供方 LOGO

规 格 承 认 书
SPECIFICATION FOR APPROVAL

日期
DATE: 2025.4.8

版本
REV.: V1.0

客　　户
CUSTOMER: 德明通讯（上海）股份有限公司

客 户 料 号
CUSTOMER P/N:

品　　名
PART NAME: W3.0-BT/WIFI Antenna

供 方 料 号
SUPPLIER P/N:

送样日期 **Date:**　　送样数量 **Q'TY:**　　**Pcs**

客户确认 CUSTOMER APPROVED BY		
工程研发部	生产采购部	承认
ENGINEER R&D DEPT	BUSSINESS DEPT	APPROVED BY

供方确认 SUPPLIER SIGNATURE		
研发部	工程部	批准
ENGINEER R&D DEPT	ENGINEER R&D DEPT	APPROVAL

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1. RF Fixture Experiment

1.1Test Setup

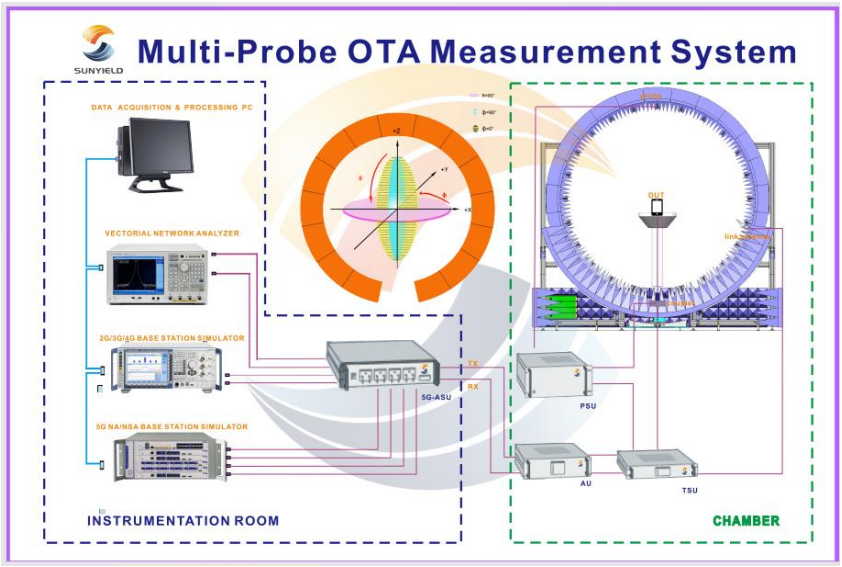
1.1.1 VNA Test Setup

VSWR and Return Loss measurements (S11) were performed using an KeySight E5071C Network Analyzer. The isolation between antennas is also teste. The testing was performed with apparatus in free space.

1.1.2 Anechoic Chamber Test Setup

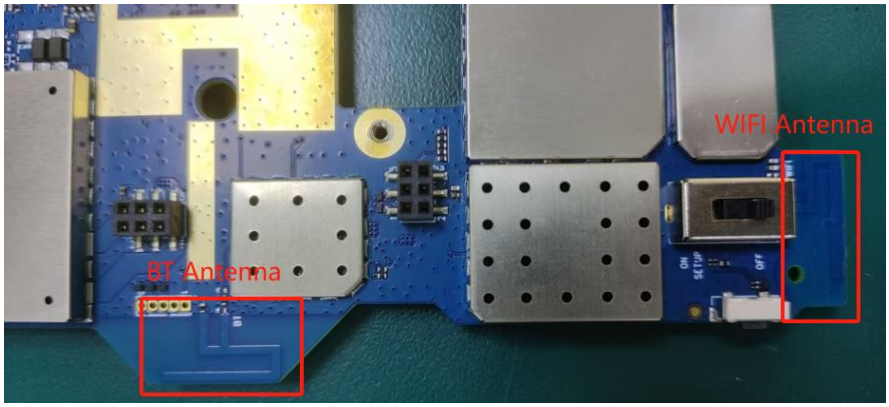
When we test Gain and Efficiency of the antenna, we will use the Multi-Probe OTA Measurement System 3D chamber.

The chamber provides test frequency from 400MHz to 6GHz.The real test environment is showing as following picture



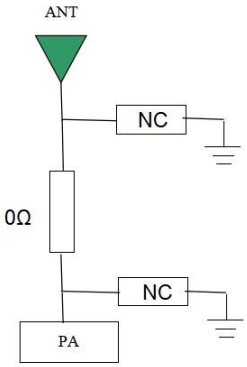
1.2 UE configuration

1.2.1 Antenna location pictures



On the left is the BT antenna, On the right is the WIFI antenna.

1.2.2 RF matching for different antennas

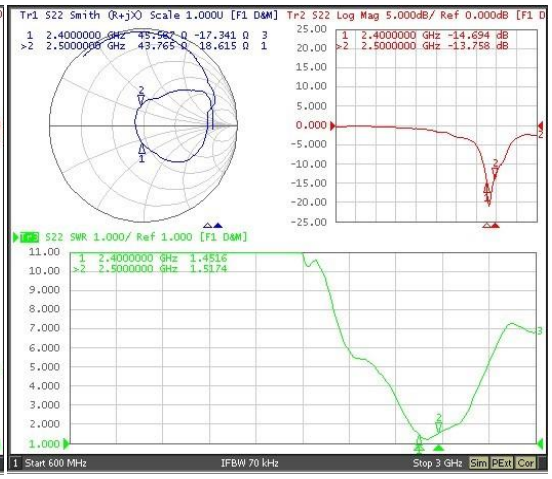


2. Test Result

2.1 Passive Test Result(S parameters)

WIFI Antenna

BT Antenna



WIFI Antenna		
frequency(MHz)	gain(dBi)	efficiency(%)
2400	2.31	57.42
2410	2.58	58.99
2420	3.3	66.08
2430	3.39	66.94
2440	3.2	64.15
2450	3.03	65.74
2460	3.07	67.2
2470	2.94	67.83
2480	2.89	67.6
2490	2.96	68.77
2500	2.87	67.77

BT Antenna		
frequency(MHz)	gain(dBi)	efficiency(%)
2400	2	57.32
2410	1.55	52.22
2420	2.07	58.37
2430	2.56	65.83
2440	2.19	61.43
2450	1.91	59.85
2460	2.03	62.7
2470	2.15	66.53
2480	2.26	69.83
2490	1.88	66.96
2500	1.59	65.32