

EFM101 thru EFM108

Surface Mount Glass Passivated Super 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
- * For use in high frequency rectifier circuits
- * Fast switching for high efficiency
- * Cavity-free glass passivated junction
- * Capable of meeting environmental standards of MIL-S-19500
- * 1.0 A operation at $T_A=75^{\circ}\text{C}$ with no thermal runaway
- * Typical IR less than $1.0\mu\text{A}$
- * High temperature soldering guaranteed: $260^{\circ}\text{C}/10$ seconds

2.Mechanical Data

Case: JEDEC DO-214AC, molded plastic over glass 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 precaution: None

Electrical Characteristic

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

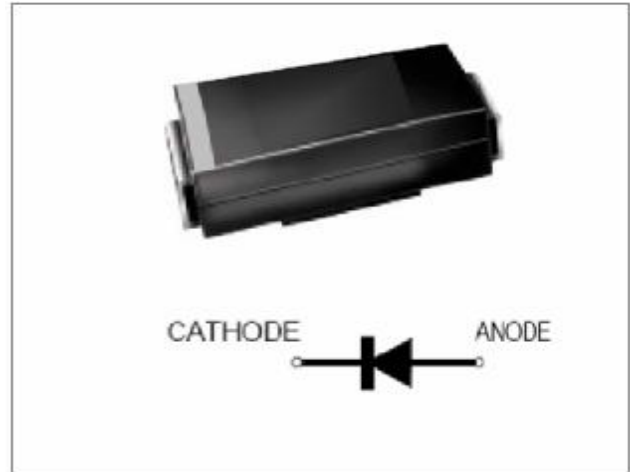
Parameter Symbol	symbol	EFM 101	EFM 102	EFM 103	EFM 104	EFM 105	EFM 106	EFM 107	EFM 108	Unit
Device marking code		EF1	EF2	EF3	EF4	EF5	EF6	EF7	EF8	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	500	600	V
Maximum RSM voltage	V_{RSM}	35	70	105	140	210	280	350	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	500	600	V
Maximum average forward rectified current at $T_A = 75^{\circ}\text{C}$	$I_F(AV)$	1.0								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30								A
Typical thermal resistance (Note 2)	$R_{\theta JA}$	55								$^{\circ}\text{C}/\text{W}$
Operating junction and storage temperature range	T_J, T_{STG}	-50 to $+150$								$^{\circ}\text{C}$

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

Parameter Symbol	symbol	EFM 101	EFM 102	EFM 103	EFM 104	EFM 105	EFM 106	EFM 107	EFM 108	Unit
Maximum instantaneous forward voltage at 1.0A	V _F	0.95				1.25		1.7		V
Maximum DC reverse current TA = 25°C at rated DC blocking voltage TA = 125°C	IR					5.0 100				µA
Typical reverse recovery time (Note 1)	trr					35				ns
Typical junction capacitance at 4.0V, 1MHz	CJ					15.0				PF

NOTES:

1. $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $IRR = 0.25\text{A}$
2. 8.0mm² (.013mm thick) land areas



