CUSTOMER: xiaomi

AAC P/N: FA-ANT6-SZ0261

Antenna type： IFA Antenna

CUSTOMER P/N: M19A Antenna

CUSTOMER	APPROVER	CHECKER

AAC ACOUSTIC TECHNOLOGIES HOLDINGS INC.

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AAC ELECTRONICS CORP.	Product Specification	P/N	FA-ANT6-SZ0261
NO. 0	Issue:	Revision Date: 3/3/23	Page: 1/9

ME	张明	Check/Appr.	
Package Eng.			
RF	王建安	Check/Appr.	

Date	Issue	Detail changes
3/3/23	P1	Preliminary

Table of contents

1. Scope

This document contains required environmental,electrical characteristic, mechanical, package and reliability test requirements.

2. Environmental Requirement

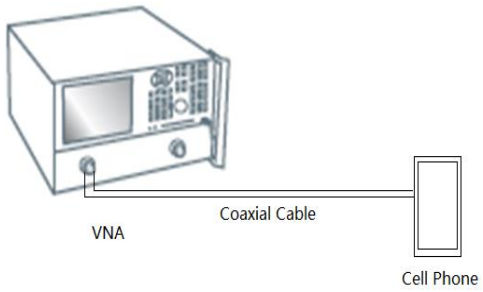
all components must be free from lead (Pb) and other banned or restricted substances according to customer's requirements.

3.Electrical Characteristic Measurement Method

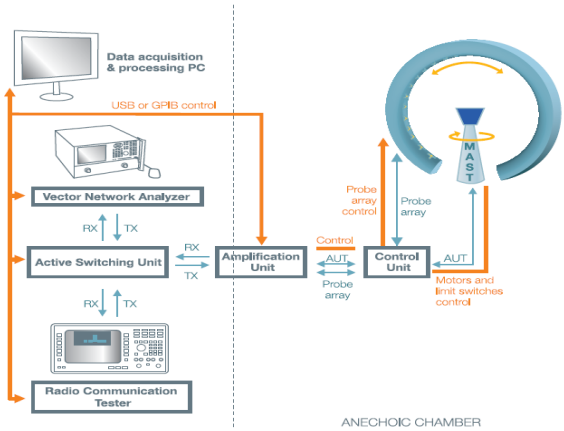
3.1 Measurement method

To measure the Return Loss and VSWR, Smith Chart, Vector Network Analyzer Agilent E5071C was used. Satimo SG24 Anechoic chamber was used to measure the Efficiency, Gain, TRP and TIS.

