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DATA SHEET

WNC P/N : 08.52414.001



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P/N: EXD24140D01

Contents

1. Product Description	1
2. Features	1
3. Overall Performance	2
4. Product Characteristics	3
4.1 Radiation Pattern	3
5. Product Drawing	6
6. ROHS	6

Version Information

Version	Date	Author	Note
A0	July 15, 2022	Rebecca	Initial Draft
A1	July 30, 2022	Rebecca	Update the SPEC
A2	August 8, 2022	Rebecca	Add product drawing
A3	September 2, 2022	Rebecca	Update the Antenna picture
A4	September 14, 2022	Rebecca	Update the drawing
A5	September 30, 2022	Rebecca	Update the drawing
A6	October 17, 2022	Rebecca	Update the Radiation Pattern & drawing
A7	November 10, 2022	Rebecca	Add Measurement Axes
A8	March 14, 2023	Rebecca	Update the drawing
A9	March 24, 2023	Rebecca	Update the peak gain description
A10	March 31, 2023	Rebecca	Update the drawing
A11	April 11, 2023	Rebecca	Add IP66
A12	May 26, 2023	Rebecca	Update the Radome Material
A13	Jun 16, 2023	Lucas	Update the drawing
A14	August 8, 2023	Rebecca	Add parts packaging

1. Product Description

Model EXD24140D01 is a WiFi antenna which has features of easy integration, can be directly connected to the product. The connector can be customized according to customer's request.

2. Features

The model EXD24140D01 antenna is defined by following features:

- 2.4GHz: $12.5 \pm 0.5\text{dBi}$ / 5GHz: $15 \pm 1\text{dBi}$
- High Efficiency
- Quick Integration

3. Overall Performance

CHARACTERISTICS	SPEC
Frequency Range	2400-2490 / 5150-5850MHz Port 1: 2400-2490MHz & 5150-5850MHz Port 2: 2400-2490MHz & 5150-5850MHz Port 3: 2400-2490MHz & 5150-5850MHz Port 4: 2400-2490MHz & 5150-5850MHz
Peak Gain (The max gain in the operating frequency band)	2.4GHz: $12.5 \pm 0.5\text{dBi}$ / 5GHz: $15 \pm 1\text{dBi}$
VSWR	<2
Front-to-back ratio	$\geq 25\text{dB}$
Isolation	$\geq 22\text{dB}$
Feed Impedance	50 ohms
Antenna Dimensions	550*230*40mm
Connector	4*N JACK
Operating Temperature	$-40 \sim 70^{\circ}$
Storage Temperature	$-40 \sim 65^{\circ}$
Rated Wind Velocity	36.9m/s
Horizontal 3dB Beam Width	2.4GHz: $40 \pm 5^{\circ}$ / 5GHz: $20 \pm 5^{\circ}$
Vertical 3dB Beam Width	2.4GHz: $40 \pm 5^{\circ}$ / 5GHz: $20 \pm 5^{\circ}$
Maximum input power	50W
Operating relative Humidity	5% - 95%
Storage Humidity	$\leq 95\%$
Polarization	2*H + 2*V
Lightning Protection	DC Grounding
Radome Material	ABS-LG AF312C(UL94V-0)
Protection level	IP66 & IP67
Weight	$3.3 \pm 0.2\text{kg}$