We declare that the material of product compliance with ROHS requirements

EFM101 thru EFM108

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

Fig. 1 - Forward Current Derating Curve

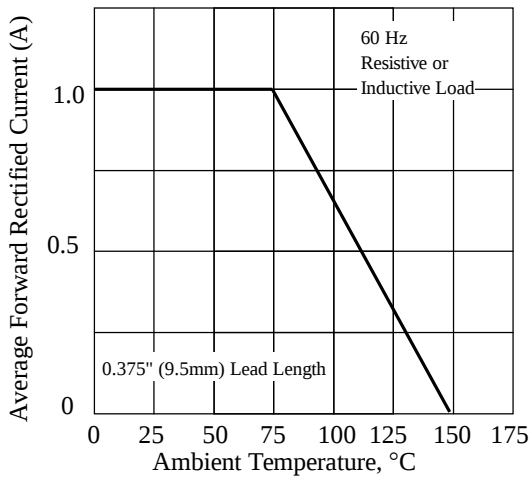


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

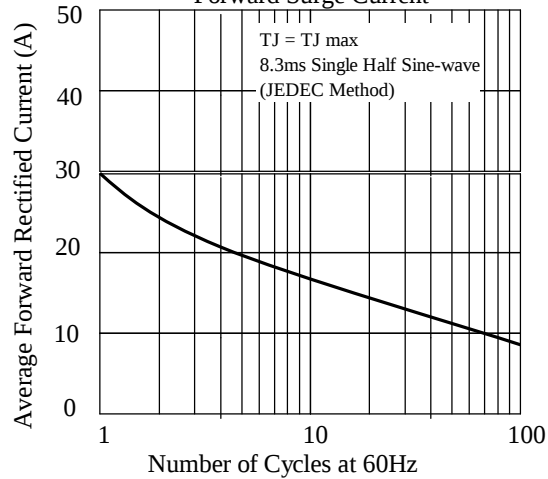


Fig 3. - Typical Instantaneous Forward Characteristics

