FCC RF Test Report

APPLICANT	:	Sony Mobile Communications AB
EQUIPMENT	:	Smart phone
BRAND NAME	:	Sony
MODEL NAME	:	PM-0510-BV
MARKETING NAME	:	C1505
FCC ID	:	PY7PM-0510
STANDARD	:	FCC 47 CFR Part 2, 22(H), 24(E)
CLASSIFICATION	:	PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Nov. 12, 2012 and completely tested on Dec. 13, 2012. We, SPORTON INTERNATIONAL 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 INC., the test report shall not be reproduced except in full.

Reviewed by:

Jones Tsai

Jones Tsai / Manager

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG292718-04	Rev. 01	Initial issue of report	Dec. 28, 2012

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	RESULT (PASS/FAIL)	Remark
3.1	§2.1046	Conducted Output Power	N/A	PASS	-
3.2	§24.232(d)	Peak-to-Average Ratio	< 13 dB	PASS	-
3.3	§22.913(a)(2)	Effective Radiated Power	< 7 Watts	PASS	-
3.3	§24.232(c)	Equivalent Isotropic Radiated Power	< 2 Watts	PASS	-
3.4	§2.1049 §22.917(a) §24.238(a)	99% & 26dB Occupied Bandwidth	N/A	PASS	-
3.5	§2.1051 §22.917(a) §24.238(a)	Band Edge Measurement	< $43+10\log_{10}$(P[Watts])	PASS	-
3.6	§2.1051 §22.917(a) §24.238(a)	Conducted Spurious Emission	< $43+10\log_{10}$(P[Watts])	PASS	-
3.7	§2.1053 §22.917(a) §24.238(a)	Field Strength of Spurious Radiation	< $43+10\log_{10}$(P[Watts])	PASS	Under limit 15.02 dB at 3820.000 MHz
3.8	§2.1055 §22.355 §24.235	Frequency Stability for Temperature & Voltage	< 2.5 ppm	PASS	-

1 General Description

1.1 Applicant

Sony Mobile Communications AB
Nya Vattentornet, 22188 Lund, Sweden

1.2 Manufacturer

Arima Communications Corp.
6F., No. 866, Jhongjheng Rd., Jhonghe City, Taipei County 23586, Taiwan

1.3 Feature of Equipment Under Test

The Equipment Under Test (hereafter called: EUT) is mobile phone supporting, GSM / WCDMA / Wi-Fi 2.4GHz 802.11b/g/n, Bluetooth with FM Receiver, and GPS features, and below is details of information.

General Information of Equipment Under Test	
Equipment	Smart phone
Brand Name	Sony
Model Name	PM-0510-BV
Marketing Name	C1505
FCC ID	PY7PM-0510
GSM Operating Band(s)	GSM 850/900/1800/1900MHz
WCDMA Operating Band(s)	FDD Band I / VIII
WCDMA Rel. Version	Rel. 6
GPRS / EGPRS Multi Slot Class	GPRS Class 12 , EGPRS Class 12
Wi-Fi Specification	802.11b/g/n (HT20)
Bluetooth Version	V2.1 + EDR / V3.0
Power Supply	Battery/AC adapter/Car Charger

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 Details of Tested Sample (EUT) Information

Product Specification subjective to this standard	
Transmitter Frequency Range	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8MHz
Receiver Frequency Range	GSM850: 869.2 MHz ~ 893.8 MHz GSM1900: 1930.2 MHz ~ 1989.8 MHz
Maximum Output Power to Antenna	GSM850 : 33.49 dBm GSM1900 : 30.98 dBm
Antenna Type / Gain	GSM850 : PIFA Antenna / -0.30 dBi GSM1900 : PIFA Antenna / 0.60 dBi
Type of Modulation	GSM/GPRS : GMSK EGPRS : GSMK for MCS 0 ~ 4 / 8PSK for MCS5 ~9
EUT #1	IMEI : 00440214-636500-6 S/N : WUJ012DJ7B
EUT #2	IMEI : 00440214-636532-9 S/N : WUJ012DJ8B
H/W :	AP
S/W :	11.3.A.0.8
EUT Stage	Production Unit

Accessory List	
AC Adapter	Model No. : EP800
	Type No. : CAA-00002016-BV B
Battery	Model No. : BA700
	Type No. : CBA-0002025
Earphone	Model No. : MH410c
	Type No. : AG-1100
USB Cable	Model No. : EC450
	Part No. : 1242-6715.2

Note:

1. Above EUT list and accessory list used are electrically identical per declared by manufacturer.
2. Above the accessories list are used to exercise the EUT during test, and the serial number of each type of accessories is listed in each section of this report.
3. No modifications are made to the EUT during all test items.
4. For other wireless features of this EUT, test report will be issued separately.
5. The radiation test was performance with EUT #1, and the conducted test was performance with EUT #2.

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

FCC Rule	System	Type of Modulation	Maximum ERP/EIRP (W)	Frequency Tolerance (%, Hz, ppm)	Emission Designator
Part 22	GSM850 GSM	GMSK	1.0304	0.06 ppm	244KGXW
Part 22	GSM850 EDGE Class 8	8PSK	0.4898	0.05 ppm	250KG7W
Part 24	GSM1900 GSM	GMSK	1.1912	0.04 ppm	246KGXW
Part 24	GSM1900 EDGE Class 8	8PSK	0.7691	0.04 ppm	252KG7W

1.6 Testing Facility

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	**Sporton Site No.**		**FCC/IC Registration No.**
	TH02-HY	03CH05-HY	722060/4086B-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: All test items were verified and recorded according to the standards and without any deviation during the test.

2 Test Configuration of Equipment Under Test

2.1 Descriptions of Test Mode

a. Preliminary tests were performed in different radio applications and recorded the RF output power in the following table:

Conducted Power		Burst Average Power (dBm)					
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		33.44	**33.49**	33.47	30.77	30.96	**30.98**
GPRS Class 8		33.41	33.43	33.42	30.76	30.95	30.97
GPRS Class 10		30.64	30.70	30.69	28.02	28.23	28.55
GPRS Class 12		27.63	27.68	27.66	25.02	25.24	25.42
EGPRS Class 8		29.22	**29.27**	29.24	28.26	28.41	**28.43**
EGPRS Class 10		26.19	26.24	26.23	25.30	25.52	25.67
EGPRS Class 12		23.18	23.22	23.21	22.26	22.48	22.64
DTM 5	GSM (GMSK, 1 Tx slot)	30.57	30.65	30.59	28.16	28.38	28.52
	GPRS (GMSK, 1 Tx slot)	30.56	30.64	30.60	28.15	28.37	28.50
DTM 9	GSM (GMSK, 1 Tx slot)	30.63	30.64	30.63	28.15	28.37	28.51
	GPRS (GMSK, 1 Tx slot)	30.62	30.63	30.61	28.13	28.36	28.50
DTM 11	GSM (GMSK, 1 Tx slot)	28.69	28.72	28.71	26.29	26.51	26.66
	GPRS (GMSK, 2 Tx slots)	28.67	28.73	28.70	26.28	26.50	26.65
DTM 5	GSM (GMSK, 1 Tx slot)	30.63	30.67	30.65	28.26	28.47	28.60
	EDGE (8PSK, 1 Tx slot)	26.16	26.21	26.19	25.29	25.50	25.64
DTM 9	GSM (GMSK, 1 Tx slot)	30.62	30.68	30.66	28.22	28.45	28.59
	EDGE (8PSK, 1 Tx slot)	26.15	26.20	26.18	25.24	25.47	25.62
DTM 11	GSM (GMSK, 1 Tx slot)	28.74	28.78	28.77	26.36	26.58	26.73
	EDGE (8PSK, 2 Tx slots)	24.26	24.31	24.30	23.34	23.56	23.71

b. 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 X, Y, Z in three orthogonal panels 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.

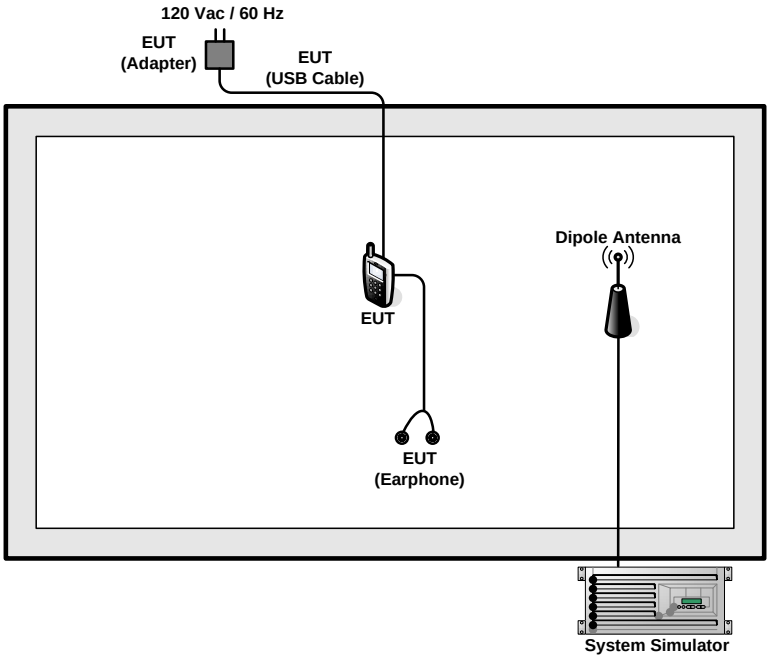
Test Modes		
Band	**Radiated TCs**	**Conducted TCs**
GSM 850	■ GSM Link ■ EDGE Class 8 Link	■ GSM Link ■ EDGE Class 8 Link
GSM 1900	■ GSM Link ■ EDGE Class 8 Link	■ GSM Link ■ EDGE Class 8 Link

Note:

1. The maximum power level of GMSK modulation is 1-slot GSM/GPRS mode, 8PSK modulation is 1-slot (multi-slot class 8) EDGE mode among GSM, EDGE, and the DTM (Dual Transfer Mode). Also, the DTM mode uses same modulation scheme with GSM, and EDGE. Therefore, we only choose GSM voice-call mode, EDGE 8PSK class 8 mode. All of all modes evaluated in report are demonstrated in compliance with FCC test standard.

2. Because there are individual antennas for each WWAN, WLAN, and Bluetooth, the co-location test modes are not required.

2.2 Connection Diagram of EUT Test Configurations



2.3 Supported Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU200	N/A	N/A	Unshielded, 1.8 m

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.

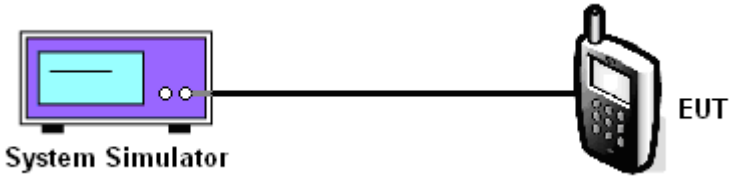
3.1.2 Measuring Instruments

The section 4.0 of List of Measuring Equipment of this test report is used for test.

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

Cellular Band						
Modes	GSM850 (GSM)			GSM850 (EDGE Class 8)		
Channel	128 (Low)	189 (Mid)	251 (High)	128 (Low)	189 (Mid)	251 (High)
Frequency (MHz)	824.2	836.4	848.8	824.2	836.4	848.8
Conducted Power (dBm)	33.44	33.49	33.47	29.22	29.27	29.24
Conducted Power (Watts)	2.21	2.23	2.22	0.84	0.85	0.84

PCS Band						
Modes	GSM1900 (GSM)			GSM1900 (EDGE Class 8)		
Channel	512 (Low)	661 (Mid)	810 (High)	512 (Low)	661 (Mid)	810 (High)
Frequency (MHz)	1850.2	1880	1909.8	1850.2	1880	1909.8
Conducted Power (dBm)	30.77	30.96	30.98	28.26	28.41	28.43
Conducted Power (Watts)	1.19	1.25	1.25	0.67	0.69	0.70

Note: maximum burst average power for GSM.

3.2 Peak-to-Average Ratio

3.2.1 Description of the PAR Measurement

For GSM signals, a peak trace is used on spectrum analyzer to determine the maximum deviation between the average and the peak power of the EUT in a given bandwidth. For UMTS signals, power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

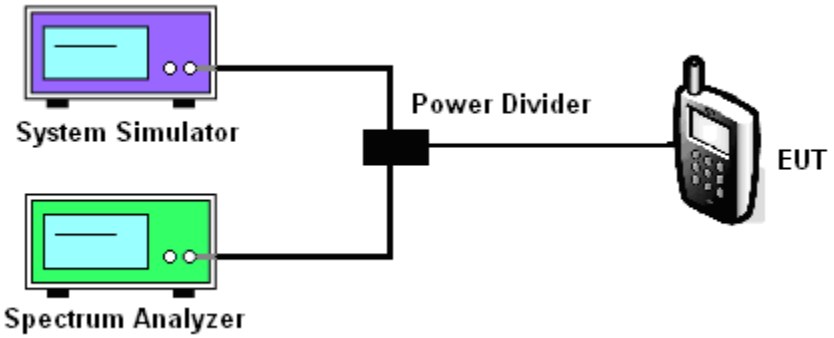
3.2.2 Measuring Instruments

The section 4.0 of List of Measuring Equipment of this test report is used for test.

3.2.3 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
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. For GSM/EGPRS operating modes:
   a. Set the RBW = 1MHz, VBW = 1MHz, Peak detector in spectrum analyzer.
   b. Set EUT in maximum power output, and triggered the burst signal.
   c. Measured respectively the Peak level and Mean level, and the deviation was recorded as Peak to Average Ratio.
4. For UMTS operating modes:
   a. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
   b. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.

3.2.4 Test Setup



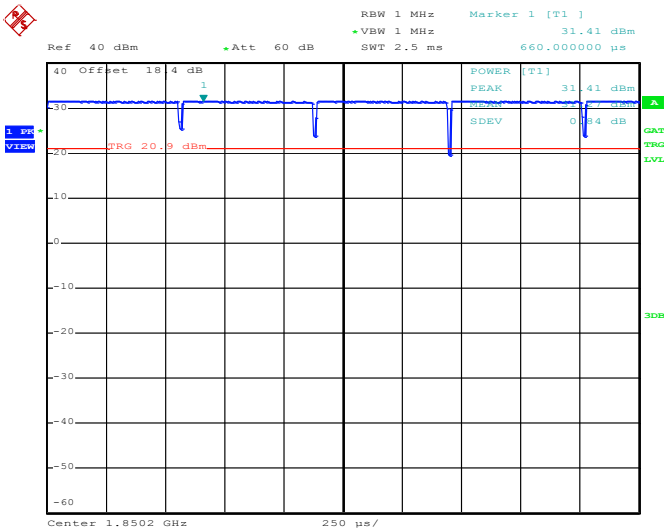
3.2.5 Test Result of Peak-to-Average Ratio

PCS Band						
Modes	GSM1900 (GSM)			GSM1900 (EDGE Class 8)		
Channel	512 (Low)	661 (Mid)	810 (High)	512 (Low)	661 (Mid)	810 (High)
Frequency (MHz)	1850.2	1880	1909.8	1850.2	1880	1909.8
Peak-to-Average Ratio (dB)	0.14	0.12	0.15	0.53	0.46	0.48

3.2.6 Test Result (Plots) of Peak-to-Average Ratio

Band :	GSM 1900	Test Mode :	GSM Link

Peak-to-Average Ratio on Channel 512 (1850.2 MHz)



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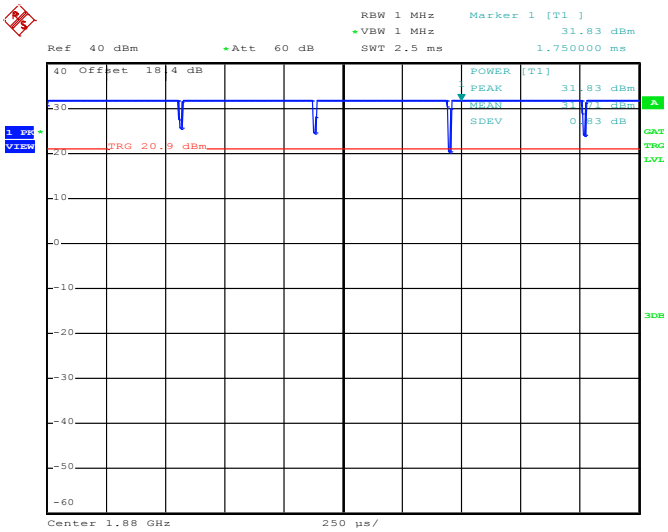
Peak-to-Average Ratio on Channel 661 (1880.0 MHz)



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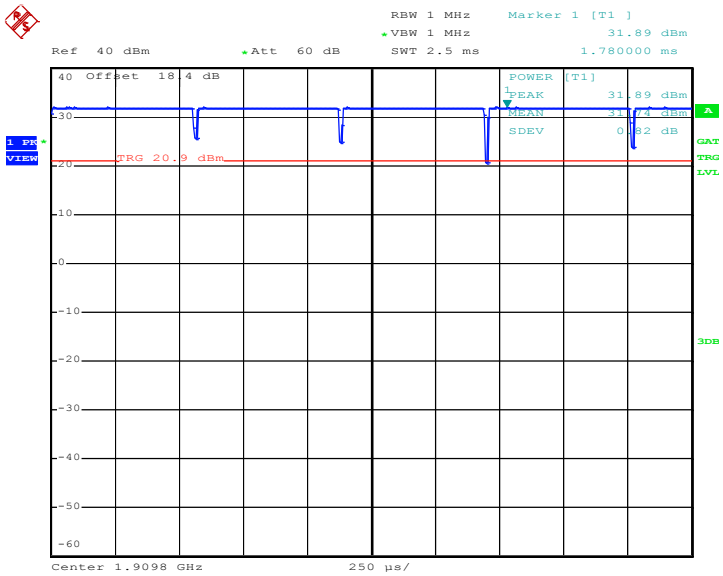
Peak-to-Average Ratio on Channel 810 (1909.8 MHz)

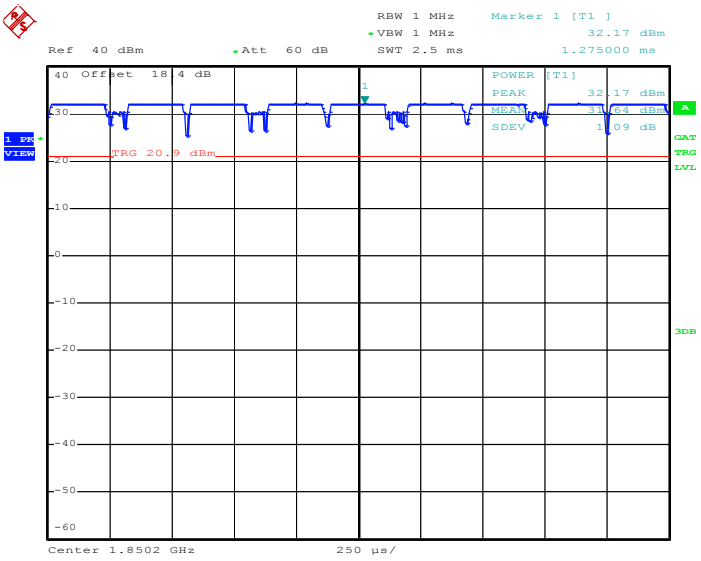


Date: 12.DEC.2012 13:22:20

Note: *The total loss is 18.4dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.*

Band :	GSM 1900	Test Mode :	EDGE Class 8 Link

Peak-to-Average Ratio on Channel 512 (1850.2 MHz)



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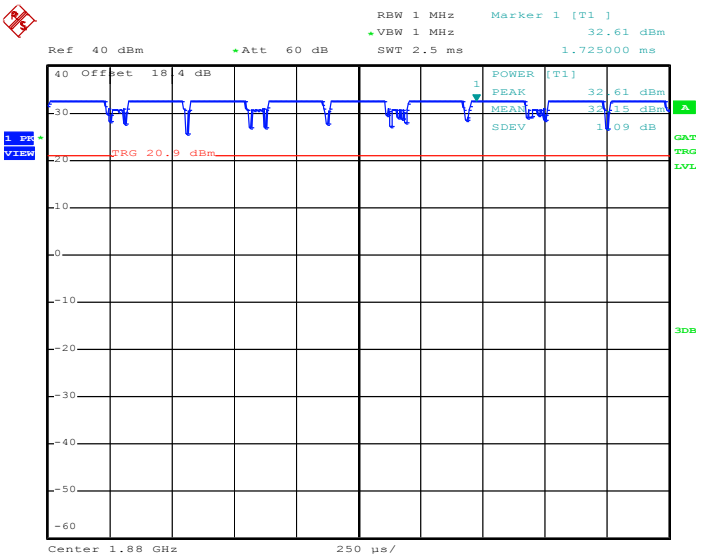
Peak-to-Average Ratio on Channel 661 (1880.0 MHz)



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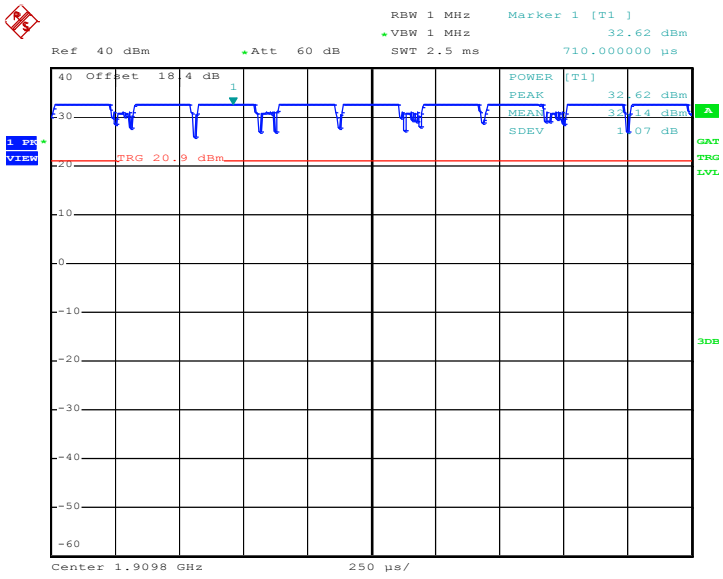
Peak-to-Average Ratio on Channel 810 (1909.8 MHz)



Date: 12.DEC.2012 13:41:12

Note: *The total loss is 18.4dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.*

3.3 Effective Radiated Power and Effective Isotropic Radiated Power Measurement

3.3.1 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.

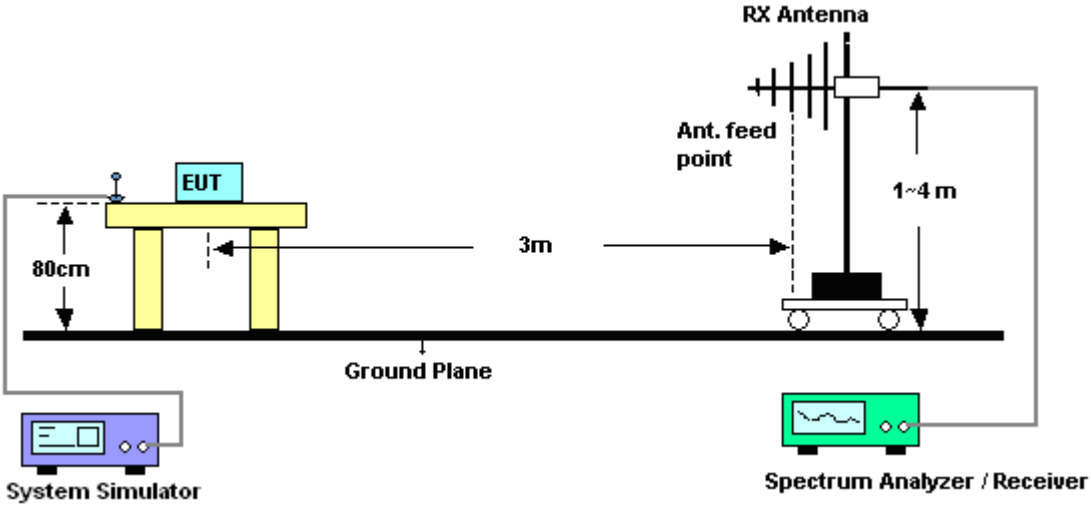
3.3.2 Measuring Instruments

The section 4.0 of List of Measuring Equipment of this test report is used for test.

3.3.3 Test Procedures

1. he 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 .

3.3.4 Test Setup



3.3.5 Test Result of ERP

GSM850 (GSM) Radiated Power ERP				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
824.2	0.28	30.99	29.12	0.8166
836.4	0.37	30.89	29.11	0.8147
848.8	1.06	31.22	30.13	1.0304
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
824.2	-6.65	34.67	25.87	0.3864
836.4	-6.20	34.88	26.53	0.4498
848.8	-5.12	34.74	27.47	0.5585

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

GSM850 (EDGE Class 8) Radiated Power ERP				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
824.2	-2.82	30.99	26.02	0.3999
836.4	-2.59	30.89	26.15	0.4121
848.8	-2.17	31.22	26.90	0.4898
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (W)**
824.2	-8.90	34.67	23.62	0.2301
836.4	-8.49	34.88	24.24	0.2655
848.8	-8.04	34.74	24.55	0.2851

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

3.3.6 Test Result of EIRP

GSM1900 (GSM) Radiated Power EIRP				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.2	-11.97	40.70	28.73	0.7464
1880.0	-11.28	41.91	30.63	1.1561
1909.8	-10.97	41.73	30.76	1.1912
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.2	-19.81	42.78	22.97	0.1982
1880.0	-19.23	43.75	24.52	0.2831
1909.8	-19.45	43.06	23.61	0.2296

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

GSM1900 (EDGE Class 8) Radiated Power EIRP				
Horizontal Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.2	-13.79	40.70	26.91	0.4909
1880.0	-13.11	41.91	28.80	0.7586
1909.8	-12.87	41.73	28.86	0.7691
Vertical Polarization				
Frequency (MHz)	**LVL (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (W)**
1850.2	-21.78	42.78	21.00	0.1259
1880.0	-21.03	43.75	22.72	0.1871
1909.8	-21.24	43.06	21.82	0.1521

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

3.4 99% Occupied Bandwidth and 26dB Bandwidth Measurement

3.4.1 Description of 99% Occupied Bandwidth and 26dB Bandwidth Measurement

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The emission bandwidth is defined as the width of the signal between two points, located at the 2 sides of the carrier frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

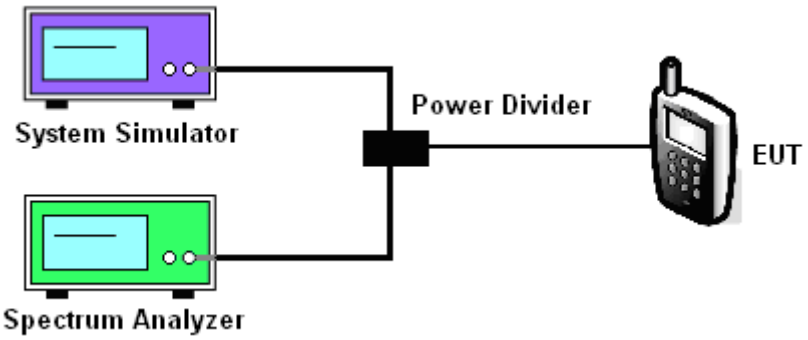
3.4.2 Measuring Instruments

The section 4.0 of List of Measuring Equipment of this test report is used for test.

3.4.3 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
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. The 99% occupied bandwidth and 26 dB bandwidth of the middle channel for the highest RF powers were measured.

3.4.4 Test Setup



3.4.5 Test Result of Occupied Bandwidth and 26dB Bandwidth

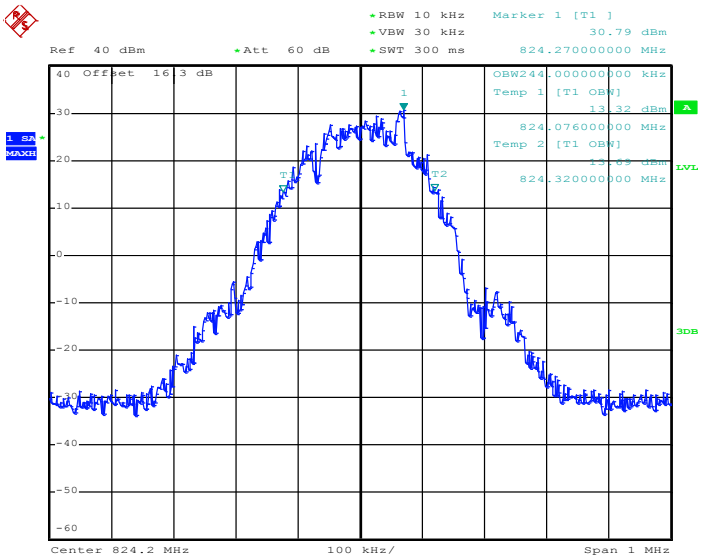
Cellular Band						
Modes	**GSM850 (GSM)**			**GSM850 (EDGE Class 8)**		
Channel	**128 (Low)**	**189 (Mid)**	**251 (High)**	**128 (Low)**	**189 (Mid)**	**251 (High)**
Frequency (MHz)	**824.2**	**836.4**	**848.8**	**824.2**	**836.4**	**848.8**
99% OBW (KHz)	244.00	242.00	242.00	242.00	244.00	250.00
26dB BW (KHz)	302.00	302.00	302.00	312.00	308.00	306.00

PCS Band						
Modes	**GSM1900 (GSM)**			**GSM1900 (EDGE Class 8)**		
Channel	**512 (Low)**	**661 (Mid)**	**810 (High)**	**512 (Low)**	**661 (Mid)**	**810 (High)**
Frequency (MHz)	**1850.2**	**1880**	**1909.8**	**1850.2**	**1880**	**1909.8**
99% OBW (KHz)	238.00	246.00	246.00	244.00	252.00	248.00
26dB BW (KHz)	302.00	302.00	300.00	304.00	310.00	300.00

3.4.6 Test Result (Plots) of Occupied Bandwidth and 26dB Bandwidth

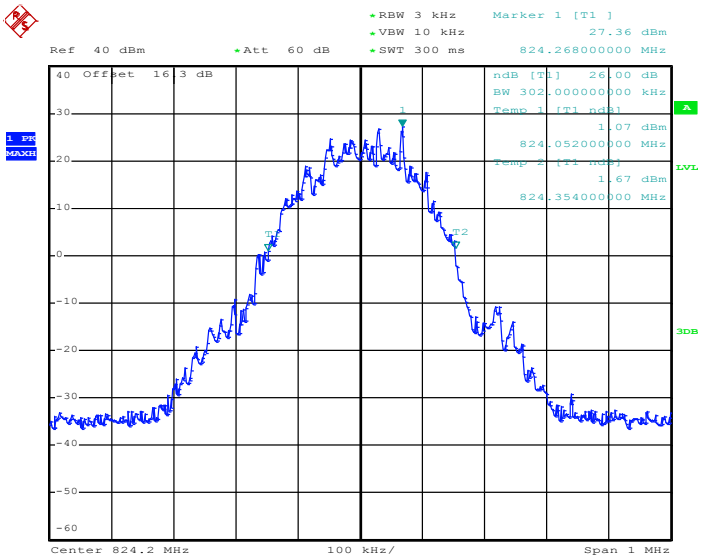
Band :	GSM 850	Test Mode :	GSM Link

99% Occupied Bandwidth Plot on Channel 128 (824.2 MHz)



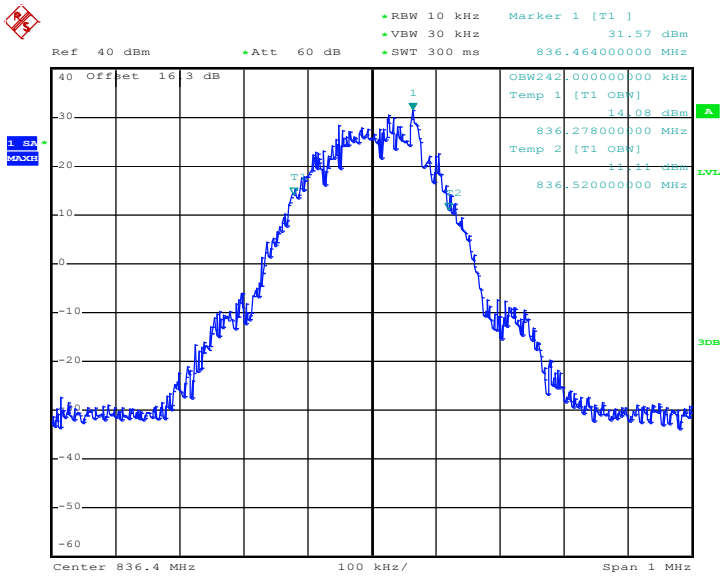
Date: 13.DEC.2012 10:56:31

26dB Bandwidth Plot on Channel 128 (824.2 MHz)



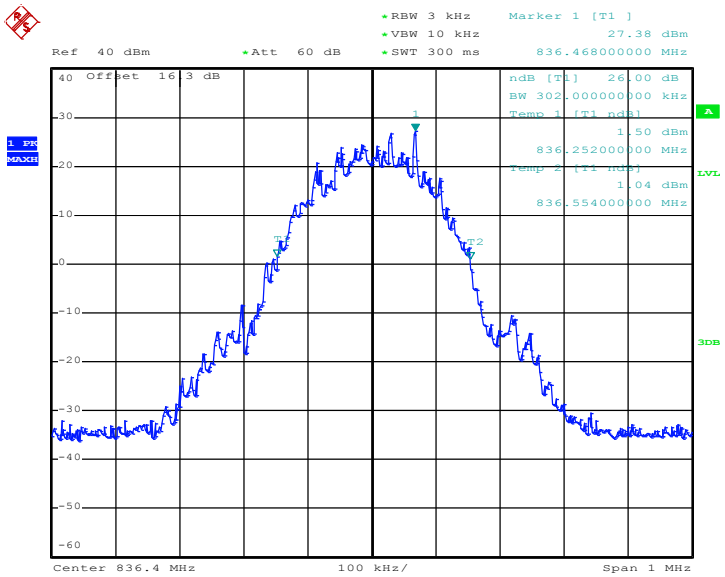
Date: 12.DEC.2012 11:48:19

99% Occupied Bandwidth Plot on Channel 189 (836.4 MHz)



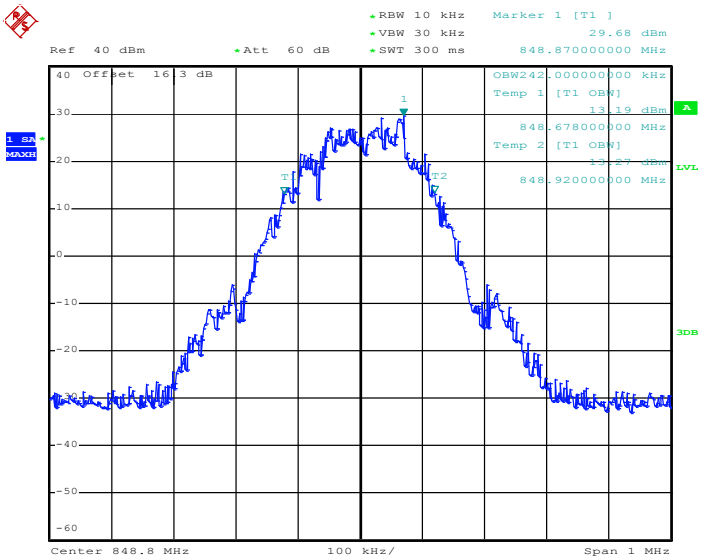
Date: 13.DEC.2012 10:56:57

26dB Bandwidth Plot on Channel 189 (836.4 MHz)



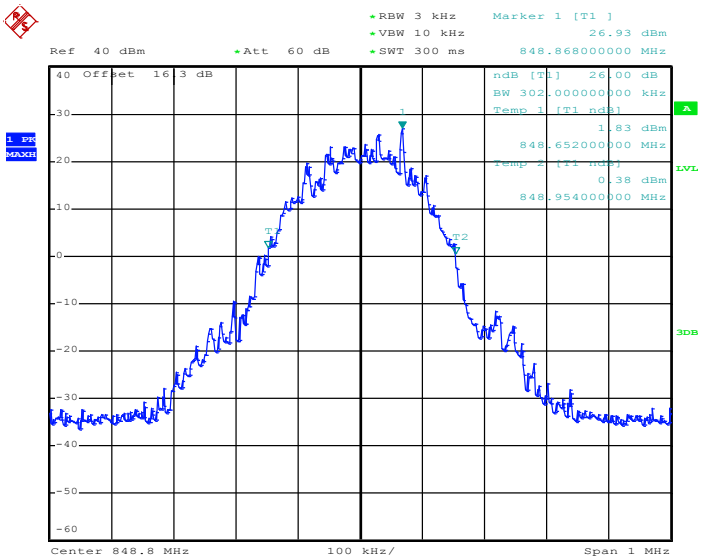
Date: 12.DEC.2012 11:48:45

99% Occupied Bandwidth Plot on Channel 251 (848.8 MHz)



Date: 13.DEC.2012 10:57:23

26dB Bandwidth Plot on Channel 251 (848.8 MHz)

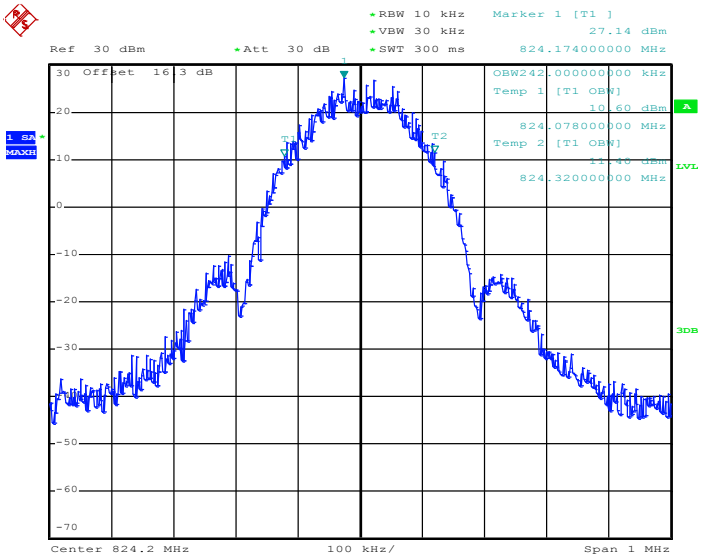


Date: 12.DEC.2012 11:49:11

Note: *The total loss is 16.3dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.*

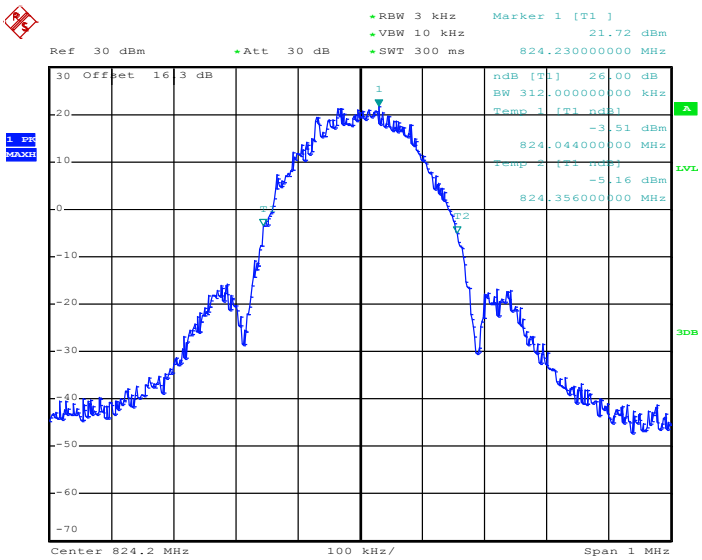
Band :	GSM 850	Test Mode :	EDGE Class 8 Link

99% Occupied Bandwidth Plot on Channel 128 (824.2 MHz)



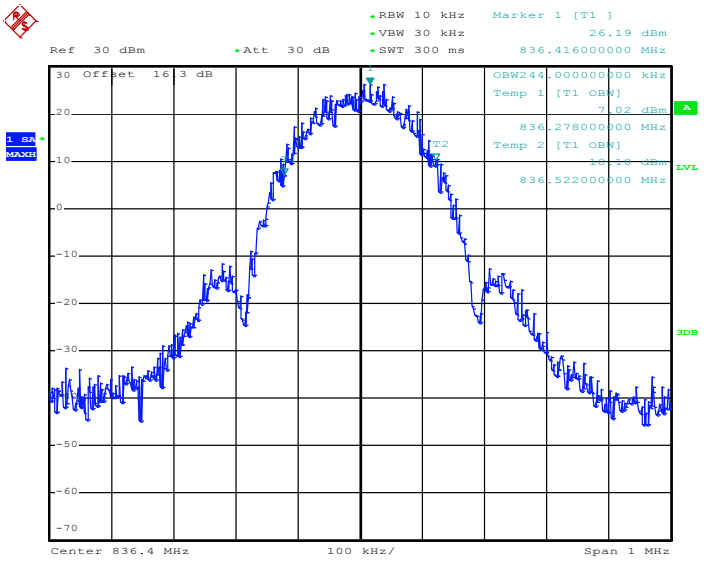
Date: 13.DEC.2012 11:05:11

26dB Bandwidth Plot on Channel 128 (824.2 MHz)



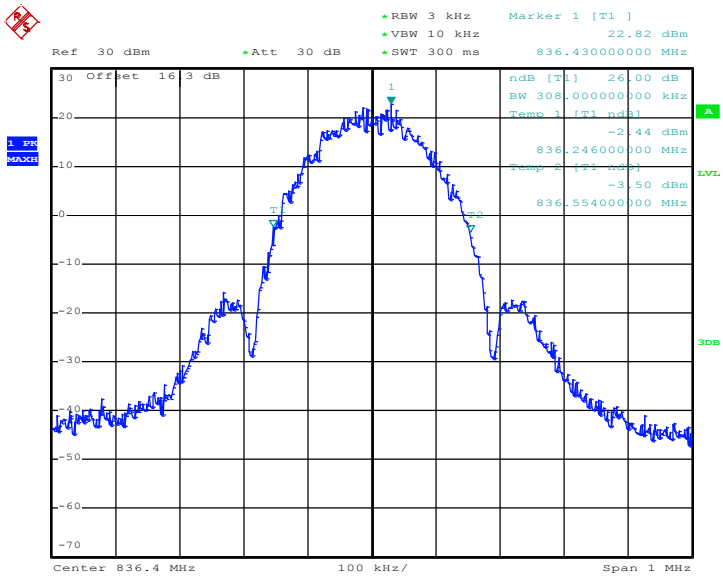
Date: 12.DEC.2012 12:42:04

99% Occupied Bandwidth Plot on Channel 189 (836.4 MHz)



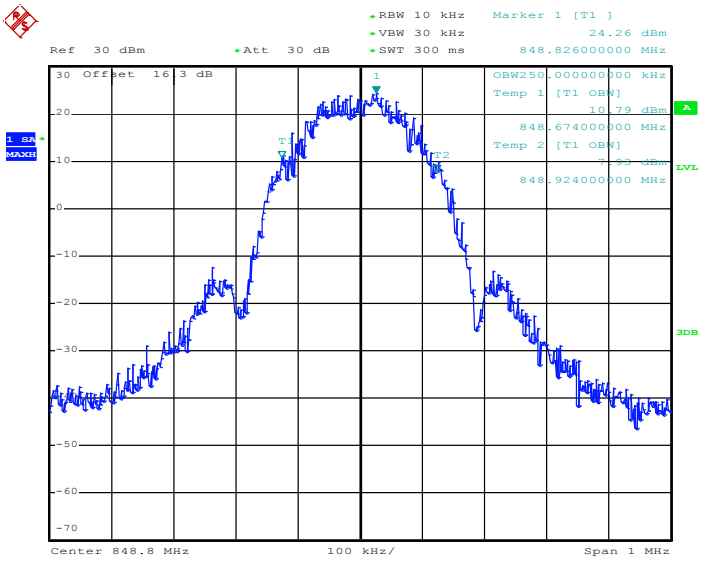
Date: 13.DEC.2012 11:05:36

26dB Bandwidth Plot on Channel 189 (836.4 MHz)



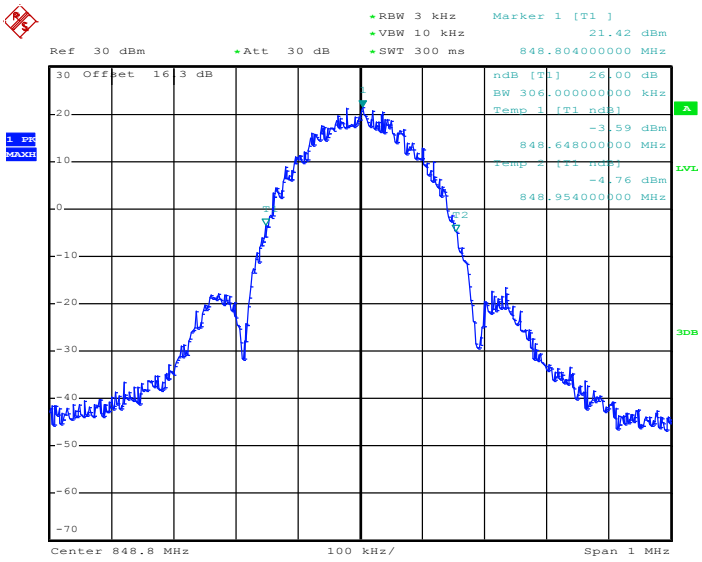
Date: 12.DEC.2012 12:42:30

99% Occupied Bandwidth Plot on Channel 251 (848.8 MHz)



Date: 13.DEC.2012 11:06:02

26dB Bandwidth Plot on Channel 251 (848.8 MHz)

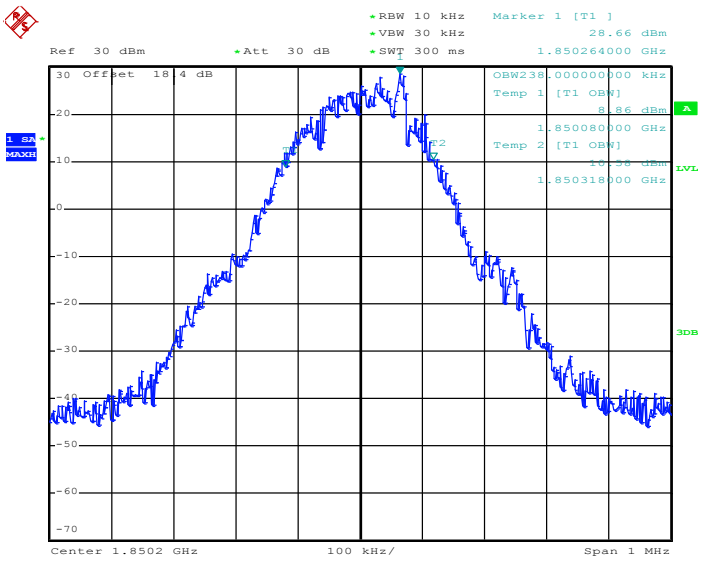


Date: 12.DEC.2012 12:42:56

Note: *The total loss is 16.3dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.*

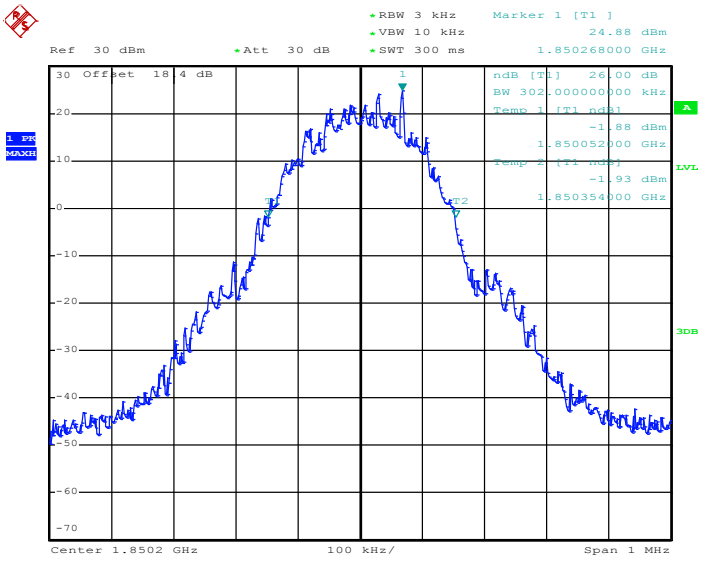
Band :	GSM 1900	Test Mode :	GSM Link

99% Occupied Bandwidth Plot on Channel 512 (1850.2 MHz)



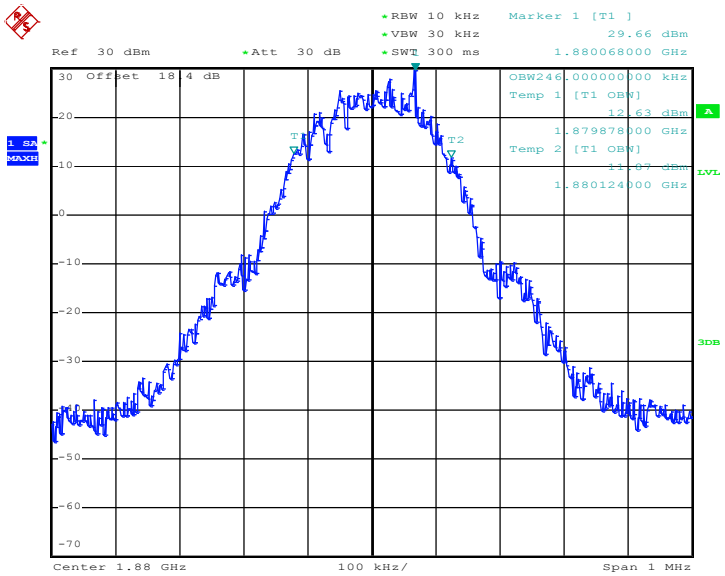
Date: 13.DEC.2012 11:38:46

26dB Bandwidth Plot on Channel 512 (1850.2 MHz)



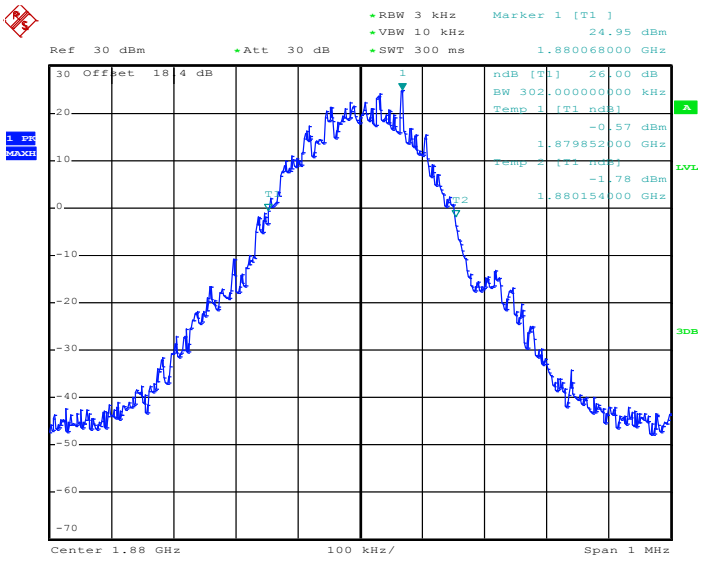
Date: 12.DEC.2012 13:23:48

99% Occupied Bandwidth Plot on Channel 661 (1880.0 MHz)



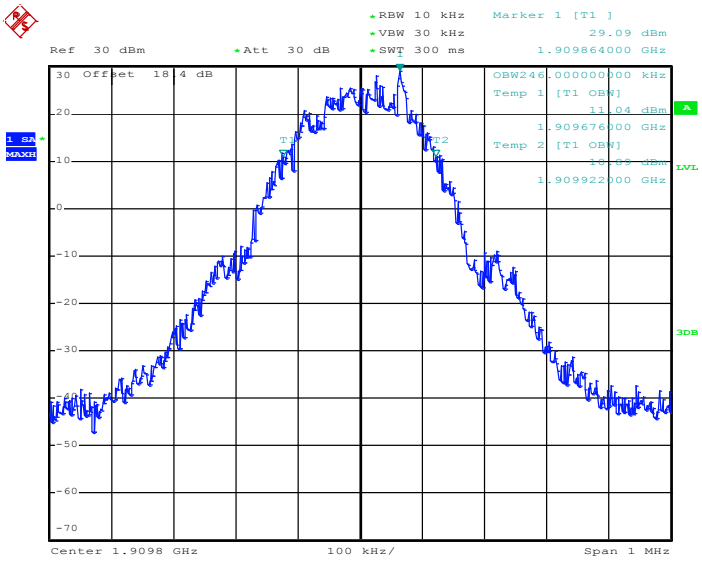
Date: 13.DEC.2012 11:39:12

26dB Bandwidth Plot on Channel 661 (1880.0 MHz)



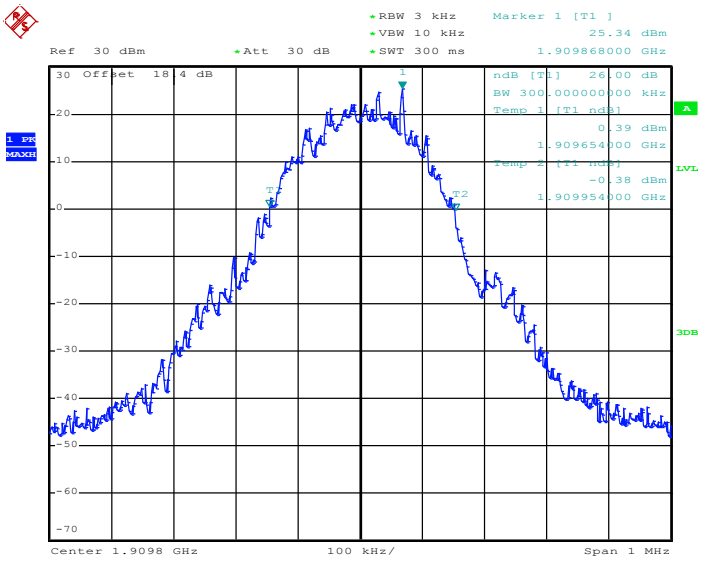
Date: 12.DEC.2012 13:24:14

99% Occupied Bandwidth Plot on Channel 810 (1909.8 MHz)



Date: 13.DEC.2012 11:39:38

26dB Bandwidth Plot on Channel 810 (1909.8 MHz)

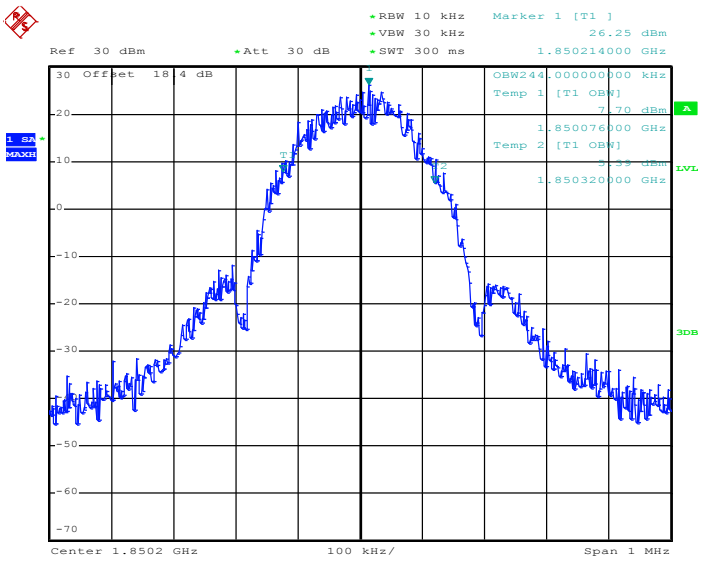


Date: 12.DEC.2012 13:24:40

Note: *The total loss is 18.4dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.*

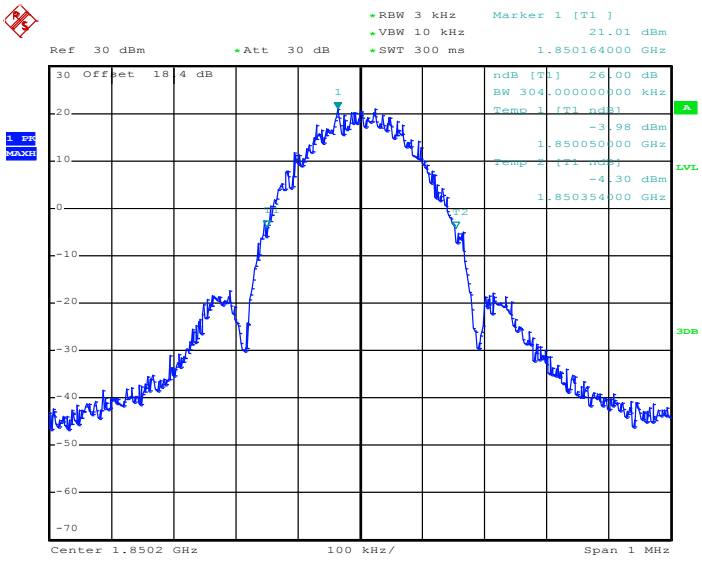
Band :	GSM 1900	Test Mode :	EDGE Class 8 Link

99% Occupied Bandwidth Plot on Channel 512 (1850.2 MHz)



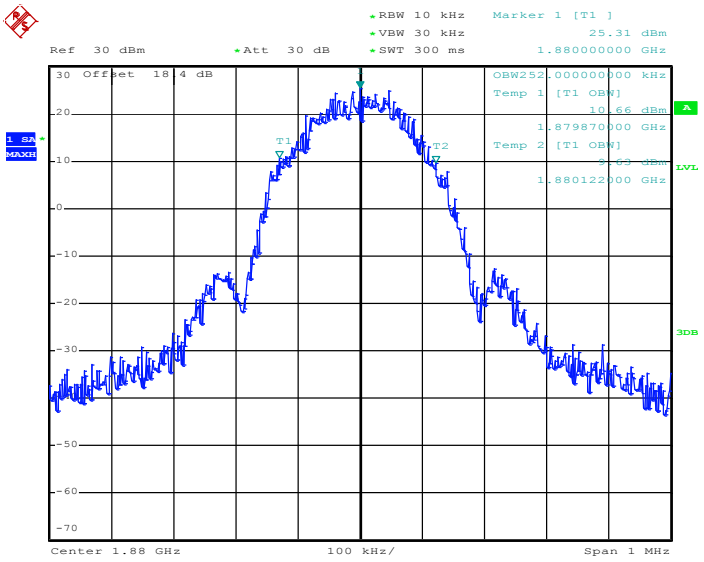
Date: 13.DEC.2012 11:54:27

26dB Bandwidth Plot on Channel 512 (1850.2 MHz)



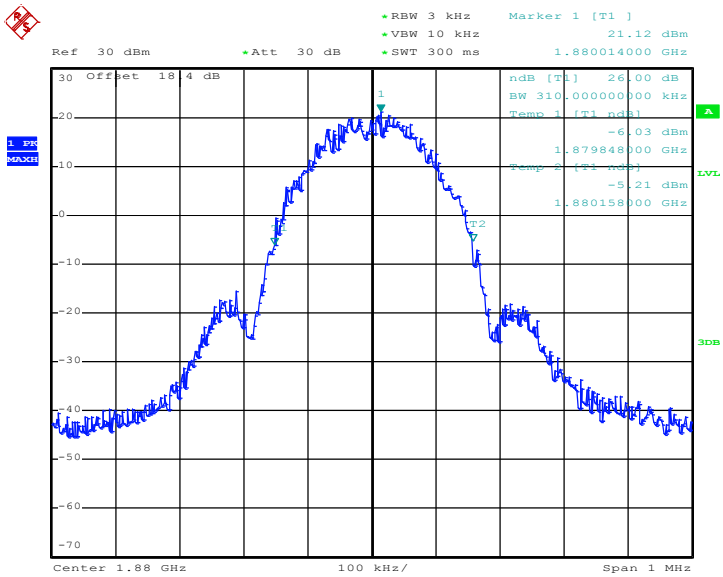
Date: 12.DEC.2012 14:02:19

99% Occupied Bandwidth Plot on Channel 661 (1880.0 MHz)



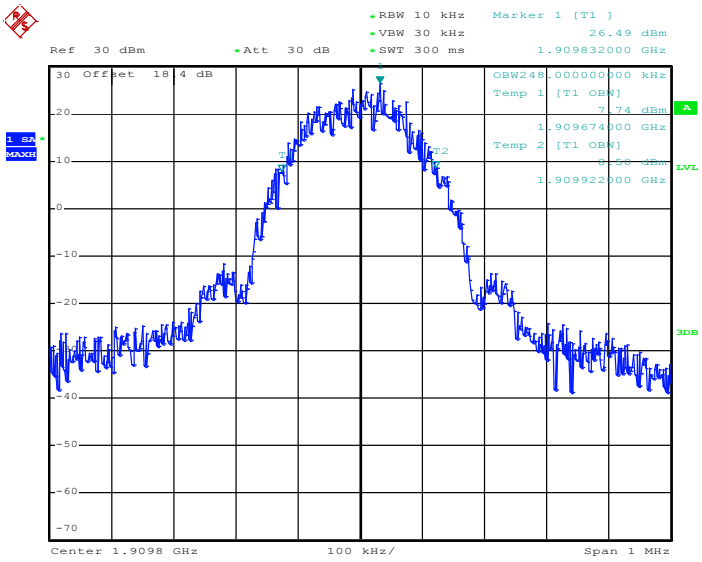
Date: 13.DEC.2012 11:54:53

26dB Bandwidth Plot on Channel 661 (1880.0 MHz)



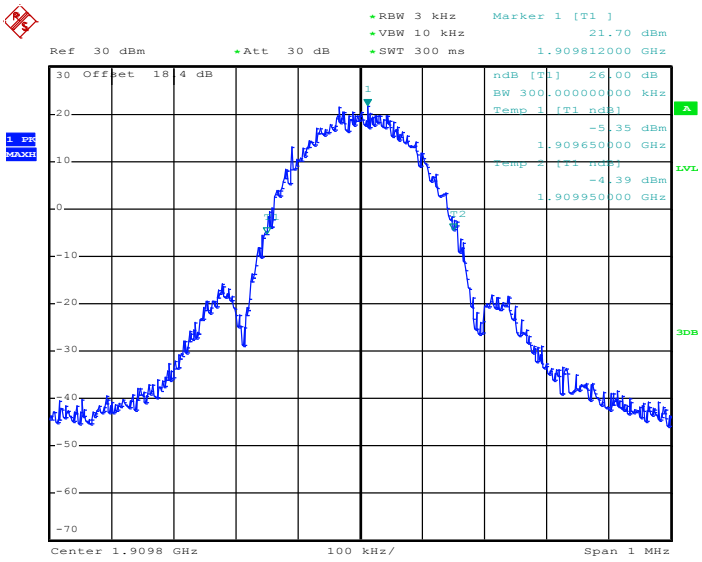
Date: 12.DEC.2012 14:02:45

99% Occupied Bandwidth Plot on Channel 810 (1909.8 MHz)



Date: 13.DEC.2012 11:55:19

26dB Bandwidth Plot on Channel 810 (1909.8 MHz)



Date: 12.DEC.2012 14:03:12

Note: *The total loss is 18.4dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.*

3.5 Band Edge Measurement

3.5.1 Description of Band Edge Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

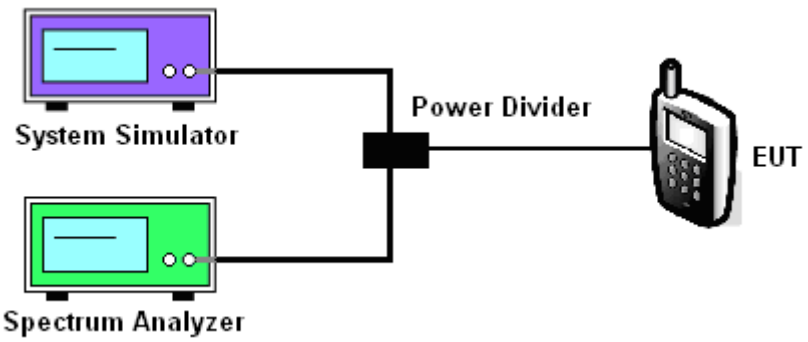
3.5.2 Measuring Instruments

The section 4.0 of List of Measuring Equipment of this test report is used for test.

3.5.3 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
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. The band edges of low and high channels for the highest RF powers were measured. Setting RBW as roughly BW/100.
4. 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.

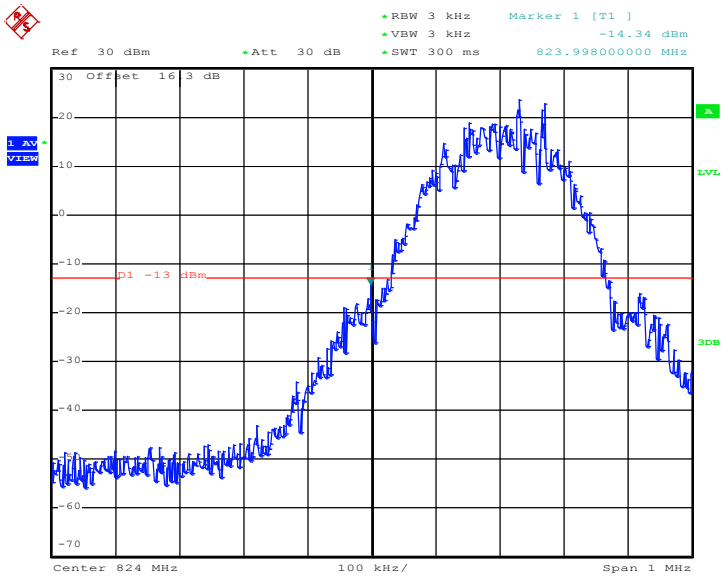
3.5.4 Test Setup



3.5.5 Test Result (Plots) of Conducted Band Edge

Band :	GSM850	Test Mode :	GSM Link
Correction Factor :	0.03dB	Maximum 26dB Bandwidth :	0.302MHz
Band Edge :	-14.31dBm	Measurement Value :	-14.34dBm

Lower Band Edge Plot on Channel 128 (824.2 MHz)

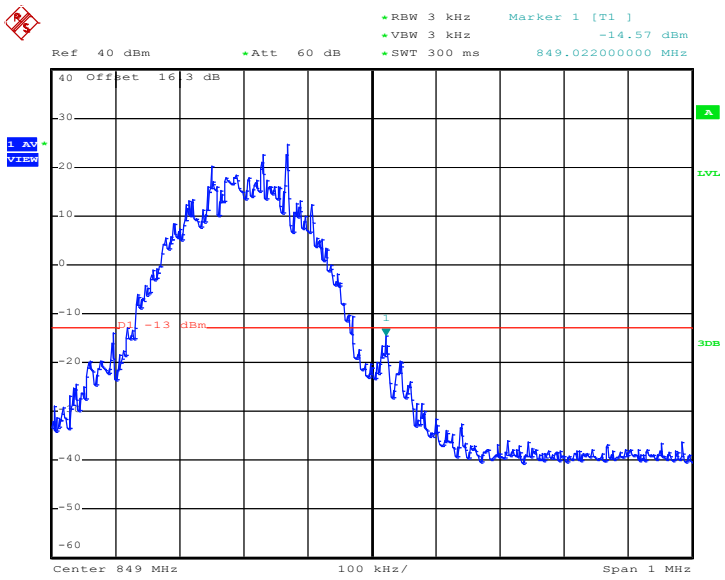


Date: 13.DEC.2012 11:30:17

1. *Correction Factor(dB)= 10log(1% Emission BW/RBW)*
2. *Band Edge= Measurement Value + Correction Factor(dB)*
   For example, -14.34dBm + 0.03dB = -14.31dBm
3. *The total loss is 16.3dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.*

Band :	GSM850	Test Mode :	GSM Link
Correction Factor :	0.03dB	Maximum 26dB Bandwidth :	0.302MHz
Band Edge :	-14.54dBm	Measurement Value :	-14.57dBm

Higher Band Edge Plot on Channel 251 (848.8 MHz)

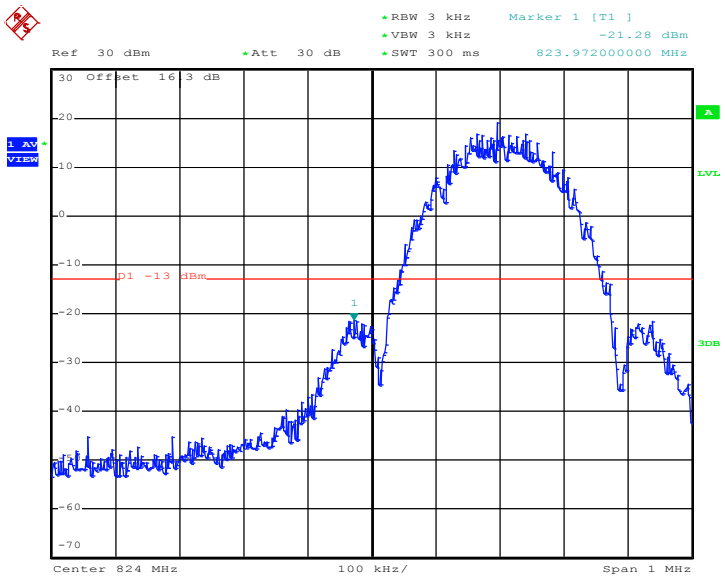


Date: 12.DEC.2012 11:51:03

1. *Correction Factor(dB)= 10log(1% Emission BW/RBW)*
2. *Band Edge= Measurement Value + Correction Factor(dB)*
3. *The total loss is 16.3dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.*

Band :	GSM850	Test Mode :	EDGE Class 8 Link
Correction Factor :	0.17dB	Maximum 26dB Bandwidth :	0.312MHz
Band Edge :	-21.11dBm	Measurement Value :	-21.28dBm

Lower Band Edge Plot on Channel 128 (824.2 MHz)

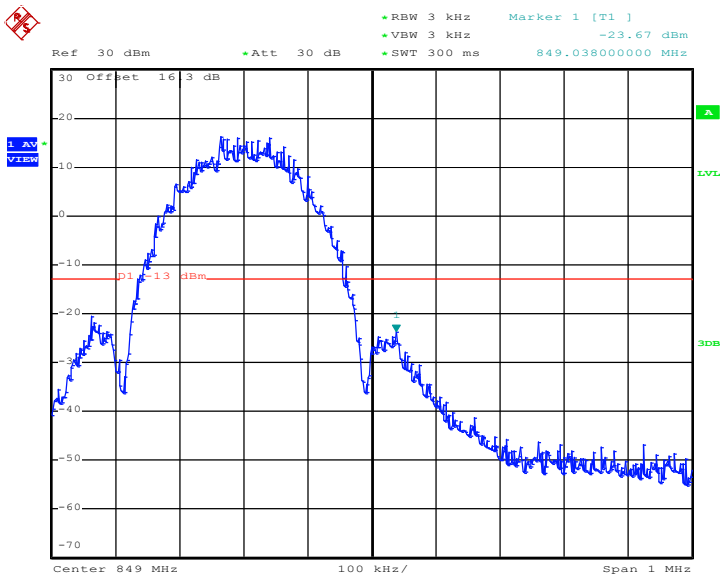


Date: 12.DEC.2012 12:44:22

1. *Correction Factor(dB)= 10log(1% Emission BW/RBW)*
2. *Band Edge= Measurement Value + Correction Factor(dB)*
3. *The total loss is 16.3dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.*

Band :	GSM850	Test Mode :	EDGE Class 8 Link
Correction Factor :	0.17dB	Maximum 26dB Bandwidth :	0.312MHz
Band Edge :	-23.50dBm	Measurement Value :	-23.67dBm

Higher Band Edge Plot on Channel 251 (848.8 MHz)

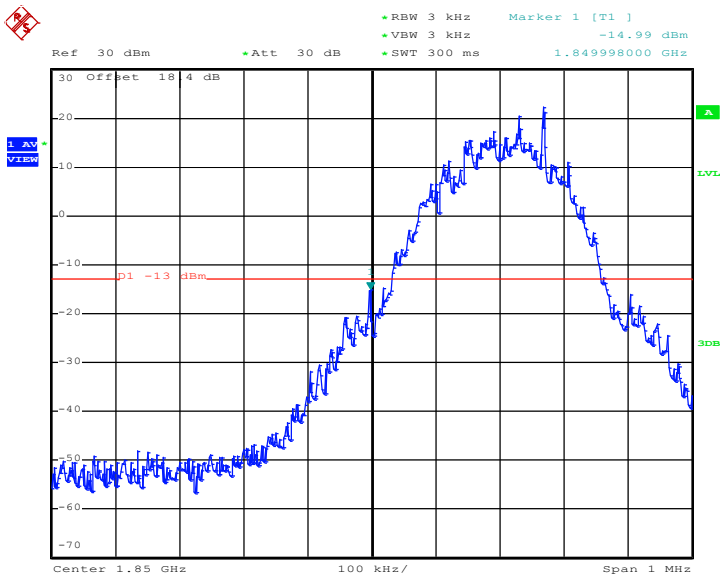


Date: 12.DEC.2012 12:44:48

1. *Correction Factor(dB)= 10log(1% Emission BW/RBW)*
2. *Band Edge= Measurement Value + Correction Factor(dB)*
3. *The total loss is 16.3dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.*

Band :	GSM1900	Test Mode :	GSM Link
Correction Factor :	0.03dB	Maximum 26dB Bandwidth :	0.302MHz
Band Edge :	-14.96dBm	Measurement Value :	-14.99dBm

Lower Band Edge Plot on Channel 512 (1850.2 MHz)

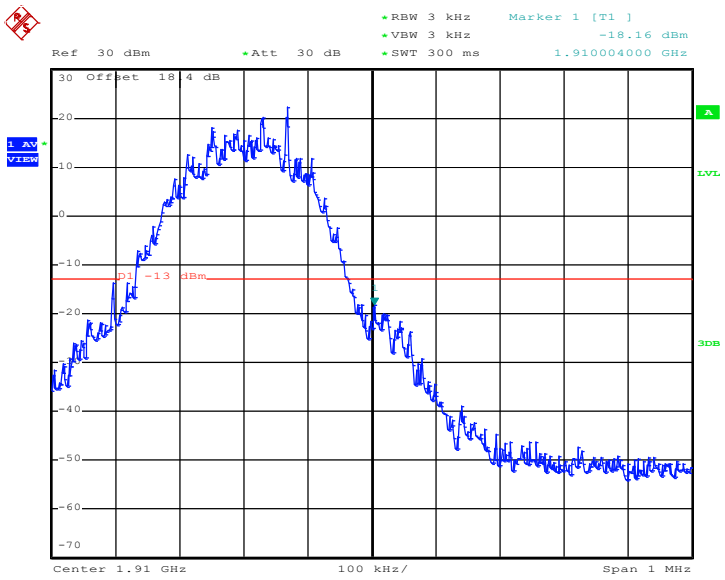


Date: 12.DEC.2012 13:26:06

1. *Correction Factor(dB)= 10log(1% Emission BW/RBW)*
2. *Band Edge= Measurement Value + Correction Factor(dB)*
3. *The total loss is 18.4dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.*

Band :	GSM1900	Test Mode :	GSM Link
Correction Factor :	0.03dB	Maximum 26dB Bandwidth :	0.302MHz
Band Edge :	-18.13dBm	Measurement Value :	-18.16dBm

Higher Band Edge Plot on Channel 810 (1909.8 MHz)

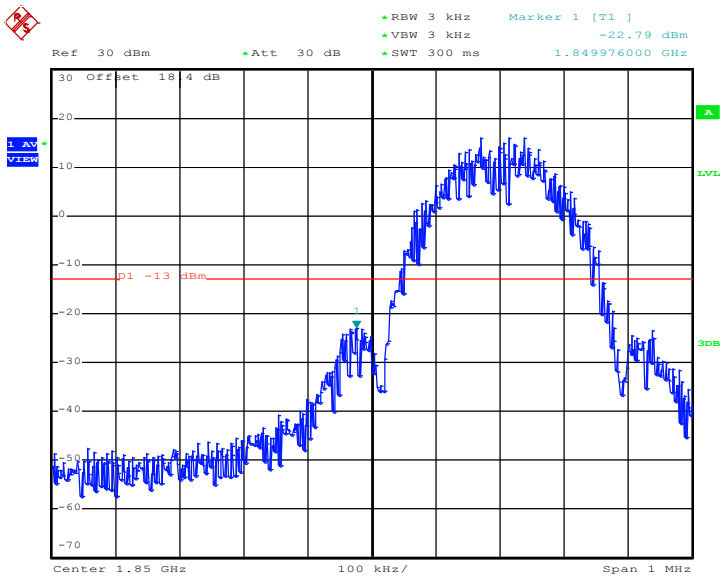


Date: 12.DEC.2012 13:26:32

1. *Correction Factor(dB)= 10log(1% Emission BW/RBW)*
2. *Band Edge= Measurement Value + Correction Factor(dB)*
3. *The total loss is 18.4dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.*

Band :	GSM1900	Test Mode :	EDGE Class 8 Link
Correction Factor :	0.14dB	Maximum 26dB Bandwidth :	0.310MHz
Band Edge :	-22.65dBm	Measurement Value :	-22.79dBm

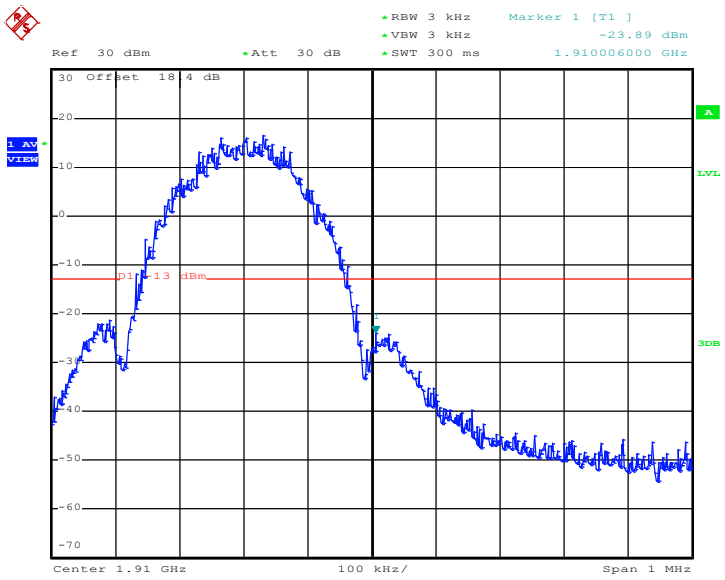
Lower Band Edge Plot on Channel 512 (1850.2 MHz)



1. *Correction Factor(dB)= 10log(1% Emission BW/RBW)*
2. *Band Edge= Measurement Value + Correction Factor(dB)*
3. *The total loss is 18.4dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.*

Band :	GSM1900	Test Mode :	EDGE Class 8 Link
Correction Factor :	0.14dB	Maximum 26dB Bandwidth :	0.310MHz
Band Edge :	-23.75dBm	Measurement Value :	-23.89dBm

Higher Band Edge Plot on Channel 810 (1909.8 MHz)



Date: 12.DEC.2012 14:05:04

1. *Correction Factor(dB)= 10log(1% Emission BW/RBW)*
2. *Band Edge= Measurement Value + Correction Factor(dB)*
3. *The total loss is 18.4dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.*

3.6 Conducted Spurious Emission Measurement

3.6.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

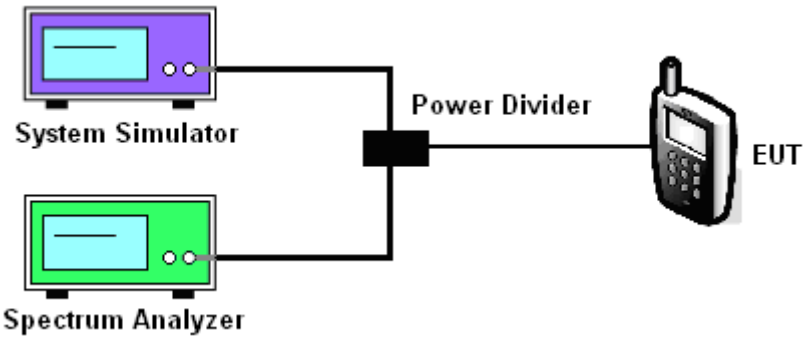
3.6.2 Measuring Instruments

The section 4.0 of List of Measuring Equipment of this test report is used for test.

3.6.3 Test Procedures

1. The EUT was connected to spectrum analyzer and base station via power divider.
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. The middle channel for the highest RF power within the transmitting frequency was measured.
4. The conducted spurious emission for the whole frequency range was taken.
5. 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.

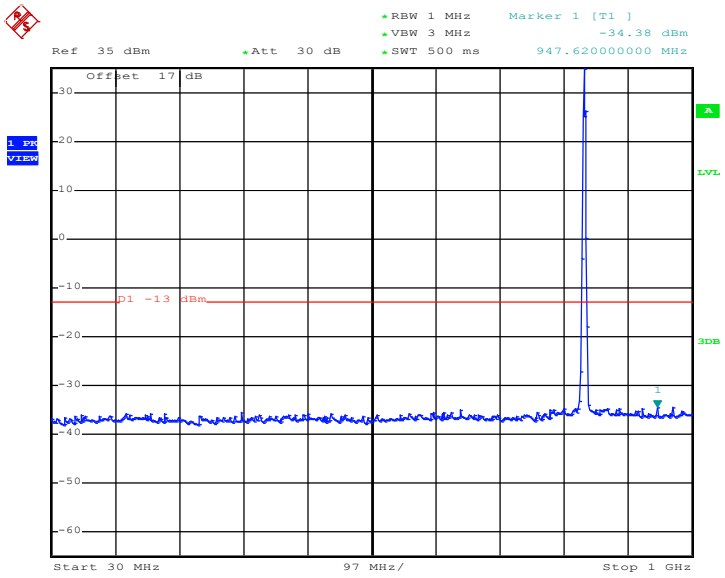
3.6.4 Test Setup



3.6.5 Test Result (Plots) of Conducted Spurious Emission

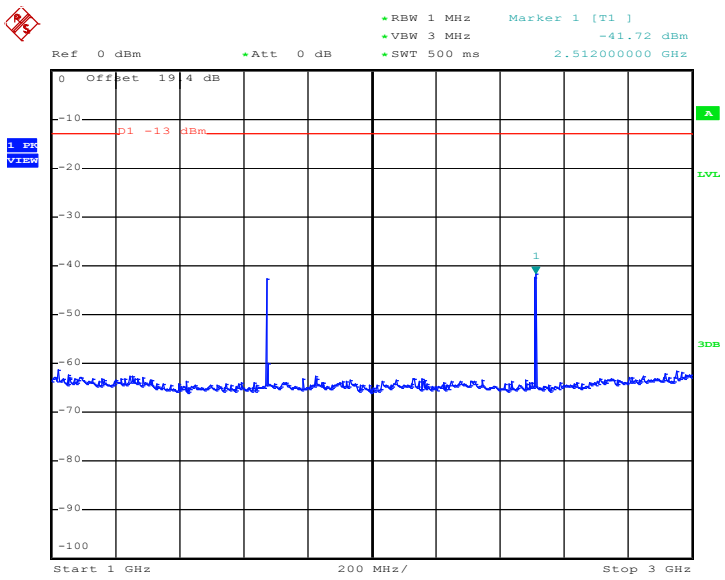
Band :	GSM850	Channel :	CH189
Test Mode :	GSM Link	Frequency :	836.4 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



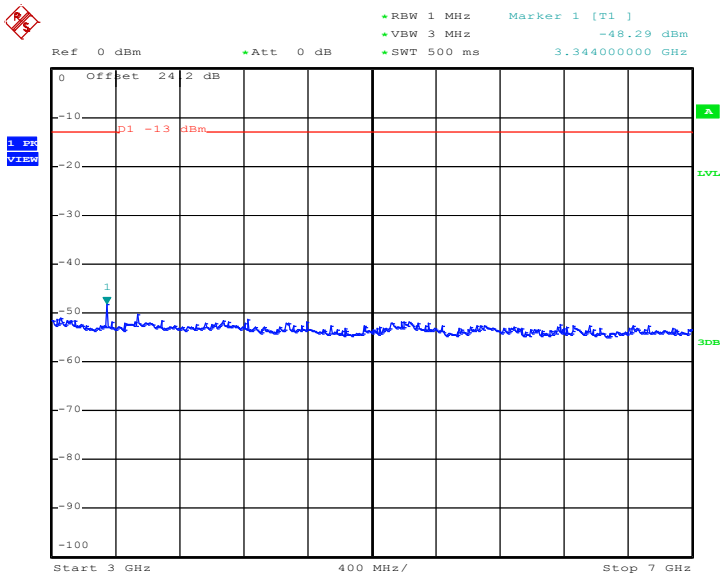
Note: The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

Conducted Spurious Emission Plot between 1GHz ~ 3GHz



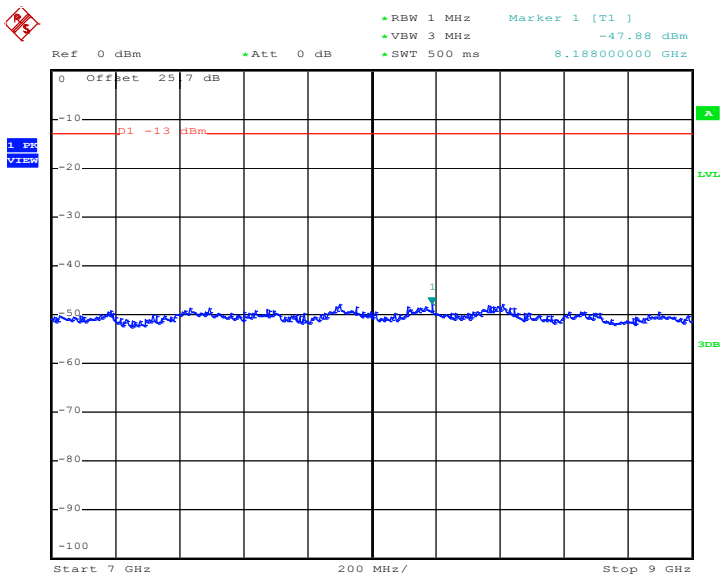
Date: 12.DEC.2012 11:38:53

Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 12.DEC.2012 11:39:05

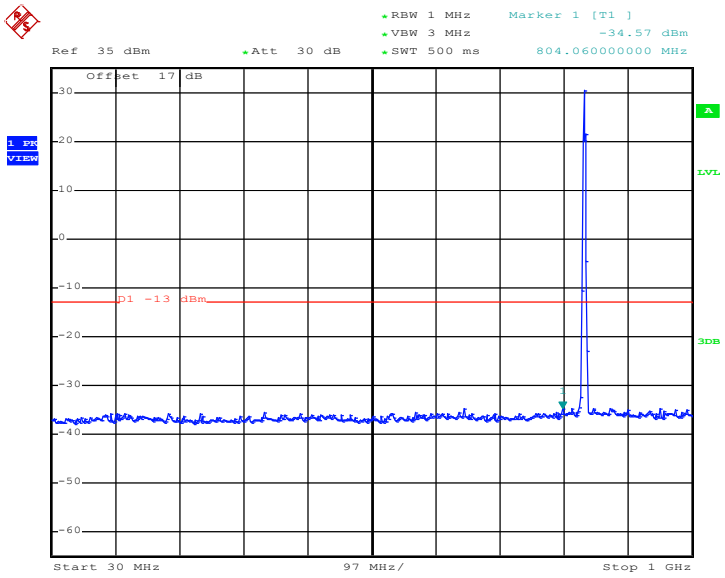
Conducted Spurious Emission Plot between 7GHz ~ 9GHz



Date: 12.DEC.2012 11:39:18

Band :	GSM850	Channel :	CH189
Test Mode :	EDGE Class 8 Link	Frequency :	836.4 MHz

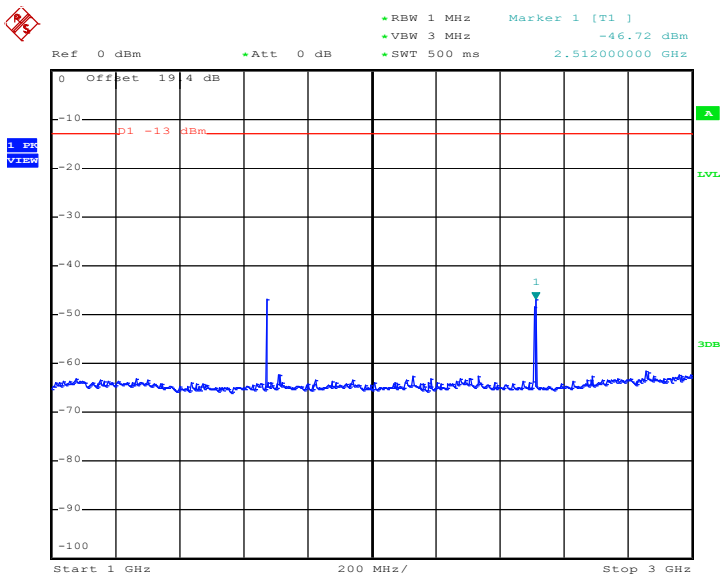
Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 12.DEC.2012 12:02:16

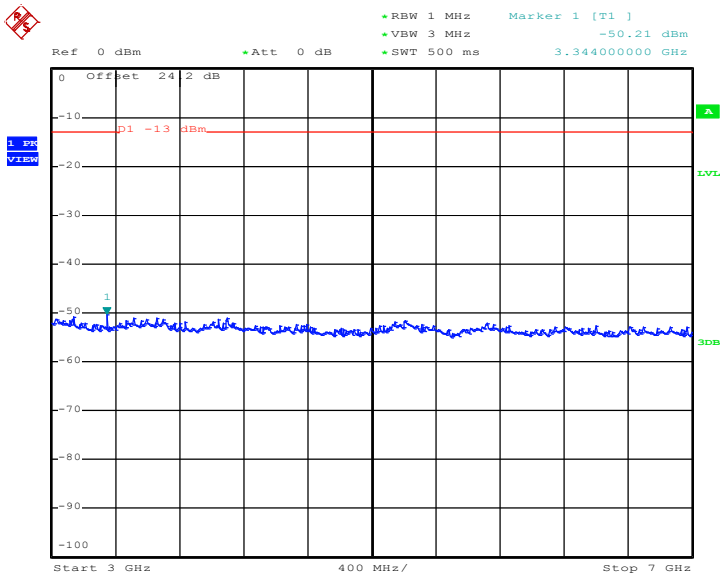
Note: The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

Conducted Spurious Emission Plot between 1GHz ~ 3GHz



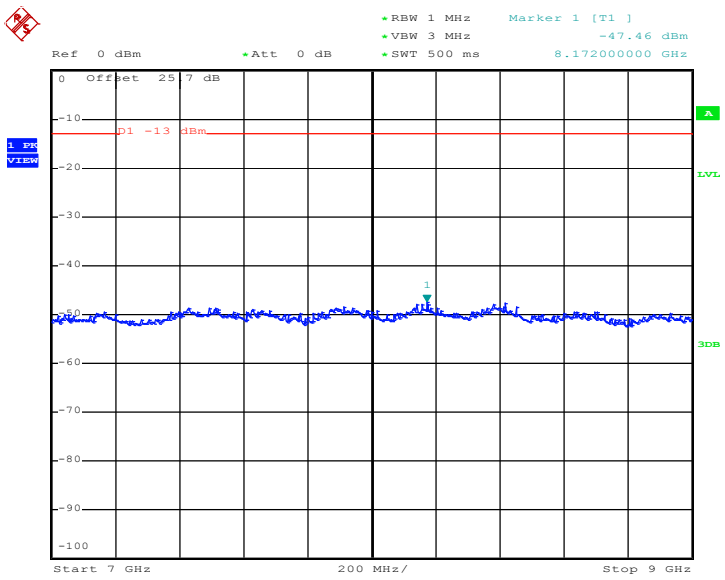
Date: 12.DEC.2012 12:02:33

Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 12.DEC.2012 12:02:46

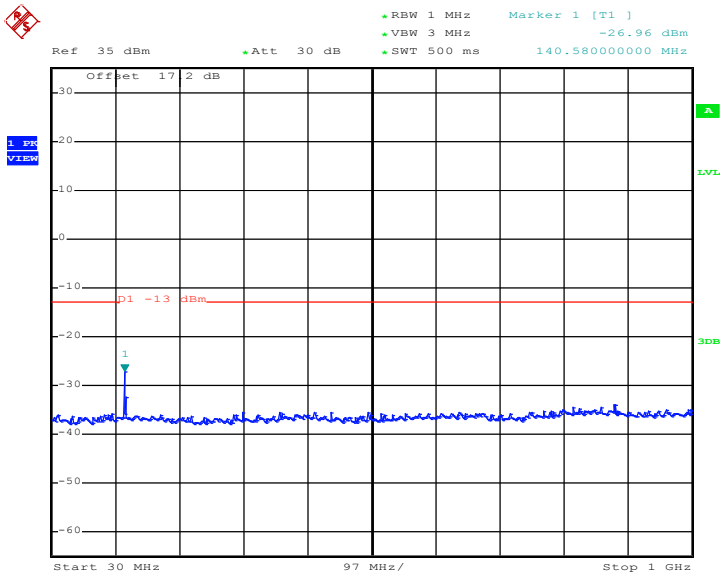
Conducted Spurious Emission Plot between 7GHz ~ 9GHz



Date: 12.DEC.2012 12:02:58

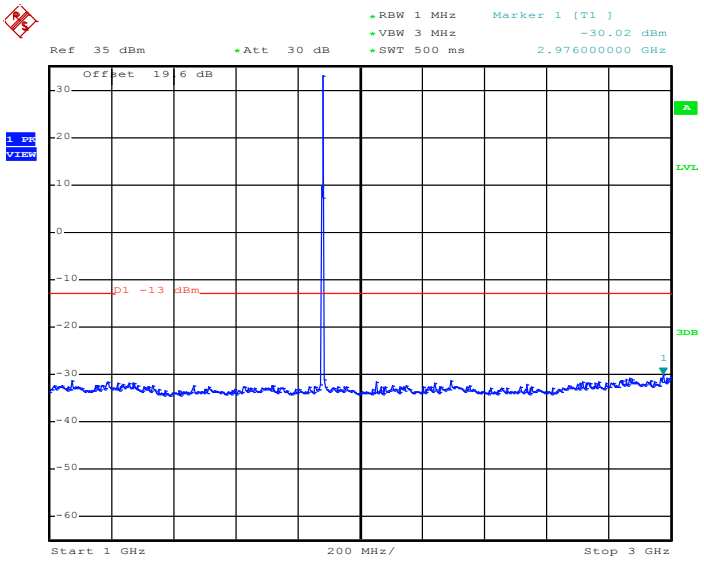
Band :	GSM1900	Channel :	CH661
Test Mode :	GSM Link	Frequency :	1880.0 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 12.DEC.2012 13:17:03

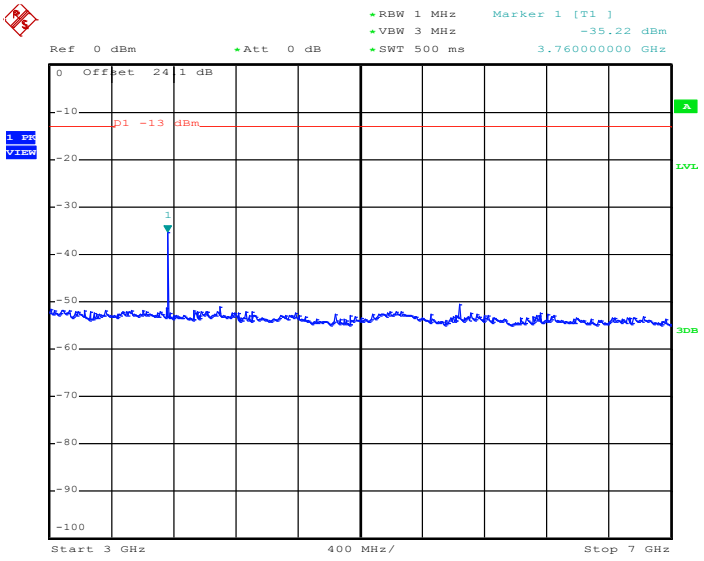
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 12.DEC.2012 13:17:15

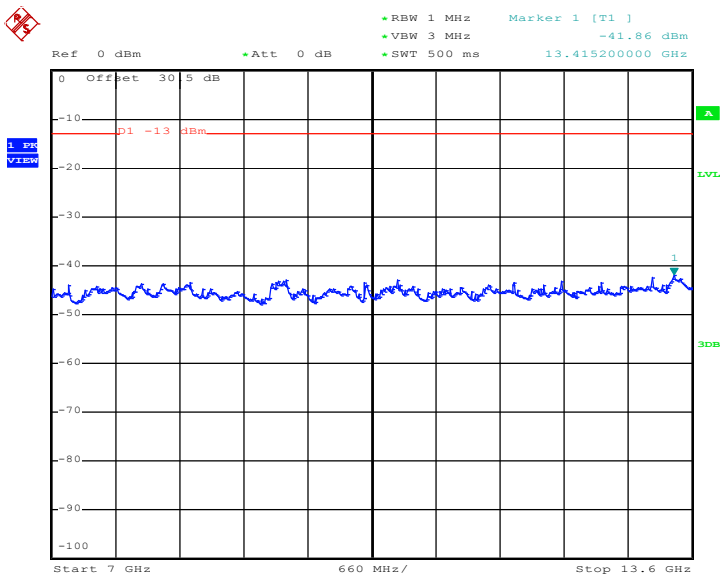
Note: The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

Conducted Spurious Emission Plot between 3GHz ~ 7GHz



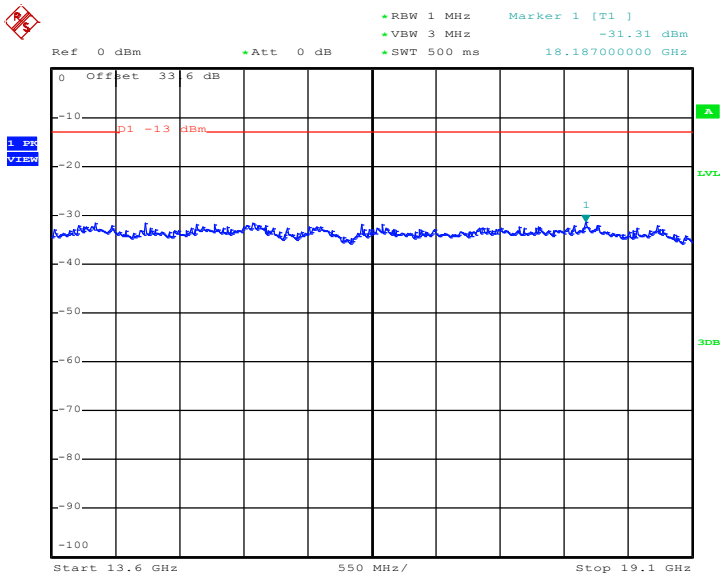
Date: 12.DEC.2012 13:17:32

Conducted Emission Plot between 7GHz ~ 13.6GHz



Date: 12.DEC.2012 13:17:45

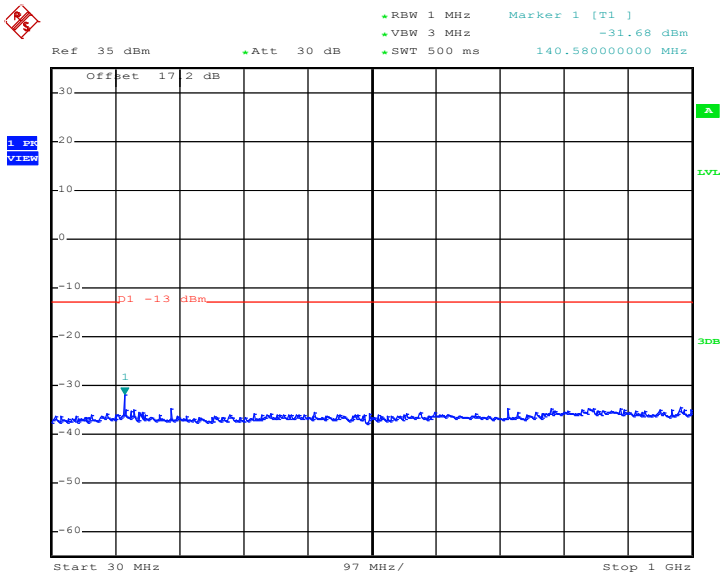
Conducted Spurious Emission Plot between 13.6GHz ~ 19.1GHz



Date: 12.DEC.2012 13:17:57

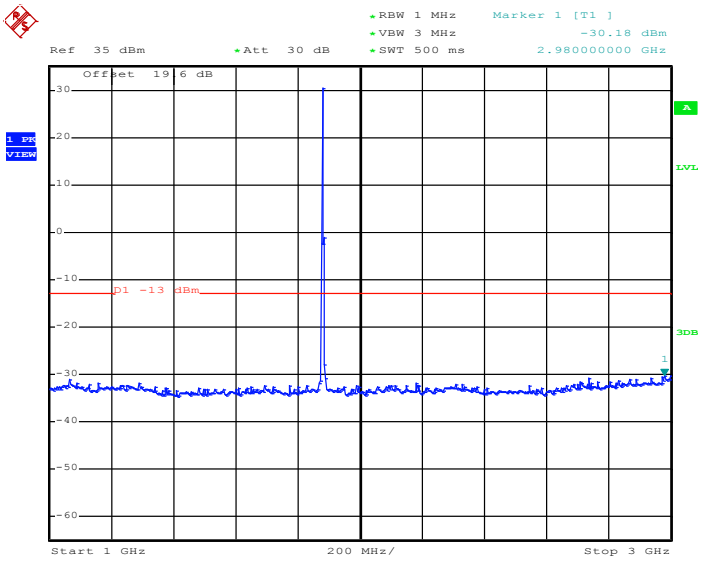
Band :	GSM1900	Channel :	CH661
Test Mode :	EDGE Class 8 Link	Frequency :	1880.0 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 12.DEC.2012 13:53:03

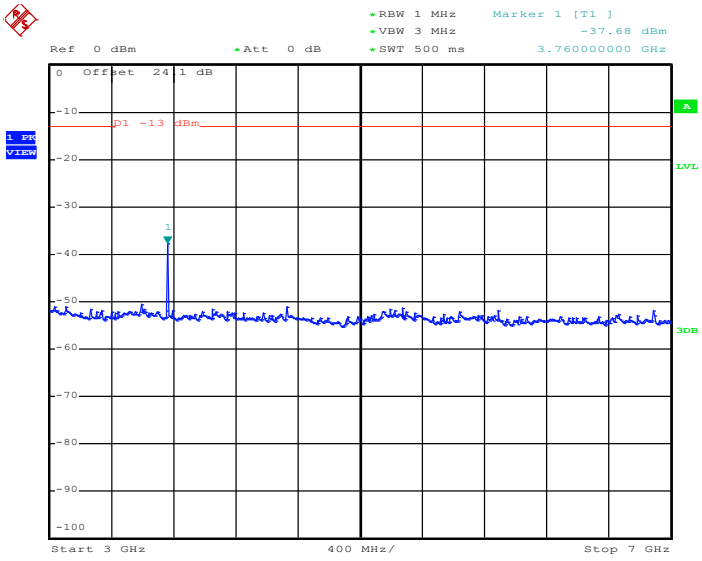
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 12.DEC.2012 13:53:16

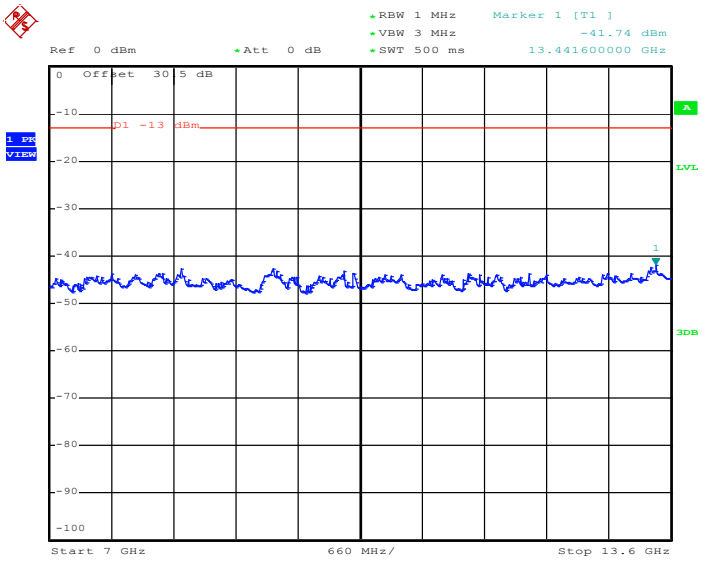
Note: The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

Conducted Spurious Emission Plot between 3GHz ~ 7GHz



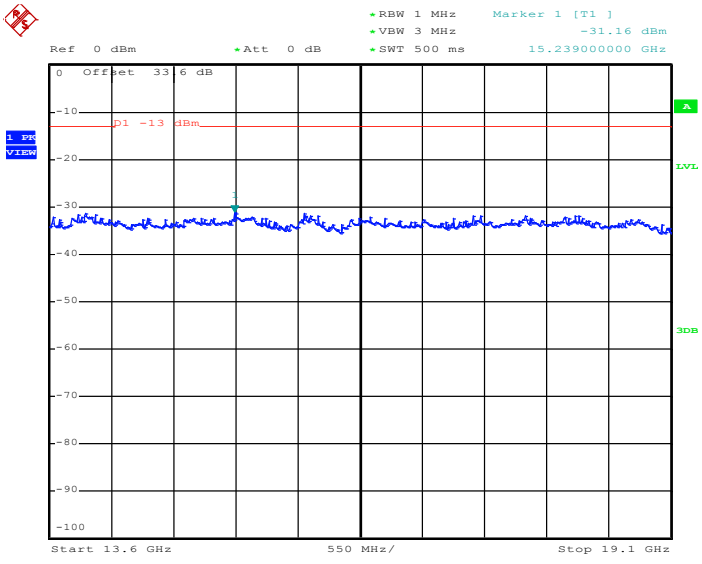
Date: 12.DEC.2012 13:53:33

Conducted Spurious Emission Plot between 7GHz ~ 13.6GHz



Date: 12.DEC.2012 13:53:46

Conducted Spurious Emission Plot between 13.6GHz ~ 19.1GHz



Date: 12.DEC.2012 13:53:58

3.7 Field Strength of Spurious Radiation Measurement

3.7.1 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.

3.7.2 Measuring Instruments

The section 4.0 of List of Measuring Equipment of this test report is used for test.

3.7.3 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. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
11. ERP (dBm) = EIRP - 2.15
12. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)

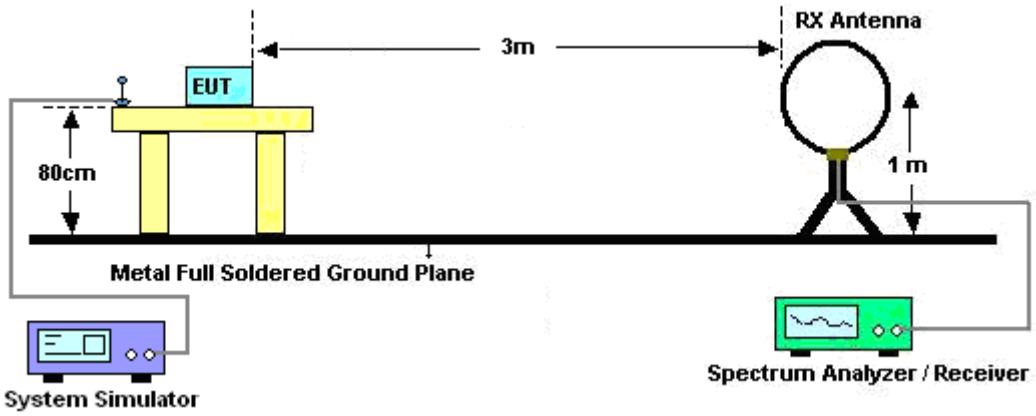
    =P(W) - [43 + 10log(P)] (dB)

    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)

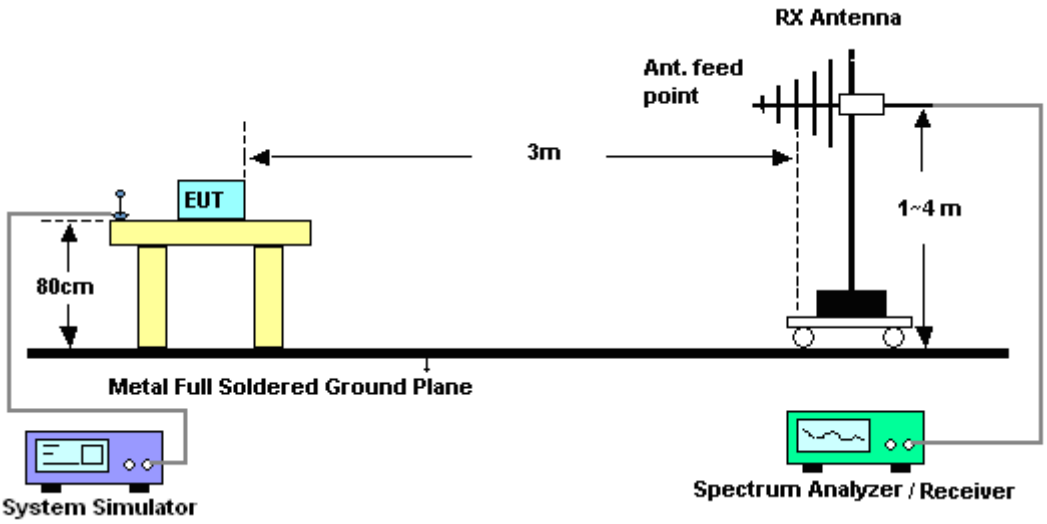
    = -13dBm.

3.7.4 Test Setup

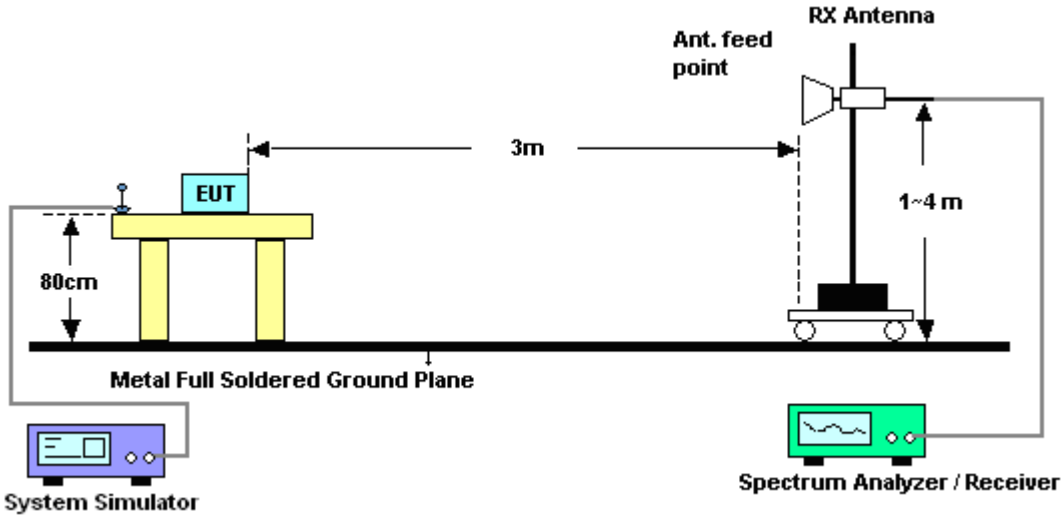
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.7.5 Accessory List of Test

Accessory List	
AC Adapter	Model No. : EP800, Supplier : Sony Ericsson (Salcomp)
	Type No. : CAA-00002016-BV B, S/N: 1110w26101468
Battery	Model No. : BA700, Supplier : Sony Ericsson
	Type No. : CBA-0002025, S/N: 000178PTPCLH
Earphone	Model No. : MH410c, Supplier : Sony Ericsson
	Type No. : AG-1100, S/N : 12351A130000464
USB Cable	Model No. : EC450, Supplier : Sony Ericsson
	Part No. : 1242-6715.2, S/N: 111912DF0258734

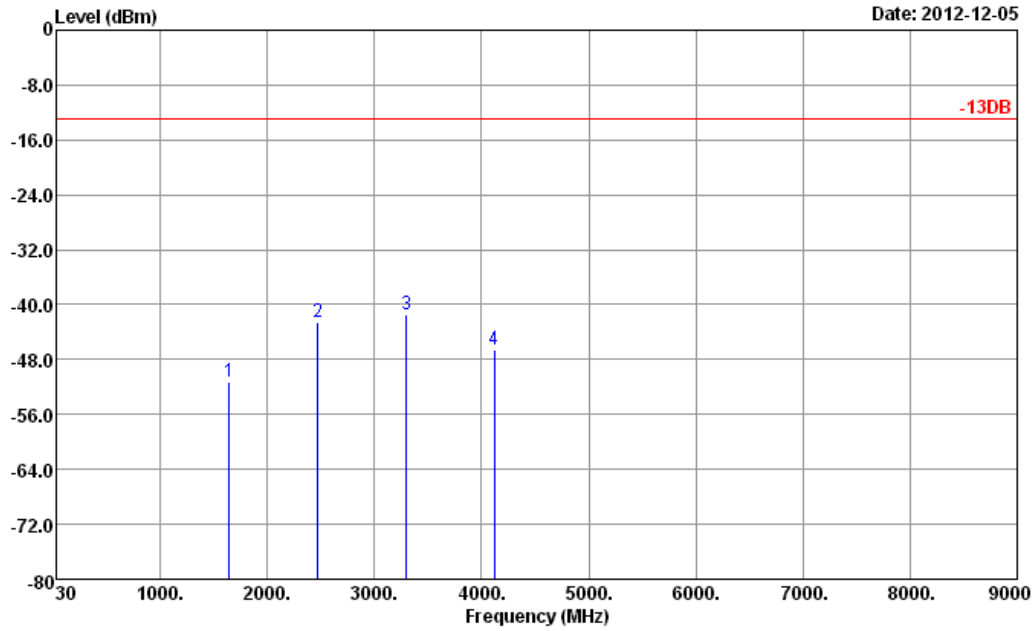
3.7.6 Test Results of Radiated Emissions (9 KHz ~ 30 MHz)

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.

3.7.7 Test Result of Field Strength of Spurious Radiated

<Low Channel>

Band :	GSM850	**Temperature :**	22~23°C
Test Mode :	GSM Link	**Relative Humidity :**	54~56%
Channel :	128		
Test Engineer :	David Yang	**Polarization :**	Horizontal
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (6th, 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

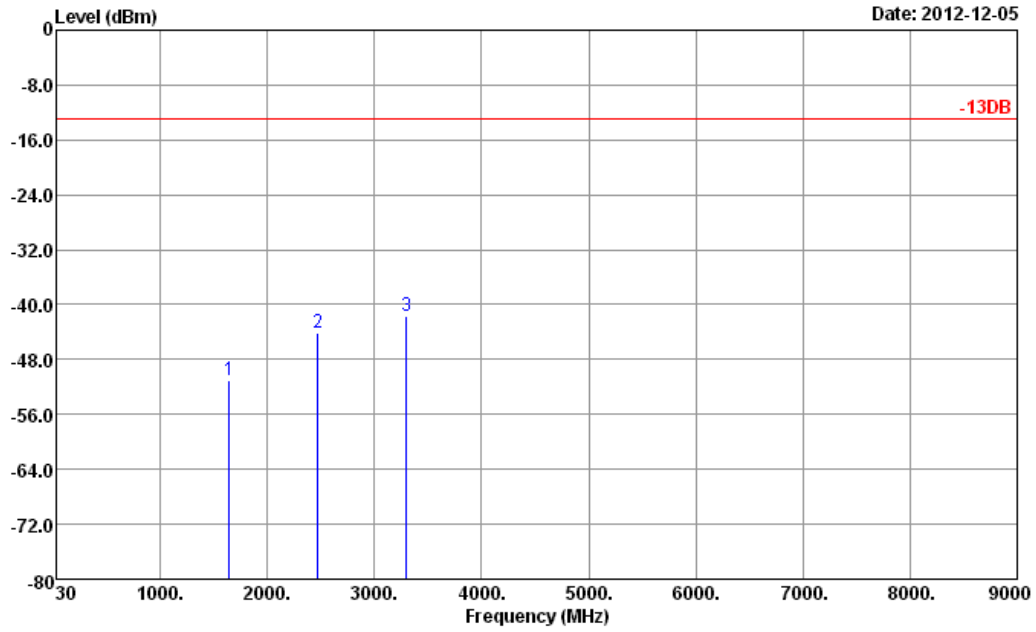


Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 HORIZONTAL
Project : FG 292718-04

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
1648	-51.31	-13	-38.31	-58.14	-53.12	1.34	5.30	H	Pass
2473	-42.55	-13	-29.55	-53.12	-44.85	1.57	6.02	H	Pass
3298	-41.54	-13	-28.54	-53.55	-45.27	1.91	7.79	H	Pass
4120	-46.68	-13	-33.68	-62.22	-51.67	1.96	9.10	H	Pass

Other harmonics are lower than background noise

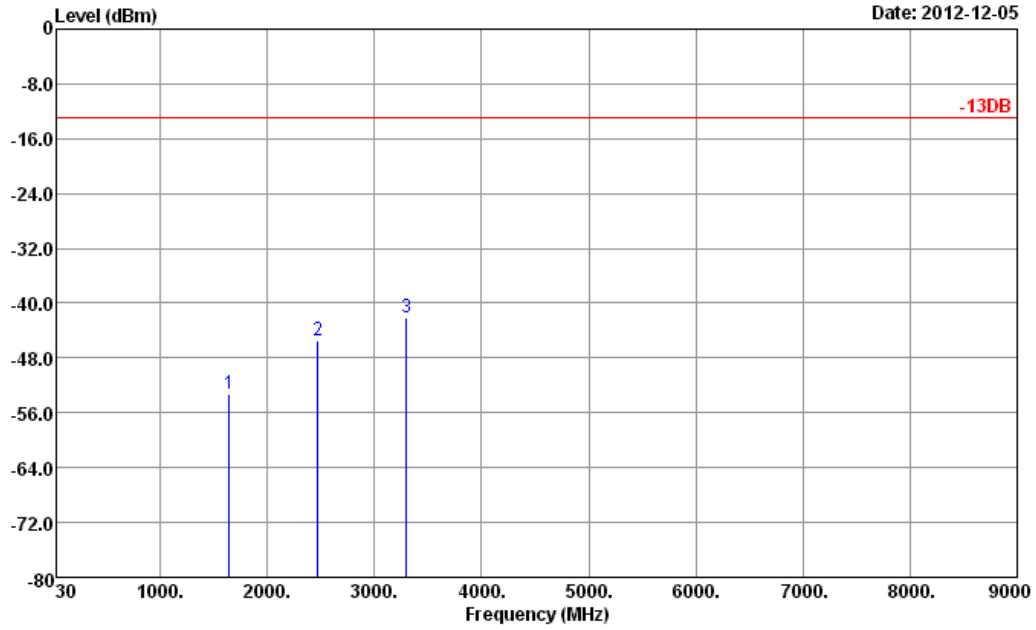
Band :	GSM850	**Temperature :**	22~23°C
Test Mode :	GSM Link	**Relative Humidity :**	54~56%
Channel :	128		
Test Engineer :	David Yang	**Polarization :**	Vertical
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (5th, 6th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		



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
1648	-50.95	-13	-37.95	-57.09	-52.76	1.34	5.30	V	Pass
2473	-44.22	-13	-31.22	-54.23	-46.52	1.57	6.02	V	Pass
3298	-41.66	-13	-28.66	-53.59	-45.39	1.91	7.79	V	Pass

Other harmonics are lower than background noise

Band :	GSM850	**Temperature :**	22~23°C
Test Mode :	EDGE Class 8 Link	**Relative Humidity :**	54~56%
Channel :	128		
Test Engineer :	David Yang	**Polarization :**	Horizontal
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (5th, 6th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

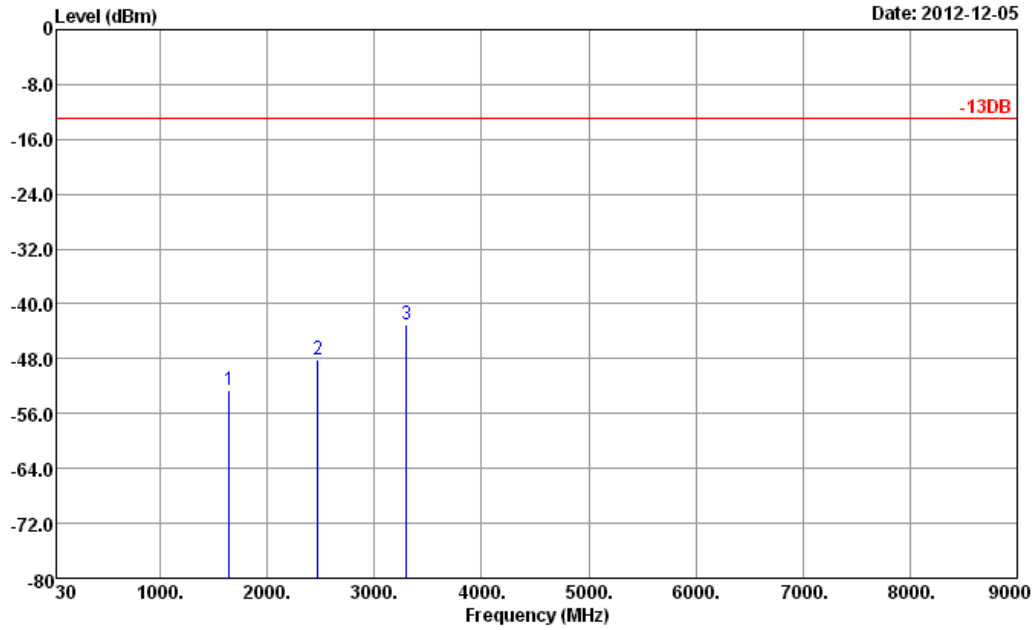


Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 HORIZONTAL
Project : FG 292718-04

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
1648	-53.35	-13	-40.35	-60.52	-55.16	1.34	5.30	H	Pass
2473	-45.43	-13	-32.43	-56	-47.73	1.57	6.02	H	Pass
3298	-42.08	-13	-29.08	-54.53	-45.81	1.91	7.79	H	Pass

Other harmonics are lower than background noise

Band :	GSM850	**Temperature :**	22~23°C
Test Mode :	EDGE Class 8 Link	**Relative Humidity :**	54~56%
Channel :	128		
Test Engineer :	David Yang	**Polarization :**	Vertical
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (5th, 6th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

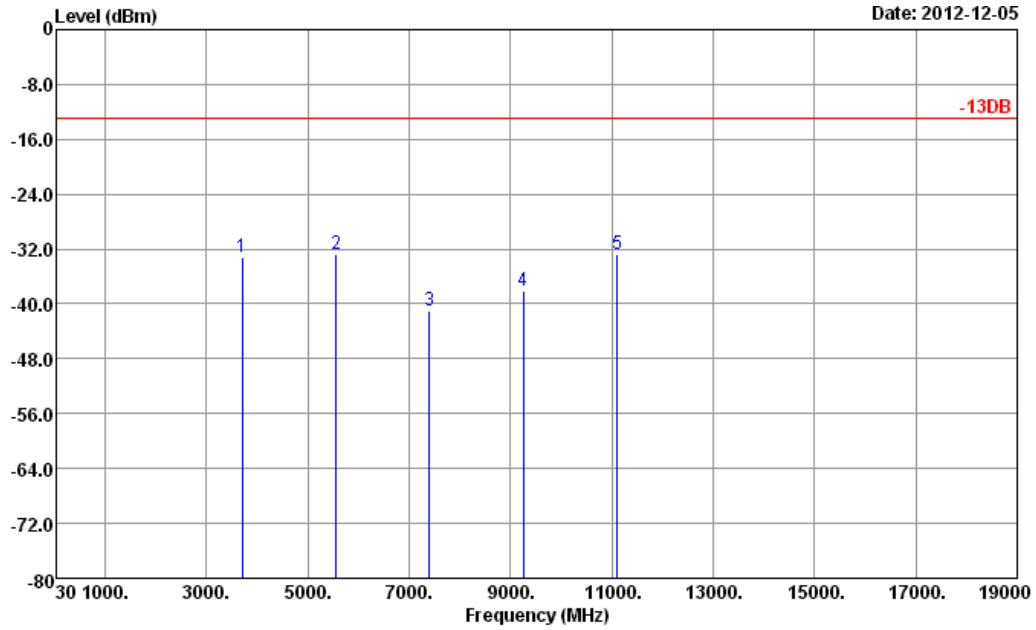


Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 VERTICAL
Project : FG 292718-04

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
1648	-52.55	-13	-39.55	-59.02	-54.36	1.34	5.30	V	Pass
2473	-48.18	-13	-35.18	-58.17	-50.48	1.57	6.02	V	Pass
3298	-42.96	-13	-29.96	-55.26	-46.69	1.91	7.79	V	Pass

Other harmonics are lower than background noise

Band :	GSM1900	**Temperature :**	22~23°C
Test Mode :	GSM Link	**Relative Humidity :**	54~56%
Channel :	512		
Test Engineer :	David Yang	**Polarization :**	Horizontal
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (7th, 8th,….etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

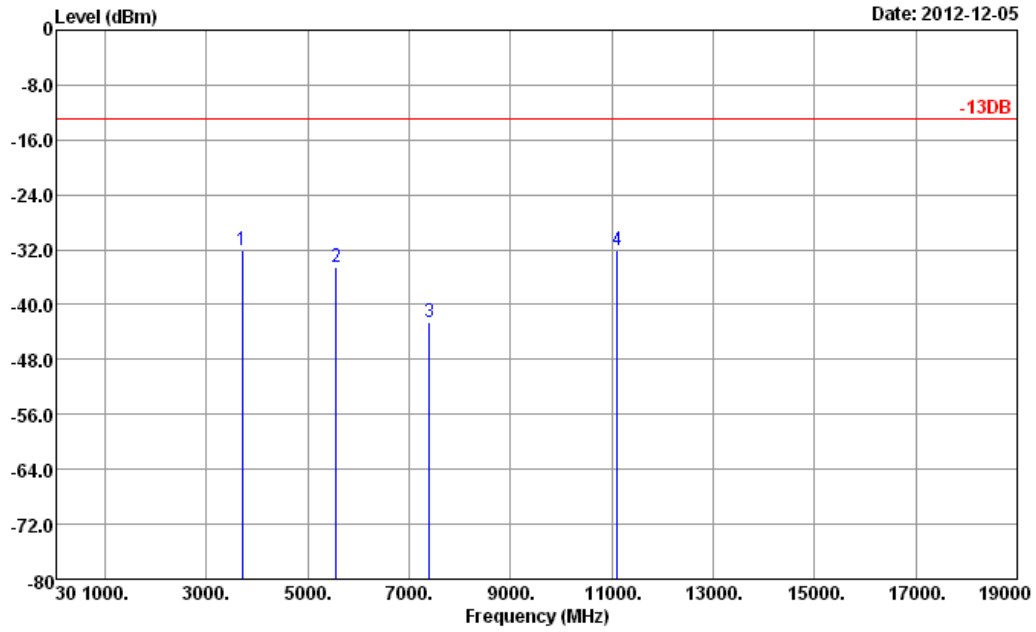


Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 HORIZONTAL
Project : FG 292718-04

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
3700	-33.14	-13	-20.14	-47.45	-39.77	2.01	8.64	H	Pass
5552	-32.81	-13	-19.81	-52.29	-41.48	2.12	10.79	H	Pass
7400	-41.06	-13	-28.06	-63.69	-50.52	2.62	12.08	H	Pass
9252	-38.01	-13	-25.01	-63.53	-48.61	2.75	13.35	H	Pass
11100	-32.66	-13	-19.66	-60	-43.26	2.72	13.32	H	Pass

Other harmonics are lower than background noise

Band :	GSM1900	**Temperature :**	22~23°C
Test Mode :	GSM Link	**Relative Humidity :**	54~56%
Channel :	512		
Test Engineer :	David Yang	**Polarization :**	Vertical
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (5^{th}, 7^{th},…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

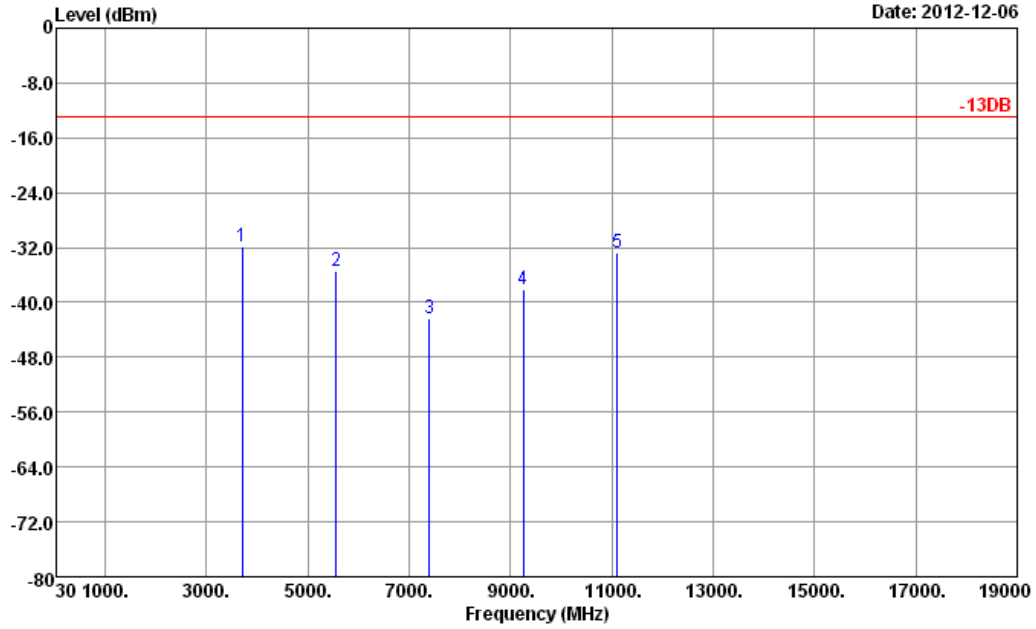


Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 VERTICAL
Project : FG 292718-04

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
3700	-32.06	-13	-19.06	-46.64	-38.69	2.01	8.64	V	Pass
5552	-34.60	-13	-21.60	-53.97	-43.27	2.12	10.79	V	Pass
7400	-42.67	-13	-29.67	-64.82	-52.13	2.62	12.08	V	Pass
11100	-32.14	-13	-19.14	-60.56	-42.74	2.72	13.32	V	Pass

Other harmonics are lower than background noise

Band :	GSM1900	**Temperature :**	22~23°C
Test Mode :	EDGE Class 8 Link	**Relative Humidity :**	54~56%
Channel :	512		
Test Engineer :	David Yang	**Polarization :**	Horizontal
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (7^{th}, 8^{th},…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

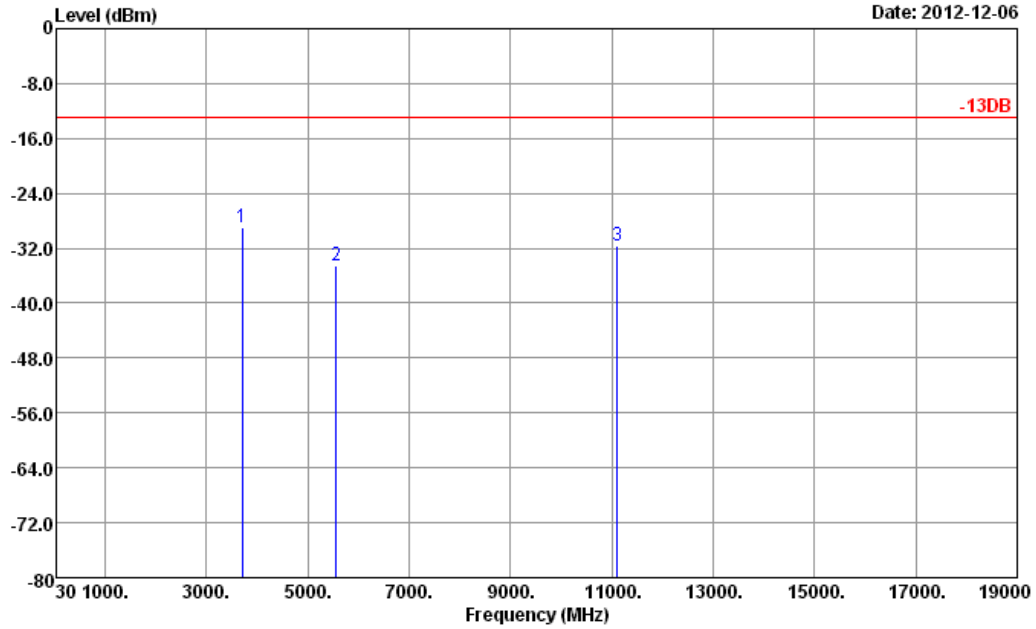


Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 HORIZONTAL
Project : FG 292718-04

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
3700	-31.91	-13	-18.91	-45.74	-38.54	2.01	8.64	H	Pass
5552	-35.51	-13	-22.51	-55.23	-44.18	2.12	10.79	H	Pass
7400	-42.27	-13	-29.27	-64.74	-51.73	2.62	12.08	H	Pass
9252	-38.06	-13	-25.06	-62.78	-48.66	2.75	13.35	H	Pass
11100	-32.79	-13	-19.79	-60.36	-43.39	2.72	13.32	H	Pass

Other harmonics are lower than background noise

Band :	GSM1900	**Temperature :**	22~23°C
Test Mode :	EDGE Class 8 Link	**Relative Humidity :**	54~56%
Channel :	512		
Test Engineer :	David Yang	**Polarization :**	Vertical
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (4th, 5th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		



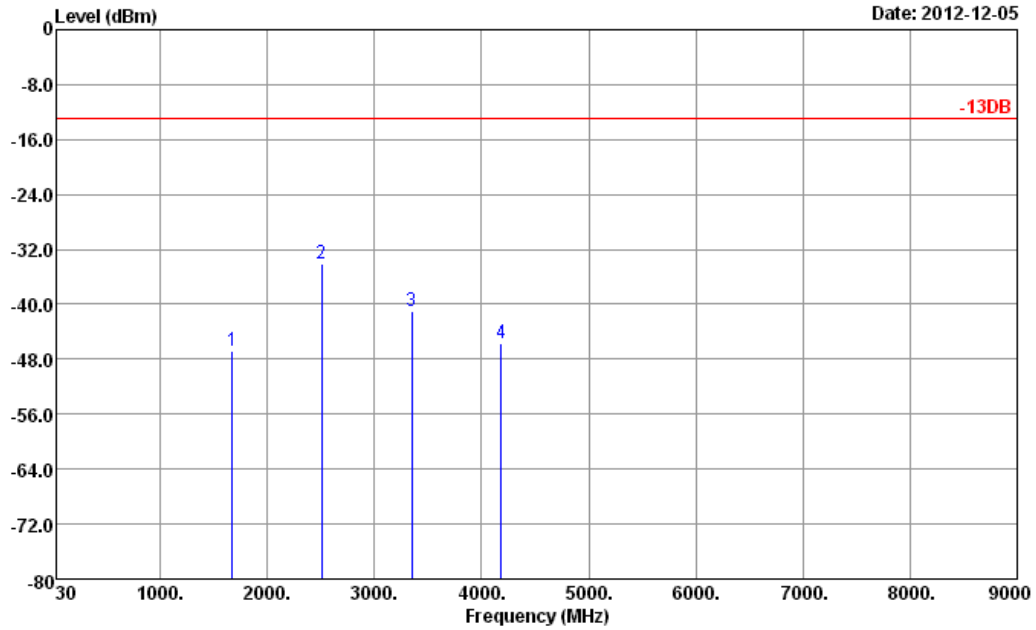
Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 VERTICAL
Project : FG 292718-04

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
3700	-29.01	-13	-16.01	-43.13	-35.64	2.01	8.64	V	Pass
5552	-34.50	-13	-21.50	-53.95	-43.17	2.12	10.79	V	Pass
11100	-31.75	-13	-18.75	-59.05	-42.35	2.72	13.32	V	Pass

Other harmonics are lower than background noise

<Middle Channel>

Band :	GSM850	**Temperature :**	22~23°C
Test Mode :	GSM Link	**Relative Humidity :**	54~56%
Channel :	189		
Test Engineer :	David Yang	**Polarization :**	Horizontal
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (6th, 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

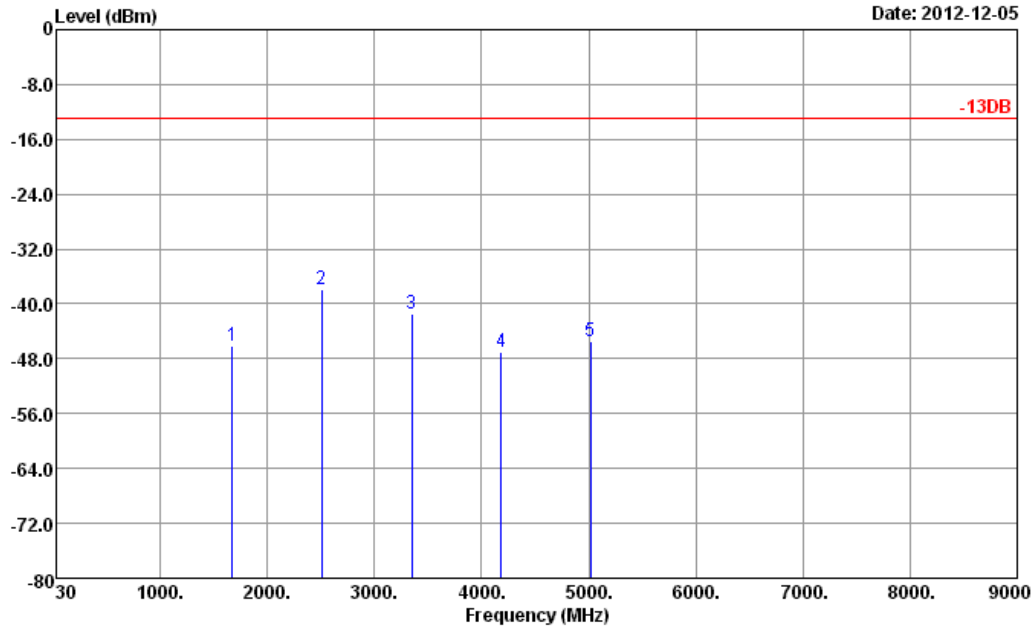


Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 HORIZONTAL
Project : FG 292718-04

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
1672	-46.87	-13	-33.87	-53.67	-48.63	1.35	5.25	H	Pass
2509	-34.03	-13	-21.03	-43.24	-36.41	1.58	6.11	H	Pass
3346	-40.97	-13	-27.97	-52.92	-44.82	1.94	7.94	H	Pass
4180	-45.73	-13	-32.73	-61.57	-50.77	1.96	9.15	H	Pass

Other harmonics are lower than background noise

Band :	GSM850	**Temperature :**	22~23°C
Test Mode :	GSM Link	**Relative Humidity :**	54~56%
Channel :	189		
Test Engineer :	David Yang	**Polarization :**	Vertical
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (7^{th}, 8^{th},…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

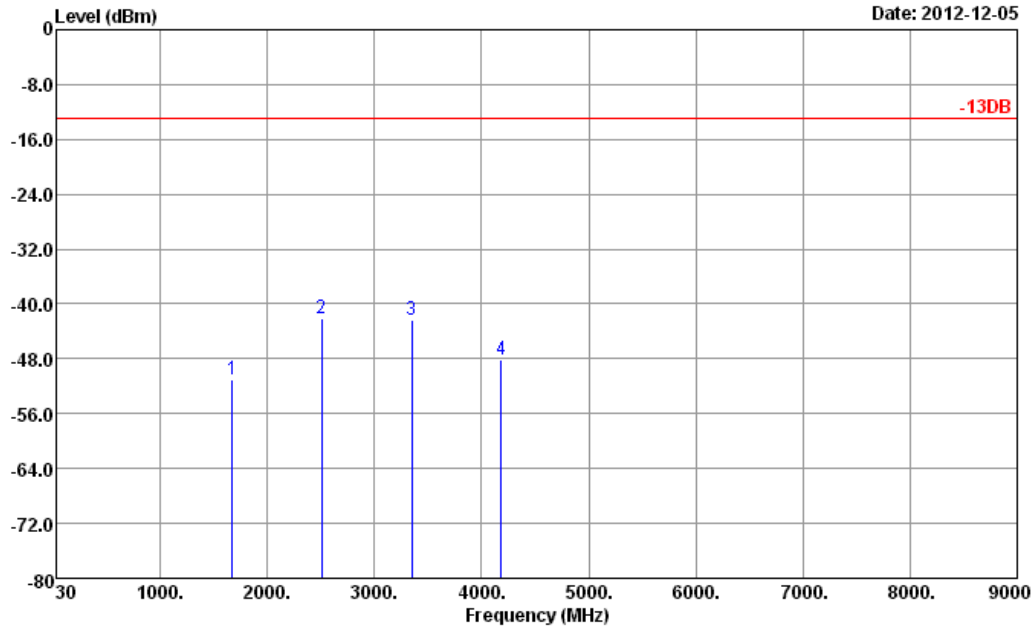


Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 VERTICAL
Project : FG 292718-04

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
1672	-46.17	-13	-33.17	-52.99	-47.93	1.35	5.25	V	Pass
2509	-37.96	-13	-24.96	-47.33	-40.34	1.58	6.11	V	Pass
3346	-41.43	-13	-28.43	-54.12	-45.28	1.94	7.94	V	Pass
4180	-47.10	-13	-34.10	-63.11	-52.14	1.96	9.15	V	Pass
5015	-45.38	-13	-32.38	-63.63	-51.56	2.08	10.41	V	Pass

Other harmonics are lower than background noise

Band :	GSM850	**Temperature :**	22~23°C
Test Mode :	EDGE Class 8 Link	**Relative Humidity :**	54~56%
Channel :	189		
Test Engineer :	David Yang	**Polarization :**	Horizontal
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (6th, 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

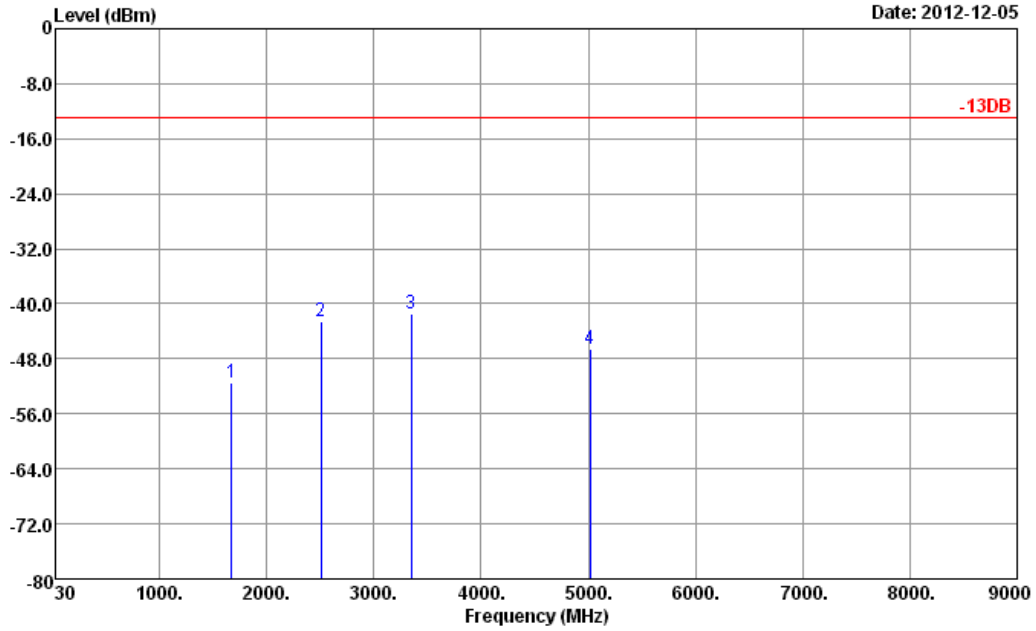


Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 HORIZONTAL
Project : FG 292718-04

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
1672	-51.07	-13	-38.07	-58.32	-52.83	1.35	5.25	H	Pass
2509	-42.13	-13	-29.13	-52.59	-44.51	1.58	6.11	H	Pass
3346	-42.39	-13	-29.39	-54.96	-46.24	1.94	7.94	H	Pass
4180	-48.23	-13	-35.23	-64.14	-53.27	1.96	9.15	H	Pass

Other harmonics are lower than background noise

Band :	GSM850	**Temperature :**	22~23°C
Test Mode :	EDGE Class 8 Link	**Relative Humidity :**	54~56%
Channel :	189		
Test Engineer :	David Yang	**Polarization :**	Vertical
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (5th, 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

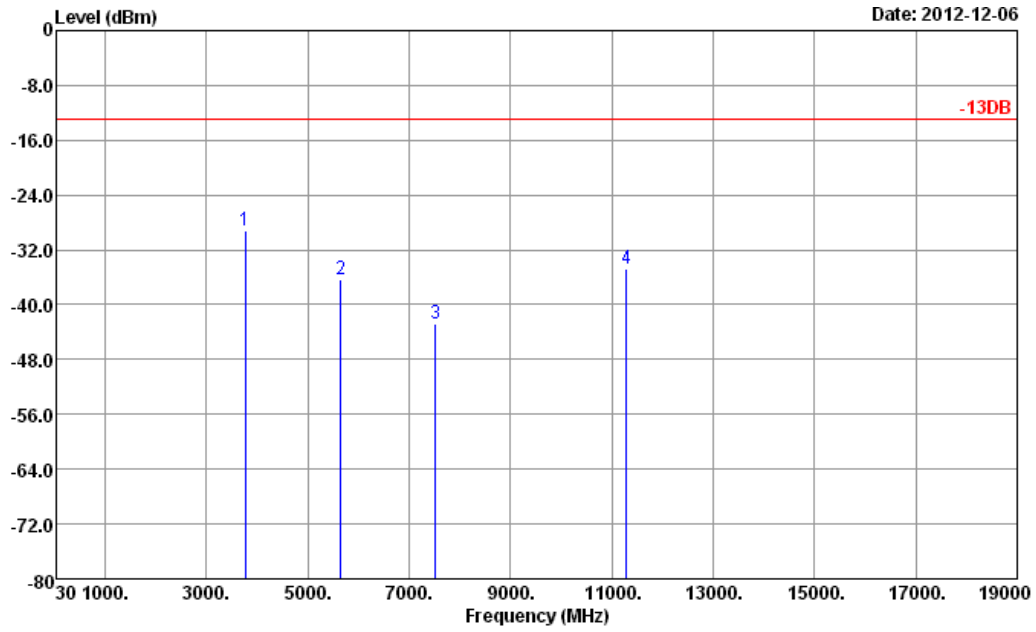


Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 VERTICAL
Project : FG 292718-04

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
1672	-51.40	-13	-38.40	-58.12	-53.16	1.35	5.25	V	Pass
2509	-42.48	-13	-29.48	-52.87	-44.86	1.58	6.11	V	Pass
3346	-41.50	-13	-28.50	-54.35	-45.35	1.94	7.94	V	Pass
5015	-46.58	-13	-33.58	-64.33	-52.76	2.08	10.41	V	Pass

Other harmonics are lower than background noise

Band :	GSM1900	**Temperature :**	22~23°C
Test Mode :	GSM Link	**Relative Humidity :**	54~56%
Channel :	661		
Test Engineer :	David Yang	**Polarization :**	Horizontal
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (5^{th}, 7^{th},…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

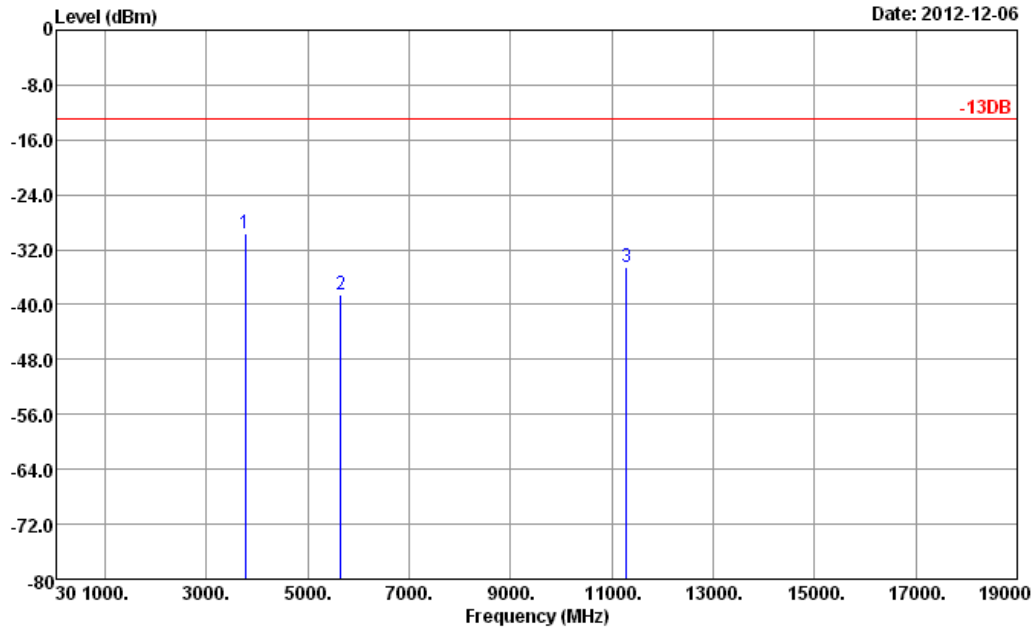


Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 HORIZONTAL
Project : FG 292718-04

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	-29.29	-13	-16.29	-42.76	-36	2.00	8.71	H	Pass
5640	-36.36	-13	-23.36	-55.18	-45	2.13	10.77	H	Pass
7520	-42.76	-13	-29.76	-64.69	-52.3	2.68	12.22	H	Pass
11280	-34.78	-13	-21.78	-61.79	-45.5	2.64	13.36	H	Pass

Other harmonics are lower than background noise

Band :	GSM1900	**Temperature :**	22~23°C
Test Mode :	GSM Link	**Relative Humidity :**	54~56%
Channel :	661		
Test Engineer :	David Yang	**Polarization :**	Vertical
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (4^{th}, 5^{th},…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

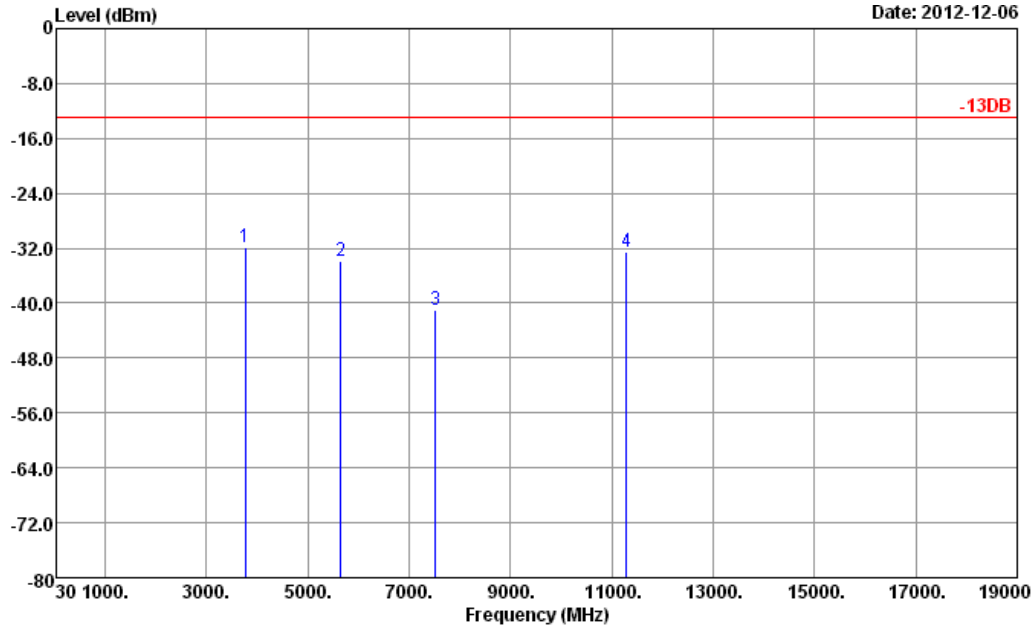


Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 VERTICAL
Project : FG 292718-04

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	-29.59	-13	-16.59	-43.04	-36.3	2.00	8.71	V	Pass
5640	-38.66	-13	-25.66	-57.61	-47.3	2.13	10.77	V	Pass
11280	-34.64	-13	-21.64	-62.96	-45.36	2.64	13.36	V	Pass

Other harmonics are lower than background noise

Band :	GSM1900	**Temperature :**	22~23°C
Test Mode :	EDGE Class 8 Link	**Relative Humidity :**	54~56%
Channel :	661		
Test Engineer :	David Yang	**Polarization :**	Horizontal
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (5^{th}, 7^{th},…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

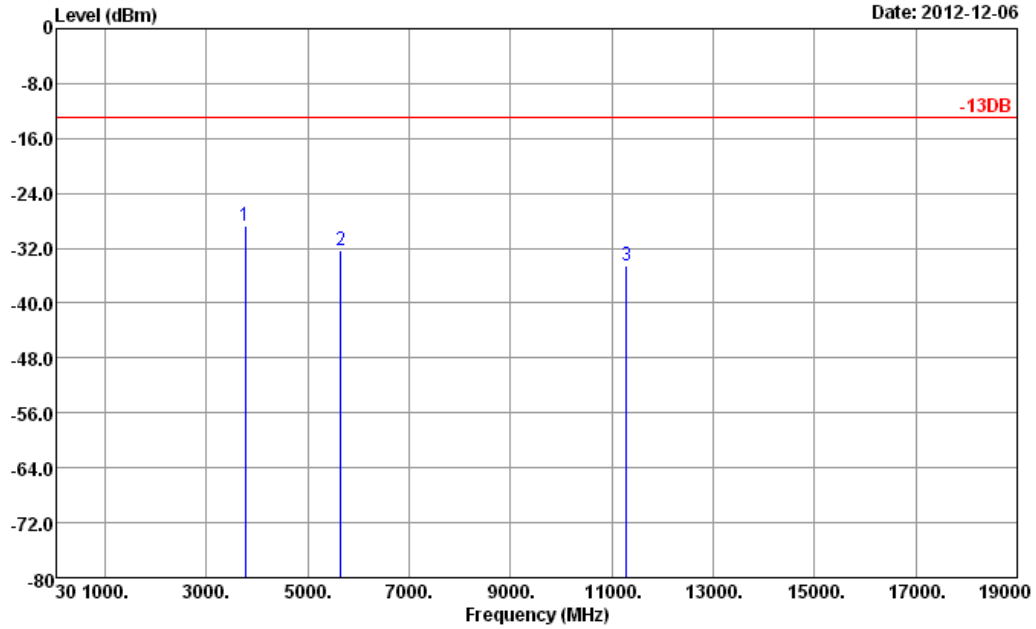


Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 HORIZONTAL
Project : FG 292718-04

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	-31.76	-13	-18.76	-45.52	-38.47	2.00	8.71	H	Pass
5640	-33.81	-13	-20.81	-53.32	-42.45	2.13	10.77	H	Pass
7520	-41.07	-13	-28.07	-64.24	-50.61	2.68	12.22	H	Pass
11280	-32.60	-13	-19.60	-60.45	-43.32	2.64	13.36	H	Pass

Other harmonics are lower than background noise

Band :	GSM1900	**Temperature :**	22~23°C
Test Mode :	EDGE Class 8 Link	**Relative Humidity :**	54~56%
Channel :	661		
Test Engineer :	David Yang	**Polarization :**	Vertical
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (4^{th}, 5^{th},…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		



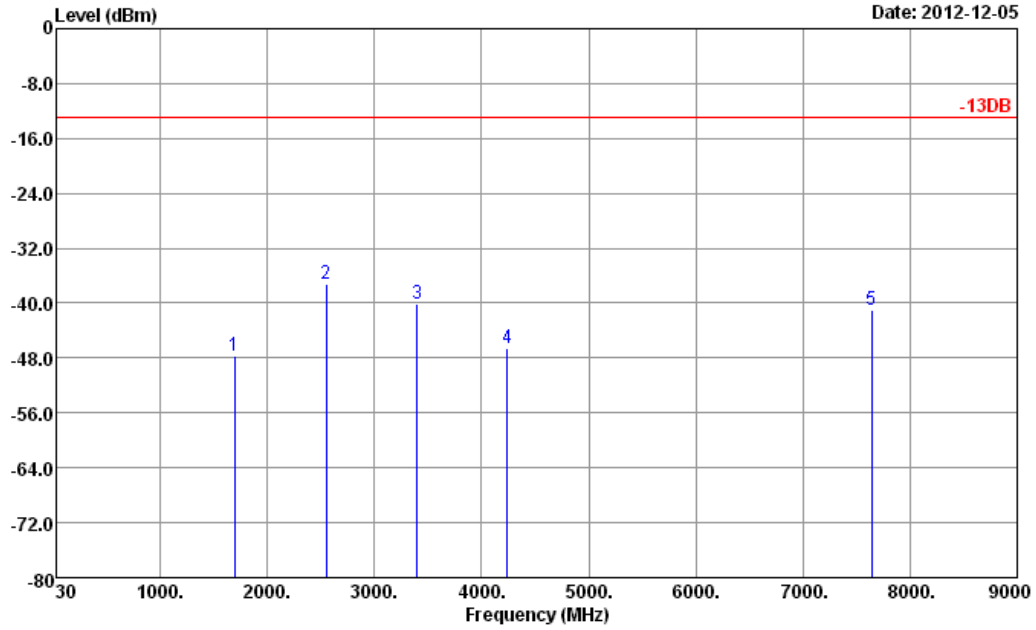
Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 VERTICAL
Project : FG 292718-04

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	-28.67	-13	-15.67	-42.59	-35.38	2.00	8.71	V	Pass
5640	-32.32	-13	-19.32	-52.04	-40.96	2.13	10.77	V	Pass
11280	-34.64	-13	-21.64	-62.51	-45.36	2.64	13.36	V	Pass

Other harmonics are lower than background noise

<High Channel>

Band :	GSM850	**Temperature :**	22~23°C
Test Mode :	GSM Link	**Relative Humidity :**	54~56%
Channel :	251		
Test Engineer :	David Yang	**Polarization :**	Horizontal
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (6th, 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

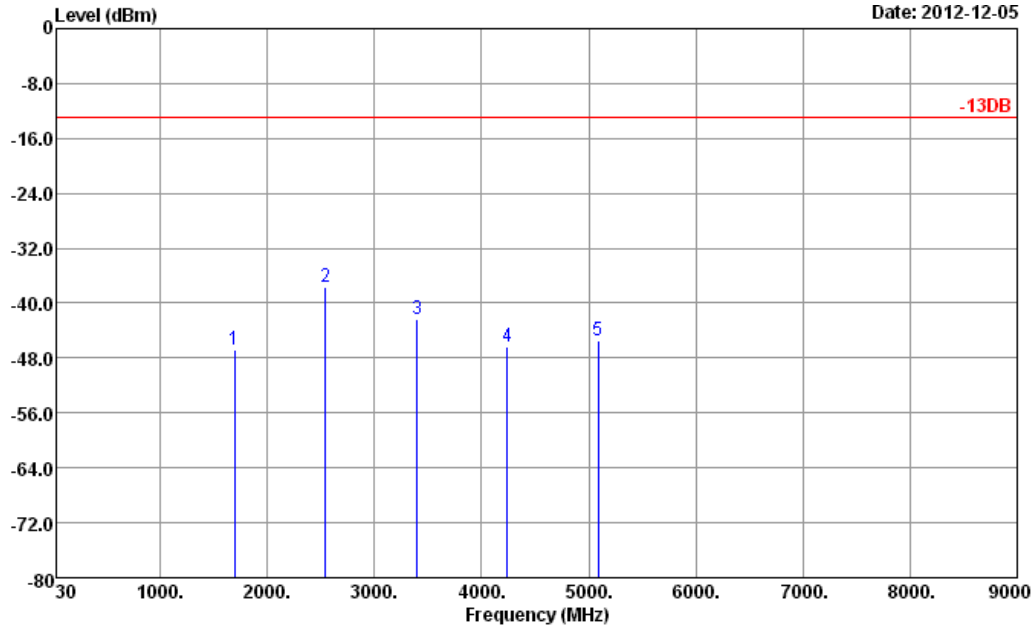


Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 HORIZONTAL
Project : FG 292718-04

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
1696	-47.61	-13	-34.61	-54.93	-49.31	1.35	5.20	H	Pass
2548	-37.25	-13	-24.25	-47.43	-39.68	1.59	6.17	H	Pass
3397	-40.22	-13	-27.22	-53.12	-44.19	1.97	8.09	H	Pass
4240	-46.65	-13	-33.65	-62.64	-51.74	1.96	9.20	H	Pass
7640	-41.05	-13	-28.05	-64.4	-48.53	2.68	12.31	H	Pass

Other harmonics are lower than background noise

Band :	GSM850	**Temperature :**	22~23°C
Test Mode :	GSM Link	**Relative Humidity :**	54~56%
Channel :	251		
Test Engineer :	David Yang	**Polarization :**	Vertical
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (7^{th}, 8^{th},…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

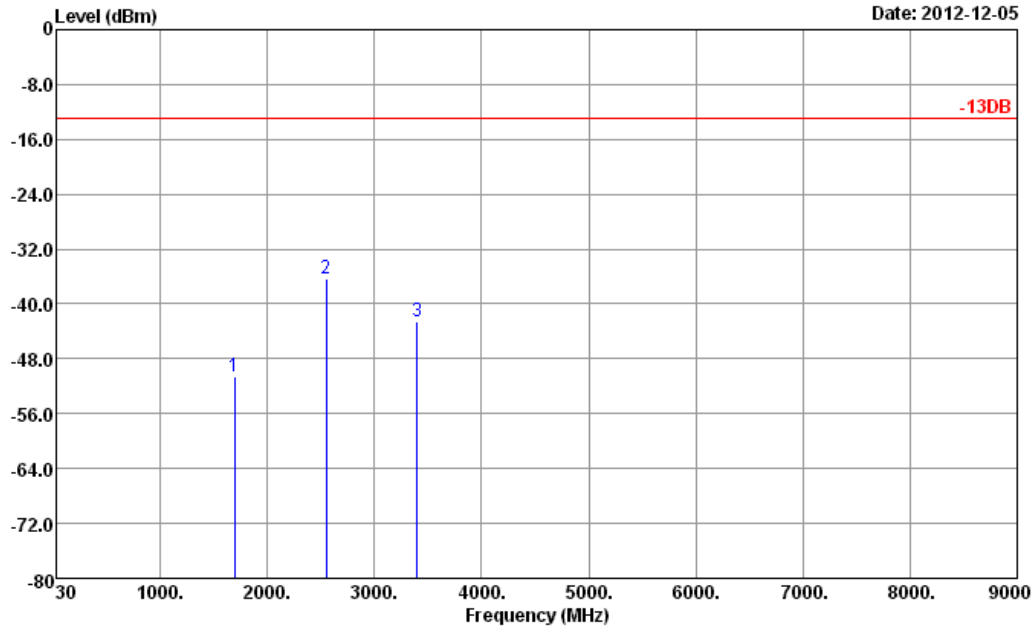


Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 VERTICAL
Project : FG 292718-04

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
1696	-46.82	-13	-33.82	-53.61	-48.52	1.35	5.20	V	Pass
2545	-37.74	-13	-24.74	-47.83	-40.17	1.59	6.17	V	Pass
3397	-42.35	-13	-29.35	-55.16	-46.32	1.97	8.09	V	Pass
4240	-46.35	-13	-33.35	-62.62	-51.44	1.96	9.20	V	Pass
5090	-45.49	-13	-32.49	-64.3	-51.73	2.09	10.47	V	Pass

Other harmonics are lower than background noise

Band :	GSM850	Temperature :	22~23°C
Test Mode :	EDGE Class 8 Link	Relative Humidity :	54~56%
Channel :	251		
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (5th, 6th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

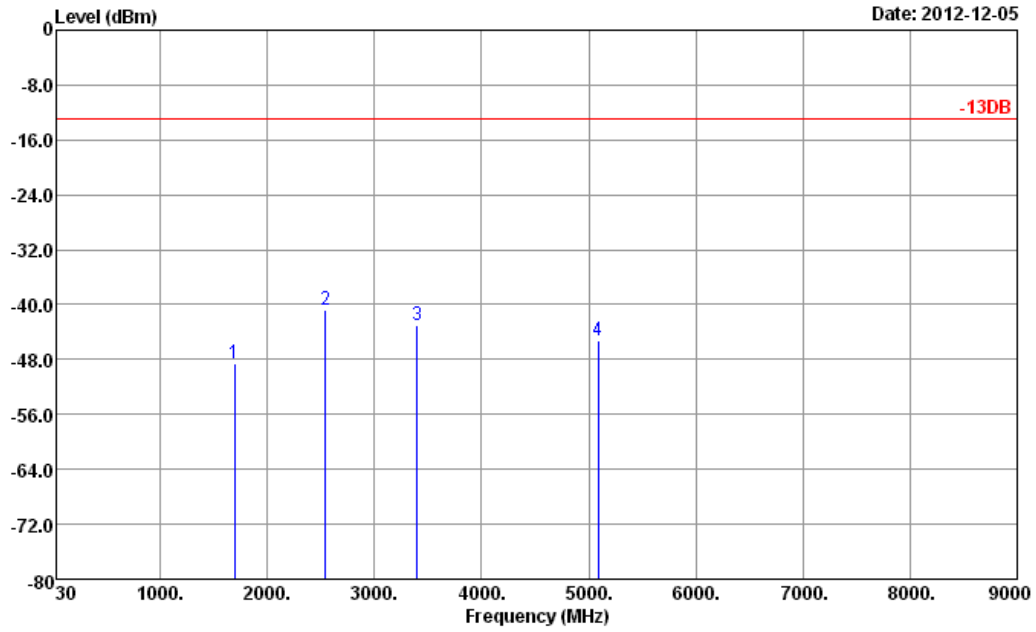


Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 HORIZONTAL
Project : FG 292718-04

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
1696	-50.66	-13	-37.66	-57.67	-52.36	1.35	5.20	H	Pass
2548	-36.31	-13	-23.31	-46.33	-38.74	1.59	6.17	H	Pass
3397	-42.62	-13	-29.62	-54.92	-46.59	1.97	8.09	H	Pass

Other harmonics are lower than background noise

Band :	GSM850	**Temperature :**	22~23°C
Test Mode :	EDGE Class 8 Link	**Relative Humidity :**	54~56%
Channel :	251		
Test Engineer :	David Yang	**Polarization :**	Vertical
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (5th, 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

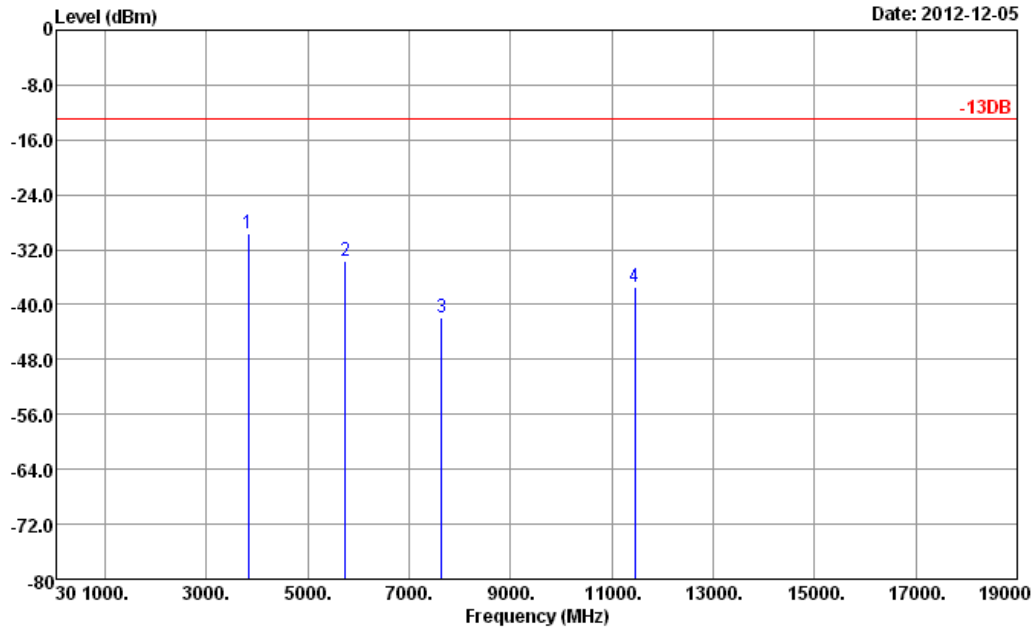


Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 VERTICAL
Project : FG 292718-04

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
1696	-48.64	-13	-35.64	-55.72	-50.34	1.35	5.20	V	Pass
2545	-40.84	-13	-27.84	-50.47	-43.27	1.59	6.17	V	Pass
3397	-42.94	-13	-29.94	-54.99	-46.91	1.97	8.09	V	Pass
5090	-45.19	-13	-32.19	-64.02	-51.43	2.09	10.47	V	Pass

Other harmonics are lower than background noise

Band :	GSM1900	**Temperature :**	22~23°C
Test Mode :	GSM Link	**Relative Humidity :**	54~56%
Channel :	810		
Test Engineer :	David Yang	**Polarization :**	Horizontal
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (5^{th}, 7^{th},…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

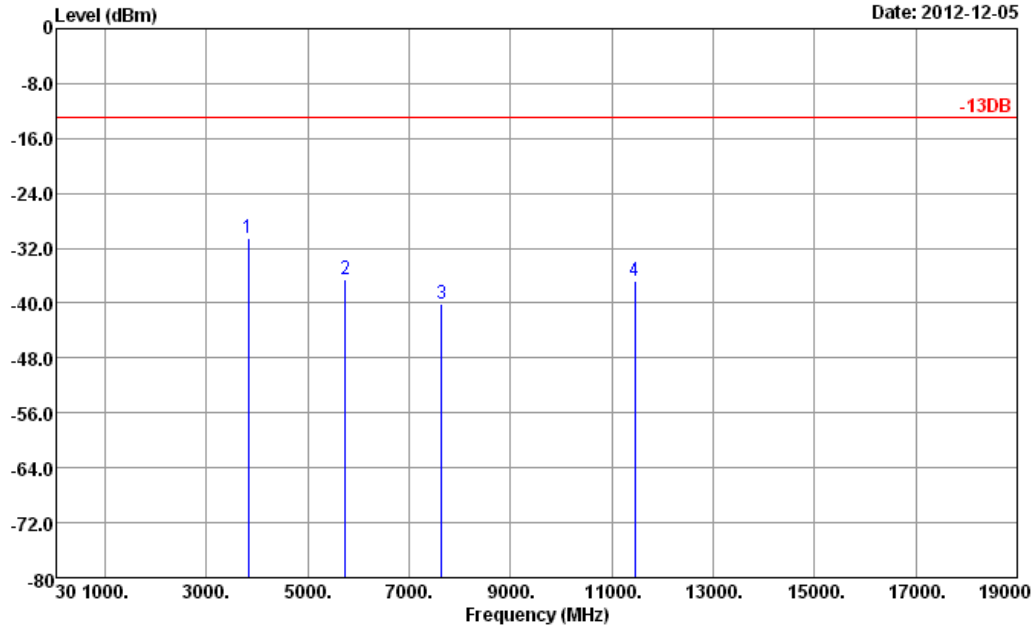


Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 HORIZONTAL
Project : FG 292718-04

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
3820	-29.62	-13	-16.62	-44.46	-36.41	1.99	8.78	H	Pass
5732	-33.64	-13	-20.64	-53.07	-42.25	2.15	10.75	H	Pass
7636	-41.84	-13	-28.84	-64.14	-51.47	2.68	12.31	H	Pass
11456	-37.48	-13	-24.48	-66.24	-48.32	2.55	13.39	H	Pass

Other harmonics are lower than background noise

Band :	GSM1900	**Temperature :**	22~23°C
Test Mode :	GSM Link	**Relative Humidity :**	54~56%
Channel :	810		
Test Engineer :	David Yang	**Polarization :**	Vertical
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (5^{th}, 7^{th},…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

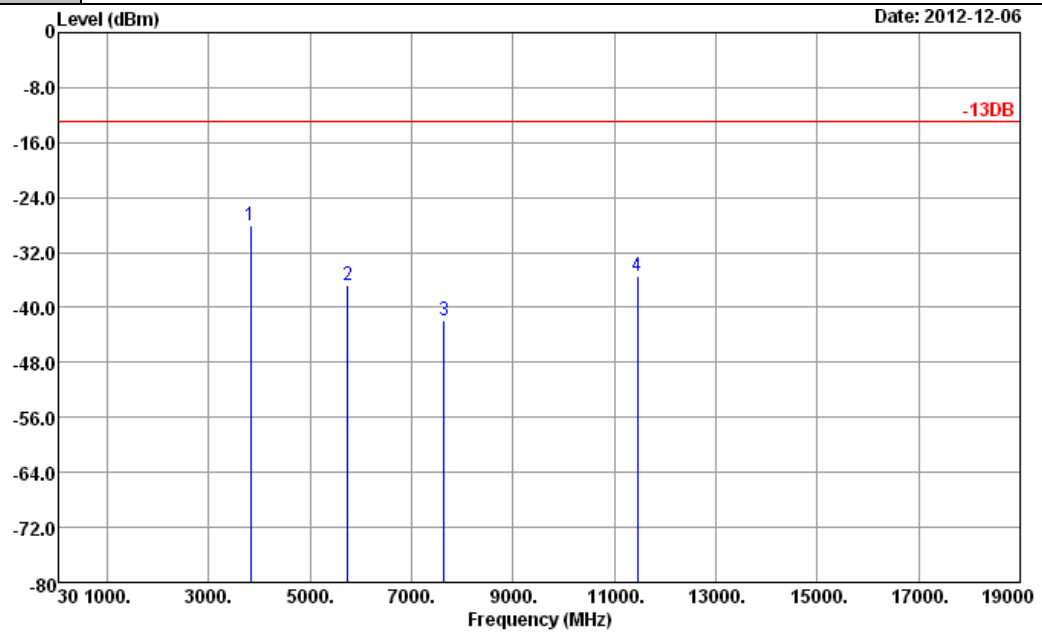


Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 VERTICAL
Project : FG 292718-04

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
3820	-30.55	-13	-17.55	-45.29	-37.34	1.99	8.78	V	Pass
5732	-36.56	-13	-23.56	-56.52	-45.17	2.15	10.75	V	Pass
7636	-40.09	-13	-27.09	-63.99	-49.72	2.68	12.31	V	Pass
11456	-36.74	-13	-23.74	-65.22	-47.58	2.55	13.39	V	Pass

Other harmonics are lower than background noise

Band :	GSM1900	**Temperature :**	22~23°C
Test Mode :	EDGE Class 8 Link	**Relative Humidity :**	54~56%
Channel :	810		
Test Engineer :	David Yang	**Polarization :**	Horizontal
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (5^{th}, 7^{th},…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

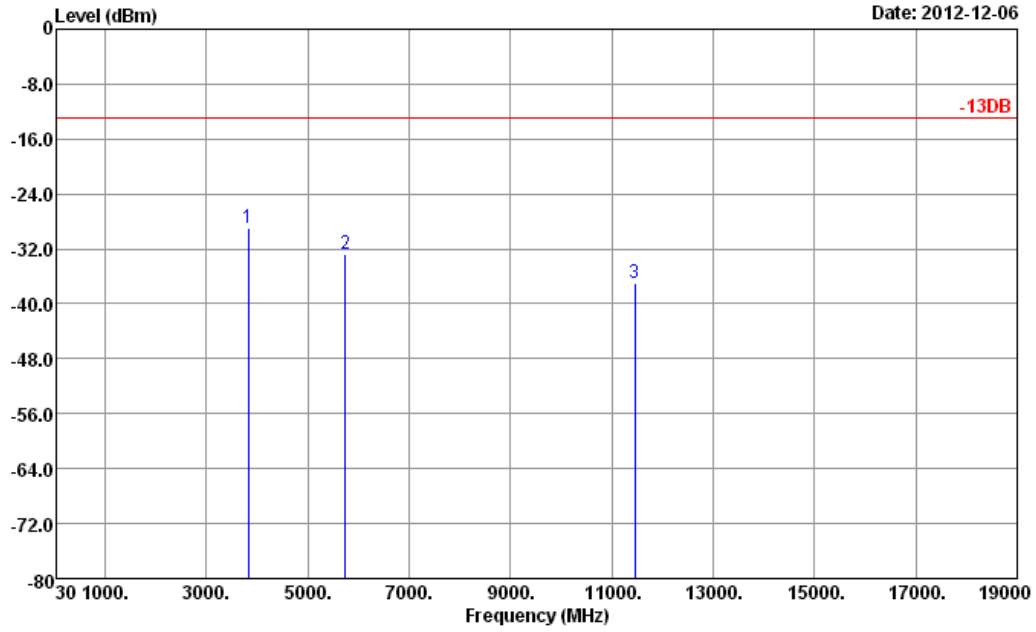


Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 HORIZONTAL
Project : FG 292718-04

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
3820	-28.02	-13	-15.02	-43.45	-34.81	1.99	8.78	H	Pass
5732	-36.66	-13	-23.66	-56.07	-45.27	2.15	10.75	H	Pass
7640	-41.83	-13	-28.83	-64.31	-51.46	2.68	12.31	H	Pass
11456	-35.51	-13	-22.51	-64.2	-46.35	2.55	13.39	H	Pass

Other harmonics are lower than background noise

Band :	GSM1900	**Temperature :**	22~23°C
Test Mode :	EDGE Class 8 Link	**Relative Humidity :**	54~56%
Channel :	810		
Test Engineer :	David Yang	**Polarization :**	Vertical
Remark :	1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line. 2. The harmonic (4^{th}, 5^{th},…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		



Site : 03CH05-HY
Condition : -13DB HF_EIRP_101221 VERTICAL
Project : FG 292718-04

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
3820	-29.05	-13	-16.05	-43.91	-35.84	1.99	8.78	V	Pass
5732	-32.68	-13	-19.68	-52.01	-41.29	2.15	10.75	V	Pass
11456	-36.99	-13	-23.99	-65.09	-47.83	2.55	13.39	V	Pass

Other harmonics are lower than background noise

3.8 Frequency Stability Measurement

3.8.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

3.8.2 Measuring Instruments

The section 4.0 of List of Measuring Equipment of this test report is used for test.

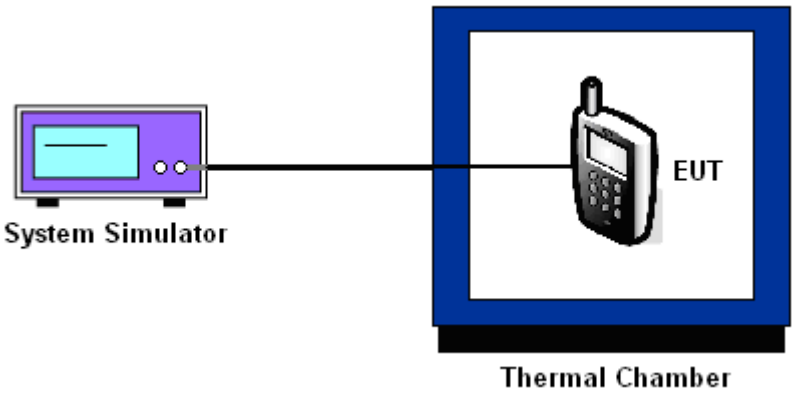
3.8.3 Test Procedures for Temperature Variation

1. The EUT was set up in the thermal chamber and connected with the base station.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.
4. If the EUT cannot be turned on at -30°C, the testing lowest temperature will be raised in 10°C step until the EUT can be turned on.

3.8.4 Test Procedures for Voltage Variation

1. The EUT was placed in a temperature chamber at 25±5° C and connected with the base station.
2. The power supply voltage to the EUT was varied from BEP to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

3.8.5 Test Setup



3.8.6 Test Result of Temperature Variation

Band :	GSM 850	Channel :	189
Limit (ppm) :	2.5	Frequency :	836.4 MHz

Temperature (°C)	GSM		EDGE Class 8		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	-44	-0.05	-39	-0.05	PASS
-20	-36	-0.04	-36	-0.04	
-10	-21	-0.02	-30	-0.04	
0	-23	-0.03	-23	-0.03	
10	-24	-0.03	-25	-0.03	
20	-28	-0.03	-26	-0.03	
30	-36	-0.04	-29	-0.03	
40	-37	-0.04	-33	-0.04	
50	-47	-0.06	-37	-0.04	

Band :	GSM 1900	Channel :	661
Limit (ppm) :	2.5	Frequency :	1880.0 MHz

Temperature (°C)	GSM		EDGE Class 8		Result
	Freq. Dev. (Hz)	Deviation (ppm)	Freq. Dev. (Hz)	Deviation (ppm)	
-30	-82	-0.04	-73	-0.04	PASS
-20	-75	-0.04	-66	-0.03	
-10	-63	-0.03	-63	-0.03	
0	-53	-0.03	-53	-0.03	
10	-42	-0.02	-47	-0.02	
20	-49	-0.03	-51	-0.03	
30	-54	-0.03	-59	-0.03	
40	-59	-0.03	-63	-0.03	
50	-72	-0.04	-71	-0.04	

3.8.7 Test Result of Voltage Variation

Band & Channel	Mode	Voltage (Volt)	Freq. Dev. (Hz)	Deviation (ppm)	Limit (ppm)	Result
GSM 850 CH189	GSM	3.7	-33	-0.04	2.5	PASS
		BEP	-28	-0.03		
		4.1	-30	-0.04		
	EDGE Class 8	3.7	-42	-0.05		
		BEP	-38	-0.04		
		4.1	-39	-0.05		
GSM 1900 CH661	GSM	3.7	-43	-0.02		
		BEP	-34	-0.02		
		4.1	-59	-0.03		
	EDGE Class 8	3.7	-41	-0.02		
		BEP	-43	-0.02		
		4.1	-49	-0.03		

Note:

1. Normal Voltage = 3.7V.
2. Battery End Point (BEP) = 3.5 V.

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
System Simulator	R&S	CMU200	117995	N/A	Jul. 30, 2012	Dec. 12, 2012 ~ Dec. 13, 2012	Jul. 29, 2013	Conducted (TH02-HY)
Spectrum Analyzer	R&S	FSP40	100055	9kHz~40GHz	Jun. 06, 2012	Dec. 12, 2012 ~ Dec. 13, 2012	Jun. 05, 2013	Conducted (TH02-HY)
Thermal Chamber	Ten Billion	TTH-D3SP	TBN-930701	N/A	Jul. 23, 2012	Dec. 12, 2012 ~ Dec. 13, 2012	Jul. 22, 2013	Conducted (TH02-HY)
Thermometer	Wisewind	410	BU5004	N/A	Nov. 22, 2012	Dec. 12, 2012 ~ Dec. 13, 2012	Nov. 21, 2013	Conducted (TH02-HY)
RF cable	HONOVA	MF86	N/A	N/A	Nov. 25, 2012	Dec. 12, 2012 ~ Dec. 13, 2012	Nov. 24, 2013	Conducted (TH02-HY)
RF cable	HONOVA	MF86	N/A	N/A	Nov. 25, 2012	Dec. 12, 2012 ~ Dec. 13, 2012	Nov. 24, 2013	Conducted (TH02-HY)
Filter	Woken	1000-12750MHz SMA	0100V1H010001G	1G Highpass	Nov. 26, 2012	Dec. 12, 2012 ~ Dec. 13, 2012	Nov. 25, 2013	Conducted (TH02-HY)
Filter	Microwave	H03G18G3	Filter	N/A	Nov. 26, 2012	Dec. 12, 2012 ~ Dec. 13, 2012	Nov. 25, 2013	Conducted (TH02-HY)
Notch Filter	Wainwright	WRCT 800/960-0.2/40 8ssk	SN22	WCDMA 850	Nov. 26, 2012	Dec. 12, 2012 ~ Dec. 13, 2012	Nov. 25, 2013	Conducted (TH02-HY)
Notch Filter	Wainwright	WRCD1700/2000-0.2/40-10SSK	SN37	PCS	Nov. 26, 2012	Dec. 12, 2012 ~ Dec. 13, 2012	Nov. 25, 2013	Conducted (TH02-HY)
Spectrum Analyzer	R&S	ESU26	100390	20Hz ~ 26.5GHz	Dec. 22, 2011	Dec. 05, 2012 ~ Dec. 07, 2012	Dec. 21, 2012	Radiation (03CH05-HY)
Bilog Antenna	Schaffner	CBL6111C	2725	30MHz~2GHz	Oct. 06, 2012	Dec. 05, 2012 ~ Dec. 07, 2012	Oct. 05, 2013	Radiation (03CH05-HY)
Turn Table	HD	Deis HD 2000	420/611	0 ~ 360 degree	N/A	Dec. 05, 2012 ~ Dec. 07, 2012	N/A	Radiation (03CH05-HY)
Horn Antenna	ESCO	3117	66584	1GHz~18GHz	Aug. 10, 2012	Dec. 05, 2012 ~ Dec. 07, 2012	Aug. 09, 2013	Radiation (03CH05-HY)
Pre Amplifier	Agilent	8449B	3008A02665	1GHz~26.5GHz	Aug. 28, 2012	Dec. 05, 2012 ~ Dec. 07, 2012	Aug. 27, 2013	Radiation (03CH05-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz ~ 40GHz	Sep. 28, 2012	Dec. 05, 2012 ~ Dec. 07, 2012	Sep. 27, 2013	Radiation (03CH05-HY)
Pre Amplifier	COM-POWER	PA-103	161075	10-1000MHz.32dB. GAIN	Feb. 27, 2012	Dec. 05, 2012 ~ Dec. 07, 2012	Feb. 26, 2013	Radiation (03CH05-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9KHz ~ 30MHz	Jul. 03, 2012	Dec. 05, 2012 ~ Dec. 07, 2012	Jul. 02, 2014	Radiation (03CH05-HY)
System Simulator	R&S	CMU200	117591	N/A	Oct. 21, 2011	Dec. 05, 2012 ~ Dec. 07, 2012	Oct. 20, 2013	Radiation (03CH05-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Thermometer	Wisewind	410	BU5004	N/A	Nov. 22, 2012	Dec. 05, 2012 ~ Dec. 07, 2012	Nov. 21, 2013	Radiation (03CH05-HY)
Test Software	Audix	E3	Version 6.2009-8-24	N/A	N/A	Dec. 05, 2012 ~ Dec. 07, 2012	N/A	Radiation (03CH05-HY)
Controller	HD GmbH	HD100	N/A	N/A	N/A	Dec. 05, 2012 ~ Dec. 07, 2012	N/A	Radiation (03CH05-HY)
Antenna Mast	HD GmbH	MA 240	N/A	N/A	N/A	Dec. 05, 2012 ~ Dec. 07, 2012	N/A	Radiation (03CH05-HY)
RF Cable	Huber+Suhner	RG 142	NA	30M~1G	Nov. 29, 2012	Dec. 05, 2012 ~ Dec. 07, 2012	Nov. 28, 2013	Radiation (03CH05-HY)
RF Cable	Huber+Suhner	SF104	NA	1G~26.5G	Nov. 29, 2012	Dec. 05, 2012 ~ Dec. 07, 2012	Nov. 28, 2013	Radiation (03CH05-HY)
Filter	Woken	1000-12750 MHz SMA	0100V1H010 001G	1G Highpass	Nov. 26, 2012	Dec. 05, 2012 ~ Dec. 07, 2012	Nov. 25, 2013	Radiation (03CH05-HY)
Filter	Microwave	H03G18G3	Filter	N/A	Nov. 26, 2012	Dec. 05, 2012 ~ Dec. 07, 2012	Nov. 25, 2013	Radiation (03CH05-HY)
Notch Filter	Wainwright	WRCT 800/960-0.2/ 40 8ssk	SN22	WCDMA 850	Nov. 26, 2012	Dec. 05, 2012 ~ Dec. 07, 2012	Nov. 25, 2013	Radiation (03CH05-HY)
Notch Filter	Wainwright	WRCD1700/ 2000-0.2/40-10SSK	SN37	PCS	Nov. 26, 2012	Dec. 05, 2012 ~ Dec. 07, 2012	Nov. 25, 2013	Radiation (03CH05-HY)

Note: Test equipment calibration is traceable to the procedure of ISO17025.

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**