

1500 W 表面贴装型

■ 特性

1. 适合表面贴装型应用
2. 符合RoHS与无卤要求
3. 可靠且低价的塑料成型技术
4. 玻璃钝化结
5. 可提供单向与双向产品
6. 响应时间快速
7. 优异的限压抑制电压能力



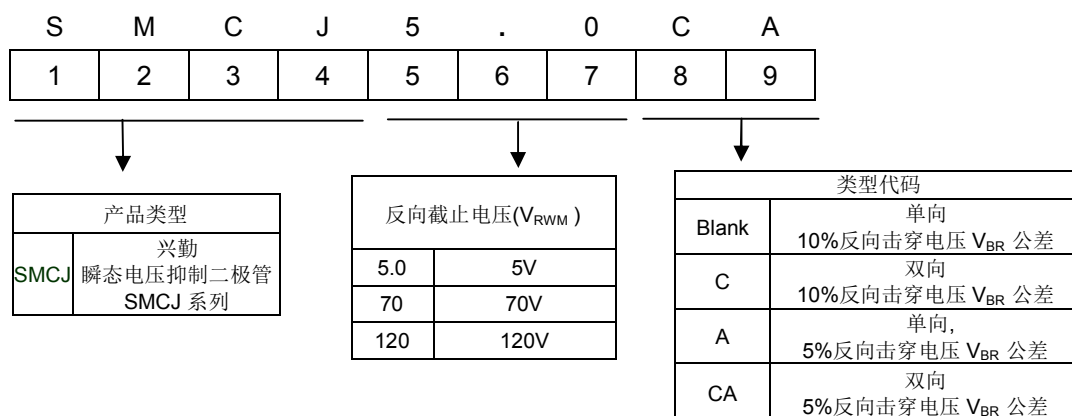
■ 用途

1. 通信设备
2. 计算机
3. 工业设备
4. 消费电子设备

■ 机械数据

1. 封装型式: DO-214AB (SMC), 封装塑料符合防火等级UL94-V0
2. 镀锡引脚可焊性符合 MIL-STD-750, Method 2026.
3. 极性:有带状标示为阴极 (注:没有极性符号为双极性产品)

■ 编码规则



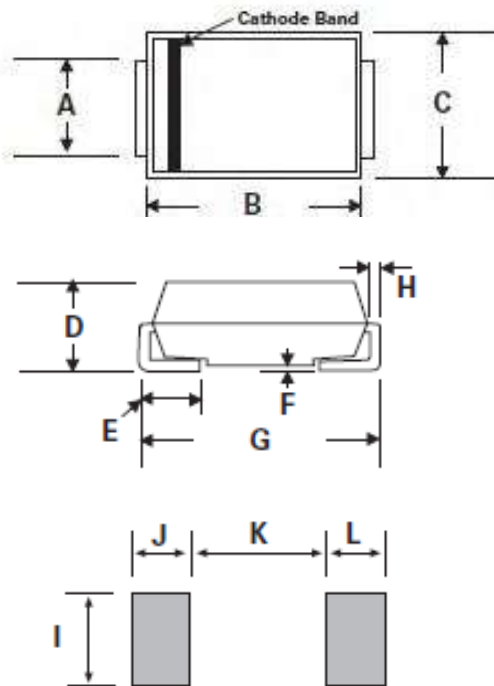
瞬态电压抑制二极管: SMCJ 系列

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■ 结构与尺寸

SMC/DO-214AB



代号	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.75	3.25	0.108	0.128
B	6.60	7.11	0.260	0.280
C	5.59	6.22	0.220	0.245
D	2.00	2.70	0.079	0.103
E	0.76	1.52	0.030	0.060
F	-	0.203	-	0.008
G	7.75	8.13	0.305	0.320
H	0.152	0.305	0.006	0.012
I	3.30	-	0.129	-
J/L	2.40	-	0.094	-
K	-	4.20	-	0.165

■ 最大标称资料 (TA=25°C)

