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Report# STA-22112961-L-ANT

Antenna Gain Measurement Report

Test Report Number STA-22112961-L-ANT

Product Name Dual band WiFi Hinged Rotatable Antenna
Model (s) GW.05.0153
Date of Receipt 12/05/2022
Date of Test 12/06/2022- 12/14/2022
Report Issue Date 12/22/2022



Issued by:

Vista Compliance Laboratories
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REVISION HISTORY

Report Number	Version	Description	Issued Date
STA-22112961-L-ANT	01	Initial report	12/22/2022



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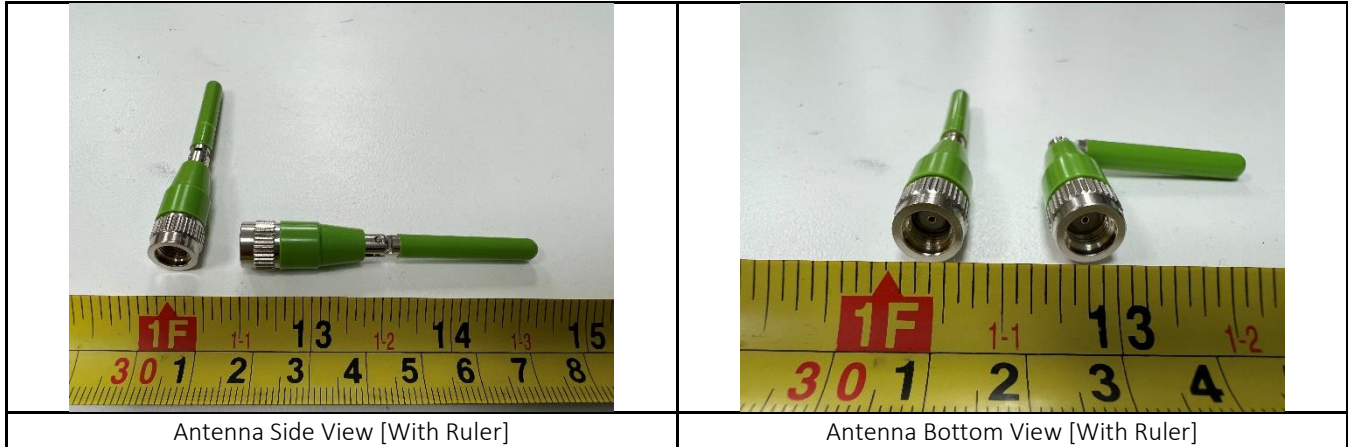
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1. General Information

Antenna Photo

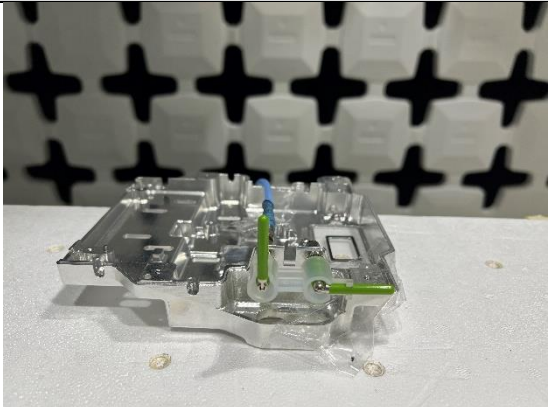
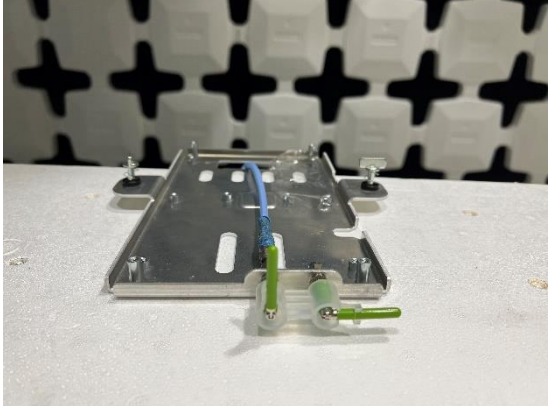
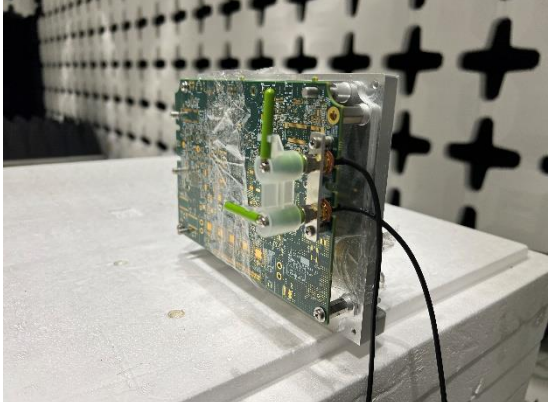


Antenna Information

Manufacturer	Taoglas
Antenna Type	Monopole antenna
Antenna Name	Dual band WiFi Hinged Rotatable Antenna
Antenna Part Number	GW.05.0153
Antenna Frequency Range	2400 - 2483 MHz 5150 - 5250 MHz 5250 - 5350 MHz 5470 - 5725 MHz 5725 - 5850 MHz 5850 - 5895 MHz 5925 - 6425 MHz 6425 - 6525 MHz 6525 - 6875 MHz 6875 - 7125 MHz
Antenna Connector	RP-SMA (M) Connector
Antenna Length	62.3mm ± 1.5mm
Antenna Diameter	10mm
Weight	6g
Radiation	Omni-directional
Polarization	Linear
Impedance	50 Ω
Input Power	10W



2. Antenna Configuration/Orientation

Type	Description	Photo
Titan Taoglas antennas	The Titan Taoglas antennas are mounted on a metal plane which will be oriented in the end product as shown at the right. Two identical antennas are installed; both are with bent position 90 deg but in different orientation.	 A photograph showing two Titan Taoglas antennas mounted on a metal plane. The antennas are green and bent at a 90-degree angle. They are mounted on a metal plane which is part of a larger assembly. The background is a white surface with a grid of black crosses.
Xanthus Taoglas antennas	The Xanthus Taoglas antennas are mounted on a metal plane which will be oriented in the end product as shown at the right. Two identical antennas are installed; both are with bent position 90 deg but in different orientation.	 A photograph showing two Xanthus Taoglas antennas mounted on a metal plane. The antennas are green and bent at a 90-degree angle. They are mounted on a metal plane which is part of a larger assembly. The background is a white surface with a grid of black crosses.
Proteus Taoglas antennas	The Proteus Taoglas antennas are mounted on a metal plane which will be oriented in the end product as shown at the right. Two identical antennas are installed; both are with bent position 90 deg but in different orientation.	 A photograph showing two Proteus Taoglas antennas mounted on a metal plane. The antennas are green and bent at a 90-degree angle. They are mounted on a metal plane which is part of a larger assembly. The background is a white surface with a grid of black crosses.

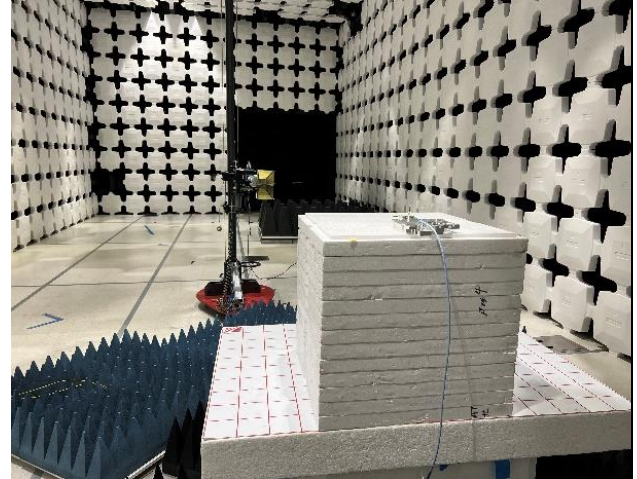


3. Test Setup Photos

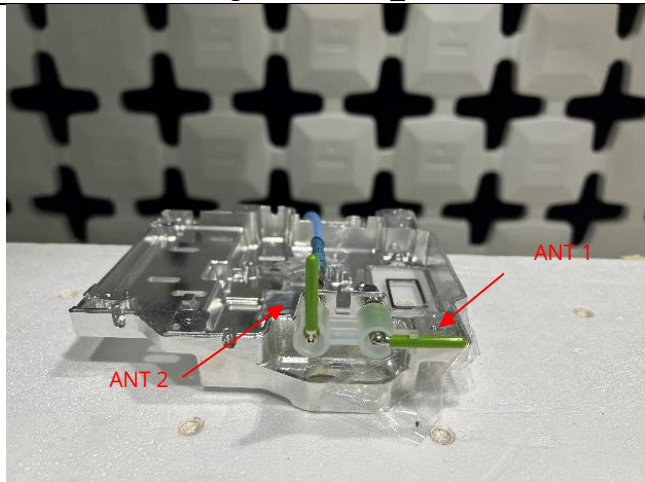
Test setup Photos (Titan Taoglas antennas)



Titan Taoglas antennas_Front View



Titan Taoglas antennas_Rear View



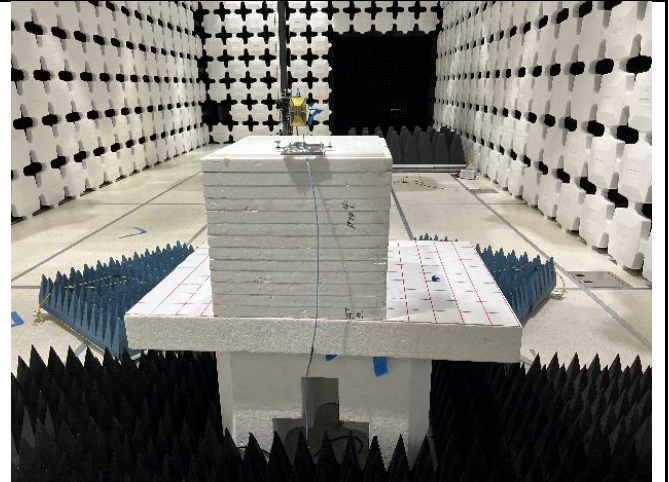
Titan Taoglas antennas_Close-up View



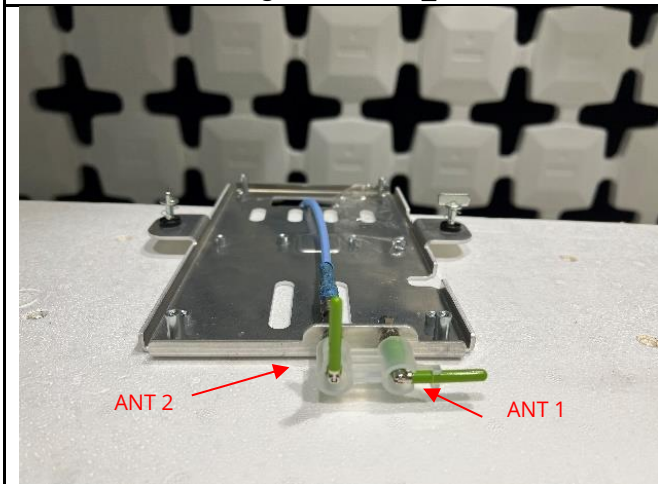
Test setup Photos (Xanthus Taoglas antennas)



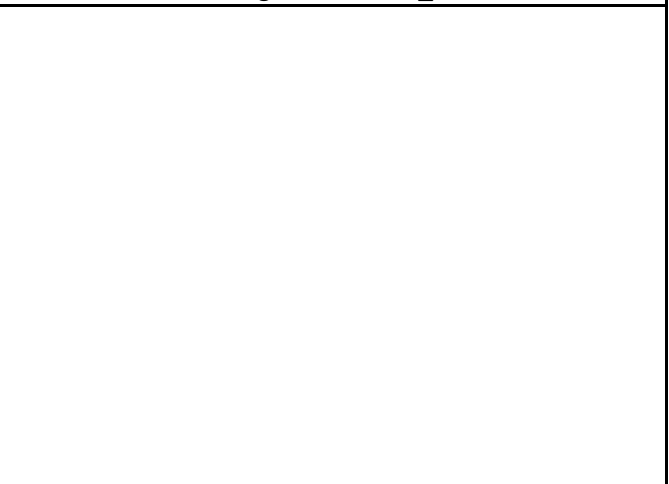
Xanthus Taoglas antennas_Front View



Xanthus Taoglas antennas_Rear View



Xanthus Taoglas antennas_Close-up View

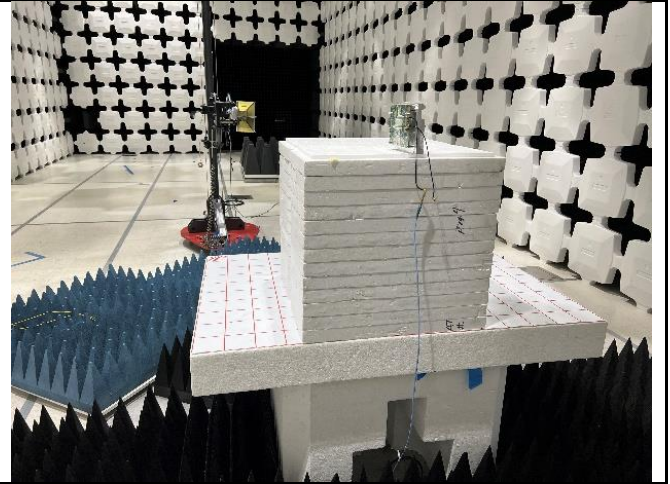




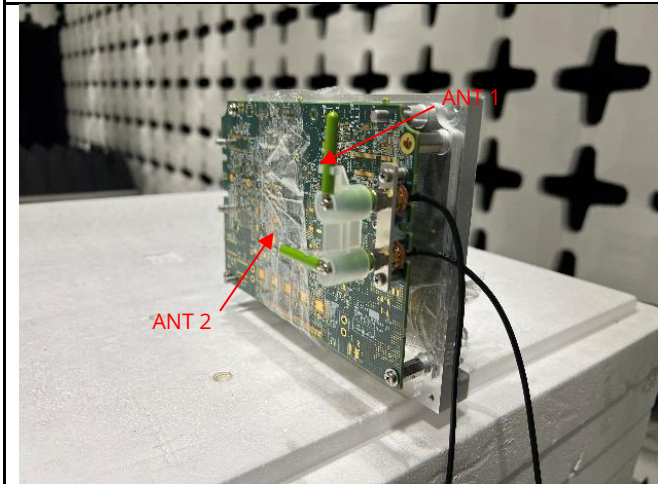
Test setup Photos (Proteus Taoglas antennas)



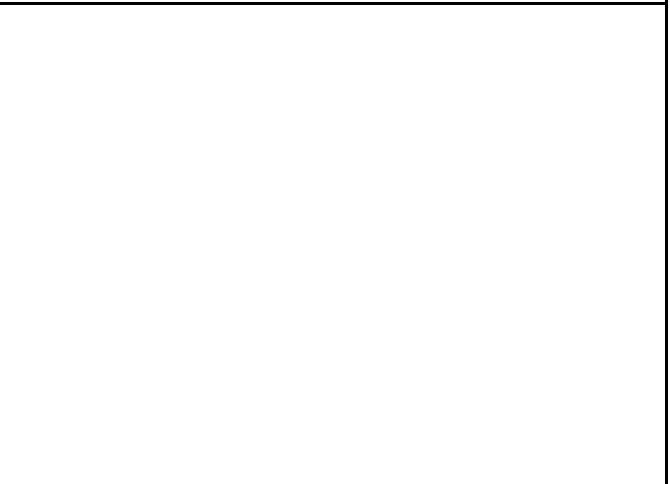
Proteus Taoglas antennas_Front View



Proteus Taoglas antennas_Rear View



Proteus Taoglas antennas_Close-up View



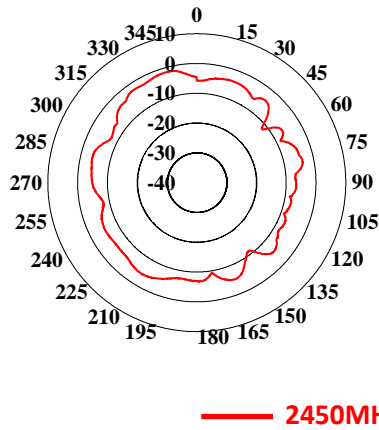


4. Antenna Gain Measurement Result

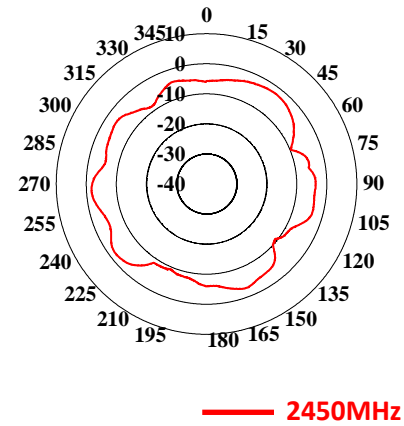
Configuration	Test condition	Orientation	Frequency (MHz)	Peak Gain(dBi)	
				Antenna 1	Antenna 2
1	Mounted on metal plan (Titan)	See "Antenna Configuration/Orientation"	2450	-1.637	-1.461
			5200	0.553	-0.243
			5300	0.22	0.242
			5600	1.509	0.593
			5800	1.744	1.604
			5870	-0.613	-1.088
			6175	1.084	0.505
			6475	3.166	1.422
			6700	2.39	1.587
			7000	5.058	2.887
2	Mounted on metal plan (Xanthus)	See "Antenna Configuration/Orientation"	2450	3.686	1.857
			5200	2.38	1.805
			5300	1.239	2.191
			5600	1.049	0.547
			5800	1.648	0.713
			5870	0.201	-0.452
			6175	1.548	0.756
			6475	1.65	1.947
			6700	0.91	1.543
			7000	4.374	3.874
3	Mounted on metal plan (Proteus)	See "Antenna Configuration/Orientation"	2450	-2.457	-0.753
			5200	2.208	2.46
			5300	2.482	1.826
			5600	3.909	4.267
			5800	2.226	2.44
			5870	2.827	4.043
			6175	2.977	4.412
			6475	2.841	2.88
			6700	2.92	3.713
			7000	5.326	4.339



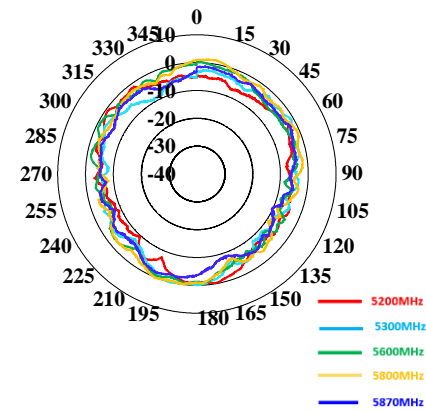
Antenna Radiation Pattern-#1 Test setup-Titan Taoglas antennas



