深圳市国质信网络通讯有限公司
ShenZhen NQI network communication ltd

Parts Approval Sheet

Supplier：

NQI:

Type/Spec： **TMK007-01**

Parts No **NQI-W3PRO-BA304X-ASM-V0**

Brand： NQI

Quantity

Send out Date： 2023/12/11

Document No：**NQI-RD-SPEC-20231208**

Approve Date：

样品版本： V0

Parts Name： **WIFIAntenna**

Supplier		Customer	
Approved By	Prepared By	Engineering Dept	Quality Dept

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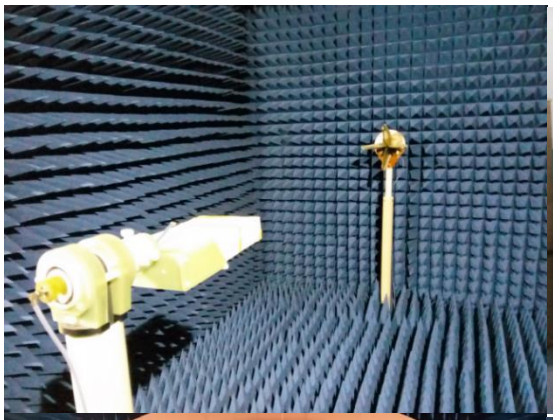
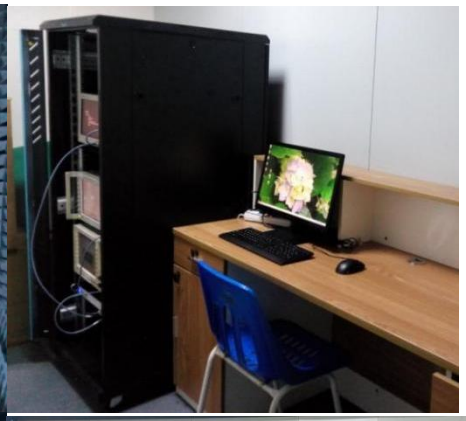
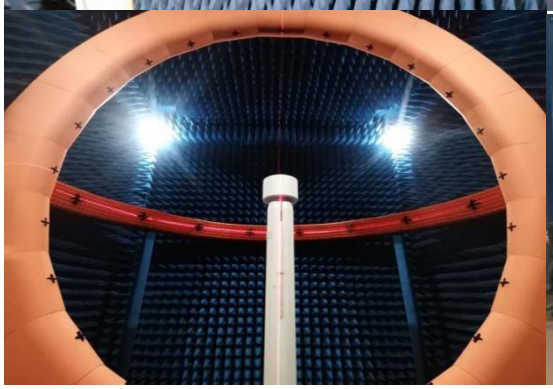
一. Samples and instructions：

二. Whole machine image：

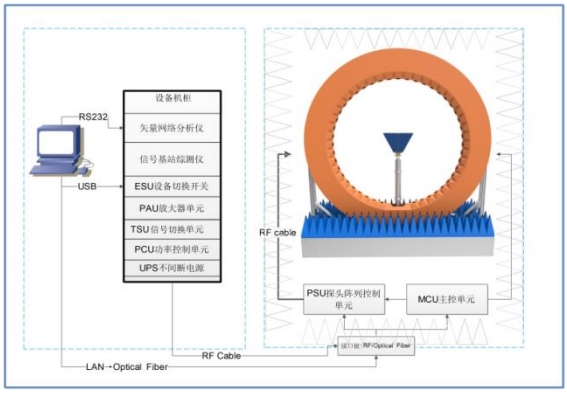
三. Testing equipment and projects：

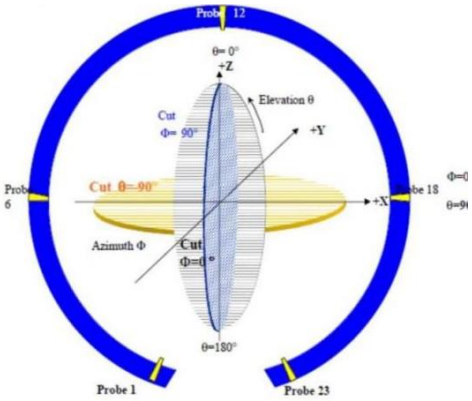
Class	Test item	Equipment
1. Sparameter	1. RL 2. VSWR 3.Smith chart	VNA: Agilent E5071B R&S ZVB8 Protek A333
2. Coupling testing	1. MAX Power 2. MIN Sens	1.2G/3G Tester： Agilent 8960 2.The coupling box：TESCOM TC-5060A 3.3D Chamber：ETS3D Chamber（5x3x3 ）
3. 3D Passive Test	1. Effeciency 2. Gain 3.radiation pattern	1. 3D Chamber：TEM24 3D Chamber（5x5x5） ETS3D Chamber（5x3x3）

		2. VNA：Agilent E5071B R&S ZVB8
3. 3DActive Test	1. 3D TRP 2. 3D TIS 3.Throughput rate	1. 3D Chamber：TEM24 3D Chamber（5x5x5） ETS3D Chamber（5x3x3） 2.2G/3G Tester: Agilent 8960 3.4G Tester：MT8820C/CMW500 4.WIFI/BT/NB-iot Tester：CMW500 5.5G Tester：SP9500-CTS 6.Head：HEAD-P10（FACE-P10）

