

## Product specification

### Quick Reference Data

|                            |                                        |  |
|----------------------------|----------------------------------------|--|
|                            | Antenna module on the system board     |  |
| Antenna type               | <b>Bluetooth Ceramic Patch Antenna</b> |  |
| Frequency                  | 2.45GHz <sup>*1</sup>                  |  |
| Ant. Port Input Pwr. (dBm) | 0 (Typ. BT class 2 output power)       |  |
| Tot. Rad. Pwr. (dBm)       | -2.3 (Input pwr ?loss pwr)             |  |
| Peak EIRP(dBm)             | 1.3                                    |  |
| Directivity (dBi)          | 1 (all direction antenna)              |  |
| Efficiency (dB)            | -3.4/ (43.34%)                         |  |
| Gain (dBi)                 | 1.78(Peak Gain X Z-plane)              |  |
| Maximum Power (dBm)        | 1.3 (XY-plane)                         |  |
| Minimum Power (dBm)        | -4(XY-plane)                           |  |
| Avg. Power (dBm)           | -0.5(XY-plane)                         |  |
| Max/Min Ratio (dB)         | 4.95(XY-plane)                         |  |
| Max/Avg Ratio (dB)         | 3.04(XY-plane)                         |  |
| Min/Avg Ratio (dB)         | 1.56(XY-plane)                         |  |
| Average Gain (dB)          | 2.49(Avg Gain XY-plane)                |  |

All the technical data and information contained herein are subject to change without prior notice

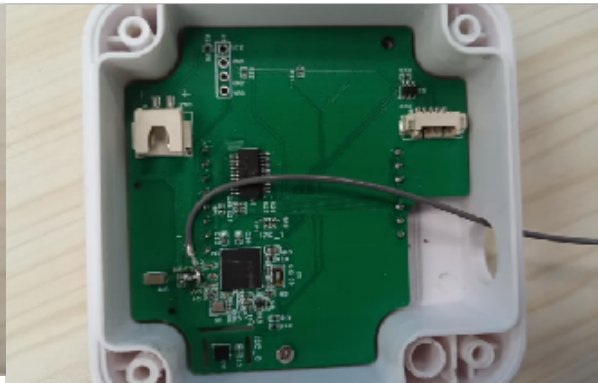
### Antenna Layout & module on the system board



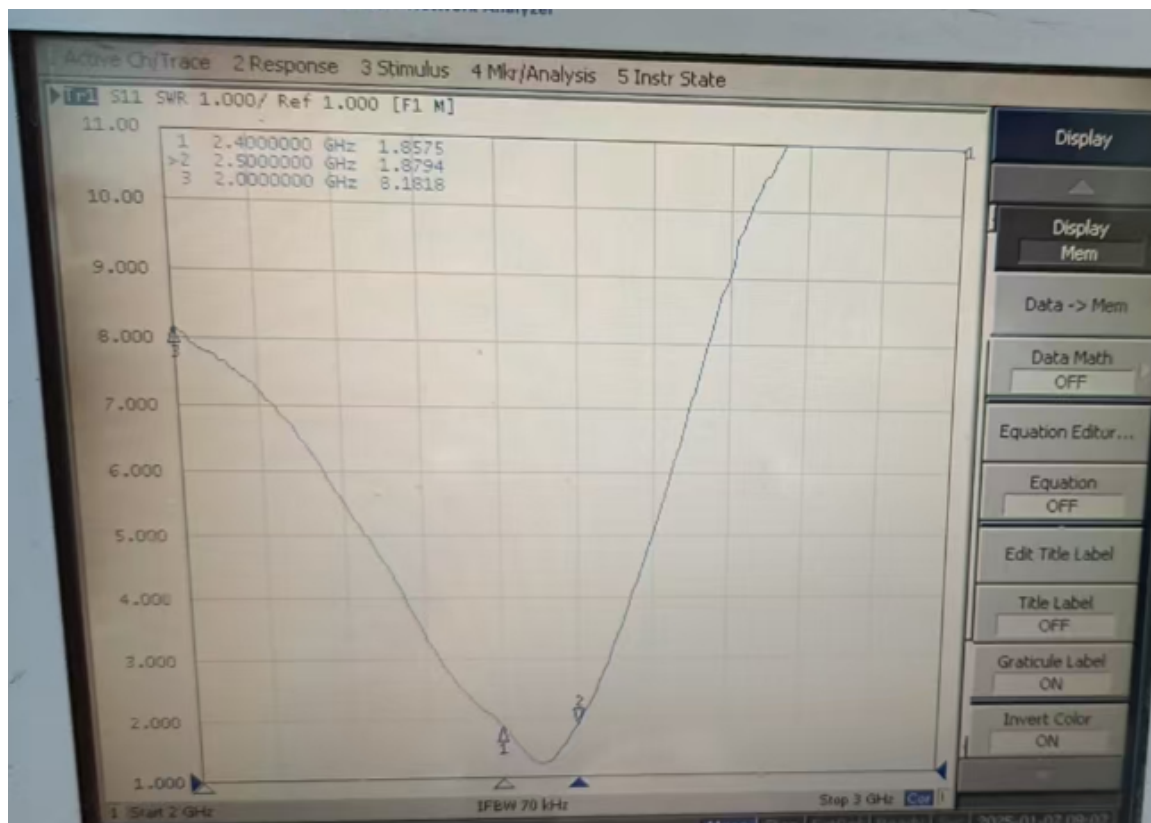
- 1. Feeding**
- 2. Identification Mark**
- 3. Soldering terminal**

