

GALTRONICS

WHEN CONNECTIONS COUNT



CIG WF402-UWB Antenna Performance Report

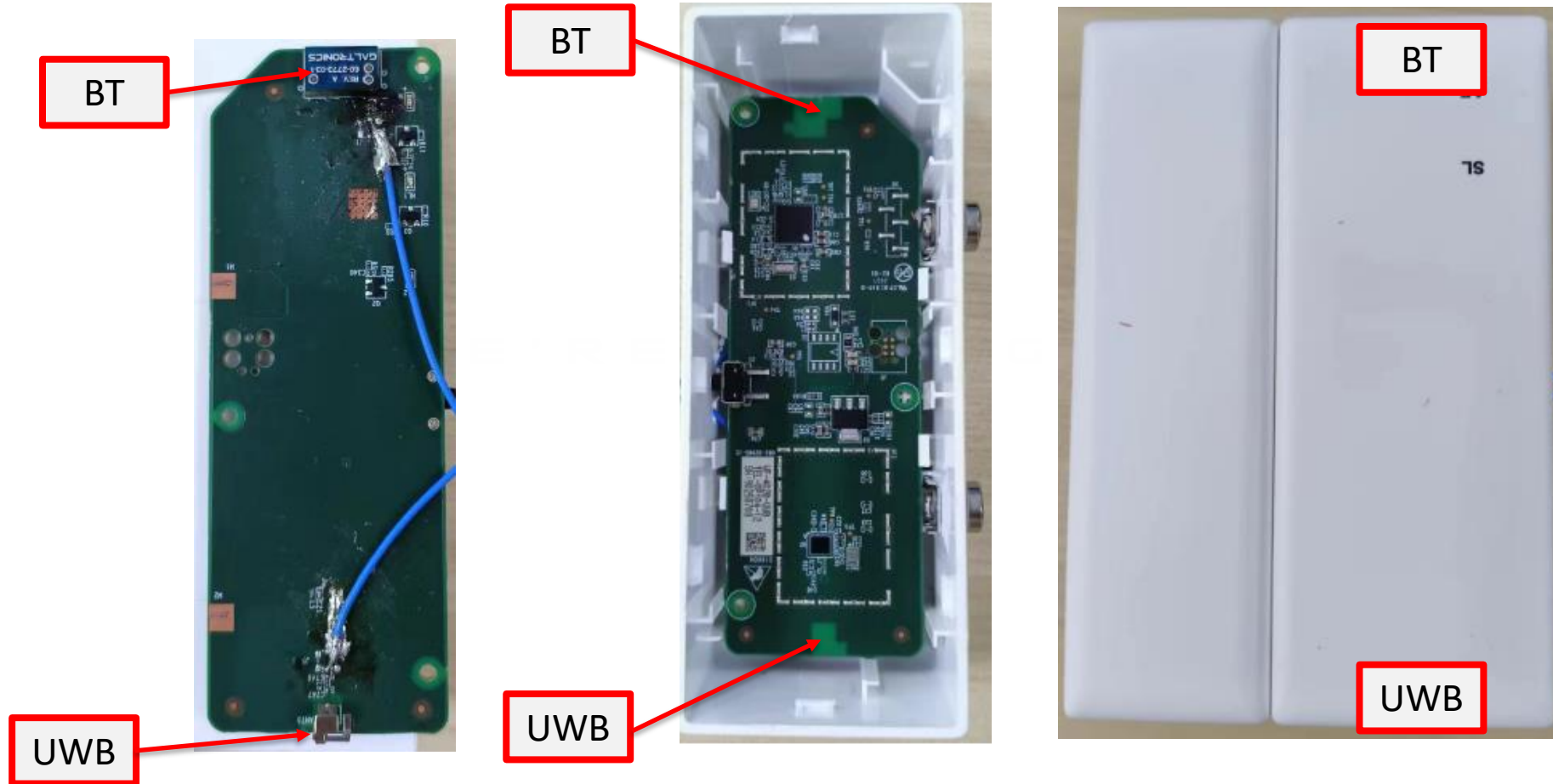
Galtronics Project: TBD

Prepared by Zack
Sep 27^h , 2023

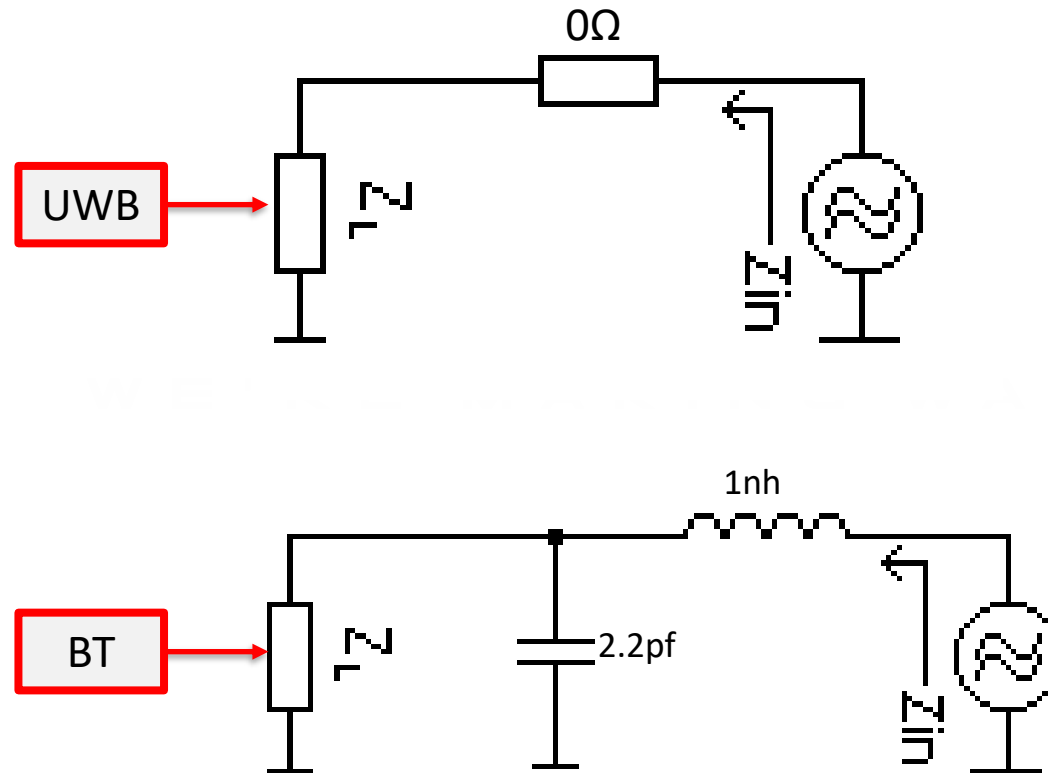
Introduction

- » Galtronics developed an antenna solution for CIG WF402-UWB.
- » There are 2 antennas :
 - Two On-board antennas :- BT and UWB.
- » The operating frequency of the BT is 2.4 GHz-2.5GHz.
- » The operating frequency of the UWB is 6.2396 GHz-6.7396GHz.
- » Measured return loss, isolation, peak gain, efficiency, and gain patterns of the antennas.

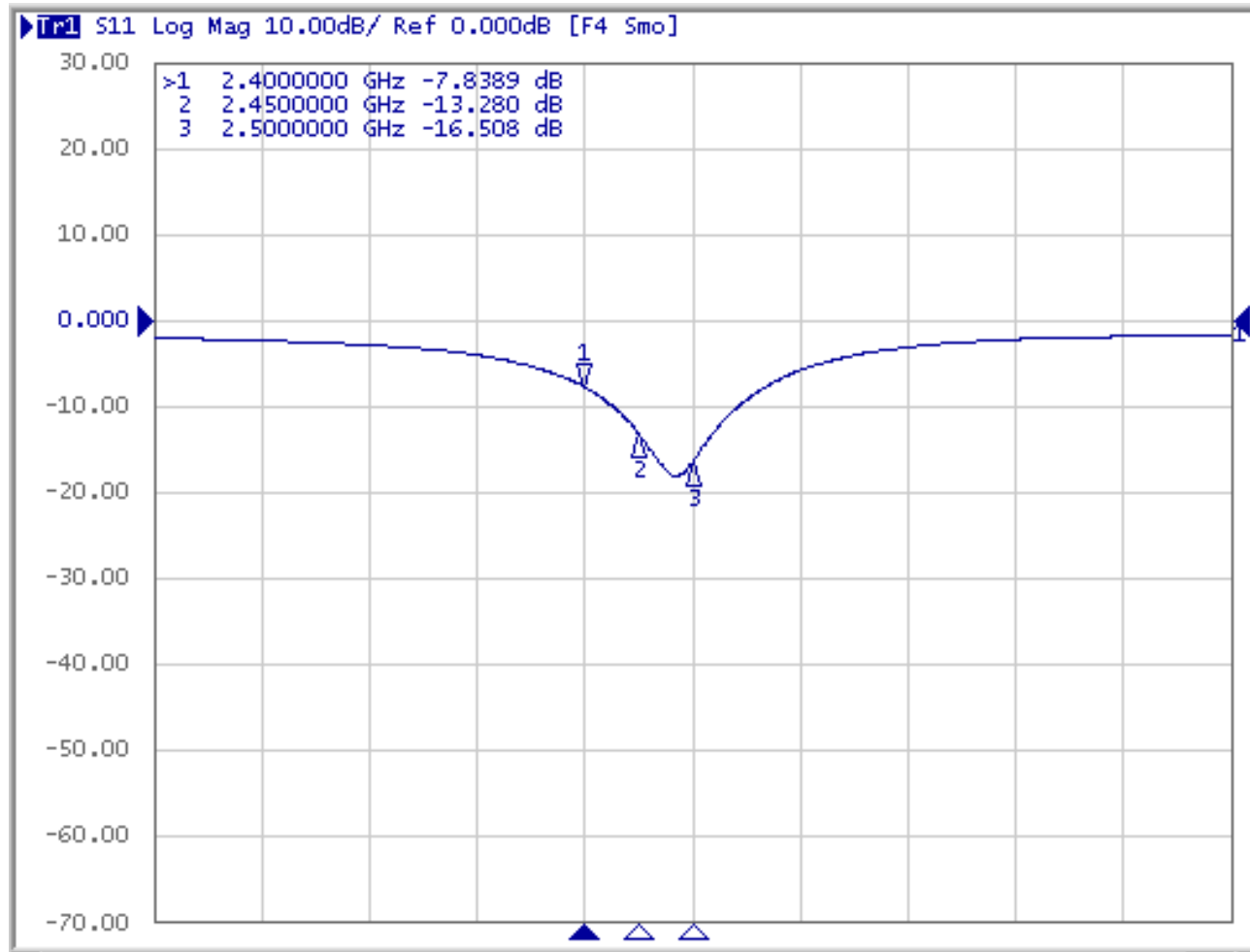
WF-402AP+WF-402D:Antenna Location



Matching Network for AP



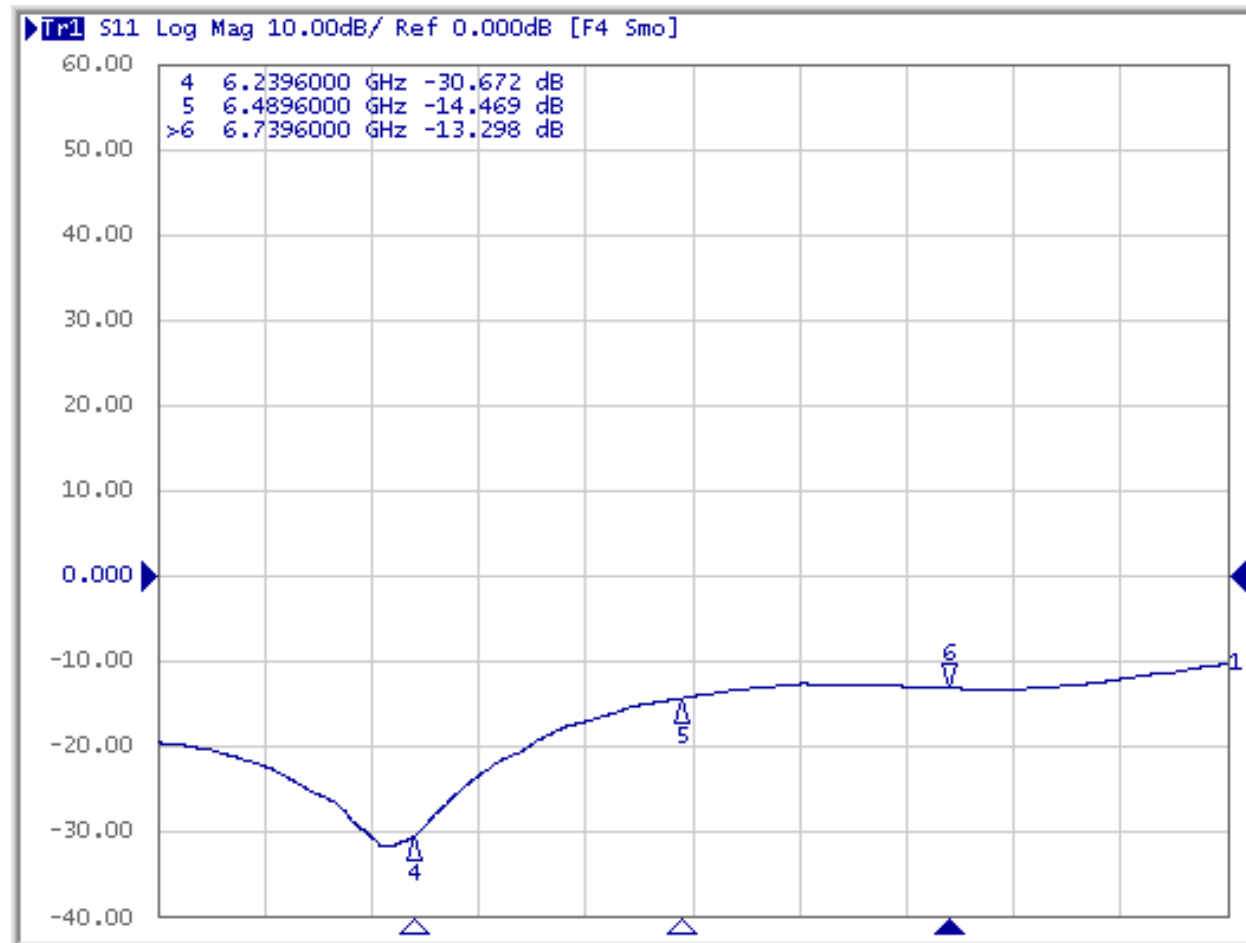
