Revision Sheet

MODEL	K2000

NO	Dated	Department / Person in charge	Contents of Revision (Page / Contents)	Valid Dated

(REMARK)

SB TELCOM CO., LTD

Product Specification

	Mechanical Engineer	RF Engineer	Check by	Approve by
	2008-1-21		2008-1-21	2008-1-21

PART NAME	INTENNA
MODEL	K2000
CODE	-

Attached Documents

NO.	Table of Contents	REMARK (PAGE)
1	Revision sheet	1
2	Product Specification	1
3	Specifications	8
4	Electrical measured Data	10
5	Drawing	1
6	RoHS	3
7		
8		
9		
10		
11		
	TOTAL	24

Please approve this product with specifications.

2008. 1. 21

Address : #25-49 Juan5-Dong Nam-Ku, Inchon Korea
Trade Name : SB TELCOM,. LTD.
Substitute : President Eung - Soon, Chang

SB TELCOM CO., LTD

Antenna Specifications

MODEL : K2000

(INTENNA)

#25-49 Juan5-Dong, Nam-Ku, Inchon, Korea

(주) 에 스 비 텔 콤

SB TELCOM CO. ,LTD.

- Table of Contents -

1. Technical Properties
   1.1 General Properties - - - - - 3 PAGE
   1.2 Electrical Properties - - - - - 3 PAGE
   1.3 Mechanical Properties - - - - 3 PAGE
   1.4 Packing - - - - - 4 PAGE

2. Electrical Properties
   2.1 Frequency bands - - - - - 5 PAGE
   2.2 Impedance - - - - - 5 PAGE

3. Mechanical Properties
   3.1 Dimensions - - - - - 6 PAGE
   3.2 Drop Test - - - - - 6 PAGE

4. Environmental Resistance Properties
   4.1 Examination Environmental Condition - 7 PAGE
   4.2 Humidity - - - - - 7 PAGE
   4.3 Temperature Cycling - - - - - 7 PAGE
   4.4 Acid Proof Examination - - - - 8 PAGE
   4.5 Salt Spray Test - - - - - 8 PAGE

1. Technical Properties

1.1 General Properties

MODEL	NSB0695-0000850/1900-TL017BK00
ANTENNA TYPE	INTENNA
APPLICATIONS	GSM850 / GSM900 / DCS1800 / PCS1900

1.2 Electrical Properties

FREQUENCY RANGE	GSM850	824 ~ 894 MHz
	GSM900	880 ~ 960 MHz
	DCS1800	1710 ~ 1880 MHz
	PCS1900	1850 ~ 1990 MHz
IMPEDANCE(NOMINAL)		50Ω
V.S.W.R		LESS THAN 2.0 : 1
RADIATION PATTERN		OMNI-DIRECTIONAL
POLARIZATION		VERTICAL
SAR(Specific Absorption Rate)		LESS THAN 1.6

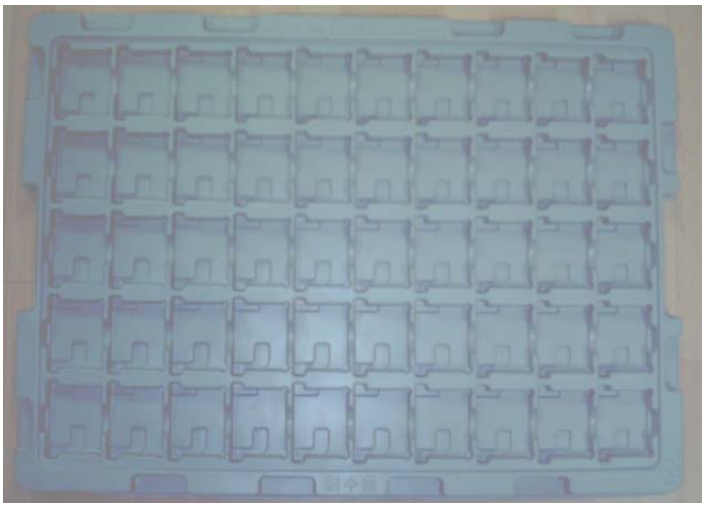
1.3 Mechanical Properties

SIZE	42.11mm × 11.61mm ×10.25mm
TEMPERATURE	-40 ℃ ~ +85℃
CONNECTOR TYPE	PIN CONTACT TYPE

1.4 Packing

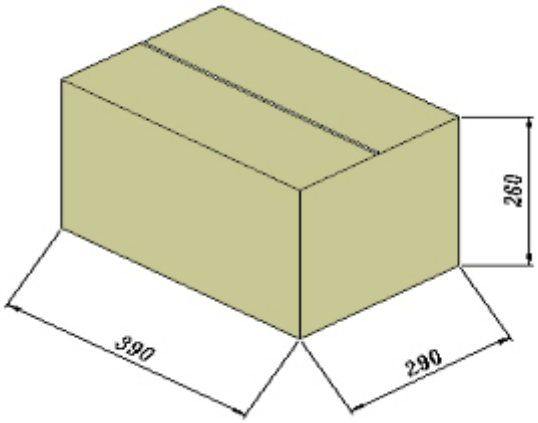
1) Packing Condition

50ea of antennas are placed on a pad (375 x 270 x 17) according to FIG. 1



(FIG. 1)

A box contains 20 PAD and 1,000 antennas be packing(20 x 50 = 1,000) according to FIG .2



(FIG. 2)

2) Remarks

A change of packing material shall be executed with mutual approval between buyer and supplier.

2. Electrical Properties

2.1 Frequency Range

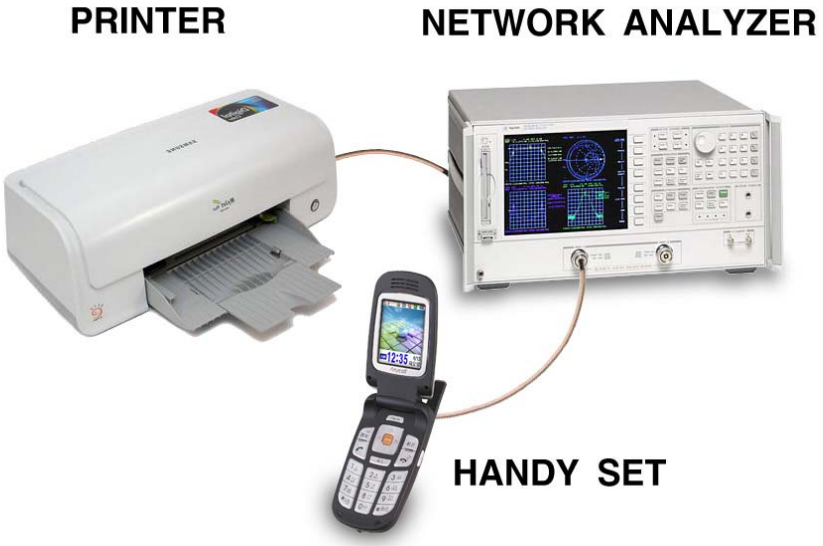
defined in section 1.2

2.2 Impedance

1) Nominal Value : 50 Ω

2) Method

To measure the appropriate impedance with the frequency desired after connecting a handset with the antenna installed to the reflection point from the network analyzer to FIG 3.



(FIG.3)

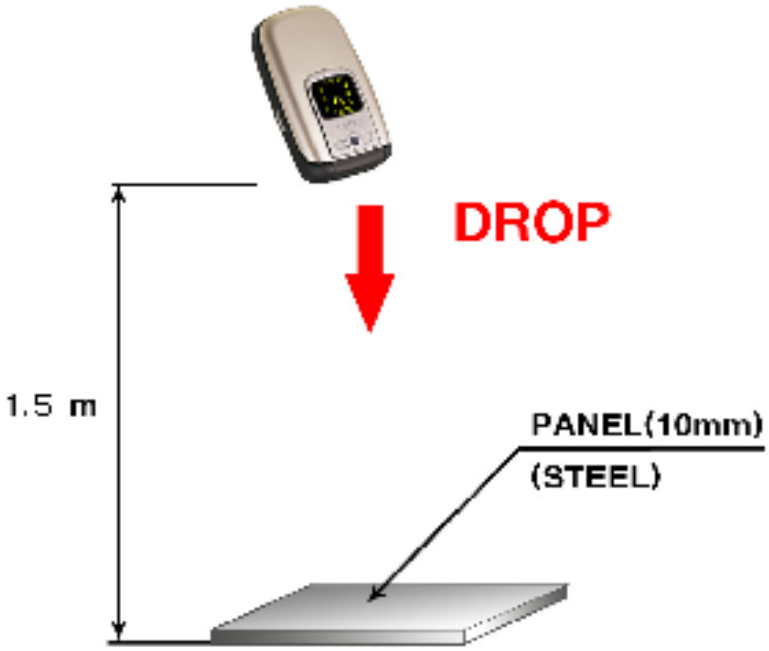
3. Mechanical Properties

3.1 Dimensions

The device dimensions shall conform to "DRAWINGS"

3.2 Drop Test

The antenna is attached to the handset or an equivalent test fixture. The handset is dropped with the antenna downward from the height of 1.5m onto a steel panel with thickness of 10mm prepared on the ground.



