

Description

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

Features

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

Mechanical Characteristic

Package: SOD-123FL

- Terminal Connections: See Diagram Below
- Marking Information: See Below

Applications

General purpose.

Equivalent Circuit



Unipolar

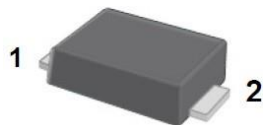


Bipolar

Pinning



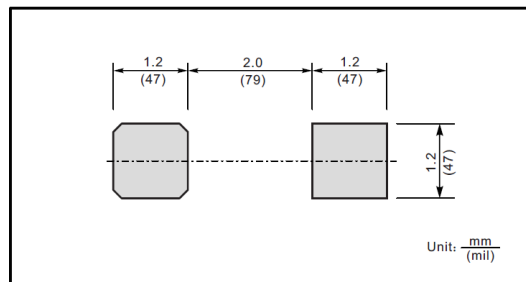
单极性



双极性

PIN	DESCRIPTION
1	Cathode
2	Anode

The recommended mounting pad size



Marking

See Marking Instructions.

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	$^\circ\text{C}$
Typical Thermal Resistance	$R_{\theta JA}$	180	$^\circ\text{C/W}$

Notes:

1. Non-repetitive current pulse per Fig 3 and derated above $T_A=25$ 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 powe. waveform is $t_p=10/1000\text{us}$
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

Electrical Characteristics(Ta=25°C)

Type		Marking		Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage	Max. Clamp Voltage	Peak Pulse Current	
					V _{RMW}	V _{BR} @I _T					
						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	200	9.2	21.7	
SMF6.0A	SMF6.0CA	AG	CAG	6.0	6.67	7.37	10	100	10.3	19.4	
SMF6.5A	SMF6.5CA	AK	CAK	6.5	7.22	7.98	10	75	11.2	17.9	
SMF7.0A	SMF7.0CA	AM	CAM	7.0	7.78	8.6	10	50	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°C)

Type		Marking		Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage	Max. Clamp Voltage	Peak Pulse Current	
					V _{RMW}	V _{BR@IT}					
						Min					Max
Uni	Bi	Uni	Bi	V	V	V	mA	μA	V	A	
SMF40A	SMF40CA	CR	CCR	40	44.4	49.1	1.0	1.0	64.5	3.1	
SMF43A	SMF43CA	CT	CCT	43	47.8	52.8	1.0	1.0	69.4	2.9	
SMF45A	SMF45CA	CV	CCV	45	50	55.3	1.0	1.0	72.7	2.8	
SMF48A	SMF48CA	CX	CCX	48	53.3	58.9	1.0	1.0	77.4	2.6	
SMF51A	SMF51CA	CZ	CCZ	51	56.7	62.7	1.0	1.0	82.4	2.4	
SMF54A	SMF54CA	DE	CDE	54	60	66.3	1.0	1.0	87.1	2.3	
SMF58A	SMF58CA	DG	CDG	58	64.4	71.2	1.0	1.0	93.6	2.1	
SMF60A	SMF60CA	DK	CDK	60	66.7	73.7	1.0	1.0	96.8	1.8	
SMF64A	SMF64CA	DM	CDM	64	71.1	78.6	1.0	1.0	103	1.7	
SMF70A	SMF70CA	DP	CDP	70	77.8	86	1.0	1.0	113	1.5	
SMF75A	SMF75CA	DR	CDR	75	83.3	92.1	1.0	1.0	121	1.4	
SMF78A	SMF78CA	DT	CDT	78	86.7	95.8	1.0	1.0	126	1.4	
SMF85A	SMF85CA	DV	CDV	85	94.4	104	1.0	1.0	137	1.3	
SMF90A	SMF90CA	DX	CDX	90	100	111	1.0	1.0	146	1.2	
SMF100A	SMF100CA	DZ	CDZ	100	111	123	1.0	1.0	162	1.1	
SMF110A	SMF110CA	EE	CEE	110	122	135	1.0	1.0	177	1.0	
SMF120A	SMF120CA	EG	CEG	120	133	147	1.0	1.0	193	0.9	
SMF130A	SMF130CA	EK	CEK	130	144	159	1.0	1.0	209	0.8	
SMF150A	SMF150CA	EM	CEM	150	167	185	1.0	1.0	243	0.7	
SMF160A	SMF160CA	EP	CEP	160	178	197	1.0	1.0	259	0.7	
SMF170A	SMF170CA	ER	CER	170	189	209	1.0	1.0	275	0.6	
SMF180A	SMF180CA	ET	CET	180	201	222	1.0	1.0	292	0.6	
SMF200A	SMF200CA	EX	CEX	200	224	247	1.0	1.0	324	0.5	
SMF220A	SMF220CA	E22	CE22	220	246	272	1.0	1.0	356	0.5	

Electrical Characteristics(Ta=25°C)

Type		Marking		Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage	Max. Clamp Voltage	Peak Pulse Current
					V _{RMW}	V _{BR@IT}				
				Min		Max	I _T	I _{R@V_{RWM}}	V _{C@I_{PP}}	I _{PP}
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

Fig.1 Peak Pulse Power Rating Curve

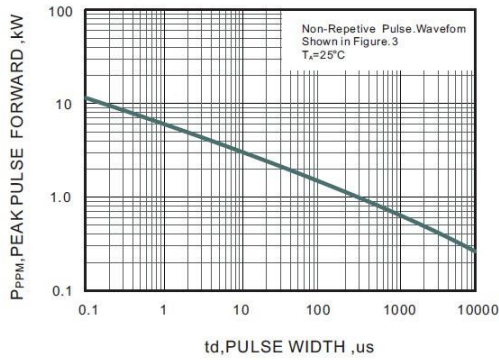


Fig.2 Forward Current Derating Curve

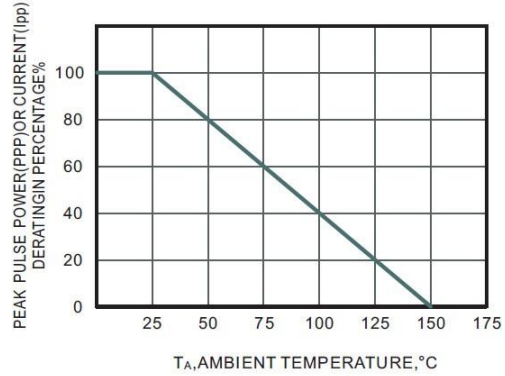


Fig.3 Pulse Waveform

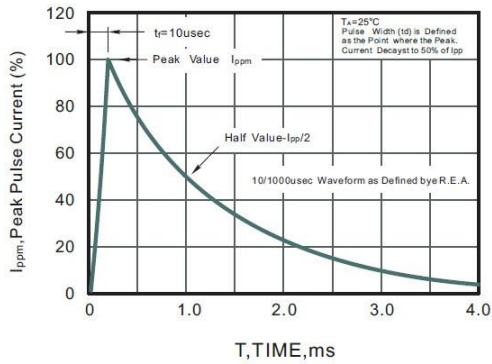
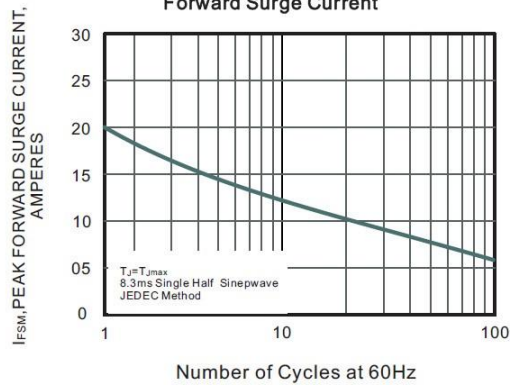
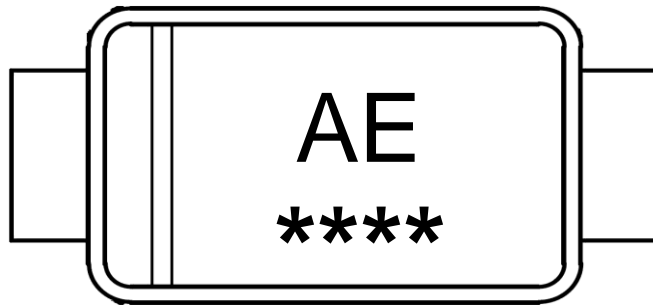


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



Marking Instructions

单极性印章图



Note:

AE : Product Type Code

****: Lot No. Code, The 1st * means:YM Code, The last 3 * means:little Lot No Code

双极性印章图



Note:

CAE : Product Type Code

****: Lot No. Code, The 1st * means:YM Code, The last 3 * means:little Lot No Co

Packaging SPEC.

Package Type	Units					Dimension (unit: mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOD-123FL	3000	8	24000	5	120000	7" x11	185X180X105	390X385X205

Package Dimensions

SOD-123FL

