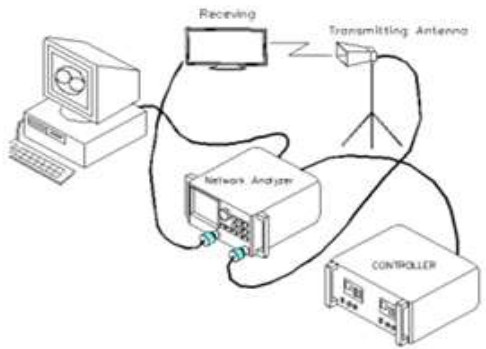
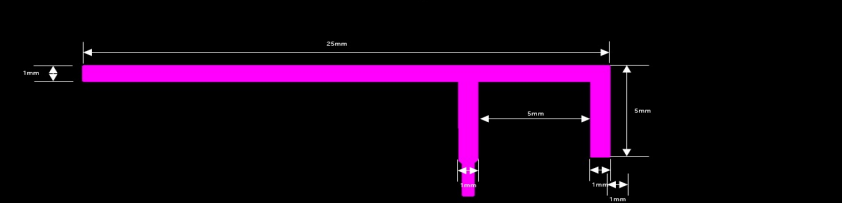


Name and address of the antenna	Aplustech
Model number of the antenna	CMS KBX
MECHANICAL MANAGER CHECKED	Kim Tae Hyun 
ENGINEERING MANAGER CHECKED	Kim Tae Hyun 
Test Date	Tue 04/Feb/2025
Measurement information	Measurement :Aplustech Equipment :Network Analyzer(MS46322A)
TEST METHOD	Electrical, mechanical, and environmental tests are conducted after preprocessing based on standard conditions. Standard conditions refer to a temperature range of 15°C to 25°C, relative humidity of 25% to 80%, and atmospheric pressure of 86 to 106 kPa. The purpose of preprocessing is to eliminate or partially neutralize the effects of prior history on the test samples. This is the initial step in the testing method, aimed at ensuring that the characteristics of the test samples are stable before measurement and testing.
Test Configuration	 The diagram illustrates the test setup. A computer is connected to a Network Analyzer. The Network Analyzer is connected to a CONTROLLER. A Receiving Antenna is connected to the Network Analyzer, and a Transmitting Antenna is connected to the CONTROLLER.
Antenna Dimension	 The diagram shows the dimensions of the antenna. The total length is 25mm. The width of the horizontal part is 1mm. The width of the vertical part is 5mm. The distance between the vertical part and the right edge is 5mm. The distance between the vertical part and the left edge is 1mm.

Passive Performance

EUT	
Test Date	Tue 04/Feb/2025 16:13:46
Event Status	
Serial Number	
Hardware Version	

	1	2	3	4	5	6	7	8	9	10									
Frequency [MHz]	2400	2410	2420	2430	2440	2450	2460	2480	2490	2500									
Efficiency [dB]	-2.76	-2.61	-2.52	-2.33	-2.08	-1.98	-1.84	-2.03	-2.24	-2.11									
Efficiency [%]	52.9	54.9	56.0	58.5	62.0	63.5	65.5	62.6	59.7	61.5									
TRG _θ [dB]	-4.43	-4.32	-4.26	-4.10	-3.86	-3.79	-3.65	-3.85	-4.02	-3.91									
Gain _{θ Peak} [dB]	0.01	0.09	0.16	0.33	0.58	0.65	0.79	0.47	0.21	0.26									
Gain _{θ Min} [dB]	-15.08	-14.80	-14.75	-14.35	-14.18	-13.84	-13.43	-13.32	-13.74	-14.33									
TRG _φ [dB]	-7.72	-7.47	-7.33	-7.07	-6.81	-6.64	-6.51	-6.68	-6.98	-6.82									
Gain _{φ Peak} [dB]	-1.84	-1.56	-1.36	-1.10	-0.81	-0.66	-0.61	-0.76	-1.06	-0.96									
Gain _{φ Min} [dB]	-41.22	-35.57	-35.63	-44.90	-39.21	-38.22	-37.09	-33.42	-33.64	-36.09									
UHRG [dB]	-5.63	-5.49	-5.43	-5.26	-5.02	-4.94	-4.82	-5.03	-5.23	-5.11									
UHRG/TRG [%]	51.7	51.4	51.2	50.9	50.8	50.5	50.4	50.1	50.2	50.1									
H-Plane	-5.33	-5.31	-5.33	-5.27	-5.09	-5.07	-4.94	-5.05	-5.20	-5.10									
E1-Plane, AVG [dB]	-3.46	-3.34	-3.28	-3.11	-2.86	-2.77	-2.61	-2.79	-2.93	-2.80									
E2-Plane, AVG [dB]	-4.79	-4.69	-4.66	-4.54	-4.33	-4.30	-4.16	-4.34	-4.47	-4.31									
Peak Gain [dB]	0.02	0.15	0.18	0.34	0.64	0.84	0.99	0.85	0.59	0.68									
Directivity [dB]	2.78	2.76	2.70	2.67	2.71	2.82	2.83	2.88	2.83	2.80									
Minimum Gain [dB]	-11.99	-12.23	-12.39	-11.99	-11.39	-11.07	-10.56	-10.69	-11.04	-11.23									
Test Condition	FS																		
Antenna Type																			

Average Efficiency	-2.24 dB	59.71 %
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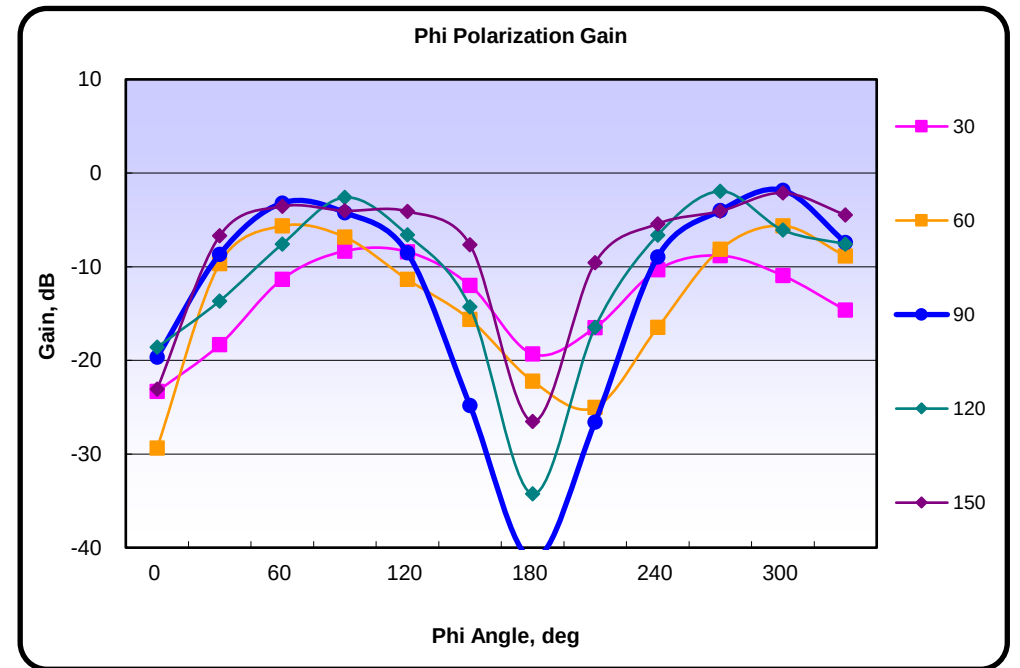
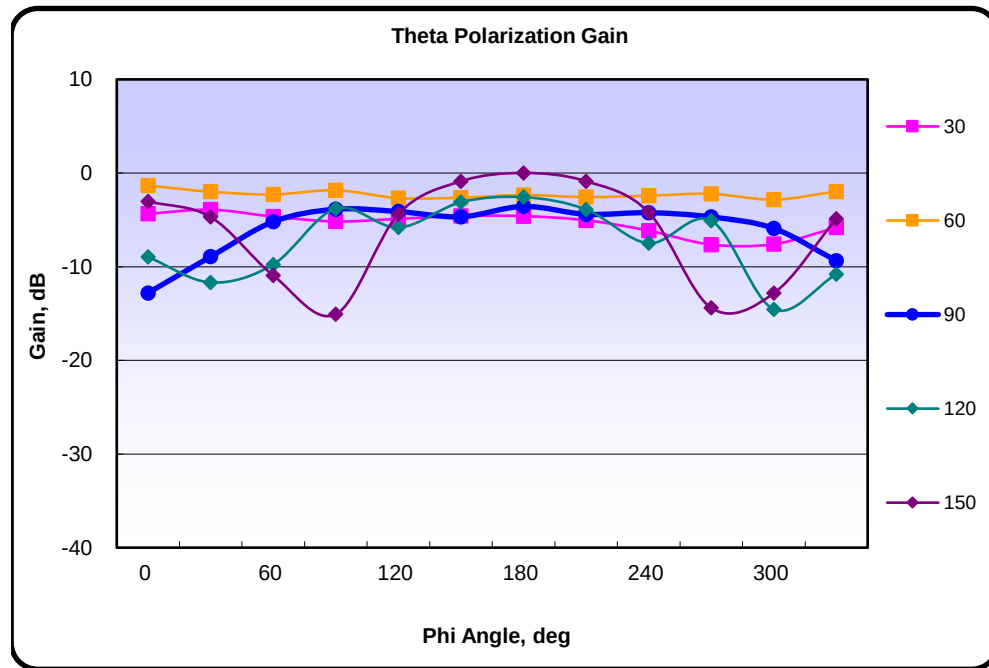
Comment

Gain(Theta-Polarization and Phi-Polarization)

2400MHz

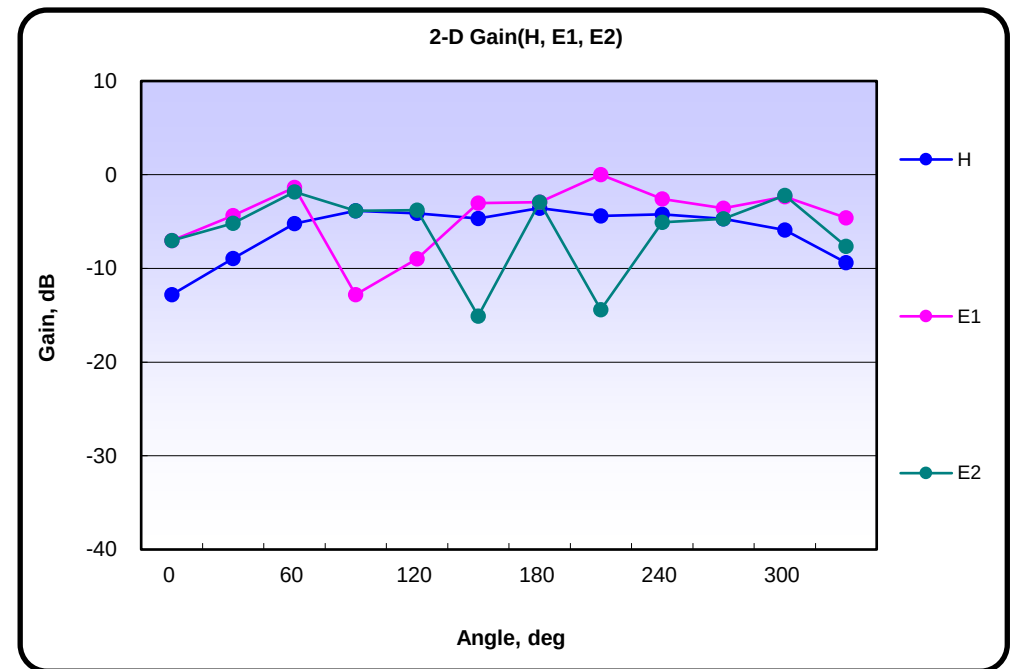
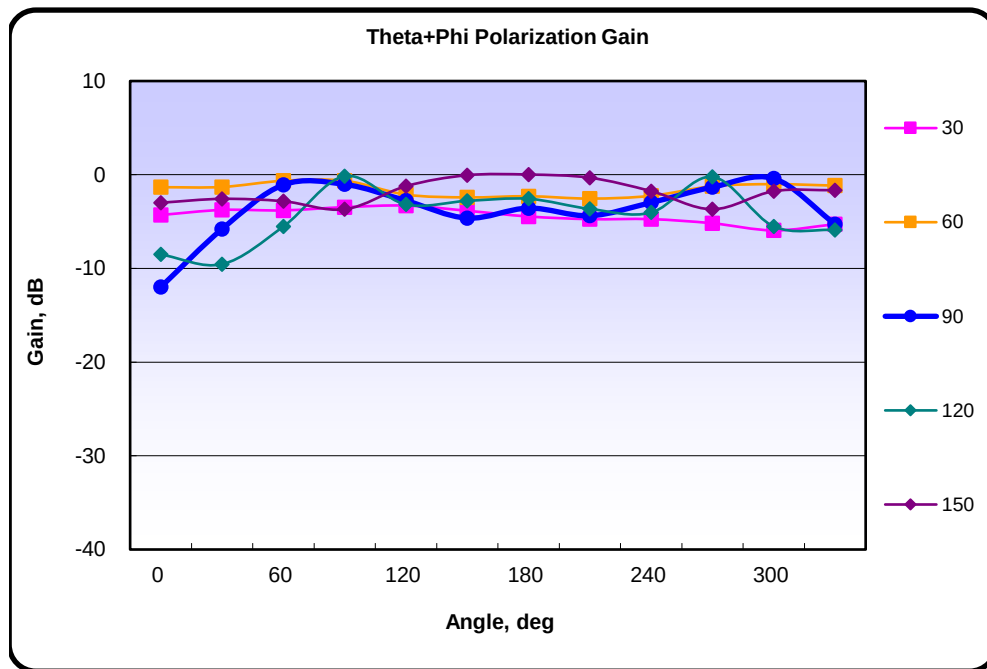
EUT		Frequency	2400	MHz	Comment	
EUT Version		Antenna Type				
Test Date	Tue 04/Feb/2025 16:13:46					
Test Condition	FS					
Tester						

Theta-Polarization Gain(dB)													Phi-Polarization Gain(dB)												
Theta Angle	Phi Angle												Theta Angle	Phi Angle											
	0	30	60	90	120	150	180	210	240	270	300	330		0	30	60	90	120	150	180	210	240	270	300	330
0	-7.03	-7.03	-7.03	-7.03	-7.03	-7.03	-7.03	-7.03	-7.03	-7.03	-7.03	-7.03	0												
30	-4.35	-3.91	-4.65	-5.17	-4.89	-4.57	-4.60	-5.04	-6.15	-7.64	-7.59	-5.82	30	-23.32	-18.33	-11.33	-8.33	-8.41	-11.99	-19.32	-16.51	-10.31	-8.82	-10.95	-14.64
60	-1.34	-1.99	-2.29	-1.83	-2.67	-2.63	-2.34	-2.57	-2.42	-2.21	-2.84	-1.97	60	-29.35	-9.67	-5.65	-6.83	-11.36	-15.63	-22.21	-25.03	-16.49	-8.14	-5.63	-8.86
90	-12.80	-8.93	-5.20	-3.86	-4.11	-4.67	-3.56	-4.40	-4.23	-4.69	-5.91	-9.37	90	-19.66	-8.68	-3.20	-4.22	-8.52	-24.81	-41.22	-26.58	-8.95	-4.01	-1.84	-7.41
120	-8.96	-11.68	-9.76	-3.79	-5.82	-3.11	-2.57	-3.88	-7.50	-5.08	-14.55	-10.80	120	-18.61	-13.66	-7.59	-2.61	-6.59	-14.29	-34.26	-16.46	-6.63	-1.94	-6.09	-7.59
150	-3.03	-4.69	-10.92	-15.08	-4.38	-0.88	0.01	-0.87	-4.19	-14.40	-12.83	-4.87	150	-23.08	-6.71	-3.56	-4.02	-4.09	-7.65	-26.53	-9.56	-5.42	-4.07	-2.11	-4.46
180	-2.94	-2.94	-2.94	-2.94	-2.94	-2.94	-2.94	-2.94	-2.94	-2.94	-2.94	-2.94	180												

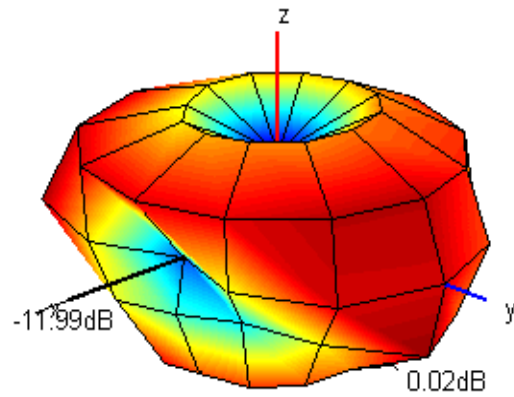


Total Gain and Efficiency	-2.761 dB	52.9 %	Theta Pol	-4.4 dB	36.1 %	Phi Pol	-7.7 dB	16.89 %
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Theta-Polarization + Phi-Polarization(dB)													2-D Gain														
Theta Angle	Phi Angle												Plane	Angle, deg													
	0	30	60	90	120	150	180	210	240	270	300	330		0	30	60	90	120	150	180	210	240	270	300	330		
0	-7.03	-7.03	-7.03	-7.03	-7.03	-7.03	-7.03	-7.03	-7.03	-7.03	-7.03	-7.03	H	-12.80	-8.93	-5.20	-3.86	-4.11	-4.67	-3.56	-4.40	-4.23	-4.69	-5.91	-9.37		
30	-4.30	-3.76	-3.81	-3.46	-3.29	-3.85	-4.46	-4.74	-4.74	-5.18	-5.94	-5.28	E1	-7.03	-4.35	-1.34	-12.80	-8.96	-3.03	-2.94	0.01	-2.57	-3.56	-2.34	-4.60		
60	-1.33	-1.31	-0.64	-0.64	-2.12	-2.42	-2.30	-2.55	-2.25	-1.22	-1.00	-1.16	E2	-7.03	-5.17	-1.83	-3.86	-3.79	-15.08	-2.94	-14.40	-5.08	-4.69	-2.21	-7.64		
90	-11.99	-5.79	-1.08	-1.03	-2.77	-4.63	-3.56	-4.37	-2.97	-1.33	-0.40	-5.27	Average														
120	-8.51	-9.55	-5.53	-0.15	-3.18	-2.79	-2.57	-3.65	-4.03	-0.22	-5.51	-5.89	H	-5.33	dB												
150	-2.99	-2.57	-2.83	-3.69	-1.22	-0.05	0.02	-0.32	-1.75	-3.69	-1.76	-1.65	E1	-3.46	dB												
180	-2.94	-2.94	-2.94	-2.94	-2.94	-2.94	-2.94	-2.94	-2.94	-2.94	-2.94	-2.94	E2	-4.79	dB												



Total Gain and Efficiency	-2.761 dB	52.9 %	Theta Pol	-4.4 dB	36.1 %	Phi Pol	-7.7 dB	16.89 %
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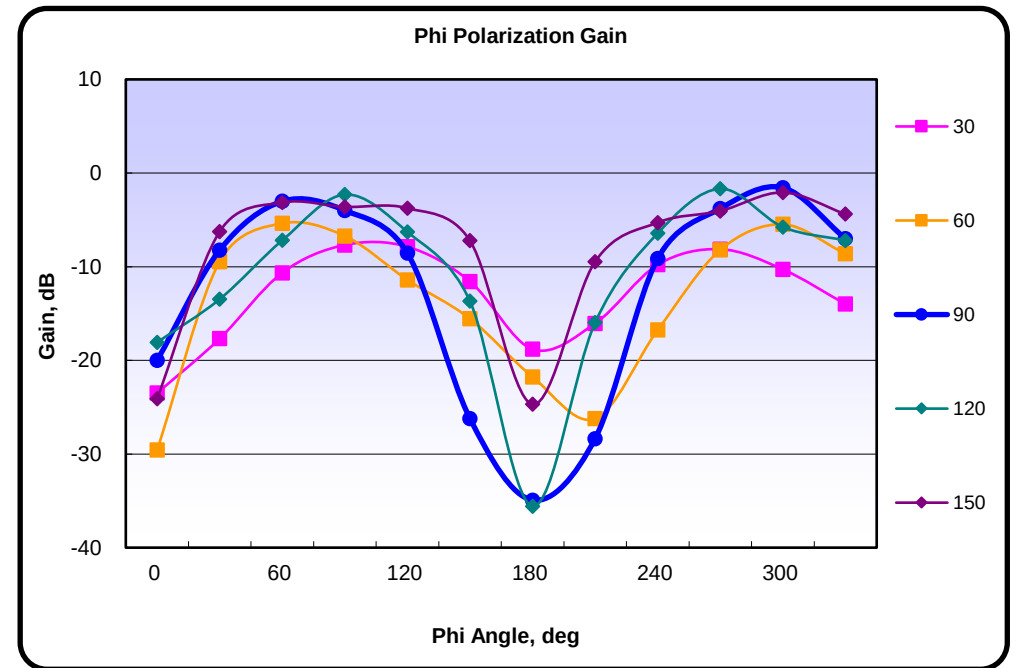
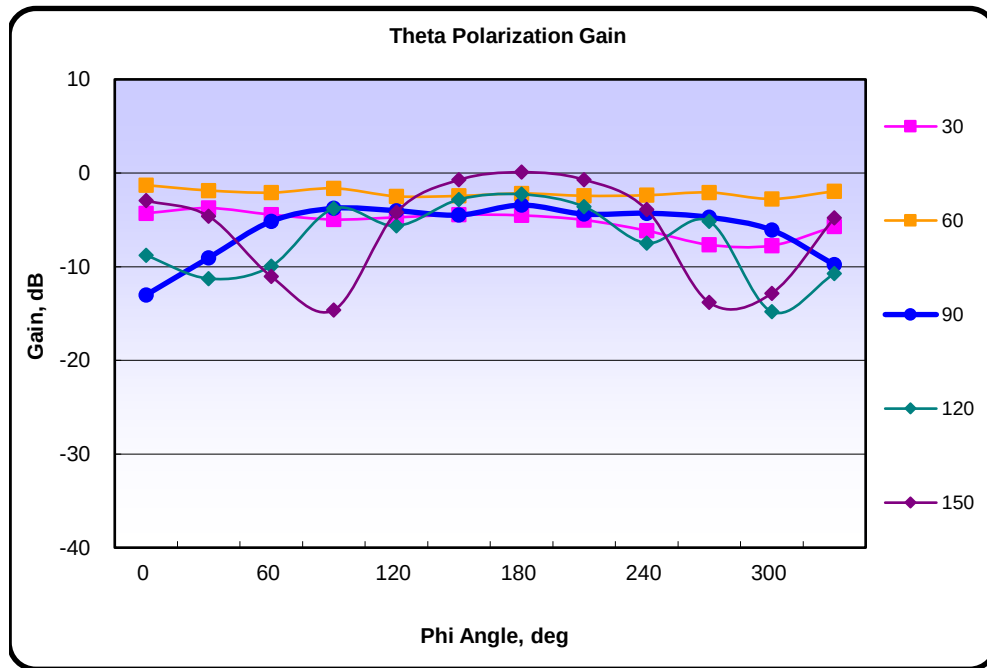
Maximum Gain	Gain	0.02 dB,	$\theta = 150$ deg,	$\phi = 180$ deg	Minimum Gain	Gain	-11.99 dB,	$\theta = 90$ deg,	$\phi = 0$ deg
Total Gain and Efficiency	-2.761 dB	52.9 %	Theta Pol	-4.4 dB	36.1 %	Phi Pol	-7.7 dB	16.89 %	

Gain(Theta-Polarization and Phi-Polarization)

2410MHz

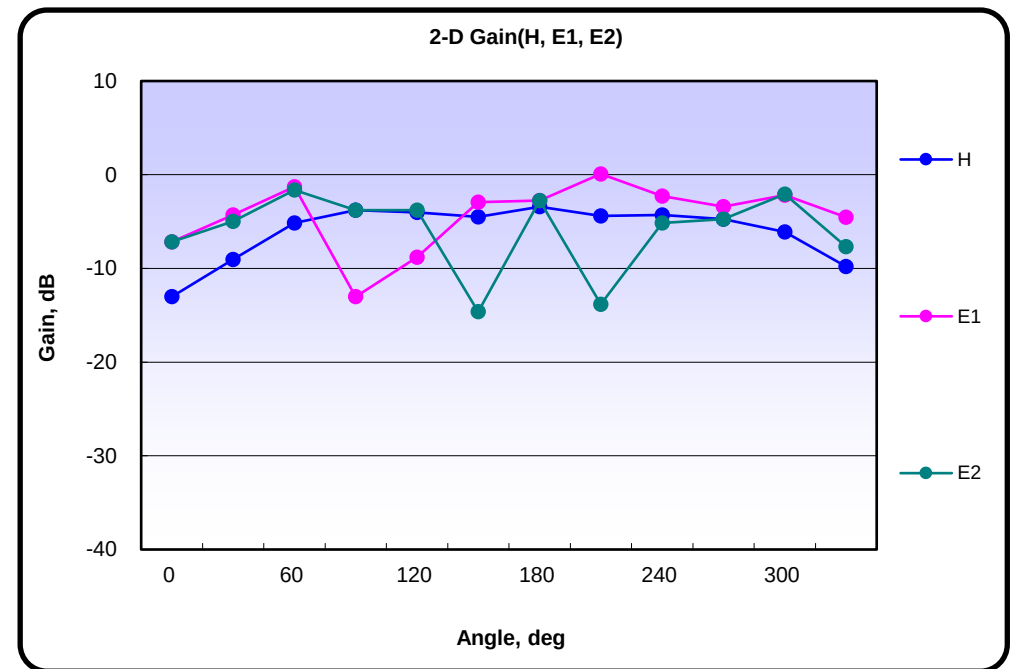
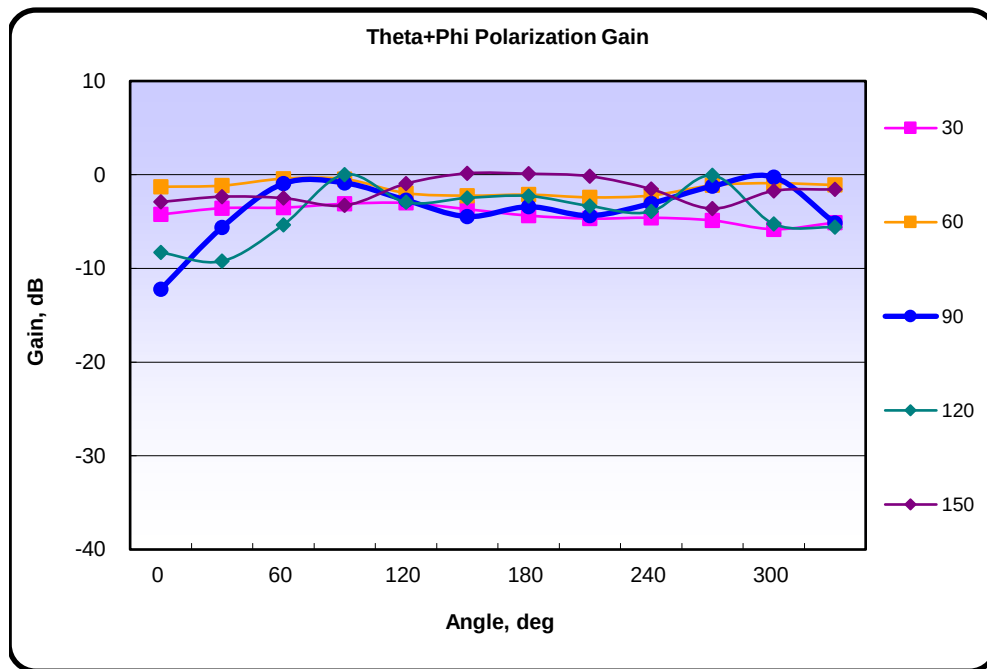
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EUT Version		Antenna Type				
Test Date	Tue 04/Feb/2025 16:13:46					
Test Condition	FS					
Tester						

Theta-Polarization Gain(dB)													Phi-Polarization Gain(dB)												
Theta Angle	Phi Angle												Theta Angle	Phi Angle											
	0	30	60	90	120	150	180	210	240	270	300	330		0	30	60	90	120	150	180	210	240	270	300	330
0	-7.17	-7.17	-7.17	-7.17	-7.17	-7.17	-7.17	-7.17	-7.17	-7.17	-7.17	-7.17	0												
30	-4.29	-3.74	-4.44	-4.96	-4.73	-4.45	-4.52	-5.01	-6.15	-7.66	-7.74	-5.71	30	-23.50	-17.68	-10.65	-7.68	-7.87	-11.57	-18.81	-16.06	-9.79	-8.13	-10.28	-13.99
60	-1.29	-1.86	-2.09	-1.63	-2.48	-2.44	-2.17	-2.43	-2.37	-2.07	-2.76	-1.94	60	-29.57	-9.45	-5.37	-6.72	-11.40	-15.55	-21.76	-26.23	-16.76	-8.21	-5.48	-8.62
90	-13.02	-9.06	-5.16	-3.77	-4.02	-4.49	-3.42	-4.38	-4.29	-4.73	-6.09	-9.79	90	-20.01	-8.23	-3.02	-3.99	-8.55	-26.21	-34.92	-28.36	-9.14	-3.79	-1.56	-7.00
120	-8.79	-11.27	-9.94	-3.79	-5.65	-2.82	-2.27	-3.58	-7.49	-5.16	-14.80	-10.74	120	-18.08	-13.47	-7.19	-2.30	-6.28	-13.68	-35.57	-15.97	-6.43	-1.68	-5.76	-7.20
150	-2.94	-4.61	-11.04	-14.63	-4.19	-0.73	0.09	-0.71	-3.91	-13.82	-12.84	-4.79	150	-24.10	-6.25	-3.15	-3.61	-3.75	-7.22	-24.69	-9.46	-5.28	-4.05	-2.07	-4.38
180	-2.76	-2.76	-2.76	-2.76	-2.76	-2.76	-2.76	-2.76	-2.76	-2.76	-2.76	-2.76	180												



Total Gain and Efficiency	-2.606 dB	54.9 %	Theta Pol	-4.3 dB	37.0 %	Phi Pol	-7.5 dB	17.90 %
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Theta-Polarization + Phi-Polarization(dB)													2-D Gain															
Theta Angle	Phi Angle												Plane	Angle, deg														
	0	30	60	90	120	150	180	210	240	270	300	330		0	30	60	90	120	150	180	210	240	270	300	330			
0	-7.17	-7.17	-7.17	-7.17	-7.17	-7.17	-7.17	-7.17	-7.17	-7.17	-7.17	-7.17	H	-13.02	-9.06	-5.16	-3.77	-4.02	-4.49	-3.42	-4.38	-4.29	-4.73	-6.09	-9.79			
30	-4.24	-3.57	-3.51	-3.10	-3.01	-3.68	-4.36	-4.68	-4.59	-4.88	-5.82	-5.11	E1	-7.17	-4.29	-1.29	-13.02	-8.79	-2.94	-2.76	0.09	-2.27	-3.42	-2.17	-4.52			
60	-1.28	-1.16	-0.42	-0.46	-1.96	-2.23	-2.12	-2.41	-2.21	-1.12	-0.90	-1.10	E2	-7.17	-4.96	-1.63	-3.77	-3.79	-14.63	-2.76	-13.82	-5.16	-4.73	-2.07	-7.66			
90	-12.23	-5.61	-0.95	-0.87	-2.71	-4.46	-3.42	-4.36	-3.06	-1.22	-0.25	-5.16	Average															
120	-8.31	-9.22	-5.34	0.03	-2.94	-2.48	-2.27	-3.34	-3.92	-0.07	-5.25	-5.61	H	-5.31	dB													
150	-2.91	-2.34	-2.50	-3.28	-0.95	0.15	0.10	-0.17	-1.53	-3.61	-1.72	-1.57	E1	-3.34	dB													
180	-2.76	-2.76	-2.76	-2.76	-2.76	-2.76	-2.76	-2.76	-2.76	-2.76	-2.76	-2.76	E2	-4.69	dB													



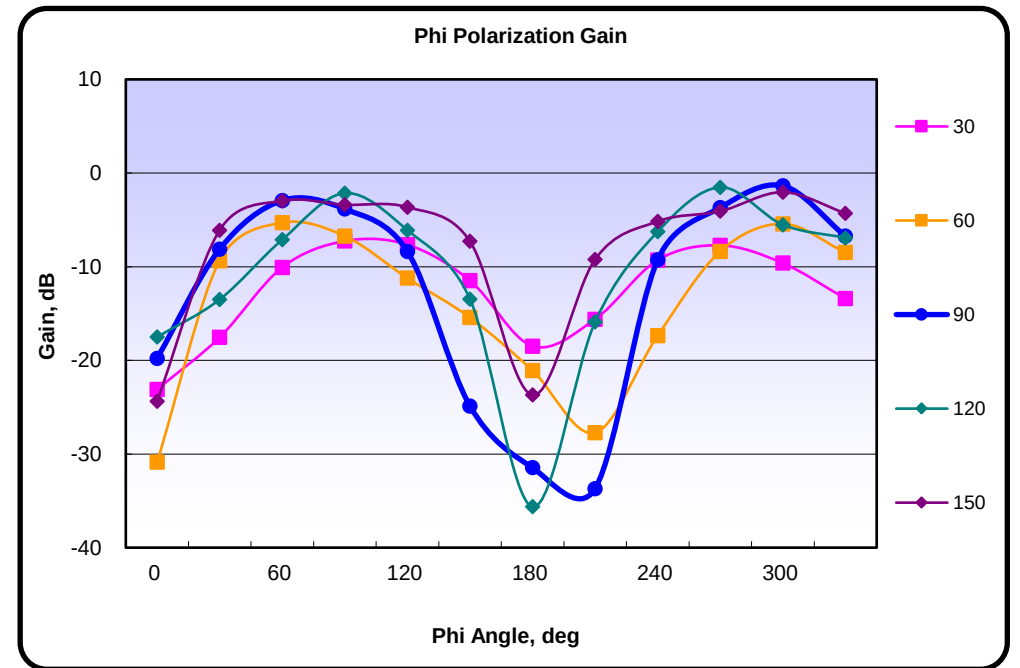
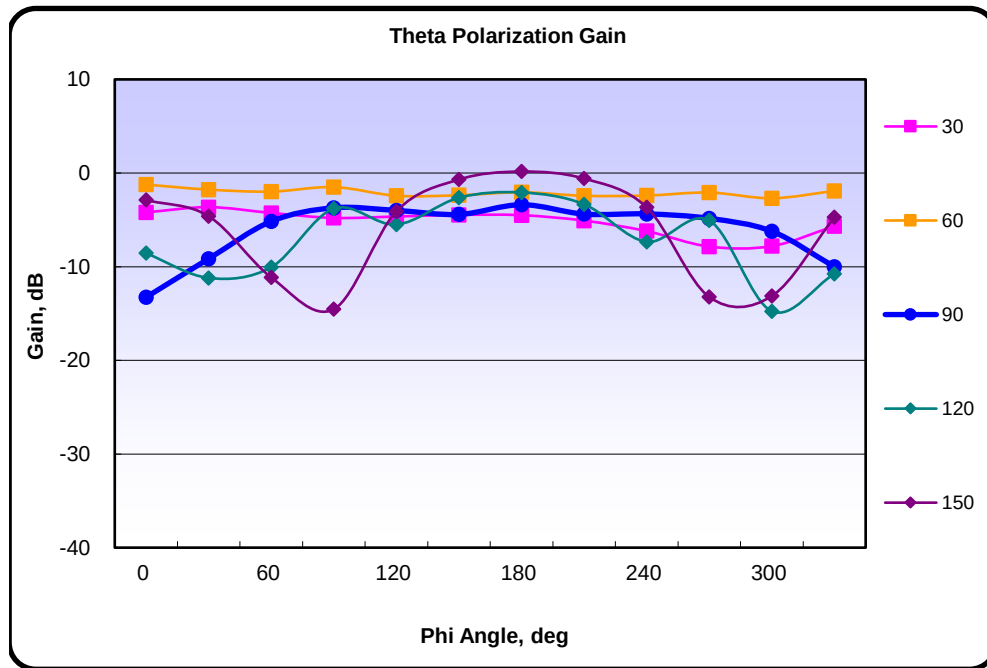
Total Gain and Efficiency	-2.606 dB	54.9 %	Theta Pol	-4.3 dB	37.0 %	Phi Pol	-7.5 dB	17.90 %
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Gain(Theta-Polarization and Phi-Polarization)

2420MHz

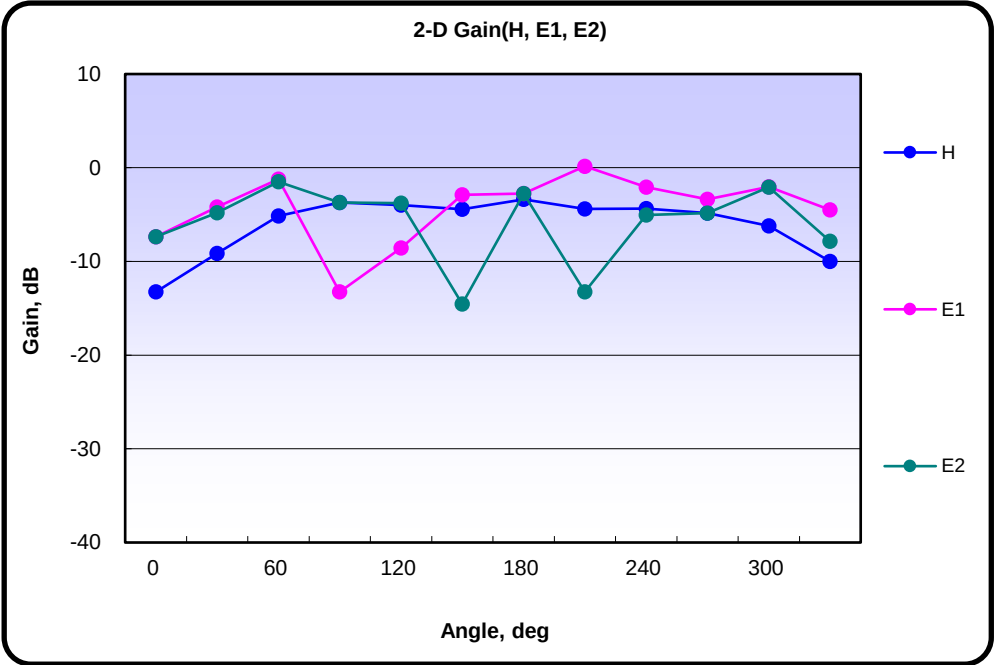
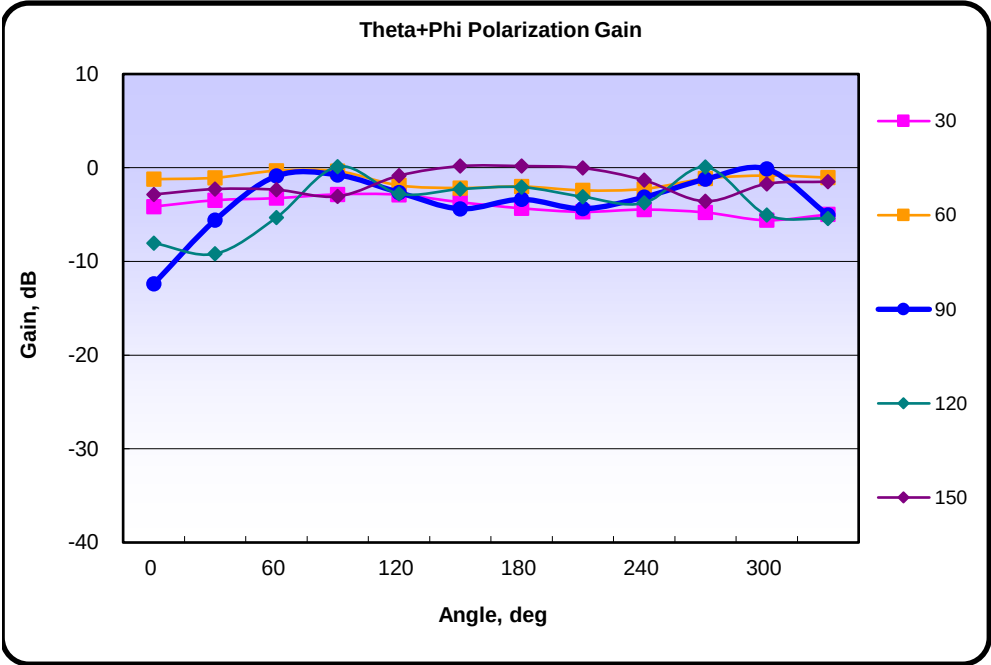
EUT		Frequency	2420	MHz	Comment	
EUT Version		Antenna Type				
Test Date	Tue 04/Feb/2025 16:13:46					
Test Condition	FS					
Tester						

Theta-Polarization Gain(dB)													Phi-Polarization Gain(dB)												
Theta Angle	Phi Angle												Theta Angle	Phi Angle											
	0	30	60	90	120	150	180	210	240	270	300	330		0	30	60	90	120	150	180	210	240	270	300	330
0	-7.37	-7.37	-7.37	-7.37	-7.37	-7.37	-7.37	-7.37	-7.37	-7.37	-7.37	-7.37	0												
30	-4.20	-3.64	-4.26	-4.79	-4.64	-4.47	-4.50	-5.08	-6.20	-7.85	-7.80	-5.67	30	-23.10	-17.54	-10.07	-7.26	-7.65	-11.48	-18.48	-15.61	-9.29	-7.72	-9.62	-13.40
60	-1.23	-1.77	-1.98	-1.50	-2.42	-2.37	-2.05	-2.43	-2.40	-2.08	-2.69	-1.91	60	-30.87	-9.35	-5.30	-6.73	-11.22	-15.43	-21.09	-27.73	-17.35	-8.36	-5.42	-8.49
90	-13.26	-9.15	-5.16	-3.71	-3.99	-4.42	-3.38	-4.38	-4.36	-4.84	-6.22	-10.00	90	-19.79	-8.13	-2.93	-3.84	-8.37	-24.87	-31.46	-33.69	-9.26	-3.70	-1.36	-6.74
120	-8.56	-11.20	-10.05	-3.79	-5.50	-2.63	-2.07	-3.33	-7.34	-5.06	-14.75	-10.76	120	-17.51	-13.50	-7.11	-2.15	-6.10	-13.45	-35.63	-15.89	-6.26	-1.52	-5.52	-6.92
150	-2.88	-4.60	-11.14	-14.54	-4.09	-0.69	0.16	-0.59	-3.66	-13.23	-13.13	-4.73	150	-24.36	-6.10	-2.96	-3.38	-3.64	-7.29	-23.70	-9.22	-5.16	-4.08	-2.04	-4.29
180	-2.77	-2.77	-2.77	-2.77	-2.77	-2.77	-2.77	-2.77	-2.77	-2.77	-2.77	-2.77	180												



Total Gain and Efficiency	-2.520 dB	56.0 %	Theta Pol	-4.3 dB	37.5 %	Phi Pol	-7.3 dB	18.50 %
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Theta-Polarization + Phi-Polarization(dB)													2-D Gain													
Theta Angle	Phi Angle												Plane	Angle, deg												
	0	30	60	90	120	150	180	210	240	270	300	330		0	30	60	90	120	150	180	210	240	270	300	330	
0	-7.37	-7.37	-7.37	-7.37	-7.37	-7.37	-7.37	-7.37	-7.37	-7.37	-7.37	-7.37	H	-13.26	-9.15	-5.16	-3.71	-3.99	-4.42	-3.38	-4.38	-4.36	-4.84	-6.22	-10.00	
30	-4.14	-3.47	-3.25	-2.84	-2.88	-3.68	-4.33	-4.71	-4.47	-4.77	-5.61	-4.99	E1	-7.37	-4.20	-1.23	-13.26	-8.56	-2.88	-2.77	0.16	-2.07	-3.38	-2.05	-4.50	
60	-1.23	-1.07	-0.32	-0.36	-1.88	-2.16	-2.00	-2.42	-2.26	-1.16	-0.83	-1.05	E2	-7.37	-4.79	-1.50	-3.71	-3.79	-14.54	-2.77	-13.23	-5.06	-4.84	-2.08	-7.85	
90	-12.39	-5.60	-0.89	-0.76	-2.64	-4.38	-3.37	-4.37	-3.14	-1.22	-0.13	-5.06	Average													
120	-8.04	-9.19	-5.33	0.12	-2.78	-2.28	-2.07	-3.10	-3.76	0.07	-5.03	-5.42	H	-5.33	dB											
150	-2.85	-2.28	-2.35	-3.06	-0.85	0.17	0.18	-0.03	-1.34	-3.58	-1.71	-1.49	E1	-3.28	dB											
180	-2.77	-2.77	-2.77	-2.77	-2.77	-2.77	-2.77	-2.77	-2.77	-2.77	-2.77	-2.77	E2	-4.66	dB											



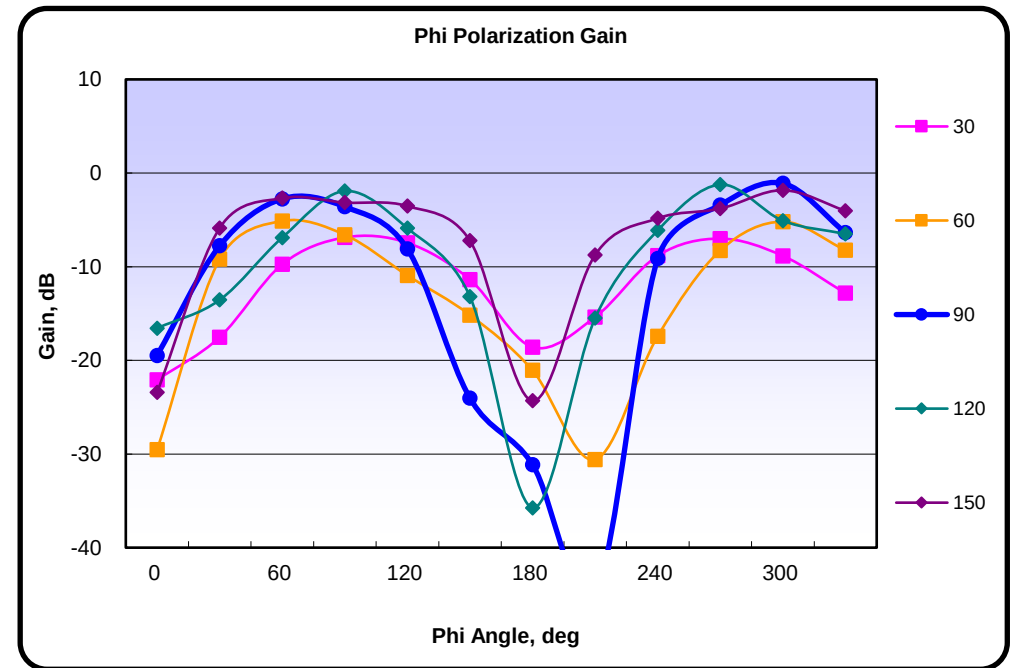
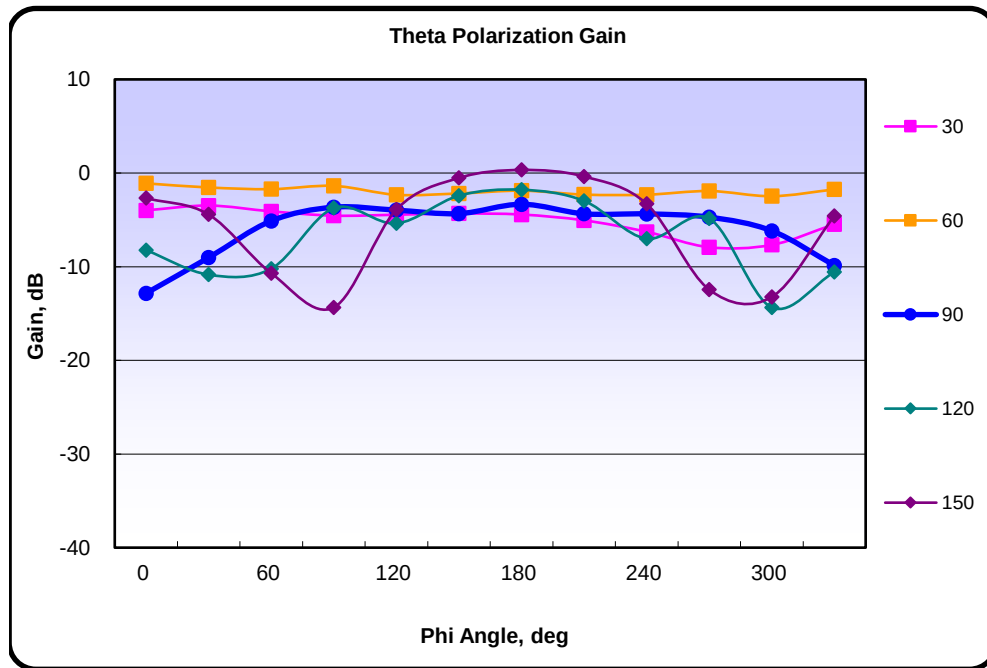
Total Gain and Efficiency	-2.520 dB	56.0 %	Theta Pol	-4.3 dB	37.5 %	Phi Pol	-7.3 dB	18.50 %
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Gain(Theta-Polarization and Phi-Polarization)

2430MHz

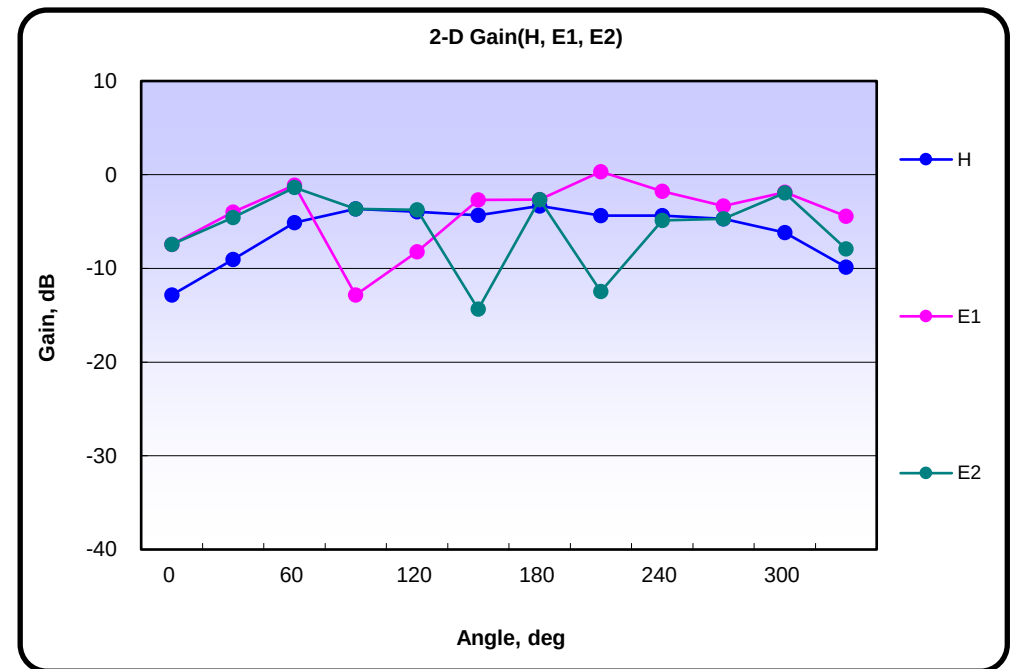
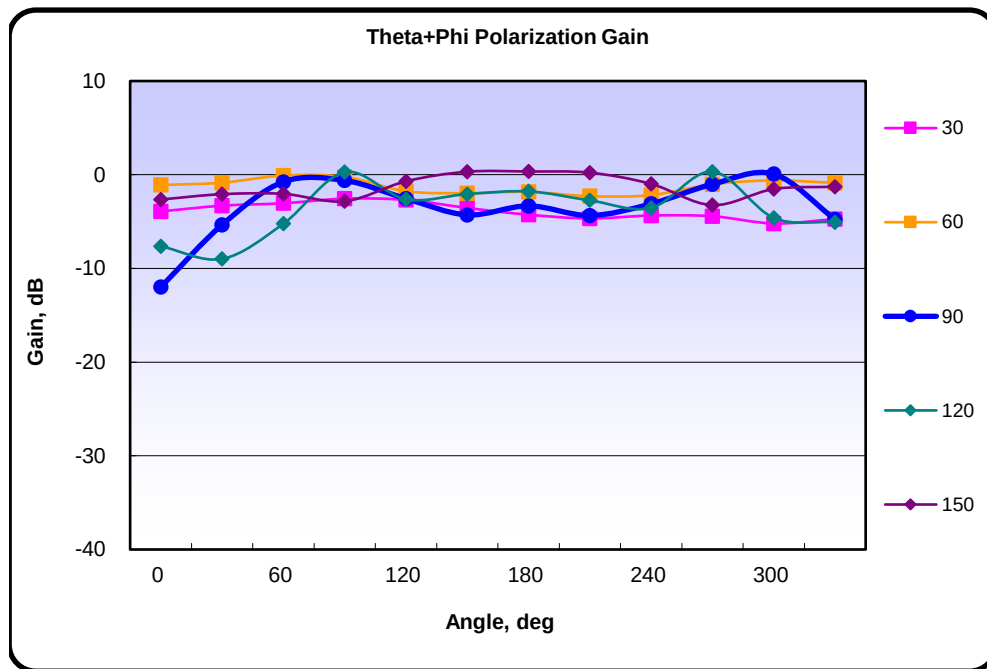
EUT		Frequency	2430	MHz	Comment	
EUT Version		Antenna Type				
Test Date	Tue 04/Feb/2025 16:13:46					
Test Condition	FS					
Tester						

Theta-Polarization Gain(dB)													Phi-Polarization Gain(dB)												
Theta Angle	Phi Angle												Theta Angle	Phi Angle											
	0	30	60	90	120	150	180	210	240	270	300	330		0	30	60	90	120	150	180	210	240	270	300	330
0	-7.43	-7.43	-7.43	-7.43	-7.43	-7.43	-7.43	-7.43	-7.43	-7.43	-7.43	-7.43	0												
30	-3.98	-3.47	-4.09	-4.55	-4.45	-4.32	-4.43	-5.05	-6.27	-7.92	-7.67	-5.46	30	-22.09	-17.53	-9.74	-6.88	-7.45	-11.38	-18.59	-15.38	-8.83	-7.00	-8.84	-12.83
60	-1.10	-1.54	-1.72	-1.37	-2.32	-2.18	-1.88	-2.30	-2.31	-1.92	-2.47	-1.75	60	-29.55	-9.19	-5.12	-6.59	-10.93	-15.16	-21.07	-30.60	-17.42	-8.27	-5.19	-8.23
90	-12.84	-9.03	-5.11	-3.64	-3.96	-4.33	-3.33	-4.35	-4.36	-4.71	-6.17	-9.86	90	-19.47	-7.77	-2.75	-3.60	-8.10	-24.03	-31.13	-44.90	-9.13	-3.43	-1.10	-6.36
120	-8.23	-10.85	-10.21	-3.74	-5.38	-2.41	-1.78	-2.97	-7.01	-4.86	-14.35	-10.57	120	-16.57	-13.55	-6.89	-1.92	-5.89	-13.19	-35.74	-15.50	-6.13	-1.23	-5.09	-6.50
150	-2.68	-4.42	-10.69	-14.35	-3.90	-0.52	0.33	-0.37	-3.29	-12.45	-13.22	-4.58	150	-23.42	-5.87	-2.68	-3.15	-3.53	-7.22	-24.32	-8.74	-4.83	-3.80	-1.83	-4.02
180	-2.65	-2.65	-2.65	-2.65	-2.65	-2.65	-2.65	-2.65	-2.65	-2.65	-2.65	-2.65	180												



Total Gain and Efficiency	-2.329 dB	58.5 %	Theta Pol	-4.1 dB	38.9 %	Phi Pol	-7.1 dB	19.63 %
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Theta-Polarization + Phi-Polarization(dB)													2-D Gain														
Theta Angle	Phi Angle												Plane	Angle, deg													
	0	30	60	90	120	150	180	210	240	270	300	330		0	30	60	90	120	150	180	210	240	270	300	330		
0	-7.43	-7.43	-7.43	-7.43	-7.43	-7.43	-7.43	-7.43	-7.43	-7.43	-7.43	-7.43	H	-12.84	-9.03	-5.11	-3.64	-3.96	-4.33	-3.33	-4.35	-4.36	-4.71	-6.17	-9.86		
30	-3.91	-3.30	-3.04	-2.55	-2.69	-3.54	-4.27	-4.67	-4.35	-4.43	-5.21	-4.73	E1	-7.43	-3.98	-1.10	-12.84	-8.23	-2.68	-2.65	0.33	-1.78	-3.33	-1.88	-4.43		
60	-1.09	-0.85	-0.09	-0.23	-1.76	-1.97	-1.83	-2.29	-2.18	-1.01	-0.61	-0.87	E2	-7.43	-4.55	-1.37	-3.64	-3.74	-14.35	-2.65	-12.45	-4.86	-4.71	-1.92	-7.92		
90	-11.99	-5.34	-0.76	-0.61	-2.54	-4.28	-3.32	-4.35	-3.11	-1.01	0.08	-4.76	Average														
120	-7.64	-8.98	-5.23	0.27	-2.62	-2.06	-1.78	-2.73	-3.54	0.33	-4.60	-5.06	H	-5.27	dB												
150	-2.64	-2.07	-2.04	-2.83	-0.70	0.32	0.34	0.22	-0.98	-3.24	-1.53	-1.28	E1	-3.11	dB												
180	-2.65	-2.65	-2.65	-2.65	-2.65	-2.65	-2.65	-2.65	-2.65	-2.65	-2.65	-2.65	E2	-4.54	dB												



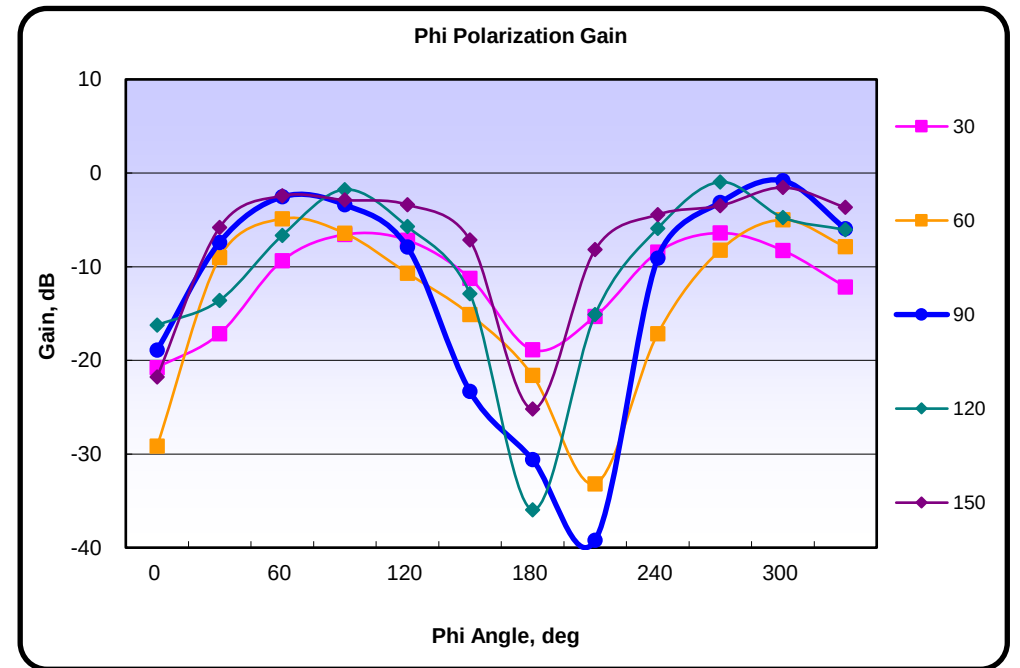
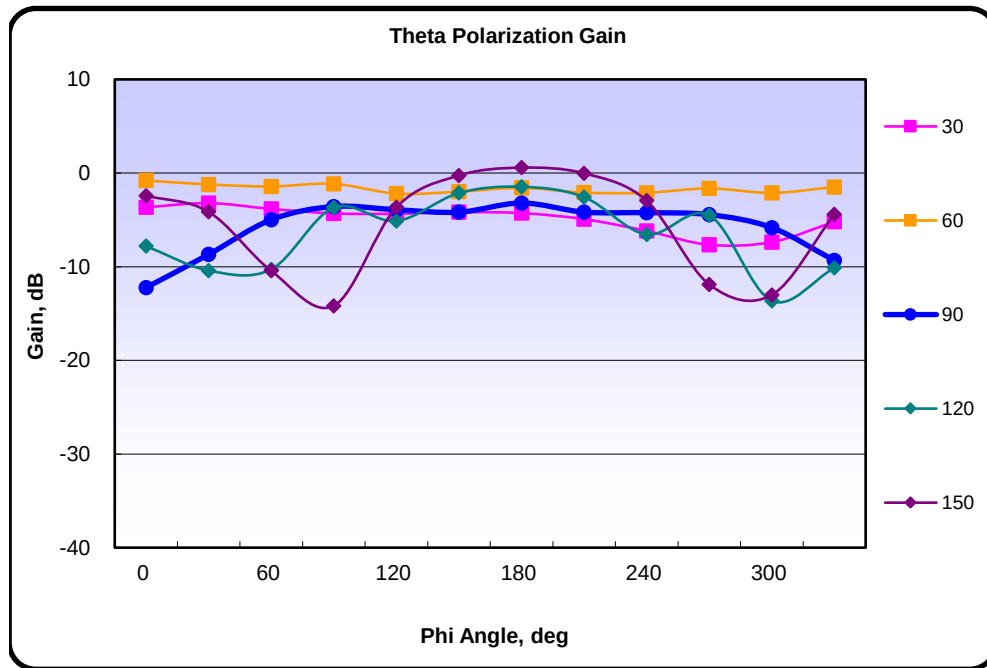
Total Gain and Efficiency	-2.329 dB	58.5 %	Theta Pol	-4.1 dB	38.9 %	Phi Pol	-7.1 dB	19.63 %
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Gain(Theta-Polarization and Phi-Polarization)

2440MHz

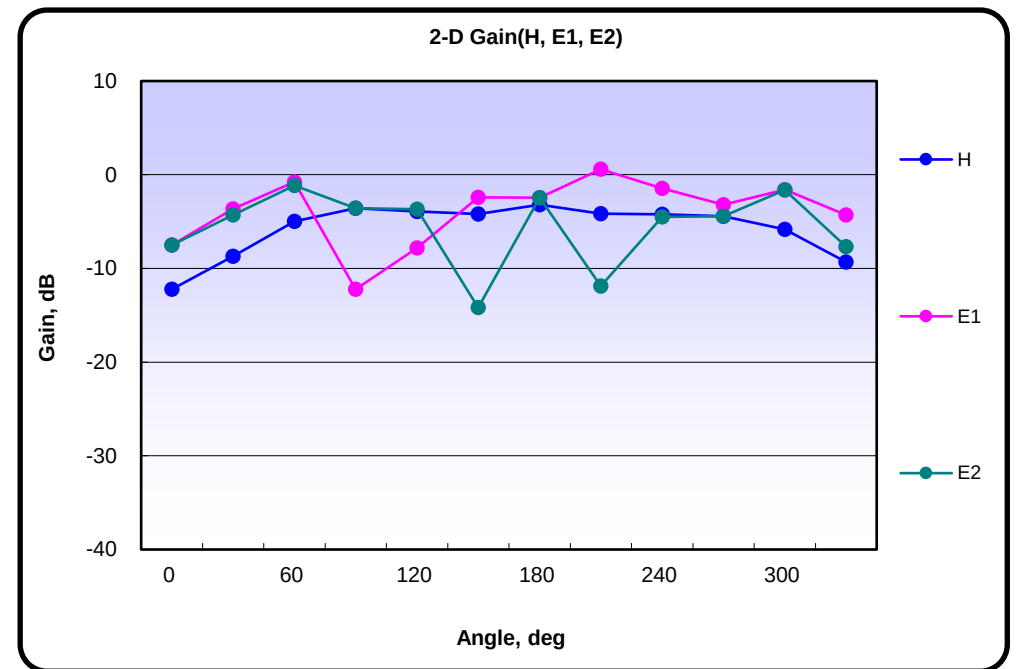
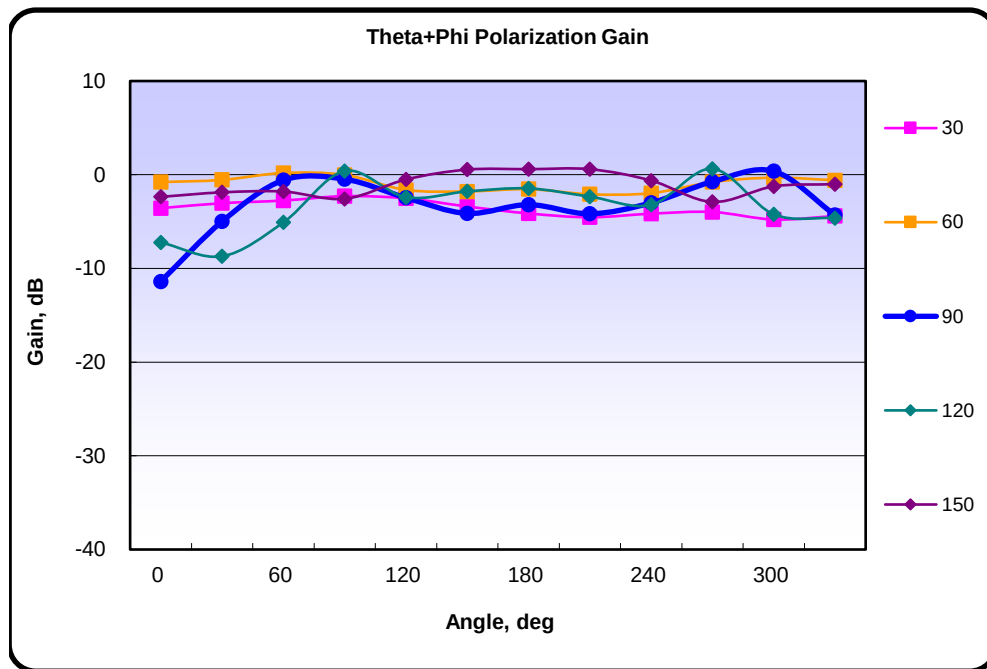
EUT		Frequency	2440	MHz	Comment	
EUT Version		Antenna Type				
Test Date	Tue 04/Feb/2025 16:13:46					
Test Condition	FS					
Tester						

Theta-Polarization Gain(dB)													Phi-Polarization Gain(dB)												
Theta Angle	Phi Angle												Theta Angle	Phi Angle											
	0	30	60	90	120	150	180	210	240	270	300	330		0	30	60	90	120	150	180	210	240	270	300	330
0	-7.49	-7.49	-7.49	-7.49	-7.49	-7.49	-7.49	-7.49	-7.49	-7.49	-7.49	-7.49	0												
30	-3.65	-3.21	-3.83	-4.31	-4.34	-4.17	-4.28	-4.92	-6.18	-7.66	-7.37	-5.21	30	-20.77	-17.15	-9.35	-6.57	-7.17	-11.23	-18.88	-15.31	-8.45	-6.40	-8.26	-12.16
60	-0.79	-1.22	-1.43	-1.15	-2.19	-1.99	-1.58	-2.09	-2.10	-1.64	-2.12	-1.49	60	-29.16	-9.01	-4.88	-6.43	-10.69	-15.10	-21.61	-33.18	-17.17	-8.24	-4.99	-7.87
90	-12.23	-8.69	-4.98	-3.57	-3.92	-4.18	-3.20	-4.17	-4.23	-4.44	-5.83	-9.33	90	-18.91	-7.40	-2.54	-3.39	-7.90	-23.31	-30.60	-39.21	-9.09	-3.15	-0.81	-5.95
120	-7.80	-10.41	-10.28	-3.68	-5.12	-2.13	-1.46	-2.57	-6.56	-4.50	-13.64	-10.13	120	-16.25	-13.59	-6.66	-1.76	-5.72	-12.87	-35.95	-15.11	-5.91	-0.95	-4.75	-6.06
150	-2.41	-4.14	-10.44	-14.18	-3.66	-0.26	0.58	-0.03	-2.95	-11.89	-13.01	-4.41	150	-21.76	-5.80	-2.43	-2.88	-3.38	-7.15	-25.19	-8.18	-4.44	-3.49	-1.54	-3.66
180	-2.45	-2.45	-2.45	-2.45	-2.45	-2.45	-2.45	-2.45	-2.45	-2.45	-2.45	-2.45	180												

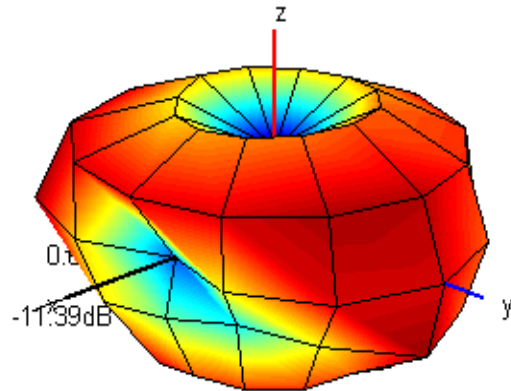


Total Gain and Efficiency	-2.077 dB	62.0 %	Theta Pol	-3.9 dB	41.1 %	Phi Pol	-6.8 dB	20.85 %
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Theta-Polarization + Phi-Polarization(dB)													2-D Gain														
Theta Angle	Phi Angle												Plane	Angle, deg													
	0	30	60	90	120	150	180	210	240	270	300	330		0	30	60	90	120	150	180	210	240	270	300	330		
0	-7.49	-7.49	-7.49	-7.49	-7.49	-7.49	-7.49	-7.49	-7.49	-7.49	-7.49	-7.49	H	-12.23	-8.69	-4.98	-3.57	-3.92	-4.18	-3.20	-4.17	-4.23	-4.44	-5.83	-9.33		
30	-3.57	-3.04	-2.76	-2.28	-2.52	-3.39	-4.13	-4.54	-4.16	-3.97	-4.78	-4.41	E1	-7.49	-3.65	-0.79	-12.23	-7.80	-2.41	-2.45	0.58	-1.46	-3.20	-1.58	-4.28		
60	-0.78	-0.55	0.19	-0.02	-1.62	-1.78	-1.54	-2.09	-1.97	-0.78	-0.31	-0.59	E2	-7.49	-4.31	-1.15	-3.57	-3.68	-14.18	-2.45	-11.89	-4.50	-4.44	-1.64	-7.66		
90	-11.39	-4.99	-0.58	-0.47	-2.46	-4.13	-3.19	-4.17	-3.00	-0.74	0.38	-4.31	Average														
120	-7.22	-8.70	-5.09	0.40	-2.40	-1.78	-1.46	-2.33	-3.21	0.64	-4.22	-4.62	H	-5.09	dB												
150	-2.36	-1.88	-1.79	-2.57	-0.51	0.55	0.59	0.59	-0.62	-2.90	-1.24	-1.01	E1	-2.86	dB												
180	-2.45	-2.45	-2.45	-2.45	-2.45	-2.45	-2.45	-2.45	-2.45	-2.45	-2.45	-2.45	E2	-4.33	dB												



Total Gain and Efficiency	-2.077	dB	62.0	%	Theta Pol	-3.9	dB	41.1	%	Phi Pol	-6.8	dB	20.85	%
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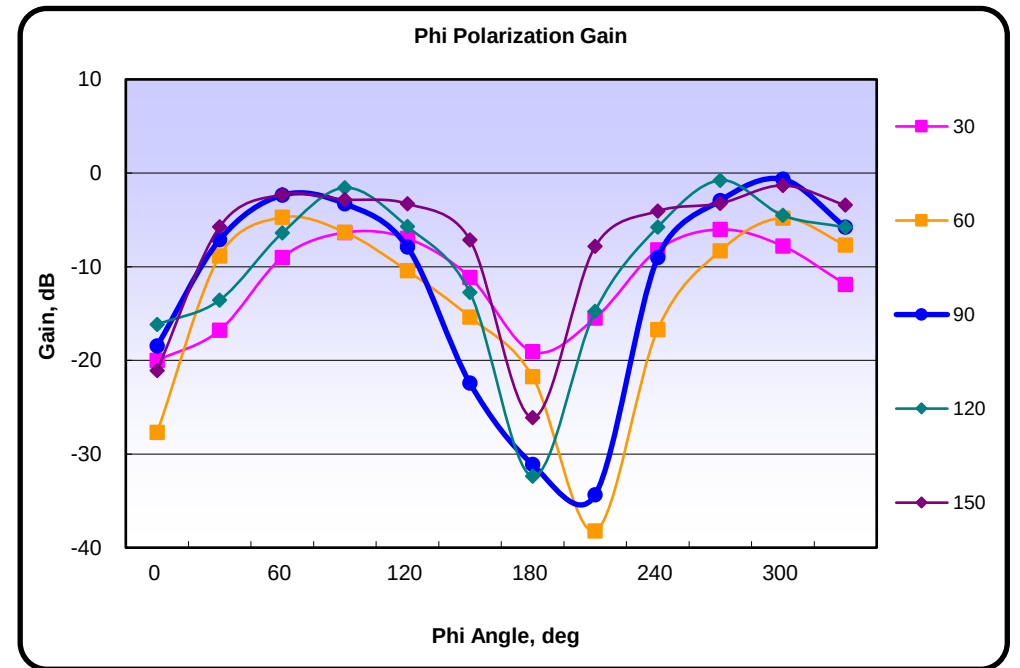
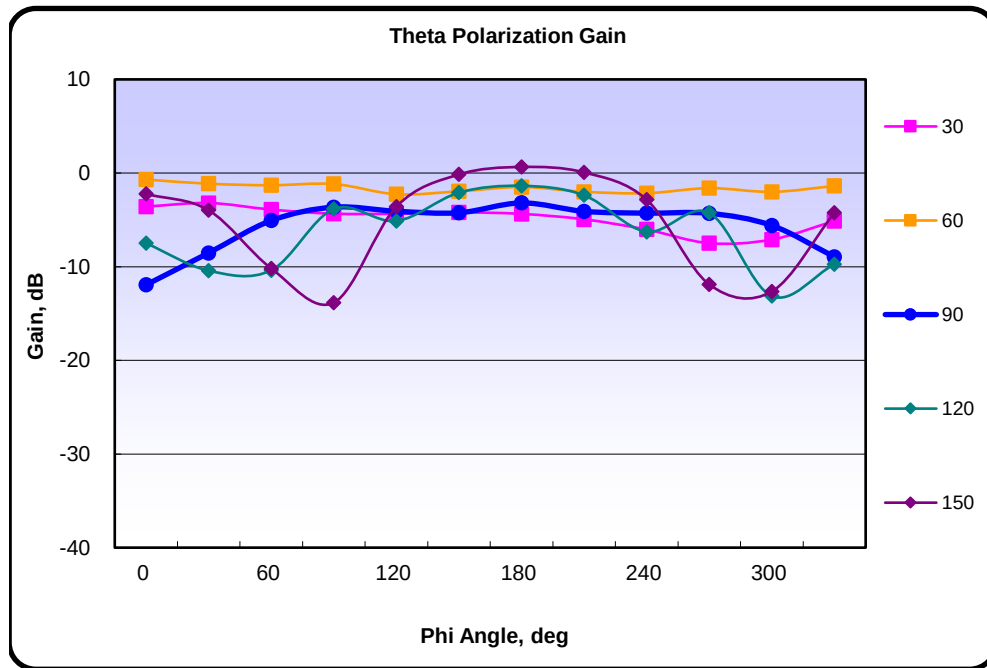
Maximum Gain	Gain	0.64 dB,	$\theta = 120$ deg,	$\phi = 270$ deg	Minimum Gain	Gain	-11.39 dB,	$\theta = 90$ deg,	$\phi = 0$ deg
Total Gain and Efficiency	-2.077 dB	62.0 %	Theta Pol	-3.9 dB	41.1 %	Phi Pol	-6.8 dB	20.85 %	

Gain(Theta-Polarization and Phi-Polarization)

2450MHz

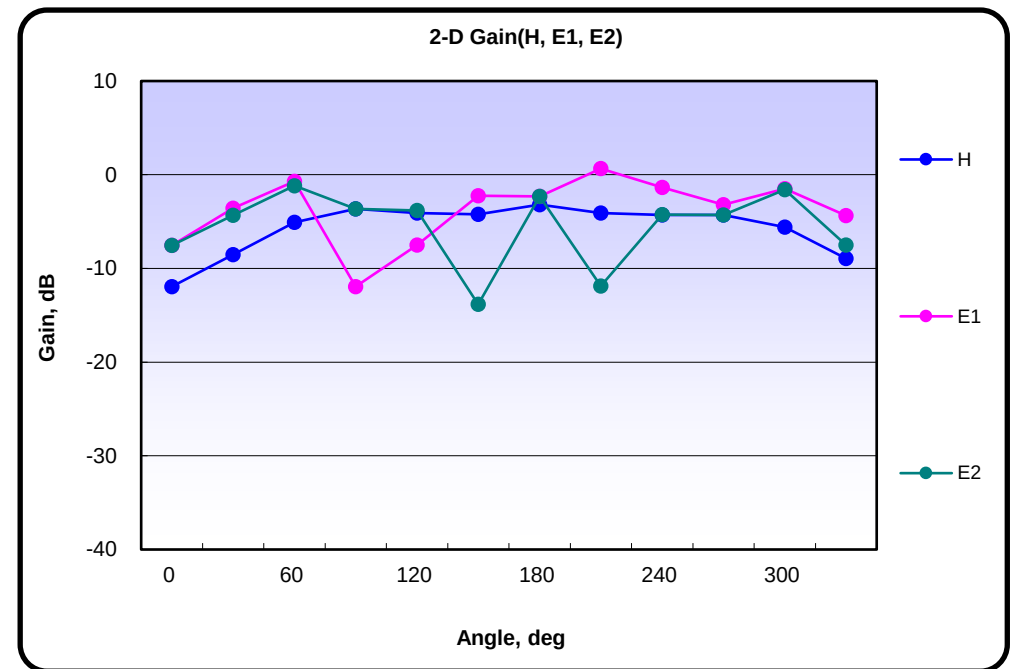
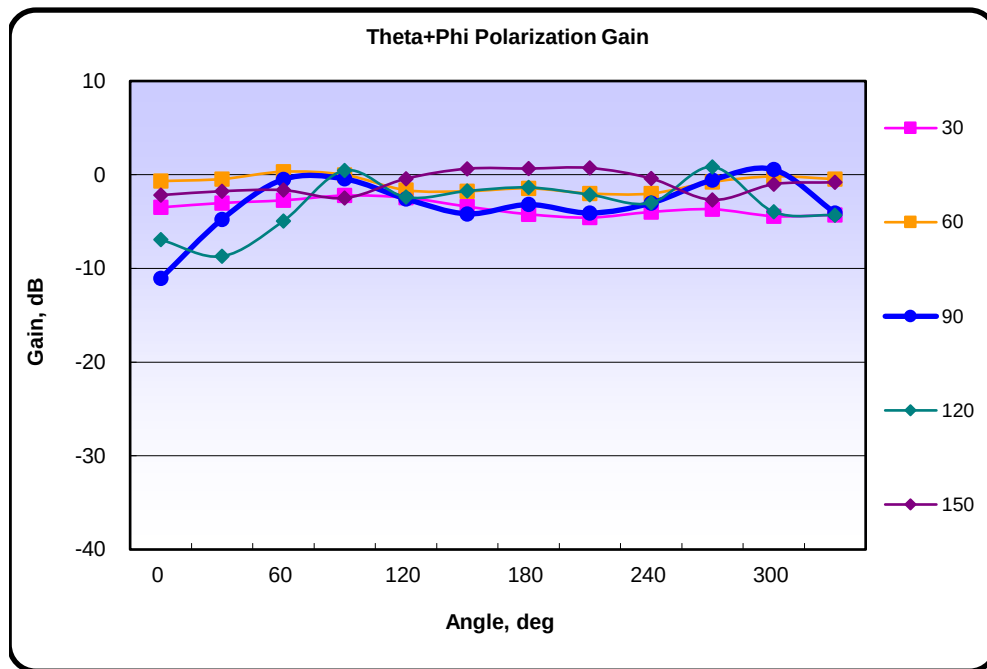
EUT		Frequency	2450	MHz	Comment	
EUT Version		Antenna Type				
Test Date	Tue 04/Feb/2025 16:13:46					
Test Condition	FS					
Tester						

Theta-Polarization Gain(dB)													Phi-Polarization Gain(dB)												
Theta Angle	Phi Angle												Theta Angle	Phi Angle											
	0	30	60	90	120	150	180	210	240	270	300	330		0	30	60	90	120	150	180	210	240	270	300	330
0	-7.54	-7.54	-7.54	-7.54	-7.54	-7.54	-7.54	-7.54	-7.54	-7.54	-7.54	-7.54	0												
30	-3.58	-3.20	-3.90	-4.34	-4.34	-4.20	-4.36	-4.94	-6.03	-7.49	-7.10	-5.12	30	-20.01	-16.79	-9.01	-6.35	-6.98	-11.13	-19.07	-15.49	-8.20	-6.02	-7.79	-11.89
60	-0.69	-1.14	-1.30	-1.17	-2.26	-1.95	-1.49	-2.00	-2.15	-1.61	-2.01	-1.38	60	-27.69	-8.84	-4.73	-6.31	-10.43	-15.38	-21.73	-38.22	-16.70	-8.30	-4.80	-7.68
90	-11.94	-8.53	-5.07	-3.64	-4.08	-4.24	-3.19	-4.09	-4.28	-4.30	-5.60	-8.94	90	-18.47	-7.12	-2.36	-3.28	-7.89	-22.44	-31.11	-34.37	-9.02	-2.94	-0.66	-5.79
120	-7.49	-10.42	-10.38	-3.83	-5.12	-2.09	-1.36	-2.37	-6.27	-4.25	-13.14	-9.74	120	-16.17	-13.57	-6.40	-1.57	-5.71	-12.76	-32.38	-14.75	-5.78	-0.77	-4.52	-5.79
150	-2.23	-3.97	-10.18	-13.84	-3.59	-0.15	0.65	0.07	-2.84	-11.89	-12.64	-4.25	150	-21.08	-5.74	-2.30	-2.82	-3.28	-7.13	-26.10	-7.84	-4.07	-3.24	-1.32	-3.43
180	-2.32	-2.32	-2.32	-2.32	-2.32	-2.32	-2.32	-2.32	-2.32	-2.32	-2.32	-2.32	180												



Total Gain and Efficiency	-1.975 dB	63.5 %	Theta Pol	-3.8 dB	41.8 %	Phi Pol	-6.6 dB	21.70 %
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Theta-Polarization + Phi-Polarization(dB)													2-D Gain														
Theta Angle	Phi Angle												Plane	Angle, deg													
	0	30	60	90	120	150	180	210	240	270	300	330		0	30	60	90	120	150	180	210	240	270	300	330		
0	-7.54	-7.54	-7.54	-7.54	-7.54	-7.54	-7.54	-7.54	-7.54	-7.54	-7.54	-7.54	H	-11.94	-8.53	-5.07	-3.64	-4.08	-4.24	-3.19	-4.09	-4.28	-4.30	-5.60	-8.94		
30	-3.48	-3.01	-2.73	-2.22	-2.45	-3.40	-4.22	-4.57	-3.97	-3.68	-4.42	-4.29	E1	-7.54	-3.58	-0.69	-11.94	-7.49	-2.23	-2.32	0.65	-1.36	-3.19	-1.49	-4.36		
60	-0.68	-0.46	0.33	-0.01	-1.64	-1.76	-1.45	-2.00	-2.00	-0.77	-0.17	-0.47	E2	-7.54	-4.34	-1.17	-3.64	-3.83	-13.84	-2.32	-11.89	-4.25	-4.30	-1.61	-7.49		
90	-11.07	-4.76	-0.50	-0.45	-2.57	-4.17	-3.18	-4.09	-3.02	-0.56	0.55	-4.08	Average														
120	-6.94	-8.71	-4.94	0.46	-2.39	-1.73	-1.36	-2.13	-3.01	0.84	-3.96	-4.32	H	-5.07	dB												
150	-2.17	-1.76	-1.64	-2.49	-0.42	0.64	0.66	0.72	-0.40	-2.68	-1.01	-0.81	E1	-2.77	dB												
180	-2.32	-2.32	-2.32	-2.32	-2.32	-2.32	-2.32	-2.32	-2.32	-2.32	-2.32	-2.32	E2	-4.30	dB												



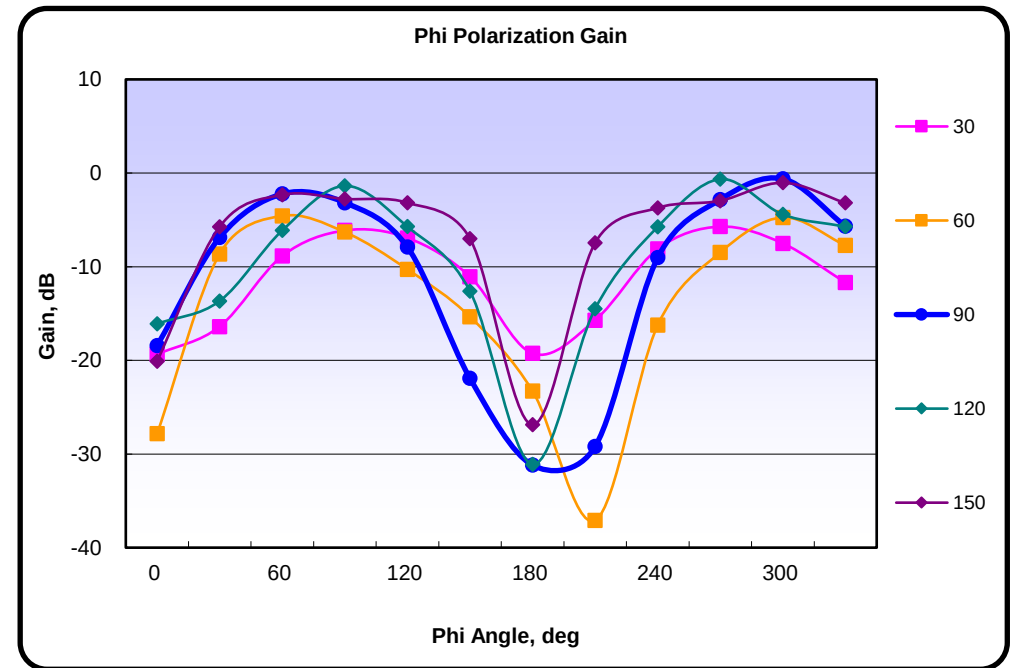
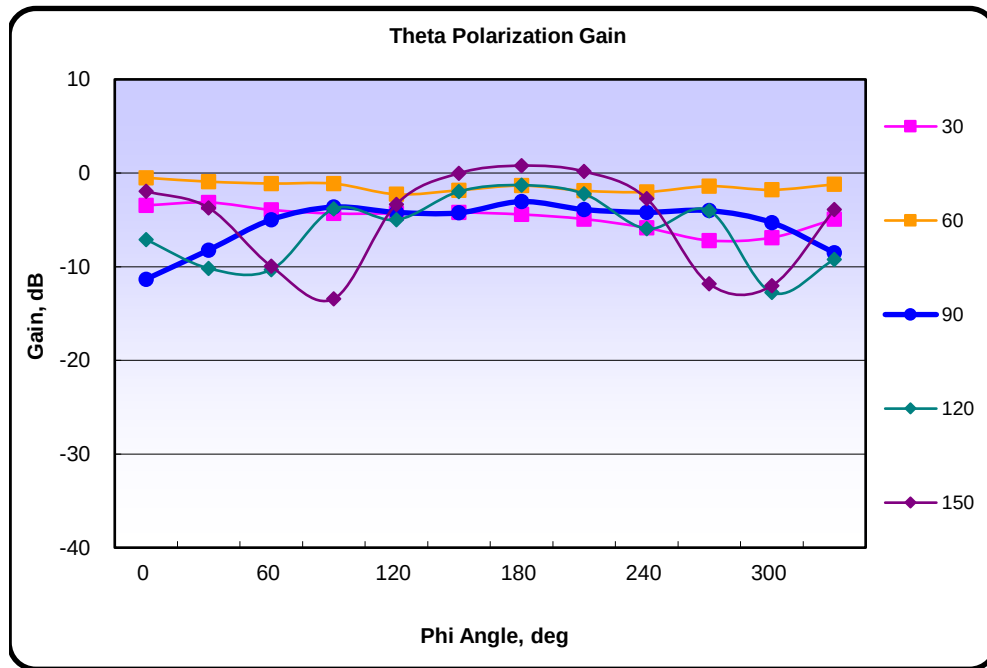
Total Gain and Efficiency	-1.975 dB	63.5 %	Theta Pol	-3.8 dB	41.8 %	Phi Pol	-6.6 dB	21.70 %
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Gain(Theta-Polarization and Phi-Polarization)

2460MHz

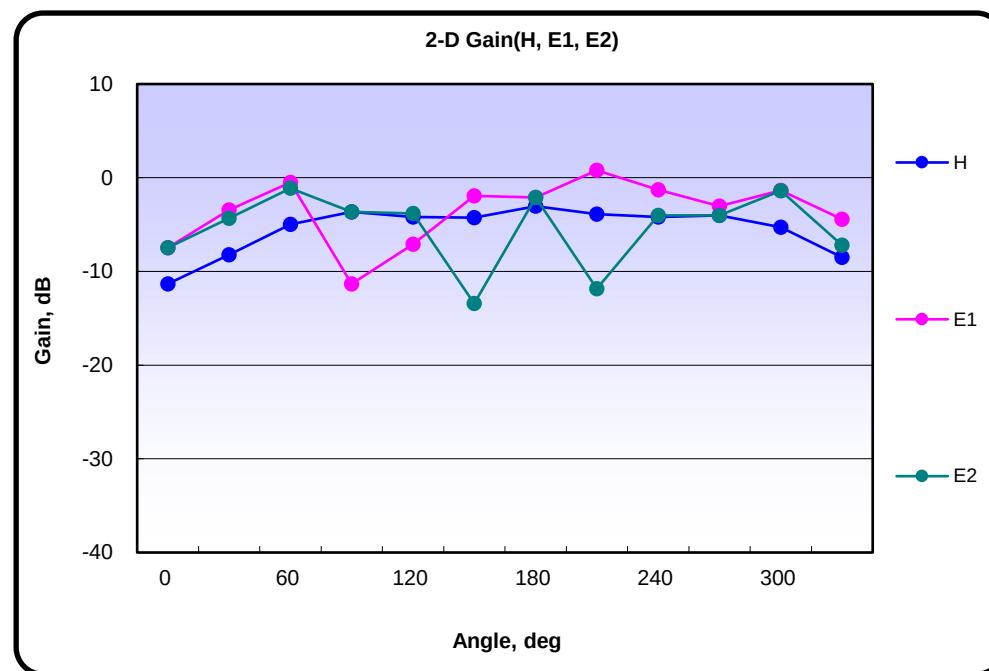
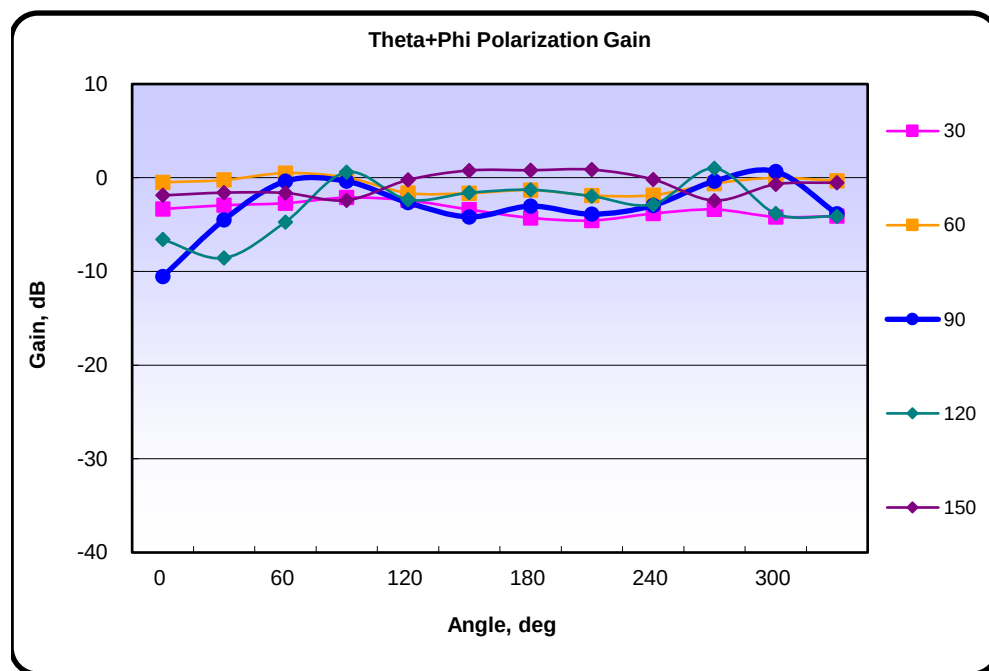
EUT		Frequency	2460	MHz	Comment	
EUT Version		Antenna Type				
Test Date	Tue 04/Feb/2025 16:13:46					
Test Condition	FS					
Tester						

Theta-Polarization Gain(dB)													Phi-Polarization Gain(dB)												
Theta Angle	Phi Angle												Theta Angle	Phi Angle											
	0	30	60	90	120	150	180	210	240	270	300	330		0	30	60	90	120	150	180	210	240	270	300	330
0	-7.47	-7.47	-7.47	-7.47	-7.47	-7.47	-7.47	-7.47	-7.47	-7.47	-7.47	-7.47	0												
30	-3.45	-3.14	-3.93	-4.32	-4.31	-4.21	-4.42	-4.91	-5.85	-7.20	-6.89	-4.93	30	-19.36	-16.39	-8.85	-6.13	-6.92	-11.06	-19.26	-15.71	-8.11	-5.72	-7.51	-11.70
60	-0.50	-0.92	-1.12	-1.13	-2.27	-1.84	-1.34	-1.89	-2.02	-1.40	-1.79	-1.21	60	-27.84	-8.63	-4.57	-6.30	-10.28	-15.34	-23.27	-37.09	-16.25	-8.48	-4.74	-7.72
90	-11.33	-8.22	-4.98	-3.63	-4.20	-4.25	-3.04	-3.90	-4.19	-4.01	-5.29	-8.51	90	-18.43	-6.88	-2.23	-3.16	-7.90	-21.91	-31.19	-29.20	-9.03	-2.83	-0.61	-5.68
120	-7.11	-10.17	-10.32	-3.82	-5.00	-1.97	-1.29	-2.22	-5.96	-4.02	-12.75	-9.23	120	-16.10	-13.66	-6.13	-1.37	-5.72	-12.61	-31.10	-14.49	-5.75	-0.65	-4.42	-5.72
150	-1.95	-3.71	-9.95	-13.43	-3.33	-0.02	0.79	0.17	-2.72	-11.84	-12.03	-3.91	150	-20.10	-5.73	-2.32	-2.76	-3.17	-6.99	-26.88	-7.45	-3.72	-2.96	-1.03	-3.19
180	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	180												



Total Gain and Efficiency	-1.839 dB	65.5 %	Theta Pol	-3.7 dB	43.1 %	Phi Pol	-6.5 dB	22.33 %
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Theta-Polarization + Phi-Polarization(dB)													2-D Gain															
Theta Angle	Phi Angle												Plane	Angle, deg														
	0	30	60	90	120	150	180	210	240	270	300	330		0	30	60	90	120	150	180	210	240	270	300	330			
0	-7.47	-7.47	-7.47	-7.47	-7.47	-7.47	-7.47	-7.47	-7.47	-7.47	-7.47	-7.47	H	-11.33	-8.22	-4.98	-3.63	-4.20	-4.25	-3.04	-3.90	-4.19	-4.01	-5.29	-8.51			
30	-3.34	-2.94	-2.72	-2.12	-2.41	-3.39	-4.28	-4.56	-3.82	-3.39	-4.18	-4.10	E1	-7.47	-3.45	-0.50	-11.33	-7.11	-1.95	-2.11	0.79	-1.29	-3.04	-1.34	-4.42			
60	-0.49	-0.24	0.50	0.02	-1.63	-1.65	-1.31	-1.89	-1.86	-0.62	-0.01	-0.33	E2	-7.47	-4.32	-1.13	-3.63	-3.82	-13.43	-2.11	-11.84	-4.02	-4.01	-1.40	-7.20			
90	-10.56	-4.49	-0.38	-0.38	-2.66	-4.18	-3.03	-3.89	-2.96	-0.37	0.66	-3.86	Average															
120	-6.59	-8.56	-4.73	0.59	-2.33	-1.61	-1.29	-1.97	-2.84	0.99	-3.82	-4.12	H	-4.94	dB													
150	-1.88	-1.59	-1.63	-2.40	-0.24	0.78	0.80	0.86	-0.18	-2.43	-0.70	-0.52	E1	-2.61	dB													
180	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	-2.11	E2	-4.16	dB													



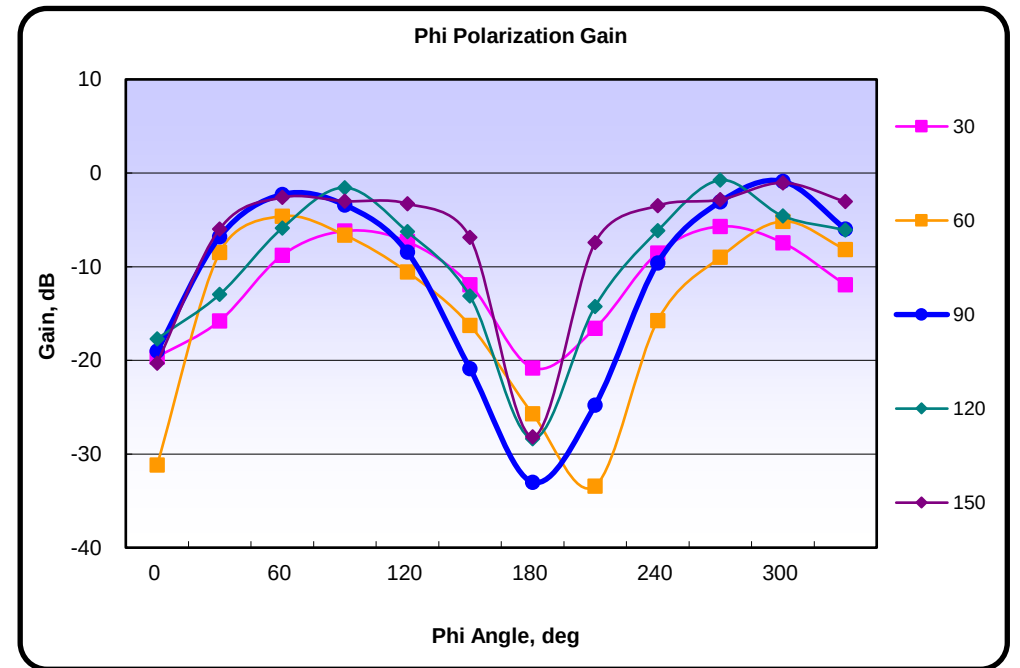
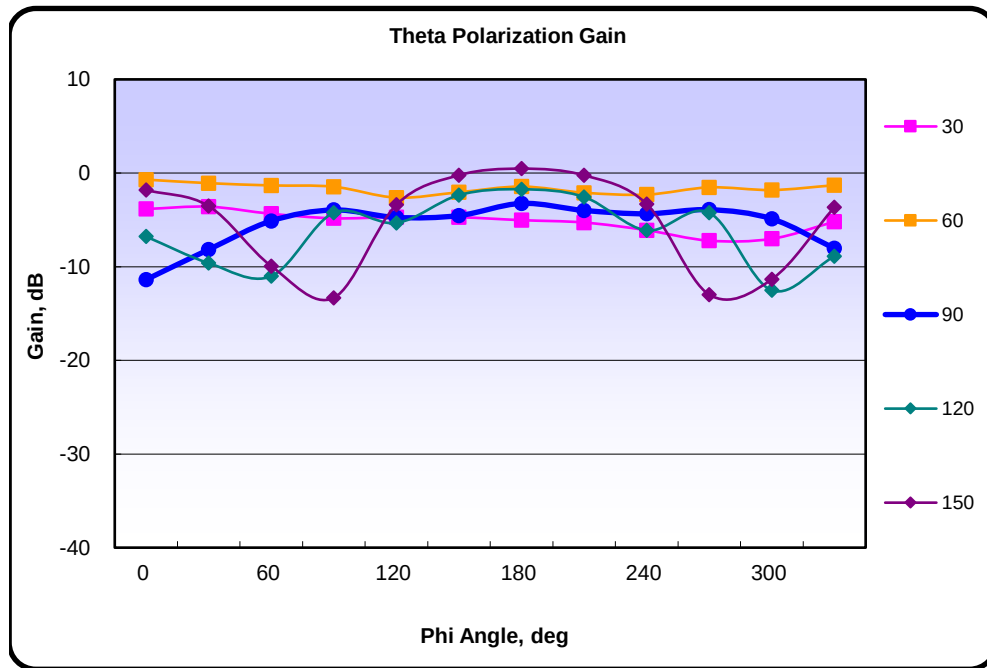
Total Gain and Efficiency	-1.839 dB	65.5 %	Theta Pol	-3.7 dB	43.1 %	Phi Pol	-6.5 dB	22.33 %
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Gain(Theta-Polarization and Phi-Polarization)

2480MHz

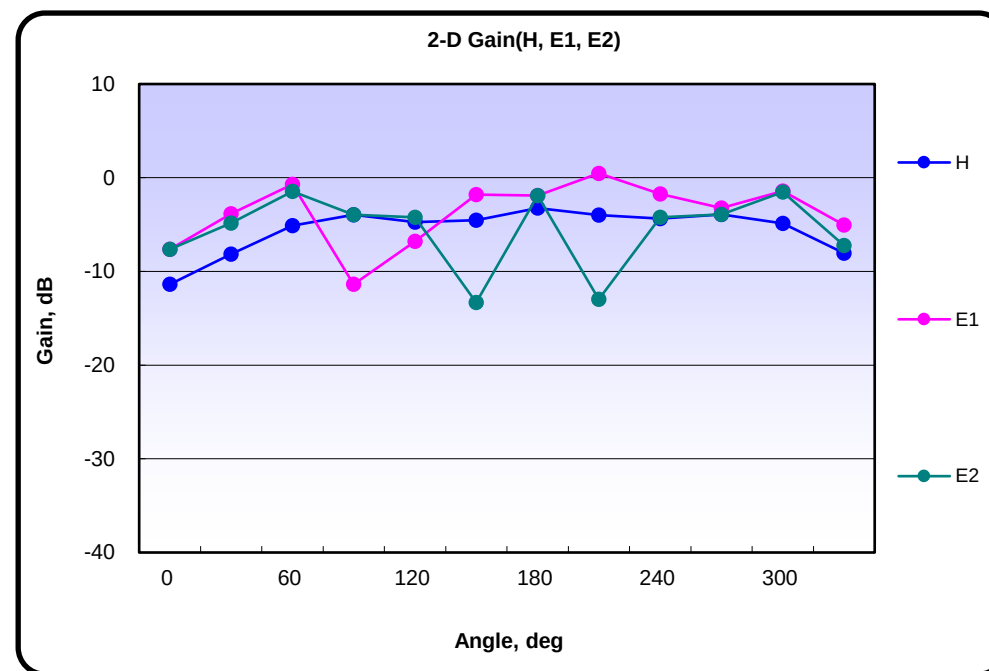
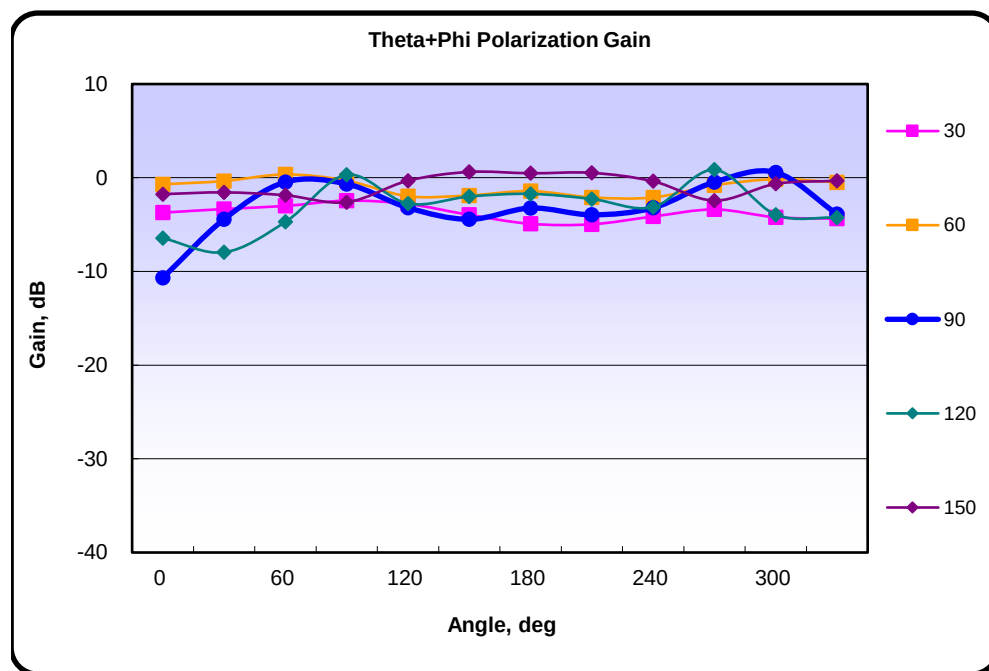
EUT	CMS KBX	Frequency	2480	MHz	Comment
EUT Version		Antenna Type	PCB		
Test Date	Tue 04/Feb/2025 16:13:46				
Test Condition	FS				
Tester	Aplustech				

Theta-Polarization Gain(dB)													Phi-Polarization Gain(dB)												
Theta Angle	Phi Angle												Theta Angle	Phi Angle											
	0	30	60	90	120	150	180	210	240	270	300	330		0	30	60	90	120	150	180	210	240	270	300	330
0	-7.63	-7.63	-7.63	-7.63	-7.63	-7.63	-7.63	-7.63	-7.63	-7.63	-7.63	-7.63	0												
30	-3.84	-3.59	-4.35	-4.83	-4.70	-4.72	-5.03	-5.28	-6.10	-7.22	-7.02	-5.20	30	-19.65	-15.79	-8.77	-6.19	-7.32	-11.92	-20.80	-16.57	-8.53	-5.70	-7.45	-11.94
60	-0.70	-1.08	-1.32	-1.46	-2.62	-2.05	-1.44	-2.10	-2.30	-1.53	-1.81	-1.30	60	-31.18	-8.48	-4.60	-6.63	-10.57	-16.26	-25.70	-33.42	-15.74	-8.99	-5.15	-8.16
90	-11.38	-8.17	-5.11	-3.94	-4.74	-4.54	-3.24	-3.99	-4.35	-3.91	-4.89	-8.04	90	-19.00	-6.81	-2.29	-3.41	-8.44	-20.87	-33.01	-24.77	-9.59	-3.07	-0.88	-5.98
120	-6.78	-9.61	-11.02	-4.24	-5.33	-2.35	-1.73	-2.55	-6.13	-4.24	-12.52	-8.88	120	-17.70	-12.96	-5.88	-1.56	-6.26	-13.14	-28.36	-14.24	-6.16	-0.76	-4.59	-6.09
150	-1.81	-3.52	-9.93	-13.32	-3.39	-0.23	0.47	-0.24	-3.30	-12.98	-11.34	-3.65	150	-20.29	-5.97	-2.61	-3.00	-3.27	-6.88	-28.15	-7.41	-3.48	-2.84	-1.04	-3.05
180	-1.89	-1.89	-1.89	-1.89	-1.89	-1.89	-1.89	-1.89	-1.89	-1.89	-1.89	-1.89	180												

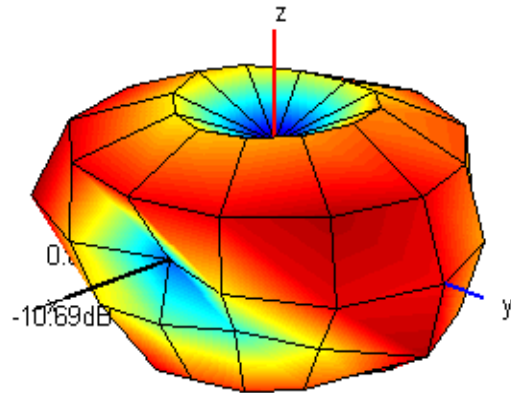


Total Gain and Efficiency	-2.032 dB	62.6 %	Theta Pol	-3.9 dB	41.2 %	Phi Pol	-6.7 dB	21.46 %
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Theta-Polarization + Phi-Polarization(dB)													2-D Gain															
Theta Angle	Phi Angle												Plane	Angle, deg														
	0	30	60	90	120	150	180	210	240	270	300	330		0	30	60	90	120	150	180	210	240	270	300	330			
0	-7.63	-7.63	-7.63	-7.63	-7.63	-7.63	-7.63	-7.63	-7.63	-7.63	-7.63	-7.63	H	-11.38	-8.17	-5.11	-3.94	-4.74	-4.54	-3.24	-3.99	-4.35	-3.91	-4.89	-8.04			
30	-3.73	-3.34	-3.01	-2.45	-2.81	-3.96	-4.92	-4.97	-4.14	-3.38	-4.22	-4.37	E1	-7.63	-3.84	-0.70	-11.38	-6.78	-1.81	-1.89	0.47	-1.73	-3.24	-1.44	-5.03			
60	-0.70	-0.35	0.35	-0.31	-1.97	-1.89	-1.42	-2.10	-2.11	-0.81	-0.16	-0.49	E2	-7.63	-4.83	-1.46	-3.94	-4.24	-13.32	-1.89	-12.98	-4.24	-3.91	-1.53	-7.22			
90	-10.69	-4.43	-0.46	-0.66	-3.20	-4.44	-3.24	-3.95	-3.21	-0.46	0.57	-3.88	Average															
120	-6.44	-7.96	-4.72	0.31	-2.76	-2.00	-1.72	-2.27	-3.13	0.85	-3.94	-4.25	H	-5.05 dB														
150	-1.75	-1.56	-1.87	-2.61	-0.32	0.62	0.48	0.52	-0.38	-2.44	-0.65	-0.33	E1	-2.79 dB														
180	-1.89	-1.89	-1.89	-1.89	-1.89	-1.89	-1.89	-1.89	-1.89	-1.89	-1.89	-1.89	E2	-4.34 dB														



Total Gain and Efficiency	-2.032	dB	62.6	%	Theta Pol	-3.9	dB	41.2	%	Phi Pol	-6.7	dB	21.46	%
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Maximum Gain	Gain	0.85 dB,	$\theta = 120$ deg,	$\phi = 270$ deg	Minimum Gain	Gain	-10.69 dB,	$\theta = 90$ deg,	$\phi = 0$ deg
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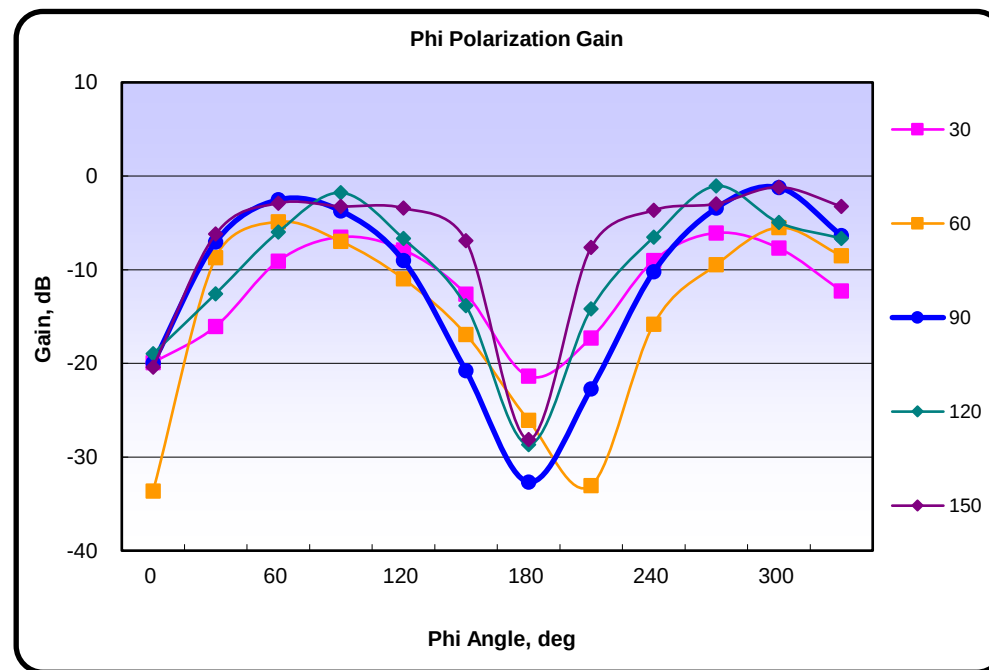
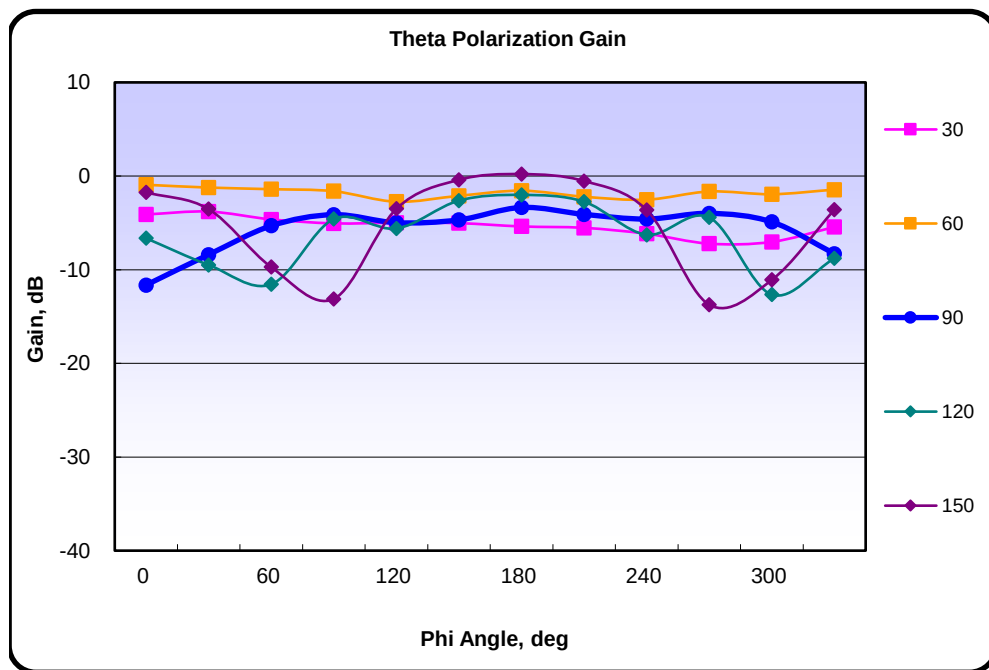
Total Gain and Efficiency	-2.032 dB	62.6 %	Theta Pol	-3.9 dB	41.2 %	Phi Pol	-6.7 dB	21.46 %
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Gain(Theta-Polarization and Phi-Polarization)

2490MHz

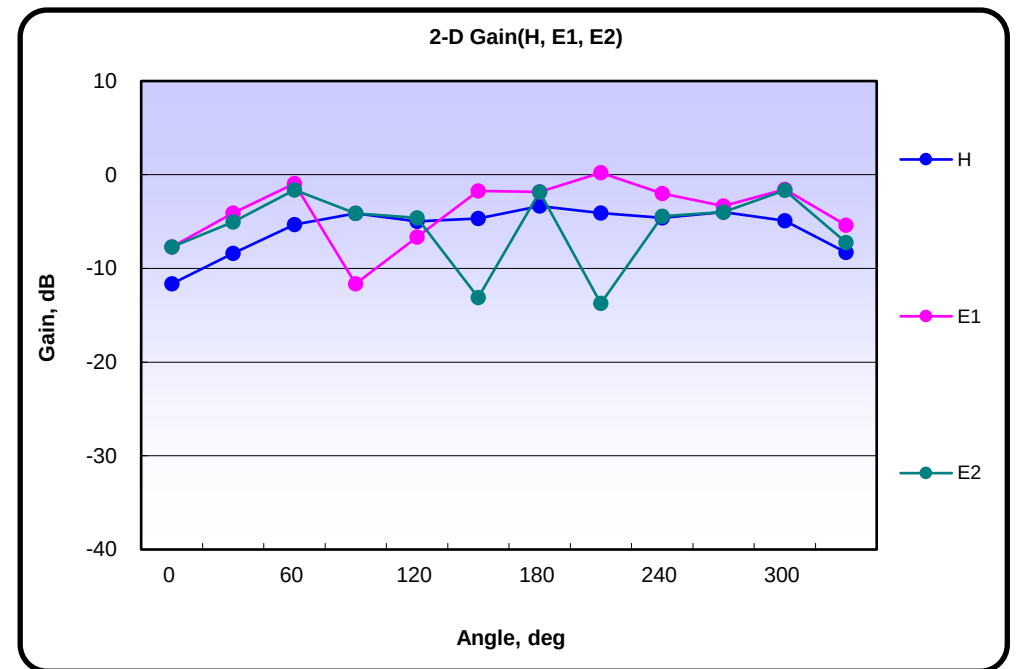
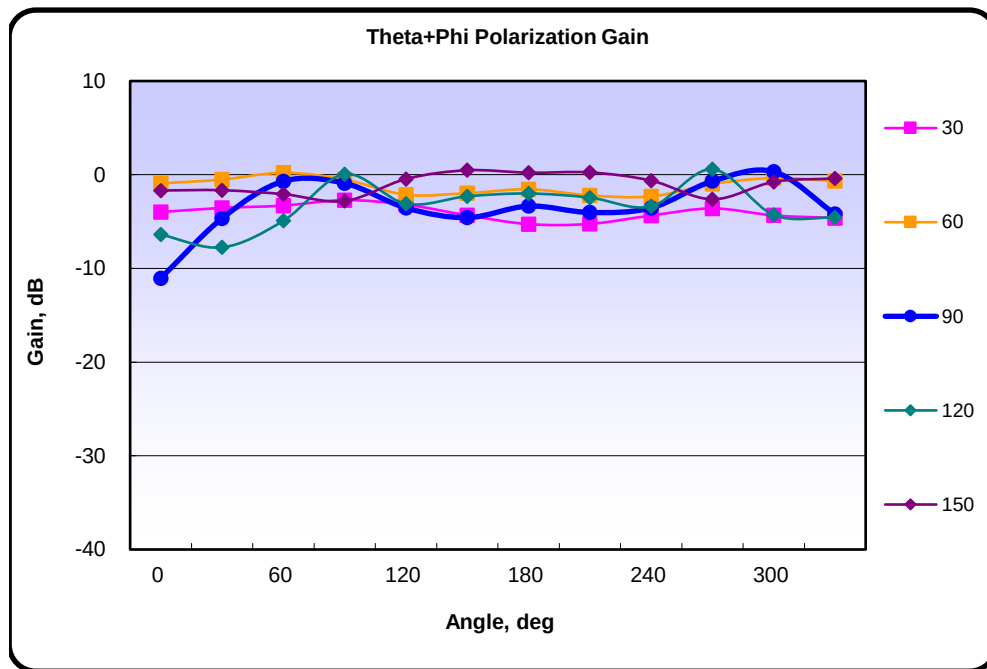
EUT		Frequency	2490	MHz	Comment	
EUT Version		Antenna Type				
Test Date	Tue 04/Feb/2025 16:13:46					
Test Condition	FS					
Tester						

Theta-Polarization Gain(dB)													Phi-Polarization Gain(dB)												
Theta Angle	Phi Angle												Theta Angle	Phi Angle											
	0	30	60	90	120	150	180	210	240	270	300	330		0	30	60	90	120	150	180	210	240	270	300	330
0	-7.70	-7.70	-7.70	-7.70	-7.70	-7.70	-7.70	-7.70	-7.70	-7.70	-7.70	-7.70	0												
30	-4.10	-3.79	-4.63	-5.05	-4.99	-5.03	-5.38	-5.53	-6.16	-7.22	-7.03	-5.44	30	-19.93	-16.06	-9.08	-6.51	-7.88	-12.60	-21.37	-17.28	-9.03	-6.07	-7.70	-12.26
60	-0.93	-1.23	-1.40	-1.62	-2.74	-2.11	-1.56	-2.21	-2.52	-1.65	-1.94	-1.45	60	-33.64	-8.70	-4.88	-6.98	-10.97	-16.91	-26.08	-33.05	-15.82	-9.47	-5.50	-8.51
90	-11.64	-8.39	-5.31	-4.12	-4.98	-4.68	-3.35	-4.09	-4.59	-3.98	-4.90	-8.29	90	-19.97	-7.04	-2.54	-3.72	-9.02	-20.79	-32.68	-22.72	-10.22	-3.43	-1.22	-6.34
120	-6.64	-9.49	-11.56	-4.59	-5.60	-2.62	-2.01	-2.74	-6.27	-4.42	-12.66	-8.78	120	-18.98	-12.57	-5.98	-1.78	-6.68	-13.85	-28.67	-14.19	-6.51	-1.06	-4.97	-6.65
150	-1.74	-3.53	-9.72	-13.12	-3.50	-0.40	0.21	-0.53	-3.62	-13.74	-11.09	-3.59	150	-20.39	-6.20	-2.89	-3.23	-3.43	-6.89	-28.13	-7.61	-3.65	-2.97	-1.18	-3.23
180	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	180												



Total Gain and Efficiency	-2.239 dB	59.7 %	Theta Pol	-4.0 dB	39.7 %	Phi Pol	-7.0 dB	20.06 %
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Theta-Polarization + Phi-Polarization(dB)													2-D Gain															
Theta Angle	Phi Angle												Plane	Angle, deg														
	0	30	60	90	120	150	180	210	240	270	300	330		0	30	60	90	120	150	180	210	240	270	300	330			
0	-7.70	-7.70	-7.70	-7.70	-7.70	-7.70	-7.70	-7.70	-7.70	-7.70	-7.70	-7.70	H	-11.64	-8.39	-5.31	-4.12	-4.98	-4.68	-3.35	-4.09	-4.59	-3.98	-4.90	-8.29			
30	-3.99	-3.54	-3.30	-2.71	-3.19	-4.33	-5.27	-5.25	-4.35	-3.60	-4.34	-4.62	E1	-7.70	-4.10	-0.93	-11.64	-6.64	-1.74	-1.83	0.21	-2.01	-3.35	-1.56	-5.38			
60	-0.93	-0.51	0.21	-0.51	-2.13	-1.97	-1.54	-2.21	-2.32	-0.99	-0.35	-0.67	E2	-7.70	-5.05	-1.62	-4.12	-4.59	-13.12	-1.83	-13.74	-4.42	-3.98	-1.65	-7.22			
90	-11.04	-4.65	-0.70	-0.91	-3.54	-4.57	-3.34	-4.03	-3.54	-0.69	0.33	-4.20	Average															
120	-6.39	-7.75	-4.92	0.05	-3.10	-2.30	-2.00	-2.44	-3.38	0.59	-4.29	-4.58	H	-5.20	dB													
150	-1.68	-1.65	-2.07	-2.81	-0.45	0.48	0.22	0.25	-0.62	-2.62	-0.76	-0.40	E1	-2.93	dB													
180	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	-1.83	E2	-4.47	dB													



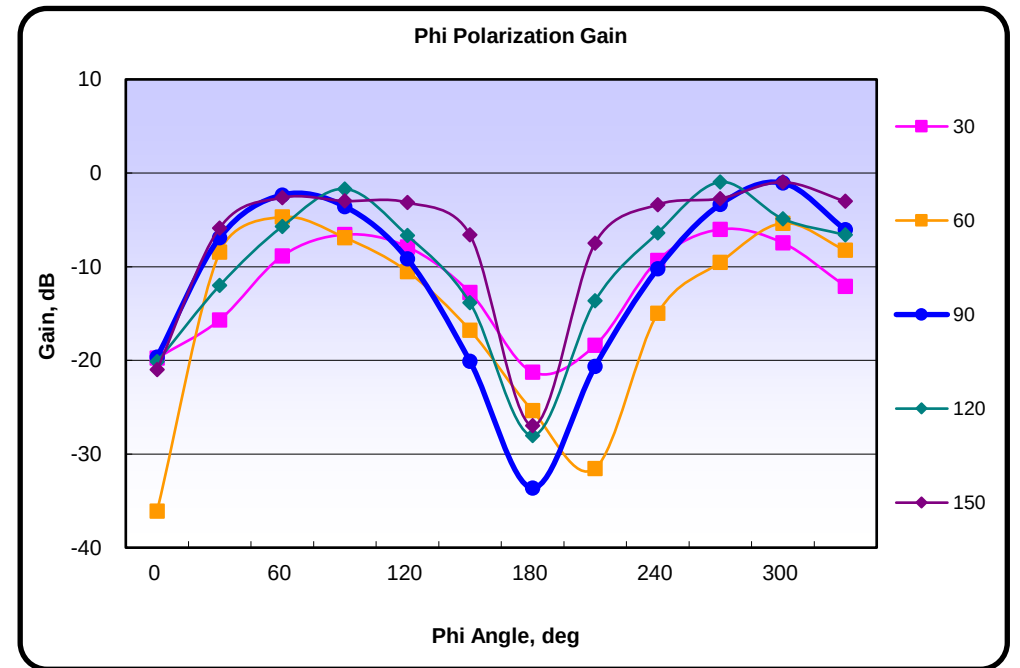
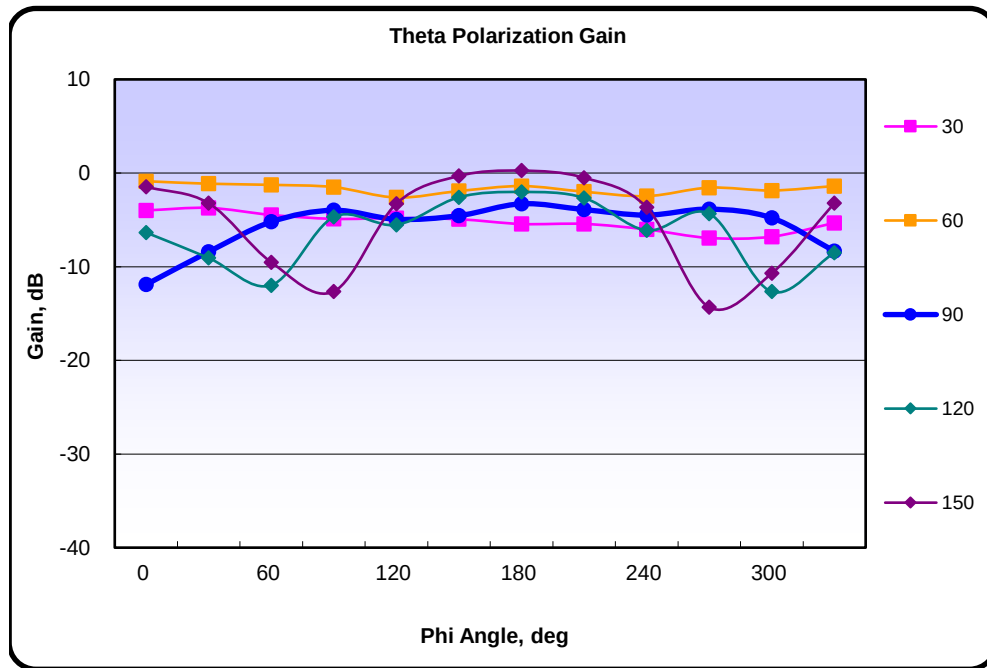
Total Gain and Efficiency	-2.239 dB	59.7 %	Theta Pol	-4.0 dB	39.7 %	Phi Pol	-7.0 dB	20.06 %
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Gain(Theta-Polarization and Phi-Polarization)

2500MHz

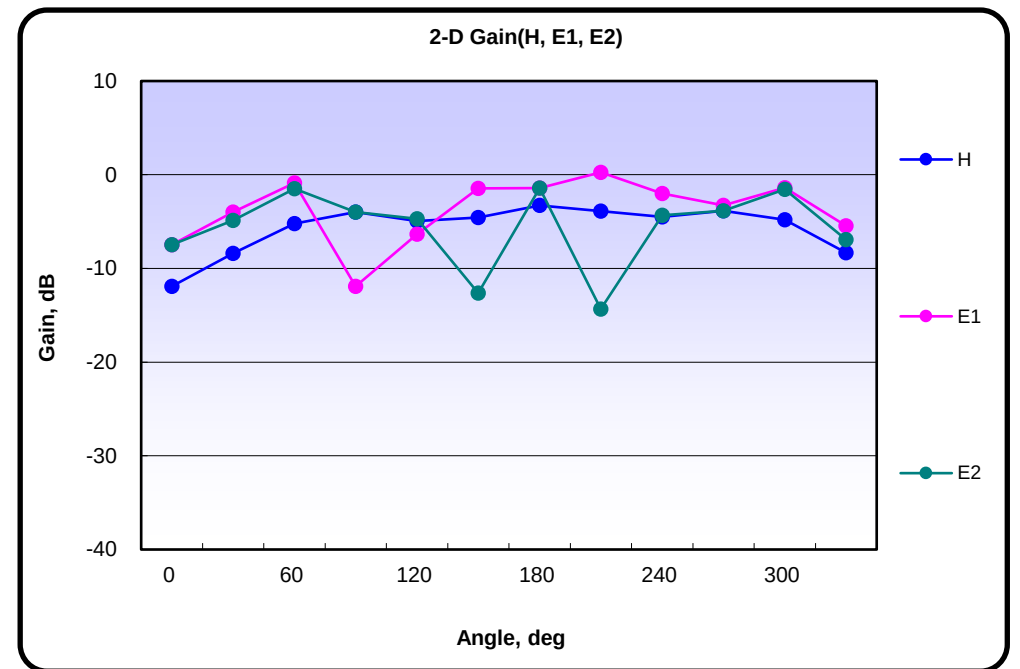
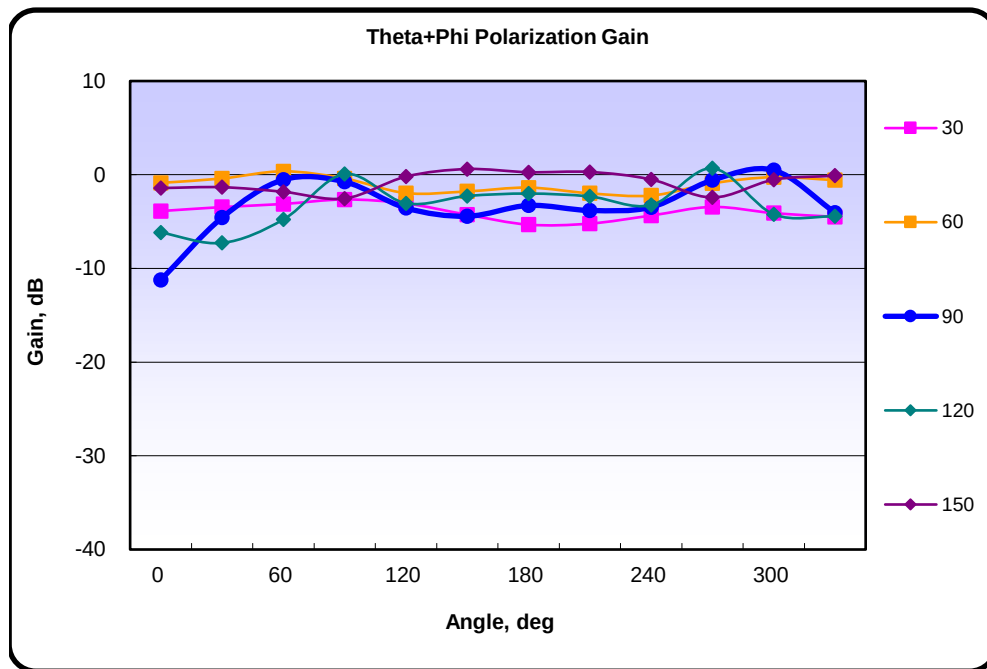
EUT		Frequency	2500	MHz	Comment	
EUT Version		Antenna Type				
Test Date	Tue 04/Feb/2025 16:13:46					
Test Condition	FS					
Tester						

Theta-Polarization Gain(dB)													Phi-Polarization Gain(dB)												
Theta Angle	Phi Angle												Theta Angle	Phi Angle											
	0	30	60	90	120	150	180	210	240	270	300	330		0	30	60	90	120	150	180	210	240	270	300	330
0	-7.48	-7.48	-7.48	-7.48	-7.48	-7.48	-7.48	-7.48	-7.48	-7.48	-7.48	-7.48	0												
30	-3.99	-3.72	-4.47	-4.89	-4.81	-4.93	-5.44	-5.43	-6.02	-6.93	-6.79	-5.32	30	-19.76	-15.68	-8.85	-6.57	-7.88	-12.76	-21.25	-18.40	-9.32	-6.01	-7.46	-12.09
60	-0.87	-1.14	-1.26	-1.50	-2.61	-1.92	-1.39	-1.99	-2.46	-1.56	-1.86	-1.39	60	-36.09	-8.45	-4.69	-6.89	-10.51	-16.78	-25.38	-31.54	-14.98	-9.52	-5.35	-8.25
90	-11.91	-8.41	-5.21	-3.97	-4.94	-4.55	-3.28	-3.90	-4.49	-3.85	-4.79	-8.34	90	-19.64	-6.90	-2.34	-3.57	-9.16	-20.10	-33.63	-20.65	-10.22	-3.34	-1.05	-6.06
120	-6.35	-9.06	-11.98	-4.69	-5.53	-2.58	-2.02	-2.65	-6.12	-4.33	-12.66	-8.51	120	-20.15	-12.01	-5.70	-1.69	-6.66	-13.85	-28.02	-13.64	-6.39	-0.96	-4.89	-6.61
150	-1.47	-3.22	-9.52	-12.64	-3.27	-0.31	0.26	-0.50	-3.66	-14.33	-10.70	-3.21	150	-20.99	-5.86	-2.63	-2.98	-3.15	-6.59	-26.98	-7.47	-3.37	-2.72	-0.97	-3.02
180	-1.43	-1.43	-1.43	-1.43	-1.43	-1.43	-1.43	-1.43	-1.43	-1.43	-1.43	-1.43	180												



Total Gain and Efficiency	-2.112 dB	61.5 %	Theta Pol	-3.9 dB	40.7 %	Phi Pol	-6.8 dB	20.82 %
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Theta-Polarization + Phi-Polarization(dB)													2-D Gain														
Theta Angle	Phi Angle												Plane	Angle, deg													
	0	30	60	90	120	150	180	210	240	270	300	330		0	30	60	90	120	150	180	210	240	270	300	330		
0	-7.48	-7.48	-7.48	-7.48	-7.48	-7.48	-7.48	-7.48	-7.48	-7.48	-7.48	-7.48	H	-11.91	-8.41	-5.21	-3.97	-4.94	-4.55	-3.28	-3.90	-4.49	-3.85	-4.79	-8.34		
30	-3.88	-3.45	-3.12	-2.64	-3.07	-4.27	-5.33	-5.22	-4.35	-3.44	-4.10	-4.49	E1	-7.48	-3.99	-0.87	-11.91	-6.35	-1.47	-1.43	0.26	-2.02	-3.28	-1.39	-5.44		
60	-0.87	-0.40	0.37	-0.40	-1.96	-1.78	-1.37	-1.99	-2.22	-0.92	-0.25	-0.58	E2	-7.48	-4.89	-1.50	-3.97	-4.69	-12.64	-1.43	-14.33	-4.33	-3.85	-1.56	-6.93		
90	-11.23	-4.58	-0.53	-0.76	-3.55	-4.43	-3.28	-3.81	-3.46	-0.58	0.48	-4.04	Average														
120	-6.17	-7.28	-4.78	0.07	-3.05	-2.27	-2.01	-2.32	-3.24	0.68	-4.22	-4.45	H	-5.10	dB												
150	-1.42	-1.33	-1.82	-2.53	-0.20	0.61	0.27	0.30	-0.50	-2.43	-0.53	-0.10	E1	-2.80	dB												
180	-1.43	-1.43	-1.43	-1.43	-1.43	-1.43	-1.43	-1.43	-1.43	-1.43	-1.43	-1.43	E2	-4.31	dB												



Total Gain and Efficiency	-2.112	dB	61.5	%	Theta Pol	-3.9	dB	40.7	%	Phi Pol	-6.8	dB	20.82	%
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