



# TEST REPORT

No. 2013TAR329

for

**Sony Mobile Communications AB**

**GSM 850/900/1800/1900 quad bands and CDMA2000 850/1900 dual  
bands mobile phone**

**Type: PM-0370-BV**

**FCC ID: PY7PM-037150**

with

**Hardware Version: A**

**Software Version: 12.0.B.1.36**

**Issued Date: Apr. 17<sup>th</sup>, 2013**

**Note:**

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of TMC Beijing.

**Test Laboratory:**

***DAR accreditation (DIN EN ISO/IEC 17025): No. D-PL-12123-01-01***

***FCC 2.948 Listed: No.733176***

***IC O.A.T.S listed: No.6629B-1***

TMC Beijing, Telecommunication Metrology Center of Ministry of Industry and Information Technology

No. 52, Huayuan Bei Road, Haidian District, Beijing, P. R. China 100191.

Tel:+86(0) 10-62304633-2561, Fax:+86(0)10-62304633-2504 Email:welcome@emcite.com. www.emcite.com

## **CONTENTS**

<b>1. TEST LABORATORY.....</b>	<b>3</b>
1.1. TESTING LOCATION .....	3
1.2. TESTING ENVIRONMENT .....	3
1.3. PROJECT DATA.....	3
1.4. SIGNATURE .....	3
<b>2. CLIENT INFORMATION.....</b>	<b>4</b>
2.1. APPLICANT INFORMATION.....	4
2.2. MANUFACTURER INFORMATION.....	4
<b>3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE) .....</b>	<b>5</b>
3.1. ABOUT EUT .....	5
3.2. INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST .....	5
3.3. INTERNAL IDENTIFICATION OF AE USED DURING THE TEST.....	5
3.4. GENERAL DESCRIPTION .....	6
3.5. EUT SET-UPS .....	6
<b>4. REFERENCE DOCUMENTS .....</b>	<b>7</b>
4.1. REFERENCE DOCUMENTS FOR TESTING.....	7
<b>5. LABORATORY ENVIRONMENT .....</b>	<b>8</b>
<b>6. SUMMARY OF TEST RESULTS.....</b>	<b>9</b>
6.1. SUMMARY OF TEST RESULTS .....	9
6.2. STATEMENTS .....	9
<b>7. TEST EQUIPMENTS UTILIZED.....</b>	<b>10</b>
<b>ANNEX A: MEASUREMENT RESULTS .....</b>	<b>11</b>
A.1 OUTPUT POWER.....	11
A.2 EMISSION LIMIT .....	15
A.3 CONDUCTED EMISSION.....	19
A.4 FREQUENCY STABILITY .....	22
A.5 OCCUPIED BANDWIDTH .....	25
A.6 EMISSION BANDWIDTH.....	29
A.7 BAND EDGE COMPLIANCE .....	33
A.8 CONDUCTED SPURIOUS EMISSION .....	36
<b>ANNEX B: TEST LAYOUT .....</b>	<b>57</b>
<b>ANNEX C: EUT PHOTOGRAPH.....</b>	<b>58</b>

## 1. Test Laboratory

### 1.1. Testing Location

Company Name: TMC Beijing, Telecommunication Metrology Center of MIIT  
Address: No 52, Huayuan Bei Road, Haidian District, Beijing, P.R.China  
Postal Code: 100191  
Telephone: +86-10-62304633-2561  
Fax: +86-10-62304633-2504

### 1.2. Testing Environment

Normal Temperature: 15-35°C  
Relative Humidity: 20-75%  
Air pressure 980 - 1040 hPa

The climatic requirements above are general exclude the special requirements for dedicated test environments listed in section 5 and some specific test cases in other parts of this report.

### 1.3. Project data

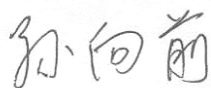
Receipt of Sample Mar. 20<sup>th</sup>, 2013  
Testing Start Date: Mar. 22<sup>th</sup>, 2013  
Testing End Date: Apr. 17<sup>th</sup>, 2013

### 1.4. Signature



---

**Qu Pengfei**  
**(Prepared this test report)**



---

**Sun Xiangqian**  
**(Reviewed this test report)**



---

**Song Chongwen**  
**(Approved this test report)**

## **2. Client Information**

### **2.1. Applicant Information**

Company Name: Sony Mobile Communications (China) Co. Ltd  
Address /Post: Sony Mobile R&D Center, No. 16, Guangshun South Street,  
Chaoyang District  
City: Beijing  
Postal Code: 100102  
Country: China  
Contact Person: Ma, Gang  
Telephone: +86-10-58656312  
Fax: +86-10-58659049

### **2.2. Manufacturer Information**

Company Name: Sony Mobile Communications AB  
Address /Post: Nya Vattentorget, 22188 Lund, Sweden  
City: Lund  
Postal Code: 22188  
Country: Sweden  
Contact Person: Nordlof, Anders  
Telephone: +46-10-802 3919  
Fax: +46-10-800 2441

### **3. Equipment Under Test (EUT) and Ancillary Equipment (AE)**

#### **3.1. About EUT**

Description	GSM 850/900/1800/1900, GPRS, EDGE, cdma2000 Band Class 0/1, Bluetooth (EDR and 4.0), WLAN ( 802.11 b/g/n), FM, GPS receiver mobile phone
Type	PM-0370-BV
FCC ID	PY7PM-0370
Frequency range (Tx)	GSM 850MHz: 824.2 MHz - 848.8 MHz PCS 1900MHz: 1850.2 MHz -1909.8 MHz cdma2000 Band Class 0:824 MHz - 849 MHz cdma2000 Band Class 1:1850 MHz -1910 MHz
Antenna	Internal
Power supply	Battery or charger (travel adapter / vehicle charger )
Output power	30.18 dBm maximum ERP measured for GSM850 30.53 dBm maximum EIRP measured for PCS1900 26.41 dBm maximum ERP measured for CDMA2000 BC0 26.93 dBm maximum EIRP measured for CDMA2000 BC1
Extreme vol. Limits	3.5VDC to 4.1VDC (nominal: 3.7VDC)
Extreme temp. Tolerance	-30°C to +50°C

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of Telecommunication Metrology Center of MIIT of People's Republic of China.

#### **3.2. Internal Identification of EUT used during the test**

<b>EUT ID*</b>	<b>SN</b>	<b>IMEI</b>	<b>HW Version</b>	<b>SW Version</b>
EUT2	CB5123BEWA	004402146480755	A	12.0.B.1.36
EUT4	CB5123NEYU	004402146480771	A	12.0.B.1.36

\*EUT ID: is used to identify the test sample in the lab internally.

#### **3.3. Internal Identification of AE used during the test**

<b>AE ID*</b>	<b>Description</b>	<b>SN</b>	<b>Revision</b>
#23496	Travel Charger	8512W19100304	1
#23813	USB Cable	123107D1000A4AE	1

#23496

Commercial name EP880  
Type AC-0400-US  
Manufacturer Salcomp

#23813

Commercial name EC801  
Type AI-0401  
Manufacturer Sony Mobile  
Length of cable 96.5cm

\*AE ID: is used to identify the test sample in the lab internally.

### 3.4. General Description

The Equipment Under Test (EUT) is a model of GSM 850/900/1800/1900 quad bands and CDMA2000 850/1900 dual bands mobile phone with integrated antenna and inbuilt battery.

The EUT supports two SIM card slots.

GSM SIM card slot supports GSM 900/1800/1900MHz bands. It also supports GPRS service with multi-slots class 8 and EGPRS service with multi-slots class 8 too.

CTC SIM card slot supports GSM 850/900/1800/1900MHz bands and CDMA2000 bands 0/1. It also supports GPRS service with multi-slots class 12 and EGPRS service with multi-slots class 12 too.

It has MP3, camera, FM radio, USB memory, GPS receiver, NFC, Mobile High-Definition Link (MHL), Bluetooth (EDR and Bluetooth 4.0), WLAN (802.11 b/g/n) and Wi-Fi hotspot functions.

It includes normal option: travel charger, Portable Hands-Free and USB cable.

Manual and specifications of the EUT were provided to fulfil the test.

Samples undergoing test were selected by the client.

### 3.5. EUT set-ups

EUT Set-up No.	Combination of EUT and AE	Remarks
Set. 1	EUT2 + #23496+ #23813	Tests with travel charger
Set. 2	EUT2	ERP/EIRP/RSE tests
Set. 3	EUT4	Conducted RF tests

## 4. Reference Documents

### 4.1. Reference Documents for testing

The following documents listed in this section are referred for testing.

<b>Reference</b>	<b>Title</b>	<b>Version</b>
FCC Part 22	PUBLIC MOBILE SERVICES	10-1-11 Edition
FCC Part 24	PERSONAL COMMUNICATIONS SERVICES	10-1-11 Edition
ANSI/TIA-603-C	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards	2004
ANSI C63.4	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2003

## 5. LABORATORY ENVIRONMENT

**Semi-anechoic chamber SAC-2** (10 meters×6.7meters×6.1meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 2 MΩ
Ground system resistance	< 1Ω
Normalised site attenuation (NSA)	< ±3.5 dB, 3m distance, from 30 to 1000 MHz
Site voltage standing-wave ratio ( $S_{VSWR}$ )	Between 0 and 6 dB, from 1GHz to 18GHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 3000 MHz

**Fully-anechoic chamber FAC-3** (9 meters×6.5 meters×4 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 2 MΩ
Ground system resistance	< 1 Ω
Uniformity of field strength	Between 0 and 6 dB, from 80 to 4000 MHz
Site voltage standing-wave ratio ( $S_{VSWR}$ )	Between 0 and 6 dB, from 1GHz to 18GHz

**Control room/ conducted chamber** did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. =20 %, Max. = 80 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 2 MΩ
Ground system resistance	< 0.5 Ω



## 6. SUMMARY OF TEST RESULTS

### 6.1. Summary of test results

Abbreviations used in this clause:

P	Pass
NA	Not applicable
F	Fail

#### cdma2000 Band Class 0

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	22.913(a)	A.1	P
2	Emission Limit	22.917, 2.1051	A.2	P
3	Conducted Emission	15.107/207	A.3	P
4	Frequency Stability	22.235, 2.1055	A.4	P
5	Occupied Bandwidth	2.1049(h)(i)	A.5	P
6	Emission Bandwidth	22.917(b)	A.6	P
7	Band Edge Compliance	22.917(b)	A.7	P
8	Conducted Spurious Emission	22.917, 2.1057	A.8	P

#### cdma2000 Band Class 1

Items	Test Name	Clause in FCC rules	Section in this report	Verdict
1	Output Power	24.232(b)	A.1	P
2	Emission Limit	24.238, 2.1051	A.2	P
3	Conducted Emission	15.107/207	A.3	P
4	Frequency Stability	24.235, 2.1055	A.4	P
5	Occupied Bandwidth	2.1049(h)(i)	A.5	P
6	Emission Bandwidth	24.238(a)	A.6	P
7	Band Edge Compliance	24.238(a)	A.7	P
8	Conducted Spurious Emission	24.238, 2.1057	A.8	P

### 6.2. Statements

The test cases listed in section 6.1 of this report for the EUT specified in section 3 were performed by TMC according to the standards or reference documents in section 4.1

The EUT met all applicable requirements of the standards or reference documents in section 4.1.

This report only deals with the cdma2000 functions among the features described in section 3.

## 7. Test Equipments Utilized

NO.	Description	TYPE	SERIES NUMBER	MANUFACTURE	CAL DUE DATE
1	Test Receiver	ESCI	100344	R&S	2014-03-28
3	Test Receiver	ESU26	100376	R&S	2013-11-07
4	EMI Antenna	VULB 9163	514	Schwarzbeck	2014-11-10
5	EMI Antenna	3117	00139065	ETS-Lindgren	2014-07-31
6	LISN	ESH2-Z5	829991/012	R&S	2014-04-14
7	Universal Radio Communication Tester	CMU200	102228	R&S	2013-07-7
8	Universal Radio Communication Tester	E5515C	MY48361083	Agilent	2014-03-16
9	Spectrum Analyzer	E4440A	MY48250642	Agilent	2014-03-04
10	EMI Antenna	9117	177	Schwarzbeck	2014-06-29
11	EMI Antenna	VULB 9163	482	Schwarzbeck	2014-02-17
12	EMI Antenna	3117	00119024	ETS-Lindgren	2014-02-02
13	EMI Antenna	3117	00058889	ETS-Lindgren	2014-02-02
14	Signal Generator	N5183A	MY49060052	Agilent	2014-03-19
15	Climatic chamber	PL-2G	343074	ESPEC	2013-05-12

## **ANNEX A: MEASUREMENT RESULTS**

### **A.1 OUTPUT POWER**

#### **Reference**

FCC: CFR Part 22.913(a), 24.232(b).

#### **A.1.1 Summary**

During the process of testing, the EUT was controlled via Rhode & Schwarz Digital Radio Communication tester (CMU200) to ensure max power transmission and proper modulation.

This result contains peak output power and ERP/EIRP measurements for the EUT.

In all cases, output power is within the specified limits.

#### **A.1.2 Conducted**

##### **A.1.2.1 Method of Measurements**

The EUT was set up for the max output power with pseudo random data modulation.

The power was measured with spectrum analyzer's peak detector.

These measurements were done at 3 frequencies (bottom, middle and top of operational frequency range) for each band: 824.7MHz, 836.52MHz and 848.31 MHz for CDMA 800 (cdma2000 Band Class 0); 1851.25 MHz, 1880.0 MHz and 1908.75 MHz for CDMA 1900 (cdma2000 Band Class 1).

##### **A.1.2.2 Measurement result**

###### **CDMA 800**

	Channel number	Frequency(MHz)	output power(dBm)
CDMA 800 (Band Class 0)	1013	824.70	<b>24.71</b>
	384	836.52	24.56
	777	848.31	24.67

###### **CDMA 1900**

	Channel number	Frequency(MHz)	output power(dBm)
CDMA 1900 (Band Class 1)	25	1851.25	<b>24.74</b>
	600	1880.00	24.61
	1175	1908.75	24.68

### A.1.3 Radiated

#### A.1.3.1 Description

This is the test for the maximum radiated power from the EUT.

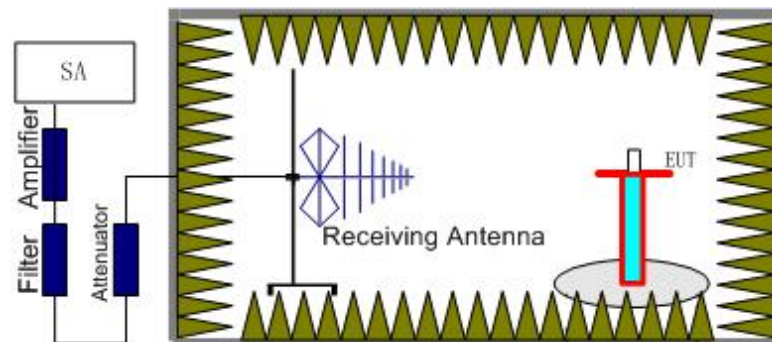
Rule Part 22.913(a) specifies "Maximum ERP. The effective radiated power (ERP) of base transmitters and cellular repeaters must not exceed 500 Watts. The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts."

Rule Part 24.232(b) specifies, "Mobile/portable stations are limited to 2 watts e.i.r.p. Peak power" and 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."

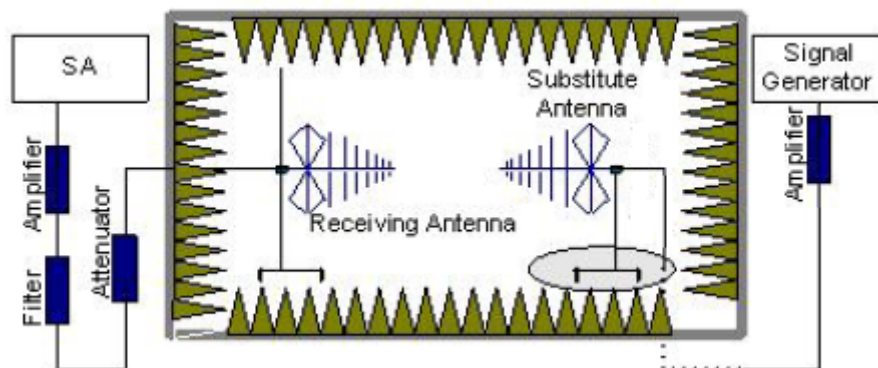
#### A.1.3.2 Method of Measurement

The measurements procedures in TIA-603C-2004 are used.

1. EUT was placed on a 1.5 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.5m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in three channels (High, Middle, Low) were measured with peak detector.



2. The EUT is then put into continuously transmitting mode at its maximum power level during the test. And the maximum value of the receiver should be recorded as (Pr).
3. The EUT shall be replaced by a substitution antenna. The test setup refers to figure below.



In the chamber, a substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF signal source for the frequency band of interest is

connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power ( $P_{Mea}$ ) is applied to the input of the substitution antenna. Adjust the level of the signal generator output until the value of the receiver reaches the previously recorded ( $P_r$ ). The power of signal source ( $P_{Mea}$ ) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

4. An amplifier should be connected to the Signal Source output port. And the cable should be connected between the amplifier and the substitution antenna.  
The cable loss ( $P_{cl}$ ), the substitution antenna Gain ( $G_a$ ) and the amplifier Gain ( $P_{Ag}$ ) should be recorded after test.  
The measurement results are obtained as described below:  
Power (EIRP) =  $P_{Mea} - P_{Ag} - P_{cl} - G_a$
5. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
6. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP -2.15.

For test layout photo, please refer to Pic.1 in Annex B.

### CDMA 800- ERP

#### Limits

	Burst Peak ERP (dBm)
CDMA 800	≤38.45dBm

#### Measurement result

Frequency (MHz)	$P_{Mea}$ (dBm)	$P_{cl}$ (dB)	$P_{Ag}$ (dB)	$G_a$ (dBi)	Correction (dB)	RMS ERP(dBm)	Polarization
824.70	-22.93	2.07	-53.00	0.84	2.15	25.01	Horizontal
836.52	-21.46	2.08	-53.00	0.90	2.15	26.41	Vertical
848.31	-22.03	2.09	-53.00	0.95	2.15	25.78	Horizontal

Sample calculation: 836.52 MHz

$$\begin{aligned} \text{Peak ERP(dBm)} &= P_{Mea}(-21.46 \text{ dBm}) - G_a (0.90 \text{ dBi}) - P_{Ag} (-53.00 \text{ dB}) - P_{cl} (2.08 \text{ dB}) - 2.15 \text{ dB} \\ &= 23.72 \text{ dBm} \end{aligned}$$

#### ANALYZER SETTINGS: RBW = VBW = 3MHz

Note: Expanded measurement uncertainty for CDMA 800 is  $U = 0.96\text{dB}$ ,  $k=2$ .

**CDMA 1900- EIRP**

**Limits**

	Burst Peak EIRP (dBm)
CDMA 1900	≤33dBm (2W)

**Measurement result**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>cl</sub> (dB)	P <sub>Ag</sub> (dB)	G <sub>a</sub> (dBi)	Peak EIRP(dBm)	Polarization
1851.25	-28.76	3.18	-53.00	-4.55	25.61	Horizontal
1880.00	-27.42	3.11	-53.00	-4.43	26.90	Horizontal
1908.75	-27.19	3.18	-53.00	-4.30	<b>26.93</b>	Horizontal

Sample calculation: 1908.75 MHz

$$\begin{aligned} \text{Peak EIRP (dBm)} &= P_{\text{Mea}}(-27.19 \text{ dBm}) - G_a(-4.30 \text{ dBi}) - P_{\text{Ag}}(-50.00 \text{ dB}) - P_{\text{cl}}(3.18 \text{ dB}) \\ &= 26.93 \text{ dBm} \end{aligned}$$

**ANALYZER SETTINGS: RBW = VBW = 3MHz**

Note: Expanded measurement uncertainty for CDMA 1900 is  $U = 1.07\text{dB}$ ,  $k=2$ .

## A.2 EMISSION LIMIT

### Reference

FCC: CFR 2.1051, Part 22.917(a), 24.238(a).

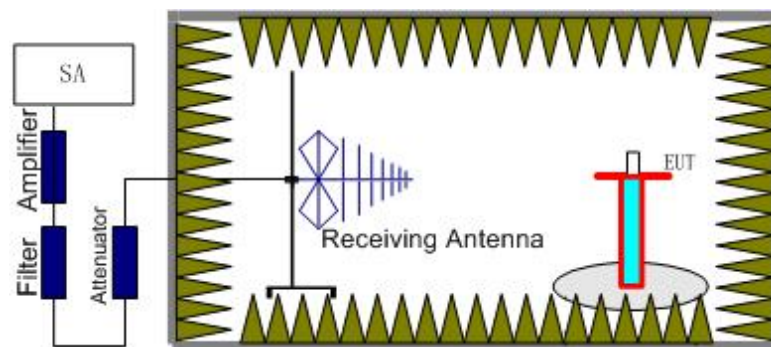
### A.2.1 Measurement Method

The measurements procedures in TIA-603C-2004 are used. This measurement is carried out in fully-anechoic chamber FAC-3.

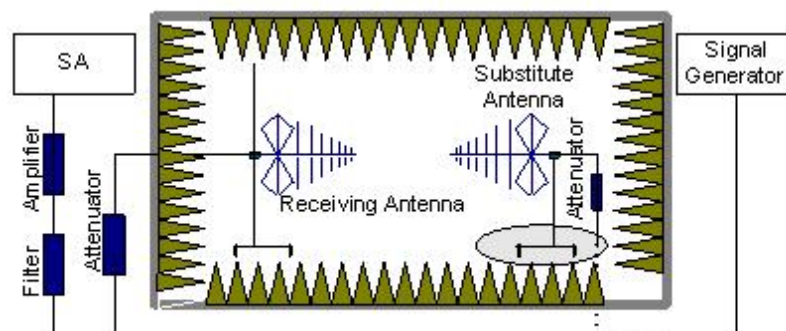
The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment, which is the transmitted carrier that can be as high as 1910 MHz. The resolution bandwidth is set 1MHz as outlined in Part 24.238 and Part 22.917. The spectrum was scanned with the mobile station transmitting at carrier frequencies that pertain to low, mid and high channels of CDMA 800 and CDMA 1900.

### The procedure of radiated spurious emissions is as follows:

1. EUT was placed on a 1.5 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna is 1.5m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic were measured with peak detector.



2. The EUT is then put into continuously transmitting mode at its maximum power level during the test. And the maximum value of the receiver should be recorded as (Pr).
3. The EUT shall be replaced by a substitution antenna. The test setup refers to figure below.



In the chamber, a substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power ( $P_{Mea}$ ) is applied to the input of the substitution antenna. Adjust the level of the signal generator output until the value of the receiver reaches the previously recorded ( $P_r$ ). The power of signal source ( $P_{Mea}$ ) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

4. The Path loss ( $P_{pl}$ ) between the Signal Source with the Substitution Antenna and the Substitution Antenna Gain ( $G_a$ ) should be recorded after test.

An amplifier should be connected in for the test.

The Path loss ( $P_{pl}$ ) is the summation of the cable loss and the gain of the amplifier.

The measurement results are obtained as described below:

$$\text{Power (EIRP)} = P_{Mea} + P_{pl} + G_a$$

5. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
6. ERP can be calculated from EIRP by subtracting the gain of the dipole,  $ERP = EIRP - 2.15dB$ .

### A.2.2 Measurement Limit

Part 22.917(a) and 24.238(a) all specify 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. The specification that emissions shall be attenuated below the transmitter power ( $P$ ) by at least  $43 + 10 \log(P)$  dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

### A.2.3 Measurement Results

Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies of the CDMA 800 (824.7MHz, 836.52MHz and 848.31 MHz) and CDMA 1900 (1851.25 MHz, 1880.0 MHz and 1908.75). It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of the CDMA 800 or CDMA 1900 into any of the other blocks. The equipment must still, however, meet emissions requirements with the carrier at all frequencies over which it is capable of operating and it is the manufacturer's responsibility to verify this.



**CDMA 800 Channel 1013/ 824.70MHz**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP(dBm)	Limit (dBm)	Polarization
1648.57	-62.39	2.91	-5.44	2.15	-62.01	-13.00	Horizontal
2485.49	-39.42	3.56	-5.32	2.15	-39.81	-13.00	Horizontal
3505.45	-69.44	4.64	-8.51	2.15	-67.72	-13.00	Vertical
4488.07	-65.95	5.20	-9.75	2.15	-63.55	-13.00	Vertical
5114.52	-68.84	5.90	-10.44	2.15	-66.45	-13.00	Horizontal
8695.11	-67.66	6.98	-11.95	2.15	-64.84	-13.00	Vertical

**CDMA 800 Channel 384/ 836.52MHz**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP(dBm)	Limit (dBm)	Polarization
1672.37	-63.99	3.12	-4.50	2.15	-64.76	-13.00	Vertical
2509.52	-35.78	3.59	-5.42	2.15	-36.10	-13.00	Horizontal
4070.53	-67.34	4.33	-7.92	2.15	-65.90	-13.00	Vertical I
5976.09	-66.58	4.94	-9.09	2.15	-64.58	-13.00	Vertical
6866.31	-68.09	5.20	-9.75	2.15	-65.69	-13.00	Horizontal
8647.76	-68.25	5.83	-10.38	2.15	-65.85	-13.00	Horizontal

**CDMA 800 Channel 777/ 848.31MHz**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	Path Loss(dB)	Antenna Gain(dBi)	Correction (dB)	Peak ERP(dBm)	Limit (dBm)	Polarization
1697.37	-67.18	2.88	-5.76	2.15	-66.45	-13.00	Horizontal
2625.80	-40.00	3.63	-5.52	2.15	-40.26	-13.00	Horizontal
3601.54	-66.10	4.25	-7.85	2.15	-64.65	-13.00	Horizontal
5029.80	-66.80	5.46	-10.05	2.15	-64.36	-13.00	Horizontal
6375.62	-65.29	5.83	-10.50	2.15	-62.77	-13.00	Vertical
7816.69	-67.12	6.37	-11.19	2.15	-64.45	-13.00	Horizontal

**CDMA 1900 Channel 25/1851.25MHz**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	G <sub>a</sub> (dBi)	Peak EIRP (dBm)	Limit (dBm)	Polarity
3702.54	-66.95	5.13	-9.53	-62.55	-13.00	Vertical
5235.66	-68.24	5.79	-10.28	-63.75	-13.00	Vertical
8590.69	-66.76	6.58	-11.39	-61.95	-13.00	Horizontal
10379.18	-66.12	7.30	-12.57	-60.85	-13.00	Horizontal
12797.76	-62.80	8.02	-12.40	-58.42	-13.00	Horizontal
15019.37	-64.62	9.30	-13.99	-59.93	-13.00	Vertical

**CDMA 1900 Channel 600/1880.00MHz**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	G <sub>a</sub> (dBi)	Peak EIRP (dBm)	Limit (dBm)	Polarity
3759.33	-34.27	4.53	-8.21	-30.59	-13.00	Horizontal
5399.90	-66.82	5.01	-8.97	-62.86	-13.00	Horizontal
7520.07	-71.50	5.78	-10.36	-66.92	-13.00	Vertical
9048.72	-66.42	7.29	-12.40	-61.31	-13.00	Vertical
12069.05	-53.74	8.55	-12.40	-49.89	-13.00	Horizontal
15040.67	-40.17	10.60	-12.40	-38.37	-13.00	Horizontal

**CDMA 1900 Channel 1175/1908.75MHz**

Frequency (MHz)	P <sub>Mea</sub> (dBm)	P <sub>pl</sub> (dB)	G <sub>a</sub> (dBi)	Peak EIRP (dBm)	Limit (dBm)	Polarity
3817.03	-57.38	5.54	-10.09	-52.83	-13.00	Horizontal
5726.09	-59.22	7.77	-12.58	-54.41	-13.00	Vertical
8644.39	-63.42	8.88	-12.57	-59.73	-13.00	Horizontal
10622.77	-35.74	9.08	-13.66	-31.16	-13.00	Horizontal
13169.68	-40.79	9.97	-13.45	-37.31	-13.00	Horizontal
15057.32	-38.84	10.35	-12.72	-36.47	-13.00	Horizontal

Note: Expanded measurement uncertainty for this test item is  $U = 4.21\text{dB}$ ,  $k=2$ .

### **A.3 CONDUCTED EMISSION**

#### **Reference**

FCC: CFR Part 15.107/207.

The measurement procedure in ANSI C63.4-2003 is used. Conducted Emission is measured with travel charger. For test layout photo, please refer to Pic.2 in Annex B.

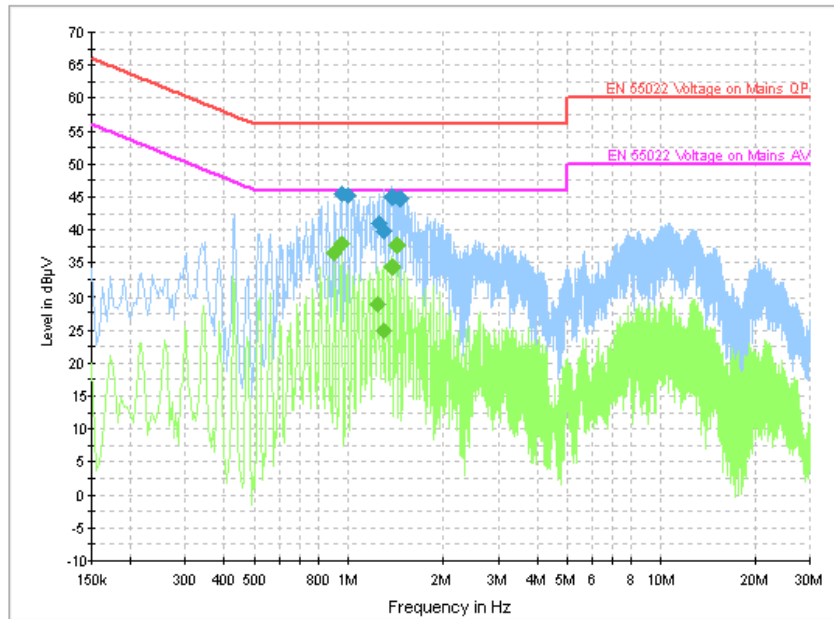
#### **A.3.1 Limit**

Frequency of Emission (MHz)	Conducted Limit (dB $\mu$ V)	
	Quasi -Peak	Average
0.15 – 0.5	66 to 56*	56 to 46*
0.5 – 5	56	46
5 – 30	60	50

\* Decreases with logarithm of the frequency

#### **A.3.2 Measurement result**

##### **CDMA 800**



IF bandwidth 9 kHz

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

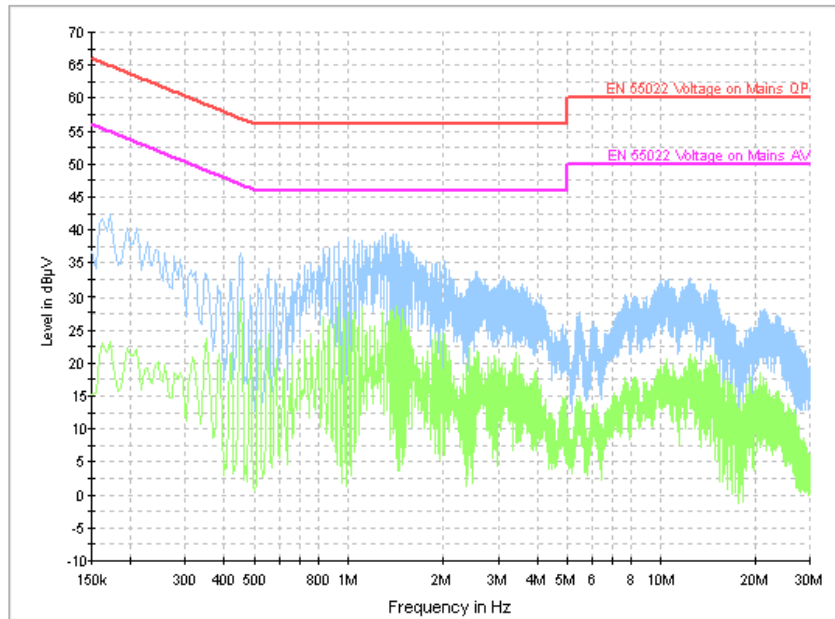
**Final Result 1**

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.951000	45.5	GND	L1	10.0	10.5	56.0
0.996000	45.2	GND	L1	10.0	10.8	56.0
1.252500	41.0	GND	L1	10.0	15.0	56.0
1.297500	39.8	GND	L1	10.0	16.2	56.0
1.383000	45.0	GND	L1	10.0	11.0	56.0
1.468500	44.7	GND	L1	10.0	11.3	56.0

**Final Result 2**

Frequency (MHz)	Average (dB $\mu$ V)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.901500	36.5	GND	L1	10.0	9.5	46.0
0.951000	37.9	GND	L1	10.0	8.1	46.0
1.248000	28.8	GND	L1	10.0	17.2	46.0
1.297500	24.8	GND	L1	10.0	21.2	46.0
1.383000	34.3	GND	L1	10.0	11.7	46.0
1.423500	37.7	GND	L1	10.0	8.3	46.0

**CDMA 1900**



IF bandwidth 9 kHz

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

## **A.4 FREQUENCY STABILITY**

### **Reference**

FCC: CFR Part 2.1055, 22.235, 24.235.

