



# FCC RF Test Report

**APPLICANT** : Motorola Mobility, LLC  
**EQUIPMENT** : Mobile Cellular Phone  
**BRAND NAME** : Motorola Mobility, LLC  
**FCC MODEL NAME** : 3606  
**FCC ID** : IHDT56QA3  
**STANDARD** : FCC 47 CFR Part 2, 22(H), 24(E), 27(L)  
**CLASSIFICATION** : PCS Licensed Transmitter Held to Ear (PCE)

The product was received on May 30, 2014 and testing was completed on Aug. 08, 2014. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA / EIA-603-C-2004 and has been in compliance with the applicable technical standards.

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

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager



## SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1<sup>st</sup> Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.



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### REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG453017A	Rev. 01	Initial issue of report	Jul. 25, 2014
FG453017A	Rev. 02	Revised the Section 2.1 and added reference test procedure	Aug. 08, 2014



## SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	§2.1046	Conducted Output Power	N/A	PASS	-
3.2	§24.232(d) §27.50(d)(5)	Peak-to-Average Ratio	<13 dB	PASS	-
3.3	§22.913(a)(2)	Effective Radiated Power	< 7 Watts	PASS	-
	§24.232(c)	Equivalent Isotropic Radiated Power	< 2 Watts	PASS	-
	§27.50(d)(4)	Equivalent Isotropic Radiated Power	< 1 Watts	PASS	-
3.4	§2.1049 §22.917(b) §24.238(b) §27.53(g)	Occupied Bandwidth	N/A	PASS	-
3.5	§2.1051 §22.917(a) §24.238(a) §27.53(g)	Band Edge Measurement	< 43+10log <sub>10</sub> (P[Watts])	PASS	-
3.6	§2.1051 §22.917(a) §24.238(a) §27.53(g)	Conducted Spurious Emission	< 43+10log <sub>10</sub> (P[Watts])	PASS	-
3.7	§2.1053 §22.917(a) §24.238(a) §27.53(g)	Field Strength of Spurious Radiation	< 43+10log <sub>10</sub> (P[Watts])	PASS	Under limit 23.49 dB at 5639.000 MHz
3.8	§2.1055 §22.355 §24.235 §27.54	Frequency Stability for Temperature & Voltage	< 2.5 ppm for Part 22.355 Emission must remain In-band for 24.235 and 27.54	PASS	-



# 1 General Description

## 1.1 Applicant

Motorola Mobility, LLC

222 W Merchandise Mart Plaza, Suite 1800, Chicago, IL 60654, United States

## 1.2 Manufacturer

Motorola Mobility, LLC

222 W Merchandise Mart Plaza, Suite 1800, Chicago, IL 60654, United States

## 1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola Mobility, LLC
Model Name	3606
FCC ID	IHDT56QA3
IMEI Code	990004980031375
EUT supports Radios application	CDMA/EV-DO/GSM/EGPRS/WCDMA/HSPA/LTE/NFC WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth v3.0 + EDR Bluetooth v4.0 - LE
HW Version	P2
EUT Stage	Identical Prototype

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

Accessory List	
AC Adapter	Brand Name : Motorola
	Model Name : SPN5788A
Earphone	Brand Name : Motorola
	Model Name : SJYN1305A



### 1.4 Product Specification subjective to this standard

Product Specification subjective to this standard	
<b>Tx Frequency</b>	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz WCDMA Band IV : 1712.4 MHz ~ 1752.6 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz CDMA2000 BC0: 824.70 MHz ~ 848.31 MHz CDMA2000 BC1: 1851.25 MHz ~ 1908.75 MHz
<b>Rx Frequency</b>	GSM850: 869.2 MHz ~ 893.8 MHz GSM1900: 1930.2 MHz ~ 1989.8 MHz WCDMA Band V: 871.4 MHz ~ 891.6 MHz WCDMA Band IV : 2112.4 MHz ~ 2152.6 MHz WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz CDMA2000 BC0: 869.70 MHz ~ 893.31 MHz CDMA2000 BC1: 1931.25 MHz ~ 1988.75 MHz
<b>Maximum Output Power to Antenna</b>	GSM850 : 32.87 dBm GSM1900 : 29.93 dBm WCDMA Band V : 23.16 dBm WCDMA Band IV : 22.93 dBm WCDMA Band II : 22.92 dBm CDMA2000 BC0 : 24.14 dBm CDMA2000 BC1 : 24.24 dBm
<b>99% Occupied Bandwidth</b>	GSM850: 0.252MHz GSM1900: 0.248MHz WCDMA Band V: 4.18MHz WCDMA Band IV: 4.18MHz WCDMA Band II: 4.18MHz CDMA2000 BC0: 1.28MHz CDMA2000 BC1: 1.28MHz
<b>Antenna Type</b>	Fixed Internal Antenna
<b>Type of Modulation</b>	GSM: GMSK GPRS: GMSK EDGE: GMSK / 8PSK WCDMA: QPSK (Uplink) HSDPA: QPSK (Uplink) HSUPA: QPSK (Uplink) CDMA2000 : QPSK CDMA2000 1xEV-DO : QPSK/8PSK

### 1.5 Modification of EUT

No modifications are made to the EUT during all test items.



### 1.6 Maximum ERP/EIRP Power, Frequency Tolerance, and Emission Designator

FCC Rule	System	Type of Modulation	Maximum ERP/EIRP (W)	Frequency Tolerance (ppm)	Emission Designator
Part 22	GSM850 GSM	GMSK	0.73	0.010 ppm	250KGXW
Part 22	GSM850 EDGE class 8	8PSK	0.22	0.011 ppm	252KG7W
Part 22	WCDMA Band V RMC 12.2Kbps	QPSK	0.10	0.012 ppm	4M18F9W
Part 22	CDMA2000 BC0 1xRTT	QPSK	0.12	0.029 ppm	1M28F9W
Part 24	GSM1900 GSM	GMSK	1.98	0.004 ppm	248KGXW
Part 24	GSM1900 EDGE class 8	8PSK	0.55	0.010 ppm	248KG7W
Part 24	WCDMA Band II RMC 12.2Kbps	QPSK	0.30	0.011 ppm	4M18F9W
Part 24	CDMA2000 BC1 1xRTT	QPSK	0.53	0.003 ppm	1M28F9W
Part 27	WCDMA Band IV RMC 12.2Kbps	QPSK	0.09	0.005 ppm	4M18F9W

### 1.7 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1022 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

<b>Test Site</b>	SPORTON INTERNATIONAL INC.	
<b>Test Site Location</b>	No. 52, Hwa Ya 1 <sup>st</sup> Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978	
<b>Test Site No.</b>	<b>Sporton Site No.</b>	
	TH02-HY	03CH07-HY



## **1.8 Applicable Standards**

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

- ♦ FCC 47 CFR Part 2, 22(H), 24(E), 27(L)
- ♦ ANSI / TIA / EIA-603-C-2004
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v02r01

### **Remark:**

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.





## **2 Test Configuration of Equipment Under Test**

### **2.1 Test Mode**

Antenna port conducted and radiated test items were performed according to KDB 971168 D01 Power Meas. License Digital Systems v02r01 with maximum output power.

Radiated measurements were performed with rotating EUT in different three orthogonal test planes to find the maximum emission.

Radiated emissions were investigated as following frequency range:

1. 30 MHz to 9000 MHz for GSM850, WCDMA Band V, and CDMA2000 BC0.
2. 30 MHz to 19000 MHz for GSM1900, WCDMA Band II, and CDMA2000 BC1.
3. 30 MHz to 18000 MHz for WCDMA Band IV.



Test Modes		
Band	Radiated TCs	Conducted TCs
GSM 850	■ GSM Link ■ EDGE class 8 Link	■ GSM Link ■ EDGE class 8 Link
GSM 1900	■ GSM Link ■ EDGE class 8 Link	■ GSM Link ■ EDGE class 8 Link
WCDMA Band V	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link
WCDMA Band II	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link
WCDMA Band IV	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link
CDMA2000 BC0	■ 1xRTT Link Mode	■ 1xRTT Link Mode
CDMA2000 BC1	■ 1xRTT Link Mode	■ 1xRTT Link Mode

**Note:** The maximum power levels are chosen to test as the worst case configuration as follows:

- GSM mode for GMSK modulation,
- EDGE multi-slot class 8 mode for 8PSK modulation,
- RMC 12.2Kbps mode for WCDMA band V,
- RMC 12.2Kbps mode for WCDMA band II,
- RMC 12.2Kbps mode for WCDMA band IV,
- 1xRTT RC3+SO55 mode for CDMA2000 BC0,

1xRTT RC3+SO55 mode for CDMA2000 BC1, only these modes were used for all tests.

In addition to above worst-case test, below investigating on all data rates, and all modes are compliance with each FCC test case which has specific test limits. For spurious emissions at antenna port, the EUT was investigated the band edges on low and high channels, and the unwanted spurious emissions on middle channel for all modes, the results are pass, then only the worst-results were reported in the test report. The Radiated Spurious emissions for GSM/GPRS/EGPRS/HSDPA/CDMA modes were investigated on the middle channel and the passed results were not worst than those data tested from the highest power channels.



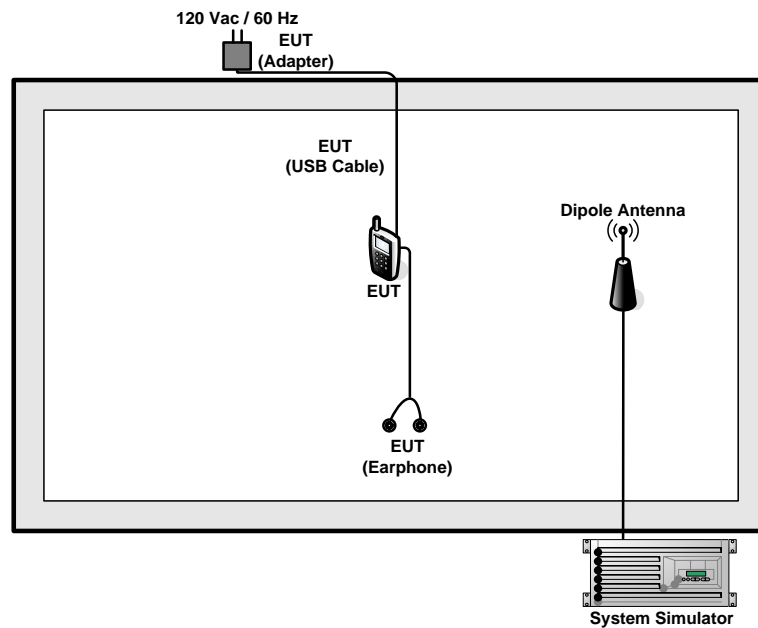
Conducted Power Measurement Results:

Conducted Power (*Unit: dBm)						
Band	GSM850			GSM1900		
Channel	128	189	251	512	661	810
Frequency	824.2	836.4	848.8	1850.2	1880.0	1909.8
GSM	32.64	32.60	32.87	29.73	29.93	29.78
GPRS class 8	32.63	32.58	32.85	29.71	29.91	29.76
GPRS class 10	30.29	30.26	30.39	26.99	26.93	26.96
GPRS class 11	28.78	28.73	28.66	25.30	25.20	25.27
GPRS class 12	27.32	27.30	27.25	24.00	23.87	23.91
EGPRS class 8	27.30	27.35	27.40	25.83	25.85	25.82
EGPRS class 10	24.71	24.77	24.83	23.29	23.30	23.28
EGPRS class 11	23.35	23.43	23.64	21.85	21.72	21.76
EGPRS class 12	22.18	22.25	22.30	20.63	20.54	20.51

Conducted Power (*Unit: dBm)									
Band	WCDMA Band V			WCDMA Band II			WCDMA Band IV		
Channel	4132	4182	4233	9262	9400	9538	1312	1413	1513
Frequency	826.4	836.4	846.6	1852.4	1880	1907.6	1712.4	1732.6	1752.6
RMC 12.2K	22.77	23.16	23.07	22.92	22.81	22.86	22.93	22.85	22.87
HSDPA Subtest-1	21.73	21.90	22.26	21.60	21.52	21.65	21.71	21.49	21.37
HSDPA Subtest-2	21.50	21.74	22.06	21.50	21.45	21.50	21.70	21.51	21.55
HSDPA Subtest-3	21.23	21.40	21.71	21.51	21.42	21.56	21.13	20.95	21.00
HSDPA Subtest-4	21.24	21.41	21.74	21.42	21.40	21.56	21.13	20.99	20.94
HSUPA Subtest-1	21.40	21.30	21.45	21.51	21.53	21.59	20.99	21.11	21.32
HSUPA Subtest-2	20.93	20.84	20.98	20.81	20.84	20.93	20.47	20.49	20.60
HSUPA Subtest-3	20.78	20.64	20.79	20.72	20.75	20.81	20.14	20.34	20.54
HSUPA Subtest-4	21.30	21.30	21.52	21.28	21.32	21.50	20.80	20.53	20.62
HSUPA Subtest-5	21.99	21.88	22.10	21.93	21.98	22.10	21.54	21.42	21.52

Conducted Power (*Unit: dBm)						
Band	CDMA2000 BC0			CDMA2000 BC1		
Channel	1013	384	777	25	600	1175
Frequency	824.7	836.52	848.31	1851.25	1880	1908.75
1xRTT RC1 SO55	24.01	24.03	24.10	24.23	23.96	24.05
1xRTT RC3 SO55	24.02	24.04	24.14	24.24	23.98	24.04
1xRTT RC3 SO32(+ F-SCH)	24.00	23.99	24.12	24.23	23.97	24.06
1xRTT RC3 SO32(+SCH)	24.03	23.98	24.11	24.21	23.97	24.05
1xEV-DO RTAP 153.6kbps	23.96	23.92	23.95	24.19	23.96	24.03
1xEV-DO RETAP 4096Bits	23.99	23.93	24.02	24.20	23.99	24.04

## 2.2 Connection Diagram of Test System



## 2.3 Support Unit used in test configuration

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m

## 2.4 Measurement Results Explanation Example

### For all conducted test items:

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

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

*Offset = RF cable loss + attenuator factor.*

The following shows an offset computation example with RF cable loss 4.2 dB and a 10dB attenuator.

Example :

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 4.2 + 10 = 14.2 \text{ (dB)} \end{aligned}$$

### **3 Test Result**

#### **3.1 Conducted Output Power Measurement**

##### **3.1.1 Description of the Conducted Output Power Measurement**

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

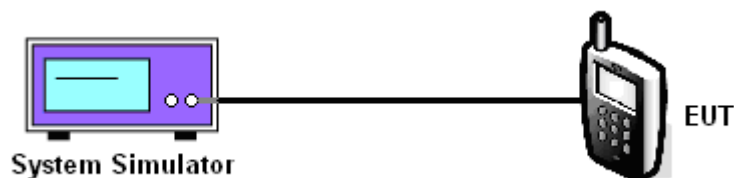
##### **3.1.2 Measuring Instruments**

The measuring equipment is listed in the section 4 of this test report.

##### **3.1.3 Test Procedures**

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure the maximum burst average power for GSM and maximum average power for other modulation signal.

##### **3.1.4 Test Setup**





### 3.1.5 Test Result of Conducted Output Power

Cellular Band									
Modes	GSM850 (GSM)			GSM850 (EDGE class 8)			WCDMA Band V (RMC 12.2Kbps)		
Channel	128 (Low)	189 (Mid)	251 (High)	128 (Low)	189 (Mid)	251 (High)	4132 (Low)	4182 (Mid)	4233 (High)
Frequency (MHz)	824.2	836.4	848.8	824.2	836.4	848.8	826.4	836.4	846.6
Conducted Power (dBm)	32.64	32.60	32.87	27.30	27.35	27.40	22.77	23.16	23.07

PCS Band									
Modes	GSM1900 (GSM)			GSM1900 (EDGE class 8)			WCDMA Band II (RMC 12.2Kbps)		
Channel	512 (Low)	661 (Mid)	810 (High)	512 (Low)	661 (Mid)	810 (High)	9262 (Low)	9400 (Mid)	9538 (High)
Frequency (MHz)	1850.2	1880	1909.8	1850.2	1880	1909.8	1852.4	1880	1907.6
Conducted Power (dBm)	29.73	29.93	29.78	25.83	25.85	25.82	22.92	22.81	22.86

AWS Band			
Modes	WCDMA Band IV (RMC 12.2Kbps)		
Channel	1312(Low)	1413 (Mid)	1513 (High)
Frequency (MHz)	1712.4	1732.6	1752.6
Conducted Power (dBm)	22.93	22.85	22.87



CDMA2000 BC0			
Test Mode	CDMA 2000 1xRTT		
Test Status	RC3+SO55		
Channel	1013 (Low)	384 (Mid)	777 (High)
Frequency (MHz)	824.70	836.52	848.31
Conducted Power (dBm)	24.02	24.04	24.14

CDMA2000 BC1			
Test Mode	CDMA 2000 1xRTT		
Test Status	RC3+SO55		
Channel	25 (Low)	600 (Mid)	1175 (High)
Frequency (MHz)	1851.25	1880.00	1908.75
Conducted Power (dBm)	24.24	23.98	24.04

**Note:** maximum burst average power for GSM, and maximum average power for WCDMA and CDMA2000.

## 3.2 Peak-to-Average Ratio

### 3.2.1 Description of the PAR Measurement

The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

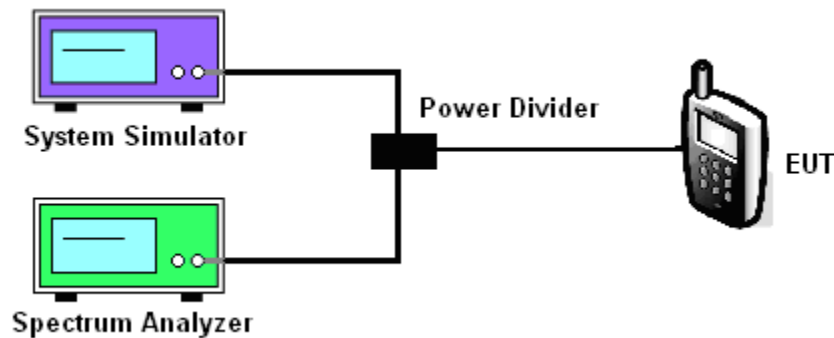
### 3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

### 3.2.3 Test Procedures

1. The testing follows FCC KDB 971168 v02r01 Section 5.7.1.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. Set EUT to transmit at maximum output power.
4. For GSM/EGPRS operating modes, signal gating is implemented on the spectrum analyzer by triggering from the system simulator.
5. Set the CCDF (Complementary Cumulative Distribution Function) option of the spectrum analyzer.  
Record the maximum PAPR level associated with a probability of 0.1%.

### 3.2.4 Test Setup







### 3.2.5 Test Result of Peak-to-Average Ratio

Cellular Band									
Modes	GSM850 (GSM)			GSM850 (EDGE class 8)			WCDMA Band V (RMC 12.2Kbps)		
Channel	128 (Low)	189 (Mid)	251 (High)	128 (Low)	189 (Mid)	251 (High)	4132 (Low)	4182 (Mid)	4233 (High)
Frequency (MHz)	824.2	836.4	848.8	824.2	836.4	848.8	826.4	836.4	846.6
Peak-to-Average Ratio (dB)	0.32	0.32	0.28	3.16	3.16	2.96	3.16	3.24	2.76

PCS Band									
Modes	GSM1900 (GSM)			GSM1900 (EDGE class 8)			WCDMA Band II (RMC 12.2Kbps)		
Channel	512 (Low)	661 (Mid)	810 (High)	512 (Low)	661 (Mid)	810 (High)	9262 (Low)	9400 (Mid)	9538 (High)
Frequency (MHz)	1850.2	1880	1909.8	1850.2	1880	1909.8	1852.4	1880	1907.6
Peak-to-Average Ratio (dB)	0.28	0.24	0.24	3.40	3.24	3.28	3.16	3.52	3.44

AWS Band			
Modes	WCDMA Band IV (RMC 12.2Kbps)		
Channel	1312(Low)	1413 (Mid)	1513 (High)
Frequency (MHz)	1712.4	1732.6	1752.6
Peak-to-Average Ratio (dB)	3.40	3.36	3.36



CDMA2000 BC0			
Modes	CDMA 2000 1xRTT		
Test Status	RC3+SO55		
Channel	1013 (Low)	384 (Mid)	777 (High)
Frequency (MHz)	824.70	836.52	848.31
Peak-to-Average Ratio (dB)	4.00	4.48	3.72

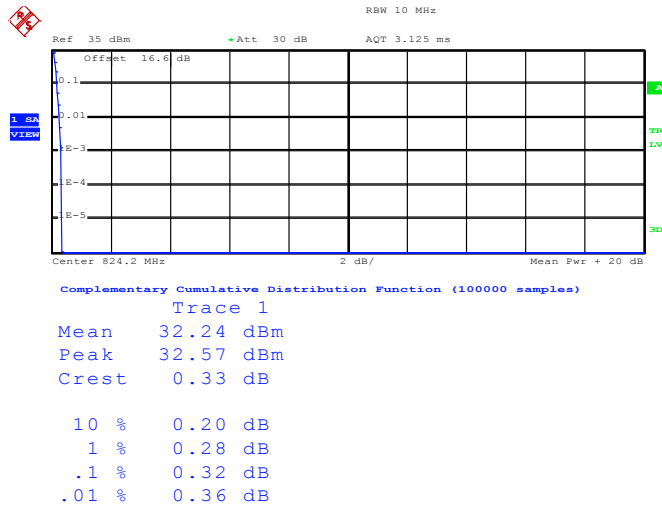
CDMA2000 BC1			
Modes	CDMA 2000 1xRTT		
Test Status	RC3+SO55		
Channel	25 (Low)	600 (Mid)	1175 (High)
Frequency (MHz)	1851.25	1880.00	1908.75
Peak-to-Average Ratio (dB)	4.48	4.64	4.32



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

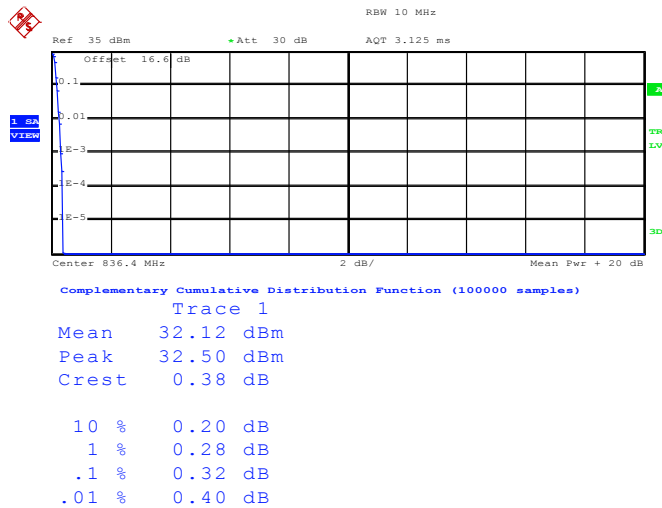
Band :	GSM 850	Test Mode :	GSM Link (GMSK)
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#### Peak-to-Average Ratio on Channel 128 (824.2 MHz)



Date: 23.JUN.2014 16:21:54

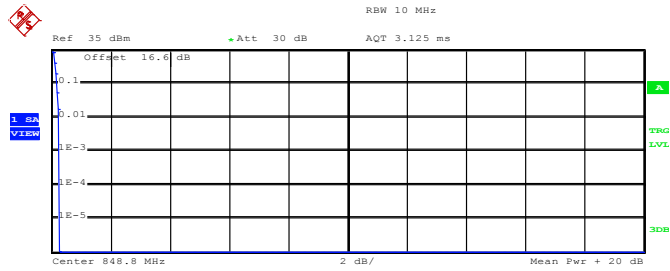
#### Peak-to-Average Ratio on Channel 189 (836.4 MHz)



Date: 23.JUN.2014 16:22:22



Peak-to-Average Ratio on Channel 251 (848.8 MHz)



Complementary Cumulative Distribution Function (100000 samples)

Trace 1  
 Mean 32.37 dBm  
 Peak 32.64 dBm  
 Crest 0.27 dB

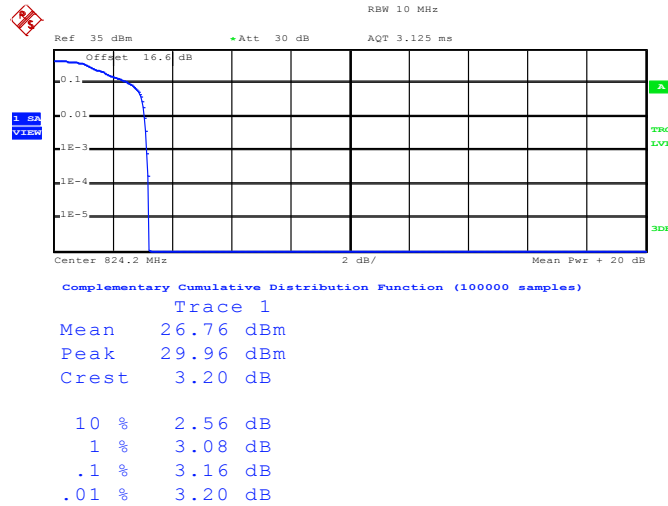
10 %	0.20 dB
1 %	0.24 dB
.1 %	0.28 dB
.01 %	0.28 dB

Date: 23.JUN.2014 16:22:46



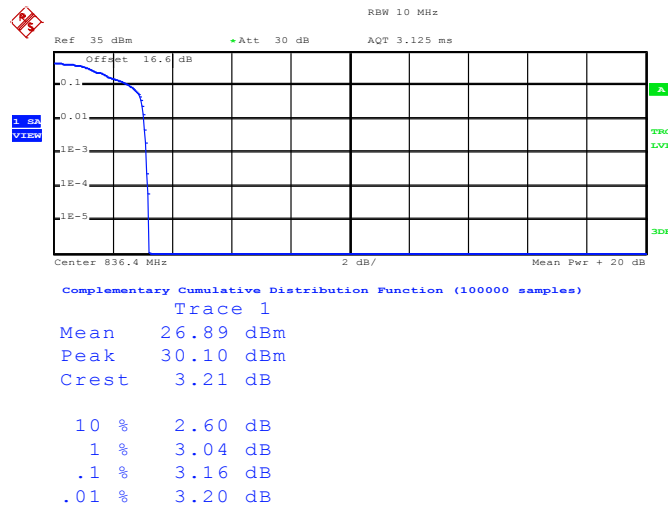
<b>Band :</b>	GSM 850	<b>Test Mode :</b>	EDGE class 8 Link (8PSK)
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**Peak-to-Average Ratio on Channel 128 (824.2 MHz)**



Date: 23.JUN.2014 17:06:27

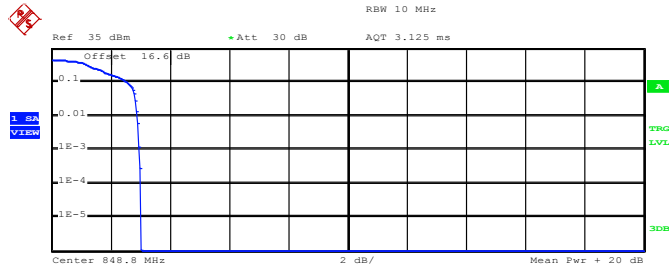
**Peak-to-Average Ratio on Channel 189 (836.4 MHz)**



Date: 23.JUN.2014 17:06:52



Peak-to-Average Ratio on Channel 251 (848.8 MHz)



Complementary Cumulative Distribution Function (100000 samples)

Trace 1  
 Mean 27.38 dBm  
 Peak 30.38 dBm  
 Crest 3.01 dB

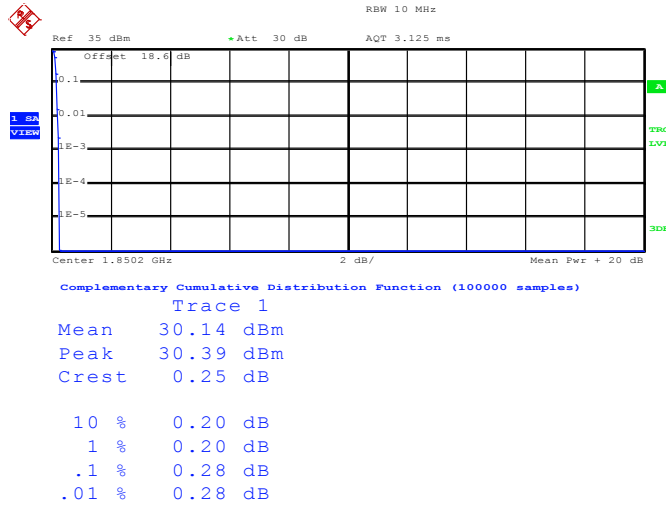
10 % 2.56 dB  
 1 % 2.92 dB  
 .1 % 2.96 dB  
 .01 % 3.04 dB

Date: 23.JUN.2014 17:07:40



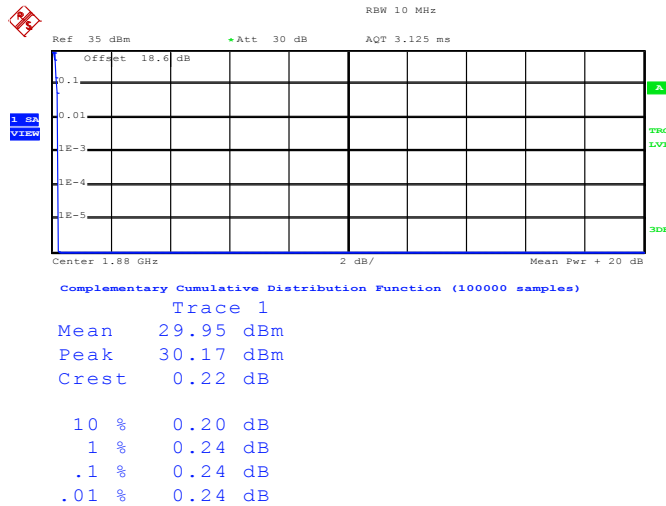
<b>Band :</b>	GSM 1900	<b>Test Mode :</b>	GSM Link (GMSK)
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Peak-to-Average Ratio on Channel 512 (1850.2 MHz)



Date: 24.JUN.2014 09:35:39

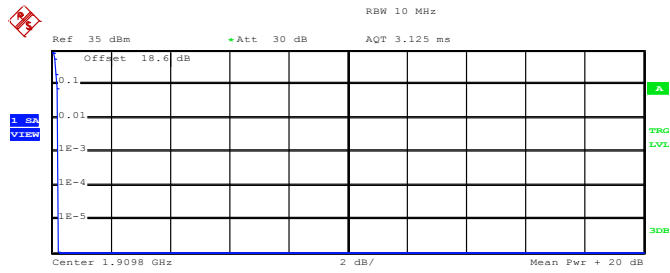
Peak-to-Average Ratio on Channel 661 (1880.0 MHz)



Date: 24.JUN.2014 09:36:04



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



Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	29.86 dBm
Peak	30.10 dBm
Crest	0.24 dB

10 %	0.20 dB
1 %	0.24 dB
.1 %	0.24 dB
.01 %	0.24 dB

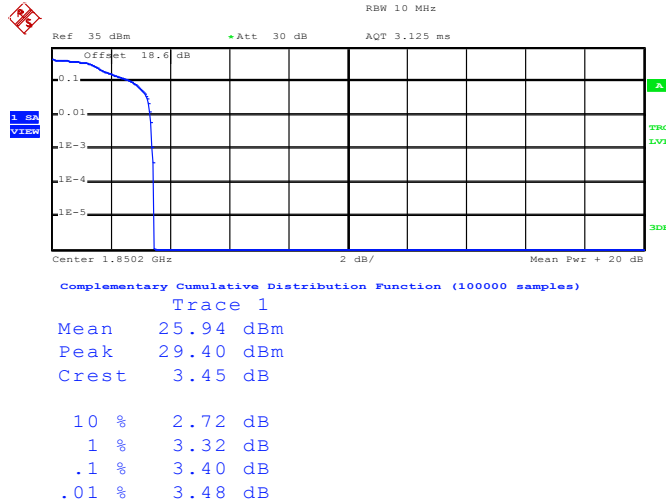
Date: 24.JUN.2014 09:36:36





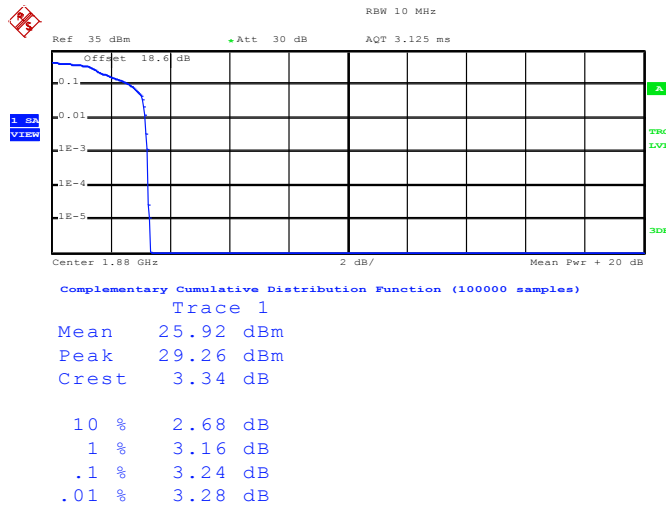
<b>Band :</b>	GSM 1900	<b>Test Mode :</b>	EDGE class 8 Link (8PSK)
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**Peak-to-Average Ratio on Channel 512 (1850.2 MHz)**



Date: 24.JUN.2014 10:09:52

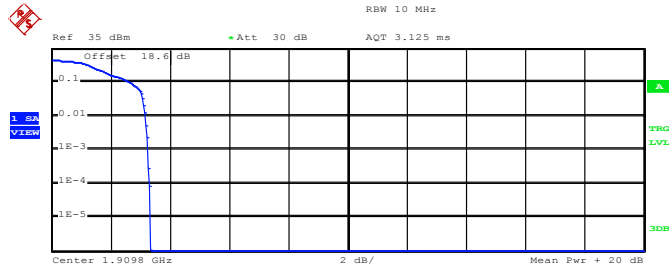
**Peak-to-Average Ratio on Channel 661 (1880.0 MHz)**



Date: 24.JUN.2014 10:10:44



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



Complementary Cumulative Distribution Function (100000 samples)

Trace 1  
 Mean 25.79 dBm  
 Peak 29.12 dBm  
 Crest 3.33 dB

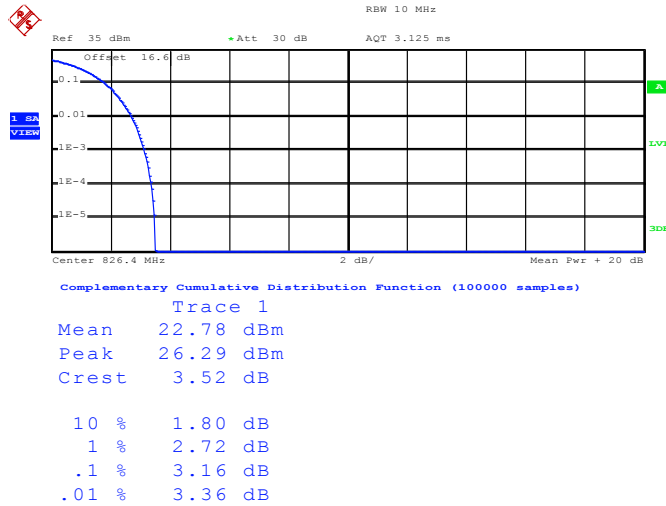
10 % 2.68 dB  
 1 % 3.16 dB  
 .1 % 3.28 dB  
 .01 % 3.32 dB

Date: 24.JUN.2014 10:12:13



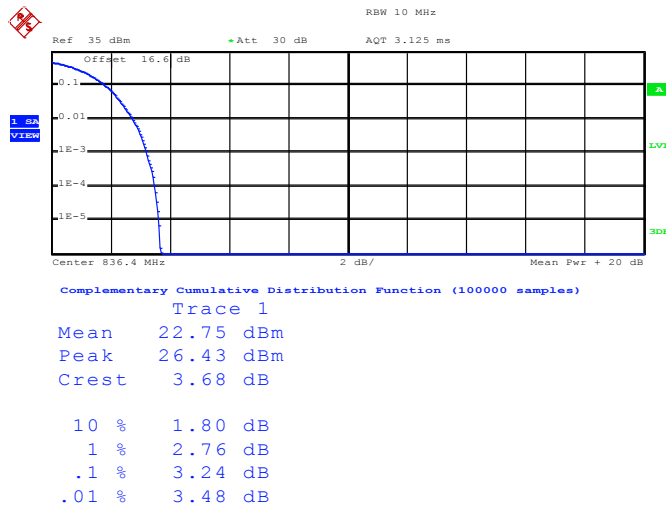
<b>Band :</b>	WCDMA Band V	<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)
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**Peak-to-Average Ratio on Channel 4132 (826.4 MHz)**



Date: 24.JUN.2014 16:30:53

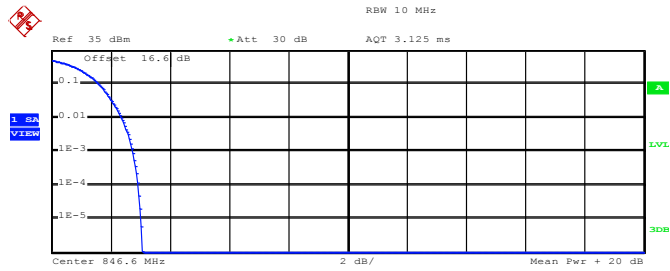
**Peak-to-Average Ratio on Channel 4182 (836.4 MHz)**



Date: 24.JUN.2014 16:31:32



Peak-to-Average Ratio on Channel 4233 (846.6 MHz)



Complementary Cumulative Distribution Function (100000 samples)

Trace 1

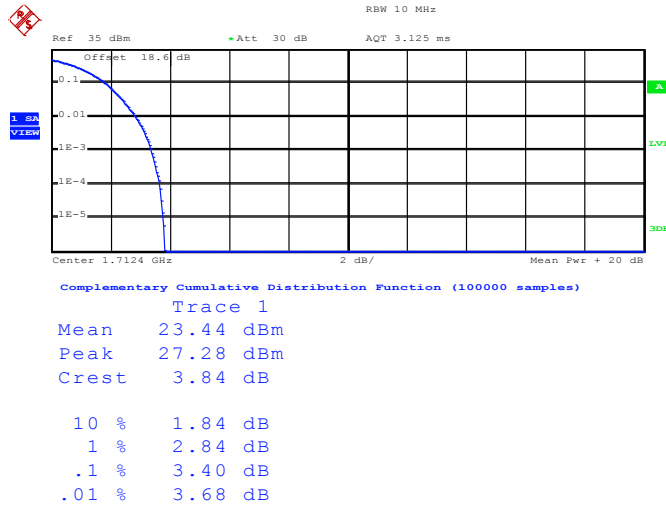
Mean	23.07 dBm
Peak	26.15 dBm
Crest	3.08 dB
10 %	1.60 dB
1 %	2.36 dB
.1 %	2.76 dB
.01 %	2.92 dB

Date: 24.JUN.2014 16:32:06



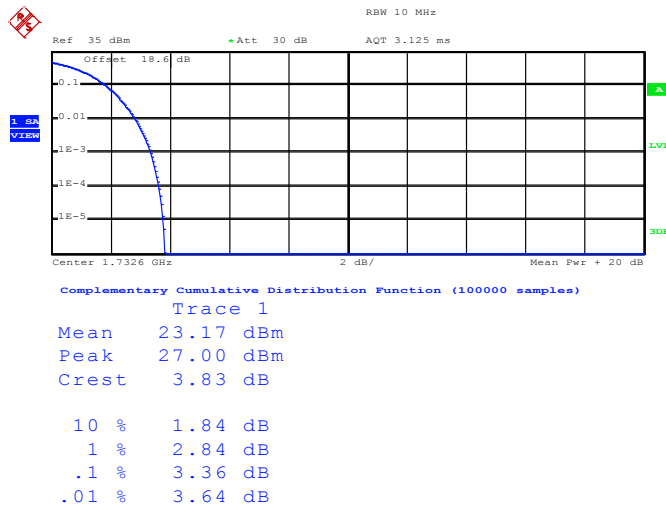
<b>Band :</b>	WCDMA Band IV	<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)
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**Peak-to-Average Ratio on Channel 1312 (1712.4 MHz)**



Date: 24.JUN.2014 15:02:58

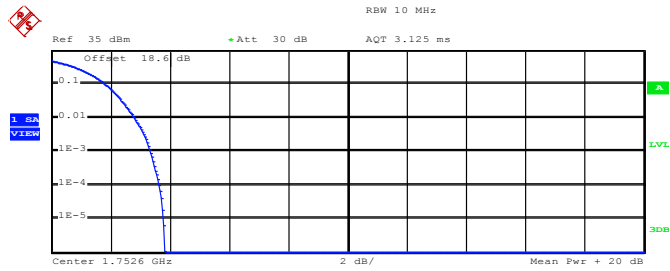
**Peak-to-Average Ratio on Channel 1413 (1732.6 MHz)**



Date: 24.JUN.2014 15:03:32



Peak-to-Average Ratio on Channel 1513 (1752.6 MHz)



Complementary Cumulative Distribution Function (100000 samples)

Trace 1  
 Mean 22.95 dBm  
 Peak 26.79 dBm  
 Crest 3.84 dB

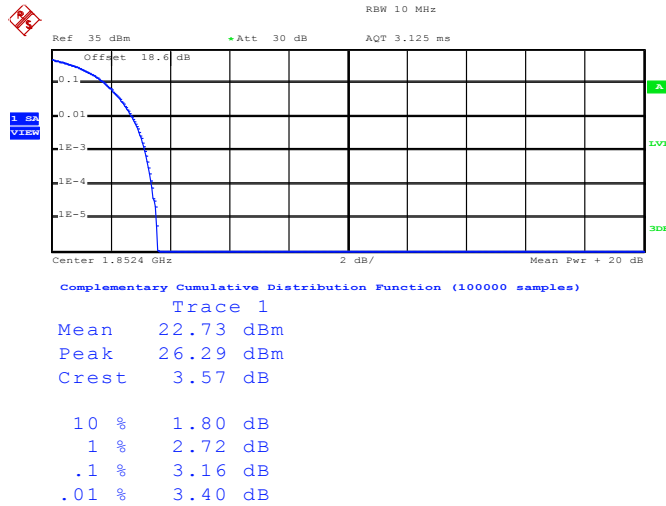
10 %	1.80 dB
1 %	2.80 dB
.1 %	3.36 dB
.01 %	3.64 dB

Date: 24.JUN.2014 15:04:28



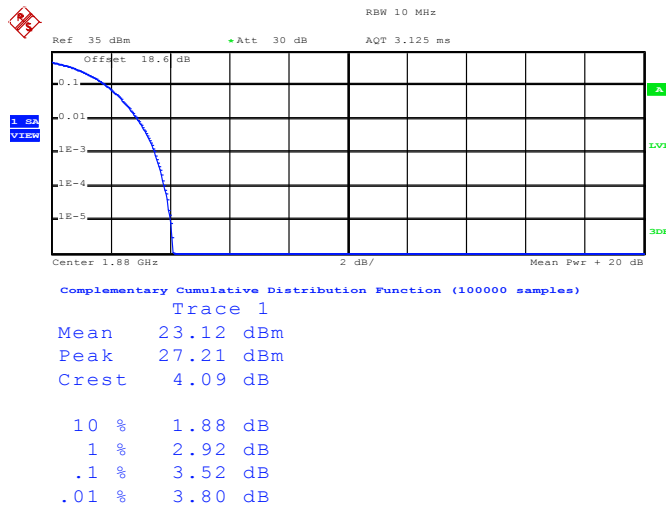
<b>Band :</b>	WCDMA Band II	<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)
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Peak-to-Average Ratio on Channel 9262 (1852.4 MHz)



Date: 24.JUN.2014 14:01:50

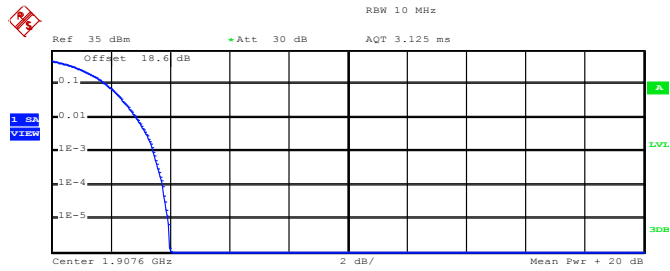
Peak-to-Average Ratio on Channel 9400 (1880.0 MHz)



Date: 24.JUN.2014 14:02:48



Peak-to-Average Ratio on Channel 9538 (1907.6 MHz)



Complementary Cumulative Distribution Function (100000 samples)

Trace 1  
 Mean 23.00 dBm  
 Peak 27.00 dBm  
 Crest 4.00 dB

10 % 1.84 dB  
 1 % 2.88 dB  
 .1 % 3.44 dB  
 .01 % 3.76 dB

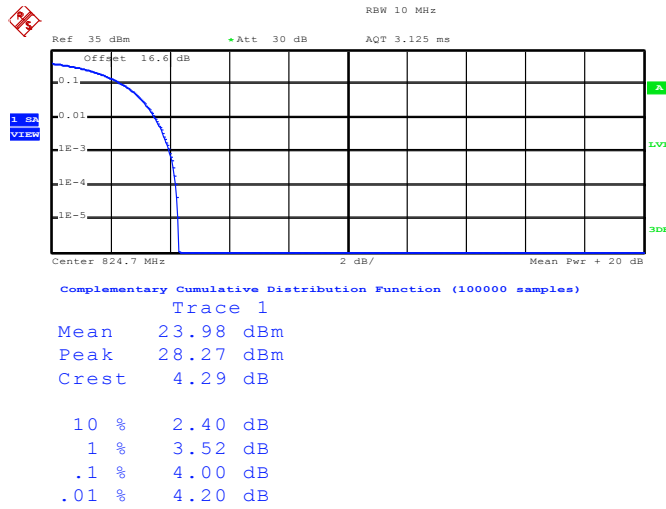
Date: 24.JUN.2014 14:03:54





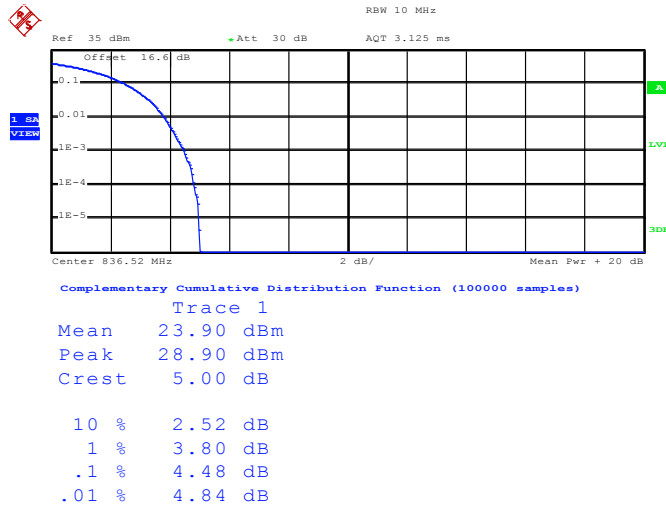
<b>Band :</b>	CDMA2000 BC0	<b>Test Mode :</b>	1xRTT Link (QPSK)
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Peak-to-Average Ratio on Channel 1013 (824.70 MHz)



Date: 24.JUN.2014 19:41:33

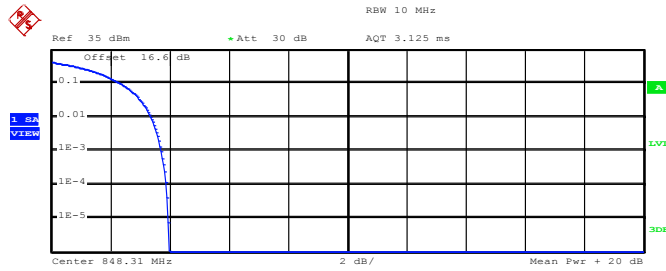
Peak-to-Average Ratio on Channel 384 (836.52 MHz)



Date: 24.JUN.2014 19:42:03



Peak-to-Average Ratio on Channel 777 (848.31 MHz)



Complementary Cumulative Distribution Function (100000 samples)

Trace 1  
 Mean 24.10 dBm  
 Peak 28.06 dBm  
 Crest 3.96 dB

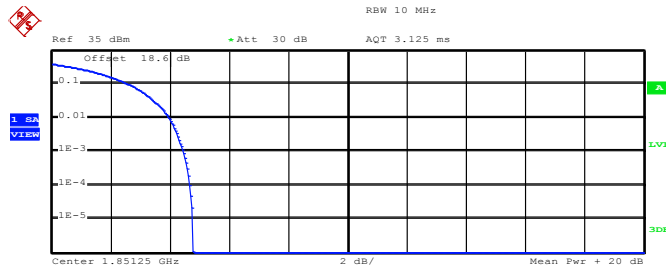
10 %	2.36 dB
1 %	3.36 dB
.1 %	3.72 dB
.01 %	3.88 dB

Date: 24.JUN.2014 19:42:34



<b>Band :</b>	CDMA2000 BC1	<b>Test Mode :</b>	1xRTT Link (QPSK)
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Peak-to-Average Ratio on Channel 25 (1851.25 MHz)

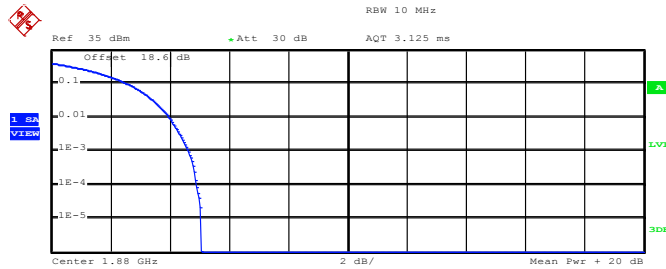


Complementary Cumulative Distribution Function (100000 samples)  
 Trace 1  
 Mean 24.11 dBm  
 Peak 28.90 dBm  
 Crest 4.79 dB

10 %	2.64 dB
1 %	4.00 dB
.1 %	4.48 dB
.01 %	4.68 dB

Date: 24.JUN.2014 18:03:38

Peak-to-Average Ratio on Channel 600 (1880 MHz)



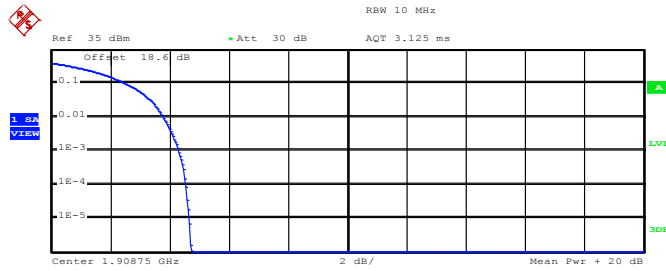
Complementary Cumulative Distribution Function (100000 samples)  
 Trace 1  
 Mean 24.33 dBm  
 Peak 29.40 dBm  
 Crest 5.07 dB

10 %	2.60 dB
1 %	4.00 dB
.1 %	4.64 dB
.01 %	4.92 dB

Date: 24.JUN.2014 18:04:52



Peak-to-Average Ratio on Channel 1175 (1908.75 MHz)



Complementary Cumulative Distribution Function (100000 samples)

Trace 1  
Mean 24.18 dBm  
Peak 28.90 dBm  
Crest 4.72 dB

10 %	2.56 dB
1 %	3.80 dB
.1 %	4.32 dB
.01 %	4.56 dB

Date: 24.JUN.2014 18:20:36



### 3.3 Effective Radiated Power and Effective Isotropic Radiated Power Measurement

#### 3.3.1 Description of the ERP/EIRP Measurement

The substitution method, in ANSI / TIA / EIA-603-C-2004, was used for ERP/EIRP measurement, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v02r01. The ERP of mobile transmitters must not exceed 7 Watts and the EIRP of mobile transmitters are limited to 2 Watts.

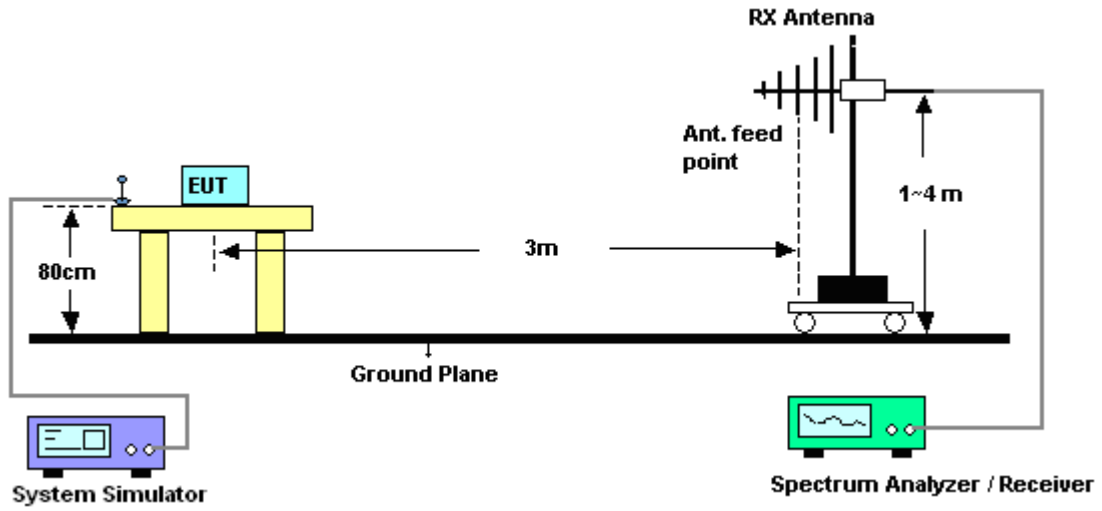
#### 3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

#### 3.3.3 Test Procedures

5. The testing follows FCC KDB 971168 v02r01 Section 5.2.1. (for CDMA/WCDMA), Section 5.2.2.2 (for GSM/GPRS/EDGE) and ANSI / TIA-603-C-2004 Section 2.2.17.
1. The EUT was placed on a non-conductive rotating platform 0.8 meters high in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with RMS detector per section 5. of KDB 971168 D01.
2. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power. The maximum emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 meters in both horizontally and vertically polarized orientations.
3. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to TIA/EIA-603-C. The EUT was replaced by dipole antenna (substitution antenna) at the same location, and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. - Tx Cable loss + Substitution antenna gain - Analyzer reading. Then the EUT's EIRP was calculated with the correction factor,  $EIRP = LVL + \text{Correction factor}$  and  $ERP = EIRP - 2.15$ .

### 3.3.4 Test Setup





3.3.5 Test Result of ERP

GSM850 (GSM) Radiated Power ERP				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)
824.2	-10.76	31.54	18.63	0.07
836.4	-10.97	32.04	18.92	0.08
848.8	-10.75	32.59	19.69	0.09
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)
824.2	-2.17	32.93	28.61	0.73
836.4	-2.65	32.82	28.02	0.63
848.8	-3.58	33.62	27.89	0.62

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

GSM850 (EDGE class 8) Radiated Power ERP				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)
824.2	-15.84	31.54	13.55	0.02
836.4	-16.06	32.04	13.83	0.02
848.8	-16.17	32.59	14.27	0.03
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)
824.2	-7.37	32.93	23.41	0.22
836.4	-7.80	32.82	22.87	0.19
848.8	-9.37	33.62	22.10	0.16

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



WCDMA Band V (RMC 12.2Kbps) Radiated Power ERP				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)
826.4	-18.97	31.44	10.32	0.01
836.4	-19.50	32.04	10.39	0.01
846.6	-19.50	32.63	10.98	0.01
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)
826.4	-10.43	32.78	20.20	0.10
836.4	-10.87	32.82	19.80	0.10
846.6	-12.22	33.4	19.03	0.08

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

CDMA2000 BC0 1xRTT_RC3+SO55 Radiated Power ERP				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)
824.70	-17.67	31.35	11.53	0.01
836.52	-18.21	32.13	11.77	0.02
848.31	-18.22	32.64	12.27	0.02
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)
824.70	-9.90	32.83	20.78	0.12
836.52	-10.77	32.81	19.89	0.10
848.31	-11.34	33.52	20.03	0.10

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





3.3.6 Test Result of EIRP

GSM1900 (GSM) Radiated Power EIRP				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1850.2	-12.50	45.34	32.84	1.92
1880.0	-13.04	46.01	32.97	1.98
1909.8	-13.02	45.81	32.79	1.90
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1850.2	-20.60	49.22	28.62	0.73
1880.0	-21.43	50.42	28.99	0.79
1909.8	-19.27	49.00	29.73	0.94

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

GSM1900 (EDGE class 8) Radiated Power EIRP				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1850.2	-17.91	45.34	27.43	0.55
1880.0	-18.76	46.01	27.25	0.53
1909.8	-18.87	45.81	26.94	0.49
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1850.2	-26.17	49.22	23.05	0.20
1880.0	-26.62	50.42	23.80	0.24
1909.8	-24.49	49.00	24.51	0.28

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



WCDMA Band IV (RMC 12.2Kbps) Radiated Power EIRP				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1712.4	-25.42	43.22	17.80	0.06
1732.6	-24.52	43.49	18.97	0.08
1752.6	-23.89	43.54	19.65	0.09
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1712.4	-28.95	46.53	17.58	0.06
1732.6	-28.41	46.43	18.02	0.06
1752.6	-29.53	48.05	18.52	0.07

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

WCDMA Band II (RMC 12.2Kbps) Radiated Power EIRP				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1852.4	-20.59	45.37	24.78	0.30
1880.0	-21.60	46.01	24.41	0.28
1907.6	-21.36	45.87	24.51	0.28
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1852.4	-28.99	49.23	20.24	0.11
1880.0	-30.35	50.42	20.07	0.10
1907.6	-28.28	49.04	20.76	0.12

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



CDMA2000 BC1 1xRTT_RC3+SO55 Radiated Power EIRP				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1851.25	-18.49	45.74	27.25	0.53
1880.00	-19.25	46.01	26.76	0.47
1908.75	-19.14	45.76	26.62	0.46
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1851.25	-28.48	51.07	22.59	0.18
1880.00	-28.42	50.42	22.00	0.16
1908.75	-26.15	48.99	22.84	0.19

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

## 3.4 99% Occupied Bandwidth and 26dB Bandwidth Measurement

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

The 99% occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

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

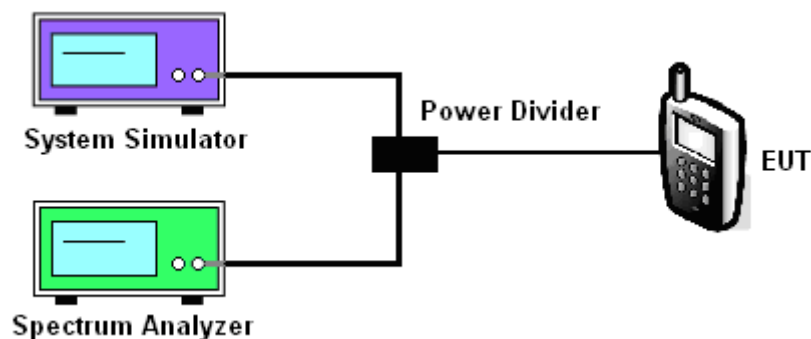
### 3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

### 3.4.3 Test Procedures

1. The testing follows FCC KDB 971168 v02r01 Section 4.2.
2. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
3. The RF output of the EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. The 99% occupied bandwidth were measured, set RBW= 1% of span, VBW= 3\*RBW, sample detector, trace maximum hold.
5. The 26dB bandwidth were measured, set RBW= 1% of EBW, VBW= 3\*RBW, peak detector, trace maximum hold.

### 3.4.4 Test Setup





3.4.5 Test Result of Occupied Bandwidth and 26dB Bandwidth

Cellular Band						
Modes	GSM850 (GSM)			GSM850 (EDGE class 8)		
Channel	128 (Low)	189 (Mid)	251 (High)	128 (Low)	189 (Mid)	251 (High)
Frequency (MHz)	824.2	836.4	848.8	824.2	836.4	848.8
99% OBW (kHz)	250.00	250.00	248.00	240.00	240.00	252.00
26dB BW (kHz)	302.00	308.00	314.00	308.00	300.00	294.00

PCS Band						
Modes	GSM1900 (GSM)			GSM1900 (EDGE class 8)		
Channel	512 (Low)	661 (Mid)	810 (High)	512 (Low)	661 (Mid)	810 (High)
Frequency (MHz)	1850.2	1880	1909.8	1850.2	1880	1909.8
99% OBW (kHz)	248.00	246.00	242.00	248.00	246.00	248.00
26dB BW (kHz)	312.00	316.00	308.00	306.00	310.00	300.00

Cellular Band			
Modes	WCDMA Band V (RMC 12.2Kbps)		
Channel	4132 (Low)	4182 (Mid)	4233 (High)
Frequency (MHz)	826.4	836.4	846.6
99% OBW (MHz)	4.16	4.18	4.12
26dB BW (MHz)	4.68	4.68	4.68

AWS Band			
Modes	WCDMA Band IV (RMC 12.2Kbps)		
Channel	1312(Low)	1413 (Mid)	1513 (High)
Frequency (MHz)	1712.4	1732.6	1752.6
99% OBW (MHz)	4.18	4.18	4.16
26dB BW (MHz)	4.66	4.68	4.68



PCS Band			
Modes	WCDMA Band II (RMC 12.2Kbps)		
Channel	9262 (Low)	9400 (Mid)	9538 (High)
Frequency (MHz)	1852.4	1880	1907.6
99% OBW (MHz)	4.16	4.16	4.18
26dB BW (MHz)	4.68	4.68	4.68

CDMA2000 BC0			
Test Mode	CDMA 2000 1xRTT		
Test Status	RC3+SO55		
Channel	1013 (Low)	384 (Mid)	777 (High)
Frequency (MHz)	824.70	836.52	848.31
99% OBW (MHz)	1.27	1.28	1.28
26dB BW (MHz)	1.41	1.41	1.41

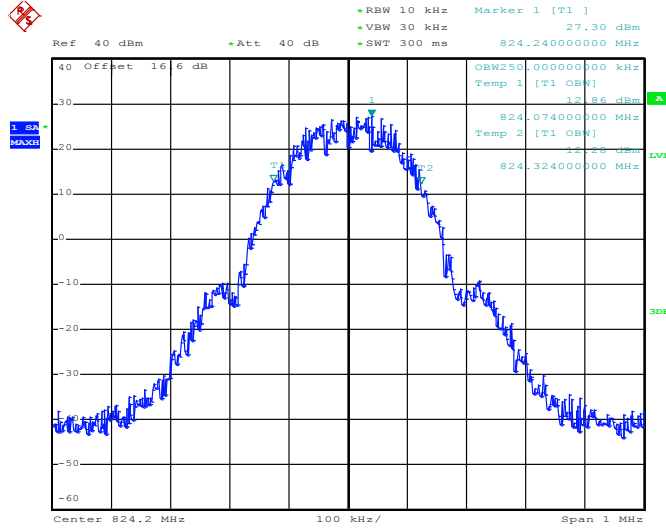
CDMA2000 BC1			
Test Mode	CDMA 2000 1xRTT		
Test Status	RC3+SO55		
Channel	25 (Low)	600 (Mid)	1175 (High)
Frequency (MHz)	1851.25	1880.00	1908.75
99% OBW (MHz)	1.28	1.28	1.28
26dB BW (MHz)	1.41	1.41	1.41



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

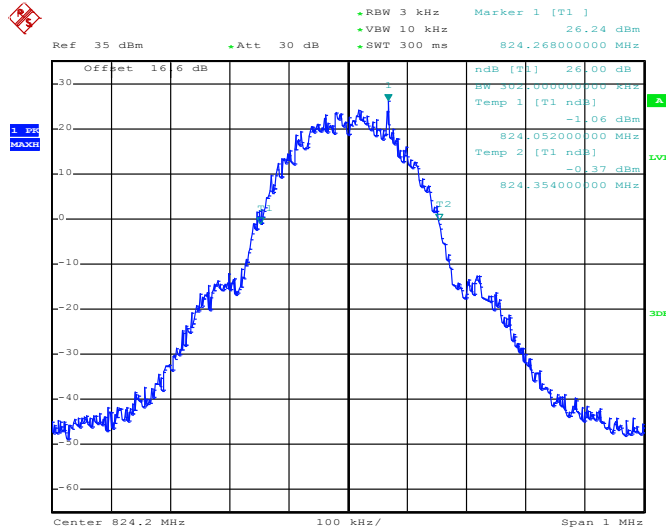
Band :	GSM 850	Test Mode :	GSM Link (GMSK)
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#### 99% Occupied Bandwidth Plot on Channel 128 (824.2 MHz)



Date: 23.JUN.2014 16:40:02

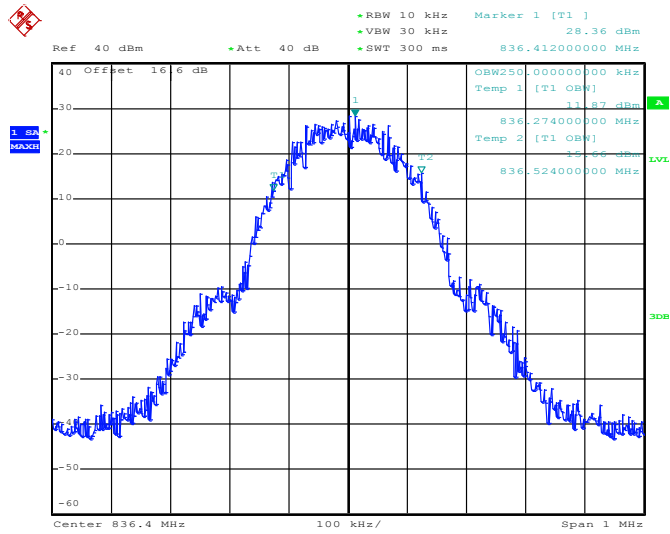
#### 26dB Bandwidth Plot on Channel 128 (824.2 MHz)



Date: 23.JUN.2014 16:32:06

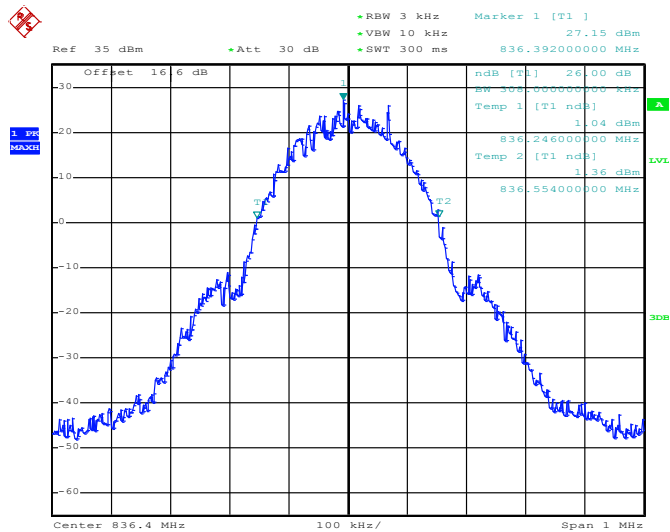


99% Occupied Bandwidth Plot on Channel 189 (836.4 MHz)



Date: 23.JUN.2014 16:35:54

26dB Bandwidth Plot on Channel 189 (836.4 MHz)

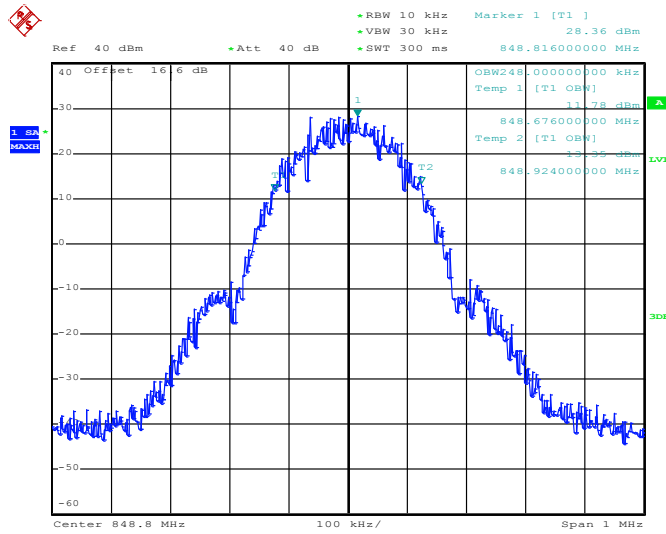


Date: 23.JUN.2014 16:32:35



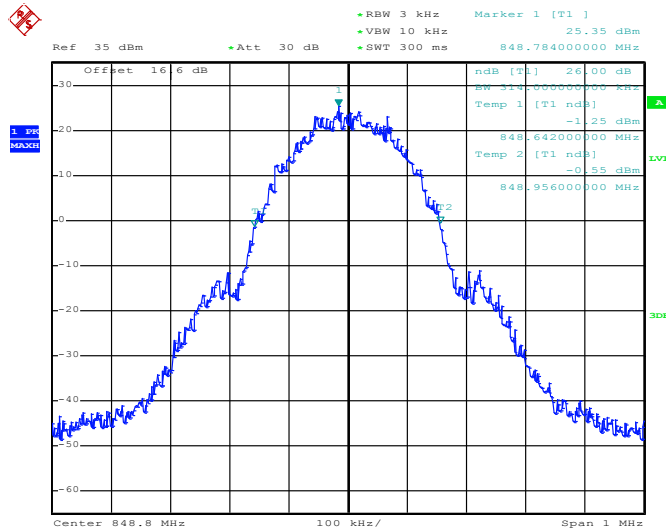


99% Occupied Bandwidth Plot on Channel 251 (848.8 MHz)



Date: 23.JUN.2014 16:36:22

26dB Bandwidth Plot on Channel 251 (848.8 MHz)

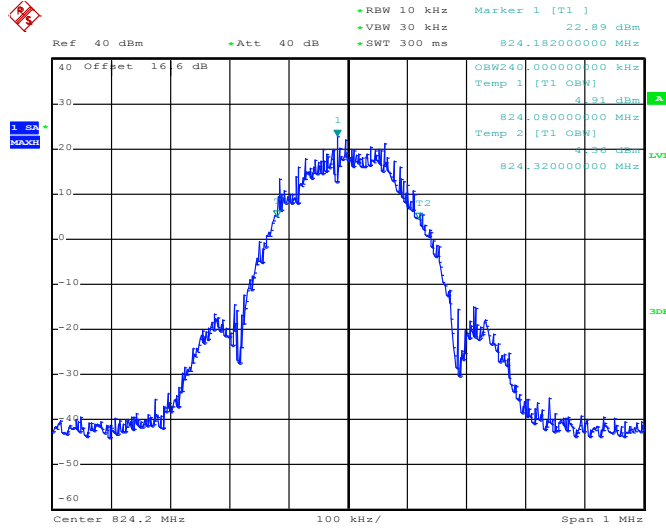


Date: 23.JUN.2014 16:33:03



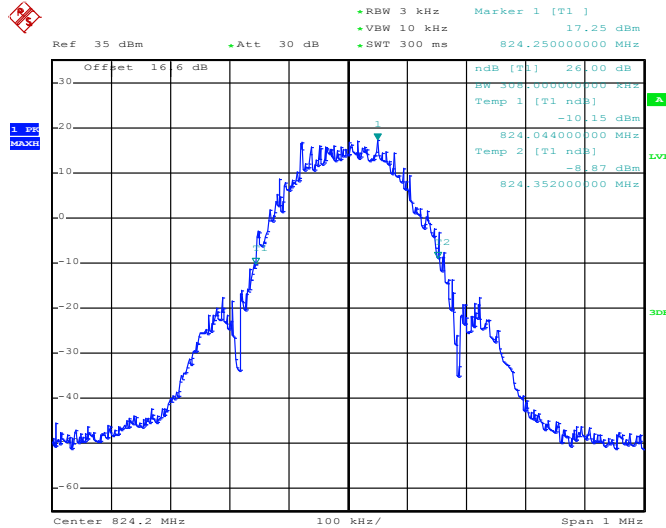
<b>Band :</b>	GSM 850	<b>Test Mode :</b>	EDGE class 8 Link (8PSK)
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99% Occupied Bandwidth Plot on Channel 128 (824.2 MHz)



Date: 23.JUN.2014 17:26:17

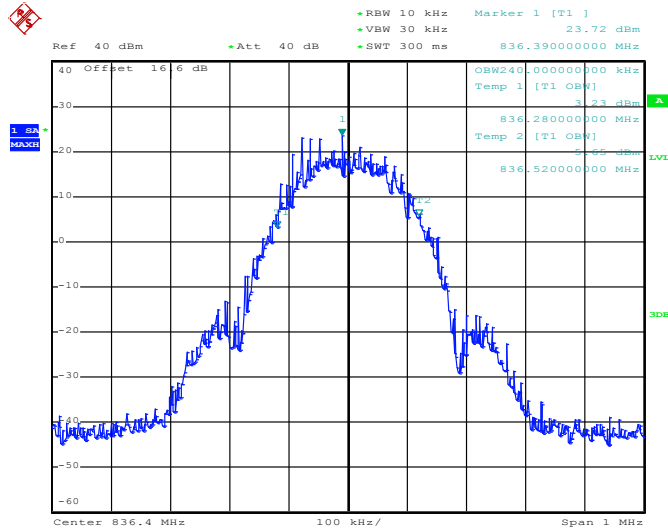
26dB Bandwidth Plot on Channel 128 (824.2 MHz)



Date: 23.JUN.2014 17:20:45

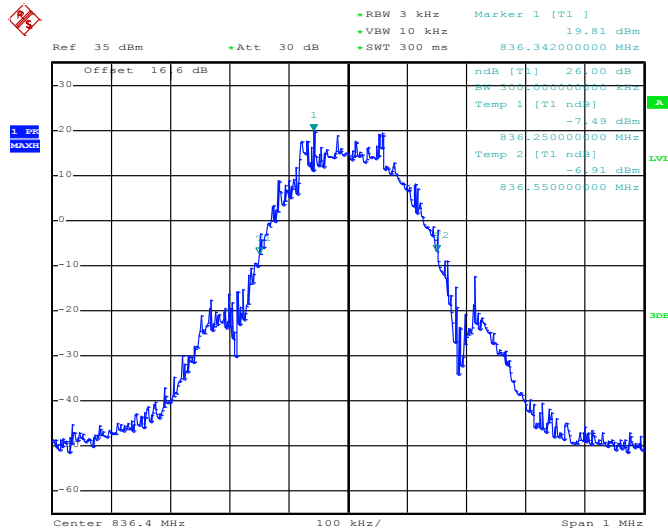


99% Occupied Bandwidth Plot on Channel 189 (836.4 MHz)



Date: 23.JUN.2014 17:26:46

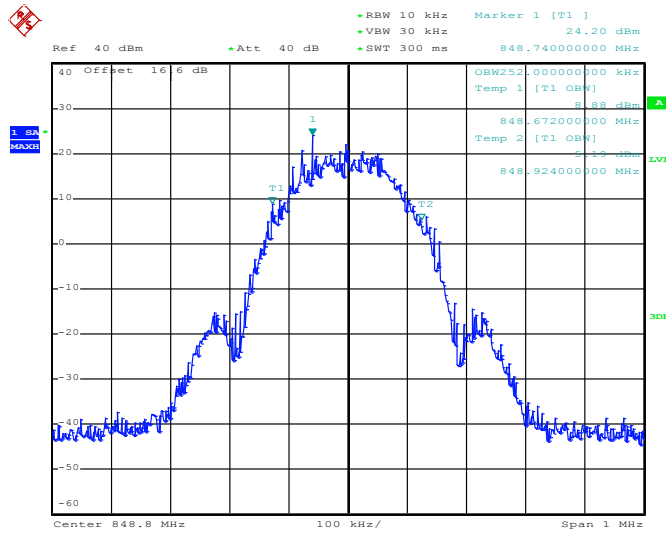
26dB Bandwidth Plot on Channel 189 (836.4 MHz)



Date: 23.JUN.2014 17:23:12

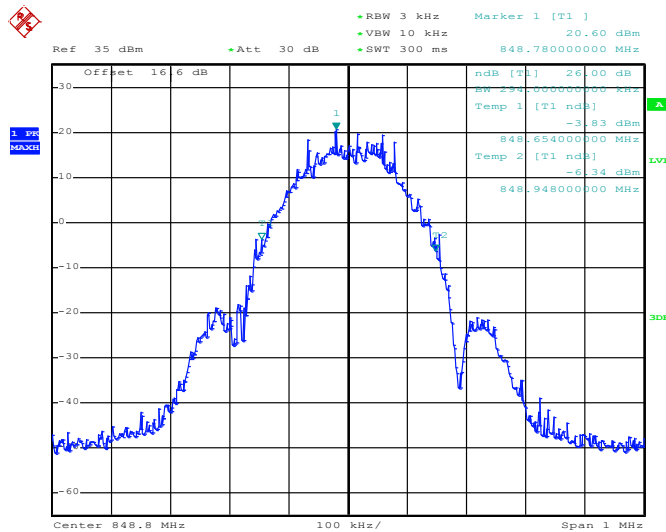


99% Occupied Bandwidth Plot on Channel 251 (848.8 MHz)



Date: 23.JUN.2014 17:27:15

26dB Bandwidth Plot on Channel 251 (848.8 MHz)

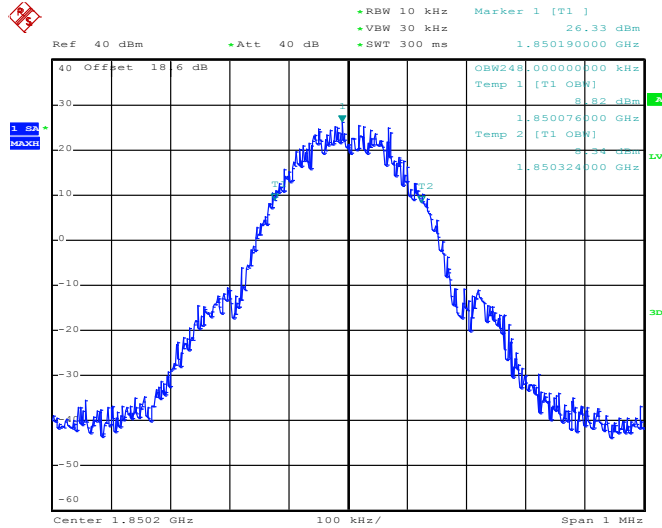


Date: 23.JUN.2014 17:21:42



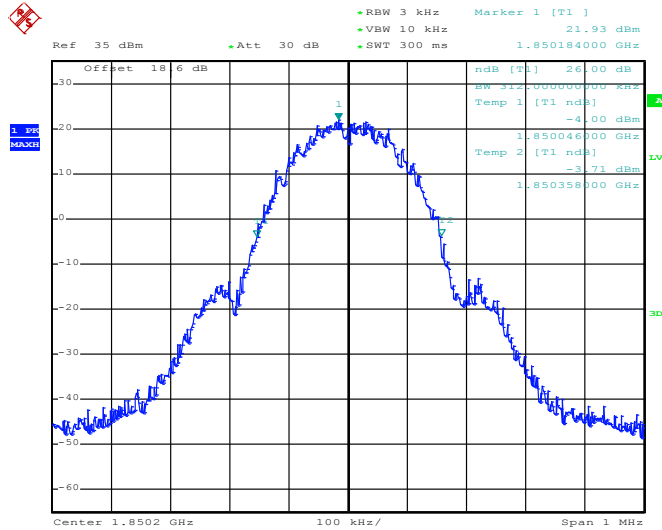
<b>Band :</b>	GSM 1900	<b>Test Mode :</b>	GSM Link (GMSK)
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99% Occupied Bandwidth Plot on Channel 512 (1850.2 MHz)



Date: 24.JUN.2014 09:45:46

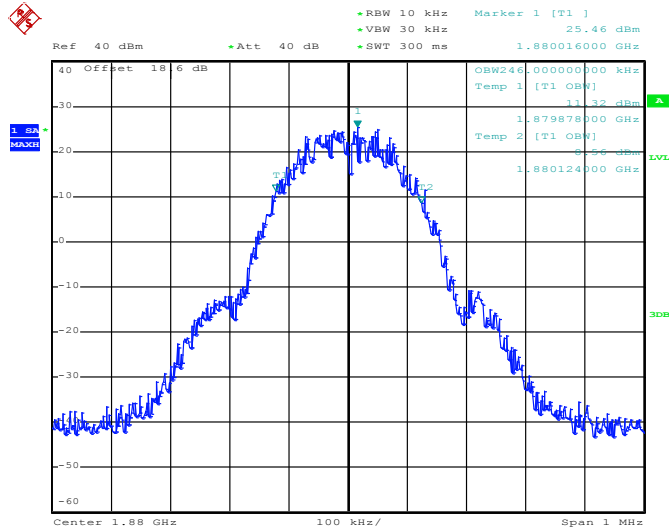
26dB Bandwidth Plot on Channel 512 (1850.2 MHz)



Date: 24.JUN.2014 09:43:39

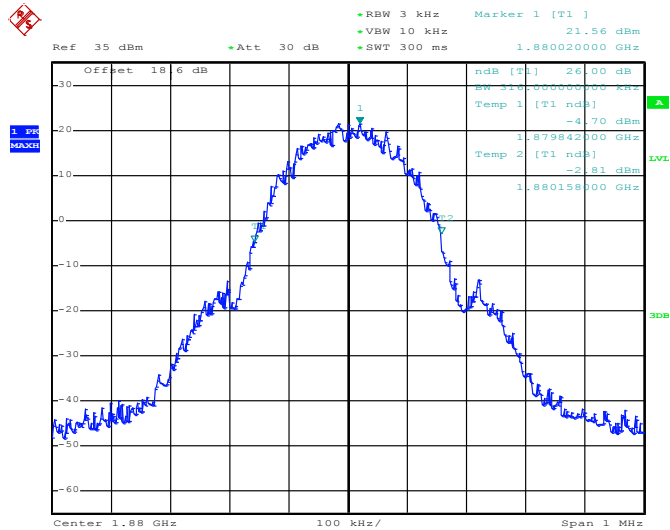


99% Occupied Bandwidth Plot on Channel 661 (1880.0 MHz)



Date: 24.JUN.2014 09:46:15

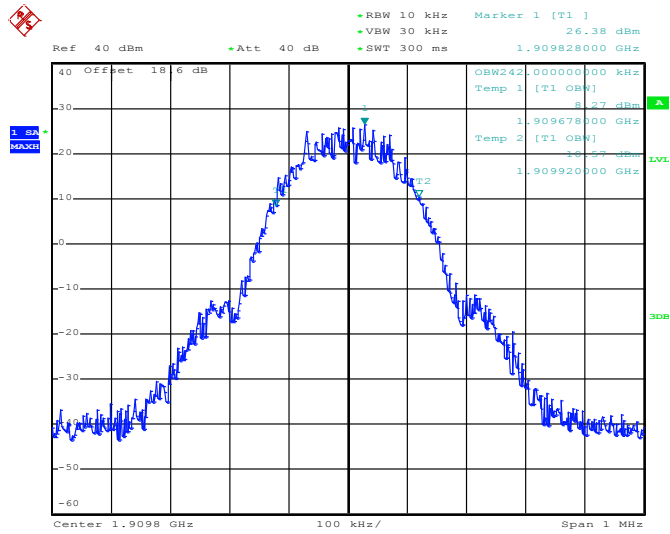
26dB Bandwidth Plot on Channel 661 (1880.0 MHz)



Date: 24.JUN.2014 09:44:07

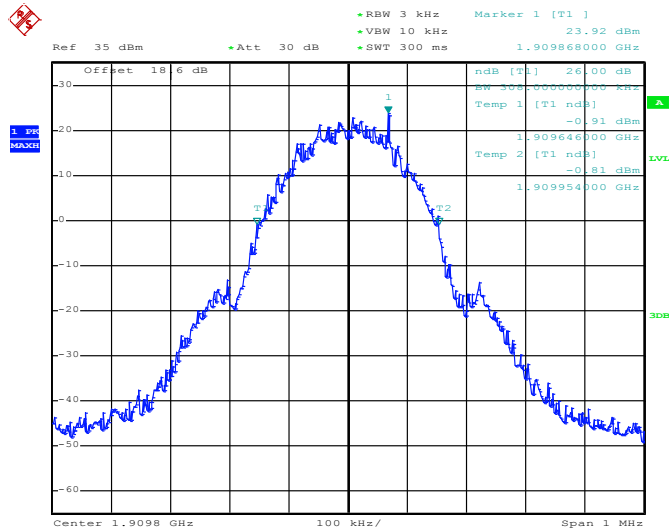


99% Occupied Bandwidth Plot on Channel 810 (1909.8 MHz)



Date: 24.JUN.2014 09:46:43

26dB Bandwidth Plot on Channel 810 (1909.8 MHz)

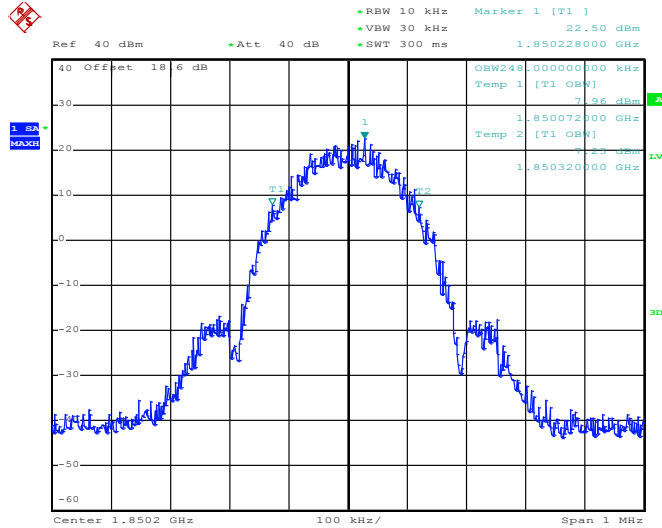


Date: 24.JUN.2014 09:44:36



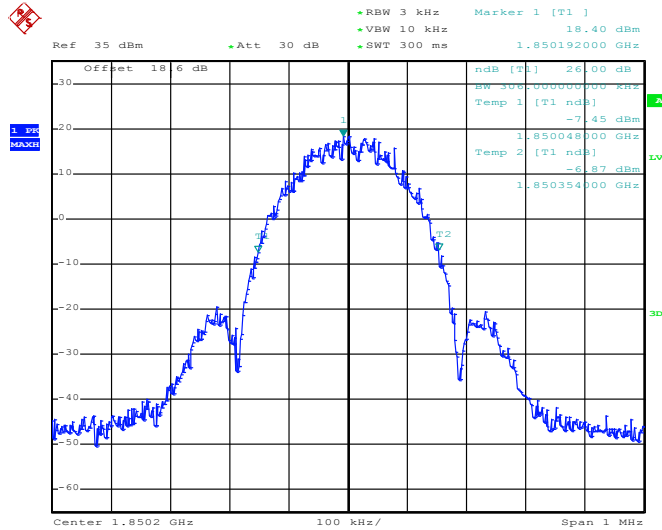
Band :	GSM 1900	Test Mode :	EDGE class 8 Link (8PSK)
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99% Occupied Bandwidth Plot on Channel 512 (1850.2 MHz)



Date: 24.JUN.2014 10:37:29

26dB Bandwidth Plot on Channel 512 (1850.2 MHz)

