



## APPROVAL SHEET

Customer Name APPOTRONICS Co., Ltd

Product Model E8

Customer P/N

Southstar P/N N14-0847-R0A

Production date 2020-03-24

Sample Version Version A

| Southstar |     |     |
|-----------|-----|-----|
| FICTION   | DQE | R&D |
|           |     |     |
| Customer  |     |     |
| PUR       | QC  | R&D |
|           |     |     |

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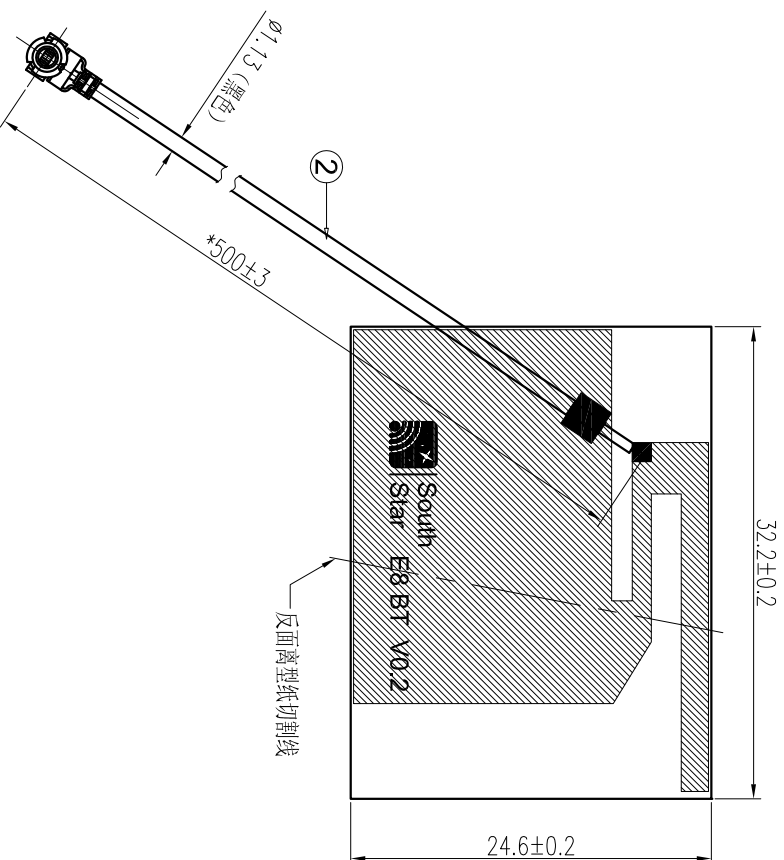
| Version | Date         | Change Description | NOTE |
|---------|--------------|--------------------|------|
| Rev. 01 | 2020. 03. 24 | First Edition      |      |
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## The basic parameters

| A. Electrical Characteristics            |                          |
|------------------------------------------|--------------------------|
| <b>Frequency</b>                         | <b>2400MHZ~2500MHZ</b>   |
| <b>VSWR</b>                              | <b>&lt; 2</b>            |
| <b>Efficiency</b>                        | <b>&gt;45%</b>           |
| <b>Impedance</b>                         | <b>50 Ohm</b>            |
| <b>Polarization</b>                      | <b>Linear</b>            |
| <b>Gain</b>                              | <b>&lt;3dBi</b>          |
| B. Material & Mechanical Characteristics |                          |
| <b>Material of Radiator</b>              | <b>FPC      black</b>    |
| <b>Cable Type</b>                        | <b>Φ 1.13mm    black</b> |
| <b>Connector Type</b>                    |                          |
| <b>Dimension</b>                         |                          |
| C. Environmental                         |                          |
| <b>Operation Temperature</b>             | <b>- 20 °C ~ + 80 °C</b> |
| <b>Storage Temperature</b>               | <b>- 20 °C ~ + 80 °C</b> |

[illegible]

## Test Equipment & Conditions

### 1 Test Equipment

VSWR is tested by connecting Agilent E5071B to the mobile phone system.

