

Surface mount transient voltage suppressor power 400 watts

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

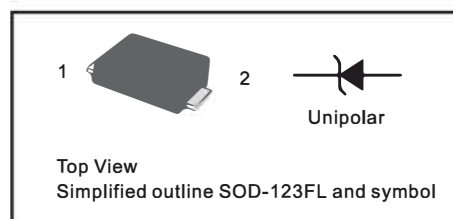
Stand-Off Voltage : 5.0V~85V

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



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}	400	W
Maximum instantaneous forward voltage at 20A for unidirectional	V_F	5.0	V
Peak Pulse Current on 10/1000 us waveform (Note 1) Fig 2	I_{PPM}	see Table 1	A
Steady State Power Dissipation (Note 4)	$P_{M(AV)}$	2.8	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 $t_p=10/1000\mu\text{s}$
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

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		I _T	I _R @ V _{RWM}	V _C @ I _{PP}	I _{PP}
			Min	Max				
Uni	Uni	V	V	V	mA	µA	V	A
SMF5.0AH	5.0AH	5	6.4	7	10	40	9.2	40.1
SMF6.0AH	6.0AH	6	6.67	7.37	10	40	10.3	35.9
SMF6.5AH	6.5AH	6.5	7.22	7.98	10	30	11.2	33.1
SMF7.0AH	7.0AH	7	7.78	8.6	10	30	12	30.9
SMF7.5AH	7.5AH	7.5	8.33	9.21	1	30	12.9	28.7
SMF8.0AH	8.0AH	8	8.89	9.83	1	20	13.6	27.2
SMF9.0AH	9.0AH	9	10	11.1	1	5	15.4	24.1
SMF10AH	10AH	10	11.1	12.3	1	2	17	23.5
SMF11AH	11AH	11	12.2	13.5	1	1	18.2	22
SMF12AH	12AH	12	13.3	14.7	1	1	19.9	20.1
SMF13AH	13AH	13	14.4	15.9	1	1	21.5	18.6
SMF14AH	14AH	14	15.6	17.2	1	1	23.2	17.2
SMF15AH	15AH	15	16.7	18.5	1	1	24.4	16.4
SMF17AH	17AH	17	18.9	20.9	1	1	27.6	14.5
SMF18AH	18AH	18	20	22.1	1	1	29.2	13.7
SMF20AH	20AH	20	22.2	24.5	1	1	32.4	12.3
SMF22AH	22AH	22	24.4	26.9	1	1	35.5	11.3
SMF24AH	24AH	24	26.7	29.5	1	1	38.9	10.3
SMF26AH	26AH	26	28.9	31.9	1	1	42.1	9.5
SMF28AH	28AH	28	31.1	34.4	1	1	45.4	8.8
SMF30AH	30AH	30	33.3	36.8	1	1	48.4	8.3
SMF33AH	33AH	33	36.7	40.6	1	1	53.3	7.5
SMF36AH	36AH	36	40	44.2	1	1	58.1	6.9
SMF40AH	40AH	40	44.4	49.1	1	1	64.5	6.2
SMF43AH	43AH	43	47.8	52.8	1	1	69.4	5.8
SMF45AH	45AH	45	50	55.3	1	1	72.7	5.5
SMF48AH	48AH	48	53.3	58.9	1	1	77.4	5.2
SMF51AH	51AH	51	56.7	62.7	1	1	82.4	4.9
SMF58AH	58AH	58	64.4	71.2	1	1	93.6	4.3
SMF60AH	60AH	60	66.7	73.7	1	1	96.8	4.1
SMF64AH	64AH	64	71.1	78.6	1	1	103	3.9
SMF70AH	70AH	70	77.8	86	1	1	113	3.5
SMF75AH	75AH	75	83.3	92.1	1	1	121	3.3
SMF78AH	78AH	78	86.7	95.8	1	1	126	3.2
SMF85AH	85AH	85	94.4	104	1	1	137	2.9

