EPIVALLEY CO.,LTD

Model Name: SXC-1380

Date: April 14, 2008

SPECIFICATIONS SHEET

Product : ANTENNA

Part No. : KH-CMSI-EP003

DRAWN	CHECKED	APPROVED

KWANG HYUN AIRTECH CO.,LTD

Address: Rm 414 Woolim Lions Valley 2, 680 Gasan-Dong, Geumcheon-Gu
Seoul 153-787 Korea
Tel: 82-2-2027-2615~6, Fax: 82-2-2027-2614

1. General

1.1 The Product

Model Name	KH-CMSI-EP003
Antenna Type	Monopole Antenna
Applications	Cellular 850MHz

1.2 Electrical Properties

Frequency Range (Tx)	824㎒ ~ 849㎒
Frequency Range (Rx)	869㎒ ~ 894㎒
Impedance	50 Ω
VSWR	Less than 4.0:1
Gain (Ave.)	-5.5(dBi)
Radiation Pattern	Omni-Directional
Polarization	Vertical

1.3 Mechanical Properties

Dimension	22.3mm(L) x 7.82mm(W) x 6.1mm(H)
Operational Temperature	-30°C ~ +90°C
Operational Humidity	10~95 %
Radiator Material	SUS 301
Weight	N/A

2. Electrical Properties

2.1 Frequency Band

Service	Cellular 850
Frequency Range	824 ~ 894 (㎒)

2.2 Impedance

2.2.1 Normal Value

50Ω ± 10Ω

2.2.2 Measuring Method

The impedance over the frequency bands shall be as close as possible to 50Ω after matching. Both free space and talk position are considered.

2.3 VSWR

2.3.1 Maximum values in free space

Service	Cellular 850
VSWR	4.0 : 1

2.3.2 Measuring Method

A 50Ω coaxial cable is connected(soldered) to the 50Ω point, at the duplex-filter on the main PCB. The connection of the coaxial cable shall be done to introduce a minimum of mismatch. As much as possible the coaxial cable arrangement shall prevent influences from induced currents on the cable. In the other end, the coaxial cable is connected to a network analyzer. The measurement is performed at room temperature. The handset, including the PCB, must not in any significant way differ from the mass production, i.e. the antenna feeding network has to be equivalent to the feeding network in mass production. The specification shall be met in the entire frequency band.

2.4 Gain(dBi)

2.4.1 Typical minimum values in maximum direction

Service	Cellular 850
Gain (dBi)	-5.5

2.4.2 Measuring Method

The connection is done according to 2.3.2.

Radiation patterns are measured at 6 different frequencies : Txmin, Txmid, Txmax, Rxmin, Rxmid and Rxmax. The antenna is measured in the 3D

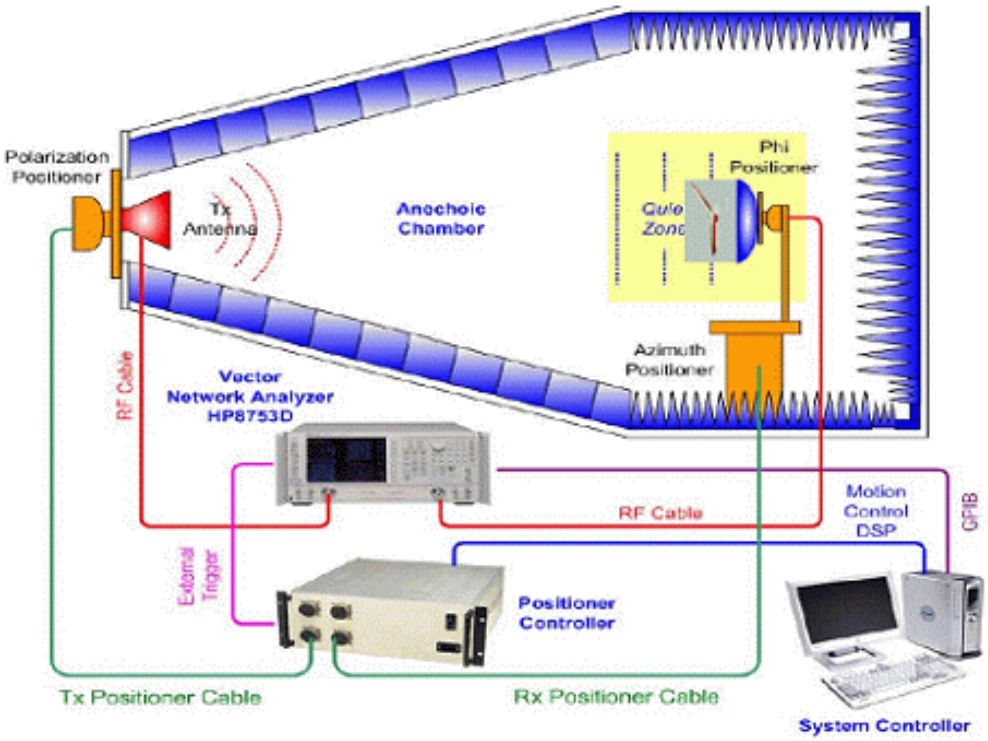
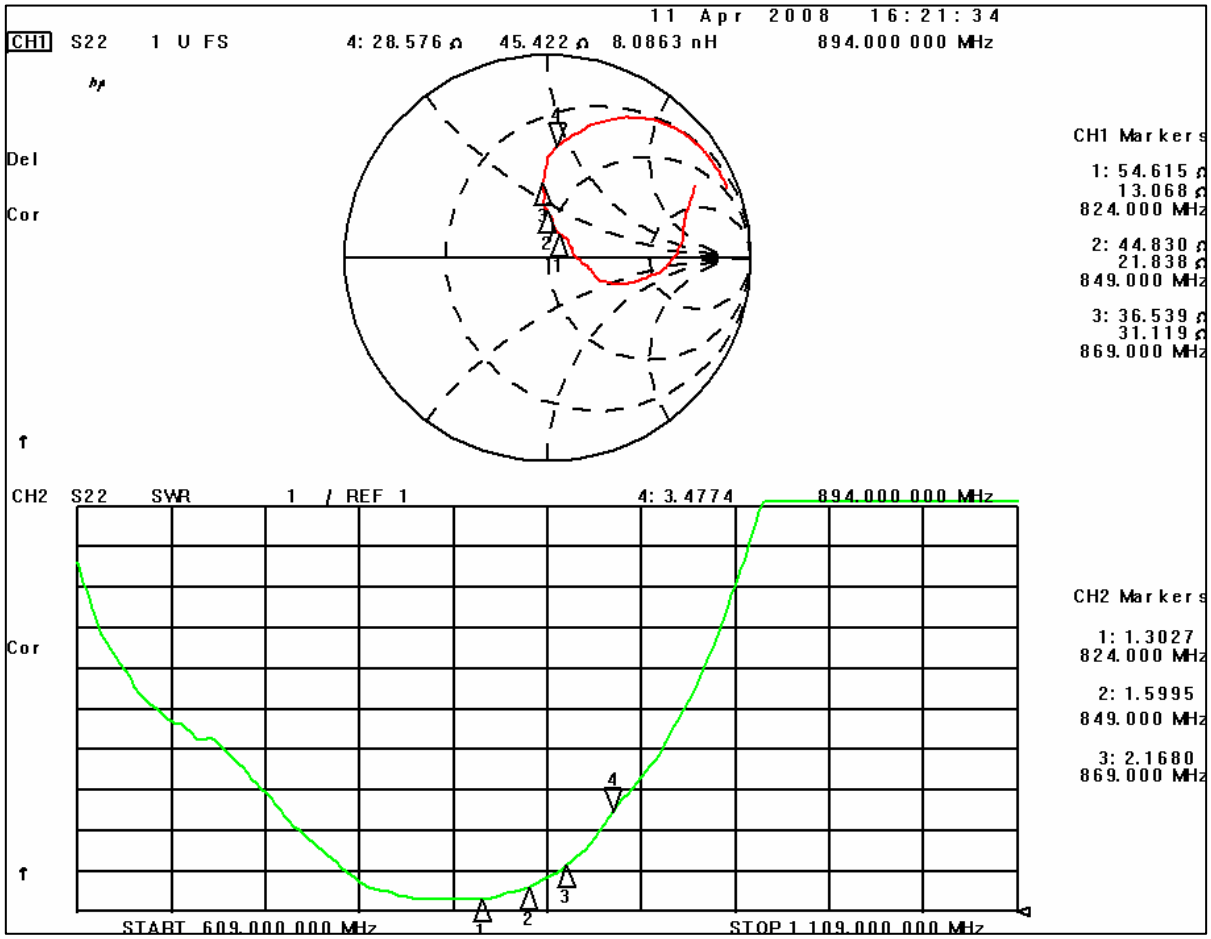


Figure 1. 3D Antenna Gain Test

3. Test Data

3.1 Network Data



3.2 3D Antenna Gain Data

Airlink 3D Antenna Measurement Results

Model Name : SXC-1080_Note PC	Memo : Memo

Frequency	Eff. (%)	Ave. Gain (dBi)	Peak Gain (dBi)	Directivity (dBi)
824 MHz	43	-3.66	-0.20	3.46
837 MHz	52	-2.88	0.55	3.43
849 MHz	45	-3.50	-0.43	3.07
869 MHz	37	-4.35	-1.31	3.04
881 MHz	38	-4.22	-1.30	2.92
894 MHz	33	-4.82	-1.50	3.32
0 MHz	207	3.16		-3.16
0 MHz	207	3.16		-3.16
0 MHz	207	3.16		-3.16
0 MHz	207	3.16		-3.16
0 MHz	207	3.16		-3.16
0 MHz	207	3.16		-3.16
0 MHz	207	3.16		-3.16
0 MHz	207	3.16		-3.16
0 MHz	207	3.16		-3.16
0 MHz	207	3.16		-3.16
0 MHz	207	3.16		-3.16
0 MHz	207	3.16		-3.16
0 MHz	207	3.16		-3.16