

S3 JA Antenna Report

1.GSM/WCDMA/LTE Antenna: S3-JA-RF

2.GPS/WiFi/BT Antenna: S3-JA-WIFI/GPS

Manufacturer: Dongguan Guang Xun ShiChuang Technology Co,Ltd

Address: No.12 East Industrial Road, Songshan Lake High-Tech

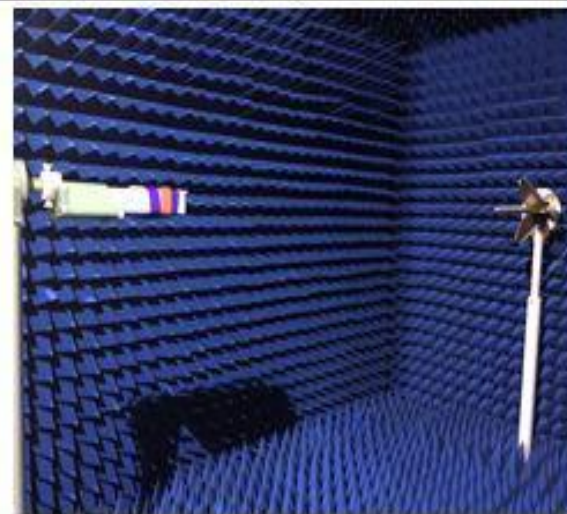
Development Zone, Dongguan,Guangdong,China



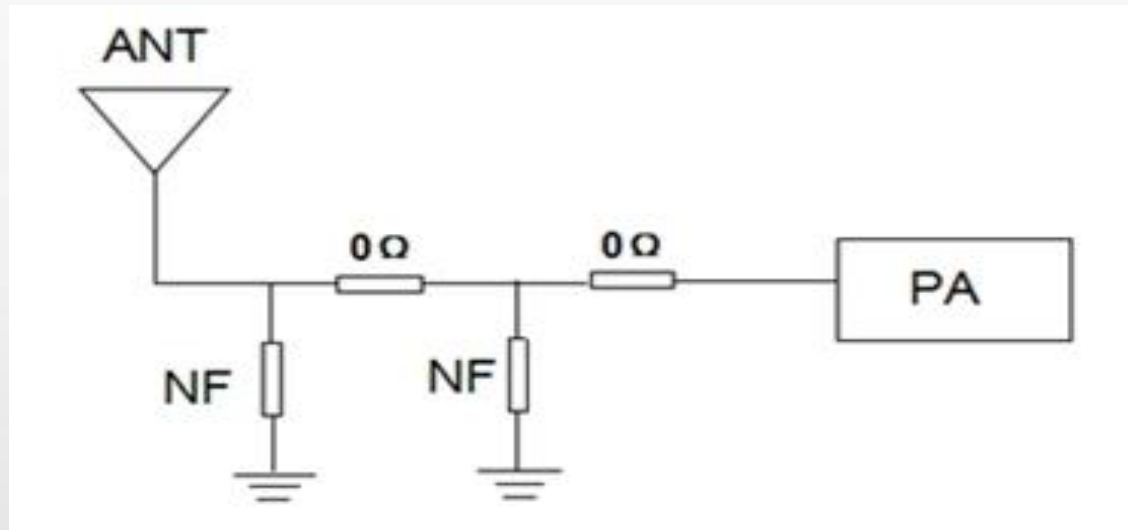
Test items and equipment

	Test item	equipment
1. S参数 (S-parameter)	1 · 回波损耗 (Return Loss) 2 · 电压驻波比 (VSWR)	网络分析仪: Agilent E5071B HP 8753D
2. 有源测试 (Active)	1 · 发射功率 (TRP) 2 · 接收灵敏度 (TIS)	1 · 暗室: ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2. 综合测试仪: Agilent 8960 E5515B × 2 StarPoint SP6011
3. 无源测试 (Passive)	1. 天线增益 (Gain) 2. 天线效率 (Efficiency)	1 · 暗室: ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2 · 网络分析仪: Agilent E5071B HP 8753D





