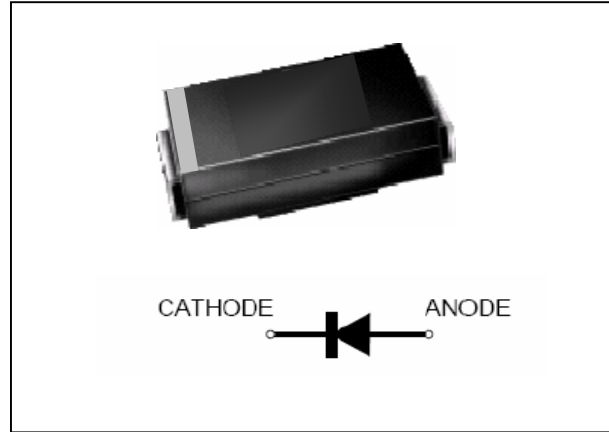


# FM401 thru FM407

## Surface Mount Glass Passivated Junction Rectifiers Reverse Voltage 50 to 1000V Forward Current 1.0A

### 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
- \* 1.0 A operation at TA=75°C with no thermal runaway
- \* Typical IR less than 1.0μA
- \* High temperature soldering guaranteed: 260°C/10 seconds



### 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:** 0.0023 oz., 0.065 g

**Handling precaution:** None

### Electrical Characteristic

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

Parameter Symbol	symbol	FM 401	FM 402	FM 403	FM 404	FM 405	FM 406	FM 407	Unit
Device marking code		M01	M02	M03	M04	M05	M06	M07	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RSM voltage	$V_{RSM}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length 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 1)	$R_{\theta JA(C.T)}$	75 (20)							°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	FM 401	FM 402	FM 403	FM 404	FM 405	FM 406	FM 407	Unit
Maximum instantaneous forward voltage at 1.0A	$V_F$	0.7 ~ 1.1							V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 125^\circ\text{C}$	IR	5.0							μA
Typical junction capacitance at 4.0V, 1MHz	CJ	8.0							PF

NOTES:

1. 8.0mm<sup>2</sup> (.013mm thick) land areas

We declare that the material of product compliance with ROHS requirements

# FM401 thru FM407

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

Fig. 1 - Forward Current Derating Curve

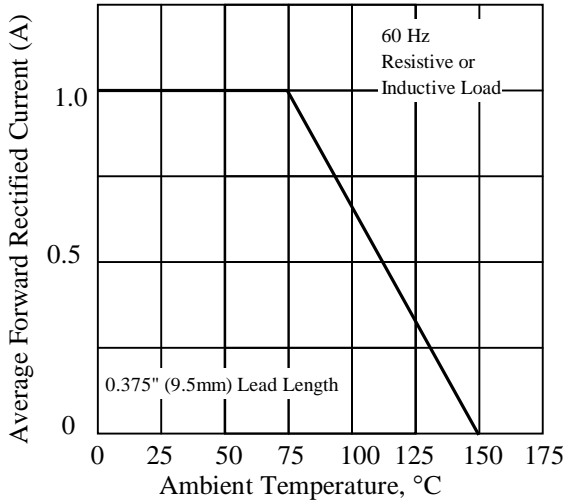


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

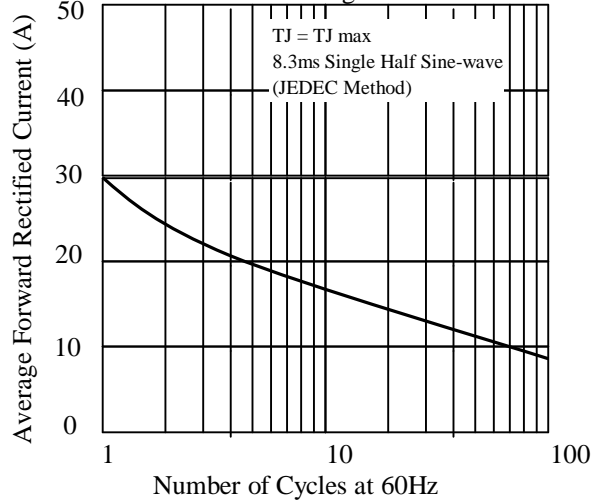


Fig 3. - Typical Instantaneous Forward Characteristics

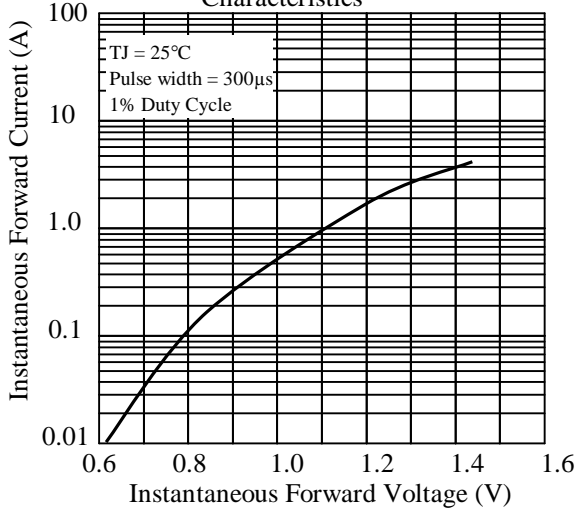


Fig 4. - Typical Reverse Characteristics

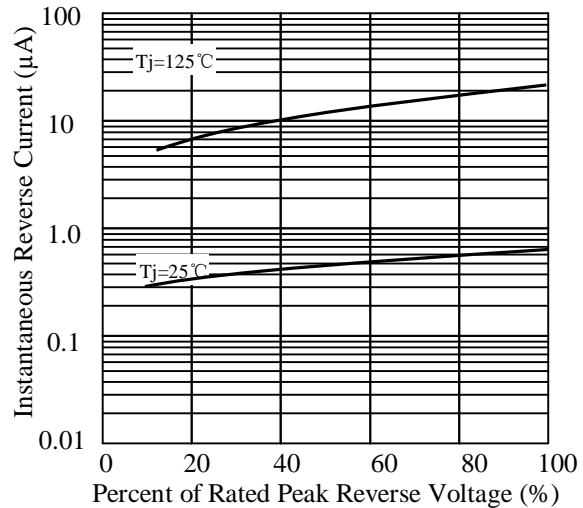


Fig 5. - typical transient thermal impedance

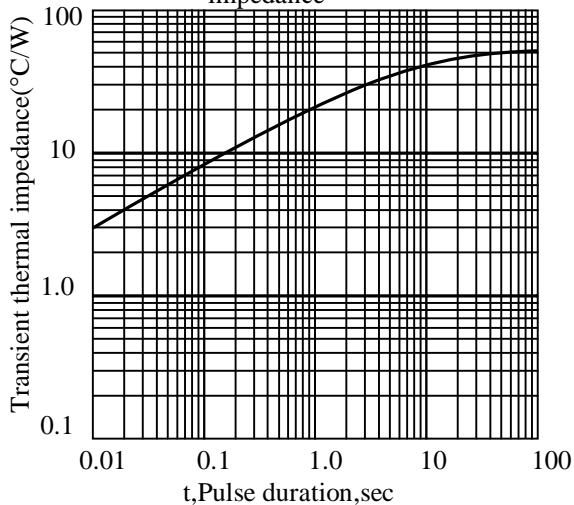
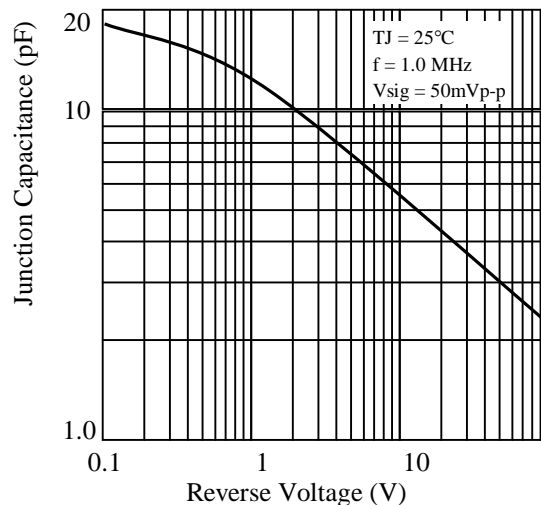
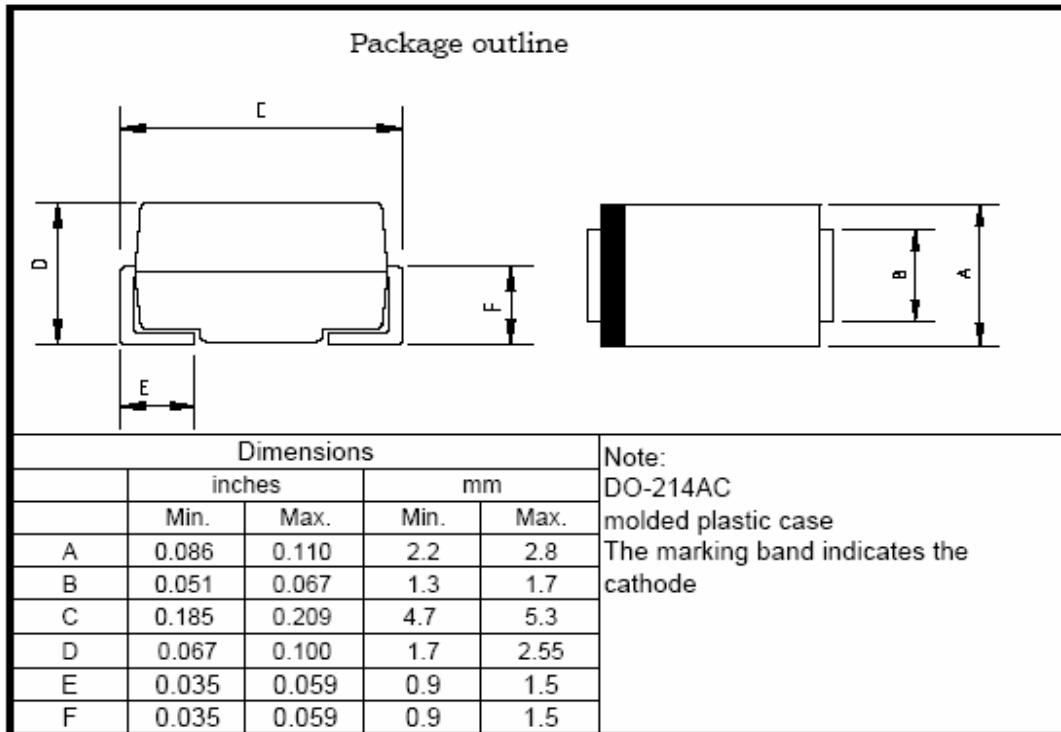


Fig 6. - Typical Junction Capacitance

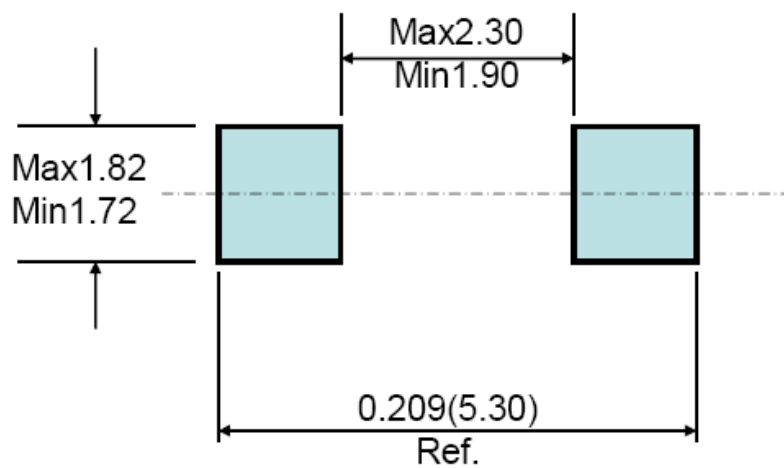


## FM401 thru FM407

### 3. dimension:

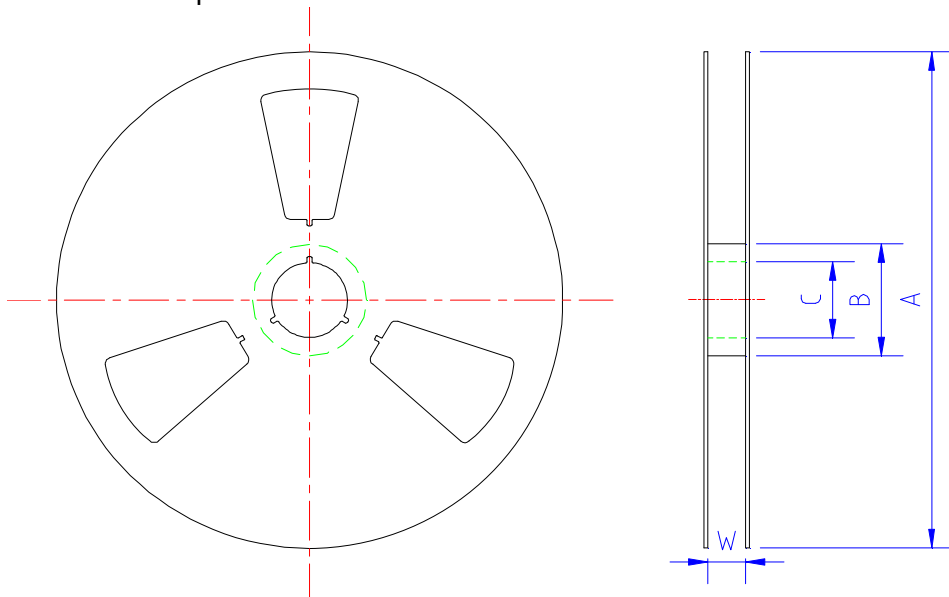


### Mounting Pad Layout ---SMA



**5.1 、 SMD Packing Reel Spec & Packing Quantity**

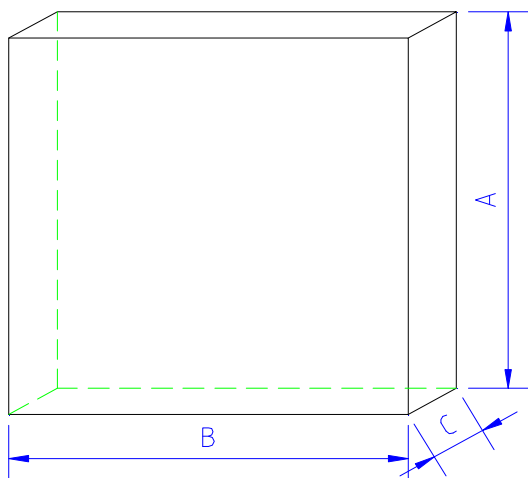
**5.1.1 Reel Packing**  
**A. Reel Spec**



unit: mm

SPEC	A	B	C	W	Quantity/Reel
SMA 7" reel	177.0±2.0	54.0±0.5	13.0±0.5	13.2±0.2	2K
SMA13" reel	330.0±2.0	75.0±0.5	13.0±0.5	13.2±0.2	5K
TO277 13" reel	330.0±2.0	75.0±0.5	13.0±0.5	13.2±0.2	5K
SMA-FL 7" reel	177.0±2.0	54.0±0.5	13.0±0.5	13.2±0.2	3K
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

size	A	B	C
	335±5.0	335±2.0	40±1.0

as per above packing

Spec	Q' ty/Box
SMA13" reel	10K
TO277 13" reel	10K
SMB-FL 13" reel	10K

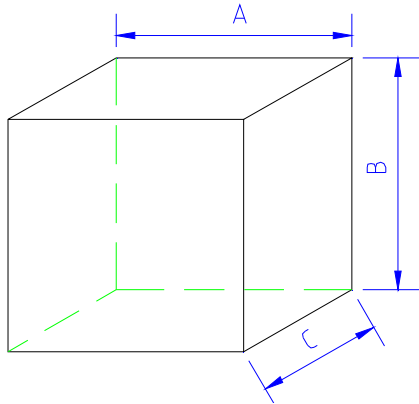
Title:  
Power Diode SMD Package Packing Spec

