乐山无线电股份有限公司
Leshan Radio Company, Ltd

SM520A-E thru SM5100A-E

Schottky Barrier Rectifiers

Reverse Voltage 20 to100V Forward Current 5.0A

FEATURES

* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
* Low power loss,high efficiency
* For use in low voltage high frequency inverters, free wheeling,and polarity protection applications
* Guardring for over voltage protection
* High temperature soldering guaranteed: 260°C/10 seconds at terminals
* IEC61000-4-2 ESD Air Contact≥±15KV



We declare that the material of product compliance with ROHS requirements

Mechanical Data

Case: JEDEC DO-214AC, molded plastic over glass DIE
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.0023 oz., 0.065 g
Handling precautin:None

1.Electrical Characteristic

Maximum & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	SM520A-E	SM530A-E	SM540A-E	SM550A-E	SM560A-E	SM580A-E	SM5100A-E	Unit
device marking code		S52•	S53•	S54•	S55•	S56•	S58•	S510•	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	V
Maximum RSM voltage	V_{RSM}	14	21	28	35	42	56	70	V
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	V
Maximum average forward rectified current at TA = 80°C	IF(AV)	5.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100							A
Typical thermal resistance (Note 1)	RθJA	50							°C/W
Operating junction and storage temperature range	TJ, TSTG	–40 to +150							°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	SM520A-E	SM530A-E	SM540A-E	SM550A-E	SM560A-E	SM580A-E	SM5100A-E	Unit
Maximum instantaneous forward voltage at 5.0A	V_F	0.50			0.70		0.85		V
Maximum DC reverse current TA = 25°C at rated DC blocking voltage TJ = 125°C	IR	0.1 10.0							mA
Typical junction capacitance at 4.0V, 1MHz	CJ	110							PF

NOTES:

1. 8.0mm2 (.013mm thick) land areas

SM520A-E thru SM5100A-E

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

Fig. 1 – Forward Current Derating Curve

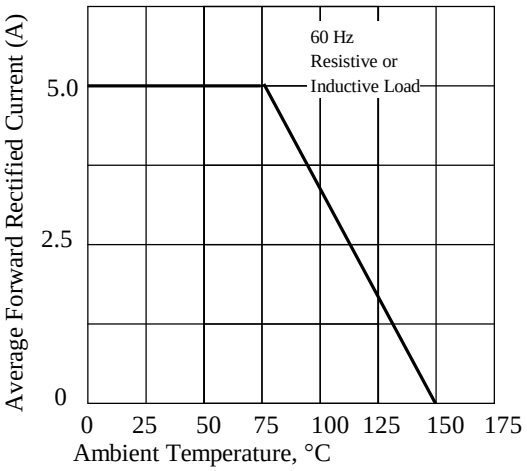


Fig. 2 – Maximum Non-repetitive Peak Forward Surge Current

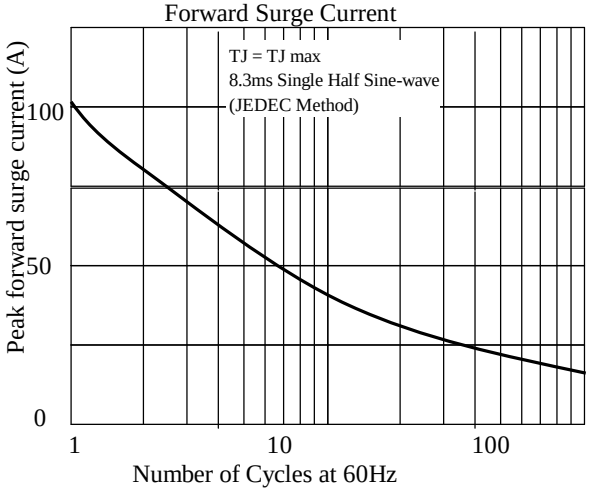


Fig 3. – Typical Instantaneous Forward Characteristics

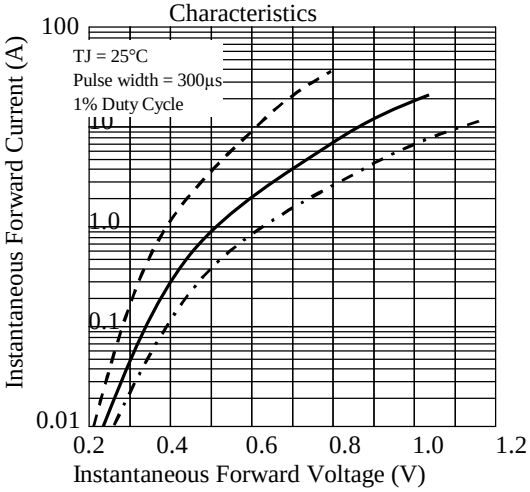


Fig 4. – Typical Reverse Characteristics

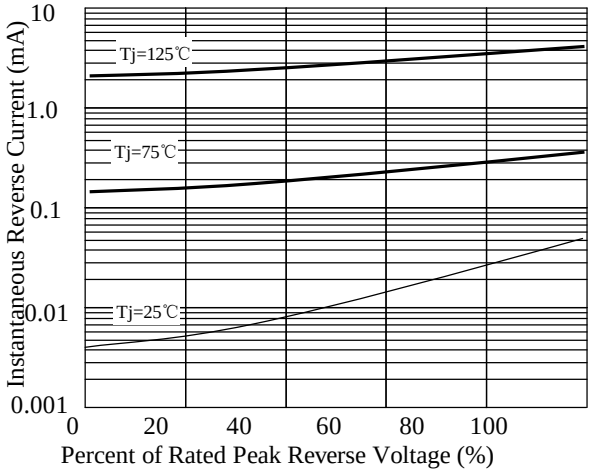


Fig 5. – typical transient thermal impedance

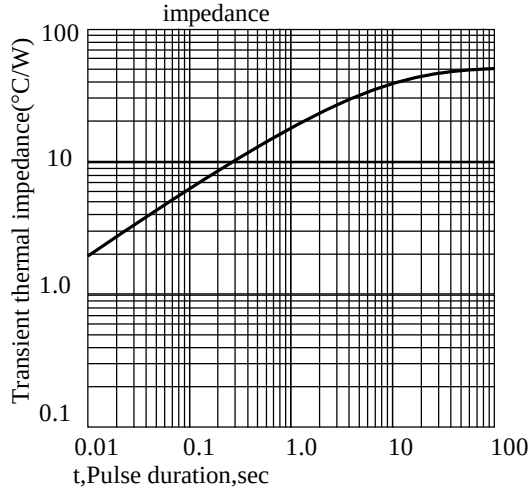
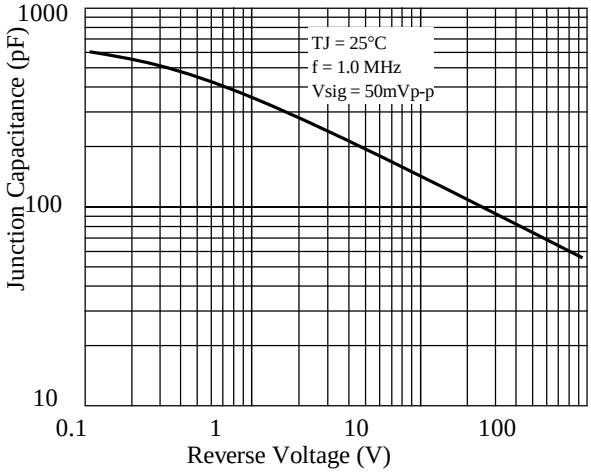


