Registration Num:428261

Report No.: RZA2010-0989_22

TESTING
No. L2264

Part 22

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_22		
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 22H (2009-12)** Public Mobile 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 19th, 2010**		
Comment	The test result only responds to the measured sample.		

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

TABLE OF CONTENT

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
Contact:	Yang Weizhong
Telephone:	+86-021-50791141/2/3
Fax:	+86-021-50791141/2/3-8000
Website:	http://www.ta-shanghai.com
E-mail:	yangweizhong@ta-shanghai.com

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):	GSM 850:（tested） WCDMA Band V:（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)
	GSM850	824.2 ~ 848.8	869.2 ~ 893.8
	WCDMA Band V	826.4 ~ 846.6	871.4 ~ 891.6
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 GSM 850 and WCDMA Band V 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 date is 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(a)	PASS
2	Effective Radiated power	22.913(a)(2)	PASS
3	Occupied Bandwidth	2.1049(h)	PASS
4	Band Edge Compliance	22.917	PASS
5	Frequency Stability	2.1055(a)(1) / 2.1055(d)(2)/22.355	PASS
6	Spurious Emissions at Antenna Terminals	2.1051 / 22.917(a)	PASS
7	Radiates Spurious Emission	2.1053 / 22.917 (a)	PASS

2.2. RF Power Output

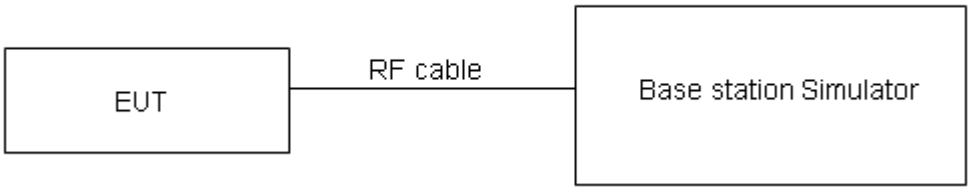
Ambient condition

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: 128, 190, 251 for GSM 850, 4132, 4183, 4233 for WCDMA Band V.

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 850

Channel	Frequency(MHz)	RF Output Power (dBm)
128	824.2	30.95
190	836.6	30.96
251	848.8	30.85

GSM 850 GPRS

Channel	Frequency(MHz)	1 down 1up RF Output Power (dBm)	1 down 2up RF Output Power (dBm)
128	824.2	30.80	29.46
190	836.6	30.82	29.51
251	848.8	30.70	29.40

GSM 850 EGPRS

Channel	Frequency(MHz)	1 down 1up RF Output Power (dBm)	1 down 2up RF Output Power (dBm)
128	824.2	27.20	25.68
190	836.6	27.22	25.72
251	848.8	27.13	25.62

WCDMA Band V

Channel	Frequency(MHz)	RF Output Power (dBm)
4132	826.4	22.20
4183	836.6	21.70
4233	846.6	22.32

2.3. Effective Radiated Power

Ambient condition

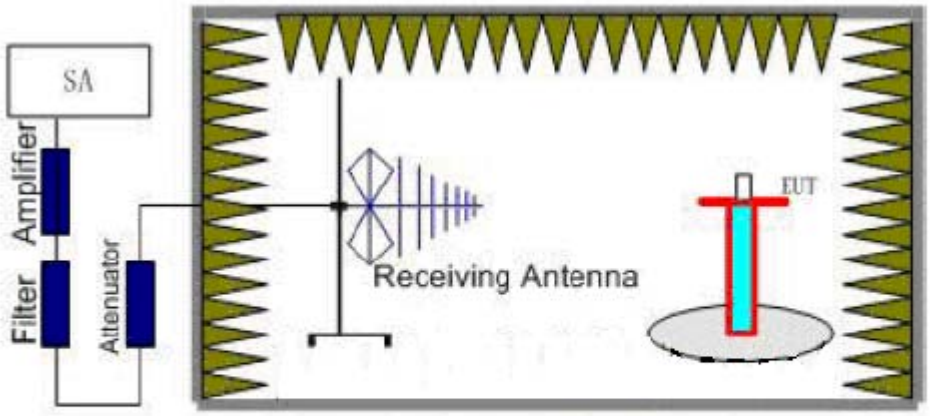
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

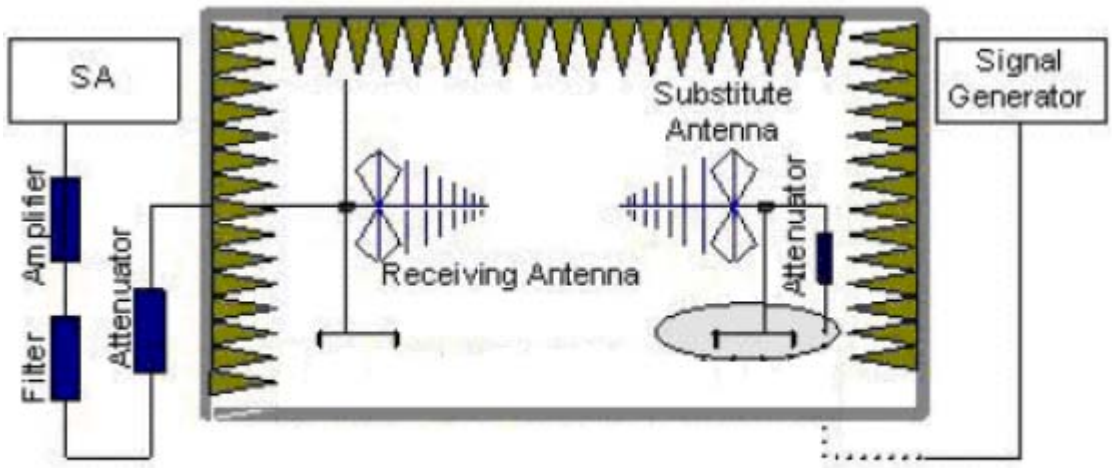
Test procedure:
The measurement was done according to TIA/EIA 603C.
Step 1:
The measurement is carried out in the semi-anechoic chamber. EUT was placed on a 0.8 meters high non-conductive table at a 3 meters test distance from the test receive antenna. A receiving antenna was placed on the antenna mast 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. These measurements have been tested at following channels: 128, 190, 251 for GSM 850, 4132, 4183, 4233 for WCDMA Band V.

Test Setup



Step 1



Step 2

Limits

Rule Part 22.913(a) specifies that "Mobile/portable stations are limited to 7 watts ERP".

Limit (ERP)	≤ 7 W (38.45 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 850

Channel	Frequency (MHz)	LVL （EUT）	S.G	Gain (dBi)	Cable Loss	Pr (dBm)	Correction Factor (dBm)	ERP (dBm)
128	824.2	-18.70	0	1.06	14.7	60.58	46.94	25.80
190	836.6	-18.43	0	1.20	14.72	60.49	46.97	26.02
251	848.8	-18.84	0	1.38	14.77	60.54	47.15	26.12

GSM 850 GPRS (1 down 1 up)

Channel	Frequency (MHz)	LVL （EUT）	S.G	Gain (dBi)	Cable Loss	Pr (dBm)	Correction Factor (dBm)	ERP (dBm)
128	824.2	-18.62	0	1.06	14.7	60.58	46.94	26.20
190	836.6	-18.37	0	1.20	14.72	60.49	46.97	26.42
251	848.8	-18.62	0	1.38	14.77	60.54	47.15	26.61

GSM 850 EGPRS (1 down 1 up)

Channel	Frequency (MHz)	LVL （EUT）	S.G	Gain (dBi)	Cable Loss	Pr (dBm)	Correction Factor (dBm)	ERP (dBm)
128	824.2	-23.75	0	1.06	14.7	60.58	46.94	25.48
190	836.6	-23.63	0	1.20	14.72	60.49	46.97	25.76
251	848.8	-23.60	0	1.38	14.77	60.54	47.15	25.94

WCDMA Band V

Channel	Frequency (MHz)	LVL （EUT）	S.G	Gain (dBi)	Cable Loss	Pr (dBm)	Correction Factor (dBm)	ERP (dBm)
4132	826.4	-29.05	0	1.06	14.7	60.55	46.91	16.32
4183	836.6	-29.15	0	1.20	14.72	60.49	46.97	15.71
4233	846.6	-29.52	0	1.38	14.77	60.52	47.13	19.98

2.4. Occupied Bandwidth

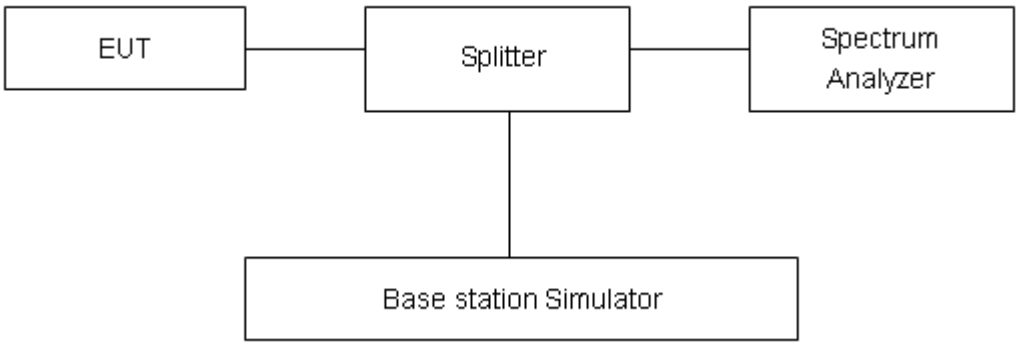
Ambient condition

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. The measurement will be conducted at three channels No. 128, 190, 251 for GSM 850, 4132, 4183, 4233 for WCDMA Band V.

Test Setup



Limits

No specific occupied bandwidth requirements in part 2.1049.

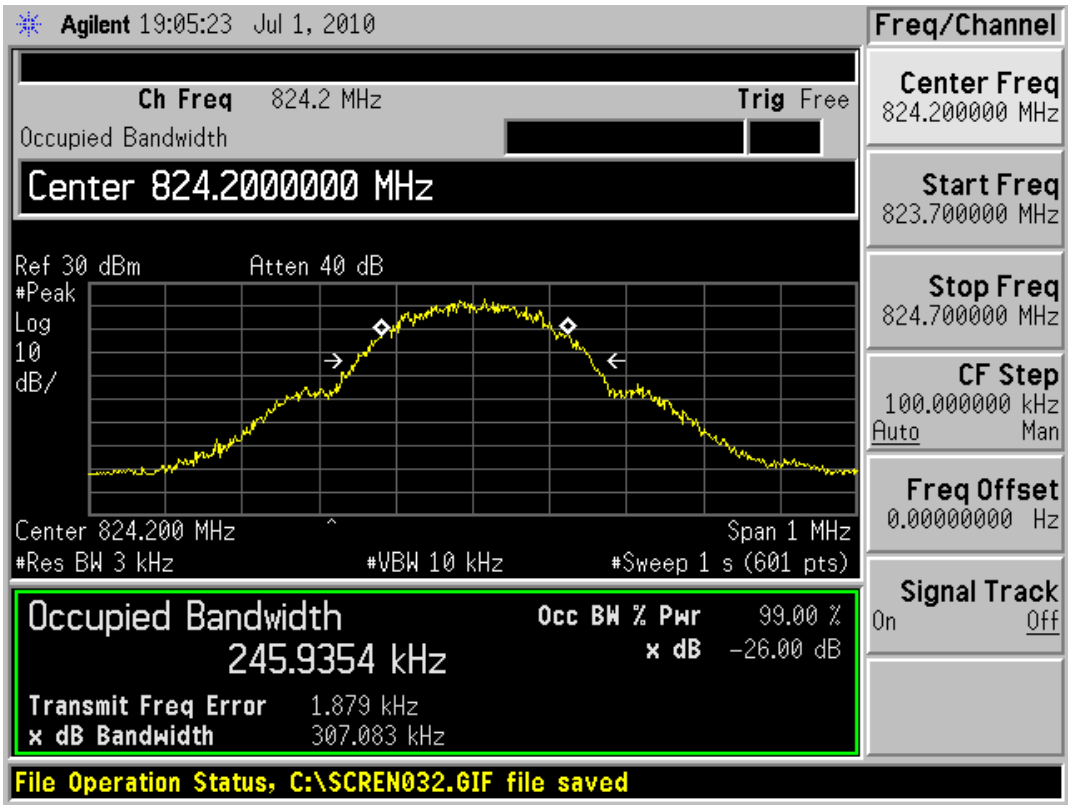
Measurement Uncertainty

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

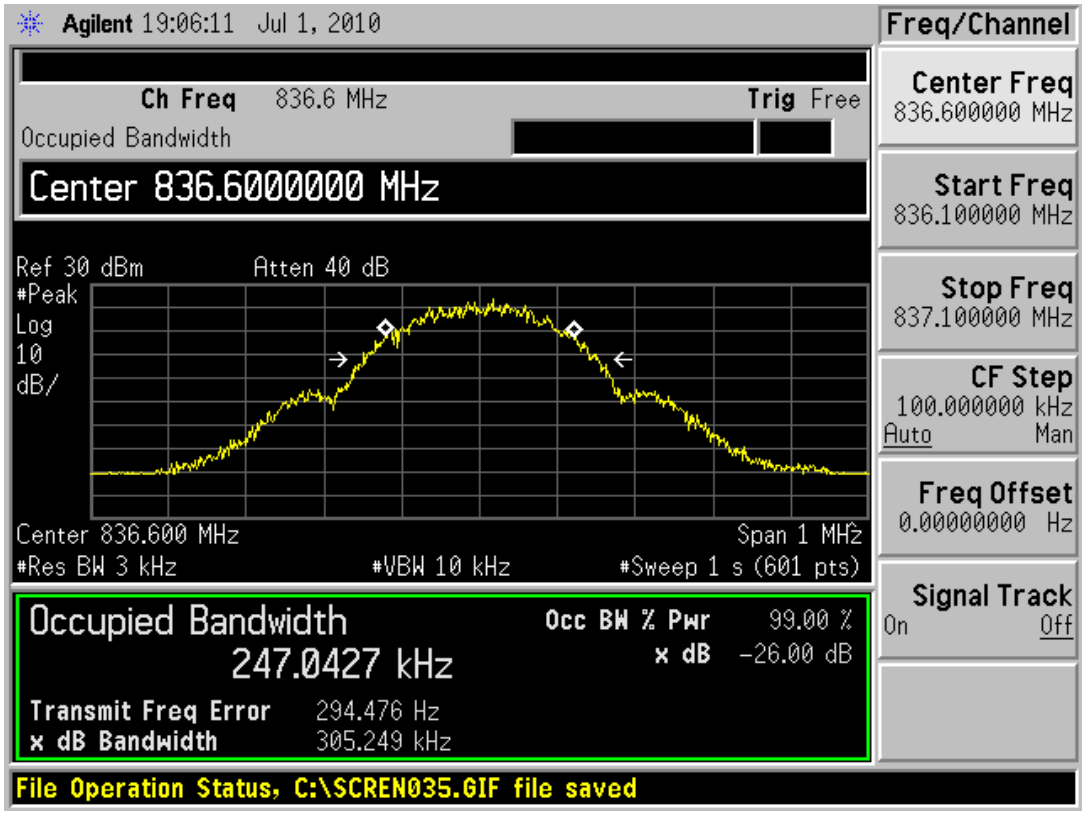
Test Result

GSM 850

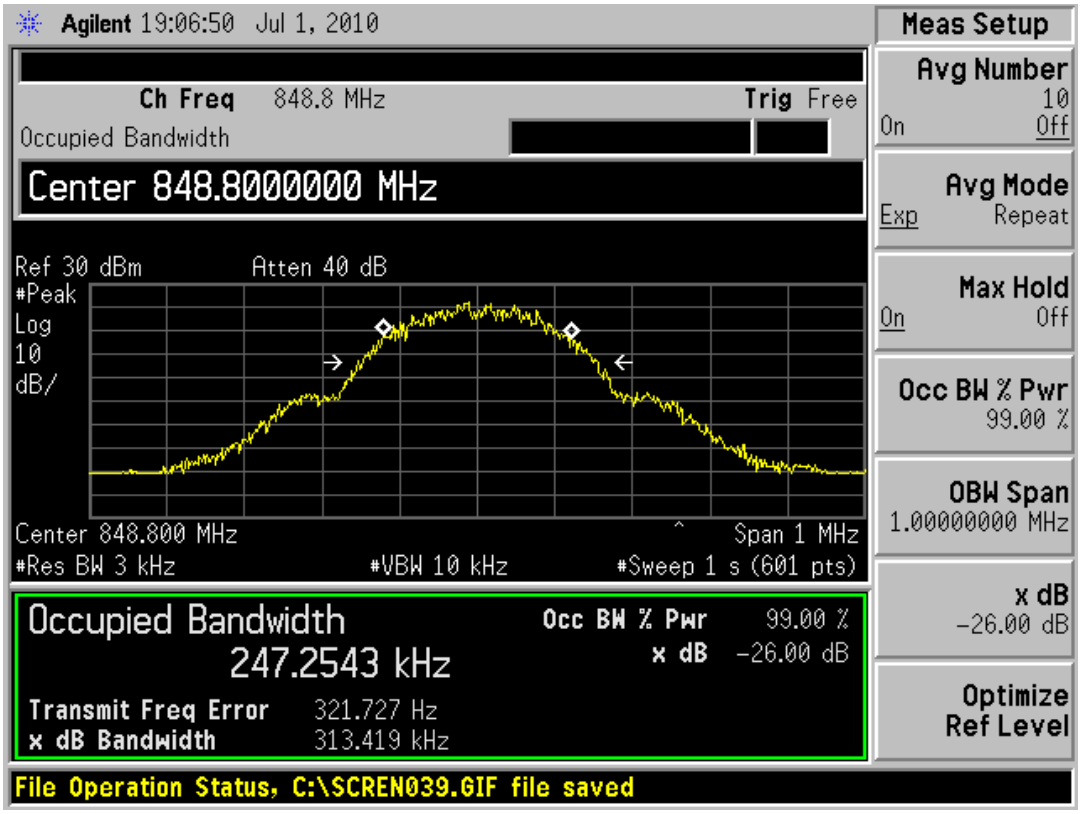
Channel	Frequency (MHz)	99% Power Bandwidth (kHz)	-26dBc Bandwidth(kHz)
128	824.2	245.94	307.08
190	836.6	247.04	305.25
251	848.8	247.25	313.42



GSM 850 CH128 Occupied Bandwidth



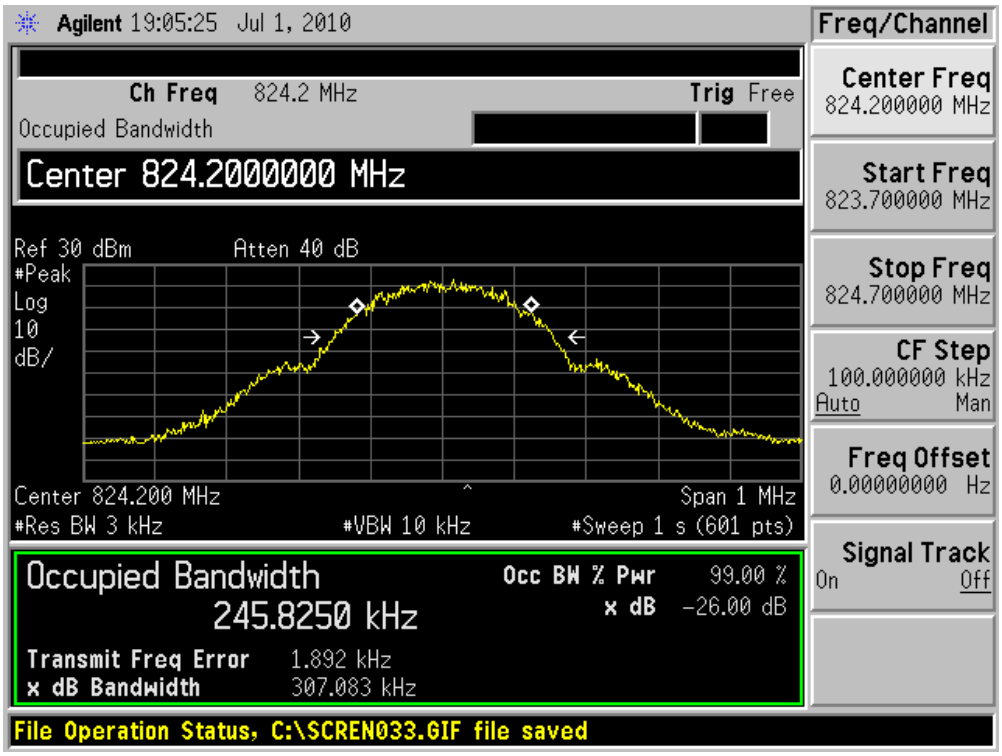
GSM 850 CH190 Occupied Bandwidth



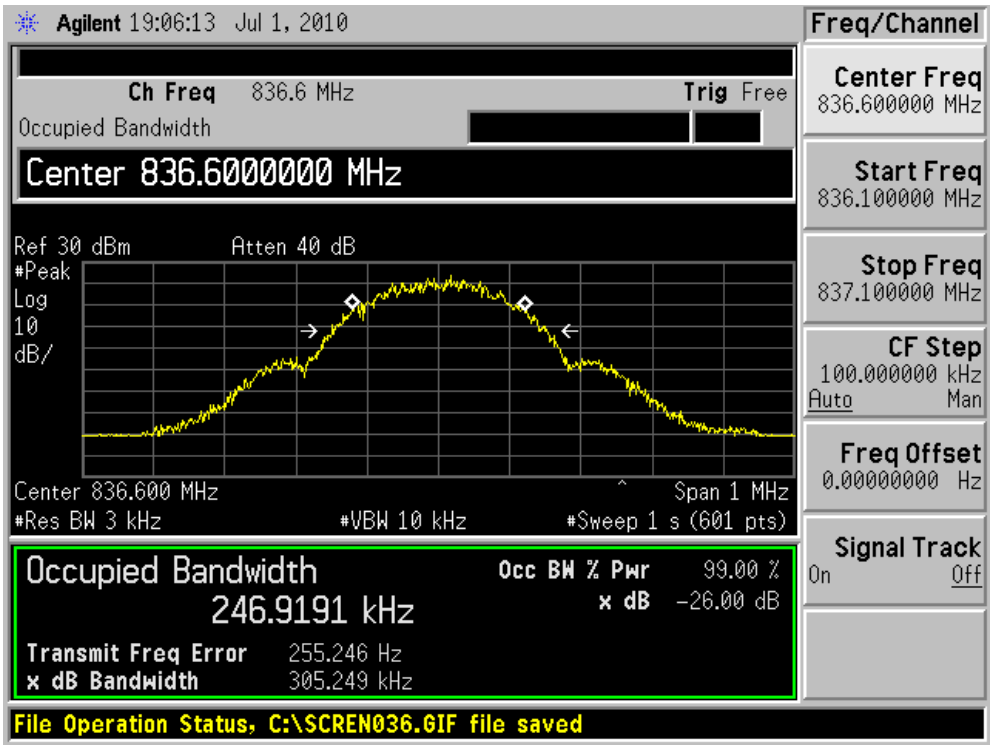
GSM 850 CH251 Occupied Bandwidth

GSM 850 GPRS

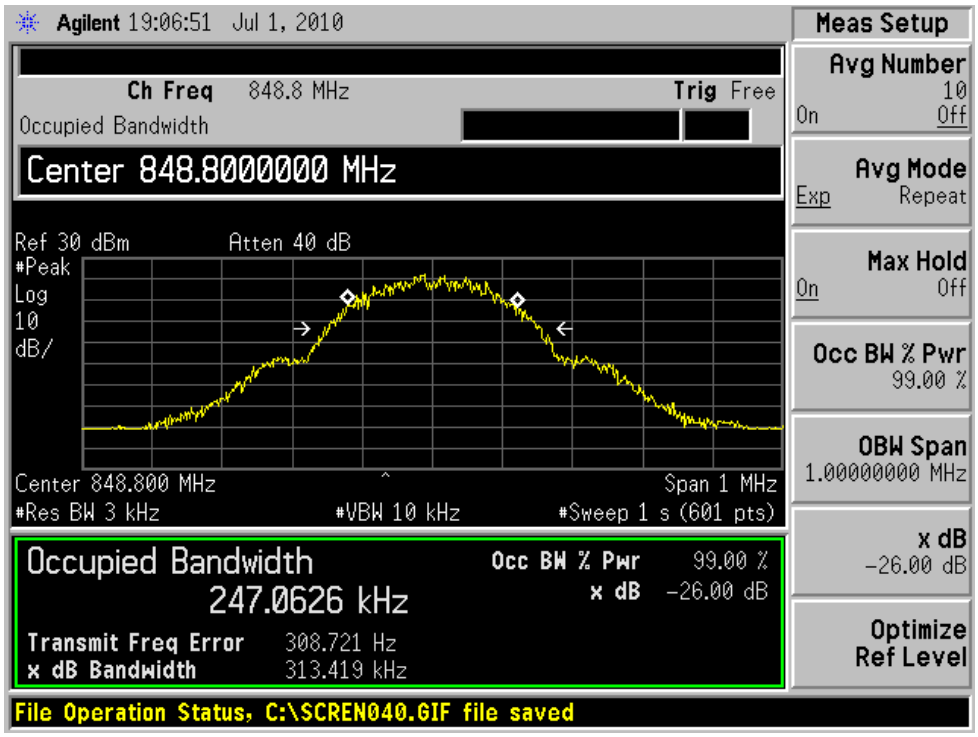
Channel	Frequency (MHz)	99% Power Bandwidth (kHz)	-26dBc Bandwidth(kHz)
128	824.2	245.83	307.08
190	836.6	255.25	305.25
251	848.8	308.72	313.42



GSM 850 GPRS CH128 Occupied Bandwidth



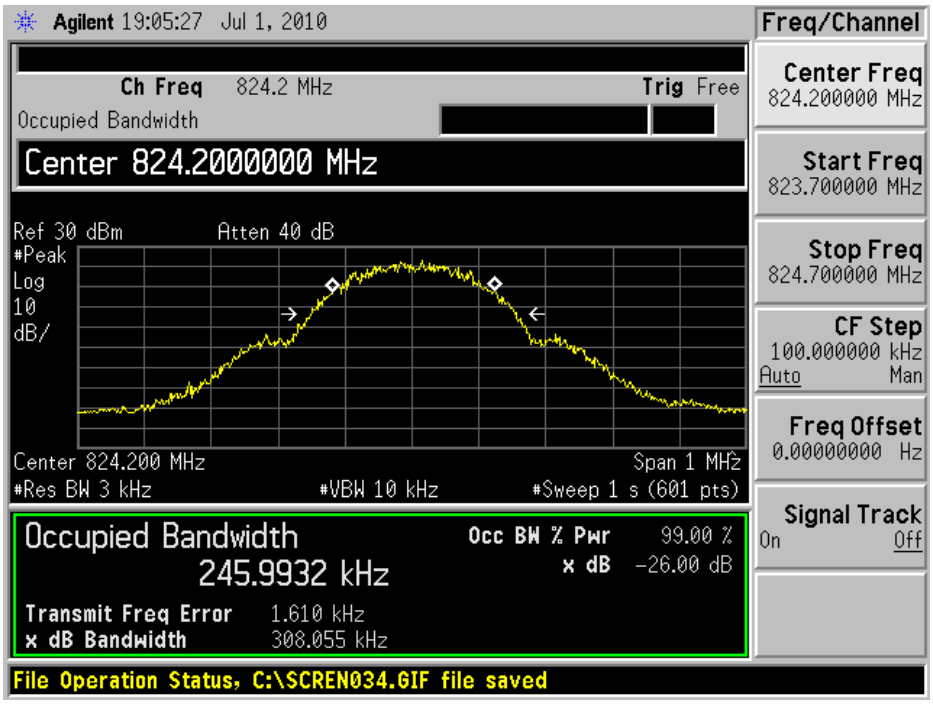
GSM 850 GPRS CH190 Occupied Bandwidth



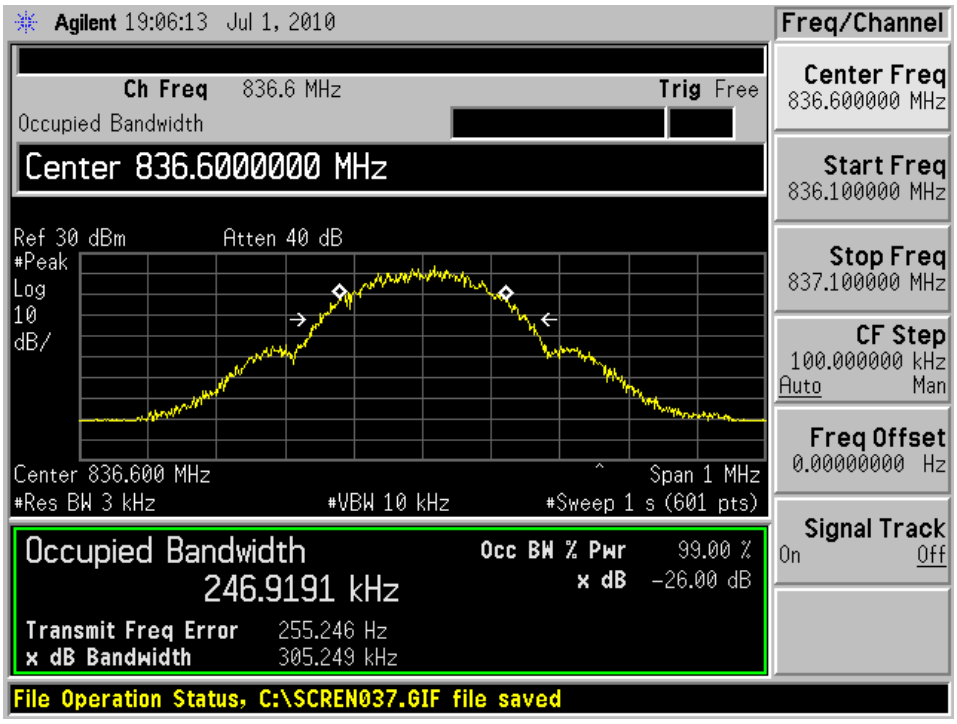
GSM 850 GPRS CH251 Occupied Bandwidth

GSM 850 EGPRS

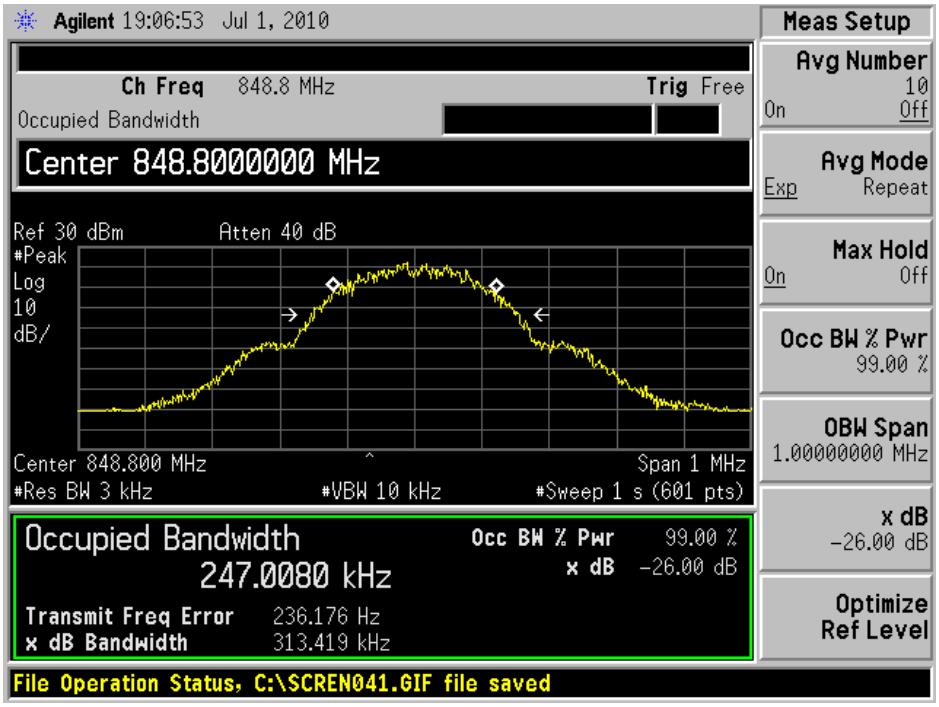
Channel	Frequency (MHz)	99% Power Bandwidth (kHz)	-26dBc Bandwidth(kHz)
128	824.2	245.99	308.06
190	836.6	255.25	305.25
251	848.8	247.01	313.42



GSM 850 EGPRS CH128 Occupied Bandwidth



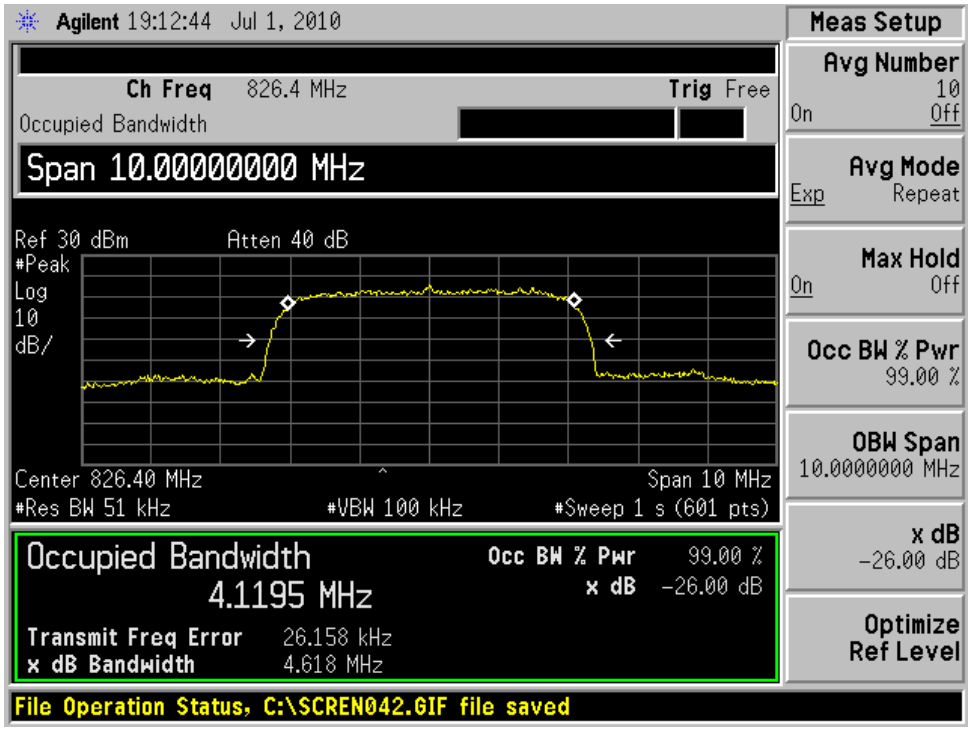
GSM 850 EGPRS CH190 Occupied Bandwidth



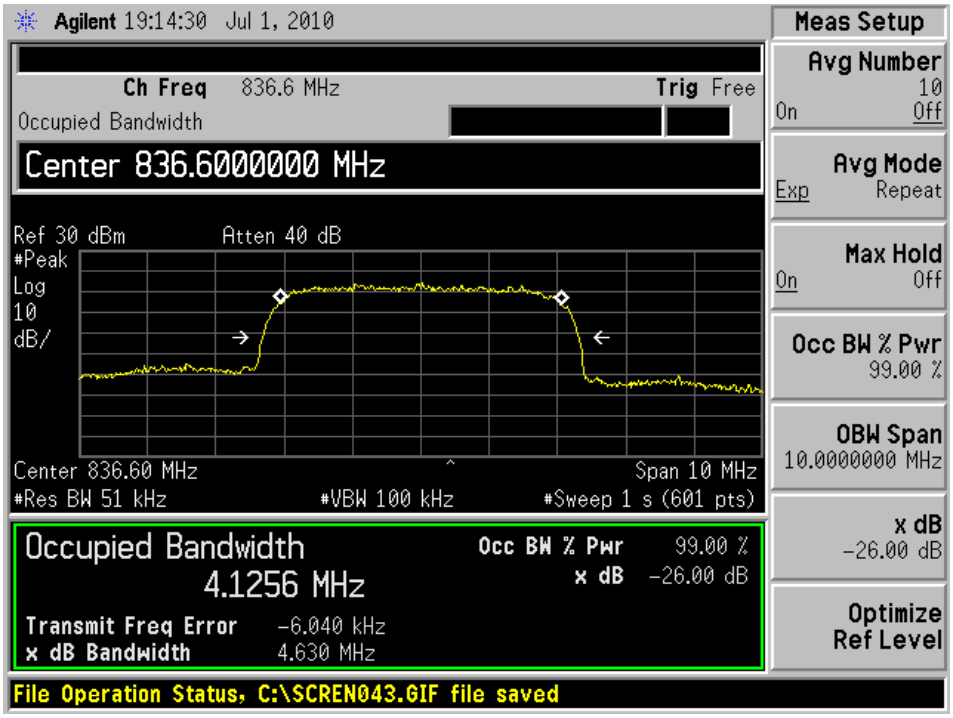
GSM 850 EGPRS CH251 Occupied Bandwidth

WCDMA Band V

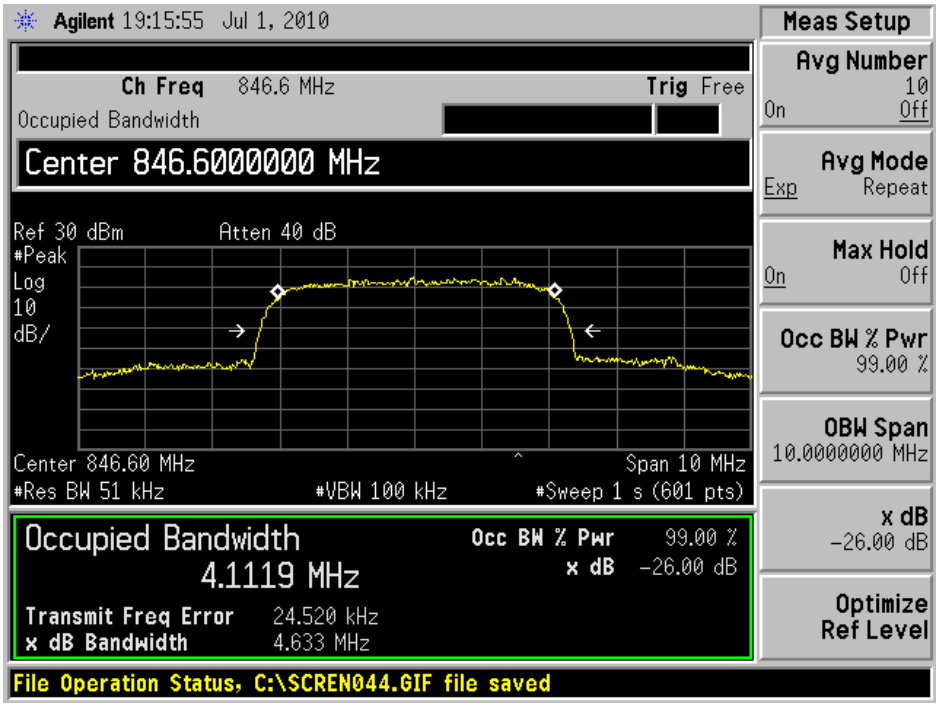
Channel	Frequency (MHz)	99% Power Bandwidth (MHz)	-26dBc Bandwidth(MHz)
4132	826.4	4.12	4.62
4183	836.6	4.13	4.63
4233	846.6	4.11	4.63



WCDMA Band V CH4132 Occupied Bandwidth



WCDMA Band V CH4183 Occupied Bandwidth



WCDMA Band V CH4233 Occupied Bandwidth

2.5. Band Edge Compliance

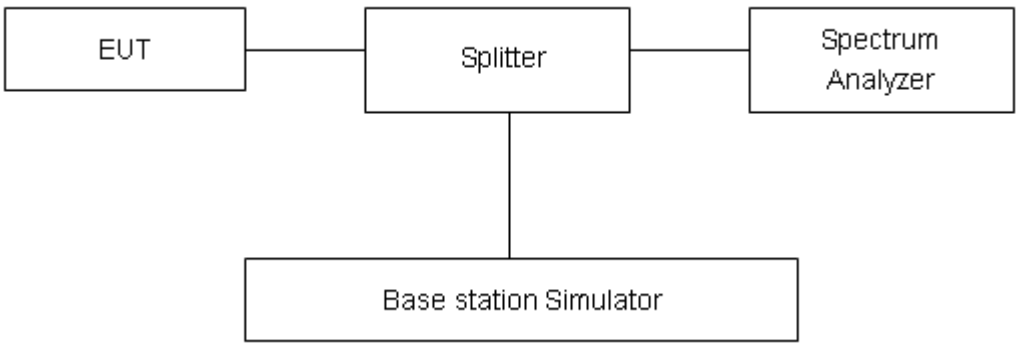
Ambient condition

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 & 51kHz on spectrum analyzer. Spectrum analyzer plots are included on the following pages. The measurement will be conducted at channels No. 128 and 251 for GSM 850, 4132, and 4233 for WCDMA Band V.

Test Setup



Limits

Rule Part 22.917(a) specifies that “The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.”

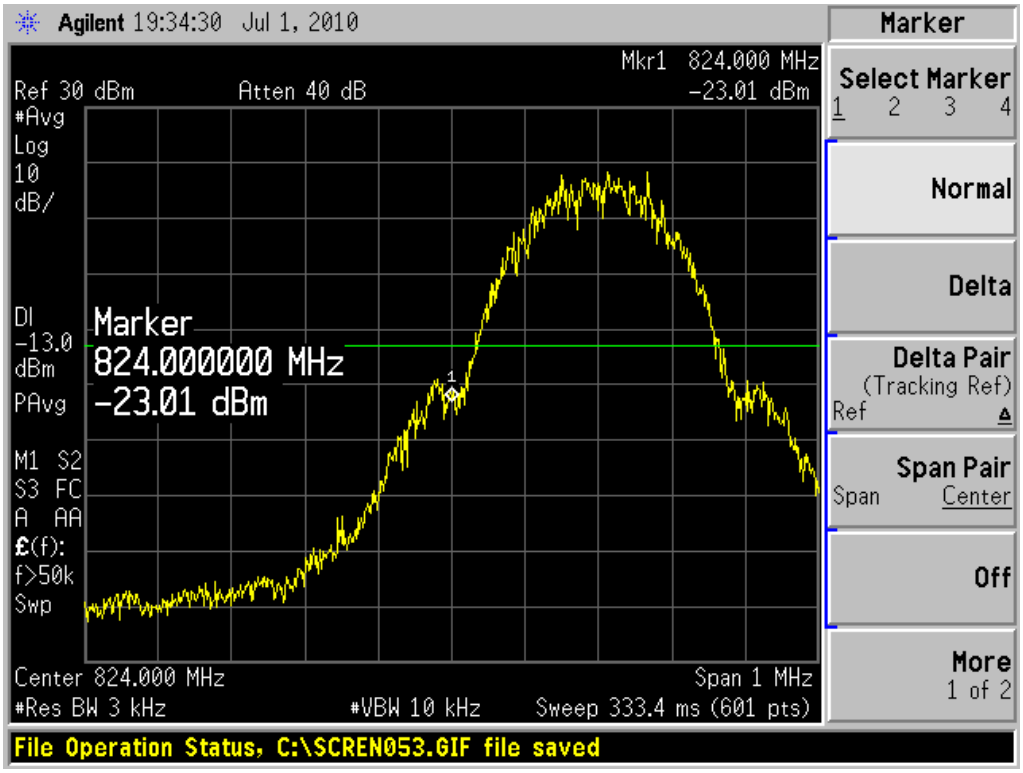
Limit	-13 dBm

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

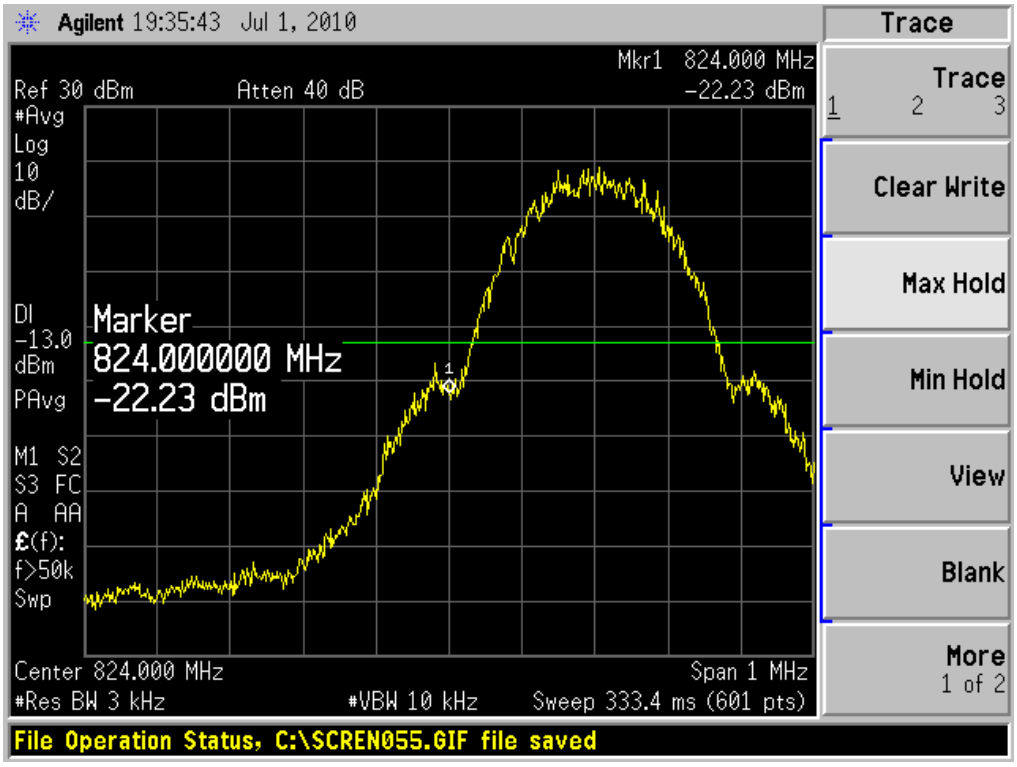
GSM 850



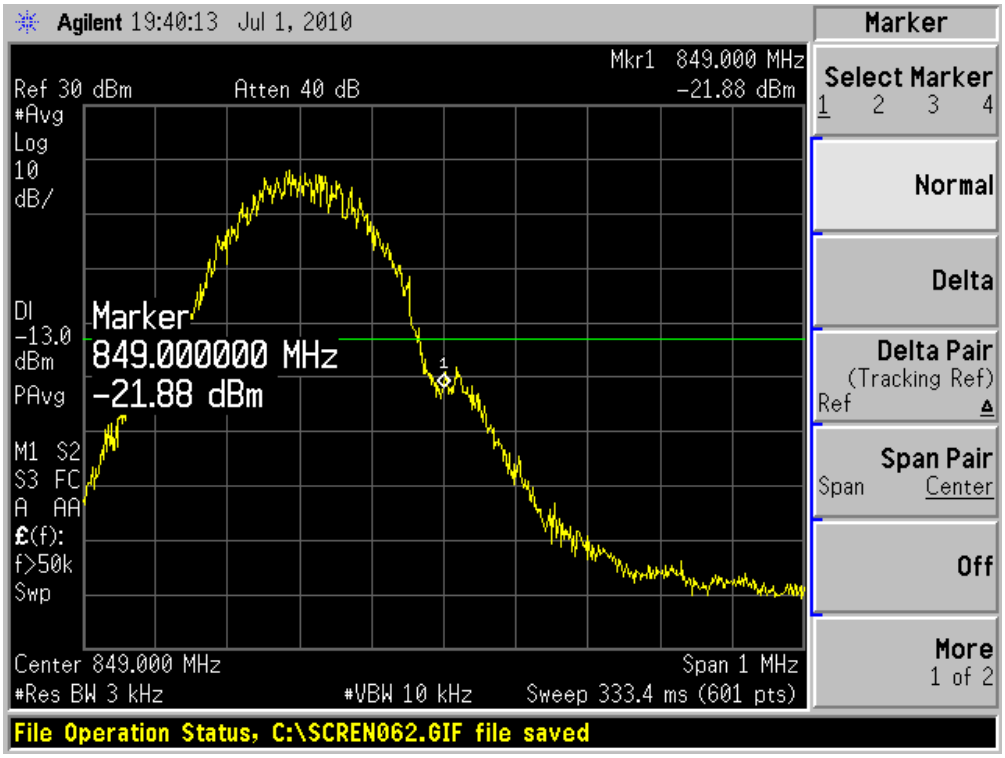
GSM 850 CH128 Channel

GSM 850 CH251 Channel

GSM 850 GPRS

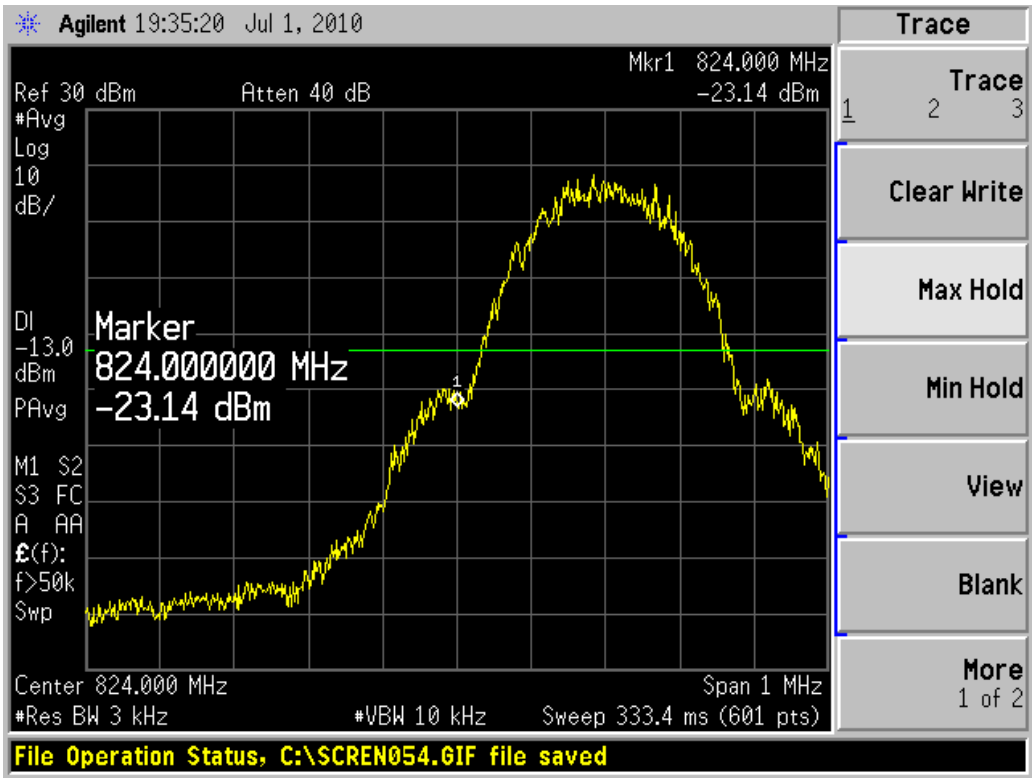


GSM 850 GPRS CH128 Channel

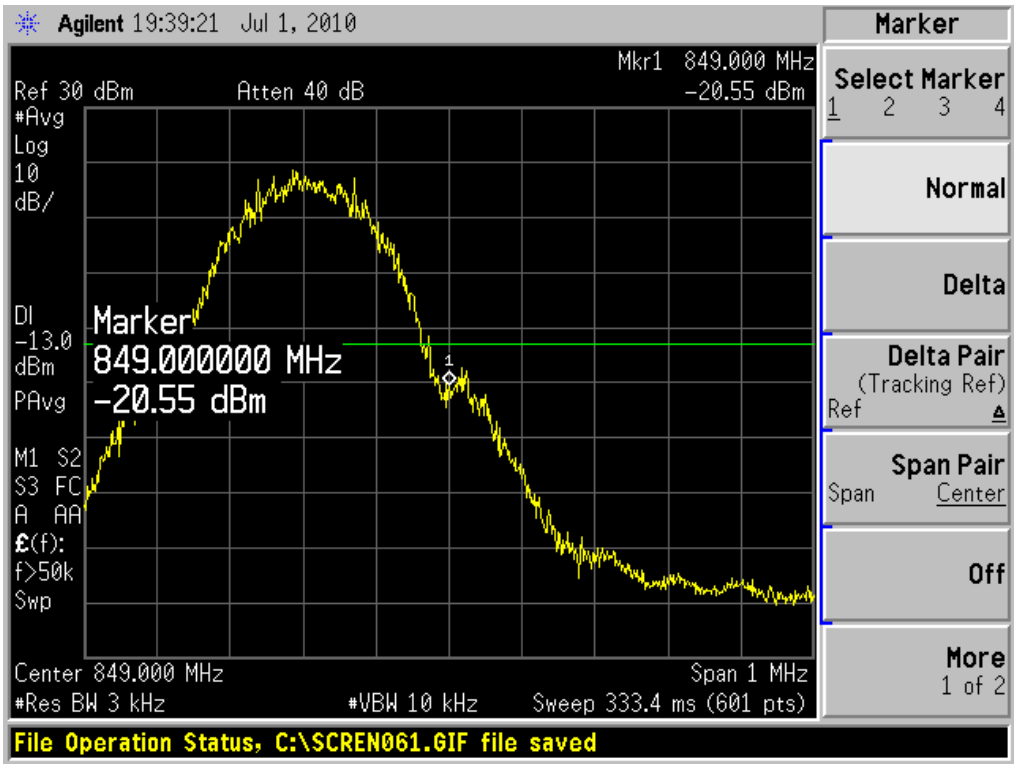


GSM 850 GPRS CH251 Channel

GSM 850 EGPRS

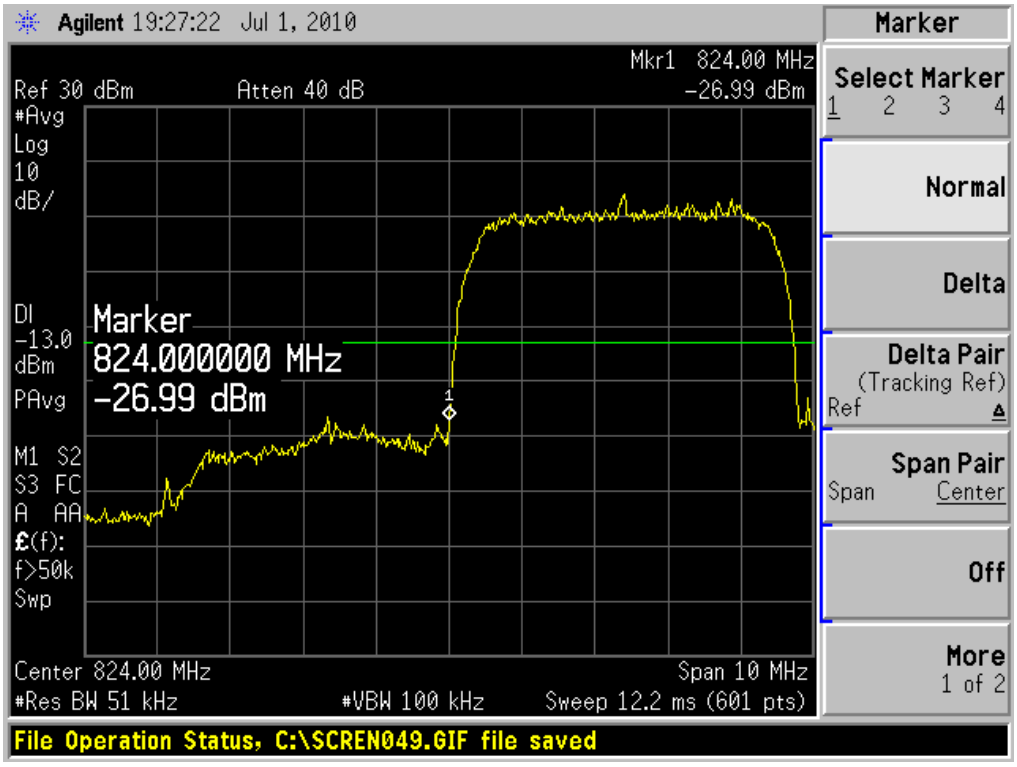


GSM 850 EGPRS CH128 Channel

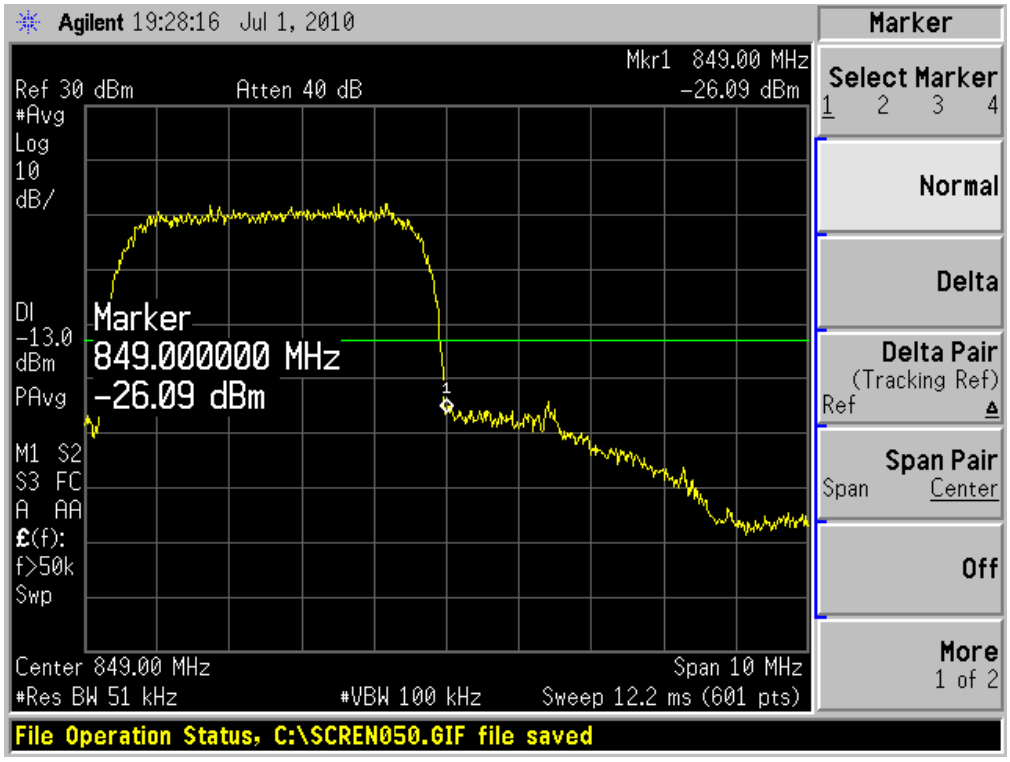


GSM 850 EGPRS CH251 Channel

WCDMA Band V



WCDMA Band V CH4132 Channel



WCDMA Band V CH4233 Channel

2.6. Frequency Stability

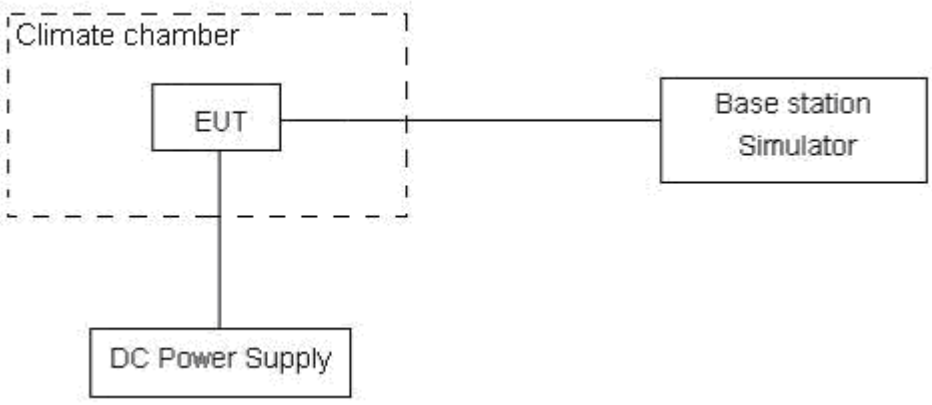
Ambient condition

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.
   The measurement will be conducted at one channel No.190 for GSM 850 and No.4183 for WCDMA Band V.

Test setup



Limits

The frequency stability of the carrier shall be accurate to within 2.5 ppm of the received frequency from the base station. This accuracy is sufficient to meet Sec. 22.355 Frequency Stability. The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Limits	⩽ 2. 5 ppm

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 850

Temperature (° C)	Test Results (ppm) / 3.7 V Power supply
	GSM 850 Channel 190
-30	0.016
-20	0.041
-10	0.036
0	0.015
10	0.036
20	0.021
30	0.032
40	0.039
50	0.028

Voltage (V)	Test Results(ppm) / 20° C
	GSM 850 Channel 190
3.5	0.036
3.7	0.021
4.2	0.017

WCDMA Band V

Temperature (° C)	Test Results (ppm) / 3.7 V Power supply
	WCDMA Band V Channel 4183
-30	0.077
-20	0.059
-10	0.061
0	0.017
10	0.049
20	0.034
30	0.014
40	0.046
50	0.025

Voltage (V)	Test Results(ppm) / 20° C
	WCDMA Band V Channel 4183
3.5	0.049
3.7	0.034
4.2	0.039

2.7. Spurious Emissions at Antenna Terminals

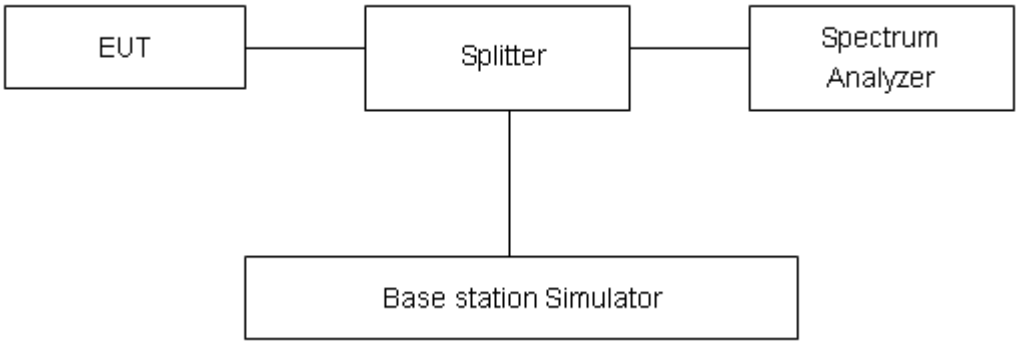
Ambient condition

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. The measurement will be conducted at channels No.128, No.190 and No.251 (Bottom, middle and top channels of GSM 850 band) and three channels No.4132, No.4183 and No.4233 (Bottom, middle and top channels of WCDMA Band V band).

Test setup



Limits

Rule Part 22.917(a) specifies that “The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.”

Limit	-13 dBm

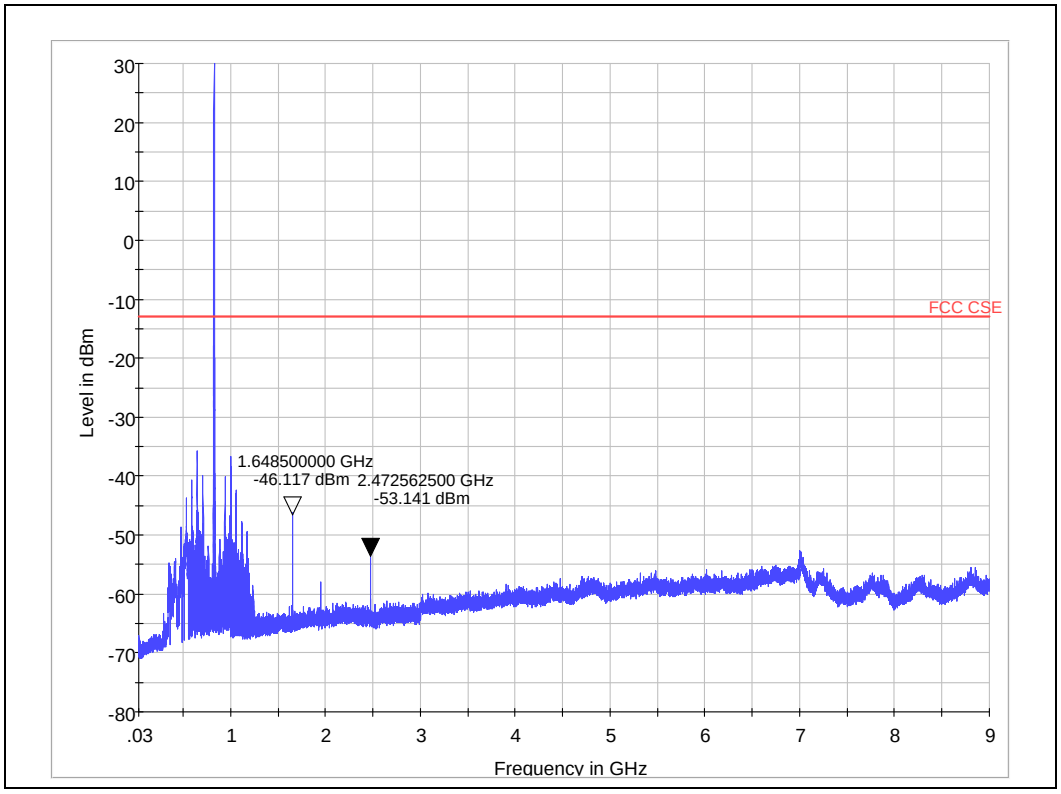
Measurement Uncertainty

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

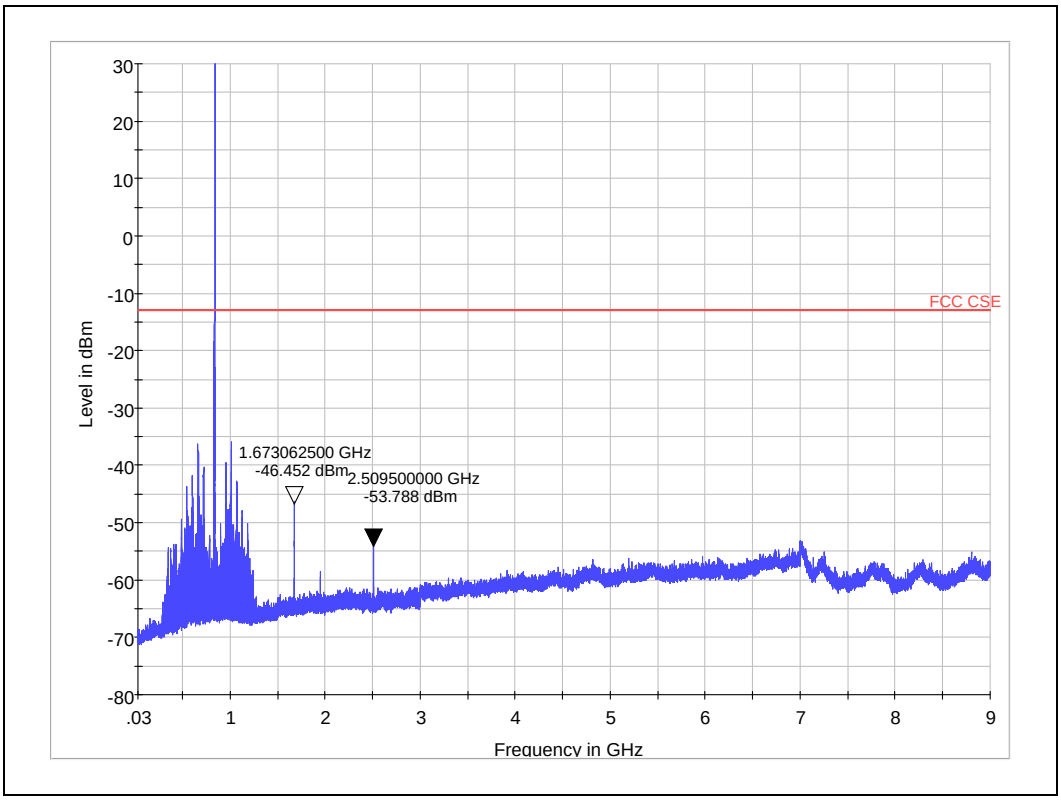
Frequency	Uncertainty
100kHz-2GHz	0.684 dB
2GHz-12.75GHz	1.407 dB

Test Result

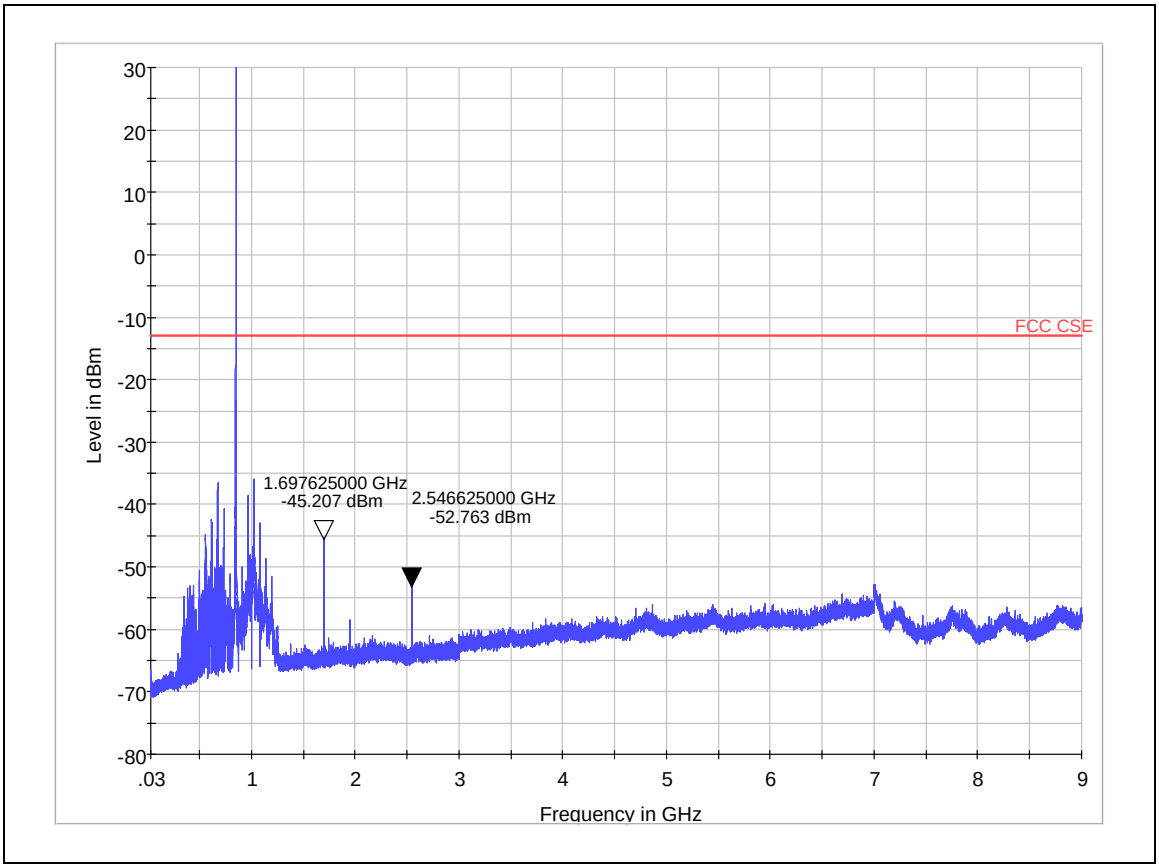
GMS 850



Note: The signal beyond the limit is carrier.
GSM 850 Channel 128 30MHz ~9GHz



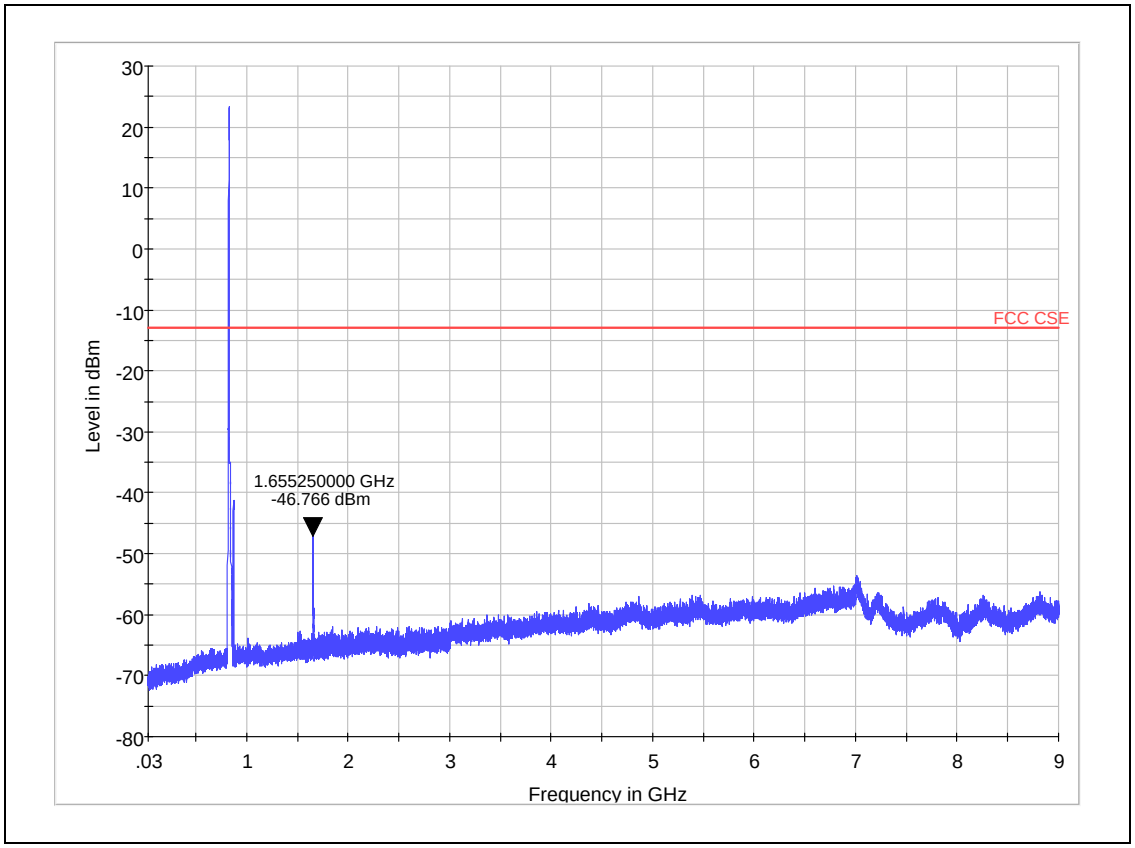
Note: The signal beyond the limit is carrier.
GSM 850 Channel 190 30MHz ~9GHz



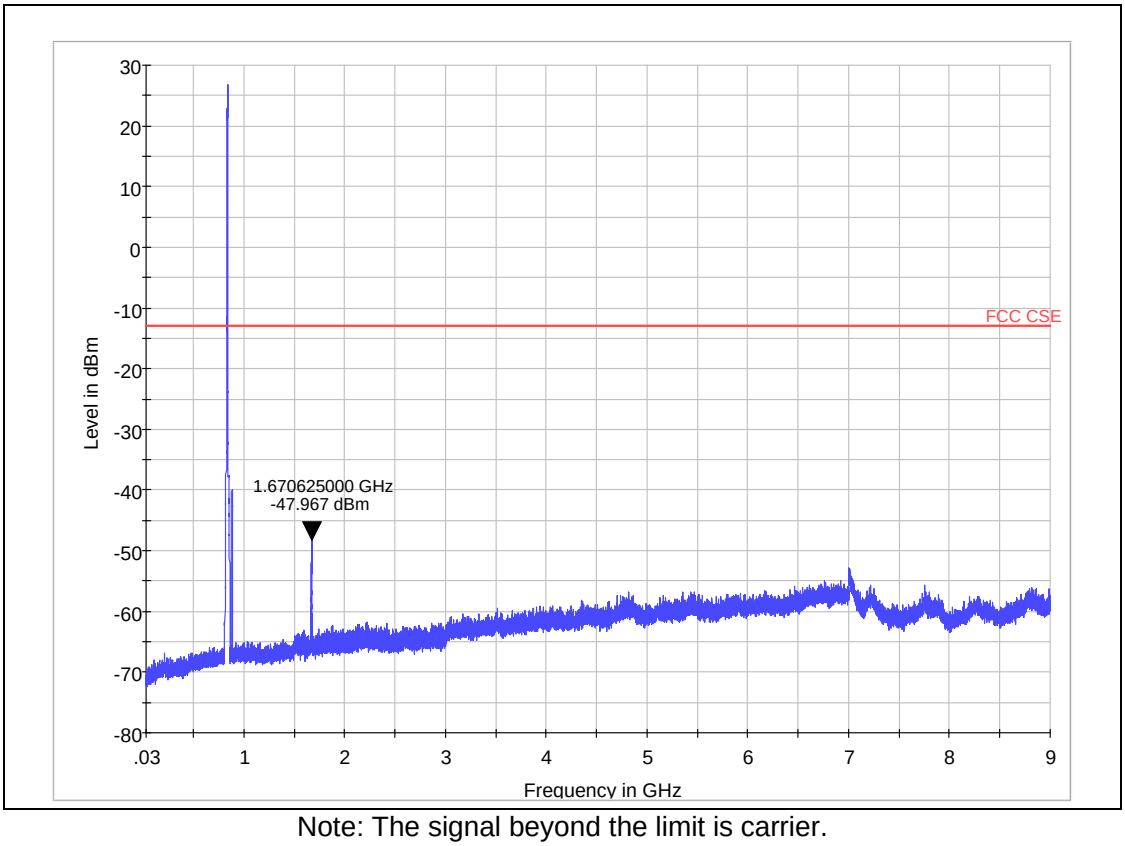
Note: The signal beyond the limit is carrier.
GSM 850 Channel 251 30MHz ~9GHz

Harmonic	TX ch. 128 Frequency (MHz)	Level (dBm)	TX ch.190 Frequency (MHz)	Level (dBm)	TX ch.251 Frequency (MHz)	Level (dBm)
2	1648.5	-46.12	1673.1	-46.45	1697.6	-45.21
3	2472.6	-53.14	2509.5	-53.79	2546.6	-52.76
4	3296.8	Nf	3346.4	Nf	3395.2	Nf
5	4121	Nf	4183	Nf	4244	Nf
6	4945.2	Nf	5019.6	Nf	5092.8	Nf
7	5769.4	Nf	5856.2	Nf	5941.6	Nf
8	6593.6	Nf	6692.8	Nf	6790.4	Nf
9	7417.8	Nf	7529.4	Nf	7639.2	Nf
10	8242	Nf	8366	Nf	8488	Nf
Nf: noise floor						

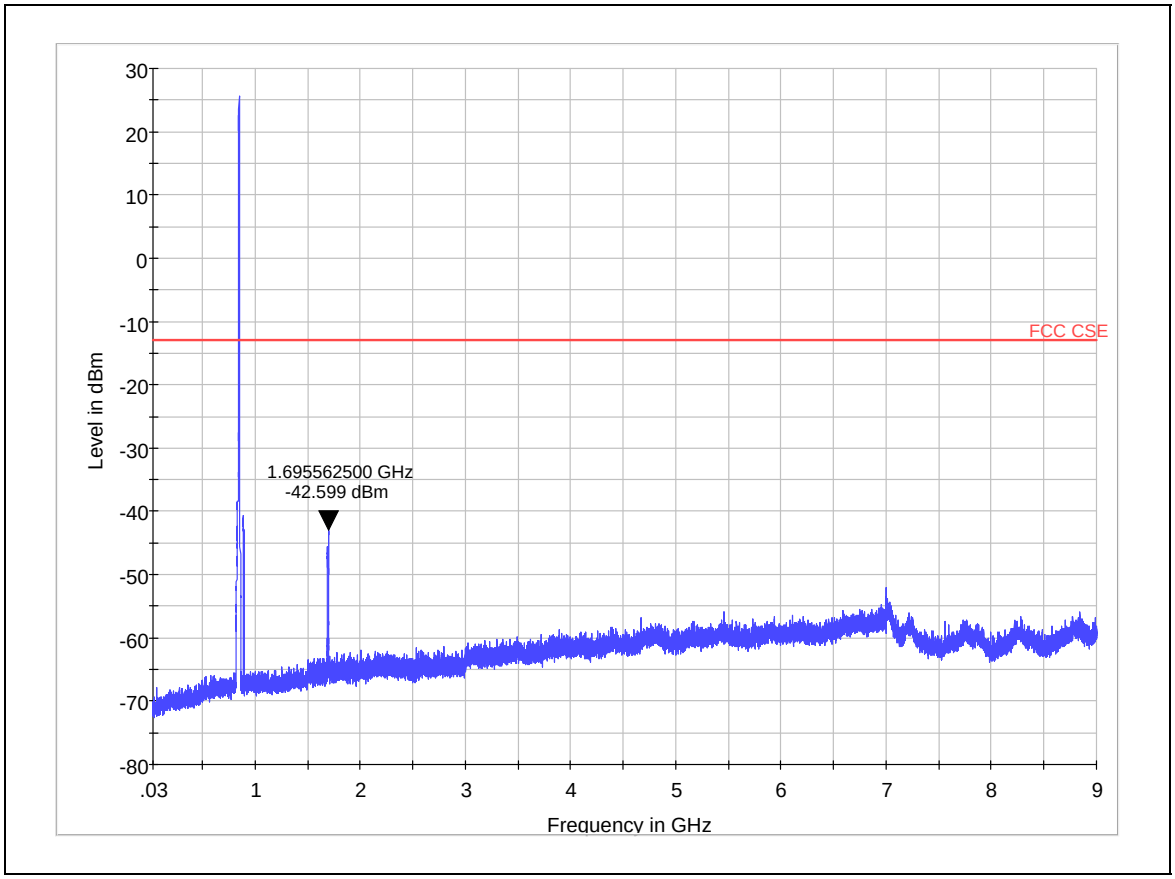
WCDMA Band V



Note: The signal beyond the limit is carrier.
WCDMA Band V Channel 4132 30MHz ~9GHz



Note: The signal beyond the limit is carrier.
WCDMA Band V Channel 4183 30MHz ~9GHz



Note: The signal beyond the limit is carrier.
WCDMA Band V Channel 4233 30MHz ~9GHz

Harmonic	TX ch.4132 Frequency (MHz)	Level (dBm)	TX ch.4183 Frequency (MHz)	Level (dBm)	TX ch.4233 Frequency (MHz)	Level (dBm)
2	1655.3	-46.77	1670.6	-47.97	1695.6	-42.60
3	2479.2	Nf	2509.8	Nf	2539.8	Nf
4	3305.6	Nf	3346.4	Nf	3386.4	Nf
5	4132	Nf	4183	Nf	4233	Nf
6	4958.4	Nf	5019.6	Nf	5079.6	Nf
7	5784.8	Nf	5856.2	Nf	5926.2	Nf
8	6611.2	Nf	6692.8	Nf	6772.8	Nf
9	7437.6	Nf	7529.4	Nf	7619.4	Nf
10	8264	Nf	8366	Nf	8466	Nf
Nf: noise floor						

2.8. Radiates Spurious Emission

Ambient condition

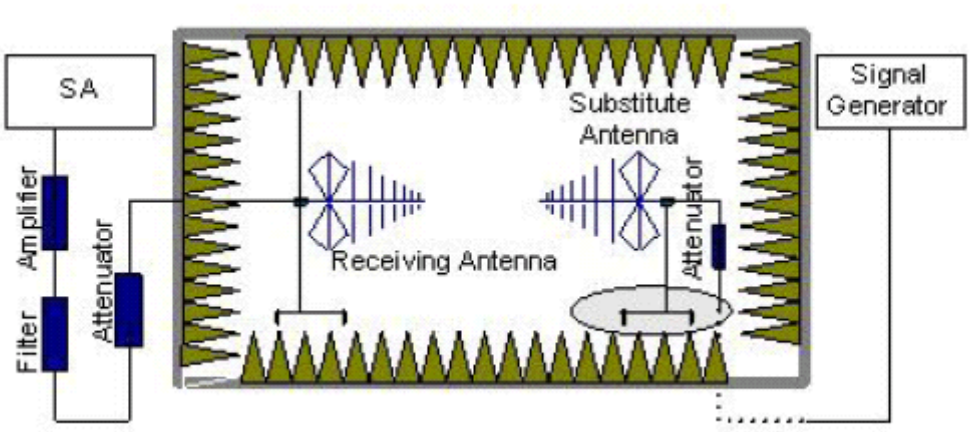
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

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 No.128, No.190 and No.251 (Bottom, middle and top channels of GSM 850 band) and three channels No.4132, No.4183 and No.4233 (Bottom, middle and top channels of WCDMA Band V band).

The data of cable loss and antenna Gain has been calibrated in full testing frequency range before the testing.
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

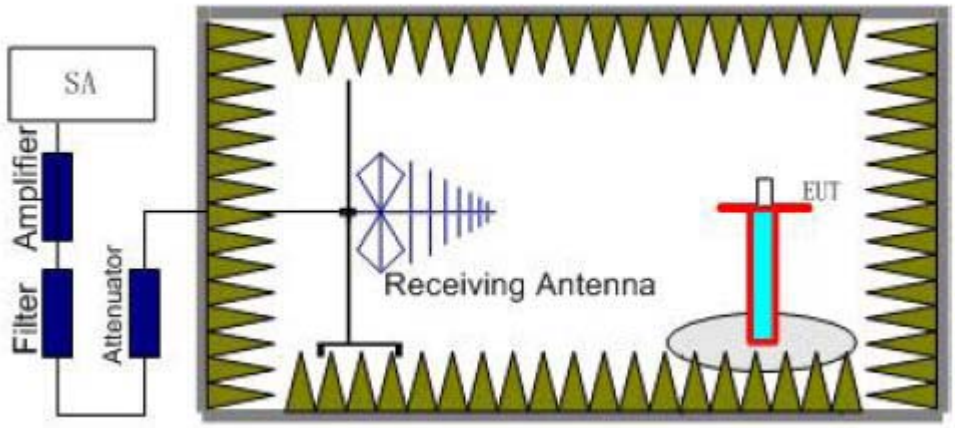
30MHz to the 10th harmonic were measured with peak detector and 1MHz bandwidth. A notch filter is necessary in the band near to the carrier frequency. A high pass filter is needed to avoid the distortion of the testing equipment in the band above the carrier frequency. If the harmonic could not be detected 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 22.917(a) specifies that “The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.”

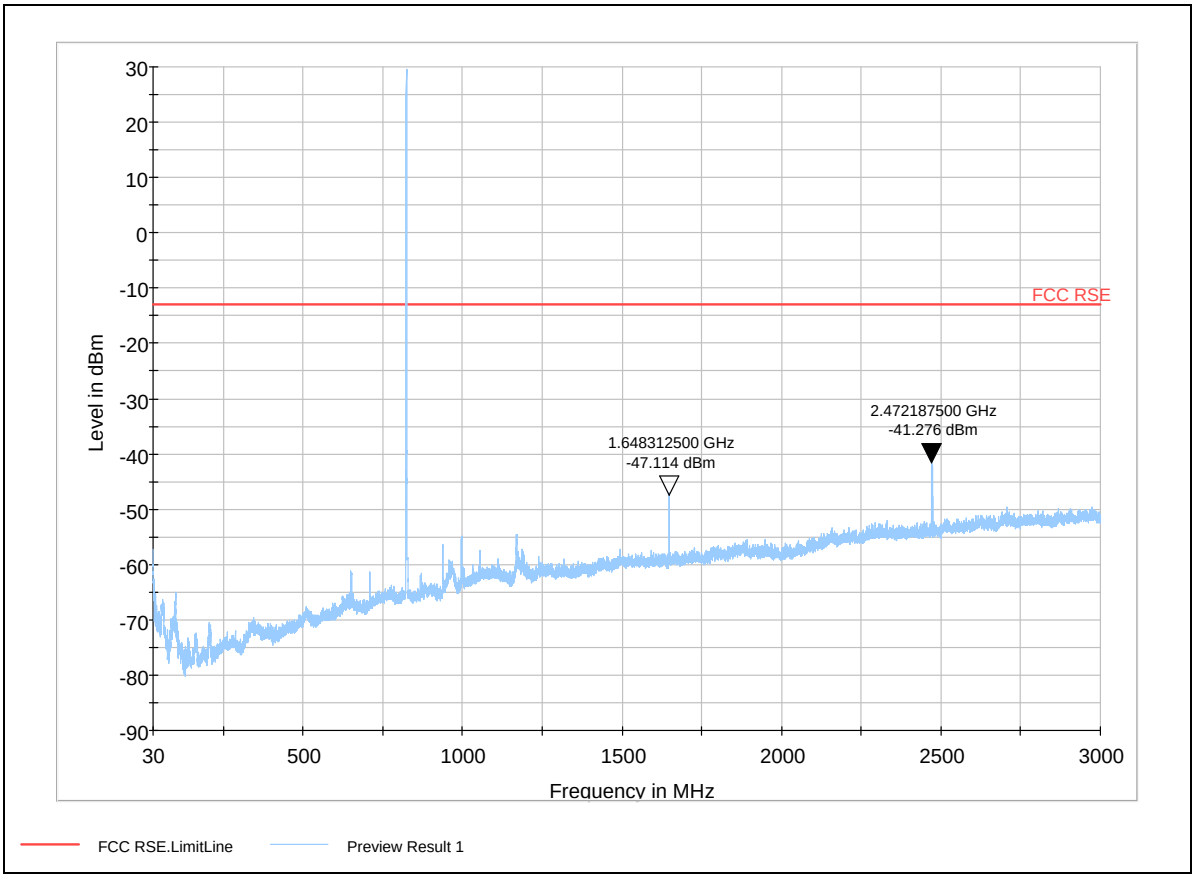
Limit	-13 dBm

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.

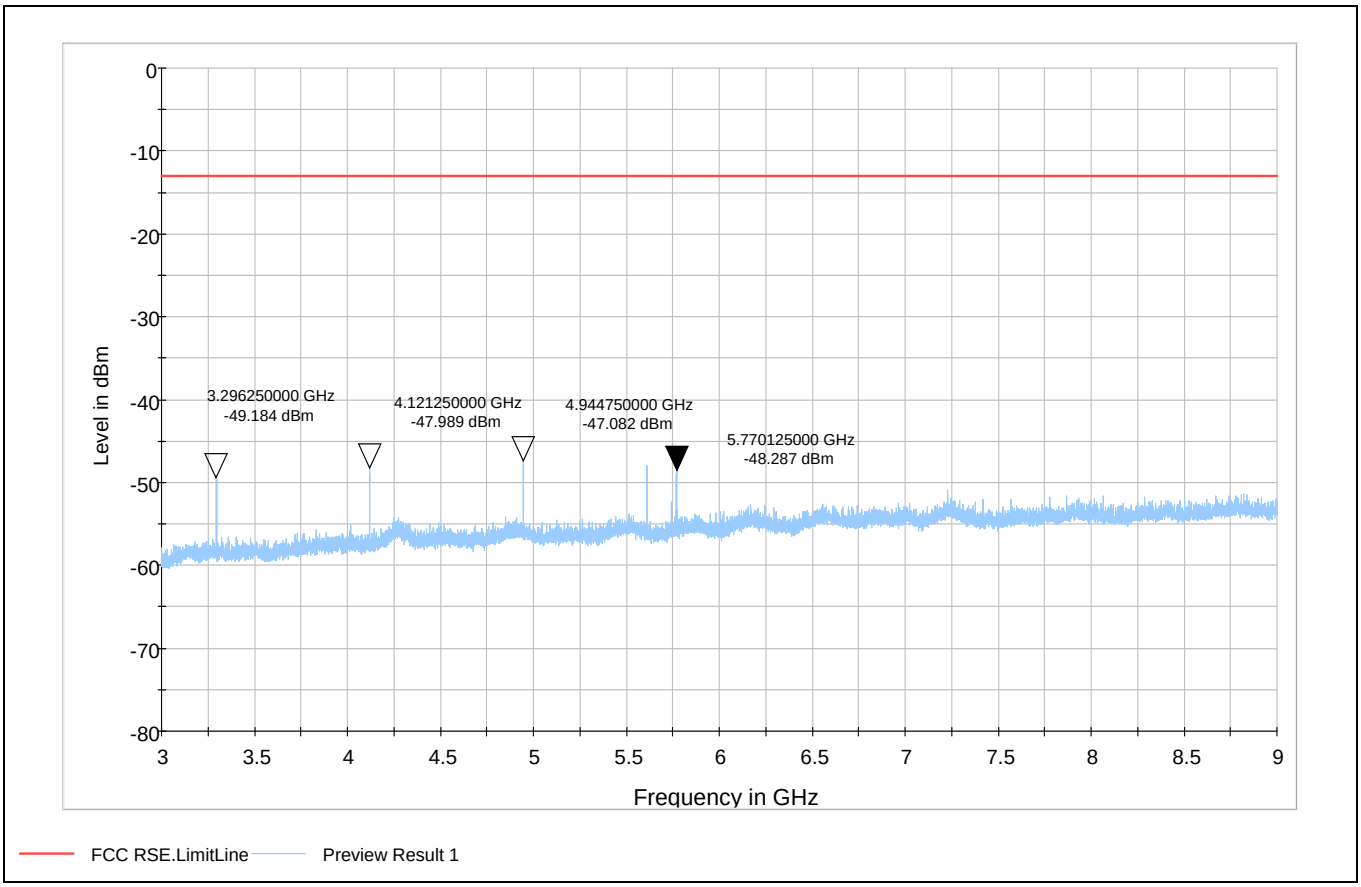
Test Result

GSM 850



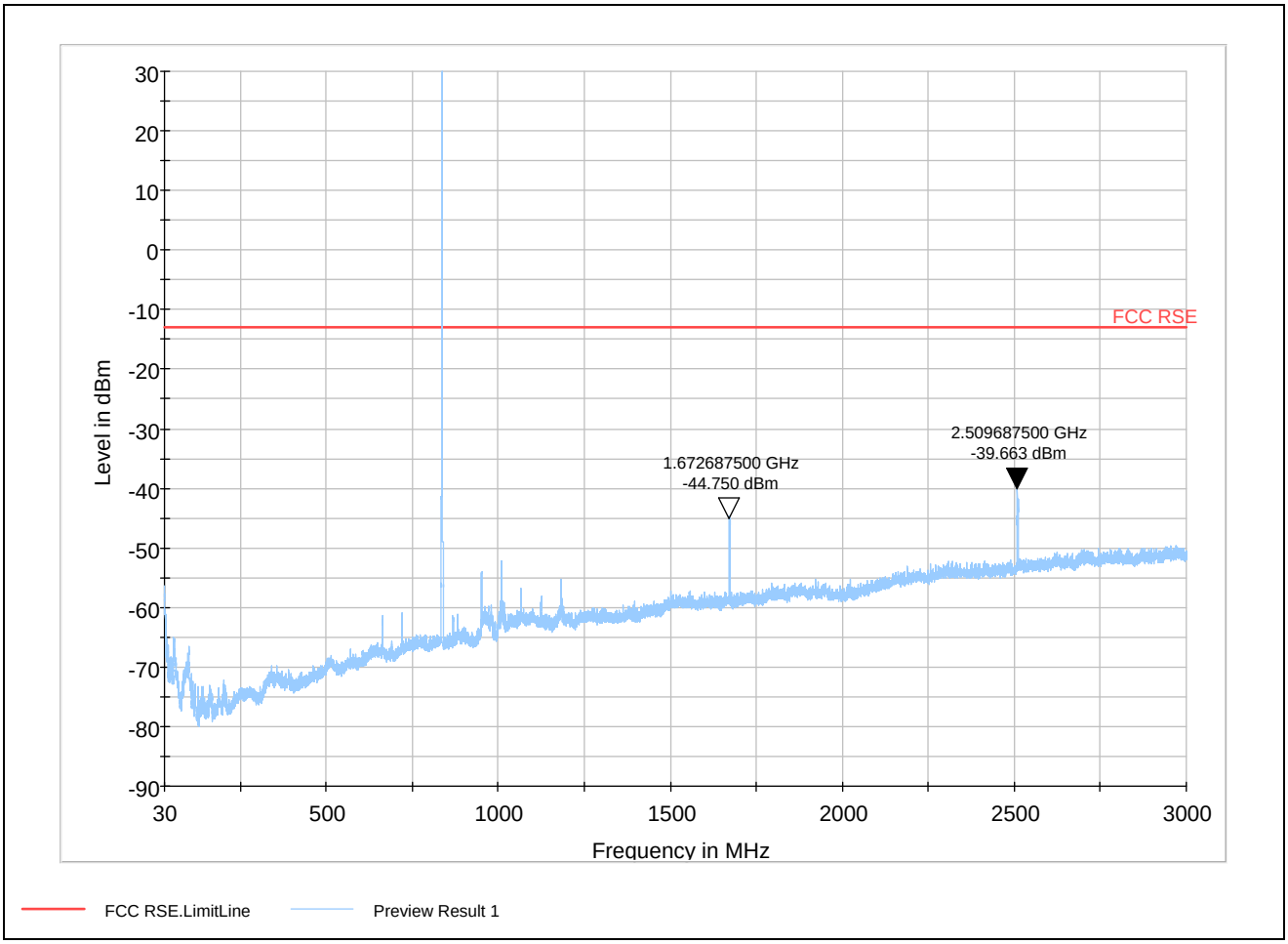
Note: The signal beyond the limit is carrier.

GSM850 Channel 128 30MHz~3GHz

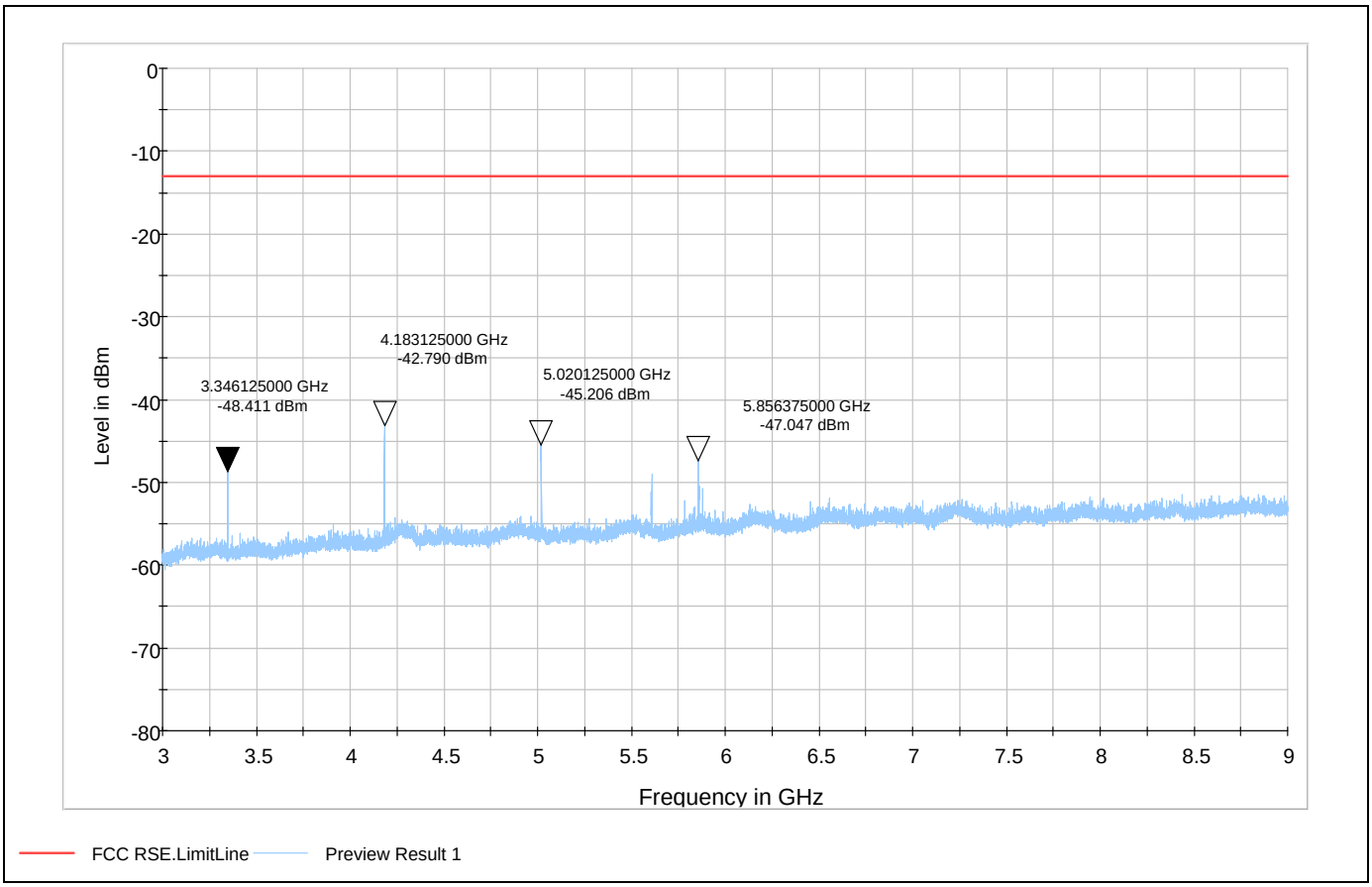


GSM850 Channel 128 3GHz ~9GHz

Harmonic	TX ch.128 Frequency (MHz)	Level (dBm)	Limit (dBm)
2	1648.3	-47.11	-13
3	2472.2	-41.28	-13
4	3296.3	-49.18	-13
5	4121.3	-47.99	-13
6	4944.8	-47.08	-13
7	5770.1	-48.29	-13
8	6593.6	Nf	-13
9	7417.8	Nf	-13
10	8242	Nf	-13
Nf: noise floor			

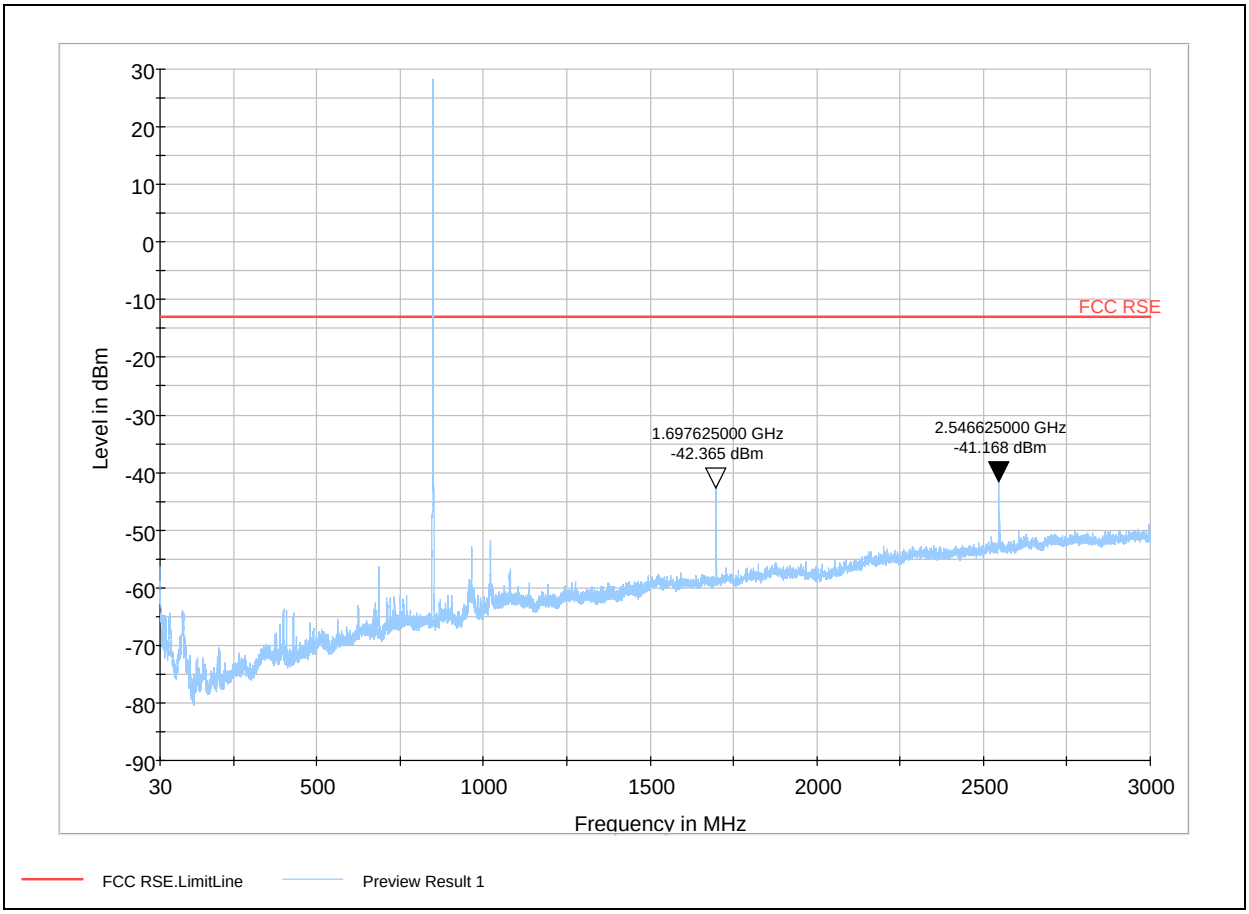


Note: The signal beyond the limit is carrier.
GSM 850 Channel 190 30MHz~3GHz



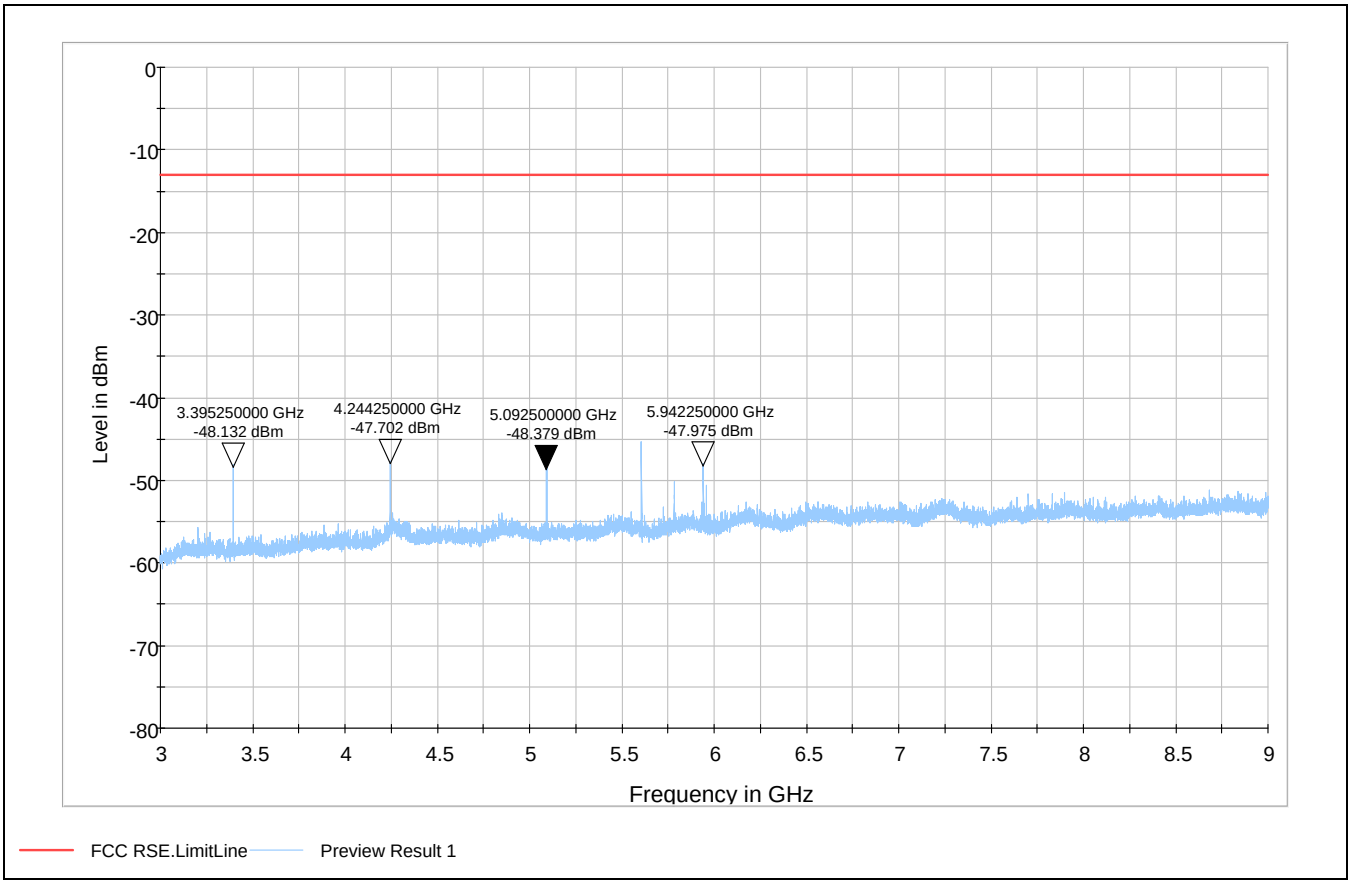
GSM 850 Channel 190 3GHz~9GHz

Harmonic	TX ch.190 Frequency (MHz)	Level (dBm)	Limit (dBm)
2	1672.69	-44.75	-13
3	2509.7	-39.66	-13
4	3346.1	-48.41	-13
5	4183.1	-42.79	-13
6	5020.1	-45.21	-13
7	5856.4	-47.05	-13
8	6692.8	Nf	-13
9	7529.4	Nf	-13
10	8366	Nf	-13
Nf: noise floor			



Note: The signal beyond the limit is carrier.

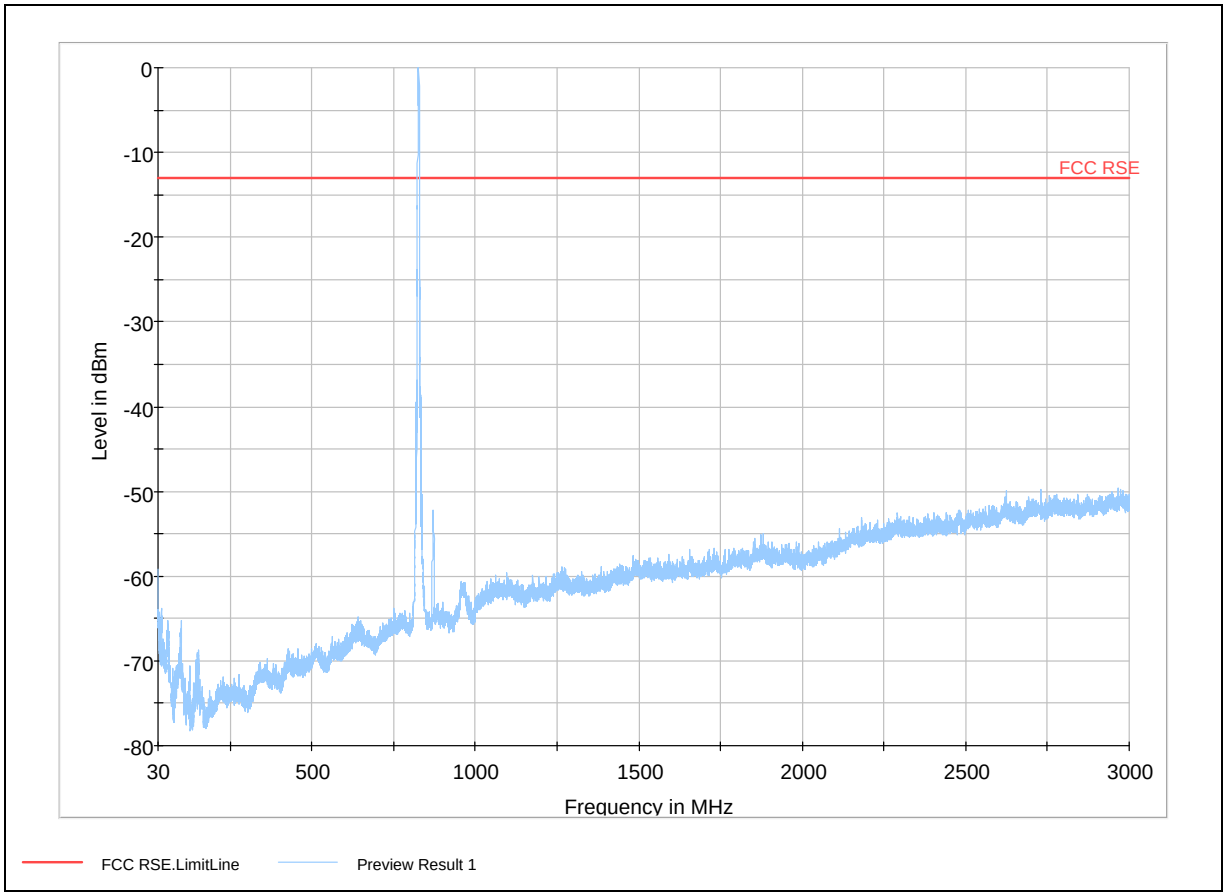
GSM850 Channel 251 30MHz~3GHz



GSM850 Channel 251 3GHz ~9GHz

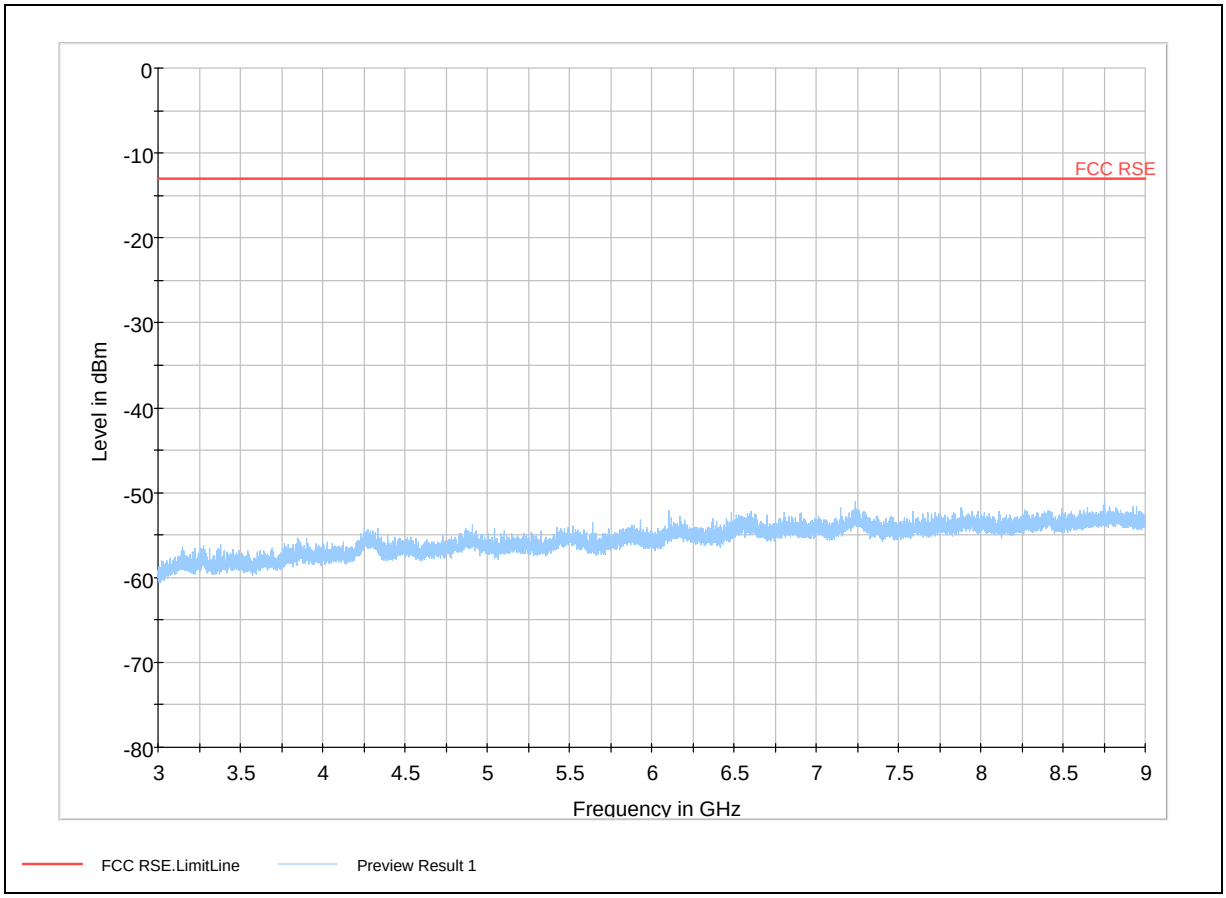
Harmonic	TX ch.251 Frequency (MHz)	Level (dBm)	Limit (dBm)
2	1697.6	-42.37	-13
3	2546.6	-41.17	-13
4	3395.3	-48.13	-13
5	4244.3	-47.70	-13
6	5092.5	-48.38	-13
7	5942.3	-47.98	-13
8	6790.4	Nf	-13
9	7639.2	Nf	-13
10	8488	Nf	-13
Nf: noise floor			

WCDMA Band V



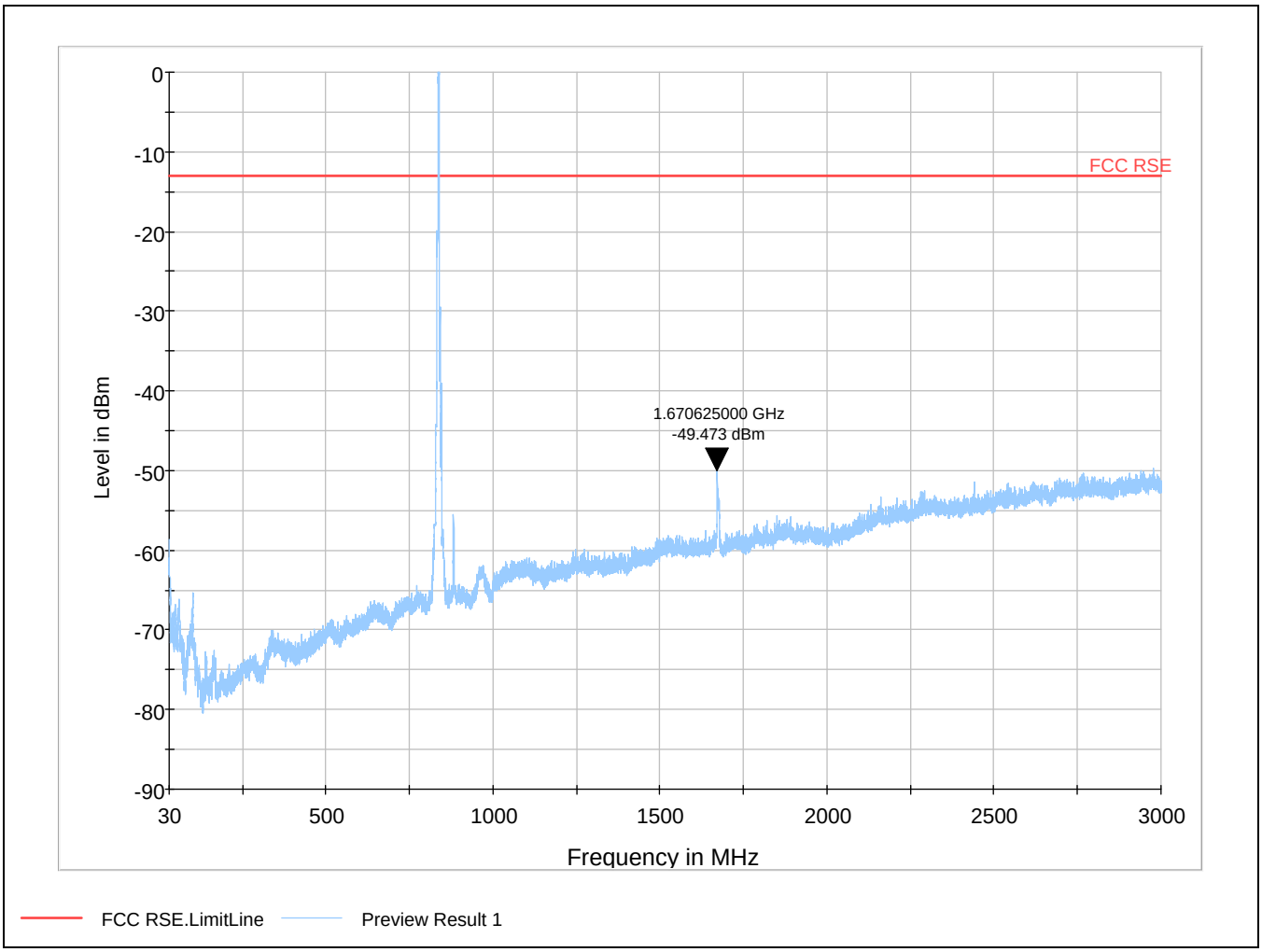
Note: The signal beyond the limit is carrier.

WCDMA Band V Channel 4132 30MHz~3GHz

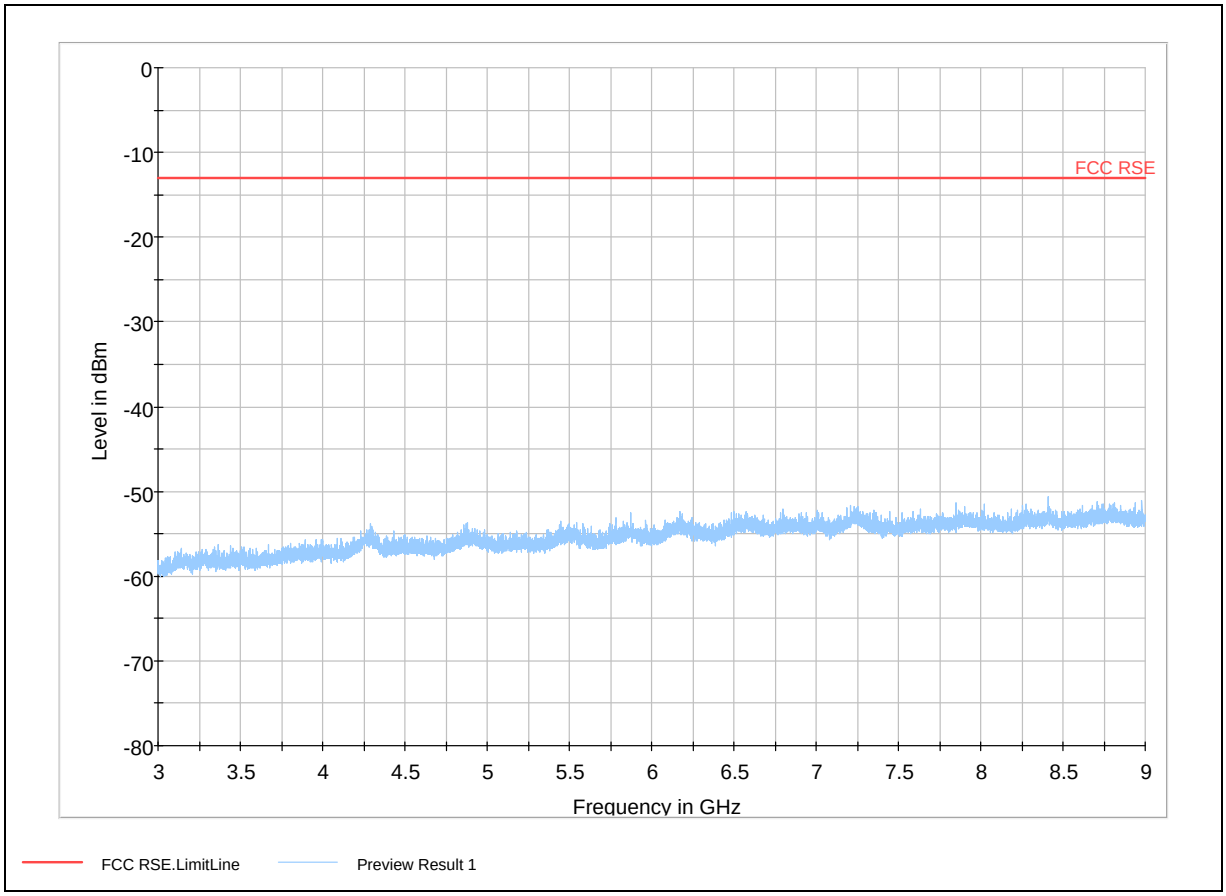


WCDMA Band V Channel 4132 3GHz ~9GHz

Harmonic	TX ch.4132 Frequency (MHz)	Level (dBm)	Limit (dBm)
2	1652.8	Nf	-13
3	2479.2	Nf	-13
4	3305.6	Nf	-13
5	4132	Nf	-13
6	4958.4	Nf	-13
7	5784.8	Nf	-13
8	6611.2	Nf	-13
9	7437.6	Nf	-13
10	8264	Nf	-13
Nf: noise floor			

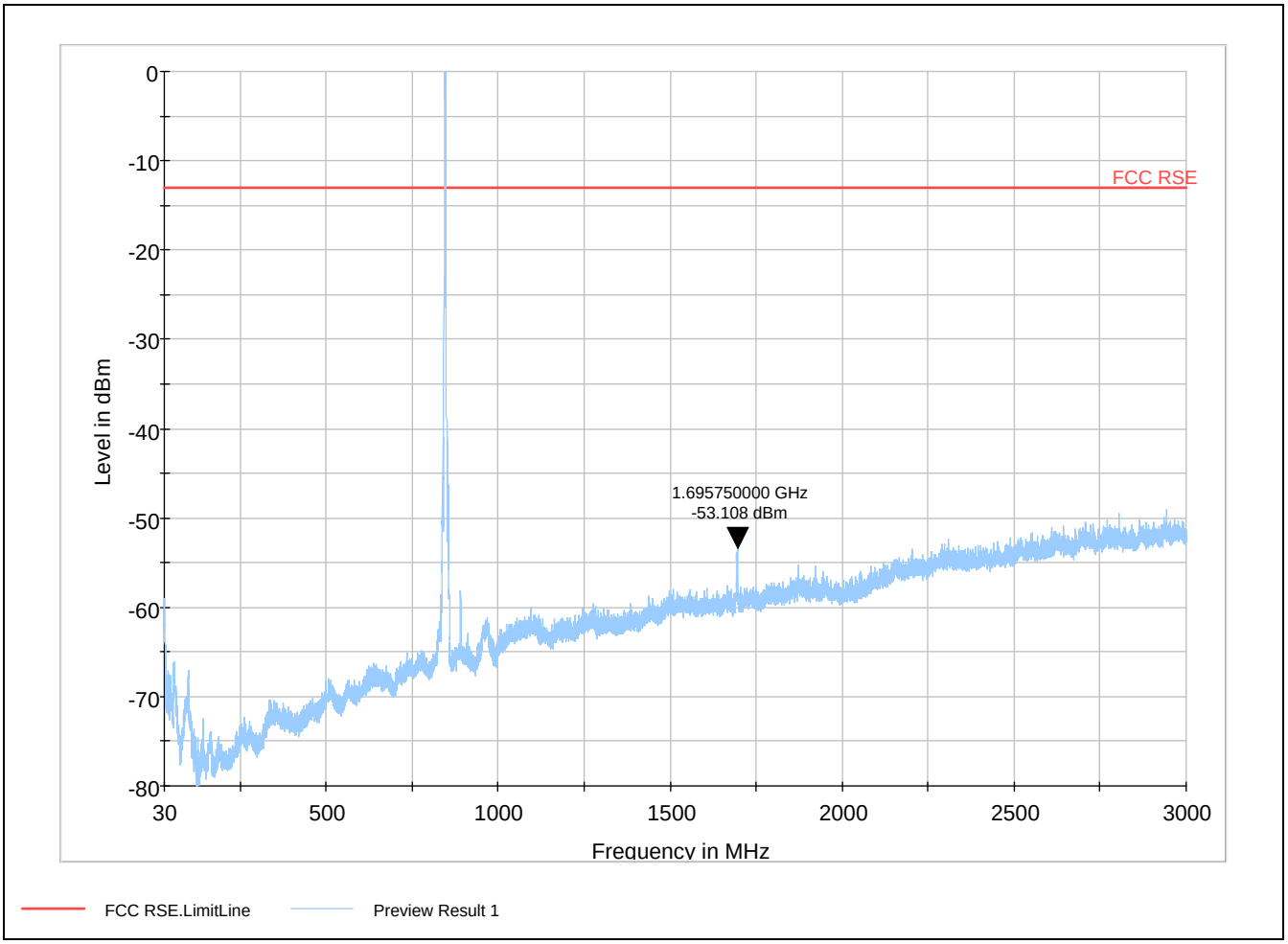


Note: The signal beyond the limit is carrier.
WCDMA Band V Channel 4183 30MHz~3GHz

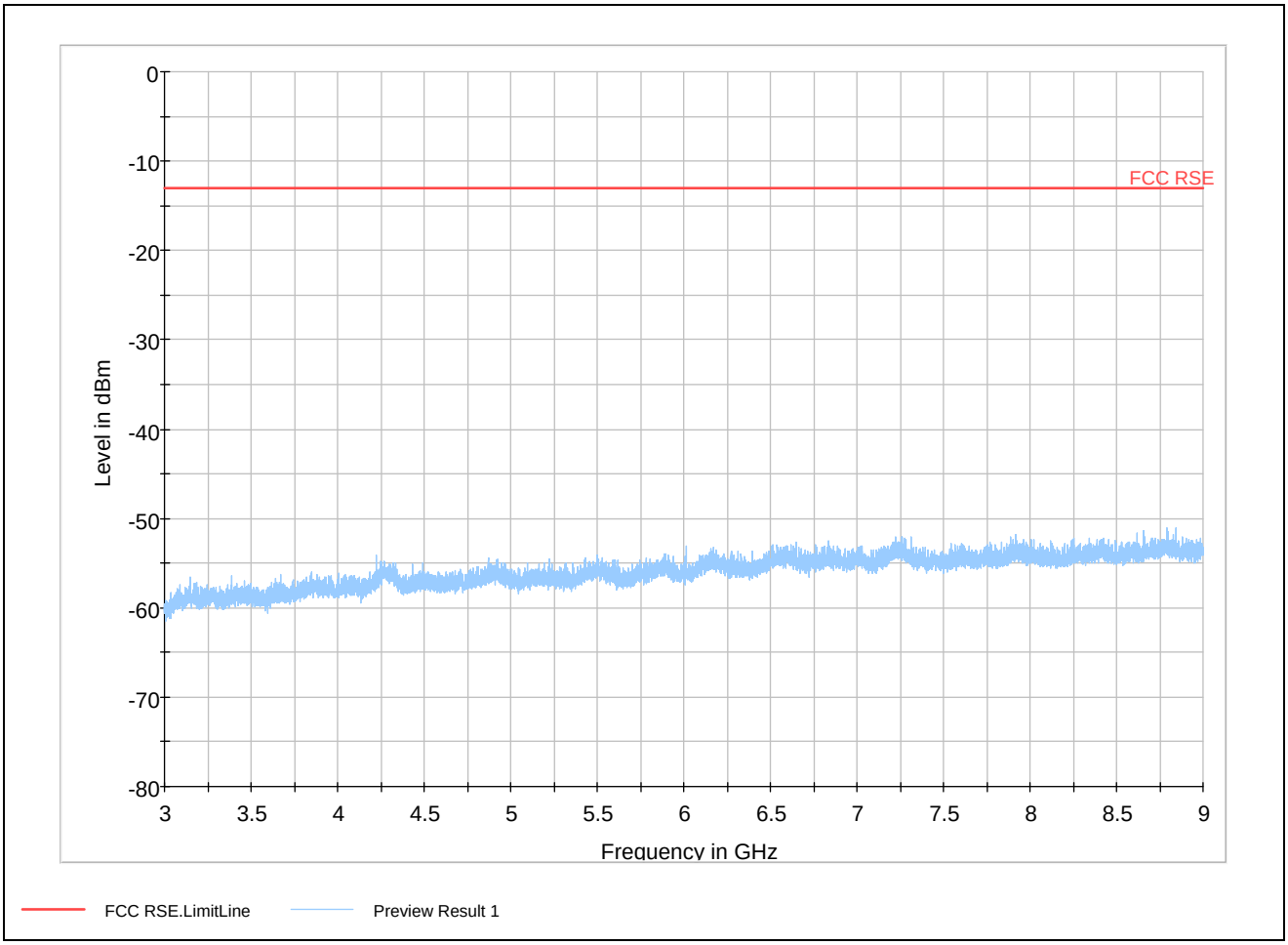


WCDMA Band V Channel 4183 3GHz ~9GHz

Harmonic	TX ch.4183 Frequency (MHz)	Level (dBm)	Limit (dBm)
2	1670.6	-49.47	-13
3	2509.8	Nf	-13
4	3346.4	Nf	-13
5	4183	Nf	-13
6	5019.6	Nf	-13
7	5856.2	Nf	-13
8	6692.8	Nf	-13
9	7529.4	Nf	-13
10	8366	Nf	-13
Nf: noise floor			



Note: The signal beyond the limit is carrier.
WCDMA Band V Channel 4233 30MHz~3GHz



WCDMA Band V Channel 4233 3GHz ~9GHz

Harmonic	TX ch.4233 Frequency (MHz)	Level (dBm)	Limit (dBm)
2	1695.75	-53.11	-13
3	2539.8	Nf	-13
4	3386.4	Nf	-13
5	4233	Nf	-13
6	5079.6	Nf	-13
7	5926.2	Nf	-13
8	6772.8	Nf	-13
9	7619.4	Nf	-13
10	8466	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	Two years
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