



ShenzhenXingtongWieressTechnologyCo ., Ltd

深圳市星通无线技术有限公司

For

深圳市鑫瑞智实业有限公司

产品规格书

客户料号/Part No. : ANT-MT009V6BLE-XT001

产品型号:STYLE:MT009-V6 BLE 天线

规格书编号/Specification No. :20230516-V1.0

客户 Client	
承认 Approved	

核准 Approved by	审核 Checked by	设计 Designed by
吴延龙	郑蕾	黄加俊

Project:MT009-V6 BLE		Author: HUANG	File Name: MT009-APP-RB
Date: 2023-05-16			
TEST:	Language:	Check: XIE	
A	English		
地址: 深圳市宝安区西乡九围强荣东工业区 A1 栋 3 楼 电话: 0755-27850514 传真: 0755-27850514 Shenzhen Xingtong Wieress Technology Co ., Ltd			

Revision History

Date	Revision	Description of Changes
2023-05-1	RA	Measured with FPC sample.
2023-05-16	RB	Measured with FPC sample.

1 TECHNICAL SUMMARY	3
2 GENERAL DESCRIPTION	3
2.1 Components/Part revisions	3
3 MECHANICAL DESCRIPTION	3
4 ELECTRICAL PERFORMANCE	3
4.1 Set-up	3
4.1.1 VSWR	3
4.1.2 Gain & Radiation Patterns	3
4.1.3 Matching Circuit Description	3
4.2 Measurement Data	4
5 PLOTS	5
5.1 VSWR (S11) BLE	5
5.4 LOG MAG (S11) BLE	5
6 MECHANICAL DRAWING	6
7 RELIABILITY TESTS	7
7.1 Test content	7
7.2 Test results	7
8 CONCLUSION	7

Project:MT009-V6 BLE		Author: HUANG	File Name: MT009-APP-RB
Date: 2023-05-16			
TEST:	Language:	Check: XIE	
A	English		
地址: 深圳市宝安区西乡九围强荣东工业区 A1 栋 3 楼 电话: 0755-27850514 传真: 0755-27850514 Shenzhen Xingtong Wieress Technology Co ., Ltd			

1 Technical Summary

This report summarizes the electrical results of the proposed antenna to support the MT009 program. We test the antenna with the latest version handset. And it seems to be acceptable.

2 General Description

2.1 Components/Part revisions

VSWR: Voltage Standing Wave Rate.

3 Mechanical Description



4 Electrical Performance

4.1 Set-up

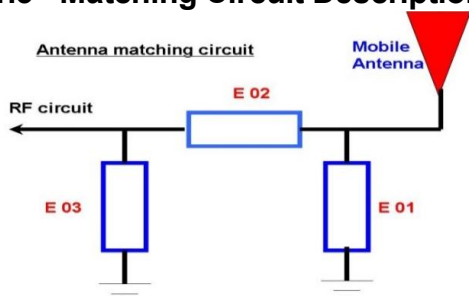
4.1.1 VSWR

VSWR measurements (S21) were performed using an Agilent 8753D Network Analyzer and the previously described test fixture. Coaxial chokes were used to mitigate surface currents on the outside of the cabling. The testing was performed in free space.

4.1.2 Gain & Radiation Patterns

The gain of the antenna was measured in the XingTong's anechoic chamber. Coaxial chokes on the feed cable were used to mitigate surface currents. The chamber provides less than -30 dB reflectivity from 2000 MHz through 3000 MHz and an 18" diameter spherical quiet zone. The measurement results are calibrated using both dipole and leaky wave horn standards.

4.1.3 Matching Circuit Description



NFC Antenna	
Element	Value
E1 (0201)	
E2 (0201)	
E3 (0201)	
E4 (0201)	
匹配无修改	

整机射频天线端未做匹配修改!

