

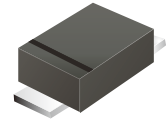
RS1AWF-HF Thru. RS1MWF-HF

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1 Amp

RoHS Device

Halogen Free



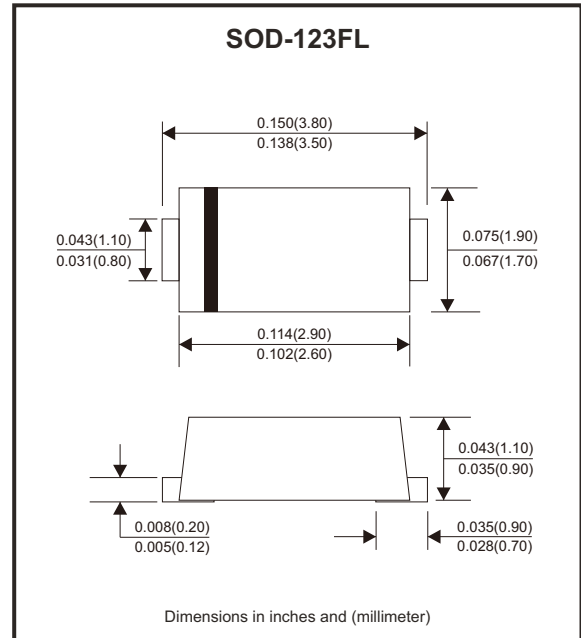
Features

- For surface mounted applications.
- Low profile package.
- Glass passivated chip junction.
- Easy to pick and place.
- Fast reverse recovery time.

Mechanical data

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, method 2026.

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	RS1AWF -HF	RS1BWF -HF	RS1DWF -HF	RS1GWF -HF	RS1JWF -HF	RS1KWF -HF	RS1MWF -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 $T_c = 125^\circ\text{C}$	$I_{F(AV)}$	1							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30							A
Max. forward voltage at 1A	V_F	1.3							V
Maximum DC reverse current at rated DC blocking voltage $T_a = 25^\circ\text{C}$ $T_a = 125^\circ\text{C}$	I_R	5 100							μA
Typical junction capacitance at $V_R = 4\text{V}$, $f = 1\text{MHz}$	C_j	15							pF
Maximum reverse recovery time (Note 1)	t_{rr}	150				250	500		ns
Typical thermal resistance (Note 2)	$R_{\theta JA}$	85							$^\circ\text{C/W}$
Operating and storage temperature range	T_j, T_{stg}	-55 ~ +150							$^\circ\text{C}$

Notes: 1. Measured with $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{rr} = 0.25\text{A}$.
2. P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

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

REV:A

Rating and Characteristic Curves (RS1AWF-HF Thru. RS1MWF-HF)

