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Customized

Application result

of Chip Antenna

Customer	프라임엔터테인먼트
Order	SET matching
Model No.	
APP. Type	
Antenna	ALA931C4

2nd Report

April 25, 2006

AMOTECH	WRITTEN	CHECKED	APPROVED

AMOTECH CO., LTD.

Microwave Research & Development Laboratory

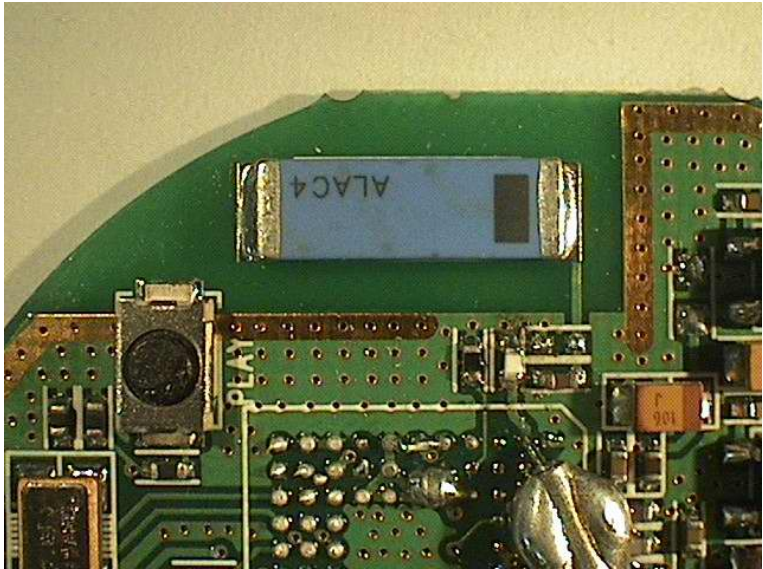
Contact : Kwon Hyoung-Jun : microwave@amotech.co.kr

Notes

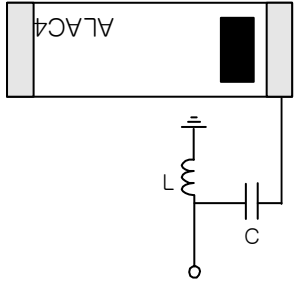
The contents of this data sheet are subject to change without notice. Please confirm the layout on the PCB and the SET conditions when placing your order.

Summary of the antenna test								
Test model condition								
Test No.	Antenna model	Condition						
#2-1	931C4	Matching(series C = 2.2pF, shunt L = 1.2nH)						
Radiation gain table of the test (dBi)								
Test No.	Freq (GHz)	Average gain						Total Gain
		XY		XZ		YZ		
		E	H	E	H	E	H	
#2-1	2.400	-5.64	-6.11	-2.45	-6.51	-17.08	-4.32	-2.47
	2.450	-4.96	-5.49	-1.47	-5.45	-16.14	-3.45	-1.60
	2.500	-5.66	-5.82	-1.95	-5.88	-16.33	-3.60	-2.01
Remark - - Total gain 값은 절대치가 아닌 상대 수치임								
Recommended design guide & tip.								

Test #2-1

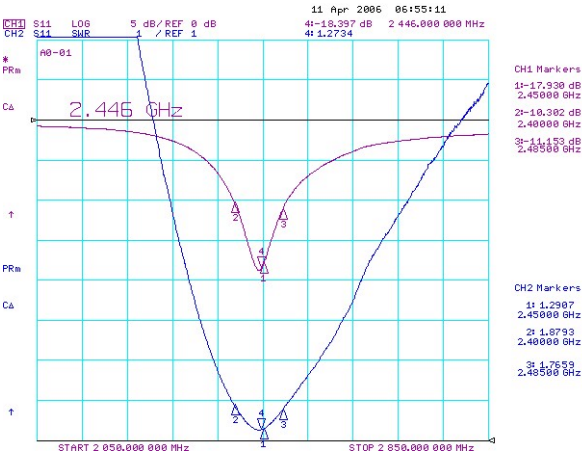


[그림 1] #2-1

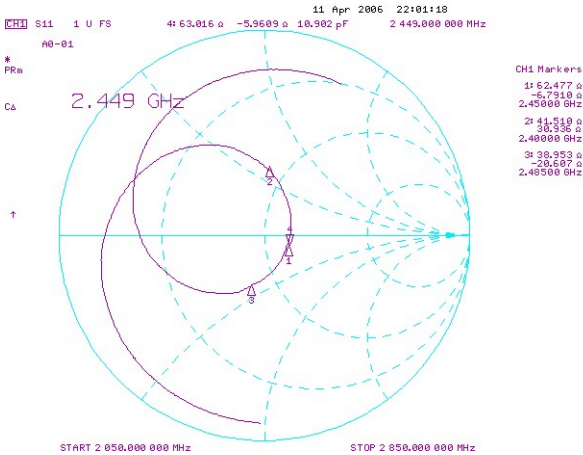


[matching layout]

No	Test #2-1
Ant	931C4
Series C	2.2pF
Shunt L	1.2nH



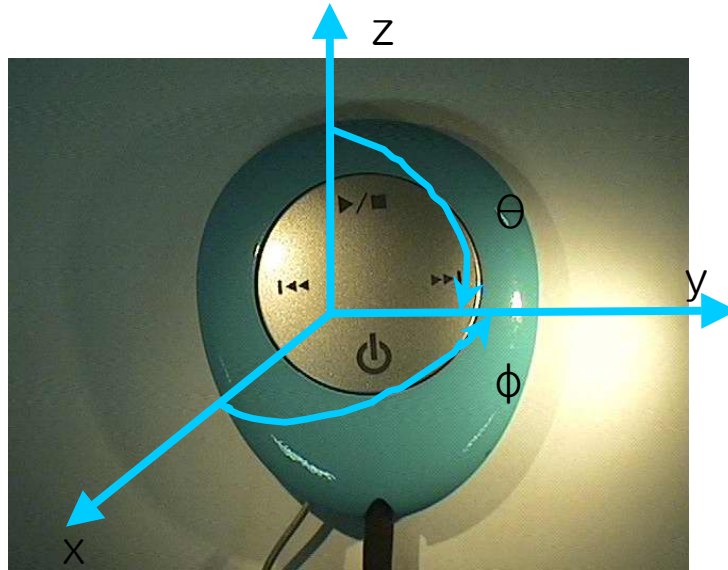
[그림 2] S11 & SWR



[그림 3] Smith chart

Remark

Radiation pattern 측정결과



안테나 방사 좌표계

Test condition

Parameters	Condition	Unit
Chamber size	8*4*4	m
Temperature	21.5	°C
Humidity	55	%
Absorption rate	-50dB under (over 2,000MHz)	
Measurement	S21 (network Analyzer)	HP8753ES
System software	Midas (Orbit/FR)	Version 3.6

- Unit : dBi
- E_plane: TX horn_roll=0deg. H_plane: TX horn_roll=90deg.

#2-1 931C4 [Azimuth XY]

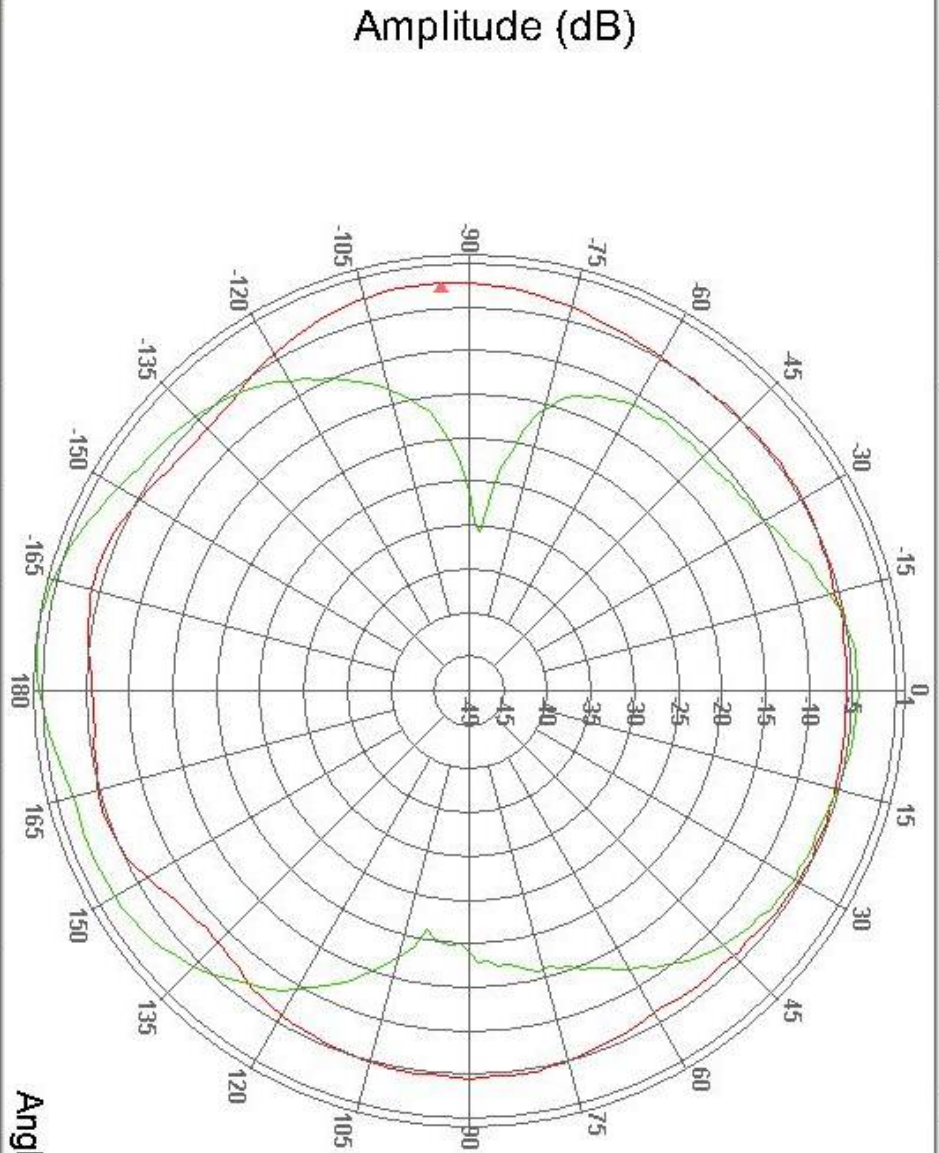
Operator: ANTENNA TEAM

#2-1_931C4_Azimuth XY

Date

2006-04-25 오전

Freq = 2.450GHZ



Angle [deg]

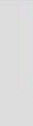
P	File Name	Roll [deg]	Freq. [GHz]	Ch.	Beam	Switch	Beam Peak [dB]	Beam Width [deg]	Null Depth [dB]	Avg
	#1-2_931c4_azimuth xy-CAL.nrf	0.00	2.450 G	0.00	Anttech		-2.11	265.98	P	-4.96
	#1-2_931c4_azimuth xy-CAL.nrf	90.00	2.450 G	0.00	Anttech		0.87	190.00	P	-5.47

Side lobes Database X Ratio

Side Lobes

No. Ampl Deg

Ampl. Color Visible Section



Not Inverted

No Skirt

Not Rotated

Ends Not Connected

Not Aligned

Not Normalized

Phase wrapped

Log. Display

#2-1 931C4 [Elevation XZ]

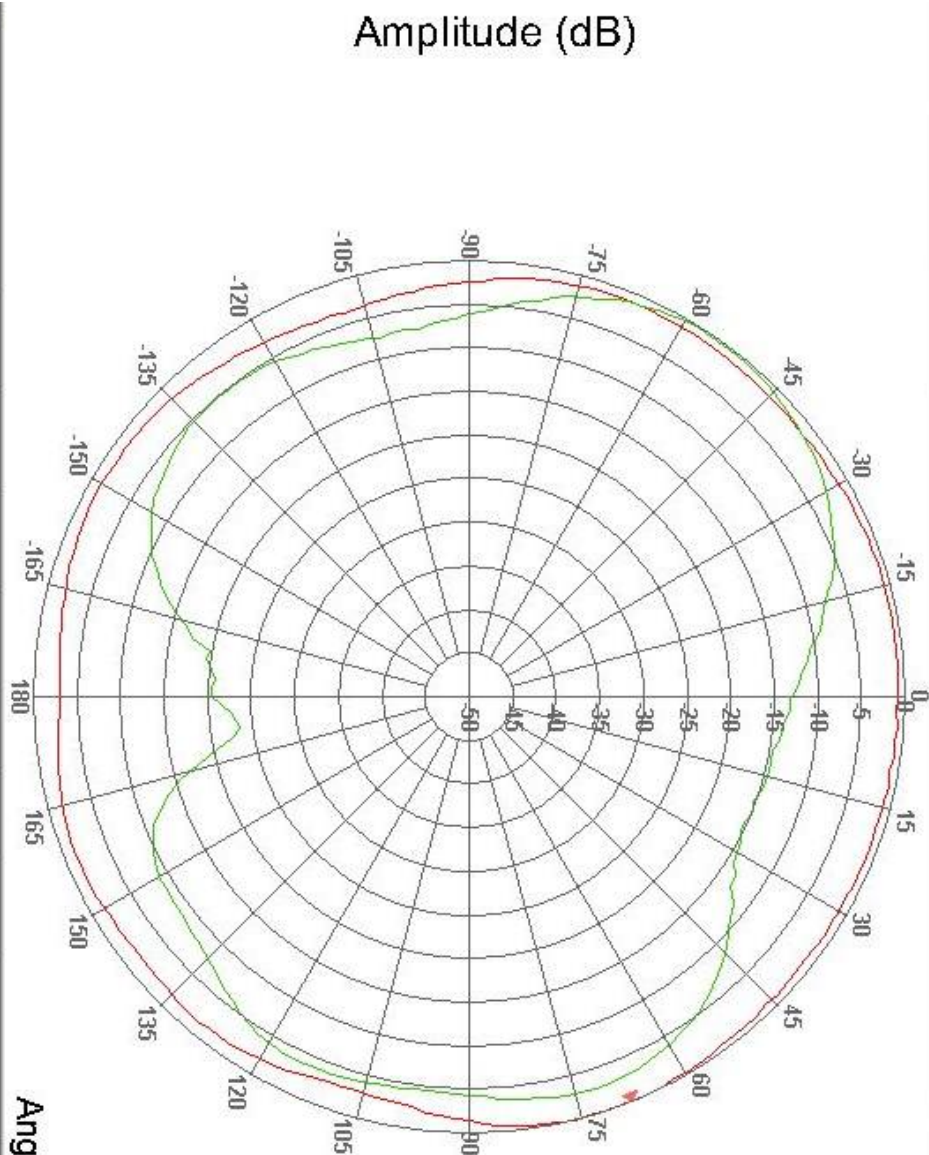
Operator: ANTENNA TEAM

#2-1_931C4_Elevation ZX

Date

2006-04-25 오전

Freq = 2.450GHZ



Angle [deg]

P	File Name	Roll [deg]	Freq. [GHz]	Ch.	Beam	Switch	Beam Peak [dB]	Beam Width [deg]	Null Depth [dB]	Avg
	#1-2_931c4_elevation zx-Cal.nff	0.00	2.450 G	0.00	Antech		0.10	68.03	P	-1.47
	#1-2_931c4_elevation zx-Cal.nff	90.00	2.450 G	0.00	Antech		-0.20	303.97	P	-5.45

☒ Amplitude
 ☐ Phase

☐ Not Inverted
 ☐ Not Aligned

☐ No Skirt
 ☐ Not Normalized

☐ Not Rotated
 ☐ Phase wrapped

☐ Ends Not Connected
 ☐ Log. Display

Ampl. Color
 Visible Section +

Side Lobes		
No.	Ampl	Deg

Side lobes Database X Ratio

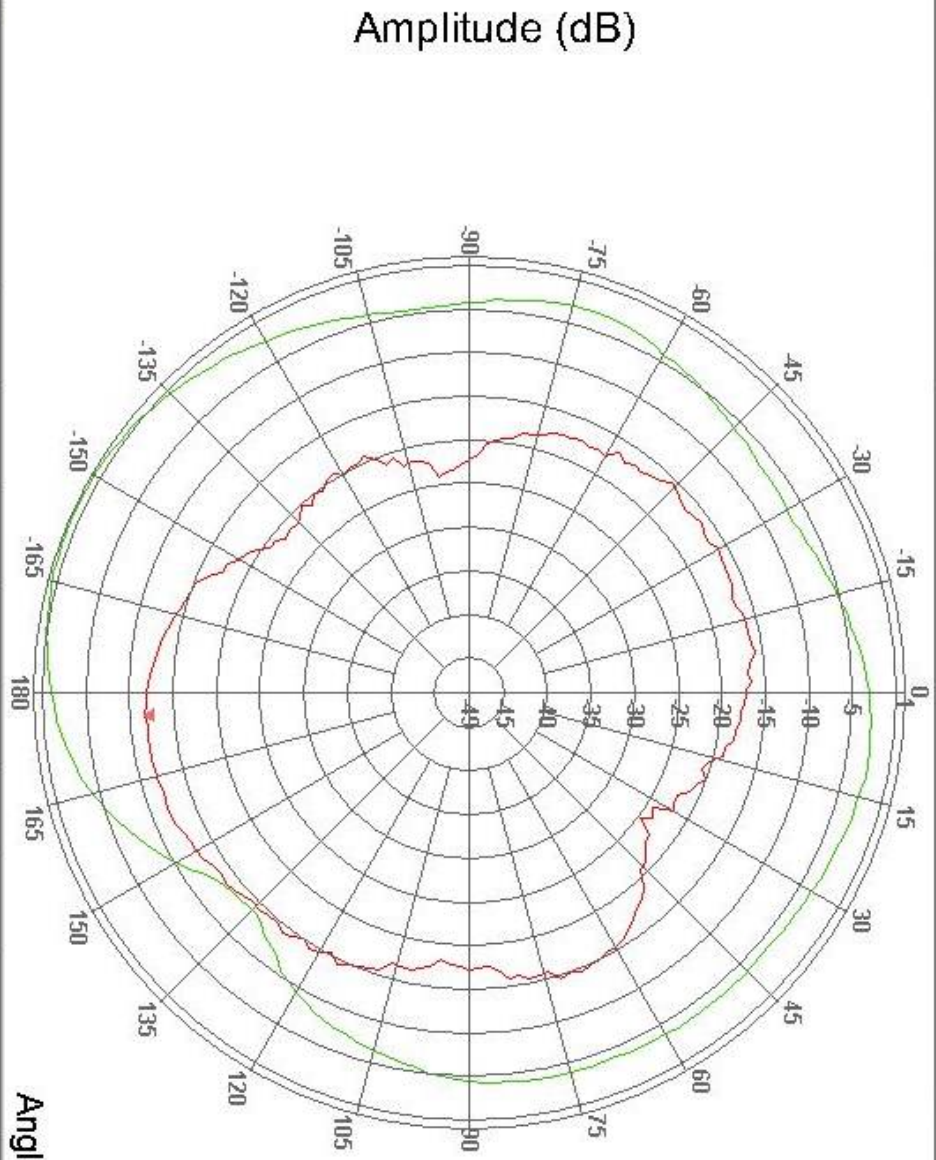
#2-1 931C4 [Elevation YZ]

Operator: ANTENNA TEAM

#2-1_931C4_Elevation ZY

Date: 2006-04-25 오전

Freq = 2.450GHZ



P	File Name	Roll [deg]	Freq. [GHz]	Ch.	Beam	Switch	Beam Peak [dB]	Beam Width [deg]	Null Depth [dB]	Avg
	#1-2_931c4_elevation zy-CAL.nff	0.00	2.450 G	0.00	Anttech		-11.06	176.00	P	-16.14
	#1-2_931c4_elevation zy-CAL.nff	90.00	2.450 G	0.00	Anttech		0.78	203.99	P	-3.45

Side Lobes

Database

Ax Ratio

No.	Ampl	Deg

Ampl. Color

Visible Section

☒ Amplitude

☐ Phase

Not Inverted

No Skirt

Not Rotated

Ends Not Connected

Not Aligned

Not Normalized

Phase wrapped

Log. Display