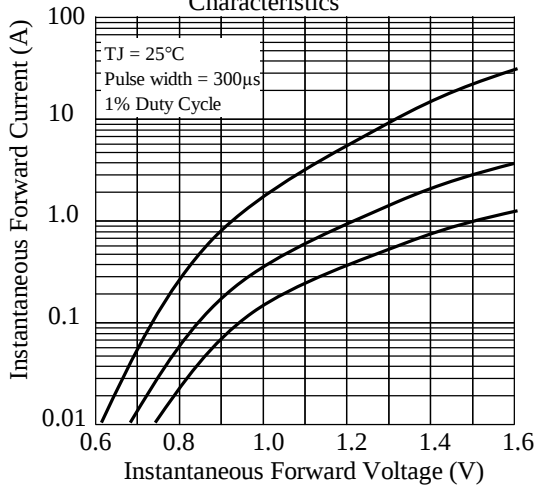


Fig 4. - Typical Reverse Characteristics

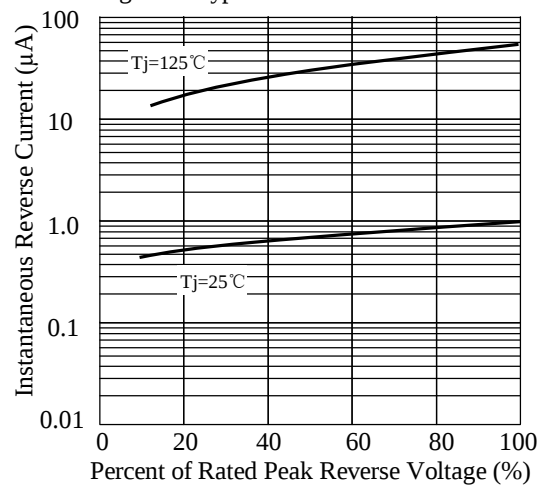


Fig 5. - typical transient thermal impedance

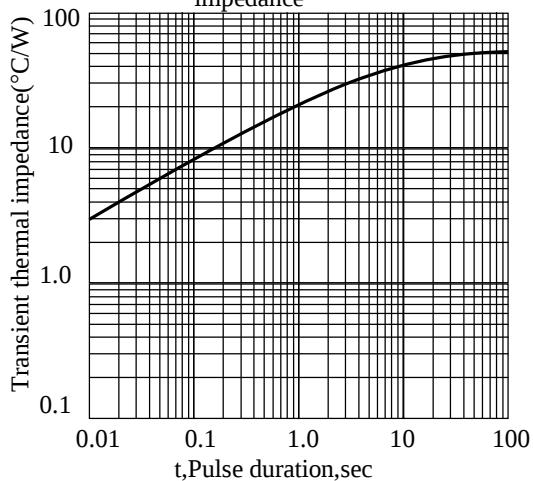
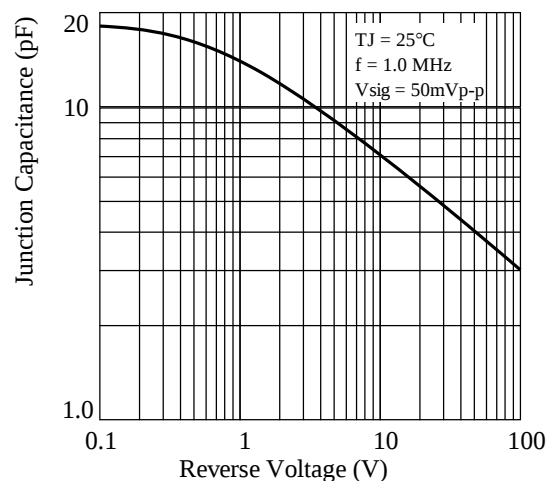
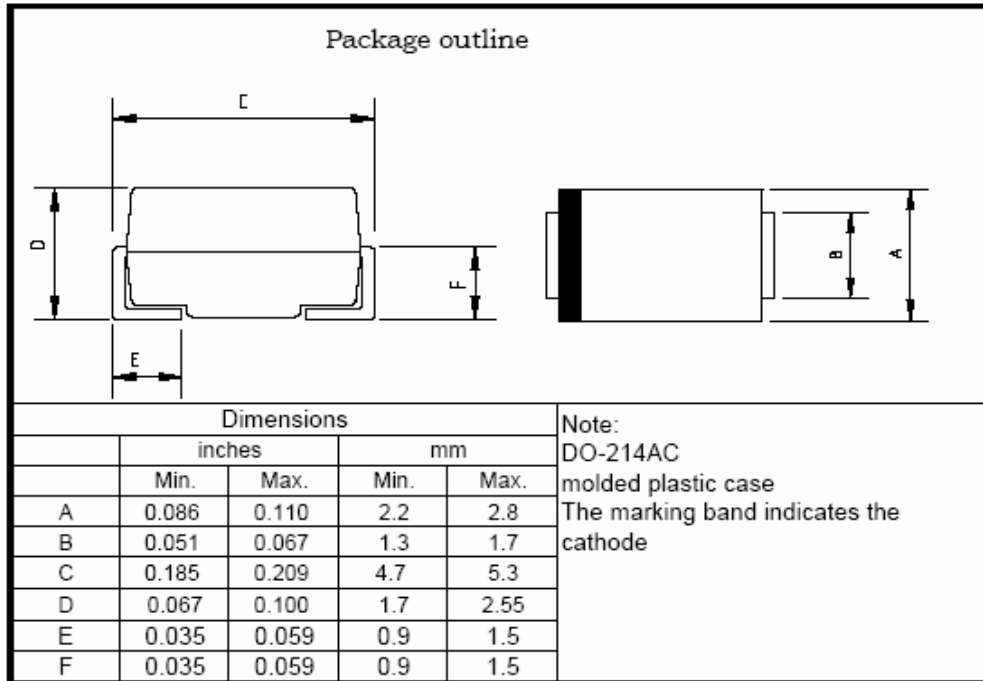


Fig 6. - Typical Junction Capacitance

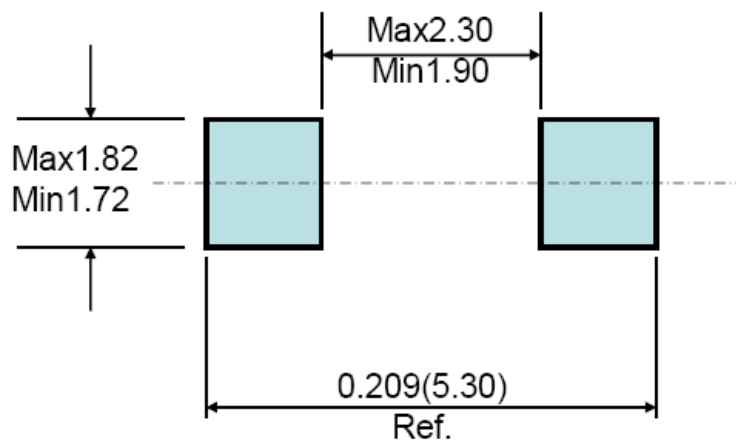


EFM101 thru EFM108

3. dimension:



Mounting Pad Layout ---SMA



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

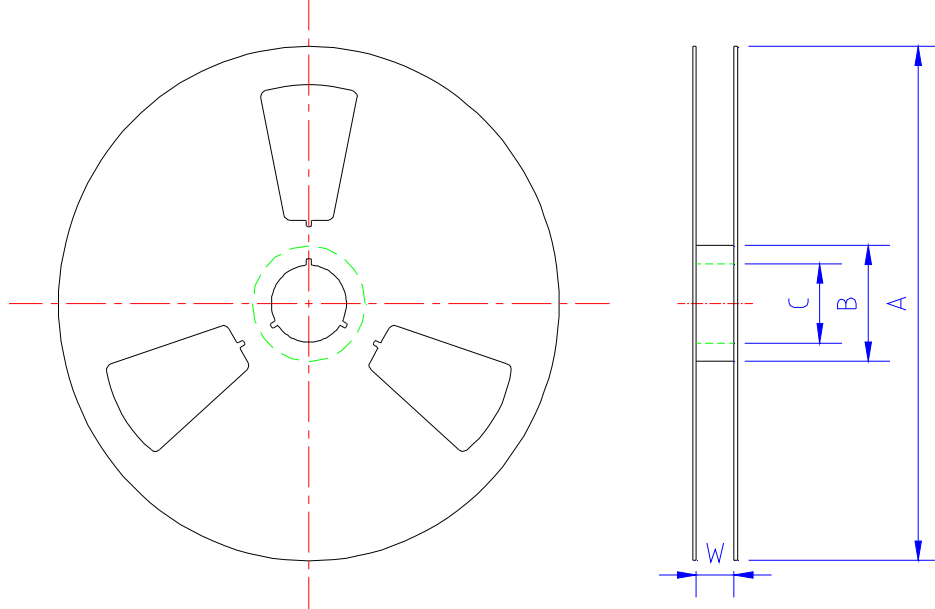
第 3 版 第 0 次修改

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

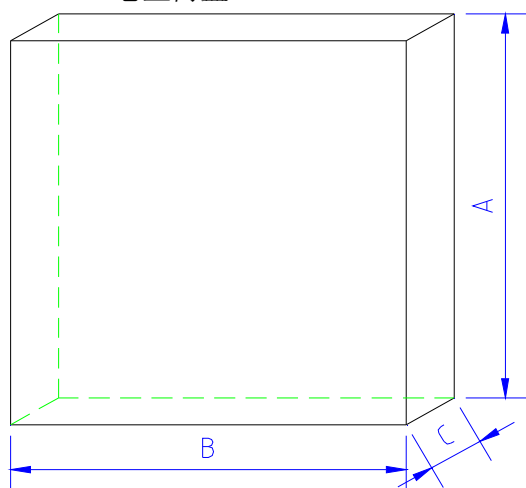
A. 卷盘规格 reel spec



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:

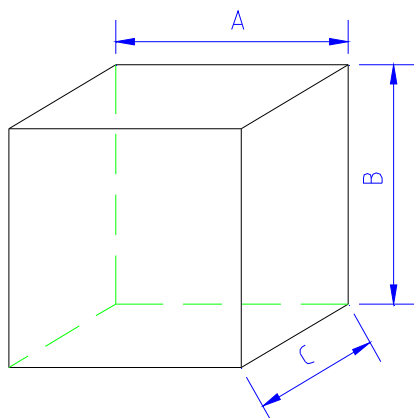
塑封生产线SMD产品包装规范
Packaging specification of SMD