(FIG.4)

4. Environmental Resistance Properties

4.1 Examination Environmental Condition

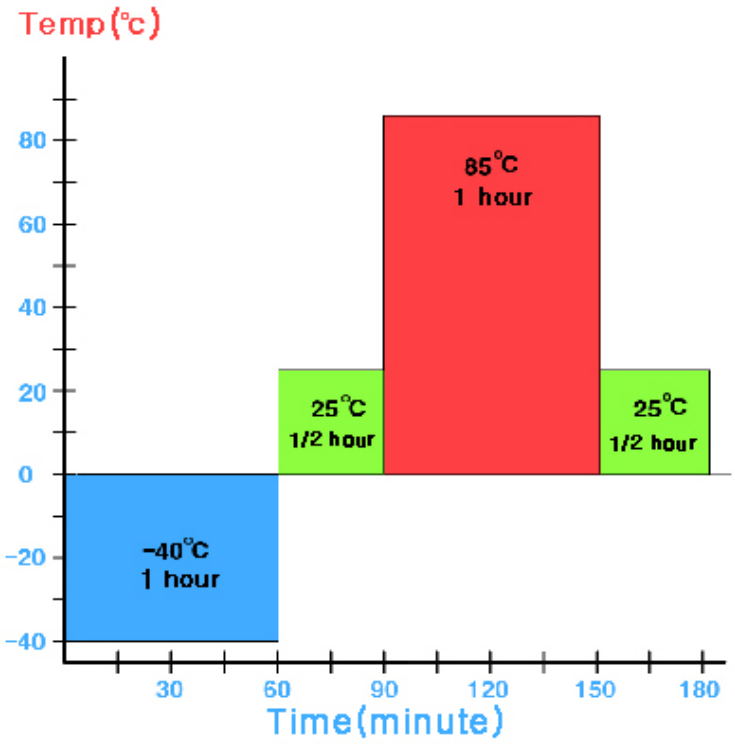
The antenna is placed at temperature 20C ± 5℃ and humidity 25%~80%(Under 55% RH) for executing all testes (Electrical, Mechanical and Environmental Tests).

4.2 Humidity

Temperature : 85C ± 2℃
Humidity : 85%RH ± 2
The antenna is placed in a climatic chamber for 120 hours.
It not must be above in appearance and function.

4.3 Temperature Cycling

The antenna is placed in a climate chamber. The temperature is cycled as follows:
The temperature is kept constant at -40C for 1 hour, kept constant at +25C for 1/2 hour, kept constant at +85C for 1 hour, kept at +25C for 1/2 hour.
This procedure is repeated 5 times. The procedures are executed based on KSC-0222.



(FIG.5)

4.4 Acid proof examination

Acidity : PH-4.6

Time : 48 Hr Leaving alone

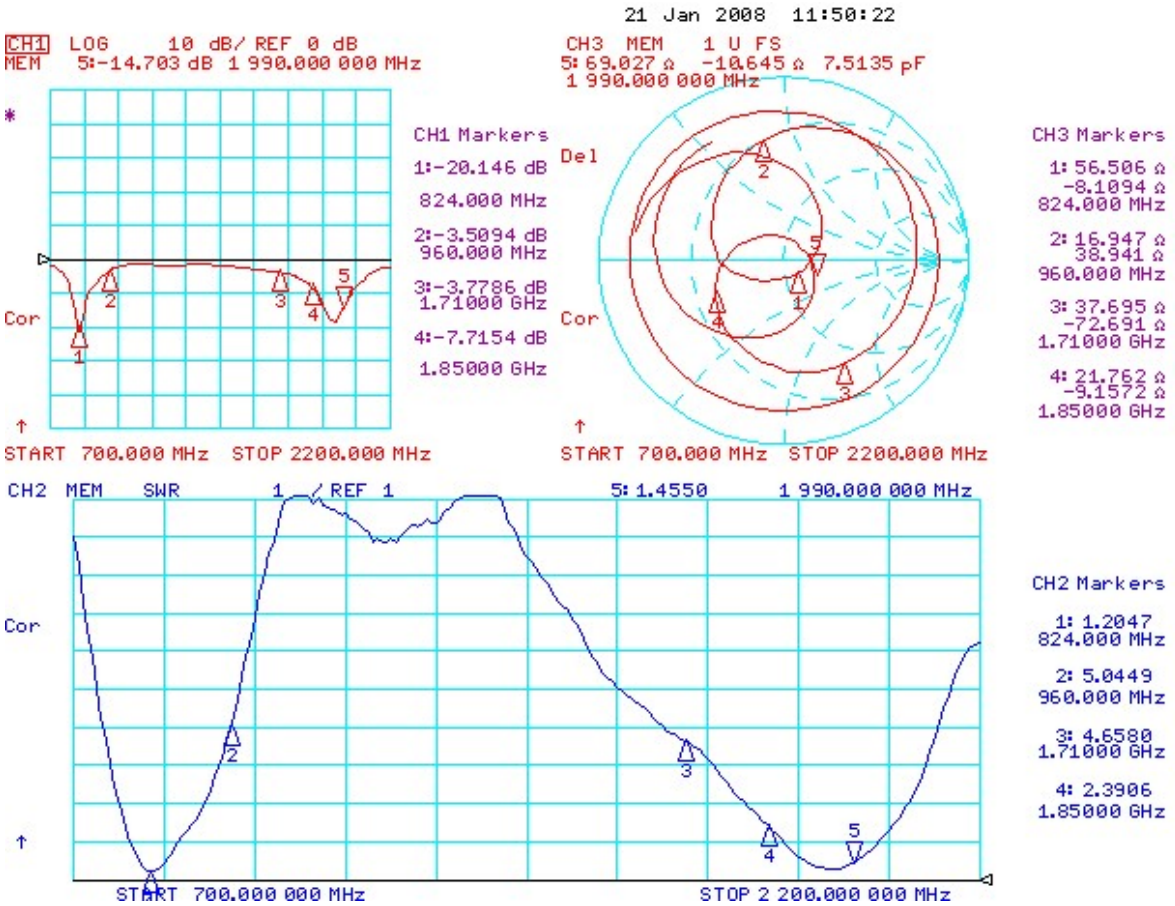
It not must be above in appearance and function.

