



FCC Test Report

for

47 CFR Part 22H, 24E

Equipment : Pocket PC Phone
Trade Name : glofiish
Model No. : M800/M800+
FCC ID : SPUM800
Tx Frequency Range : GSM850 : 824.2~848.8 MHz
PCS1900 : 1850.2~1909.8 MHz
WCDMA Band V : 826.4~846.6 MHz
WCDMA Band II : 1852.4~1907.6 MHz
Max. ERP/EIRP Power : GGSM850(GSM) : 0.66 W
GSM850(EDGE) : 0.19 W
PCS1900(GSM) : 1.86 W
PCS1900(EDGE) : 0.62 W
WCDMA Band V : 0.07 W
WCDMA Band V(HSDPA) : 0.06 W
WCDMA Band II : 0.36 W
WCDMA Band II(HSDPA) : 0.31 W
Emission Designator : GSM : 300KGXW
EDGE : 300KG7W
WCDMA : 4M22F9W
Applicant : E-TEN Information System Co., Ltd.
9F., No. 256, Yangguang Street, Neihu Chiu, Taipei,
Taiwan114, R.O.C.

- The test result refers exclusively to the test presented test model / sample.
- Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.
- **Certificate or Test Report must not be used by the applicant to claim the product in this test report endorsement by NVLAP or any agency of U.S. government.**
- The data shown in this test report were carried out on Oct. 09, 2007 at **Sporton International Inc. LAB.**
- Report No.: FG761327-04A, Report Version: Rev. 01.

Jones Tsai
Manager

SPORTON International Inc.

6F, No.106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

SPORTON International Inc.

TEL : 886-2-2696-2468

FAX : 886-2-2696-2255

Report Version: Rev. 01



Table of Contents

History of this test report	ii
1. General Information.....	1
1.2 Applicant.....	1
1.3 Manufacturer	1
1.4 Basic Description of Equipment under Test.....	1
1.5 Feature of Equipment under Test	2
1.6 Report Date	3
2 Test Configuration of Equipment under Test.....	4
2.1 Test Manner	4
2.2 Test Mode	4
2.3 Connection Diagram of Test System	4
2.4 Ancillary Equipment List	5
3. General Information of Test Site	6
3.1 Test Voltage	6
3.2 Test Compliance	6
3.3 Frequency Range	6
3.4 Test Distance	6
4. Test Data and Test Result.....	7
4.1 List of Measurements and Examinations.....	7
4.2 RF Output Power.....	8
4.3 ERP / EIRP Measurement.....	11
4.4 Occupied Bandwidth and Band Edge Measurement	17
4.5 Conducted Emission.....	90
4.6 Field Strength of Spurious Radiation	127
4.7 Frequency Stability (Temperature Variation)	150
4.8 Frequency Stability (Voltage Variation)	154
5. List of Measurement Equipments	156
6. Uncertainty Evaluation	157
 Appendix A - External Photographs	
Appendix B - Internal Photographs	
Appendix C - Setup Photographs	



History of this test report

Report Issue Date: Oct. 09, 2007

Report No.	Description



1. General Information

1.2 Applicant

E-TEN Information System Co., Ltd.

9F., No. 256, Yangguang Street, Neihu Chiu, Taipei, Taiwan114, R.O.C.

1.3 Manufacturer

E-TEN Information System Co., Ltd.

9F., No. 256, Yangguang Street, Neihu Chiu, Taipei, Taiwan114, R.O.C.

1.4 Basic Description of Equipment under Test

Equipment		Pocket PC Phone
Trade Name		glofiish
Model Name		M800/M800+
FCC ID		SPUM800
AC Adapter	Brand Name	Phihong
	Model Name	PSC05R-050 PH
	Power Rating	I/P: 100-240Vac, 50-60Hz, 14-19VA, 0.2A; O/P: 5Vdc, 1A
	AC Power Cord Type	1.9 meter shielded cable with ferrite core
Battery	Brand Name	Welldone
	Model Name	E4ET011K1002
	Rating	3.7Vdc, 1530mAh
	Type	Li-ion
Earphone	Brand Name	Merry
	Model Name	DD0EN5EP004
	Signal line Type	1.6 meter non-shielded cable without ferrite core
USB Cable	Brand Name	Golden Bridge
	Model Name	As52-07030013
	Signal line Type	1 meter non-shielded cable without ferrite core

Remark: Above EUT's information was declared by manufacturer. Please refer to the specifications of manufacturer or User's Manual for more detailed features description.



1.5 Feature of Equipment under Test

DUT Type :	Pocket PC Phone
Trade Name :	glofiish
Model Name :	M800/M800+
FCC ID :	SPUM800
Tx Frequency :	GSM850 / WCDMA Band V : 824 ~ 849 MHz PCS1900 / WCDMA Band II : 1850 ~1910 MHz WLAN / Bluetooth : 2400 ~ 2483.5 MHz
Rx Frequency :	GSM850 / WCDMA Band V : 869 ~ 894 MHz PCS1900 / WCDMA Band II : 1930 ~ 1990 MHz WLAN / Bluetooth : 2400 ~ 2483.5 MHz
Maximum Output Power to Antenna :	GSM850 : 32.82 dBm (GSM) / 32.78 dBm (GPRS) / 27.50 dBm (EDGE) / PCS1900 : 29.61 dBm (GSM) / 29.58 dBm (GPRS) / 26.15 dBm (EDGE) / WCDMA Band V : 23.47 dBm(12.2kbps) / 23.53 dBm(64kbps) / 23.47 dBm(144kbps) / 23.48 dBm(384kbps) / 22.67 dBm (12.2kbps+HSDPA) WCDMA Band II : 22.38 dBm(12.2kbps) / 22.39 dBm(64kbps) / 22.41 dBm(144kbps) / 22.46 dBm(384kbps) / 21.53 dBm (12.2kbps+HSDPA) WLAN : 17.35 dBm (802.11b) / 21.20 dBm (802.11g) Bluetooth : 3.46 dBm (1Mbps) Bluetooth EDR : 3.47 dBm (2Mbps) / 3.89 dBm (3Mbps)
Maximum ERP/EIRP :	GSM850(GSM) : 0.66 W (28.17 dBm) GSM850(EDGE) : 0.19 W (22.85 dBm) PCS1900(GSM) : 1.86 W (32.70 dBm) PCS1900(EDGE) : 0.62 W (27.92 dBm) WCDMA Band V : 0.07 W (18.69 dBm) WCDMA Band V(HSDPA) : 0.06 W (18.03 dBm) WCDMA Band II : 0.36 W (25.52 dBm) WCDMA Band II(HSDPA) : 0.31 W (24.85 dBm)
Antenna Type :	Bluetooth : FPC Antenna WLAN : PIFA Antenna
Type of Antenna Connector	N/A
Power Rating (DC/AC , Voltage and Current of RF element or PA) :	GSM : 3.7V / 250mA WCDMA : 3.7V / 550mA
GPRS / EGPRS Multislot class :	10
Modulation Type :	GSM : GMSK EDGE : 8PSK WCDMA / HSDPA : QPSK WLAN : DSSS / OFDM Bluetooth(1Mbps): GFSK Bluetooth EDR (2Mbps): Pi/4-DQPSK Bluetooth EDR (3Mbps): 8-DPSK
Emission Designator :	GSM : 300KGXW EDGE : 300KG7W WCDMA : 4M22F9W
Device Power Class :	GSM850 : 4 PCS1900 : 1 WCDMA Band V : 2 WCDMA Band II : 3



1.6 Report Date

EUT Received : Sep. 05, 2007

Report Date : Oct. 09, 2007

2 Test Configuration of Equipment under Test

2.1 Test Manner

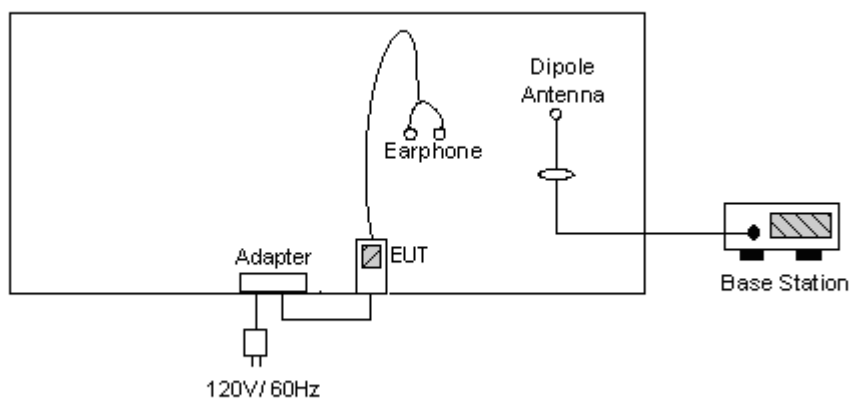
1. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range.
2. During all testings, EUT is in link mode with base station emulator at maximum power level.
3. Frequency range investigated: radiated emission 30 MHz to 9000 MHz for GSM850 and WCDMA Band V; 30MHz to 19000 MHz for PCS1900 and WCDMA Band II.

2.2 Test Mode

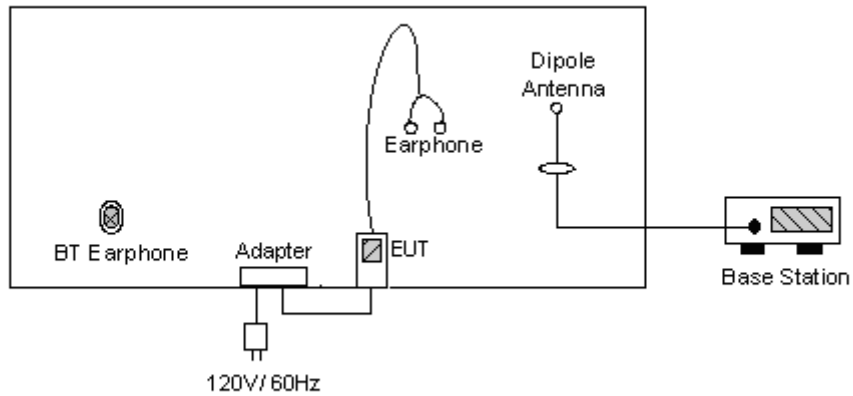
Application	GSM850	PCS1900	WCDMA Band V	WCDMA Band II
Radiated Emission	☒ Mode 1: GSM Link	☒ Mode 3: GSM Link	☒ Mode 5: WCDMA Link	☒ Mode 7: WCDMA Link
	☒ Mode 2: EDGE Link	☒ Mode 4: EDGE Link	☒ Mode 6: HSDPA Link	☒ Mode 8: HSDPA Link
	☒ Mode 9: GSM Link + BT Link			
Conducted Measurement	☒ Mode 1: GSM Link	☒ Mode 3: GSM Link	☒ Mode 5: WCDMA Link	☒ Mode 7: WCDMA Link
	☒ Mode 2: EDGE Link	☒ Mode 4: EDGE Link	☒ Mode 6: HSDPA Link	☒ Mode 8: HSDPA Link

2.3 Connection Diagram of Test System

<Mode 1~8>



<Mode 9>



2.4 Ancillary Equipment List

Item	Equipment	Trade Name	Model No.	FCC ID	Cable Cord / Power Code
1.	Base Station	R&S	CMU200	N/A	Unshielded, 1.8m
2.	BT Earphone	Engotech	ET-BH111	PQY471087	N/A



3. General Information of Test Site

Test Site Location : No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park,
Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.
TEL : 886-3-327-3456
FAX : 886-3-318-0055

Test Site No : 03CH06-HY

The chamber meets the characteristics of ANSI C63.4-2003. This site is on file with the FCC.

3.1 Test Voltage

AC 120V / 60Hz

3.2 Test Compliance

47 CFR Part 22H, 24E, Part 2

3.3 Frequency Range

- a. Radiation: from 30MHz to 9000MHz for GSM850 and WCDMA Band V.
- b. Radiation: from 30 MHz to 19000 MHz for PCS1900 and WCDMA Band II.

3.4 Test Distance

The test distance of radiated emission from antenna to EUT is 3 m.



4. Test Data and Test Result

4.1 List of Measurements and Examinations

FCC Rule	Description of Test	Result	Section
§2.1046	RF Output Power	Passed	4.2
§ 22.913 §24.232	ERP / EIRP	Passed	4.3
§2.1049, § 22.917, § 24.238(b)	Occupied Bandwidth & Band Edge Measurement	Passed	4.4
§2.1051	Conducted Emission	Passed	4.5
§2.1053	Field Strength of Spurious Radiation	Passed	4.6
§2.1055, § 22.355, §24.235	Frequency Stability vs. Temperature	Passed	4.7
§2.1055, §22.355, §24.235	Frequency Stability vs. Voltage	Passed	4.8

4.2 RF Output Power

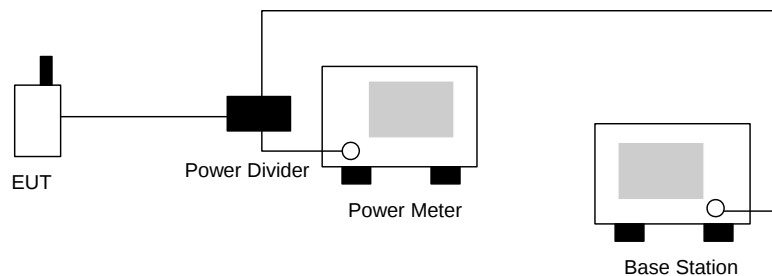
4.2.1 Measurement Instruments :

As described in chapter 5 of this test report.

4.2.2 Test Procedure :

1. The transmitter output was connected to power meter and base station through power divider.
2. Set EUT maximum power through base station.
3. Select lowest, middle, and highest channels for each band.

4.2.3 Test Setup Layout :



**4.2.4 Test Result :**

Bands	Channel	Frequency (MHz)	Conducted Power (dBm)	Conducted Power (Watts)
GSM850 (GSM)	128	824.2 (Low)	32.79	1.901
	189	836.4 (Mid)	32.82	1.914
	251	848.8 (High)	32.74	1.879
GSM850 (EDGE)	128	824.2 (Low)	27.50	0.562
	189	836.4 (Mid)	27.41	0.551
	251	848.8 (High)	27.28	0.535
PCS1900 (GSM)	512	1850.2 (Low)	29.54	0.899
	661	1880.0 (Mid)	29.42	0.875
	810	1909.8 (High)	29.61	0.914
PCS1900 (EDGE)	512	1850.2 (Low)	26.15	0.412
	661	1880.0 (Mid)	26.03	0.401
	810	1909.8 (High)	25.97	0.395
WCDMA Band V (12.2k bps)	4132	826.4 (Low)	23.47	0.22
	4182	836.4 (Mid)	23.38	0.22
	4233	846.6 (High)	23.43	0.22
WCDMA Band V (64k bps)	4132	826.4 (Low)	23.46	0.22
	4182	836.4 (Mid)	23.37	0.22
	4233	846.6 (High)	23.53	0.23
WCDMA Band V (144k bps)	4132	826.4 (Low)	23.47	0.22
	4182	836.4 (Mid)	23.40	0.22
	4233	846.6 (High)	23.42	0.22
WCDMA Band V (384k bps)	4132	826.4 (Low)	23.48	0.22
	4182	836.4 (Mid)	23.39	0.22
	4233	846.6 (High)	23.45	0.22
WCDMA Band V (AMR)	4132	826.4 (Low)	21.59	0.14
	4182	836.4 (Mid)	21.89	0.15
	4233	846.6 (High)	20.29	0.11
WCDMA Band V (HSDPA)	4132	826.4 (Low)	22.67	0.18
	4182	836.4 (Mid)	22.54	0.18
	4233	846.6 (High)	22.58	0.18



Bands	Channel	Frequency (MHz)	Conducted Power (dBm)	Conducted Power (Watts)
WCDMA Band II (12.2k bps)	9262	1852.4 (Low)	22.37	0.17
	9400	1880.0 (Mid)	22.38	0.17
	9538	1907.6 (High)	22.31	0.17
WCDMA Band II (64k bps)	9262	1852.4 (Low)	22.37	0.17
	9400	1880.0 (Mid)	22.39	0.17
	9538	1907.6 (High)	22.30	0.17
WCDMA Band II (144k bps)	9262	1852.4 (Low)	22.38	0.17
	9400	1880.0 (Mid)	22.41	0.17
	9538	1907.6 (High)	22.31	0.17
WCDMA Band II (384k bps)	9262	1852.4 (Low)	22.39	0.17
	9400	1880.0 (Mid)	22.42	0.17
	9538	1907.6 (High)	22.46	0.18
WCDMA Band II (AMR)	9262	1852.4 (Low)	22.31	0.17
	9400	1880.0 (Mid)	22.11	0.16
	9538	1907.6 (High)	21.81	0.15
WCDMA Band II (HSDPA)	9262	1852.4 (Low)	21.51	0.14
	9400	1880.0 (Mid)	21.53	0.14
	9538	1907.6 (High)	21.43	0.14



4.3 ERP / EIRP Measurement

Equivalent isotropic radiated power measurements by substitution method according to ANSI/TIA/EIA-603-C.

4.3.1 Measurement Instruments

As described in chapter 5 of this test report.

4.3.2 Test Procedure

1. The EUT was placed on a table with 1.0 meter height in an fully anechoic chamber.
2. The EUT was set 1.2 meters from the receiving antenna which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiated power.
4. The height of the receiving antenna is also kept at 1.0M height.
5. Taking the record of maximum ERP/EIRP.
6. A dipole antenna was substituted in place of the EUT and was driven by a signal generator.
7. The conducted power at the terminal of the dipole antenna is measured.
8. Repeat step 3 to step 5 to get the maximum ERP/EIRP of the substitution antenna.
9. $ERP/EIRP = P_s + E_t - E_s + G_s = P_s + R_t - R_s + G_s$

P_s (dBm) : Input power to substitution antenna.

G_s (dBi or dBd) : Substitution antenna Gain.

$E_t = R_t + AF$

$E_s = R_s + AF$

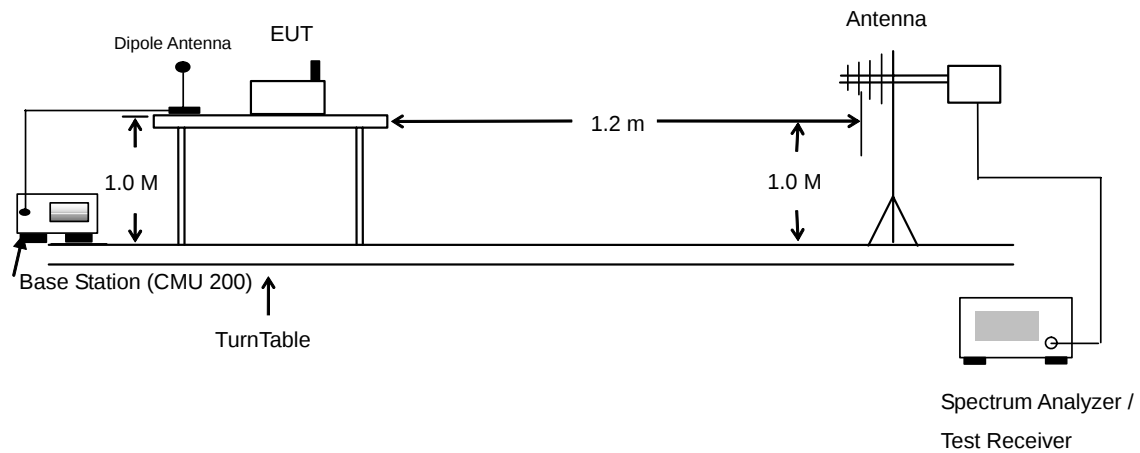
AF (dB/m) : Receive antenna factor

R_t : The highest received signal in Spectrum Analyzer for EUT.

R_s : The highest received signal in spectrum analyzer for substitution antenna.



4.3.3 Test Setup Layout of ERP/EIRP



**4.3.4 Test Result**

GSM850 (GSM) Radiated Power ERP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	ERP (W)
824.20	-32.81	-48.12	0.00	-1.08	14.23	0.03
836.40	-31.31	-48.28	0.00	-0.93	16.04	0.04
848.80	-29.57	-48.35	0.00	-0.76	18.02	0.06
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	ERP (W)
824.20	-23.08	-47.97	0.00	-1.08	23.81	0.24
836.40	-21.19	-48.01	0.00	-0.93	25.89	0.39
848.80	-19.12	-48.05	0.00	-0.76	28.17	0.66

GSM850 (EDGE) Radiated Power ERP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	ERP (W)
824.20	-38.04	-48.12	0.00	-1.08	9.00	0.01
836.40	-36.72	-48.28	0.00	-0.93	10.63	0.01
848.80	-35.05	-48.35	0.00	-0.76	12.54	0.02
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	ERP (W)
824.20	-27.88	-47.97	0.00	-1.08	19.01	0.08
836.40	-26.52	-48.01	0.00	-0.93	20.56	0.11
848.80	-24.44	-48.05	0.00	-0.76	22.85	0.19



PCS1900 (GSM) Radiated Power EIRP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1850.20	-22.22	-51.88	0.00	1.96	31.62	1.45
1880.00	-23.48	-52.99	0.00	2.00	31.51	1.42
1909.80	-24.47	-54.28	0.00	1.98	31.79	1.51
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1850.20	-22.02	-52.13	0.00	1.96	32.07	1.61
1880.00	-22.89	-53.17	0.00	2.00	32.28	1.69
1909.80	-23.41	-54.13	0.00	1.98	32.70	1.86

PCS1900 (EDGE) Radiated Power EIRP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1850.20	-26.53	-51.88	0.00	1.96	27.31	0.54
1880.00	-27.74	-52.99	0.00	2.00	27.25	0.53
1909.80	-28.38	-54.28	0.00	1.98	27.88	0.61
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1850.20	-26.37	-52.13	0.00	1.96	27.72	0.59
1880.00	-27.25	-53.17	0.00	2.00	27.92	0.62
1909.80	-28.23	-54.13	0.00	1.98	27.88	0.61



WCDMA Band V Radiated Power ERP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	ERP (W)
824.20	-40.63	-48.12	0.00	-1.08	6.41	0.00
836.40	-38.91	-48.28	0.00	-0.93	8.44	0.01
848.80	-39.90	-48.35	0.00	-0.76	7.69	0.01
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	ERP (W)
824.20	-30.53	-47.97	0.00	-1.08	16.36	0.04
836.40	-28.39	-48.01	0.00	-0.93	18.69	0.07
848.80	-29.03	-48.05	0.00	-0.76	18.26	0.07

WCDMA Band V (HSDPA) Radiated Power ERP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	ERP (W)
824.20	-40.89	-48.12	0.00	-1.08	6.15	0.00
836.40	-39.34	-48.28	0.00	-0.93	8.01	0.01
848.80	-40.49	-48.35	0.00	-0.76	7.10	0.01
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	ERP (W)
824.20	-31.13	-47.97	0.00	-1.08	15.76	0.04
836.40	-29.05	-48.01	0.00	-0.93	18.03	0.06
848.80	-29.63	-48.05	0.00	-0.76	17.66	0.06



WCDMA Band II Radiated Power EIRP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1850.20	-29.56	-51.88	0.00	1.96	24.28	0.27
1880.00	-30.27	-52.99	0.00	2.00	24.72	0.30
1909.80	-32.70	-54.28	0.00	1.98	23.56	0.23
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1850.20	-29.12	-52.13	0.00	1.96	24.97	0.31
1880.00	-29.65	-53.17	0.00	2.00	25.52	0.36
1909.80	-31.73	-54.13	0.00	1.98	24.38	0.27

WCDMA Band II (HSDPA) Radiated Power EIRP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1850.20	-30.17	-51.88	0.00	1.96	23.67	0.23
1880.00	-30.98	-52.99	0.00	2.00	24.01	0.25
1909.80	-33.35	-54.28	0.00	1.98	22.91	0.20
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1850.20	-29.88	-52.13	0.00	1.96	24.21	0.26
1880.00	-30.32	-53.17	0.00	2.00	24.85	0.31
1909.80	-32.33	-54.13	0.00	1.98	23.78	0.24

4.4 Occupied Bandwidth and Band Edge Measurement

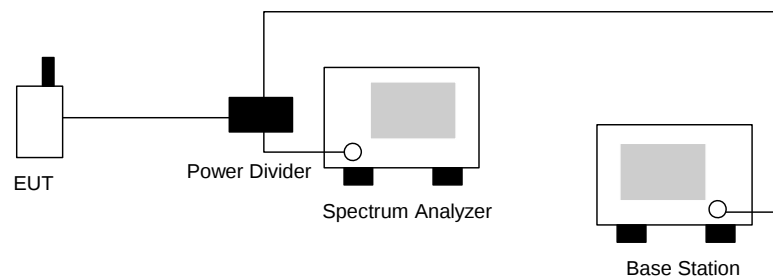
4.4.1 Measurement Instruments

As described in chapter 5 of this test report.

4.4.2 Test Procedure

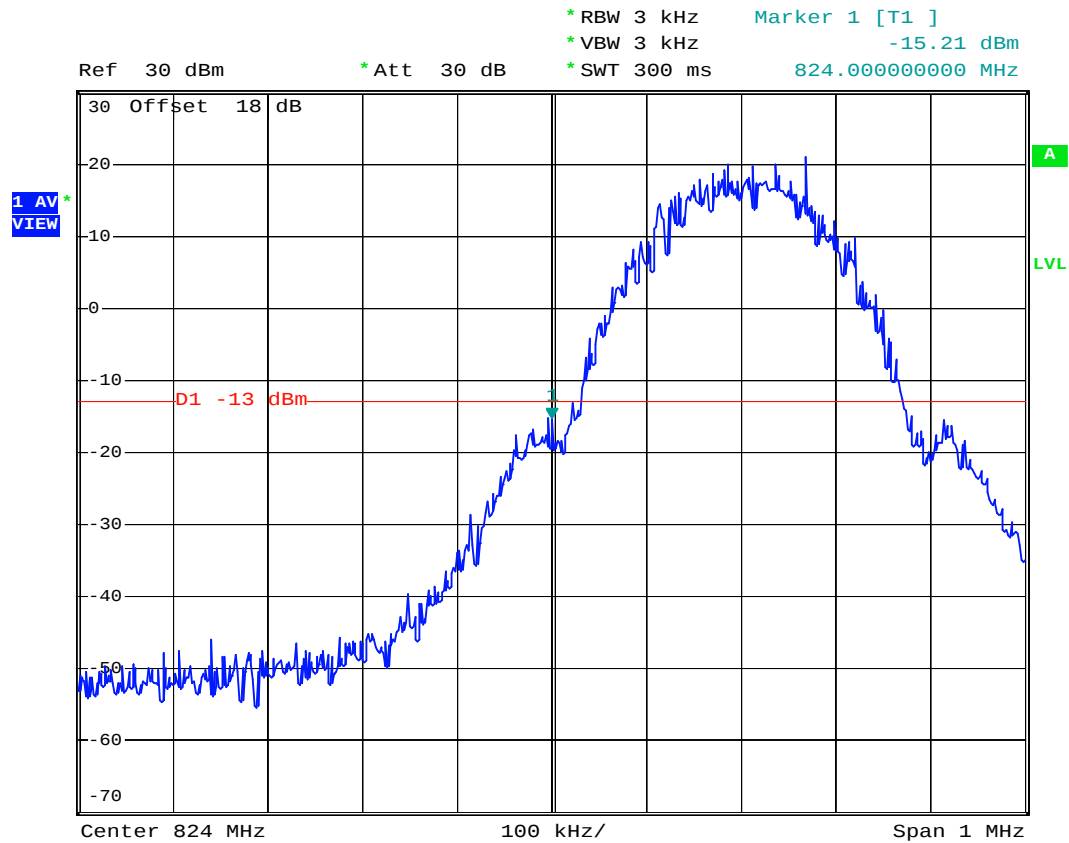
1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The 99% occupied bandwidth of middle channel for the highest and lowest RF powers were measured.
3. The bandedge of low and high channels for the highest RF powers within the transmitting frequency band were measured. Setting RBW as roughly BW/100.

