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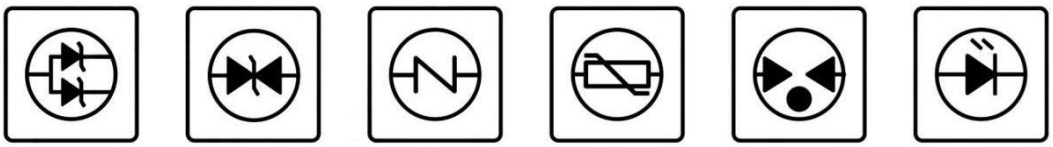
SEMICONDUCTOR



SMF5.0(C)A-MS - SMF440(C)A-MS

Product specification

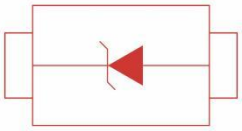
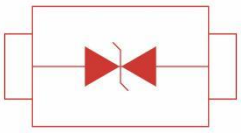
FEATURES

- For surface mounted applications in order to
- optimize board space.
- Low profile package
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability

Mechanical Data

- Case : JEDEC SOD-123FL molded plastic body
- Terminals : Solderable per MIL-STD-750,Method 2026
- Polarity : Polarity symbol marking on body
- Mounting Position : Any
- Weight : 0.0007 ounce, 0.02 grams
- Marking : Date Code and Marking Code See Page 2

Reference News

PACKAGE OUTLINE	PIN CONFIGURATION
	
Unipolar	
	
Bipolar	

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation on TA=25°C (Note 1,2,5, Fig1)	P_{PPM}	200	W
Peak Forward Surge Current (Note 3)	I_{FSM} (UNI)	30	A
Peak Pulse Current on 10/1000 us waveform (Note 1) Fig 2	I_{PPM}	see Table 1	A
Steady State Power Dissipation (Note 4)	$P_{M(AV)}$	1.0	W
Operating Junction and Storage Range	T_J, T_{STG}	-55 to +150	°C
Typical Thermal Resistance	$R_{\theta JA}$	180	°C/W

NOTES

1. Non- repetitive current pulse per Fig 3 and derated above TA =25°C per Fig 2
2. Mounted on 5mm^2 copper pads to each terminal
3. 8 .3ms single half sinewave, or equivalent square wave duty cycle=4 pulses per minutes maximum
4. lead temperature at TL =75°C
5. Peak pulse powe . waveform is tp=10/1000us
6. A transient suppressor is selected according to the working peak reverse voltage(VRWM), Which Should be equal to or greater than the DC or continuous peak operating voltage level

