

Antenna Specification document

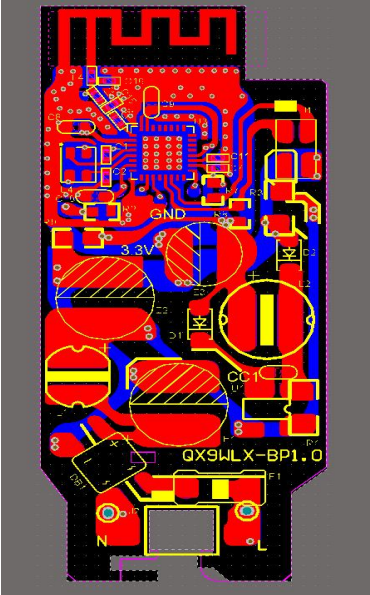
For

CX011

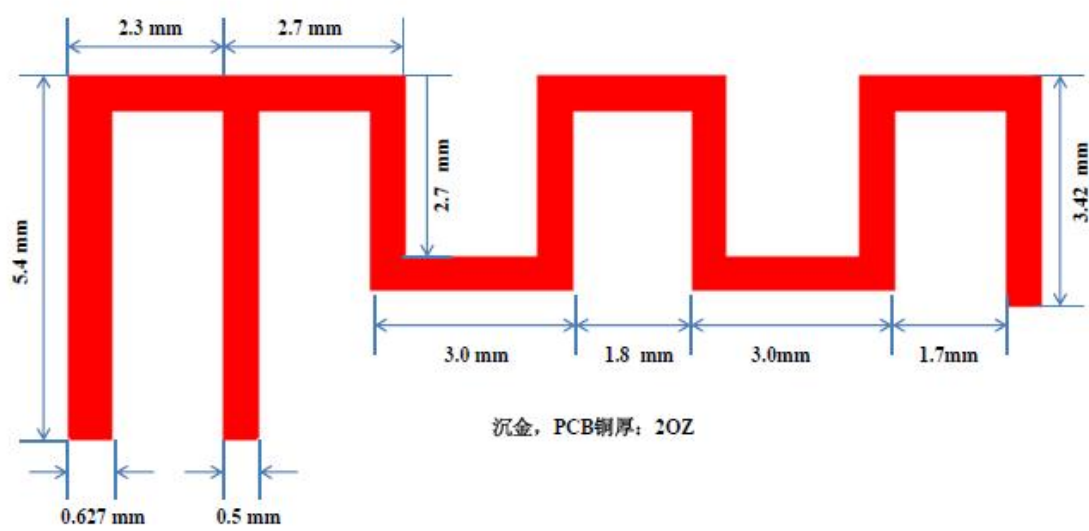
Customer	中山市晨轩科技有限公司 (Zhongshan Chenxuan Technology Co., Ltd)	Demo	CX011- on-board antenna
Factory address	2nd Floor, No. 6, Caoyi Xingtai South Road, Guzhen Town, Zhongshan City, Guangdong Province		
Band	2.4G	Color	绿色
PRS PN		Version	V1.0
Issued by	Ma	Checked by	Mem
Confirmed by	Shang	Date	2025.05.18

一. TEST INSTRUMENTATION

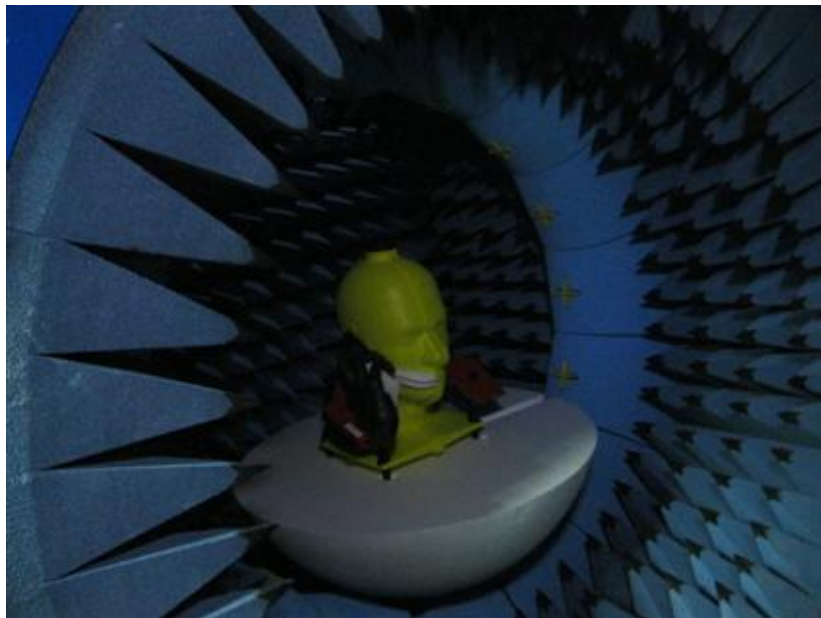
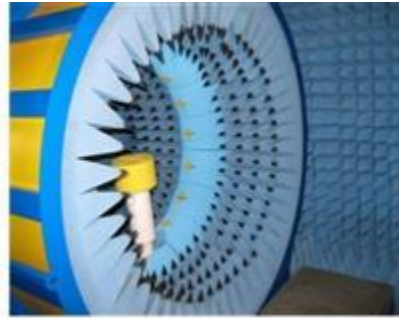
CHAMBER	SATIMO Chamber
Wireless Networking Test Set	Agilent E5071C
NETWORK ANALYZER	Agilent 8753D
TEMPERATURE	20±3℃
HUMIDITY	50±20%rh
GROUND RESISTANCE	<0.5R

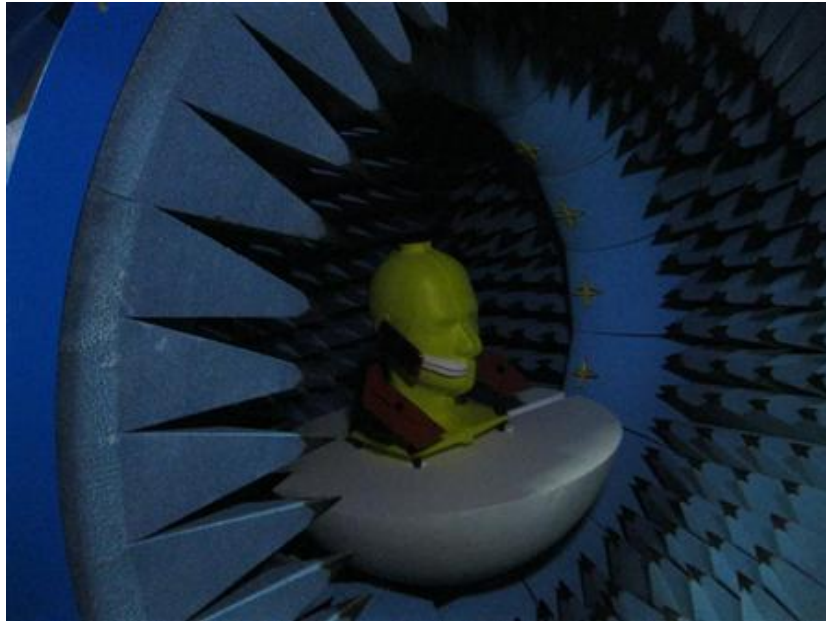


CX011-on-board-antenna

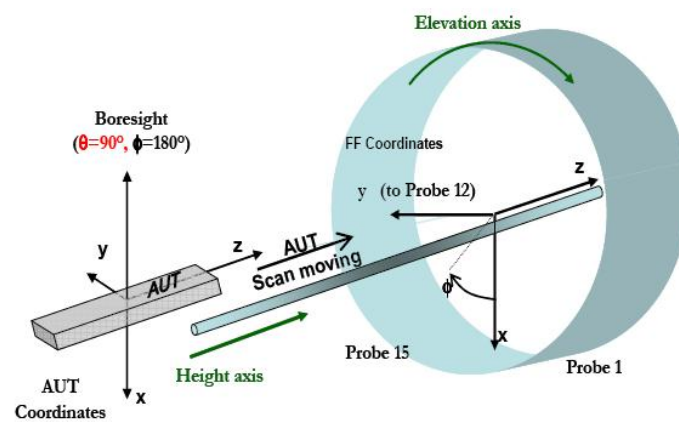


Antenna Dimension

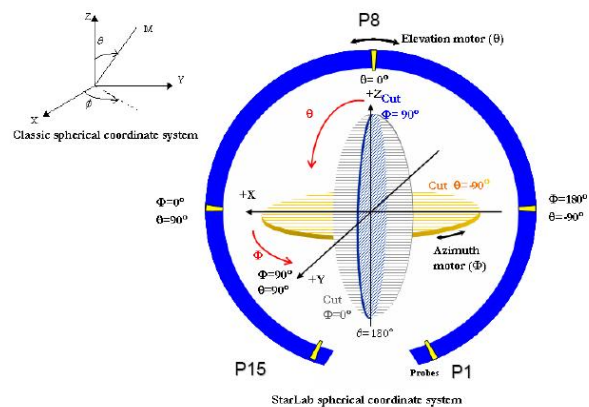




Coordinate system – Cylindrical geometry



Coordinate system – Spherical geometry

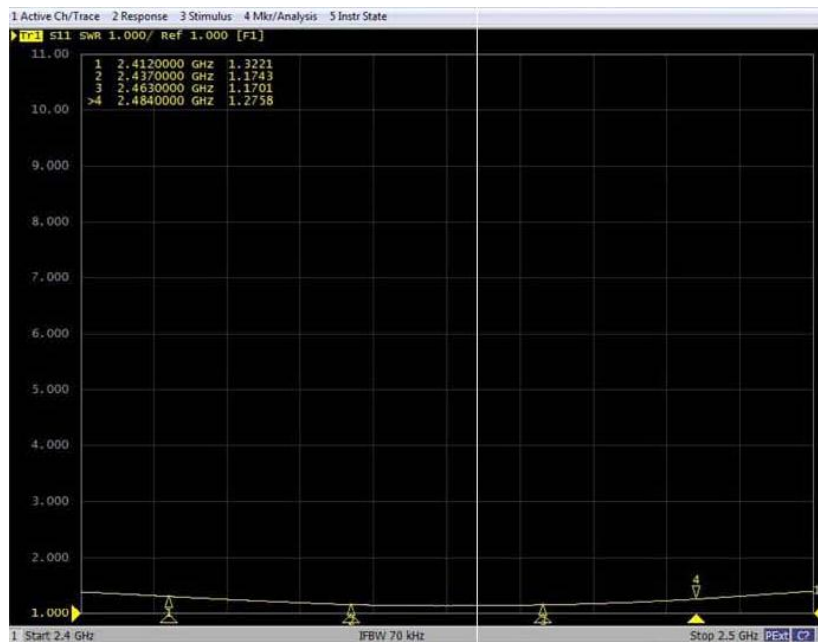


二. Test Results

2.1 Gain and Efficiency

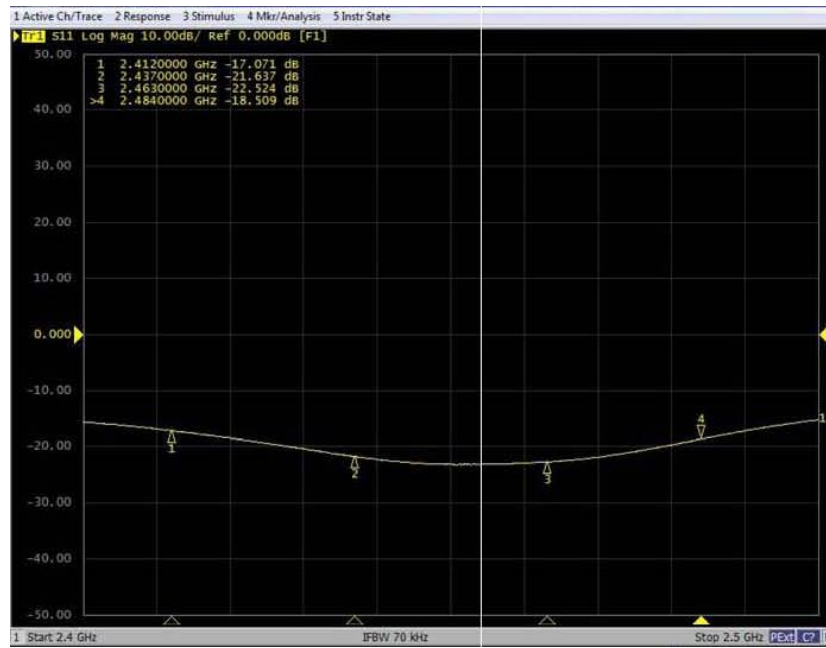
Test Item	Freq (MHz)	Efficiency (%)	Gain (dBi)	Note
Gain	2400	71.32	2.72	Vertical 30°
	2412	70.68	3.21	
	2417	76.51	2.88	
	2422	77.78	2.67	
	2427	80.76	2.89	
	2432	80.11	2.80	
	2437	75.32	2.64	
	2442	75.23	2.93	
	2447	72.99	2.78	
	2452	70.01	3.12	
	2457	72.34	3.13	
	2462	71.32	3.28	
	2467	72.33	3.24	
	2472	75.67	3.33	
	2477	72.12	3.42	
	2482	80.23	3.57	
	2500	79.65	3.22	