4. Product Characteristics

4.1 Radiation Pattern

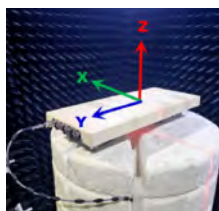


Figure 1: Model EXD24140D01 Measurement Axes

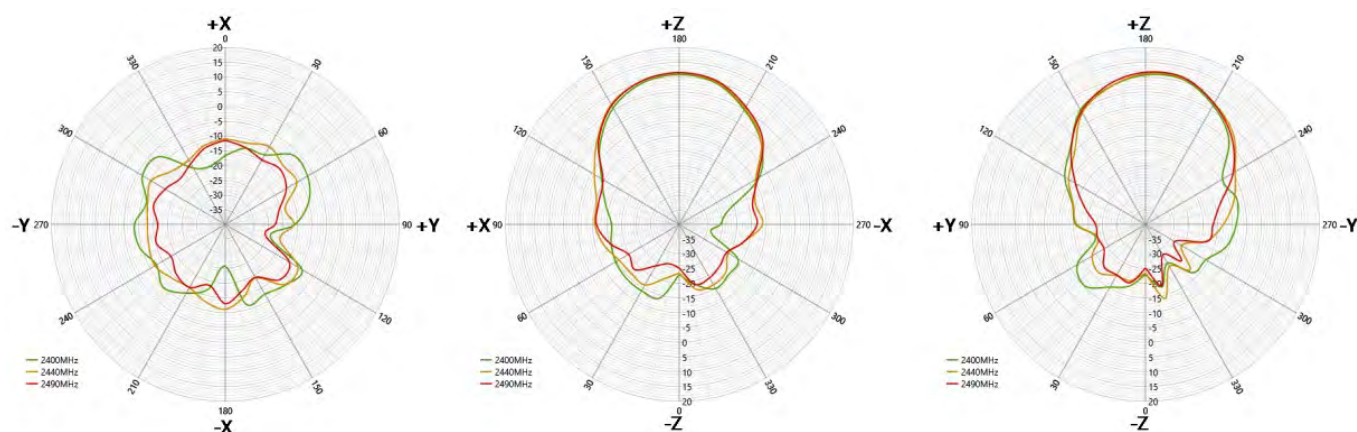


Figure 2: Model EXD24140D01 Radiation Patterns in 2.4G of port1

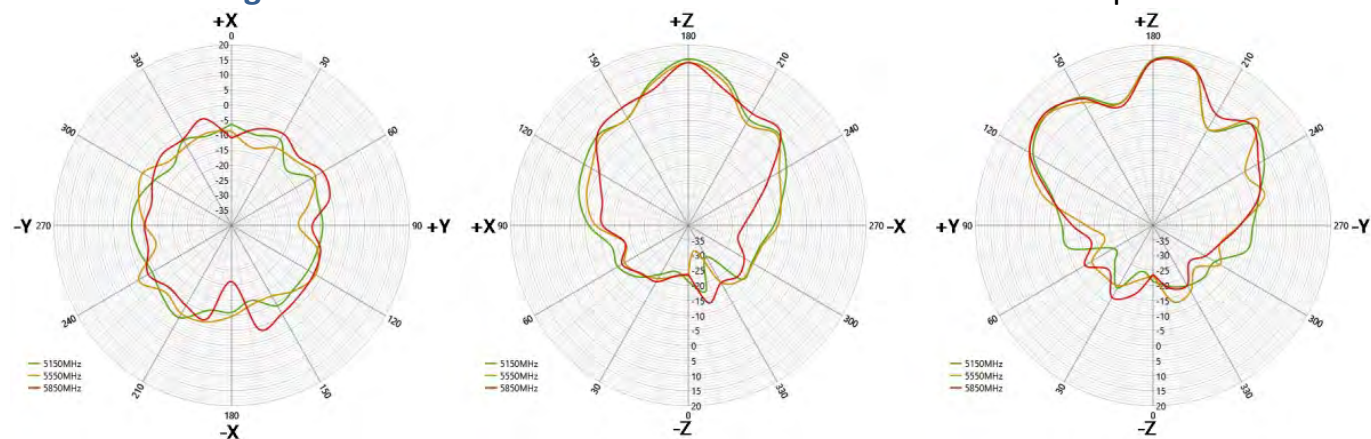


Figure 3: Model EXD24140D01 Radiation Patterns in 5G of port1

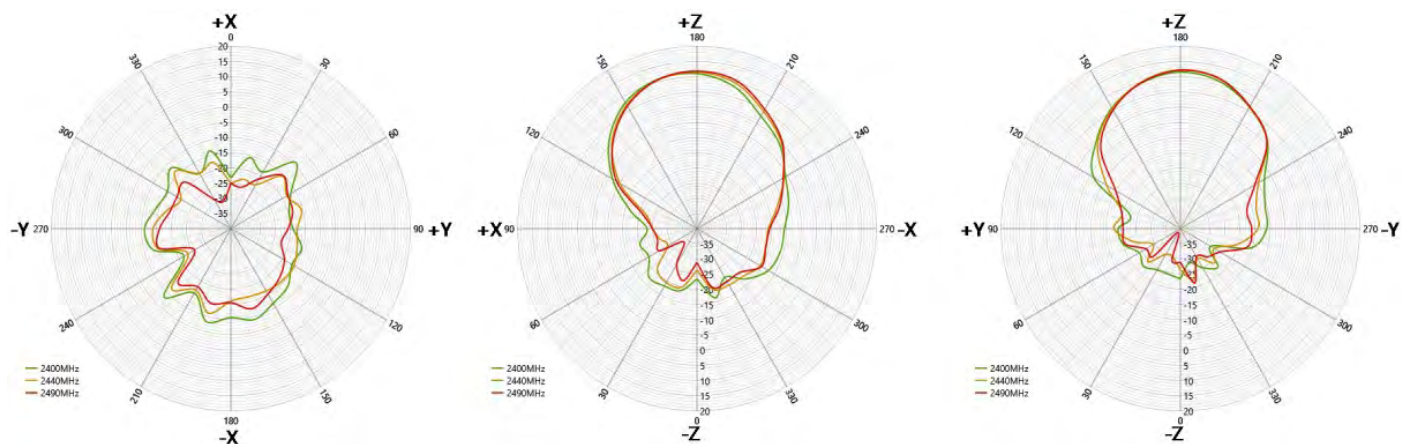


Figure 4: Model EXD24140D01 Radiation Patterns in 2.4G of port2

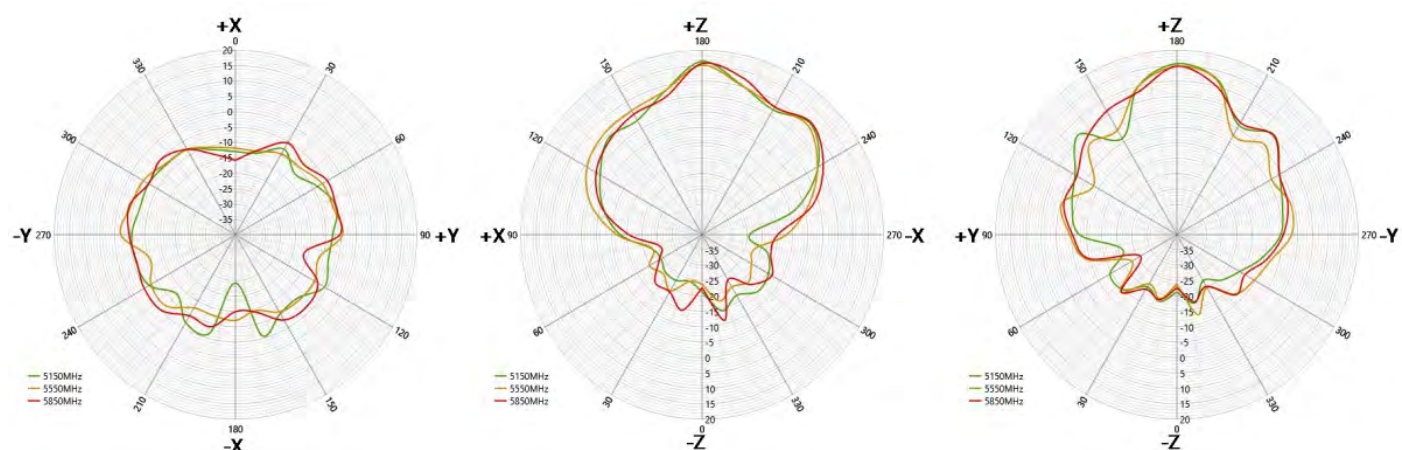


Figure 5: Model EXD24140D01 Radiation Patterns in 5G of port2

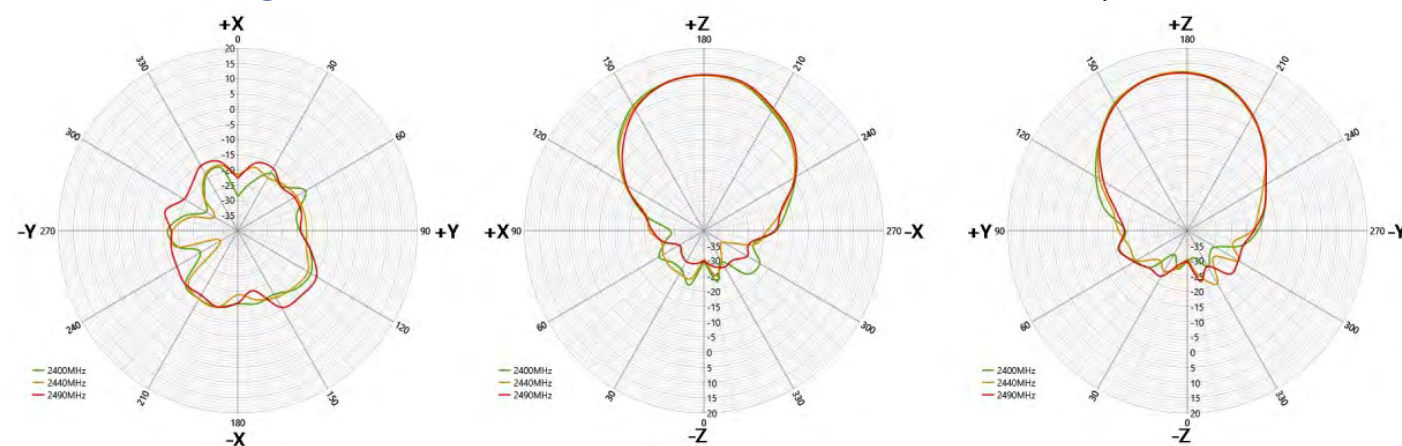


Figure 6: Model EXD24140D01 Radiation Patterns in 2.4G of port3

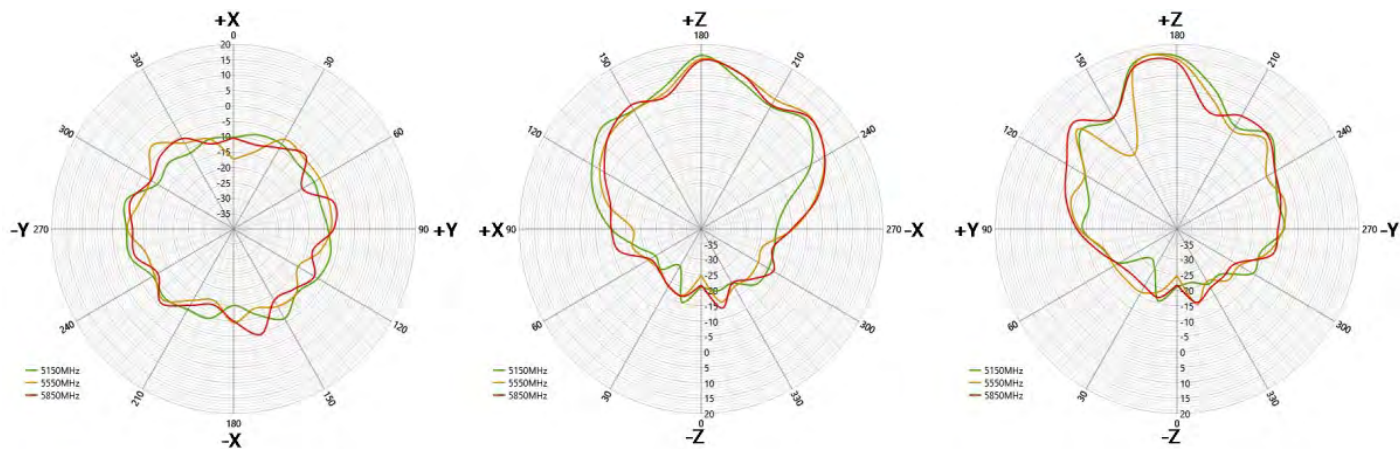


Figure 7: Model EXD24140D01 Radiation Patterns in 5G of port3

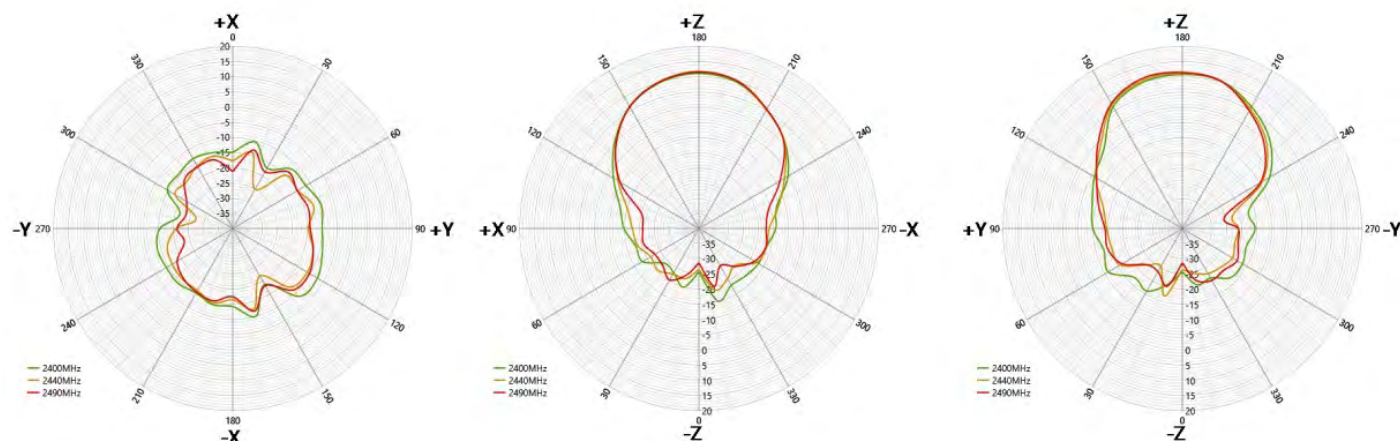


Figure 8: Model EXD24140D01 Radiation Patterns in 2.4G of port4

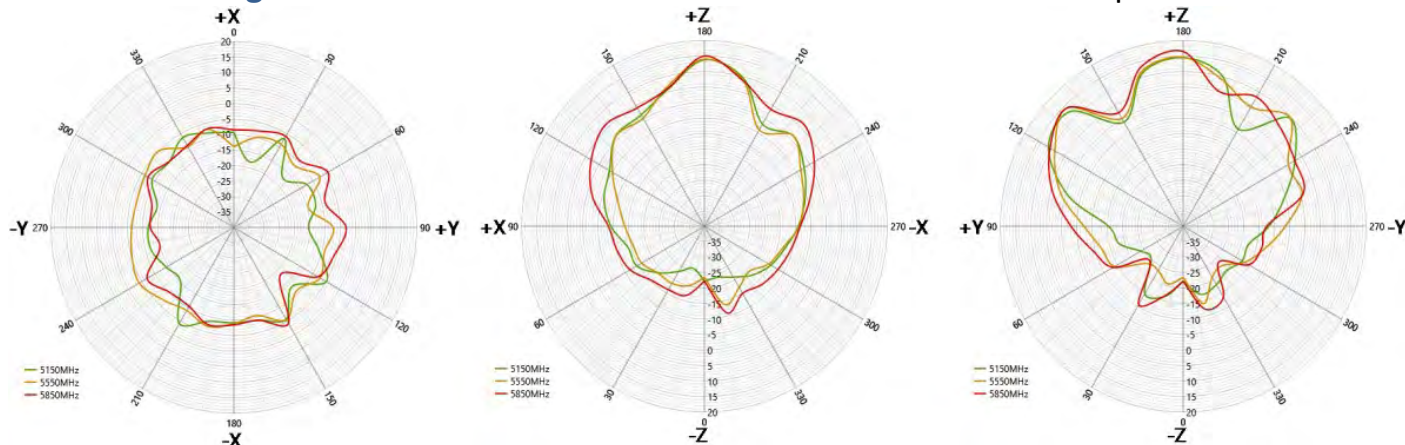
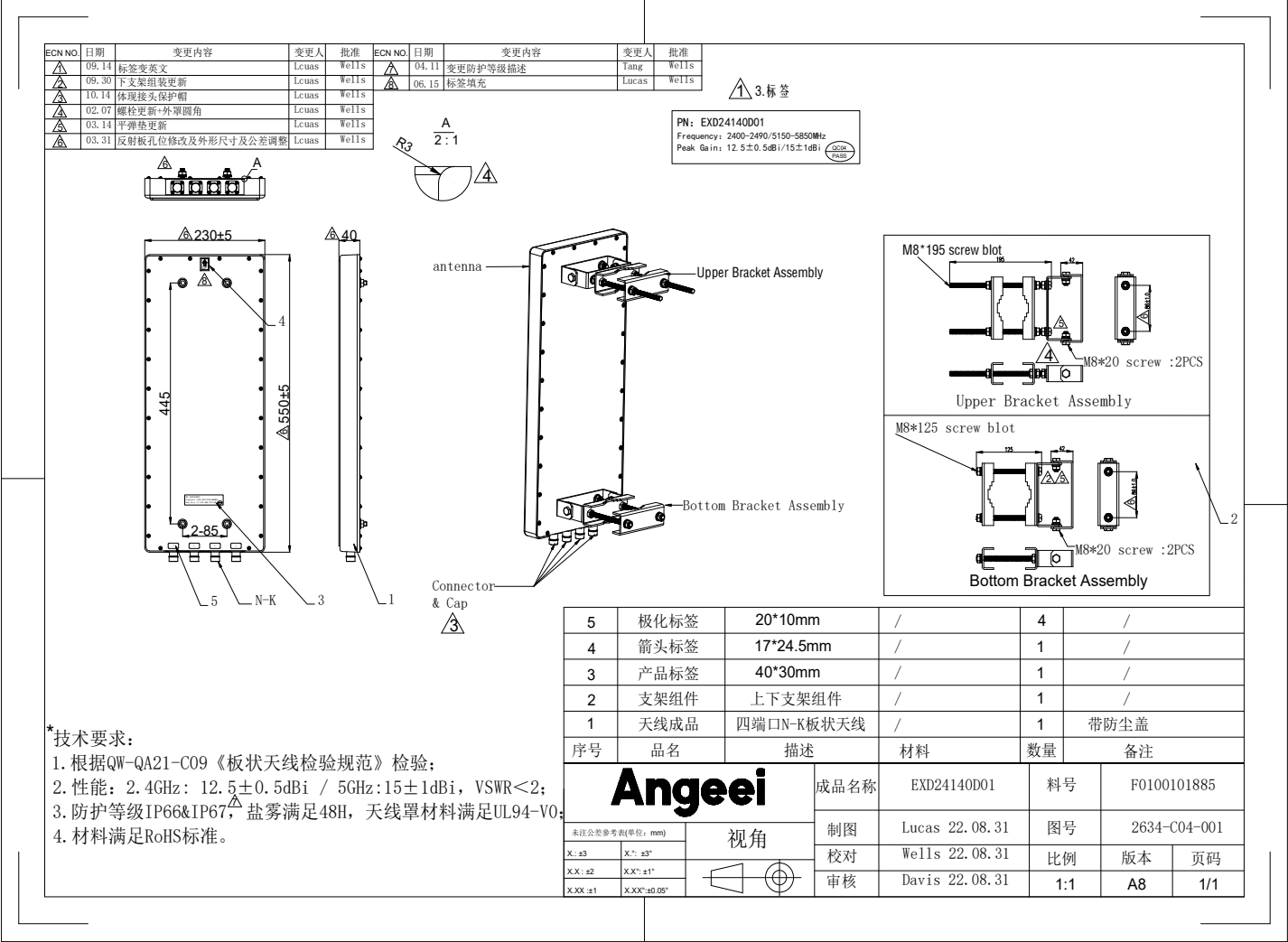


