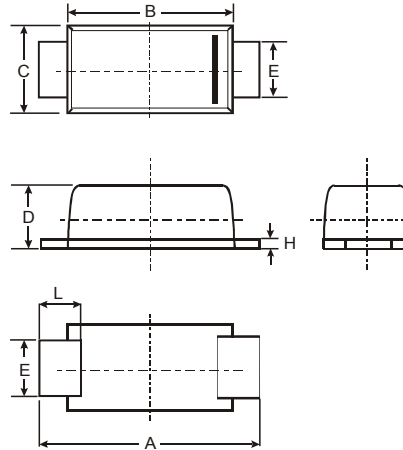


SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR DIODE

SMFJ5.0A - SMFJ170CA iS Electronics

Features

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



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			

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: 0.006 ounces, 0.02 gram

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 FR-4.



TYPE 型号		Reverse Stand-Off Voltage 反向对峙电压	Breakdown Voltage Min. @I _T 崩溃电压 (最小)	Breakdown Voltage Max. @ I _T 崩溃电压 (最大)	Test Current 测试电流	Reverse Leakage @V _{RWM} 反向漏电	Maximum Clamping Voltage@I _{PP} 最大嵌位电压	Peak Pulse Current 峰值脉冲电流
(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)
SMFJ5.0A	SMFJ5.0CA	5.0	6.40	7.00	10	400	9.2	21.7
SMFJ6.0A	SMFJ6.0CA	6.0	6.67	7.37	10	400	10.3	19.4
SMFJ6.5A	SMFJ6.5CA	6.5	7.22	7.98	10	250	11.2	17.9
SMFJ7.0A	SMFJ7.0CA	7.0	7.78	8.60	10	100	12.0	16.7
SMFJ7.5A	SMFJ7.5CA	7.5	8.33	9.21	1.0	50	12.9	15.5
SMFJ8.0A	SMFJ8.0CA	8.0	8.89	9.83	1.0	25	13.6	14.7
SMFJ8.5A	SMFJ8.5CA	8.5	9.44	10.4	1.0	10	14.4	13.9
SMFJ9.0A	SMFJ9.0CA	9.0	10.0	11.1	1.0	5.0	15.4	13.0
SMFJ10A	SMFJ10CA	10	11.1	12.3	1.0	2.5	17.0	11.8
SMFJ11A	SMFJ11CA	11	12.2	13.5	1.0	2.5	18.2	11.0
SMFJ12A	SMFJ12CA	12	13.3	14.7	1.0	2.5	19.9	10.1
SMFJ13A	SMFJ13CA	13	14.4	15.9	1.0	1.0	21.5	9.3
SMFJ14A	SMFJ14CA	14	15.6	17.2	1.0	1.0	23.2	8.6
SMFJ15A	SMFJ15CA	15	16.7	18.5	1.0	1.0	24.4	8.2
SMFJ16A	SMFJ16CA	16	17.8	19.7	1.0	1.0	26.0	7.7
SMFJ17A	SMFJ17CA	17	18.9	20.9	1.0	1.0	27.6	7.2
SMFJ18A	SMFJ18CA	18	20.0	22.1	1.0	1.0	29.2	6.8
SMFJ20A	SMFJ20CA	20	22.2	24.5	1.0	1.0	32.4	6.2
SMFJ22A	SMFJ22CA	22	24.4	26.9	1.0	1.0	35.5	5.6
SMFJ24A	SMFJ24CA	24	26.7	29.5	1.0	1.0	38.9	5.1
SMFJ26A	SMFJ26CA	26	28.9	31.9	1.0	1.0	42.1	4.8
SMFJ28A	SMFJ28CA	28	31.1	34.4	1.0	1.0	45.4	4.4
SMFJ30A	SMFJ30CA	30	33.3	36.8	1.0	1.0	48.4	4.1
SMFJ33A	SMFJ33CA	33	36.7	40.6	1.0	1.0	53.3	3.8
SMFJ36A	SMFJ36CA	36	40.0	44.2	1.0	1.0	58.1	3.4
SMFJ40A	SMFJ40CA	40	44.4	49.1	1.0	1.0	64.5	3.1
SMFJ43A	SMFJ43CA	43	47.8	52.8	1.0	1.0	69.4	2.9
SMFJ45A	SMFJ45CA	45	50.0	55.3	1.0	1.0	72.7	2.8
SMFJ48A	SMFJ48CA	48	53.3	58.9	1.0	1.0	77.4	2.6
SMFJ51A	SMFJ51CA	51	56.7	62.7	1.0	1.0	82.4	2.4
SMFJ54A	SMFJ54CA	54	60.0	66.3	1.0	1.0	87.1	2.3
SMFJ58A	SMFJ58CA	58	64.4	71.2	1.0	1.0	93.6	2.1
SMFJ60A	SMFJ60CA	60	66.7	73.7	1.0	1.0	96.8	1.8
SMFJ64A	SMFJ64CA	64	71.1	78.6	1.0	1.0	103	1.7
SMFJ70A	SMFJ70CA	70	77.8	86.0	1.0	1.0	113	1.5
SMFJ75A	SMFJ75CA	75	83.3	92.1	1.0	1.0	121	1.4
SMFJ78A	SMFJ78CA	78	86.7	95.8	1.0	1.0	126	1.4
SMFJ85A	SMFJ85CA	85	94.4	104	1.0	1.0	137	1.3
SMFJ90A	SMFJ90CA	90	100	111	1.0	1.0	146	1.2
SMFJ100A	SMFJ100CA	100	111	123	1.0	1.0	162	1.1
SMFJ110A	SMFJ110CA	110	122	135	1.0	1.0	177	1.0
SMFJ120A	SMFJ120CA	120	133	147	1.0	1.0	193	0.9
SMFJ130A	SMFJ130CA	130	144	159	1.0	1.0	209	0.8
SMFJ150A	SMFJ150CA	150	167	185	1.0	1.0	243	0.7
SMFJ160A	SMFJ160CA	160	178	197	1.0	1.0	259	0.7
SMFJ170A	SMFJ170CA	170	189	209	1.0	1.0	275	0.6



FIG.1 - PULSE DERATING CURVE

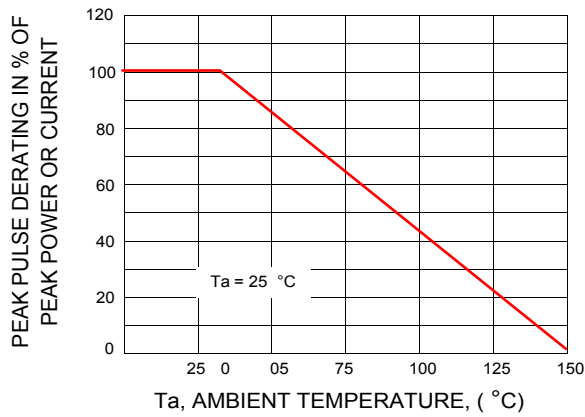


FIG.2 - 10 x 1000 μs PULSE WAVEFORM

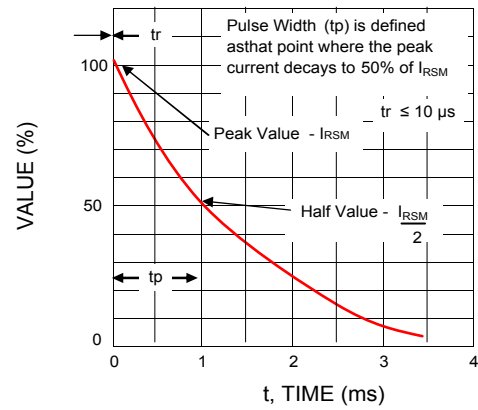


FIG.3 - STEADY STATE POWER DERATING

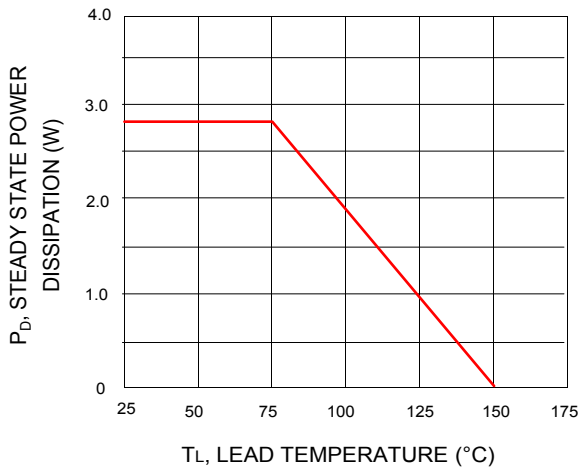


FIG.4 - PULSE RATING CURVE

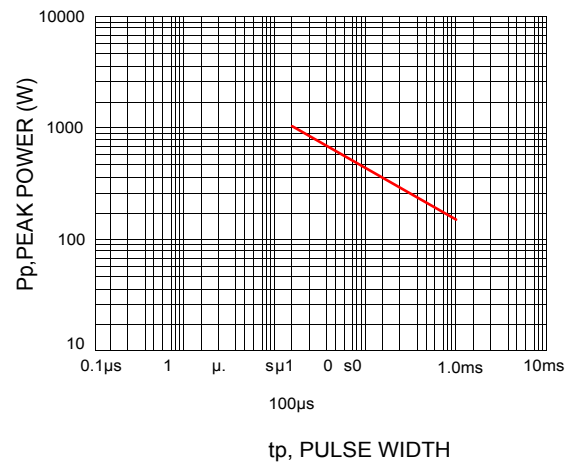


FIG.5 - 8 x 20 μs PULSE WAVEFORM

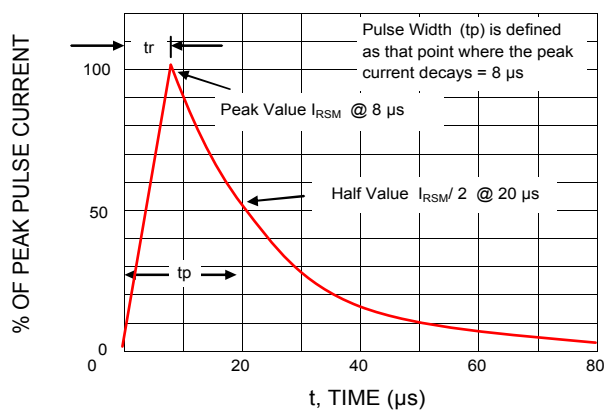


FIG. 6 - CAPACITANCE VS. WORKING PEAK REVERSE VOLTAGE

