



深圳市南斗星科技有限公司
SHENZHEN SOUTHSTAR CO., LTD

ADD: 1606/C6, Hengfeng Industry Building
Baoan District, ShenZhen, China
TEL: 86-755-27474071 FAX: 86-755-29976316
Email: liangshengsam@yahoo.com.cn

规格承认书

SPECIFICATION FOR APPROVAL

日期
DATE: 2020. 03. 20

版本
REV.: V01

客 户
CUSTOMER: 德明通讯（上海）有限公司

客 户 料 号
CUSTOMER P/N:

品 名
PART NAME: MM27-19 (BT)

供 方 料 号
SUPPLIER P/N: W01-0584-R0A

送样日期 **Date:** 送样数量 **Q'TY:** 5 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

Index

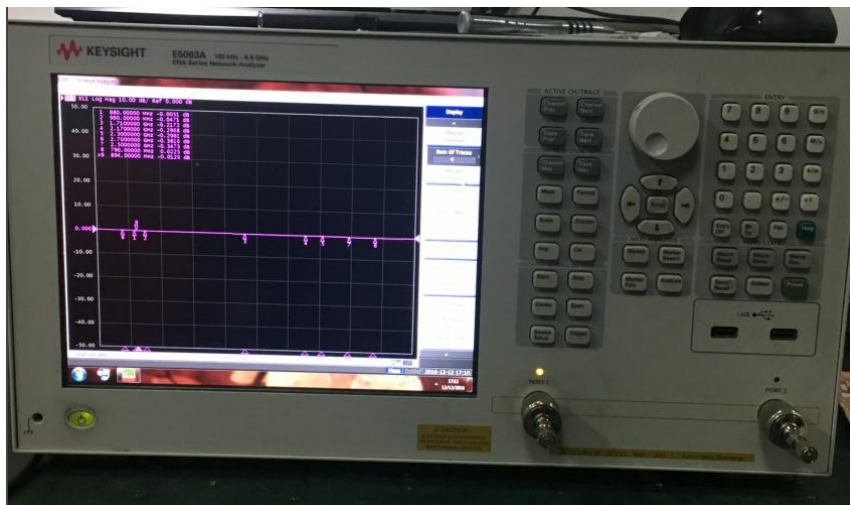
1. RF Fixture Experiment.....	3
1.1 Test Setup.....	3
1.2 UE configuration.....	5
2. Test Result.....	6
2.2 Passive Test Result(S parameters).....	7-13
2.3 Active Test Result(TRP TIS).....	14
3. Mechanical instruction.....	15
4. Packing.....	16

