

Antenna Report

Revision History

Date	Revision	Comment
2019-06-5	1st	The fist version

Content

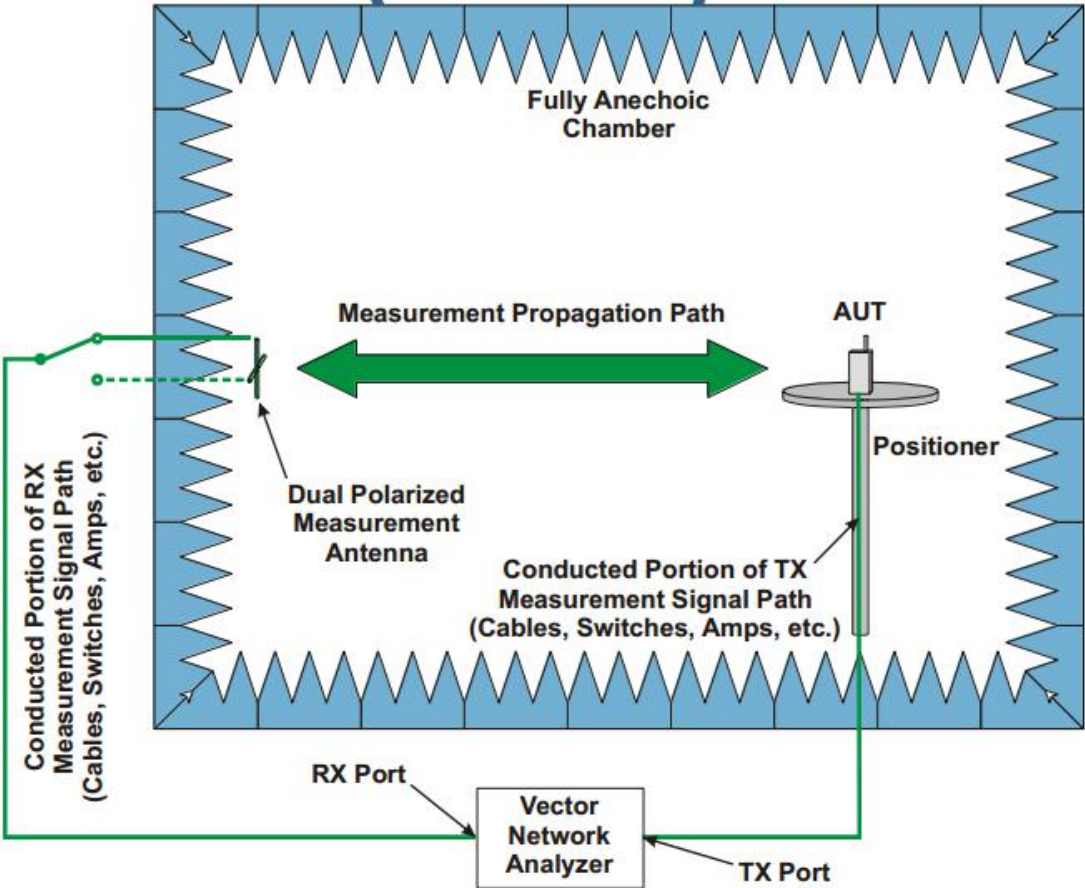
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1. Introduction

This document records the detail antenna radiation performance of OTT Box. It is a confidential document of Skyworth.

2. Test Solution

The test topology is following figure.



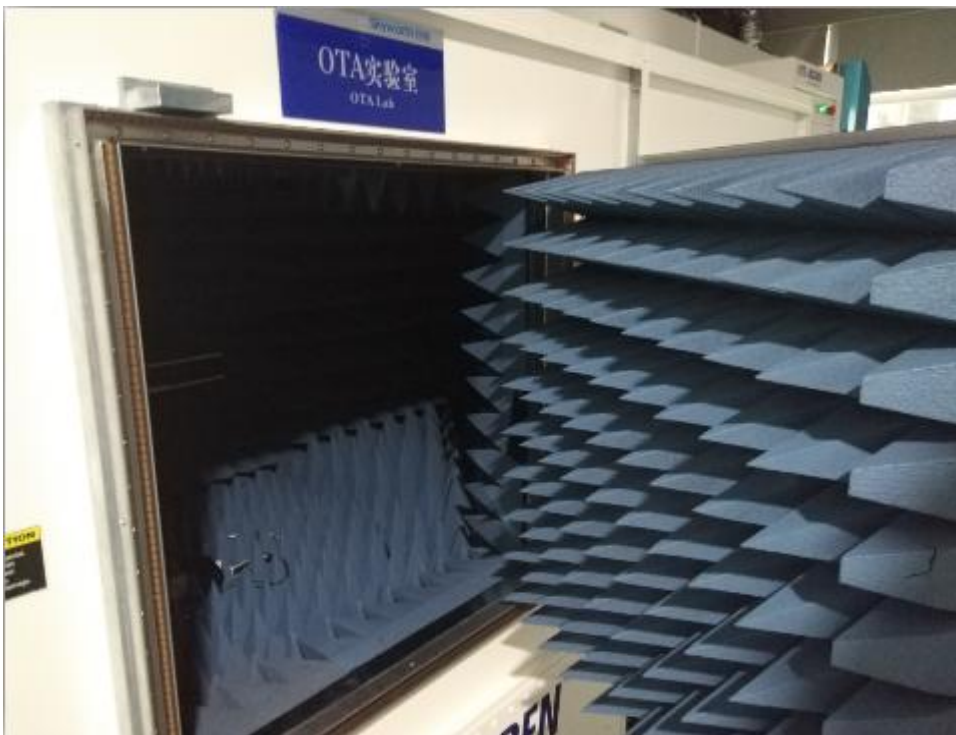
3. Equipment List

No.	Equipment	Model	Calibration	Remark
1	Network analyzer	ZNB-8	2019/06	/
3	Anechoic Chamber	AMS-8050	2019/03	/
4	Wireless Connectivity Tester	CMW270	2019/03	
5	Power Splitter	ZN2PD-63-S+	/	

4. Test Environment



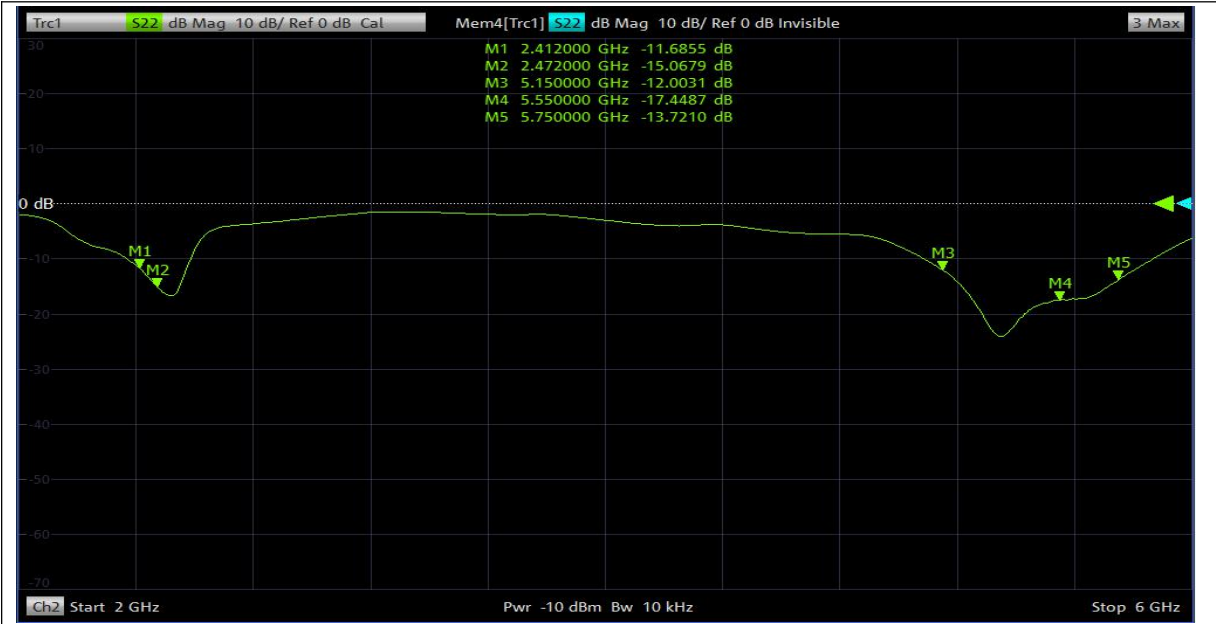
Anechoic Chamber Facade



Anechoic Chamber Inside

5. Test Result

5.1 Antenna S Parameter

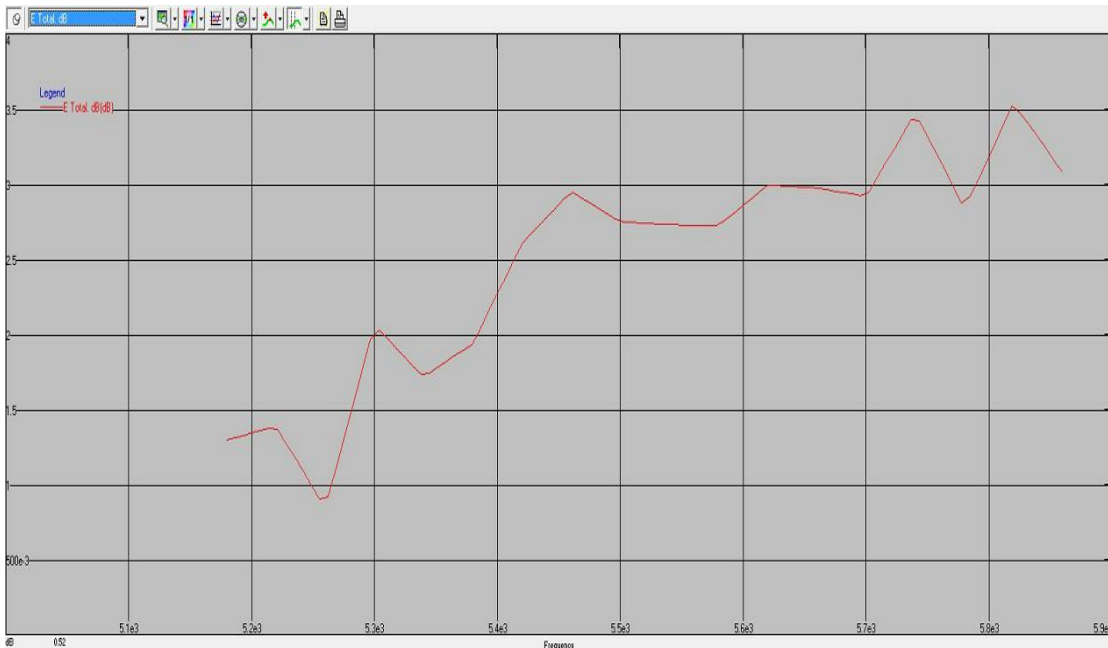


Frequency Range	2.4GHz ~ 2.5GHz	5.18GHz ~ 5.875GHz	
S Parameter	S11 < -11 dB	S11 < -13 dB	

5.2 Antenna Gain and Efficiency



Freq/GHz	2.4	2.41	2.42	2.43	2.44	2.45	2.46	2.47	2.48	2.49	2.5
Gain/dBi	2.86	3.18	3.02	2.99	3.12	3.18	3.08	2.72	2.33	2.45	2.64
Effic.	69%	71%	72%	75%	77%	74%	69%	67%	67%	70%	75%

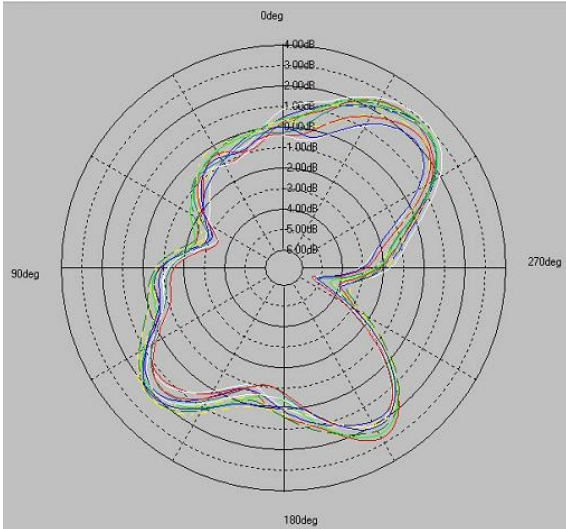


Freq/GHz	5.18	5.26	5.34	5.42	5.5	5.58	5.66	5.74	5.82	
Gain/dBi	1.3	0.85	1.72	2.61	2.76	2.72	2.98	3.48	3.54	
Effic.	38%	37%	43%	54%	56%	58%	61%	68%	69%	

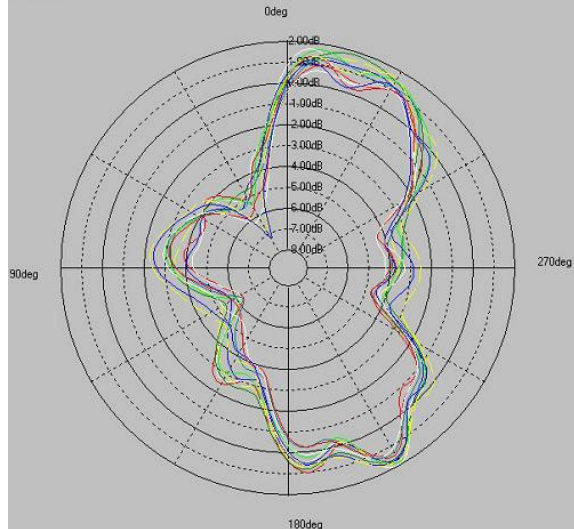
5.3 Dual-Antenna Far Field Radiation

5.3.1 2D Far Field Radiation

---2410MHz

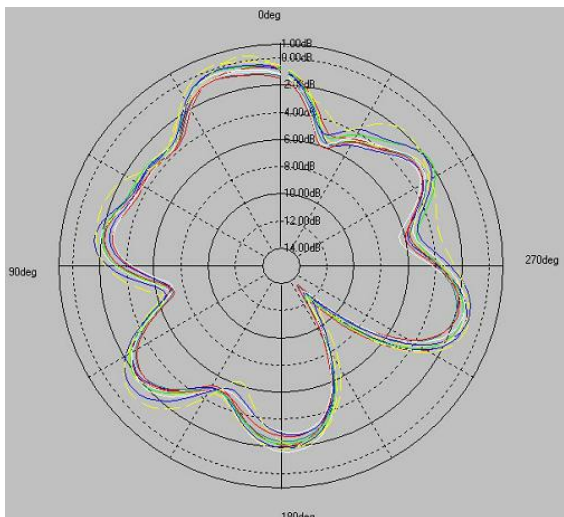


Phi = 0 degree for 2.4G

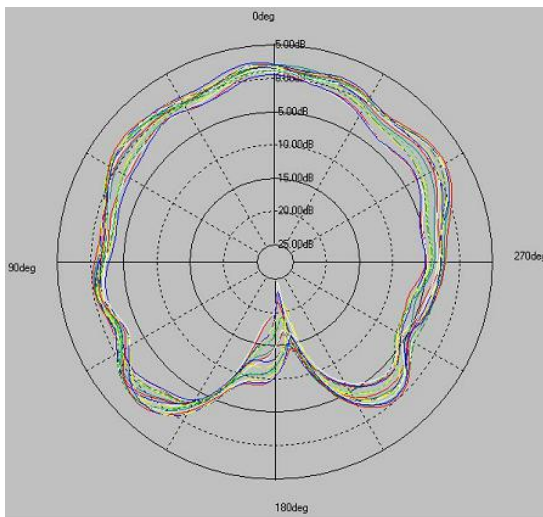


Phi = 90 degree for 2.4G

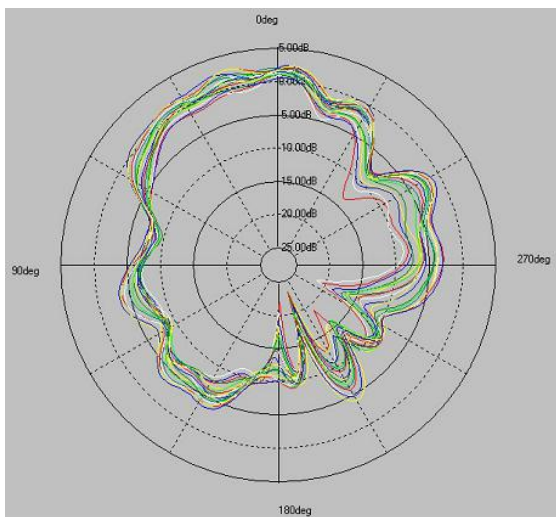
— 5.820MHz



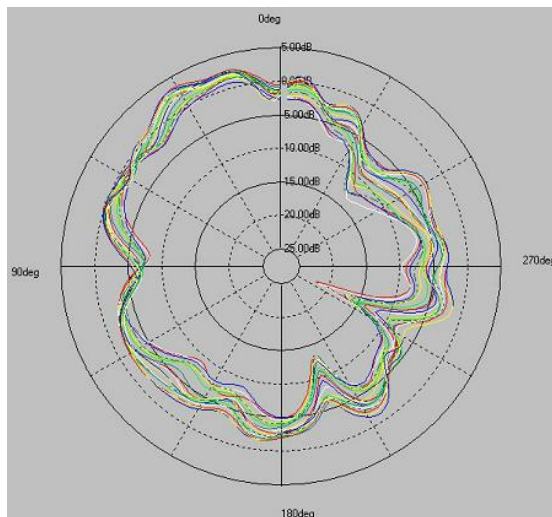
Theta = 90 degree for 2.4G



Phi = 0 degree for 5G



Phi = 90 degree for 5G

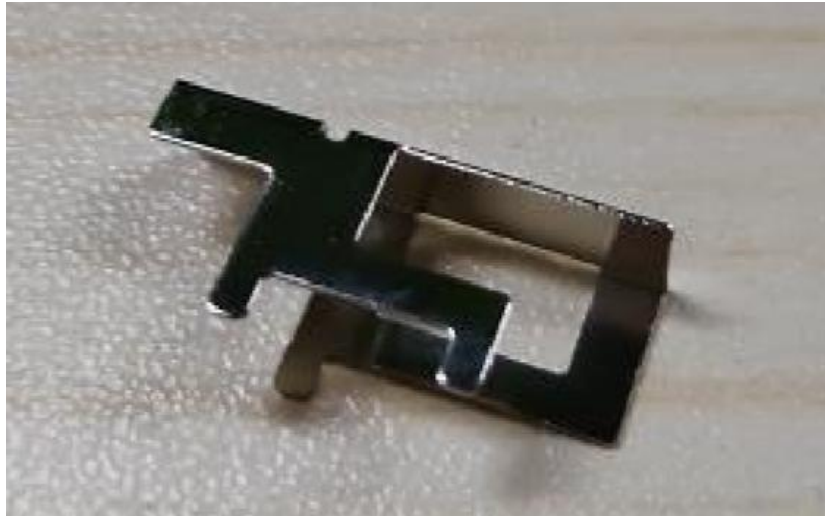


Theta = 0 degree for 5G

5.4 Other Parameter

Item	Parameter
Impedance	50 ohm
Polarization	line
Max VSWR	2:1
Radiation Properties	Omni-directional
Max Input Power	2 W
Material	Stainless steel
Connector	PCB trace(on board)
Operation Temperature	- 40 ~ 85 °C
RoHs Compliant	YES

6. ANNEX DUT PHOTO



Unit:mm