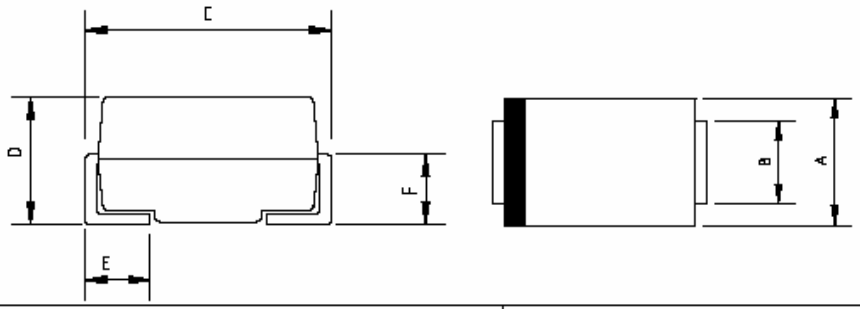
Fig 6. – Typical Junction Capacitance



SM520A-E thru SM5100A-E

3. dimension:

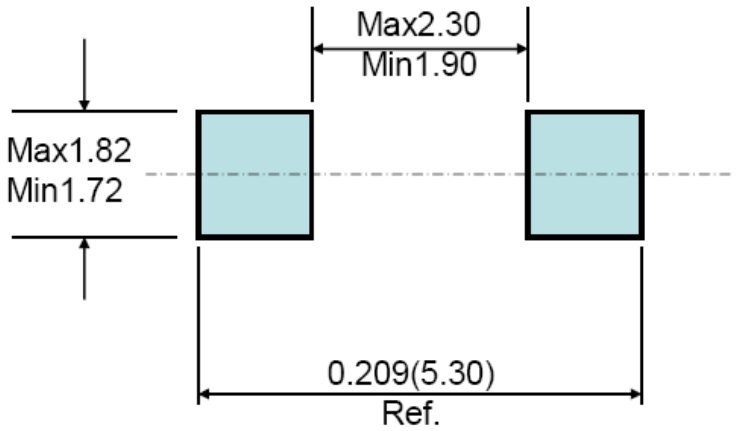
Package outline



Dimensions				
	inches		mm	
	Min.	Max.	Min.	Max.
A	0.086	0.110	2.2	2.8
B	0.051	0.067	1.3	1.7
C	0.185	0.209	4.7	5.3
D	0.067	0.100	1.7	2.55
E	0.035	0.059	0.9	1.5
F	0.035	0.059	0.9	1.5

Note:
DO-214AC
molded plastic case
The marking band indicates the cathode

Mounting Pad Layout
---SMA

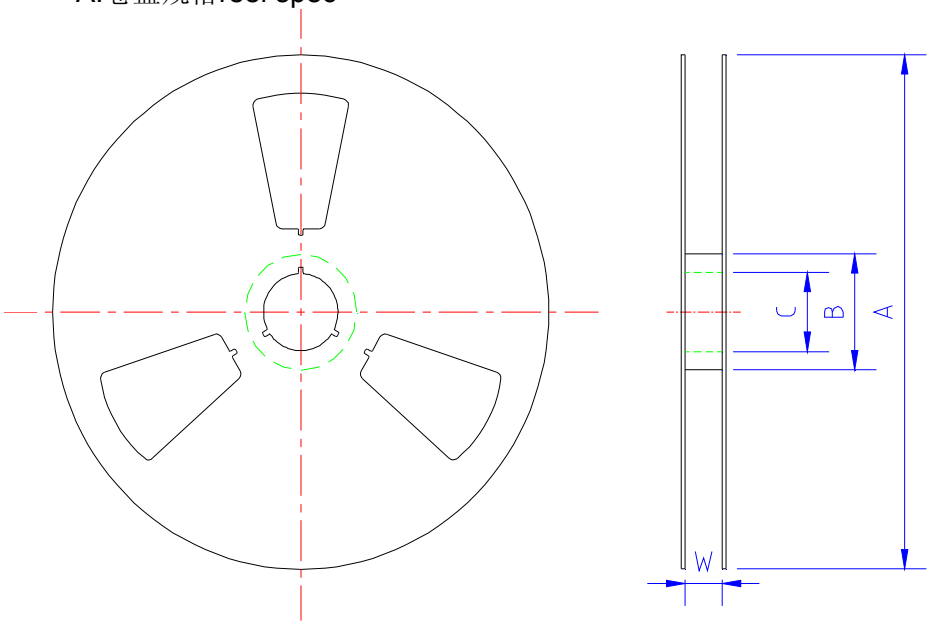


SM540A-E: " S"--肖特基产品；"M"--表面贴装； "5"--正向电流5A; " 40"---VB为40V; "A"--SMA封装；
"E"--满足ESD大于15KV.

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

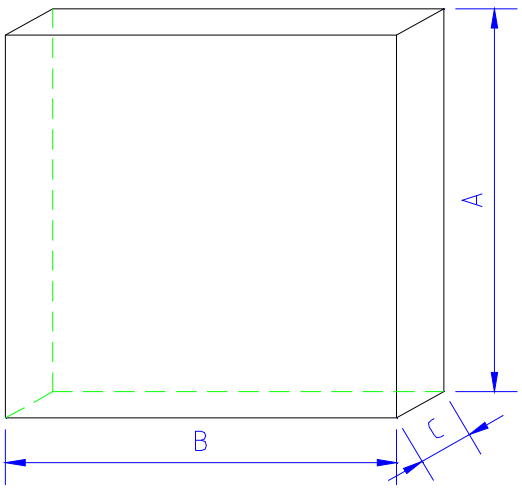
A.卷盘规格reel spec



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



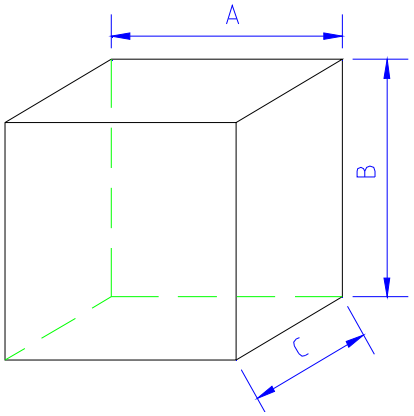
单位：mm

	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

C. 7"卷盘盒 box



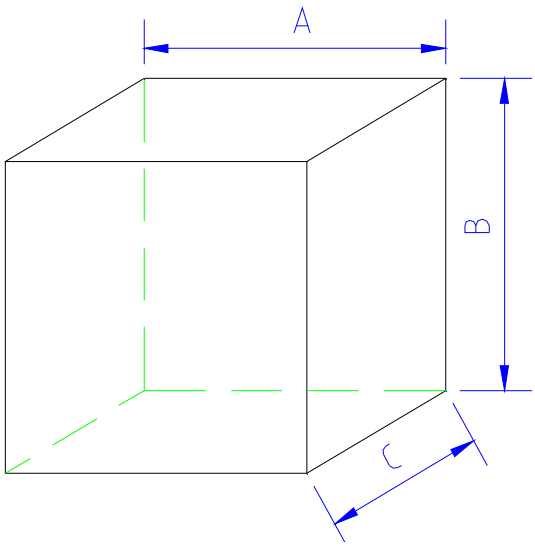
单位：mm

	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

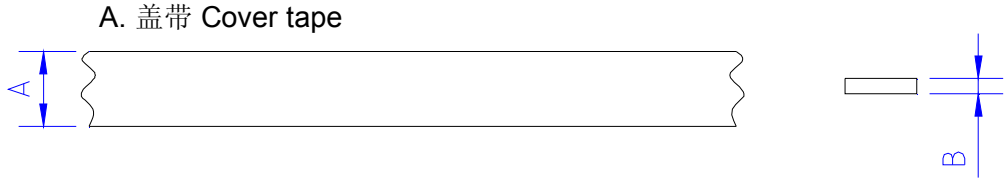
	A	B	C
尺寸	350±2.0	340±2.0	350±2.0

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

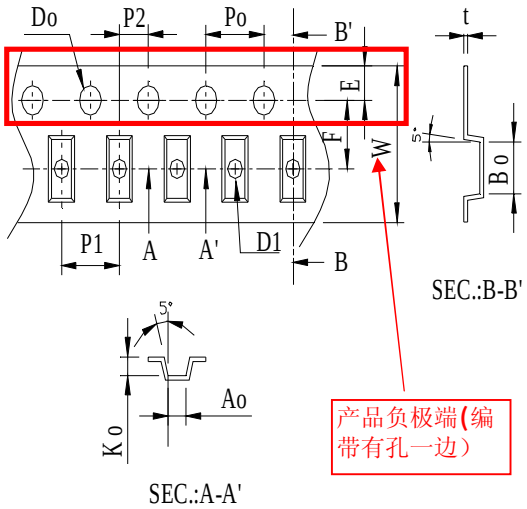
A. 盖带 Cover tape



单位：mm

	A	B
