Ceramic Patch Antenna

Data Sheet

Type : Ceramic Patch Antenna
AMOTECH Part No. : AUDA-080804-CH5CH9-STD30 (UWB CH5&CH9 Dual Type Antenna)
Customer Part No. :

-	Designed	Checked		Approved
Date	. .	. .	. .	. .

Revision no	Content	Page	Date	Name
0	First, documented	-	2022.03.14	Y.C Choi

RoHS

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Designed	Checked		Approved
. .	. .	. .	. .

1. Specification

1.1 Electrical characteristic

No	Item	Specification	Unit	Remarks
1	Frequency	UWB CH5 : 6250.00 ~ 6750.00 UWB CH9 : 7750.00 ~ 8250.00	MHz	Notes : 1)
		TBD	MHz	Notes : 2)
2	VSWR	Max 3 : 1 @ 6250.00 ~ 8250.00MHz	-	Notes : 1)
		TBD	-	Notes : 2)
3	Gain	Please Refer to page 8, 9	dBic	Notes : 1)
4	Axial Ratio	Please Refer to page 10	dB	Notes : 1)
5	Polarization	RHCP	-	-
6	Isolation	Typ. -15.0 (Refer to table 1.2 on page 3)	dB	Notes : 1)
7	Impedance	50	Ω	-
8	Operating Temperature	-40 / +90	℃	-

※ Notes: 1) Measured on 30x30mm ground plane with 100mm/1.13mm flexible RF cable & connector.

Notes: 2) Measured on Amotech FR4 Ground Plane for Mass Production Jig.

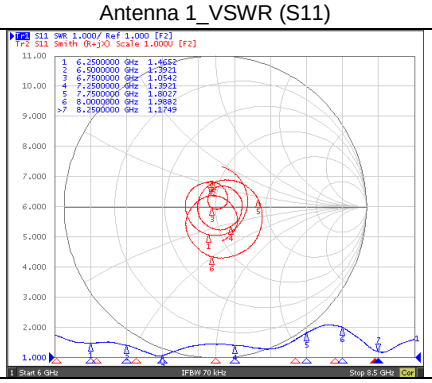
- Fc is min Point of Loop in VSWR.
- All Products in Mass Production Pass through the Inspection Process (100%)

➔ Inspection List : Frequency(MHz), VSWR

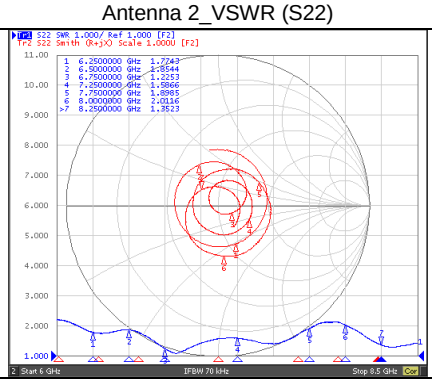
1.2 Typical S-Parameter

※ Measured on 30x30mm ground plane with 100mm/1.13mm flexible RF cable & connector.

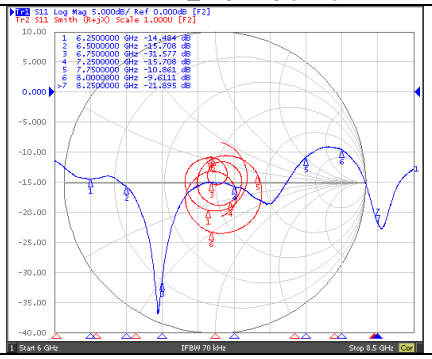
Antenna 1_VSWR (S11)



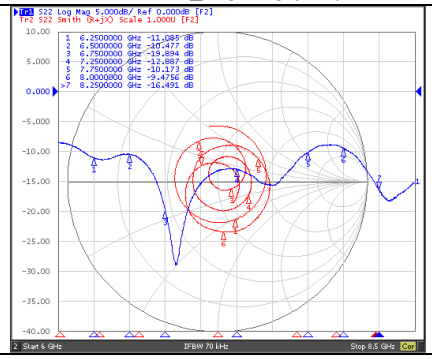
Antenna 2_VSWR (S22)



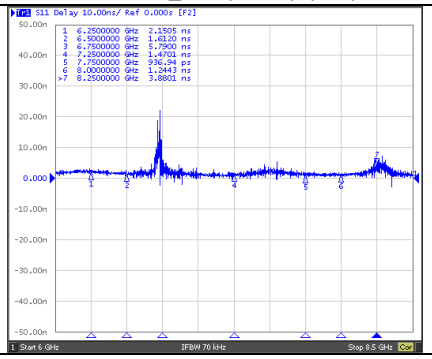
Antenna 1_Log Mag (S11)



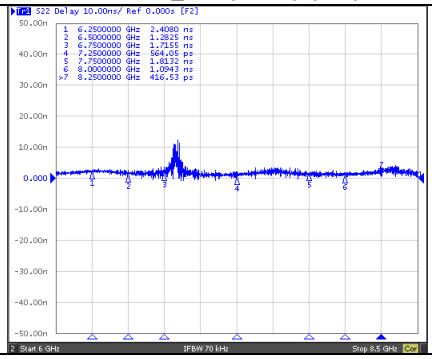
Antenna 2_Log Mag (S22)



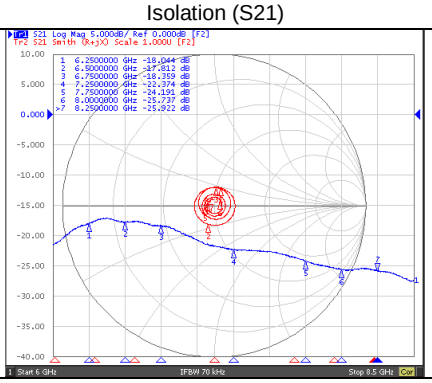
Antenna 1_Group Delay (S11)



Antenna 2_Group Delay (S22)

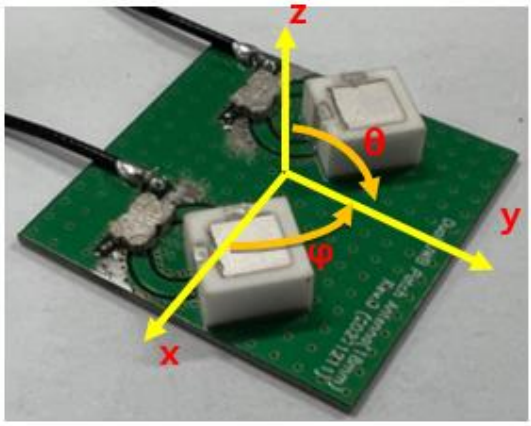


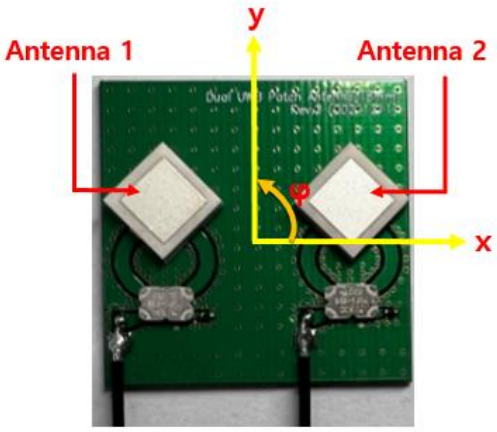
Isolation (S21)

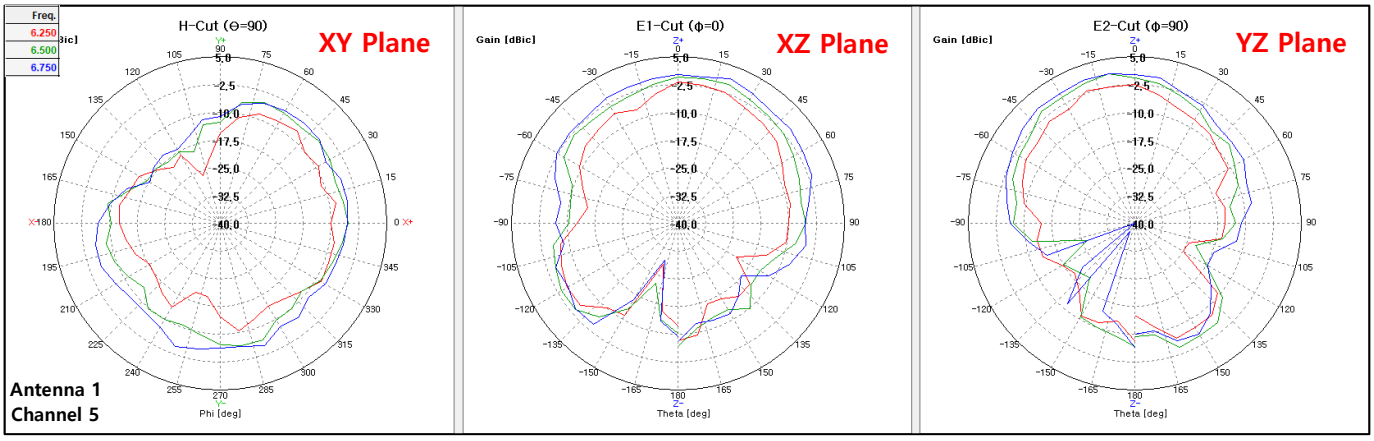


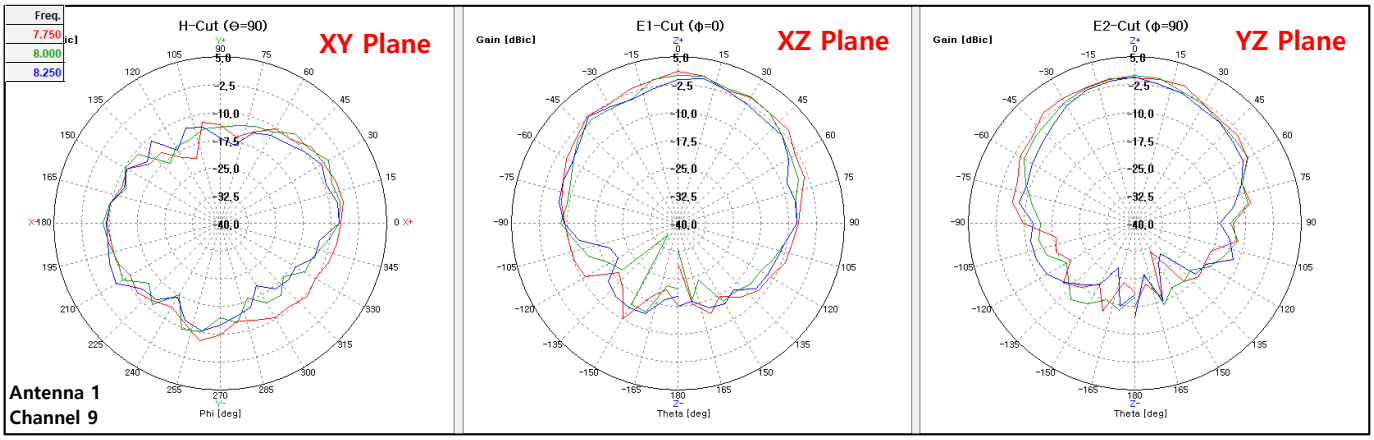
1.3.1.1 Antenna 1 Right Hand Circular Polarization (RHCP) 2D Radiation Patterns [dBic]

(Measured on 30x30mm ground plane with 100mm/1.13mm flexible RF cable & connector)



