

## Surface mount transient voltage suppressor power 200 watts

Stand-Off Voltage : 5.0V~220V

### 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

### Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

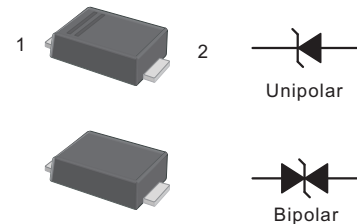
Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation on TA=25°C (Note 1,2,5, Fig1)	$P_{PPM}$	200	W
Peak Forward Surge Current (Note 3)	$I_{FSM}$ (UNI)	20	A
Peak Pulse Current on 10/1000 us waveform (Note 1) Fig 2	$I_{PPM}$	see Table 1	A
Steady State Power Dissipation (Note 4)	$P_{M(AV)}$	1	W
Operating Junction and Storage Range	$T_J, T_{STG}$	-55 to +150	°C
Typical Thermal Resistance	$R_{\theta JA}$	180	°C

### NOTES

1. Non-repetitive current pulse per Fig 3 and derated above  $T_A=25^\circ\text{C}$  per Fig 2
2. Mounted on 5mm<sup>2</sup> 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  $t_p=10/1000\mu\text{s}$
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

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

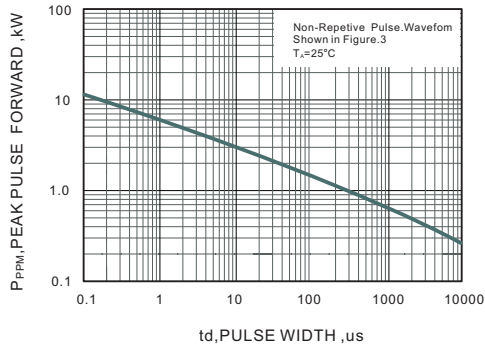


Top View  
Simplified outline sSOD-123FL and symbol

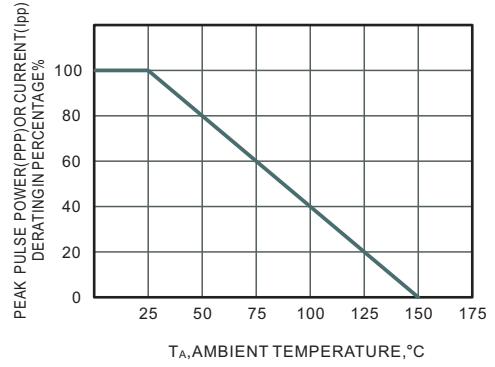
Characteristics at Ta = 25°C

Type		Marking		V <sub>RWM</sub>	Breakdown Voltage		Test Current	Reverse Leakage	Max. Clamp Voltage	Peak Pulse Current
					V <sub>BR</sub> @ I <sub>T</sub>					
					Min	Max	I <sub>T</sub>	I <sub>R</sub> @ V <sub>RWM</sub>	V <sub>C</sub> @ I <sub>PP</sub>	I <sub>PP</sub>
Uni	Bi	Uni	Bi	V	V	V	mA	µA	V	A
KSJD12A05L01	KSJD12C05L01	AE	CAE	5	6.4	7	10	200	9.2	21.7
KSJD12A06L01	KSJD12C06L01	AG	CAG	6	6.67	7.37	10	100	10.3	19.4
KSJD12A6.5L01	KSJD12C6.5L01	AK	CAK	6.5	7.22	7.98	10	75	11.2	17.9
KSJD12A07L01	KSJD12C07L01	AM	CAM	7	7.78	8.6	10	50	12	16.7
KSJD12A7.5L01	KSJD12C7.5L01	AP	CAP	7.5	8.33	9.21	1	50	12.9	15.5
KSJD12A08L01	KSJD12C08L01	AR	CAR	8	8.89	9.83	1	25	13.6	14.7
KSJD12A8.5L01	KSJD12C8.5L01	AT	CAT	8.5	9.44	10.4	1	10	14.4	13.9
KSJD12A09L01	KSJD12C09L01	AV	CAV	9	10	11.1	1	5	15.4	13
KSJD12A10L01	KSJD12C10L01	AX	CAX	10	11.1	12.3	1	2.5	17	11.8
KSJD12A11L01	KSJD12C11L01	AZ	CAZ	11	12.2	13.5	1	2.5	18.2	11
KSJD12A12L01	KSJD12C12L01	BE	CBE	12	13.3	14.7	1	2.5	19.9	10.1
KSJD12A13L01	KSJD12C13L01	BG	CBG	13	14.4	15.9	1	1	21.5	9.3
