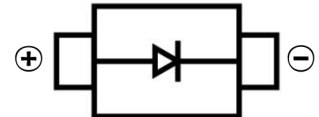


Fast Recovery Diodes
FEATURES

- Glass passivated device
- Ideal for surface mouted applications
- Low reverse leakage
- Metallurgically bonded construction


SOD-123FL
MECHANICAL DATA

- Case: SOD-123FL
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.0155 grams (approximate)


MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

Parameter	Symbol	FR 101L	FR 102L	FR 103L	FR 104L	FR 105L	FR 106L	FR 107L	Unit	
Repetitive Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V	
RMS Voltage	V _{RMS}	35	70	140	280	420	560	700		
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000		
Forward Voltage at 1.0A	V _F	1.3								A
Averaged Forward Current.Ta=65°C (Note.1)	I _{FAV}	1								
Peak Forward Surge Current T _L =25°C	I _{FSM}	30								
Maximum DC Reverse Current Ta=25°C Ta=125°C	I _R	5								μA
		50								
Reverse recovery time (Note.2)	t _{rr}	150				250	500		ns	
Typical Junction Capacitance (Note.3)	C _j	4								pF
Typical Thermal Resistance (Note.4)	R _{θJA}	180								°C/W
Junction Temperature	T _j	150								°C
Storage Temperature	T _{stg}	-55 to 150								

Note.1: Averaged over any 20ms period.

Note.2: Measured with I_F=0.5A, I_R=1A, I_{rr}=0.25A.

Note.3: Measured at 1MHz and applied reverse voltage of 4.0V D.C.

Note.4: Thermal resistance junction to ambient, 6.0 mm² copper pads to each terminal.