4.4.3 Test Setup Layout

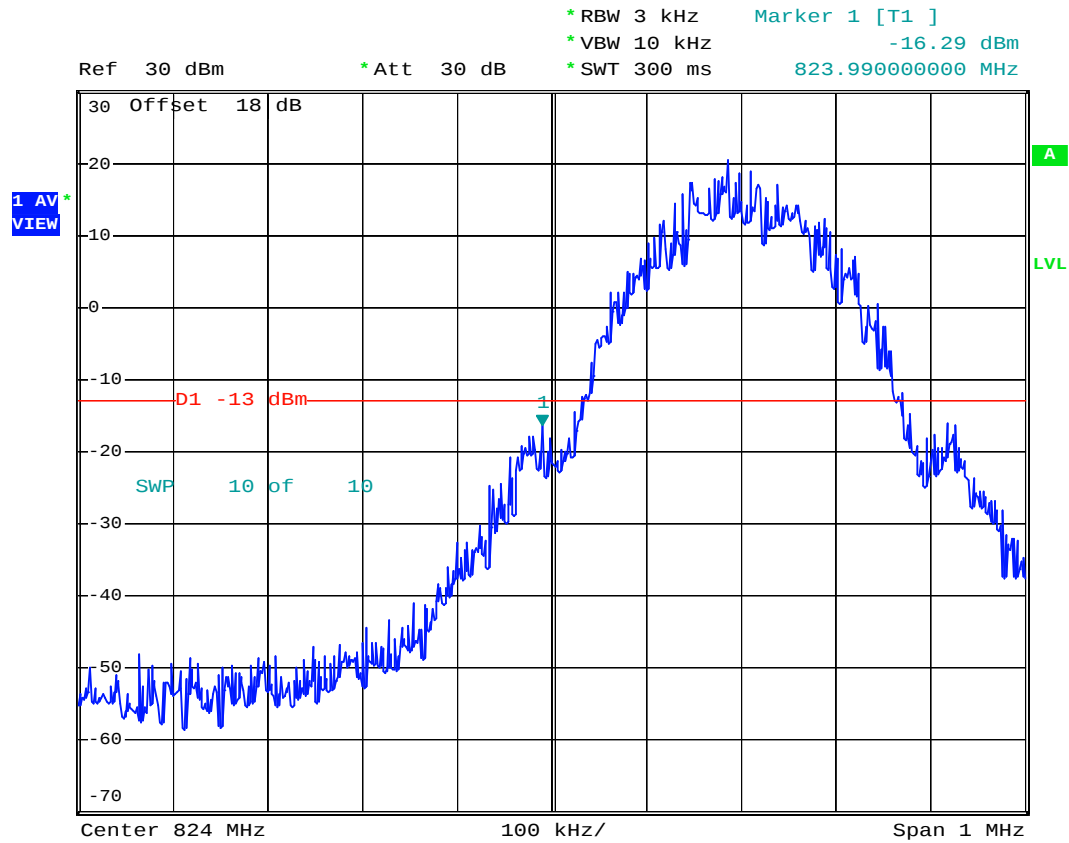


**4.4.4 Test Result**

- Mode 1
- Test Mode : GSM850 (GSM) CH128 Lower Band Edge
- Power State : High



Date: 3.JUL.2007 22:56:57



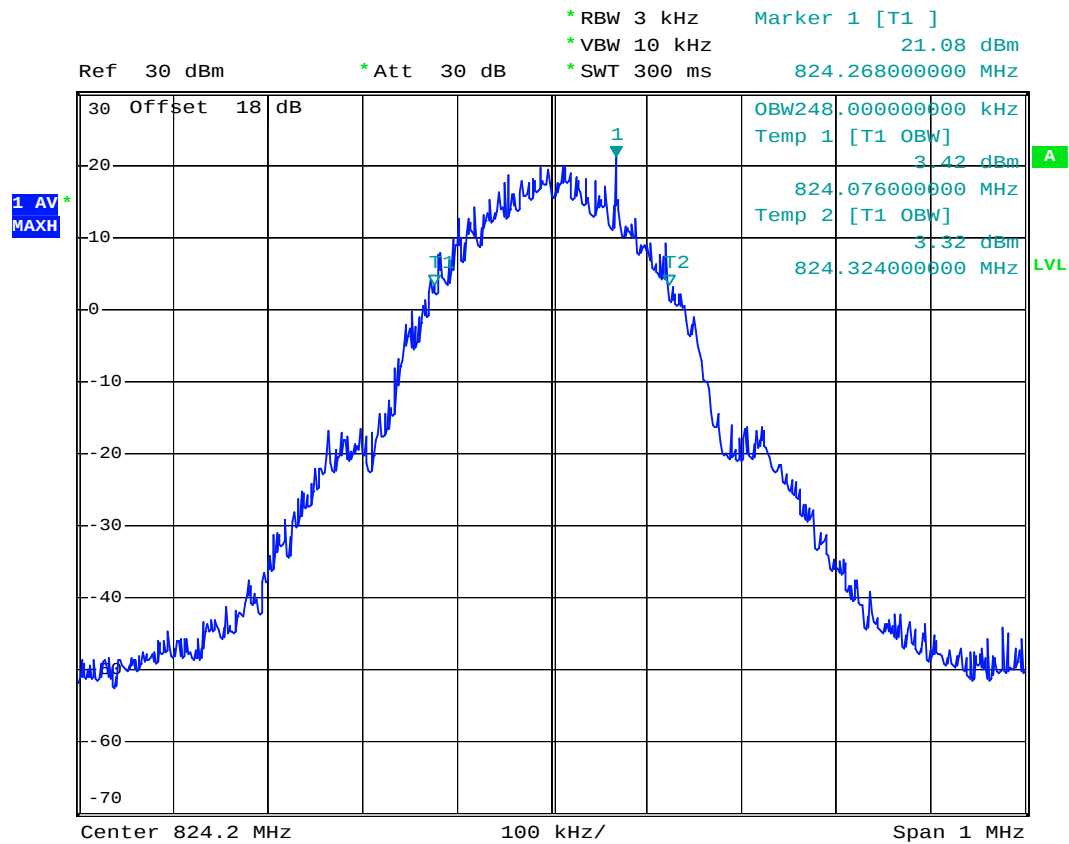
Date: 3.JUL.2007 22:58:40



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : GSM850 (GSM) CH128 99% Occupied Bandwidth
- Power State : High



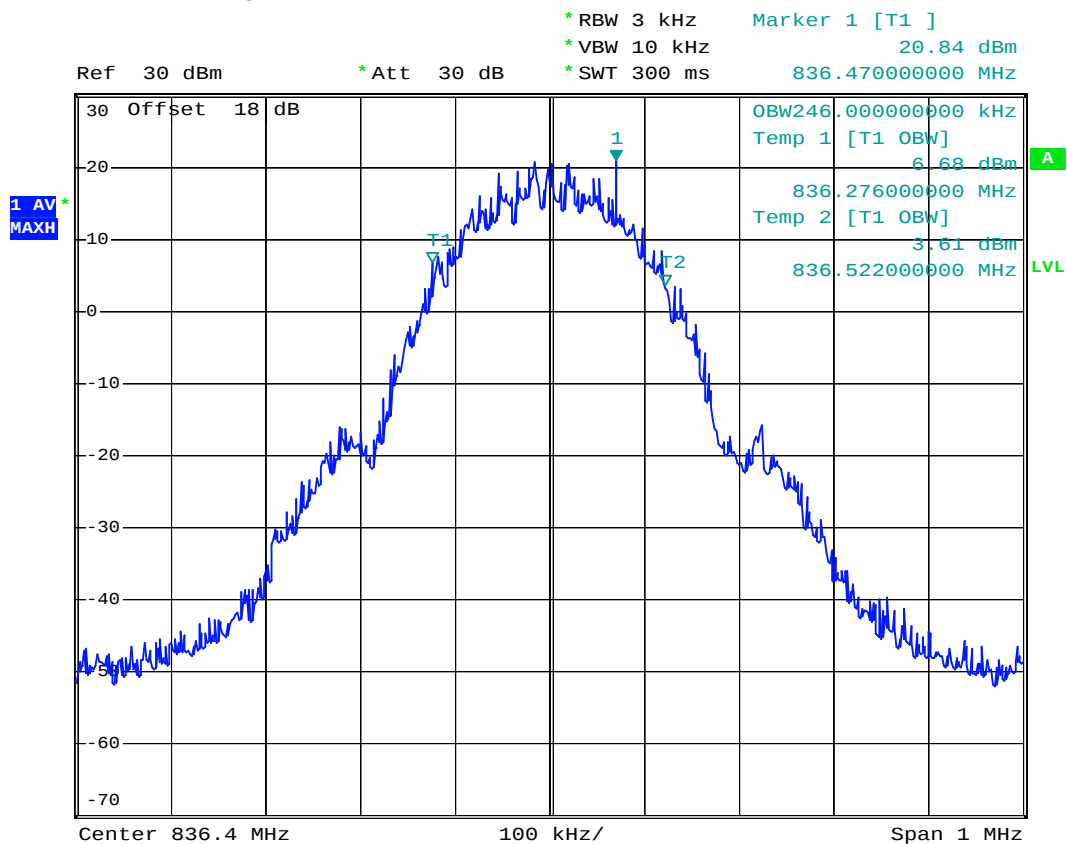
Date: 4.JUL.2007 01:18:37



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : GSM850 (GSM) CH189 99% Occupied Bandwidth
- Power State : High



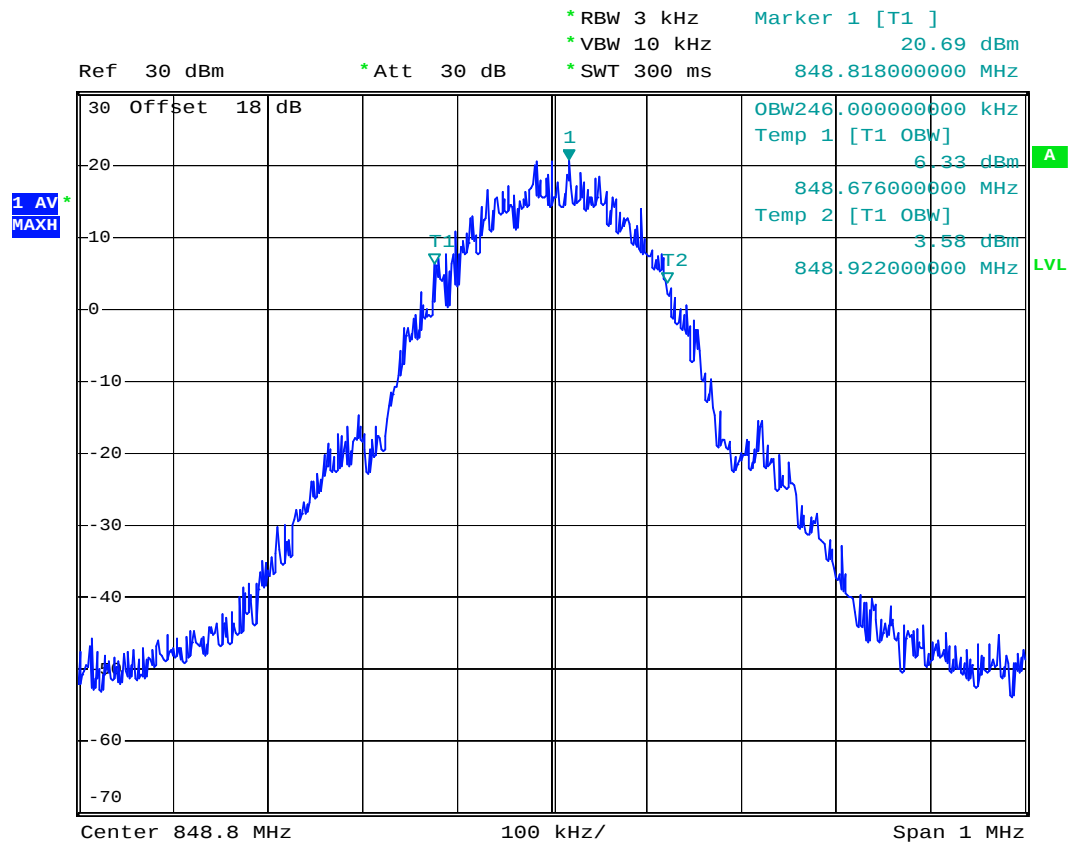
Date: 4.JUL.2007 01:19:12



FCC TEST REPORT

Report No. : FG761327-04A

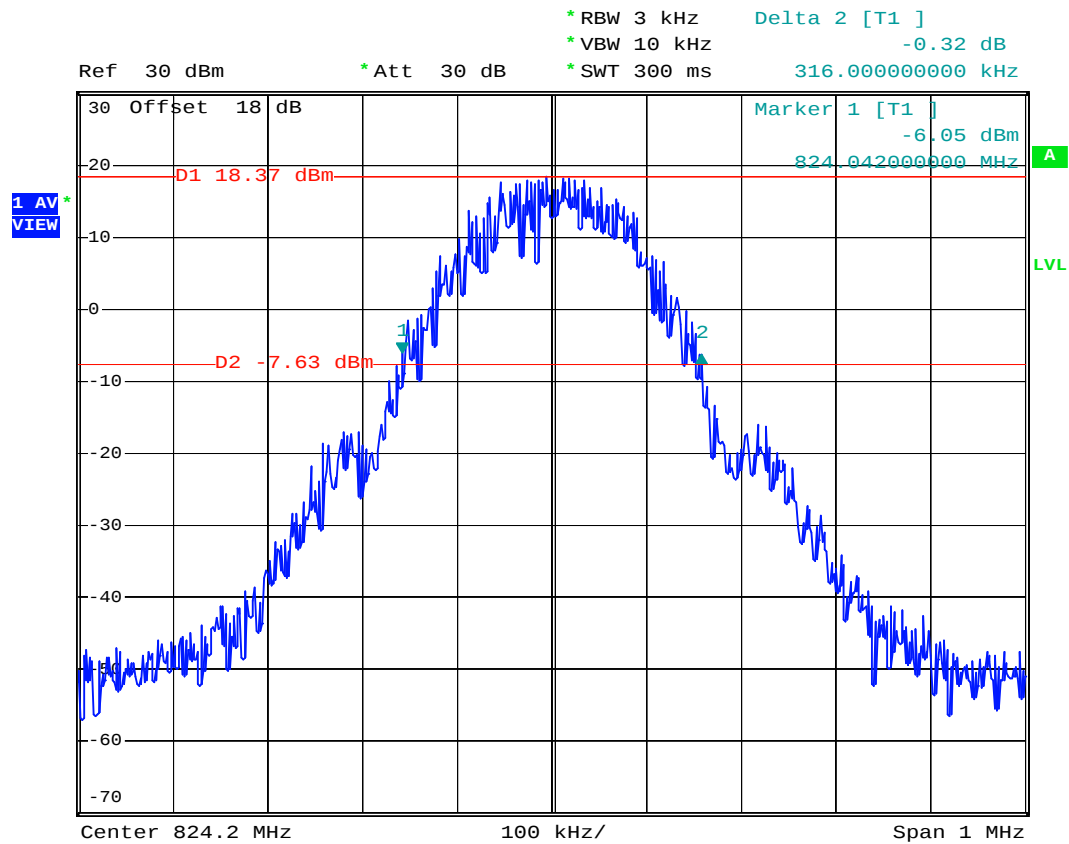
- Test Mode : GSM850 (GSM) CH 251 99% Occupied Bandwidth
- Power State : High



Date: 4.JUL.2007 01:19:45



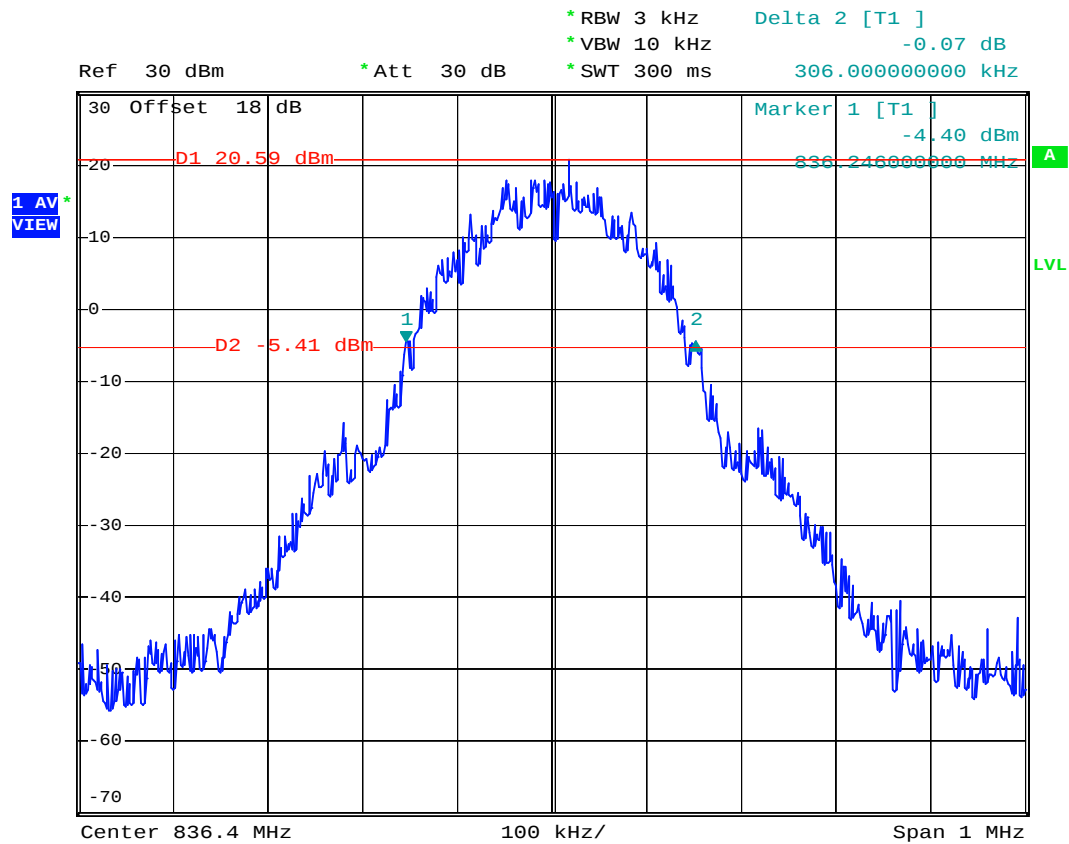
- Test Mode : GSM850 (GSM) CH128 26dB Bandwidth
- Power State : High



Date: 3.JUL.2007 23:07:45



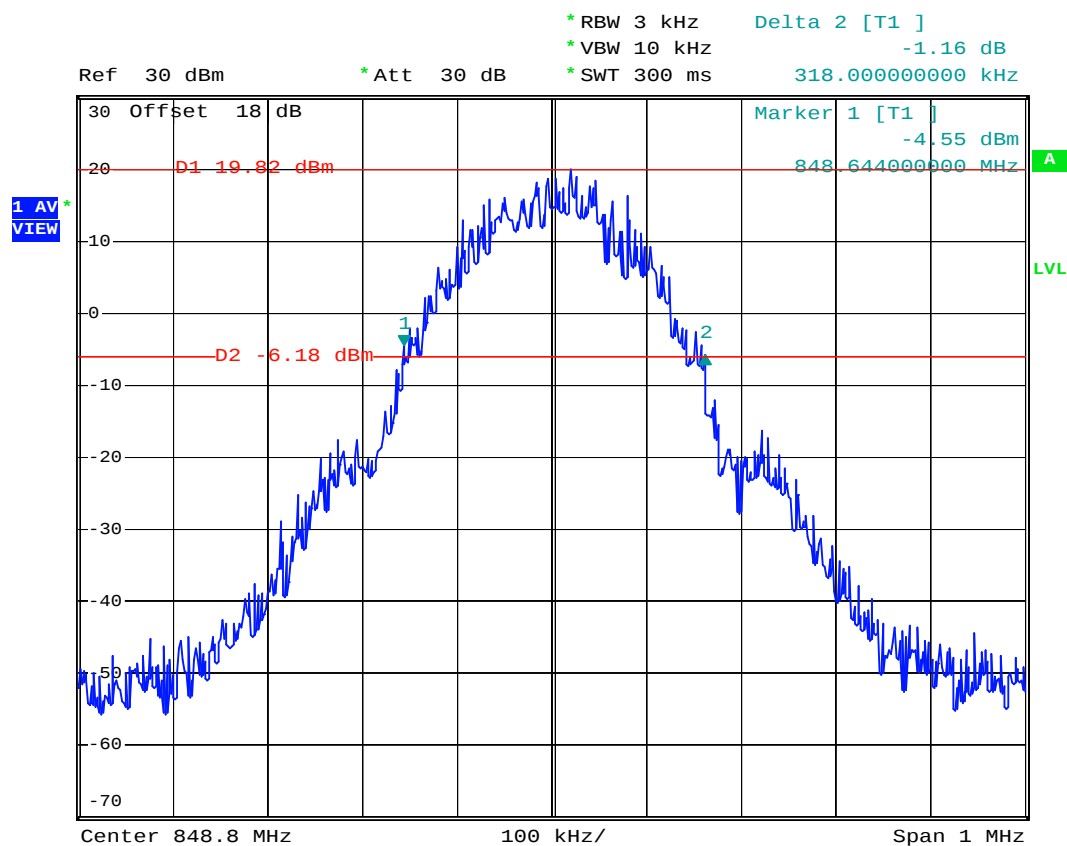
- Test Mode : GSM850 (GSM) CH189 26dB Bandwidth
- Power State : High



Date: 3.JUL.2007 23:08:43



- Test Mode : GSM850 (GSM) CH 251 26dB Bandwidth
- Power State : High



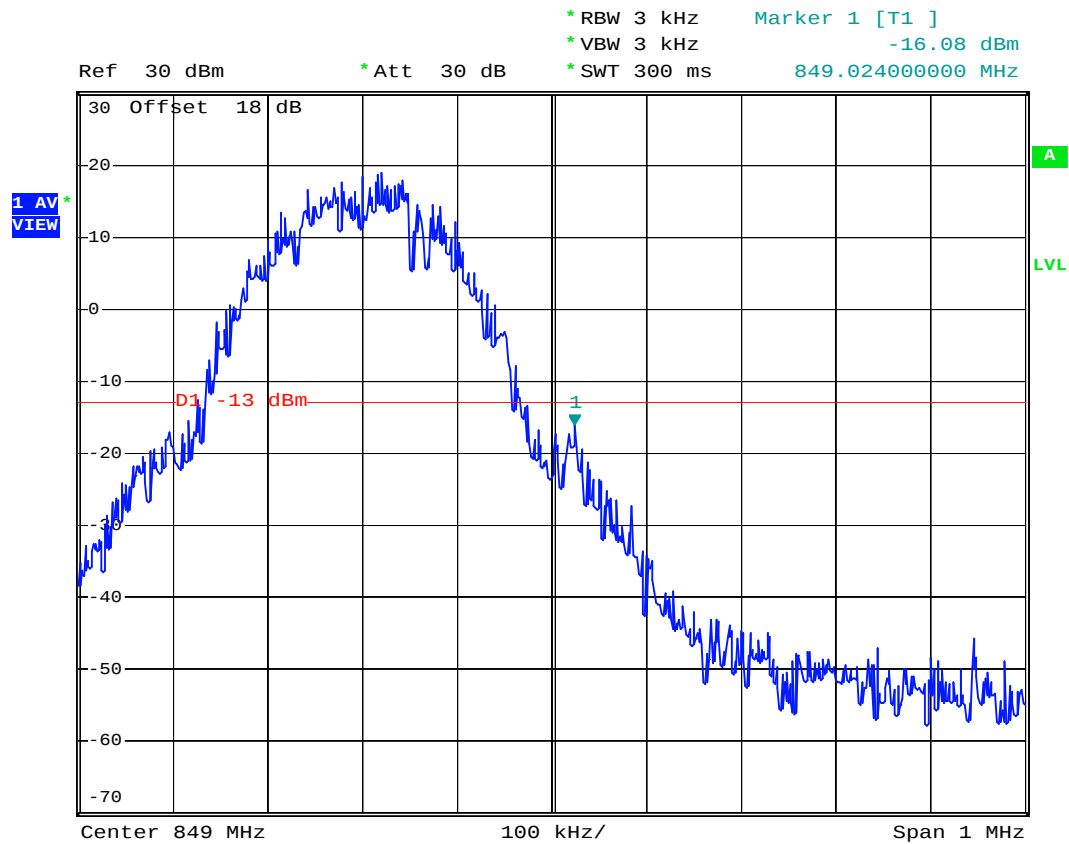
Date: 3.JUL.2007 23:09:31



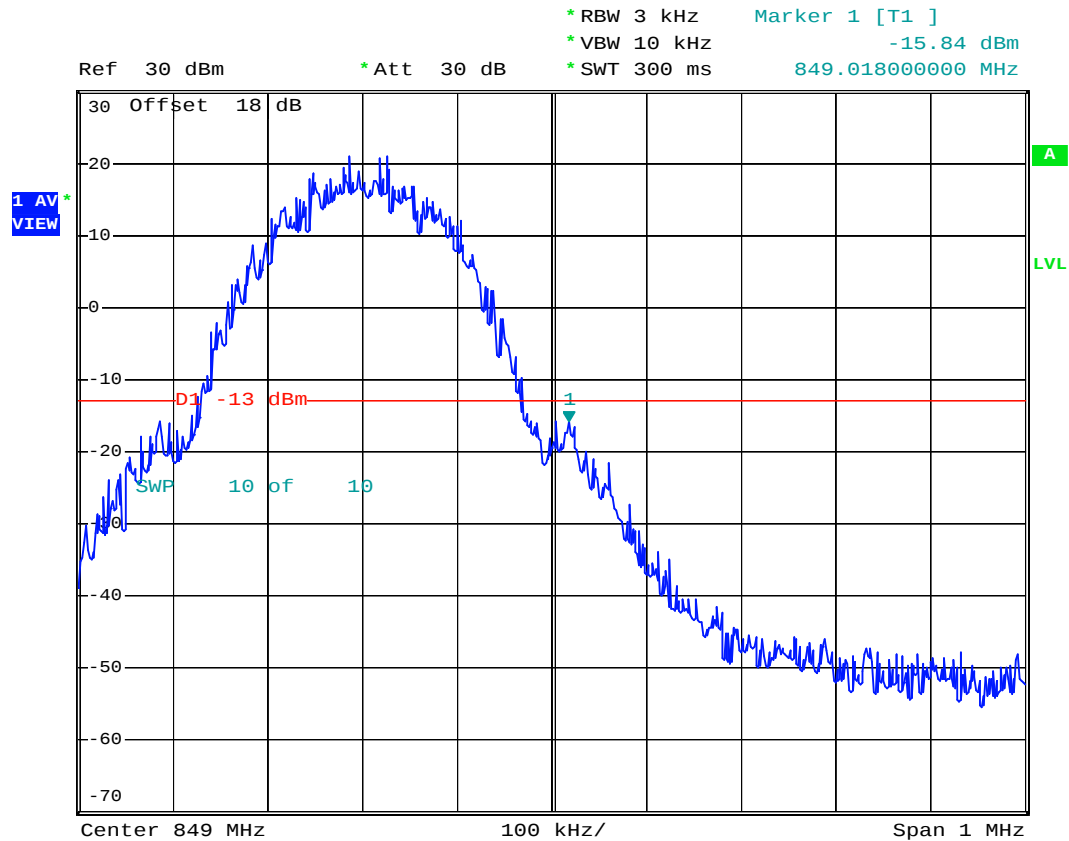
FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : GSM850 (GSM) CH251 Higher Band Edge
- Power State : High