KSJD12A14L01	KSJD12C14L01	BK	CBK	14	15.6	17.2	1	1	23.2	8.6
KSJD12A15L01	KSJD12C15L01	BM	CBM	15	16.7	18.5	1	1	24.4	8.2
KSJD12A16L01	KSJD12C16L01	BP	CBP	16	17.8	19.7	1	1	26	7.7
KSJD12A17L01	KSJD12C17L01	BR	CBR	17	18.9	20.9	1	1	27.6	7.2
KSJD12A18L01	KSJD12C18L01	BT	CBT	18	20	22.1	1	1	29.2	6.8
KSJD12A20L01	KSJD12C20L01	BV	CBV	20	22.2	24.5	1	1	32.4	6.2
KSJD12A22L01	KSJD12C22L01	BX	CBX	22	24.4	26.9	1	1	35.5	5.6
KSJD12A24L01	KSJD12C24L01	BZ	CBZ	24	26.7	29.5	1	1	38.9	5.1
KSJD12A26L01	KSJD12C26L01	CE	CCE	26	28.9	31.9	1	1	42.1	4.8
KSJD12A28L01	KSJD12C28L01	CG	CCG	28	31.1	34.4	1	1	45.4	4.4
KSJD12A30L01	KSJD12C30L01	CK	CCK	30	33.3	36.8	1	1	48.4	4.1
KSJD12A33L01	KSJD12C33L01	CM	CCM	33	36.7	40.6	1	1	53.3	3.8
KSJD12A36L01	KSJD12C36L01	CP	CCP	36	40	44.2	1	1	58.1	3.4
KSJD12A40L01	KSJD12C40L01	CR	CCR	40	44.4	49.1	1	1	64.5	3.1
KSJD12A43L01	KSJD12C43L01	CT	CCT	43	47.8	52.8	1	1	69.4	2.9
KSJD12A45L01	KSJD12C45L01	CV	CCV	45	50	55.3	1	1	72.7	2.8
KSJD12A48L01	KSJD12C48L01	CX	CCX	48	53.3	58.9	1	1	77.4	2.6
KSJD12A51L01	KSJD12C51L01	CZ	CCZ	51	56.7	62.7	1	1	82.4	2.4
KSJD12A54L01	KSJD12C54L01	DE	CDE	54	60	66.3	1	1	87.1	2.3
KSJD12A58L01	KSJD12C58L01	DG	CDG	58	64.4	71.2	1	1	93.6	2.1
KSJD12A60L01	KSJD12C60L01	DK	CDK	60	66.7	73.7	1	1	96.8	1.8
KSJD12A64L01	KSJD12C64L01	DM	CDM	64	71.1	78.6	1	1	103	1.7
KSJD12A70L01	KSJD12C70L01	DP	CDP	70	77.8	86	1	1	113	1.5
KSJD12A75L01	KSJD12C75L01	DR	CDR	75	83.3	92.1	1	1	121	1.4
KSJD12A78L01	KSJD12C78L01	DT	CDT	78	86.7	95.8	1	1	126	1.4
KSJD12A85L01	KSJD12C85L01	DV	CDV	85	94.4	104	1	1	137	1.3
KSJD12A90L01	KSJD12C90L01	DX	CDX	90	100	111	1	1	146	1.2
KSJD12A100L01	KSJD12C100L01	DZ	CDZ	100	111	123	1	1	162	1.1
KSJD12A110L01	KSJD12C110L01	EE	CEE	110	122	135	1	1	177	1
KSJD12A120L01	KSJD12C120L01	EG	CEG	120	133	147	1	1	193	0.9
KSJD12A130L01	KSJD12C130L01	EK	CEK	130	144	159	1	1	209	0.8
KSJD12A150L01	KSJD12C150L01	EM	CEM	150	167	185	1	1	243	0.7
KSJD12A160L01	KSJD12C160L01	EP	CEP	160	178	197	1	1	259	0.7
KSJD12A170L01	KSJD12C170L01	ER	CER	170	189	209	1	1	275	0.6
KSJD12A180L01	KSJD12C180L01	ET	CET	180	201	222	1	1	292	0.5
KSJD12A200L01	KSJD12C200L01	EX	CEX	200	224	247	1	1	324	0.5
KSJD12A220L01	KSJD12C220L01	E22	GE22	220	246	272	1	1	356	0.5

