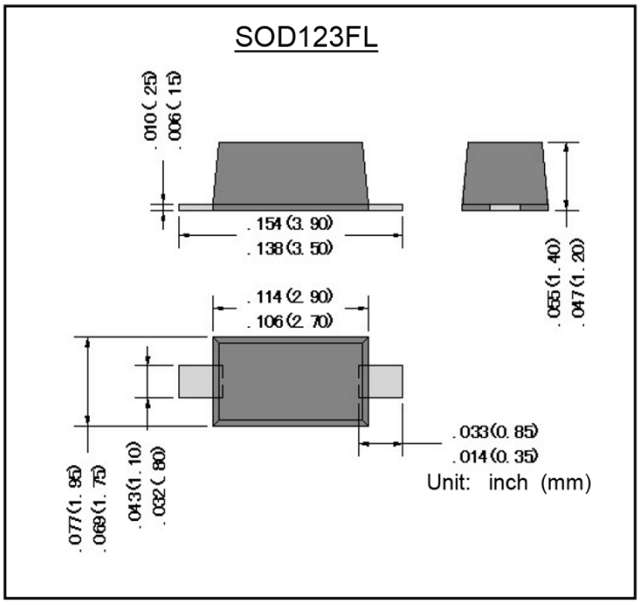
WANGFENG ELECTRON
旺峰电子

SMFJ SERIES

瞬间电压抑制二极管
功率 200 W
电压范围 5.0 ~170 V

TRANSIENT VOLTAGE SUPPRESSORS
Power Dissipation 200 W
Voltage Range 5.0 - 170 V

Dimensions in millimeters



FEATURE

- 200 w峰值脉冲功耗 200W Peak Pulse Power Dissipation
- 玻璃钝化接面 Glass passivated junction
- 单向和双向版本可用 Uni- and Bi-Directional Versions Available
- 优秀的夹紧功能 Excellent Clamping Capability
- 快速响应时间 Fast Response Time

MECHANICAL DATA

- 封装外形:SOD123FL 塑封
  Case: SOD-123FL molded plastic body
- 极性端为负极 Polarity Indicator: Cathode Band
  （注：双向设备没有极性指示
  Note: Bi-directional devices have no polarityindicator.)
- 环氧树脂：UL易燃等级：94V-0
  Epoxy: UL 94V-0 rate flame retardant
- 重量:0.064克(约) Weight: 0.064 grams (approx.)

DEVICES FOR BIDIRECTIONAL APPLICATIONS

For bidirectional use suffix A or CA for types SMFJ5.0A thru SMFJ170A(e.g.SMFJ5.0CA,SMFJ170CA)

Electrical characteristics apply in both directions.

Maximum Ratings @ T_A = 25℃ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation (Non repetitive current pulse derated above T_A = 250C) (Note 1)	P_{PK}	200	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) (Notes 1, 2, & 3)	I_{FSM}	20	A
Steady State Power Dissipation @ T_L = 75℃	$PM_{(AV)}$	0.5	W
Instantaneous Forward Voltage @ I_{PP} = 10A (Notes 1, 2, & 3)	V_F	3.5	V
Operating Temperature Range	T_j	-55 to +150	0C
Storage Temperature Range	T_{STG}	-55 to +175	0C

Notes: 1. Valid provided that terminals are kept at ambient temperature.
2. Measured with 8.3ms single half sine-wave. Duty cycle = 4 pulses per minute maximum.
3. Unidirectional units only.

