Zibo Seno Electronic Engineering Co., Ltd.

淄博圣诺

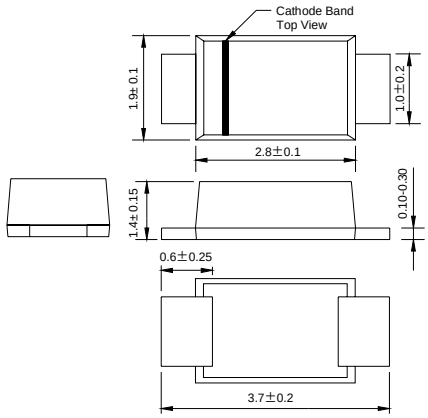
SMF5.0A/CA-SMF190A/CA

5.0 to 190Volts 200Watts SMD TRANSIENT VOLTAGE SUPPRESSORS

Features

- Glass Passivated Die Construction
- 200W Peak Pulse Power Dissipation
- 5.0V-190V Standoff Voltage
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability

SOD - 123FL



Dimensions in millimeters

Mechanical Data

- Case: SOD-123FL Molded Plastic
- Terminals:Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- Marking:
  Unidirectional – Device Code and Cathode Band
  Bidirectional – Device Code Only
- Weight: 0.064 grams (approx.)
- **Lead Free: For RoHS / Lead Free Version**

"C" Suffix Designates Bi-directional Devices
"A" Suffix Designates 5% Tolerance Devices
No Suffix Designates 10% Tolerance Devices

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation at T_A = 25°C (Note 1, 2, 5) Figure 3	P_{PPM}	200	W
Peak Forward Surge Current (Note 3)	I_{FSM}	30	A
Peak Pulse Current on 10/1000μS Waveform (Note 1) Figure 1	I_{PPM}	See Table 1	A
Steady State Power Dissipation (Note 2, 4)	$P_{M(AV)}$	1.0	W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150	°C

Note: 1. Non-repetitive current pulse, per Figure 1 and derated above T_A = 25°C per Figure 4.
2. Mounted on 40mm^2 copper pad.
3. 8.3ms single half sine-wave duty cycle = 4 pulses per minutes maximum.
4. Lead temperature at 75°C = T_L.
5. Peak pulse power waveform is 10/1000μS.

Ratings and Characteristic Curves T_A=25°C unless otherwise noted

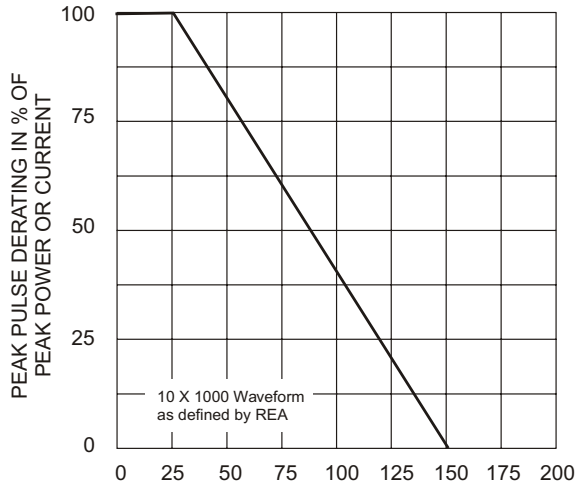


Fig. 1 Pulse Derating Curve

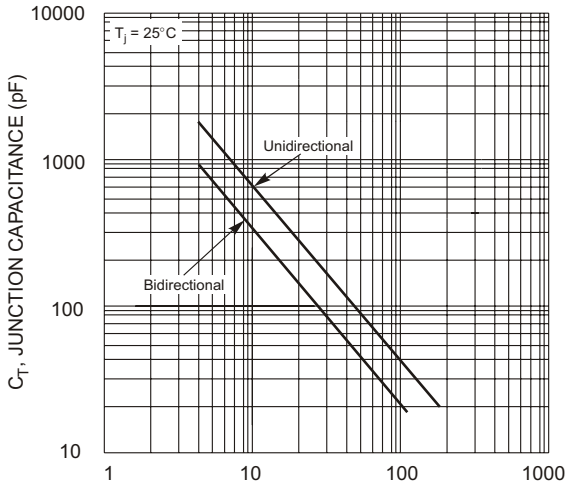


Fig. 2 Typical Total Capacitance

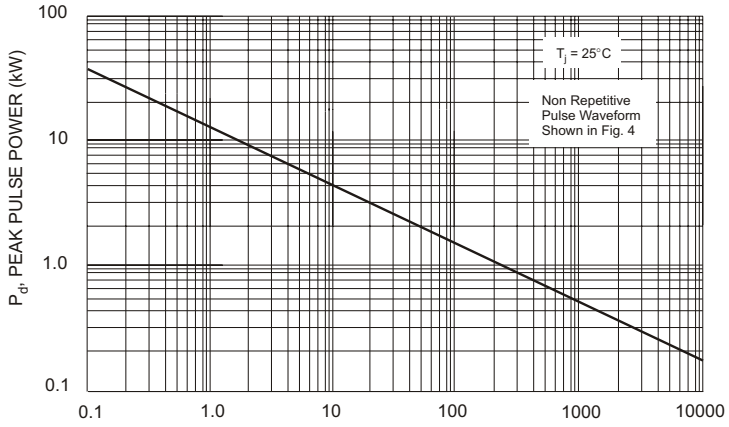


Fig. 3 Pulse Rating Curve

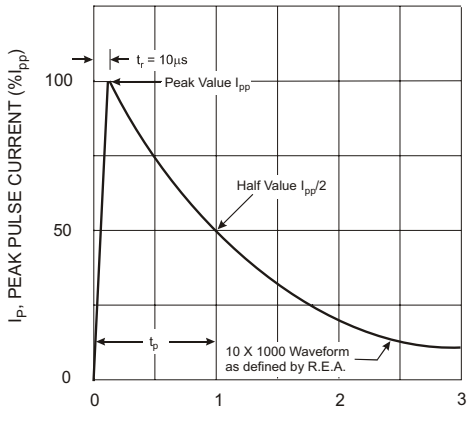


Fig. 4 Pulse Waveform

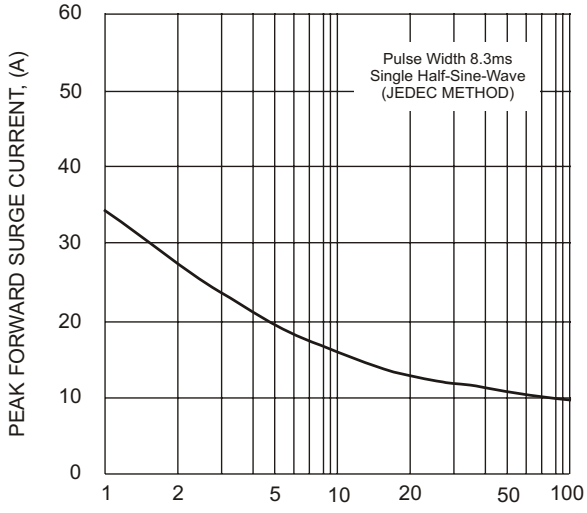


Fig. 5 Maximum Non-Repetitive Surge Current

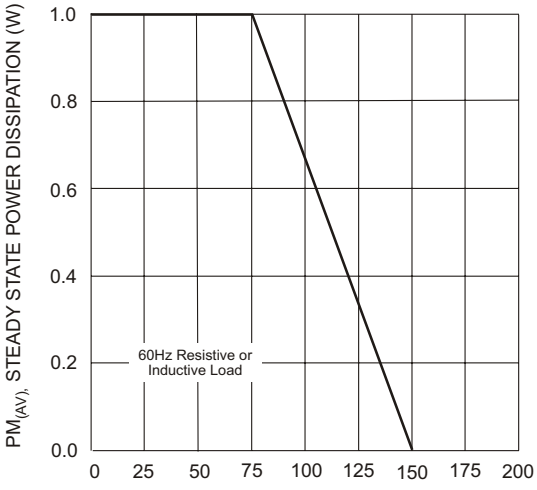


Fig. 6 Steady State Power Derating Curve

Electrical Specification @ Ta=25°C

Type Number		Marking		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I_T	Breakdown Voltage Max. @ I_T	Test Current	Clamping Voltage	Peak Pulse Current	Reverse Leakage @V_{RMW}
Uni	Bi	Uni	Bi	V_{RMW}(V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
SMF5.0A	SMF5.0CA	5.0A	5.0CA	5.0	6.40	7.25	10	9.2	21.7	400.0
SMF6.0A	SMF6.0CA	6.0A	6.0CA	6.0	6.67	7.67	10	10.3	19.4	400.0
SMF6.5A	SMF6.5CA	6.5A	6.5CA	6.5	7.22	8.30	10	11.2	17.9	250.0
SMF7.0A	SMF7.0CA	7.0A	7.0CA	7.0	7.78	8.95	10	12	16.7	100.0
SMF7.5A	SMF7.5CA	7.5A	7.5CA	7.5	8.33	9.58	1.0	12.9	15.5	50.0
SMF8.0A	SMF8.0CA	8.0A	8.0CA	8.0	8.89	10.23	1.0	13.6	14.7	25.0
SMF8.5A	SMF8.5CA	8.5A	8.5CA	8.5	9.44	10.82	1.0	14.4	13.9	10.0
SMF9.0A	SMF9.0CA	9.0A	9.0CA	9.0	10.0	11.5	1.0	15.4	13	5.0
SMF10A	SMF10CA	10A	10CA	10	11.1	12.8	1.0	17	11.8	2.5
SMF11A	SMF11CA	11A	11CA	11	12.2	14.0	1.0	18.2	11	2.5
SMF12A	SMF12CA	12A	12CA	12	13.3	15.3	1.0	19.9	10.1	2.5
SMF13A	SMF13CA	13A	13CA	13	14.4	16.5	1.0	21.5	9.3	1.0
SMF14A	SMF14CA	14A	14CA	14	15.6	17.9	1.0	23.2	8.6	1.0
SMF15A	SMF15CA	15A	15CA	15	16.7	19.2	1.0	24.4	8.2	1.0
SMF16A	SMF16CA	16A	16CA	16	17.8	20.5	1.0	26	7.7	1.0
SMF17A	SMF17CA	17A	17CA	17	18.9	21.7	1.0	27.6	7.2	1.0
SMF18A	SMF18CA	18A	18CA	18	20.0	23.3	1.0	29.2	6.8	1.0
SMF20A	SMF20CA	20A	20CA	20	22.2	25.5	1.0	32.4	6.2	1.0
SMF22A	SMF22CA	22A	22CA	22	24.4	28.0	1.0	35.5	5.6	1.0
SMF24A	SMF24CA	24A	24CA	24	26.7	30.7	1.0	38.9	5.1	1.0
SMF26A	SMF26CA	26A	26CA	26	28.9	33.2	1.0	42.1	4.8	1.0
SMF28A	SMF28CA	28A	28CA	28	31.1	35.8	1.0	45.4	4.4	1.0
SMF30A	SMF30CA	30A	30CA	30	33.3	38.3	1.0	48.4	4.1	1.0
SMF33A	SMF33CA	33A	33CA	33	36.7	42.2	1.0	53.3	3.8	1.0
