

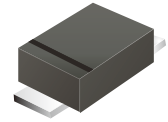
US1AWF-HF Thru. US1MWF-HF

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1 Amp

RoHS Device

Halogen Free



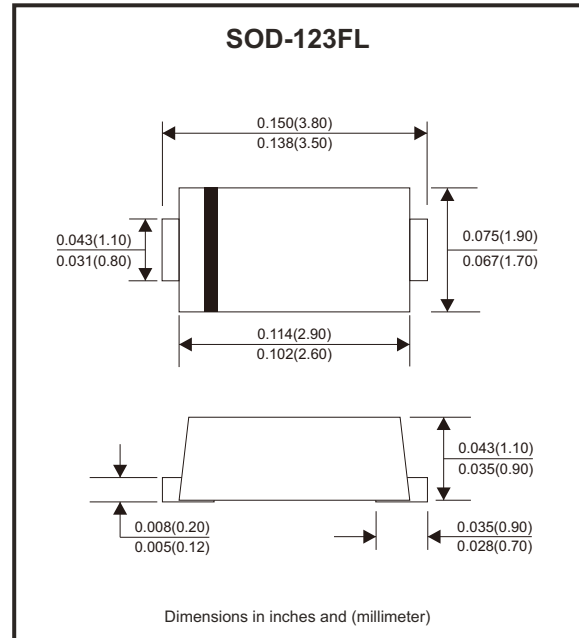
Features

- For surface mounted applications.
- Low profile package.
- Glass passivated chip junction.
- High efficiency.

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	US1AWF -HF	US1BWF -HF	US1DWF -HF	US1GWF -HF	US1JWF -HF	US1KWF -HF	US1MWF -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°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	1.0			1.3	1.65			V
Maximum DC reverse current T _a = 25°C at rated DC blocking voltage T _a =125°C	I _R	5 100							μA
Maximum reverse recovery time (Note 1)	t _{rr}	50				75			ns
Typical junction capacitance (Note 2)	C _j	15							pF
Typical thermal resistance (Note 3)	R _{θJA}	85							°C/W
Operating and storage temperature range	T _j , T _{stg}	-55 ~ +150							°C

Notes: 1. Measured with $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{rr} = 0.25\text{A}$.

2. Measured at 1 MHz and applied reverse voltage of 4 V D.C

3. 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 (US1AWF-HF Thru. US1MWF-HF)

