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SEMICONDUCTOR



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PLED

SODJ5.0A-MS - SODJ170CA-MS

Product specification


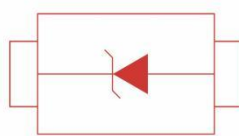

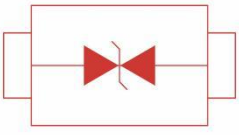
Features

- For surface mounted applications
- Low profile package
- Low incremental surge resistance, excellent clamping capability
- 200W peak pulse power capability with a10/1000 μ s wave from, repetition rate (duty cycle):0.01%
- High temperature soldering guaranteed: 260 $^{\circ}$ C/10 seconds, at terminals

Mechanical Data

- Case: JEDEC SOD- 123FL, molded plastic over passivated chip
- Polarity: Color band denotes positive end(cathode) except for bidirectional
- Mounting position: Any
- Weight: 0.006 ounces, 0.02 gram

Reference News

PACKAGE OUTLINE	PIN CONFIGURATION
	
SOD-123FL Unipolar	
	
SOD-123FL Bipolar	

Maximum Ratings TA = 25 $^{\circ}$ C unless otherwise specified

Characteristic	Symbol	Value	Unit
Maximum P _{PK} Dissipation (PW - 10/1000 μ s)	P _{PK}	200	W
Maximum P _{PK} Dissipation @Ta =25 $^{\circ}$ C (PW - 8/10 μ s) (Note2)	P _{PK}	1000	W
DC Power Dissipation @ Ta= 25 $^{\circ}$ C (Note 3)	P _D	385	W
Derate above 25 $^{\circ}$ C		4.0	mW/ $^{\circ}$ C
Thermal Resistance, Junction to Ambient (Note3)	R θ JA	325	$^{\circ}$ C /W
Thermal Resistance, Junction to Lead (Note 3)	R θ JL	26	$^{\circ}$ C /W
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55 to + 150	$^{\circ}$ C

Notes :

- (1) Non-repetitive current pulse at Ta = 25 $^{\circ}$ C, per waveform of Fig. 2.
- (2) Non-repetitive current pulse at Ta = 25 $^{\circ}$ C, per waveform of Fig.5.
- (3) Mounted with recommended minimum pad size , DC board FR4.