参数	代号	数值	单位
10/1000 μ s 波型峰值脉冲功耗(Note1, Fig.1)	P _{PPM}	1500	W
10/1000 μ s 波型峰值脉冲电流.(Note1, Fig.3)	I _{PPM}	See Table	A
峰值正向浪涌电流 (Note 2)	I _{FSM}	200	A
稳态功耗 (Fig.5).	P _{M(AV)}	6.5	W
工作结温和存储温度范围	T _J , T _{STG}	-55~+150	°C

注: 1. 非重复性电流脉冲如 Fig. 3, 及25°C以上减额曲线如 Fig. 2.

2. 8.3ms 单半正弦波,或相当于每分钟最多四个脉冲的方波.

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■ 电气特性 (T_A=25°C)

型号. (单向)	型号. (双向)	反向截止 电压	反向击穿电压 V _{BR} @ IT		测试 电流	最大限制 电压 VC @ Ipp	最大脉冲峰值 电流	最大反向 漏电流 IR @ V _{RWM}	印字	
			V _{RWM} (V)	Min(V)					Max(V)	IT(mA)
SMCJ5.0A	SMCJ5.0CA	5.0	6.40	7.00	10	9.2	163.0	800	GDE	BDE
SMCJ6.0A	SMCJ6.0CA	6.0	6.67	7.37	10	10.3	145.7	800	GDG	BDG
SMCJ6.5A	SMCJ6.5CA	6.5	7.22	7.98	10	11.2	134.0	500	GDK	BDK
SMCJ7.0A	SMCJ7.0CA	7.0	7.78	8.60	10	12.0	125.0	200	GDM	BDM
SMCJ7.5A	SMCJ7.5CA	7.5	8.33	9.21	1	12.9	116.3	100	GDP	BDP
SMCJ8.0A	SMCJ8.0CA	8.0	8.89	9.83	1	13.6	110.3	50	GDR	BDR
SMCJ8.5A	SMCJ8.5CA	8.5	9.44	10.4	1	14.4	104.2	20	GDT	BDT
SMCJ9.0A	SMCJ9.0CA	9.0	10.0	11.1	1	15.4	97.4	10	GDV	BDV
SMCJ10A	SMCJ10CA	10	11.1	12.3	1	17.0	88.3	5	GDX	BDX
SMCJ11A	SMCJ11CA	11	12.2	13.5	1	18.2	82.5	1	GDZ	BDZ
SMCJ12A	SMCJ12CA	12	13.3	14.7	1	19.9	75.4	1	GEE	BEE
SMCJ13A	SMCJ13CA	13	14.4	15.9	1	21.5	69.8	1	GEG	BEG
SMCJ14A	SMCJ14CA	14	15.6	17.2	1	23.2	64.7	1	GEK	BEK
SMCJ15A	SMCJ15CA	15	16.7	18.5	1	24.4	61.5	1	GEM	BEM
SMCJ16A	SMCJ16CA	16	17.8	19.7	1	26.0	57.7	1	GEP	BEP
SMCJ17A	SMCJ17CA	17	18.9	20.9	1	27.6	54.4	1	GER	BER
SMCJ18A	SMCJ18CA	18	20.0	22.1	1	29.2	51.4	1	GET	BET
SMCJ20A	SMCJ20CA	20	22.2	24.5	1	32.4	46.3	1	GEV	BEV
SMCJ22A	SMCJ22CA	22	24.4	26.9	1	35.5	42.3	1	GEX	BEX
SMCJ24A	SMCJ24CA	24	26.7	29.5	1	38.9	38.6	1	GEZ	BEZ
SMCJ26A	SMCJ26CA	26	28.9	31.9	1	42.1	35.7	1	GFE	BFE
SMCJ28A	SMCJ28CA	28	31.1	34.4	1	45.4	33.1	1	GFG	BFG
SMCJ30A	SMCJ30CA	30	33.3	36.8	1	48.4	31.0	1	GFK	BFK
SMCJ33A	SMCJ33CA	33	36.7	40.6	1	53.3	28.2	1	GFM	BFM
SMCJ36A	SMCJ36CA	36	40.0	44.2	1	58.1	25.9	1	GFP	BFP
SMCJ40A	SMCJ40CA	40	44.4	49.1	1	64.5	23.3	1	GFR	BFR
SMCJ43A	SMCJ43CA	43	47.8	52.8	1	69.4	21.7	1	GFT	BFT
SMCJ45A	SMCJ45CA	45	50.0	55.3	1	72.7	20.6	1	GFV	BFV
SMCJ48A	SMCJ48CA	48	53.3	58.9	1	77.4	19.4	1	GFX	BFX