Figure 9: Model EXD24140D01 Radiation Patterns in 5G of port4

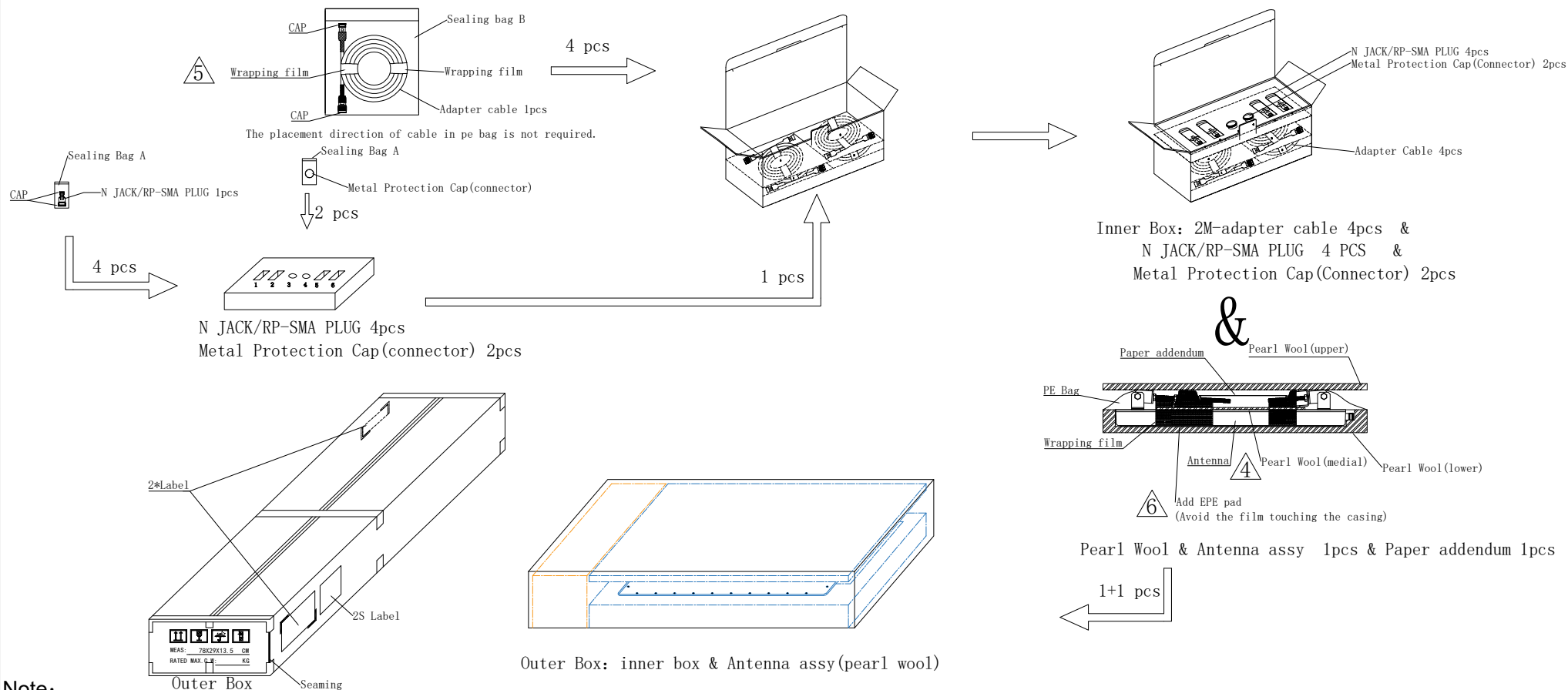
5. Product Drawing



6. ROHS

Model EXD24140D01 antenna is RoHS compliant.

ECN NO.	DATE	DESCRIPTION	CHANGER	APPROVER	ECN NO.	DATE	DESCRIPTION	CHANGER	APPROVER
①	22.09.30	Single box packaging.	Lucas	Davis	④	23.05.24	Packaging change	Tang	Davis
②	23.02.09	ADD COTTON PAD	Lucas	Davis	⑤	23.06.15	Packaging change	Xxzhao	Davis
③	23.05.05	Packaging change	Tang	Davis	⑥	23.08.08	Packaging change	Yutao	Davis



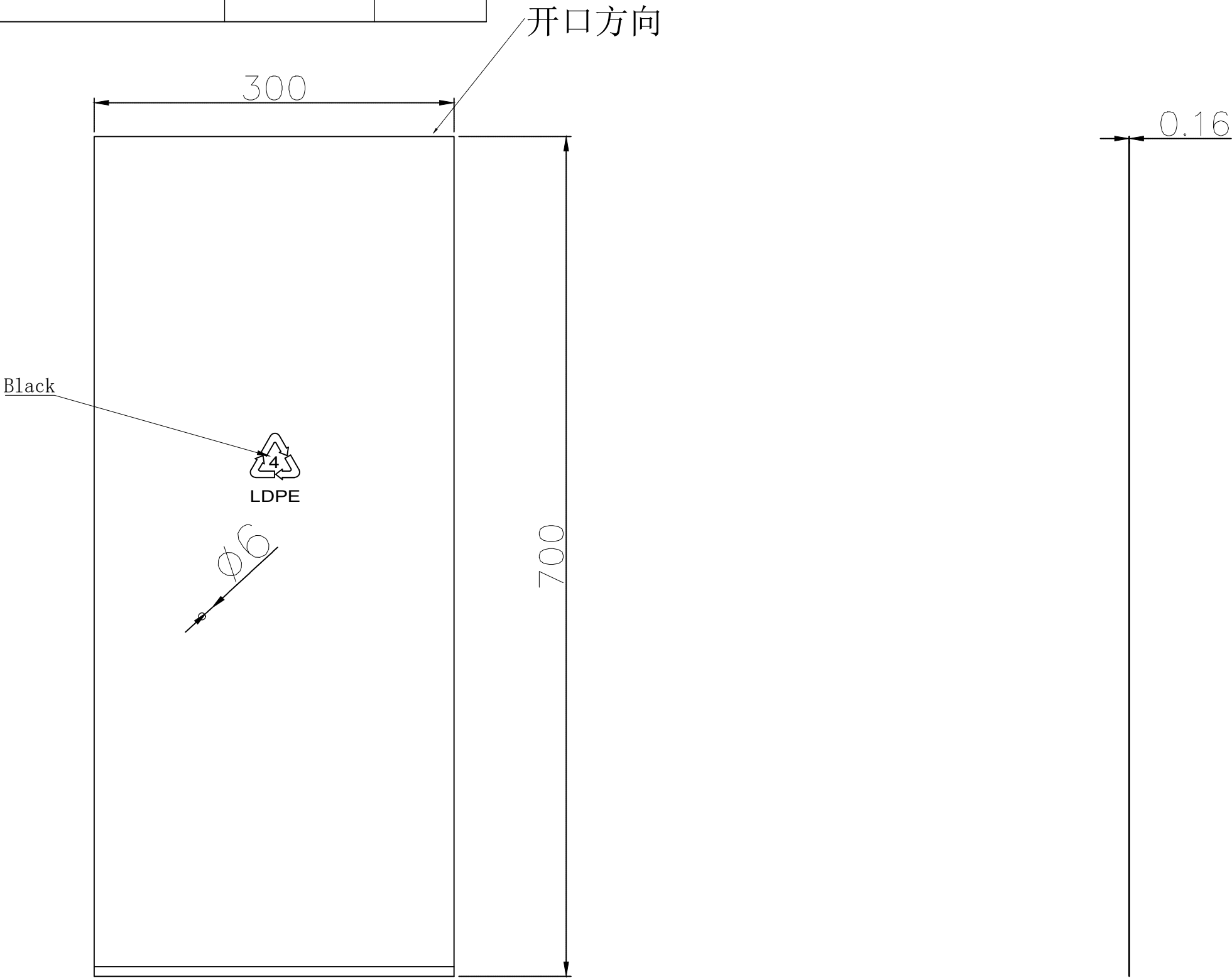
Note:

- Pearl wool packing size: top cover 632*270*15 ±10mm, bottom cover 632*270*55 ±10mm; Pearl Wool(medial): 350*150*10 ±10mm; Pearl Wool(Connector): 265*125*35 ±10mm.
- Inner box packing size: 270*130*105 ±10mm; The inner box contains 4 pcs 2M-adapter cable & 4 pcs N JACK/RP-SMA PLUG connector & 2 pcs Metal Protection Cap/box;
- Outer packing size: 780*290*135 ±10mm; The outer box contains one inner boxes & one Antenna assy(pearl wool & paper addendum)
- Estimated weight: 5.2KG/BOX.

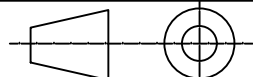
Angeei			P/N	EXD24140D01-PACKAGING			
UNMARKED TOLERANCE(mm)			DRAWN	Lucas	22.08.23	DWG NO.	2634-C20-001
X. : ±10	X.° : ±3°	VIEW 	CHECKED	Wells	22.08.23	SCALE	REV. PAGE
X.X : ±5	X.X° : ±1°		APPROVED	Davis	22.08.23	1:1	A6 1/1
X.XX : ±2	X.XX° : ±0.05°						

ECN NO.	DATE	DESCRIPTION	CHANGER	APPROVER
△1				

RoHS
Compliant

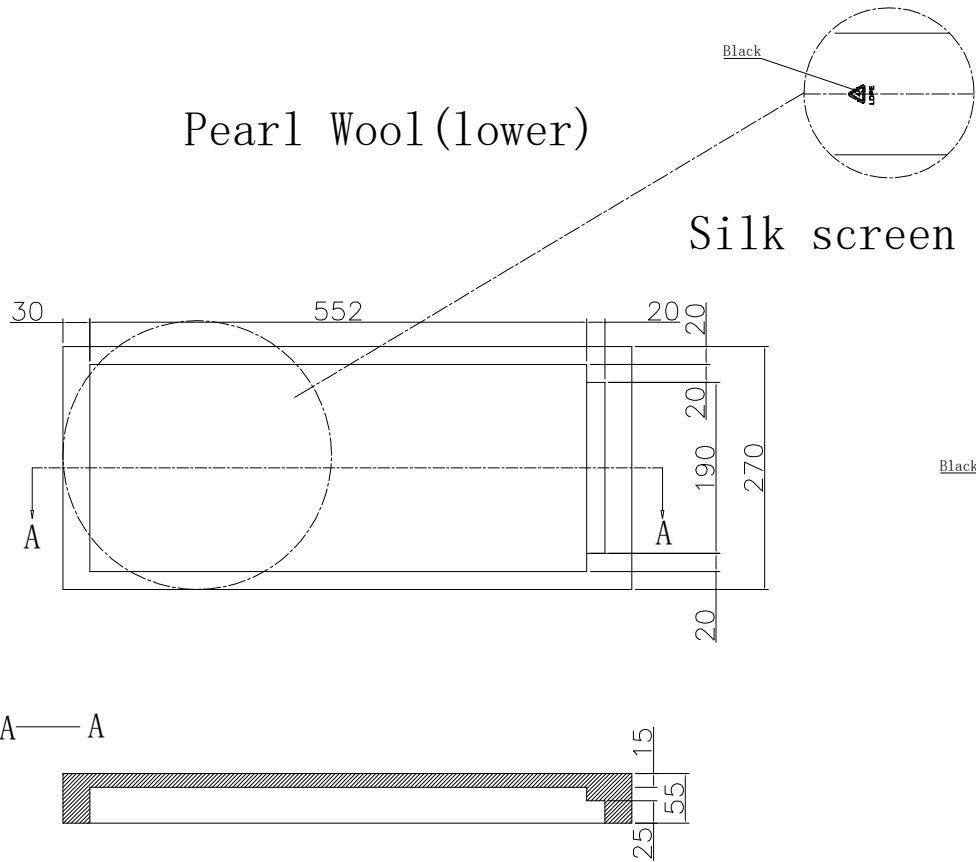


- Note:
- 1、Materials meet RoHS standards;
 - 2、Material: LDPE;Weight: 35±5g;
 - 3、Sealing Type: Tape sealing.

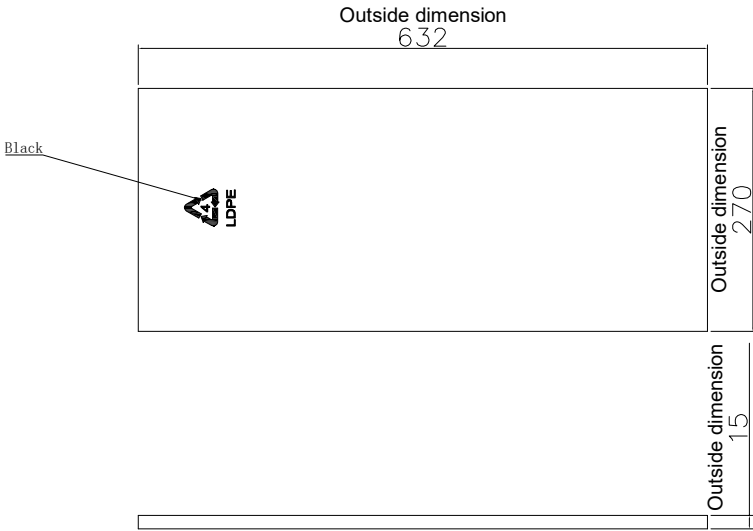
Angeei			P/N	EXD24140D01-PE袋	PART NO.	/	
UNMARKED TOLERANCE(mm)		VIEW 	DRAWN	Lucas 22. 11. 01	DWG NO.	2634-C20-007	
X. : ±10	X. ° : ±3°		CHECKED	Wells 22. 11. 01	SCALE	REV.	PAGE
X. X : ±5	X. X° : ±1°		APPROVED	Davis 22. 11. 01	1:1	A0	1/1
X. XX : ±2	X. XX° : ±0. 05°						

ECN NO.	DATE	DESCRIPTION	CHANGER	APPROVER
				

RoHS
Compliant



Pearl Wool (upper)



Note:
1、Materials meet RoHS standards.
2、Materials : EPE.
3、Weight: 100±20g

Angeei		P/N	EXD24140D01-包棉	PART NO.	/	
UNMARKED TOLERANCE(mm)		DRAWN	Lucas 22.11.01	DWG NO.	2634-C20-008	
X. : ±10	X. ° : ±3°	CHECKED	Wells 22.11.01	SCALE	REV.	PAGE
X.X : ±5	X.X° : ±1°	APPROVED	Davis 22.11.01	1:1	A0	1/1
X.XX : ±2	X.XX° : ±0.05°					

ECN NO.	DATE	DESCRIPTION	CHANGER	APPROVER
				

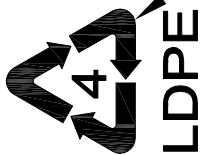
RoHS
Compliant



Outside dimension
350

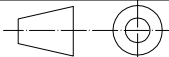
Outside dimension
10

Black



Outside dimension
150

Note:
1、Materials meet RoHS standards.
2、Materials : EPE.
3、Weight: 7±5g/pcs

Angeei			P/N	EXD24140D01-珍珠棉垫棉		PART NO.	/	
UNMARKED TOLERANCE(mm)		VIEW 	DRAWN	Lucas	22. 11. 01	DWG NO.	2634-C20-004	
X. : ±10	X. ° : ±3°		CHECKED	Wells	22. 11. 01	SCALE	REV.	PAGE
X. X : ±5	X. X° : ±1°		APPROVED	Davis	22. 11. 01	1:1	A0	1/1
X. XX : ±2	X. XX° : ±0. 05°							

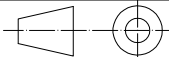
ECN NO.	DATE	DESCRIPTION	CHANGER	APPROVER
				

Outside dimension
 600 ± 20

Outside dimension
 1.5 ± 1

Outside dimension
 380 ± 20

Note:
1、Materials meet RoHS standards.
2、Materials : EPE.

Angeei		P/N	EXD24140D01-珍珠棉		PART NO.	/			
		DRAWN	Y. Tao	23. 07. 13	DWG NO.	2634-C20-011			
UNMARKED TOLERANCE(mm)		VIEW 		CHECKED	Lucas	23. 07. 13	SCALE	REV.	PAGE
X. : ±5	X. ° : ±3°			APPROVED	Davis	23. 07. 13	1:1	A0	1/1
X. X : ±2	X. X° : ±1°								
X. XX : ±1	X. XX° : ±0. 05°								

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P/N: 049 Metal Protective Cap

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Fax: +86-512-56990970
Email: Sales@Angeei.com

Contents

1. Product Description	1
2. Overall Performance	1
3. Product Drawing	2
4. ROHS	2

Version Information

Version	Date	Author	Note
A0	December 19, 2022	Rebecca	Initial Draft
A1	December 23, 2022	Wells	Update the product drawing

1. Overall Performance

CHARACTERISTICS	SPEC
Product Dimensions	Φ21*12mm
Operating Temperature	-55～125°
Operational Humidity	<95%

