

2.4G Copper Tube Antenna SPECIFICATION

Customer Name: AEE Technology

Product Name: 2.4G Copper Tube Antenna

Material code: S-EANT0A02xx1V0

1.objective

Standardize the specifications and testing methods of mobile communication terminal antennas produced by Shenzhen Dewima Communication Equipment Co., Ltd. to avoid errors caused by different testing conditions and methods

2.Overview of product categories and models Category

1.This mobile communication terminal antenna is an external Monopole antenna

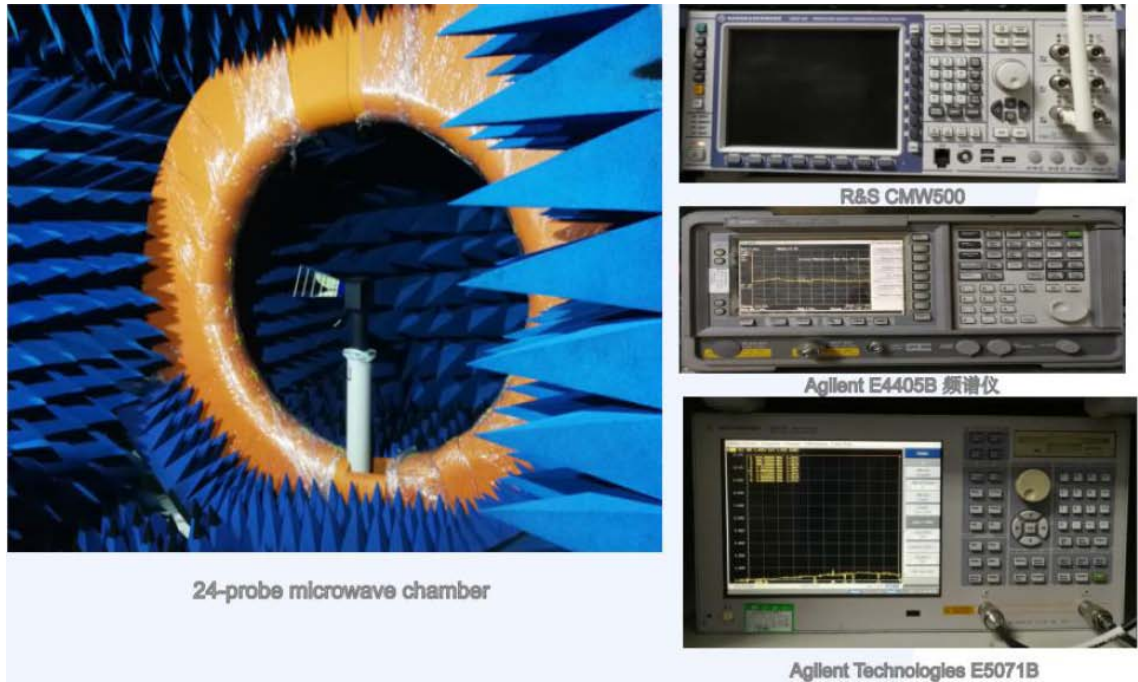
2.Product Model Overview This report mainly outlines the electrical results of the antenna designed for the 2.4G copper tube antenna project. This antenna is designed in the frequency range of 2400-2500MHz.

3. Technical indicators and instruments and equipment

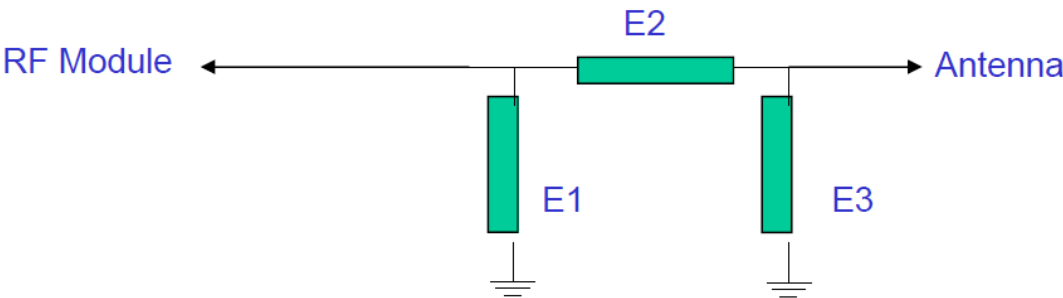
3.1 TECHNICAL INDEX

Product electrical performance indicators	
Operating frequency range	2400~2500MHz
standing-wave ratio	2400~2500MHz < 2.0
Antenna gain	2.47dBi Max
Radiation efficiency	2400~2500MHz>50%
impedance	50ohm
Product Material Description	
Copper tube+1.13 * 110mm coaxial line+second-generation terminals	
operation temperature	-30°C ~ + 85 °C
storage temperature	-30°C ~ + 85 °C

