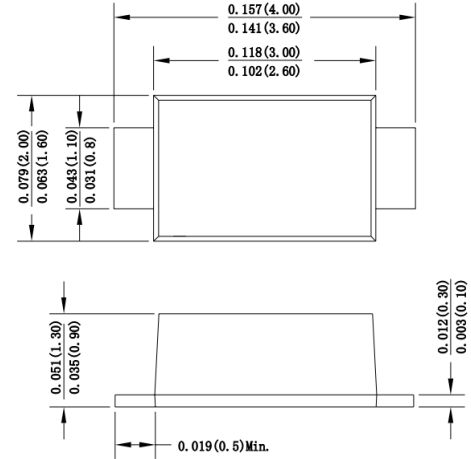


Features

- Complete voltage range 3.3 to 100 volts
- High peak reverse power dissipation
- High reliability
- Low leakage current
- Standard zener voltage tolerance is $\pm 5\%$.
- Qualified according to AEC-Q101

SOD123FL



Dimensions in inches and (millimeters)

Mechanical Data

Case : Molded plastic body

Terminals : Solder plated, solderable per MIL-STD-750,Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.0023 ounce, 0.07 grams

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Rating	Symbol	Value	Unit
DC Power Dissipation at $T_L = 75^\circ\text{C}$ (Note1)	P_D	1.0	W
Maximum Forward Voltage at $I_F = 200\text{ mA}$	V_F	1.2	V
Junction Temperature Range	T_J	- 55 to + 150	$^\circ\text{C}$
Storage Temperature Range	T_S	- 55 to + 150	$^\circ\text{C}$

Note :

(1) P.C.B. Mounted on 0.31x0.31x0.08" (8x8x2mm) copper areas pads.

Device Marking	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current	Maximum Surge Current
	V _Z @ I _{ZT}	I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	I _{ZK}	I _R @ V _R	I _{ZM}	I _{RM} ⁽²⁾	
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)	(mApk)
728A	3.3	76.0	10	400	1.0	100	1.0	276	1380
729A	3.6	69.0	10	400	1.0	100	1.0	252	1260
730A	3.9	64.0	9.0	400	1.0	50	1.0	234	1190
731A	4.3	58.0	9.0	400	1.0	10	1.0	217	1070
732A	4.7	53.0	8.0	500	1.0	10	1.0	193	970
733A	5.1	49.0	7.0	550	1.0	10	1.0	178	890
734A	5.6	45.0	5.0	600	1.0	10	2.0	162	810
735A	6.2	41.0	2.0	700	1.0	10	3.0	146	730
736A	6.8	37.0	3.5	700	1.0	50	4.0	133	660
737A	7.5	34.0	4.0	700	0.5	50	5.0	121	605
738A	8.2	31.0	4.5	700	0.5	50	6.0	110	550
739A	9.1	28.0	5.0	700	0.5	50	7.0	100	500
740A	10	25.0	7.0	700	0.25	50	7.6	91	454
741A	11	23.0	8.0	700	0.25	50	8.4	83	414
742A	12	21.0	9.0	700	0.25	5.0	9.1	76	380
743A	13	19.0	10	700	0.25	5.0	9.9	69	344
744A	15	17.0	14	700	0.25	5.0	11.4	61	305
745A	16	15.5	16	700	0.25	5.0	12.2	57	285
746A	18	14.0	20	750	0.25	5.0	13.7	50	250
747A	20	12.5	22	750	0.25	5.0	15.2	45	225
748A	22	11.5	23	750	0.25	5.0	16.7	41	205
749A	24	10.5	25	750	0.25	5.0	18.2	38	190
750A	27	9.5	35	750	0.25	5.0	20.6	34	170
751A	30	8.5	40	1000	0.25	5.0	22.8	30	150
752A	33	7.5	45	1000	0.25	5.0	25.1	27	135
753A	36	7.0	50	1000	0.25	5.0	27.4	25	125
754A	39	6.5	60	1000	0.25	5.0	29.7	23	115
755A	43	6.0	70	1500	0.25	5.0	32.7	22	110
756A	47	5.5	80	1500	0.25	5.0	35.8	19	95
757A	51	5.0	95	1500	0.25	5.0	38.8	18	90
758A	56	4.5	110	2000	0.25	5.0	42.6	16	80
759A	62	4.0	125	2000	0.25	5.0	47.1	14	70
760A	68	3.7	150	2000	0.25	5.0	51.7	13	65
761A	75	3.3	175	2000	0.25	5.0	56.0	12	60
762A	82	3.0	200	3000	0.25	5.0	62.2	11	55
763A	91	2.8	250	3000	0.25	5.0	69.2	10	50
764A	100	2.5	350	3000	0.25	5.0	76.0	9.0	45

Notes :

- (1) The type number listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$.
- (2) The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I_{ZT} per JEDEC Method

Ratings And Characteristic Curves

Fig. 1 MAXIMUM CONTINUOUS POWER DERATING

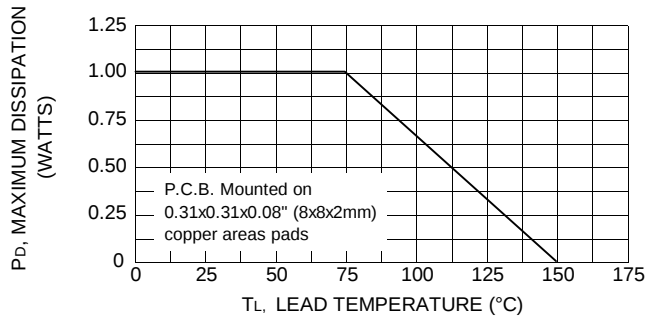
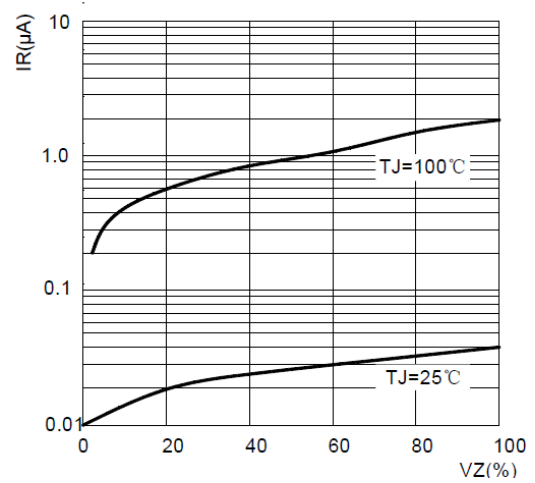
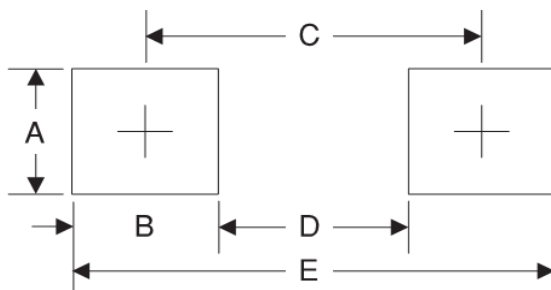


Fig. 2 TYPICAL REVERSE LEAKAGE CHARACTERISTICS

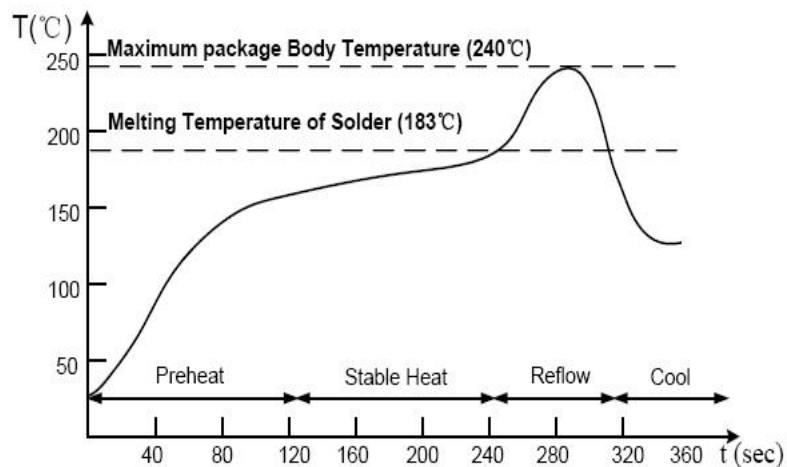


Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.048
B	1.15	0.045
C	3.10	0.122
D	1.95	0.077
E	4.25	0.167

Suggested Soldering Temperature Profile

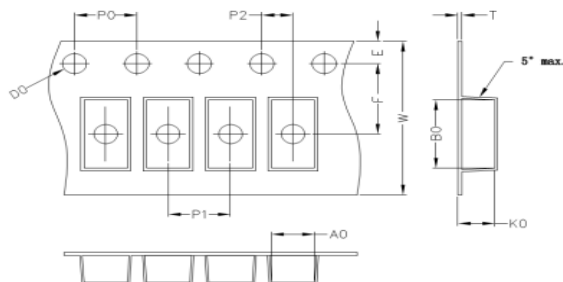


Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Package Information

Carrier Dimension(mm)



A0	B0	K0	D0	E	F
2.15	3.95	1.35	1.55	1.75	3.50
P0	P1	P2	T	W	Tolerance
4.0	4.0	2.0	0.25	8	0.1

Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SOD123FL	7'	178	3	180	15	380*200*200	150

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