

SMF5.0(C)A~SMF440(C)A

Rev.B May.-2024

/ Descriptions

200W V_{RMW} :5.0V~440V SOD-123FL
200W Surface Mount Transient Voltage Suppressor Stand-Off Voltage 5.0V~440V SOD-123FL thin package.

/ Features

94V-0

For surface mounted applications in order to optimize board space Glass passivated junction Low inductance Plastic package has Underwriters Laboratory Flammability Classifications 94V-0,HF Product.

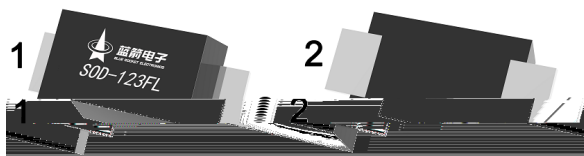
/ Applications

General purpose.

/ Equivalent Circuit



/ Pinning



/ Marking

See Marking Instructions.

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/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Peak Pulse Power Dissipation on $T_a=25^\circ\text{C}$ (Note1,2,5, Fig1)	P_{PPM}	200	W
Peak Forward Surge Current(Note3)	$I_{FSM(UNI)}$	20	A
Peak Pulse Current on 10/1000us waveform (Note1) Fig2	I_{PPM}	See Table 1	A
Steady State Power Dissipation (Note4)	$P_{M(AV)}$	1	W
Operating Junction and Storage Range	T_j, T_{stg}	-55~150	
ESD Voltage per IEC61000-4-2 Contact Air	V_{ESD1} V_{ESD2}	± 30 ± 30	kV
ESD Voltage (HBM)	V_{ESD}	16	kV
Typical Thermal Resistance	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	105 25 32	/W

NOTES

1. Non-repetitive current pulse per Fig 3 and derated above $T_A=25^\circ\text{C}$ per Fig 2
2. Mounted on 5mm² 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 $T_L=75^\circ\text{C}$
5. Peak pulse power. waveform is $t_p=10/1000\mu\text{s}$
6. A transient suppressor is selected according to the working peak reverse voltage(V_{rwm}), Which Should be equal to or greater than the DC or continuous peak operating voltage level
7. P.C.B. mounted with 0.2" X 0.2" (5 X 5 mm) copper pad areas.

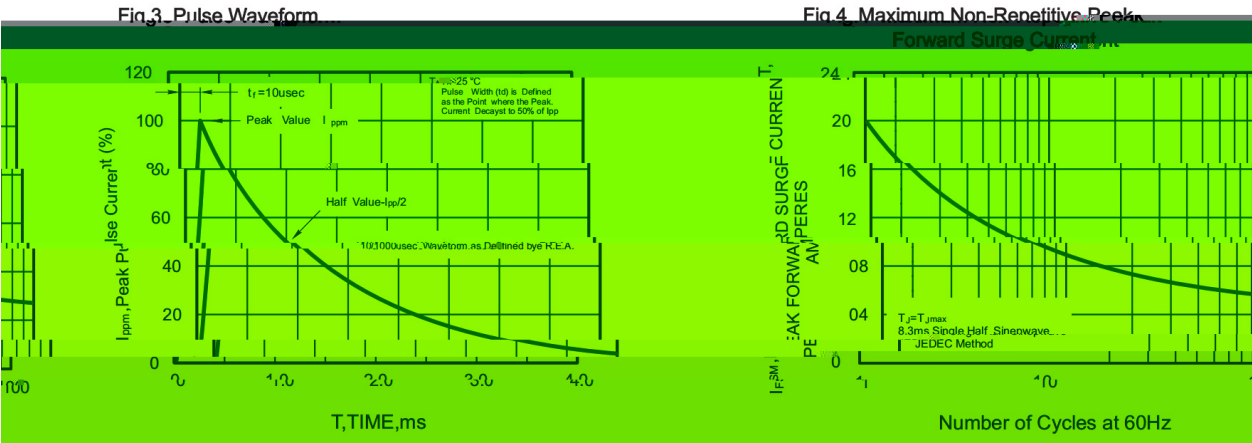
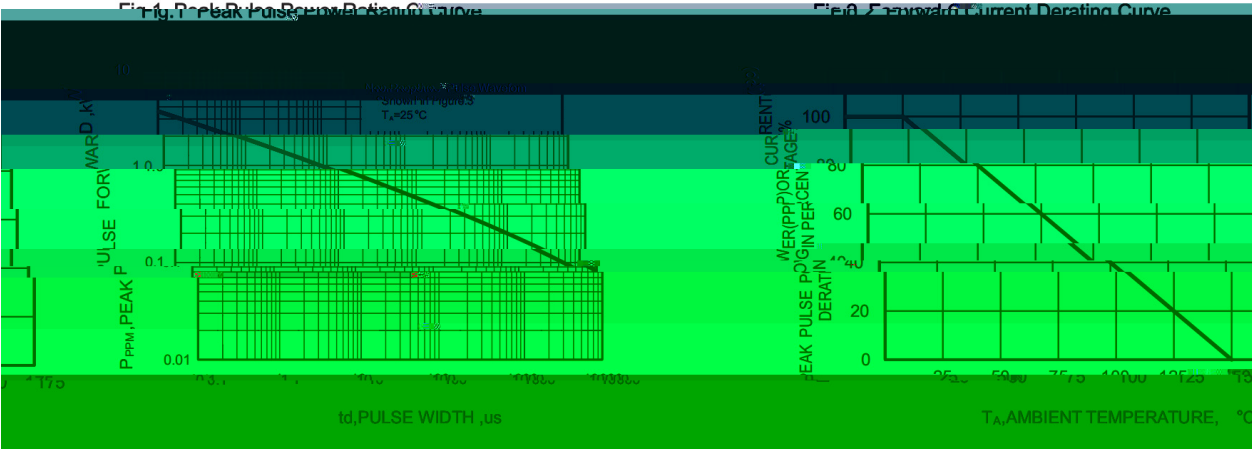
/ Electrical Characteristics(Ta=25)

