



Test Report

Product Name : Smart Handheld
Model No : M900
FCC ID : HLZSHM900

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

Date of Receipt : 2009/02/24
Issued Date : 2009/03/06
Report No. : 092307R-HPUSP07V01
Version : V1.0

The test results relate only to the samples tested.
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Test Report Certification

Issued Date : 2009/03/06

Report No.: 092307R-HPUSP07V01



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. : M900
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.

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This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Smart Handheld
Model No.	M900
Trade Name	acer & glofiish
IMEI No.	353273030000036
FCC ID.	HLZSHM900
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 Mobile Phone to the requirements of 47CFR2, 22 and 24.

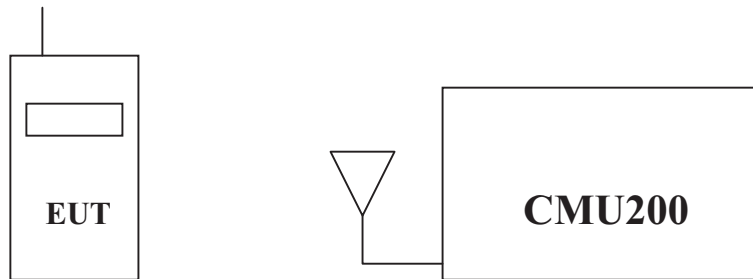
The EUT provide all functions described as above. The EUT is tested with maximum rated TX power via the Base Station simulator.

Quietek 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:

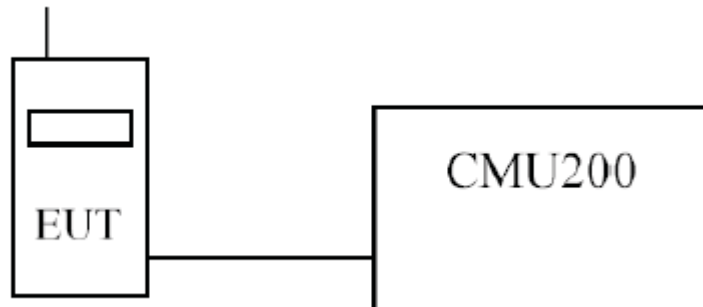
Test Mode	GSM 850
	GSM 850 GPRS
	GSM 850 EGPRS
	PCS 1900
	PCS 1900 GPRS
	PCS 1900 EGPRS
	WCDMA BAND V
	WCDMA BAND V HSDPA
	WCDMA BAND V HSUPA
	WCDMA BAND II
	WCDMA BAND II HSDPA
	WCDMA BAND II HSUPA

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	24
Humidity (%RH)	25-75	51
Barometric pressure (mbar)	860-1060	950-1000

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: Quietek 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

1.6. Type of Emission

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

2. Peak Power Output

2.1. Test Equipment

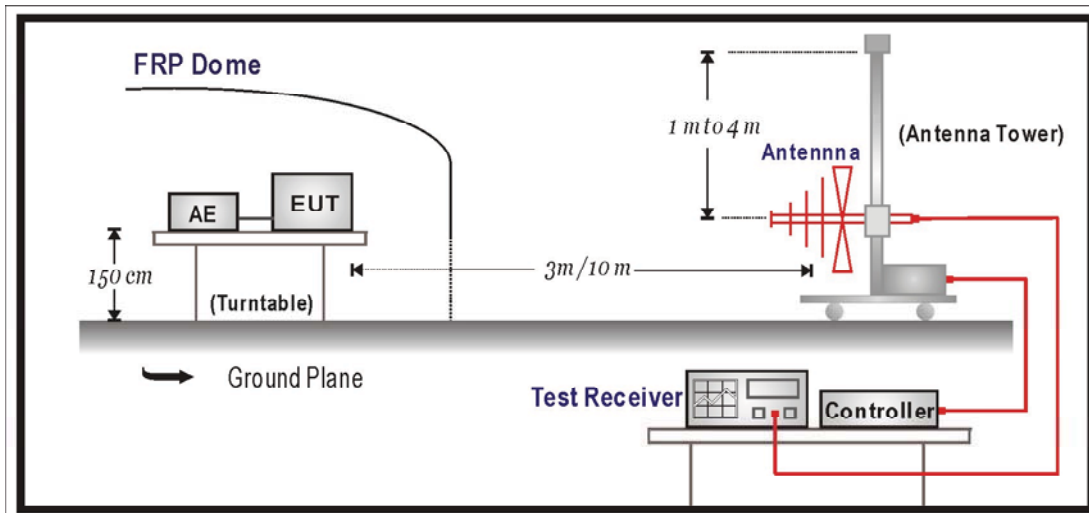
The following test equipments are used during the radiated emission test:

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	Advantest	R3162 / 120300652	Feb., 2009
	Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May., 2009
	Bilog Antenna	SCHAFFNER	CBL6112B / 2697	May., 2009
	Horn Antenna	ETS	3115 / 0005-6160	Jul., 2008
	Pre-Amplifier	QTK	QTK-AMP-01 / 0001	Jul., 2008

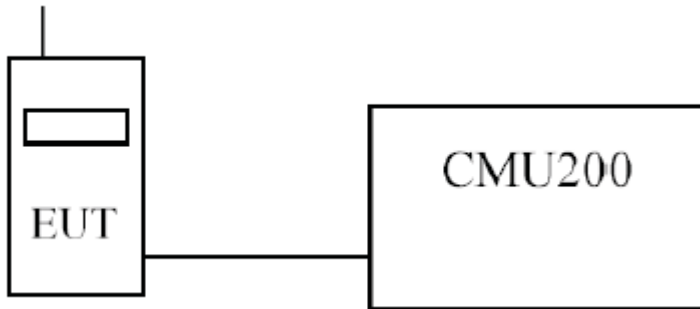
Note: 1. All equipments that need to be calibrated are with calibration period of 1 year.

2.2. Test Setup

Radiated Power Measurement



Conducted Power Measurement



2.3. Limits

GSM850	<7W
PCS1900	<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	2009/03/02	Test Site	CTR
Test Condition	GSM 850		

GSM 850				
Frequency (MHz)	Output Power (dBm)	Path Loss (dB)	Result (dBm)	Result (W)
824.2	31.98	0.4	32.38	1.73
836.4	31.88	0.4	32.28	1.69
848.8	32.02	0.4	32.42	1.75
PCS 1900				
Frequency (MHz)	Output Power (dBm)	Path Loss (dB)	Result (dBm)	Result (W)
1850.2	28.26	0.6	28.86	0.77
1880	28.21	0.6	28.81	0.76
1909.8	28.38	0.6	28.98	0.79
GPRS 850				
Frequency (MHz)	Output Power (dBm)	Path Loss (dB)	Result (dBm)	Result (W)
824.2	32.00	0.4	32.40	1.74
836.4	31.96	0.4	32.36	1.72
848.8	32.07	0.4	32.47	1.77
GPRS 1900				
Frequency (MHz)	Output Power (dBm)	Path Loss (dB)	Result (dBm)	Result (W)
1850.2	28.11	0.6	28.71	0.74
1880	28.07	0.6	28.67	0.74
1909.8	28.20	0.6	28.80	0.76

EGPRS 850				
Frequency (MHz)	Output Power (dBm)	Path Loss (dB)	Result (dBm)	Result (W)
824.2	26.53	0.4	26.93	0.49
836.4	26.65	0.4	27.05	0.51
848.8	26.69	0.4	27.09	0.51
EGPRS 1900				
Frequency (MHz)	Output Power (dBm)	Path Loss (dB)	Result (dBm)	Result (W)
1850.2	24.86	0.6	25.46	0.35
1880	24.76	0.6	25.36	0.34
1909.8	24.92	0.6	25.52	0.36
WCDMA V				
Frequency (MHz)	Output Power (dBm)	Path Loss (dB)	Result (dBm)	Result (W)
826.4	22.11	0.4	22.51	0.18
836.6	22.08	0.4	22.48	0.18
846.6	22.05	0.4	22.45	0.18
WCDMA II				
Frequency (MHz)	Output Power (dBm)	Path Loss (dB)	Result (dBm)	Result (W)
1852.4	21.71	0.6	22.31	0.17
1880	21.75	0.6	22.35	0.17
1907.6	21.68	0.6	22.28	0.17