TYPE		Marking		Reverse Stand-Off Voltage	Breakdown Voltage Min. @ I _T	Breakdown Voltage Max. @ I _T	Test Current	Reverse Leakage @ V _{RWM}	Maximum Clamping Voltage @ I _{PP}	Peak
(Uni)	(Bi)	(Uni)	(Bi)	V _{RWM} (V)	V _{BR} MIN(V)	V _{BR} MAX(V)	I _T (mA)	I _R (uA)	V _C (V)	I _{PP} (A)
SODJ5.0A-MS	SODJ5.0CA-MS	KE	FE	5.0	6.40	7.00	10	400	9.2	21.7
SODJ6.0A-MS	SODJ6.0CA-MS	KG	FG	6.0	6.67	7.37	10	400	10.3	19.4
SODJ6.5A-MS	SODJ6.5CA-MS	KK	FK	6.5	7.22	7.98	10	250	11.2	17.9
SODJ7.0A-MS	SODJ7.0CA-MS	KM	FM	7.0	7.78	8.60	10	100	12.0	16.7
SODJ7.5A-MS	SODJ7.5CA-MS	KP	FP	7.5	8.33	9.21	1.0	50	12.9	15.5
SODJ8.0A-MS	SODJ8.0CA-MS	KR	FR	8.0	8.89	9.83	1.0	25	13.6	14.7
SODJ8.5A-MS	SODJ8.5CA-MS	KT	FT	8.5	9.44	10.4	1.0	10	14.4	13.9
SODJ9.0A-MS	SODJ9.0CA-MS	KV	FV	9.0	10.0	11.1	1.0	5.0	15.4	13.0
SODJ10A-MS	SODJ10CA-MS	KX	FX	10	11.1	12.3	1.0	2.5	17.0	11.8
SODJ11A-MS	SODJ11CA-MS	KZ	FZ	11	12.2	13.5	1.0	2.5	18.2	11.0
SODJ12A-MS	SODJ12CA-MS	LE	HE	12	13.3	14.7	1.0	2.5	19.9	10.1
SODJ13A-MS	SODJ13CA-MS	LG	HG	13	14.4	15.9	1.0	1.0	21.5	9.3
SODJ14A-MS	SODJ14CA-MS	LK	HK	14	15.6	17.2	1.0	1.0	23.2	8.6
SODJ15A-MS	SODJ15CA-MS	LM	HM	15	16.7	18.5	1.0	1.0	24.4	8.2
SODJ16A-MS	SODJ16CA-MS	LP	HP	16	17.8	19.7	1.0	1.0	26.0	7.7
SODJ17A-MS	SODJ17CA-MS	LR	HR	17	18.9	20.9	1.0	1.0	27.6	7.2
SODJ18A-MS	SODJ18CA-MS	LT	HT	18	20.0	22.1	1.0	1.0	29.2	6.8
SODJ20A-MS	SODJ20CA-MS	LV	HV	20	22.2	24.5	1.0	1.0	32.4	6.2
SODJ22A-MS	SODJ22CA-MS	LX	HX	22	24.4	26.9	1.0	1.0	35.5	5.6
SODJ24A-MS	SODJ24CA-MS	LZ	HZ	24	26.7	29.5	1.0	1.0	38.9	5.1
SODJ26A-MS	SODJ26CA-MS	ME	JE	26	28.9	31.9	1.0	1.0	42.1	4.8
SODJ28A-MS	SODJ28CA-MS	MG	JG	28	31.1	34.4	1.0	1.0	45.4	4.4
SODJ30A-MS	SODJ30CA-MS	MK	JK	30	33.3	36.8	1.0	1.0	48.4	4.1
SODJ33A-MS	SODJ33CA-MS	MM	JM	33	36.7	40.6	1.0	1.0	53.3	3.8
SODJ36A-MS	SODJ36CA-MS	MP	JP	36	40.0	44.2	1.0	1.0	58.1	3.4
SODJ40A-MS	SODJ40CA-MS	MR	JR	40	44.4	49.1	1.0	1.0	64.5	3.1
SODJ43A-MS	SODJ43CA-MS	MT	JT	43	47.8	52.8	1.0	1.0	69.4	2.9
SODJ45A-MS	SODJ45CA-MS	MV	JV	45	50.0	55.3	1.0	1.0	72.7	2.8
SODJ48A-MS	SODJ48CA-MS	MX	JX	48	53.3	58.9	1.0	1.0	77.4	2.6
SODJ51A-MS	SODJ51CA-MS	MZ	JZ	51	56.7	62.7	1.0	1.0	82.4	2.4
SODJ54A-MS	SODJ54CA-MS	NE	XE	54	60.0	66.3	1.0	1.0	87.1	2.3
SODJ58A-MS	SODJ58CA-MS	NG	XG	58	64.4	71.2	1.0	1.0	93.6	2.1
SODJ60A-MS	SODJ60CA-MS	NK	XK	60	66.7	73.7	1.0	1.0	96.8	1.8
SODJ64A-MS	SODJ64CA-MS	NM	XM	64	71.1	78.6	1.0	1.0	103	1.7
SODJ70A-MS	SODJ70CA-MS	NP	XP	70	77.8	86.0	1.0	1.0	113	1.5
SODJ75A-MS	SODJ75CA-MS	NR	XR	75	83.3	92.1	1.0	1.0	121	1.4
SODJ78A-MS	SODJ78CA-MS	NT	XT	78	86.7	95.8	1.0	1.0	126	1.4
SODJ85A-MS	SODJ85CA-MS	NV	XB	85	94.4	104	1.0	1.0	137	1.3
SODJ90A-MS	SODJ90CA-MS	NX	XX	90	100	111	1.0	1.0	146	1.2
SODJ100A-MS	SODJ100CA-MS	NZ	XZ	100	111	123	1.0	1.0	162	1.1
SODJ110A-MS	SODJ110CA-MS	PE	TE	110	122	135	1.0	1.0	177	1.0
SODJ120A-MS	SODJ120CA-MS	PG	TG	120	133	147	1.0	1.0	193	0.9
SODJ130A-MS	SODJ130CA-MS	PK	TK	130	144	159	1.0	1.0	209	0.8
SODJ150A-MS	SODJ150CA-MS	PM	TM	150	167	185	1.0	1.0	243	0.7
SODJ160A-MS	SODJ160CA-MS	PP	TP	160	178	197	1.0	1.0	259	0.7
SODJ170A-MS	SODJ170CA-MS	PR	TR	170	189	209	1.0	1.0	275	0.6