文件编号: WI-258

文件编号: WI-258

第 3 页

C. 7"卷盘盒 box



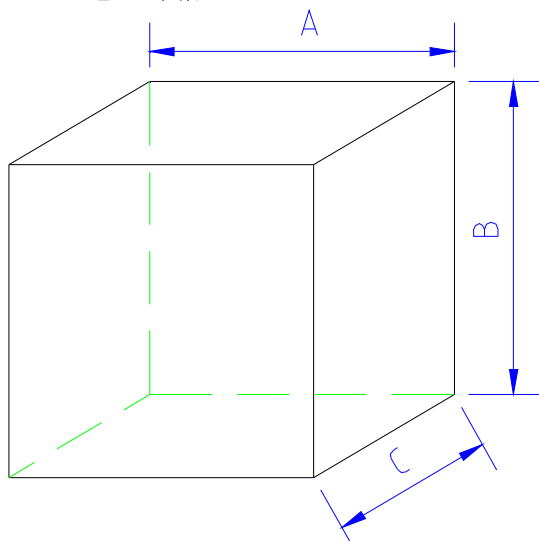
单位: mm

	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

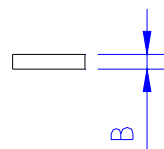
	A	B	C
尺寸	350±2.0	340±2.0	350±2.0

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	13.30±0.10	

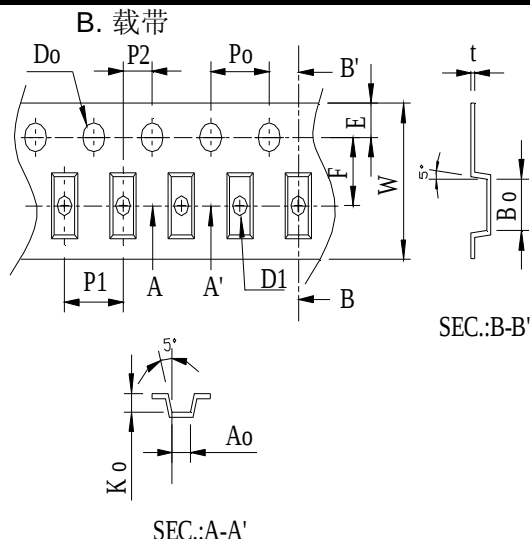
标题Title:

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



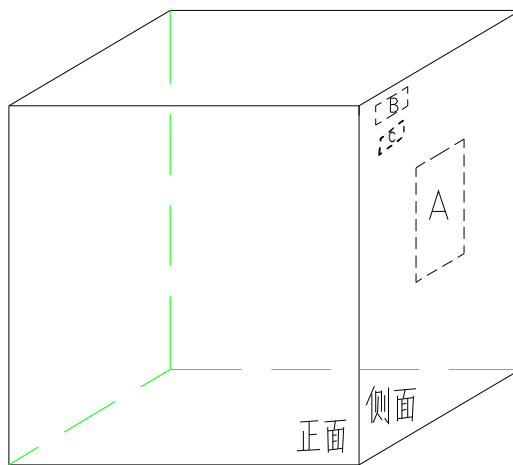
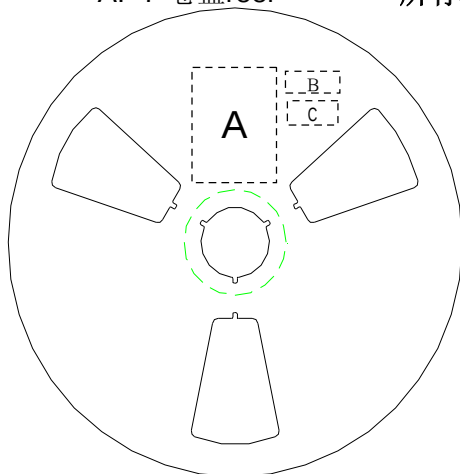
类型	SMA	SMB	SMC
W	12±0.3	12±0.3	16±0.3
P1	4±0.1	8±0.1	8±0.1
E	1.75±0.1	1.75±0.1	1.75±0.1
F	5.5±0.05	5.5±0.05	7.5±0.05
D0	1.55±0.05	1.55±0.05	1.55±0.05
D1	1.5±0.1	1.55±0.05	1.55±0.05
P0	4±0.1	4±0.1	4±0.1
P2	2±0.05	2±0.05	2±0.05
10P0	40±0.2	40±0.2	40±0.2
A0	2.79±0.1	3.8±0.1	6.05±0.1
B0	5.33±0.1	5.4±0.1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

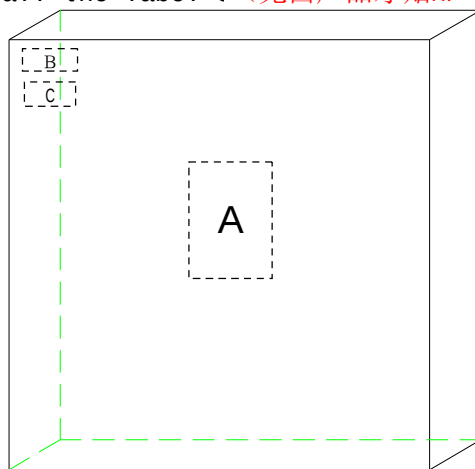
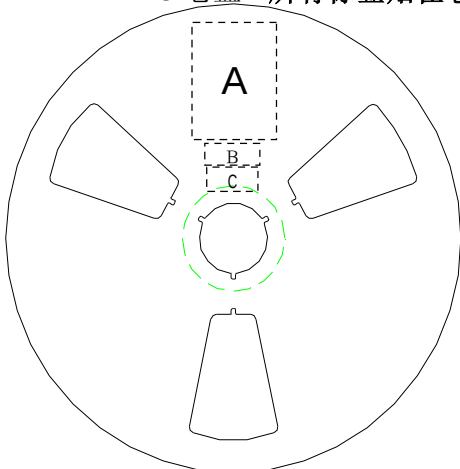
所有标签贴在卷盘负极 all the label on cathode side



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	*****
数量(只) QTY(PCS)	*****
批号 LOT	*****
日期 DATE	*****
检验员: CHECKER	

← LRC产品型号 type

← 产品数量 quantity

← 产品批号 LOT

← 产品生产日期 date

QC章

ROHS标签

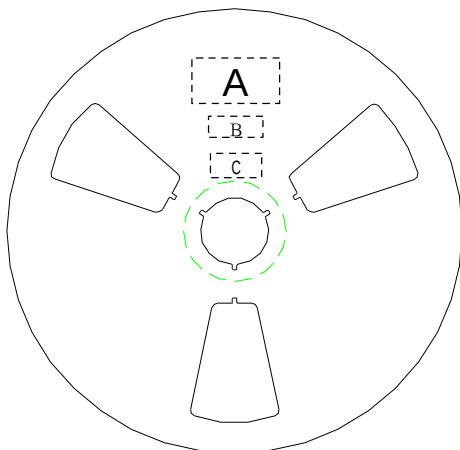


无卤标签 HF label

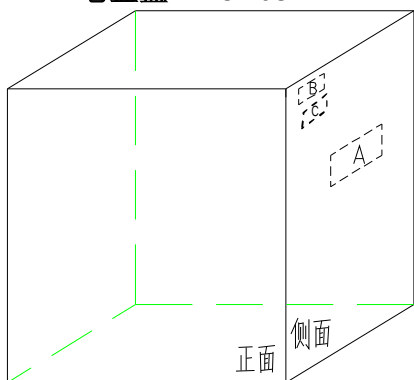
Green

2.2 国外客户
overseas

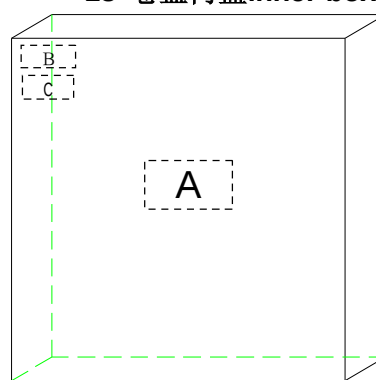
所有标签贴在卷盘负极 all the label on cathode side



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)

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.

EFM101 thru EFM108

4. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	周杰	2010-4-13
2	1.增加包装规范；2增加建议焊盘尺寸；	周杰	2011-6-15