2. Product Drawing

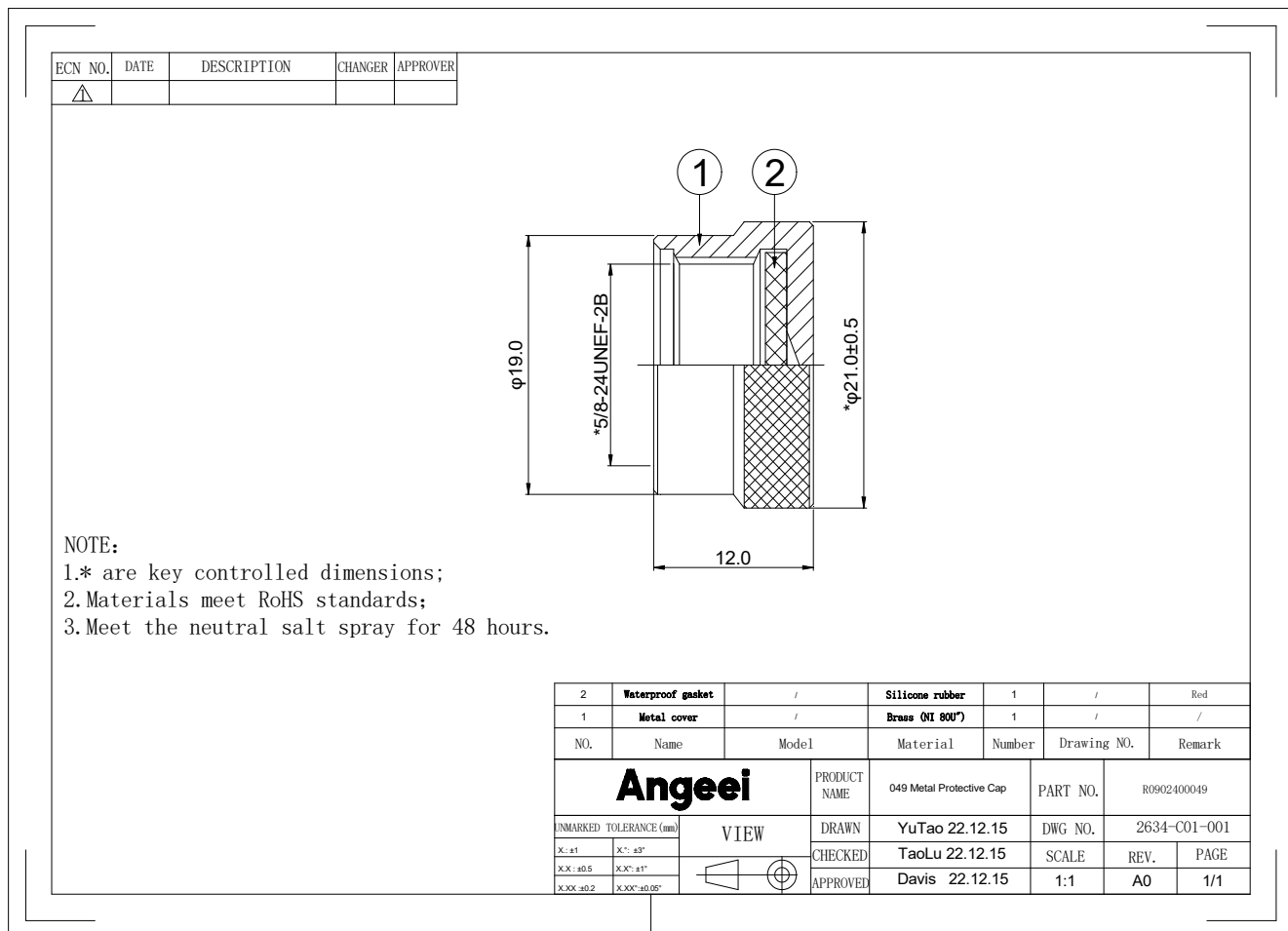


Figure 1: 049 Metal Protective Cap Dimensions

3. ROHS

Model 049 Metal Protective Cap is RoHS compliant.



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P/N: CB2000B24ENND

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Contents

1. Product Description	1
2. Overall Performance	2
3. Product Drawing	3
4. ROHS	3
5. Cable Data Sheet	4

Version Information

Version	Date	Author	Note
V0	July 26, 2022	Rebecca	Initial Draft
A0	September 2, 2022	Rebecca	Update the drawing
A1	October 7, 2022	Rebecca	Add Storage Temperature & Humidity
A2	November 15, 2022	Rebecca	Update the drawing
A3	February 21, 2023	Rebecca	Update the Cable Data Sheet
A4	March 13, 2023	Rebecca	Update the drawing
A5	March 31, 2023	Rebecca	Update the drawing
A6	April 12, 2023	Rebecca	Add IP66

1. Product Description

Model CB2000B24ENND cable assembly is defined by following features:

- Frequency Range DC to 6GHz
- Quick Integration

2. Overall Performance

CHARACTERISTICS	SPEC
Frequency Range	DC to 6GHz
VSWR	<2
Power Handling	50W
Feed Impedance	50 ohms
Interface	N-PLUG & N-PLUG
Operating Temperature	-40 ° C to +80 ° C
Storage Temperature	-40° C to +75 ° C
Operating relative Humidity	5% to 95% non-condensing
Storage humidity	≤95%
Cable	ALSR240
Weight	205 ± 15g
Protection level	IP66 & IP67

3. Product Drawing

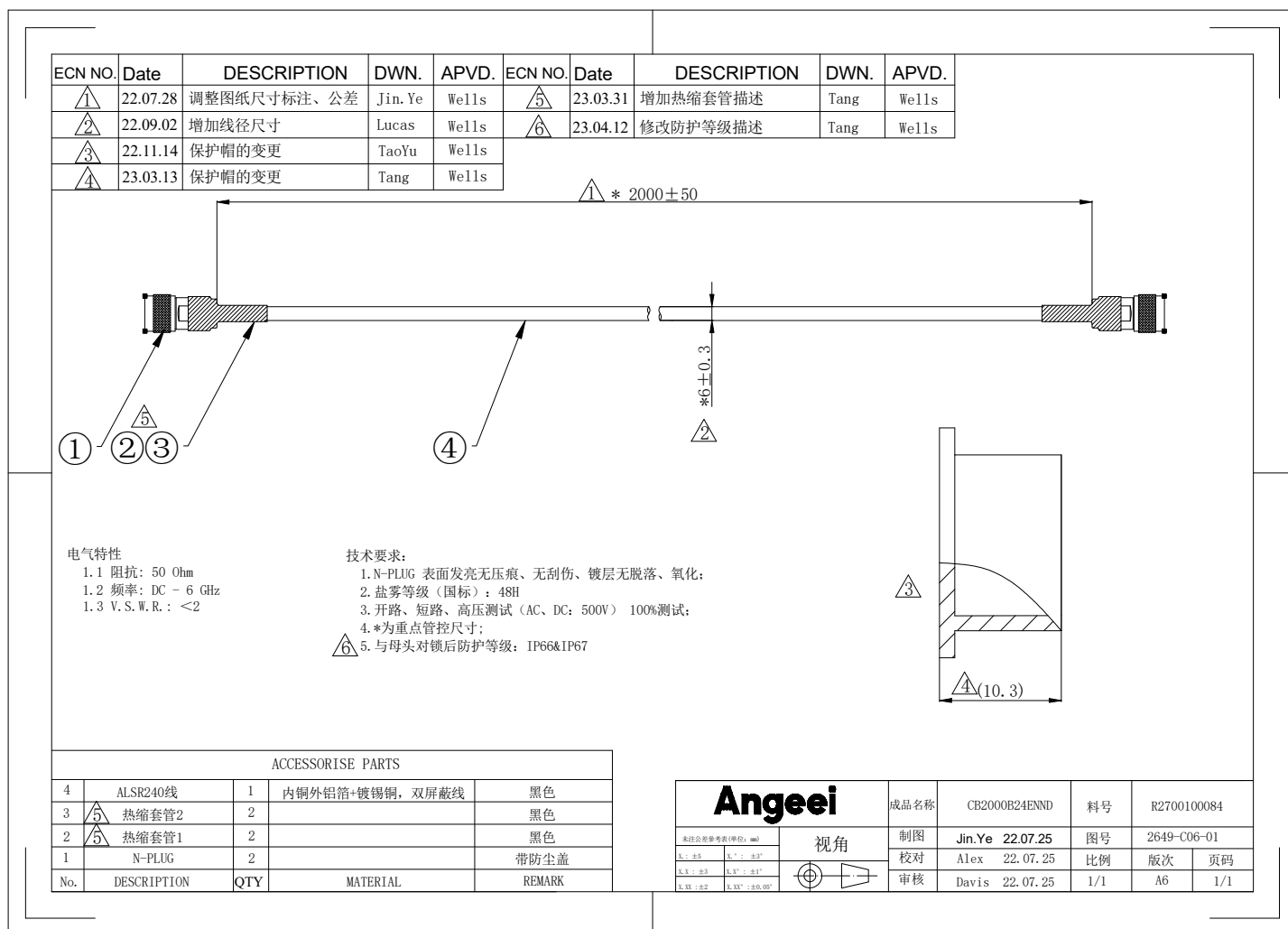


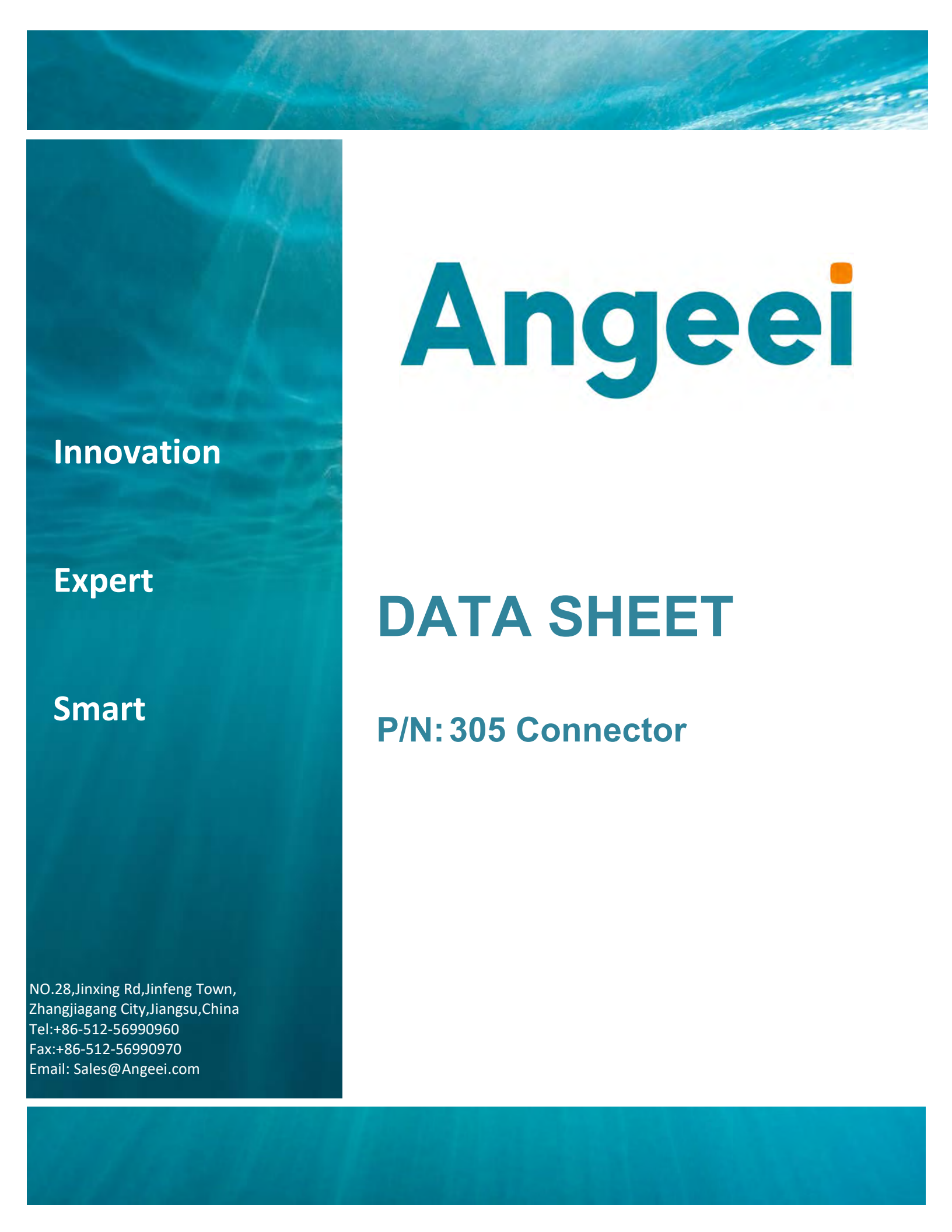
Figure 1: Model CB2000B24ENND Dimensions

4. ROHS

Model CB2000B24ENND is RoHS compliant.