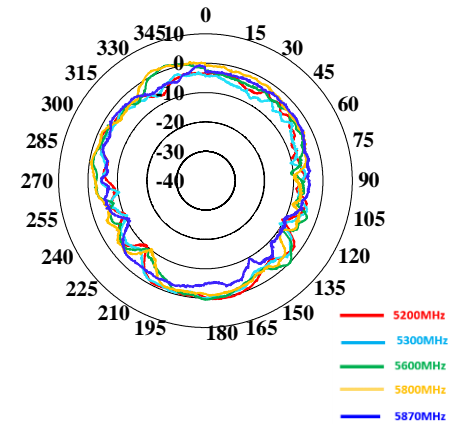
Titan Taoglas antennas-ANT2-2.4GHz Band



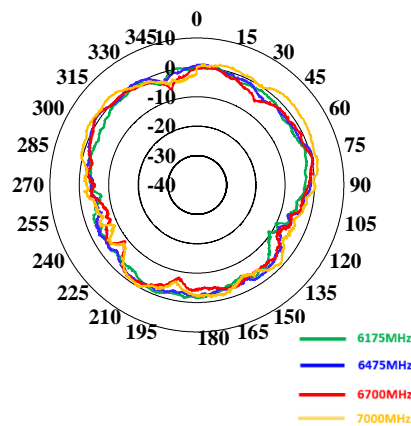
Titan Taoglas antennas-ANT1-2.4GHz Band



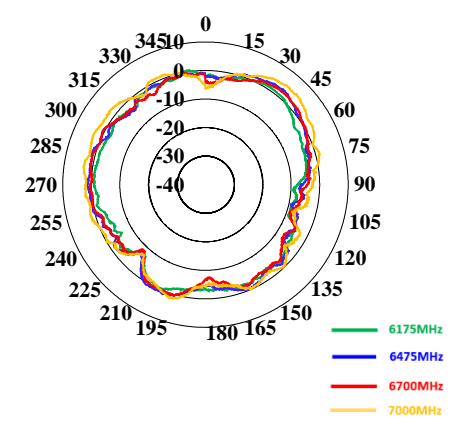
Titan Taoglas antennas-ANT2-5GHz Band



Titan Taoglas antennas-ANT1-5GHz Band



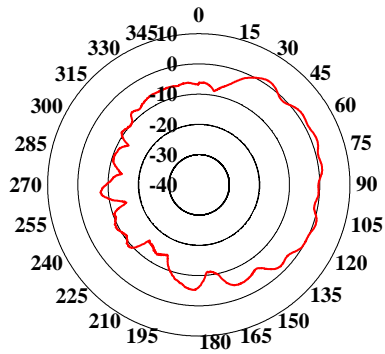
Titan Taoglas antennas-ANT2-6GHz Band



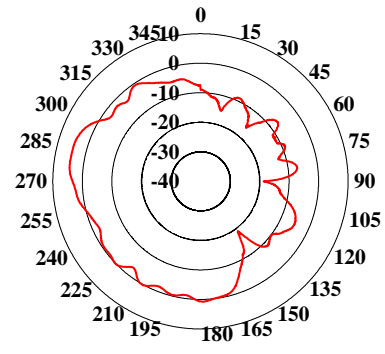
Titan Taoglas antennas-ANT1-6GHz Band



Antenna Radiation Pattern-#2 Test setup-Xanthus Taoglas antennas



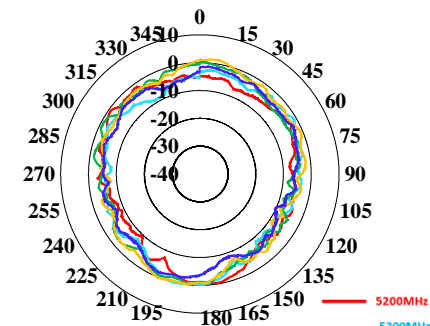
2450MHz



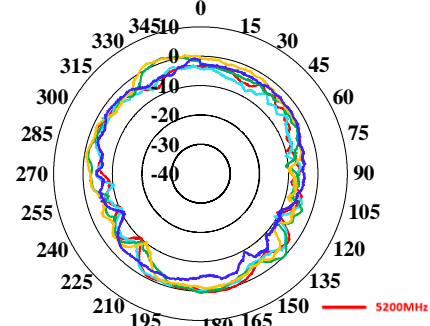
2450MHz

Xanthus Taoglas antennas-ANT2-2.4GHz Band

Xanthus Taoglas antennas-ANT1-2.4GHz Band



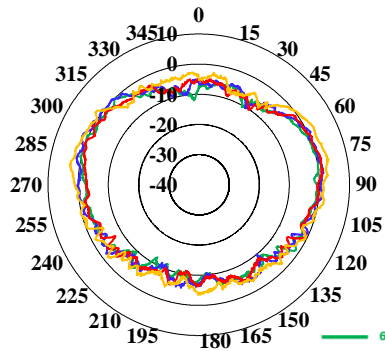
5200MHz
5300MHz
5600MHz
5800MHz
5870MHz



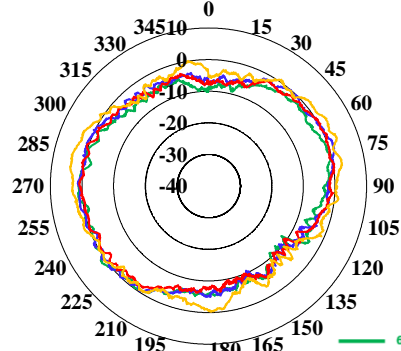
5200MHz