2.2 VSWR (Voltage Standing Wave Ration)



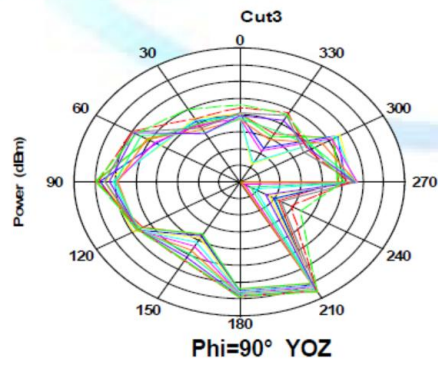
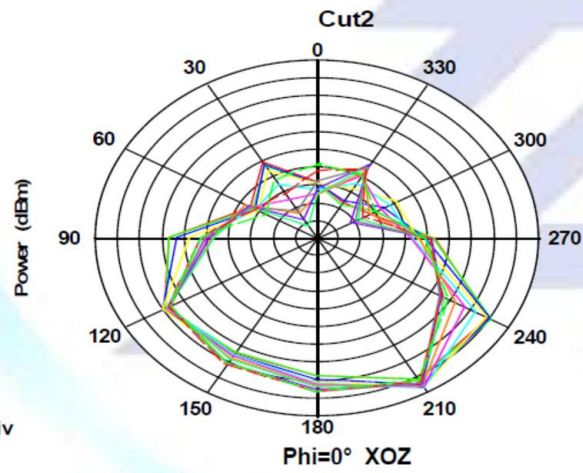
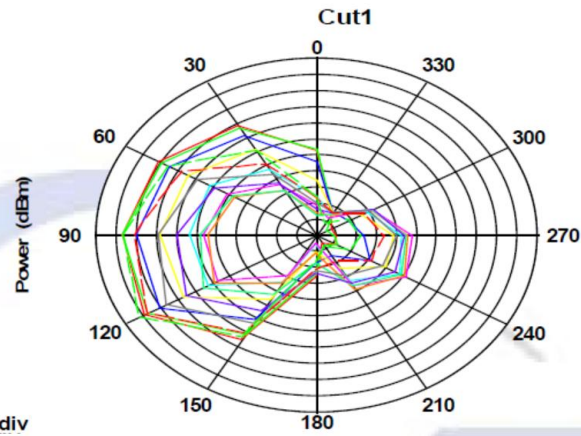
Frequency(MHz)	2412	2437	2463	2484
VSWR	1.31	1.17	1.16	1.29

2.3 Antenna S11



Frequency(MHz)	2412	2437	2463	2484
S11 (dB)	-17.01	-21.65	-22.52	-18.51

三. 2-D pattern Plots



2400 MHz
2402 MHz
2410 MHz
2420 MHz
2430 MHz
2440 MHz
2450 MHz
2460 MHz
2470 MHz
2480 MHz
2490 MHz
2500 MHz

2400 MHz
2402 MHz
2410 MHz
2420 MHz
2430 MHz
2440 MHz
2450 MHz
2460 MHz
2470 MHz
2480 MHz
2490 MHz
2500 MHz

2400 MHz
2402 MHz
2410 MHz
2420 MHz
2430 MHz
2440 MHz
2450 MHz
2460 MHz
2470 MHz
2480 MHz
2490 MHz
2500 MHz