1. RF Fixture Experiment

1.1 Test Setup

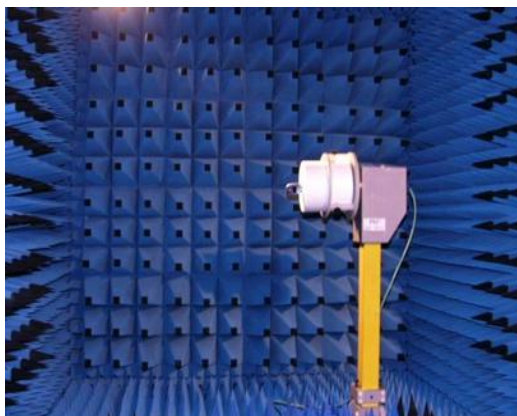
1.1.1 VNA Test Setup

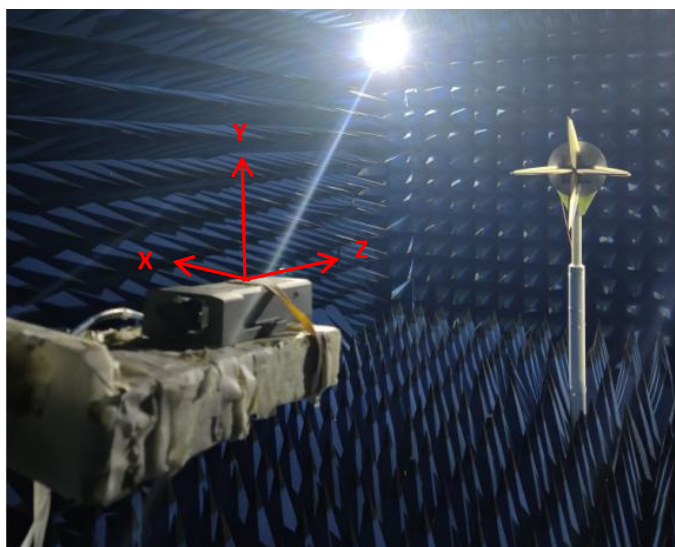
VSWR and Return Loss measurements (S11) were performed using an Keysight E5071C Network Analyzer. The isolation between antennas is also tested. The testing was performed with apparatus in free space.



1.1.2 Anechoic Chamber Test Setup

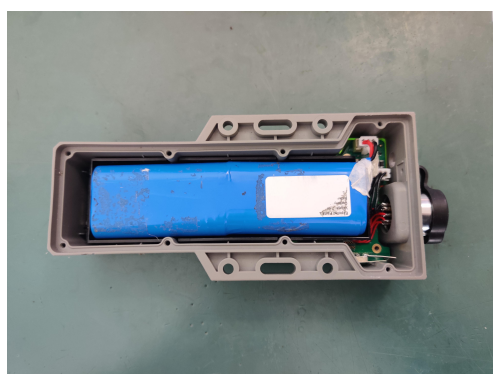
When we test Gain and Efficiency of the antenna, we will use the ETS 3D chamber. The chamber provides test frequency from 400MHz to 6GHz. The real test environment is showing as following picture





