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AH2201 BT/Wi-Fi PCB Pattern Antenna - Measurement Results

23-June-2022



Equipment List and EUT

No.	Equipment	Brand	Model No.	Serial No.	Calibrated Date	Calibrated Until
1	Far Field Anechoic Chamber	-	Indoor Lab	AP871	19-Feb-2021	18-Feb-2024
2	Transmit Horn Antenna	ETS Lindgren	ETS 3115	29269/ETS3115	NA	NA
3	Reference Antenna	MVG	SH800	ANTMVG80001	NA	NA
4	Signal Generator	Keysight	N5182A	MY50143240	03-Feb-2021	03-Feb-2023
5	Signal Receiver	R&S	ESU 40	ESW44/103032	24-Aug-2021	23-Aug-2022
6	VNA	Keysight	5071C	MY46100445	11-Aug-2021	11-Aug-2023
7	EUT (Display Audio)	Panasonic	AH2201	1500156	NA	NA

Test Method / Standard

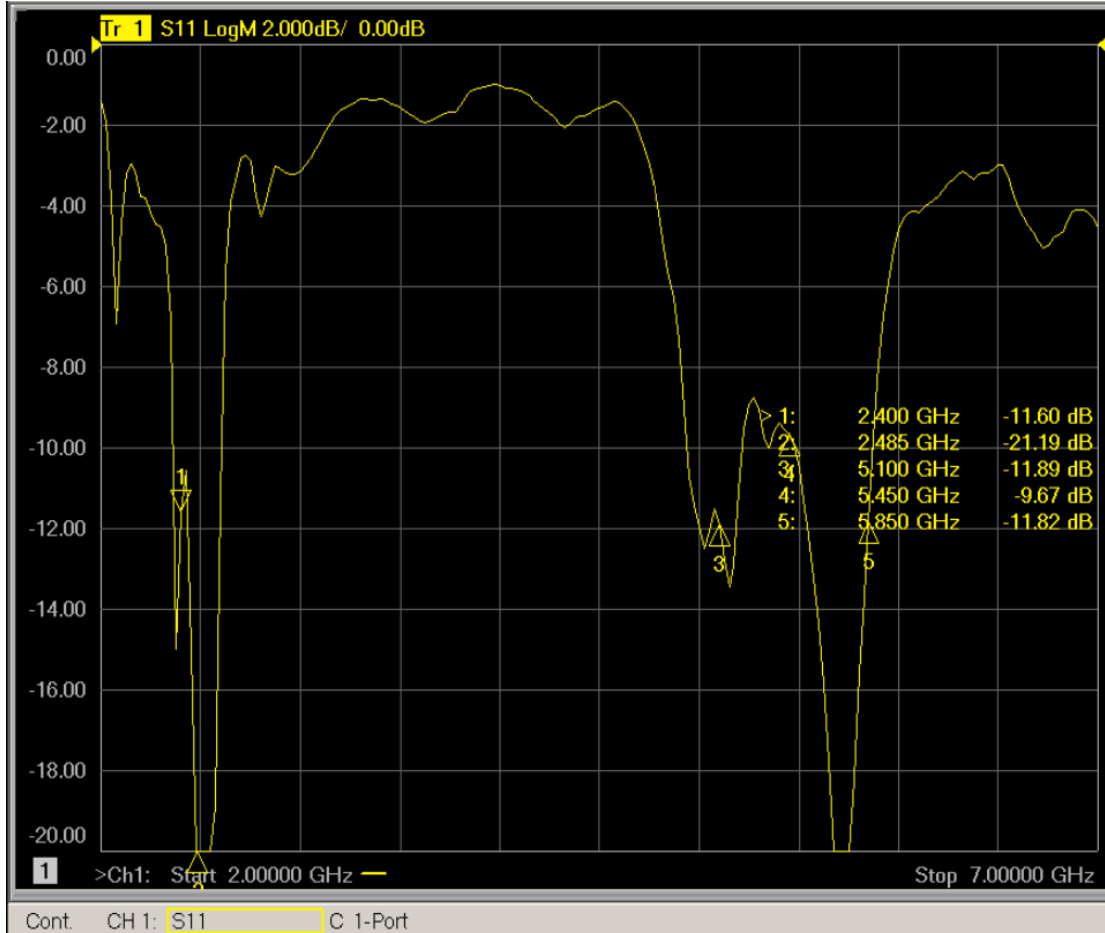
Refer IEEE Recommended Practice for Antenna Measurements
Document No: IEEE Std 149TM-2021

Dual Band BT/Wi-Fi Pattern Antenna with Enclosure

- Return Loss Testing Setup



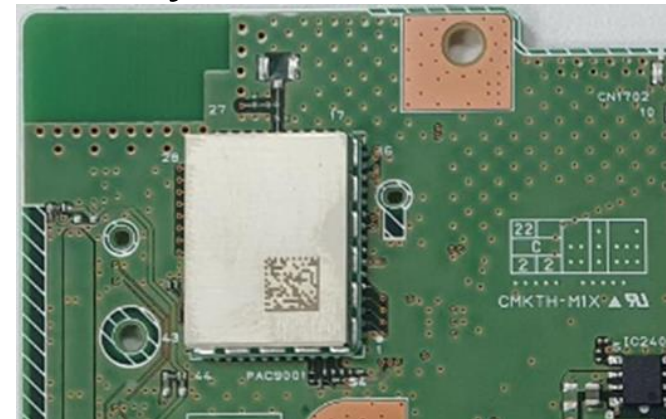
Return Loss Measurement



Layer-1



Layer-4



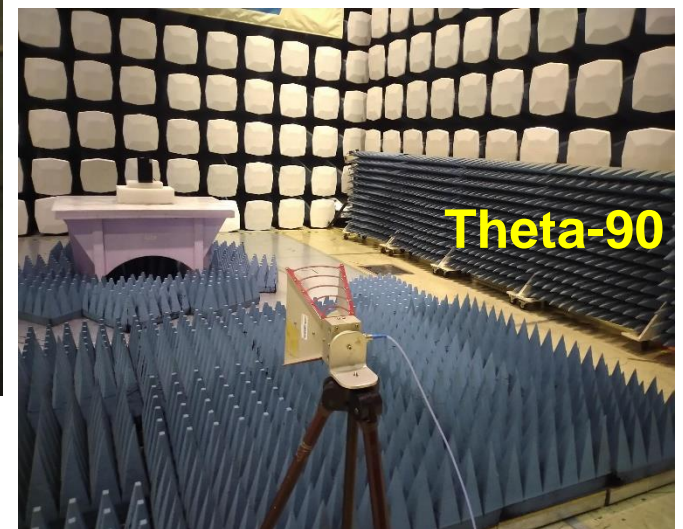
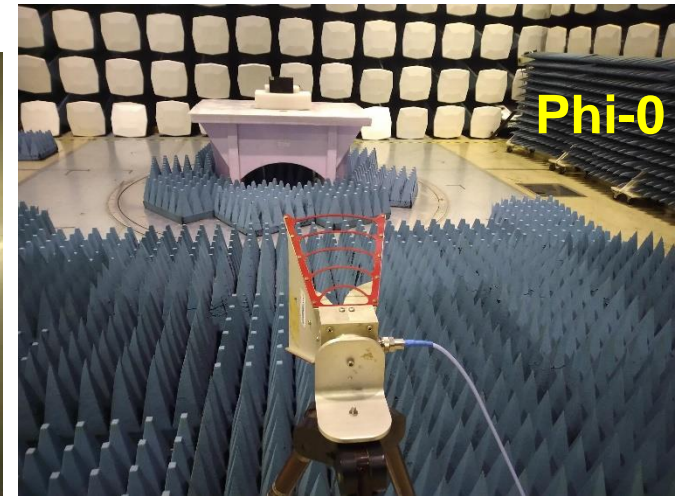
- The Return Loss measurement with the Pattern Antenna shows RL values for 2.4G band and 5G band