匹配电路(Matching)



0 ohm



有源自由空间3D数据(3D data):

3G:

Frequency Band	W900			W2100		
channel	L	M	H	L	M	H
TRP	9.14	9.31	8.37	17.6	17.4	17.2
TIS			-93			-102



4G- FDD:

Frequency Band	B1			B3			B5		
channel	L	M	H	L	M	H	L	M	H
TRP	17.6	18.6	18.1	17.5	17.4	18.5	7.5	8.3	8.2
TIS			-90.5			-94.2			-81.7
Frequency Band	B8			B28B					
channel	L	M	H	L	M	H			
TRP	8.31	7.53	7.45	8.25	7.5	7.25			
TIS			-83.24			-81.5			

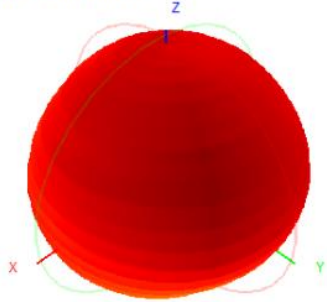
B41		
L	M	H
17.3	17.6	17.34
		-90



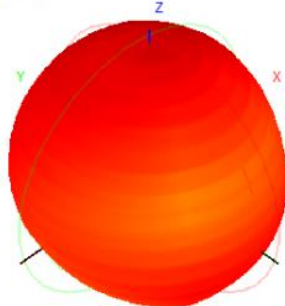
4G无源数据:

Frequency (MHz)	710.0	720.0	730.0	740.0	750.0	760.0	770.0	780.0	790.0	800.0
Gain (dBi)	-7.82	-8.38	-8.11	-8.20	-9.41	-9.71	-10.23	-10.71	-10.90	-10.76
Efficiency (%)	7.63	6.56	6.71	6.12	4.72	4.57	4.53	4.43	4.35	4.14

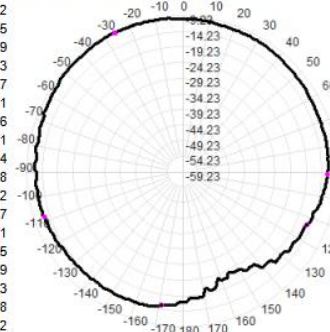
740.0MHz H+V, Eff: 6.1%



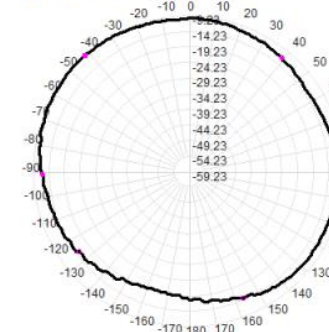
Back View



740.0MHz Total(E1-XZ), Max=-9.67dBi

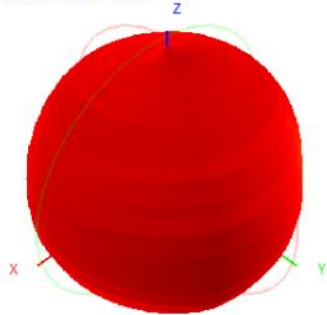


740.0MHz Total(E2-YZ), Max=-9.23dBi

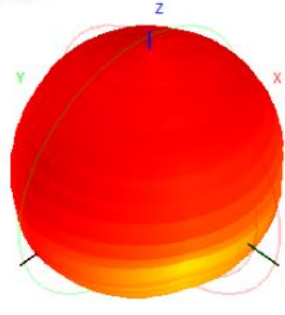


Frequency (MHz)	820.0	830.0	840.0	850.0	860.0	870.0	880.0	890.0	900.0	910.0	920.0	930.0	940.0	950.0	960.0
Gain (dBi)	-8.97	-9.11	-9.03	-8.52	-9.23	-10.33	-9.92	-9.81	-10.01	-10.58	-10.08	-10.39	-10.33	-10.51	-11.08
Efficiency (%)	5.77	5.76	5.32	5.84	5.16	4.39	4.70	4.72	4.23	3.72	3.91	3.64	3.78	3.53	3.35

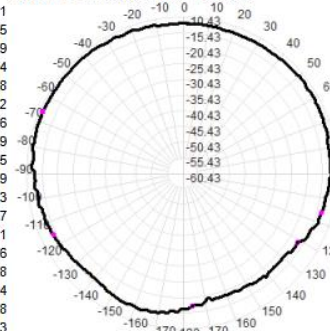
900.0MHz H+V, Eff: 4.2%



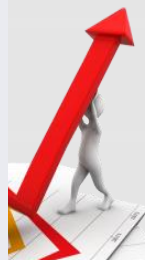
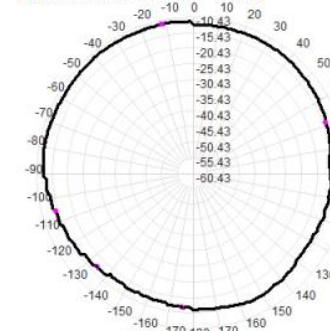
Back View



900.0MHz Total(E1-XZ), Max=-11.46dBi

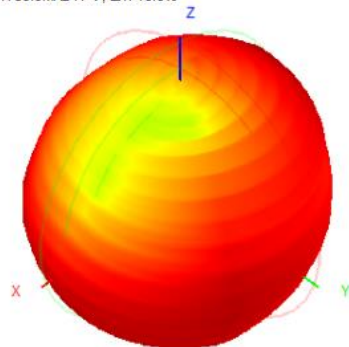


900.0MHz Total(E2-YZ), Max=-11.70dBi

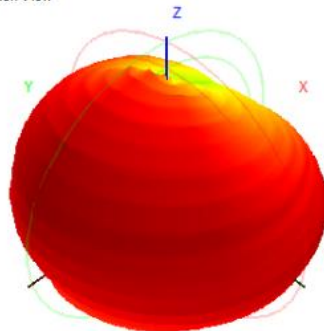


Frequency (MHz)	1700.0	1710.0	1720.0	1730.0	1740.0	1750.0	1760.0	1770.0	1780.0	1790.0	1800.0	1810.0	1820.0	1830.0	1840.0	1850.0	1860.0	1870.0	1880.0
Gain (dBi)	-4.69	-4.96	-4.96	-4.75	-4.74	-4.55	-4.69	-4.96	-5.62	-6.55	-7.74	-9.27	10.09	-9.78	11.09	10.61	-9.81	-8.85	-8.49
Efficiency (%)	14.96	15.35	15.70	16.61	16.94	16.57	14.83	14.16	12.46	10.31	8.09	5.95	4.69	4.62	3.30	3.58	4.37	4.94	5.74

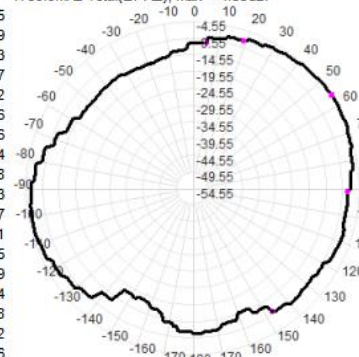
1750.0MHz H+V, Eff: 16.6%



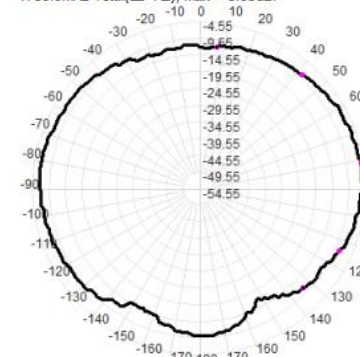
Back View



1750.0MHz Total(E1-XZ), Max= -4.55dBi

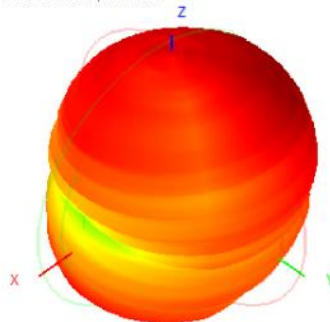


1750.0MHz Total(E2-YZ), Max= -5.63dBi

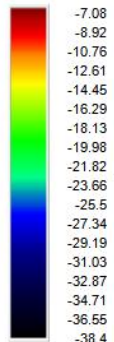
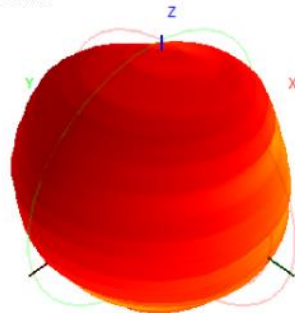


Frequency (MHz)	1890.0	1900.0	1910.0	1920.0	1930.0	1940.0	1950.0	1960.0	1970.0	1980.0	1990.0
Gain (dBi)	-8.06	-8.27	-7.72	-7.17	-7.59	-7.34	-7.77	-7.08	-7.67	-7.39	-7.15
Efficiency (%)	6.20	5.59	6.11	6.48	5.67	6.36	6.20	7.14	6.41	6.71	7.56

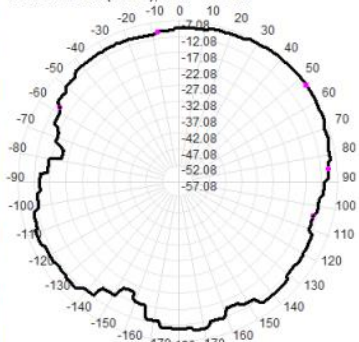
1960.0MHz H+V, Eff: 7.1%



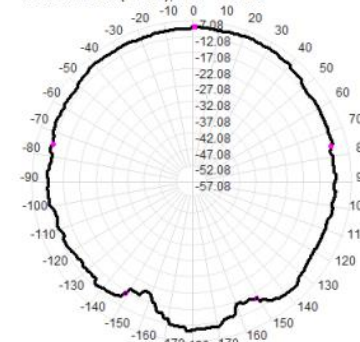
Back View



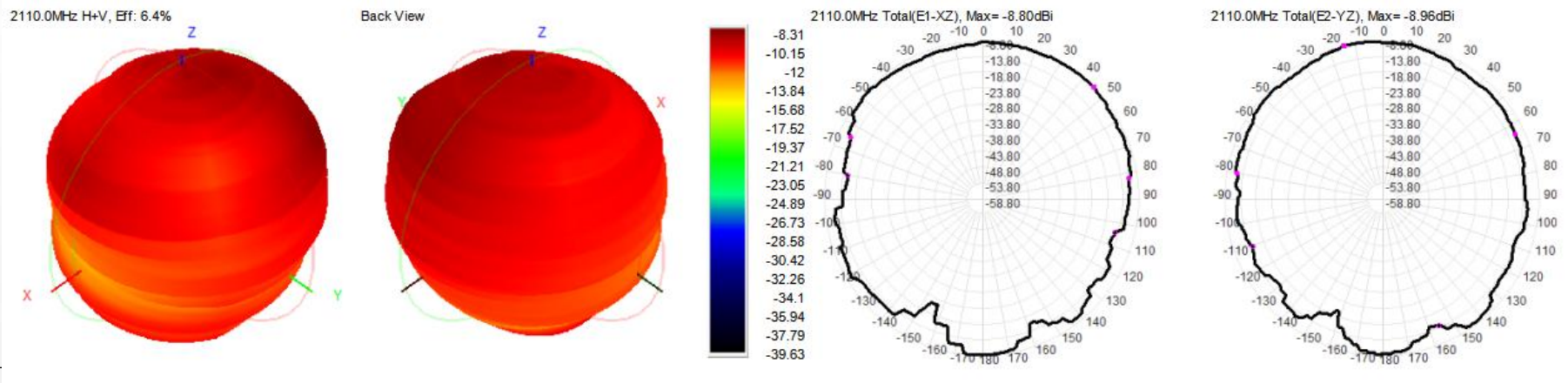
1960.0MHz Total(E1-XZ), Max= -7.08dBi



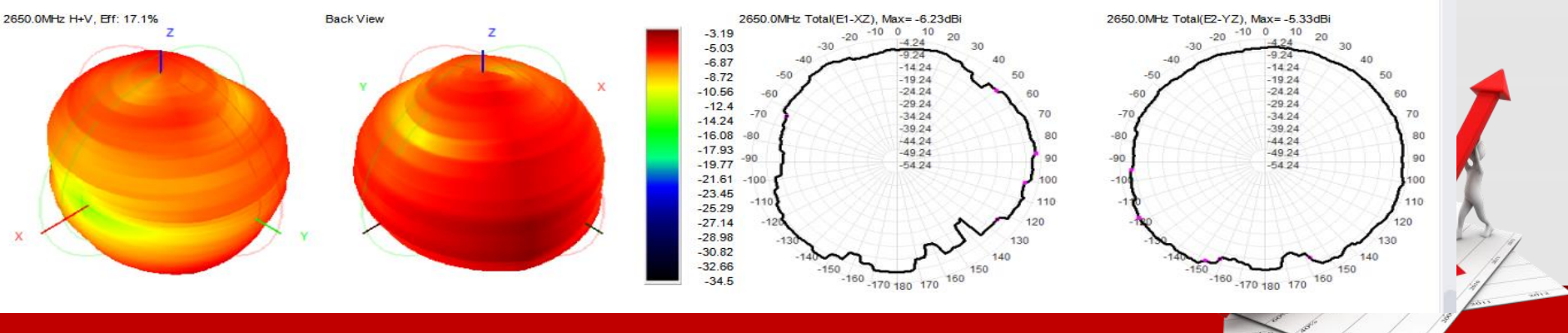
1960.0MHz Total(E2-YZ), Max= -9.04dBi



Frequency (MHz)	2100.0	2110.0	2120.0	2130.0	2140.0	2150.0	2160.0	2170.0
Gain (dBi)	-7.51	-8.31	-8.08	-7.56	-7.80	-8.71	-7.92	-7.44
Efficiency (%)	7.06	6.44	6.45	7.53	6.78	6.13	7.54	8.05

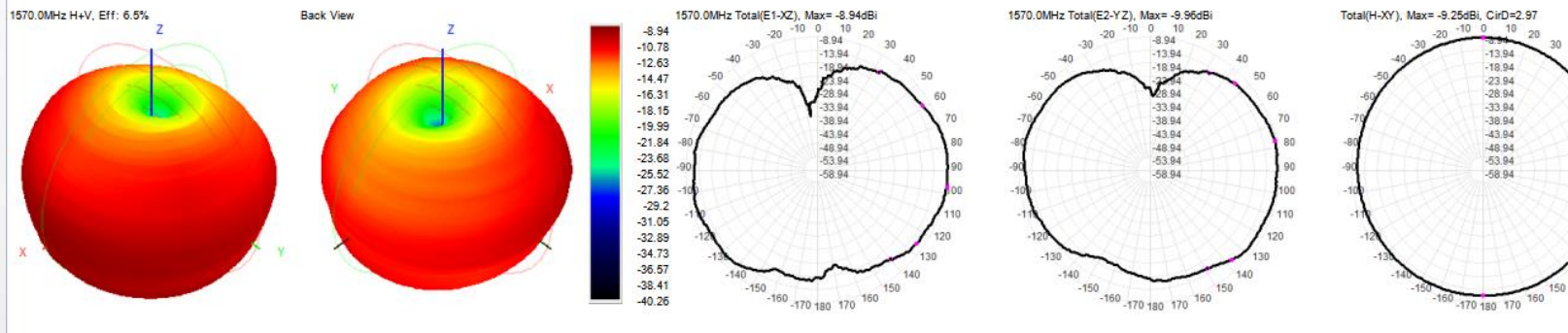


Frequency (MHz)	2500.0	2510.0	2520.0	2530.0	2540.0	2550.0	2560.0	2570.0	2580.0	2590.0	2600.0	2610.0	2620.0	2630.0	2640.0	2650.0	2660.0	2670.0	2680.0	2690.0	2700.0
Gain (dBi)	-6.32	-5.92	-6.30	-6.28	-6.38	-6.03	-6.68	-6.41	-6.04	-5.27	-4.38	-4.05	-3.35	-3.30	-3.22	-3.19	-3.67	-3.67	-2.21	-2.13	-2.43
Efficiency (%)	9.96	10.70	9.90	9.28	9.33	10.15	8.11	7.62	9.12	11.64	13.20	12.83	14.20	16.11	16.98	17.08	15.05	15.05	19.83	19.46	18.52

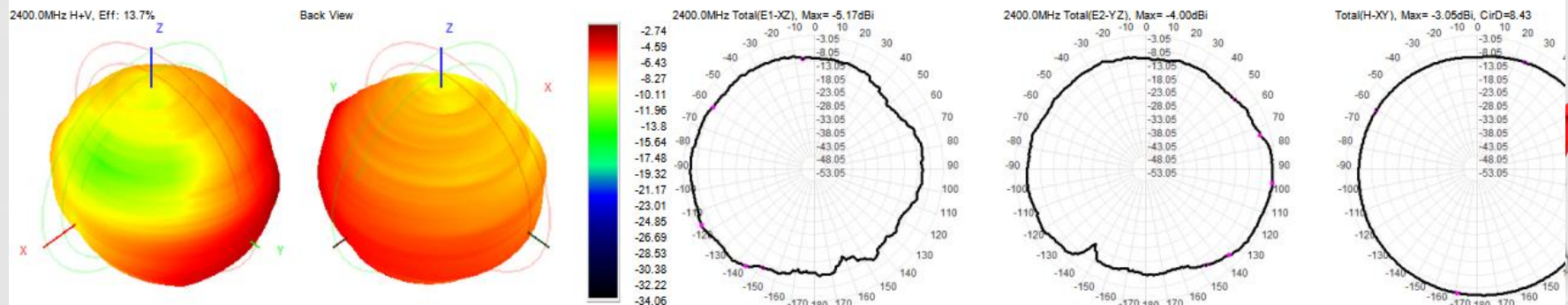


GPS+WIFI无源数据:

Frequency (MHz)	1650.0	1660.0	1670.0	1680.0	1690.0	1700.0
Gain (dBi)	-8.85	-9.63	-9.77	-9.67	-9.99	-10.27
Efficiency (%)	5.57	4.56	4.49	4.07	3.96	3.55
Directivity (dB)	3.70	3.78	3.71	4.24	4.04	4.23



