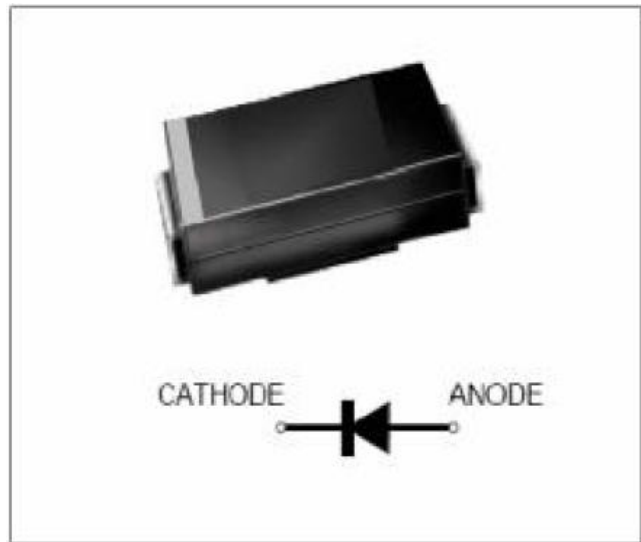


SMCJ*** Series

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR VOLTAGE 5.0 TO 250 Volts 1500 Watt Peak Pulse Power

Feature

- * Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- * For surface mounted applications in order to optimize board space
- * Low profile package
- * Built-in strain relief
- * Glass passivated junction
- * Low inductance
- * Excellent clamping capability
- * Repetition Rate (duty cycle):0.01%
- * Fast response time: typically less than 1.0ps from 0 Volts to V(BR) for unidirectional types
- * Typical IR less than 1mA above 10V
- * High temperature soldering guaranteed: 260°C/10 seconds,



Mechanical Data

Case: JEDEC DO-214AB/SMC molded plastic

Terminals: Axial leads, solderable per MIL-STD-202, Method 208

Polarity: Color band denoted cathode except Bipolar

Mounting Position: Any

Weight: 0.21 gram

We declare that the material of product compliance with ROHS requirements

1. DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use C or CA Suffix for types SMCJ5.0CA thru types SMCJ250CA Electrical characteristics apply in both directions. marking is all type; without color band.

MAXIMUM RATINGS AND CHARACTERISTICS

ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

RATING	SYMBOL	VALUE	UNITS
Peak Power Dissipation at $T_A=25^\circ\text{C}$, $T_P=1\text{ms}$ (Note 1)	P _{PPM}	Minimum1500	Watts
Steady State Power Dissipation at $T_L=75^\circ\text{C}$ (Note 2)	P _{M(AV)}	6.5	Watts
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load(JEDEC Method) (Note 3)	I _{FSM}	200	Amps
Operating Temperature Range	T _J ,	-55 to +150	°C
Storage Temperature Range	T _{STG}	-55 to +175	°C

NOTES:

1. Non-repetitive current pulse, per Fig. 3 and derated above $T_A=25^\circ\text{C}$ per Fig. 2.
2. Mounted on Copper Leaf area of 1.57in²(40mm²).
3. 8.3ms single half sine-wave, duty cycle= 4 pulses per minutes maximum.

