

Dongguan Jingrun Technology Co., Ltd.

## T13 Project Antenna Material Requirements Specification

Customer Name: Dongguan Jingrun Technology Co., Ltd.

Customer Product Name: T 1 3

Product Name: BLUETOOTH SPEAKER

Product Specifications: See the BOM list for details

Material Code: T13

### Change History:

| order number | edition | state           | Start and End Dates | person liable | page number | remarks |
|--------------|---------|-----------------|---------------------|---------------|-------------|---------|
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| 2            |         |                 |                     |               |             |         |

### Supplier's acknowledgment signature:

| Responsible Person/Date |  | IQC/ date |  | Review/Date |  | Approved/Date |  |
|-------------------------|--|-----------|--|-------------|--|---------------|--|
| MD                      |  |           |  |             |  |               |  |
| RF                      |  |           |  |             |  |               |  |

### Buyer's acknowledgment signature (please return after signing):

| Buyer's determination result: <input type="checkbox"/> Qualified <input type="checkbox"/> Unqualified |                   |                          |                                                |
|-------------------------------------------------------------------------------------------------------|-------------------|--------------------------|------------------------------------------------|
| Development and Design Engineer / Date                                                                | SQE Engineer/Date | Procurement Manager/Date | Development Department Manager's Approval/Date |
|                                                                                                       |                   |                          |                                                |

## Catalogue

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## 1. Overview

### 1.1 Scope of Application

This specification defines the technical requirements for antennas and material specifications for DM66 products.

These requirements apply to the antenna selection, testing, and acceptance of DM66 products.

### 1.2 Basic Project Information

|                         |                            |
|-------------------------|----------------------------|
| Antenna Name:           | <b>T13</b>                 |
| Antenna Frequency Band: | BT:GFSK<br>2402Mhz-2500Mhz |
| Antenna Material:       | FPC                        |

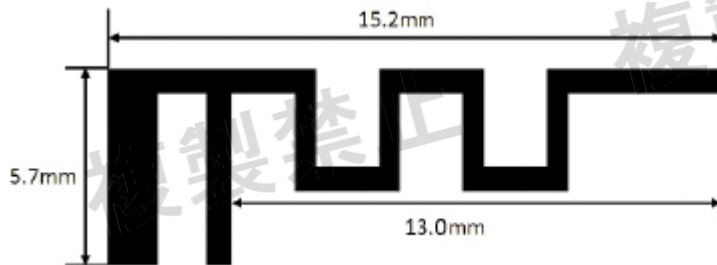
## 2. Requirements for Technical Specifications

### 2.1 Test Items and Equipment Overview

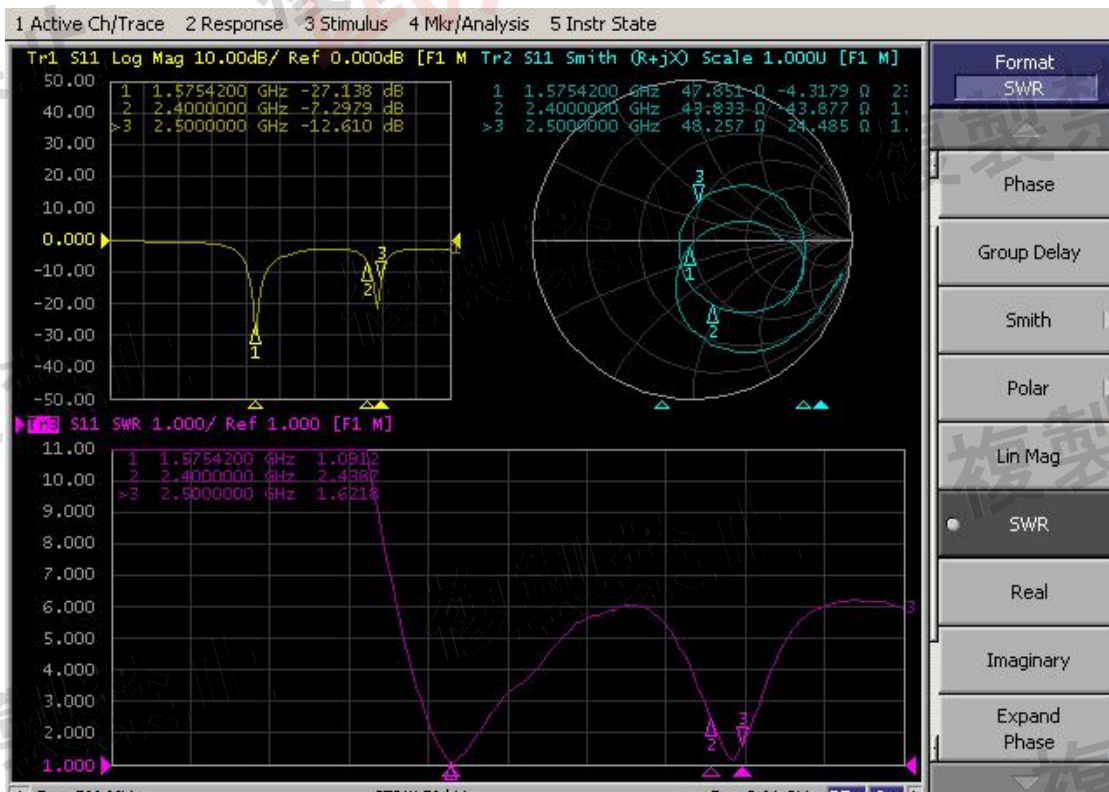
| List               | test item                      | equipment                                        |
|--------------------|--------------------------------|--------------------------------------------------|
| S11<br>Parameters  | Standing Wave Ratio, Echo Loss | network analyzer                                 |
| Active<br>Testing  | TRP,TIS                        | Comprehensive tester, microwave anechoic chamber |
| Passive<br>Testing | Gain, Efficiency               | network analyzer                                 |

| ITEM                   | ANTSPEC               |                  |
|------------------------|-----------------------|------------------|
| ModelName              | <b>T13</b>            |                  |
| Center<br>Frequency    | Horizontal            | Vertical         |
|                        | 2400MHz -1.26dBi      | 2400MHz -5.2dBi  |
|                        | 2450MHz -0.76dBi      | 2450MHz -2.46dBi |
|                        | 2500MHz -0.58dBi      | 2500MHz -1.86dBi |
| MAX.Gain               | -0.58dBi              |                  |
| Polarization           | HorizontalandVertical |                  |
| AzimuthBeam<br>Pattern | Omni-directional      |                  |
| Impedance              | 50 Ohm                |                  |
| AntennaLength          | 38.20mm               |                  |

AntennaPhoto&Length(mm)



