



## Features

- Average Forward Current:  $I_{F(AV)}=1A$
- Polarity: Color band denotes cathode



SMAF

## Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
ES1AF-ES1JF	SMAF	ES1xF	10000

x: From A-M



## Maximum Ratings ( $T_a=25^{\circ}C$ unless otherwise noted)

Item	Symbol	Unit	Test Conditions	ES1							
				AF	BF	CF	DF	EF	GF	HF	JF
Repetitive Peak Reverse Voltage	$V_{RRM}$	V		50	100	150	200	300	400	500	600
Maximum RMS Voltage	$V_{RMS}$	V		35	70	105	140	210	280	350	420
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load, $T_L=120^{\circ}C$	1.0							
Surge(Non-repetitive)Forward Current	$I_{FSM}$	A	60Hz Half-sine wave, 1 cycle, $T_a=25^{\circ}C$	30							
Operation Junction and Storage Temperature Range	$T_J, T_{STG}$	$^{\circ}C$		-55 ~ +150							

## Electrcal Characteristics ( $T_a=25^{\circ}C$ unless otherwise specified)

Item	Symbol	Unit	Test Condition		ES1							
					AF	BF	CF	DF	EF	GF	HF	JF
Peak Forward Voltage	V <sub>F</sub>	V	I <sub>F</sub> =1.0A		0.95				1.25		1.70	
Maximum reverse recovery time	t <sub>rr</sub>	ns	I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A		35							
Peak Reverse Current	I <sub>RRM1</sub>	μA	V <sub>RM</sub> =V <sub>RRM</sub>	Ta =25°C	5							
	Ta =100°C			100								
Thermal Resistance(Typical)	R <sub>θJ-A</sub>	°C/W	Between junction and ambient		85							
	R <sub>θJ-L</sub>		Between junction and terminal		35							

### Notes:

Thermal resistance from junction to ambient and from junction to lead moyned on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas



## Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

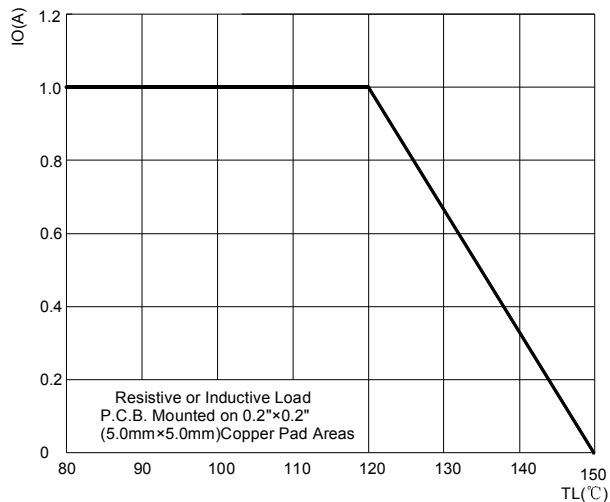


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

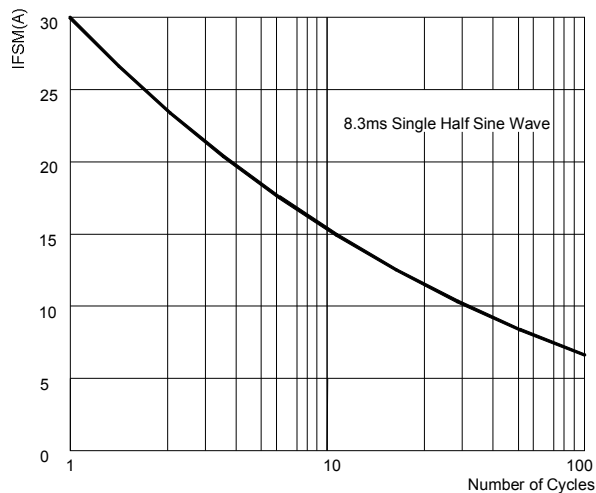


FIG.3: TYPICAL FORWARD CHARACTERISTICS

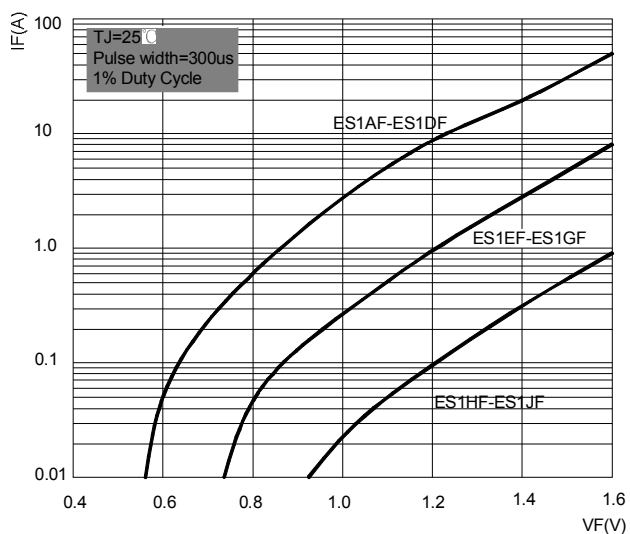


FIG.4: TYPICAL REVERSE CHARACTERISTICS

