

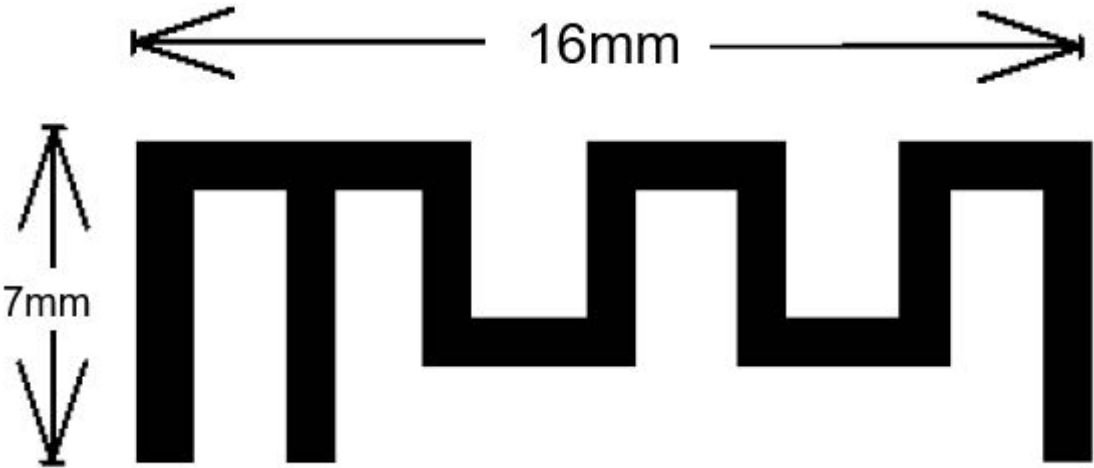
# ANTENNA TEST REPORT

|      |  |
|------|--|
| NAME |  |
|------|--|

## Summary

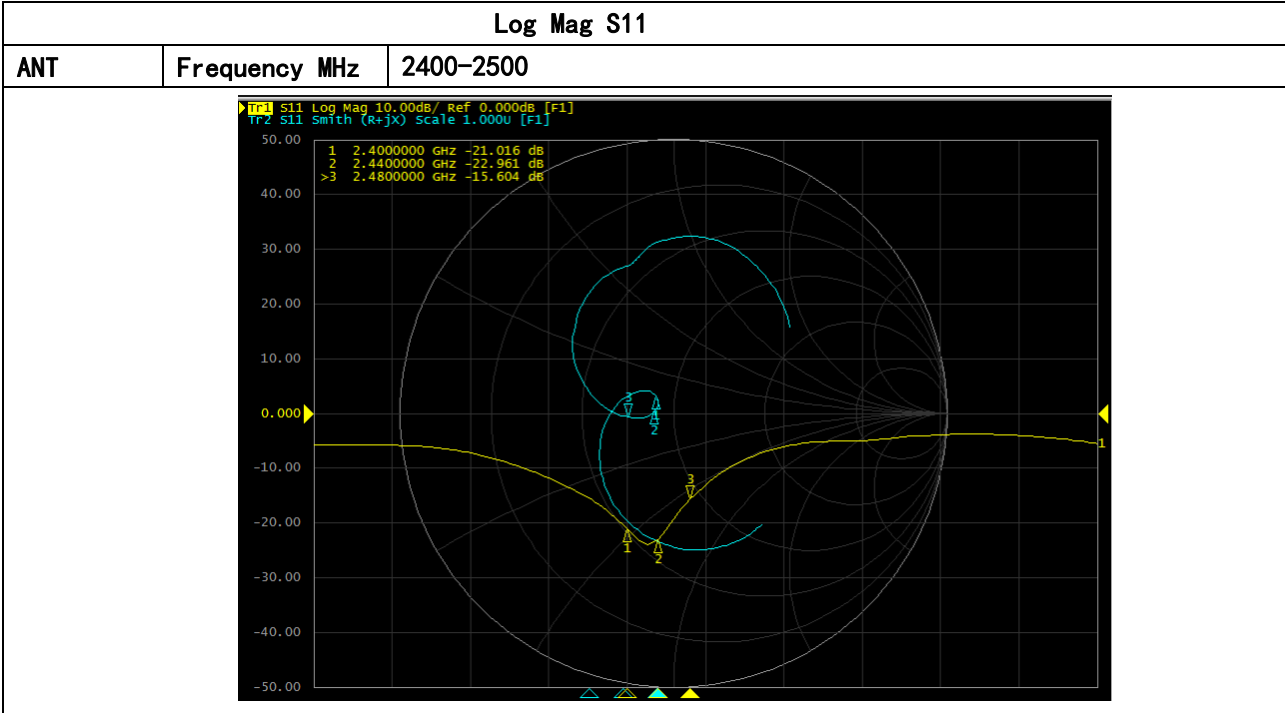
| ITEM         | SPEC.                                                         |
|--------------|---------------------------------------------------------------|
| Model Name   | BT 2.4 GHz                                                    |
| MAX. GAIN    | 0.58dBi                                                       |
| Polarization | Horizontal                                                    |
| Impedance    | 50 $\Omega$                                                   |
| Antenna Type | Internal antenna                                              |
| Manufacturer | NOVO (GUANGDONG) HIGH-TECH CO. LTD                            |
| Address      | No.7-1, Jiye Road, Leping Town, Sanshui District, Foshan City |

