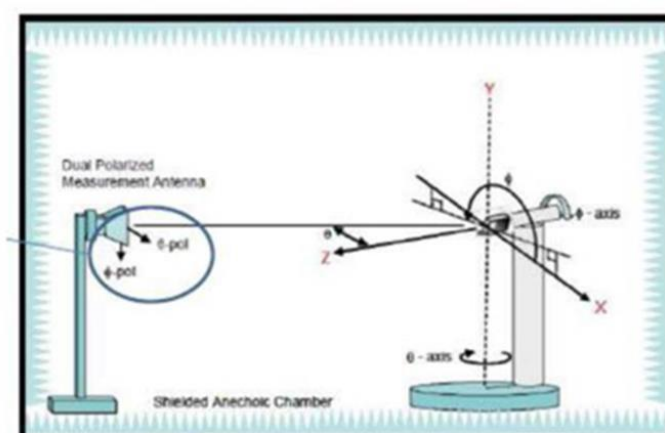


Regulatory Antenna Information

| | |
|----------------------|-----------------|
| Vendor | Dashine |
| Product Name: | Dongle |
| Model No: | GD300XD |
| Antenna Type: | Ceramic antenna |
| Antenna Part number: | RFANT3216120A5T |
| Antenna Peak Gain: | -1.44dBi |

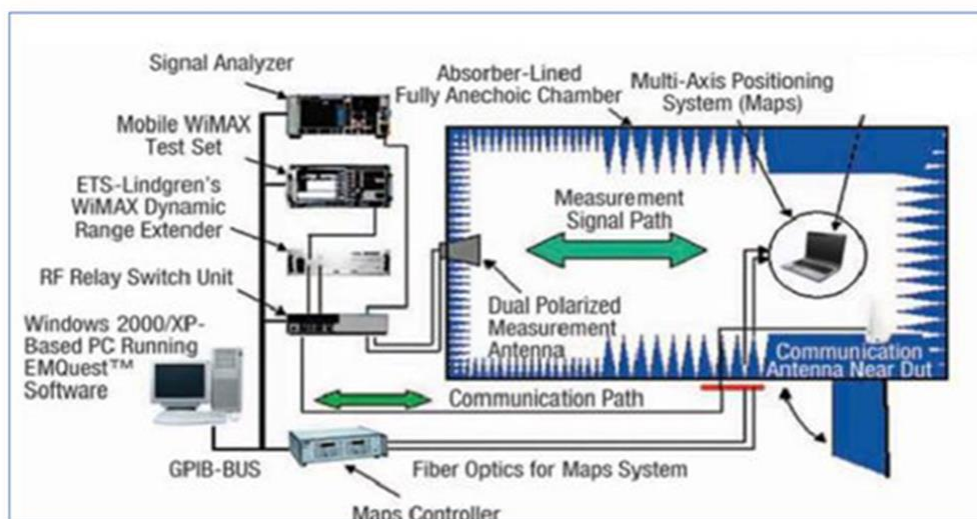
Applicable test methods



Test & System Description

a. Test setup

ETS8500

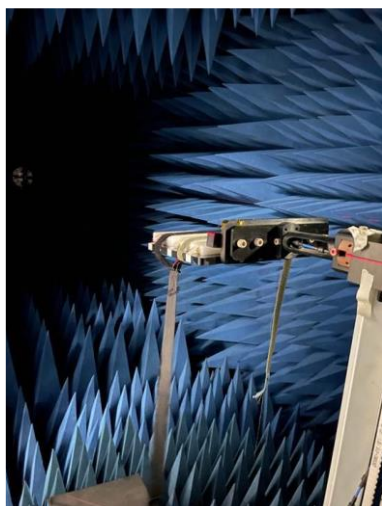


Equipment list

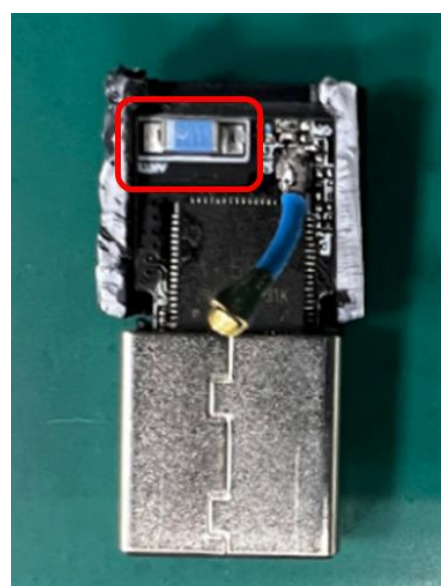
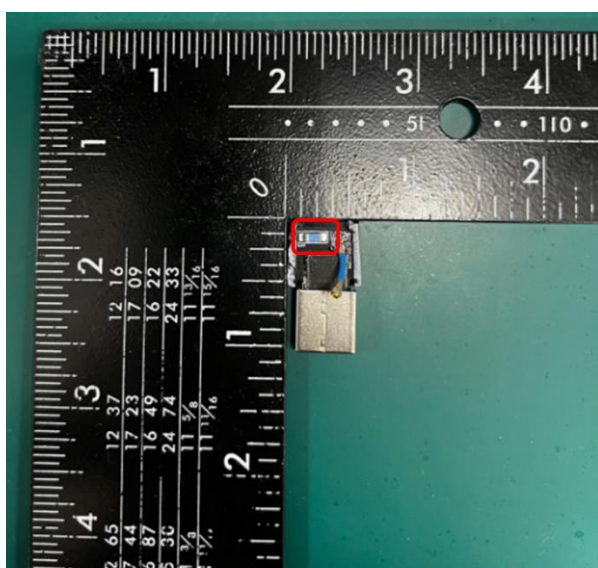
| Radiated Setup #1 | | | | | | |
|-------------------|--|----------------------------------|---------------------------|-----------------|------------|---------------|
| ID# | Device | Type/Model | Serial # | Manufacturer | Cal. Date | Cal. Due Date |
| 0135 | Anechoic Chamber | FACT3 | 5720 | ETS-Lindgren | 2020-07-06 | 2022-01-07 |
| 0136 | Turn Table | ETS | - | ETS-Lindgren | N/A | N/A |
| 0147 | Switch & Positioning systems | EMC Center | 00159757 | ETS-Lindgren | N/A | N/A |
| 0530 | Measurement SW | EMC32, v10.40.10 | 100623 | Rohde & Schwarz | N/A | N/A |
| 1033 | Boresight antenna mast | BAM 4.0-P | P/278/2890.01 | Maturo | N/A | N/A |
| 1076 | Spectrum Analyzer | FSW43 | 101847 | Rohde & Schwarz | 2020-11-02 | 2022-11-02 |
| 0993 | Biconical antenna 30 MHz – 1 GHz | UBAA9115 BBVU9135 DGA9552N | 0286 + CH 9044 | Schwarzbeck | 2019-11-22 | 2021-11-22 |
| 0325 | Horn antenna | 3117 | 00157734 | ETS-Lindgren | 2019-08-12 | 2021-08-12 |
| 0141 | Horn Antenna + Amplifier + HPF6.4 | 3117 | 00157736 | ETS-Lindgren | 2020-04-02 | 2022-04-02 |
| 0334 | Double-Ridged Waveguide Horn with Pre-Amplifier 18 GHz to 40 GHz | 3116C+PA | 00169308bis + 00196308 | ETS-Lindgren | 2019-07-24 | 2021-07-24 |
| 0859 | Cable 2.5m - 30MHz to 18GHz | 0500990992500KE | 19.23.395 | Radiall | 2020-11-27 | 2021-05-27 |
| 0206 | Cable 1.2m – 18 to 40 GHz | UFA147A-0-0480- 200200 | MFR 64639223720-003 | Micro-coax | 2020-08-25 | 2021-02-25 |
| 0263 | Cable 1m - 1GHz to 18GHz | UFA147A | - | Utiliflex | 2020-08-25 | 2021-02-25 |
| 0369 | Cable 2m - 26.5GHz to 40GHz | 794-9191-2000A | E00327 | Atem | 2020-08-25 | 2021-02-25 |
| 0371 | Cable 1m – 30 MHz - 18GHz | UFB311A-0-0590- 50U50U | MFR 64639 223230-001 | Micro-coax | 2020-08-25 | 2021-02-25 |
| 1099 | Cable 7m DC-18 GHz | 0501051057000GX | 19.35.850 | Radiall | 2020-11-27 | 2021-05-27 |
| 0809 | Cable 7m - 18GHz to 40GHz | R286304009 | - | Radiall | 2020-08-25 | 2021-02-25 |
| 1098 | Cable 1.5m - DC-18GHz | CBL-1.5M-SMSM+ | 202879 | Mini-Circuits | 2020-11-27 | 2021-05-27 |
| 0797 | Temp & Humidity Logger | RA12E-TH1-RAS | RA12-D0EB1A | Avtech | 2019-07-04 | 2021-07-04 |