Fig.1 Peak Pulse Power Rating Curve

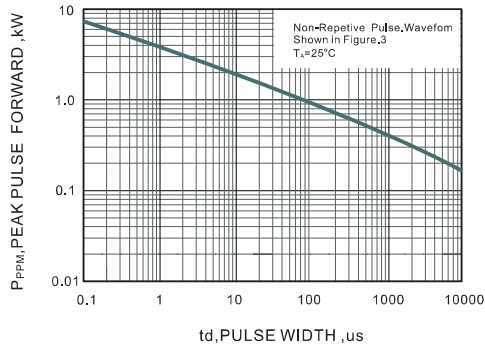


Fig.2 Forward Current Derating Curve

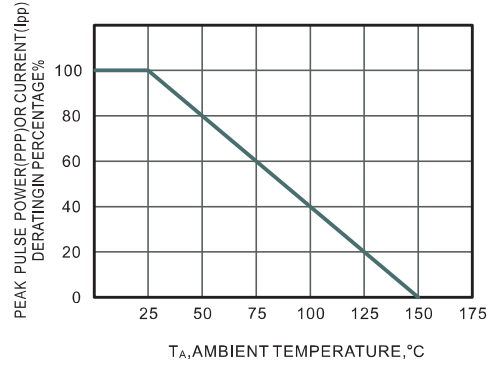


Fig.3 Pulse Waveform

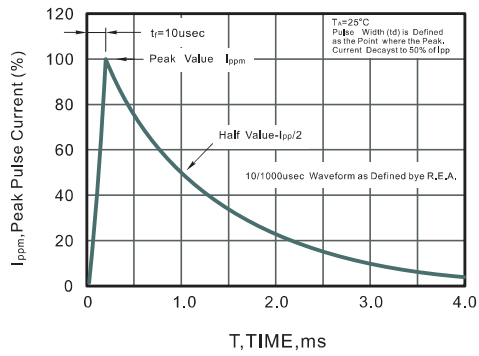
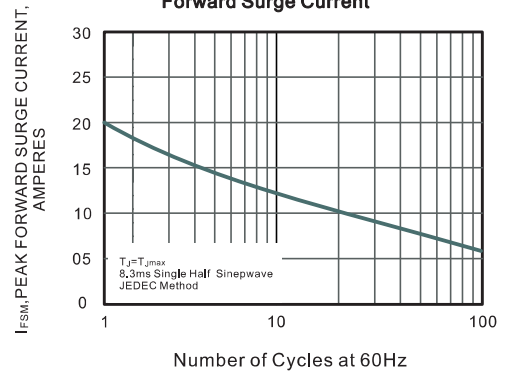


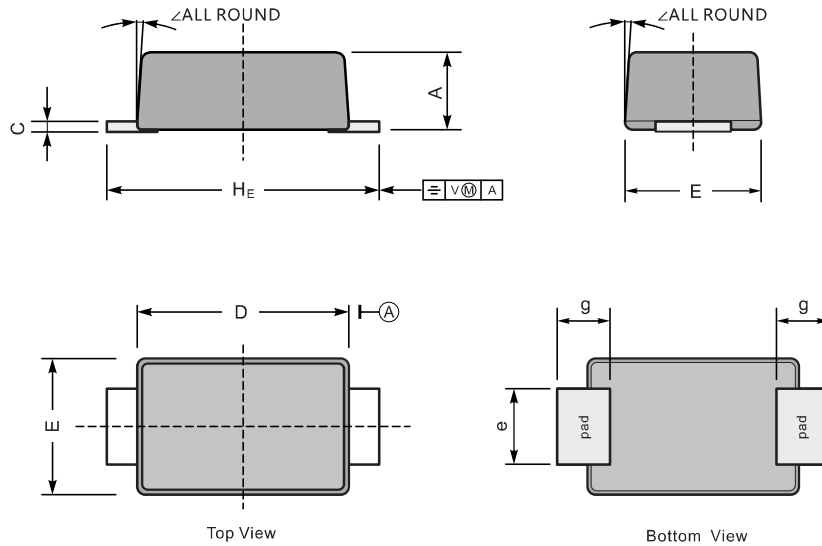
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



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

