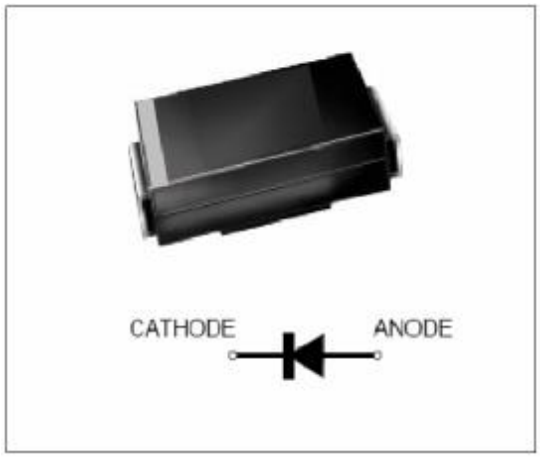
乐山无线电股份有限公司
Leshan Radio Company, Ltd

HFMA210 thru HFMA290

Surface Mount Glass Passivated High Efficiency Rectifiers
Reverse Voltage 50 to 1200V Forward Current 2.0A

FEATURES

* Plastic package has Underwriters Laboratories Flammability Classification 94V-0
* Ideally suited for use in very high frequency switching
* power supplies, inverters and as free wheeling diodes
* Ultrafast recovery time for high efficiency
* Excellent high temperature switching
* Soft recovery characteristics
* Cavity-free glass passivated junction
* High temperature soldering guaranteed:
* 260°C/10 seconds
  5 lbs. (2.3kg) tension



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	HFMA 210	HFMA 220	HFMA 230	HFMA 240	HFMA 250	HFMA 260	HFMA 270	HFMA 280	HFMA 290	Unit
device marking code		HF21	HF22	HF23	HF24	HF25	HF26	HF27	HF28	HF29	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	600	800	1000	1200	V
Maximum RSM voltage	V_{RSM}	35	70	140	210	280	420	560	700	840	V
Maximum DC blocking voltage	V_{DC}	50	100	200	300	400	600	800	1000	1200	V
Maximum average forward rectified current (See fig. 1)	IF(AV)	2.0									A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	60									A
Maximum full load reverse current, full cycle average,0.375"(9.5mm) lead lengths at T_A = 55°C	IR(AV)	100									μA
Typical thermal resistance (Note 2)	RθJA	50									°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	HFMA 210	HFMA 220	HFMA 230	HFMA 240	HFMA 250	HFMA 260	HFMA 270	HFMA 280	HFMA 290	Unit
Maximum instantaneous forward voltage at 2.0A	V_F	1.00			1.30		1.85				V
Maximum DC reverse current TA = 25°C at rated DC blocking voltage TA = 100°C	IR	5.0 50									μA
Typical reverse recovery time (Note 1)	trr	50					75				ns
Typical junction capacitance at 4.0V, 1MHz	CJ	17									PF

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

HFMA210 thru HFMA290

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

Fig. 1 – Forward Current Derating Curve

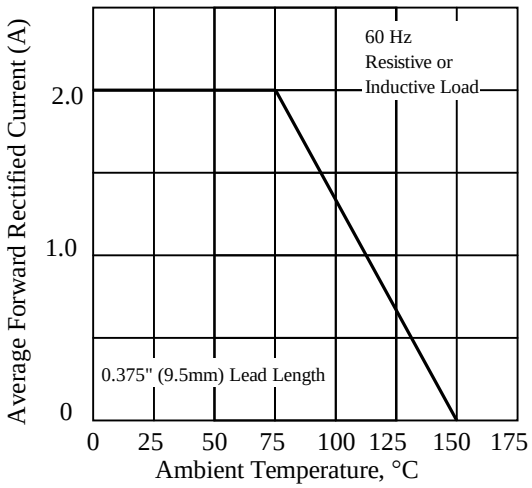


Fig. 2 – Maximum Non-repetitive Peak Forward Surge Current

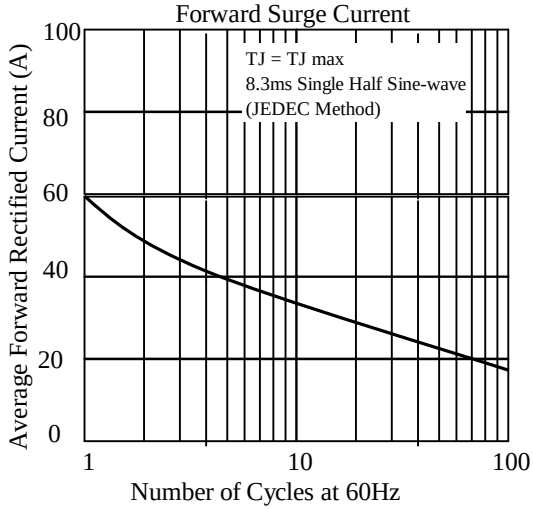


Fig 3. – Typical Instantaneous Forward Characteristics

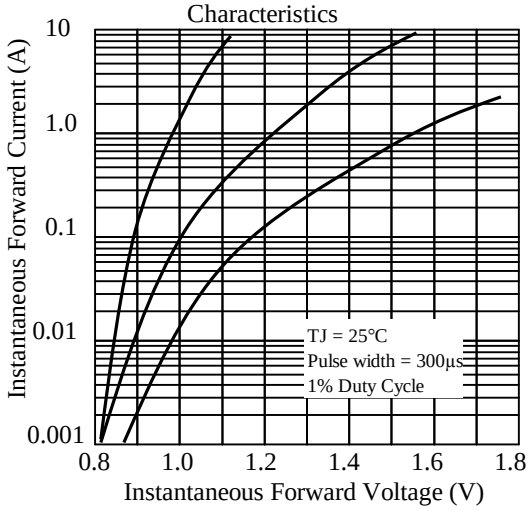


Fig 4. – Typical Reverse Characteristics

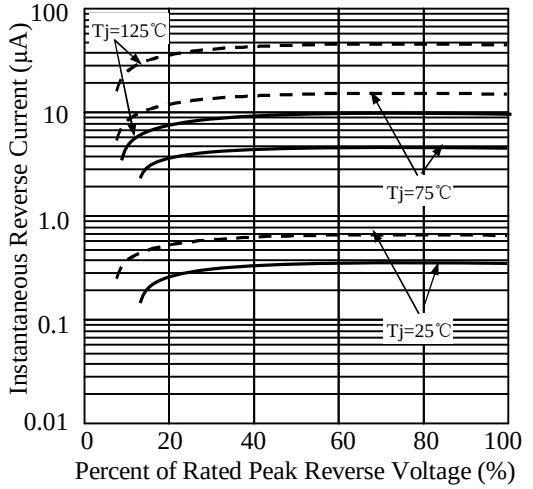


Fig 5. – typical transient thermal impedance

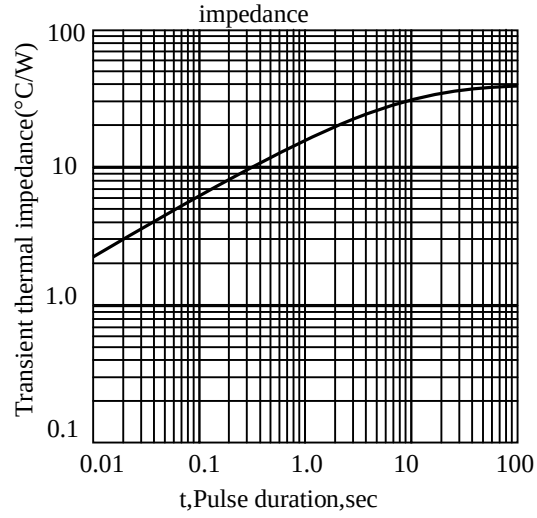
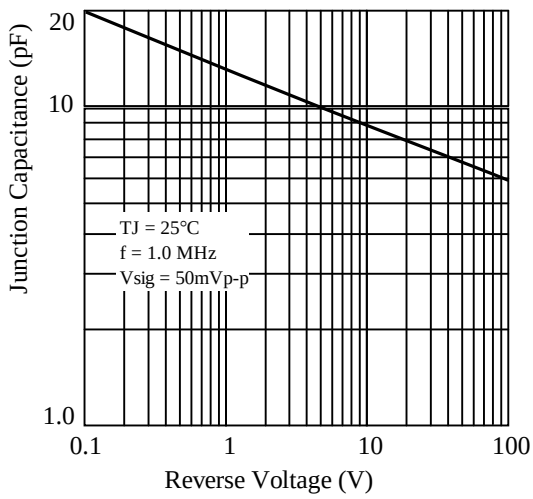
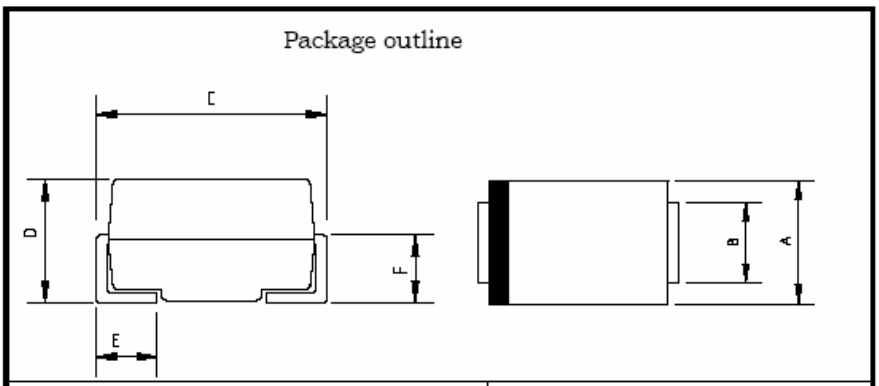