Type		Marking		Stand-off Voltage	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
SMF5.0A	SMF5.0CA	AE	CAE	5.0	6.4	7.0	10	400	9.2	21.7
SMF6.0A	SMF6.0CA	AG	CAG	6.0	6.67	7.37	10	400	10.3	19.4
SMF6.5A	SMF6.5CA	AK	CAK	6.5	7.22	7.98	10	250	11.2	17.9
SMF7.0A	SMF7.0CA	AM	CAM	7.0	7.78	8.6	10	100	12	16.7
SMF7.5A	SMF7.5CA	AP	CAP	7.5	8.33	9.21	1.0	50	12.9	15.5
SMF8.0A	SMF8.0CA	AR	CAR	8.0	8.89	9.83	1.0	25	13.6	14.7
SMF8.5A	SMF8.5CA	AT	CAT	8.5	9.44	10.4	1.0	10	14.4	13.9
SMF9.0A	SMF9.0CA	AV	CAV	9.0	10	11.1	1.0	5.0	15.4	13.0
SMF10A	SMF10CA	AX	CAX	10	11.1	12.3	1.0	2.5	17	11.8
SMF11A	SMF11CA	AZ	CAZ	11	12.2	13.5	1.0	2.5	18.2	11.0
SMF12A	SMF12CA	BE	CBE	12	13.3	14.7	1.0	2.5	19.9	10.1
SMF13A	SMF13CA	BG	CBG	13	14.4	15.9	1.0	1.0	21.5	9.3
SMF14A	SMF14CA	BK	CBK	14	15.6	17.2	1.0	1.0	23.2	8.6
SMF15A	SMF15CA	BM	CBM	15	16.7	18.5	1.0	1.0	24.4	8.2
SMF16A	SMF16CA	BP	CBP	16	17.8	19.7	1.0	1.0	26	7.7
SMF17A	SMF17CA	BR	CBR	17	18.9	20.9	1.0	1.0	27.6	7.2
SMF18A	SMF18CA	BT	CBT	18	20	22.1	1.0	1.0	29.2	6.8
SMF20A	SMF20CA	BV	CBV	20	22.2	24.5	1.0	1.0	32.4	6.2
SMF22A	SMF22CA	BX	CBX	22	24.4	26.9	1.0	1.0	35.5	5.6
SMF24A	SMF24CA	BZ	CBZ	24	26.7	29.5	1.0	1.0	38.9	5.1
SMF26A	SMF26CA	CE	CCE	26	28.9	31.9	1.0	1.0	42.1	4.8
SMF28A	SMF28CA	CG	CCG	28	31.1	34.4	1.0	1.0	45.4	4.4
SMF30A	SMF30CA	CK	CCK	30	33.3	36.8	1.0	1.0	48.4	4.1
SMF33A	SMF33CA	CM	CCM	33	36.7	40.6	1.0	1.0	53.3	3.8
SMF36A	SMF36CA	CP	CCP	36	40	44.2	1.0	1.0	58.1	3.4

/ Electrical Characteristics(Ta=25)