### 2 Test Conditions

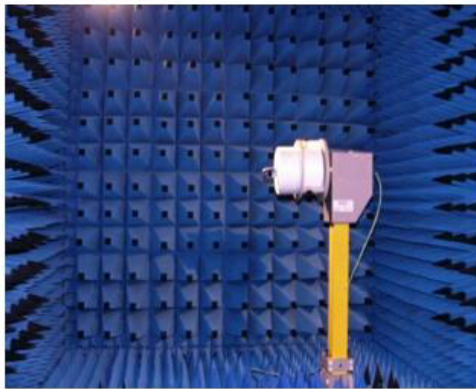
Chamber: ETS-743

TD-SCDMA test equipment :StarPoint S6010/Agilent 8960

LTE-TDD/FDD-SCDMA test equipment: StarPoint SP8011/CMW500

WCDMA/GSM/CDMA test equipment:Agilent 8960

Passive efficiency est equipment:Agilent Technologies E5071B



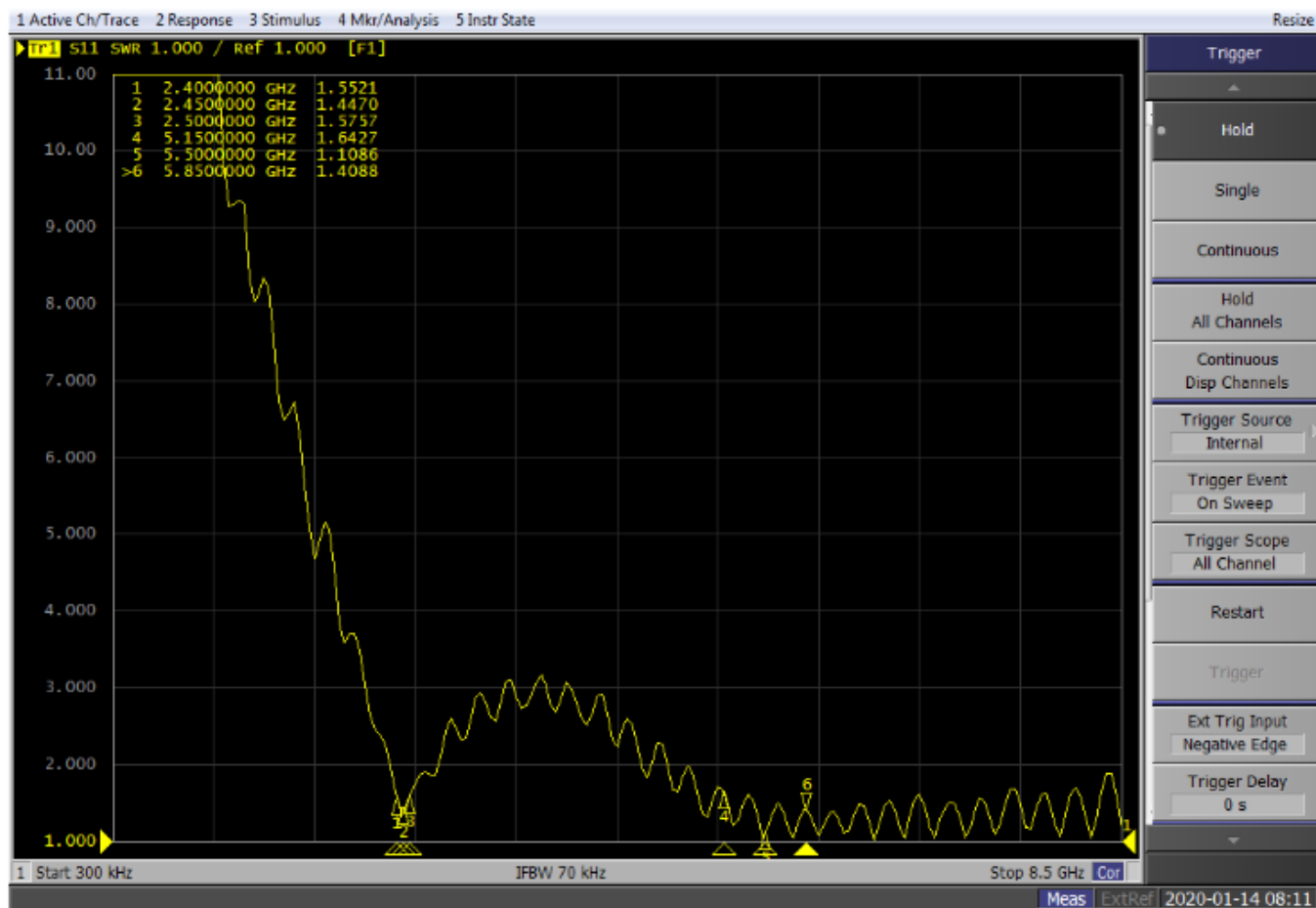
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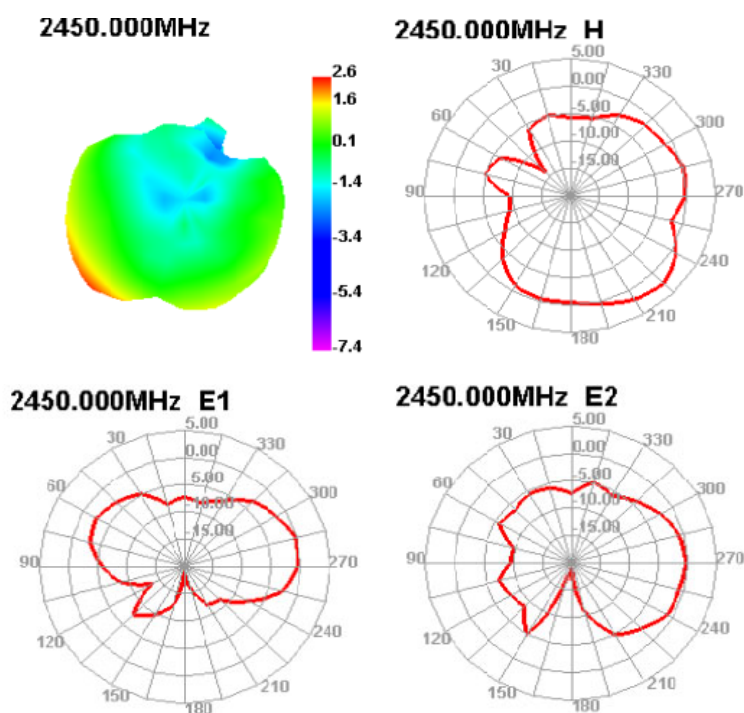
Passive efficiency est equipment:Agilent Technologies E5071B

**Antenna Impedance: S11 (parameter)**


## Efficiency & gain:

| Passive Test For WIFI-2.4G |             |               |
|----------------------------|-------------|---------------|
| Freq<br>(MHz)              | Effi<br>(%) | Gain<br>(dBi) |
| 2400                       | 45.18       | 2.88          |
| 2410                       | 46.78       | 2.47          |
| 2420                       | 45.55       | 2.46          |
| 2430                       | 45.29       | 2.66          |
| 2440                       | 46.48       | 2.25          |
| 2450                       | 47.11       | 2.58          |
| 2460                       | 46.53       | 2.14          |
| 2470                       | 46.17       | 2.22          |
| 2480                       | 46.56       | 2.69          |
| 2490                       | 44.09       | 2.31          |
| 2500                       | 45.4        | 2.12          |

## Antenna 3D radiation pattern



Antenna assembly drawing:

