

S1AW THRU S1MW



Glass Passivated Rectifiers

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.0 Ampere

RoHS Device

Halogen Free

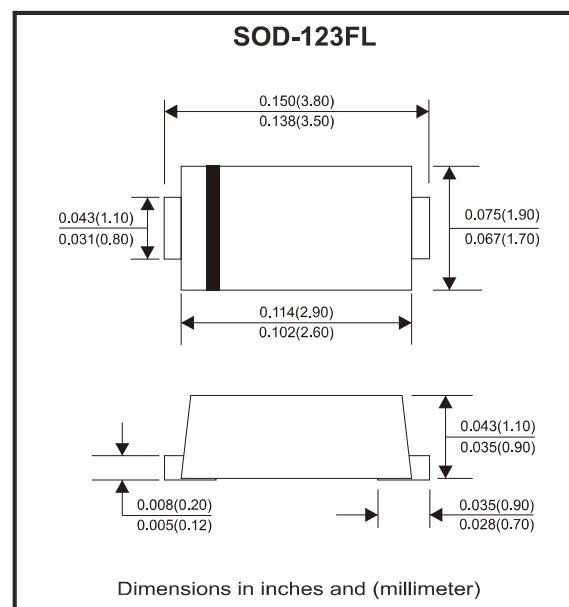


Features

- Ideal for surface mount applications.
- Easy pick and place.
- Low leakage current.
- Meets MSL Level 1, per J-STD-020, LF maximum peak of 260°C.

Mechanical data

- Epoxy: UL94V-0 rated flame retardant.
- Case: Molded plastic, SOD-123FL.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Weight: 0.014 grams approx.



Circuit diagram



Maximum Ratings (at T_A=25°C unless otherwise noted)

Parameter		Symbol	S1AW A1	S1BW A2	S1DW A3	S1GW A4	S1JW A5	S1KW A6	S1MW A7	Unit
Maximum repetitive peak reverse voltage		V _{RRM}	50	100	200	400	600	800	1000	V
Maximum DC blocking voltage		V _{DC}	50	100	200	400	600	800	1000	V
Maximum RMS voltage		V _{RMS}	35	70	140	280	420	560	700	V
Maximum averaged forward current		I _O	1.0							A
Maximum Instantaneous forward voltage I _F =1.0A @ 25°C		V _F	1.0							V
Non-repetitive forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I _{FSM}	30							A
Reverse current at rated DC blocking voltage	@T _J =25°C	I _R	10							μA
	@T _J =100°C		50							
Typical thermal resistance, Junction to ambient (Note1)		R _{θJA}	75							°C/W
Operating junction temperature		T _J	-55 to +150							°C
Storage temperature range		T _{STG}	-55 to +150							°C
Typical junction capacitance f=1MHz and applied 4V DC reverse voltage		C _J	6							pF

Notes: 1. Thermal resistance from junction to ambient on FR4 PC board, 1"x1", 2 oz. Copper pad areas.

Company reserves the right to improve product design, functions and reliability without notice.