Control Room



Anechoic Chamber



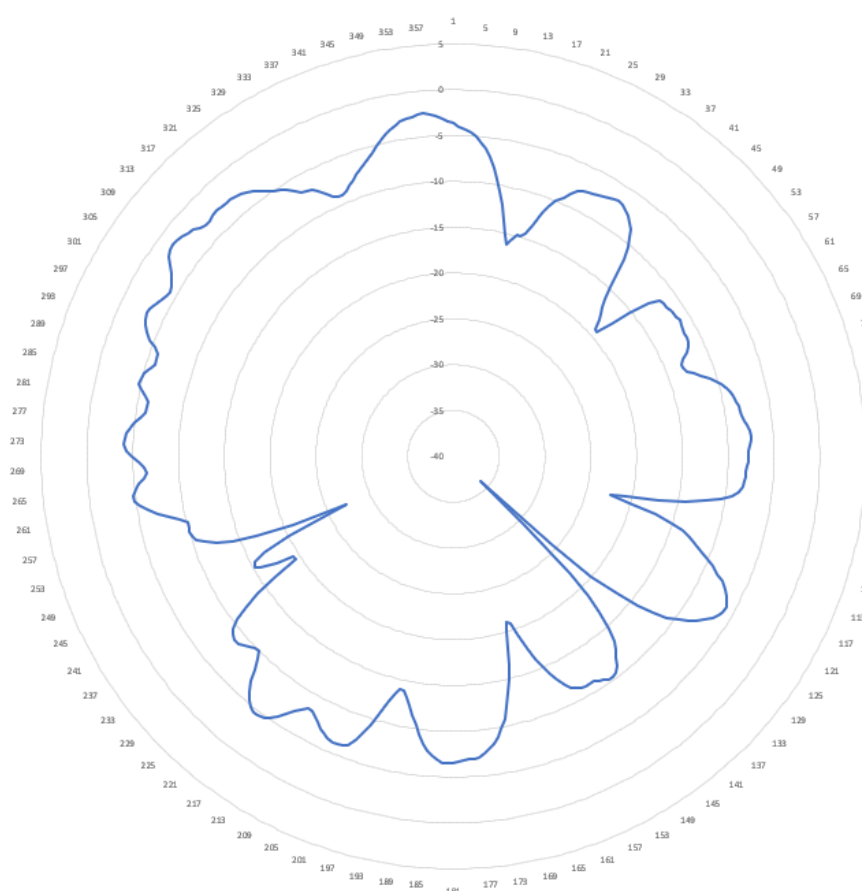
Measured Radiation Pattern @ 2.4 GHz



Radiation Pattern at 2.4GHz Phi 0



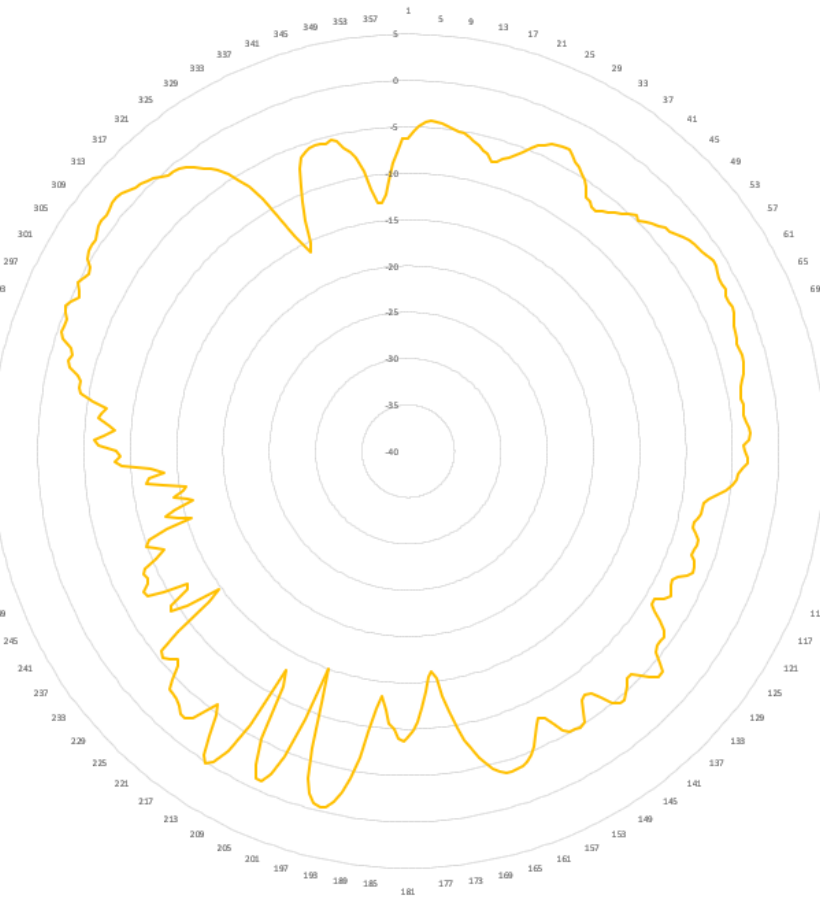
Radiation Pattern at 2.4GHz Theta 90



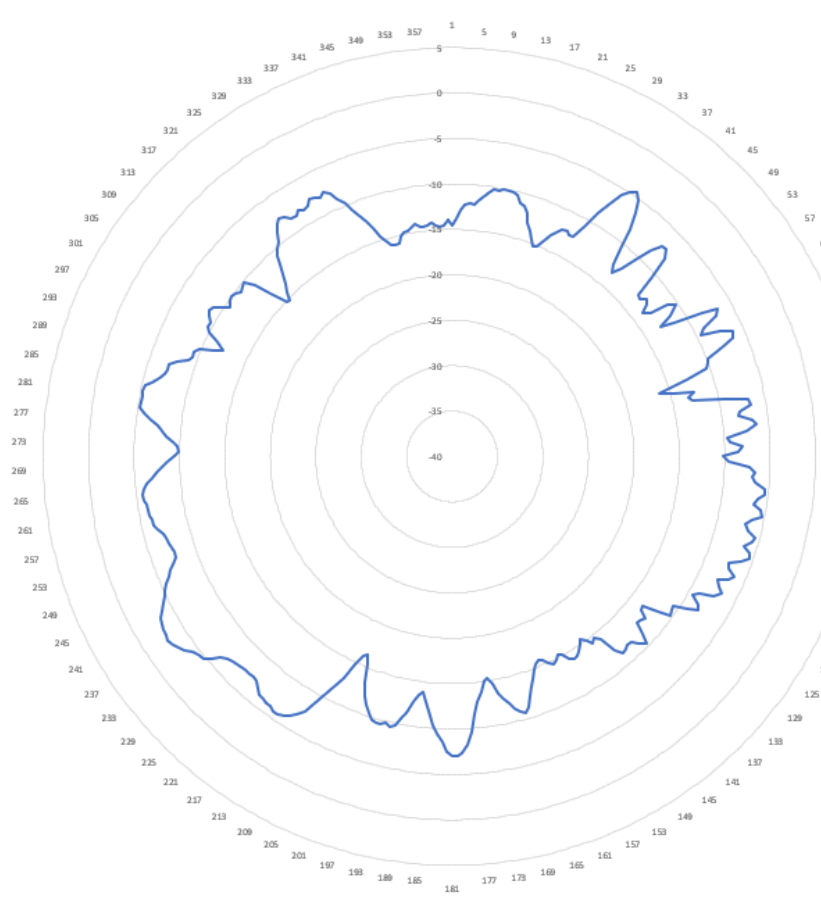
Measured Radiation Pattern @ 5.85 GHz



Radiation Pattern at 5.85GHz Phi 0



Radiation Pattern at 5.85GHz Theta 90





Pattern Antenna Gain

Peak Gain in dBi	
2.4GHz	5.85GHz
2.56	1.82

Inference:

- The above-mentioned gain values are calculated based on the Radiation Pattern measurement
- The Pattern Antenna Gain values in both bands are better > 0dBi similar to the Simulation Results.



- **Return loss**
 - Return Loss is getting better ($>8\text{dB}$) in both 2.4G and 5G bands

- **Radiation Pattern**
 - Measurement is Performed and Peak gain at all frequency points in both band are observed above 0dBi which is similar to the Simulation Results.



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