WCDMA V HSDPA								
Frequency (MHz)	Set 1		Set 2		Set 3		Set 4	
	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)
826.4	22.79	0.19	21.82	0.15	21.75	0.15	21.78	0.15
836.6	22.72	0.19	21.74	0.15	21.75	0.15	21.72	0.15
846.6	22.72	0.19	21.78	0.15	21.78	0.15	21.77	0.15
β_c	2		12		15		15	
β_d	15		15		8		4	
$\Delta_{ACK}, \Delta_{NACK} \Delta_{CQI}$	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								
Frequency (MHz)	Set 1		Set 2		Set 3		Set 4	
	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)
1852.4	22.45	0.18	21.66	0.15	21.69	0.15	21.73	0.15
1880	22.56	0.18	21.76	0.15	21.74	0.15	21.75	0.15
1907.6	22.47	0.18	21.65	0.15	21.66	0.15	21.68	0.15
β_c	2		12		15		15	
β_d	15		15		8		4	
$\Delta_{ACK}, \Delta_{NACK} \Delta_{CQI}$	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										
Frequency (MHz)	Set 1		Set 2		Set 3		Set 4		Set 5	
	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)
826.4	21.86	0.15	22.41	0.17	21.33	0.14	22.76	0.19	21.77	0.15
836.6	21.83	0.15	22.38	0.17	21.27	0.13	22.71	0.19	21.72	0.15
846.6	21.81	0.15	22.41	0.17	21.27	0.13	22.73	0.19	21.76	0.15
β_c	11		6		15		2		15	
β_d	15		15		9		15		15	
$\Delta_{ACK}, \Delta_{NACK} \Delta_{CQI}$	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										
Frequency (MHz)	Set 1		Set 2		Set 3		Set 4		Set 5	
	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)	Power (dBm)	Power (Watts)
1852.4	21.77	0.15	22.25	0.17	21.18	0.13	22.45	0.18	21.69	0.15
1880	21.78	0.15	22.35	0.17	21.39	0.14	22.57	0.18	21.75	0.15
1907.6	21.75	0.15	22.22	0.17	21.14	0.13	22.47	0.18	21.64	0.15
β_c	11		6		15		2		15	
β_d	15		15		9		15		15	
$\Delta_{ACK}, \Delta_{NACK} \Delta_{CQI}$	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	2009/03/02	Test Site	OATS 3
Test Condition	GSM 850		

Maximum Power-GSM 850 (Open)

Frequency (MHz)	Raw Result (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBd)	Cable Loss (dB)	Result ERP (dBm)	Result ERP (W)
824.2	20.36	23.28	4.45	0.51	27.22	0.53
836.4	21.42	24.37	4.45	0.51	28.31	0.68
848.8	21.97	24.93	4.45	0.51	28.87	0.77

Maximum Power-GSM 850 (Close)

Frequency (MHz)	Raw Result (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBd)	Cable Loss (dB)	Result ERP (dBm)	Result ERP (W)
824.2	20.02	22.93	4.45	0.51	26.87	0.49
836.4	21.20	24.14	4.45	0.51	28.08	0.64
848.8	21.66	24.61	4.45	0.51	28.55	0.72

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	2009/03/02	Test Site	OATS 3
Test Condition	GSM 850 GPRS		

Maximum Power-GSM 850 GPRS (Open)

Frequency (MHz)	Raw Result (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBd)	Cable Loss (dB)	Result ERP (dBm)	Result ERP (W)
824.2	20.52	23.45	4.45	0.51	27.39	0.55
836.4	21.41	24.36	4.45	0.51	28.30	0.68
848.8	22.02	24.98	4.45	0.51	28.92	0.78

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	2009/03/02	Test Site	OATS 3
Test Condition	GSM 850 EGPRS		

Maximum Power-GSM 850 EGPRS (Open)

Frequency (MHz)	Raw Result (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBd)	Cable Loss (dB)	Result ERP (dBm)	Result ERP (W)
824.2	17.93	20.80	4.45	0.51	24.74	0.30
836.4	18.94	21.83	4.45	0.51	25.77	0.38
848.8	19.73	22.64	4.45	0.51	26.58	0.45

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	2009/03/02	Test Site	OATS 3
Test Condition	PCS 1900		

Maximum Power-PCS 1900 (Open)

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dB)	Result EIRP (dBm)	Result EIRP (W)
1850.2	-11.100	18.778	10.4	1.02	28.16	0.65
1880.0	-10.400	19.85	10.4	1.02	29.23	0.84
1909.8	-11.350	19.142	10.4	1.02	28.52	0.71

Maximum Power-PCS 1900 (Close)

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dB)	Result EIRP (dBm)	Result EIRP (W)
1850.2	-11.41	18.470	10.4	1.02	27.85	0.61
1880.0	-10.66	19.590	10.4	1.02	28.97	0.79
1909.8	-11.68	18.810	10.4	1.02	28.19	0.66

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	2009/03/02	Test Site	OATS 3
Test Condition	PCS 1900 GPRS		

Maximum Power-PCS 1900 GPRS (Open)

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dB)	Result EIRP (dBm)	Result EIRP (W)
1850.2	-11.100	18.778	10.4	1.02	28.16	0.65
1880.0	-10.400	19.85	10.4	1.02	29.23	0.84
1909.8	-11.450	19.042	10.4	1.02	28.42	0.70

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	2009/03/02	Test Site	OATS 3
Test Condition	PCS 1900 EGPRS		

Maximum Power-PCS 1900 EGPRS (Open)

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dB)	Result EIRP (dBm)	Result EIRP (W)
1850.2	-11.360	18.518	10.4	1.02	27.90	0.62
1880.0	-10.900	19.350	10.4	1.02	28.73	0.75
1909.8	-11.720	18.772	10.4	1.02	28.15	0.65

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	2009/03/02	Test Site	OATS 3
Test Condition	WCDMA BAND V		

Maximum Power- WCDMA BAND V (Open)

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBd)	Cable Loss (dB)	Result ERP (dBm)	Result ERP (W)
826.4	14.24	17.08	4.45	0.51	21.02	0.13
836.6	15.24	18.08	4.45	0.51	22.02	0.16
846.6	13.46	16.30	4.45	0.51	20.24	0.11

Maximum Power- WCDMA BAND V (Close)

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBd)	Cable Loss (dB)	Result ERP (dBm)	Result ERP (W)
826.4	13.94	16.78	4.45	0.51	20.72	0.12
836.6	14.89	17.73	4.45	0.51	21.67	0.15
846.6	13.11	15.95	4.45	0.51	19.89	0.10

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	2009/03/02	Test Site	OATS 3
Test Condition	WCDMA BAND V HSDPA		

Maximum Power- WCDMA BAND V HSDPA (Open)

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBd)	Cable Loss (dB)	Result ERP (dBm)	Result ERP (W)
826.4	14.79	17.63	4.45	0.51	21.57	0.14
836.6	16.16	19.00	4.45	0.51	22.94	0.20
846.6	14.51	17.35	4.45	0.51	21.29	0.13

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	2009/03/02	Test Site	OATS 3
Test Condition	WCDMA BAND V HSUPA		

Maximum Power- WCDMA BAND V HSUPA (Open)

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBd)	Cable Loss (dB)	Result ERP (dBm)	Result ERP (W)
826.4	14.63	17.47	4.45	0.51	21.41	0.14
836.6	15.64	18.48	4.45	0.51	22.42	0.17
846.6	14.01	16.85	4.45	0.51	20.79	0.12

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	2009/03/02	Test Site	OATS 3
Test Condition	WCDMA BAND II		

Maximum Power- WCDMA BAND II (Open)

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dB)	Result EIRP (dBm)	Result EIRP (W)
1852.4	-15.870	14.535	10.4	1.02	23.92	0.25
1880	-15.640	15.11	10.4	1.02	24.49	0.28
1907.6	-16.590	14.404	10.4	1.02	23.78	0.24

Maximum Power- WCDMA BAND II (Close)

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dB)	Result EIRP (dBm)	Result EIRP (W)
1852.4	-16.05	13.860	10.4	1.02	23.24	0.21
1880	-15.93	14.320	10.4	1.02	23.70	0.23
1907.6	-17.01	13.480	10.4	1.02	22.86	0.19

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	2009/03/02	Test Site	OATS 3
Test Condition	WCDMA BAND II HSDPA		

Maximum Power- WCDMA BAND II HSDPA (Open)

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dB)	Result EIRP (dBm)	Result EIRP (W)
1852.4	-14.760	15.645	10.4	1.02	25.03	0.32
1880	-14.080	16.67	10.4	1.02	26.05	0.40
1907.6	-15.550	15.444	10.4	1.02	24.82	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: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	2009/03/02	Test Site	OATS 3
Test Condition	WCDMA BAND II HSDPA		

Maximum Power- WCDMA BAND II HSDPA (Open)

Frequency (MHz)	Reading Level (dBm)	Substitution Level (dBm)	Substitution Antenna Gain (dBi)	Cable Loss (dB)	Result EIRP (dBm)	Result EIRP (W)
1852.4	-15.300	15.105	10.4	1.02	24.49	0.28
1880	-15.250	15.5	10.4	1.02	24.88	0.31
1907.6	-15.910	15.084	10.4	1.02	24.46	0.28

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

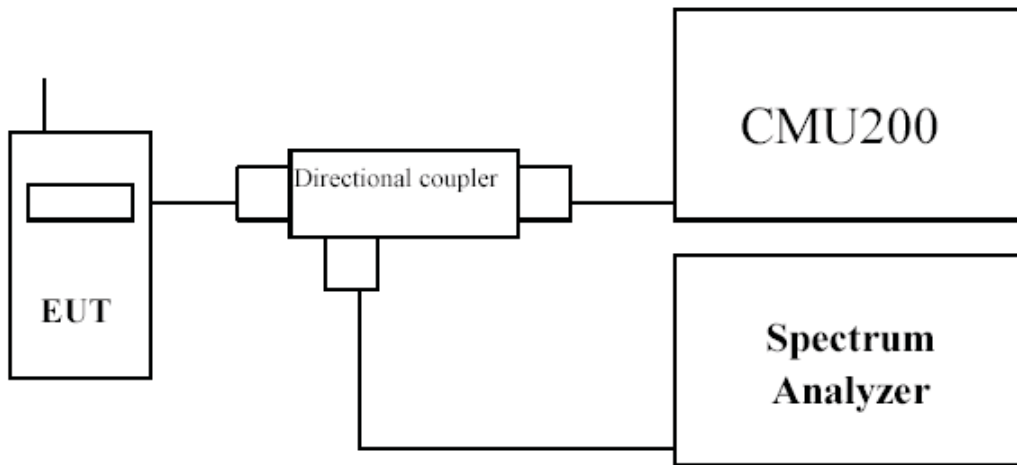
3.1. Test Equipment

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

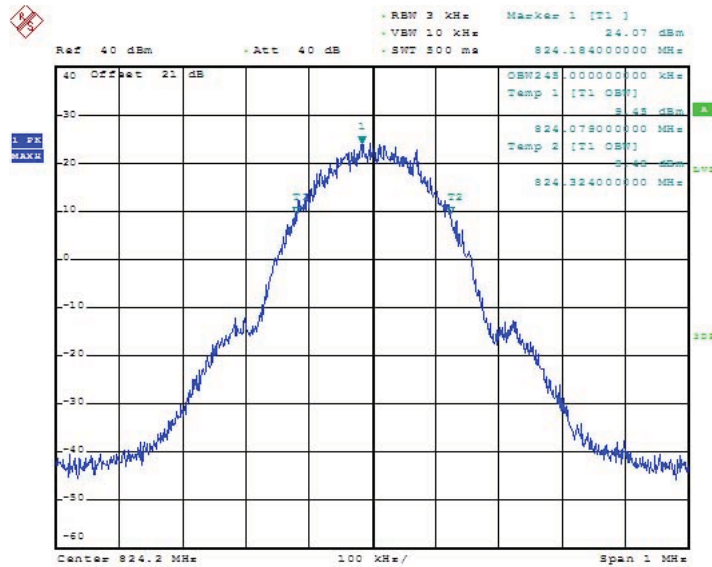
Product	Smart Handheld
Test Mode	Occupied Bandwidth
Test Site	CTR

Test Mode	Channel & TX Frequency (MHz)	99% Occupied Bandwidth (MHz)	26 dB bandwidth (MHz)	Required Limit (MHz)	Result
GSM 850	128(824.2)	0.245	0.314	N/A	Pass
	189(836.4)	0.244	0.310	N/A	Pass
	251(848.8)	0.245	0.313	N/A	Pass
GSM 850 GPRS	128(824.2)	0.242	0.298	N/A	Pass
	189(836.4)	0.245	0.290	N/A	Pass
	251(848.8)	0.247	0.279	N/A	Pass
GSM 850 EGPRS	128(824.2)	0.241	0.306	N/A	Pass
	189(836.4)	0.240	0.310	N/A	Pass
	251(848.8)	0.242	0.306	N/A	Pass
PCS 1900	512(1850.2)	0.244	0.303	N/A	Pass
	661(1880)	0.246	0.305	N/A	Pass
	810(1909.8)	0.245	0.317	N/A	Pass
PCS 1900 GPRS	512(1850.2)	0.241	0.302	N/A	Pass
	661(1880)	0.242	0.285	N/A	Pass
	810(1909.8)	0.241	0.299	N/A	Pass
PCS 1900 EGPRS	512(1850.2)	0.243	0.299	N/A	Pass
	661(1880)	0.245	0.312	N/A	Pass
	810(1909.8)	0.243	0.305	N/A	Pass
WCDMA V	4132(826.4)	4.164	4.860	N/A	Pass
	4183(836.6)	4.188	4.872	N/A	Pass
	4233(846.6)	4.176	4.872	N/A	Pass
WCDMA V HSDPA	4132(826.4)	4.176	4.824	N/A	Pass

	4183(836.6)	4.188	4.836	N/A	Pass
	4233(846.6)	4.176	4.836	N/A	Pass
WCDMA V HSUPA	4132(826.4)	4.176	4.824	N/A	Pass
	4183(836.6)	4.176	4.848	N/A	Pass
	4233(846.6)	4.176	4.836	N/A	Pass
WCDMA II	9262(1852.4)	4.176	4.860	N/A	Pass
	9400(1880)	4.188	4.860	N/A	Pass
	9538(1907.6)	4.176	4.872	N/A	Pass
WCDMA II HSDPA	9262(1852.4)	4.188	4.836	N/A	Pass
	9400(1880)	4.188	4.836	N/A	Pass
	9538(1907.6)	4.176	4.848	N/A	Pass
WCDMA II HSUPA	9262(1852.4)	4.188	4.836	N/A	Pass
	9400(1880)	4.176	4.860	N/A	Pass
	9538(1907.6)	4.176	4.836	N/A	Pass

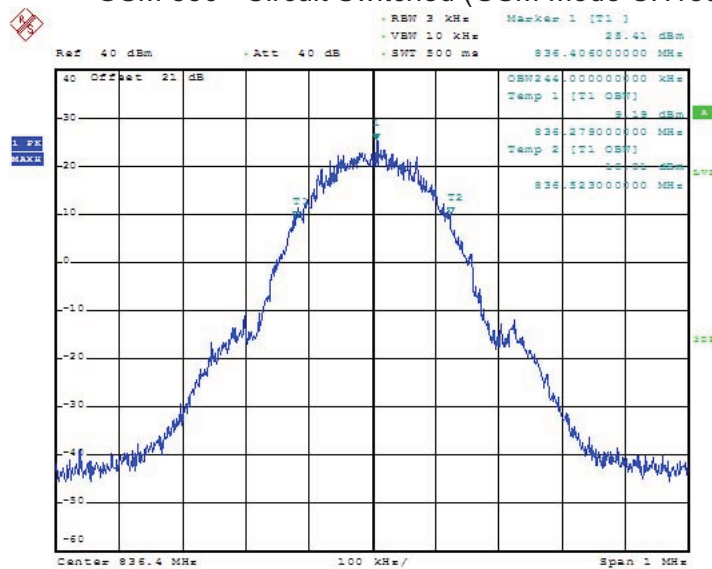
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/26	Test Site	CTR
Test Condition	GSM 850		

GSM 850 - Circuit Switched (GSM Mode CH 128)