Antenna Return Loss of the BT



Port1 = BT

Antenna Return Loss of the UWB

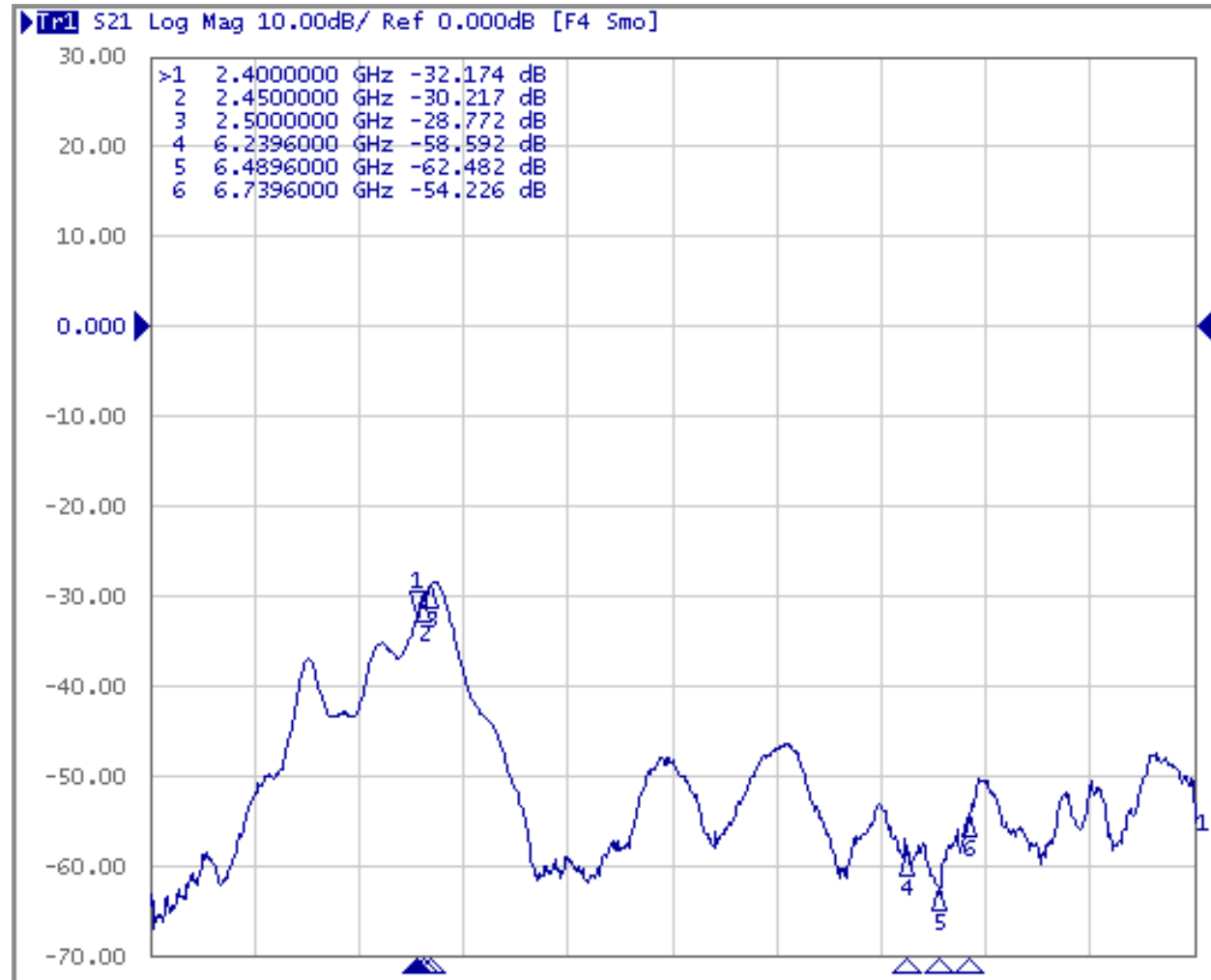
Port1= UWB