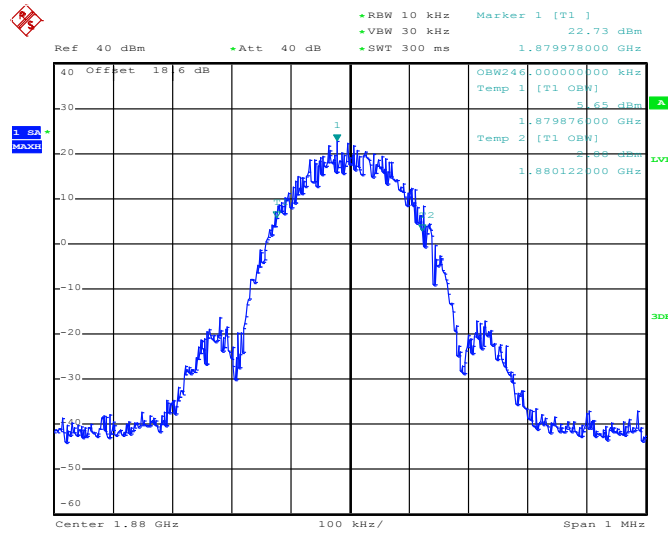


Date: 24.JUN.2014 10:34:36



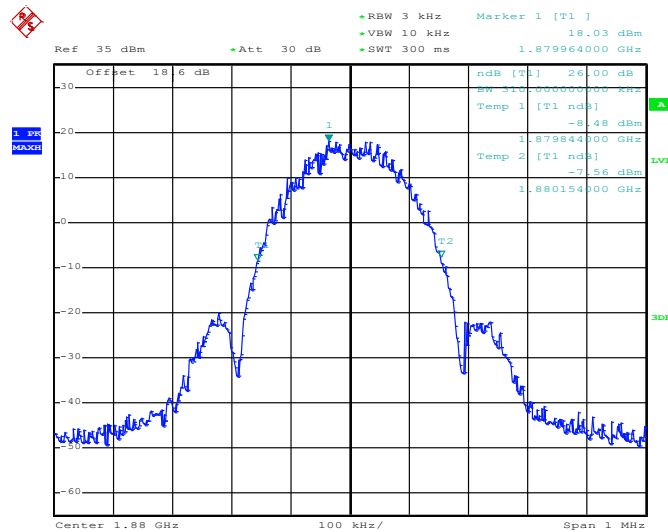


### 99% Occupied Bandwidth Plot on Channel 661 (1880.0 MHz)



Date: 24.JUN.2014 10:38:02

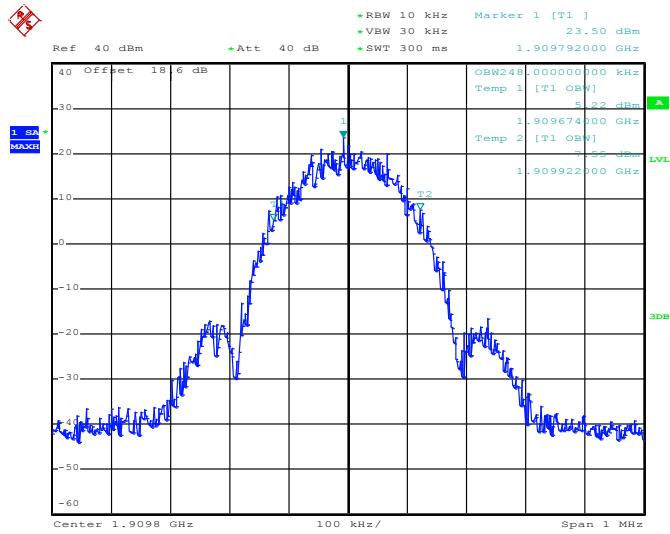
### 26dB Bandwidth Plot on Channel 661 (1880.0 MHz)



Date: 24.JUN.2014 10:32:58

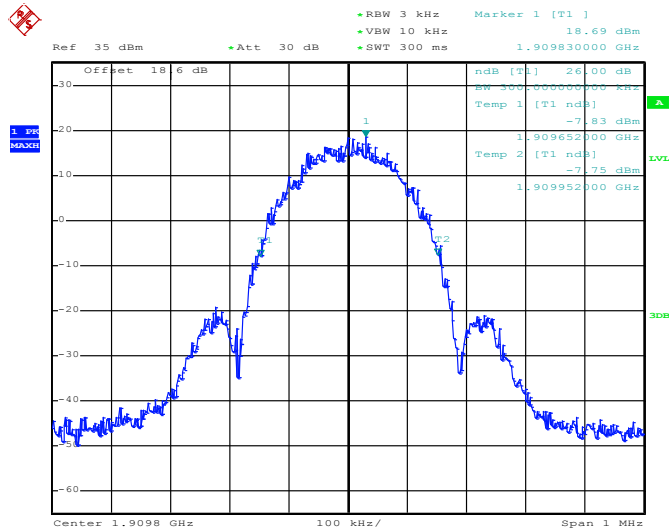


99% Occupied Bandwidth Plot on Channel 810 (1909.8 MHz)



Date: 24.JUN.2014 10:38:41

26dB Bandwidth Plot on Channel 810 (1909.8 MHz)

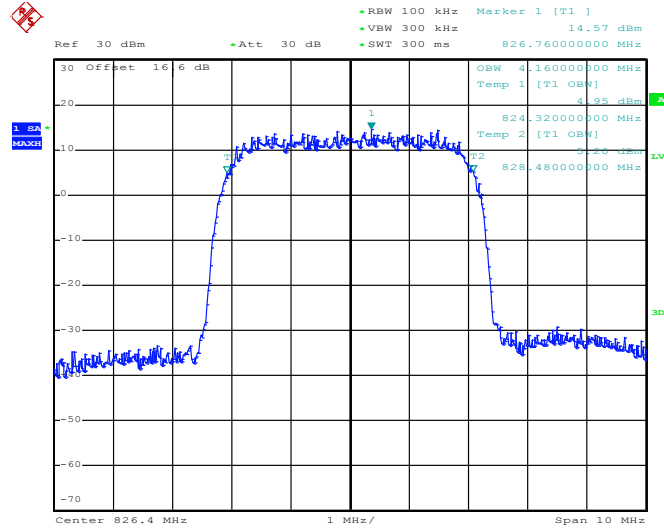


Date: 24.JUN.2014 10:33:35



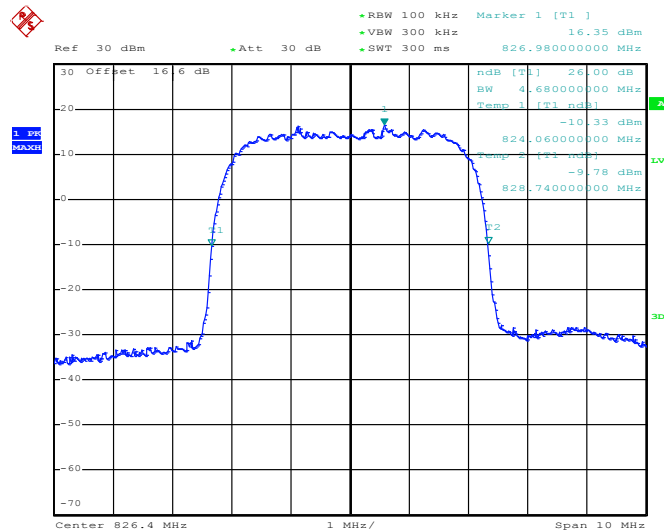
<b>Band :</b>	WCDMA Band V	<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)
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99% Occupied Bandwidth Plot on Channel 4132 (826.4 MHz)



Date: 24.JUN.2014 17:36:12

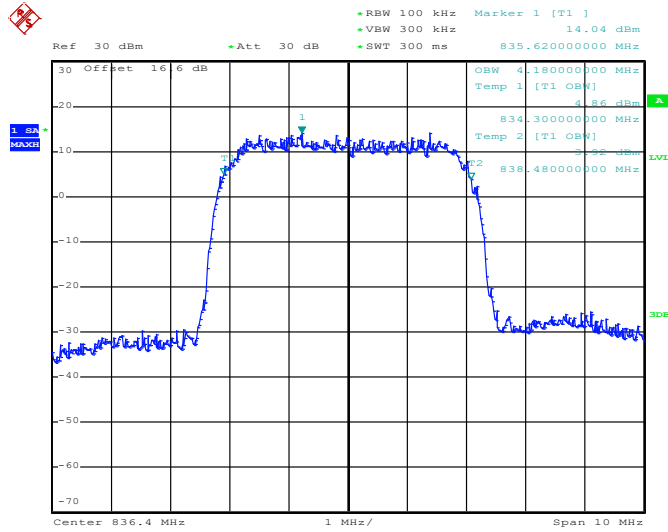
26dB Bandwidth Plot on Channel 4132 (826.4 MHz)



Date: 24.JUN.2014 17:34:18

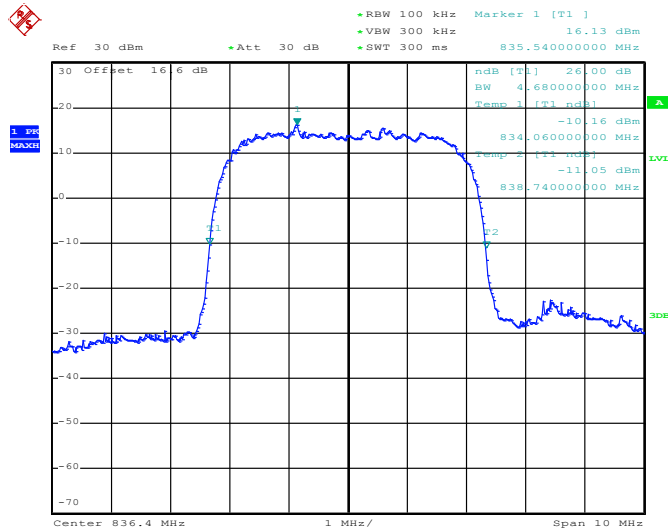


99% Occupied Bandwidth Plot on Channel 4182 (836.4 MHz)



Date: 24.JUN.2014 17:36:40

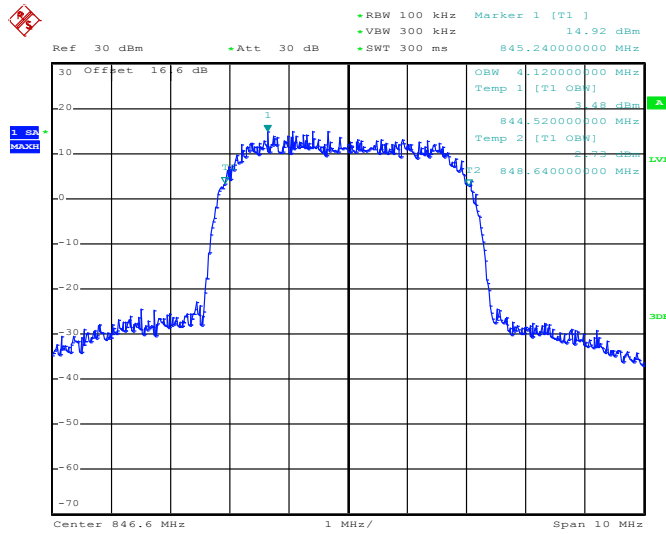
26dB Bandwidth Plot on Channel 4182 (836.4 MHz)



Date: 24.JUN.2014 17:34:47

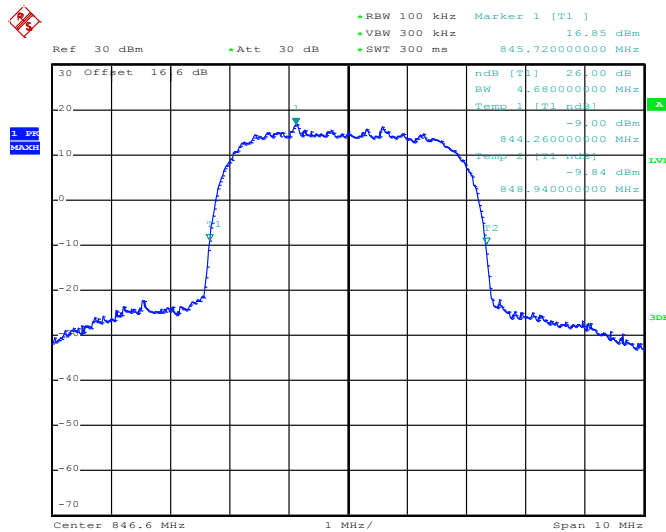


99% Occupied Bandwidth Plot on Channel 4233 (846.6 MHz)



Date: 24.JUN.2014 17:37:09

26dB Bandwidth Plot on Channel 4233 (846.6 MHz)

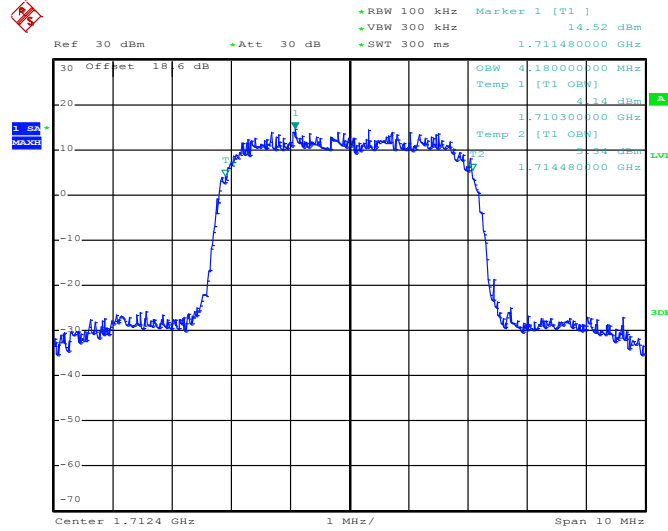


Date: 24.JUN.2014 17:35:16



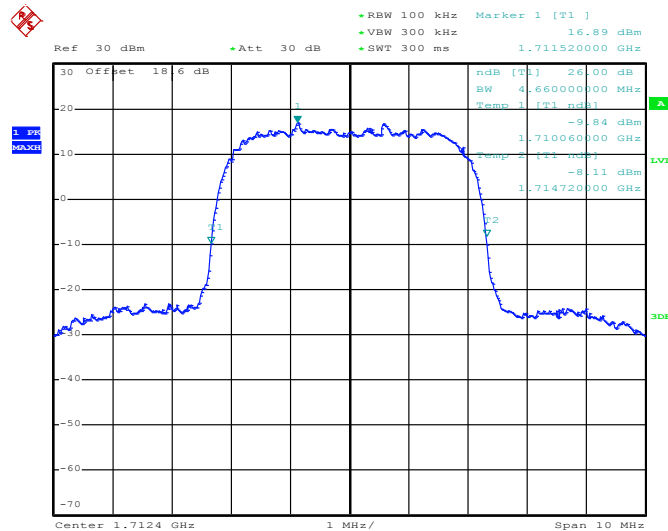
<b>Band :</b>	WCDMA Band IV	<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)
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99% Occupied Bandwidth Plot on Channel 1312 (1712.4 MHz)



Date: 24.JUN.2014 15:14:55

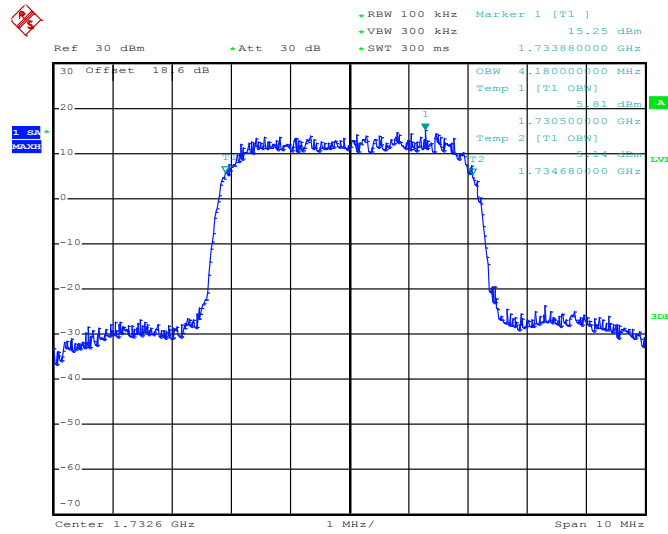
26dB Bandwidth Plot on Channel 1312 (1712.4 MHz)



Date: 24.JUN.2014 15:13:02

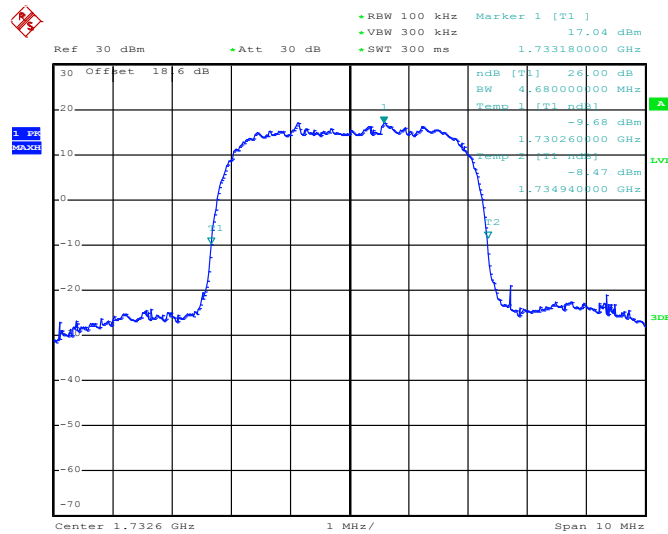


99% Occupied Bandwidth Plot on Channel 1413 (1732.6 MHz)



Date: 24.JUN.2014 15:15:24

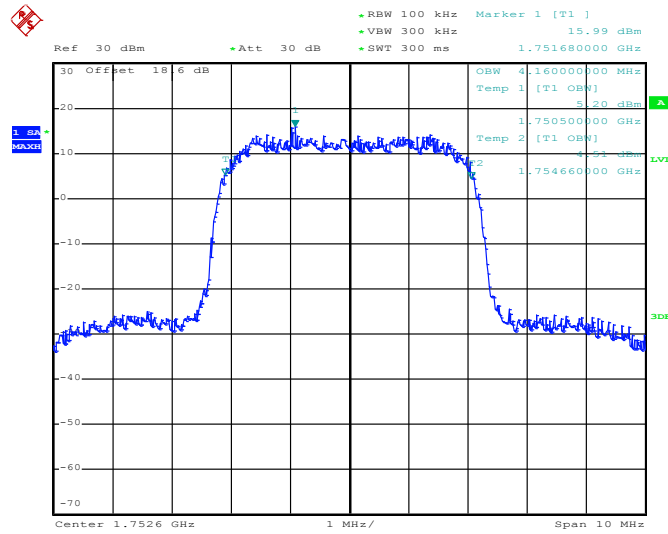
26dB Bandwidth Plot on Channel 1413 (1732.6 MHz)



Date: 24.JUN.2014 15:13:30

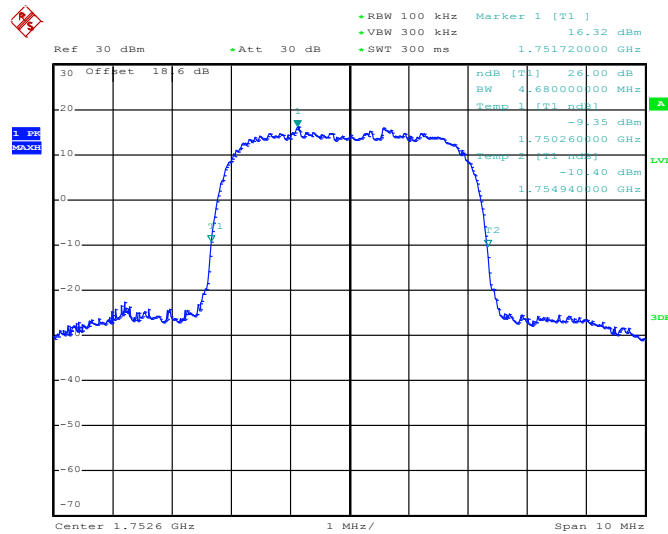


99% Occupied Bandwidth Plot on Channel 1513 (1752.6 MHz)



Date: 24.JUN.2014 15:15:52

26dB Bandwidth Plot on Channel 1513 (1752.6 MHz)



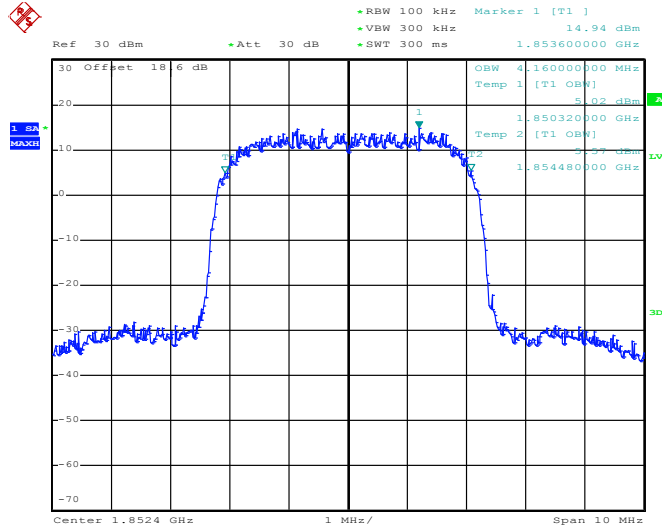
Date: 24.JUN.2014 15:13:59





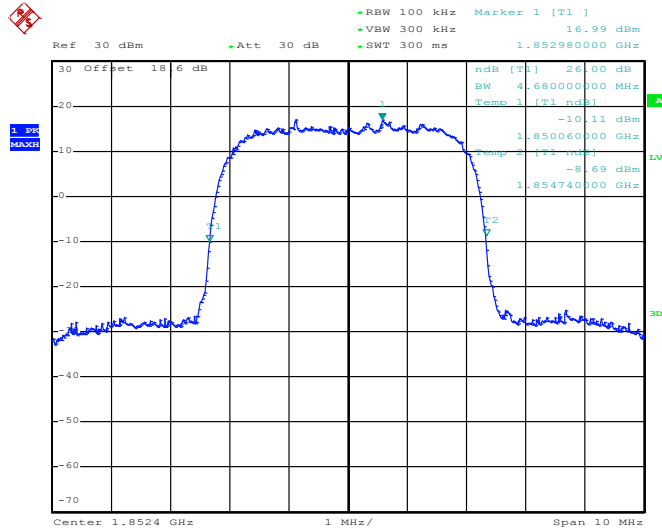
<b>Band :</b>	WCDMA Band II	<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)
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99% Occupied Bandwidth Plot on Channel 9262 (1852.4 MHz)



Date: 24.JUN.2014 14:17:56

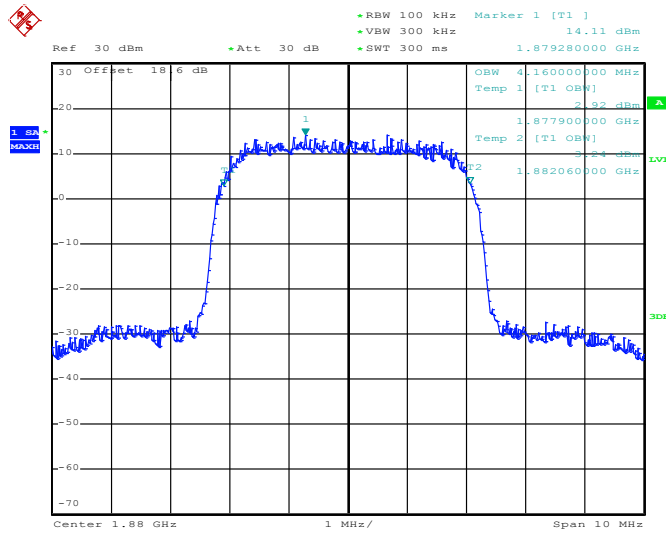
26dB Bandwidth Plot on Channel 9262 (1852.4 MHz)



Date: 24.JUN.2014 14:16:08

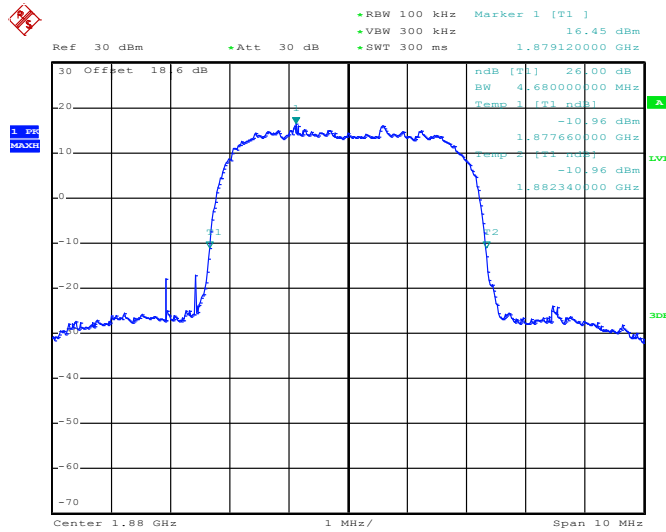


99% Occupied Bandwidth Plot on Channel 9400 (1880.0 MHz)



Date: 24.JUN.2014 14:18:25

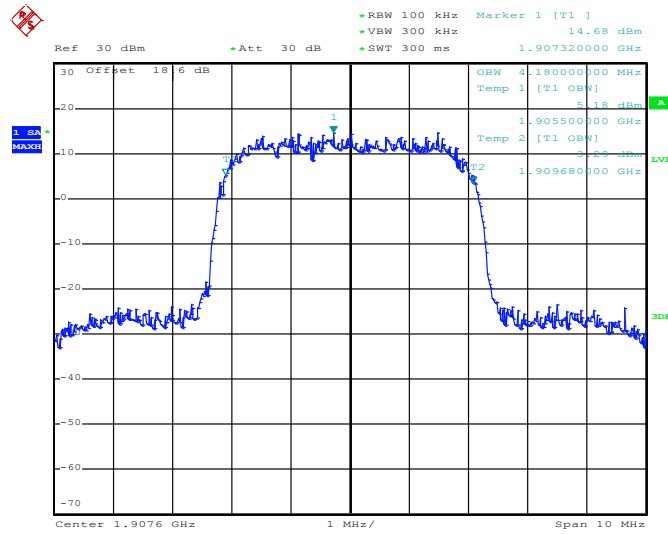
26dB Bandwidth Plot on Channel 9400 (1880.0 MHz)



Date: 24.JUN.2014 14:16:37

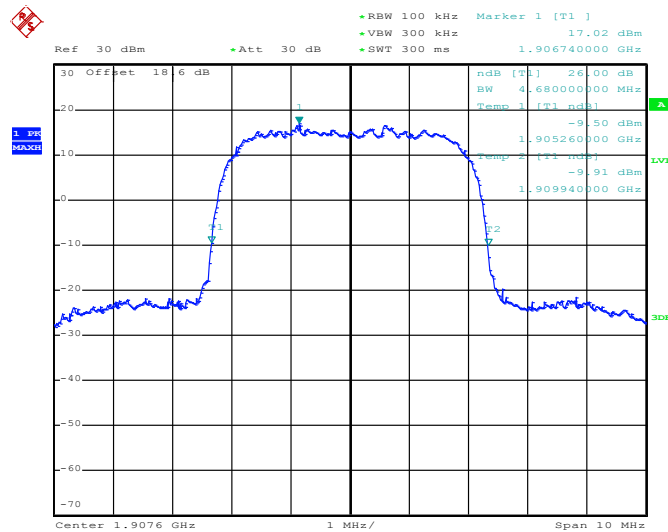


99% Occupied Bandwidth Plot on Channel 9538 (1907.6 MHz)



Date: 24.JUN.2014 14:18:54

26dB Bandwidth Plot on Channel 9538 (1907.6 MHz)

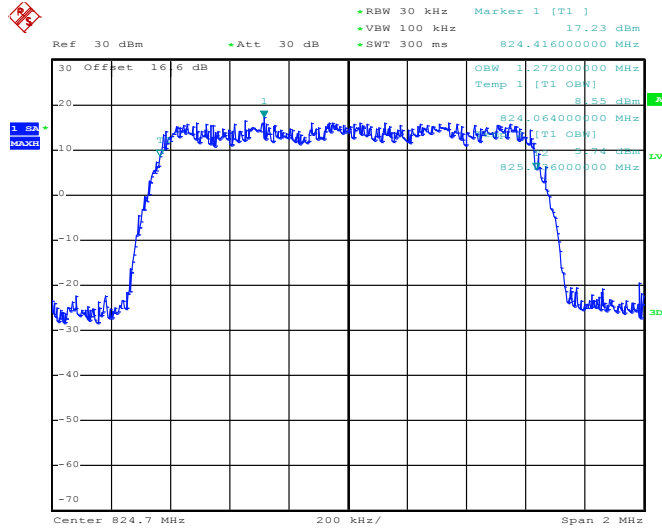


Date: 24.JUN.2014 14:17:05



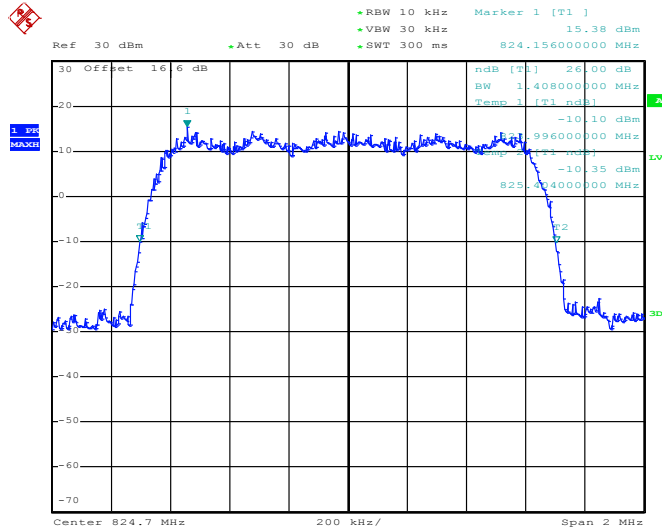
<b>Band :</b>	CDMA2000 BC0	<b>Test Mode :</b>	1xRTT_RC3+SO55 (QPSK)
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99% Occupied Bandwidth Plot on Channel 1013 (824.7 MHz)



Date: 24.JUN.2014 20:08:29

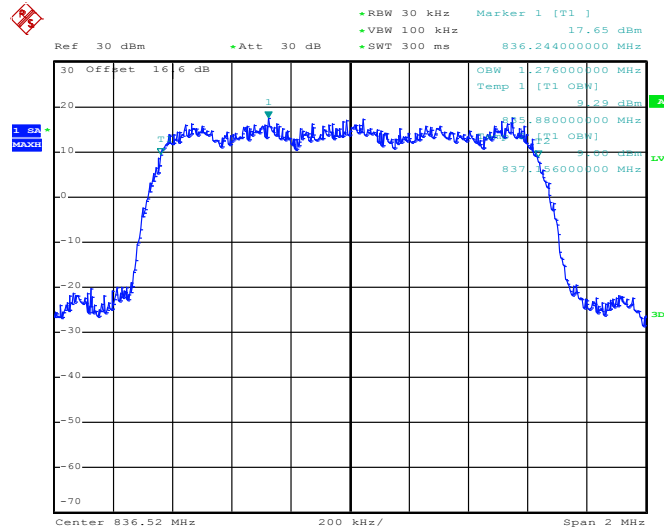
26dB Bandwidth Plot on Channel 1013 (824.7 MHz)



Date: 24.JUN.2014 20:06:41

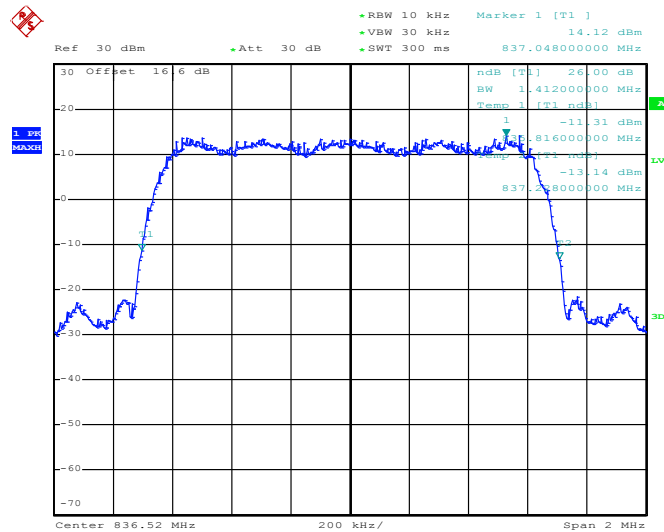


99% Occupied Bandwidth Plot on Channel 384 (836.52 MHz)



Date: 24.JUN.2014 20:08:57

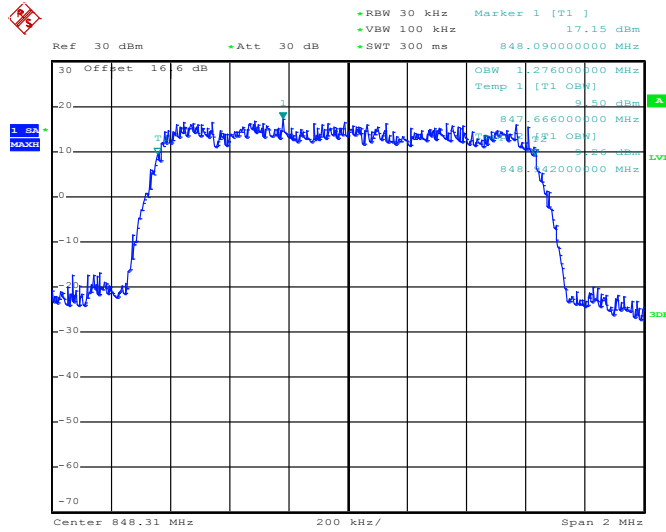
26dB Bandwidth Plot on Channel 384 (836.52 MHz)



Date: 24.JUN.2014 20:07:09

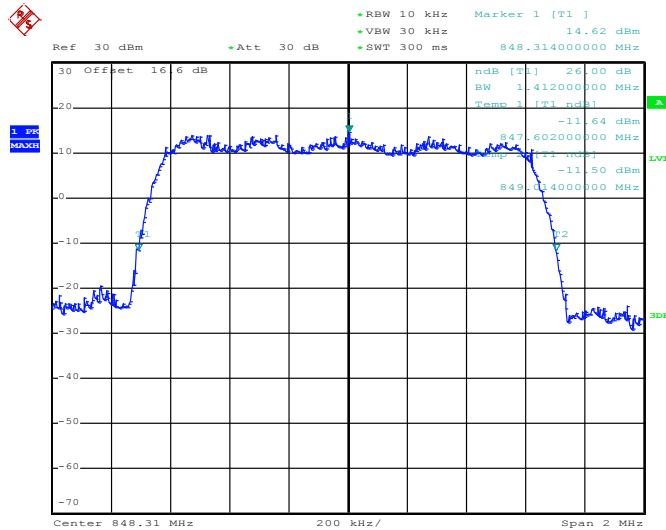


99% Occupied Bandwidth Plot on Channel 777 (848.31 MHz)



Date: 24.JUN.2014 20:09:26

26dB Bandwidth Plot on Channel 777 (848.31 MHz)

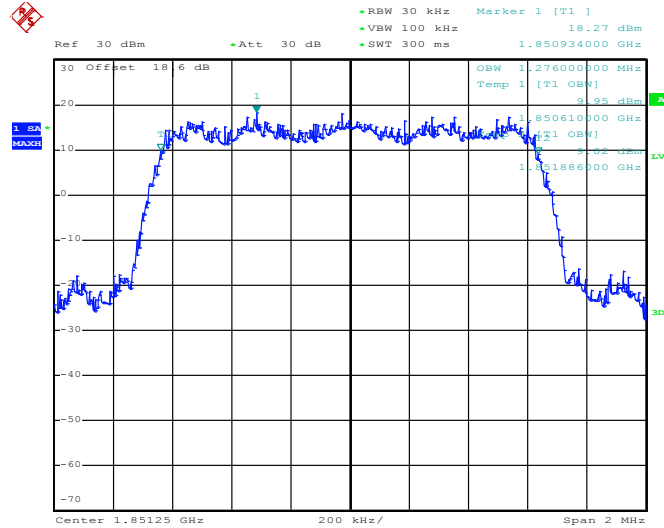


Date: 24.JUN.2014 20:07:38



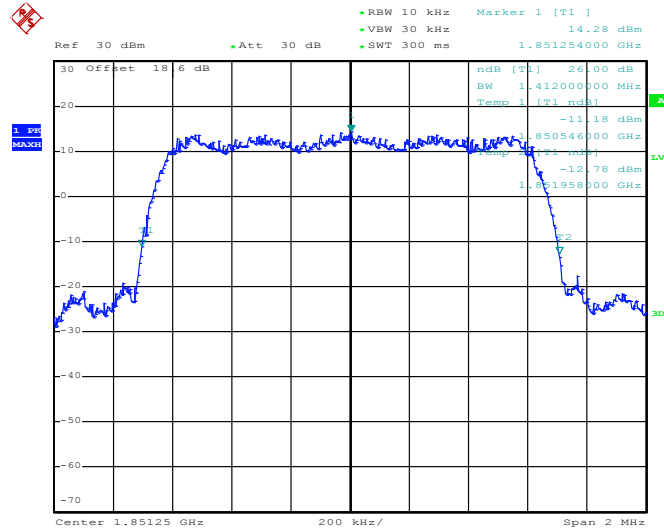
<b>Band :</b>	CDMA2000 BC1	<b>Test Mode :</b>	1xRTT_RC3+SO55 (QPSK)
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99% Occupied Bandwidth Plot on Channel 25 (1851.25 MHz)



Date: 24.JUN.2014 19:14:10

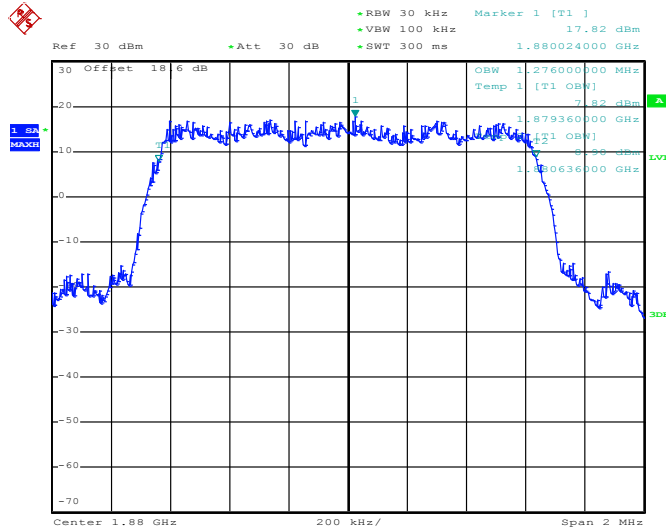
26dB Bandwidth Plot on Channel 25 (1851.25 MHz)



Date: 24.JUN.2014 19:12:26

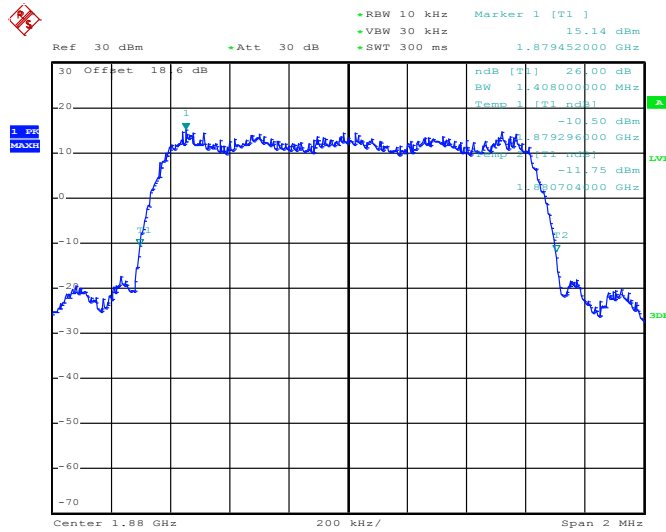


99% Occupied Bandwidth Plot on Channel 600 (1880.0 MHz)



Date: 24.JUN.2014 19:14:39

26dB Bandwidth Plot on Channel 600 (1880.0 MHz)

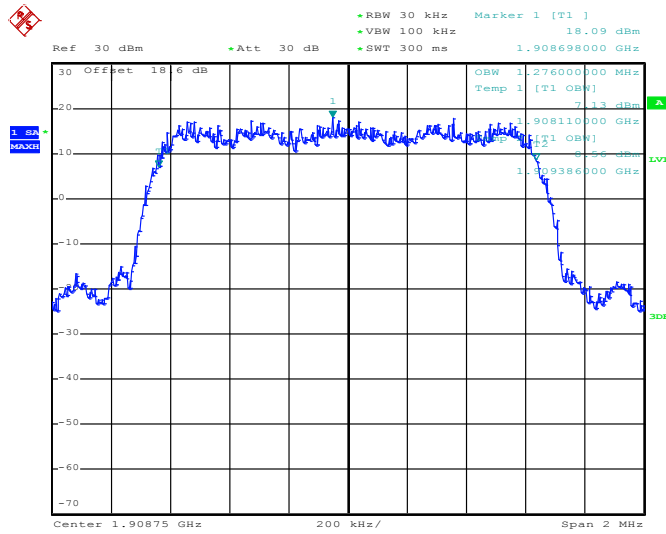


Date: 24.JUN.2014 19:12:55



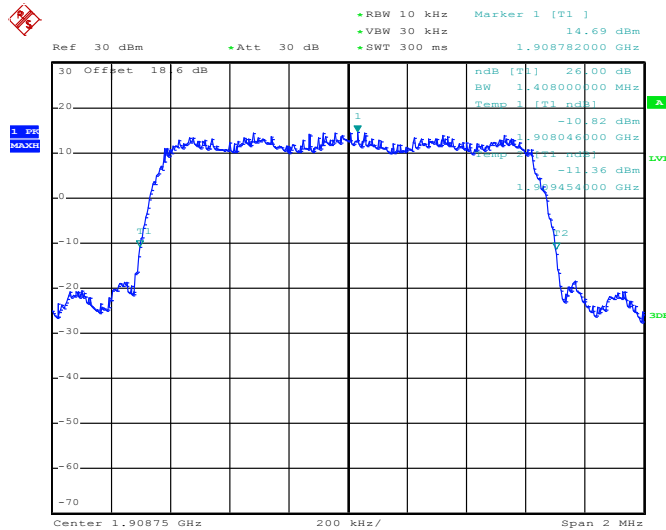


99% Occupied Bandwidth Plot on Channel 1175 (1908.75 MHz)



Date: 24.JUN.2014 19:15:07

26dB Bandwidth Plot on Channel 1175 (1908.75 MHz)



Date: 24.JUN.2014 19:13:23

## 3.5 Band Edge Measurement

### 3.5.1 Description of Band Edge Measurement

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

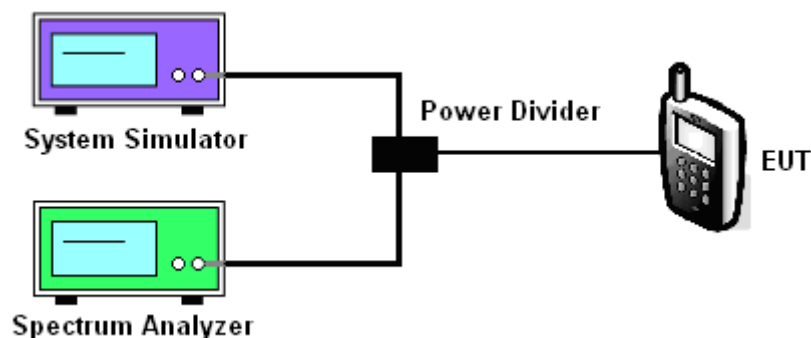
### 3.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

### 3.5.3 Test Procedures

4. The testing follows FCC KDB 971168 v02r01 Section 6.0.
1. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
2. The RF output of EUT was connected to the spectrum analyzer by an RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. The band edges of low and high channels for the highest RF powers were measured.
4. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
5. The limit line is derived from  $43 + 10\log(P)$  dB below the transmitter power P(Watts)  
 $= P(W) - [43 + 10\log(P)] \text{ (dB)}$   
 $= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$   
 $= -13\text{dBm}.$

### 3.5.4 Test Setup

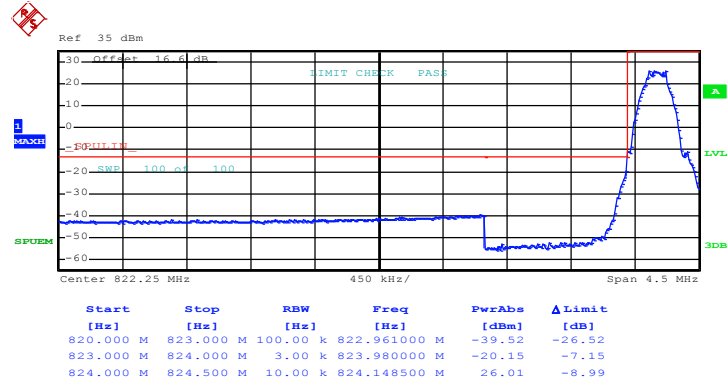




### 3.5.5 Test Result (Plots) of Conducted Band Edge

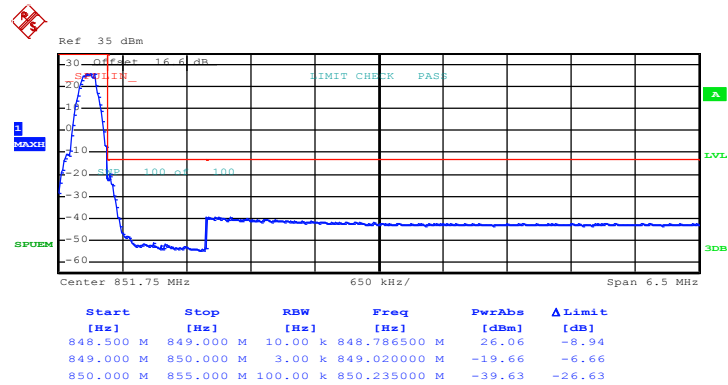
Band :	GSM850	Test Mode :	GSM Link (GMSK)
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#### Lower Band Edge Plot on Channel 128 (824.2 MHz)



Date: 23.JUN.2014 16:30:02

#### Higher Band Edge Plot on Channel 251 (848.8 MHz)

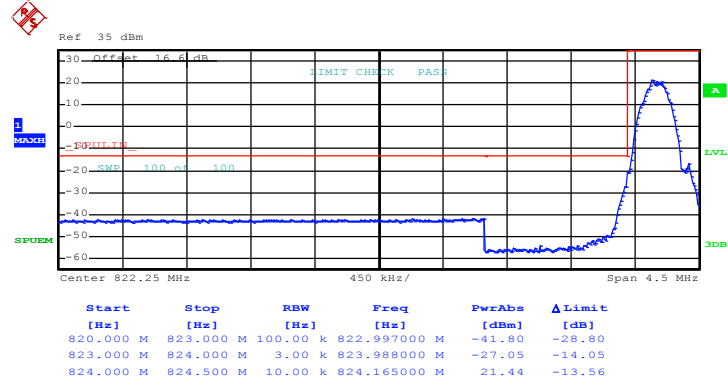


Date: 23.JUN.2014 16:26:29



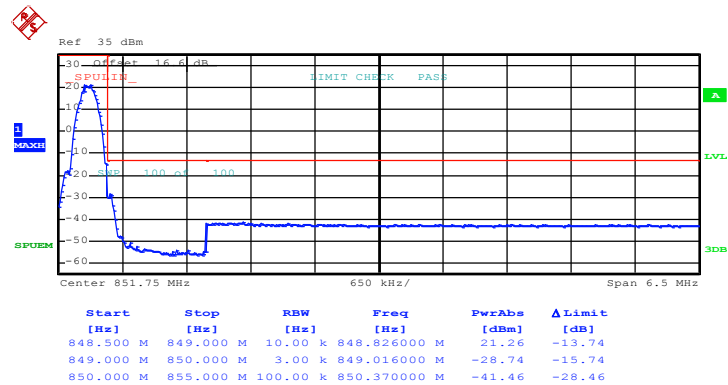
Band :	GSM850	Test Mode :	EDGE class 8 Link (8PSK)
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Lower Band Edge Plot on Channel 128 (824.2 MHz)



Date: 23.JUN.2014 17:15:06

Higher Band Edge Plot on Channel 251 (848.8 MHz)

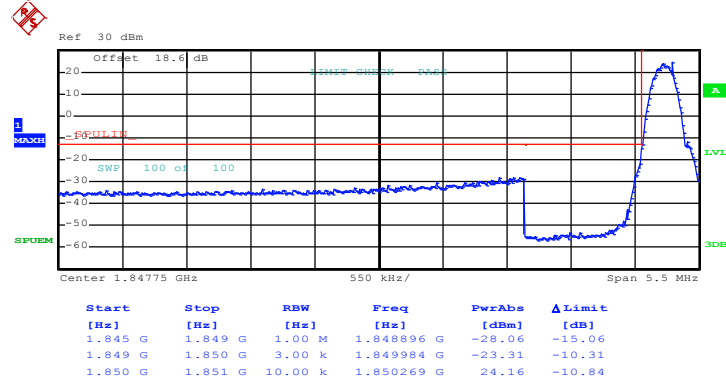


Date: 23.JUN.2014 17:11:09



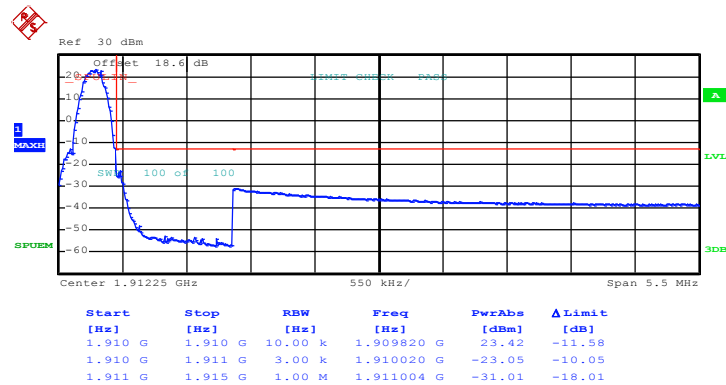
Band :	GSM1900	Test Mode :	GSM Link (GMSK)
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Lower Band Edge Plot on Channel 512 (1850.2 MHz)



Date: 24.JUN.2014 09:41:38

Higher Band Edge Plot on Channel 810 (1909.8 MHz)

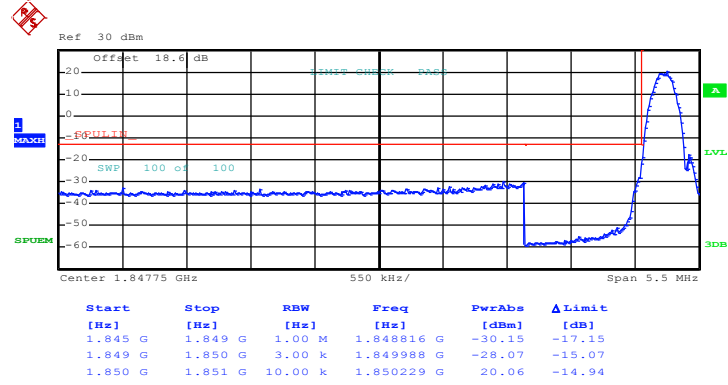


Date: 24.JUN.2014 09:39:19



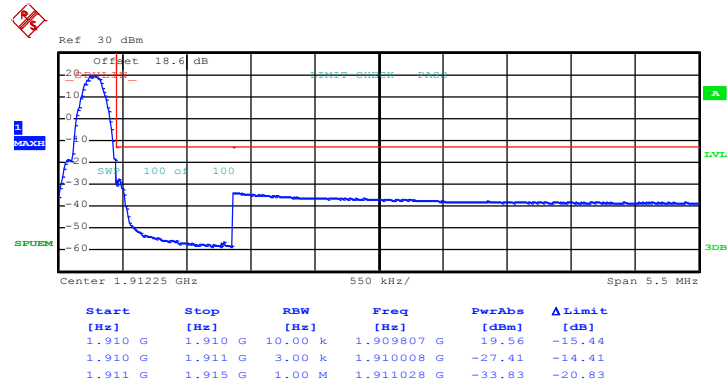
Band :	GSM1900	Test Mode :	EDGE class 8 Link (8PSK)
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Lower Band Edge Plot on Channel 512 (1850.2 MHz)



Date: 24.JUN.2014 10:23:03

Higher Band Edge Plot on Channel 810 (1909.8 MHz)

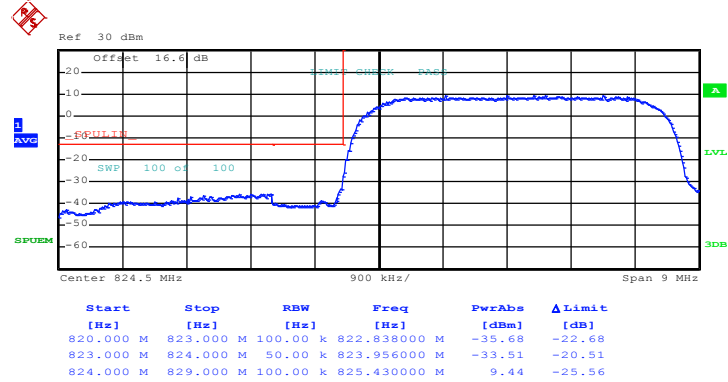


Date: 24.JUN.2014 10:20:26



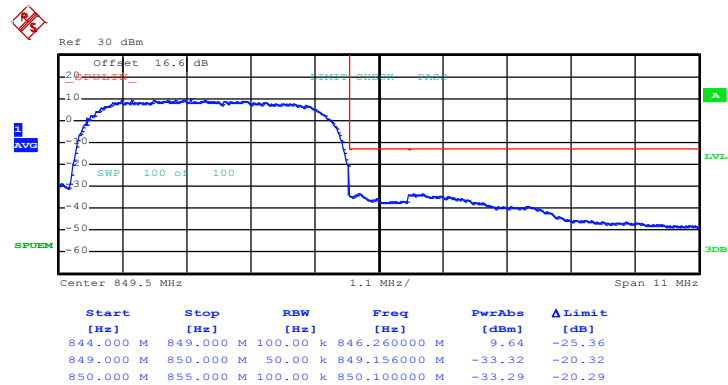
<b>Band :</b> WCDMA Band V	<b>Test Mode :</b> RMC 12.2Kbps Link (QPSK)
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Lower Band Edge Plot on Channel 4132 (826.4 MHz)



Date: 24.JUN.2014 17:14:20

Higher Band Edge Plot on Channel 4233 (846.6 MHz)

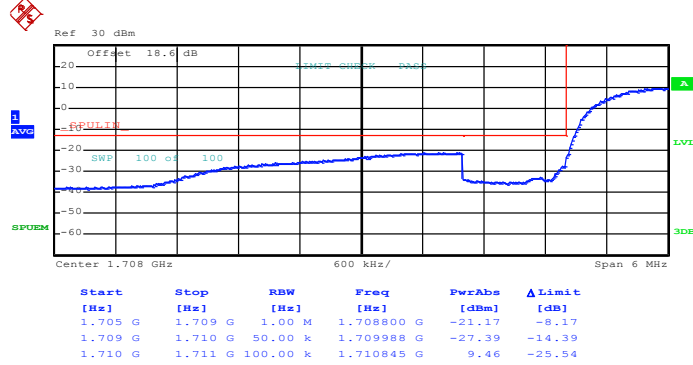


Date: 24.JUN.2014 16:35:55



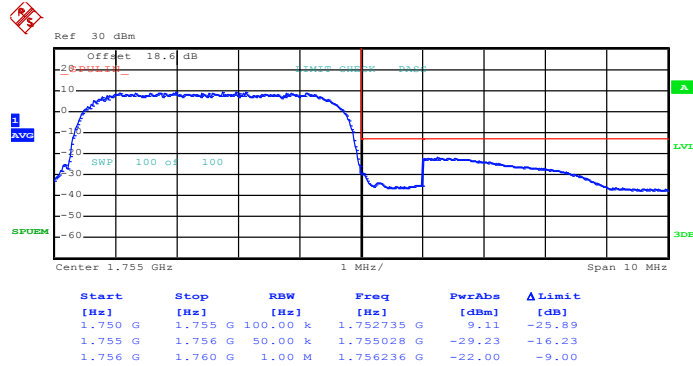
<b>Band :</b>	WCDMA Band IV	<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)
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Lower Band Edge Plot on Channel 1312 (1712.4 MHz)



Date: 24.JUN.2014 15:10:02

Higher Band Edge Plot on Channel 1513 (1752.6 MHz)



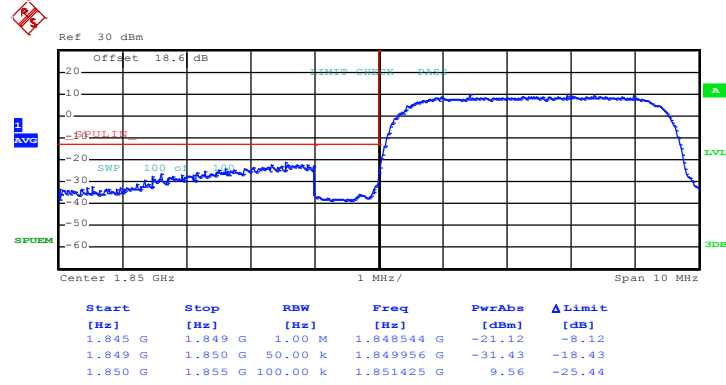
Date: 24.JUN.2014 15:07:15





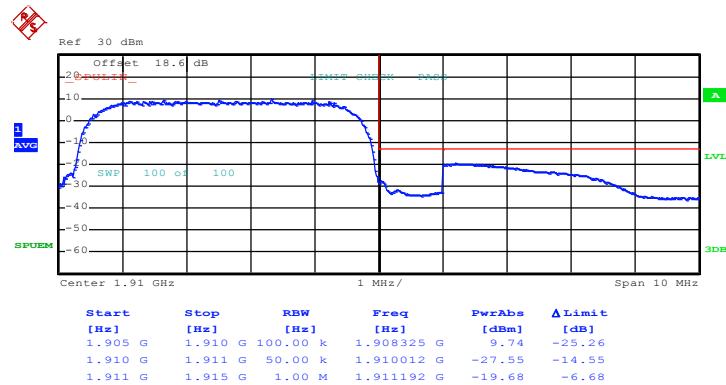
Band :	WCDMA Band II	Test Mode :	RMC 12.2Kbps Link (QPSK)
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Lower Band Edge Plot on Channel 9262 (1852.4 MHz)



Date: 24.JUN.2014 14:11:40

Higher Band Edge Plot on Channel 9538 (1907.6 MHz)

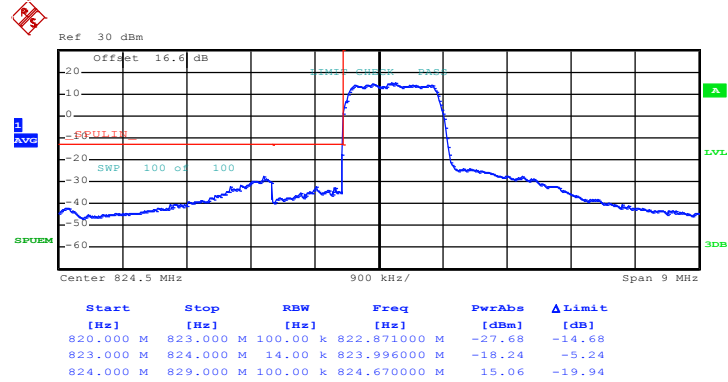


Date: 24.JUN.2014 14:06:36



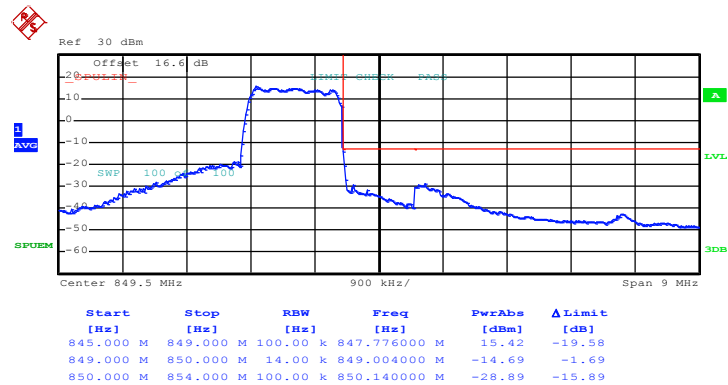
Band :	CDMA2000 BC0	Test Mode :	1xRTT_RC3+SO55 (QPSK)
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Lower Band Edge Plot on Channel 1013 (824.7 MHz)



Date: 24.JUN.2014 19:49:20

Higher Band Edge Plot on Channel 777 (848.31 MHz)

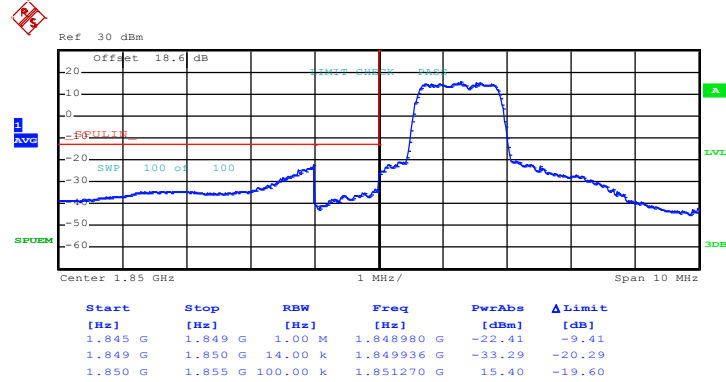


Date: 24.JUN.2014 19:45:46



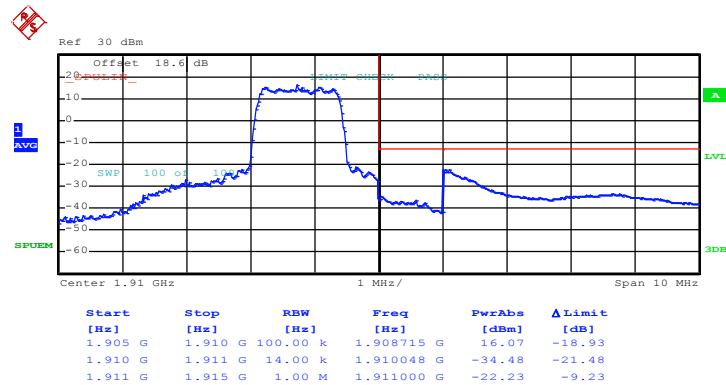
Band :	CDMA2000 BC1	Test Mode :	1xRTT_RC3+SO55 (QPSK)
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Lower Band Edge Plot on Channel 25 (1851.25 MHz)



Date: 24.JUN.2014 19:01:17

Higher Band Edge Plot on Channel 1175 (1908.75 MHz)



Date: 24.JUN.2014 18:23:12

### 3.6 Conducted Spurious Emission Measurement

#### 3.6.1 Description of Conducted Spurious Emission Measurement

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

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

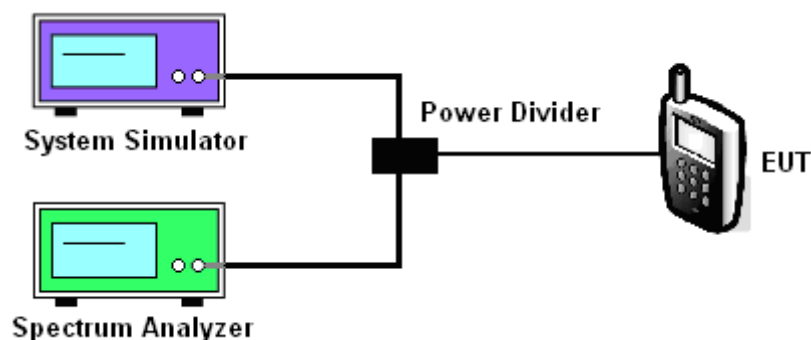
#### 3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

#### 3.6.3 Test Procedures

1. The testing follows FCC KDB 971168 v02r01 Section 6.0.
2. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by an RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. The limit line is derived from  $43 + 10\log(P)$  dB below the transmitter power P(Watts)
  - =  $P(W) - [43 + 10\log(P)]$  (dB)
  - =  $[30 + 10\log(P)]$  (dBm) -  $[43 + 10\log(P)]$  (dB)
  - = -13dBm.

#### 3.6.4 Test Setup

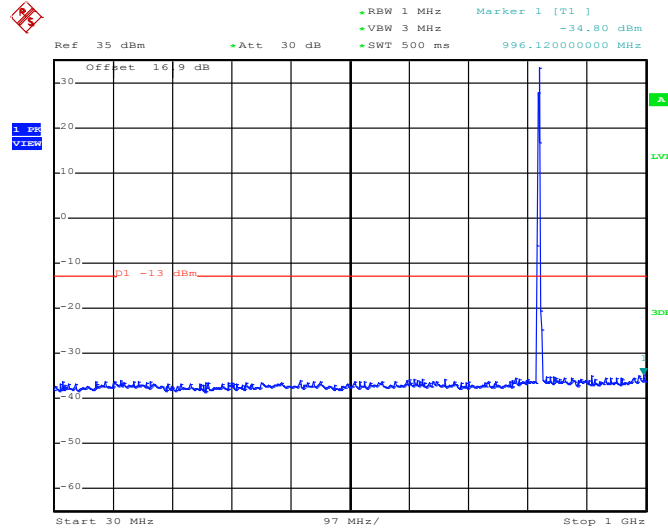




### 3.6.5 Test Result (Plots) of Conducted Spurious Emission

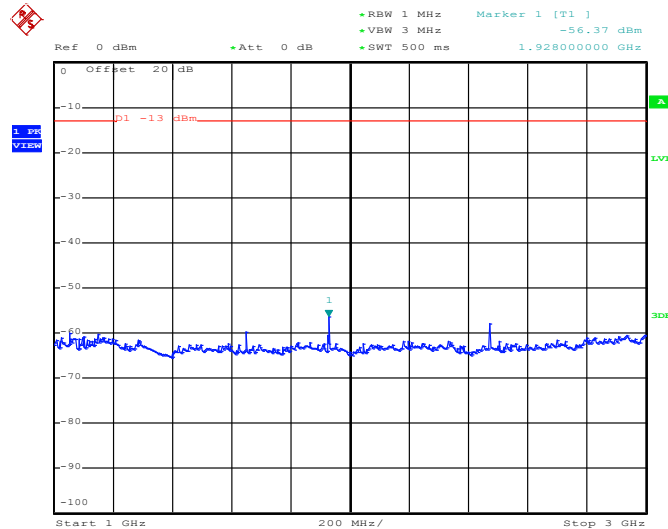
Band :	GSM850	Channel :	CH128
Test Mode :	GSM Link (GMSK)	Frequency :	824.2 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 23.JUN.2014 16:46:17

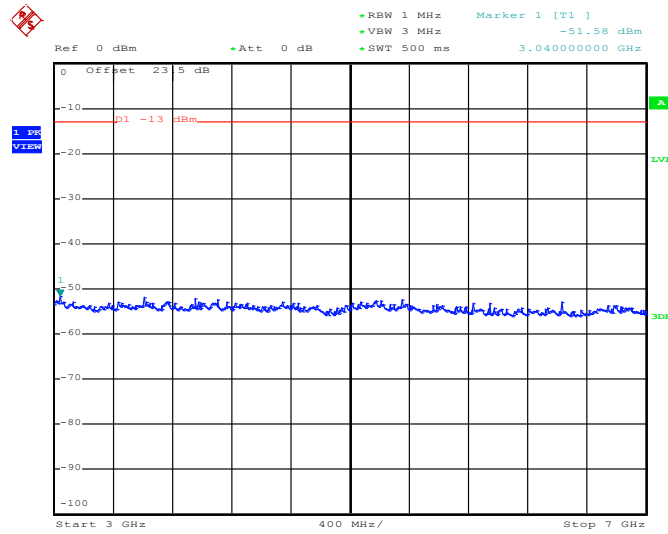
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 23.JUN.2014 16:47:37

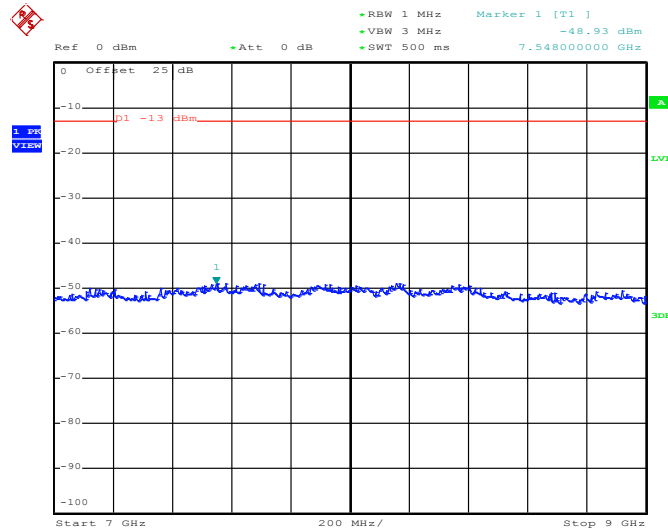


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 23.JUN.2014 16:47:45

### Conducted Spurious Emission Plot between 7GHz ~ 9GHz

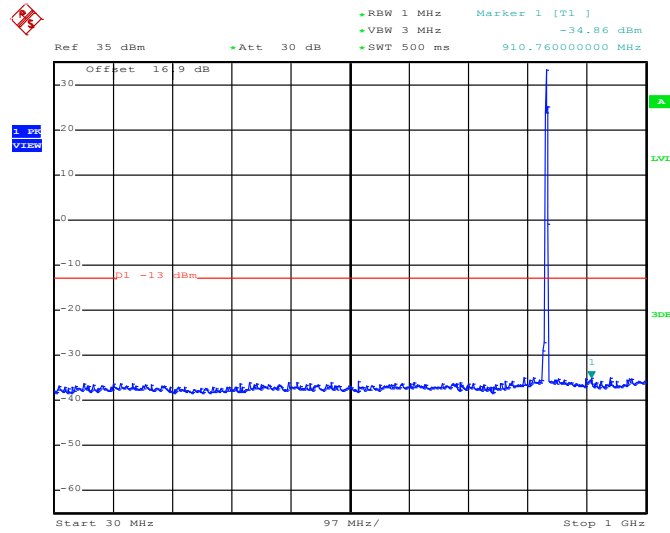


Date: 23.JUN.2014 16:47:54



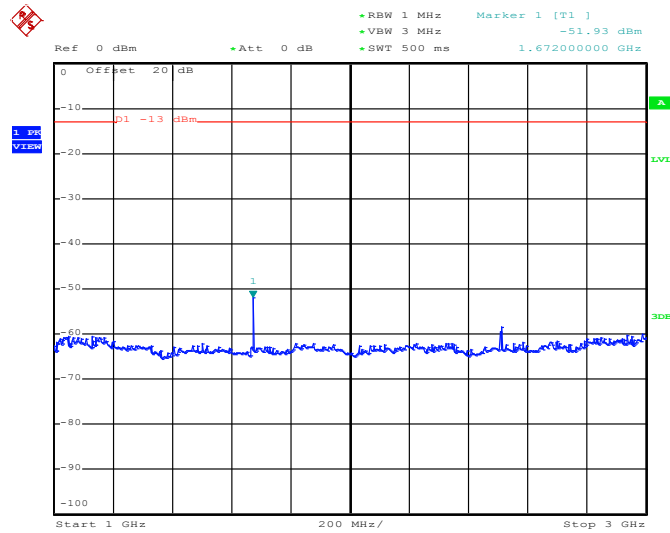
Band :	GSM850	Channel :	CH189
Test Mode :	GSM Link (GMSK)	Frequency :	836.4 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 23.JUN.2014 16:48:53

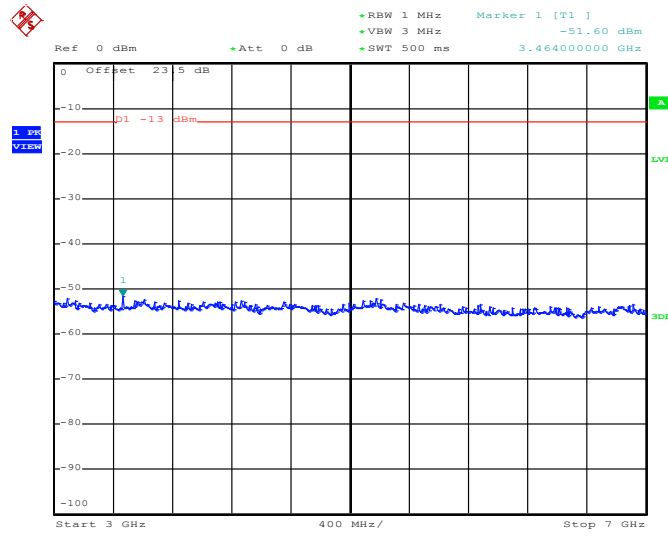
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 23.JUN.2014 16:49:05

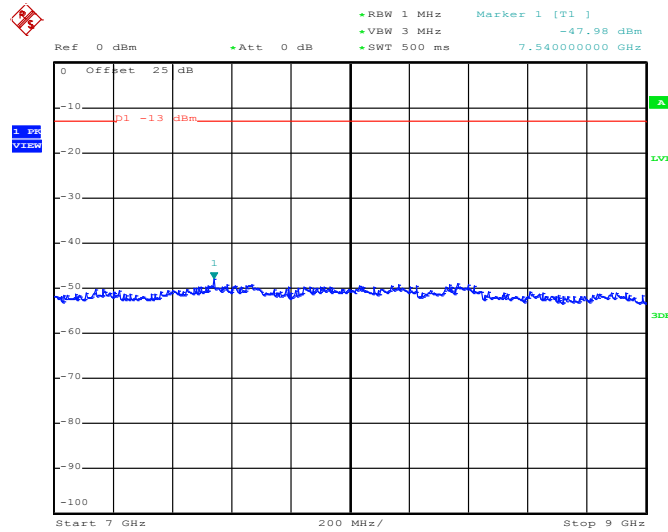


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 23.JUN.2014 16:49:13

### Conducted Spurious Emission Plot between 7GHz ~ 9GHz



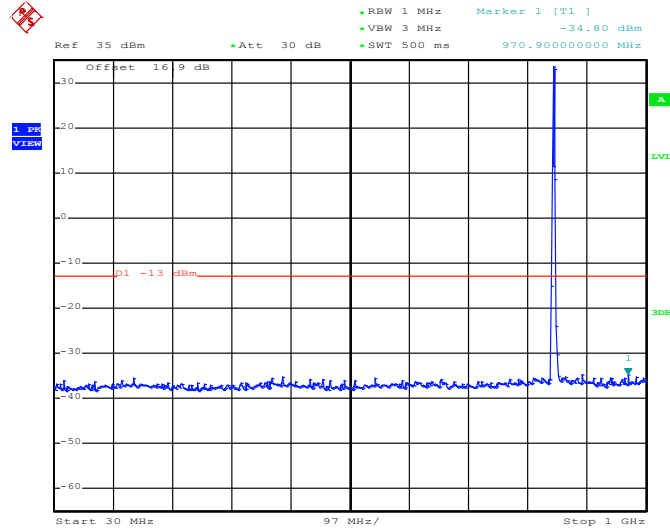
Date: 23.JUN.2014 16:49:22





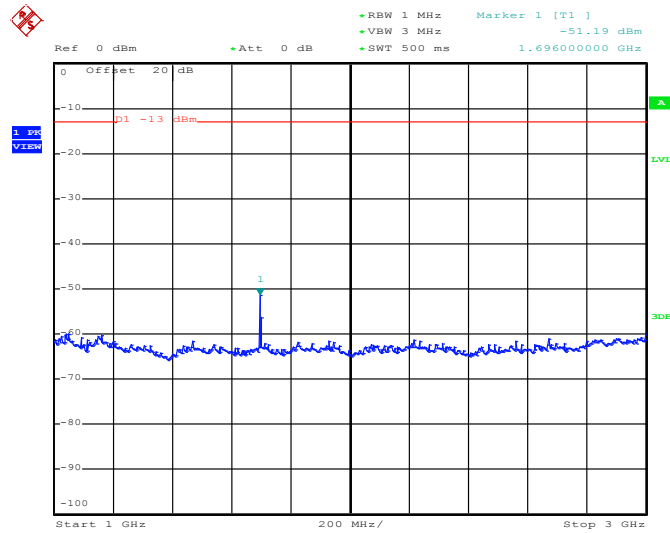
Band :	GSM850	Channel :	CH251
Test Mode :	GSM Link (GMSK)	Frequency :	848.8 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 23.JUN.2014 16:51:03

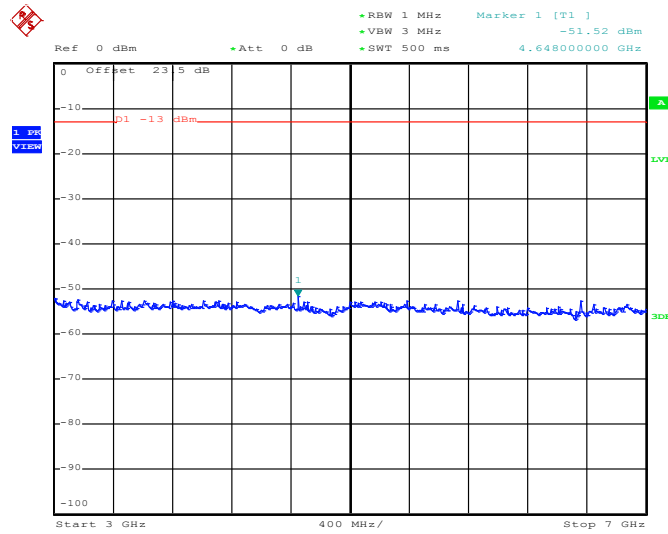
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 23.JUN.2014 16:51:13

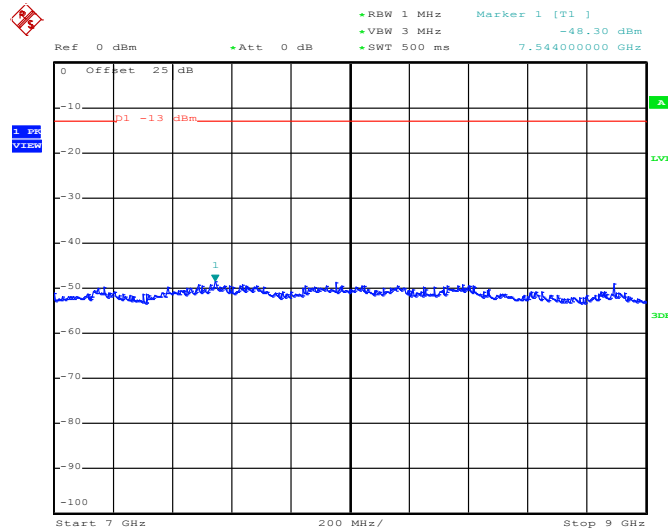


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 23.JUN.2014 16:51:21

### Conducted Spurious Emission Plot between 7GHz ~ 9GHz

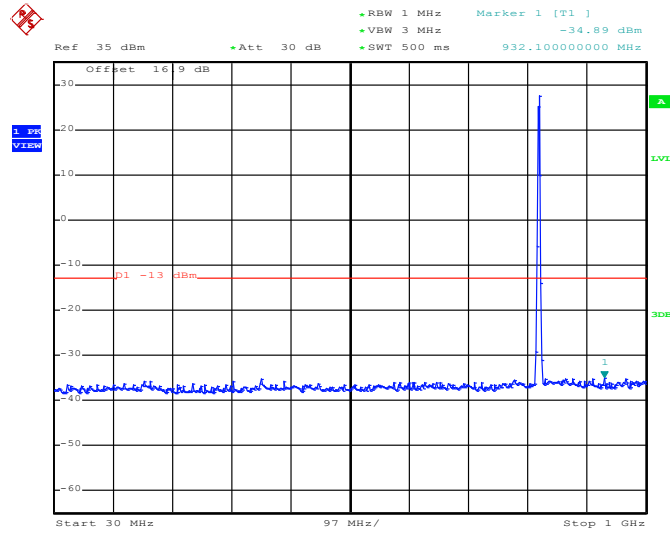


Date: 23.JUN.2014 16:51:29



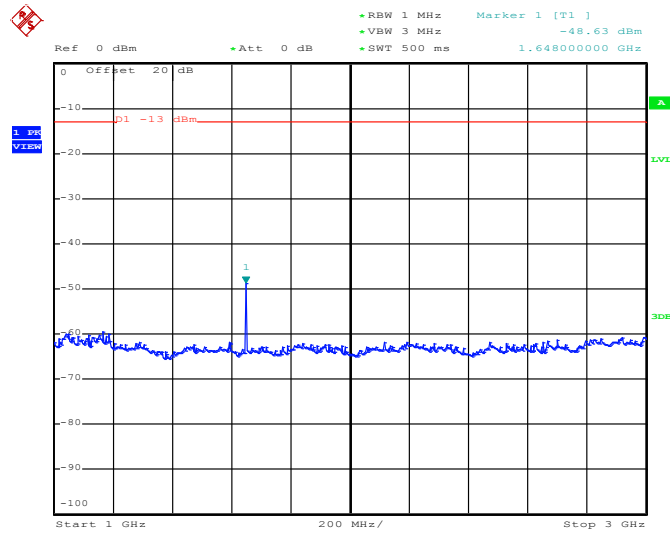
Band :	GSM850	Channel :	CH128
Test Mode :	EDGE class 8 Link (8PSK)	Frequency :	824.2 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 23.JUN.2014 17:32:47

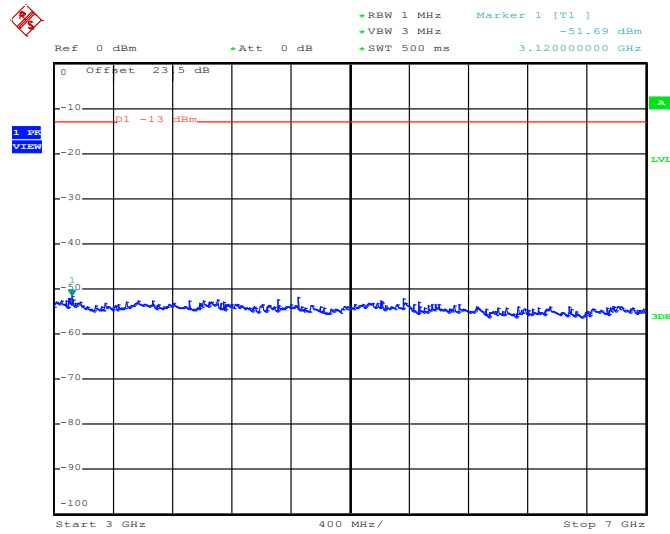
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 23.JUN.2014 17:32:58

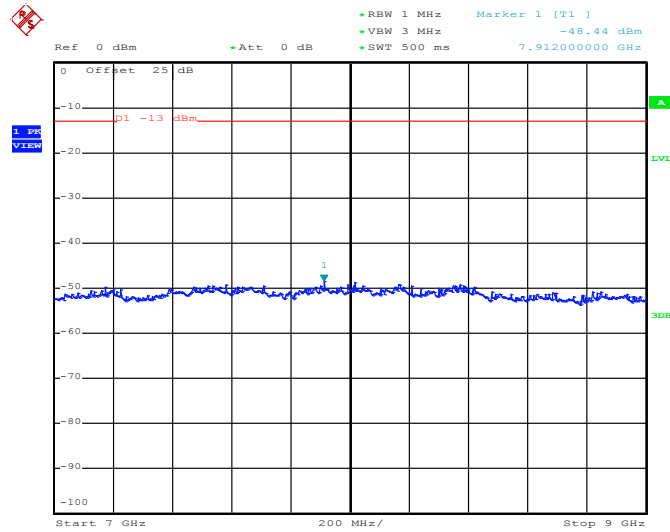


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 23.JUN.2014 17:33:06

### Conducted Spurious Emission Plot between 7GHz ~ 9GHz

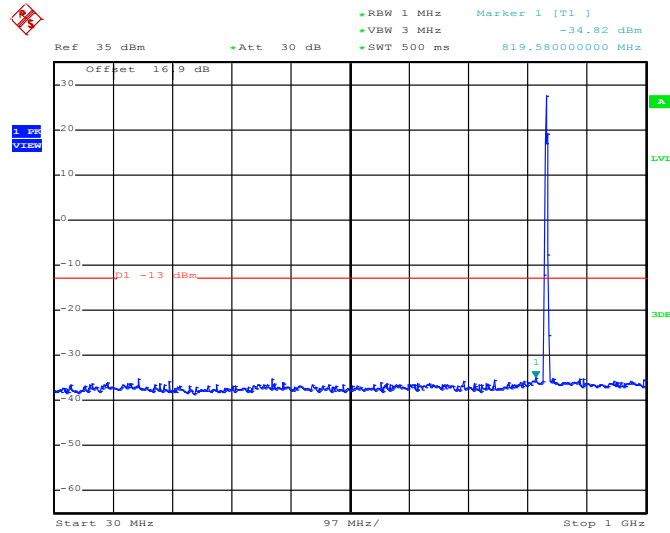


Date: 23.JUN.2014 17:33:15



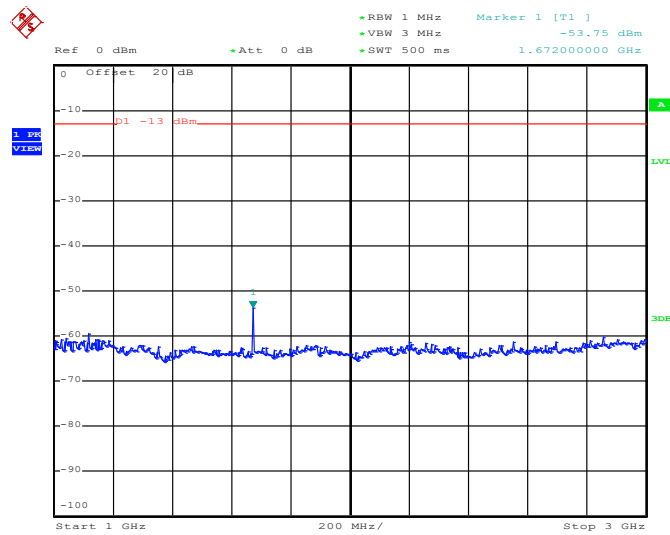
<b>Band :</b>	GSM850	<b>Channel :</b>	CH189
<b>Test Mode :</b>	EDGE class 8 Link (8PSK)	<b>Frequency :</b>	836.4 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 23.JUN.2014 17:31:14

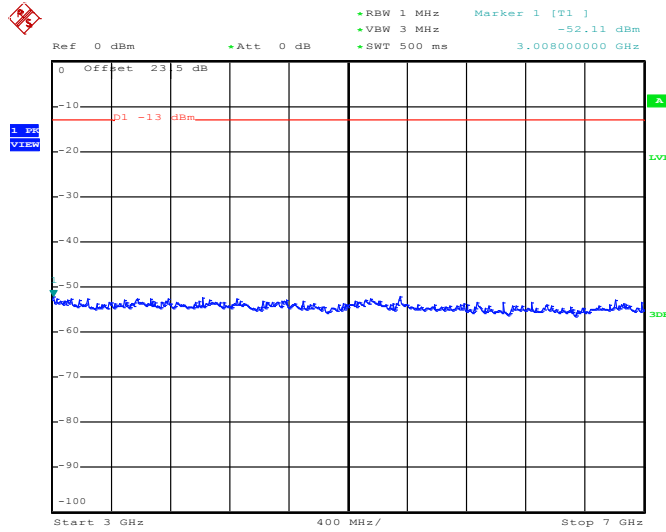
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 23.JUN.2014 17:31:30

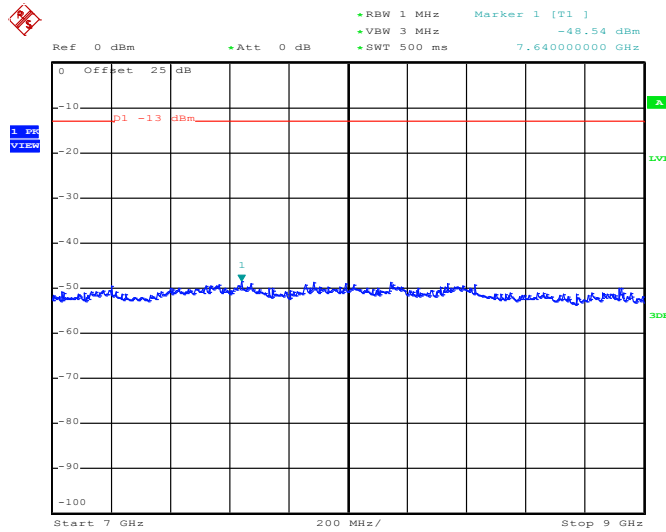


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 23.JUN.2014 17:31:38

### Conducted Spurious Emission Plot between 7GHz ~ 9GHz

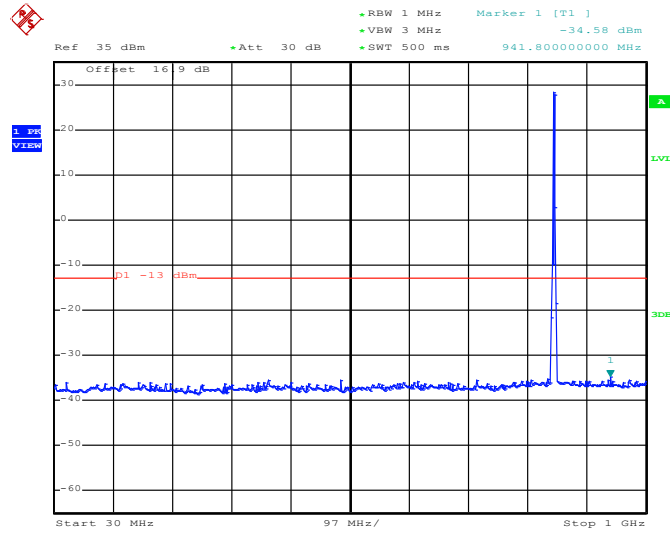


Date: 23.JUN.2014 17:31:47



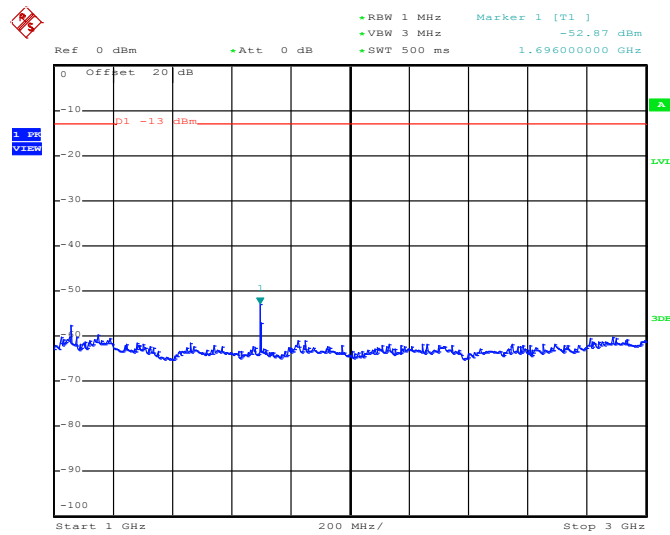
Band :	GSM850	Channel :	CH251
Test Mode :	EDGE class 8 Link (8PSK)	Frequency :	848.8 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 23.JUN.2014 17:34:29

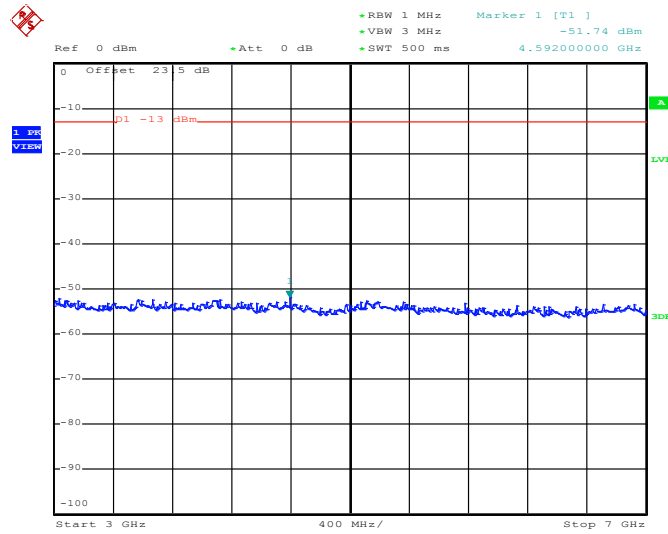
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 23.JUN.2014 17:34:39

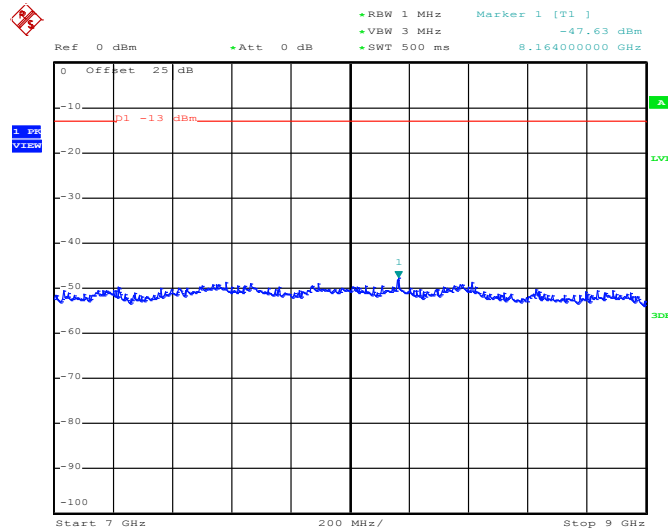


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 23.JUN.2014 17:34:48

### Conducted Spurious Emission Plot between 7GHz ~ 9GHz



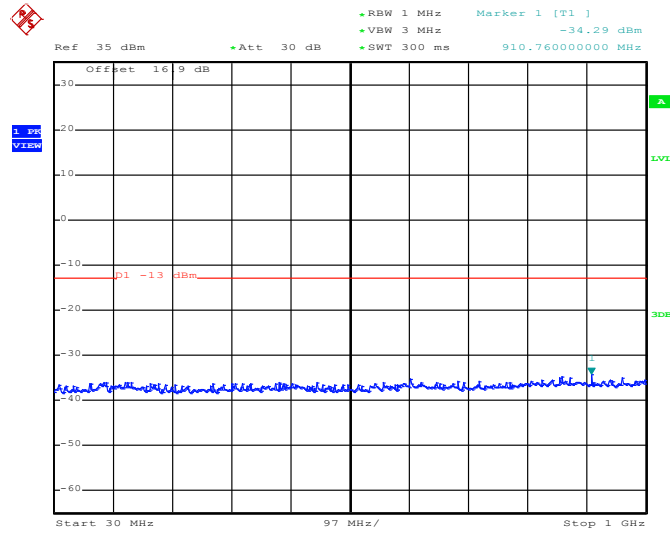
Date: 23.JUN.2014 17:34:56





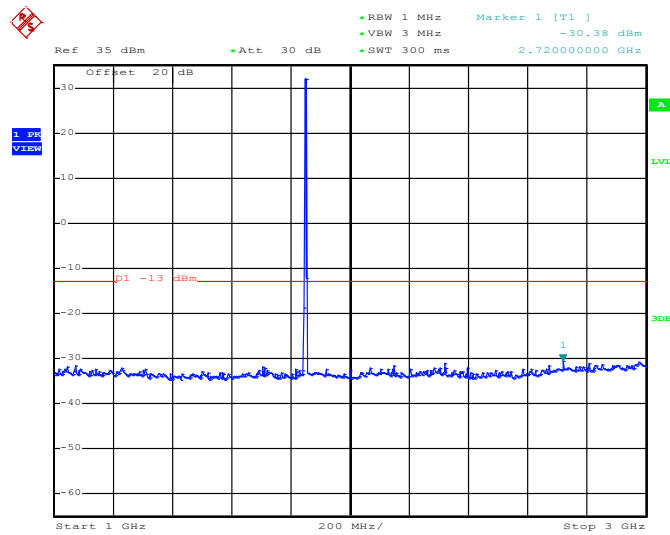
Band :	GSM1900	Channel :	CH512
Test Mode :	GSM Link (GMSK)	Frequency :	1850.2 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 24.JUN.2014 09:57:36

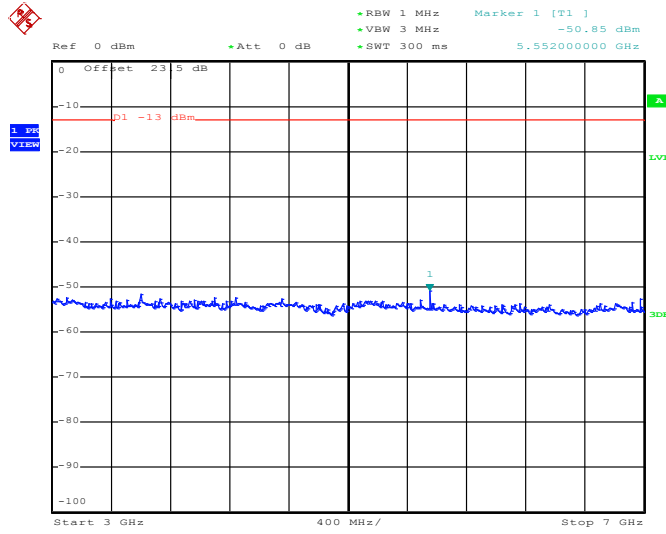
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 24.JUN.2014 09:57:44

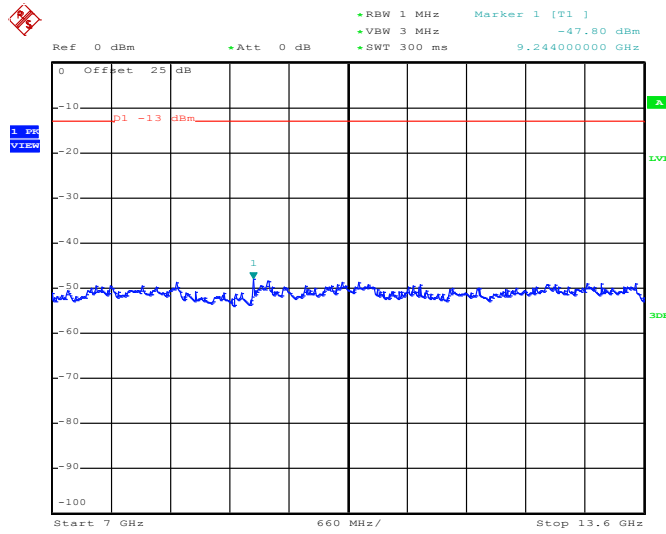


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 24.JUN.2014 09:57:55

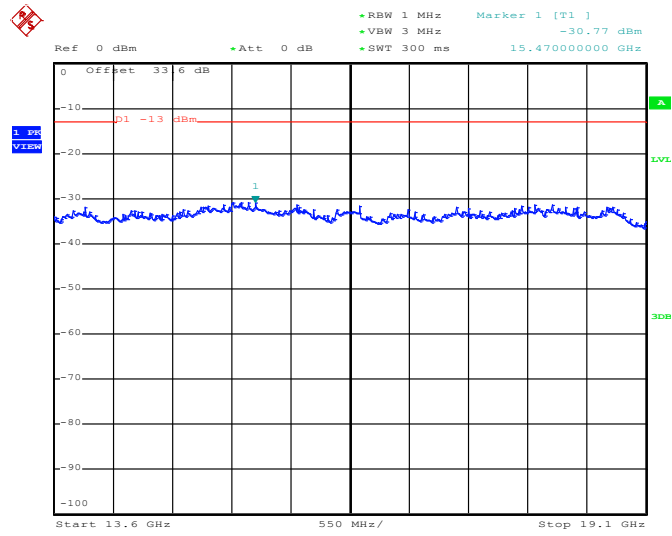
### Conducted Spurious Emission Plot between 7GHz ~ 13.6GHz



Date: 24.JUN.2014 09:58:03



Conducted Spurious Emission Plot between 13.6GHz ~ 19.1GHz

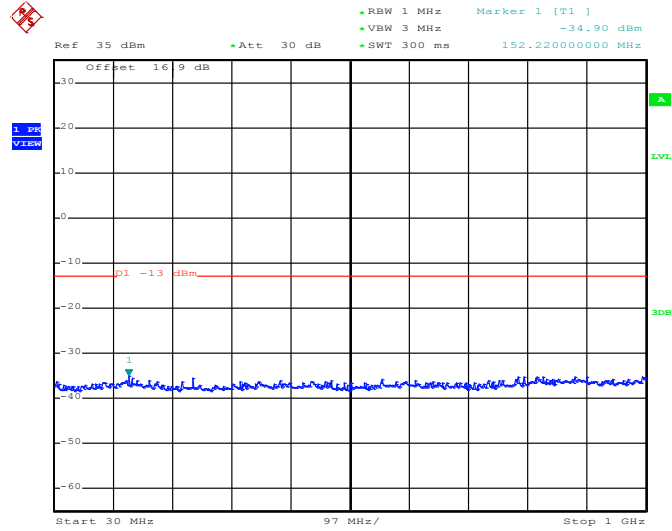


Date: 24.JUN.2014 09:58:12



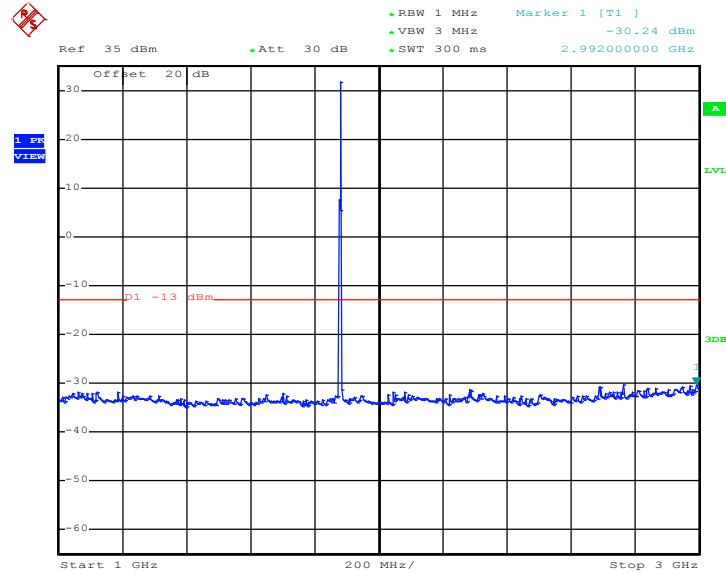
Band :	GSM1900	Channel :	CH661
Test Mode :	GSM Link (GMSK)	Frequency :	1880.0 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 24.JUN.2014 09:56:17

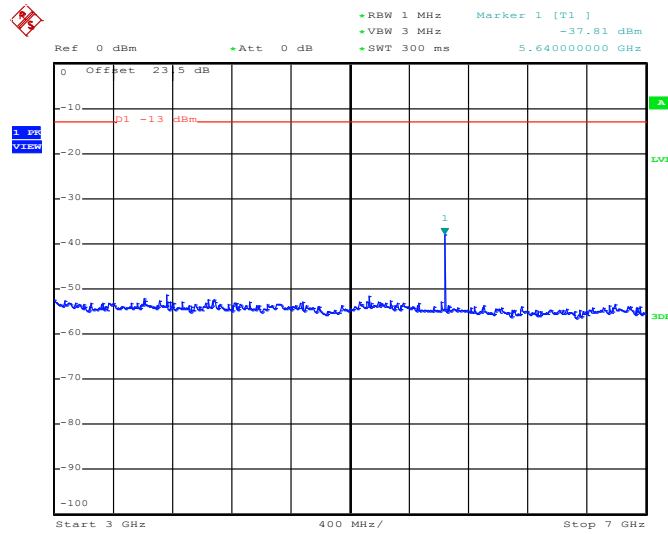
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 24.JUN.2014 09:56:26

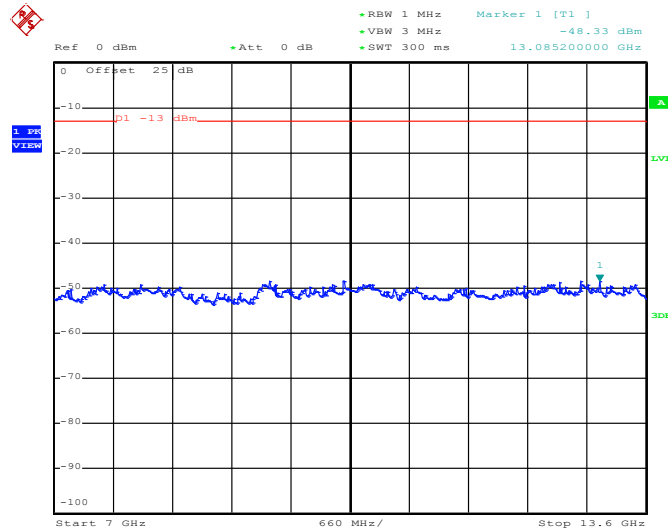


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 24.JUN.2014 09:56:36

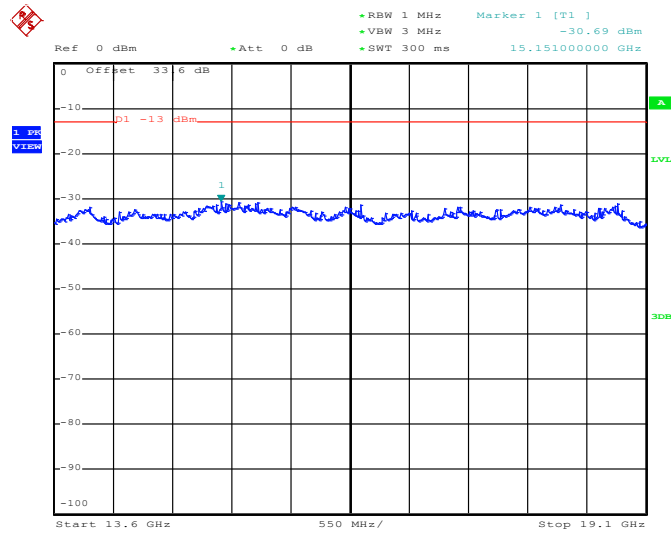
### Conducted Spurious Emission Plot between 7GHz ~ 13.6GHz



Date: 24.JUN.2014 09:56:45



Conducted Spurious Emission Plot between 13.6GHz ~ 19.1GHz

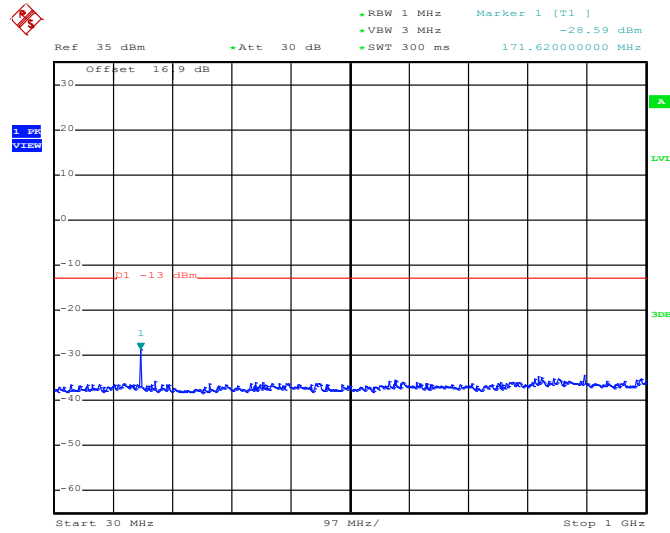


Date: 24.JUN.2014 09:56:53



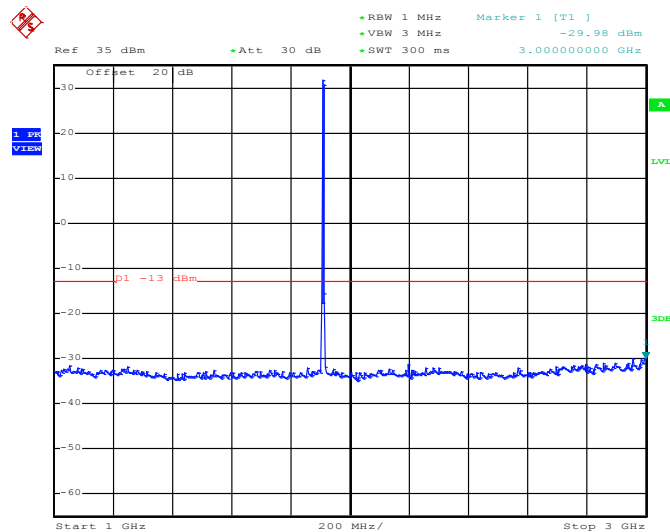
Band :	GSM1900	Channel :	CH810
Test Mode :	GSM Link (GMSK)	Frequency :	1909.8 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 24.JUN.2014 09:59:09

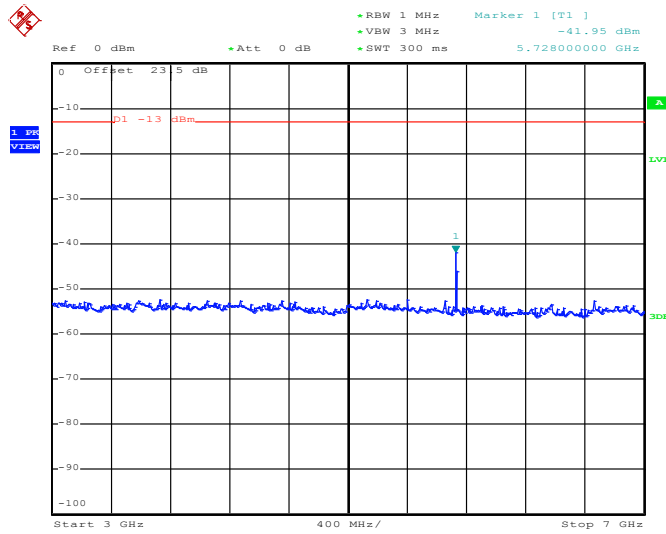
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 24.JUN.2014 09:59:18

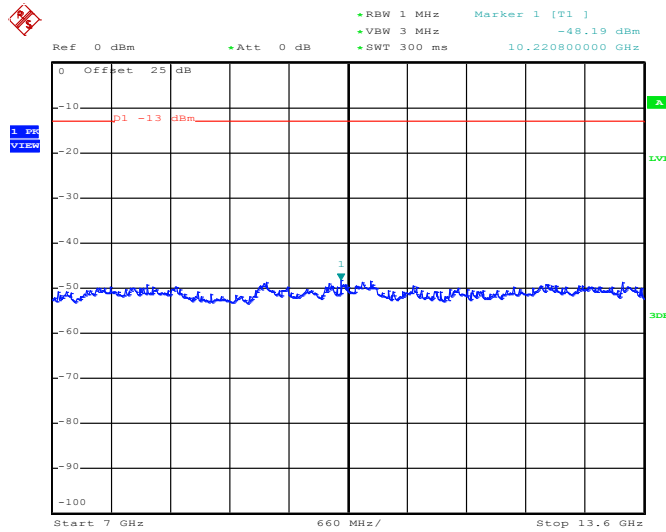


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 24.JUN.2014 09:59:30

### Conducted Spurious Emission Plot between 7GHz ~ 13.6GHz

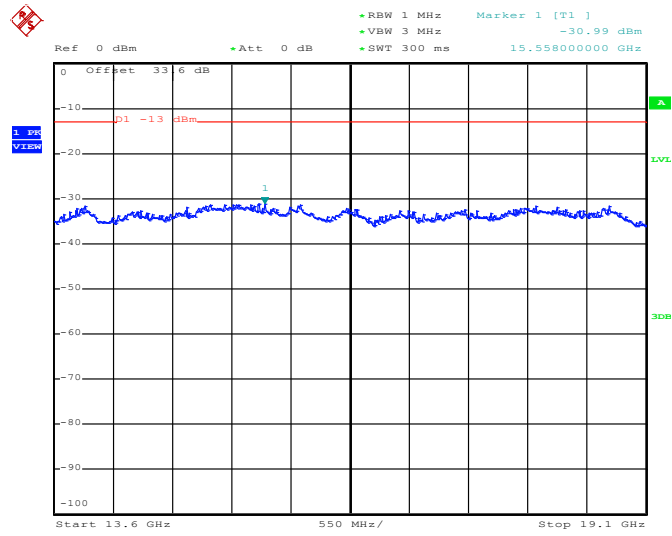


Date: 24.JUN.2014 09:59:39





Conducted Spurious Emission Plot between 13.6GHz ~ 19.1GHz

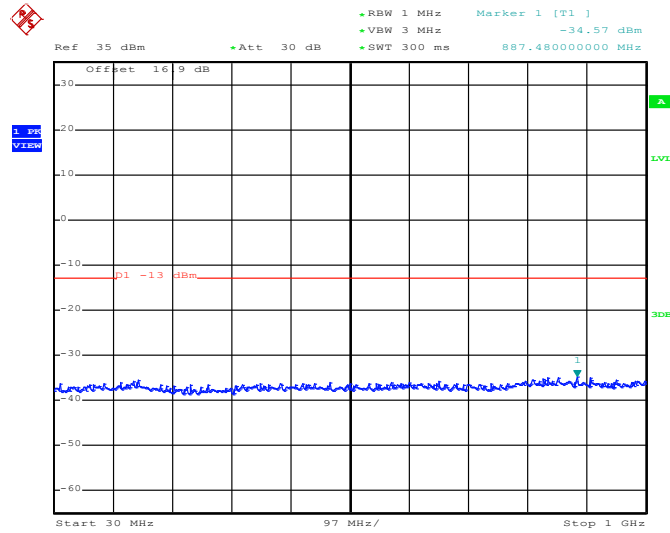


Date: 24.JUN.2014 09:59:47



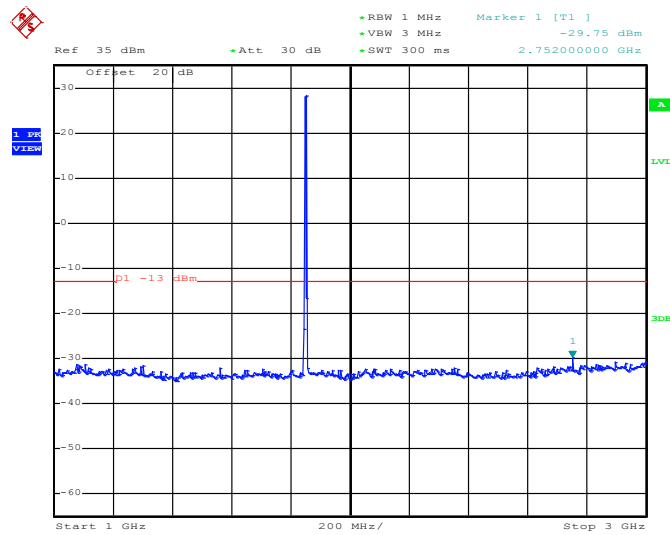
Band :	GSM1900	Channel :	CH512
Test Mode :	EDGE class 8 Link (8PSK)	Frequency :	1850.2 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 24.JUN.2014 10:41:46

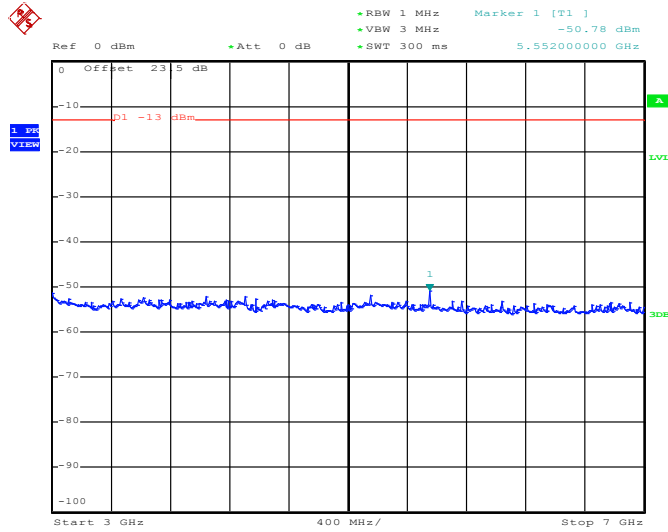
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 24.JUN.2014 10:41:54

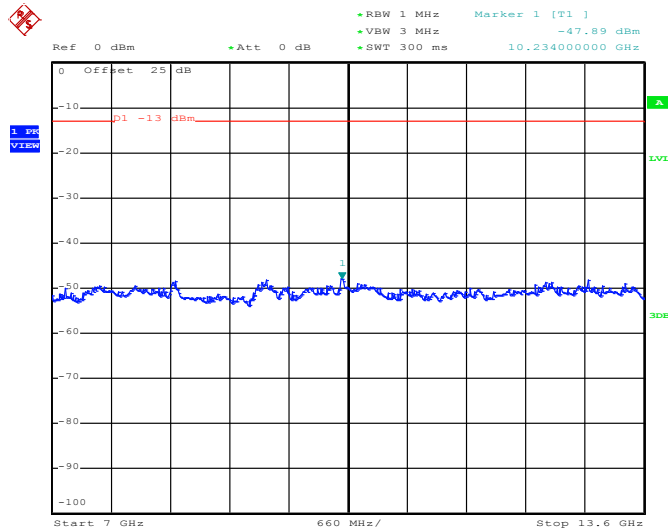


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 24.JUN.2014 10:42:04

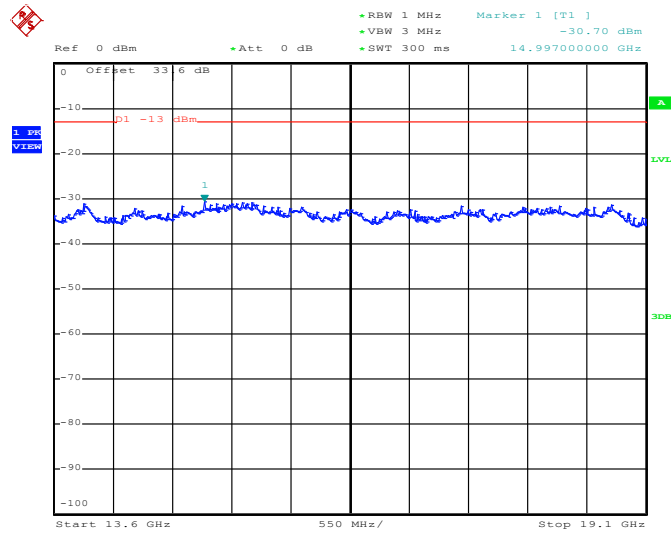
### Conducted Spurious Emission Plot between 7GHz ~ 13.6GHz



Date: 24.JUN.2014 10:42:13



Conducted Spurious Emission Plot between 13.6GHz ~ 19.1GHz

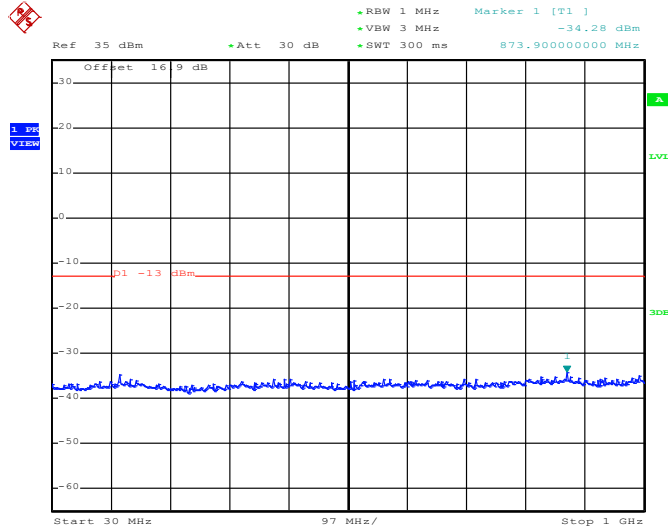


Date: 24.JUN.2014 10:42:21



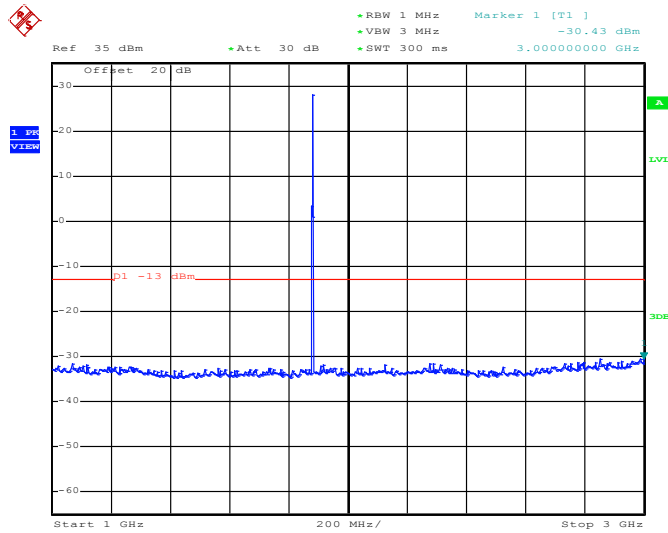
<b>Band :</b>	GSM1900	<b>Channel :</b>	CH661
<b>Test Mode :</b>	EDGE class 8 Link (8PSK)	<b>Frequency :</b>	1880.0 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 24.JUN.2014 10:40:27

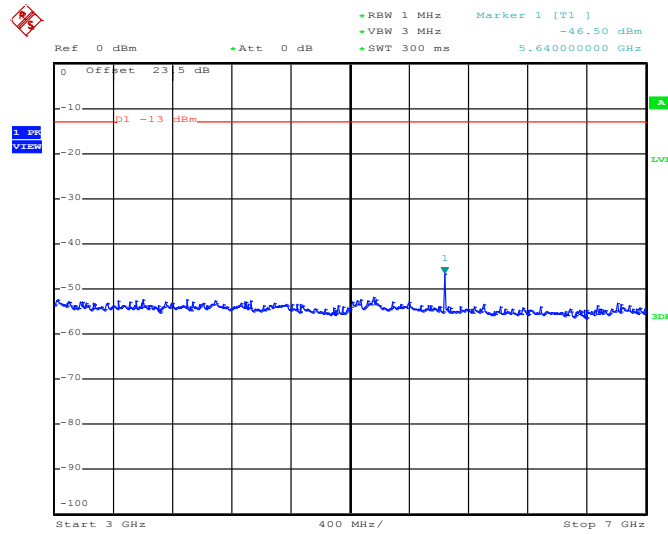
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 24.JUN.2014 10:40:35

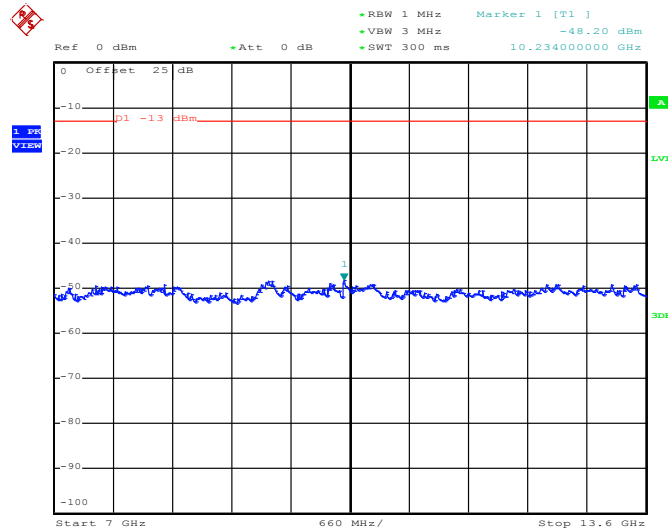


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 24.JUN.2014 10:40:46

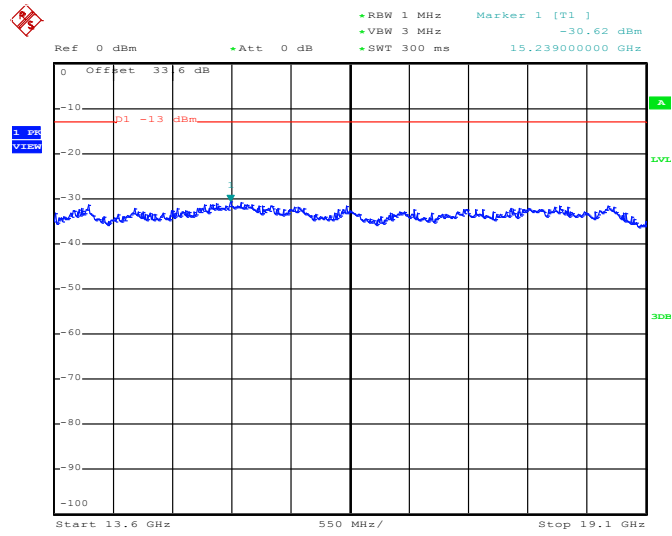
### Conducted Spurious Emission Plot between 7GHz ~ 13.6GHz



Date: 24.JUN.2014 10:40:54



Conducted Spurious Emission Plot between 13.6GHz ~ 19.1GHz

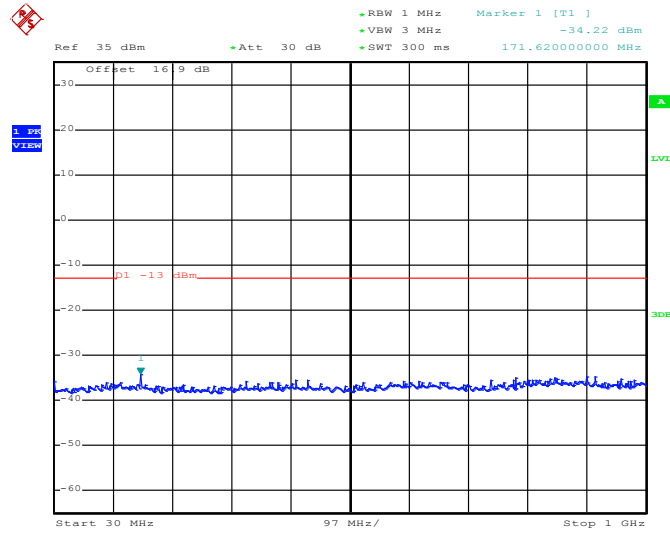


Date: 24.JUN.2014 10:41:03



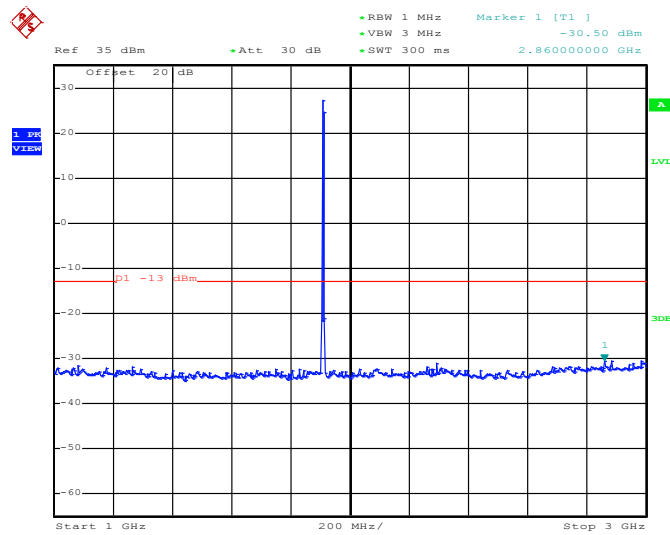
Band :	GSM1900	Channel :	CH810
Test Mode :	EDGE class 8 Link (8PSK)	Frequency :	1909.8 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 24.JUN.2014 10:43:22

Conducted Spurious Emission Plot between 1GHz ~ 3GHz

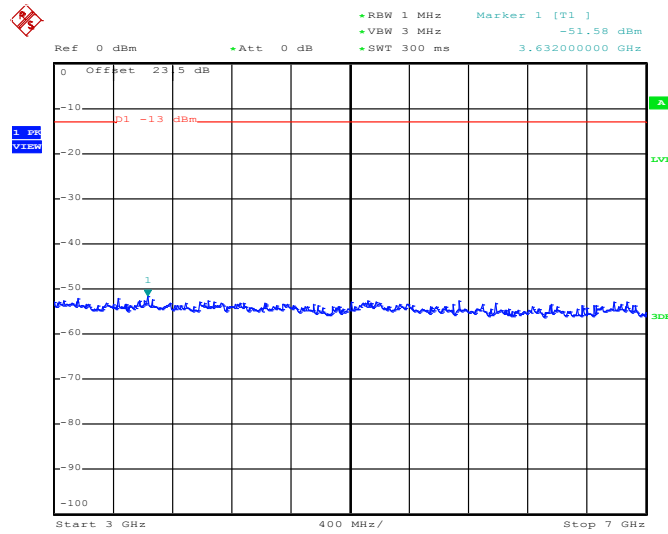


Date: 24.JUN.2014 10:43:31



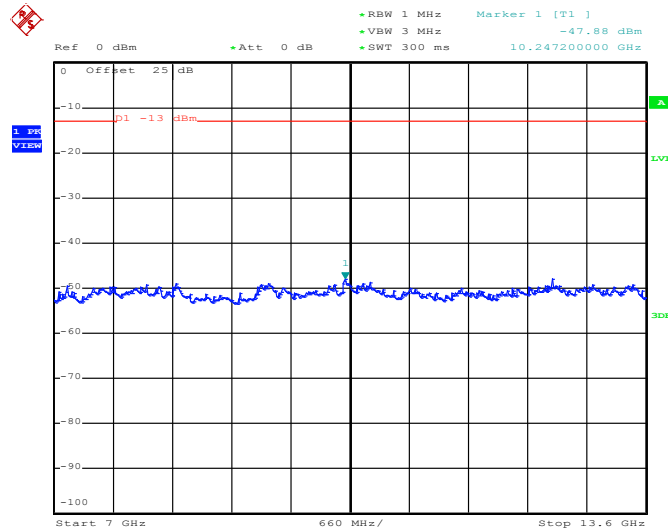


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 24.JUN.2014 10:43:45

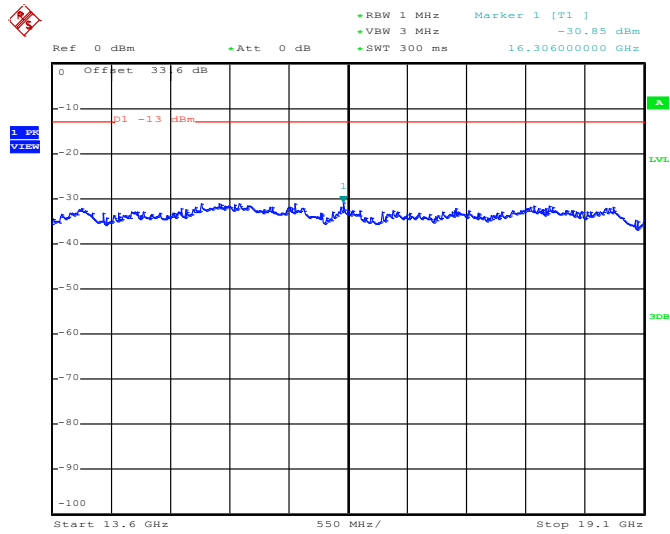
### Conducted Spurious Emission Plot between 7GHz ~ 13.6GHz



Date: 24.JUN.2014 10:43:53



Conducted Spurious Emission Plot between 13.6GHz ~ 19.1GHz

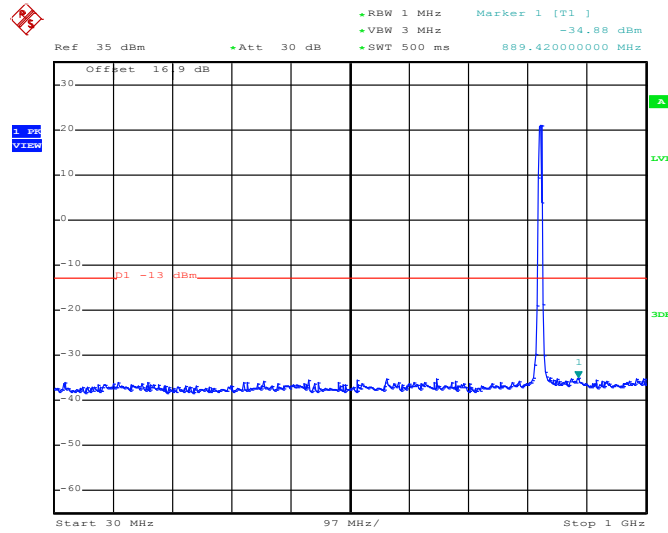


Date: 24.JUN.2014 10:44:02



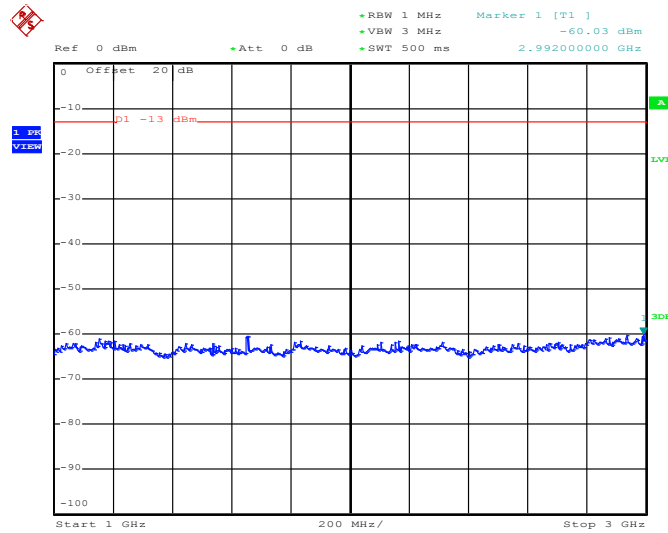
Band :	WCDMA Band V	Channel :	CH4132
Test Mode :	RMC 12.2Kbps Link (QPSK)	Frequency :	826.4 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 24.JUN.2014 17:42:19

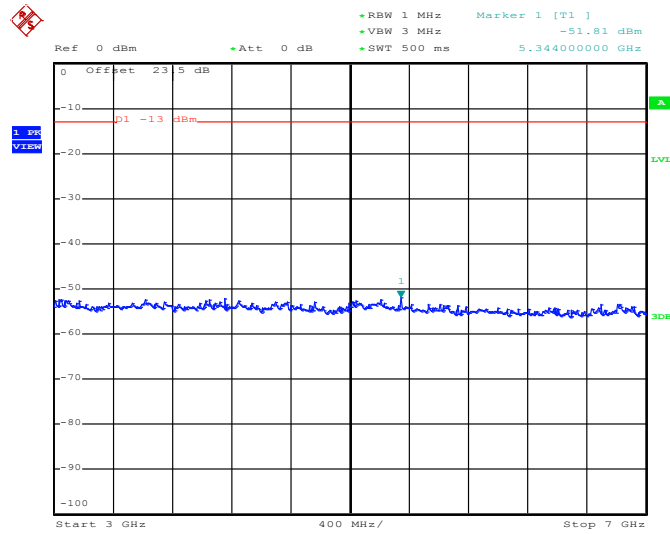
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 24.JUN.2014 17:42:29

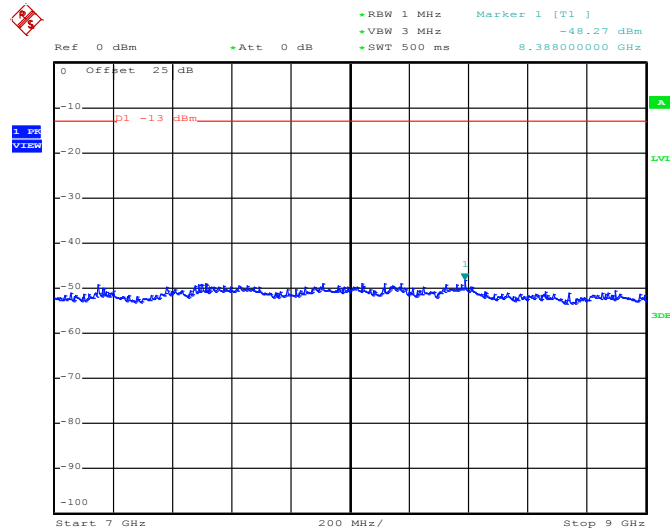


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 24.JUN.2014 17:42:37

### Conducted Spurious Emission Plot between 7GHz ~ 9GHz

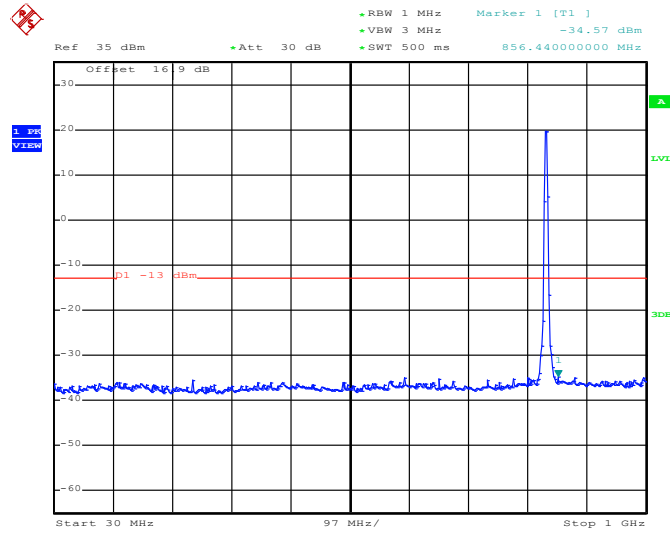


Date: 24.JUN.2014 17:42:46



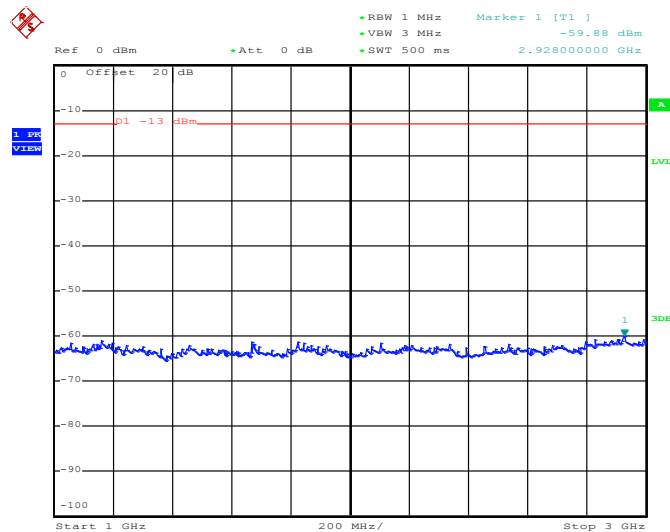
Band :	WCDMA Band V	Channel :	CH4233
Test Mode :	RMC 12.2Kbps Link (QPSK)	Frequency :	846.6 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 24.JUN.2014 17:41:06

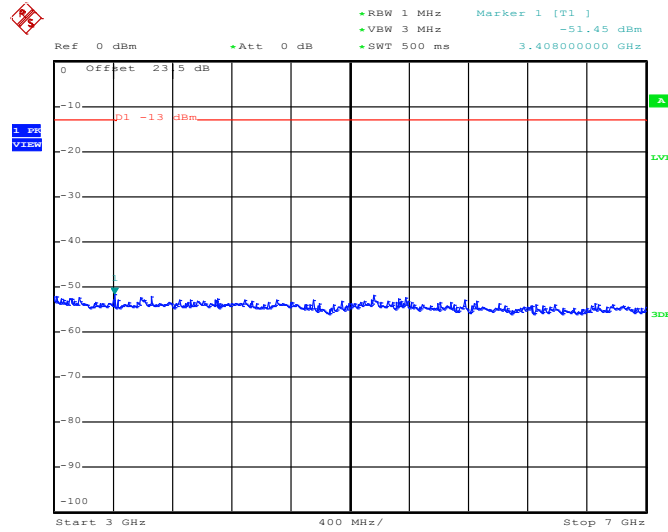
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 24.JUN.2014 17:41:17

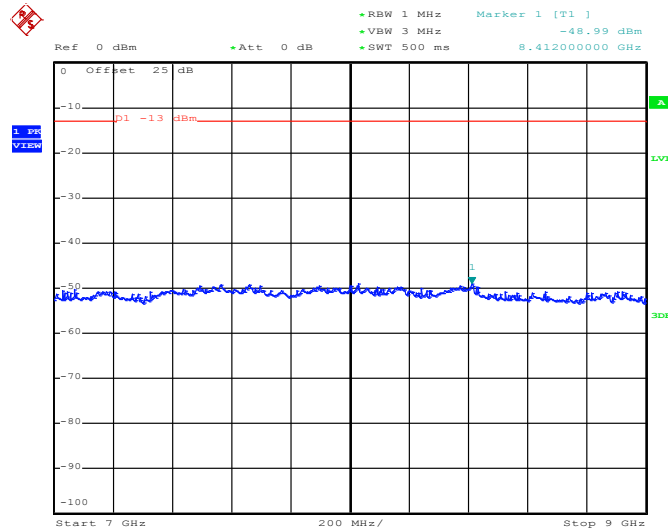


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 24.JUN.2014 17:41:25

### Conducted Spurious Emission Plot between 7GHz ~ 9GHz

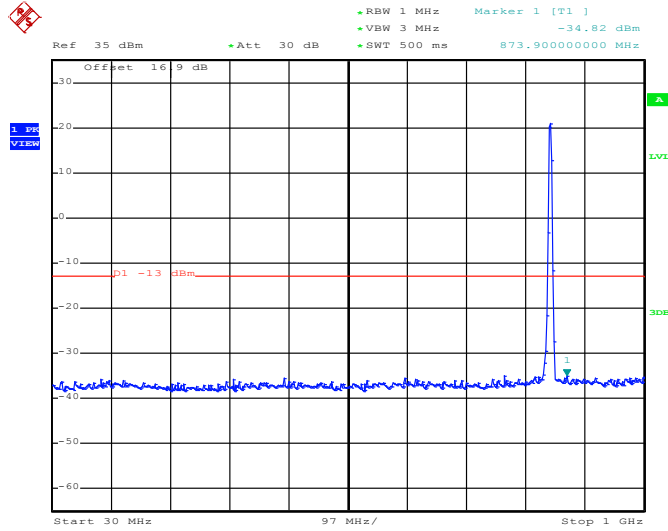


Date: 24.JUN.2014 17:41:34



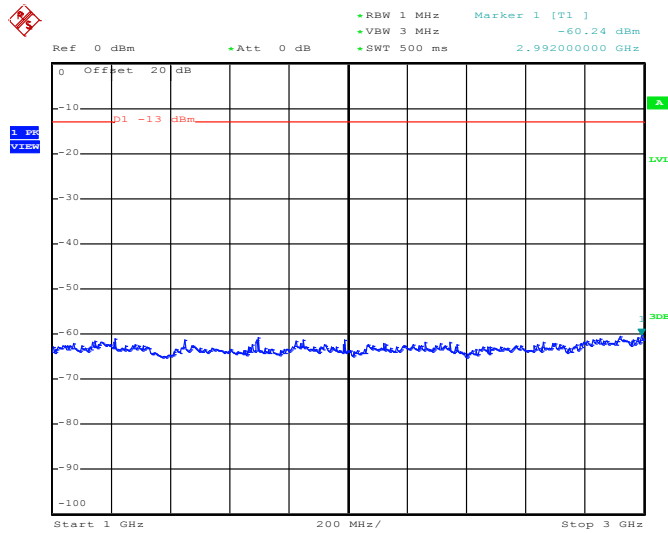
Band :	WCDMA Band V	Channel :	CH4182
Test Mode :	RMC 12.2Kbps Link (QPSK)	Frequency :	836.4 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 24.JUN.2014 17:43:35

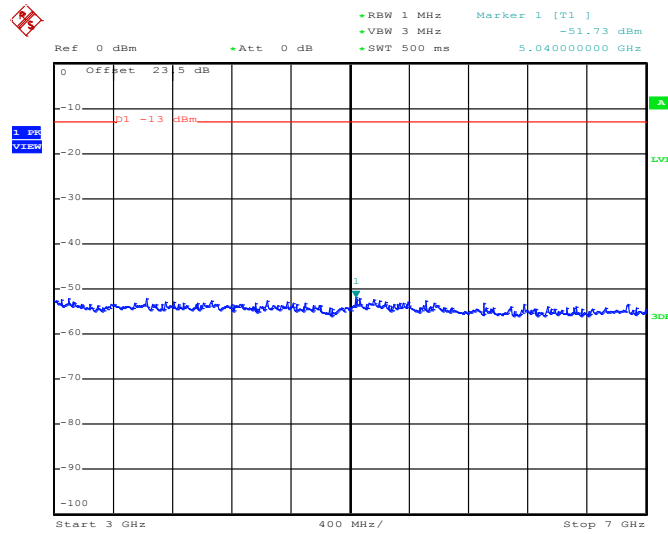
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 24.JUN.2014 17:43:47

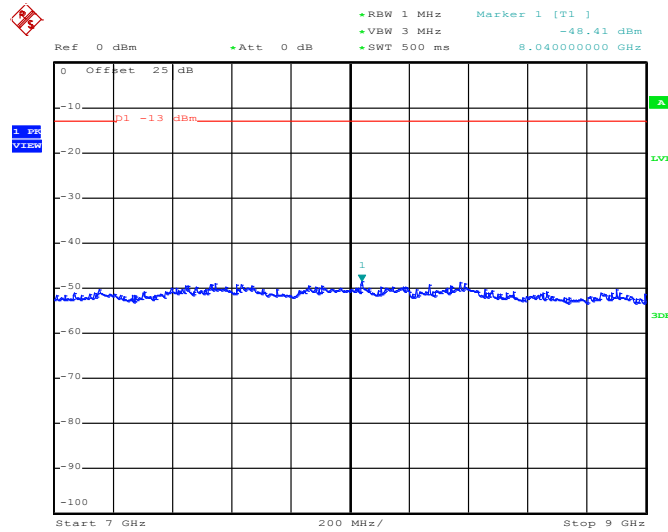


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 24.JUN.2014 17:43:55

### Conducted Spurious Emission Plot between 7GHz ~ 9GHz



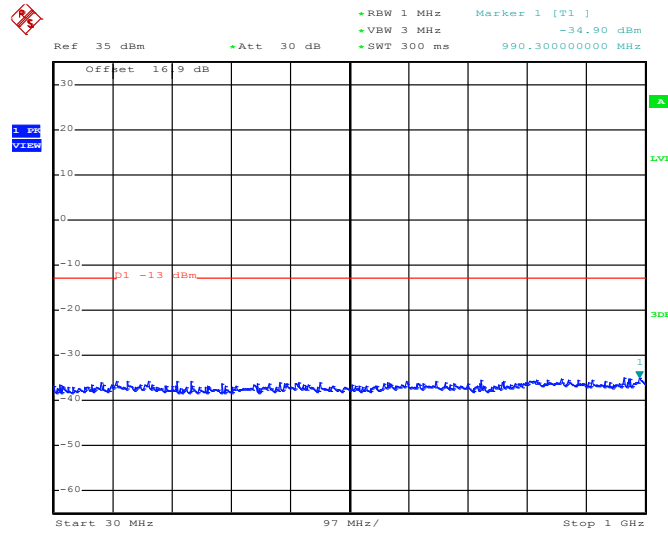
Date: 24.JUN.2014 17:44:04





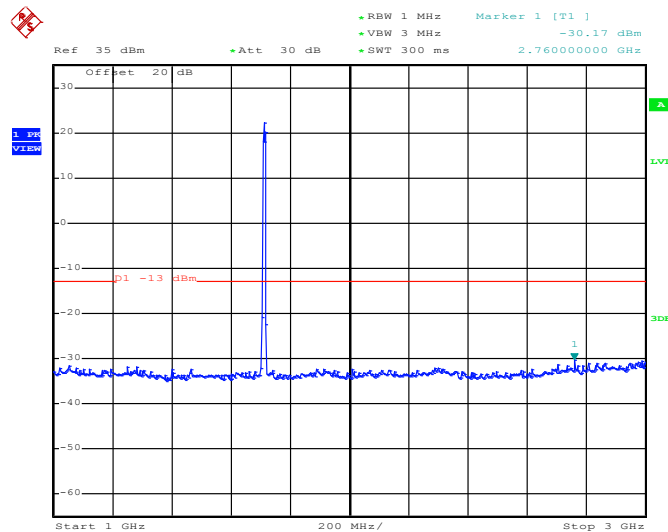
Band :	WCDMA Band IV	Channel :	CH1312
Test Mode :	RMC 12.2Kbps Link (QPSK)	Frequency :	1712.4 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 24.JUN.2014 15:17:48

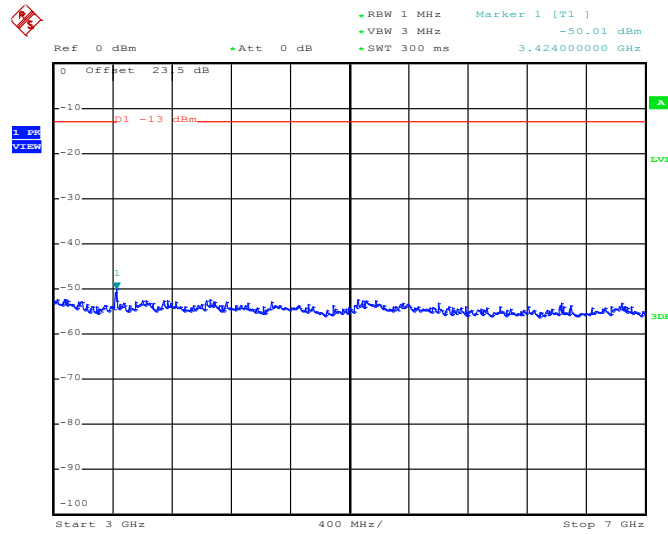
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 24.JUN.2014 15:17:56

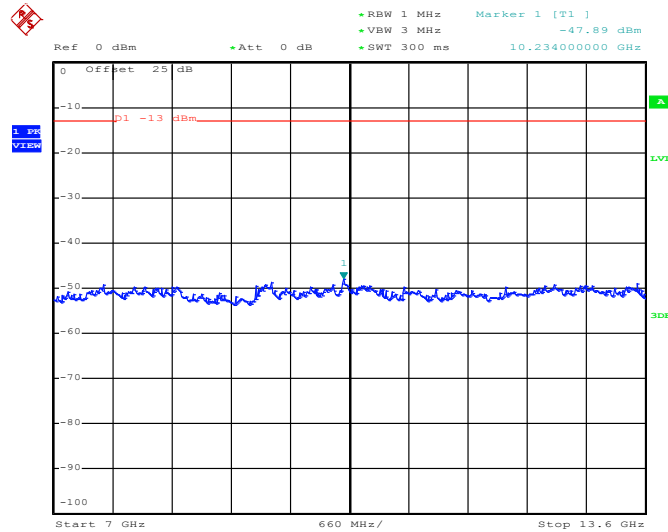


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 24.JUN.2014 15:18:07

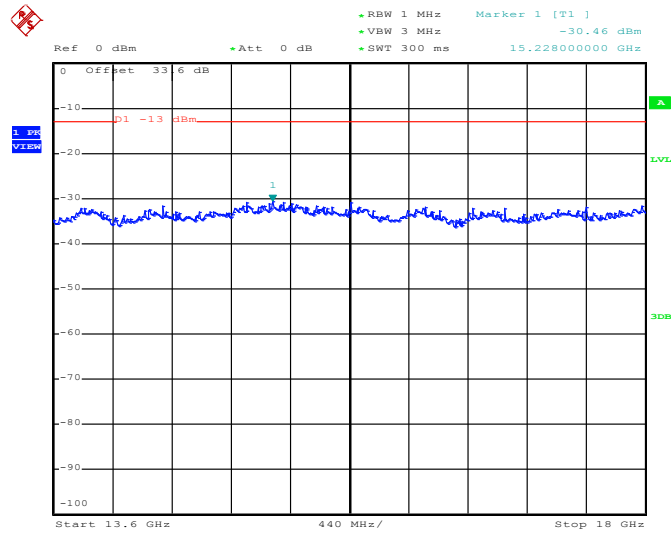
### Conducted Spurious Emission Plot between 7GHz ~ 13.6GHz



Date: 24.JUN.2014 15:18:15



Conducted Spurious Emission Plot between 13.6GHz ~ 18GHz

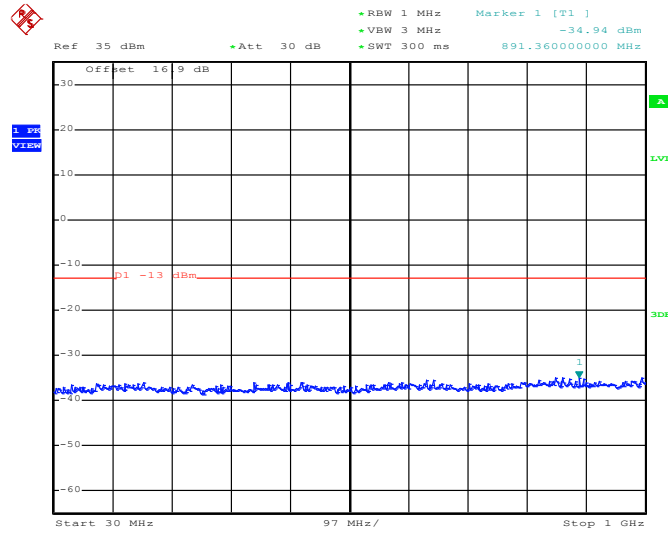


Date: 24.JUN.2014 15:18:24



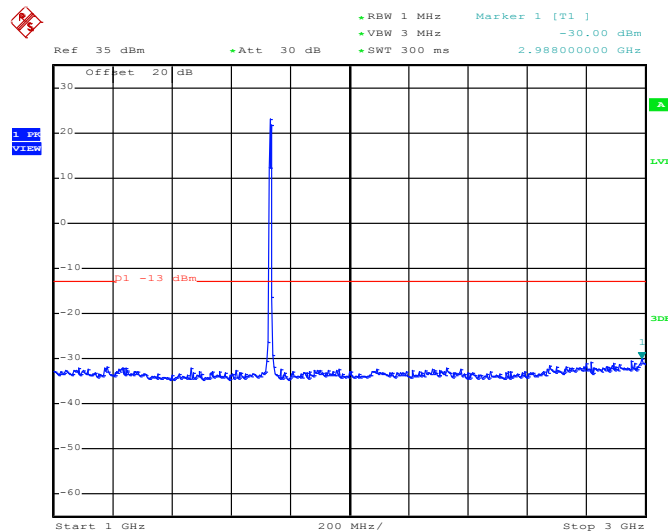
Band :	WCDMA Band IV	Channel :	CH1413
Test Mode :	RMC 12.2Kbps Link (QPSK)	Frequency :	1732.6 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 24.JUN.2014 15:16:25

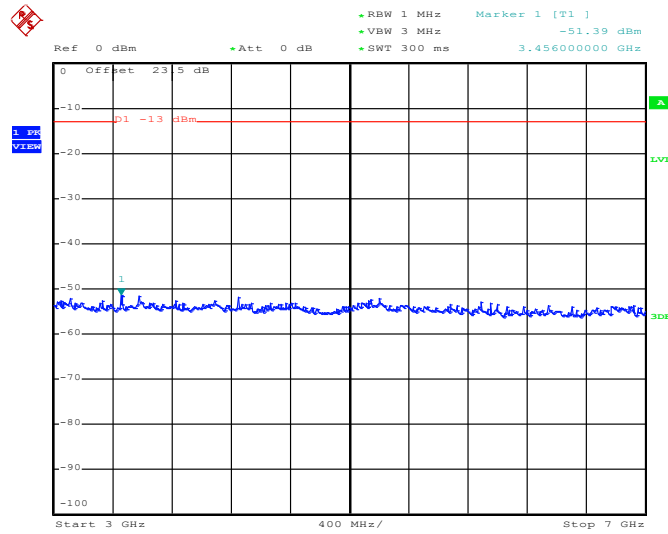
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 24.JUN.2014 15:16:34

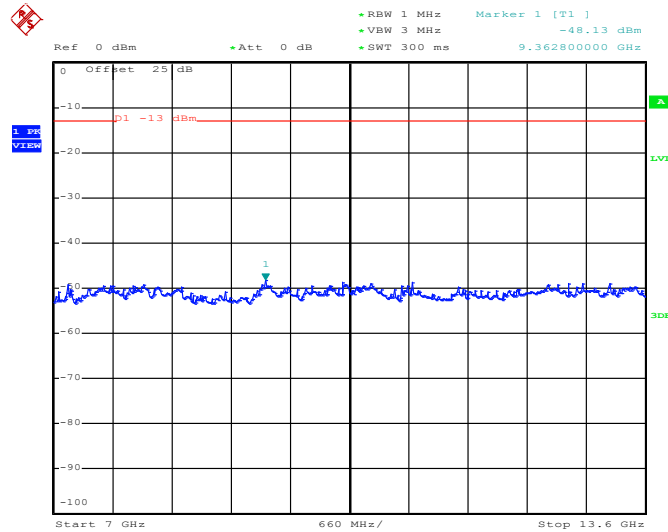


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 24.JUN.2014 15:16:45

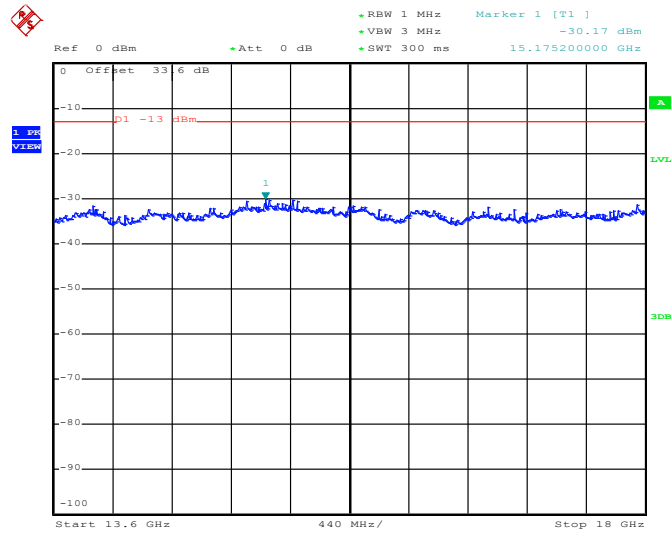
### Conducted Spurious Emission Plot between 7GHz ~ 13.6GHz



Date: 24.JUN.2014 15:16:53



Conducted Spurious Emission Plot between 13.6GHz ~ 18GHz

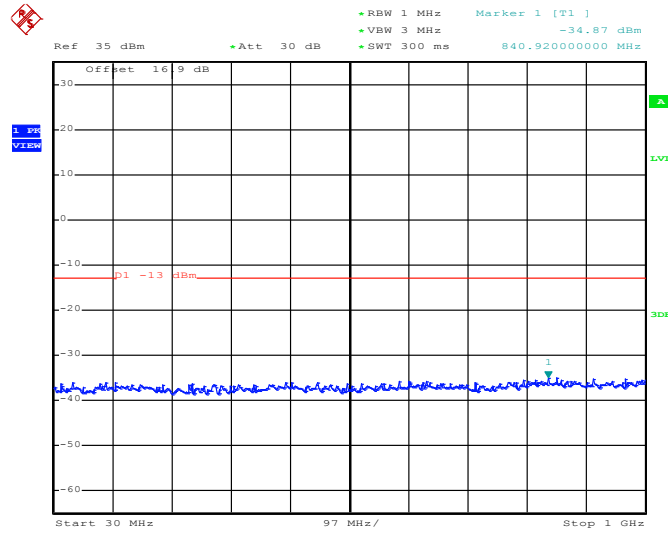


Date: 24.JUN.2014 15:17:01



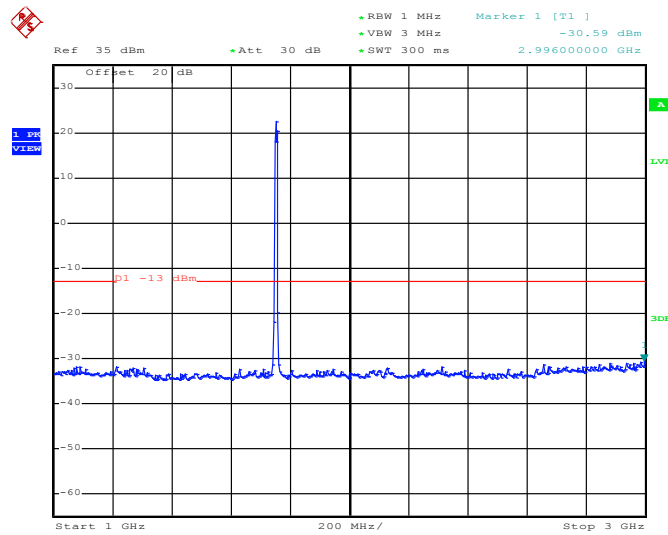
<b>Band :</b>	WCDMA Band IV	<b>Channel :</b>	CH1513
<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)	<b>Frequency :</b>	1752.6 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 24.JUN.2014 15:19:28

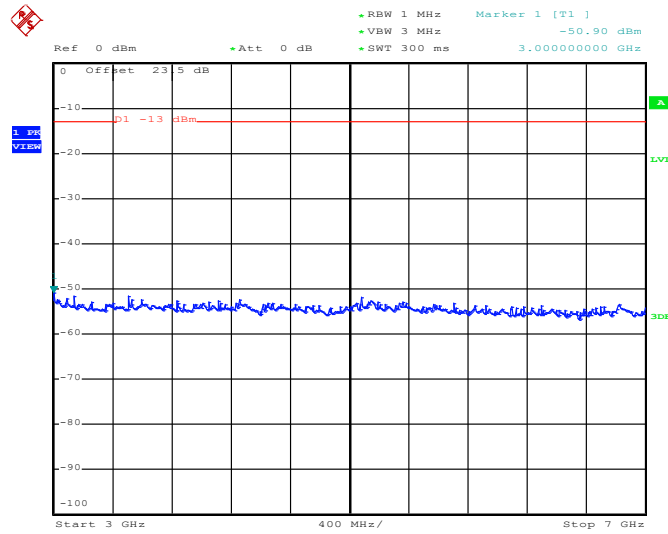
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 24.JUN.2014 15:19:36

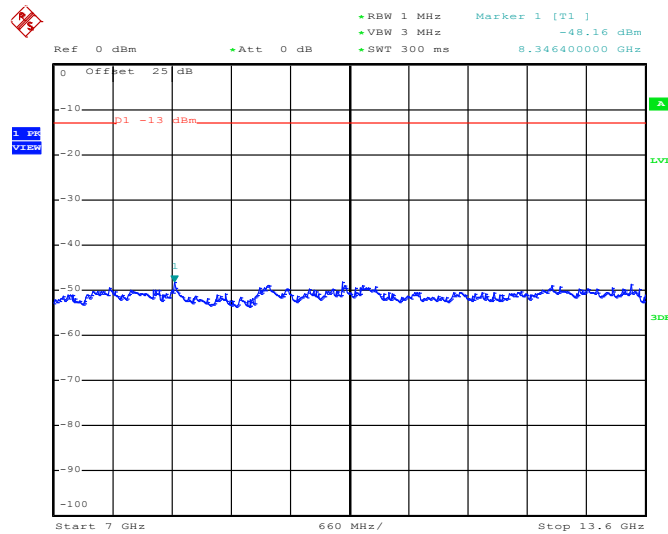


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 24.JUN.2014 15:19:47

### Conducted Spurious Emission Plot between 7GHz ~ 13.6GHz

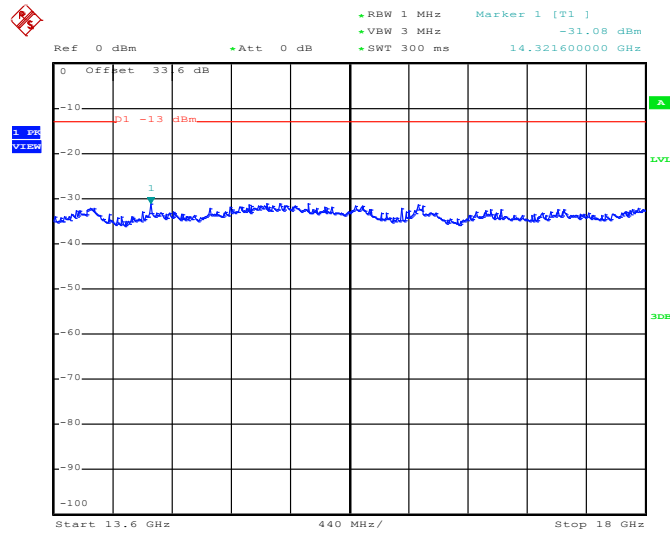


Date: 24.JUN.2014 15:19:55





Conducted Spurious Emission Plot between 13.6GHz ~ 18GHz

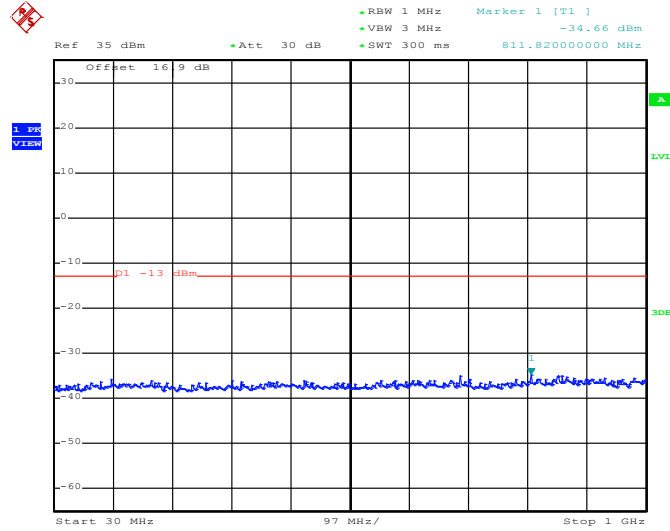


Date: 24.JUN.2014 15:20:04



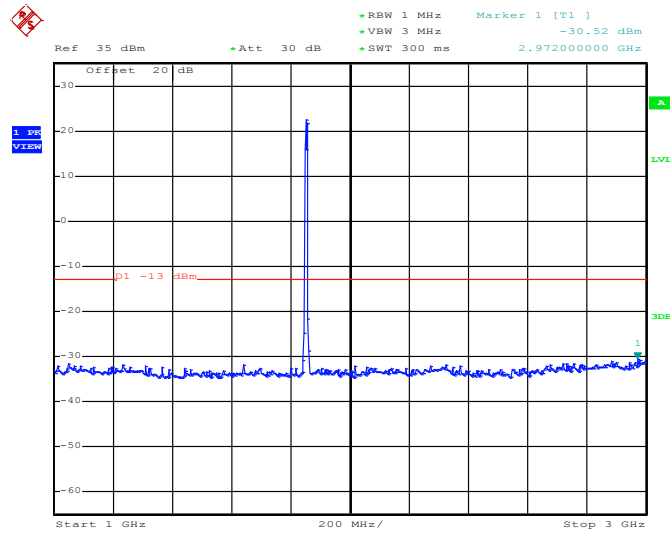
<b>Band :</b>	WCDMA Band II	<b>Channel :</b>	CH9262
<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)	<b>Frequency :</b>	1852.4 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 24.JUN.2014 14:21:11

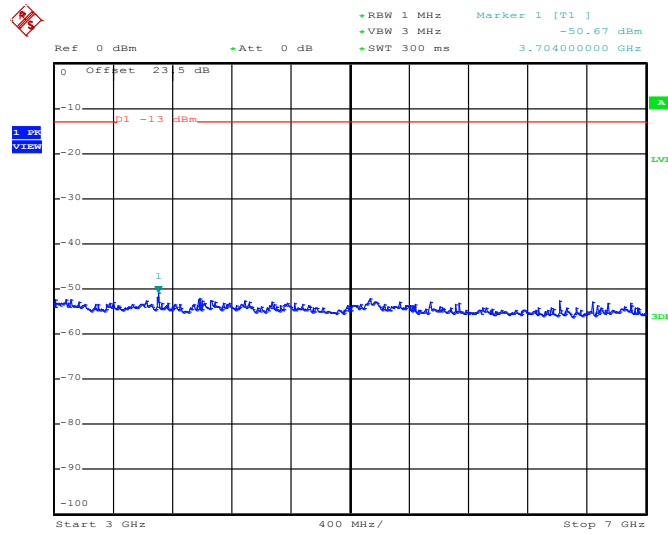
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 24.JUN.2014 14:21:20

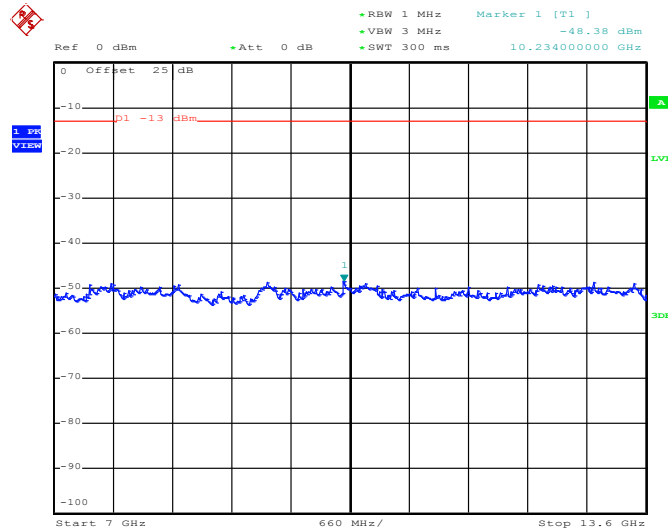


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 24.JUN.2014 14:21:31

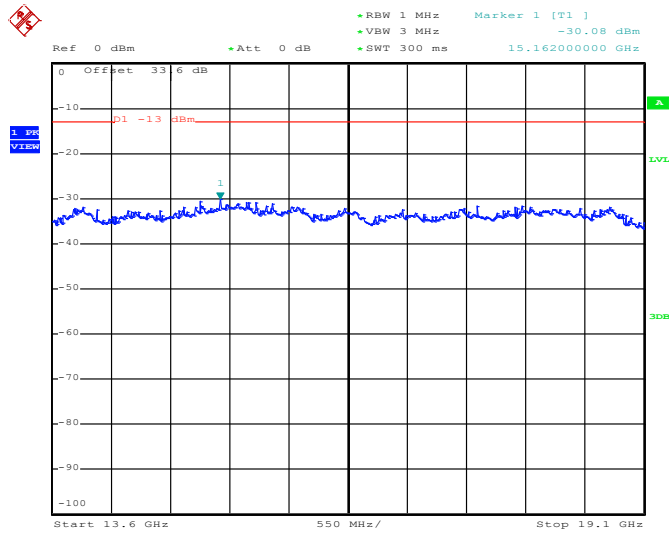
### Conducted Spurious Emission Plot between 7GHz ~ 13.6GHz



Date: 24.JUN.2014 14:21:39



Conducted Spurious Emission Plot between 13.6GHz ~ 19.1GHz

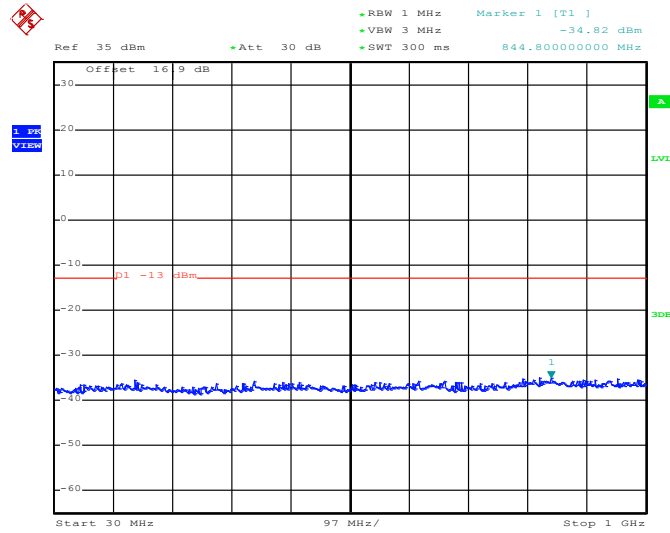


Date: 24.JUN.2014 14:21:47



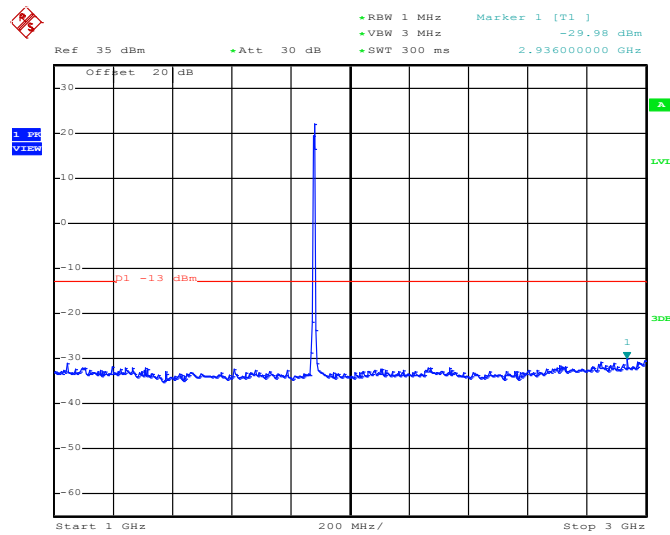
<b>Band :</b>	WCDMA Band II	<b>Channel :</b>	CH9400
<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)	<b>Frequency :</b>	1880.0 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 24.JUN.2014 14:19:53

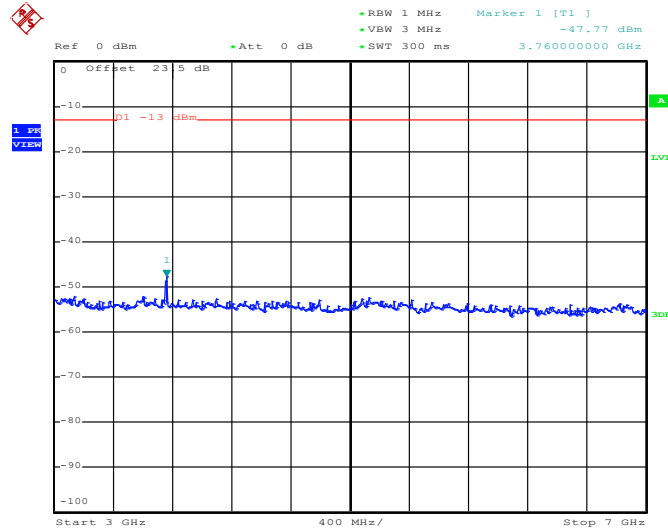
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 24.JUN.2014 14:20:01

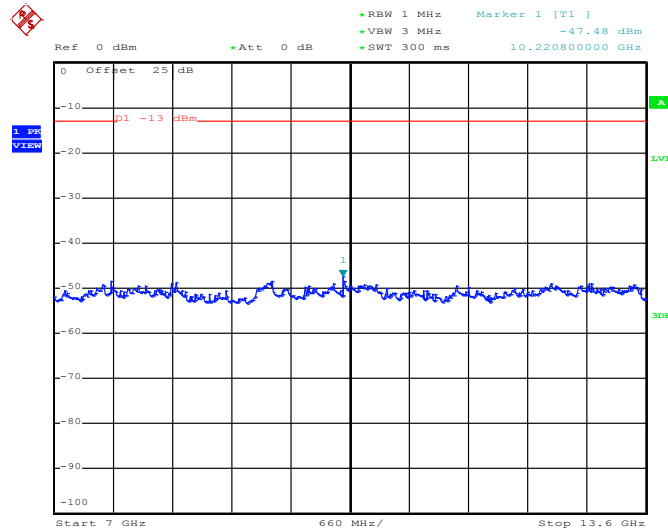


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 24.JUN.2014 14:20:12

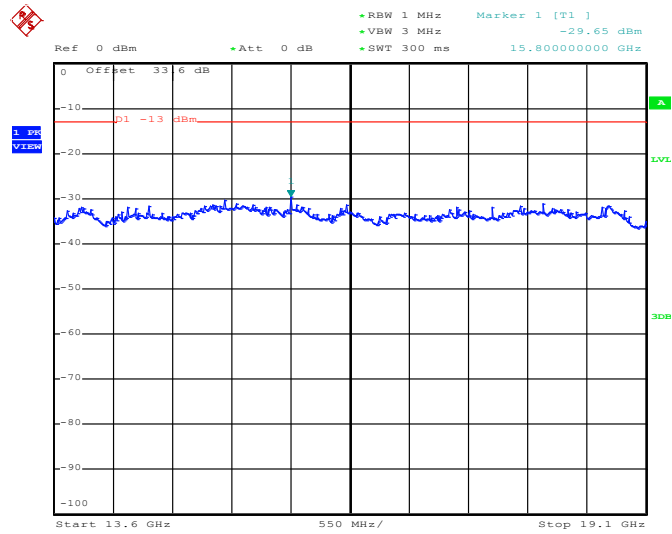
### Conducted Spurious Emission Plot between 7GHz ~ 13.6GHz



Date: 24.JUN.2014 14:20:20



Conducted Spurious Emission Plot between 13.6GHz ~ 19.1GHz

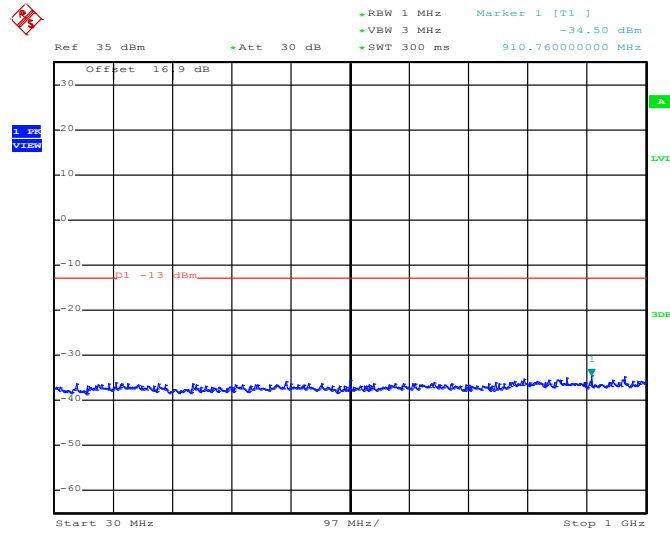


Date: 24.JUN.2014 14:20:29



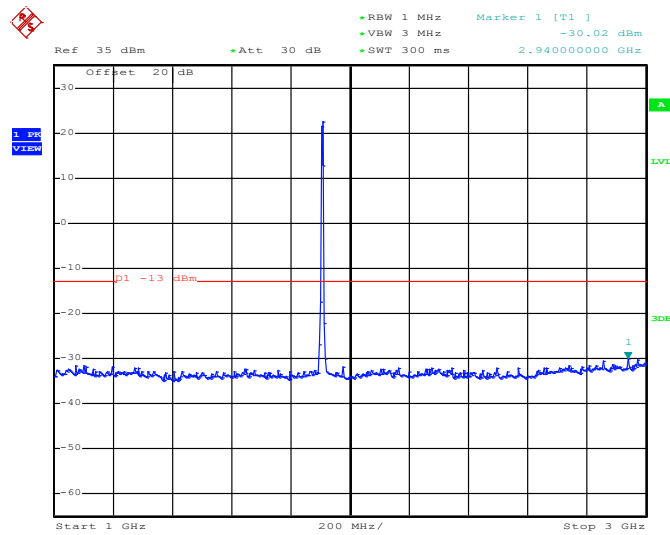
Band :	WCDMA Band II	Channel :	CH9538
Test Mode :	RMC 12.2Kbps Link (QPSK)	Frequency :	1907.6 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 24.JUN.2014 14:22:58

Conducted Spurious Emission Plot between 1GHz ~ 3GHz

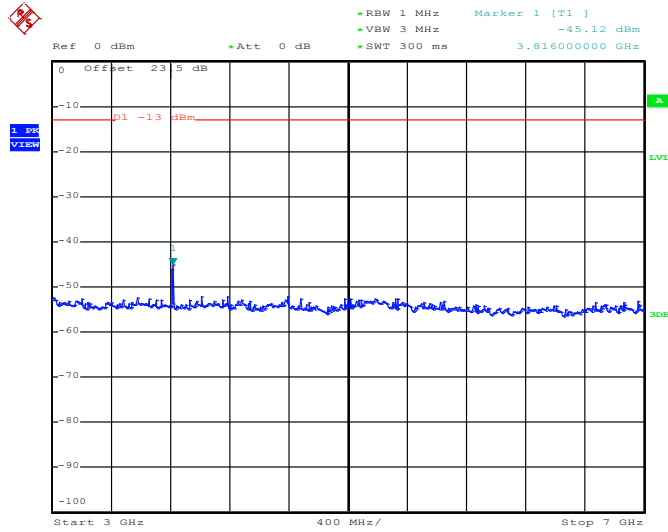


Date: 24.JUN.2014 14:23:06



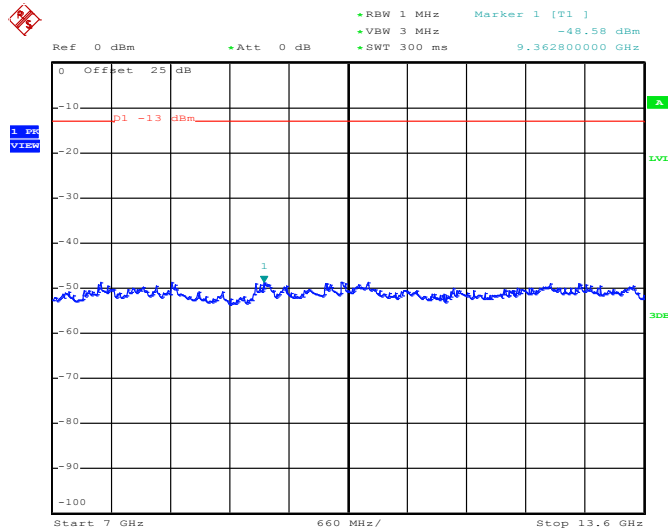


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 24.JUN.2014 14:23:17

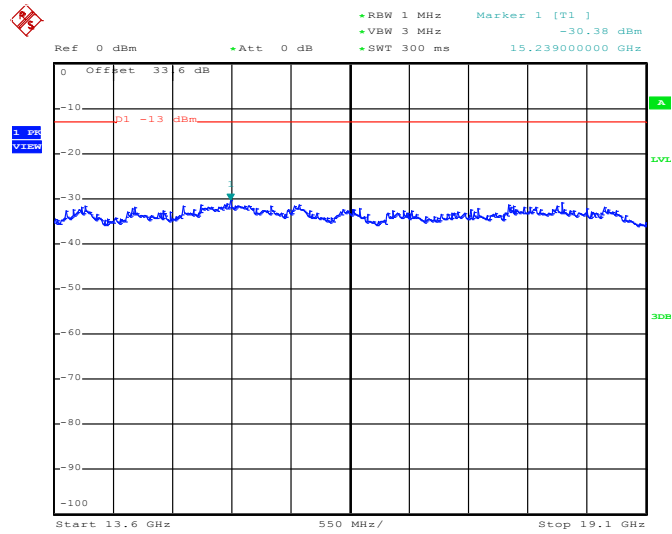
### Conducted Spurious Emission Plot between 7GHz ~ 13.6GHz



Date: 24.JUN.2014 14:23:25



Conducted Spurious Emission Plot between 13.6GHz ~ 19.1GHz

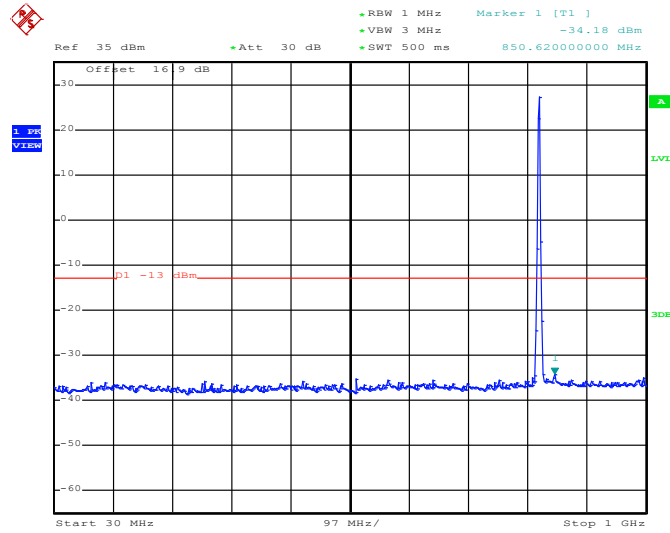


Date: 24.JUN.2014 14:23:33



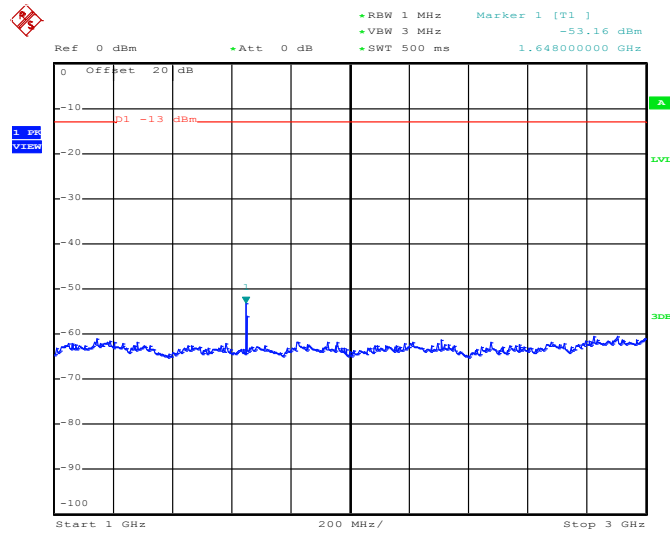
<b>Band :</b>	CDMA2000 BC0	<b>Channel :</b>	CH1013
<b>Test Mode :</b>	1xRTT_RC3+SO55 (QPSK)	<b>Frequency :</b>	824.7 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 24.JUN.2014 20:11:52

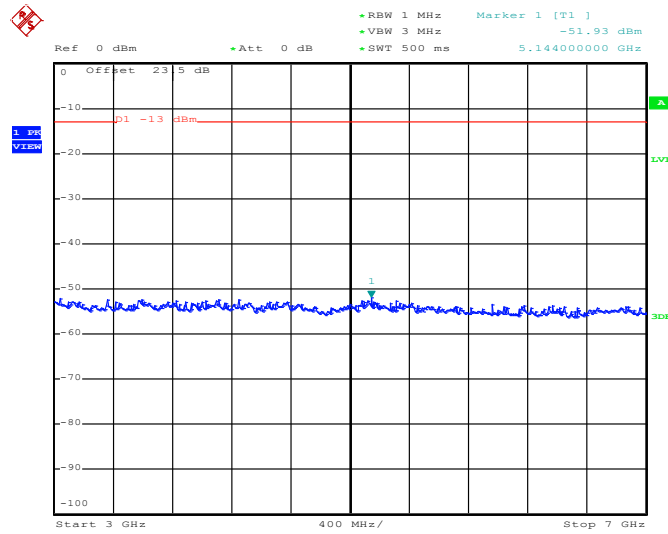
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 24.JUN.2014 20:12:05

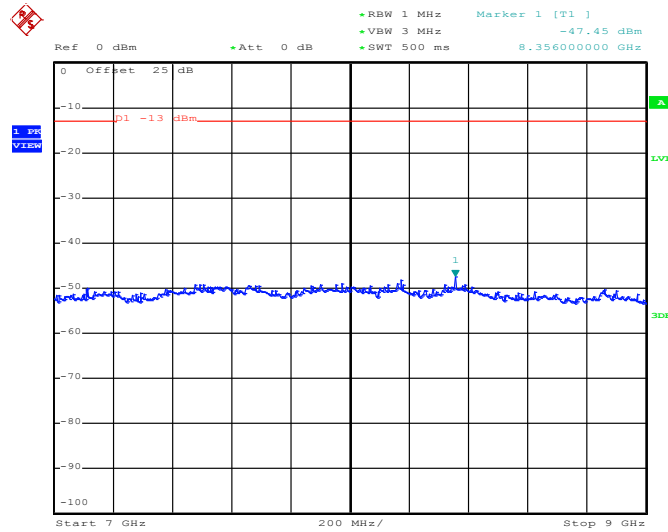


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 24.JUN.2014 20:12:13

### Conducted Spurious Emission Plot between 7GHz ~ 9GHz

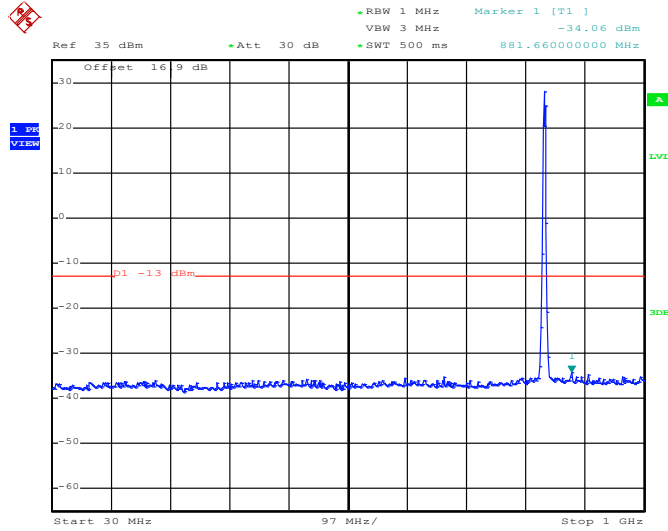


Date: 24.JUN.2014 20:12:22



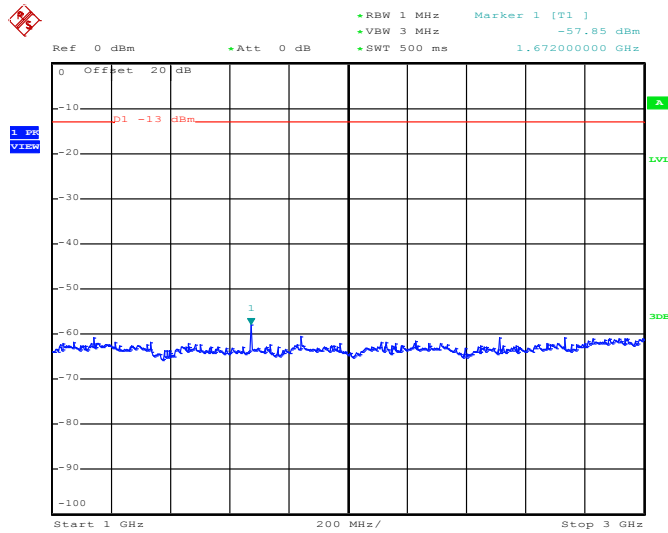
Band :	CDMA2000 BC0	Channel :	CH384
Test Mode :	1xRTT_RC3+SO55 (QPSK)	Frequency :	836.52 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 24.JUN.2014 20:10:10

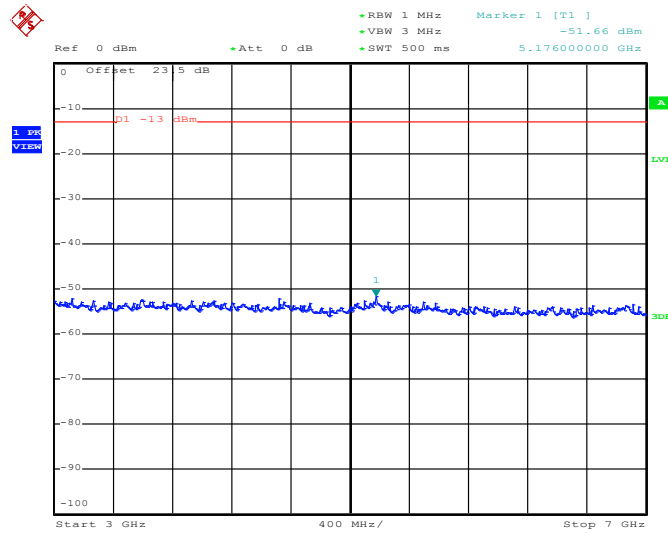
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 24.JUN.2014 20:10:36

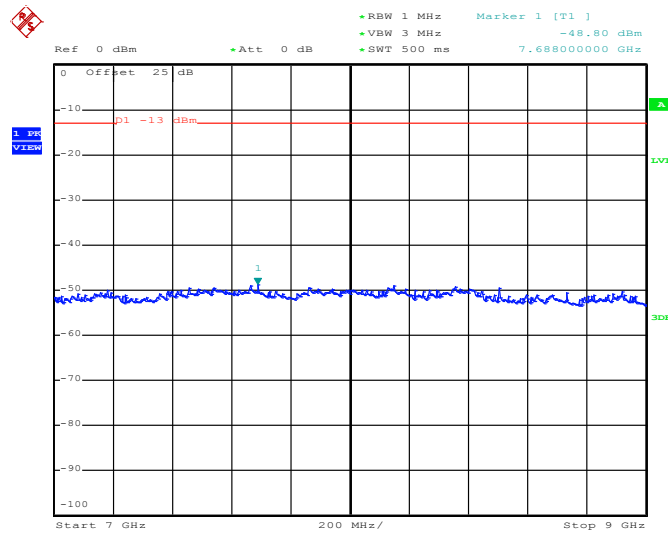


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 24.JUN.2014 20:10:44

### Conducted Spurious Emission Plot between 7GHz ~ 9GHz

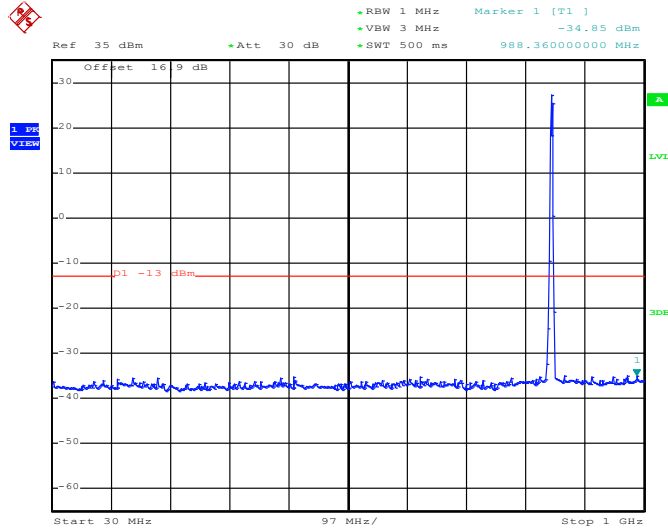


Date: 24.JUN.2014 20:10:53



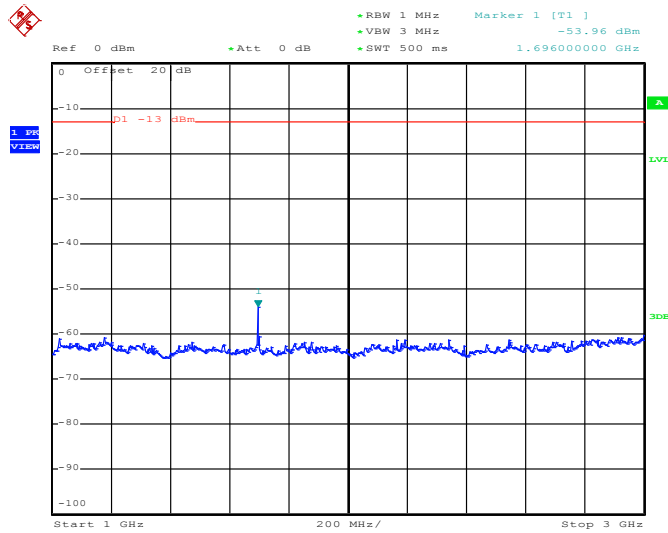
Band :	CDMA2000 BC0	Channel :	CH777
Test Mode :	1xRTT_RC3+SO55 (QPSK)	Frequency :	848.31 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 24.JUN.2014 20:15:20

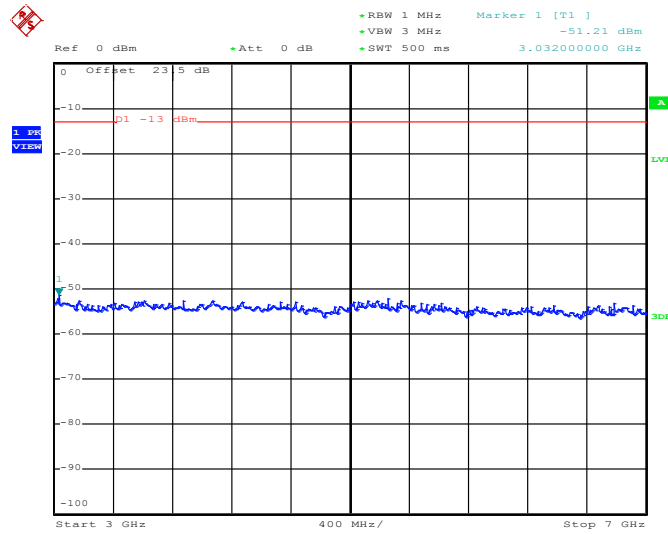
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 24.JUN.2014 20:15:32

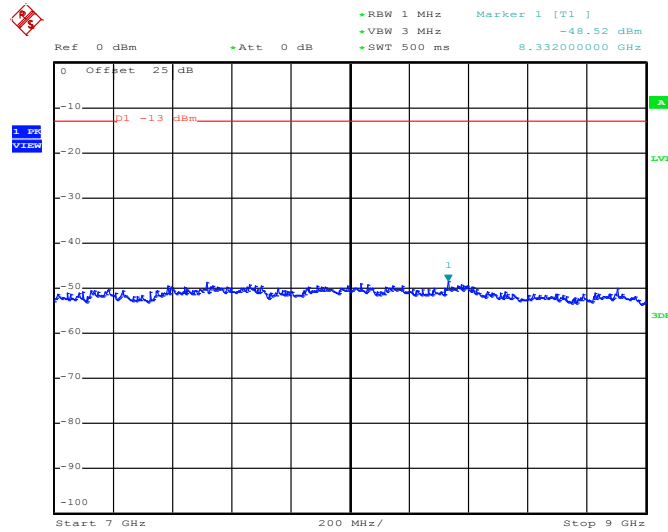


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 24.JUN.2014 20:15:41

### Conducted Spurious Emission Plot between 7GHz ~ 9GHz



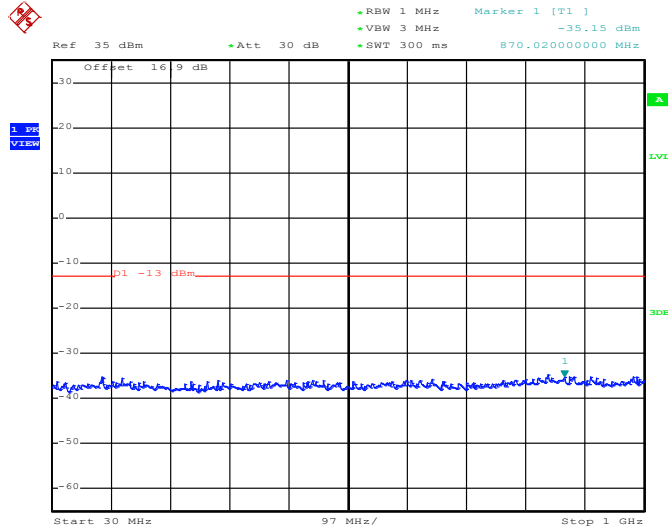
Date: 24.JUN.2014 20:15:49





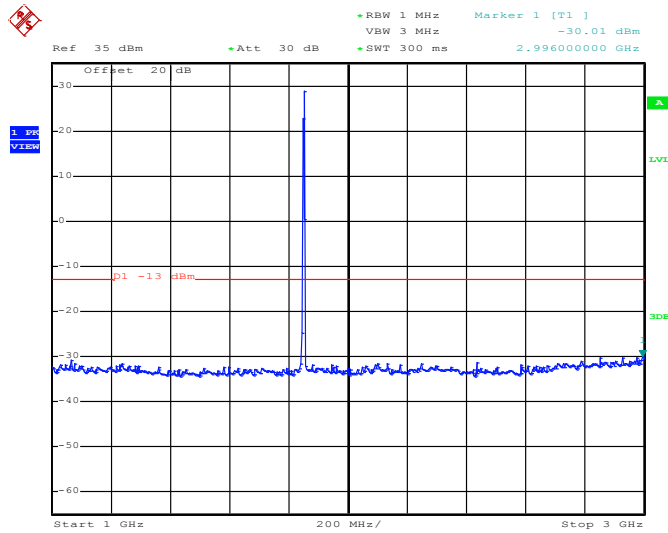
Band :	CDMA2000 BC1	Channel :	CH25
Test Mode :	1xRTT_RC3+SO55 (QPSK)	Frequency :	1851.25 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 24.JUN.2014 19:17:24

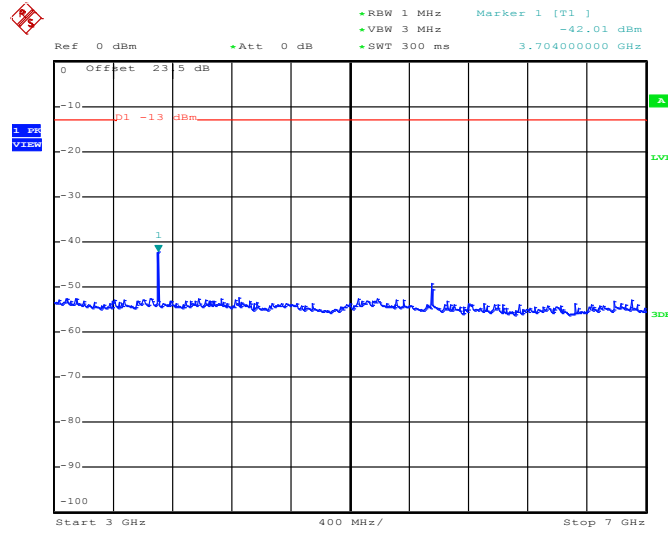
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 24.JUN.2014 19:17:23

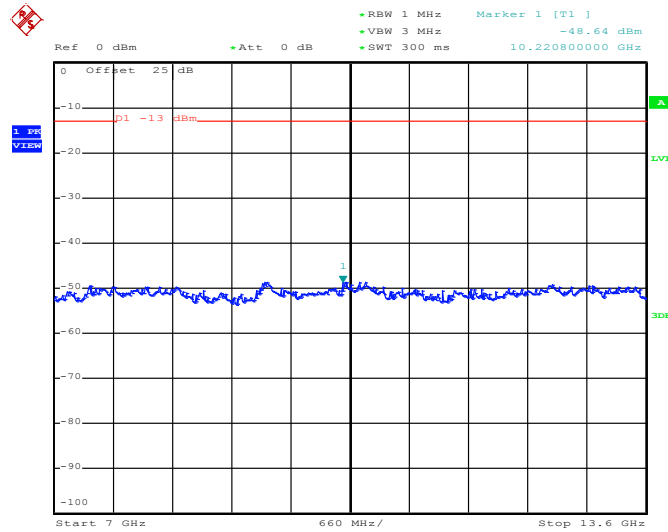


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 24.JUN.2014 19:17:43

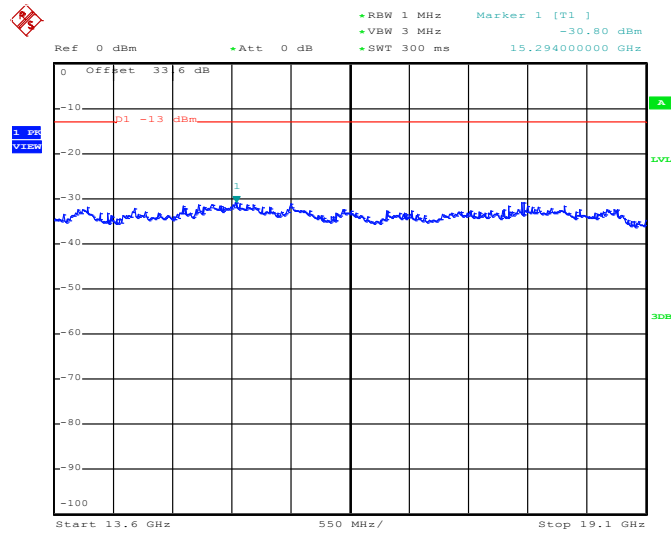
### Conducted Spurious Emission Plot between 7GHz ~ 13.6GHz



Date: 24.JUN.2014 19:17:52



Conducted Spurious Emission Plot between 13.6GHz ~ 19.1GHz

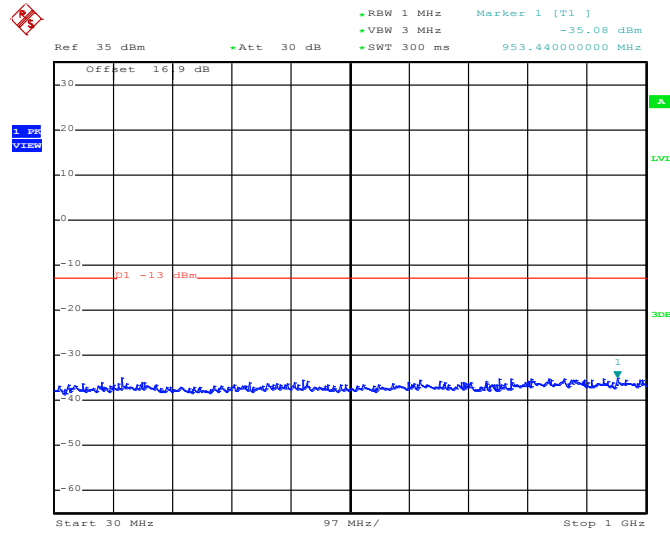


Date: 24.JUN.2014 19:18:00



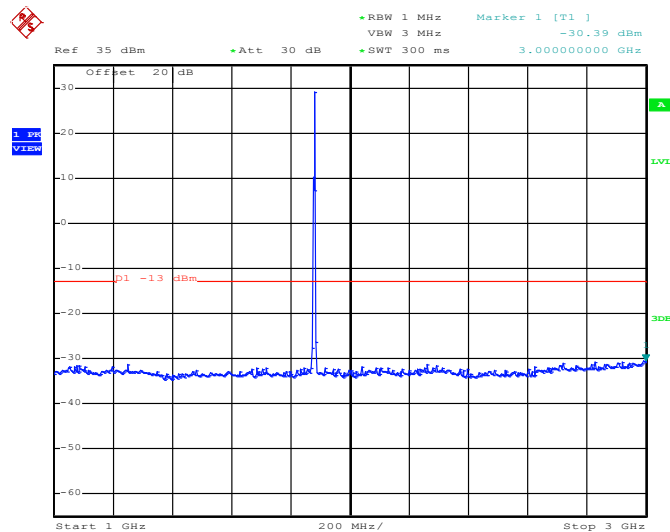
<b>Band :</b>	CDMA2000 BC1	<b>Channel :</b>	CH600
<b>Test Mode :</b>	1xRTT_RC3+SO55 (QPSK)	<b>Frequency :</b>	1880.0 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 24.JUN.2014 19:15:54

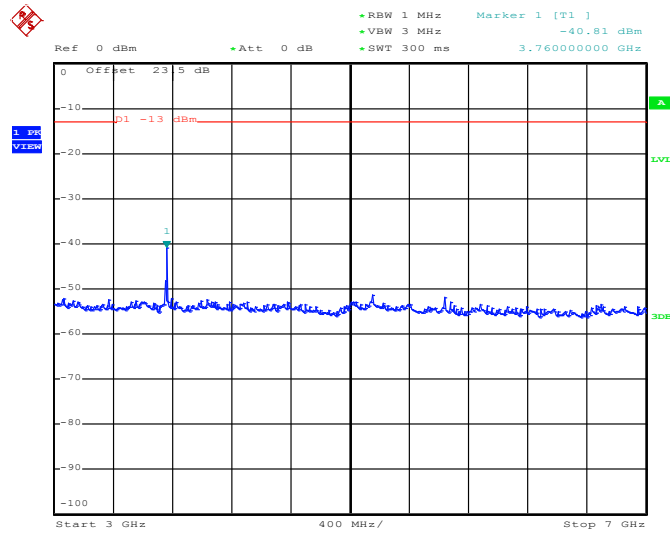
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 24.JUN.2014 19:16:12

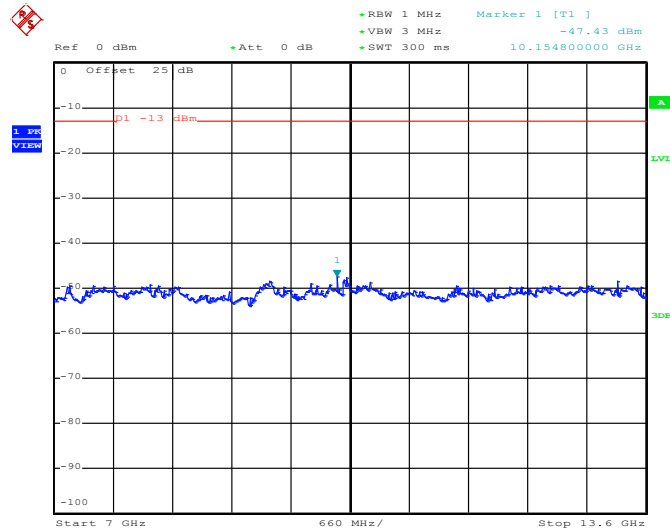


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 24.JUN.2014 19:16:15

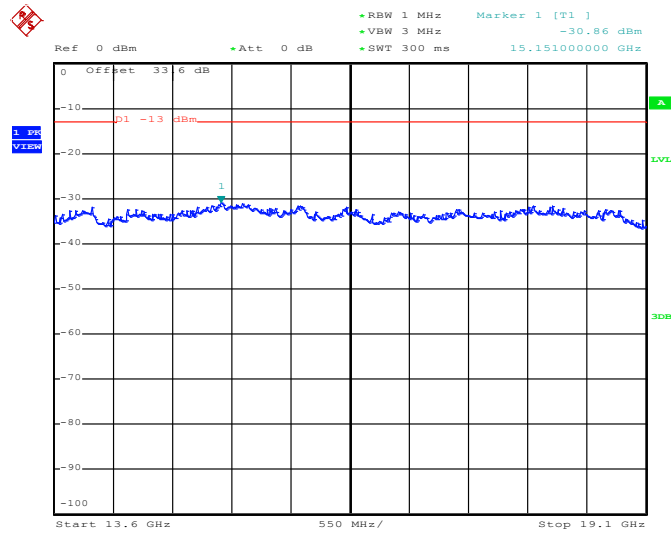
### Conducted Spurious Emission Plot between 7GHz ~ 13.6GHz



Date: 24.JUN.2014 19:16:24



Conducted Spurious Emission Plot between 13.6GHz ~ 19.1GHz

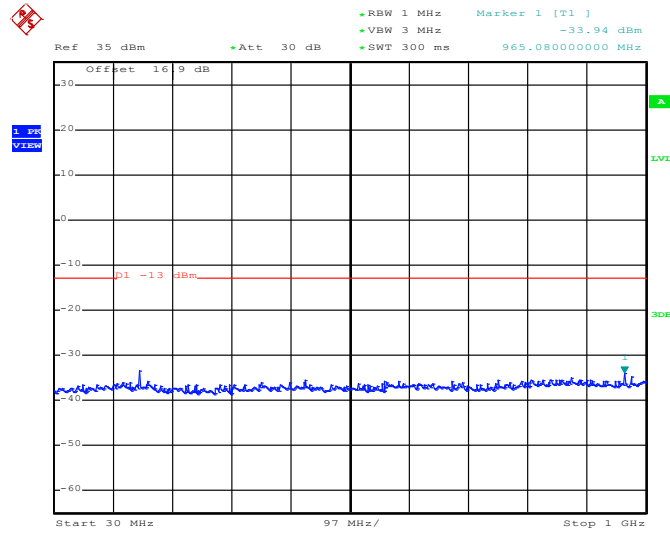


Date: 24.JUN.2014 19:16:32



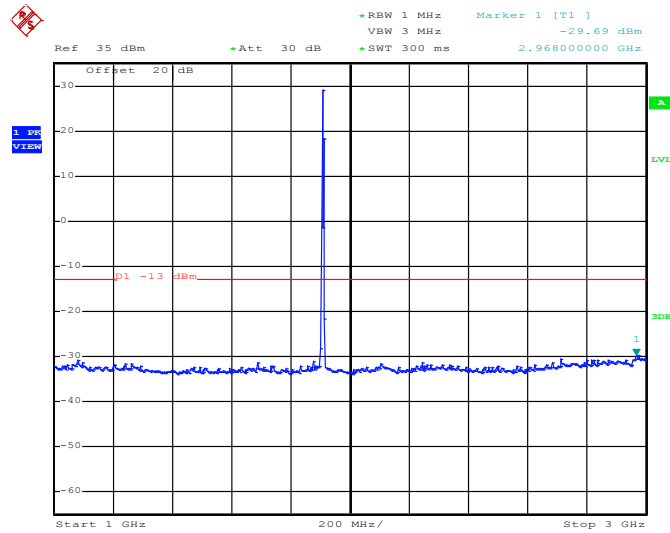
Band :	CDMA2000 BC1	Channel :	CH1175
Test Mode :	1xRTT_RC3+SO55 (QPSK)	Frequency :	1908.75 MHz

Conducted Spurious Emission Plot between 30MHz ~ 1GHz



Date: 24.JUN.2014 19:19:50

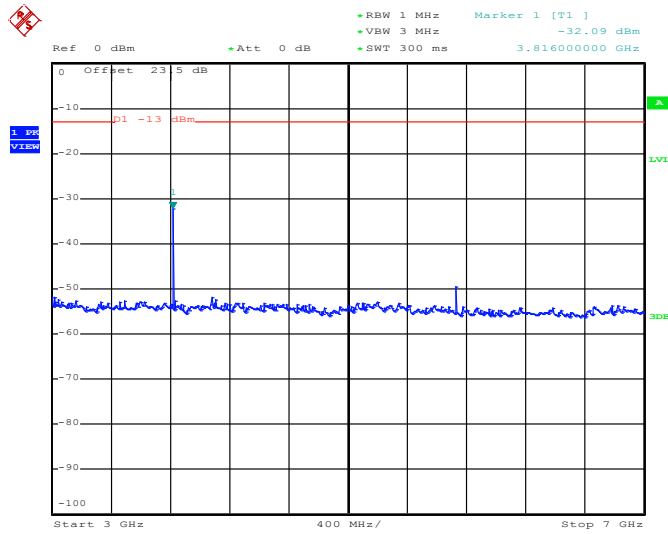
Conducted Spurious Emission Plot between 1GHz ~ 3GHz



Date: 24.JUN.2014 19:19:51

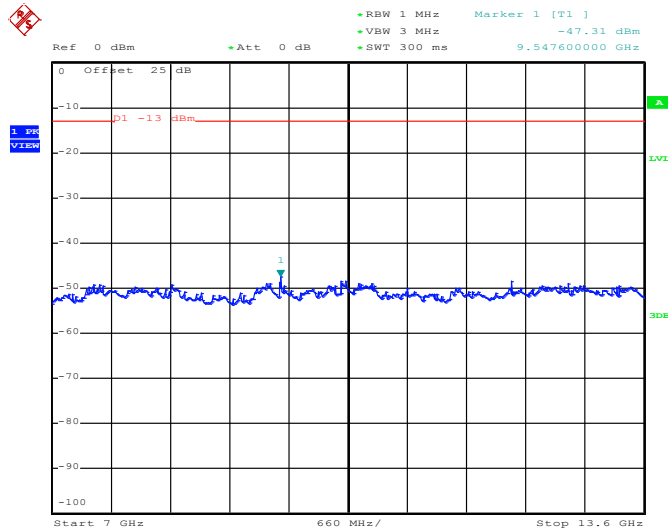


### Conducted Spurious Emission Plot between 3GHz ~ 7GHz



Date: 24.JUN.2014 19:20:10

### Conducted Spurious Emission Plot between 7GHz ~ 13.6GHz

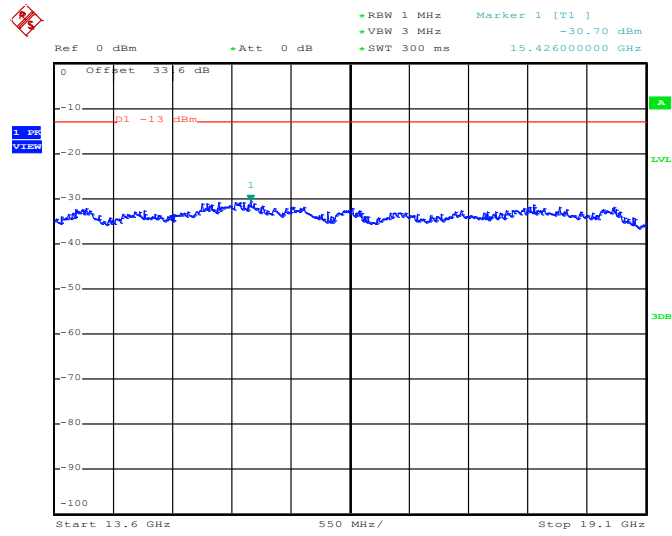


Date: 24.JUN.2014 19:20:18





Conducted Spurious Emission Plot between 13.6GHz ~ 19.1GHz



Date: 24.JUN.2014 19:20:27



### 3.7 Field Strength of Spurious Radiation Measurement

#### 3.7.1 Description of Field Strength of Spurious Radiated Measurement

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

#### 3.7.2 Measuring Instruments

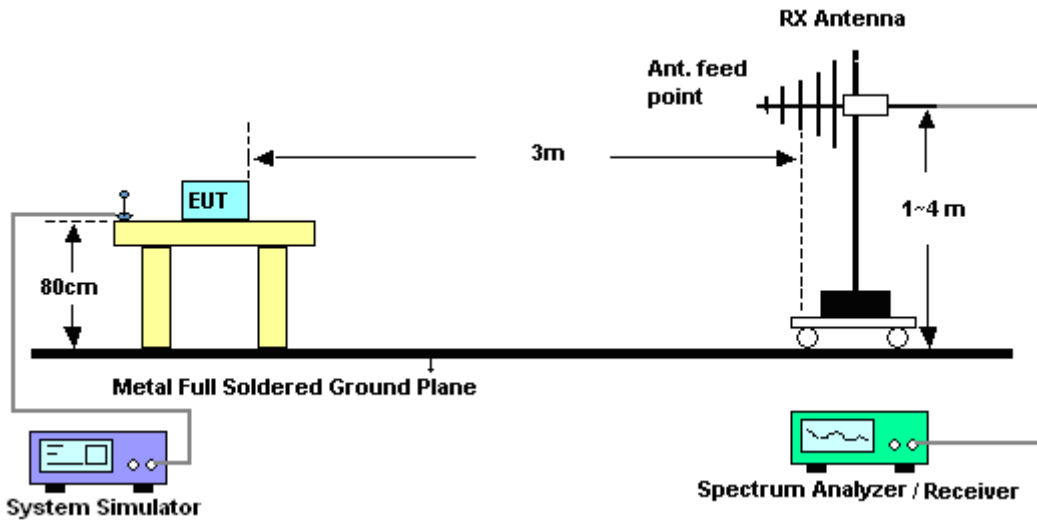
The measuring equipment is listed in the section 4 of this test report.

#### 3.7.3 Test Procedures

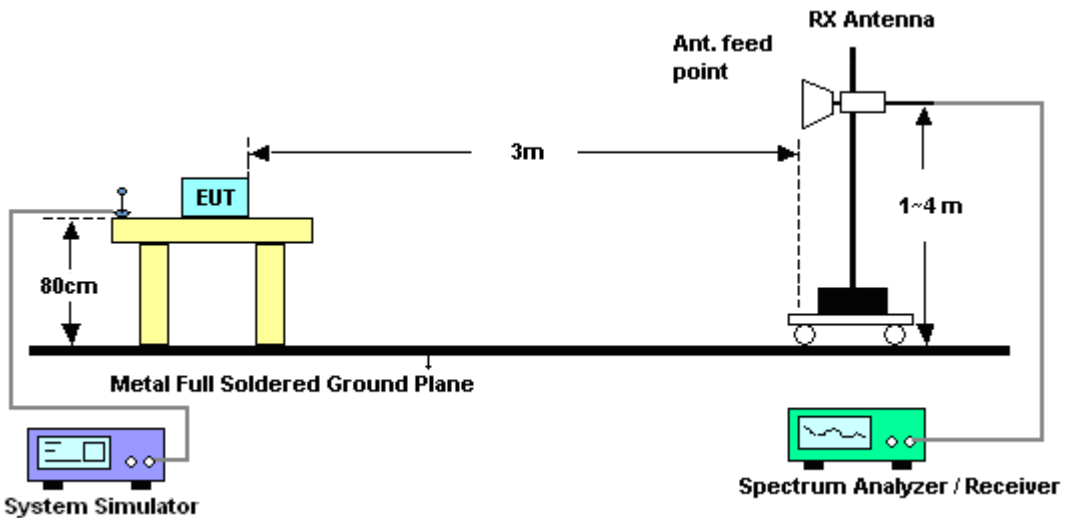
1. The testing follows FCC KDB 971168 v02r01 Section 5.8 and ANSI / TIA-603-C-2004 Section 2.2.12.
2. The EUT was placed on a rotatable wooden table 0.8 meters above the ground.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between one meter and four meters to search for the maximum spurious emission for both horizontal and vertical polarizations.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11.  $EIRP (dBm) = S.G. Power - Tx Cable Loss + Tx Antenna Gain$
12.  $ERP (dBm) = EIRP - 2.15$
13. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
14. The limit line is derived from  $43 + 10\log(P)$  dB below the transmitter power P(Watts)  
=  $P(W) - [43 + 10\log(P)] (dB)$   
=  $[30 + 10\log(P)] (dBm) - [43 + 10\log(P)] (dB)$   
= -13dBm.

### 3.7.4 Test Setup

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz





3.7.5 Test Result of Field Strength of Spurious Radiated

<Low Channel>

<b>Band :</b>	GSM850		<b>Temperature :</b>	23~25°C					
<b>Test Mode :</b>	GSM Link (GMSK)		<b>Relative Humidity :</b>	44~48%					
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu		<b>Polarization :</b>	Horizontal					
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1649	-54.00	-13	-41.00	-62.77	-58	1.53	5.53	H	Pass
2474	-53.61	-13	-40.61	-66.41	-57.7	2.06	6.15	H	Pass
3298	-53.75	-13	-40.75	-67.84	-59.2	2.48	7.93	H	Pass

<b>Band :</b>	GSM850		<b>Temperature :</b>	23~25°C					
<b>Test Mode :</b>	GSM Link (GMSK)		<b>Relative Humidity :</b>	44~48%					
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu		<b>Polarization :</b>	Vertical					
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1649	-47.10	-13	-34.10	-58.72	-51.1	1.53	5.53	V	Pass
2474	-53.11	-13	-40.11	-66.63	-57.2	2.06	6.15	V	Pass
3298	-53.05	-13	-40.05	-68.58	-58.5	2.48	7.93	V	Pass



<Middle Channel>

<b>Band :</b>	GSM850		<b>Temperature :</b>	23~25°C					
<b>Test Mode :</b>	GSM Link (GMSK)		<b>Relative Humidity :</b>	44~48%					
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu		<b>Polarization :</b>	Horizontal					
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1672	-46.53	-13	-33.53	-55.89	-50.4	1.62	5.49	H	Pass
2509	-53.68	-13	-40.68	-66.97	-57.8	2.1	6.22	H	Pass
3345	-53.76	-13	-40.76	-67.86	-58.8	3.03	8.07	H	Pass

<b>Band :</b>	GSM850		<b>Temperature :</b>	23~25°C					
<b>Test Mode :</b>	GSM Link (GMSK)		<b>Relative Humidity :</b>	44~48%					
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu		<b>Polarization :</b>	Vertical					
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1672	-41.13	-13	-28.13	-52.31	-45	1.62	5.49	V	Pass
2509	-53.08	-13	-40.08	-67.24	-57.2	2.1	6.22	V	Pass
3345	-52.26	-13	-39.26	-68.13	-57.3	3.03	8.07	V	Pass



<High Channel>

<b>Band :</b>	GSM850		<b>Temperature :</b>	23~25°C					
<b>Test Mode :</b>	GSM Link (GMSK)		<b>Relative Humidity :</b>	44~48%					
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu		<b>Polarization :</b>	Horizontal					
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1696	-54.32	-13	-41.32	-63.74	-58.2	1.57	5.45	H	Pass
2544	-47.44	-13	-34.44	-60.88	-51.7	2.02	6.28	H	Pass
3393	-53.70	-13	-40.70	-68.08	-59.6	2.3	8.20	H	Pass

<b>Band :</b>	GSM850		<b>Temperature :</b>	23~25°C					
<b>Test Mode :</b>	GSM Link (GMSK)		<b>Relative Humidity :</b>	44~48%					
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu		<b>Polarization :</b>	Vertical					
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1696	-46.92	-13	-33.92	-58.37	-50.8	1.57	5.45	V	Pass
2544	-46.34	-13	-33.34	-60.31	-50.6	2.02	6.28	V	Pass
3393	-52.80	-13	-39.80	-68.26	-58.7	2.3	8.20	V	Pass



<Low Channel>

<b>Band :</b>	GSM850				<b>Temperature :</b>	23~25°C			
<b>Test Mode :</b>	EDGE class 8 Link (8PSK)				<b>Relative Humidity :</b>	44~48%			
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu				<b>Polarization :</b>	Horizontal			
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1648	-53.90	-13	-40.90	-62.8	-57.9	1.53	5.53	H	Pass
2474	-53.51	-13	-40.51	-66.65	-57.6	2.06	6.15	H	Pass
3298	-53.45	-13	-40.45	-68.49	-58.9	2.48	7.93	H	Pass

<b>Band :</b>	GSM850				<b>Temperature :</b>	23~25°C			
<b>Test Mode :</b>	EDGE class 8 Link (8PSK)				<b>Relative Humidity :</b>	44~48%			
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu				<b>Polarization :</b>	Vertical			
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1648	-47.40	-13	-34.40	-58.7	-51.4	1.53	5.53	V	Pass
2474	-53.11	-13	-40.11	-67.02	-57.2	2.06	6.15	V	Pass
3298	-52.55	-13	-39.55	-68.06	-58	2.48	7.93	V	Pass



<Middle Channel>

<b>Band :</b>	GSM850				<b>Temperature :</b>	23~25°C			
<b>Test Mode :</b>	EDGE class 8 Link (8PSK)				<b>Relative Humidity :</b>	44~48%			
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu				<b>Polarization :</b>	Horizontal			
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1672	-51.93	-13	-38.93	-61.03	-55.8	1.62	5.49	H	Pass
2509	-53.18	-13	-40.18	-66.69	-57.3	2.1	6.22	H	Pass
3345	-53.96	-13	-40.96	-68.22	-59	3.03	8.07	H	Pass

<b>Band :</b>	GSM850				<b>Temperature :</b>	23~25°C			
<b>Test Mode :</b>	EDGE class 8 Link (8PSK)				<b>Relative Humidity :</b>	44~48%			
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu				<b>Polarization :</b>	Vertical			
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1672	-43.63	-13	-30.63	-55.14	-47.5	1.62	5.49	V	Pass
2509	-53.28	-13	-40.28	-67.37	-57.4	2.1	6.22	V	Pass
3345	-52.06	-13	-39.06	-67.86	-57.1	3.03	8.07	V	Pass





<High Channel>

<b>Band :</b>	GSM850				<b>Temperature :</b>	23~25°C			
<b>Test Mode :</b>	EDGE class 8 Link (8PSK)				<b>Relative Humidity :</b>	44~48%			
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu				<b>Polarization :</b>	Horizontal			
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1696	-57.12	-13	-44.12	-66.92	-61	1.57	5.45	H	Pass
2544	-53.54	-13	-40.54	-66.96	-57.8	2.02	6.28	H	Pass
3393	-54.10	-13	-41.10	-68.24	-60	2.3	8.20	H	Pass

<b>Band :</b>	GSM850				<b>Temperature :</b>	23~25°C			
<b>Test Mode :</b>	EDGE class 8 Link (8PSK)				<b>Relative Humidity :</b>	44~48%			
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu				<b>Polarization :</b>	Vertical			
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1696	-52.02	-13	-39.02	-63.4	-55.9	1.57	5.45	V	Pass
2544	-53.84	-13	-40.84	-67.85	-58.1	2.02	6.28	V	Pass
3393	-52.40	-13	-39.40	-68.02	-58.3	2.3	8.20	V	Pass



<Low Channel>

<b>Band :</b>	GSM1900				<b>Temperature :</b>	23~25°C			
<b>Test Mode :</b>	GSM Link (GMSK)				<b>Relative Humidity :</b>	44~48%			
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu				<b>Polarization :</b>	Horizontal			
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3700	-53.75	-13	-40.75	-68.92	-59.9	2.59	8.74	H	Pass
5548	-38.84	-13	-25.84	-59.14	-46.5	3.04	10.70	H	Pass
7400	-41.26	-13	-28.26	-68.85	-50	3.28	12.02	H	Pass

<b>Band :</b>	GSM1900				<b>Temperature :</b>	23~25°C			
<b>Test Mode :</b>	GSM Link (GMSK)				<b>Relative Humidity :</b>	44~48%			
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu				<b>Polarization :</b>	Vertical			
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3700	-51.75	-13	-38.75	-68.12	-57.9	2.59	8.74	V	Pass
5548	-43.04	-13	-30.04	-63.42	-50.7	3.04	10.70	V	Pass
7400	-41.86	-13	-28.86	-69.09	-50.6	3.28	12.02	V	Pass



<Middle Channel>

<b>Band :</b>	GSM1900		<b>Temperature :</b>	23~25°C					
<b>Test Mode :</b>	GSM Link (GMSK)		<b>Relative Humidity :</b>	44~48%					
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu		<b>Polarization :</b>	Horizontal					
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3760	-51.90	-13	-38.90	-67.29	-58.2	2.51	8.81	H	Pass
5639	-36.49	-13	-23.49	-57.56	-44.2	2.99	10.70	H	Pass
7520	-42.57	-13	-29.57	-69.97	-51.1	3.59	12.12	H	Pass

<b>Band :</b>	GSM1900		<b>Temperature :</b>	23~25°C					
<b>Test Mode :</b>	GSM Link (GMSK)		<b>Relative Humidity :</b>	44~48%					
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu		<b>Polarization :</b>	Vertical					
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3760	-51.60	-13	-38.60	-67.86	-57.9	2.51	8.81	V	Pass
5639	-40.39	-13	-27.39	-61.2	-48.1	2.99	10.70	V	Pass
7520	-42.37	-13	-29.37	-69.42	-50.9	3.59	12.12	V	Pass



<High Channel>

<b>Band :</b>	GSM1900		<b>Temperature :</b>	23~25°C					
<b>Test Mode :</b>	GSM Link (GMSK)		<b>Relative Humidity :</b>	44~48%					
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu		<b>Polarization :</b>	Horizontal					
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3820	-51.89	-13	-38.89	-66.96	-58.3	2.47	8.88	H	Pass
5730	-39.20	-13	-26.20	-60.54	-46.9	3	10.70	H	Pass
7640	-42.32	-13	-29.32	-68.84	-51.1	3.43	12.21	H	Pass

<b>Band :</b>	GSM1900		<b>Temperature :</b>	23~25°C					
<b>Test Mode :</b>	GSM Link (GMSK)		<b>Relative Humidity :</b>	44~48%					
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu		<b>Polarization :</b>	Vertical					
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3820	-50.09	-13	-37.09	-66.82	-56.5	2.47	8.88	V	Pass
5730	-40.20	-13	-27.20	-61.37	-47.9	3	10.70	V	Pass
7640	-42.72	-13	-29.72	-68.84	-51.5	3.43	12.21	V	Pass



<Low Channel>

<b>Band :</b>	GSM1900					<b>Temperature :</b>	23~25°C		
<b>Test Mode :</b>	EDGE class 8 Link (8PSK)					<b>Relative Humidity :</b>	44~48%		
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu					<b>Polarization :</b>	Horizontal		
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3700	-54.05	-13	-41.05	-69.24	-60.2	2.59	8.74	H	Pass
5550	-47.44	-13	-34.44	-67.8	-55.1	3.04	10.70	H	Pass
7400	-42.16	-13	-29.16	-69.76	-50.9	3.28	12.02	H	Pass

<b>Band :</b>	GSM1900					<b>Temperature :</b>	23~25°C		
<b>Test Mode :</b>	EDGE class 8 Link (8PSK)					<b>Relative Humidity :</b>	44~48%		
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu					<b>Polarization :</b>	Vertical		
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3700	-53.05	-13	-40.05	-69.06	-59.2	2.59	8.74	V	Pass
5550	-48.14	-13	-35.14	-68.67	-55.8	3.04	10.70	V	Pass
7400	-42.36	-13	-29.36	-69.45	-51.1	3.28	12.02	V	Pass



<Middle Channel>

<b>Band :</b>	GSM1900				<b>Temperature :</b>	23~25°C			
<b>Test Mode :</b>	EDGE class 8 Link (8PSK)				<b>Relative Humidity :</b>	44~48%			
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu				<b>Polarization :</b>	Horizontal			
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3760	-53.20	-13	-40.20	-68.55	-59.5	2.51	8.81	H	Pass
5639	-43.39	-13	-30.39	-64.41	-51.1	2.99	10.70	H	Pass
7520	-42.67	-13	-29.67	-69.75	-51.2	3.59	12.12	H	Pass

<b>Band :</b>	GSM1900				<b>Temperature :</b>	23~25°C			
<b>Test Mode :</b>	EDGE class 8 Link (8PSK)				<b>Relative Humidity :</b>	44~48%			
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu				<b>Polarization :</b>	Vertical			
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3760	-52.10	-13	-39.10	-68.64	-58.4	2.51	8.81	V	Pass
5639	-44.69	-13	-31.69	-65.39	-52.4	2.99	10.70	V	Pass
7520	-42.27	-13	-29.27	-69.29	-50.8	3.59	12.12	V	Pass



<High Channel>

<b>Band :</b>	GSM1900	<b>Temperature :</b>	23~25°C						
<b>Test Mode :</b>	EDGE class 8 Link (8PSK)	<b>Relative Humidity :</b>	44~48%						
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu	<b>Polarization :</b>	Horizontal						
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3819	-52.39	-13	-39.39	-67.92	-58.8	2.47	8.88	H	Pass
5729	-45.60	-13	-32.60	-66.91	-53.3	3	10.70	H	Pass
7639	-42.42	-13	-29.42	-68.99	-51.2	3.43	12.21	H	Pass

<b>Band :</b>	GSM1900	<b>Temperature :</b>	23~25°C						
<b>Test Mode :</b>	EDGE class 8 Link (8PSK)	<b>Relative Humidity :</b>	44~48%						
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu	<b>Polarization :</b>	Vertical						
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3819	-50.89	-13	-37.89	-67.46	-57.3	2.47	8.88	V	Pass
5729	-47.40	-13	-34.40	-68.31	-55.1	3	10.70	V	Pass
7639	-41.32	-13	-28.32	-67.71	-50.1	3.43	12.21	V	Pass



<Low Channel>

<b>Band :</b>	WCDMA Band V		<b>Temperature :</b>	23~25°C					
<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)		<b>Relative Humidity :</b>	44~48%					
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu		<b>Polarization :</b>	Horizontal					
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1652	-57.50	-13	-44.50	-66.38	-61.5	1.53	5.53	H	Pass
2479	-53.81	-13	-40.81	-67.04	-57.9	2.06	6.15	H	Pass
3305	-53.45	-13	-40.45	-67.88	-58.9	2.48	7.93	H	Pass

<b>Band :</b>	WCDMA Band V		<b>Temperature :</b>	23~25°C					
<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)		<b>Relative Humidity :</b>	44~48%					
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu		<b>Polarization :</b>	Vertical					
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1652	-55.10	-13	-42.10	-66.21	-59.1	1.53	5.53	V	Pass
2479	-53.31	-13	-40.31	-66.65	-57.4	2.06	6.15	V	Pass
3305	-52.35	-13	-39.35	-67.91	-57.8	2.48	7.93	V	Pass





<Middle Channel>

<b>Band :</b>	WCDMA Band V					<b>Temperature :</b>	23~25°C		
<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)					<b>Relative Humidity :</b>	44~48%		
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu					<b>Polarization :</b>	Horizontal		
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1672	-56.83	-13	-43.83	-66.12	-60.7	1.62	5.49	H	Pass
2509	-53.88	-13	-40.88	-67.09	-58	2.1	6.22	H	Pass
3345	-53.66	-13	-40.66	-67.87	-58.7	3.03	8.07	H	Pass

<b>Band :</b>	WCDMA Band V					<b>Temperature :</b>	23~25°C		
<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)					<b>Relative Humidity :</b>	44~48%		
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu					<b>Polarization :</b>	Vertical		
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1672	-55.03	-13	-42.03	-66.34	-58.9	1.62	5.49	V	Pass
2509	-52.98	-13	-39.98	-66.83	-57.1	2.1	6.22	V	Pass
3345	-52.16	-13	-39.16	-67.83	-57.2	3.03	8.07	V	Pass



<High Channel>

<b>Band :</b>	WCDMA Band V					<b>Temperature :</b>	23~25°C		
<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)					<b>Relative Humidity :</b>	44~48%		
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu					<b>Polarization :</b>	Horizontal		
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1696	-47.52	-13	-34.52	-57.08	-51.4	1.57	5.45	H	Pass
2540	-54.14	-13	-41.14	-67.45	-58.4	2.02	6.28	H	Pass
3387	-53.50	-13	-40.50	-67.7	-59.4	2.3	8.20	H	Pass

<b>Band :</b>	WCDMA Band V					<b>Temperature :</b>	23~25°C		
<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)					<b>Relative Humidity :</b>	44~48%		
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu					<b>Polarization :</b>	Vertical		
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1696	-39.62	-13	-26.62	-50.82	-43.5	1.57	5.45	V	Pass
2540	-53.34	-13	-40.34	-67.44	-57.6	2.02	6.28	V	Pass
3387	-51.40	-13	-38.40	-67.2	-57.3	2.3	8.20	V	Pass



<Low Channel>

<b>Band :</b>	WCDMA Band IV					<b>Temperature :</b>	23~25°C		
<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)					<b>Relative Humidity :</b>	44~48%		
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu					<b>Polarization :</b>	Horizontal		
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3424	-51.99	-13	-38.99	-66.89	-55.82	4.48	8.31	H	Pass
5136	-48.35	-13	-35.35	-68.44	-52.99	5.332	9.98	H	Pass
6850	-41.12	-13	-28.12	-68.64	-46.36	6.1	11.34	H	Pass

<b>Band :</b>	WCDMA Band IV					<b>Temperature :</b>	23~25°C		
<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)					<b>Relative Humidity :</b>	44~48%		
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu					<b>Polarization :</b>	Vertical		
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3424	-50.38	-13	-37.38	-66.57	-54.21	4.48	8.31	V	Pass
5136	-45.39	-13	-32.39	-68.68	-50.03	5.332	9.98	V	Pass
6850	-40.59	-13	-27.59	-68.57	-45.83	6.1	11.34	V	Pass



<Middle Channel>

<b>Band :</b>	WCDMA Band IV					<b>Temperature :</b>	23~25°C		
<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)					<b>Relative Humidity :</b>	44~48%		
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu					<b>Polarization :</b>	Horizontal		
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3462	-52.50	-13	-39.50	-67.76	-56.33	4.48	8.31	H	Pass
5197	-50.29	-13	-37.29	-68.89	-54.93	5.332	9.98	H	Pass
6930	-41.01	-13	-28.01	-68.32	-46.25	6.1	11.34	H	Pass

<b>Band :</b>	WCDMA Band IV					<b>Temperature :</b>	23~25°C		
<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)					<b>Relative Humidity :</b>	44~48%		
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu					<b>Polarization :</b>	Vertical		
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3465	-51.31	-13	-38.31	-67.29	-55.14	4.48	8.31	V	Pass
5197	-48.63	-13	-35.63	-69.01	-53.27	5.332	9.98	V	Pass
6927	-39.59	-13	-26.59	-68.45	-44.83	6.1	11.34	V	Pass



<High Channel>

<b>Band :</b>	WCDMA Band IV					<b>Temperature :</b>	23~25°C		
<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)					<b>Relative Humidity :</b>	44~48%		
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu					<b>Polarization :</b>	Horizontal		
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3504	-52.76	-13	-39.76	-67.41	-57.03	4.16	8.43	H	Pass
5257.5	-48.98	-13	-35.98	-68.59	-53.94	5.13	10.09	H	Pass
7015	-42.05	-13	-29.05	-68.82	-47.33	6.15	11.43	H	Pass

<b>Band :</b>	WCDMA Band IV					<b>Temperature :</b>	23~25°C		
<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)					<b>Relative Humidity :</b>	44~48%		
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu					<b>Polarization :</b>	Vertical		
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3504	-52.38	-13	-39.38	-66.97	-56.65	4.16	8.43	V	Pass
5257.5	-47.90	-13	-34.90	-69.1	-52.86	5.13	10.09	V	Pass
7015	-40.98	-13	-27.98	-68.21	-46.26	6.15	11.43	V	Pass



<Low Channel>

<b>Band :</b>	WCDMA Band II		<b>Temperature :</b>	23~25°C					
<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)		<b>Relative Humidity :</b>	44~48%					
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu		<b>Polarization :</b>	Horizontal					
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3704	-54.25	-13	-41.25	-69.19	-60.4	2.59	8.74	H	Pass
5557	-48.14	-13	-35.14	-68.92	-55.8	3.04	10.70	H	Pass
7410	-42.46	-13	-29.46	69.95	-51.2	3.28	12.02	H	Pass

<b>Band :</b>	WCDMA Band II		<b>Temperature :</b>	23~25°C					
<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)		<b>Relative Humidity :</b>	44~48%					
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu		<b>Polarization :</b>	Vertical					
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3704	-52.35	-13	-39.35	-68.96	-58.5	2.59	8.74	V	Pass
5557	-48.84	-13	-35.84	-69.19	-56.5	3.04	10.70	V	Pass
7410	-42.26	-13	-29.26	-69.46	-51	3.28	12.02	V	Pass



<Middle Channel>

<b>Band :</b>	WCDMA Band II		<b>Temperature :</b>	23~25°C					
<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)		<b>Relative Humidity :</b>	44~48%					
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu		<b>Polarization :</b>	Horizontal					
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3760	-53.30	-13	-40.30	-68.44	-59.6	2.51	8.81	H	Pass
5636	-47.89	-13	-34.89	-68.7	-55.6	2.99	10.70	H	Pass
7520	-42.17	-13	-29.17	-69.29	-50.7	3.59	12.12	H	Pass

<b>Band :</b>	WCDMA Band II		<b>Temperature :</b>	23~25°C					
<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)		<b>Relative Humidity :</b>	44~48%					
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu		<b>Polarization :</b>	Vertical					
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3760	-53.50	-13	-40.50	-69.79	-59.8	2.51	8.81	V	Pass
5636	-49.59	-13	-36.59	-70.23	-57.3	2.99	10.70	V	Pass
7520	-42.57	-13	-29.57	-69.36	-51.1	3.59	12.12	V	Pass



<High Channel>

<b>Band :</b>	WCDMA Band II				<b>Temperature :</b>	23~25°C			
<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)				<b>Relative Humidity :</b>	44~48%			
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu				<b>Polarization :</b>	Horizontal			
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3815	-51.39	-13	-38.39	-67.08	-57.8	2.47	8.88	H	Pass
5723	-47.50	-13	-34.50	-68.74	-55.2	3	10.70	H	Pass
7630	-43.02	-13	-30.02	-69.56	-51.8	3.43	12.21	H	Pass

<b>Band :</b>	WCDMA Band II				<b>Temperature :</b>	23~25°C			
<b>Test Mode :</b>	RMC 12.2Kbps Link (QPSK)				<b>Relative Humidity :</b>	44~48%			
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu				<b>Polarization :</b>	Vertical			
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3815	-50.69	-13	-37.69	-67.11	-57.1	2.47	8.88	V	Pass
5723	-48.70	-13	-35.70	-69.35	-56.4	3	10.70	V	Pass
7630	-43.62	-13	-30.62	-69.41	-52.4	3.43	12.21	V	Pass





<Low Channel>

<b>Band :</b>	CDMA2000 BC0					<b>Temperature :</b>	23~25°C		
<b>Test Mode :</b>	1xRTT_RC3+SO55 (QPSK)					<b>Relative Humidity :</b>	44~48%		
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu					<b>Polarization :</b>	Horizontal		
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1649	-57.30	-13	-44.30	-66.03	-61.3	1.53	5.53	H	Pass
2474	-54.81	-13	-41.81	-67.61	-58.9	2.06	6.15	H	Pass
3298	-54.15	-13	-41.15	-68.28	-59.6	2.48	7.93	H	Pass

<b>Band :</b>	CDMA2000 BC0					<b>Temperature :</b>	23~25°C		
<b>Test Mode :</b>	1xRTT_RC3+SO55 (QPSK)					<b>Relative Humidity :</b>	44~48%		
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu					<b>Polarization :</b>	Vertical		
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1649	-55.20	-13	-42.20	-66.05	-59.2	1.53	5.53	V	Pass
2474	-53.71	-13	-40.71	-67.08	-57.8	2.06	6.15	V	Pass
3298	-52.05	-13	-39.05	-67.33	-57.5	2.48	7.93	V	Pass



<Middle Channel>

<b>Band :</b>	CDMA2000 BC0	<b>Temperature :</b>	23~25°C						
<b>Test Mode :</b>	1xRTT_RC3+SO55 (QPSK)	<b>Relative Humidity :</b>	44~48%						
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu	<b>Polarization :</b>	Horizontal						
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1672	-57.63	-13	-44.63	-66.89	-61.5	1.62	5.49	H	Pass
2509	-53.38	-13	-40.38	-66.67	-57.5	2.1	6.22	H	Pass
3345	-53.56	-13	-40.56	-67.66	-58.6	3.03	8.07	H	Pass

<b>Band :</b>	CDMA2000 BC0	<b>Temperature :</b>	23~25°C						
<b>Test Mode :</b>	1xRTT_RC3+SO55 (QPSK)	<b>Relative Humidity :</b>	44~48%						
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu	<b>Polarization :</b>	Vertical						
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1672	-54.63	-13	-41.63	-65.86	-58.5	1.62	5.49	V	Pass
2509	-53.18	-13	-40.18	-67.01	-57.3	2.1	6.22	V	Pass
3345	-52.46	-13	-39.46	-68.17	-57.5	3.03	8.07	V	Pass



<High Channel>

<b>Band :</b>	CDMA2000 BC0						<b>Temperature :</b>	23~25°C	
<b>Test Mode :</b>	1xRTT_RC3+SO55 (QPSK)						<b>Relative Humidity :</b>	44~48%	
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu						<b>Polarization :</b>	Horizontal	
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1696	-58.32	-13	-45.32	-67.57	-62.2	1.57	5.45	H	Pass
2544	-54.24	-13	-41.24	-67.32	-58.5	2.02	6.28	H	Pass
3393	-53.60	-13	-40.60	-68.08	-59.5	2.3	8.20	H	Pass

<b>Band :</b>	CDMA2000 BC0						<b>Temperature :</b>	23~25°C	
<b>Test Mode :</b>	1xRTT_RC3+SO55 (QPSK)						<b>Relative Humidity :</b>	44~48%	
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu						<b>Polarization :</b>	Vertical	
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
1696	-55.42	-13	-42.42	-67.15	-59.3	1.57	5.45	V	Pass
2544	-53.04	-13	-40.04	-66.82	-57.3	2.02	6.28	V	Pass
3393	-52.20	-13	-39.20	-67.84	-58.1	2.3	8.20	V	Pass



<Low Channel>

<b>Band :</b>	CDMA2000 BC1	<b>Temperature :</b>	23~25°C						
<b>Test Mode :</b>	1xRTT_RC3+SO55 (QPSK)	<b>Relative Humidity :</b>	44~48%						
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu	<b>Polarization :</b>	Horizontal						
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3700	-51.08	-13	-38.08	-68.95	-57.23	2.59	8.74	H	Pass
5553.75	-49.79	-13	-36.79	-67.19	-57.45	3.04	10.70	H	Pass
7405	-41.27	-13	-28.27	-69.25	-50.01	3.28	12.02	H	Pass

<b>Band :</b>	CDMA2000 BC1	<b>Temperature :</b>	23~25°C						
<b>Test Mode :</b>	1xRTT_RC3+SO55 (QPSK)	<b>Relative Humidity :</b>	44~48%						
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu	<b>Polarization :</b>	Vertical						
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3700	-50.84	-13	-37.84	-69.6	-56.99	2.59	8.74	V	Pass
5553.75	-49.31	-13	-36.31	-69.11	-56.97	3.04	10.70	V	Pass
7405	-42.70	-13	-29.70	-69.7	-51.44	3.28	12.02	V	Pass



<Middle Channel>

<b>Band :</b>	CDMA2000 BC1	<b>Temperature :</b>	23~25°C						
<b>Test Mode :</b>	1xRTT_RC3+SO55 (QPSK)	<b>Relative Humidity :</b>	44~48%						
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu	<b>Polarization :</b>	Horizontal						
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3760	-50.44	-13	-37.44	-68.18	-56.74	2.51	8.81	H	Pass
5640	-45.58	-13	-32.58	-67.79	-53.29	2.99	10.70	H	Pass
7520	-41.94	-13	-28.94	-68.65	-50.47	3.59	12.12	H	Pass

<b>Band :</b>	CDMA2000 BC1	<b>Temperature :</b>	23~25°C						
<b>Test Mode :</b>	1xRTT_RC3+SO55 (QPSK)	<b>Relative Humidity :</b>	44~48%						
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu	<b>Polarization :</b>	Vertical						
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3760	-51.02	-13	-38.02	-68.12	-57.32	2.51	8.81	V	Pass
5640	-44.70	-13	-31.70	-67.69	-52.41	2.99	10.70	V	Pass
7520	-40.70	-13	-27.70	-69.62	-49.23	3.59	12.12	V	Pass



<High Channel>

<b>Band :</b>	CDMA2000 BC1	<b>Temperature :</b>	23~25°C						
<b>Test Mode :</b>	1xRTT_RC3+SO55 (QPSK)	<b>Relative Humidity :</b>	44~48%						
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu	<b>Polarization :</b>	Horizontal						
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3819	-49.41	-13	-36.41	-66.78	-55.82	2.47	8.88	H	Pass
5723	-41.36	-13	-28.36	66.69	-49.06	3	10.70	H	Pass
7635	-42.36	-13	-29.36	-69.14	-51.14	3.43	12.21	H	Pass

<b>Band :</b>	CDMA2000 BC1	<b>Temperature :</b>	23~25°C						
<b>Test Mode :</b>	1xRTT_RC3+SO55 (QPSK)	<b>Relative Humidity :</b>	44~48%						
<b>Test Engineer :</b>	Kai Wang, Stan Hsieh and Ken Wu	<b>Polarization :</b>	Vertical						
<b>Remark :</b>	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.								
Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	SPA Reading ( dBm )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain ( dBi )	Polarization ( H/V )	Result
3817	-50.25	-13	-37.25	-67.26	-56.66	2.47	8.88	V	Pass
5726	-43.77	-13	-30.77	-68.39	-51.47	3	10.70	V	Pass
7634	-43.66	-13	-30.66	-69.44	-52.44	3.43	12.21	V	Pass

### 3.8 Frequency Stability Measurement

#### 3.8.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block for FCC Part 24 / Part 27 and the frequency stability of the transmitter shall be maintained within  $\pm 0.00025\%$  ( $\pm 2.5\text{ppm}$ ) of the center frequency for FCC Part 22.

#### 3.8.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

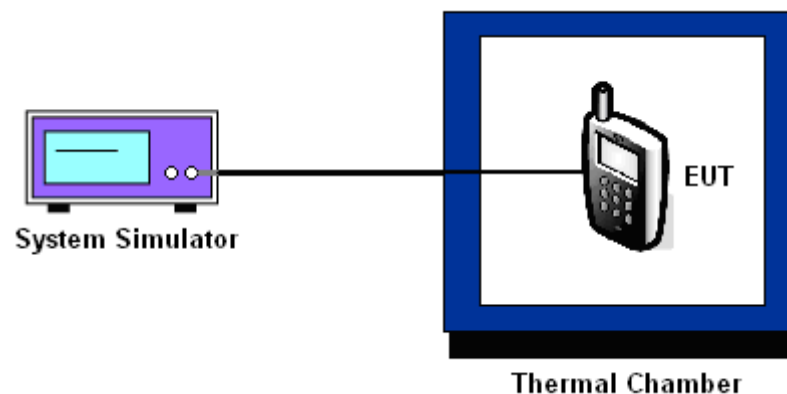
#### 3.8.3 Test Procedures for Temperature Variation

1. The testing follows FCC KDB 971168 v02r01 Section 9.0.
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. With power OFF, the temperature was decreased to  $-30^{\circ}\text{C}$  and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
4. With power OFF, the temperature was raised in  $10^{\circ}\text{C}$  steps up to  $50^{\circ}\text{C}$ . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

#### 3.8.4 Test Procedures for Voltage Variation

1. The testing follows FCC KDB 971168 v02r01 Section 9.0.
2. The EUT was placed in the thermal chamber at  $25\pm 5^{\circ}\text{C}$  and connected with the system simulator.
3. The power supply voltage to the EUT was varied from BEP to 115% of the nominal value measured at the input to the EUT.
4. The variation in frequency was measured for the worst case.

#### 3.8.5 Test Setup





3.8.6 Test Result of Temperature Variation

<b>Band :</b>	GSM 850	<b>Channel :</b>	189
<b>Limit (ppm) :</b>	2.5	<b>Frequency :</b>	836.4 MHz

Temperature (°C)	GSM	EDGE class 8	Result
	Deviation (ppm)	Deviation (ppm)	
50	0.0096	0.0108	PASS
40	0.0048	0.0072	
30	0.0060	0.0024	
20(Ref.)	0.0000	0.0000	
10	0.0048	0.0012	
0	0.0024	0.0012	
-10	0.0036	0.0000	
-20	0.0048	0.0048	
-30	0.0072	0.0060	

<b>Band :</b>	GSM 1900	<b>Channel :</b>	661
<b>Limit (ppm) :</b>	within authourized band	<b>Frequency :</b>	1880.0 MHz

Temperature (°C)	GSM	EDGE class 8	Result
	Deviation (ppm)	Deviation (ppm)	
50	0.0021	0.0064	PASS
40	0.0011	0.0043	
30	0.0016	0.0027	
20(Ref.)	0.0000	0.0000	
10	0.0005	0.0016	
0	0.0016	0.0032	
-10	0.0005	0.0048	
-20	0.0011	0.0080	
-30	0.0037	0.0096	

Note: The frequency fundamental emissions stay within the authorized frequency block from the derivation based on the frequency deviations measured on the center channel are small.





<b>Band :</b>	WCDMA Band V	<b>Channel :</b>	4182
<b>Limit (ppm) :</b>	2.5	<b>Frequency :</b>	836.4 MHz

Temperature (°C)	RMC 12.2Kbps	Result
	Deviation (ppm)	
50	0.0036	PASS
40	0.0012	
30	0.0012	
20(Ref.)	0.0000	
10	0.0108	
0	0.0120	
-10	0.0036	
-20	0.0072	
-30	0.0024	

<b>Band :</b>	WCDMA Band IV	<b>Channel :</b>	1413
<b>Limit (ppm) :</b>	within authourized band	<b>Frequency :</b>	1732.6

Temperature (°C)	RMC 12.2Kbps	Result
	Deviation (ppm)	
50	0.0040	PASS
40	0.0023	
30	0.0012	
20(Ref.)	0.0000	
10	0.0006	
0	0.0017	
-10	0.0029	
-20	0.0046	
-30	0.0035	

Note: The frequency fundamental emissions stay within the authorized frequency block from the derivation based on the frequency deviations measured on the center channel are small.



<b>Band :</b>	WCDMA Band II	<b>Channel :</b>	9400
<b>Limit (ppm) :</b>	within authorized band	<b>Frequency :</b>	1880.0 MHz

Temperature (°C)	RMC 12.2Kbps	Result
	Deviation (ppm)	
50	0.0101	PASS
40	0.0080	
30	0.0085	
20(Ref.)	0.0000	
10	0.0074	
0	0.0080	
-10	0.0005	
-20	0.0090	
-30	0.0106	

Note: The frequency fundamental emissions stay within the authorized frequency block from the derivation based on the frequency deviations measured on the center channel are small.



<b>Band :</b>	CDMA2000 BC0 1xRTT_RC3+SO55	<b>Channel :</b>	384
<b>Limit (ppm) :</b>	2.5	<b>Frequency :</b>	836.52 MHz

Temperature (°C)	Deviation (ppm)	Result
50	0.0120	PASS
40	0.0072	
30	0.0084	
20(Ref.)	0.0000	
10	0.0048	
0	0.0251	
-10	0.0215	
-20	0.0287	
-30	0.0263	

<b>Band :</b>	CDMA2000 BC1 1xRTT_RC3+SO55	<b>Channel :</b>	600
<b>Limit (ppm) :</b>	within authourized band	<b>Frequency :</b>	1880.0 MHz

Temperature (°C)	Deviation (ppm)	Result
50	0.0032	PASS
40	0.0021	
30	0.0027	
20(Ref.)	0.0000	
10	0.0011	
0	0.0005	
-10	0.0005	
-20	0.0000	
-30	0.0016	

Note: The frequency fundamental emissions stay within the authorized frequency block from the derivation based on the frequency deviations measured on the center channel are small.



3.8.7 Test Result of Voltage Variation

Band & Channel	Mode	Voltage (Volt)	Deviation (ppm)	Limit (ppm)	Result
GSM 850 CH189	GSM	4.35	0.0072	2.5 ppm for Part 22  Within the authorized band for Part 24 and Part 27	PASS
		3.90	0.0000		
		BEP	0.0024		
	EDGE class 8	4.35	0.0024		
		3.90	0.0012		
		BEP	0.0012		
GSM 1900 CH661	GSM	4.35	0.0011		
		3.90	0.0000		
		BEP	0.0016		
	EDGE class 8	4.35	0.0016		
		3.90	0.0005		
		BEP	0.0032		
WCDMA Band V CH4182	RMC 12.2Kbps	4.35	0.0012		
		3.90	0.0120		
		BEP	0.0000		
WCDMA Band II CH9400	RMC 12.2Kbps	4.35	0.0000		
		3.90	0.0074		
		BEP	0.0080		
WCDMA Band IV CH1413	RMC 12.2Kbps	4.35	0.0006		
		3.90	0.0012		
		BEP	0.0000		
CDMA2000 BC0 CH384	1xRTT RC3+SO55	4.35	0.0227		
		3.90	0.0024		
		BEP	0.0000		
CDMA2000 BC1 CH600	1xRTT RC3+SO55	4.35	0.0005		
		3.90	0.0005		
		BEP	0.0016		

Note:

1. Normal Voltage = 4.35V.
2. Battery End Point (BEP) = 3.40 V.
3. For Part 24 and Part 27, the frequency fundamental emissions stay within the authorized frequency block from the derivation based on the frequency deviations measured on the center channel are small.



## 4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
System Simulator	Rohde & Schwarz	CMU200	117995	N/A	Aug. 01, 2013	Jun. 23, 2014~ Jun. 24, 2014	Jul. 31, 2014	Conducted (TH02-HY)
System Simulator	Rohde & Schwarz	CMU200	117995	N/A	Jul. 29, 2014	Aug. 07, 2014~ Aug. 08, 2014	Jul. 28, 2015	Conducted (TH02-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 09, 2014	Jun. 23, 2014~ Jun. 24, 2014& Aug. 07, 2014~ Aug. 08, 2014	Jun. 08, 2015	Conducted (TH02-HY)
Thermal Chamber	Ten Billion	TTH-D3SP	TBN-930701	N/A	Jul. 19, 2013	Jun. 23, 2014~ Jun. 24, 2014	Jul. 18, 2014	Conducted (TH02-HY)
Thermal Chamber	Ten Billion	TTH-D3SP	TBN-930701	N/A	Jul. 17, 2014	Aug. 07, 2014~ Aug. 08, 2014	Jul. 16, 2015	Conducted (TH02-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV30	101749	10Hz ~ 30GHz	Feb. 10, 2014	Jul. 05, 2014~ Jul. 11, 2014& Aug. 07, 2014	Feb. 09, 2015	Radiation (03CH07-HY)
Bilog Antenna	Schaffner	CBL6111C	2726	30MHz ~ 1GHz	Oct. 10, 2013	Jul. 05, 2014~ Jul. 11, 2014& Aug. 07, 2014	Oct. 09, 2014	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	75962	1GHz~18GHz	Aug. 22, 2013	Jul. 05, 2014~ Jul. 11, 2014& Aug. 07, 2014	Aug. 21, 2014	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00066583	1GHz~18GHz	Aug. 02, 2013	Jul. 05, 2014~ Jul. 11, 2014	Aug. 01, 2014	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00066583	1GHz~18GHz	Jul. 24, 2014	Aug. 07, 2014	Jul. 23, 2015	Radiation (03CH07-HY)
Signal Generator	Rohde & Schwarz	SMF100A	101107	100kHz~40GHz	May 23, 2014	Jul. 05, 2014~ Jul. 11, 2014& Aug. 07, 2014	May 22, 2015	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10 MHz ~ 1GHz	Mar. 17, 2014	Jul. 05, 2014~ Jul. 11, 2014& Aug. 07, 2014	Mar. 16, 2015	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1 GHz~26.5 GHz	Nov. 29, 2013	Jul. 05, 2014~ Jul. 11, 2014& Aug. 07, 2014	Nov. 28, 2014	Radiation (03CH07-HY)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Turn Table	ChainTek	ChainTek 3000	N/A	0 ~ 360 degree	N/A	Jul. 05, 2014~ Jul. 11, 2014& Aug. 07, 2014	N/A	Radiation (03CH07-HY)
Antenna Mast	ChainTek	M-400-0	114/8000604/L	N/A	N/A	Jul. 05, 2014~ Jul. 11, 2014& Aug. 07, 2014	N/A	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz- 40GHz	Oct. 03, 2013	Jul. 05, 2014~ Jul. 11, 2014& Aug. 07, 2014	Oct. 02, 2014	Radiation (03CH07-HY)



## 5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	4.50
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