### **A.4.1 Method of Measurement**

In order to measure the carrier frequency under the condition of AFC lock, it is necessary to make measurements with the EUT in a "call mode". This is accomplished with the use of R&S CMU200 DIGITAL RADIO COMMUNICATION TESTER.

1. Measure the carrier frequency at room temperature.
2. Subject the EUT to overnight soak at -30°C.
3. With the EUT, powered via nominal voltage, connected to the CMU200 and in a simulated call on mid channel of CDMA 800 and CDMA 1900, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
4. Repeat the above measurements at 10°C increments from -30°C to +50°C. Allow at least 1 1/2 hours at each temperature, unpowered, before making measurements.
5. Re-measure carrier frequency at room temperature with nominal voltage. Vary supply voltage from minimum voltage to maximum voltage, in 0.1Volt increments re-measuring carrier frequency at each voltage. Pause at nominal voltage for 1 1/2 hours unpowered, to allow any self-heating to stabilize, before continuing.
6. Subject the EUT to overnight soak at +50°C.
7. With the EUT, powered via nominal voltage, connected to the CMU200 and in a simulated call on the centre channel, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
8. Repeat the above measurements at 10 C increments from +50°C to -30°C. Allow at least 1 1/2 hours at each temperature, unpowered, before making measurements.
9. At all temperature levels hold the temperature to +/- 0.5°C during the measurement procedure.

### **A.4.2 Measurement Limit**

#### **A.4.2.1 For Hand carried battery powered equipment**

According to the JTC standard the frequency stability of the carrier shall be accurate to within 0.1 ppm of the received frequency from the base station. This accuracy is sufficient to meet Sec. 24.235, Frequency Stability. The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. As this transceiver is considered "Hand carried, battery powered equipment" Section 2.1055(d)(2) applies. This requires that the lower voltage for frequency stability testing be specified by the manufacturer. This transceiver is specified to operate with an input voltage of between 3.5VDC and 4.1VDC, with a nominal voltage of 3.7VDC. Operation above or below these voltage limits is prohibited by transceiver software in order to prevent improper operation as well as to protect components from overstress. These voltages represent a tolerance of -5.4 % and +10.8 %. For the purposes of measuring frequency stability these voltage limits are to be used.

**A.4.2.2 For equipment powered by primary supply voltage**

According to the JTC standard the frequency stability of the carrier shall be accurate to within 0.1 ppm of the received frequency from the base station. This accuracy is sufficient to meet section 24.235, Frequency Stability. The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. For this EUT section 2.1055(d)(1) applies. This requires varying primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment.

**A.4.3 Measurement results**

**CDMA 800**

**Room Temperature: 24 °C**

**Frequency Error vs Voltage**

Voltage(V)	Frequency error(Hz)	Frequency error(ppm)
3.5	-6	0.007
3.7	-6	0.008
4.1	-5	0.006

**Frequency Error vs Temperature**

temperature(°C)	Frequency error(Hz)	Frequency error(ppm)
50	-6	0.008
40	-6	0.008
30	-6	0.008
20	-5	0.006
10	-6	0.008
0	-7	0.008
- 10	-7	0.008
- 20	-6	0.007
- 30	-6	0.007

Expanded measurement uncertainty for this test item is 10 Hz, k=2

**CDMA 1900**

**Room Temperature: 24°C**

**Frequency Error vs Voltage**

Voltage(V)	Frequency error(Hz)	Frequency error(ppm)
3.5	4	0.002
3.7	4	0.002
4.1	4	0.002

**Frequency Error vs Temperature**

temperature(°C)	Frequency error(Hz)	Frequency error(ppm)
50	4	0.002
40	5	0.002
30	4	0.002
20	4	0.002
10	5	0.002
0	4	0.002
- 10	4	0.002
- 20	4	0.002
- 30	4	0.002

Expanded measurement uncertainty for this test item is 10 Hz, k=2



## A.5 OCCUPIED BANDWIDTH

### Reference

FCC: CFR Part 2.1049(h)(i).

### A.5.1 Occupied Bandwidth Results

Occupied bandwidth measurements are only provided for selected frequencies in order to reduce the amount of submitted data. Data were taken at the extreme and mid frequencies of CDMA 800 and CDMA 1900. The table below lists the measured -20dBc BW (99%). Spectrum analyzer plots are included on the following pages.

#### Measurement Parameters:

RBW = 20 kHz, VBW = 50 kHz

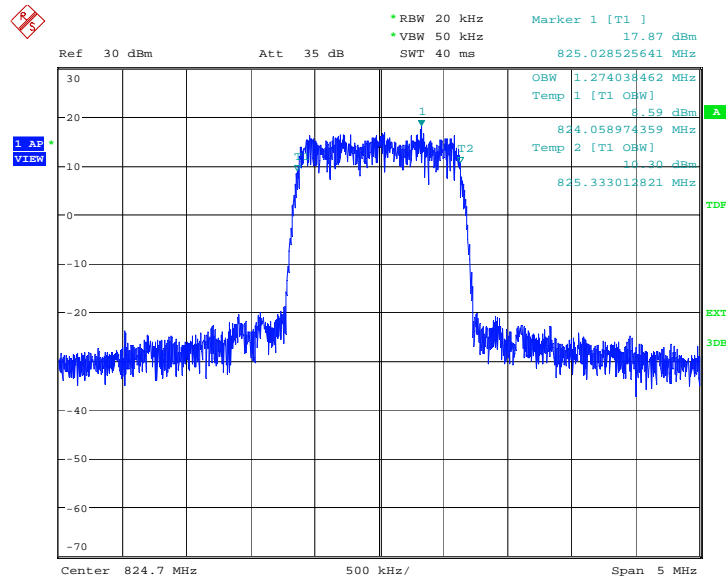
#### CDMA 800 (-20dBc)

Channel	Occupied Bandwidth (-20dBc BW)( MHz)
1013	1.274
384	1.266
777	1.282

Expanded measurement uncertainty for this test item is 1.1 kHz, k=2

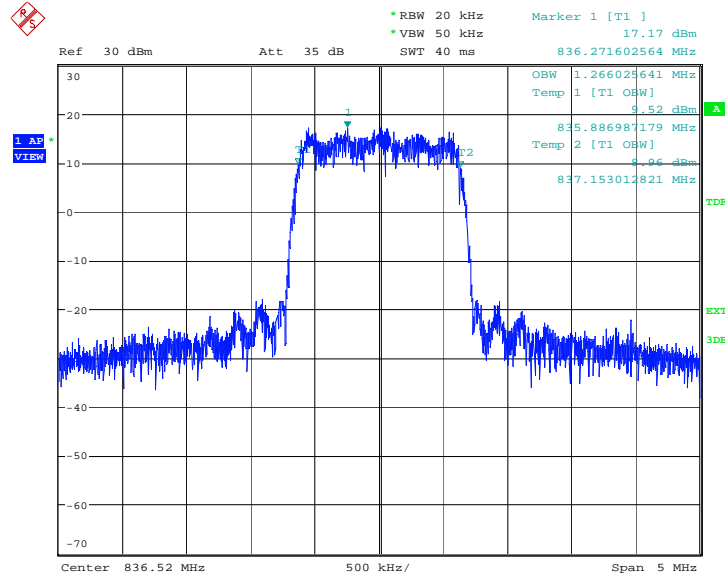
#### CDMA 800

#### Channel 1013-Occupied Bandwidth (99% BW)



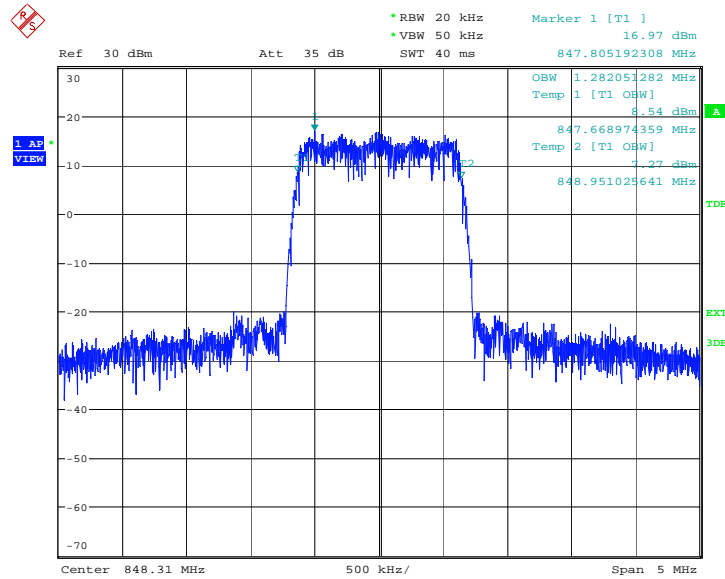
Date: 28.MAR.2013 04:43:46

### Channel 384-Occupied Bandwidth (99% BW)



Date: 28.MAR.2013 04:44:23

### Channel 777-Occupied Bandwidth (99% BW)



Date: 28.MAR.2013 04:45:01

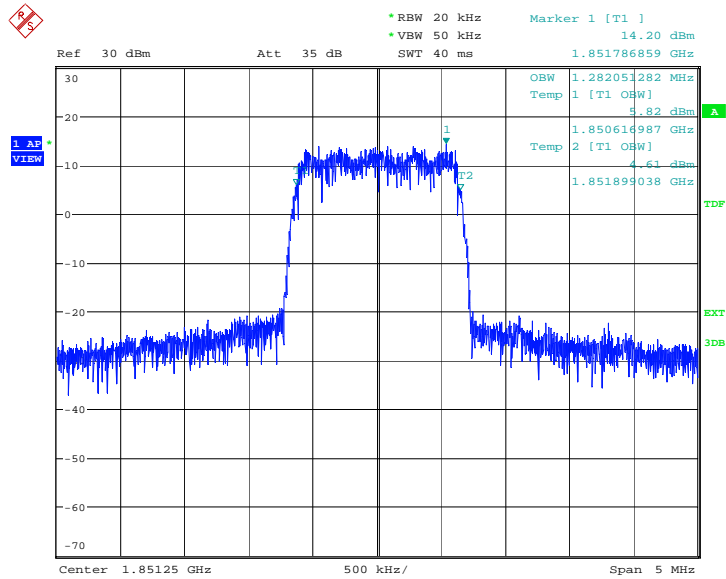
**CDMA 1900 (-20dBc)**

Channel	Occupied Bandwidth (-20dBc BW)( MHz)
25	1.282
600	1.274
1175	1.274

Expanded measurement uncertainty for this test item is 1.1 kHz, k=2

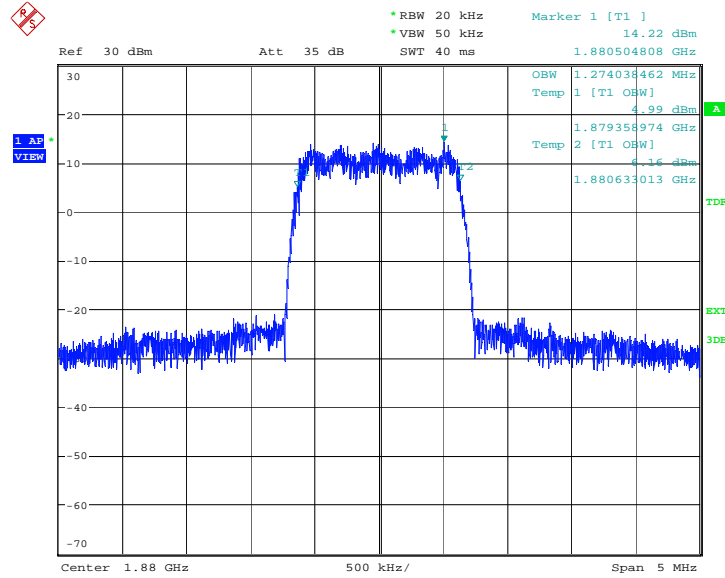
**CDMA 1900**

**Channel 25-Occupied Bandwidth (99% BW)**



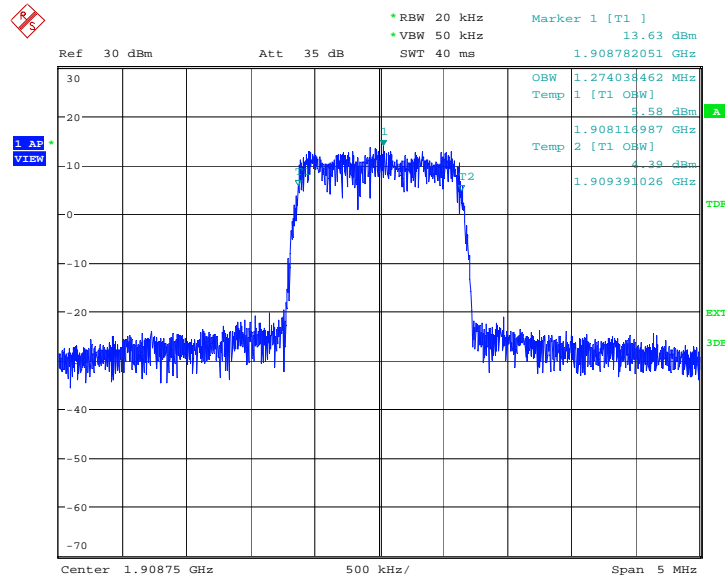
Date: 28.MAR.2013 04:57:54

### Channel 600-Occupied Bandwidth (99% BW)



Date: 28.MAR.2013 04:58:31

### Channel 1175-Occupied Bandwidth (99% BW)



Date: 28.MAR.2013 04:59:08

## A.6 EMISSION BANDWIDTH

### Reference

FCC: CFR Part 22.917(b), 24.238(a).

### A.6.1 Emission Bandwidth Results

Emission bandwidth measurements are only provided for selected frequencies in order to reduce the amount of submitted data. Data were taken at the extreme and mid frequencies of CDMA 800 and CDMA 1900. Table below lists the measured -26dBc BW. Spectrum analyzer plots are included on the following pages.

#### Measurement Parameters:

RBW = 20 kHz, VBW = 50 kHz

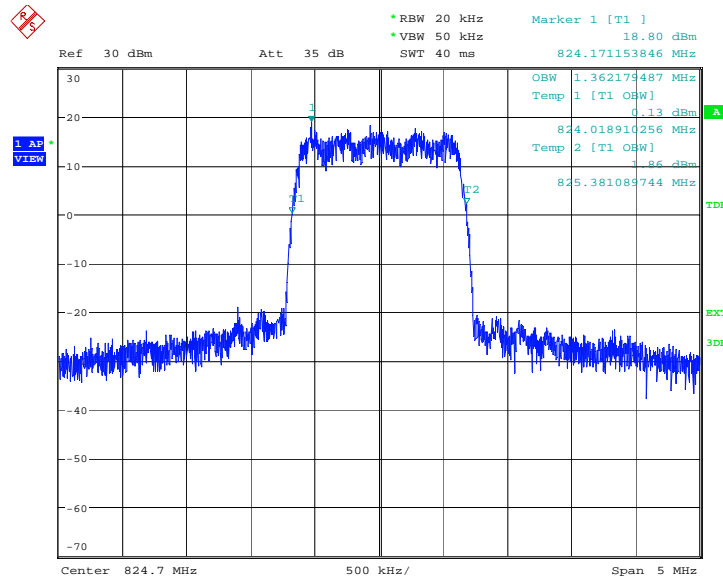
#### CDMA 800(-26dBc)

Channel	Occupied Bandwidth (-26dBc BW)( MHz)
1013	1.362
384	1.362
777	1.362

Expanded measurement uncertainty for this test item is 1.1 kHz, k=2

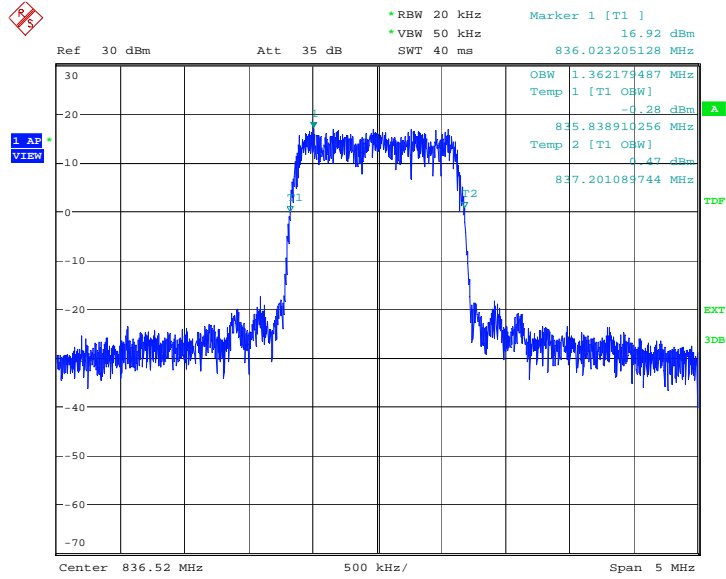
#### CDMA 800

#### Channel 1013-Occupied Bandwidth (-26dBc BW)



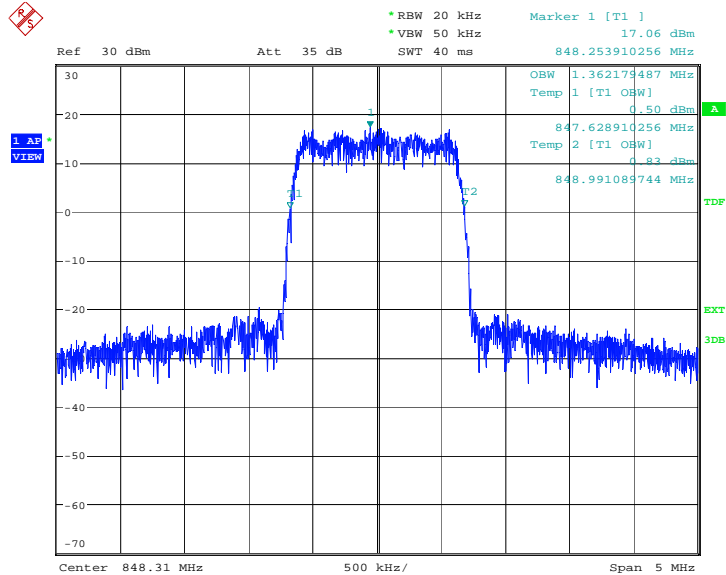
Date: 28.MAR.2013 04:45:40

### Channel 384-Occupied Bandwidth (-26dBc BW)



Date: 28.MAR.2013 04:46:17

### Channel 777-Occupied Bandwidth (-26dBc BW)



Date: 28.MAR.2013 04:46:54

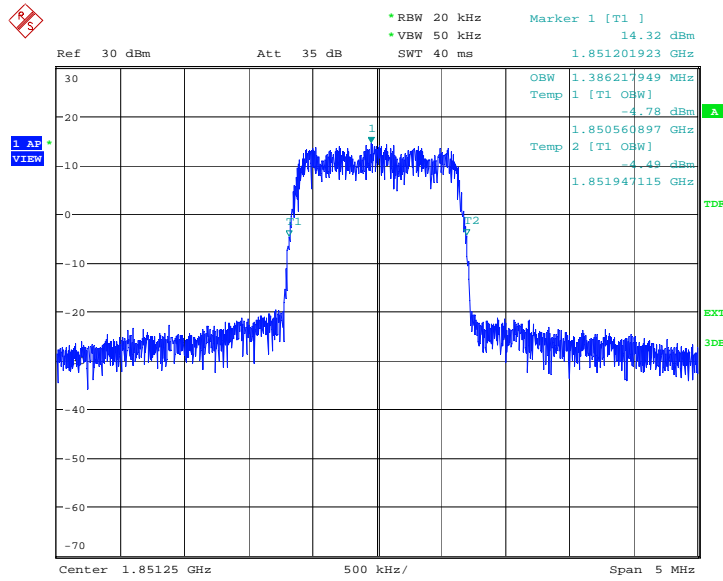
**CDMA 1900 (-26dBc)**

Channel	Occupied Bandwidth (-26dBc BW)( MHz)
25	1.386
600	1.386
1175	1.378

Expanded measurement uncertainty for this test item is 1.1 kHz, k=2.

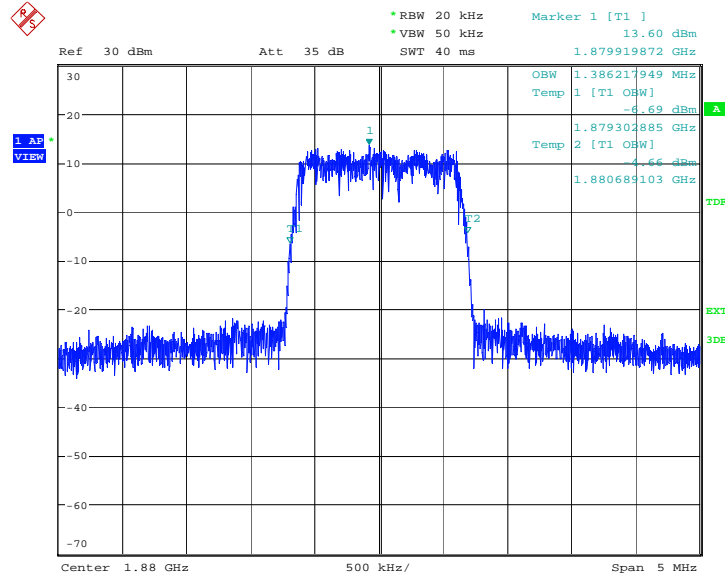
**CDMA 1900**

**Channel 25-Occupied Bandwidth (-26dBc BW)**



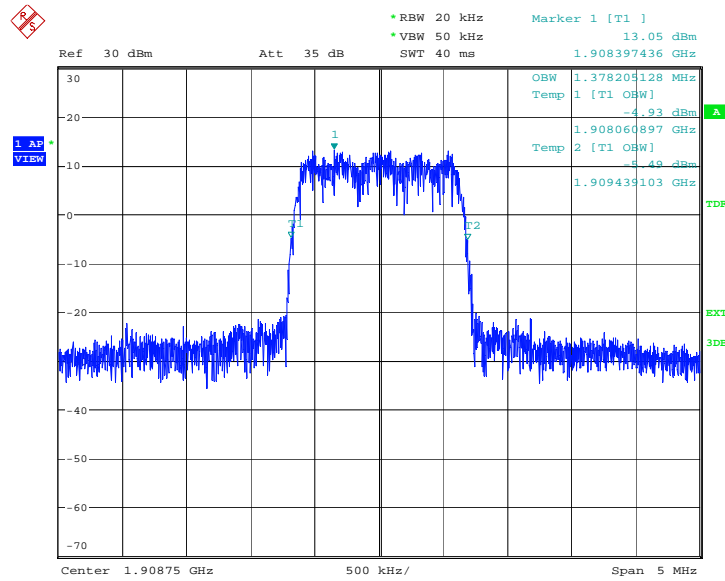
Date: 28.MAR.2013 04:59:47

### Channel 600-Occupied Bandwidth (-26dBc BW)



Date: 28.MAR.2013 05:00:25

### Channel 1175-Occupied Bandwidth (-26dBc BW)



Date: 28.MAR.2013 05:01:02



## A.7 BAND EDGE COMPLIANCE

### Reference

FCC: CFR Part 22.917(b), 24.238(a).

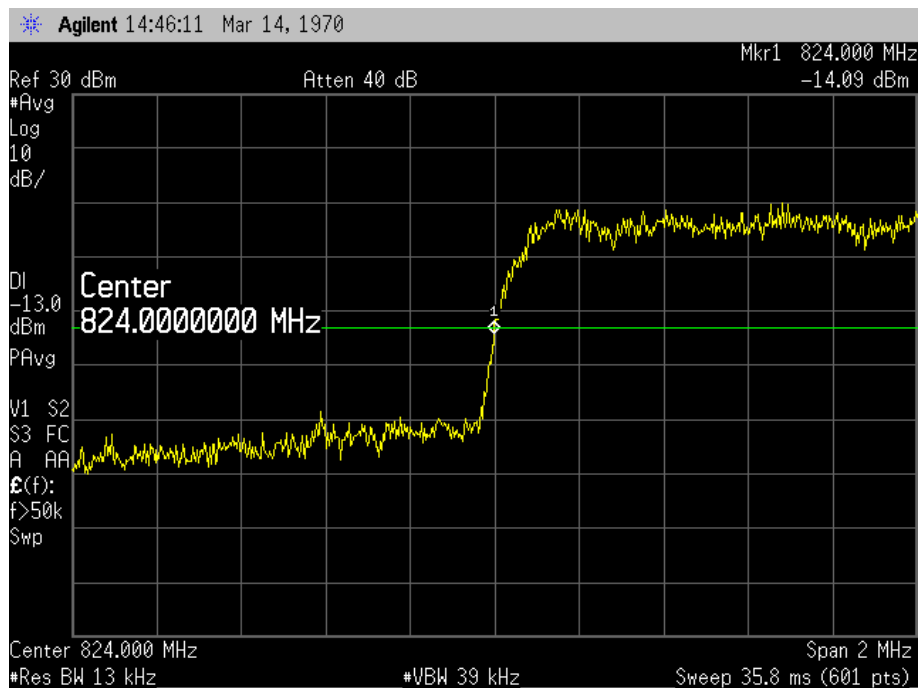
### A.7.1 Measurement limit

On any frequency outside frequency band of the US Cellular/PCS spectrum, the power of any emission shall be attenuated below the transmitter power (P, in Watts) by at least  $43+10\log(P)$  dB. For all power levels +30 dBm to 0 dBm, this becomes a constant specification limit of -13 dBm.

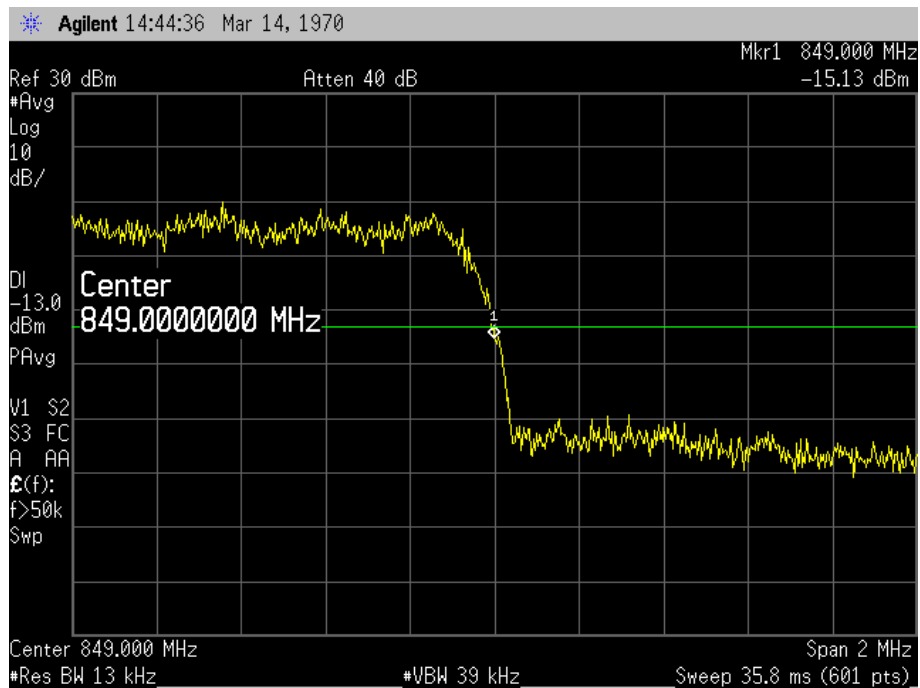
### A.7.2 Measurement result

#### CDMA 800

#### BAND EDGE BLOCK-Channel 1013

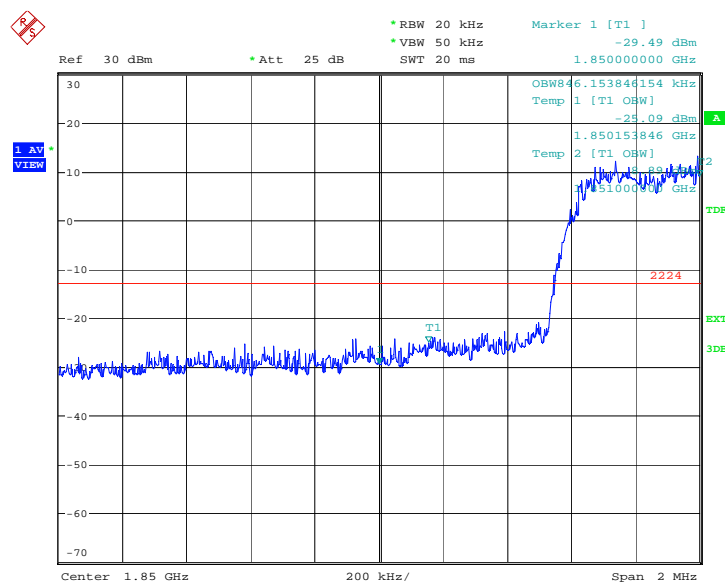


### HIGH BAND EDGE BLOCK-Channel 777



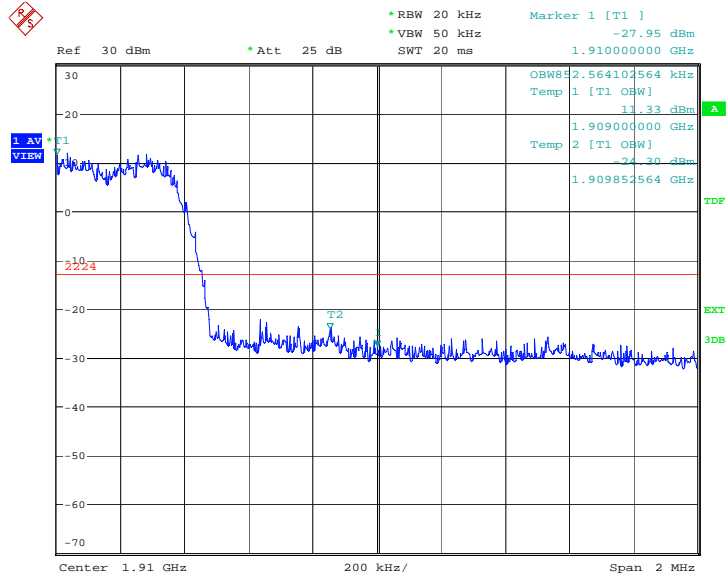
### CDMA 1900

### BAND EDGE BLOCK-Channel 25



Date: 28.MAR.2013 05:01:15

### HIGH BAND EDGE BLOCK-Channel 1175



Date: 28.MAR.2013 05:01:27

## **A.8 CONDUCTED SPURIOUS EMISSION**

### **Reference**

FCC: CFR Part 2.1057, 22.917, 24.238.

### **A.8.1 Measurement Method**

The following steps outline the procedure used to measure the conducted emissions from the EUT.

1. Determine frequency range for measurements: From CFR 2.1057 the spectrum should be investigated from the lowest radio frequency generated in the equipment up to at least the 10th harmonic of the carrier frequency. For the equipment of CDMA 1900, this equates to a frequency range of 30 MHz to 19.1 GHz, data are taken from 30 MHz to 20 GHz. For CDMA 800, data are taken from 30 MHz to 10 GHz.
2. Determine EUT transmit frequencies: below outlines the band edge frequencies pertinent to conducted emissions testing.

#### **CDMA 800 Transmitter**

Channel	Frequency (MHz)
1013	824.70
384	836.52
777	848.31

#### **CDMA 1900 Transmitter**

Channel	Frequency (MHz)
25	1851.25
600	1880.00
1175	1908.75

### **A. 8.2 Measurement Limit**

Part 22.917 and Part 24.238 specify 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.

The specification that emissions shall be attenuated below the transmitter power (P) by at least  $43 + 10 \log(P)$  dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

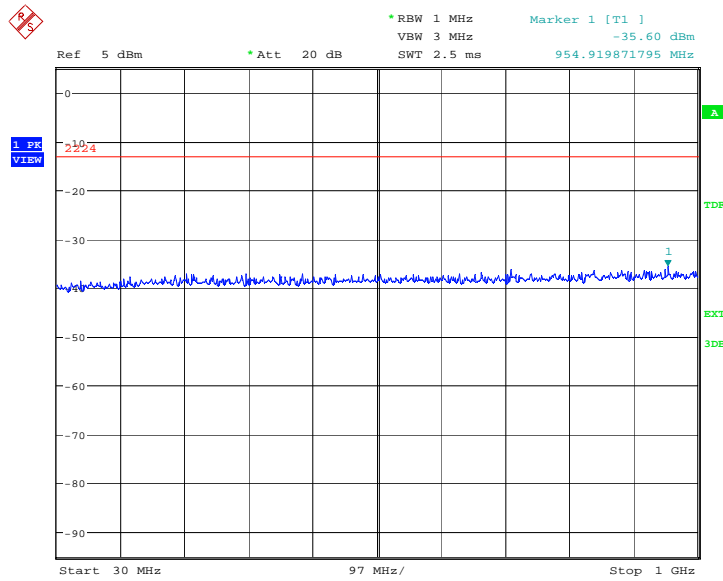
### **A. 8.3 Measurement result**

**Measurement Uncertainty: 0.3dB**

**CDMA 1900**

**A. 8.3.1 Channel 25: 30MHz –1GHz**

Spurious emission limit –13dBm.

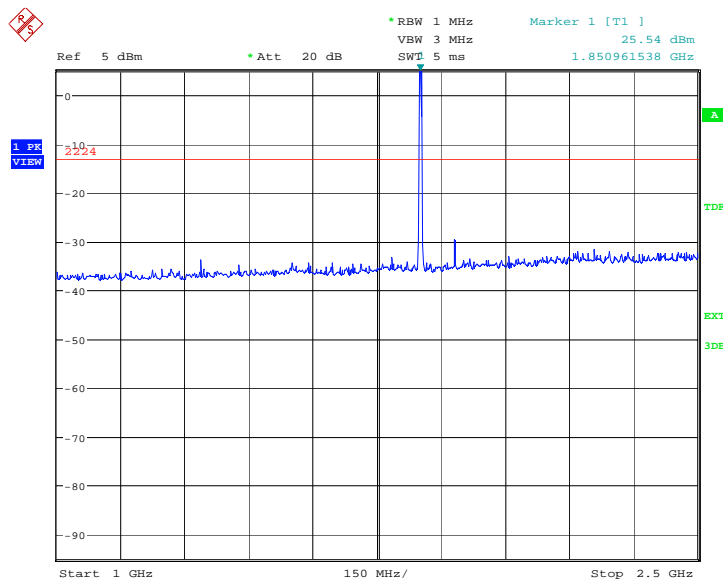


Date: 28.MAR.2013 05:59:12

**A.8.3.2 Channel 25: 1GHz –2.5GHz**

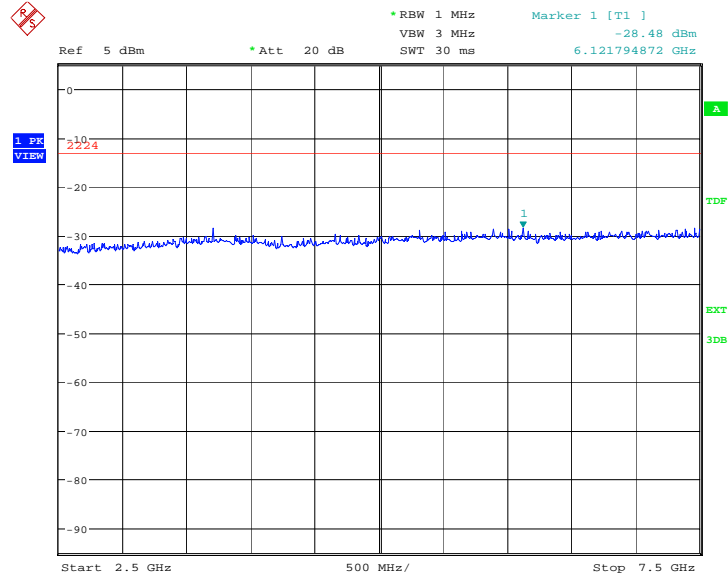
Spurious emission limit –13dBm.

**NOTE: peak above the limit line is the carrier frequency.**



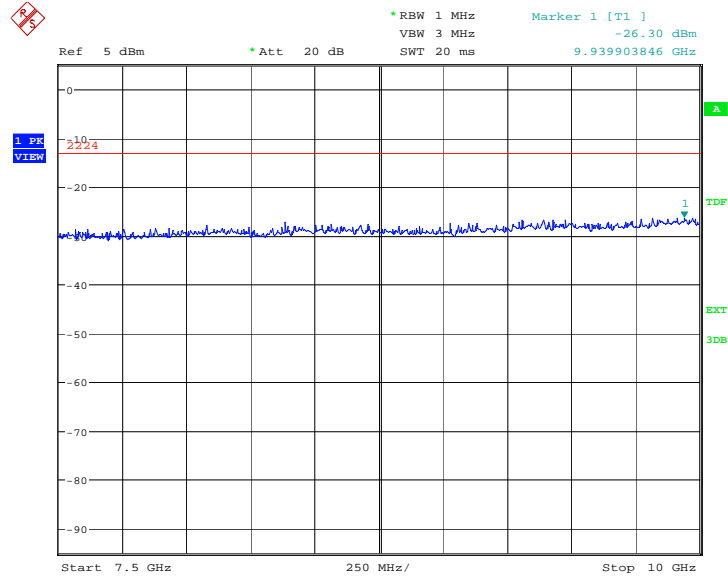
Date: 28.MAR.2013 05:59:38

**A.8.3.3 Channel 25: 2.5GHz –7.5GHz**  
Spurious emission limit –13dBm.



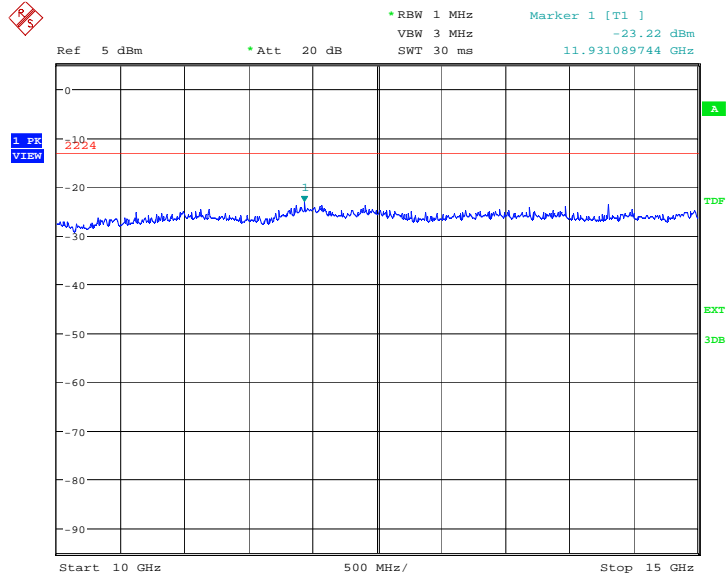
Date: 28.MAR.2013 06:00:05

**A.8.3.4 Channel 25: 7.5GHz –10GHz**  
Spurious emission limit –13dBm.



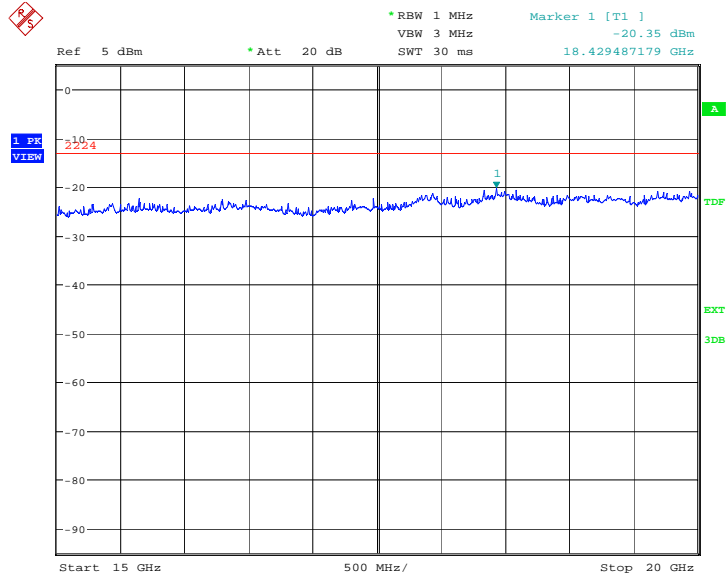
Date: 28.MAR.2013 06:00:32

**A.8.3.5 Channel 25: 10GHz –15GHz**  
Spurious emission limit –13dBm.



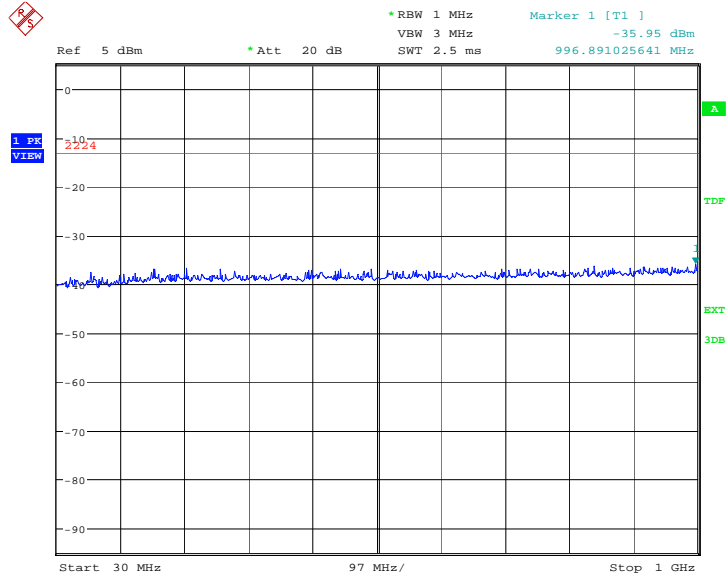
Date: 28.MAR.2013 06:00:59

**A.8.3.6 Channel 25: 15GHz –20GHz**  
Spurious emission limit –13dBm.



Date: 28.MAR.2013 06:01:26

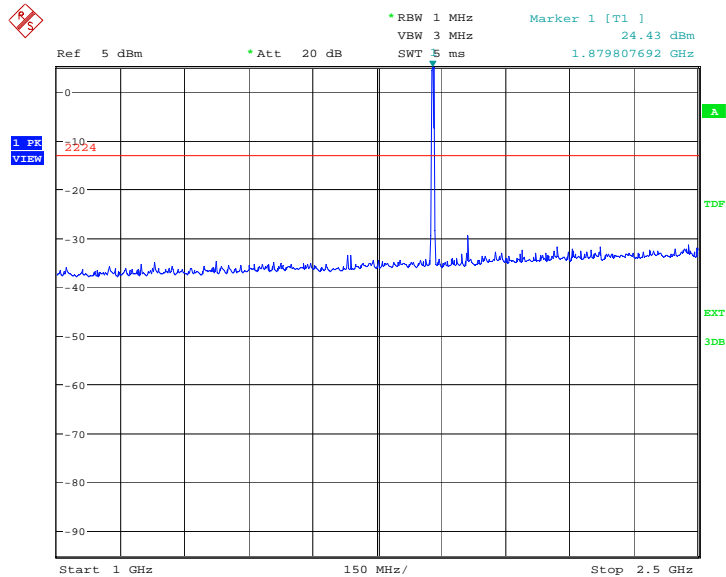
**A. 8.3.7 Channel 600: 30MHz –1GHz**  
Spurious emission limit –13dBm.



Date: 28.MAR.2013 06:01:53

**A.8.3.8 Channel 600: 1GHz –2.5GHz**  
Spurious emission limit –13dBm.

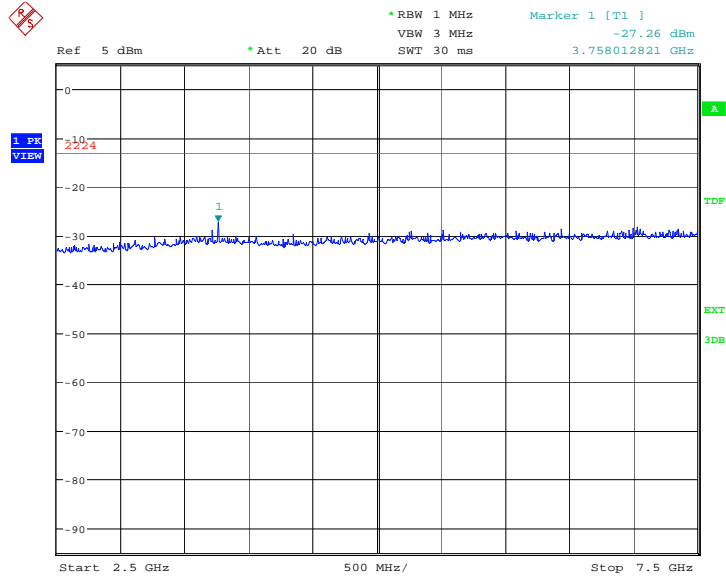
**NOTE: peak above the limit line is the carrier frequency.**



Date: 28.MAR.2013 06:02:20

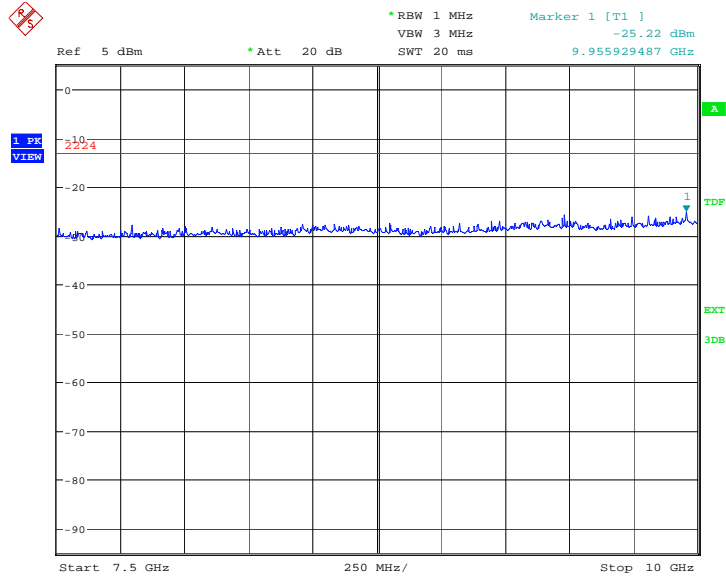


**A.8.3.9 Channel 600: 2.5GHz –7.5GHz**  
Spurious emission limit –13dBm.



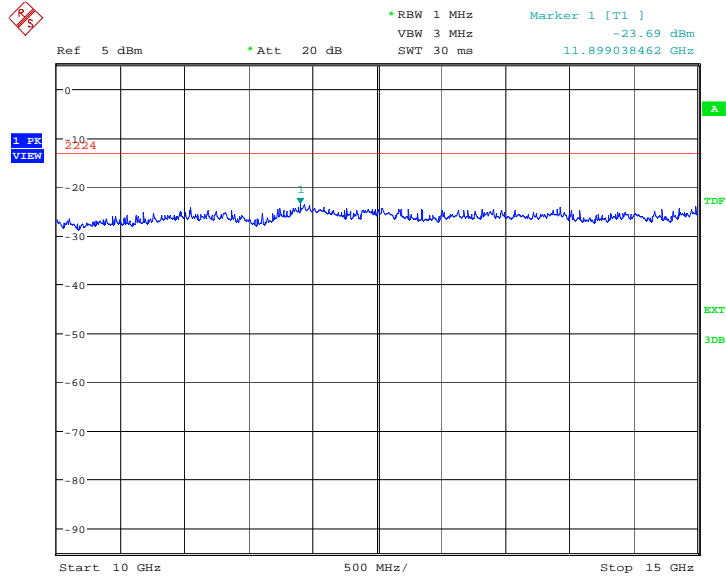
Date: 28.MAR.2013 06:02:47

**A.8.3.10 Channel 600: 7.5GHz –10GHz**  
Spurious emission limit –13dBm.



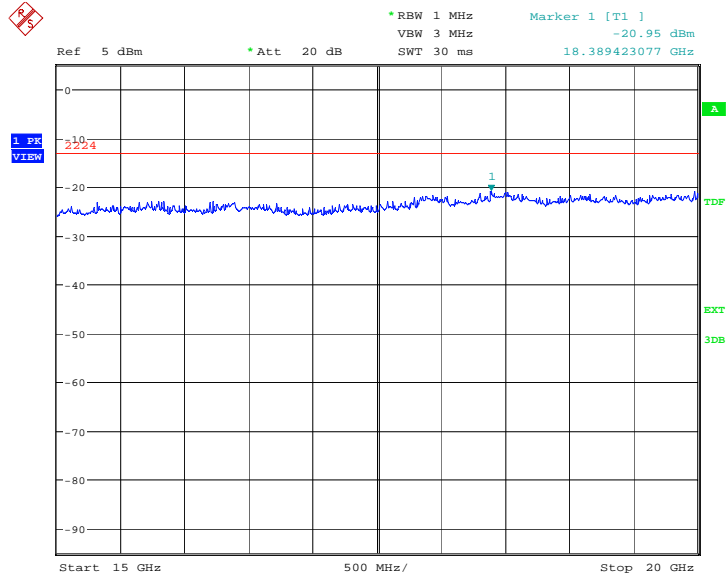
Date: 28.MAR.2013 06:03:14

**A.8.3.11 Channel 600: 10GHz –15GHz**  
Spurious emission limit –13dBm.



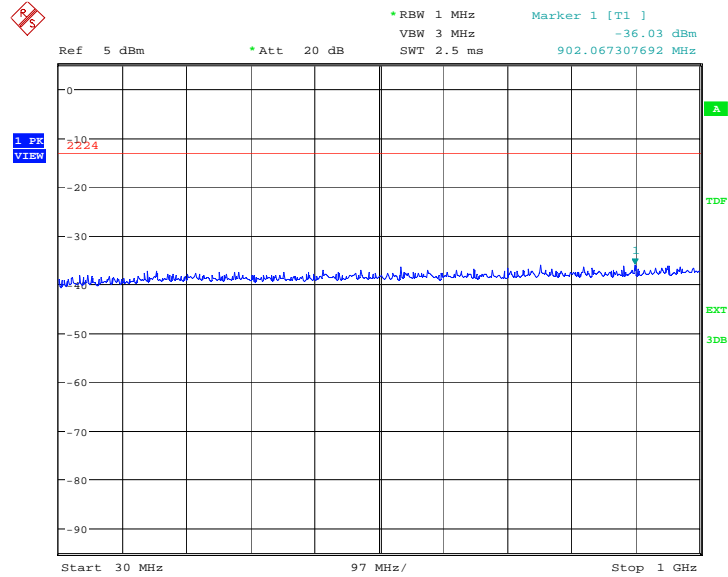
Date: 28.MAR.2013 06:03:40

**A.8.3.12 Channel 600: 15GHz –20GHz**  
Spurious emission limit –13dBm.



Date: 28.MAR.2013 06:04:07

**A. 8.3.13 Channel 1175: 30MHz –1GHz**  
Spurious emission limit –13dBm.

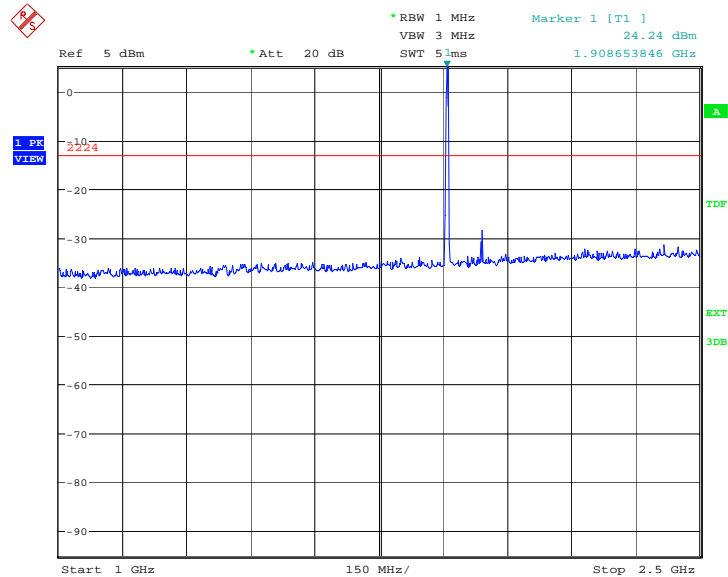


Date: 28.MAR.2013 06:04:35

**A.8.3.14 Channel 1175: 1GHz –2.5GHz**

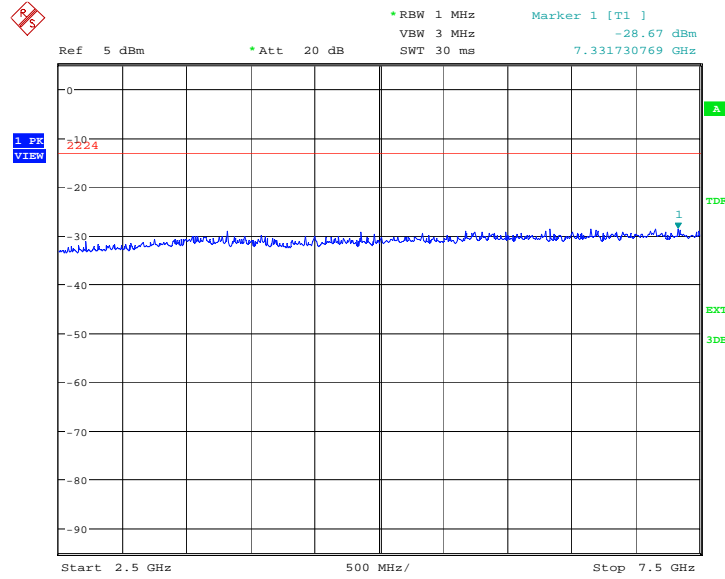
Spurious emission limit –13dBm.

**NOTE: peak above the limit line is the carrier frequency.**



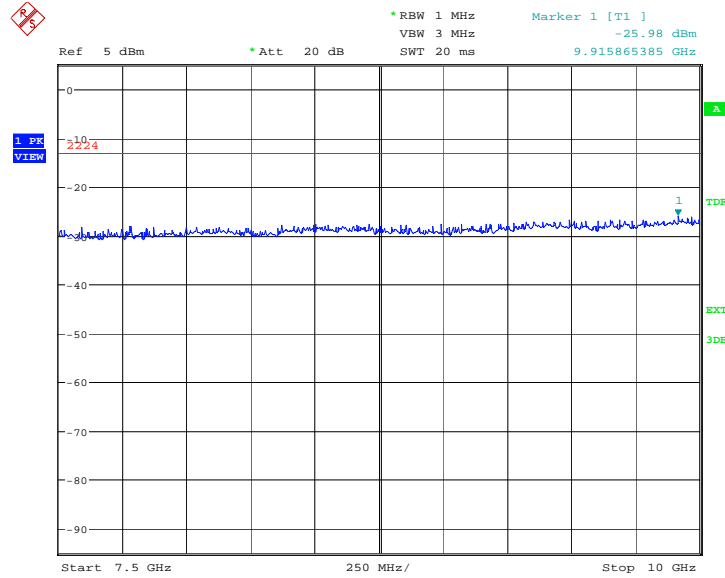
Date: 28.MAR.2013 06:05:02

**A.8.3.15 Channel 1175: 2.5GHz –7.5GHz**  
Spurious emission limit –13dBm.



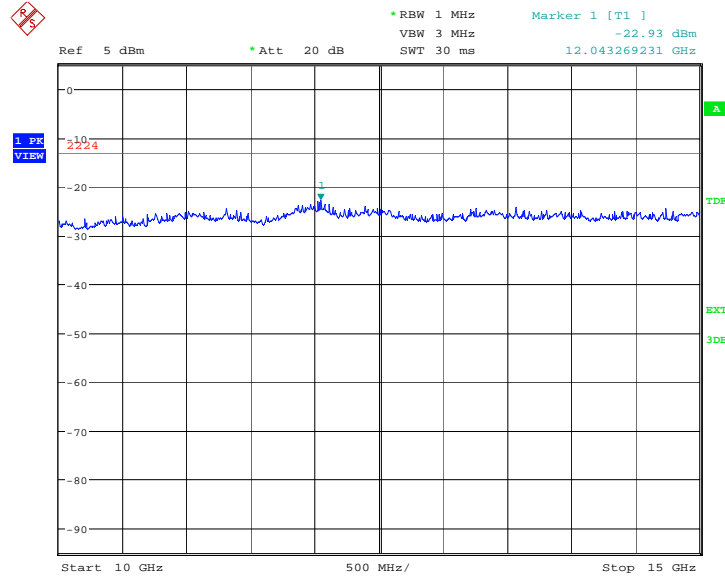
Date: 28.MAR.2013 06:05:29

**A.8.3.16 Channel 1175: 7.5GHz –10GHz**  
Spurious emission limit –13dBm.



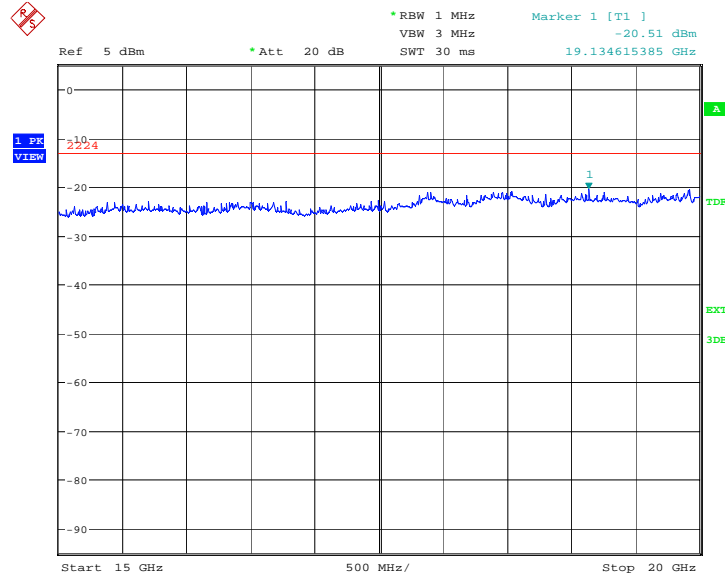
Date: 28.MAR.2013 06:05:55

**A.8.3.17 Channel 1175: 10GHz –15GHz**  
Spurious emission limit –13dBm.



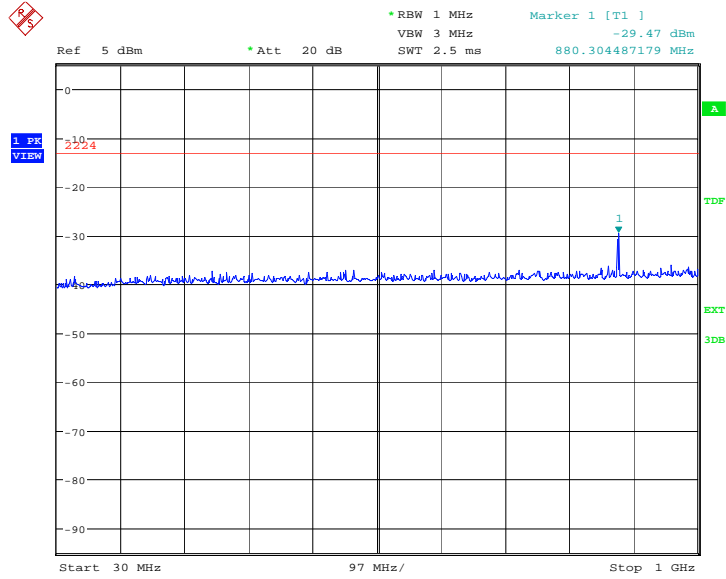
Date: 28.MAR.2013 06:06:22

**A.8.3.18 Channel 1175: 15GHz –20GHz**  
Spurious emission limit –13dBm.



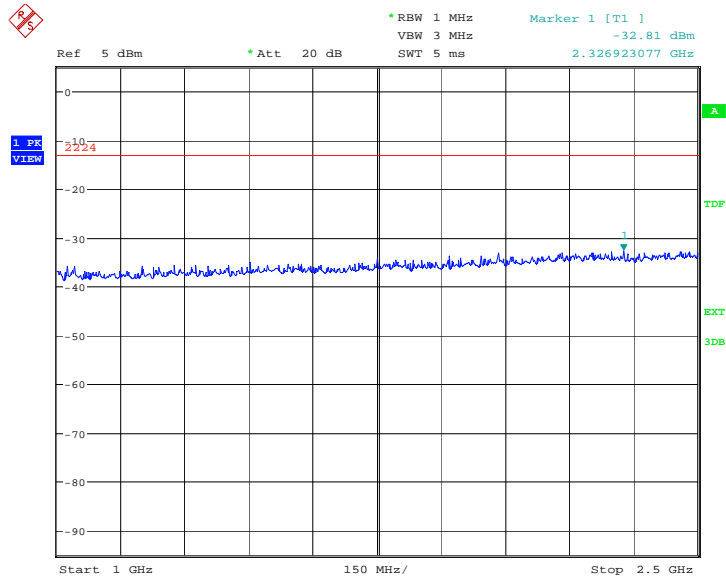
Date: 28.MAR.2013 06:06:49

**A. 8.3.19 Idle mode: 30MHz –1GHz**  
Spurious emission limit –13dBm.



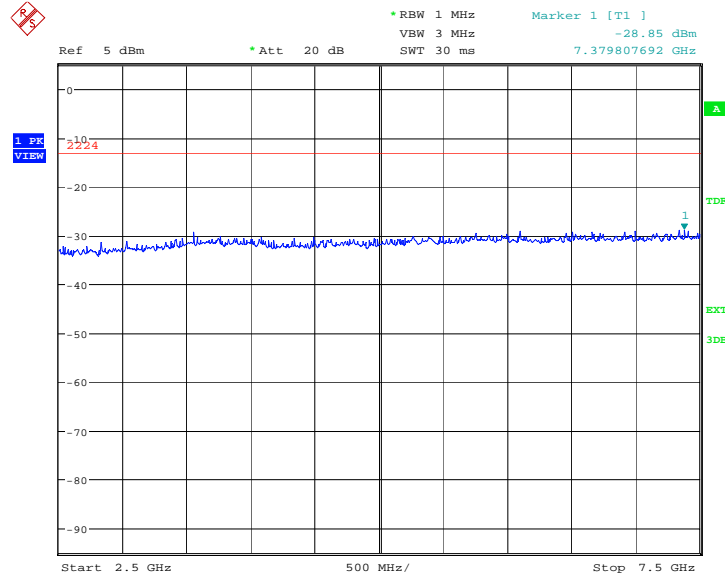
Date: 28.MAR.2013 23:43:51

**A.8.3.20 Idle mode: 1GHz –2.5GHz**  
Spurious emission limit –13dBm.



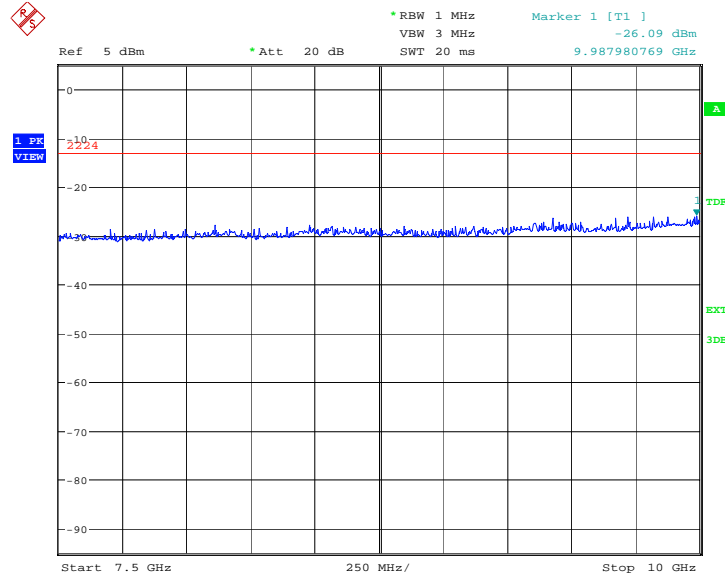
Date: 28.MAR.2013 23:44:18

**A.8.3.21 Idle mode: 2.5GHz –7.5GHz**  
Spurious emission limit –13dBm.



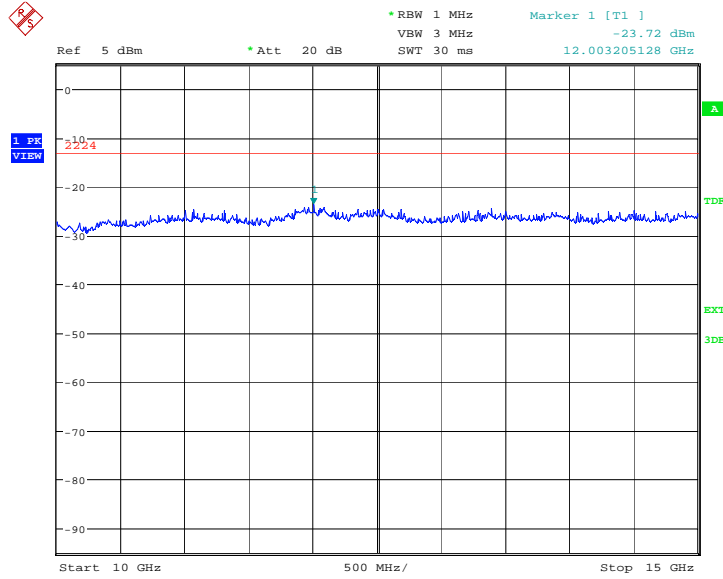
Date: 28.MAR.2013 23:44:45

**A.8.3.22 Idle mode: 7.5GHz –10GHz**  
Spurious emission limit –13dBm.



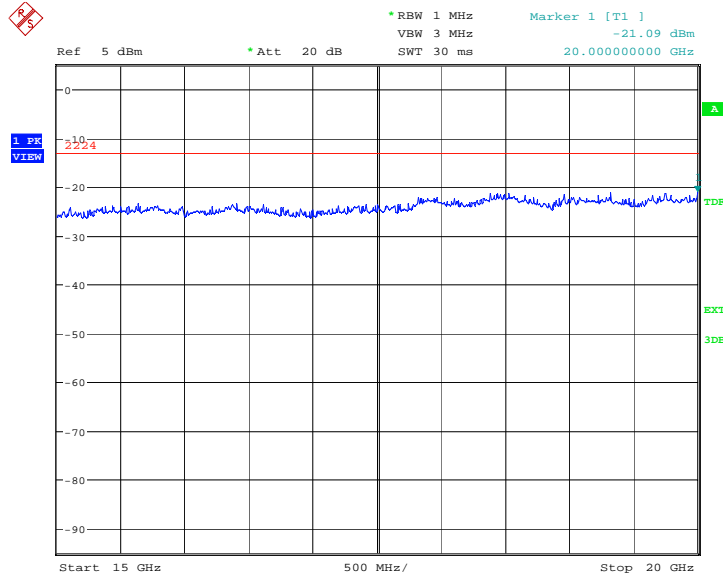
Date: 28.MAR.2013 23:45:12

**A.8.3.23 Idle mode: 10GHz –15GHz**  
Spurious emission limit –13dBm.



Date: 28.MAR.2013 23:45:39

**A.8.3.24 Idle mode: 15GHz –20GHz**  
Spurious emission limit –13dBm.



Date: 28.MAR.2013 23:46:06

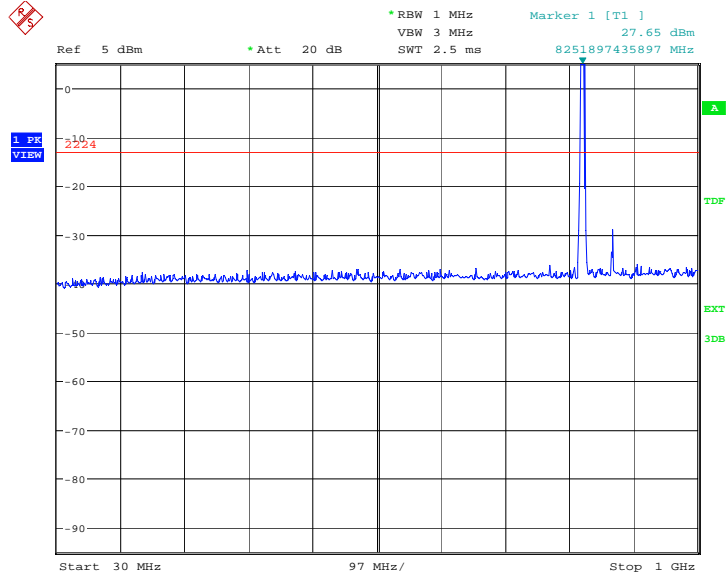


**CDMA 800**

**A. 8.3.25 Channel 1013: 30MHz –1GHz**

Spurious emission limit –13dBm.

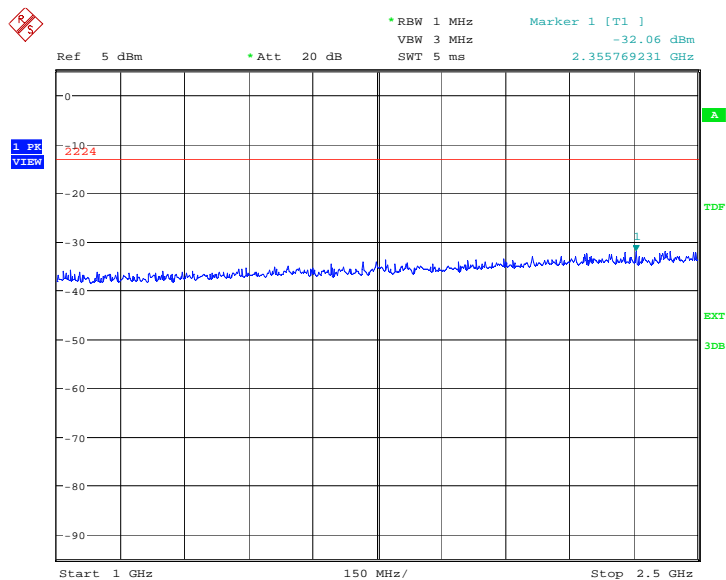
**NOTE: peak above the limit line is the carrier frequency.**



Date: 29.MAR.2013 02:00:08

**A. 8.3.26 Channel 1013: 1GHz – 2.5GHz**

Spurious emission limit –13dBm.

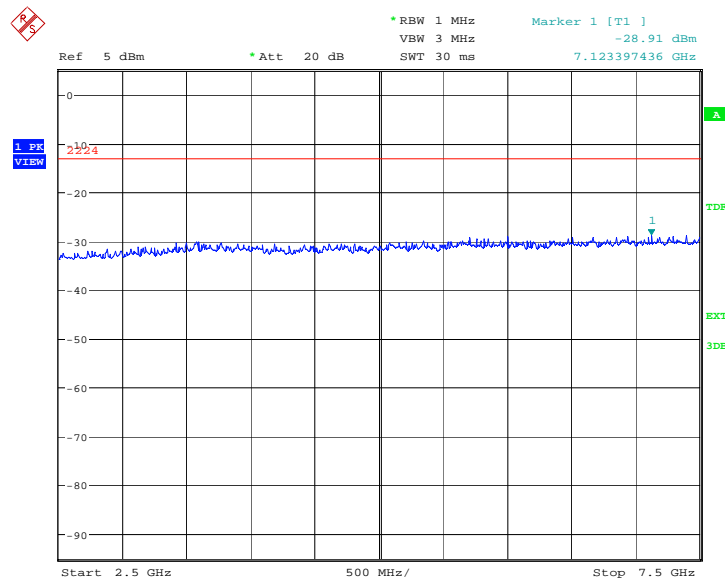


Date: 29.MAR.2013 02:00:35

### A. 8.3.27 Channel 1013: 2.5GHz –7.5GHz

Spurious emission limit –13dBm.

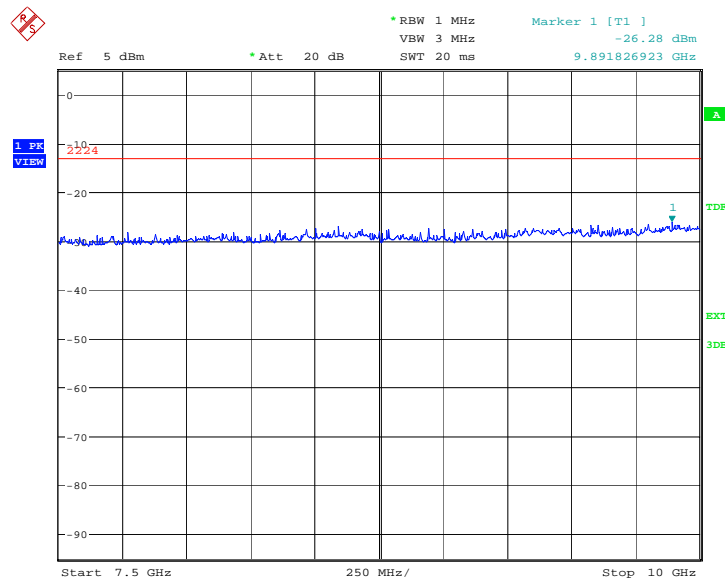
**NOTE: peak above the limit line is the carrier frequency.**



Date: 29.MAR.2013 02:01:02

### A. 8.3.28 Channel 1013: 7.5GHz – 10GHz

Spurious emission limit –13dBm.

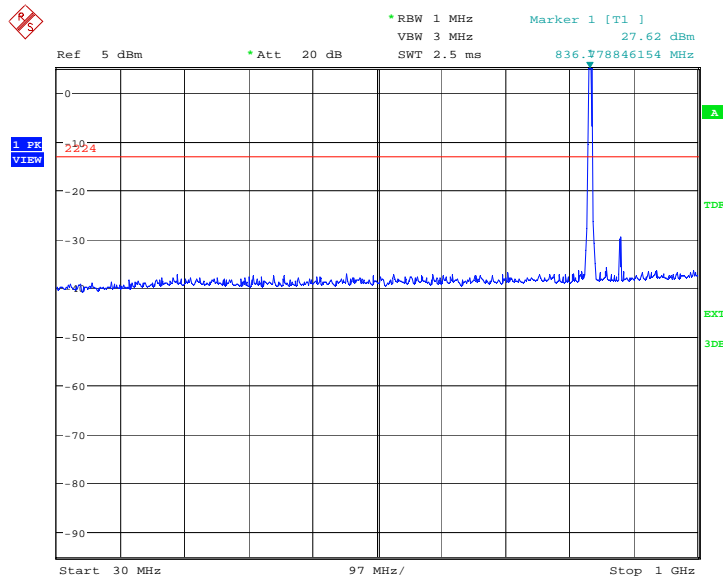


Date: 29.MAR.2013 02:01:29

### A. 8.3.29 Channel 384: 30MHz –1GHz

Spurious emission limit –13dBm.

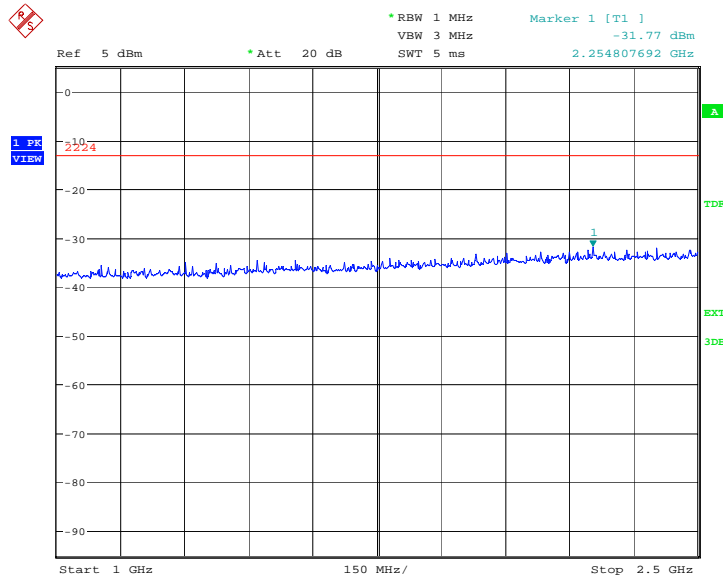
**NOTE: peak above the limit line is the carrier frequency.**



Date: 29.MAR.2013 02:01:56

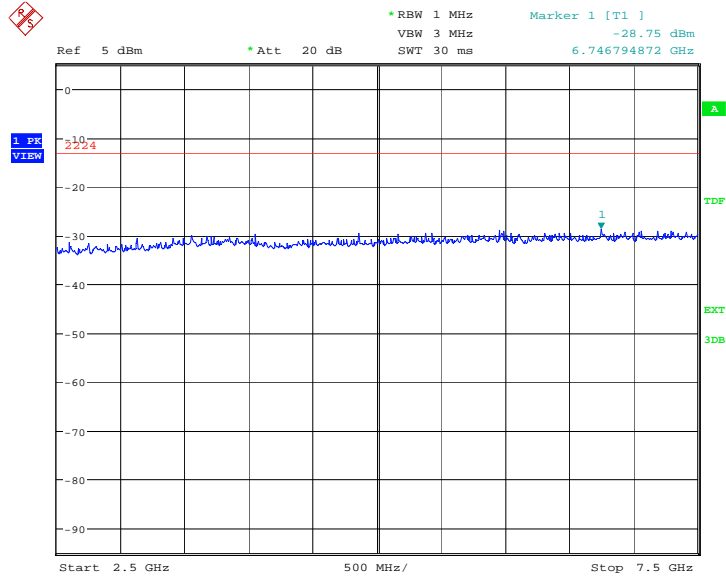
### A.8.3.30 Channel 384: 1GHz – 2.5GHz

Spurious emission limit –13dBm.



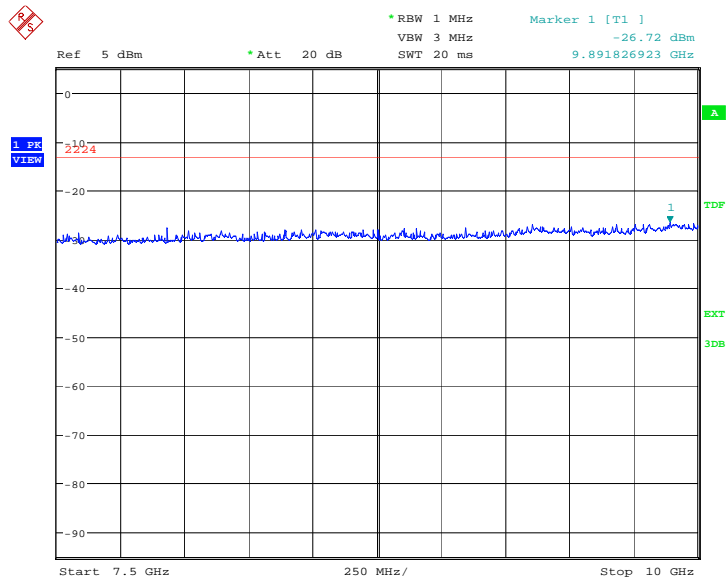
Date: 29.MAR.2013 02:02:23

**A. 8.3.31 Channel 384: 2.5GHz –7.5GHz**  
Spurious emission limit –13dBm.



Date: 29.MAR.2013 02:02:50

**A. 8.3.32 Channel 384: 7.5GHz – 10GHz**  
Spurious emission limit –13dBm.

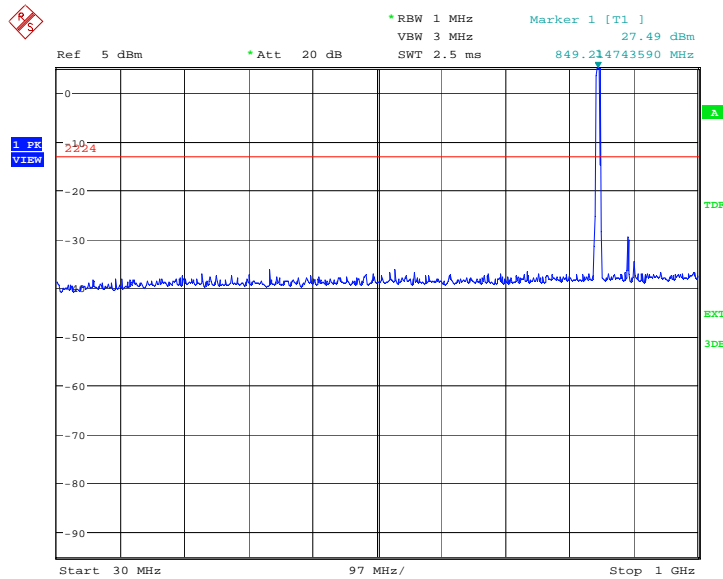


Date: 29.MAR.2013 02:03:17

**A. 8.3.33 Channel 777: 30MHz –1GHz**

Spurious emission limit –13dBm.

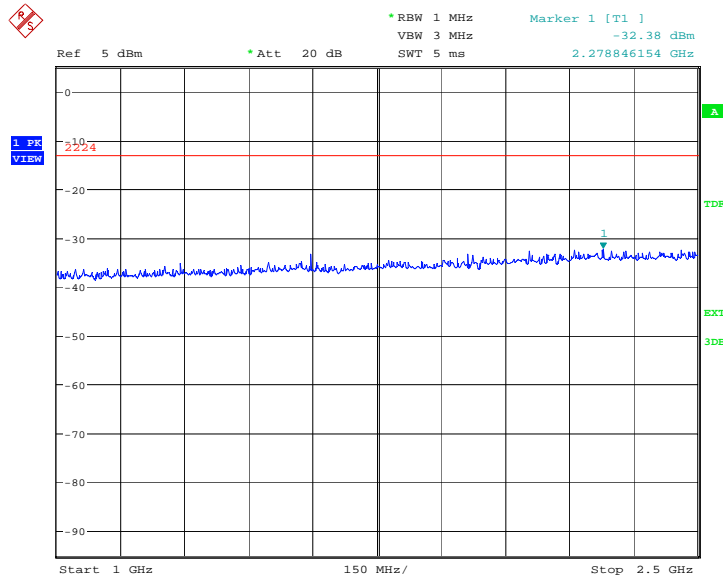
**NOTE: peak above the limit line is the carrier frequency.**



Date: 29.MAR.2013 02:03:44

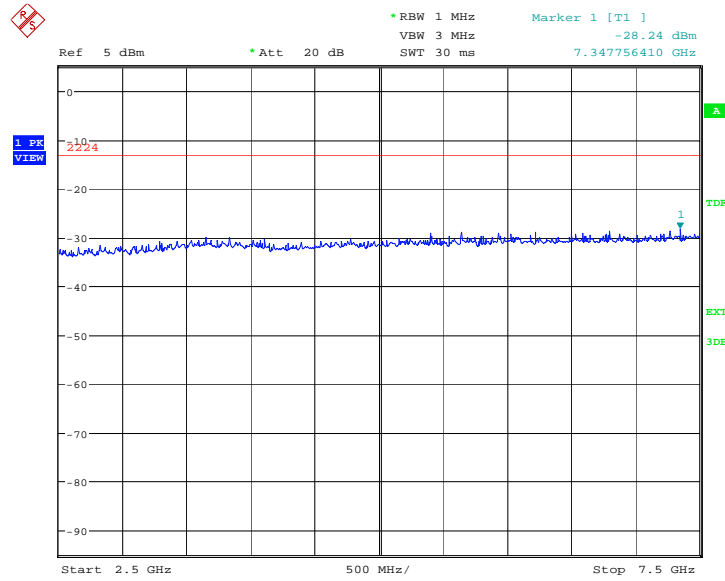
**A. 8.3.34 Channel 777: 1GHz – 2.5GHz**

Spurious emission limit –13dBm.



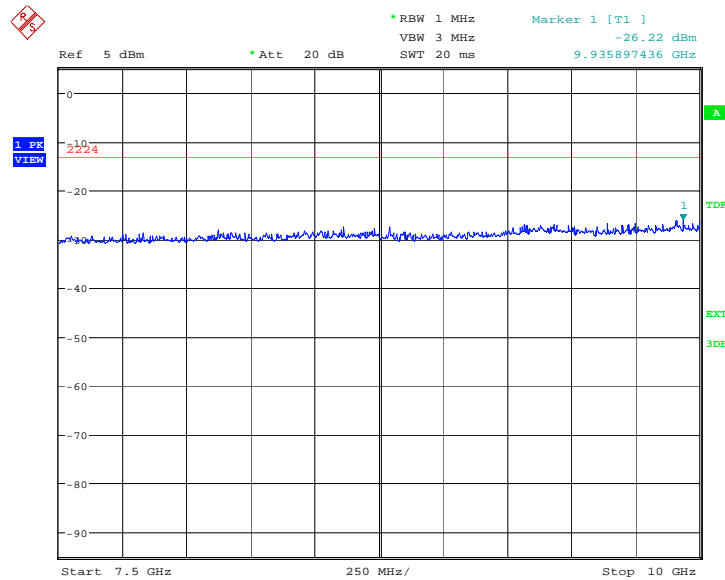
Date: 29.MAR.2013 02:04:11

**A. 8.3.35 Channel 777: 2.5GHz –7.5GHz**  
Spurious emission limit –13dBm.



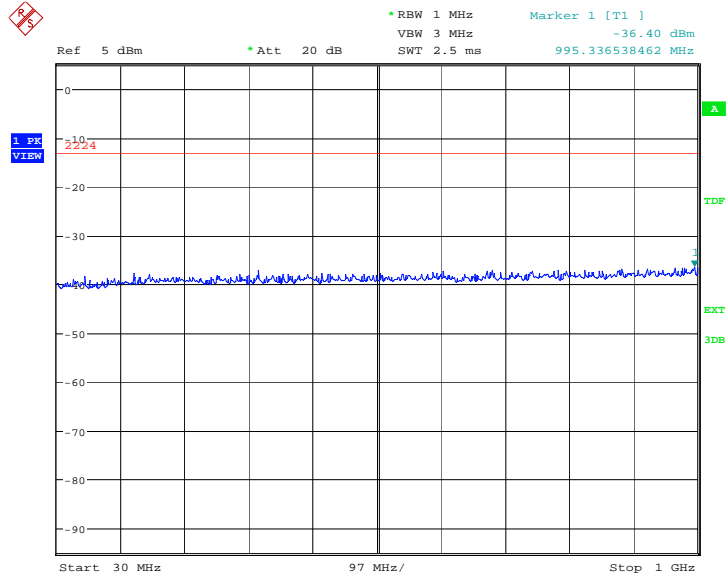
Date: 29.MAR.2013 02:04:38

**A. 8.3.36 Channel 777: 7.5GHz – 10GHz**  
Spurious emission limit –13dBm.



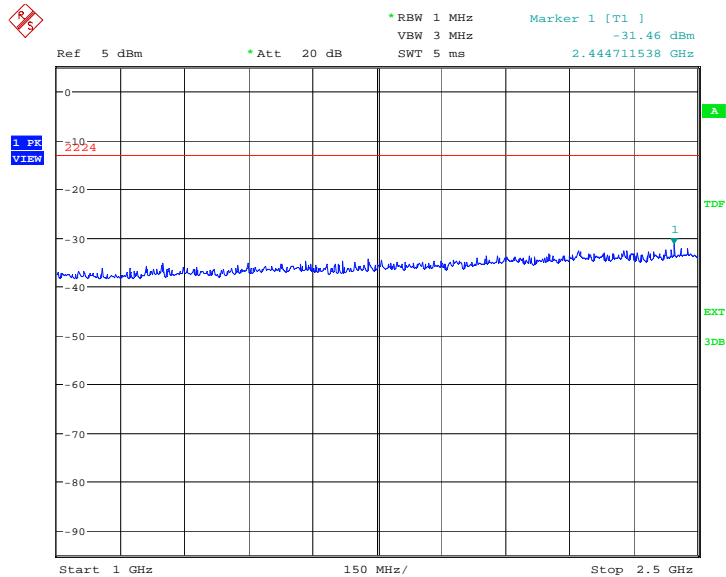
Date: 29.MAR.2013 02:05:05

**A. 8.3.37 Idle mode: 30MHz – 1GHz**  
Spurious emission limit -13dBm.



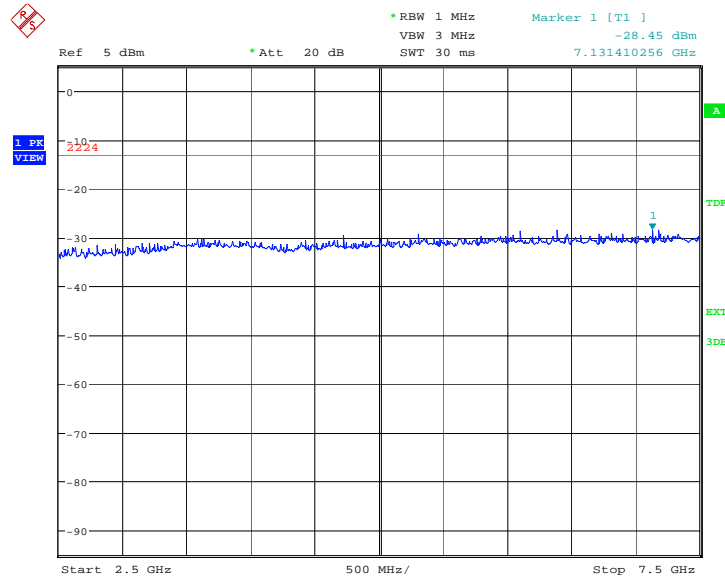
Date: 29.MAR.2013 00:06:46

**A.8.3.38 Idle mode: 1GHz – 2.5GHz**  
Spurious emission limit -13dBm.



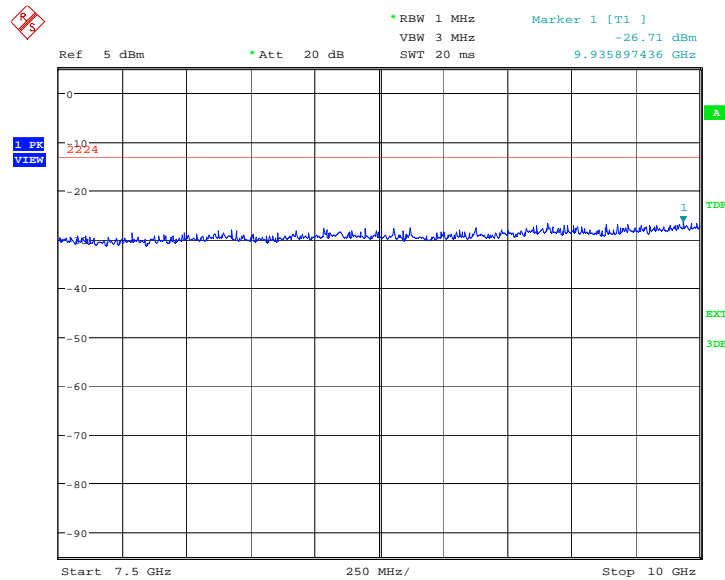
Date: 29.MAR.2013 00:07:12

**A.8.3.39 Idle mode: 2.5GHz – 7.5GHz**  
Spurious emission limit -13dBm.



Date: 29.MAR.2013 00:07:39

**A.8.3.40 Idle mode: 7.5GHz – 10GHz**  
Spurious emission limit -13dBm.



Date: 29.MAR.2013 00:08:06