## Antenna Photo & Length (mm)

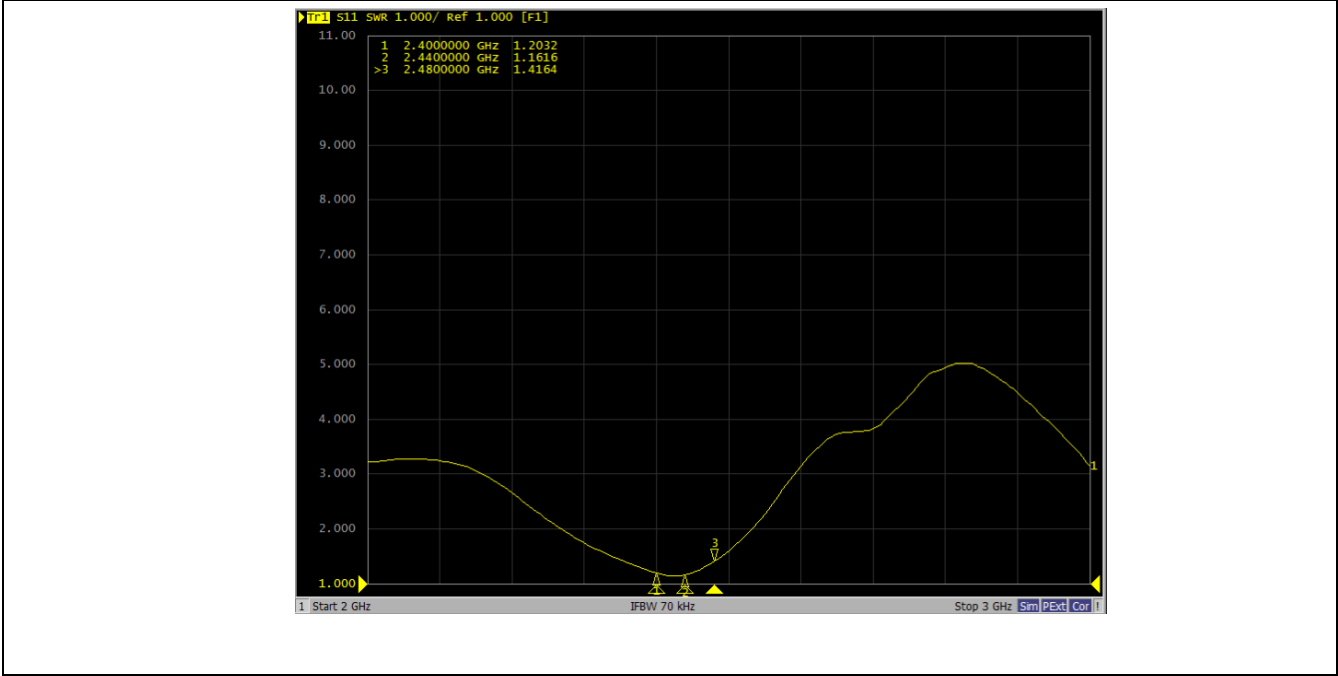


Electrical performance test results

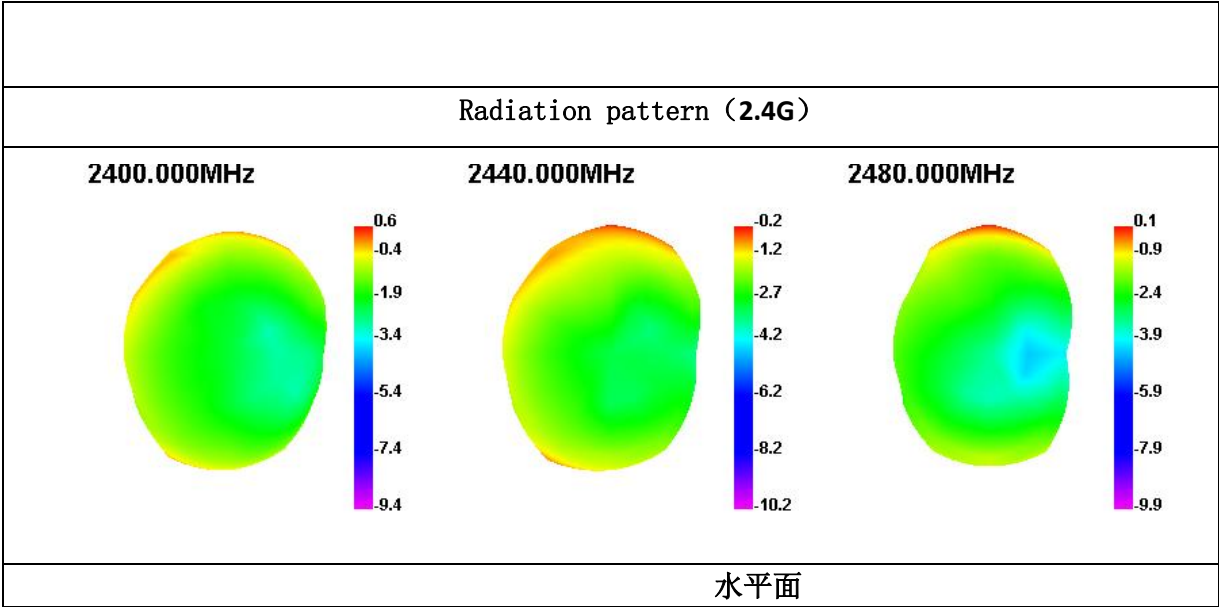
| Antenna performance indicators |                     |      |                                     |              |       |    |
|--------------------------------|---------------------|------|-------------------------------------|--------------|-------|----|
| NO                             | items               | Unit | Performance indicators requirements | Test results |       |    |
| 1                              | Frequency range     | MHz  | 2412-2483                           | 2400-2483    |       | OK |
| 2                              | Gain                | dBi  | /                                   | 2400         | 0.58  |    |
|                                |                     |      |                                     | 2440         | -0.23 |    |
|                                |                     |      |                                     | 2480         | 0.14  |    |
| 4                              | Return loss         | dB   | $\leq -10$                          | 2400         | -21.0 |    |
|                                |                     |      |                                     | 2440         | -22.9 |    |
|                                |                     |      |                                     | 2480         | -15.6 |    |
| 4                              | Standing wave ratio | dB   | /                                   | 2400         | 1.2   |    |
|                                |                     |      |                                     | 2440         | 1.16  |    |
|                                |                     |      |                                     | 2480         | 1.41  |    |



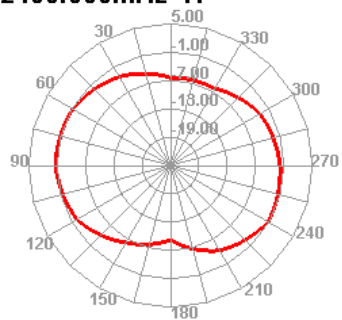
| SWR |               |           |
|-----|---------------|-----------|
|     | Frequency MHz | 2400–2500 |