Fig.1 - Forward Current Derating Curve

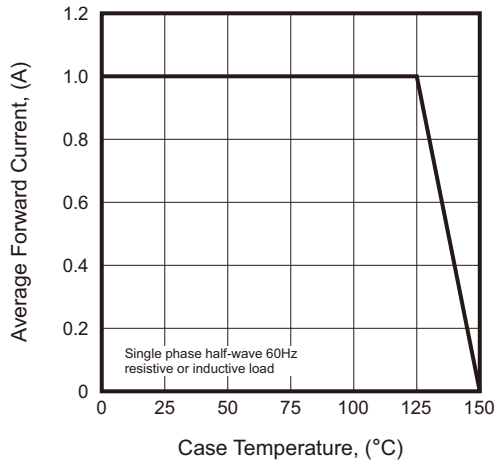


Fig.2 - Typical Reverse Characteristics

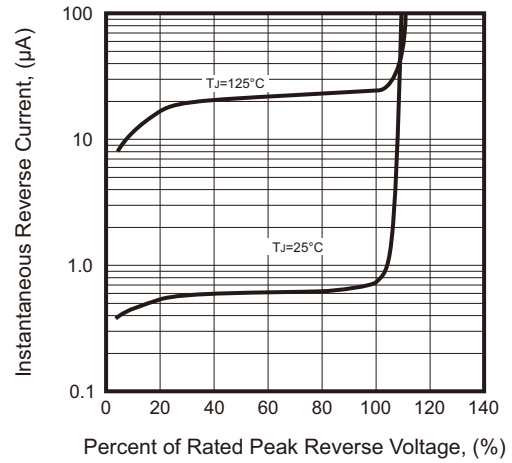


Fig.3 - Typical Forward Characteristic

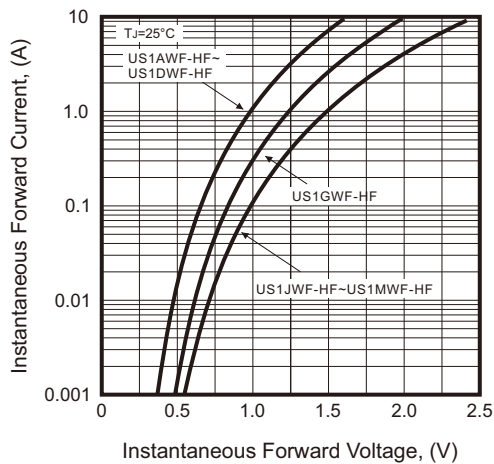


Fig.4 - Maximum Non-Repetitive Peak Forward Surge Current

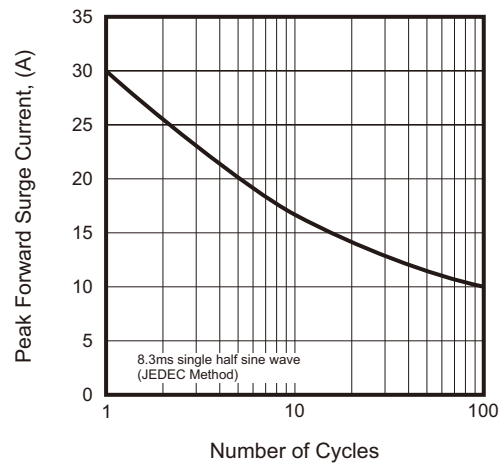


Fig.5 - Typical Transient Thermal Impedance

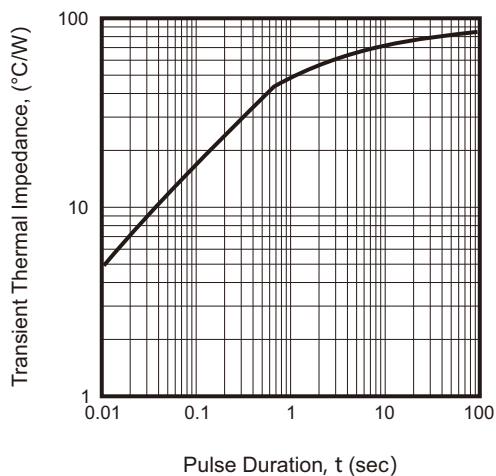
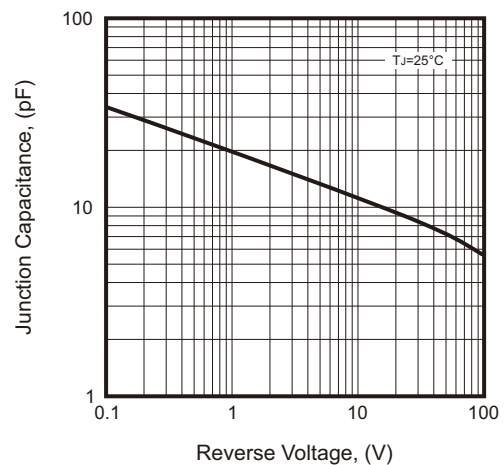
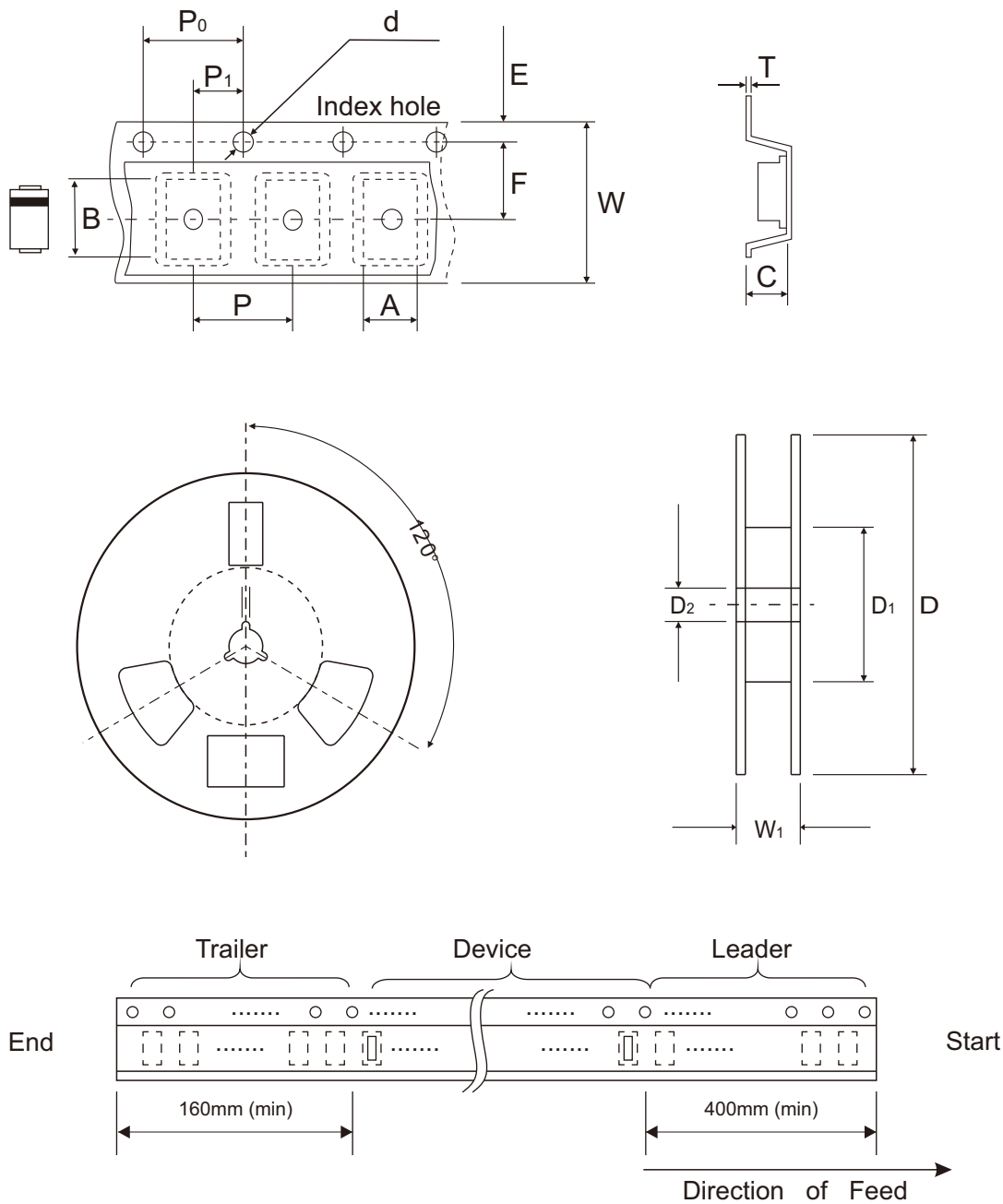