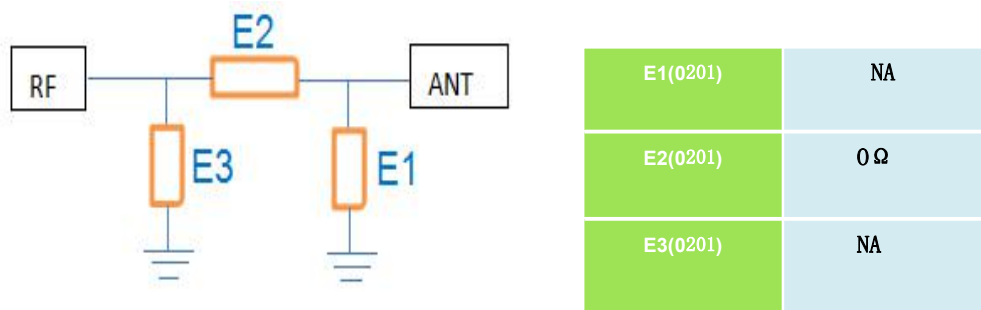
1.2 UE configuration

1.2.1 Antenna location picture



1.2.2 RF matching for different antennas

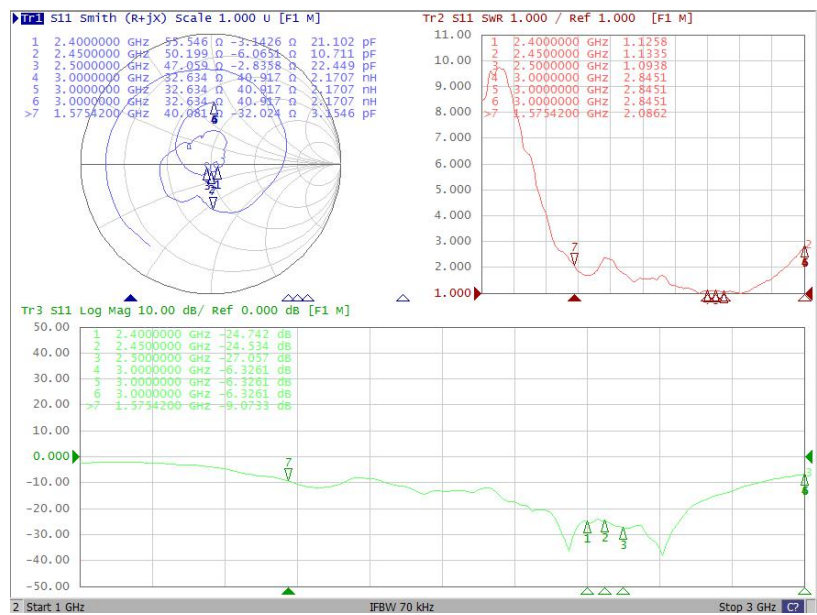
LTE



2. Test Result

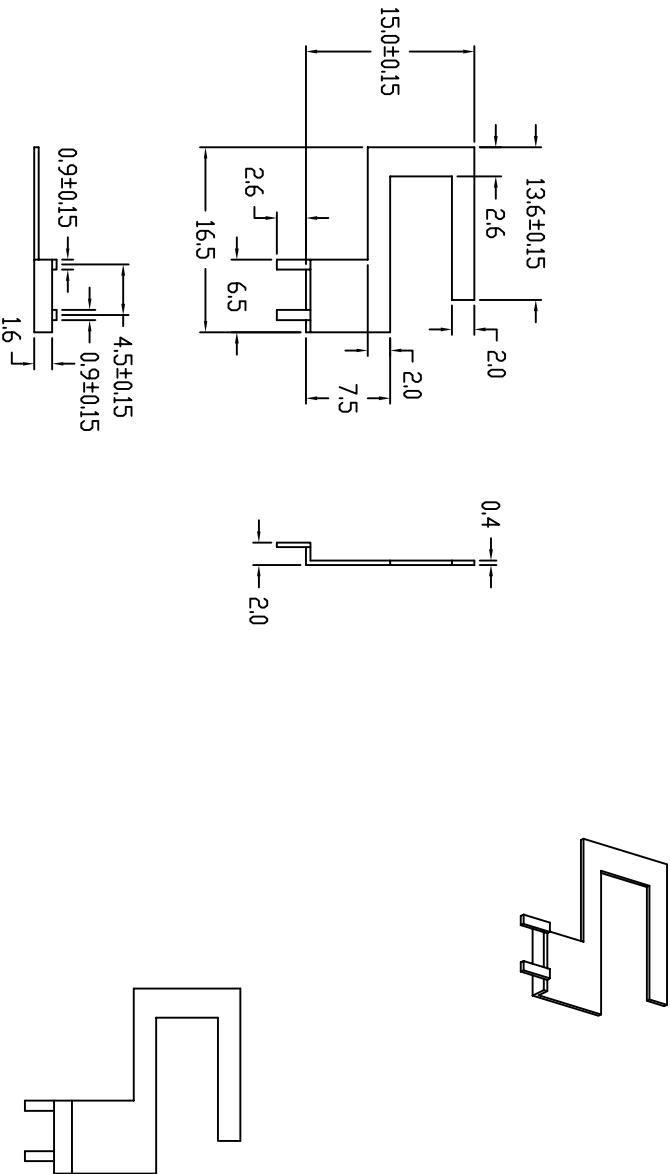
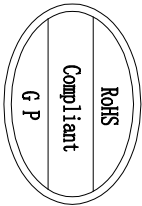
2.2 Passive Test Result(S parameters)

BT Antenna-S11



BT Antenna Effi

Freq (MHz)	Effi (%)	Gain (dBi)
2400	51.84	1.45
2410	53.44	1.44
2420	57.07	1.72
2430	56.92	1.65
2440	54.34	1.34
2450	52.7	1.82
2460	54.42	1.59
2470	57.29	1.19
2480	58.51	1.28
2490	57.58	1.21
2500	56.92	1.02



备注:

1. 材料: 不锈钢(SUS304) 镀镍, T=0.4; 字体和标识为钢印
- . 安规要求: ROHS
- . 品质要求按照南斗星《IQC进料检验规范》执行

1. 材料: 不锈钢(SUS304) 镀锌, T=0.4; 字体和标识为钢印																
· 安规要求: ROHS																
· 品质要求按照南斗星《IQC进料检验规范》执行																
D					深 圳 南 斗 星 科 技 有 限 公 司											
					SHEN ZHEN SOUTHSTAR CO., LTD											
					Third Angle		Project	MM27	Date	2020.3.7						
					0~10 ±0.05	○	0.02	Part Name	钢片天线	Designed by						
					10~18 ±0.10	◎	0.03	Part No.	W01-0584-R0A	MD	张小东					
					18~30 ±0.12	⊥	0.02	Material	SUS304	Checked by	RF	毛惠涛				
	A	New drawing			30~40 ±0.15	∇	0.04									
					40~	±0.20	Angle						±0.5°			
	Rev	Description	Date	Remark	Location	N/A		DWG No.	W01-0584-R0A	Approved by	Unit	mm	Scale	1:1	Rev	A
		1	2	3	4	5	6	7	8							

日期: 2020.03.19

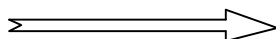
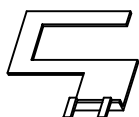
page: 1 of 1

成品名称：MM27钢片天线

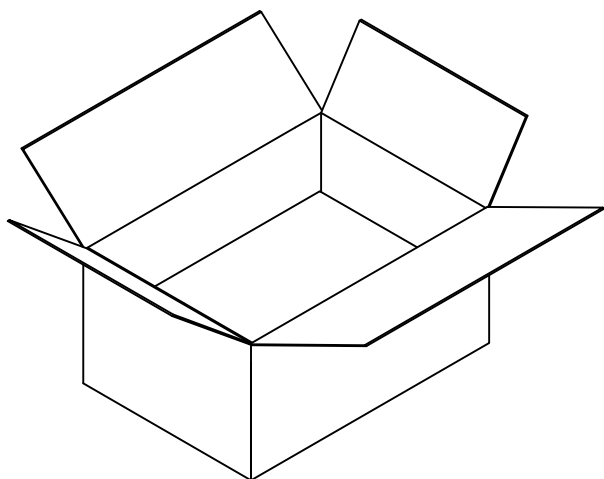
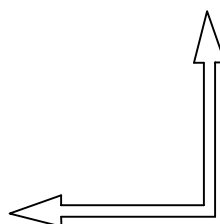
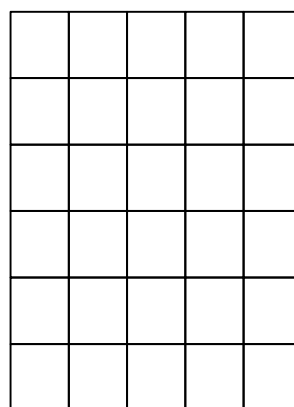
版本: A

客戶：德明

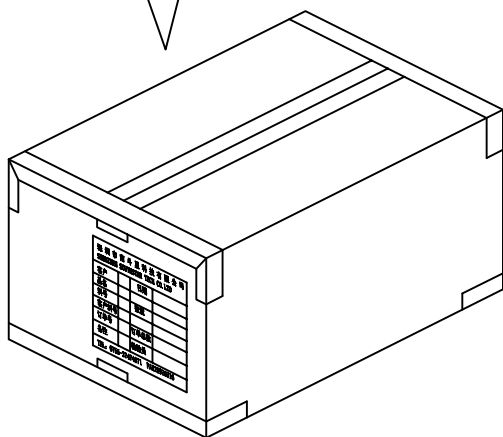
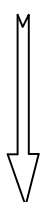
一：WIFI成品天线



二：用吸塑盘包装



三：装一箱，以实际包装为准



四：封箱,外箱贴我司生产标签和ROHS标签.

批准:

确认: 拟制:

拟制: 张小东

张小东