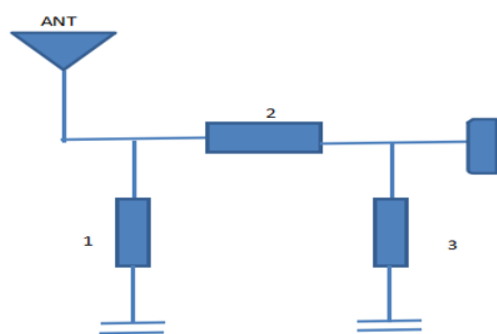
#### DIMENSIONS

| Figure | Symbol | Dimension (mm)  |
|--------|--------|-----------------|
|        | L      | $3.20 \pm 0.20$ |
|        | W      | $1.60 \pm 0.10$ |
|        | T      | $1.20 \pm 0.10$ |
|        | a      | $0.25 \pm 0.15$ |



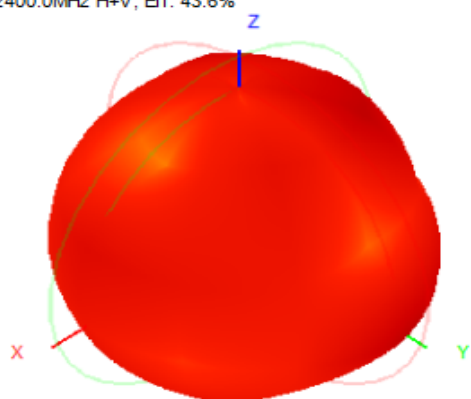
| Frequency ID | Frequency (MHz) | Gain (dBi) | Efficiency (%) |
|--------------|-----------------|------------|----------------|
| 1            | 2400.0          | 1.46       | 43.64          |
| 2            | 2410.0          | 1.42       | 43.88          |
| 3            | 2420.0          | 1.26       | 43.23          |
| 4            | 2430.0          | 1.11       | 42.33          |
| 5            | 2440.0          | 1.05       | 41.59          |
| 6            | 2450.0          | 1.29       | 43.34          |
| 7            | 2460.0          | 1.61       | 45.73          |
| 8            | 2470.0          | 1.78       | 46.75          |
| 9            | 2480.0          | 1.63       | 44.80          |
| 10           | 2490.0          | 1.61       | 45.35          |
| 11           | 2500.0          | 1.40       | 44.68          |



