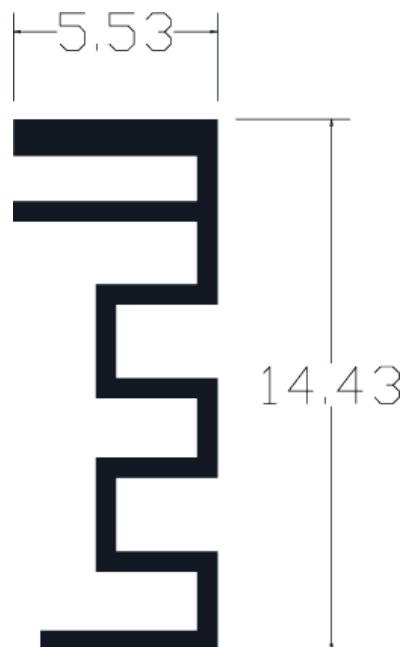


# RT5029 ANTENNA TEST REPORT

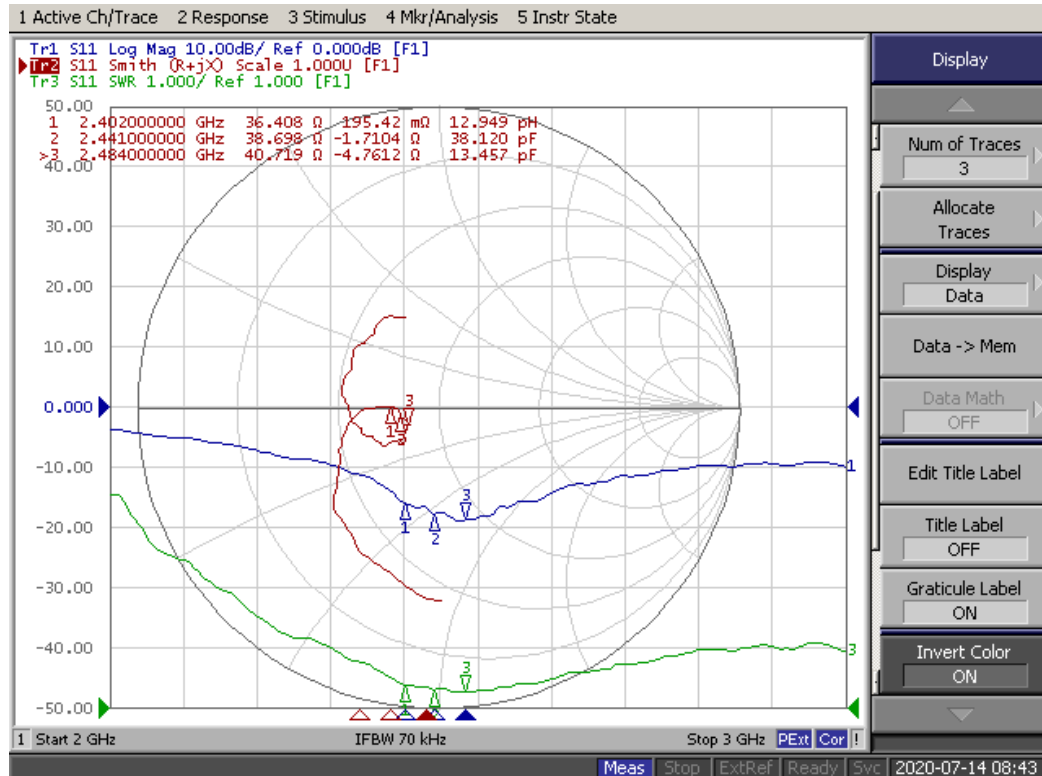
## 1.Electrical Characteristics

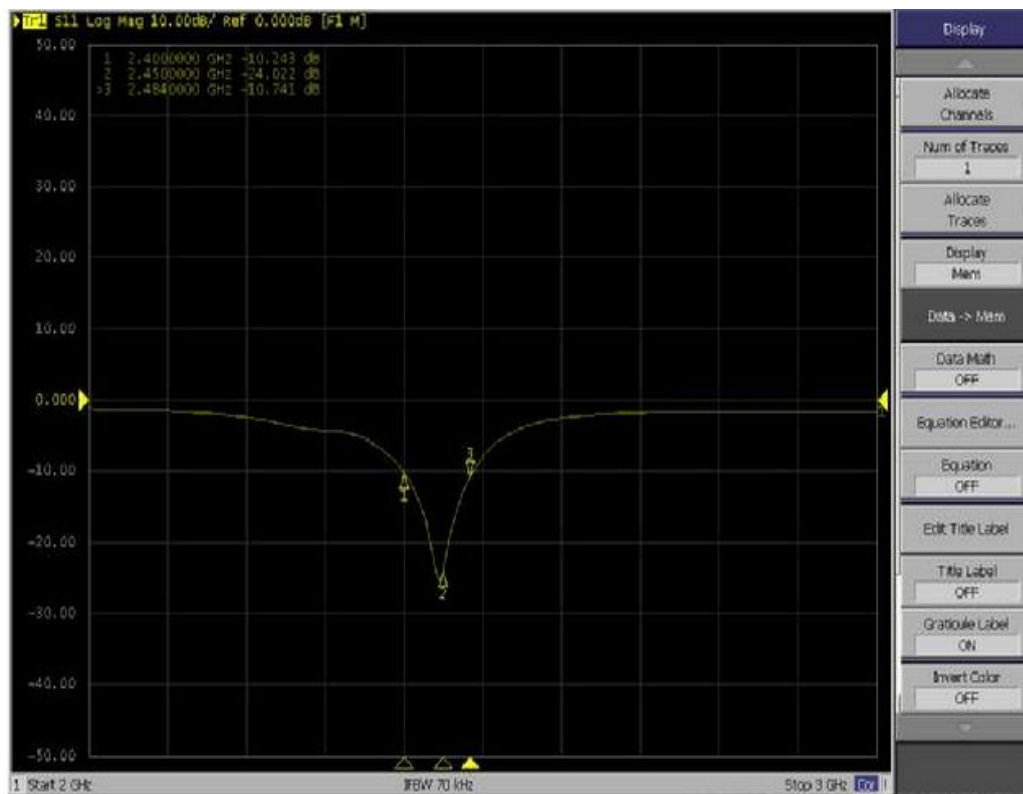
| Item                  | Specification          |
|-----------------------|------------------------|
| Type                  | PCB Inverted-F Antenna |
| Central frequency     | 2.441 GHz              |
| Bandwidth             | 78 MHz (Typical value) |
| Gain                  | 0 ~ 4 dBi              |
| Polarization          | Linear                 |
| VSWR                  | 2 max.                 |
| Azimuth Bandwidth     | Omni-directional       |
| Impedance             | 50Ω                    |
| Rated Power (max.)    | 2dBm                   |
| Maximum Input Power   | 10dBm                  |
| Operation Temperature | -40 ' C ~ +85 ' C      |

## 2.The suggestion of matching circuit

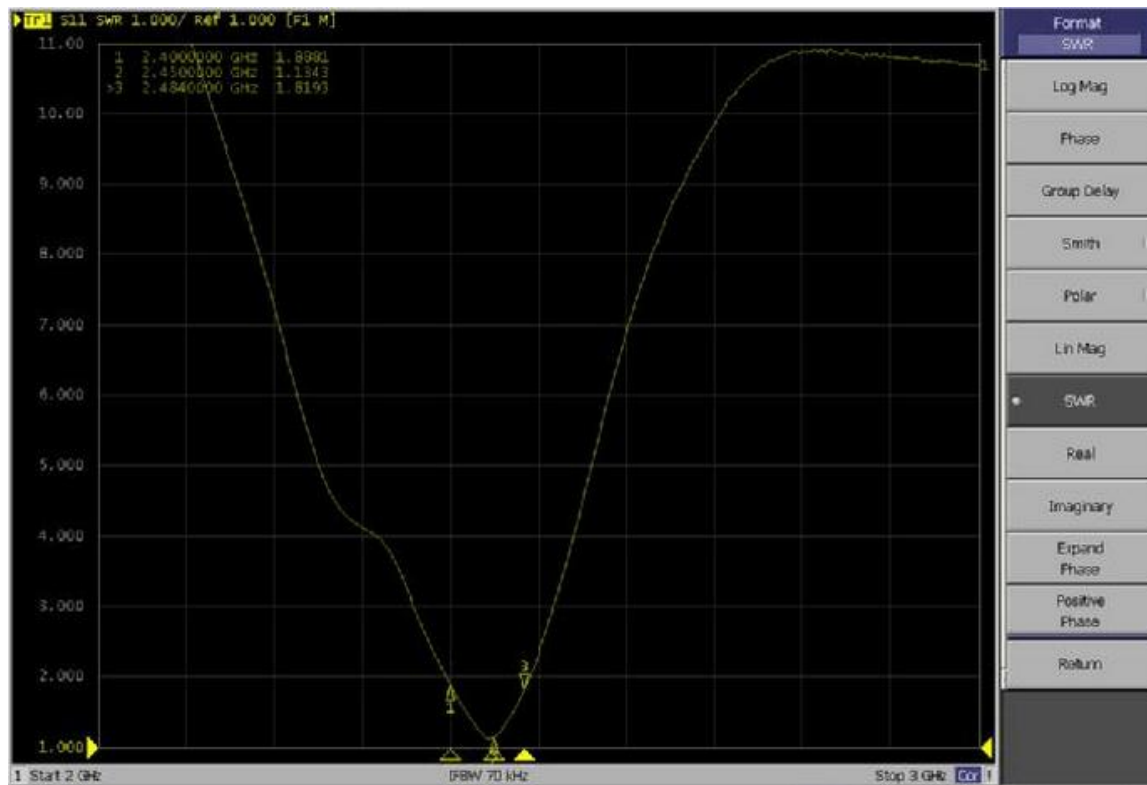


### 3. SWR & Smith chart





| Frequency(GHz) | S11(dB) |
|----------------|---------|
| 2.402          | -10.24  |
| 2.441          | -24.02  |
| 2.480          | -10.74  |



| Frequency(GHz) | VSWR |
|----------------|------|
| 2.402          | 1.88 |
| 2.441          | 1.13 |
| 2.480          | 1.81 |

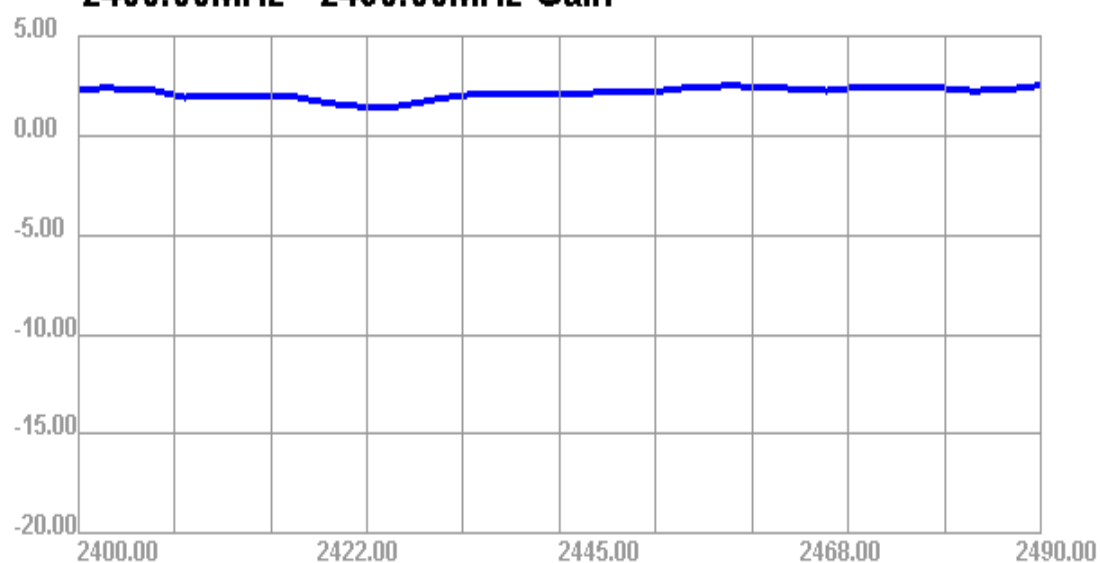
**The reference:**

|                           |         |         |       |       |       |
|---------------------------|---------|---------|-------|-------|-------|
| <b>Return Loss</b>        | -6.02dB | -7.36dB | -10dB | -13dB | -20dB |
| <b>VSWR</b>               | 3       | 2.5     | 1.92  | 1.576 | 1.22  |
| <b>Return Power Ratio</b> | 25%     | 18.37%  | 10%   | 5%    | 0.98% |

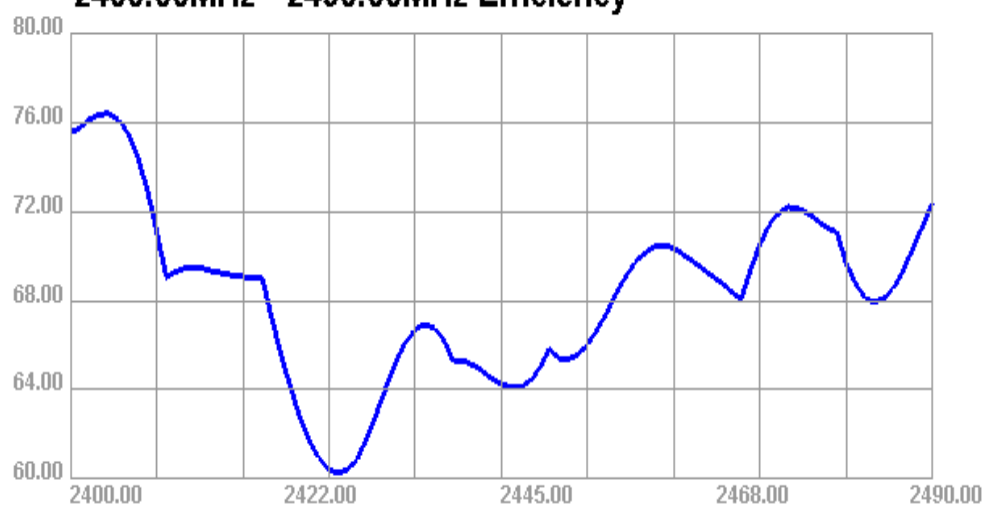
#### 4. Gain & Efficiency:

| Passive Test For BT |             |              |               |               |            |             |             |             |                      |                    |
|---------------------|-------------|--------------|---------------|---------------|------------|-------------|-------------|-------------|----------------------|--------------------|
| Freq<br>(MHz)       | Effi<br>(%) | Effi<br>(dB) | Gain<br>(dBi) | Gain<br>(dBd) | UHS<br>(%) | DHIS<br>(%) | Max<br>(dB) | Min<br>(dB) | Directivity<br>(dBi) | Beamwidth<br>(3dB) |
| 2400                | 75.52       | -1.22        | 2.36          | 0.21          | 32.188     | 43.335      | 2.36        | -11.99      | 3.58                 | 45                 |
| 2410                | 69.05       | -1.61        | 1.92          | -0.23         | 29.32      | 39.729      | 1.92        | -11.23      | 3.52                 | 45                 |
| 2420                | 69.04       | -1.61        | 1.98          | -0.17         | 29.191     | 39.852      | 1.98        | -10.64      | 3.58                 | 45                 |
| 2430                | 60.93       | -2.15        | 1.47          | -0.68         | 25.77      | 35.164      | 1.47        | -11.13      | 3.63                 | 45                 |
| 2440                | 65.24       | -1.85        | 2.04          | -0.11         | 27.779     | 37.463      | 2.04        | -11.51      | 3.89                 | 15                 |
| 2450                | 65.84       | -1.82        | 2.23          | 0.08          | 28.091     | 37.745      | 2.23        | -12.25      | 4.05                 | 45                 |
| 2460                | 70.14       | -1.54        | 2.47          | 0.32          | 29.886     | 40.252      | 2.47        | -12.09      | 4.01                 | 60                 |
| 2470                | 68.04       | -1.67        | 2.25          | 0.1           | 29.065     | 38.975      | 2.25        | -12.07      | 3.92                 | 45                 |
| 2480                | 71.08       | -1.48        | 2.4           | 0.25          | 30.396     | 40.681      | 2.4         | -13.13      | 3.89                 | 45                 |
| 2490                | 72.42       | -1.4         | 2.52          | 0.37          | 30.826     | 41.595      | 2.52        | -13.89      | 3.92                 | 45                 |

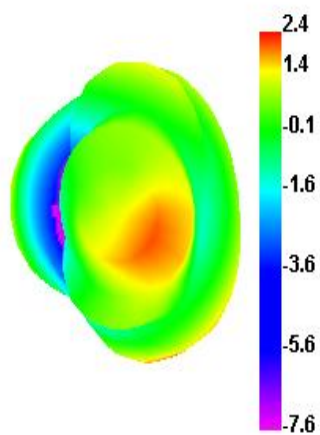
**2400.00MHz - 2490.00MHz Gain**



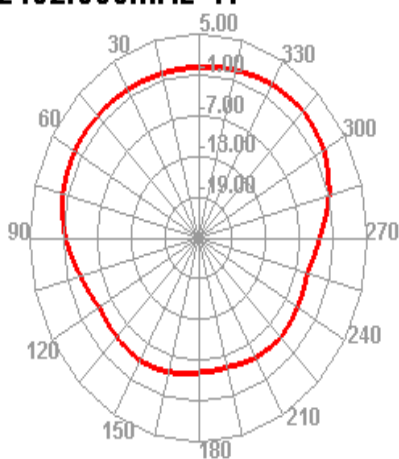
**2400.00MHz - 2490.00MHz Efficiency**



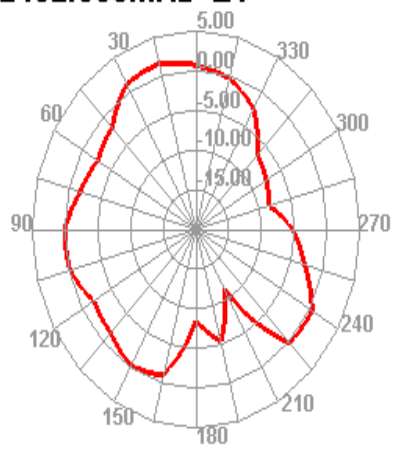
**2402.000MHz**



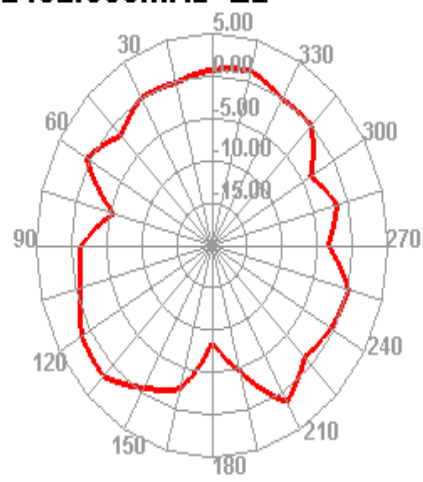
**2402.000MHz H**



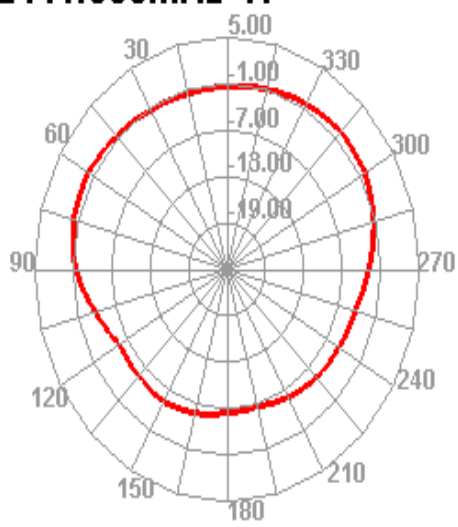
2402.000MHz E1



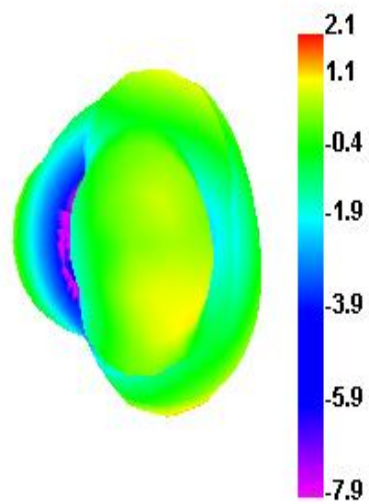
2402.000MHz E2



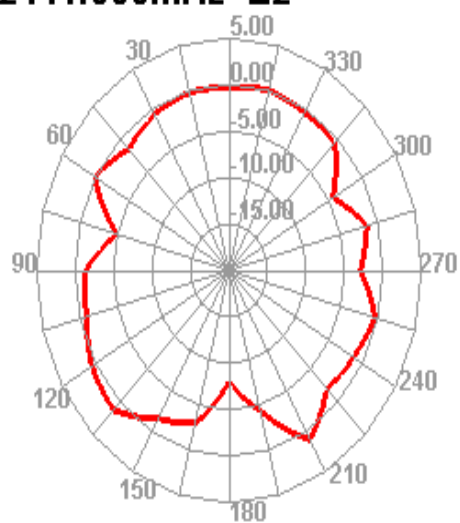
2441.000MHz H



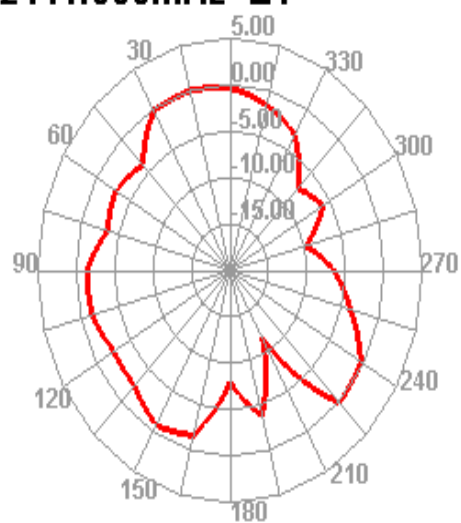
2441.000MHz



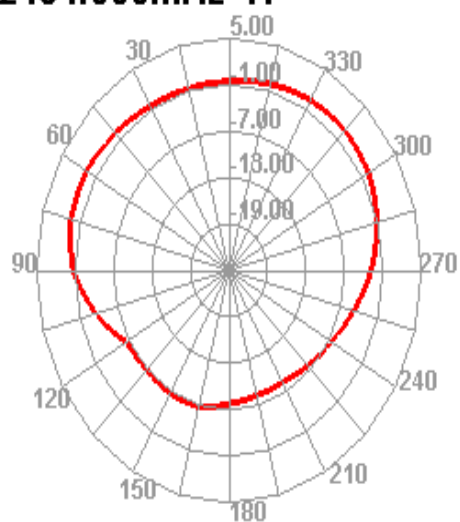
2441.000MHz E2



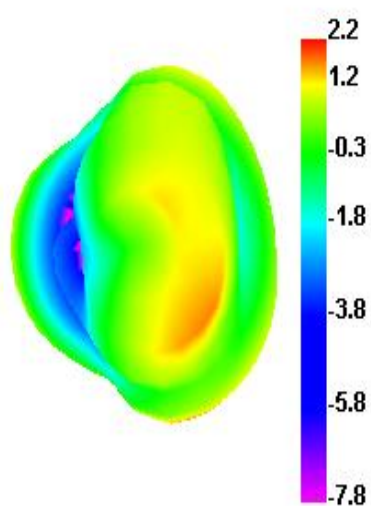
2441.000MHz E1



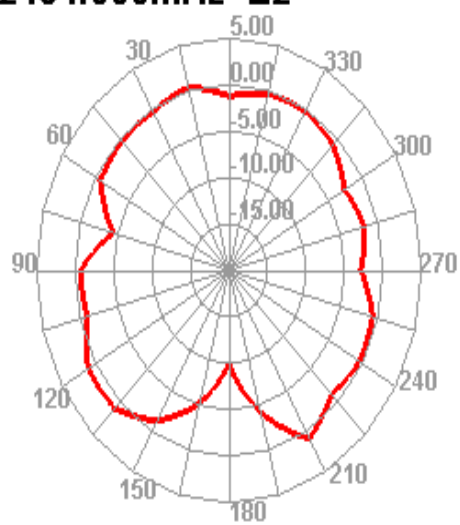
2484.000MHz H



2484.000MHz



2484.000MHz E2



2484.000MHz E1