Part Number Add C For Bi-Directional (Note 4)	Reverse Standoff Voltage	Breakdown Voltage V_{BR} @ I_T (Note 5)		Test Current	Max. Reverse Leakage @ V_{RWM} (Note 6)	Max. Clamping Voltage @ I_{pp}	Max. Peak Pulse Current I_{pp}	Marking Code	
	V_{RWM} (V)	Min (V)	Max (V)	I_T (mA)	I_R (μA)	V_C (V)	(A)	UNI-	BI-
SMFJ5.0(C)A	5.0	6.40	7.25	10	800	9.2	21.74	KE	TE
SMFJ6.0(C)A	6.0	6.67	7.37	10	800	10.3	19.42	KG	TG
SMFJ6.5(C)A	6.5	7.22	7.98	10	500	11.2	17.86	KK	TK
SMFJ7.0(C)A	7.0	7.78	8.60	10	200	12.0	16.67	KM	TM
SMFJ7.5(C)A	7.5	8.33	9.21	1.0	100	12.9	15.50	KP	TP
SMFJ8.0(C)A	8.0	8.89	9.83	1.0	50	13.6	14.71	KR	TR
SMFJ8.5(C)A	8.5	9.44	10.4	1.0	20	14.4	13.89	KT	TT
SMFJ9.0(C)A	9.0	10.0	11.1	1.0	10	15.4	12.99	KV	TV
SMFJ10(C)A	10	11.1	12.3	1.0	5.0	17.0	11.76	KX	TX
SMFJ11(C)A	11	12.2	13.5	1.0	1.0	18.2	10.99	KZ	TZ
SMFJ12(C)A	12	13.3	14.7	1.0	1.0	19.9	10.05	LE	UE
SMFJ13(C)A	13	14.4	15.9	1.0	1.0	21.5	9.30	LG	UG
SMFJ14(C)A	14	15.6	17.2	1.0	1.0	23.2	8.62	LK	UK
SMFJ15(C)A	15	16.7	18.5	1.0	1.0	24.4	8.20	LM	UM
SMFJ16(C)A	16	17.8	19.7	1.0	1.0	26.0	7.69	LP	UP
SMFJ17(C)A	17	18.9	20.9	1.0	1.0	27.6	7.25	LR	UR
SMFJ18(C)A	18	20.0	22.1	1.0	1.0	29.2	6.85	LT	UT
SMFJ20(C)A	20	22.2	24.5	1.0	1.0	32.4	6.17	LV	UV
SMFJ22(C)A	22	24.4	26.9	1.0	1.0	35.5	5.63	LX	UX
SMFJ24(C)A	24	26.7	29.5	1.0	1.0	38.9	5.14	LZ	UZ
SMFJ26(C)A	26	28.9	31.9	1.0	1.0	42.1	4.75	ME	VE
SMFJ28(C)A	28	31.1	34.4	1.0	1.0	45.4	4.41	MG	VG
SMFJ30(C)A	30	33.3	36.8	1.0	1.0	48.4	4.13	MK	VK
SMFJ33(C)A	33	36.7	40.6	1.0	1.0	53.3	3.75	MM	VM
SMFJ36(C)A	36	40.0	44.2	1.0	1.0	58.1	3.44	MP	VP
SMFJ40(C)A	40	44.4	49.1	1.0	1.0	64.5	3.10	MR	VR
SMFJ43(C)A	43	47.8	52.8	1.0	1.0	69.4	2.88	MT	VT
SMFJ45(C)A	45	50.0	55.3	1.0	1.0	72.7	2.75	MV	VV
SMFJ48(C)A	48	53.3	58.9	1.0	1.0	77.4	2.58	MX	VX
SMFJ51(C)A	51	56.7	62.7	1.0	1.0	82.4	2.43	MZ	VZ
SMFJ54(C)A	54	60.0	66.3	1.0	1.0	87.1	2.30	NE	WE
SMFJ58(C)A	58	64.4	71.2	1.0	1.0	93.6	2.14	NG	WG
SMFJ60(C)A	60	66.7	73.7	1.0	1.0	96.8	2.07	NK	WK
SMFJ64(C)A	64	71.1	78.6	1.0	1.0	103	1.94	NM	WM
SMFJ70(C)A	70	77.8	86.0	1.0	1.0	113	1.77	NP	WP
SMFJ75(C)A	75	83.3	92.1	1.0	1.0	121	1.65	NR	WR
SMFJ78(C)A	78	86.7	95.8	1.0	1.0	126	1.59	NT	WT
SMFJ85(C)A	85	94.4	104	1.0	1.0	137	1.46	NV	WV
SMFJ90(C)A	90	100	111	1.0	1.0	146	1.37	NX	WX
SMFJ100(C)A	100	111	123	1.0	1.0	162	1.23	NZ	WZ
SMFJ110(C)A	110	122	135	1.0	1.0	177	1.13	PE	XE
SMFJ120(C)A	120	133	147	1.0	1.0	193	1.04	PG	XG
SMFJ130(C)A	130	144	159	1.0	1.0	209	0.96	PK	XK
SMFJ150(C)A	150	167	185	1.0	1.0	243	0.82	PM	XM
SMFJ160(C)A	160	178	197	1.0	1.0	259	0.77	PP	XP
SMFJ170(C)A	170	189	209	1.0	1.0	275	0.73	PR	XR

Notes: 4. Suffix C denotes Bi-directional device.

