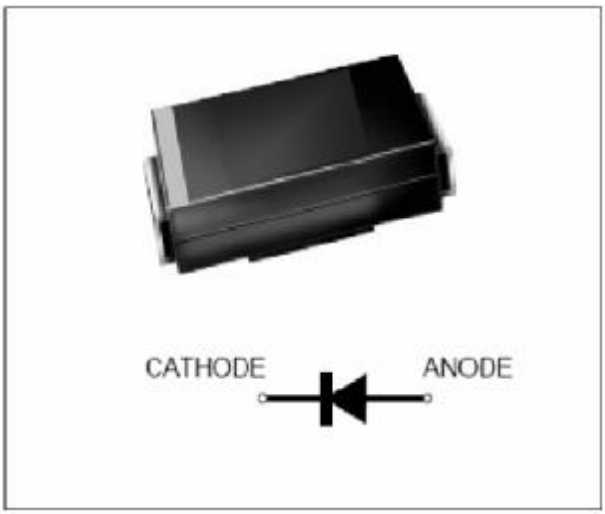
乐山无线电股份有限公司
Leshan Radio Company, Ltd

LUMA105 thru LUMA160

Glass Passivated Junction Ultra Fast Rectifiers
Reverse Voltage 50 to 600V Forward Current 1.0A

FEATURES

* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
* High temperature metallurgically bonded construction
* Glass passivated chip
* Capable of meeting environmental standards of MIL-S-19500
* For use in high frequency rectifier circuits
* Fast switching for high efficiency
* High temperature soldering guaranteed: 260°C/10 seconds
* 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension



Mechanical Data

Case: JEDEC DO-214AC, molded plastic body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.0026 oz., 0.075 g
Handling precautin:None

Electrical Characteristic

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

Parameter Symbol	symbol	LUMA 105	LUMA 110	LUMA 115	LUMA 120	LUMA 140	LUMA 150	LUMA 160	Unit
device marking code		UM05	UM10	UM15	UM20	UM40	UM50	UM60	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	400	500	600	V
Maximum RSM voltage	V_{RSM}	35	70	105	140	280	350	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	400	500	600	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at TA = 55°C	IF(AV)	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30							A
Maximum full load reverse current, full cycle average,0.375"(9.5mm) lead lengths at T_A = 75°C	IR(AV)	100							μA
Typical thermal resistance (Note 2)	RθJA	72							°C/W
Operating junction and storage temperature range	TJ, TSTG	–50 to +150							°C

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

Parameter Symbol	symbol	LUMA 105	LUMA 110	LUMA 115	LUMA 120	LUMA 140	LUMA 150	LUMA 160	Unit
Maximum Instantaneous Forward Voltage (IF = 1.0 Amps, TJ = 25°C)	V_F	0.93				1.25		1.5	V
Maximum full load reverse current, full cycle average,0.375"(9.5mm) lead lengths (Rated dc Voltage, TJ = 125°C) (Rated dc Voltage, TJ = 25°C)	IR	150 5.0							μA
Typical reverse recovery time (Note 1)	TRR	35				50			ns
Typical junction capacitance at 4.0V, 1MHz	CJ	45							PF

NOTES:
1. IF = 0.5A, IR = 1.0A, IRR = 0.25A
2. 8.0mm2 (.013mm thick) land areas

LUMA105 thru LUMA160

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

Fig. 1 – Forward Current Derating Curve

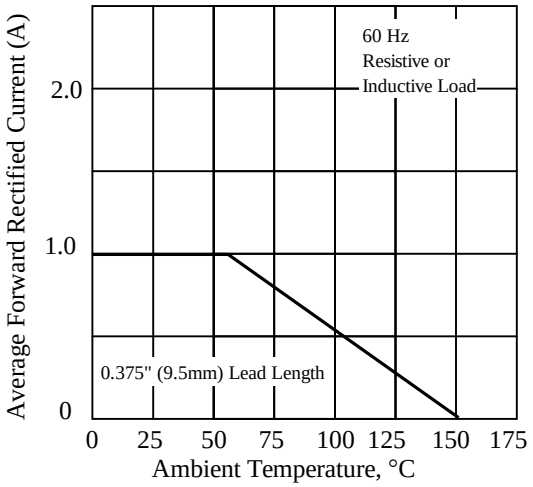


Fig. 2 – Maximum Non-repetitive Peak Forward Surge Current

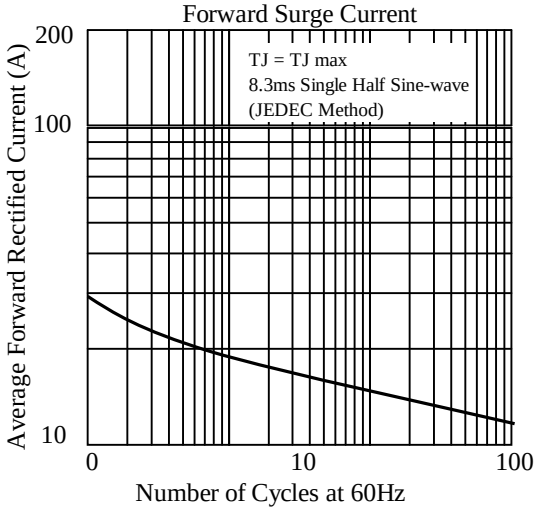


Fig 3. – Typical Instantaneous Forward Characteristics

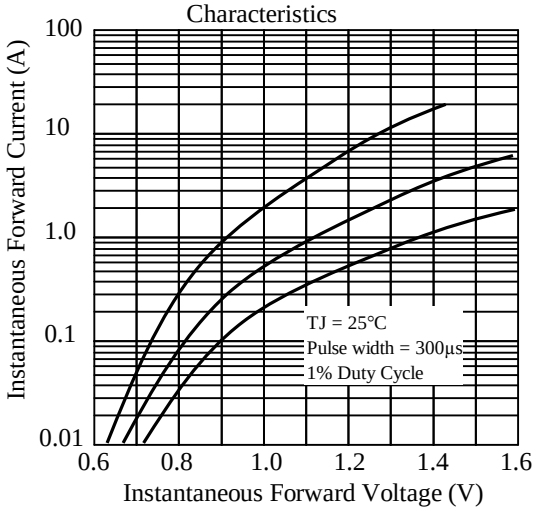


Fig 4. – Typical Reverse Characteristics

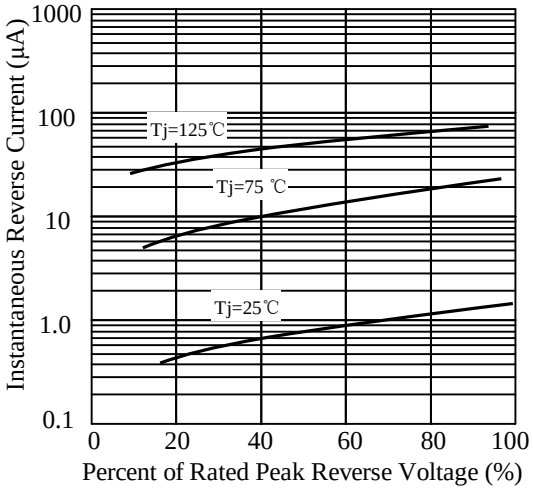


Fig 5. – typical transient thermal impedance

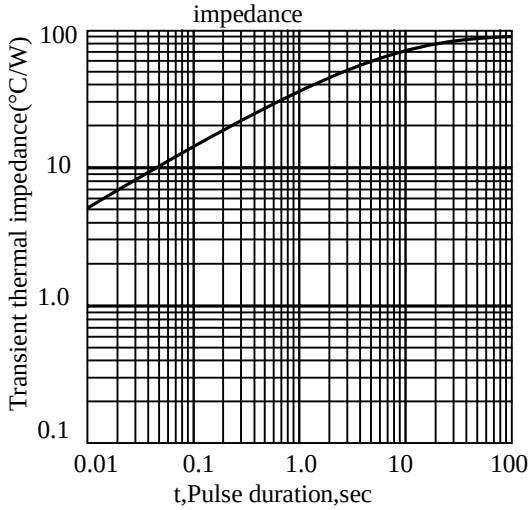
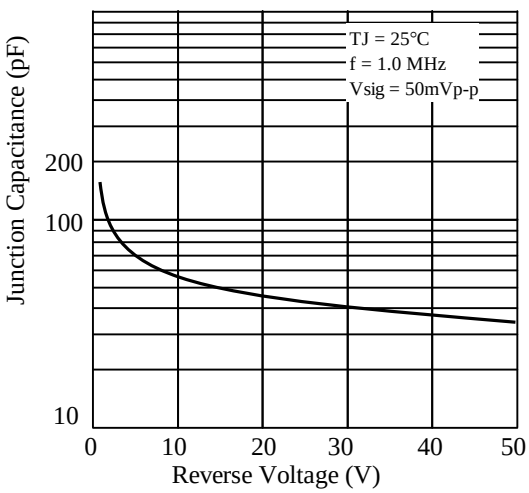


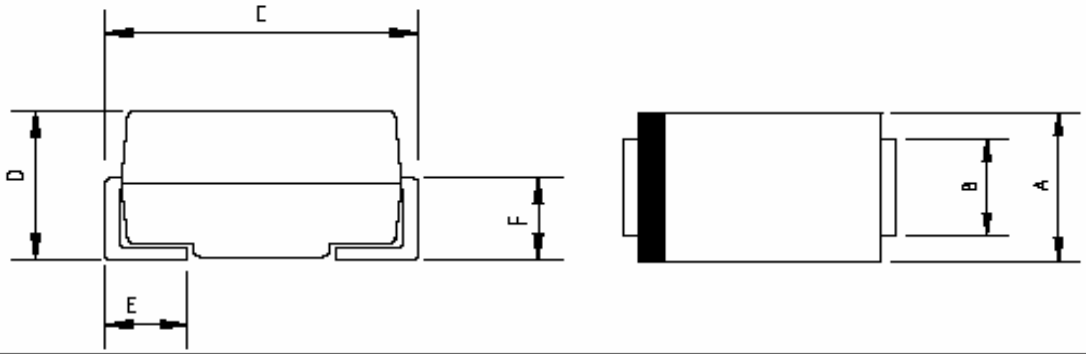
Fig 6. – Typical Junction Capacitance



LUMA105 thru LUMA160

3. dimension:

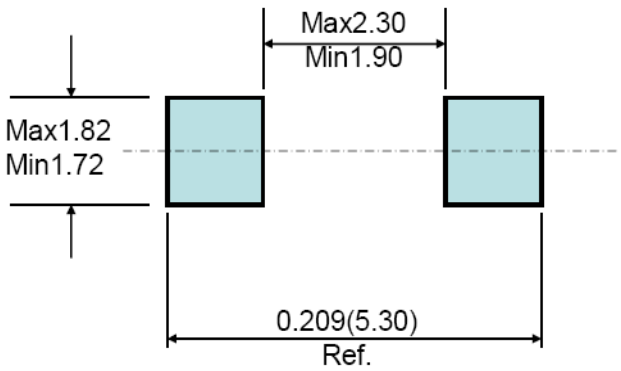
Package outline

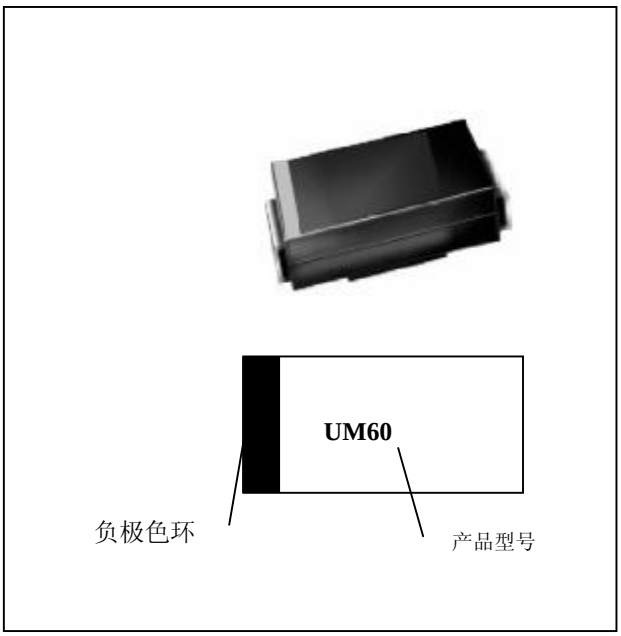


Dimensions				
	inches		mm	
	Min.	Max.	Min.	Max.
A	0.086	0.110	2.2	2.8
B	0.051	0.067	1.3	1.7
C	0.185	0.209	4.7	5.3
D	0.067	0.100	1.7	2.55
E	0.035	0.059	0.9	1.5
F	0.035	0.059	0.9	1.5

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

Mounting Pad Layout
---SMA



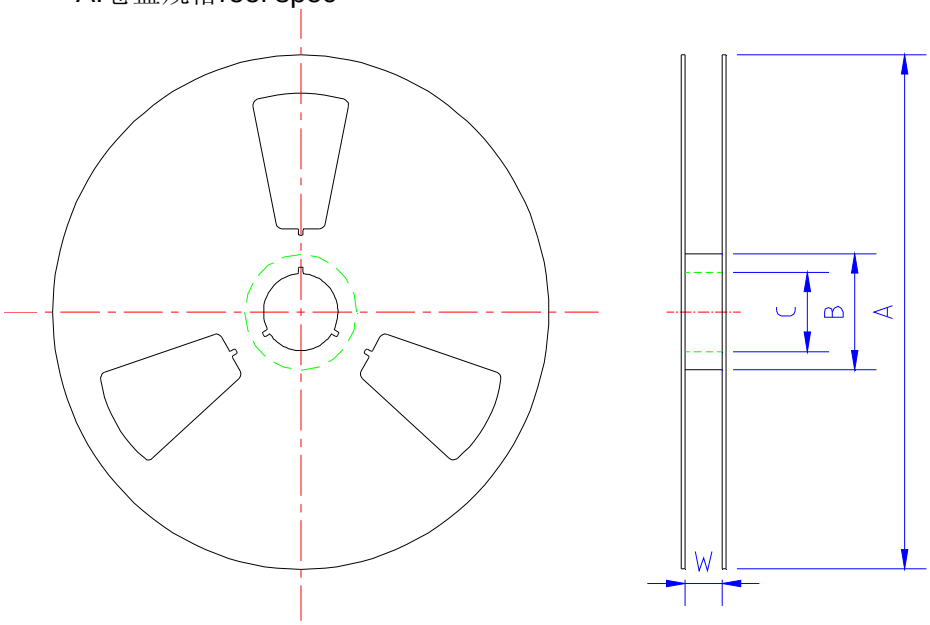


LUMA160： L---LRC；U----超快二极管；M---贴片产品； A---SMA封装；1----IF=1A; 60----VB=600V；

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

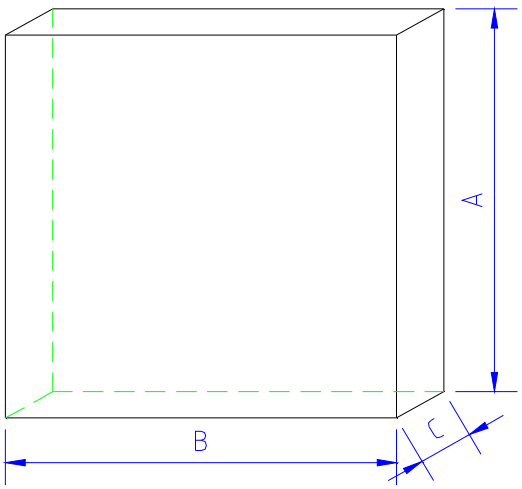
A.卷盘规格reel spec



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



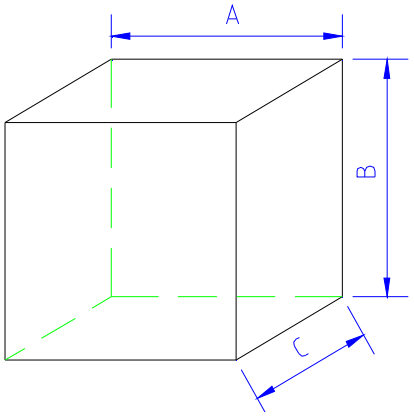
单位：mm

	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



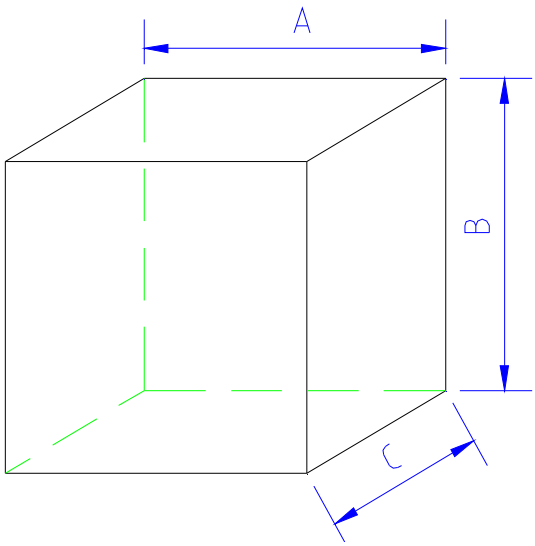
单位：mm

	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

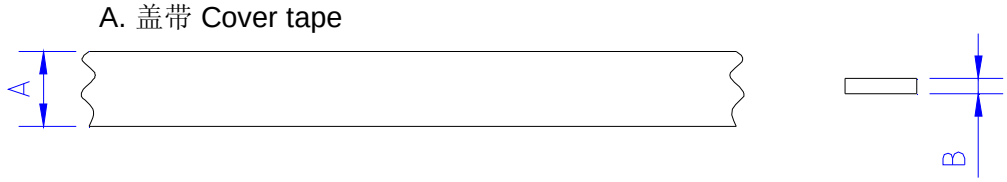