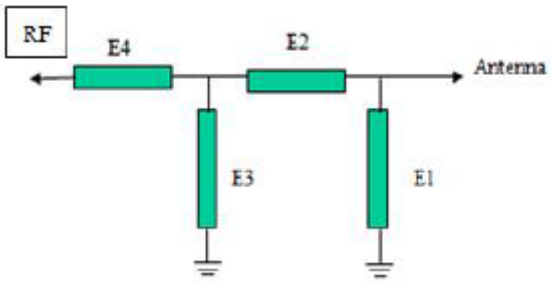





四. Chamber connection and coordinates：

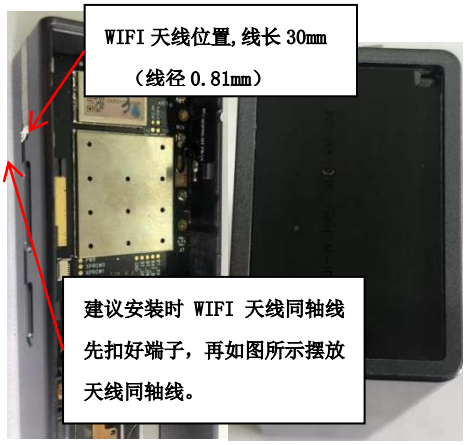




五. Antenna matching network：



六.Antenna assembly method and environmental treatment：

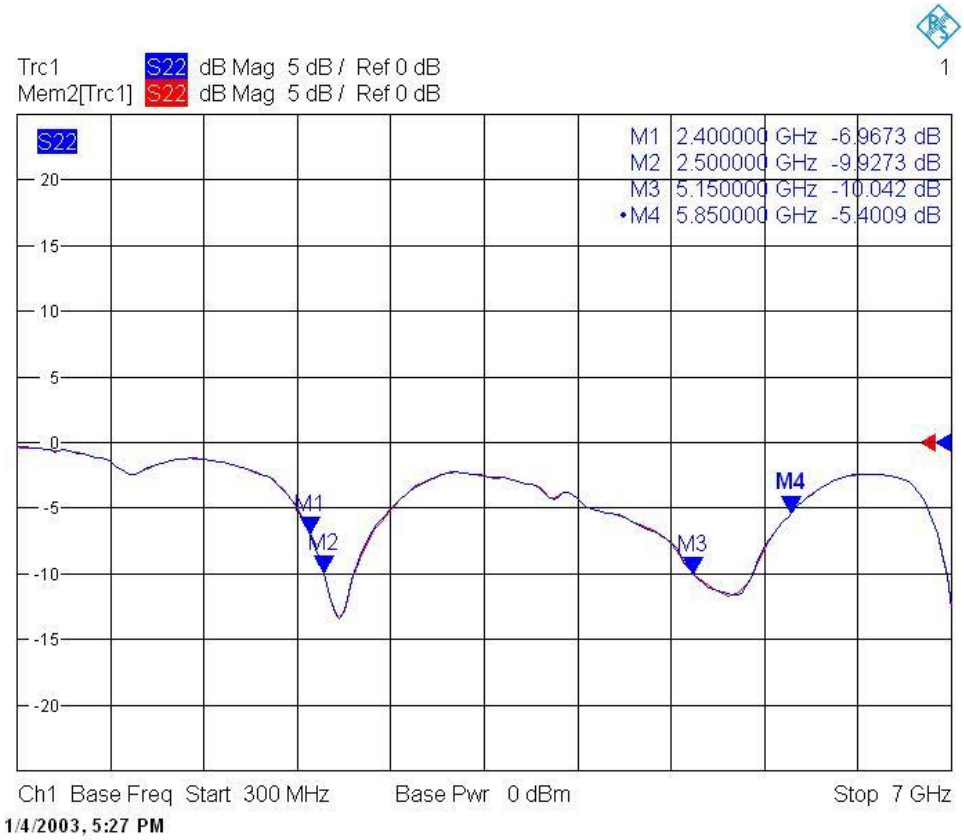


七. Antenna electrical performance test data：

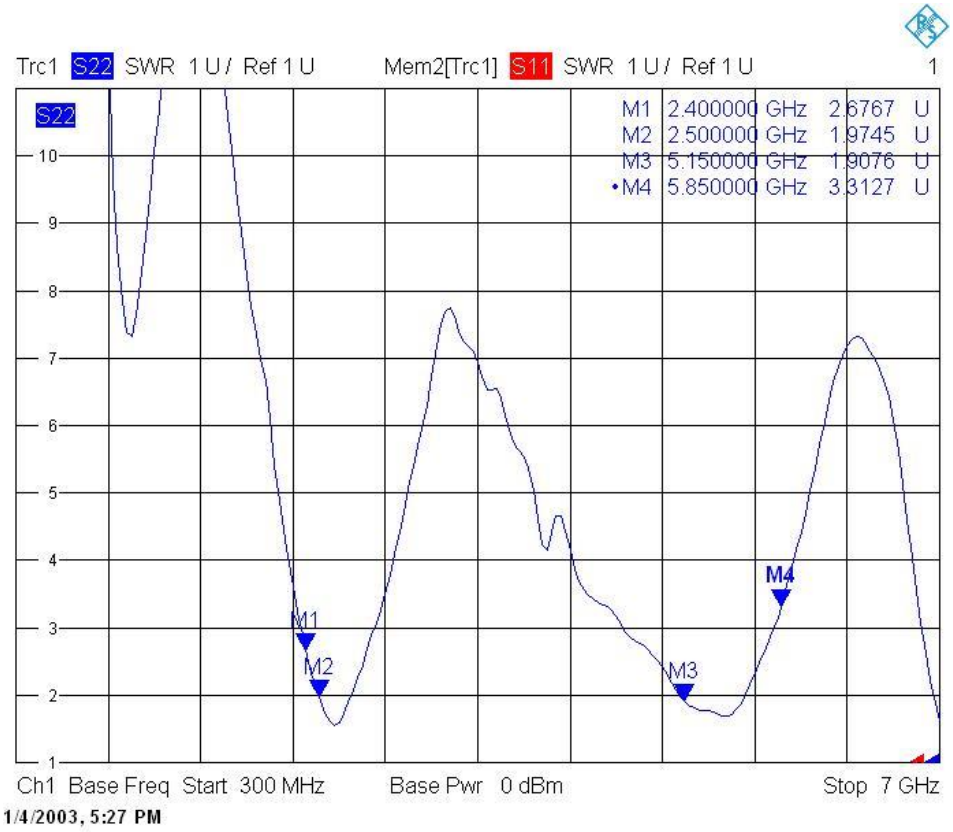
7.1. Passive parameters of antenna

7.1.1. Antenna Return Loss (RL)/Standing Wave Ratio (VSWR)

RL



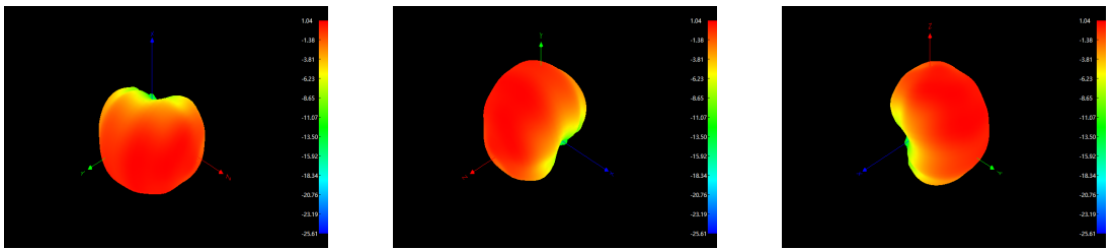
VSWR



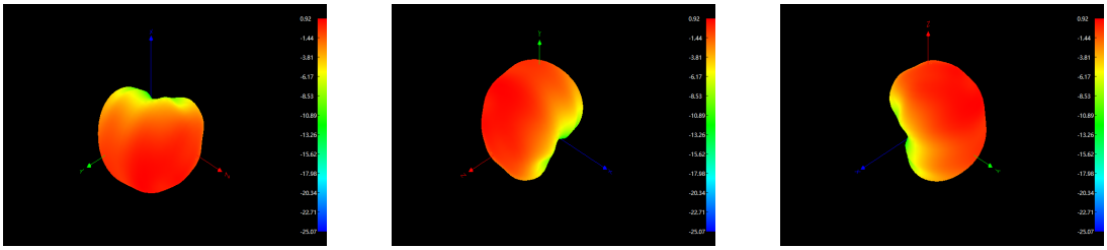
7.1.2. Antenna efficiency/gain/pattern

Freq (MHz)	Effi (%)	MAXGain (dBi)	Freq (MHz)	Effi (%)	MAXGain (dBi)	Freq (MHz)	Effi (%)	MAXGain (dBi)
2400	41.02	0.04	5250	32.66	-0.02	5570	54.95	1.4
2410	40.93	0.28	5270	31.92	0.05	5590	53.58	1.33
2420	41.59	1.14	5290	32.51	0.23	5610	49.66	0.9
2430	39.54	-0.36	5310	34.04	0.42	5630	49.66	0.76
2440	42.07	1.27	5330	38.19	0.73	5650	45.29	2.4
2450	40.46	-0.08	5350	35.89	0.93	5670	41.59	0.96
2460	36.64	-0.51	5370	39.81	1.35	5690	44.06	0.42
2470	35.56	0.62	5390	40.36	0.94	5710	47.1	0.97
2480	36.06	-0.39	5410	42.36	1.24	5730	48.19	0.57
2490	38.02	-0.37	5430	39.72	1.29	5750	49.09	0.87
2500	35.08	0.83	5450	42.07	1.01	5770	52.97	0.31
5150	39.54	0.62	5470	42.27	1.14	5790	49.32	0.6
5170	37.15	0.26	5490	42.36	0.14	5810	46.34	0.31
5190	35.97	0.3	5510	47.53	0.78	5830	46.56	0.38
5210	35.24	0.13	5530	49.2	0.86	5850	39.9	0.74
5230	31.77	-0.17	5550	52.84	0.29			