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

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

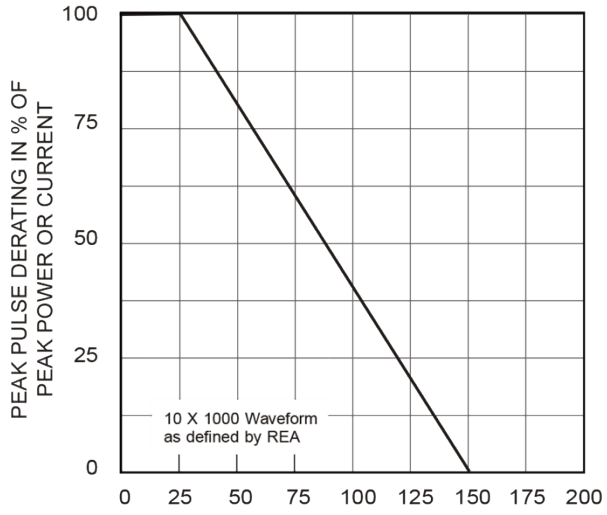


Fig. 1 Pulse Derating Curve

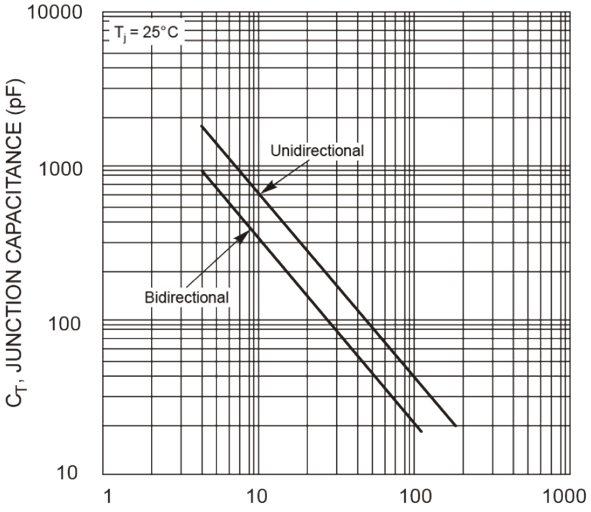


Fig. 2 Typical Total Capacitance

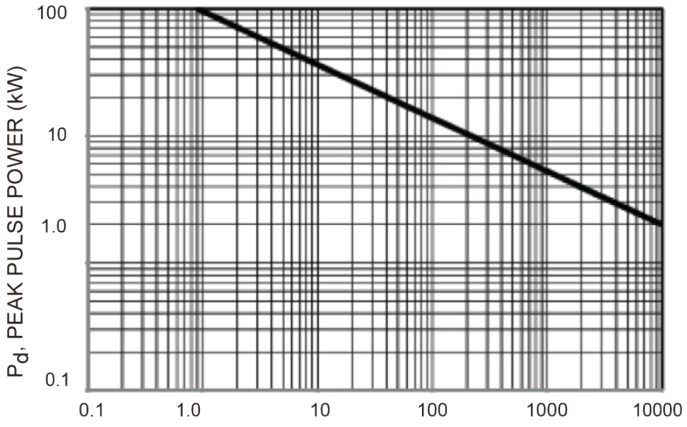


Fig. 3 Pulse Rating Curve

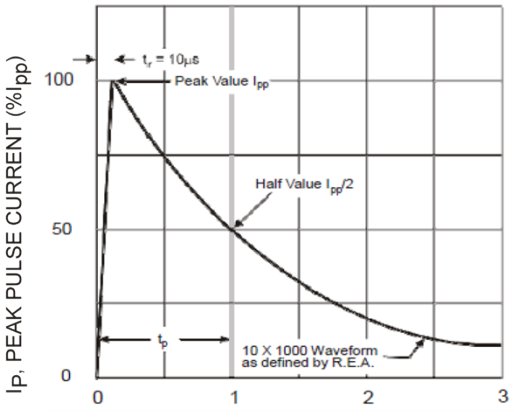


Fig. 4 Pulse Waveform

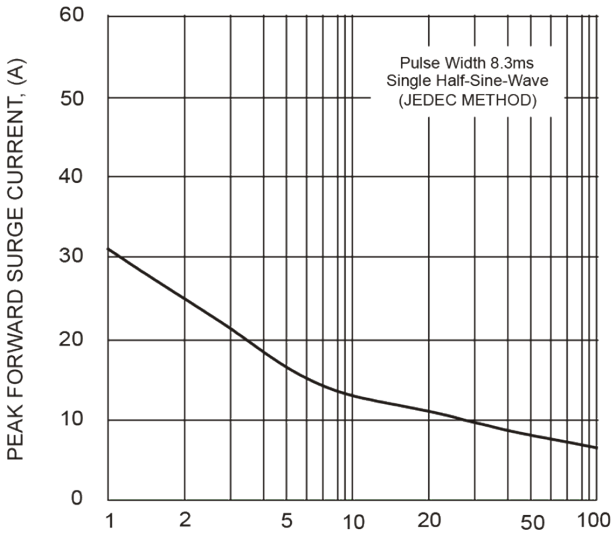


Fig. 5 Maximum Non-Repetitive Surge Current

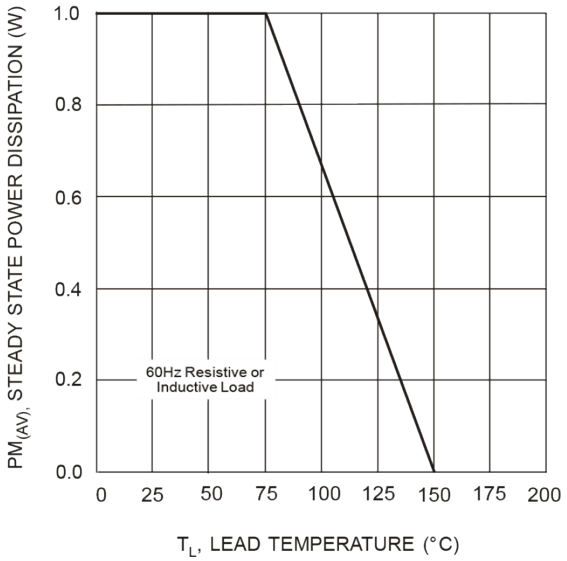


Fig. 6 Steady State Power Derating Curve