Fig.1 - Forward Current Derating Curve

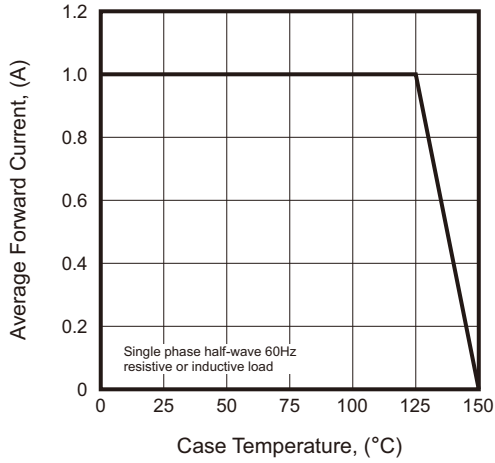


Fig.2 - Typical Reverse Characteristics

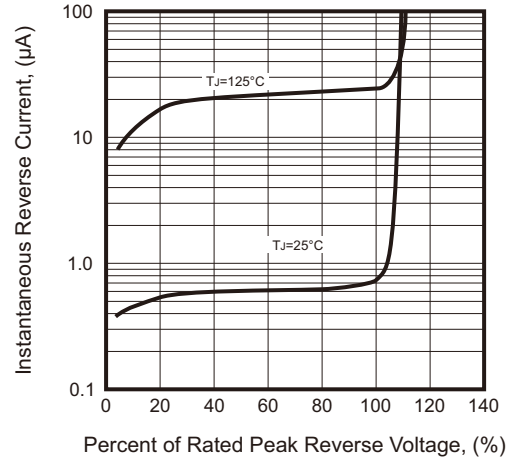


Fig.3 - Typical Instaneous Forward Characteristic

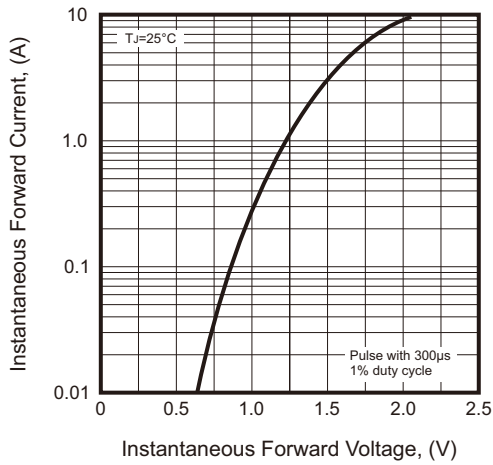


Fig.4 - Typical Junction Capacitance

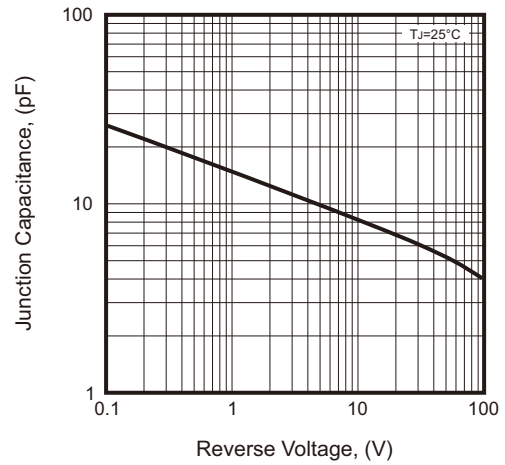
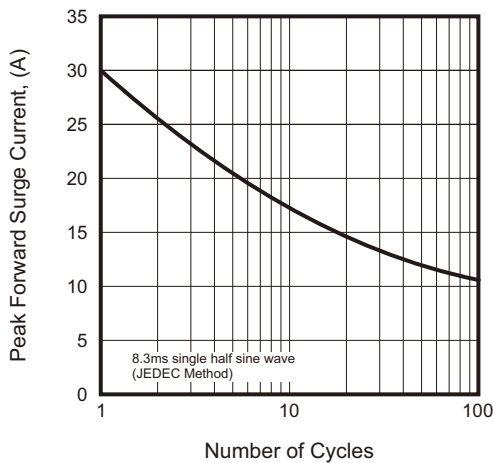
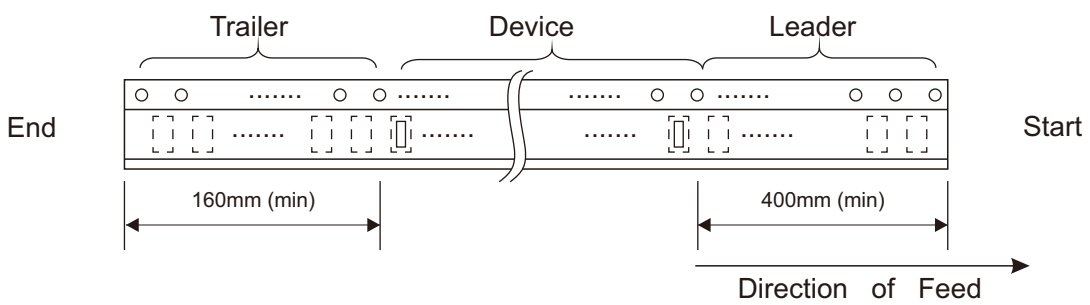
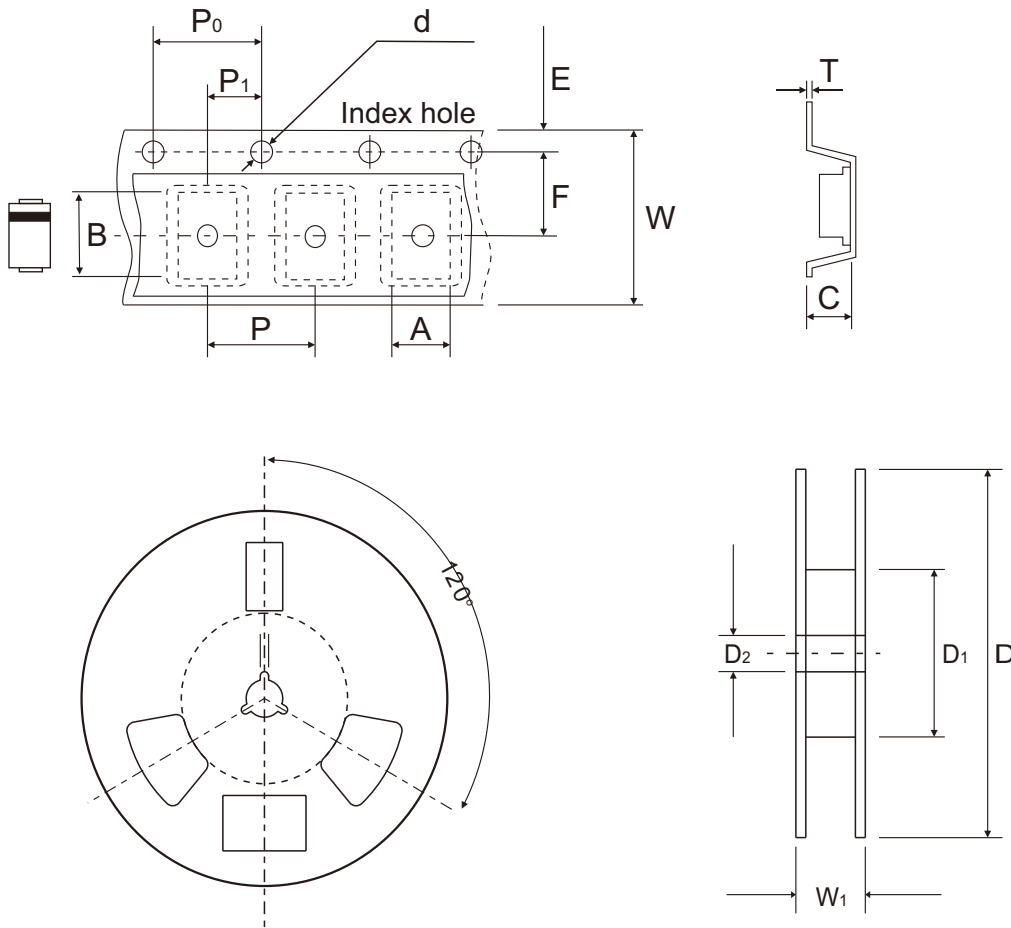


Fig.5 - Maximum Non-Repetitive Peak Forward Surge Current



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Reel Taping Specification



SOD-123FL	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.05 ± 0.10	3.90 ± 0.10	1.28 ± 0.05	1.55 ± 0.05	180 ± 1.00	60.00 ± 1.50	13.00 ± 0.20
	(inch)	0.081 ± 0.004	0.154 ± 0.004	0.050 ± 0.002	0.061 ± 0.002	7.087 ± 0.039	2.362 ± 0.059	0.512 ± 0.008

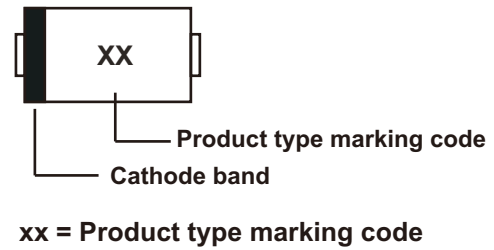
SOD-123FL	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.25 ± 0.02	8.00 ± 0.30	10.70 + 2.00 - 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.010 ± 0.001	0.315 ± 0.012	0.421 + 0.079 - 0.039

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REV:A

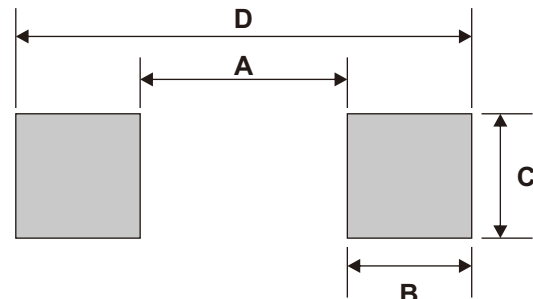
Marking Code

Part Number	Marking Code
RS1AWF-HF	F2
RS1BWF-HF	
RS1DWF-HF	
RS1GWF-HF	
RS1JWF-HF	F5
RS1KWF-HF	F7
RS1MWF-HF	



Suggested PAD Layout

SIZE	SOD-123FL	
	(mm)	(inch)
A	2.00	0.079
B	1.20	0.047
C	1.20	0.047
D	4.40	0.173



Note: 1. The pad layout is for reference purpose only.

Standard Packaging

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