

Test	Approval
	
KIM.GB	KIM.YJ

Wi-Fi HALOW EVK ANT (SJANT-PCB-900-01) Passive Data

IoT사업부 연구1파트

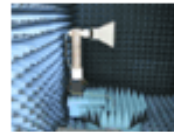
2023. 10. 31



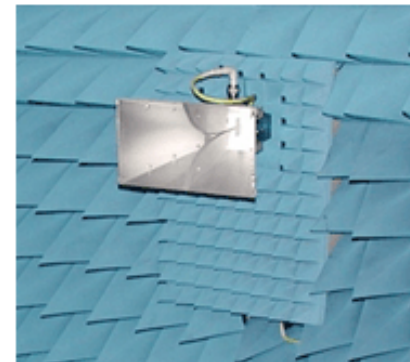
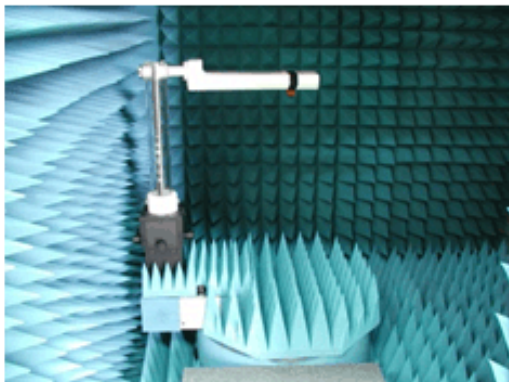
2-2. TEST 장비

> Chamber

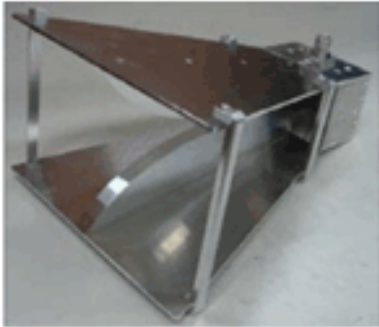
Compact Chamber



- Size : 3 x 2.5 x 2.5m (H)
- Manual Open/Close System
- RF Shield Performance : > 100dB
- System : 3D Automated Mobile Phone Measurement System
- Absorber : 12" Pyramidal Absorber
- Antenna : Double Rigid Horn Antenna



> Horn Antenna



HA-600

frequency range : 400MHz ~ 6GHz

frequency range : 600MHz ~ 6GHz

vswr : Normal 2.0(max 2.5)

Gain : 3~16dBi@3GHz

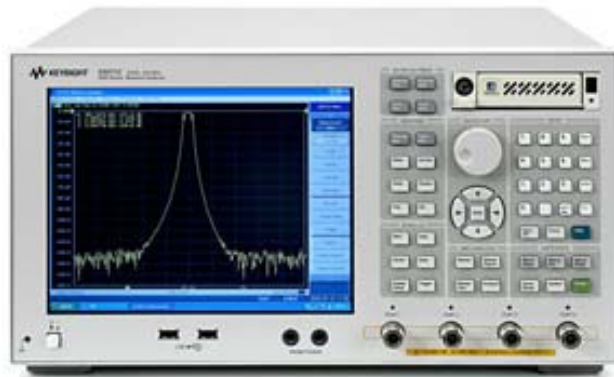
HPBW(half power beam width) : 25~110 deg for E-plane,

20~150 deg for H-plane

Impedance(nomial) : 50Ω

Connector : Type N

> Vector Network Analyzer



Agilent Technologies

E5071C ENA Vector Network Analyzer

- Frequency Range: 30 kHz ~ 3 GHz / 6 GHz
- S-Parameter Test Set: Solid-state switching supported
- Dynamic Range: Up to 110 dB
- High-speed measurement and data transfer supported

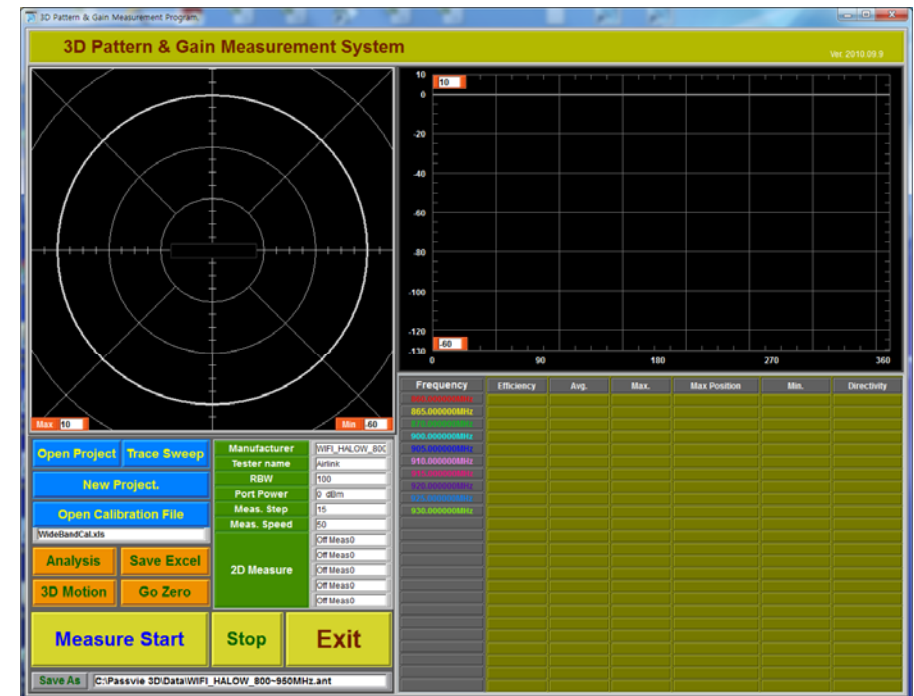
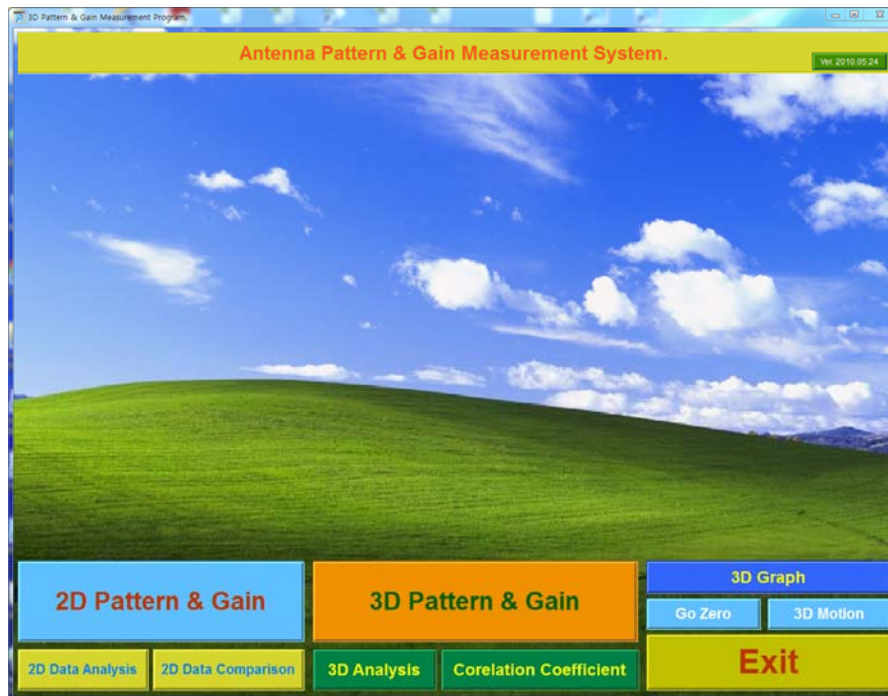
Calibration



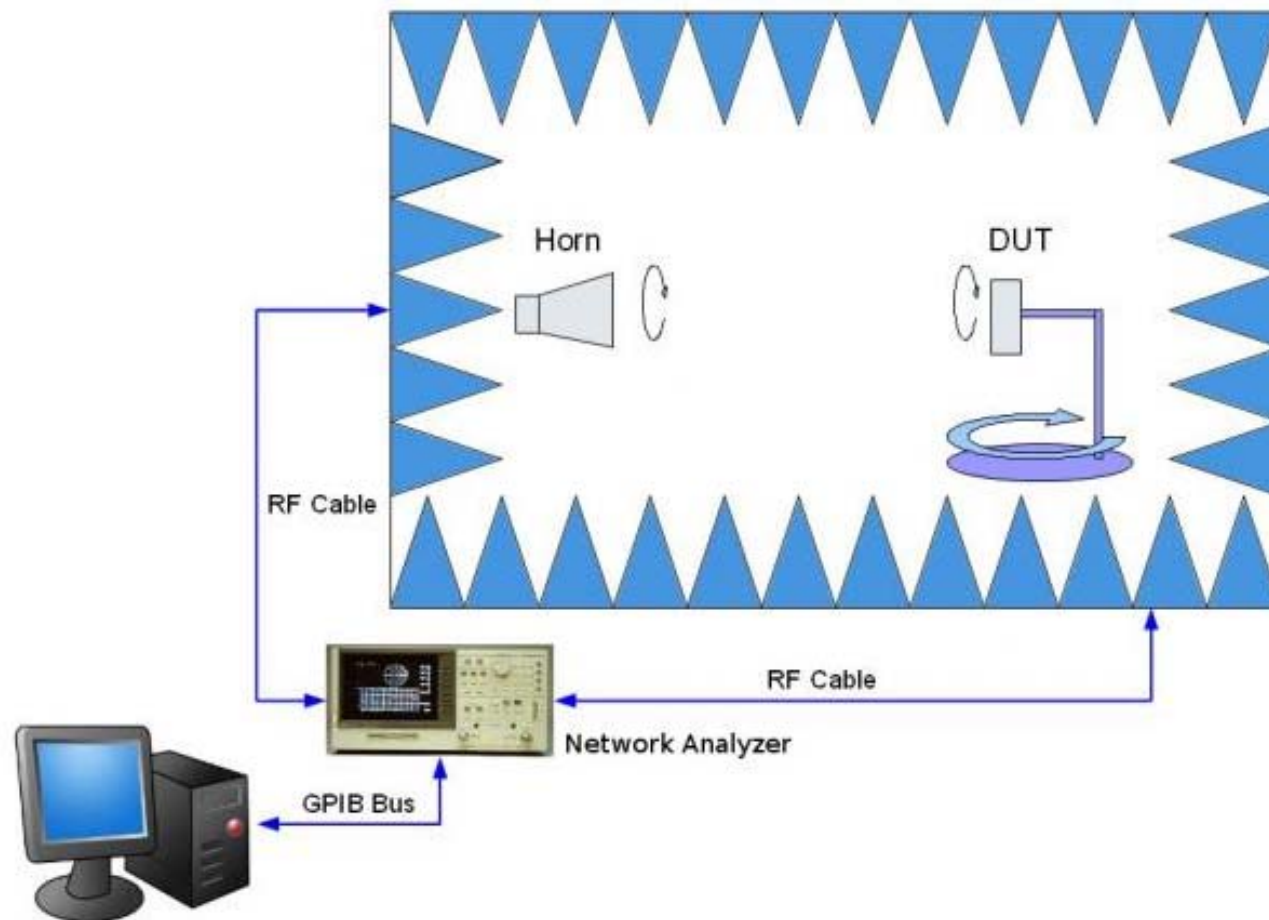
- Calibration every 12 months (scheduled for 25/03/14)

2-3. TEST SW

> Antenna_Gain(KSS社)



2-4. Test 구성도



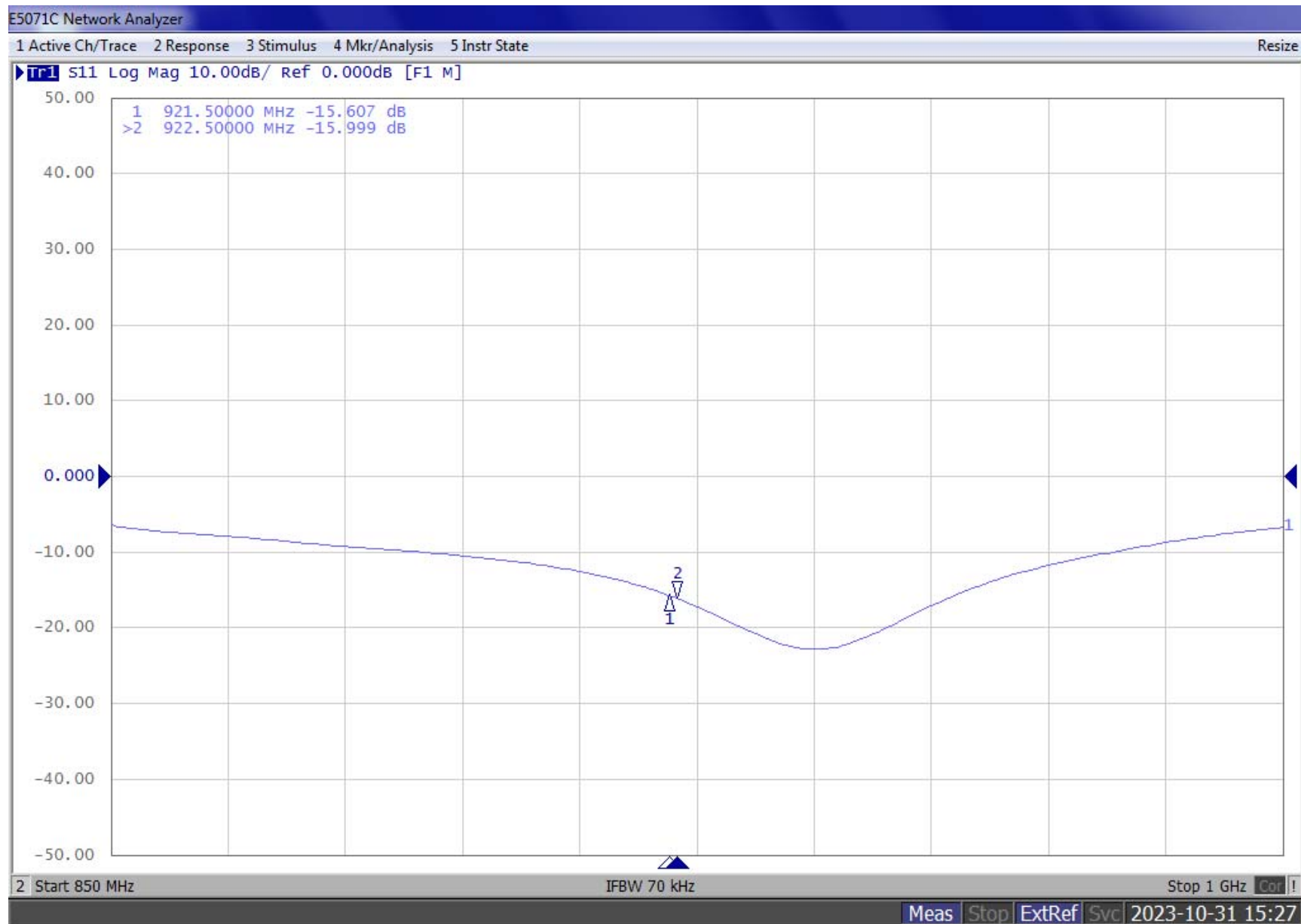
4-1. General Specifications

Model	Antenna
Antenna Type	PCB Pattern Antenna
Application	WIFI Halow Antenna

4-2. Electrical Specifications

Frequency Range	900 ~ 950 (MHz)
Ant	SJANT-PCB-900-01
Peak Gain (dBi)	3.0 dBi
Eff.(%)	73.9 %
Impedance	50Ω

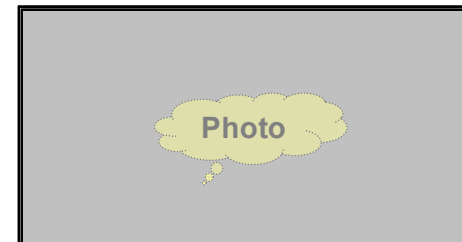
Wi-Fi HALOW EVK ANT Passive TEST - Return Loss



Wi-Fi HALOW EVK ANT Passive TEST – Antenna 3D Gain

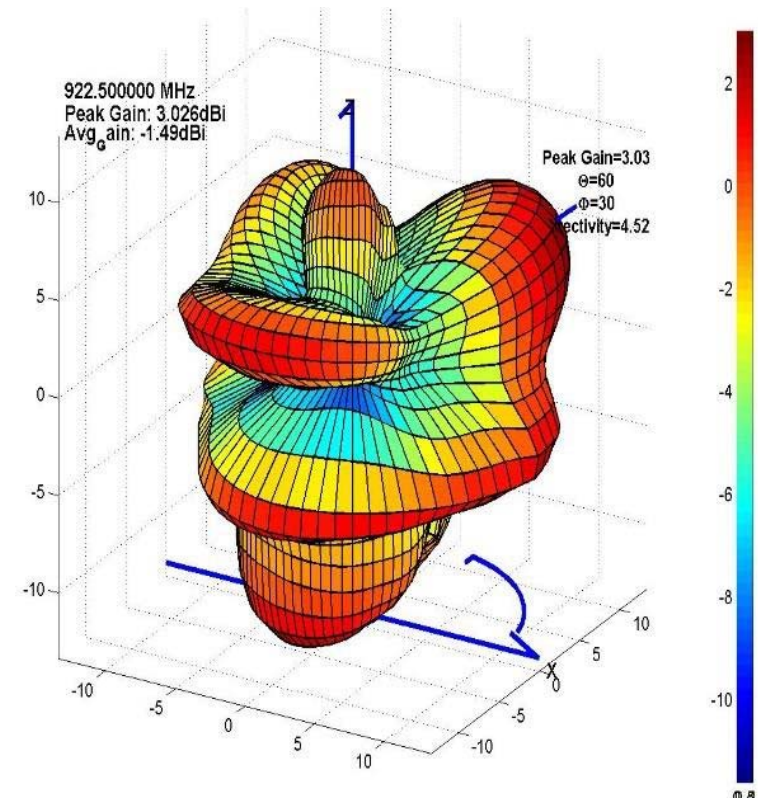
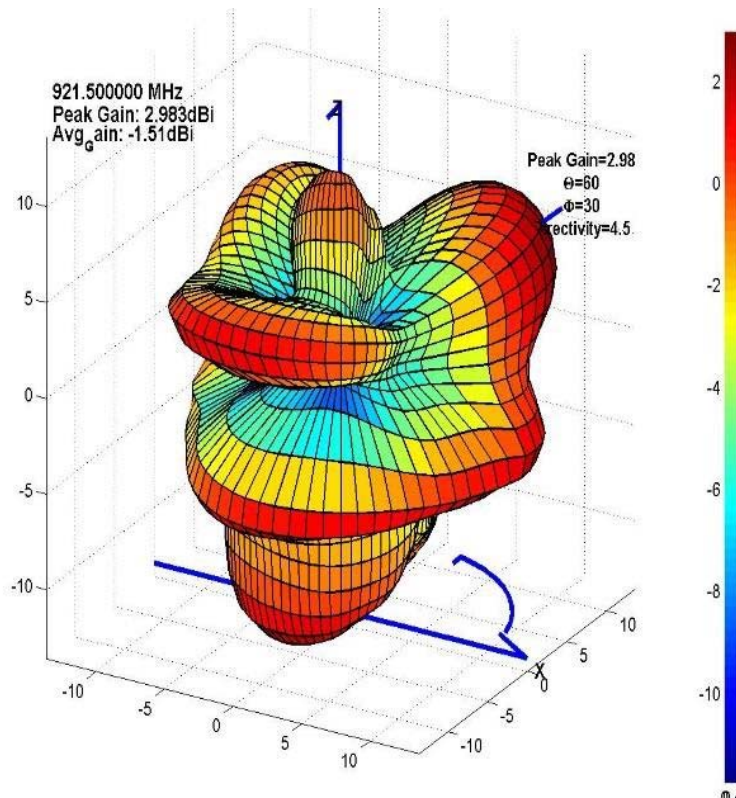
Antenna Pattern & Gain Report

Manufacturer	WIFI_HaLow
Model Name	WIFI_HaLow
Tester Name	Kim Gi Bae / SJIT R&D LAB
Test Date	2023-10-31 오전 11:37:45
IF BW	100 Hz
Port Power	0.00 dBm
Meas Step	15`



Frequency	Efficiency	Average Gain			Max Gain			Max Position	Directivity
		Ver	Hor	Total	Ver	Hor	Total		
900.000000 MHz	73.9 %	-5.4 dBi	-3.5 dBi	-1.3 dBi	2.1 dBi	1.8 dBi	2.8 dBi	Theta60/Pie30	4.15 dB
905.000000 MHz	71.3 %	-5.5 dBi	-3.7 dBi	-1.5 dBi	1.9 dBi	1.8 dBi	2.8 dBi	Theta60/Pie30	4.25 dB
910.000000 MHz	67.7 %	-5.6 dBi	-4.0 dBi	-1.7 dBi	1.7 dBi	1.7 dBi	2.6 dBi	Theta60/Pie30	4.34 dB
915.000000 MHz	66.5 %	-5.6 dBi	-4.1 dBi	-1.8 dBi	1.6 dBi	1.7 dBi	2.7 dBi	Theta60/Pie30	4.42 dB
921.500000 MHz	70.6 %	-5.3 dBi	-3.9 dBi	-1.5 dBi	1.7 dBi	2.1 dBi	3.0 dBi	Theta60/Pie30	4.50 dB
922.500000 MHz	70.9 %	-5.3 dBi	-3.8 dBi	-1.5 dBi	1.8 dBi	2.1 dBi	3.0 dBi	Theta60/Pie30	4.52 dB
926.500000 MHz	70.5 %	-5.3 dBi	-3.9 dBi	-1.5 dBi	1.7 dBi	2.1 dBi	3.0 dBi	Theta60/Pie30	4.49 dB
929.500000 MHz	69.0 %	-5.4 dBi	-4.0 dBi	-1.6 dBi	1.6 dBi	2.0 dBi	2.8 dBi	Theta60/Pie30	4.38 dB
935.000000 MHz	66.3 %	-5.6 dBi	-4.1 dBi	-1.8 dBi	1.5 dBi	1.9 dBi	2.5 dBi	Theta60/Pie30	4.32 dB
940.000000 MHz	63.2 %	-5.9 dBi	-4.3 dBi	-2.0 dBi	1.3 dBi	1.9 dBi	2.2 dBi	Theta60/Pie30	4.23 dB
945.000000 MHz	62.1 %	-6.0 dBi	-4.3 dBi	-2.1 dBi	1.2 dBi	2.0 dBi	2.2 dBi	Theta60/Pie45	4.25 dB
950.000000 MHz	62.1 %	-6.1 dBi	-4.3 dBi	-2.1 dBi	1.1 dBi	2.1 dBi	2.3 dBi	Theta75/Pie30	4.36 dB
955.000000 MHz	61.6 %	-6.3 dBi	-4.2 dBi	-2.1 dBi	1.0 dBi	2.2 dBi	2.4 dBi	Theta75/Pie30	4.49 dB
960.000000 MHz	64.6 %	-6.2 dBi	-3.9 dBi	-1.9 dBi	1.1 dBi	2.6 dBi	2.7 dBi	Theta75/Pie45	4.60 dB
965.000000 MHz	66.2 %	-6.2 dBi	-3.7 dBi	-1.8 dBi	1.1 dBi	2.7 dBi	2.9 dBi	Theta75/Pie45	4.69 dB
970.000000 MHz	58.9 %	-6.9 dBi	-4.1 dBi	-2.3 dBi	0.5 dBi	2.4 dBi	2.5 dBi	Theta75/Pie45	4.83 dB
975.000000 MHz	52.7 %	-7.6 dBi	-4.5 dBi	-2.8 dBi	-0.2 dBi	2.0 dBi	2.2 dBi	Theta75/Pie45	4.95 dB
980.000000 MHz	49.7 %	-8.0 dBi	-4.7 dBi	-3.0 dBi	-0.6 dBi	1.8 dBi	2.0 dBi	Theta75/Pie45	5.02 dB
985.000000 MHz	48.1 %	-8.3 dBi	-4.8 dBi	-3.2 dBi	-1.0 dBi	1.7 dBi	1.9 dBi	Theta75/Pie45	5.07 dB
990.000000 MHz	50.2 %	-8.3 dBi	-4.5 dBi	-3.0 dBi	-1.0 dBi	1.9 dBi	2.1 dBi	Theta75/Pie45	5.09 dB
995.000000 MHz	50.9 %	-8.3 dBi	-4.4 dBi	-2.9 dBi	-1.2 dBi	1.9 dBi	2.1 dBi	Theta75/Pie30	5.01 dB
1000.000000 MHz	48.9 %	-8.6 dBi	-4.6 dBi	-3.1 dBi	-1.6 dBi	1.6 dBi	1.8 dBi	Theta75/Pie30	4.95 dB
995.000000 MHz	48.4 %	-8.6 dBi	-4.6 dBi	-3.2 dBi	-1.7 dBi	1.6 dBi	1.8 dBi	Theta75/Pie30	4.97 dB
1000.000000 MHz	48.9 %	-8.6 dBi	-4.6 dBi	-3.1 dBi	-1.6 dBi	1.6 dBi	1.9 dBi	Theta75/Pie30	4.98 dB

Wi-Fi HALOW EVK ANT Passive TEST – Antenna 3D Gain



감사합니다.