SMCJ*** Series

Uni-Directional Part Number	Device marking code	Reverse Stand-off Voltage VRWM (V)	Breakdown Voltage VBR (V) Min. @IT	Breakdown Voltage VBR (V) Max. @IT	Test Current IT (mA)	Maximum Clamping Voltage @IPP VC (V)	Peak Pulse Current Ipp (A)	Reverse Leakage @VRWM IR (uA)
SMCJ5.0	SMCJ5.0	5	6.4	7.55	10	9.6	156.3	1000
SMCJ5.0A	SMCJ5.0A	5	6.4	7.25	10	9.2	163.0	1000
SMCJ6.0	SMCJ6.0	6	6.67	8.45	10	11.4	131.6	1000
SMCJ6.0A	SMCJ6.0A	6	6.67	7.67	10	10.3	145.6	1000
SMCJ6.5	SMCJ6.5	6.5	7.22	9.14	10	12.3	122.0	500
SMCJ6.5A	SMCJ6.5A	6.5	7.22	8.3	10	11.2	133.9	500
SMCJ7.0	SMCJ7.0	7	7.78	9.86	10	13.3	112.8	200
SMCJ7.0A	SMCJ7.0A	7	7.78	8.95	10	12	125.0	200
SMCJ7.5	SMCJ7.5	7.5	8.33	10.67	1	14.3	104.9	100
SMCJ7.5A	SMCJ7.5A	7.5	8.33	9.6	1	12.9	116.3	100
SMCJ8.0	SMCJ8.0	8	8.89	11.3	1	15.00	100.0	50
SMCJ8.0A	SMCJ8.0A	8	8.89	10.23	1	13.6	110.3	50
SMCJ8.5	SMCJ8.5	8.5	9.44	11.92	1	15.9	94.3	25
SMCJ8.5A	SMCJ8.5A	8.5	9.44	10.82	1	14.4	104.2	25
SMCJ9.0	SMCJ9.0	9	10	12.6	1	16.9	88.8	10
SMCJ9.0A	SMCJ9.0A	9	10	11.5	1	15.4	97.4	10
SMCJ10	SMCJ10	10	11.1	14.1	1	18.8	79.8	5
SMCJ10A	SMCJ10A	10	11.1	12.8	1	17	88.2	5
SMCJ11	SMCJ11	11	12.2	15.4	1	20.1	74.6	5
SMCJ11A	SMCJ11A	11	12.2	14	1	18.2	82.4	5
SMCJ12	SMCJ12	12	13.3	16.9	1	22	68.2	5
SMCJ12A	SMCJ12A	12	13.3	15.3	1	19.9	75.4	5
SMCJ13	SMCJ13	13	14.4	18.2	1	23.8	63.0	5
SMCJ13A	SMCJ13A	13	14.4	16.5	1	21.5	69.8	5
SMCJ14	SMCJ14	14	15.6	19.8	1	25.8	58.1	5
SMCJ14A	SMCJ14A	14	15.6	17.9	1	23.2	64.7	5
SMCJ15	SMCJ15	15	16.7	21.1	1	26.9	55.8	5
SMCJ15A	SMCJ15A	15	16.7	19.2	1	24.4	61.5	5
SMCJ16	SMCJ16	16	17.8	22.6	1	28.8	52.1	5
SMCJ16A	SMCJ16A	16	17.8	20.5	1	26	57.7	5
SMCJ17	SMCJ17	17	18.9	23.9	1	30.5	49.2	5
SMCJ17A	SMCJ17A	17	18.9	21.7	1	27.6	54.3	5
SMCJ18	SMCJ18	18	20	25.3	1	32.2	46.6	5
SMCJ18A	SMCJ18A	18	20	23.3	1	29.2	51.4	5
SMCJ20	SMCJ20	20	22.2	28.1	1	35.8	41.9	5
SMCJ20A	SMCJ20A	20	22.2	25.5	1	32.4	46.3	5
SMCJ22	SMCJ22	22	24.4	30.9	1	39.4	38.1	5
SMCJ22A	SMCJ22A	22	24.4	28	1	35.5	42.3	5
SMCJ24	SMCJ24	24	26.7	33.8	1	43	34.9	5
SMCJ24A	SMCJ24A	24	26.7	30.7	1	38.9	38.6	5
SMCJ26	SMCJ26	26	28.9	36.6	1	46.6	32.2	5
SMCJ26A	SMCJ26A	26	28.9	33.2	1	42.1	35.6	5
SMCJ28	SMCJ28	28	31.1	39.4	1	50	30.0	5
SMCJ28A	SMCJ28A	28	31.1	35.8	1	45.4	33.0	5