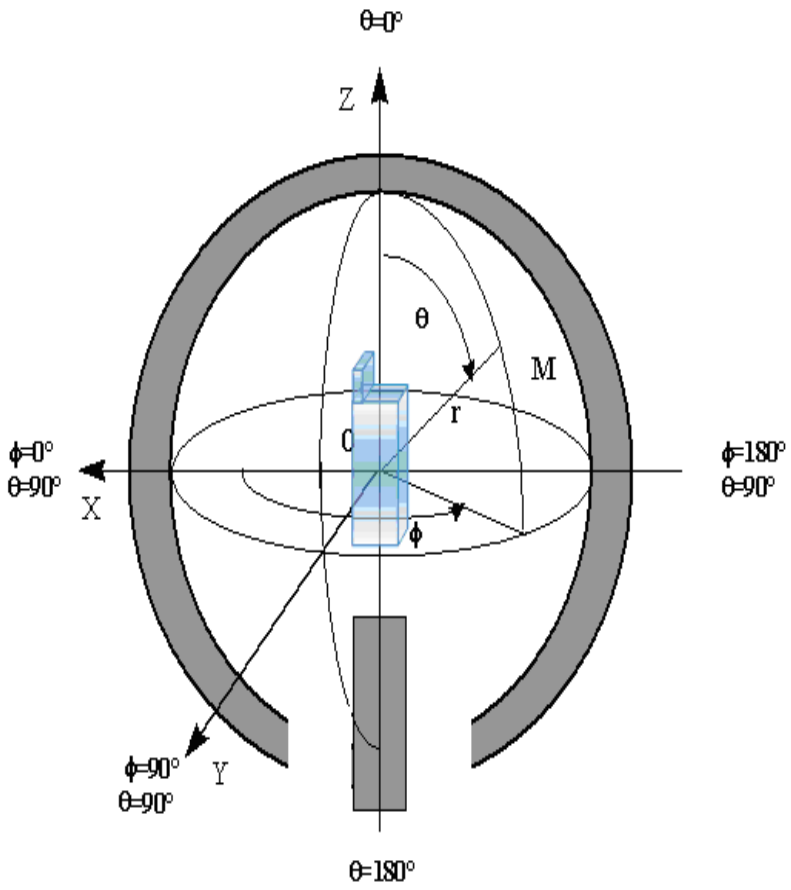
3.1.1Return Loss and VSWR



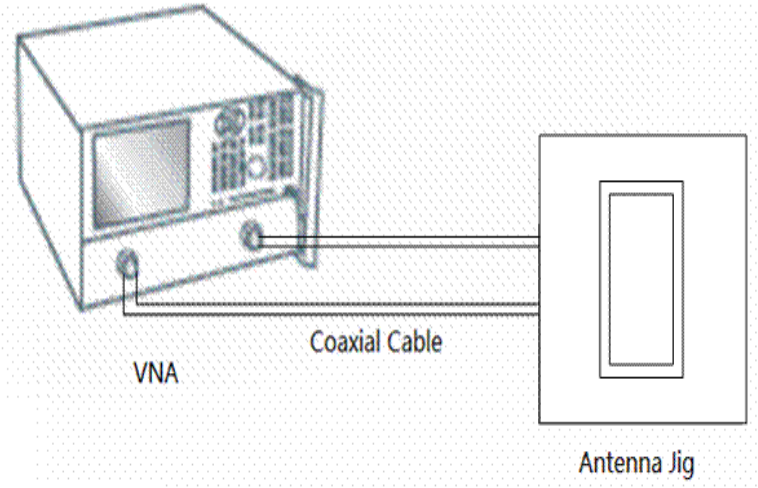
3.1.2 Efficiency, Gain, OTA measurement



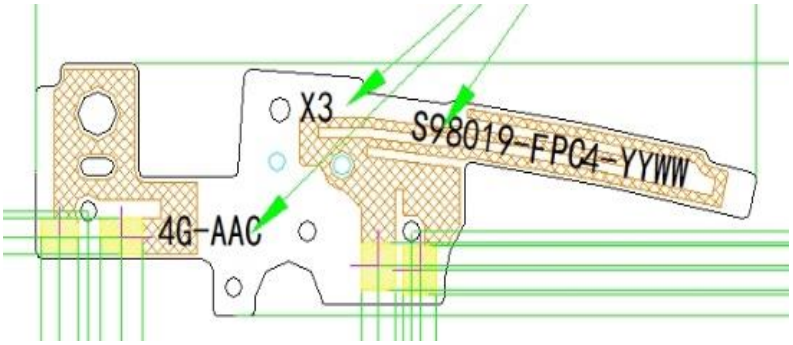
Phi=0deg Phi=90deg Theta=90deg



AAC designs a special S11 RF test jig for antenna test in mass production line.The antenna with average frequency in line is selected as reference antenna, and the results of the test jig is going to correlated to the performance in the real phone.