	A	B	C
尺寸	350±2.0	340±2.0	350±2.0

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

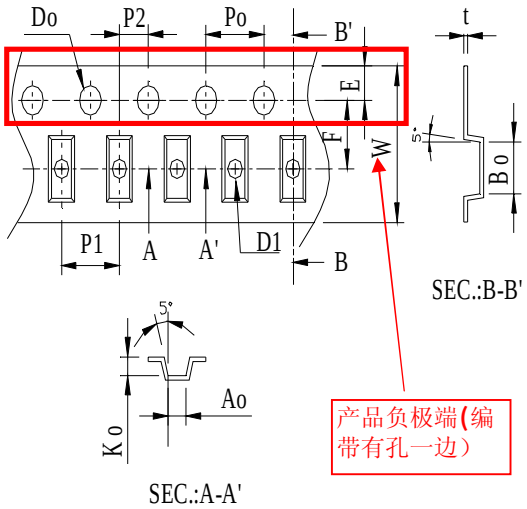
A. 盖带 Cover tape



单位：mm

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

B. 载带

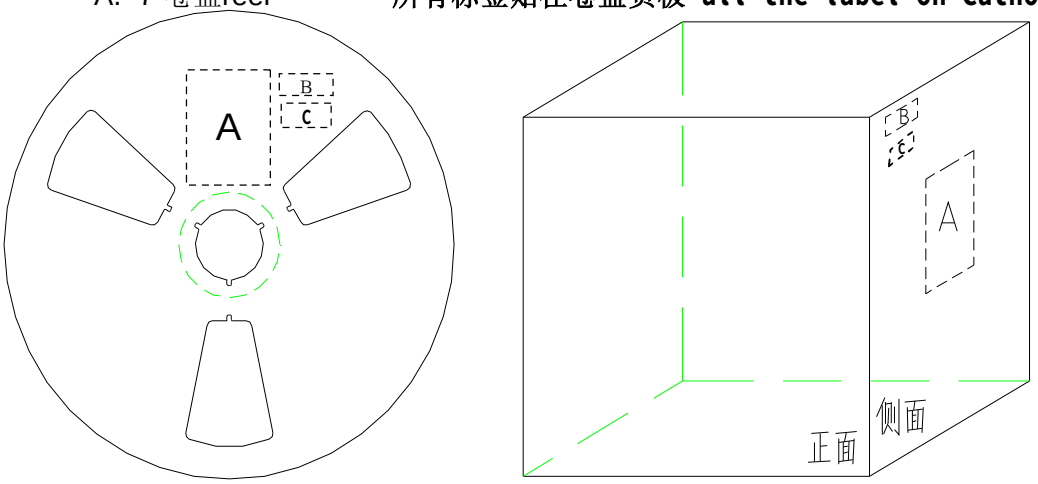


类型	SMA	SMB	SMC
W	12±0.3	12±0.3	16±0.3
P1	4±0.1	8±0.1	8±0.1
E	1.75±0.1	1.75±0.1	1.75±0.1
F	5.5±.05	5.5±0.05	7.5±.05
D0	1.55±0.05	1.55±0.05	1.55±0.05
D1	1.5±0.1	1.55±0.05	1.55±0.05
P0	4±0.1	4±0.1	4±0.1
P2	2±0.05	2±0.05	2±0.05
10P0	40±0.2	40±0.2	40±0.2
A0	2.79±0.1	3.8±0.1	6.05±0.1
B0	5.33±0.1	5.4±0.1	8.31±0.1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

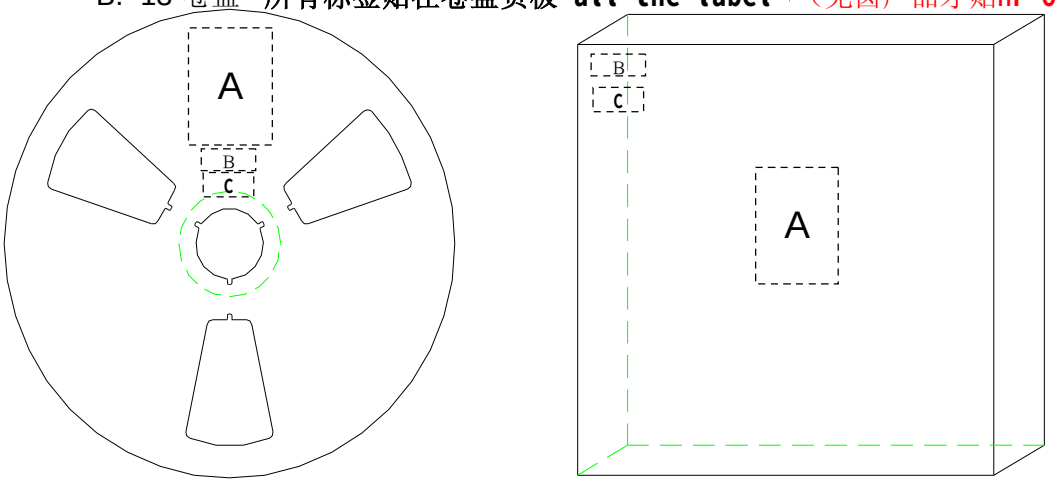
5.2.1国内客户domestic

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

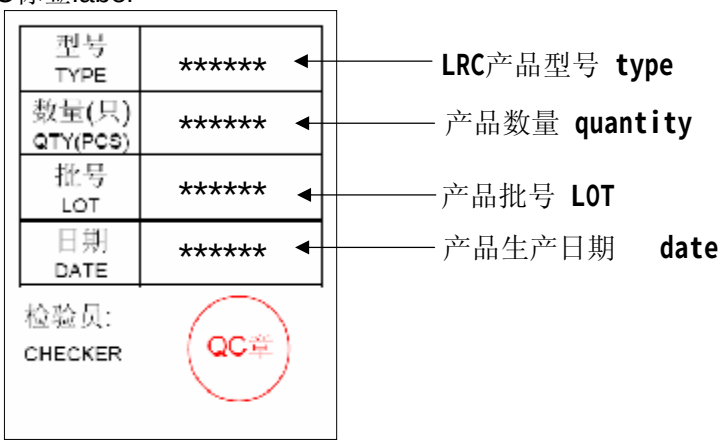
B. 13"卷盘 **所有标签贴在卷盘负极 all the label**（无卤产品才贴**HF only**）



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

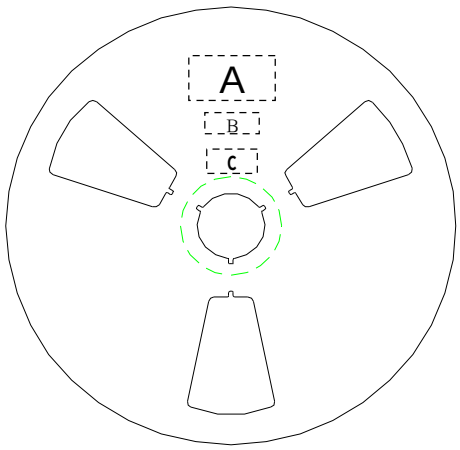


无卤标签 HF label

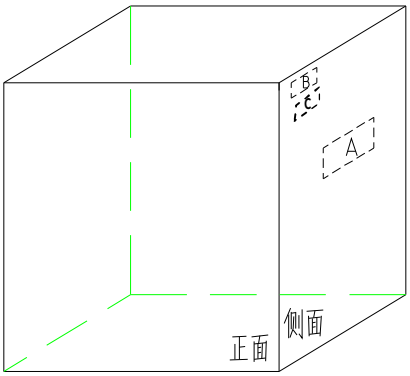
Green

2.2 国外客户 overseas

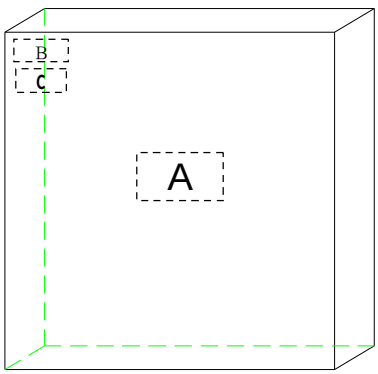
所有标签贴在卷盘负极 all the label on cathode side



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:******
MARK:******
Q'TY:******
DATE:******

← LRC产品型号
← 印字型号
← 产品数量
← 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.

LUMA105 thru LUMA160

4. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	周杰	2010-3-18
2	增加印字标识	周杰	2010-9-30
3	增加命名说明；将LUM160系列改为LUMA160系列。	周杰	2012-5-29