

1A Antenna Part Number	1B Manufacture	1C Antenna Type	1D Cable Assembly Part Number and Information	1E Peak Gain W/i Cable loss (dBi)	1F Peak Gain w/o Cable Loss (dBi)	1G VSWR	1H Cable Loss (dBi)
(P/N:YCE-5008) Main antenna	Yokowo Co.Ltd	Monopole	(P/N: U.FL-2LP- 5016-A-495)	2400- 2500MHz 0.46 dBi (peak)	2400- 2500MHz 1.96 dBi (peak)	2400- 2500MHz 1.50 max	2400- 2500MHz 1.50 dBi (peak)
			50 ohm Coaxial. length: 50cm	5150- 5350MHz 1.94 dBi (peak)	5150- 5350MHz 4.24 dBi (peak)	5150- 5350MHz 2.60 max	5150- 5350MHz 2.30 dBi (peak)
			diameter: 1.1mm	5470- 5725MHz 0.61 dBi (peak)	5470- 5725MHz 2.91 dBi (peak)	5470- 5725MHz 2.75 max	5470- 5725MHz 2.30 dBi (peak)
			Connector: U.FL	5725- 5850MHz 1.66 dBi (peak)	5725- 5850MHz 3.96 dBi (peak)	5725- 5850MHz 2.80 max	5725- 5850MHz 2.30 dBi (peak)
(P/N:YCE-5008) Auxiliary antenna	Yokowo Co.Ltd	Monopole	Example: (P/N: U.FL-2LP- 5016-A-515)	2400- 2500MHz 1.03 dBi (peak)	2400- 2500MHz 2.53 dBi (peak)	2400- 2500MHz 1.50 max	2400- 2500MHz 1.50 dBi (peak)
			50 ohm Coaxial. length: 52cm	5150- 5350MHz 0.27 dBi (peak)	5150- 5350MHz 2.27 dBi (peak)	5150- 5350MHz 2.00 max	5150- 5350MHz 2.00 dBi (peak)
			diameter: 1.1mm	5470- 5725MHz 0.00 dBi (peak)	5470- 5725MHz 2.00 dBi (peak)	5470- 5725MHz 2.60 max	5470- 5725MHz 2.00 dBi (peak)
			Connector: U.FL	5725- 5850MHz 2.39 dBi (peak)	5725- 5850MHz 4.39 dBi (peak)	5725- 5850MHz 2.40 max	5725- 5850MHz 2.00 dBi (peak)

Ceramic Antenna Test Data**yokowo****To : FUJITSU LIMITED****Application : For W-LAN (IEEE-802.11a,b,g)**

Measurement Institution : Yokowo No.3 Radio Measuring Site

Antenna Model : YCE-5008 (008L00197)

Date : 2004/04/28

Measurement Condition : Gilia Disp.-Left Side

Measured by : K.Okubo

Antenna Matching : Shunt L (3.3nH)**Correction of Cable Loss : Non (include Loss 1.5dB)****f=2400MHz**

Plane	Tx	Peak. Gain [dBi]	Avg. Gain [dBi]	Tx H & V Avg. [dBi]	Each Freq. Avg. [dBi]
X-Y	Horizontal	0.46	-5.46	-6.6	-7.5
	Vertical	-4.02	-8.04		
Y-Z	Horizontal	-0.63	-5.84	-7.8	
	Vertical	-4.82	-11.57		
Z-X	Horizontal	-8.65	-13.33	-8.3	
	Vertical	-2.16	-5.99		

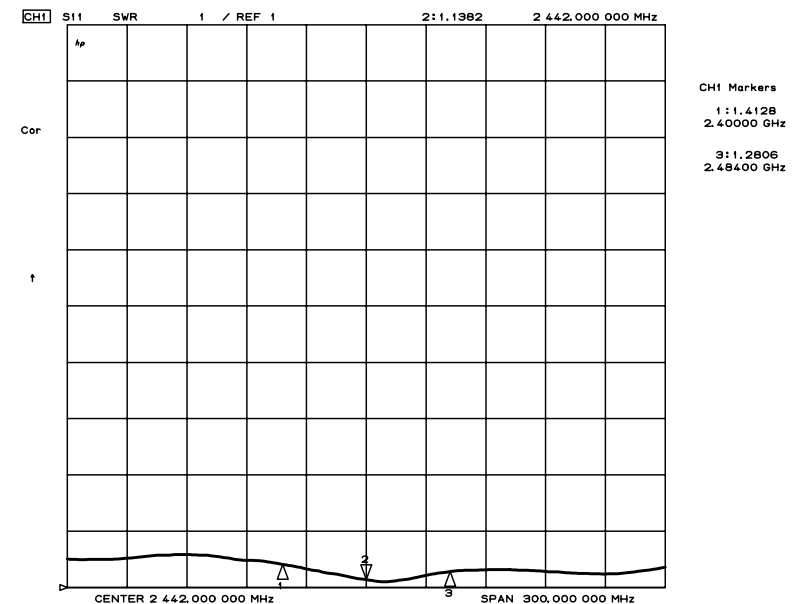
X-Y Plane All Avg. (All Freq.)	-6.7 dBi
Y-Z Plane All Avg. (All Freq.)	-7.9 dBi
Z-X Plane All Avg. (All Freq.)	-8.1 dBi
All Plane & All Freq. Avg.	-7.5 dBi

f=2442MHz

Plane	Tx	Peak. Gain [dBi]	Avg. Gain [dBi]	Tx H & V Avg. [dBi]	Each Freq. Avg. [dBi]
X-Y	Horizontal	0.32	-5.67	-6.8	-7.6
	Vertical	-3.74	-8.28		
Y-Z	Horizontal	-1.14	-6.18	-8.0	
	Vertical	-4.44	-11.39		
Z-X	Horizontal	-6.53	-11.27	-8.0	
	Vertical	-2.28	-6.21		

f=2484MHz

Plane	Tx	Peak. Gain [dBi]	Avg. Gain [dBi]	Tx H & V Avg. [dBi]	Each Freq. Avg. [dBi]
X-Y	Horizontal	0.21	-5.74	-6.8	-7.5
	Vertical	-5.02	-8.33		
Y-Z	Horizontal	0.38	-5.99	-7.8	
	Vertical	-4.07	-10.77		
Z-X	Horizontal	-5.03	-10.07	-8.1	
	Vertical	-2.86	-6.70		

VSWR

Ceramic Antenna Test Data

yokowo

Application : For W-LAN (IEEE-802.11a,b,g)

Measurement Institution : Yokowo No.3 Radio Measuring Site

Antenna Model : YCE-5008 (008L00197)

Date : 2004/04/28

Measurement Condition : Gilia Disp.-Left Side

Measured by : K.Okubo

Antenna Matching : Shunt L (3.3nH)

Correction of Cable Loss : Non (include Loss 2.3dB)

f=4900MHz

Plane	Tx	Peak. Gain [dBi]	Avg. Gain [dBi]	Tx H & V Avg. [dBi]	Each Freq. Avg. [dBi]
X-Y	Horizontal	1.67	-4.53	-5.8	-6.2
	Vertical	-1.11	-7.64		
Y-Z	Horizontal	1.94	-4.06	-5.9	
	Vertical	-2.15	-9.13		
Z-X	Horizontal	-1.74	-8.12	-7.1	
	Vertical	-1.96	-6.20		

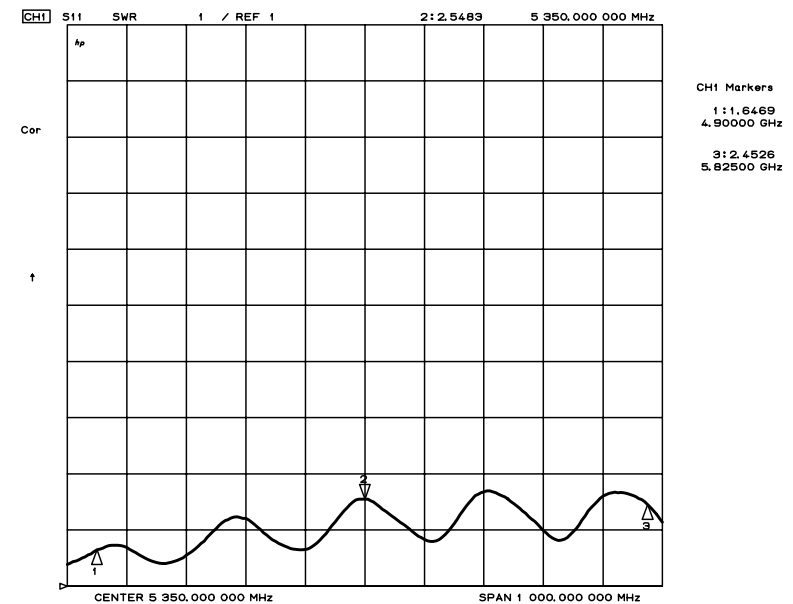
X-Y Plane All Avg. (All Freq.)	-6.3 dBi
Y-Z Plane All Avg. (All Freq.)	-6.4 dBi
Z-X Plane All Avg. (All Freq.)	-8.6 dBi
All Plane & All Freq. Avg.	-7.0 dBi

f=5350MHz

Plane	Tx	Peak. Gain [dBi]	Avg. Gain [dBi]	Tx H & V Avg. [dBi]	Each Freq. Avg. [dBi]
X-Y	Horizontal	-0.27	-6.16	-7.5	-8.1
	Vertical	-1.81	-9.54		
Y-Z	Horizontal	0.61	-5.59	-7.5	
	Vertical	-4.43	-11.12		
Z-X	Horizontal	-7.55	-12.78	-9.5	
	Vertical	-2.11	-7.64		

f=5825MHz

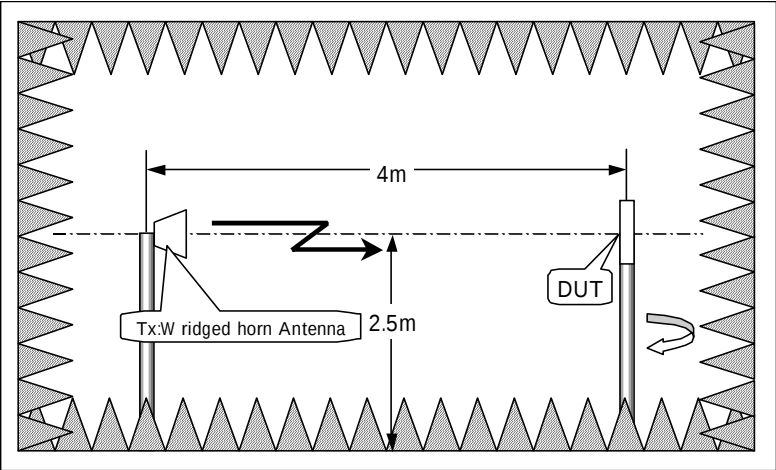
Plane	Tx	Peak. Gain [dBi]	Avg. Gain [dBi]	Tx H & V Avg. [dBi]	Each Freq. Avg. [dBi]
X-Y	Horizontal	0.99	-4.35	-5.8	-6.9
	Vertical	-0.57	-8.11		
Y-Z	Horizontal	1.66	-3.85	-5.9	
	Vertical	-3.78	-9.97		
Z-X	Horizontal	-6.25	-12.54	-10.0	
	Vertical	-3.15	-8.36		

VSWR

Ceramic Antenna Test Data



Measurement Condition



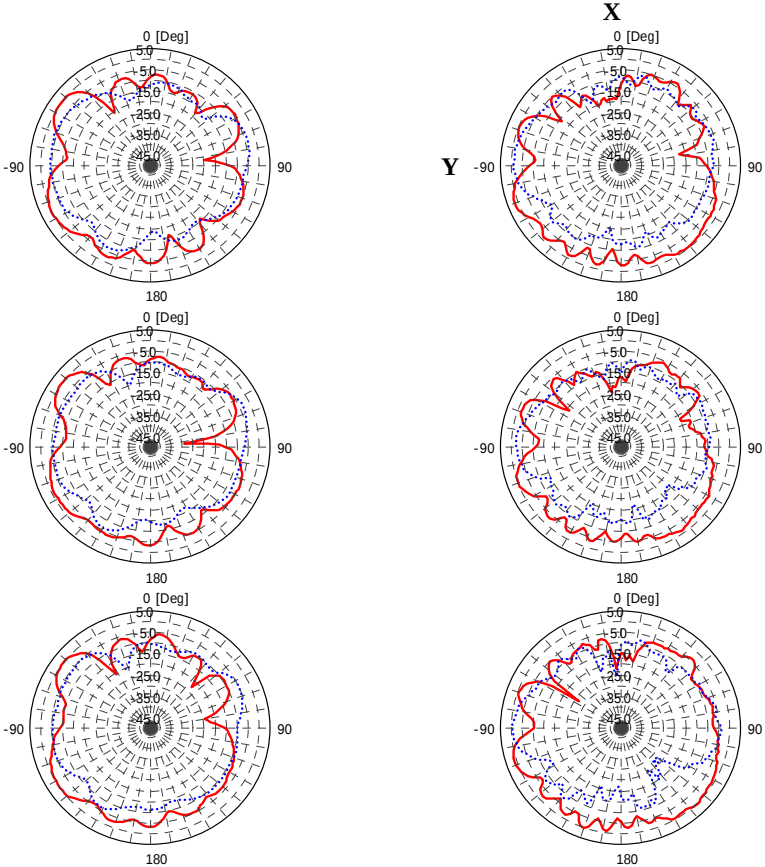
Antenna Coordinated



Field Pattern X-Y Plane

Fj_040428_004
K.Okubo
04年04月28日
Onion Left X-Y

All AVG. -6.52[dBi]
All MAX. AVG. -0.64[dBi]



	Line	No.	Frequency[MHz]	MEMO	MAX. Gain[dBi]	AVG. Gain[dBi]
1	=====		2400.00	Tx-H	0.46	-5.46
2			2400.00	Tx-V	-4.02	-8.04
3	=====		2442.00	Tx-H	0.32	-5.67
4			2442.00	Tx-V	-3.74	-8.28
5	=====		2484.00	Tx-H	0.21	-5.74
6			2484.00	Tx-V	-5.02	-8.33
7	=====		4900.00	Tx-H	1.67	-4.53
8			4900.00	Tx-V	-1.11	-7.64
9	=====		5350.00	Tx-H	-0.27	-6.16
10			5350.00	Tx-V	-1.81	-9.54
11	=====		5825.00	Tx-H	0.99	-4.35
12			5825.00	Tx-V	-0.57	-8.11

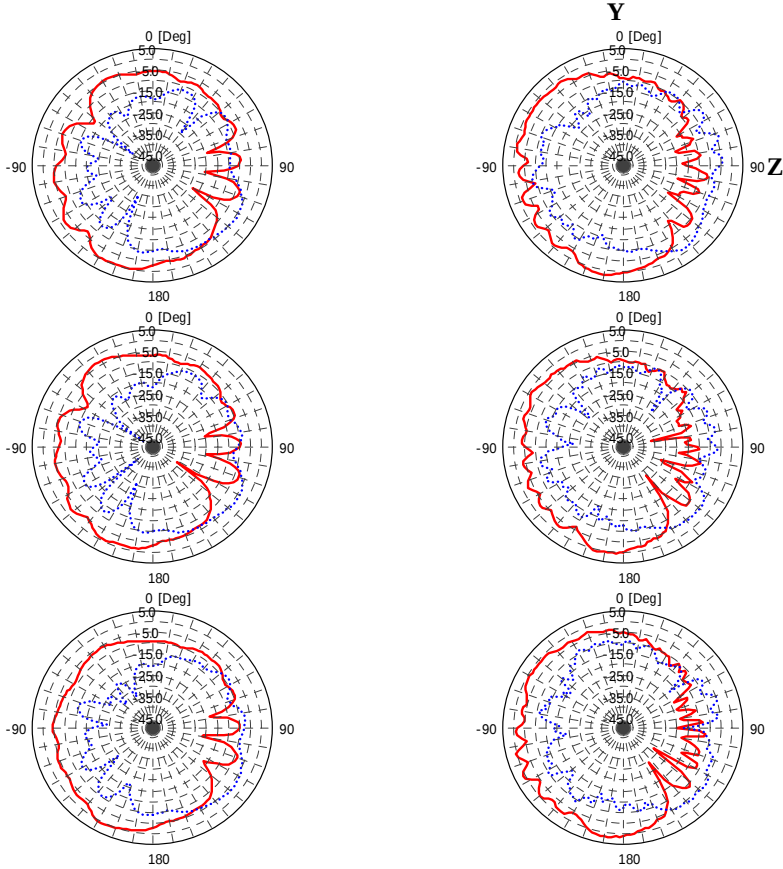
Ceramic Antenna Test Data



Field Pattern Y-Z Plane

Fj_040428_018
K.Okubo
04年04月28日
Onion Left Y-Z

All AVG. -7.06[dBi]
All MAX. AVG. -1.07[dBi]



	Line	No.	Frequency[MHz]	MEMO	MAX. Gain[dBi]	AVG. Gain[dBi]
1	—		2400.00	Tx-H	-0.63	-5.84
2	----		2400.00	Tx-V	-4.82	-11.57
3	—		2442.00	Tx-H	-1.14	-6.18
4	----		2442.00	Tx-V	-4.44	-11.39
5	—		2484.00	Tx-H	0.38	-5.99
6	----		2484.00	Tx-V	-4.07	-10.77
7	—		4900.00	Tx-H	1.94	-4.06
8	----		4900.00	Tx-V	-2.15	-9.13
9	—		5350.00	Tx-H	0.61	-5.59
10	----		5350.00	Tx-V	-4.43	-11.12
11	—		5825.00	Tx-H	1.66	-3.85
12	----		5825.00	Tx-V	-3.78	-9.97

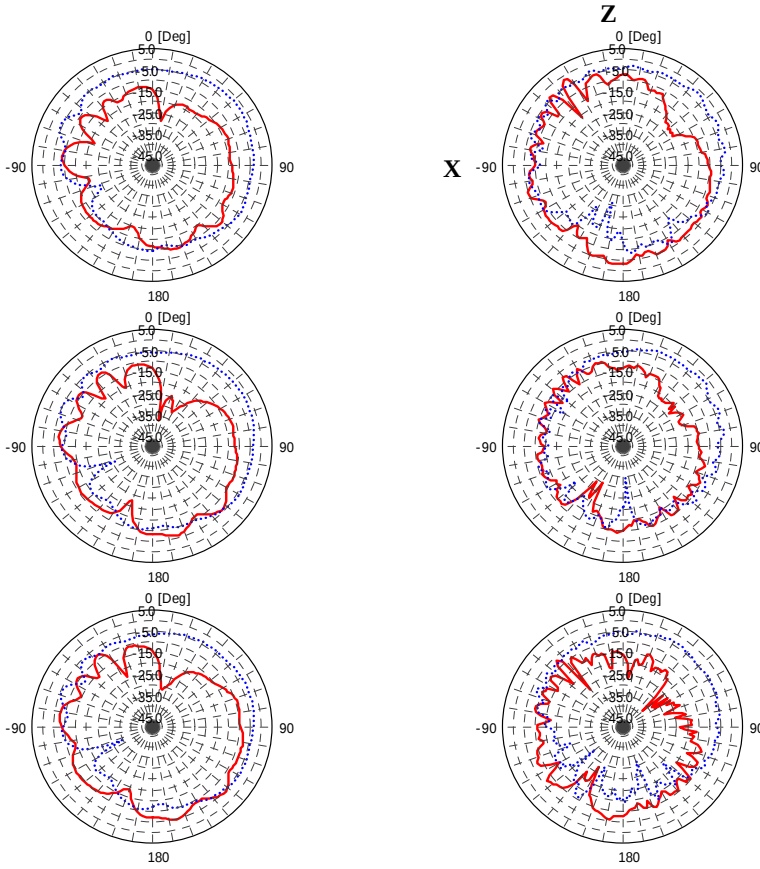
yokowo co.,ltd.

1112, Kanohara, Tomioka-shi Gunma, 370-2495, JAPAN Antenna Engineering Dept. TEL +81 274-62-2127 FAX +81 274-62-2031

Field Pattern Z-X Plane

Fj_040428_020
K.Okubo
04年04月28日
Onion Left Z-X

All AVG. -8.37[dBi]
All MAX. AVG. -3.62[dBi]



	Line	No.	Frequency[MHz]	MEMO	MAX. Gain[dBi]	AVG. Gain[dBi]
1	—		2400.00	Tx-H	-8.65	-13.33
2	----		2400.00	Tx-V	-2.16	-5.99
3	—		2442.00	Tx-H	-6.53	-11.27
4	----		2442.00	Tx-V	-2.28	-6.21
5	—		2484.00	Tx-H	-5.03	-10.07
6	----		2484.00	Tx-V	-2.86	-6.70
7	—		4900.00	Tx-H	-1.74	-8.12
8	----		4900.00	Tx-V	-1.96	-6.20
9	—		5350.00	Tx-H	-7.55	-12.78
10	----		5350.00	Tx-V	-2.11	-7.64
11	—		5825.00	Tx-H	-6.25	-12.54
12	----		5825.00	Tx-V	-3.15	-8.36

Ceramic Antenna Test Data**yokowo****To : FUJITSU LIMITED****Application : For W-LAN (IEEE-802.11a,b,g)**

Measurement Institution : Yokowo No.3 Radio Measuring Site

Antenna Model : YCE-5008 (008L00197)

Date : 2004/04/28

Measurement Condition : Gilia Disp.-Right Side

Measured by : K.Okubo

Antenna Matching : Shunt L (3.3nH)**Correction of Cable Loss : Non (include Loss 1.5dB)****f=2400MHz**

Plane	Tx	Peak. Gain [dBi]	Avg. Gain [dBi]	Tx H & V Avg. [dBi]	Each Freq. Avg. [dBi]
X-Y	Horizontal	1.03	-4.99	-5.9	-6.7
	Vertical	-3.13	-7.17		
Y-Z	Horizontal	-0.27	-5.12	-6.8	
	Vertical	-2.78	-9.59		
Z-X	Horizontal	-7.43	-13.01	-7.4	
	Vertical	-1.60	-5.04		

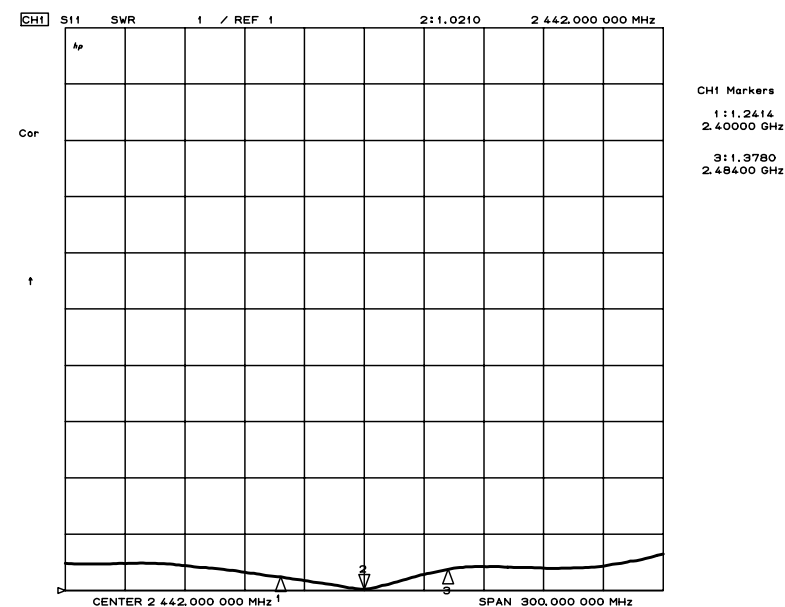
X-Y Plane All Avg. (All Freq.)	-6.4 dBi
Y-Z Plane All Avg. (All Freq.)	-7.2 dBi
Z-X Plane All Avg. (All Freq.)	-7.9 dBi
All Plane & All Freq. Avg.	-7.1 dBi

f=2442MHz

Plane	Tx	Peak. Gain [dBi]	Avg. Gain [dBi]	Tx H & V Avg. [dBi]	Each Freq. Avg. [dBi]
X-Y	Horizontal	0.20	-5.66	-6.6	-7.4
	Vertical	-4.00	-7.88		
Y-Z	Horizontal	-1.09	-5.75	-7.4	
	Vertical	-3.07	-10.25		
Z-X	Horizontal	-6.29	-11.60	-8.3	
	Vertical	-3.00	-6.42		

f=2484MHz

Plane	Tx	Peak. Gain [dBi]	Avg. Gain [dBi]	Tx H & V Avg. [dBi]	Each Freq. Avg. [dBi]
X-Y	Horizontal	0.40	-5.69	-6.6	-7.4
	Vertical	-3.91	-7.83		
Y-Z	Horizontal	-0.22	-5.86	-7.5	
	Vertical	-3.08	-10.25		
Z-X	Horizontal	-6.51	-11.29	-8.2	
	Vertical	-2.87	-6.43		

VSWR**yokowo co.,ltd.**

Ceramic Antenna Test Data**yokowo****Application : For W-LAN (IEEE-802.11a,b,g)**

Measurement Institution : Yokowo No.3 Radio Measuring Site

Antenna Model : YCE-5008 (008L00197)

Date : 2004/04/28

Measurement Condition : Gilia Disp.-Right Side

Measured by : K.Okubo

Antenna Matching : Shunt L (3.3nH)**Correction of Cable Loss : Non (include Loss 2.3dB)****f=4900MHz**

Plane	Tx	Peak. Gain [dBi]	Avg. Gain [dBi]	Tx H & V Avg. [dBi]	Each Freq. Avg. [dBi]
X-Y	Horizontal	0.04	-7.07	-8.1	-8.2
	Vertical	-3.23	-9.43		
Y-Z	Horizontal	0.27	-6.81	-8.1	
	Vertical	-3.70	-9.88		
Z-X	Horizontal	-5.88	-11.73	-8.6	
	Vertical	-2.76	-6.77		

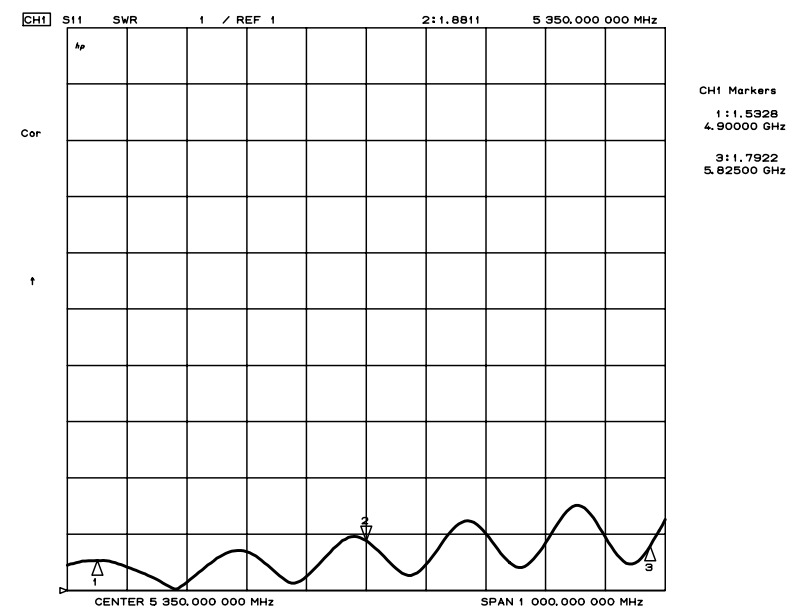
X-Y Plane All Avg. (All Freq.)	-7.0 dBi
Y-Z Plane All Avg. (All Freq.)	-6.9 dBi
Z-X Plane All Avg. (All Freq.)	-9.2 dBi
All Plane & All Freq. Avg.	-7.6 dBi

f=5350MHz

Plane	Tx	Peak. Gain [dBi]	Avg. Gain [dBi]	Tx H & V Avg. [dBi]	Each Freq. Avg. [dBi]
X-Y	Horizontal	-0.17	-6.87	-8.1	-8.8
	Vertical	-2.56	-9.71		
Y-Z	Horizontal	0.00	-6.50	-7.8	
	Vertical	-3.74	-9.69		
Z-X	Horizontal	-4.20	-11.51	-11.6	
	Vertical	-6.05	-11.67		

f=5825MHz

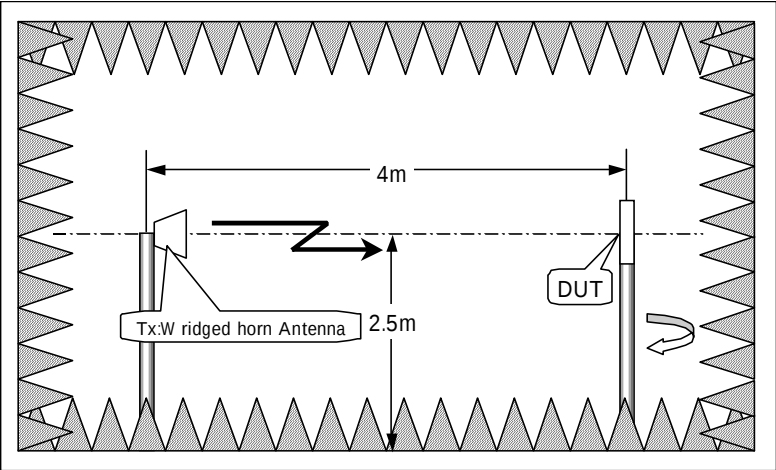
Plane	Tx	Peak. Gain [dBi]	Avg. Gain [dBi]	Tx H & V Avg. [dBi]	Each Freq. Avg. [dBi]
X-Y	Horizontal	1.61	-4.03	-5.4	-6.1
	Vertical	0.21	-7.47		
Y-Z	Horizontal	2.39	-3.69	-5.4	
	Vertical	-2.08	-8.30		
Z-X	Horizontal	-3.94	-11.16	-8.1	
	Vertical	-0.94	-6.38		

VSWR

Ceramic Antenna Test Data



Measurement Condition



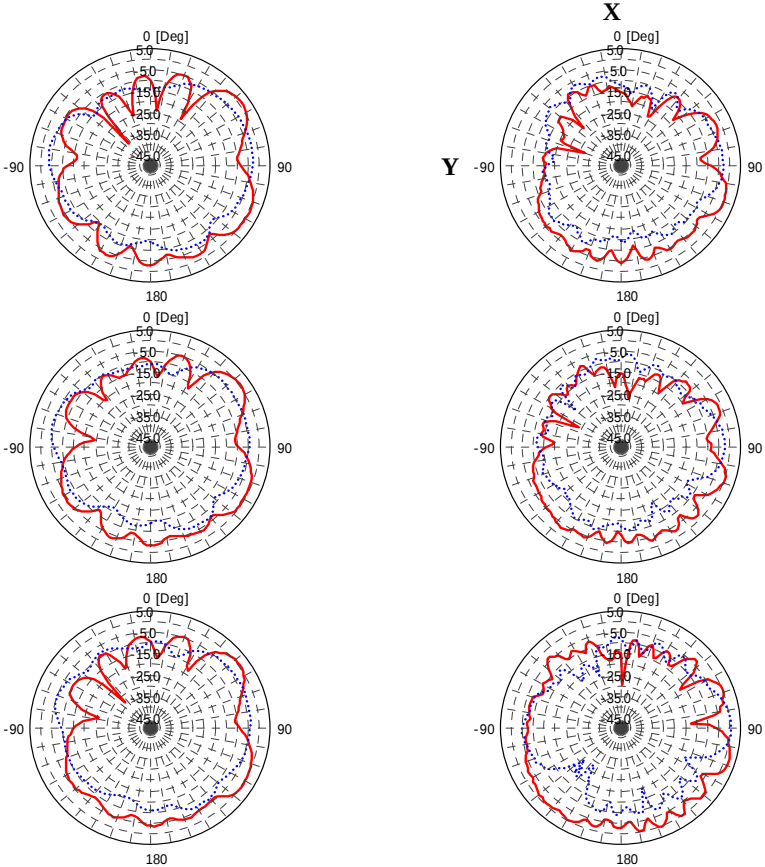
Antenna Coordinated



Field Pattern X-Y Plane

Fj_040428_006
K.Okubo
04年04月28日
Onion Right X-Y

All AVG. -6.68[dBi]
All MAX. AVG. -0.71[dBi]



	Line	No.	Frequency[MHz]	MEMO	MAX. Gain[dBi]	AVG. Gain[dBi]
1	=====		2400.00	Tx-H	1.03	-4.99
2			2400.00	Tx-V	-3.13	-7.17
3	=====		2442.00	Tx-H	0.20	-5.66
4			2442.00	Tx-V	-4.00	-7.88
5	=====		2484.00	Tx-H	0.40	-5.69
6			2484.00	Tx-V	-3.91	-7.83
7	=====		4900.00	Tx-H	0.04	-7.07
8			4900.00	Tx-V	-3.23	-9.43
9	=====		5350.00	Tx-H	-0.17	-6.87
10			5350.00	Tx-V	-2.56	-9.71
11	=====		5825.00	Tx-H	1.61	-4.03
12			5825.00	Tx-V	0.21	-7.47

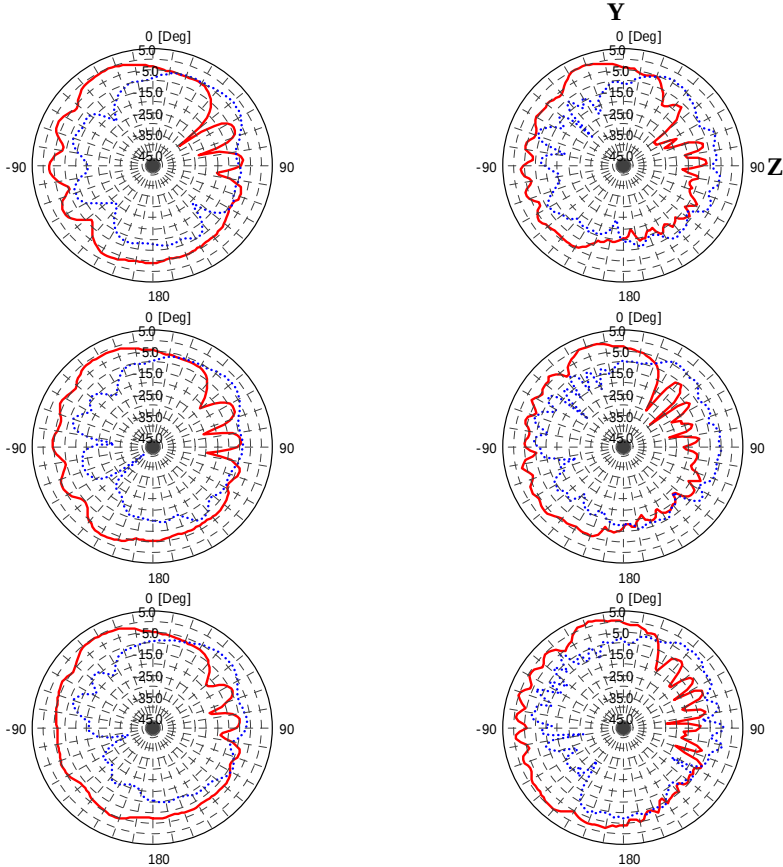
Ceramic Antenna Test Data



Field Pattern Y-Z Plane

Fj_040428_016
K.Okubo
04年04月28日
Onion Right Y-Z

All AVG. -7.08[dBi]
All MAX. AVG. -1.04[dBi]



	Line	No.	Frequency[MHz]	MEMO	MAX. Gain[dBi]	AVG. Gain[dBi]
1	Red		2400.00	Tx-H	-0.27	-5.12
2	Blue		2400.00	Tx-V	-2.78	-9.59
3	Red		2442.00	Tx-H	-1.09	-5.75
4	Blue		2442.00	Tx-V	-3.07	-10.25
5	Red		2484.00	Tx-H	-0.22	-5.86
6	Blue		2484.00	Tx-V	-3.08	-10.25
7	Red		4900.00	Tx-H	0.27	-6.81
8	Blue		4900.00	Tx-V	-3.70	-9.88
9	Red		5350.00	Tx-H	0.00	-6.50
10	Blue		5350.00	Tx-V	-3.74	-9.69
11	Red		5825.00	Tx-H	2.39	-3.69
12	Blue		5825.00	Tx-V	-2.08	-8.30

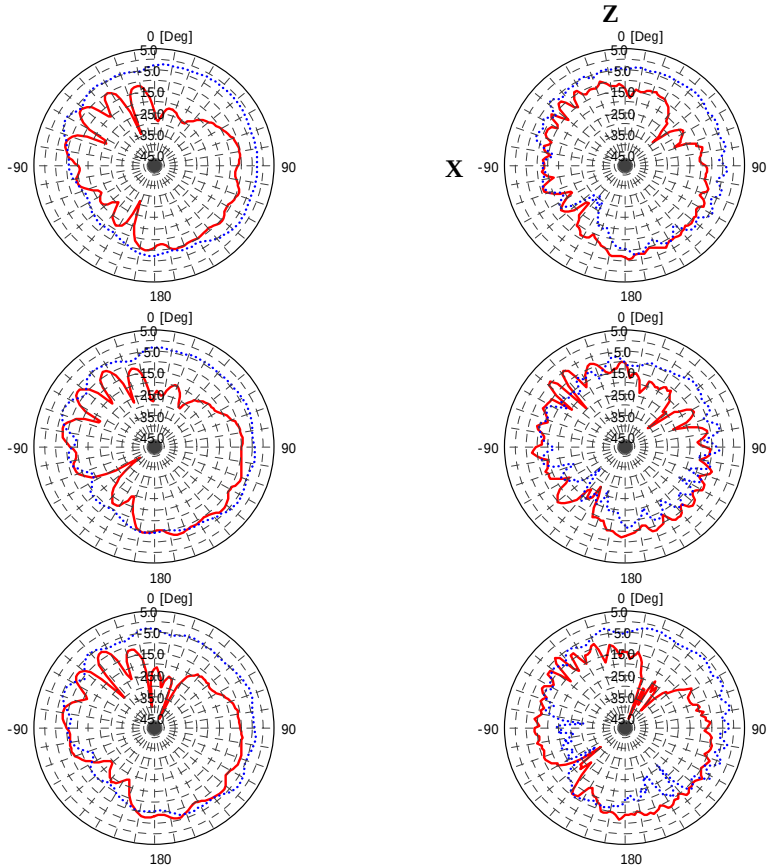
yokowo co.,ltd.

1112, Kanohara, Tomioka-shi Gunma, 370-2495, JAPAN Antenna Engineering Dept. TEL +81 274-62-2127 FAX +81 274-62-2031

Field Pattern Z-X Plane

Fj_040428_022
K.Okubo
04年04月28日
Onion Right Z-X

All AVG. -8.52[dBi]
All MAX. AVG. -3.82[dBi]



	Line	No.	Frequency[MHz]	MEMO	MAX. Gain[dBi]	AVG. Gain[dBi]
1	Red		2400.00	Tx-H	-7.43	-13.01
2	Blue		2400.00	Tx-V	-1.60	-5.04
3	Red		2442.00	Tx-H	-6.29	-11.60
4	Blue		2442.00	Tx-V	-3.00	-6.42
5	Red		2484.00	Tx-H	-6.51	-11.29
6	Blue		2484.00	Tx-V	-2.87	-6.43
7	Red		4900.00	Tx-H	-5.88	-11.73
8	Blue		4900.00	Tx-V	-2.76	-6.77
9	Red		5350.00	Tx-H	-4.20	-11.51
10	Blue		5350.00	Tx-V	-6.05	-11.67
11	Red		5825.00	Tx-H	-3.94	-11.16
12	Blue		5825.00	Tx-V	-0.94	-6.38