3.2 Instruments and equipment



4. Matching circuit description



Element	Value	Vender
E1(0402)		
E2(0402)		
E3(0402)		

5. Antenna electrical performance parameters (standing wave ratio, gain, efficiency, directional pattern)

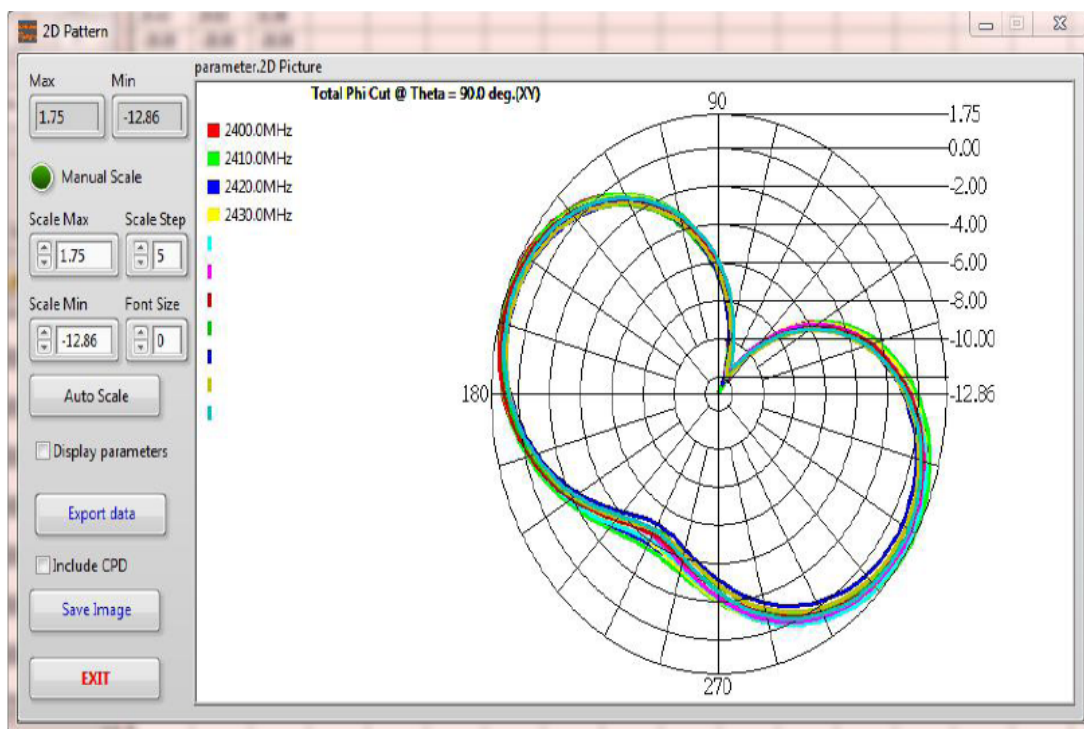
5.1 VSWR:



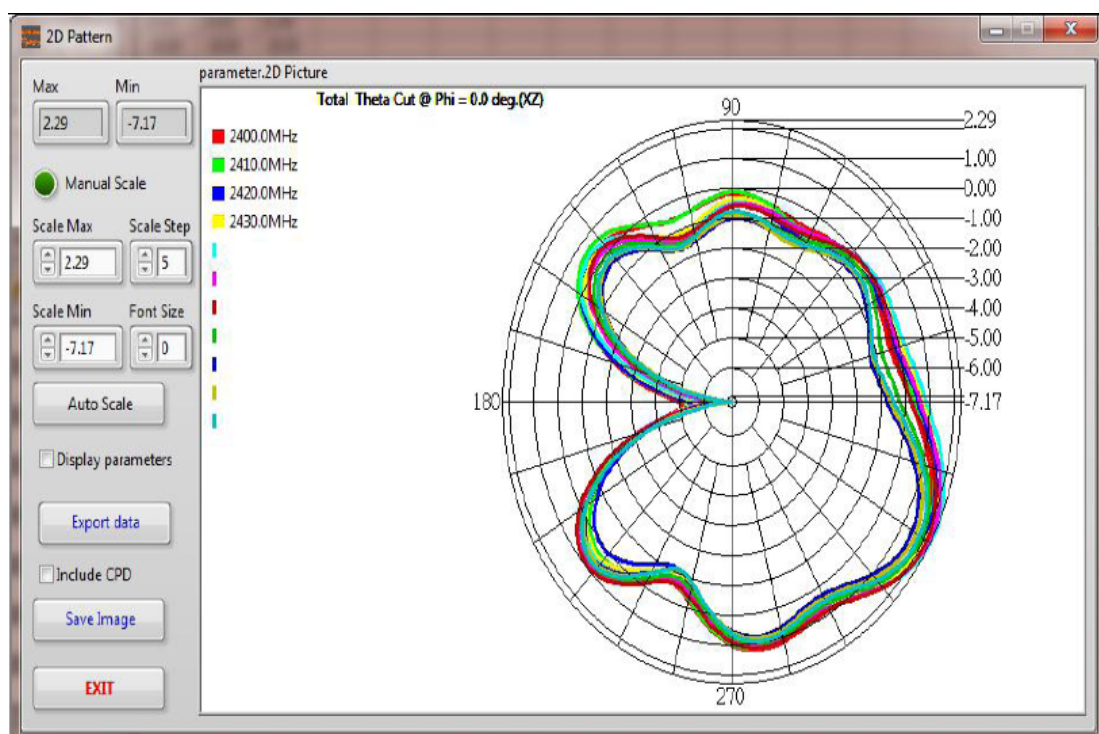
5.2 Efficiency and Gain

Frequency(MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Peak Gain(dBi)	2.28	2.36	2.31	2.43	2.47	2.25	2.15	1.90	1.49	1.75	1.95
Directivity(dBi)	3.26	3.32	3.50	3.50	3.51	3.31	3.29	3.26	3.13	3.28	3.32
Average Gain(dBi)	-0.97	-0.96	-1.19	-1.07	-1.04	-1.06	-1.13	-1.36	-1.63	-1.53	-1.37
Efficiency(%)	79.95	80.17	76.11	78.19	78.70	78.37	77.05	73.10	68.65	70.32	72.94
Upper HEM , EIRP(dB)	-3.39	-3.33	-3.52	-3.40	-3.33	-3.41	-3.49	-3.74	-4.06	-3.93	-3.78
Lower HEM , EIRP(dB)	-4.66	-4.72	-4.99	-4.88	-4.91	-4.85	-4.92	-5.11	-5.31	-5.25	-5.08
Upper HEM , EIRP(%)	45.79	46.44	44.42	45.66	46.40	45.61	44.81	42.25	39.23	40.49	41.88
Lower HEM , EIRP(%)	34.16	33.72	31.69	32.53	32.29	32.75	32.24	30.85	29.43	29.83	31.06
Peak Gain @ Theta(degree)	-24.00	-22.00	-22.00	-22.00	-22.00	-22.00	32.00	32.00	-28.00	-28.00	-26.00
Peak Gain @ Phi(degree)	74.00	80.00	80.00	94.00	100.00	98.00	176.00	178.00	116.00	116.00	110.00
Null @ Phi(degree)	98.00	96.00	100.00	100.00	100.00	102.00	100.00	102.00	104.00	104.00	106.00
Null @ Theta(degree)	62.00	62.00	62.00	62.00	60.00	62.00	60.00	62.00	62.00	60.00	60.00
Roundness @90degree	14.53	14.61	13.73	13.67	13.07	13.06	13.51	13.15	13.59	13.18	12.52
Roundness @60degree	8.41	9.11	9.03	9.46	9.52	9.25	9.59	9.07	9.16	9.28	9.19
Roundness @30degree	6.92	7.26	7.51	7.54	7.56	7.55	7.61	7.81	7.97	8.56	9.12

