

# IW611-IW620-G

# ANTENNA DATA SHEET

Sony Corporation

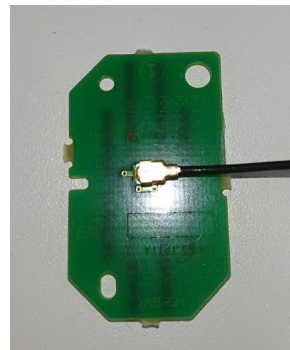
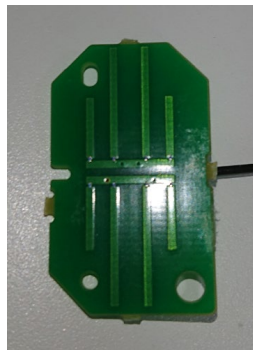
Manufacturer: Sony Corporation

Manufacturer Address: 1-7-1 Konan  
Minato-ku Tokyo  
108-0075 Japan

Country of Origin: Malaysia

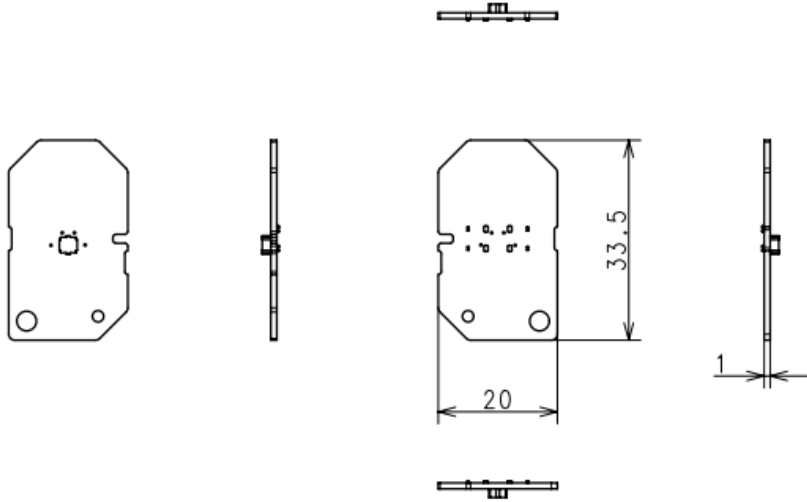
## 1. Specification

Item	Characteristics
Antenna Type	Dipole
FrequencyRange	2.4~2.4835GHz 5.15~5.85GHz
Input Impedance	50 $\Omega$
V.S.W.R	< 3.0
Polarization	linear polarization



## 2. Antenna Drawing

### Antenna



### Coaxial cable

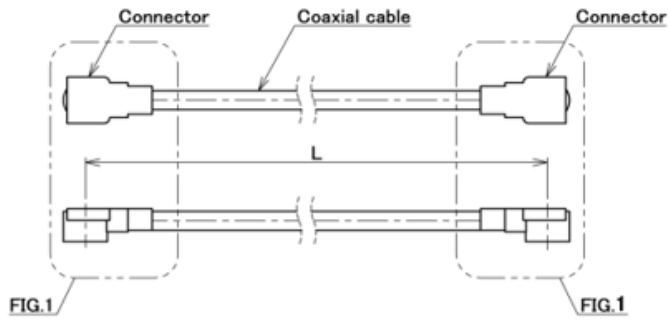
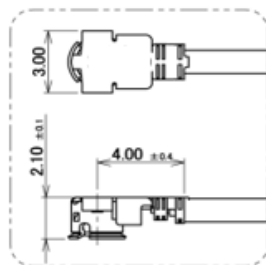


FIG.1



L: Cable Length  
Refer to Page 3 and 4.

Serial number	Cable Length [mm]	Cable Loss					
		2.4GHz	2.45GHz	2.5GHz	5.15GHz	5.5GHz	5.85GHz
100	100	0.51	0.51	0.52	0.79	0.80	0.82
110	110	0.54	0.54	0.55	0.84	0.85	0.87
120	120	0.57	0.57	0.58	0.88	0.90	0.92
130	130	0.60	0.60	0.62	0.93	0.94	0.97
140	140	0.63	0.64	0.65	0.98	0.99	1.02
150	150	0.67	0.67	0.68	1.02	1.04	1.07
160	160	0.70	0.70	0.71	1.07	1.09	1.12
170	170	0.73	0.73	0.74	1.11	1.14	1.17
180	180	0.76	0.76	0.77	1.16	1.18	1.22
190	190	0.79	0.79	0.81	1.21	1.23	1.27
200	200	0.82	0.83	0.84	1.25	1.28	1.32
210	210	0.85	0.86	0.87	1.30	1.33	1.37
220	220	0.88	0.89	0.90	1.35	1.37	1.42
230	230	0.91	0.92	0.93	1.39	1.42	1.47
240	240	0.95	0.95	0.96	1.44	1.47	1.52
250	250	0.98	0.98	1.00	1.48	1.52	1.57
260	260	1.01	1.02	1.03	1.53	1.57	1.62
270	270	1.04	1.05	1.06	1.58	1.61	1.67
280	280	1.07	1.08	1.09	1.62	1.66	1.72
290	290	1.10	1.11	1.12	1.67	1.71	1.77
300	300	1.13	1.14	1.15	1.72	1.76	1.82
310	310	1.16	1.17	1.19	1.76	1.81	1.87
320	320	1.19	1.21	1.22	1.81	1.85	1.92
330	330	1.23	1.24	1.25	1.85	1.90	1.97
340	340	1.26	1.27	1.28	1.90	1.95	2.02
350	350	1.29	1.30	1.31	1.95	2.00	2.07
360	360	1.32	1.33	1.34	1.99	2.05	2.12
370	370	1.35	1.36	1.38	2.04	2.09	2.17
380	380	1.38	1.39	1.41	2.09	2.14	2.22
390	390	1.41	1.43	1.44	2.13	2.19	2.27
400	400	1.44	1.46	1.47	2.18	2.24	2.32
410	410	1.47	1.49	1.50	2.23	2.28	2.37
420	420	1.51	1.52	1.53	2.27	2.33	2.42
430	430	1.54	1.55	1.57	2.32	2.38	2.47
440	440	1.57	1.58	1.60	2.36	2.43	2.52
450	450	1.60	1.62	1.63	2.41	2.48	2.57

Serial number	Cable Length [mm]	Cable Loss					
		2.4GHz	2.45GHz	2.5GHz	5.15GHz	5.5GHz	5.85GHz
460	460	1.63	1.65	1.66	2.46	2.52	2.62
470	470	1.66	1.68	1.69	2.50	2.57	2.67
480	480	1.69	1.71	1.72	2.55	2.62	2.72
490	490	1.72	1.74	1.76	2.60	2.67	2.77
500	500	1.75	1.77	1.79	2.64	2.72	2.82
510	510	1.79	1.81	1.82	2.69	2.76	2.87
520	520	1.82	1.84	1.85	2.73	2.81	2.92
530	530	1.85	1.87	1.88	2.78	2.86	2.97
540	540	1.88	1.90	1.91	2.83	2.91	3.02
550	550	1.91	1.93	1.95	2.87	2.96	3.07
560	560	1.94	1.96	1.98	2.92	3.00	3.12
570	570	1.97	2.00	2.01	2.97	3.05	3.17
580	580	2.00	2.03	2.04	3.01	3.10	3.22
590	590	2.03	2.06	2.07	3.06	3.15	3.27
600	600	2.07	2.09	2.11	3.11	3.20	3.32
610	610	2.10	2.12	2.14	3.15	3.24	3.36
620	620	2.13	2.15	2.17	3.20	3.29	3.41
630	630	2.16	2.18	2.20	3.24	3.34	3.46
640	640	2.19	2.22	2.23	3.29	3.39	3.51
650	650	2.22	2.25	2.26	3.34	3.43	3.56
660	660	2.25	2.28	2.30	3.38	3.48	3.61
670	670	2.28	2.31	2.33	3.43	3.53	3.66
680	680	2.31	2.34	2.36	3.48	3.58	3.71
690	690	2.34	2.37	2.39	3.52	3.63	3.76
700	700	2.38	2.41	2.42	3.57	3.67	3.81
710	710	2.41	2.44	2.45	3.61	3.72	3.86
720	720	2.44	2.47	2.49	3.66	3.77	3.91
730	730	2.47	2.50	2.52	3.71	3.82	3.96
740	740	2.50	2.53	2.55	3.75	3.87	4.01
750	750	2.53	2.56	2.58	3.80	3.91	4.06
760	760	2.56	2.60	2.61	3.85	3.96	4.11
770	770	2.59	2.63	2.64	3.89	4.01	4.16
780	780	2.62	2.66	2.68	3.94	4.06	4.21
790	790	2.66	2.69	2.71	3.98	4.11	4.26
800	800	2.69	2.72	2.74	4.03	4.15	4.31

## Cable Loss Calculation

### ■2.4GHz

$$\text{Cable Loss[dB]} = 0.51 + 0.00311 * (\text{Cable Length[mm]} - 100)$$

### ■2.45GHz

$$\text{Cable Loss[dB]} = 0.51 + 0.00316 * (\text{Cable Length[mm]} - 100)$$

### ■2.5GHz

$$\text{Cable Loss[dB]} = 0.52 + 0.00317 * (\text{Cable Length[mm]} - 100)$$

### ■5.15GHz

$$\text{Cable Loss[dB]} = 0.79 + 0.00463 * (\text{Cable Length[mm]} - 100)$$

### ■5.5GHz

$$\text{Cable Loss[dB]} = 0.80 + 0.00479 * (\text{Cable Length[mm]} - 100)$$

### ■5.85GHz

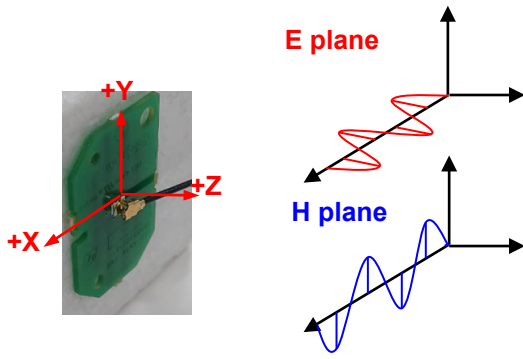
$$\text{Cable Loss[dB]} = 0.82 + 0.00499 * (\text{Cable Length[mm]} - 100)$$

## 3. Antenna Gain Table

Frequency	Peak Gain (dBi)
2.400GHz	-1.11
2.450GHz	-0.15
2.500GHz	0.29
5.150-5.250GHz	1.36
5.250-5.350GHz	1.36
5.470-5.725GHz	0.93
5.725-5.850GHz	0.75

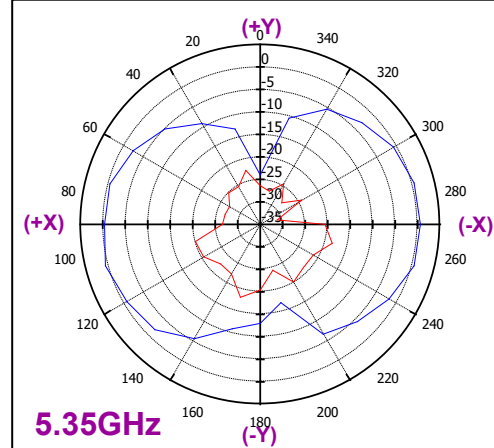
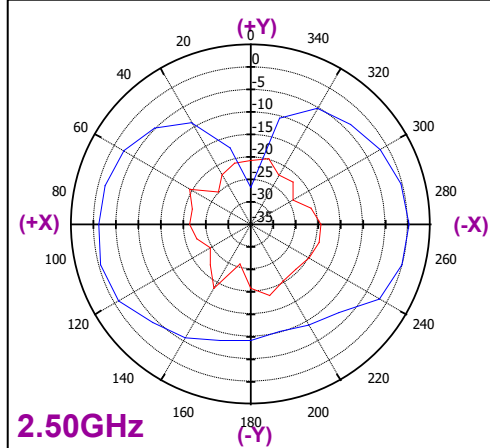
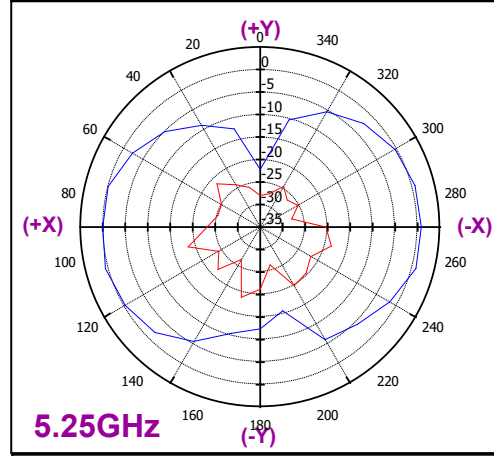
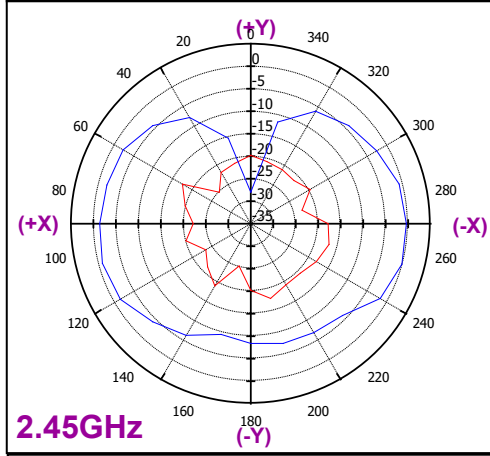
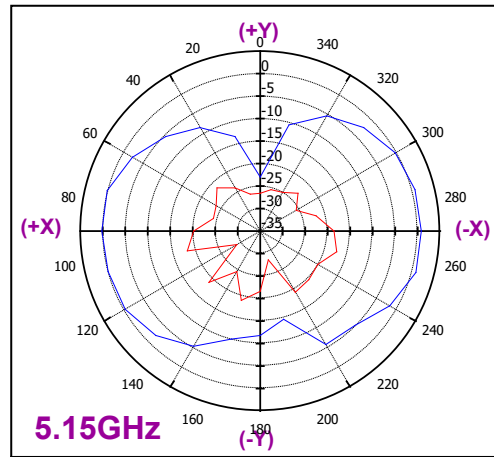
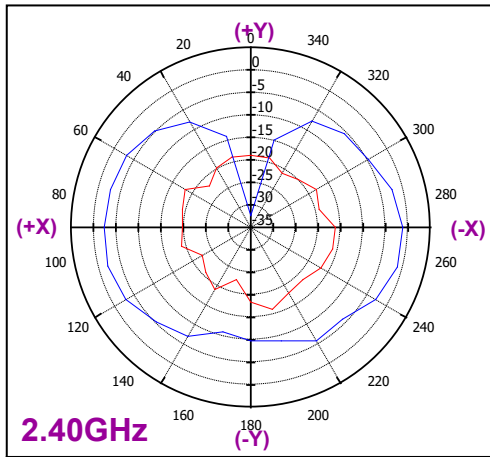
Antenna Cable (L = 100mm) included

# 4. X-Y plane radiation pattern



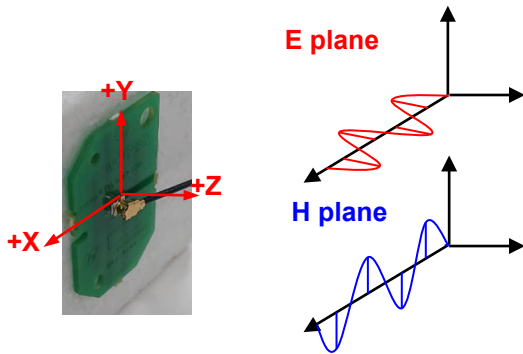
Freq. (GHz)	Peak Gain (dBi)		Ave Gain (dBi)	
	E	H	E	H
2.40	-16.21	-1.11	-19.15	-7.99
2.45	-17.07	-0.16	-20.49	-6.73
2.50	-18.51	0.12	-21.36	-6.77
5.15	-17.31	0.89	-22.80	-5.97
5.25	-18.35	0.84	-23.65	-5.89
5.35	-18.26	0.57	-23.71	-6.33

Antenna Cable (L = 100mm) included



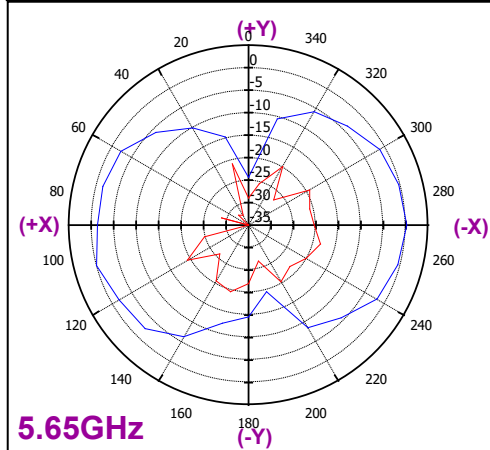
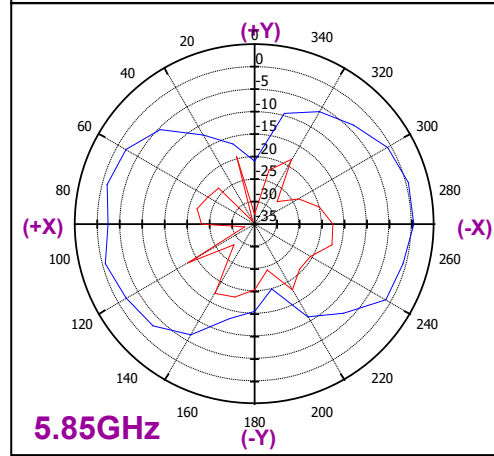
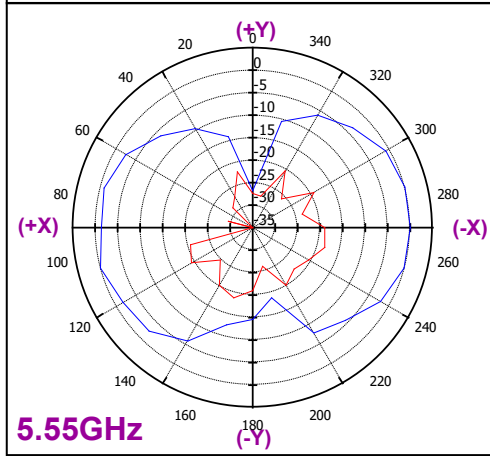
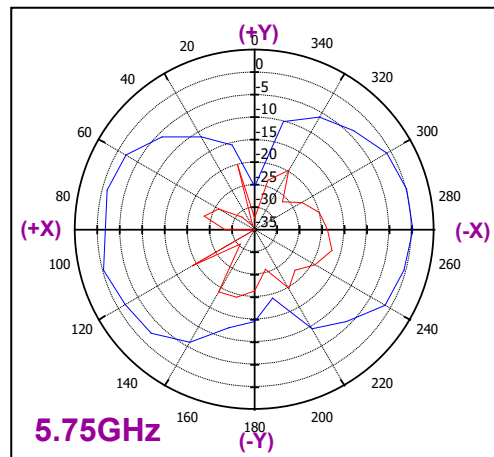
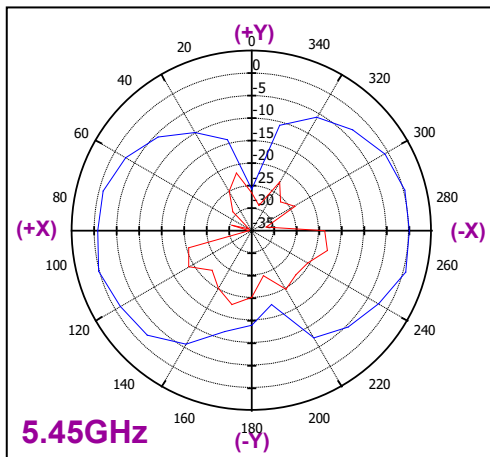
# 4. X-Y plane radiation pattern

Sony  
IW611-IW620-G ANT Data-  
7/11 2023/01/17



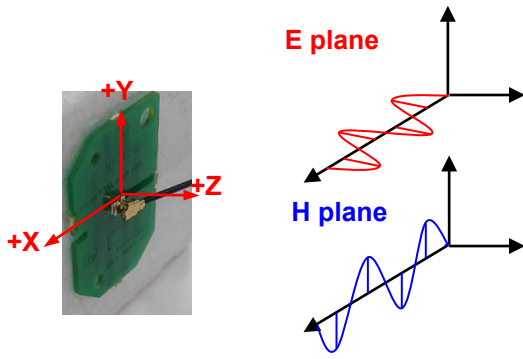
Freq. (GHz)	Peak Gain (dBi)		Ave Gain (dBi)	
	E	H	E	H
5.45	-17.70	0.32	-24.20	-6.95
5.55	-18.35	0.02	-24.53	-7.27
5.65	-18.41	0.10	-24.67	-7.24
5.75	-17.20	0.16	-24.37	-7.37
5.85	-17.27	0.33	-23.11	-7.31

Antenna Cable (L = 100mm) included



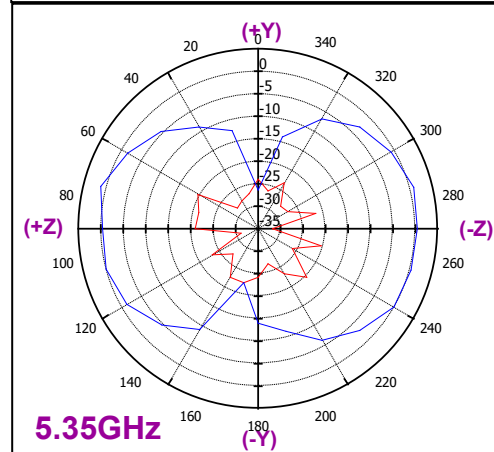
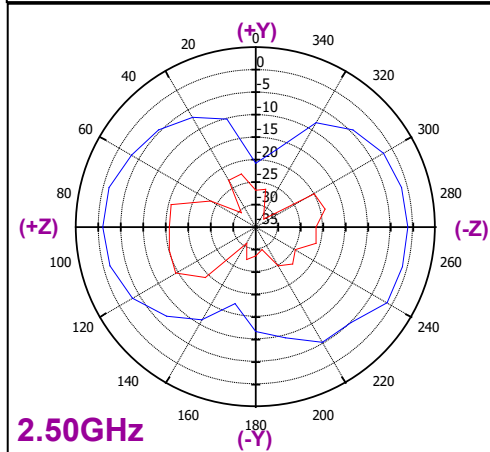
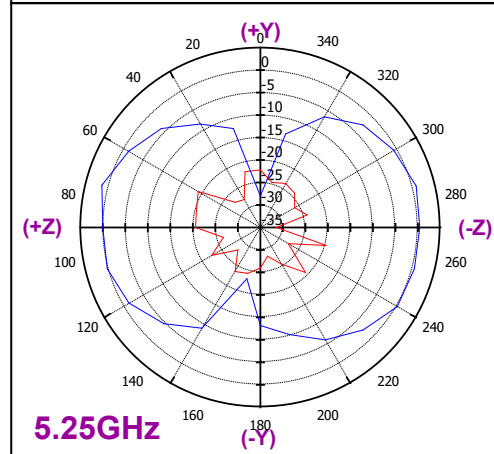
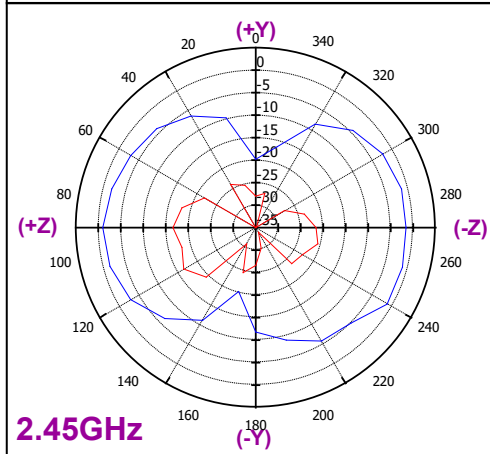
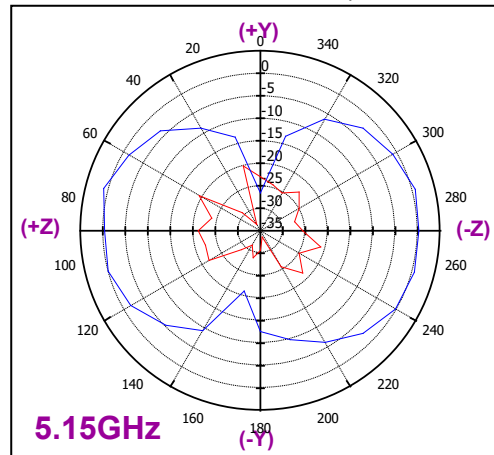
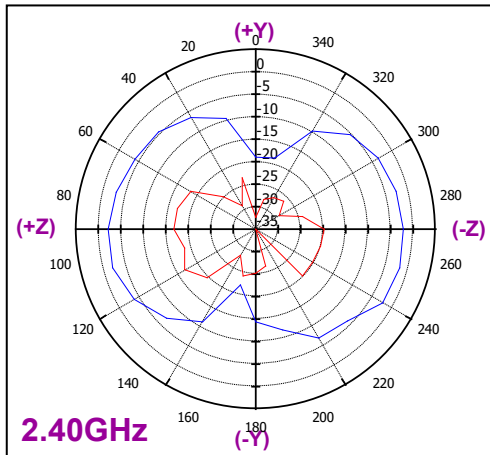
# 4. Y-Z plane radiation pattern

Sony  
IW611-IW620-G ANT Data-  
8/11 2023/01/17



Freq. (GHz)	Peak Gain (dBi)		Ave Gain (dBi)	
	E	H	E	H
2.40	-16.70	-1.97	-24.35	-8.00
2.45	-16.48	-1.07	-25.80	-7.08
2.50	-14.44	-0.97	-23.84	-7.10
5.15	-19.24	1.12	-25.39	-6.85
5.25	-18.98	1.36	-24.38	-6.91
5.35	-19.64	1.17	-24.76	-7.00

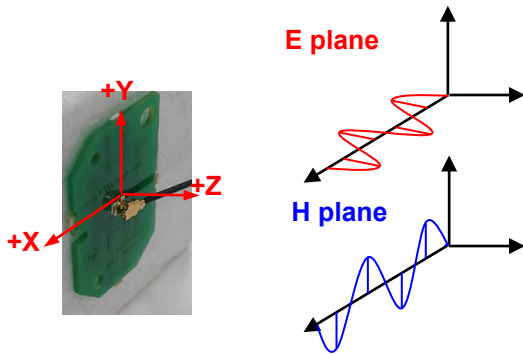
Antenna Cable (L = 100mm) included





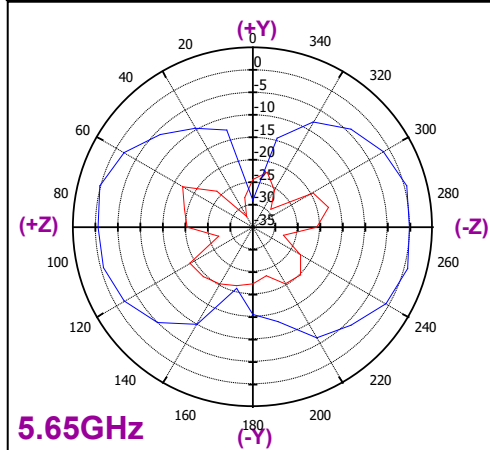
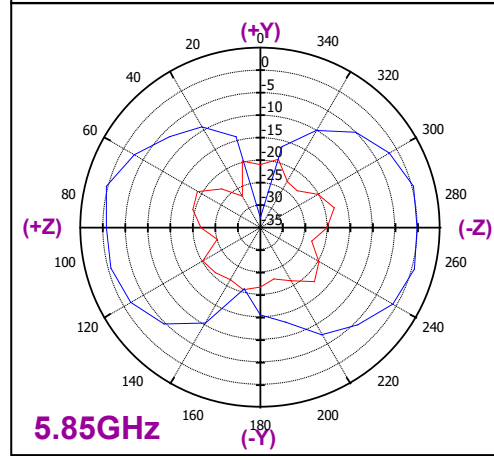
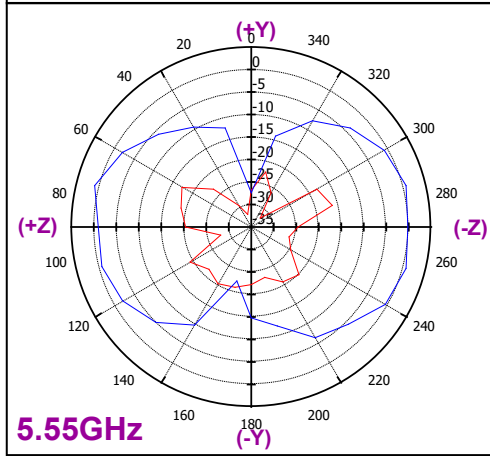
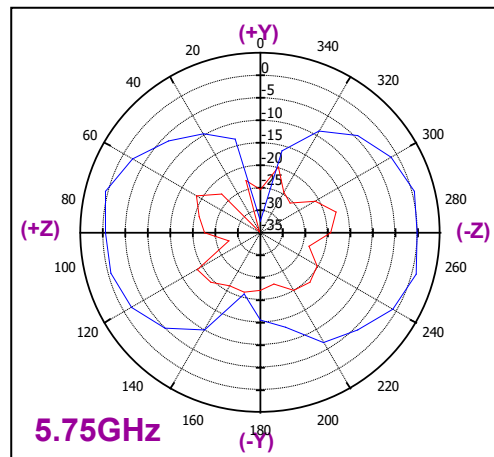
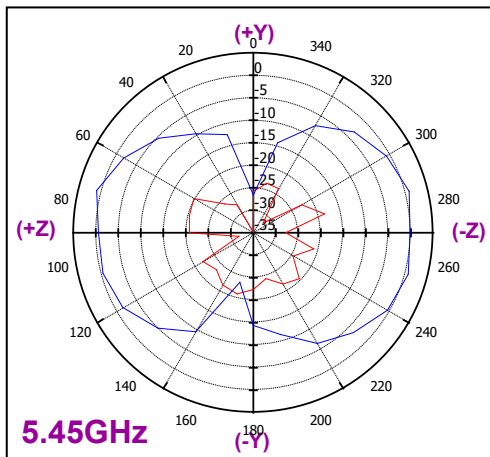
# 4. Y-Z plane radiation pattern

Sony  
IW611-IW620-G ANT Data-  
9/11 2023/01/17

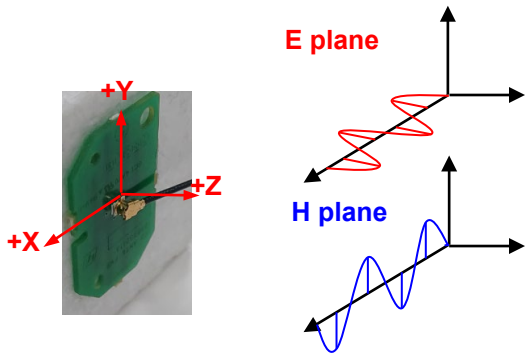


Freq. (GHz)	Peak Gain (dBi)		Ave Gain (dBi)	
	E	H	E	H
5.45	-18.68	0.98	-24.18	-7.36
5.55	-16.45	0.93	-23.32	-7.54
5.65	-16.88	0.54	-22.78	-7.80
5.75	-17.52	0.75	-22.38	-8.23
5.85	-18.04	0.42	-21.25	-8.47

Antenna Cable (L = 100mm) included

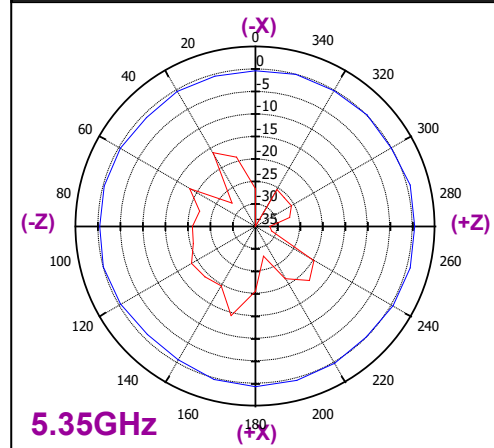
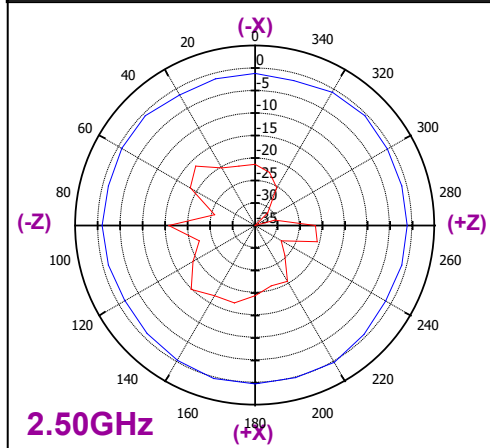
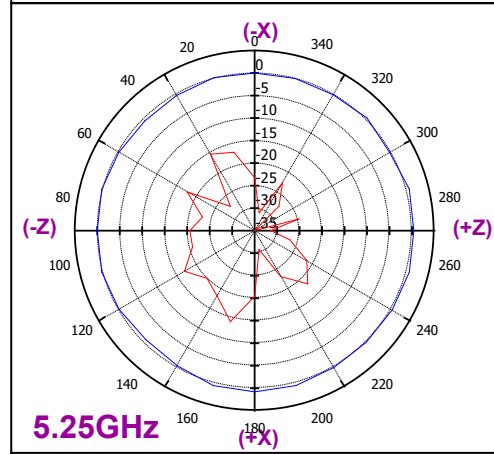
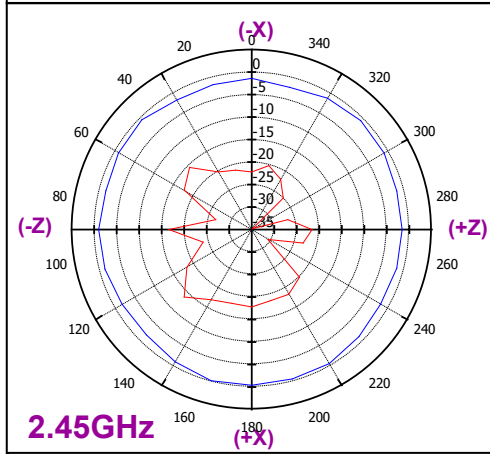
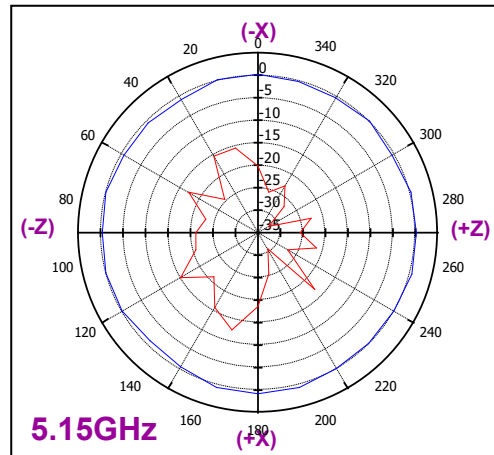
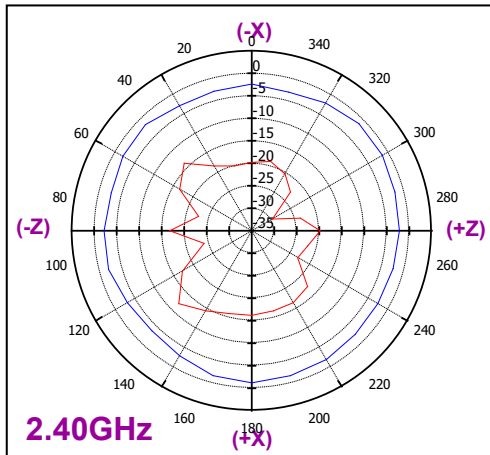


# 4. Z-X plane radiation pattern

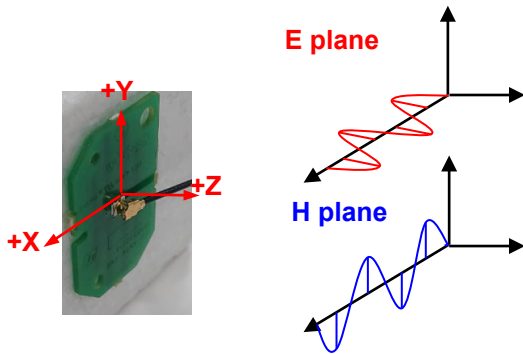


Freq. (GHz)	Peak Gain (dBi)		Ave Gain (dBi)	
	E	H	E	H
2.40	-12.14	-1.11	-19.18	-2.30
2.45	-13.75	-0.15	-21.32	-1.26
2.50	-14.95	0.29	-22.16	-0.90
5.15	-12.60	0.89	-21.59	-0.09
5.25	-13.99	0.83	-22.92	0.12
5.35	-14.49	0.68	-23.26	-0.10

Antenna Cable (L = 100mm) included



# 4. Z-X plane radiation pattern



Freq. (GHz)	Peak Gain (dBi)		Ave Gain (dBi)	
	E	H	E	H
5.45	-14.05	0.10	-23.45	-0.44
5.55	-13.11	0.02	-24.71	-0.69
5.65	-12.64	0.13	-23.41	-0.56
5.75	-12.35	0.27	-21.22	-0.57
5.85	-10.74	0.56	-20.53	-0.80

Antenna Cable (L = 100mm) included