Project: MT009-V6 BLE		Author: HUANG	File Name: MT009-APP-RB
Date: 2023-05-16			
TEST:	Language:	Check: XIE	
A	English		
地址: 深圳市宝安区西乡九围强荣东工业区 A1 栋 3 楼 电话: 0755-27850514 传真: 0755-27850514 Shenzhen Xingtong Wieress Technology Co., Ltd			

4.2 Measurement Data

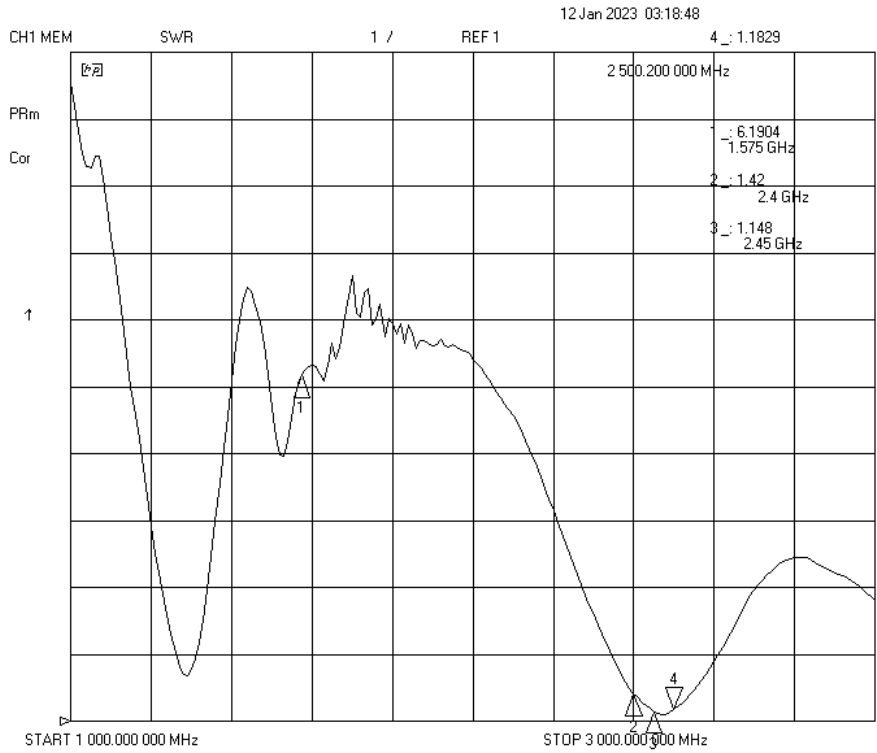
BLE-OTA 无源效率

FETUKEJI											
Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Point Values											
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-7.86	-7.67	-7.53	-7.40	-7.29	-7.13	-7.07	-7.10	-7.03	-7.01	-6.98
Peak EIRP (dBm)	0.58	0.83	1.00	1.12	1.21	1.37	1.39	1.36	1.28	1.23	1.11
Directivity (dBi)	8.44	8.50	8.52	8.52	8.51	8.50	8.46	8.46	8.31	8.24	8.09
Efficiency (dB)	-7.86	-7.67	-7.53	-7.40	-7.29	-7.13	-7.07	-7.10	-7.03	-7.01	-6.98
Efficiency (%)	16.40	17.10	17.70	18.20	18.70	19.40	19.60	19.50	19.80	19.90	20.10
Gain (dBi)	0.58	0.83	1.00	1.12	1.21	1.37	1.39	1.36	1.28	1.23	1.11
NHPRP \pm Pi/4 (dBm)	-9.50	-9.29	-9.10	-8.92	-8.75	-8.54	-8.42	-8.39	-8.27	-8.20	-8.13
NHPRP \pm Pi/6 (dBm)	-11.39	-11.18	-10.98	-10.76	-10.56	-10.30	-10.13	-10.06	-9.89	-9.78	-9.68
NHPRP \pm Pi/8 (dBm)	-12.96	-12.75	-12.54	-12.28	-12.04	-11.76	-11.55	-11.44	-11.23	-11.09	-10.97
Upper Hem. PRP (dBm)	-14.85	-14.73	-14.64	-14.55	-14.42	-14.23	-14.06	-13.93	-13.65	-13.40	-13.15
Lower Hem. PRP (dBm)	-8.83	-8.62	-8.46	-8.33	-8.22	-8.07	-8.04	-8.10	-8.09	-8.15	-8.17
Upper Hem. PRP (%)	3.27	3.37	3.44	3.51	3.61	3.77	3.93	4.05	4.32	4.57	4.84
Lower Hem. PRP (%)	13.09	13.73	14.24	14.68	15.05	15.58	15.71	15.47	15.51	15.32	15.23

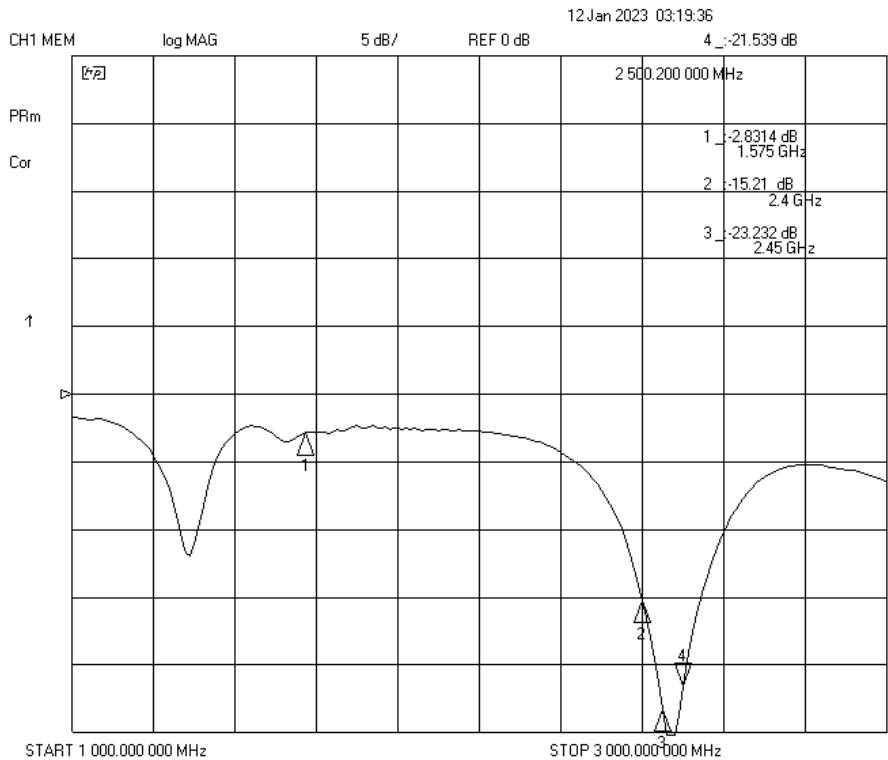
Project:MT009-V6 BLE		Author: HUANG	File Name: MT009-APP-RB
Date: 2023-05-16			
TEST:	Language:	Check: XIE	
A	English		
地址: 深圳市宝安区西乡九围强荣东工业区 A1 栋 3 楼 电话: 0755-27850514 传真: 0755-27850514 Shenzhen Xingtong Wieress Technology Co., Ltd			

