
Specification For Approval

GaoKe Ant Co., Ltd

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Revision: A/2

Manufacture: GaoKe Ant Co.,Ltd

Material Number GKA-GPS-002

Production Name GPS Active External Antenna

Production Number GKA-GPS-002

Approved By

GaoKe Ant Co.,Ltd

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1、 Mechanical Specifications

Size (mm)	45*38*12.8	Mounting	Magnetic
Weight(g)	<110	Connector	SMA Male Straight
Color	Black	Cable	RG174 - 6m

2、 Working Conditions

Temperature: -40°C~+85°C

Humidity: 95 % ~ 100 %

3、 Storage Conditions

Temperature: -40°C~+85°C

Humidity: 95 % ~ 100 %

4、 Antenna Characteristics

NO	Item	Specifications	Post Environmental Tolerance
1	(MHz) Range of Receiving Frequency	1575.42 ±3	±2.5
2	Center Frequency(MHz) (with 30mmSquareGND plane)	1575.42	±3.0
3	Band Width(MHz) (Return Loss ≤ -10dB)	≥10	
4	V.S.W.R(in Center Frequency)	≤1.5	
5	Gain (Zenith)(dBi typ) (with 70mmSquare GND plane)	4.5	±0.5
6	Axial Ratio (with 70mm Square GND plan)	3.0dB	±0.2
7	Polarization	Right-Handed Circular	----
8	Impedance(Ω)	50	----
9	(ppm/°C) Frequency Temperature Coefficient	0±10	----

5、 Amplifier Characteristics

NO	Item	Specifications
1	Range Of Receiving Frequency	1575.42 ± 3MHz
2	LAN Gain	28 ± 1 dBi
3	In Center Frequency	≤ 2.0
4	Noise Figure	< 2.0
5	Supply Voltage	3~5V
6	Current Consumption	12 ± 1mA@3VDC

6、 Environmental testing

NO	Normal temperature performance	High temperature test performance deviation	Low temperature test performance deviation
1	LNA Gain 28±1 dB	±2	±2
2	V.S.W.R(in Center Frequency) ≤ 2.0	±0.3	±0.3
3	Noise Figure < 2.0	±0.3	±0.3

7、 Salt fog Test

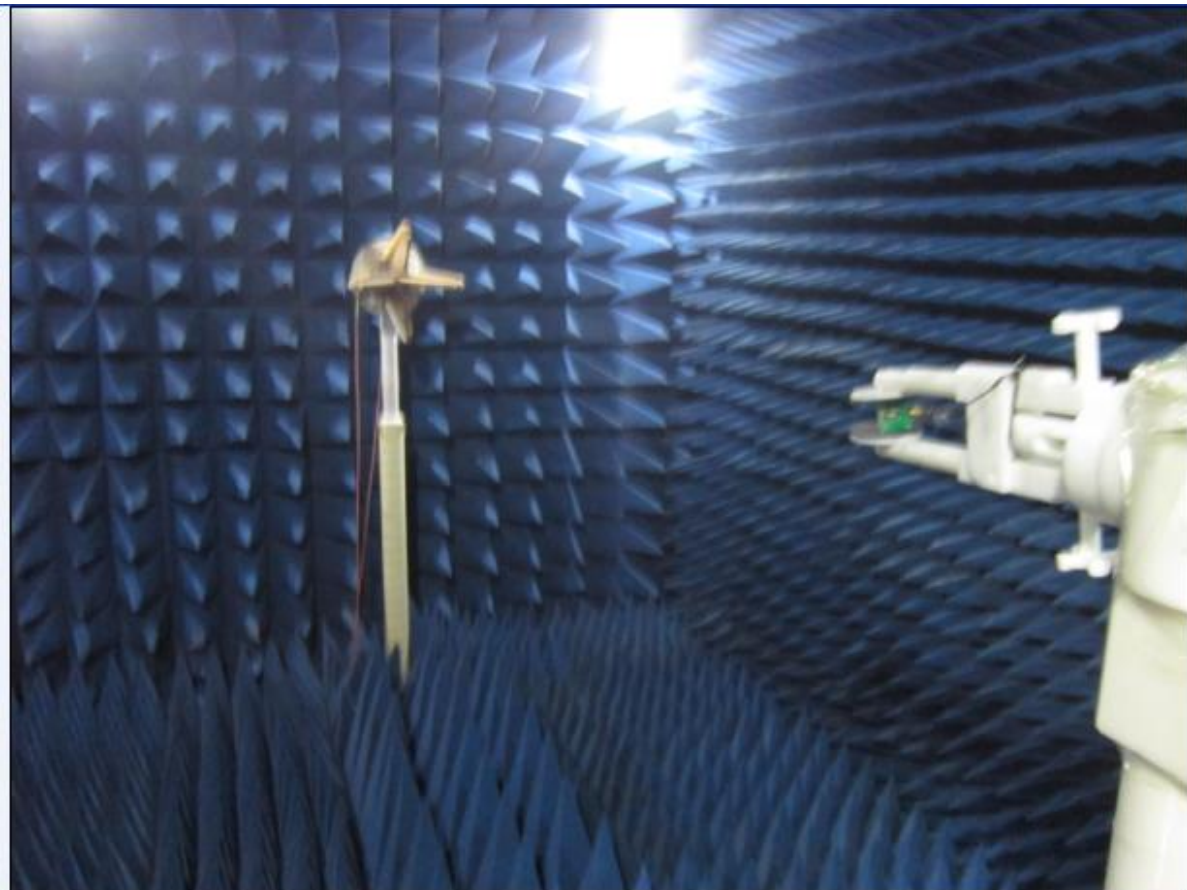
Quantity	Pensile kind	Specification	Inspect	Conclusion
2	30 °suspension, trimming use 3 M posted cover	Free From dirt, atmospheric pressure 80 PA pressure; PH value solution for: 6.9; 35 °C salt solution when concentration (every litres of solution including 42 G sea salt solute); Density: 1.0366; Test eight hours after 32 °C flow with pure water flushing; Air drying blower.	Without oxidation and corrosion phenomena	The test results show that: the product oxidation and corrosion resistance of superior performance

8. Antenna Test

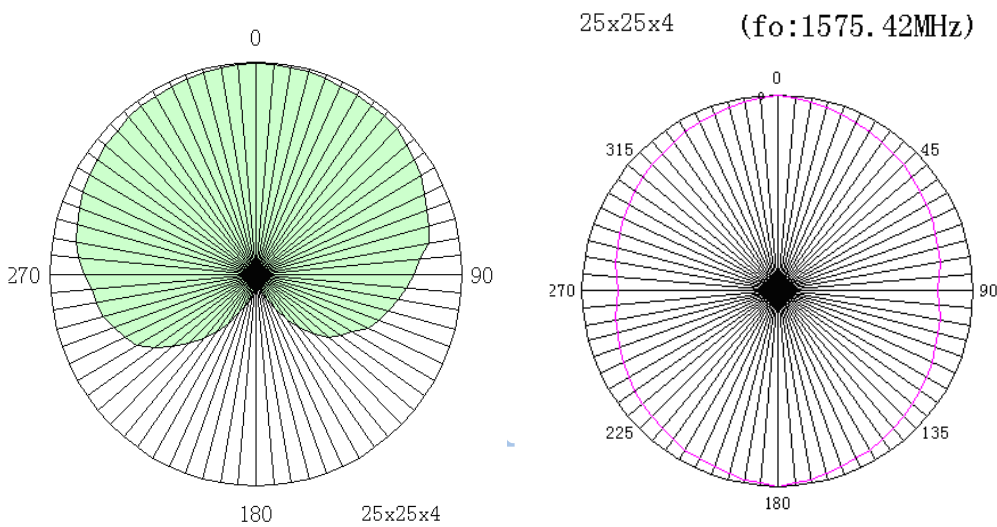
8.1 LNA Gain Test



8.2 Antenna Radiation Test

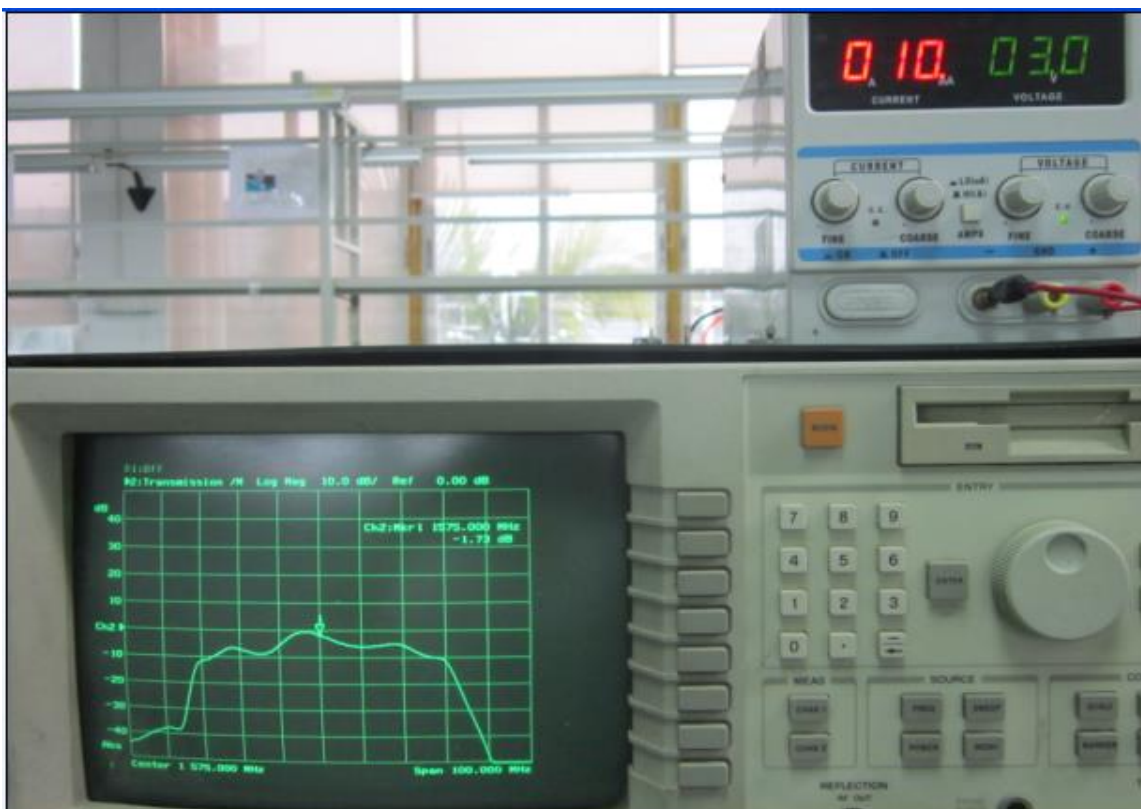


Passive Test For GPS1								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	Max (dB)	Min (dB)	Attenut Hor	Attenut Ver
1555	43.98	-3.57	2.36	0.21	2.36	-19.37	42.96	42.74
1560	69.9	-1.55	3.65	1.5	3.65	-14.3	42.93	42.69
1565	75.22	-1.24	2.62	0.47	2.62	-10.01	43.07	42.8
1570	80.49	-1.28	3.21	0.04	2.19	-10.49	43.2	42.91
1575	87.72	-1.09	4.13	0.73	2.88	-13.6	43.36	43.07
1580	78.71	-2.1	3.53	0.46	2.61	-16.98	43.52	43.23
1585	70.59	-1.83	3.16	1.01	3.16	-20.08	43.53	43.24
1590	50.39	-3.53	1.5	-0.65	1.5	-24.82	43.55	43.24
1595	48.23	-3.17	1.85	-0.3	1.85	-24.97	43.53	43.25

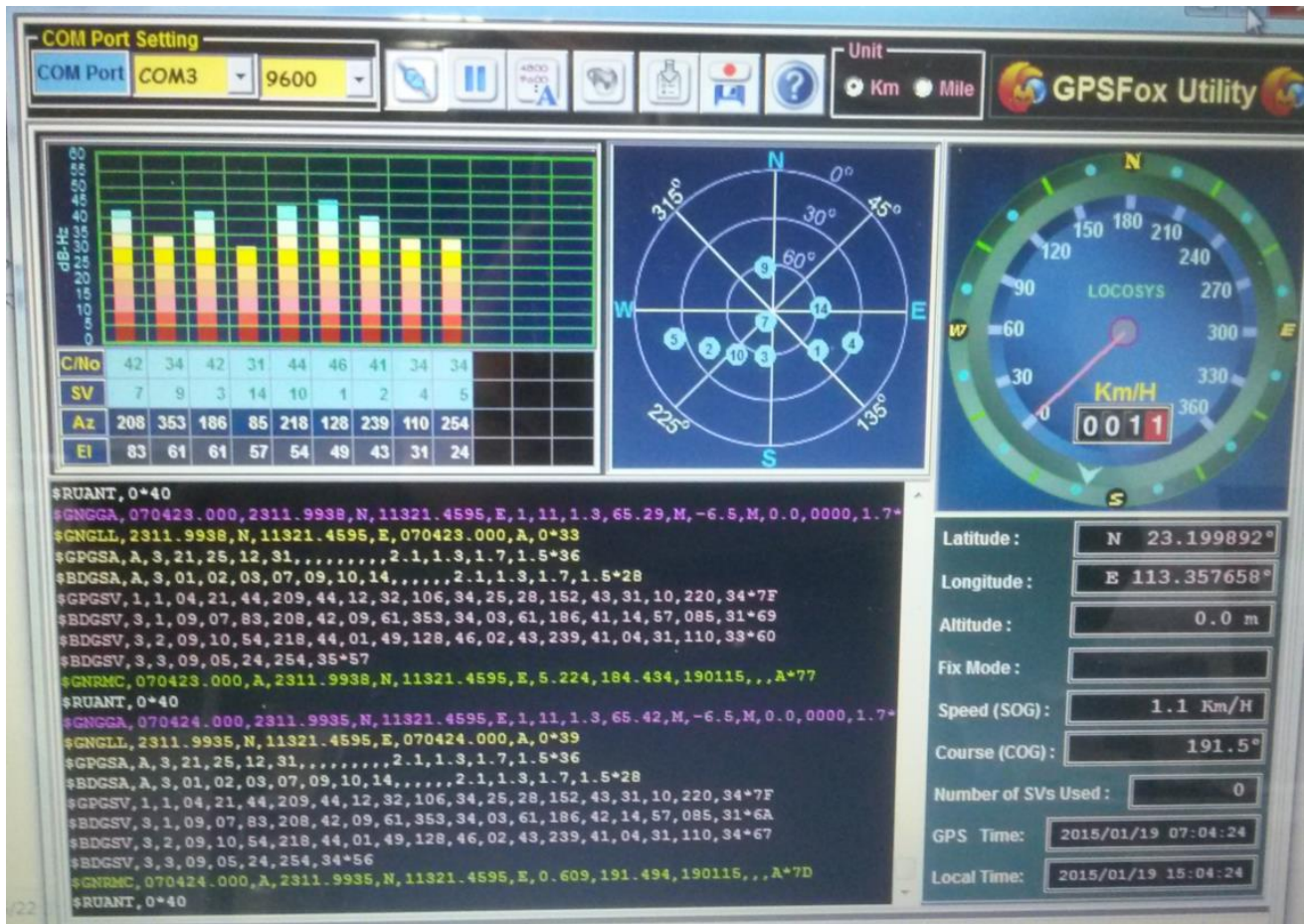


Ltd

8.3 Antenna Performance Test

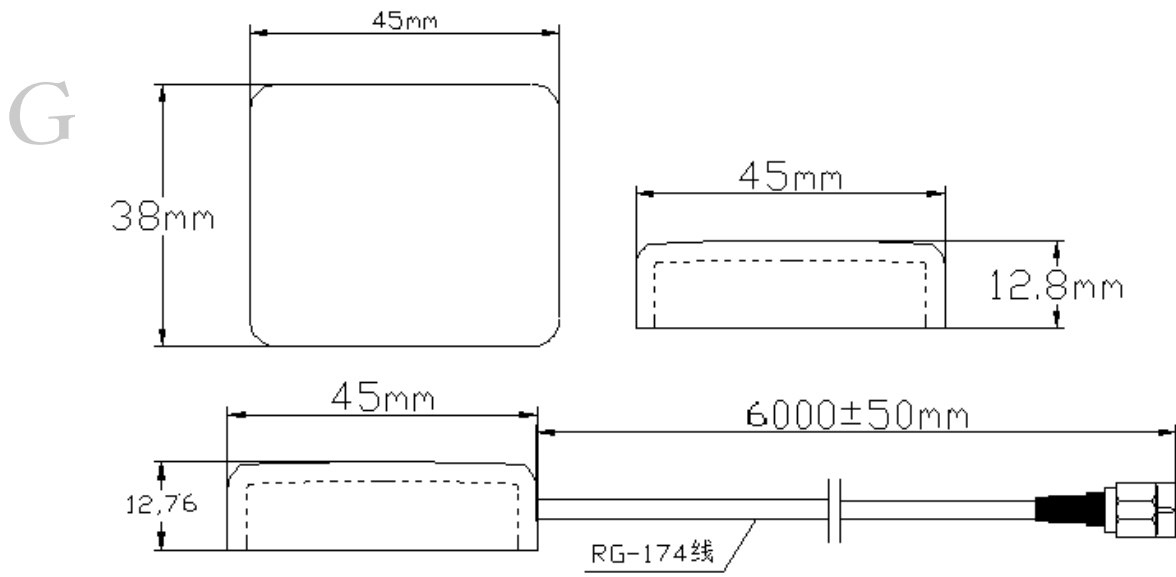


9. Antenna GPSCam



10. Antenna Picture and Drawing (MM):





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