



# Celluon\_9374 Rev1.0 패턴 안테나 매칭 값 및 성능 데이터

**2014. 08. 13**

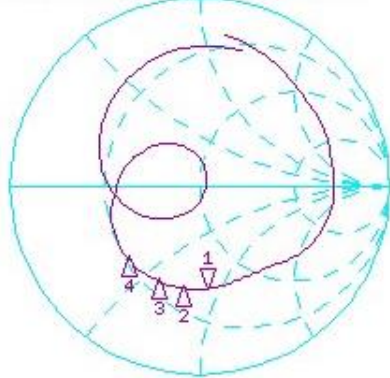


## 1. Rev 1.0 패턴 안테나 매칭 값 및 성능

- 1-1. CH0 패턴 안테나 vswr 및 매칭 값
- 1-2. CH0 패턴 안테나 Gain
- 1-3. CH1 패턴 안테나 VSWR 및 매칭 값
- 1-4. CH1 패턴 안테나 Gain

## 1-1. CH0 패턴 안테나 vswr 및 매칭 값

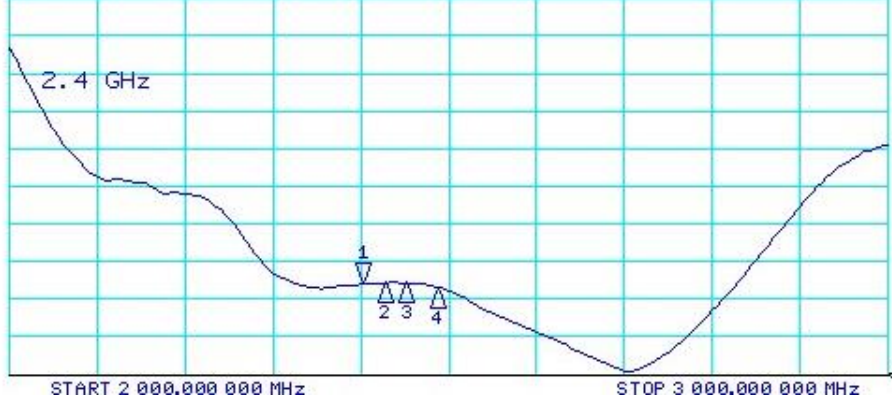
CH1 S11 1 U FS 1: 28.359  $\Omega$  -44.133  $\Omega$  1.5026 pF 2 400.000 000 MHz



CH1 Markers

2: 23.451  $\Omega$   
-36.250  $\Omega$   
2.42500 GHz  
3: 20.136  $\Omega$   
-28.580  $\Omega$   
2.45000 GHz  
4: 17.514  $\Omega$   
-18.394  $\Omega$   
2.48500 GHz

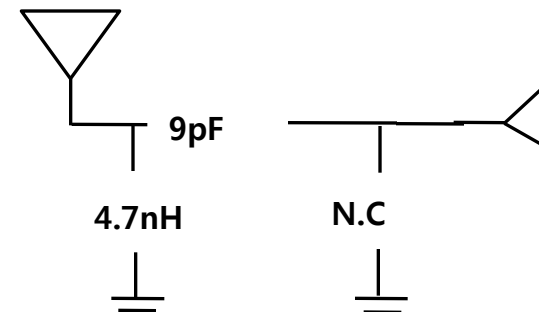
CH2 S11 SWR 1 / REF 1 1: 3.4104 2 400.000 000 MHz