SMA	9.30±0.10	0.068±0.005
SMB		
SMC	13.30±0.10	

B. 载带

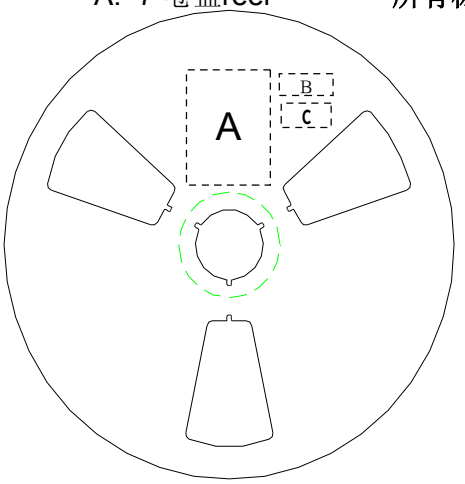


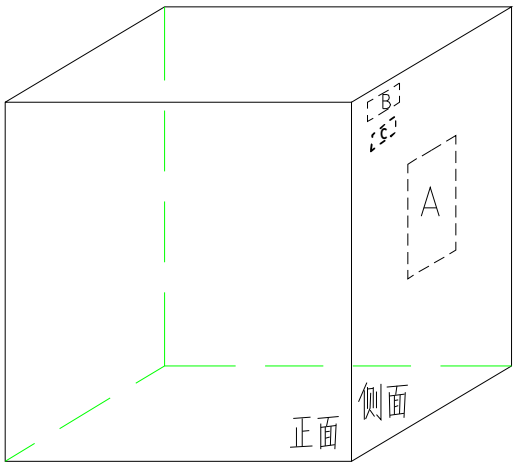
类型	SMA	SMB	SMC
W	12±0.3	12±0.3	16±0.3
P1	4±0.1	8±0.1	8±0.1
E	1.75±0.1	1.75±0.1	1.75±0.1
F	5.5±.05	5.5±0.05	7.5±.05
D0	1.55±0.05	1.55±0.05	1.55±0.05
D1	1.5±0.1	1.55±0.05	1.55±0.05
P0	4±0.1	4±0.1	4±0.1
P2	2±0.05	2±0.05	2±0.05
10P0	40±0.2	40±0.2	40±0.2
A0	2.79±0.1	3.8±0.1	6.05±0.1
B0	5.33±0.1	5.4±0.1	8.31±0.1
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

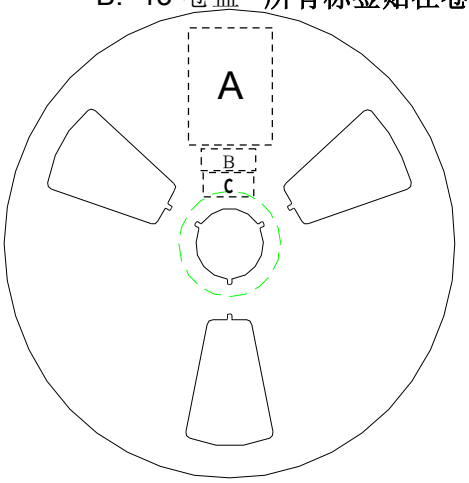
A. 7"卷盘reel 所有标签贴在卷盘负极 **all the label on cathode side**

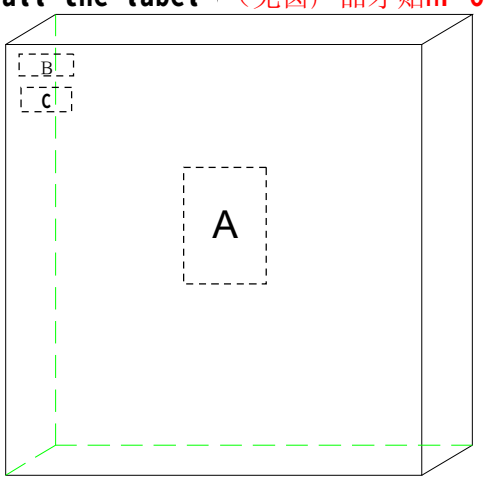




A处:贴LRC标签; B处:贴ROHS标签 C处:贴无卤标签 HF label

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）

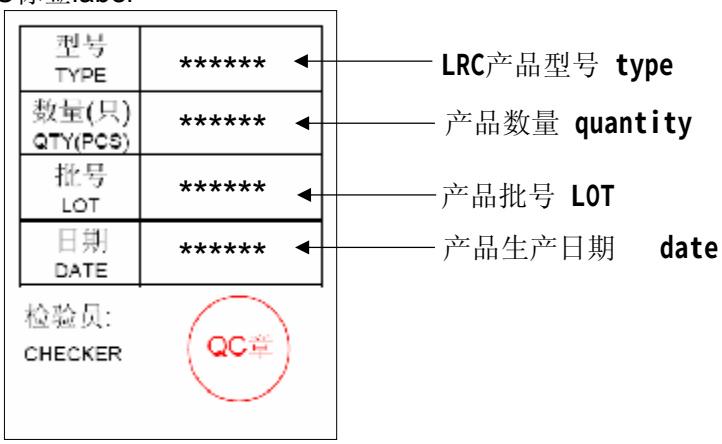




A处:贴LRC标签; B处:贴ROHS标签 C处:贴无卤标签（无卤产品才贴HF only）

C. 标签要求label spec：

LRC标签label



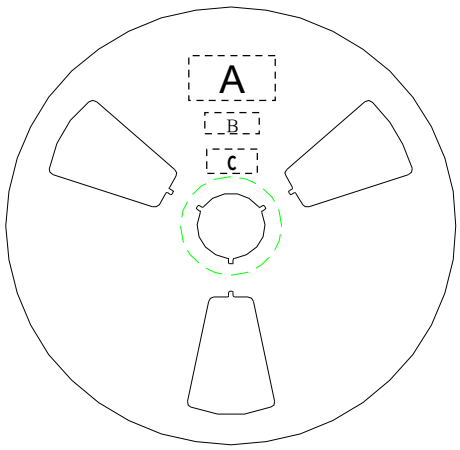
ROHS标签



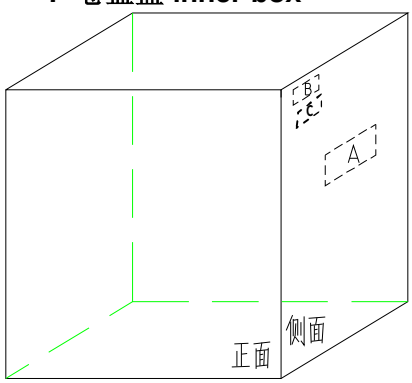
无卤标签 HF label

Green

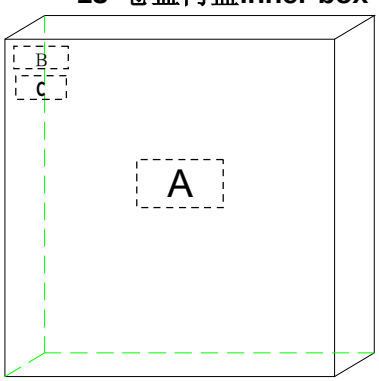
2.2 国外客户 overseas 所有标签贴在卷盘负极 all the label on cathode side



7"卷盘盒 inner box



13"卷盘内盒inner box



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

（无卤产品才贴HF only）

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:

1. 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
2. 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.

SM520A-E thru SM5100A-E

4. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	周杰	2011-3-5
2	1.增加包装规范；2.修正RMS为RSM；	周杰	2012-5-18