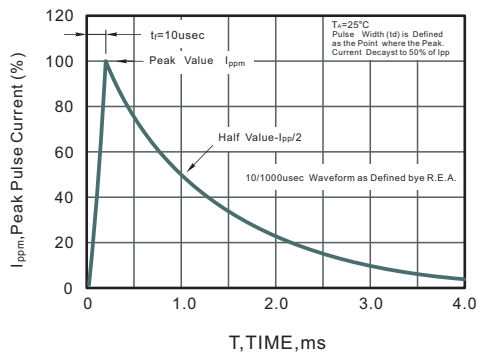
**Fig.1 Peak Pulse Power Rating Curve**



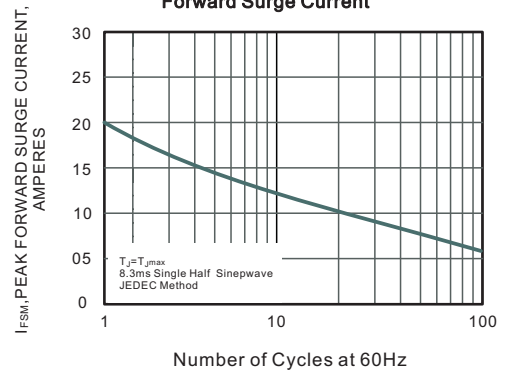
**Fig.2 Forward Current Derating Curve**



**Fig.3 Pulse Waveform**



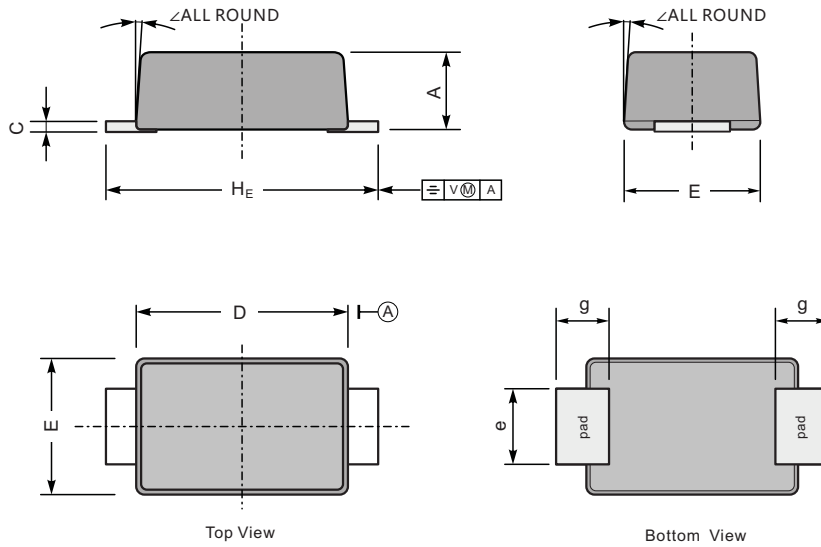
**Fig.4 Maximum Non-Repetitive Peak Forward Surge Current**



**PACKAGE OUTLINE**

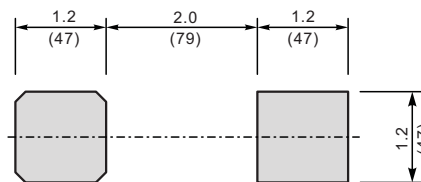
Plastic surface mounted package; 2 leads

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

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