



Sylph

DVT ANTENNA TEST REPORT

Product Name	Sylph
Applicant	Innocomm
Manufacturer	Innocomm
Test site	Innocomm
Model	Sylph
Antenna type	IFA
Address	1F, No.6, Hsin Ann Rd., Hsinchu Science Park, Hsinchu 30078, Taiwan

Approved by	Reviewed by	Issued by
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1. INTRODUCTION

1.1 TEST EQUIPMENT

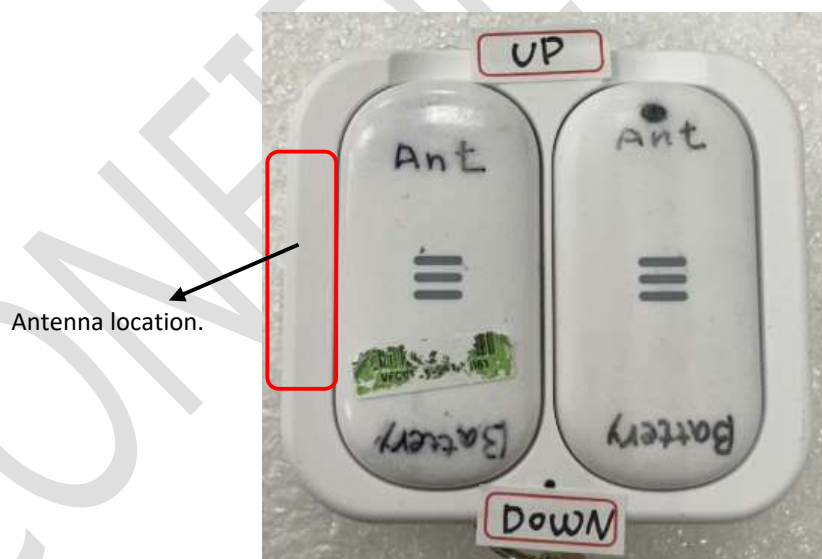
Passive Test:

Network Analyzer: R/S ZVB8 (9KHz ~ 8.5GHz)

3D Passive Chamber: Atenlab OTA 200

1.2 TEST SAMPLE

Quantity: 1

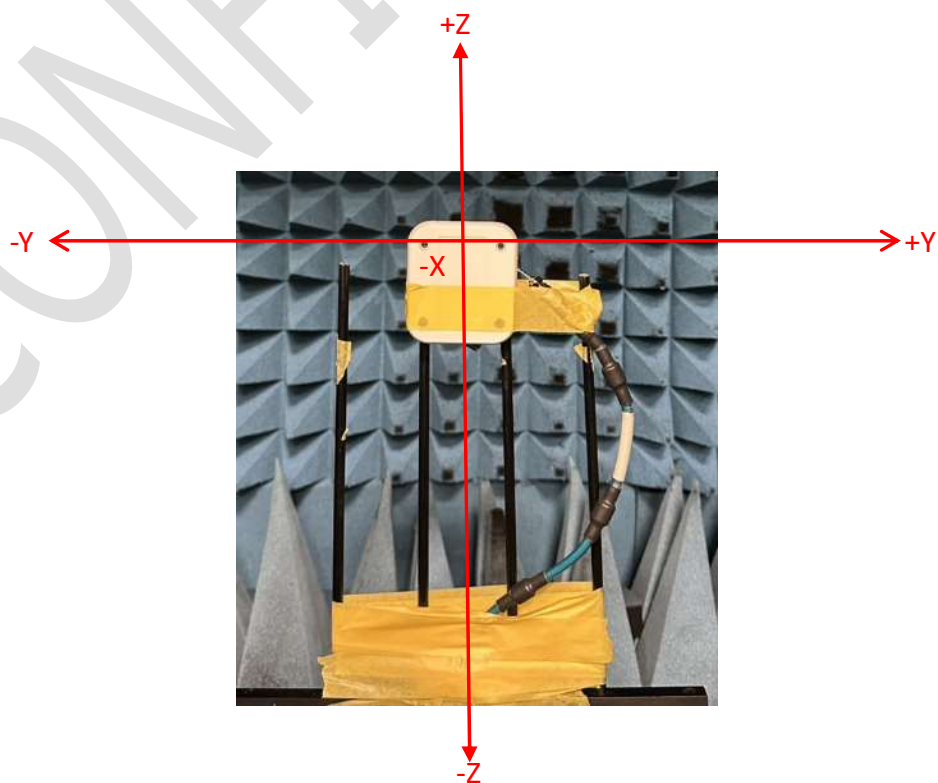
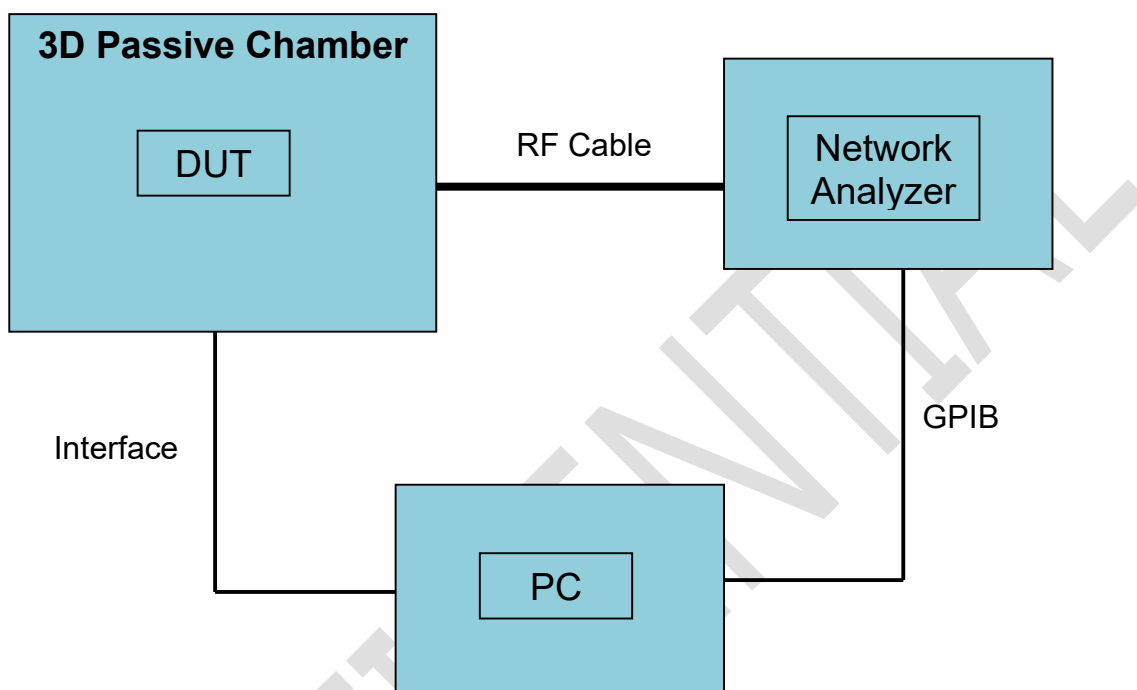


1.3 TEST CONDITION

Support Band: BLE: 2402 MHz ~ 2480 MHz

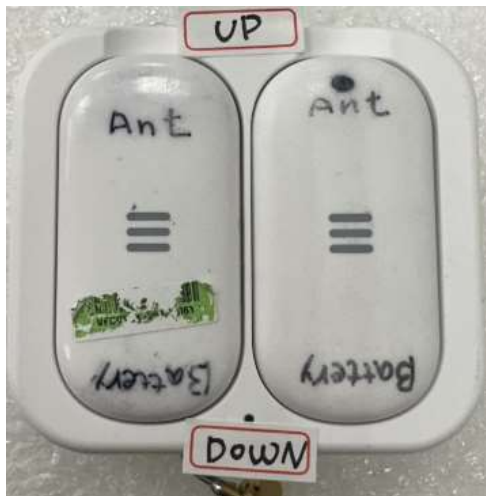
Temperature: 25°C

1.4 TEST SETUP



2. PASSIVE PERFORMANCE TEST

Test mode:



Test mode 1(main)



Test mode 2



Test mode 3



Test mode 4

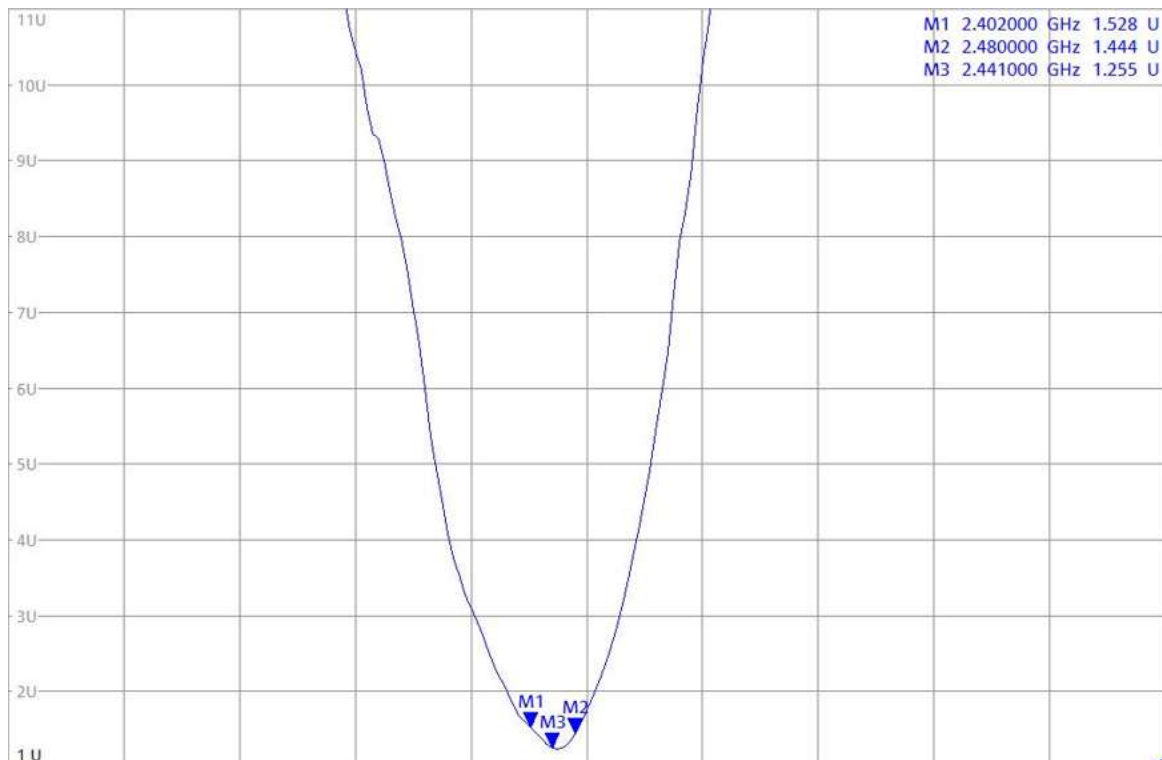
2.1 AVERAGE/PEAK PERFORMANCE

Frequency (MHz)	Average efficiency (%)	Average Gain (dBi)	Peak Gain (dBi)
Test Mode 1(Main)	52.37	-2.81	3
Test Mode 2	42.54	-3.71	0.46
Test Mode 3	49.91	-3.09	2.81
Test Mode 4	44.59	-3.51	1.05

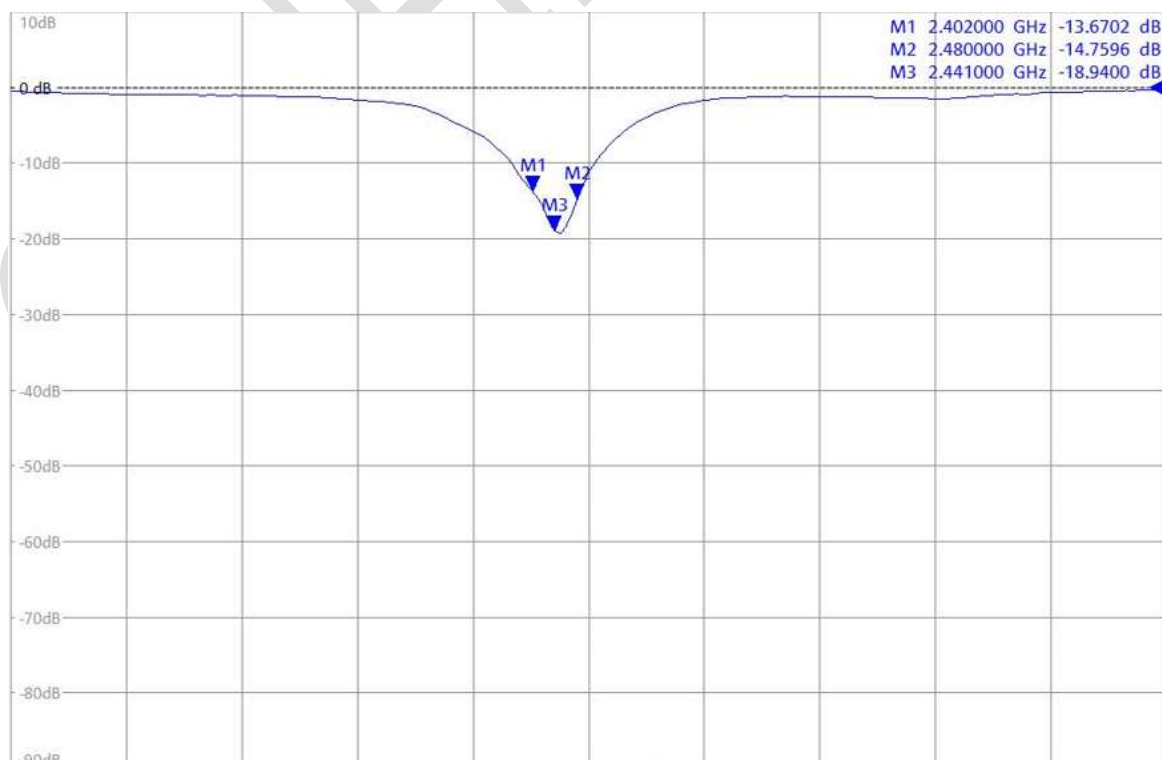
2.2 DETAIL AVERAGE PERFORMANCE

Frequency (MHz)	Sylph antenna		
	Frequency (MHz)	Gain (dBi)	Efficiency %
Test Mode 1(Main)	2402MHz	-3.05	49.55
	2441MHz	-2.63	54.58
	2480MHz	-2.76	52.97
Test Mode 2	2402MHz	-3.64	43.25
	2441MHz	-3.62	43.45
	2480MHz	-3.38	45.92
Test Mode 3	2402MHz	-2.88	51.52
	2441MHz	-3.02	49.89
	2480MHz	-3.11	48.87
Test Mode 4	2402MHz	-3.38	45.92
	2441MHz	-3.43	45.39
	2480MHz	-3.72	42.46

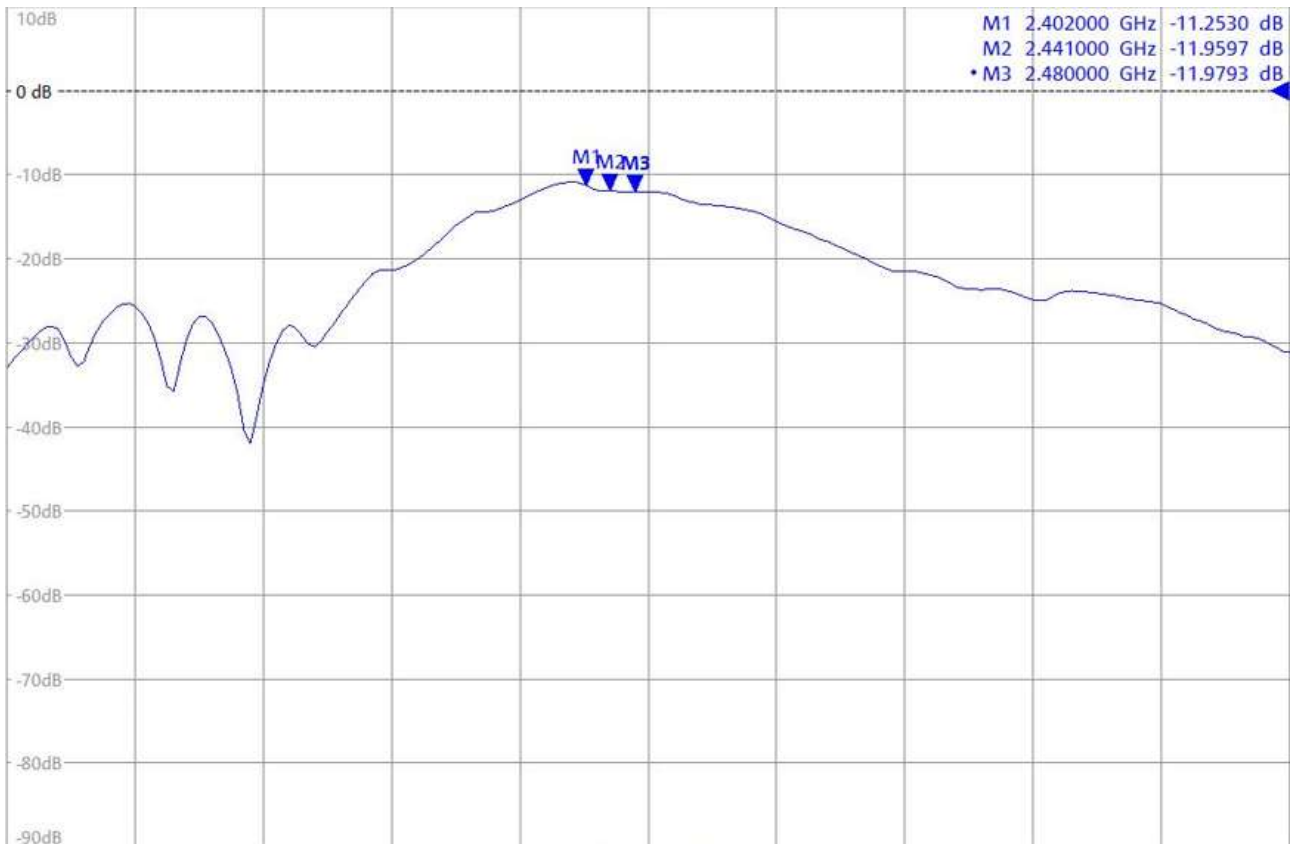
2.3 VSWR MEASUREMENT (Test Mode 1)



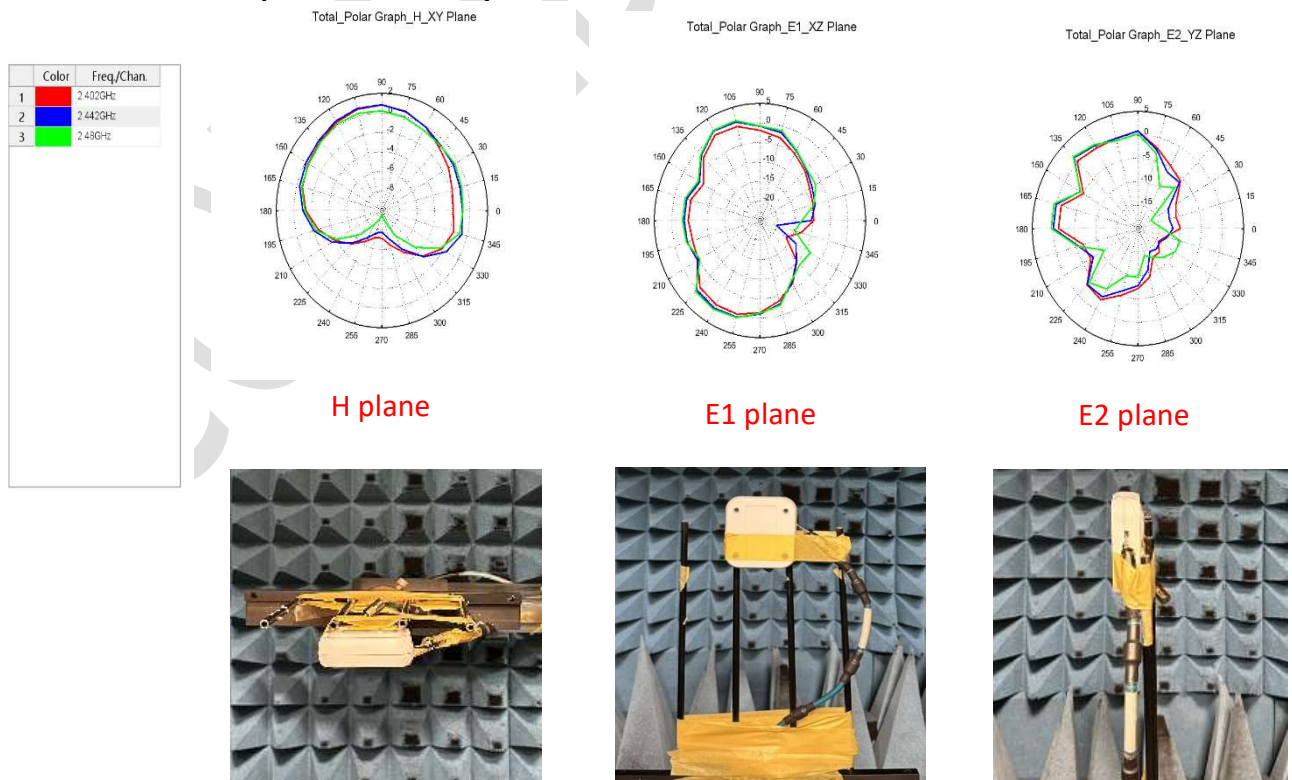
2.4 RETURN LOSS (Test mode 1)



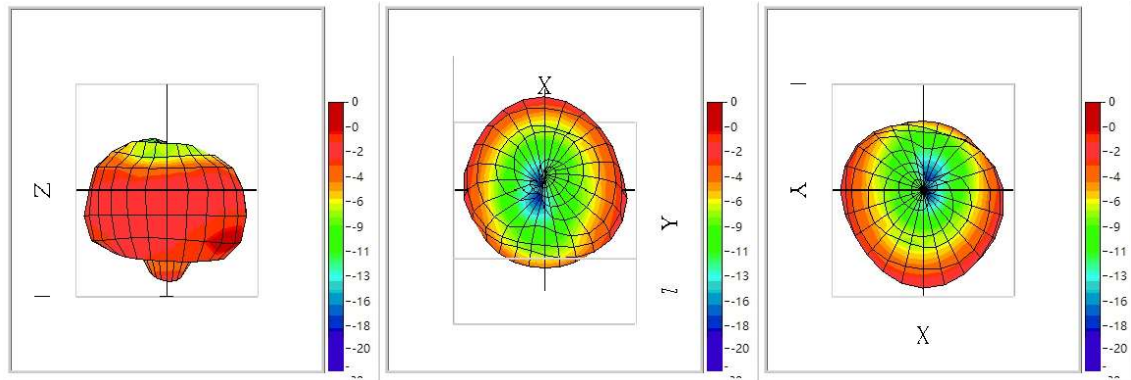
2.5 ISOLATION (Test Mode 1 vs Tracker)



2.6 2D PLOTS (Test Mode 1)



2.7 3D Graph (Test mode 1 @2441MHz)



3. Reference (Tracker antenna performance check)

Test mode:



Test mode 1



Test mode 2



Test mode 3



Test mode 4

3.1 AVERAGE/PEAK PERFORMANCE

Frequency (MHz)	Average efficiency (%)	Average Gain (dBi)	Peak Gain (dBi)
Test Mode 1	41.76	-3.79	1.61
Test Mode 2	22.78	-6.43	-1.95
Test Mode 3	37.21	-4.3	0.88
Test Mode 4	24.34	-6.13	-1.24

3.2 DETAIL AVERAGE PERFORMANCE

Frequency (MHz)	Tracker antenna		
	Frequency (MHz)	Gain (dBi)	Efficiency %
Test Mode 1	2402MHz	-3.92	40.55
	2441MHz	-3.68	42.85
	2480MHz	-3.55	41.76
Test Mode 2	2402MHz	-6.72	21.28
	2441MHz	-6.37	23.07
	2480MHz	-6.2	23.99
Test Mode 3	2402MHz	-4.57	34.91
	2441MHz	-4.15	38.46
	2480MHz	-4.17	38.28
Test Mode 4	2402MHz	-6.17	24.15
	2441MHz	-6.02	25
	2480MHz	-6.22	23.88