

规格承认书

SPECIFICATION FOR APPROVAL

日期
DATE: 2023.01.06

版本
REV.: V2.0

客 户
CUSTOMER: 惠达

客 户 料 号
CUSTOMER P/N:

品 名
PART NAME: HD401 (双频外置高增益 WIFI-2 209mm)

供 方 料 号
SUPPLIER P/N: N12-7070-R0A

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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Revised History

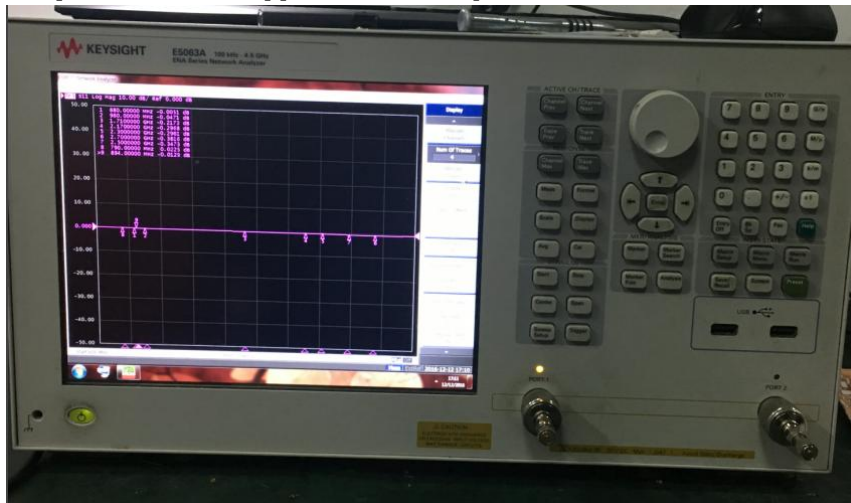
[illegible]

1. RF Fixture Experiment

1.1 Test Setup

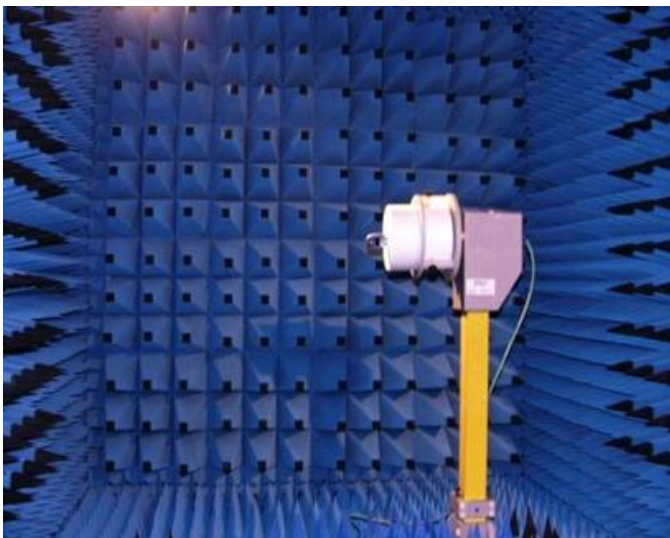
1.1.1 VNA Test Setup

VSWR and Return Loss measurements (S_{11}) were performed using an Keysight E5071C Network Analyzer. The isolation between antennas is also tested. The testing was performed with apparatus in free space.



1.1.4 Anechoic Chamber Test Setup

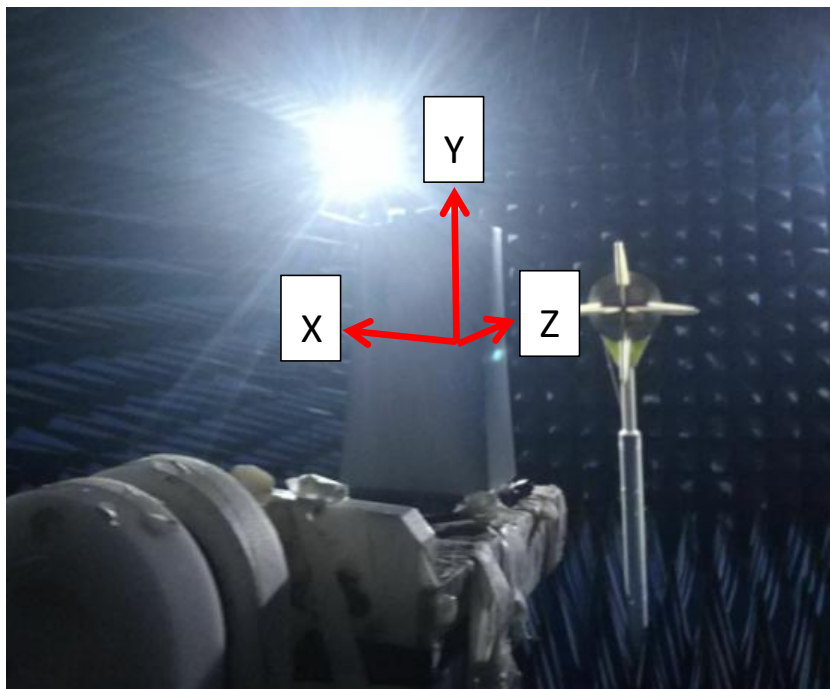
When we test Gain and Efficiency of the antenna, we will use the ETS 3D chamber. The chamber provides test frequency from 400MHz to 6GHz. The real test environment is showing as following picture



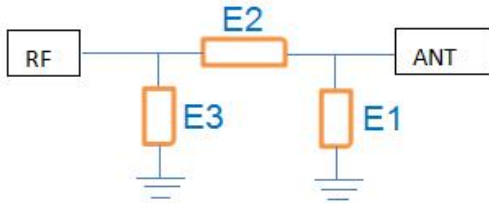


1.2 UE configuration

1.2.1 Antenna location pictures



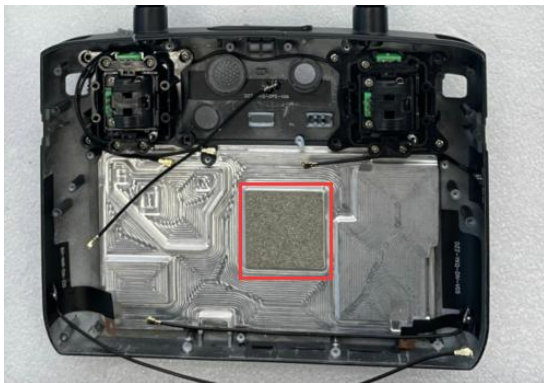
1.2.2 RF matching for different antennas



E1(0201)	NA
E2(0201)	0 欧姆
E3(0201)	NA

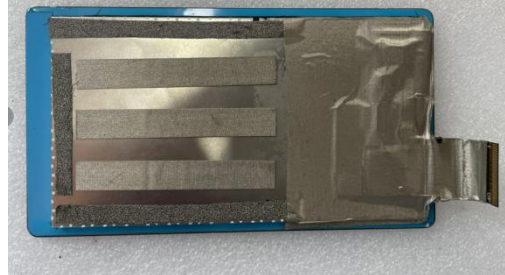
1.2.3 Environmental treatment

导电绒接主板地

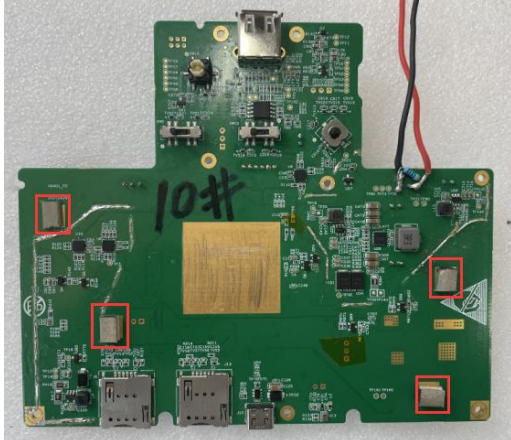


屏幕排线用导电布包住

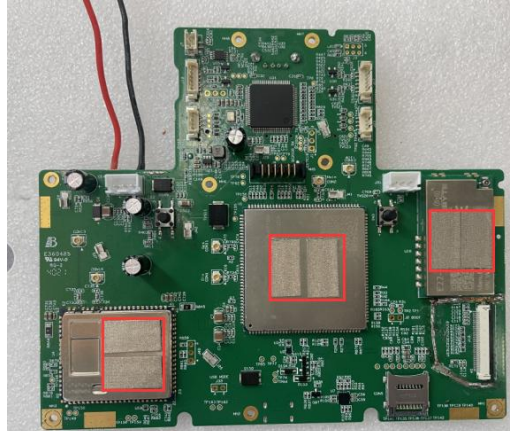
屏幕金属背板用导电泡棉接住金属框

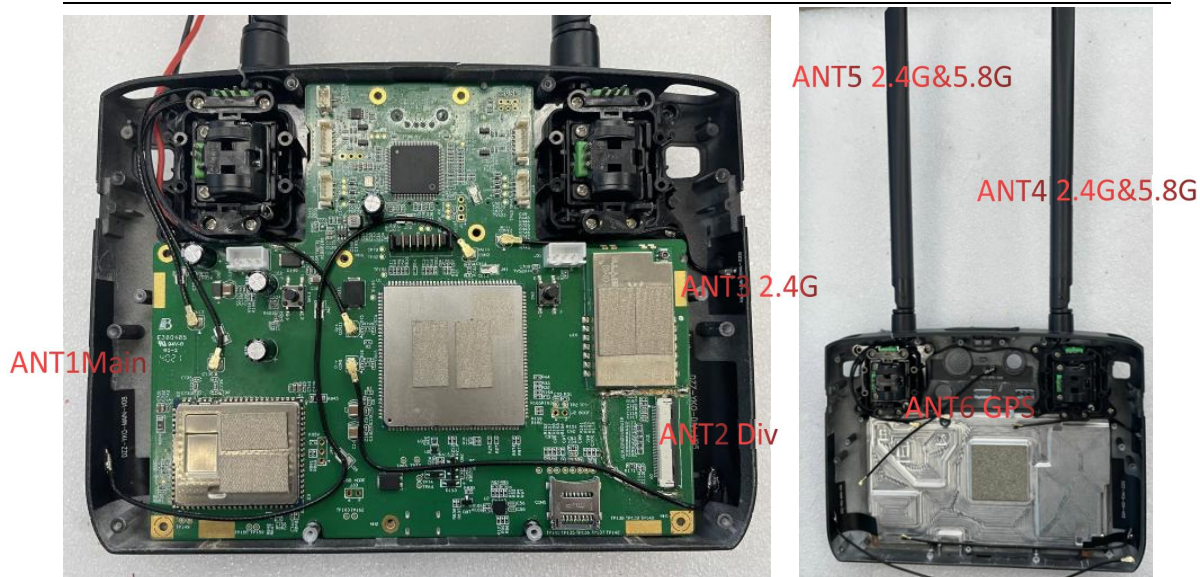


主板背面用四个导电泡棉与金属框接地处理



主板正面用三个导电泡棉与金属散热片接地处理

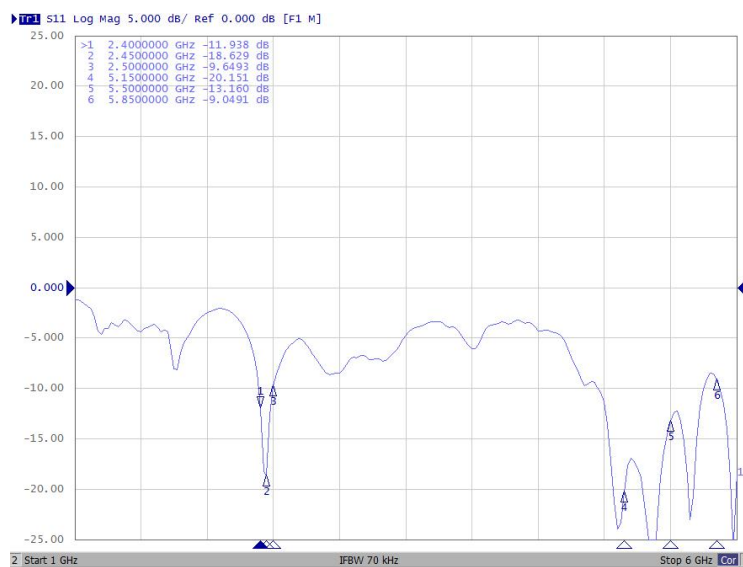




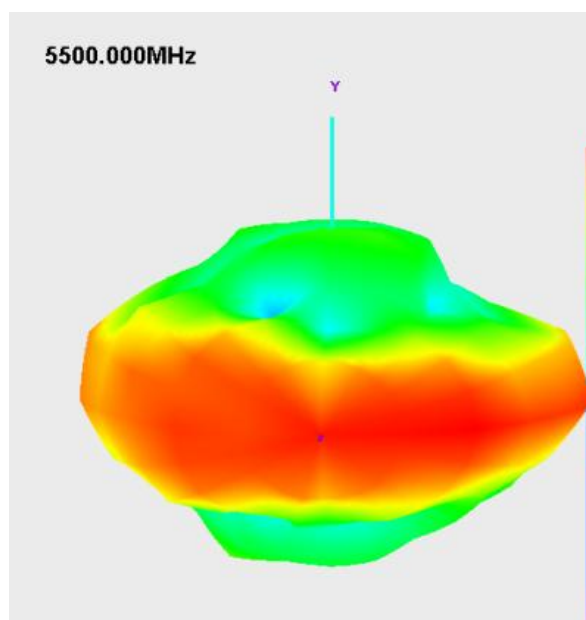
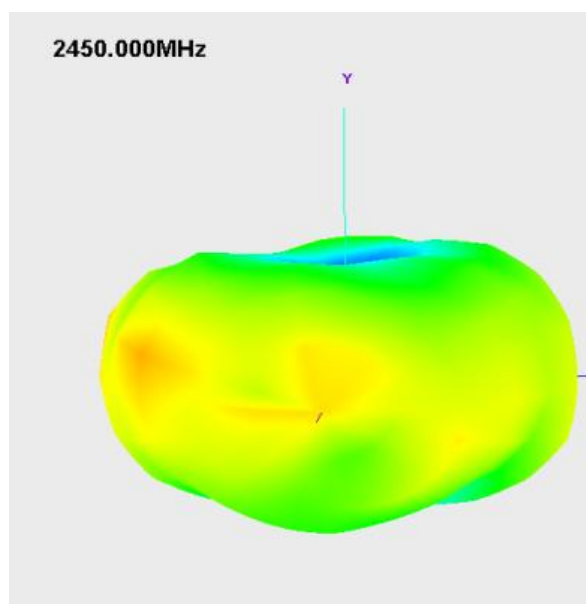
2. Test Result

2.2 Passive Test Result(S parameters)

S11



3D



Efficiency

Frequency (MHz)	Gain (dB)	Efficiency (%)
2400	4.85	59.44
2410	4.88	60.33
2420	4.97	61.65
2430	4.87	60.96
2440	4.50	58.33
2450	4.57	57.53
2460	4.63	57.07
2470	4.71	56.39
2480	4.71	55.60
2490	4.82	56.58
2500	4.74	55.97
5100	4.67	57.08
5140	4.37	55.96
5180	4.18	53.48
5220	4.87	54.68
5260	5.18	54.85
5300	5.24	53.94
