

Surface mount transient voltage suppressor power 200 watts

Stand-Off Voltage : 5.0V~440V

FEATURES

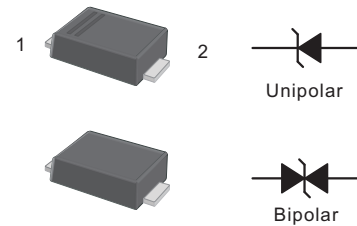
- For surface mounted applications in order to optimize board space.
- Low profile package
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability

MECHANICAL DATA

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight:15mg/0.00048oz

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Simplified outline SOD-123FL and symbol

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)	20	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	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 $T_A=25^\circ\text{C}$ 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 powe. waveform is tp=10/1000us
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

Characteristics at Ta = 25°C

Type		Marking		V _{RWM}	Breakdown Voltage		Test Current	Reverse Leakage	Max. Clamp Voltage	Peak Pulse Current
					V _{BR} @ I _T					
					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
KSMF5.0A	KSMF5.0CA	AE	CAE	5	6.4	7	10	400	9.2	21.7
KSMF6.0A	KSMF6.0CA	AG	CAG	6	6.67	7.37	10	400	10.3	19.4
KSMF6.5A	KSMF6.5CA	AK	CAK	6.5	7.22	7.98	10	250	11.2	17.9
KSMF7.0A	KSMF7.0CA	AM	CAM	7	7.78	8.6	10	100	12	16.7
KSMF7.5A	KSMF7.5CA	AP	CAP	7.5	8.33	9.21	1	50	12.9	15.5
KSMF8.0A	KSMF8.0CA	AR	CAR	8	8.89	9.83	1	25	13.6	14.7
KSMF8.5A	KSMF8.5CA	AT	CAT	8.5	9.44	10.4	1	10	14.4	13.9
KSMF9.0A	KSMF9.0CA	AV	CAV	9	10	11.1	1	5	15.4	13
KSMF10A	KSMF10CA	AX	CAX	10	11.1	12.3	1	2.5	17	11.8
KSMF11A	KSMF11CA	AZ	CAZ	11	12.2	13.5	1	2.5	18.2	11
KSMF12A	KSMF12CA	BE	CBE	12	13.3	14.7	1	2.5	19.9	10.1
KSMF13A	KSMF13CA	BG	CBG	13	14.4	15.9	1	1	21.5	9.3
KSMF14A	KSMF14CA	BK	CBK	14	15.6	17.2	1	1	23.2	8.6
KSMF15A	KSMF15CA	BM	CBM	15	16.7	18.5	1	1	24.4	8.2
KSMF16A	KSMF16CA	BP	CBP	16	17.8	19.7	1	1	26	7.7
KSMF17A	KSMF17CA	BR	CBR	17	18.9	20.9	1	1	27.6	7.2
KSMF18A	KSMF18CA	BT	CBT	18	20	22.1	1	1	29.2	6.8
KSMF20A	KSMF20CA	BV	CBV	20	22.2	24.5	1	1	32.4	6.2
KSMF22A	KSMF22CA	BX	CBX	22	24.4	26.9	1	1	35.5	5.6
KSMF24A	KSMF24CA	BZ	CBZ	24	26.7	29.5	1	1	38.9	5.1
KSMF26A	KSMF26CA	CE	CCE	26	28.9	31.9	1	1	42.1	4.8
KSMF28A	KSMF28CA	CG	CCG	28	31.1	34.4	1	1	45.4	4.4
KSMF30A	KSMF30CA	CK	CCK	30	33.3	36.8	1	1	48.4	4.1
KSMF33A	KSMF33CA	CM	CCM	33	36.7	40.6	1	1	53.3	3.8
KSMF36A	KSMF36CA	CP	CCP	36	40	44.2	1	1	58.1	3.4
KSMF40A	KSMF40CA	CR	CCR	40	44.4	49.1	1	1	64.5	3.1
KSMF43A	KSMF43CA	CT	CCT	43	47.8	52.8	1	1	69.4	2.9
KSMF45A	KSMF45CA	CV	CCV	45	50	55.3	1	1	72.7	2.8
KSMF48A	KSMF48CA	CX	CCX	48	53.3	58.9	1	1	77.4	2.6
KSMF51A	KSMF51CA	CZ	CCZ	51	56.7	62.7	1	1	82.4	2.4
KSMF54A	KSMF54CA	DE	CDE	54	60	66.3	1	1	87.1	2.3
KSMF58A	KSMF58CA	DG	CDG	58	64.4	71.2	1	1	93.6	2.1
KSMF60A	KSMF60CA	DK	CDK	60	66.7	73.7	1	1	96.8	1.8
KSMF64A	KSMF64CA	DM	CDM	64	71.1	78.6	1	1	103	1.7
KSMF70A	KSMF70CA	DP	CDP	70	77.8	86	1	1	113	1.5
KSMF75A	KSMF75CA	DR	CDR	75	83.3	92.1	1	1	121	1.4
KSMF78A	KSMF78CA	DT	CDT	78	86.7	95.8	1	1	126	1.4
KSMF85A	KSMF85CA	DV	CDV	85	94.4	104	1	1	137	1.3
KSMF90A	KSMF90CA	DX	CDX	90	100	111	1	1	146	1.2
KSMF100A	KSMF100CA	DZ	CDZ	100	111	123	1	1	162	1.1
KSMF110A	KSMF110CA	EE	CEE	110	122	135	1	1	177	1
KSMF120A	KSMF120CA	EG	CEG	120	133	147	1	1	193	0.9
KSMF130A	KSMF130CA	EK	CEK	130	144	159	1	1	209	0.8
KSMF150A	KSMF150CA	EM	CEM	150	167	185	1	1	243	0.7
KSMF160A	KSMF160CA	EP	CEP	160	178	197	1	1	259	0.7
KSMF170A	KSMF170CA	ER	CER	170	189	209	1	1	275	0.6
KSMF180A	KSMF180CA	ET	CET	180	201	222	1	1	292	0.5
KSMF190A	KSMF190CA	EV	CEV	190	211	232	1	1	308	0.5
KSMF200A	KSMF200CA	EX	CEX	200	224	247	1	1	324	0.5
KSMF220A	KSMF220CA	E22	CE22	220	246	272	1	1	356	0.5
KSMF250A	KSMF250CA	E25	CE25	250	279	309	1	1	405	0.5
KSMF300A	KSMF300CA	E30	CE30	300	335	371	1	1	486	0.45
KSMF350A	KSMF350CA	E35	CE35	350	391	432	1	1	567	0.4
KSMF400A	KSMF400CA	E40	CE40	400	447	494	1	1	648	0.35
KSMF440A	KSMF440CA	E44	CE44	440	492	543	1	1	713	0.3

Fig.1 Peak Pulse Power Rating Curve

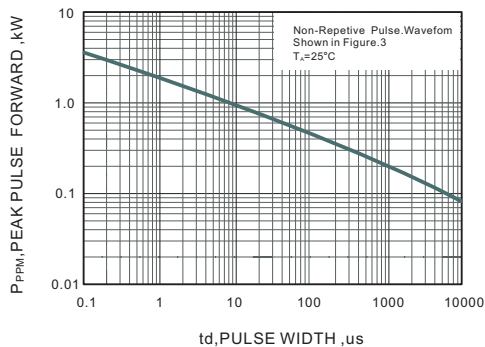


Fig.2 Forward Current Derating Curve

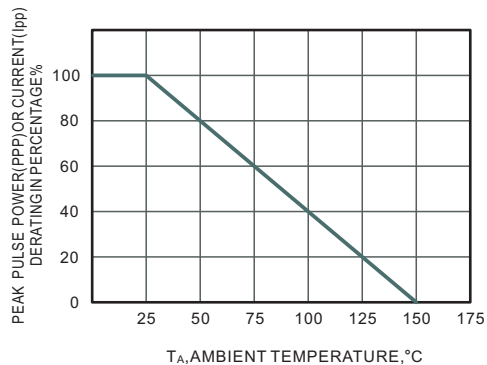


Fig.3 Pulse Waveform

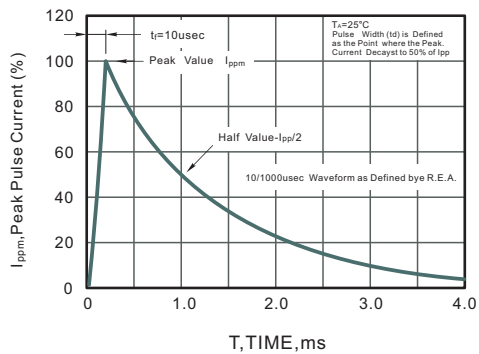
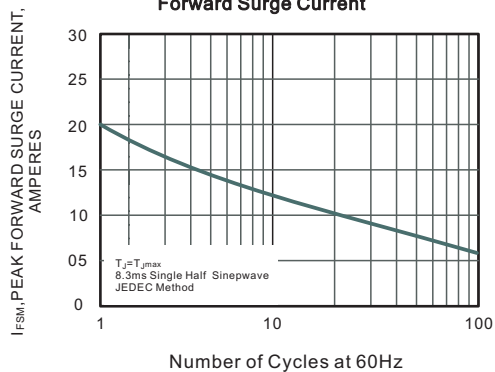


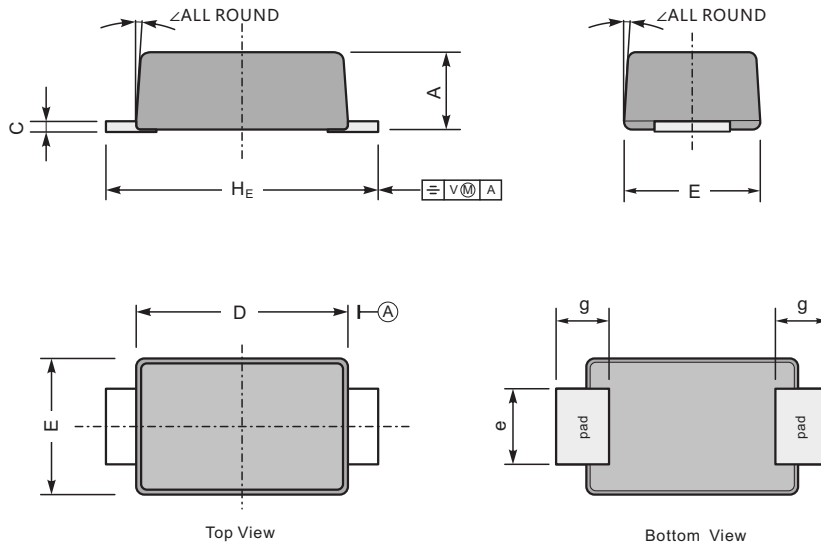
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



PACKAGE OUTLINE

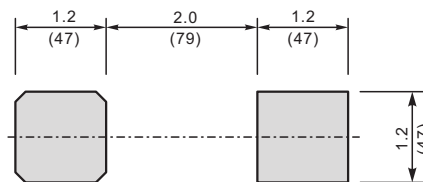
Plastic surface mounted package; 2 leads

SOD-123FL



UNIT		A	C	D	E	e	g	H_E	\angle
mm	max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	

The recommended mounting pad size



Unit: $\frac{\text{mm}}{\text{(mil)}}$