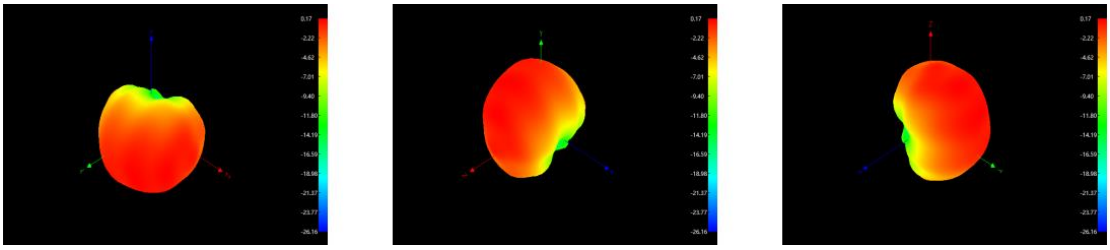
2400MHZ



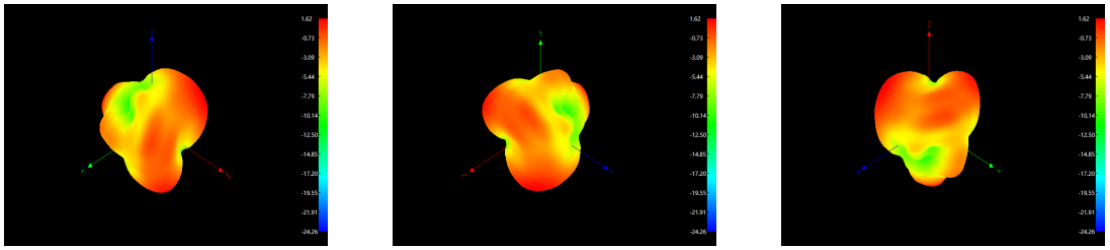
2450MHZ



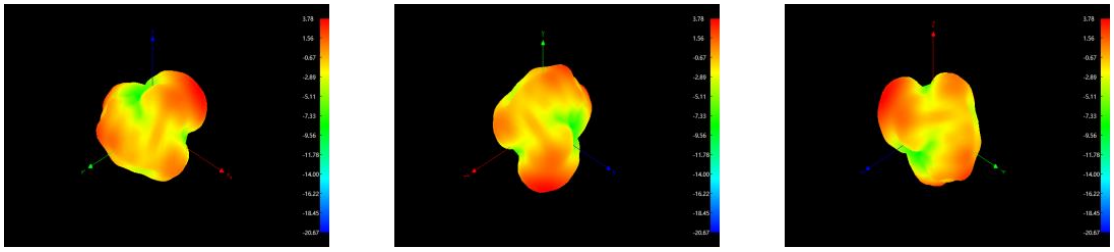
2500MHZ



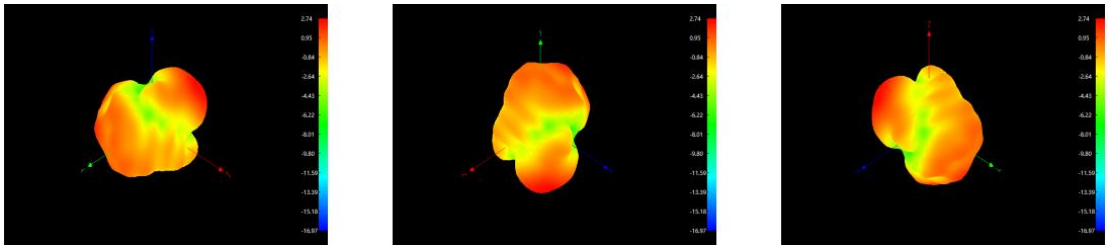
5150MHZ



5510MHZ



5850MHZ



7.2 Antenna active parameters

7.2.1.TRP/TIS

BAND	WIFI-B (11b) 20M		
CHANNEL	1	6	11
TRP(dBm)	13.29	13.02	13.33
Standards TRP	13±2		
TIS(dBm)	-84.98	-83.91	-84.16
Standards TIS	-84±2		
BAND	WIFI-A (11a) 54M		
CHANNEL	36	149	165
TRP(dBm)	12.08	12.16	12.29
Standards TRP	12±2		
TIS(dBm)	-72.37	-72.06	-70.94
Standards TIS	-71.5±2		
BAND	WIFI-A (11a) 6M		
CHANNEL	36	149	165
TRP(dBm)	12.17	13.18	13.15
Standards TRP	12.5±2		
TIS(dBm)	-89.91	-89.58	-88.01
Standards TIS	-88.5±2		

7.2.2. Conduction test

BAND	WIFI-B (11b) 20M		
CHANNEL	1	6	11
TX	17.3	17.5	17.53
RX	-88	-87	-88
BAND	WIFI-A (11a) 6M		
CHANNEL	36	149	165
TX	12.6	13.82	13.91
RX	-90	-91	-93

Note: Line loss set to 0DB

八. Antenna structure drawing: