

Technical Document	
model	LORO WAVE
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LORO WAVE

(Boyoung Bluetooth Product)

Antenna Specification



보영테크(주)

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1. ELECTRICAL SPECIFICATIONS

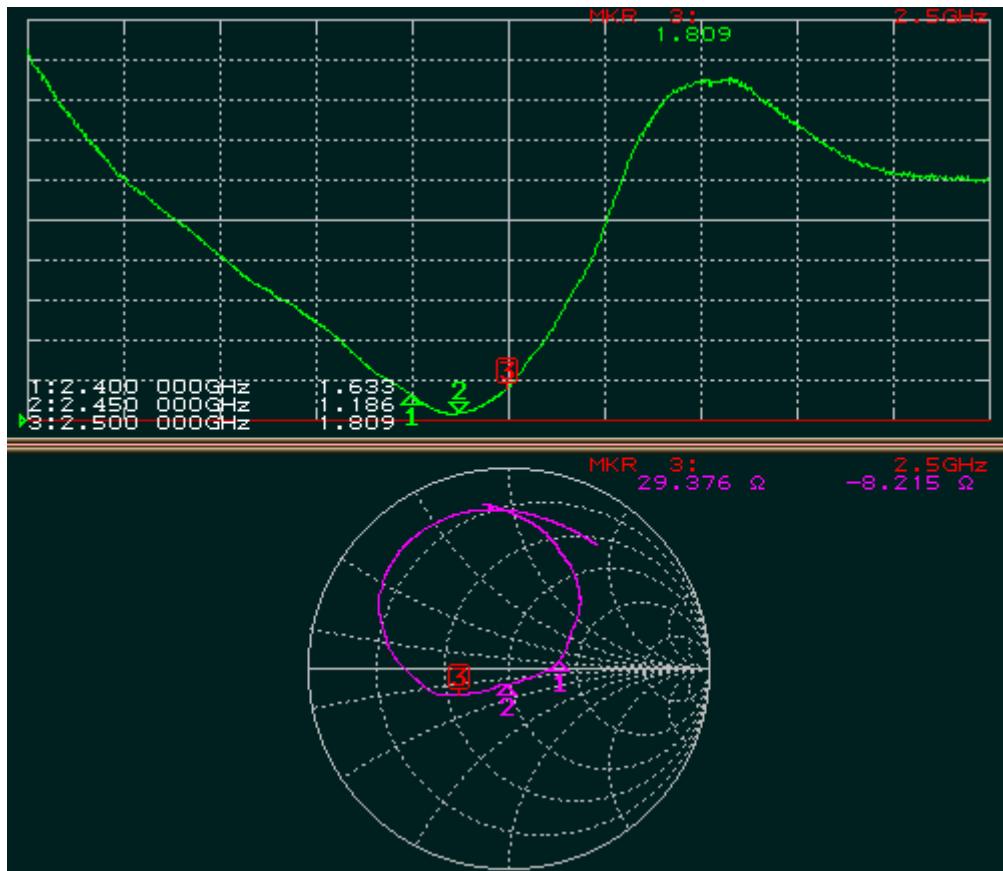
1.1 General

* All items are measured in room temperature (25 °C).

* All items are measured at customer set condition.

No	Item	Specification	Typical Data
1	Frequency	2400 ~ 2500 MHz	2400 ~ 2484 MHz
2	VSWR	3.5 max	2.0 Max
3	Total Gain(Peak)	Peak Gain : -1.0dBi min	-0.5 dBi
4	Impedance	50 Ω	50 Ω
5	Polarization	Linear	Linear

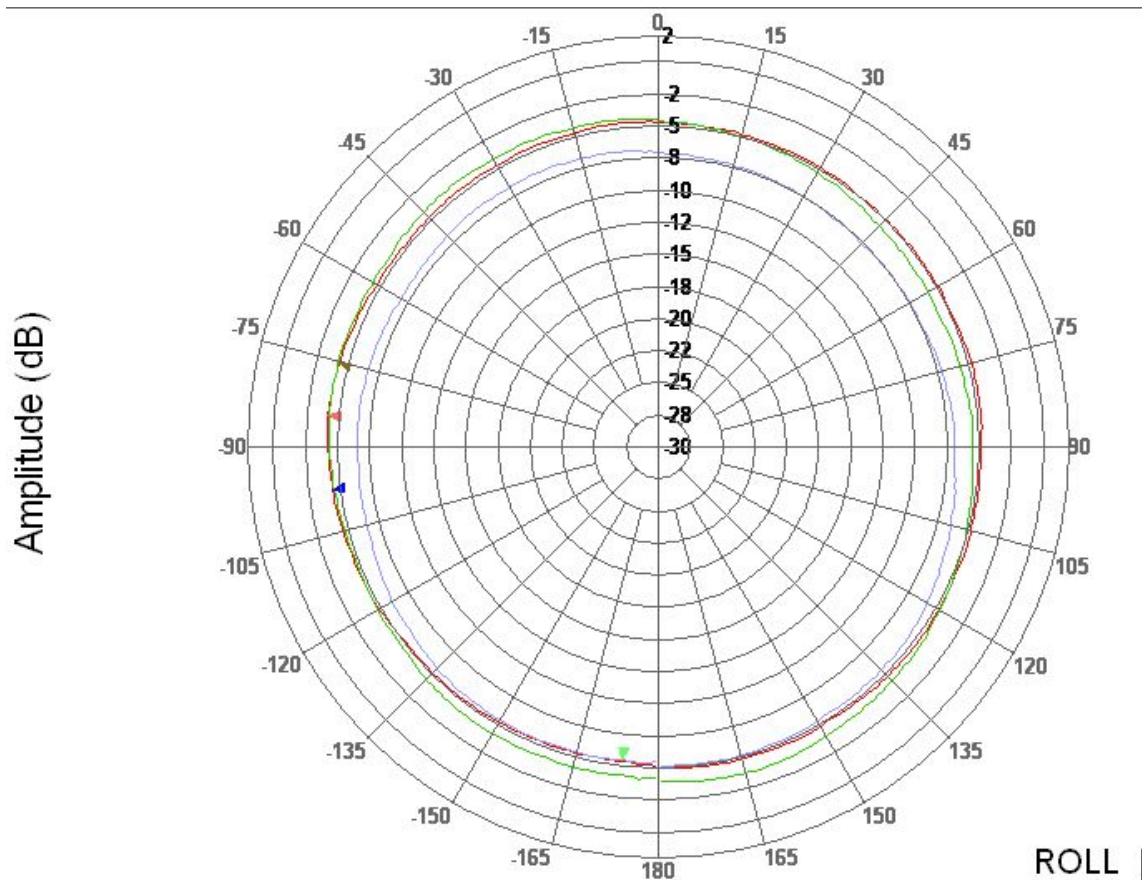
1.2 VSWR data (S11 of SET condition)



