

Pumpkin/Pumpkin2 Antenna Data

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 Right	Yokowo Co.Ltd	Monopole	(P/N: U.FL-2LP -5016-A-340) 50 ohm Coaxial. length: 34cm diameter: 1.1mm Connector: U.FL	2400-2500MHz 2.29 dBi (peak)	2400-2500MHz 3.69dBi (peak)	2400-2500MHz 1.16 max	2400-2500MHz 1.4dBi (peak)
				5150-5350MHz 2.65 dBi (peak)	5150-5350MHz 4.65 dBi (peak)	5150-5350MHz 2.15 max	5150-5350MHz 2.00 dBi (peak)
				5470-5725MHz 0.54 dBi (peak)	5470-5725MHz 2.54 dBi (peak)	5470-5725MHz 2.50 max	5470-5725MHz 2.00 dBi (peak)
				5725-5850MHz 2.95 dBi (peak)	5725-5850MHz 4.95 dBi (peak)	5725-5850MHz 2.40 max	5725-5850MHz 2.00 dBi (peak)
(P/N:YCE-5008) Auxiliary antenna Left	Yokowo Co.Ltd	Monopole	Example: (P/N: U.FL-2LP -5016-A-480) 50 ohm Coaxial. length: 48cm diameter: 1.1mm Connector: U.FL	2400-2500MHz 2.31dBi (peak)	2400-2500MHz 3.51dBi (peak)	2400-2500MHz 2.00 max	2400-2500MHz 1.2 dBi (peak)
				5150-5350MHz 1.98 dBi (peak)	5150-5350MHz 3.98 dBi (peak)	5150-5350MHz 2.00 max	5150-5350MHz 2.00 dBi (peak)
				5470-5725MHz 1.80 dBi (peak)	5470-5725MHz 3.80 dBi (peak)	5470-5725MHz 2.60 max	5470-5725MHz 2.00 dBi (peak)
				5725-5850MHz 2.17 dBi (peak)	5725-5850MHz 4.17 dBi (peak)	5725-5850MHz 2.30 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 : 2004/02/11

Measurement condition : Pumpkin(Pumpkin2) Disp.-left side

Measured by : S.Yoshida

Antenna matching : Shunt L (2.2nH)**Correction of cable loss : Non (include loss 1.4dB)****f=2400MHz**

Plane	Tx	Peak. gain [dBi]	Average gain [dBi]	Tx H & V average [dBi]	Each frequency average [dBi]
X-Y	Horizontal	-0.36	-6.35	-6.7	-7.3
	Vertical	-1.58	-7.09		
Y-Z	Horizontal	1.33	-4.98	-6.2	
	Vertical	-2.69	-7.80		
Z-X	Horizontal	-1.77	-10.94	-9.8	
	Vertical	-3.23	-8.83		

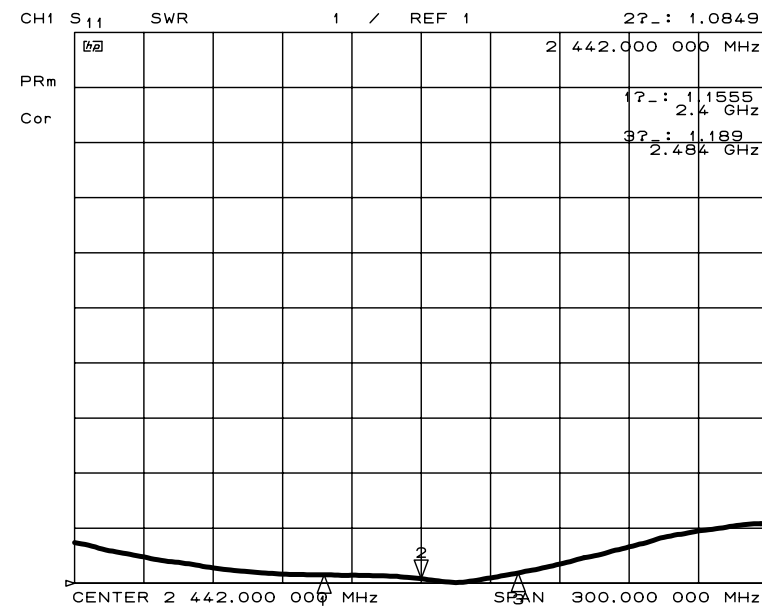
X-Y plane all average (all frequency)	-6.6 dBi
Y-Z plane all average (all frequency)	-6.0 dBi
Z-X plane all average (all frequency)	-9.0 dBi
All plane & all frequency average	-7.0 dBi

f=2442MHz

Plane	Tx	Peak. gain [dBi]	Average gain [dBi]	Tx H & V average [dBi]	Each frequency average [dBi]
X-Y	Horizontal	0.68	-6.28	-6.6	-6.8
	Vertical	-1.10	-6.88		
Y-Z	Horizontal	2.29	-4.62	-5.8	
	Vertical	-1.23	-7.32		
Z-X	Horizontal	-2.44	-11.08	-8.5	
	Vertical	-1.91	-6.93		

f=2484MHz

Plane	Tx	Peak. gain [dBi]	Average gain [dBi]	Tx H & V average [dBi]	Each frequency average [dBi]
X-Y	Horizontal	0.69	-6.31	-6.6	-7.1
	Vertical	-1.14	-6.92		
Y-Z	Horizontal	2.00	-5.08	-6.2	
	Vertical	-1.13	-7.66		
Z-X	Horizontal	-2.59	-10.14	-8.9	
	Vertical	-3.20	-7.91		

VSWR**yokowo co.,ltd.**

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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 : 2004/02/11

Measurement condition : Pumpkin(Pumpkin2) Disp.-left side

Measured by : S.Yoshida

Antenna matching : Shunt L (2.2nH)

Correction of cable loss : Non (include loss 2dB)

f=4900MHz

Plane	Tx	Peak. gain [dBi]	Average gain [dBi]	Tx H & V average [dBi]	Each frequency average [dBi]
X-Y	Horizontal	0.96	-5.06	-4.9	-5.3
	Vertical	0.61	-4.69		
Y-Z	Horizontal	2.65	-3.56	-5.2	
	Vertical	-0.77	-7.78		
Z-X	Horizontal	-0.80	-7.49	-6.0	
	Vertical	-1.55	-4.82		

