

Customer : _____

P/N : _____

()

SPECIFICATION

RoHS

Product : FPCB Antenna

Customer Model Name : Flex 800

Remarks : _____

Revision: 1.0 (2023-09-04)

BLUECOM BT R&D			QA/QC
WRITTEN	CHECK	APPROVAL	CHECK
			
김 경록		김 범석	최 화준
	CHECK	APPROVAL	APPROVAL

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1. Revision History

[illegible]

2. Introduction

2.1 Introduction of Product

This Product is a Pattern BT Antenna that the thin copper is printed inside PCB

2.2 Specification and Dimension

size [mm]	L = 24.8± 0.1	
	W = 6.78 ± 0.1	
	T = 0.8 ± 0.03	
Model	Flex 800	
Application	Bluetooth	
P/N	Flex 800 Antenna	
Revision	1.0	

3. Electrical Characteristics

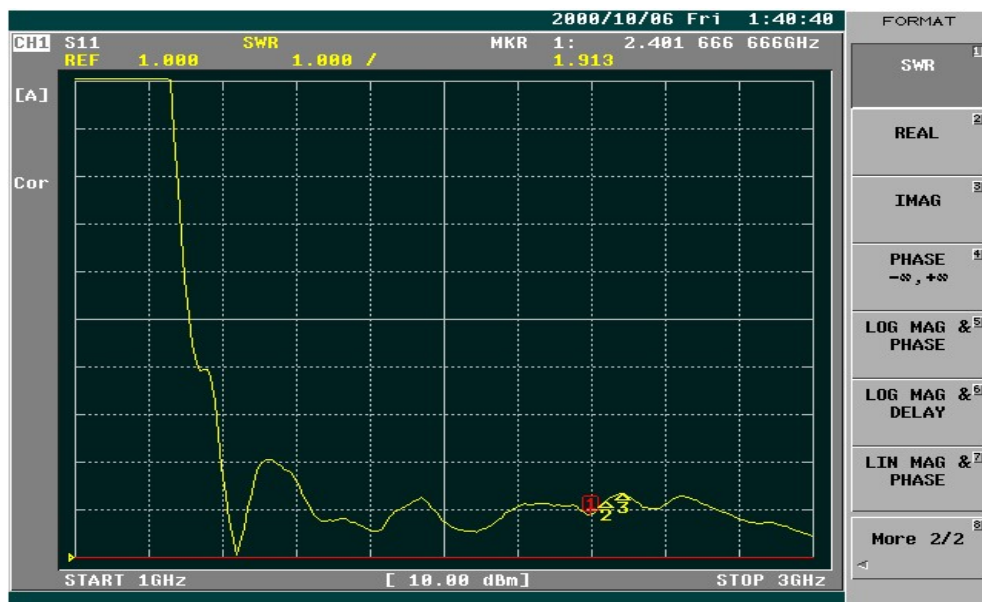
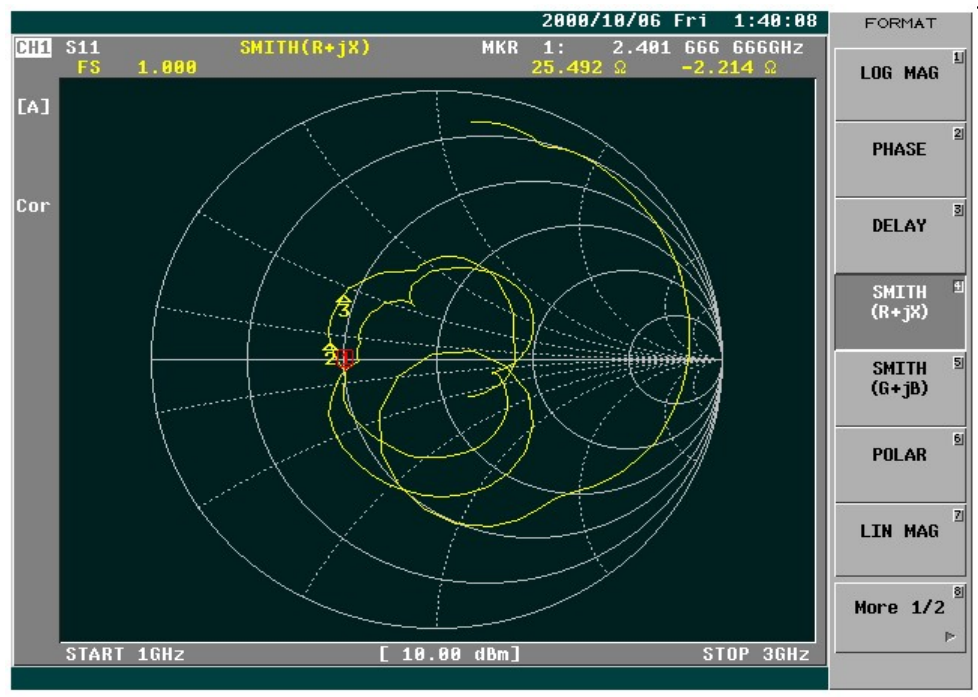
3.1 Set Condition

ITEM			SPEC
Frequency Range [MHz]			2400 ~ 2485
VSWR [MAX]			3.0 : 1
Input Impedance [Ω]			50 Ohm
Polarization			Linear
Matching Value of Antenna Matching Circuit	Matching Circuit	shunt 1	N/C
		series	0Ohm
		shunt 2	N/C
Gain[dBi]	Azimuth Plane	Peak	1.34 @2450
		Average	-2.35 @2450
	Elevation1 Plane	Peak	0.8 @2450
		Average	-4.06@2450
	Elevation2 Plane	Peak	1.2 @2450
		Average	-4.32 @2450
	3D	Peak	1.34 @2450
		Min	-5.2 @2450

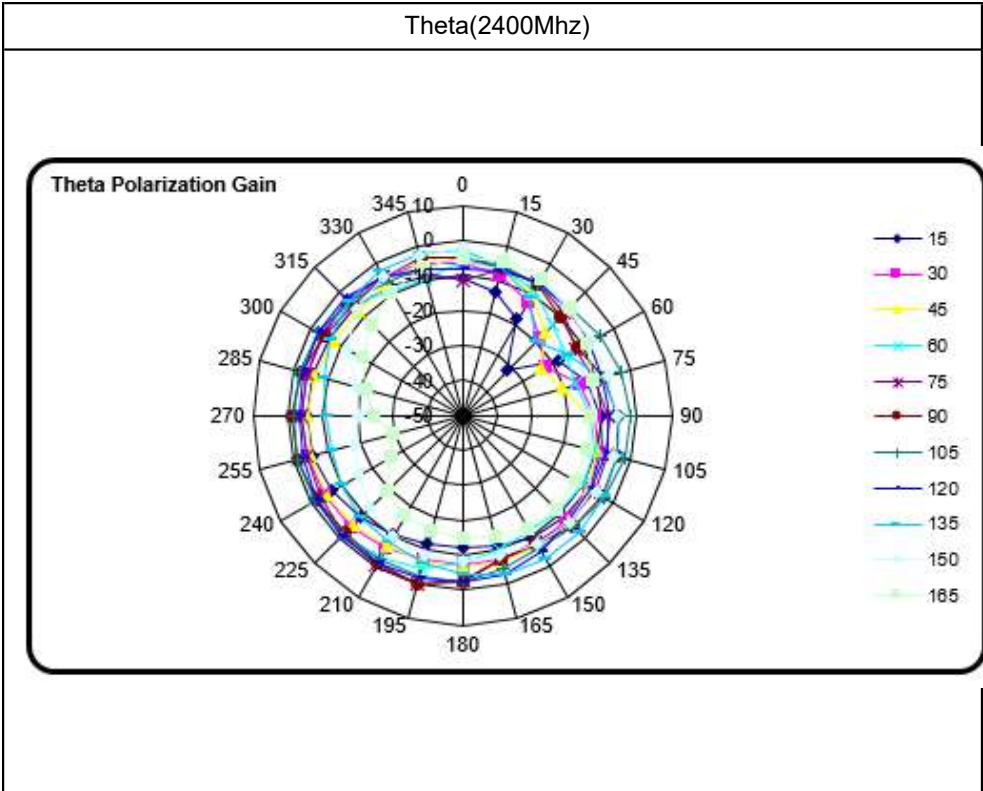
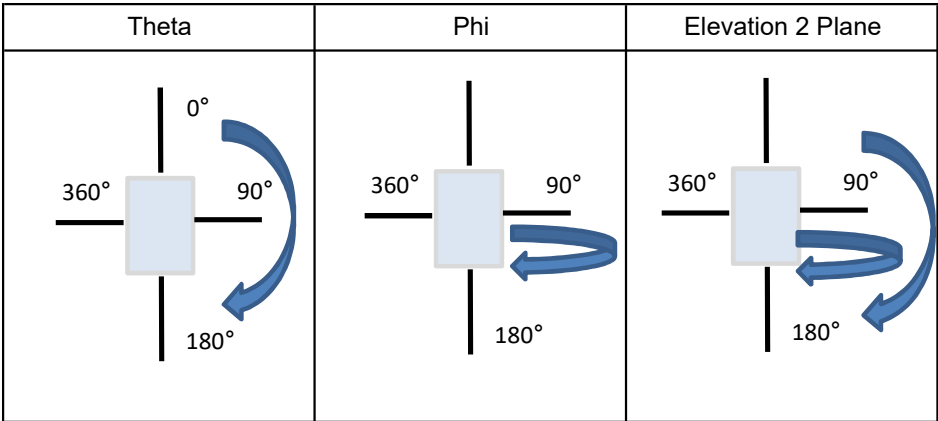
3.2 Passive Efficiency

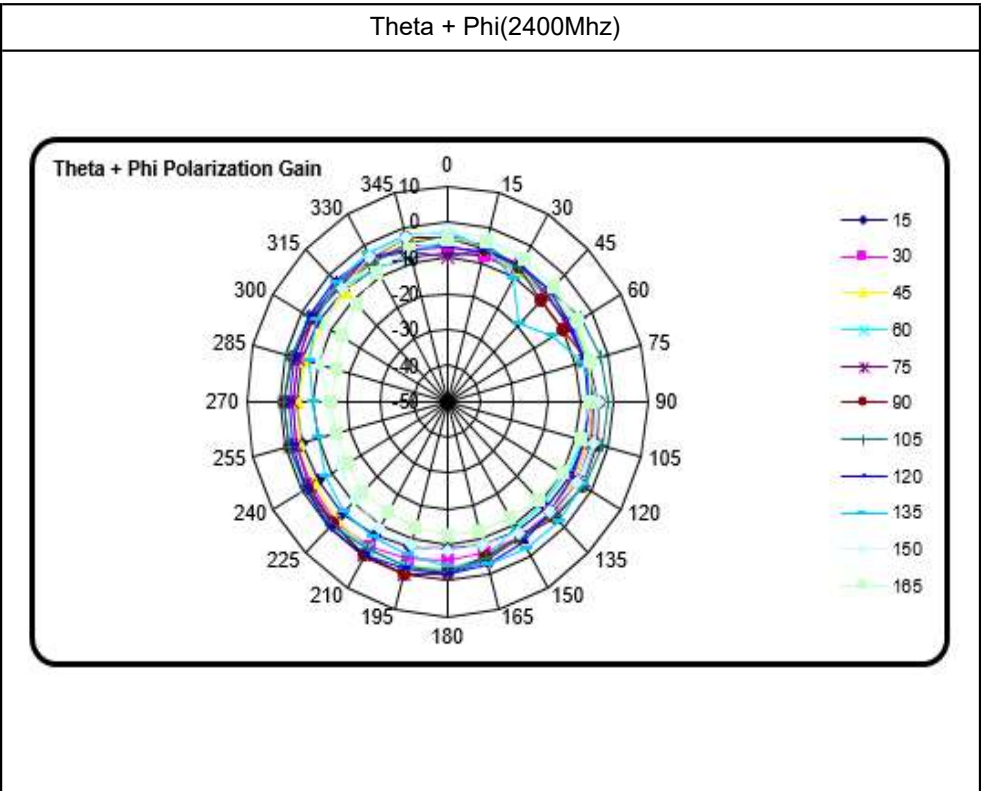
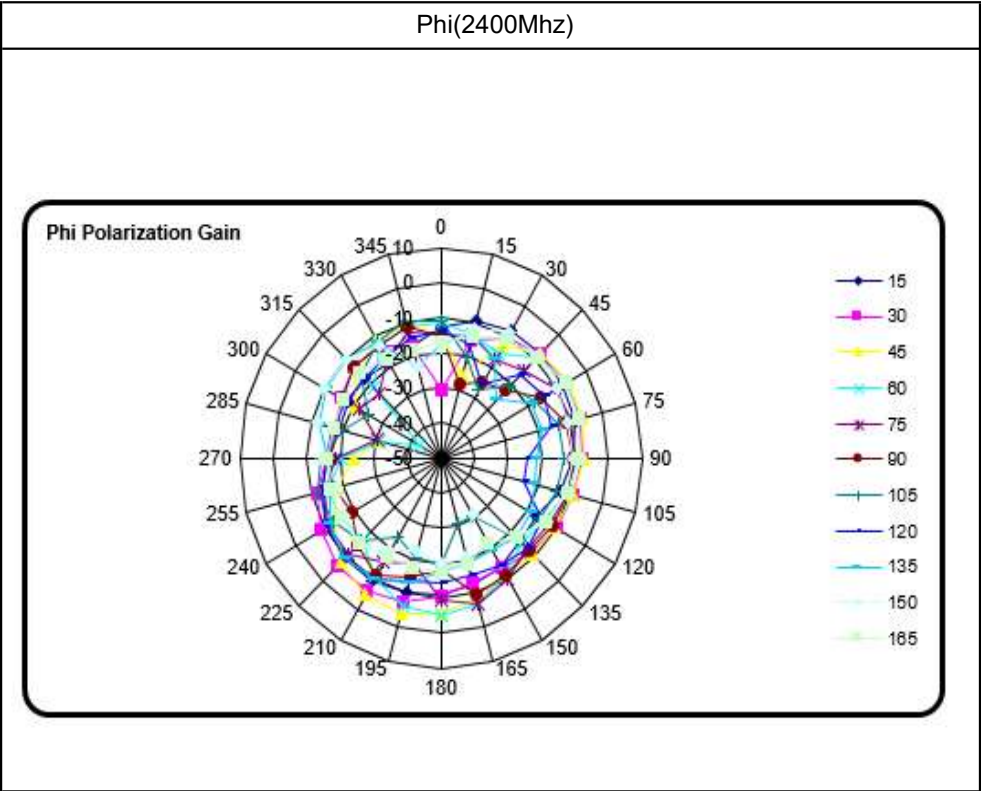
	1	2	3	4	5	6	7	8	9	10	11
Frequency [MHz]	2400	2410	2420	2430	2440	2450	2460	2470	2480	2485	2500
Efficiency [dB]	-4.31	-4.22	-3.87	-3.38	-3.08	-2.76	-3.05	-3.32	-3.50	-3.49	-3.81
Efficiency [%]	37.1	37.8	41.0	46.0	49.2	53.0	49.5	46.6	44.7	44.8	41.6
TRG _s [dB]	-5.06	-5.00	-4.65	-4.13	-3.87	-3.58	-3.95	-4.23	-4.49	-4.50	-4.90
Gain _{s Peak} [dBi]	0.11	0.11	0.50	1.00	1.15	1.31	0.80	0.38	0.47	0.55	0.61
Gain _{s Min} [dBi]	-31.92	-31.65	-38.98	-32.90	-32.25	-30.39	-28.83	-31.44	-33.10	-34.22	-34.45
TRG _p [dB]	-12.31	-12.09	-11.75	-11.33	-10.88	-10.37	-10.36	-10.53	-10.40	-10.32	-10.34
Gain _{p Peak} [dBi]	-4.12	-3.84	-3.44	-2.77	-2.47	-1.81	-1.92	-2.11	-1.95	-1.92	-2.08
Gain _{p Min} [dBi]	-42.87	-43.82	-36.64	-37.01	-34.51	-34.37	-40.23	-49.34	-35.88	-39.63	-39.99
UHRG [dB]	-7.50	-7.30	-6.87	-6.35	-6.05	-5.76	-6.09	-6.43	-6.68	-6.71	-7.18
UHRG/TRG [%]	48.0	49.3	50.1	50.4	50.4	50.1	49.7	48.8	48.1	47.6	46.0
H-Plane	-3.81	-3.76	-3.40	-2.86	-2.59	-2.35	-2.80	-3.22	-3.63	-3.76	-4.47
E1-Plane, AVG [dB]	-5.49	-5.38	-5.03	-4.53	-4.29	-4.06	-4.47	-4.77	-5.06	-5.07	-5.52
E2-Plane, AVG [dB]	-5.77	-5.73	-5.37	-4.86	-4.69	-4.23	-4.70	-5.03	-5.24	-5.23	-5.55
Peak Gain [dBi]	0.24	0.26	0.55	1.04	1.17	1.34	0.96	0.70	0.83	0.92	0.84
Directivity [dB]	4.55	4.48	4.43	4.41	4.25	4.10	4.01	4.02	4.33	4.41	4.65

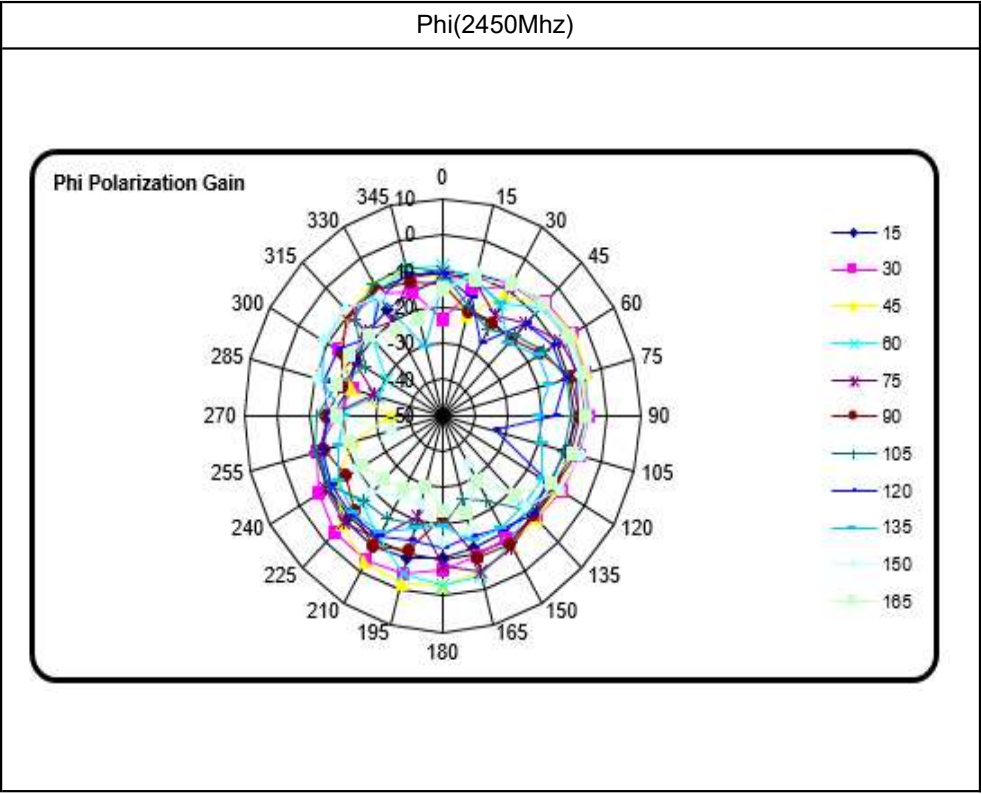
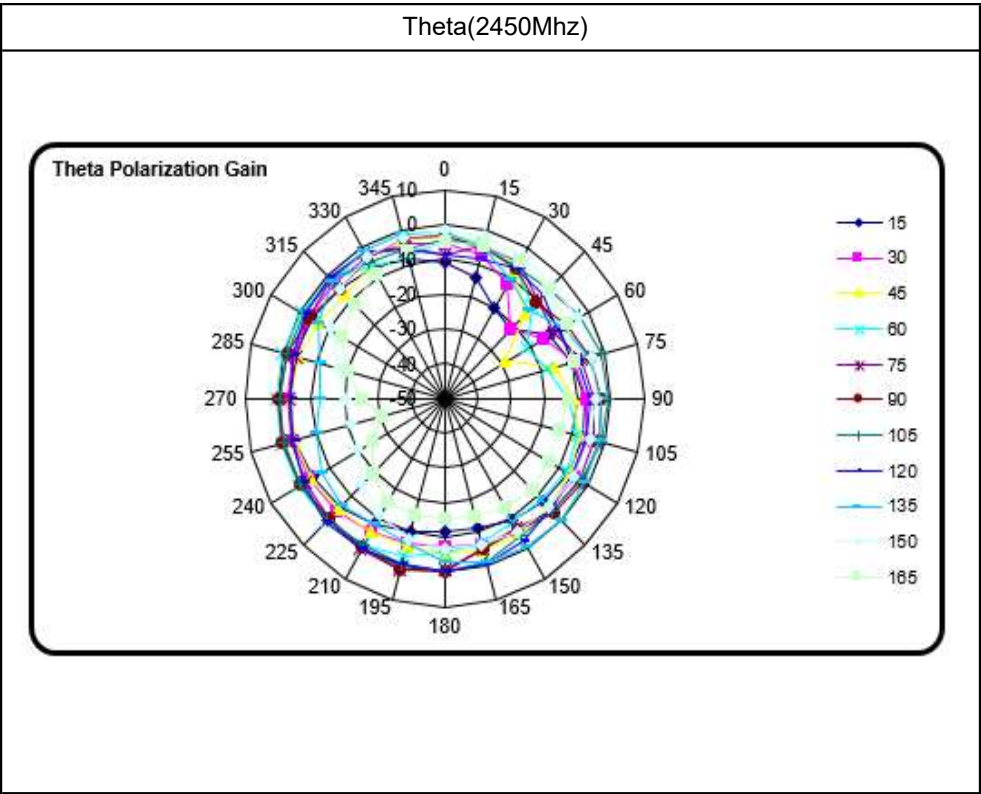
3.3 Graph of Set Condition

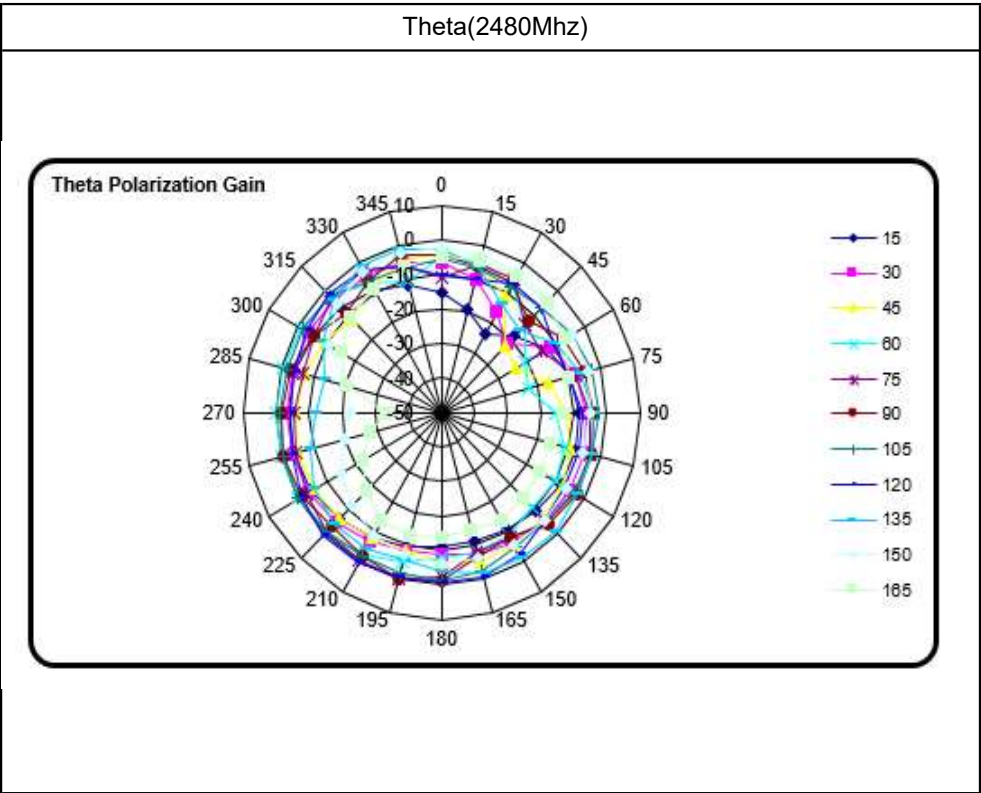
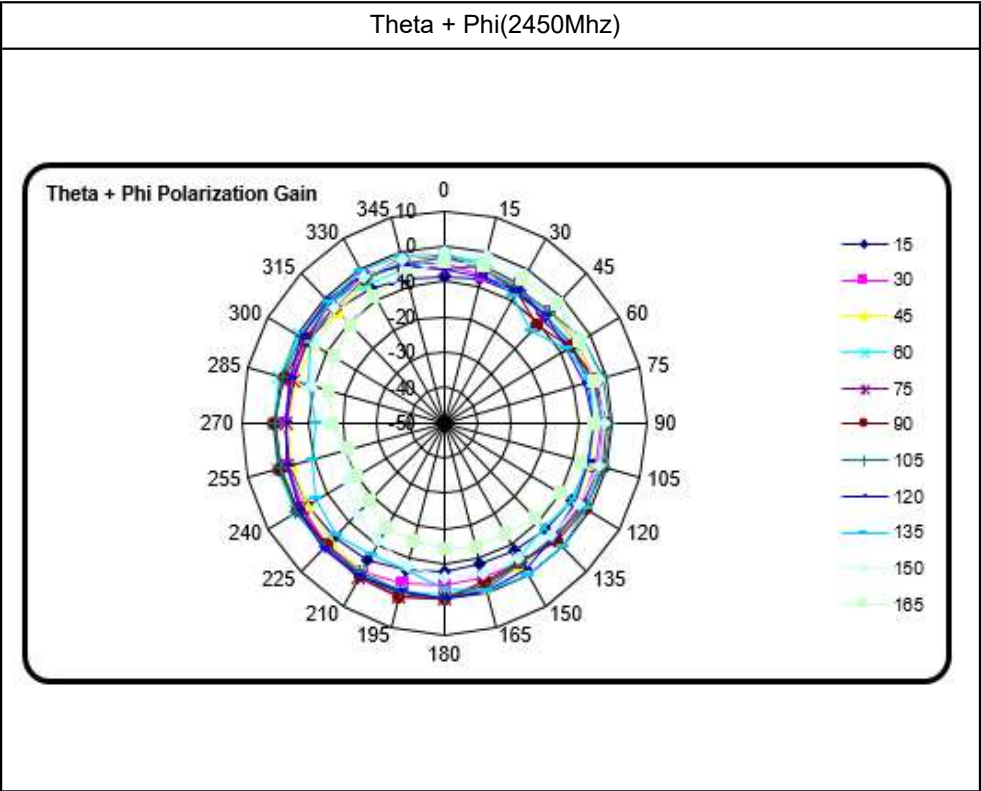


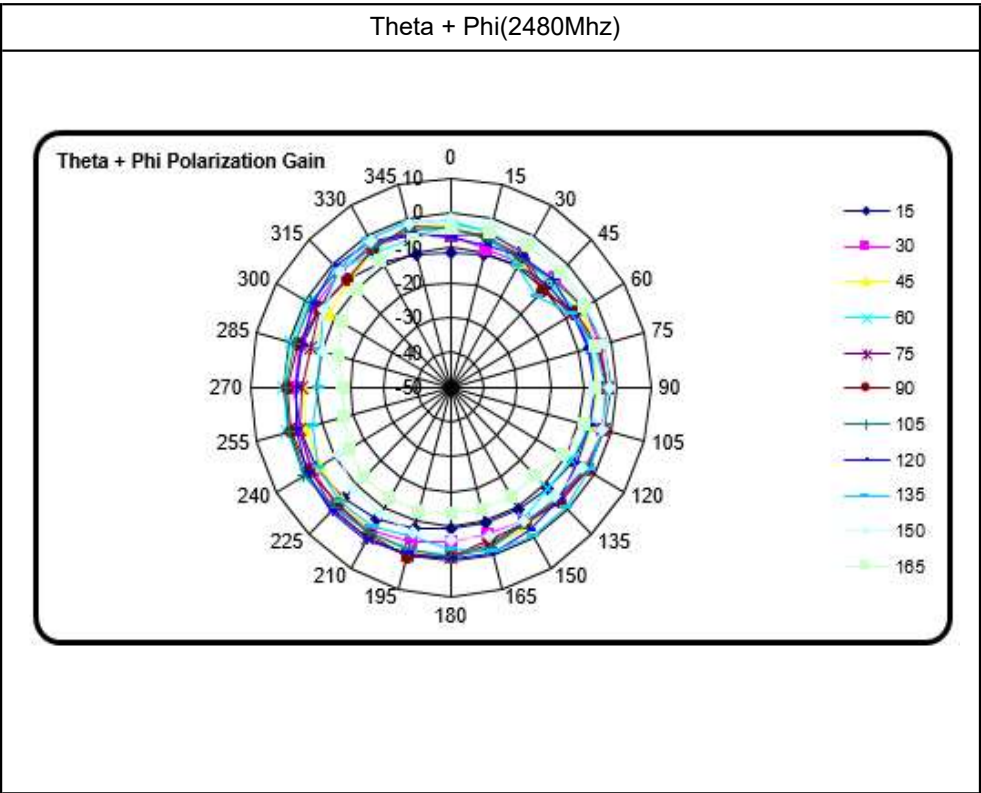
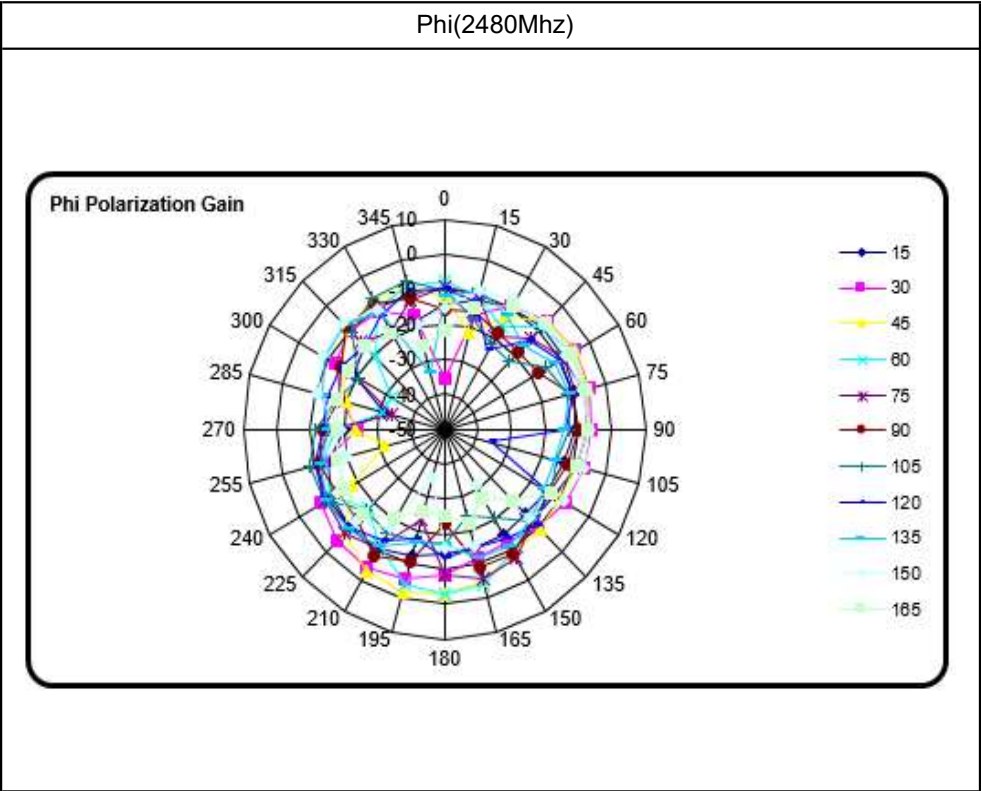
3.4 Radiation Pattern





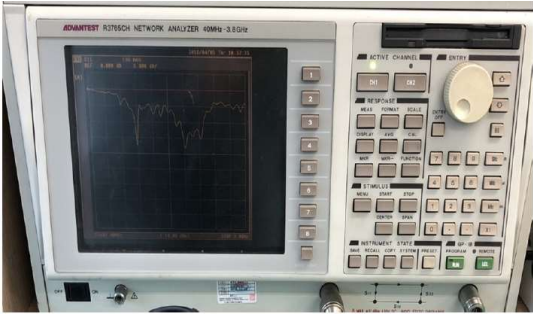






4. Measurement Process

4.1 VSWR/Returnloss

	Set Condition
Network Analyzer	ADVANTEST R3765CH
Cable	RF Cable (300mm)
Test Condition	

4.2 Gain

- The Antenna Gain is measured using the set at Anechoic Chamber

Anechoic Chamber for Antenna Gain Measurement