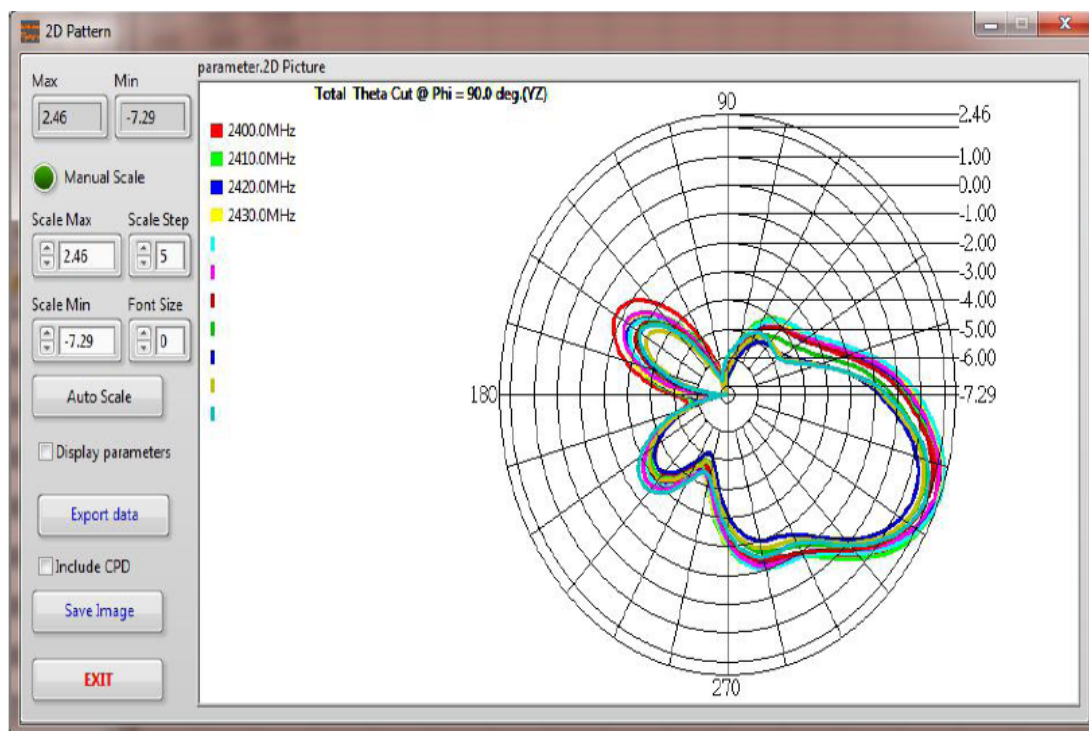
5.3 H-plane direction diagram



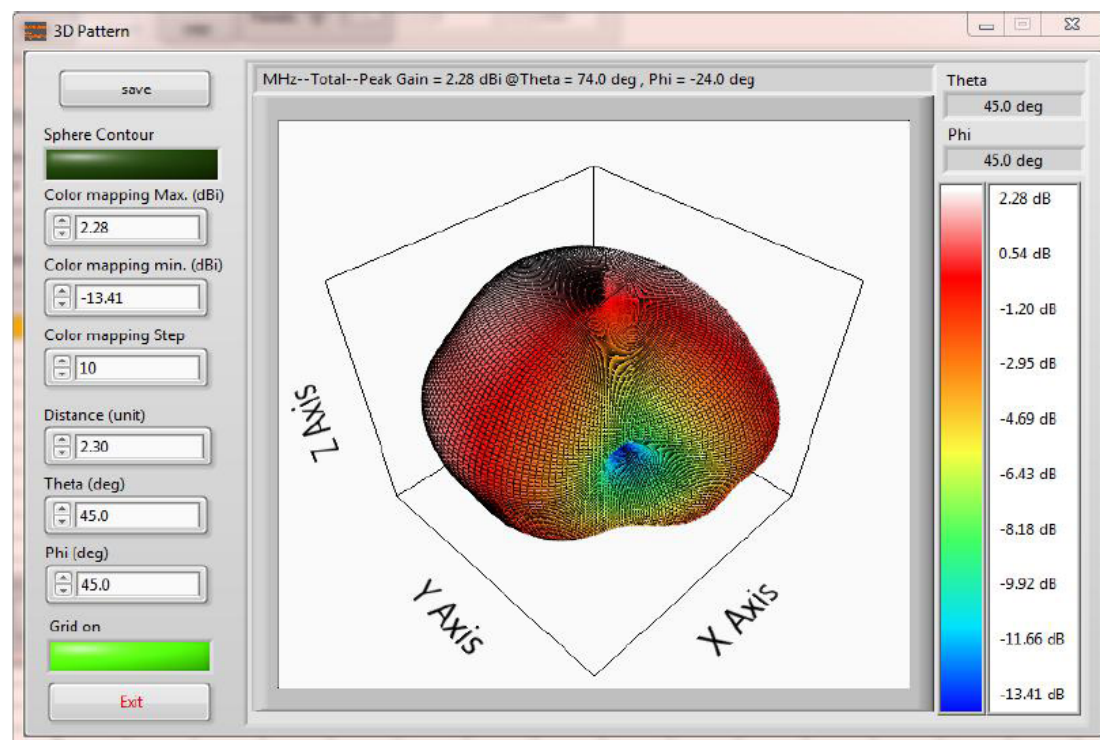
5.4 E1 direction diagram



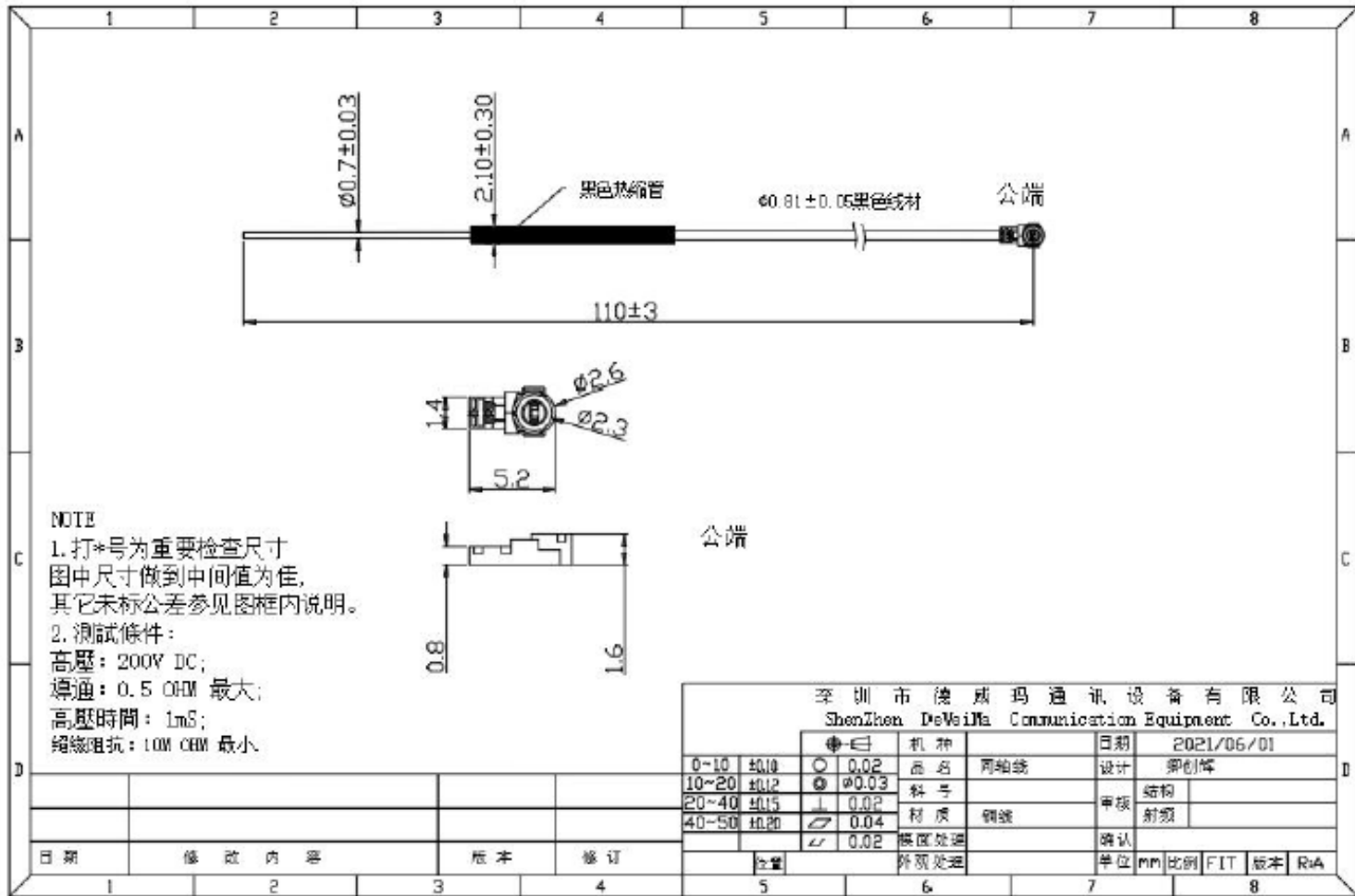
5.5 E2 direction diagram



5.6 3D Pattern



6. Product structure diagram



7. Product physical image



8. Packaging method

Packaging method	Packing materia	Size	Number	Notes
Bulk	PE bag	85*120mm	1000PCS	