Report No.: RZA2010-0989_24

TESTING
No. L2264

Part 24

TEST REPORT

Product Name	GSM /WCDMA dual mode mobile phone
FCC ID	WLPW110
Model	W110
Applicant	Shanghai Longcheer3g Technology Co.,Ltd

TA Technology (Shanghai) Co., Ltd.

GENERAL SUMMARY

Product Name	GSM /WCDMA dual mode mobile phone	**Model**	W110
FCC ID	WLPW110	**Report No.**	RZA2010-0989_24
Client	Shanghai Longcheer3g Technology Co.,Ltd		
Manufacturer	Shanghai Longcheer3g Technology Co.,Ltd		
Reference Standard(s)	**FCC CFR47 Part 2 (2009-12)** Frequency Allocations And Radio Treaty Matters;General Rules And Regulations **FCC CFR47 Part 24E (2009-12)** Personal Communications Services **ANSI/TIA-603-C** Land mobile FM or PM Communications Equipment Measurements and Performance Standards.(2004)		
Conclusion	This portable wireless equipment has been measured in all cases requested by the relevant standards. Test results in Chapter 2 of this test report are below limits specified in the relevant standards. General Judgment: **Pass** (Stamp) **Date of issue: July 14th, 2010**		
Comment	The test result only responds to the measured sample.		

Approved by Yang Weizhong **Revised by** Xu Kai **Performed by** Du Ruwei

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1. General Information

1.1. Notes of the test report

TA Technology (Shanghai) Co., Ltd. guarantees the reliability of the data presented in this test report, which is the results of measurements and tests performed for the items under test on the date and under the conditions stated in this test report and is based on the knowledge and technical facilities available at TA Technology (Shanghai) Co., Ltd. at the time of execution of the test.

TA Technology (Shanghai) Co., Ltd. is liable to the client for the maintenance by its personnel of the confidentiality of all information related to the items under test and the results of the test. This report only refers to the item that has undergone the test.

This report standalone dose not constitute or imply by its own an approval of the product by the certification Bodies or competent Authorities. This report cannot be used partially or in full for publicity and/or promotional purposes without previous written approval of **TA Technology (Shanghai) Co., Ltd.** and the Accreditation Bodies, if it applies.

1.2. Testing laboratory

Company:	TA Technology (Shanghai) Co., Ltd.
Address:	No.145, Jintang Rd, Tangzhen Industry Park, Pudong
City:	Shanghai
Post code:	201201
Country:	P. R. China
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1.3. Applicant Information

Company:	Shanghai Longcheer3g Technology Co.,Ltd
Address:	No.1,Building 5, 299 Bisheng Rd, Zhangjiang Hi-Tech Park, Pudong, Shanghai
City:	Shanghai
Postal Code:	201204
Country:	P.R. China
Contact	Zhengfang hu
Telephone:	+86-21-64088898
Fax:	+86-21-54970816

1.4. Manufacturer Information

Company:	Shanghai Longcheer3g Technology Co.,Ltd
Address:	No.1,Building 5, 299 Bisheng Rd, Zhangjiang Hi-Tech Park, Pudong, Shanghai
City:	Shanghai
Postal Code:	201204
Country:	P.R. China
Telephone:	+86-21-64088898
Fax:	+86-21-54970816

1.5. Information of EUT

General information

Name of EUT:	GSM /WCDMA dual mode mobile phone		
Device Operating Configurations:			
IMEI:	355077010016854		
Operating Mode(s):	GSM1900:（tested） WCDMA Band II:（tested）		
GPRS Multi-slot Class:	10		
EGPRS Multi-slot Class:	10		
Antenna Type:	Internal Antenna		
Power Supply:	Battery or Charger		
Rated Power Supply Voltage:	3.7V		
Extreme Voltage:	Minimum: 3.5V Maximum: 4.2V		
Extreme Temperature:	Lowest: -10°C Highest: +55°C		
Operating Frequency Range(s)	Band	Tx (MHz)	Rx (MHz)
	GSM1900	1850.2 ~ 1909.8	1930.2 ~ 1989.8
	WCDMA Band II	1852.4 ~ 1907.6	1932.4 ~ 1987.6
Hardware Version:	LQWM232A		
Software Version:	LQWHM01.1.0		

Auxiliary equipment details

AE1: Battery

Model:	BL-96
Manufacturer:	i-mobile
S/N:	BAK0810061300286

AE2: Travel Charger

Model:	ASUC1-052050
Manufacturer:	AQUILSTAR PRECISION INDUSTRIAL(SHEN ZHEN)CO.,LTD.
S/N:	/

AE3: Headset

Model:	TJ-090057
Manufacture:	HONG Kong Tenji Technology Industrial Co., Ltd.
S/N:	/

Equipment Under Test (EUT) is GSM /WCDMA dual mode mobile phone with internal antenna. The EUT supports GSM1900 and WCDMA Band II band in this report.

The sample under test was selected by the Client.

Components list please refer to documents of the manufacturer.

1.6. Test Date

The test is performed from July 1, 2010 to July 13, 2010.

2. Test Information

2.1. Summary of test results

Number	Test Case	Clause in FCC rules	Verdict
1	RF power output	2.1046	PASS
2	Effective Isotropic Radiated power	24.232	PASS
3	Occupied Bandwidth	2.1049	PASS
4	Band Edge Compliance	24.238	PASS
5	Frequency Stability	2.1055 / 24.235	PASS
6	Spurious Emissions at Antenna Terminals	2.1051 / 24.238	PASS
7	Radiates Spurious Emission	2.1053 / 24.238	PASS

2.2. RF Power Output

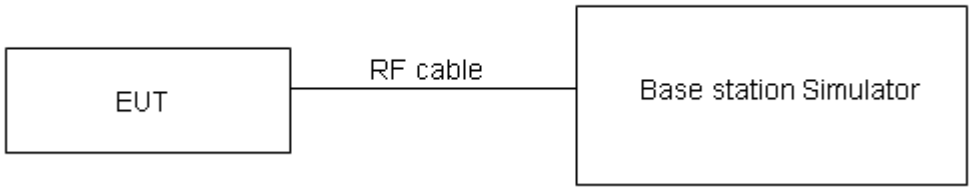
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

During the process of the testing, The EUT is controlled by the Base Station Simulator to ensure max power transmission and proper modulation. These measurements have been tested at following channels: 512,661,810 for GSM 1900 band and 9262,9400,9538 for WCDMA Band II band.

Test Setup



The loss between RF output port of the EUT and the input port of the tester has been taken into consideration.

Limits

No specific RF power output requirements in part 2.1046.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2. U= 0.4 dB.

Test Results

GSM 1900

Channel	Frequency(MHz)	RF Output Power (dBm)
512	1850.2	28.77
661	1880.0	29.29
810	1909.8	29.79

GSM 1900 GPRS

Channel	Frequency(MHz)	1 down 1up RF Output Power (dBm)	1 down 2up RF Output Power (dBm)
512	1850.2	28.77	26.80
661	1880.0	29.29	27.32
810	1909.8	29.80	27.83

GSM 1900 EGPRS

Channel	Frequency(MHz)	1 down 1up RF Output Power (dBm)	1 down 2up RF Output Power (dBm)
512	1850.2	25.78	24.76
661	1880.0	26.29	25.28
810	1909.8	26.80	25.78

WCDMA Band II

Channel	Frequency(MHz)	RF Output Power (dBm)
9262	1852.4	22.45
9400	1880.0	22.80
9538	1907.6	22.93

2.3. Effective Isotropic Radiated Power

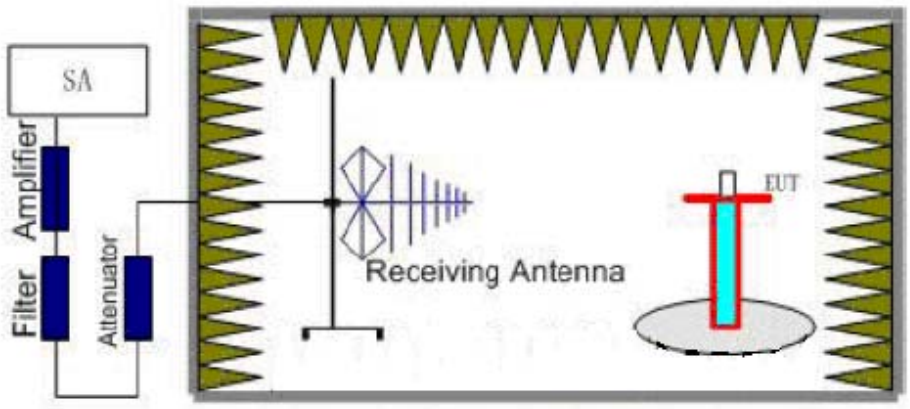
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

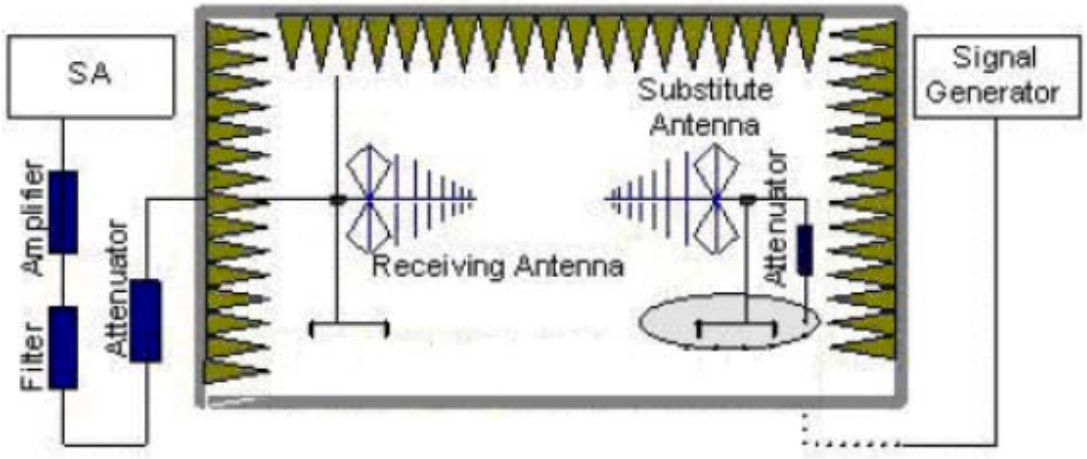
Methods of Measurement

Test procedure:
The measurement was done according to TIA/EIA 603C.
Step 1:
The measurement is carried out in the semi-anechoic chamber. EUT was placed on a 0.8 meters high non-conductive table at a 3 meters test distance from the test receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT. A radio link shall be established between EUT and Tester. The output power of the cell signal of the tester will be decreased until the output power of the EUT reach a maximum value. A peak detector is used while RBW and VBW are both set to 3MHz. During the measurement, the highest emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna moved up and down over a range from 1 to 4 meters in both horizontally and vertically polarized orientations.
Step 2:
A dipole antenna shall be substituted in place of the EUT. The antenna will be driven by a signal generator with a known power S.G. applied through a Tx cable. Then the maximum Analyzer reading is recorded while the antenna was moving up and down. The E.R.P. /E.I.R.P. of the EUT can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
The correction factor (in dB)=S.G. - Tx Cable loss + Substitution antenna gain - Analyzer reading – 2.15. Then the EUT's E.R.P. was calculated with the correction factor, E.R.P. = LVL + Correction factor. The measurement will be conducted at three channels No.512, No.661 and No.810 of GSM 1900 and No.9262, No.9400 and No.9538of WCDMA Band II.

Test Setup



Step 1



Step 2

Limits

Rule Part 24.232(b) specifies that "Mobile/portable stations are limited to 2 watts EIRP. Peak power" and Rule Part 24.232(c) specifies that "Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage".

Limit (EIRP)	≤ 2 W (33 dBm)

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor *k* = 2. U= 1.19 dB

Test Results

GSM 1900

Channel	Frequency (MHz)	LVL （EUT）	S.G	Gain (dBi)	Cable Loss	Pr (dBm)	Correction Factor (dBm)	EIRP (dBm)
512	1850.2	-27.02	0	1.91	14.7	-67.38	54.59	22.51
661	1880.0	-28.03	0	1.94	14.72	-68.49	55.71	24.02
810	1909.8	-29.52	0	1.90	14.77	-70.05	57.18	26.18

GSM 1900 GPRS(1 down 1up)

Channel	Frequency (MHz)	LVL （EUT）	S.G	Gain (dBi)	Cable Loss	Pr (dBm)	Correction Factor (dBm)	EIRP (dBm)
512	1850.2	-26.72	0	1.91	14.7	-67.38	54.59	22.52
661	1880.0	-27.73	0	1.94	14.72	-68.49	55.71	23.86
810	1909.8	-29.42	0	1.90	14.77	-70.05	57.18	26.44

GSM 1900 EGPRS(1 down 1up)

Channel	Frequency (MHz)	LVL （EUT）	S.G	Gain (dBi)	Cable Loss	Pr (dBm)	Correction Factor (dBm)	EIRP (dBm)
512	1850.2	-31.27	0	1.91	14.7	-67.38	54.59	23.90
661	1880.0	-32.56	0	1.94	14.72	-68.49	55.71	25.23
810	1909.8	-33.94	0	1.90	14.77	-70.05	57.18	27.27

WCDMA Band II

Channel	Frequency (MHz)	LVL （EUT）	S.G	Gain (dBi)	Cable Loss	Pr (dBm)	Correction Factor (dBm)	EIRP (dBm)
9262	1852.4	-34.18	0	1.91	14.7	-67.44	54.65	18.21
9400	1880.0	-34.92	0	1.94	14.72	-68.49	55.71	14.17
9538	1907.6	-36.52	0	1.90	14.77	-69.95	57.08	16.50

2.4. Occupied Bandwidth

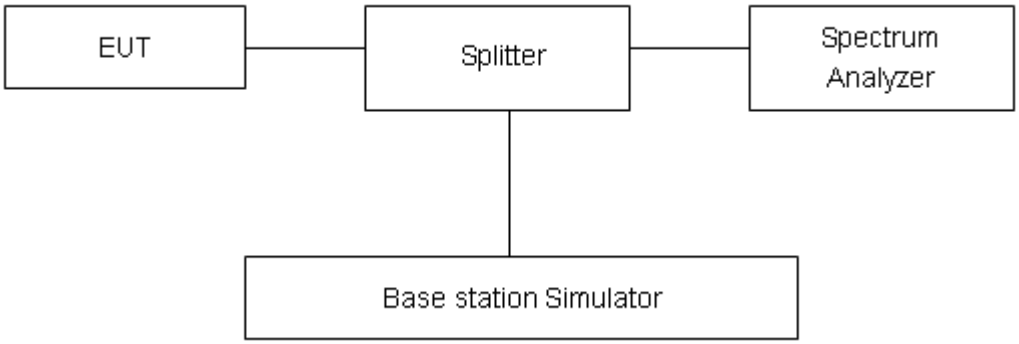
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The occupied bandwidth is measured using spectrum analyzer. RBW is set to 3kHz & 51kHz on spectrum analyzer. 99% power and -26dBC occupied bandwidths are recorded. Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

No specific occupied bandwidth requirements in part 2.1049.

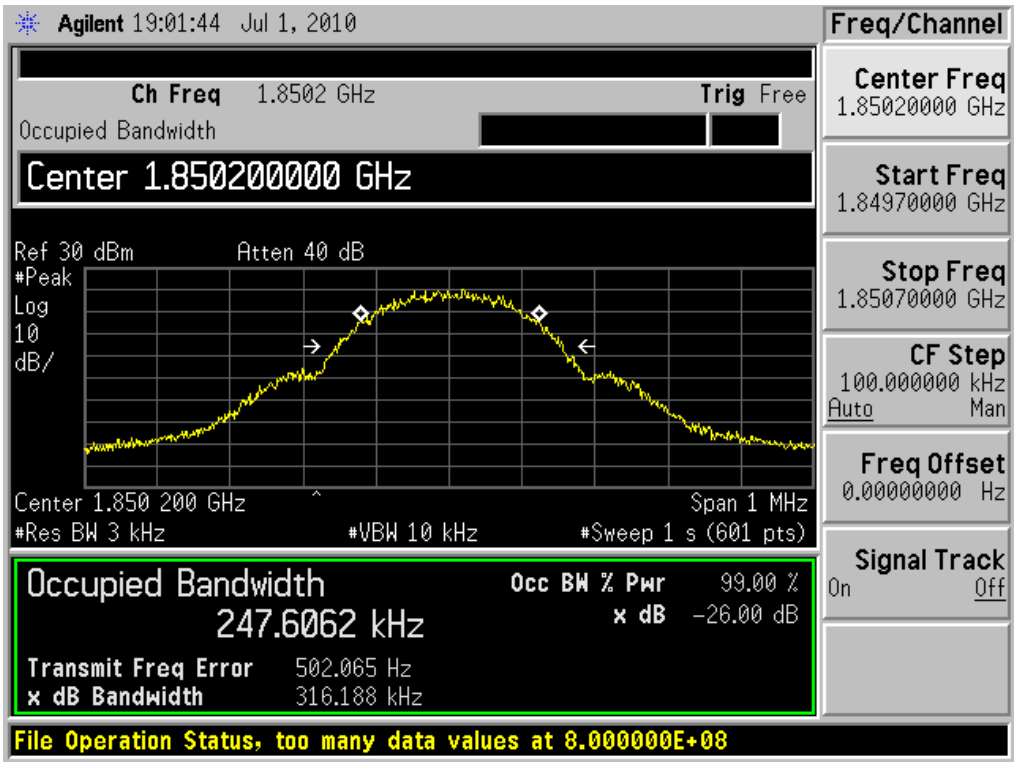
Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2. U= 624Hz.

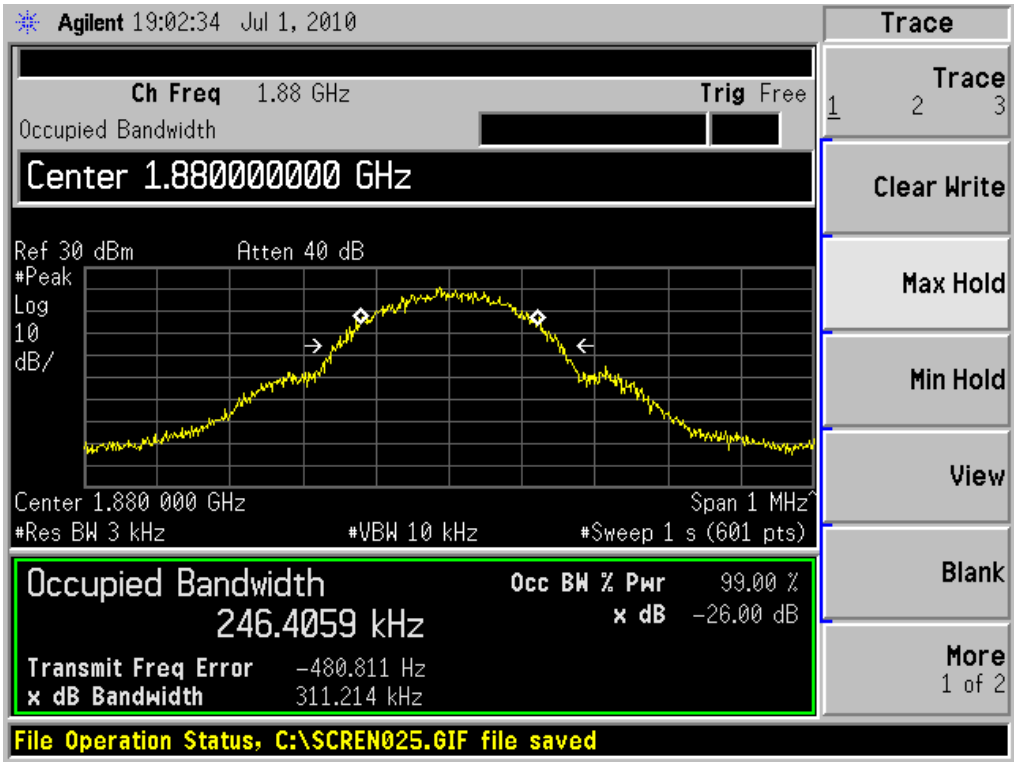
Test Result

GSM 1900

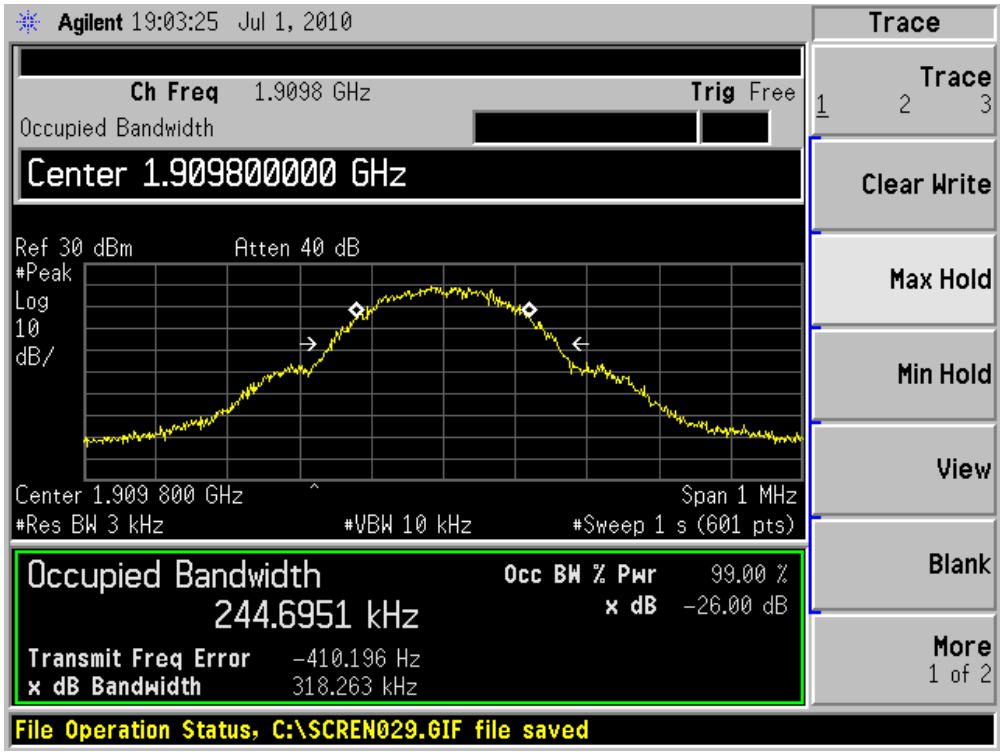
Channel	Frequency (MHz)	99% Power Bandwidth (kHz)	-26dBc Bandwidth(kHz)
512	1850.2	247.61	316.19
661	1880.0	246.41	311.21
810	1909.8	244.70	318.26