### 3.TestReport

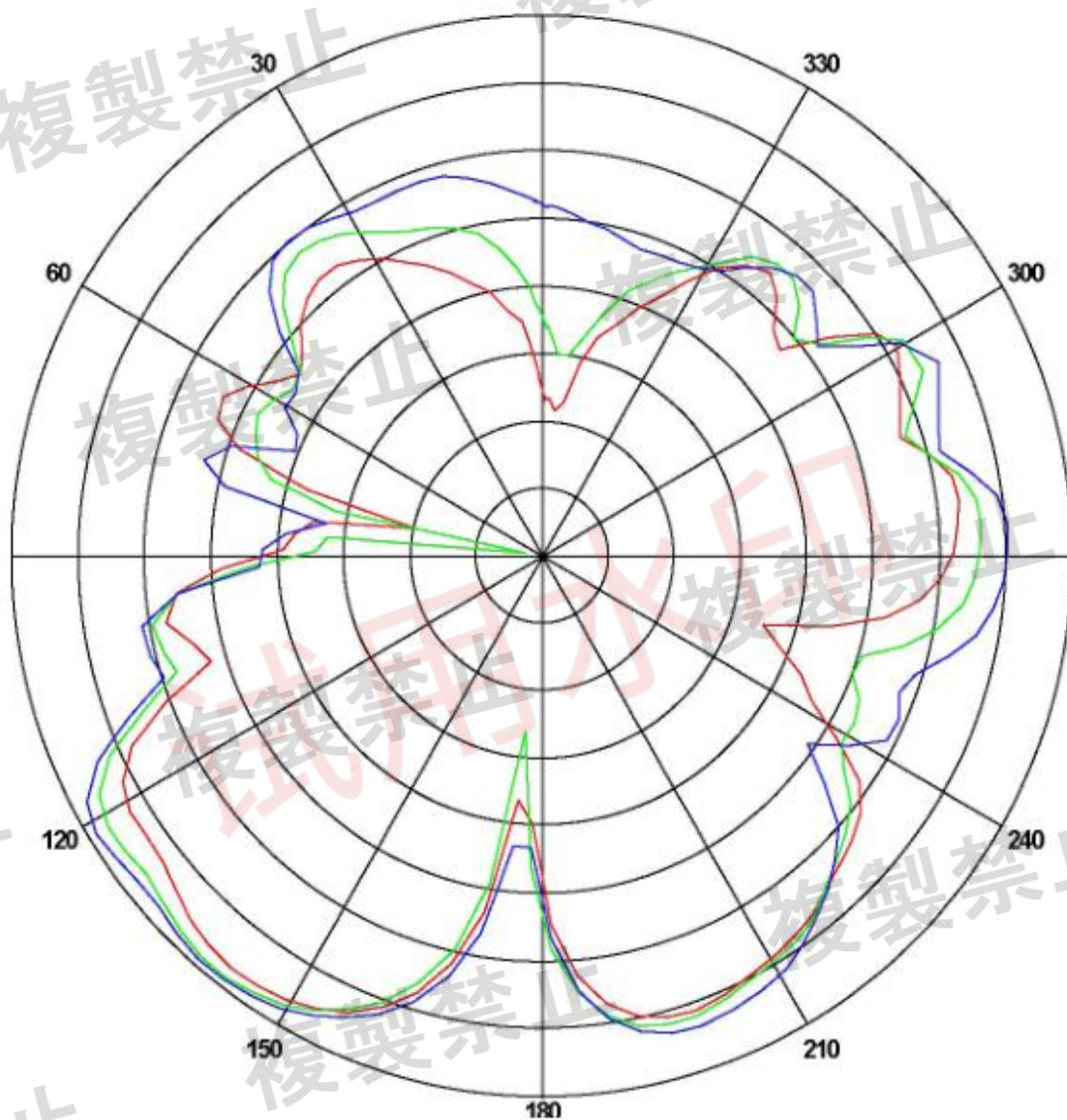


# Dongguan Jingrun Technology Co., Ltd.

Horizontal: 2400 MHz 2450 MHz 2500 MHz

Power (dBm)