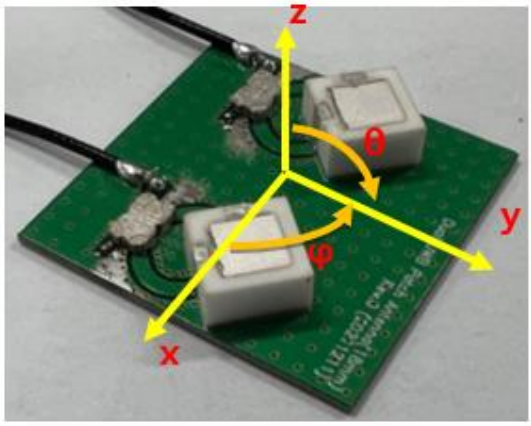


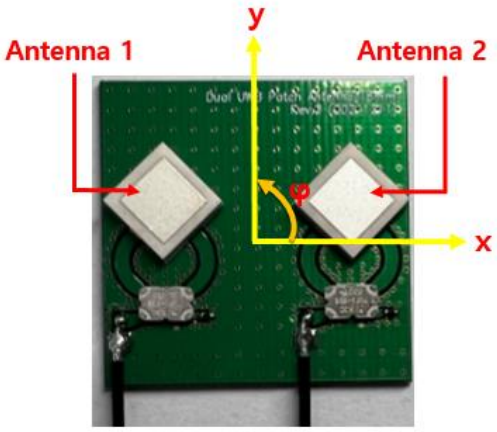


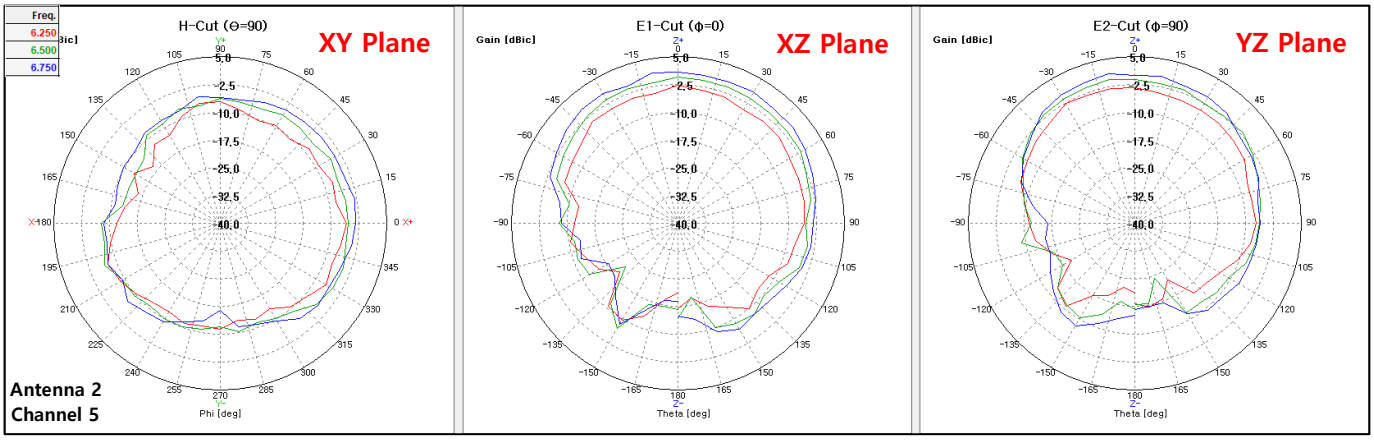


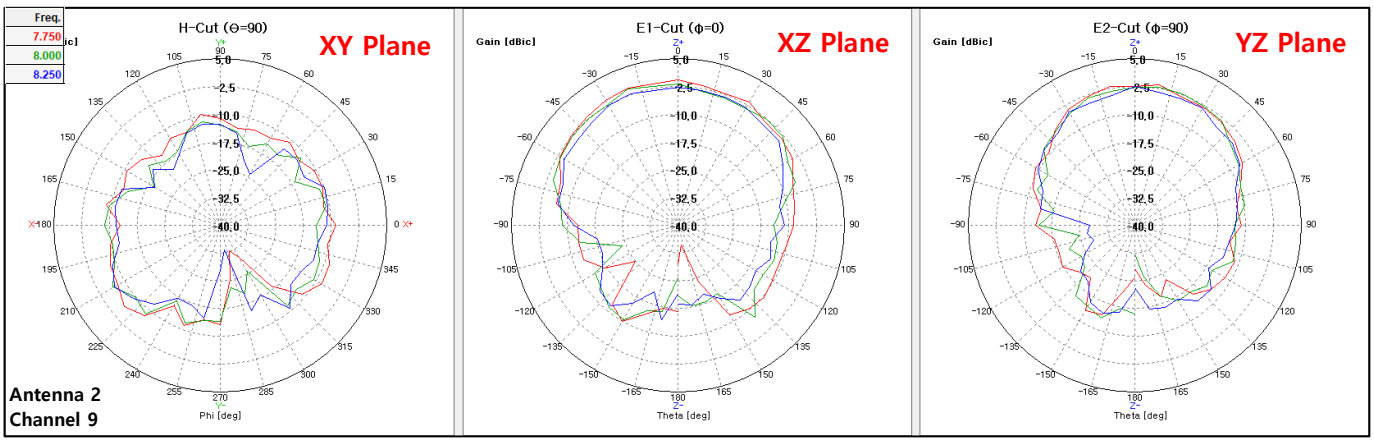
1.3.1.2 Antenna 2 Right Hand Circular Polarization (RHCP) 2D Radiation Patterns [dBic]

(Measured on 30x30mm ground plane with 100mm/1.13mm flexible RF cable & connector)



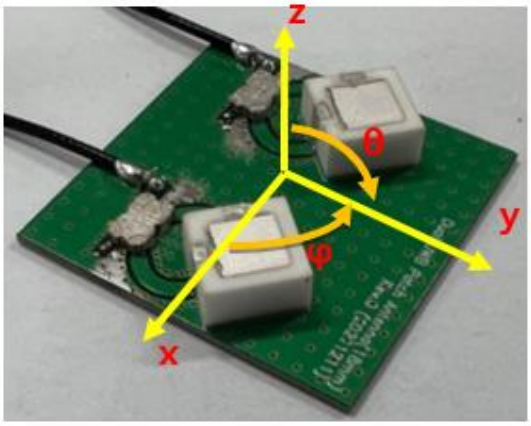


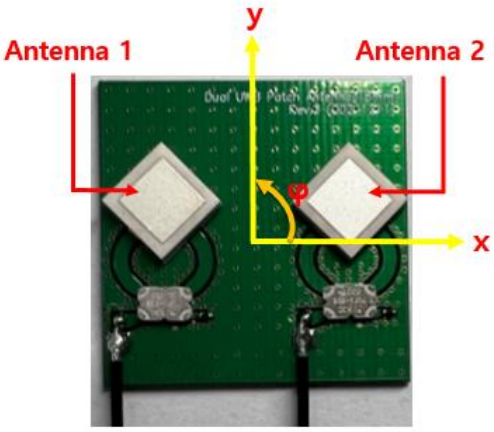


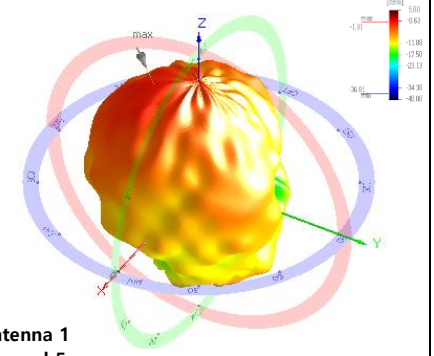
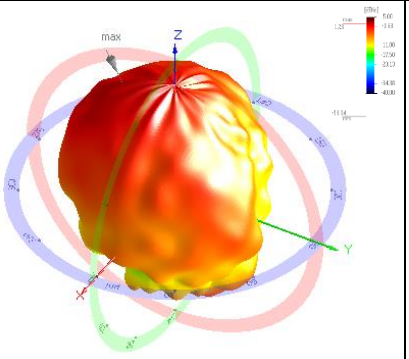
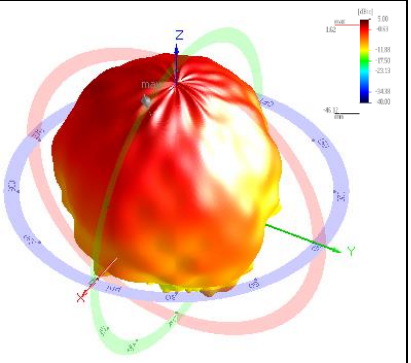


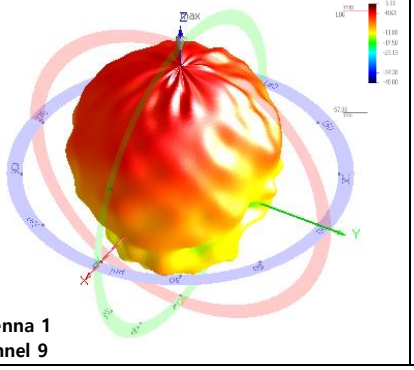
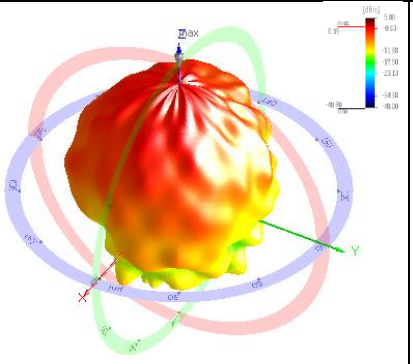
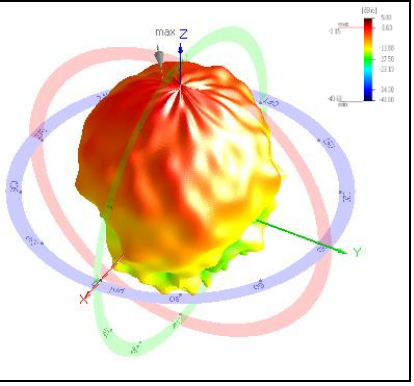
1.3.2.1 Antenna 1 Right Hand Circular Polarization (RHCP) 3D Radiation Patterns [dBic]

(Measured on 30x30mm ground plane with 100mm/1.13mm flexible RF cable & connector)



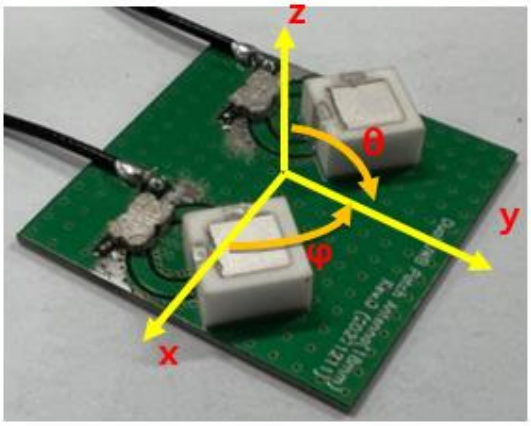


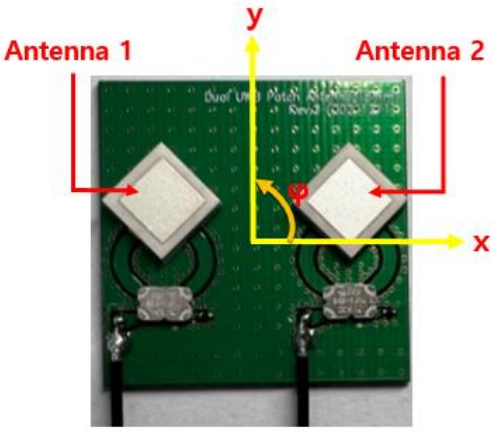
6250MHz	6500MHz	6750MHz
		
Antenna 1 Channel 5		

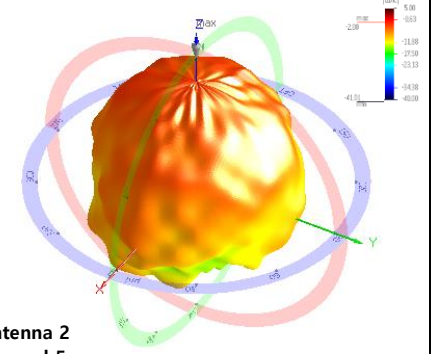
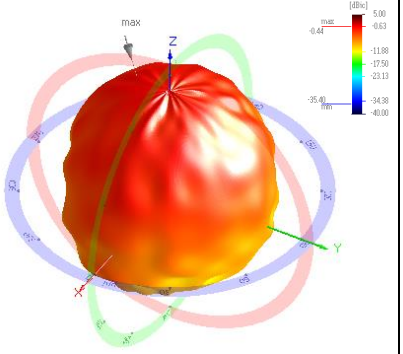
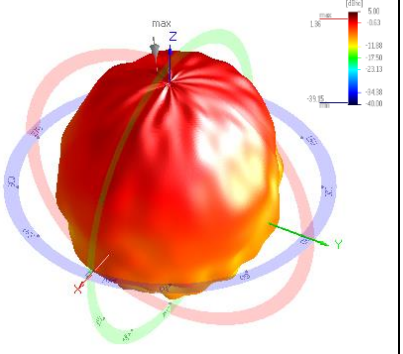
7750MHz	8000MHz	8250MHz
		
Antenna 1 Channel 9		

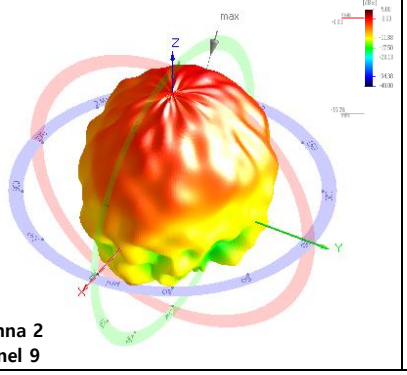
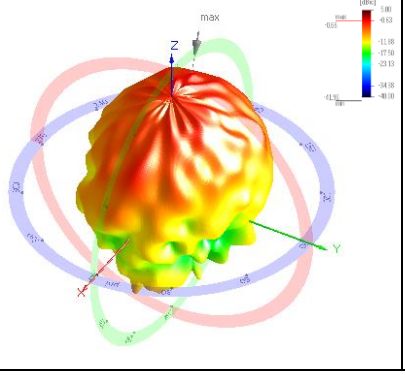
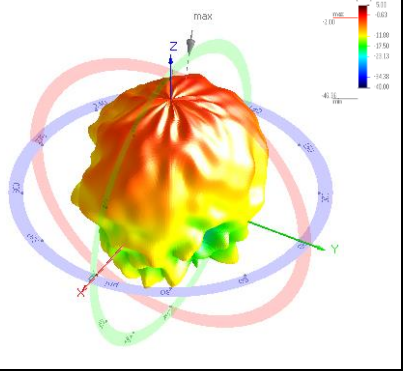
1.3.2.2 Antenna 2 Right Hand Circular Polarization (RHCP) 3D Radiation Patterns [dBic]

(Measured on 30x30mm ground plane with 100mm/1.13mm flexible RF cable & connector)





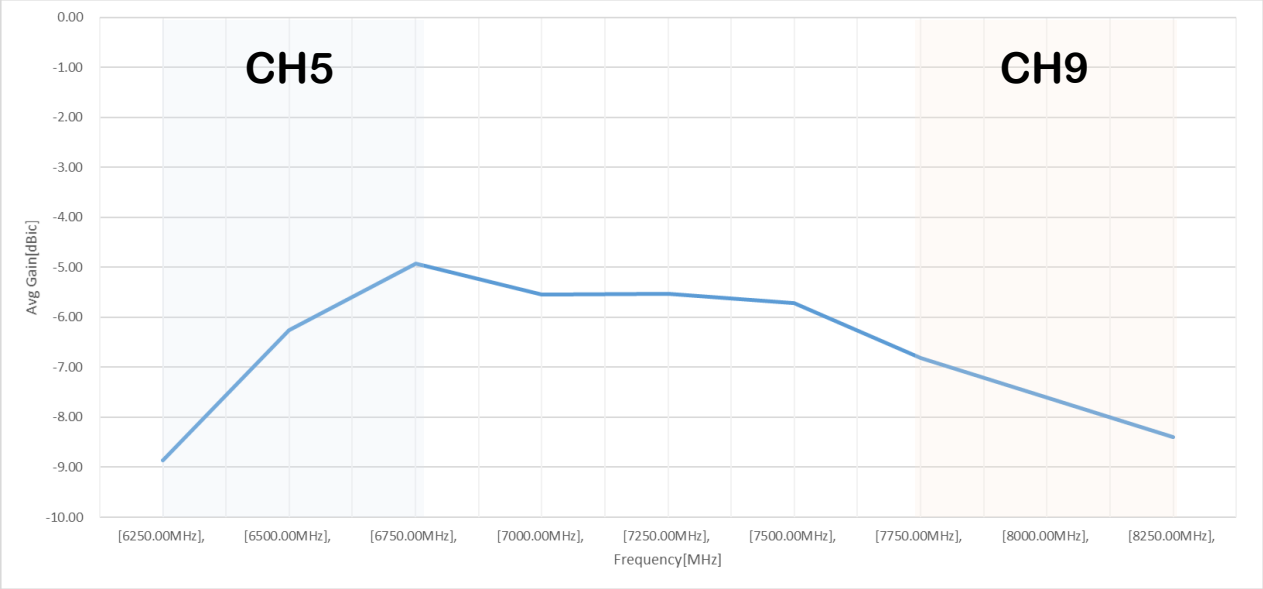
6250MHz	6500MHz	6750MHz
		
Antenna 2 Channel 5		

7750MHz	8000MHz	8250MHz
		
Antenna 2 Channel 9		

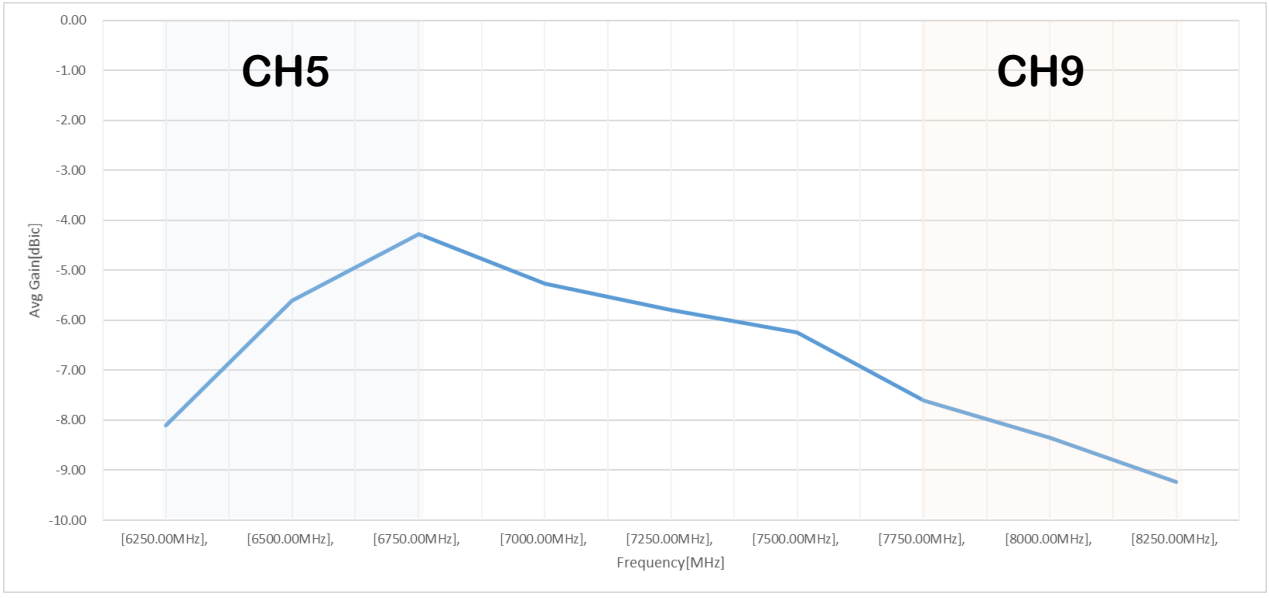
1.3.3 Average Gain

(Measured on 30x30mm ground plane with 100mm/1.13mm flexible RF cable & connector)

[Antenna 1]



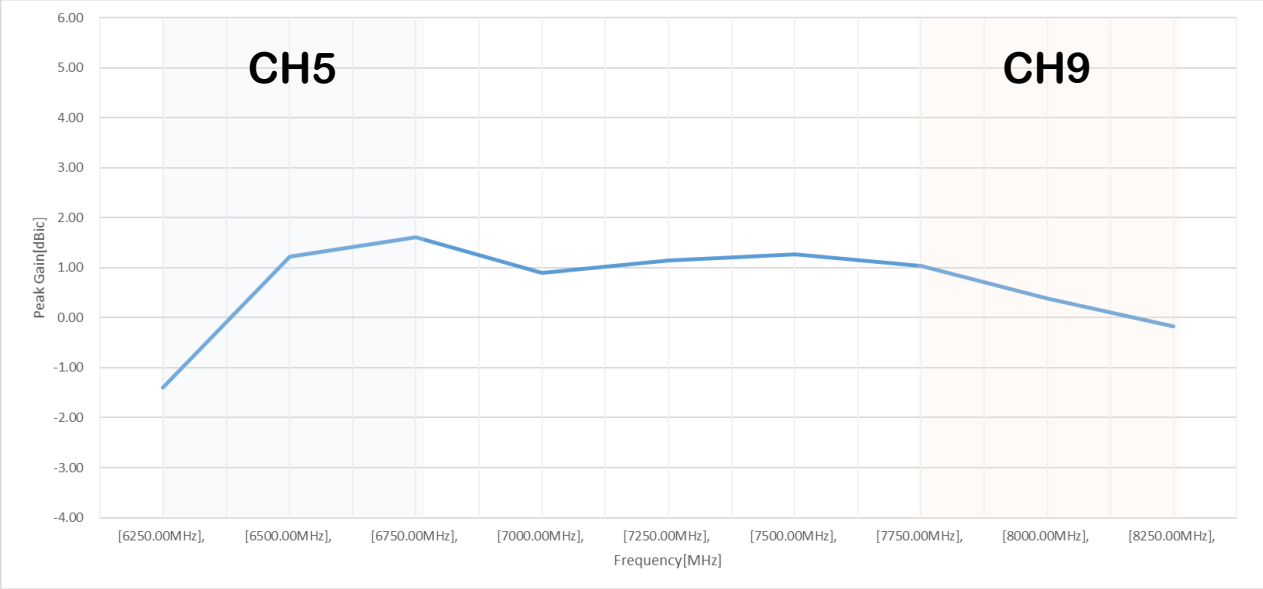
[Antenna 2]



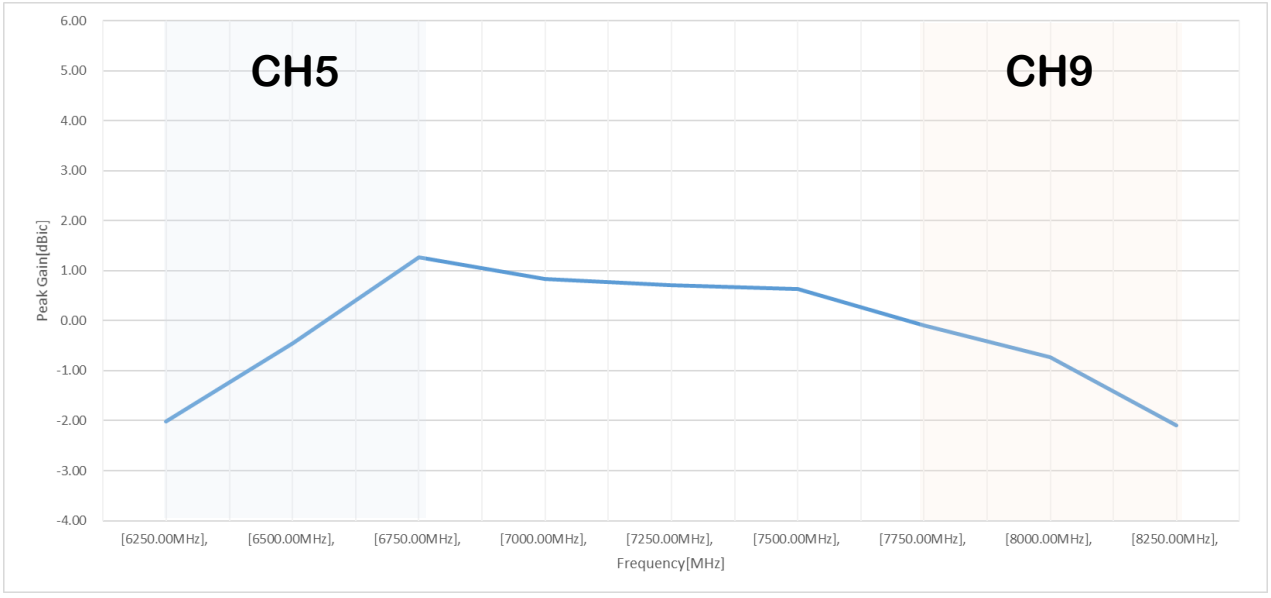
1.3.4 Peak Gain

(Measured on 30x30mm ground plane with 100mm/1.13mm flexible RF cable & connector)

[Antenna 1]



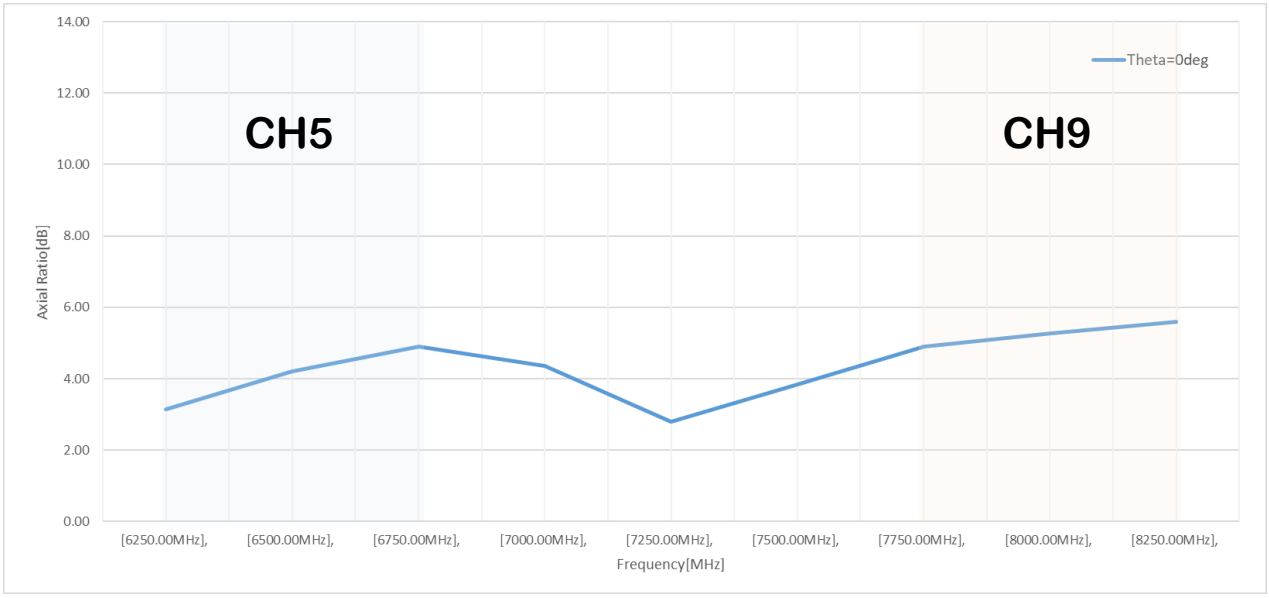
[Antenna 2]



1.3.5 Axial Ratio*

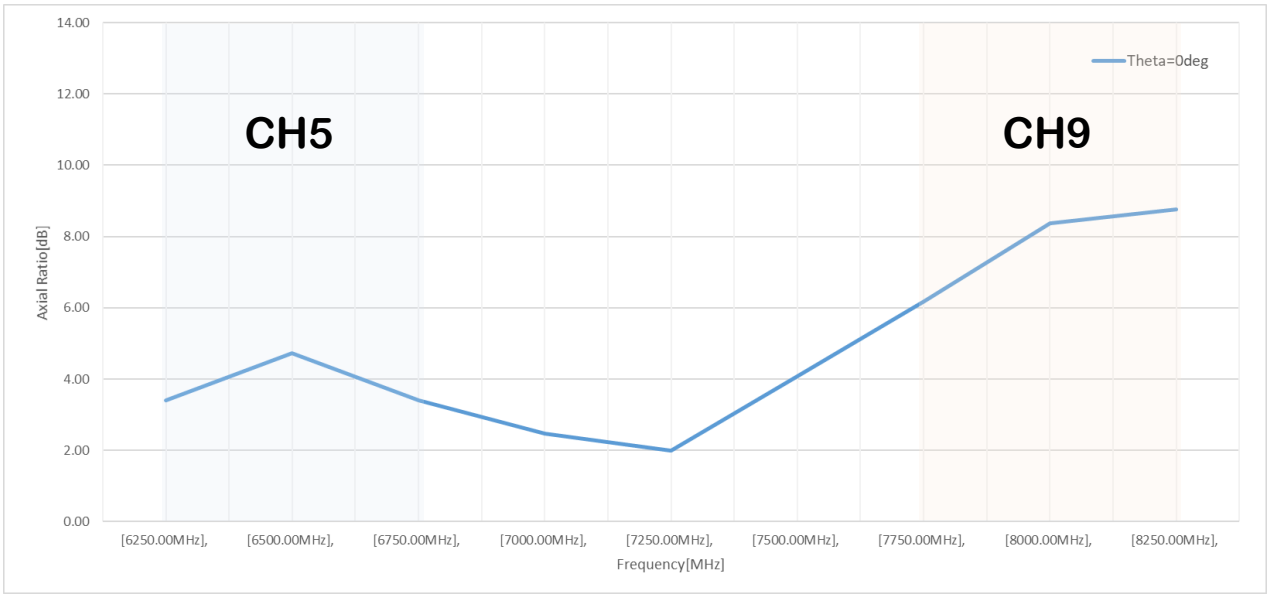
(Measured on 30x30mm ground plane with 100mm/1.13mm flexible RF cable & connector)

[Antenna 1]



*Note: Axial Ratio measurements graph shows only θ=0° data

[Antenna 2]



*Note: Axial Ratio measurements graph shows only θ=0° data

1.3.6 RHCP Gain Raw Data (6250MHz, 6500MHz, 6750MHz, 7750MHz, 8000MHz, 8250MHz)

(Measured on 30x30mm ground plane with 100mm/1.13mm flexible RF cable & connector)

[Antenna 1, Channel 5]

	6250MHz RHCP Gain Raw Data[dBic]									
	θ=00.0	θ=10.0	θ=20.0	θ=30.0	θ=40.0	θ=50.0	θ=60.0	θ=70.0	θ=80.0	θ=90.0
Φ=00.0	-1.97	-2.14	-2.59	-3.99	-4.56	-5.38	-7.61	-9.28	-9.20	-9.98
Φ=10.0	-2.77	-3.26	-3.82	-5.29	-6.66	-6.93	-8.65	-9.89	-9.62	-8.37
Φ=20.0	-3.21	-3.06	-4.99	-4.94	-6.57	-6.78	-9.41	-8.50	-8.87	-10.95
Φ=30.0	-3.05	-3.19	-4.81	-4.88	-6.24	-7.63	-6.75	-8.49	-9.08	-9.20
Φ=40.0	-3.19	-4.17	-4.31	-5.20	-5.29	-6.17	-6.02	-6.79	-8.86	-10.23
Φ=50.0	-2.25	-3.73	-4.60	-5.82	-5.88	-5.47	-5.98	-5.79	-7.98	-7.60
Φ=60.0	-2.87	-3.37	-5.52	-5.90	-5.02	-5.70	-5.63	-6.09	-7.90	-8.37
Φ=70.0	-2.53	-4.49	-6.25	-6.48	-6.88	-7.66	-6.21	-7.31	-7.47	-8.61
Φ=80.0	-3.10	-4.82	-5.97	-7.78	-8.05	-8.95	-8.49	-10.18	-9.23	-11.02
Φ=90.0	-2.49	-4.76	-6.66	-7.65	-8.52	-10.29	-10.91	-16.64	-15.16	-15.70
Φ=100.0	-2.92	-5.21	-5.96	-8.47	-8.79	-10.94	-11.73	-20.39	-18.93	-22.56
Φ=110.0	-3.64	-4.97	-7.37	-8.32	-10.00	-13.07	-14.36	-17.36	-24.04	-26.23
Φ=120.0	-3.17	-5.64	-6.48	-9.07	-11.78	-11.75	-12.86	-18.79	-23.69	-18.66
Φ=130.0	-3.51	-6.01	-6.83	-9.45	-10.41	-10.19	-14.95	-17.33	-17.59	-20.18
Φ=140.0	-4.20	-4.88	-7.06	-8.62	-8.64	-10.77	-12.38	-18.07	-19.23	-17.61
Φ=150.0	-3.87	-5.82	-5.94	-7.57	-8.49	-9.76	-11.41	-16.60	-15.45	-14.58
Φ=160.0	-2.83	-5.42	-6.08	-7.20	-6.15	-7.78	-11.59	-19.76	-13.72	-13.97
Φ=170.0	-3.42	-4.75	-6.36	-6.36	-6.55	-7.93	-10.53	-13.76	-19.54	-12.21
Φ=180.0	-3.14	-4.70	-7.42	-5.80	-6.81	-7.43	-9.31	-12.60	-15.32	-12.83
Φ=190.0	-3.64	-4.79	-6.07	-6.05	-5.90	-6.74	-8.58	-10.32	-15.82	-14.10
Φ=200.0	-3.60	-4.75	-6.62	-5.15	-6.28	-6.36	-7.09	-9.99	-14.16	-15.68
Φ=210.0	-3.55	-3.24	-6.31	-6.07	-6.87	-6.86	-7.23	-10.09	-13.51	-18.03
Φ=220.0	-3.59	-3.17	-5.24	-5.90	-6.30	-5.97	-5.57	-9.17	-14.18	-17.31
Φ=230.0	-3.08	-3.35	-5.25	-4.61	-6.47	-6.77	-6.12	-8.53	-11.64	-15.50
Φ=240.0	-4.00	-3.04	-3.62	-5.76	-6.83	-6.87	-5.54	-8.09	-11.77	-13.85
Φ=250.0	-3.47	-3.44	-4.05	-4.62	-6.51	-6.84	-5.71	-6.55	-8.74	-20.30
Φ=260.0	-4.00	-3.15	-2.93	-4.81	-4.98	-5.11	-5.82	-7.09	-10.42	-19.98
Φ=270.0	-4.37	-2.73	-1.97	-4.36	-4.09	-5.77	-5.88	-7.73	-9.66	-14.76
Φ=280.0	-2.96	-2.34	-2.07	-3.04	-3.49	-4.10	-5.08	-6.71	-8.05	-10.40
Φ=290.0	-3.64	-2.94	-2.04	-2.00	-2.82	-3.96	-4.95	-7.42	-7.54	-12.52
Φ=300.0	-3.86	-2.40	-1.39	-2.05	-2.75	-3.51	-4.87	-6.58	-7.56	-14.21
Φ=310.0	-2.83	-1.77	-1.41	-2.08	-2.41	-4.03	-5.25	-7.41	-7.52	-13.26
Φ=320.0	-2.88	-2.19	-1.79	-1.93	-2.49	-3.78	-5.39	-5.39	-9.02	-11.24
Φ=330.0	-4.02	-2.65	-2.53	-1.59	-3.51	-4.12	-4.97	-5.87	-8.45	-8.44
Φ=340.0	-3.22	-3.09	-2.73	-3.50	-3.92	-4.28	-5.75	-6.95	-9.94	-8.79
Φ=350.0	-2.85	-3.03	-2.88	-3.96	-5.46	-4.82	-7.24	-7.72	-8.38	-8.73

[Antenna 1, Channel 5]

	6500MHz RHCP Gain Raw Data[dBic]									
	θ=00.0	θ=10.0	θ=20.0	θ=30.0	θ=40.0	θ=50.0	θ=60.0	θ=70.0	θ=80.0	θ=90.0
Φ=00.0	-0.57	-0.43	-0.12	-1.39	-2.18	-2.57	-3.79	-5.10	-6.22	-5.39
Φ=10.0	-1.07	-1.20	-1.57	-2.33	-3.72	-3.88	-4.91	-5.73	-6.06	-6.26
Φ=20.0	-1.10	-1.79	-1.90	-2.57	-3.55	-3.28	-4.03	-6.39	-5.46	-6.87
Φ=30.0	-0.11	-1.55	-1.80	-2.73	-2.52	-3.62	-4.51	-6.15	-6.68	-5.79
Φ=40.0	-0.82	-1.89	-2.28	-2.58	-2.73	-2.76	-3.55	-4.88	-5.02	-5.35
Φ=50.0	-0.59	-2.05	-3.11	-3.01	-3.46	-2.22	-3.10	-3.57	-4.75	-6.26
Φ=60.0	-0.63	-1.97	-2.75	-3.53	-3.97	-3.25	-3.66	-4.24	-3.55	-5.63
Φ=70.0	-1.22	-2.37	-2.60	-3.83	-4.16	-4.26	-4.49	-4.65	-5.30	-5.30
Φ=80.0	-0.32	-2.14	-3.14	-5.53	-5.86	-5.87	-5.77	-7.80	-8.54	-6.93
Φ=90.0	-0.82	-1.82	-3.53	-4.92	-7.72	-6.85	-8.87	-10.33	-13.88	-12.71
Φ=100.0	-0.52	-2.34	-3.72	-5.40	-5.64	-9.81	-7.97	-11.92	-11.30	-13.10
Φ=110.0	-1.17	-2.53	-3.57	-5.54	-7.22	-8.24	-7.61	-9.89	-13.62	-19.36
Φ=120.0	-1.22	-2.80	-3.40	-5.99	-8.38	-7.20	-10.13	-11.39	-18.44	-17.67
Φ=130.0	-1.24	-2.89	-3.15	-5.65	-8.26	-7.92	-8.78	-13.47	-22.61	-18.41
Φ=140.0	-1.52	-3.23	-3.22	-5.68	-7.35	-8.66	-9.47	-14.76	-19.53	-17.13
Φ=150.0	-1.83	-2.41	-2.99	-5.90	-7.06	-7.47	-10.27	-19.28	-19.41	-17.10
Φ=160.0	-1.43	-3.13	-3.46	-5.14	-6.23	-5.08	-9.10	-15.61	-20.76	-13.88
Φ=170.0	-1.04	-1.69	-2.32	-4.70	-4.68	-4.17	-6.81	-11.72	-14.63	-9.07
Φ=180.0	-0.97	-1.98	-3.27	-3.69	-3.82	-3.12	-4.55	-9.64	-10.41	-10.54
Φ=190.0	-0.67	-1.50	-2.56	-2.74	-3.81	-3.60	-4.96	-6.25	-9.33	-8.70
Φ=200.0	-0.86	-1.42	-2.22	-3.56	-3.02	-2.47	-3.85	-5.57	-10.02	-9.48
Φ=210.0	-0.25	-1.33	-1.97	-2.85	-3.01	-2.76	-3.95	-6.32	-9.60	-11.40
Φ=220.0	-0.54	-0.92	-1.89	-3.44	-2.75	-2.84	-3.72	-6.79	-9.25	-13.14
Φ=230.0	-0.43	-0.89	-1.53	-2.39	-2.86	-2.76	-3.32	-5.40	-7.61	-9.82
Φ=240.0	-1.36	-1.05	-1.36	-2.43	-2.99	-2.90	-3.53	-4.38	-5.87	-9.99
Φ=250.0	0.05	-0.41	-0.05	-1.74	-2.64	-3.35	-3.50	-4.62	-5.84	-10.71
Φ=260.0	-0.67	0.71	0.27	-1.63	-2.84	-3.31	-3.10	-4.21	-5.98	-9.40
Φ=270.0	-0.42	0.90	0.01	-0.75	-0.77	-3.14	-3.80	-4.79	-7.64	-7.23
Φ=280.0	-0.76	0.57	-0.05	0.42	-0.55	-2.05	-3.72	-5.10	-6.10	-6.56
Φ=290.0	0.01	0.87	1.22	1.05	0.42	-0.82	-3.36	-4.80	-6.20	-6.55
Φ=300.0	-0.40	0.31	0.31	1.05	-0.11	-0.67	-2.94	-4.32	-6.74	-9.73
Φ=310.0	-0.19	0.97	0.81	0.80	0.62	-0.64	-2.77	-4.29	-6.11	-10.03
Φ=320.0	-0.20	0.49	0.10	0.47	-0.19	-1.72	-2.87	-4.36	-7.77	-11.25
Φ=330.0	-0.42	0.55	-0.14	-0.18	-1.11	-2.26	-2.45	-4.91	-6.98	-8.89
Φ=340.0	-0.51	-0.55	0.04	-1.15	-1.15	-2.90	-3.12	-4.66	-6.69	-7.98
Φ=350.0	-0.65	-0.75	-0.93	-1.51	-2.11	-2.72	-3.89	-5.07	-7.16	-6.61

[Antenna 1, Channel 5]

	6750MHz RHCP Gain Raw Data[dBic]									
	θ=00.0	θ=10.0	θ=20.0	θ=30.0	θ=40.0	θ=50.0	θ=60.0	θ=70.0	θ=80.0	θ=90.0
Φ=00.0	0.06	0.04	1.61	0.32	-0.57	-0.36	-0.99	-1.58	-3.95	-5.70
Φ=10.0	-0.63	-0.47	0.50	0.28	-0.67	-0.86	-2.22	-2.83	-4.32	-5.05
Φ=20.0	-0.89	-0.38	0.35	-0.12	-1.06	-1.92	-2.14	-4.32	-6.06	-5.26
Φ=30.0	-0.97	-0.34	-0.28	-0.80	-0.47	-1.97	-2.32	-4.11	-5.90	-7.04
Φ=40.0	-0.10	-0.18	-0.95	-0.81	-0.86	-1.31	-1.86	-4.47	-5.94	-4.85
Φ=50.0	-0.24	-0.72	-2.12	-1.08	-1.37	-2.39	-2.82	-3.85	-4.44	-4.79
Φ=60.0	-0.22	-0.47	-1.65	-2.61	-3.04	-2.75	-3.26	-4.13	-4.24	-4.99
Φ=70.0	-0.04	0.29	-1.37	-3.28	-3.92	-4.12	-4.69	-4.52	-5.57	-5.49
Φ=80.0	0.26	-0.82	-2.35	-2.94	-4.82	-5.22	-6.37	-7.07	-7.49	-7.39
Φ=90.0	0.15	-0.08	-2.54	-3.37	-5.43	-5.72	-6.04	-7.80	-7.97	-11.12
Φ=100.0	0.75	-0.14	-2.52	-3.34	-4.39	-4.82	-6.05	-7.79	-8.18	-11.64
Φ=110.0	0.52	-0.69	-1.76	-2.83	-3.86	-4.62	-5.73	-7.47	-10.97	-15.08
Φ=120.0	0.03	-0.30	-2.17	-2.23	-3.46	-5.73	-7.13	-8.99	-10.78	-17.02
Φ=130.0	0.48	-0.29	-1.57	-2.96	-3.74	-6.74	-10.54	-10.81	-12.75	-15.96
Φ=140.0	0.56	0.00	-1.55	-2.37	-4.80	-6.18	-7.81	-10.79	-14.31	-16.54
Φ=150.0	0.28	-0.42	-1.79	-1.67	-3.76	-4.56	-8.30	-9.03	-16.50	-17.98
Φ=160.0	0.68	-0.43	-0.96	-1.90	-3.24	-3.29	-5.60	-9.48	-12.91	-13.10
Φ=170.0	0.42	0.11	-1.38	-1.83	-2.39	-3.00	-3.35	-5.36	-9.16	-9.80
Φ=180.0	-0.09	-0.29	-0.80	-1.09	-2.13	-1.93	-2.16	-4.64	-7.81	-6.91
Φ=190.0	0.63	-0.02	-0.17	-1.01	-0.73	-1.45	-2.10	-3.18	-6.12	-5.70
Φ=200.0	-0.18	0.69	0.03	-0.46	-1.39	-1.16	-1.57	-2.89	-4.19	-5.85
Φ=210.0	0.09	0.21	-0.01	-0.55	-1.03	-2.06	-1.72	-2.16	-4.05	-7.41
Φ=220.0	0.31	1.16	0.21	-0.55	-0.47	-1.14	-0.87	-3.51	-5.70	-8.48
Φ=230.0	0.49	0.38	0.79	-0.26	-1.09	-1.29	-1.73	-3.10	-5.99	-8.49
Φ=240.0	0.45	1.10	0.69	0.16	-0.42	-1.13	-2.13	-2.54	-5.20	-7.50
Φ=250.0	0.16	0.86	0.67	-0.12	-0.40	-1.09	-1.42	-2.17	-4.21	-4.64
Φ=260.0	0.03	0.65	1.05	0.57	0.68	-0.94	-1.77	-2.26	-3.99	-5.53
Φ=270.0	0.07	0.97	0.94	0.44	0.61	-0.33	-1.81	-2.88	-4.94	-6.36
Φ=280.0	0.43	0.82	0.46	1.01	1.23	-0.70	-2.33	-2.87	-4.88	-6.21
Φ=290.0	0.25	1.25	0.42	1.45	0.44	-0.36	-1.39	-1.68	-3.63	-4.89
Φ=300.0	0.39	1.35	0.19	0.99	0.25	-0.32	-1.24	-2.93	-5.92	-7.65
Φ=310.0	0.19	1.35	0.76	1.09	0.50	-0.20	-2.04	-4.73	-7.17	-7.03
Φ=320.0	0.45	0.64	0.56	0.96	0.32	0.02	-1.96	-4.59	-6.61	-8.81
Φ=330.0	0.15	0.10	0.55	0.75	-0.15	-0.46	-2.13	-3.92	-5.83	-7.19
Φ=340.0	0.19	0.26	1.12	-0.09	0.10	-0.45	-1.56	-2.93	-4.81	-7.09
Φ=350.0	-0.35	0.07	0.27	0.69	0.23	-0.52	-1.79	-3.01	-4.62	-6.35

[Antenna 1, Channel 9]

	7750MHz RHCP Gain Raw Data[dBic]									
	θ=00.0	θ=10.0	θ=20.0	θ=30.0	θ=40.0	θ=50.0	θ=60.0	θ=70.0	θ=80.0	θ=90.0
Φ=00.0	1.03	0.32	-1.88	-0.73	-1.31	-0.93	-3.38	-3.76	-6.20	-7.33
Φ=10.0	0.13	-0.49	-0.42	-1.11	-0.70	-2.43	-3.11	-5.67	-7.02	-6.32
Φ=20.0	0.23	0.10	0.09	-0.67	-0.83	-2.27	-3.90	-5.82	-6.77	-6.69
Φ=30.0	0.12	-0.04	-1.06	-0.67	-1.52	-1.91	-4.74	-5.54	-6.90	-7.67
Φ=40.0	0.26	-1.24	0.24	-0.97	-1.84	-3.26	-4.64	-7.33	-8.01	-7.97
Φ=50.0	0.09	-0.61	-0.31	-1.40	-2.28	-3.97	-5.99	-6.15	-7.82	-10.38
Φ=60.0	-0.20	-1.24	-1.52	-1.58	-4.35	-4.37	-6.28	-7.49	-7.48	-10.46
Φ=70.0	0.66	-0.71	-1.22	-1.53	-3.51	-5.68	-7.17	-8.89	-10.21	-13.86
Φ=80.0	0.49	-0.22	-0.76	-2.03	-2.92	-5.08	-7.18	-9.63	-12.11	-16.37
Φ=90.0	-0.69	-0.58	-0.61	-2.85	-3.83	-3.42	-4.81	-9.09	-8.20	-13.51
Φ=100.0	-0.57	-0.75	-0.96	-3.27	-3.18	-4.35	-5.23	-8.91	-11.58	-12.29
Φ=110.0	-0.42	-0.79	-1.29	-2.77	-4.76	-4.22	-6.02	-9.47	-10.92	-21.30
Φ=120.0	-0.32	-0.74	-2.75	-3.85	-3.78	-3.94	-7.78	-11.63	-14.91	-19.47
Φ=130.0	-0.14	-0.15	-2.97	-2.83	-4.45	-6.51	-8.24	-15.00	-15.60	-15.04
Φ=140.0	-1.01	-0.90	-3.05	-3.54	-4.15	-6.50	-6.67	-9.48	-15.69	-15.09
Φ=150.0	-0.88	-1.25	-3.33	-3.54	-4.07	-5.02	-7.10	-12.11	-11.05	-10.74
Φ=160.0	-1.48	-1.00	-3.05	-3.14	-2.92	-4.57	-5.61	-10.75	-10.30	-11.79
Φ=170.0	-0.53	-1.26	-1.18	-1.91	-4.14	-3.34	-7.03	-6.56	-9.72	-9.75
Φ=180.0	-0.27	-0.78	-1.51	-2.80	-2.09	-4.16	-5.20	-7.02	-7.93	-9.37
Φ=190.0	-0.25	-0.69	-1.12	-2.89	-3.43	-3.53	-4.99	-7.23	-12.67	-9.97
Φ=200.0	0.14	-0.10	-1.02	-2.13	-2.15	-3.51	-5.19	-8.54	-10.13	-10.02
Φ=210.0	0.07	0.39	-0.85	-2.00	-2.57	-3.61	-4.39	-5.54	-8.92	-11.97
Φ=220.0	0.00	-0.03	-1.09	-2.74	-1.90	-4.66	-4.40	-6.74	-7.84	-10.68
Φ=230.0	-0.22	-0.56	-1.00	-2.16	-3.42	-3.67	-5.40	-6.86	-10.40	-12.57
Φ=240.0	0.04	0.00	-1.17	-1.86	-3.71	-4.85	-4.97	-6.43	-8.22	-13.88
Φ=250.0	0.56	0.23	-0.76	-1.55	-2.59	-4.76	-5.13	-6.06	-11.08	-11.40
Φ=260.0	-0.16	0.39	-1.20	-1.09	-2.54	-3.59	-4.98	-5.78	-8.96	-7.72
Φ=270.0	-0.40	-0.49	-1.06	-1.20	-1.30	-3.87	-4.06	-6.36	-6.53	-9.92
Φ=280.0	-0.10	0.15	-0.37	-1.10	-1.56	-2.52	-4.54	-5.36	-10.22	-13.23
Φ=290.0	-0.49	-0.22	-0.31	-0.43	-1.43	-2.68	-4.91	-7.26	-9.91	-12.08
Φ=300.0	-0.15	0.05	-0.23	-0.82	-2.29	-2.47	-5.03	-6.35	-9.87	-10.64
Φ=310.0	0.24	-0.83	-0.34	-0.93	-1.50	-2.34	-3.43	-4.84	-8.42	-10.83
Φ=320.0	0.06	-0.50	-1.93	-1.75	-2.38	-1.89	-2.90	-6.58	-7.82	-9.26
Φ=330.0	0.14	-0.20	-0.70	-0.60	-1.89	-2.33	-3.46	-5.79	-7.22	-10.29
Φ=340.0	0.07	-0.23	-0.85	-1.39	-1.59	-1.96	-4.08	-5.74	-7.32	-8.75
Φ=350.0	-0.58	-0.48	-1.09	-1.04	-1.28	-1.39	-4.33	-4.33	-7.15	-8.15

[Antenna 1, Channel 9]

	8000MHz RHCP Gain Raw Data[dBic]									
	θ=00.0	θ=10.0	θ=20.0	θ=30.0	θ=40.0	θ=50.0	θ=60.0	θ=70.0	θ=80.0	θ=90.0
Φ=00.0	-0.04	0.18	-1.22	-0.60	-1.27	-3.12	-4.63	-5.35	-7.80	-7.92
Φ=10.0	-0.03	-1.40	-1.67	-0.91	-1.62	-1.92	-5.13	-6.35	-7.14	-7.07
Φ=20.0	-0.29	-0.76	-1.08	-1.70	-2.04	-3.12	-4.50	-5.40	-8.05	-7.97
Φ=30.0	-0.45	-1.45	-0.79	-0.74	-2.79	-3.07	-3.94	-5.59	-7.11	-6.34
Φ=40.0	-0.12	-0.43	-0.37	-1.05	-1.15	-3.88	-3.56	-4.26	-7.80	-8.78
Φ=50.0	0.16	-0.13	-1.47	-1.68	-2.88	-3.66	-4.81	-5.54	-7.85	-8.60
Φ=60.0	0.32	-0.98	-0.99	-2.27	-3.82	-4.23	-6.37	-7.51	-9.39	-11.62
Φ=70.0	-0.01	-0.93	-2.03	-2.68	-3.34	-4.08	-5.62	-9.39	-11.28	-12.09
Φ=80.0	-0.24	-0.85	-2.19	-4.61	-3.92	-5.17	-7.27	-8.32	-10.21	-13.22
Φ=90.0	-0.13	-0.37	-2.15	-2.98	-4.27	-4.80	-4.73	-9.05	-8.86	-14.08
Φ=100.0	-0.19	-1.82	-2.49	-3.07	-3.79	-4.25	-7.82	-9.74	-10.20	-14.09
Φ=110.0	-0.04	-0.90	-2.48	-4.81	-4.49	-7.89	-7.72	-10.51	-11.62	-15.97
Φ=120.0	-0.25	-1.06	-3.35	-3.18	-4.49	-7.29	-12.51	-12.44	-20.14	-16.23
Φ=130.0	-0.82	-2.02	-3.05	-5.45	-4.80	-7.48	-13.61	-14.50	-12.67	-18.82
Φ=140.0	-0.50	-2.12	-2.94	-4.61	-6.56	-9.76	-8.51	-11.75	-13.55	-10.96
Φ=150.0	-0.08	-1.74	-3.76	-3.79	-4.08	-9.42	-7.94	-10.21	-13.71	-10.27
Φ=160.0	-0.49	-1.78	-3.80	-4.68	-3.77	-6.15	-10.00	-9.70	-12.99	-12.77
Φ=170.0	0.07	-1.18	-3.76	-4.02	-3.28	-5.38	-7.89	-9.45	-8.78	-9.68
Φ=180.0	-0.16	-0.59	-4.13	-4.08	-3.61	-4.67	-7.24	-9.02	-9.60	-8.26
Φ=190.0	0.38	-1.13	-2.03	-2.92	-2.84	-3.58	-7.61	-7.91	-8.91	-9.30
Φ=200.0	-0.82	-1.15	-2.67	-1.99	-2.85	-4.50	-5.96	-8.27	-8.95	-10.46
Φ=210.0	-1.05	-0.32	-2.74	-2.80	-3.73	-4.60	-6.17	-8.64	-8.50	-9.46
Φ=220.0	0.04	-0.55	-1.95	-2.65	-3.84	-3.48	-6.16	-8.06	-9.50	-14.72
Φ=230.0	-0.13	-1.06	-1.17	-2.46	-4.07	-4.57	-4.98	-6.74	-9.20	-11.49
Φ=240.0	0.39	-0.78	-2.26	-3.58	-5.32	-3.98	-6.40	-8.39	-11.84	-17.85
Φ=250.0	-0.07	-0.35	-1.21	-3.39	-5.17	-4.62	-6.36	-7.04	-8.67	-9.64
Φ=260.0	-0.10	-0.91	-1.58	-2.67	-5.06	-4.94	-5.10	-7.86	-9.22	-10.29
Φ=270.0	0.20	-0.57	-1.26	-2.14	-3.78	-4.45	-5.48	-8.60	-11.76	-14.51
Φ=280.0	0.34	-0.53	-0.77	-1.64	-3.61	-3.80	-5.39	-10.52	-10.35	-12.85
Φ=290.0	0.17	-0.87	-1.13	-1.85	-2.52	-4.10	-5.86	-9.90	-9.75	-18.49
Φ=300.0	0.02	0.04	-0.56	-1.38	-3.14	-3.95	-4.92	-5.83	-10.49	-15.16
Φ=310.0	-0.56	-0.48	-0.35	-2.09	-1.85	-4.59	-3.69	-5.51	-9.10	-14.41
Φ=320.0	-0.58	-0.29	-0.75	-0.92	-2.61	-3.27	-2.86	-5.89	-8.58	-17.67
Φ=330.0	-0.55	-0.33	-1.79	-2.27	-2.60	-3.77	-4.70	-6.80	-7.81	-13.65
Φ=340.0	0.13	0.20	-1.00	-2.10	-2.75	-2.54	-4.58	-8.25	-9.76	-13.25
Φ=350.0	0.05	-0.81	-1.20	-1.66	-2.69	-2.96	-4.00	-6.59	-8.28	-10.64

[Antenna 1, Channel 9]

	8250MHz RHCP Gain Raw Data[dBic]									
	θ=00.0	θ=10.0	θ=20.0	θ=30.0	θ=40.0	θ=50.0	θ=60.0	θ=70.0	θ=80.0	θ=90.0
Φ=00.0	-1.31	-0.47	-1.72	-2.80	-3.64	-3.23	-5.47	-8.55	-7.69	-7.94
Φ=10.0	-0.78	-1.76	-2.28	-3.52	-3.66	-4.44	-4.24	-7.79	-7.28	-7.80
Φ=20.0	-1.14	-1.36	-2.68	-3.56	-2.05	-4.34	-5.37	-7.60	-7.17	-9.52
Φ=30.0	-0.18	-1.34	-2.72	-3.41	-2.54	-2.71	-4.07	-7.15	-7.21	-8.33
Φ=40.0	-1.03	-1.93	-1.77	-2.82	-2.91	-4.66	-4.11	-4.48	-7.03	-10.13
Φ=50.0	-1.15	-1.78	-3.09	-3.08	-4.01	-4.82	-5.68	-7.26	-7.95	-11.98
Φ=60.0	-1.71	-1.39	-2.52	-3.44	-3.86	-5.78	-5.83	-8.73	-10.01	-12.58
Φ=70.0	-0.80	-2.48	-2.71	-3.63	-5.87	-5.22	-6.07	-8.56	-10.85	-14.06
Φ=80.0	-1.20	-2.19	-3.58	-3.79	-4.95	-5.47	-7.95	-8.93	-11.74	-18.58
Φ=90.0	-0.64	-1.98	-2.68	-4.15	-4.50	-5.67	-6.19	-9.31	-12.81	-16.92
Φ=100.0	-0.47	-1.86	-2.34	-4.57	-4.87	-6.66	-6.30	-7.90	-11.94	-13.74
Φ=110.0	-0.28	-2.02	-3.48	-5.30	-5.81	-6.23	-11.36	-11.77	-15.23	-12.56
Φ=120.0	-1.74	-2.47	-3.14	-4.71	-6.13	-8.15	-10.26	-12.87	-17.56	-17.10
Φ=130.0	-1.61	-2.64	-3.94	-4.56	-4.59	-7.83	-10.40	-17.36	-14.58	-10.95
Φ=140.0	-1.27	-3.46	-3.43	-4.13	-5.84	-7.92	-9.50	-14.19	-12.03	-14.25
Φ=150.0	-1.18	-2.66	-3.87	-4.34	-5.83	-7.32	-10.58	-10.08	-12.91	-10.84
Φ=160.0	-1.32	-4.38	-4.35	-5.86	-4.07	-5.92	-8.74	-7.89	-8.89	-12.30
Φ=170.0	-1.66	-3.82	-3.61	-4.94	-3.98	-5.09	-7.02	-7.46	-10.09	-9.73
Φ=180.0	-1.35	-3.13	-4.36	-3.67	-2.43	-5.47	-7.03	-7.09	-7.27	-9.08
Φ=190.0	-1.11	-3.46	-3.34	-3.80	-3.86	-6.30	-8.57	-8.70	-6.78	-9.07
Φ=200.0	-2.50	-2.36	-3.49	-3.71	-3.31	-5.15	-7.47	-9.41	-9.04	-8.07
Φ=210.0	-1.92	-2.23	-3.41	-2.86	-3.35	-5.13	-6.27	-9.08	-9.93	-7.46
Φ=220.0	-1.84	-2.74	-3.25	-3.47	-3.12	-5.62	-6.34	-11.49	-9.96	-12.49
Φ=230.0	-0.29	-1.80	-4.60	-4.76	-3.35	-4.77	-6.95	-7.20	-10.92	-13.20
Φ=240.0	-1.21	-2.53	-2.61	-5.22	-4.69	-4.89	-6.15	-8.52	-11.00	-17.05
Φ=250.0	-1.20	-2.72	-3.14	-4.31	-4.17	-4.58	-5.46	-8.35	-11.35	-12.13
Φ=260.0	-1.19	-2.32	-3.09	-4.71	-5.87	-5.94	-6.55	-8.09	-10.89	-10.46
Φ=270.0	-1.88	-1.12	-1.72	-3.41	-5.49	-6.96	-7.94	-9.00	-8.36	-12.55
Φ=280.0	-1.74	-1.84	-1.11	-3.58	-3.76	-5.86	-7.01	-9.81	-12.82	-14.49
Φ=290.0	-0.55	-0.26	-1.36	-1.68	-3.37	-4.55	-7.35	-9.72	-14.56	-15.93
Φ=300.0	-0.48	-1.00	-0.60	-1.58	-2.57	-4.67	-7.08	-11.47	-13.72	-20.45
Φ=310.0	-0.43	-0.58	-1.34	-1.37	-2.97	-4.50	-5.94	-10.85	-13.57	-16.97
Φ=320.0	-1.35	-0.96	-1.22	-1.90	-3.15	-2.67	-6.15	-6.28	-12.24	-16.05
Φ=330.0	-1.47	-0.93	-0.75	-2.72	-3.86	-3.89	-5.99	-8.26	-13.42	-16.54
Φ=340.0	-2.32	-1.01	-1.20	-3.02	-3.90	-3.63	-6.19	-8.06	-11.25	-12.87
Φ=350.0	-1.47	-1.03	-1.30	-3.49	-2.76	-5.44	-6.03	-8.39	-10.08	-12.70

[Antenna 2, Channel 5]

	6250MHz RHCP Gain Raw Data[dBic]									
	θ=00.0	θ=10.0	θ=20.0	θ=30.0	θ=40.0	θ=50.0	θ=60.0	θ=70.0	θ=80.0	θ=90.0
Φ=00.0	-2.85	-3.56	-3.70	-4.72	-4.26	-4.03	-5.16	-5.23	-5.38	-5.87
Φ=10.0	-3.49	-3.36	-4.88	-4.67	-5.26	-4.15	-6.28	-7.12	-7.32	-8.17
Φ=20.0	-3.49	-3.51	-4.08	-5.09	-5.67	-4.02	-5.94	-6.60	-8.85	-7.65
Φ=30.0	-2.62	-4.26	-4.55	-4.09	-5.61	-4.51	-6.66	-6.92	-7.09	-9.19
Φ=40.0	-3.33	-3.73	-4.18	-4.01	-4.56	-4.61	-5.86	-6.53	-8.29	-8.64
Φ=50.0	-3.55	-3.67	-5.34	-4.39	-4.38	-5.55	-4.89	-6.94	-8.23	-10.62
Φ=60.0	-3.00	-3.91	-5.03	-4.20	-4.89	-5.25	-5.64	-6.03	-8.80	-9.66
Φ=70.0	-2.45	-4.31	-4.71	-4.48	-4.75	-4.93	-4.59	-6.82	-8.76	-10.43
Φ=80.0	-2.66	-3.84	-4.75	-3.80	-4.38	-4.79	-4.90	-7.17	-8.59	-8.89
Φ=90.0	-3.35	-4.30	-4.67	-4.72	-4.70	-5.16	-5.70	-7.58	-7.77	-7.24
Φ=100.0	-3.15	-3.66	-4.47	-4.96	-4.37	-4.40	-5.47	-7.27	-8.41	-7.21
Φ=110.0	-3.40	-4.39	-5.51	-4.86	-4.32	-5.23	-6.99	-7.85	-8.22	-9.41
Φ=120.0	-3.21	-4.09	-4.72	-5.76	-4.88	-6.58	-8.17	-8.36	-9.77	-12.49
Φ=130.0	-3.87	-3.54	-5.10	-5.42	-5.37	-5.16	-8.63	-9.88	-10.70	-12.29
Φ=140.0	-3.20	-4.03	-5.59	-5.11	-6.20	-6.90	-8.13	-10.05	-13.17	-16.28
Φ=150.0	-3.41	-4.18	-4.10	-5.68	-5.69	-5.77	-7.86	-10.14	-12.22	-13.09
Φ=160.0	-3.43	-4.85	-4.46	-3.50	-5.23	-6.90	-8.17	-9.23	-13.64	-16.53
Φ=170.0	-3.80	-4.45	-4.43	-4.38	-4.76	-7.11	-6.77	-9.37	-13.44	-13.94
Φ=180.0	-3.42	-4.47	-4.03	-4.30	-4.25	-6.21	-6.94	-7.49	-12.83	-12.15
Φ=190.0	-2.81	-4.66	-3.87	-4.40	-3.83	-6.08	-8.18	-8.50	-11.66	-9.83
Φ=200.0	-3.32	-4.37	-4.43	-4.59	-4.39	-5.11	-5.30	-7.75	-9.06	-7.60
Φ=210.0	-2.95	-4.39	-4.07	-4.08	-4.71	-6.33	-6.33	-7.78	-7.46	-8.75
Φ=220.0	-4.17	-4.73	-4.40	-3.78	-4.31	-5.18	-6.59	-7.86	-7.30	-10.31
Φ=230.0	-3.81	-4.14	-4.36	-4.51	-4.01	-5.53	-6.36	-6.82	-9.83	-12.04
Φ=240.0	-3.83	-4.10	-4.06	-2.68	-4.41	-5.17	-8.37	-7.72	-11.17	-12.32
Φ=250.0	-3.24	-3.72	-3.83	-3.70	-4.81	-6.78	-7.19	-7.96	-11.44	-11.27
Φ=260.0	-3.64	-2.84	-3.83	-3.58	-5.16	-5.33	-7.19	-8.60	-10.13	-11.88
Φ=270.0	-3.48	-3.19	-3.19	-2.67	-4.32	-5.31	-6.43	-7.15	-9.84	-11.41
Φ=280.0	-3.20	-2.92	-3.50	-3.03	-3.64	-5.46	-6.15	-7.70	-12.14	-13.35
Φ=290.0	-3.56	-3.96	-3.47	-3.16	-3.42	-6.06	-5.45	-9.38	-13.49	-12.33
Φ=300.0	-2.98	-3.98	-3.38	-3.41	-3.99	-5.32	-6.61	-9.42	-10.31	-13.48
Φ=310.0	-2.01	-2.91	-3.02	-4.50	-4.71	-5.86	-5.94	-8.47	-9.92	-10.60
Φ=320.0	-3.35	-3.34	-3.48	-3.82	-4.67	-6.42	-7.04	-9.20	-8.96	-9.27
Φ=330.0	-3.14	-3.61	-3.90	-4.62	-5.55	-5.13	-6.48	-5.81	-8.30	-6.88
Φ=340.0	-2.67	-3.85	-3.91	-4.46	-5.20	-4.51	-4.97	-5.76	-5.96	-7.83
Φ=350.0	-3.48	-3.45	-4.36	-3.74	-5.43	-4.84	-5.28	-6.11	-5.32	-6.82

[Antenna 2, Channel 5]

	6500MHz RHCP Gain Raw Data[dBic]									
	θ=00.0	θ=10.0	θ=20.0	θ=30.0	θ=40.0	θ=50.0	θ=60.0	θ=70.0	θ=80.0	θ=90.0
Φ=00.0	-0.54	-0.74	-0.83	-1.06	-1.33	-1.42	-1.60	-2.94	-3.46	-5.45
Φ=10.0	-1.59	-0.97	-1.98	-1.37	-1.83	-2.02	-1.62	-3.17	-4.35	-5.58
Φ=20.0	-1.14	-2.00	-2.16	-1.68	-1.70	-2.56	-2.50	-3.94	-5.82	-6.31
Φ=30.0	-0.97	-1.84	-2.01	-1.39	-1.18	-1.56	-2.44	-3.80	-4.97	-5.39
Φ=40.0	-0.95	-1.37	-1.80	-0.95	-1.16	-2.59	-2.81	-4.07	-4.96	-6.87
Φ=50.0	-1.74	-1.75	-1.28	-1.27	-1.24	-2.18	-2.66	-3.46	-4.78	-6.56
Φ=60.0	-0.74	-1.50	-1.62	-1.57	-1.65	-1.88	-2.73	-3.72	-5.48	-6.31
Φ=70.0	-1.13	-1.68	-1.67	-2.53	-1.85	-1.30	-3.06	-4.19	-5.84	-7.20
Φ=80.0	-0.81	-1.20	-1.18	-2.12	-2.56	-1.72	-2.97	-3.60	-4.88	-6.88
Φ=90.0	-1.22	-1.67	-1.52	-2.60	-2.49	-1.91	-3.25	-4.57	-5.50	-6.40
Φ=100.0	-1.47	-1.49	-1.85	-2.92	-2.64	-2.68	-3.95	-5.34	-6.16	-7.75
Φ=110.0	-1.30	-2.15	-1.93	-2.78	-2.40	-3.26	-4.36	-5.77	-7.01	-7.18
Φ=120.0	-1.44	-2.10	-2.03	-2.99	-3.02	-3.29	-5.17	-6.98	-8.16	-9.04
Φ=130.0	-1.94	-1.13	-2.12	-1.78	-4.01	-4.23	-4.62	-6.27	-9.12	-8.98
Φ=140.0	-1.34	-1.84	-2.17	-2.62	-3.05	-4.67	-5.53	-6.57	-11.87	-13.09
Φ=150.0	-0.96	-1.90	-2.01	-2.86	-2.90	-3.87	-4.66	-6.75	-10.31	-13.61
Φ=160.0	-1.08	-2.06	-2.45	-2.13	-2.39	-3.86	-5.24	-6.40	-11.79	-13.48
Φ=170.0	-1.46	-1.97	-2.00	-2.01	-2.01	-2.54	-4.11	-6.17	-12.00	-13.27
Φ=180.0	-1.58	-1.54	-1.34	-1.29	-2.07	-3.21	-4.25	-5.05	-10.34	-7.77
Φ=190.0	-2.00	-1.82	-1.62	-1.68	-1.48	-3.28	-4.01	-5.73	-7.44	-8.29
Φ=200.0	-1.88	-1.41	-1.46	-1.67	-2.06	-2.63	-3.95	-4.65	-5.20	-6.64
Φ=210.0	-1.51	-1.33	-1.05	-1.79	-2.14	-3.20	-3.75	-4.35	-5.05	-9.55
Φ=220.0	-1.45	-1.48	-0.99	-1.68	-1.54	-3.01	-4.10	-5.02	-6.00	-9.56
Φ=230.0	-1.22	-1.64	-1.18	-1.97	-1.74	-2.85	-4.35	-5.38	-7.75	-10.81
Φ=240.0	-1.51	-1.29	-0.50	-2.00	-2.25	-2.46	-4.91	-6.38	-7.69	-10.11
Φ=250.0	-1.27	-1.46	-0.94	-1.35	-2.17	-3.03	-5.59	-7.04	-7.35	-10.39
Φ=260.0	-1.01	-0.99	-0.45	-1.44	-1.84	-3.36	-5.15	-6.22	-7.40	-10.87
Φ=270.0	-0.88	-0.61	-1.14	-1.32	-1.70	-2.94	-4.98	-7.82	-9.65	-11.99
Φ=280.0	-0.72	-0.73	-0.66	-1.05	-2.38	-3.21	-4.42	-6.85	-11.84	-10.20
Φ=290.0	-0.86	-0.63	-0.87	-1.70	-2.61	-3.40	-5.49	-8.18	-10.00	-11.52
Φ=300.0	-0.97	-0.71	-1.19	-2.22	-2.10	-2.39	-5.88	-6.44	-9.60	-10.40
Φ=310.0	-1.01	-0.74	-1.06	-1.75	-2.78	-3.11	-4.41	-5.60	-9.75	-9.05
Φ=320.0	-0.95	-0.59	-1.12	-1.67	-2.48	-2.42	-3.08	-5.20	-6.08	-6.02
Φ=330.0	-1.05	-0.62	-1.27	-1.92	-1.67	-1.93	-3.15	-4.32	-4.76	-4.97
Φ=340.0	-0.98	-0.49	-1.42	-2.10	-1.68	-1.48	-2.91	-3.17	-3.75	-4.51
Φ=350.0	-0.90	-1.02	-1.57	-1.59	-1.41	-2.14	-2.82	-2.47	-3.40	-5.49

[Antenna 2, Channel 5]

	6750MHz RHCP Gain Raw Data[dBic]									
	θ=00.0	θ=10.0	θ=20.0	θ=30.0	θ=40.0	θ=50.0	θ=60.0	θ=70.0	θ=80.0	θ=90.0
Φ=00.0	0.74	0.47	0.47	0.96	0.27	0.43	-0.20	-1.31	-2.22	-3.41
Φ=10.0	-0.12	-0.07	-0.15	0.52	0.39	-0.28	-1.51	-2.13	-3.75	-3.05
Φ=20.0	0.10	-0.29	0.14	-0.20	0.15	0.03	-1.24	-2.15	-4.06	-4.24
Φ=30.0	0.28	0.48	-0.23	-0.03	0.25	-0.14	-1.29	-2.38	-3.44	-4.16
Φ=40.0	-0.18	0.24	-0.65	-0.36	0.09	-0.62	-1.17	-2.15	-3.56	-4.23
Φ=50.0	0.35	0.29	-0.49	-0.14	0.01	-1.38	-1.95	-2.58	-3.33	-4.42
Φ=60.0	-0.24	0.17	0.38	-0.77	-0.97	-1.55	-1.95	-2.45	-3.50	-4.56
Φ=70.0	0.27	0.04	0.31	-0.92	-1.19	-2.65	-3.22	-3.11	-4.53	-5.28
Φ=80.0	-0.54	0.21	-0.66	-0.81	-1.44	-2.75	-3.30	-3.87	-5.63	-6.32
Φ=90.0	-0.18	0.38	-0.69	-0.46	-1.23	-3.13	-3.68	-4.38	-6.28	-6.11
Φ=100.0	0.62	0.22	-0.30	-0.78	-1.40	-2.10	-3.95	-6.04	-5.49	-5.44
Φ=110.0	0.67	0.41	-0.24	-0.29	-1.02	-2.22	-3.97	-5.11	-6.77	-7.63
Φ=120.0	0.35	0.20	-0.27	-0.50	-0.78	-1.90	-3.93	-7.41	-6.53	-7.88
Φ=130.0	0.55	0.20	-0.53	-0.74	-0.59	-1.89	-3.59	-6.41	-5.90	-8.30
Φ=140.0	0.44	0.61	-0.06	-0.57	-1.03	-1.51	-3.46	-4.99	-7.70	-9.80
Φ=150.0	0.48	0.52	-0.33	-0.19	0.49	-1.24	-2.97	-4.60	-6.64	-9.79
Φ=160.0	0.29	0.96	0.17	0.18	0.17	-1.25	-2.58	-4.30	-8.79	-10.51
Φ=170.0	0.55	1.08	0.29	0.58	0.78	-0.14	-1.72	-3.95	-6.72	-11.09
Φ=180.0	0.71	1.12	-0.49	0.51	0.30	-0.57	-1.99	-3.31	-7.60	-8.62
Φ=190.0	0.52	0.69	0.25	0.89	0.86	-0.82	-1.98	-3.22	-4.77	-8.87
Φ=200.0	0.27	0.41	-0.53	0.27	0.39	-0.68	-2.84	-3.36	-4.59	-7.71
Φ=210.0	0.84	0.65	-0.35	0.65	0.45	-0.45	-2.52	-3.38	-4.53	-9.60
Φ=220.0	0.31	1.09	-0.79	0.39	0.14	-0.57	-1.85	-3.75	-5.88	-7.40
Φ=230.0	0.36	0.67	-0.01	-0.08	-0.78	-1.57	-2.60	-4.11	-6.08	-8.78
Φ=240.0	0.42	0.20	-0.24	-0.48	-1.49	-1.79	-3.13	-4.30	-6.66	-9.20
Φ=250.0	0.67	1.27	-0.25	-0.02	-0.32	-1.97	-3.84	-6.00	-7.62	-11.60
Φ=260.0	0.64	0.69	0.46	-0.14	-0.53	-3.22	-4.45	-6.63	-8.81	-13.30
Φ=270.0	0.47	0.89	0.28	-0.05	-0.91	-3.61	-5.13	-7.56	-11.79	-16.46
Φ=280.0	-0.04	0.67	0.66	0.44	-1.45	-3.23	-4.93	-7.73	-12.85	-11.71
Φ=290.0	0.32	0.69	0.47	0.11	-1.15	-3.16	-3.71	-5.57	-9.90	-10.98
Φ=300.0	0.19	0.60	0.24	0.53	-0.82	-2.54	-3.65	-5.37	-7.42	-9.50
Φ=310.0	0.34	0.64	0.17	-0.18	-0.57	-2.08	-2.70	-4.23	-5.67	-6.56
Φ=320.0	-0.27	-0.29	0.68	0.05	-0.40	-1.00	-1.61	-2.83	-3.67	-5.58
Φ=330.0	0.49	-0.22	-0.15	-0.10	0.30	-0.73	-1.07	-2.26	-4.14	-5.85
Φ=340.0	0.36	0.10	-0.06	0.44	0.49	-0.28	-0.76	-2.03	-3.26	-5.25
Φ=350.0	0.48	0.25	-0.18	0.28	-0.08	-0.57	-0.58	-2.00	-2.44	-4.09

[Antenna 2, Channel 9]

	7750MHz RHCP Gain Raw Data[dBic]									
	θ=00.0	θ=10.0	θ=20.0	θ=30.0	θ=40.0	θ=50.0	θ=60.0	θ=70.0	θ=80.0	θ=90.0
Φ=00.0	-0.82	-1.73	-2.26	-1.64	-3.60	-3.50	-4.20	-7.00	-7.93	-8.75
Φ=10.0	-2.14	-0.77	-1.92	-2.48	-2.30	-4.40	-3.59	-5.26	-6.37	-11.71
Φ=20.0	-0.14	-1.51	-1.70	-1.88	-3.54	-3.93	-4.81	-5.82	-9.51	-10.43
Φ=30.0	-1.05	-1.74	-2.38	-2.34	-3.10	-3.25	-4.63	-8.72	-9.82	-10.55
Φ=40.0	-1.79	-2.13	-2.16	-2.87	-3.04	-4.88	-6.17	-9.91	-9.23	-12.46
Φ=50.0	-1.35	-1.97	-1.82	-4.00	-3.63	-5.15	-6.78	-10.06	-11.20	-10.82
Φ=60.0	-1.21	-2.66	-2.19	-3.27	-3.19	-3.77	-5.87	-11.03	-12.84	-12.94
Φ=70.0	-1.15	-2.43	-2.33	-2.86	-3.56	-3.47	-6.49	-12.11	-12.41	-12.59
Φ=80.0	-1.99	-1.69	-2.52	-3.36	-3.12	-4.91	-6.44	-9.67	-10.23	-13.42
Φ=90.0	-2.60	-1.62	-3.25	-3.23	-3.63	-4.68	-6.37	-9.67	-12.00	-11.16
Φ=100.0	-2.01	-1.39	-2.86	-3.33	-5.74	-6.32	-6.93	-8.40	-8.08	-9.72
Φ=110.0	-1.74	-2.58	-2.47	-3.19	-4.24	-4.58	-5.27	-6.66	-9.07	-13.35
Φ=120.0	-2.26	-1.10	-1.90	-2.90	-4.98	-4.81	-5.63	-6.29	-9.41	-12.97
Φ=130.0	-2.53	-1.64	-1.63	-2.29	-4.06	-3.40	-6.51	-8.42	-12.20	-15.47
Φ=140.0	-1.41	-1.31	-0.85	-2.14	-2.70	-2.97	-4.59	-6.90	-9.26	-12.28
Φ=150.0	-1.68	-1.47	-1.63	-1.08	-2.12	-3.32	-3.66	-7.05	-6.47	-10.70
Φ=160.0	-1.75	-1.51	-0.70	-1.75	-2.04	-2.80	-3.79	-6.61	-7.34	-12.25
Φ=170.0	-1.72	-1.44	-0.09	-0.48	-1.62	-2.65	-3.65	-5.13	-6.95	-8.62
Φ=180.0	-2.90	-1.35	-0.60	-1.01	-1.76	-2.28	-3.18	-6.38	-6.78	-13.04
Φ=190.0	-2.17	-1.46	-0.75	-0.69	-2.00	-2.36	-2.10	-5.08	-6.81	-9.81
Φ=200.0	-1.95	-0.73	-0.90	-1.32	-1.98	-3.10	-2.01	-4.87	-8.17	-8.41
Φ=210.0	-1.10	-1.57	-1.50	-1.50	-2.47	-2.34	-4.02	-5.81	-7.47	-7.99
Φ=220.0	-1.35	-1.26	-0.78	-2.42	-2.84	-3.81	-4.20	-6.41	-6.39	-6.01
Φ=230.0	-2.21	-1.92	-1.96	-2.05	-3.41	-5.25	-6.81	-8.00	-8.23	-8.29
Φ=240.0	-2.12	-1.98	-2.30	-3.98	-3.86	-6.35	-8.01	-9.13	-12.10	-15.01
Φ=250.0	-2.41	-2.94	-2.60	-4.67	-3.15	-7.23	-9.28	-9.01	-13.13	-11.17
Φ=260.0	-1.37	-1.89	-3.05	-4.62	-5.36	-6.37	-9.59	-11.62	-13.87	-14.22
Φ=270.0	-1.18	-2.00	-2.91	-3.98	-6.57	-9.51	-9.15	-10.80	-14.29	-13.20
Φ=280.0	-1.81	-2.48	-3.36	-3.87	-6.26	-7.70	-9.08	-10.58	-13.02	-25.10
Φ=290.0	-2.00	-2.74	-3.24	-4.64	-6.22	-6.20	-9.93	-12.31	-17.17	-32.68
Φ=300.0	-0.98	-1.77	-3.29	-3.41	-6.12	-7.54	-9.11	-10.71	-14.23	-30.00
Φ=310.0	-2.20	-3.10	-2.11	-5.16	-5.04	-6.46	-7.39	-9.37	-13.39	-18.62
Φ=320.0	-2.00	-2.95	-2.41	-2.95	-3.27	-6.20	-7.81	-9.17	-11.28	-10.94
Φ=330.0	-2.52	-2.65	-2.26	-3.09	-4.01	-4.38	-6.99	-7.25	-8.89	-8.36
Φ=340.0	-1.33	-1.55	-3.31	-2.81	-3.32	-3.99	-5.17	-8.80	-9.37	-8.74
Φ=350.0	-2.26	-2.05	-3.27	-2.15	-3.92	-3.28	-4.28	-6.22	-7.06	-10.42

[Antenna 2, Channel 9]

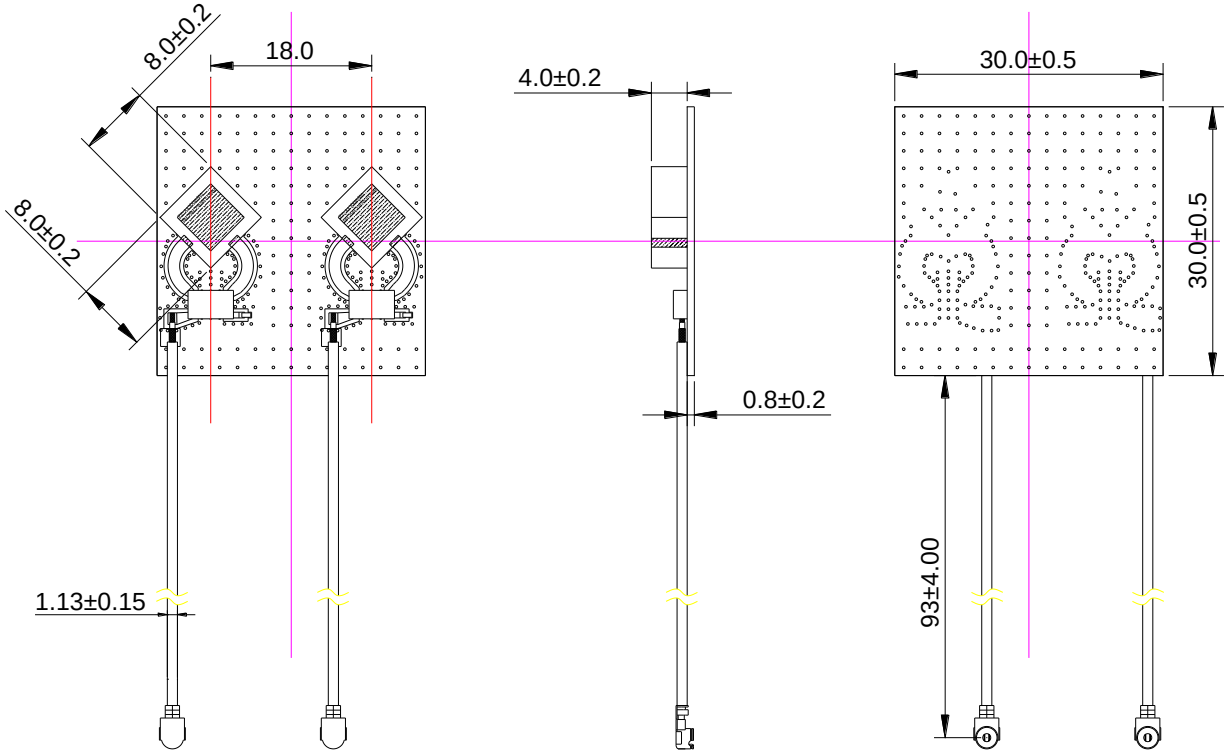
	8000MHz RHCP Gain Raw Data[dBic]									
	θ=00.0	θ=10.0	θ=20.0	θ=30.0	θ=40.0	θ=50.0	θ=60.0	θ=70.0	θ=80.0	θ=90.0
Φ=00.0	-1.77	-3.27	-3.42	-3.70	-2.65	-2.87	-5.66	-6.36	-11.47	-14.07
Φ=10.0	-2.70	-3.88	-2.99	-2.80	-1.92	-3.53	-7.06	-9.89	-10.90	-10.97
Φ=20.0	-2.10	-2.19	-2.76	-3.66	-4.24	-6.33	-6.56	-8.15	-9.47	-11.43
Φ=30.0	-2.15	-2.32	-1.77	-2.86	-3.67	-4.47	-7.10	-10.29	-10.81	-16.69
Φ=40.0	-2.66	-3.36	-2.68	-2.78	-4.60	-4.95	-7.56	-13.84	-12.47	-11.68
Φ=50.0	-2.29	-2.18	-1.84	-3.49	-4.18	-6.95	-9.34	-10.86	-10.92	-15.41
Φ=60.0	-2.52	-2.81	-2.37	-2.19	-5.90	-5.68	-8.04	-9.71	-10.02	-14.67
Φ=70.0	-1.44	-2.11	-1.44	-2.56	-4.43	-5.49	-9.30	-9.94	-12.33	-17.28
Φ=80.0	-1.65	-2.28	-2.21	-2.87	-4.81	-5.08	-9.02	-8.13	-14.49	-14.26
Φ=90.0	-2.81	-2.26	-2.29	-2.84	-3.38	-6.26	-7.58	-9.51	-9.89	-12.93
Φ=100.0	-1.80	-2.45	-1.62	-4.40	-3.55	-5.89	-7.41	-8.66	-9.22	-11.57
Φ=110.0	-1.84	-2.55	-2.78	-3.69	-4.77	-4.09	-6.47	-7.51	-9.18	-13.16
Φ=120.0	-1.74	-1.94	-3.31	-3.87	-2.62	-3.19	-6.55	-7.40	-10.12	-16.96
Φ=130.0	-2.78	-2.88	-2.13	-3.32	-4.34	-4.67	-6.00	-7.17	-10.24	-17.34
Φ=140.0	-1.57	-2.75	-2.28	-3.20	-3.98	-4.01	-5.11	-7.32	-10.57	-14.95
Φ=150.0	-2.48	-2.68	-2.08	-3.00	-3.22	-4.76	-5.49	-6.06	-8.16	-19.18
Φ=160.0	-2.16	-1.34	-1.38	-1.66	-3.56	-3.50	-3.53	-5.25	-7.68	-13.24
Φ=170.0	-1.90	-1.06	-2.41	-2.19	-2.24	-2.48	-3.18	-4.66	-7.95	-9.63
Φ=180.0	-3.10	-2.03	-0.75	-2.45	-2.30	-2.68	-3.35	-4.25	-7.71	-8.70
Φ=190.0	-1.90	-1.70	-1.49	-2.52	-2.39	-2.98	-3.56	-5.35	-8.54	-10.41
Φ=200.0	-1.98	-0.73	-2.32	-2.46	-2.22	-3.96	-4.18	-5.69	-7.45	-9.56
Φ=210.0	-2.42	-2.02	-2.25	-2.17	-2.20	-5.07	-3.62	-4.85	-7.89	-6.57
Φ=220.0	-1.95	-2.72	-2.92	-2.63	-3.44	-4.49	-5.26	-5.21	-6.27	-9.89
Φ=230.0	-2.45	-2.69	-3.69	-4.36	-4.40	-6.14	-9.30	-7.11	-7.54	-8.71
Φ=240.0	-2.06	-2.85	-3.31	-3.89	-5.34	-5.40	-7.39	-8.43	-13.25	-16.46
Φ=250.0	-2.55	-2.01	-3.55	-4.63	-5.85	-6.60	-8.71	-8.64	-13.60	-12.00
Φ=260.0	-3.30	-1.75	-3.20	-5.23	-6.89	-7.27	-9.27	-10.02	-12.85	-13.96
Φ=270.0	-2.95	-3.39	-3.37	-5.15	-6.79	-8.00	-12.98	-11.83	-17.90	-14.09
Φ=280.0	-2.61	-3.17	-3.12	-6.20	-7.17	-9.17	-9.00	-13.69	-17.86	-22.81
Φ=290.0	-1.37	-2.68	-4.65	-5.54	-6.38	-8.59	-14.88	-14.71	-15.33	-20.39
Φ=300.0	-3.53	-3.78	-4.05	-5.77	-7.71	-9.73	-10.39	-15.65	-24.36	-25.58
Φ=310.0	-4.45	-2.21	-4.37	-4.79	-6.14	-7.69	-11.06	-11.58	-11.48	-11.62
Φ=320.0	-2.90	-2.96	-4.59	-3.81	-5.95	-7.17	-11.82	-8.48	-10.68	-13.17
Φ=330.0	-1.70	-3.85	-4.12	-4.63	-4.38	-7.05	-7.63	-7.05	-8.81	-10.87
Φ=340.0	-3.49	-2.78	-3.60	-4.10	-4.19	-4.09	-6.35	-7.57	-9.39	-11.47
Φ=350.0	-2.55	-3.26	-3.21	-3.58	-4.94	-4.62	-6.08	-6.01	-9.12	-13.30

[Antenna 2, Channel 9]

	8250MHz RHCP Gain Raw Data[dBic]									
	θ=00.0	θ=10.0	θ=20.0	θ=30.0	θ=40.0	θ=50.0	θ=60.0	θ=70.0	θ=80.0	θ=90.0
Φ=00.0	-2.75	-2.98	-3.12	-3.40	-4.45	-4.39	-7.15	-9.89	-11.99	-11.11
Φ=10.0	-3.77	-2.89	-2.59	-4.27	-4.21	-6.07	-6.94	-9.60	-12.51	-10.51
Φ=20.0	-4.11	-3.64	-3.48	-4.32	-5.96	-6.68	-7.67	-10.05	-11.48	-10.14
Φ=30.0	-2.52	-3.43	-2.89	-3.70	-4.94	-6.73	-7.70	-9.94	-11.79	-13.86
Φ=40.0	-2.40	-2.48	-4.30	-3.17	-7.25	-8.76	-10.20	-13.62	-13.53	-12.79
Φ=50.0	-2.34	-3.47	-3.12	-3.59	-4.86	-8.17	-9.55	-13.80	-15.05	-13.21
Φ=60.0	-3.64	-2.87	-2.23	-4.09	-5.87	-7.36	-12.34	-12.64	-14.07	-24.16
Φ=70.0	-2.96	-2.78	-3.09	-3.47	-5.22	-6.86	-10.42	-13.08	-14.16	-21.47
Φ=80.0	-2.88	-3.41	-3.09	-4.42	-4.79	-7.05	-7.99	-10.53	-12.51	-14.81
Φ=90.0	-2.62	-3.43	-3.67	-3.50	-5.56	-5.56	-7.35	-10.96	-11.93	-12.63
Φ=100.0	-3.81	-3.79	-2.15	-3.87	-5.28	-5.67	-8.55	-13.84	-9.97	-12.25
Φ=110.0	-3.22	-2.14	-3.41	-3.37	-4.33	-7.03	-9.38	-9.76	-10.42	-13.61
Φ=120.0	-2.85	-2.61	-2.18	-3.60	-3.97	-5.63	-5.95	-8.79	-11.91	-17.94
Φ=130.0	-2.95	-2.10	-3.51	-3.08	-3.60	-5.22	-6.93	-8.75	-14.41	-20.46
Φ=140.0	-3.05	-2.56	-2.90	-2.98	-3.20	-4.77	-6.50	-7.21	-11.26	-16.41
Φ=150.0	-4.13	-3.67	-3.07	-2.59	-3.77	-5.17	-5.25	-9.70	-11.86	-19.42
Φ=160.0	-4.65	-3.76	-3.29	-3.20	-3.35	-4.00	-5.32	-7.13	-10.37	-11.64
Φ=170.0	-3.43	-3.27	-2.49	-3.42	-4.59	-4.42	-3.65	-5.56	-9.10	-11.12
Φ=180.0	-3.68	-3.16	-2.34	-2.73	-3.94	-4.54	-4.41	-6.95	-7.06	-11.79
Φ=190.0	-3.76	-2.90	-2.13	-3.62	-2.72	-3.73	-4.01	-5.67	-8.57	-12.31
Φ=200.0	-4.06	-2.80	-3.57	-3.65	-4.08	-4.02	-6.38	-7.17	-7.72	-9.08
Φ=210.0	-3.45	-3.62	-3.00	-4.43	-5.34	-4.01	-4.96	-7.23	-7.14	-6.87
Φ=220.0	-3.44	-3.28	-2.86	-5.05	-6.43	-6.52	-7.75	-8.55	-7.61	-9.25
Φ=230.0	-2.89	-3.25	-4.04	-4.88	-6.53	-5.47	-7.31	-9.80	-10.91	-12.17
Φ=240.0	-4.70	-3.39	-4.29	-5.79	-6.06	-7.22	-9.00	-12.46	-14.07	-17.13
Φ=250.0	-2.73	-4.06	-4.15	-7.20	-5.88	-8.19	-8.72	-11.52	-11.83	-17.00
Φ=260.0	-3.13	-3.58	-5.47	-5.24	-6.73	-6.77	-8.11	-12.55	-13.61	-14.48
Φ=270.0	-3.18	-4.41	-4.74	-4.75	-7.60	-8.05	-9.91	-13.55	-14.07	-27.89
Φ=280.0	-2.44	-3.53	-3.62	-8.00	-6.56	-9.00	-9.40	-19.60	-18.31	-33.36
Φ=290.0	-3.04	-3.71	-6.25	-6.90	-9.14	-8.38	-17.46	-17.95	-16.86	-15.50
Φ=300.0	-3.00	-2.31	-5.20	-6.44	-5.74	-11.25	-14.13	-30.70	-12.79	-18.21
Φ=310.0	-4.31	-3.82	-4.15	-4.79	-5.87	-9.16	-11.52	-14.34	-10.60	-10.84
Φ=320.0	-3.40	-4.23	-5.31	-3.51	-5.17	-9.62	-7.69	-9.41	-9.78	-15.07
Φ=330.0	-2.89	-3.38	-3.85	-2.92	-5.62	-5.99	-6.10	-9.24	-8.15	-14.80
Φ=340.0	-2.98	-3.23	-2.77	-3.34	-4.27	-5.17	-6.80	-8.69	-10.69	-13.07
Φ=350.0	-3.51	-3.68	-3.39	-3.99	-4.99	-5.90	-6.47	-7.81	-13.13	-13.16

2. Mechanical Outline

2.1 Dimension



<TOP> <SIDE> <BOTTOM>

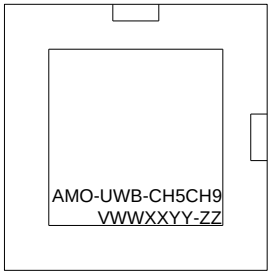
Note
1. Unit : mm
2. Distance between two antennas is 18mm.

2.2 Tuning : Top(According to Procedure of Amotech document)

2.3 Mechanical characteristic

No	Item	Specification	Unit	Remarks
1	Antenna	8.0x8.0mm-4.0T * 2EA	-	Ceramic Patch
2	PCB	30.0x30.0mm-0.8T	-	FR4
3	Cable	Φ1.13, 100mm U.FL & MHF compatible * 2EA	-	Color : Black
4	Hybrid Coupler	Hybrid RF Coupler * 2EA	-	-

2.4 Marking



- V : Line section
- WW : Year
- XX : Month
- YY : Day
- ZZ : Serial number of daily