N/A: Not Applicable

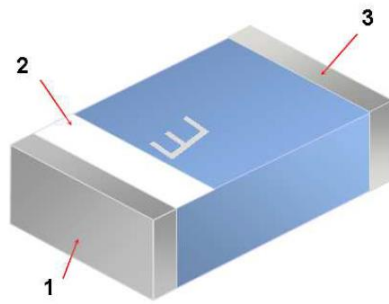
Setup photo



Dongle Photo



Chip antenna construction

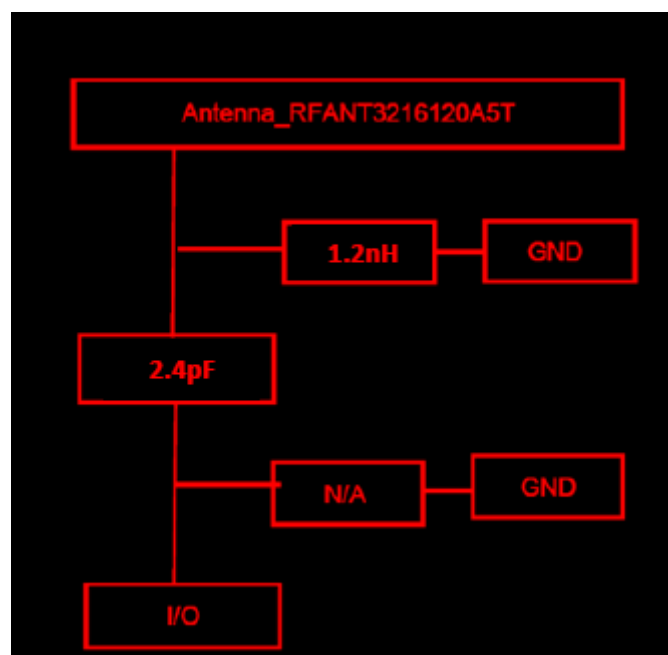


1. Feeding
2. Identification Mark
3. Soldering terminal

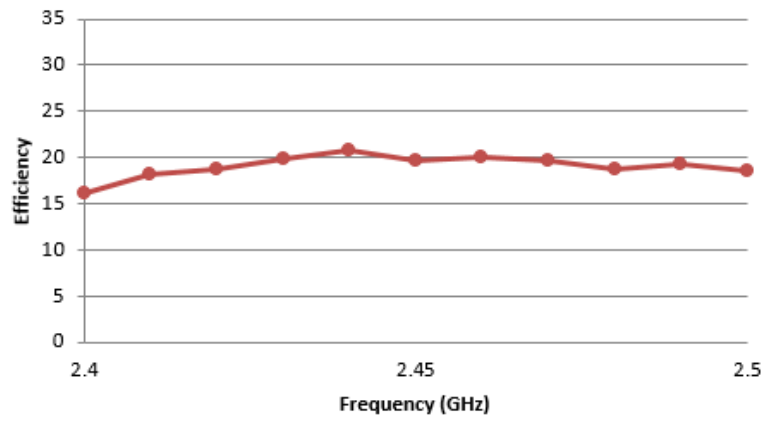
Chip antenna dimensions

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

