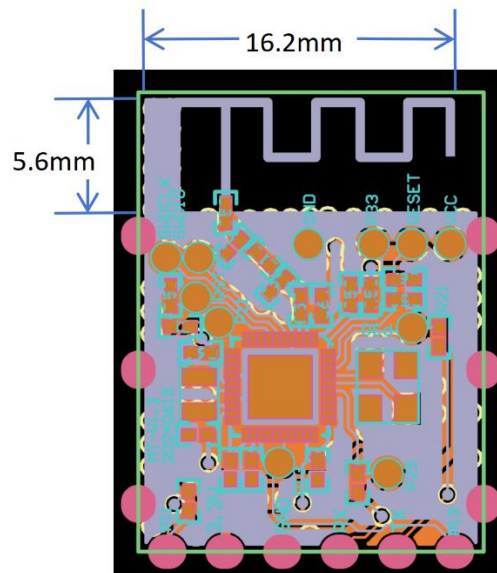


ETBTM-F7 Antenna

Designer	Suzhou Etag-Technology Corporation
Address	Building D2, Phase II, Science and Technology Park, Suzhou National University of Nanotechnology, No. 333, Songbei Road, Xietang Street, Wuzhong District, Suzhou City
Manufacturer	Guangde Oukeda Electronics Co., Ltd
Address	No. 3, Pengju Road, Guangde City, Xuancheng City, Anhui Province

1 Antenna drawing



2 Electrical Specs

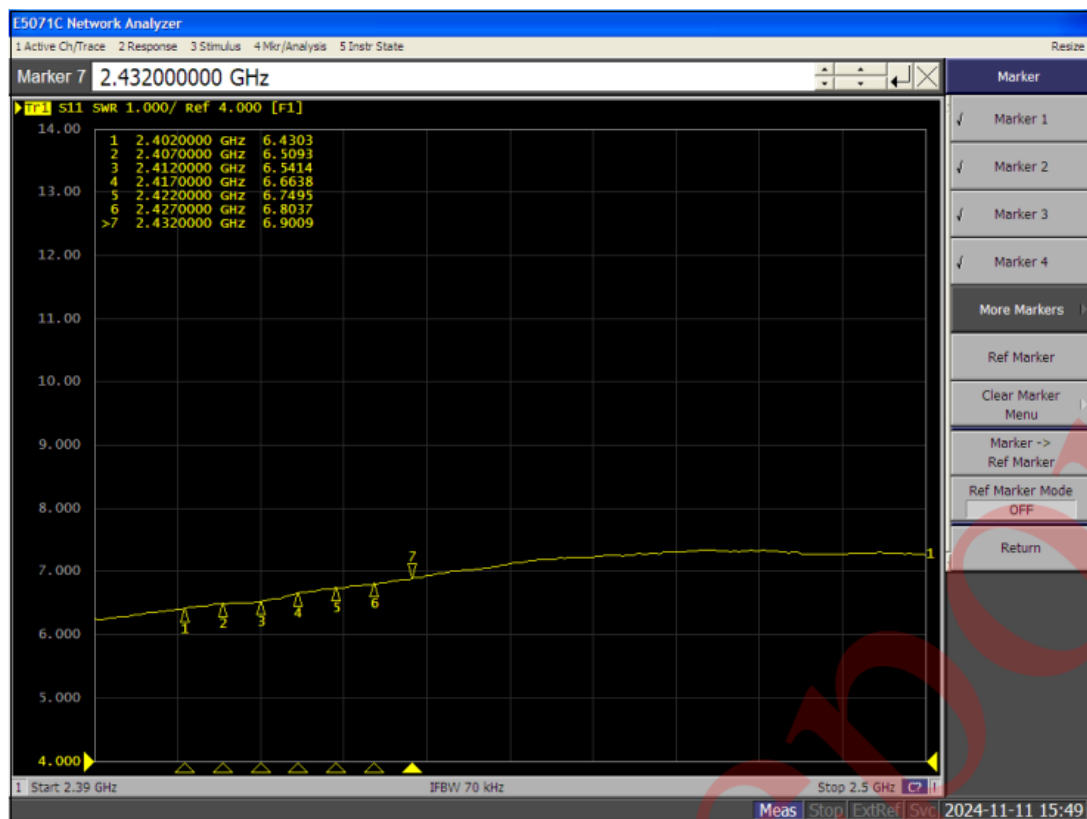
2.1 RFID Antenna

Specifications	
Product model	2.4G PCB antenna
Frequency	2.400-2.480GHz
Polarization	Linear

VSWR	≤ 10
Peak Gain	3.4 dBi
Input impedance	50
Antenna size	16.2mm*5.6mm
Material	copper
Temperature	-20°C to +70°C

3 Typical measured data

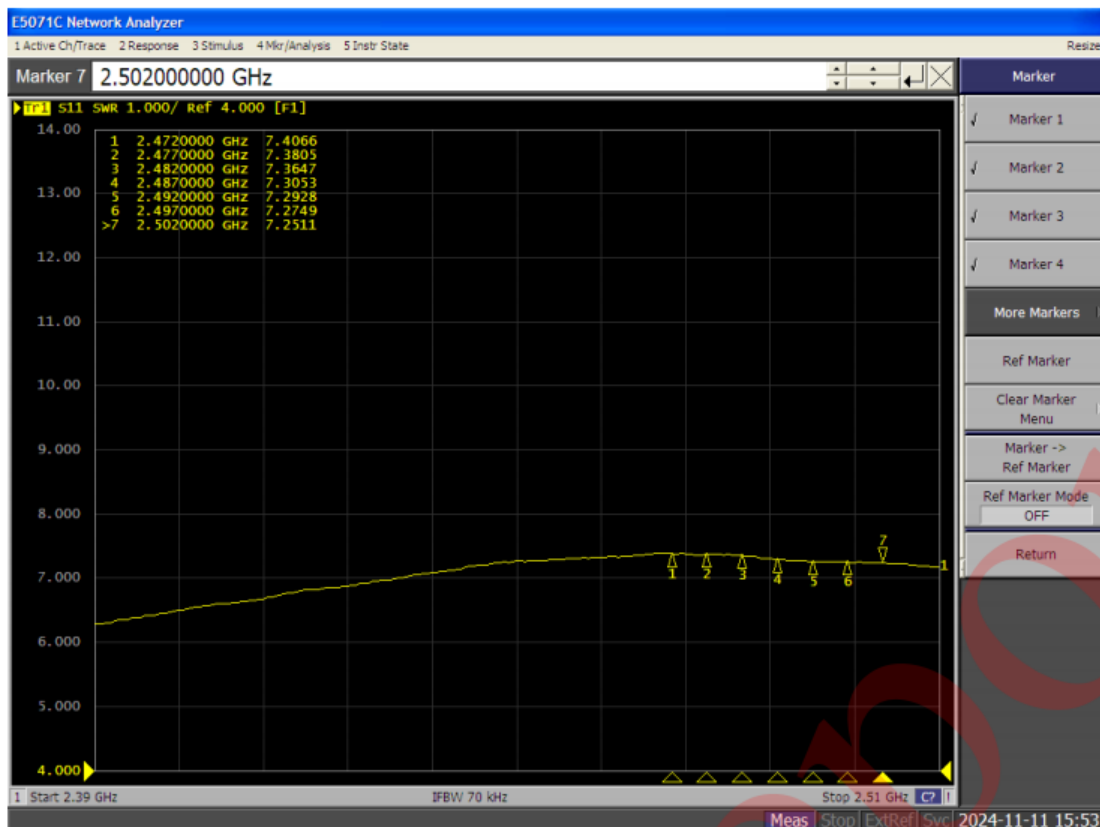
3.1 VSWR



Frequency 2402~2432 MHz



Frequency 2437~2467 MHz



Frequency 2472~2502 MHz

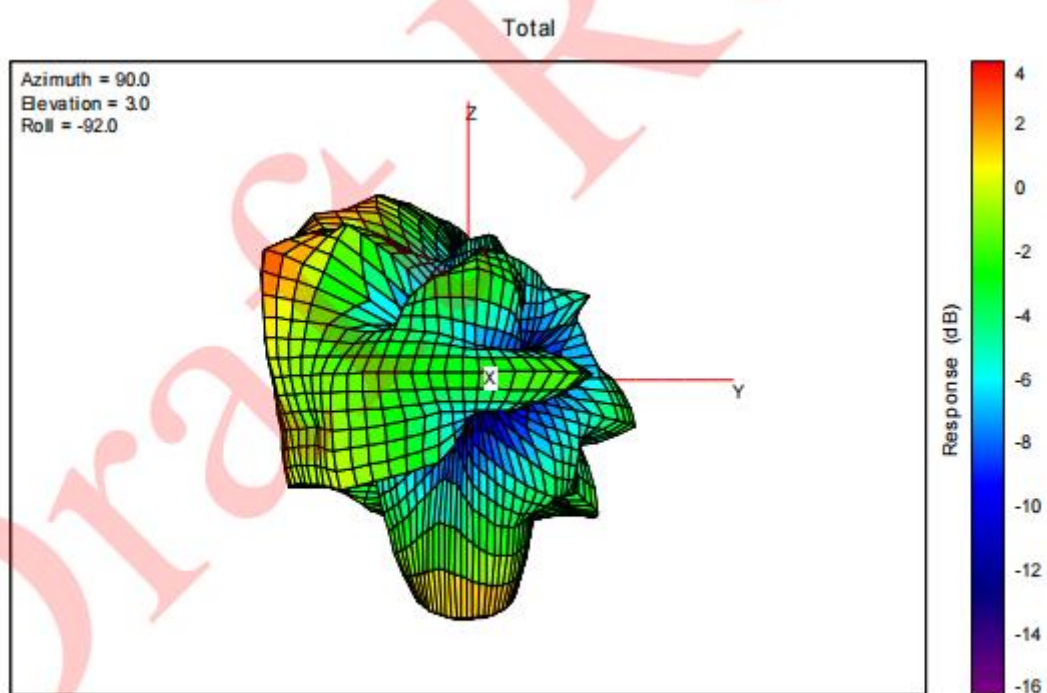
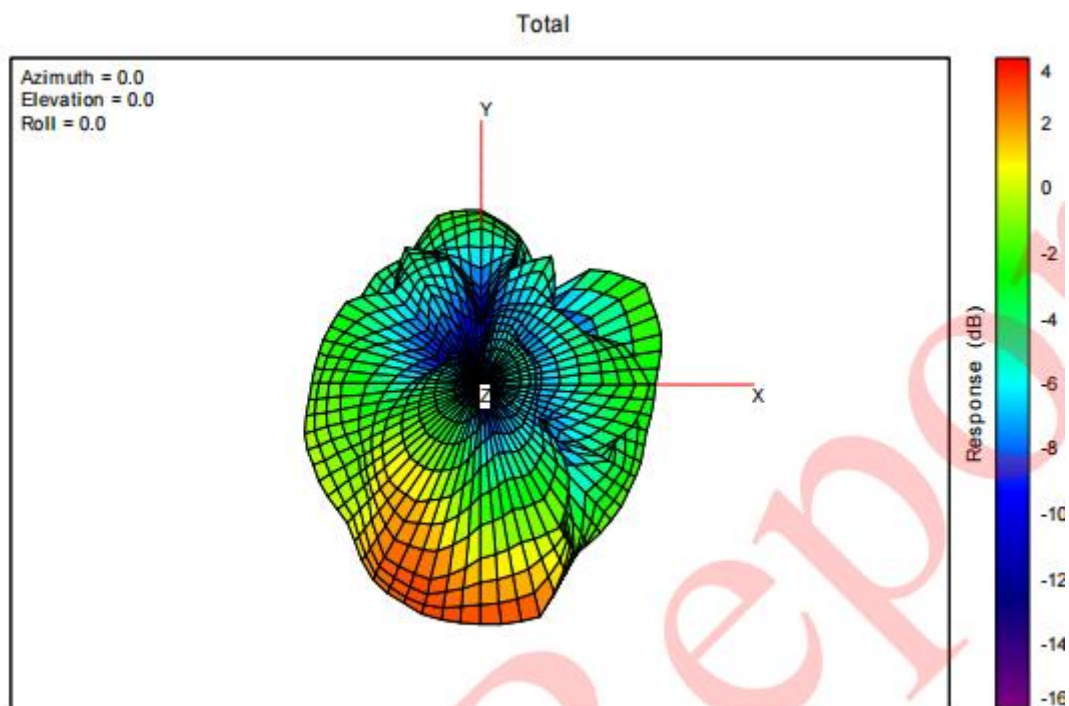
3.2 Gain

Test / Position	Antenna Gain / Free Space										
Frequency(MHz)	2402	2407	2412	2417	2422	2427	2432	2437	2442	2447	2452
Avg Gain	-2.6	-2.5	-2.5	-2.5	-2.4	-2.4	-2.4	-2.3	-2.3	-2.2	-2.2
Peak Gain	3.4	3.4	3.2	3.1	3.2	3.3	3.3	3.3	3.3	3.3	3.3
Directivity	6.0	5.9	5.7	5.6	5.6	5.6	5.6	5.6	5.6	5.5	5.5
Efficiency	-2.6	-2.5	-2.5	-2.5	-2.4	-2.4	-2.4	-2.3	-2.3	-2.2	-2.2
Efficiency (%)	55.2	56.0	56.1	56.5	57.3	57.9	58.0	58.6	59.3	59.6	59.7

Test / Position	Antenna Gain / Free Space									
Frequency(MHz)	2457	2462	2467	2472	2477	2482	2487	2492	2497	2502
Avg Gain	-2.2	-2.2	-2.2	-2.2	-2.3	-2.3	-2.4	-2.5	-2.5	-2.6
Peak Gain	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.2	3.2	3.3
Directivity	5.4	5.3	5.3	5.3	5.3	5.4	5.5	5.6	5.8	5.9
Efficiency	-2.2	-2.2	-2.2	-2.2	-2.3	-2.3	-2.4	-2.5	-2.5	-2.6
Efficiency (%)	60.5	60.7	59.9	59.7	59.4	58.5	57.8	56.9	55.6	55.4

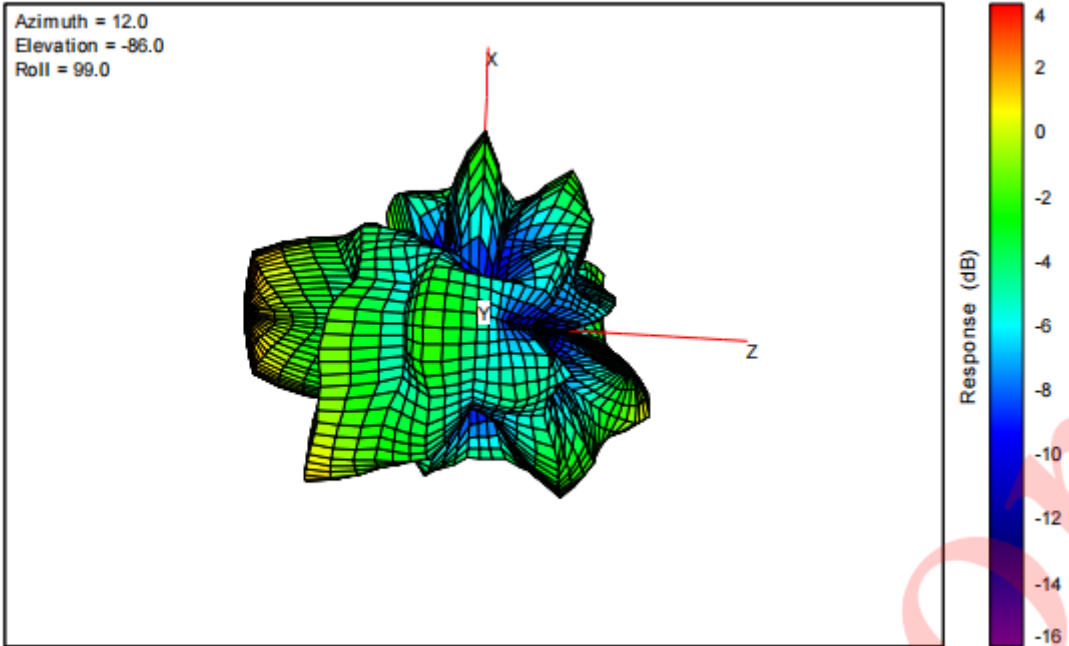
3.3 Free Space Position Antenna Gain Patterns

3D pattern

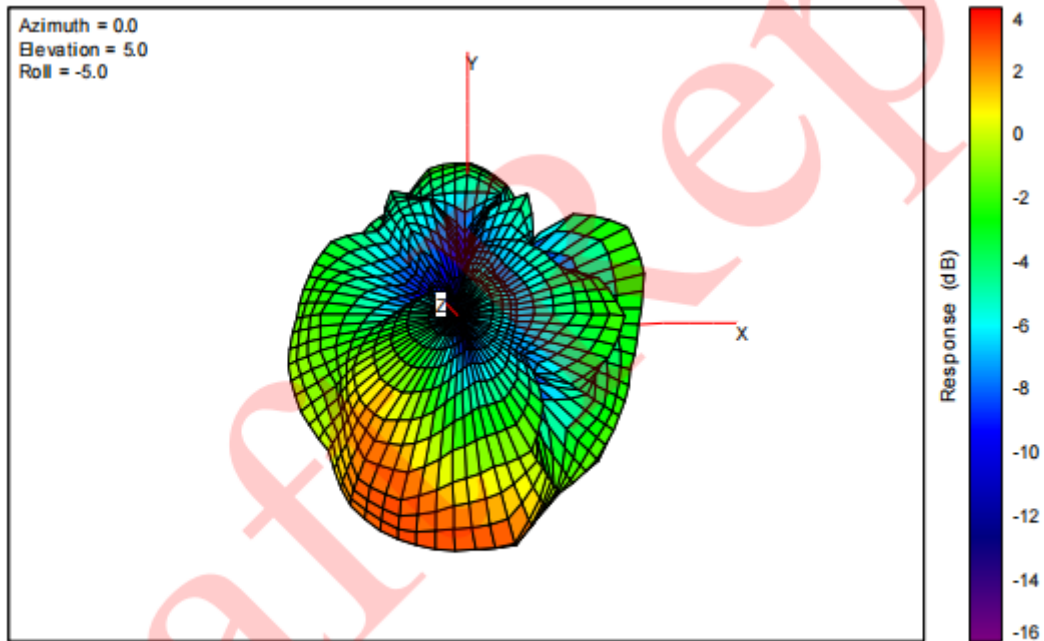


Free Space

Total



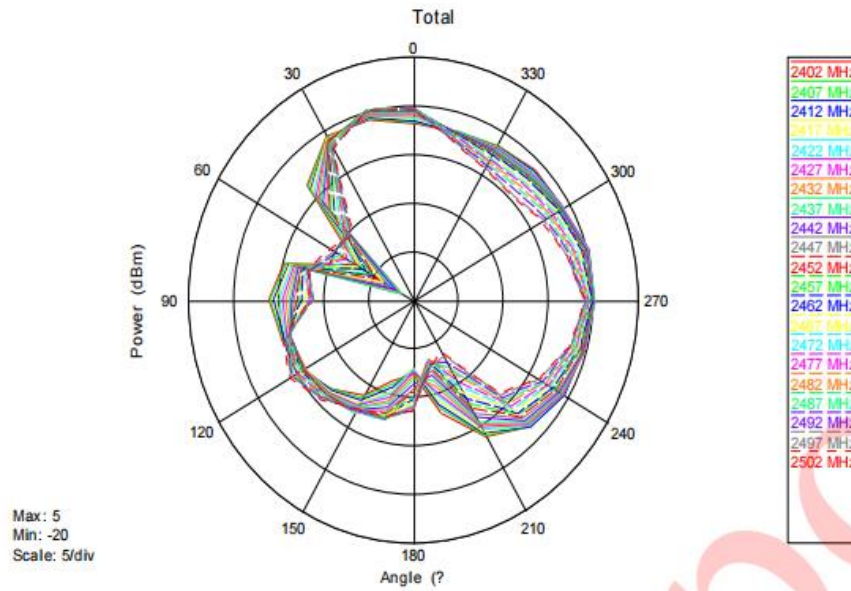
Total



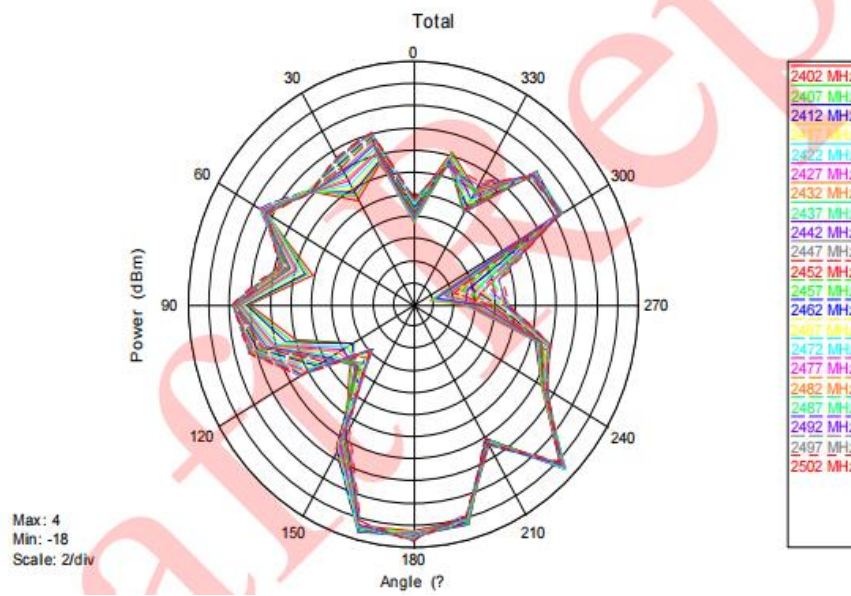
Free Space

2D pattern

H

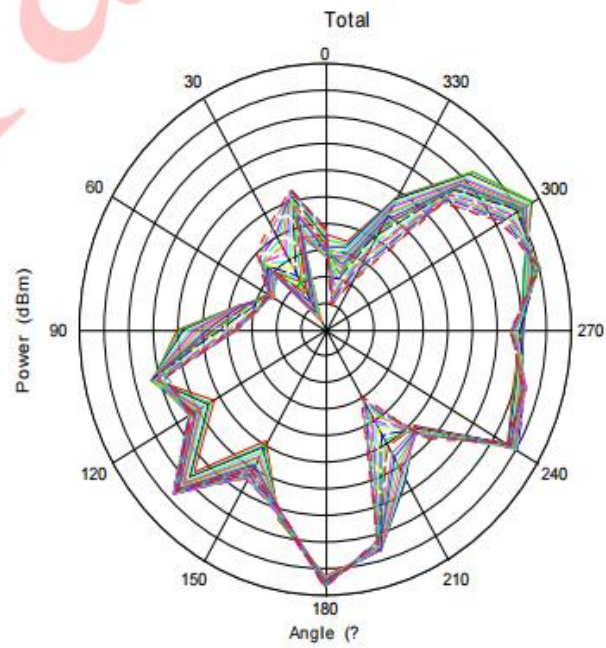


E1



E2

Max: 4
Min: -16
Scale: 2/div



Free Space

2402 MHz
2407 MHz
2412 MHz
2417 MHz
2422 MHz
2427 MHz
2432 MHz
2437 MHz
2442 MHz
2447 MHz
2452 MHz
2457 MHz
2462 MHz
2467 MHz
2472 MHz
2477 MHz
2482 MHz
2487 MHz
2492 MHz
2497 MHz
2502 MHz