Date: 3.JUL.2007 23:00:03



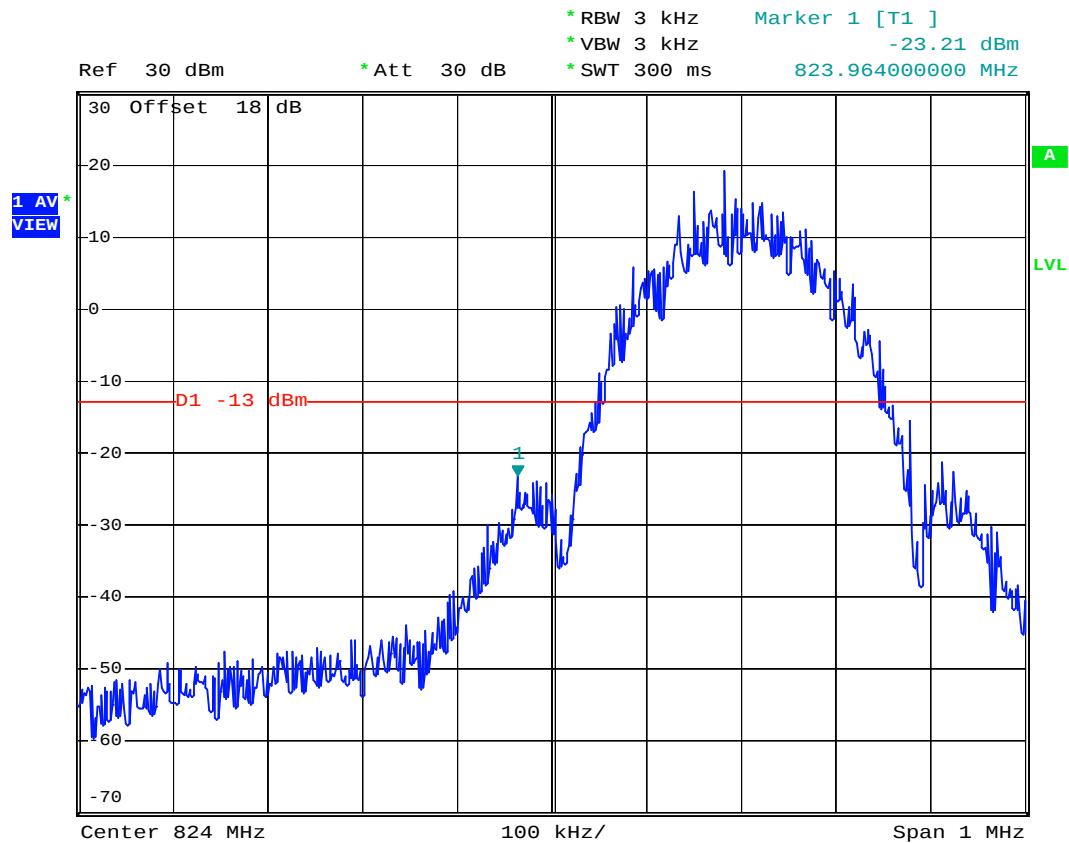
Date: 3.JUL.2007 22:59:22



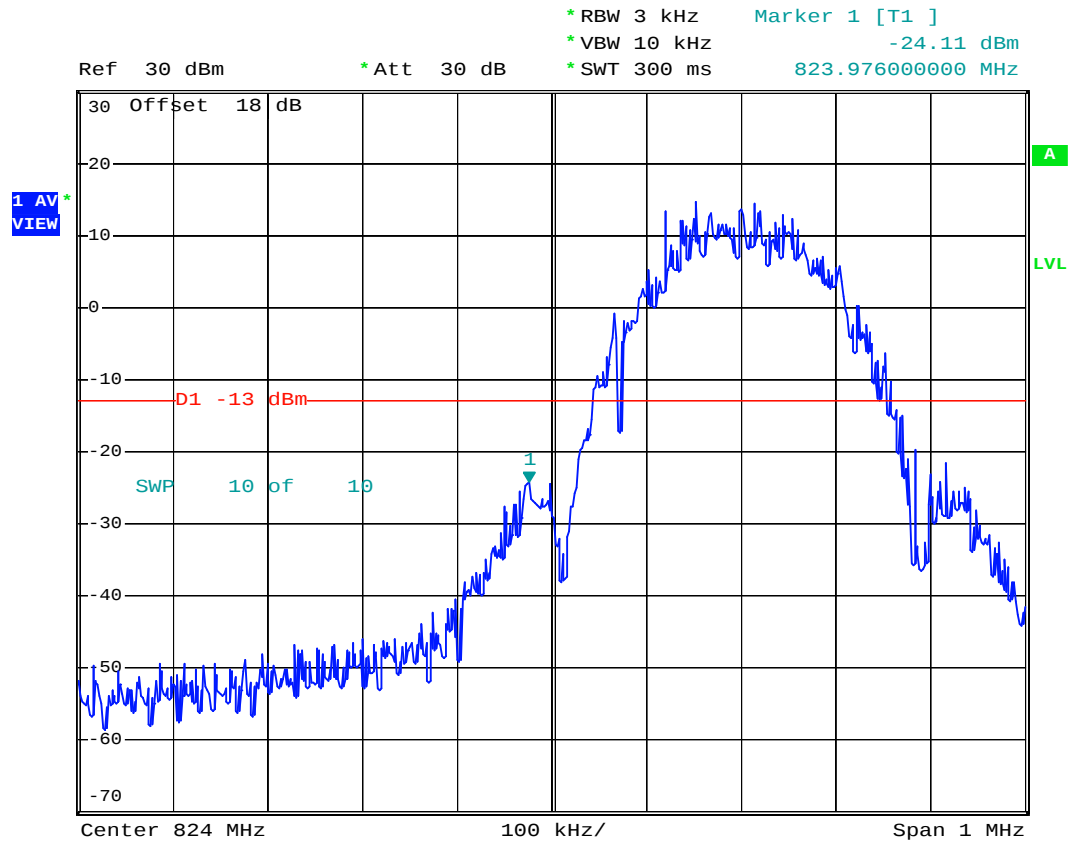
FCC TEST REPORT

Report No. : FG761327-04A

- Mode 2
- Test Mode : GSM850 (EDGE) CH128 Lower Band Edge
- Power State : High



Date: 4.JUL.2007 01:46:38



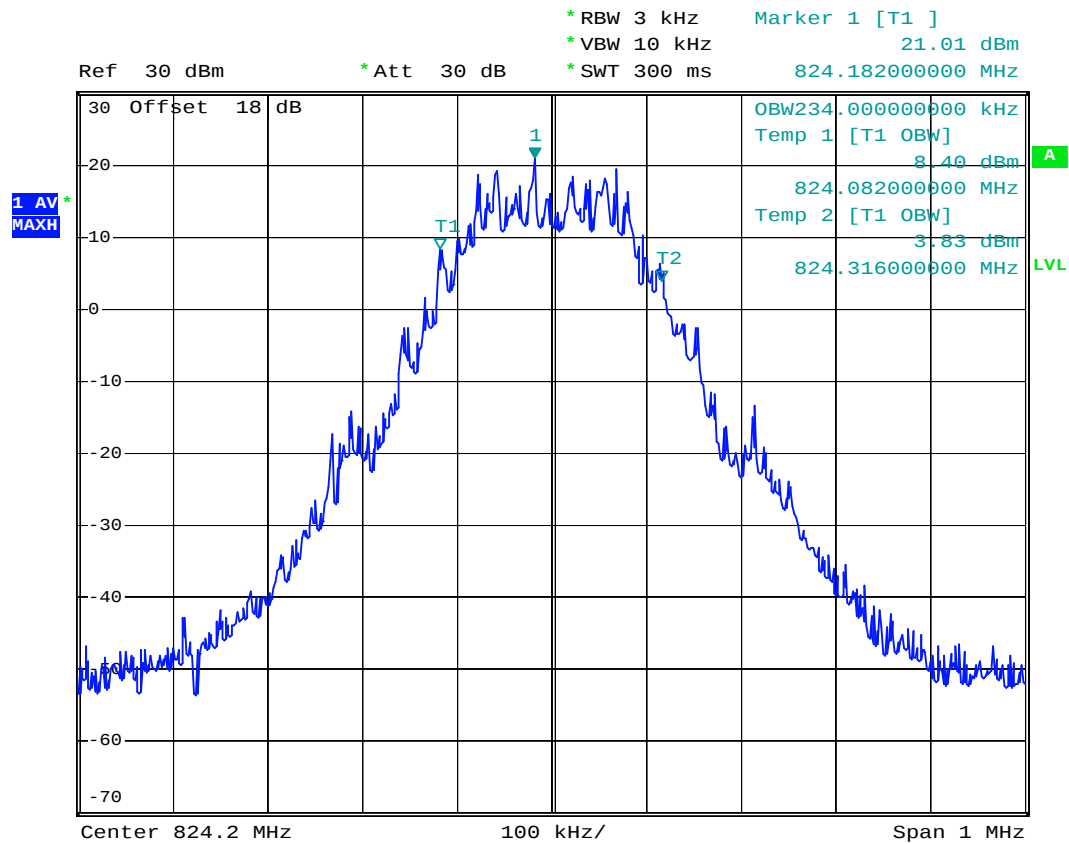
Date: 4.JUL.2007 01:57:02



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : GSM850 (EDGE) CH128 99% Occupied Bandwidth
- Power State : High



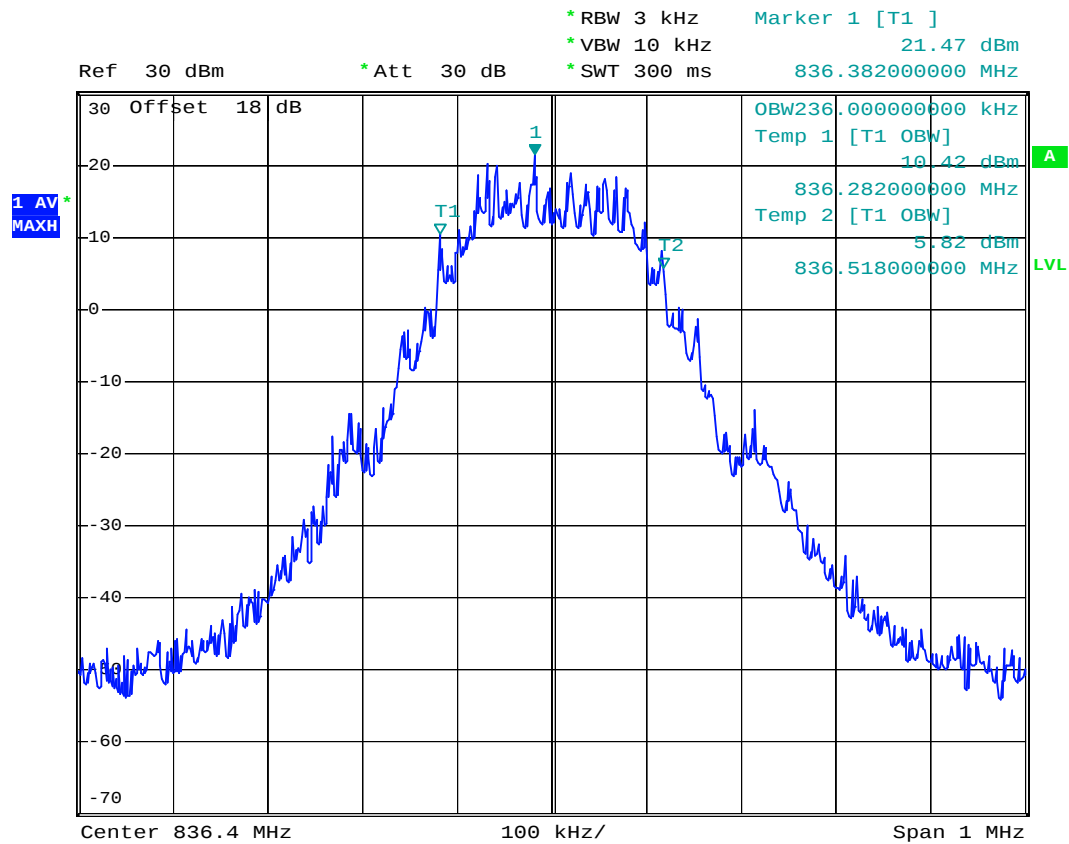
Date: 4.JUL.2007 02:15:15



FCC TEST REPORT

Report No. : FG761327-04A

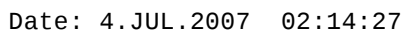
- Test Mode : GSM850 (EDGE) CH189 99% Occupied Bandwidth
- Power State : High



Date: 4.JUL.2007 02:14:54

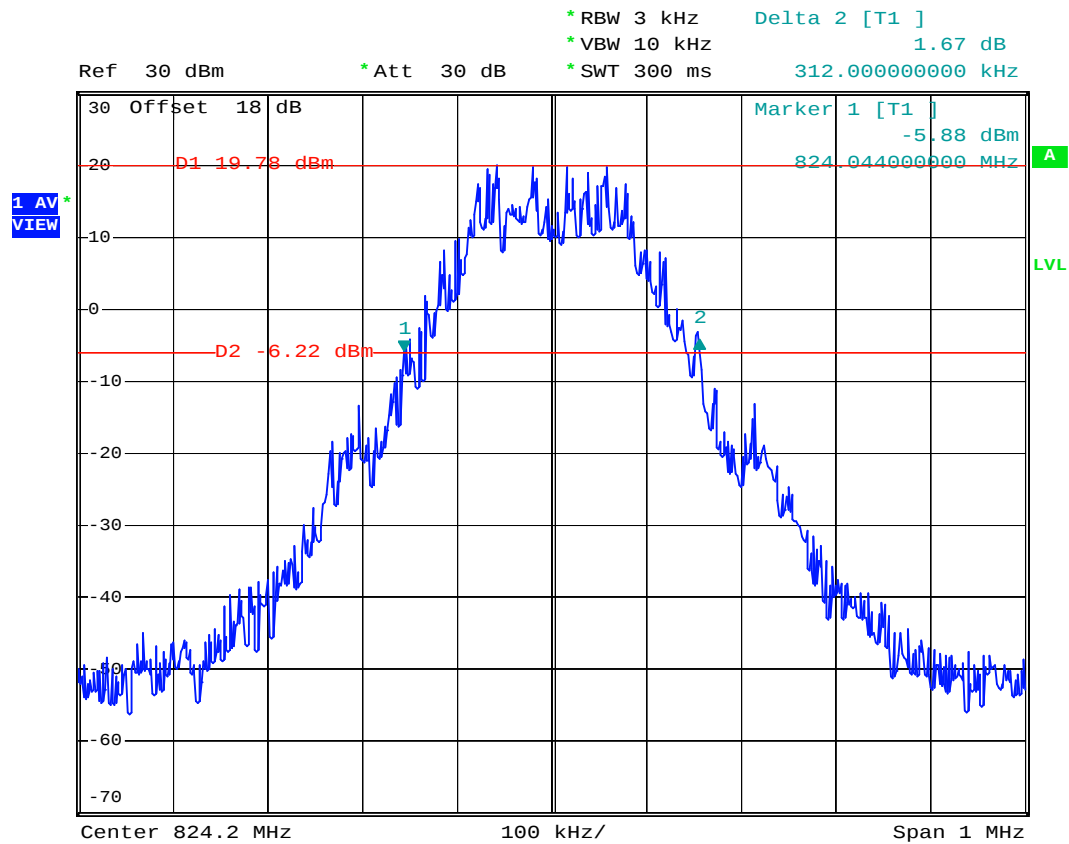


- Test Mode : GSM850 (EDGE) CH 251 99% Occupied Bandwidth
- Power State : High





- Test Mode : GSM850 (EDGE) CH128 26dB Bandwidth
- Power State : High



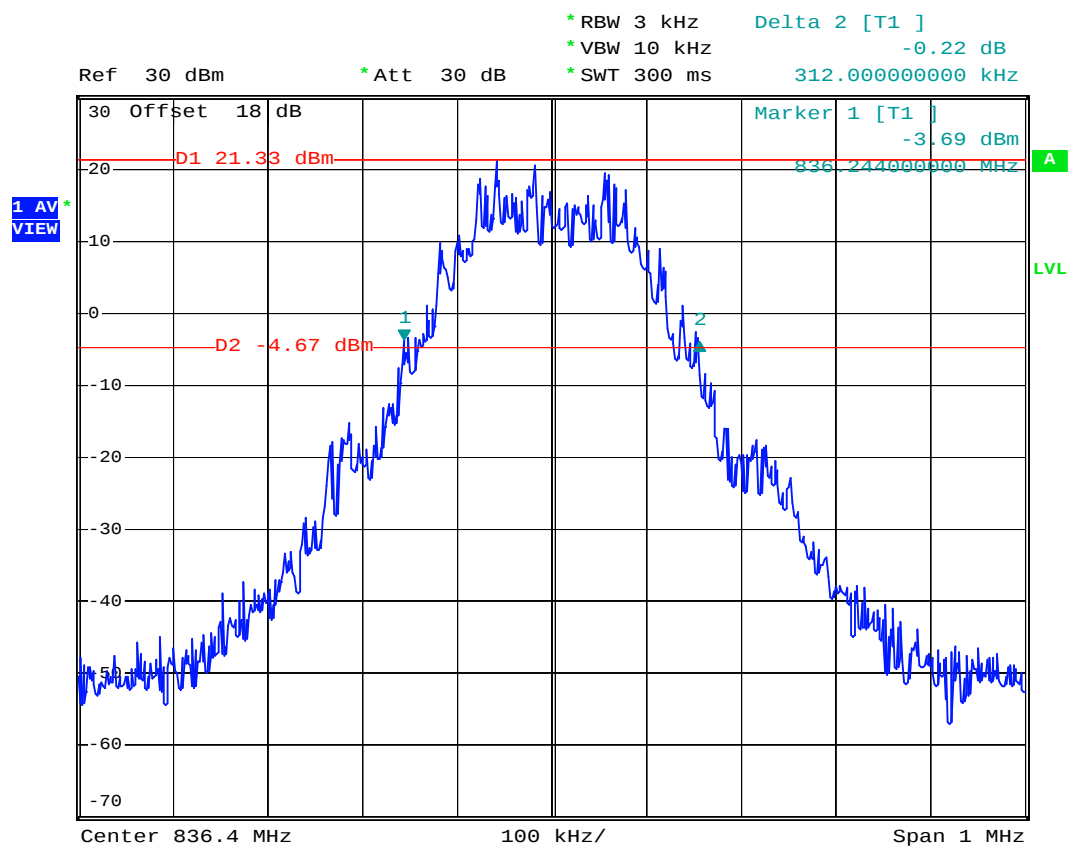
Date: 4.JUL.2007 02:05:35



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : GSM850 (EDGE) CH189 26dB Bandwidth
- Power State : High



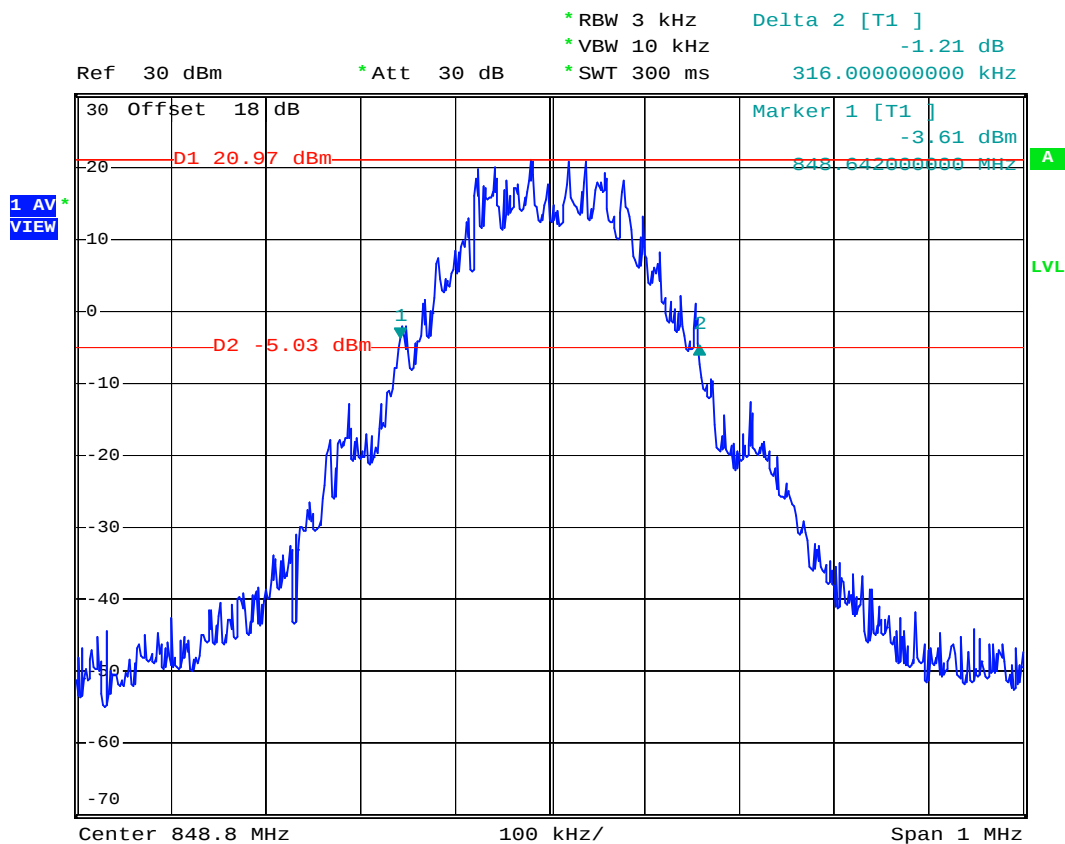
Date: 4.JUL.2007 02:04:06



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : GSM850 (EDGE) CH 251 26dB Bandwidth
- Power State : High



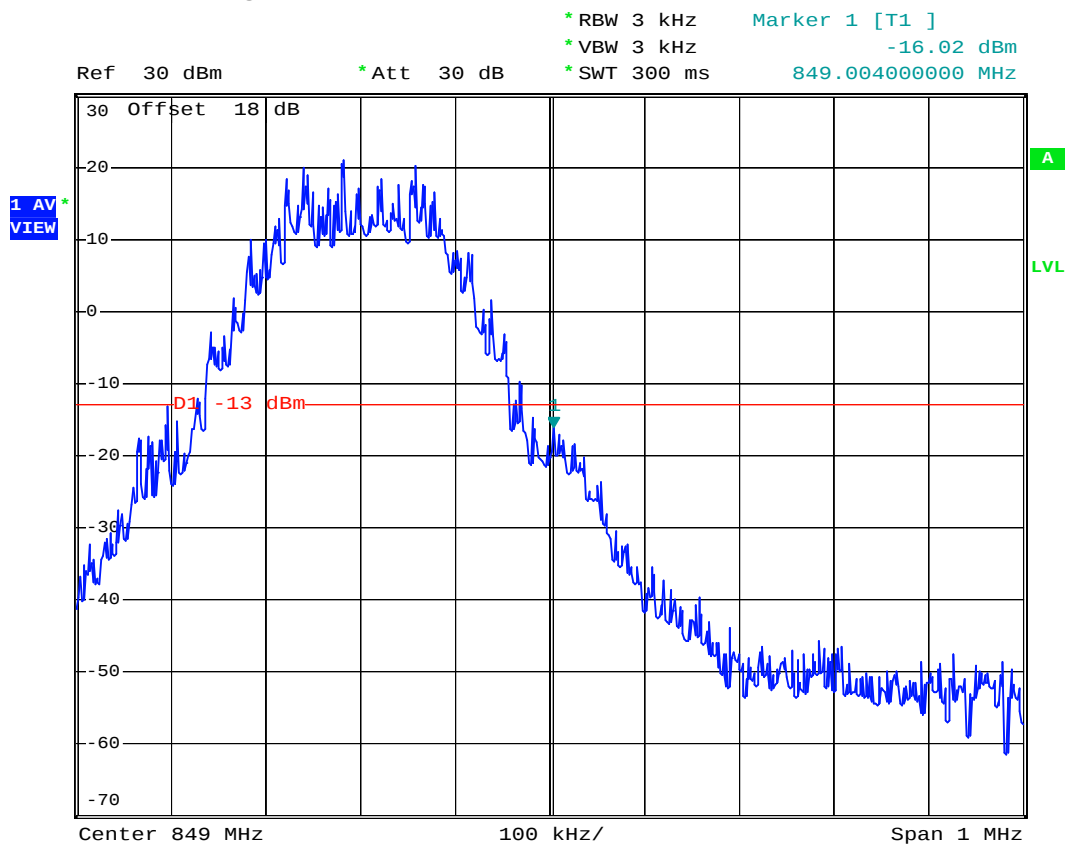
Date: 4.JUL.2007 02:03:09



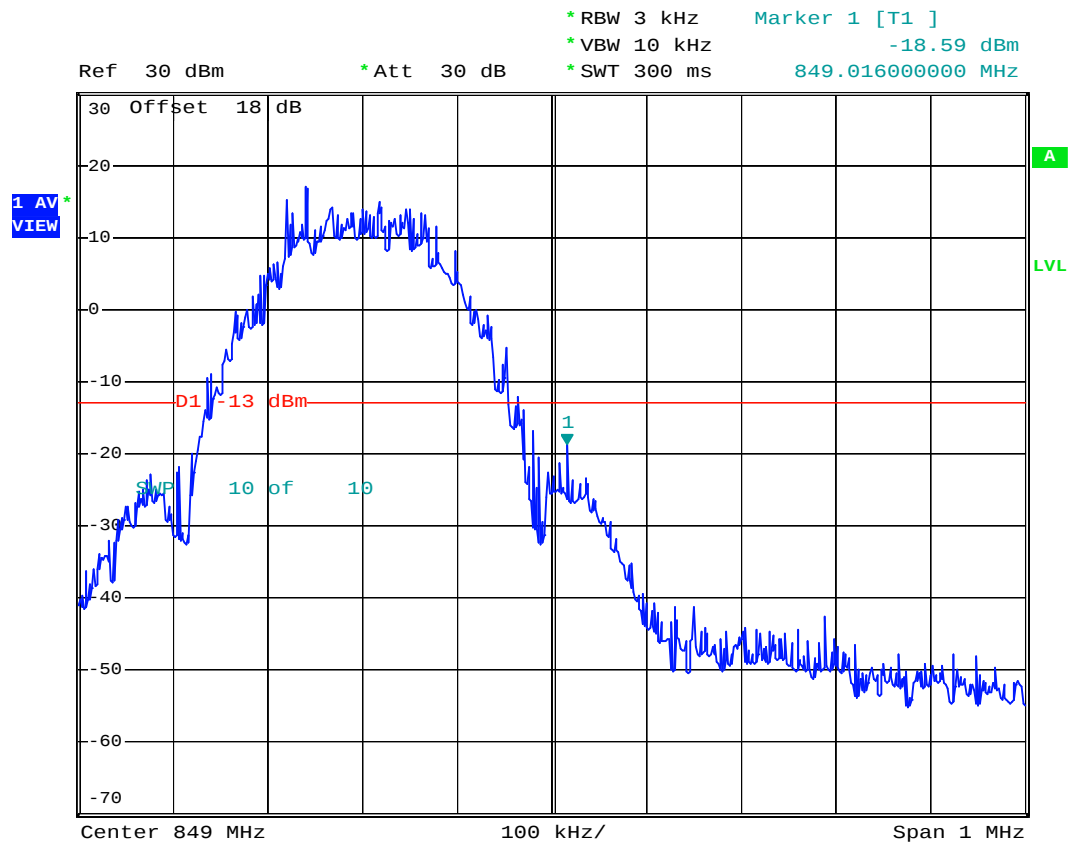
FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : GSM850 (EDGE) CH251 Higher Band Edge
- Power State : High