Rev:1.0

Rating and Characteristic Curves

Fig.1 - Typical Current Derating Curve

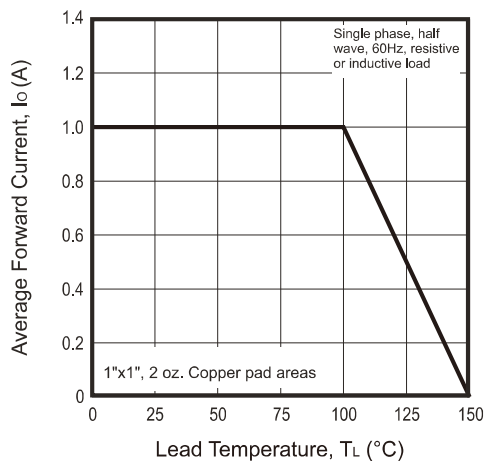


Fig.2 - Typical Forward Characteristics

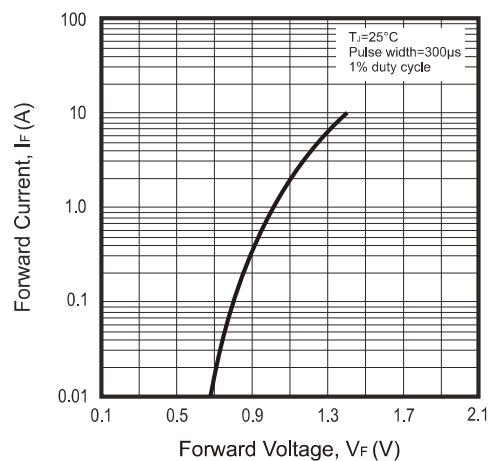


Fig.3 - Non-repetitive Forward Surge Current

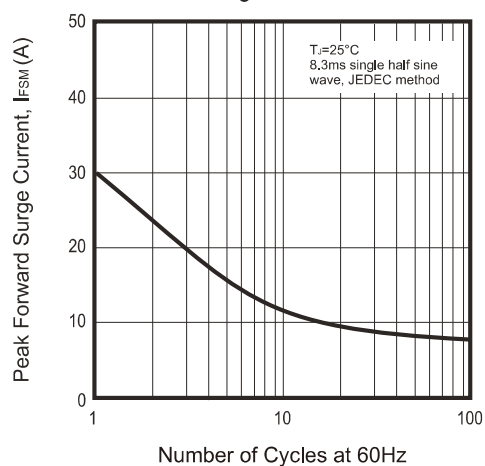


Fig.4 - Typical Reverse Characteristics

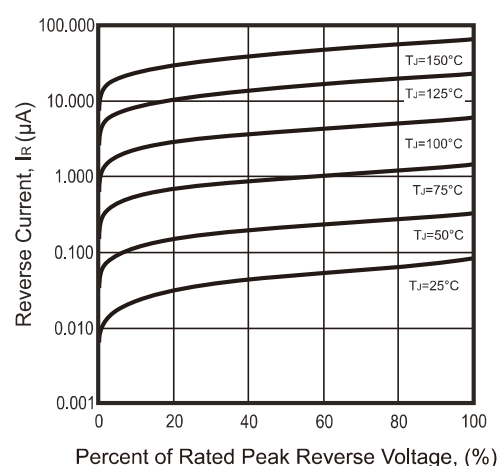
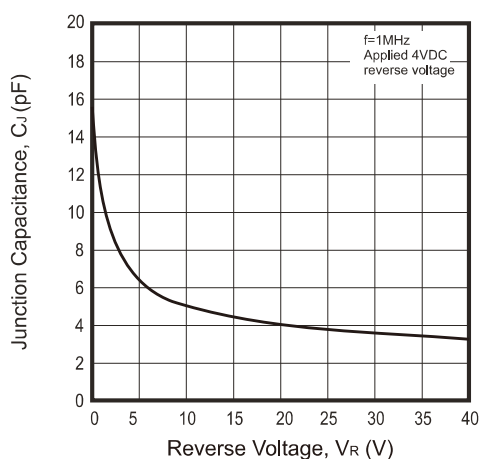


Fig.5 - Typical Junction Capacitance



Marking Code

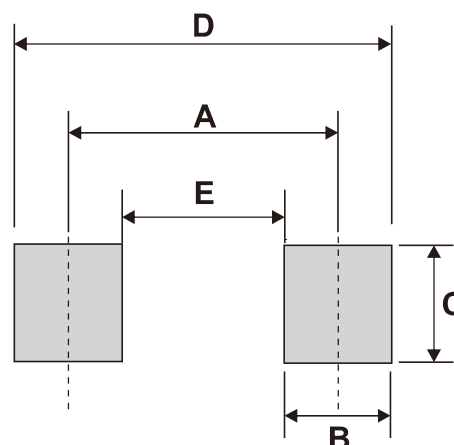
Part Number	Marking Code
S1AW	A1
S1BW	A2
S1DW	A3
S1GW	A4
S1JW	A5
S1KW	A6
S1MW	A7



XX: Product type marking code

Suggested P.C.B. PAD Layout

SIZE	SOD-123FL	
	(mm)	(inch)
A	3.10	0.122
B	1.15	0.045
C	1.25	0.048
D	4.25	0.167
E	1.95	0.077



