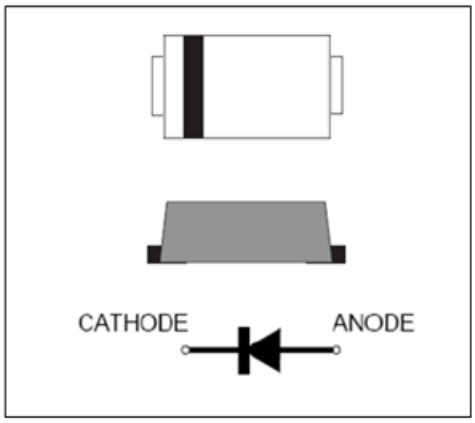
RS2ABF thru RS2MABF

Surface Mount Glass Passivated Super Fast Rectifiers

Reverse Voltage 50 to 1000V Forward Current 2.0A

FEATURES

* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
* High temperature metallurgically bonded construction
* Cavity-free glass passivated junction
* Capable of meeting environmental standards of MIL-S-19500
* Fast Switching for high efficiency
* Typical IR less than 1.0μA
* High temperature soldering guaranteed: 260°C/10 seconds



Mechanical Data

Case: JEDEC SMB-FL, molded plastic over glass die
Terminals: Plated leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.066 g
Handling precautin:None

we declare that the material of product is halogen free (green epoxy compound).

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

Parameter Symbol	symbol	RS2ABF	RS2BBF	RS2DBF	RS2GBF	RS2JBF	RS2KBF	RS2MBF	RS2MPBF	Unit
Device marking code		RS2A	RS2B	RS2D	RS2G	RS2J	RS2K	RS2M	RS2MP	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	1000	V
Maximum RSM voltage	V_{RSM}	35	70	140	280	420	560	700	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at T_C = 75°C	IF(AV)	2.0								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	70								A
Typical thermal resistance (Note 2)	RθJA RθJC	135 25								°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	RS2ABF	RS2BBF	RS2DBF	RS2GBF	RS2JBF	RS2KBF	RS2MBF	RS2MPBF	Unit
Maximum instantaneous forward voltage at 2.0A	V_F	1.3								V
Maximum DC reverse current TA = 25°C at rated DC blocking voltage TJ = 125°C	IR	5.0 100								μA
Typical reverse recovery time (Note 1)	trr	150					500		250	ns
Typical junction capacitance at 4.0V, 1MHz	CJ	8.0								PF

NOTES:

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

RS2ABF thru RS2MABF

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

Fig. 1 – Forward Current Derating Curve

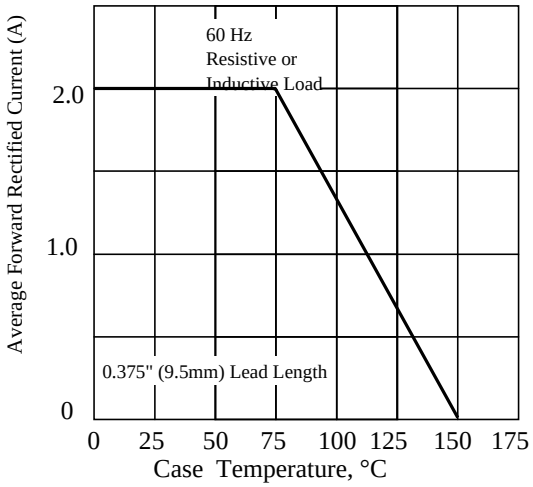


Fig. 2 – Maximum Non-repetitive Peak Forward Surge Current

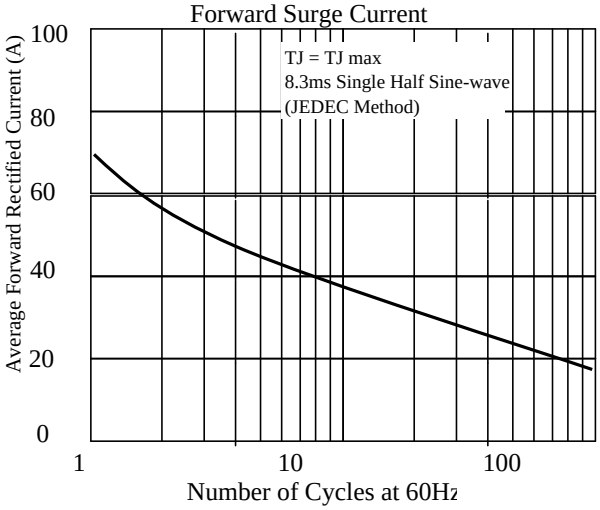


Fig 3. – Typical Instantaneous Forward Characteristics

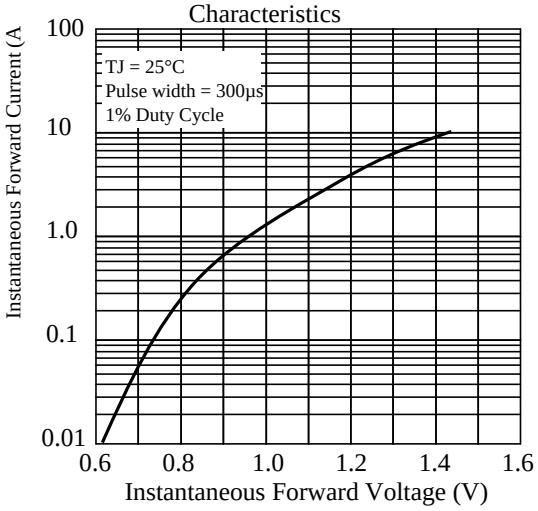


Fig 4. – Typical Reverse Characteristics

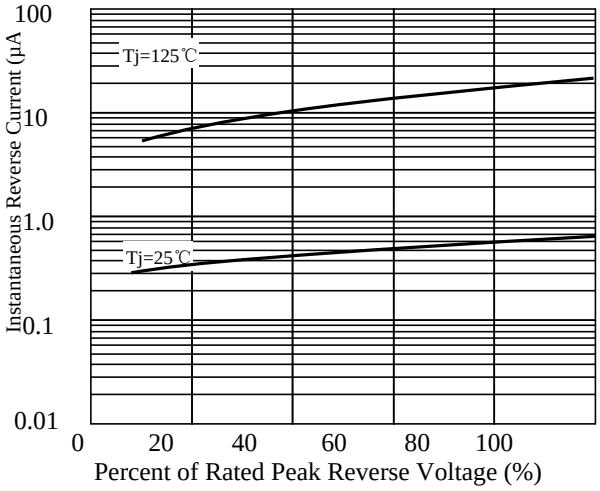


Fig 5. – typical transient thermal impedance

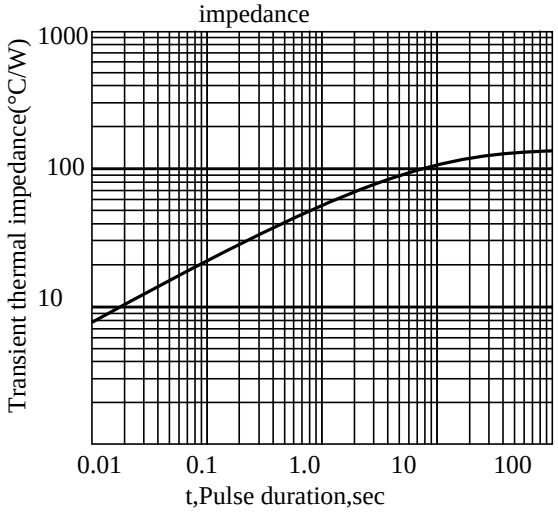
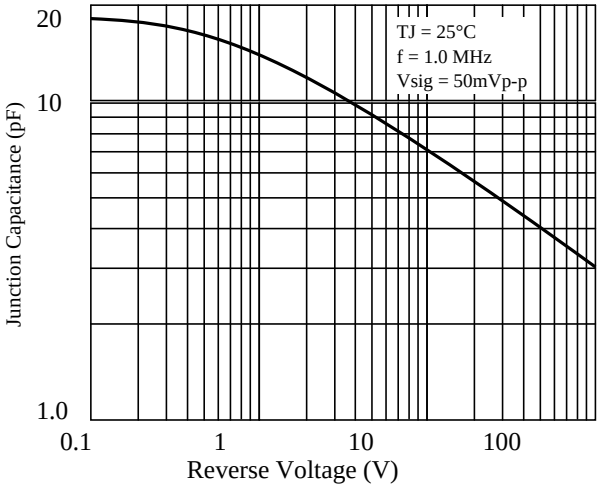


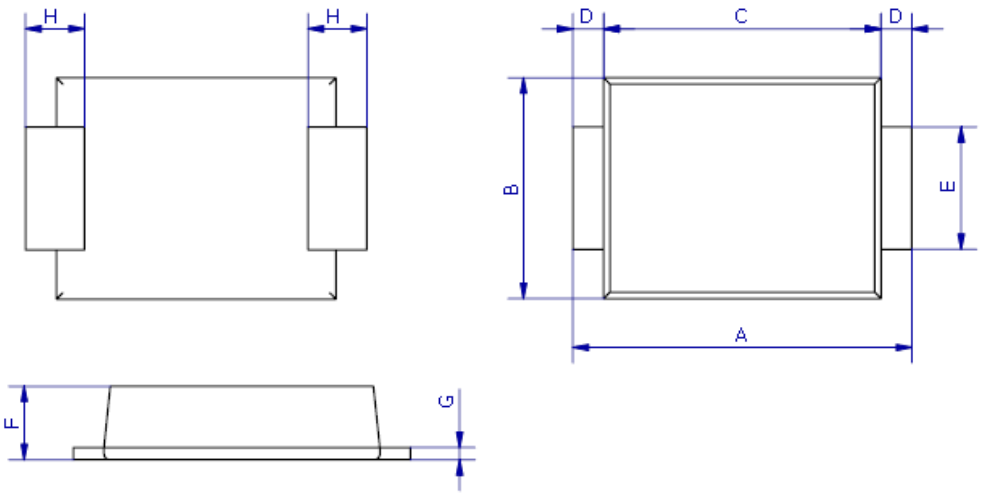
Fig 6. – Typical Junction Capacitance



RS2ABF thru RS2MABF

3. dimension:

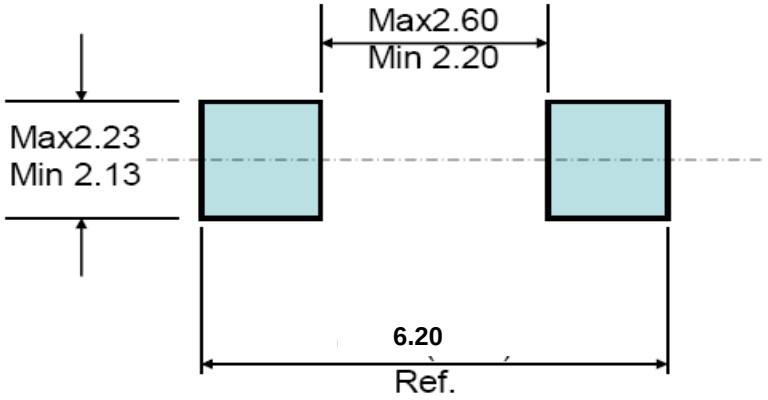
SMB-FL



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.3	5.7	0.209	0.224
B	3.4	3.8	0.134	0.150
C	4.3	4.7	0.169	0.185
D	0.45Typ		0.018Typ	
E	1.9	2.1	0.0748	0.08268
F	1.05	1.40	0.04134	0.05512
G	0.2	0.3	0.00591	0.00984
H	0.95Typ		0.037Typ	

Mounting Pad Layout

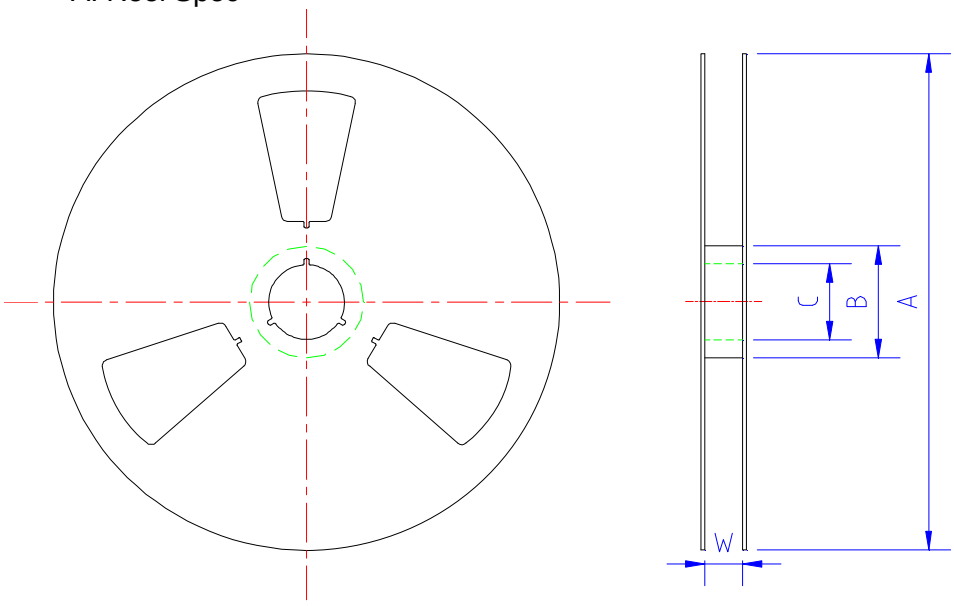
--- SMB-FL



5.1 、SMD Packing Reel Spec & Packing Quantity

5.1.1 Reel Packing

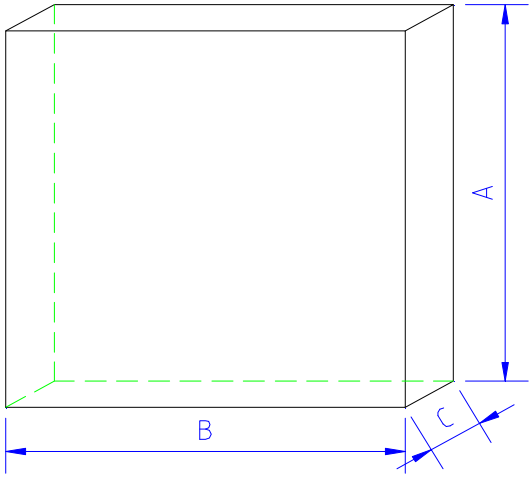
A. Reel Spec



unit：mm

SPEC	A	B	C	W	Quantity/Reel
SMA-FL 7" reel	177.0±2.0	54.0±0.5	13.0±0.5	13.2±0.2	3K
TO277 13" reel	330.0±2.0	75.0±0.5	13.0±0.5	13.2±0.2	5K
SOD123FL 7" reel	177.0±2.0	50.0±0.5	13.0±0.5	9.4±1.5	3K
SOD323HE 7" reel	177.0±2.0	50.0±0.5	13.0±0.5	9.4±1.5	3K
SMB-FL 13" reel	330.0±2.0	75.0±0.5	13.0±0.5	13.2±0.2	5K

B. 13" reel packing box



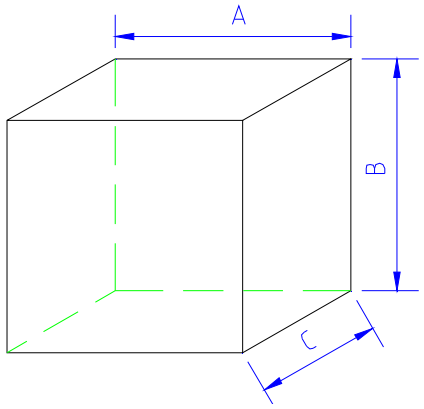
unit：mm

	A	B	C
size	335±5.0	335±2.0	40±1.0

as per above packing

Spec	Q'ty/Box
TO277 13" reel	10K
SMB-FL 13" reel	10K

C. 7" reel packing box



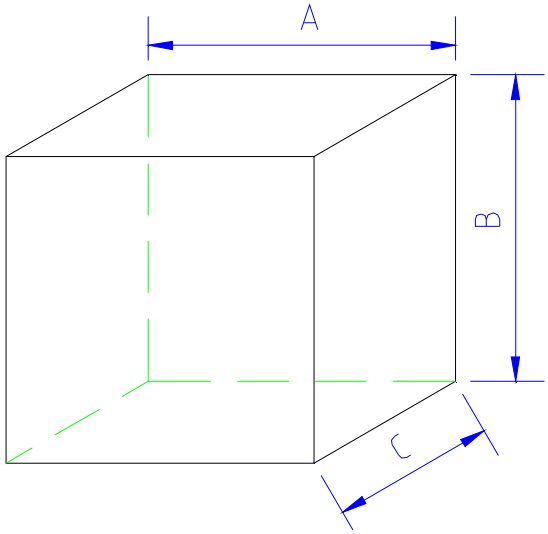
unit：mm

	A	B	C
SMA-FL SOD123FL SOD323HE	186±2.0	139±2.0	185±2.0

as per above packing

	Q'ty/Box
SMA-FL	30K
SOD123FL	30K
SOD323HE	30K

D. reel packing carton



unit：mm

	A	B	C
size	350±2.0	340±2.0	350±2.0

as per above packing

Spec	Q'ty/Carton
TO277 13" reel	80K
SMB-FL 13" reel	80K

unit：mm

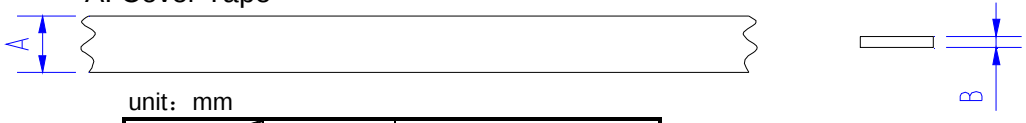
	A	B	C
SMA-FL SOD123FL SOD323HE	455±2.0	400±2.0	410±2.0

as per above packing

Spec	Q'ty/Carton
SMA-FL 7" reel	360K
SOD123-FL 7" reel	360K
SOD323HE 7" reel	360K

5.1.2 Tape Spec

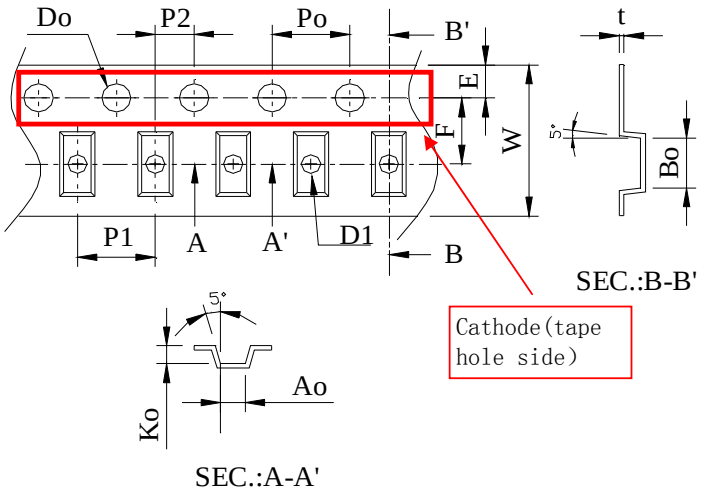
A. Cover Tape



unit：mm

	A	B
SMA-FL SMB-FL TO277	9.5±0.10	0.062±0.007
SOD123FL SOD323HE	5.4±0.10	

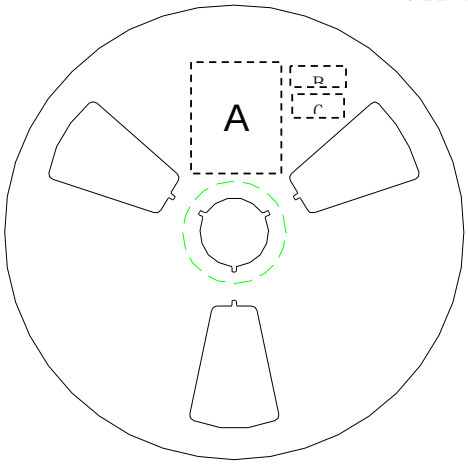
B. Carrier Tape

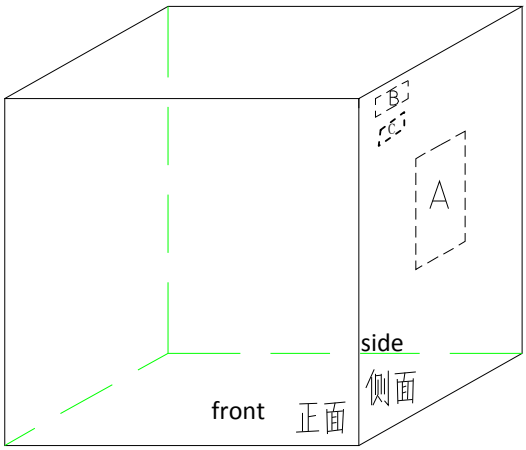


Item	SOD323HE	SOD123FL	SMA-FL	SMB-FL	TO277
W	8±0.3	8±0.3	12±0.3	12±0.3	12±0.3
P1	4±0.1	4±0.1	4±0.1	8±0.1	8±0.1
E	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1
F	3.5±.05	3.5±.05	5.5±.05	5.5±0.05	5.5±.05
D0	1.55±0.05	1.55±0.05	1.55±0.05	1.55±0.05	1.55±0.05
D1	1.1±0.1	1.1±0.1	1.5±0.1	1.55±0.05	1.5±0.1
P0	4±0.1	4±0.1	4±0.1	4±0.1	4±0.1
P2	2±0.05	2±0.05	2±0.05	2±0.05	2±0.05
10P0	40±0.2	40±0.2	40±0.2	40±0.2	40±0.2
A0	1.45±0.1	1.95±0.1	2.83±0.1	3.8±0.1	4.3±0.1
B0	2.75±0.1	3.95±0.1	4.75±0.1	5.75±0.1	6.8±0.1
K0	0.80±0.1	1.30±0.1	1.42±0.1	1.4±0.1	1.35±0.1
T	0.25±0.05	0.25±0.05	0.25±0.05	0.25±0.05	0.25±0.05

5.2、SMD Power Diode General Packing Spec

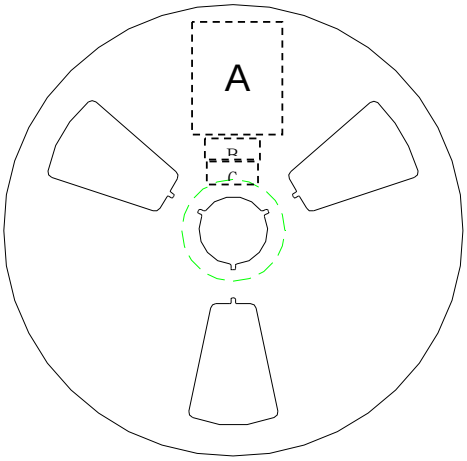
A. 7" reel all labels will be at cathode side of reel ;

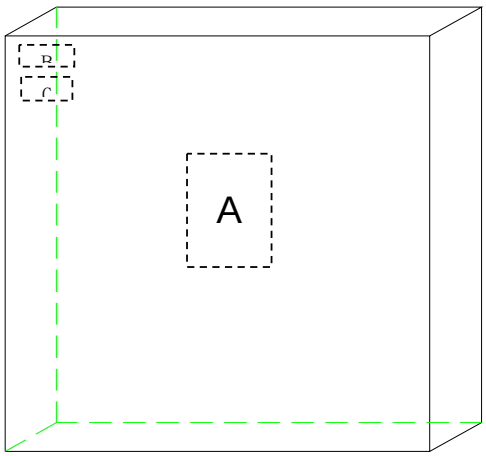




A:LRC label; B:Environment Label C:Halide free label

B. 13" reel



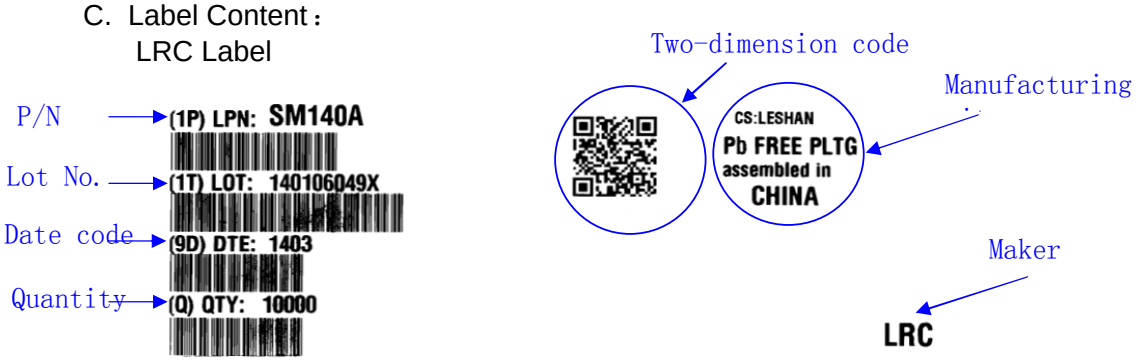


A:LRC label; B:Environment Labe C:Halide free label

C.Tape lead: face anode side of the reel,upper side is the tape lead position. All labels are at cathode side of the reel.

C. Label Content：

LRC Label



lot: 140106049X: 140106---2014/1/6；049----lot number:49；X：product code

Environment Label

Halide-free Label

RS2ABF thru RS2MABF

4. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	周杰	2014.04.30