

KSA-875MS1008A

(Peak gain : -8.68 dBi)



Antenna Sample Specification

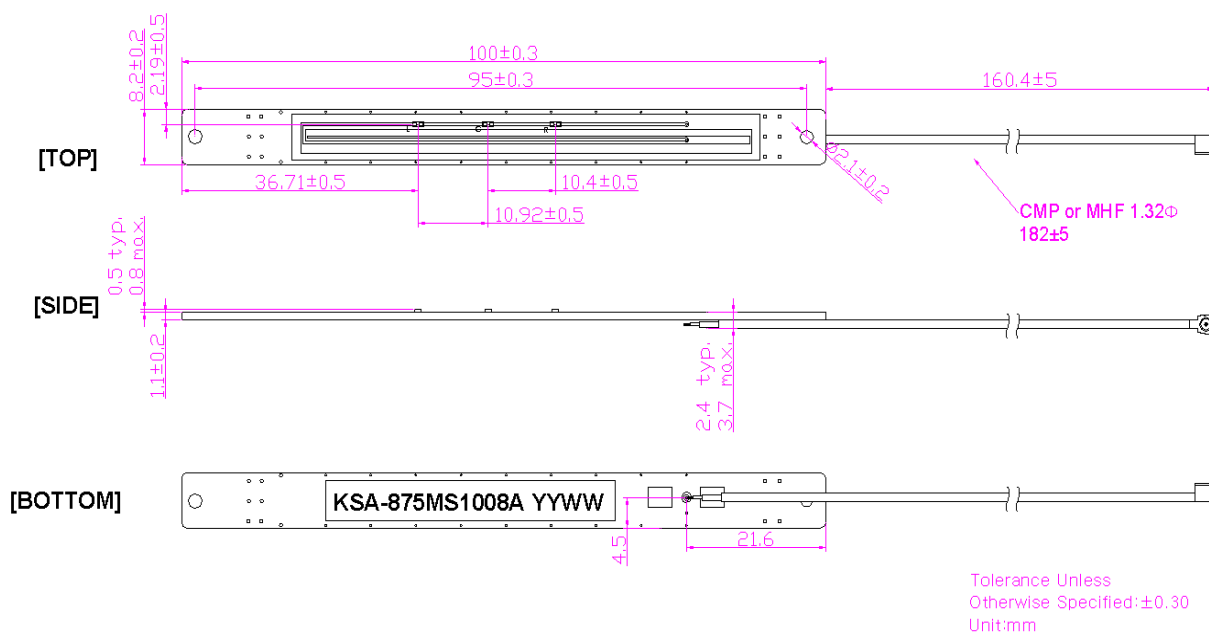


Customer	PHYCHIPS	Written	Checked	Approved
Part No.	KSA-875MS1008A	Li.R		
Date	10-Apr-25			

1. Electrical Specifications.

ITEM	Specifications
Center Frequency(=Fc)	875 ± 15 MHz
Return Loss @ Fc	-10 dB max.
Impedance	50 Ω
Polarization	Linear
Typical Peak Gain @ Fc	-8.0 dBi

2. Dimensions.



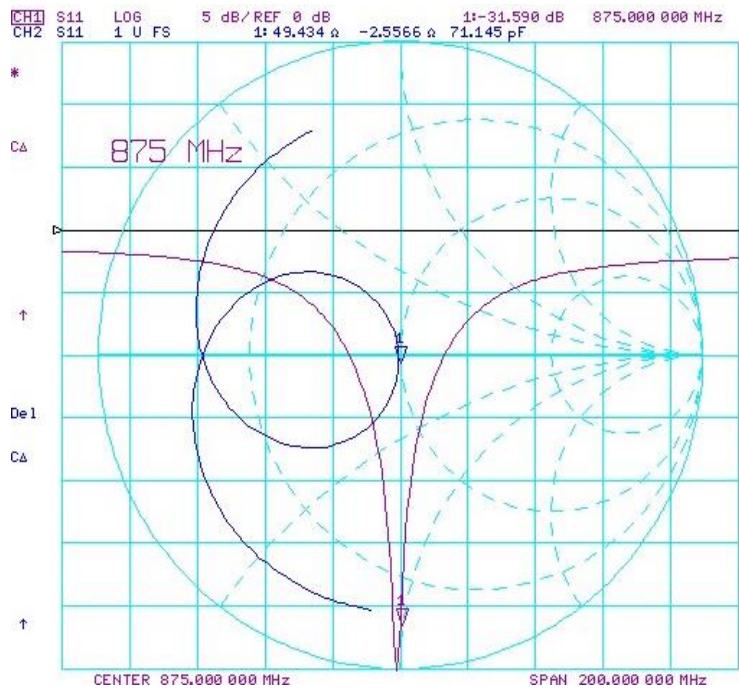
* Both CMP(Gigalane) and MHF(I-PEX) can be used interchangeably.
However, only one type, either CMP or MHF, must be used in the same LOT production.

* YYWW : Date Code

* Dimensions of Connector :

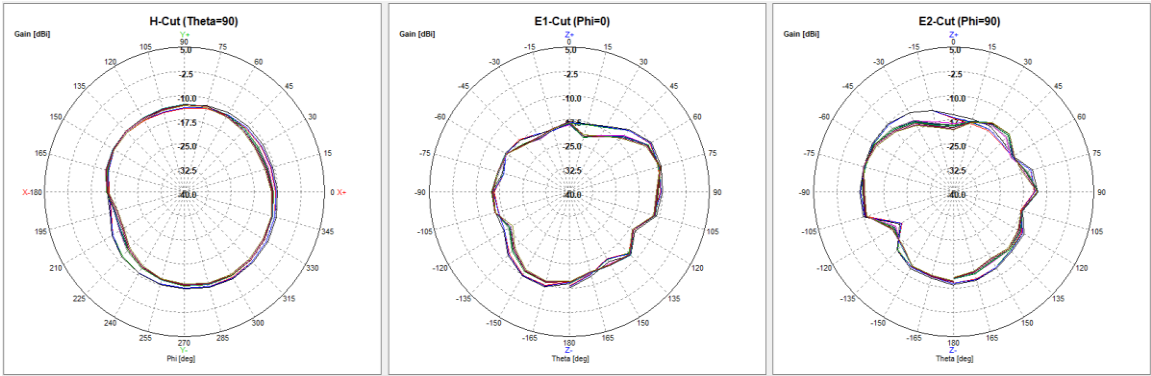
CMP	MHF

3. Data
3.1) Return Loss



3.2) Antenna Chamber Data

No.	Freq.	PwrSurr	Eff.[%]	Avg.[dBi]	Peak[dBi]	Theta[deg]	Phi[deg]	H(Theta=0)	Avg.[dBi]	Peak[dBi]	Phi[deg]	BW[deg]	E1(Phi=0)	Avg.[dBi]	Peak[dBi]	Theta[deg]	BW[deg]	E2(Phi=90)	Avg.[dBi]	Peak[dBi]	Theta[deg]	BW[deg]
1	865.000	4.77	-13.22	-8.77	75.00	315.00	-11.71	-9.20	300.00	271.73	-13.60	-9.85	-165.00	57.28	-13.23	-10.05	-90.00	88.74				
2	867.000	4.91	-13.09	-8.65	75.00	315.00	-11.59	-9.14	300.00	219.57	-13.47	-9.71	-165.00	57.36	-13.12	-10.02	-90.00	88.85				
3	868.000	4.95	-13.06	-8.60	75.00	315.00	-11.58	-9.15	300.00	208.41	-13.45	-9.73	-165.00	58.00	-13.08	-10.02	-90.00	88.74				
4	875.000	5.42	-12.66	-8.20	75.00	315.00	-11.21	-8.88	315.00	214.94	-13.03	-9.44	-165.00	58.62	-12.73	-9.83	-90.00	87.67				
5	902.000	4.35	-13.61	-8.77	75.00	315.00	-12.20	-9.91	300.00	229.92	-14.00	-9.88	75.00	56.51	-13.78	-10.09	-75.00	71.41				
6	904.000	4.37	-13.60	-8.74	75.00	315.00	-12.20	-9.86	315.00	228.60	-13.96	-9.77	75.00	55.76	-13.76	-10.00	-75.00	70.00				
7	906.000	4.38	-13.58	-8.68	75.00	315.00	-12.19	-9.84	300.00	228.31	-13.94	-9.71	75.00	55.13	-13.75	-9.90	-75.00	68.43				
8	908.000	4.39	-13.58	-8.68	75.00	315.00	-12.22	-9.88	300.00	227.98	-13.91	-9.67	75.00	54.88	-13.73	-9.85	-75.00	67.42				
9	910.000	4.34	-13.63	-8.73	75.00	315.00	-12.29	-9.91	315.00	228.42	-13.96	-9.66	75.00	54.23	-13.79	-9.85	-75.00	66.54				
10	912.000	4.23	-13.74	-8.86	75.00	315.00	-12.43	-10.01	300.00	150.19	-14.05	-9.70	75.00	53.55	-13.91	-9.93	-75.00	65.14				
11	914.000	4.06	-13.92	-9.03	75.00	315.00	-12.63	-10.18	300.00	149.92	-14.22	-9.86	75.00	53.34	-14.09	-10.05	-75.00	63.42				
12	916.000	3.89	-14.10	-9.26	75.00	315.00	-12.81	-10.37	300.00	149.20	-14.38	-9.96	75.00	52.67	-14.27	-10.22	-75.00	63.08				
13	918.000	3.75	-14.25	-9.40	75.00	315.00	-13.00	-10.52	300.00	148.86	-14.50	-10.06	75.00	52.18	-14.43	-10.32	-75.00	60.87				
14	920.000	3.63	-14.40	-9.53	75.00	330.00	-13.16	-10.69	300.00	149.01	-14.64	-10.16	75.00	51.77	-14.58	-10.51	-75.00	60.96				
15	922.000	3.50	-14.57	-9.71	75.00	330.00	-13.34	-10.80	300.00	135.78	-14.79	-10.28	75.00	51.47	-14.76	-10.66	-75.00	60.40				
16	924.000	3.33	-14.77	-9.90	75.00	330.00	-13.57	-11.04	315.00	136.23	-15.00	-10.42	75.00	50.88	-14.95	-10.79	-75.00	59.08				
17	926.000	3.17	-14.99	-10.16	75.00	330.00	-13.79	-11.22	315.00	136.66	-15.20	-10.54	75.00	49.57	-15.19	-11.09	-75.00	59.11				
18	928.000	3.04	-15.18	-10.35	75.00	345.00	-13.97	-11.39	300.00	147.57	-15.38	-10.73	75.00	49.56	-15.38	-11.29	-75.00	58.63				



4. Test Process

4.1. Test Process (S-parameter Measurement)

4.1.1. Purpose

Confirm that the 1. electrical characteristics of the antenna are correct.

4.1.2. Configuration

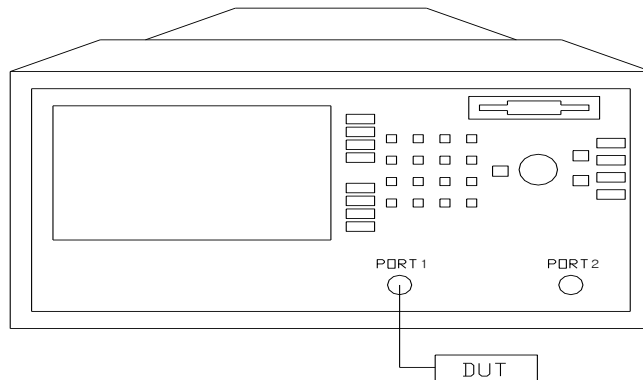


Fig 1. Network Analyzer Block Diagram

4.1.3. Test Equipment

Network Analyzer – HP 8753ES, HP 8753E...

4.1.4. Test Method

- ①. Set up the Network Analyzer as follows.
Center Frequency – 920MHz
Frequency Span – 200MHz
Number of Point – 401
- ②. Calibration the Port 1 of Network Analyzer
- ③. Connect the measurement antenna to the Port 1 cable
Check that this is meet the specifications with measuring the S11 value.
Record them in the characteristics section of the report.

4.1.5. Test Site

Research Institute of SANGSHIN

4.2. Test Process (Gain Measurement)

4.2.1. Purpose

Check the radiation gain of the antenna

4.2.2. Chamber System Diagram

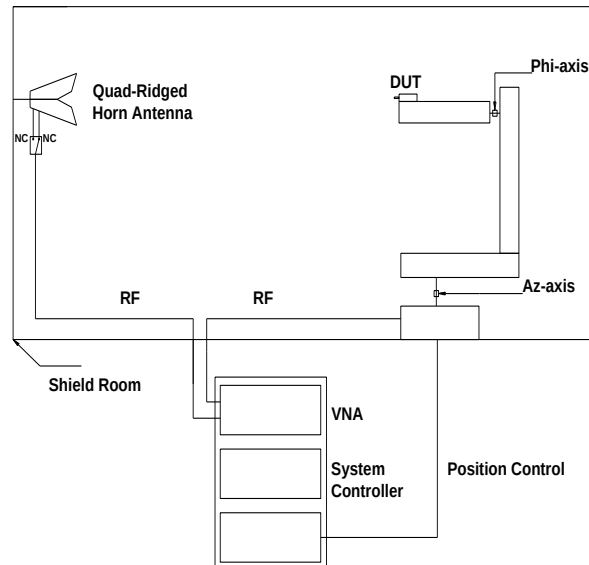


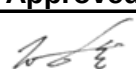
Fig 2. Chamber Test Block Diagram

4.2.3. Test Site

Research Institute of SANGSHIN

KSA-920MS4510A

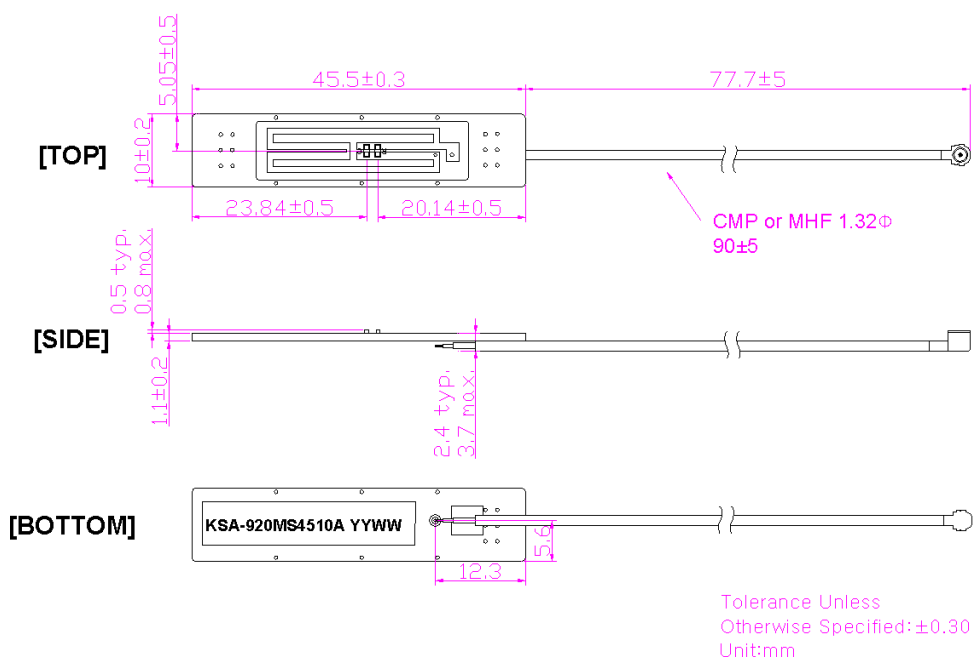
(Peak gain : -35.44 dBi)

Customer	PHYCHIPS	Written	Checked	Approved
Part No.	KSA-920MS4510A	Li.R		
Date	18-Jun-25			

1. Electrical Specifications.

ITEM	Specifications
Operating Frequency	865-928 MHz
Return Loss	10 dB min.
Impedance	50 Ω
Polarization	Linear
Peak Gain @ 920MHz	-35.0 dBi

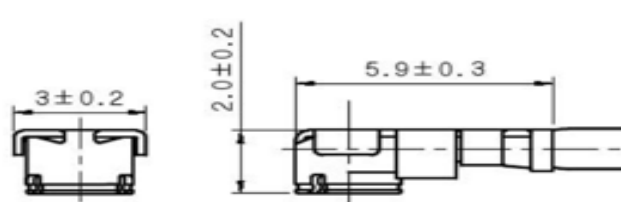
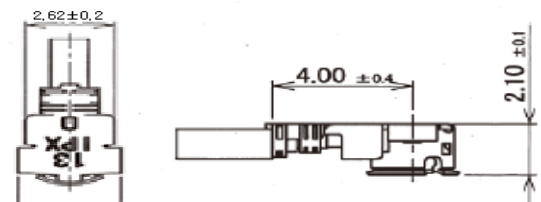
2. Dimensions.



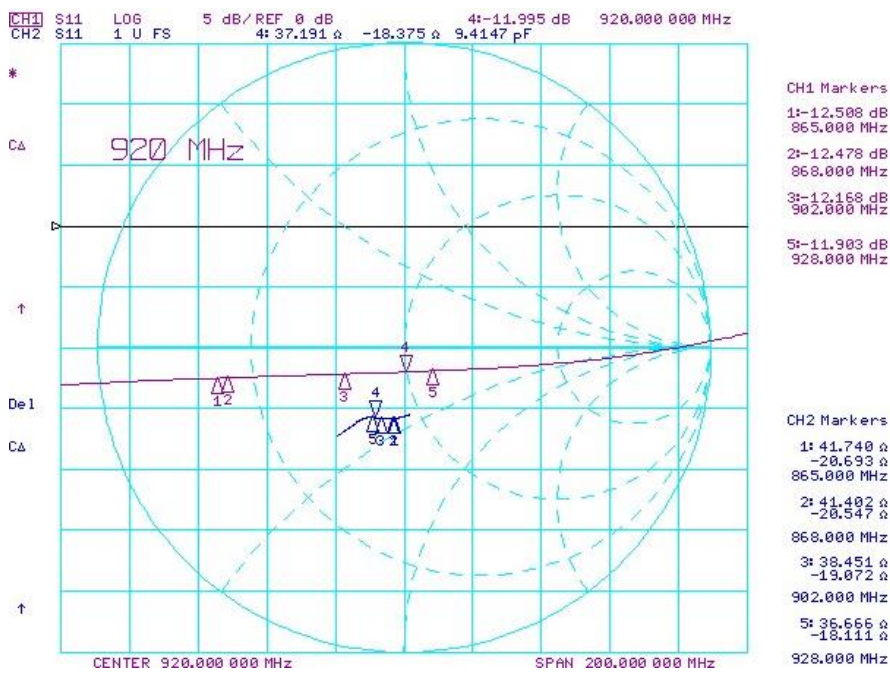
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However, only one type, either CMP or MHF, must be used in the same LOT production.

* YYWW : Date Code

* Dimensions of Connector :

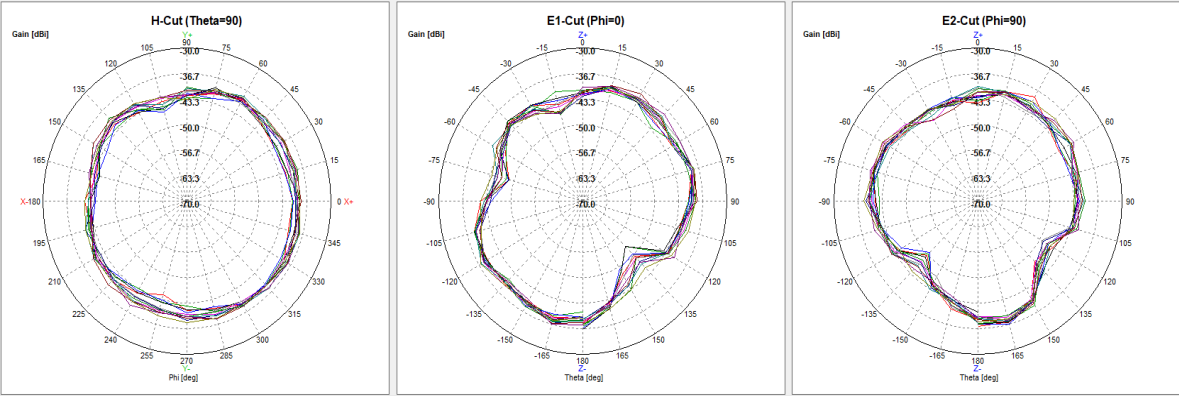
CMP	MHF
 Dimensions (mm): - Width: 3 ± 0.2 - Height: 2.0 ± 0.2 - Length: 5.9 ± 0.3	 Dimensions (mm): - Width: 2.62 ± 0.2 - Height: 3.00 ± 0.2 - Length: 4.00 ± 0.4 - Height: 2.10 ± 0.1

3. Data
3.1) Return Loss



3.2) Antenna Chamber Data

No.	Freq.	Pwr Surr	Eff. [%]	Avg. [dB]	Peak [dB]	Theta [°]	Phi [deg]	H(Theta=)	Phi [deg]	BW [deg]	E1(Phi=0)	Peak [dB]	Theta [°]	BW [deg]	E2(Phi=90)	Peak [dB]	Theta [°]	BW [deg]
1	865.000	0.01	-41.09	-35.46	150.00	135.00	-41.20	-38.68	315.00	119.61	-41.04	-38.22	180.00	99.66	-41.75	-37.32	180.00	39.95
2	867.000	0.01	-41.11	-36.28	150.00	120.00	-41.40	-38.47	300.00	113.23	-41.05	-37.35	180.00	48.88	-41.82	-37.52	165.00	23.45
3	868.000	0.01	-41.11	-36.42	150.00	135.00	-41.52	-39.00	300.00	170.68	-40.97	-36.88	180.00	88.67	-41.72	-36.84	165.00	30.75
4	902.000	0.01	-41.19	-36.38	150.00	135.00	-40.50	-38.38	345.00	239.94	-40.84	-38.12	180.00	92.20	-41.72	-38.65	165.00	47.47
5	904.000	0.01	-41.14	-36.06	150.00	135.00	-40.41	-37.73	315.00	178.36	-40.77	-37.62	-165.00	54.20	-41.59	-37.95	165.00	45.36
6	906.000	0.01	-41.09	-36.07	150.00	120.00	-40.42	-38.47	330.00	222.54	-40.86	-36.87	-165.00	45.40	-41.87	-38.92	-90.00	53.27
7	908.000	0.01	-40.88	-35.54	150.00	120.00	-40.01	-37.84	345.00	232.82	-40.49	-37.50	-165.00	94.90	-41.44	-38.43	-180.00	34.16
8	910.000	0.01	-40.85	-35.83	150.00	135.00	-39.75	-37.55	345.00	215.49	-40.46	-37.35	-165.00	85.94	-41.43	-37.60	165.00	38.75
9	912.000	0.01	-40.74	-36.22	150.00	150.00	-39.64	-37.74	330.00	237.10	-40.39	-36.93	-165.00	49.15	-41.25	-37.15	165.00	39.05
10	914.000	0.01	-40.74	-35.86	150.00	135.00	-39.85	-37.53	330.00	208.18	-40.24	-36.70	-165.00	33.38	-41.33	-37.87	165.00	40.55
11	916.000	0.01	-40.57	-35.59	150.00	120.00	-39.71	-37.47	345.00	225.26	-40.31	-37.35	-120.00	85.53	-41.17	-38.10	165.00	40.53
12	918.000	0.01	-40.45	-36.04	150.00	120.00	-39.30	-37.53	315.00	236.81	-40.40	-37.66	-120.00	29.84	-41.10	-37.84	165.00	39.47
13	920.000	0.01	-40.45	-35.44	150.00	135.00	-39.25	-37.42	360.00	229.23	-40.24	-37.42	90.00	100.31	-40.91	-37.87	-180.00	224.78
14	922.000	0.01	-40.35	-35.89	165.00	135.00	-39.26	-36.97	330.00	183.74	-40.10	-37.48	-120.00	100.10	-40.70	-37.35	165.00	40.16
15	924.000	0.01	-40.31	-35.75	150.00	135.00	-39.18	-37.20	270.00	229.38	-39.95	-37.03	-120.00	82.06	-40.48	-37.20	-90.00	34.24
16	926.000	0.01	-40.26	-35.77	150.00	120.00	-39.09	-37.04	330.00	221.20	-39.88	-36.57	45.00	85.98	-40.72	-37.97	150.00	58.01
17	928.000	0.01	-40.21	-35.87	150.00	120.00	-38.71	-36.45	330.00	220.83	-39.96	-37.09	90.00	84.75	-40.65	-37.88	-90.00	66.67



4. Test Process

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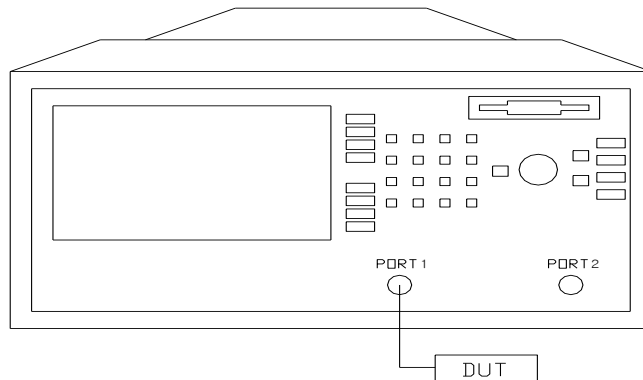


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Research Institute of SANGSHIN

4.2. Test Process (Gain Measurement)

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4.2.2. Chamber System Diagram

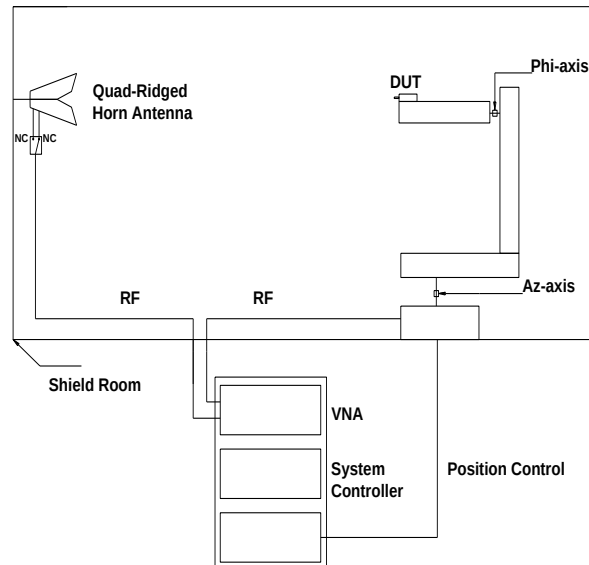


Fig 2. Chamber Test Block Diagram

4.2.3. Test Site

Research Institute of SANGSHIN