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

JiangYuan

Parts Approval Sheet

Supplier： NQI network　　**Parts Name：** WIFI（2.4/5.8G）&BT

Type/Spec： NQI-1042H-240X　　**Parts No:**

Brand： NQI　　**Quantity：** 3

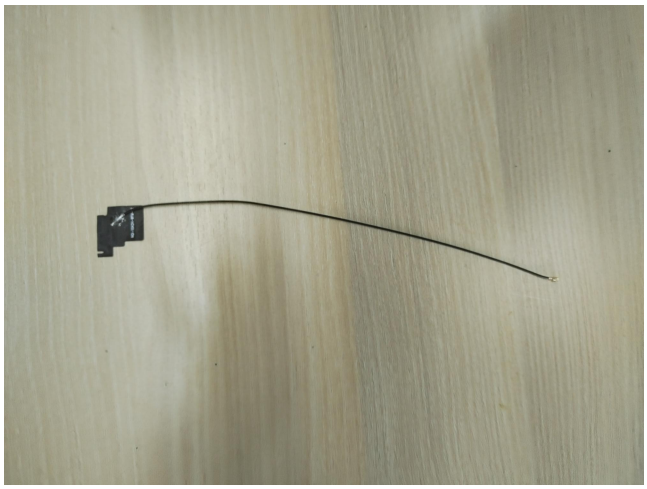
Send out Date： 2022/05/31　　**Document No：**

Approve Date：　　**Version：**

Supplier		Customer	
Approved By	Prepared By	Engineering Dept	Quality Dept
	深圳市国质信网络通讯有限公司 工程专用章		

供应商地址：深圳市龙岗区平吉大道 66 号康利城 7 栋 103 号

List of specifications



Cell phone pictures

1.Electrical Specifications

Frequency range	（2400-2500,5150-5850）MHz
impedance	50 ohm
VSWR	≤3.0
power capacity	2W
Polarization	level
Radiation direction	omnibearing

2.mechanical parameter

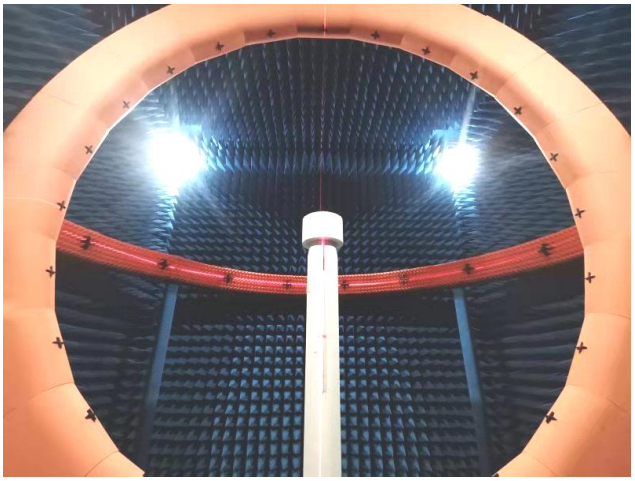
Cable length	240mm
coaxial-cable	1.13 black line
connection type	IPEX 1 generation

3.Working/Storage temperature

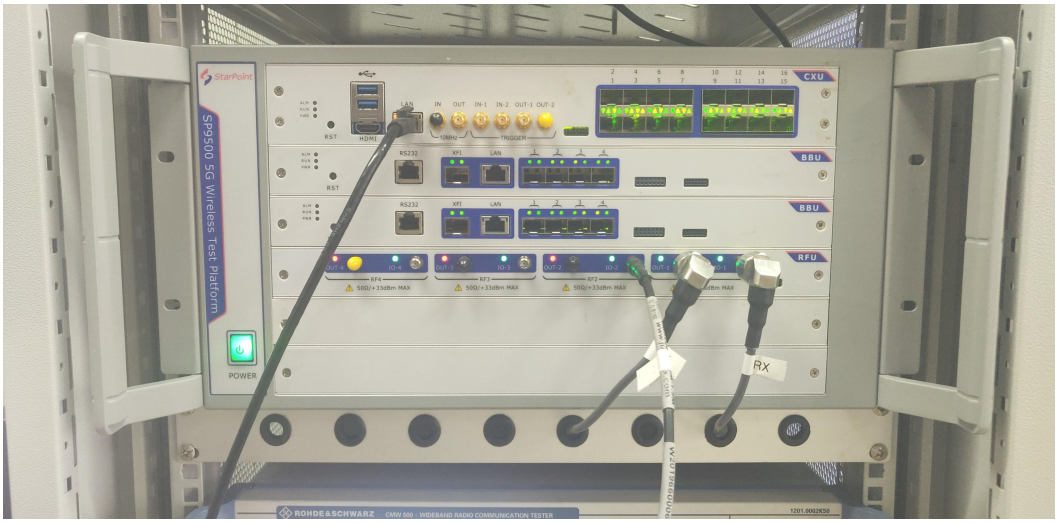
Working temperature	-30℃～65℃
Storage temperature	-30℃～75℃

4.Test equipment

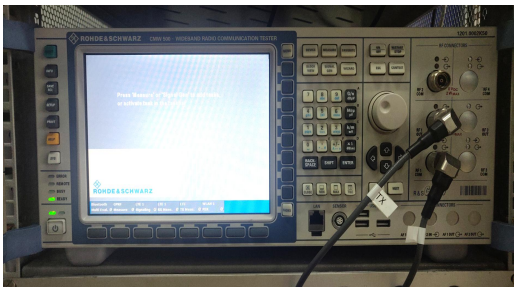
TEMRADIO 24 chamber



5G SP9500

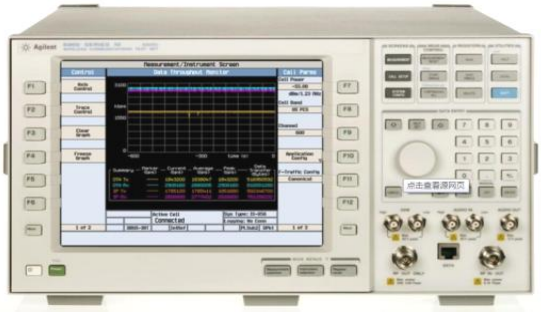


2G/3G/4G/NB/WIFI/BT CMW500

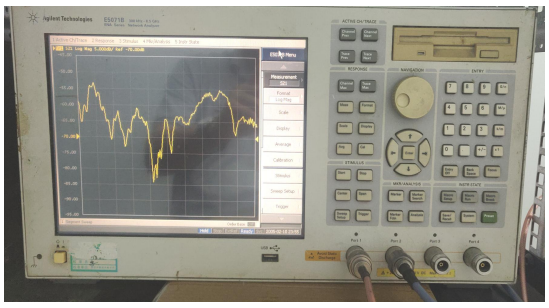


2G/3G/4G MT8820C

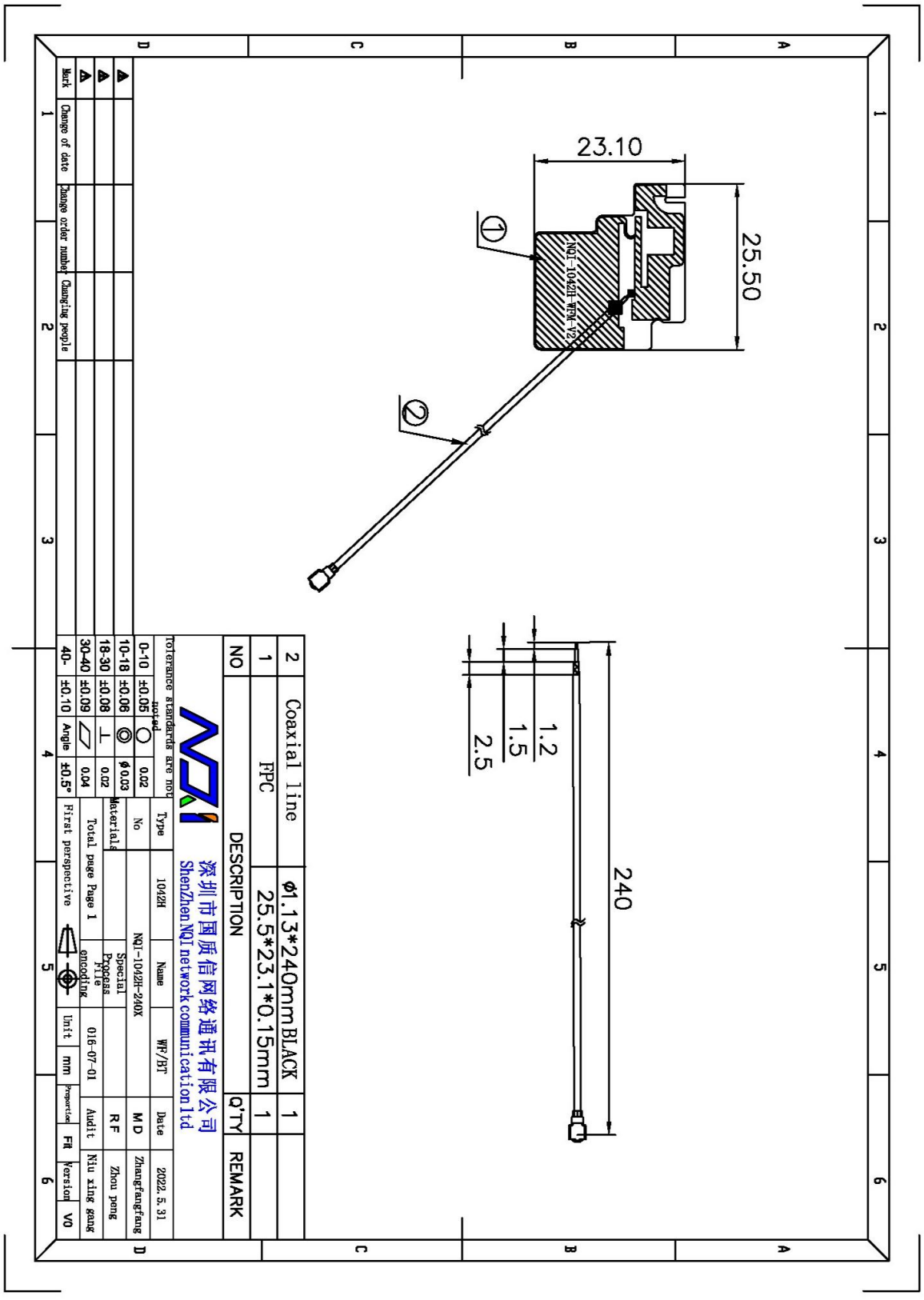
E5071B 8G



2G/3G 8960



5. Antenna structure drawing

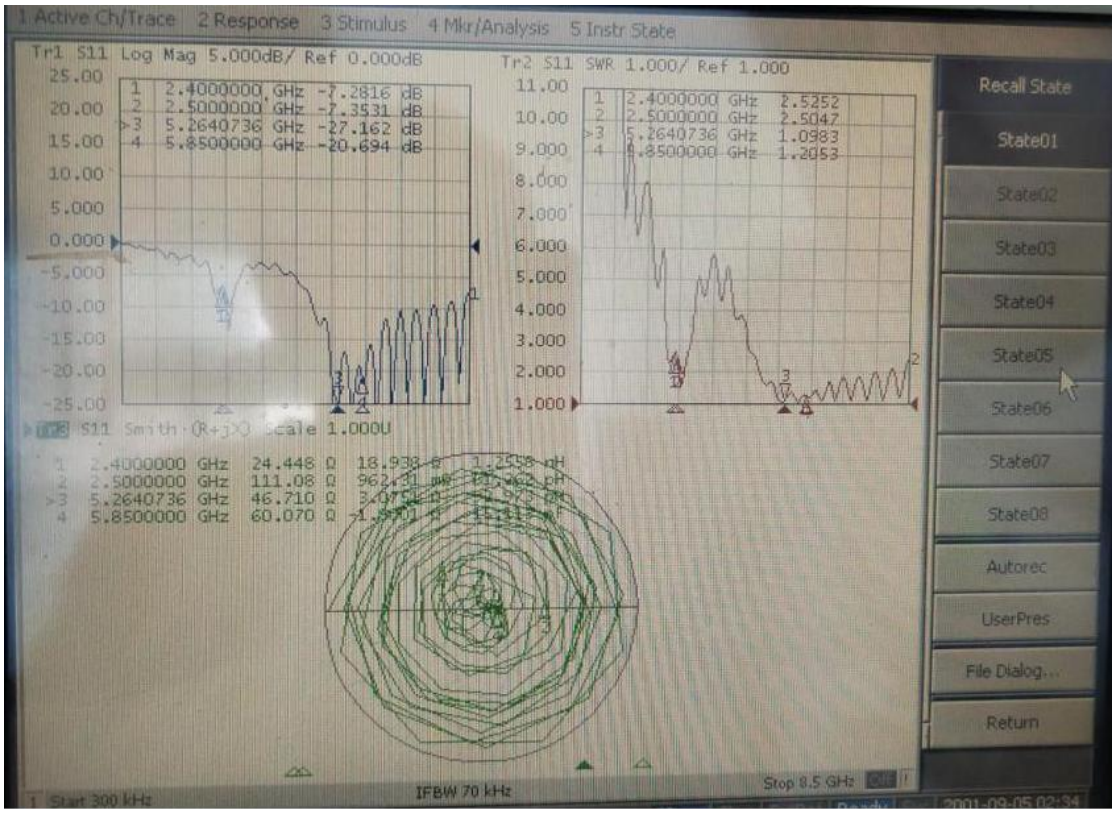


6.Environment and reliability test

project	Experimental conditions	performance requirement	test equipment
Low temperature storage	degree -30 ℃ soil 2 ℃ / humidity 0%/RH/ time 48H	The appearance and function tests had no effect after the test	Constant temperature and humidity testing machine
High temperature and high humidity storage	temperature70C. Humidity is 90~95%/RH for 48H	The appearance and function tests had no effect after the test	Constant temperature and humidity testing machine
Temperature shock	Product environment: 35℃ for 2H and then 80 ℃ for 2H, 12 cycles for 48H	The appearance and function tests had no effect after the test	Hot and cold impact testing machine

7.Antenna electrical performance test data

7.1RL/VSWR/Smith Chant



7.2 OTA test

NQI ANT TRP&TIS parameter Summary of YC16						
BAND	2.4G			5.8G		
CHANNEL	1	6	11	36	100	165
TRP(dBm)	14.13	13.23	12.77	10.5	9.05	2.5
CHANNEL	1	6	11	36	100	165
TIS(dBm)	-68.3	-68.72	-54.28	-71.45	-69.74	-68.27

7.3 Throughput test

Type	Freq	Result	Unit	Type	Freq	Result	Unit
下行	2.4GHz	44.79	Mbps	下行	5GHz	47.85	MBits
上行	2.4GHz	46.17	Mbps	上行	5GHz	48.28	MBits

2.4G 下行	Azimuth(°)	Result
1	0	42.85
2	45	45.04
3	90	45.04
4	135	45.15
5	180	45.26
6	225	45.33
7	270	45.16
8	315	44.48

5.8G 下行	Azimuth(°)	Result
1	0	44.56
2	45	45.68
3	90	44.49
4	135	48.25
5	180	50.02
6	225	50.26
7	270	50.64
8	315	48.86

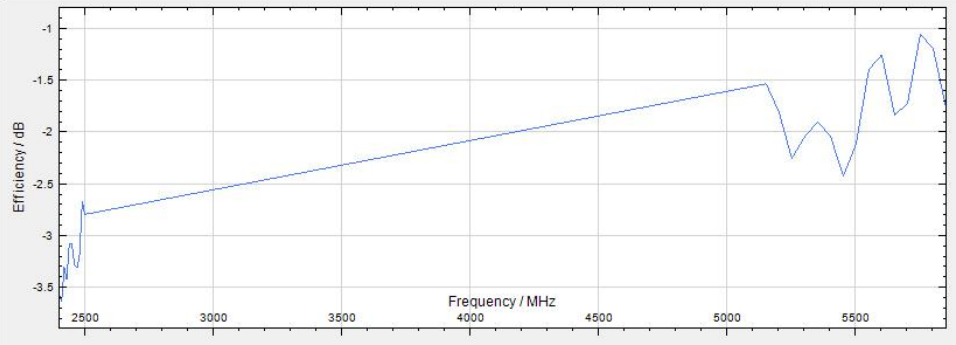
2.4G 上行	Azimuth(°)	Result
1	0	45.5
2	45	46.55
3	90	45.7
4	135	46.11
5	180	46.6
6	225	45.66
7	270	45.96
8	315	47.27

5.8G 上行	Azimuth(°)	Result
1	0	47.88
2	45	49.92
3	90	51.06
4	135	52.39
5	180	47.58
6	225	45.44
7	270	46.24
8	315	45.74

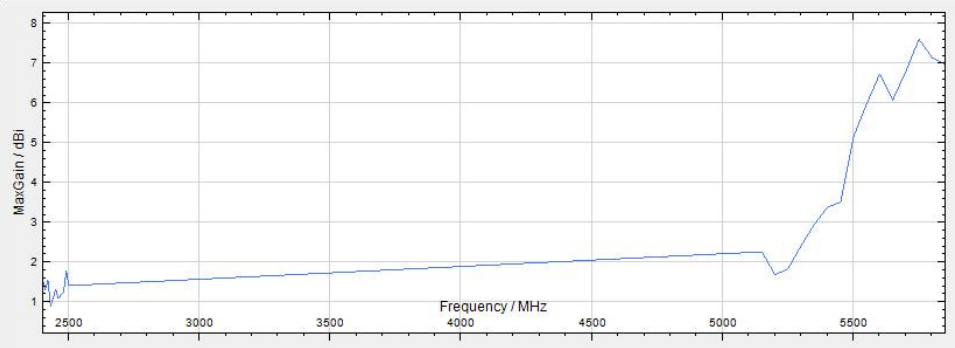
Eight.Effeciency、Gain

Freq (MHz)	Effi (%)	Gain (dBi)
2400	44.06	1.56
2410	43.35	1.32
2420	46.77	1.56
2430	45.5	0.9
2440	49.32	1.11
2450	49.2	1.34
2460	46.99	1.09
2470	46.67	1.2
2480	48.08	1.27
2490	54.2	1.8
2500	52.6	1.42
5150	70.31	2.27
5200	66.07	1.69
5250	59.57	1.85
5300	62.52	2.43
5350	64.57	2.96
5400	62.66	3.39
5450	57.28	3.52
5500	61.52	5.16
5550	72.61	5.99
5600	74.99	6.74
5650	65.61	6.09
5700	67.3	6.81
5750	78.52	7.62
5850	76.03	7.16

Effeciencygraph



Gain graph


MaxGain / dBi
8
7
6
5
4
3
2
1
Frequency / MHz
2500
3000
3500
4000
4500
5000
5500