



## SOD-123F TVS 瞬态电压抑制二极管

### ■ Features 特点

ESD 30KV Air, 30KV contact 静电释放电压 30KV 空气放电与 30KV 接触放电

Solid-state silicon avalanche technology 固态硅雪崩技术

Low leakage current 低漏电流

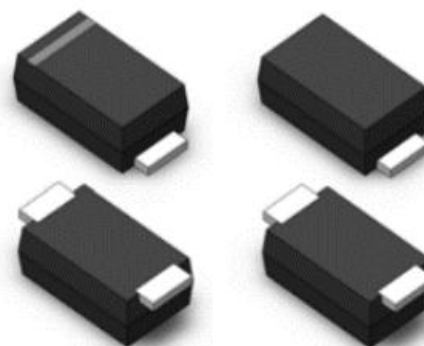
### ■ Applications 应用

Personal digital assistants (PDA) 个人数码助手

Handhelds and notebooks 手持式笔记本

Portable devices 桌面设备

Digital cameras 数码相机



### ■ Internal Schematic Diagram 内部结构



### ■ Absolute Maximum Ratings 最大额定值

Characteristic 特性参数	Symbol 符号	Rat 额定值	Unit 单位
Peak Power Dissipation 峰值功率	$P_{PK}$	200	W
Reverse Stand-off Work Voltage 反向工作电压	$V_{RWM}$	5.0~170	V
Peak Pulse Current 峰值脉冲电流	$I_{PP}$	21.7~0.73	A
Thermal Resistance Junction-Ambient 结到环境热阻	$R_{\theta JA}$	125	$^{\circ}C/W$
Junction/Storage Temperature 结温/储存温度	$T_J, T_{stg}$	-55~150	$^{\circ}C$

### ■ Electrical Characteristics 电特性

( $T_A=25^{\circ}C$  unless otherwise noted 如无特殊说明, 温度为  $25^{\circ}C$ )



# 安徽富信半导体科技有限公司

ANHUI FOSAN SEMICONDUCTOR TECHNOLOGY CO., LTD.

Type Number	V <sub>RWM</sub> (V)	V <sub>BR</sub> (V)@I <sub>T</sub>		I <sub>T</sub> (mA)	V <sub>C</sub> (V) @I <sub>PP</sub>	I <sub>PP</sub> (A)	I <sub>R</sub> (μA) @V <sub>RWM</sub>	Marking	
		Min.	Max.					A(UNI)	CA(BI)
SMF5.0(C)A	5.0	6.40	7.25	10	9.2	21.7	200	AE	WE
SMF6.0(C)A	6.0	6.67	7.67	10	10.3	19.4	200	AG	WG
SMF6.5(C)A	6.5	7.22	8.30	10	11.2	17.9	150	AK	WK
SMF7.0(C)A	7.0	7.78	8.95	10	12.0	16.7	75	AM	WM
SMF7.5(C)A	7.5	8.33	9.58	1	12.9	15.5	50	AP	WP
SMF8.0(C)A	8.0	8.89	10.23	1	13.6	14.7	25	AR	WR
SMF8.5(C)A	8.5	9.44	10.82	1	14.4	13.9	20	AT	WT
SMF9.0(C)A	9.0	10.0	11.50	1	15.4	13.0	10	AV	WV
SMF10(C)A	10	11.1	12.80	1	17.0	11.8	5	AX	WX