GSM1900 CH512 Occupied Bandwidth



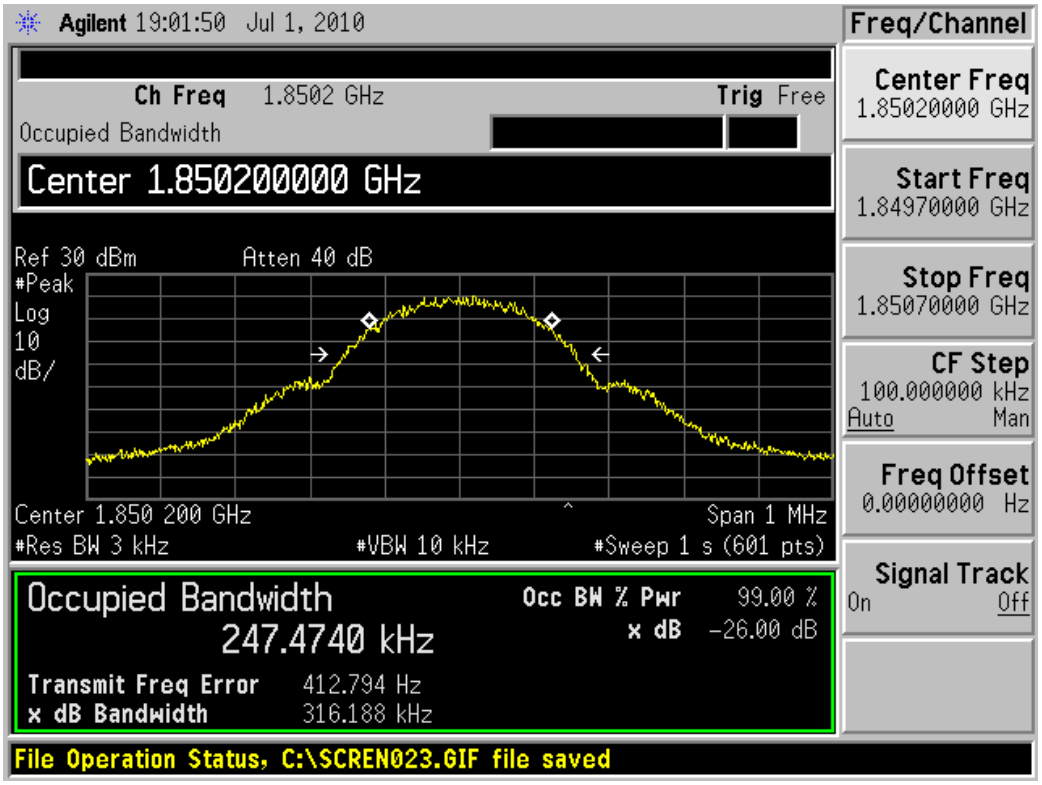
GSM 1900 CH661 Occupied Bandwidth



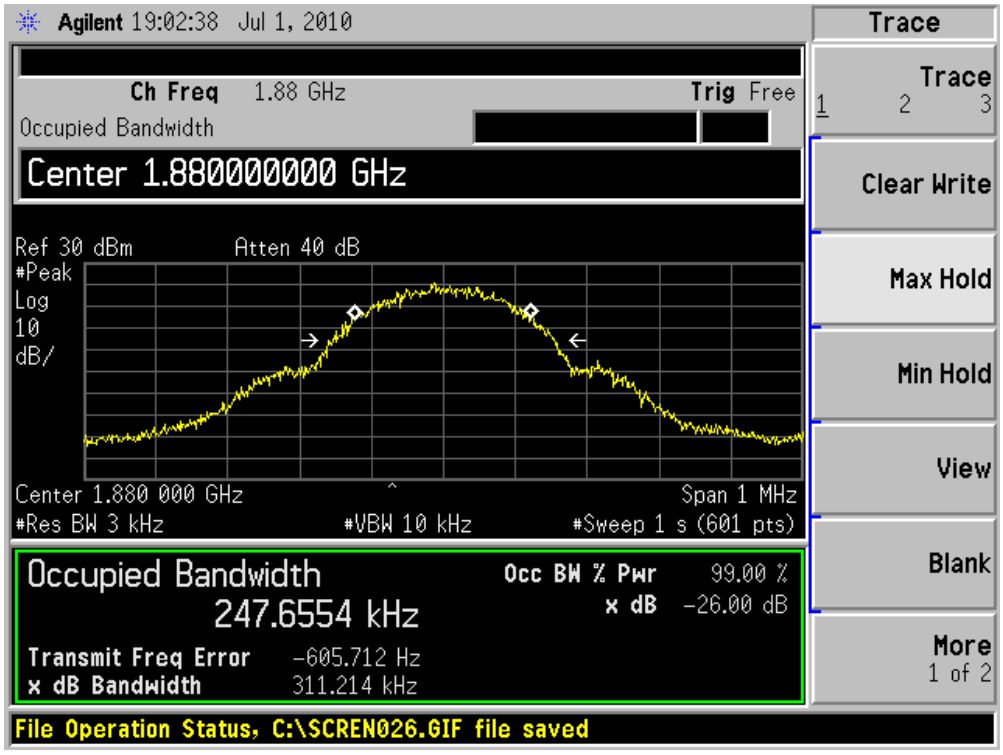
GSM 1900 CH810 Occupied Bandwidth

GSM 1900 GPRS

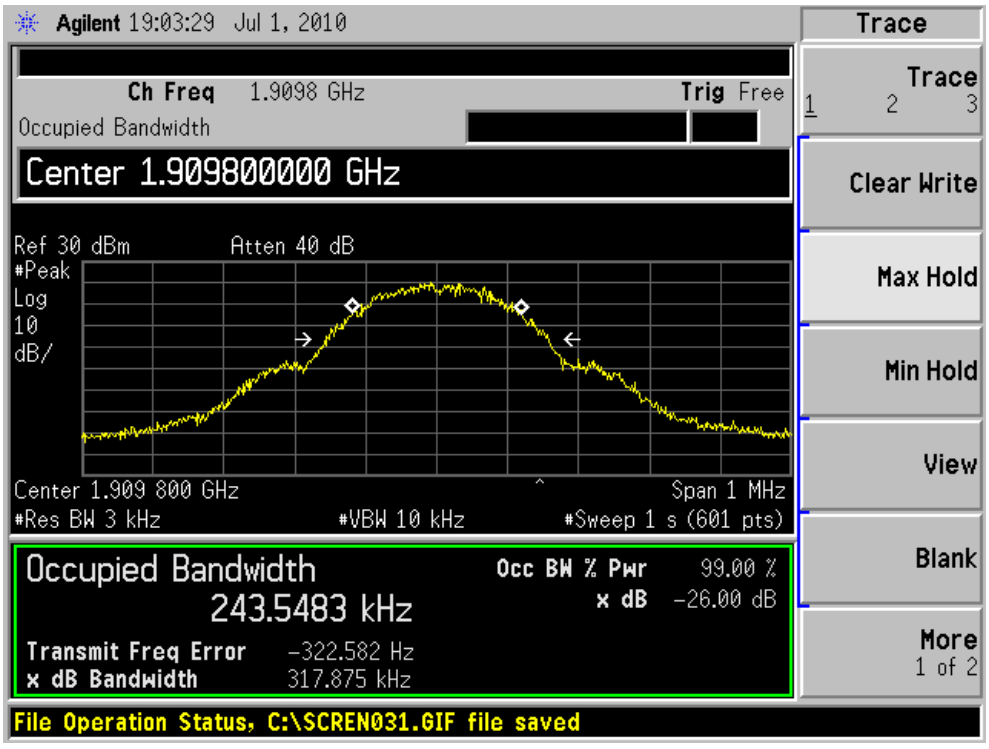
Channel	Frequency (MHz)	99% Power Bandwidth (kHz)	-26dBc Bandwidth(kHz)
512	1850.2	247.47	316.19
661	1880.0	247.66	311.21
810	1909.8	243.55	317.88



GSM1900 GPRS CH512 Occupied Bandwidth



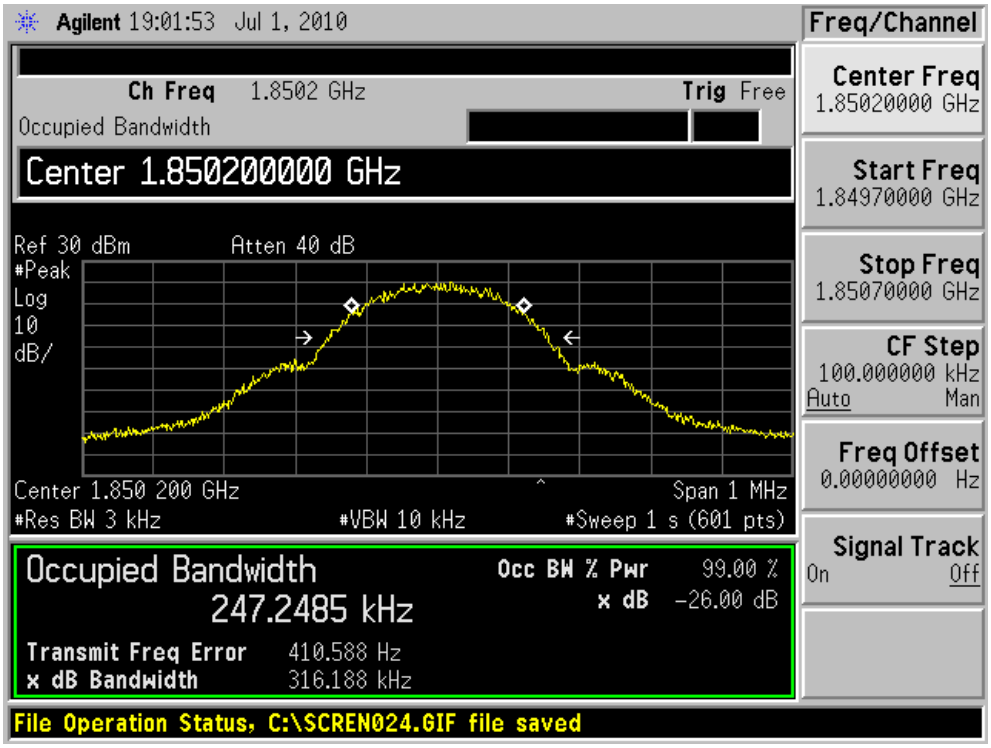
GSM 1900 GPRS CH661 Occupied Bandwidth



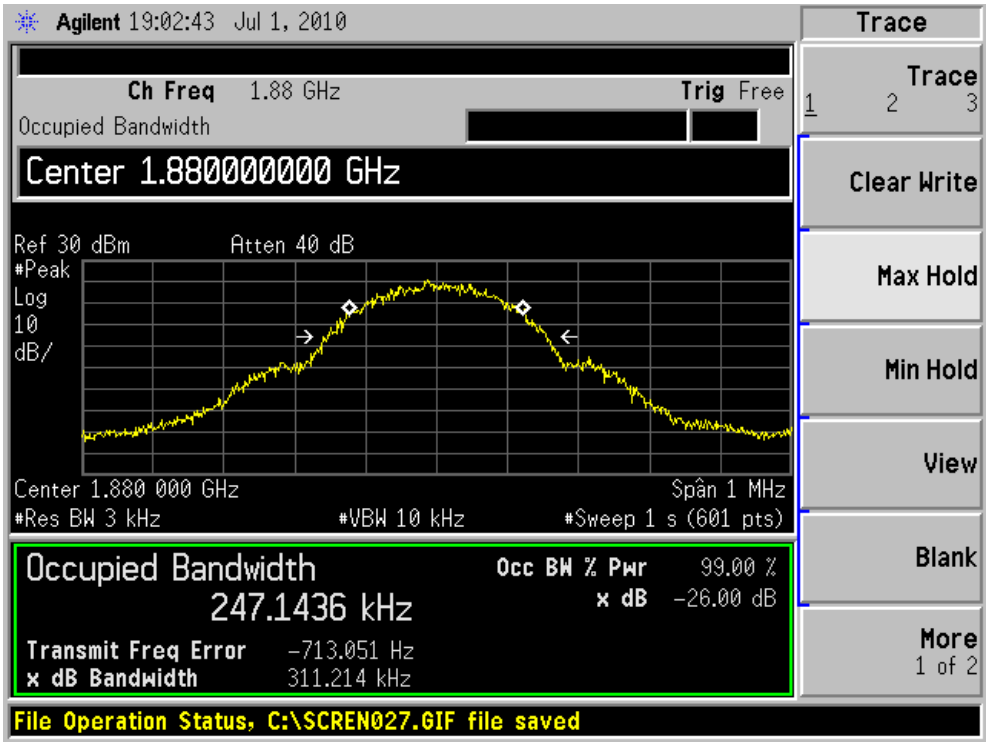
GSM 1900 GPRS CH810 Occupied Bandwidth

GSM 1900 EGPRS

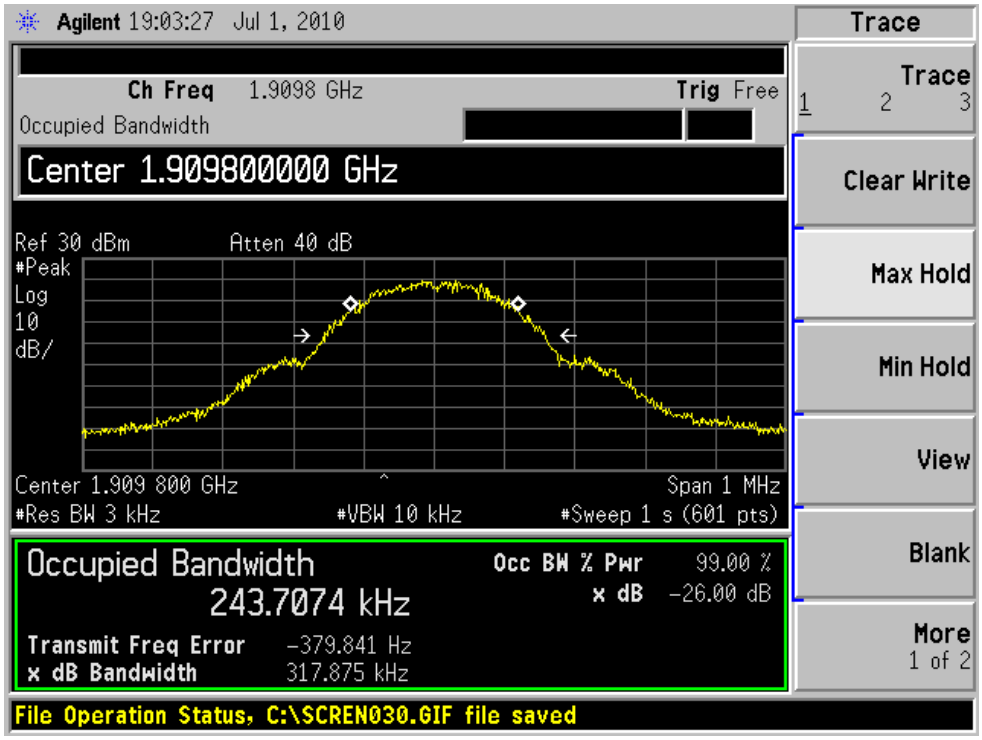
Channel	Frequency (MHz)	99% Power Bandwidth (kHz)	-26dBc Bandwidth(kHz)
512	1850.2	247.25	316.19
661	1880.0	247.14	311.21
810	1909.8	243.71	317.88



GSM1900 EGPRS CH512 Occupied Bandwidth



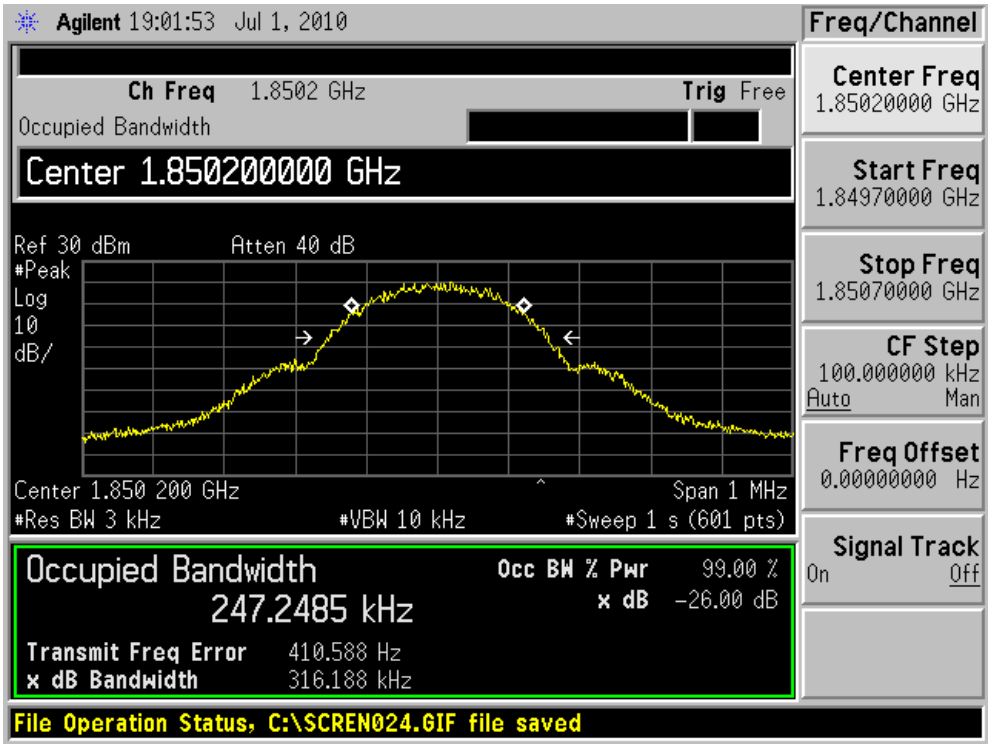
GSM 1900 EGPRS CH661 Occupied Bandwidth



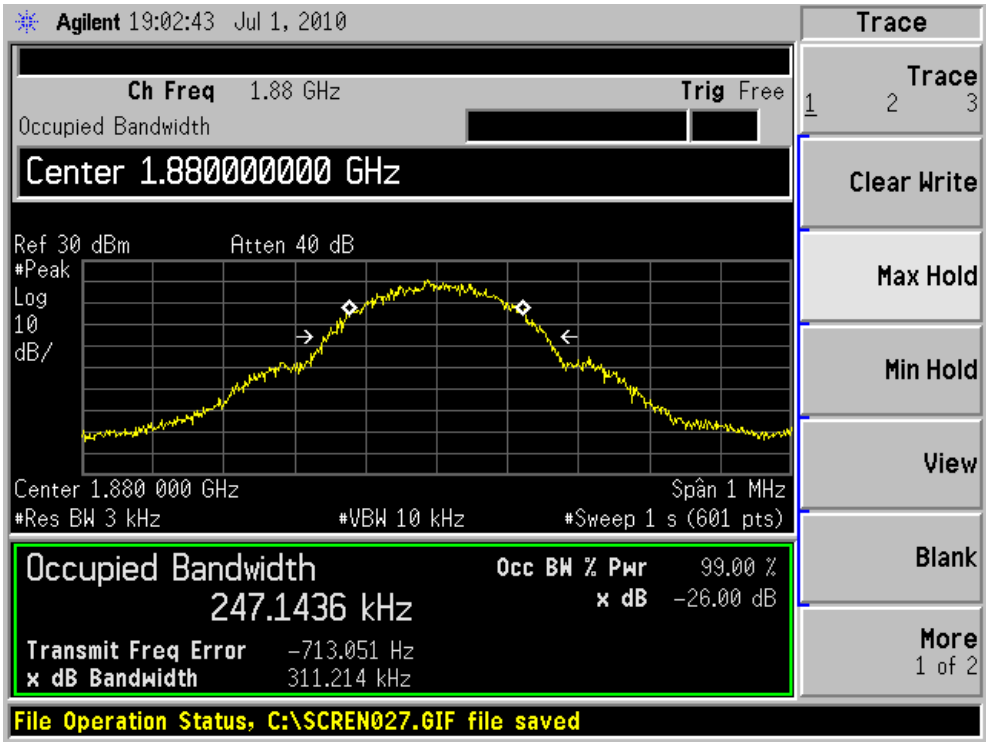
GSM 1900 EGPRS CH810 Occupied Bandwidth

WCDMA Band II

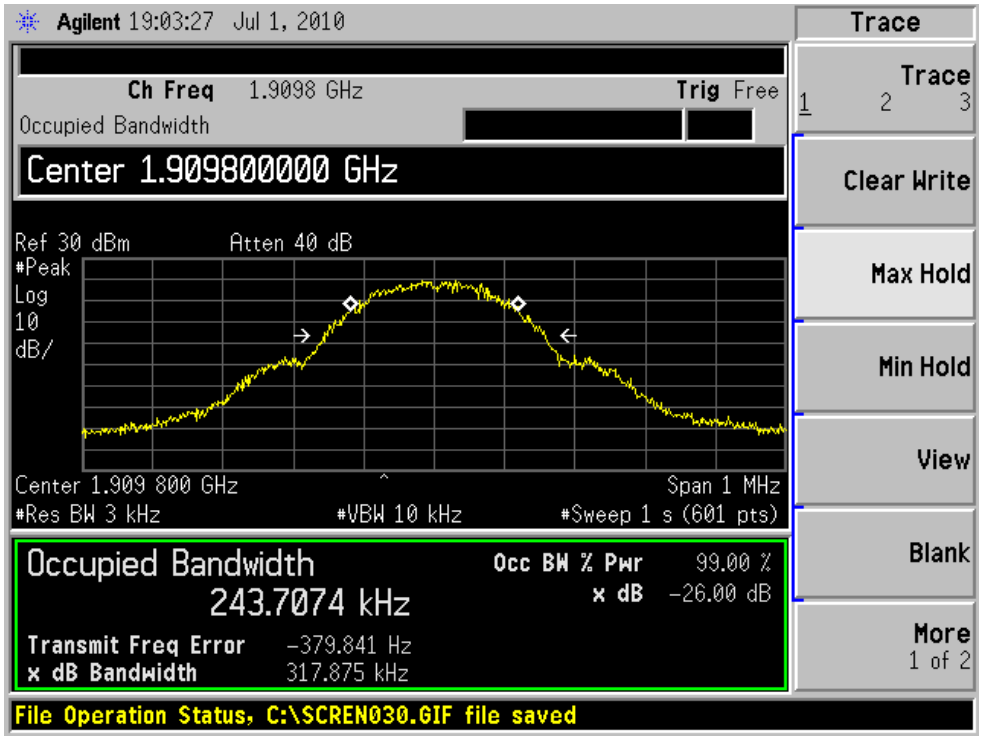
Channel	Frequency (MHz)	99% Power Bandwidth (kHz)	-26dBc Bandwidth(kHz)
9262	1852.4	247.25	316.19
9400	1880.0	247.14	311.21
9538	1907.6	243.71	317.88



GSM1900 EGPRS CH512 Occupied Bandwidth



GSM 1900 EGPRS CH661 Occupied Bandwidth



GSM 1900 EGPRS CH810 Occupied Bandwidth

2.5. Band Edge Compliance

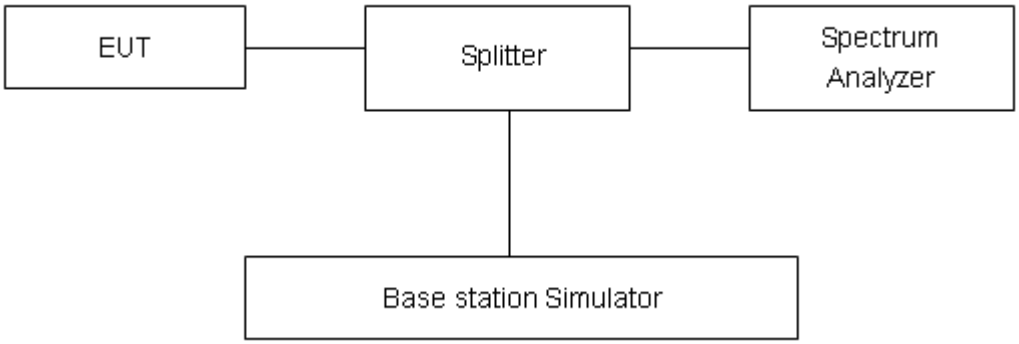
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The band edge of the lowest and highest channels were measured. The Average detector is used and RBW is set to 3kHz & 51 kHz on spectrum analyzer. Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

Rule Part 24.238(a) specifies that “on any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log10 (P) dB.”

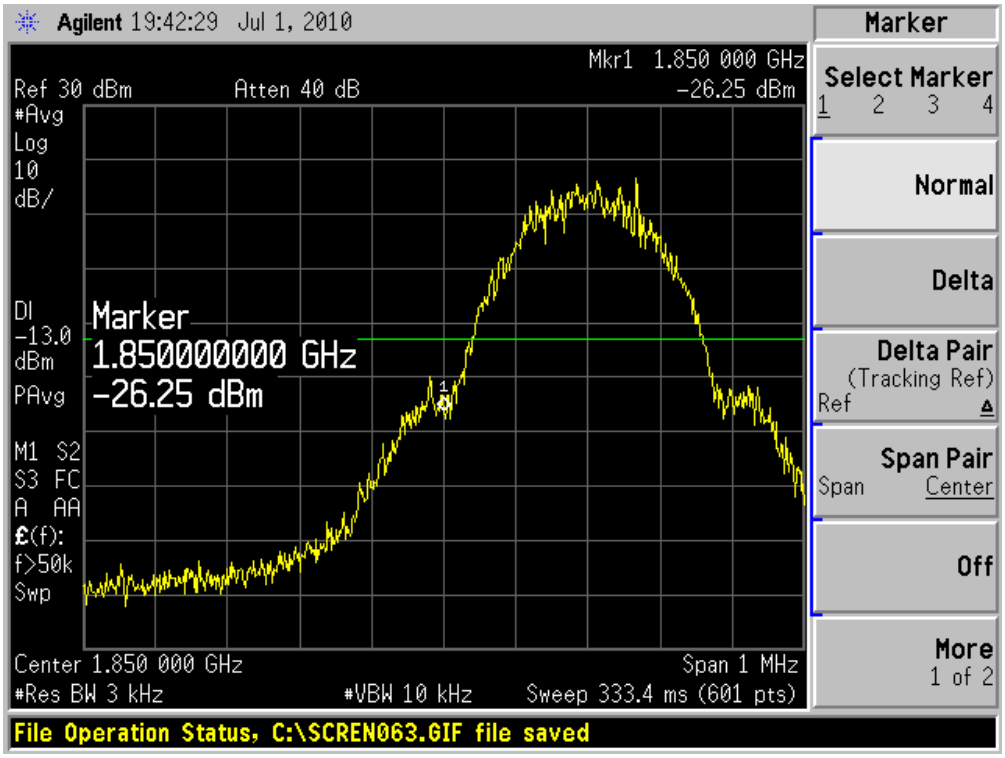
Limit	-13 dBm

Measurement Uncertainty

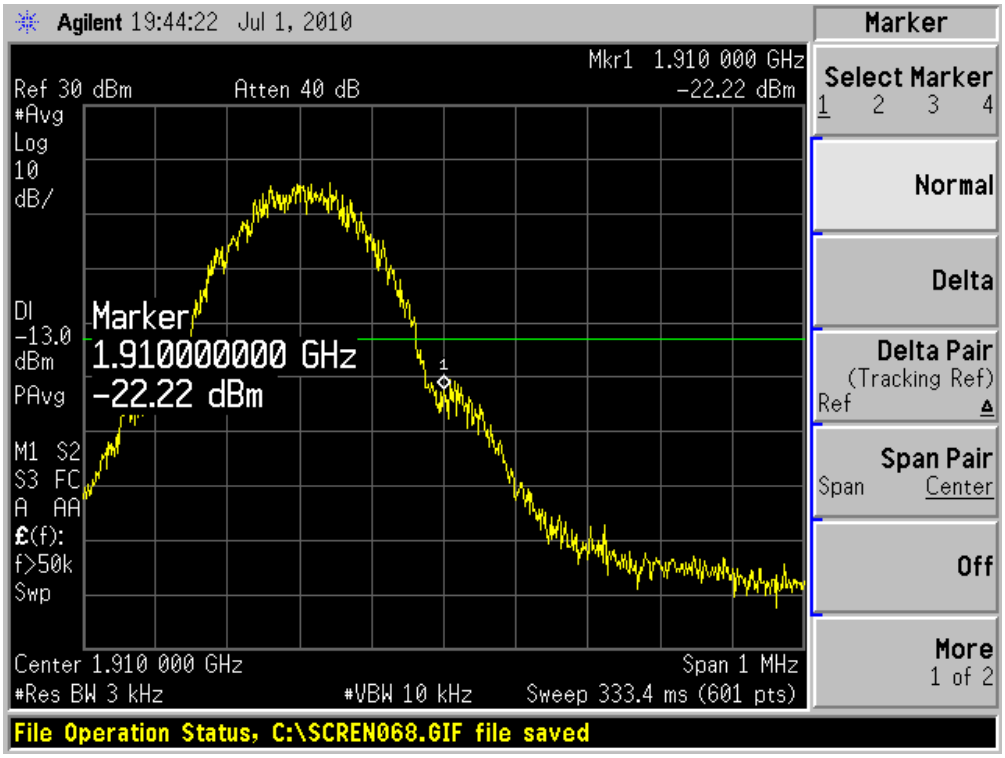
The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor *k* = 1.96. U=0.684dB.

Test Result

GSM 1900

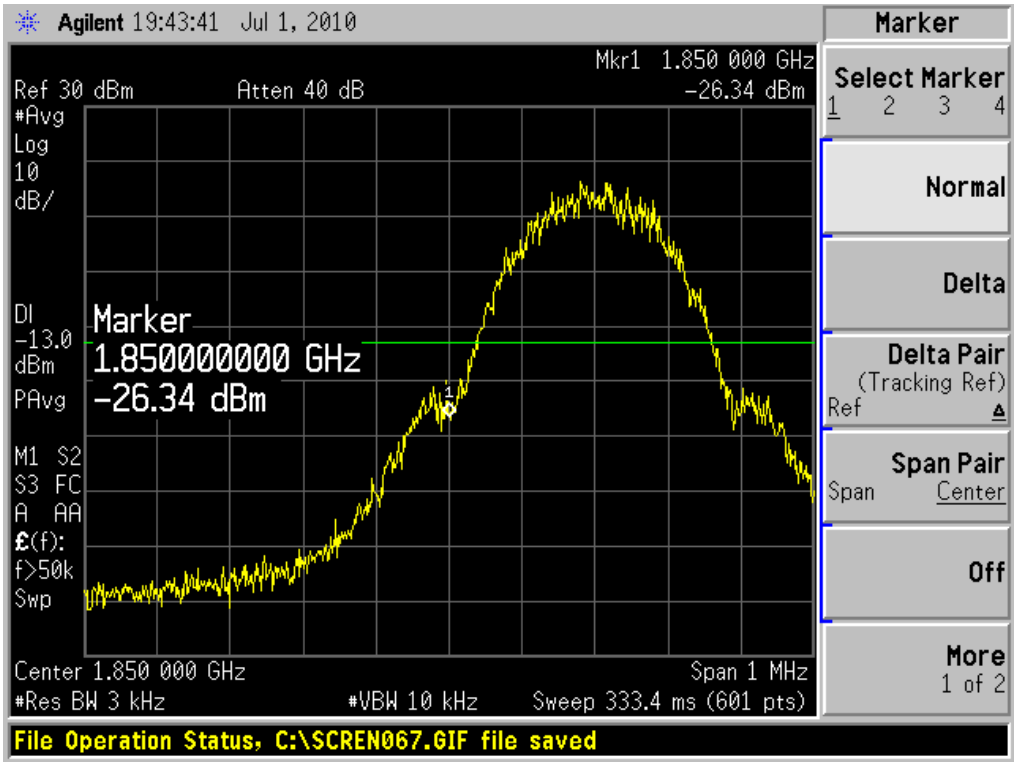


GSM 1900 512 Channel

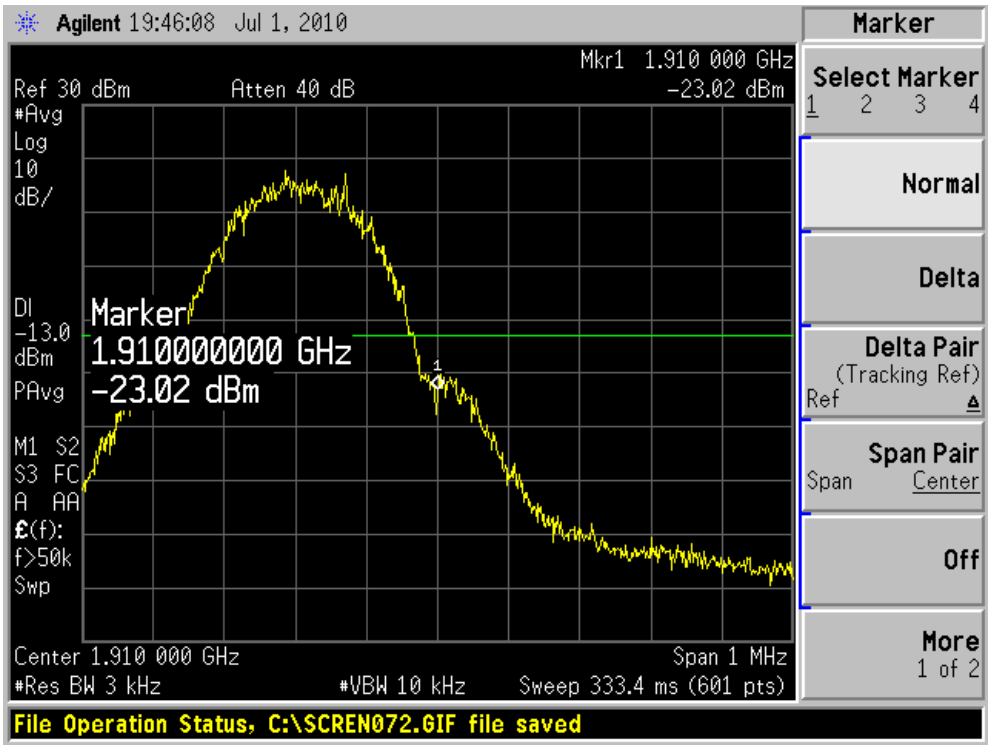


GSM1900 810 Channel

GSM 1900 GPRS

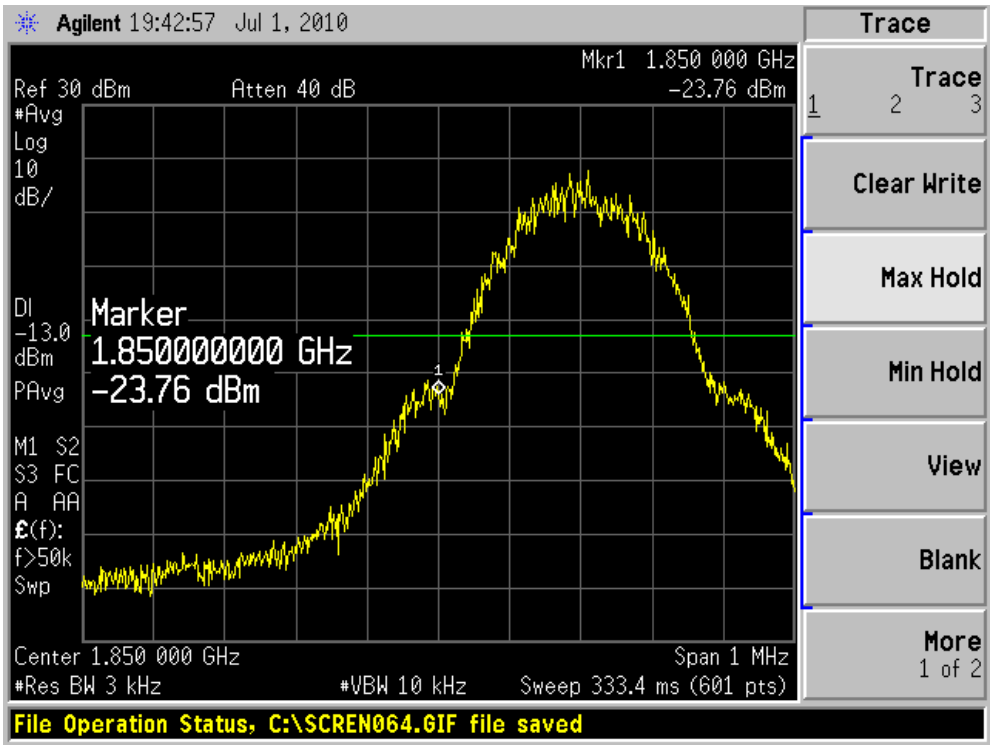


GSM 1900 GPRS 512 Channel

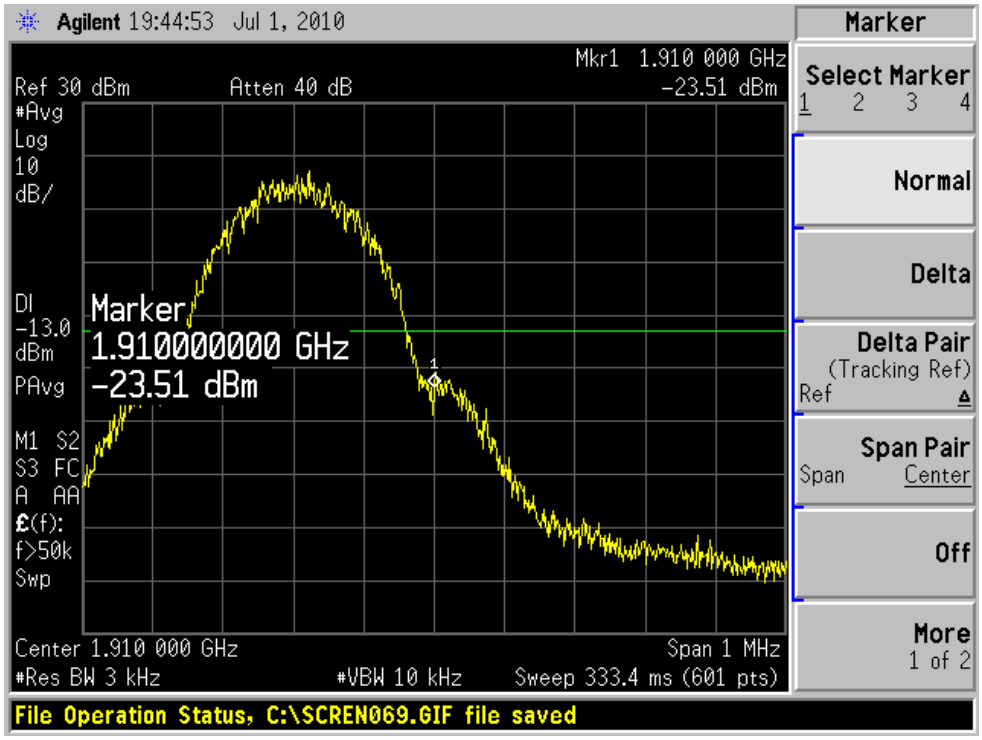


GSM1900 GPRS 810 Channel

GSM 1900 EGPRS

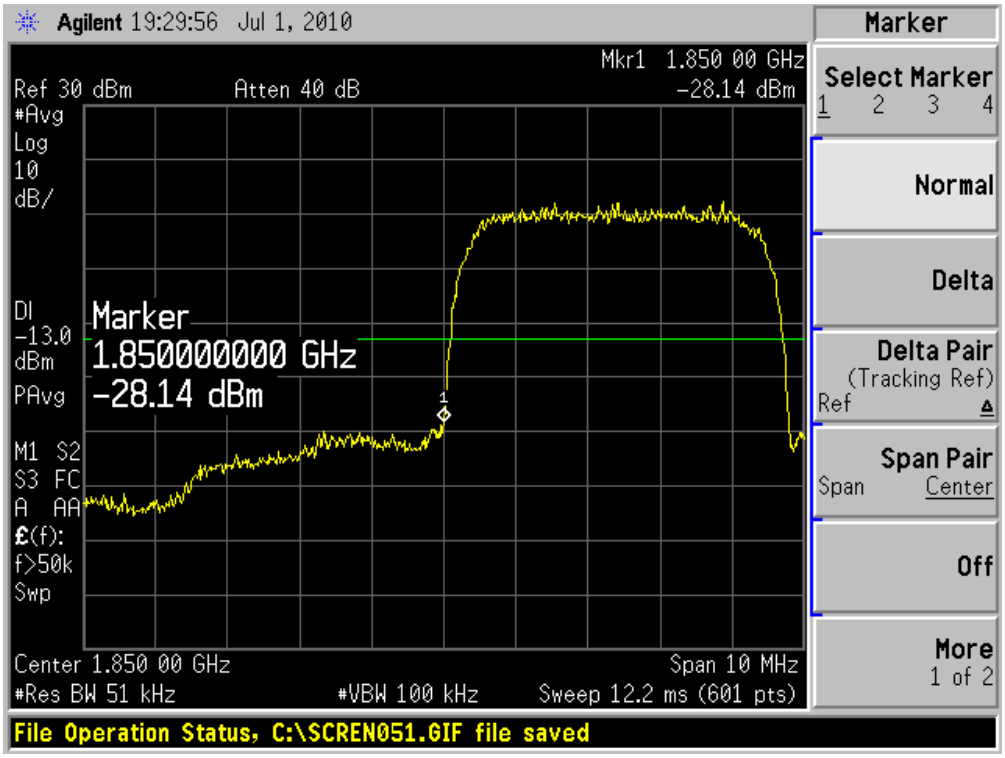


GSM 1900 EGPRS 512 Channel



GSM1900 EGPRS 810 Channel

WCDMA Band II



WCDMA Band II 9262 Channel

WCDMA Band II 9538 Channel

2.6. Frequency Stability

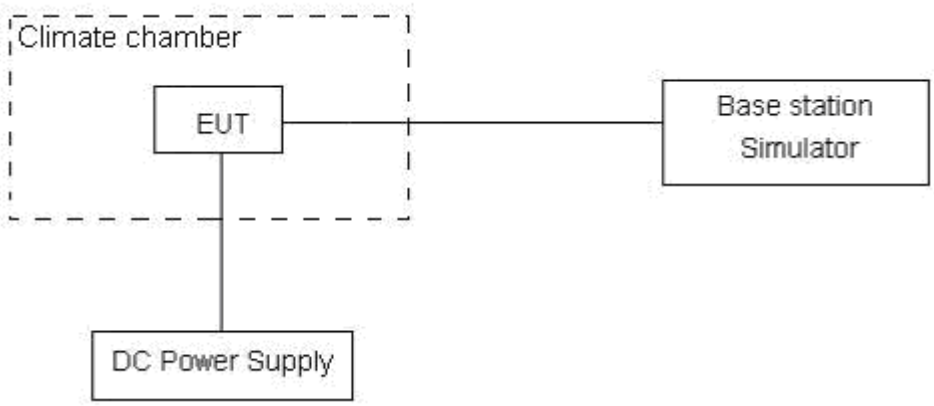
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

1. Frequency Stability (Temperature Variation)
   The temperature inside the climate chamber is varied from -30°C to +50°C in 10°C step size,
   (1) With all power removed, the temperature was decreased to -30°C and permitted to stabilize for three hours.
   (2) Measure the carrier frequency with the test equipment in a “call mode”. These measurements should be made within 1 minute of powering up the mobile station, to prevent significant self warming.
   (3) Repeat the above measurements at 10°C increments from -30°C to +50°C. Allow at least 1.5 hours at each temperature, un-powered, before making measurements.
2. Frequency Stability (Voltage Variation)
   The frequency stability shall be measured with variation of primary supply voltage as follows:
   (1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment.
   (2) For hand carried, battery powered equipment, reduce primary supply voltage to the battery-operating end point which shall be specified by the manufacturer.
   This transceiver is specified to operate with an input voltage of between 3.5 V and 4.2 V, with a nominal voltage of 3.7V.

Test setup



Limits

No specific frequency stability requirements in part 24.235

Measurement Uncertainty

The assessed measurement uncertainty to ensure 99.75％ confidence level for the normal distribution is with the coverage factor *k* = 3. U= 0.01ppm.

Test Result

GSM 1900

Temperature (° C)	Test Results (ppm) / 3.7 V Power supply
	GSM 1900 Channel 661
-30	0.037
-20	0.051
-10	0.029
0	0.036
10	0.019
20	0.036
30	0.029
40	0.038
50	0.045

Voltage (V)	Test Results(ppm) / 20° C
	Channel 661
3.5	0.019
3.7	0.036
4.2	0.043

WCDMA Band II

Temperature (° C)	Test Results (ppm) / 3.7 V Power supply
	WCDMA Band II Channel 9400
-30	0.055
-20	0.044
-10	0.017
0	0.029
10	0.046
20	0.019
30	0.017
40	0.048
50	0.023

Voltage (V)	Test Results(ppm) / 20° C
	WCDMA Band II Channel 9400
3.5	0.033
3.7	0.019
4.2	0.028

2.7. Spurious Emissions at Antenna Terminals

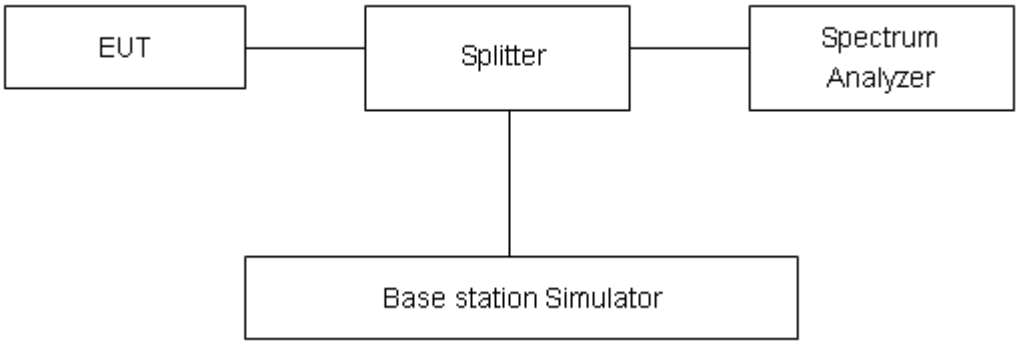
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The measurement is carried out using a spectrum analyzer. The spectrum analyzer scans from 30MHz to the 10th harmonic of the carrier. The peak detector is used and RBW is set to 1MHz on spectrum analyzer.

Test setup



Limits

Rule Part 24.238(a) specifies that “on any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log10 (P) dB.”

Limit	-13 dBm

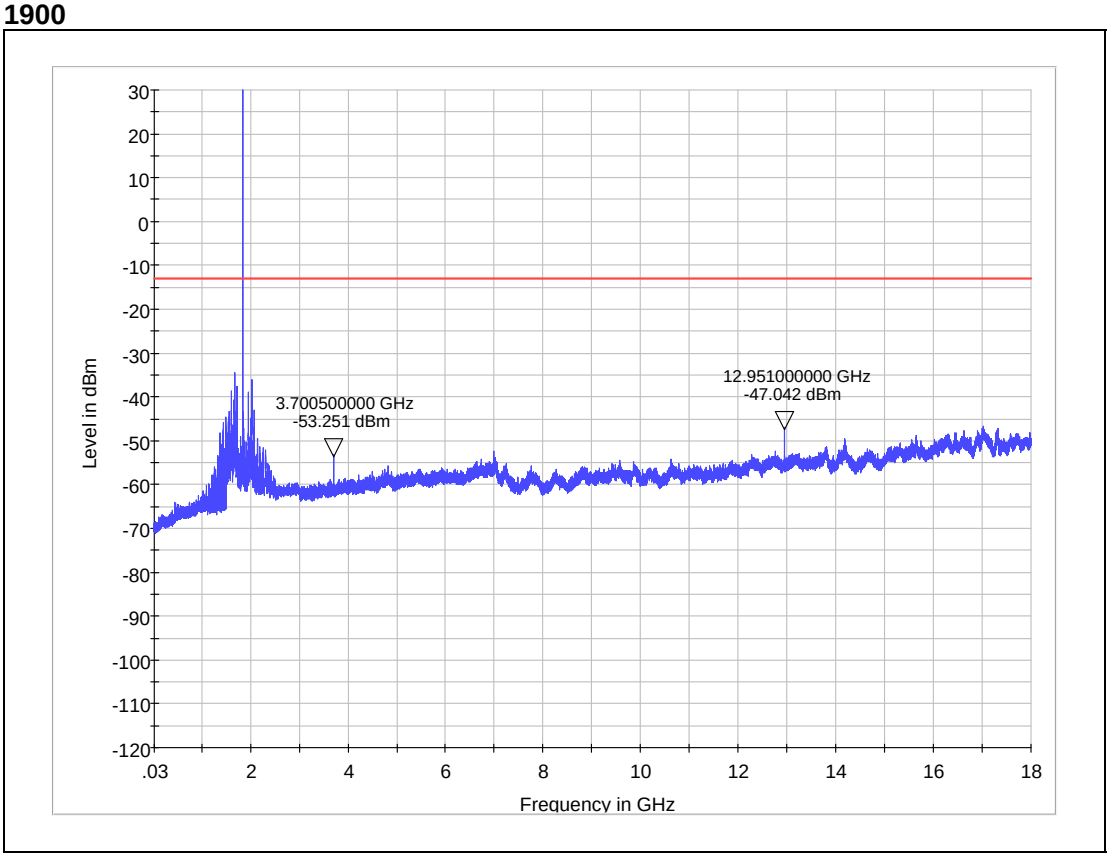
Measurement Uncertainty

The assessed measurement uncertainty to ensure 99.75％ confidence level for the normal distribution is with the coverage factor *k* = 1.96.

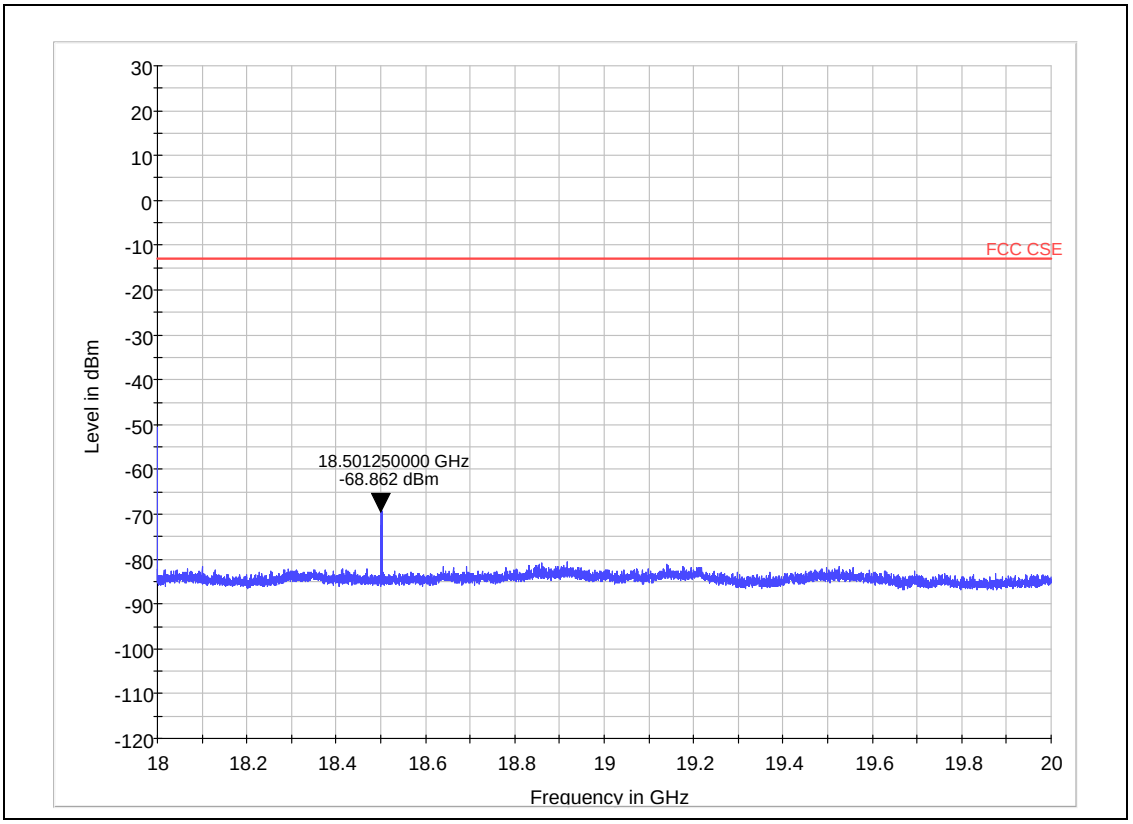
Frequency	Uncertainty
100kHz-2GHz	0.684 dB
2GHz-12.75GHz	1.407 dB

Test Result

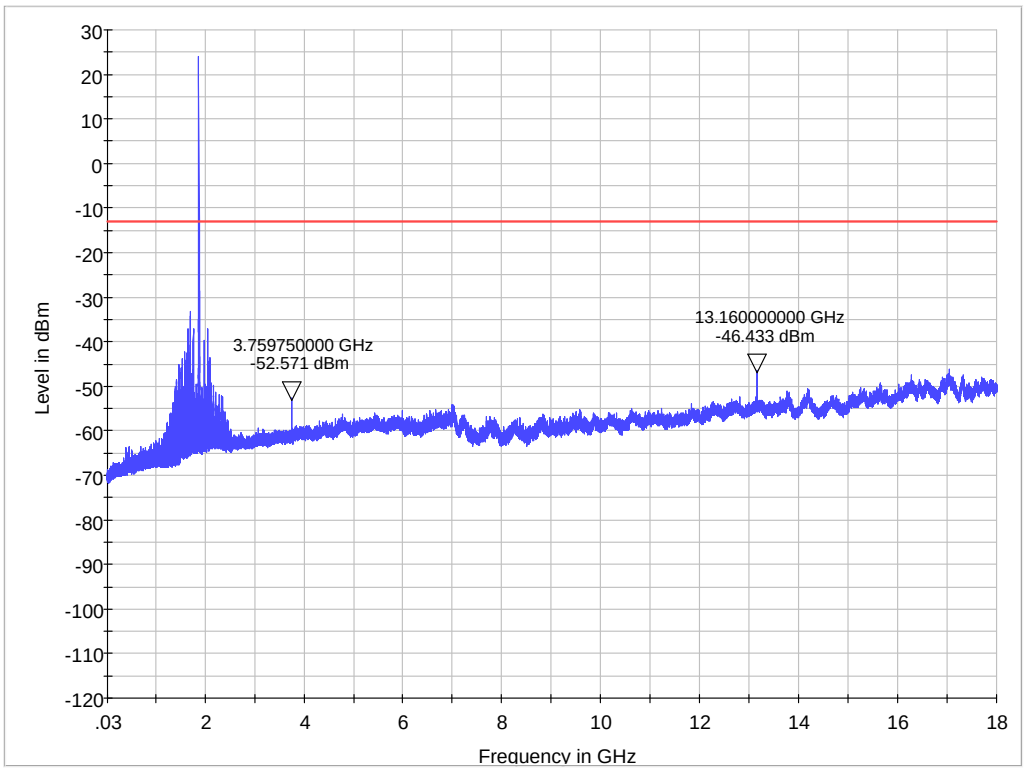
GSM 1900



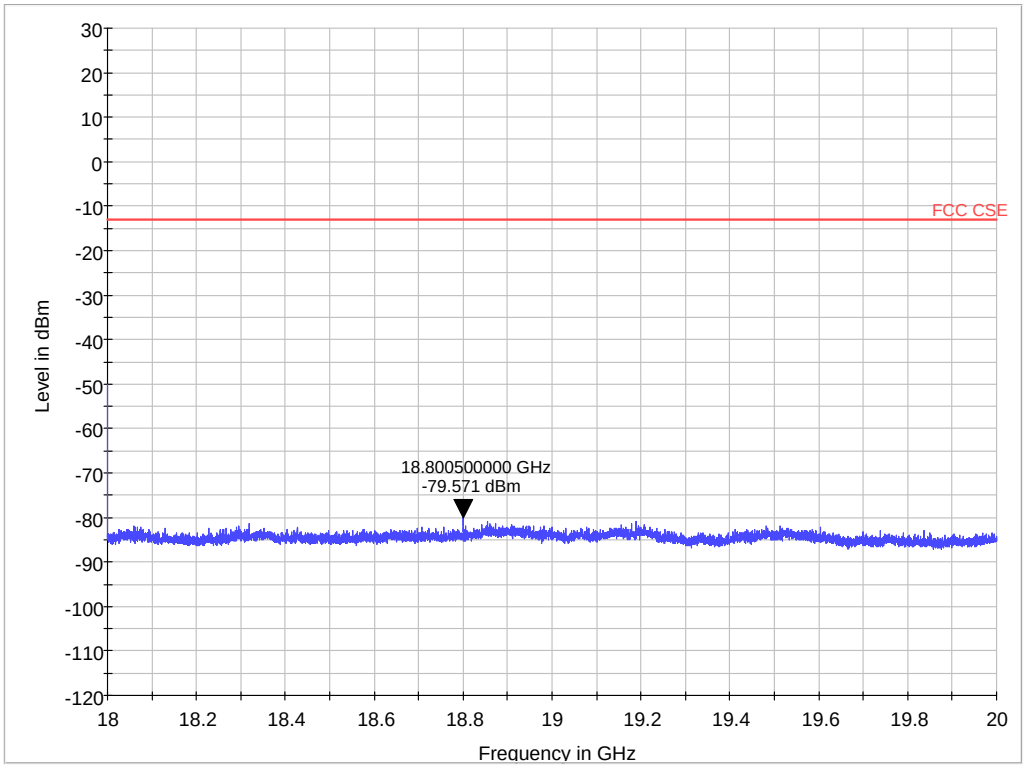
Note: The signal beyond the limit is carrier.
GSM 1900 Channel 512 30MHz ~18GHz



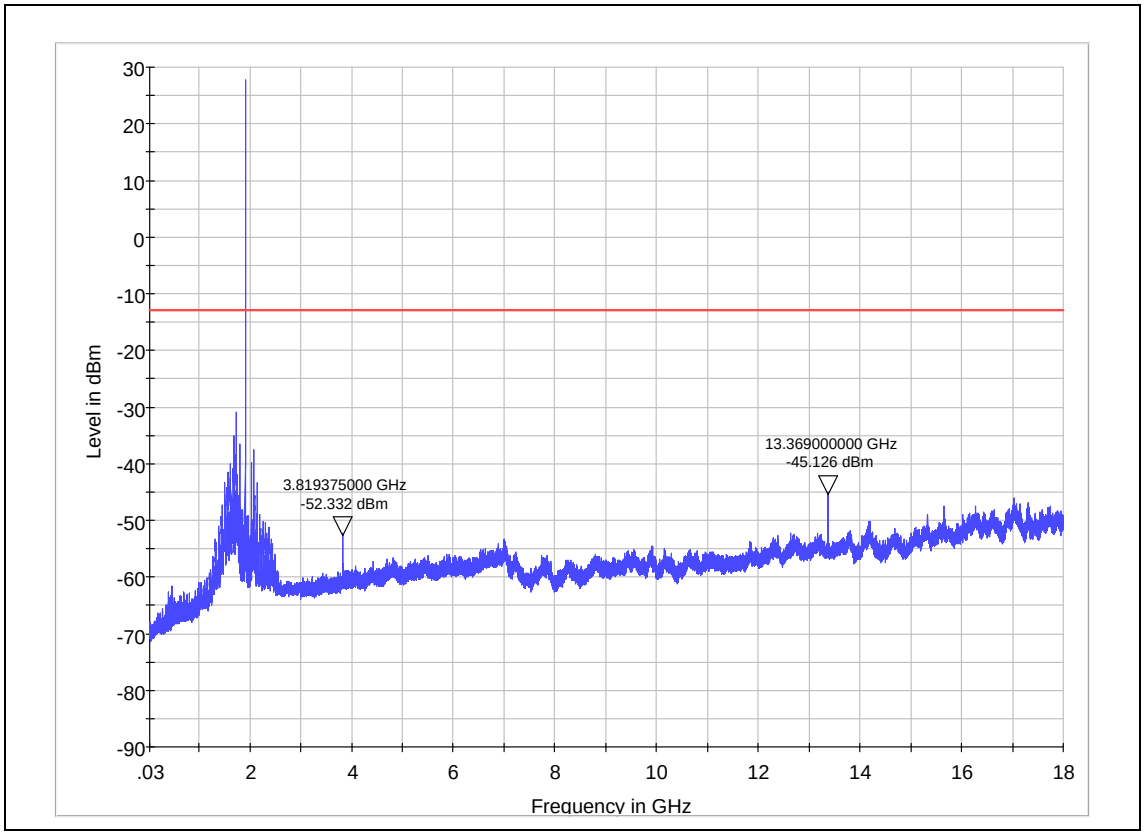
GSM 1900 Channel 512 18GHz ~20GHz



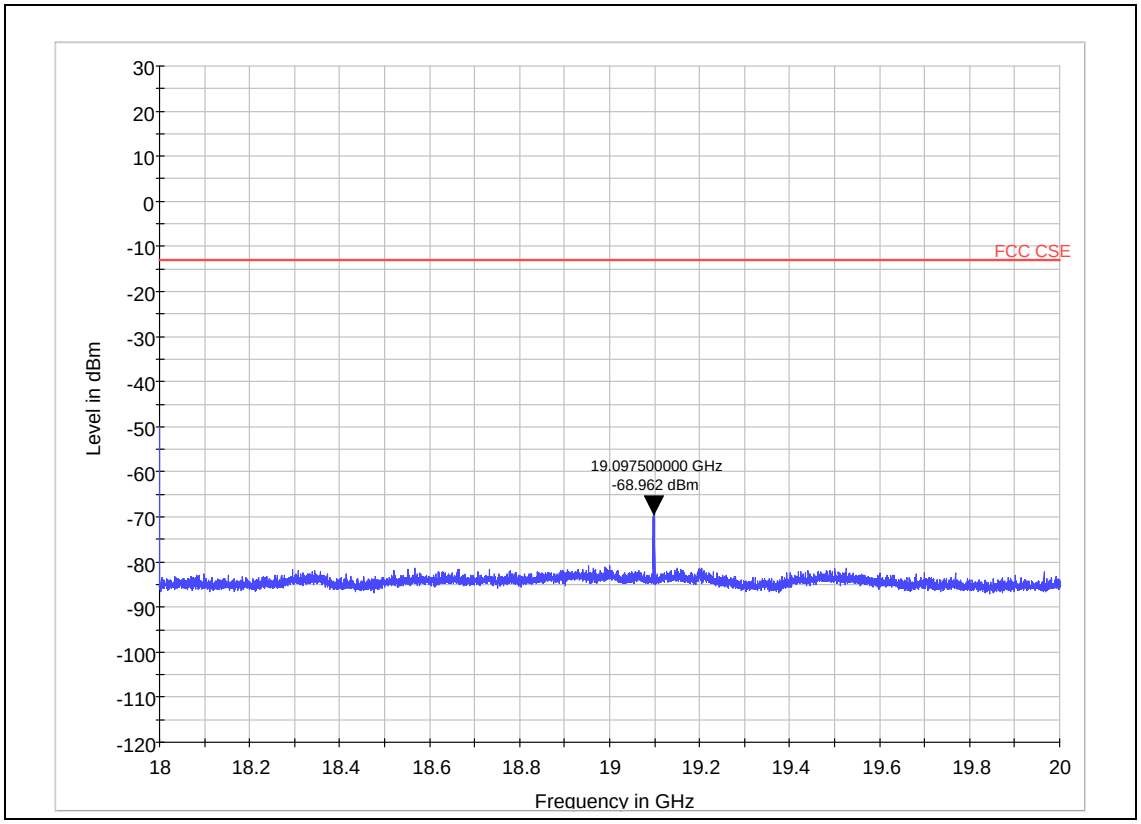
Note: The signal beyond the limit is carrier.
GSM 1900 Channel 661 30MHz ~18GHz



GSM 1900 Channel 661 18GHz ~20GHz



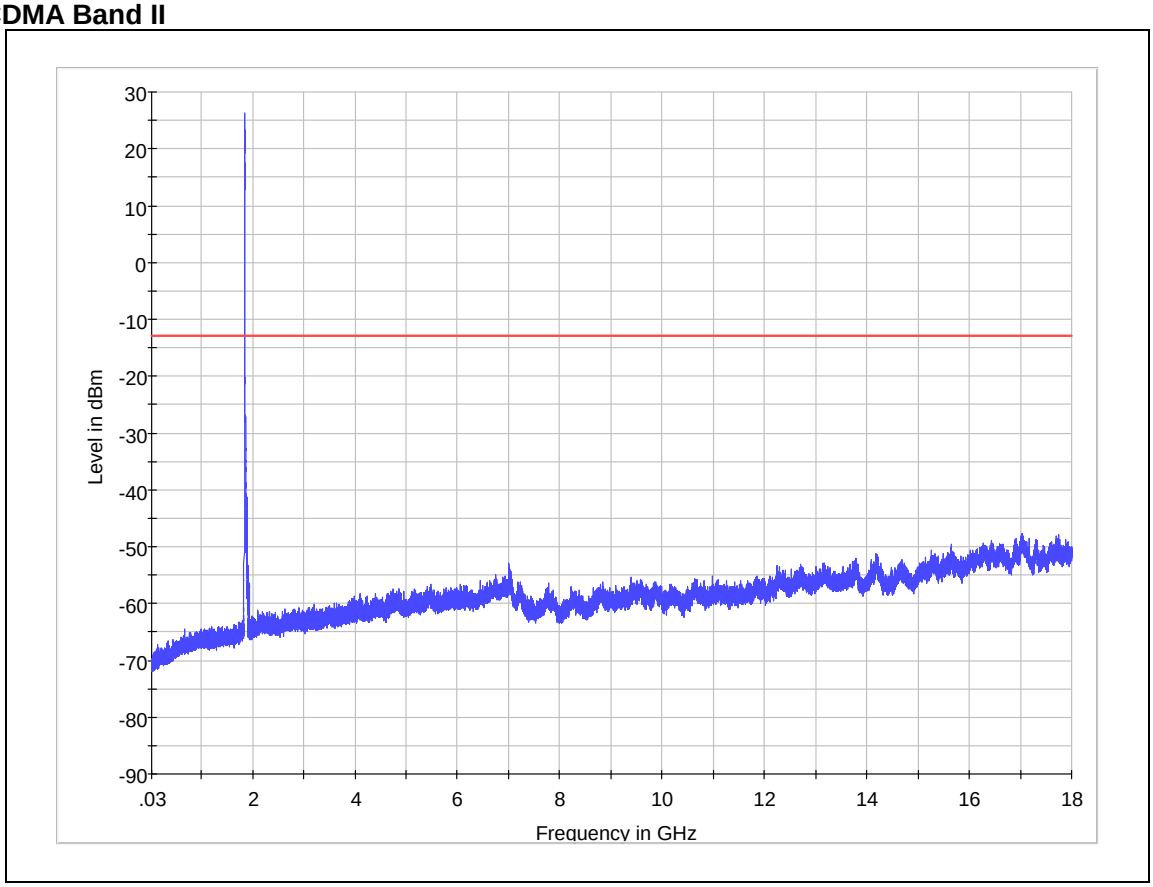
Note: The signal beyond the limit is carrier.
GSM 1900 Channel 810 30MHz ~18GHz



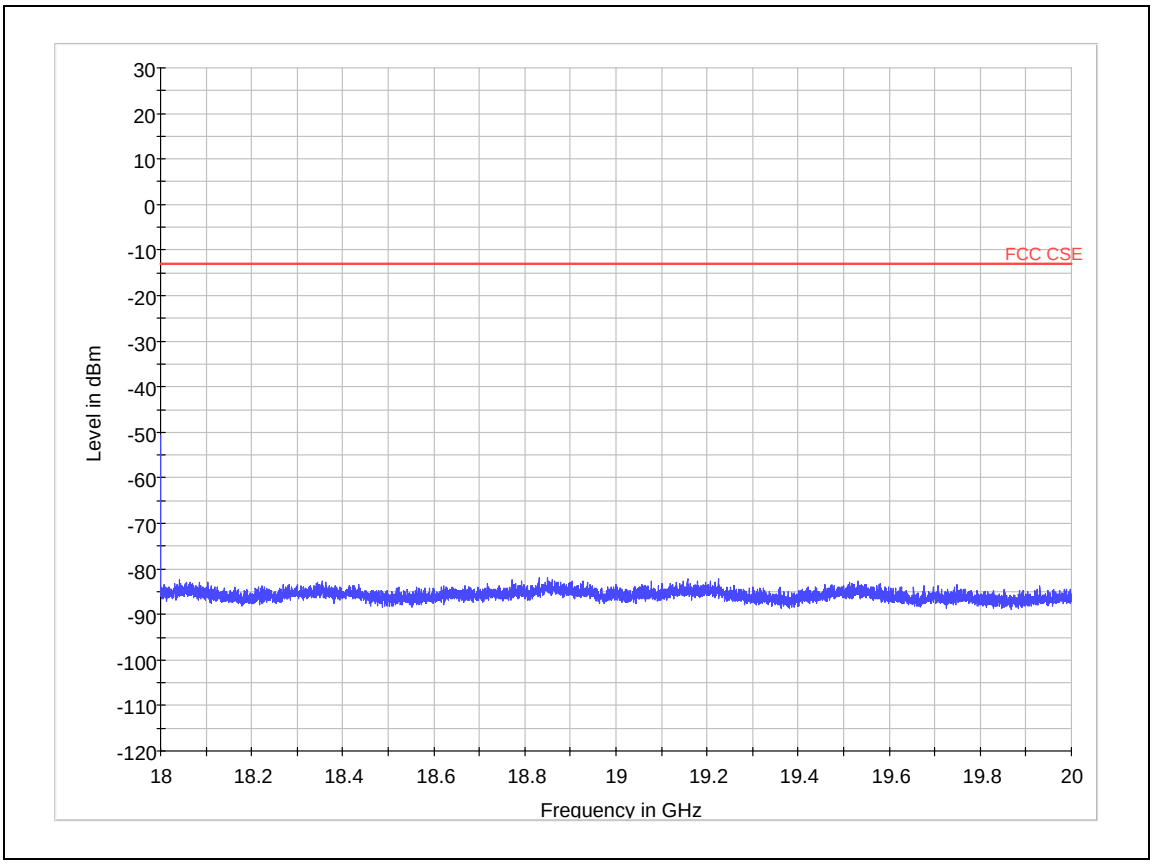
GSM 1900 Channel 810 18GHz ~20GHz

Harmonic	TX ch.512 Frequency (MHz)	Level (dBm)	TX ch.661 Frequency (MHz)	Level (dBm)	TX ch.810 Frequency (MHz)	Level (dBm)
2	3700.5	-53.25	3759.8	-52.57	3819.4	-52.33
3	5550.6	Nf	5640	Nf	5729.4	Nf
4	7400.8	Nf	7520	Nf	7639.2	Nf
5	9251	Nf	9400	Nf	9549	Nf
6	11101.2	Nf	11280	Nf	11458.8	Nf
7	12951.0	-47.04	13160	-46.43	13369	-45.13
8	14801.6	Nf	15040	Nf	15278.4	Nf
9	16651.8	Nf	16920	Nf	17188.2	Nf
10	18501.3	-68.86	18800.5	-79.57	19097.5	-68.96
Nf: noise floor						

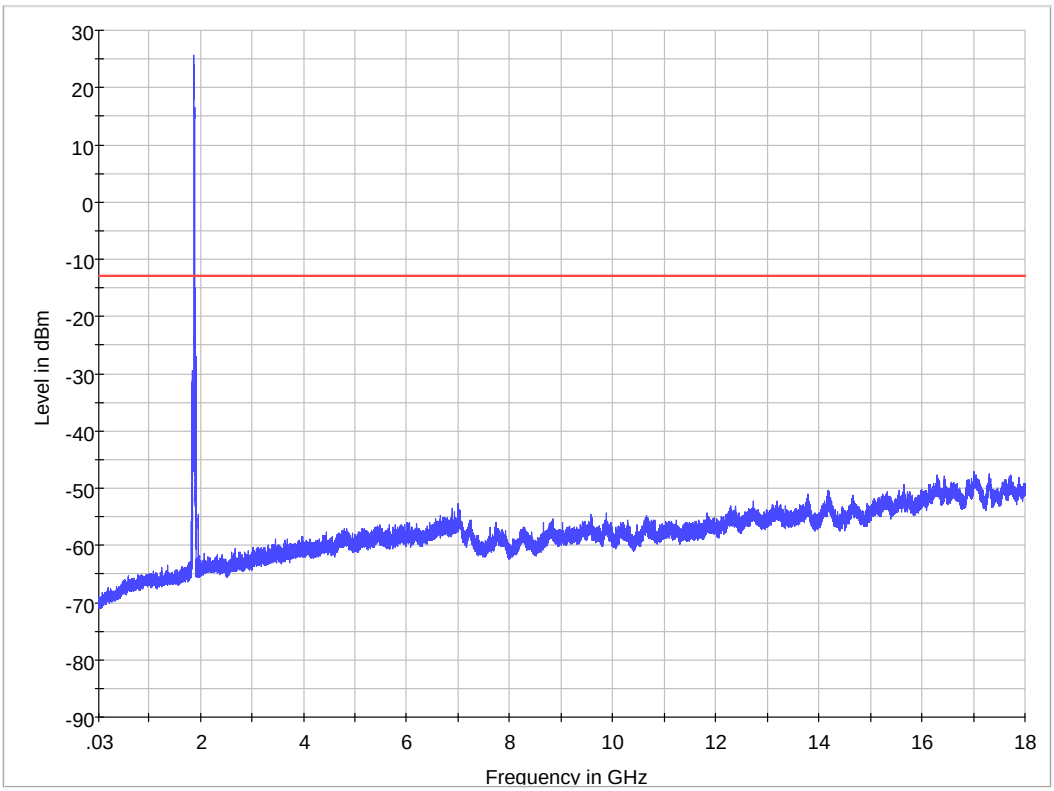
WCDMA Band II



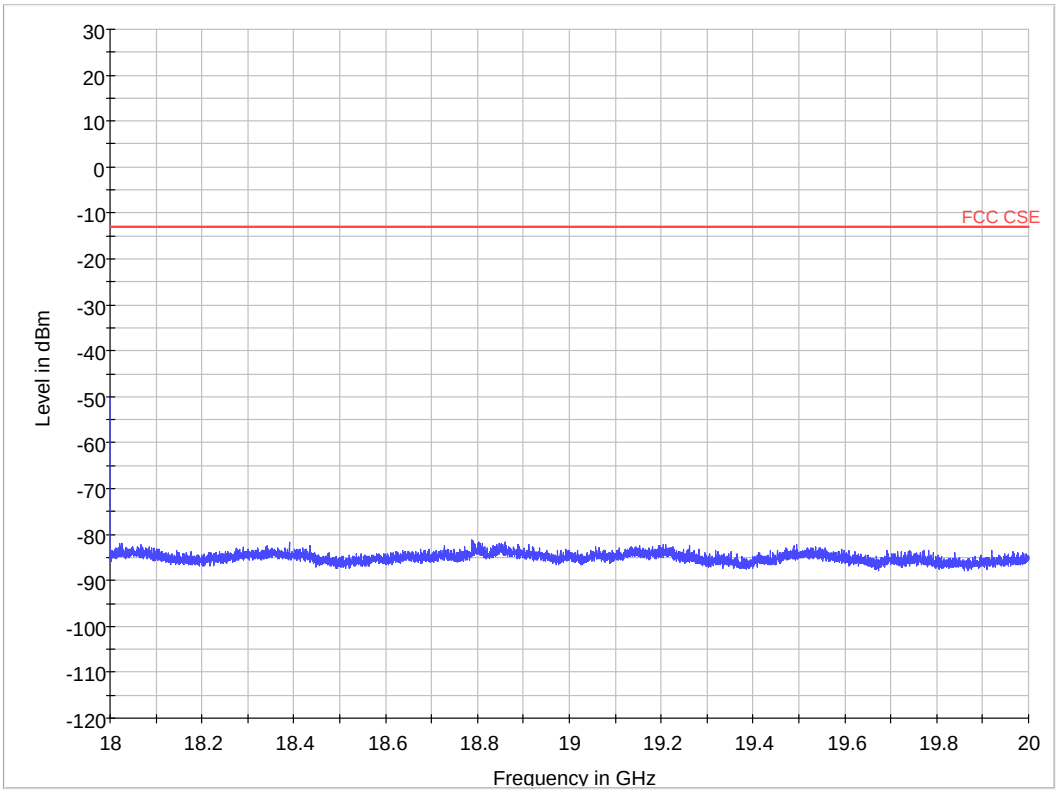
Note: The signal beyond the limit is carrier.
WCDMA Band II Channel 9262 30MHz ~18GHz



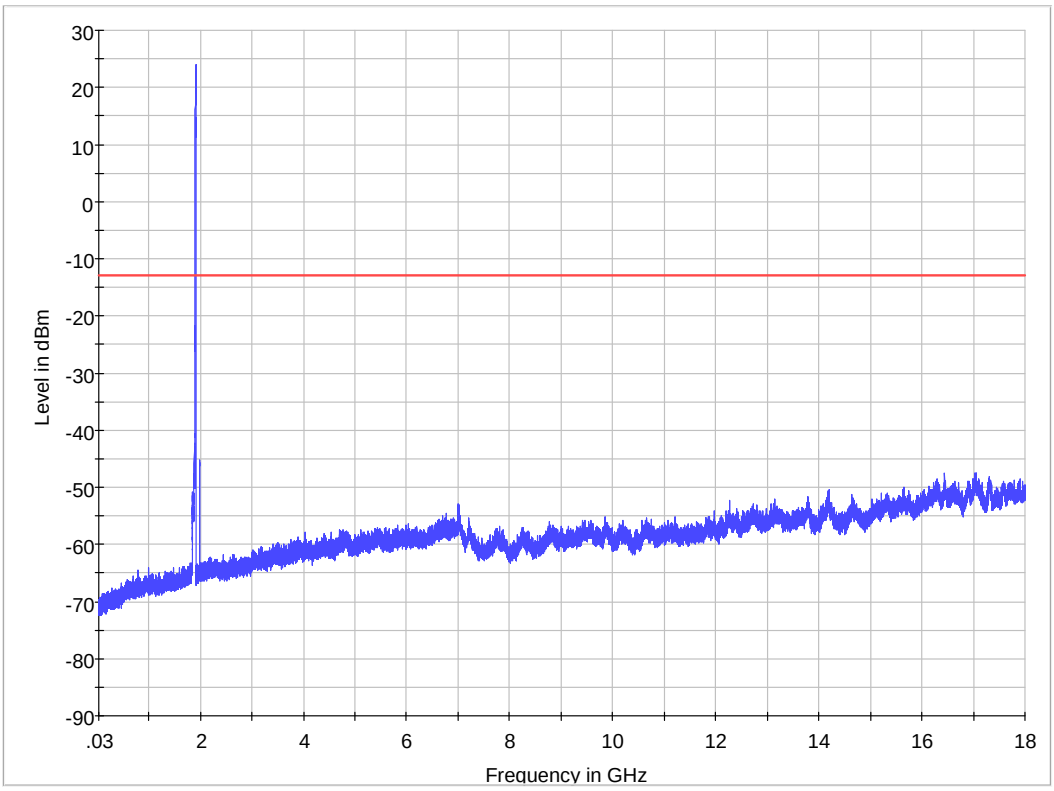
WCDMA Band II Channel 9262 18GHz ~20GHz



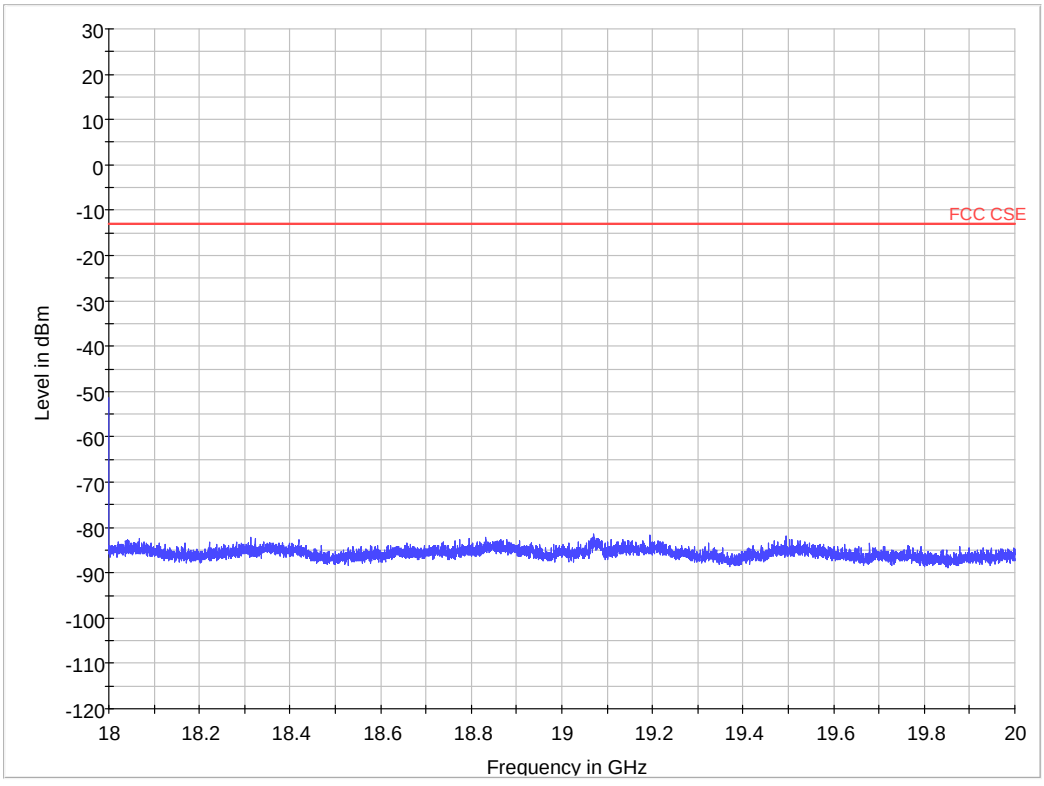
Note: The signal beyond the limit is carrier.
WCDMA Band II Channel 9400 30MHz ~18GHz



WCDMA Band II Channel 9400 18GHz ~20GHz



Note: The signal beyond the limit is carrier.
WCDMA Band II Channel 9538 30MHz ~18GHz



WCDMA Band II Channel 9538 18GHz ~20GHz

Harmonic	TX ch. 9262 Frequency (MHz)	Level (dBm)	TX ch. 9400 Frequency (MHz)	Level (dBm)	TX ch. 9538 Frequency (MHz)	Level (dBm)
2	3704.8	Nf	3760	Nf	3815.2	Nf
3	5557.2	Nf	5640	Nf	5722.8	Nf
4	7409.6	Nf	7520	Nf	7630.4	Nf
5	9262	Nf	9400	Nf	9538	Nf
6	11114.4	Nf	11280	Nf	11445.6	Nf
7	12966.8	Nf	13160	Nf	13353.2	Nf
8	14819.2	Nf	15040	Nf	15260.8	Nf
9	16671.6	Nf	16920	Nf	17168.4	Nf
10	18524	Nf	18800	Nf	19076	Nf
Nf: noise floor						

2.1. Radiates Spurious Emission

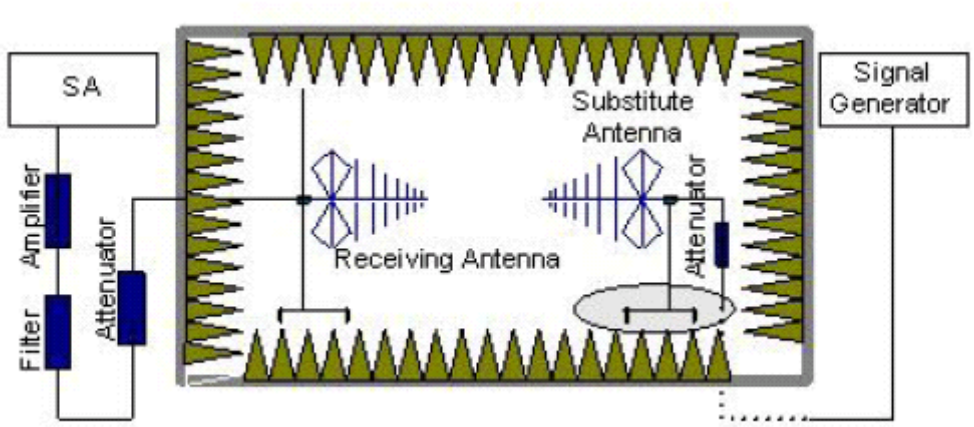
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The measurements procedures in TIA -603C are used.
The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment. The measurement will be conducted at channels 512,661,810 of GSM1900 and 9262,9400,9538 of WCDMA Band II.
. The procedure of Radiates Spurious Emission is as follows:

1. Pre-calibration
   In an fully anechoic chamber, A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted at a 3 meter test distance from the receive antenna. An RF signal source is connected to the dipole with a Tx cable that has been constructed to not interfere with radiation pattern of the antenna. A known (measured) power (Pin) is applied to input of dipole, and the power received (Pr) is recorded from the spectrum analyzer.
   "Reference Path loss" is established as Pin –Pr-Tx cable loss+ Substitution antenna gain.



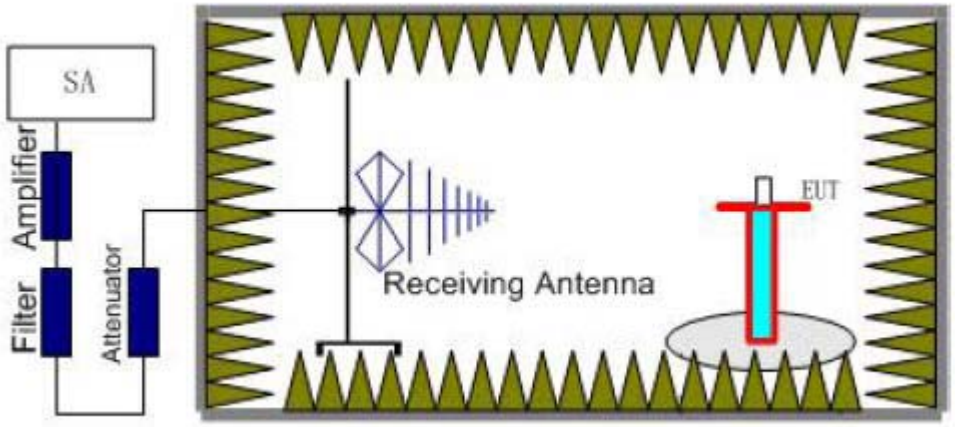
2. EUT Test
   EUT was placed on a 1.5 meter high non – conductive table at a 3 meter test distance from the receive antenna. The height of receiving antenna is 1.5 m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the table and adjusting the receiving antenna polarization. The measurement is carried out using a spectrum analyzer .The radiated emission measurements of all non-harmonic and harmonic of the transmit frequency from 30MHz to the 10th harmonic were measured with peak detector and 1MHz bandwidth. A notch filter is necessary in the band near to the carrier frequency. A high pass filter is needed to avoid the distortion of the testing equipment in the band above the carrier frequency. If the harmonic could not be detected above the noise floor, the ambient level was recorded.
   The level of the spurious emissions can be calculated through the level of the signal generator,

cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.

Calculation procedure:

RSE = Rx (dBm) + Reference Path loss

Rx: reading of the receiver



Limits

Rule Part 24.238(a) specifies that “on any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log10 (P) dB.”

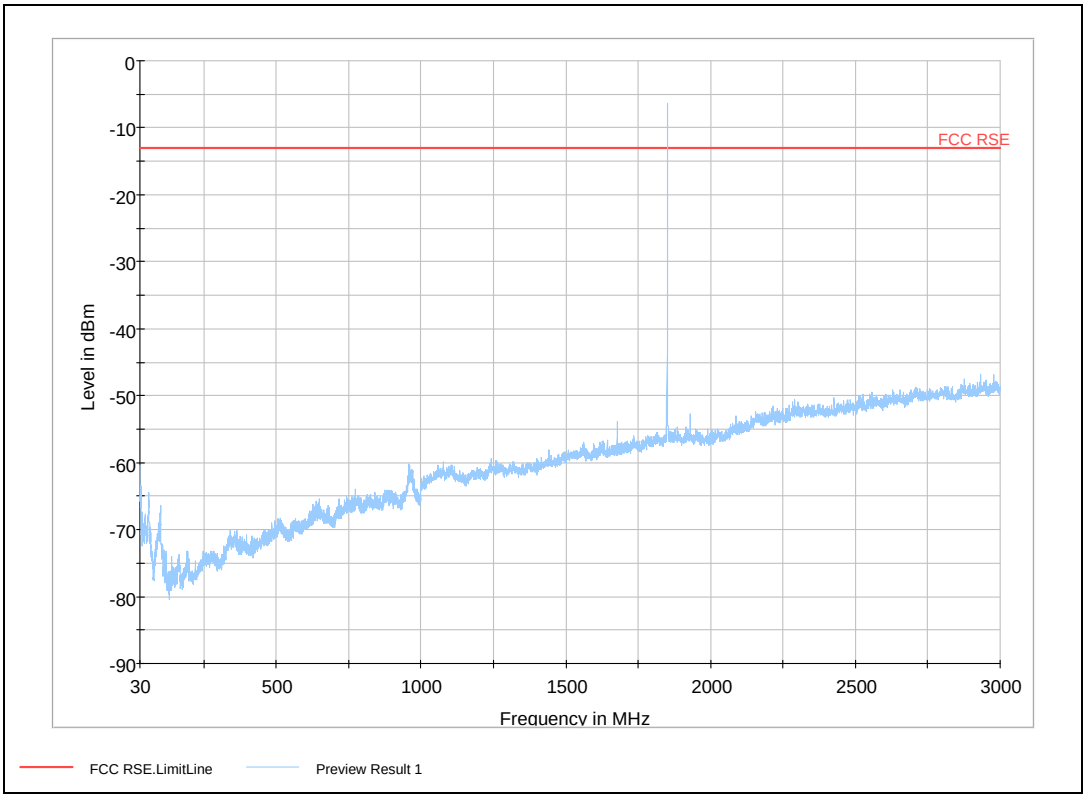
Limit	-13 dBm

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95％ confidence level for the normal distribution is with the coverage factor *k* = 1.96. U=3.16 dB.

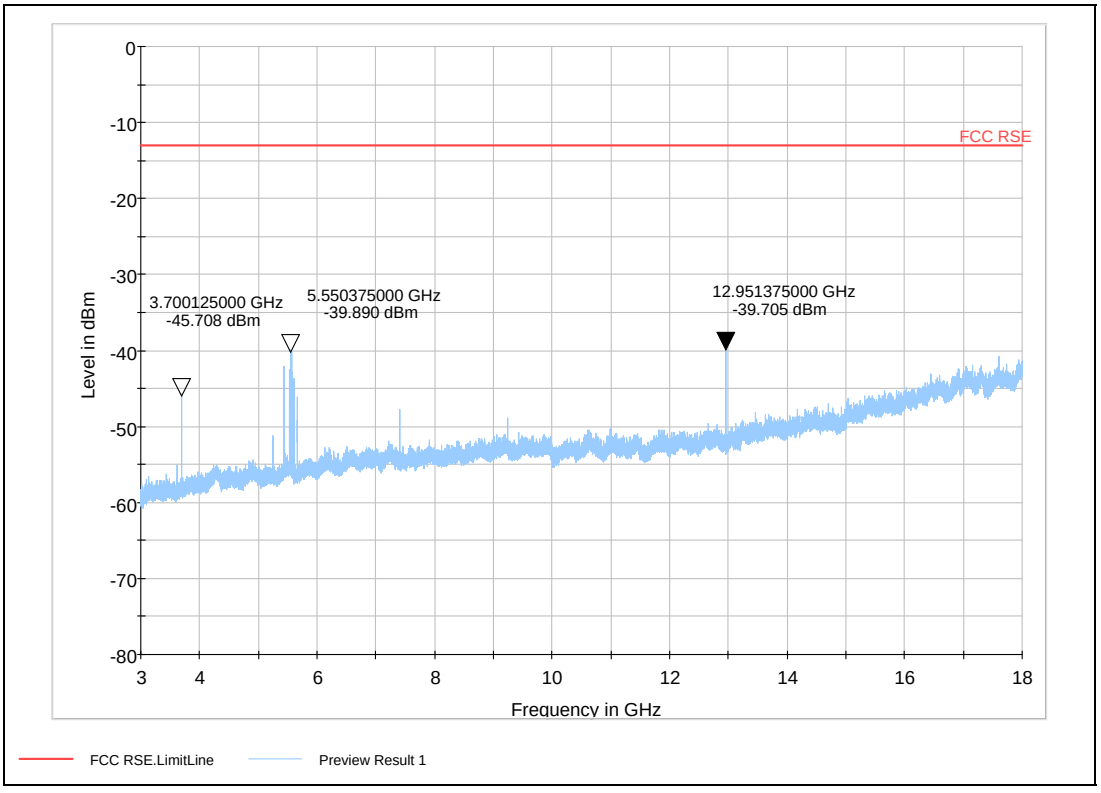
Test Result

GSM 1900

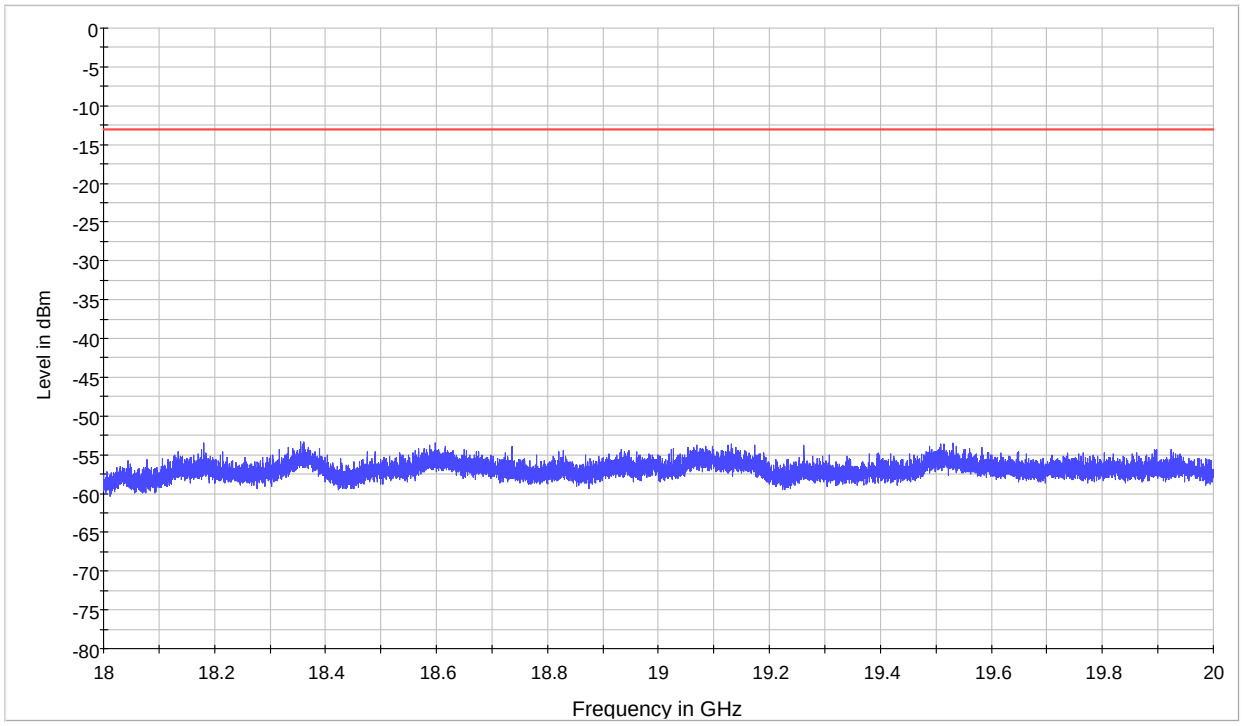


Note: The signal beyond the limit is carrier.

GSM 1900 Channel 512 30MHz~3GHz

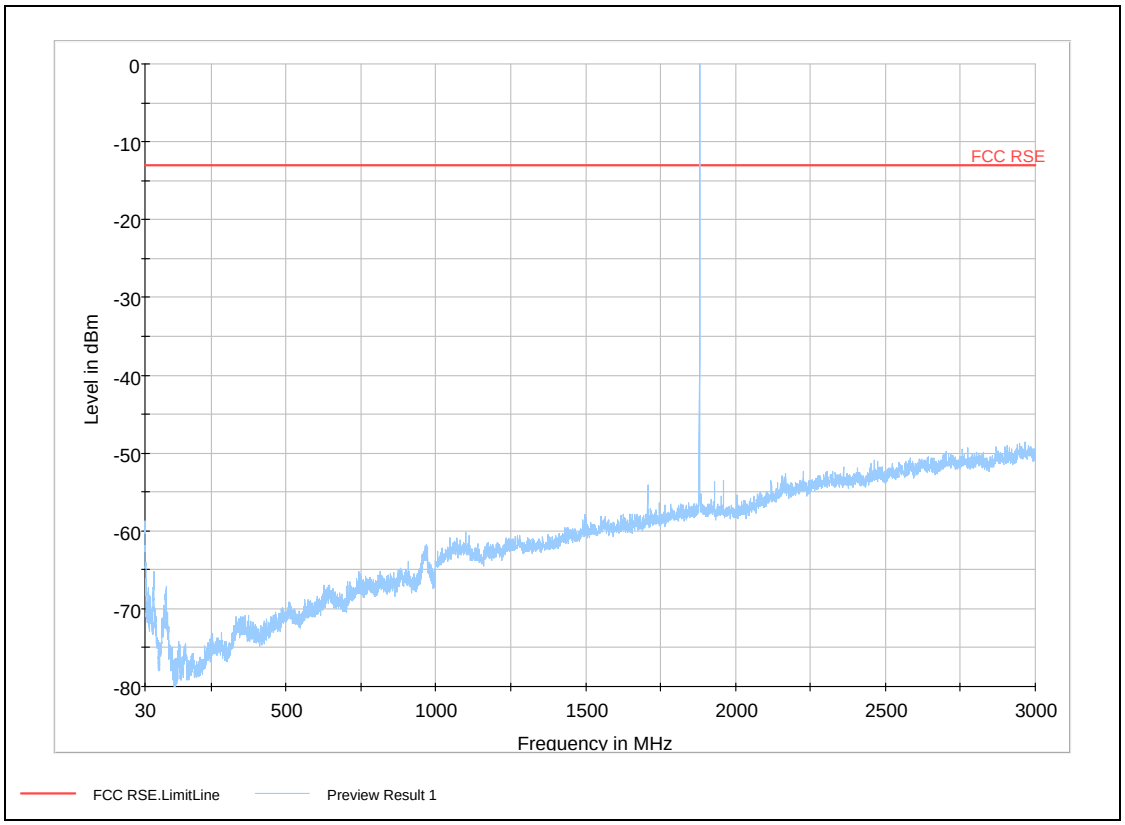


GSM 1900 Channel 512 3GHz ~18GHz



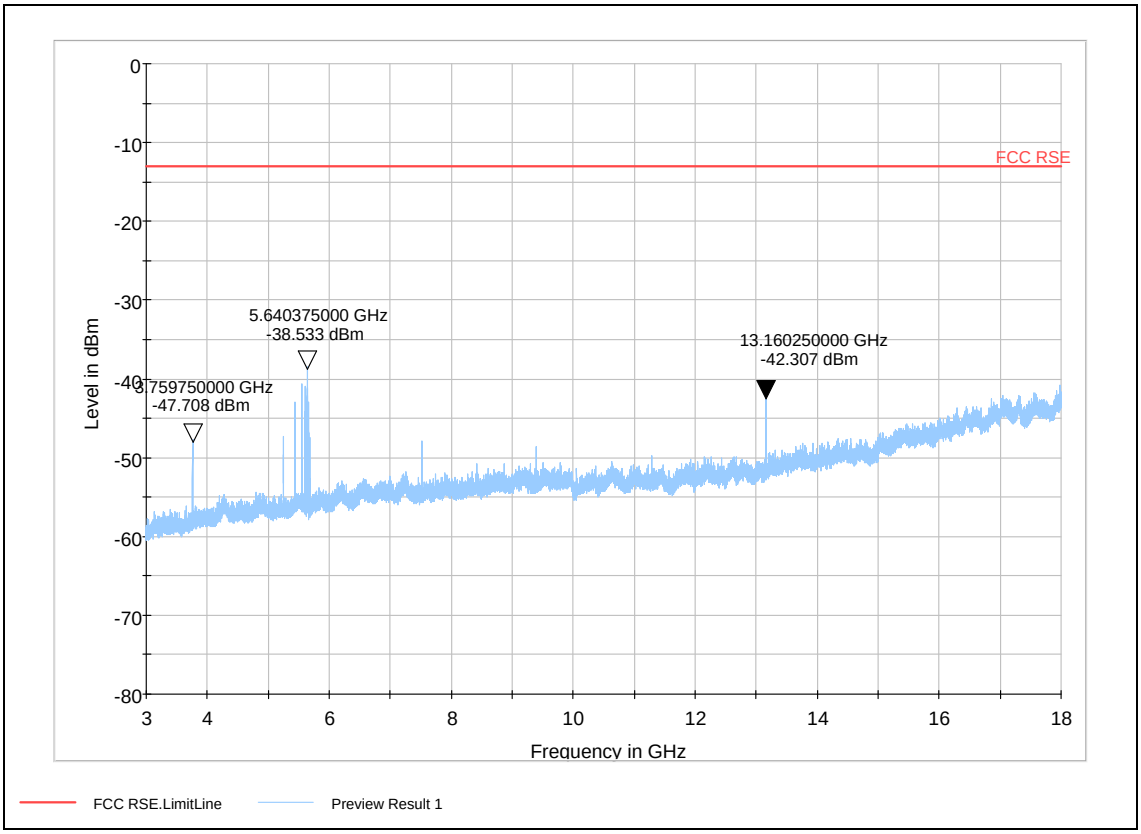
GSM 1900 Channel 512 18GHz ~20GHz

Harmonic	TX ch.512 Frequency (MHz)	Level (dBm)	Limit (dBm)
2	3700.1	-45.71	-13
3	5550.4	-39.90	-13
4	7400.8	Nf	-13
5	9251	Nf	-13
6	11101.2	Nf	-13
7	12951.4	-39.71	-13
8	14801.6	Nf	-13
9	16651.8	Nf	-13
10	18502	Nf	-13
Nf: noise floor			

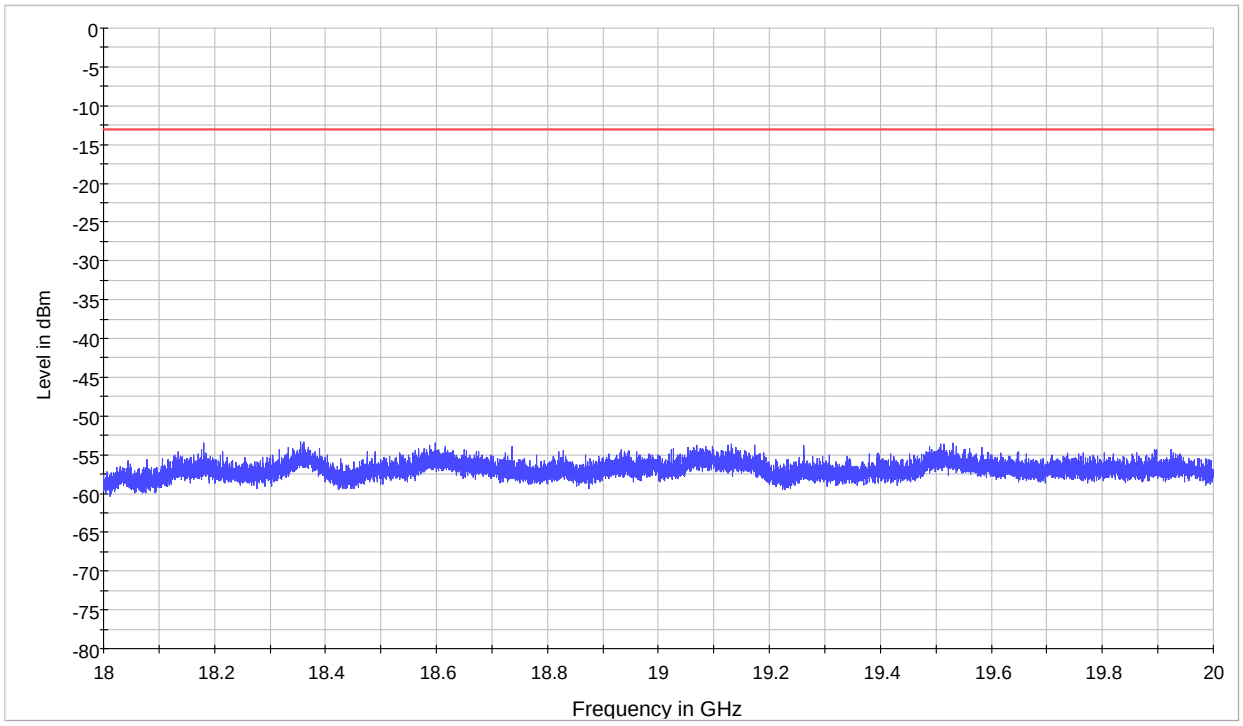


Note: The signal beyond the limit is carrier.

GSM 1900 Channel 661 30MHz~3GHz

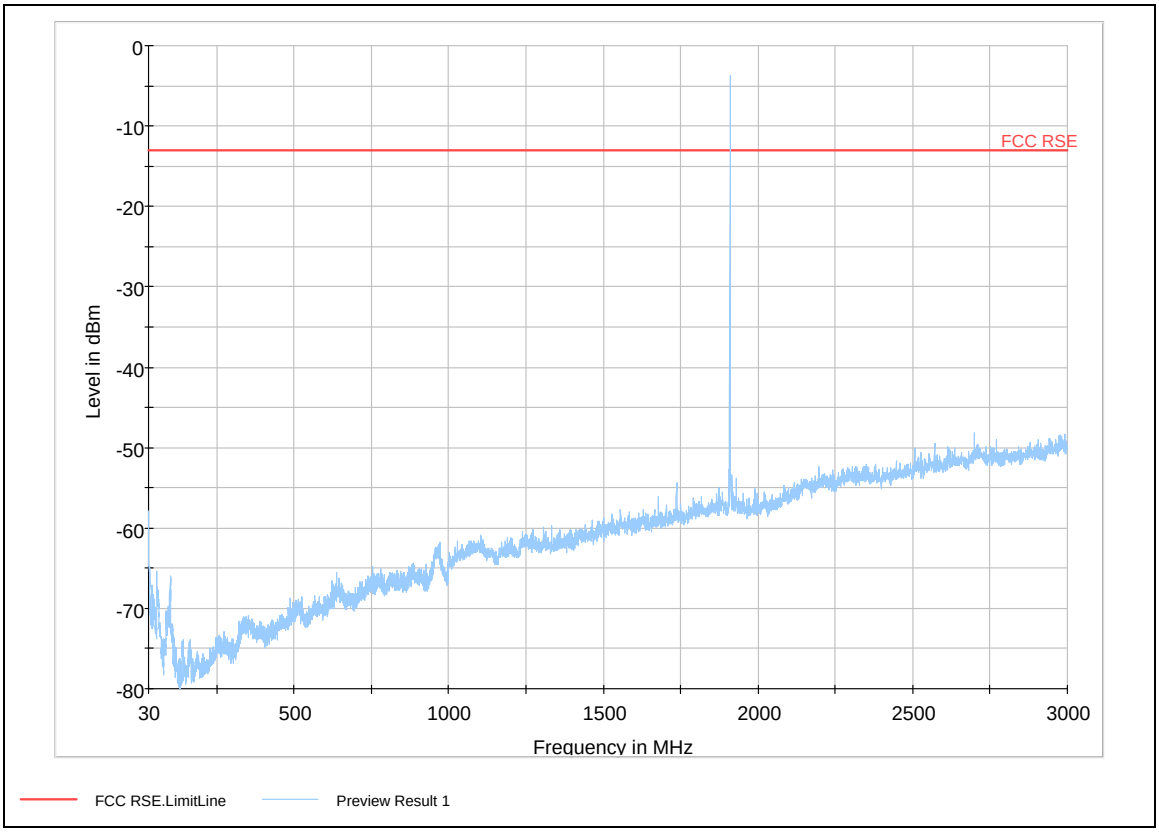


GSM 1900 Channel 661 3GHz ~18GHz



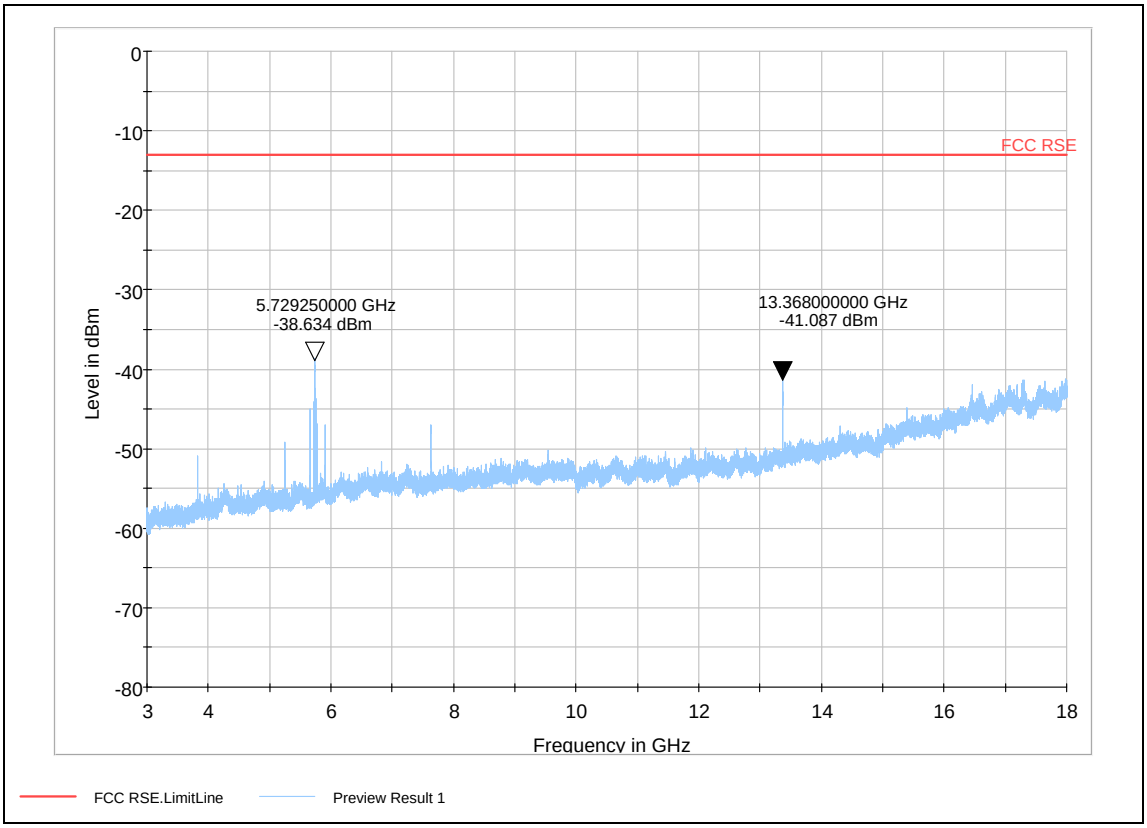
GSM 1900 Channel 661 18GHz ~20GHz

Harmonic	TX ch.661 Frequency (MHz)	Level (dBm)	Limit (dBm)
2	3759.8	-47.71	-13
3	5640.4	-38.53	-13
4	7520	Nf	-13
5	9400	Nf	-13
6	11280	Nf	-13
7	13160.3	-42.31	-13
8	15040	Nf	-13
9	16920	Nf	-13
10	18800	Nf	-13
Nf: noise floor			

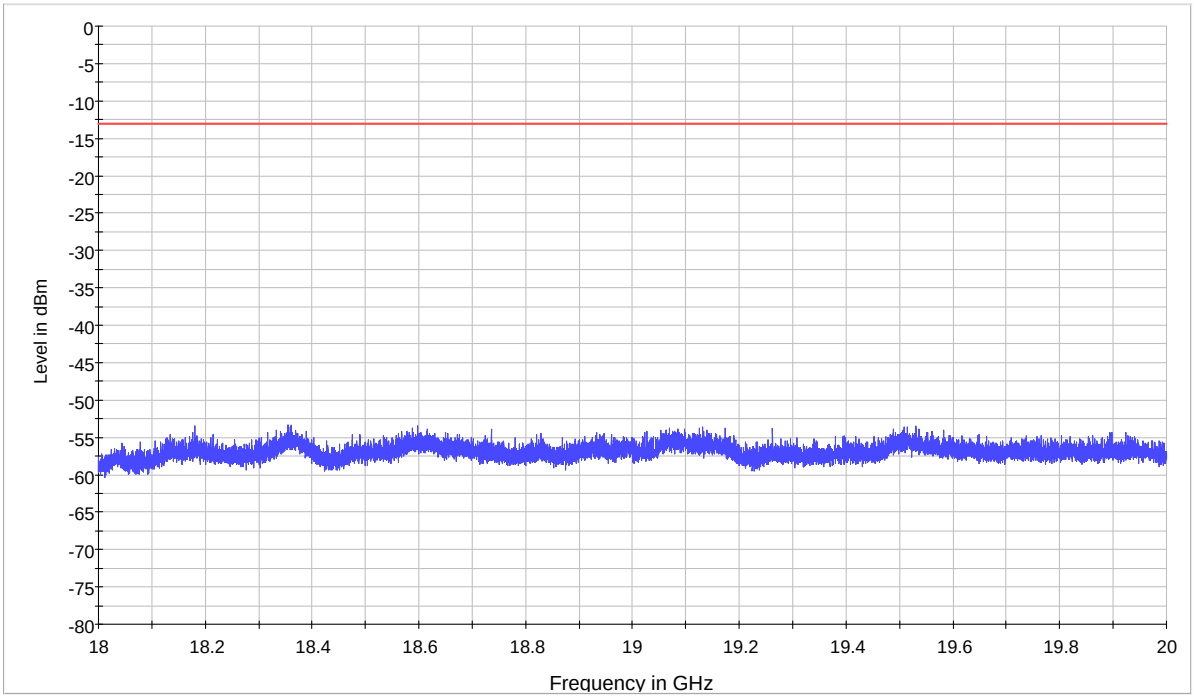


Note: The signal beyond the limit is carrier.

GSM 1900 Channel 810 30MHz~3GHz



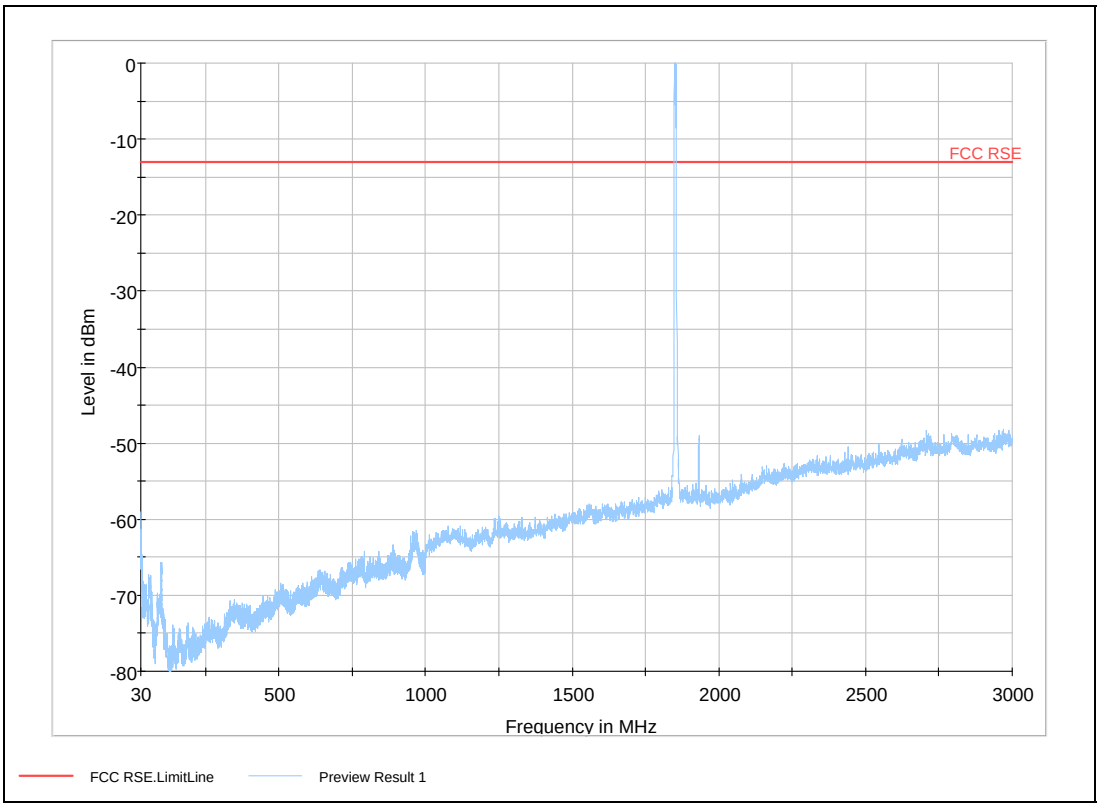
GSM 1900 Channel 810 3GHz ~18GHz



GSM 1900 Channel 810 18GHz ~20GHz

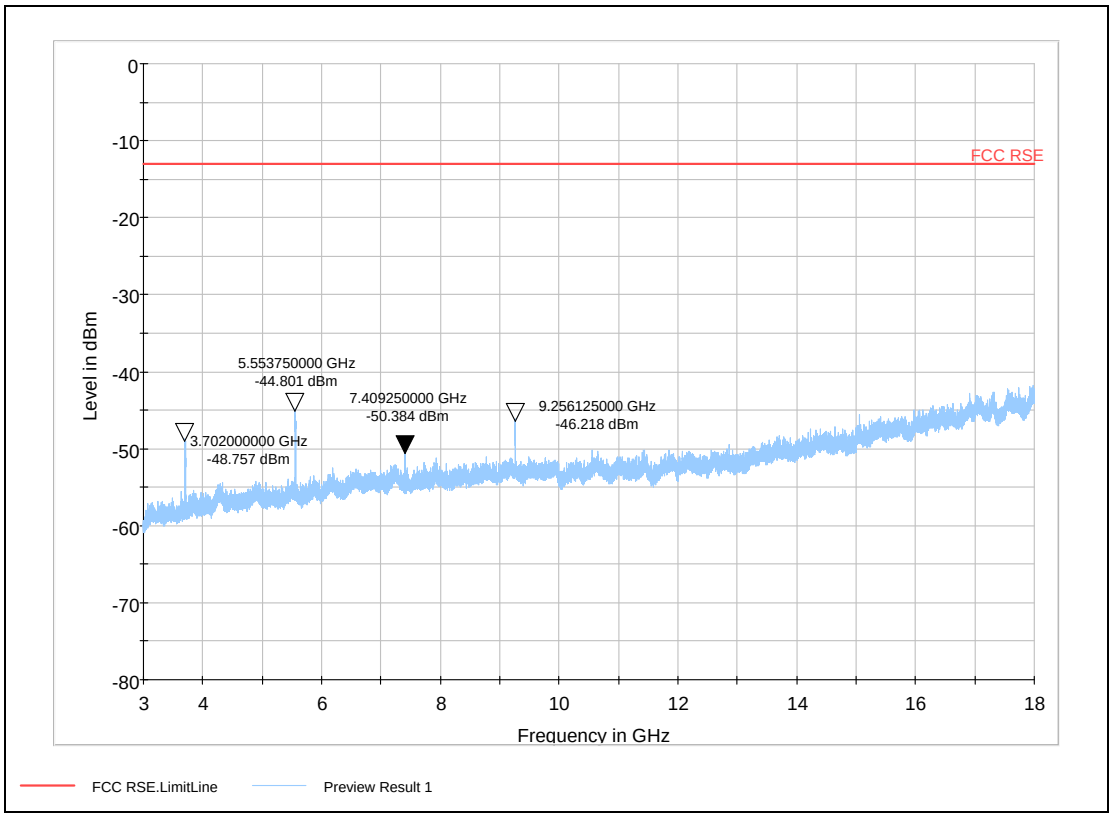
Harmonic	TX ch.810 Frequency (MHz)	Level (dBm)	Limit (dBm)
2	3819.6	Nf	-13
3	5729.3	-38.63	-13
4	7639.2	Nf	-13
5	9549	Nf	-13
6	11458.8	Nf	-13
7	13368	-41.09	-13
8	15278.4	Nf	-13
9	17188.2	Nf	-13
10	19098	Nf	-13
Nf: noise floor			

WCDMA Band II

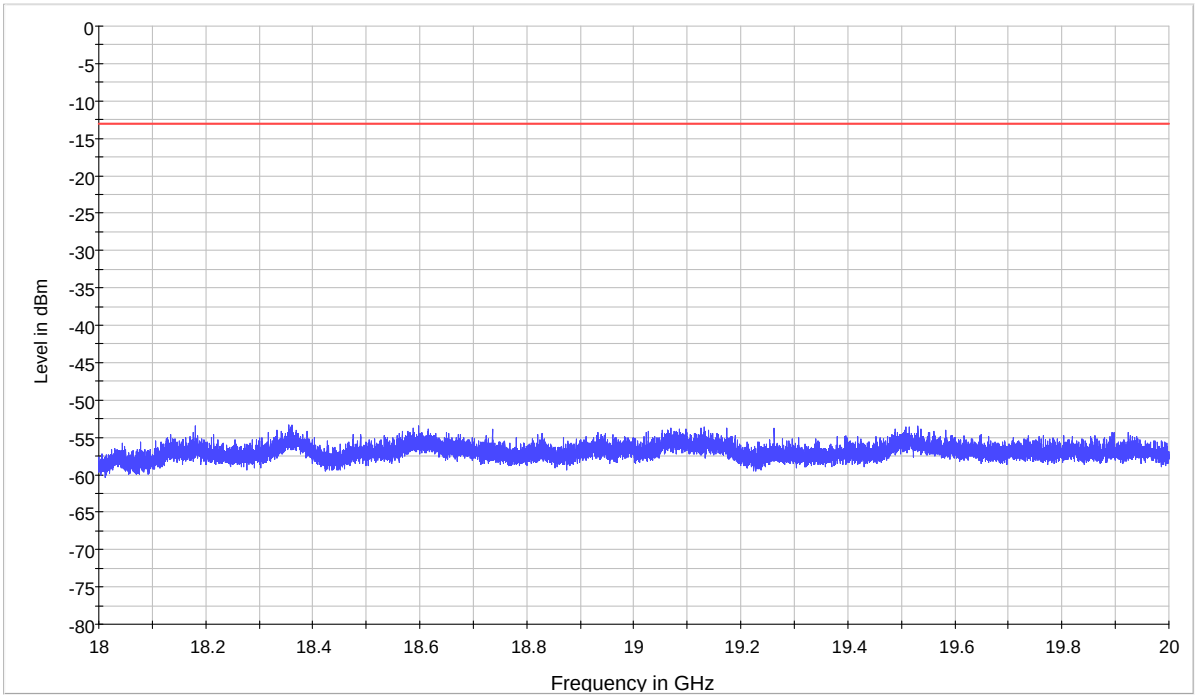


Note: The signal beyond the limit is carrier.

WCDMA Band II Channel 9262 30MHz~3GHz

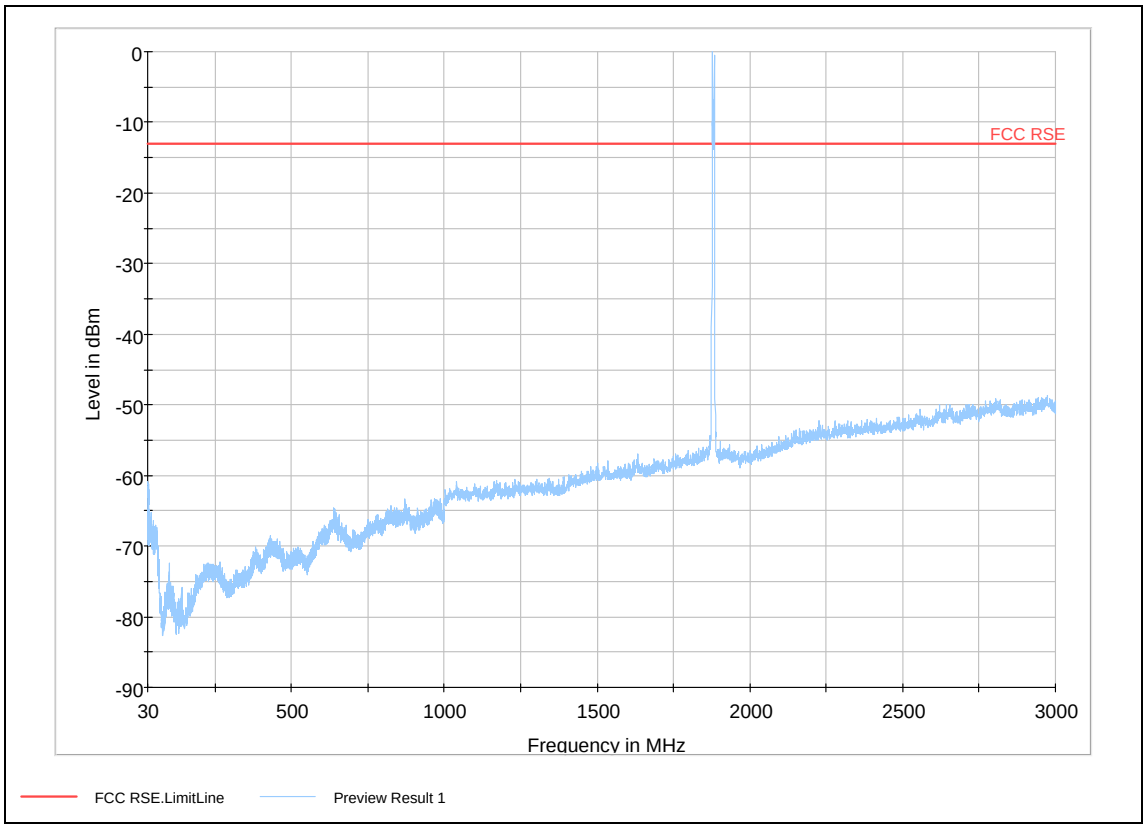


WCDMA Band II Channel 9262 3GHz ~18GHz

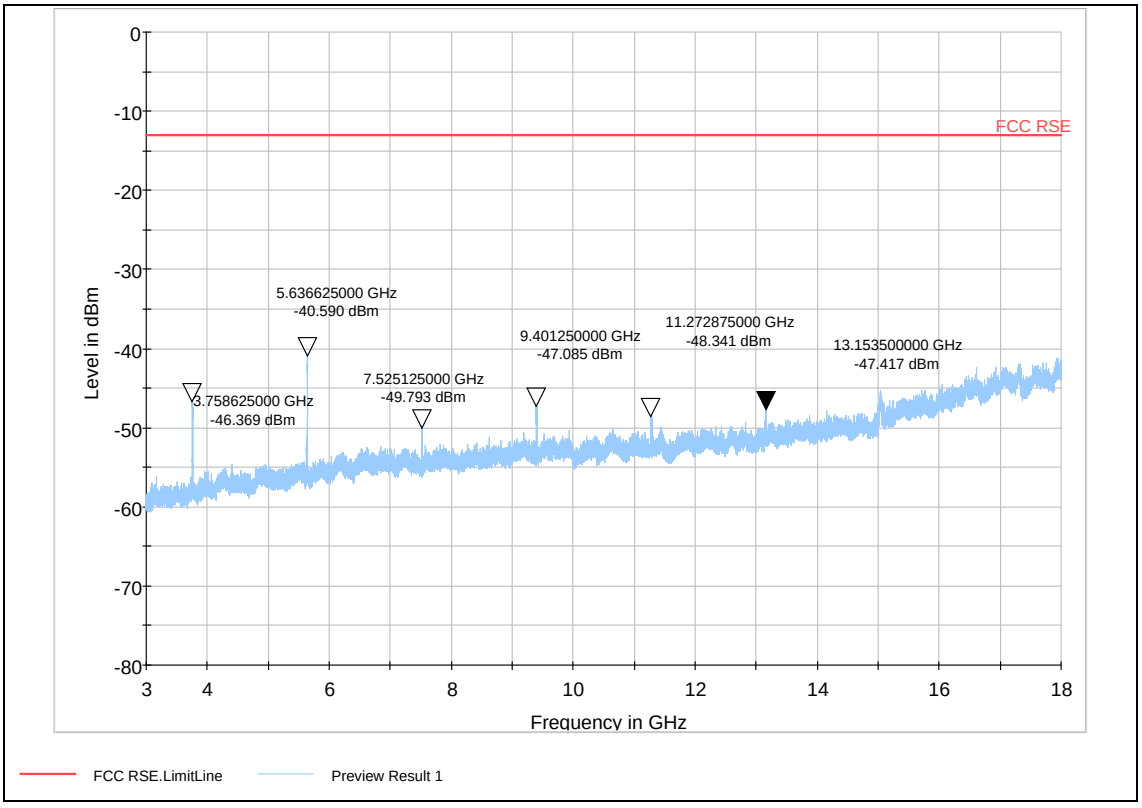


WCDMA Band II Channel 9262 18GHz ~20GHz

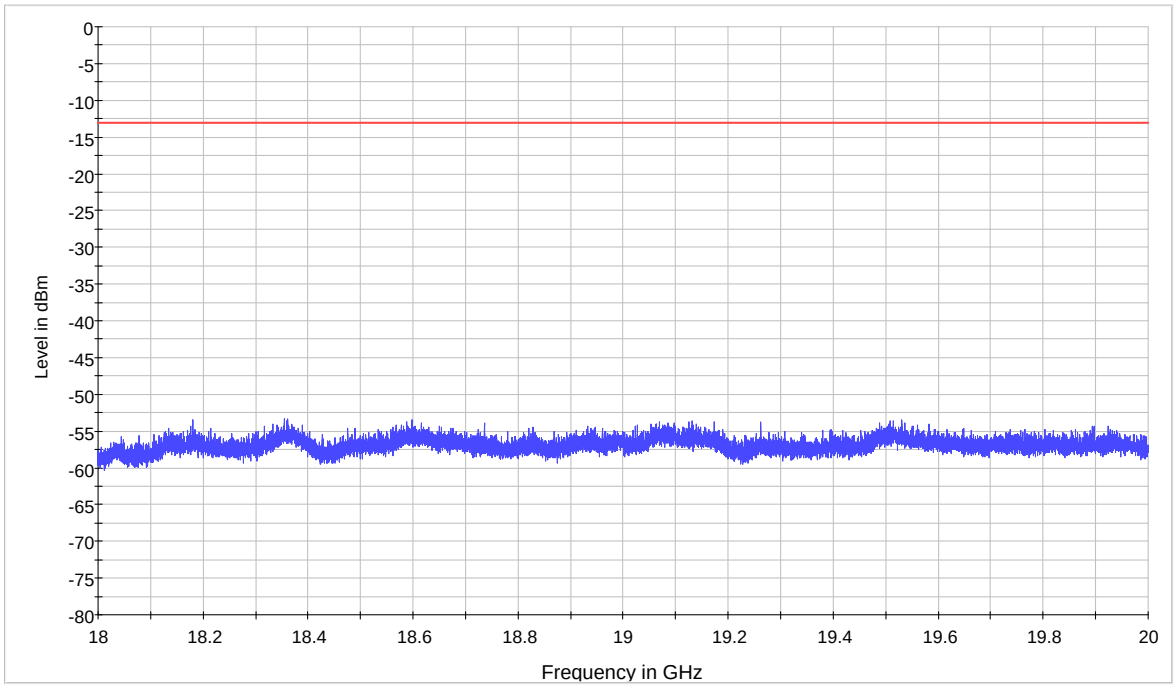
Harmonic	TX ch.9262 Frequency (MHz)	Level (dBm)	Limit (dBm)
2	3702	-48.76	-13
3	5553.8	-44.80	-13
4	7409.3	-50.38	-13
5	9256.1	-46.22	-13
6	11114.4	Nf	-13
7	12966.8	Nf	-13
8	14819.2	Nf	-13
9	16671.6	Nf	-13
10	18524	Nf	-13
Nf: noise floor			



Note: The signal beyond the limit is carrier.
WCDMA Band II Channel 9400 30MHz~3GHz

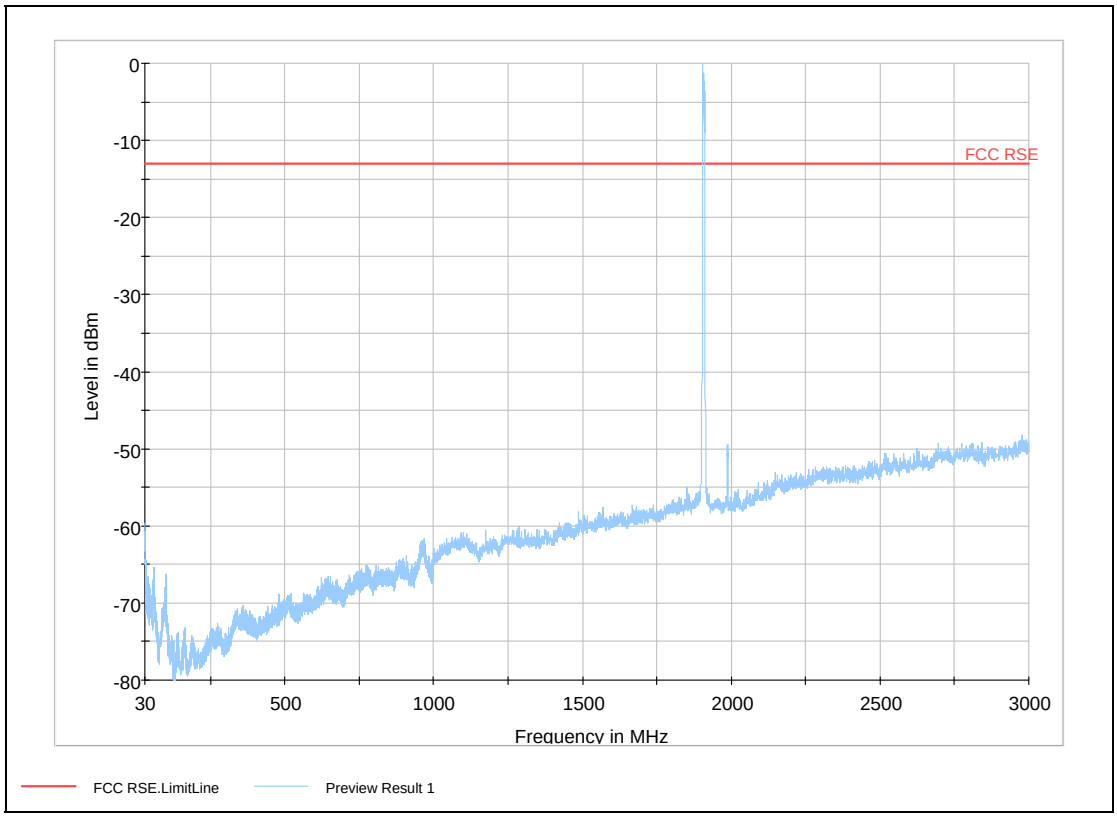


WCDMA Band II Channel 9400 3GHz ~18GHz

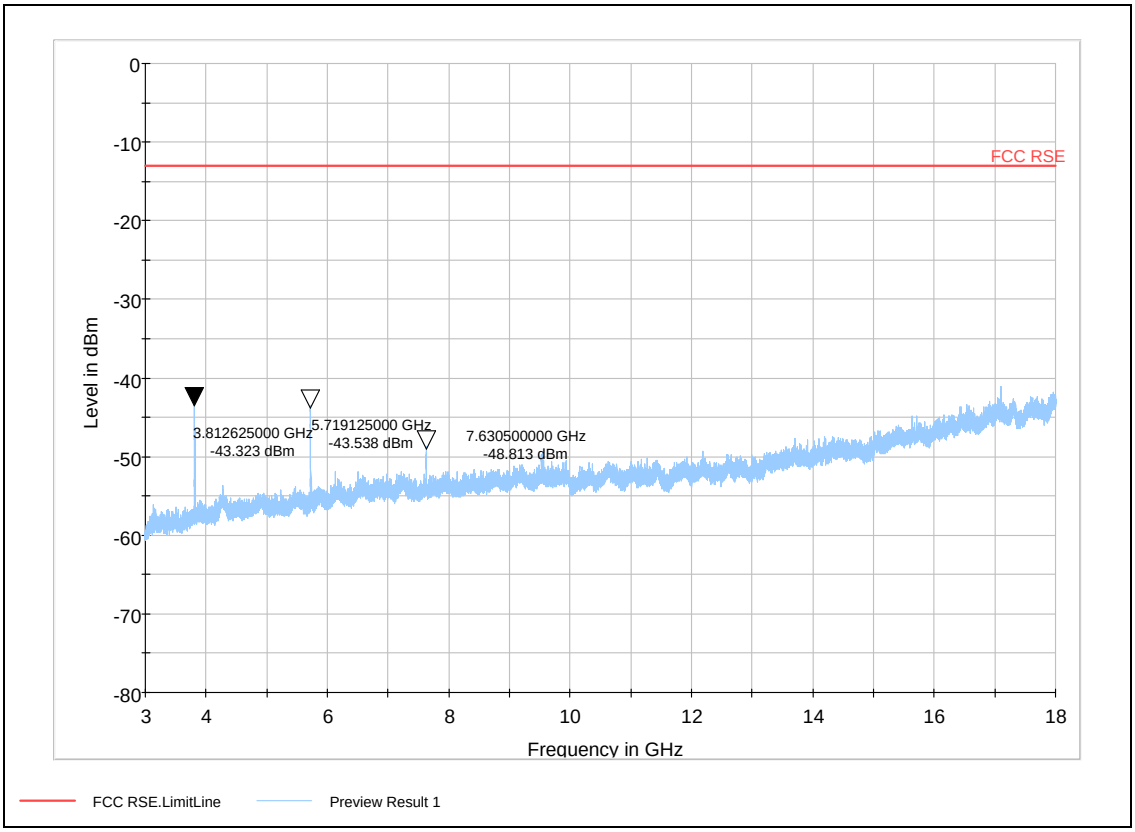


WCDMA Band II Channel 9400 18GHz ~20GHz

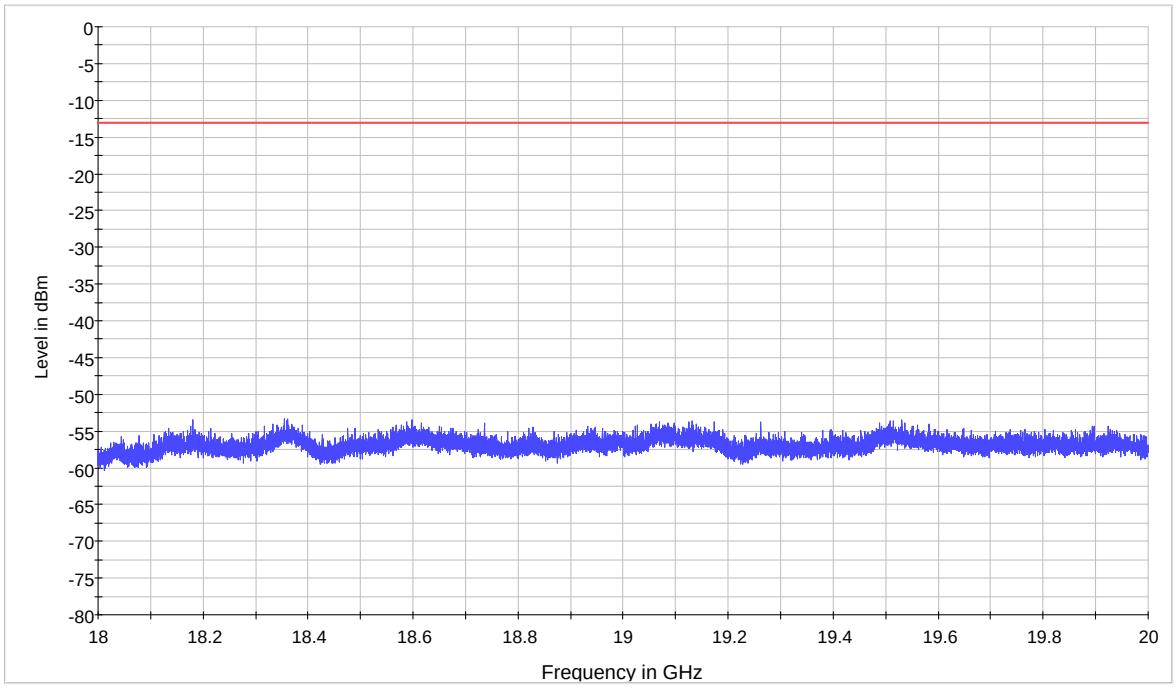
Harmonic	TX ch.9400 Frequency (MHz)	Level (dBm)	Limit (dBm)
2	3758.6	-46.37	-13
3	5636.6	-40.59	-13
4	7525.1	-49.79	-13
5	9401.3	-47.09	-13
6	11272.9	-48.34	-13
7	13153.5	-47.42	-13
8	15040	Nf	-13
9	16920	Nf	-13
10	18800	Nf	-13
Nf: noise floor			



Note: The signal beyond the limit is carrier.
WCDMA Band II Channel 9538 30MHz~3GHz



WCDMA Band II Channel 9538 3GHz ~18GHz



WCDMA Band II Channel 9538 18GHz ~20GHz

Harmonic	TX ch.9538 Frequency (MHz)	Level (dBm)	Limit (dBm)
2	3812.6	-43.32	-13
3	5719.1	-43.54	-13
4	7630.5	-48.81	-13
5	9538	Nf	-13
6	11445.6	Nf	-13
7	13353.2	Nf	-13
8	15260.8	Nf	-13
9	17168.4	Nf	-13
10	19076	Nf	-13
Nf: noise floor			

3. Main Test Instruments

No.	Name	Type	Manufacturer	Serial Number	Calibration Date	Valid Period
01	Base Station Simulator	CMU200	R&S	118133	2010-05-27	One year
02	Signal Analyzer	FSV	R&S	100815	2010-06-28	One year
03	Signal generator	SMR27	R&S	100365	2010-06-28	One year
04	Spectrum Analyzer	E4445A	Agilent	MY46181166	2010-06-07	One year
05	EMI Test Receiver	ESCI	R&S	100948	2010-06-08	One year
06	Trilog Antenna	VULB 9163	SCHWARZBECK	9163-391	2009-05-14	Two years
07	Horn Antenna	HF907	R&S	100126	2009-07-02	Twoyears
08	Biconical Antenna	VUBA 9117	SCHWARZBECK	9117-225	2010-05-13	One year
09	Quad-Ridge Horn Antenna	3164-03	ETS-Lindgren	1064	2010-05-19	One year
10	Power Splitter	11667A	Agilent	52960	NA	NA
11	DC Power Supply	GPS-3030D	GM	E877677	NA	NA
12	Semi-Anechoic Chamber	9.6*6.7*6.6m	ETS-Lindgren	NA	NA	NA
13	OTA Fully-Anechoic Chamber	7.4*3.6*3.6m	ETS-Lindgren	3658	NA	NA
14	EMI test software	ES-K1	R&S	NA	NA	NA
15	OTA test software	EMQuest	ETS-Lindgren	NA	NA	NA

*******END OF REPORT BODY*******

ANNEX A: EUT Appearance and Test Setup

A.1 EUT Appearance

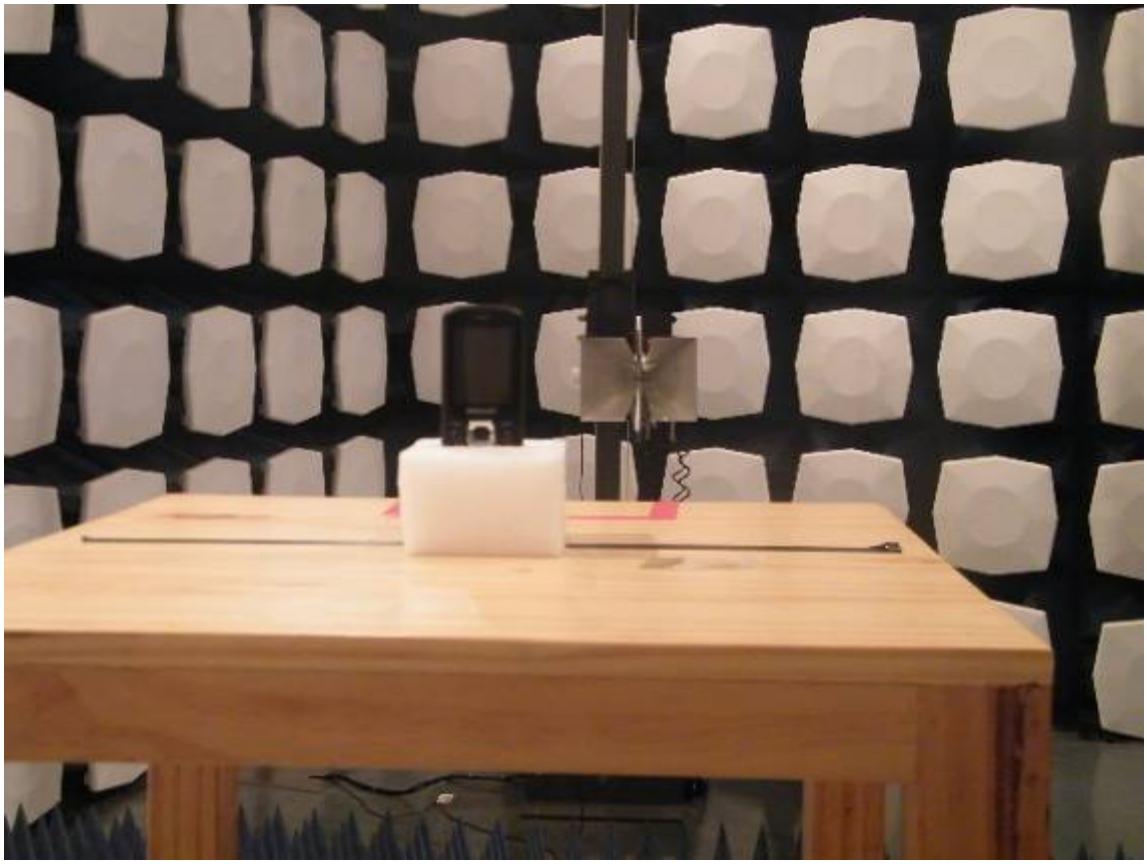
Picture 1-1: EUT

Picture 1-2: Battery

Picture 1-3: Charger

Picture 1 EUT

A.2 Test Setup



Picture 2: Radiated Spurious Emissions Test setup