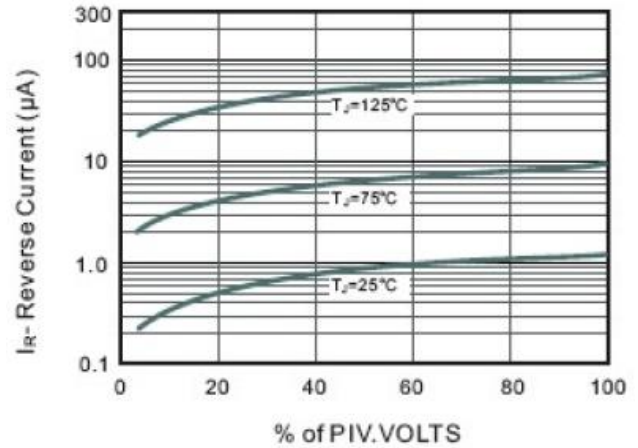


Figure. 4 Typical Forward Characteristics

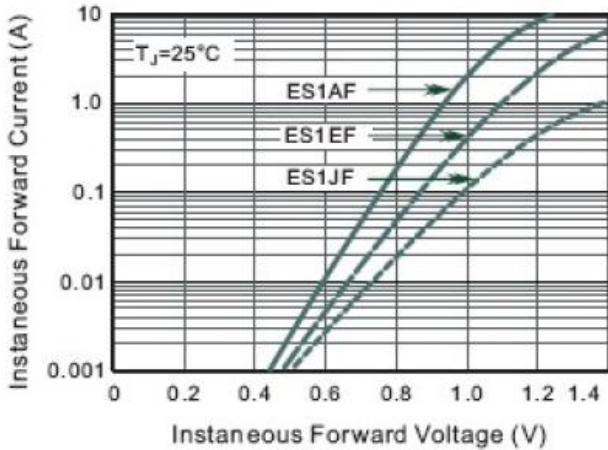
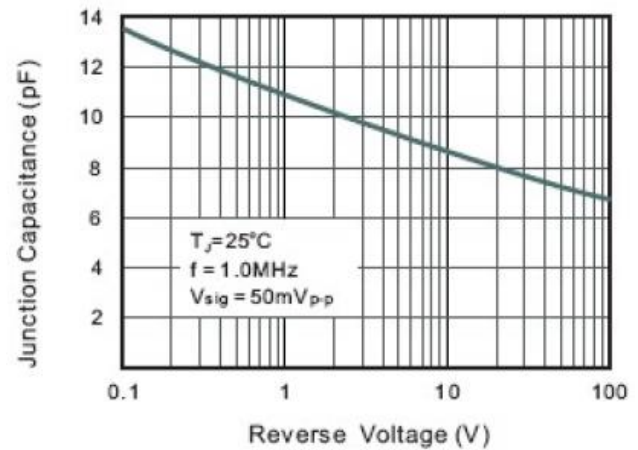


Figure. 5 Typical Junction Capacitance

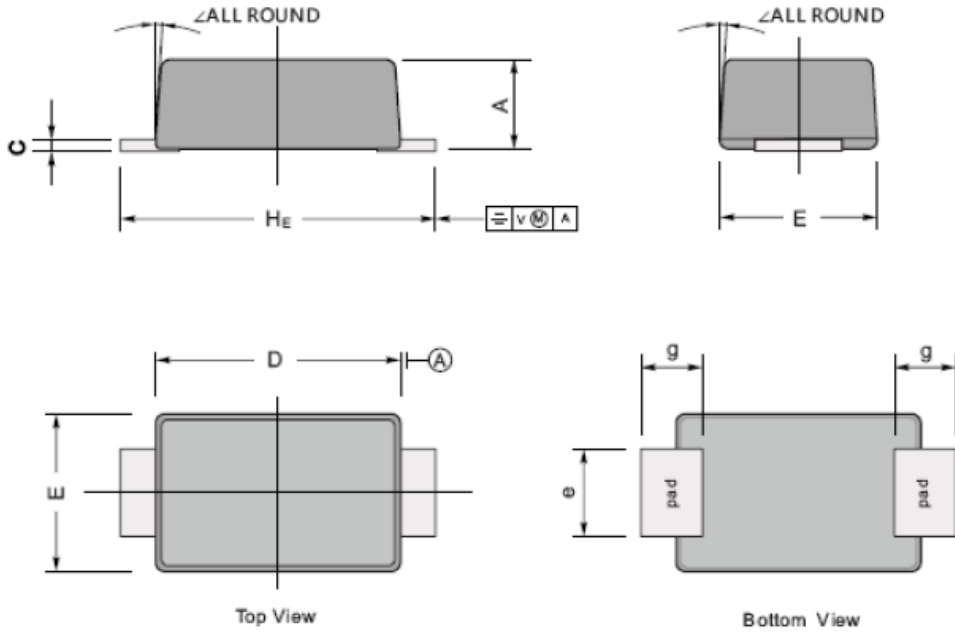




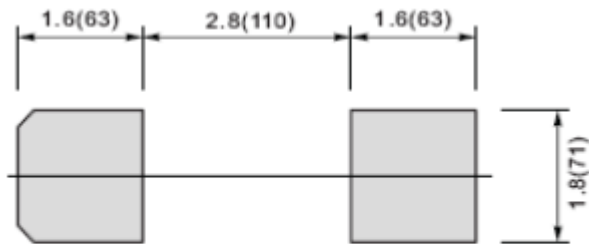
**PACKAGE INFORMATION**

Dimension in SMAF (Unit: mm)

Plastic surface mounted package; 2 leads



The recommended mounting pad size



Unit: mm(mil)

UNIT		A	B	C	E	e	g	H <sub>E</sub>	$\angle$
mm	Max	1.3	0.23	3.7	2.7	1.6	1.3	4.9	7°
	Min	1.1	0.18	3.3	2.4	1.3	1.0	4.4	
mil	Max	51	9.1	146	106	63	51	193	
	Min	43	7.1	130	94	51	39	173	



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