SMF5.0(C)A-MS-SMF440(C)A-MS

Characteristics at Ta = 25°C

Type		Marking		RMW	Breakdown Voltage		Test Current	Reverse Leakage	Max . C lamp Vo ltage	Peak P ulse Current
					VBR @ IT		IT	IR @ VRWM	VC @ IPP	IPP
					Min	Max				
Uni	Bi	Uni	Bi	V	V	V	mA	uA	V	A
SMF5 .0A-MS	SMF5 .0CA-MS	AE	NE	5	6.4	7	10	400	9.2	21 .7
SMF6 .0A-MS	SMF6 .0CA-MS	AG	NG	6	6 .67	7 .37	10	400	10 .3	19 .4
SMF6 .5A-MS	SMF6 .5CA-MS	AK	NK	6.5	7 .22	7 .98	10	250	11 .2	17 .9
SMF7 .0A-MS	SMF7 .0CA-MS	AM	NM	7	7 .78	8.6	10	100	12	16 .7
SMF7 .5A-MS	SMF7 .5CA-MS	AP	NP	7.5	8 .33	9 .21	1	50	12 .9	15 .5
SMF8 .0A-MS	SMF8 .0CA-MS	AR	NR	8	8 .89	9 .83	1	25	13 .6	14 .7
SMF8 .5A-MS	SMF8 .5CA-MS	AT	NT	8.5	9 .44	10 .4	1	10	14 .4	13 .9
SMF9 .0A-MS	SMF9 .0CA-MS	AV	NV	9	10	11 .1	1	5	15 .4	13
SMFl0 A-MS	SMFl0 CA-MS	AX	NX	10	11 .1	12 .3	1	2.5	17	11 .8
SMF11A-MS	SMF11CA-MS	AZ	NZ	11	12 .2	13 .5	1	2.5	18 .2	11
SMF12A-MS	SMF12CA-MS	BE	OE	12	13 .3	14 .7	1	2.5	19 .9	10 .1
SMF13A-MS	SMF13CA-MS	BG	OG	13	14 .4	15 .9	1	1	21 .5	9.3
SMF14A-MS	SMF14CA-MS	BK	OK	14	15 .6	17.2	1	1	23 .2	8.6
SMF15A-MS	SMF15CA-MS	BM	OM	15	16 .7	18 .5	1	1	24 .4	8.2
SMF16A-MS	SMF16CA-MS	BP	OP	16	17 .8	19 .7	1	1	26	7.7
SMF17A-MS	SMF17CA-MS	BR	OR	17	18 .9	20 .9	1	1	27 .6	7.2
SMF18A-MS	SMF18CA-MS	BT	OT	18	20	22 .1	1	1	29 .2	6.8
SMF20A-MS	SMF20CA-MS	BV	OV	20	22 .2	24 .5	1	1	32 .4	6.2
SMF22A-MS	SMF22CA-MS	BX	OX	22	24 .4	26 .9	1	1	35 .5	5.6
SMF24A-MS	SMF24CA-MS	BZ	OZ	24	26 .7	29 .5	1	1	38 .9	5 .1
SMF26A-MS	SMF26CA-MS	CE	PE	26	28 .9	31 .9	1	1	42 .1	4.8
SMF28A-MS	SMF28CA-MS	CG	PG	28	31 .1	34 .4	1	1	45 .4	4 .4
SMF30A-MS	SMF30CA-MS	CK	PK	30	33 .3	36 .8	1	1	48 .4	4 .1
SMF33A-MS	SMF33CA-MS	CM	PM	33	36 .7	40 .6	1	1	53 .3	3.8
SMF36A-MS	SMF36CA-MS	CP	PP	36	40	44 .2	1	1	58 .1	3 .4
SMF40A-MS	SMF40CA-MS	CR	PR	40	44 .4	49 .1	1	1	64 .5	3 .1
SMF43A-MS	SMF43CA-MS	CT	PT	43	47 .8	52 .8	1	1	69 .4	2.9
SMF45A-MS	SMF45CA-MS	CV	PV	45	50	55 .3	1	1	72 .7	2.8
SMF48A-MS	SMF48CA-MS	CX	PX	48	53 .3	58 .9	1	1	77 .4	2.6
SMF51A-MS	SMF51CA-MS	CZ	PZ	51	56 .7	62 .7	1	1	82 .4	2 .4
SMF54A-MS	SMF54CA-MS	DE	PA	54	60	66 .3	1	1	87 .1	2.3
SMF58A-MS	SMF58CA-MS	DG	PC	58	64 .4	71 .2	1	1	93 .6	2 .1
SMF60A-MS	SMF60CA-MS	DK	CDK	60	66 .7	73 .7	1	1	96 .8	1.8
SMF64A-MS	SMF64CA-MS	DM	CDM	64	71 .1	78 .6	1	1	103	1.7
SMF70A-MS	SMF70CA-MS	DP	CDP	70	77 .8	86	1	1	113	1.5
SMF75A-MS	SMF75CA-MS	DR	CDR	75	83 .3	92 .1	1	1	121	1 .4
SMF78A-MS	SMF78CA-MS	DT	CDT	78	86 .7	95 .8	1	1	126	1 .4
SMF85A-MS	SMF85CA-MS	DV	CDV	85	94 .4	104	1	1	137	1.3
SMF90A-MS	SMF90CA-MS	DX	CDX	90	100	111	1	1	146	1.2
SMF100A-MS	SMF100CA-MS	DZ	CDZ	100	111	123	1	1	162	1 .1
SMF110A-MS	SMF110CA-MS	EE	CEE	110	122	135	1	1	177	1
SMF120A-MS	SMF120CA-MS	EG	CEG	120	133	147	1	1	193	0.9
SMF130A-MS	SMF130CA-MS	EK	CEK	130	144	159	1	1	209	0.8
SMF150A-MS	SMF150CA-MS	EM	CEM	150	167	185	1	1	243	0.7
SMF160A-MS	SMF160CA-MS	EP	CEP	160	178	197	1	1	259	0.7
SMF170A-MS	SMF170CA-MS	ER	CER	170	189	209	1	1	275	0.6
SMF180A-MS	SMF180CA-MS	ET	CET	180	201	222	1	1	292	0.5
SMF190A-MS	SMF190CA-MS	EV	CEV	190	211	232	1	1	308	0.5
SMF200A-MS	SMF200CA-MS	EX	CEX	200	224	247	1	1	324	0.5
SMF220A-MS	SMF220CA-MS	E22	CE22	220	246	272	1	1	356	0.5
SMF250A-MS	SMF250CA-MS	E25	CE25	250	279	309	1	1	405	0.5
SMF300A-MS	SMF300CA-MS	E30	CE30	300	335	371	1	1	486	0 .45
SMF350A-MS	SMF350CA-MS	E35	CE35	350	391	432	1	1	567	0 .4
SMF400A-MS	SMF400CA-MS	E40	CE40	400	447	494	1	1	648	0 .35
SMF440A-MS	SMF440CA -MS	E44	CE44	440	492	543	1	1	713	0.3

