

B631 Gate 433&2.4G Antenna Specification

Design Specifications	Typical	Units
Antenna type	PCB+MCX adapter line	
working Frequency	【433】 & 【2400-2500】	MHz
Gain	-13.21dBi@433MHz, -2.18dBi@2.4G	dBi
Antenna efficiency	/	%
Return loss	【-14.62】 & 【-7.89 ~ -7.73】	
Ploriaztion	Linear polarization	
Axial Ratio	When the antenna is circular polarization, note the axial ratio in the working bandwidth	N/A
Radiation pattern	omnidirectional	
impedance	50 ohm	
Power handling	33	dBm
Interface	MCX-J	
Overall dimensions	See drawing section	
Weight	no requirement	
Operatin Temp	-30 ----- 70	°
Storing Temp	-30 ----- 70	°

1、 Indication

The report mainly provides the test status of various electrical performance parameters of the B631 Gate 433&2.4G Antenna. (As shown in Figure 1 below)

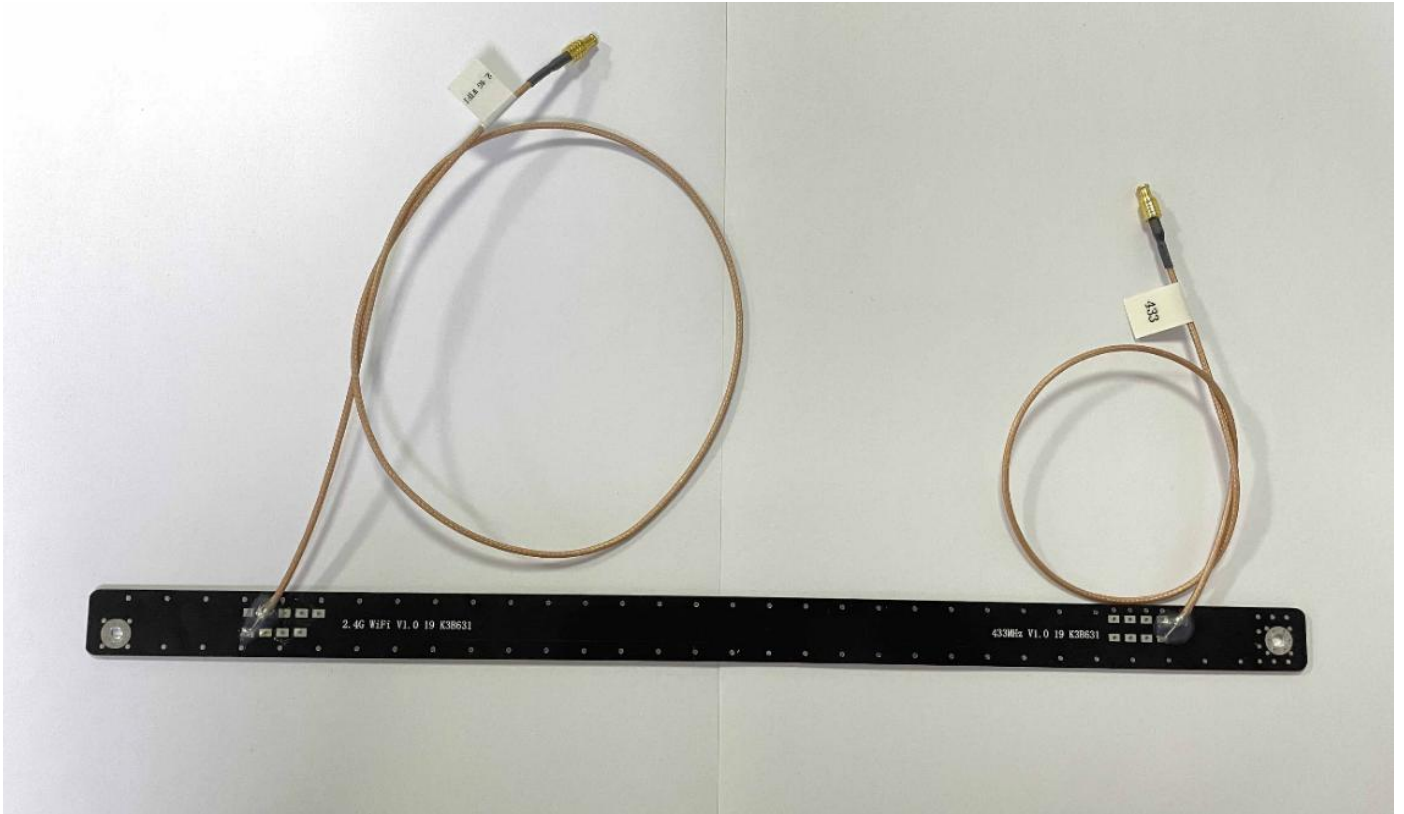


Figure 1 B631 Gate 433&2.4G Antenna