5. Cable Data Sheet

Item	Specification		
Cable type	ALSR240		
Impedance	50 ± 3 ohms		
材料 Material	结构描述 Detail	尺寸 Size mm	颜色 Color
内导体 Inner Conductor	铜 Bare Copper	1/1.42±0.02	铜色 Coppery
绝缘 Dielectric	发泡聚乙烯 Foam PE	3.80±0.10	白色 White
屏蔽 1 st Outer Conductor	自粘铝箔 Laminate Aluminum Tape	3.90±0.10	银色 Silvery
屏蔽 2 st Outer Conductor	镀锡铜 Tinned-Copper Braid(128*Φ0.12mm)	4.40±0.10	银色 Silvery
护套 Jacket	低烟无卤 LSZH	6.10±0.15	黑色 Black
Cable loss (dB/1meter)	0.9GHz	0.248	
	2GHz	0.377	
	3GHz	0.468	
	4GHz	0.546	
	5GHz	0.616	
	6GHz	0.681	
Operating temperature	-40℃~+80℃		



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P/N: 305 Connector

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Contents

1. Product Description	1
2. Features	1
3. Overall Performance	2
4. Product Characteristics	3
4.1 VSWR	3
4.2 Insertion loss	4
5. Product Drawing	5
6. ROHS	5

Version Information

Version	Date	Author	Note
A0	September 7, 2022	Rebecca	Initial Draft
A1	September 9, 2022	Rebecca	Add weight & Update the drawing
A2	October 7, 2022	Rebecca	Add Storage Temperature & Humidity
A3	November 15, 2022	Rebecca	Update the drawing
A4	March 7, 2023	Rebecca	Add the insertion loss
A5	March 13, 2023	Rebecca	Update the drawing
A6	March 24, 2023	Rebecca	Update the drawing

1. Product Description

Model 305 Connector product is designed with patented technology. 305 Connector is a dual band which has features of easy integration, can be directly connected to the product. The connector can be customized according to customer's request. This Connector was designed to accommodate most WLAN applications, such as access points, routers, and gateways.

2. Features

The Model 305 Connector is defined by following features:

- High Efficiency
- Quick Integration

3. Overall Performance

CHARACTERISTICS	SPEC
Frequency Range	DC-6GHz
VSWR	DC-3GHz VSWR<1.3 3GHz-6GHz VSWR<1.5
Feed Impedance	50 ohms
Dimensions	33.95* ϕ 15.8mm
Operating Temperature	-55° C to +125 ° C
Storage Temperature	-55° C to +120 ° C
Operating relative Humidity	5% - 95% non-condensing
Storage Humidity	$\leq$ 95%
Connector	N JACK / RP-SMA PLUG
Weight	28 $\pm$ 5g

4. Product Characteristics

Measuring the VSWR of 305 Connector in a non-interference environment.