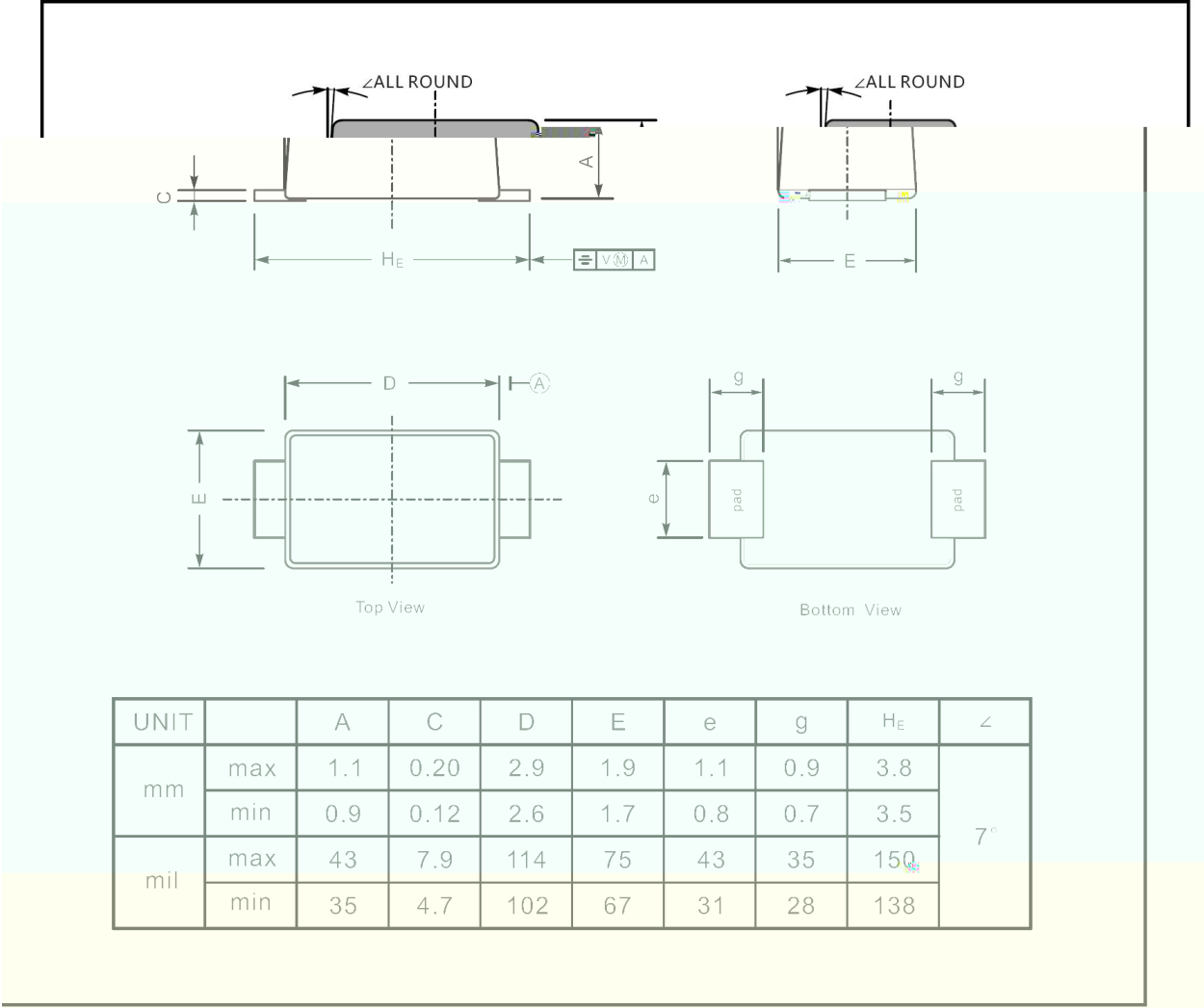
Type		Marking		Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage	Max. Clamp Voltage	Peak Pulse Current
				V _{RWM}	V _{BR@I_T}		I _T	I _{R@V_{RWM}}	V _{C@I_{PP}}	I _{PP}
					Min	Max				
Uni	Bi	Uni	Bi	V	V	V	mA	μA	V	A
SMF250A	SMF250CA	E25	CE25	250	279	309	1.0	1.0	405	0.5
SMF300A	SMF300CA	E30	CE30	300	335	371	1.0	1.0	486	0.45
SMF350A	SMF350CA	E35	CE35	350	391	432	1.0	1.0	567	0.4
SMF400A	SMF400CA	E40	CE40	400	447	494	1.0	1.0	648	0.35
SMF440A	SMF440CA	E44	CE44	440	492	543	1.0	1.0	713	0.3

/ Electrical Characteristic Curve

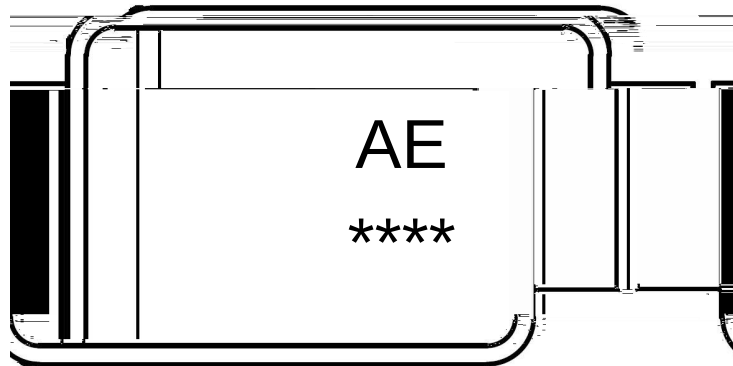


/ Package Dimensions

SOD-123FL



/ Marking Instructions



AE

Note:

AE Product Type Code



CAE

Note:

CAE Product Type Code

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- Note:
- 1

150 180 60 90sec;

1.Preheating:150~180 , Time:60~90sec.
- 2

245±5 5±0.5sec;

2.Peak Temp.:245±5 , Duration:5±0.5sec.
- 3

2 10 /sec.

3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL