Test Report

Product Name	:	Smart Handheld
Model No	:	F900
FCC ID	:	HLZSHF900

Applicant	:	Acer Incorporated
Address	:	8F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan

Date of Receipt	:	2009/02/20
Issued Date	:	2009/02/26
Report No.	:	092276R-HPUSP07V01
Version	:	V1.0

Test Report Certification

Issued Date : 2009/02/26
Report No.: 092276R-HPUSP07V01

QuieTek Corporation

Accredited by NIST (NVLAP)
NVLAP Lab Code: 200533-0

Product Name	:	Smart Handheld
Applicant	:	Acer Incorporated
Address	:	8F, 88, Sec. 1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan
Manufacturer	:	Arima Communication (JiangSu) Co., Ltd
Trade Name	:	acer & glofiish
Model No.	:	F900
Rated Voltage	:	AC 120V/60Hz
EUT Voltage	:	DC3.7V
Measurement Standard	:	FCC CFR Title 47 Part 2 22 24
Measurement Reference	:	TIA/EIA 603-C
Test Result	:	Complied

Test results relate only to the samples tested.
The test report shall not be reproduced except in full without the written approval of Quie Tek Corporation.
This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

Documented By : Nicole Huang
(Engineering Adm. Assistant / Nicole Huang)

Tested By : Vorana Chen
(Engineer / Vorana Chen)

Approved By :
(Manager /Vincent Lin)

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Smart Handheld
Model No.	F900
Trade Name	acer & glofiish
IMEI No.	353274030000038(Conducted) 353274030000053(Radiated)
FCC ID.	HLZSHF900
Antenna Type	Internal
TX Frequency	824MHz~849MHz(GSM 850/WCDMA Band V) 1850MHz ~ 1910MHz(PCS 1900/WCDMA Band II)
Rx Frequency	869MHz~894MHz(GSM 850/WCDMA Band V) 1930MHz ~ 1990MHz(PCS 1900/WCDMA Band II)
Function	GPRS/EGPRS/WCDMA/HSDPA/HSUPA
Hardware version	V1.0
Software version	V1.0

1.2. Operational Description

The information contained within this report is intended to show verification of compliance of the 850/1900MHz Notebook to the requirements of 47CFR2, 22 and 24.

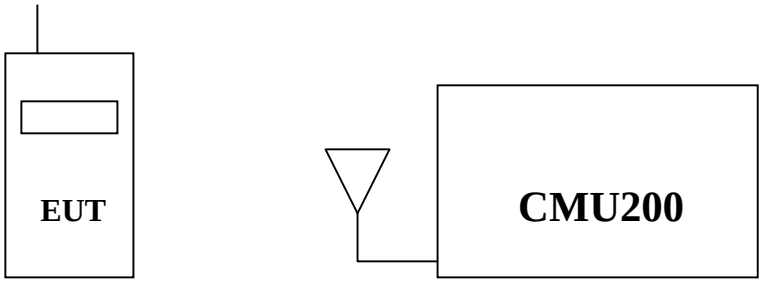
The EUT provide all functions described as above. The EUT is tested with maximum rated TX power via the Base Station simulator.

Quie Tek has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

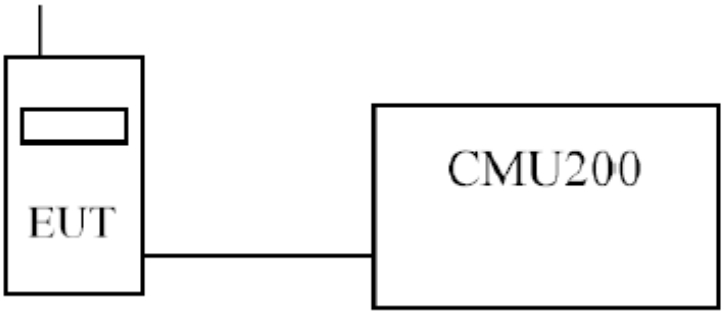
Test Mode:	GSM 850
	GSM 850 GPRS
	GSM 850 EGPRS
	PCS 1900
	PCS 1900 GPRS
	PCS 1900 EGPRS
	WCDMA BAND V
	WCDMA BAND V HSDPA
	WCDMA BAND V HSUPA
	WCDMA BAND II
	WCDMA BAND II HSDPA
	WCDMA BAND II HSUPA

1.3. Configuration of tested System

(a) Configuration of Radiated measurement



(b) Configuration of Conducted measurement



1.4. EUT Setup Procedures

(1) Setup the EUT and simulators as shown on 1.3
(2) Turn on the power of all equipments.
(3) The EUT was set to communicate with CMU200.
(4) Repeat the above procedure (3).

1.5. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	23
Humidity (%RH)	25-75	52
Barometric pressure (mbar)	860-1060	982

Site Description: File on

Federal Communications Commission

FCC Engineering Laboratory

7435 Oakland Mills Road

Columbia, MD 21046

FCC Registration Number :92195

July 03, 2001 Accreditation on NVLAP
NVLAP Lab Code: 200533-0

Site Name: Quie Tek Corporation

LinKou Testing Laboratory:

No. 5, Ruei-Shu Valley, Ruei-Ping Tsuen,
Lin-Kou Shiang, Taipei,
Taiwan, R.O.C.
TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789
E-Mail : service@quietek.com

FCC Accreditation Number: TW1014

1.6. Type of Emission

GSM/GPRS/EGPRS: 300KG7W
WCDMA/HSDPA/HSUPA: 4M20F9W

2. Peak Power Output

2.1. Test Equipment

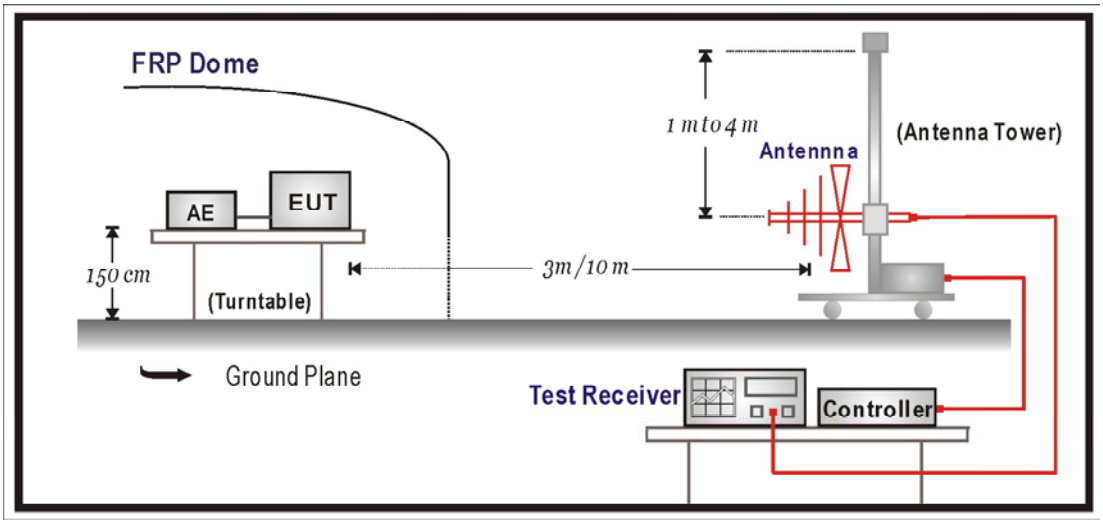
The following test equipments are used during the radiated emission test:

Test Site	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒OATS 3	Test Receiver	R & S	ESCS 30 / 100122	Feb., 2009
	Universal Radio Communication Tester	R & S	CMU200 / 104846	Apr., 2008
	Spectrum Analyzer	Agilent	N9020A/ MY48010570	Apr., 2008
	Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May., 2008
	Bilog Antenna	SCHAFFNER	CBL6112B / 2697	May., 2008
	Horn Antenna	ETS	3115 / 0005-6160	Jul., 2008
	Pre-Amplifier	QTK	QTK-AMP-01 / 0001	Jul., 2008

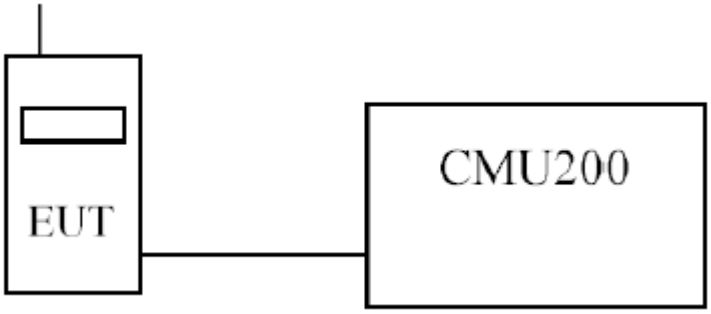
Note: 1. All equipments that need to be calibrated are with calibration period of 1 year.

2.2. Test Setup

Radiated Power Measurement



Conducted Power Measurement



2.3. Limits

Cellular Band 850	**<7W**
PCS Band 1900	**<2W or +33dBm**

2.4. Test Procedure

➢RF Out Power (Radiated)

The Spectrum Analyzer was tuned to the test frequency. The device was put into Transmit mode then rotated through 360 degrees until the highest power level was observed in both horizontal and vertical polarization. The device was then replaced with a substitution antenna, which input signal was adjusted until the received level matched that of the previously detected emission.

The EUT is tested with maximum rated TX power via the Base Station simulator.

➢RF Out Power (Conducted)

The EUT is tested with maximum rated TX power via the Base Station simulator, and the output power was measured at the antenna terminals of the EUT.

2.5. Test Specification

According to Part 2.1046, 22.913,24.232.

2.6. Test Result of Peak Power Output

Product	Smart Handheld		
Test Mode	RF Output Power (Conducted)		
Date of Test	2009/02/24	Test Site	CTR

GSM 850				
Frequency (MHz)	Output Power (dBm)	Path Loss (dB)	Result (dBm)	Result (W)
824.2	31.82	0.4	32.22	1.67
836.4	32.02	0.4	32.42	1.75
848.8	32.06	0.4	32.46	1.76
PCS 1900				
Frequency (MHz)	Output Power (dBm)	Path Loss (dB)	Result (dBm)	Result (W)
1850.2	29.11	0.6	29.71	0.94
1880	28.52	0.6	29.12	0.82
1909.8	28.45	0.6	29.05	0.80
GPRS 850				
Frequency (MHz)	Output Power (dBm)	Path Loss (dB)	Result (dBm)	Result (W)
824.2	31.84	0.4	32.24	1.66
836.4	32.04	0.4	32.44	1.75
848.8	32.08	0.4	32.48	1.77
GPRS 1900				
Frequency (MHz)	Output Power (dBm)	Path Loss (dB)	Result (dBm)	Result (W)
1850.2	29.12	0.6	29.72	0.94
1880	28.53	0.6	29.13	0.82
1909.8	28.46	0.6	29.06	0.81

EGPRS 850				
Frequency (MHz)	Output Power (dBm)	Path Loss (dB)	Result (dBm)	Result (W)
824.2	26.31	0.4	26.71	0.47
836.4	26.36	0.4	26.76	0.47
848.8	26.42	0.4	26.82	0.48
EGPRS 1900				
Frequency (MHz)	Output Power (dBm)	Path Loss (dB)	Result (dBm)	Result (W)
1850.2	25.41	0.6	26.01	0.40
1880	25.09	0.6	25.69	0.37
1909.8	25.03	0.6	25.63	0.37
WCDMA V				
Frequency (MHz)	Output Power (dBm)	Path Loss (dB)	Result (dBm)	Result (W)
826.4	21.65	0.4	22.05	0.16
836.6	21.67	0.4	22.07	0.16
846.6	21.72	0.4	22.12	0.16
WCDMA II				
Frequency (MHz)	Output Power (dBm)	Path Loss (dB)	Result (dBm)	Result (W)
1852.4	21.82	0.6	22.42	0.17
1880	21.89	0.6	22.49	0.18
1907.6	21.50	0.6	22.10	0.16

WCDMA V HSDPA								
	Set 1		Set 2		Set 3		Set 4	
Frequency (MHz)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)
826.4	22.54	0.18	22.04	0.16	22.09	0.16	22.05	0.16
836.6	22.57	0.18	22.10	0.16	22.12	0.16	22.08	0.16
846.6	22.65	0.18	22.13	0.16	22.16	0.16	22.11	0.16
β_c	2		12		15		15	
β_d	15		15		8		4	
Δ_{ACK}, Δ_{NACK} Δ_{CQI}	8		8		8		8	
Cable loss: 0.4dB for 850MHz ; 0.6dB for 1900MHz								

All HSDPA testing was done in Set1 configuration.

WCDMA II HSDPA								
	Set 1		Set 2		Set 3		Set 4	
Frequency (MHz)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)
1852.4	22.73	0.19	22.45	0.18	22.45	0.18	22.44	0.18
1880	22.82	0.19	22.54	0.18	22.53	0.18	22.56	0.18
1907.6	22.38	0.17	22.08	0.16	22.09	0.16	22.09	0.16
β_c	2		12		15		15	
β_d	15		15		8		4	
Δ_{ACK}, Δ_{NACK} Δ_{CQI}	8		8		8		8	
Cable loss: 0.4dB for 850MHz ; 0.6dB for 1900MHz								

All HSDPA testing was done in Set1 configuration.

WCDMA V HSUPA										
	Set 1		Set 2		Set 3		Set 4		Set 5	
Frequency (MHz)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)
826.4	21.45	0.14	22.11	0.16	20.91	0.12	22.31	0.17	21.36	0.14
836.6	21.56	0.14	22.20	0.17	21.01	0.13	22.40	0.17	21.47	0.14
846.6	21.55	0.14	22.18	0.17	21.00	0.13	22.41	0.17	21.49	0.14
β_c	11		6		15		2		15	
β_d	15		15		9		15		15	
Δ_{ACK}, Δ_{NACK} Δ_{CQI}	8		8		8		8		8	
AGV	20		12		15		17		21	
Cable loss: 0.4dB for 850MHz ; 0.6dB for 1900MHz										

Note:All HSUPA testing was done in Set4 configuration.

WCDMA II HSUPA										
	Set 1		Set 2		Set 3		Set 4		Set 5	
Frequency (MHz)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)
1852.4	21.96	0.16	22.45	0.18	21.45	0.14	22.72	0.19	21.95	0.16
1880	21.96	0.16	22.53	0.18	21.46	0.14	22.81	0.19	21.99	0.16
1907.6	21.63	0.15	22.14	0.16	21.15	0.13	22.40	0.17	21.61	0.14
β_c	11		6		15		2		15	
β_d	15		15		9		15		15	
Δ_{ACK}, Δ_{NACK} Δ_{CQI}	8		8		8		8		8	
AGV	20		12		15		17		21	
Cable loss: 0.4dB for 850MHz ; 0.6dB for 1900MHz										

Note: All HSUPA testing was done in Set4 configuration.

Product	Smart Handheld		
Test Mode	RF Output Power (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	GSM 850		

Maximum Power-GSM 850

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBd)	Cable Loss (dB)	Result ERP (dBm)	Result ERP (W)
824.2	18.92	21.81	4.45	0.51	25.75	0.38
836.4	20.22	23.14	4.45	0.51	27.08	0.51
848.8	20.85	23.78	4.45	0.51	27.72	0.59

Note:

1. The EUT meets the requirements of FCC CFR 47: Part 22, Section 22.913(a) for Effective Radiated Power.
2. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
3. Result ERP = Substitution Level + Substitution Antenna Gain - Cable Loss

Product	Smart Handheld		
Test Mode	RF Output Power (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	PCS 1900		

Maximum Power-PCS 1900

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dB)	Result EIRP (dBm)	Result EIRP (W)
1850.2	-12.280	17.598	10.4	1.02	26.978	0.50
1880.0	-14.820	15.430	10.4	1.02	24.810	0.30
1909.8	-15.160	15.332	10.4	1.02	24.712	0.30

Note:

1. The EUT meets the requirements of FCC CFR 47: Part 24, Section 24.232(b) for Effective Isotropically Radiated Power.
2. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
3. Result EIRP = Substitution Level + Substitution Antenna Gain - Cable Loss

Product	Smart Handheld		
Test Mode	RF Output Power (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	GSM 850 GPRS		

Maximum Power-GSM 850 GPRS

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBd)	Cable Loss (dB)	Result ERP (dBm)	Result ERP (W)
824.2	18.98	21.87	4.45	0.51	25.81	0.38
836.4	20.24	23.16	4.45	0.51	27.10	0.51
848.8	20.92	23.86	4.45	0.51	27.80	0.60

Note:

1. The EUT meets the requirements of FCC CFR 47: Part 22, Section 22.913(a) for Effective Radiated Power.
2. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
3. Result ERP = Substitution Level + Substitution Antenna Gain - Cable Loss

Product	Smart Handheld		
Test Mode	RF Output Power (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	PCS 1900 GPRS		

Maximum Power-PCS 1900 GPRS

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dB)	Result EIRP (dBm)	Result EIRP (W)
1850.2	-12.650	17.228	10.4	1.02	26.608	0.46
1880.0	-14.840	15.410	10.4	1.02	24.79	0.30
1909.8	-15.050	15.442	10.4	1.02	24.822	0.30

Note:

1. The EUT meets the requirements of FCC CFR 47: Part 24, Section 24.232(b) for Effective Isotropically Radiated Power.
2. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
3. Result EIRP = Substitution Level + Substitution Antenna Gain - Cable Loss

Product	Smart Handheld		
Test Mode	RF Output Power (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	GSM 850 EGPRS		

Maximum Power-GSM 850 EGPRS

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBd)	Cable Loss (dB)	Result ERP (dBm)	Result ERP (W)
824.2	16.54	19.39	4.45	0.51	23.33	0.22
836.4	17.89	20.75	4.45	0.51	24.69	0.29
848.8	19.48	22.38	4.45	0.51	26.32	0.43

Note:

1. The EUT meets the requirements of FCC CFR 47: Part 22, Section 22.913(a) for Effective Radiated Power.
2. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
3. Result ERP = Substitution Level + Substitution Antenna Gain - Cable Loss

Product	Smart Handheld		
Test Mode	RF Output Power (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	PCS 1900 EGPRS		

Maximum Power-PCS 1900 EGPRS

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dB)	Result EIRP (dBm)	Result EIRP (W)
1850.2	-13.000	16.878	10.4	1.02	26.258	0.42
1880.0	-15.030	15.220	10.4	1.02	24.600	0.29
1909.8	-15.490	15.002	10.4	1.02	24.382	0.27

Note:

1. The EUT meets the requirements of FCC CFR 47: Part 24, Section 24.232(b) for Effective Isotropically Radiated Power.
2. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
3. Result EIRP = Substitution Level + Substitution Antenna Gain - Cable Loss

Product	Smart Handheld		
Test Mode	RF Output Power (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	WCDMA BAND V Link		

Maximum Power- WCDMA BAND V Link

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBd)	Cable Loss (dB)	Result ERP (dBm)	Result ERP (W)
826.4	12.2	15.04	4.45	0.51	18.98	0.08
836.6	13.79	16.63	4.45	0.51	20.57	0.11
846.6	11.97	14.81	4.45	0.51	18.75	0.07

Note:

1. The EUT meets the requirements of FCC CFR 47: Part 22, Section 22.913(a) for Effective Radiated Power.
2. Receiver setting (Peak Detector) : RBW:5MHz; VBW:5MHz
3. Result ERP = Substitution Level + Substitution Antenna Gain - Cable Loss

Product	Smart Handheld		
Test Mode	RF Output Power (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	WCDMA BAND V HSDPA Link		

Maximum Power- WCDMA BAND V HSDPA Link

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBd)	Cable Loss (dB)	Result ERP (dBm)	Result ERP (W)
826.4	12.36	15.20	4.45	0.51	19.14	0.08
836.6	13.87	16.71	4.45	0.51	20.65	0.12
846.6	12.23	15.07	4.45	0.51	19.01	0.08

Note:

1. The EUT meets the requirements of FCC CFR 47: Part 22, Section 22.913(a) for Effective Radiated Power.
2. Receiver setting (Peak Detector) : RBW:5MHz; VBW:5MHz
3. Result ERP = Substitution Level + Substitution Antenna Gain - Cable Loss

Product	Smart Handheld		
Test Mode	RF Output Power (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	WCDMA BAND V HSUPA Link		

Maximum Power- WCDMA BAND V HSUPA Link

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBd)	Cable Loss (dB)	Result ERP (dBm)	Result ERP (W)
826.4	12.25	15.09	4.45	0.51	19.03	0.08
836.6	13.96	16.80	4.45	0.51	20.74	0.12
846.6	12.13	14.97	4.45	0.51	18.91	0.08

Note:

1. The EUT meets the requirements of FCC CFR 47: Part 22, Section 22.913(a) for Effective Radiated Power.
2. Receiver setting (Peak Detector) : RBW:5MHz; VBW:5MHz
3. Result ERP = Substitution Level + Substitution Antenna Gain - Cable Loss

Product	Smart Handheld		
Test Mode	RF Output Power (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	WCDMA BAND II Link		

Maximum Power- WCDMA BAND II Link

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dB)	Result EIRP (dBm)	Result EIRP (W)
1852.4	-18.130	9.965	10.4	1.02	21.155	0.13
1880	-19.130	8.960	10.4	1.02	20.500	0.11
1907.6	-20.140	10.244	10.4	1.02	19.734	0.09

Note:

1. The EUT meets the requirements of FCC CFR 47: Part 24, Section 24.232(b) for Effective Isotropically Radiated Power.
2. Receiver setting (Peak Detector) : RBW:5MHz; VBW:5MHz
3. Result EIRP = Substitution Level + Substitution Antenna Gain - Cable Loss

Product	Smart Handheld		
Test Mode	RF Output Power (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	WCDMA BAND II HSDPA Link		

Maximum Power- WCDMA BAND II HSDPA Link

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dB)	Result EIRP (dBm)	Result EIRP (W)
1852.4	-17.440	10.655	10.4	1.02	21.845	0.15
1880	-19.140	8.950	10.4	1.02	20.490	0.11
1907.6	-20.090	10.294	10.4	1.02	19.784	0.10

Note:

1. The EUT meets the requirements of FCC CFR 47: Part 24, Section 24.232(b) for Effective Isotropically Radiated Power.
2. Receiver setting (Peak Detector) : RBW:5MHz; VBW:5MHz
3. Result EIRP = Substitution Level + Substitution Antenna Gain - Cable Loss

Product	Smart Handheld		
Test Mode	RF Output Power (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	WCDMA BAND II HSUPA Link		

Maximum Power- WCDMA BAND II HSUPA Link

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dB)	Result EIRP (dBm)	Result EIRP (W)
1852.4	-16.840	11.255	10.4	1.02	22.445	0.18
1880	-18.610	9.480	10.4	1.02	21.020	0.13
1907.6	-20.090	10.294	10.4	1.02	19.784	0.10

Note:

1. The EUT meets the requirements of FCC CFR 47: Part 24, Section 24.232(b) for Effective Isotropically Radiated Power.
2. Receiver setting (Peak Detector) : RBW:5MHz; VBW:5MHz
3. Result EIRP = Substitution Level + Substitution Antenna Gain - Cable Loss

3. Occupied Bandwidth

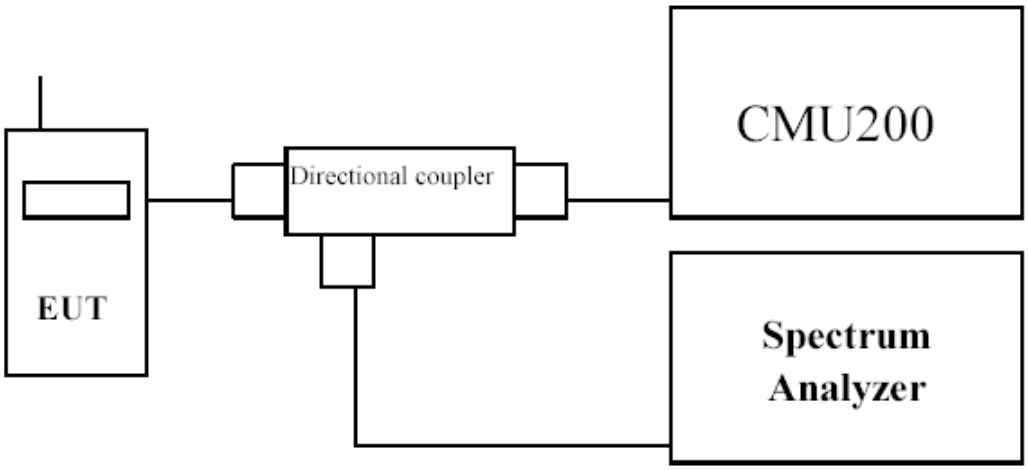
3.1. Test Equipment

The following test equipments are used during the occupied bandwidth tests:

Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Spectrum Analyzer (9K-40GHz)	R&S	FSP40/100170	Nov ., 2008
Universal Radio Communication Tester	R & S	CMU200 / 104846	Apr., 2008
Directional coupler	Agilent	87300C / MY44300353	Aug., 2008
Directional coupler	Agilent	778D-012/ 50550	Aug., 2008

Note: All equipments upon which need to be calibrated are with calibration period of 1 year.

3.2. Test Setup



3.3. Test Procedure

The EUT is tested with maximum rated TX power via the Base Station simulator, and the occupied bandwidth was measured at the antenna terminals of the EUT.

The Resolution BW of the analyzer is set to 1 % of the emission bandwidth. The EUT's occupied bandwidth is measured as the width of the signal between two points, one below the carrier center frequency and one above the carrier frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

The plots below show the resultant display from the Spectrum Analyser.

3.4. Test Specification

According to Part 2.1049, 22.917(b), 24.238(b).

3.5. Test Result of Occupied Bandwidth

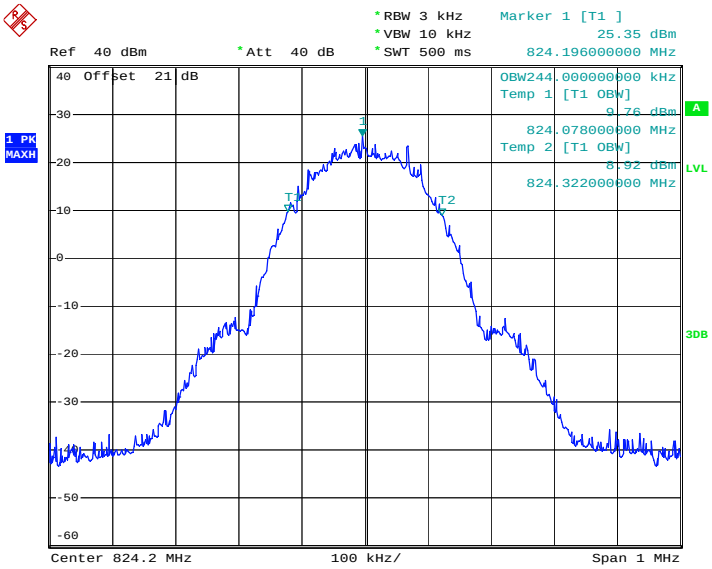
Product	Smart Handheld		
Test Mode	Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR

Test Mode	Channel & TX Frequency (MHz)	99% Occupied Bandwidth (MHz)	26 dB bandwidth (MHz)	Required Limit (MHz)	Result
GSM 850	128(824.2)	0.244	0.314	N/A	Pass
	189(836.4)	0.248	0.308	N/A	Pass
	251(848.8)	0.248	0.312	N/A	Pass
GSM 850 GPRS	128(824.2)	0.302	0.300	N/A	Pass
	189(836.4)	0.246	0.296	N/A	Pass
	251(848.8)	0.246	0.300	N/A	Pass
GSM 850 EGPRS	128(824.2)	0.247	0.304	N/A	Pass
	189(836.4)	0.244	0.299	N/A	Pass
	251(848.8)	0.244	0.297	N/A	Pass
WCDMA V	4132(826.4)	4.152	4.824	N/A	Pass
	4183(836.6)	4.164	4.824	N/A	Pass
	4233(846.6)	4.176	4.836	N/A	Pass
WCDMA V HSDPA	4132(826.4)	4.164	4.836	N/A	Pass
	4183(836.6)	4.188	4.848	N/A	Pass
	4233(846.6)	4.176	4.836	N/A	Pass
WCDMA V HSUPA	4132(826.4)	4.164	4.836	N/A	Pass
	4183(836.6)	4.188	4.848	N/A	Pass
	4233(846.6)	4.176	4.848	N/A	Pass
PCS 1900	512(1850.2)	0.244	0.310	N/A	Pass
	661(1880)	0.248	0.312	N/A	Pass
	810(1909.8)	0.244	0.314	N/A	Pass

PCS 1900 GPRS	512(1850.2)	0.238	0.302	N/A	Pass
	661(1880)	0.244	0.308	N/A	Pass
	810(1909.8)	0.240	0.298	N/A	Pass
PCS 1900 EGPRS	512(1850.2)	0.242	0.300	N/A	Pass
	661(1880)	0.242	0.304	N/A	Pass
	810(1909.8)	0.244	0.310	N/A	Pass
WCDMA II	9262(1852.4)	4.164	4.836	N/A	Pass
	9400(1880)	4.176	4.848	N/A	Pass
	9538(1907.6)	4.176	4.848	N/A	Pass
WCDMA II HSDPA	9262(1852.4)	4.176	4.836	N/A	Pass
	9400(1880)	4.176	4.848	N/A	Pass
	9538(1907.6)	4.176	4.860	N/A	Pass
WCDMA II HSUPA	9262(1852.4)	4.176	4.836	N/A	Pass
	9400(1880)	4.176	4.848	N/A	Pass
	9538(1907.6)	4.176	4.860	N/A	Pass

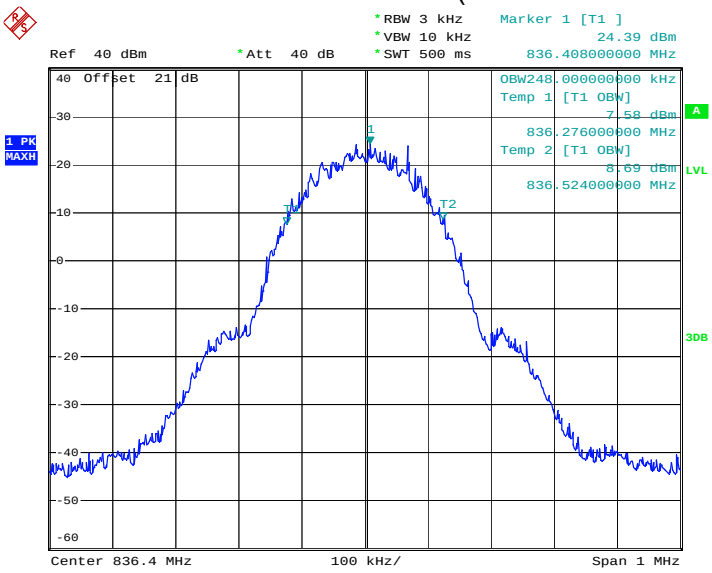
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	GSM 850		

GSM 850 – Circuit Switched (GSM Mode CH 128)



Date: 24.FEB.2009 07:07:46

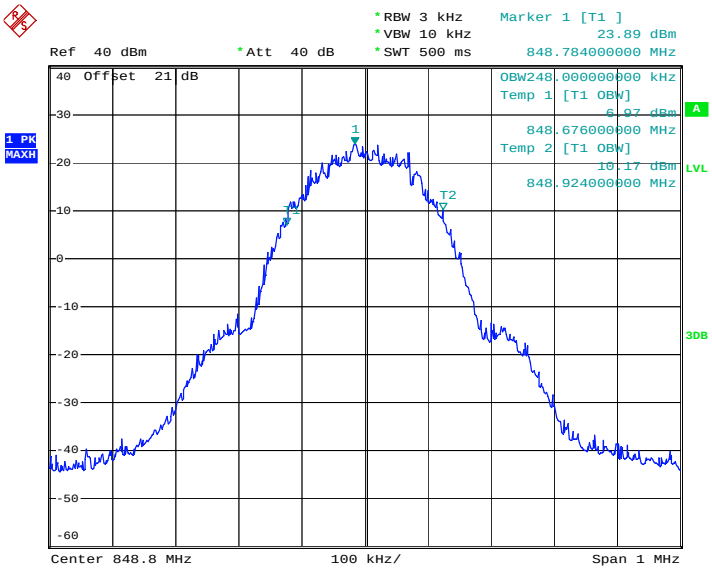
GSM 850 - Circuit Switched (GSM Mode CH189)



Date: 24.FEB.2009 07:11:46

Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	GSM 850		

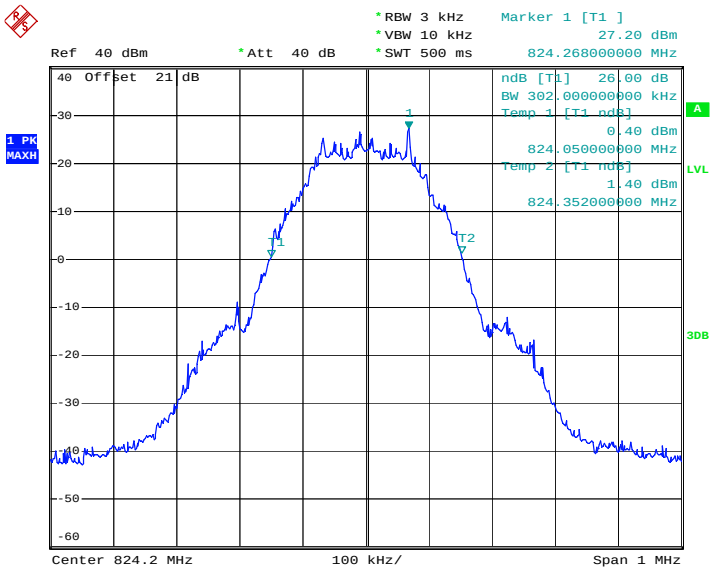
GSM 850 - Circuit Switched (GSM Mode CH 251)



Date: 24.FEB.2009 07:13:10

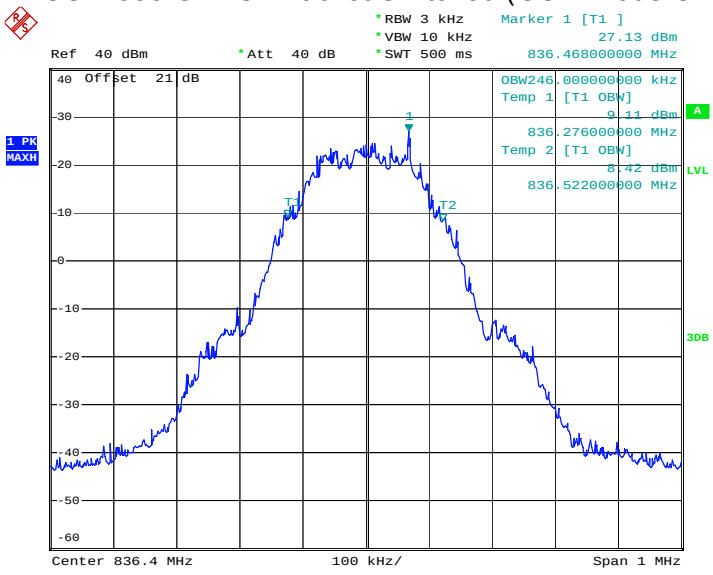
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	GSM 850 GPRS		

GSM 850 GPRS - Packet Switched (GSM Mode CH 128)



Date: 24.FEB.2009 07:36:40

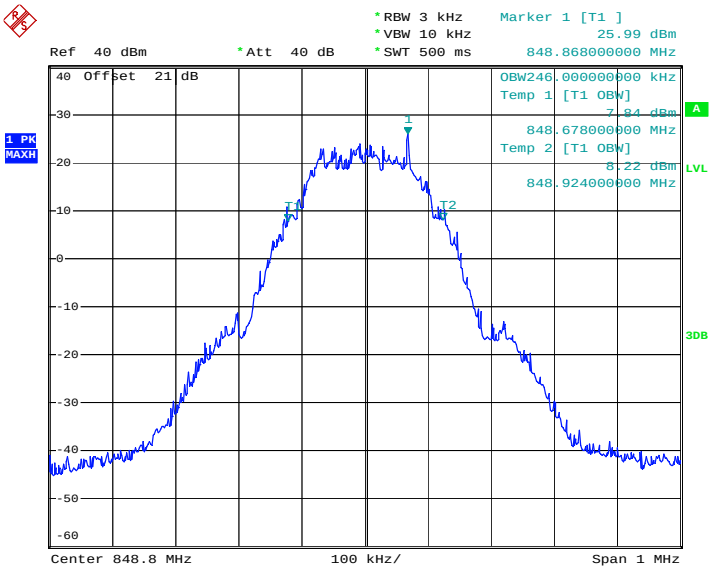
GSM 850 GPRS - Packet Switched (GSM Mode CH189)



Date: 24.FEB.2009 07:25:05

Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	GSM 850 GPRS		

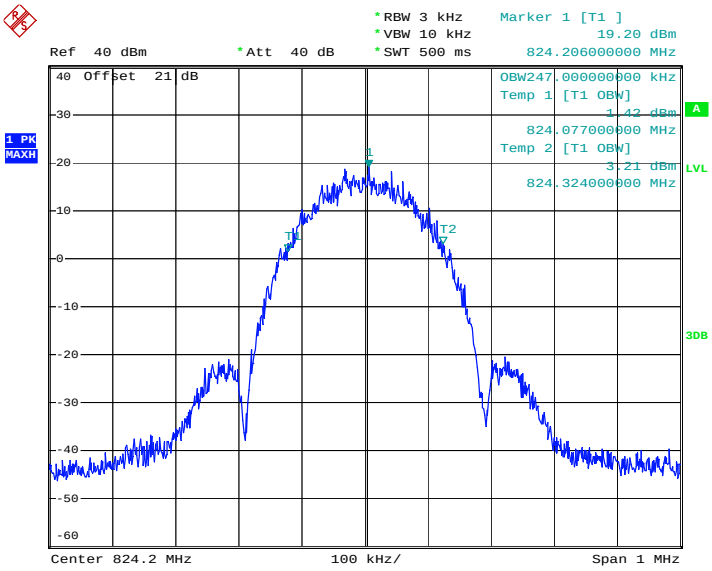
GSM 850 GPRS - Packet Switched (GSM Mode CH 251)



Date: 24.FEB.2009 07:22:03

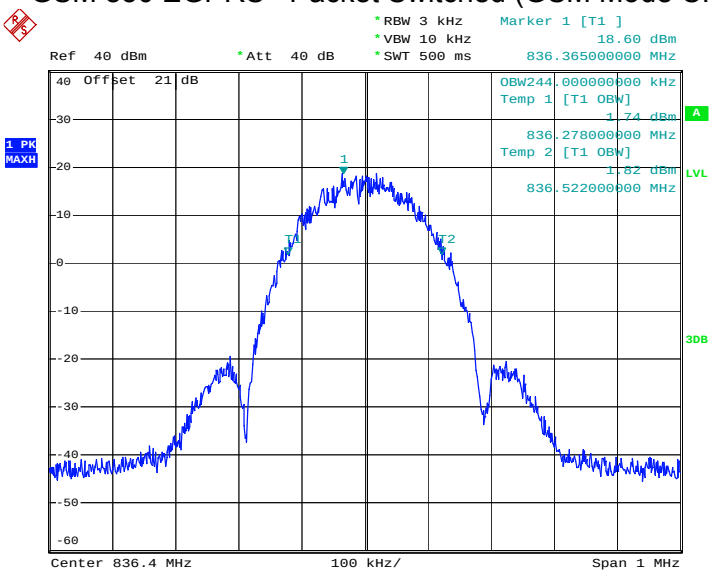
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	GSM 850 EGPRS		

GSM 850 EGPRS - Packet Switched (GSM Mode CH 128)



Date: 12.FEB.2009 05:01:35

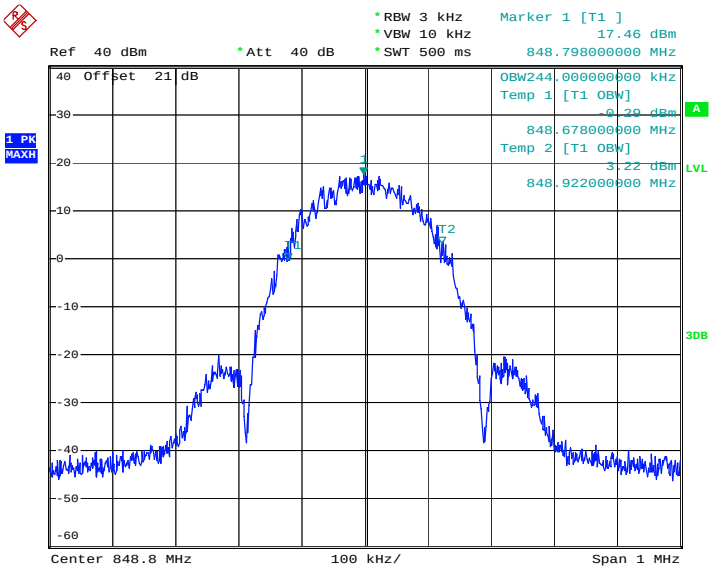
GSM 850 EGPRS - Packet Switched (GSM Mode CH189)



Date: 12.FEB.2009 05:03:10

Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	GSM 850 EGPRS		

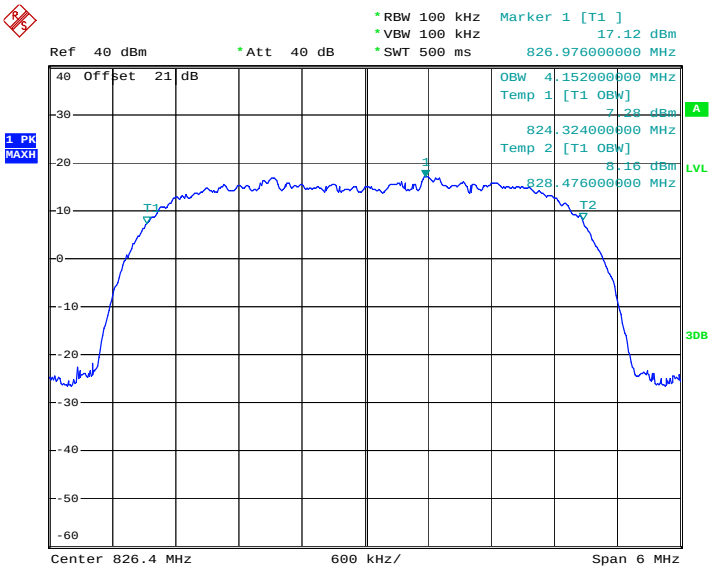
GSM 850 EGPRS - Packet Switched (GSM Mode CH 251)



Date: 12.FEB.2009 05:06:10

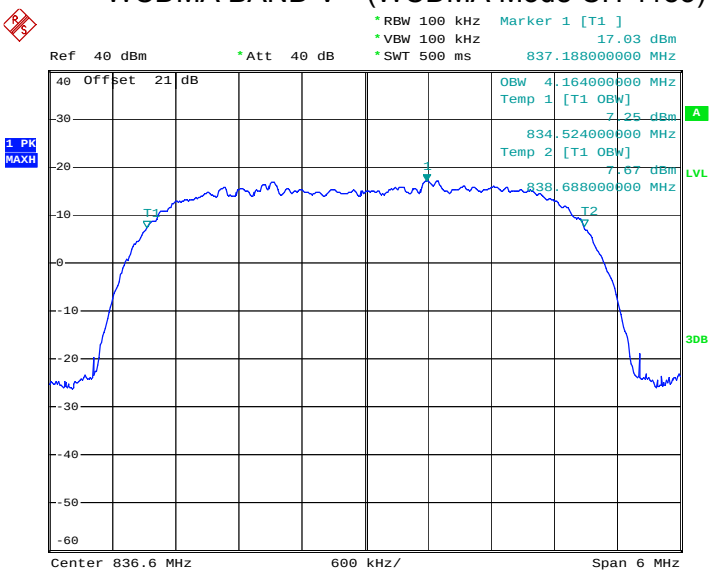
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND V		

WCDMA BAND V (WCDMA Mode CH 4132)



Date: 24.FEB.2009 12:36:07

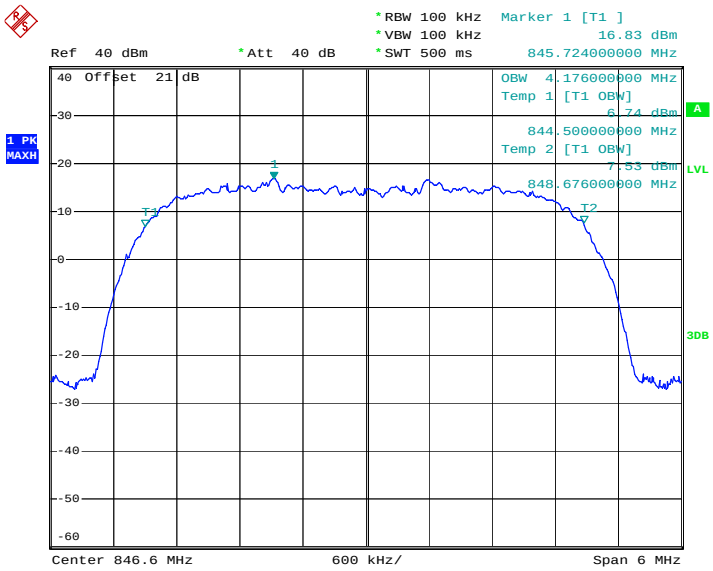
WCDMA BAND V (WCDMA Mode CH 4183)



Date: 24.FEB.2009 12:38:41

Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND V		

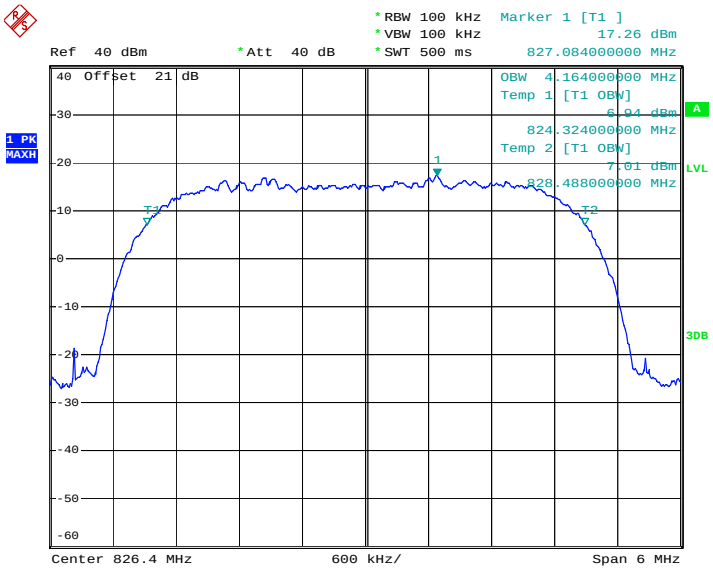
WCDMA BAND V (WCDMA Mode CH 4233)



Date: 24.FEB.2009 12:41:15

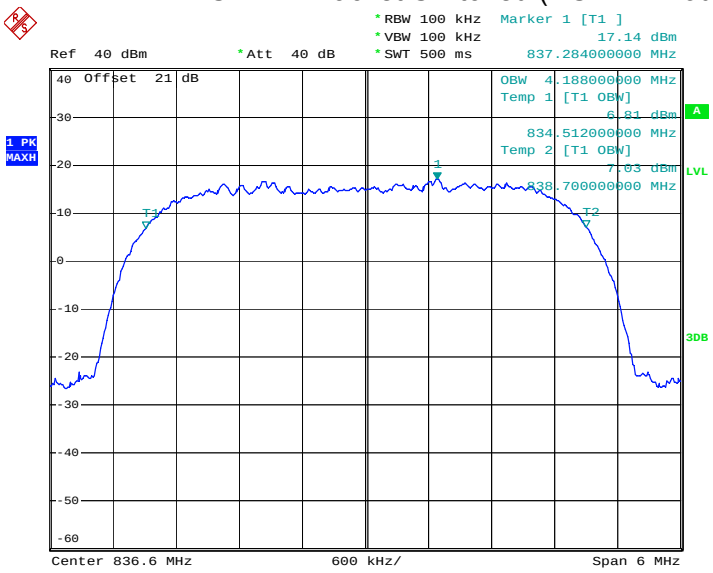
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND V HSDPA		

WCDMA BAND V HSDPA - Packet Switched (HSDPA Mode CH 4132)



Date: 24.FEB.2009 12:53:26

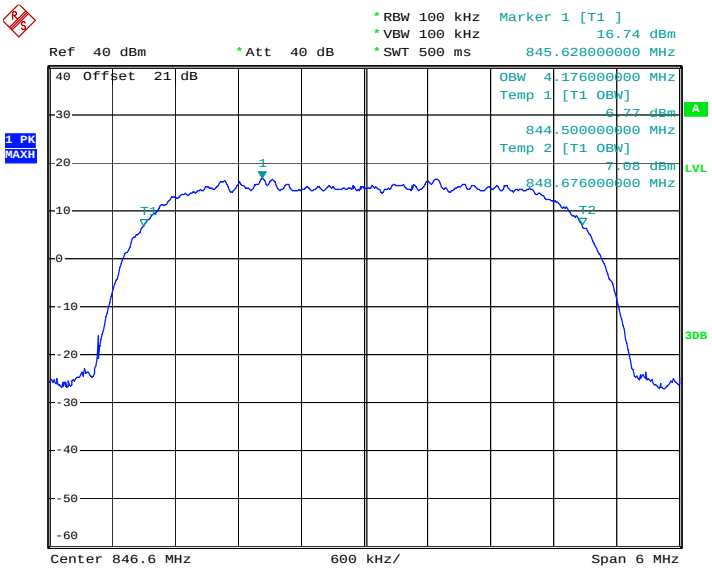
WCDMA BAND V HSDPA - Packet Switched (HSDPA Mode CH 4183)



Date: 24.FEB.2009 12:54:32

Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND V HSDPA		

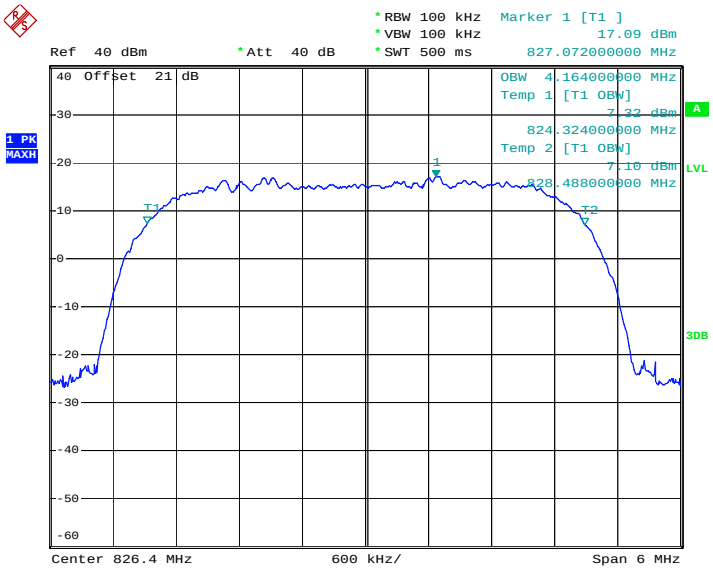
WCDMA BAND V HSDPA - Packet Switched (HSDPA Mode CH 4233)



Date: 24.FEB.2009 12:57:19

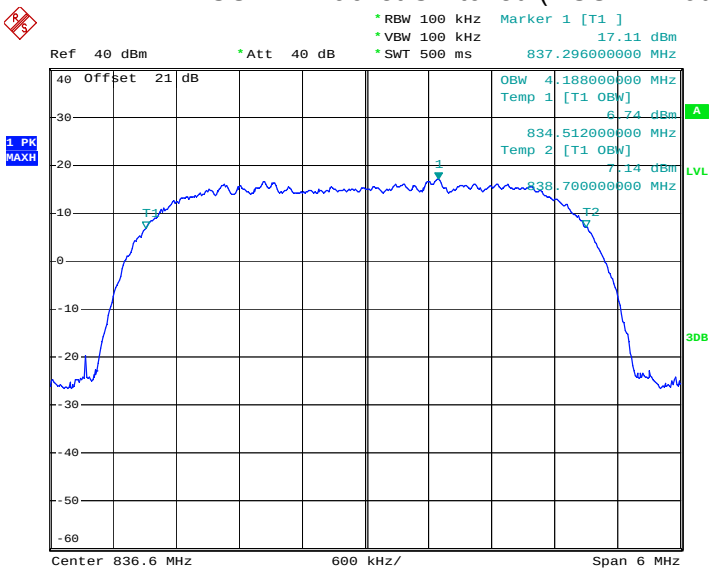
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND V HSUPA		

WCDMA BAND V HSUPA - Packet Switched (HSUPA Mode CH 4132)



Date: 24.FEB.2009 13:03:28

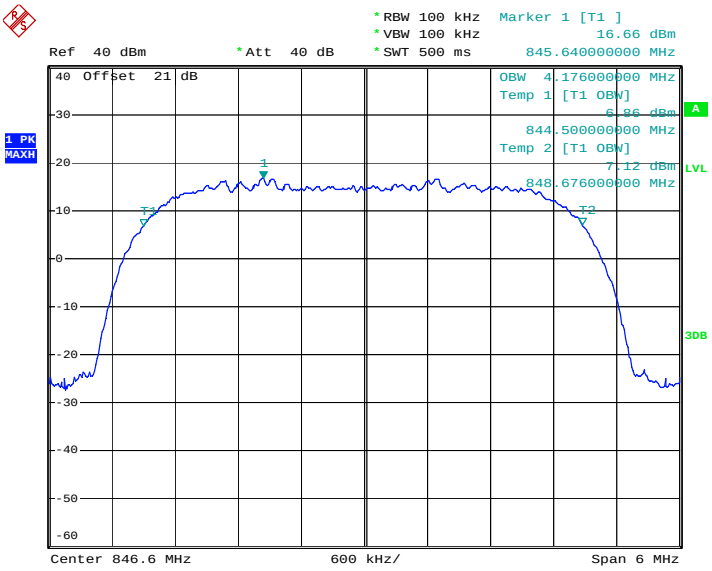
WCDMA BAND V HSUPA - Packet Switched (HSUPA Mode CH 4183)



Date: 24.FEB.2009 13:02:02

Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND V HSUPA		

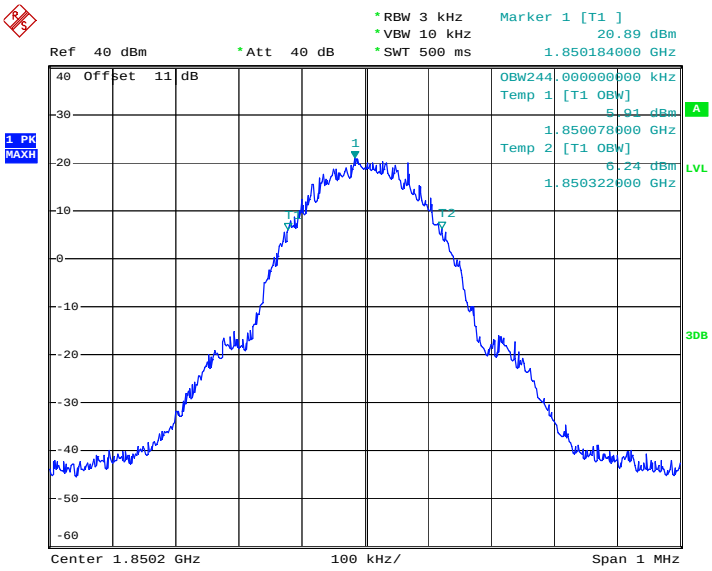
WCDMA BAND V HSUPA - Packet Switched (HSUPA Mode CH 4233)



Date: 24.FEB.2009 12:59:19

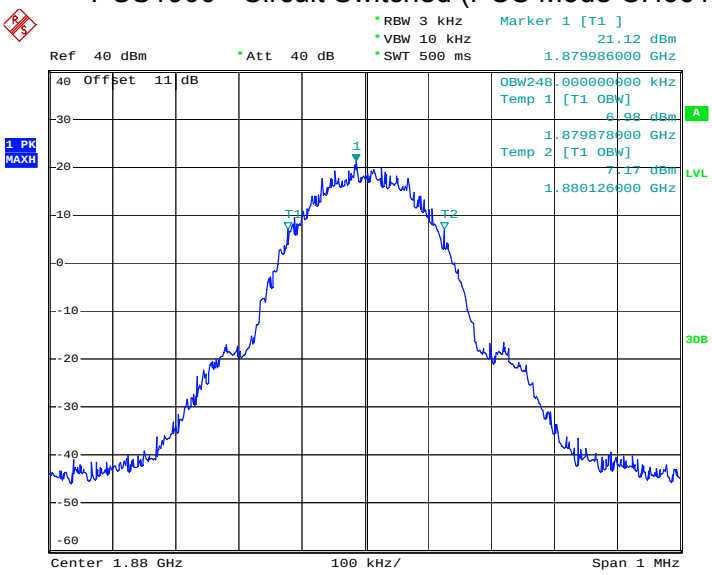
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	PCS1900		

PCS1900 - Circuit Switched (PCS Mode CH 512)



Date: 24.FEB.2009 06:47:44

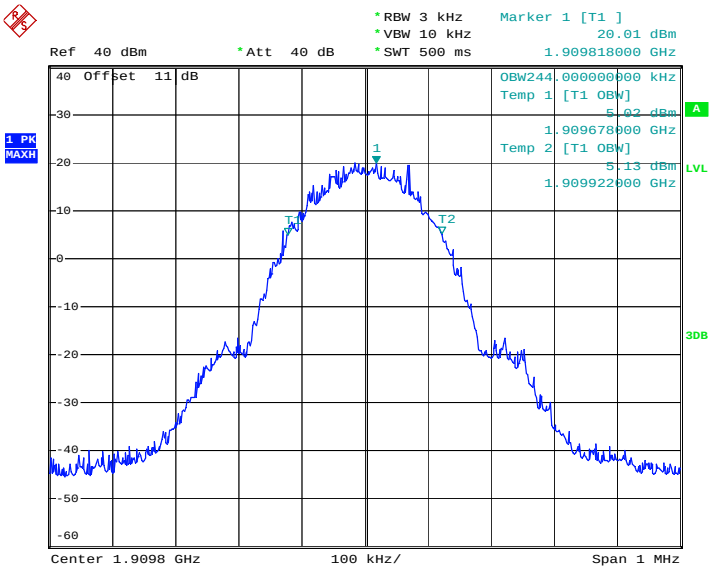
PCS1900 - Circuit Switched (PCS Mode CH661)



Date: 24.FEB.2009 06:46:19

Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	PCS1900		

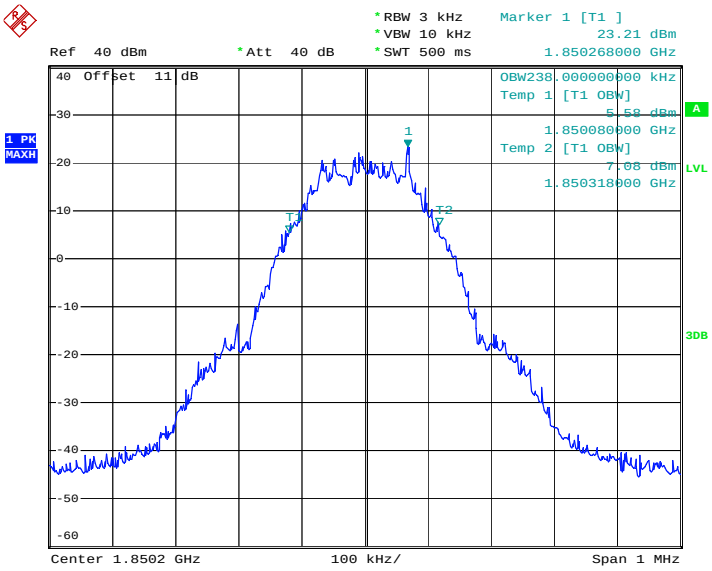
PCS1900 - Circuit Switched (PCS Mode CH 810)



Date: 24.FEB.2009 06:42:32

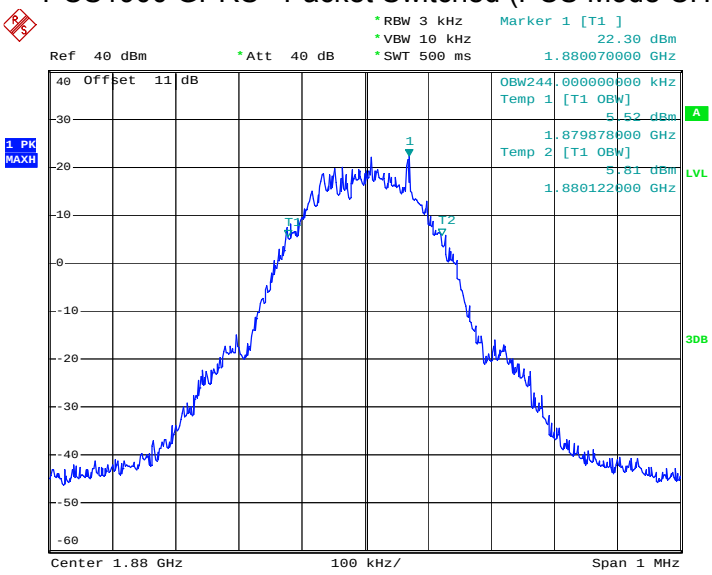
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	PCS1900 GPRS		

PCS1900 GPRS - Packet Switched (PCS Mode CH 512)



Date: 24.FEB.2009 05:43:41

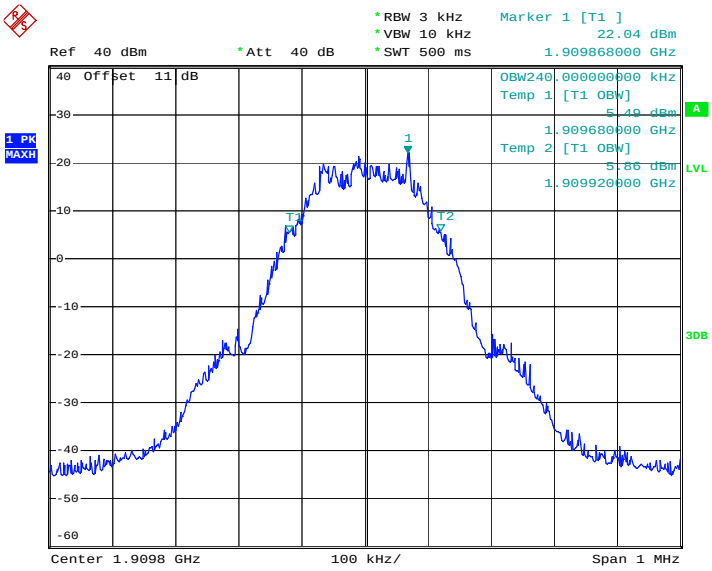
PCS1900 GPRS - Packet Switched (PCS Mode CH661)



Date: 24.FEB.2009 05:42:07

Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	PCS1900 GPRS		

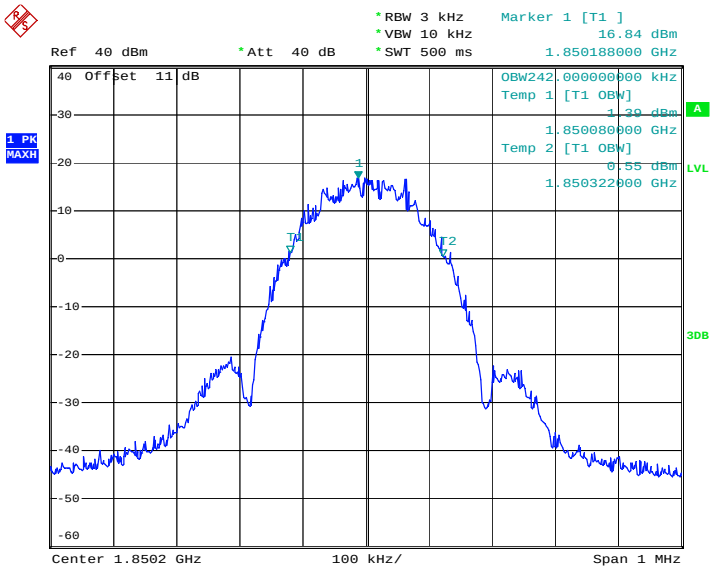
PCS1900 GPRS - Packet Switched (PCS Mode CH 810)



Date: 24.FEB.2009 05:40:45

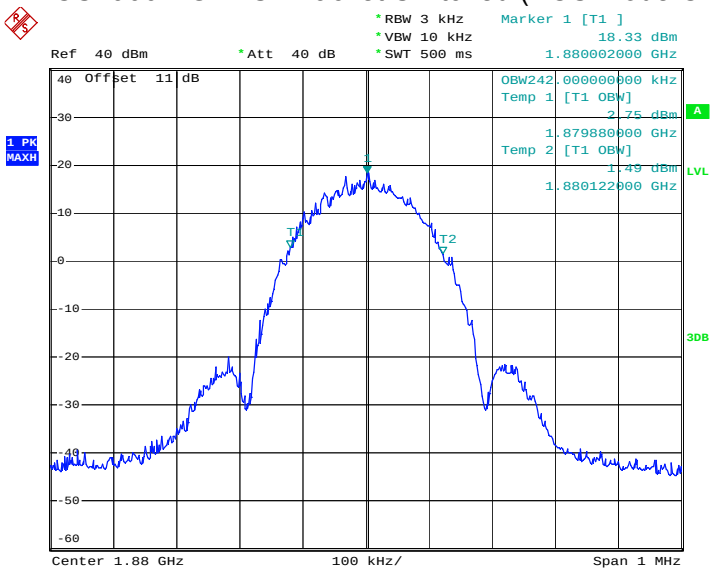
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	PCS1900 EGPRS		

PCS1900 EGPRS - Packet Switched (PCS Mode CH 512)



Date: 24.FEB.2009 06:53:18

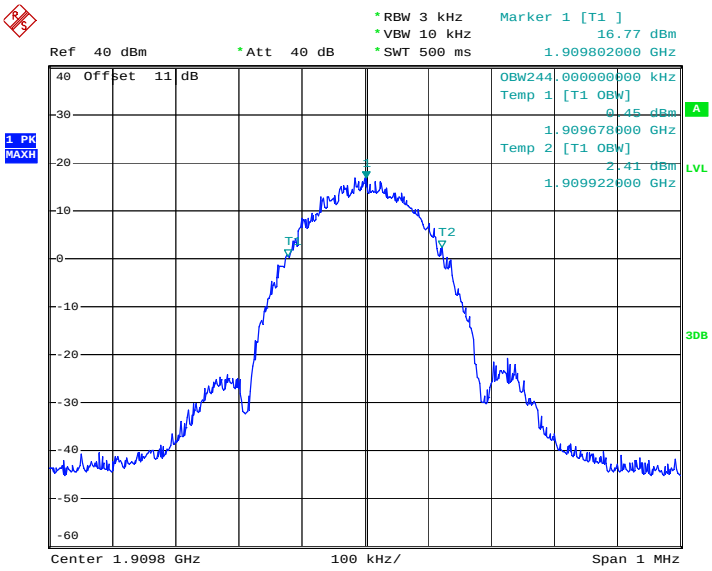
PCS1900 EGPRS - Packet Switched (PCS Mode CH661)



Date: 24.FEB.2009 06:56:44

Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	PCS1900 EGPRS		

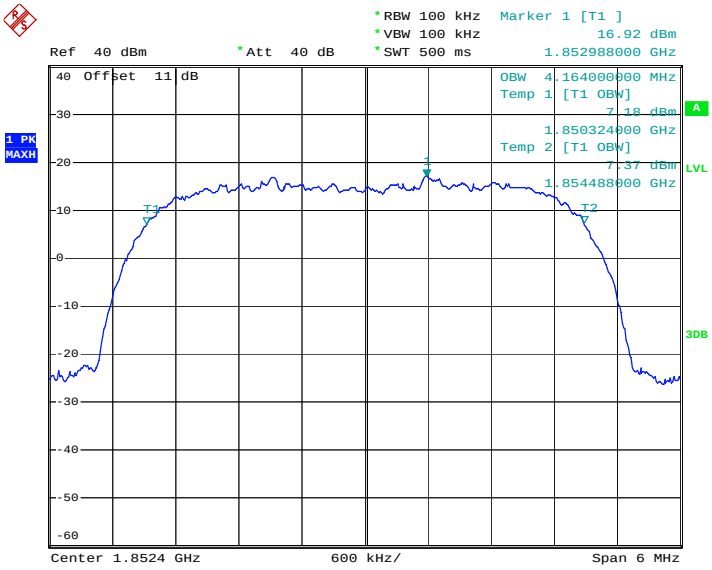
PCS1900 EGPRS - Packet Switched (PCS Mode CH 810)



Date: 24.FEB.2009 07:00:53

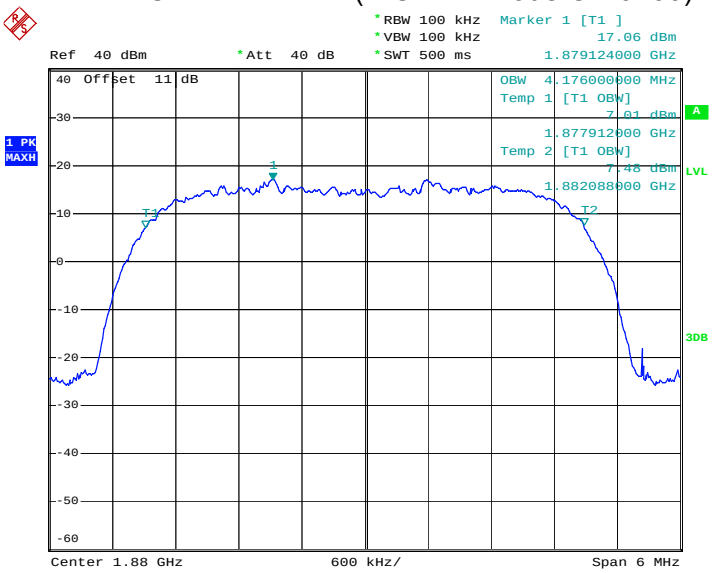
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND II		