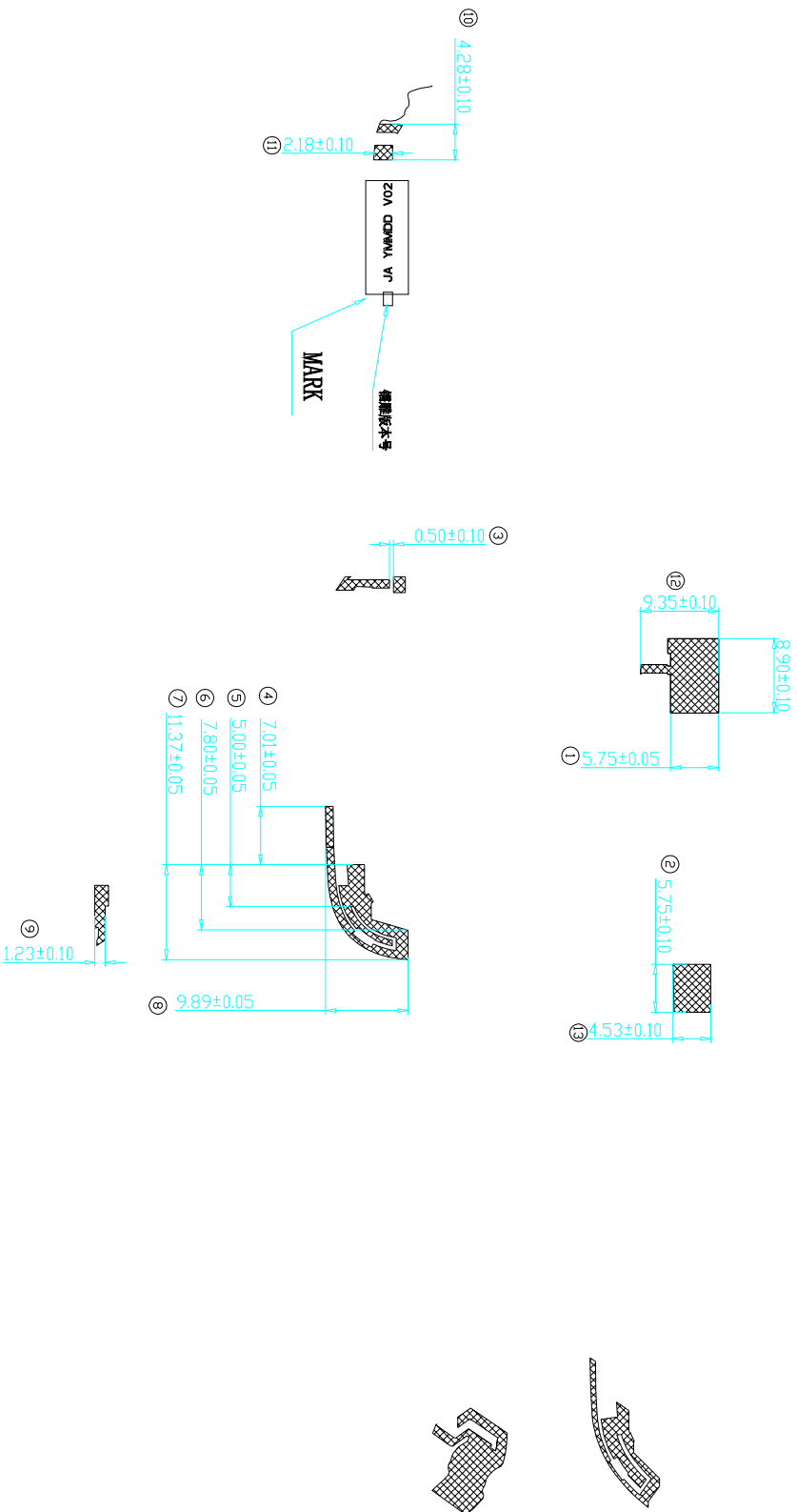
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Gain (dBi)	-2.74	-3.17	-3.15	-2.49	-2.86	-3.56	-3.44	-3.60	-3.83	-4.15	-4.34
Efficiency (%)	13.69	12.90	12.49	14.34	13.36	11.65	12.36	12.42	13.20	12.83	12.58



GPS实际测试数据:

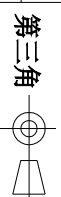


1	2	3	4	5	6	7	8
标记	处数	更改内容	批准	日期	备注		



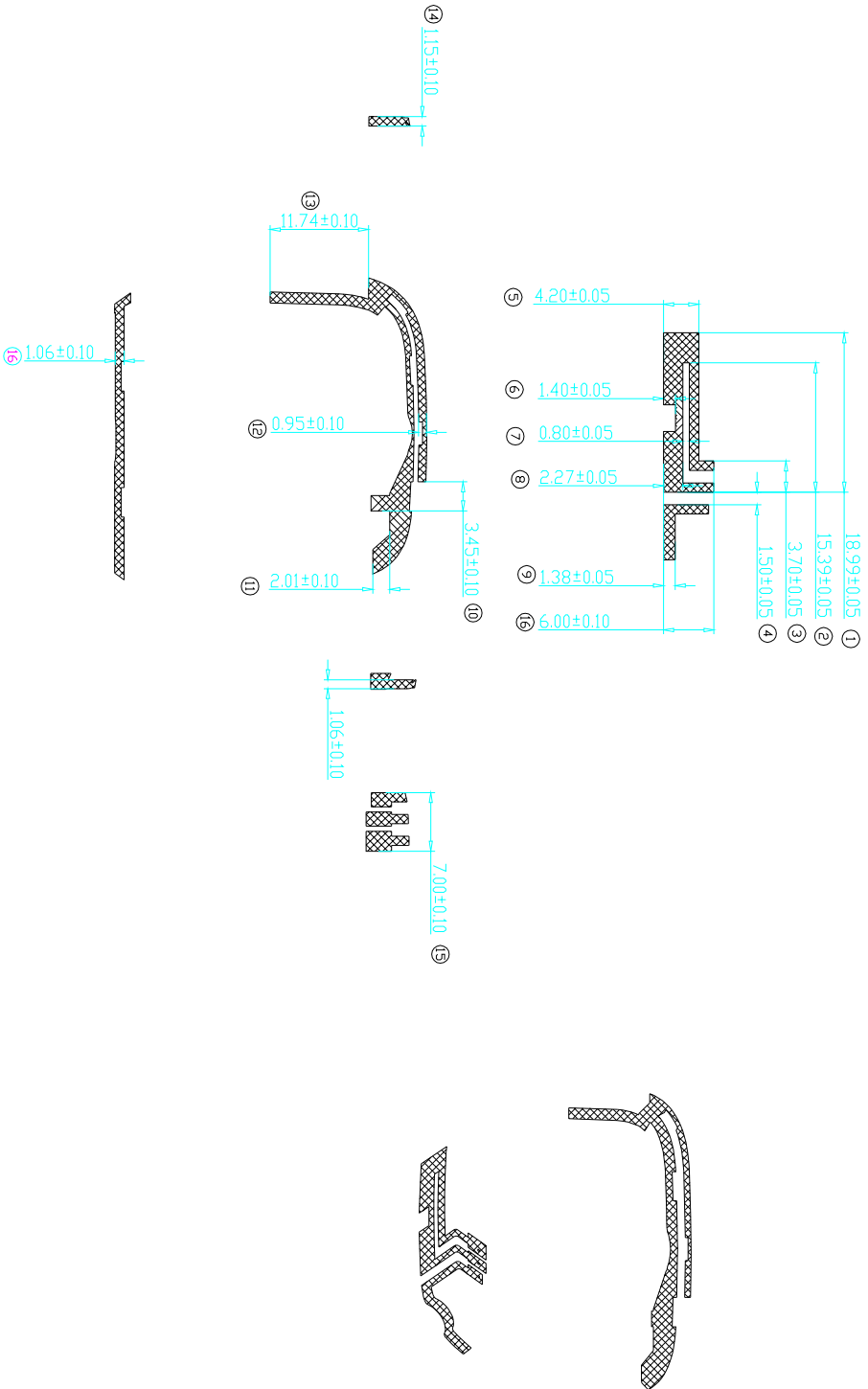
MARK:
JA:天线型号, 固定不变;
YMDD:生产日期, 按实际日期变更;
V02:天线版本号。

编号	S3-JA-WIFI/GPS	制图	林宇	日期	2023.2.21
机种	S3-JA-V02	审核	牛磊	日期	
料号		尺寸数量	9档	日期	
材质	Cu:8-12um, Ni:2-4um	重点尺寸		版本	
比例	1:1				
单位	mm				

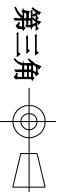


Dongguan Guangzun Shichang Technology Co., Ltd
东莞光磊士创科技有限公司

1	2	3	4	5	6	7	8
标记	处数	更改内容	批准	日期	备注		



编号	S3-JA-RF	制图	林宇	日期	2023.2.21
机种	S3-JA-V02	审核	牛磊	日期	
料号		尺寸数量	15档	日期	
材质	Cu:8-12um, Ni:2-4um	重点尺寸		版本	
比例	1:1				
单位	mm				



Dongguan Guangsun Stamping Technology Co., Ltd
东莞光硕士创科技有限公司

Thanks !

