

Surface Mount Transient Voltage Suppressors (TVS)

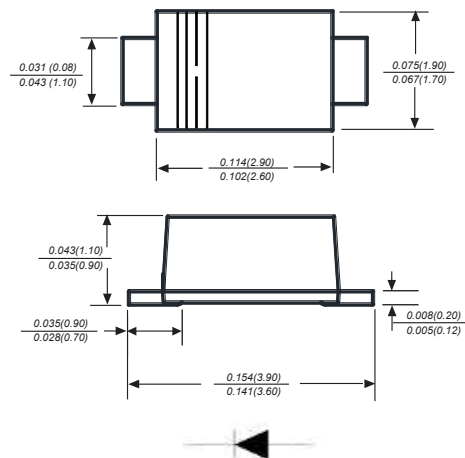
Features

- For surface mounted applications
- Low profile package
- Low incremental surge resistance, excellent clamping capability
- 200W peak pulse power capability with a10/1000 μ s wave from, repetition rate (duty cycle):0.01%
- High temperature soldering guaranteed:
260 $^{\circ}$ C /10 seconds, at terminals

Mechanical Data

- Case: JEDEC SOD-123FL, molded plastic over passivated chip
- Polarity: Color band denotes positive end (cathode) except for bidirectional
- Mounting position: Any
- Weight:0.0007 ounce, 0.02 grams

SOD-123FL



Dimensions in inches and (millimeters)

Maximum Ratings $T_A = 25^{\circ}\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Maximum P_{PK} Dissipation (PW - 10/1000 μ s)	P_{PK}	200	W
Maximum P_{PK} Dissipation @ $T_A = 25^{\circ}\text{C}$ (PW - 8/10 μ s) (Note 2)	P_{PK}	1000	W
DC Power Dissipation @ $T_A = 25^{\circ}\text{C}$ (Note 3)	P_D	385	mW
Derate above 25°C		4.0	mW/ $^{\circ}\text{C}$
Thermal Resistance, Junction to Ambient (Note 3)	$R_{\theta JA}$	325	$^{\circ}\text{C}/\text{W}$
Thermal Resistance, Junction to Lead (Note 3)	$R_{\theta JL}$	26	$^{\circ}\text{C}/\text{W}$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^{\circ}\text{C}$

Notes :

- (1) Non-repetitive current pulse at $T_A = 25^{\circ}\text{C}$, per waveform of Fig. 2.
- (2) Non-repetitive current pulse at $T_A = 25^{\circ}\text{C}$, per waveform of Fig. 5.
- (3) Mounted with recommended minimum pad size, DC board FR4.