Date: 26.FEB.2009 07:48:31

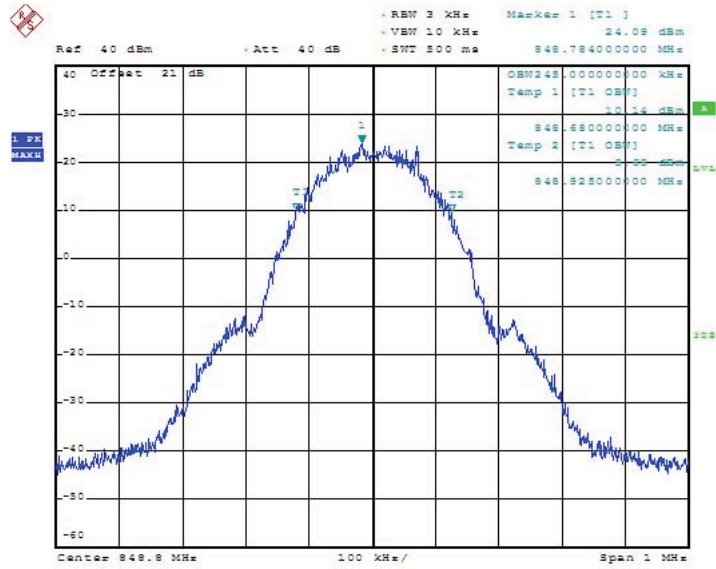
GSM 850 - Circuit Switched (GSM Mode CH189)



Date: 26.FEB.2009 07:59:46

Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/26	Test Site	CTR
Test Condition	GSM 850		

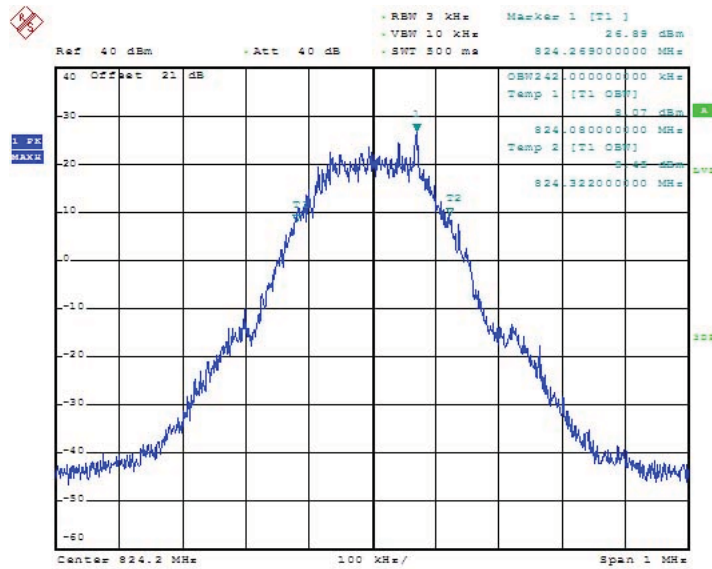
GSM 850 - Circuit Switched (GSM Mode CH 251)



Date: 26.FEB.2009 08:02:14

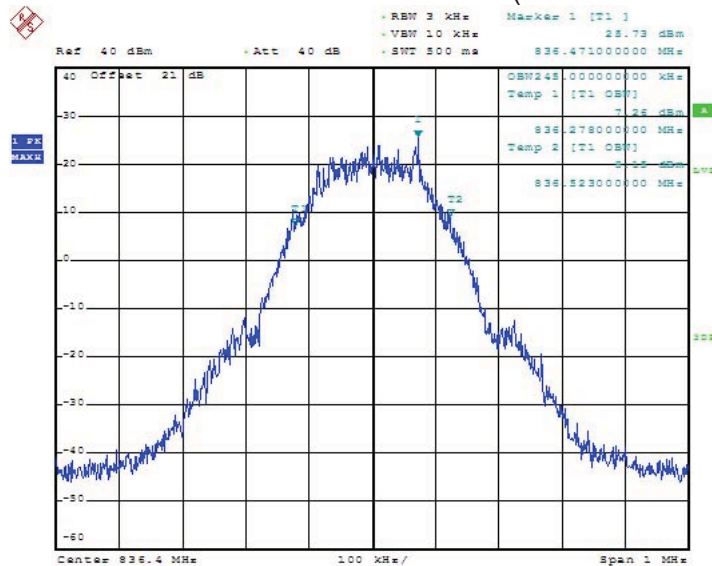
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/26	Test Site	CTR
Test Condition	GSM 850 GPRS		

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



Date: 26.FEB.2009 09:20:50

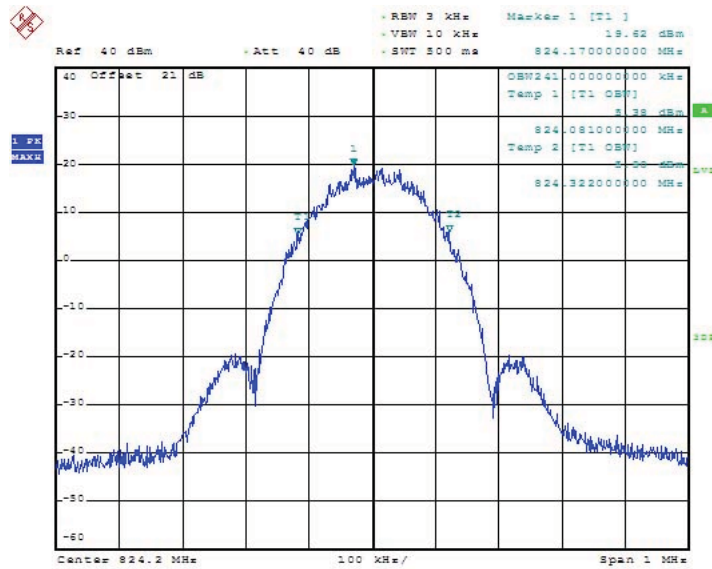
GSM 850 GPRS - Packet Switched (GSM Mode CH189)



Date: 26.FEB.2009 09:21:38

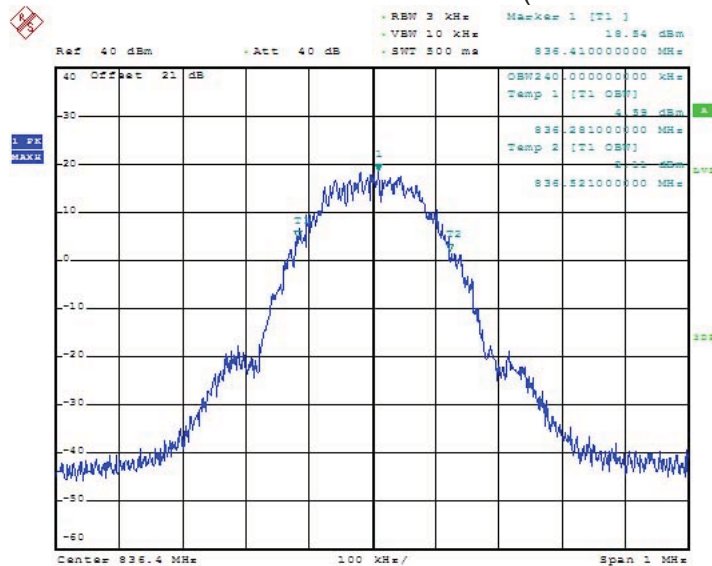
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/26	Test Site	CTR
Test Condition	GSM 850 EGPRS		

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



Date:26.FEB.2009 08:19:10

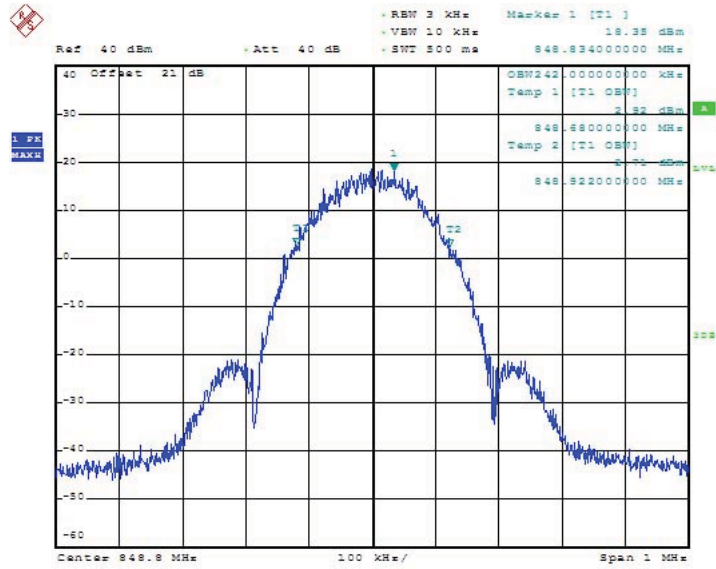
GSM 850 EGPRS - Packet Switched (GSM Mode CH189)



Date:26.FEB.2009 08:11:52

Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/26	Test Site	CTR
Test Condition	GSM 850 EGPRS		

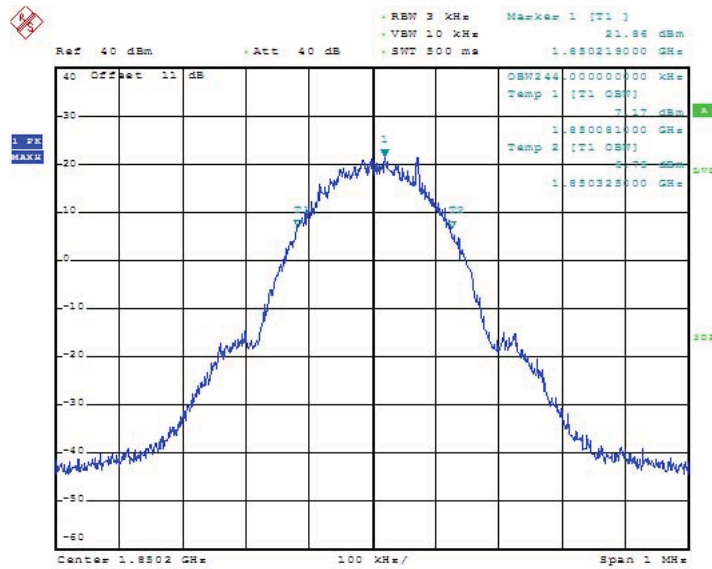
GSM 850 EGPRS - Packet Switched (GSM Mode CH 251)



Date: 26.FEB.2009 08:15:35

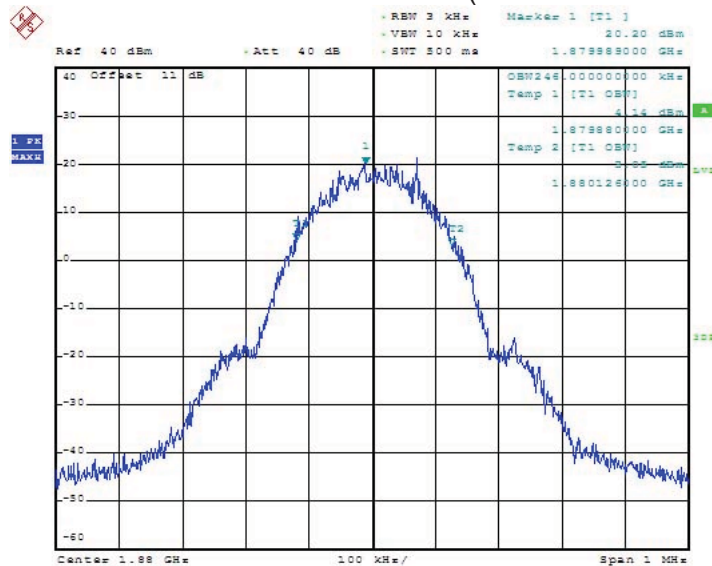
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/26	Test Site	CTR
Test Condition	PCS1900		

PCS1900 - Circuit Switched (PCS Mode CH 512)



Date: 26.FEB.2009 10:03:14

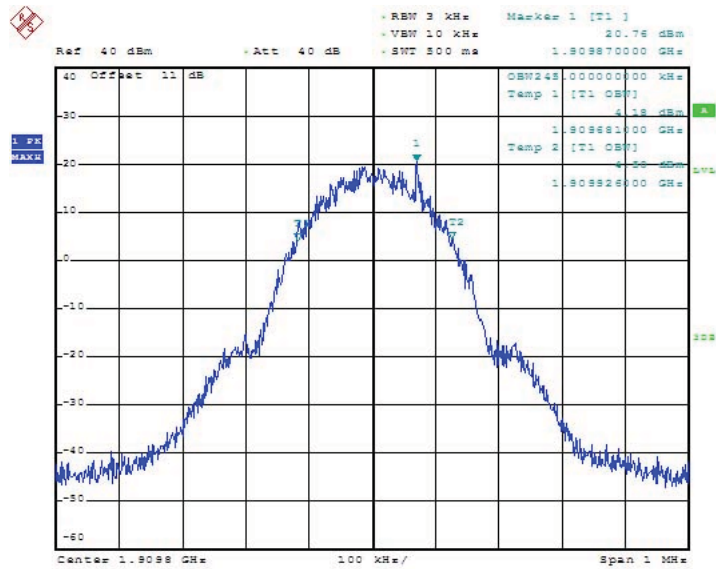
PCS1900 - Circuit Switched (PCS Mode CH661)



Date: 26.FEB.2009 09:57:03

Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/26	Test Site	CTR
Test Condition	PCS1900		

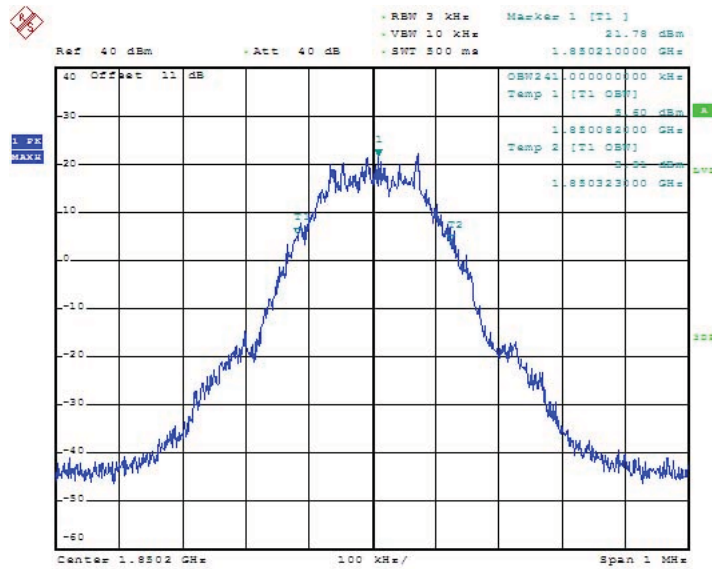
PCS1900 - Circuit Switched (PCS Mode CH 810)



Date: 26.FEB.2009 10:04:27

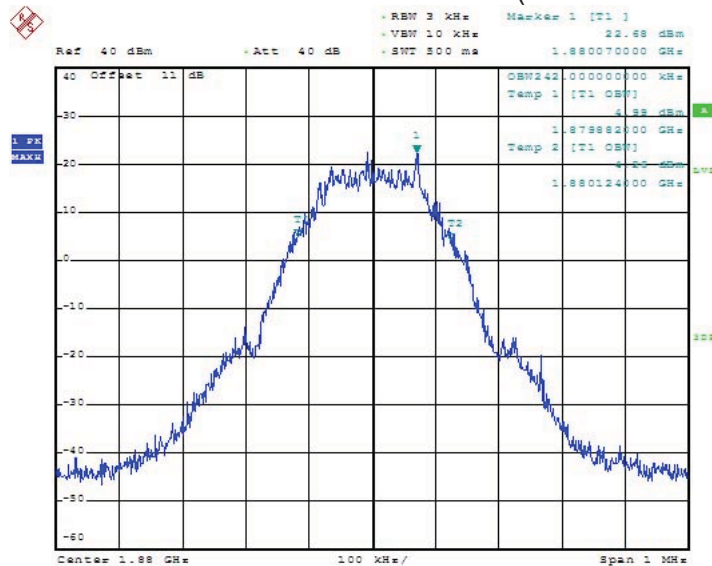
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/26	Test Site	CTR
Test Condition	PCS1900 GPRS		

PCS1900 GPRS - Packet Switched (PCS Mode CH 512)



Date: 26.FEB.2009 10:29:51

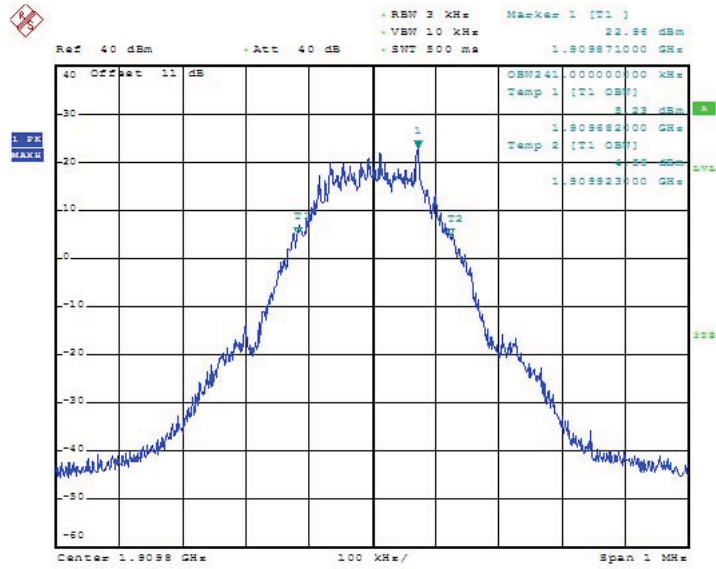
PCS1900 GPRS - Packet Switched (PCS Mode CH661)



Date: 26.FEB.2009 10:28:36

Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/26	Test Site	CTR
Test Condition	PCS1900 GPRS		

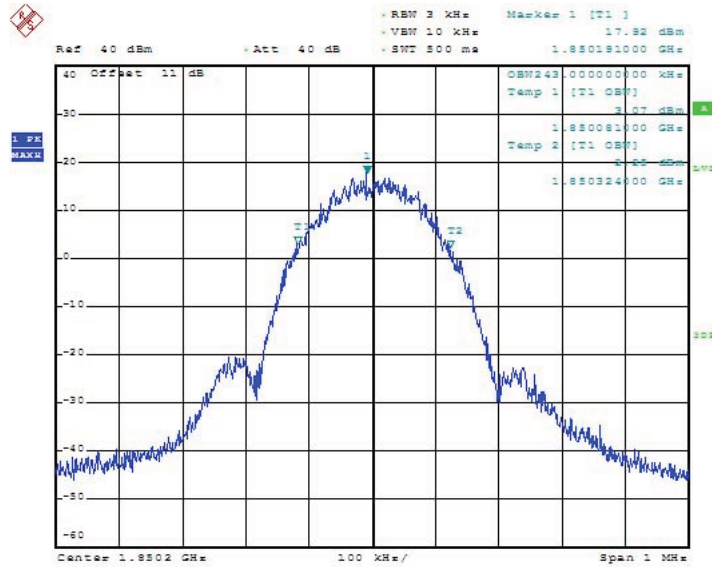
PCS1900 GPRS - Packet Switched (PCS Mode CH 810)



Date: 26.FEB.2009 10:21:58

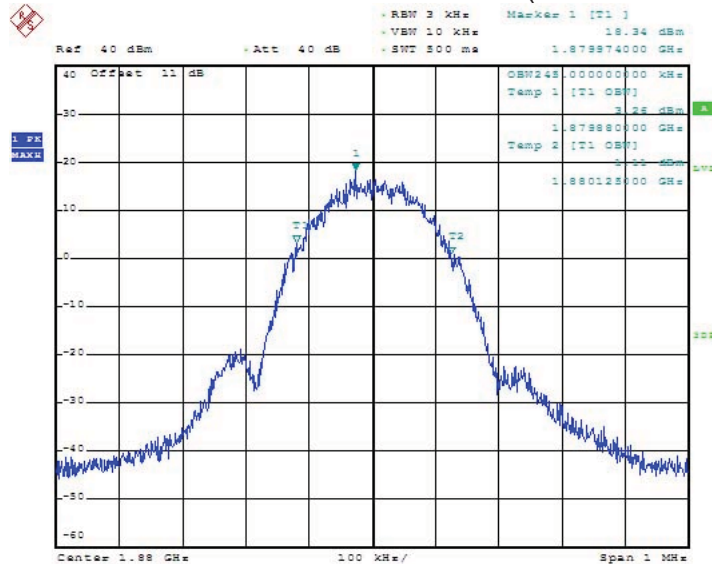
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/26	Test Site	CTR
Test Condition	PCS1900 EGPRS		

PCS1900 EGPRS - Packet Switched (PCS Mode CH 512)



Date: 26.FEB.2009 10:08:55

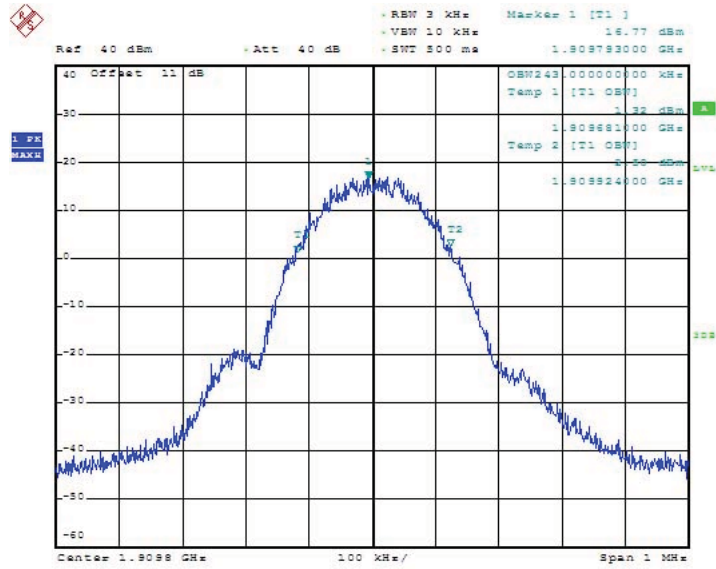
PCS1900 EGPRS - Packet Switched (PCS Mode CH661)



Date: 26.FEB.2009 10:09:48

Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/26	Test Site	CTR
Test Condition	PCS1900 EGPRS		

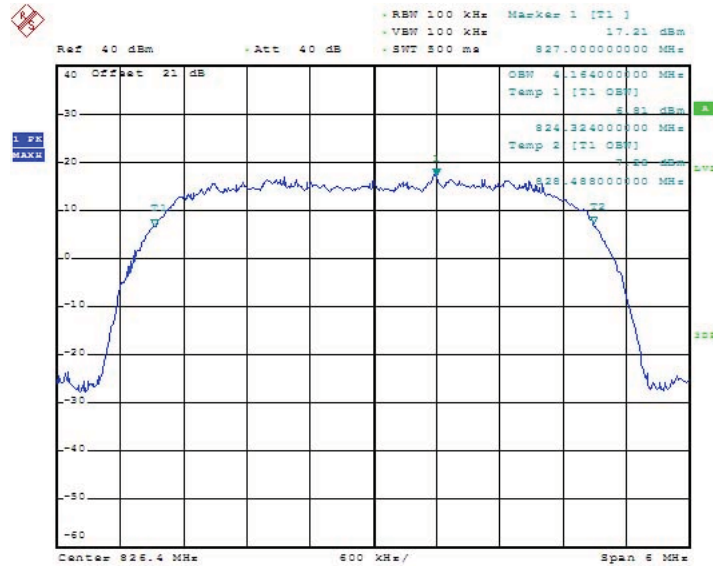
PCS1900 EGPRS - Packet Switched (PCS Mode CH 810)



Date: 26.FEB.2009 10:18:53

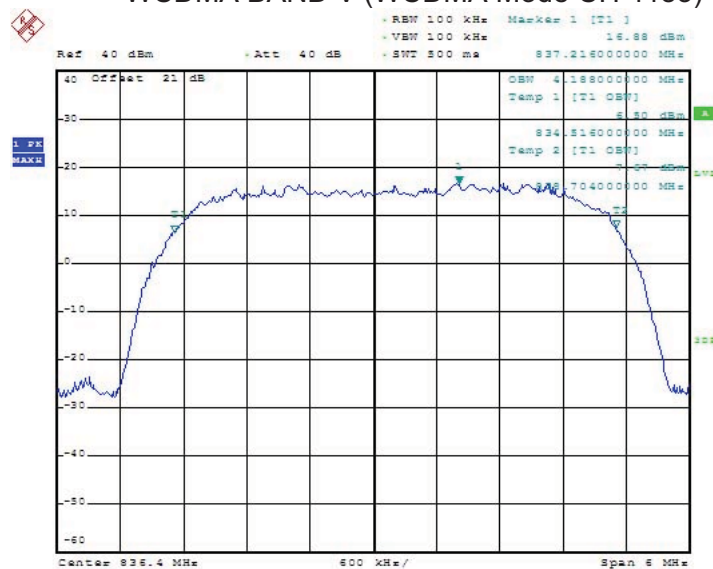
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/27	Test Site	CTR
Test Condition	WCDMA BAND V		

WCDMA BAND V (WCDMA Mode CH 4132)



Date: 27.FEB.2009 16:01:13

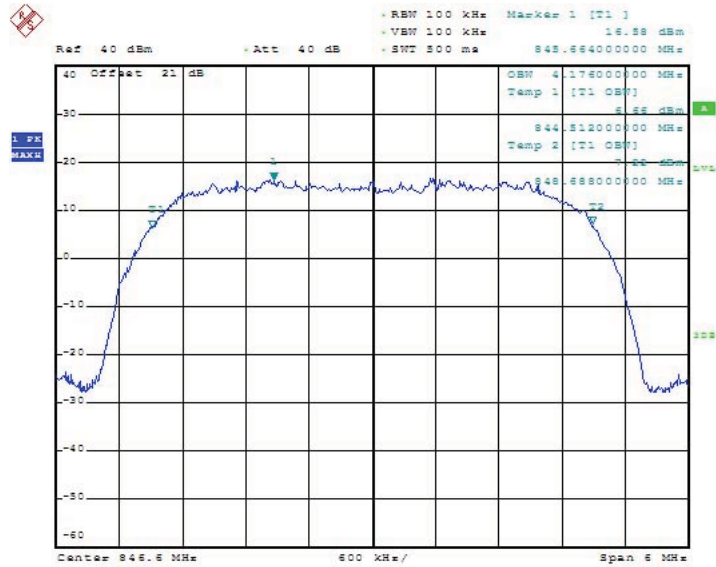
WCDMA BAND V (WCDMA Mode CH 4183)



Date: 27.FEB.2009 15:59:09

Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/27	Test Site	CTR
Test Condition	WCDMA BAND V		

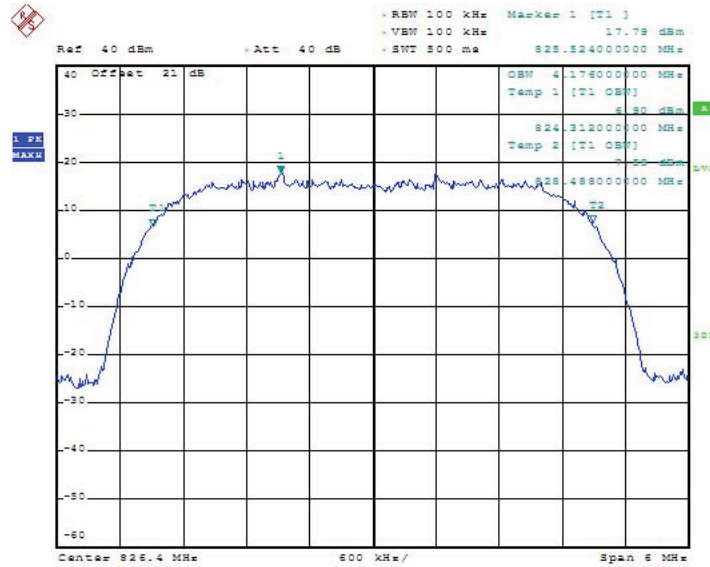
WCDMA BAND V (WCDMA Mode CH 4233)



Date: 27.FEB.2009 15:58:35

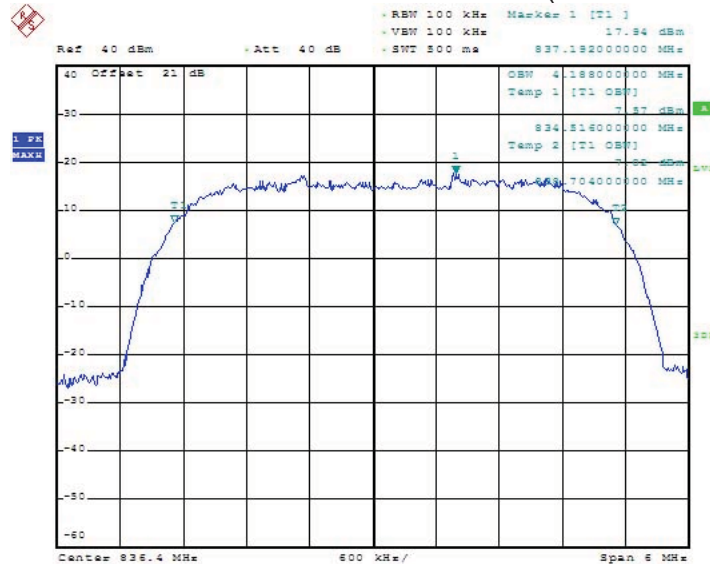
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/27	Test Site	CTR
Test Condition	WCDMA BAND V HSDPA		

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



Date: 27.FEB.2009 15:48:00

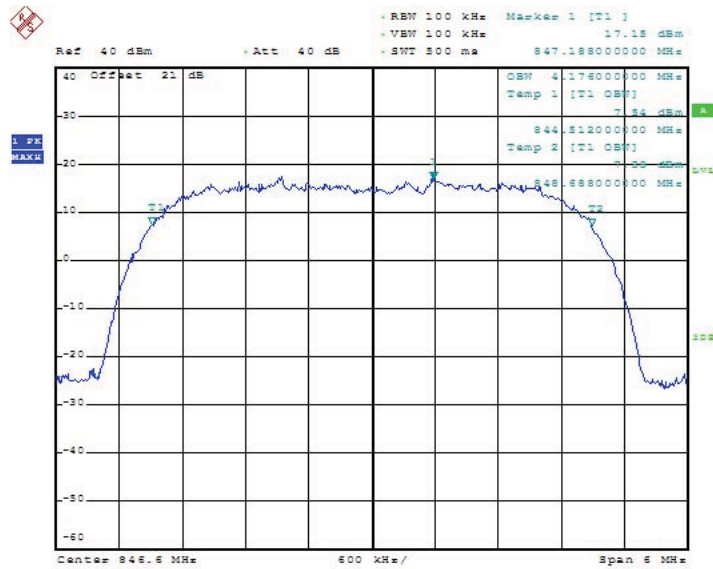
WCDMA BAND V HSDPA - Packet Switched (HSDPA Mode CH 4183)



Date: 27.FEB.2009 15:47:15

Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/27	Test Site	CTR
Test Condition	WCDMA BAND V HSDPA		

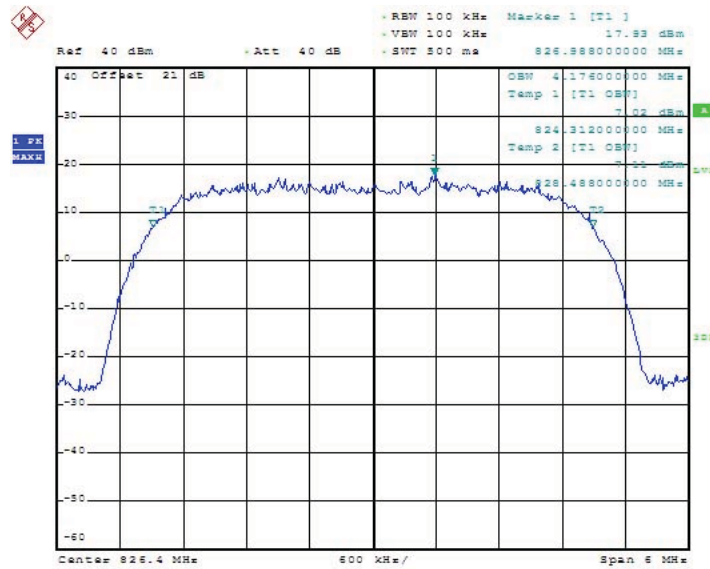
WCDMA BAND V HSDPA - Packet Switched (HSDPA Mode CH 4233)



Date: 27.FEB.2009 15:45:40

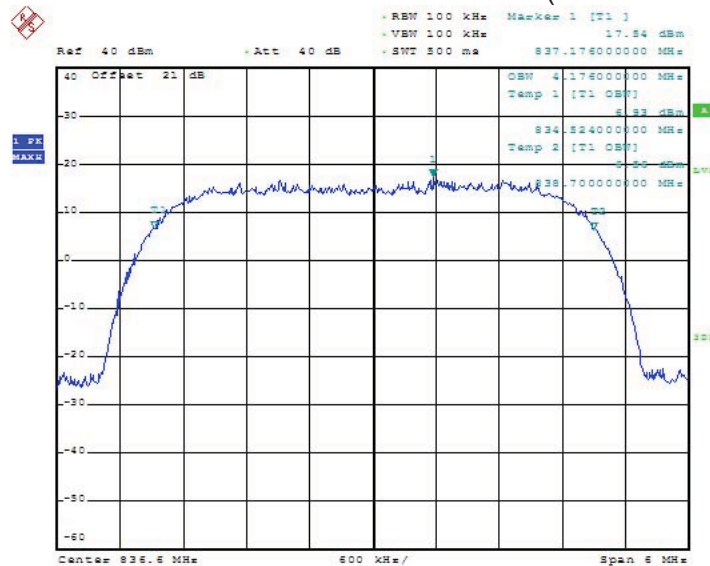
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/27	Test Site	CTR
Test Condition	WCDMA BAND V HSUPA		

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



Date: 27.FEB.2009 15:51:01

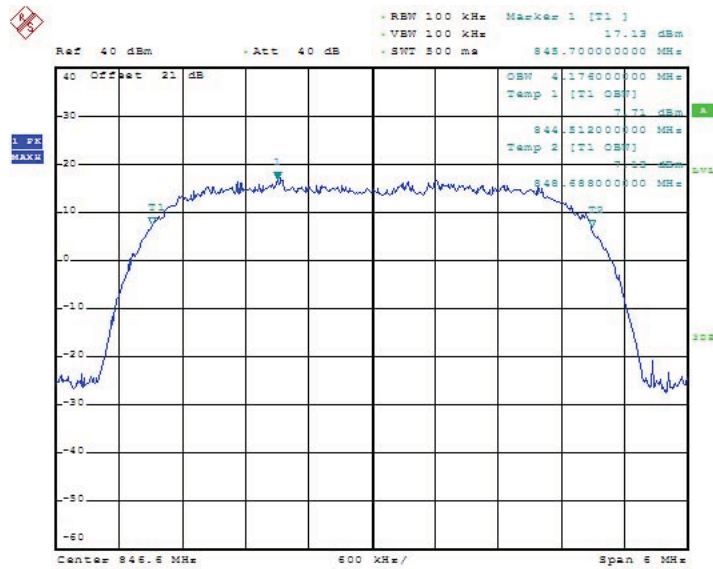
WCDMA BAND V HSUPA - Packet Switched (HSUPA Mode CH 4183)



Date: 27.FEB.2009 15:55:12

Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/27	Test Site	CTR
Test Condition	WCDMA BAND V HSUPA		

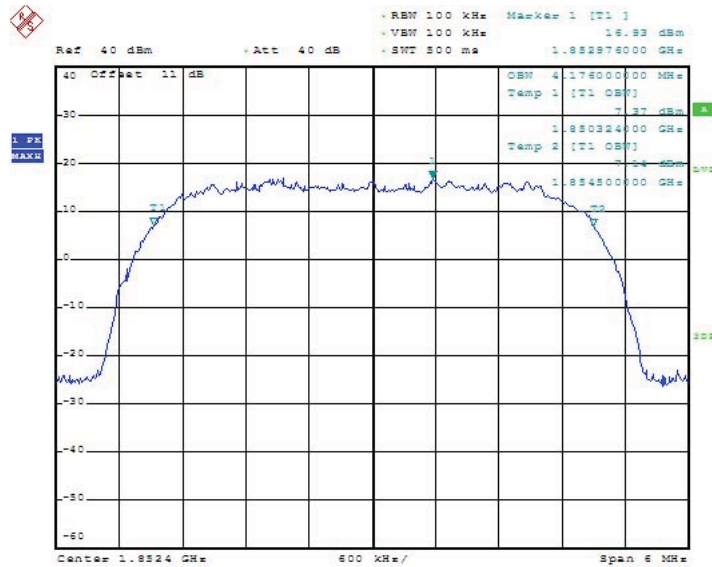
WCDMA BAND V HSUPA - Packet Switched (HSUPA Mode CH 4233)



Date: 27.FEB.2009 15:55:53

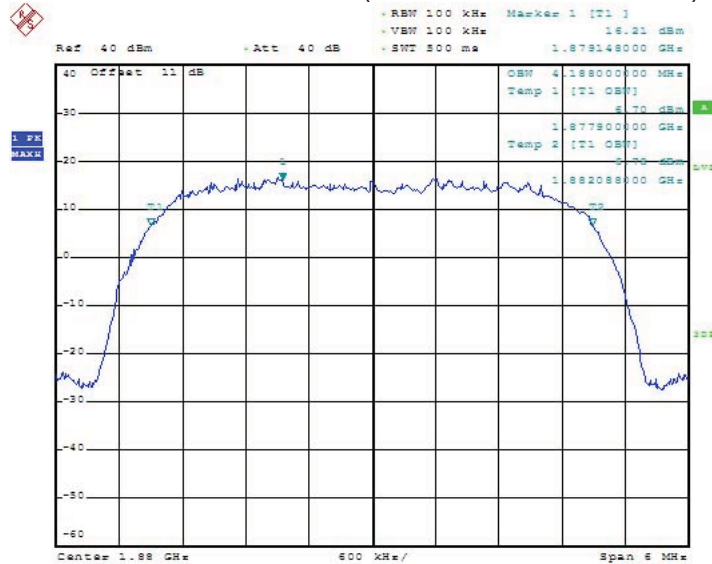
Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/27	Test Site	CTR
Test Condition	WCDMA BAND II		

WCDMA BAND II (WCDMA Mode CH 9262)



Date: 27.FEB.2009 15:13:01

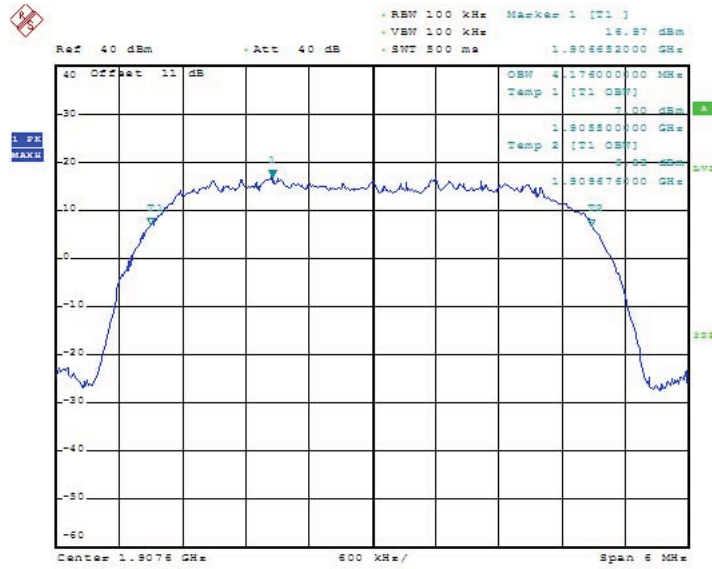
WCDMA BAND II (WCDMA Mode CH 9400)



Date: 27.FEB.2009 15:12:20

Product	Smart Handheld		
Test Mode	99% Occupied Bandwidth		
Date of Test	2009/02/27	Test Site	CTR
Test Condition	WCDMA BAND II		

WCDMA BAND II (WCDMA Mode CH 9538)



Date: 27.FEB.2009 15:10:45