Max: 0 Min: -40 Scale: 5/div

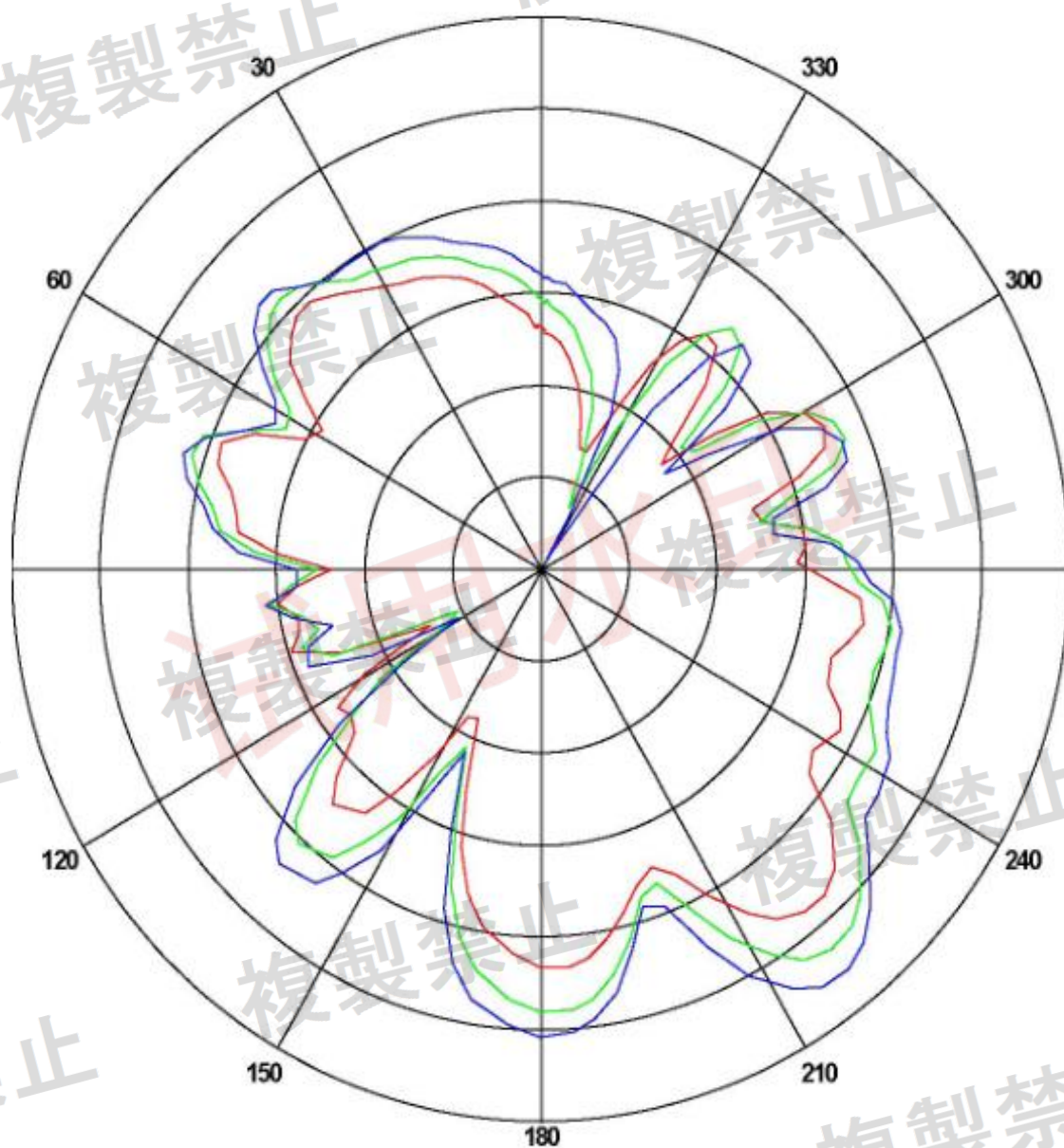


| Frequency<br>(MHz) | Gain(dB)  |          |          |
|--------------------|-----------|----------|----------|
|                    | Max       | Min      | Avg      |
| 2400               | -1.73178  | -30.0815 | -8.48713 |
| 2450               | -0.845801 | -38.5605 | -7.88012 |
| 2500               | -0.685586 | -24.0318 | -6.79139 |

Vertical: 2400 MHz 2450 MHz 2500 MHz

Power (dBm)