Fig.1 Peak Pulse Power Rating Curve

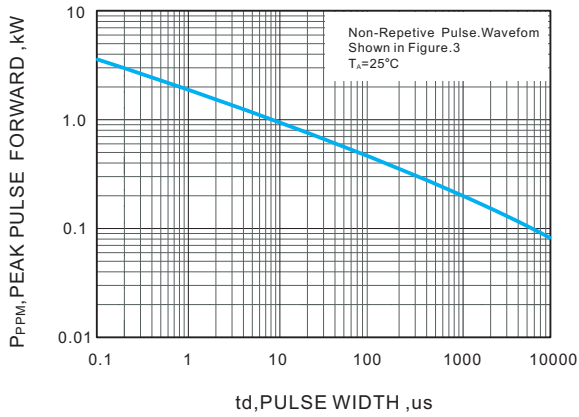


Fig.2 Forward Current Derating Curve

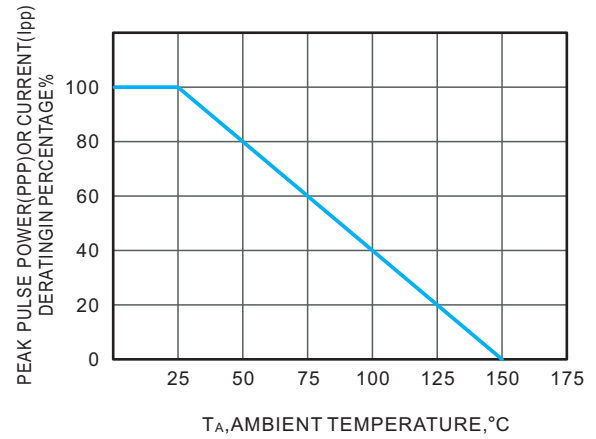


Fig.3 Pulse Waveform

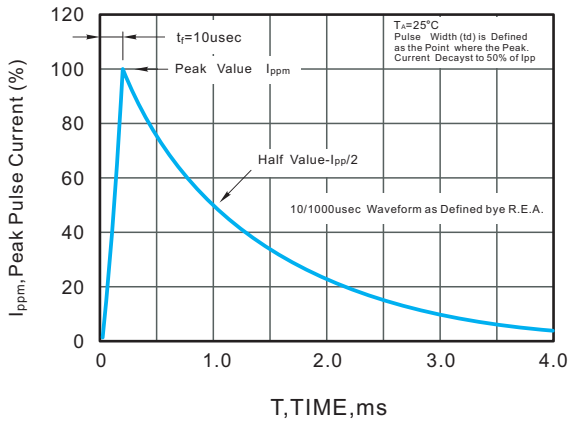
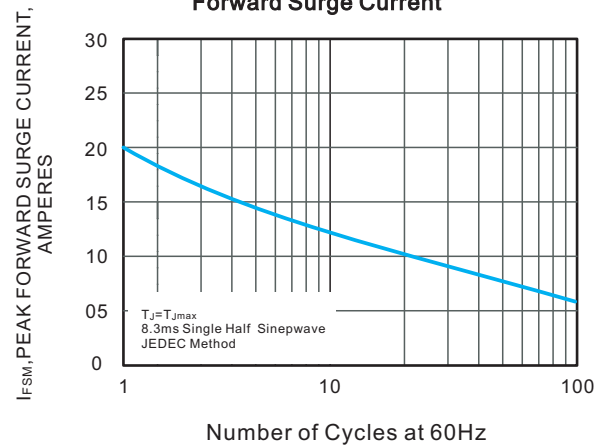
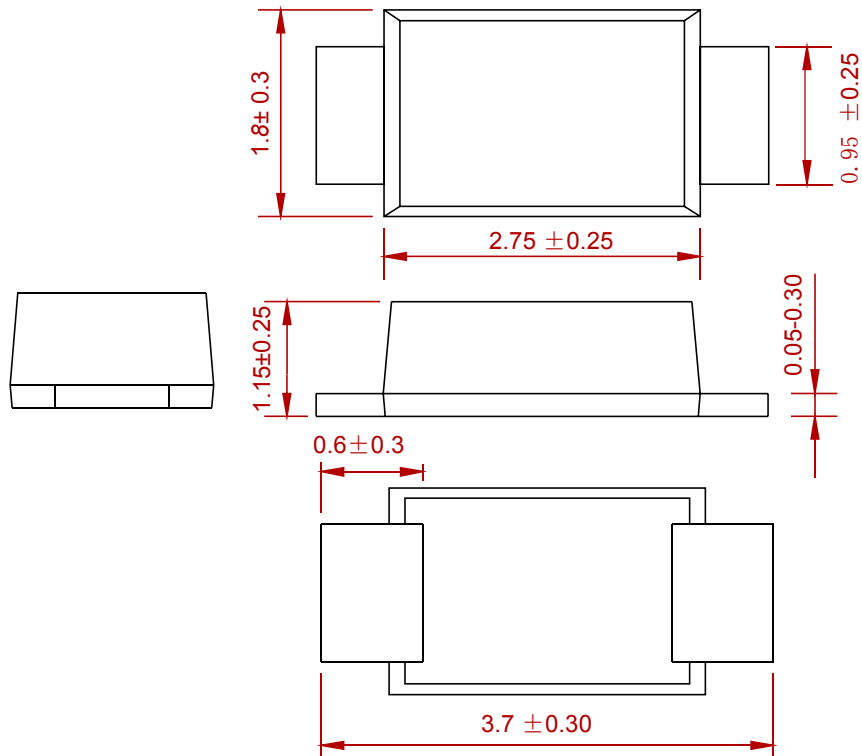


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

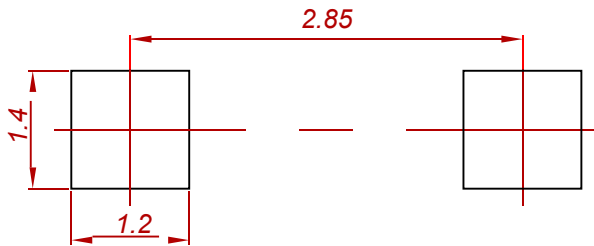


PACKAGE MECHANICAL DATA



Dimensions in millimeters

Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
SODJ5.0A-MS-SODJ170CA-MS	SOD-123FL	3000

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