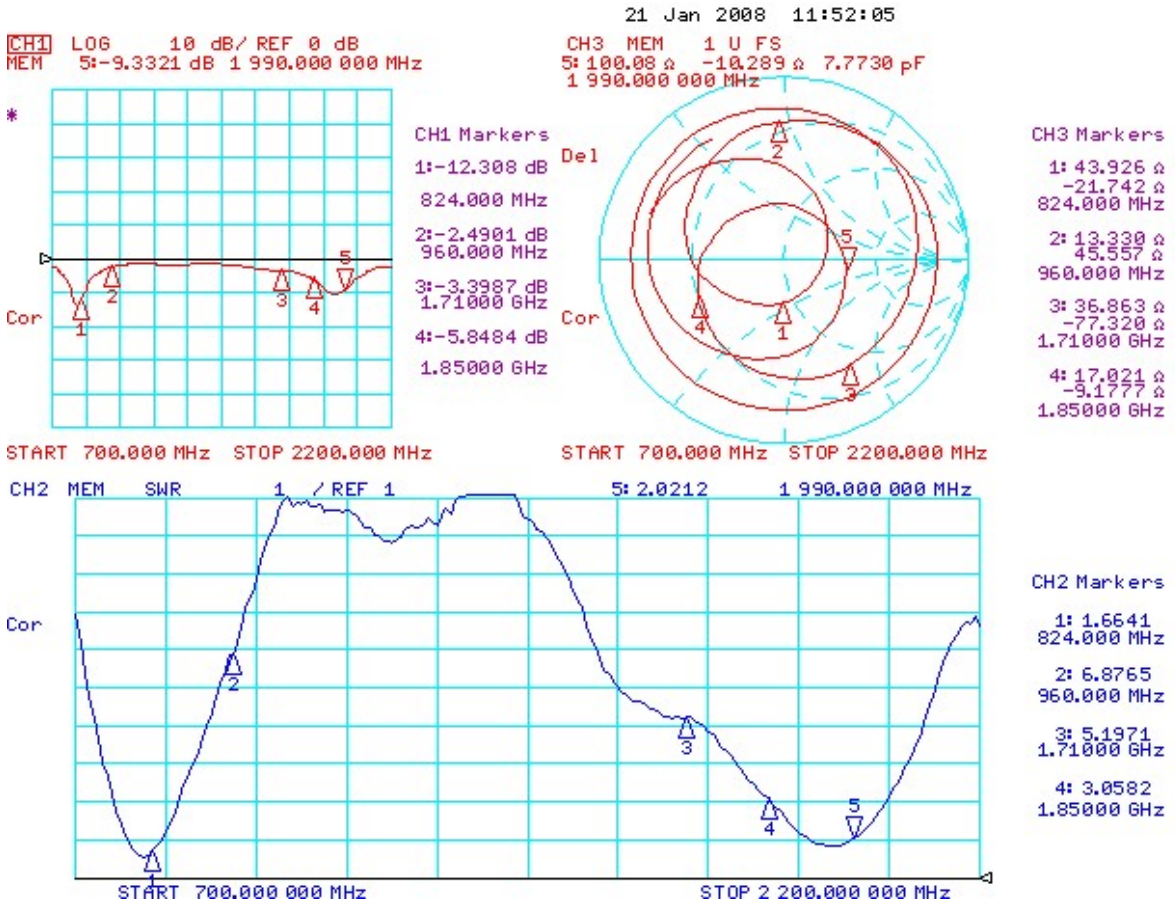
4.5 Salt spray test

Temperature : 35℃ ±2℃

Salinity : with 5% 72Hr it examines

It not must be above in appearance and function.

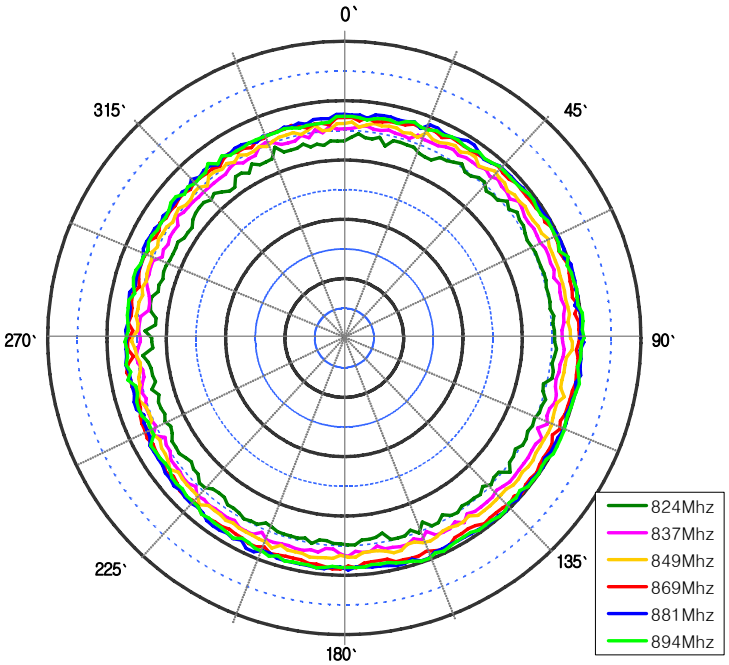

21 Jan 2008 11:50:22
CH1 LOG 10 dB/ REF 0 dB
MEM 5:-14.703 dB 1 990.000 000 MHz
CH1 Markers
1:-20.146 dB
824.000 MHz
2:-3.5094 dB
960.000 MHz
3:-3.7786 dB
1.71000 GHz
4:-7.7154 dB
1.85000 GHz
Cor
START 700.000 MHz STOP 2200.000 MHz
CH3 MEM 1 U FS
5: 69.027 Ω -10.645 Ω 7.5135 pF
1 990.000 000 MHz
Del
Cor
START 700.000 MHz STOP 2200.000 MHz
CH3 Markers
1: 56.506 Ω
-8.1094 Ω
824.000 MHz
2: 16.947 Ω
38.941 Ω
960.000 MHz
3: 37.695 Ω
-72.691 Ω
1.71000 GHz
4: 21.762 Ω
-9.1572 Ω
1.85000 GHz
CH2 MEM SWR 1 / REF 1
5: 1.4550 1 990.000 000 MHz
Cor
START 700.000 000 MHz
STOP 2 200.000 000 MHz
CH2 Markers
1: 1.2047
824.000 MHz
2: 5.0449
960.000 MHz
3: 4.6580
1.71000 GHz
4: 2.3906
1.85000 GHz


21 Jan 2008 11:52:05
CH1 LOG 10 dB/ REF 0 dB
MEM 5:-9.3321 dB 1 990.000 000 MHz
CH1 Markers
1:-12.308 dB
824.000 MHz
2:-2.4901 dB
960.000 MHz
3:-3.3987 dB
1.71000 GHz
4:-5.8484 dB
1.85000 GHz
Cor
START 700.000 MHz STOP 2200.000 MHz
CH3 MEM 1 U FS
5: 100.08 Ω -10.289 Ω 7.7730 pF
1 990.000 000 MHz
Del
Cor
START 700.000 MHz STOP 2200.000 MHz
CH3 Markers
1: 43.926 Ω
-21.742 Ω
824.000 MHz
2: 13.330 Ω
45.557 Ω
960.000 MHz
3: 36.863 Ω
-77.320 Ω
1.71000 GHz
4: 17.021 Ω
-9.1777 Ω
1.85000 GHz
CH2 MEM SWR 1 / REF 1
5: 2.0212 1 990.000 000 MHz
Cor
START 700.000 000 MHz
STOP 2 200.000 000 MHz
CH2 Markers
1: 1.6641
824.000 MHz
2: 6.8765
960.000 MHz
3: 5.1971
1.71000 GHz
4: 3.0582
1.85000 GHz

Gain & Radiation Pattern

Model Name:	Model Name K2000
Test Band :	GSM850
Test Date :	
Tester Name:	
User Name :	
Memo :	

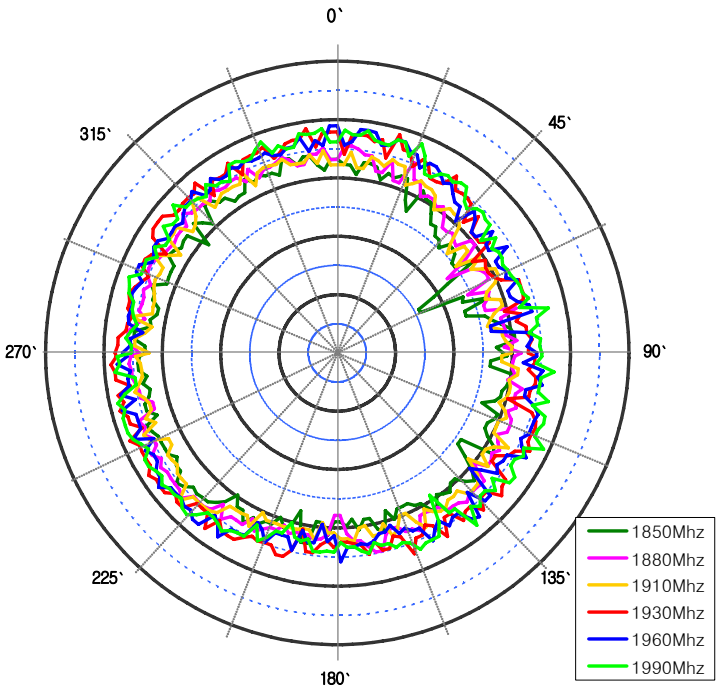
Frequency	Max.	Min.	Avg.	Beam Peak
824Mhz	-3.97	-8.59	-5.84	54`
837Mhz	-2.42	-6.69	-4.06	82`
849Mhz	-1.52	-5.51	-3.34	92`
869Mhz	-0.16	-4.34	-1.97	82`
881Mhz	0.39	-3.91	-1.52	92`
894Mhz	0.44	-3.98	-1.64	90`



Gain & Radiation Pattern

Model Name:	Model Name K2000
Test Band :	DCS1900
Test Date :	
Tester Name:	
User Name :	
Memo :	

