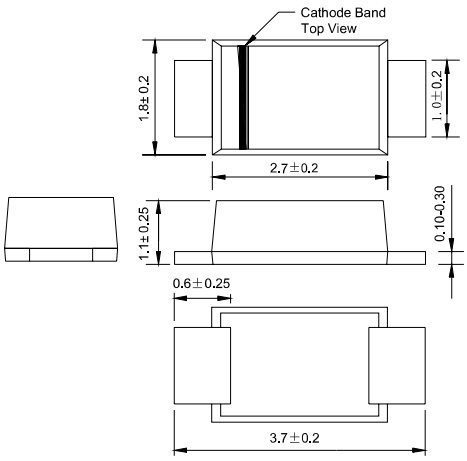
200W Surface Mount Unidirectional and Bidirectional

SOD-123FL

Features

- For surface mounted applications in order to optimize board space.
- Low profile package.
- Excellent clamping capability.
- IEC61000-4-2 ESD 15kV Air,8kV contact compliance
- Protects one I/O line
- Lead-free parts meet RoHS requirments.
- Meet HF requirments.



Dimensions in millimeters

Applications

- Personal digital assistants (PDA)
- Cellular handsets & Accessories
- Portable devices
- Portable instrumentation
- Handhelds and notebooks
- Digital cameras

Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Terminals :Plated terminals, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any
- Weight : Approximated 0.02 gram

Maximum ratings and Electrical Characteristics (AT T_A=25°C unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	Value	UNIT
Peak Power Dissipation	Peak Pulse Power Dissipation at TA=25°C by 10x1000us (Note 1)	P_{PPM}	200	W
Operating junction temperature range		T_J	-55 to +150	°C
Storage temperature range		T_{STG}	-55 to +150	°C

Note: 1. Non-repetitive current pulse, per Fig. 2 and derated above TA=25°C per Fig. 1