SMCJ*** Series

SMCJ30	SMCJ30	30	33.3	42.2	1	53.5	28.0	5
SMCJ30A	SMCJ30A	30	33.3	38.3	1	48.4	31.0	5
SMCJ33	SMCJ33	33	36.7	46.5	1	59	25.4	5
SMCJ33A	SMCJ33A	33	36.7	42.2	1	53.3	28.1	5
SMCJ36	SMCJ36	36	40	50.7	1	64.3	23.3	5
SMCJ36A	SMCJ36A	36	40	46	1	58.1	25.8	5
SMCJ40	SMCJ40	40	44.4	56.3	1	71.4	21.0	5
SMCJ40A	SMCJ40A	40	44.4	51.1	1	64.5	23.3	5
SMCJ43	SMCJ43	43	47.8	60.5	1	76.7	19.6	5
SMCJ43A	SMCJ43A	43	47.8	54.9	1	69.4	21.6	5
SMCJ45	SMCJ45	45	50	63.3	1	80.3	18.7	5
SMCJ45A	SMCJ45A	45	50	57.5	1	72.7	20.6	5
SMCJ48	SMCJ48	48	53.3	67.5	1	85.5	17.5	5
SMCJ48A	SMCJ48A	48	53.3	61.3	1	77.4	19.4	5
SMCJ51	SMCJ51	51	56.7	71.8	1	91.1	16.5	5
SMCJ51A	SMCJ51A	51	56.7	65.2	1	82.4	18.2	5
SMCJ54	SMCJ54	54	60	76	1	96.3	15.6	5
SMCJ54A	SMCJ54A	54	60	69	1	87.1	17.2	5
SMCJ58	SMCJ58	58	64.4	81.6	1	103	14.6	5
SMCJ58A	SMCJ58A	58	64.4	74.1	1	93.6	16.0	5
SMCJ60	SMCJ60	60	66.7	84.5	1	107	14.0	5
SMCJ60A	SMCJ60A	60	66.7	76.7	1	96.8	15.5	5
SMCJ64	SMCJ64	64	71.1	90.1	1	114	13.2	5
SMCJ64A	SMCJ64A	64	71.1	81.8	1	103	14.6	5
SMCJ70	SMCJ70	70	77.8	98.6	1	125	12.0	5
SMCJ70A	SMCJ70A	70	77.8	89.5	1	113	13.3	5
SMCJ75	SMCJ75	75	83.3	105.7	1	134	11.2	5
SMCJ75A	SMCJ75A	75	83.3	95.8	1	121	12.4	5
SMCJ78	SMCJ78	78	86.7	109.8	1	139	10.8	5
SMCJ78A	SMCJ78A	78	86.7	99.7	1	126	11.9	5
SMCJ85	SMCJ85	85	94.4	119.2	1	151	9.9	5
SMCJ85A	SMCJ85A	85	94.4	108.2	1	137	10.9	5
SMCJ90	SMCJ90	90	100	126.5	1	160	9.4	5
SMCJ90A	SMCJ90A	90	100	115.5	1	146	10.3	5
SMCJ100	SMCJ100	100	111	141	1	179	8.4	5
SMCJ100A	SMCJ100A	100	111	128	1	162	9.3	5
SMCJ110	SMCJ110	110	122	154.5	1	196	7.7	5
SMCJ110A	SMCJ110A	110	122	140.5	1	177	8.5	5
SMCJ120	SMCJ120	120	133	169	1	214	7.0	5
SMCJ120A	SMCJ120A	120	133	153	1	193	7.8	5
SMCJ130	SMCJ130	130	144	182.5	1	231	6.5	5
SMCJ130A	SMCJ130A	130	144	165.5	1	209	7.2	5
SMCJ150	SMCJ150	150	167	211.5	1	268	5.6	5
SMCJ150A	SMCJ150A	150	167	192.5	1	243	6.2	5
SMCJ160	SMCJ160	160	178	226	1	287	5.2	5
SMCJ160A	SMCJ160A	160	178	205	1	259	5.8	5
SMCJ170	SMCJ170	170	189	239.5	1	304	4.9	5
SMCJ170A	SMCJ170A	170	189	217.5	1	275	5.5	5
SMCJ180	SMCJ180	180	198	253.8	1	322	4.7	5
SMCJ180A	SMCJ180A	180	198	230.4	1	292	5.1	5
SMCJ190	SMCJ190	190	209	267.9	1	340	4.4	5
SMCJ190A	SMCJ190A	190	209	243.2	1	308	4.9	5

**LRC**乐山无线电股份有限公司
Leshan Radio Company, Ltd

SMCJ*** Series

SMCJ200	SMCJ200	200	220	282	1	358	4.2	5
SMCJ200A	SMCJ200A	200	220	256	1	324	4.6	5
SMCJ210	SMCJ210	210	231	296.1	1	376	4.0	5
SMCJ210A	SMCJ210A	210	231	268.8	1	340	4.4	5
SMCJ220	SMCJ220	220	242	310.2	1	394	3.8	5
SMCJ220A	SMCJ220A	220	242	281.6	1	356	4.2	5
SMCJ250	SMCJ250	250	275	350	1	445	3.4	5
SMCJ250A	SMCJ250A	250	275	320	1	405	3.7	5

SMCJ*** Series

2. Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Peak Pulse Power Rating

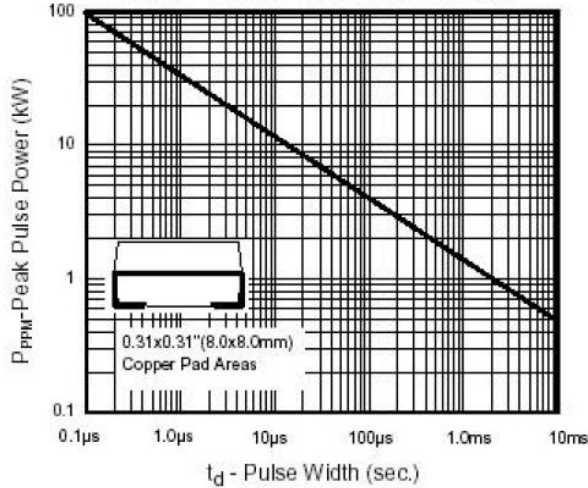


Fig.2 - Pulse Derating Curve

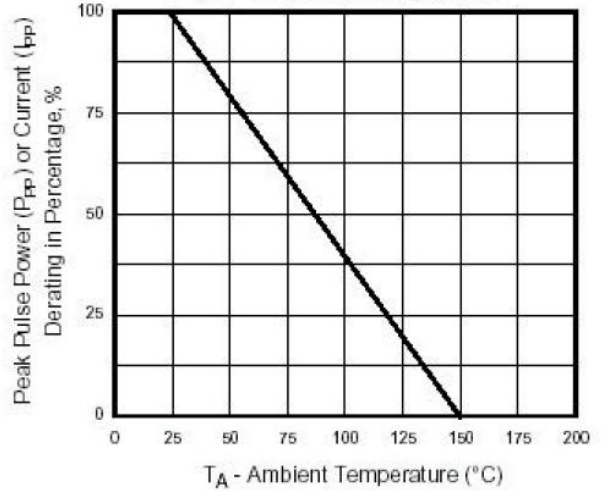


Fig.3 - Pulse Waveform

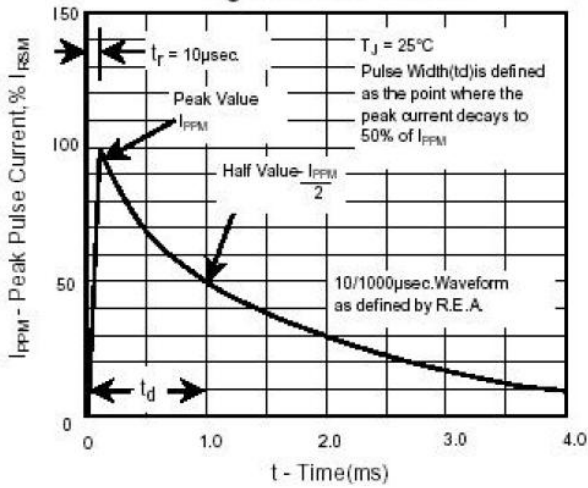


Fig.4 - Typical Junction Capacitance Uni-Directional

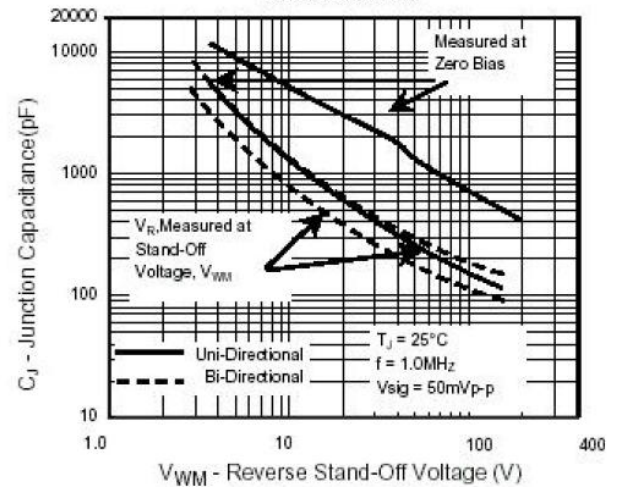


Fig. 5 - Typ. Transient Thermal Impedance

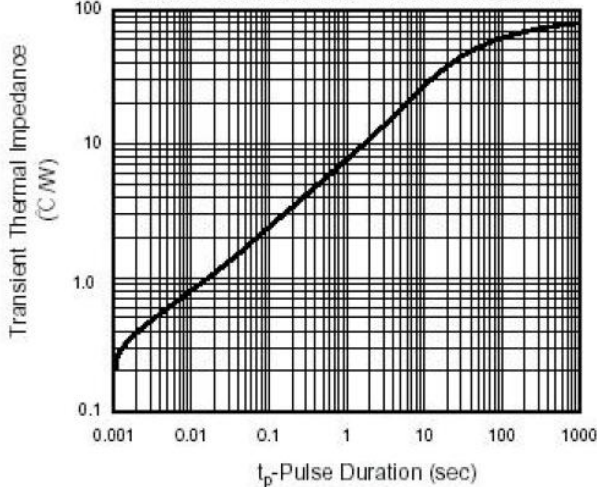
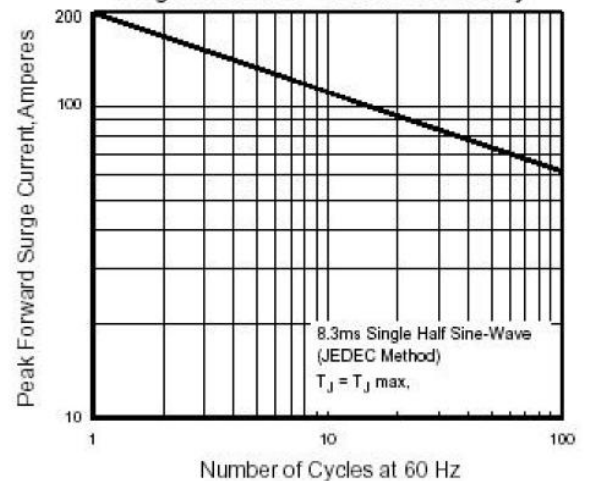
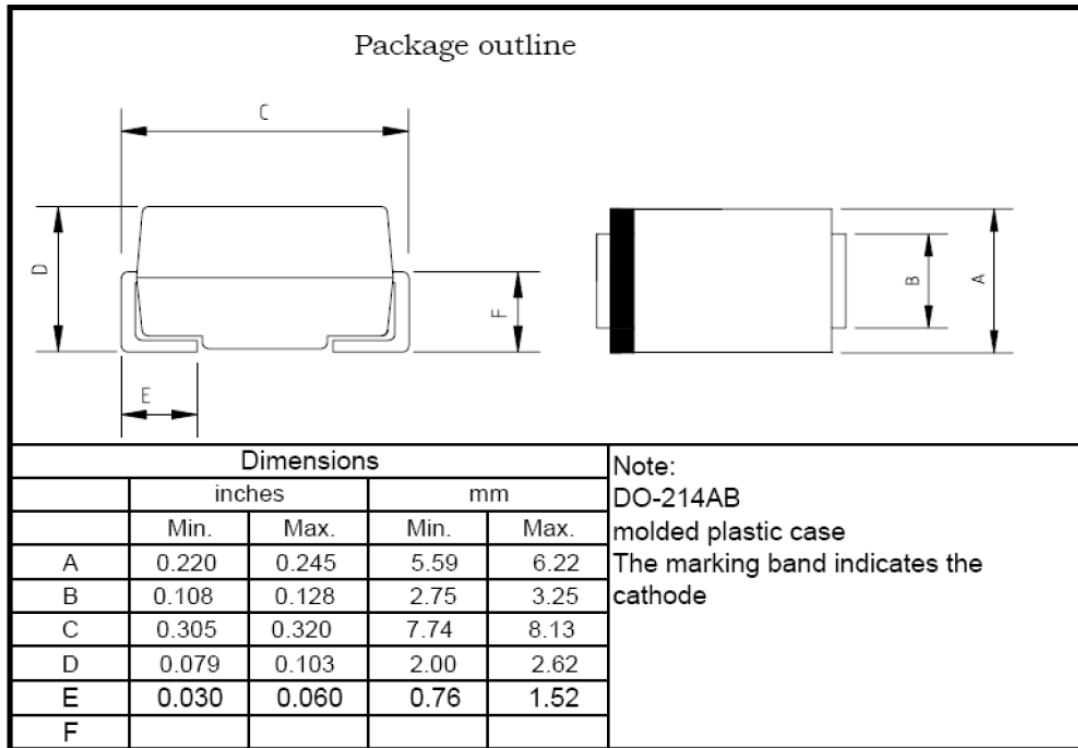


Fig.6 - Maximum Non-Repetitive Forward Surge Current Uni-Directional Use Only

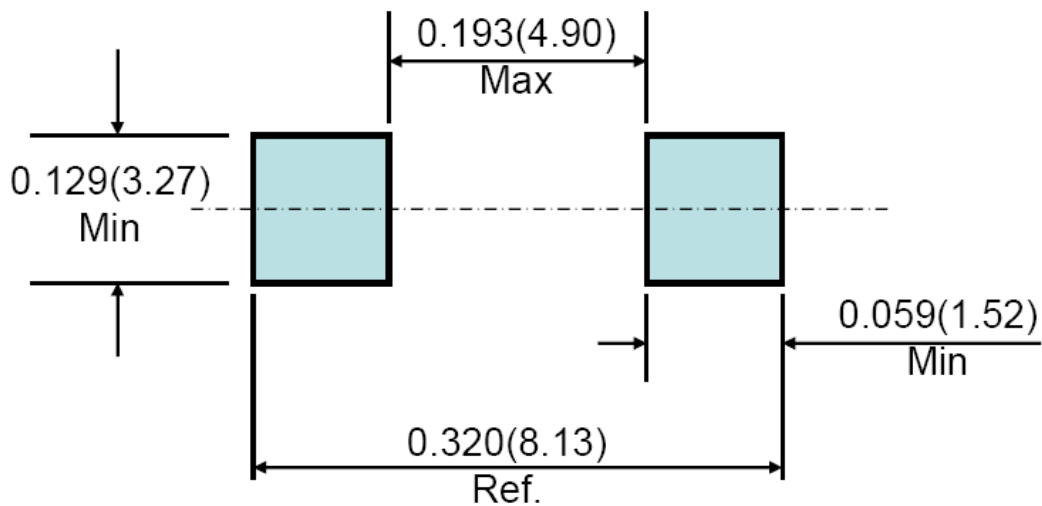


SMCJ*** Series

3. dimension:



Mounting Pad Layout ---SMC

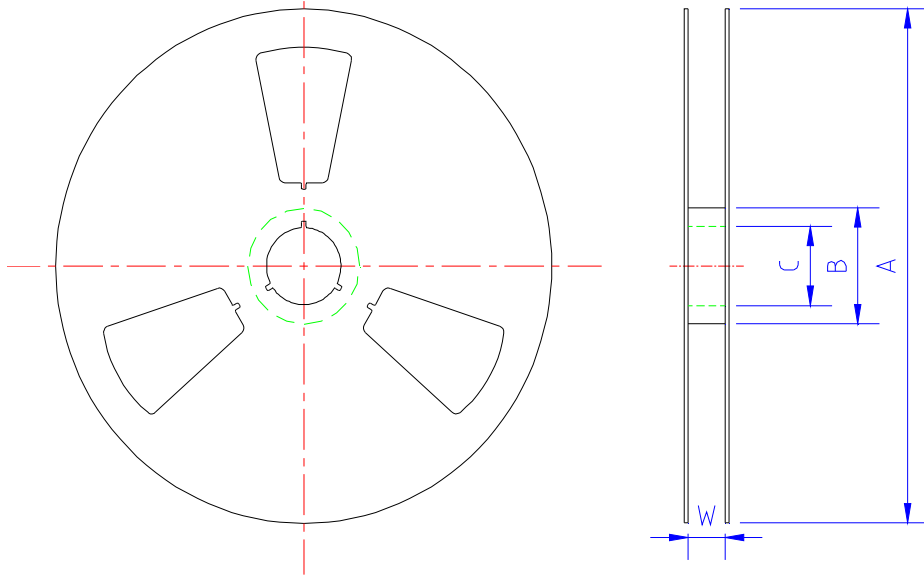


标题Title: 塑封生产线SMD产品包装规范 Packaging specification of SMD	文件编号: WI-258
	第 3 版 第 0 次修改
	第 2 页

SMD产品通用包装材料规格以及包装产品数量
General packaging materials spec. and quantity

1.1 卷装 reel

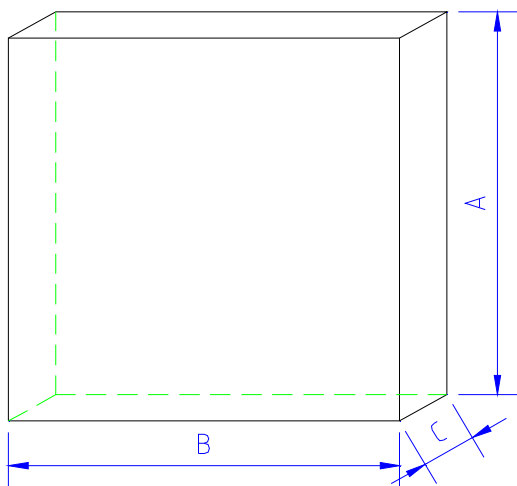
A. 卷盘规格 reel spec



单位: mm

规格	A	B	C	W	每卷数量
SMA 7"卷盘	177.0±2.0	54.0±0.5	13.0±0.5	13.2±0.2	2K
SMA13"卷盘	330.0±2.0	75.0±0.5	13.0±0.5	13.2±0.2	5K
SMB13"卷盘	330.0±2.0	75.0±0.5	13.0±0.5	13.5±0.5	3K
SMC13"卷盘	330.0±2.0	75.0±0.5	13.0±0.5	17.0±0.5	3K

B. 13"卷盘内盒 inner box



单位: mm

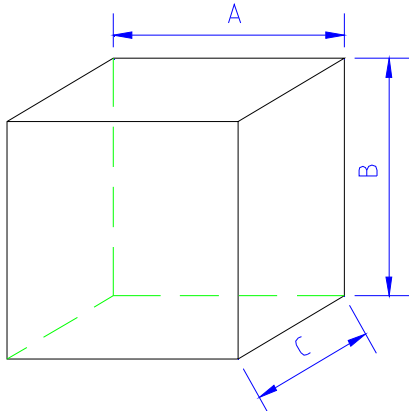
	A	B	C
尺寸	335±5.0	335±2.0	40±1.0

按以上包装方式, 产品包装数量: quantity

规格	每盒数量
SMA13"卷盘	10K
SMB13"卷盘	6K
SMC13"卷盘	6K

标题Title: 塑封生产线SMD产品包装规范 Packaging specification of SMD	文件编号: WI-258
	文件编号: WI-258
	第 3 页

C. 7"卷盘盒 box



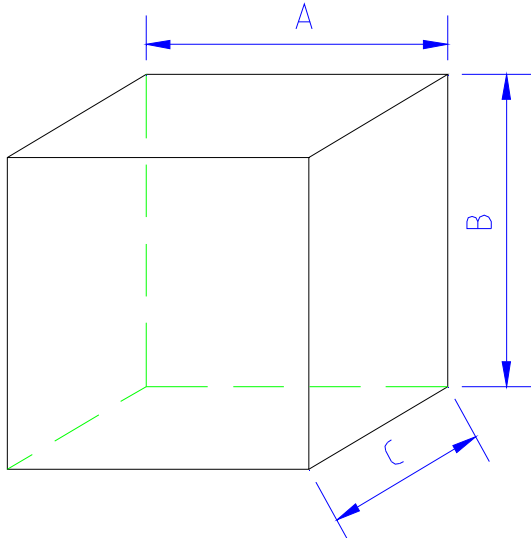
单位: mm

	A	B	C
尺寸	188±2.0	188±2.0	138±2.0

按以上包装方式, 产品包装数量: quantity

	每盒数量
7"卷盘	16K

D. 卷盘外箱 reel carton



单位: mm

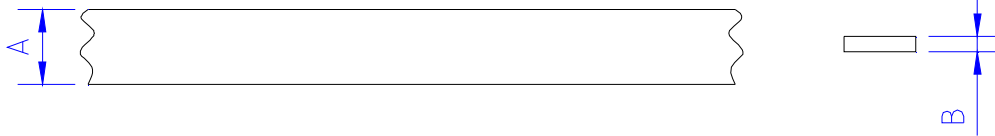
	A	B	C
尺寸	350±2.0	340±2.0	350±2.0

按以上包装方式, 产品包装数量:

规格	每箱数量
SMA 7"卷盘	80K
SMA13"卷盘	80K
SMB13"卷盘	48K
SMC13"卷盘	36K

1.2 编带规格 tape spec

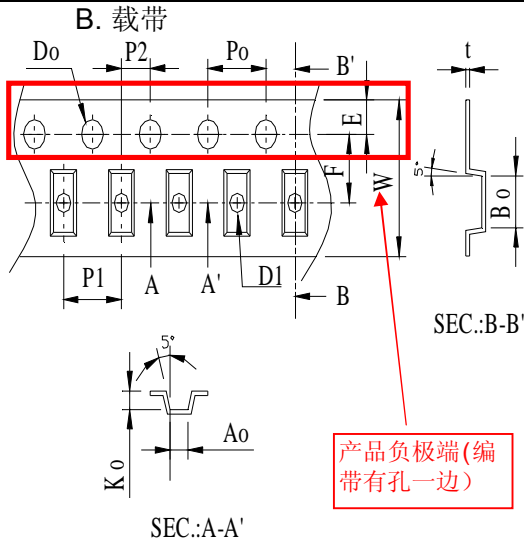
A. 盖带 Cover tape



单位: mm

	A	B
SMA	9.30±0.10	0.068±0.005
SMB		
SMC		

标题Title: 塑封生产线SMD产品包装规范 Packaging specification of SMD	文件编号: WI-258
	第 3 版 第 0 次修改
	第 4 页



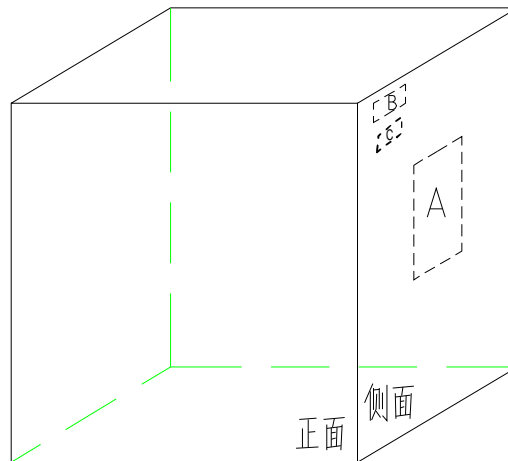
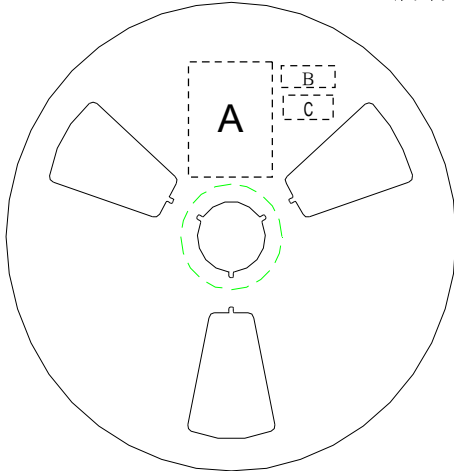
类型	SMA	SMB	SMC
W	12±0.3	12±0.3	16±0.3
P1	4±0.1	8±0.1	8±0.1
E	1.75±0.1	1.75±0.1	1.75±0.1
F	5.5±0.05	5.5±0.05	7.5±0.05
D0	1.55±0.05	1.55±0.05	1.55±0.05
D1	1.5±0.1	1.55±0.05	1.55±0.05
P0	4±0.1	4±0.1	4±0.1
P2	2±0.05	2±0.05	2±0.05
10P0	40±0.2	40±0.2	40±0.2
A0	2.79±0.1	3.8±0.1	6.05±0.1
B0	5.33±0.1	5.4±0.1	8.31±0.1
K0	2.36±0.1	2.45±0.1	2.54±0.1
T	0.25±0.05	0.25±0.05	0.25±0.05

2、SMD产品通用包装规范 General spec of SMD

5.2.1国内客户domestic

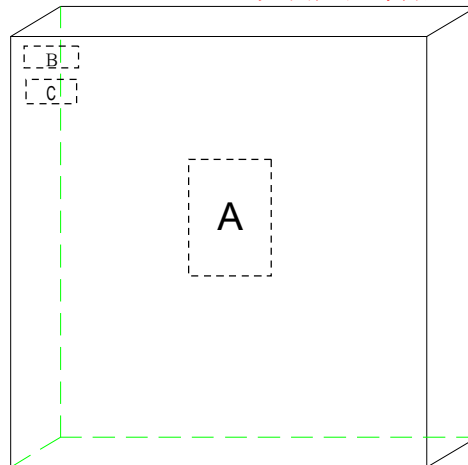
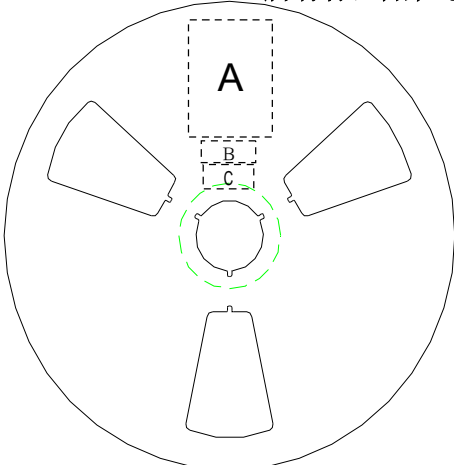
A. 7"卷盘reel

所有标签贴在卷盘负极 all the label on cathode side



A处:贴LRC标签; B处:贴ROHS标签 C处:贴无卤标签 HF label

B. 13"卷盘 所有标签贴在卷盘负极 all the label (无卤产品才贴HF only)




A处:贴LRC标签; B处:贴ROHS标签 C处:贴无卤标签 (无卤产品才贴HF only)

标题Title: 塑封生产线SMD产品包装规范 Packaging specification of SMD	文件编号: WI-258
	第 3 版 第 0 次修改
	第 5 页

C. 标签要求label spec:

LRC标签label

型号 TYPE	*****	← LRC产品型号 type
数量(只) QTY(PCS)	*****	← 产品数量 quantity
批号 LOT	*****	← 产品批号 LOT
日期 DATE	*****	← 产品生产日期 date
检验员: CHECKER		

ROHS标签

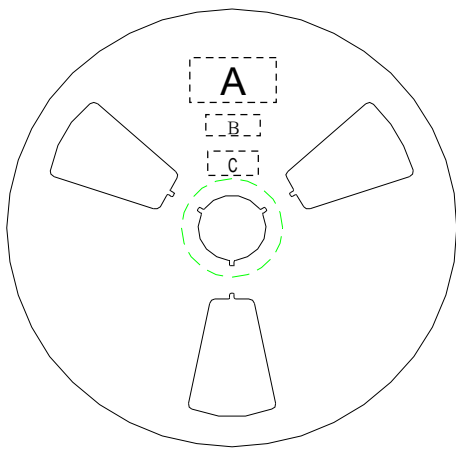


无卤标签 HF label

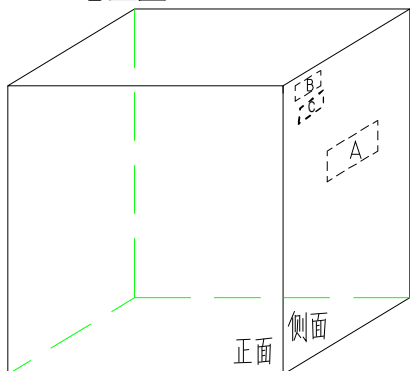


2.2 国外客户
overseas

所有标签贴在卷盘负极 all the label on cathode side



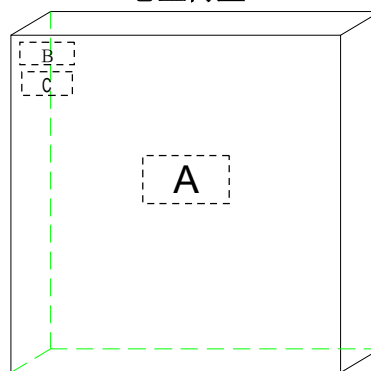
7"卷盘盒 inner box



A处:贴LRC标签;

B处:贴ROHS标签

13"卷盘内盒inner box



C处:贴无卤标签HF label
(无卤产品才贴HF only)

标题Title: 塑封生产线SMD产品包装规范 Packaging specification of SMD	文件编号: WI-258
	第 3 版 第 0 次修改
	第 6 页

LRC标签label

TYPE:*****	← LRC产品型号
MARK:*****	← 印字型号
Q'TY:*****	← 产品数量
DATE:*****	← 产品生产日期

ROHS标签



无卤标签 HF label



注意事项NOTE:

- 13"卷盘内盒装好产品,需用热缩膜包装;13"reel'inner box must be packed by shrink film
- 所有编带产品卷装完成后,用白色胶带将编带粘牢;
every tape after packing, must be fixed by white adhesive tape

3.1产品出厂检验报告 testing report of the OQC

每批出货时, 需要附上出厂检验报告 every lot must with test report

3.2尾箱

同一编码每批次只允许出现一个尾数箱, 对于尾数物料, 须用缓冲材料对空余部分填充好, 保证物料在受到一定的外作用力下不发生明显移动, 且物料间无碰撞。

The same coding is only one ending for each batch box materials for the mantissa to be good filled with cushioning material.



LRC

乐山无线电股份有限公司
Leshan Radio Company, Ltd

SMCJ*** Series

4. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	余波	2011-11-9
2	明确双向印字规范	周杰	2012-5-10