SMF11(C)A	11	12.2	14.00	1	18.2	11.0	1	AZ	WZ
SMF12(C)A	12	13.3	15.30	1	19.9	10.1	1	BE	XE
SMF13(C)A	13	14.4	15.60	1	21.5	9.3	1	BG	XG
SMF14(C)A	14	15.6	17.90	1	23.2	8.62	1	BK	XK
SMF15(C)A	15	16.7	19.20	1	24.4	8.2	1	BM	XM
SMF16(C)A	16	17.8	20.50	1	26.0	7.69	1	BP	XP
SMF17(C)A	17	18.9	21.70	1	27.6	7.25	1	BR	XR
SMF18(C)A	18	20.0	23.30	1	29.2	6.85	1	BT	XT
SMF20(C)A	20	22.2	25.50	1	32.4	6.17	1	BV	XV
SMF22(C)A	22	24.4	28.00	1	35.5	5.63	1	BX	XX
SMF24(C)A	24	26.7	30.70	1	38.9	5.14	1	BZ	XZ
SMF26(C)A	26	28.9	33.20	1	42.1	4.75	1	CE	YE
SMF28(C)A	28	31.1	35.80	1	45.4	4.41	1	CG	YG
SMF30(C)A	30	33.3	38.30	1	48.4	4.13	1	CK	YK
SMF33(C)A	33	36.7	42.20	1	53.3	3.75	1	CM	YM
SMF36(C)A	36	40.0	46.00	1	58.1	3.44	1	CP	YP
SMF40(C)A	40	44.4	51.10	1	64.5	3.1	1	CR	YR
SMF43(C)A	43	47.8	54.90	1	69.4	2.88	1	CT	YT
SMF45(C)A	45	50.0	57.50	1	72.7	2.75	1	CV	YV
SMF48(C)A	48	53.3	61.30	1	77.4	2.58	1	CX	YX
SMF51(C)A	51	56.7	65.20	1	82.4	2.43	1	CZ	YZ
SMF54(C)A	54	60.0	69.00	1	87.1	2.3	1	RE	ZE
SMF58(C)A	58	64.4	74.10	1	93.6	2.14	1	RG	ZG
SMF60(C)A	60	66.7	76.70	1	96.8	2.07	1	RK	ZK
SMF64(C)A	64	71.1	81.80	1	103	1.94	1	RM	ZM
SMF70(C)A	70	77.8	89.50	1	113	1.77	1	RP	ZP
SMF75(C)A	75	83.3	95.80	1	121	1.65	1	RR	ZR
SMF78(C)A	78	86.7	99.70	1	126	1.59	1	RT	ZT
SMF85(C)A	85	94.4	108.2	1	137	1.46	1	RV	ZV
SMF90(C)A	90	100	115.5	1	146	1.37	1	RX	ZX
SMF100(C)A	100	111	128.0	1	162	1.23	1	RZ	ZZ
SMF110(C)A	110	122	140.5	1	177	1.13	1	SE	VE
SMF120(C)A	120	133	153.0	1	193	1.04	1	SG	VG
SMF130(C)A	130	144	165.5	1	209	0.96	1	SK	VK
SMF150(C)A	150	167	192.5	1	243	0.82	1	SM	VM
SMF160(C)A	160	178	205.0	1	259	0.77	1	SP	VP
SMF170(C)A	170	189	217.5	1	275	0.73	1	SR	VR