ELECTRICAL CHARACTERISTICS $T_A = 25^\circ\text{C}$, continued

Type		Marking		Reverse Stand-Off Voltage	Breakdown Voltage Min. @ I_T	Breakdown Voltage Max. @ I_T	Test Current	Reverse Leakage @ V_{RWM}	Maximum Clamping Voltage @ I_{PP}	Peak Pulse Current
(Uni)	(Bi)	(Uni)	(Bi)	$V_{RWM}(V)$	$V_{BR\ MIN}(V)$	$V_{BR\ MAX}(V)$	$I_T(mA)$	$I_R(\mu A)$	$V_C(V)$	$I_{PP}(mA)$
MMF5.0A	MMF5.0CA	KE	EE	5.0	6.40	7.00	10	400	9.2	21.7
MMF6.0A	MMF6.0CA	KG	FG	6.0	6.67	7.37	10	400	10.3	19.4
MMF6.5A	MMF6.5CA	KK	FK	6.5	7.22	7.98	10	250	11.2	17.9
MMF7.0A	MMF7.0CA	KM	FM	7.0	7.78	8.60	10	100	12.0	16.7
MMF7.5A	MMF7.5CA	KP	FP	7.5	8.33	9.21	1.0	50	12.9	15.5
MMF8.0A	MMF8.0CA	KR	FR	8.0	8.89	9.83	1.0	25	13.6	14.7
MMF8.5A	MMF8.5CA	KT	FT	8.5	9.44	10.4	1.0	10	14.4	13.9
MMF9.0A	MMF9.0CA	KV	FV	9.0	10.0	11.1	1.0	5.0	15.4	13.0
MMF10A	MMF10CA	KX	FX	10	11.1	12.3	1.0	2.5	17.0	11.8
MMF11A	MMF11CA	KZ	FZ	11	12.2	13.5	1.0	2.5	18.2	11.0
MMF12A	MMF12CA	LE	HE	12	13.3	14.7	1.0	2.5	19.9	10.1
MMF13A	MMF13CA	LG	HG	13	14.4	15.9	1.0	1.0	21.5	9.3
MMF14A	MMF14CA	LK	HK	14	15.6	17.2	1.0	1.0	23.2	8.6
MMF15A	MMF15CA	LM	HM	15	16.7	18.5	1.0	1.0	24.4	8.2
MMF16A	MMF16CA	LP	HP	16	17.8	19.7	1.0	1.0	26.0	7.7
MMF17A	MMF17CA	LR	HR	17	18.9	20.9	1.0	1.0	27.6	7.2
MMF18A	MMF18CA	LT	HT	18	20.0	22.1	1.0	1.0	29.2	6.8
MMF20A	MMF20CA	LV	HV	20	22.2	24.5	1.0	1.0	32.4	6.2
MMF22A	MMF22CA	LX	HX	22	24.4	26.9	1.0	1.0	35.5	5.6
MMF24A	MMF24CA	LZ	HZ	24	26.7	29.5	1.0	1.0	38.9	5.1
MMF26A	MMF26CA	ME	JE	26	28.9	31.9	1.0	1.0	42.1	4.8
MMF28A	MMF28CA	MG	JG	28	31.1	34.4	1.0	1.0	45.4	4.4
MMF30A	MMF30CA	MK	JK	30	33.3	36.8	1.0	1.0	48.4	4.1
MMF33A	MMF33CA	MM	JM	33	36.7	40.6	1.0	1.0	53.3	3.8
MMF36A	MMF36CA	MP	JP	36	40.0	44.2	1.0	1.0	58.1	3.4
MMF40A	MMF40CA	MR	JR	40	44.4	49.1	1.0	1.0	64.5	3.1
MMF43A	MMF43CA	MT	JT	43	47.8	52.8	1.0	1.0	69.4	2.9
MMF45A	MMF45CA	MV	JV	45	50.0	55.3	1.0	1.0	72.7	2.8
MMF48A	MMF48CA	MX	JX	48	53.3	58.9	1.0	1.0	77.4	2.6
MMF51A	MMF51CA	MZ	JZ	51	56.7	62.7	1.0	1.0	82.4	2.4
MMF54A	MMF54CA	NE	XE	54	60.0	66.3	1.0	1.0	87.1	2.3
MMF58A	MMF58CA	NG	XG	58	64.4	71.2	1.0	1.0	93.6	2.1
MMF60A	MMF60CA	NK	XK	60	66.7	73.7	1.0	1.0	96.8	1.8
MMF64A	MMF64CA	NM	XM	64	71.1	78.6	1.0	1.0	103	1.7
MMF70A	MMF70CA	NP	XP	70	77.8	86.0	1.0	1.0	113	1.5
MMF75A	MMF75CA	NR	XR	75	83.3	92.1	1.0	1.0	121	1.4
MMF78A	MMF78CA	NT	XT	78	86.7	95.8	1.0	1.0	126	1.4
MMF85A	MMF85CA	NV	XB	85	94.4	104	1.0	1.0	137	1.3
MMF90A	MMF90CA	NX	XX	90	100	111	1.0	1.0	146	1.2
MMF100A	MMF100CA	NZ	XZ	100	111	123	1.0	1.0	162	1.1
MMF110A	MMF110CA	PE	TE	110	122	135	1.0	1.0	177	1.0
MMF120A	MMF120CA	PG	TG	120	133	147	1.0	1.0	193	0.9
MMF130A	MMF130CA	PK	TK	130	144	159	1.0	1.0	209	0.8
MMF150A	MMF150CA	PM	TM	150	167	185	1.0	1.0	243	0.7
MMF160A	MMF160CA	PP	TP	160	178	197	1.0	1.0	259	0.7
MMF170A	MMF170CA	PR	TR	170	189	209	1.0	1.0	275	0.6