5300MHz
5600MHz
5800MHz
5870MHz

Xanthus Taoglas antennas-ANT2-5GHz Band

Xanthus Taoglas antennas-ANT1-5GHz Band



6175MHz
6475MHz
6700MHz
7000MHz



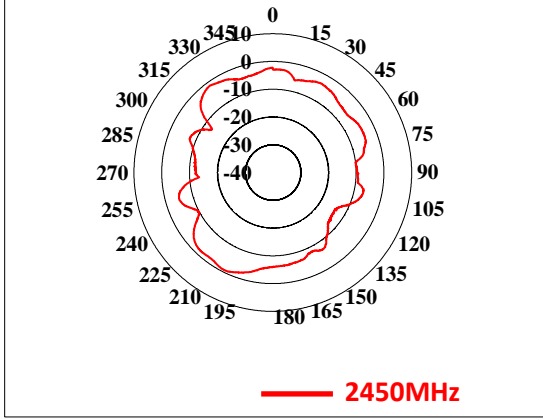
6175MHz
6475MHz
6700MHz
7000MHz

Xanthus Taoglas antennas-ANT2-6GHz Band

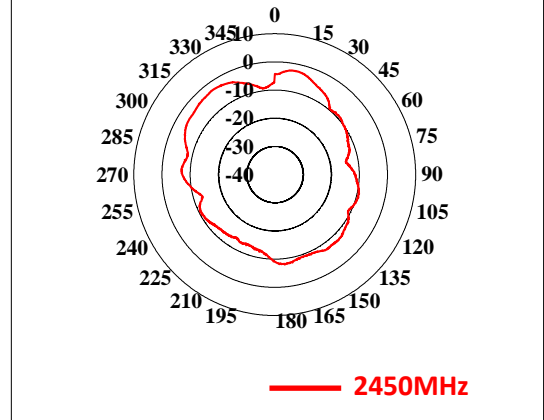
Xanthus Taoglas antennas-ANT1-6GHz Band



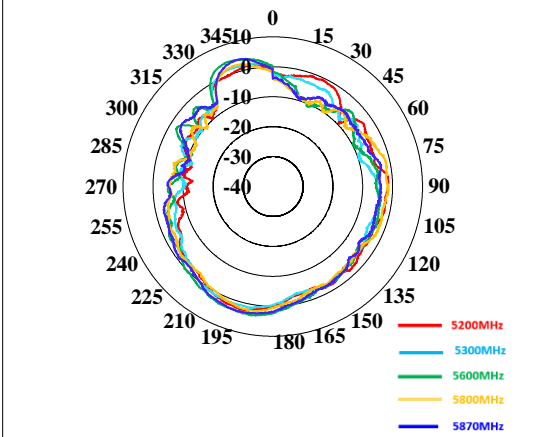
Antenna Radiation Pattern-#3 Test setup-Proteus Taoglas antennas



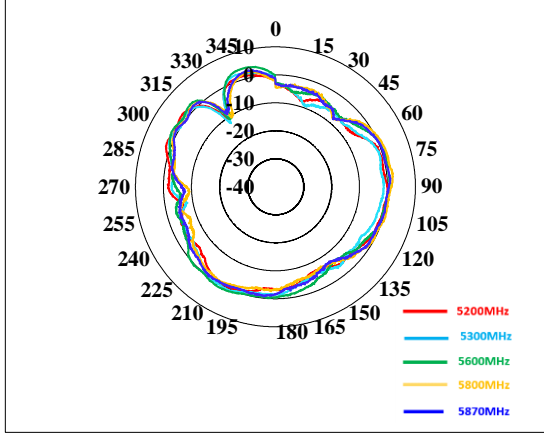
Proteus Taoglas antennas-ANT2-2.4GHz Band



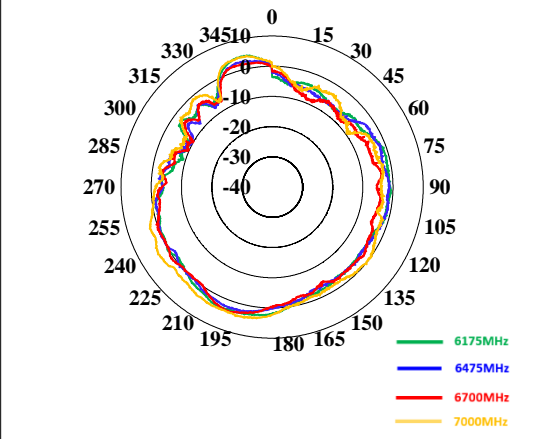
Proteus Taoglas antennas-ANT1-2.4GHz Band



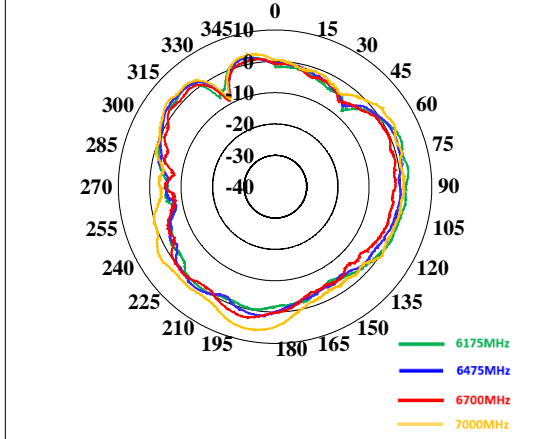
Proteus Taoglas antennas-ANT2-5GHz Band



Proteus Taoglas antennas-ANT1-5GHz Band



Proteus Taoglas antennas-ANT2-6GHz Band



Proteus Taoglas antennas-ANT1-6GHz Band