



Sercomm Internal Antenna Preliminary Data Sheet

P/N: 617210XX

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SerComm Corporation

8F, No. 3-1, YuanQu St., NanKang, Taipei 115, Taiwan, R.O.C

Tel: 886-2-26553988

Fax: 886-2-26553966

[http: //www.sercomm.com.tw](http://www.sercomm.com.tw)

SerComm (Suzhou) R&D Center

NO, 26, Xinghai Street, Suzhou Industrial Park, Jiangsu, China

Tel: 86-512-67612332

Fax: 86-512-67612331

Revision History

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Ver 10	2023/5/30	John Hsieh	Approval

Sercomm Corporation			
Antenna Engineer Checked	Mechanical Engineer Checked	R&D Manager Checked	R&D Director Checked
<i>John Hsieh</i>	<i>Clark Li</i>	<i>Jerry Liu</i>	<i>Kevin Tseng</i>

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1. Antenna Specifications

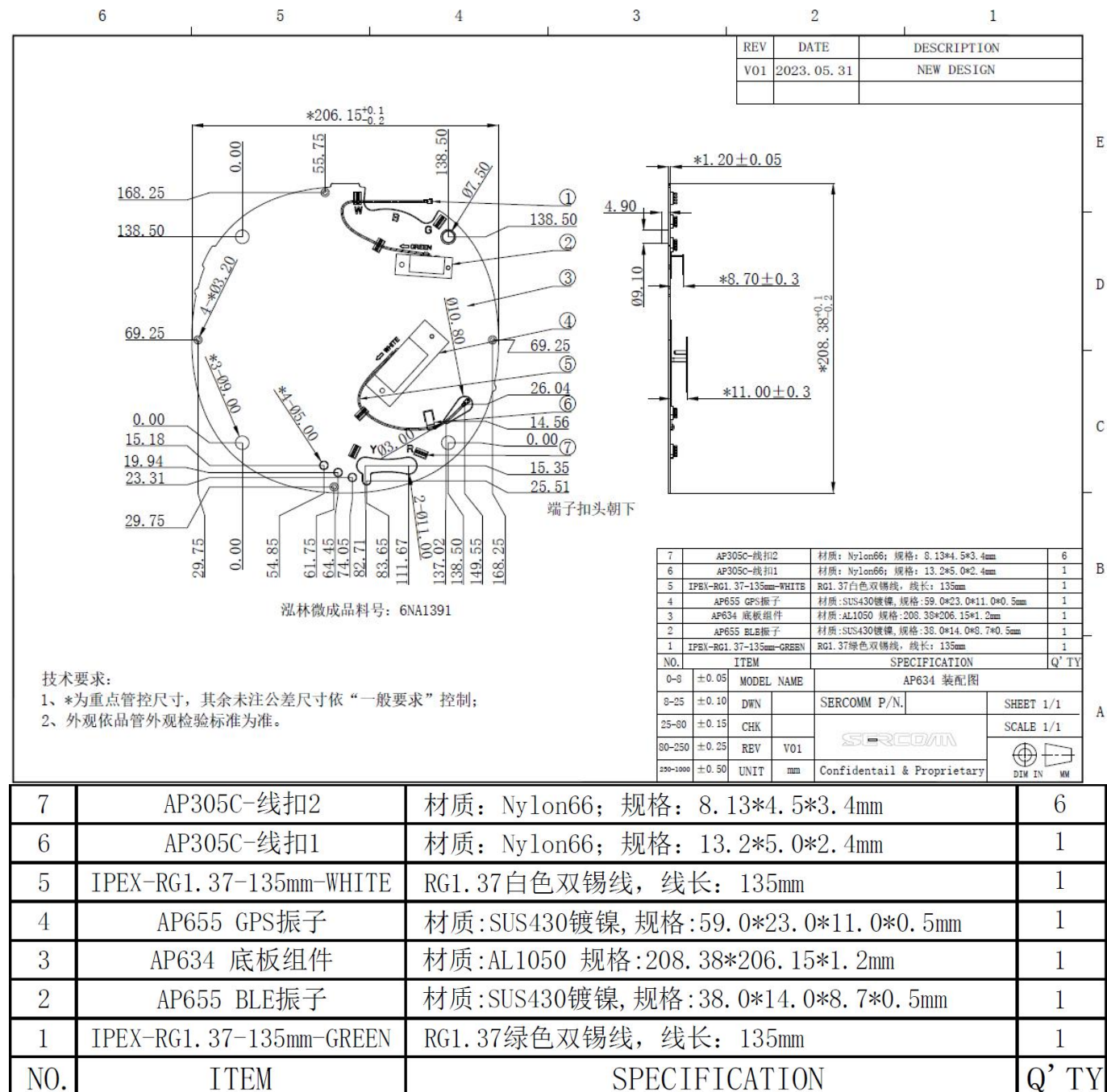
1.1 Electrical Properties

Application	BLE/GPS
Antenna Type	PIFA
Frequency Range (MHz)	2400-2500/1575
Return Loss (dB)	Used for device > 10dB
Peak Gain (dBi)	3.0 dBi
Efficiency (%)	70%
Polarization	Linear polarization
Impedance (ohm)	50Ω
Cable Type	N/A
Connector	N/A

1.2 Physical Properties

Antenna Dimensions	208.38(L) x 206.15(W) x 12.2(T) (mm ³)
Operating Temperature	- 40°C ~ + 75°C
Storage Temperature	- 40°C ~ + 75°C
Humidity Range	0% to 95% non-condensing

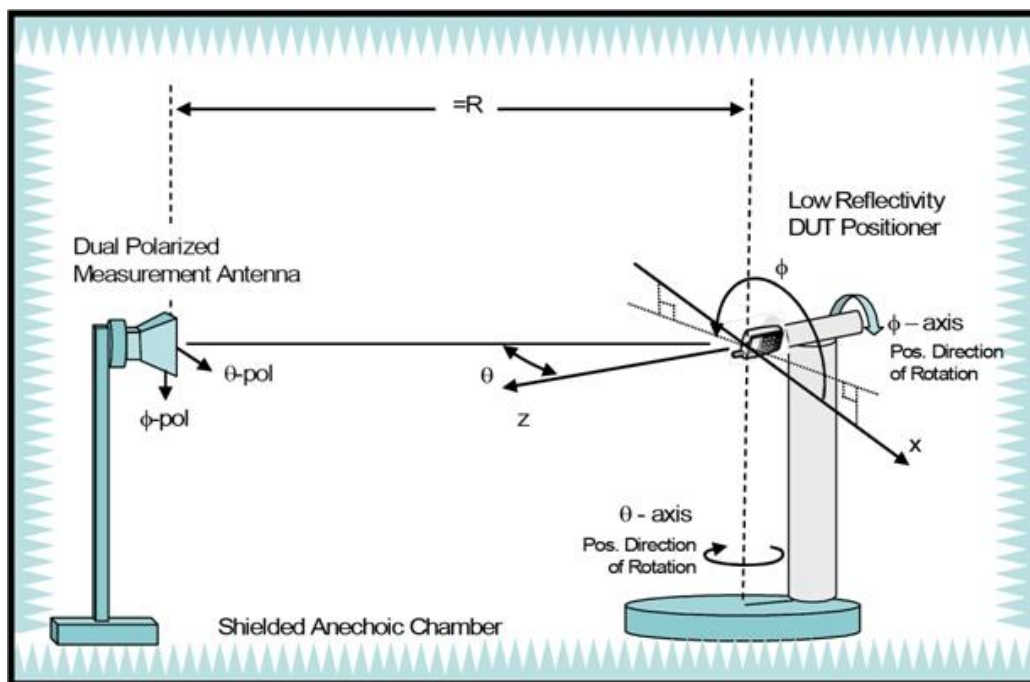
2. Product Drawing



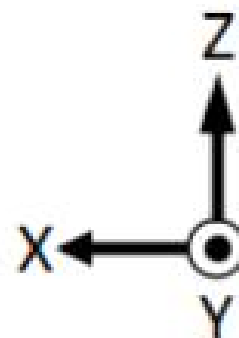
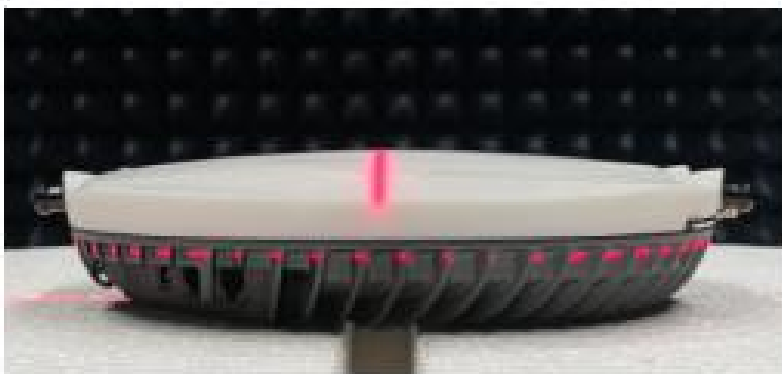
3. Performance Test Result

3.1 Test Facility

ETS AMS-8500 antenna measurement system with a size of $7.32(L) \times 3.66(W) \times 3.66(H)$ m³ is used for antenna performance test. 3D test data can be obtained with one scan.

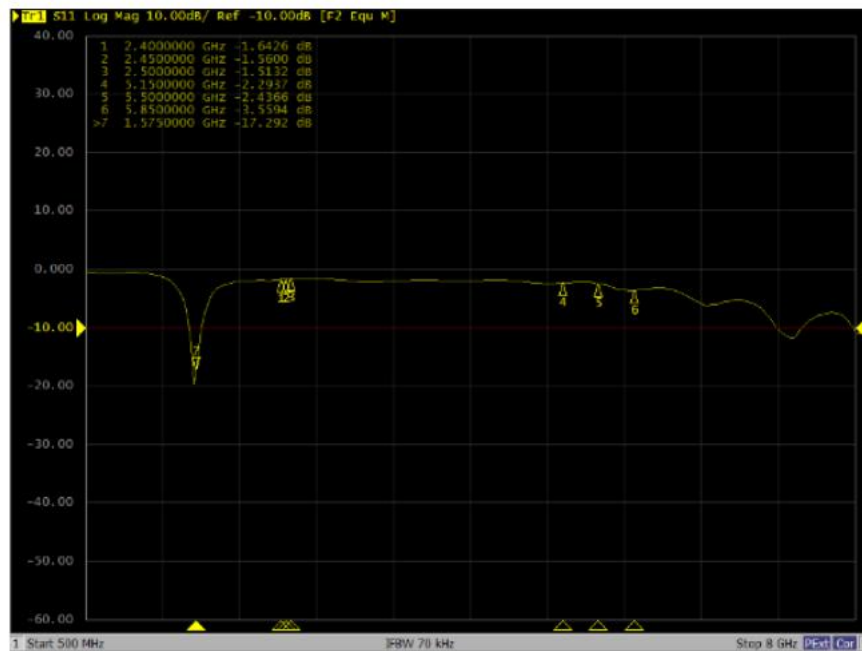


The measurement coordinate of the antenna is defined as below.

