

SBR5100

Schottky Barrier Rectifiers

Reverse Voltage 100V Forward Current 5A

FEATURES

- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * Low power loss,high efficiency
- * For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- * Guardring for over voltage protection
- * High temperature soldering guaranteed: 260°C/10 seconds at terminals

Mechanical Data

Case: JEDEC TO-277A,
molded plastic over SKY body
Terminals: Plated leads, solderable per
MIL-STD-750, Method 2026

Mounting Position: Any

Weight: 0.108 g

Handling precaution:None

1.Electrical Characteristic

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

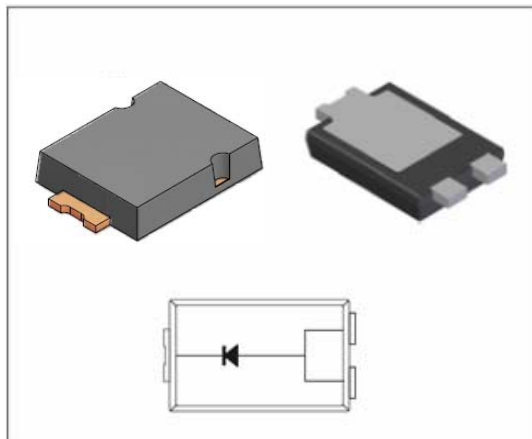
Parameter Symbol	symbol	SBR5100	Unit
device marking code		SBR5100	
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum RMS voltage	V_{RMS}	70	V
Maximum DC blocking voltage	V_{DC}	100	V
Maximum average forward rectified current at $T_c = 75^\circ\text{C}$	$I_F(AV)$	5.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150	A
Typical thermal resistance (Note 1)	R θ JC	8	$^\circ\text{C/W}$
	R θ JL	15	
	R θ JA	31	
Typical thermal resistance (Note 3)	R θ JA	135	$^\circ\text{C/W}$
Operating junction temperature range	T_J	-55 to +150	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +175	$^\circ\text{C}$

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

Parameter Symbol	symbol	SBR5100	Unit
Maximum instantaneous forward voltage at 5A at 25°C	V_F	0.87	V
Maximum DC reverse current $T_j = 25^\circ\text{C}$ at rated DC blocking voltage $T_j = 100^\circ\text{C}$ (note2) at rated DC blocking voltage $T_j = 125^\circ\text{C}$ (note2)	IR	0.015	mA
		10.0	
		20	
Typical junction capacitance at 4.0V, 1MHz	CJ	500	PF

NOTES:

1. Polyimide PCB, 2oz. Copper. Cathode pad dimensions 18.8mm x 14.4mm. Anode pad dimensions 5.6mm x 14.4mm.
- 2.Short duration pulse test used to minimize self-heating effect .
- 3.FR-4 PCB, 2oz.Copper.



We declare that the material of product is
Halogen free (green epoxy compound)

SBR5100

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

Fig. 1 - Forward Current Derating

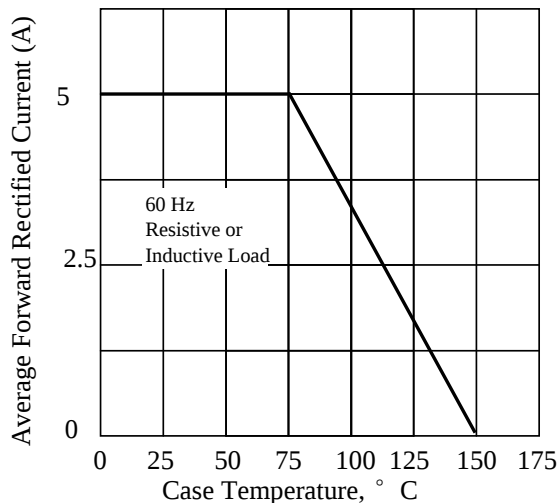


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

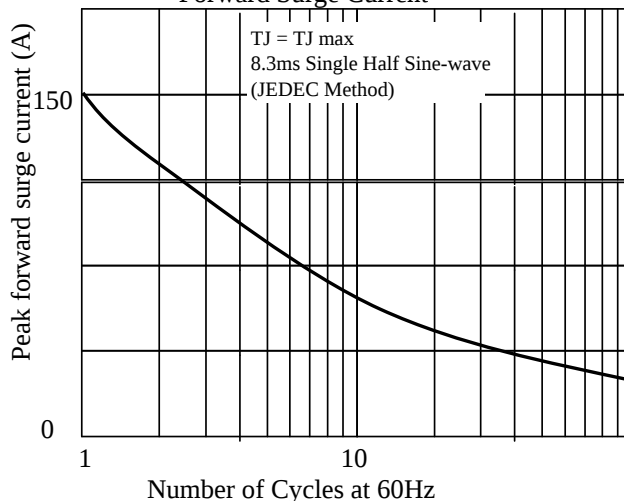


Fig 3. - Typical Instantaneous Forward Characteristics

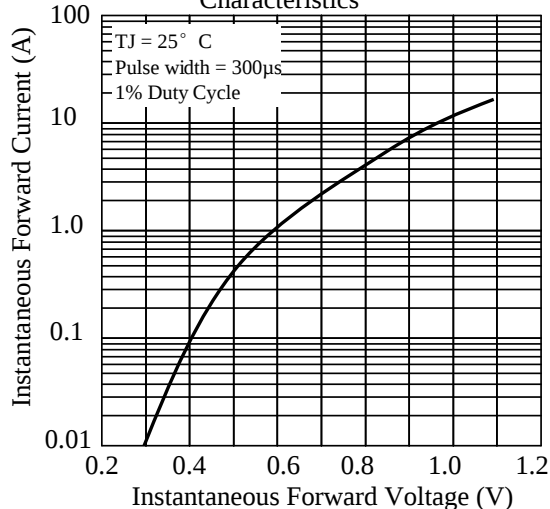


Fig 4. - Typical Reverse Characteristics

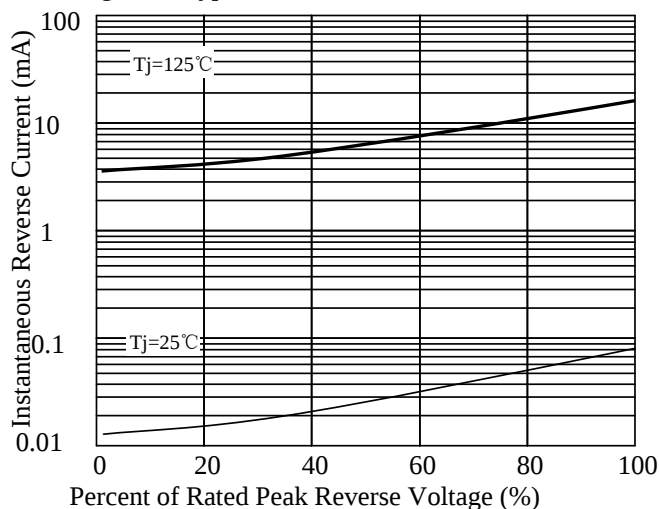


Fig 5. - typical transient thermal impedance(Note 3)

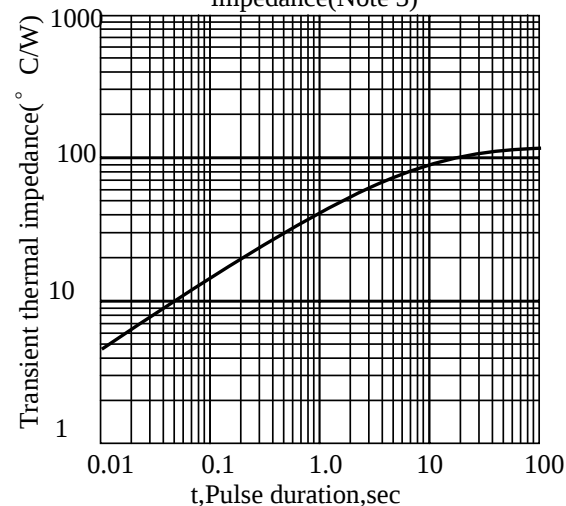
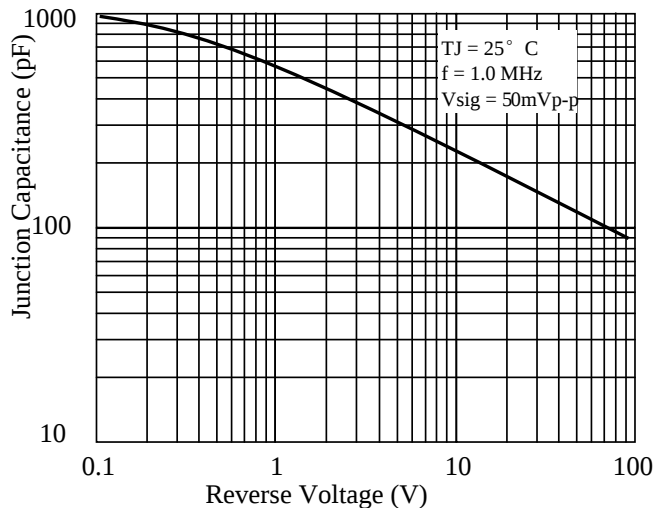


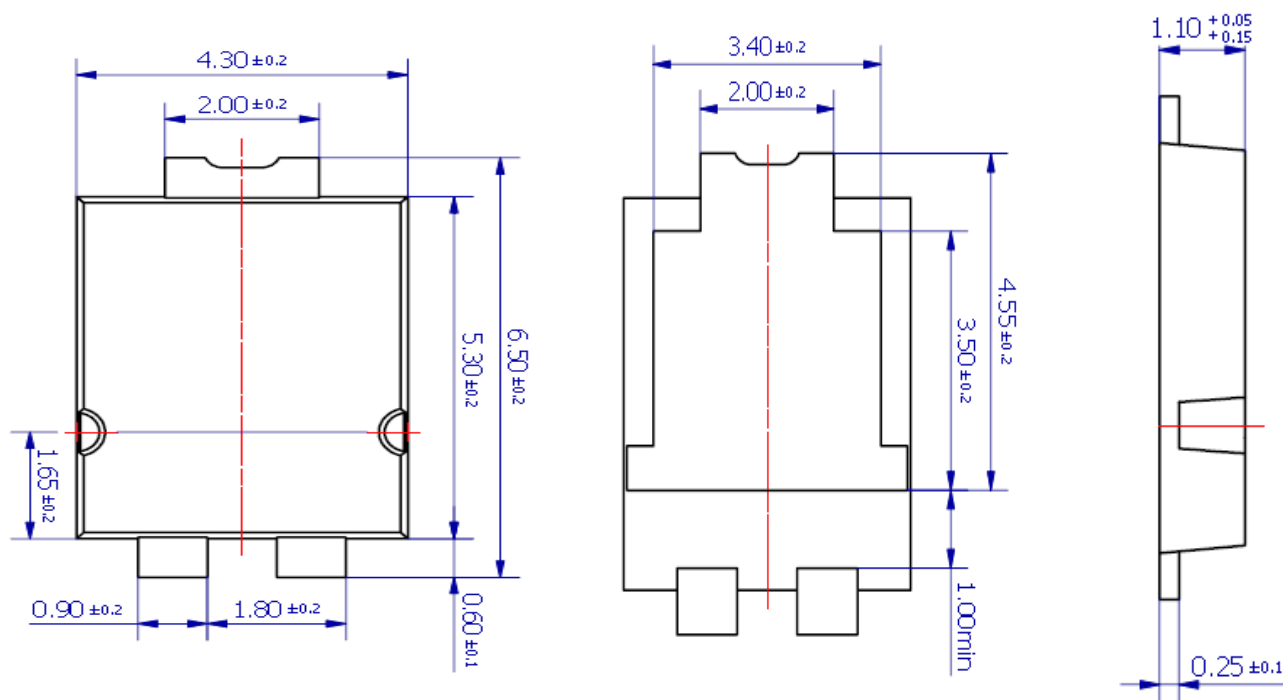
Fig 6. - Typical Junction Capacitance



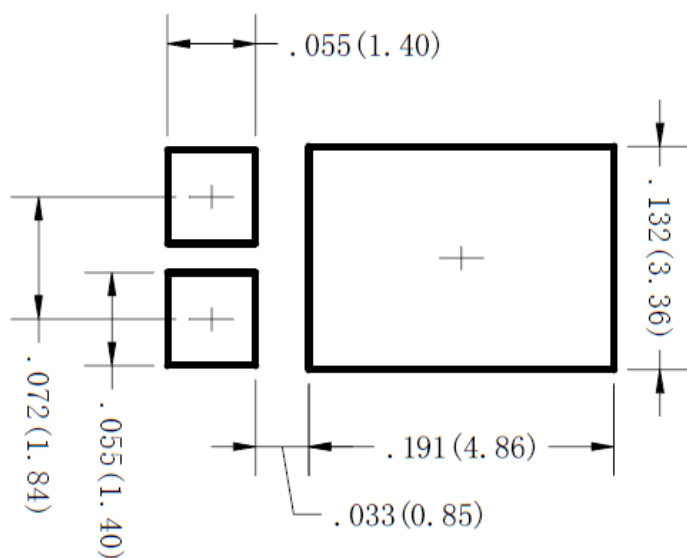
SBR5100

3. dimension:

TO-277A



Mounting PAD layout

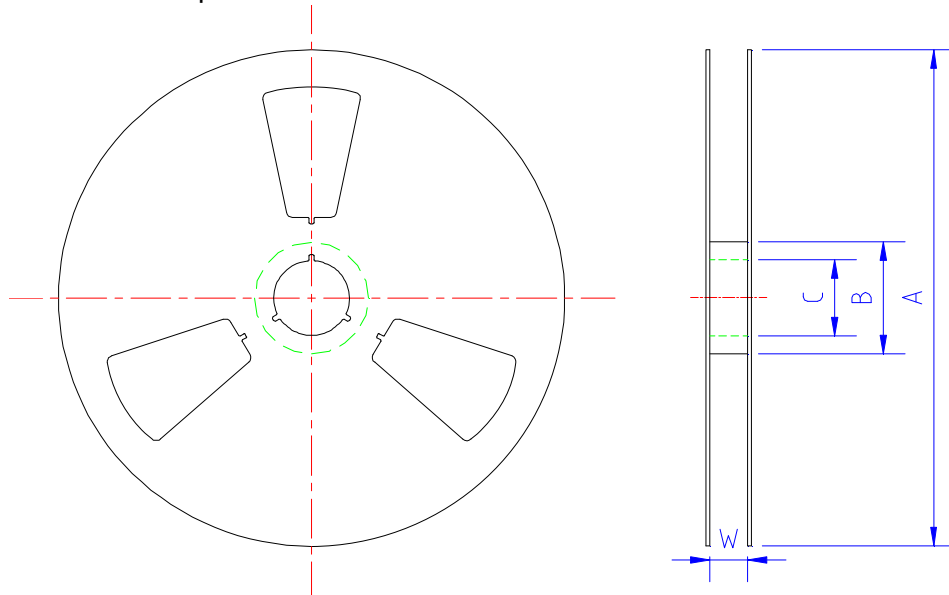


Title: Power Diode SMD Package Pa cking Spec	DOC NO.: WI-258
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5.1 、 SMD Packing Reel Spec & Packing Quantity

5.1.1 Reel Packing

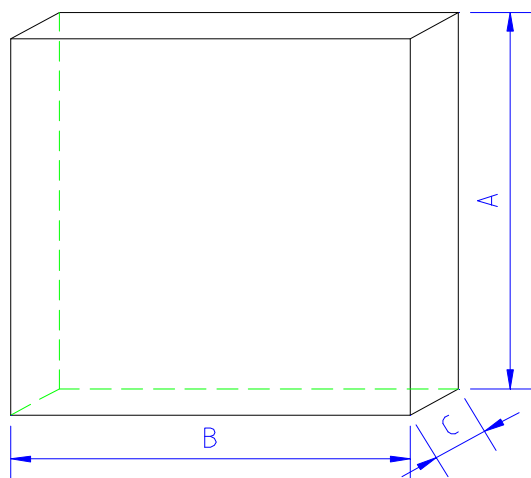
A. Reel Spec



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
SMA-FL13" 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
SMB13" reel	330.0±2.0	75.0±0.5	13.0±0.5	13.5±0.5	3K
SMC13" reel	330.0±2.0	75.0±0.5	13.0±0.5	17.0±0.5	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

	A	B	C
size	335±5.0	335±2.0	40±1.0

as per above packing

Spec	Q' ty/Box
SMA13" reel	10K
SMB13" reel	6K
SMC13" reel	6K
TO277 13" reel	10K
SMB-FL 13" reel	10K

Title:

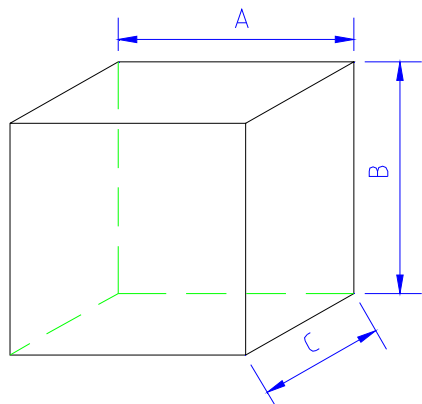
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C. 7" reel packing box



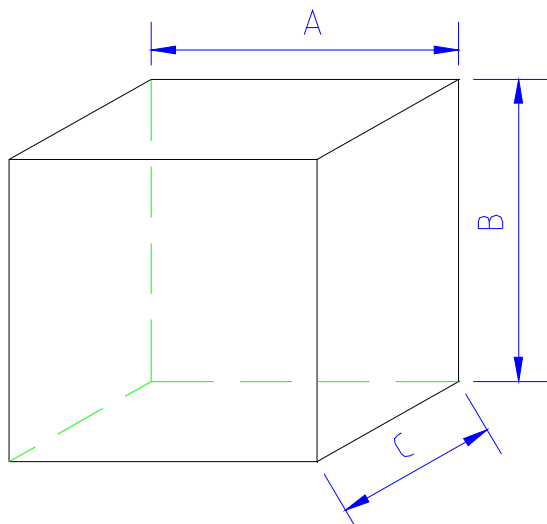
unit: mm

	A	B	C
SMA/SMA-FL	188±2.0	188±2.0	138±2.0
SOD123FL			
SOD323HE	186±2.0	139±2.0	185±2.0

as per above packing

	Q' ty/Box
SMA/SMA-FL	16K
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
SMA/SMA-FL 7" reel	80K
SMA13"reel	80K
SMB13"reel	48K
SMC13"reel	36K
SMA-FL13"reel	80K
TO277 13" reel	80K
SMB-FL 13" reel	80K

unit: mm

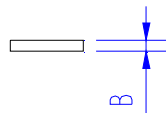
	A	B	C
SOD123FL			
SOD323HE	455±2.0	400±2.0	410±2.0

as per above packing

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

5.1.2 Tape Spec

A. Cover Tape

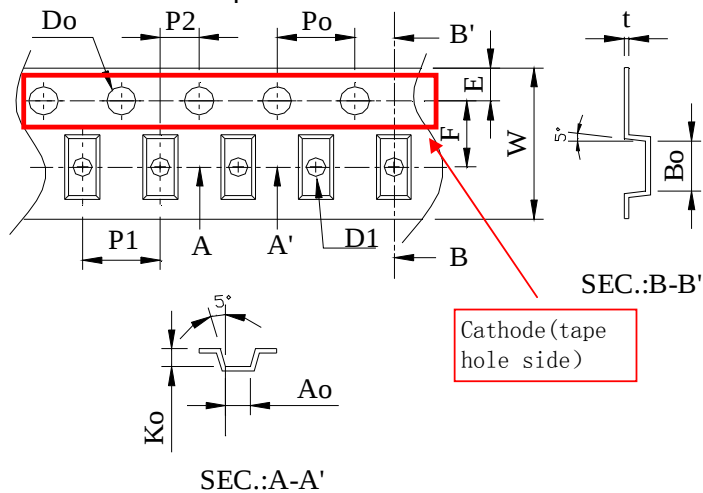


unit: mm

	A	B
SMA /SMA-FL SMB-FL /SMB /TO277	9.5±0.10	0.062±0.007
SMC	13.30±0.10	
SOD123FL SOD323HE	5.4±0.10	

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B. Carrier Tape

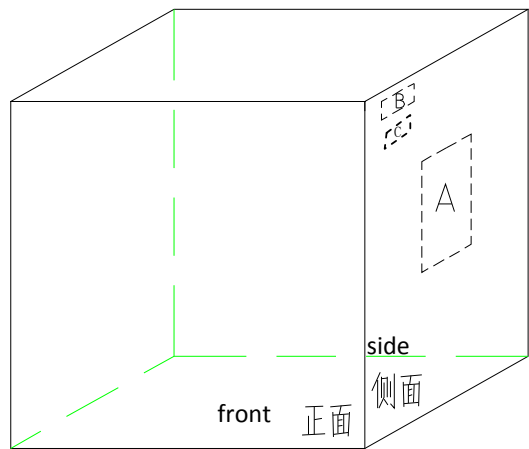
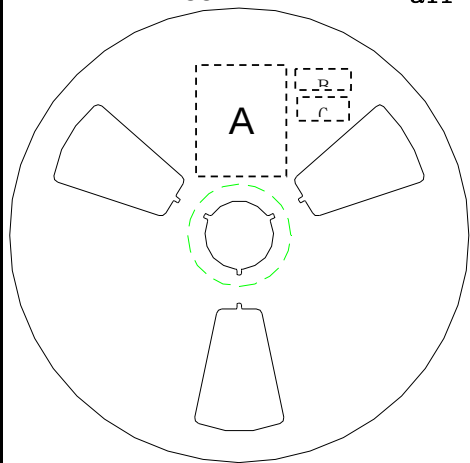


Item	SOD323HE	SOD123FL	SMA	SMA-FL	SMB	SMB-FL	TO277	SMC
W	8 ± 0.3	8 ± 0.3	12 ± 0.3	12 ± 0.3	12 ± 0.3	12 ± 0.3	12 ± 0.3	16 ± 0.3
P1	4 ± 0.1	4 ± 0.1	4 ± 0.1	4 ± 0.1	8 ± 0.1	8 ± 0.1	8 ± 0.1	8 ± 0.1
E	1.75 ± 0.1	1.75 ± 0.1	1.75 ± 0.1	1.75 ± 0.1	1.75 ± 0.1	1.75 ± 0.1	1.75 ± 0.1	1.75 ± 0.1
F	3.5 ± 0.05	3.5 ± 0.05	5.5 ± 0.05	5.5 ± 0.05	5.5 ± 0.05	5.5 ± 0.05	5.5 ± 0.05	7.5 ± 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	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	1.55 ± 0.05	1.5 ± 0.1	1.55 ± 0.05
P0	4 ± 0.1	4 ± 0.1	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	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	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	3.8 ± 0.1	4.3 ± 0.1	6.05 ± 0.1
B0	2.75 ± 0.1	3.95 ± 0.1	5.33 ± 0.1	4.75 ± 0.1	5.4 ± 0.1	5.75 ± 0.1	6.8 ± 0.1	8.31 ± 0.1
K0	0.80 ± 0.1	1.30 ± 0.1	2.36 ± 0.1	1.42 ± 0.1	2.45 ± 0.1	1.4 ± 0.1	1.35 ± 0.1	2.54 ± 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	0.25 ± 0.05	0.25 ± 0.05

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5.2、SMD Power Diode General Packing Spec

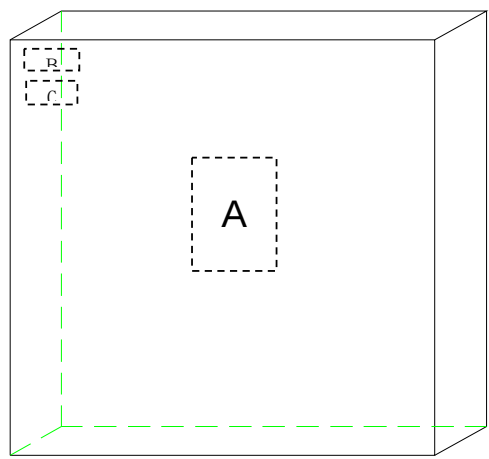
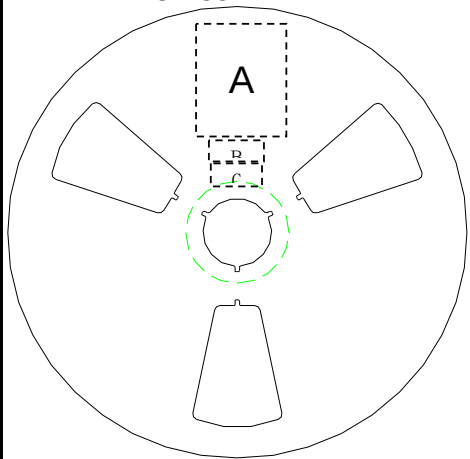
A. 7" reel all labels will be at cathode side of reel ;



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.



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C. Label Content : LRC Label P/N → (1P) LPN: SM140A Lot No. → (1T) LOT: 140106049X Date code → (9D) DTE: 1403 Quantity → (Q) QTY: 10000      Two-dimension code Manufacturing Maker LRC lot: 140106049X: 140106---2014/1/6; 049----lot number:49; X: product code Environment Label  Halide-free Label 	

SBR5100

4. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	周杰	2013. 12. 13
2	更新产品尺寸为T0-277A	周杰	2014-1-17

单击下面可查看定价，库存，交付和生命周期等信息

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