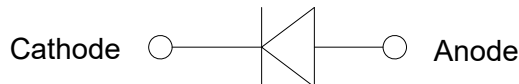
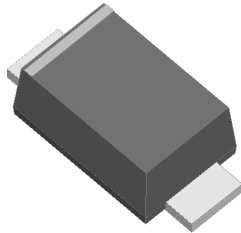


Surface Mount Fast Recovery Rectifier

US1AFL~US1MFL SOD-123FL



Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- Fast switching for fast recovery
- High forward surge capability

Mechanical Data

- Package: SOD-123FL
- Lead: lead solderable per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode end

■Maximum Ratings (T_a=25°C Unless otherwise specified)

Parameter	Symbols	US1AFL	US1BFL	US1DFL	US1GFL	US1JFL	US1KFL	US1MFL	Units
Maximum Repetitive Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	I(AV)	1.0							A
Reverse Recovery Time. IF=0.5A,IR=1A,IRR=0.25A	Trr	50				75			ns
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	IFSM	30							A
I ² t rating for fusing (1ms< t < 8.3ms)	I ² t	3.7							A ² S
Maximum Forward Voltage at 1.0A and 25℃	VF	1.0			1.4	1.7			V
Maximum DC Reverse Current @TA=25 °C at Rated DC Blocking Voltage @TA=100 °C	IR	5 500							μA
Typical Junction Capacitance (Note1)	Cj	15				10			pF
Operating and Storage Temperature Range	Tj, Tstg	-55 ~ +150							℃
Typical thermal resistance (Note 2)	RθJ-A	85							℃/W

Note: 1. Measured at 1MHz and applied reverse voltage of 4 VDC.

2. Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B with 3mm*3mm copper pad areas.

RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

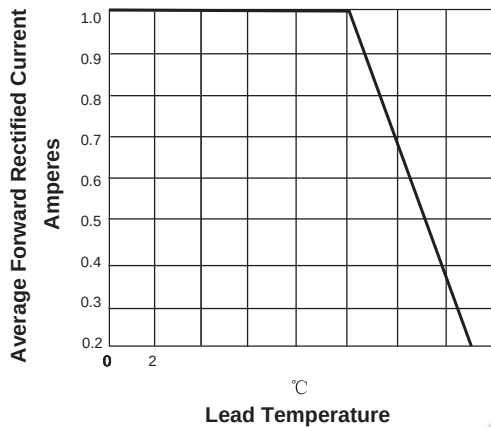


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

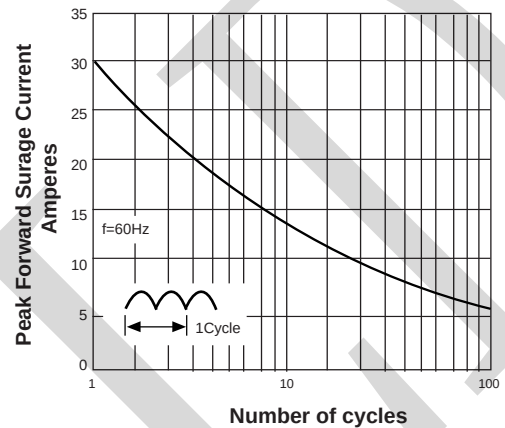


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

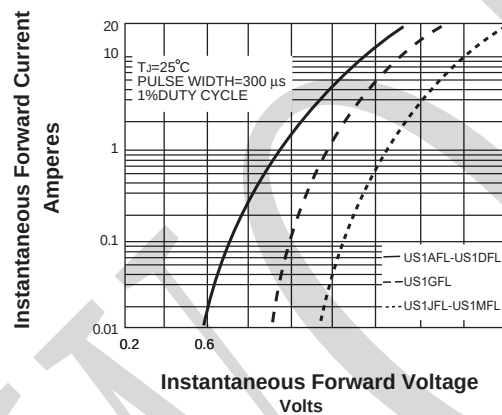
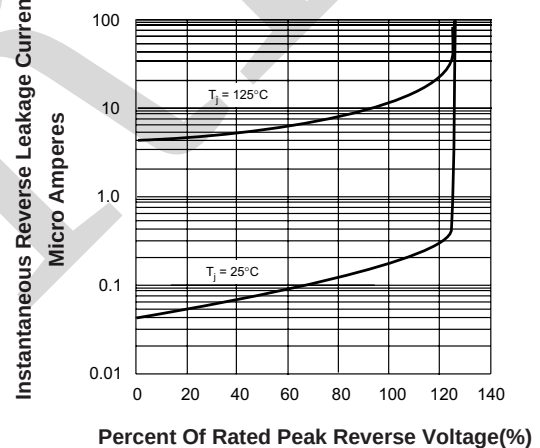
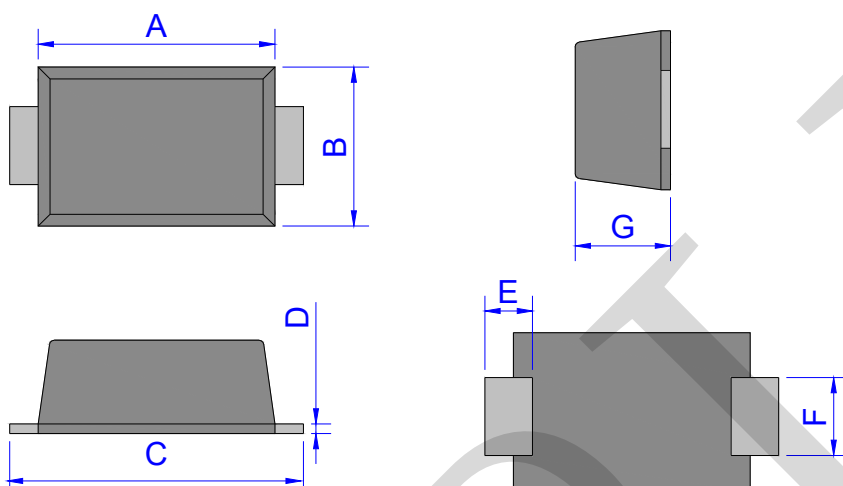


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



PACKAGE OUTLINE DIMENSIONS

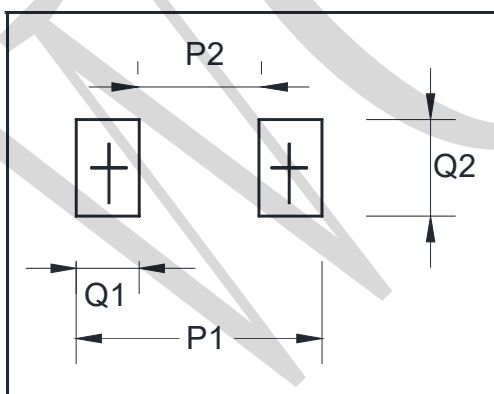
Note:unit mm(mil)



SOD-123FL Mechanical Data

UNIT		A	B	C	D	E	F	G
mm	max	3.0	2.0	3.95	0.25	0.9	1.2	1.35
	min	2.6	1.6	3.45	0.1	0.3	0.8	0.95
mil	max	118.1	78.7	155.5	9.8	35.4	47.2	53.1
	min	102.4	63.0	135.8	3.93	11.8	31.5	37.4

SOD-123FL Suggested Pad Layout



UNIT		P1	P2	Q1	Q2
mm	min	3.9	1.9	1.0	1.05
mil	min	153.5	74.8	39.3	41.3