Variant FCC RF Test Report

APPLICANT	:	**Doro AB**
EQUIPMENT	:	**Mobile Telephone**
BRAND NAME	:	**Doro**
MODEL NAME	:	**Doro PhoneEasy 618**
FCC ID	:	**WS5DORO618**
STANDARD	:	**FCC 47 CFR Part 2, 22(H), 24(E)**
CLASSIFICATION	:	**PCS Licensed Transmitter Held to Ear (PCE)**

This is a variant report which is included the Conducted Power, ERP/EIRP and Radiation test items. The product was received on Mar. 11, 2013 and completely tested on Apr. 08, 2013. We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI / TIA / EIA-603-C-2004 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL (KUNSHAN) INC., the test report shall not be reproduced except in full.

Reviewed by:

Jones Tsai

Jones Tsai / Manager

SPORTON INTERNATIONAL (KUNSHAN) INC.

No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG240603-04	Rev. 01	This is a variant report for Doro PhoneEasy 618. The product equality declaration could be referred to Appendix C. All the test cases were performed on original report which can be referred to Sporton Report Number FG240603. Based on the original test report, only the Conducted Power, and the worst cases of ERP/EIRP and Radiated Spurious Emissions were verified for the differences.	Apr. 09, 2013
FG240603-04	Rev. 02	Update report for revising the Software Version.	Apr. 11, 2013
FG240603-04	Rev. 03	Update report for revising the Software Version.	Apr. 24, 2013

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	§2.1046	RSS-132 (5.4) RSS-133 (6.4)	Conducted Output Power	N/A	PASS	-
3.2	§22.913(a)(2)	RSS-132(5.4) SRSP-503(5.1.3)	Effective Radiated Power	< 7 Watts	PASS	-
3.2	§24.232(c)	RSS-133 (6.4) SRSP-510(5.1.2)	Equivalent Isotropic Radiated Power	< 2 Watts	PASS	-
3.3	§2.1053 §22.917(a) §24.238(a)	RSS-132 (5.5) RSS-133 (6.5)	Field Strength of Spurious Radiation	< $43+10\log_{10}$(P[Watts])	PASS	Under limit 14.00 dB at 9400.000 MHz

1 General Description

1.1 Applicant

Doro AB
Magistratsvägen 10 SE-226 43 Lund Sweden

1.2 Manufacturer

CK TELECOM LTD.
Technology Road.High-Tech Development Zone. Heyuan, Guangdong, P.R.China.

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Telephone
Brand Name	Doro
Model Name	Doro PhoneEasy 618
FCC ID	WS5DORO618
EUT supports Radios application	GSM/GPRS/WCDMA/Bluetooth
HW Version	APPLE-V2.0
SW Version	APPLE-S01B_DORO618_L3EN_206_130423
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx Frequency	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz
Rx Frequency	GSM850: 869.2 MHz ~ 893.8 MHz GSM1900: 1930.2 MHz ~ 1989.8 MHz WCDMA Band V: 871.4 MHz ~ 891.6 MHz WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz
Maximum Output Power to Antenna	**<For Sample 1>** GSM850: 32.41 dBm GSM1900: 30.21 dBm WCDMA Band V: 23.08 dBm WCDMA Band II: 23.25 dBm **<For Sample 2>** GSM850: 32.44 dBm GSM1900: 30.22 dBm WCDMA Band V: 23.21 dBm WCDMA Band II: 23.07 dBm **<For Sample 3>** GSM850: 32.35 dBm GSM1900: 30.31 dBm WCDMA Band V: 23.15 dBm WCDMA Band II: 23.06 dBm
Antenna Type	Fixed Internal Antenna
Type of Modulation	GSM: GMSK GPRS: GMSK WCDMA: QPSK (Uplink)

1.5 Maximum ERP/EIRP Power, Frequency Tolerance, and Emission Designator

<For black Color Sample>

FCC Rule	System	Type of Modulation	Maximum ERP/EIRP (W)
Part 22	GSM850 GSM	GMSK	0.2729
Part 24	GSM1900 GSM	GMSK	0.6823

<For Red Color Sample>

FCC Rule	System	Type of Modulation	Maximum ERP/EIRP (W)
Part 22	GSM850 GSM	GMSK	0.2576
Part 24	GSM1900 GSM	GMSK	0.6546

<For silvery Color Sample>

FCC Rule	System	Type of Modulation	Maximum ERP/EIRP (W)
Part 22	GSM850 GSM	GMSK	0.2123
Part 24	GSM1900 GSM	GMSK	0.7379

1.6 Testing Site

Test Site	SPORTON INTERNATIONAL (KUNSHAN) INC.		
Test Site Location	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C. TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958		
Test Site No.	**Sporton Site No.**		**FCC/IC Registration No.**
	TH01-KS	03CH01-KS	149928/4086E-1

1.7 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- Preliminary Guidance for Receiving Applications for Certification of 3G Device. May 9, 2006.
- FCC 47 CFR Part 2, 22(H), 24(E)
- ANSI / TIA / EIA-603-C-2004
- FCC KDB 971168 D01 Power Meas. License Digital Systems v01

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.

2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

2.1 Test Mode

During all testing, EUT is in link mode with base station emulator at maximum power level. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission.

Frequency range investigated for radiated emission is as follows:

1. 30 MHz to 9000 MHz for GSM850.
2. 30 MHz to 19000 MHz for GSM1900.

Test Modes		
Band	**Radiated TCs**	**Conducted TCs**
GSM 850	■ GSM Link	■ GSM Link
GSM 1900	■ GSM Link	■ GSM Link

Note: The maximum power levels are GSM mode for GMSK link, only these modes were used for all tests.

The conducted power tables are as follows:

For black Color Sample

<GSM>

Burst Average Power						
Band	**GSM850**			**GSM1900**		
Channel	**128**	**189**	**251**	**512**	**661**	**810**
Frequency (MHz)	**824.2**	**836.4**	**848.8**	**1850.2**	**1880.0**	**1909.8**
GSM	32.29	32.37	**32.41**	29.99	30.09	**30.21**
GPRS 8	32.25	32.36	32.40	29.98	30.08	30.20
GPRS 10	31.42	31.54	31.61	29.09	29.16	29.39

<WCDMA>

Band	**WCDMA Band V**			**WCDMA Band II**		
Channel	**4132**	**4182**	**4233**	**9262**	**9400**	**9538**
Frequency (MHz)	**826.4**	**836.4**	**846.6**	**1852.4**	**1880.0**	**1907.6**
AMR 12.2k	23.01	23.05	22.96	22.96	23.22	23.17
RMC 12.2k	23.03	**23.08**	22.95	22.98	**23.25**	23.21

For Red Color Sample

<GSM>

Burst Average Power						
Band	**GSM850**			**GSM1900**		
Channel	**128**	**189**	**251**	**512**	**661**	**810**
Frequency (MHz)	**824.2**	**836.4**	**848.8**	**1850.2**	**1880.0**	**1909.8**
GSM	32.30	32.41	**32.44**	29.98	30.10	**30.22**
GPRS 8	32.30	32.41	**32.44**	29.96	30.08	30.19
GPRS 10	31.49	31.61	31.67	29.05	29.15	29.37

<WCDMA>

Band	**WCDMA Band V**			**WCDMA Band II**		
Channel	**4132**	**4182**	**4233**	**9262**	**9400**	**9538**
Frequency (MHz)	**826.4**	**836.4**	**846.6**	**1852.4**	**1880.0**	**1907.6**
AMR 12.2k	23.11	23.20	23.15	22.91	23.05	22.94
RMC 12.2k	23.12	**23.21**	23.17	22.92	**23.07**	22.97