Fig.6 - Typical Junction Capacitance



Reel Taping Specification

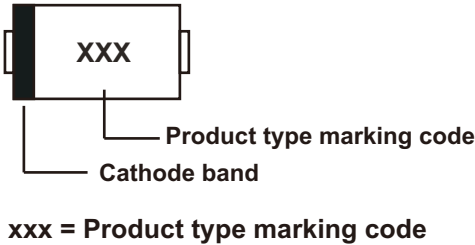


	SYMBOL	A	B	C	d	D	D1	D2
SOD-123FL	(mm)	2.05 ± 0.10	3.90 ± 0.10	1.28 ± 0.05	1.55 ± 0.05	180 ± 1.00	60.00 ± 1.50	13.00 ± 0.20
	(inch)	0.081 ± 0.004	0.154 ± 0.004	0.050 ± 0.002	0.061 ± 0.002	7.087 ± 0.039	2.362 ± 0.059	0.512 ± 0.008

	SYMBOL	E	F	P	P0	P1	T	W	W1
SOD-123FL	(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

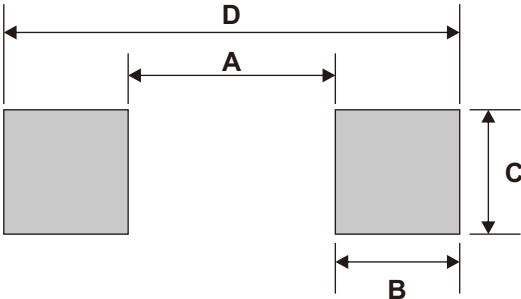
Marking Code

Part Number	Marking Code
US1AWF-HF	USL
US1BWF-HF	
US1DWF-HF	
US1GWF-HF	USM
US1JWF-HF	USH
US1KWF-HF	
US1MWF-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