

Antenna datasheet

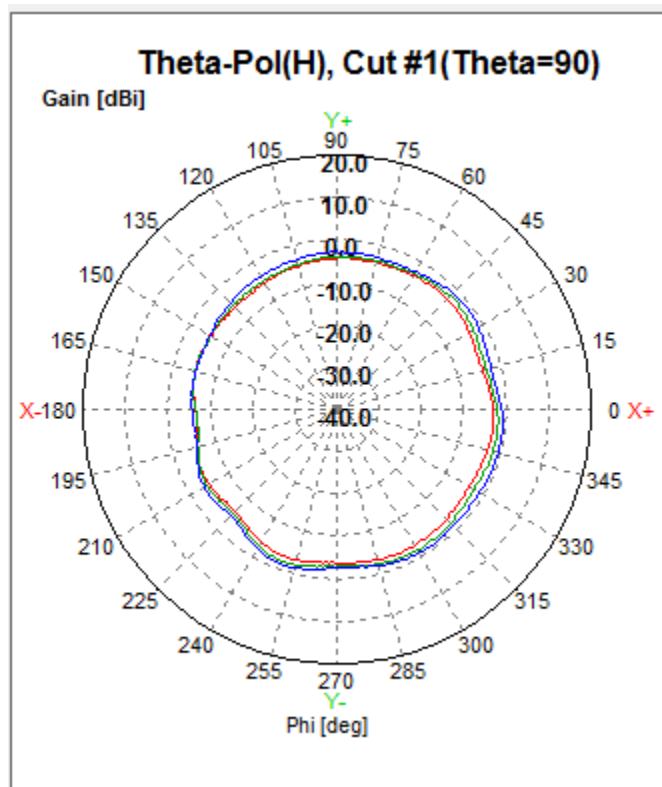
Object	PCB Pattern Antenna	Date	2023-08-24
Customer		Rev.	REV.A
System	Bluetooth	Written by	CPD GROUP
Model Name	CAMG-L1000_ANT		

Electrical Specifications	
Frequency Range (MHz)	2400 ~ 2480
Band Width (MHz)	200MHz
V.S.W.R (Min)	1.3
Gain (Max)	1.22 (dBi)
Input Impedance	50 (Ω)
Polarization	Theta-Pol(Horizontal), Phi-Pol(Vertical)
Mechanical Specifications	
Antenna size (L x W x H, mm)	22 × 5 × 0.05T
Weight	None
Connector	None
Cable length	None
Radiator Material	None
Operation Temperature (°C)	-10 ~ 50
Operation Humidity (%)	10 ~ 90

※ Data measured by **EMTI(Electromagnetic Wave Technology Institute)** / TEL +82-2-703-2415 / Homepage:

<https://www.emti.or.kr/>

Horizontal

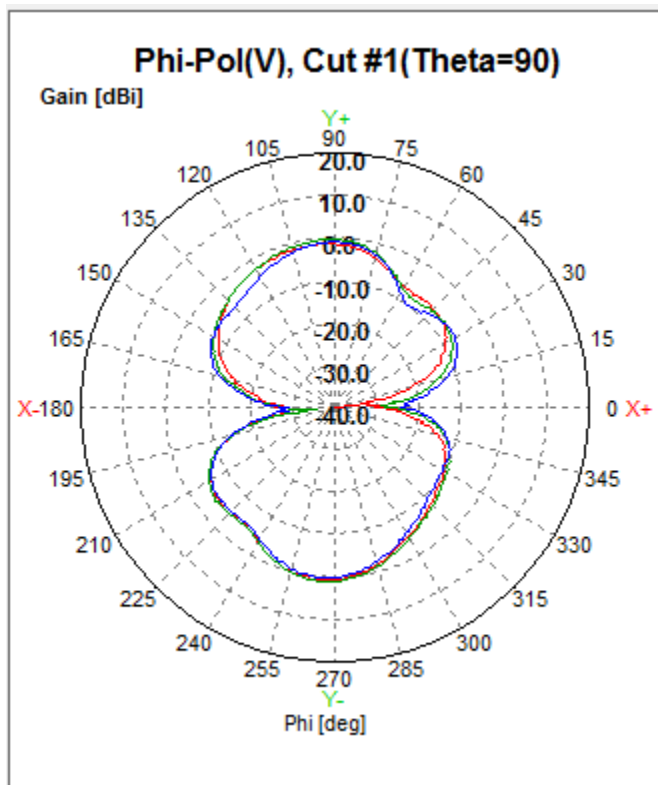


Frequency (MHz)	Average (dBi)	Peak (dBi)	Null (dBi)	Diff. (dB)	BW (deg)
2402	-4.23	-2.81	-6.89	4.08	255.16
2440	-3.43	-1.59	-7.03	5.43	232.37
2480	-2.55	-0.43	-6.29	5.86	231.76

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Vertical



Frequency (MHz)	Average (dBi)	Peak (dBi)	Null (dBi)	Diff. (dB)	BW (deg)
2402	-4.78	0.88	-40.58	41.46	42.95
2440	-4.30	1.22	-35.56	36.78	42.31
2480	-5.18	0.36	-29.26	29.62	40.95

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Appendix 1. EMTI Antenna measurement environment

Scope

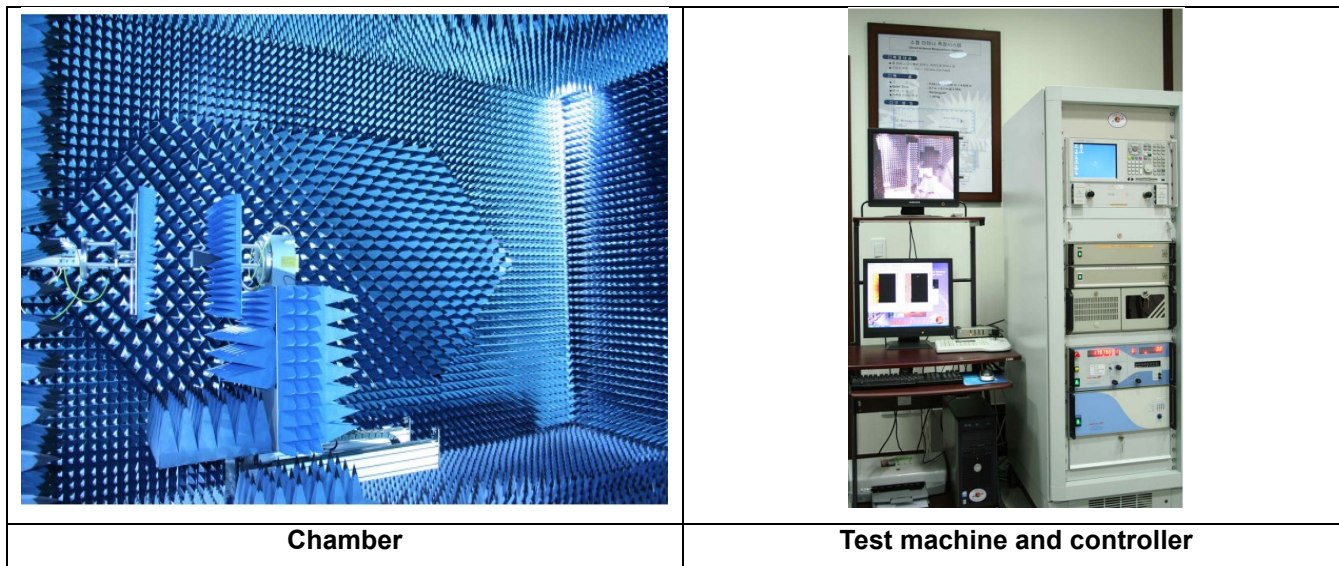
- High-gain antennas in the 2.0 GHz to 110.0 GHz band

Non-reflective Room Specifications

- Size: 6(W) m x 9(L) m x 4.8(H) m
- Frequency range:: 2.0 GHz ~ 110.0 GHz (Near Field)
- Type: Rectangular
- Scanning Area: 3.7 m x 2.9 m (X-axis, Y-axis)
- System: ORBIT/FR (Israel)
- Shield Performance (measured by KTL)

Field	Frequency	Performance
Magnetic Field	14.0 kHz	70 dB
	200 kHz	90 dB
Electric Field	1.0 ~ 50.0 MHz	100 dB
Plane Wave	400 MHz ~ 1.0 GHz	100 dB
Microwave	10.0 GHz ~ 18 GHz	100 dB

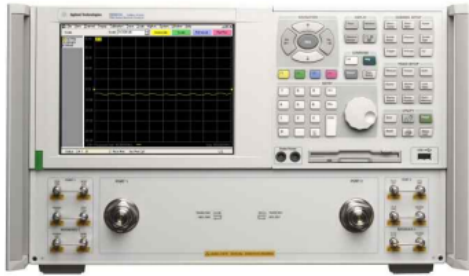
Chamber



Chamber

Test machine and controller

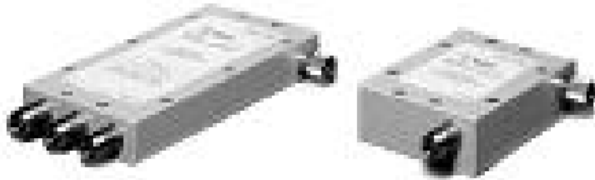
Test machine



Network Analyzer : Agilent E8364B



LO/IF Distribution Unit : Agilent 85309A



Mixer : Agilent 83620B-H50, 83620A-H50

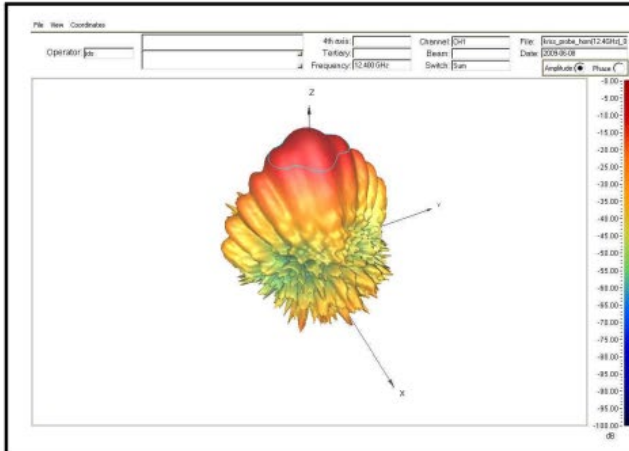


Amplifier : Agilent 83050A

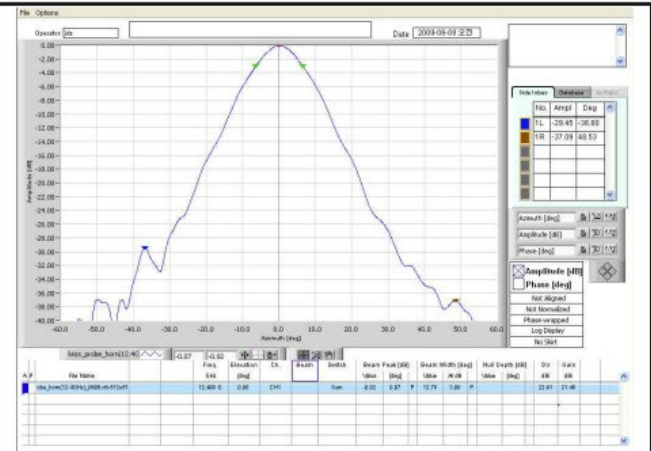


RF Amplifier Unit : ORBIT/FR AL-8502-4

Test software: ORBIT/FR (Israel)



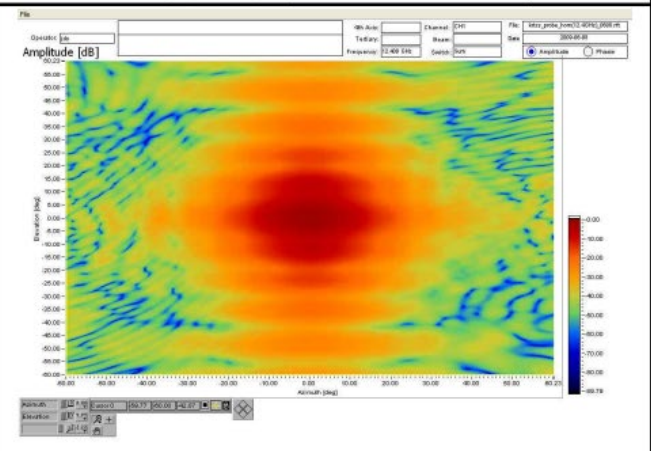
▲ 측정결과 (3D Amplitude)



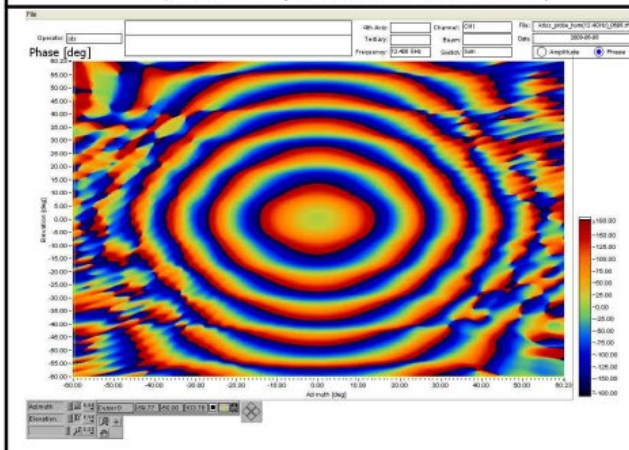
▲ 측정결과 (Cartesian Azimuth)



▲ 측정결과 (Cartesian Elevation)



▲ 측정결과 (Intensity Amplitude)



▲ 측정결과 (Intensity Phase)

Antenna photo (PCB pattern antenna)