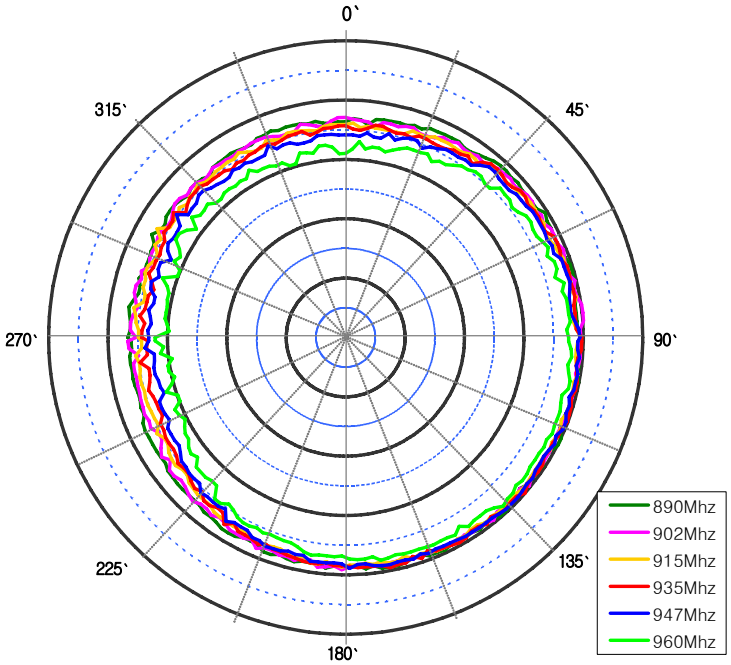
Frequency	Max.	Min.	Avg.	Beam Peak
1850Mhz	-4.57	-24.16	-8.54	232`
1880Mhz	-3.54	-17.26	-6.81	228`
1910Mhz	-2.97	-13.85	-7.47	228`
1930Mhz	-1.07	-12.06	-4.23	16`
1960Mhz	-1.07	-13.34	-4.71	0`
1990Mhz	-0.96	-10.90	-4.08	116`



Gain & Radiation Pattern

Model Name:	Model Name K2000
Test Band :	GSM900
Test Date :	
Tester Name:	
User Name :	
Memo :	

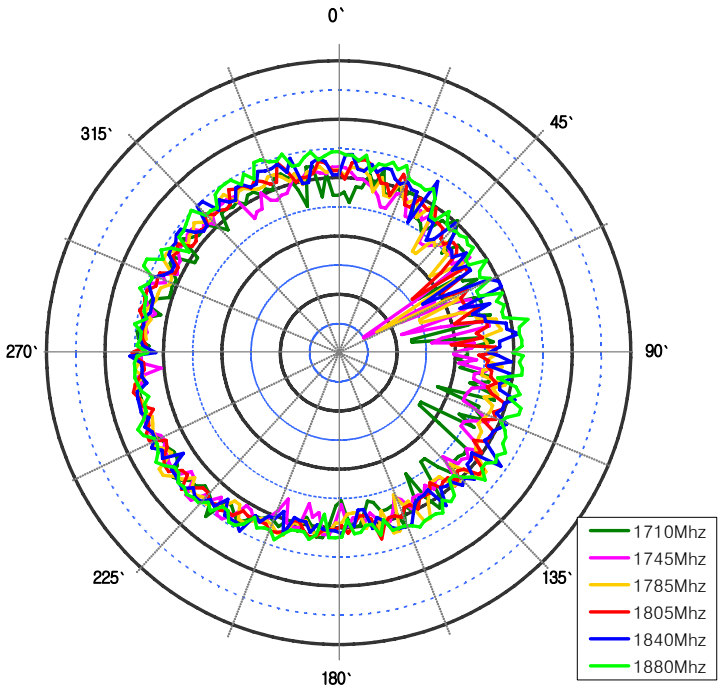
Frequency	Max.	Min.	Avg.	Beam Peak
890Mhz	0.07	-4.58	-1.91	116`
902Mhz	0.14	-5.02	-2.15	84`
915Mhz	-0.32	-5.66	-2.66	100`
935Mhz	0.01	-6.71	-2.68	132`
947Mhz	-0.28	-8.07	-3.16	112`
960Mhz	-1.15	-10.62	-4.58	138`



Gain & Radiation Pattern

Model Name:	Model Name K2000
Test Band :	DCS1800
Test Date :	
Tester Name:	
User Name :	
Memo :	

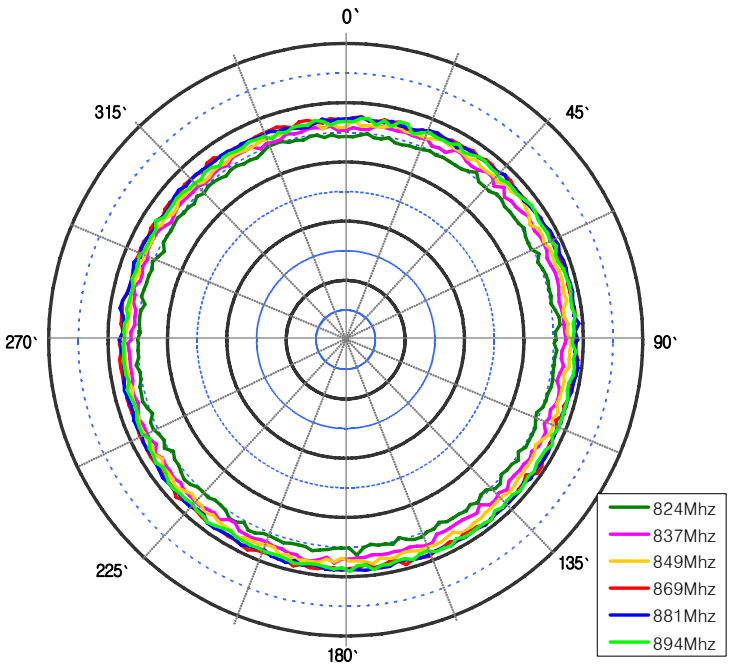
Frequency	Max.	Min.	Avg.	Beam Peak
1710Mhz	-3.88	-27.31	-9.43	220`
1745Mhz	-4.28	-34.97	-9.37	226`
1785Mhz	-3.37	-32.57	-8.72	236`
1805Mhz	-4.24	-20.67	-8.53	260`
1840Mhz	-4.10	-23.39	-8.04	244`
1880Mhz	-3.22	-14.12	-6.99	250`



Gain & Radiation Pattern

Model Name:	Model Name K2000
Test Band :	GSM850
Test Date :	
Tester Name:	
User Name :	
Memo :	

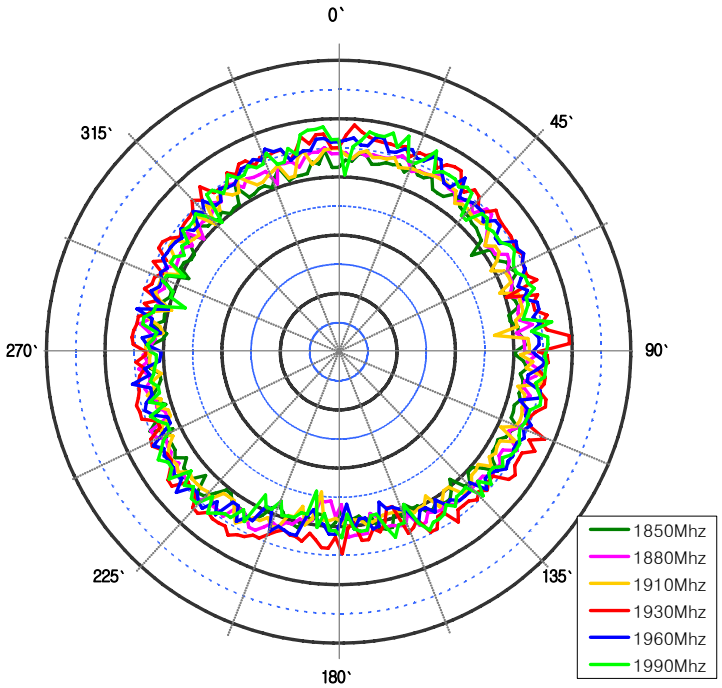
Frequency	Max.	Min.	Avg.	Beam Peak
824Mhz	-3.61	-6.02	-4.90	178`
837Mhz	-2.17	-4.74	-3.43	190`
849Mhz	-1.90	-4.22	-2.81	174`
869Mhz	-0.64	-3.21	-1.75	124`
881Mhz	-0.62	-3.53	-1.75	98`
894Mhz	-0.89	-3.89	-2.07	174`



Gain & Radiation Pattern

Model Name:	Model Name K2000
Test Band :	DCS1900
Test Date :	
Tester Name:	
User Name :	
Memo :	

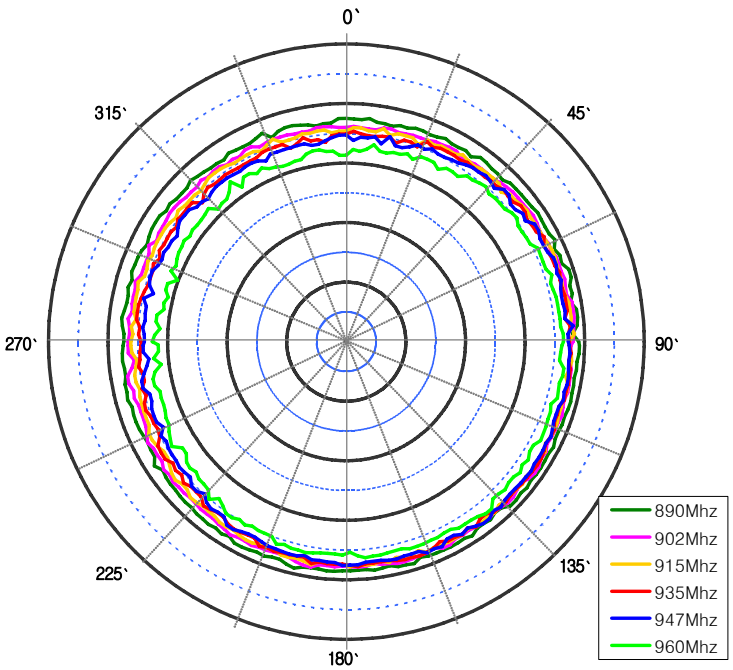
Frequency	Max.	Min.	Avg.	Beam Peak
1850Mhz	-4.94	-12.64	-8.31	248`
1880Mhz	-4.42	-14.37	-7.06	234`
1910Mhz	-4.68	-15.75	-7.62	98`
1930Mhz	-0.47	-11.91	-4.74	86`
1960Mhz	-2.57	-13.78	-6.03	10`
1990Mhz	-1.15	-15.77	-5.97	18`



Gain & Radiation Pattern

Model Name:	Model Name K2000
Test Band :	GSM900
Test Date :	
Tester Name:	
User Name :	
Memo :	

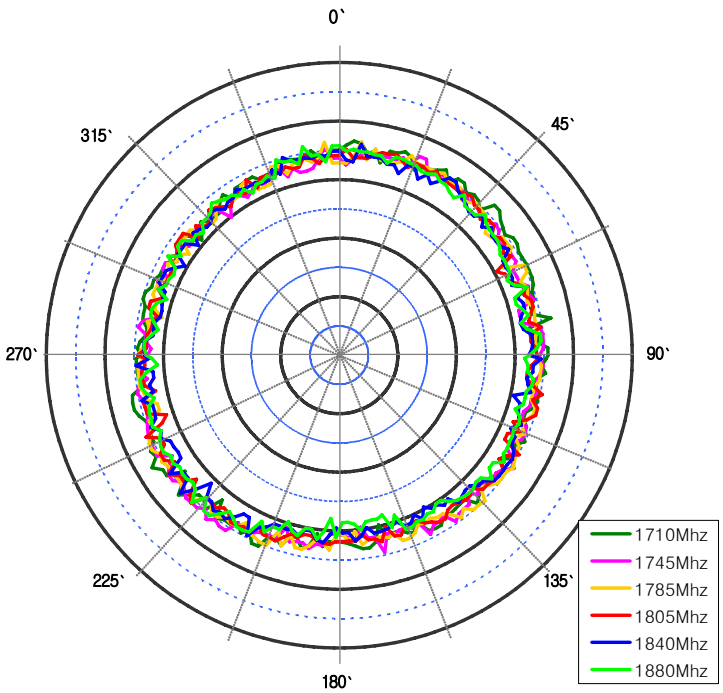
Frequency	Max.	Min.	Avg.	Beam Peak
890Mhz	-0.72	-3.52	-1.87	72`
902Mhz	-1.42	-4.29	-2.73	124`
915Mhz	-1.64	-4.96	-3.16	88`
935Mhz	-1.84	-6.44	-3.60	122`
947Mhz	-1.77	-6.78	-3.93	142`
960Mhz	-2.81	-9.87	-5.44	140`



Gain & Radiation Pattern

Model Name:	Model Name K2000
Test Band :	DCS1800
Test Date :	
Tester Name:	
User Name :	
Memo :	

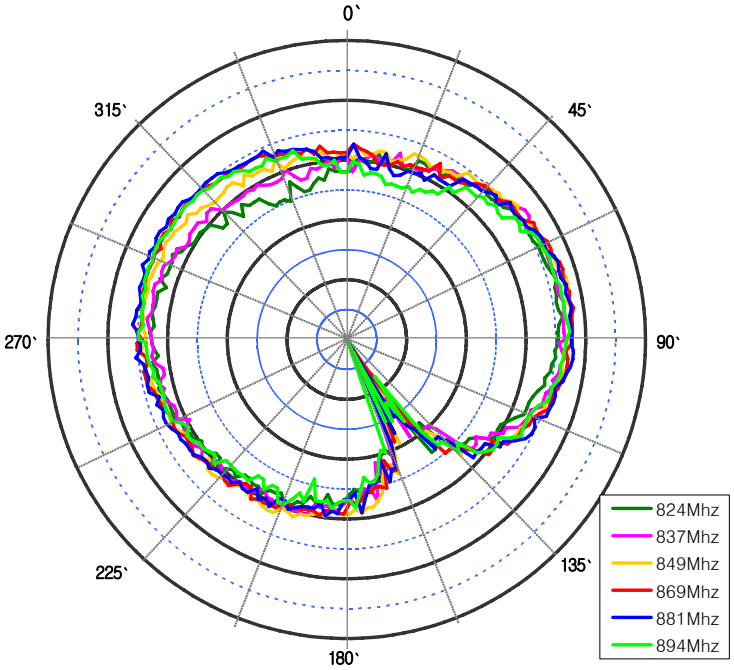
Frequency	Max.	Min.	Avg.	Beam Peak
1710Mhz	-2.70	-10.27	-5.65	240`
1745Mhz	-3.41	-10.41	-6.26	22`
1785Mhz	-3.37	-9.81	-6.19	6`
1805Mhz	-4.19	-9.68	-6.60	248`
1840Mhz	-3.80	-10.50	-7.15	6`
1880Mhz	-3.87	-12.08	-7.03	352`



Gain & Radiation Pattern

Model Name:	K2000
Test Band :	GSM850
Test Date :	
Tester Name:	
User Name :	
Memo :	

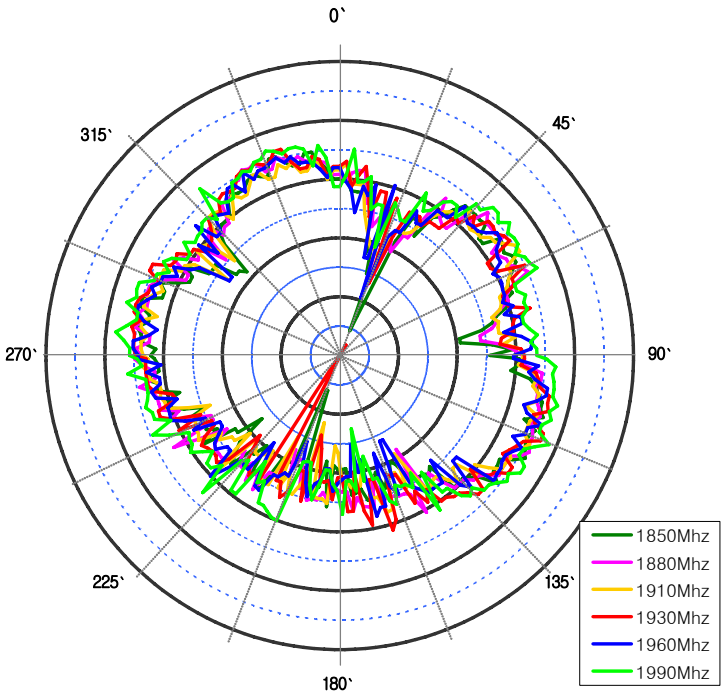
Frequency	Max.	Min.	Avg.	Beam Peak
824Mhz	-3.46	-40.69	-8.61	74`
837Mhz	-3.15	-33.57	-7.83	54`
849Mhz	-1.85	-31.64	-6.77	74`
869Mhz	-1.69	-37.68	-6.42	82`
881Mhz	-2.03	-37.94	-6.33	82`
894Mhz	-2.63	-39.94	-7.38	88`



Gain & Radiation Pattern

Model Name:	K2000
Test Band :	DCS1900
Test Date :	
Tester Name:	
User Name :	
Memo :	

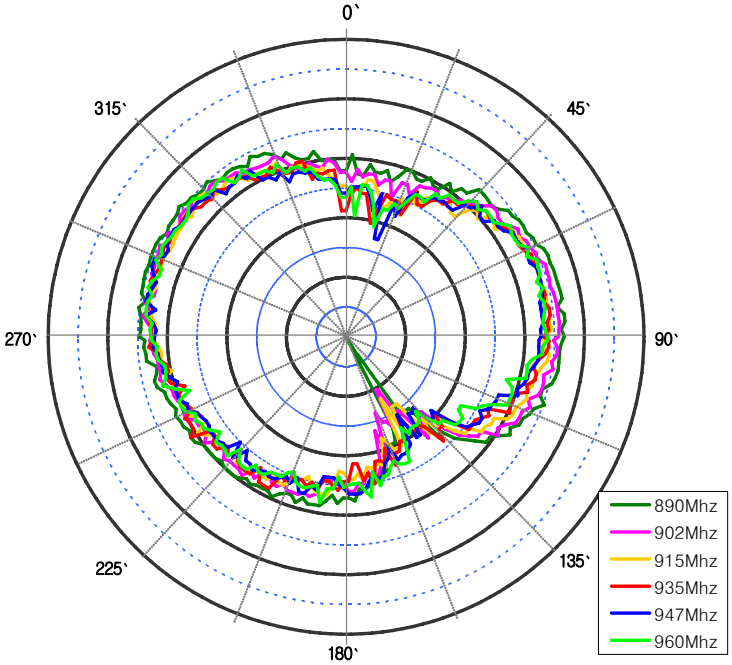
Frequency	Max.	Min.	Avg.	Beam Peak
1850Mhz	-3.80	-33.71	-9.50	108`
1880Mhz	-3.80	-22.32	-8.73	118`
1910Mhz	-4.35	-28.26	-9.50	116`
1930Mhz	-2.90	-42.05	-8.22	112`
1960Mhz	-3.58	-24.69	-9.13	110`
1990Mhz	-1.28	-27.40	-6.72	114`



Gain & Radiation Pattern

Model Name:	K2000
Test Band :	GSM900
Test Date :	
Tester Name:	
User Name :	
Memo :	

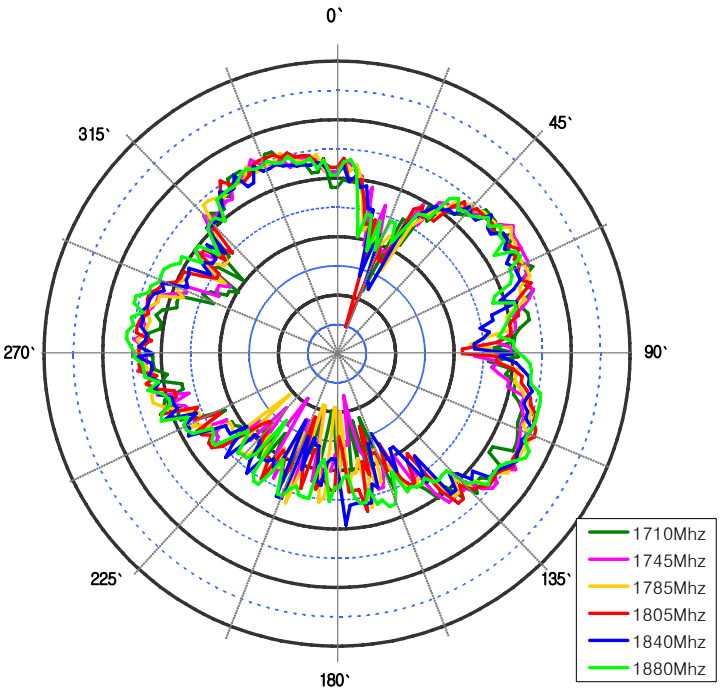
Frequency	Max.	Min.	Avg.	Beam Peak
890Mhz	-3.16	-40.42	-7.33	84`
902Mhz	-4.14	-29.75	-8.53	86`
915Mhz	-5.35	-28.12	-9.63	88`
935Mhz	-5.57	-24.28	-9.64	82`
947Mhz	-5.33	-24.37	-9.93	292`
960Mhz	-5.44	-22.85	-9.65	68`



Gain & Radiation Pattern

Model Name:	K2000
Test Band :	DCS1800
Test Date :	
Tester Name:	
User Name :	
Memo :	

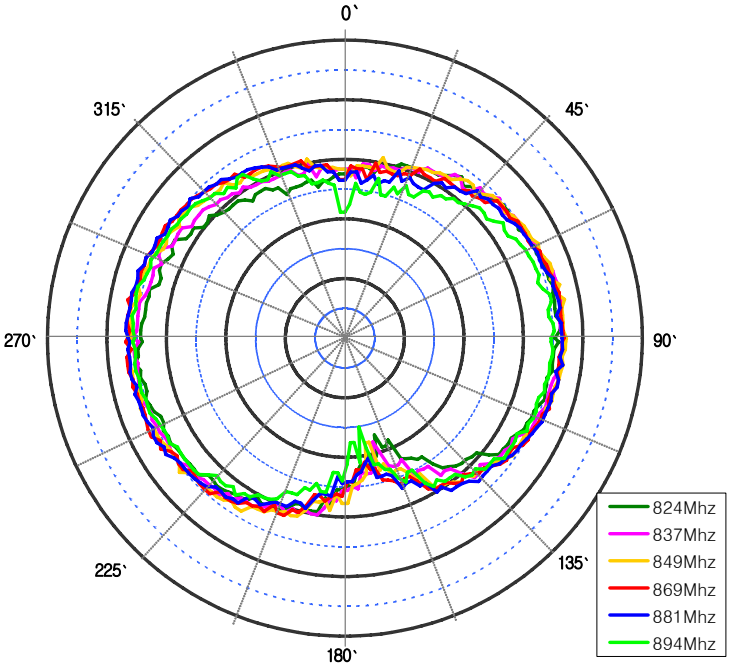
Frequency	Max.	Min.	Avg.	Beam Peak
1710Mhz	-3.44	-30.21	-9.39	66`
1745Mhz	-2.84	-32.79	-8.76	54`
1785Mhz	-3.24	-30.88	-8.75	54`
1805Mhz	-3.43	-28.51	-8.65	114`
1840Mhz	-4.29	-27.32	-9.27	122`
1880Mhz	-3.21	-25.73	-8.33	118`



Gain & Radiation Pattern

Model Name:	K2000
Test Band :	GSM850
Test Date :	
Tester Name:	
User Name :	
Memo :	

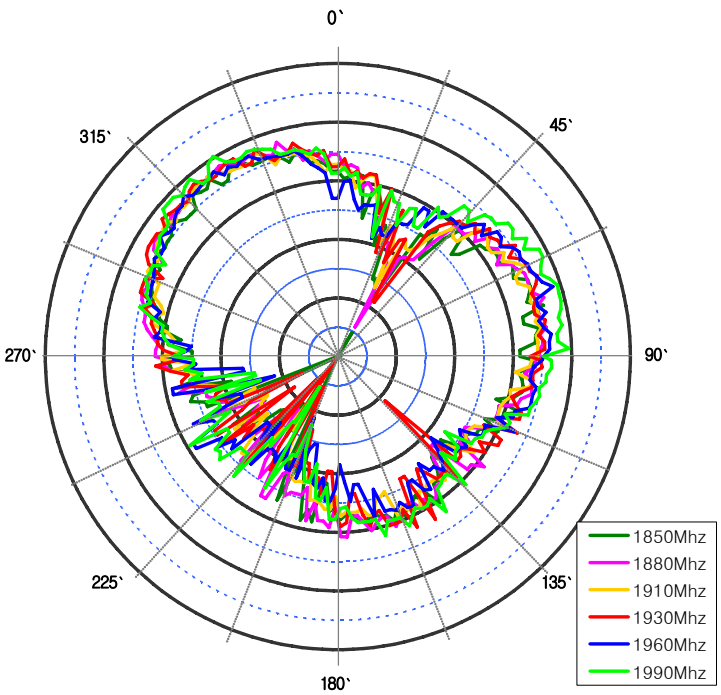
Frequency	Max.	Min.	Avg.	Beam Peak
824Mhz	-3.58	-23.00	-7.61	86`
837Mhz	-2.98	-21.98	-6.85	90`
849Mhz	-2.48	-22.06	-6.19	80`
869Mhz	-2.93	-18.93	-6.15	282`
881Mhz	-3.06	-19.46	-6.25	98`
894Mhz	-4.01	-24.91	-7.61	278`



Gain & Radiation Pattern

Model Name:	K2000
Test Band :	DCS1900
Test Date :	
Tester Name:	
User Name :	
Memo :	

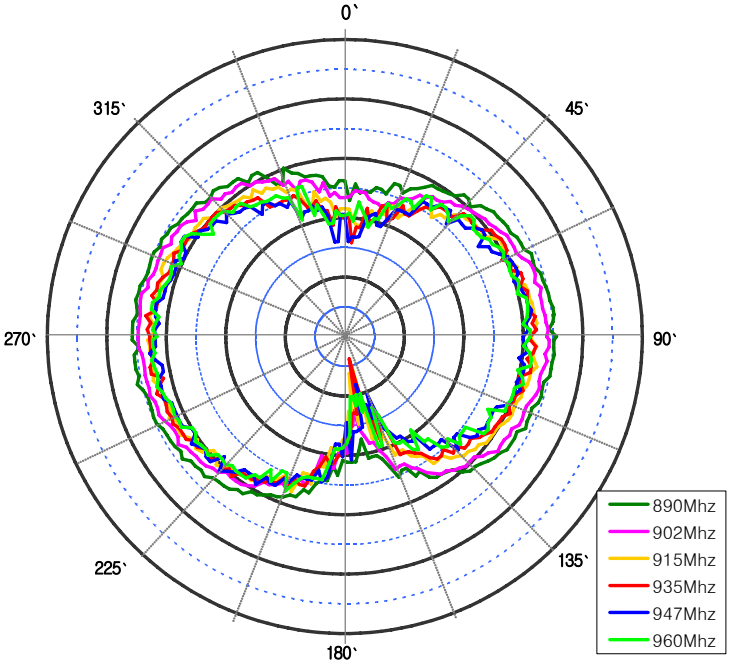
Frequency	Max.	Min.	Avg.	Beam Peak
1850Mhz	-2.68	-44.77	-8.89	326`
1880Mhz	-1.69	-28.75	-7.68	330`
1910Mhz	-2.09	-31.30	-8.38	322`
1930Mhz	-1.67	-39.47	-7.45	322`
1960Mhz	-1.37	-28.80	-7.83	72`
1990Mhz	0.25	-34.00	-6.21	330`



Gain & Radiation Pattern

Model Name:	K2000
Test Band :	GSM900
Test Date :	
Tester Name:	
User Name :	
Memo :	

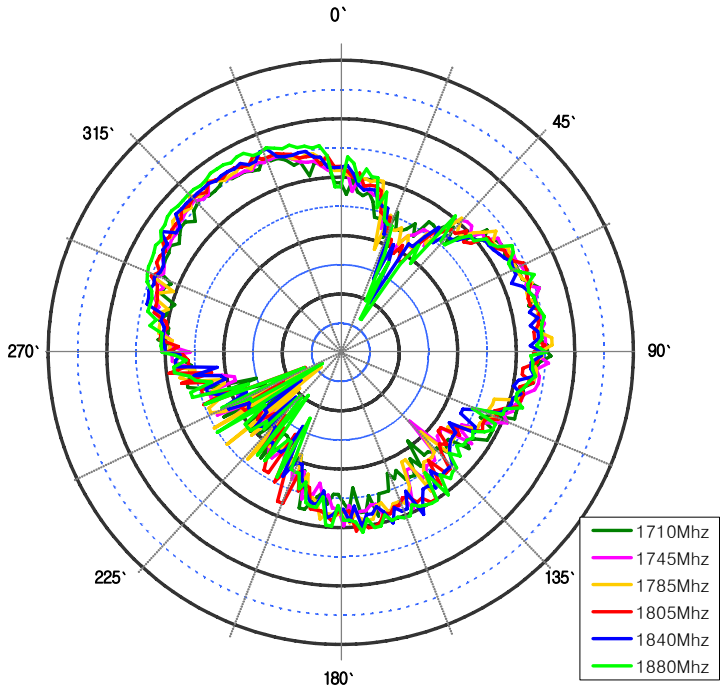
Frequency	Max.	Min.	Avg.	Beam Peak
890Mhz	-4.17	-22.50	-7.57	258`
902Mhz	-5.12	-27.37	-8.73	282`
915Mhz	-6.87	-34.87	-10.50	270`
935Mhz	-6.35	-36.15	-10.80	278`
947Mhz	-7.07	-31.72	-11.50	266`
960Mhz	-7.18	-30.05	-11.30	280`



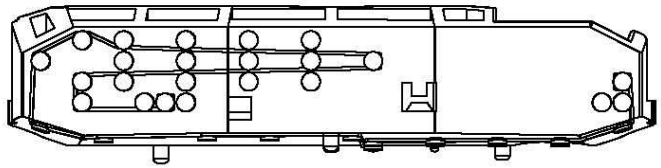
Gain & Radiation Pattern

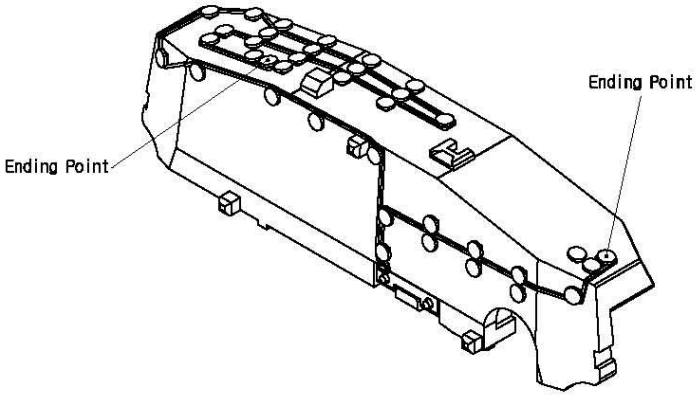
Model Name:	K2000
Test Band :	DCS1800
Test Date :	
Tester Name:	
User Name :	
Memo :	

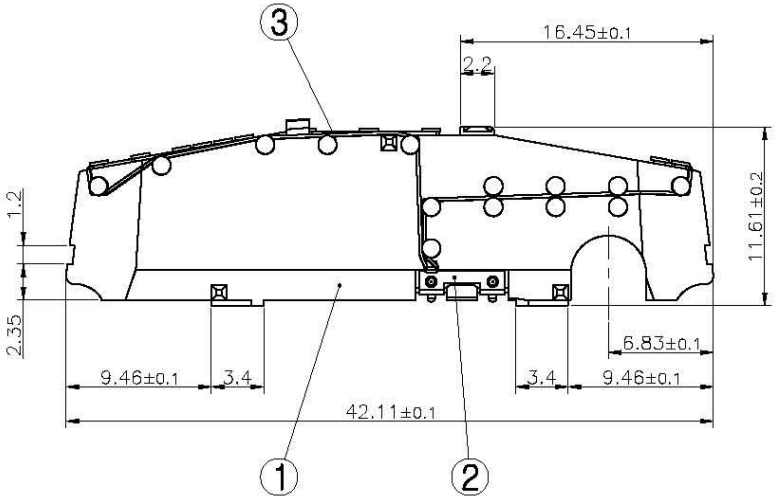
Frequency	Max.	Min.	Avg.	Beam Peak
1710Mhz	-4.04	-27.19	-9.37	328`
1745Mhz	-3.24	-27.62	-8.91	324`
1785Mhz	-2.69	-35.82	-8.75	324`
1805Mhz	-3.18	-33.40	-8.68	338`
1840Mhz	-2.96	-31.67	-8.80	306`
1880Mhz	-2.09	-36.32	-7.73	336`

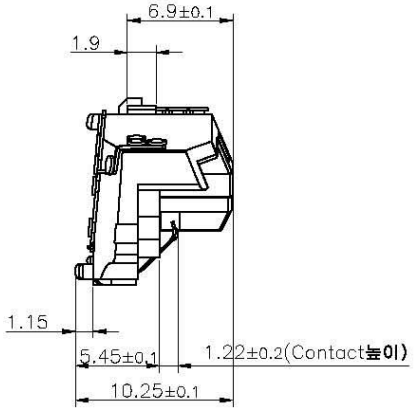


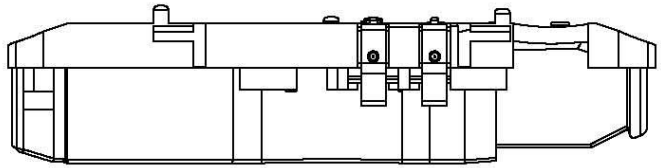
AMEND	MRK.	DATE	REVSION	SIGN











NO.	PARTS NO.	NAME	MATERIAL	Q'TY.	REMARKS
3	COL-0001	RADIATOR	COIL(Φ0.2mm)	1	-
2	PRS-0145	CONTACT PIN	SUS301 1/2H(0.15t)	1	Ni PLATED
1	NSB-0695	INTENNA BASE	PC(HF-1023IM)	1	-

DRAW BY	CHECK BY	APPROVE BY	SCALE	UNIT
			3/1	mm

BUYER NAME	MEDEL NO.	MODEL NAME
TELIAN	NSB0695-0000850/1900-TL017BK00	K2000

A4 (420 x 297)

SB TELCOM.CO.,LTD

RoHS	MODEL	K2000		
BASE / HF-1023IM(K2261)	REV	00	PAGE	1/3

ECO-022455

SAMSUNG 제일모직 starex

유해물질 성적서

업체명	슈우테크
Grade/Color	HF-1023IM/K2261
사용용도	하드폰PC RESIN
분석기관	제일모직 종합연구원

시 료 명

구분	시료명	비고
수지	HF-1023IM	
칼라	K2261	B707,DK03

시 험 결 과

시험항목		전처리방법	시험장비	단위(ppm)	M.D.L	함유량
중금속	Cd	EN 1122	ICP-AES	mg/kg	0.5	N.D
	Pb	US EPA 3050B	ICP-AES	mg/kg	5	N.D
	Hg	US EPA7473	Hg Analyzer	mg/kg	0.03	N.D
	Cr^{6+}	USEPA 3060A	UV/VIS	mg/kg	1	N.D
난연제	PBB	Cheil Method	GC/MS	mg/kg	5	N.D
	PBDE	Cheil Method	GC/MS	mg/kg	5	N.D

* 이 수치는 Eu 규정에 위배되지 않음 * M.D.L : Method Detection Limit * ND : Not Detected

시험담당자 : 최수만 Choi Sumann, 승인자 : 한연종 Y. J. Han

발행일자 : 2007년 12월 26일

승인일자 : 2007년 07월 01일

품 질 경 영 팀

RoHS	MODEL	K2000		
COIL / UEW	REV	00	PAGE	2/3

SGS

Test Report No. F690501/LF-CTSAYU07-09577 Date: April 23, 2007 Page 1 of 3

To: CNI CABLE CO., LTD
312-16
Deukkan-dong
Asan-city
CHUNGNAM
Korea

The following merchandise was submitted and identified by the client as :

Product name	:UEW(Polyurethane Enamelled Wires)
SGS File No.	: AYU07-09577
Received Date	: April 16, 2007
Test Performing Date	: April 17, 2007
Test Performed	: SGS Testing Korea tested the sample(s) selected by applicant with following results
Test Results	: For further details, please refer to following page(s)

SGS Testing Korea Co. Ltd. / Ulsan Laboratory

Sharpless Park /Testing Person

Thomas Hwang / Ulsan Lab. Mgr

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SGS Testing Korea Co., Ltd. | 1002-2, Hwaksan-ri, Onsan-eub,Ulju-gun,Ulsan,Korea 689-890 | T +82 (0)52 239 6908~10 F +82 (0)52 239 6913 www.sgslab.co.kr, www.kr.sgs.com/greenlab

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LAB 100

SGS

Test Report No. F690501/LF-CTSAYU07-09577 Date: April 23, 2007 Page 2 of 3

Sample No.	: AYU07-09577.001
Sample Description	: UEW(Polyurethane Enamelled Wires)
Item No./Part No.	: N/A

Heavy Metals

Test Items	Unit	Test Method	MDL	Results
Cadmium (Cd)	mg/kg	US EPA 3052(1996), US EPA 6010B(1996), ICP	1	N.D.
Lead (Pb)	mg/kg	US EPA 3052(1996), US EPA 6010B(1996), ICP	5	6.30
Mercury (Hg)	mg/kg	US EPA 3052(1996), US EPA 6010B(1996), ICP	2	N.D.
Hexavalent Chromium (Cr VI)	mg/kg	US EPA 3060A(1996), US EPA 7196A(1992), UV	1	N.D.

Flame Retardants: PBBs/PBDEs

Test Items	Unit	Test Method	MDL	Results
Monobromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Dibromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tribromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tetrabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Pentabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Hexabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Heptabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Octabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Nonabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Decabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Monobromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Dibromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tribromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tetrabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Pentabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Hexabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Heptabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Octabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Nonabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Decabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.

NOTE: (1) N.D. = Not detected.(<MDL)
(2) ppm = mg/kg
(3) MDL = Method Detection Limit
(4) - = No regulation
(5) ** = Qualitative analysis (No Unit)
(6) Negative = Undetectable / Positive = Detectable

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LAB 100

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Test Report No. F690501/LF-CTSAYU07-09577 Date: April 23, 2007 Page 3 of 3

Picture of Sample as Received:

Sample Color : Copper

*** End ***

NOTE: (1) N.D. = Not detected.(<MDL)
(2) ppm = mg/kg
(3) MDL = Method Detection Limit
(4) - = No regulation
(5) ** = Qualitative analysis (No Unit)
(6) Negative = Undetectable / Positive = Detectable

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LAB 100

RoHS	MODEL	K2000		
CONTACT PIN / SUS301(Ni-P)	REV	00	PAGE	3/3

SGS

Test Report No. [illegible] Date May 14, 2007 Page 2 of 4

Sample No. : AYU07-11049.001
Sample Description : STS301
Style/Item No. : N/A
Comments : Material is stainless

Heavy Metals

Test Items	Unit	Test Method	MDL	Results
Cadmium (Cd)	mg/kg	US EPA 3052(1996), US EPA 6010B(1996), ICP	1	N.D
Lead (Pb)	mg/kg	US EPA 3052(1996), US EPA 6010B(1996), ICP	5	N.D
Mercury (Hg)	mg/kg	US EPA 3052(1996), US EPA 6010B(1996), ICP	3	N.D
Hexavalent Chromium (Cr VI)	mg/kg	US EPA 3060A(1996), US EPA 7196A(1992), UV	1	N.D

Flame Retardants PBBs/PBDEs

Test Items	Unit	Test Method	MDL	Results
Monobromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D
Dibromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D
Tribromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D
Tetrabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D
Pentabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Hexabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Heptabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Octabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Nonabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Decabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Monobromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Dibromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tribromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D
Tetrabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D
Pentabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D
Hexabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D
Heptabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Octabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Nonabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Decabromodiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D

NOTE: (1) N.D. = Not detected.(<MDL)
(2) ppm = mg/kg
(3) MDL = Method Detection Limit
(4) - = No regulation
(5) ** = Qualitative analysis (No Unit)
(6) Negative = Undetectable / Positive = Detectable

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SGS

Test Report No. DRAFT REPORT Date: January 11, 2007 Page 1 of 2

To: PYEONG HWA METAL CO.,LTD.
643-7
Gupo-dong
Gumi-city
GYEONGBUK
Korea

The following merchandise was submitted and identified by the client as :

Product name : CAN(Electroness Ni)
SGS File No. : ULK07-00008
Received Date : January 04, 2007
Test Performing Date : January 05, 2007
Test Performed : SGS Testing Korea tested the sample(s) selected by applicant with following results
Test Results : For further details, please refer to following page(s)
Buyer(s) : TI KOREA

SGS Testing Korea Co. Ltd.

Sharpless Park /Testing Person **Thomas Hwang / Lab. Manager**

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Test Report No. DRAFT REPORT Date: January 11, 2007 Page 2 of 2

Sample No. : ULK07-00008.001
Sample Description : CAN(Electroness Ni)
Item No./Part No. : N/A

Heavy Metals

Test Items	Unit	Test Method	MDL	Results
Cadmium (Cd)	mg/kg	US EPA 3052, ICP-AES	1	N.D.
Lead (Pb)	mg/kg	US EPA 3052, ICP-AES	5	N.D.
Mercury (Hg)	mg/kg	US EPA 3052, ICP-AES	2	N.D.
Hexavalent Chromium (Cr VI)	mg/kg	US EPA 3060A, UV-vis	1	N.D.

Picture of Sample as Received:

*** End ***

NOTE: (1) N.D. = Not detected.(<MDL)
(2) ppm = mg/kg
(3) MDL = Method Detection Limit
(4) - = No regulation
(5) ** = Qualitative analysis (No Unit)
(6) Negative = Undetectable / Positive = Detectable

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