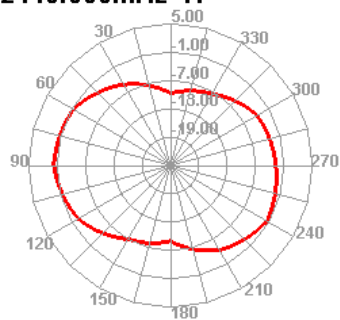
Radiation parameter test



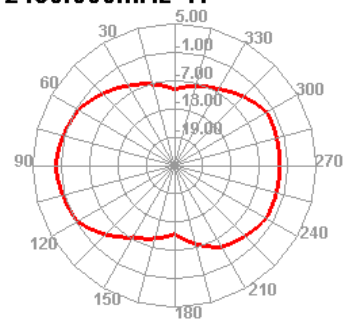
2400.000MHz H



2440.000MHz H

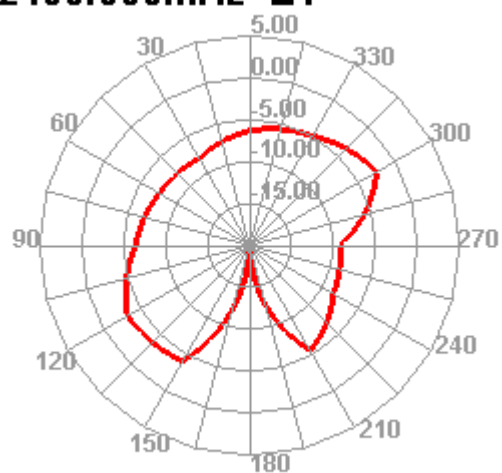


2480.000MHz H

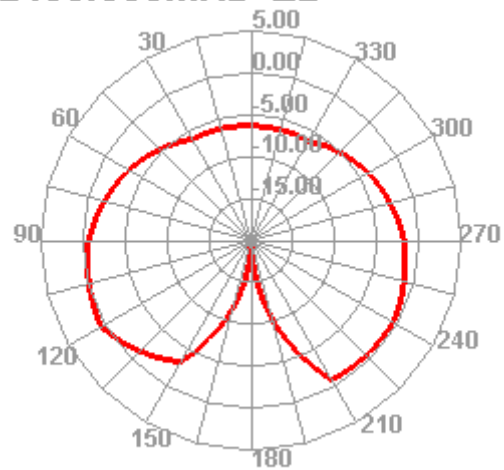


V

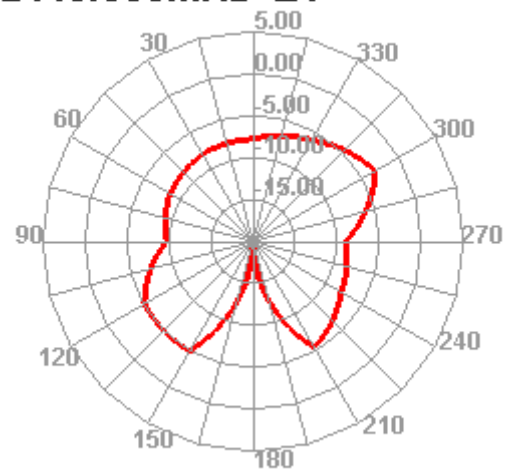
2400.000MHz E1



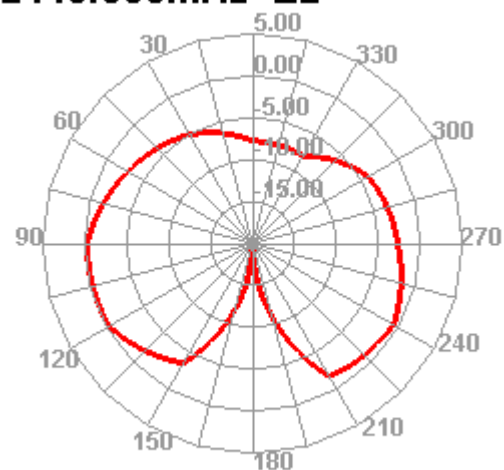
2400.000MHz E2



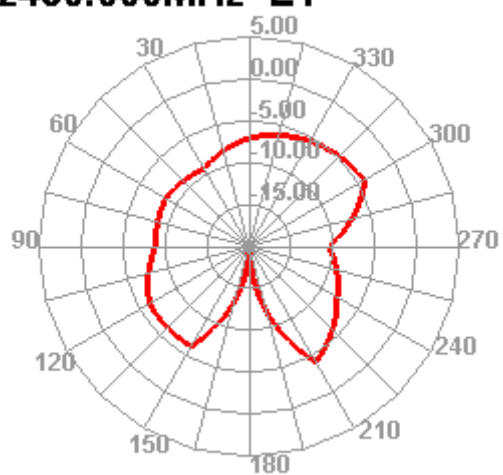
2440.000MHz E1



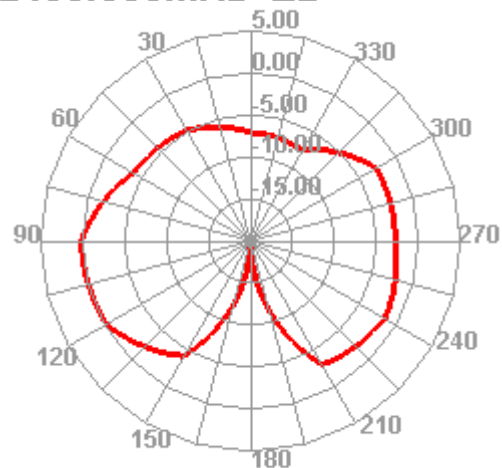
2440.000MHz E2



**2480.000MHz E1**



**2480.000MHz E2**



**Antenna passive efficiency**

| Frequency | E Total. dB(dBi) | Efficiency(%) |
|-----------|------------------|---------------|
| 2400MHz   | 0.58             | 47.32         |
| 2410MHz   | 0.06             | 44.49         |
| 2420MHz   | 0.06             | 44.28         |
| 2430MHz   | -0.14            | 42.96         |
| 2440MHz   | -0.23            | 42.31         |
| 2450MHz   | 0.03             | 42.4          |
| 2460MHz   | 0.17             | 41.59         |
| 2470MHz   | 0.21             | 40.92         |
| 2480MHz   | 0.14             | 40.3          |
| 2490MHz   | 0.28             | 41.86         |
| 2500MHz   | 0.06             | 39.81         |