WCDMA BAND II (WCDMA Mode CH 9262)



Date: 24.FEB.2009 11:17:47

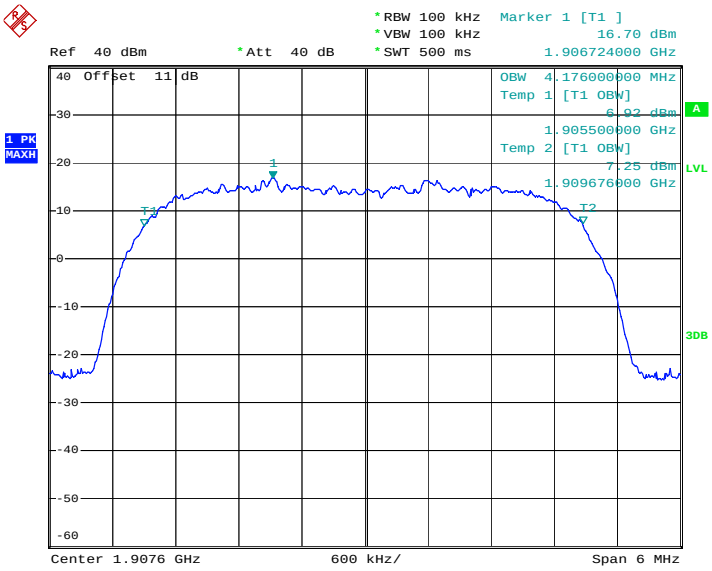
WCDMA BAND II (WCDMA Mode CH 9400)



Date: 24.FEB.2009 11:18:39

Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND II		

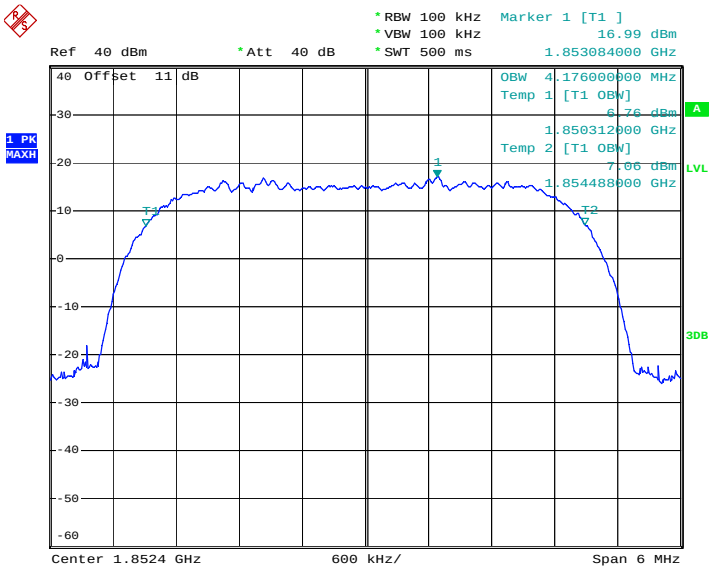
WCDMA BAND II - Packet Switched (WCDMA Mode CH 9538)



Date: 24.FEB.2009 11:21:11

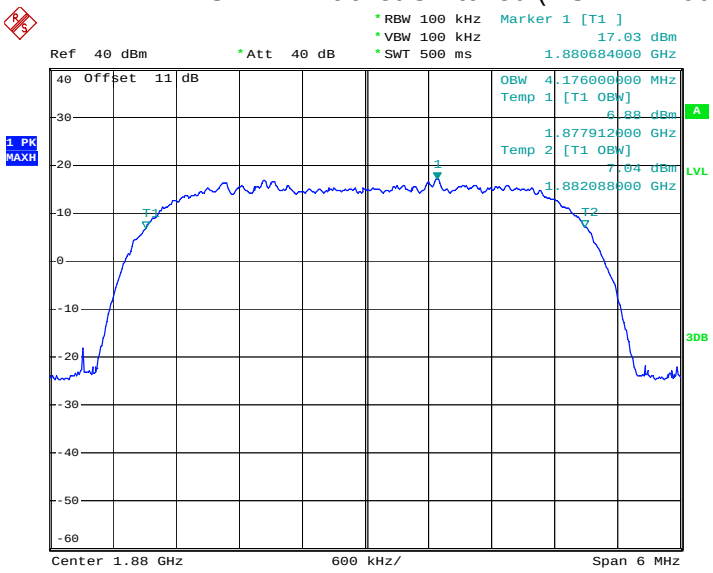
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND II HSDPA		

WCDMA BAND II HSDPA - Packet Switched (HSDPA Mode CH 9262)



Date: 24.FEB.2009 11:55:04

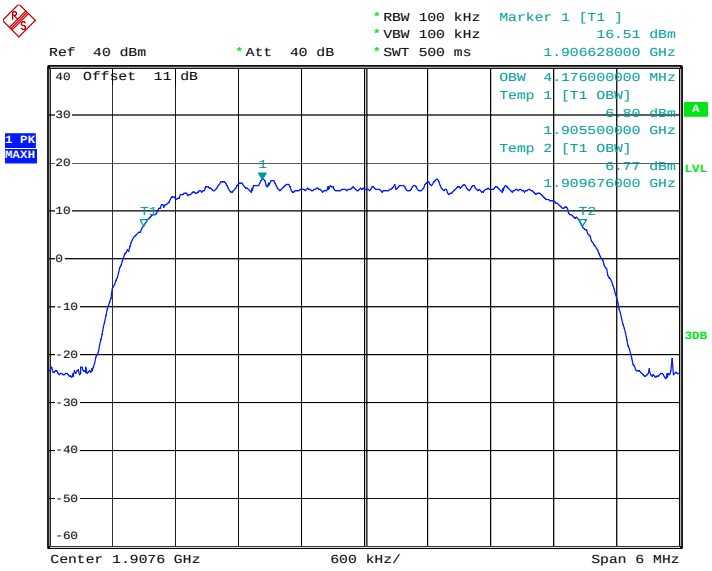
WCDMA BAND II HSDPA - Packet Switched (HSDPA Mode CH 9400)



Date: 24.FEB.2009 11:53:59

Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND II HSDPA		

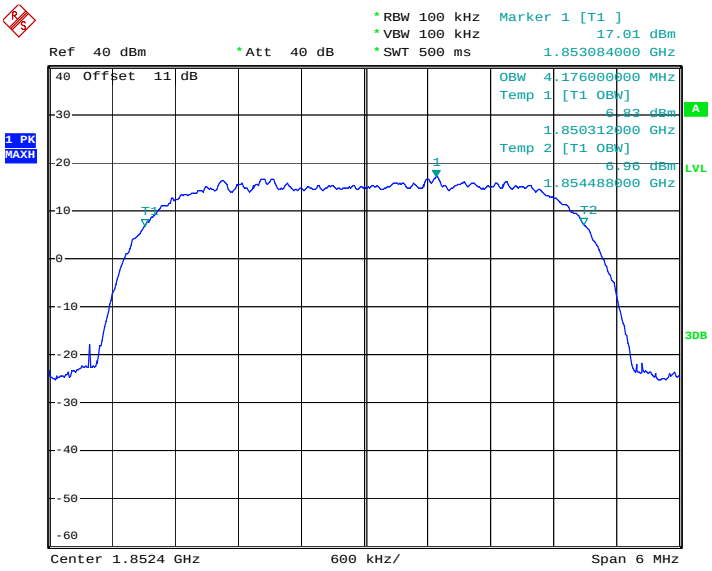
WCDMA BAND II HSDPA - Packet Switched (HSDPA Mode CH 9538)



Date: 24.FEB.2009 11:51:30

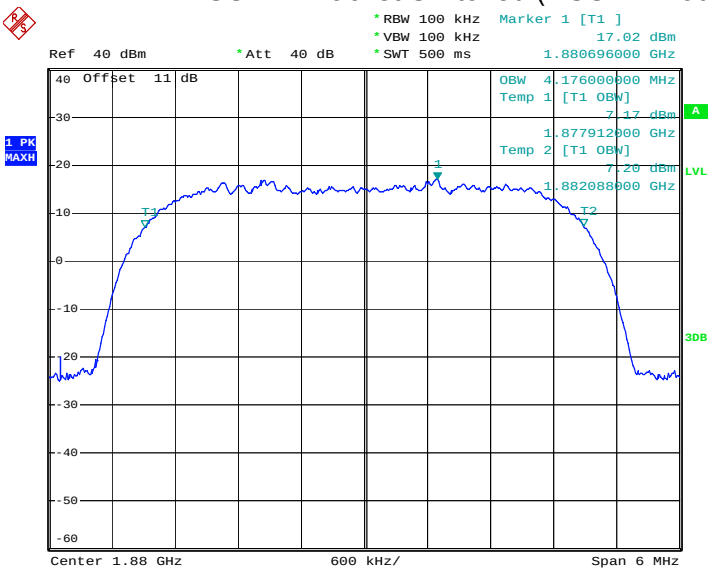
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND II HSUPA		

WCDMA BAND II HSUPA - Packet Switched (HSUPA Mode CH 9262)



Date: 24.FEB.2009 11:28:42

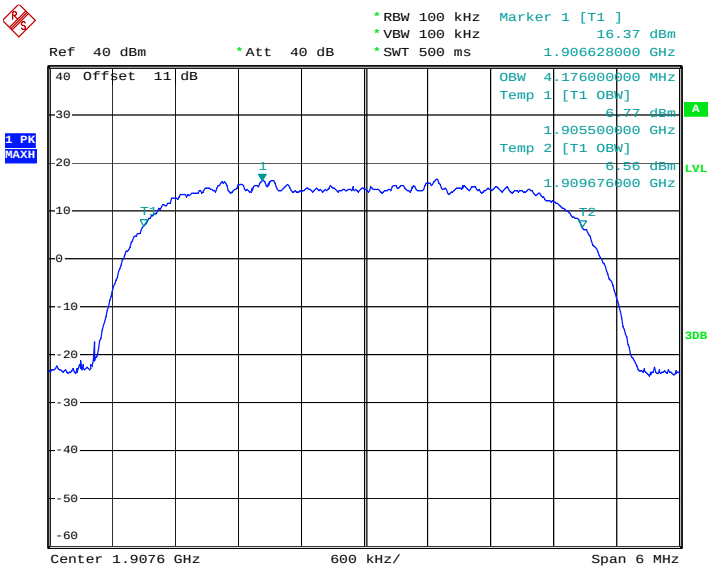
WCDMA BAND II HSUPA - Packet Switched (HSUPA Mode CH 9400)



Date: 24.FEB.2009 11:27:30

Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND II HSUPA		

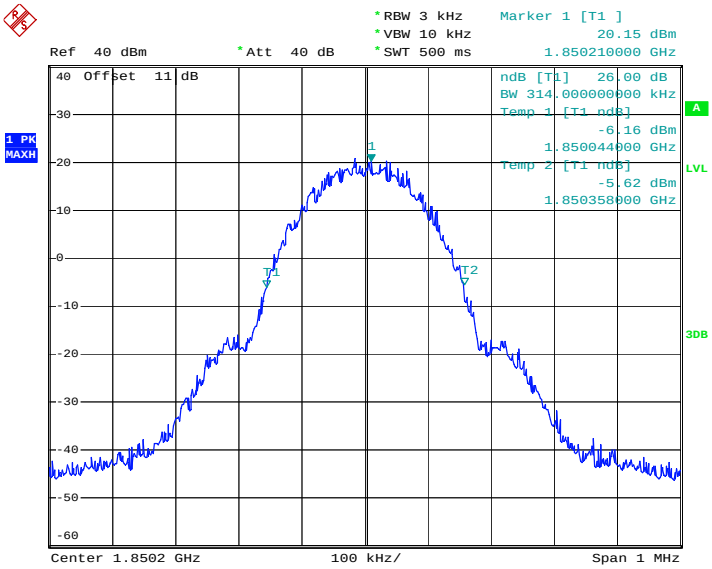
WCDMA BAND II HSUPA - Packet Switched (HSUPA Mode CH 9538)



Date: 24.FEB.2009 11:25:02

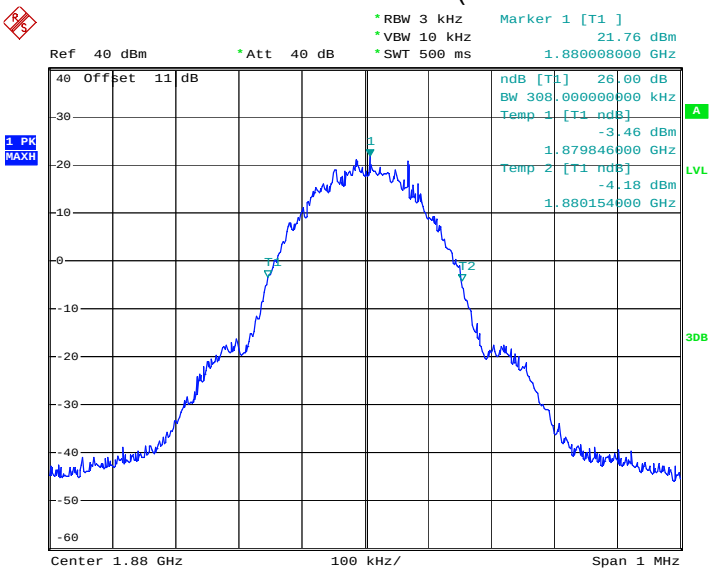
Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	GSM 850		

GSM 850 - Circuit Switched (GSM Mode CH 128)



Date: 24.FEB.2009 06:48:32

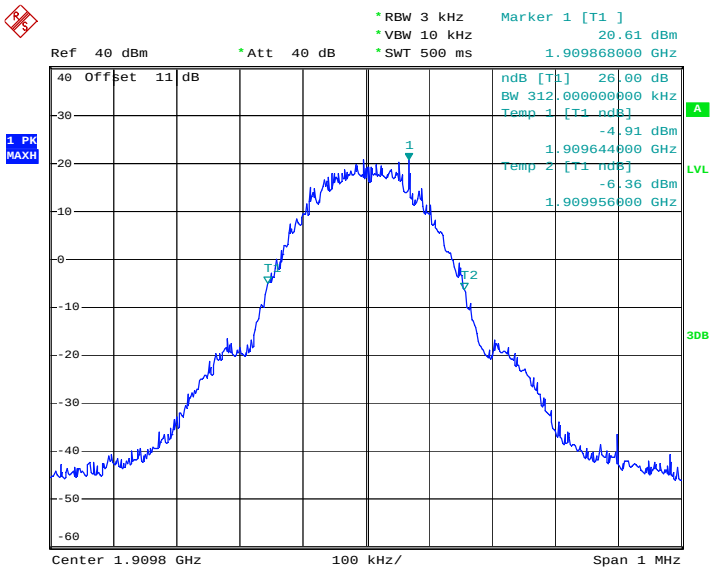
GSM 850 - Circuit Switched (GSM Mode CH189)



Date: 24.FEB.2009 06:45:07

Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	GSM 850		

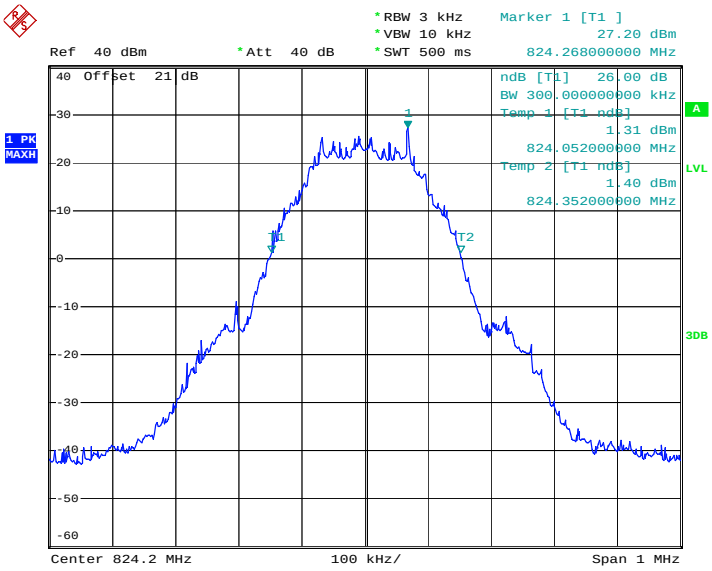
GSM 850 - Circuit Switched (GSM Mode CH 251)



Date: 24.FEB.2009 06:43:33

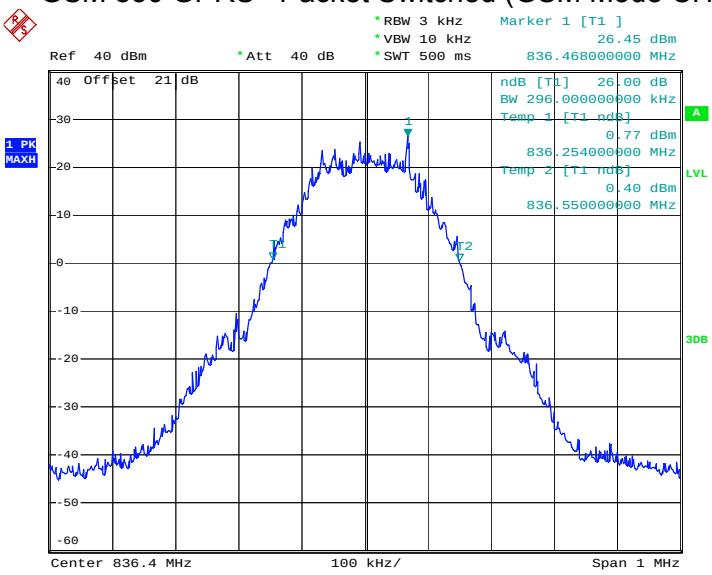
Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	GSM 850 GPRS		

GSM 850 GPRS - Packet Switched (GSM Mode CH 128)



Date: 24.FEB.2009 07:33:42

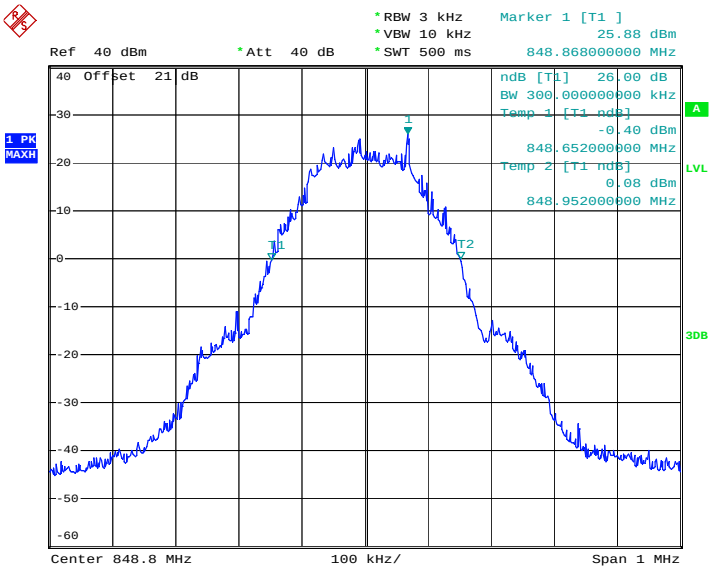
GSM 850 GPRS - Packet Switched (GSM Mode CH189)



Date: 24.FEB.2009 07:26:07

Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	GSM 850 GPRS		

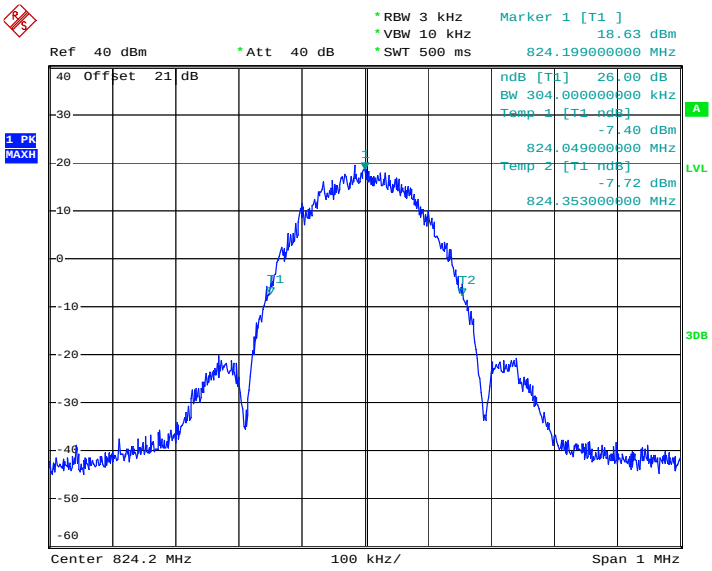
GSM 850 GPRS - Packet Switched (GSM Mode CH 251)



Date: 24.FEB.2009 07:20:22

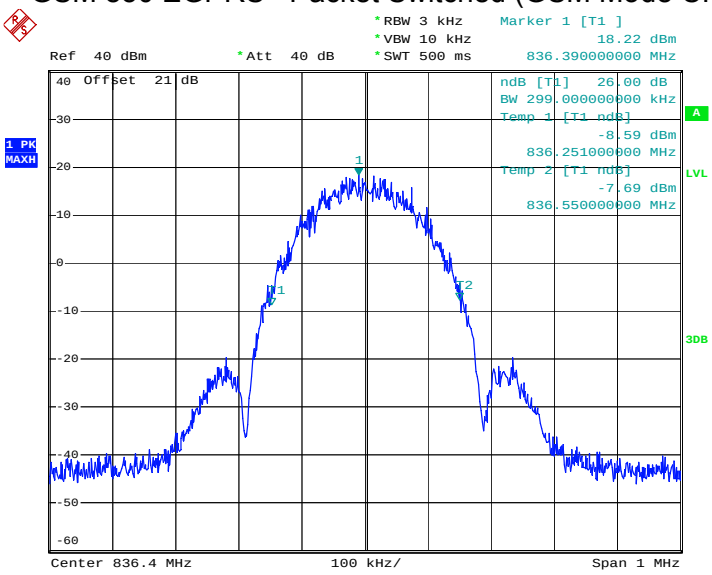
Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	GSM 850 EGPRS		

GSM 850 EGPRS - Packet Switched (GSM Mode CH 128)



Date: 12.FEB.2009 05:00:47

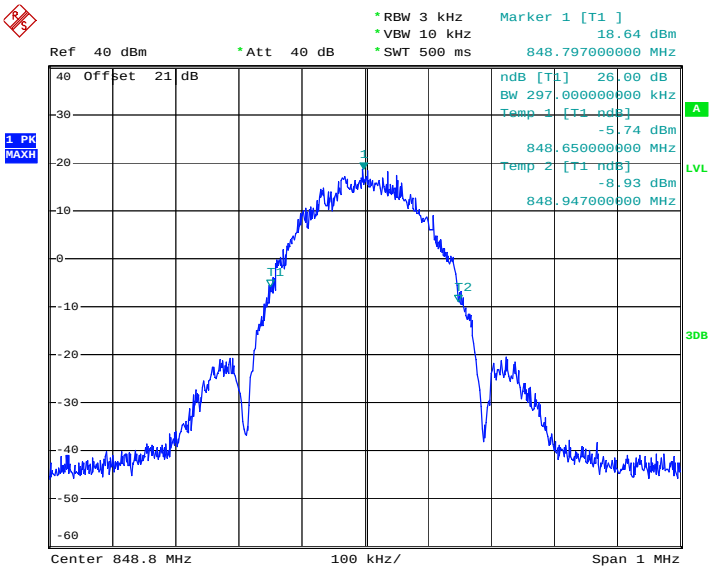
GSM 850 EGPRS - Packet Switched (GSM Mode CH189)



Date: 12.FEB.2009 05:04:01

Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	GSM 850 EGPRS		

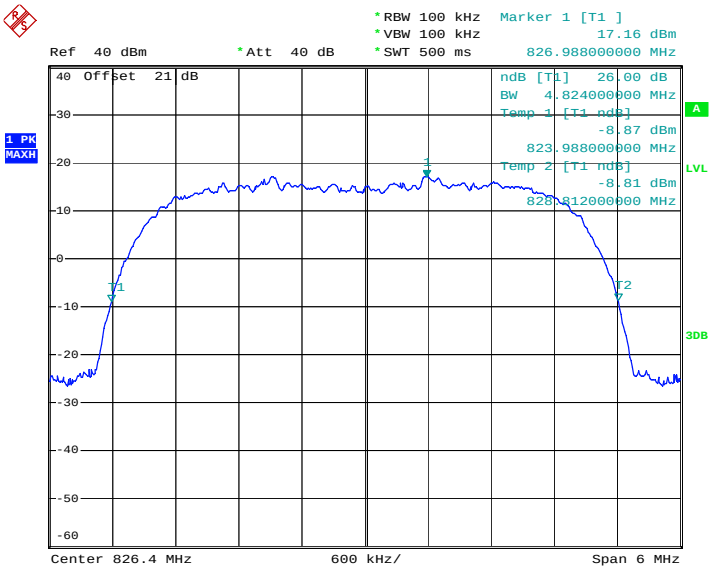
GSM 850 EGPRS - Packet Switched (GSM Mode CH 251)



Date: 12.FEB.2009 05:05:10

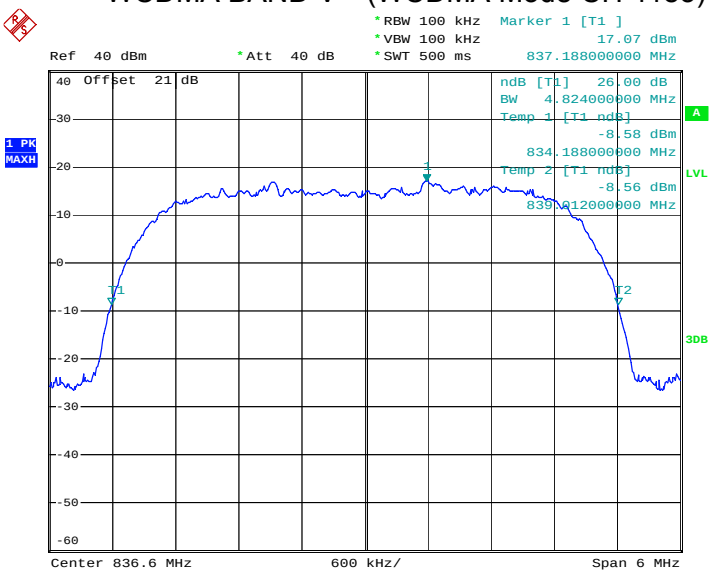
Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND V		

WCDMA BAND V (WCDMA Mode CH 4132)



Date: 24.FEB.2009 12:35:17

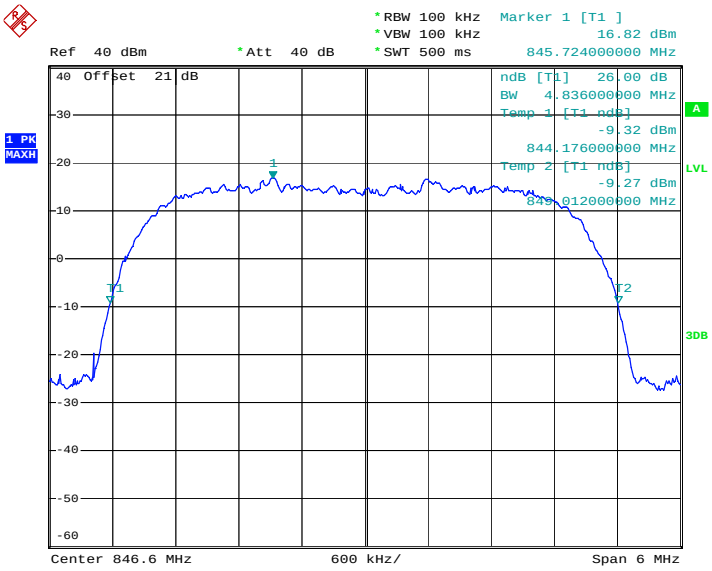
WCDMA BAND V (WCDMA Mode CH 4183)



Date: 24.FEB.2009 12:39:33

Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND V		

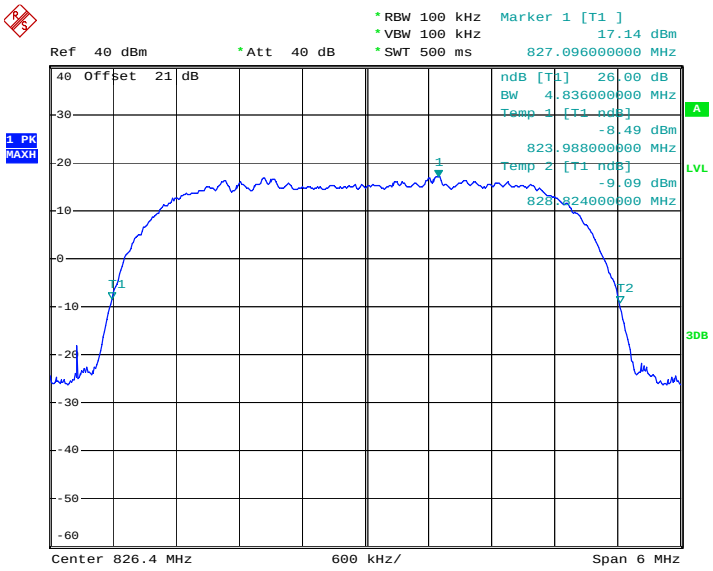
WCDMA BAND V (WCDMA Mode CH 4233)



Date: 24.FEB.2009 12:40:24

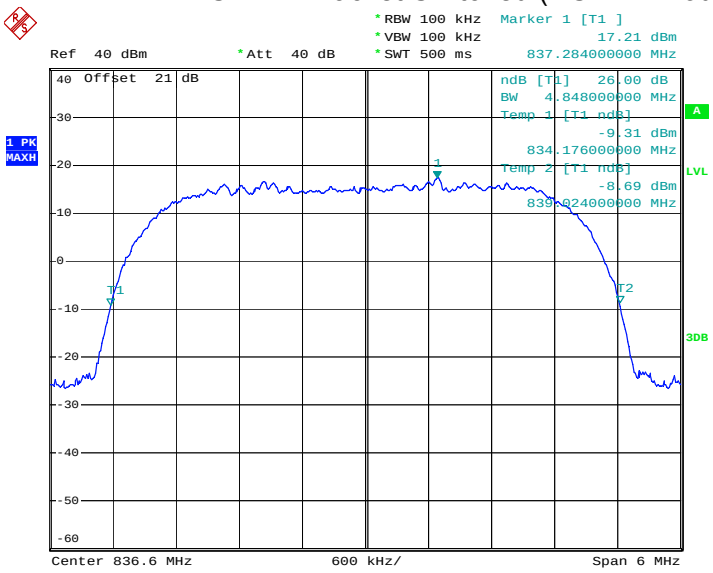
Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND V HSDPA		

WCDMA BAND V HSDPA - Packet Switched (HSDPA Mode CH 4132)



Date: 24.FEB.2009 12:52:43

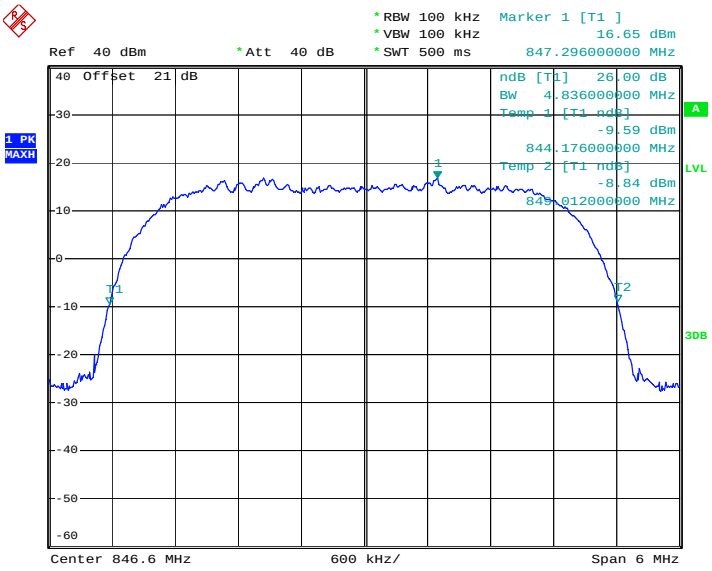
WCDMA BAND V HSDPA - Packet Switched (HSDPA Mode CH 4183)



Date: 24.FEB.2009 12:55:14

Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND V HSDPA		

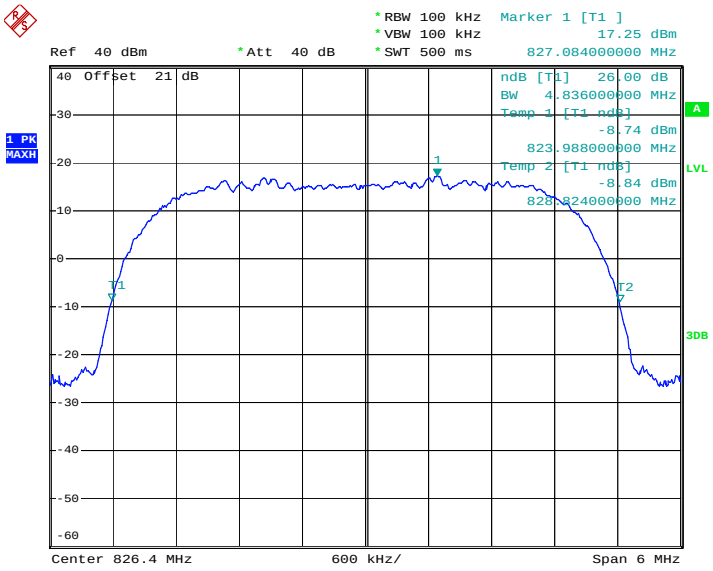
WCDMA BAND V HSDPA - Packet Switched (HSDPA Mode CH 4233)



Date: 24.FEB.2009 12:56:00

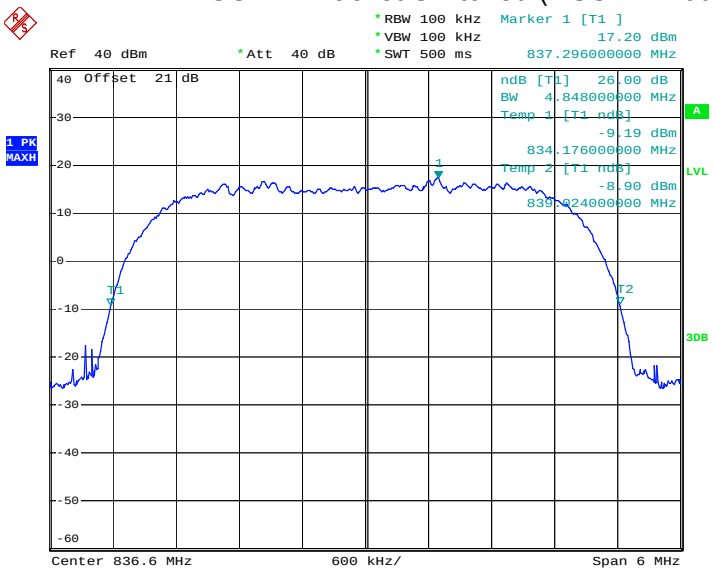
Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND V HSUPA		

WCDMA BAND V HSUPA - Packet Switched (HSUPA Mode CH 4132)



Date: 24.FEB.2009 13:04:39

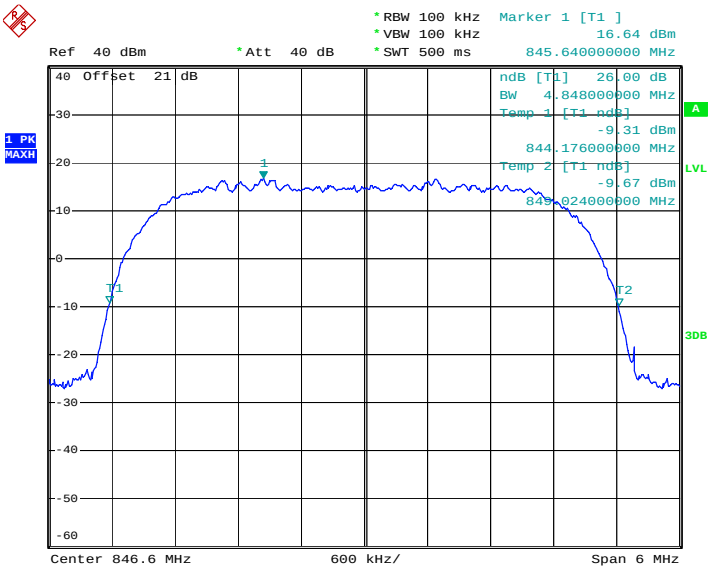
WCDMA BAND V HSUPA - Packet Switched (HSUPA Mode CH 4183)



Date: 24.FEB.2009 13:01:19

Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND V HSUPA		

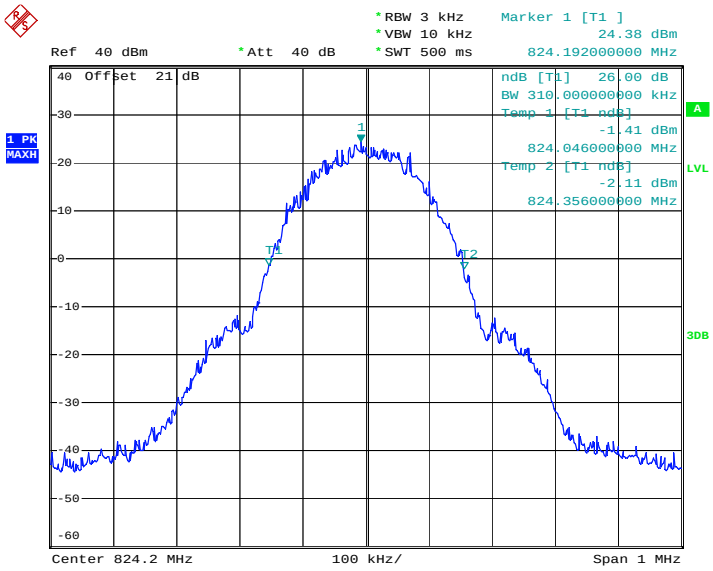
WCDMA BAND V HSUPA - Packet Switched (HSUPA Mode CH 4233)



Date: 24.FEB.2009 13:00:15

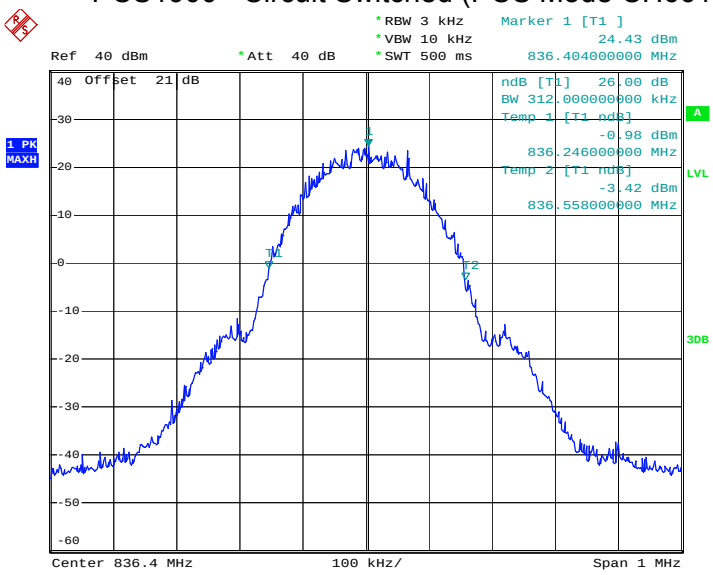
Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	PCS1900		

PCS1900 - Circuit Switched (PCS Mode CH 512)



Date: 24.FEB.2009 07:09:27

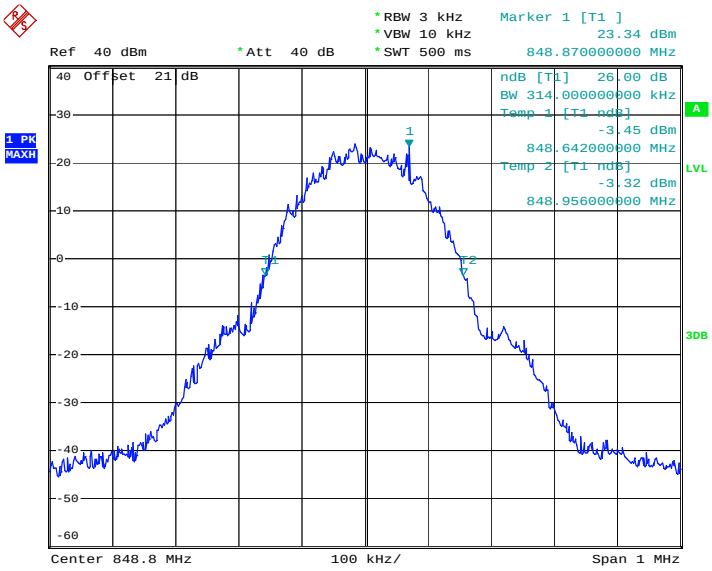
PCS1900 - Circuit Switched (PCS Mode CH661)



Date: 24.FEB.2009 07:10:52

Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	PCS1900		

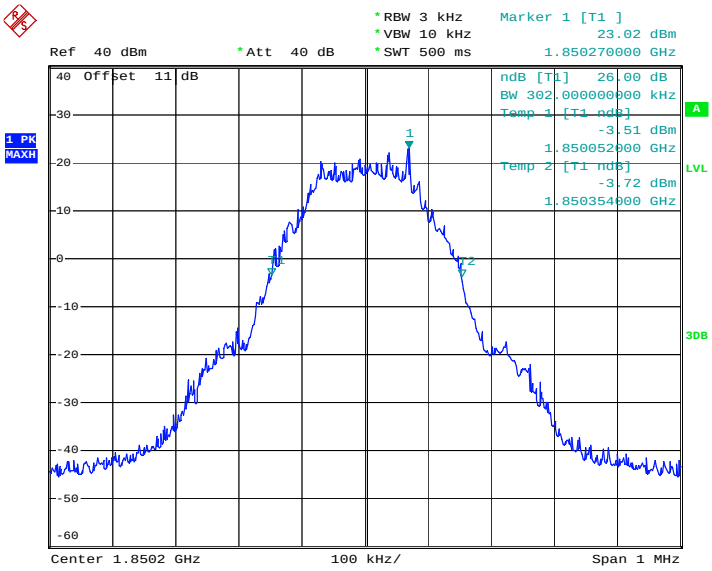
PCS1900 - Circuit Switched (PCS Mode CH 810)



Date: 24.FEB.2009 07:14:12

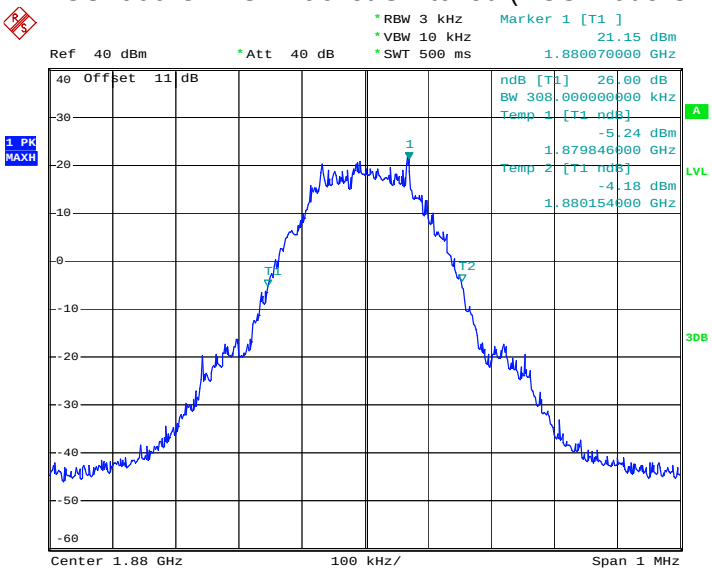
Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	PCS1900 GPRS		

PCS1900 GPRS - Packet Switched (PCS Mode CH 512)



Date: 24.FEB.2009 05:34:35

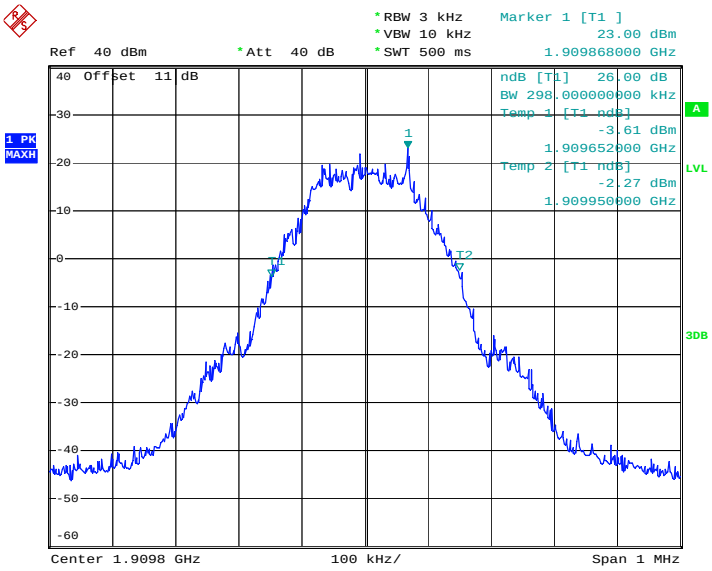
PCS1900 GPRS - Packet Switched (PCS Mode CH661)



Date: 24.FEB.2009 05:36:46

Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	PCS1900 GPRS		

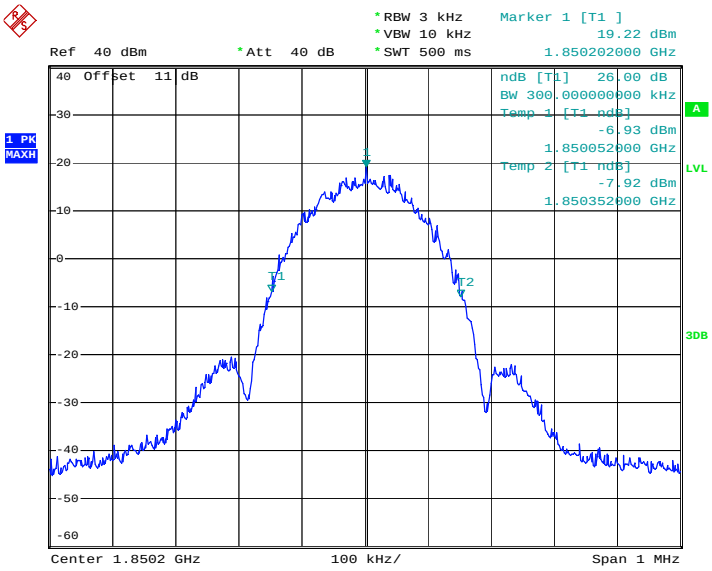
PCS1900 GPRS - Packet Switched (PCS Mode CH 810)



Date: 24.FEB.2009 05:38:31

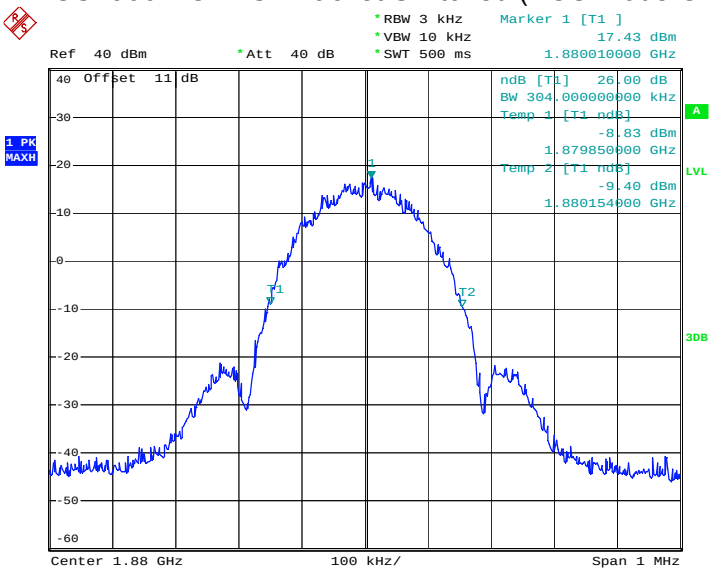
Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	PCS1900 EGPRS		

PCS1900 EGPRS - Packet Switched (PCS Mode CH 512)



Date: 24.FEB.2009 06:52:06

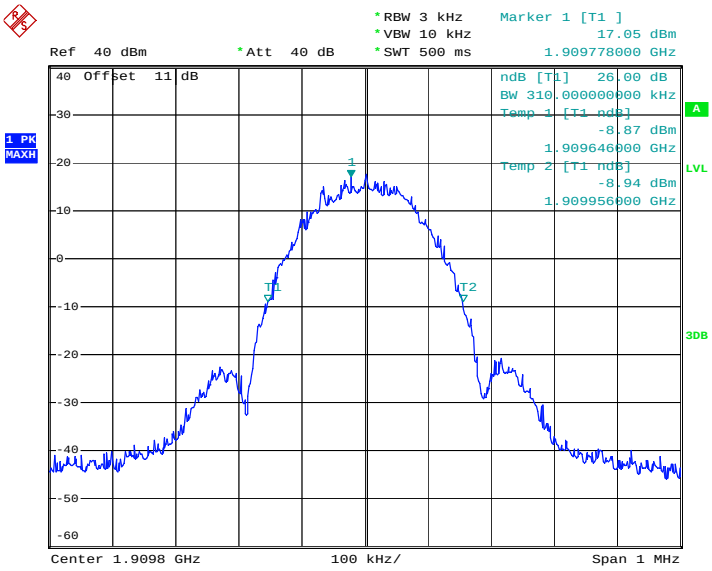
PCS1900 EGPRS - Packet Switched (PCS Mode CH661)



Date: 24.FEB.2009 06:58:06

Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	PCS1900 EGPRS		

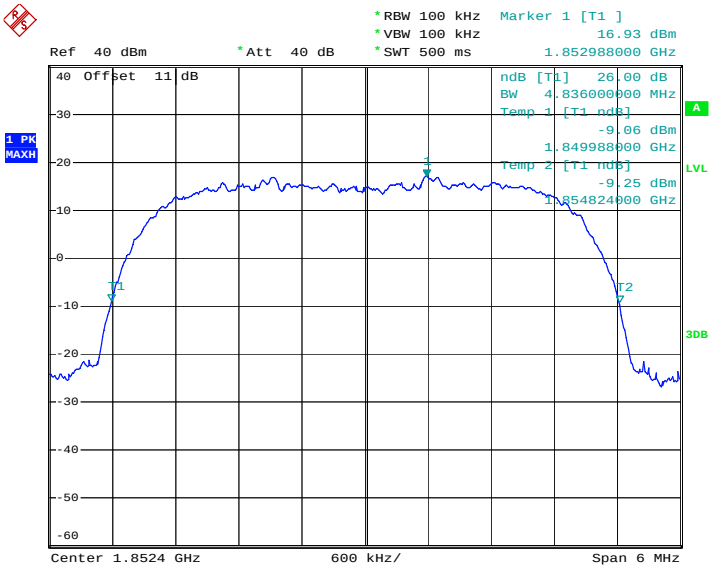
PCS1900 EGPRS - Packet Switched (PCS Mode CH 810)



Date: 24.FEB.2009 06:59:51

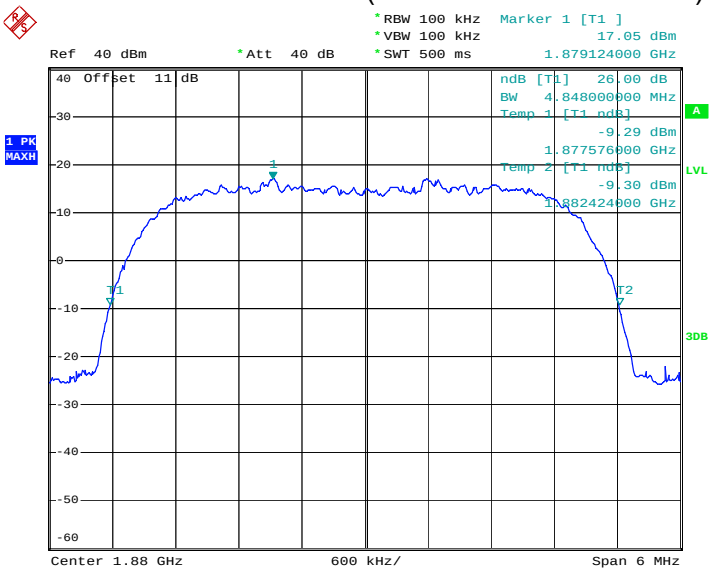
Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND II		

WCDMA BAND II (WCDMA Mode CH 9262)



Date: 24.FEB.2009 11:17:03

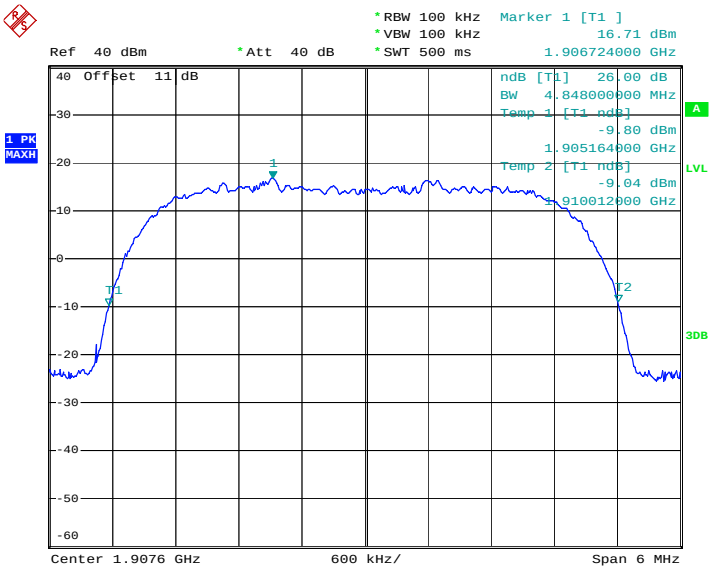
WCDMA BAND II (WCDMA Mode CH 9400)



Date: 24.FEB.2009 11:19:23

Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND II		

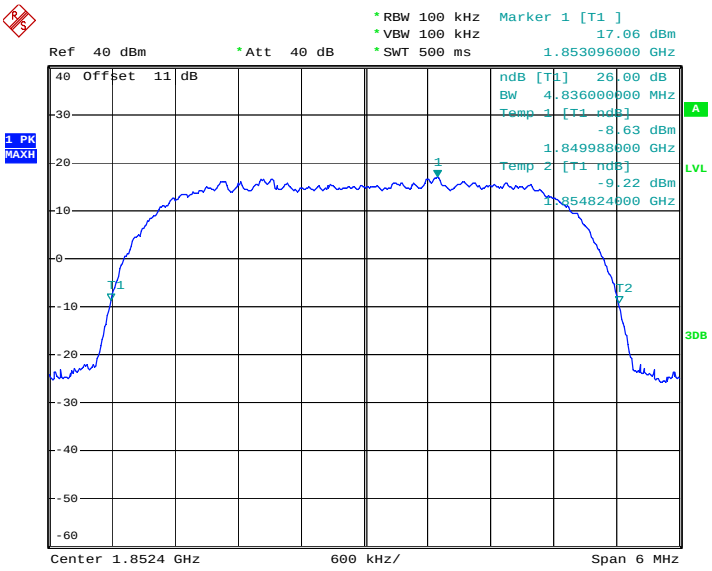
WCDMA BAND II (WCDMA Mode CH 9538)



Date: 24.FEB.2009 11:20:18

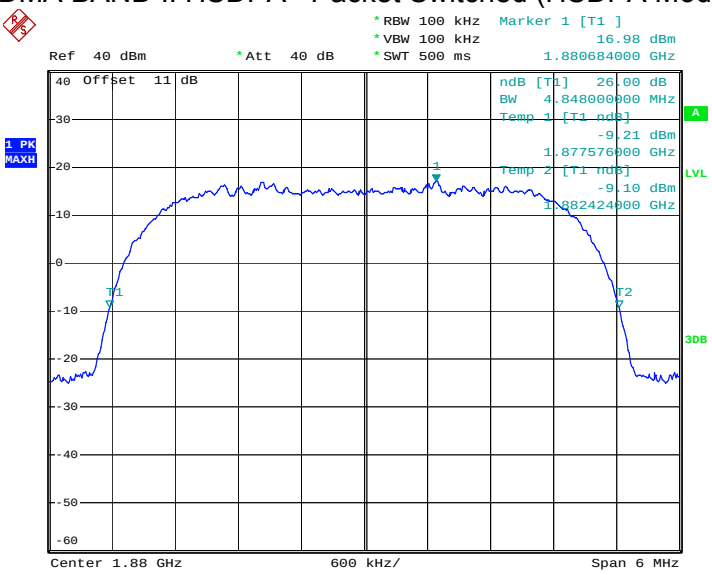
Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND II HSDPA		

WCDMA BAND II HSDPA - Packet Switched (HSDPA Mode CH 9262)



Date: 24.FEB.2009 11:55:50

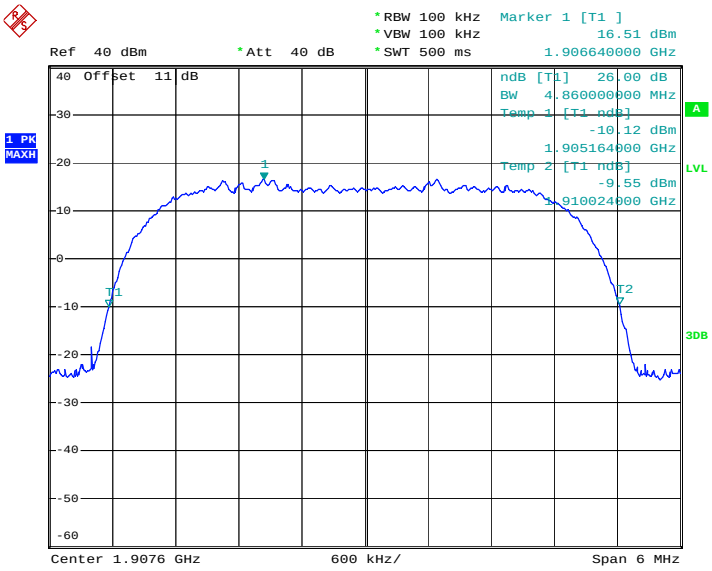
WCDMA BAND II HSDPA - Packet Switched (HSDPA Mode CH 9400)



Date: 24.FEB.2009 11:53:10

Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND II HSDPA		

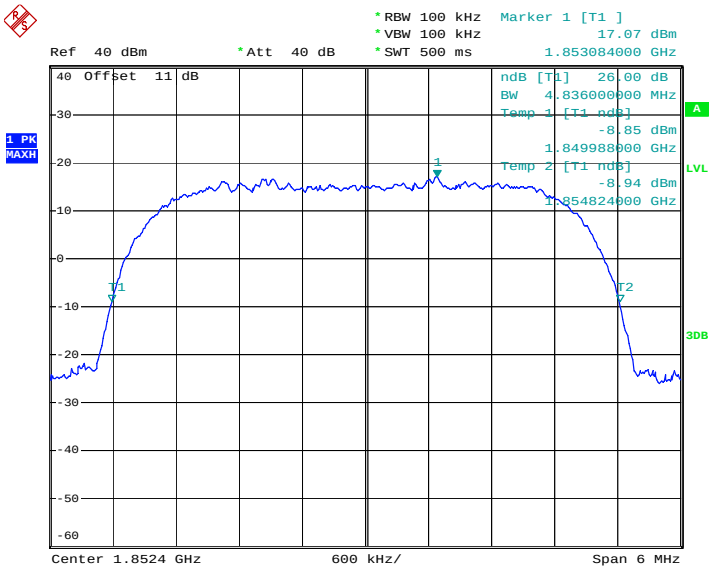
WCDMA BAND II HSDPA - Packet Switched (HSDPA Mode CH 9538)



Date: 24.FEB.2009 11:52:23

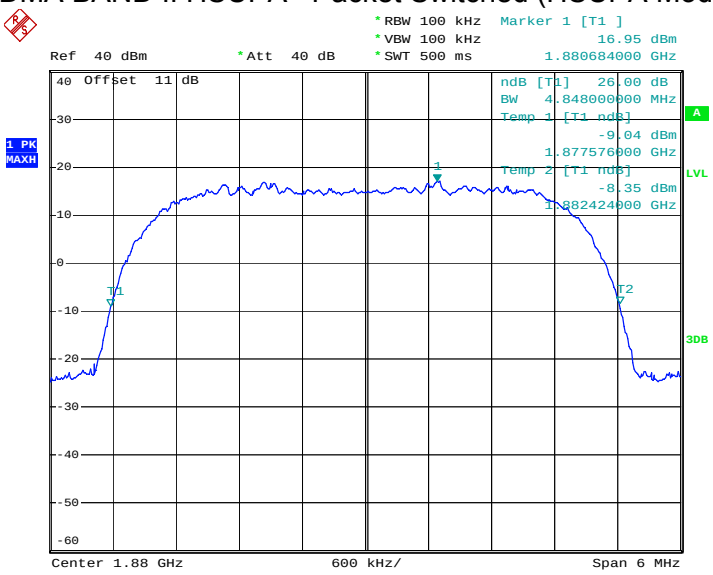
Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND II HSUPA		

WCDMA BAND II HSUPA - Packet Switched (HSUPA Mode CH 9262)



Date: 24.FEB.2009 11:29:23

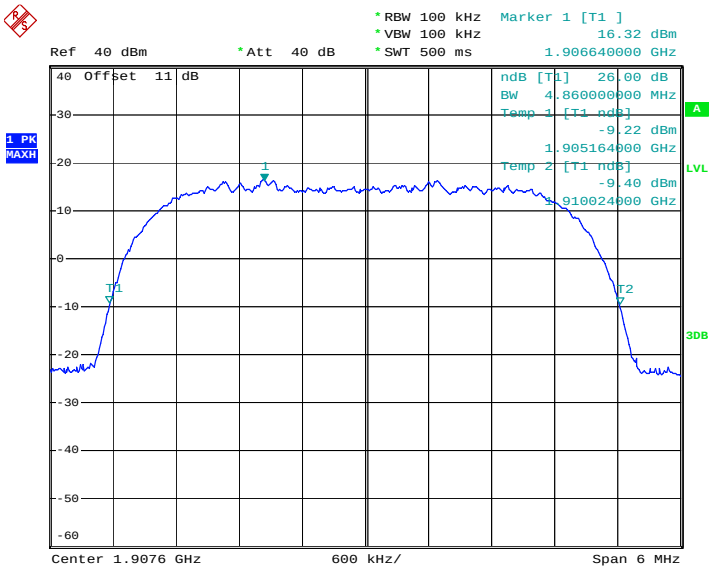
WCDMA BAND II HSUPA - Packet Switched (HSUPA Mode CH 9400)



Date: 24.FEB.2009 11:26:50

Product	Smart Handheld		
Test Mode	26dB Occupied Bandwidth		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND II HSUPA		

WCDMA BAND II HSUPA - Packet Switched (HSUPA Mode CH 9538)



Date: 24.FEB.2009 11:25:48

4. Spurious Emission At Antenna Terminals (+/-1MHz)

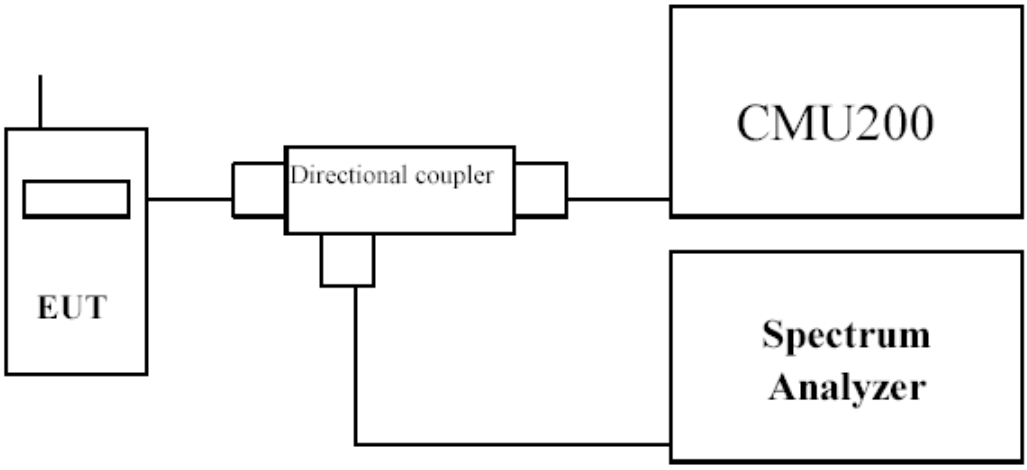
4.1. Test Equipment

The following test equipments are used during the spurious emission test

Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Spectrum Analyzer (9K-40GHz)	R&S	FSP40/100170	Nov ., 2008
Universal Radio Communication Tester	R & S	CMU200 / 104846	Apr., 2008
Directional coupler	Agilent	87300C / MY44300353	Aug., 2008
Directional coupler	Agilent	778D-012/ 50550	Aug., 2008

Note: All equipments upon which need to be calibrated are with calibration period of 1 year.

4.2. Setup



4.3. Limits

Cellular Band Transmitter limits for narrowband spurious emission

Lower Block Edge Test Frequencies	**Upper Block Edge Test Frequencies**
Block A Channel : 128 Frequency : 824.2 MHz	Block B Channel : 251 Frequency : 848.8 MHz

PCS Band Transmitter limits for narrowband spurious emission

Lower Block Edge Test Channels/Frequencies	**Upper Block Edge Test Channels/Frequencies**
Block A Channel : 512 Frequency : 1850.2 MHz	Block C Channel : 810 Frequency : 1909.8 MHz

4.4. Test Procedure

In accordance with Part 22.917 and 24.238, at least 1% of the emission bandwidth was used for the resolution and video bandwidths up to 1MHz away from the Block Edge. At greater than 1MHz, the resolution and video bandwidth were increased to 1MHz.

The reference power and path losses of all channels used for testing in each frequency block were measured.

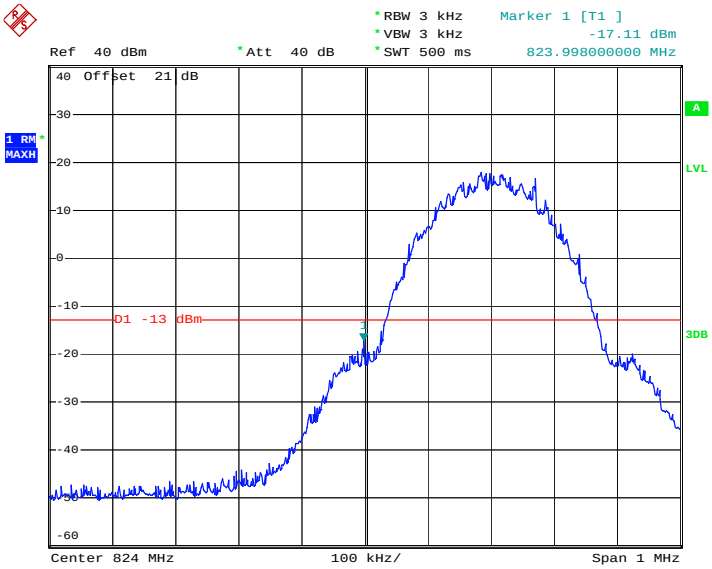
4.5. Test Specification

According to Part 2.1049, 22.917,24.238.

4.6. Test Result of Spurious Emission At Antenna Terminals (+/-1MHz)

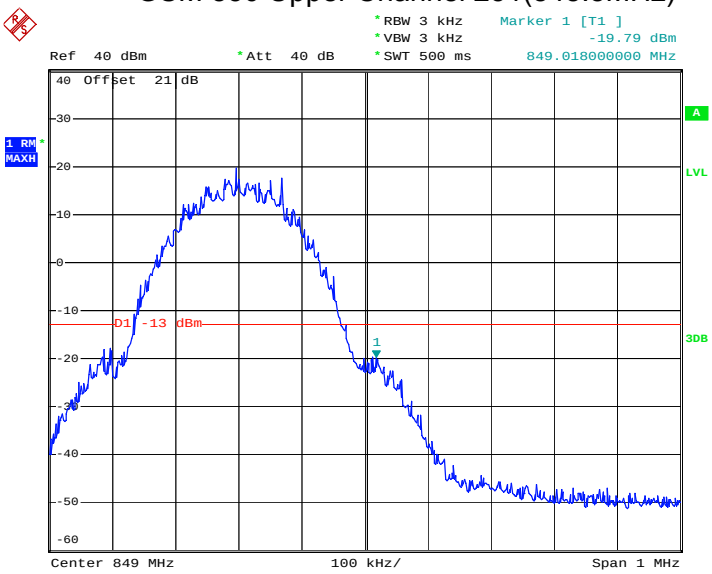
Product	Smart Handheld		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	Block Edge Test (GSM 850)		

GSM 850 Lower Channel 128 (824.2MHz)



Date: 24.FEB.2009 04:36:08

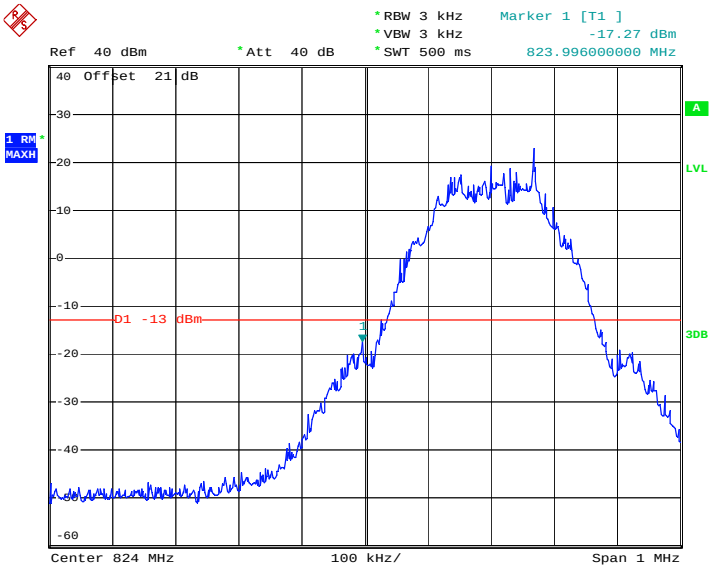
GSM 850 Upper Channel 251(848.8MHz)



Date: 24.FEB.2009 04:38:40

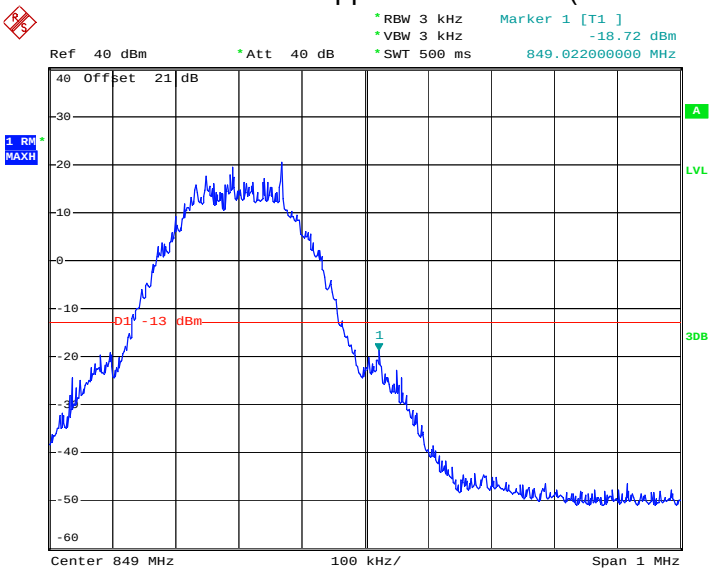
Product	Smart Handheld		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	Block Edge Test (GSM 850 GPRS)		

GSM 850 GPRS Lower Channel 128 (824.2MHz)



Date: 24.FEB.2009 04:47:02

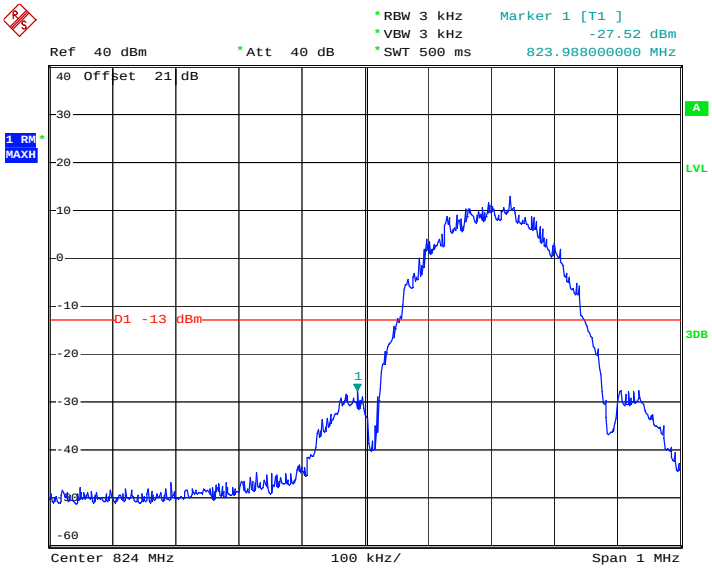
GSM 850 GPRS Upper Channel 251(848.8MHz)



Date: 24.FEB.2009 04:48:01

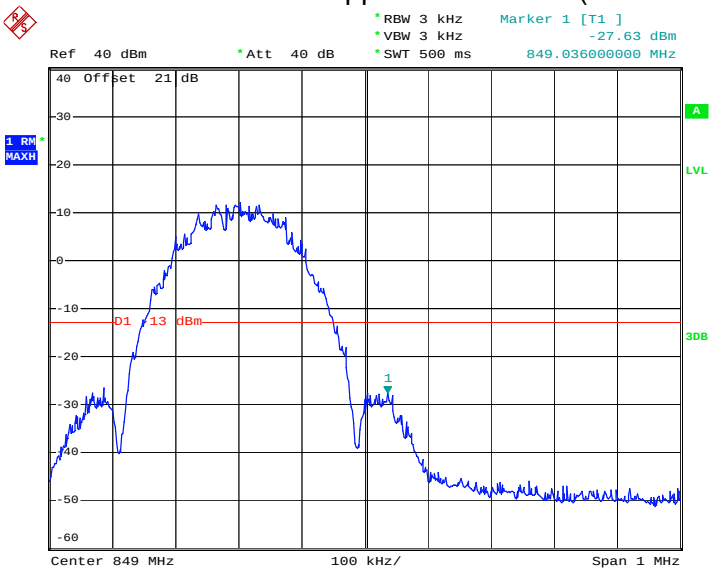
Product	Smart Handheld		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	Block Edge Test (GSM 850 EGPRS)		

GSM 850 EGPRS Lower Channel 128 (824.2MHz)



Date: 24.FEB.2009 04:42:46

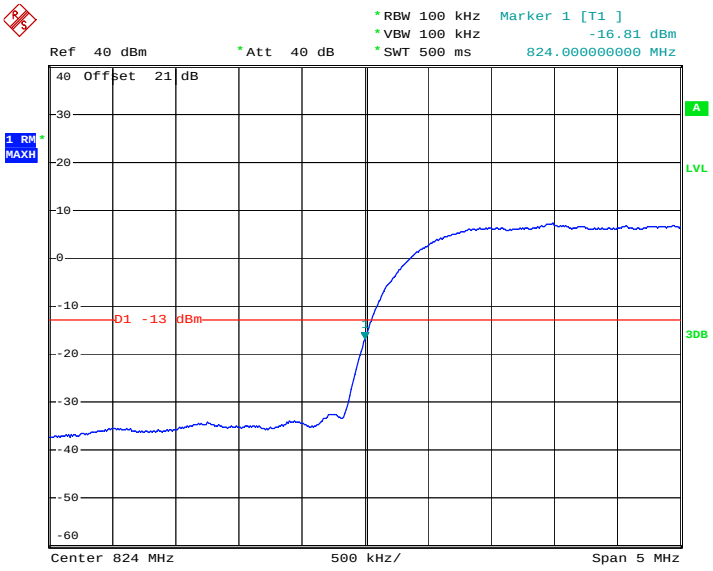
GSM 850 EGPRS Upper Channel 251(848.8MHz)



Date: 24.FEB.2009 04:41:48

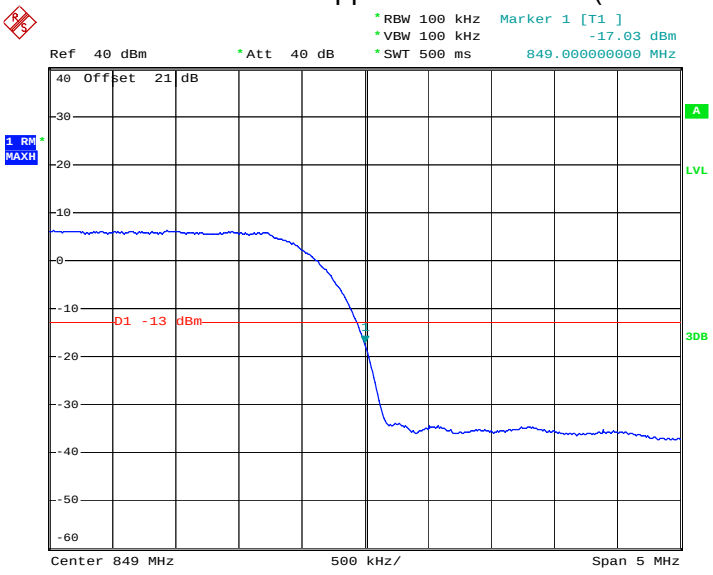
Product	Smart Handheld		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	Block Edge Test (WCDMA BAND V)		

WCDMA BAND V Lower Channel 4132 (826.4MHz)



Date: 24.FEB.2009 12:25:17

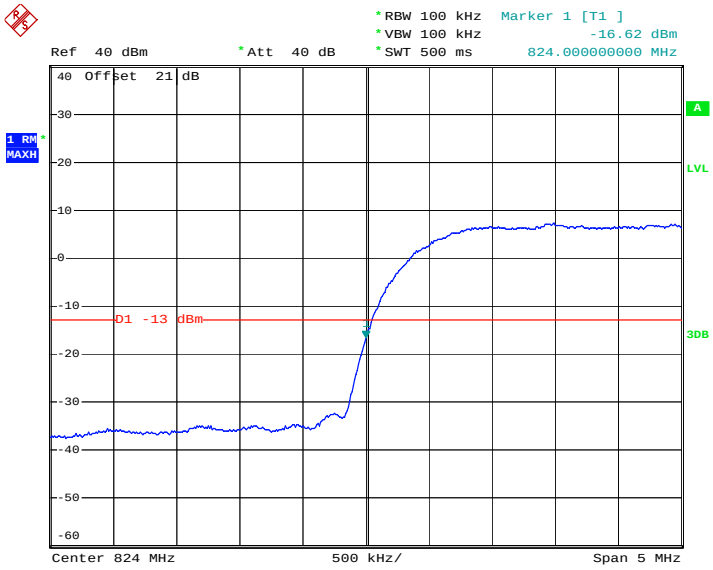
WCDMA BAND V Upper Channel 4233 (4233MHz)



Date: 24.FEB.2009 12:26:23

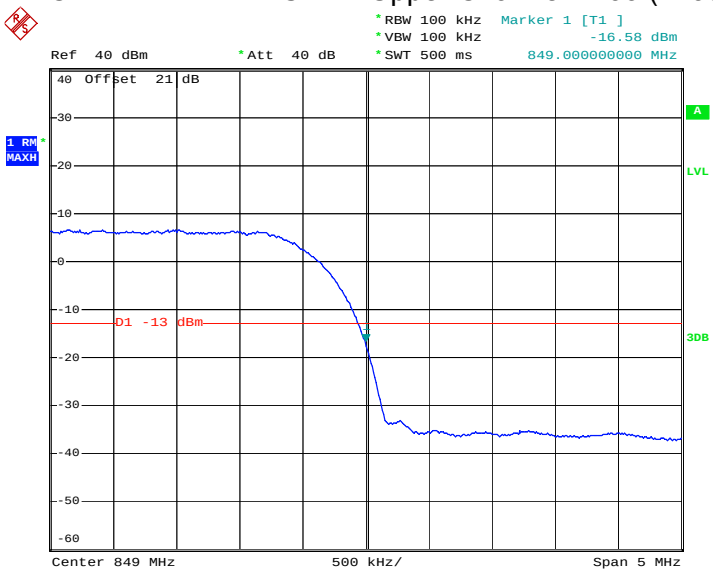
Product	Smart Handheld		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	Block Edge Test (WCDMA BAND V HSDPA)		

WCDMA BAND V HSDPA Lower Channel 4132 (826.4MHz)



Date: 24.FEB.2009 12:31:20

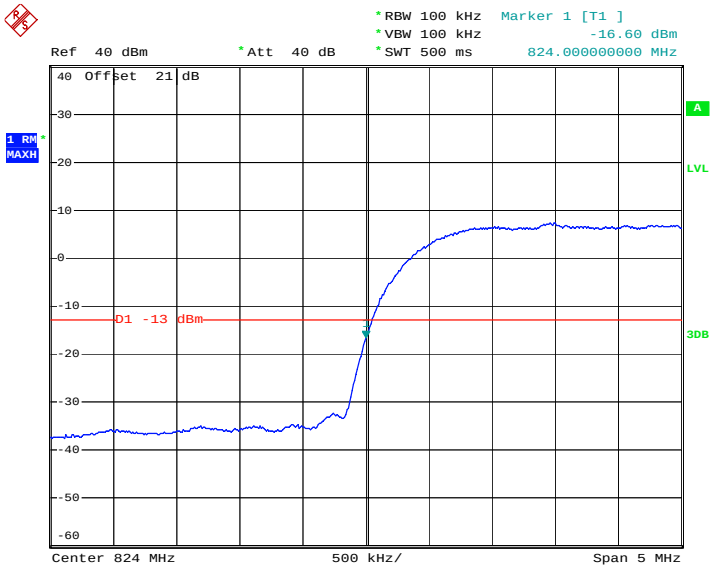
WCDMA BAND V HSDPA Upper Channel 4233 (4233MHz)



Date: 24.FEB.2009 12:30:38

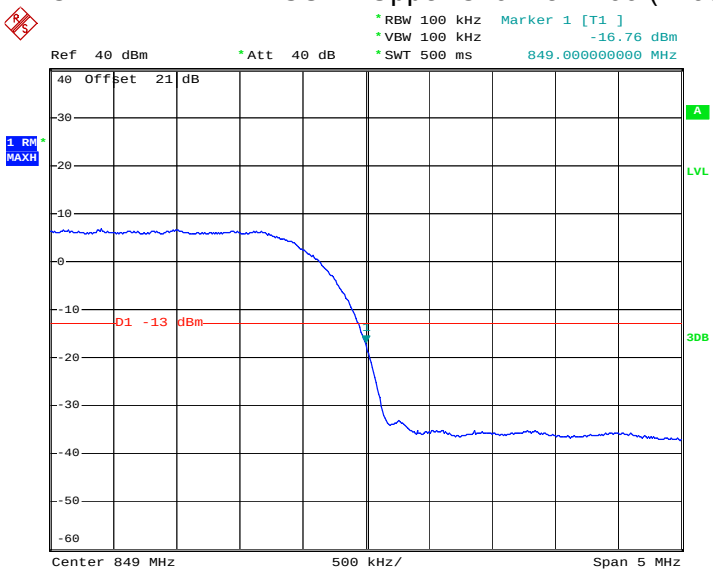
Product	Smart Handheld		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	Block Edge Test (WCDMA BAND V HSUPA)		

WCDMA BAND V HSDPA Lower Channel 4132 (826.4MHz)



Date: 24.FEB.2009 12:28:49

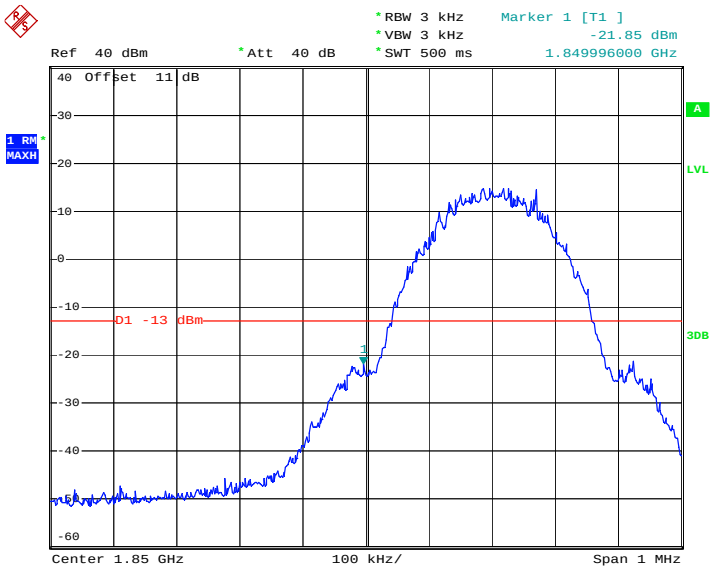
WCDMA BAND V HSUPA Upper Channel 4233 (4233MHz)



Date: 24.FEB.2009 12:29:37

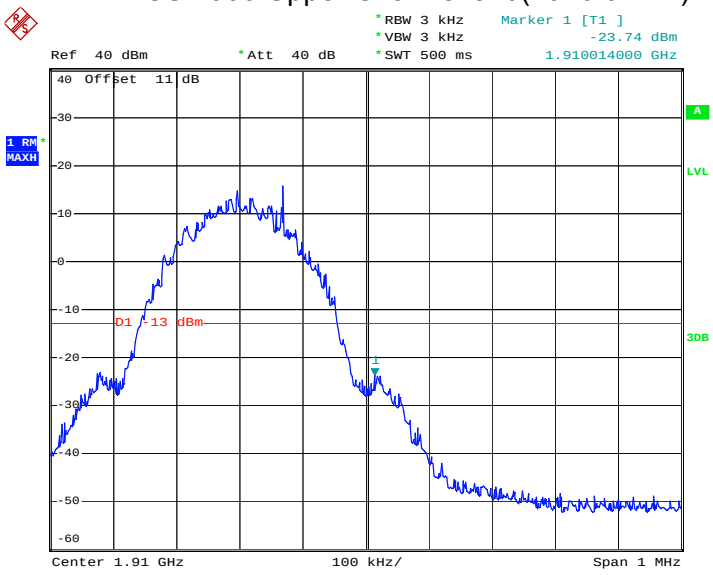
Product	Smart Handheld		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	Block Edge Test (PCS 1900)		

PCS 1900 Lower Channel 512 (1850.2MHz)



Date: 24.FEB.2009 05:17:20

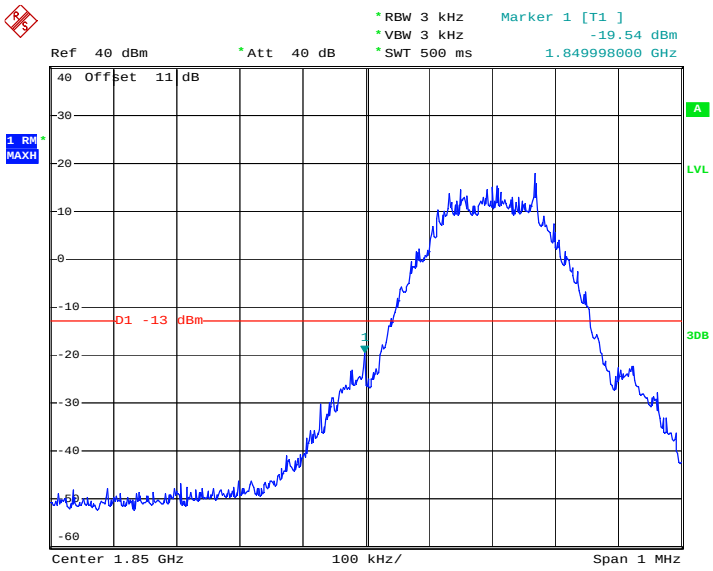
PCS 1900 Upper Channel 810(1910.0MHz)



Date: 24.FEB.2009 05:18:23

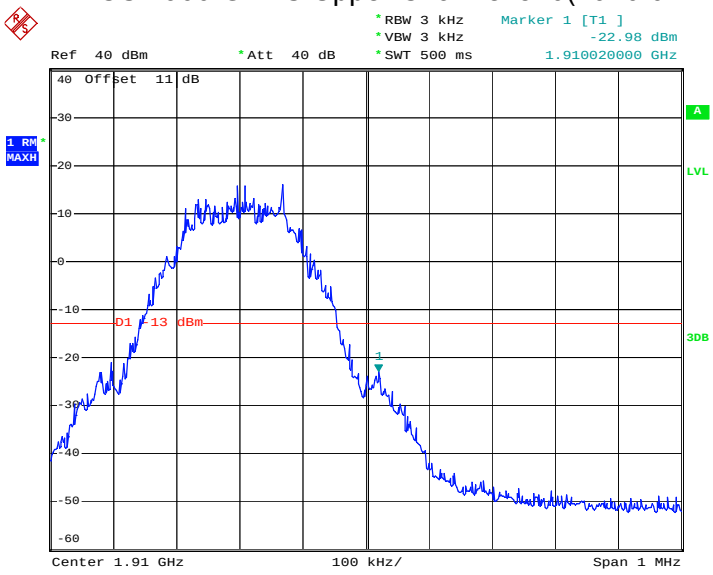
Product	Smart Handheld		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	Block Edge Test (PCS 1900 GPRS)		

PCS 1900 GPRS Lower Channel 512 (1850.2MHz)



Date: 24.FEB.2009 05:24:49

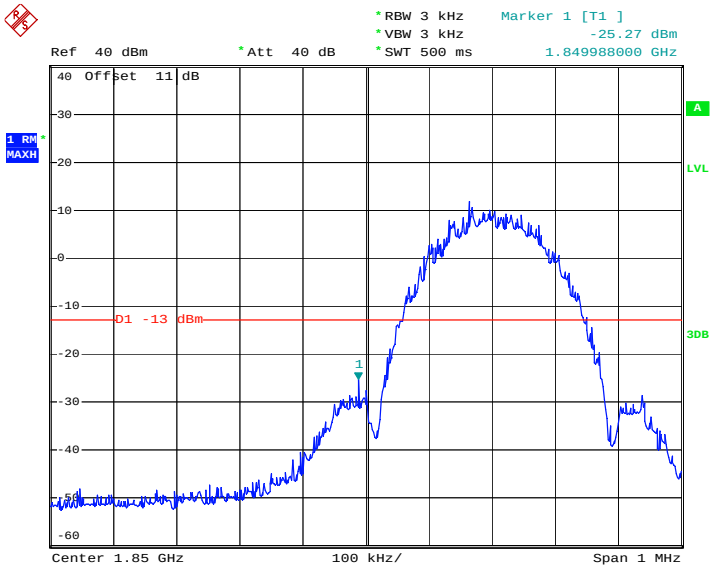
PCS 1900 GPRS Upper Channel 810(1910.0MHz)



Date: 24.FEB.2009 05:23:30

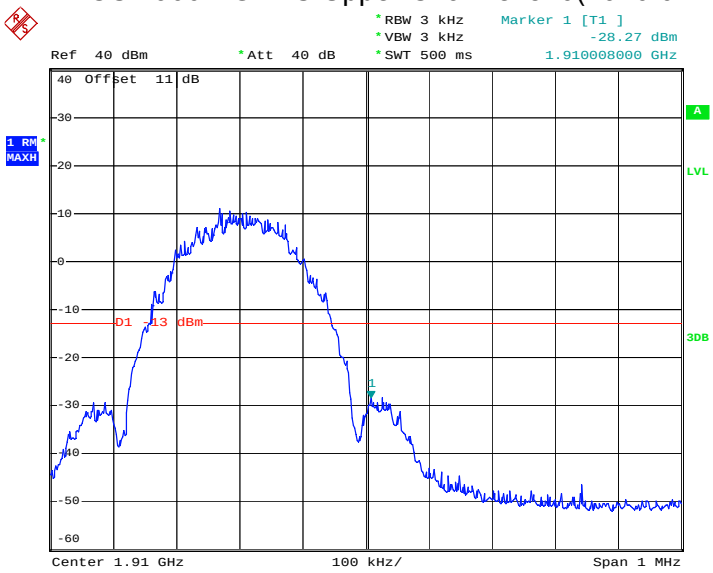
Product	Smart Handheld		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	Block Edge Test (PCS 1900 EGPRS)		

PCS 1900 EGPRS Lower Channel 512 (1850.2MHz)



Date: 24.FEB.2009 05:19:59

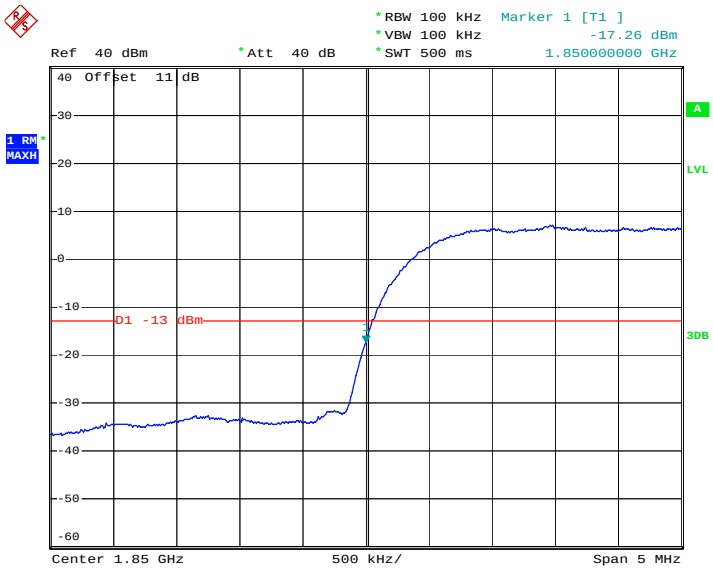
PCS 1900 EGPRS Upper Channel 810(1910.0MHz)



Date: 24.FEB.2009 05:21:11

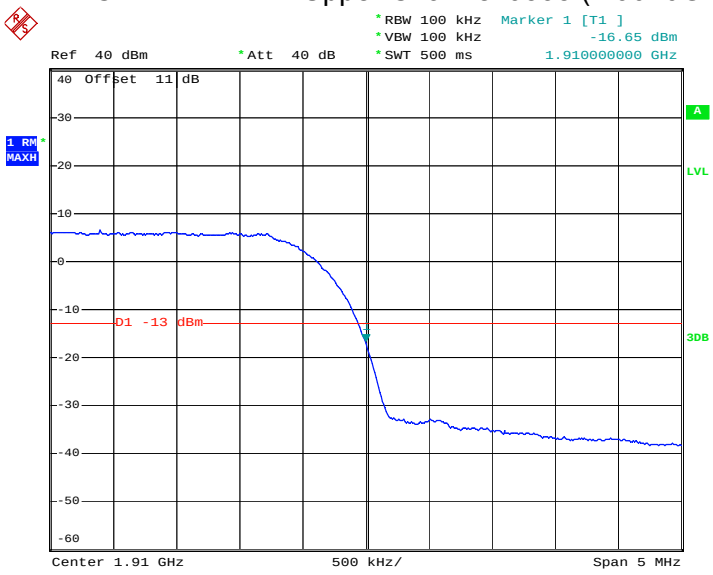
Product	Smart Handheld		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	Block Edge Test (WCDMA BAND II)		

WCDMA BAND II Lower Channel 9262 (1.8524GHz)



Date: 24.FEB.2009 12:19:51

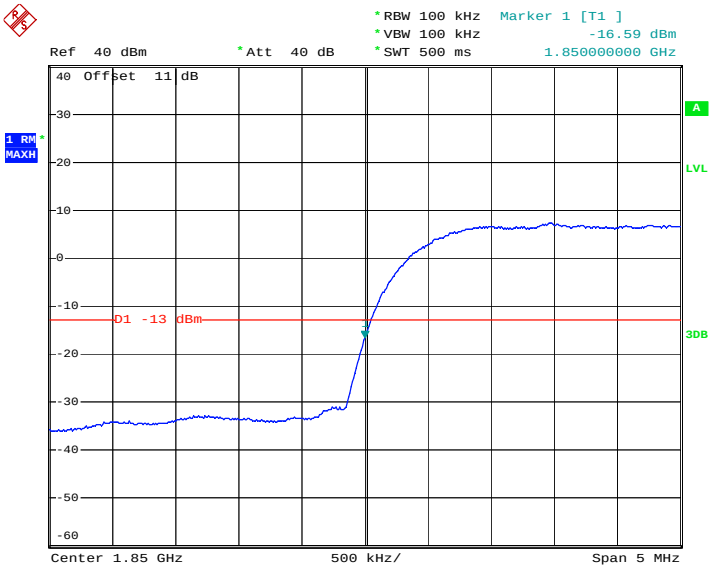
WCDMA BAND II Upper Channel 9538 (1.9076GHz)



Date: 24.FEB.2009 12:18:38

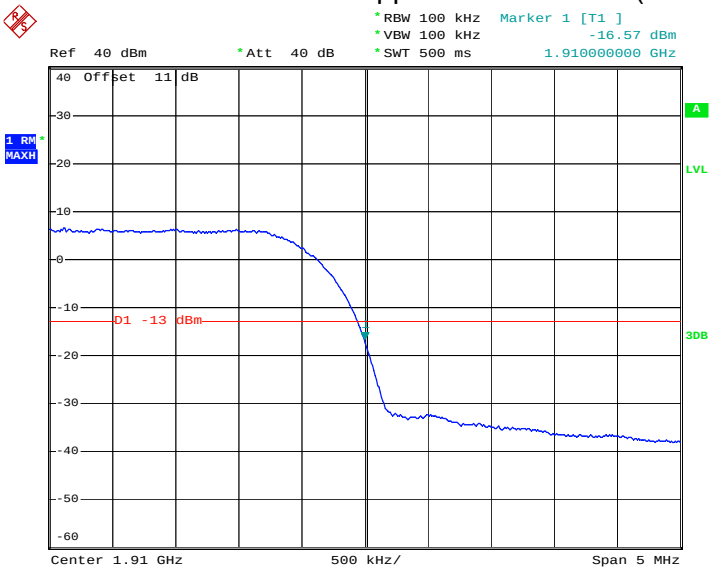
Product	Smart Handheld		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	Block Edge Test (WCDMA BAND II HSDPA)		

WCDMA BAND II HSDPA Lower Channel 9262 (1.8524GHz)



Date: 24.FEB.2009 12:13:00

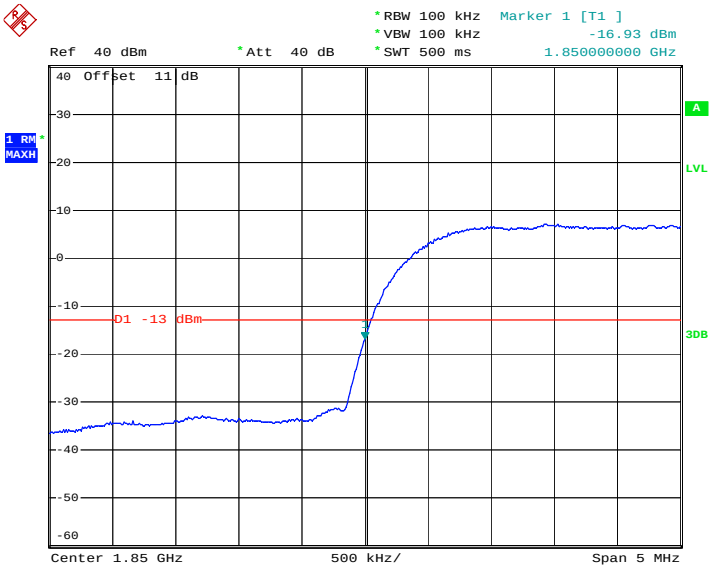
WCDMA BAND II HSDPA Upper Channel 9538 (1.9076GHz)



Date: 24.FEB.2009 12:11:07

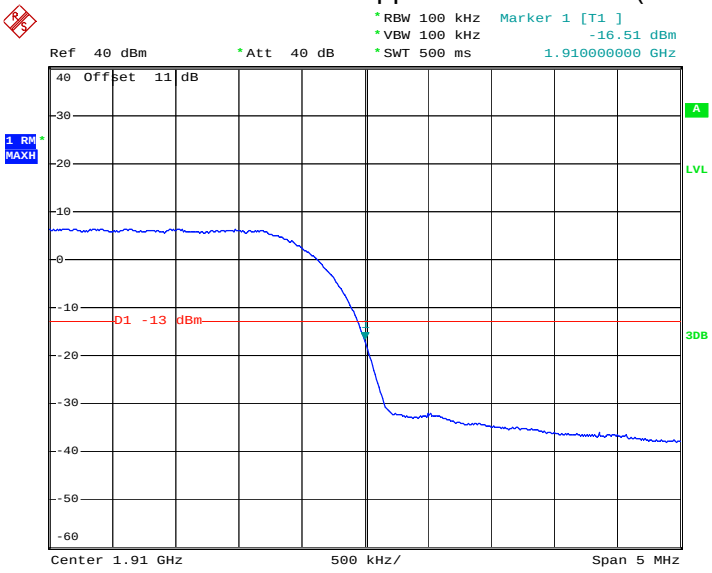
Product	Smart Handheld		
Test Mode	Spurious Emission At Antenna Terminals (+/-1MHz)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	Block Edge Test (WCDMA BAND II HSUPA)		

WCDMA BAND II HSUPA Lower Channel 9262 (1.8524GHz)



Date: 24.FEB.2009 12:16:50

WCDMA BAND II HSUPA Upper Channel 9538 (1.9076GHz)



Date: 24.FEB.2009 12:17:48

5. Spurious Emission

5.1. Test Equipment

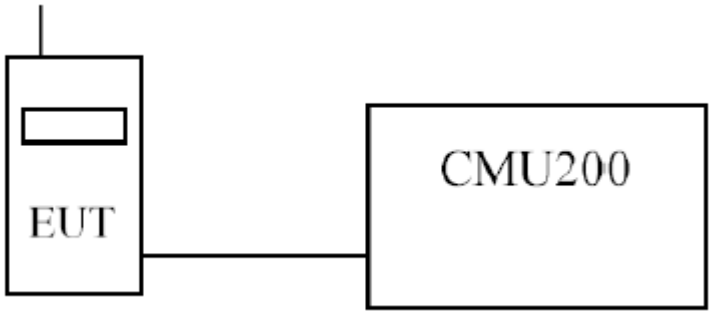
The following test equipments are used during the radiated emission test:

Test Site	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒CTR	Spectrum Analyzer (9K-40GHz)	R&S	FSP40/100170	Nov ., 2008
	Dual Directional couple	Agilent	778D-012/50550	Aug , 2008
	Directional coupler	Agilent	87300C/ MY44300353	Aug ., 2008
☒SITE3	Universal Radio Communication Tester	R & S	CMU200 / 104846	Apr ., 2008
	Bilog Antenna	Schaffner Chase	CBL6112B/2921	Aug ., 2008
	Broadband Horn Antenna	Schwarzbeck	BBHA9170/497	Sep ., 2008
	Horn Antenna	Schwarzbeck	BBHA9120D/ 305	Sep ., 2008
	Pre-Amplifier	QTK	N/A	N/A
	Microwave Amplifier (0.5GHZ-26.5GHZ)	Agilent	83017A/ MY39500682	Aug ., 2008
	Spectrum Analyzer	Agilent	N9020A/ MY48010570	Apr., 2008
	Universal Radio Communication Tester	R & S	CMU200 / 104846	Apr ., 2008

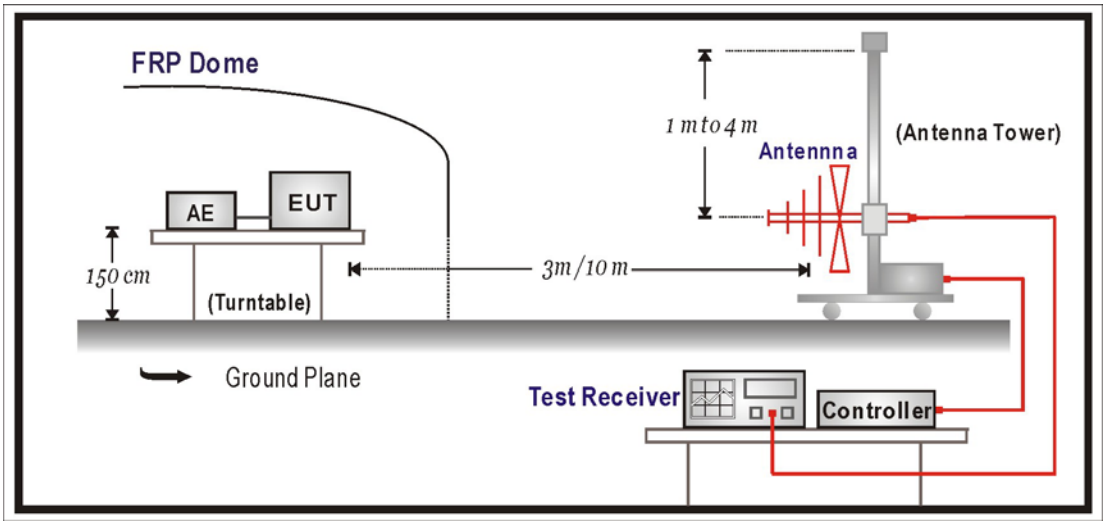
Note: 1. All equipments that need to be calibrated are with calibration period of 1 year.

5.2. Test Setup

5.2.1.1 Spurious emissions at antenna terminals.



5.2.1.2 Field strength of spurious radiation.



5.3. Limits

Limit	**<-13dBm**

43 + 10Log(P) down on the carrier where P is the power in Watts.

5.4. Test Procedure

In accordance with Part 2.1051, the spurious emissions from the antenna terminal were measured. The transmitter output power was attenuated using a combination of filters and attenuators and the frequency spectrum investigated from 30MHz to 20GHz. The EUT was set to transmit on full power. The EUT was tested on bottom, middle and top channels for both power levels. The resolution and video bandwidth was set to 3MHz in accordance with Part 22.917&24.238. The spectrum analyzer detector was set to Max Hold.
In addition, measurements were made up to the 10^{th} harmonic of the fundamental.

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to TIA/EIA 603-C on radiated measurement.

5.5. Test Specification

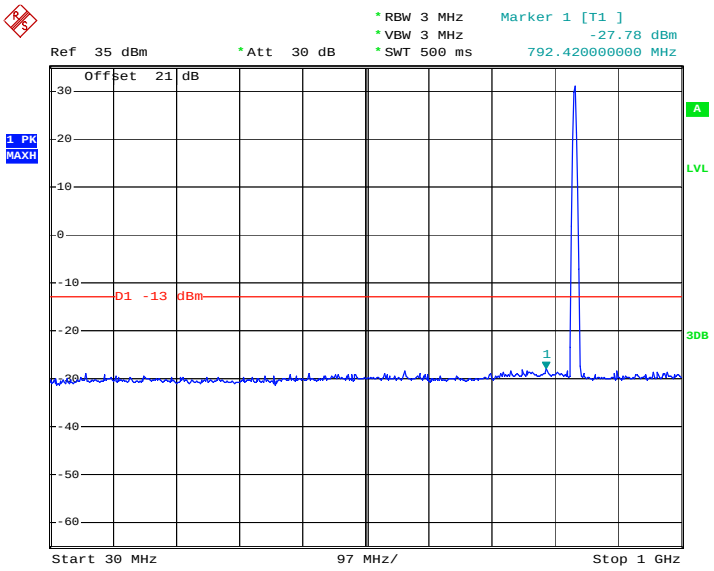
According to Part 2.1051, 2.1053, 22.917(a), 24.238(b).

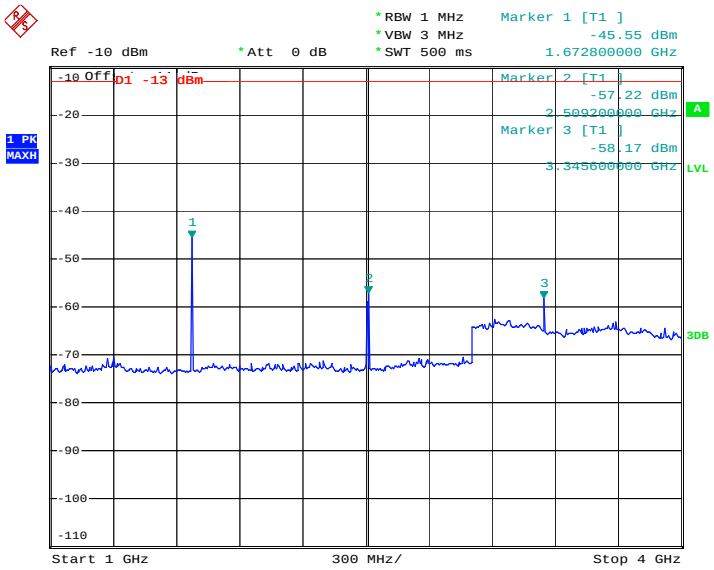
5.6. Test Result of Spurious Emission

Product	Smart Handheld		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	GSM 850	Test Range	30MHz~10GHz

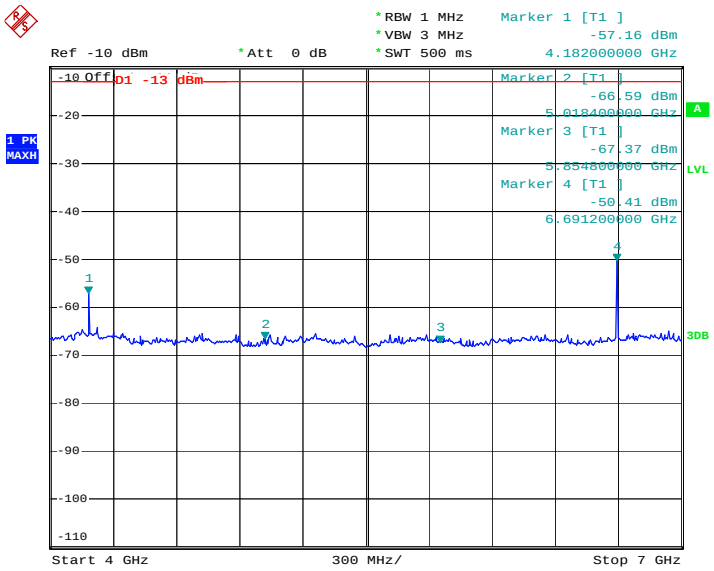
GSM 850 Middle-Channel 189

Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
1672.8	-45.55	0.58	-44.97	-13
2509.2	-57.22	0.7	-56.52	-13
3345.6	-58.17	1.01	-57.16	-13
4182	-57.16	1.18	-55.98	-13
5018.4	-66.59	1.23	-65.36	-13
5854.8	-67.37	1.45	-65.92	-13
6691.2	-50.41	1.56	-48.85	-13
7527.6	-61.68	1.59	-60.09	-13
8364	-57.98	1.82	-56.16	-13

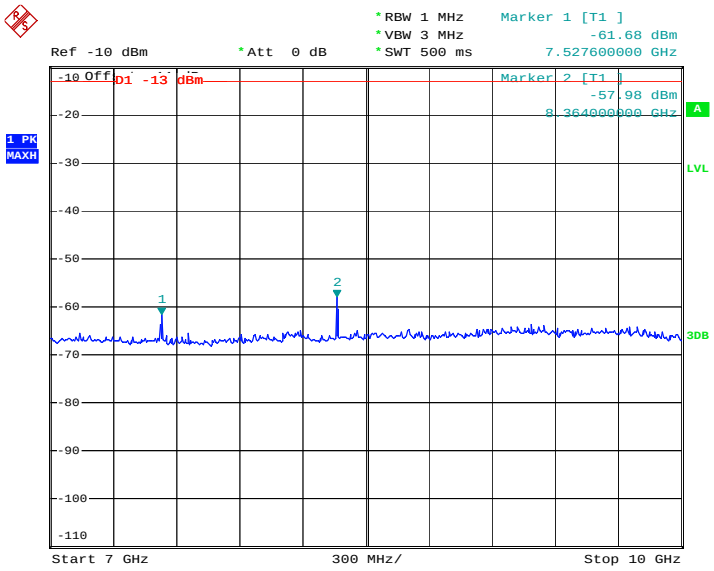




Date: 24.FEB.2009 05:02:28



Date: 24.FEB.2009 05:05:45

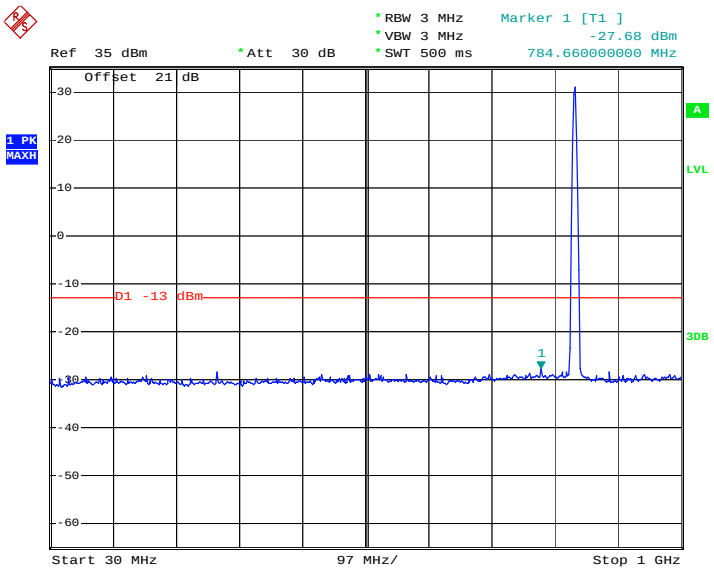


Date: 24.FEB.2009 05:06:27

Product	Smart Handheld		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	GSM 850 GPRS	Test Range	30MHz~10GHz

GSM 850 GPRS Middle-Channel 189

Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
1672.8	-45.58	0.58	-45.00	-13
2509.2	-57.44	0.7	-56.74	-13
3345.6	-57.35	1.01	-56.34	-13
4182	-57.45	1.18	-56.27	-13
5018.4	-66.16	1.23	-64.93	-13
5854.8	-66.45	1.45	-65.00	-13
6691.2	-50.48	1.56	-48.92	-13
7527.6	-61.70	1.59	-60.11	-13
8364	-57.10	1.82	-55.28	-13



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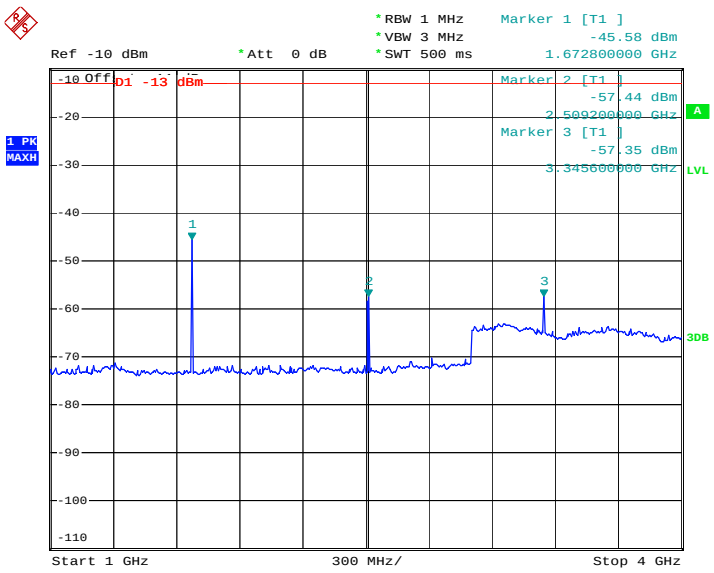
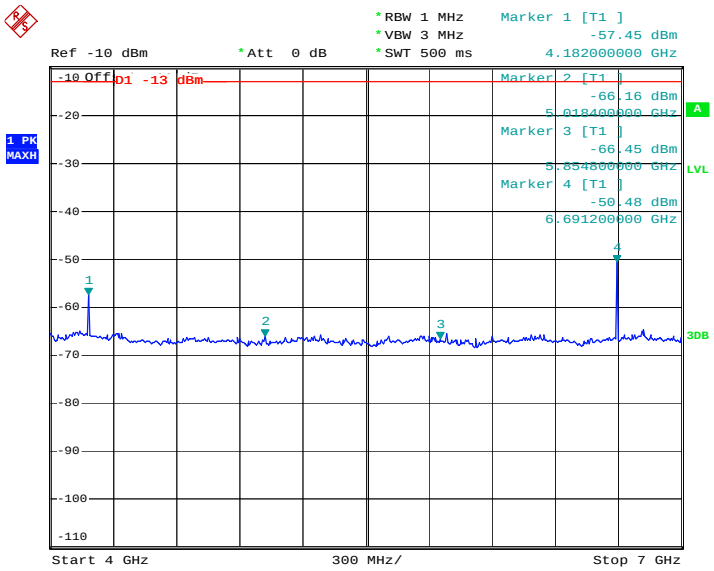
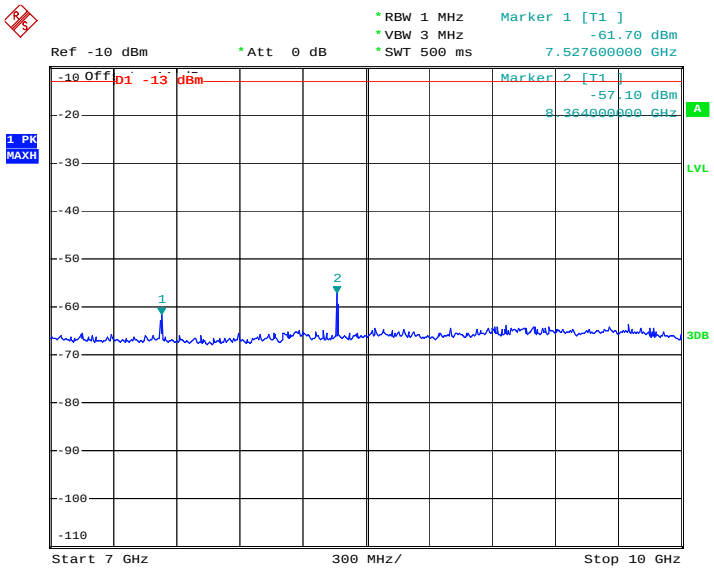


Date: 24.FEB.2009 04:56:55



Date: 24.FEB.2009 04:58:47

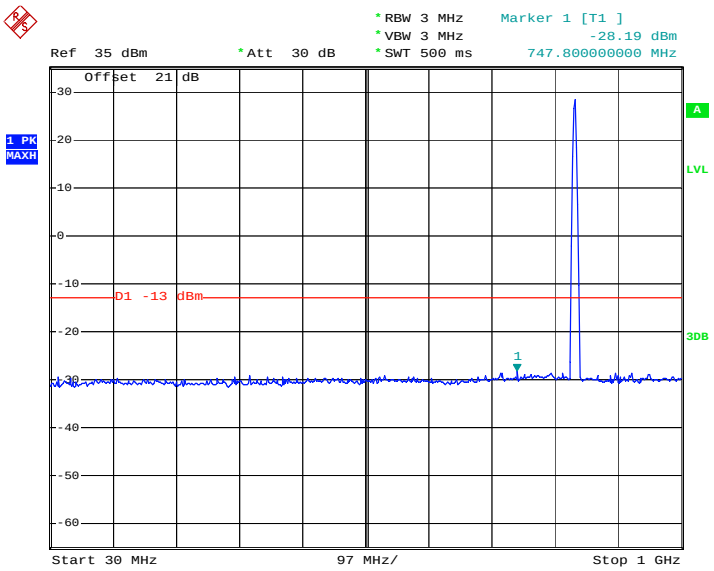


Date: 24.FEB.2009 04:59:48

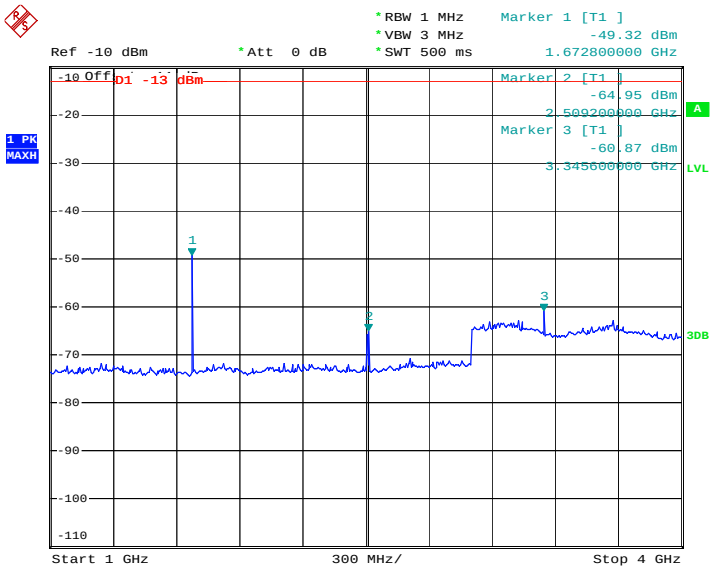
Product	Smart Handheld		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	GSM 850 EGPRS	Test Range	30MHz~10GHz

GSM 850 EGPRS Mid-Channel 189

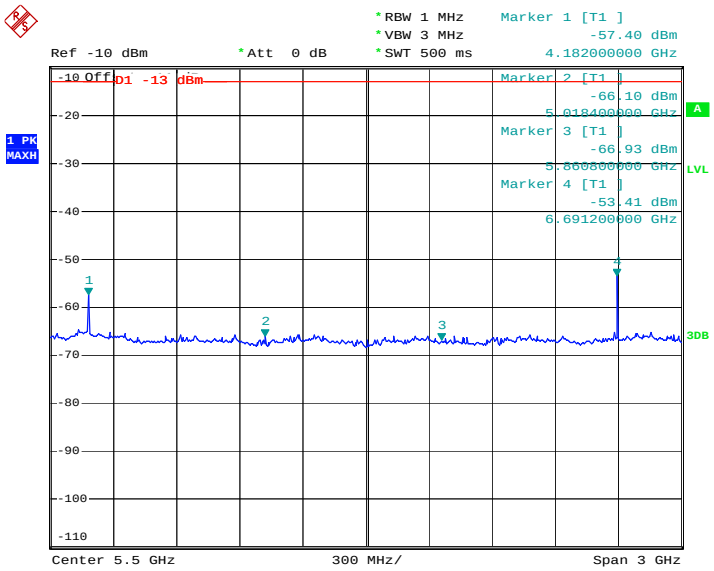
Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
1672.8	-49.32	0.58	-48.74	-13
2509.2	-64.95	0.7	-64.25	-13
3345.6	-60.87	1.01	-59.86	-13
4182	-57.40	1.18	-56.22	-13
5018.4	-66.10	1.23	-64.87	-13
5854.8	-66.93	1.45	-65.48	-13
6691.2	-53.41	1.56	-51.85	-13
7527.6	-62.13	1.59	-60.54	-13
8364	-61.05	1.82	-59.23	-13



Date: 24.FEB.2009 13:19:58



Date: 24.FEB.2009 05:09:24



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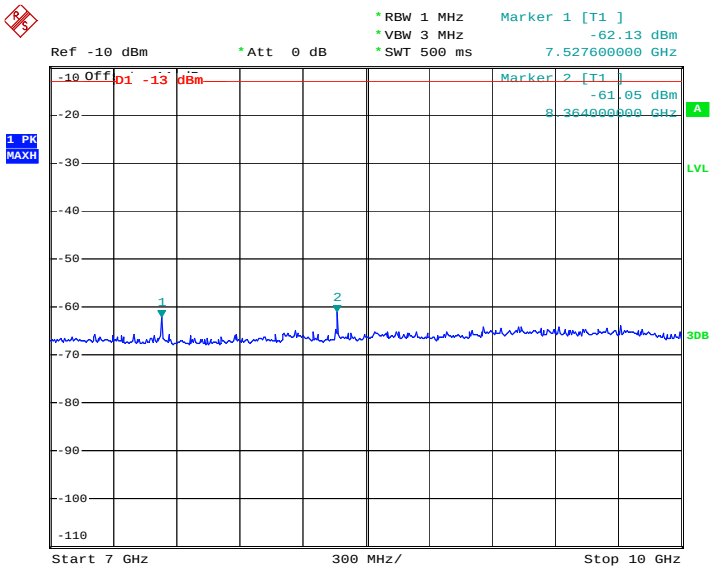
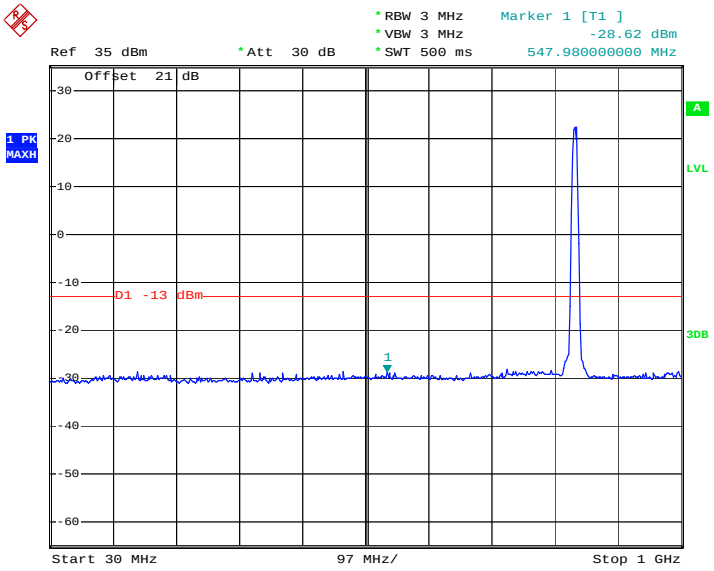


Date: 24.FEB.2009 05:12:26

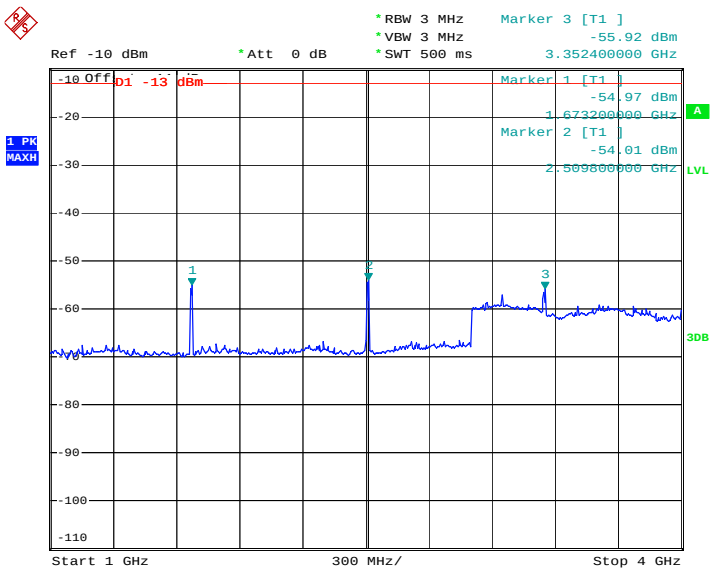
Product	Smart Handheld		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND V	Test Range	30MHz~10GHz

WCDMA BAND V Mid-Channel 4183

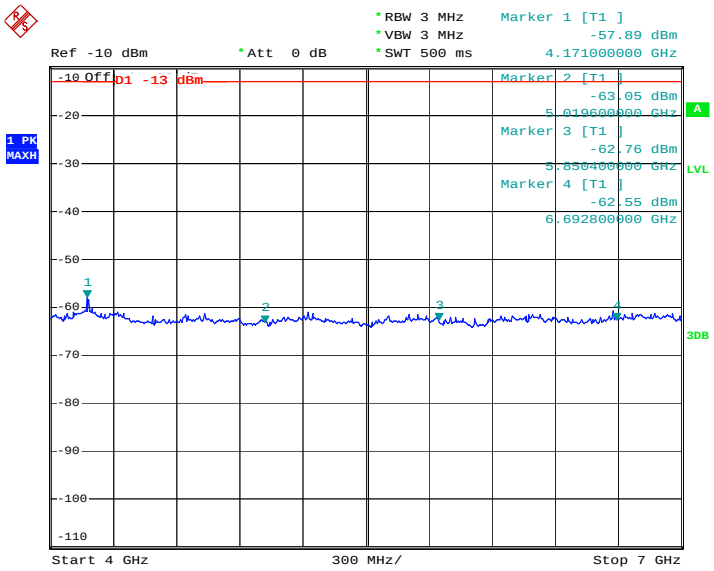
Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
1673.2	-54.97	0.58	-54.39	-13
2509.8	-54.01	0.7	-53.31	-13
3352.4	-55.92	1.01	-54.91	-13
4183	-57.89	1.18	-56.71	-13
5019.6	-63.05	1.23	-61.82	-13
5856.2	-62.76	1.45	-61.31	-13
6692.8	-62.55	1.56	-60.99	-13
7529.4	-62.43	1.59	-60.84	-13
8366	-60.44	1.82	-58.62	-13



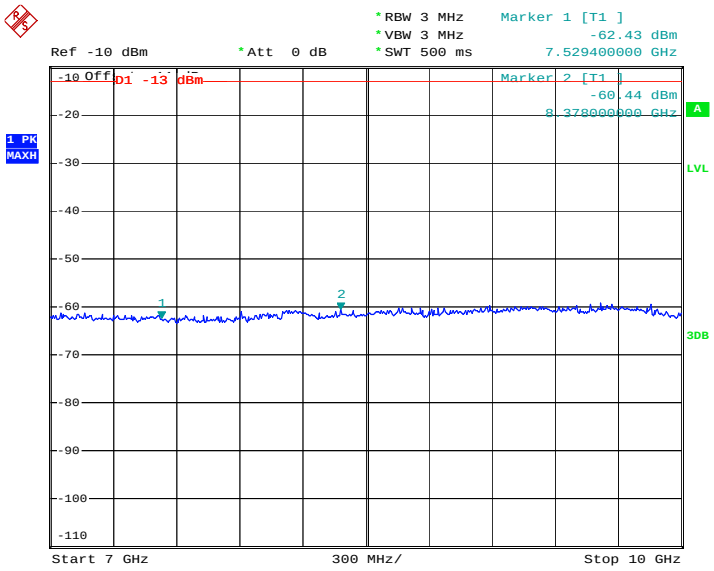
Date: 24.FEB.2009 13:13:56



Date: 24.FEB.2009 10:54:27



Date: 24.FEB.2009 10:55:39

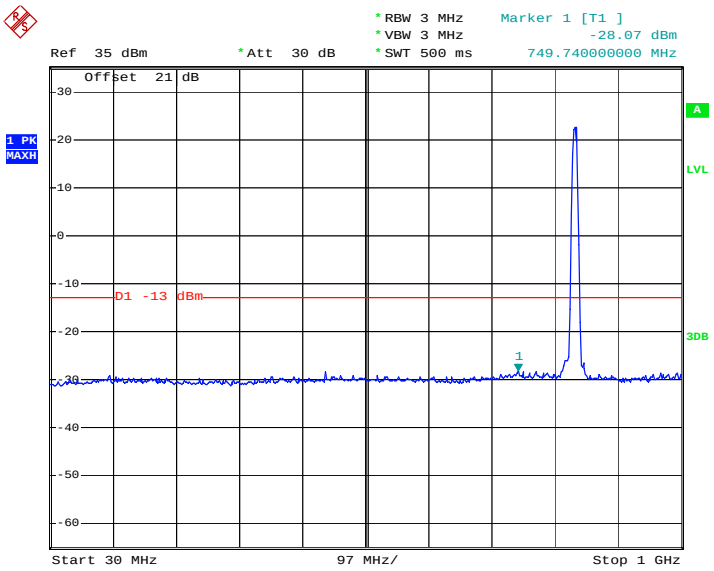


Date: 24.FEB.2009 10:56:56

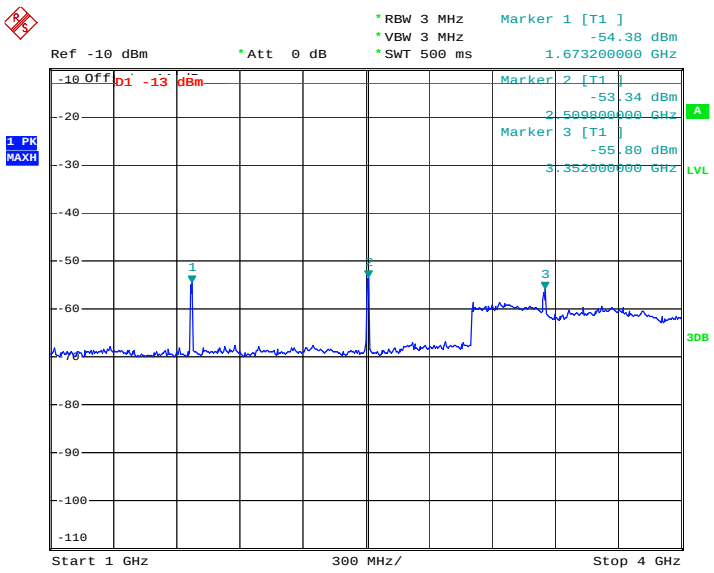
Product	Smart Handheld		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND V HSDPA	Test Range	30MHz~10GHz

WCDMA BAND V HSDPA Mid-Channel 4183

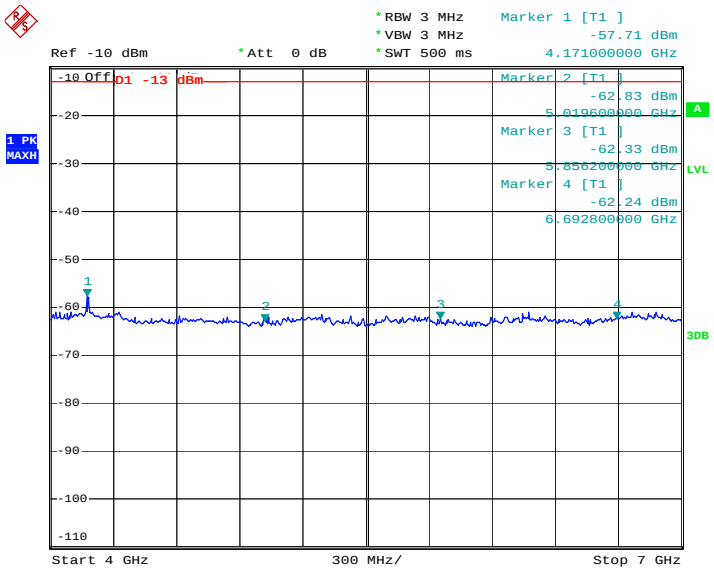
Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
1673.2	-54.38	0.58	-53.80	-13
2509.8	-53.34	0.7	-52.64	-13
3352	-55.80	1.01	-54.79	-13
4183	-57.71	1.18	-56.53	-13
5019.6	-62.83	1.23	-61.60	-13
5856.2	-62.33	1.45	-60.88	-13
6692.8	-62.24	1.56	-60.68	-13
7529.4	-62.49	1.59	-60.90	-13
8366	-61.38	1.82	-59.56	-13



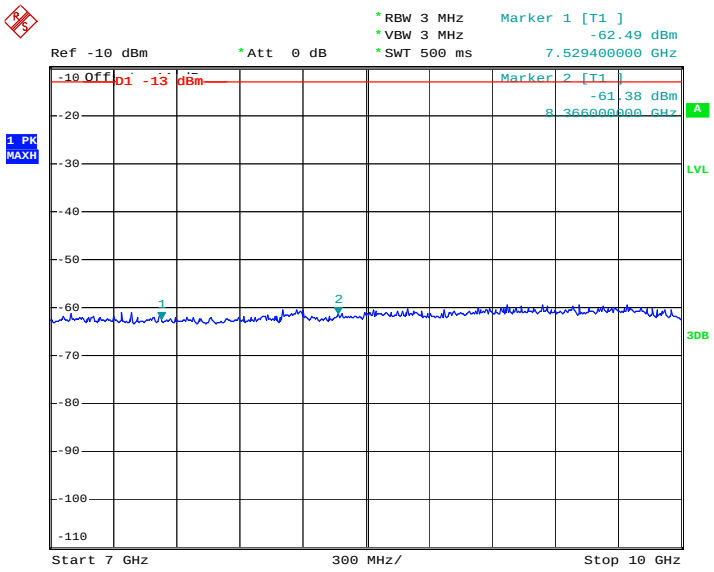
Date: 24.FEB.2009 13:12:26



Date: 24.FEB.2009 11:03:28



Date: 24.FEB.2009 11:04:25

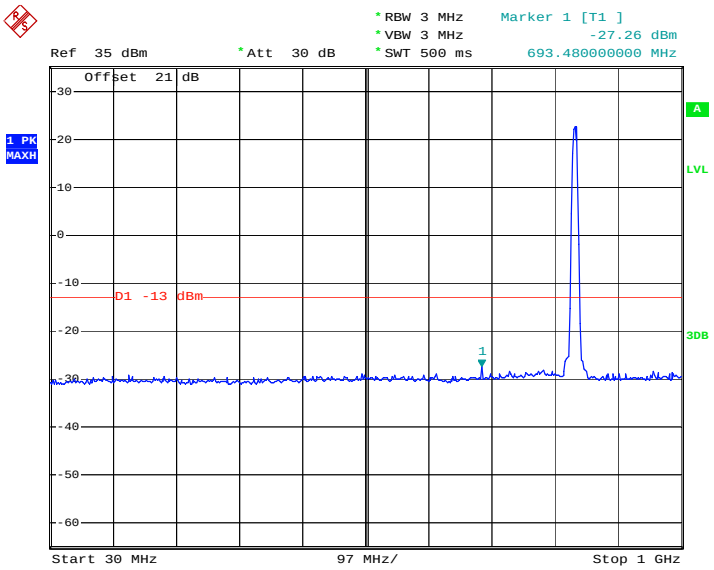


Date: 24.FEB.2009 11:05:09

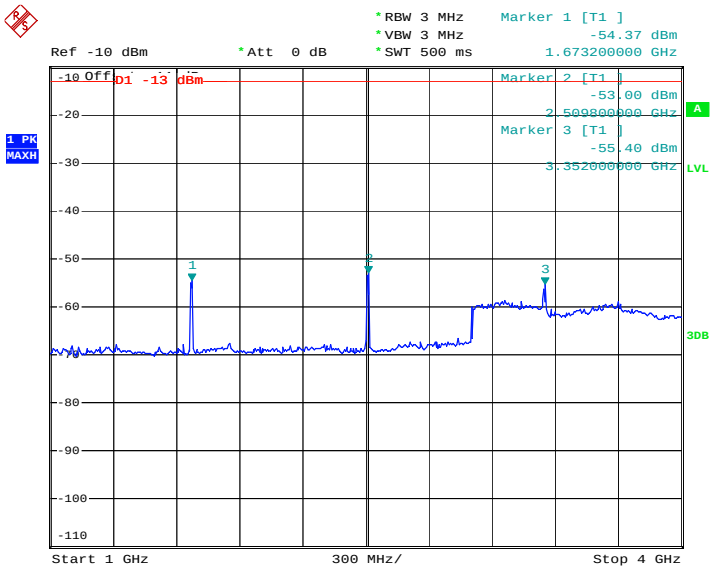
Product	Smart Handheld		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND V HSUPA	Test Range	30MHz~10GHz

WCDMA BAND V HSUPA Mid-Channel 4183

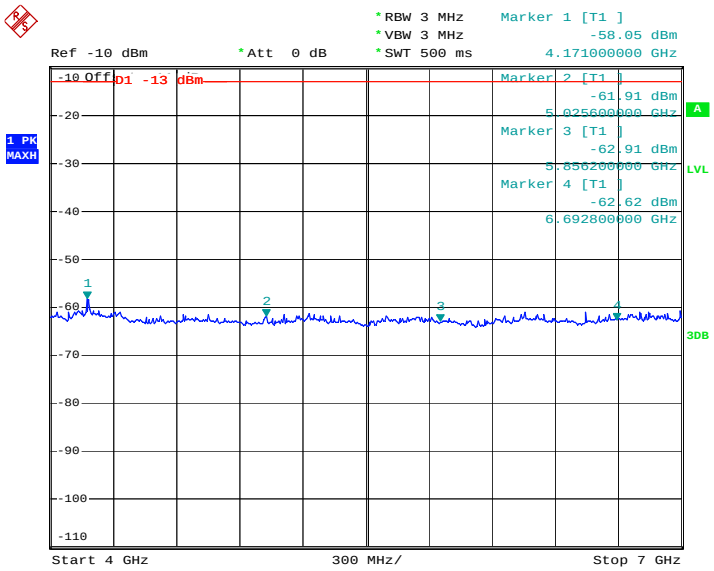
Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
1673.2	-54.37	0.58	-53.79	-13
2509.8	-53.00	0.7	-52.30	-13
3352	-55.40	1.01	-54.39	-13
4183	-58.05	1.18	-56.87	-13
5019.6	-61.91	1.23	-60.68	-13
5856.2	-62.91	1.45	-61.46	-13
6692.8	-62.62	1.56	-61.06	-13
7529.4	-62.44	1.59	-60.85	-13
8366	-61.94	1.82	-60.12	-13



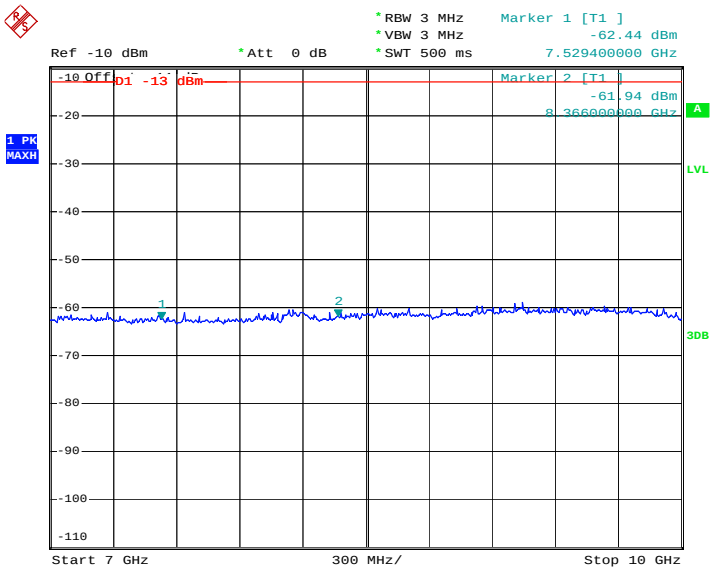
Date: 24.FEB.2009 13:10:17



Date: 24.FEB.2009 11:06:54



Date: 24.FEB.2009 11:07:57

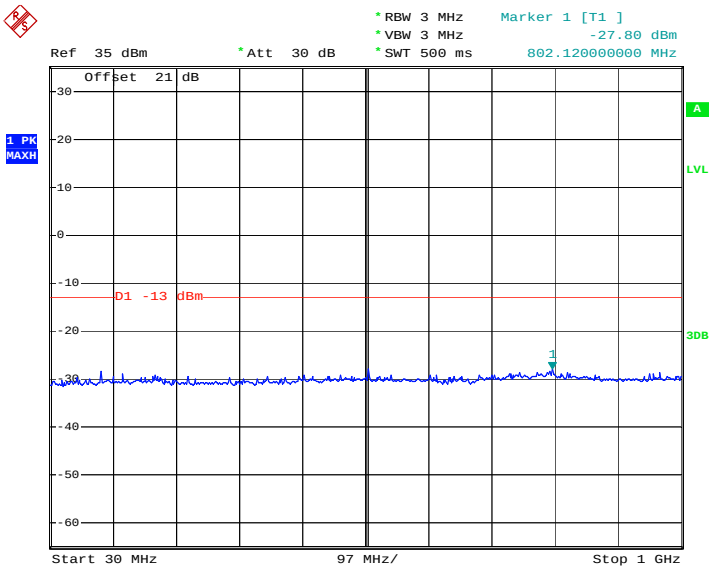


Date: 24.FEB.2009 11:08:40

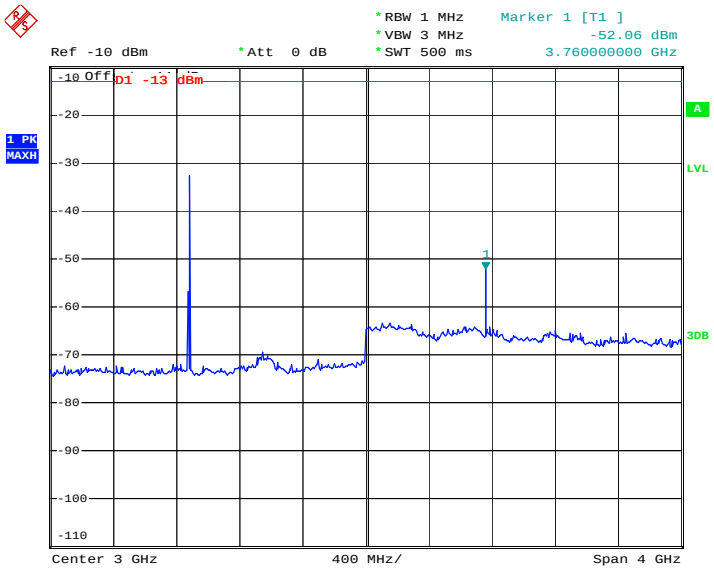
Product	Smart Handheld		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	PCS 1900	Test Range	30MHz~20GHz

PCS 1900 Mid-Channel 661

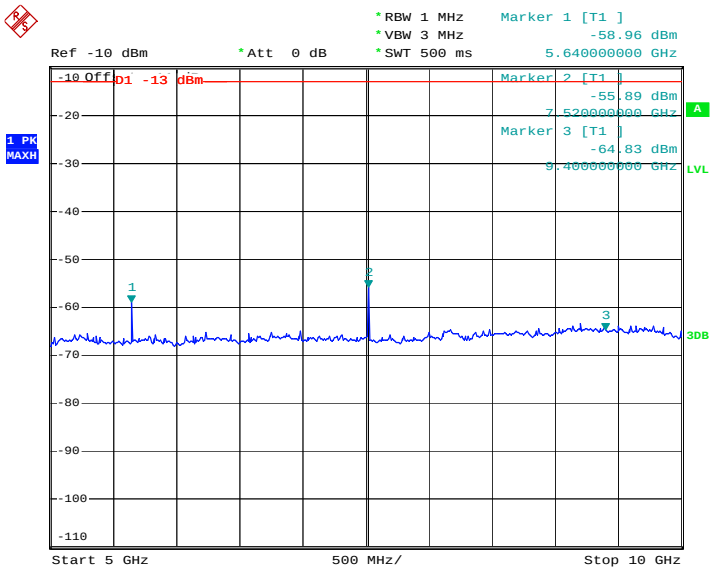
Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
3760	-52.06	1.1	-50.96	-13
5640	-58.96	1.23	-57.73	-13
7520	-55.89	1.59	-54.30	-13
9400	-64.83	1.89	-62.94	-13
11280	-64.99	2.07	-62.92	-13
13160	-64.68	2.26	-62.42	-13
15040	-55.92	2.64	-53.28	-13
16920	-57.13	3.5	-53.63	-13
18800	-55.87	3.7	-52.17	-13



Date: 24.FEB.2009 13:29:44



Date: 24.FEB.2009 07:55:24



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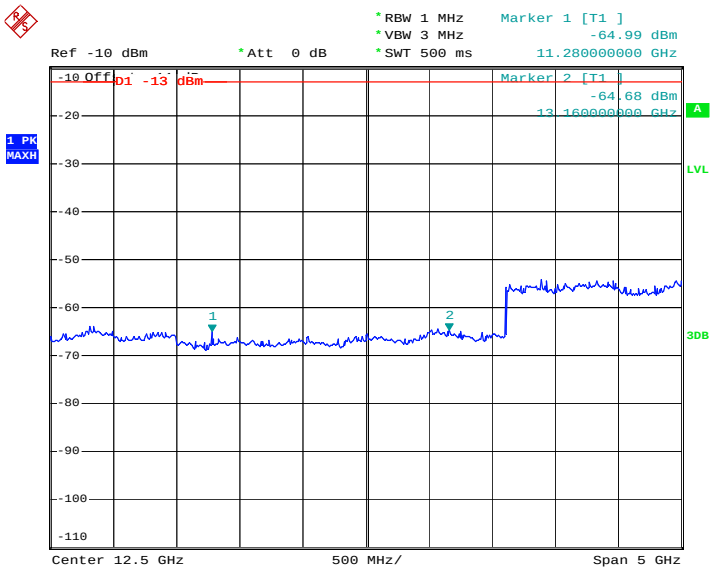
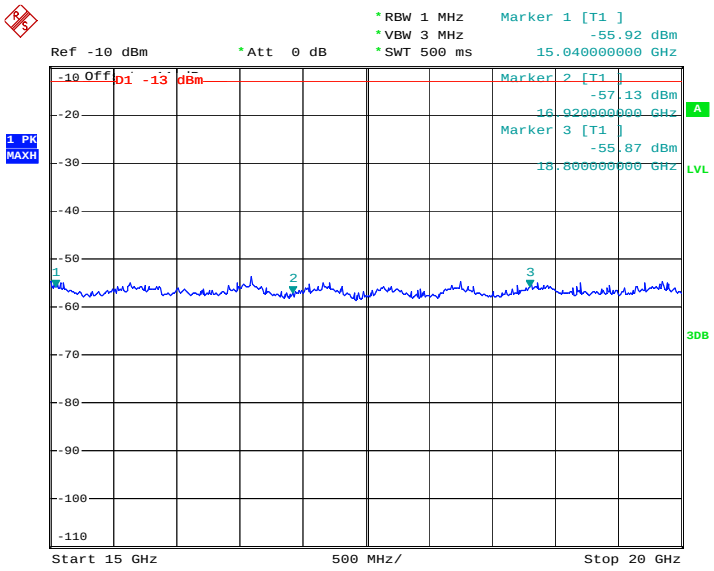


Date: 24.FEB.2009 07:58:17

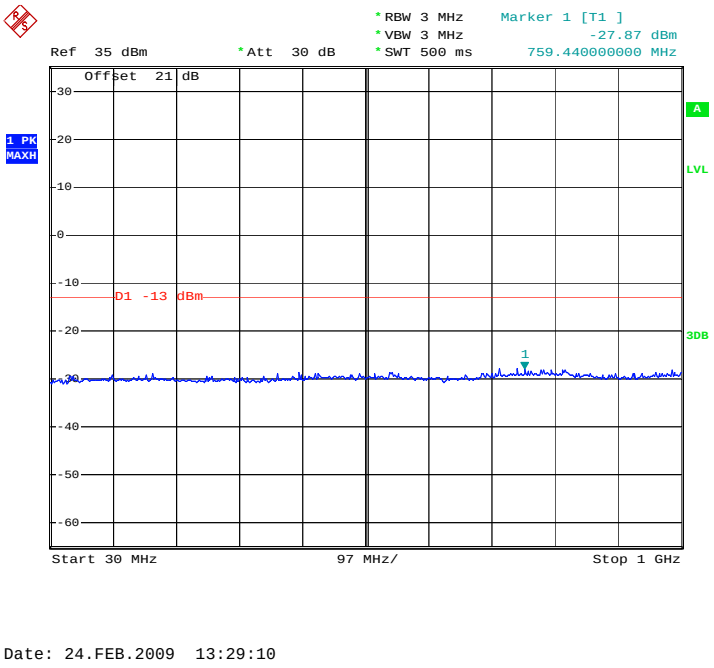


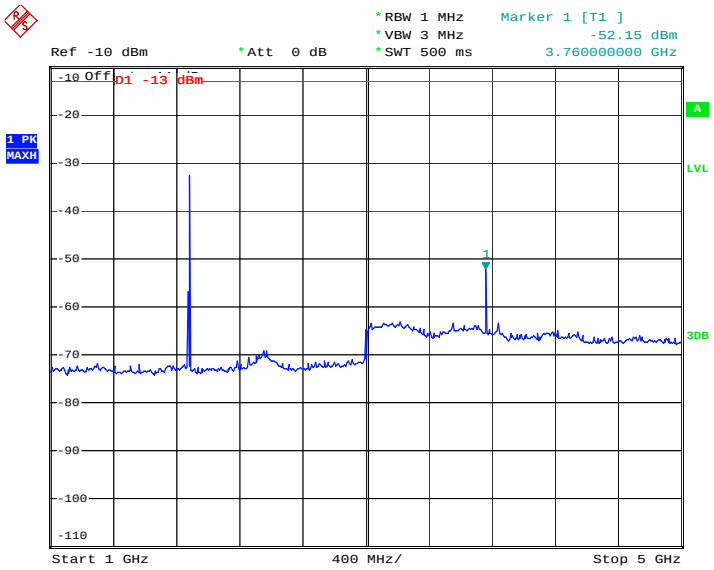
Date: 24.FEB.2009 07:59:00

Product	Smart Handheld		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	PCS 1900 GPRS	Test Range	30MHz~20GHz

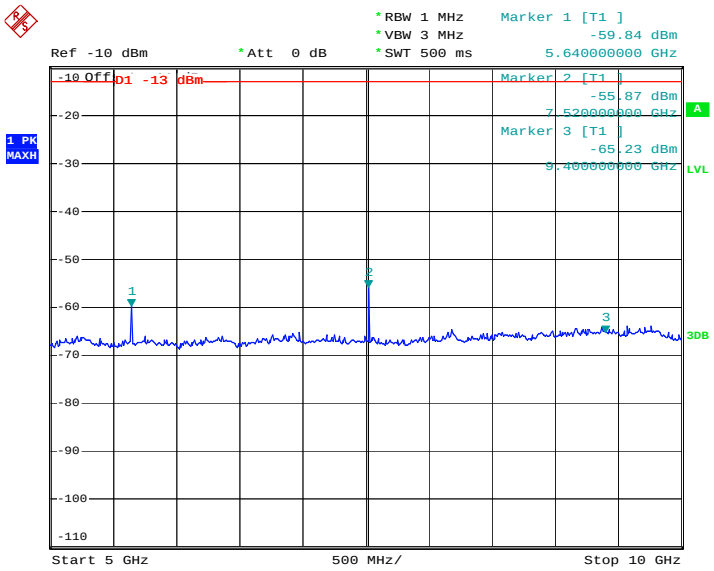
PCS 1900 GPRS Mid-Channel 661

Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
3760	-52.15	1.1	-51.05	-13
5640	-59.84	1.23	-58.61	-13
7520	-55.87	1.59	-54.28	-13
9400	-65.23	1.89	-63.34	-13
11280	-64.63	2.07	-62.56	-13
13160	-65.07	2.26	-62.81	-13
15040	-56.01	2.64	-53.37	-13
16920	-57.08	3.5	-53.58	-13
18800	-56.44	3.7	-52.74	-13

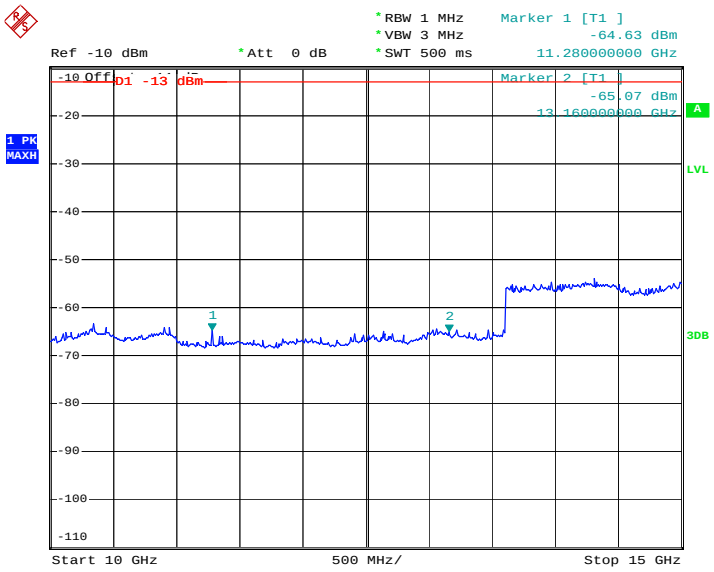




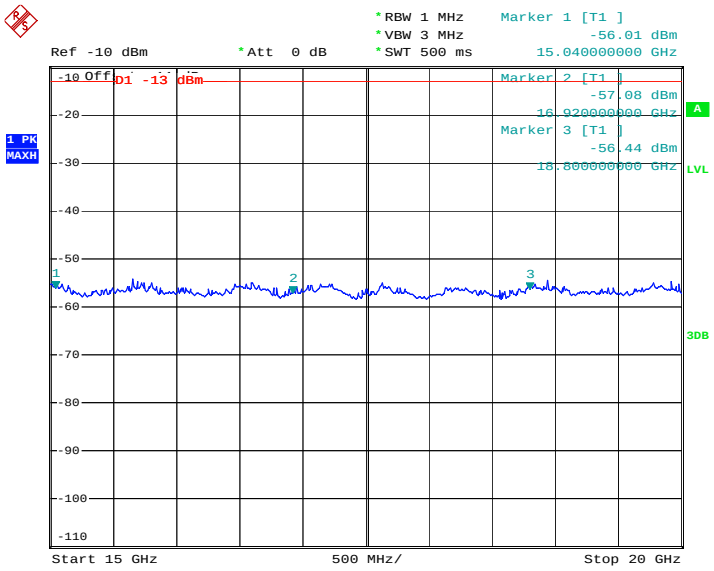
Date: 24.FEB.2009 08:01:11



Date: 24.FEB.2009 08:01:52



Date: 24.FEB.2009 08:02:44

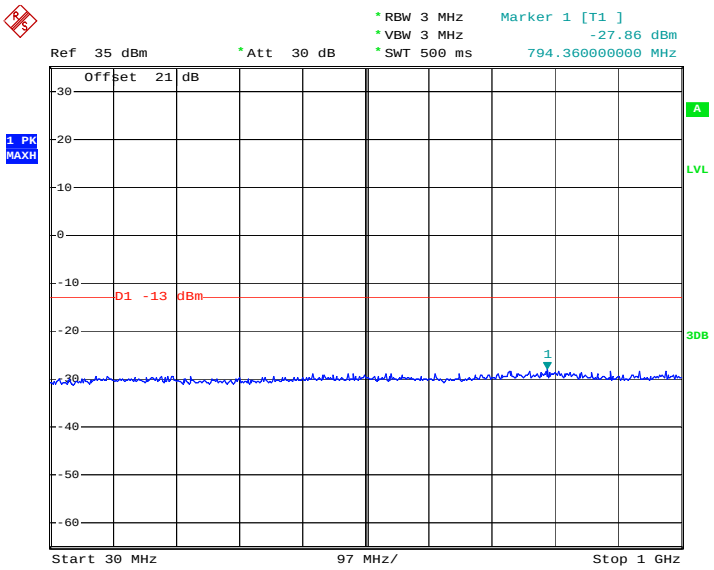


Date: 24.FEB.2009 08:03:31

Product	Smart Handheld		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	PCS 1900 EGPRS	Test Range	30MHz~20GHz

PCS 1900 EGPRS Mid-Channel 661

Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
3760	-52.85	1.1	-51.75	-13
5640	-61.25	1.23	-60.02	-13
7520	-57.37	1.59	-55.78	-13
9400	-64.69	1.89	-62.80	-13
11280	-65.90	2.07	-63.83	-13
13160	-64.87	2.26	-62.61	-13
15040	-55.26	2.64	-52.62	-13
16920	-56.67	3.5	-53.17	-13
18800	-56.19	3.7	-52.49	-13



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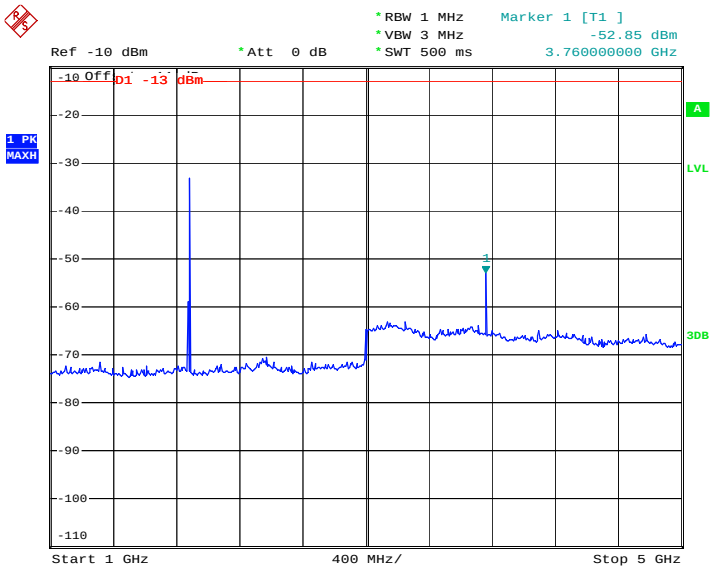

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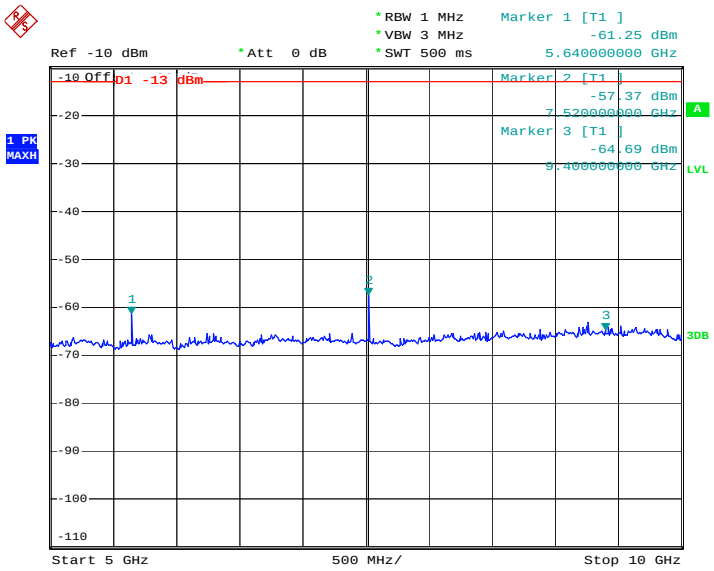
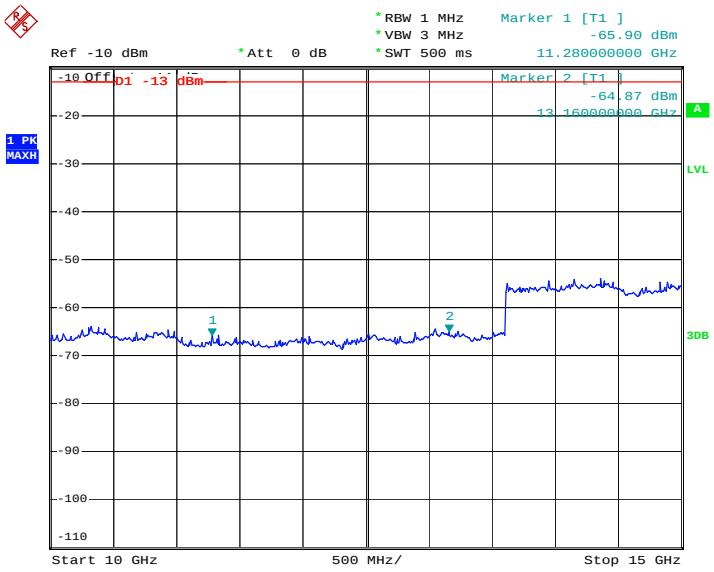
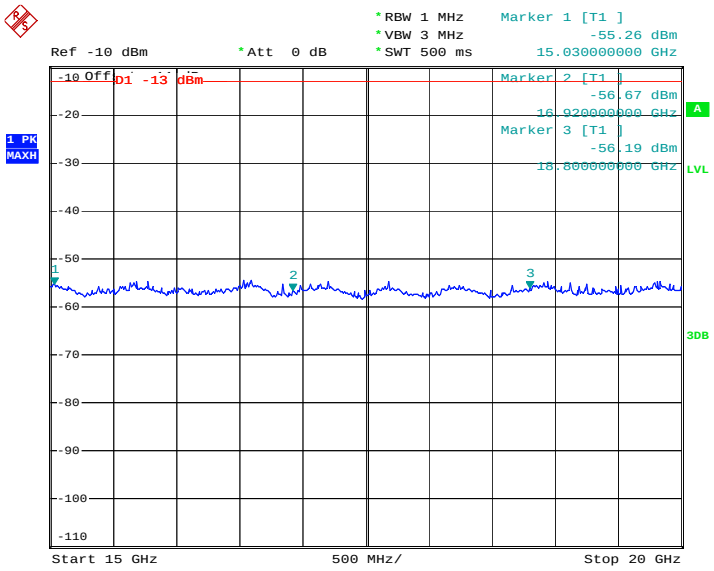


Date: 24.FEB.2009 08:06:12



Date: 24.FEB.2009 08:06:58

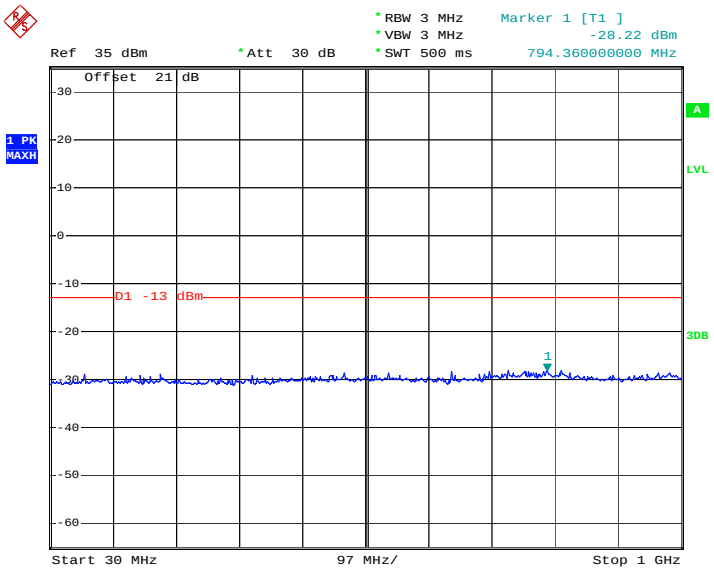


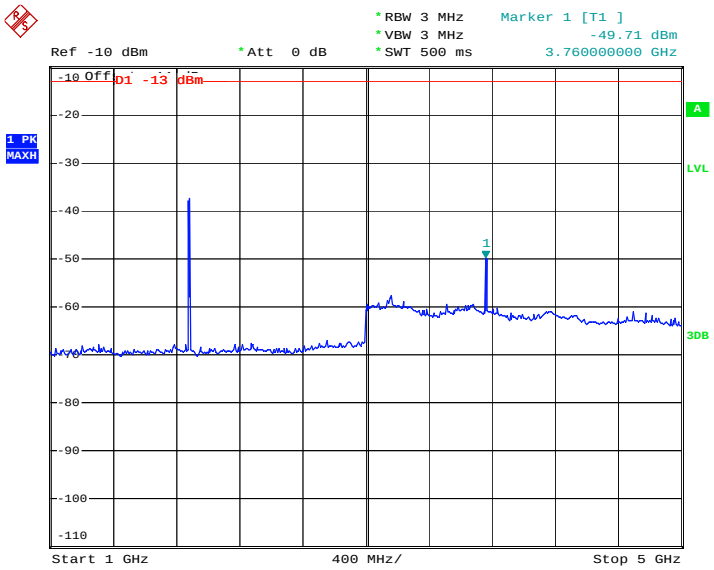
Date: 24.FEB.2009 08:07:59

Product	Smart Handheld		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND II	Test Range	30MHz~20GHz

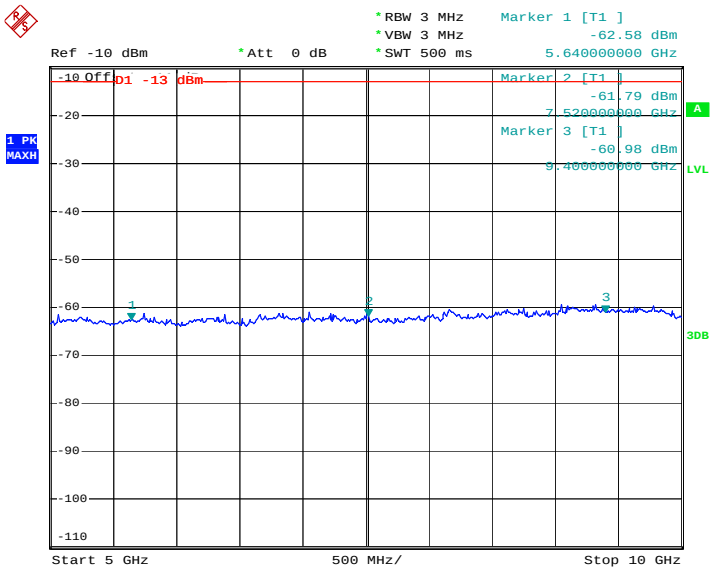
WCDMA BAND II Mid-Channel 9400

Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
3760	-49.71	1.1	-48.61	-13
5640	-62.58	1.23	-61.35	-13
7520	-61.79	1.59	-60.20	-13
9400	-60.98	1.89	-59.09	-13
11280	-63.25	2.07	-61.18	-13
13160	-61.51	2.26	-59.25	-13
15040	-50.85	2.64	-48.21	-13
16920	-52.66	3.5	-49.16	-13
18800	-51.56	3.7	-47.86	-13





Date: 24.FEB.2009 10:46:52



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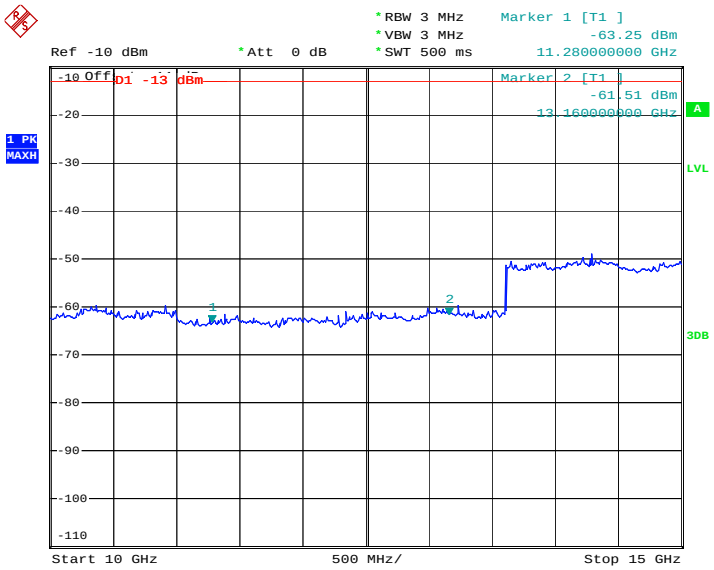
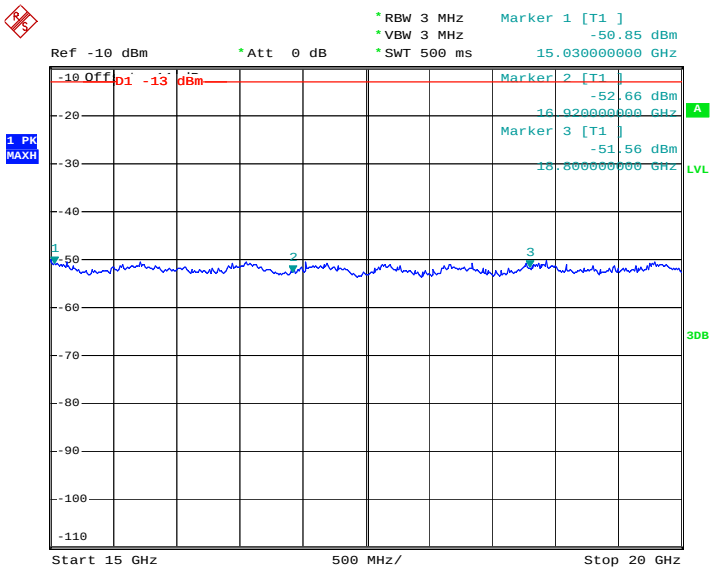


Date: 24.FEB.2009 10:48:40

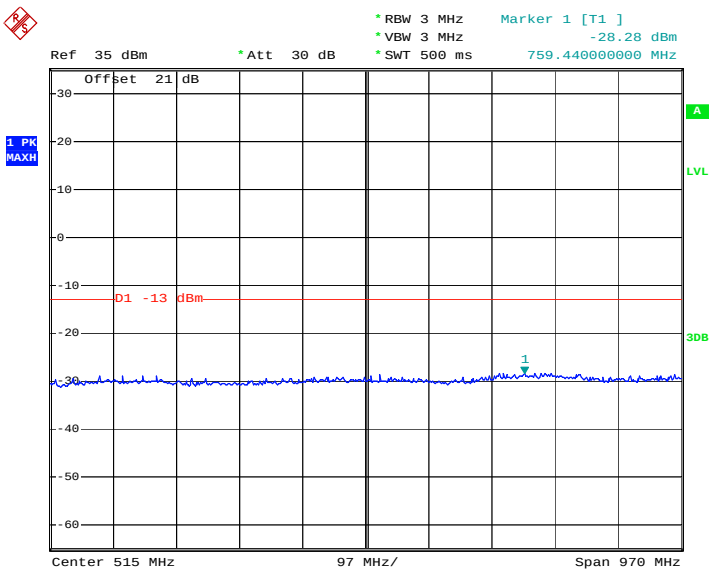


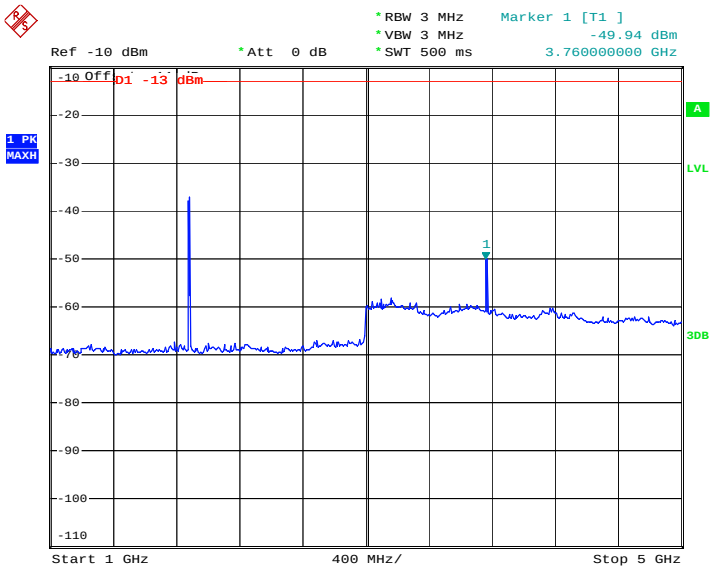
Date: 24.FEB.2009 10:50:04

Product	Smart Handheld		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND II HSDPA	Test Range	30MHz~20GHz

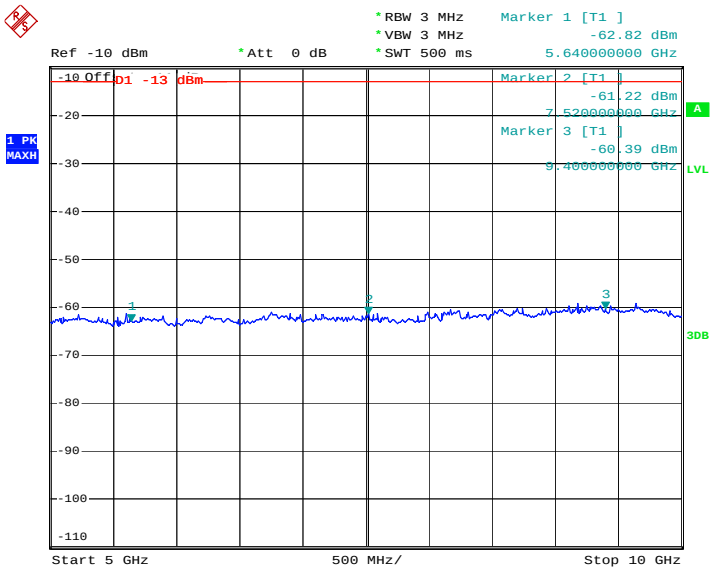
WCDMA BAND II HSDPA Mid-Channel 9400

Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
3760	-49.94	1.1	-48.84	-13
5640	-62.82	1.23	-61.59	-13
7520	-61.22	1.59	-59.63	-13
9400	-60.39	1.89	-58.50	-13
11280	-62.43	2.07	-60.36	-13
13160	-60.95	2.26	-58.69	-13
15040	-50.87	2.64	-48.23	-13
16920	-52.18	3.5	-48.68	-13
18800	-51.65	3.7	-47.95	-13

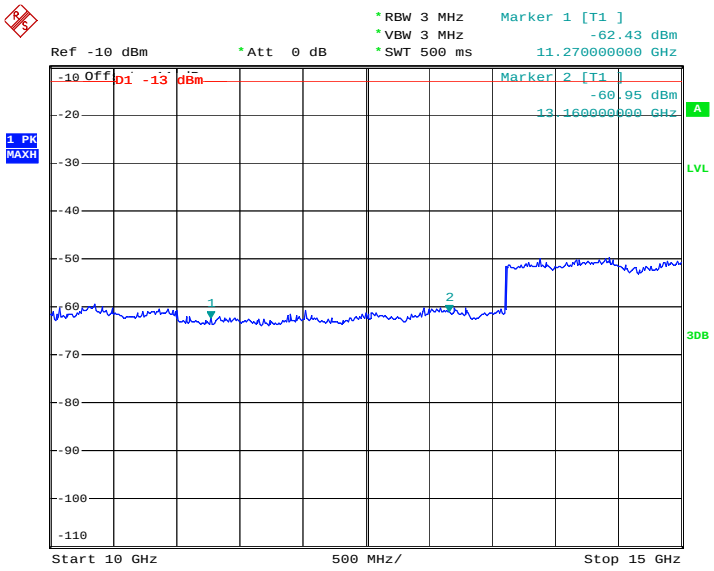




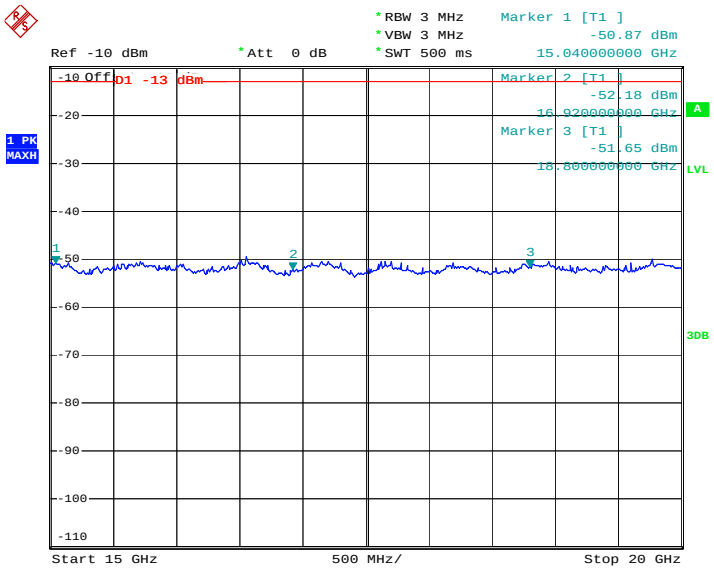
Date: 24.FEB.2009 10:32:40



Date: 24.FEB.2009 10:33:43



Date: 24.FEB.2009 10:34:41

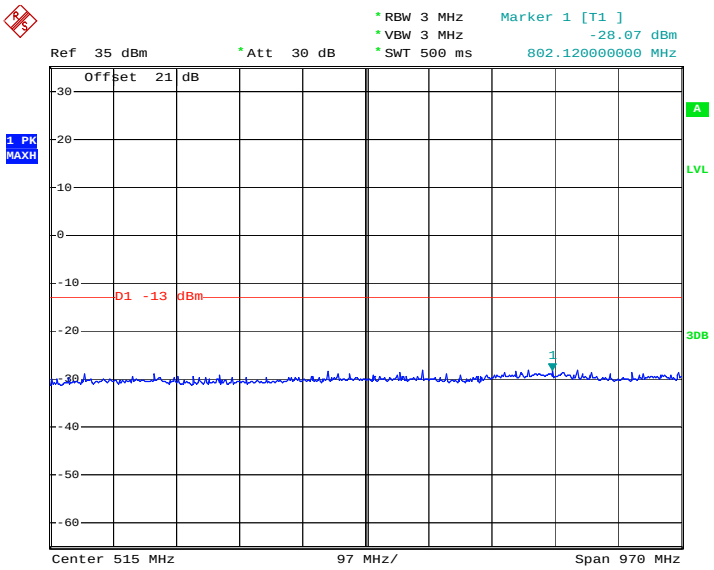


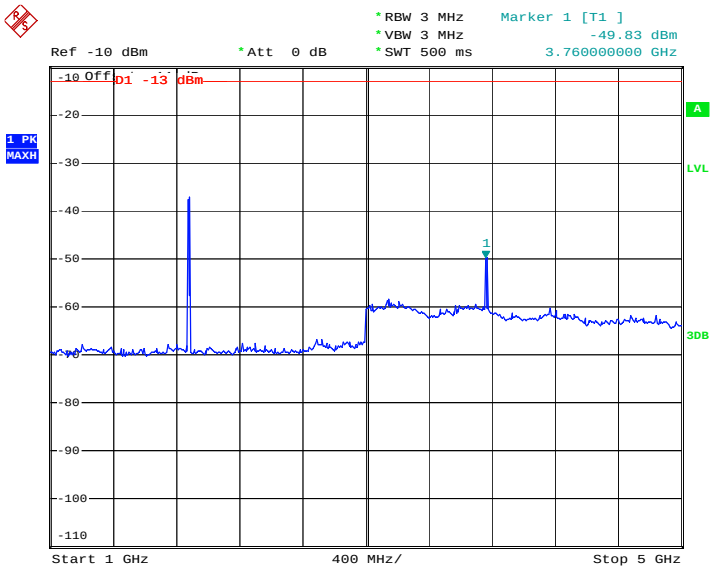
Date: 24.FEB.2009 10:36:23

Product	Smart Handheld		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND II HSUPA	Test Range	30MHz~20GHz

WCDMA BAND II HSUPA Mid-Channel 9400

Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
3760	-49.83	1.1	-48.73	-13
5640	-62.73	1.23	-61.50	-13
7520	-62.06	1.59	-60.47	-13
9400	-60.51	1.89	-58.62	-13
11280	-63.08	2.07	-61.01	-13
13160	-60.71	2.26	-58.45	-13
15040	-51.09	2.64	-48.45	-13
16920	-52.57	3.5	-49.07	-13
18800	-51.87	3.7	-48.17	-13





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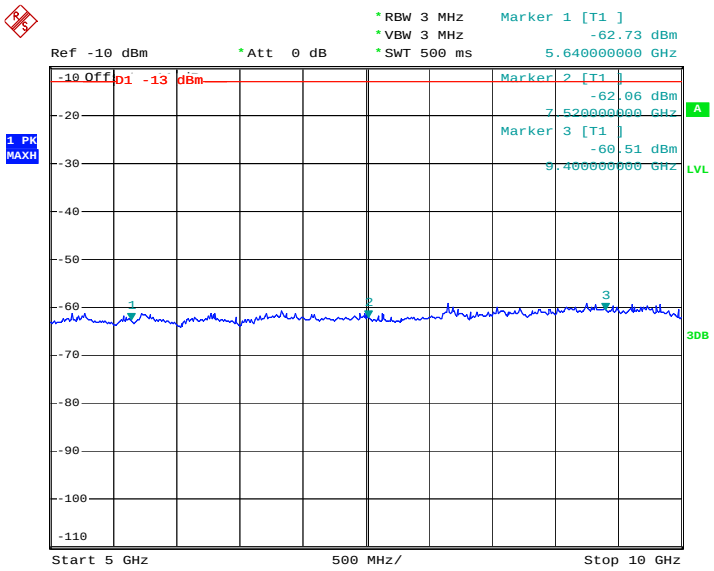

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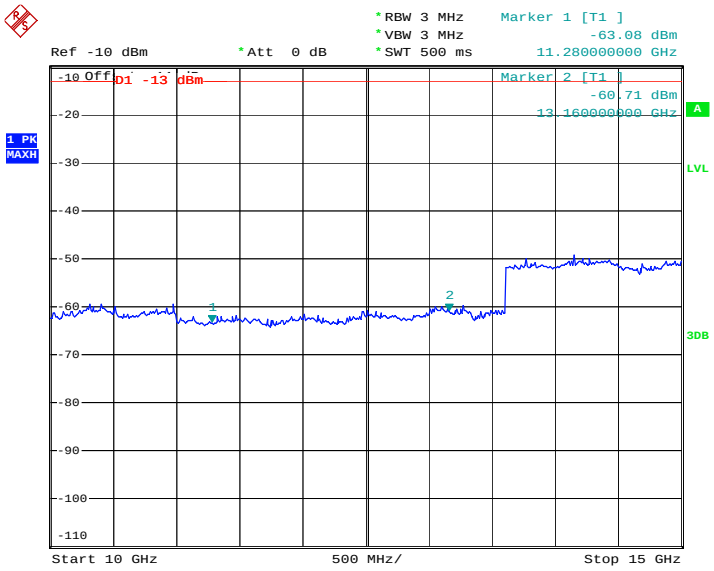

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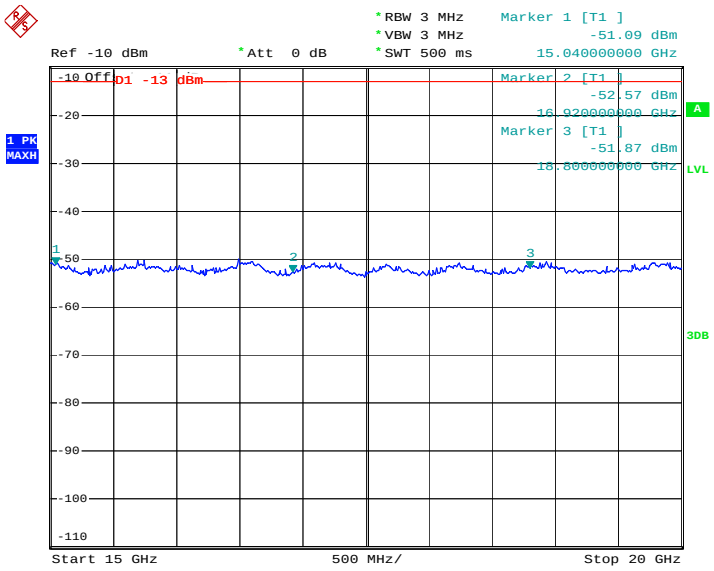


Date: 24.FEB.2009 10:26:58

Product	Smart Handheld		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	Channel 189 (GSM 850)	Test Range	30MHz~10GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

1672.8	-46.340	-51.030	1.630	9.800	-42.860	-13
2509.2	-45.220	-45.387	2.100	10.600	-36.887	-13
3345.6	-55.200	-56.623	2.350	12.300	-46.673	-13
4182	-56.940	-56.461	2.700	12.600	-46.561	-13
5018.4	-59.310	-55.515	2.830	12.700	-45.645	-13
5854.8	-60.450	-55.028	3.200	13.000	-45.228	-13

Vertical Emissions

1672.8	-55.320	-59.635	1.630	9.800	-51.465	-13
2509.2	-46.320	-47.017	2.100	10.600	-38.517	-13
3345.6	-55.510	-57.444	2.350	12.300	-47.494	-13
4182	-54.810	-54.056	2.700	12.600	-44.156	-13
5018.4	-58.570	-55.473	2.830	12.700	-45.603	-13
5854.8	-61.320	-56.313	3.200	13.000	-46.513	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 6 GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

Product	Smart Handheld		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	Channel 189 (GSM 850 GPRS)	Test Range	30MHz~10GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

1672.8	-46.060	-50.752	1.630	9.800	-42.582	-13
2509.2	-45.670	-45.837	2.100	10.600	-37.337	-13
3345.6	-55.820	-57.240	2.350	12.300	-47.290	-13
4182	-59.380	-58.901	2.700	12.600	-49.001	-13
5018.4	-59.960	-56.165	2.830	12.700	-46.295	-13
5854.8	-60.770	-55.346	3.200	13.000	-45.546	-13

Vertical Emissions

1672.8	-56.100	-60.414	1.630	9.800	-52.244	-13
2509.2	-41.590	-42.287	2.100	10.600	-33.787	-13
3345.6	-54.720	-56.654	2.350	12.300	-46.704	-13
4182	-55.620	-54.866	2.700	12.600	-44.966	-13
5018.4	-58.400	-55.198	2.830	12.700	-45.328	-13
5854.8	-61.110	-56.165	3.200	13.000	-46.365	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 6 GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

Product	Smart Handheld		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	Channel 189 (GSM 850 EGPRS)	Test Range	30MHz~10GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

1672.8	-50.49	-55.180	1.630	9.800	-47.010	-13
2509.2	-48.05	-48.217	2.100	10.600	-39.717	-13
3345.6	-57.31	-58.736	2.350	12.300	-48.786	-13
4182	-59.59	-59.111	2.700	12.600	-49.211	-13
5018.4	-61.72	-58.005	2.830	12.700	-48.135	-13
5854.8	-61.46	-56.023	3.200	13.000	-46.223	-13

Vertical Emissions

1672.8	-59.32	-63.637	1.630	9.800	-55.467	-13
2509.2	-48.29	-48.987	2.100	10.600	-40.487	-13
3345.6	-57.82	-59.754	2.350	12.300	-49.804	-13
4182	-58.09	-57.336	2.700	12.600	-47.436	-13
5018.4	-61.9	-58.593	2.830	12.700	-48.723	-13
5854.8	-60.53	-55.585	3.200	13.000	-45.785	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 6 GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

Product	Smart Handheld		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	Channel 4183 (WCDMA BAND V)	Test Range	30MHz~10GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

1672.8	-54.24	-58.932	1.630	9.800	-50.762	-13
2509.2	-48.87	-49.037	2.100	10.600	-40.537	-13
3352	-54.17	-55.590	2.350	12.300	-45.640	-13
4182	-54.01	-53.549	2.700	12.600	-43.649	-13
5018.4	-52.70	-48.982	2.830	12.700	-39.112	-13
5854.8	-61.73	-56.295	3.200	13.000	-46.495	-13

Vertical Emissions

1672.8	-50.41	-54.724	1.630	9.800	-46.554	-13
2509.2	-54.41	-55.104	2.100	10.600	-46.604	-13
3352	-54.11	-56.040	2.350	12.300	-46.090	-13
4182	-52.45	-51.714	2.700	12.600	-41.814	-13
5018.4	-52.35	-49.127	2.830	12.700	-39.257	-13
5854.8	-61.35	-56.391	3.200	13.000	-46.591	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 6 GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

Product	Smart Handheld		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	Channel 4183 (WCDMA BAND V HSDPA)	Test Range	30MHz~10GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

1672.8	-54.24	-58.932	1.630	9.800	-50.762	-13
2509.2	-54.04	-54.207	2.100	10.600	-45.707	-13
3345.6	-54.08	-55.500	2.350	12.300	-45.550	-13
4182	-53.82	-53.359	2.700	12.600	-43.459	-13
5018.4	-52.01	-48.119	2.830	12.700	-38.249	-13
5854.8	-60.6	-55.068	3.200	13.000	-45.268	-13

Vertical Emissions

1672.8	-50.420	-54.734	1.630	9.800	-46.564	-13
2509.2	-52.130	-52.824	2.100	10.600	-44.324	-13
3345.6	-52.920	-54.826	2.350	12.300	-44.876	-13
4182	-51.980	-51.244	2.700	12.600	-41.344	-13
5018.4	-52.270	-48.942	2.830	12.700	-39.072	-13
5854.8	-61.730	-56.771	3.200	13.000	-46.971	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 6 GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

Product	Smart Handheld		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	Channel 4183 (WCDMA BAND V HSUPA)	Test Range	30MHz~10GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

1672.8	-53.150	-57.842	1.630	9.800	-49.672	-13
2509.2	-51.220	-51.387	2.100	10.600	-42.887	-13
3345.6	-53.590	-55.010	2.350	12.300	-45.060	-13
4182	-53.250	-52.789	2.700	12.600	-42.889	-13
5018.4	-51.460	-47.569	2.830	12.700	-37.699	-13
5854.8	-61.850	-56.415	3.200	13.000	-46.615	-13

Vertical Emissions

1672.8	-50.860	-55.174	1.630	9.800	-47.004	-13
2509.2	-53.220	-53.914	2.100	10.600	-45.414	-13
3345.6	-51.660	-53.590	2.350	12.300	-43.640	-13
4182	-51.880	-51.144	2.700	12.600	-41.244	-13
5018.4	-52.500	-49.172	2.830	12.700	-39.302	-13
5854.8	-60.890	-55.807	3.200	13.000	-46.007	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 6 GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

Product	Smart Handheld		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	Channel 661 (PCS1900)	Test Range	30MHz~20GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

3760	-52.230	-52.760	2.530	12.600	-42.690	-13
5640	-60.790	-56.294	3.050	13.100	-46.244	-13
7520	-60.970	-49.970	3.650	11.500	-42.120	-13
9400	-63.160	-47.133	3.850	12.000	-38.983	-13
11280	-63.240	-48.102	4.580	12.000	-40.682	-13

Vertical Emissions

3760	-53.130	-53.942	2.530	12.600	-43.872	-13
5640	-58.470	-54.400	3.050	13.100	-44.350	-13
7520	-59.570	-48.874	3.650	11.500	-41.024	-13
9400	-55.660	-39.658	3.850	12.000	-31.508	-13
11280	-63.500	-48.828	4.580	12.000	-41.408	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 12GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

Product	Smart Handheld		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	Channel 661 (PCS1900 GPRS)	Test Range	30MHz~20GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

3760	-50.370	-50.900	2.530	12.600	-40.830	-13
5640	-61.240	-56.744	3.050	13.100	-46.694	-13
7520	-62.570	-51.570	3.650	11.500	-43.720	-13
9400	-62.890	-46.863	3.850	12.000	-38.713	-13
11280	-63.060	-47.922	4.580	12.000	-40.502	-13

Vertical Emissions

3760	-54.300	-55.112	2.530	12.600	-45.042	-13
5640	-57.980	-53.910	3.050	13.100	-43.860	-13
7520	-60.030	-49.334	3.650	11.500	-41.484	-13
9400	-55.480	-39.478	3.850	12.000	-31.328	-13
11280	-63.120	-48.448	4.580	12.000	-41.028	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 12GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

Product	Smart Handheld		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	Channel 661 (PCS1900 EGPRS)	Test Range	30MHz~20GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

3760	-54.090	-54.620	2.530	12.600	-44.550	-13
5640	-60.860	-56.364	3.050	13.100	-46.314	-13
7520	-61.980	-50.980	3.650	11.500	-43.130	-13
9400	-62.690	-46.663	3.850	12.000	-38.513	-13
11280	-63.150	-48.012	4.580	12.000	-40.592	-13

Vertical Emissions

3760	-55.270	-56.082	2.530	12.600	-46.012	-13
5640	-59.950	-55.880	3.050	13.100	-45.830	-13
7520	-62.380	-51.684	3.650	11.500	-43.834	-13
9400	-57.340	-41.338	3.850	12.000	-33.188	-13
11280	-63.150	-48.478	4.580	12.000	-41.058	-13

Note:

1. Receiver setting (Peak Detector) : RBW:1MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 12GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

Product	Smart Handheld		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	Channel 9400 (WCDMA BAND II)	Test Range	30MHz~20GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

3760	-54.200	-54.730	2.530	12.600	-44.660	-13
5640	-61.560	-57.097	3.050	13.100	-47.047	-13
7520	-59.250	-48.250	3.650	11.500	-40.400	-13
9400	-64.120	-48.093	3.850	12.000	-39.943	-13
11280	-62.900	-47.762	4.580	12.000	-40.342	-13

Vertical Emissions

3760	-50.150	-50.962	2.530	12.600	-40.892	-13
5640	-62.640	-58.570	3.050	13.100	-48.520	-13
7520	-55.300	-44.604	3.650	11.500	-36.754	-13
9400	-64.650	-48.648	3.850	12.000	-40.498	-13
11280	-63.100	-48.428	4.580	12.000	-41.008	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 12GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

Product	Smart Handheld		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	Channel 9400 (WCDMA BAND II HSDPA)	Test Range	30MHz~20GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

3760	-53.620	-54.150	2.530	12.600	-44.080	-13
5640	-62.460	-57.964	3.050	13.100	-47.914	-13
7520	-59.770	-48.770	3.650	11.500	-40.920	-13
9400	-63.310	-47.283	3.850	12.000	-39.133	-13
11280	-64.060	-48.922	4.580	12.000	-41.502	-13

Vertical Emissions

3760	-49.740	-50.552	2.530	12.600	-40.482	-13
5640	-62.660	-58.590	3.050	13.100	-48.540	-13
7520	-55.130	-44.434	3.650	11.500	-36.584	-13
9400	-64.070	-48.068	3.850	12.000	-39.918	-13
11280	-64.120	-49.448	4.580	12.000	-42.028	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 12GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

Product	Smart Handheld		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2009/02/24	Test Site	OATS 3
Test Condition	Channel 9400 (WCDMA BAND II HSUPA)	Test Range	30MHz~20GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions

3760	-53.660	-54.190	2.530	12.600	-44.120	-13
5640	-62.080	-57.584	3.050	13.100	-47.534	-13
7520	-59.350	-48.350	3.650	11.500	-40.500	-13
9400	-63.470	-47.443	3.850	12.000	-39.293	-13
11280	-63.400	-48.262	4.580	12.000	-40.842	-13

Vertical Emissions

3760	-48.500	-49.312	2.530	12.600	-39.242	-13
5640	-58.210	-54.140	3.050	13.100	-44.090	-13
7520	-55.370	-44.674	3.650	11.500	-36.824	-13
9400	-64.570	-48.568	3.850	12.000	-40.418	-13
11280	-63.460	-48.788	4.580	12.000	-41.368	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 12GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

6. Frequency Stability Under Temperature & Voltage Variations

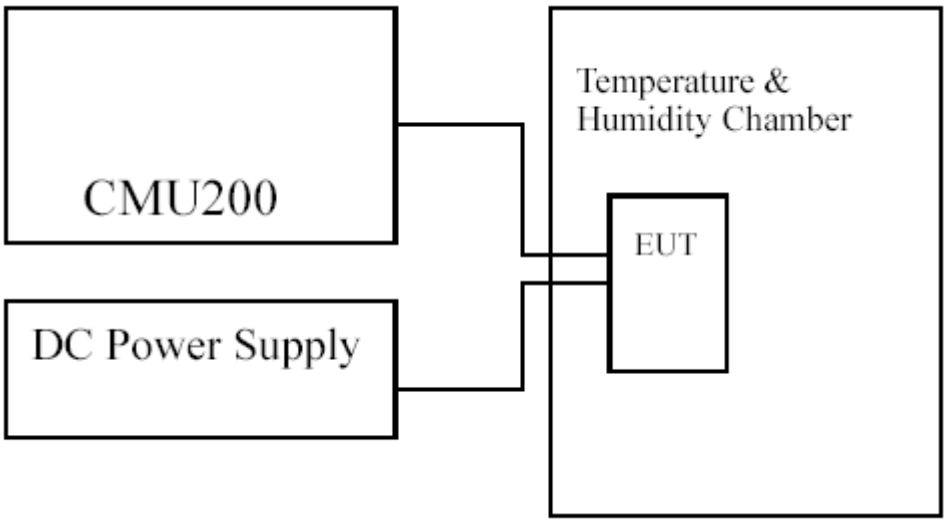
6.1. Test Equipment

The following test equipments are used during the frequency stability test:

Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Universal Radio Communication Tester	R & S	CMU200 / 104846	Apr., 2008
Standard Temperature & Humidity Chamber	WIT	TH-1S-B / 108210	Aug., 2008
DC Power Supply	Topward	6303D / 670302	N/A

Note: All equipments upon which need to be calibrated are with calibration period of 1 year

6.2. Test Setup



6.3. Limits

Limit	**<±2.5ppm**

6.4. Test Procedure

The frequency stability of transmitter is measured by:

(a) Temperature: The temperature is varied from -30°C to 50°C in 10°C increament using a standard temperature & Humidity chamber.

(b) Primary Supply Voltage: The primary supply voltage is varied 85% to 115% of the nominal value for non hand-carried equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating endpoint which shall be specified by the manufacturer.

The EUT was connected via the base station simulator. Universal Radio Communication Tester, (CMU200), was used to measure The Frequency Error. The maximum result of measurements was recorded.

6.5. Test Specification

According to Part 2.1055,22.355,24.235

6.6. Test Result of Frequency Stability Under Temperature Variations

Product	Smart Handheld		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	GSM 850 / Channel 189	Test Range	-30℃~+50℃

Frequency Stability Under Temperature Variations

Temperature Interval(℃)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	0.836	36	±2.09
-20	0.836	-21	±2.09
-10	0.836	28	±2.09
0	0.836	22	±2.09
10	0.836	-19	±2.09
20	0.836	-47	±2.09
30	0.836	-51	±2.09
40	0.836	-66	±2.09
50	0.836	-19	±2.09

Voltage Variations

DC Voltage (V)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
4.2	0.836	-49	±2.09
3.7	0.836	-47	±2.09
3.4	0.836	-41	±2.09

Product	Smart Handheld		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	GSM 850 GPRS / Channel 189	Test Range	-30℃~+50℃

Frequency Stability Under Temperature Variations

Temperature Interval(℃)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	0.836	45	±2.09
-20	0.836	40	±2.09
-10	0.836	-25	±2.09
0	0.836	21	±2.09
10	0.836	-29	±2.09
20	0.836	-41	±2.09
30	0.836	-48	±2.09
40	0.836	-59	±2.09
50	0.836	63	±2.09

Voltage Variations

DC Voltage (V)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
4.2	0.836	-35	±2.09
3.7	0.836	-41	±2.09
3.4	0.836	-43	±2.09

Product	Smart Handheld		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	GSM 850 EGPRS / Channel 189	Test Range	-30℃~+50℃

Frequency Stability Under Temperature Variations

Temperature Interval(℃)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	0.836	22	±2.09
-20	0.836	34	±2.09
-10	0.836	27	±2.09
0	0.836	28	±2.09
10	0.836	31	±2.09
20	0.836	-40	±2.09
30	0.836	-44	±2.09
40	0.836	45	±2.09
50	0.836	-47	±2.09

Voltage Variations

DC Voltage (V)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
4.2	0.836	-40	±2.09
3.7	0.836	-40	±2.09
3.4	0.836	-29	±2.09

.Product	Smart Handheld		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	PCS 1900 / Channel 661	Test Range	-30℃~+50℃

Frequency Stability Under Temperature Variations

Temperature Interval(℃)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	1.88	126	±4.7
-20	1.88	-53	±4.7
-10	1.88	-59	±4.7
0	1.88	58	±4.7
10	1.88	52	±4.7
20	1.88	-67	±4.7
30	1.88	-112	±4.7
40	1.88	-119	±4.7
50	1.88	-56	±4.7

Voltage Variations

DC Voltage (V)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
4.2	1.88	-96	±4.7
3.7	1.88	-67	±4.7
3.4	1.88	-93	±4.7

.Product	Smart Handheld		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	PCS 1900 GPRS / Channel 661	Test Range	-30℃~+50℃

Frequency Stability Under Temperature Variations

Temperature Interval(℃)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	1.88	137	±4.7
-20	1.88	-73	±4.7
-10	1.88	-76	±4.7
0	1.88	-67	±4.7
10	1.88	-61	±4.7
20	1.88	-90	±4.7
30	1.88	-109	±4.7
40	1.88	-120	±4.7
50	1.88	-116	±4.7

Voltage Variations

DC Voltage (V)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
4.2	1.88	97	±4.7
3.7	1.88	-90	±4.7
3.4	1.88	-73	±4.7

.Product	Smart Handheld		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	PCS 1900 EGPRS / Channel 661	Test Range	-30℃~+50℃

Frequency Stability Under Temperature Variations

Temperature Interval(℃)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	1.88	-57	±4.7
-20	1.88	-55	±4.7
-10	1.88	48	±4.7
0	1.88	-57	±4.7
10	1.88	77	±4.7
20	1.88	59	±4.7
30	1.88	75	±4.7
40	1.88	99	±4.7
50	1.88	-75	±4.7

Voltage Variations

DC Voltage (V)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
4.2	1.88	-98	±4.7
3.7	1.88	59	±4.7
3.4	1.88	-89	±4.7

Product	Smart Handheld		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND V / Channel 4183	Test Range	-30℃~+50℃

Frequency Stability Under Temperature Variations

Temperature Interval(℃)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	0.836	31	±2.09
-20	0.836	28	±2.09
-10	0.836	27	±2.09
0	0.836	40	±2.09
10	0.836	-30	±2.09
20	0.836	-32	±2.09
30	0.836	-28	±2.09
40	0.836	-28	±2.09
50	0.836	16	±2.09

Voltage Variations

DC Voltage (V)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
4.2	0.836	-38	±2.09
3.7	0.836	-32	±2.09
3.4	0.836	-31	±2.09

.Product	Smart Handheld		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND V HSDPA / Channel 4183	Test Range	-30℃~+50℃

Frequency Stability Under Temperature Variations

Temperature Interval(℃)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	0.836	25	±2.09
-20	0.836	28	±2.09
-10	0.836	-36	±2.09
0	0.836	-39	±2.09
10	0.836	-32	±2.09
20	0.836	-51	±2.09
30	0.836	-39	±2.09
40	0.836	-34	±2.09
50	0.836	27	±2.09

Voltage Variations

DC Voltage (V)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
4.2	0.836	-62	±2.09
3.7	0.836	-51	±2.09
3.4	0.836	-54	±2.09

.Product	Smart Handheld		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND V HSUPA / Channel 4183	Test Range	-30℃~+50℃

Frequency Stability Under Temperature Variations

Temperature Interval(℃)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	0.836	-24	±2.09
-20	0.836	29	±2.09
-10	0.836	33	±2.09
0	0.836	-27	±2.09
10	0.836	-33	±2.09
20	0.836	-34	±2.09
30	0.836	-32	±2.09
40	0.836	-31	±2.09
50	0.836	33	±2.09

Voltage Variations

DC Voltage (V)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
4.2	0.836	29	±2.09
3.7	0.836	-34	±2.09
3.4	0.836	38	±2.09

.Product	Smart Handheld		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND II / Channel 9400	Test Range	-30℃~+50℃

Frequency Stability Under Temperature Variations

Temperature Interval(℃)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	1.88	-61	±4.7
-20	1.88	60	±4.7
-10	1.88	56	±4.7
0	1.88	51	±4.7
10	1.88	-51	±4.7
20	1.88	-71	±4.7
30	1.88	-72	±4.7
40	1.88	84	±4.7
50	1.88	75	±4.7

Voltage Variations

DC Voltage (V)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
4.2	1.88	-83	±4.7
3.7	1.88	-71	±4.7
3.4	1.88	-89	±4.7

Product	Smart Handheld		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND II HSDPA / Channel 9400	Test Range	-30℃~+50℃

Frequency Stability Under Temperature Variations

Temperature Interval(℃)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	1.88	64	±4.7
-20	1.88	52	±4.7
-10	1.88	52	±4.7
0	1.88	58	±4.7
10	1.88	-69	±4.7
20	1.88	-72	±4.7
30	1.88	-78	±4.7
40	1.88	76	±4.7
50	1.88	69	±4.7

Voltage Variations

DC Voltage (V)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
4.2	1.88	-81	±4.7
3.7	1.88	-72	±4.7
3.4	1.88	69	±4.7

.Product	Smart Handheld		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2009/02/24	Test Site	CTR
Test Condition	WCDMA BAND II HSUPA / Channel 9400	Test Range	-30℃~+50℃

Frequency Stability Under Temperature Variations

Temperature Interval(℃)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	1.88	53	±4.7
-20	1.88	54	±4.7
-10	1.88	51	±4.7
0	1.88	59	±4.7
10	1.88	53	±4.7
20	1.88	-74	±4.7
30	1.88	87	±4.7
40	1.88	78	±4.7
50	1.88	82	±4.7

Voltage Variations

DC Voltage (V)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
4.2	1.88	86	±4.7
3.7	1.88	-74	±4.7
3.4	1.88	-79	±4.7

7. EMI Reduction Method During Compliance Testing

No modification was made during testing.