

# 样品承认书

## Confirmation of products

|                           |                              |                      |                    |            |            |
|---------------------------|------------------------------|----------------------|--------------------|------------|------------|
| 客户名称<br>Customer          |                              |                      |                    |            |            |
| 项目名称<br>Project Name      | SD11                         | 版本<br>Version        | A. 2               | 日期<br>Date | 2023-03-25 |
| 项目料号<br>Project NO.       | 03. 08. 03. 001              | 客户料号<br>Customer NO. | 54. 07. 001. 0085A |            |            |
| 频段<br>Frequency Range     | 2400~2500MHz<br>5100~5800MHz | 备注<br>Notes          |                    |            |            |
| 设计<br>Designed By         |                              |                      |                    |            |            |
| 审核<br>Approved By         |                              |                      |                    |            |            |
| 客户确认<br>Clients' Approval |                              |                      |                    |            |            |

公司名称：深圳市林荣科技有限公司

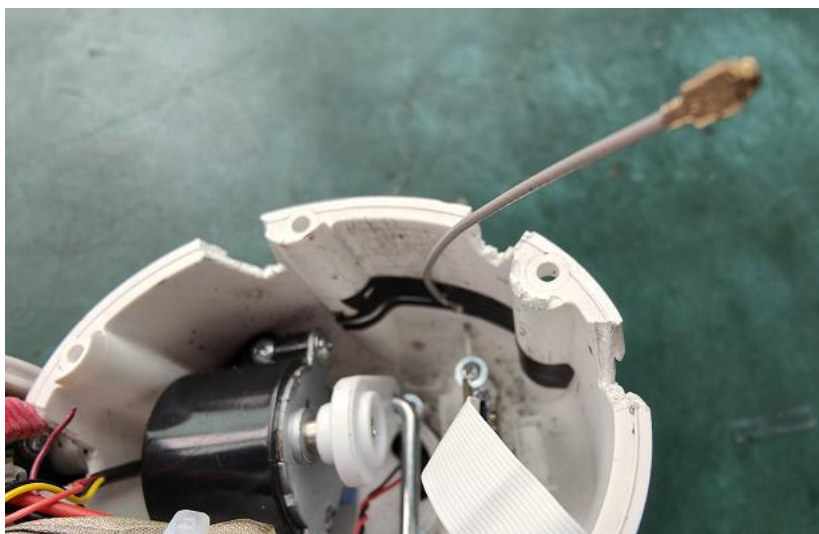
Designer: SHENZHEN LINRONG TECHNOLOGY CO., LTD

地址：深圳市龙华区大浪街道华荣路联建工业园 1 栋 3 楼

ADD: Floor 3, building 1, LianJian Industrial Park, Huarong Road, Dalang street, Longhua District, Shenzhen

## 1、 Specification

This report mainly provides the testing conditions of various electric and structural performance parameters for cell phone antenna ----SD11 Picture 1 shows the antenna designed by LR.



## 2、 VSWR Testing

### 2.1 Testing connection

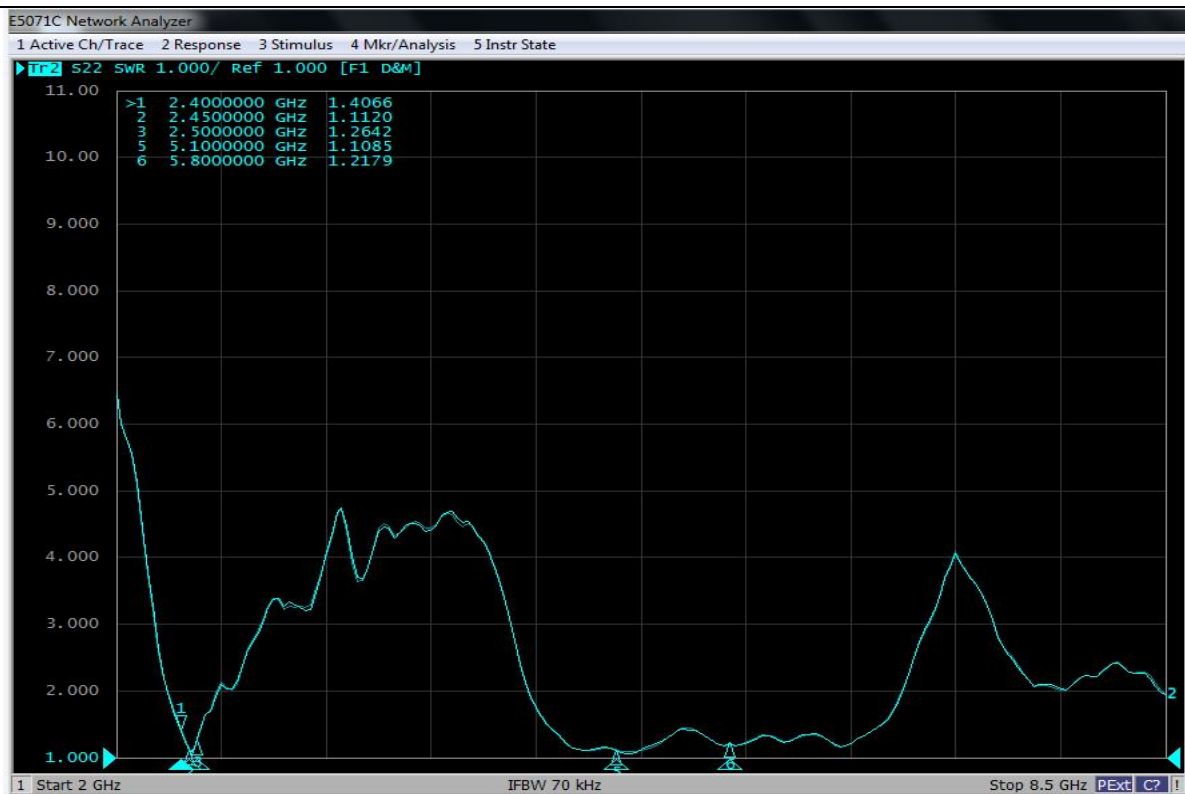
The **Return Loss** testing devices are connected in sequence: Agilent5071C Network Analyzer →Testing Cable → Customer-providing Devices.

### 2.2 VSWR

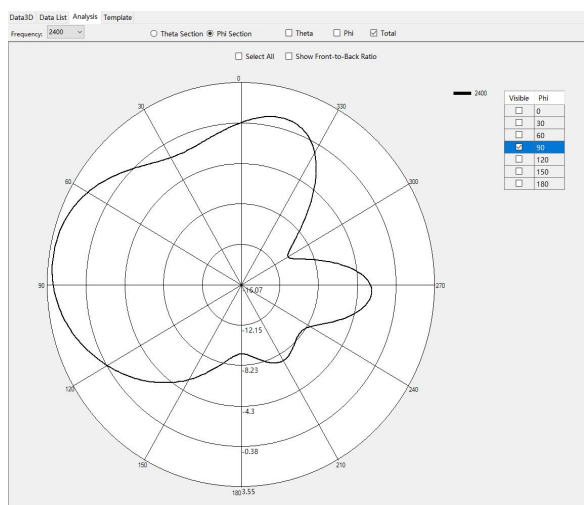
The following table expresses the VSWR value of antenna's two edges of its frequency range. With regard to the relevant diagram of VSWR

| SD11 WIFI VSWR  |      |      |      |       |      |
|-----------------|------|------|------|-------|------|
| Frequency (MHz) | 2400 | 2450 | 2500 | 5100  | 5800 |
| VSWR            | 1.49 | 1.11 | 1.26 | 1.100 | 1.21 |

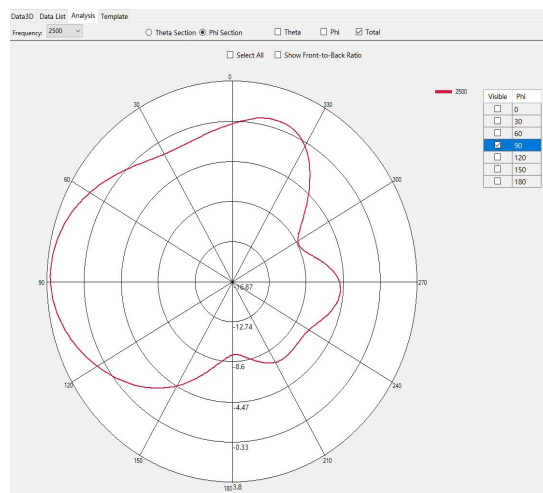
### 2.3 Testing data



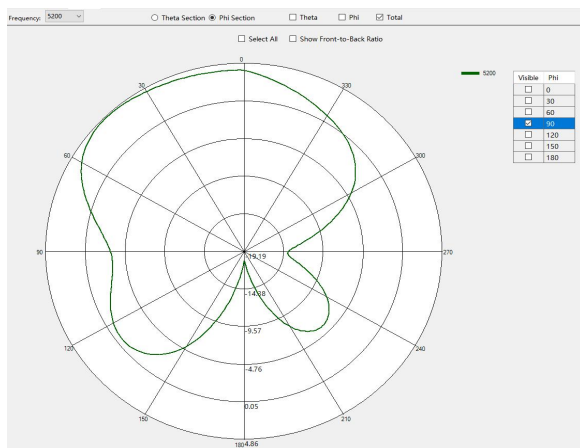
2.4+5.8G WIFI antenna VSWR



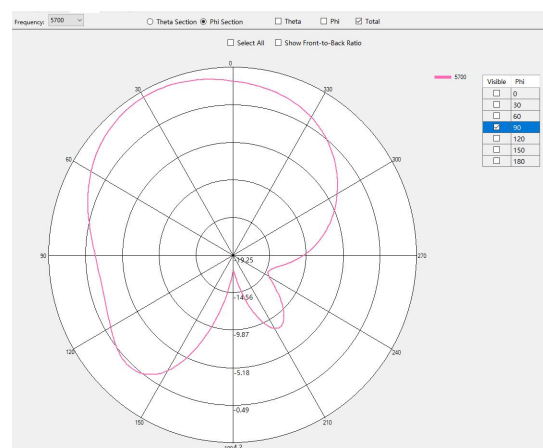
2400MHz



2500MHz

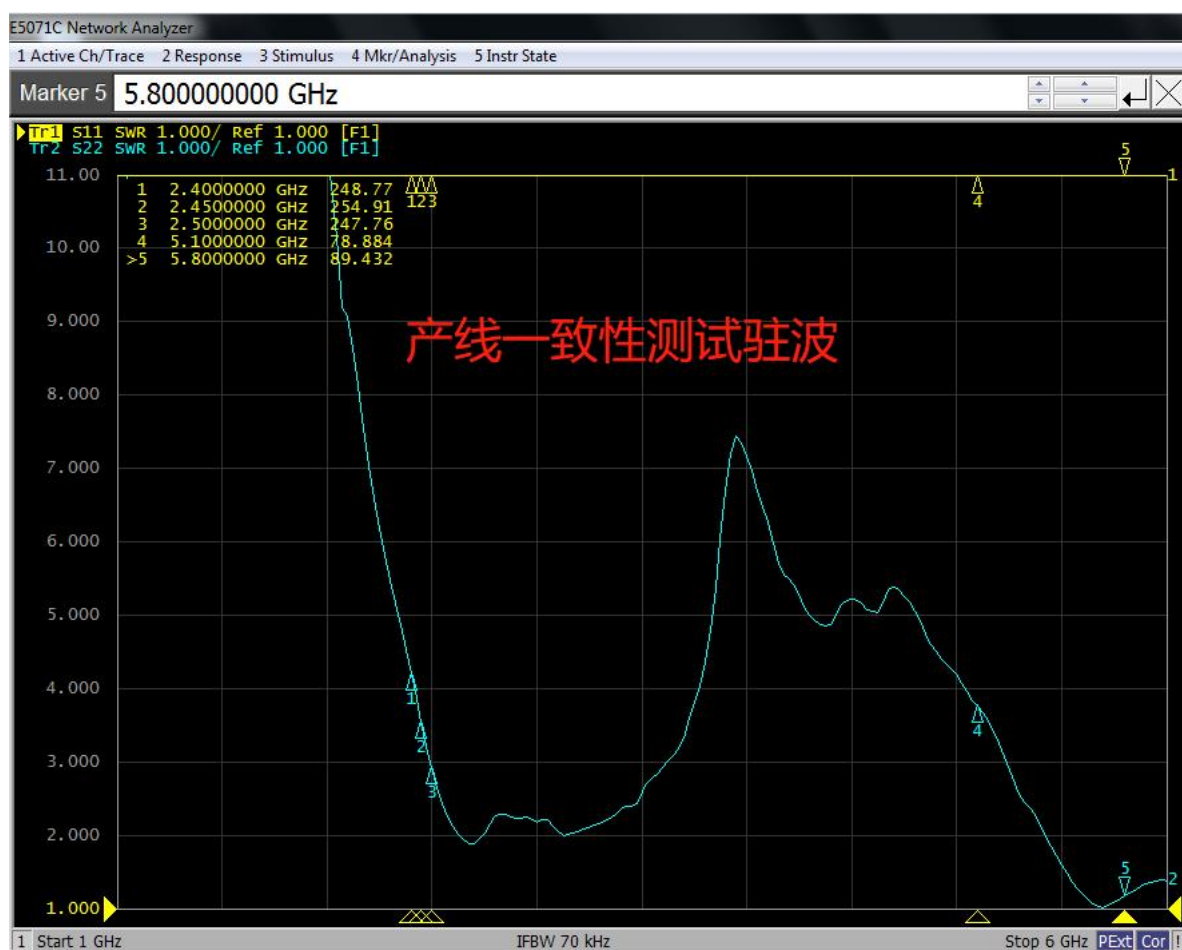


5200MHz



5700MHz

## 2.4 Single antenna test VSWR



## 3、 Power、 Sensitivity Testing

### 3.1 Testing field

LR Microwave Anechoic Chamber : testing frequency ranges from 400MHz to 6GHz and the 40cm diameter spherical quiet zone, the chamber provides less than  $-90\text{dB}$  reflectivity from 400MHz—6GHz.

### 3.2 Testing results

The following table indicates the testing results related to Power and Sensitivity in Microwave Anechoic Chamber, concerning the relative diagram.

### 3.3 Active testing.

天线无源效率      Antenna passive efficiency

| Freq MHz | Gain dBi | Efficiency | Freq MHz | Gain dBi | Efficiency |
|----------|----------|------------|----------|----------|------------|
| 2400     | 3.4      | 61.9       | 5360     | 4.7      | 60.5       |
| 2410     | 3.6      | 62.0       | 5380     | 4.8      | 62.6       |
| 2420     | 3.6      | 62.3       | 5400     | 4.9      | 62.5       |
| 2430     | 3.7      | 62.6       | 5420     | 4.9      | 62.8       |
| 2440     | 3.7      | 64.0       | 5440     | 4.9      | 61.8       |
| 2450     | 3.9      | 64.9       | 5460     | 4.9      | 61.1       |
| 2460     | 3.7      | 65.6       | 5480     | 5.0      | 60.9       |

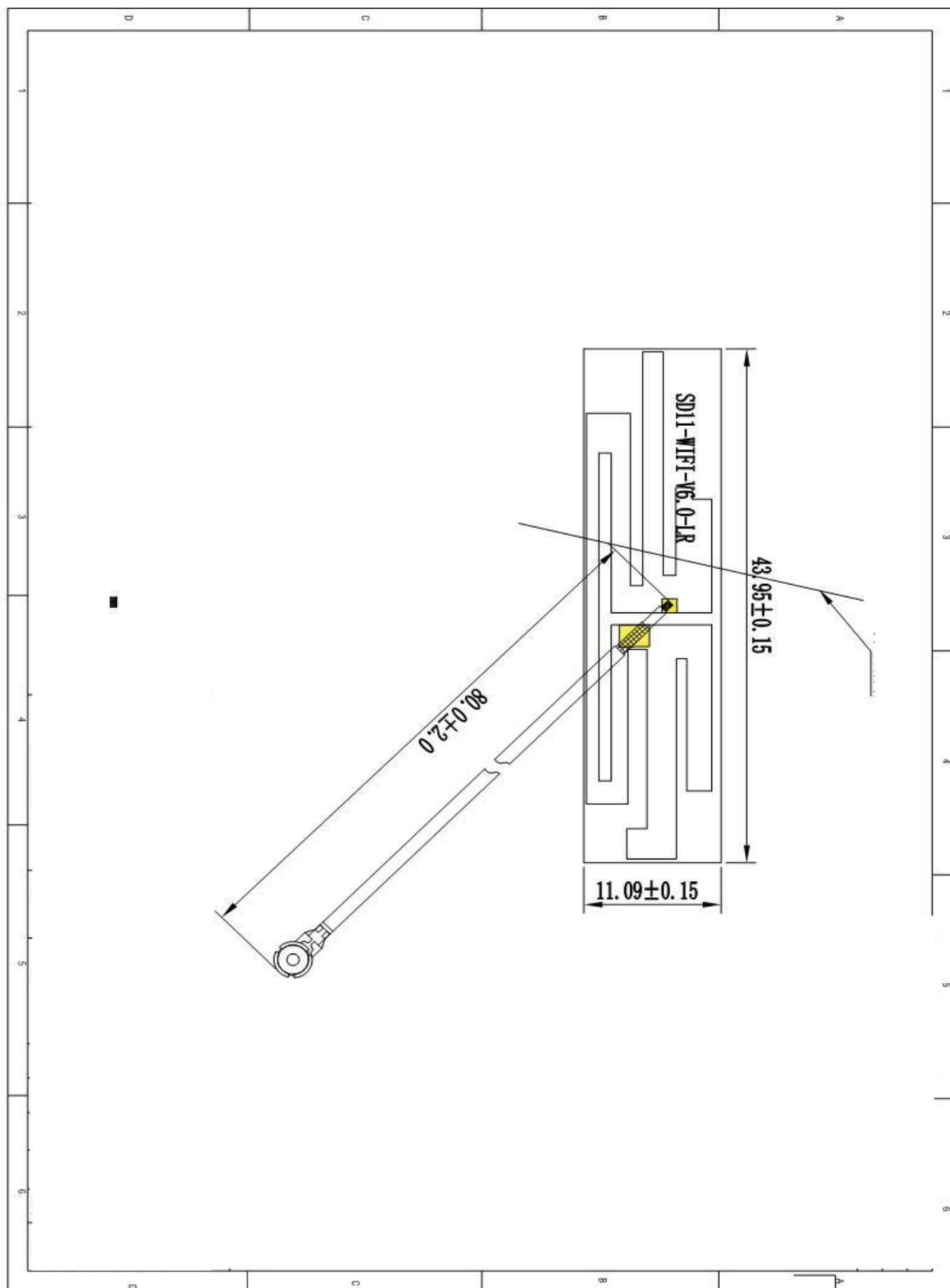
|      |     |      |      |     |      |
|------|-----|------|------|-----|------|
| 2470 | 3.9 | 66.1 | 5500 | 4.9 | 60.0 |
| 2480 | 3.8 | 67.1 | 5520 | 4.7 | 58.2 |
| 2490 | 3.9 | 68.2 | 5540 | 4.8 | 59.2 |
| 2500 | 3.8 | 67.7 | 5560 | 5.1 | 62.7 |
| 5100 | 4.3 | 59.4 | 5580 | 5.0 | 62.7 |
| 5120 | 4.2 | 58.5 | 5600 | 4.9 | 63.1 |
| 5140 | 4.3 | 58.6 | 5620 | 4.7 | 61.3 |
| 5160 | 4.5 | 60.3 | 5640 | 4.3 | 58.9 |
| 5180 | 4.4 | 58.2 | 5660 | 4.2 | 57.6 |
| 5200 | 4.5 | 60.0 | 5680 | 4.3 | 58.5 |
| 5220 | 4.6 | 61.7 | 5700 | 4.2 | 57.5 |
| 5240 | 4.5 | 60.1 | 5720 | 5.1 | 57.0 |
| 5260 | 4.5 | 59.7 | 5740 | 3.9 | 54.8 |
| 5280 | 4.6 | 60.6 | 5760 | 3.9 | 57.0 |
| 5300 | 4.6 | 59.6 | 5780 | 3.9 | 56.5 |
| 5320 | 4.4 | 57.6 | 5800 | 3.8 | 56.1 |
| 5340 | 4.7 | 61.1 |      |     |      |

#### 4、Environmental treatment

Antenna mounting diagram



## 5、Mechanical Dimension Drawing



## 6. Packaging standard

包装说明：具体包装数量以实物为准，图片只显示包装的方式，并非此项目实物。

Packaging Description: the specific packaging quantity is subject to the physical object. The picture only shows the way of packaging, not the physical object of the project



天线用 PE 袋包装

The top cover board, with PE film packaging



防潮防水 PET 袋封装，放于纸箱或胶筐内

Moistureproof waterproof PET bag packaging,  
Put in the cartons



纸箱用胶带封口

Carton sealing with duct tape



包装箱整箱外观 ( )

Cases appearance