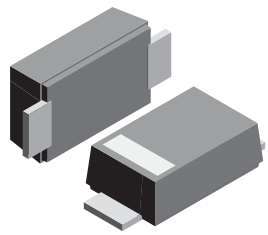
MMF5.0A(CA) - MMF170A(CA)

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR DIODE

VOLTAGE RANGE: 5.0 - 170V
POWER: 200Watts



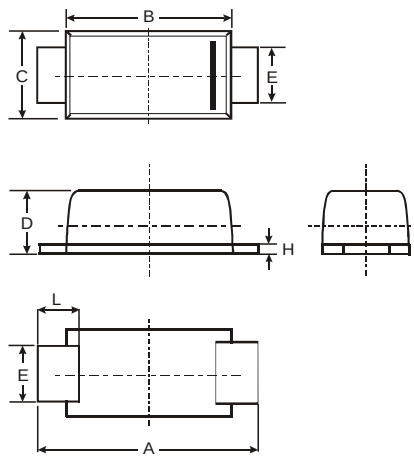
Features

- For surface mounted applications
- Low profile package
- Low incremental surge resistance, excellent clamping capability
- 200W peak pulse power capability with a10/1000 wave from,repetition rate (dutycycle):0.01%
- High temperature soldering guaranteed:
  260 °C/10 seconds, at terminals

Mechanical Data

- Case: SOD-123FL
  plastic body over passivated junction
- Terminals : Plated axial leads,
- solderable per MIL-STD-750,Method 2026
- Polarity : Color band denotes cathode end
- Mounting Position : Any
- Weight:0.0007 ounce, 0.02 grams

RoHS COMPLIANT



SOD-123FL			
Dim	Min	Max	Typ
A	3.58	3.72	3.65
B	2.72	2.78	2.75
C	1.77	1.83	1.80
D	1.02	1.08	1.05
E	0.097	1.03	1.00
H	0.13	0.17	0.15
L	0.53	0.57	0.55
All Dimensions in mm			

Maximum Ratings T_A = 25°C unless otherwise specified

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

Notes :

(1) Non−repetitive current pulse at Ta = 25°C, per waveform of Fig. 2.
(2) Non−repetitive current pulse at Ta = 25°C, per waveform of Fig. 5.
(3) Mounted with recommended minimum pad size, DC board FR4.

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(uA)	V_C(V)	I_{PP}(mA)
MMF5.0A	**MMF5.0CA**	KE	FE	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

RATING AND CHARACTERISTIC CURVES (MMF5.0A - MMF170A)

FIG.1 - PULSE DERATING CURVE

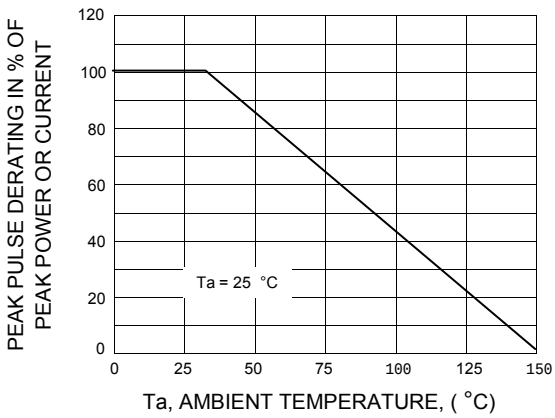


FIG.2 - 10 x 1000 µs PULSE WAVEFORM

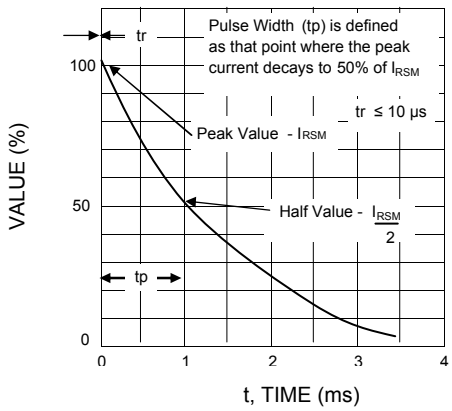


FIG.3 - STEADY STATE POWER DERATING

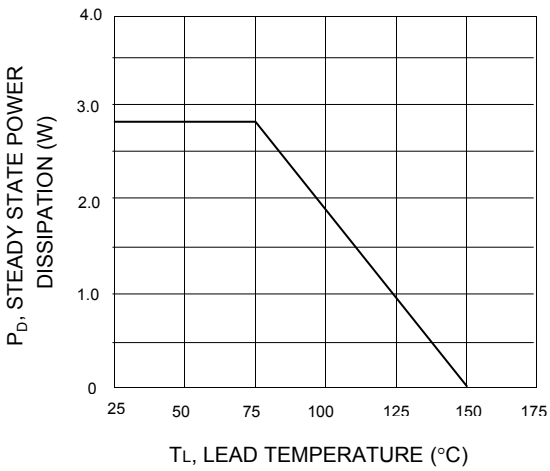


FIG.4 - PULSE RATING CURVE

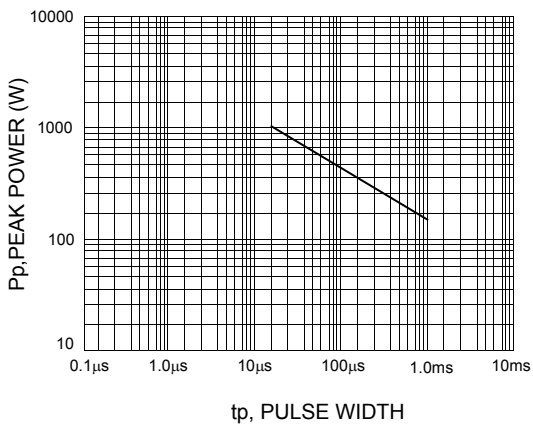


FIG.5 - 8 x 20 µs PULSE WAVEFORM

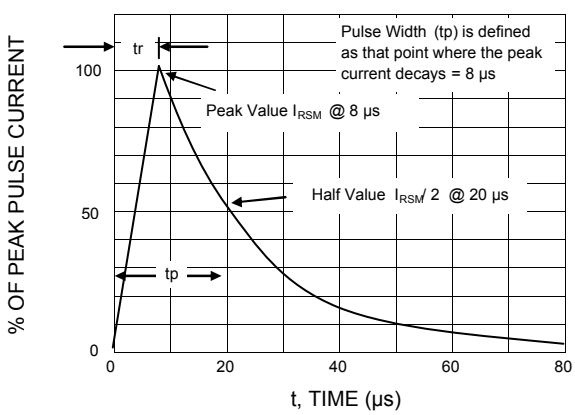
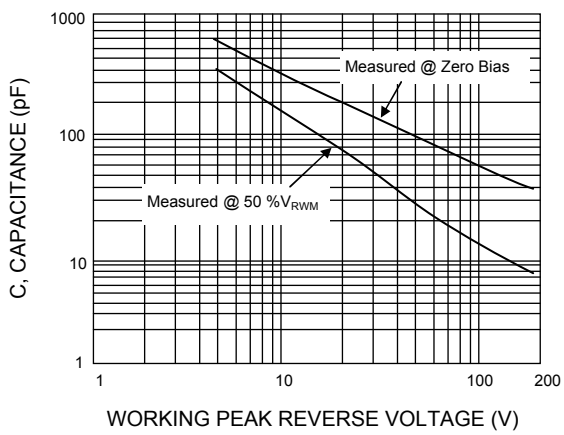



FIG. 6 - CAPACITANCE VS. WORKING PEAK REVERSE VOLTAGE