


Customer	Bluebird	Date	2012.3.23	
Model	HM-50	Rev.	1	

Report

Model: HM-50

Customer: Bluebird

Antenna Type: FPCB

Band: GSM 850 / GSM 900 / DCS 1800 / PCS 1900 / WCDMA

Production: DAEYOUNG KTX

Tester: LEE KWANG HO

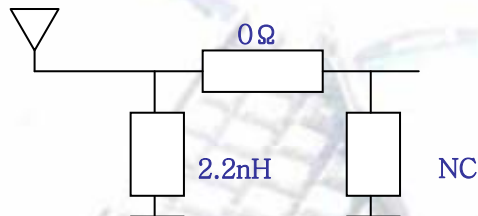
1. 실험목적

신규제작 케리어에 맞춰서

전밴드 안테나와 WCDMA용 안테나 제작 및 Passive 측정

2. 실험환경

- 안테나 Matching value




- 안테나 및 Set
SET



EMI 제거 된 브라켓으로 측정

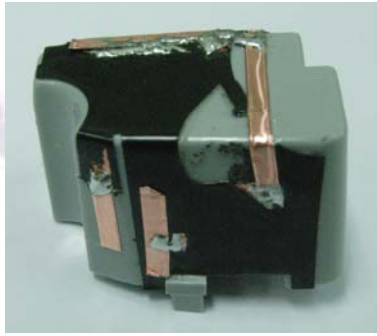
안테나 PCB 하단에 동테이프로 시방.

GPS 안테나가 없는 상태에서 측정

Customer	Bluebird	Date	2012.3.23	
Model	HM-50	Rev.	1	

1.GSM850/EGSM/DCS/PCS/WCDMA 안테나

샘플 1

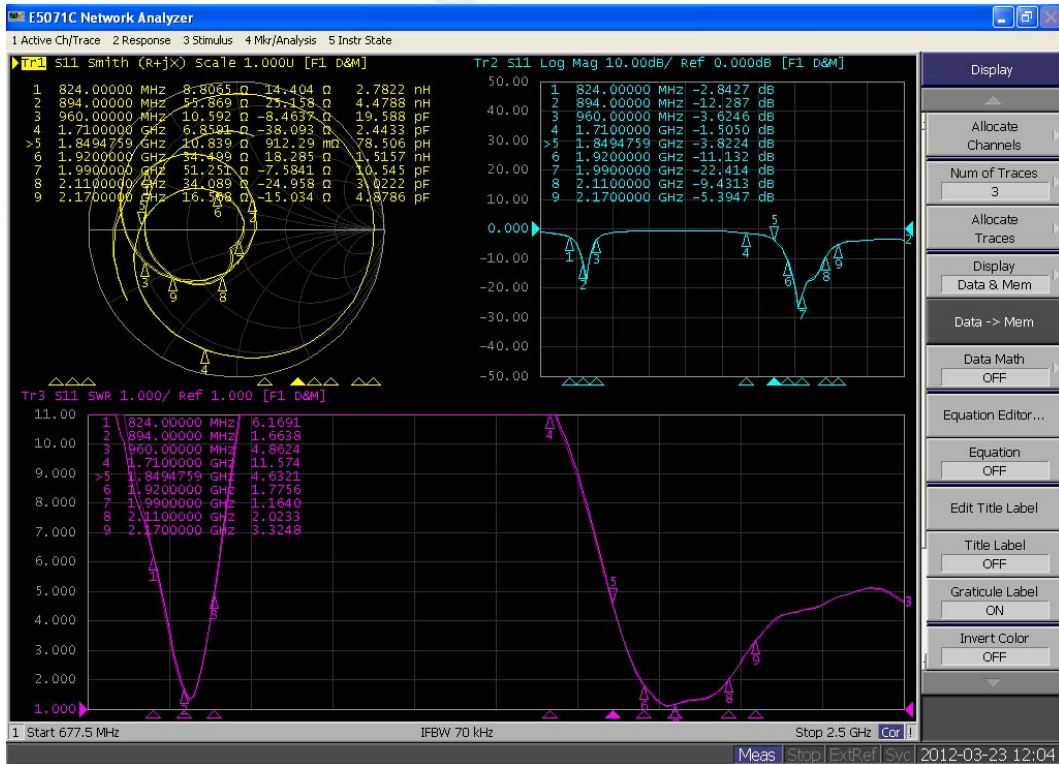



측정 DATA

매칭: 병렬 2.2NH

PCB 하단에 동테이프 시방 후 측정

① V.S.W.R



Customer	Bluebird	Date	2012.3.23	
Model	HM-50	Rev.	1	

② Passive data(Gain)

Antenna Pattern & Gain Report									
Manufacturer		Company Name							
Model Name		Filename							
Tester Name		Airlink							
Test Date		2012-03-22 오전 10:44:52							
IF BW		100 Hz							
Port Power		0.00 dBm							
Meas Step		15							
Photo									
Frequency	Efficiency	Average Gain			Max Gain			Max Position	Directivity
		Ver	Hor	Total	Ver	Hor	Total		
824.000000 MHz	39.8 %	-13.9 dBi	-4.5 dBi	-4.0 dBi	-6.4 dBi	-2.1 dBi	-2.0 dBi	Theta90/Pie135	1.95 dB
849.000000 MHz	52.3 %	-11.7 dBi	-3.4 dBi	-2.8 dBi	-4.7 dBi	-0.8 dBi	-0.6 dBi	Theta150/Pie75	2.24 dB
869.000000 MHz	60.3 %	-10.2 dBi	-2.9 dBi	-2.2 dBi	-3.3 dBi	0.0 dBi	0.3 dBi	Theta90/Pie210	2.51 dB
880.000000 MHz	69.3 %	-9.1 dBi	-2.4 dBi	-1.6 dBi	-2.4 dBi	0.7 dBi	1.3 dBi	Theta90/Pie210	2.93 dB
894.000000 MHz	74.9 %	-8.1 dBi	-2.2 dBi	-1.3 dBi	-1.8 dBi	1.2 dBi	1.9 dBi	Theta90/Pie120	3.20 dB
915.000000 MHz	73.3 %	-7.7 dBi	-2.5 dBi	-1.3 dBi	-0.7 dBi	1.2 dBi	2.3 dBi	Theta90/Pie120	3.63 dB
925.000000 MHz	65.4 %	-8.0 dBi	-3.1 dBi	-1.8 dBi	-0.5 dBi	0.6 dBi	1.8 dBi	Theta90/Pie120	3.68 dB
960.000000 MHz	42.7 %	-9.0 dBi	-5.2 dBi	-3.7 dBi	-2.0 dBi	-1.3 dBi	0.2 dBi	Theta90/Pie120	3.93 dB
1710.000000 MHz	4.3 %	-18.2 dBi	-15.6 dBi	-13.7 dBi	-9.5 dBi	-10.2 dBi	-6.8 dBi	Theta120/Pie330	6.86 dB
1785.000000 MHz	12.8 %	-13.4 dBi	-10.9 dBi	-8.9 dBi	-5.5 dBi	-5.4 dBi	-2.4 dBi	Theta120/Pie330	6.48 dB
1810.000000 MHz	12.7 %	-13.1 dBi	-11.1 dBi	-9.0 dBi	-6.6 dBi	-5.4 dBi	-3.4 dBi	Theta120/Pie330	5.60 dB
1850.000000 MHz	20.6 %	-10.7 dBi	-9.2 dBi	-6.9 dBi	-4.1 dBi	-3.7 dBi	-1.5 dBi	Theta120/Pie345	5.34 dB
1880.000000 MHz	40.2 %	-7.5 dBi	-6.5 dBi	-4.0 dBi	-1.1 dBi	-0.4 dBi	0.8 dBi	Theta120/Pie345	4.81 dB
1910.000000 MHz	47.2 %	-6.6 dBi	-6.0 dBi	-3.3 dBi	-0.2 dBi	0.7 dBi	1.6 dBi	Theta120/Pie345	4.88 dB
1920.000000 MHz	55.8 %	-5.8 dBi	-5.3 dBi	-2.5 dBi	1.0 dBi	1.0 dBi	2.5 dBi	Theta120/Pie345	5.05 dB
1930.000000 MHz	56.7 %	-5.7 dBi	-5.3 dBi	-2.5 dBi	0.5 dBi	1.3 dBi	2.4 dBi	Theta180/Pie0	4.87 dB
1980.000000 MHz	68.5 %	-4.7 dBi	-4.6 dBi	-1.6 dBi	1.9 dBi	2.1 dBi	3.8 dBi	Theta150/Pie345	5.42 dB
1990.000000 MHz	53.2 %	-5.7 dBi	-5.8 dBi	-2.7 dBi	0.5 dBi	1.2 dBi	2.4 dBi	Theta180/Pie0	5.16 dB
2110.000000 MHz	29.5 %	-9.0 dBi	-7.7 dBi	-5.3 dBi	-2.4 dBi	-1.4 dBi	0.3 dBi	Theta15/Pie330	5.64 dB
2170.000000 MHz	33.1 %	-8.7 dBi	-7.1 dBi	-4.8 dBi	-1.8 dBi	-1.7 dBi	0.7 dBi	Theta15/Pie330	5.52 dB

2.WCDMA 안테나

샘플 2

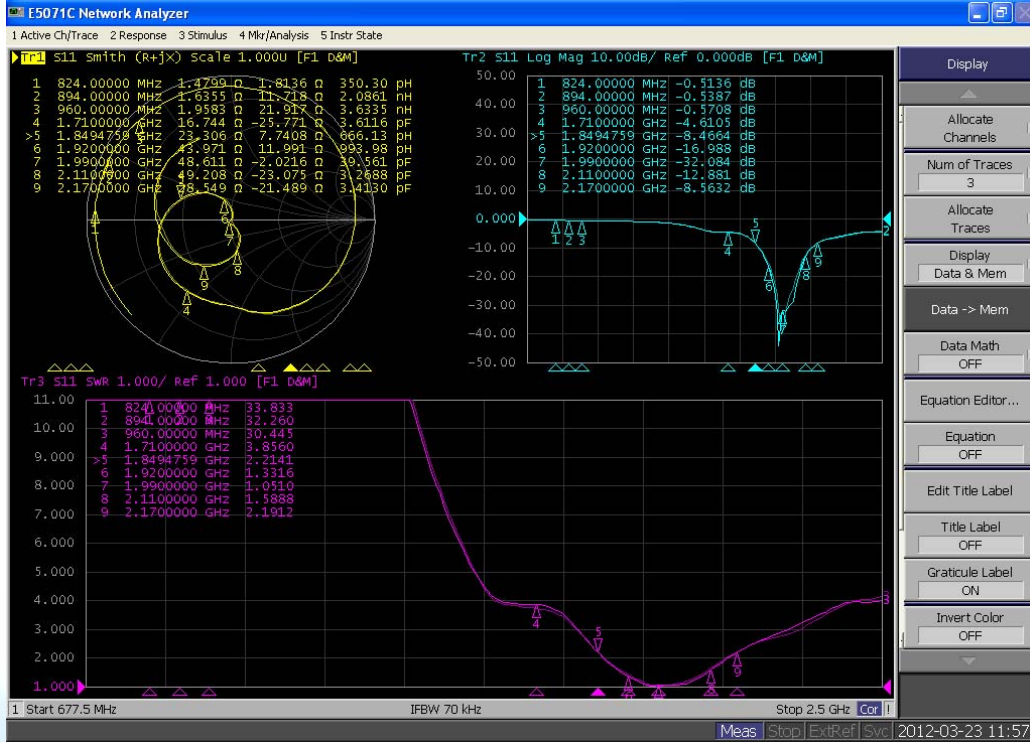


측정 DATA

매칭: 병렬 2.2 NH, PCB 하단에 동테이프 시방

Customer	Bluebird	Date	2012.3.23	
Model	HM-50	Rev.	1	

① V.S.W.R



① Passive data(Gain)

Antenna Pattern & Gain Report									
Manufacturer		Company Name							
Model Name		Filename							
Tester Name		Airlink							
Test Date		2012-03-22 오전 11:46:17							
IF BW		100 Hz							
Port Power		0.00 dBm							
Meas Step		15`							
Photo									
Frequency	Efficiency	Average Gain			Max Gain			Max Position	Directivity
		Ver	Hor	Total	Ver	Hor	Total		
824.000000 MHz	1.3 %	-29.4 dBi	-19.4 dBi	-19.0 dBi	-19.5 dBi	-16.9 dBi	-16.1 dBi	Theta120/Pie0	2.90 dB
849.000000 MHz	1.1 %	-28.7 dBi	-20.0 dBi	-19.4 dBi	-19.6 dBi	-16.4 dBi	-15.7 dBi	Theta135/Pie0	3.72 dB
869.000000 MHz	1.1 %	-28.3 dBi	-20.4 dBi	-19.8 dBi	-21.6 dBi	-15.4 dBi	-15.3 dBi	Theta150/Pie0	4.40 dB
880.000000 MHz	1.1 %	-27.5 dBi	-20.2 dBi	-19.4 dBi	-19.7 dBi	-16.6 dBi	-16.4 dBi	Theta150/Pie0	3.01 dB
894.000000 MHz	1.2 %	-26.3 dBi	-20.2 dBi	-19.3 dBi	-19.4 dBi	-17.9 dBi	-16.7 dBi	Theta60/Pie300	2.53 dB
915.000000 MHz	1.5 %	-24.8 dBi	-19.4 dBi	-18.3 dBi	-17.3 dBi	-16.6 dBi	-15.4 dBi	Theta90/Pie120	2.91 dB
925.000000 MHz	1.5 %	-24.8 dBi	-19.2 dBi	-18.2 dBi	-17.1 dBi	-16.1 dBi	-15.1 dBi	Theta90/Pie120	3.10 dB
960.000000 MHz	1.7 %	-23.7 dBi	-19.0 dBi	-17.7 dBi	-15.1 dBi	-15.8 dBi	-14.0 dBi	Theta60/Pie270	3.75 dB
1710.000000 MHz	13.3 %	-12.9 dBi	-10.8 dBi	-8.7 dBi	-5.4 dBi	-5.1 dBi	-2.3 dBi	Theta120/Pie330	6.47 dB
1785.000000 MHz	27.5 %	-9.4 dBi	-7.9 dBi	-5.6 dBi	-2.9 dBi	-2.1 dBi	0.5 dBi	Theta120/Pie330	6.13 dB
1810.000000 MHz	25.5 %	-9.5 dBi	-8.4 dBi	-5.9 dBi	-3.6 dBi	-3.0 dBi	-0.4 dBi	Theta120/Pie330	5.52 dB
1850.000000 MHz	33.6 %	-8.2 dBi	-7.4 dBi	-4.7 dBi	-2.1 dBi	-1.9 dBi	0.0 dBi	Theta180/Pie0	4.72 dB
1880.000000 MHz	51.5 %	-6.1 dBi	-5.7 dBi	-2.9 dBi	0.4 dBi	-0.1 dBi	1.6 dBi	Theta180/Pie0	4.52 dB
1910.000000 MHz	52.4 %	-6.0 dBi	-5.6 dBi	-2.8 dBi	0.8 dBi	0.9 dBi	2.3 dBi	Theta180/Pie0	5.14 dB
1920.000000 MHz	57.4 %	-5.7 dBi	-5.2 dBi	-2.4 dBi	1.2 dBi	1.3 dBi	2.7 dBi	Theta180/Pie0	5.13 dB
1930.000000 MHz	56.6 %	-5.8 dBi	-5.2 dBi	-2.5 dBi	1.3 dBi	1.3 dBi	2.8 dBi	Theta180/Pie0	5.24 dB
1980.000000 MHz	66.5 %	-5.1 dBi	-4.5 dBi	-1.8 dBi	2.4 dBi	2.3 dBi	3.6 dBi	Theta180/Pie0	5.39 dB
1990.000000 MHz	53.4 %	-5.9 dBi	-5.5 dBi	-2.7 dBi	1.3 dBi	1.3 dBi	2.8 dBi	Theta180/Pie0	5.52 dB
2110.000000 MHz	41.0 %	-7.3 dBi	-6.5 dBi	-3.9 dBi	-1.6 dBi	0.1 dBi	1.8 dBi	Theta150/Pie345	5.70 dB
2170.000000 MHz	48.3 %	-6.7 dBi	-5.7 dBi	-3.2 dBi	-1.4 dBi	0.2 dBi	1.9 dBi	Theta150/Pie345	5.07 dB