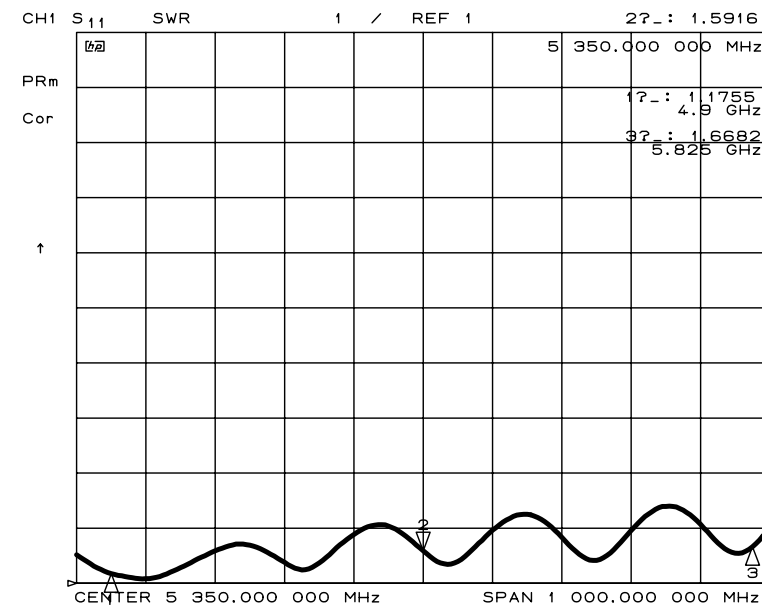
X-Y plane all average (all frequency)	-5.3 dBi
Y-Z plane all average (all frequency)	-5.2 dBi
Z-X plane all average (all frequency)	-6.0 dBi
All plane & all frequency average	-5.5 dBi

f=5350MHz

Plane	Tx	Peak. gain [dBi]	Average gain [dBi]	Tx H & V average [dBi]	Each frequency average [dBi]
X-Y	Horizontal	-0.49	-5.79	-6.2	-6.7
	Vertical	-0.87	-6.75		
Y-Z	Horizontal	0.54	-4.20	-5.9	
	Vertical	-2.51	-8.83		
Z-X	Horizontal	-2.62	-8.24	-8.4	
	Vertical	-3.69	-8.56		

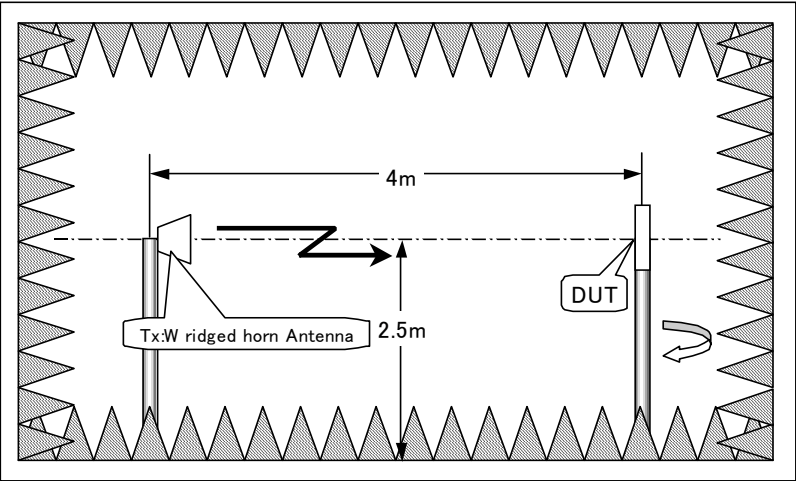
f=5825MHz

Plane	Tx	Peak. gain [dBi]	Average gain [dBi]	Tx H & V average [dBi]	Each frequency average [dBi]
X-Y	Horizontal	1.04	-4.53	-5.0	-4.7
	Vertical	1.48	-5.42		
Y-Z	Horizontal	2.95	-2.69	-4.7	
	Vertical	-1.54	-8.50		
Z-X	Horizontal	-0.37	-5.94	-4.5	
	Vertical	1.03	-3.37		

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Measurement condition



Antenna coordinated



Field pattern X-Y plane

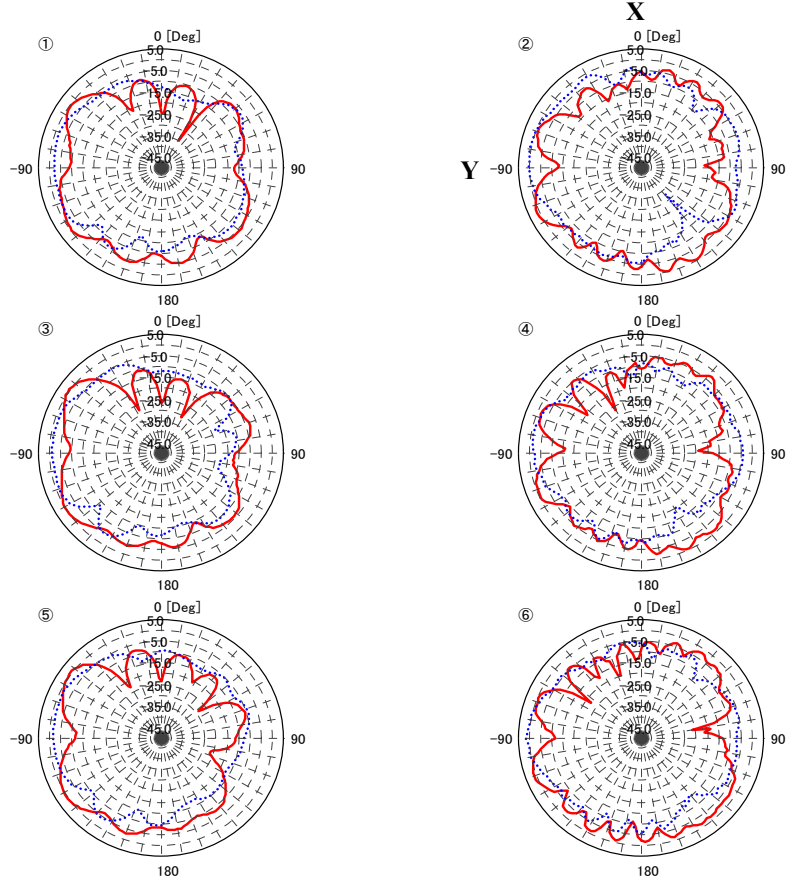
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S.Yoshida

04年02月11日

Pampukin Disp.左 X-Y

All AVG. -5.92[dBi]
All MAX. AVG. 0.10[dBi]



	Line	No.	Frequency[MHz]	MEMO		MAX. Gain[dBi]	AVG. Gain[dBi]
1	—————	①	2400.00	Tx-H		-0.36	-6.35
2		①	2400.00	Tx-V		-1.58	-7.09
3	—————	③	2442.00	Tx-H		0.68	-6.28
4		③	2442.00	Tx-V		-1.10	-6.88
5	—————	⑤	2484.00	Tx-H		0.69	-6.31
6		⑤	2484.00	Tx-V		-1.14	-6.92
7	—————	②	4900.00	Tx-H		0.96	-5.06
8		②	4900.00	Tx-V		0.61	-4.69
9	—————	④	5350.00	Tx-H		-0.49	-5.79
10		④	5350.00	Tx-V		-0.87	-6.75
11	—————	⑥	5825.00	Tx-H		1.04	-4.53
12		⑥	5825.00	Tx-V		1.48	-5.42

Field pattern Y-Z plane

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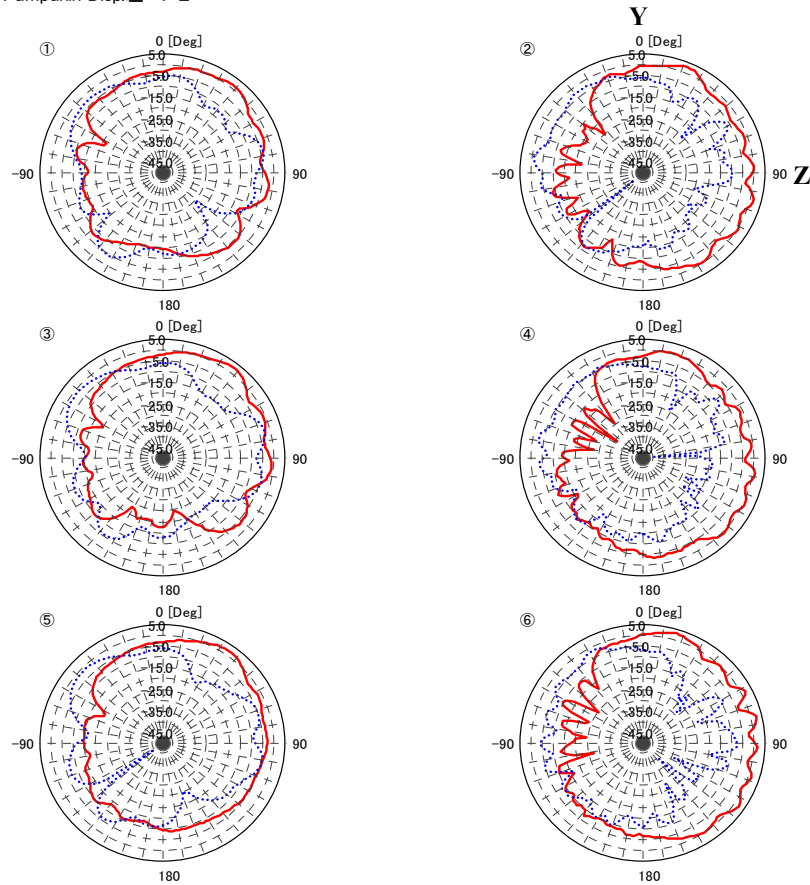
S.Yoshida

04年02月11日

Pampukin Disp.左 Y-Z

All AVG. -5.61[dBi]

All MAX. AVG. 0.59[dBi]



	Line	No.	Frequency[MHz]	MEMO	MAX. Gain[dBi]	AVG. Gain[dBi]
1	—	①	2400.00	Tx-H	1.33	-4.98
2		①	2400.00	Tx-V	-2.69	-7.80
3	—	③	2442.00	Tx-H	2.29	-4.62
4		③	2442.00	Tx-V	-1.23	-7.32
5	—	⑤	2484.00	Tx-H	2.00	-5.08
6		⑤	2484.00	Tx-V	-1.13	-7.66
7	—	②	4900.00	Tx-H	2.65	-3.56
8		②	4900.00	Tx-V	-0.77	-7.78
9	—	④	5350.00	Tx-H	0.54	-4.20
10		④	5350.00	Tx-V	-2.51	-8.83
11	—	⑥	5825.00	Tx-H	2.95	-2.69
12		⑥	5825.00	Tx-V	-1.54	-8.50

Field pattern Z-X plane

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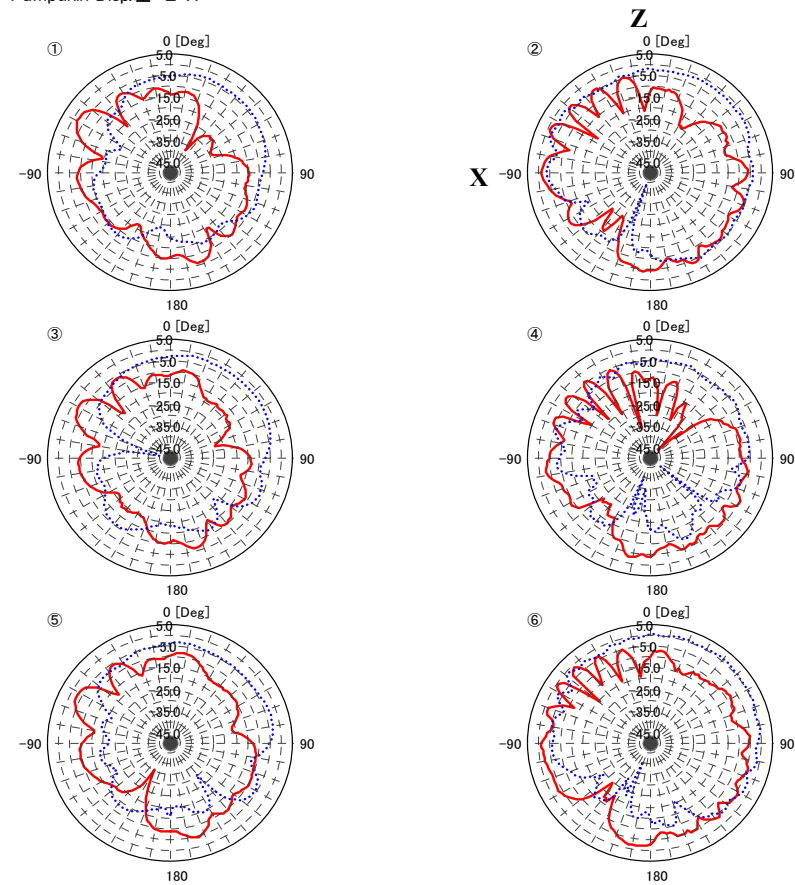
S.Yoshida

04年02月11日

Pampukin Disp.左 Z-X

All AVG. -7.25[dBi]

All MAX. AVG. -1.72[dBi]



	Line	No.	Frequency[MHz]	MEMO	MAX. Gain[dBi]	AVG. Gain[dBi]
1	—	①	2400.00	Tx-H	-1.77	-10.94
2		①	2400.00	Tx-V	-3.23	-8.83
3	—	③	2442.00	Tx-H	-2.44	-11.08
4		③	2442.00	Tx-V	-1.91	-6.93
5	—	⑤	2484.00	Tx-H	-2.59	-10.14
6		⑤	2484.00	Tx-V	-3.20	-7.91
7	—	②	4900.00	Tx-H	-0.80	-7.49
8		②	4900.00	Tx-V	-1.55	-4.82
9	—	④	5350.00	Tx-H	-2.62	-8.24
10		④	5350.00	Tx-V	-3.69	-8.56
11	—	⑥	5825.00	Tx-H	-0.37	-5.94
12		⑥	5825.00	Tx-V	1.03	-3.37

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 : 2004/02/11

Measurement condition : Pumpkin(Pumpkin2) Disp.-right side

Measured by : S.Yoshida

Antenna matching : Shunt L (2.2nH)**Correction of cable loss : Non (include loss 1.2dB)****f=2400MHz**

Plane	Tx	Peak. gain [dBi]	Average gain [dBi]	Tx H & V average [dBi]	Each frequency average [dBi]
X-Y	Horizontal	0.80	-5.81	-6.1	-7.8
	Vertical	-0.53	-6.40		
Y-Z	Horizontal	0.67	-5.91	-7.4	
	Vertical	-2.49	-9.64		
Z-X	Horizontal	-7.36	-12.40	-11.3	
	Vertical	-5.38	-10.38		

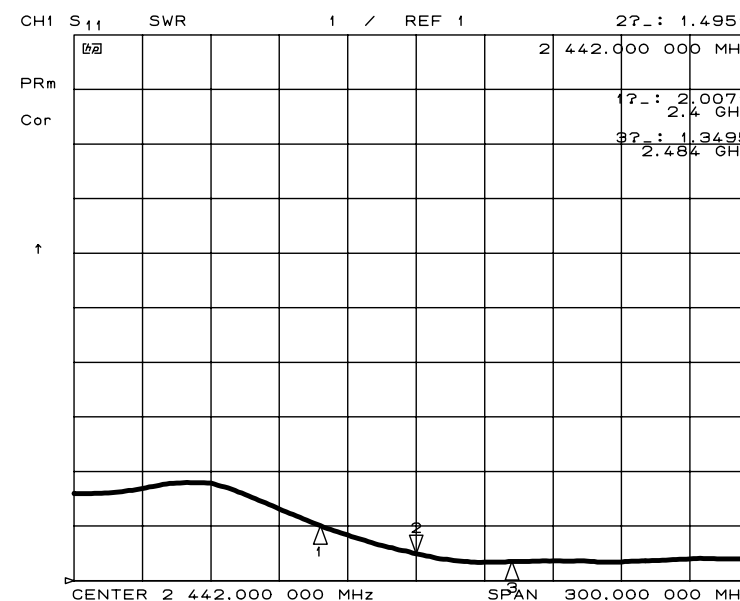
X-Y plane all average (all frequency)	-5.3 dBi
Y-Z plane all average (all frequency)	-6.8 dBi
Z-X plane all average (all frequency)	-9.6 dBi
All plane & all frequency average	-6.9 dBi

f=2442MHz

Plane	Tx	Peak. gain [dBi]	Average gain [dBi]	Tx H & V average [dBi]	Each frequency average [dBi]
X-Y	Horizontal	1.94	-4.40	-4.8	-6.4
	Vertical	1.14	-5.21		
Y-Z	Horizontal	2.31	-4.63	-6.2	
	Vertical	-2.88	-8.64		
Z-X	Horizontal	-5.68	-11.30	-9.3	
	Vertical	-2.46	-7.92		

f=2484MHz

Plane	Tx	Peak. gain [dBi]	Average gain [dBi]	Tx H & V average [dBi]	Each frequency average [dBi]
X-Y	Horizontal	1.67	-4.63	-5.1	-6.6
	Vertical	0.61	-5.67		
Y-Z	Horizontal	1.41	-5.40	-6.9	
	Vertical	-4.04	-9.21		
Z-X	Horizontal	-5.58	-12.44	-8.5	
	Vertical	-1.47	-6.53		

VSWR**yokowo co.,ltd.**

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Ceramic antenna test data

yokowo

Application : For W-LAN (IEEE-802.11a,b,g)
 Antenna model : YCE-5008 (008L00197)
 Measurement condition : Pumpkin(Pumpkin2) Disp.-right side
 Antenna matching : Shunt L (2.2nH)
 Correction of cable loss : Non (include loss 2dB)

Measurement institution : Yokowo No.3 radio measuring site

Date : 2004/02/11

Measured by : S.Yoshida

f=4900MHz

Plane	Tx	Peak. gain [dBi]	Average gain [dBi]	Tx H & V average [dBi]	Each frequency average [dBi]
X-Y	Horizontal	1.39	-4.74	-4.6	-5.1
	Vertical	0.12	-4.55		
Y-Z	Horizontal	1.98	-3.35	-4.8	
	Vertical	0.14	-7.08		
Z-X	Horizontal	-1.66	-7.57	-5.9	
	Vertical	-0.88	-4.75		

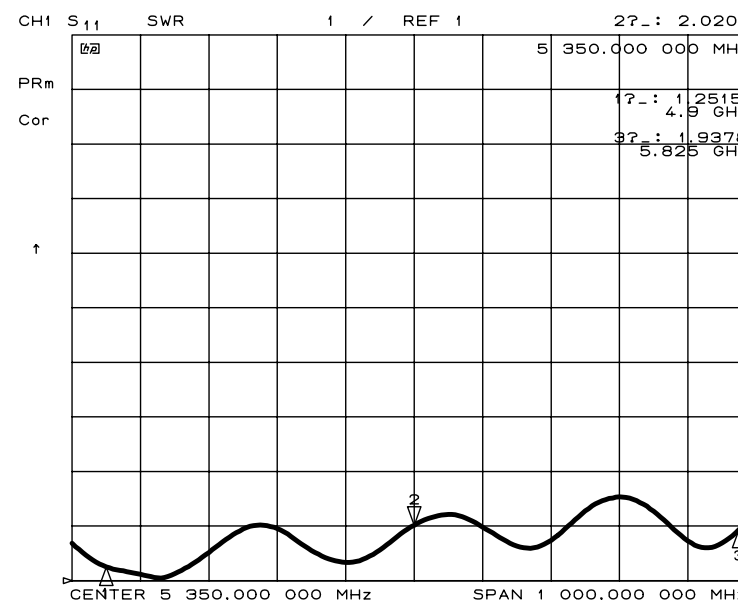
X-Y plane all average (all frequency)	-5.2 dBi
Y-Z plane all average (all frequency)	-5.3 dBi
Z-X plane all average (all frequency)	-6.2 dBi
All plane & all frequency average	-5.6 dBi

f=5350MHz

Plane	Tx	Peak. gain [dBi]	Average gain [dBi]	Tx H & V average [dBi]	Each frequency average [dBi]
X-Y	Horizontal	1.01	-5.21	-5.8	-6.4
	Vertical	0.39	-6.39		
Y-Z	Horizontal	1.80	-4.01	-5.9	
	Vertical	-2.30	-9.51		
Z-X	Horizontal	-0.17	-7.54	-7.8	
	Vertical	-2.79	-8.04		

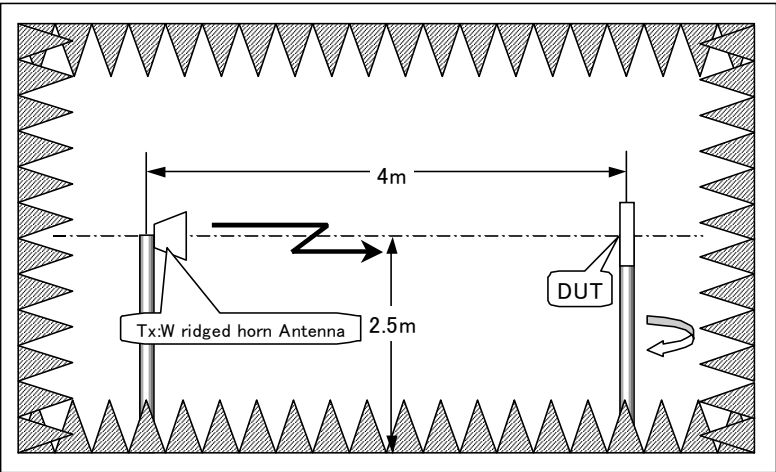
f=5825MHz

Plane	Tx	Peak. gain [dBi]	Average gain [dBi]	Tx H & V average [dBi]	Each frequency average [dBi]
X-Y	Horizontal	0.66	-4.96	-5.3	-5.3
	Vertical	1.50	-5.64		
Y-Z	Horizontal	2.17	-3.26	-5.3	
	Vertical	-2.62	-9.09		
Z-X	Horizontal	-1.32	-6.54	-5.3	
	Vertical	-0.13	-4.26		

SWR**yokowo co.,ltd.**

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Measurement condition



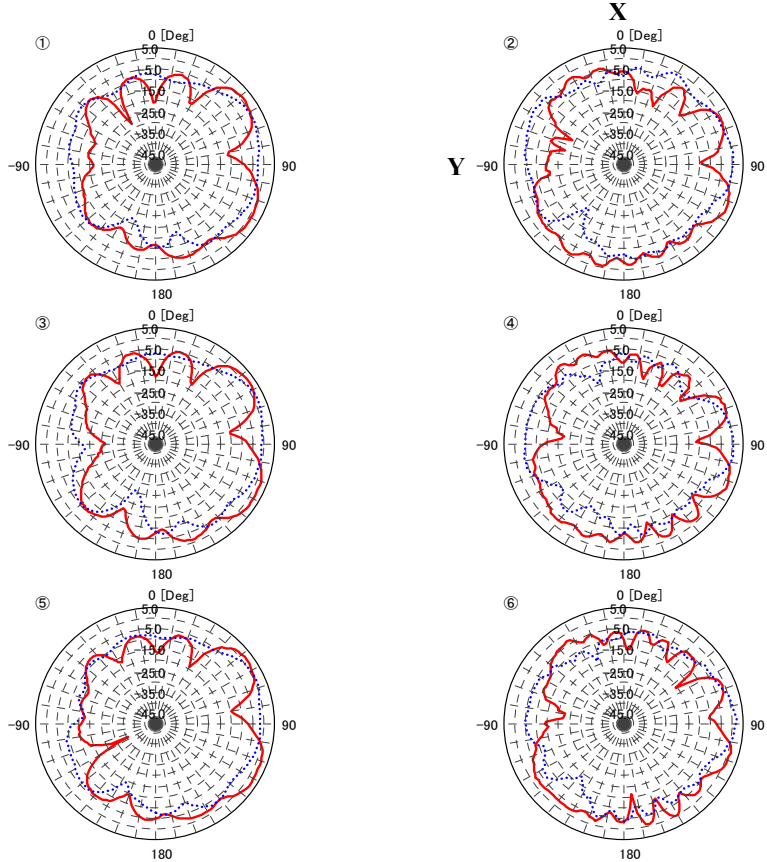
Antenna coordinated



Field pattern X-Y plane

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S.Yoshida
04年02月11日
Pampukin Disp.右 X-Y

All AVG. -5.25[dBi]
All MAX. AVG. 0.94[dBi]



	Line	No.	Frequency[MHz]	MEMO	MAX. Gain[dBi]	AVG. Gain[dBi]
1	—————	①	2400.00	Tx-H	0.80	-5.81
2		①	2400.00	Tx-V	-0.53	-6.40
3	—————	③	2442.00	Tx-H	1.94	-4.40
4		③	2442.00	Tx-V	1.14	-5.21
5	—————	⑤	2484.00	Tx-H	1.67	-4.63
6		⑤	2484.00	Tx-V	0.61	-5.67
7	—————	②	4900.00	Tx-H	1.39	-4.74
8		②	4900.00	Tx-V	0.12	-4.55
9	—————	④	5350.00	Tx-H	1.01	-5.21
10		④	5350.00	Tx-V	0.39	-6.39
11	—————	⑥	5825.00	Tx-H	0.66	-4.86
12		⑥	5825.00	Tx-V	1.50	-5.64

Ceramic antenna test data

yokowo

Field pattern Y-Z plane

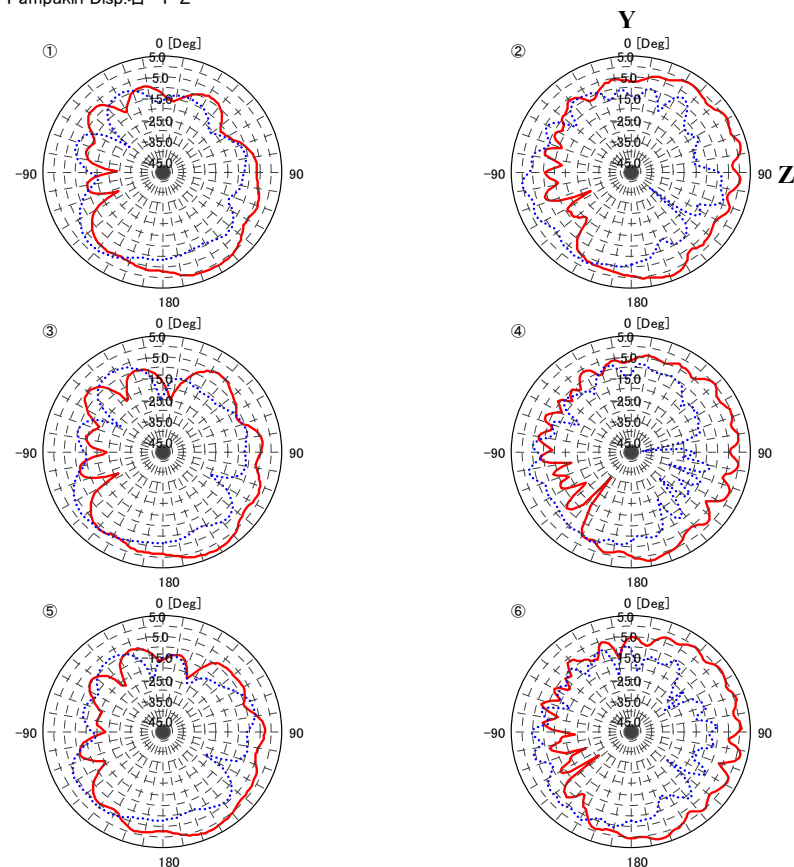
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S.Yoshida

04年02月11日

Pampukin Disp.右 Y-Z

All AVG. -5.99[dBi]
All MAX. AVG. 0.22[dBi]



	Line	No.	Frequency[MHz]	MEMO	MAX. Gain[dBi]	AVG. Gain[dBi]
1	—	①	2400.00	Tx-H	0.67	-5.91
2	-----	①	2400.00	Tx-V	-2.49	-9.64
3	—	③	2442.00	Tx-H	2.31	-4.63
4	-----	③	2442.00	Tx-V	-2.88	-8.64
5	—	⑤	2484.00	Tx-H	1.41	-5.40
6	-----	⑤	2484.00	Tx-V	-4.04	-9.21
7	—	②	4900.00	Tx-H	1.98	-3.35
8	-----	②	4900.00	Tx-V	0.14	-7.08
9	—	④	5350.00	Tx-H	1.80	-4.01
10	-----	④	5350.00	Tx-V	-2.30	-9.51
11	—	⑥	5825.00	Tx-H	2.17	-3.26
12	-----	⑥	5825.00	Tx-V	-2.62	-9.09

Field pattern Z-X plane

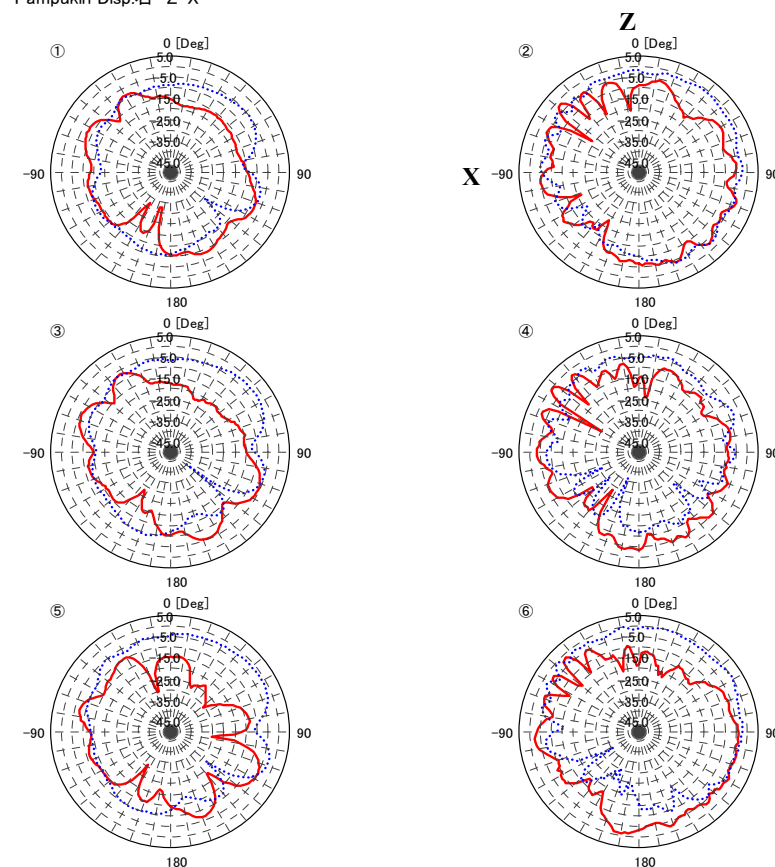
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S.Yoshida

04年02月11日

Pampukin Disp.右 Z-X

All AVG. -7.56[dBi]
All MAX. AVG. -2.34[dBi]



	Line	No.	Frequency[MHz]	MEMO	MAX. Gain[dBi]	AVG. Gain[dBi]
1	—	①	2400.00	Tx-H	-7.36	-12.40
2	-----	①	2400.00	Tx-V	-5.38	-10.38
3	—	③	2442.00	Tx-H	-5.68	-11.33
4	-----	③	2442.00	Tx-V	-2.46	-7.92
5	—	⑤	2484.00	Tx-H	-5.58	-12.44
6	-----	⑤	2484.00	Tx-V	-1.47	-6.53
7	—	②	4900.00	Tx-H	-1.66	-7.57
8	-----	②	4900.00	Tx-V	-0.88	-4.75
9	—	④	5350.00	Tx-H	-0.17	-7.54
10	-----	④	5350.00	Tx-V	-2.79	-8.04
11	—	⑥	5825.00	Tx-H	-1.32	-6.54
12	-----	⑥	5825.00	Tx-V	-0.13	-4.26

yokowo co.,ltd.

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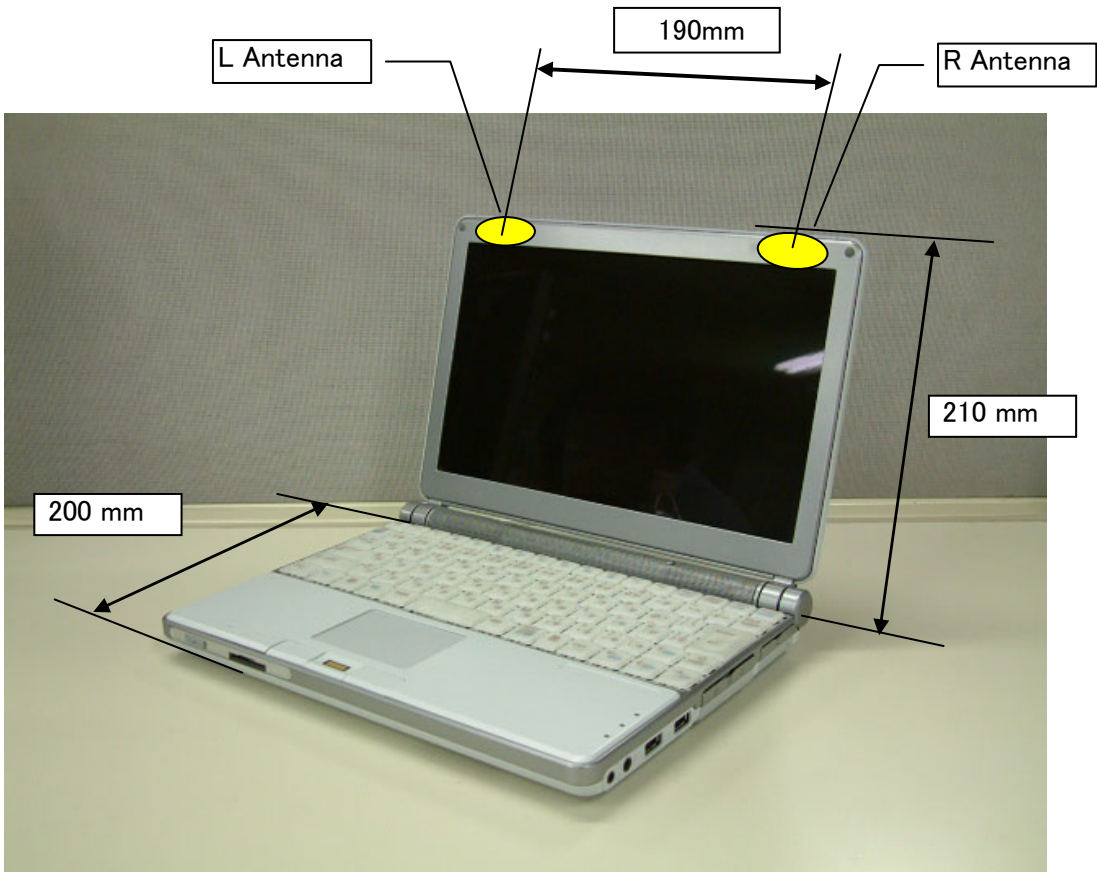
Pumpkin/Pumpkin2 Antenna Summary

Designator Manufacture	Fujitsu
Antenna Type	Monopole
Cable type (length)	Coax(450mm)
P/N	YCE-5008
Gain	MAX : 2.95(dBi) *see Note

Note:
1. Includes all cable losses.

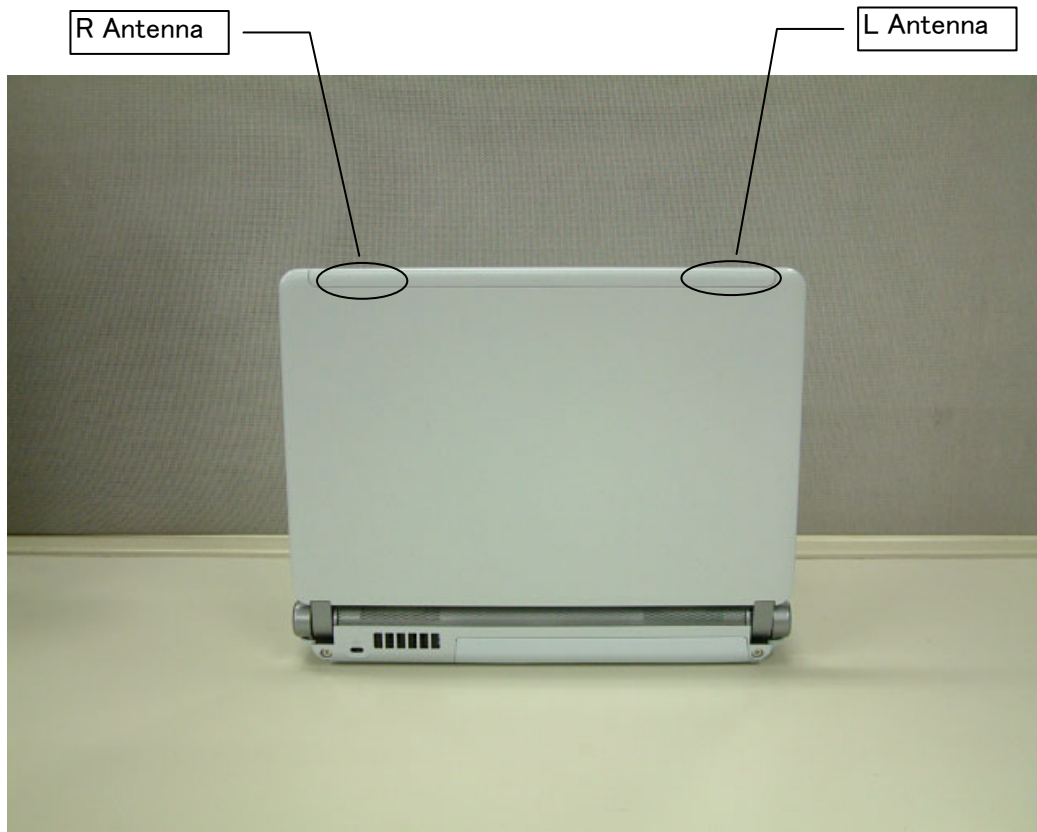
Picture:

Front View



Fujitsu Confidential

Rear View



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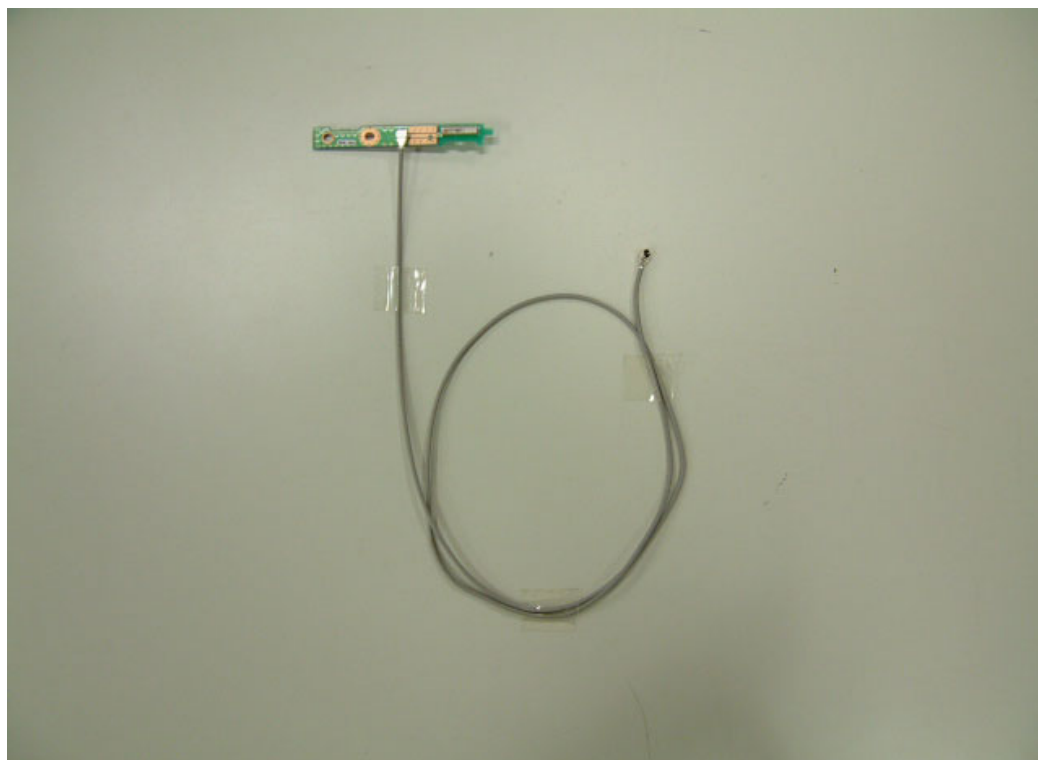


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Left-Side Antenna



Right-Side Antenna