5340	4.98	53.24
5380	4.81	51.50
5420	4.99	50.17
5460	5.01	54.12
5500	5.27	55.18
5540	5.12	52.83
5580	5.09	50.35
5620	5.31	48.96
5660	4.71	50.70
5700	5.21	53.77
5740	5.20	53.25
5780	5.25	50.79
5820	4.84	51.31
5860	4.90	53.61
5900	4.95	52.24

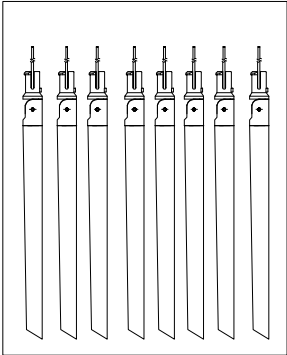
由 Autodesk 教育版产品制作

版本: A	
成品名称 : 外置天线	

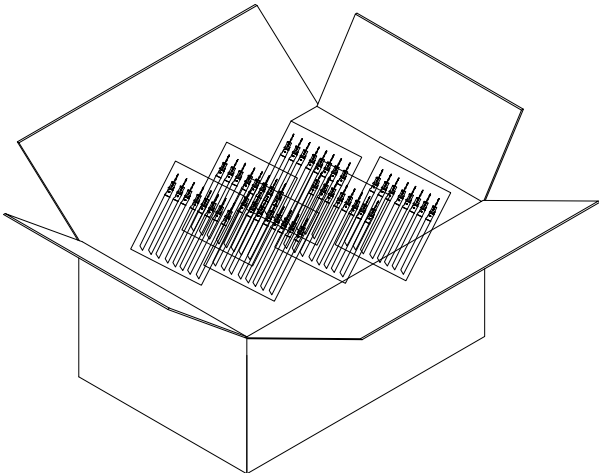
一: 成品天线



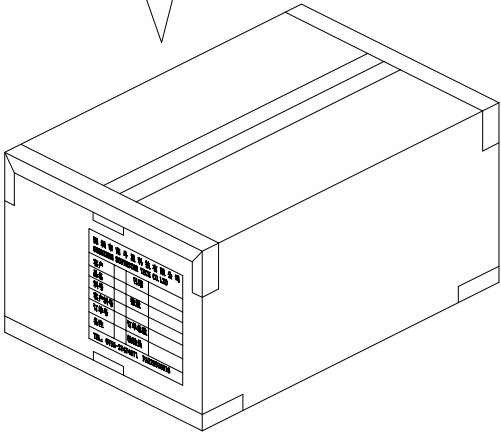
二: 用PE袋装起来



四: 装一箱, 以实际包装为准



五: 封箱, 外箱贴我司生产标签和 ROHS 标签.



批准: _____

确认: 冯惠平

拟制:田进