5 Plots

5.1 VSWR (S11) BLE



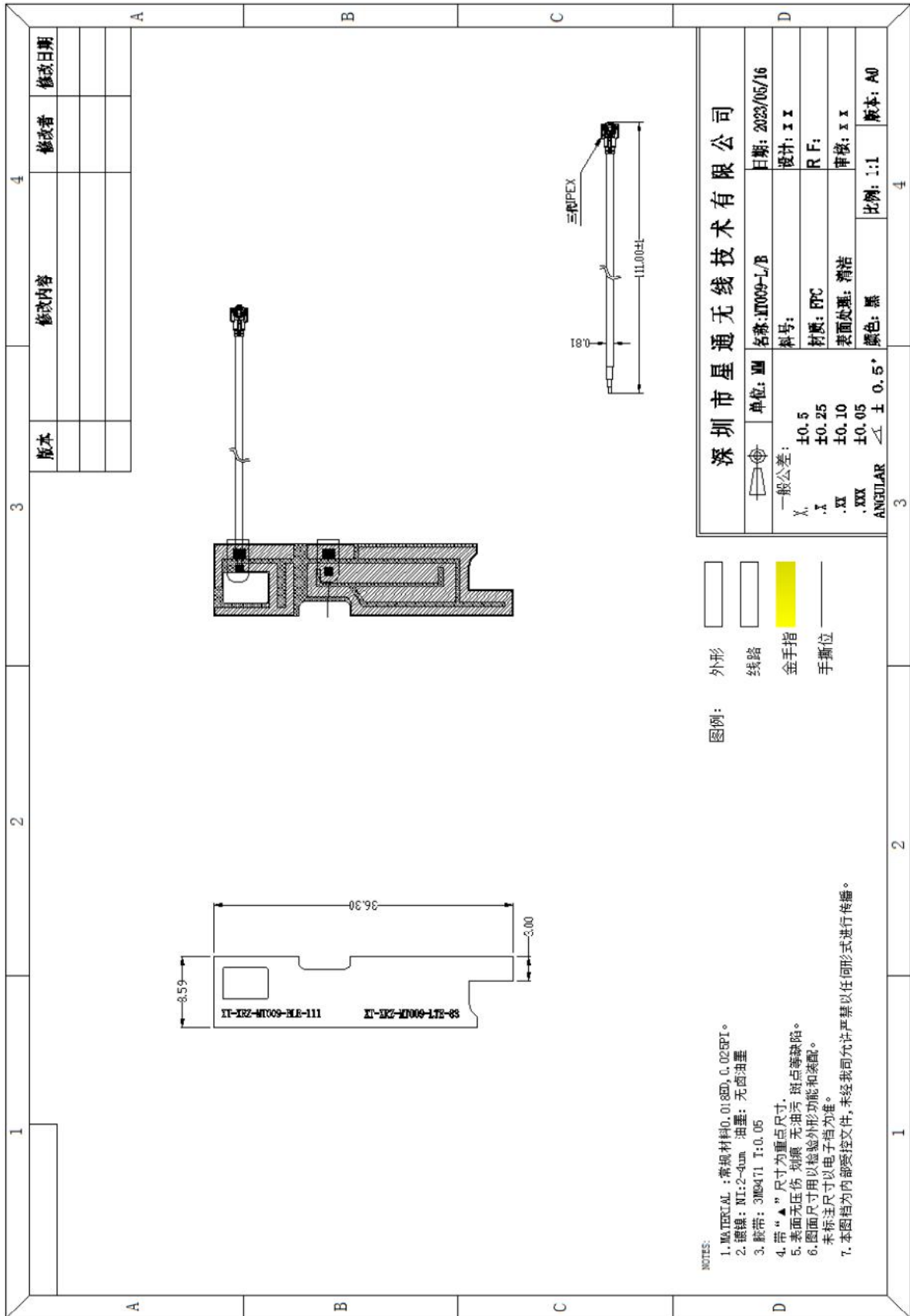
5.4 LOG MAG (S11) BLE



Project: MT009-V6 BLE		Author: HUANG	MT009-APP-RB
Date: 2023-05-16			
TEST:	Language:	Check: XIE	
A	English		
地址: 深圳市宝安区西乡九围强荣东工业区 A1 栋 3 楼 电话: 0755-27850514 传真: 0755-27850514 Shenzhen Xingtong Wieress Technology Co., Ltd			

6 Mechanical drawing

BLE-MD



Project: MT009-V6 BLE		Author: HUANG	File Name: MT009-APP-RB
Date: 2023-05-16		Check: XIE	
TEST:	Language:		
A	English		
地址: 深圳市宝安区西乡九围强荣东工业区 A1 栋 3 楼 电话: 0755-27850514 传真: 0755-27850514 Shenzhen Xingtong Wieress Technology Co., Ltd			

7 Reliability tests

7.1 Test content

No	试验项目	试验方法	判定基准
1	盐水喷雾试验	把盐浓度 5%的溶液喷雾 48HR	不能有变色, 歪 (变形) 脱落等的缺点 腐蚀面积不能过大
2	工作温度 (Operational Temperature)	-40°C~+65°C	
3	储存温度 (Storage Temperature)	-50°C~+85°C	
4	湿度 (Humidity)	40%~95%	

7.2 Test results

NO	样品数	试验期间	实验结果	备注
1	50	24 小时	OK	技术等级为 9 级 腐蚀<0.4mm
2	50	24 小时	OK	技术等级为 9 级 腐蚀<0.4mm

8 Conclusion

环境处理



备注：整机环境处理以天线报告为最终。

Project:MT009-V6 BLE		Author: HUANG	File Name: MT009-APP-RB
Date: 2023-05-16			
TEST:	Language:	Check: XIE	
A	English		
地址: 深圳市宝安区西乡九围强荣东工业区 A1 栋 3 楼 电话: 0755-27850514 传真: 0755-27850514 Shenzhen Xingtong Wieress Technology Co., Ltd			