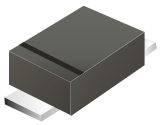
S1AF-HF Thru. S1MF-HF

Reverse Voltage: 50 to 1000 V
Forward Current: 1.0 A
RoHS Device
Halogen Free



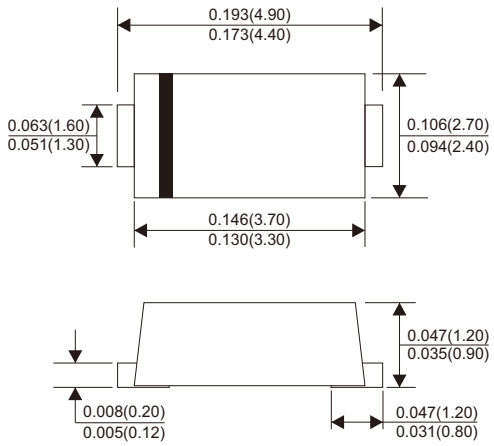
Features

- For surface mounted application.
- Low profile package.
- Glass passivated chip junction.
- Easy to pick and place.

Mechanical data

- Case: SMAF, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.

SMAF



Dimensions in inches and (millimeter)

Circuit Diagram



Maximum Ratings and Electrical Characteristics

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

Parameter	Symbols	S1AF-HF	S1BF-HF	S1DF-HF	S1GF-HF	S1JF-HF	S1KF-HF	S1MF-HF	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at Tc=125°C	$I_{F(AV)}$	1							A
Peak forward surge current 8.3ms single half sine wave superimposed on rated load	I_{FSM}	30							A
Max instantaneous forward voltage at 1A	V_F	1.1							V
Maximum DC reverse current T_a=25°C at rated DC blocking voltage T_a=125°C	I_R	5 50							μA
Typical junction capacitance (Note 1)	C_j	15							pF
Typical thermal resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JC}$	80 27							°C/W
Operating and storage temperature range	T_j, T_{stg}	-55 to +150							°C

Notes: 1. Measured at 1MHz and applied reverse voltage of 4V D.C.
2. P.C.B. mounted with 0.2" x 0.2" (5 x 5mm) copper pad areas.

Rating and Characteristic Curves (S1AF-HF Thru. S1MF-HF)

Fig.1 - Forward Current Derating Curve

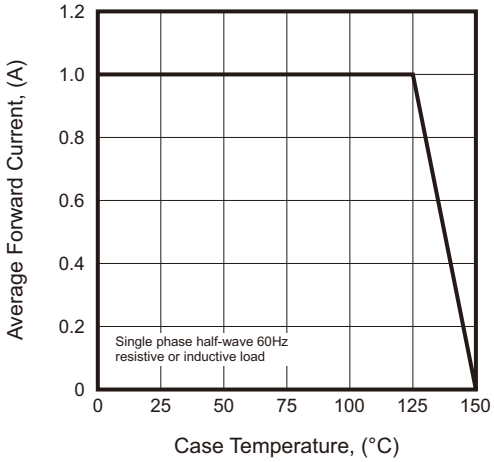


Fig.2 - Typical Instantaneous Reverse Characteristics

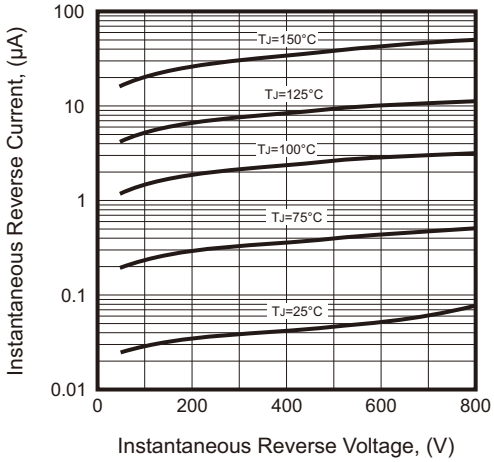


Fig.3 - Typical Forward Characteristic

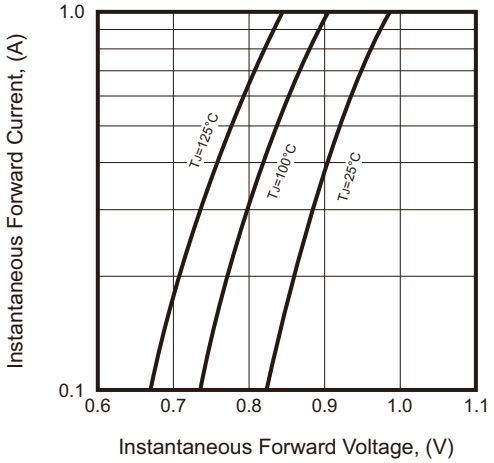


Fig.4 - Typical Junction Capacitance

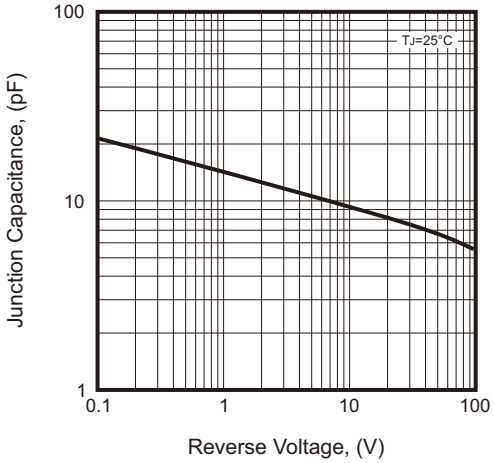
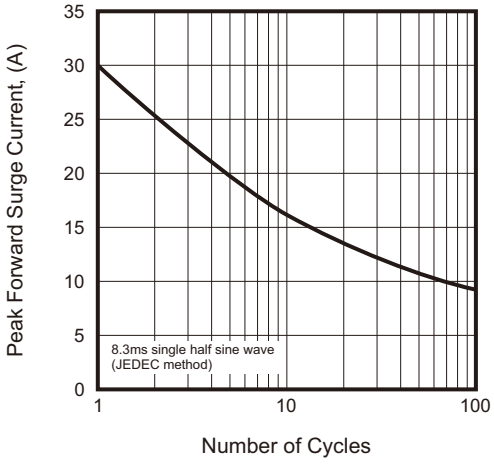
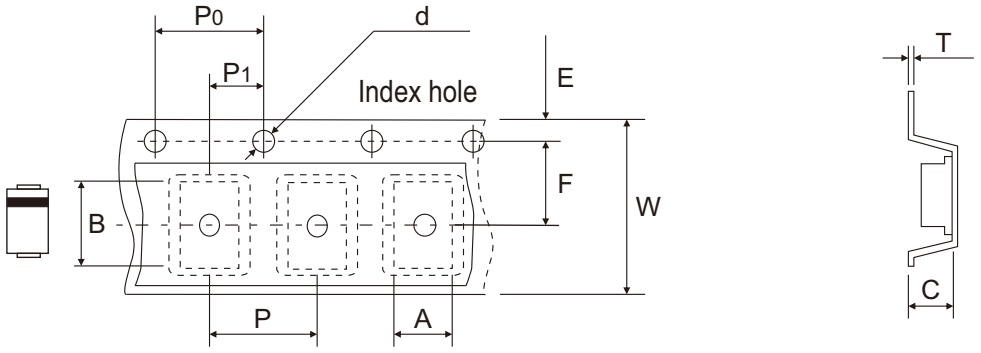
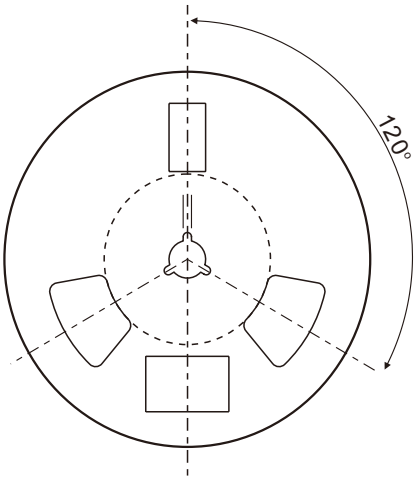


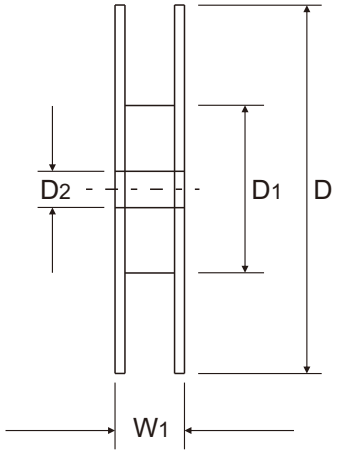
Fig.5 - Maximum Non-Repetitive Peak Forward Surge Current

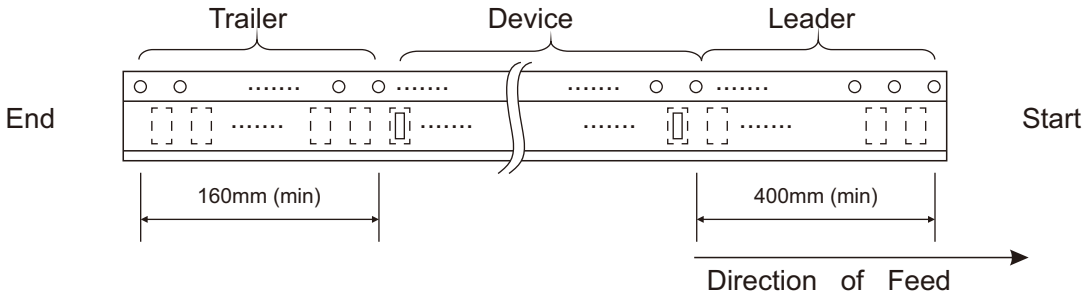


Reel Taping Specification







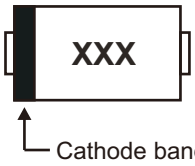


	SYMBOL	A	B	C	d	D	D1	D2
SMAF	(mm)	2.93 ± 0.10	5.33 ± 0.10	1.33 ± 0.10	1.55 ± 0.05	330 ± 2.00	75.00 ± 1.00	13.00 ± 0.20
	(inch)	0.115 ± 0.004	0.210 ± 0.004	0.052 ± 0.004	0.061 ± 0.002	12.992 ± 0.079	2.953 ± 0.039	0.512 ± 0.008

	SYMBOL	E	F	P	P0	P1	T	W	W1
SMAF	(mm)	1.73 ± 0.10	5.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.20 ± 0.03	12.00 ± 0.30	14.70 + 2.00 − 1.00
	(inch)	0.068 ± 0.004	0.217 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.008 ± 0.001	0.472 ± 0.012	0.579 + 0.079 − 0.039

Marking Code

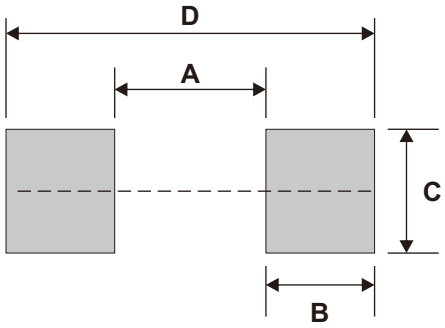
Part Number	Marking Code
S1AF-HF	S1A
S1BF-HF	S1B
S1DF-HF	S1D
S1GF-HF	S1G
S1JF-HF	S1J
S1KF-HF	S1K
S1MF-HF	S1M



xxx = Product type marking code

Suggested P.C.B. PAD Layout

SIZE	SMAF	
	(mm)	(inch)
A	2.20	0.087
B	1.60	0.063
C	1.80	0.071
D	5.40	0.213



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SMAF	10,000	13