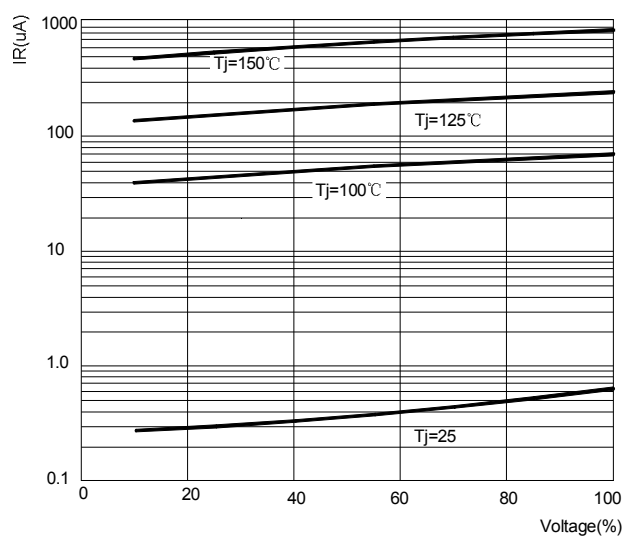
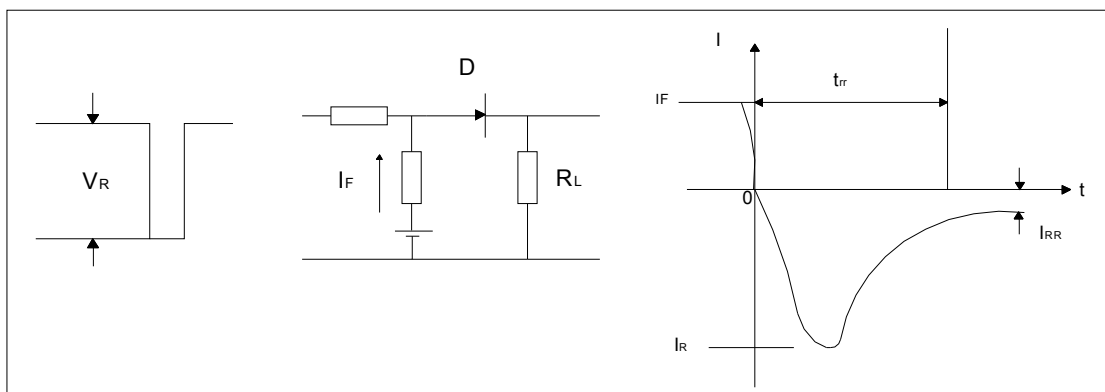
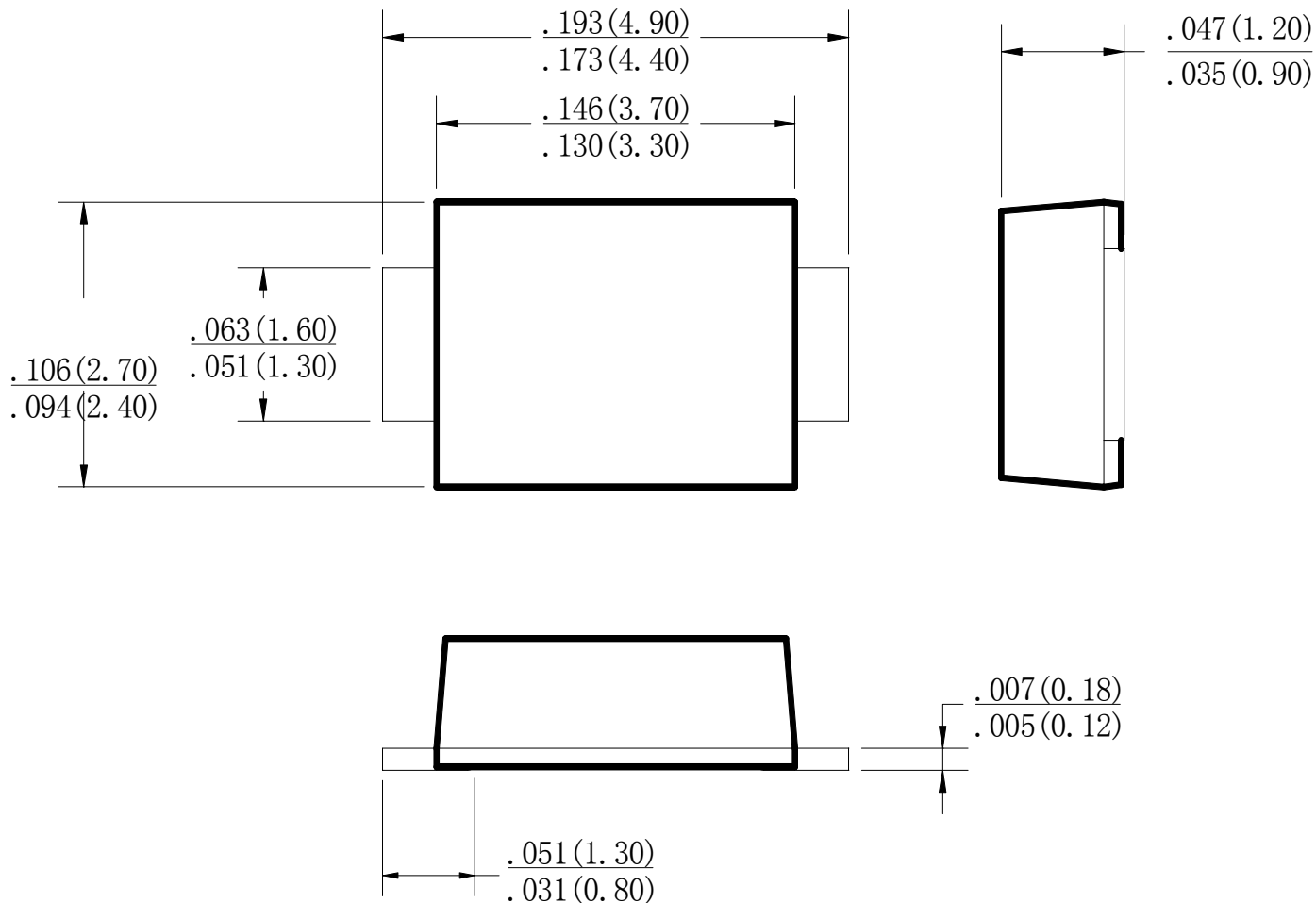


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time





## SMAF Package Outline Dimensions



Dimensions in inches and (millimeters)



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