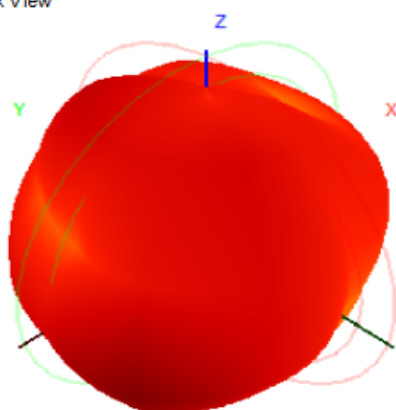


|   | P/C | pF  | nH    |
|---|-----|-----|-------|
| 1 |     |     |       |
| 2 | C   |     | 1.5nH |
| 3 | P   | 1pF |       |
| 4 |     |     |       |
| 5 |     |     |       |

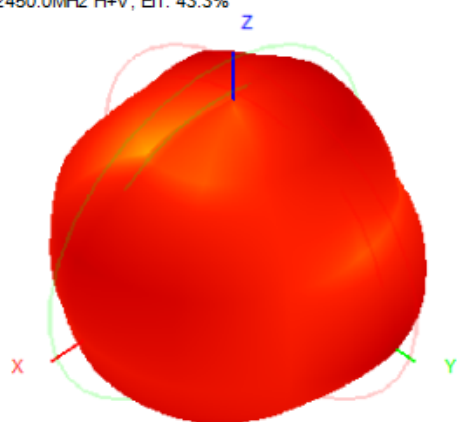
2400.0MHz H+V, Eff: 43.6%



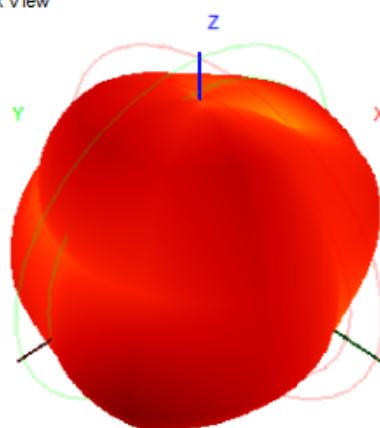
Back View



2450.0MHz H+V, Eff: 43.3%

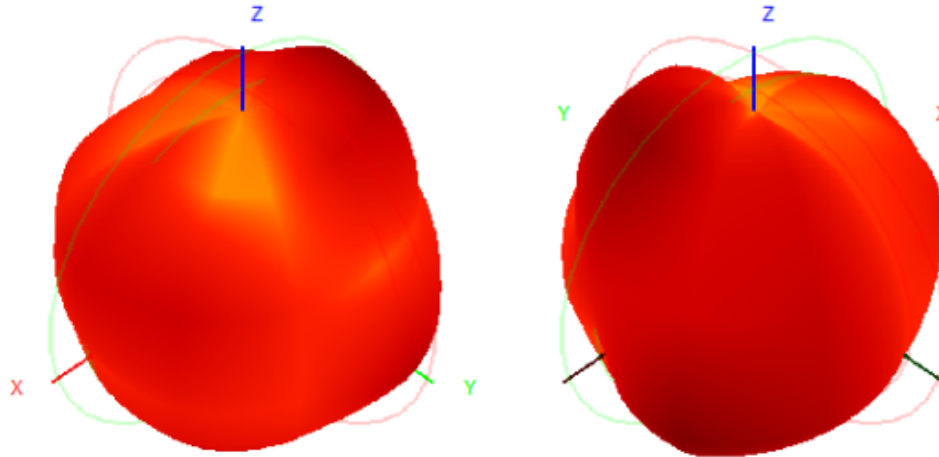


Back View

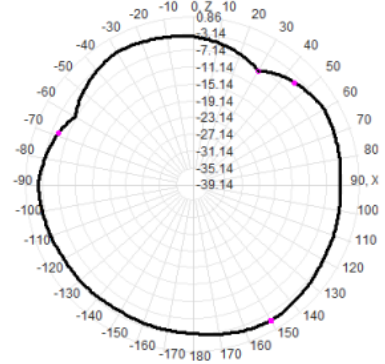


2500.0MHz H+V, Eff: 44.7%

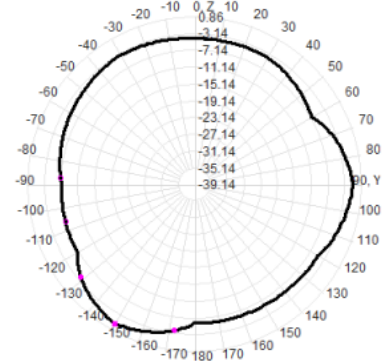
Back View



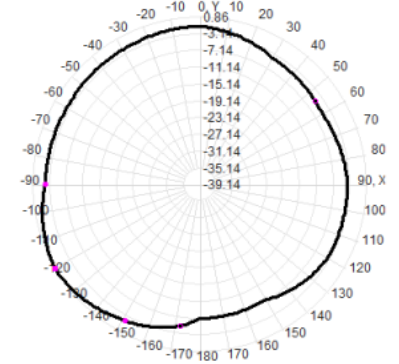