DOC NO.: WI-258

DOC NO.: WI-258

Page: 3

C. 7" reel packing box



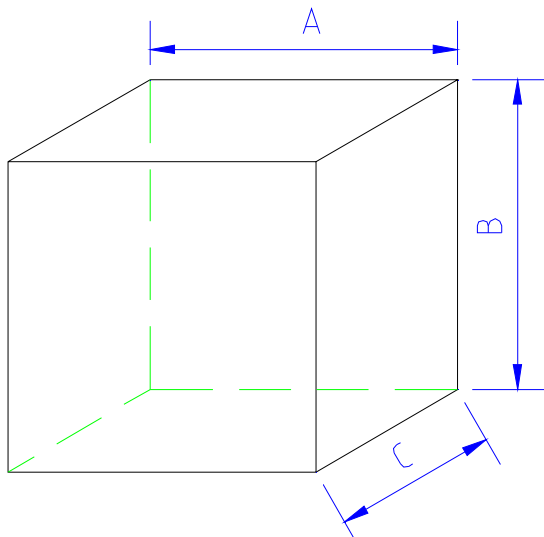
unit: mm

	A	B	C
SMA	188±2.0	188±2.0	138±2.0
SMAFL SOD123FL SOD323HE	186±2.0	139±2.0	185±2.0

as per above packing

	Q' ty/Box
SMA	16K
SOD123FL	30K
SOD323HE	30K
SMA-FL	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
SMA 7" reel	80K
SMA13"reel	80K
SMA-FL13"reel	80K
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
SOD123-FL 7" reel	360K
SOD323HE 7" reel	360K
SMA-FL 7" reel	360K

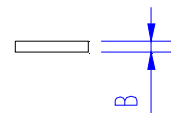
5.1.2 Tape Spec

A. Cover Tape

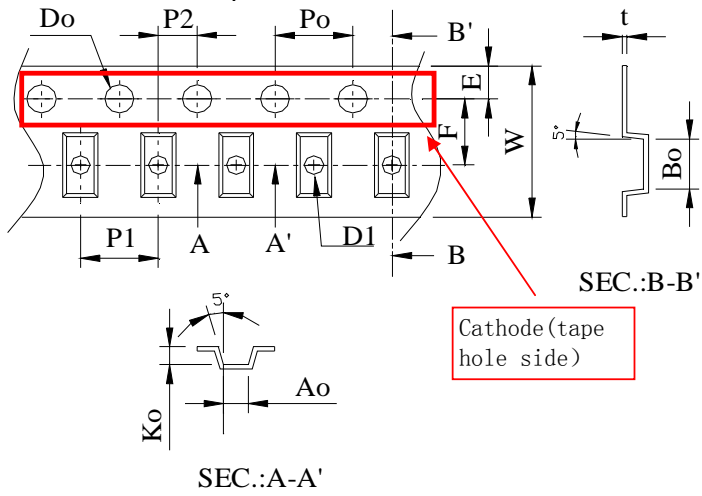


unit: mm

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



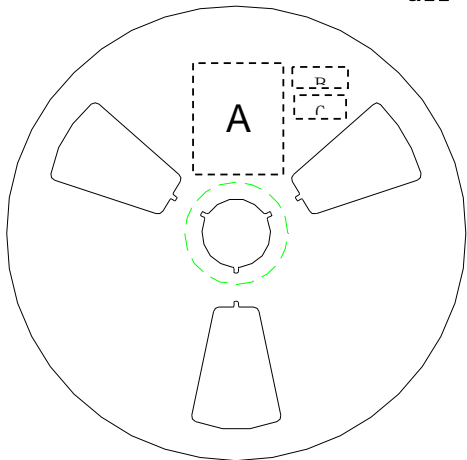
**B. Carrier Tape**



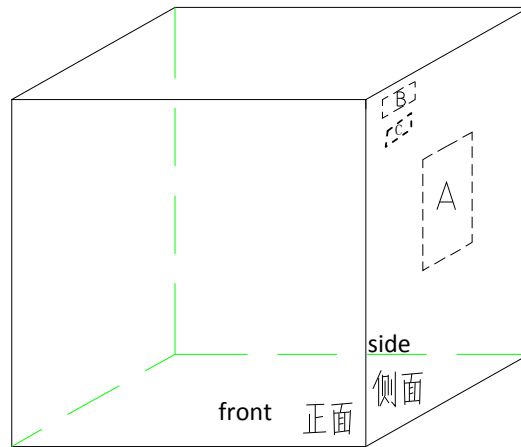
Item	SOD323HE	SOD123FL	SMA	SMA-FL	SMB-FL	TO277
W	8±0.3	8±0.3	12±0.3	12±0.3	12±0.3	12±0.3
P1	4±0.1	4±0.1	4±0.1	4±0.1	8±0.1	8±0.1
E	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1
F	3.5±0.05	3.5±0.05	5.5±0.05	5.5±0.05	5.5±0.05	5.5±0.05
D0	1.55±0.05	1.55±0.05	1.55±0.05	1.55±0.05	1.55±0.05	1.55±0.05
D1	1.1±0.1	1.1±0.1	1.5±0.1	1.5±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	4±0.1
P2	2±0.05	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	40±0.2
A0	1.45±0.1	1.95±0.1	2.79±0.1	2.83±0.1	3.8±0.1	4.3±0.1
B0	2.75±0.1	3.95±0.1	5.33±0.1	4.75±0.1	5.75±0.1	6.8±0.1
K0	0.80±0.1	1.30±0.1	2.36±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	0.25±0.05

5.2、SMD Power Diode General Packing Spec

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

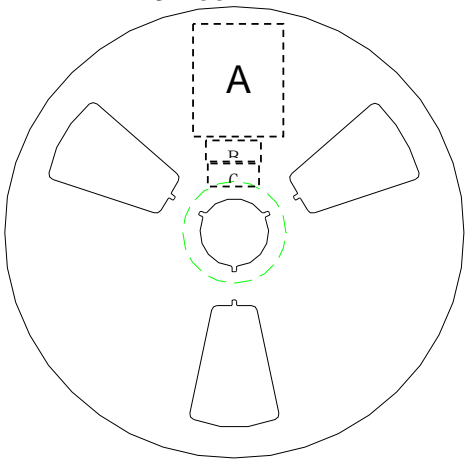


A:LRC label;



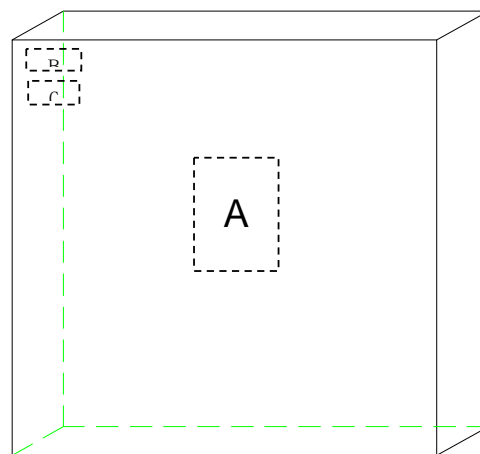
B:Environment Label C:Halide free label

B. 13" reel



A:LRC label;

B:Environment Labe C:Halide free label



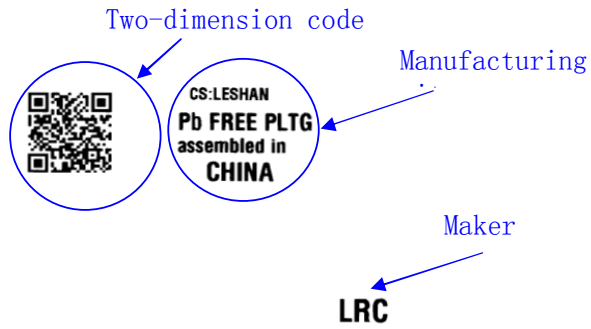
C. Tape lead: face anode side of the reel, upper side is the tape lead position. All labels are at cathode side of the reel.



标题: <b>Power Diode SMD Package Packing Spec</b>	DOC NO.: WI-258
	Version: 5    Modification: 0
	Page: 6

C. Label Content :  
LRC Label

P/N → (1P) LPN: **SM140A**  
 Lot No. → (1T) LOT: **140106049X**  
 Date code → (9D) DTE: **1403**  
 Quantity → (Q) QTY: **10000**



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

Environment Label



Halide-free Label





## FM401 thru FM407

### 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	增加包装规范	周杰	2011-9-13

单击下面可查看定价，库存，交付和生命周期等信息

[>>LRC\(乐山无线电\)](#)

[>>点击查看相关商品](#)