SMF36A	SMF36CA	36A	36CA	36	40.0	46.0	1.0	58.1	3.4	1.0
SMF40A	SMF40CA	40A	40CA	40	44.4	51.1	1.0	64.5	3.1	1.0
SMF43A	SMF43CA	43A	43CA	43	47.8	54.9	1.0	69.4	2.9	1.0
SMF45A	SMF45CA	45A	45CA	45	50.0	57.5	1.0	72.7	2.8	1.0
SMF48A	SMF48CA	48A	48CA	48	53.3	61.3	1.0	77.4	2.6	1.0
SMF51A	SMF51CA	51A	51CA	51	56.7	65.2	1.0	82.4	2.4	1.0
SMF54A	SMF54CA	54A	54CA	54	60.0	69.0	1.0	87.1	2.3	1.0
SMF58A	SMF58CA	58A	58CA	58	64.4	74.1	1.0	93.6	2.1	1.0
SMF60A	SMF60CA	60A	60CA	60	66.7	76.7	1.0	96.8	1.8	1.0
SMF64A	SMF64CA	64A	64CA	64	71.1	81.8	1.0	103	1.7	1.0
SMF70A	SMF70CA	70A	70CA	70	77.8	89.5	1.0	113	1.5	1.0
SMF75A	SMF75CA	75A	75CA	75	83.3	95.8	1.0	121	1.4	1.0
SMF78A	SMF78CA	78A	78CA	78	86.7	99.7	1.0	126	1.4	1.0

※ For Bi-directional type having VRWM of 10 Volts and less, the IR limit is double

Notes: 1. Suffix C denotes Bi-directional device.

2. V_{BR} measured with I_T current pulse = 300μs

3. For Bi-Directional devices having V_{RWM} of 10V and under, the I_R is doubled.

Electrical Specification @ Ta=25°C

Type Number		Marking		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I_T	Breakdown Voltage Max. @ I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RMW}
Uni	Bi	Uni	Bi	V_{RMW}(V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
SMF85A	SMF85CA	85A	85CA	85	94.4	108.2	1.0	137	1.3	1.0
SMF90A	SMF90CA	90A	90CA	90	100.0	115.5	1.0	146	1.2	1.0
SMF100A	SMF100CA	100	100C	100	111.0	128.0	1.0	162	1.1	1.0
SMF110A	SMF110CA	110	110C	110	122.0	140.5	1.0	177	1.0	1.0
SMF120A	SMF120CA	120	120C	120	133.0	153.0	1.0	193	0.9	1.0
SMF130A	SMF130CA	130	130C	130	144.0	165.5	1.0	209	0.8	1.0
SMF150A	SMF150CA	150	150C	150	167.0	192.5	1.0	243	0.7	1.0
SMF160A	SMF160CA	160	160C	160	178.0	205.0	1.0	259	0.7	1.0
SMF170A	SMF170CA	170	170C	170	189.0	217.5	1.0	275	0.6	1.0
SMF180A	SMF180CA	180	180C	180	198.0	230.4	1.0	292	0.6	1.0
SMF190A	SMF190CA	190	190C	190	209.0	243.2	1.0	308	0.5	1.0

※ For Bi-directional type having VRWM of 10 Volts and less, the IR limit is double

Notes: 1. Suffix C denotes Bi-directional device.
2. V_{BR} measured with I_T current pulse = 300μs
3. For Bi-Directional devices having V_{RWM} of 10V and under, the I_R is doubled.