



ES1AF SERIES

SURFACE MOUNT SUPERFAST RECTIFIER

VOLTAGE 50-600 Volts **CURRENT** 1 Ampere

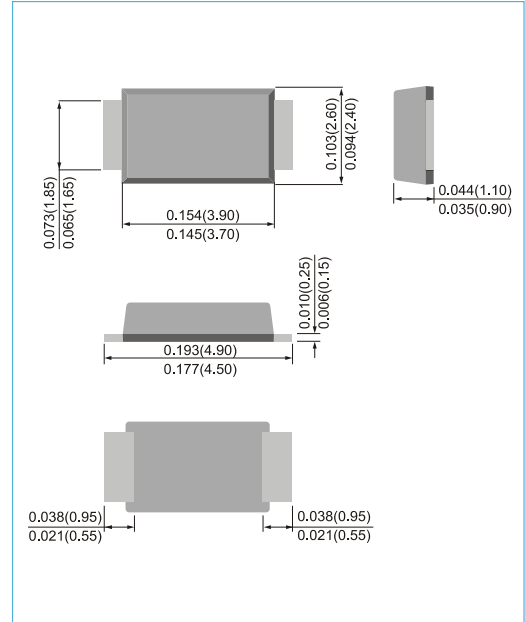
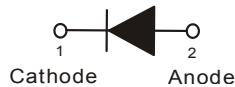
SMAF Unit : inch(mm)

FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Superfast recovery times for high efficiency
- Glass Passivated Chip Junction
- Lead free in comply with EU RoHS 2002/95/EC directives.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case: SMAF molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Approx. Weight : 0.00116 ounces, 0.0328 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	ES1AF	ES1BF	ES1CF	ES1DF	ES1EF	ES1GF	ES1JF	UNITS
Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	600	V
RMS Voltage	V _{RMS}	35	70	105	140	210	280	420	V
DC Blocking Voltage	V _R	50	100	150	200	300	400	600	V
Average Forward Current	I _{F(AV)}	1.0							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	30							A
Forward Voltage at 1.0A	V _F	0.95			1.25		1.7		V
DC Reverse Current at Rated DC Blocking Voltage T _J =25°C	I _R	1.0							μA
Typical Junction capacitance V _R =4V,1MHz	C _J	15							pF
Typical Thermal Resistance ,Junction to Lead (Note 1) Junction to Ambient (Note 2)	R _{θJL} R _{θJA}	24 150							°C / W
Reverse Recovery Time at I _F =0.5A,I _R =1.0A,I _{RR} =0.25A	trr	35							nS
Operating Junction Temperature and Storage Temperature Range	T _J ,T _{STG}	-55 to +150							°C

NOTES : 1. Mounted on an FR4 PCB, single-sided copper, with 48cm² copper pad area
2. Mounted on an FR4 PCB, single-sided copper, mini pad.



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RATING AND CHARACTERISTIC CURVES

