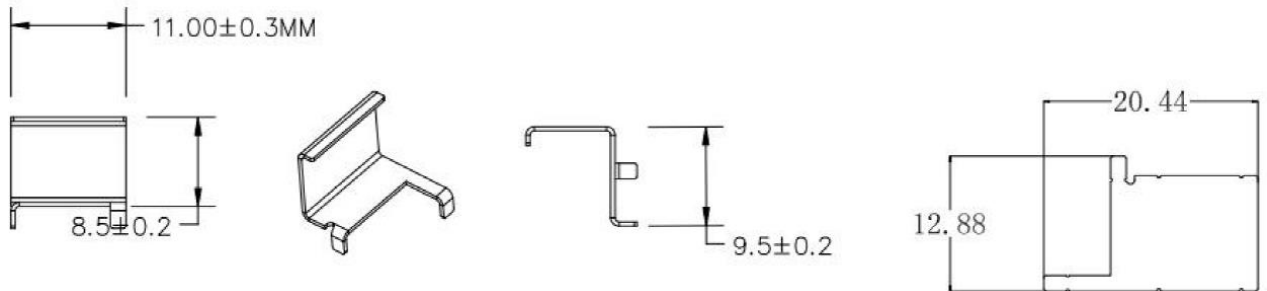


Antenna Specification

1. Antenna Describe

| | |
|----------------------|---|
| Antenna Manufacturer | Shenzhen Guandetong Electronic Co., Ltd. |
| Antenna Address | 3rd Floor, Building D, Maoyuan Industrial Park, Huanguan South, Guanhu Street, Longhua District, Shenzhen China |
| Antenna Model | GDT-X50-2.4G-11-9.5 |
| Antenna Type | SUS Antenna |
| Antenna Gain | 3.85dBi Max |
| Frequency Rang | 2400-2500MHz |
| VSWR | ≤ 2 |
| Input Impedance | 50 Ω |

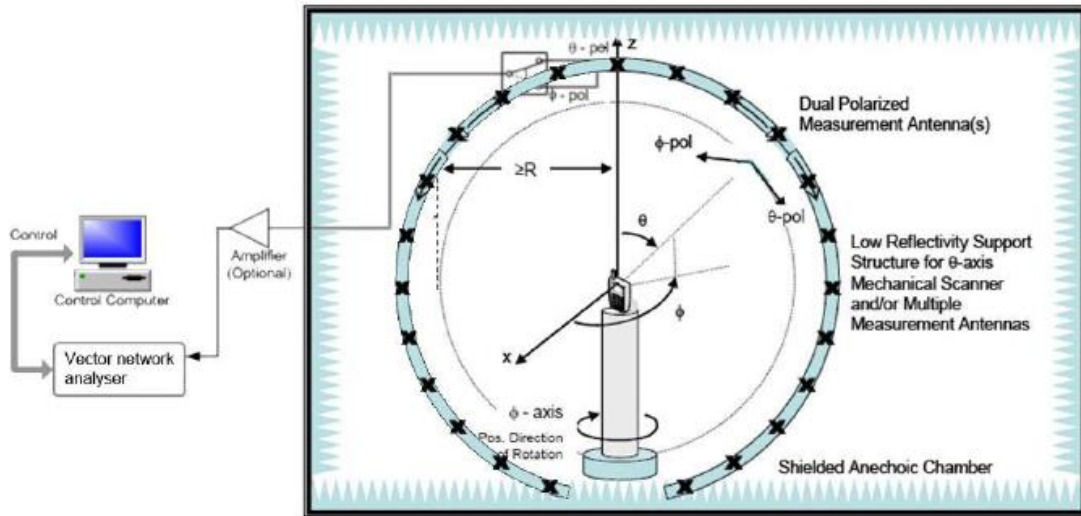
2. External View Drawing



Unit: mm

3. Measurement Result

3.1 Test Setup



3.2 S11 Parameter



3.3 Antenna test data

| FETUKEJI | | | | | | | | | | | |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Frequency ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Frequency (MHz) | 2400.0 | 2410.0 | 2420.0 | 2430.0 | 2440.0 | 2450.0 | 2460.0 | 2470.0 | 2480.0 | 2490.0 | 2500.0 |
| Point Values | | | | | | | | | | | |
| Ant. Port Input Pwr. (dBm) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Tot. Rad. Pwr. (dBm) | -3.53 | -3.55 | -3.39 | -3.12 | -3.29 | -3.38 | -3.21 | -3.09 | -3.04 | -2.98 | -2.73 |
| Peak EIRP (dBm) | 2.97 | 3.13 | 3.51 | 3.85 | 3.57 | 3.44 | 3.56 | 3.50 | 3.20 | 3.16 | 3.33 |
| Directivity (dBi) | 6.50 | 6.68 | 6.90 | 6.97 | 6.86 | 6.82 | 6.78 | 6.59 | 6.24 | 6.13 | 6.06 |
| Efficiency (dB) | -3.53 | -3.55 | -3.39 | -3.12 | -3.29 | -3.38 | -3.21 | -3.09 | -3.04 | -2.98 | -2.73 |
| Efficiency (%) | 44.40 | 44.20 | 45.80 | 48.80 | 46.90 | 46.00 | 47.70 | 49.00 | 49.60 | 50.40 | 53.30 |
| Gain (dBi) | 2.97 | 3.13 | 3.51 | 3.85 | 3.57 | 3.44 | 3.56 | 3.50 | 3.20 | 3.16 | 3.33 |
| NHPRP $\pm \pi/4$ (dBm) | -4.06 | -3.85 | -3.45 | -3.05 | -3.29 | -3.42 | -3.28 | -3.39 | -3.73 | -3.72 | -3.55 |
| NHPRP $\pm \pi/6$ (dBm) | -5.49 | -5.28 | -4.87 | -4.47 | -4.72 | -4.87 | -4.74 | -4.85 | -5.19 | -5.18 | -5.01 |
| NHPRP $\pm \pi/8$ (dBm) | -6.67 | -6.45 | -6.04 | -5.64 | -5.90 | -6.06 | -5.94 | -6.04 | -6.38 | -6.36 | -6.19 |
| Upper Hem. PRP (dBm) | -9.77 | -9.73 | -9.47 | -9.09 | -9.17 | -9.22 | -9.04 | -8.93 | -8.91 | -8.83 | -8.58 |
| Lower Hem. PRP (dBm) | -4.71 | -4.75 | -4.62 | -4.39 | -4.59 | -4.69 | -4.53 | -4.41 | -4.34 | -4.28 | -4.04 |
| Upper Hem. PRP (%) | 10.53 | 10.65 | 11.30 | 12.32 | 12.10 | 11.98 | 12.49 | 12.78 | 12.85 | 13.09 | 13.88 |
| Lower Hem. PRP (%) | 33.82 | 33.53 | 34.49 | 36.43 | 34.78 | 33.99 | 35.22 | 36.26 | 36.79 | 37.31 | 39.45 |

3.4 Antenna test diagram

