

Transient Voltage Suppressors 200W SOD-123FL

SMF Series

MERITEK

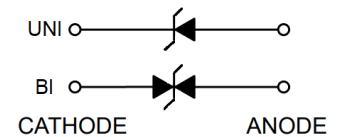
FEATURE

- 200W Peak Pulse Power (10/1000 μ s Waveform), Repetitive Rate:0.01%
- 5.0V to 350V Standoff Voltage
- Glass Passivated Junction
- Excellent Clamping Capability, Fast Response Time
- Low Leakage
- UL Flammability Classification Rating 94V-0



MECHANICAL DATA

- Case: SOD-123FL, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Color Band Denotes Cathode End



MAXIMUM RATINGS

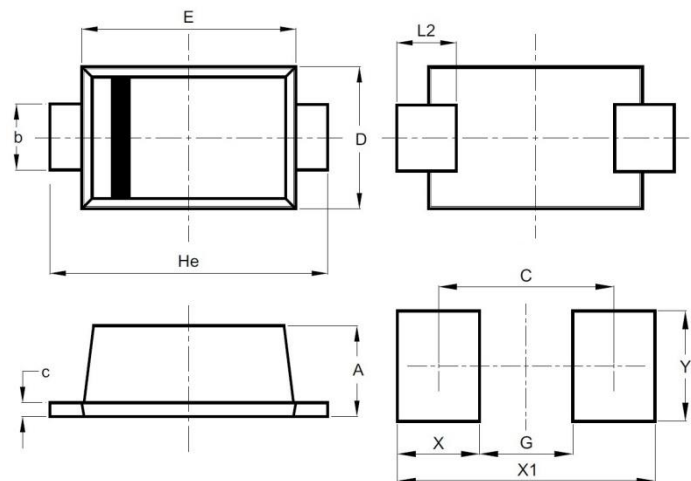
Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation On 10/1000 μ s Waveform	P_{PPM}	200	W
Peak Pulse Power Dissipation On 8/20 μ s Waveform	P_{PPM}	1000	W
Peak Forward Surge Current	I_{FSM}	20	A
Peak Pulse Current On 10/1000 μ s Waveform	I_{PPM}	See Table	A
Power Dissipation on Infinite Heatsink at $T_L = 75^\circ\text{C}$	P_D	0.4	W
Maximum Instantaneous Forward Voltage at 100A, For Unidirectional only	V_F	3.5	V
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Note:

1. $T_A = 25^\circ\text{C}$ ambient temperature unless otherwise specified.
2. Non-repetitive current pulse, and derated above $T_A = 25^\circ\text{C}$.
3. Measured 8.3ms single half sine-wave, or equivalent square wave, duty cycle=4 pulses per minutes maximum.

DIMENSIONS

SOD-123FL	Min (mm)	Max (mm)
A	0.95	1.30
b	0.70	1.20
c	0.05	0.25
D	1.60	1.90
E	2.60	2.90
He	3.50	3.90
L2	0.60	1.00
G	1.95	
C	3.10	
X	1.15	
X1	4.25	
Y	1.22	