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		VRWM (V)	Min(V)	Max(V)	IT (mA)	VC (V)	I _{pp} (A)	IR(μA)	UNI	BI
SMCJ51A	SMCJ51CA	51	56.7	62.7	1	82.4	18.2	1	GFZ	BFZ
SMCJ54A	SMCJ54CA	54	60.0	66.3	1	87.1	17.3	1	GGE	BGE
SMCJ58A	SMCJ58CA	58	64.4	71.2	1	93.6	16.1	1	GGG	BGG
SMCJ60A	SMCJ60CA	60	66.7	73.7	1	96.8	15.5	1	GGK	BGK
SMCJ64A	SMCJ64CA	64	71.1	78.6	1	103	14.6	1	GGM	BGM
SMCJ70A	SMCJ70CA	70	77.8	86.0	1	113	13.3	1	GGP	BGP
SMCJ75A	SMCJ75CA	75	83.3	92.1	1	121	12.4	1	GGR	BGR
SMCJ78A	SMCJ78CA	78	86.7	95.8	1	126	11.9	1	GGT	BGT
SMCJ85A	SMCJ85CA	85	94.4	104	1	137	11.0	1	GGV	BGV
SMCJ90A	SMCJ90CA	90	100	111	1	146	10.3	1	GGX	BGX
SMCJ100A	SMCJ100CA	100	111	123	1	162	9.3	1	GGZ	BGZ
SMCJ110A	SMCJ110CA	110	122	135	1	177	8.5	1	GHE	BHE
SMCJ120A	SMCJ120CA	120	133	147	1	193	7.8	1	GHG	BHG
SMCJ130A	SMCJ130CA	130	144	159	1	209	7.2	1	GHK	BHK
SMCJ150A	SMCJ150CA	150	167	185	1	243	6.2	1	GHM	BHM
SMCJ160A	SMCJ160CA	160	178	197	1	259	5.8	1	GHP	BHP
SMCJ170A	SMCJ170CA	170	189	209	1	275	5.5	1	GHR	BHR
SMCJ180A	SMCJ180CA	180	201	222	1	292	5.1	1	GHT	BHT
SMCJ190A	SMCJ190CA	190	209	243	1	308	4.8	1	GHV	BHV
SMCJ200A	SMCJ200CA	200	224	247	1	324	4.6	1	GHW	BHW
SMCJ220A	SMCJ220CA	220	246	272	1	356	4.2	1	GHX	BHX
SMCJ250A	SMCJ250CA	250	279	309	1	405	3.7	1	GHZ	BHZ
SMCJ300A	SMCJ300CA	300	335	371	1	486	3.1	1	GJE	BJE
SMCJ350A	SMCJ350CA	350	391	432	1	567	2.6	1	GJG	BJG
SMCJ400A	SMCJ400CA	400	447	494	1	648	2.3	1	GJK	BJK
SMCJ440A	SMCJ440CA	440	492	543	1	713	2.1	1	GJM	BJM

■ 特性曲线图 ($T_A=25^\circ\text{C}$)

FIG.1 - PULSE RATING CURVE

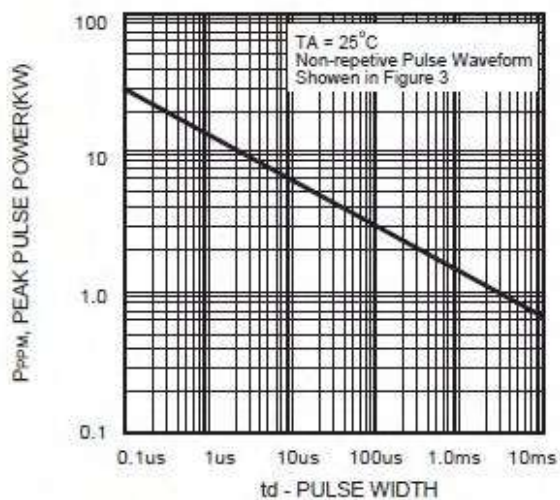


FIG.2 - PULSE DERATING CURVE

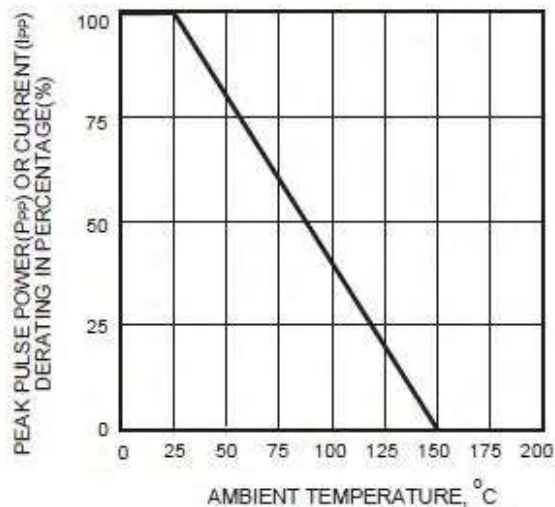


FIG.3 - PULSE WAVEFORM

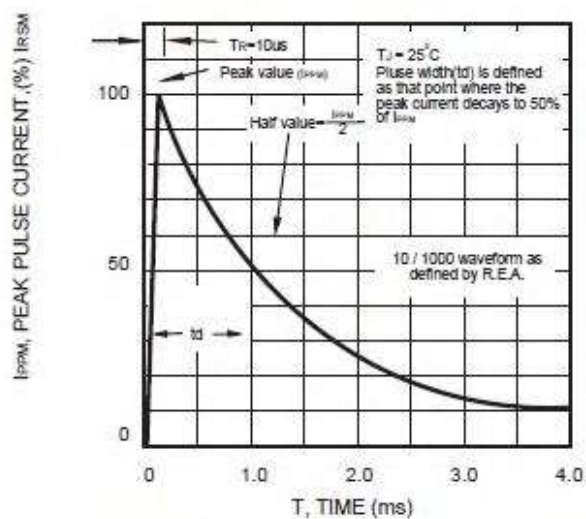


FIG.4 - TYPICAL JUNCTION CAPACITANCE

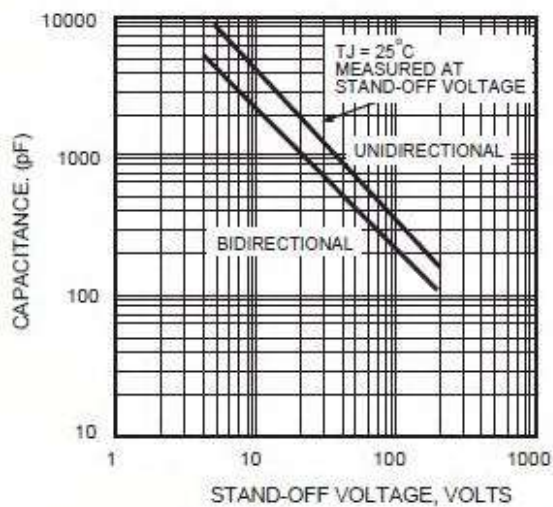
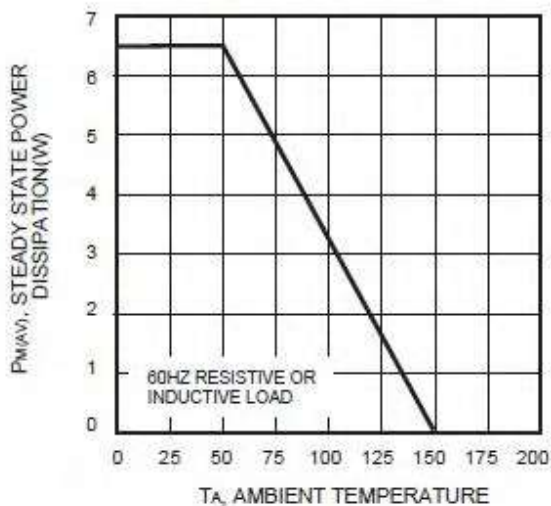
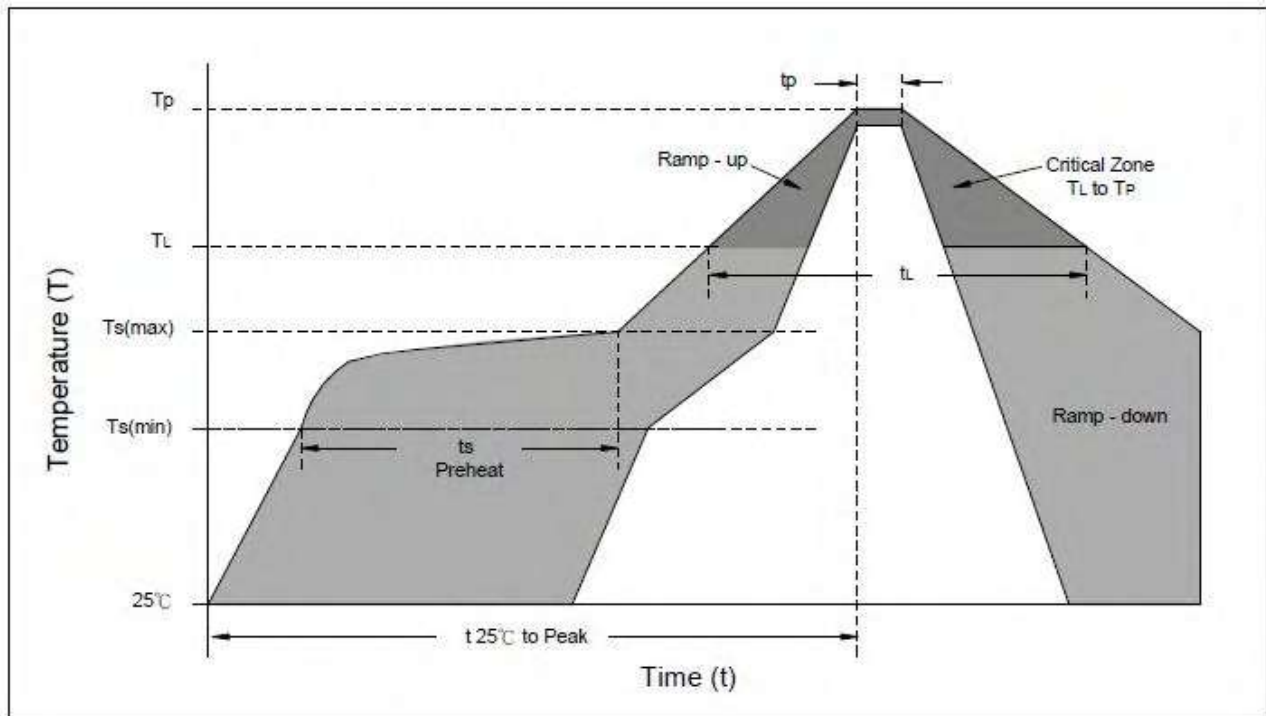


FIG.5 - STEADY STATE POWER DERATING CURVE



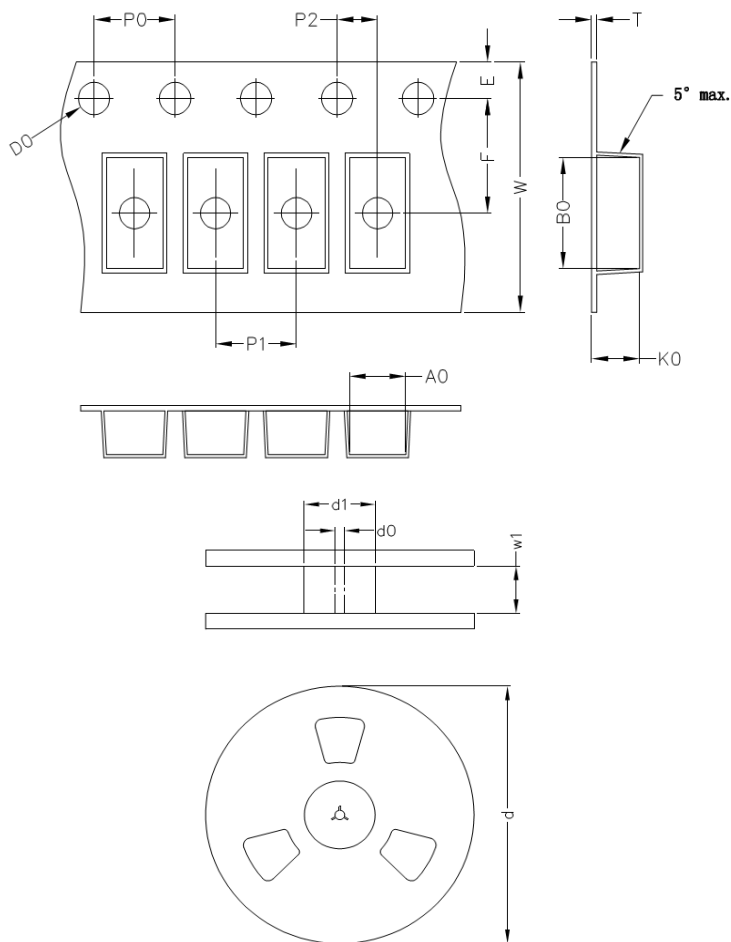
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■ 推荐焊接条件



Reflow Condition	Lead-free assembly
Preheat	
-Temperature Min(Ts min)	150°C
-Temperature Min(Ts max)	200°C
-Time (min to max) (ts)	60 – 180 seconds
Average ramp up rate	
-Temperature Liquidus (TL) to peak	3°C/second max
Ts(max) to TL	
-Ramp-up Rate	3°C/second max.
Reflow	
-Temperature Liquidus (TL)	217°C
-Time (tL)	60 – 150 seconds
Peak Temperature (TP)	260°C
Time within 5°C of actual peak Temperature(tp)	20 – 40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to peak Temperature(TP)	8 minutes max.
Do not exceed	260°C

■ 包装



代号	DO-214AB (SMC) 单位: mm
A0	6.05
B0	8.31
K0	2.54
D0	1.55
E	1.75
F	7.50
P0	4.00
P1	8.00
P2	2.00
T	0.25
W	16.00
d (13")	330.00
d1	75
d0	13.50
w1	17.00

注:尺寸公差为 $\pm 0.1\text{mm}$, 卷轴公差 $\pm 2\text{mm}$

■ 数量

封装型式	尺寸	卷
	inch	Kpcs
SMC	13	3

■ 仓库存储条件

● 存储条件:

1. 储存温度: $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$
2. 相对湿度: $\leq 75\% \text{RH}$
3. 不要将本产品存放在有腐蚀性气体或是阳光直接照射的环境中保管

● 存储期限: 1 年