2400.0MHz Total(E1-XZ), Max=-1.74dBi



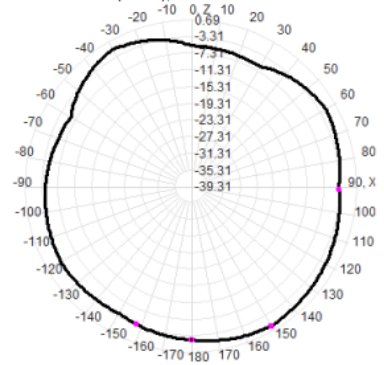
2400.0MHz Total(E2-YZ), Max=-1.00dBi



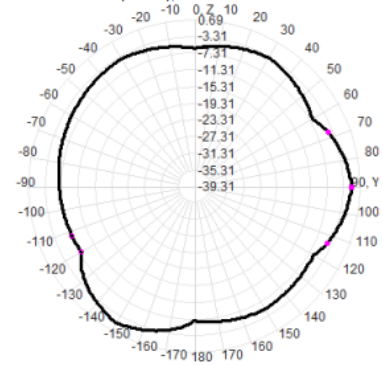
Total(H-XY), Max=0.86dBi, CirD=8.47



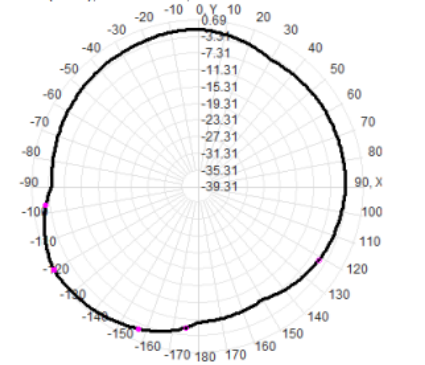
2450.0MHz Total(E1-XZ), Max=-0.78dBi



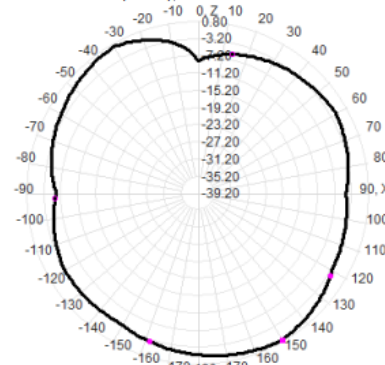
2450.0MHz Total(E2-YZ), Max=-1.53dBi



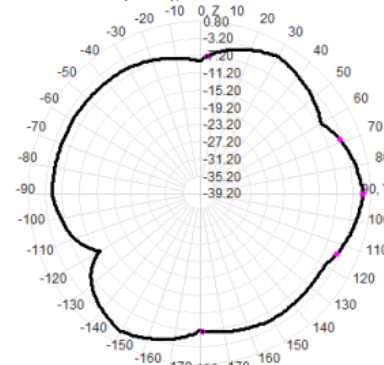
Total(H-XY), Max=0.69dBi, CirD=8.80



2500.0MHz Total(E1-XZ), Max=0.11dBi



2500.0MHz Total(E2-YZ), Max=-1.18dBi



Total(H-XY), Max=0.80dBi, CirD=7.60