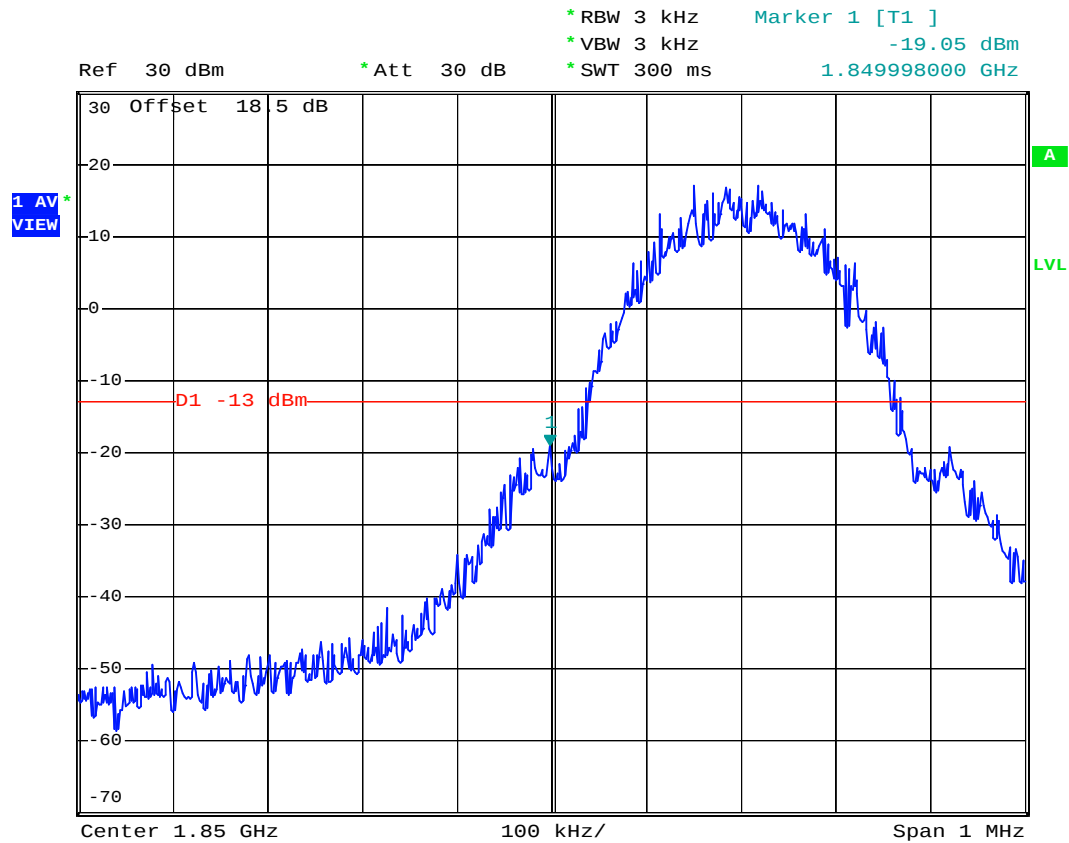
Date: 4.JUL.2007 01:59:00



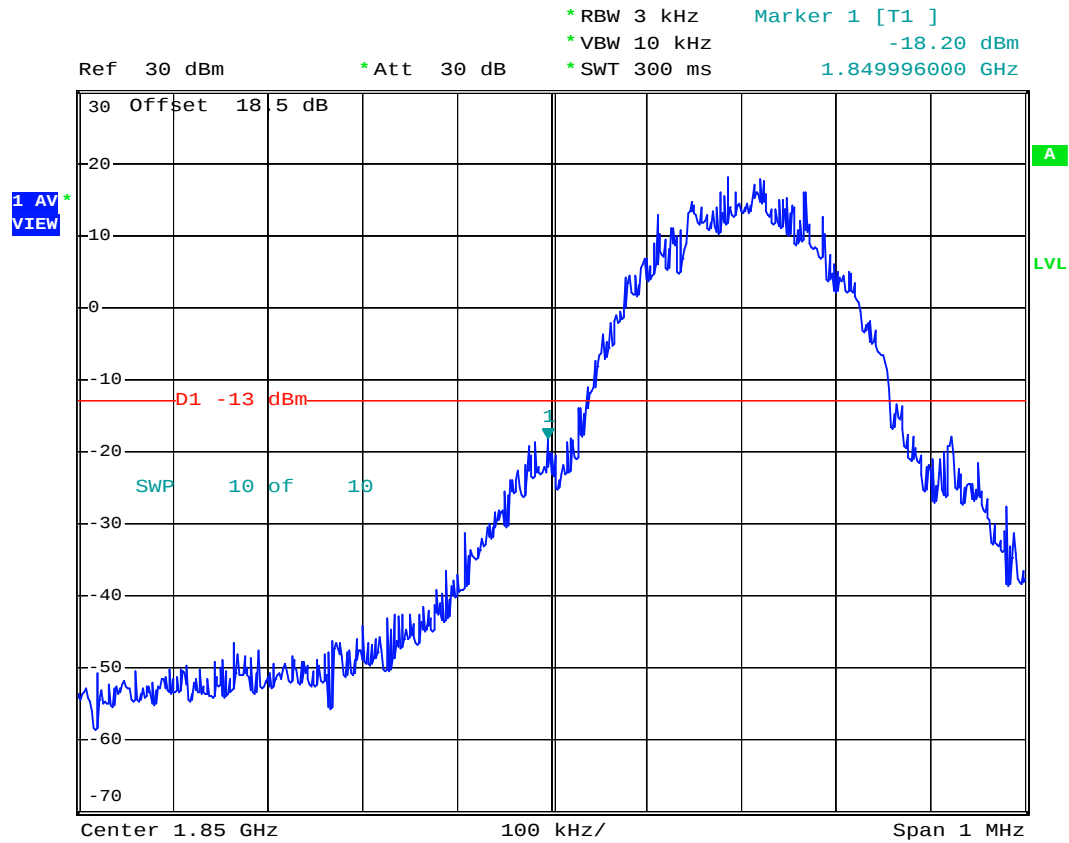
Date: 4.JUL.2007 01:57:39



- Mode 3
- Test Mode : PCS1900 (GSM) CH512 Lower Band Edge
- Power State : High



Date: 4.JUL.2007 00:19:01



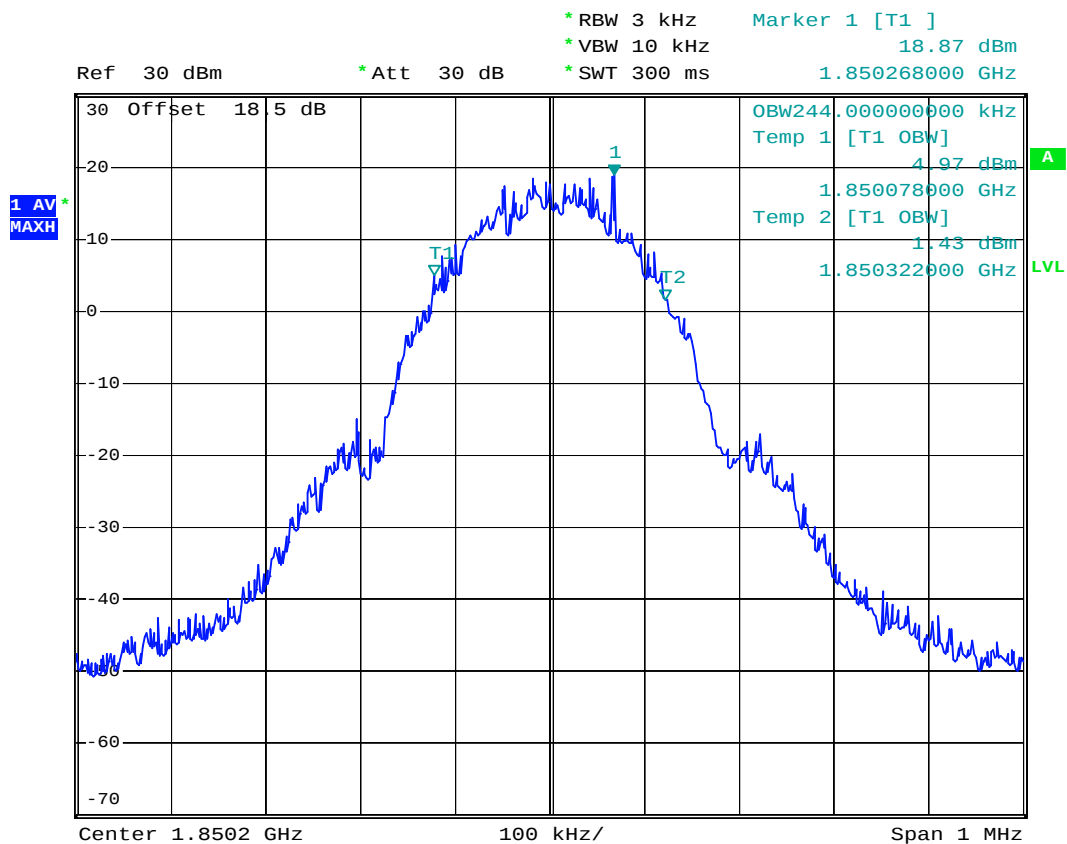
Date: 4.JUL.2007 00:19:31



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : PCS1900 (GSM) CH512 99% Occupied Bandwidth
- Power State : High



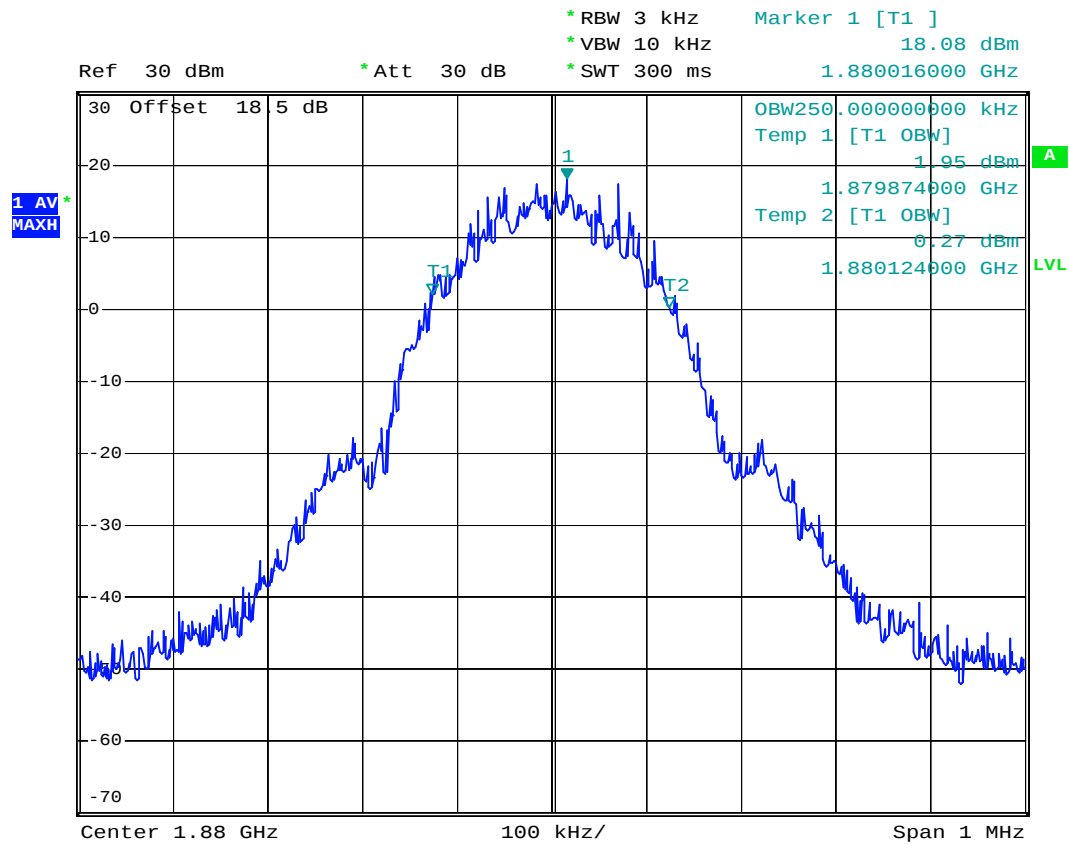
Date: 4.JUL.2007 00:25:09



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : PCS1900 (GSM) CH661 99% Occupied Bandwidth
- Power State : High



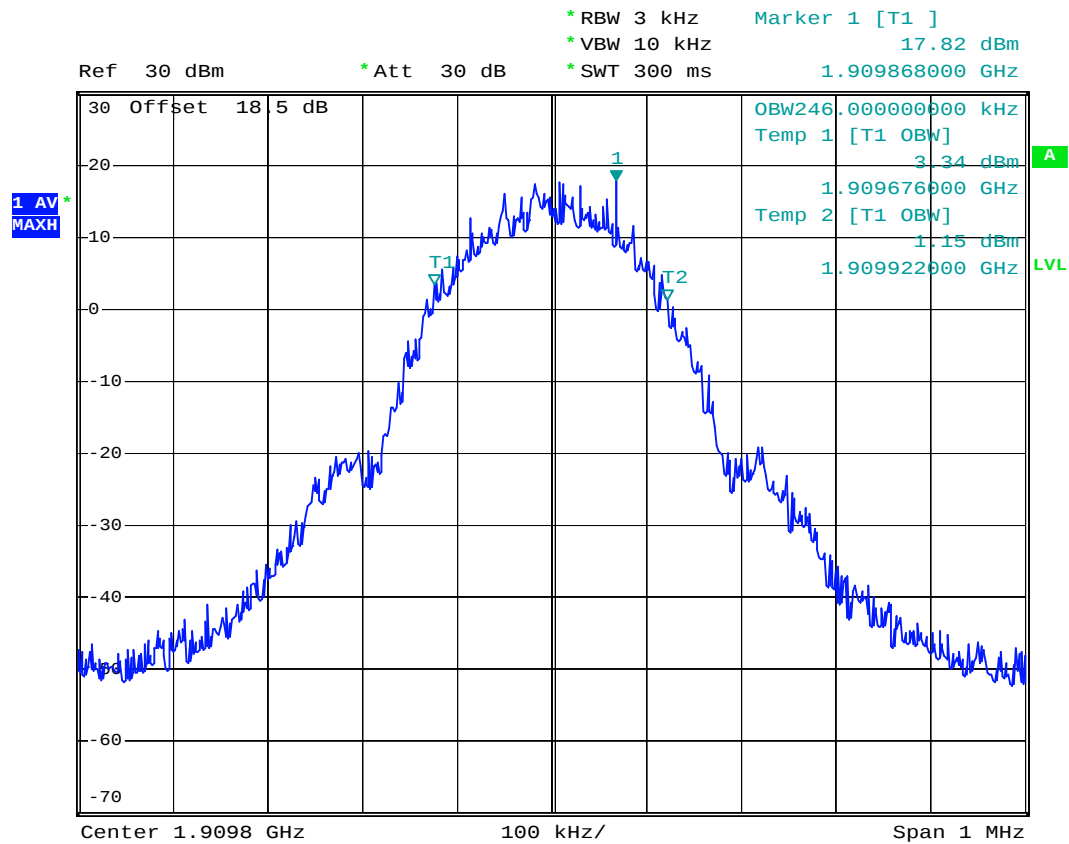
Date: 4.JUL.2007 00:25:47



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : PCS1900 (GSM) CH810 99% Occupied Bandwidth
- Power State : High



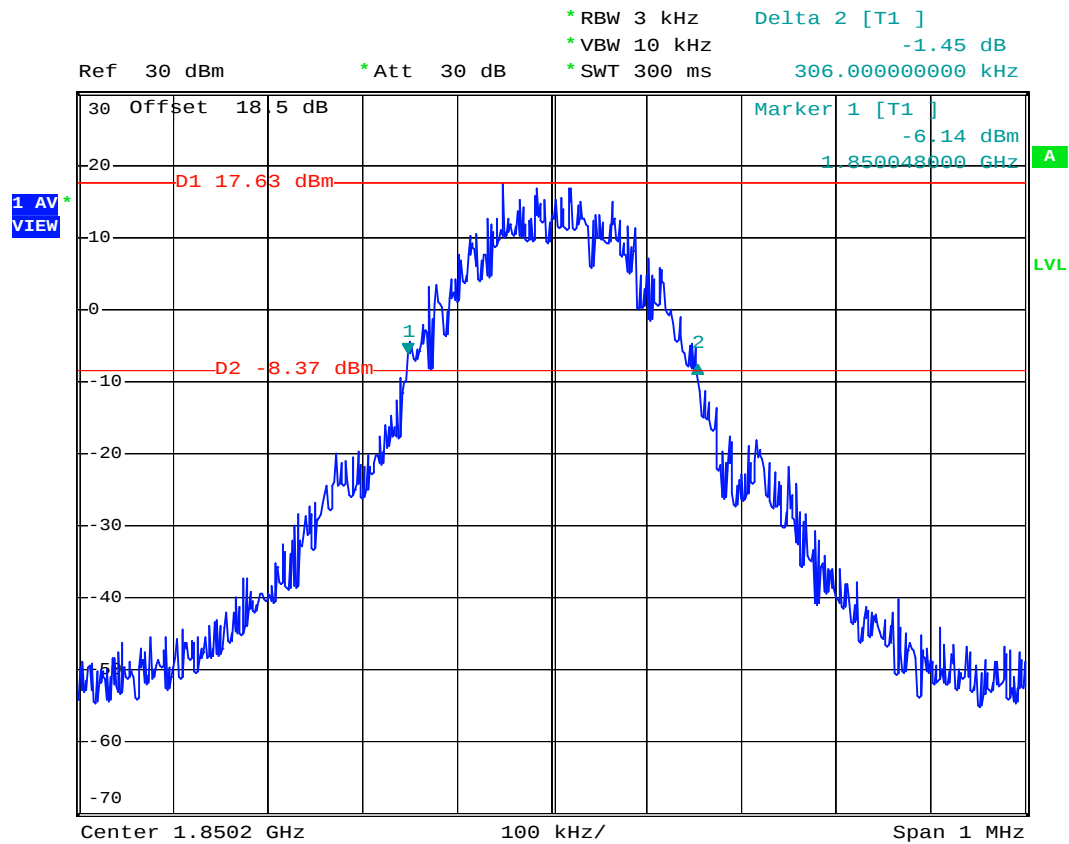
Date: 4.JUL.2007 00:26:36



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : PCS1900 (GSM) CH512 26dB Bandwidth
- Power State : High



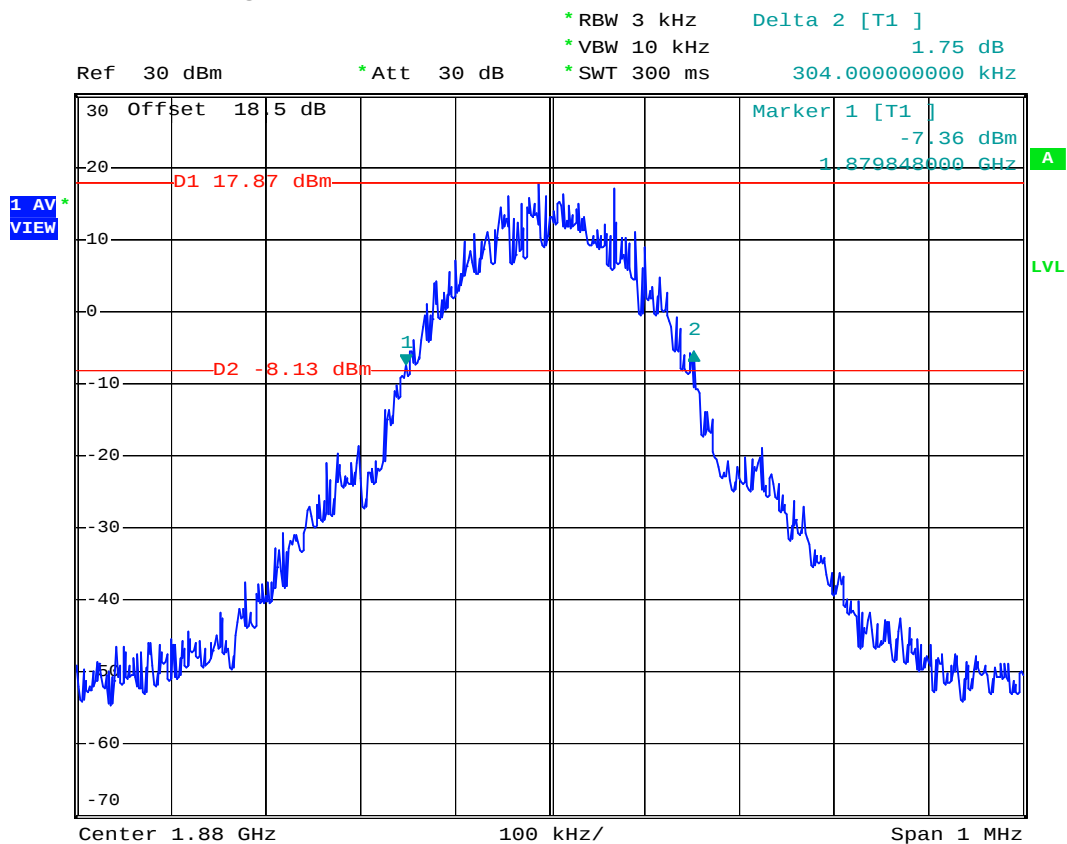
Date: 4.JUL.2007 00:33:34



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : PCS1900 (GSM) CH661 26dB Bandwidth
- Power State : High



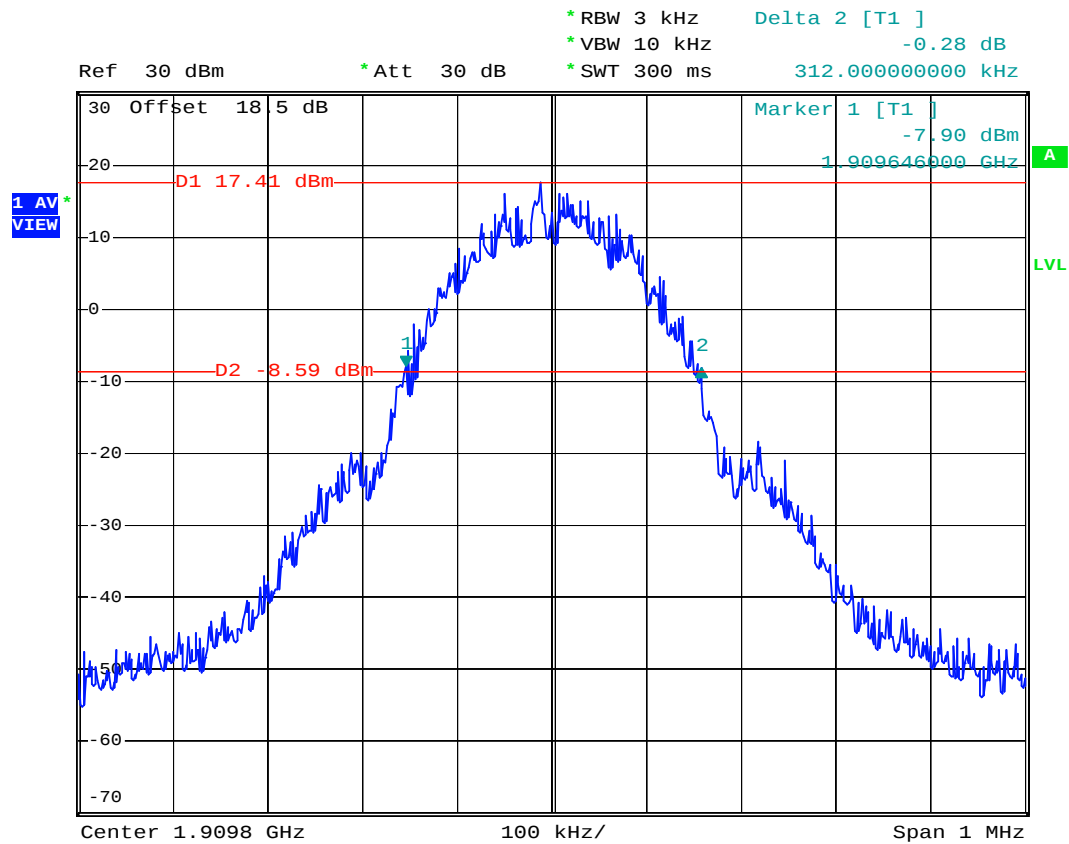
Date: 4.JUL.2007 00:35:39



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : PCS1900 (GSM) CH810 26dB Bandwidth
- Power State : High



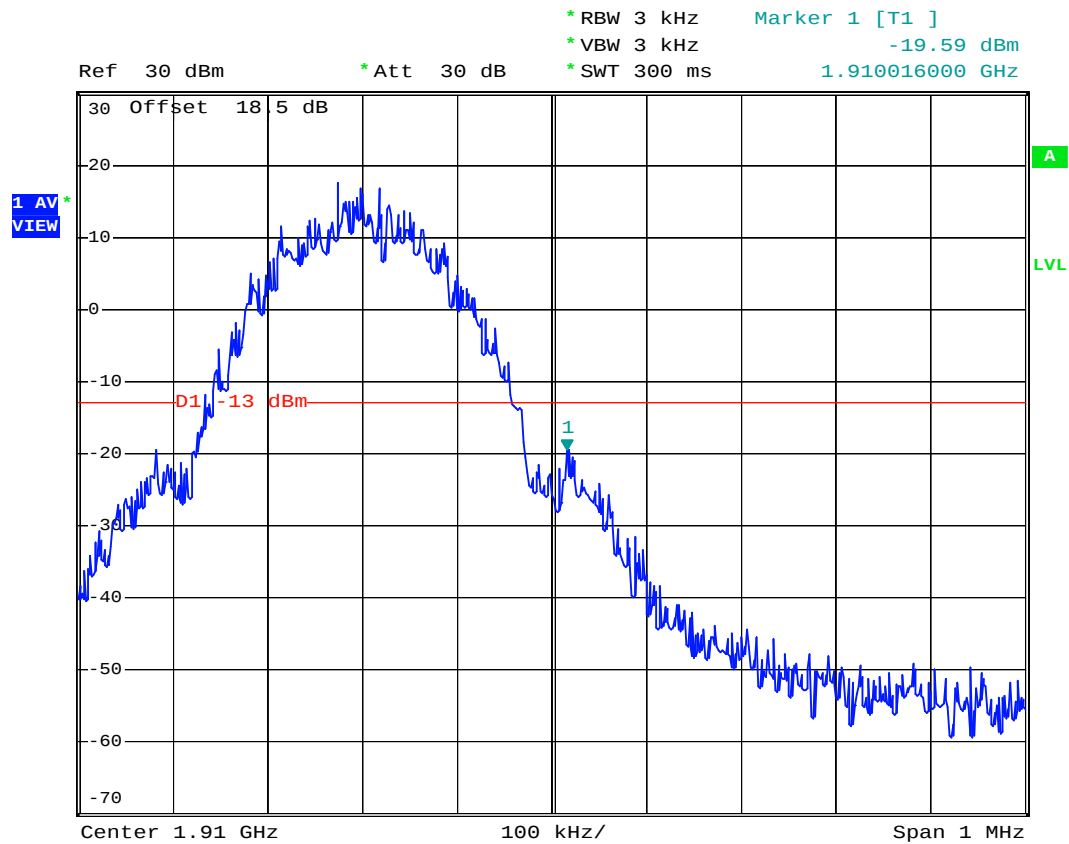
Date: 4.JUL.2007 00:36:40



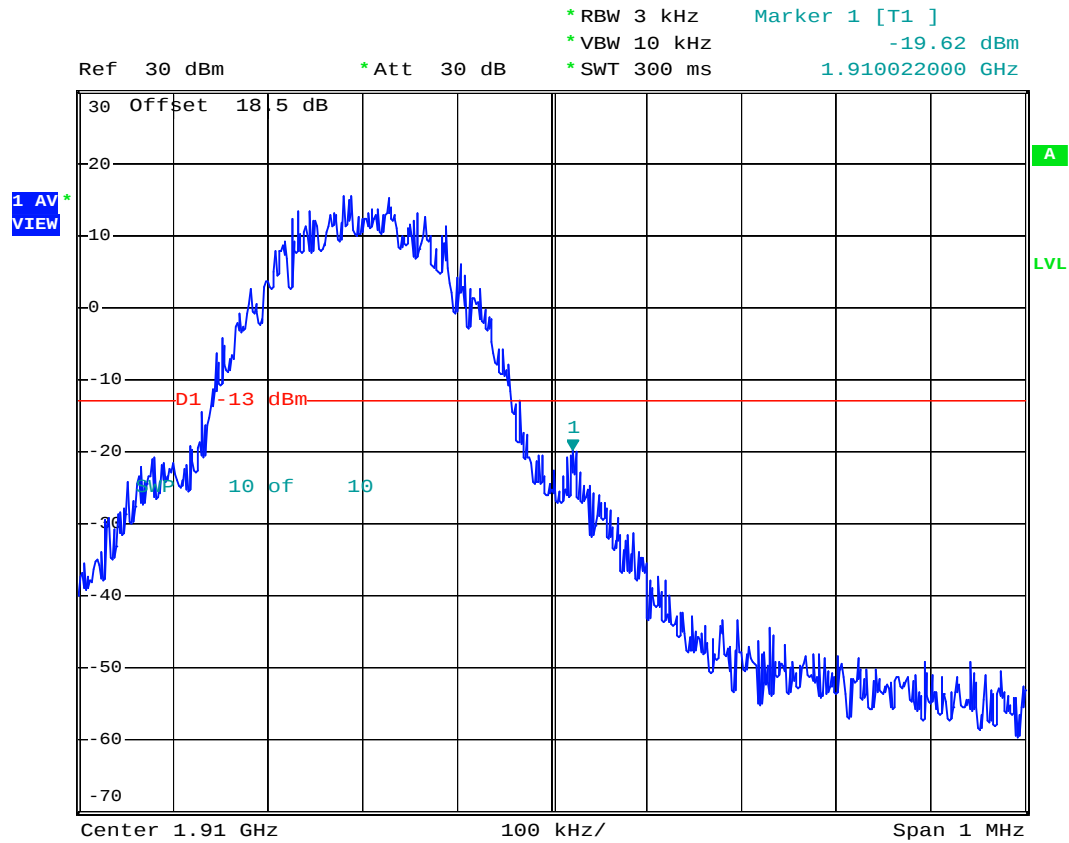
FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : PCS1900 (GSM) CH810 Higher Band Edge
- Power State : High



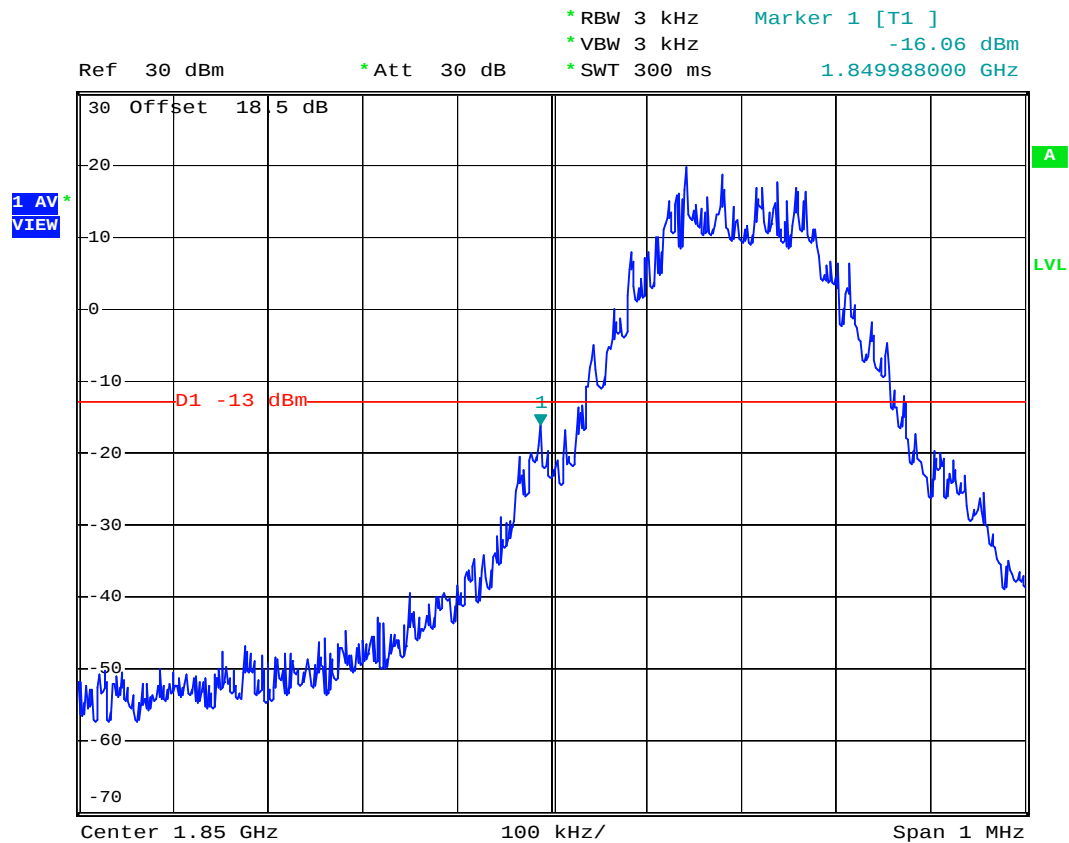
Date: 4.JUL.2007 00:20:46



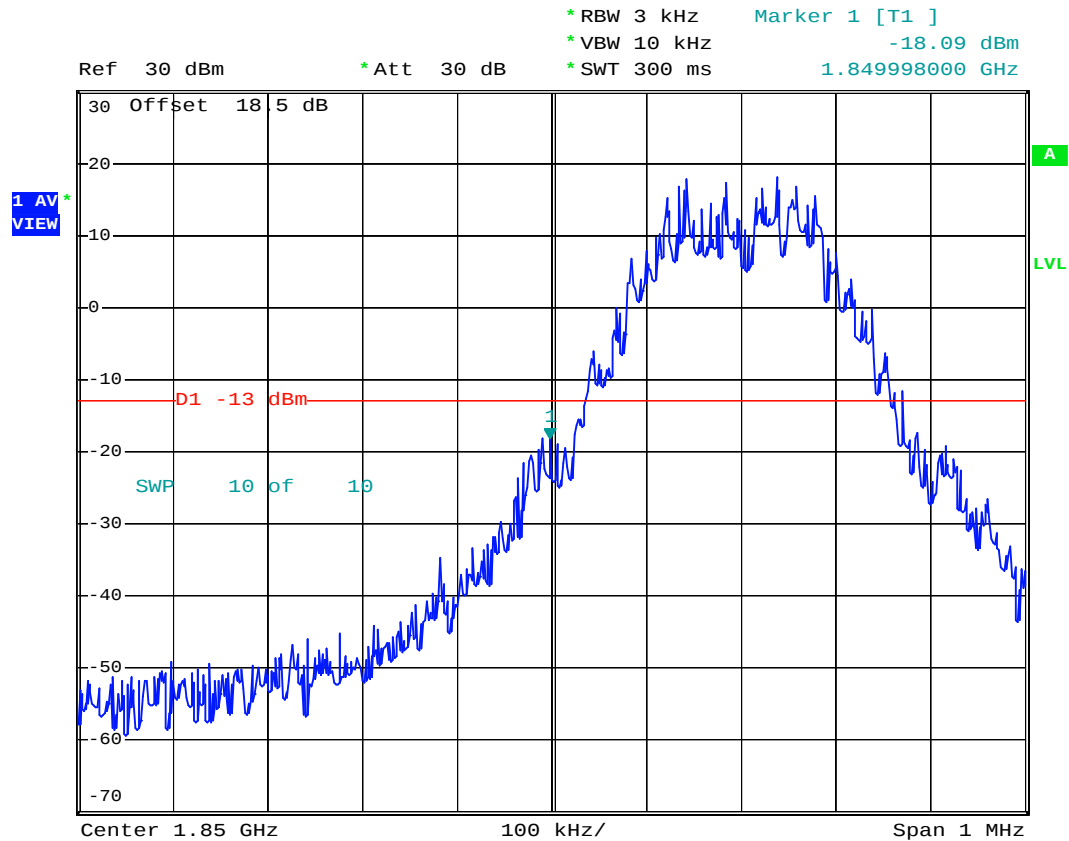
Date: 4.JUL.2007 00:20:16



- Mode 4
- Test Mode : PCS1900 (EDGE) CH512 Lower Band Edge
- Power State : High



Date: 4.JUL.2007 02:29:41



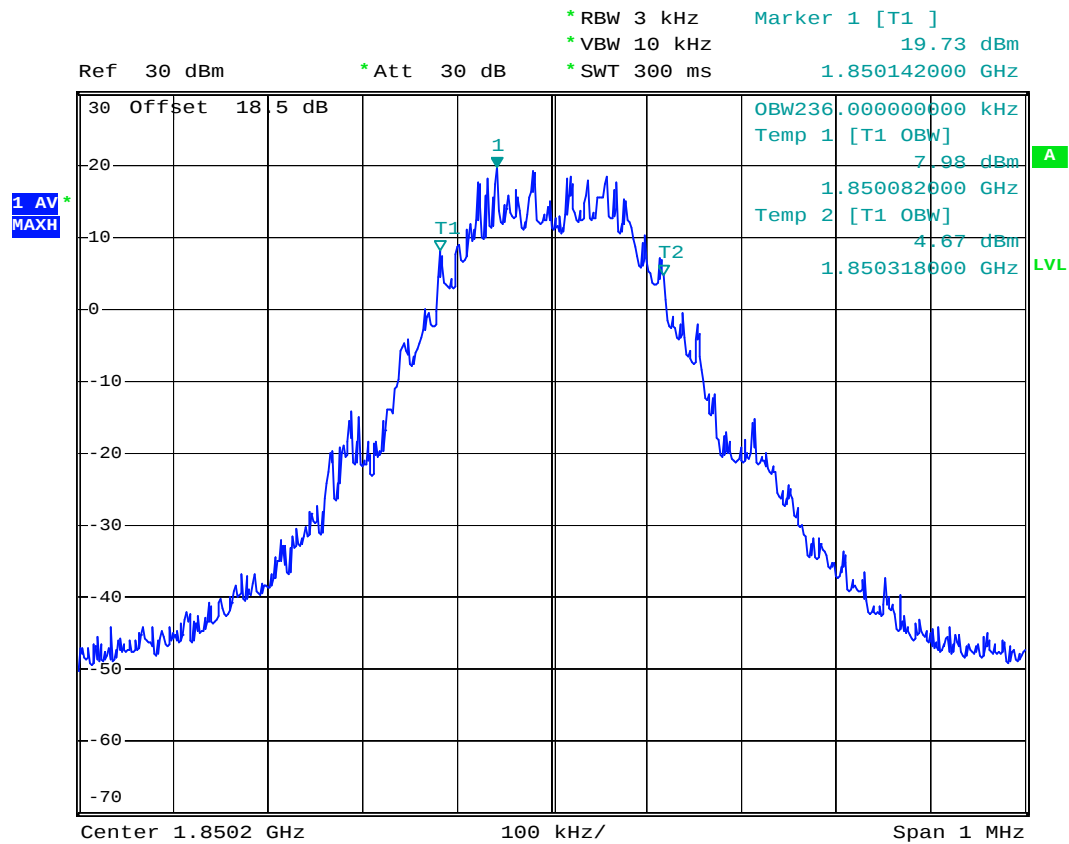
Date: 4.JUL.2007 02:30:11



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : PCS1900 (EDGE) CH512 99% Occupied Bandwidth
- Power State : High



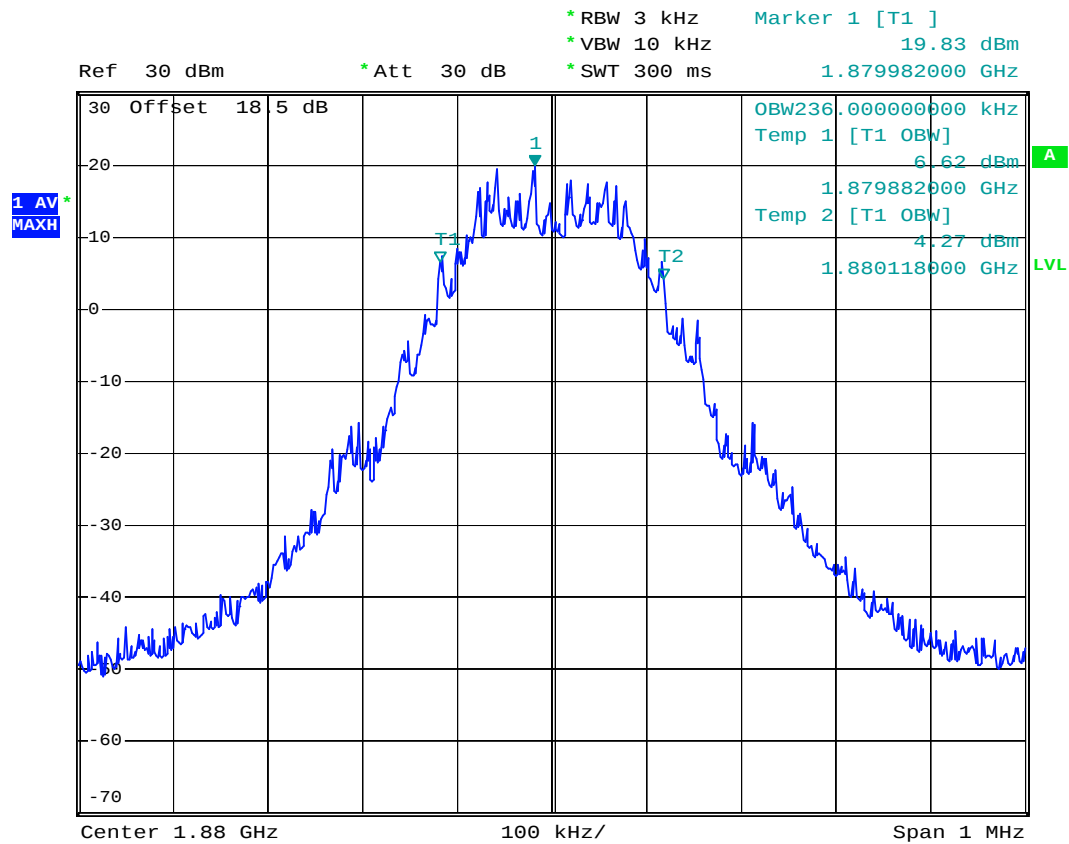
Date: 4.JUL.2007 02:41:00



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : PCS1900 (EDGE) CH661 99% Occupied Bandwidth
- Power State : High

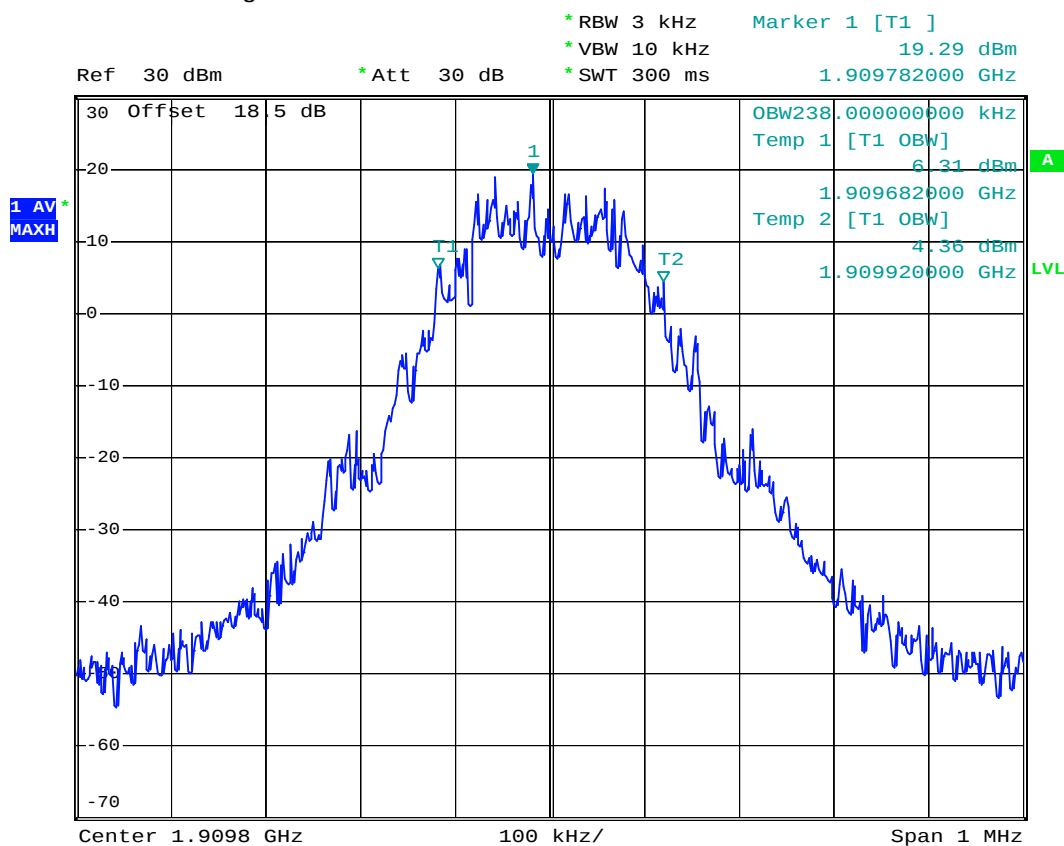


Date: 4.JUL.2007 02:41:26



Report No. : FG761327-04A

- Test Mode : PCS1900 (EDGE) CH810 99% Occupied Bandwidth
- Power State : High



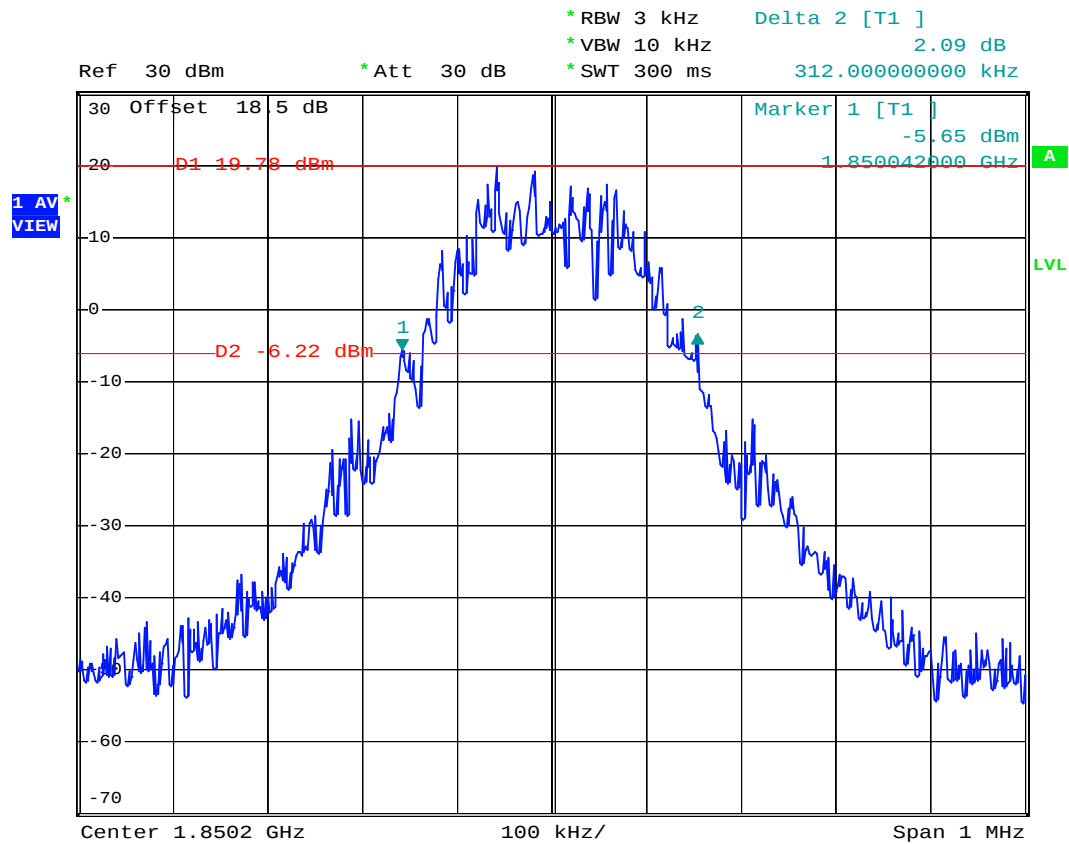
Date: 4.JUL.2007 02:41:54



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : PCS1900 (EDGE) CH512 26dB Bandwidth
- Power State : High



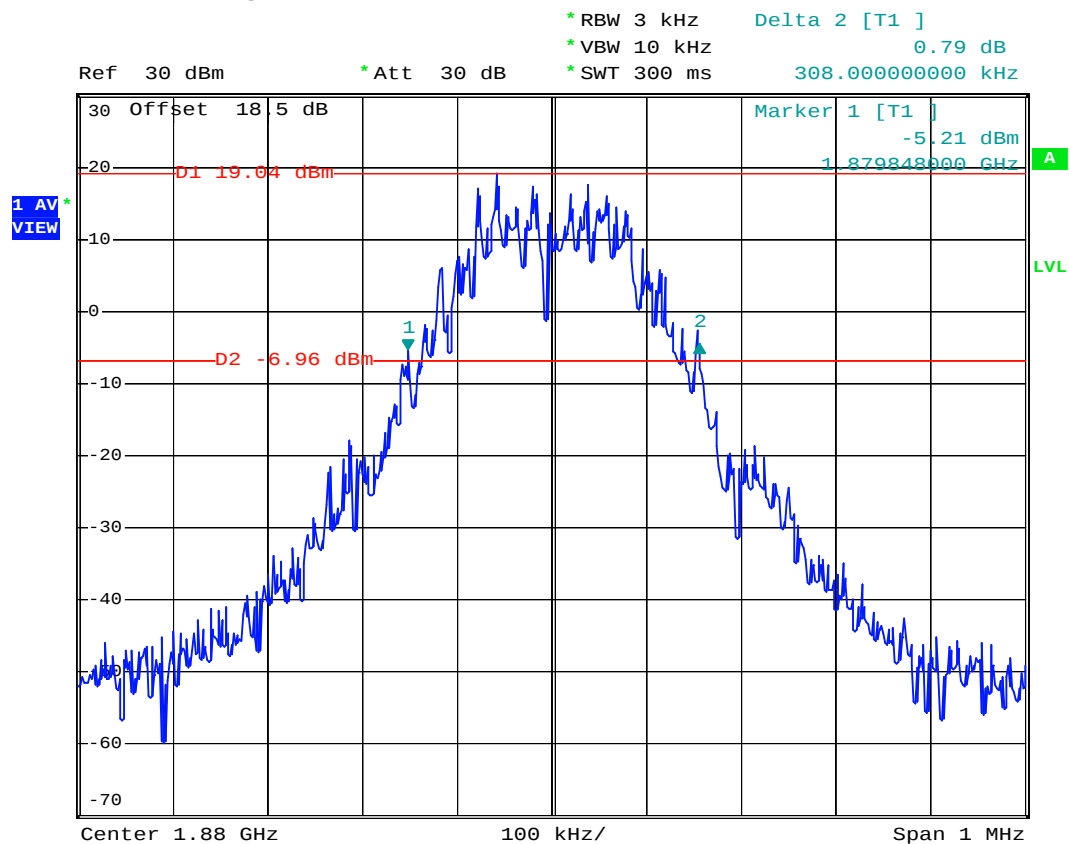
Date: 4.JUL.2007 02:44:06



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : PCS1900 (EDGE) CH661 26dB Bandwidth
- Power State : High