## ■ Typical Characteristic Curve 典型特性曲线

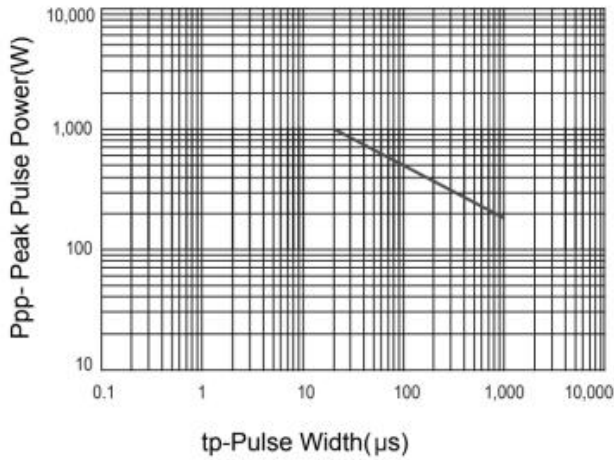


Figure 1. Peak Pulse Power Rating Curve

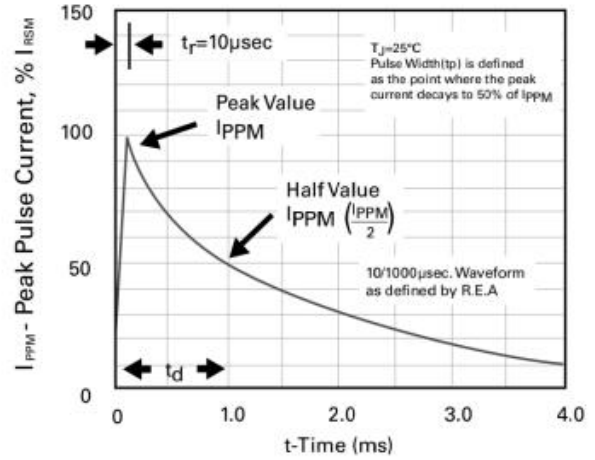


Figure 2. 10/1000 us Pulse Waveform

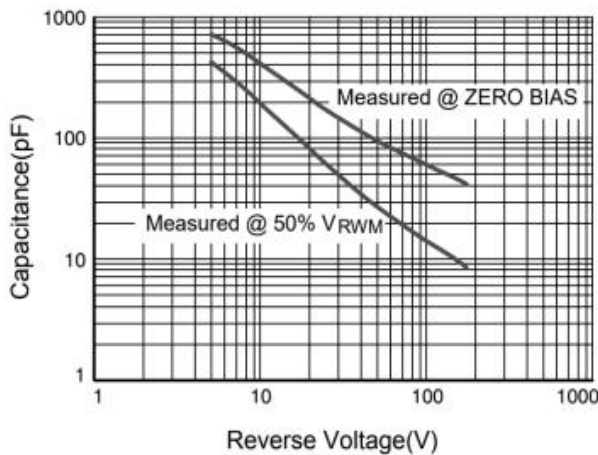


Figure 3. Capacitance vs. Reverse Voltage

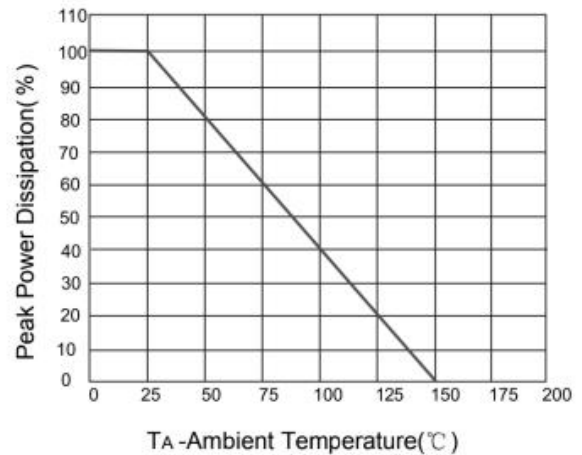
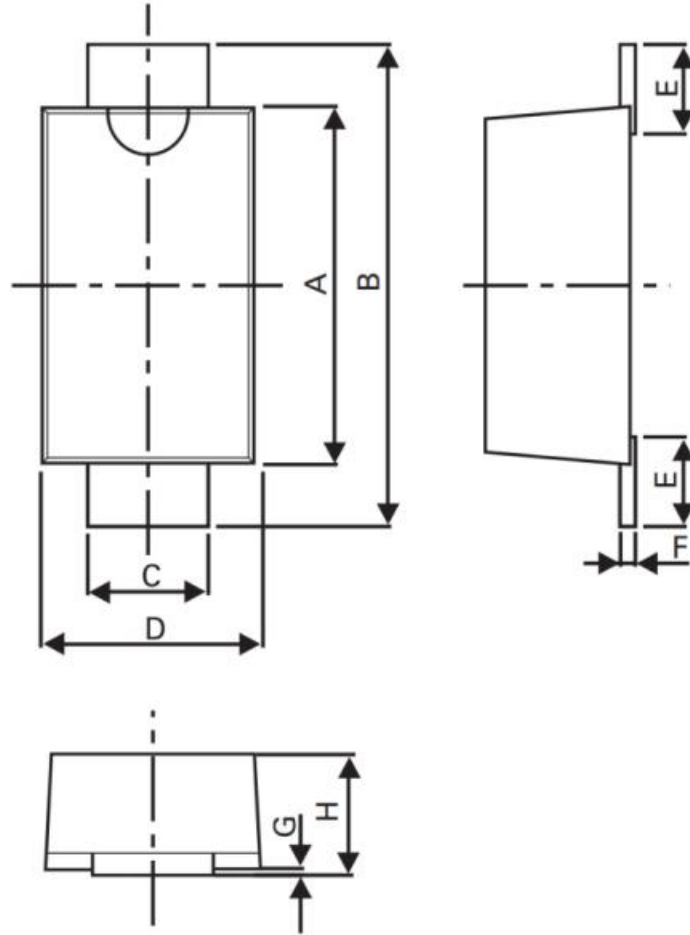


Figure 4. Power Derating curve

## ■Dimension 外形封装尺寸



Dimensions	Millimeters		Inches	
	Min	Max	Min	Max
A	2.5	3.05	0.0984	0.1201
B	3.35	4.05	0.1319	0.1594
C	0.7	1.2	0.0275	0.0472
D	1.5	2	0.0591	0.0787
E	0.35	0.95	0.0138	0.0374
F	0.05	0.26	0.002	0.0102
G	0	0.2	0	0.0079
H	0.70	1.35	0.0276	0.0531

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