Characteristic Curves $T_A = 25^\circ\text{C}$ unless otherwise noted

FIG.1 - PULSE DERATING CURVE

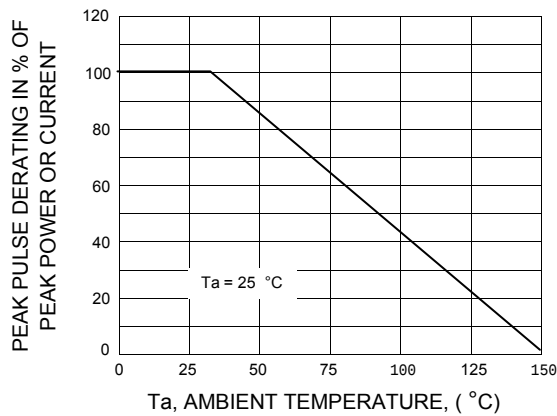


FIG.2 - 10 x 1000 μs PULSE WAVEFORM

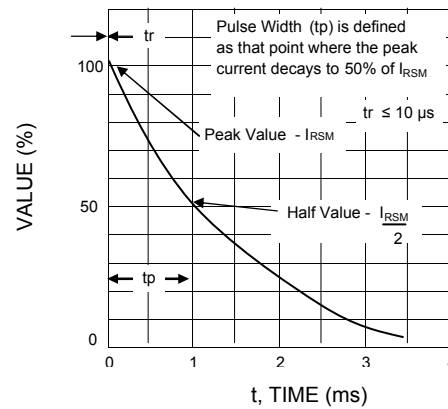


FIG.3 - STEADY STATE POWER DERATING

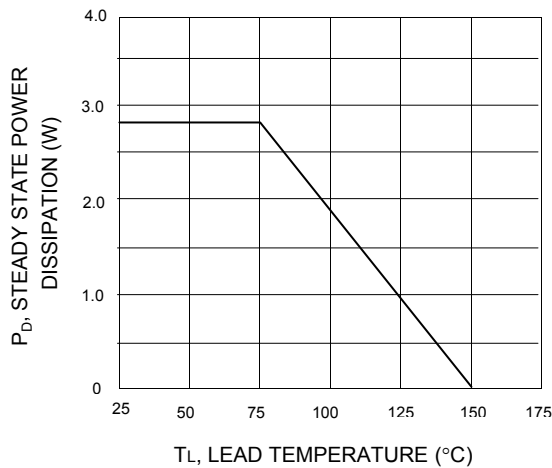


FIG.4 - PULSE RATING CURVE

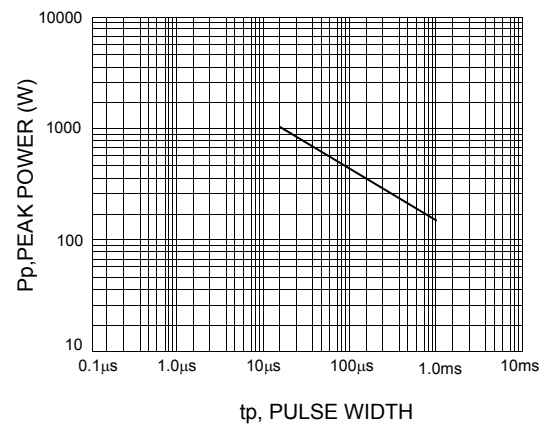


FIG.5 - 8 x 20 μs PULSE WAVEFORM

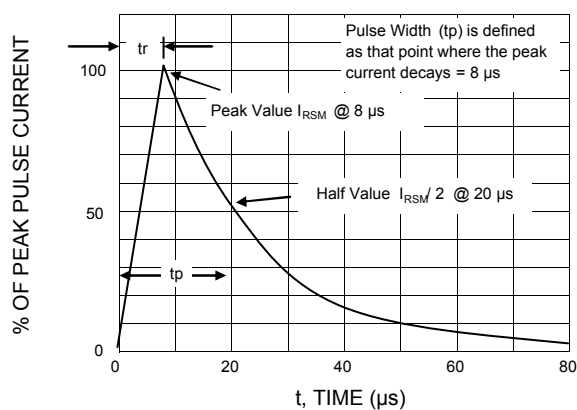
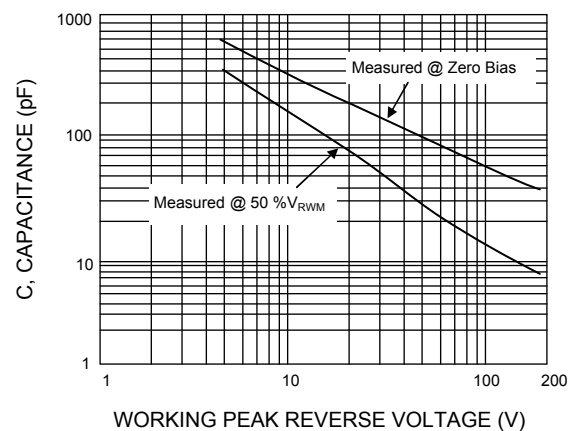
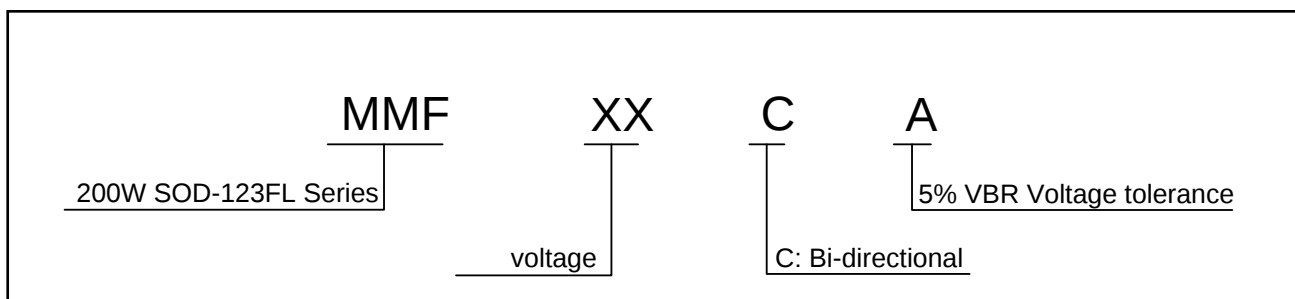


FIG. 6 - CAPACITANCE VS. WORKING PEAK REVERSE VOLTAGE



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