CH2 Markers

2: 3.4298  
2.42500 GHz  
3: 3.4031  
2.45000 GHz  
4: 3.2874  
2.48500 GHz

튜닝 매칭 값



## 1-2. CH0 패턴 안테나 Gain

### 2.4GHz 대역

Summary							Multiple Frequency				Multiple C			
No.	Freq.	PwrSum					H( $\theta=90$ )				E1( $\phi=0$ )			
		Eff.[%]	Avg.[dBi]	Peak[dBi]	$\theta$ [deg]	$\phi$ [deg]	Avg.[dBi]	Peak[dBi]	$\phi$ [deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	$\theta$ [deg]	BW[deg]
1	2400.000	29.89	-5.25	-0.14	135.00	320.00	-7.01	-2.90	320.00	999.00	-5.99	-2.25	135.00	47.94
2	2425.000	30.69	-5.13	-0.01	135.00	305.00	-6.79	-2.51	310.00	999.00	-5.87	-2.02	135.00	48.33
3	2450.000	37.99	-4.20	0.97	135.00	300.00	-5.88	-1.91	300.00	999.00	-4.77	-0.86	135.00	52.47
4	2485.000	41.51	-3.82	1.04	135.00	300.00	-5.36	-1.42	305.00	999.00	-4.35	-1.06	75.00	35.06

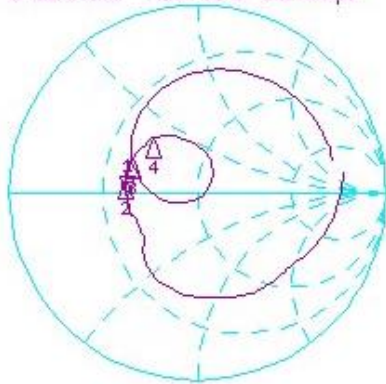
### 5GHz 대역

Summary							Multiple Frequency				Multiple C			
No.	Freq.	PwrSum					H( $\theta=90$ )				E1( $\phi=0$ )			
		Eff.[%]	Avg.[dBi]	Peak[dBi]	$\theta$ [deg]	$\phi$ [deg]	Avg.[dBi]	Peak[dBi]	$\phi$ [deg]	BW[deg]	Avg.[dBi]	Peak[dBi]	$\theta$ [deg]	BW[deg]
5	5150.000	46.02	-3.37	3.11	150.00	225.00	-4.07	-1.11	165.00	47.31	-3.82	2.39	-150.00	23.89
6	5250.000	34.65	-4.60	1.50	150.00	175.00	-5.14	-1.44	295.00	26.28	-5.06	0.84	-150.00	24.38
7	5500.000	44.23	-3.54	2.90	150.00	205.00	-5.06	-0.81	285.00	23.38	-3.96	1.73	-150.00	30.86
8	5650.000	31.57	-5.01	0.87	150.00	225.00	-6.44	-1.15	285.00	12.32	-5.87	-1.61	-135.00	36.47
9	5725.000	39.30	-4.06	2.06	150.00	220.00	-5.07	0.52	280.00	22.30	-5.13	1.42	-150.00	24.58
10	5750.000	35.33	-4.52	1.34	150.00	170.00	-5.49	-0.16	280.00	16.23	-5.09	-0.23	-150.00	42.63
11	5800.000	28.07	-5.52	0.52	150.00	225.00	-5.99	0.48	275.00	12.07	-6.90	-2.27	-150.00	999.00
12	5825.000	21.51	-6.67	0.06	150.00	300.00	-7.60	-2.45	240.00	9.07	-7.17	-1.47	-135.00	25.50
13	5850.000	18.82	-7.25	0.30	135.00	135.00	-8.12	-2.11	80.00	5.35	-8.03	-2.02	-135.00	17.29

## 2-1. CH1 패턴 안테나 vswr 및 매칭 값

CH1 S11 1 U FS 1: 22.348  $\Omega$  -1.0791  $\Omega$  61.454 pF 2 400.000 000 MHz

\*  
Del  
Cor



CH1 Markers  
2: 21.907  $\Omega$   
3.6357  $\Omega$   
2.42500 GHz  
3: 22.659  $\Omega$   
9.3213  $\Omega$   
2.45000 GHz  
4: 26.478  $\Omega$   
17.203  $\Omega$   
2.48500 GHz

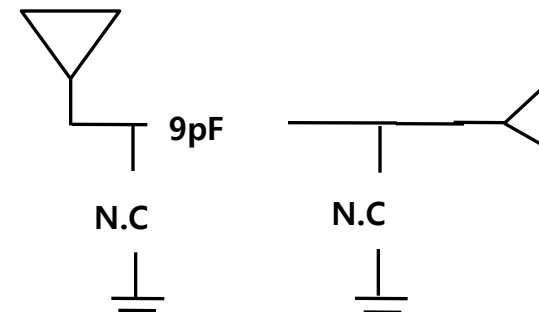
CH2 S11 SWR 1 / REF 1 1: 2.2383 2 400.000 000 MHz

Del  
Cor



CH2 Markers  
2: 2.2971  
2.42500 GHz  
3: 2.3019  
2.45000 GHz  
4: 2.1836  
2.48500 GHz

튜닝 매칭 값



## 2-2. CH1 패턴 안테나 Gain

### 2.4GHz 대역

Summary							Multiple Frequency				Multiple C			
No.	Freq.	PwrSum Eff.[%]	Avg.[dBi]	Peak[dBi]	$\theta$ [deg]	$\phi$ [deg]	H( $\theta=90$ ) Avg.[dBi]	Peak[dBi]	$\phi$ [deg]	BW[deg]	E1( $\phi=0$ ) Avg.[dBi]	Peak[dBi]	$\theta$ [deg]	BW[deg]
1	2400.000	40.20	-3.96	1.39	120.00	130.00	-5.64	-2.59	195.00	139.34	-4.60	-0.79	-135.00	23.11
2	2425.000	50.21	-2.99	2.39	135.00	125.00	-4.38	-0.77	210.00	118.32	-3.65	0.34	-135.00	21.86
3	2450.000	41.25	-3.85	1.43	135.00	125.00	-5.15	-1.38	200.00	132.81	-4.54	-0.08	-75.00	54.24
4	2485.000	46.82	-3.30	2.05	135.00	130.00	-4.43	-0.38	210.00	70.76	-3.91	0.29	-75.00	50.15

### 5GHz 대역

Summary							Multiple Frequency				Multiple C			
No.	Freq.	PwrSum Eff.[%]	Avg.[dBi]	Peak[dBi]	$\theta$ [deg]	$\phi$ [deg]	H( $\theta=90$ ) Avg.[dBi]	Peak[dBi]	$\phi$ [deg]	BW[deg]	E1( $\phi=0$ ) Avg.[dBi]	Peak[dBi]	$\theta$ [deg]	BW[deg]
5	5150.000	16.52	-7.82	-0.94	120.00	255.00	-8.38	-3.66	225.00	22.79	-8.87	-2.34	-135.00	17.33
6	5250.000	14.93	-8.26	-0.87	120.00	265.00	-8.42	-5.13	140.00	56.71	-8.57	-4.49	165.00	42.48
7	5500.000	23.99	-6.20	1.69	150.00	240.00	-6.12	-0.31	215.00	7.78	-6.52	-1.23	-135.00	18.47
8	5650.000	24.74	-6.07	0.94	150.00	270.00	-6.77	-1.94	250.00	63.00	-6.69	-0.77	-135.00	22.69
9	5725.000	51.94	-2.84	4.78	150.00	250.00	-2.89	1.45	260.00	12.08	-3.44	2.72	-135.00	38.17
10	5750.000	48.60	-3.13	4.64	150.00	255.00	-3.35	0.49	225.00	41.00	-3.95	0.77	-165.00	44.16
11	5800.000	38.22	-4.18	4.01	150.00	255.00	-4.09	-0.57	230.00	91.22	-4.99	1.00	-150.00	35.44
12	5825.000	31.68	-4.99	2.52	150.00	270.00	-4.73	-1.27	290.00	37.18	-5.47	0.20	-135.00	42.80
13	5850.000	29.99	-5.23	1.88	150.00	240.00	-5.19	0.05	280.00	17.73	-6.28	-0.64	-135.00	38.92





CN0 2.4Ghz

**Graph Option**

**Style**

☒ Polar ☐ Rectangular

**Zoom**

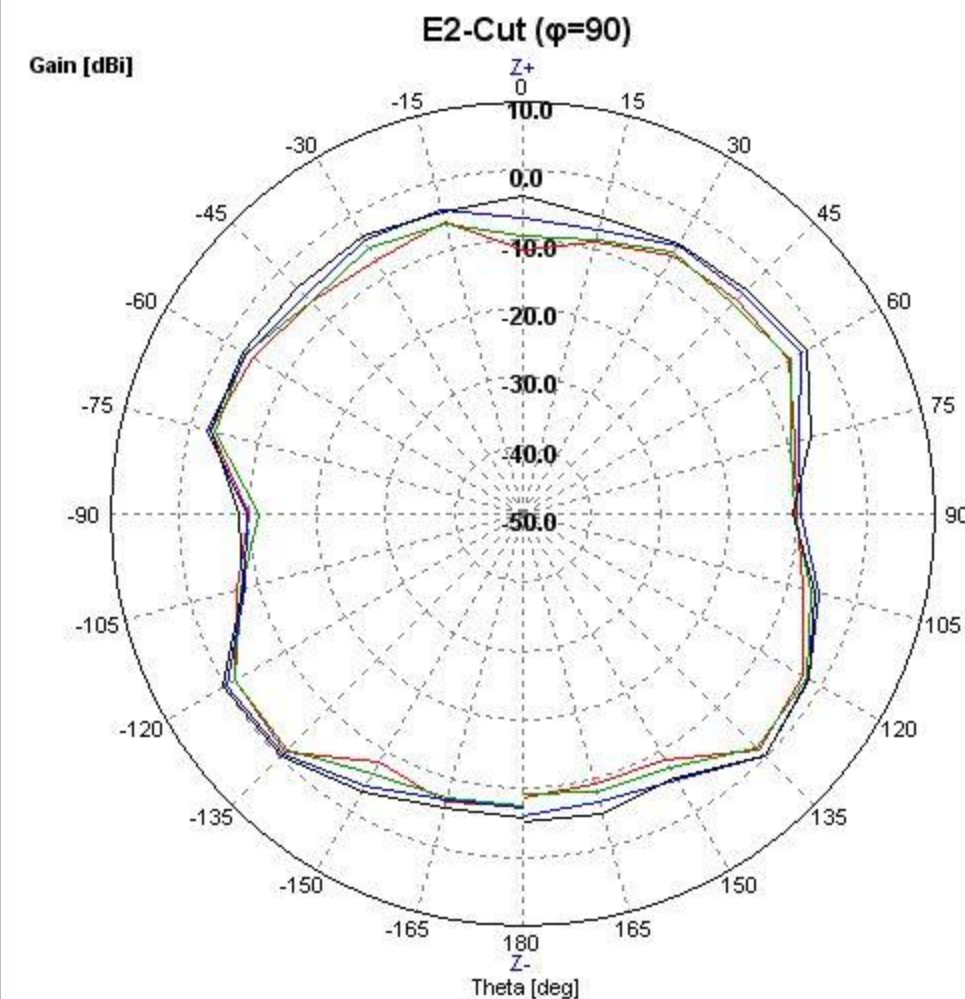
H-Cut E1-Cut E2-Cut

**Scale**

Max : 10

Min : -50

Apply





No.	Freq.	PwrSum	Eff.[%]	Avg.[dBi]	Peak[dBi]	$\theta$ [deg]	$\phi$ [deg]	H( $\theta=90$ )	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]
5	5150.000	46.02	-3.37	3.11	150.00	225.00		-4.07	-1.11	165.00	47.31	-3.82	2.39	-150.00	23.89	-2.52	1.15	-165.00	27.04			
6	5250.000	34.65	-4.60	1.50	150.00	175.00		-5.14	-1.44	295.00	26.28	-5.06	0.84	-150.00	24.38	-3.64	0.73	150.00	19.30			
7	5500.000	44.23	-3.54	2.90	150.00	205.00		-5.06	-0.81	285.00	23.38	-3.96	1.73	-150.00	30.86	-3.47	0.53	150.00	14.97			
8	5650.000	31.57	-5.01	0.87	150.00	225.00		-6.44	-1.15	285.00	12.32	-5.87	-1.61	-135.00	36.47	-4.78	-2.15	-135.00	63.06			
9	5725.000	39.30	-4.06	2.06	150.00	220.00		-5.07	0.52	280.00	22.30	-5.13	1.42	-150.00	24.58	-3.50	0.16	150.00	13.16			
10	5750.000	35.33	-4.52	1.34	150.00	170.00		-5.49	-0.16	280.00	16.23	-5.09	-0.23	-150.00	42.63	-4.15	-0.96	-165.00	22.09			
11	5800.000	28.07	-5.52	0.52	150.00	225.00		-5.99	0.48	275.00	12.07	-6.90	-2.27	-150.00	999.00	-4.24	-1.23	-165.00	999.00			
12	5825.000	21.51	-6.67	0.06	150.00	300.00		-7.60	-2.45	240.00	9.07	-7.17	-1.47	-135.00	25.50	-5.52	-2.40	-165.00	999.00			
13	5850.000	18.82	-7.25	0.30	135.00	135.00		-8.12	-2.11	80.00	5.35	-8.03	-2.02	-135.00	17.29	-6.13	-3.27	-165.00	999.00			

CN0 5Ghz

## Plot Data

Polarization :

Powr-Sum

Frequency :

[MHz]

2400,000  
2425,000  
2450,000  
2485,000  
5150,000  
5250,000  
5500,000  
5650,000  
5725,000  
5750,000  
5800,000  
5825,000  
5850,000

## Graph Option

Style

☒ Polar ☐ Rectangular

Zoom

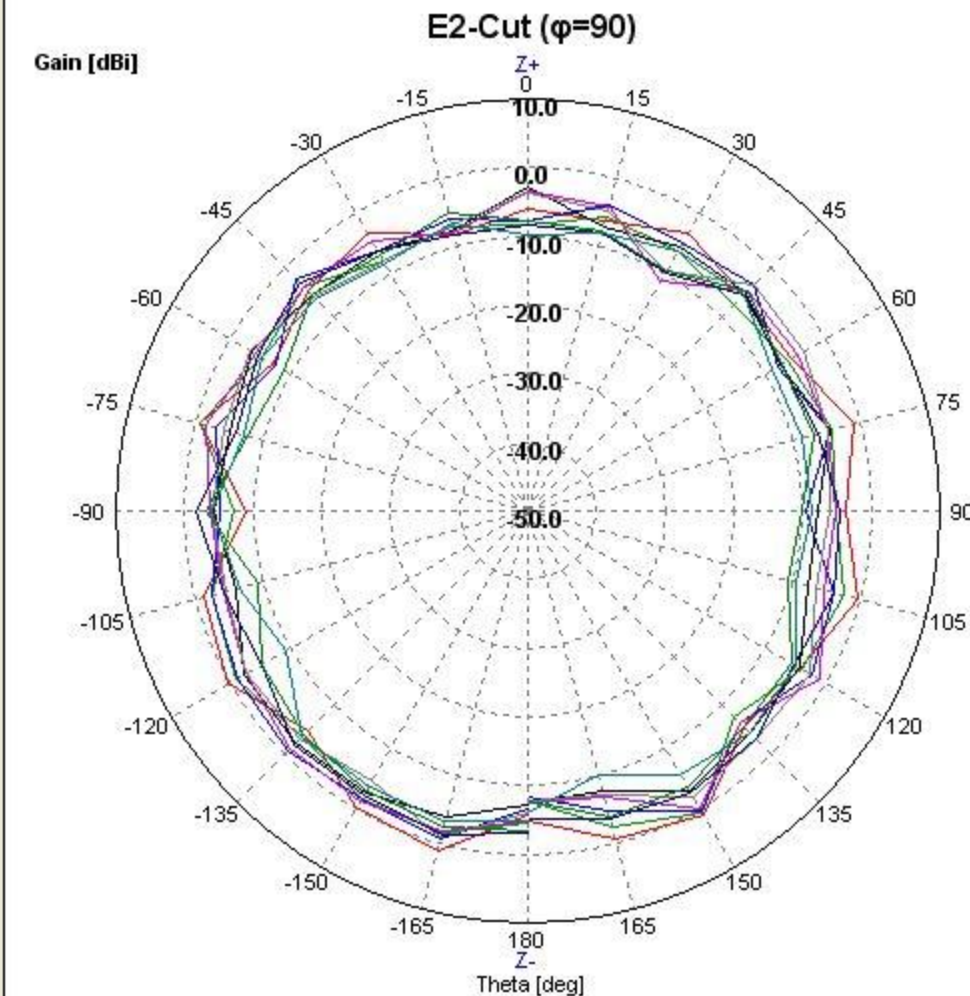
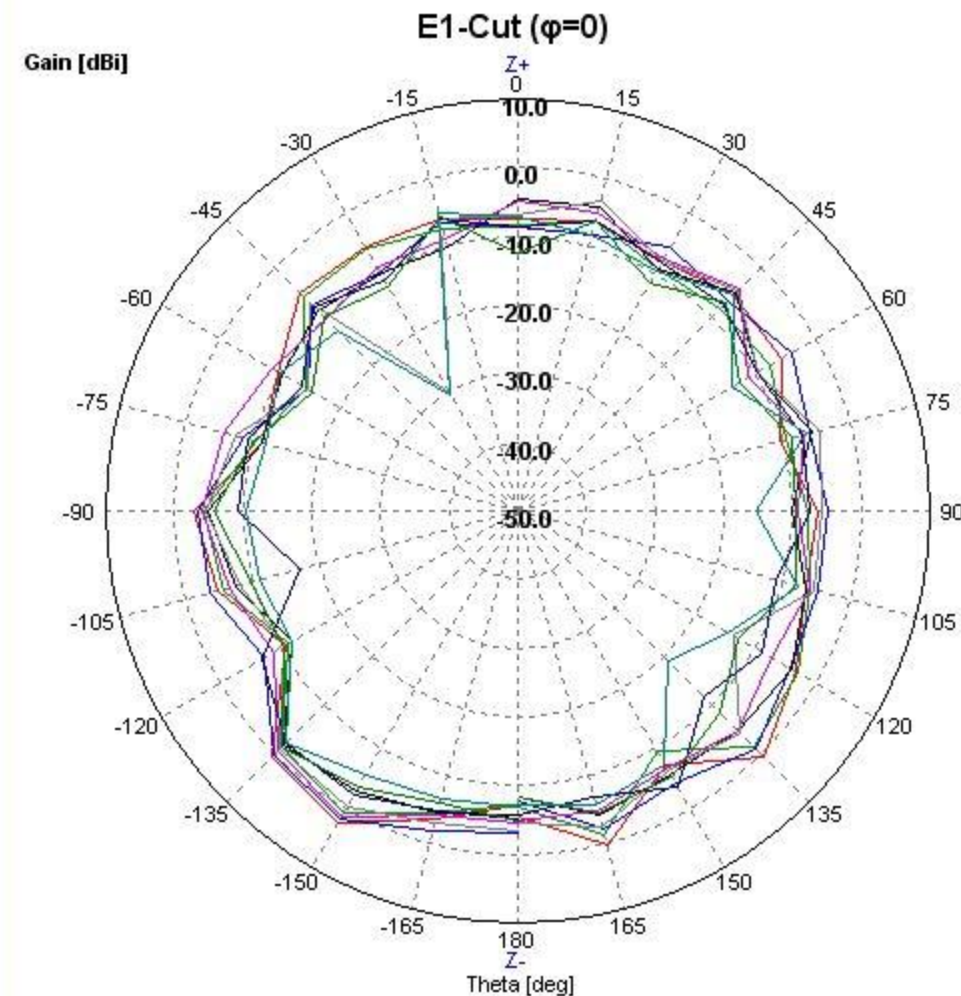
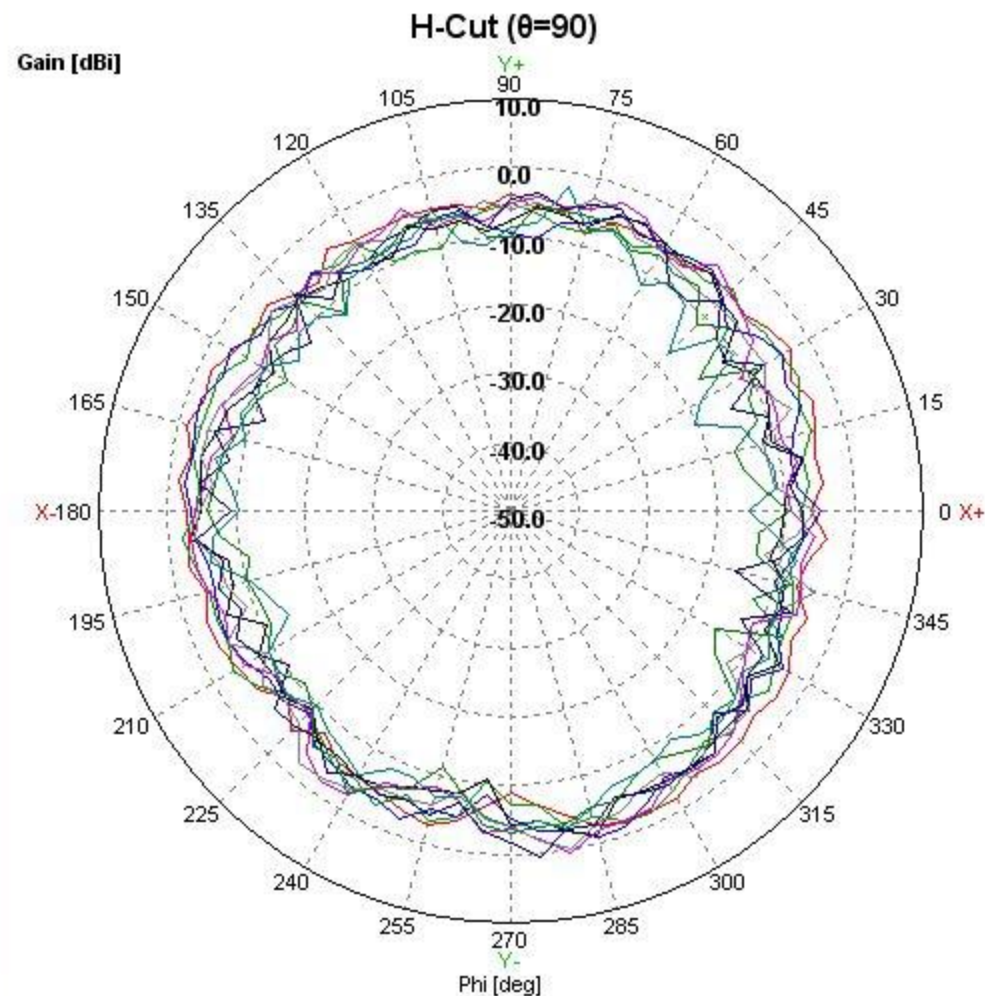
H-Cut E1-Cut E2-Cut

Scale

Max : 10

Min : -50

Apply





CN1 2.4Ghz

**Graph Option**

**Style**

☒ Polar ☐ Rectangular

**Zoom**

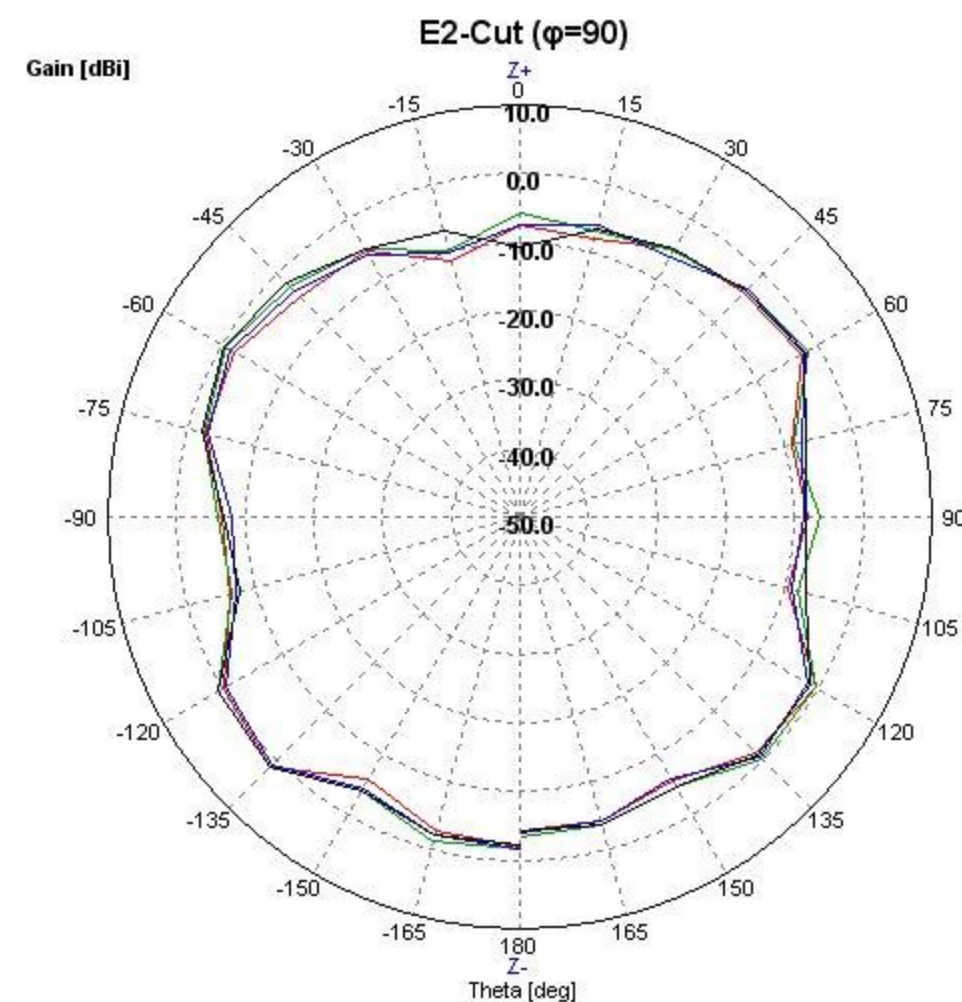
H-Cut E1-Cut E2-Cut

**Scale**

Max : 10

Min : -50

Apply





CN1 5Ghz

Graph Option

Style

☒ Polar ☐ Rectangular

Zoom

H-Cut E1-Cut E2-Cut

Scale

Max : 10

Min : -50

Apply