Characteristics at Ta = 25°C

Table 1

Type		Marking			Breakdown Voltage		Test Current	Reverse Leakage	Max. Clamp Voltage	Peak Pulse Current
				V_{RMW}	V_{BR} @ I_T		I_T	I_R @ V_{RWM}	V_C @ I_{PP}	I_{PP}
					Min	Max				
Uni	Bi	Uni	Bi	V	V	V	mA	μA	V	A
SMF3.3A	SMF3.3CA	3.3A	3.3CA	3	4.10	6.00	1	45	7.3	27.4
SMF5.0A	SMF5.0CA	AE	CAE	5	6.40	7.00	10	200	9.2	21.7
SMF6.0A	SMF6.0CA	AG	CAG	6	6.67	7.37	10	100	10.3	19.4
SMF6.5A	SMF6.5CA	AK	CAK	7	7.22	7.98	10	75	11.2	17.9
SMF7.0A	SMF7.0CA	AM	CAM	7	7.78	8.60	10	50	12.0	16.7
SMF7.5A	SMF7.5CA	AP	CAP	8	8.33	9.21	1	50	12.9	15.5
SMF8.0A	SMF8.0CA	AR	CAR	8	8.89	9.83	1	25	13.6	14.7
SMF8.5A	SMF8.5CA	AT	CAT	9	9.44	10.40	1	10	14.4	13.9
SMF9.0A	SMF9.0CA	AV	CAV	9	10.00	11.10	1	5	15.4	13.0
SMF10A	SMF10CA	AX	CAX	10	11.10	12.30	1	3	17.0	11.8
SMF11A	SMF11CA	AZ	CAZ	11	12.20	13.50	1	3	18.2	11.0
SMF12A	SMF12CA	BE	CBE	12	13.30	14.70	1	3	19.9	10.1
SMF13A	SMF13CA	BG	CBG	13	14.40	15.90	1	1	21.5	9.3
SMF14A	SMF14CA	BK	CBK	14	15.60	17.20	1	1	23.2	8.6
SMF15A	SMF15CA	BM	CBM	15	16.70	18.50	1	1	24.4	8.2
SMF16A	SMF16CA	BP	CBP	16	17.80	19.70	1	1	26.0	7.7
SMF17A	SMF17CA	BR	CBR	17	18.90	20.90	1	1	27.6	7.2
SMF18A	SMF18CA	BT	CBT	18	20.00	22.10	1	1	29.2	6.8
SMF20A	SMF20CA	BV	CBV	20	22.20	24.50	1	1	32.4	6.2
SMF22A	SMF22CA	BX	CBX	22	24.40	26.90	1	1	35.5	5.6
SMF24A	SMF24CA	BZ	CBZ	24	26.70	29.50	1	1	38.9	5.1
SMF26A	SMF26CA	CE	CCE	26	28.90	31.90	1	1	42.1	4.8
SMF28A	SMF28CA	CG	CCG	28	31.10	34.40	1	1	45.4	4.4
SMF30A	SMF30CA	CK	CCK	30	33.30	36.80	1	1	48.4	4.1
SMF33A	SMF33CA	CM	CCM	33	36.70	40.60	1	1	53.3	3.8
SMF36A	SMF36CA	CP	CCP	36	40.00	44.20	1	1	58.1	3.4
SMF40A	SMF40CA	CR	CCR	40	44.40	49.10	1	1	64.5	3.1
SMF43A	SMF43CA	CT	CCT	43	47.80	52.80	1	1	69.4	2.9
SMF45A	SMF45CA	CV	CCV	45	50.00	55.30	1	1	72.7	2.8
SMF48A	SMF48CA	CX	CCX	48	53.30	58.90	1	1	77.4	2.6
SMF51A	SMF51CA	CZ	CCZ	51	56.70	62.70	1	1	82.4	2.4
SMF54A	SMF54CA	DE	CDE	54	60.00	66.30	1	1	87.1	2.3
SMF58A	SMF58CA	DG	CDG	58	64.40	71.20	1	1	93.6	2.1
SMF60A	SMF60CA	DK	CDK	60	66.70	73.70	1	1	96.8	1.8
SMF64A	SMF64CA	DM	CDM	64	71.10	78.60	1	1	103.0	1.7
SMF70A	SMF70CA	DP	CDP	70	77.80	86.00	1	1	113.0	1.5
SMF75A	SMF75CA	DR	CDR	75	83.30	92.10	1	1	121.0	1.4
SMF78A	SMF78CA	DT	CDT	78	86.70	95.80	1	1	126.0	1.4
SMF85A	SMF85CA	DV	CDV	85	94.40	104.00	1	1	137.0	1.3
SMF90A	SMF90CA	DX	CDX	90	100.00	111.00	1	1	146.0	1.2
SMFI00A	SMFI00CA	DZ	CDZ	100	111.00	123.00	1	1	162.0	1.1
SMF110A	SMF110CA	EE	CEE	110	122.00	135.00	1	1	177.0	1.0
SMF120A	SMF120CA	EG	CEG	120	133.00	147.00	1	1	193.0	0.9
SMF130A	SMF130CA	EK	CEK	130	144.00	159.00	1	1	209.0	0.8
SMF150A	SMF150CA	EM	CEM	150	167.00	185.00	1	1	243.0	0.7
SMF160A	SMF160CA	EP	CEP	160	178.00	197.00	1	1	259.0	0.7
SMF170A	SMF170CA	ER	CER	170	189.00	209.00	1	1	275.0	0.6
SMF180A	SMF180CA	ET	CET	180	201.00	222.00	1	1	292.0	0.5
SMF200A	SMF200CA	EX	CEX	200	224.00	247.00	1	1	324.0	0.5
SMF220A	SMF220CA	E22	CE22	220	246.00	272.00	1	1	356.0	0.5

Rating and characteristic curves (SMF SERIES)

FIG.1 - PULSE DERATING CURVE

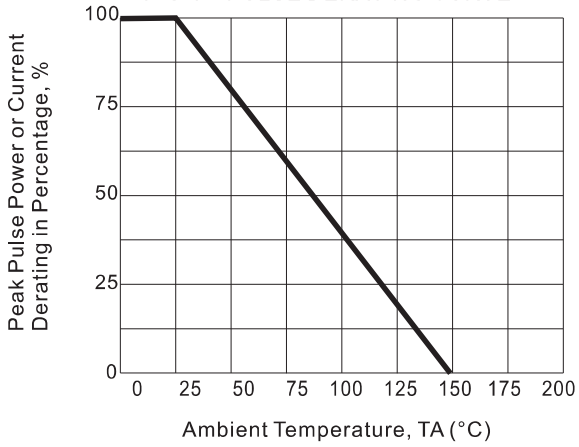


FIG.2 - 10X1000us PULSE WAVEFORM

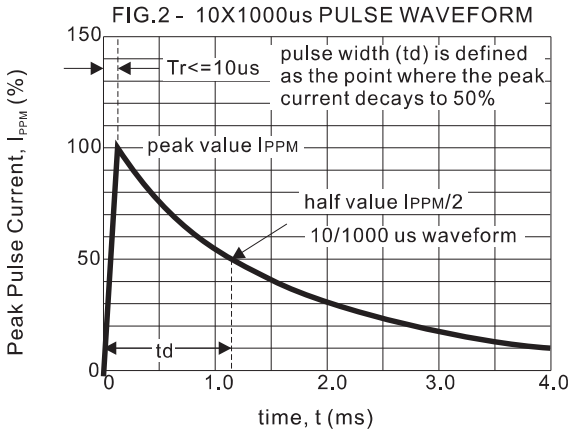


FIG.3 - 8X20us PULSE WAVEFORM

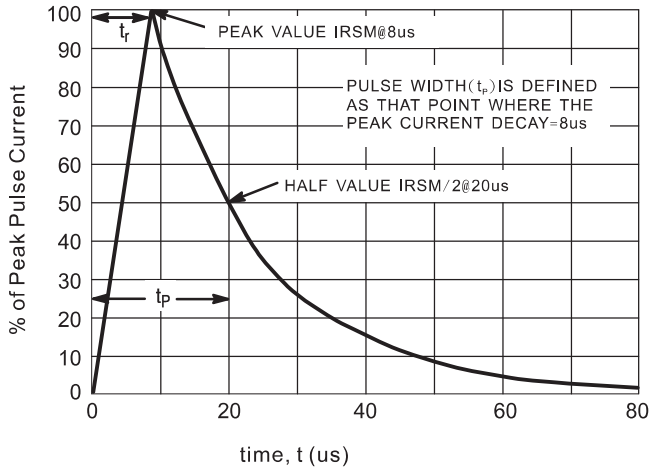


FIG.4 - PEALK PULSE POWER RATING CURVE

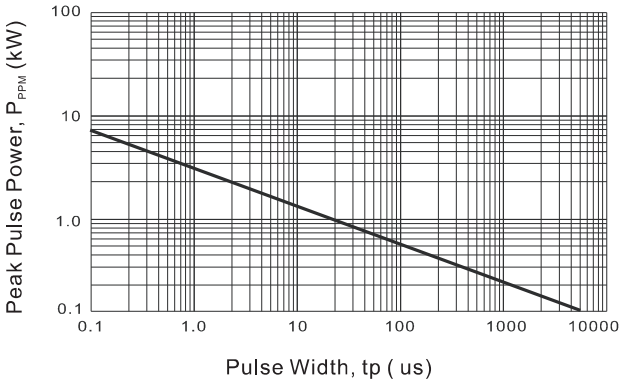
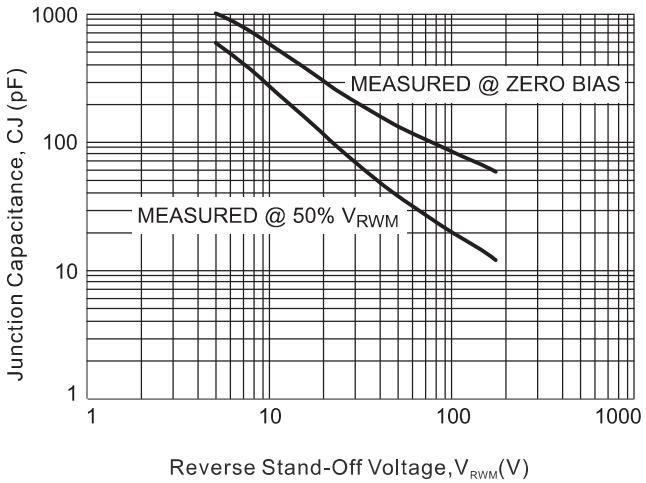


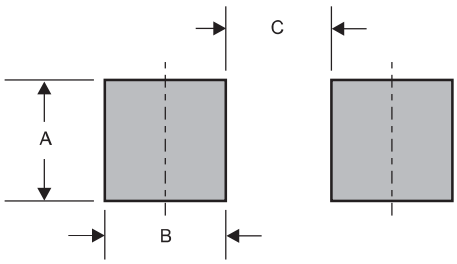
FIG.5 - TYPICAL JUNCTION CAPACITANCE



Pinning information

Pin	Simplified outline	Symbol
Uni-Directional Pin1 cathode Pin2 anode		
Bi-Directional		

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-123FL	0.044 (1.10)	0.040 (1.00)	0.079 (2.00)