Antenna Isolation of BT and UWB

Port1= UWB

Port2= BT

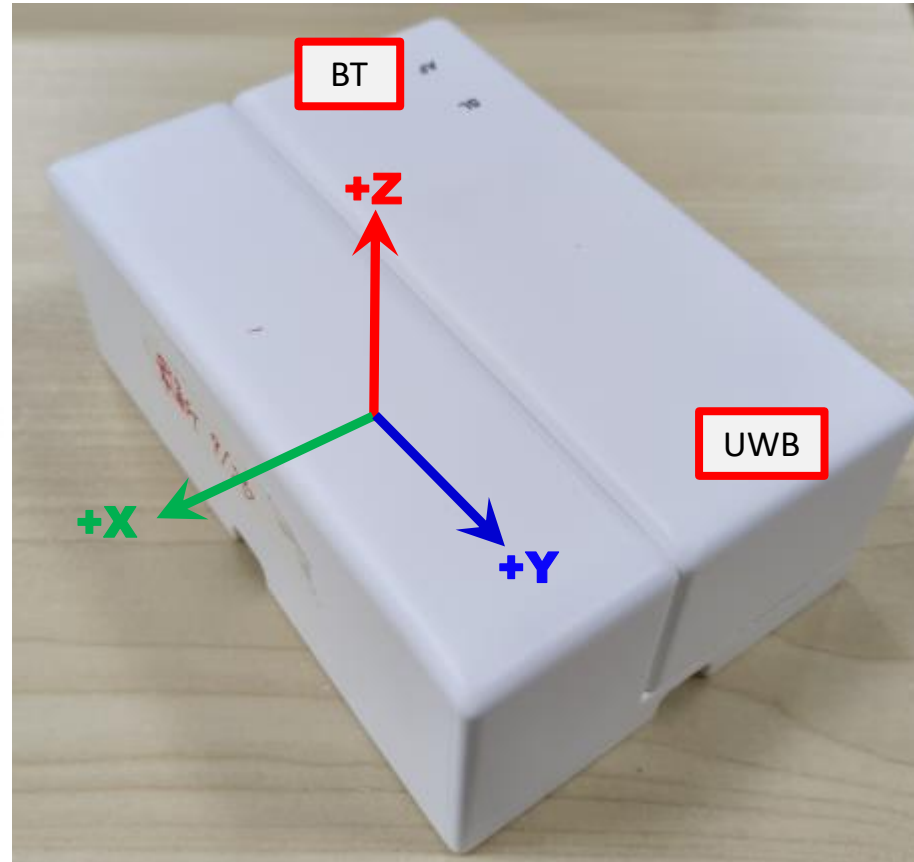


Gain & Efficiency summary

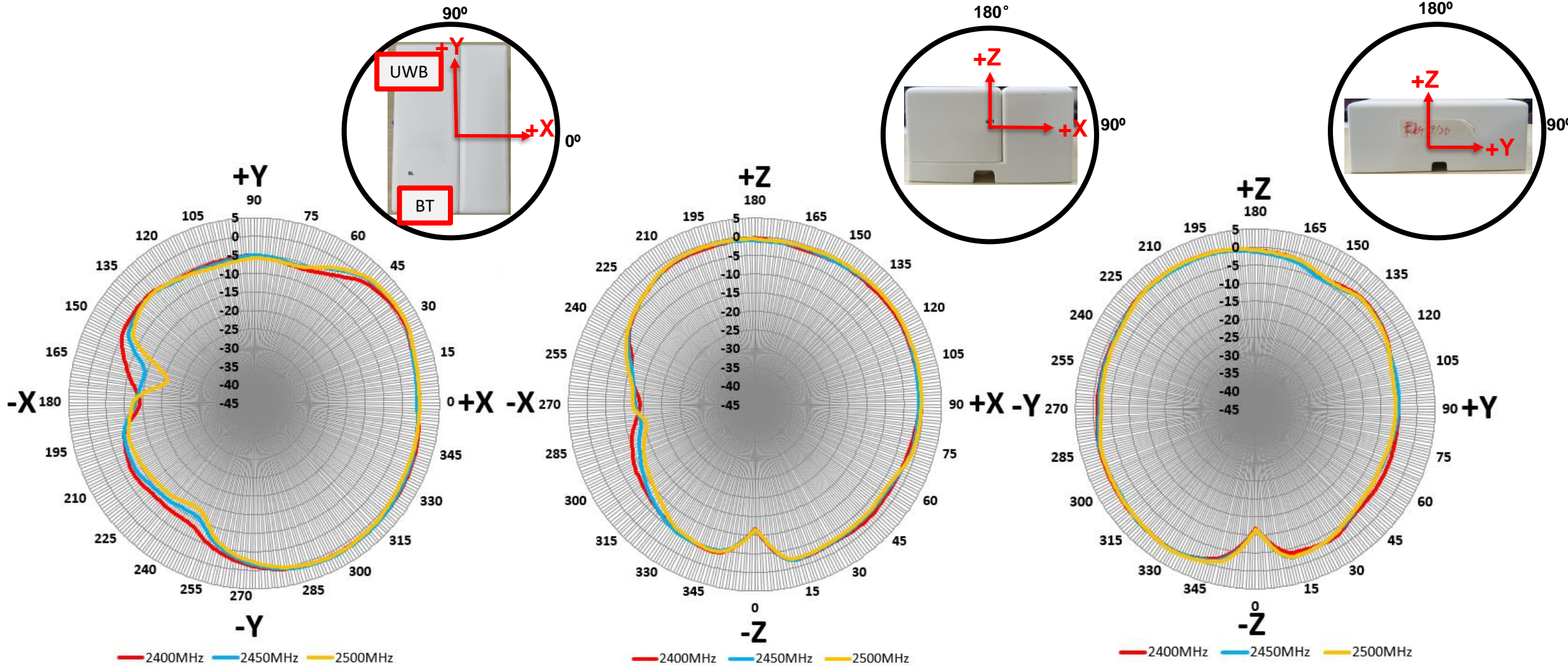
BT	Freq(MHz)	Peak Gain(dBi)	Directivity(dBi)	Efficiency(%)
	2400	1.87	5.38	44.51
	2450	2.36	5.23	51.68
	2500	2.62	5.25	54.52
	Average			50.24

