

### Antenna Summary (YCE-5008)

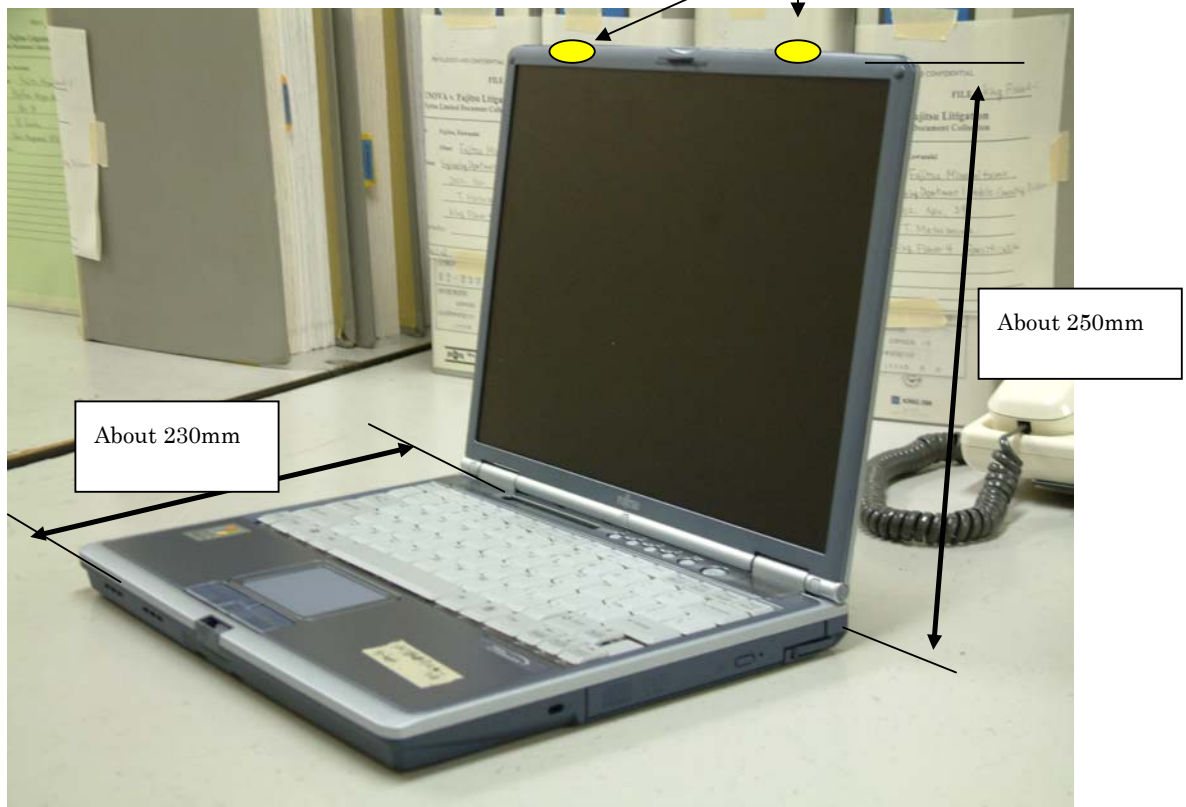
Antenna Type	Monopole Ceramic Chip
Cable type ( length )	Coax( 450mm )
P/N	YCE-5008
Gain	MAX : 2.08(dBi) *see Note

\* Note:

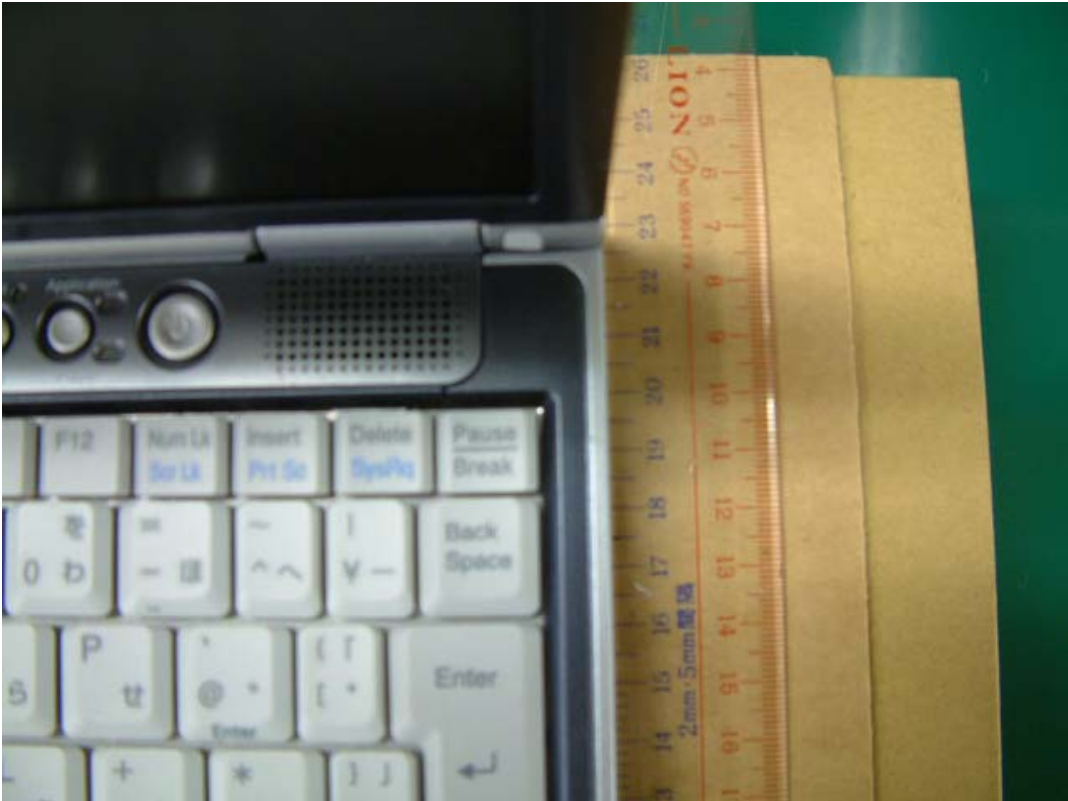
1. Included all cable losses.

Antenna Position

Picture:







Left-Side Antenna



Right-Side Antenna



Application: ForW-LAN(IEEE-802.11b,g)  
 Antennamodel: YCE-5008(008L00196)  
 Measurementcondition: A-unitRightside  
 Antennamatching: ShuntL(3.3nH)  
 Correctionofcableloss: Non(includeloss1.5dB)

Measurementinstitution:YokowoNo.3radiomeasuringsite  
 Date:2003/10/22  
 Measuredby:S.Yoshida

f=2400MHz

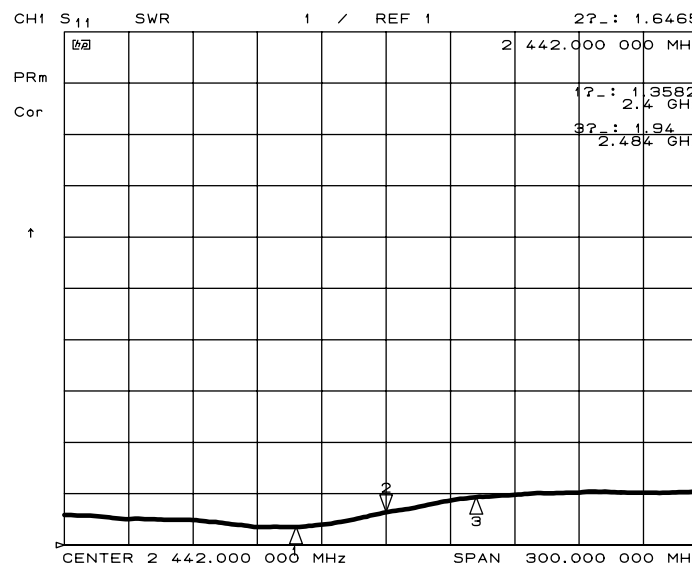
Plane	Tx	Peak.gain [dBi]	Averagegain [dBi]	TxH&Vaverage [dBi]	Eachfrequencyaverage [dBi]
X-Y	Horizontal	1.46	-4.18	-5.0	-5.6
	Vertical	-0.71	-6.00		
Y-Z	Horizontal	2.08	-4.19	-5.3	
	Vertical	0.03	-6.88		
Z-X	Horizontal	-3.42	-8.97	-6.6	
	Vertical	-1.75	-5.06		

X-Yplaneallaverage(allfrequency)	-5.2 dBi
Y-Zplaneallaverage(allfrequency)	-5.6 dBi
Z-Xplaneallaverage(allfrequency)	-6.6 dBi
Allplane&allfrequencyaverage	-5.8 dBi

f=2442MHz

Plane	Tx	Peak.gain [dBi]	Averagegain [dBi]	TxH&Vaverage [dBi]	Eachfrequencyaverage [dBi]
X-Y	Horizontal	1.42	-4.35	-5.2	-5.7
	Vertical	-0.67	-6.38		
Y-Z	Horizontal	1.49	-4.32	-5.5	
	Vertical	-0.30	-7.23		
Z-X	Horizontal	-3.40	-9.82	-6.5	
	Vertical	-1.46	-4.61		

VSWR



f=2484MHz

Plane	Tx	Peak.gain [dBi]	Averagegain [dBi]	TxH&Vaverage [dBi]	Eachfrequencyaverage [dBi]
X-Y	Horizontal	1.23	-4.61	-5.5	-6.0
	Vertical	-1.01	-6.63		
Y-Z	Horizontal	0.54	-4.71	-5.9	
	Vertical	-0.43	-7.49		
Z-X	Horizontal	-4.96	-10.75	-6.8	
	Vertical	-1.45	-4.71		

Application: ForW-LAN(IEEE-802.11a)  
 Antennamodel: YCE-5008(008L00196)  
 Measurementcondition: A-unitRightside  
 Antennamatching: ShuntL(3.3nH)  
 Correctionofcableloss: Non(includeloss2.3dB)

Measurementinstitution:YokowoNo.3radiomeasuringsite  
 Date:2003/10/22  
 Measuredby:S.Yoshida

f=4900MHz

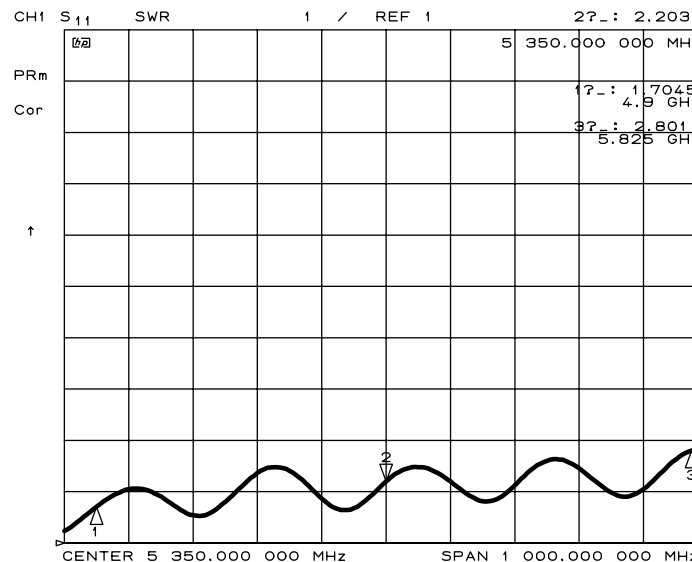
Plane	Tx	Peak.gain [dBi]	Averagegain [dBi]	TxH&Vaverage [dBi]	Eachfrequencyaverage [dBi]
X-Y	Horizontal	1.66	-4.19	-5.3	-5.9
	Vertical	-1.00	-6.66		
Y-Z	Horizontal	1.18	-4.28	-5.2	
	Vertical	0.73	-6.50		
Z-X	Horizontal	-3.26	-7.95	-7.5	
	Vertical	-2.45	-7.07		

X-Yplaneallaverage(allfrequency)	-6.1 dBi
Y-Zplaneallaverage(allfrequency)	-6.2 dBi
Z-Xplaneallaverage(allfrequency)	-9.1 dBi
Allplane&allfrequencyaverage	-6.9 dBi

f=5350MHz

Plane	Tx	Peak.gain [dBi]	Averagegain [dBi]	TxH&Vaverage [dBi]	Eachfrequencyaverage [dBi]
X-Y	Horizontal	0.59	-5.70	-6.9	-7.8
	Vertical	-1.87	-8.44		
Y-Z	Horizontal	0.29	-5.84	-7.0	
	Vertical	-1.91	-8.64		
Z-X	Horizontal	-6.94	-11.47	-10.2	
	Vertical	-4.26	-9.16		

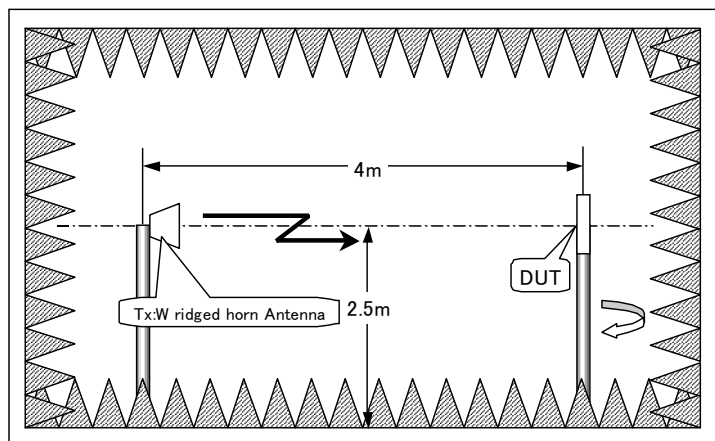
VSWR



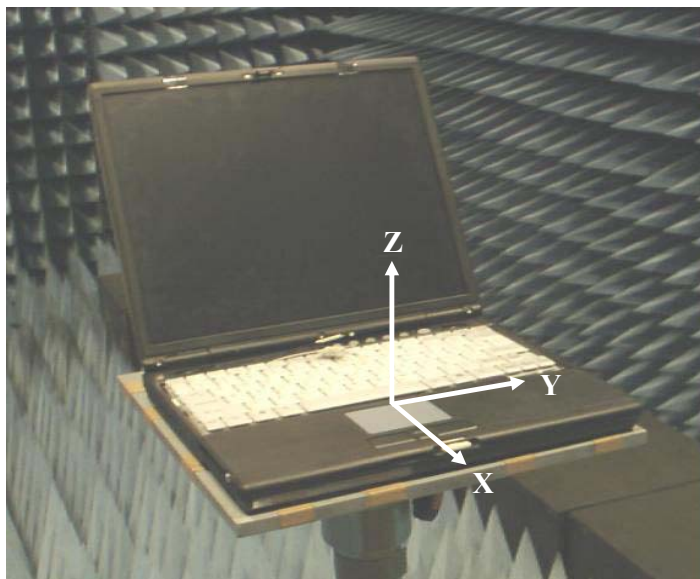
f=5825MHz

Plane	Tx	Peak.gain [dBi]	Averagegain [dBi]	TxH&Vaverage [dBi]	Eachfrequencyaverage [dBi]
X-Y	Horizontal	1.24	-4.79	-6.3	-7.3
	Vertical	-0.34	-8.73		
Y-Z	Horizontal	1.09	-5.26	-6.4	
	Vertical	-1.52	-7.91		
Z-X	Horizontal	-6.06	-12.63	-10.2	
	Vertical	-4.19	-8.59		

**Measurementcondition**



**Antennacoordinated**

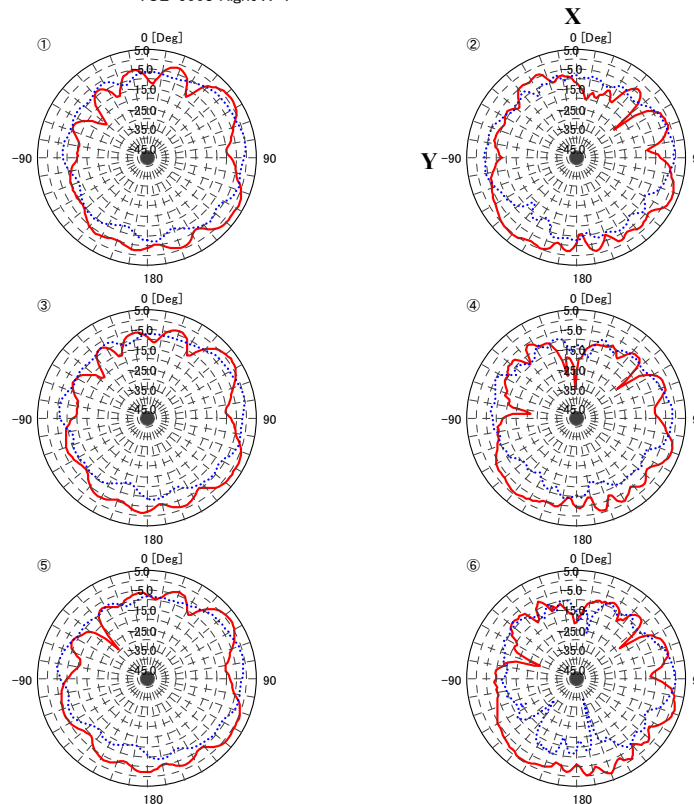


**FieldpatternX-Yplane**

FJ-031022-009  
S.Yoshida  
03/10/22

All AVG. -5.65[dBi]  
All MAX. AVG. 0.32[dBi]

YCE-5008 Right X-Y



Line	No.	Frequency[MHz]	MEMO	MAX Gain[dBi]	AVG Gain[dBi]
1	①	2400.00	Tx-H	1.46	-4.18
2	①	2400.00	Tx-V	-0.71	-6.00
3	③	2442.00	Tx-H	1.42	-4.35
4	③	2442.00	Tx-V	-0.67	-6.38
5	⑤	2484.00	Tx-H	1.23	-4.61
6	⑤	2484.00	Tx-V	-1.01	-6.63
7	②	4900.00	Tx-H	1.66	-4.19
8	②	4900.00	Tx-V	-1.00	-6.66
9	④	5350.00	Tx-H	0.59	-5.70
10	④	5350.00	Tx-V	-1.87	-8.44
11	⑥	5825.00	Tx-H	1.24	-4.79
12	⑥	5825.00	Tx-V	-0.34	-8.73

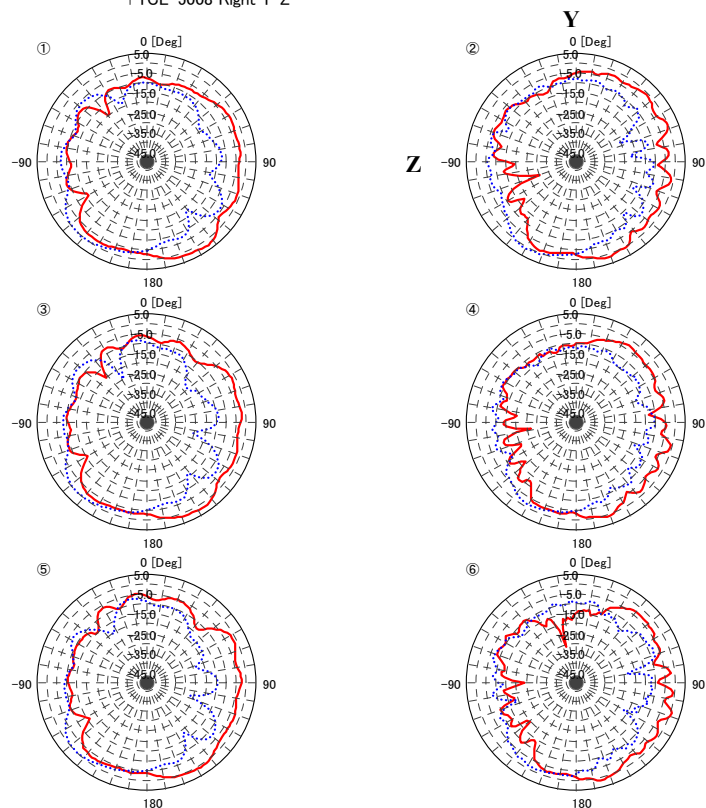


**FieldpatternY-Zplane**

Fj-031022-013  
S.Yoshida  
03/10/22

All AVG. -5.86[dBi]  
All MAX. AVG. 0.41[dBi]

YCE-5008 Right Y-Z

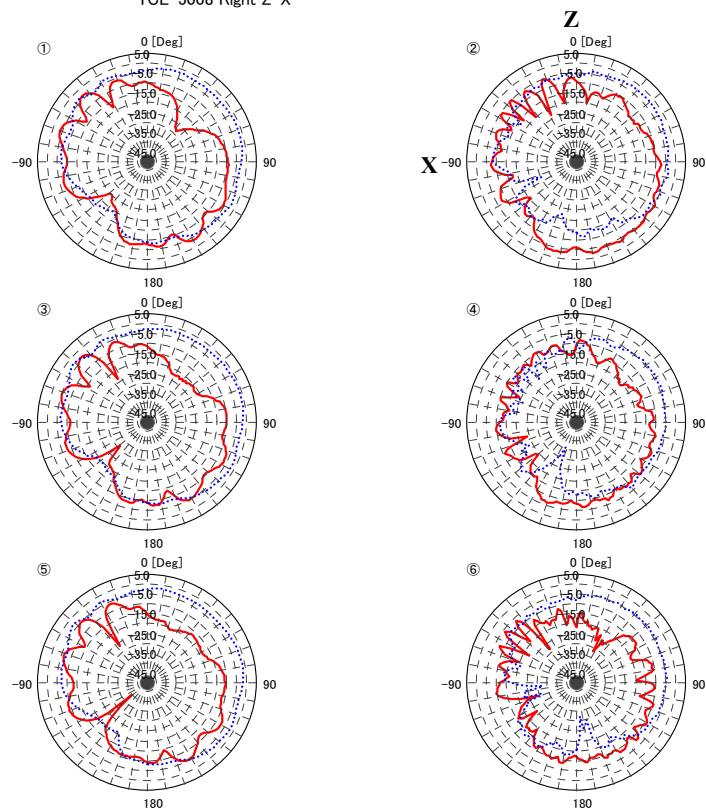


**FieldpatternZ-Xplane**

Fj-031022-025  
S.Yoshida  
03/10/22

All AVG. -7.67[dBi]  
All MAX. AVG. -3.33[dBi]

YCE-5008 Right Z-X



Line	No.	Frequency[MHz]	MEMO	MAX. Gain[dBi]	AVG. Gain[dBi]
1	①	2400.00	Tx-H	2.08	-4.19
2	①	2400.00	Tx-V	0.03	-6.88
3	③	2442.00	Tx-H	1.49	-4.32
4	③	2442.00	Tx-V	-0.30	-7.23
5	⑤	2484.00	Tx-H	0.54	-4.71
6	⑤	2484.00	Tx-V	-0.43	-7.49
7	②	4900.00	Tx-H	1.18	-4.28
8	②	4900.00	Tx-V	0.73	-6.50
9	④	5350.00	Tx-H	0.29	-5.84
10	④	5350.00	Tx-V	-1.91	-8.64
11	⑥	5825.00	Tx-H	1.09	-5.26
12	⑥	5825.00	Tx-V	-1.52	-7.91

Line	No.	Frequency[MHz]	MEMO	MAX. Gain[dBi]	AVG. Gain[dBi]
1	①	2400.00	Tx-H	-3.42	-8.97
2	①	2400.00	Tx-V	-1.75	-5.06
3	③	2442.00	Tx-H	-3.40	-8.82
4	③	2442.00	Tx-V	-1.46	-4.61
5	⑤	2484.00	Tx-H	-4.96	-10.75
6	⑤	2484.00	Tx-V	-1.45	-4.71
7	②	4900.00	Tx-H	-3.26	-7.95
8	②	4900.00	Tx-V	-2.45	-7.07
9	④	5350.00	Tx-H	-6.94	-11.47
10	④	5350.00	Tx-V	-4.26	-9.16
11	⑥	5825.00	Tx-H	-6.06	-12.63
12	⑥	5825.00	Tx-V	-4.19	-8.59

# Specification for IEEE802.11b,g Ceramic Chip Antenna

Customer's PartNo. CP159328-01

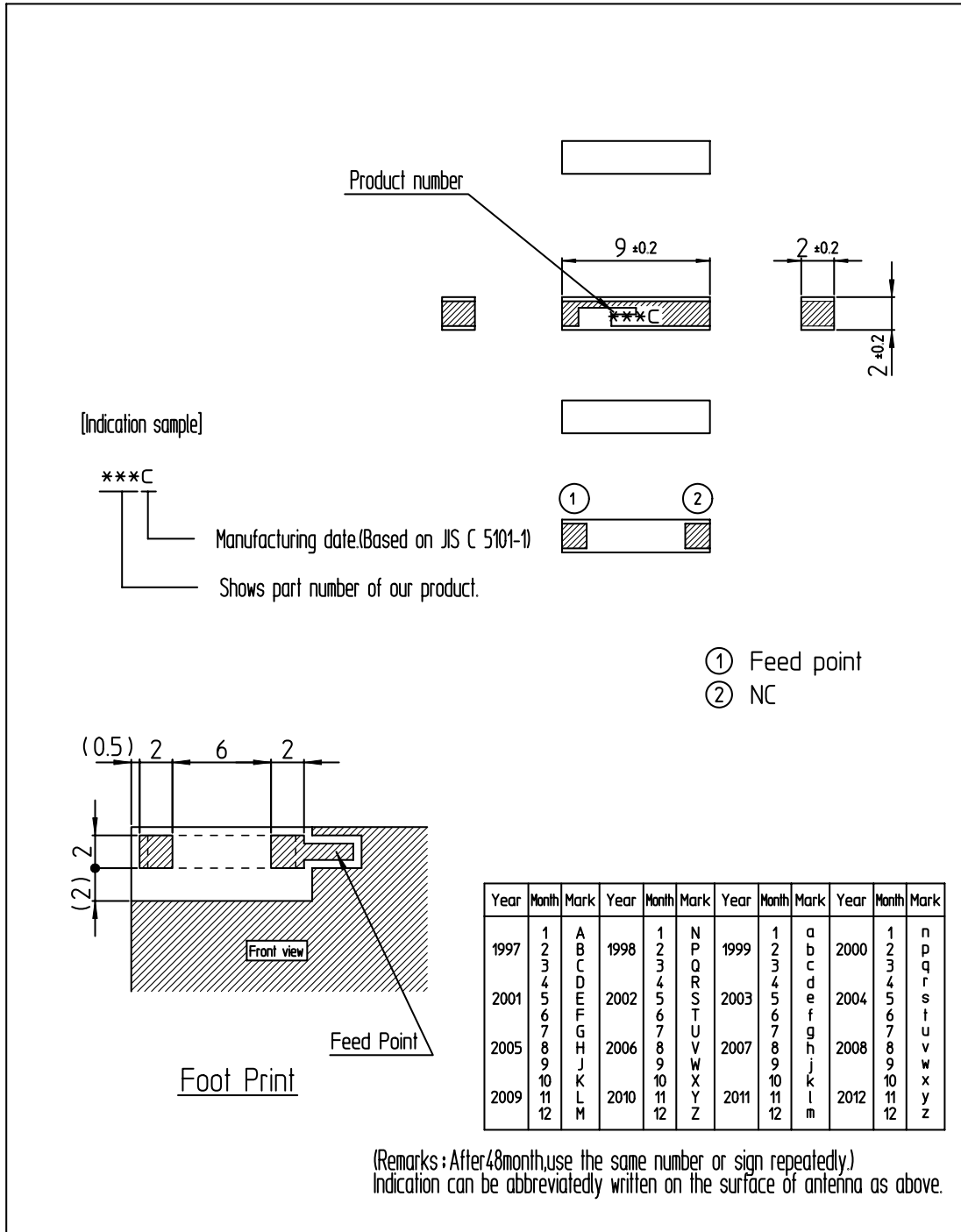
Model Series YCE-5008

PartNo. 008L00196

1.0	Electrical Specification	
1.1	Feedpoint impedance	50ohms( $\Omega$ )
1.2	Frequency range	2.400-2.484GHz
1.3	Peak Gain* <sup>1</sup> (Performance of only antenna)	2.08dBimax.
1.4	VSWR* <sup>2</sup>	3.0max.
<p>*1: Section 1.3, peak gain on electrical specifications shall be highest gain of horizontal and vertical polarization on X-Y, Y-Z and Z-X plane that measured in actual sample.</p> <p>*2: Section 1.4, VSWR on electrical specifications shall be value of VSWR measured in actual sample.</p>		

Data Issued: Oct.23,2003  
 Issued by: S.Yoshida  
 Antenna Engineering Dept.  
 Yokowoco.,ltd.

OutlineDrawing



	質量 MASS	材質 MATERIAL	表面処理 FINISH	機種形名 MODEL No YCE-5008	図番 DWG.NO M8-00139F-00
△*			設計 DESIGNED 2003-03-18	製図 DRAWING 2003-03-18	検図 CHECKED 2003-03-18
△*			承認 APPROVED 2003-03-18	指定公差 LIMITS	品名 DESCRIPTION OUTLINE
△*			Yoshida	S.Mari	Chigira
記号 MARK	年月日 DATE	来歴 REVISION RECORD	担当 DR	承認 APPR	単位 UNIT mm
			<b>yokowo co.,ltd.</b>		A4 3角法 3RD ANGLE PROJECTION

Application: ForW-LAN(IEEE-802.11b,g)  
 Antennamodel: YCE-5008(008L00196)  
 Measurementcondition: A-unitLeftside  
 Antennamatching: ShuntL(3.3nH)  
 Correctionofcableloss: Non(includeloss1.5dB)

Measurementinstitution:YokowoNo.3radiomeasuringsite  
 Date:2003/10/22  
 Measuredby:S.Yoshida

f=2400MHz

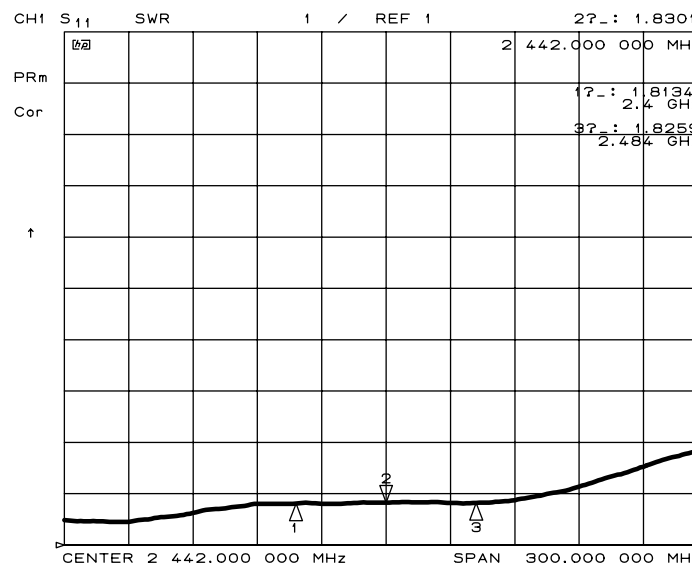
Plane	Tx	Peak.gain [dBi]	Averagegain [dBi]	TxH&Vaverage [dBi]	Eachfrequencyaverage [dBi]
X-Y	Horizontal	1.02	-4.54	-5.3	-5.9
	Vertical	-1.70	-6.24		
Y-Z	Horizontal	0.51	-4.23	-5.5	
	Vertical	0.35	-7.28		
Z-X	Horizontal	-5.71	-10.04	-7.0	
	Vertical	-1.70	-5.28		

X-Yplaneallaverage(allfrequency)	-5.6 dBi
Y-Zplaneallaverage(allfrequency)	-5.8 dBi
Z-Xplaneallaverage(allfrequency)	-7.5 dBi
Allplane&allfrequencyaverage	-6.2 dBi

f=2442MHz

Plane	Tx	Peak.gain [dBi]	Averagegain [dBi]	TxH&Vaverage [dBi]	Eachfrequencyaverage [dBi]
X-Y	Horizontal	1.11	-4.83	-5.5	-6.3
	Vertical	-1.55	-6.40		
Y-Z	Horizontal	1.28	-4.69	-5.8	
	Vertical	0.42	-7.27		
Z-X	Horizontal	-4.73	-8.78	-7.8	
	Vertical	-3.73	-7.04		

VSWR



f=2484MHz

Plane	Tx	Peak.gain [dBi]	Averagegain [dBi]	TxH&Vaverage [dBi]	Eachfrequencyaverage [dBi]
X-Y	Horizontal	0.64	-5.15	-5.8	-6.4
	Vertical	-1.11	-6.63		
Y-Z	Horizontal	1.40	-4.94	-6.0	
	Vertical	-0.05	-7.41		
Z-X	Horizontal	-5.67	-9.42	-7.6	
	Vertical	-3.44	-6.25		

Application: ForW-LAN(IEEE-802.11a)  
 Antennamodel: YCE-5008(008L00196)  
 Measurementcondition: A-unitLeftside  
 Antennamatching: ShuntL(3.3nH)  
 Correctionofcableloss: Non(includeloss2.3dB)

Measurementinstitution:YokowoNo.3radiomeasuringsite  
 Date:2003/10/22  
 Measuredby:S.Yoshida

**f=4900MHz**

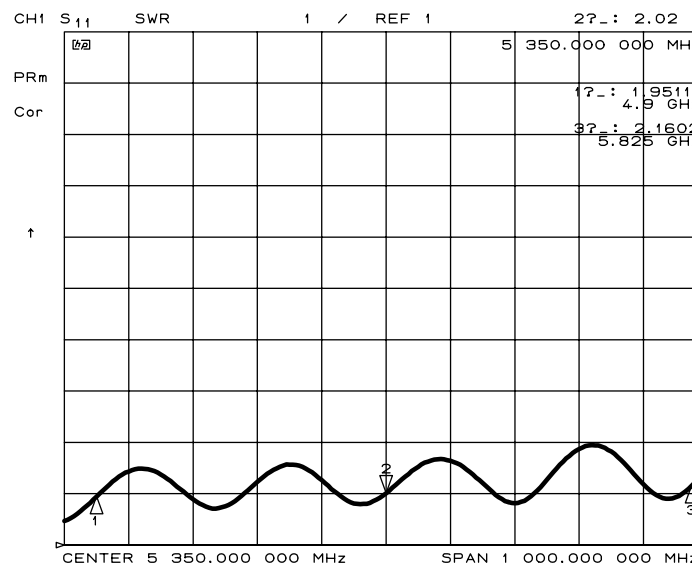
Plane	Tx	Peak.gain [dBi]	Averagegain [dBi]	TxH&Vaverage [dBi]	Eachfrequencyaverage [dBi]
X-Y	Horizontal	1.20	-4.57	-5.7	-6.5
	Vertical	-1.51	-7.29		
Y-Z	Horizontal	0.10	-4.57	-5.8	
	Vertical	-0.36	-7.43		
Z-X	Horizontal	-2.38	-8.41	-8.4	
	Vertical	-4.14	-8.34		

X-Yplaneallaverage(allfrequency)	-6.2 dBi
Y-Zplaneallaverage(allfrequency)	-6.3 dBi
Z-Xplaneallaverage(allfrequency)	-9.5 dBi
Allplane&allfrequencyaverage	-7.1 dBi

**f=5350MHz**

Plane	Tx	Peak.gain [dBi]	Averagegain [dBi]	TxH&Vaverage [dBi]	Eachfrequencyaverage [dBi]
X-Y	Horizontal	-0.22	-5.90	-7.1	-7.9
	Vertical	-2.08	-8.69		
Y-Z	Horizontal	-0.24	-5.97	-7.3	
	Vertical	-2.51	-9.09		
Z-X	Horizontal	-6.17	-11.30	-10.1	
	Vertical	-4.72	-9.15		

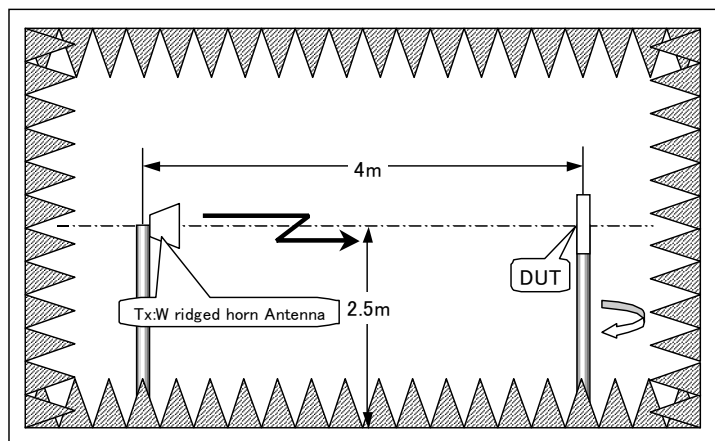
**VSWR**



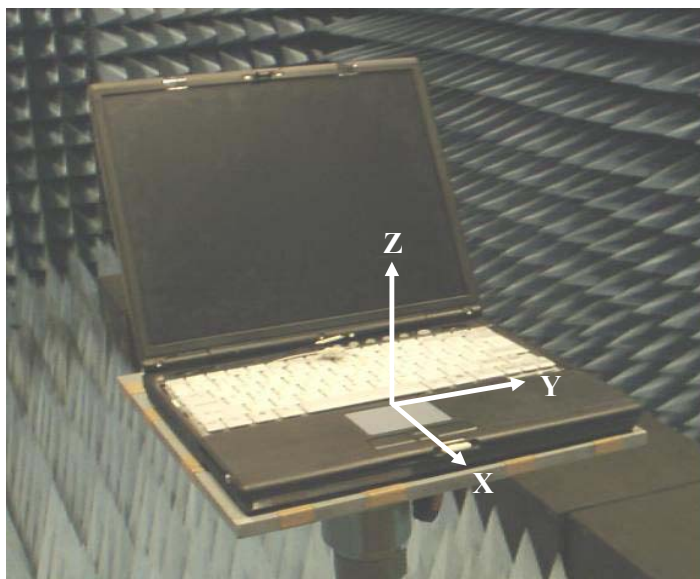
**f=5825MHz**

Plane	Tx	Peak.gain [dBi]	Averagegain [dBi]	TxH&Vaverage [dBi]	Eachfrequencyaverage [dBi]
X-Y	Horizontal	1.79	-4.40	-5.9	-7.0
	Vertical	0.11	-8.13		
Y-Z	Horizontal	1.67	-4.78	-6.1	
	Vertical	-2.16	-8.04		
Z-X	Horizontal	-6.39	-12.54	-10.2	
	Vertical	-3.80	-8.73		

**Measurementcondition**



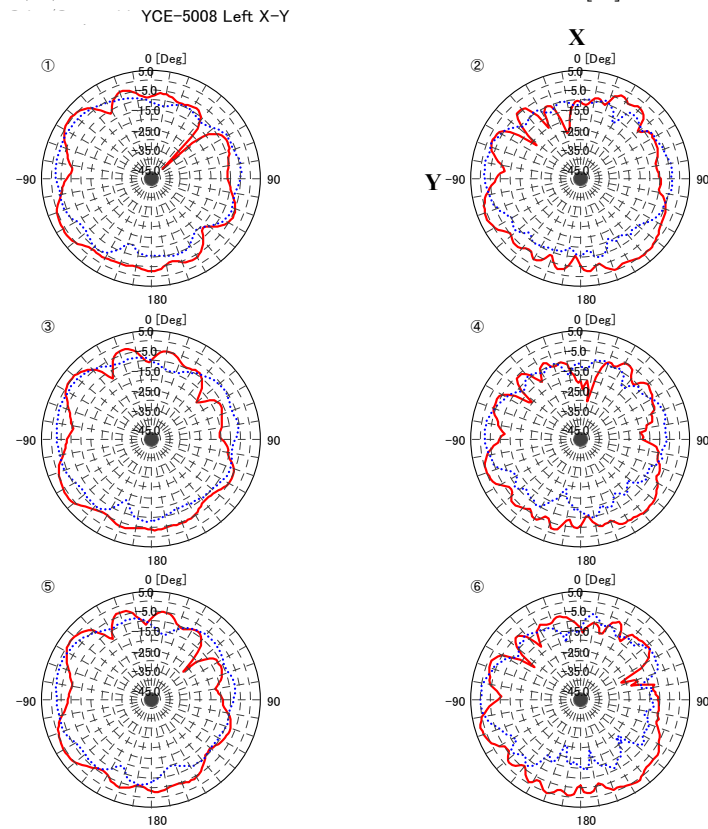
**Antennacoordinated**



**FieldpatternX-Yplane**

FJ-031022-005  
S.Yoshida  
03/10/22

All AVG. -5.86[dBi]  
All MAX. AVG. -0.00[dBi]



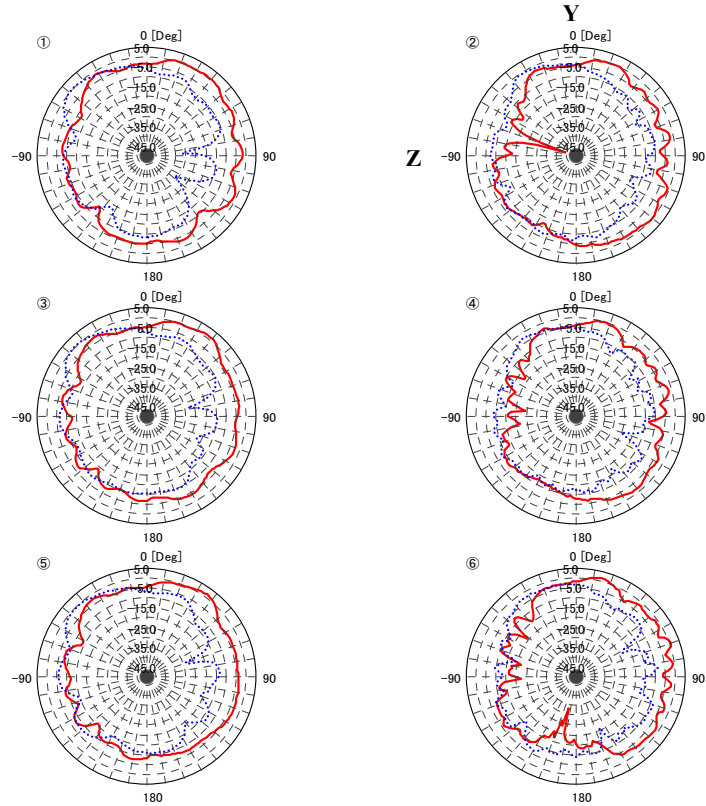
Line	No.	Frequency[MHz]	MEMO	MAX Gain[dBi]	AVG Gain[dBi]
1	①	2400.00	Tx-H	1.02	-4.54
2	①	2400.00	Tx-V	-1.70	-6.24
3	③	2442.00	Tx-H	1.11	-4.83
4	③	2442.00	Tx-V	-1.55	-6.40
5	⑤	2484.00	Tx-H	0.64	-5.15
6	⑤	2484.00	Tx-V	-1.11	-6.63
7	②	4900.00	Tx-H	1.20	-4.57
8	②	4900.00	Tx-V	-1.51	-7.29
9	④	5350.00	Tx-H	-0.22	-5.90
10	④	5350.00	Tx-V	-2.08	-8.69
11	⑥	5825.00	Tx-H	1.79	-4.40
12	⑥	5825.00	Tx-V	0.11	-8.13

**FieldpatternY-Zplane**

Fj-031022-017  
S.Yoshida  
03/10/22

All AVG. -6.04[dBi]  
All MAX. AVG. 0.20[dBi]

YCE-5008 Left Y-Z

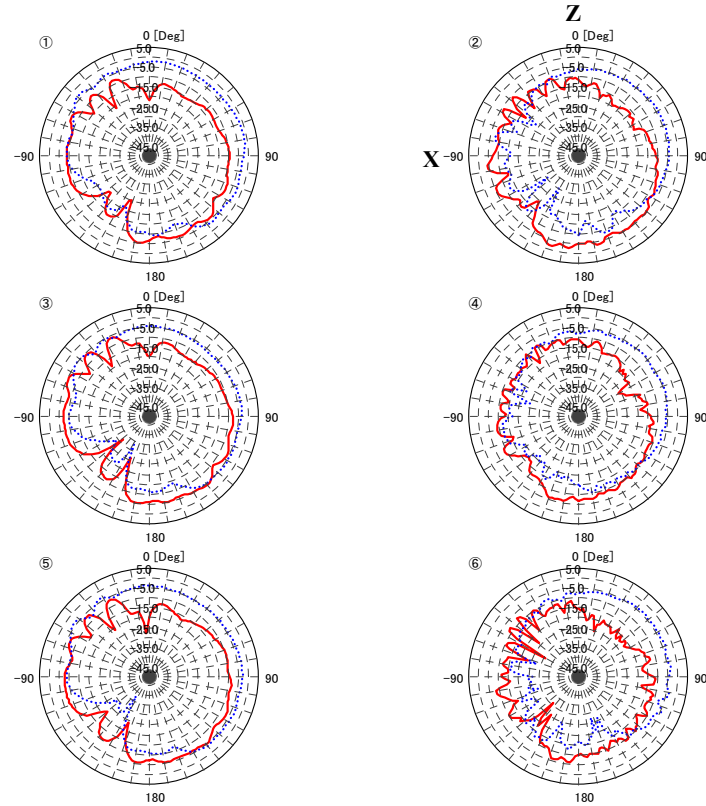


**FieldpatternZ-Xplane**

Fj-031022-021  
S.Yoshida  
03/10/22

All AVG. -8.35[dBi]  
All MAX. AVG. -4.15[dBi]

YCE-5008 Left Z-X



Line	No.	Frequency[MHz]	MEMO	MAX. Gain[dBi]	AVG. Gain[dBi]
1	①	2400.00	Tx-H	0.51	-4.23
2	①	2400.00	Tx-V	0.35	-7.28
3	③	2442.00	Tx-H	1.28	-4.69
4	③	2442.00	Tx-V	0.42	-7.27
5	⑤	2484.00	Tx-H	1.40	-4.94
6	⑤	2484.00	Tx-V	-0.05	-7.41
7	②	4900.00	Tx-H	0.10	-4.57
8	②	4900.00	Tx-V	-0.36	-7.43
9	④	5350.00	Tx-H	-0.24	-5.97
10	④	5350.00	Tx-V	-2.51	-9.09
11	⑥	5825.00	Tx-H	1.67	-4.78
12	⑥	5825.00	Tx-V	-2.16	-8.04

Line	No.	Frequency[MHz]	MEMO	MAX. Gain[dBi]	AVG. Gain[dBi]
1	①	2400.00	Tx-H	-5.71	-10.04
2	①	2400.00	Tx-V	-1.70	-5.28
3	③	2442.00	Tx-H	-4.73	-8.78
4	③	2442.00	Tx-V	-3.73	-7.04
5	⑤	2484.00	Tx-H	-5.67	-9.42
6	⑤	2484.00	Tx-V	-3.44	-6.25
7	②	4900.00	Tx-H	-2.38	-8.41
8	②	4900.00	Tx-V	-4.14	-8.34
9	④	5350.00	Tx-H	-6.17	-11.30
10	④	5350.00	Tx-V	-4.72	-9.15
11	⑥	5825.00	Tx-H	-6.39	-12.54
12	⑥	5825.00	Tx-V	-3.80	-8.73