Fig 6. – Typical Junction Capacitance

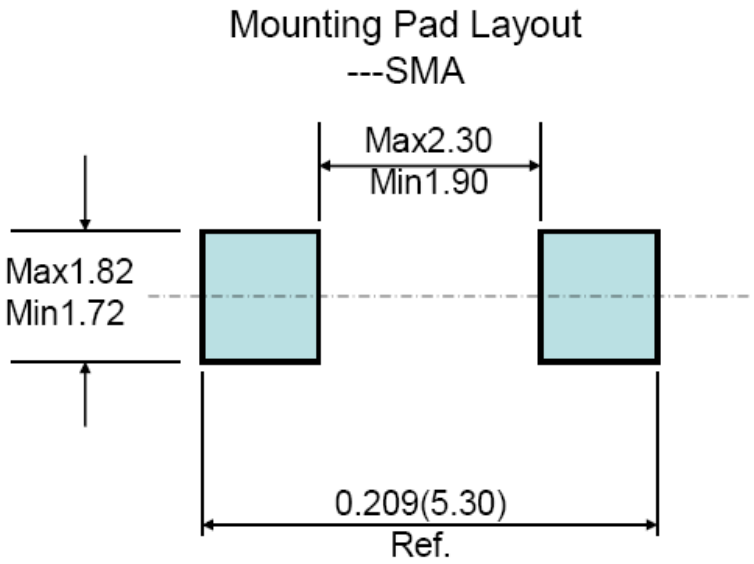


HFMA210 thru HFMA290

3. dimension:



Dimensions					Note:
	inches		mm		DO-214AC
	Min.	Max.	Min.	Max.	molded plastic case
A	0.086	0.110	2.2	2.8	The marking band indicates the
B	0.051	0.067	1.3	1.7	cathode
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	

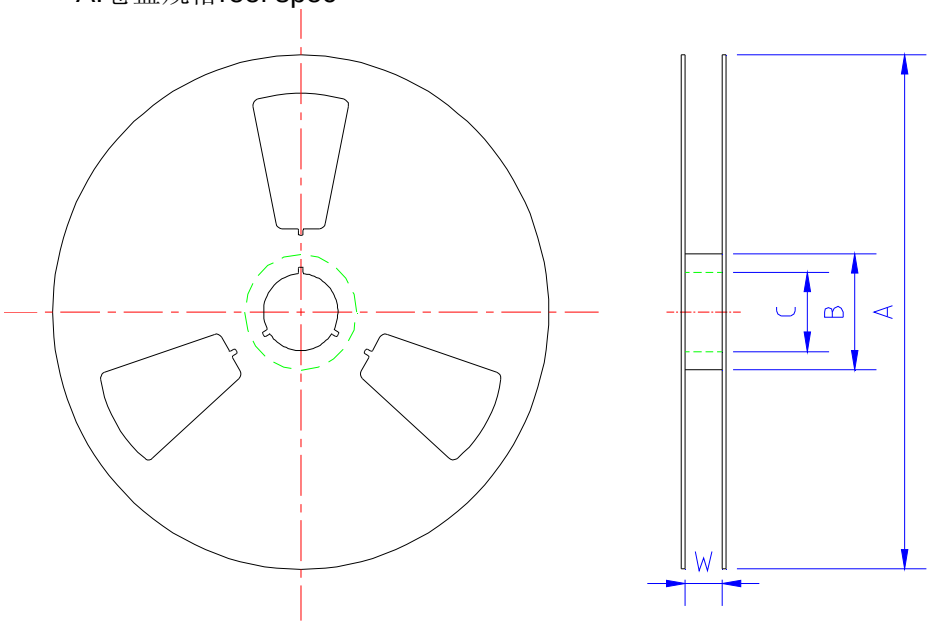


HFMA290： HF----超快二极管；M---贴片产品； A---SMA封装；2----IF=2A; 90----VB=1200V;

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

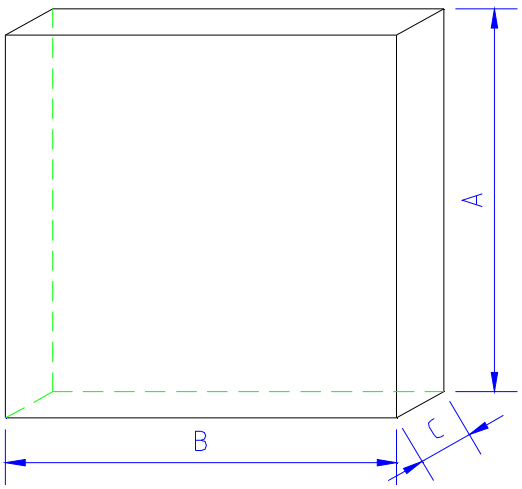
A.卷盘规格reel spec



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



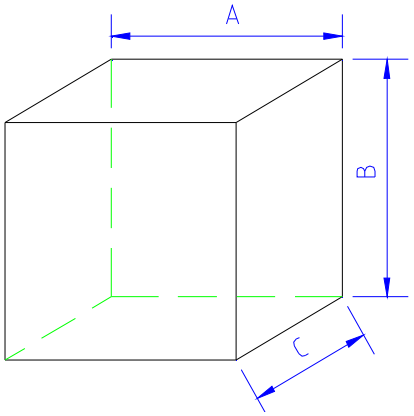
单位：mm

	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



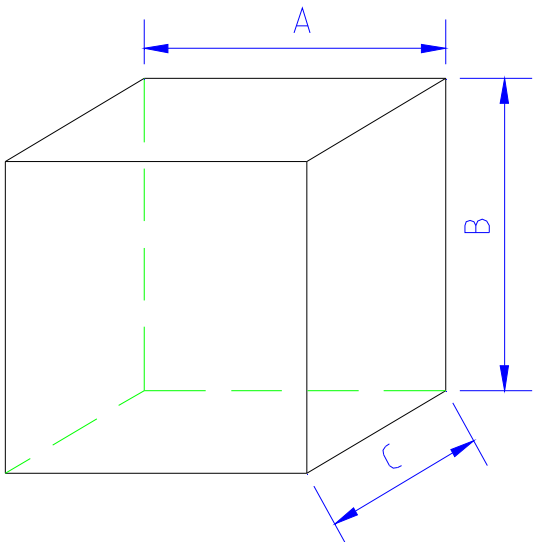
单位：mm

	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

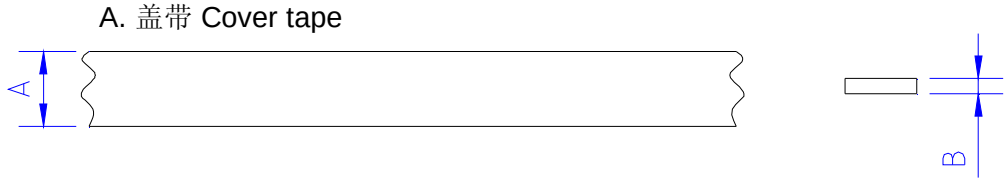
	A	B	C
尺寸	350±2.0	340±2.0	350±2.0

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

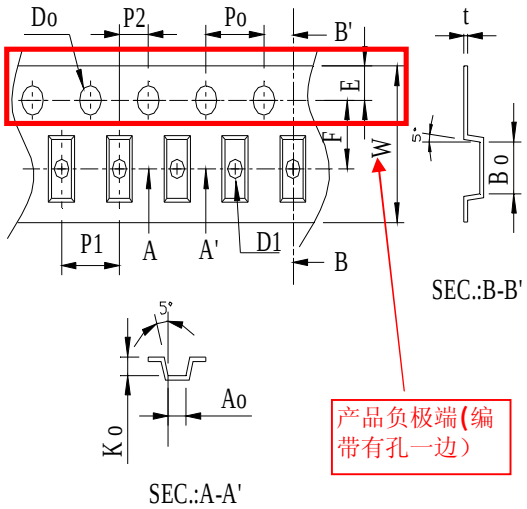
A. 盖带 Cover tape



单位：mm

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

B. 载带

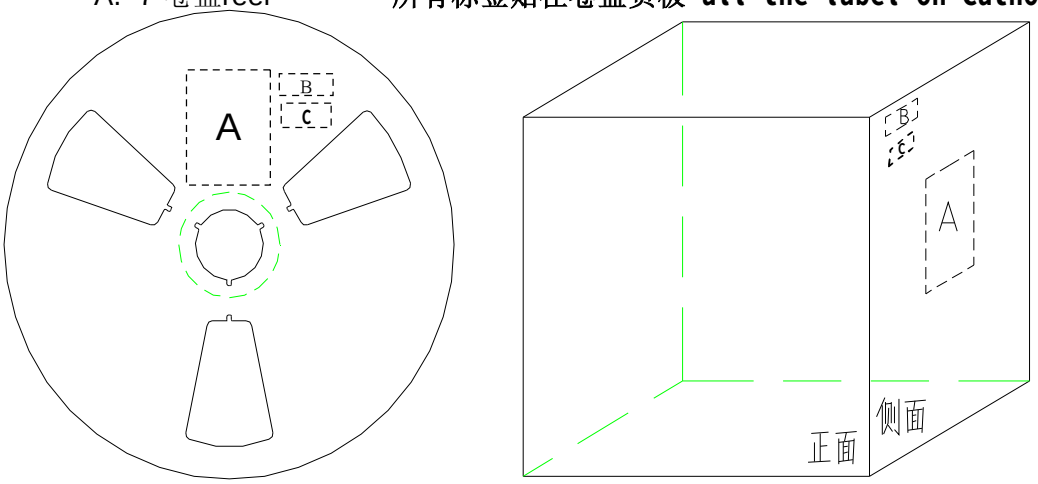


类型	SMA	SMB	SMC
W	12±0.3	12±0.3	16±0.3
P1	4±0.1	8±0.1	8±0.1
E	1.75±0.1	1.75±0.1	1.75±0.1
F	5.5±.05	5.5±0.05	7.5±.05
D0	1.55±0.05	1.55±0.05	1.55±0.05
D1	1.5±0.1	1.55±0.05	1.55±0.05
P0	4±0.1	4±0.1	4±0.1
P2	2±0.05	2±0.05	2±0.05
10P0	40±0.2	40±0.2	40±0.2
A0	2.79±0.1	3.8±0.1	6.05±0.1
B0	5.33±0.1	5.4±0.1	8.31±0.1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

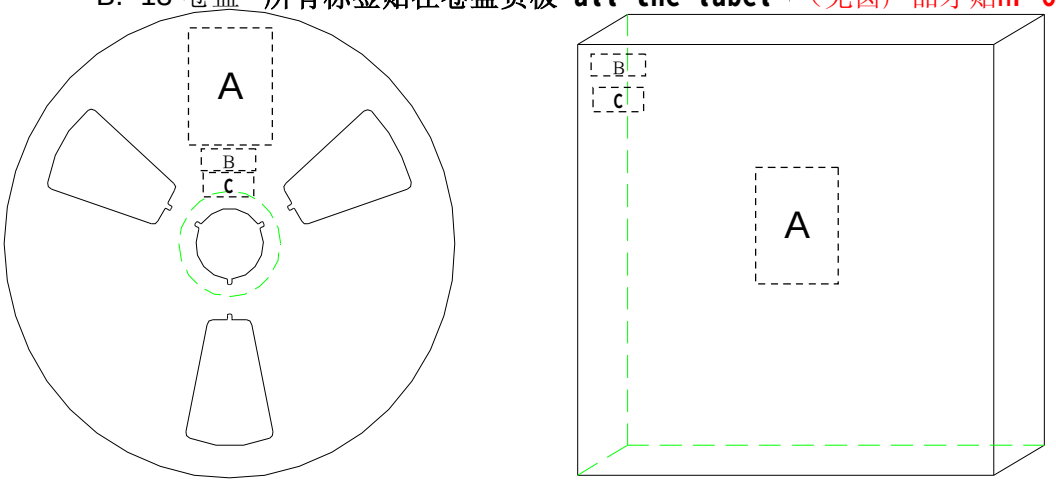
5.2.1国内客户domestic

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

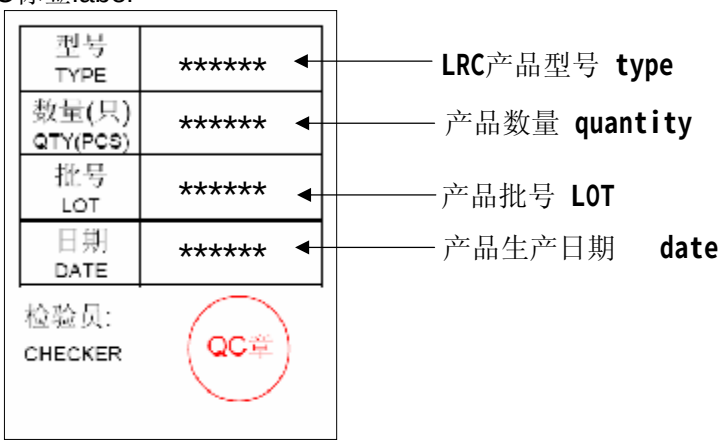
B. 13"卷盘 **所有标签贴在卷盘负极 all the label**（无卤产品才贴**HF only**）



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

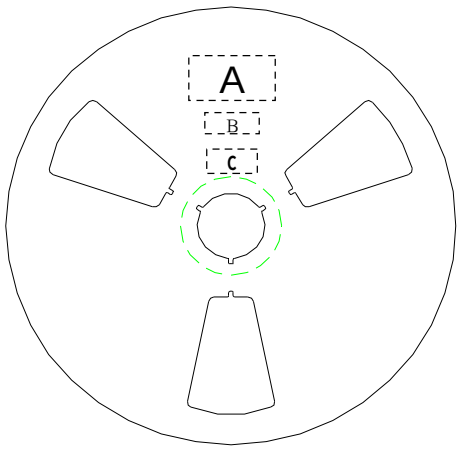


无卤标签 HF label

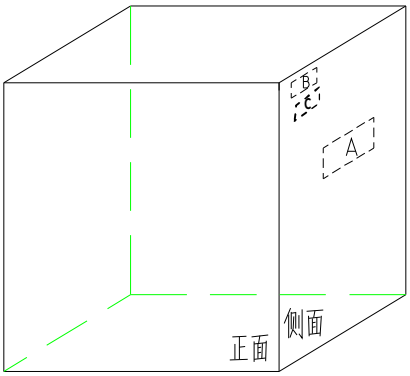
Green

2.2 国外客户 overseas

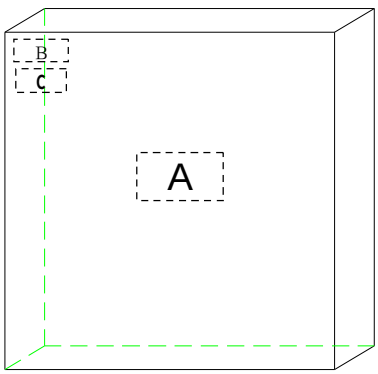
所有标签贴在卷盘负极 all the label on cathode side



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.

HFMA210 thru HFMA290

4. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	周杰	2011-7-13
2	增加包装规范	周杰	2011-9-6
3	1.将HFM2**更名为HFMA2**;2.将HFMA280H更名为HFMA290;	周杰	2012-8-2