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ELECTRICAL CHARACTERISTICS

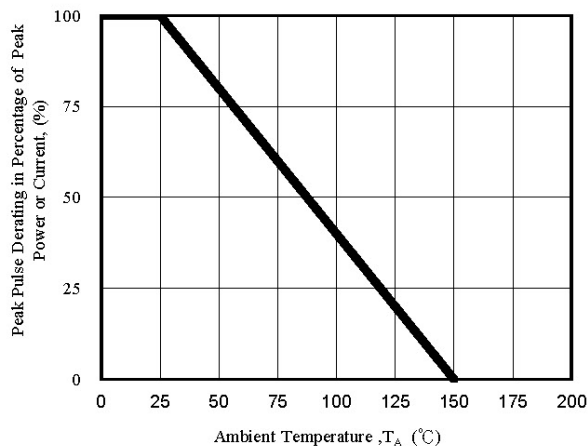
Part Number		Working Reverse Voltage	Reverse Breakdown Voltage		Test Current	Max Reverse Leakage Current	Max Clamping Voltage	Reverse Surge Current
Uni-Polar	Bi-Polar	V_{RWM} (V)	V_{BR} (V) Min	V_{BR} (V) Max	I_T (mA)	I_R (uA) @ V_{RWM}	V_C (V) @ I_{PP}	I_{PP} (A) Max
SMF5.0A	SMF5.0CA	5.0	6.40	7.00	10	400	9.2	21.74
SMF6.0A	SMF6.0CA	6.0	6.67	7.37	10	400	10.3	19.42
SMF6.5A	SMF6.5CA	6.5	7.22	7.98	10	250	11.2	17.86
SMF7.0A	SMF7.0CA	7.0	7.78	8.60	10	100	12.0	16.67
SMF7.5A	SMF7.5CA	7.5	8.33	9.21	1	50	12.9	15.50
SMF8.0A	SMF8.0CA	8.0	8.89	9.83	1	25	13.6	14.71
SMF8.5A	SMF8.5CA	8.5	9.44	10.4	1	10	14.4	13.89
SMF9.0A	SMF9.0CA	9.0	10.0	11.1	1	5	15.4	12.99
SMF10A	SMF10CA	10	11.1	12.3	1	2.5	17.0	11.76
SMF11A	SMF11CA	11	12.2	13.5	1	2.5	18.2	10.99
SMF12A	SMF12CA	12	13.3	14.7	1	2.5	19.9	10.05
SMF13A	SMF13CA	13	14.4	15.9	1	1	21.5	9.30
SMF14A	SMF14CA	14	15.6	17.2	1	1	23.2	8.62
SMF15A	SMF15CA	15	16.7	18.5	1	1	24.4	8.20
SMF16A	SMF16CA	16	17.8	19.7	1	1	26.0	7.69
SMF17A	SMF17CA	17	18.9	20.9	1	1	27.6	7.25
SMF18A	SMF18CA	18	20.0	22.1	1	1	29.2	6.85
SMF19A	SMF19CA	19	21.1	23.3	1	1	30.6	6.54
SMF20A	SMF20CA	20	22.2	24.5	1	1	32.4	6.17
SMF22A	SMF22CA	22	24.4	26.9	1	1	35.5	5.63
SMF24A	SMF24CA	24	26.7	29.5	1	1	38.9	5.14
SMF26A	SMF26CA	26	28.9	31.9	1	1	42.1	4.75
SMF28A	SMF28CA	28	31.1	34.4	1	1	45.4	4.41
SMF30A	SMF30CA	30	33.3	36.8	1	1	48.4	4.13
SMF33A	SMF33CA	33	36.7	40.6	1	1	53.3	3.75
SMF36A	SMF36CA	36	40.0	44.2	1	1	58.1	3.44
SMF40A	SMF40CA	40	44.4	49.1	1	1	64.5	3.10
SMF43A	SMF43CA	43	47.8	52.8	1	1	69.4	2.88
SMF45A	SMF45CA	45	50.0	55.3	1	1	72.7	2.75
SMF48A	SMF48CA	48	53.3	58.9	1	1	77.4	2.58
SMF51A	SMF51CA	51	56.7	62.7	1	1	82.4	2.43
SMF54A	SMF54CA	54	60.0	66.3	1	1	87.1	2.30
SMF58A	SMF58CA	58	64.4	71.2	1	1	93.6	2.14
SMF60A	SMF60CA	60	66.7	73.7	1	1	96.8	2.07
SMF64A	SMF64CA	64	71.1	78.6	1	1	103	1.94
SMF70A	SMF70CA	70	77.8	86.0	1	1	113	1.77
SMF75A	SMF75CA	75	83.3	92.1	1	1	121	1.65
SMF78A	SMF78CA	78	86.7	95.8	1	1	126	1.59
SMF80A	SMF80CA	80	88.8	97.6	1	1	129	1.55
SMF85A	SMF85CA	85	94.4	104	1	1	137	1.46
SMF90A	SMF90CA	90	100	111	1	1	146	1.37
SMF100A	SMF100CA	100	111	123	1	1	162	1.23
SMF110A	SMF110CA	110	122	135	1	1	177	1.13
SMF120A	SMF120CA	120	133	147	1	1	193	1.04
SMF130A	SMF130CA	130	144	159	1	1	209	0.96
SMF140A	SMF140CA	140	155	171	1	1	224	0.89
SMF150A	SMF150CA	150	167	185	1	1	243	0.82
SMF160A	SMF160CA	160	178	197	1	1	259	0.77
SMF170A	SMF170CA	170	189	209	1	1	275	0.73
SMF180A	SMF180CA	180	200	220	1	1	292	0.68
SMF190A	SMF190CA	190	211	232	1	1	308	0.65
SMF200A	SMF200CA	200	224	247	1	1	324	0.62
SMF220A	SMF220CA	220	246	272	1	1	356	0.56
SMF250A	--	250	279	309	1	1	405	0.50
SMF300A	--	300	335	371	1	1	486	0.41
SMF350A	--	350	391	432	1	1	567	0.36

Note:

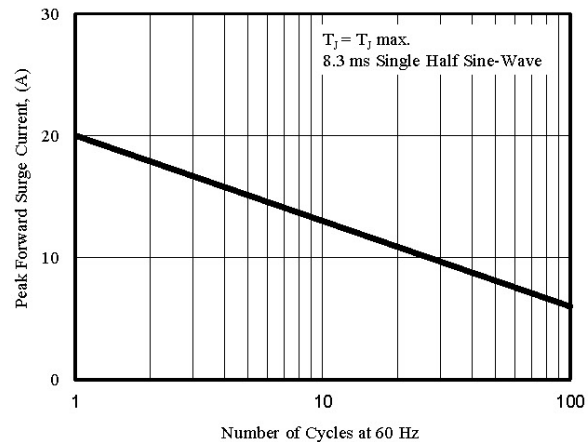
1. $T_A = 25^\circ\text{C}$ ambient temperature unless otherwise specified.
2. The available parts are "A" type only, the parts without A(V_{BR} is $\pm 10\%$) is not availed
3. Add suffix 'C' or 'CA' after part number to specify Bi-directional devices
4. For Bi-Directional device having VR of 10 volts and under, the IR limit is double

CHARACTERISTIC CURVES

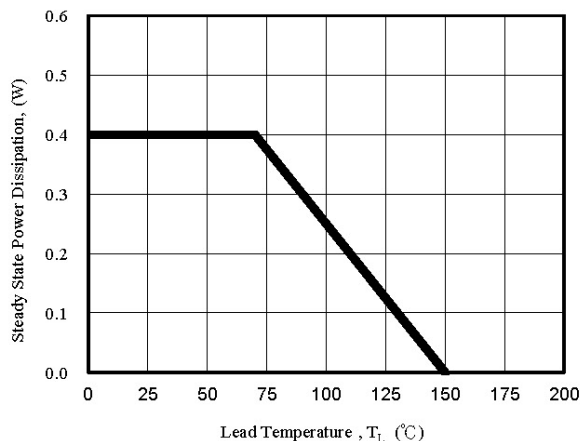
Pulse Derating Curve



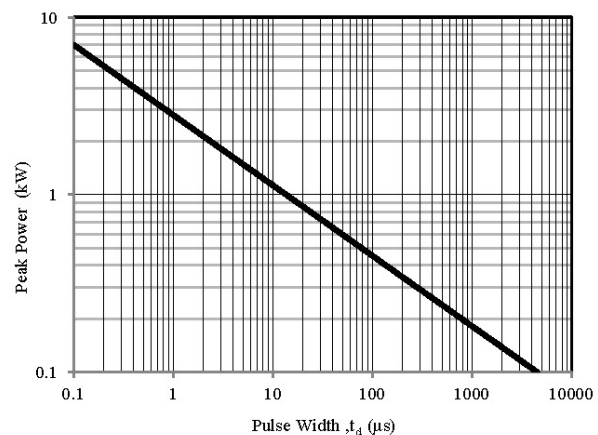
Maximum Non-Repetitive Surge Current



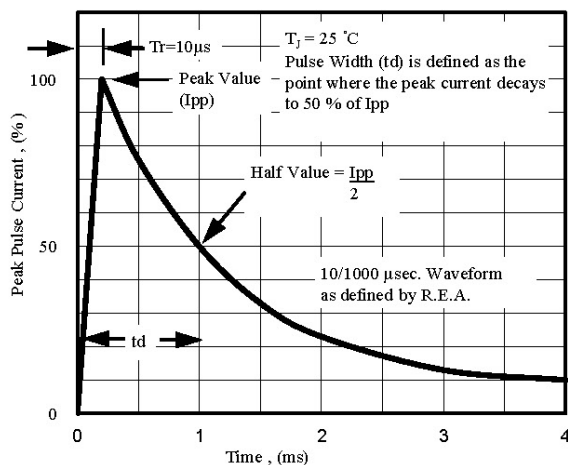
Steady State Power Derating Curve



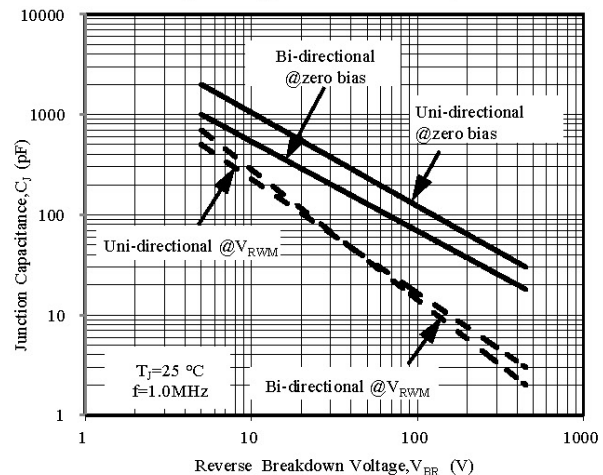
Peak Pulse Power Rating Curve



Pulse Waveform



Typical Junction Capacitance



*Specifications subject to change without notice.