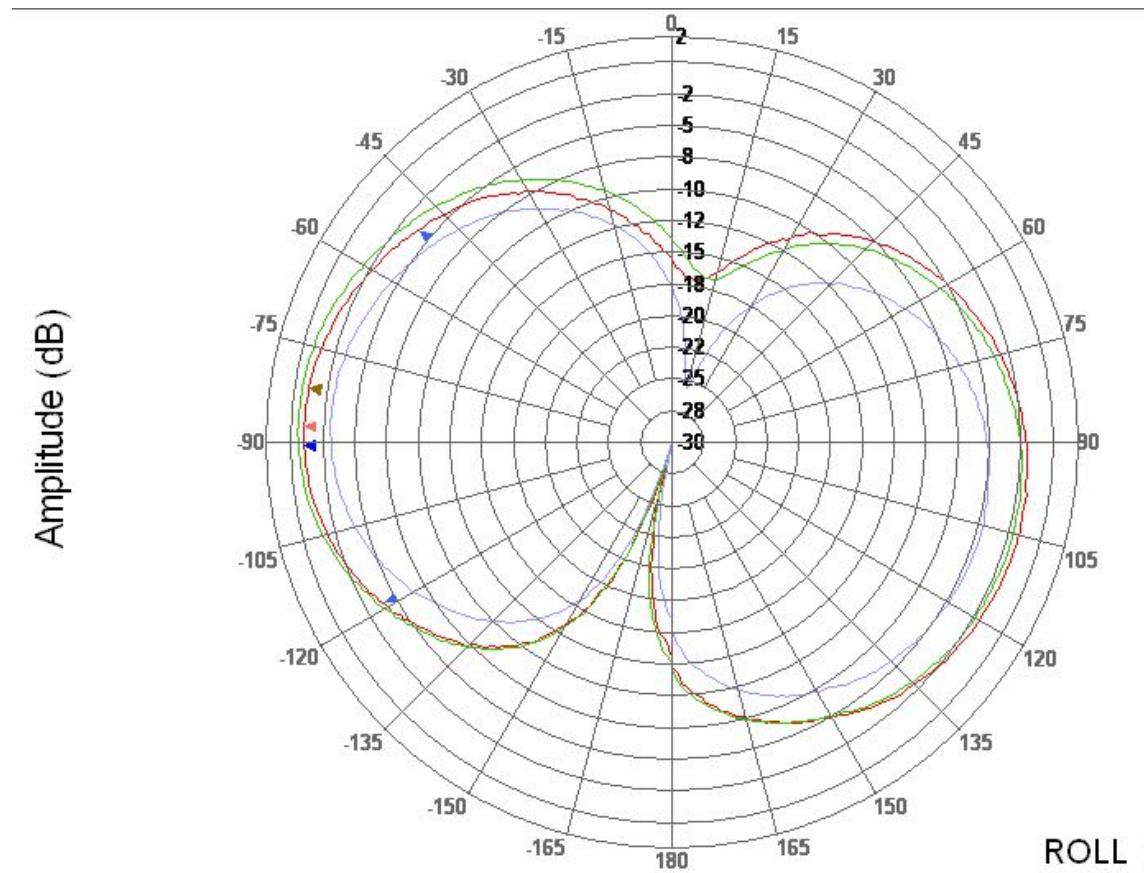
1.3 Radiation Pattern

Peak Value(Beam Peak :dB)			
	Azimuth Plane	Elevation 1	Elevation 2
2.4 GHz	-4.16	-0.97	-0.91
2.45 GHz	-3.67	-0.50	-0.91
2.5 GHz	-5.10	-3.04	-3.51

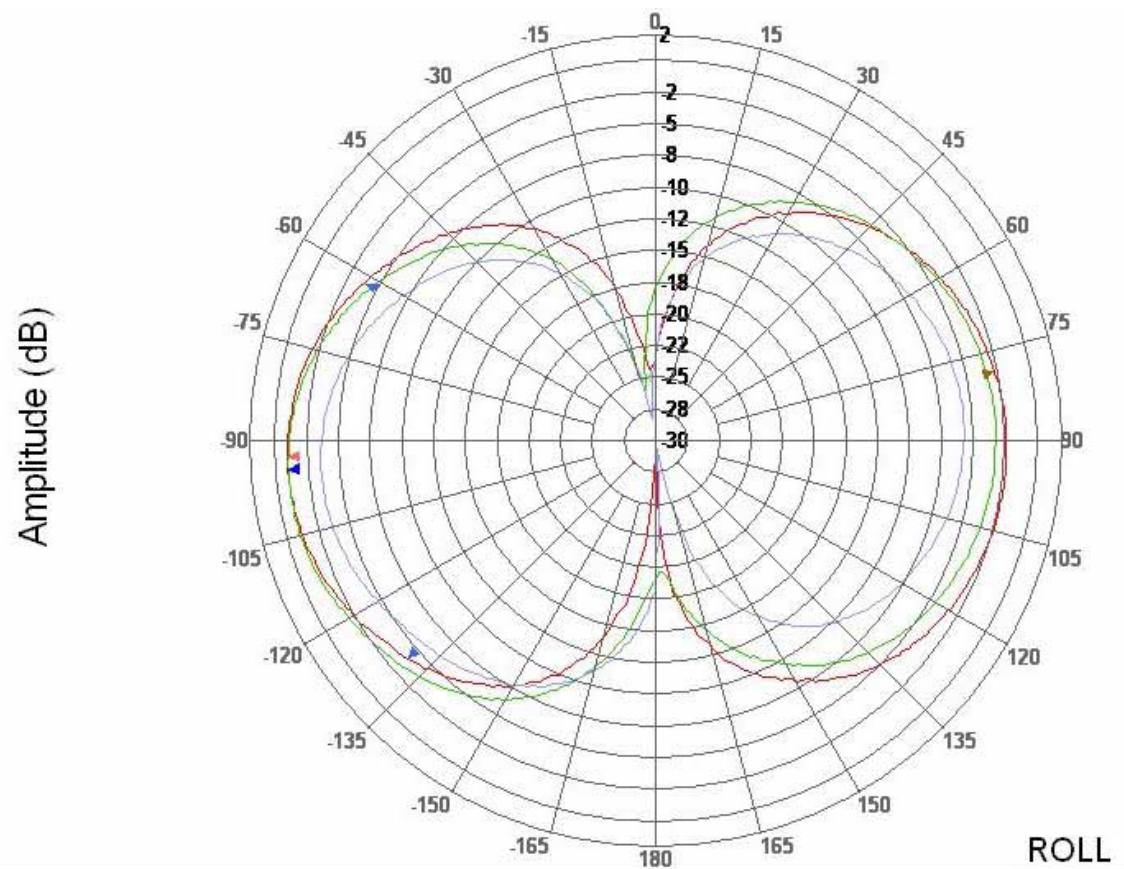
(a) Azimuth Plane (XY) – Vertical Polarization



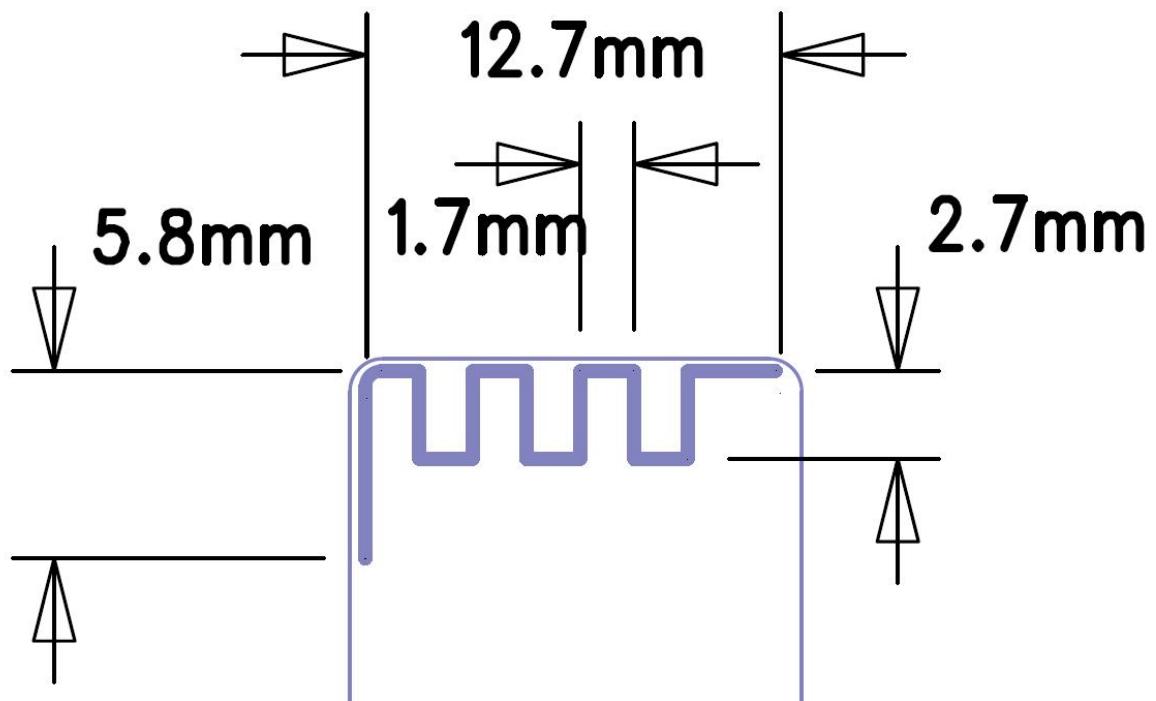
(b) Elevation1 Plane (ZX) – Horizontal Polarization



(c) Elevation2 Plane (YZ) – Horizontal Polarization (Folder Close)