4.1 VSWR

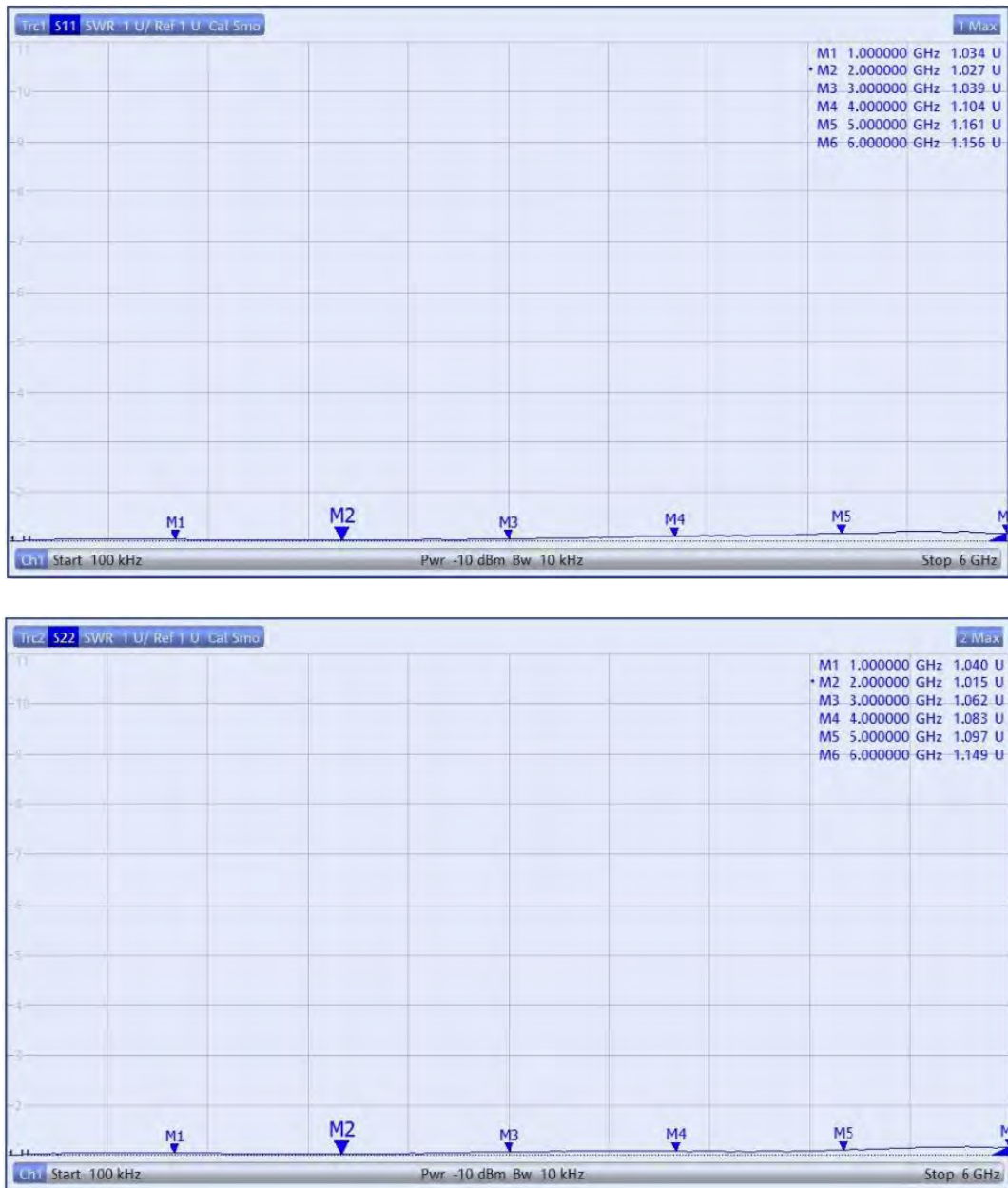


Figure 1: Model 305 Connector VSWR

4.2 Insertion loss

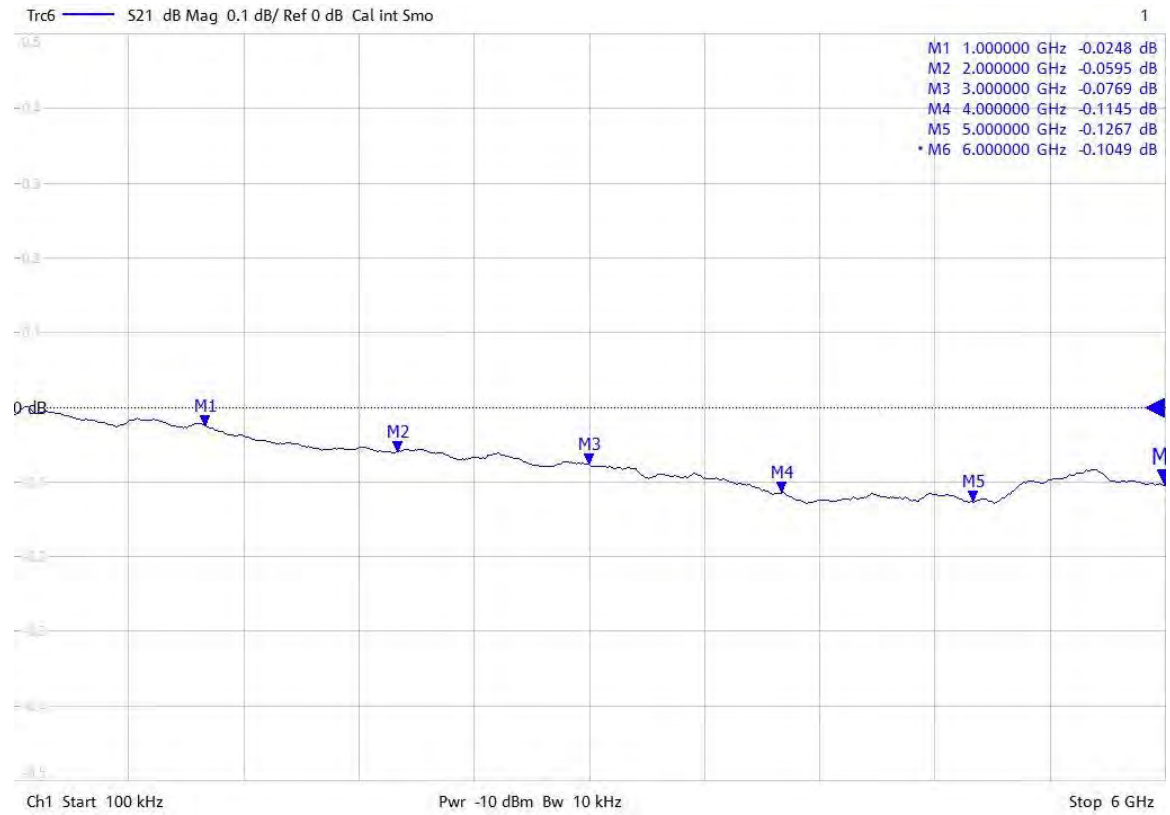


Figure 2: Model 305 Connector Insertion loss

5. Product Drawing

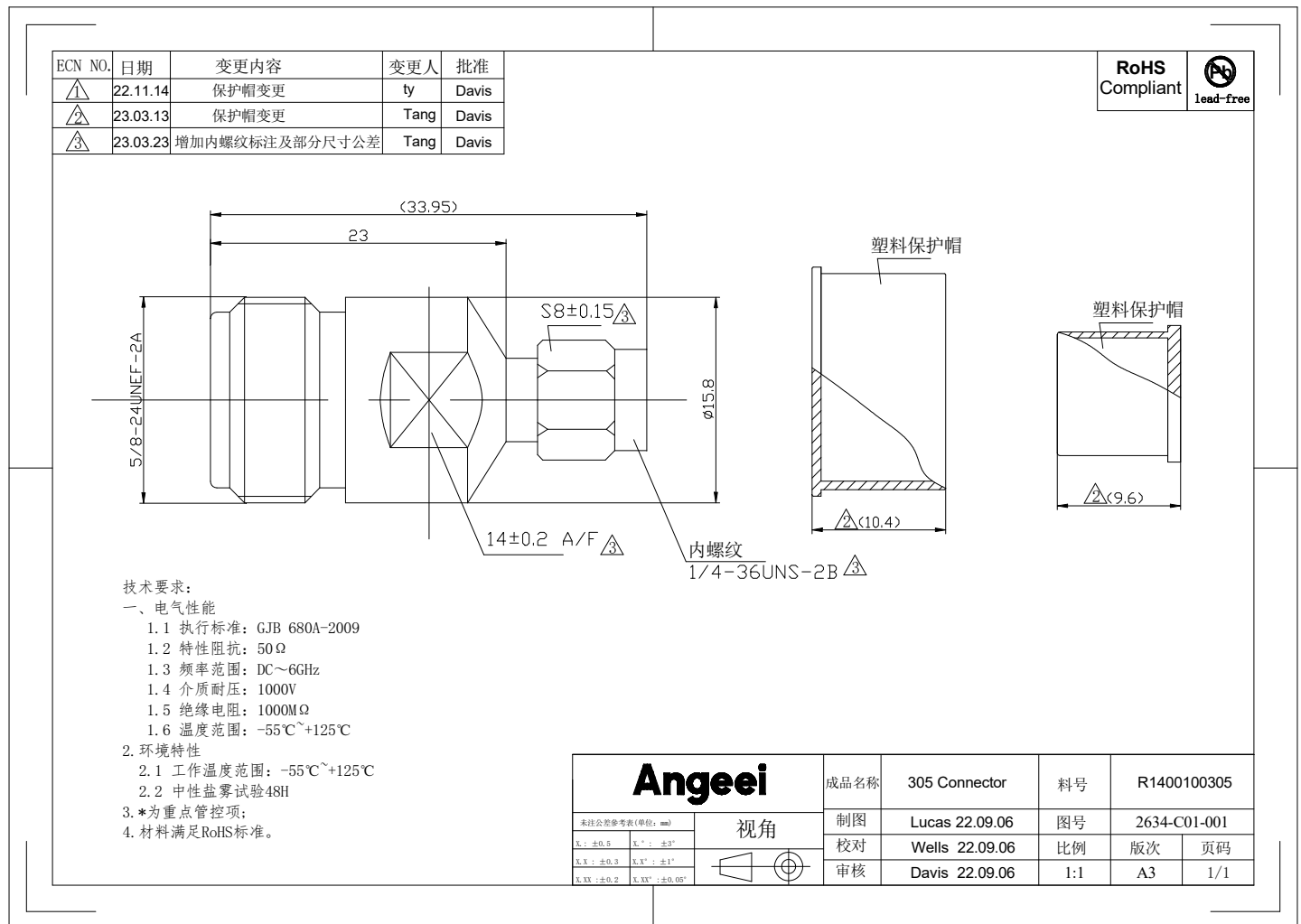


Figure 3: Model 305 Connector Dimensions

6. ROHS

Model 305 Connector is RoHS compliant.

Note:

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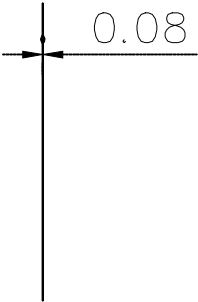
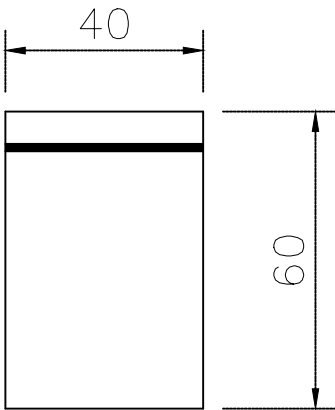
ADD:NO.28,Jinxing Rd,Jinfeng Town,
Zhangjiagang City,Jiangsu,China
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Email: Sales@Angeei.com

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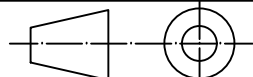
RoHS
Compliant



leae酷嘜踴踴

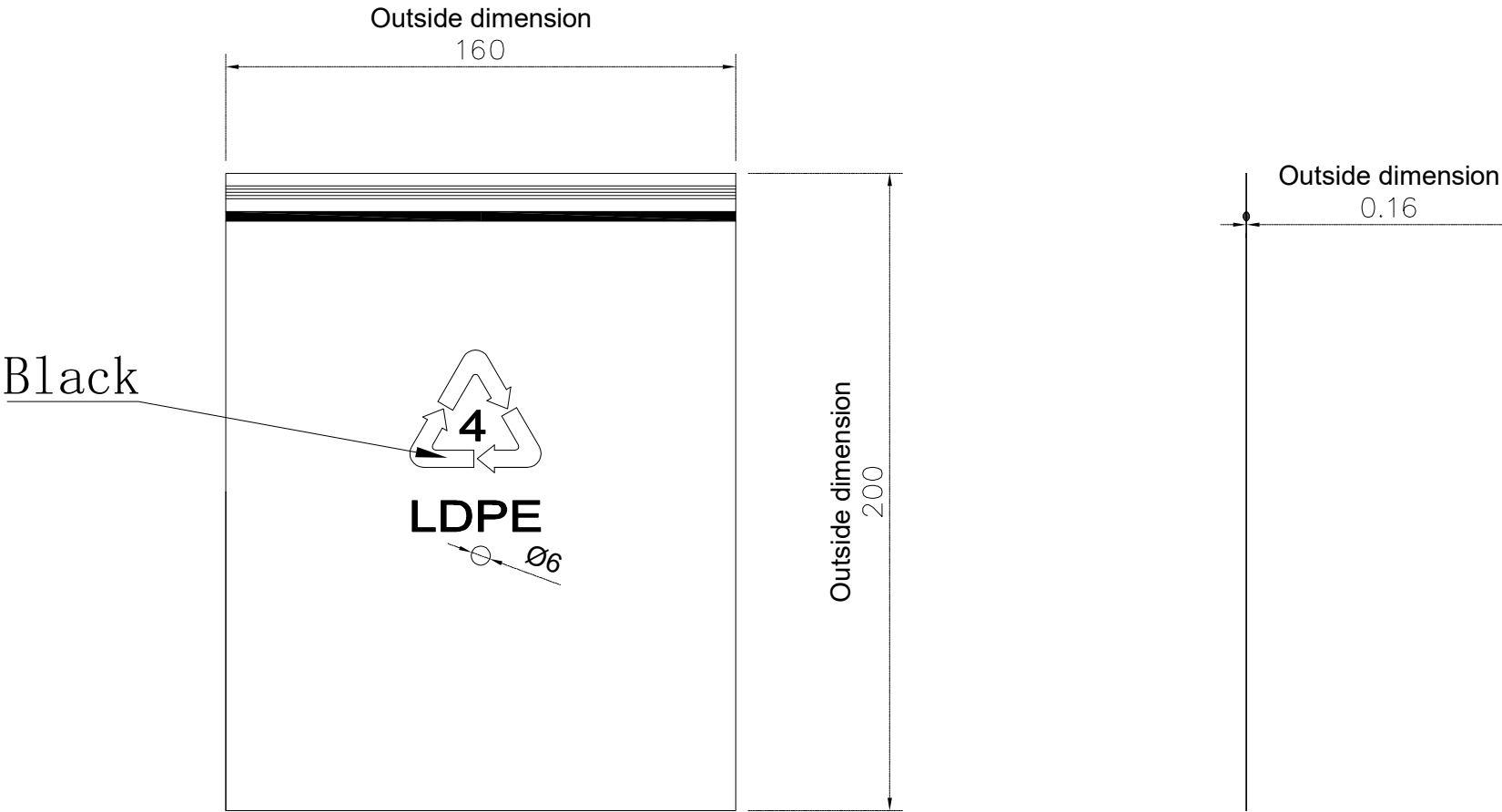


Note:
1、Materials meet RoHS standards;
2、Material: PE;Weight: 0.25±0.1g;
3、Sealing Type: Zipper。

Angeei			P/N	EXD24140D01-自封袋A		PART NO.	/	
UNMARKED TOLERANCE(mm)		VIEW 	DRAWN	Lucas 22. 11. 01		DWG NO.	2634-C20-002	
X. : ±10	X. ° : ±3°		CHECKED	Wells 22. 11. 01		SCALE	REV.	PAGE
X. X : ±5	X. X° : ±1°		APPROVED	Davis 22. 11. 01		1:1	A0	1/1
X. XX : ±2	X. XX° : ±0. 05°							