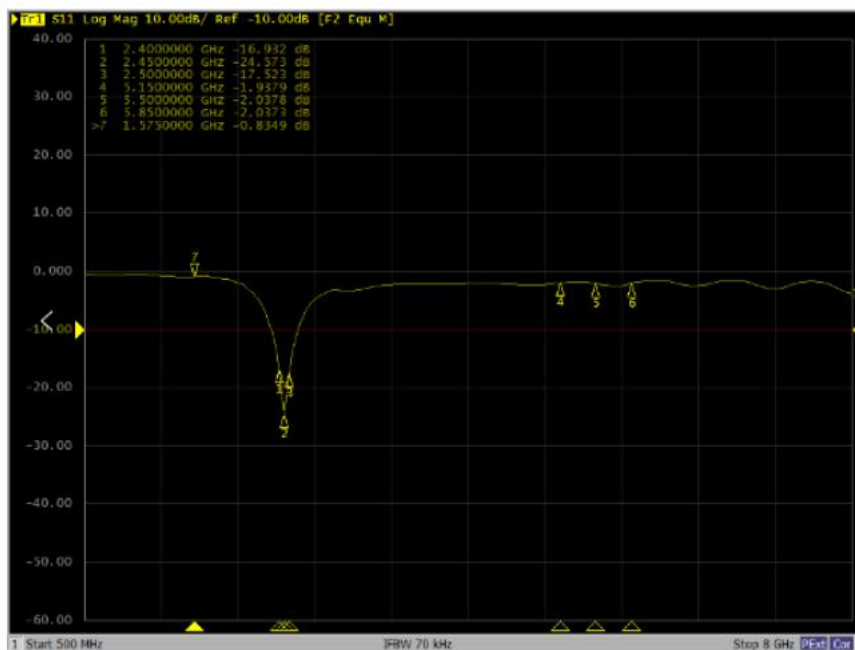


3.2 Return Loss

Return Loss – Ant 0

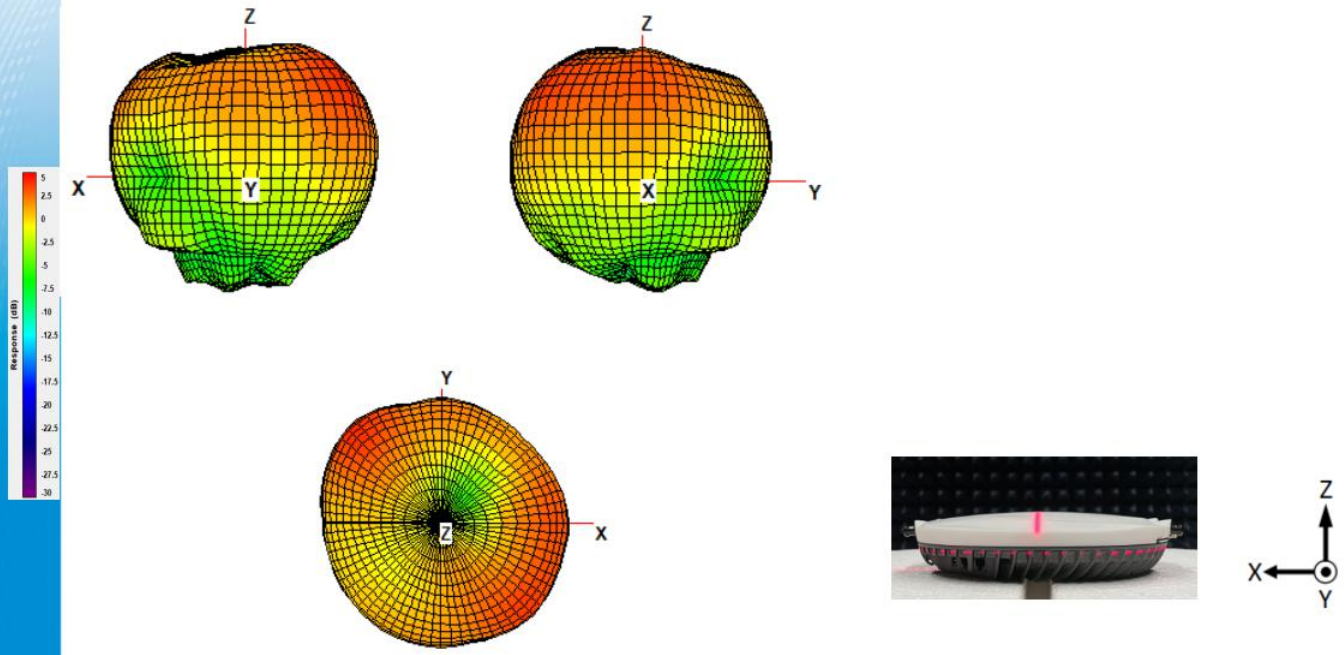


Return Loss – Ant 1

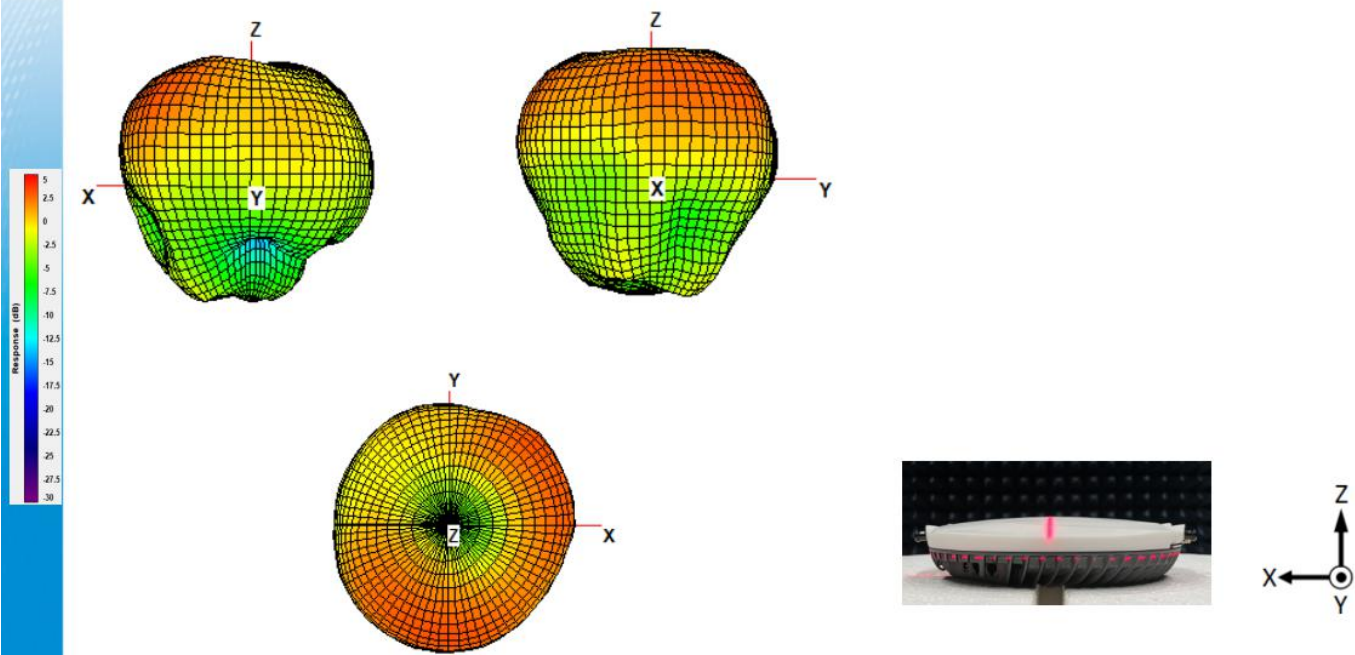


3.3 Radiation Pattern

3D Radiation Pattern – Ant 0 @ 2.45GHz



3D Radiation Pattern – Ant 1 @ 1.575GHz



3.4 Gain & Efficiency

Peak Gain & Efficiency

Ant 0 Performance		
Frequency (MHz)	Efficiency (%)	Peak Gain (dBi)
2400	75.3	3.0
2450	79.1	3.2
2500	77.1	3.1

Ant 1 Performance		
Frequency (MHz)	Efficiency (%)	Peak Gain (dBi)
1575	77.2	3.3