For silvery Color Sample

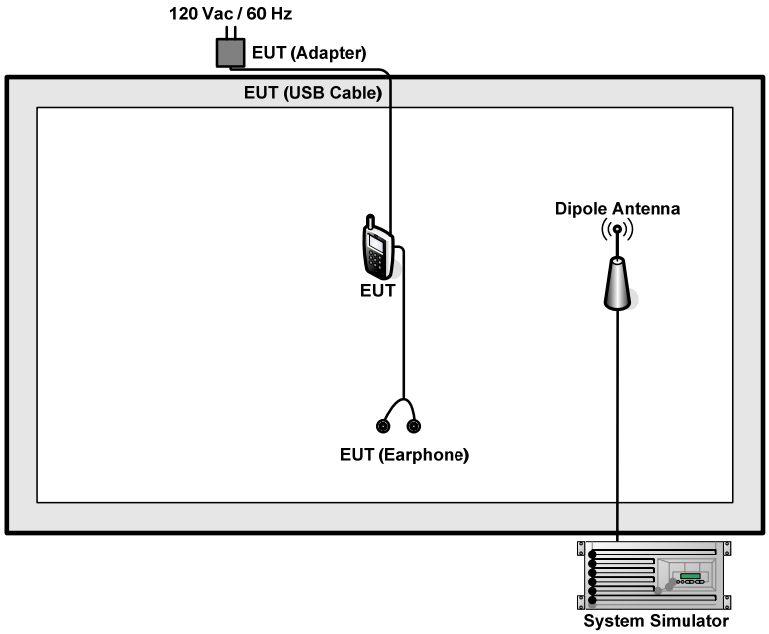
<GSM>

Burst Average Power						
Band	**GSM850**			**GSM1900**		
Channel	**128**	**189**	**251**	**512**	**661**	**810**
Frequency (MHz)	**824.2**	**836.4**	**848.8**	**1850.2**	**1880.0**	**1909.8**
GSM	32.19	32.30	**32.35**	30.01	30.13	**30.31**
GPRS 8	32.17	32.29	32.34	29.99	30.12	30.30
GPRS 10	31.35	31.49	31.57	29.05	29.19	29.36

<WCDMA>

Band	**WCDMA Band V**			**WCDMA Band II**		
Channel	**4132**	**4182**	**4233**	**9262**	**9400**	**9538**
Frequency (MHz)	**826.4**	**836.4**	**846.6**	**1852.4**	**1880.0**	**1907.6**
AMR 12.2k	23.09	23.12	23.09	22.96	23.05	23.01
RMC 12.2k	23.12	**23.15**	23.10	22.99	**23.06**	22.99

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	DC Power Supply	GWINSTEK	GPS-3030D	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

Example :

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 Conducted Output Power Measurement

3.1.1 Description of the Conducted Output Power Measurement

A base station simulator was used to establish communication with the EUT. Its parameters were set to transmit the maximum power on the EUT. The measured power in the radio frequency on the transmitter output terminals shall be reported.

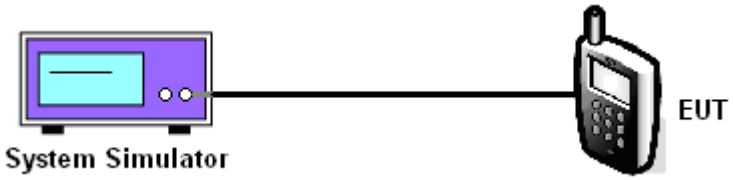
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The transmitter output port was connected to base station.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set EUT at maximum power through base station.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure the maximum burst average power for GSM and maximum average power for other modulation signal.

3.1.4 Test Setup



3.1.5 Test Result of Conducted Output Power

<For black Color Sample>

Cellular Band						
Modes	**GSM850 (GSM)**			**WCDMA Band V (RMC 12.2Kbps)**		
Channel	**128 (Low)**	**189 (Mid)**	**251 (High)**	**4132 (Low)**	**4182 (Mid)**	**4233 (High)**
Frequency (MHz)	**824.2**	**836.4**	**848.8**	**826.4**	**836.4**	**846.6**
Conducted Power (dBm)	32.29	32.37	32.41	23.03	23.08	22.95
Conducted Power (Watts)	1.69	1.73	1.74	0.20	0.20	0.20

PCS Band						
Modes	**GSM1900 (GSM)**			**WCDMA Band II (RMC 12.2Kbps)**		
Channel	**512 (Low)**	**661 (Mid)**	**810 (High)**	**9262 (Low)**	**9400 (Mid)**	**9538 (High)**
Frequency (MHz)	**1850.2**	**1880**	**1909.8**	**1852.4**	**1880**	**1907.6**
Conducted Power (dBm)	29.99	30.09	30.21	22.98	23.25	23.21
Conducted Power (Watts)	1.00	1.02	1.05	0.20	0.21	0.21

<For Red Color Sample>

Cellular Band						
Modes	**GSM850 (GSM)**			**WCDMA Band V (RMC 12.2Kbps)**		
Channel	**128 (Low)**	**189 (Mid)**	**251 (High)**	**4132 (Low)**	**4182 (Mid)**	**4233 (High)**
Frequency (MHz)	**824.2**	**836.4**	**848.8**	**826.4**	**836.4**	**846.6**
Conducted Power (dBm)	32.30	32.41	32.44	23.12	23.21	23.17
Conducted Power (Watts)	1.70	1.74	1.75	0.21	0.21	0.21

PCS Band						
Modes	**GSM1900 (GSM)**			**WCDMA Band II (RMC 12.2Kbps)**		
Channel	**512 (Low)**	**661 (Mid)**	**810 (High)**	**9262 (Low)**	**9400 (Mid)**	**9538 (High)**
Frequency (MHz)	**1850.2**	**1880**	**1909.8**	**1852.4**	**1880**	**1907.6**
Conducted Power (dBm)	29.98	30.10	30.22	22.92	23.07	22.97
Conducted Power (Watts)	1.00	1.02	1.05	0.20	0.20	0.20

<For silvery Color Sample>

Cellular Band						
Modes	**GSM850 (GSM)**			**WCDMA Band V (RMC 12.2Kbps)**		
Channel	**128 (Low)**	**189 (Mid)**	**251 (High)**	**4132 (Low)**	**4182 (Mid)**	**4233 (High)**
Frequency (MHz)	**824.2**	**836.4**	**848.8**	**826.4**	**836.4**	**846.6**
Conducted Power (dBm)	32.19	32.30	32.35	23.12	23.15	23.10
Conducted Power (Watts)	1.66	1.70	1.72	0.21	0.21	0.20

PCS Band						
Modes	**GSM1900 (GSM)**			**WCDMA Band II (RMC 12.2Kbps)**		
Channel	**512 (Low)**	**661 (Mid)**	**810 (High)**	**9262 (Low)**	**9400 (Mid)**	**9538 (High)**
Frequency (MHz)	**1850.2**	**1880**	**1909.8**	**1852.4**	**1880**	**1907.6**
Conducted Power (dBm)	30.01	30.13	30.31	22.99	23.06	22.99
Conducted Power (Watts)	1.00	1.03	1.07	0.20	0.20	0.20

Note: maximum burst average power for GSM, and maximum average power for WCDMA.

3.2 Effective Radiated Power and Effective Isotropic Radiated Power Measurement

3.2.1 Description of the ERP/EIRP Measurement

The substitution method, in ANSI / TIA / EIA-603-C-2004, was used for ERP/EIRP measurement, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v01. The ERP of mobile transmitters must not exceed 7 Watts and the EIRP of mobile transmitters are limited to 2 Watts.

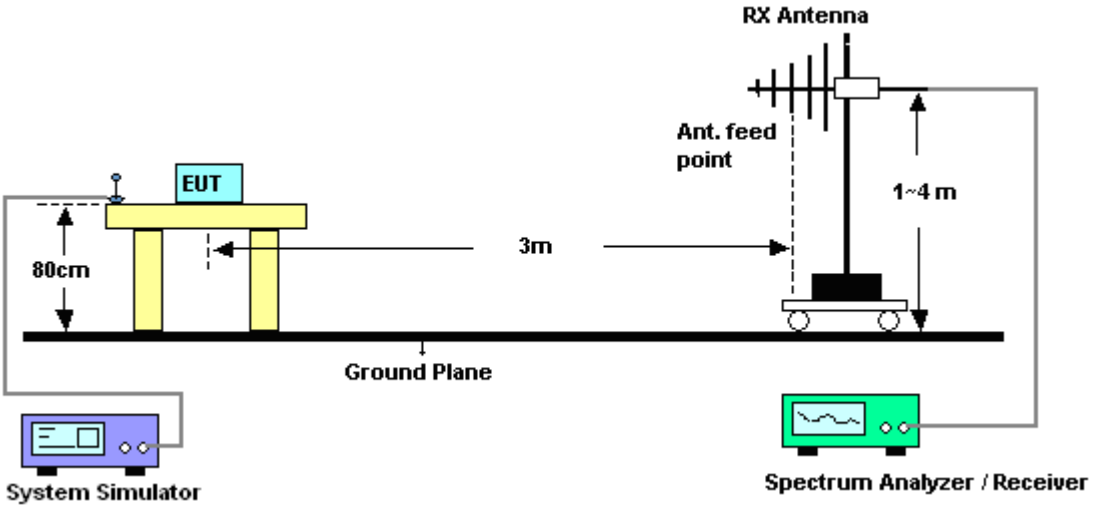
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

1. The EUT was placed on an non-conductive rotating platform with 0.8 meter height in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with RBW= 1MHz, VBW= 3MHz for GSM, RBW= 100 KHz, VBW= 300 KHz, used channel power option with bandwidth=5MHz for WCDMA, and RMS detector settings per section 4.0 of KDB 971168 D01.
2. During the measurement, the EUT was enforced in maximum power and linked with a base station. The highest emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 meters in both horizontally and vertically polarized orientations.
3. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to TIA/EIA-603-C. The EUT was replaced by dipole antenna (substitution antenna) at same location, and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. - Tx Cable loss + Substitution antenna gain - Analyzer reading. Then the EUT's EIRP was calculated with the correction factor, EIRP= LVL + Correction factor and ERP = EIRP – 2.15 .

3.2.4 Test Setup



3.2.5 Test Result of ERP

<For black Color Sample>

GSM850 (GSM) Radiated Power ERP				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
824.2	-3.74	30.25	24.36	0.2729
836.4	-3.71	30.15	24.29	0.2685
848.8	-6.64	30.05	21.26	0.1337
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
824.2	-14.05	33.29	17.09	0.0512
836.4	-11.92	33.29	19.22	0.0836
848.8	-14.21	33.26	16.90	0.0490

* ERP = LVL (dBm) + Correction Factor (dB) – 2.15

<For Red Color Sample>

GSM850 (GSM) Radiated Power ERP				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
824.2	-3.99	30.25	24.11	0.2576
836.4	-3.95	30.15	24.05	0.2541
848.8	-5.21	30.05	22.69	0.1858
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
824.2	-12.47	33.29	18.67	0.0736
836.4	-11.81	33.29	19.33	0.0857
848.8	-11.67	33.26	19.44	0.0879

* ERP = LVL (dBm) + Correction Factor (dB) – 2.15

<For silvery Color Sample>

GSM850 (GSM) Radiated Power ERP				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
824.2	-4.83	30.25	23.27	0.2123
836.4	-4.90	30.15	23.10	0.2042
848.8	-6.94	30.05	20.96	0.1247
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
824.2	-10.87	33.29	20.27	0.1064
836.4	-9.21	33.29	21.93	0.1560
848.8	-9.88	33.26	21.23	0.1327

* ERP = LVL (dBm) + Correction Factor (dB) – 2.15

3.2.6 Test Result of EIRP

<For black Color Sample>

GSM1900 (GSM) Radiated Power EIRP				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.2	-8.43	36.77	28.34	0.6823
1880.0	-8.70	36.16	27.46	0.5572
1909.8	-10.86	36.8	25.94	0.3926
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.2	-12.68	38.86	26.18	0.4150
1880.0	-12.25	38.31	26.06	0.4036
1909.8	-13.02	38.78	25.76	0.3767

* EIRP = LVL (dBm) + Correction Factor (dB)

<For Red Color Sample>

GSM1900 (GSM) Radiated Power EIRP				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.2	-8.61	36.77	28.16	0.6546
1880.0	-8.40	36.16	27.76	0.5970
1909.8	-13.36	36.8	23.44	0.2208
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.2	-14.54	38.86	24.32	0.2704
1880.0	-13.72	38.31	24.59	0.2877
1909.8	-13.75	38.78	25.03	0.3184

* EIRP = LVL (dBm) + Correction Factor (dB)

<For silvery Color Sample>

GSM1900 (GSM) Radiated Power EIRP				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.2	-8.09	36.77	28.68	0.7379
1880.0	-8.63	36.16	27.53	0.5662
1909.8	-9.78	36.8	27.02	0.5035
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.2	-17.73	38.86	21.13	0.1297
1880.0	-16.49	38.31	21.82	0.1521
1909.8	-18.19	38.78	20.59	0.1146

* EIRP = LVL (dBm) + Correction Factor (dB)

3.3 Field Strength of Spurious Radiation Measurement

3.3.1 Description of Field Strength of Spurious Radiated Measurement

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.3.2 Measuring Instruments

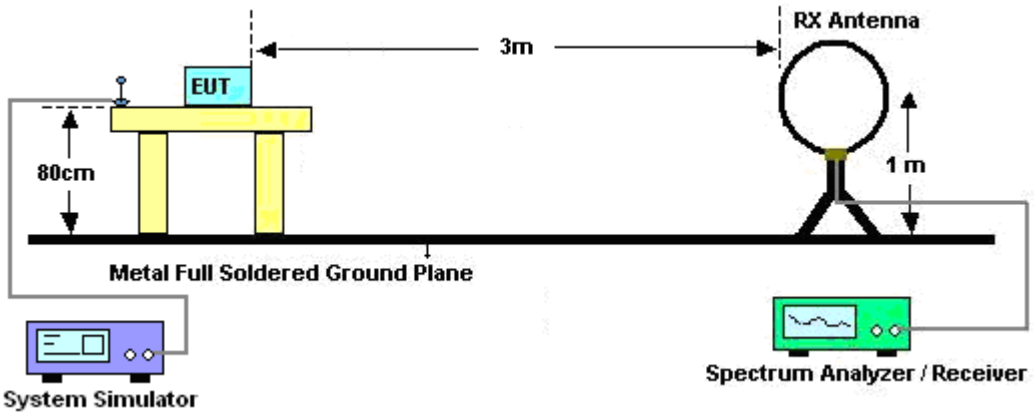
See list of measuring instruments of this test report.

3.3.3 Test Procedures

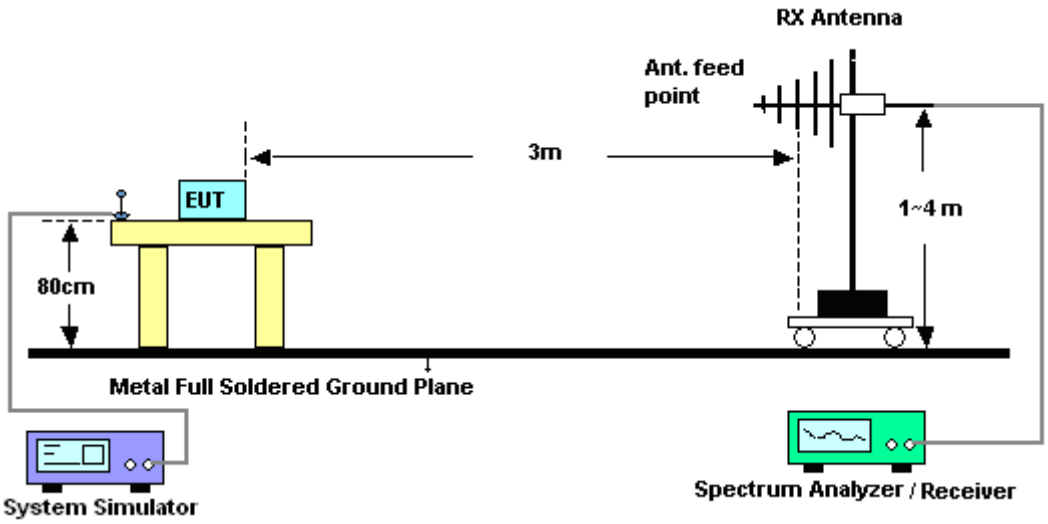
1. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
11. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)
    = P(W) - [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.
12. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
13. ERP (dBm) = EIRP - 2.15

3.3.4 Test Setup

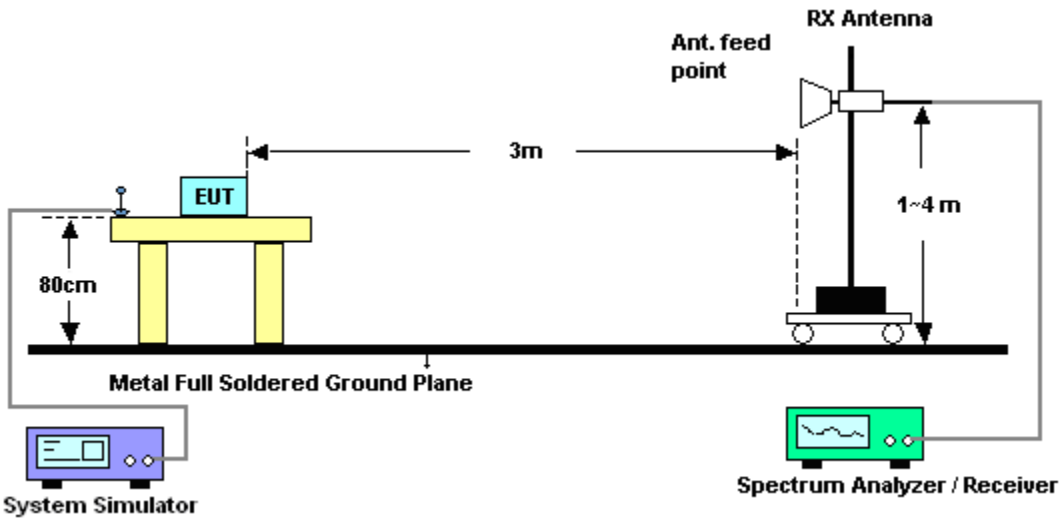
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



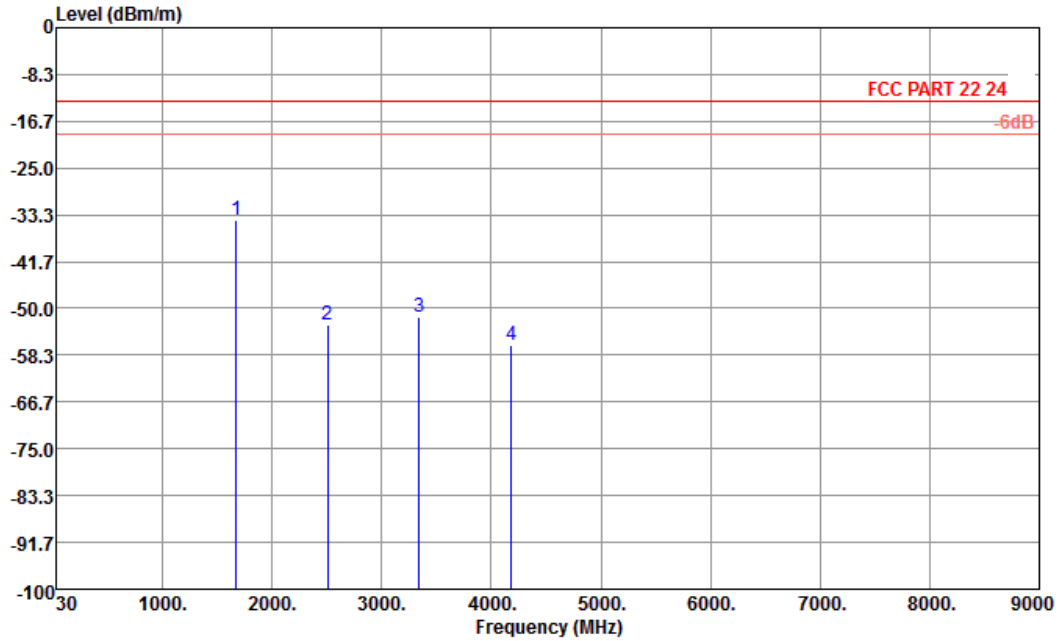
3.3.5 Test Results of Radiated Emissions (9 KHz ~ 30 MHz)

The low frequency, which started from 9 KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

3.3.6 Test Result of Field Strength of Spurious Radiated

<For black Color Sample>

Band :	GSM850	**Temperature :**	23~24°C
Test Mode :	GSM Link	**Relative Humidity :**	43~44%
Test Engineer :	Stone Gu	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

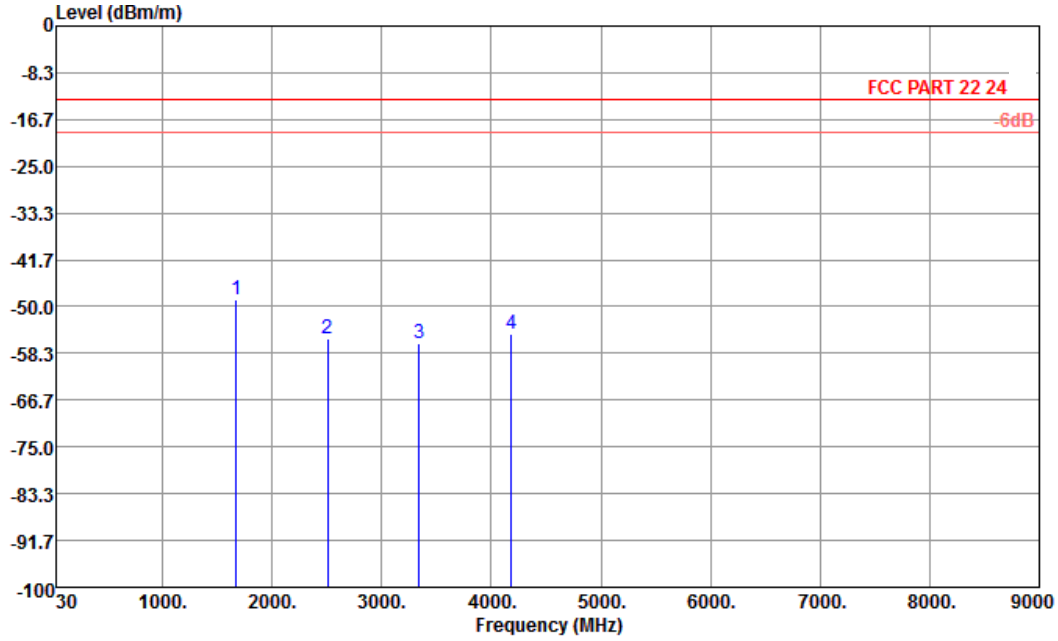


Site : 03CH01-KS
Condition : FCC PART 22 24 3m HF EIRP FACTOR-09020 HORIZONTAL
Project : (FG) 240603-04

Plane : E2

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-34.36	-13	-21.36	-51.23	-37.33	0.88	6.00	H	Pass
2510	-52.89	-13	-39.89	-72.50	-55.50	1.08	5.84	H	Pass
3345	-51.53	-13	-38.53	-62.13	-55.90	1.14	7.66	H	Pass
4182	-56.46	-13	-43.46	-71.22	-61.73	1.37	8.79	H	Pass

Band :	GSM850	Temperature :	23~24°C
Test Mode :	GSM Link	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

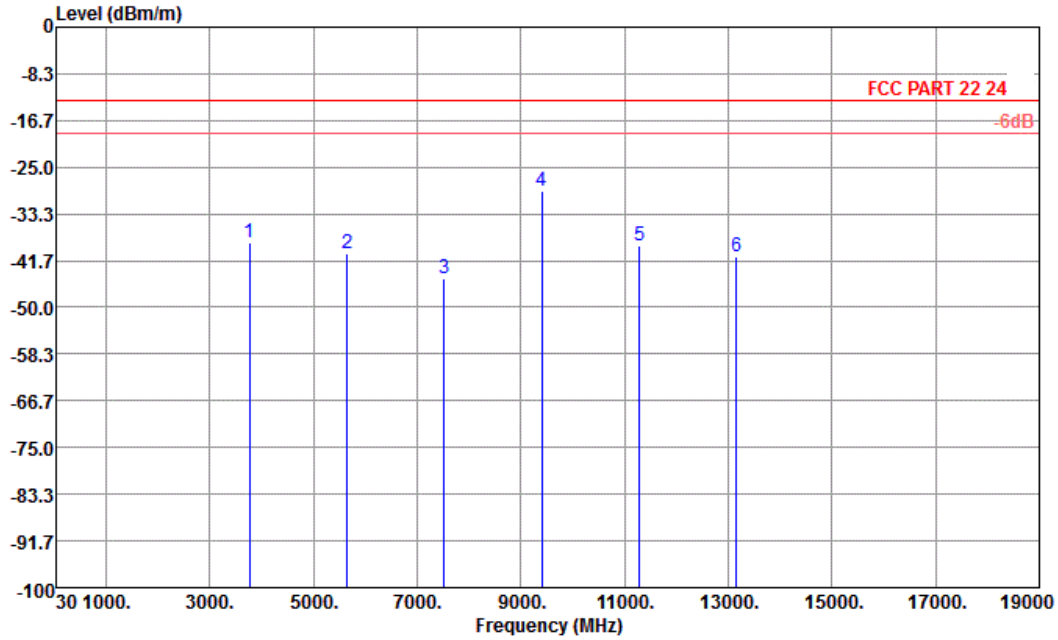


Site : 03CH01-KS
Condition : FCC PART 22 24 3m HF EIRP FACTOR-09020 VERTICAL
Project : (FG) 240603-04

Plane : E2

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-48.72	-13	-35.72	-61.61	-51.69	0.88	6.00	V	Pass
2510	-55.68	-13	-42.68	-74.53	-58.29	1.08	5.84	V	Pass
3345	-56.41	-13	-43.41	-68.24	-60.78	1.14	7.66	V	Pass
4182	-54.96	-13	-41.96	-70.18	-60.23	1.37	8.79	V	Pass

Band :	GSM1900	Temperature :	23~24°C
Test Mode :	GSM Link	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

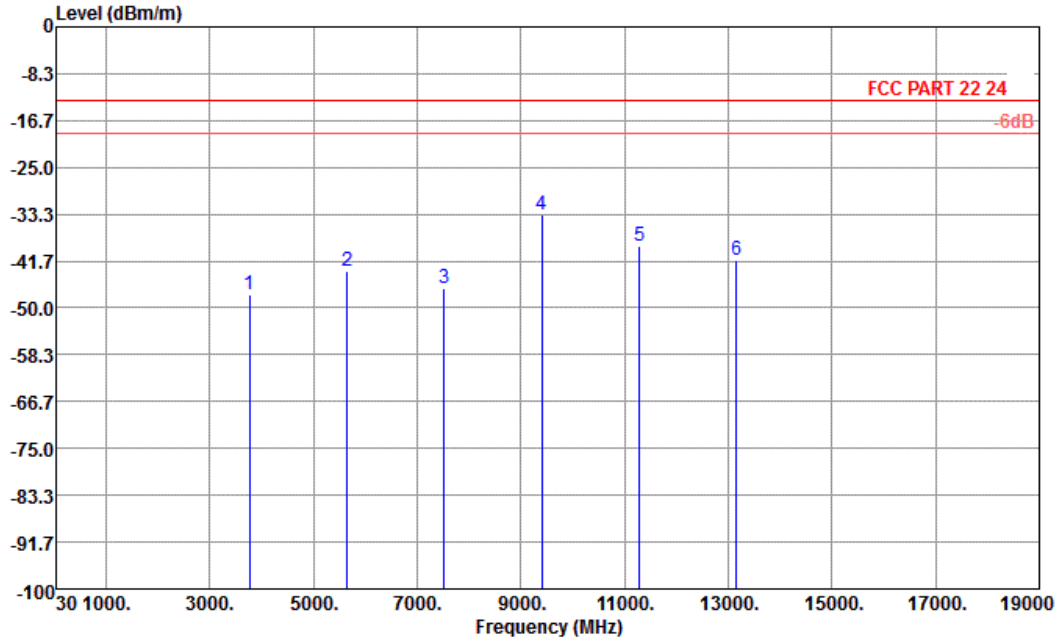


Site : 03CH01-KS
Condition : FCC PART 22 24 3m HF EIRP FACTOR-09020 HORIZONTAL
Proiect : (FG) 240603-04

Plane : E1

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-38.53	-13	-25.53	-55.24	-45.27	1.28	8.02	H	Pass
5640	-40.41	-13	-27.41	-60.08	-48.83	1.58	10.00	H	Pass
7520	-44.78	-13	-31.78	-66.72	-55.10	1.78	12.10	H	Pass
9400	-29.33	-13	-16.33	-56.80	-40.11	2.22	13.00	H	Pass
11280	-38.96	-13	-25.96	-67.45	-49.81	2.16	13.01	H	Pass
13160	-40.99	-13	-27.99	-71.57	-52.05	2.64	13.70	H	Pass

Band :	GSM1900	**Temperature :**	23~24°C
Test Mode :	GSM Link	**Relative Humidity :**	43~44%
Test Engineer :	Stone Gu	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



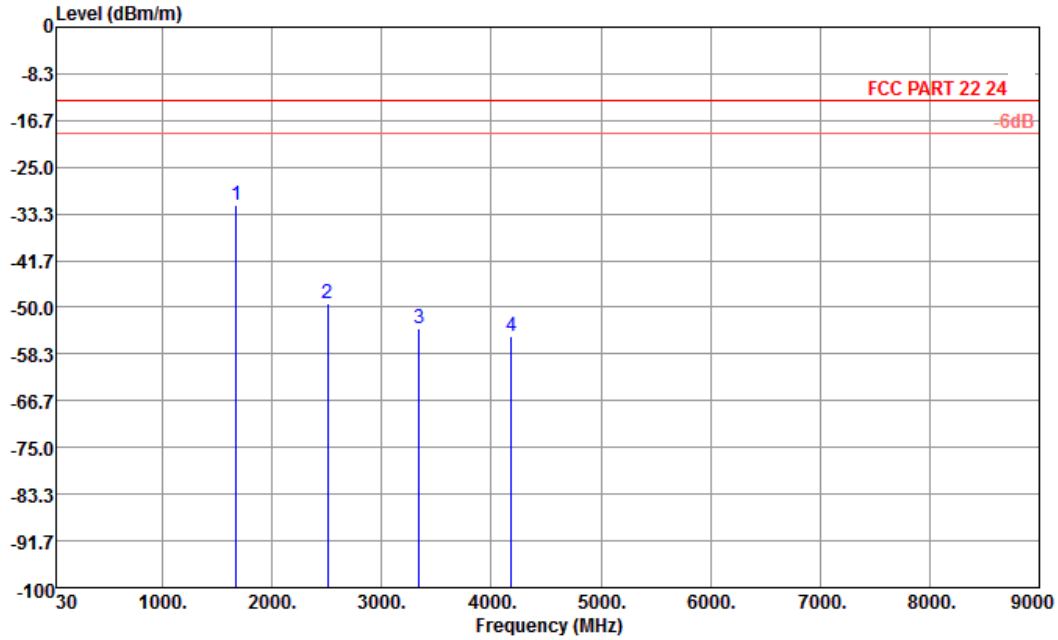
Site : 03CH01-KS
Condition : FCC PART 22 24 3m HF EIRP FACTOR-09020 VERTICAL
Project : (FG) 240603-04

Plane : E1

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-47.57	-13	-34.57	-62.6	-54.31	1.28	8.02	V	Pass
5640	-43.52	-13	-30.52	-61.74	-51.94	1.58	10	V	Pass
7520	-46.65	-13	-33.65	-68.9	-56.97	1.78	12.1	V	Pass
9400	-33.37	-13	-20.37	-59.35	-44.15	2.22	13	V	Pass
11280	-39.10	-13	-26.10	-67.69	-49.95	2.16	13.01	V	Pass
13160	-41.64	-13	-28.64	-72.29	-52.70	2.64	13.7	V	Pass

<For Red Color Sample>

Band :	GSM850	**Temperature :**	23~24°C
Test Mode :	GSM Link	**Relative Humidity :**	50~51%
Test Engineer :	Stone Gu	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

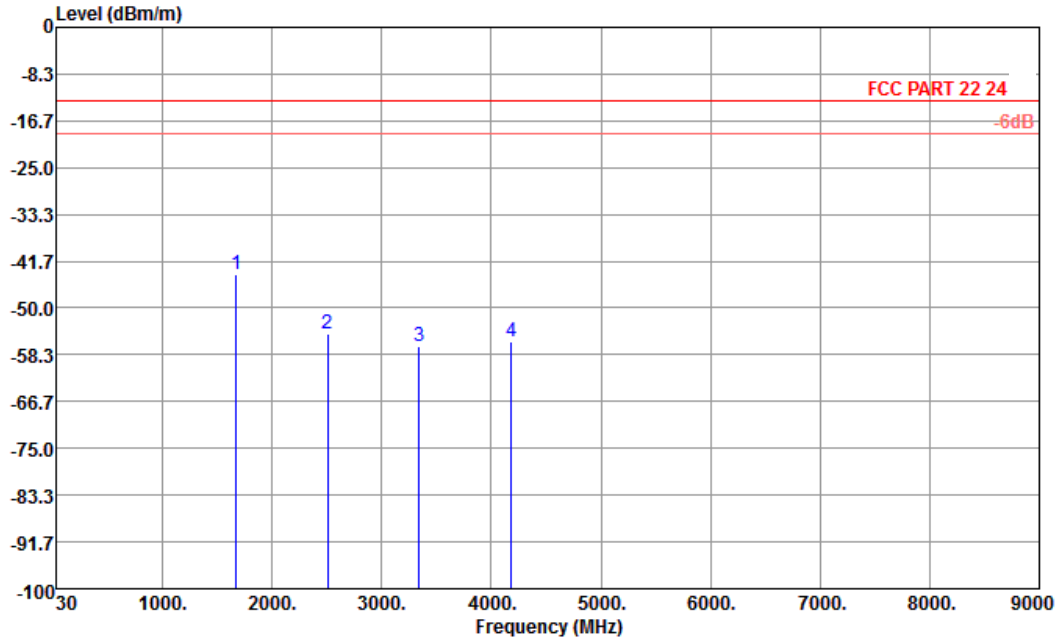


Site : 03CH01-KS
Condition : FCC PART 22 24 3m HF EIRP FACTOR-09020 HORIZONTAL
Project : (FG) 240603-04

Plane : E2

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-31.74	-13	-18.74	-48.09	-34.71	0.88	6.00	H	Pass
2510	-49.41	-13	-36.41	-70.89	-52.02	1.08	5.84	H	Pass
3345	-53.77	-13	-40.77	-64.37	-58.14	1.14	7.66	H	Pass
4182	-55.13	-13	-42.13	-69.89	-60.40	1.37	8.79	H	Pass

Band :	GSM850	Temperature :	23~24°C
Test Mode :	GSM Link	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

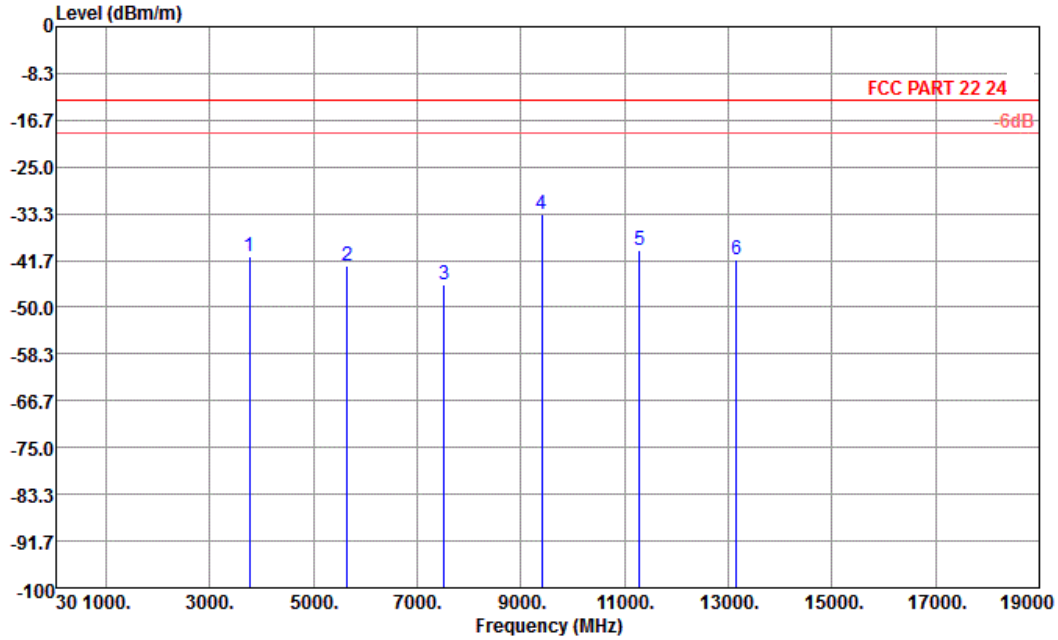


Site : 03CH01-KS
Condition : FCC PART 22 24 3m HF EIRP FACTOR-09020 VERTICAL
Project : (FG) 240603-04

Plane : E2

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-44.13	-13	-31.13	-57.50	-47.10	0.88	6.00	V	Pass
2510	-54.66	-13	-41.66	-73.51	-57.27	1.08	5.84	V	Pass
3345	-56.80	-13	-43.80	-68.63	-61.17	1.14	7.66	V	Pass
4182	-56.06	-13	-43.06	-71.28	-61.33	1.37	8.79	V	Pass

Band :	GSM1900	**Temperature :**	23~24°C
Test Mode :	GSM Link	**Relative Humidity :**	43~44%
Test Engineer :	Stone Gu	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

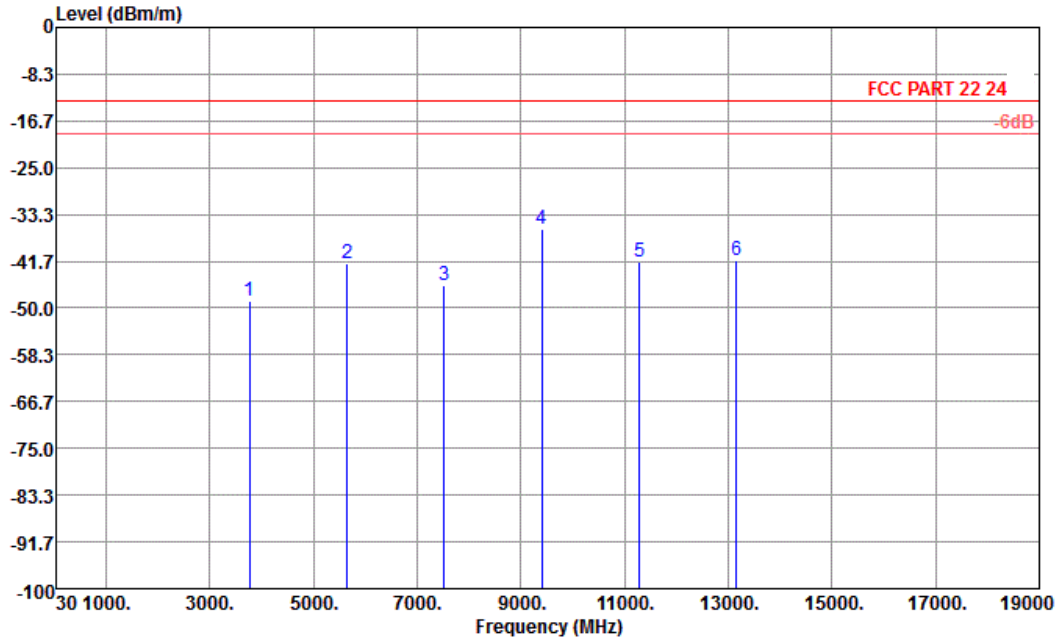


Site : 03CH01-KS
Condition : FCC PART 22 24 3m HF EIRP FACTOR-09020 HORIZONTAL
Project : (FG) 240603-04

Plane : E1

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-41.00	-13	-28.00	-57.05	-47.74	1.28	8.02	H	Pass
5640	-42.71	-13	-29.71	-61.76	-51.13	1.58	10.00	H	Pass
7520	-45.87	-13	-32.87	-67.81	-56.19	1.78	12.10	H	Pass
9400	-33.47	-13	-20.47	-59.81	-44.25	2.22	13.00	H	Pass
11280	-39.80	-13	-26.80	-68.29	-50.65	2.16	13.01	H	Pass
13160	-41.62	-13	-28.62	-72.20	-52.68	2.64	13.70	H	Pass

Band :	GSM1900	Temperature :	23~24°C
Test Mode :	GSM Link	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



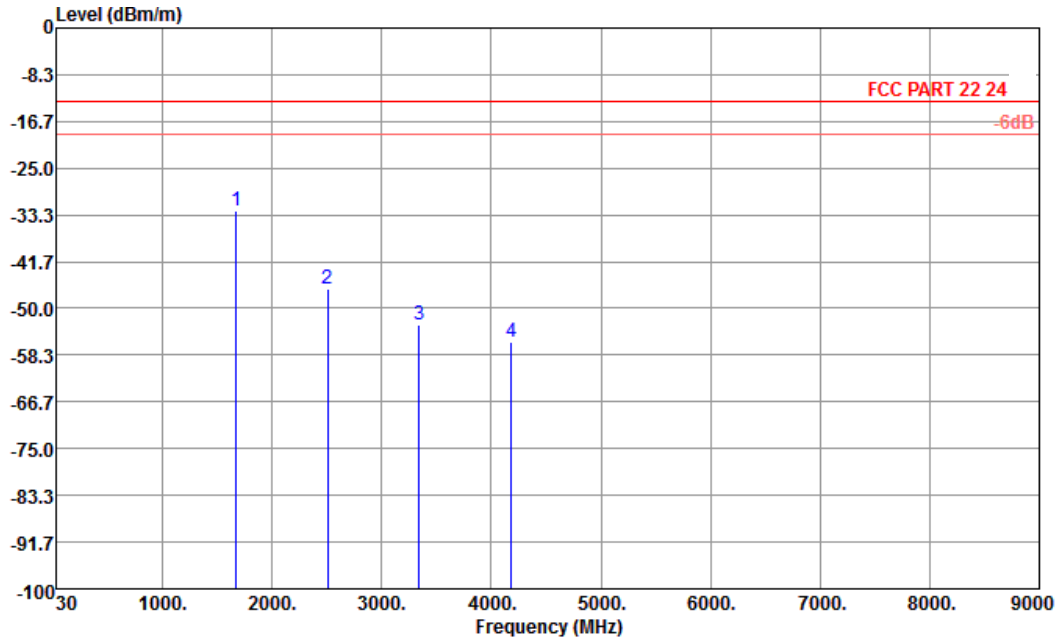
Site : 03CH01-KS
Condition : FCC PART 22 24 3m HF EIRP FACTOR-09020 VERTICAL
Project : (FG) 240603-04

Plane : E1

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-48.82	-13	-35.82	-63.85	-55.56	1.28	8.02	V	Pass
5640	-42.13	-13	-29.13	-60.76	-50.55	1.58	10	V	Pass
7520	-45.97	-13	-32.97	-68.22	-56.29	1.78	12.1	V	Pass
9400	-35.98	-13	-22.98	-61.47	-46.76	2.22	13	V	Pass
11280	-41.71	-13	-28.71	-70.3	-52.56	2.16	13.01	V	Pass
13160	-41.52	-13	-28.52	-72.17	-52.58	2.64	13.7	V	Pass

<For silvery Color Sample>

Band :	GSM850	**Temperature :**	23~24°C
Test Mode :	GSM Link	**Relative Humidity :**	50~51%
Test Engineer :	Stone Gu	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

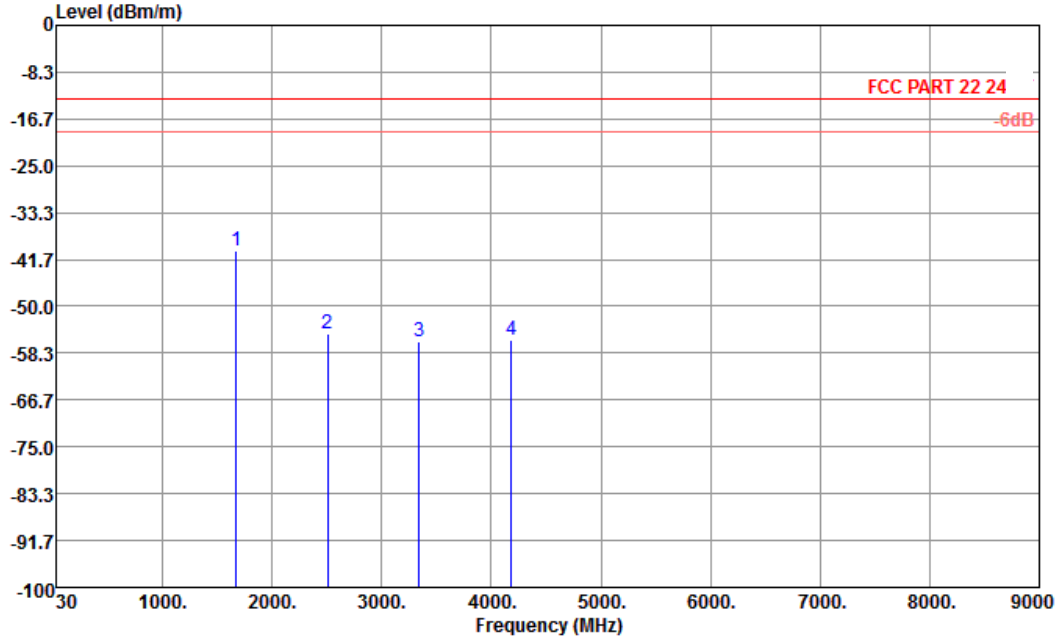


Site : 03CH01-KS
Condition : FCC PART 22 24 3m HF EIRP FACTOR-09020 HORIZONTAL
Project : (FG) 240603-04

Plane : E2

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-32.49	-13	-19.49	-49.14	-35.46	0.88	6.00	H	Pass
2510	-46.54	-13	-33.54	-69.23	-49.15	1.08	5.84	H	Pass
3345	-53.06	-13	-40.06	-63.66	-57.43	1.14	7.66	H	Pass
4182	-56.05	-13	-43.05	-70.81	-61.32	1.37	8.79	H	Pass

Band :	GSM850	Temperature :	23~24°C
Test Mode :	GSM Link	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

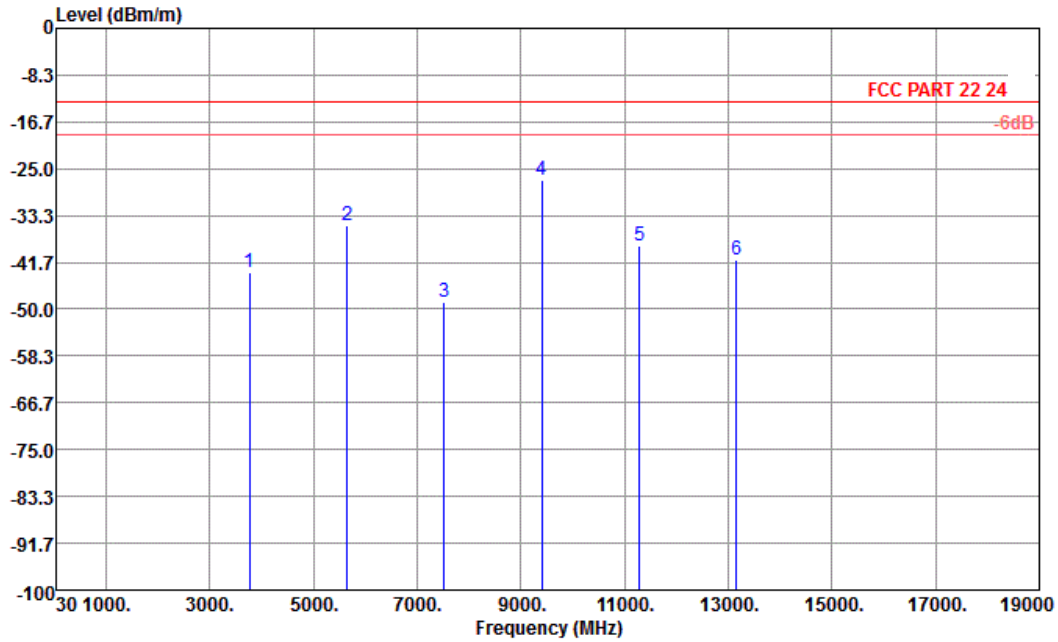


Site : 03CH01-KS
Condition : FCC PART 22 24 3m HF EIRP FACTOR-09020 VERTICAL
Project : (FG) 240603-04

Plane : E2

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-40.15	-13	-27.15	-53.68	-43.12	0.88	6.00	V	Pass
2510	-55.00	-13	-42.00	-73.85	-57.61	1.08	5.84	V	Pass
3345	-56.40	-13	-43.40	-68.23	-60.77	1.14	7.66	V	Pass
4182	-55.97	-13	-42.97	-71.19	-61.24	1.37	8.79	V	Pass

Band :	GSM1900	**Temperature :**	23~24°C
Test Mode :	GSM Link	**Relative Humidity :**	43~44%
Test Engineer :	Stone Gu	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

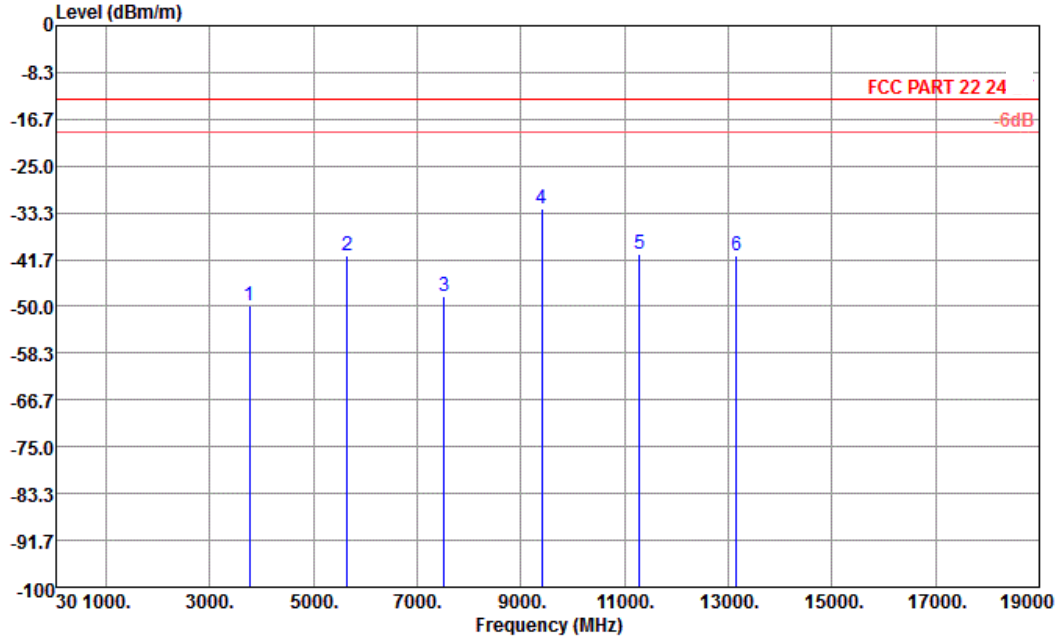


Site : 03CH01-KS
Condition : FCC PART 22 24 3m HF EIRP FACTOR-09020 HORIZONTAL
Project : (FG) 240603-04

Plane : E1

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-43.50	-13	-30.50	-59.09	-50.24	1.28	8.02	H	Pass
5640	-35.08	-13	-22.08	-56.14	-43.50	1.58	10.00	H	Pass
7520	-48.79	-13	-35.79	-70.73	-59.11	1.78	12.10	H	Pass
9400	-27.00	-13	-14.00	-54.84	-37.78	2.22	13.00	H	Pass
11280	-38.79	-13	-25.79	-67.28	-49.64	2.16	13.01	H	Pass
13160	-41.23	-13	-28.23	-71.81	-52.29	2.64	13.70	H	Pass

Band :	GSM1900	Temperature :	23~24°C
Test Mode :	GSM Link	Relative Humidity :	43~44%
Test Engineer :	Stone Gu	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH01-KS
Condition : FCC PART 22 24 3m HF EIRP FACTOR-09020 VERTICAL
Project : (FG) 240603-04

Plane : E1

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-49.97	-13	-36.97	-65	-56.71	1.28	8.02	V	Pass
5640	-40.86	-13	-27.86	-59.91	-49.28	1.58	10	V	Pass
7520	-48.19	-13	-35.19	-70.44	-58.51	1.78	12.1	V	Pass
9400	-32.53	-13	-19.53	-58.82	-43.31	2.22	13	V	Pass
11280	-40.64	-13	-27.64	-69.23	-51.49	2.16	13.01	V	Pass
13160	-41.00	-13	-28.00	-71.65	-52.06	2.64	13.7	V	Pass

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP40	100319	9kHz~40GHz	Dec. 29, 2012	Apr. 01, 2013	Dec. 28, 2013	Conducted (TH01-KS)
System Simulator	R&S	CMU200	837587/066	2G Full-Band	Dec. 29, 2012	Apr. 01, 2013	Dec. 28, 2013	Conducted (TH01-KS)
DC Power Supply	GWINSTEK	GPS-3030D	E1884515	N/A	Aug. 22, 2012	Apr. 01, 2013	Aug. 21, 2013	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	N/A	Dec. 29, 2012	Apr. 01, 2013	Dec. 28, 2013	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESCI	100534	9kHz~3GHz	Nov. 08, 2012	Apr. 08, 2013	Nov. 07, 2013	Radiation (03CH01-KS)
Spectrum Analyzer	R&S	FSP30	100400	9kHz~30GHz	Jun. 01, 2012	Apr. 08, 2013	May 31, 2013	Radiation (03CH01-KS)
Bilog Antenna	SCHAFFNER	CBL6112D	23182	25MHz~2GHz	Dec. 07, 2012	Apr. 08, 2013	Dec. 06, 2013	Radiation (03CH01-KS)
Double Ridge Horn Antenna	EMCO	3117	00075959	1GHz~18GHz	Jan. 06, 2013	Apr. 08, 2013	Jan. 05, 2014	Radiation (03CH01-KS)
Amplifier	com-power	PA-103A	161069	1MHz~1GHz	Jun. 01, 2012	Apr. 08, 2013	May 31, 2013	Radiation (03CH01-KS)
Amplifier	Agilent	8449B	3008A02370	1GHz~26.5GHz	Dec. 29, 2012	Apr. 08, 2013	Dec. 28, 2013	Radiation (03CH01-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	9170249	15GHz~40GHz	Nov. 23, 2012	Apr. 08, 2013	Nov. 22, 2013	Radiation (03CH01-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9KHZ-30MHZ	N/A	Apr. 08, 2013	N/A	Radiation (03CH01-KS)
Signal Generator	R&S	SMR40	100455	10MHz-40GHz	Dec. 29, 2012	Apr. 08, 2013	Dec. 28, 2013	Radiation (03CH01-KS)
System Simulator	R&S	CMU200	116456	Full-Band	Sep. 19, 2012	Apr. 08, 2013	Sep. 18, 2013	Radiation (03CH01-KS)

5 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.54**

Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.72**

Appendix A. Photographs of EUT

Please refer to Sporton report number EP240603-04 as below.

Appendix C. Product Equality Declaration

CK TELECOM LIMITED

Technology Road.High-Tech Development Zone. Heyuan, Guangdong,P.R.China.
TEL:0755-26739633/FAX:0755-26739500

Date: May 6, 2013

Product Equality Declaration

We, CK TELECOM LIMITED, declare on our sole responsibility for the product of Doro PhoneEasy 618(model) as below:

1、LCD model by TFT1N5757-E change to TFT1N5819-E
2、SIM Card by KWS6156N20R change to CAF99-06153-S527
3、Flash Memory by TY9A0A111300KA40 Change to TY9A0A111527K*
4、Software Version by APPLE-S01A_DORO618_L3EN_201_121106 change to APPLE-S01B_DORO618_L3EN_206_130423

Except Listings above, the others are the same as previous version.

Should you have any questions or comments regarding this matter, please have my best attention.

Sincerely yours,

Contact Person: Xin Li
Company: CK TELECOM LIMITED
Tel: +86-755-26739633
Fax: +86-755-26739500
E-Mail: xin.li@ck-telecom.com