ECN NO.	DATE	DESCRIPTION	CHANGER	APPROVER

RoHS
Compliant

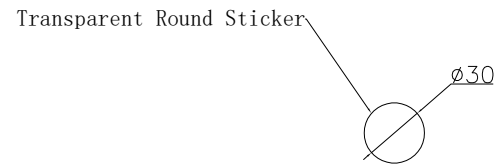
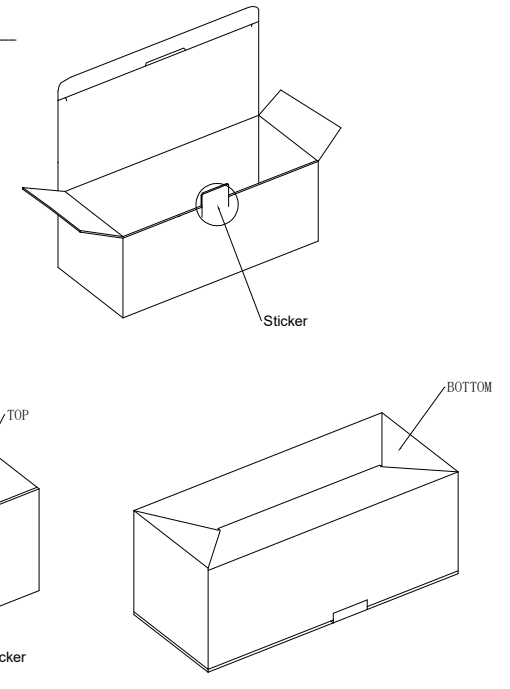
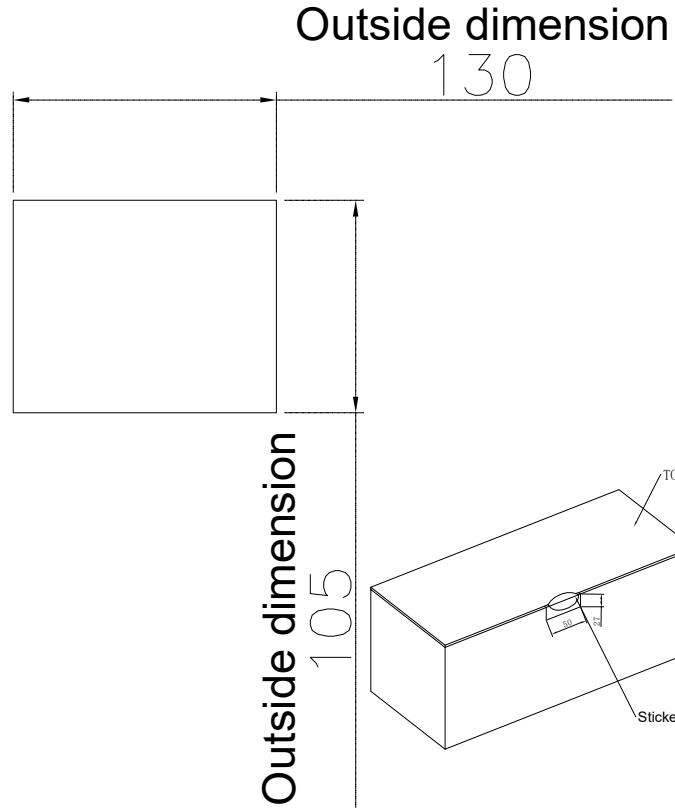
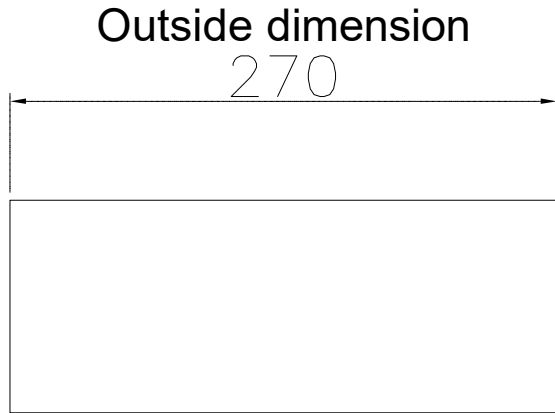


Note:
1、Materials meet RoHS standards;
2、Material: LDPE;Weight: 5.5±3g;
3、Sealing Type: Zipper。

Angeei		P/N	EXD24140D01-自封袋B	PART NO.	/	
UNMARKED TOLERANCE(mm)		VIEW		DRAWN	Lucas 22.11.01	DWG NO. 2634-C20-003
X. : ±10	X. ° : ±3°			CHECKED	Wells 22.11.01	SCALE REV. PAGE
X.X : ±5	X.X° : ±1°			APPROVED	Davis 22.11.01	1:1 A0 1/1
X.XX : ±2	X.XX° : ±0.05°					

ECN NO.	DATE	DESCRIPTION	CHANGER	APPROVER
①				

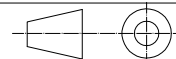
RoHS Compliant	 lead-free
-------------------	---



Note:

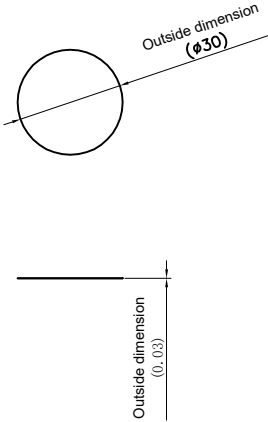
- 1、Materials meet RoHS standards.
- 2、Materials : B corrugated kraft paper, grade 3A.
- 3、Sealing method: buckle, with transparent round sticker on the top.
- 4、Outside dimension 270*130*105.
- 5、resistance to rupture: 3.5kgf/cm².

Angeei		P/N	EXD24140D01-INNERBOX	PART NO.	/	
UNMARKED TOLERANCE(mm)		DRAWN	Lucas 22.11.01	DWG NO.	2634-C20-006	
X. : ±10	X. ° : ±3°	CHECKED	Wells 22.11.01	SCALE	REV.	PAGE
X.X : ±5	X.X ° : ±1°	APPROVED	Davis 22.11.01	1:1	A0	1/1
X.XX : ±2	X.XX ° : ±0.05°					

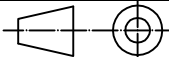


ECN NO.	DATE	DESCRIPTION	CHANGER	APPROVER
				

RoHS
Compliant



Note:
1、Materials meet RoHS standards;
2、Material: BOPP(Acrylic glue);
3、Colour: Transparent。

Angeei			P/N	EXD24140D01-Round Tape		PART NO.	/	
UNMARKED TOLERANCE(mm)		VIEW 	DRAWN	Tang	23.02.08	DWG NO.	2634-C20-010	
X. : ±10	X. ° : ±3°		CHECKED	Lucas	23.02.08	SCALE	REV.	PAGE
X.X : ±5	X.X° : ±1°		APPROVED	Davis	23.02.08	1:1	A0	1/1
X.XX : ±2	X.XX° : ±0.05°							

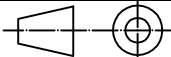
ECN NO.	DATE	DESCRIPTION	CHANGER	APPROVER
				

RoHS
Compliant



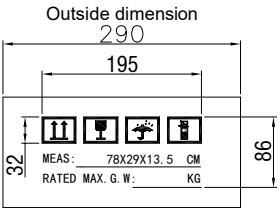
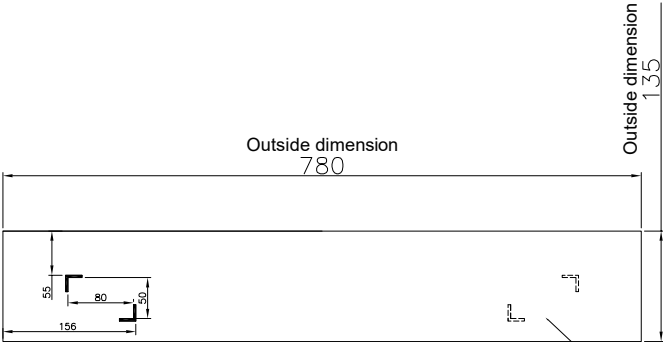
Note:

- 1、Materials meet RoHS standards;
- 2、Material: BOPP/PE/PP;
- 3、Colour: Transparent.

Angeei			P/N	EXD24140D01 Packaging Tape	PART NO.	/	
UNMARKED TOLERANCE(mm)		VIEW 	DRAWN	Tang 23. 02. 08	DWG NO.	2634-C20-011	
X. : ±10	X. ° : ±3°		CHECKED	Lucas 23. 02. 08	SCALE	REV.	PAGE
X. X : ±5	X. X° : ±1°		APPROVED	Davis 23. 02. 08	1:1	A0	1/1
X. XX :±2	X. XX° :±0. 05°						

ECN NO.	DATE	DESCRIPTION	CHANGER	APPROVER
				

RoHS
Compliant

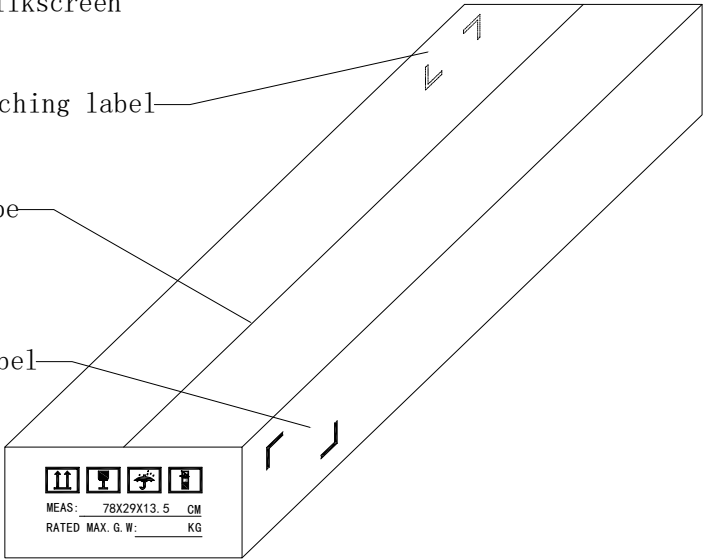


Symmetrical Label Silkscreen

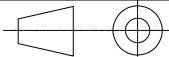
Position for attaching label

Pack with sealing tape

Position for attaching label



- Note:
- 1、Materials meet RoHS standards;
 - 2、Materials : BC corrugated kraft paper, grade 3A; ; Fit with a glued fit;
 - 3、Packed with sealing tape;
 - 4、Outside dimension 780*290*135;
 - 5、resistance to rupture: 8kgf/cm².

Angeei			P/N	EXD24140D01-OUTERBOX		PART NO.	/	
			DRAWN	Lucas	22. 11. 01	DWG NO.	2634-C20-009	
UNMARKED TOLERANCE(mm)		VIEW 	CHECKED	Wells	22. 11. 01	SCALE	REV.	PAGE
X. : ±10	X. ° : ±3°		APPROVED	Davis	22. 11. 01	1:1	A0	1/1
X.X : ±5	X.X° : ±1°							
X.XX : ±2	X.XX° : ±0.05°							