Customized

Application Report

Customer	*ㄷ/엔에이*
Model	*Oppera-S5-RX*
Application	*Bluetooth*
Antenna type	*ALA131C3 / ALA321C3*
Report No.	*1st*
Date	*2009. 11. 04*

Amotech / Antenna Gr.

Written by : 문경중
Contact : gtomb@amotech.co.kr

1. Summary of the antenna test

1) Test Condition

Test No	Antenna Type	Condition
#1-1	ALA131C3	SET Matching (Series1 L =1.5nH Shunt C =2.0pF Series2 R =0ohm)
#1-2	ALA321C3	SET Matching (Series1 L =5.6nH Shunt L =1.0nH Series2 R =0ohm)

2) Radiation Gain Table

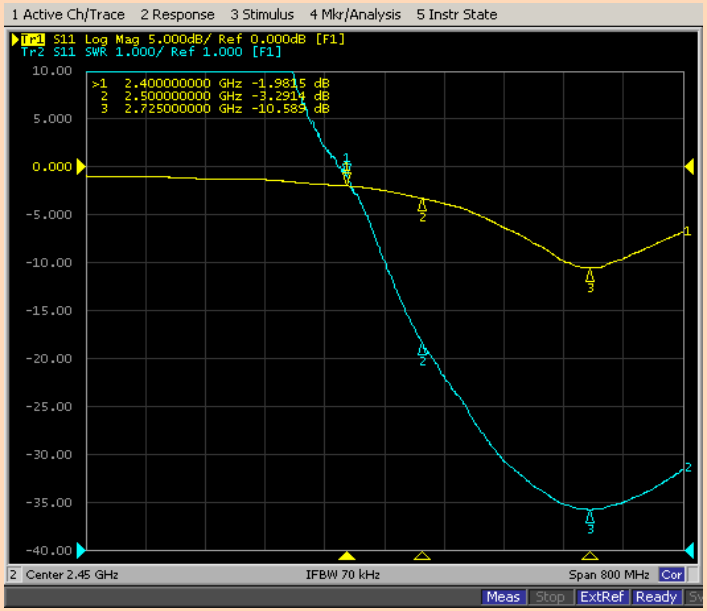
Test No	Freq (GHz)	Efficiency (%)	Avg. Gain (dBi)	Peak Gain (dBi)
#1-1	2400 MHz	48.3	-3.2	1.2
	2442 MHz	63.6	-2.0	1.9
	2485 MHz	53.5	-2.7	1.8

Test No	Freq (GHz)	Efficiency (%)	Avg. Gain (dBi)	Peak Gain (dBi)
#1-2	2400 MHz	48.6	-3.1	1.2
	2442 MHz	55.8	-2.5	1.8
	2485 MHz	48.8	-3.1	1.3

1. Summary of the antenna test

3) Remark

-Test #1-1 : ALA131C3 Ant.(Master Ant.) 적용하여 측정.
-초기 Frequency : 2725MHz



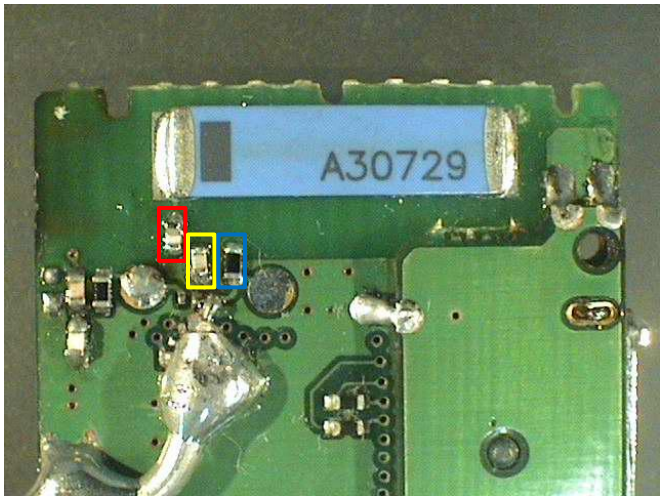
[Master Ant. 초기상태]

-Test #1-2: ALA321C3 Ant.(Sub Ant.) 적용하여 측정.
-초기 Frequency : 3250MHz

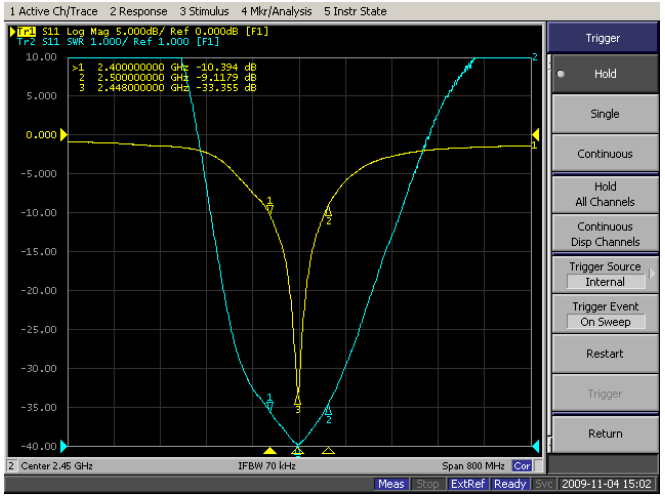
[Sub Ant. 초기상태]

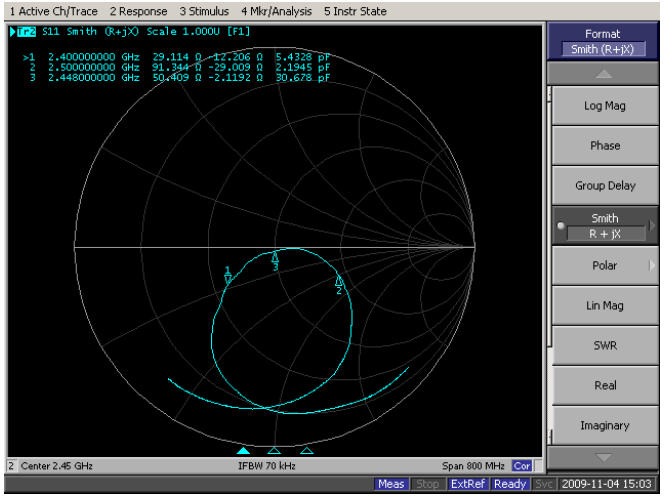
2. TEST #1-1

1) 안테나 Layout 및 S-Parameter



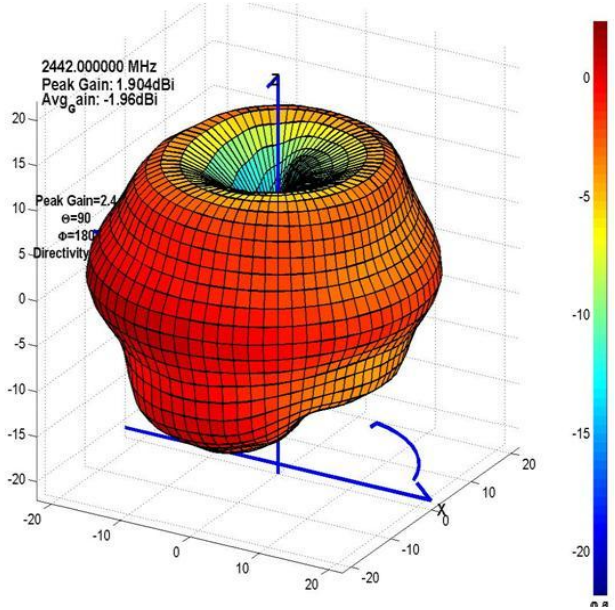
Test No.	#1-1
Antenna	ALA131C3
Series 1	L = 1.5nH
Shunt	C = 2.0pF
Series 2	R = 0 ohm

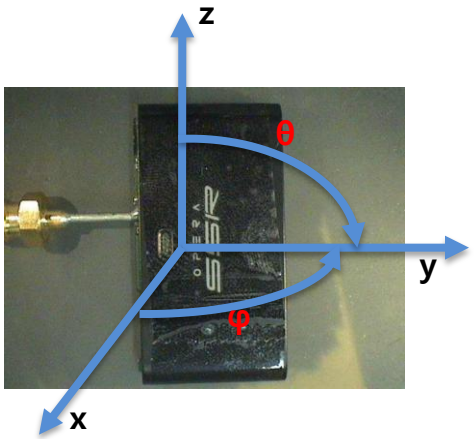




2. TEST #1-1

2) Radiation Gain



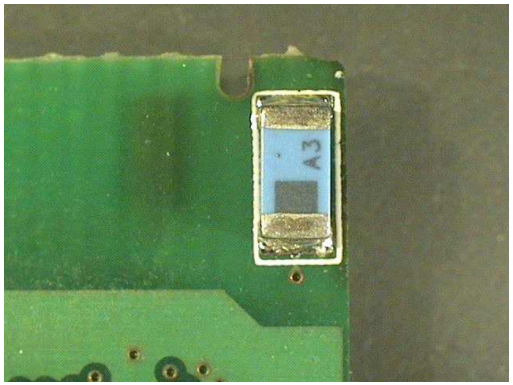


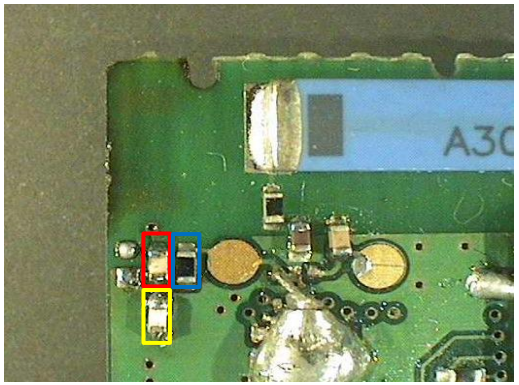
Test No	Freq (GHz)	Efficiency (%)	Avg. Gain (dBi)	Peak Gain (dBi)
#1-1	2400 MHz	48.3	-3.2	1.2
	2442 MHz	63.6	-2.0	1.9
	2485 MHz	53.5	-2.7	1.8

※ Anechoic Chamber : 2.8*1.6*1.8 m^3

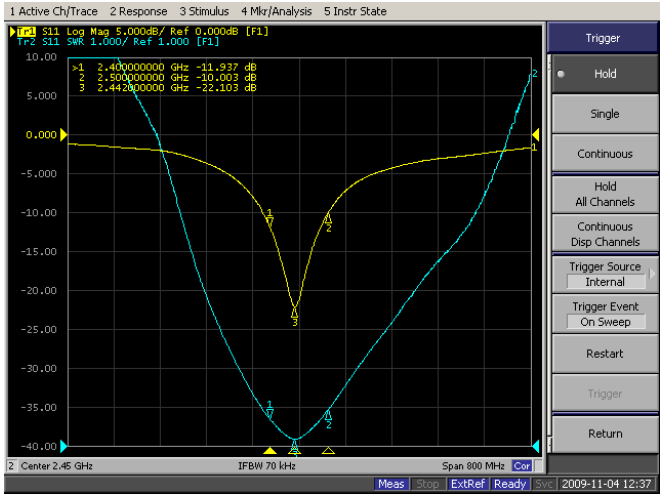
2. TEST #1-2

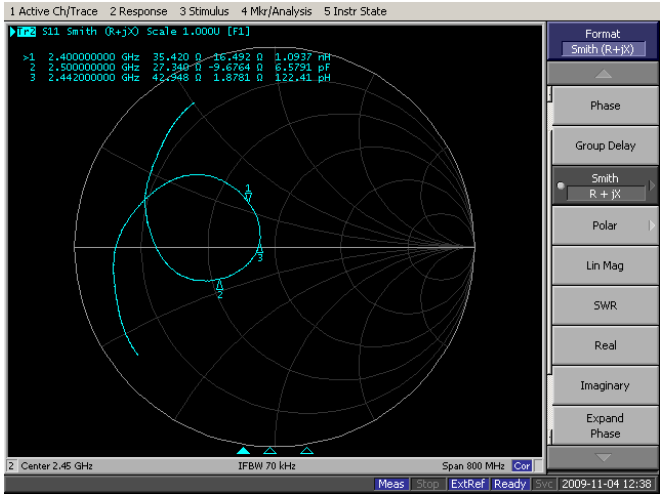
1) 안테나 Layout 및 S-Parameter





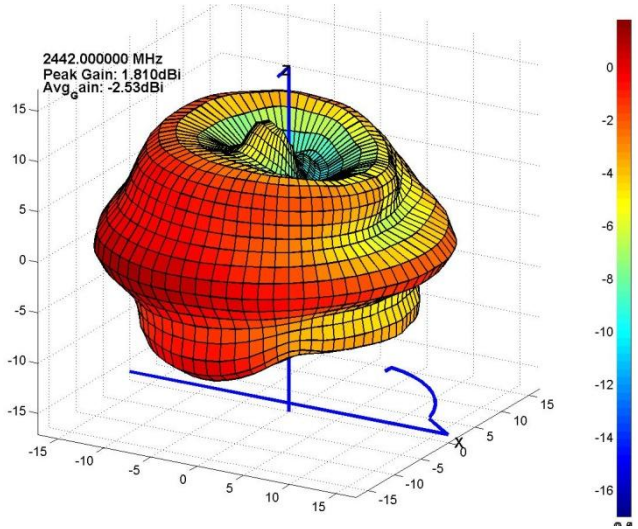
Test No.	#1-2
Antenna	ALA321C3
Series 1	L = 5.6nH
Shunt	L = 1.0nH
Series 2	R = 0 ohm

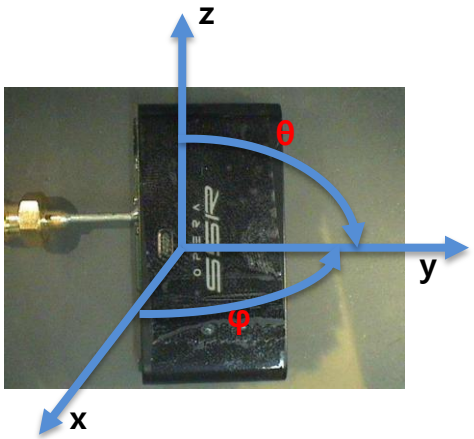




2. TEST #1-2

2) Radiation Gain





Test No	Freq (GHz)	Efficiency (%)	Avg. Gain (dBi)	Peak Gain (dBi)
#1-2	2400 MHz	48.6	-3.1	1.2
	2442 MHz	55.8	-2.5	1.8
	2485 MHz	48.8	-3.1	1.3

※ Anechoic Chamber : 2.8*1.6*1.8 m^3