2、 Electrical Performance

2.1 Specification standard

B631 Gate 433&2.4G Antenna working band is at 433MHz & 2400-2500MHz.

2.2 Antenna matching circuit

B631 Gate 433&2.4G Antenna matches the original matching circuit.

2.3 Return loss Test

A. Test setup

Return loss measurements (S11) were performed using Agilent E5071B Network Analyzer and the previously described test fixture. A ferrite-loaded coaxial cable was used to mitigate surface currents on the outside of the cabling. The testing was performed in free space ETS AMP8500S chamber.

B. Return loss

The table below shows the standing wave ratio value of the edge frequency of the working band of B631 Gate 433&2.4G Antenna matches the original matching circuit.

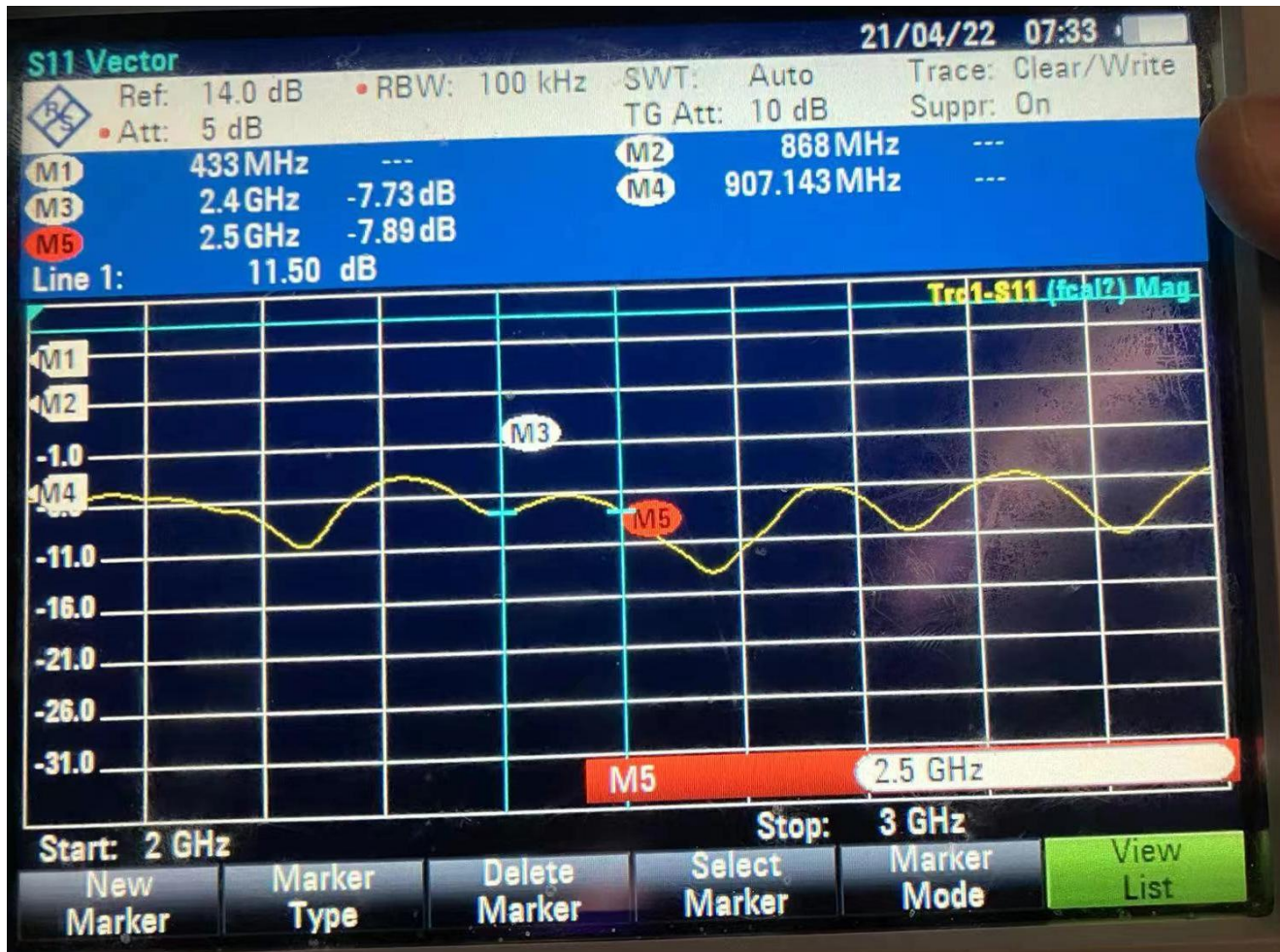
Frequency band	frequency (MHz)	Return loss
433	433	-14.62
2.4G WIFI	2400	-7.73
	2500	-7.89

2.3.1 S11 parameter

433 ANT:



2.4G ANT:



3、Suggestion And Solution

This report is according to the customer provide B631 Gate 433&2.4G Antenna the final version of the electrical performance of antenna.

As can be seen from the above test data, this antenna provides better electrical performance.

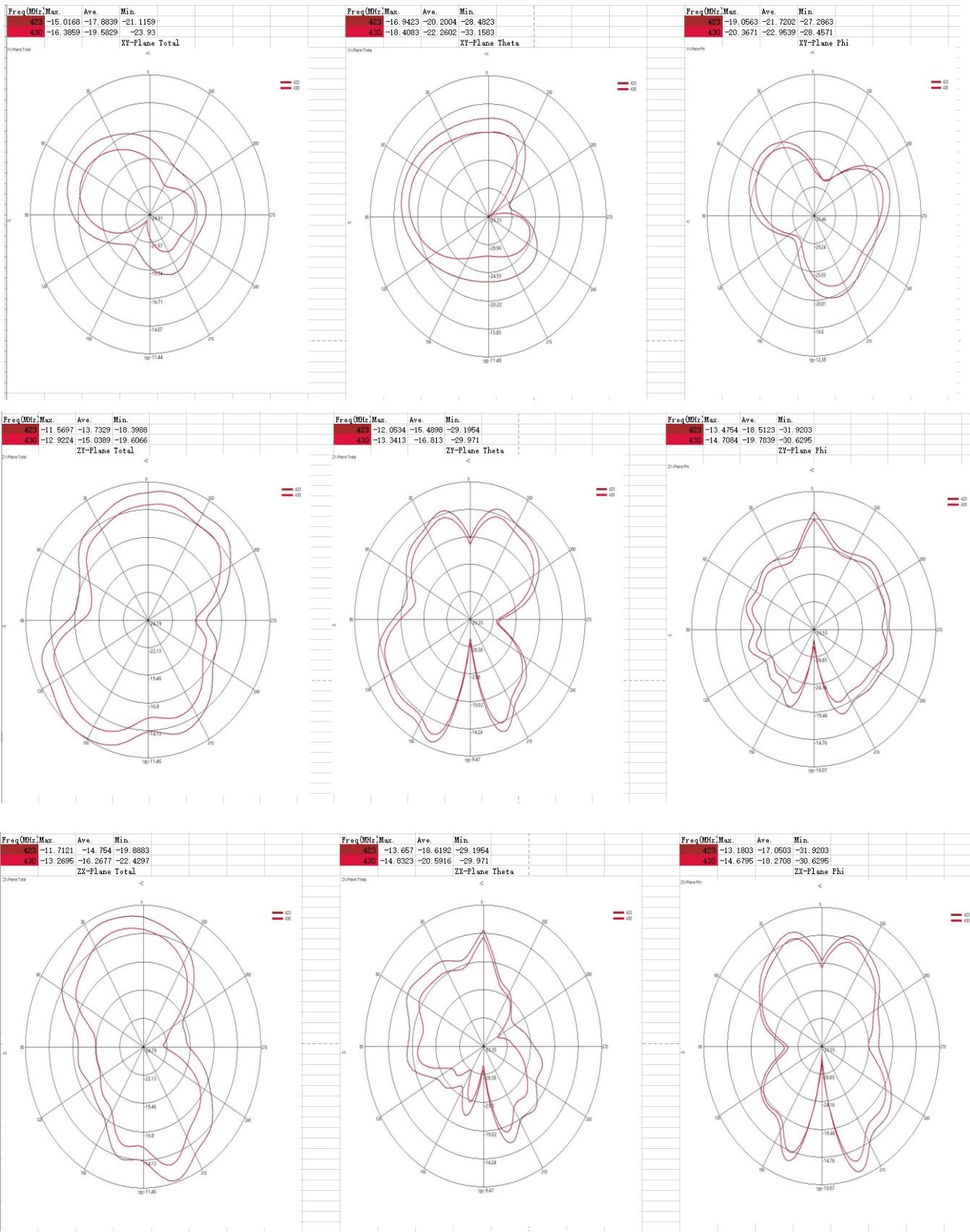
We are looking forward to your confirmation. Thank you for your cooperation!

4、Appearance Drawing

433MHz Summary Report:

Freq (MHz)	Gain (dBi)	Efficiency (dB)	Efficiency (%)
420	-10.70	-14.37	3.66
421	-10.97	-14.61	3.46
422	-11.27	-14.88	3.25
423	-11.54	-15.09	3.10
424	-11.82	-15.30	2.95
425	-12.11	-15.63	2.73
426	-12.38	-15.95	2.54
427	-12.41	-15.99	2.52
428	-12.41	-16.02	2.50
429	-12.69	-16.29	2.35
430	-12.92	-16.54	2.22
431	-13.04	-16.69	2.14
432	-13.14	-16.85	2.06
433	-13.21	-16.95	2.02
434	-13.31	-17.05	1.97
435	-13.55	-17.29	1.86
436	-13.77	-17.52	1.77
437	-13.98	-17.69	1.70
438	-14.18	-17.86	1.64
439	-14.43	-18.02	1.58
440	-14.57	-18.18	1.52

2D Plot for 433MHz:



2.4G Summary Report:

Freq(MHz)	Gain(dBi)	Efficiency(dB)	Efficiency(%)
2400	-3.00	-9.80	10.46
2410	-3.01	-9.91	10.20
2420	-3.05	-9.93	10.17
2430	-2.89	-9.92	10.18
2440	-2.70	-9.77	10.55
2450	-2.42	-9.51	11.19
2460	-2.18	-9.44	11.37
2470	-2.30	-9.51	11.19
2480	-2.18	-9.45	11.35
2490	-2.10	-9.27	11.84
2500	-2.10	-9.20	12.04

2D Plot for 2.4G:

