

Surface Mount Transient Voltage Suppressor

Stand-Off Voltage - 5.0 to 180 Volts

PMF(200W) Series

Features

- For surface mounted applications in order to optimize board space
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Excellent clamping capability
- Repetition Rate (duty cycle):0.01%
- Fast response time: typically less than 1.0ps from 0 Volts to V(BR) for unidirectional types
- Typical IR less than 1μA above 10V
- High Temperature soldering: 260°C/10 seconds at terminals
- Plastic package has Underwriters Laboratory Flammability 94V-O
- Pb-free plated

Mechanical Data

- **Case:** JEDEC SOD-123 molded plastic over passivated chip
- **Terminals:** Solder plated, solderable per MIL-STD-750 Method 2026
- **Polarity:** For uni-directional types the bandby laser denotes the cathode, which is positive with respect to the anode under normal TVS operation

Devices For Bipolar Application

- For Bidirectional use C or CA Suffix for types PMF5.0 thru types PMF170 (e.g. PMF5.0C , PMF170CA)
- Electrical characteristics apply in both directions

Maximum Ratings And Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000μs waveform (Note 1,2 ,FIG.1)	P _{PPM}	200	Watts
Peak Pulse Current of on 10/1000μs waveform (Note 1,FIG.3)	I _{PPM}	SEE TABLE 1	Amps
Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed on Rated Load,(JEDEC Method) (Note2,3)	I _{FSM}	30	Amps
Operating junction and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

Notes :

- 1.Non-repetitive current pulse , per Fig. 3 and derated above TA = 25°C per Fig. 2 .
- 2.Mounted on 5.0mm x 5.0mm (0.03mm thick) Copper Pads to each terminal
- 3.8.3ms single half sine-wave , or equivalent square wave, Duty cycle = 4 pulses per minutes maximum.



Electrical Characteristics

PMF Part Number		Device Marking Code		Reverse Stand-Off Voltage	Breakdown Voltage @IT	Breakdown Voltage @IT	Test Current	Maximum Clamping Voltage @Ipp	Peak Pulse Current	Reverse Leakage @VRWM
UNI-Polar	BI-Polar	UNI	BI	VRWM(V)	VBR(V)Min.	VBR(V)Max.	IT(mA)	Vc(V)	Ipp(A)	IR(μA)
* SMF5.0A	SMF5.0CA	AE	WE	5.0	6.40	7.00	10	9.2	21.70	400
SMF6.0A	* SMF6.0CA	AG	WG	6.0	6.67	7.37	10	10.3	19.40	400
SMF6.5A	SMF6.5CA	AK	WK	6.5	7.22	7.98	10	11.2	17.90	250
SMF7.0A	SMF7.0CA	AM	WM	7.0	7.78	8.60	10	12.0	16.70	100
SMF7.5A	SMF7.5CA	AP	WP	7.5	8.33	9.21	1	12.9	15.50	50
SMF8.0A	SMF8.0CA	AR	WR	8.0	8.89	9.83	1	13.6	14.70	25
SMF8.5A	SMF8.5CA	AT	WT	8.5	9.44	10.40	1	14.4	13.90	10
SMF9.0A	SMF9.0CA	AV	WV	9.0	10.00	11.10	1	15.4	13.00	5
SMF10A	SMF10CA	AX	WX	10.0	11.10	12.30	1	17.0	11.80	2
SMF11A	SMF11CA	AZ	WZ	11.0	12.20	13.50	1	18.2	11.00	2
SMF12A	* SMF12CA	BE	XE	12.0	13.30	14.70	1	19.9	10.10	2
SMF13A	SMF13CA	BG	XG	13.0	14.40	15.90	1	21.5	9.30	1
SMF14A	SMF14CA	BK	XK	14.0	15.60	17.20	1	23.2	8.62	1
SMF15A	SMF15CA	BM	XM	15.0	16.70	18.50	1	24.4	8.20	1
SMF16A	SMF16CA	BP	XP	16.0	17.80	19.70	1	26.0	7.69	1
SMF17A	SMF17CA	BR	XR	17.0	18.90	20.90	1	27.6	7.25	1
SMF18A	SMF18CA	BT	XT	18.0	20.00	22.10	1	29.2	6.85	1
SMF19A	SMF19CA	BU	XU	19.0	21.10	23.30	1	30.6	6.54	1
SMF20A	SMF20CA	BV	XV	20.0	22.22	24.50	1	32.4	6.17	1
SMF22A	SMF22CA	BX	XY	22.0	24.40	26.90	1	35.5	5.63	1
SMF24A	* SMF24CA	BZ	XZ	24.0	26.7	29.50	1	38.9	5.14	1
SMF26A	SMF26CA	CE	YE	26.0	28.90	31.90	1	42.1	4.75	1
SMF28A	SMF28CA	CG	YG	28.0	31.10	34.40	1	45.4	4.41	1
SMF30A	* SMF30CA	CK	YK	30.0	33.30	36.80	1	48.4	4.13	1
SMF33A	SMF33CA	CM	YM	33.0	36.70	40.60	1	53.3	3.75	1

Notes :

1. For bidirectional type having VRWM of 10 volts and less, the IR limit is double
2. For parts with A , the VBR is ± 5%

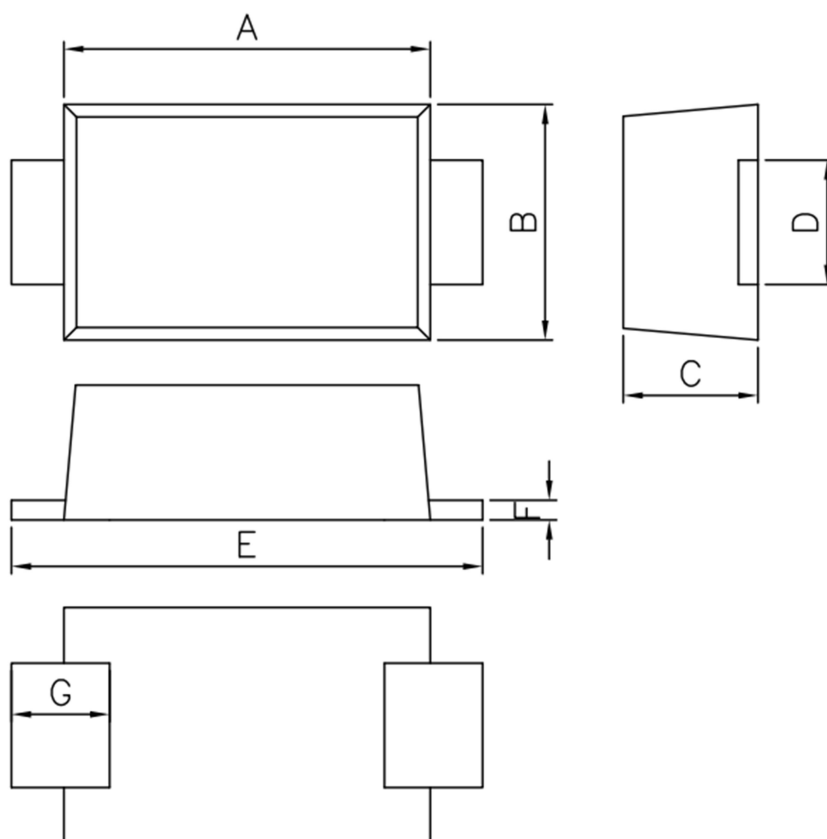
Electrical Characteristics

Part Number		Device Marking Code		Reverse Stand-Off Voltage	Breakdown Voltage @IT	Breakdown Voltage @IT	Test Current	Maximum Clamping Voltage @Ipp	Peak Pulse Current	Reverse Leakage @VRWM
UNI-Polar	BI-Polar	UNI	BI	VRWM(V)	VBR(V)Min.	VBR(V)Max.	IT(mA)	Vc(V)	Ipp(A)	IR(μA)
SMF36A	* SMF36CA	CP	YP	36.0	40.00	44.20	1	58.1	3.44	1
SMF40A	SMF40CA	CR	YR	40.0	44.40	49.10	1	64.5	3.10	1
SMF43A	SMF43CA	CT	YT	43.0	47.80	52.80	1	69.4	2.88	1
SMF45A	SMF45CA	CV	YV	45.0	50.00	55.30	1	72.7	2.75	1
SMF48A	SMF48CA	CX	YX	48.0	53.30	58.90	1	77.4	2.58	1
SMF51A	SMF51CA	CZ	YZ	51.0	56.70	62.70	1	82.4	2.43	1
SMF54A	SMF54CA	RE	ZE	54.0	60.00	66.30	1	87.1	2.30	1
SMF58A	* SMF58CA	RG	ZG	58.0	64.40	71.20	1	93.6	2.14	1
SMF60A	SMF60CA	RK	ZK	60.0	66.70	73.70	1	96.8	2.07	1
SMF64A	SMF64CA	RM	ZM	64.0	71.10	78.60	1	103.0	1.94	1
SMF70A	SMF70CA	RP	ZP	70.0	77.80	86.00	1	113.0	1.77	1
SMF75A	SMF75CA	RR	ZR	75.0	83.30	92.10	1	121.0	1.65	1
SMF78A	SMF78CA	RT	ZT	78.0	86.70	95.80	1	126.0	1.59	1
SMF80A	SMF80CA	RU	ZU	80.0	88.80	97.60	1	129.0	1.55	1
SMF85A	SMF85CA	RV	ZV	85.0	94.40	104.00	1	137.0	1.46	1
SMF90A	SMF90CA	RX	ZX	90.0	100.00	111.00	1	146.0	1.37	1
SMF100A	SMF100CA	RZ	ZZ	100.0	111.00	123.00	1	162.0	1.23	1
SMF110A	SMF110CA	SE	VE	110.0	122.00	135.00	1	177.0	1.13	1
SMF120A	SMF120CA	SG	VG	120.0	133.00	147.00	1	193.0	1.04	1
SMF130A	SMF130CA	SK	VK	130.0	144.00	159.00	1	209.0	0.96	1
SMF140A	SMF140CA	SL	VL	140.0	155.00	171.00	1	224.0	0.89	1
SMF150A	SMF150CA	SM	VM	150.0	167.00	185.00	1	243.0	0.82	1
SMF160A	SMF160CA	SP	VP	160.0	178.00	197.00	1	259.0	0.77	1
SMF170A	SMF170CA	SR	VR	170.0	189.00	209.00	1	275.0	0.73	1
SMF180A	SMF180CA	ST	VT	180.0	200.00	220.00	1	290.0	0.69	1

Notes :

- 1.For bidirectional type having VRWM of 10 volts and less, the IR limit is double
- 2.For parts with A , the VBR is ± 5%

Dimensions (SOD-123FL)



SYMBOL	MILLIMETERS		
	Normal	MIN	MAX
A	2.80	2.75	2.85
B	1.80	1.75	1.85
C	1.03	1.00	1.06
D	0.95	0.90	1.00
E	3.60	3.50	3.70
F	0.15	0.13	0.17
G	0.75		