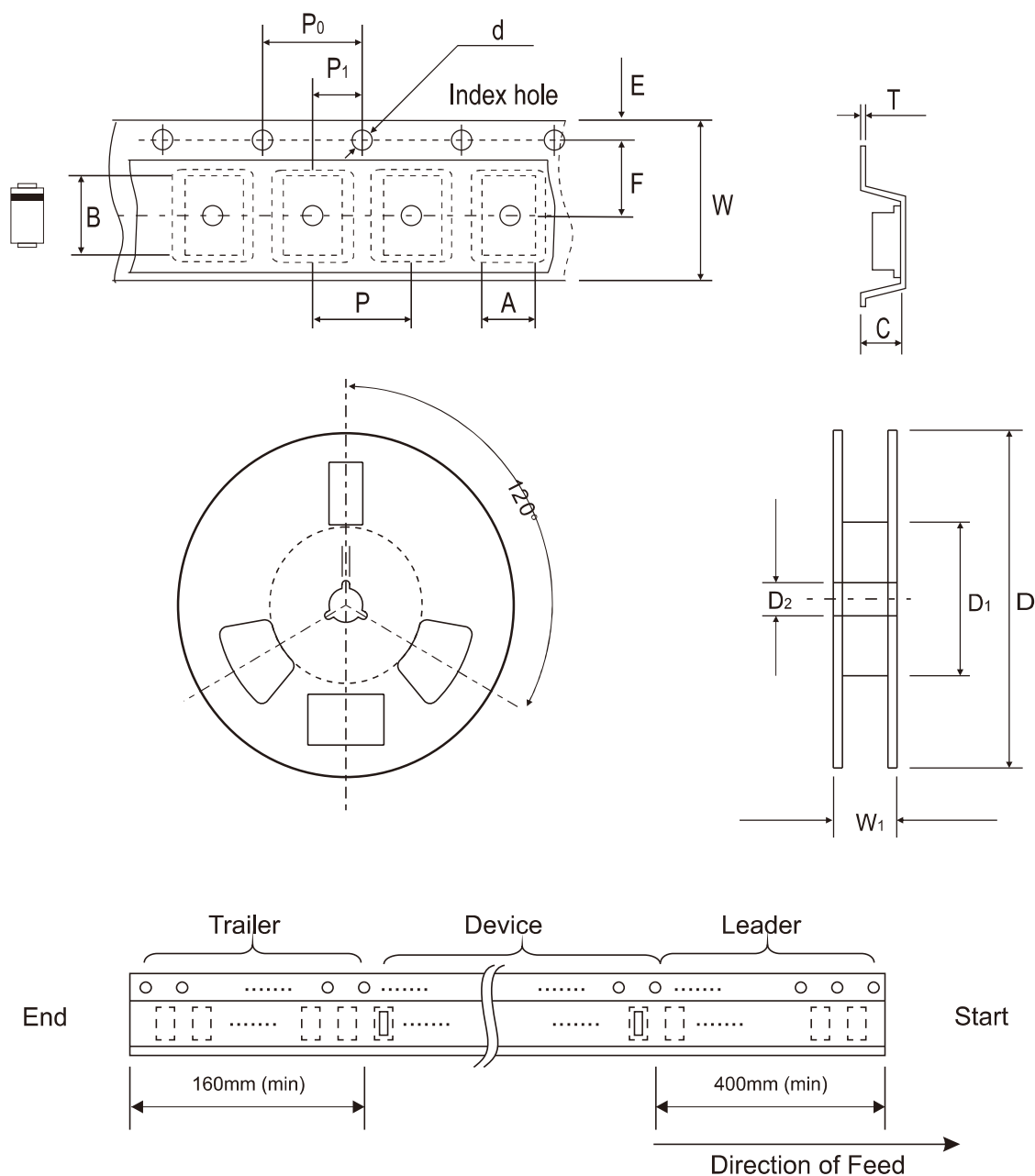
Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-123FL	3,000	7

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Reel Taping Specification



SOD-123FL	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	2.05 ± 0.10	3.85 ± 0.10	1.25 ± 0.10	1.55 ± 0.05	178.00 ± 1.00	60.00 ± 0.50	13.50 ± 0.20
	(inch)	0.081 ± 0.004	0.152 ± 0.004	0.049 ± 0.004	0.061 ± 0.002	7.008 ± 0.039	2.362 ± 0.020	0.531 ± 0.008

SOD-123FL	SYMBOL	E	F	P	P ₀	P ₁	T	W	W ₁
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.20 ± 0.05	8.00 ± 0.30	12.00 + 0.50 - 0
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.008 ± 0.002	0.315 ± 0.012	0.472 + 0.020 - 0

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