Marking

NO.	FR101L	FR102L	FR103L	FR104L	FR105L	FR106L	FR107L
Marking	F1	F2	F3	F4	F5	F6	F7

Fast Recovery Diodes

Typical Characteristics

FIG.1 – TYPICAL FORWARD CHARACTERISTIC

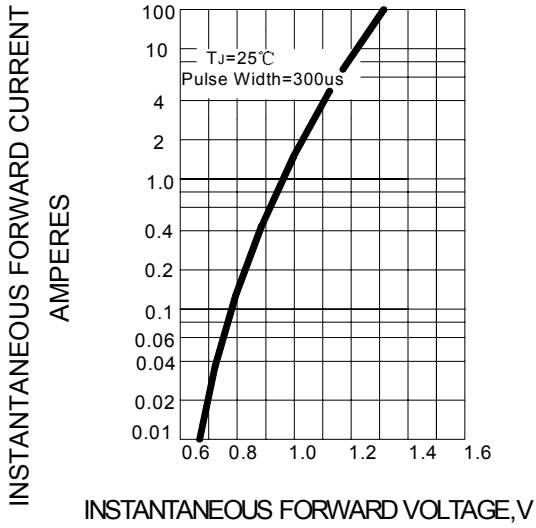


FIG.2 – TYPICAL JUNCTION CAPACITANCE

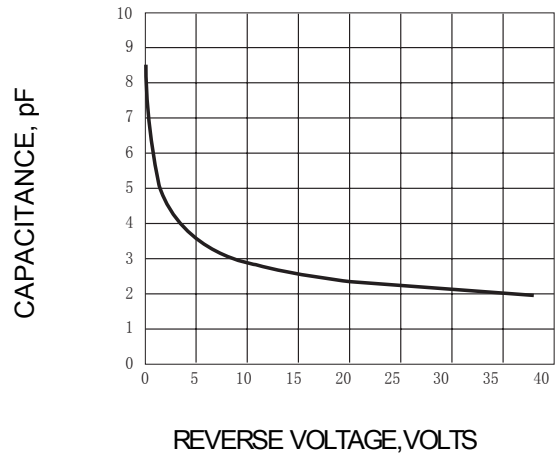


FIG.3 – TYPICAL INSTANTANEOUS REVERSE CHARACTERISTICS

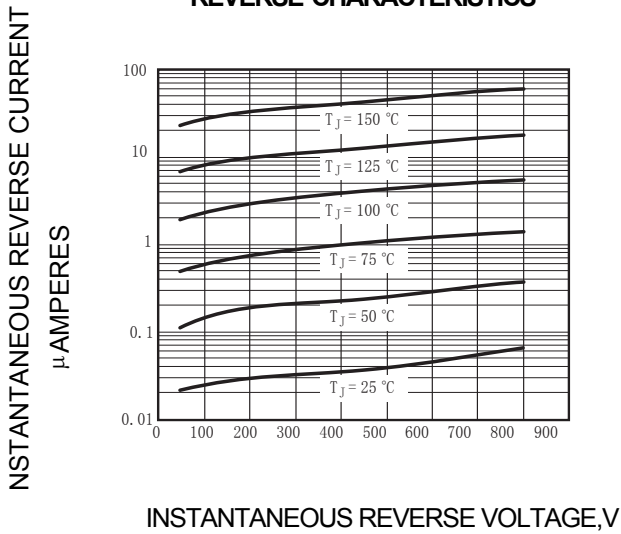
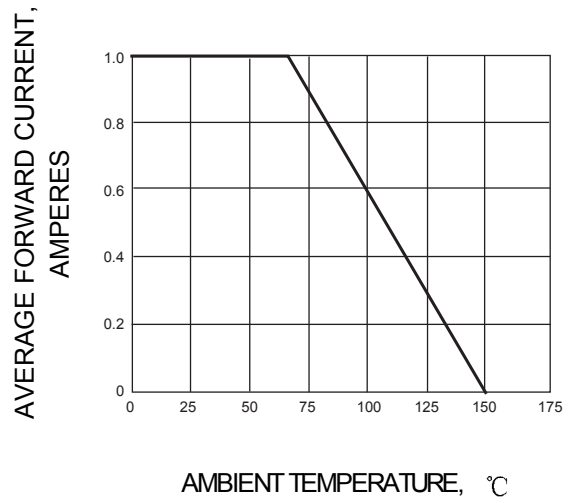
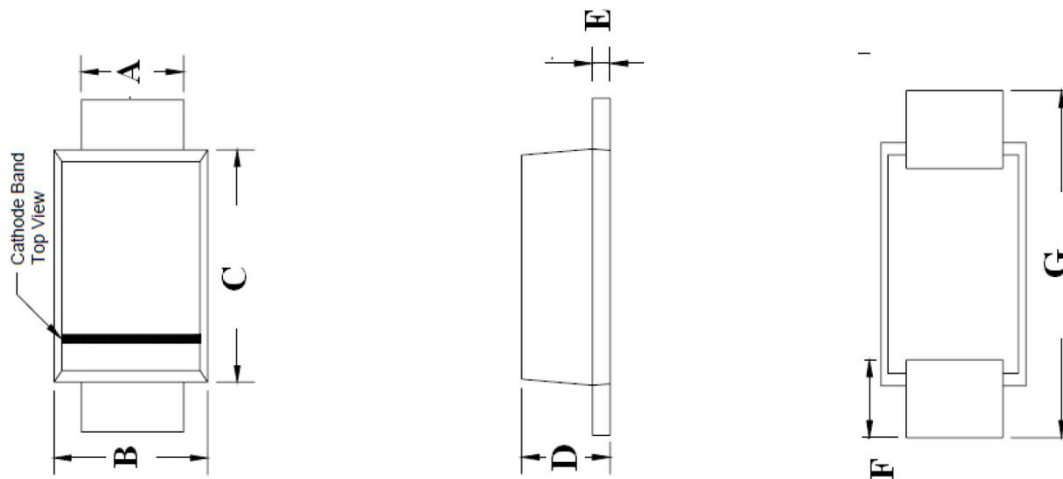
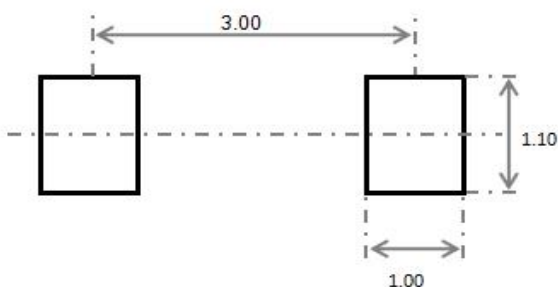