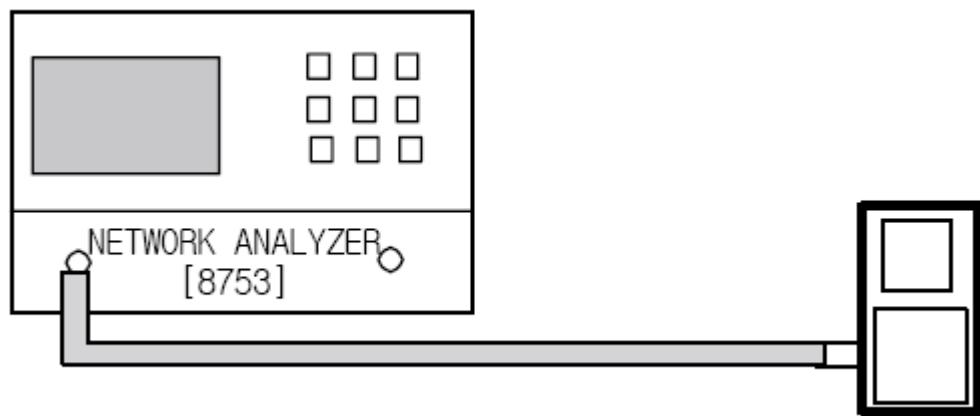
2. MECHANICAL DIMENSION



3. Measurement Method and Condition

The measurement of antenna performance is measurement of gain, radiation pattern using ORBIT/FR apparatus in Anechoic chamber and measurement of VSWR using Network analyzer.

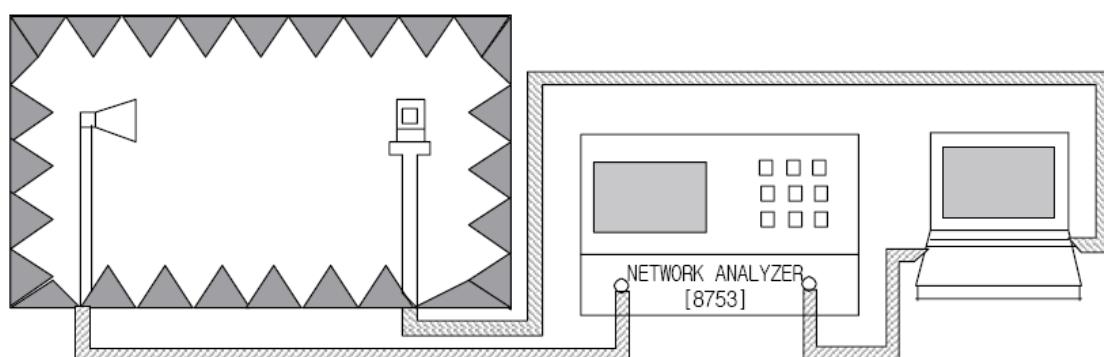
3.1 The measurement of Frequency and VSWR



<Measurement Method>

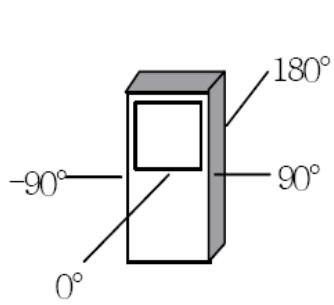
- 1) As seen the above, network analyzer is set up for S11 measurement.
- 2) The measurement frequency range is to set up from 2 GHz to 3 GHz.
- 3) Perform S11 one port full calibration.
- 4) Measure the VSWR of three points of Bluetooth frequency range such as 2400 MHz, 2450 MHz, and 2500 MHz.

3.2 The measurement of Gain and Radiation Patterns

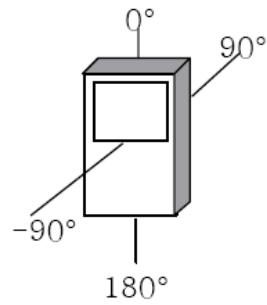


<Measurement Method>

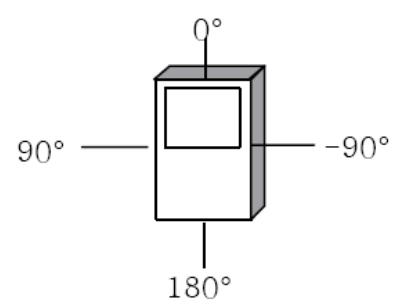
- 1) As seen the above, network analyzer is to set up in Anechoic chamber.
- 2) As seen the beneath, for the measurement planes as Azimuth, Elevation1, and Elevation2, measure Gain data of vertical polarization and horizontal polarization for each plane.



(AZIMUTH PLANE)



(ELEVATION1 PLANE)



(ELEVATION2 PLANE)