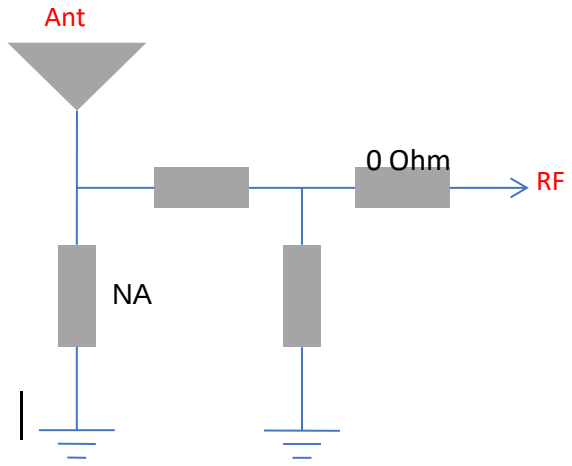


4.Pictures of prototype and antenna environment



GPS/WIFI

5.Matching Circuit



GPS/WIFI

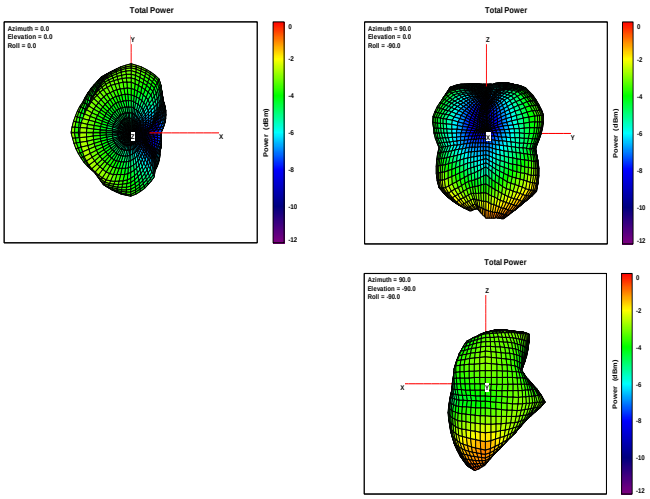
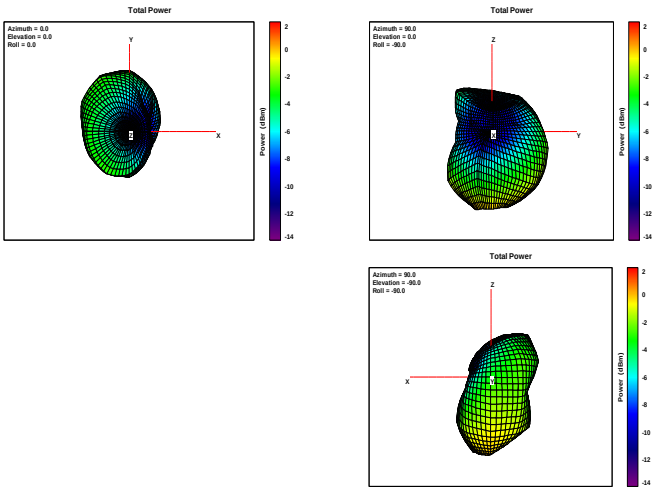
6.5 Efficiency

GPS/WIFI

Frequency/MHZ	Eff(%)	Eff(db)	Gain (dB)
1520	22%	-6.6	-5.6
1530	25%	-6.0	-5.0
1540	27%	-5.7	-4.8
1550	29%	-5.4	-4.4
1560	29%	-5.4	-4.3
1570	31%	-5.1	-4.0
1580	32%	-4.9	-3.9
1590	31%	-5.0	-4.0
1600	30%	-5.2	-4.0
1610	29%	-5.5	-4.2
1620	26%	-5.9	-4.6
2400	34%	-4.7	-3.7
2410	36%	-4.4	-3.7
2420	36%	-4.4	-3.8
2430	35%	-4.6	-3.8
2440	36%	-4.4	-3.7
2450	36%	-4.5	-3.8
2460	36%	-4.4	-3.9
2470	36%	-4.5	-3.7
2480	34%	-4.7	-3.7
2490	34%	-4.7	-3.7
2500	34%	-4.7	-3.6
5150	36%	-4.5	-3.6
5200	39%	-4.1	-3.6
5250	37%	-4.3	-3.9
5300	40%	-4.0	-3.9
5350	42%	-3.8	-3.9
5400	45%	-3.4	-3.9
5450	42%	-3.8	-3.8
5500	43%	-3.6	-3.8
5550	43%	-3.7	-3.9
5600	44%	-3.6	-3.9
5650	45%	-3.5	-4.0
5700	48%	-3.2	-4.0
5750	44%	-3.5	-4.3
5800	41%	-3.9	-4.4
5850	45%	-3.5	-4.3
5900	47%	-3.3	-4.3

6.4 Radiation Pattern

GPS&wifi ant

GPS	
WIFI	

7.Active Measurement Data

GPS/BT/WIFI ant

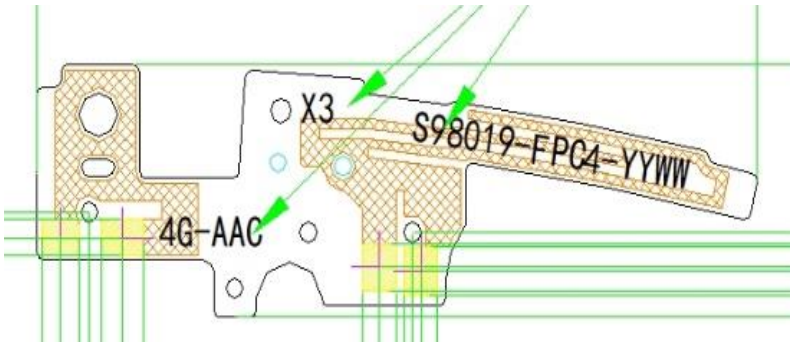
	信道	TRP	TIS
11A	44	12.3	-69.5
	60	12.5	-69.3
	157	12.8	-69.7
11G	1	12.5	-68.0
	6	13.0	-68.3
	11	12.5	-68.2
GPS	-151		

8. Antenna measurement spec on RF test jig

Test band	Reference frequency(MHz)	Spec(MHz)
GPS & WIFI	1636 / 1738	±15
	2930 / 3101	±25

9. Mechanical Layout and Dimensions

9.1 Antenna holder mechanical layout and dimensions



** RL spec presented in the table is only valid in AAC measurement condition. The measurement result can be different according to measurement conditions such as place, cable, tester and network analyzer etc. If the measurement condition is changed,make sure that reference frequency should be adjusted again by the provided reference antenna.