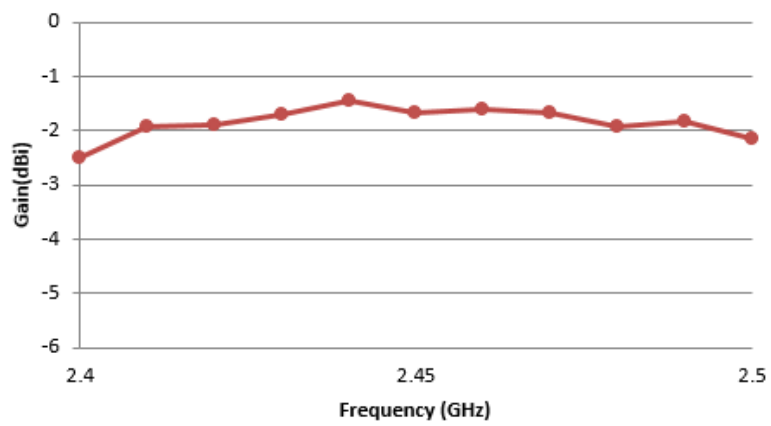
Antenna matching circuit



Efficiency curve

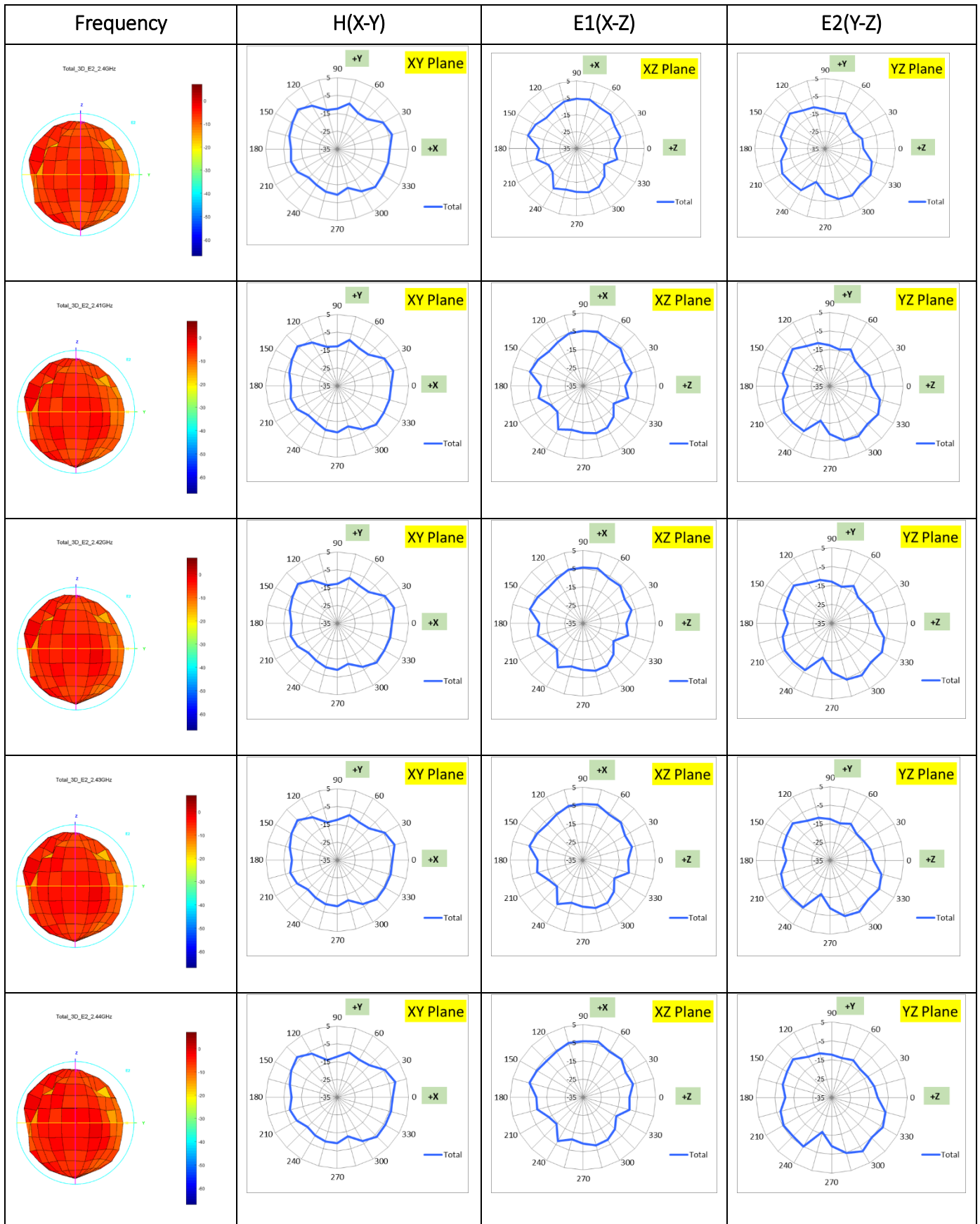


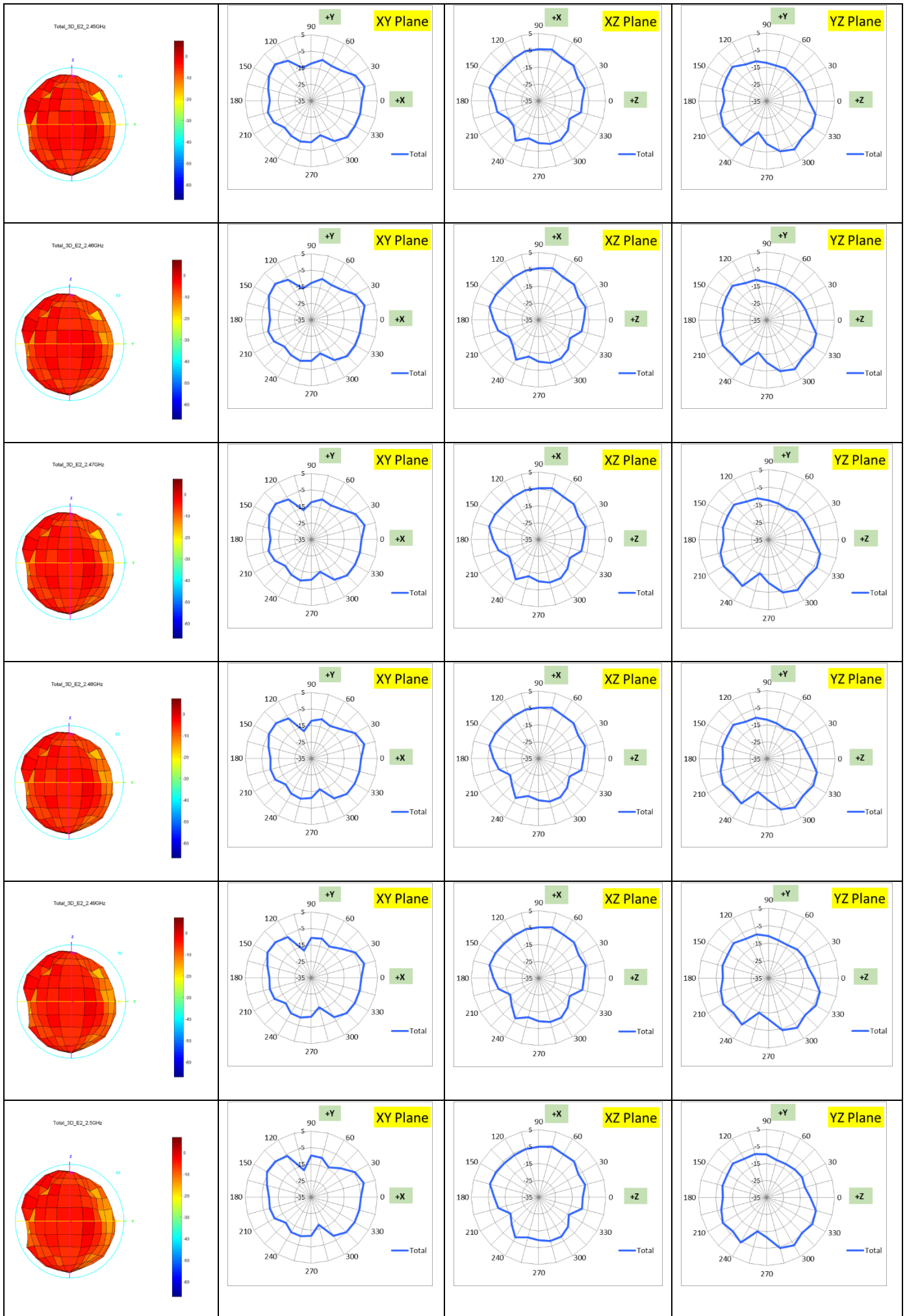
Gain curve



| Frequency/MHz | 2400 | 2410 | 2420 | 2430 | 2440 | 2450 | 2460 | 2470 | 2480 | 2490 | 2500 |
|----------------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| Efficiency / % | 16.18 | 18.2 | 18.75 | 19.77 | 20.8 | 19.63 | 20 | 19.72 | 18.66 | 19.36 | 18.54 |
| Gain/ dBi | -2.49 | -1.92 | -1.89 | -1.72 | -1.44 | -1.67 | -1.6 | -1.66 | -1.94 | -1.83 | -2.15 |

2400-2500 MHz Radiation Characteristic





S11&VSWR