Typical Characterisitics

Fig.1 Peak Pulse Power Rating Curve

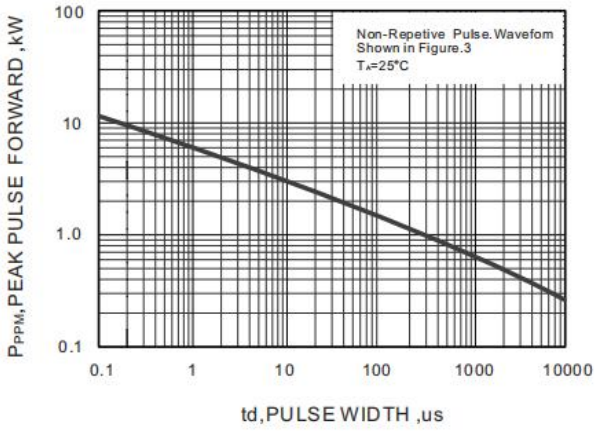


Fig.2 Forward Current Derating Curve

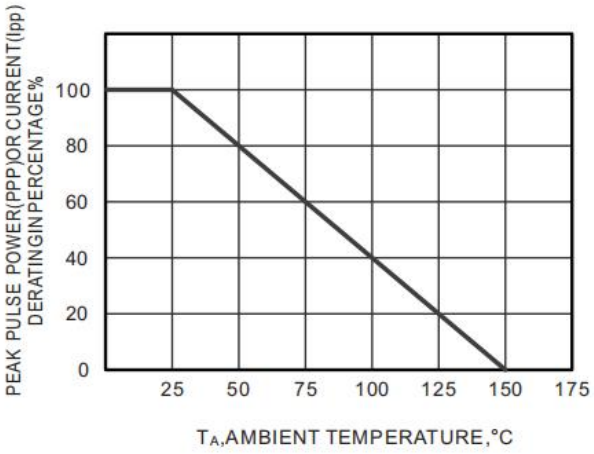


Fig.3 Pulse Waveform

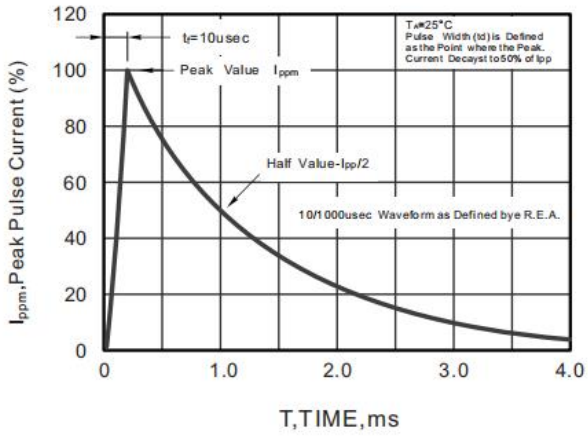
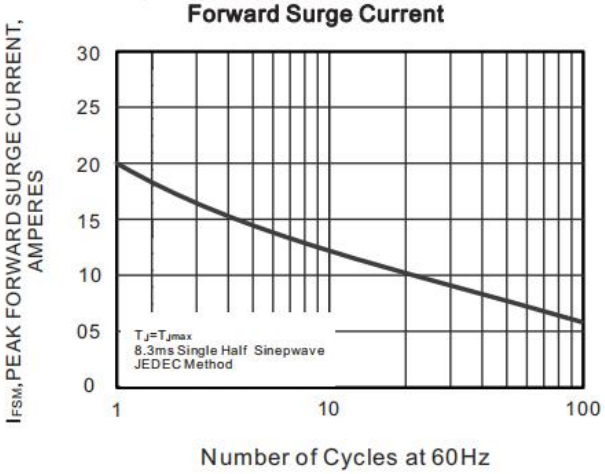
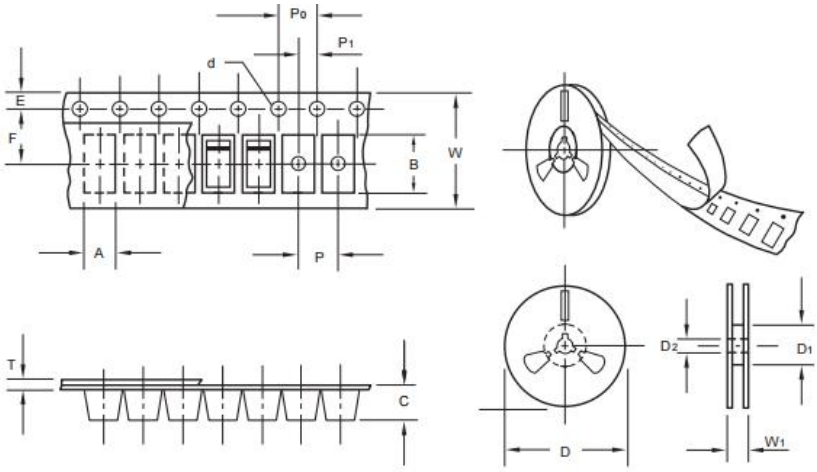


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



Packing information

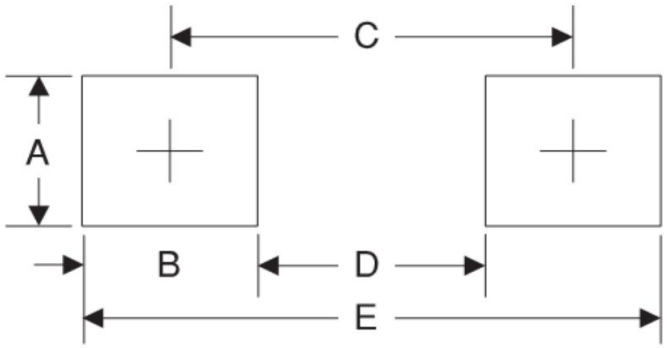


Item	Symbol	Tolerance	SOD-123FL
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	
7" Reel outside diameter	D	2.0	
7" Reel inner diameter	D_1	min	
Feed hole diameter	D_2	0.5	
Sprocket hole position	E	0.1	
Punch hole position	F	0.1	
Punch hole pitch	P	0.1	
Sprocket hole pitch	P_0	0.1	
Embossment center	P_1	0.1	
Overall tape thickness	T	0.1	
Tape width	W	0.3	
Reel width	W_1	1.0	

Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOD- 123FL	7"	3,000	4.0	45,000	210*208*203	178	430*430*235	180,000	9.0

Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.047
B	1.2	0.047
C	3.2	0.126
D	2	0.079
E	4.4	0.173

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