FIG.4 – FORWARD DERATING CURVE



SOD-123FL Package Outline Dimensions


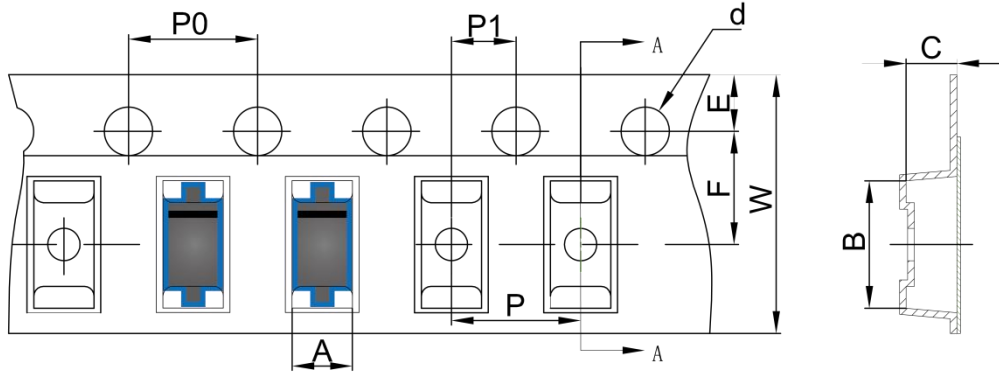
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.75	0.95	0.029	0.037
B	1.60	2.00	0.063	0.079
C	2.60	3.00	0.103	0.119
D	0.90	1.20	0.036	0.047
E	0.12	0.22	0.005	0.009
F	0.8Typ		0.032Typ	
G	3.50	3.90	0.138	0.159

SOD-123FL Suggested Pad Layout

Note:

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

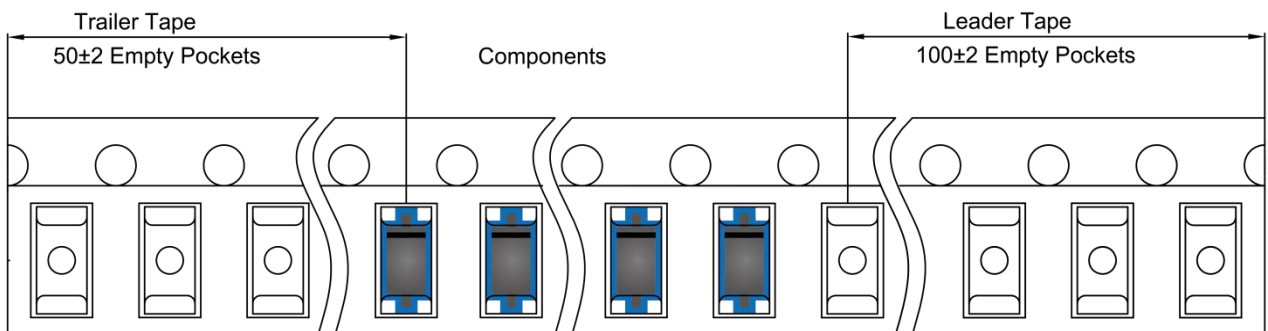
SOD-123FL Tape and Reel

SOD-123FL Embossed Carrier Tape

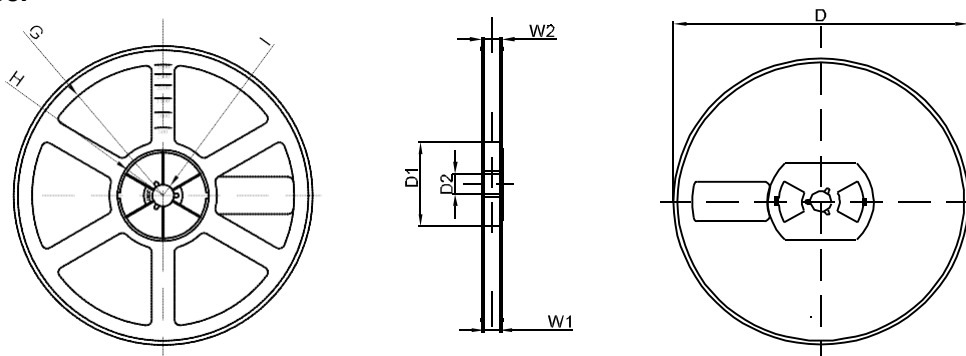


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SOD-123FL	2.10	4.00	1.25	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

SOD-123FL Tape Leader and Trailer



SOD-123FL Reel



DIMENSIONS ARE IN MILLIMETER								
REEL OPTION	D	D1	D2	G	H	I	W1	W2
7" DIA	Ø178	54.40	13.00	R78	R25.60	R6.50	9.50	12.30
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1