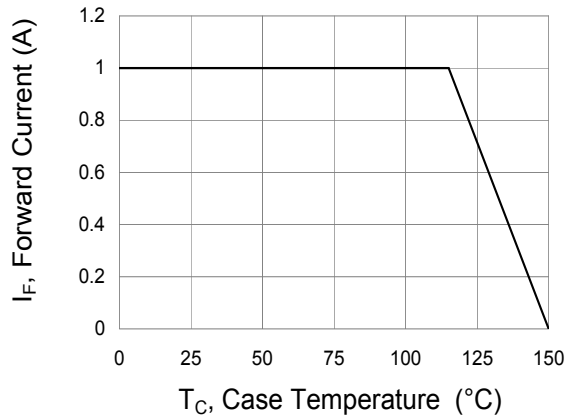


Fig.1 Forward Current Derating Curve

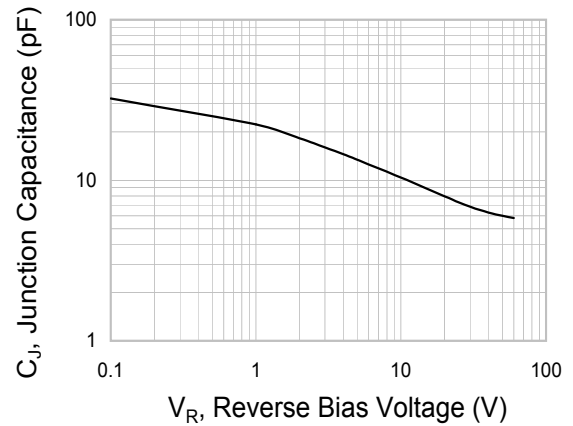


Fig.2 Typical Junction Capacitance

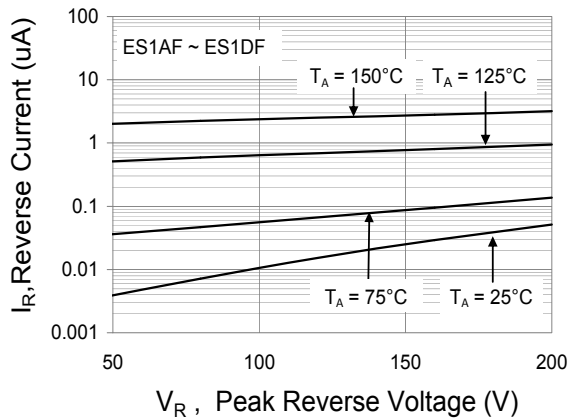


Fig.3 Typical Reverse Characteristics

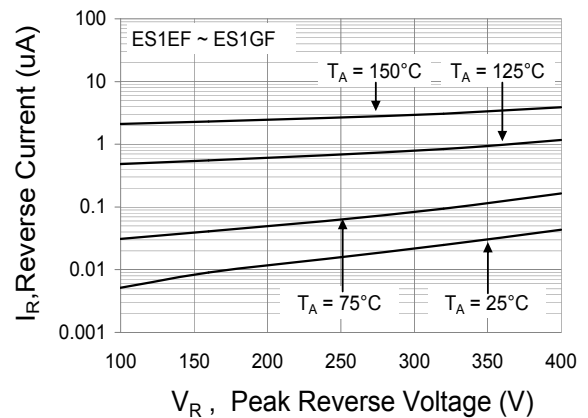


Fig.4 Typical Reverse Characteristics

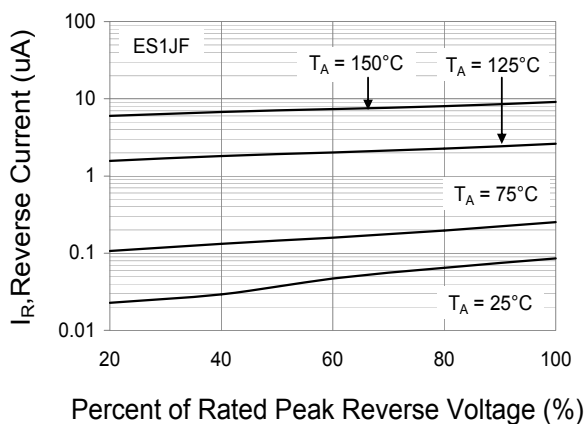


Fig.5 Typical Reverse Characteristics

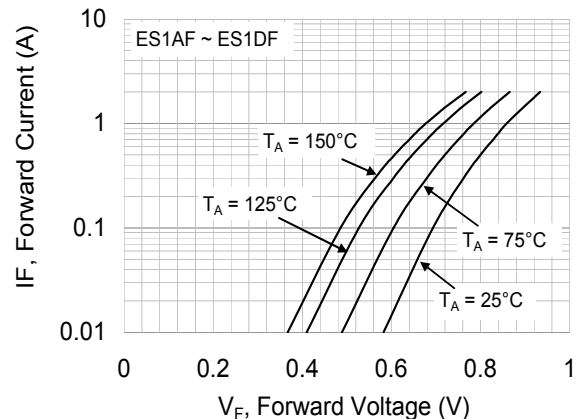


Fig.6 Typical Forward Characteristics



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RATING AND CHARACTERISTIC CURVES

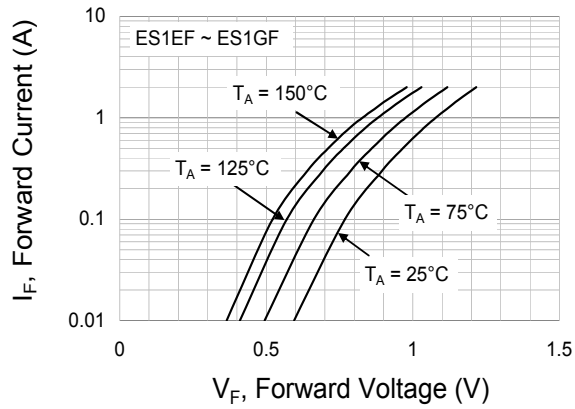


Fig.7 Typical Forward Characteristics

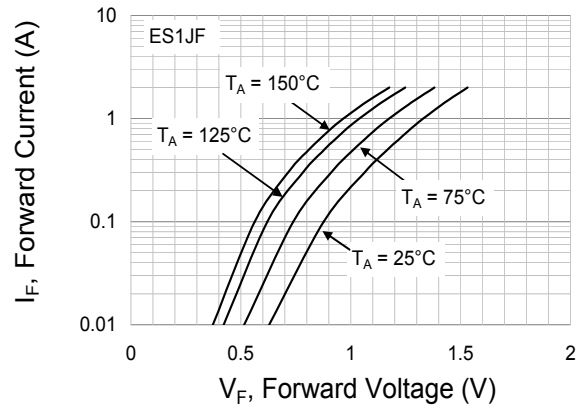
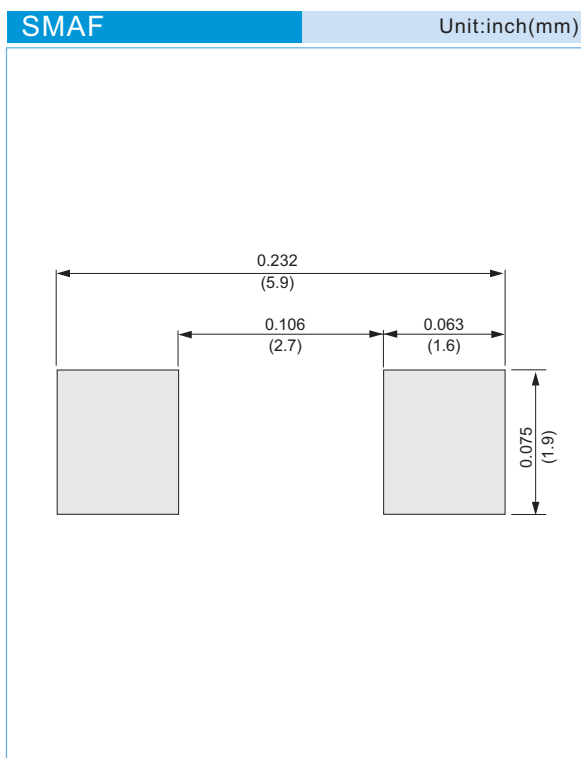


Fig.8 Typical Forward Characteristics



ES1AF SERIES

MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
 - T/R - 10K per 13" plastic Reel
 - T/R - 3K per 7" plastic Reel

LEGAL STATEMENT

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