UWB	Freq(MHz)	Peak Gain(dBi)	Directivity(dBi)	Efficiency(%)
	6239.6	3.98	6.08	61.64
	6489.6	4.12	5.97	65.28
	6739.6	4.07	6.36	58.92
	Average			61.95

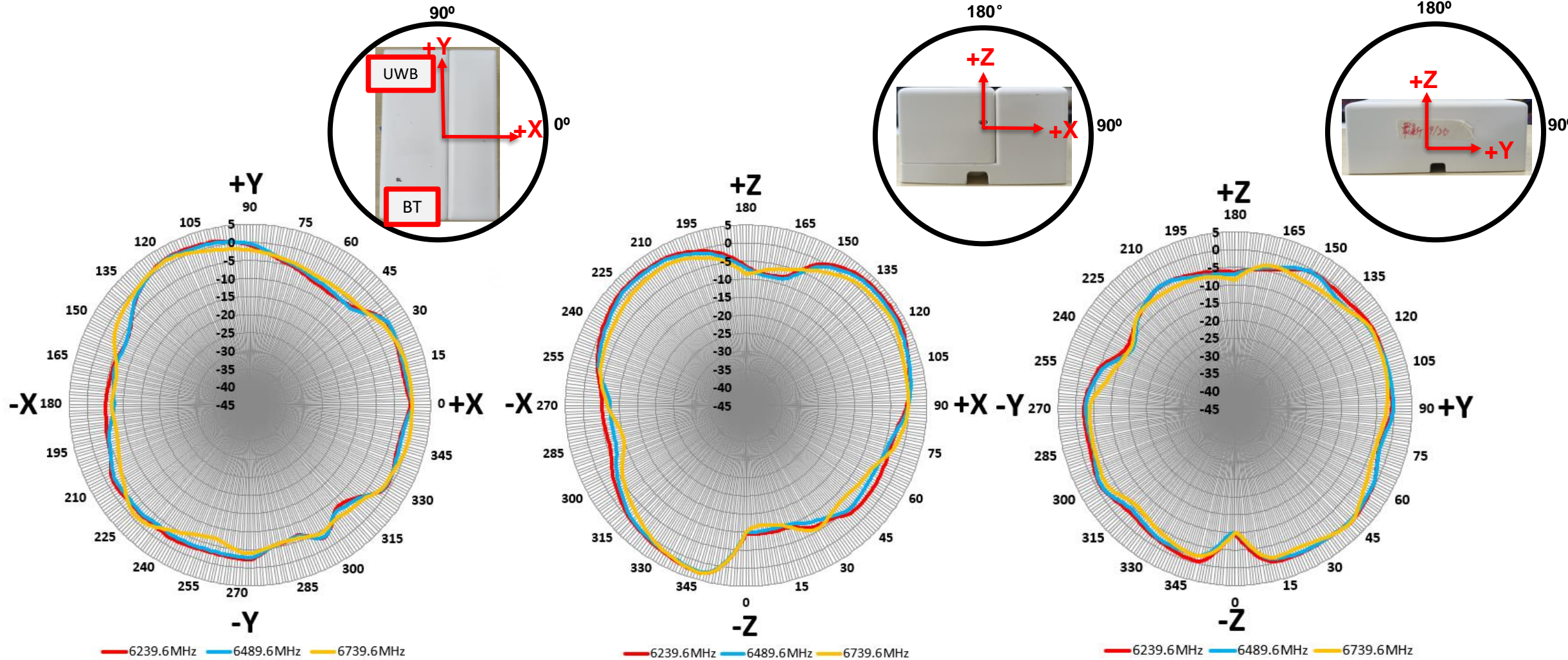
Chamber Coordinates



Power Sum-BT



Power Sum-UWB



WF402-AP Antenna Performance Summary

Antenna	Worst Return loss (dB)	Average Efficiency (%)	Highest Peak Gain (dBi)	Mutual Isolation (dB) 2.4G Band	Mutual Isolation (dB) 6G Band
				BT	UWB
BT	-7.8	50.24	2.62		-54.2
UWB	-13.3	61.95	4.12	-28.8	

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Thank You!

We Look Forward To Working Together