Max: 0 Min: -30 Scale: 5/div

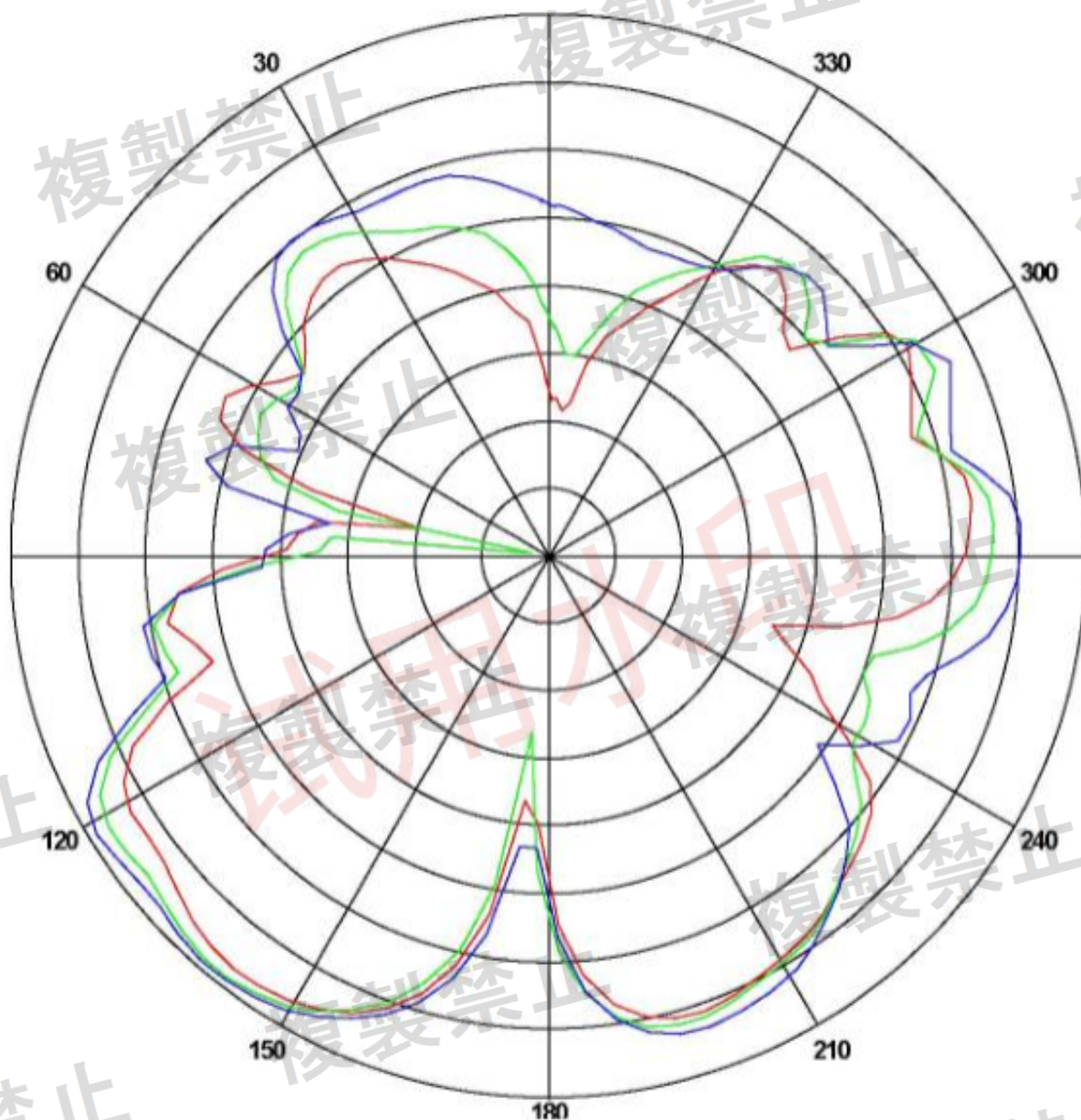


| Frequency<br>(MHz) | Gain(dB) |          |          |
|--------------------|----------|----------|----------|
|                    | Max      | Min      | Avg      |
| 2400               | -6.1530  | -24.1420 | -13.0295 |
| 2450               | -3.7054  | -26.5836 | -10.6700 |
| 2500               | -2.32122 | -30.4301 | -9.70536 |

Horizontal: 2400 MHz 2450 MHz 2500 MHz

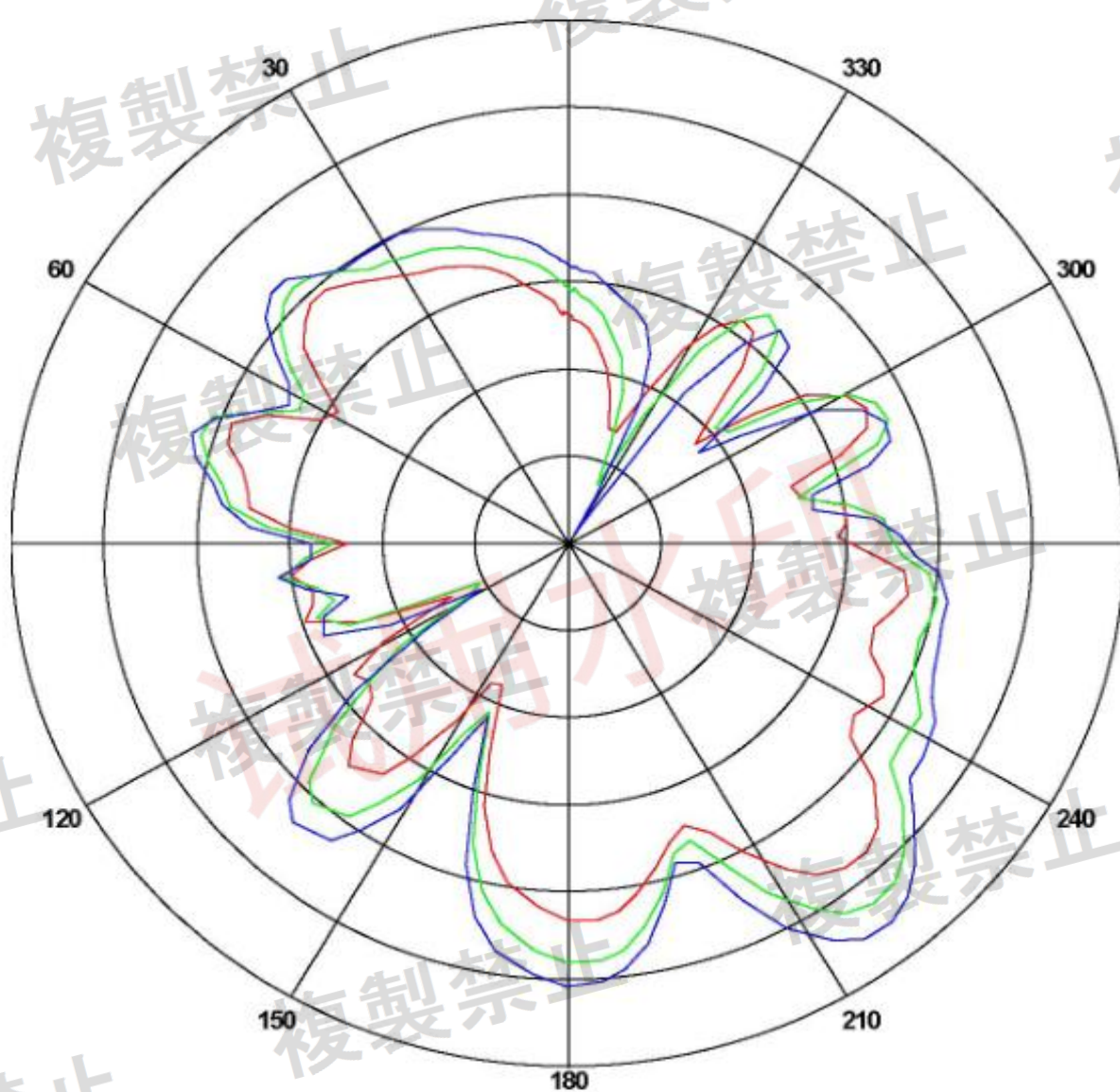
Power (dBm)

Max: 0 Min: -40 Scale: 5/div



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