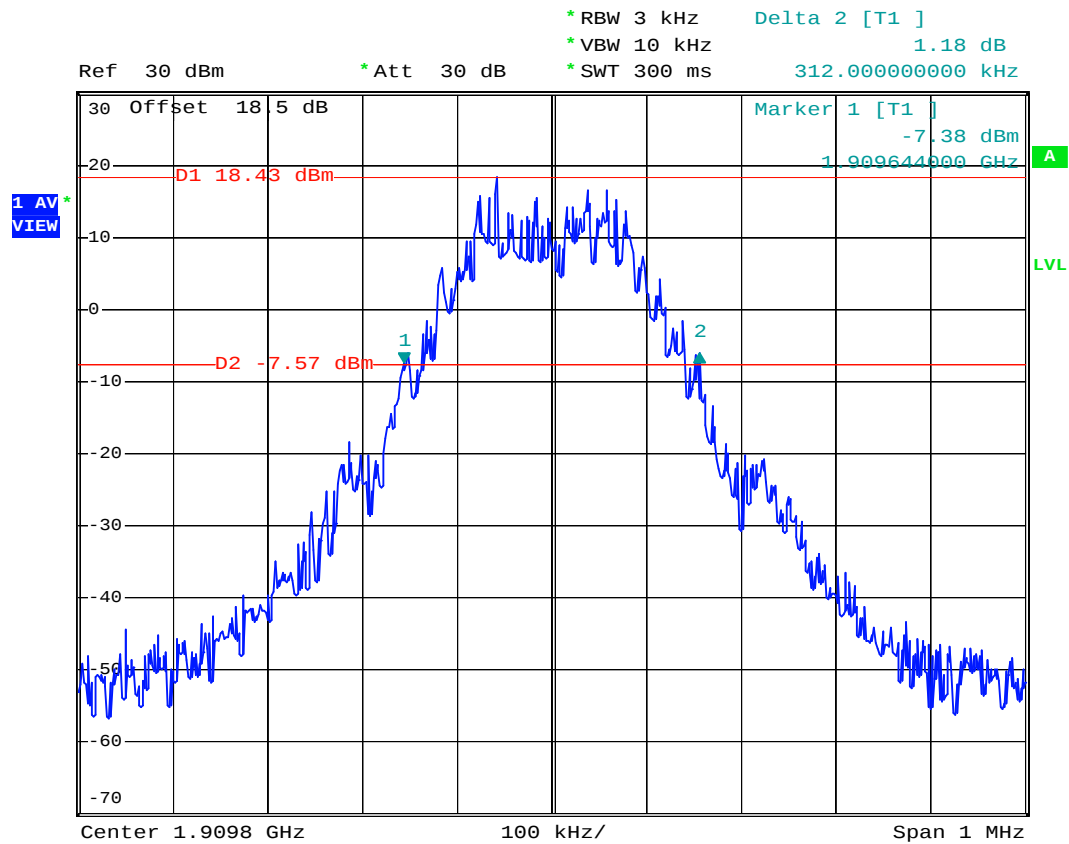
Date: 4.JUL.2007 02:43:23



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : PCS1900 (EDGE) CH810 26dB Bandwidth
- Power State : High



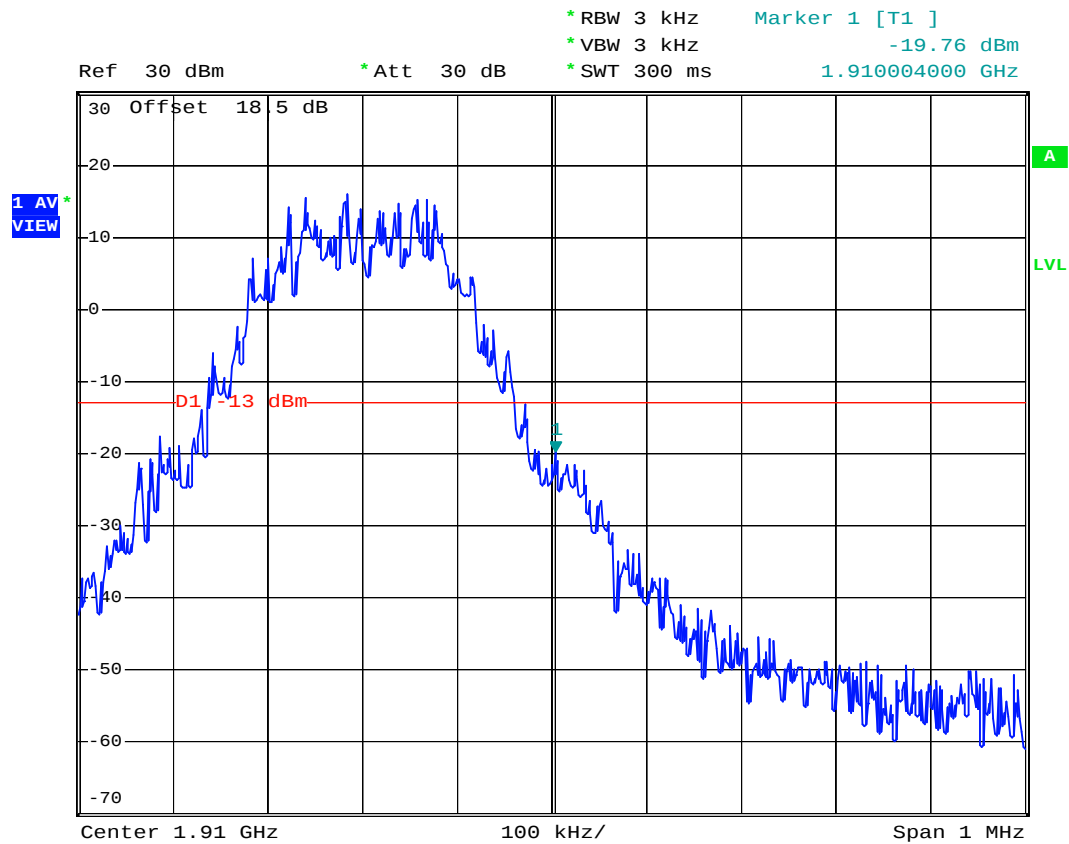
Date: 4.JUL.2007 02:42:39



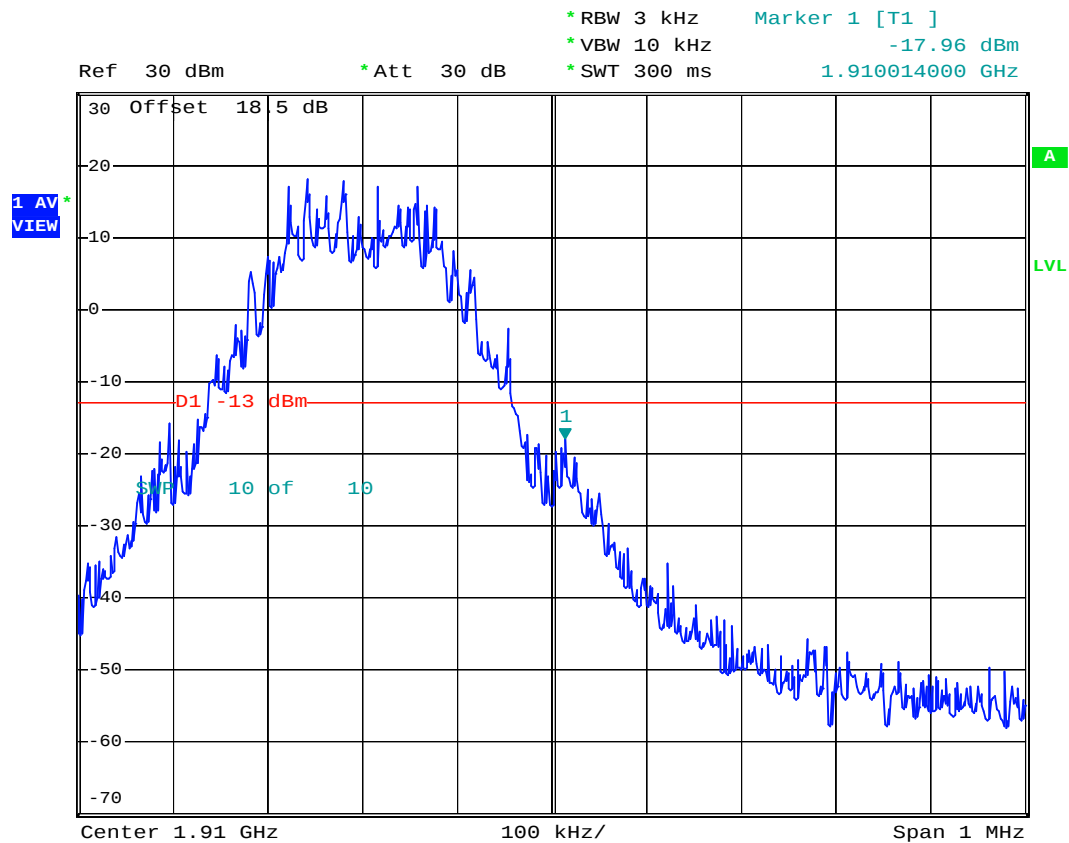
FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : PCS1900(EDGE) CH810 Higher Band Edge
- Power State : High



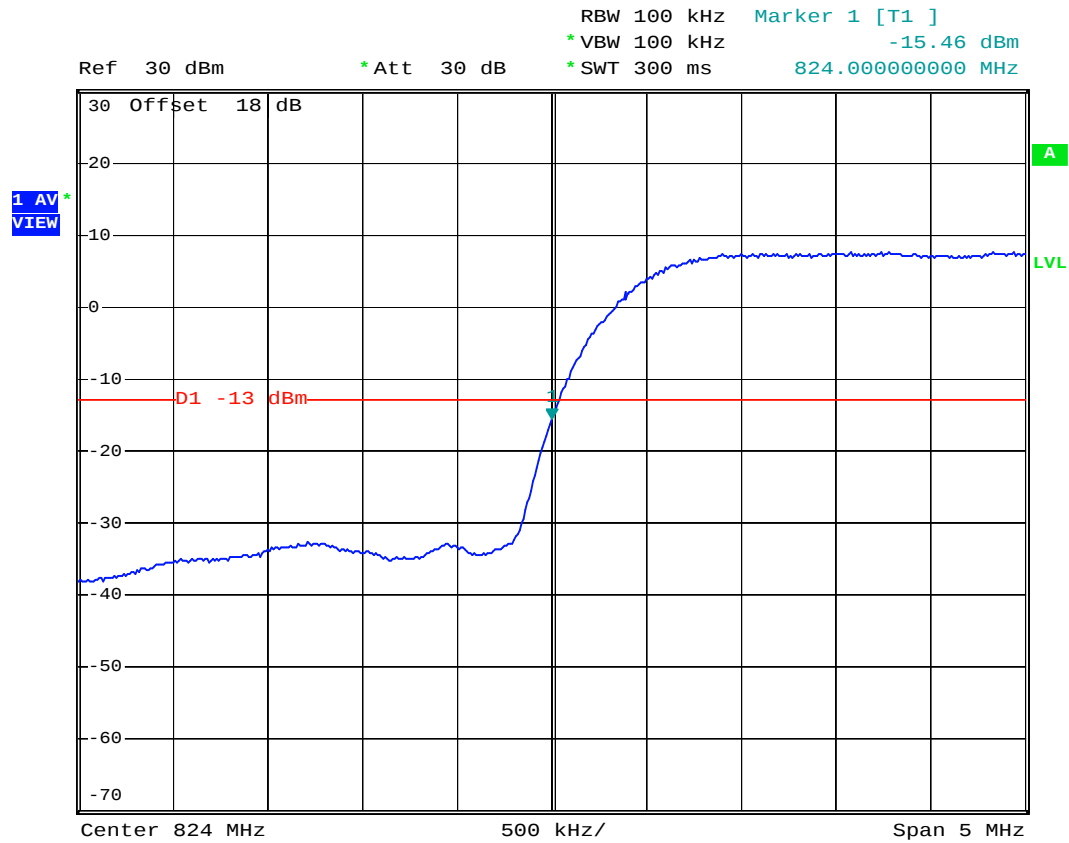
Date: 4.JUL.2007 02:33:03



Date: 4.JUL.2007 02:30:43



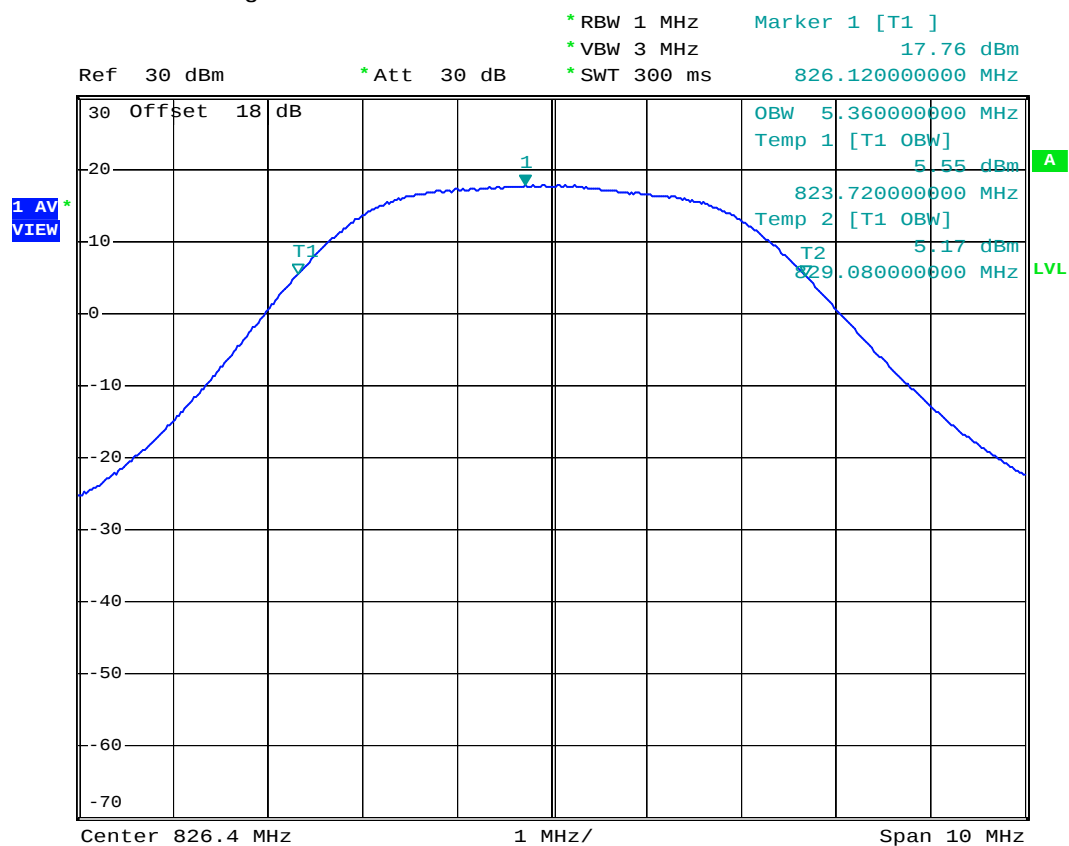
- Mode 5
- Test Mode : WCDMA Band V CH4132 Lower Band Edge
- Power State : High



Date: 4.JUL.2007 03:28:42



- Test Mode : WCDMA Band V CH4132 99% Occupied Bandwidth
- Power State : High



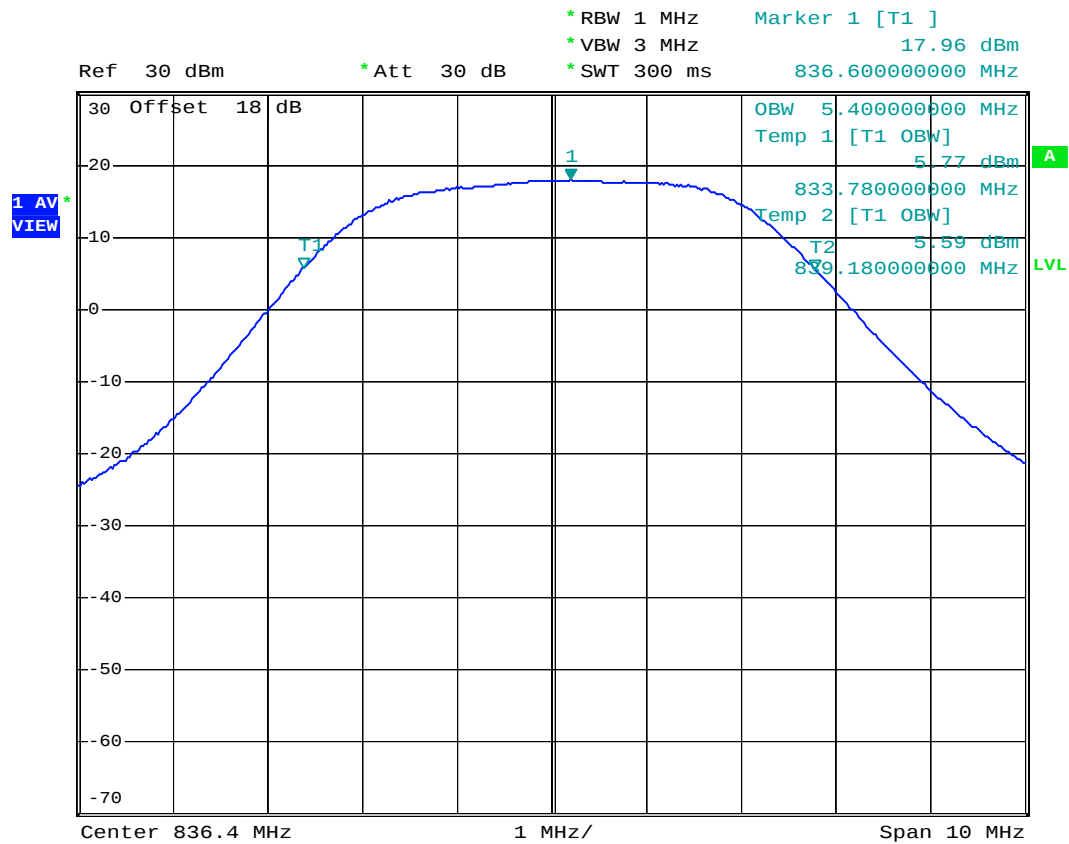
Date: 17.JUL.2007 03:17:38



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band V CH4182 99% Occupied Bandwidth
- Power State : High



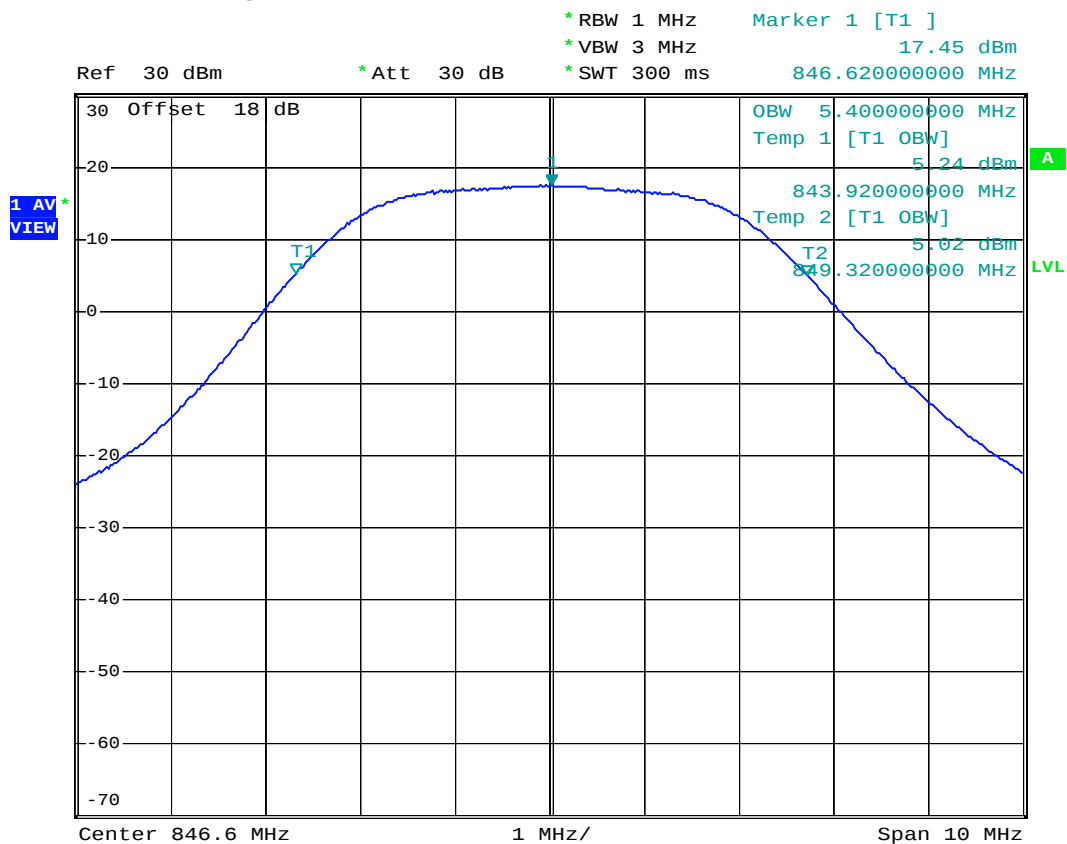
Date: 17.JUL.2007 03:18:18



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band V CH4233 99% Occupied Bandwidth
- Power State : High



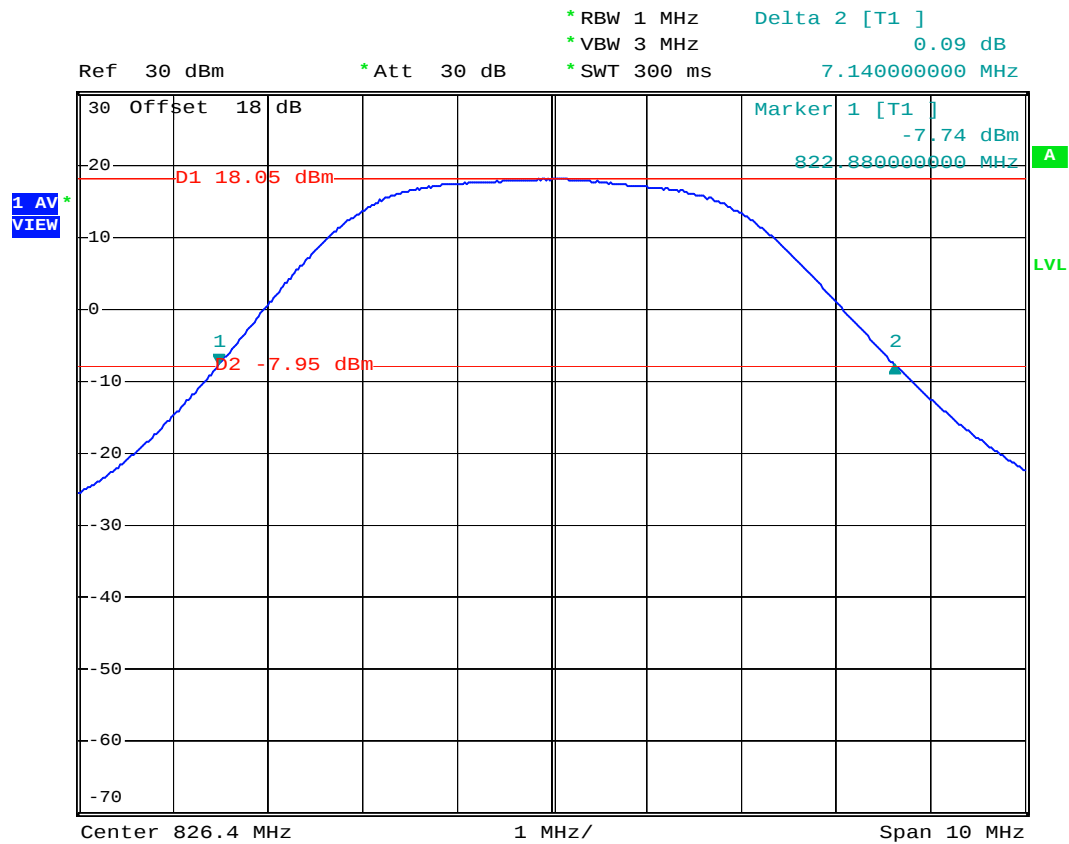
Date: 17.JUL.2007 03:19:11



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band V CH4132 26dB Bandwidth
- Power State : High



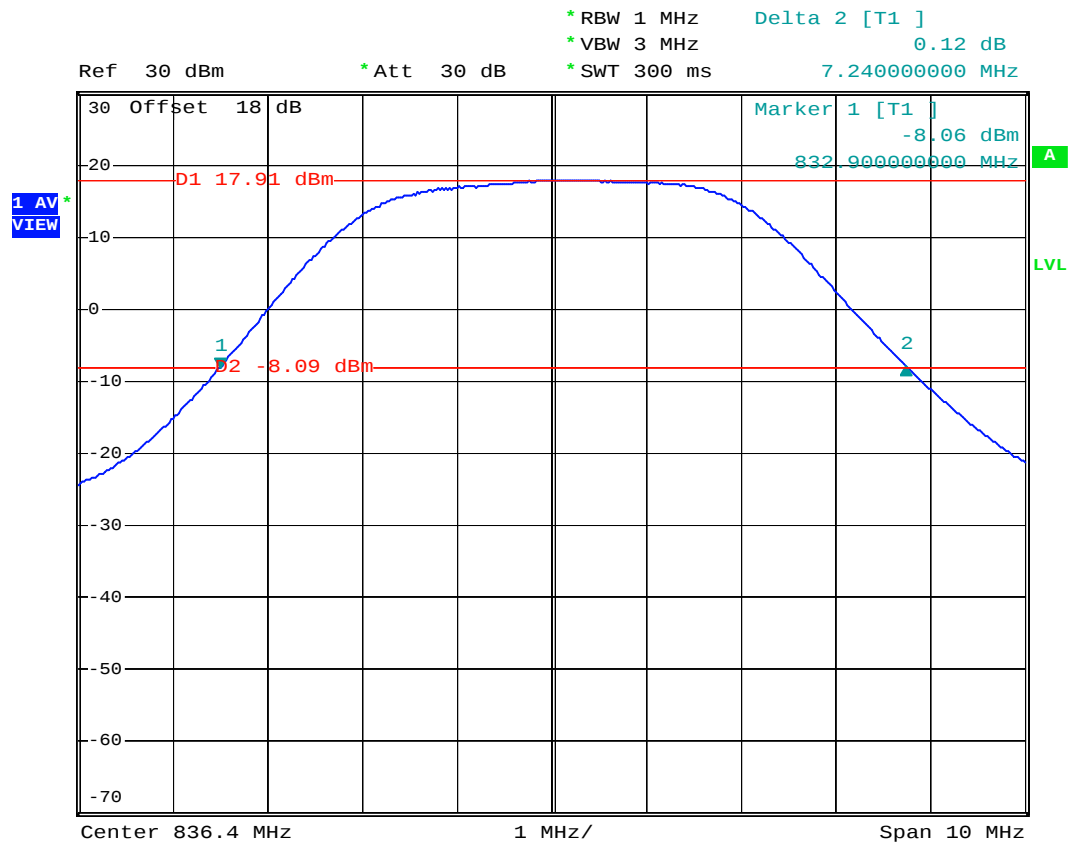
Date: 17.JUL.2007 09:18:22



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band V CH4182 26dB Bandwidth
- Power State : High



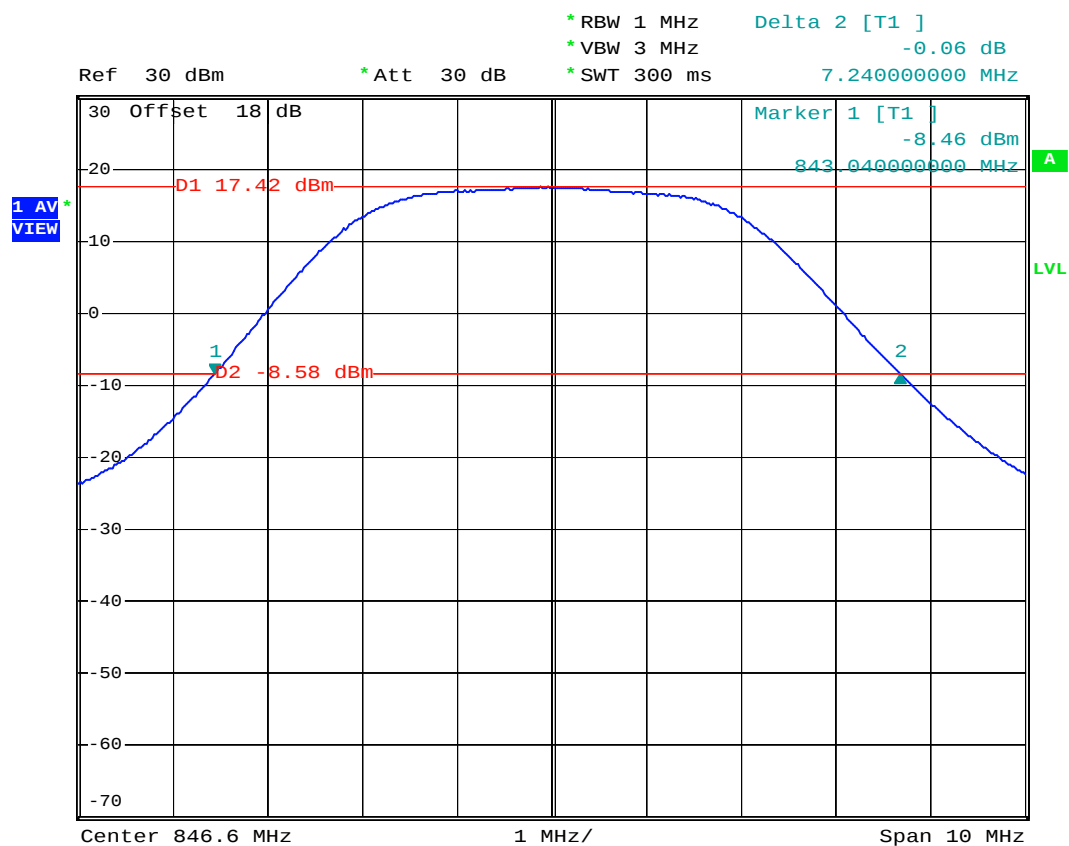
Date: 17.JUL.2007 02:35:17



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band V CH4233 26dB Bandwidth
- Power State : High



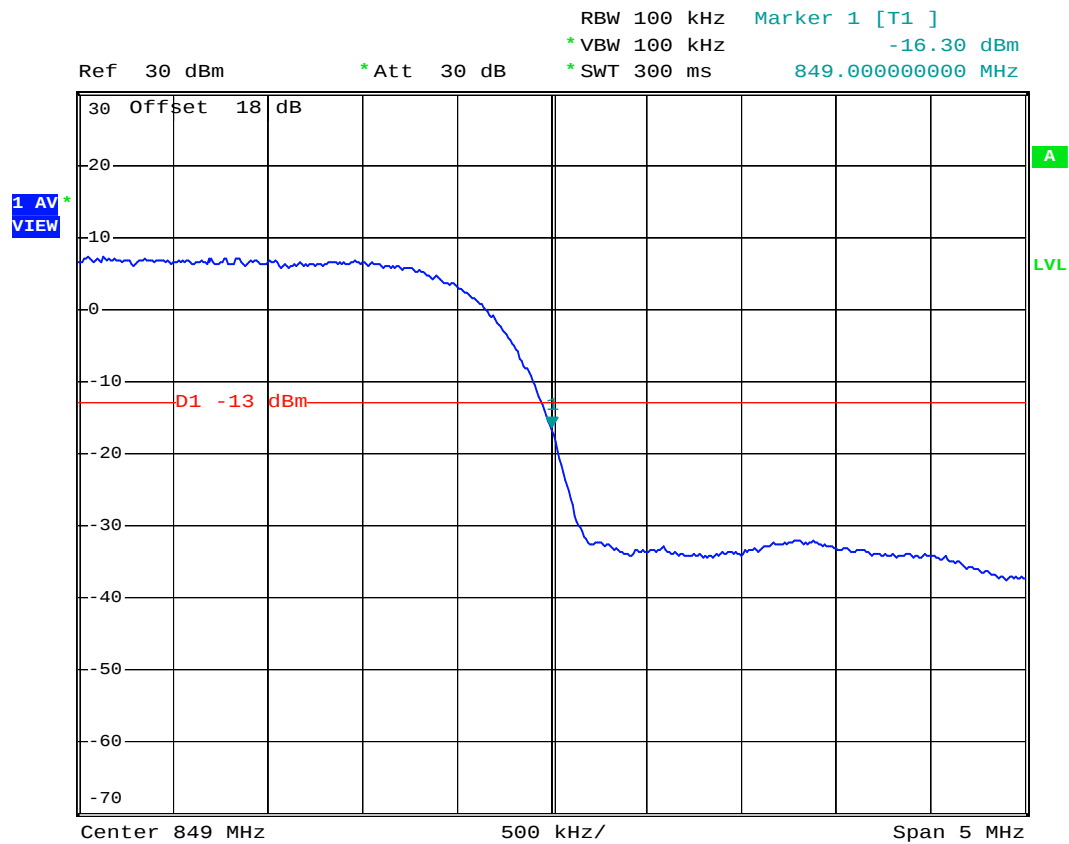
Date: 17.JUL.2007 02:59:44



FCC TEST REPORT

Report No. : FG761327-04A

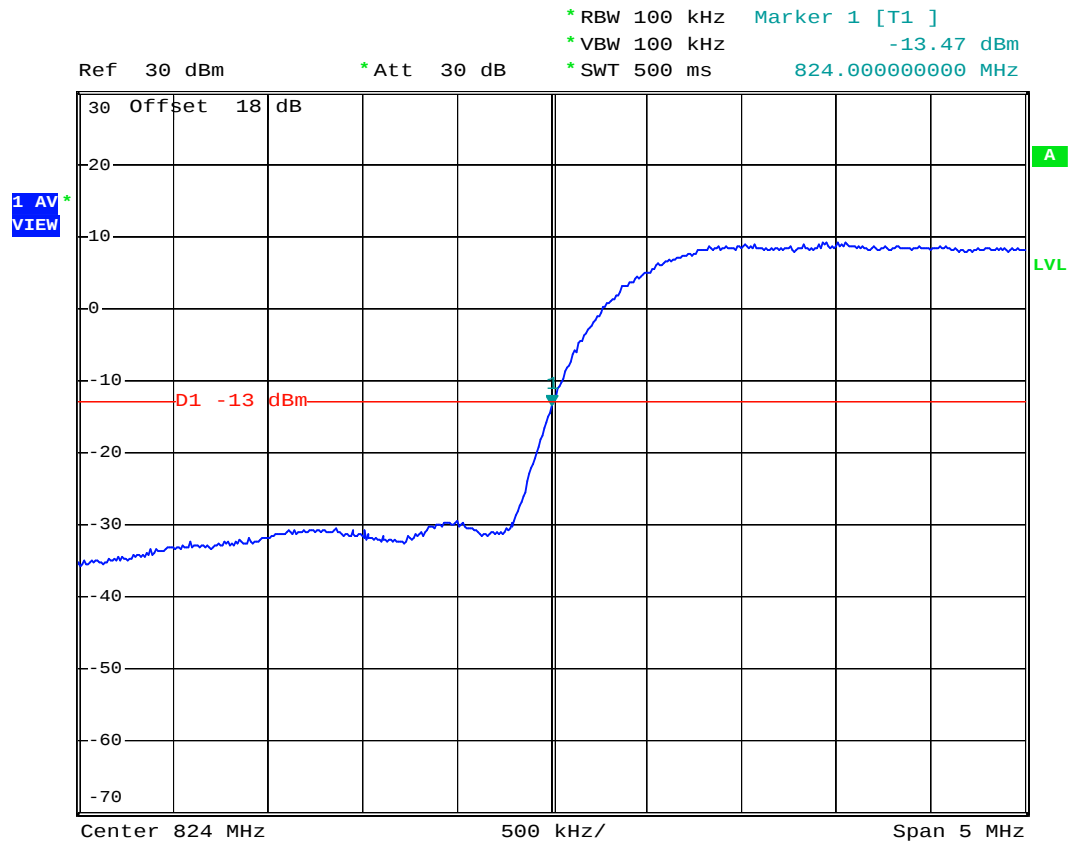
- Test Mode : WCDMA Band V CH4233 Higher Band Edge
- Power State : High



Date: 4.JUL.2007 03:28:13



- Mode 6
- Test Mode : WCDMA Band V (HSDPA) CH4132 Lower Band Edge
- Power State : High



Date: 8.JUL.2007 00:47:05



- Test Mode : WCDMA Band V (HSDPA) CH4132 99% Occupied Bandwidth
- Power State : High



A

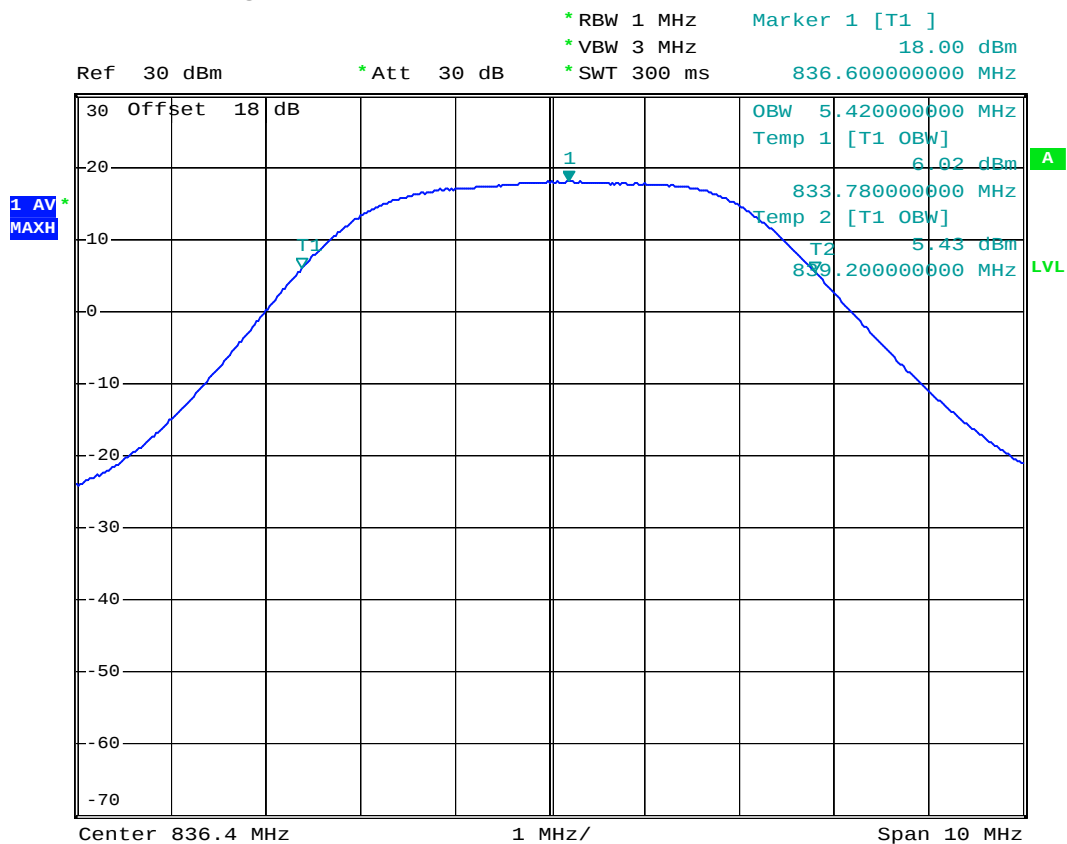
LVL



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band V (HSDPA) CH4182 99% Occupied Bandwidth
- Power State : High



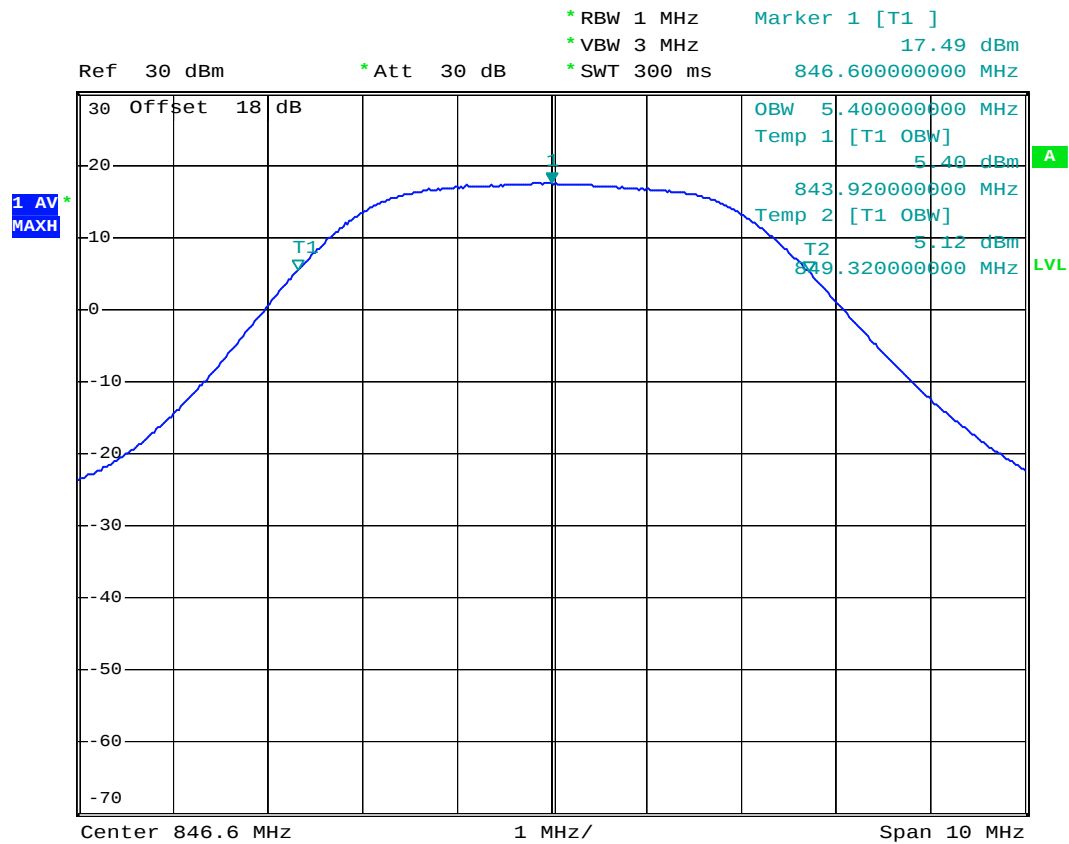
Date: 17.JUL.2007 03:15:58



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band V (HSDPA) CH4233 99% Occupied Bandwidth
- Power State : High



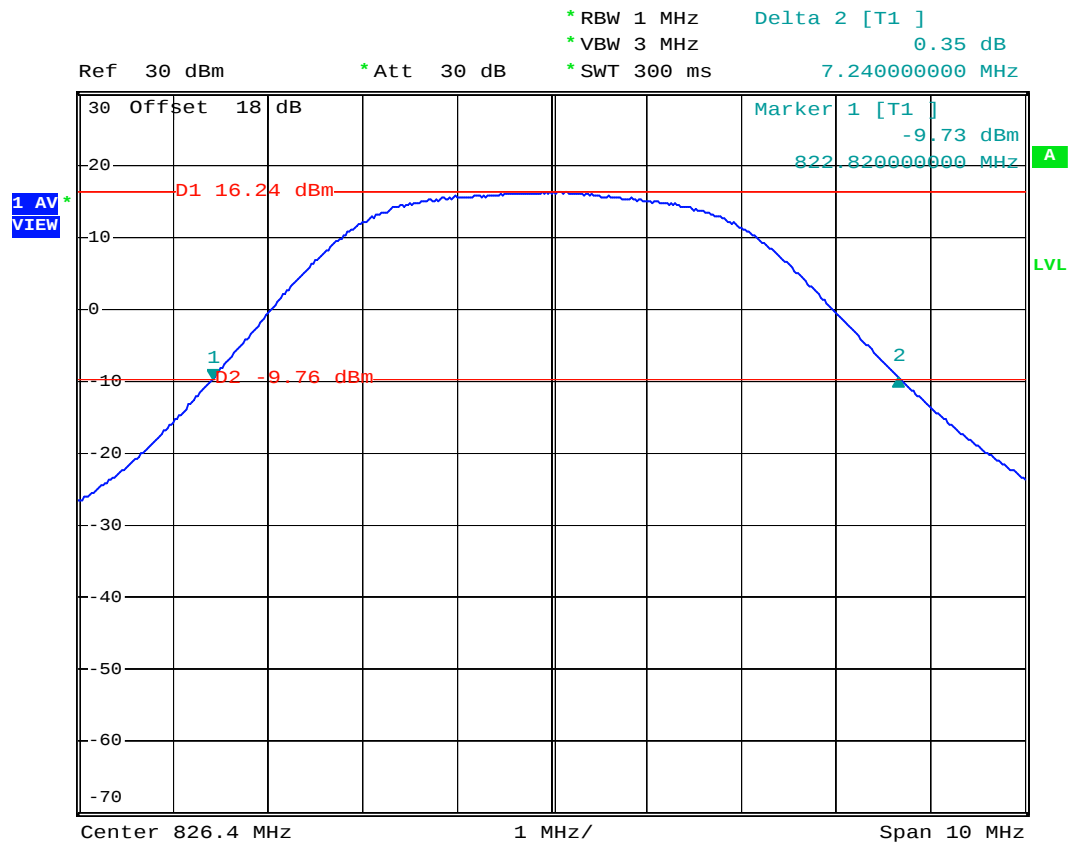
Date: 17.JUL.2007 03:14:52



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band V (HSDPA) CH4132 26dB Bandwidth
- Power State : High



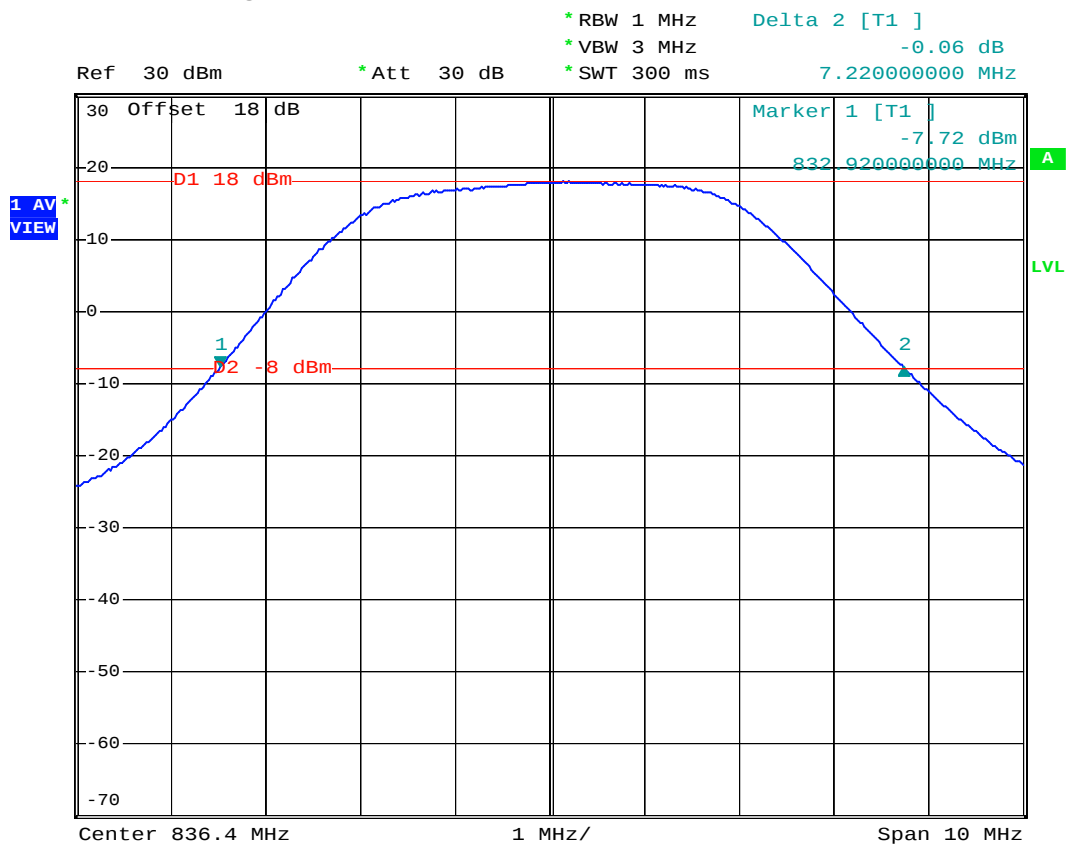
Date: 17.JUL.2007 16:02:38



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band V (HSDPA) CH4182 26dB Bandwidth
- Power State : High



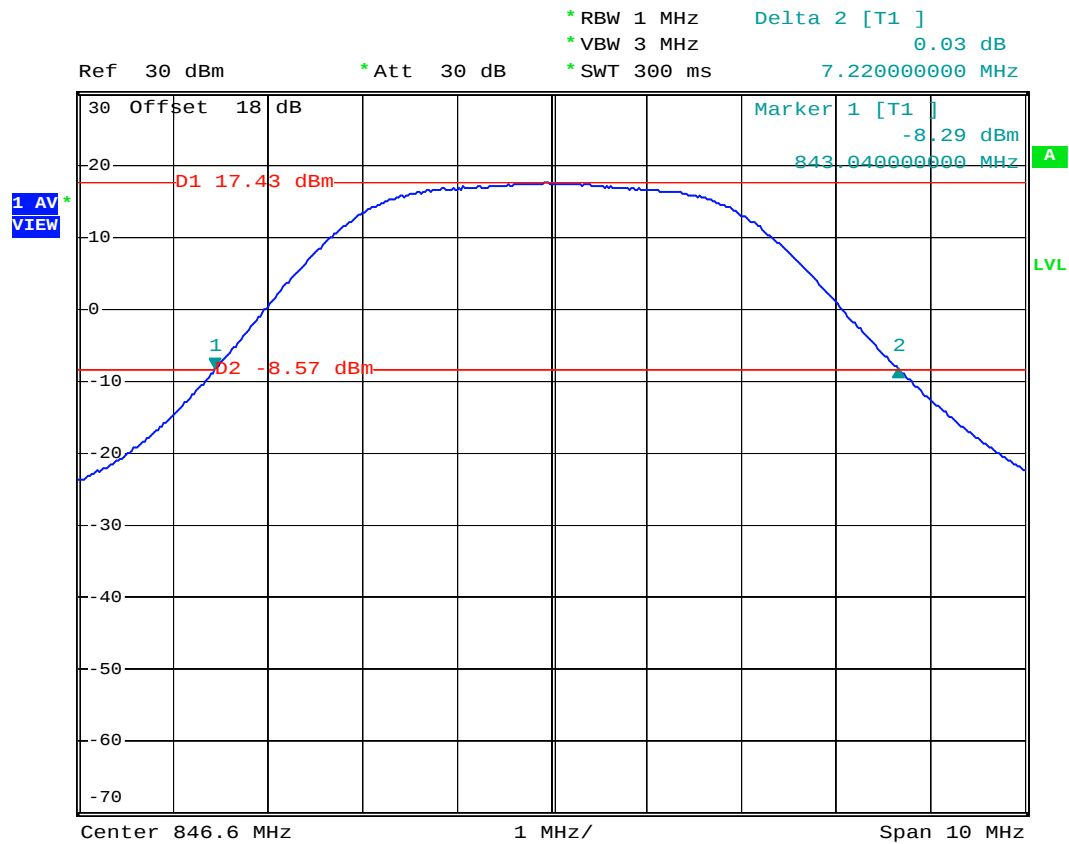
Date: 17.JUL.2007 03:02:31



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band V (HSDPA) CH4233 26dB Bandwidth
- Power State : High



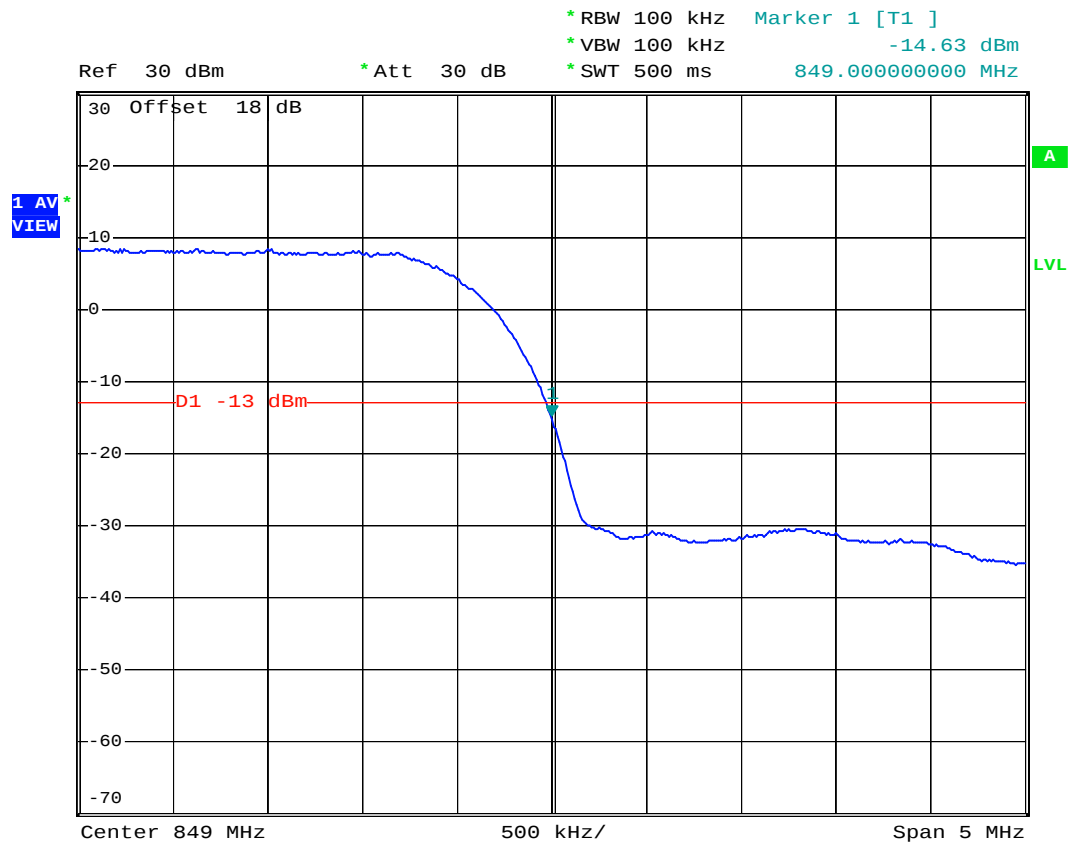
Date: 17.JUL.2007 03:13:44



FCC TEST REPORT

Report No. : FG761327-04A

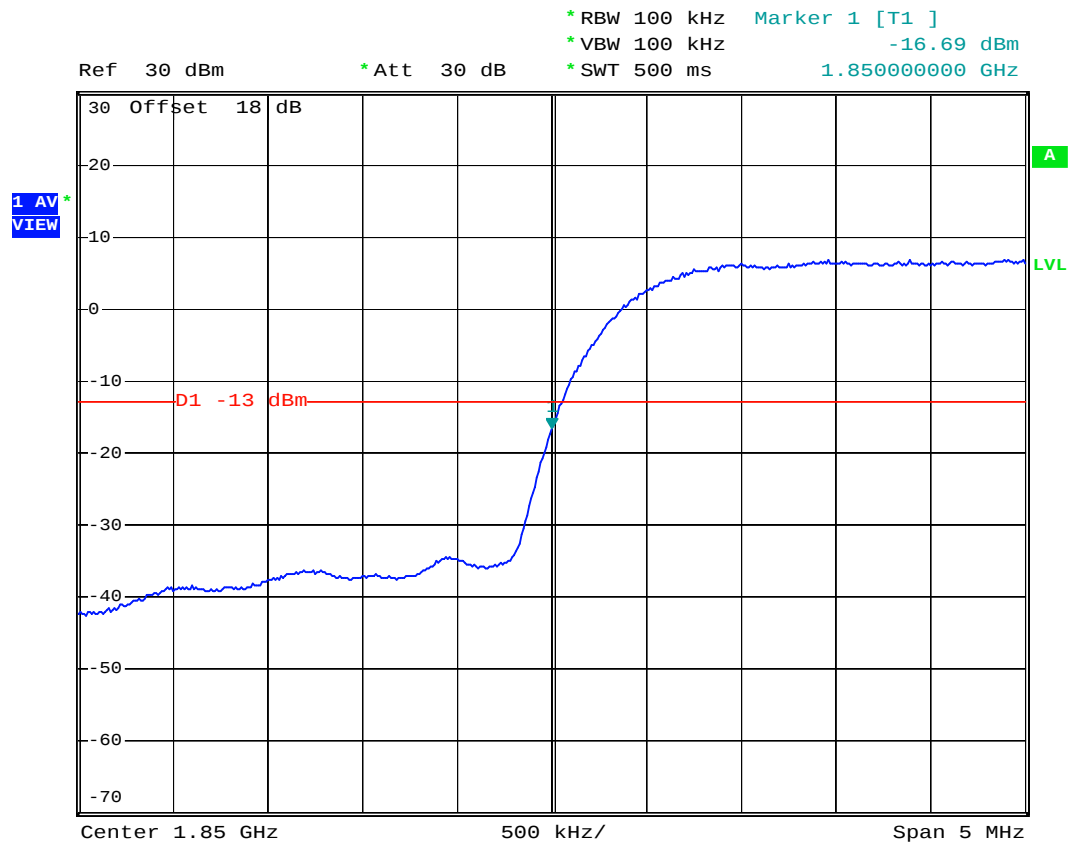
- Test Mode : WCDMA Band V (HSDPA) CH4233 Higher Band Edge
- Power State : High



Date: 8.JUL.2007 00:45:22



- Mode 7
- Test Mode : WCDMA Band II CH9262 Lower Band Edge
- Power State : High



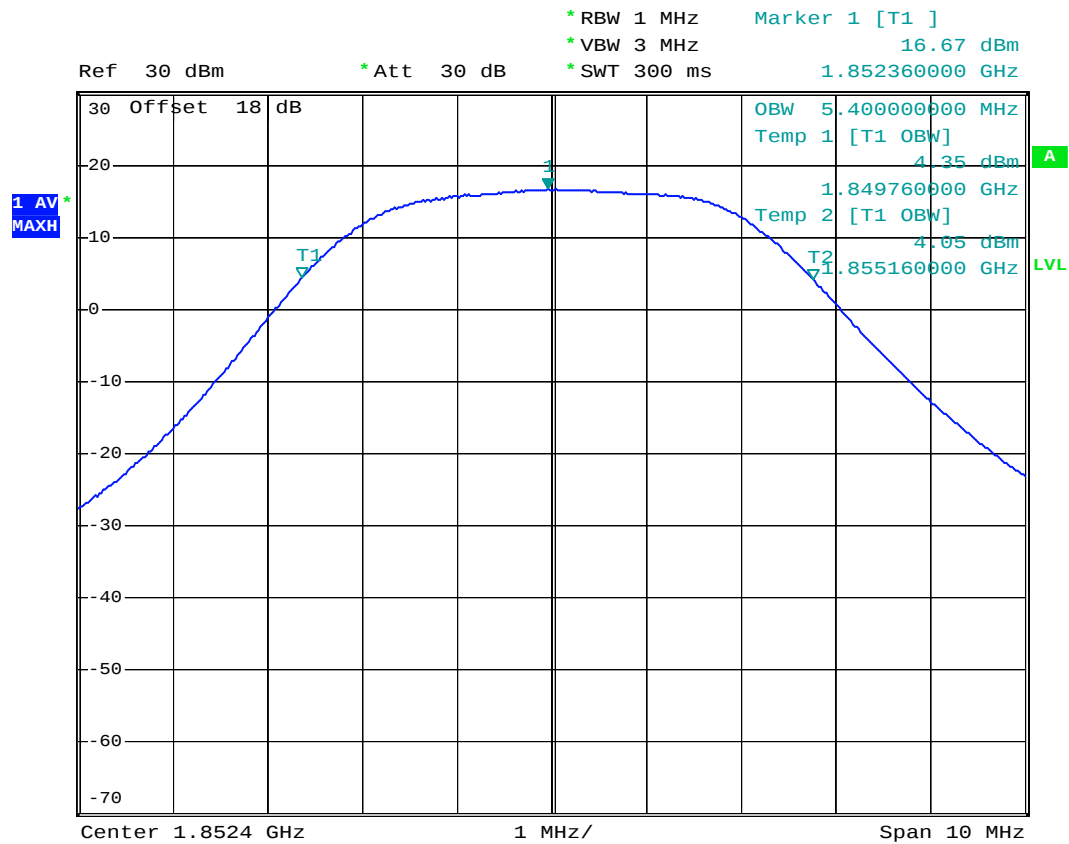
Date: 7.JUL.2007 23:37:06



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band II CH9262 99% Occupied Bandwidth
- Power State : High



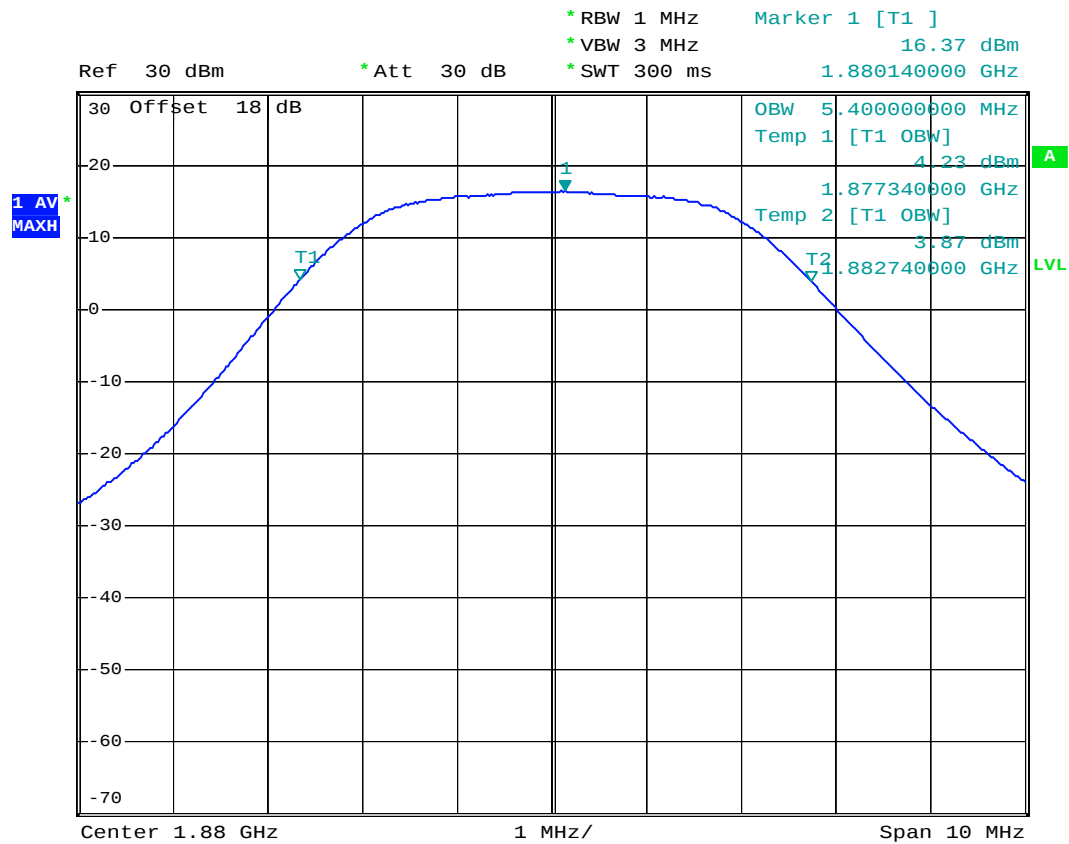
Date: 17.JUL.2007 02:00:58



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band II CH9400 99% Occupied Bandwidth
- Power State : High



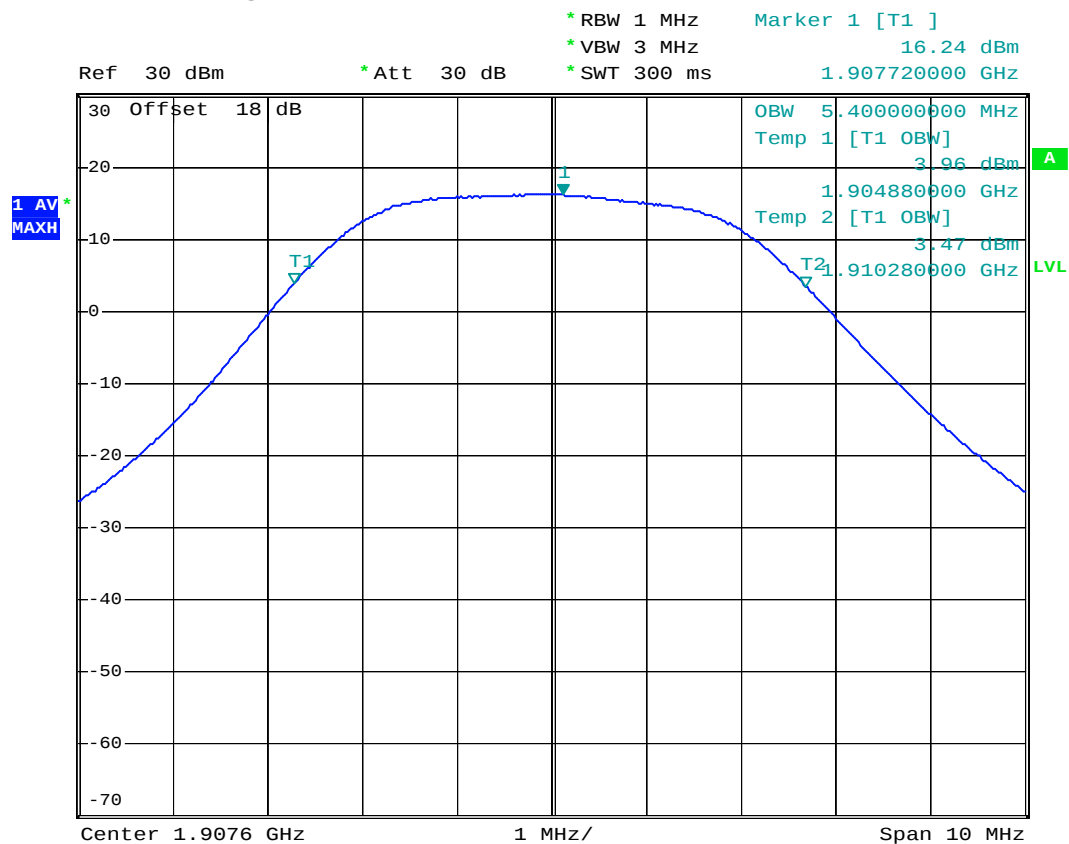
Date: 17.JUL.2007 02:00:09



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band II CH9538 99% Occupied Bandwidth
- Power State : High



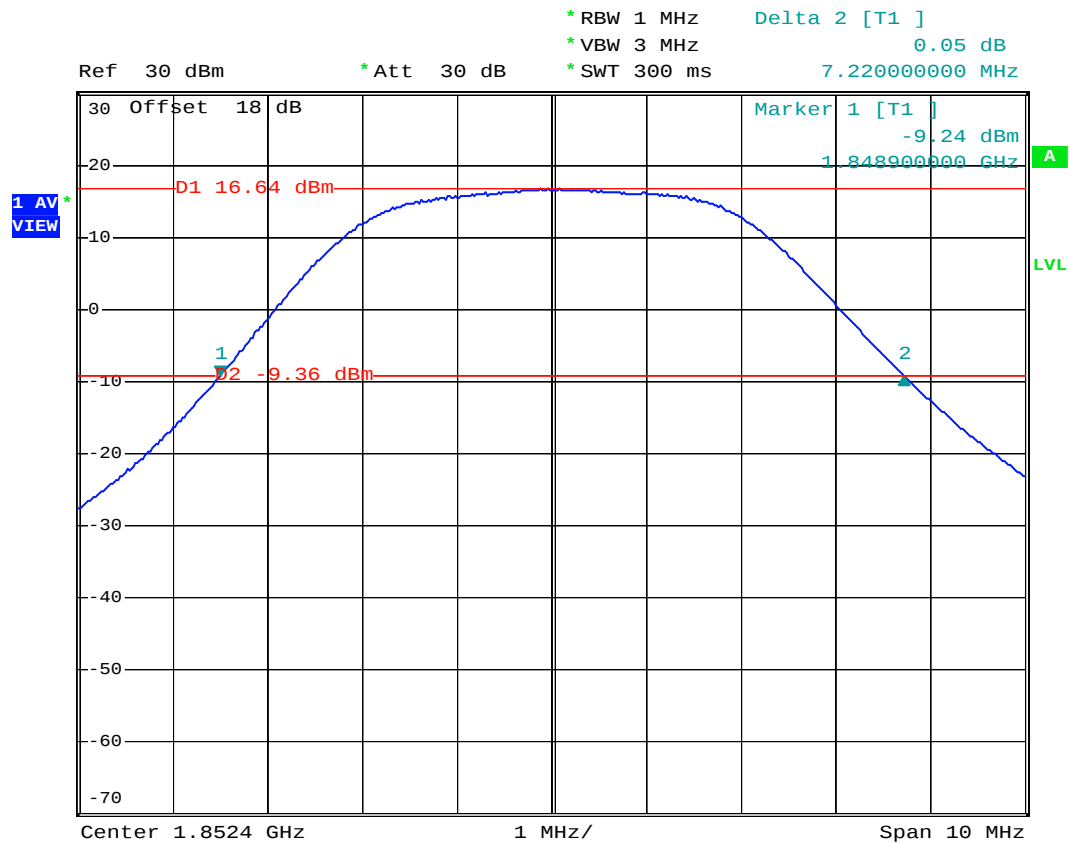
Date: 17.JUL.2007 02:01:43



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band II CH9262 26dB Bandwidth
- Power State : High



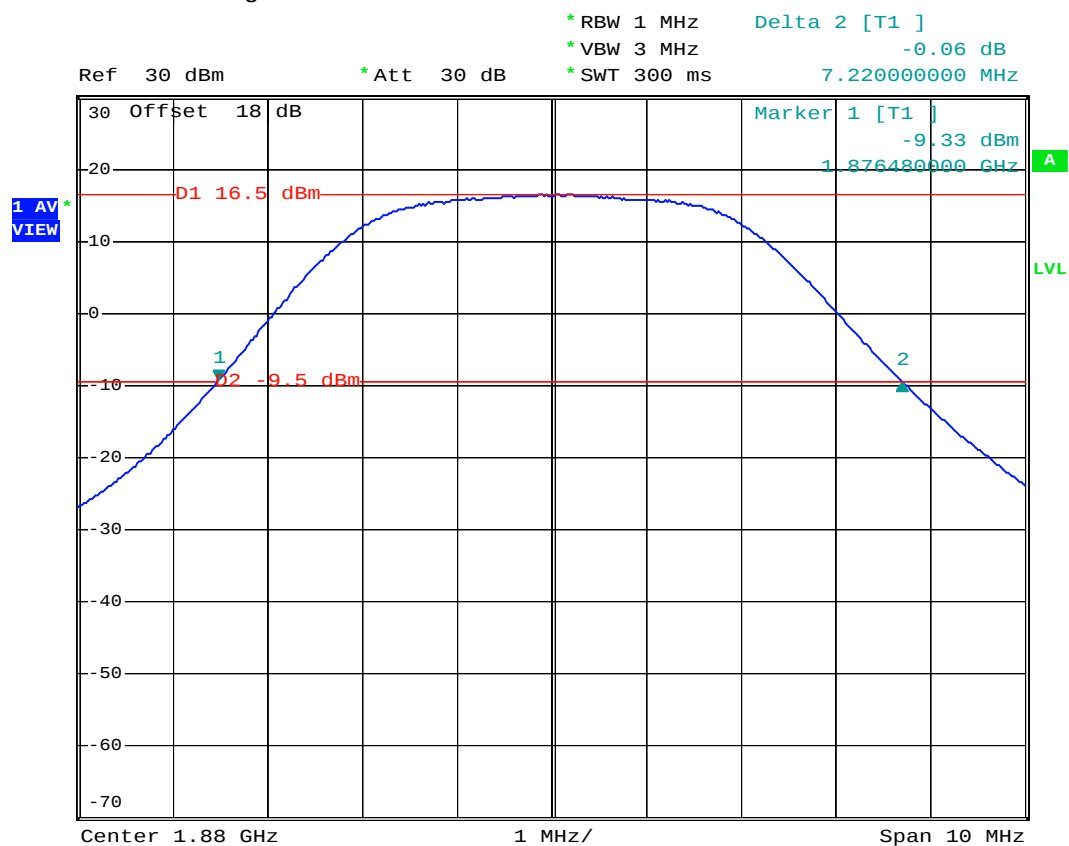
Date: 17.JUL.2007 02:16:04



FCC TEST REPORT

Report No. : FG761327-04A

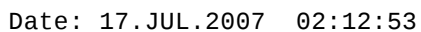
- Test Mode : WCDMA Band II CH9400 26dB Bandwidth
- Power State : High



Date: 17.JUL.2007 02:14:01



- Test Mode : WCDMA Band II CH9538 26dB Bandwidth
- Power State : High

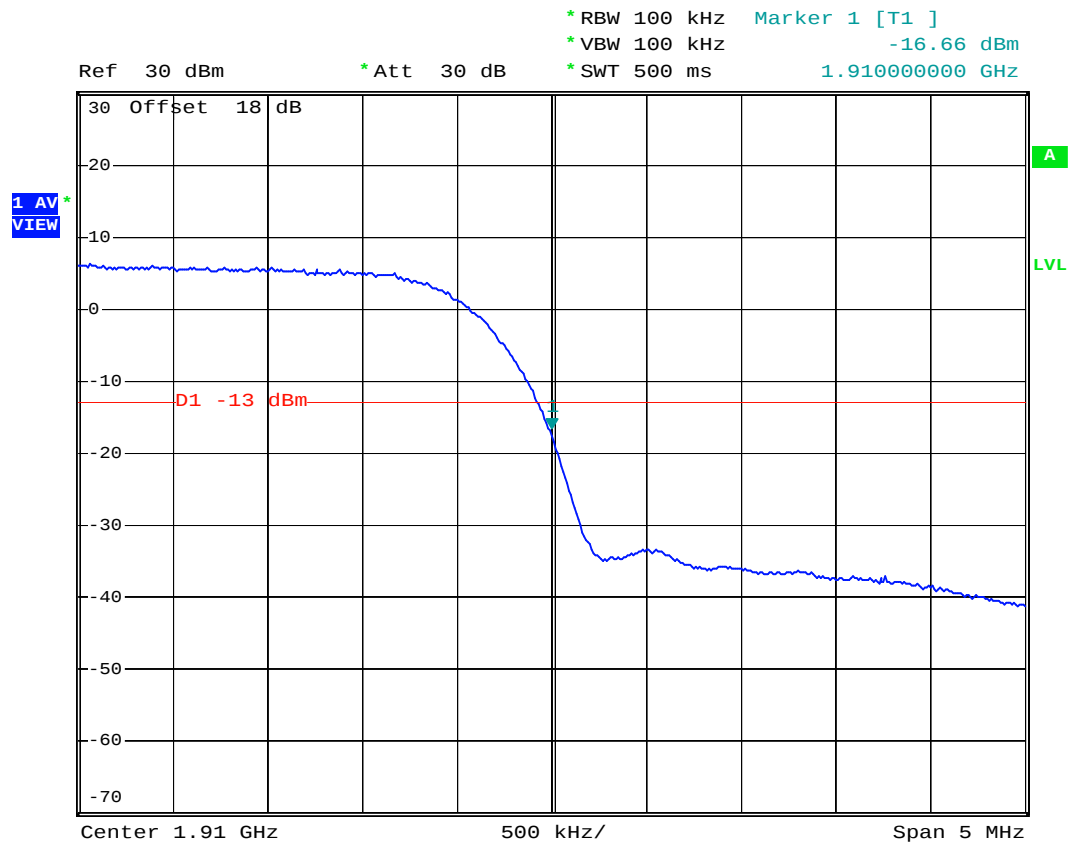




FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band II CH9538 Higher Band Edge
- Power State : High



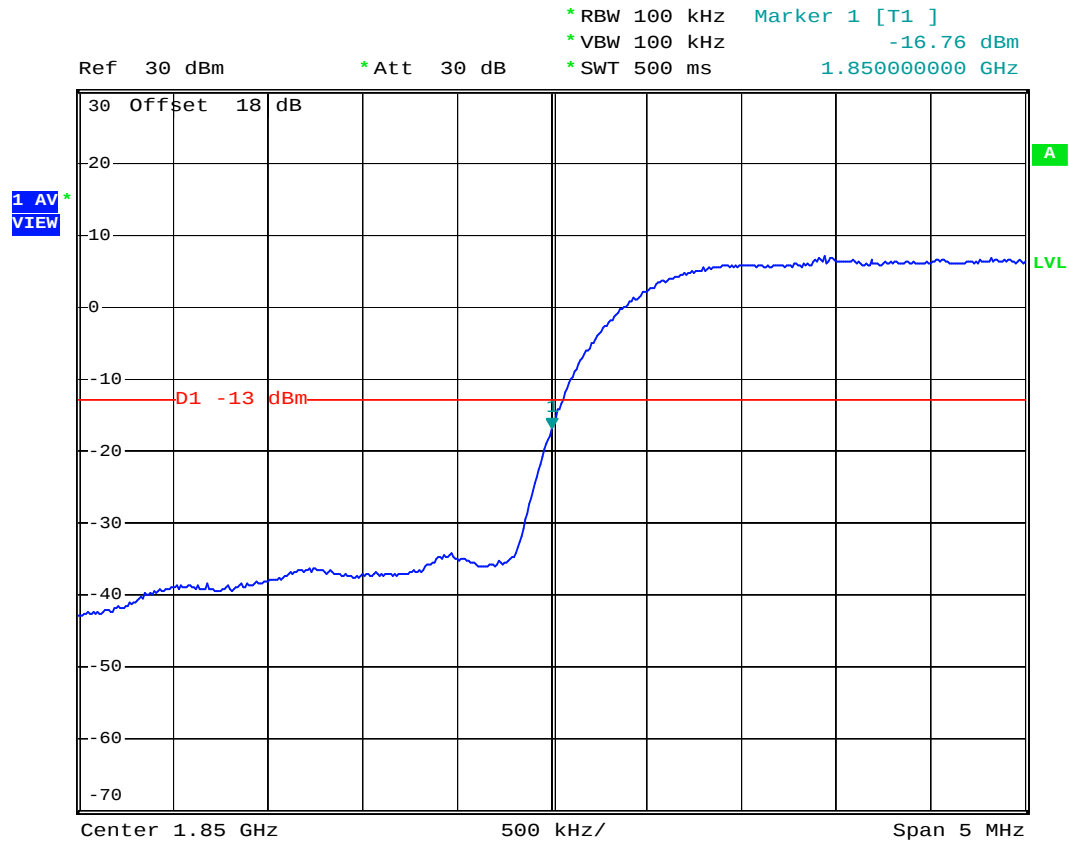
Date: 7.JUL.2007 23:35:52



FCC TEST REPORT

Report No. : FG761327-04A

- Mode 8
- Test Mode : WCDMA Band II (HSDPA) CH9262 Lower Band Edge
- Power State : High



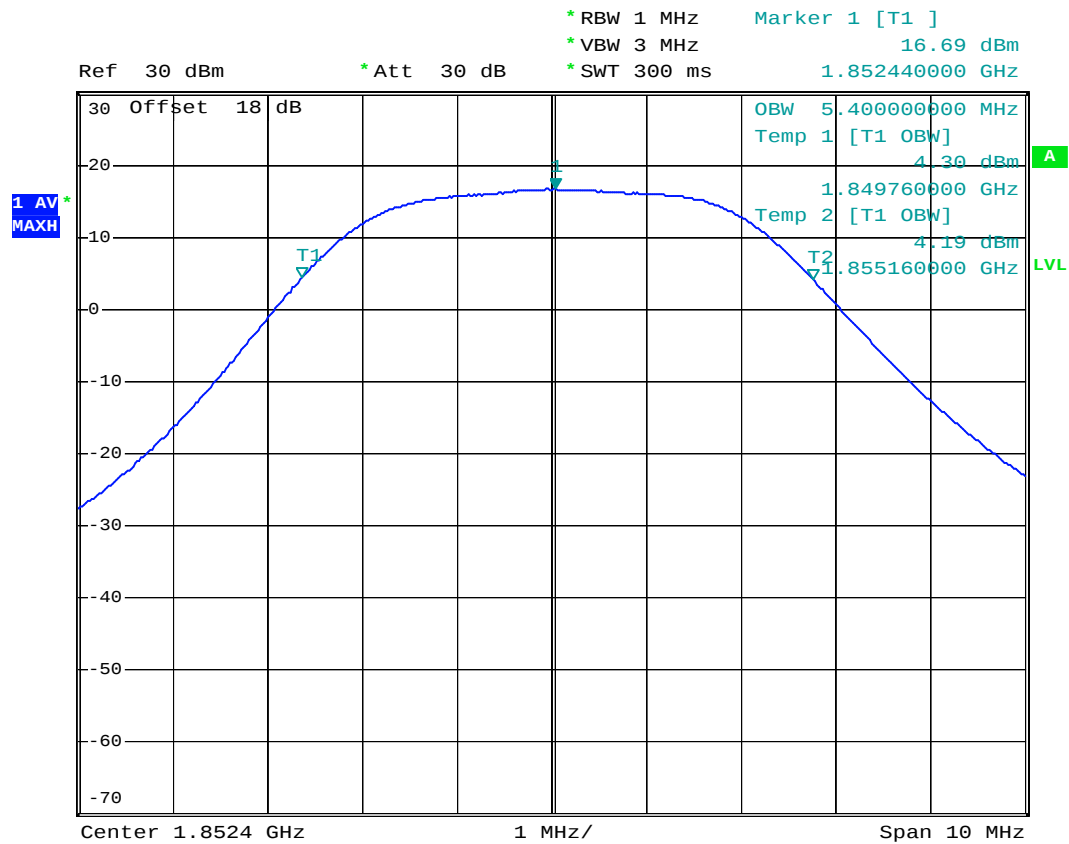
Date: 8.JUL.2007 00:05:50



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band II (HSDPA) CH9262 99% Occupied Bandwidth
- Power State : High



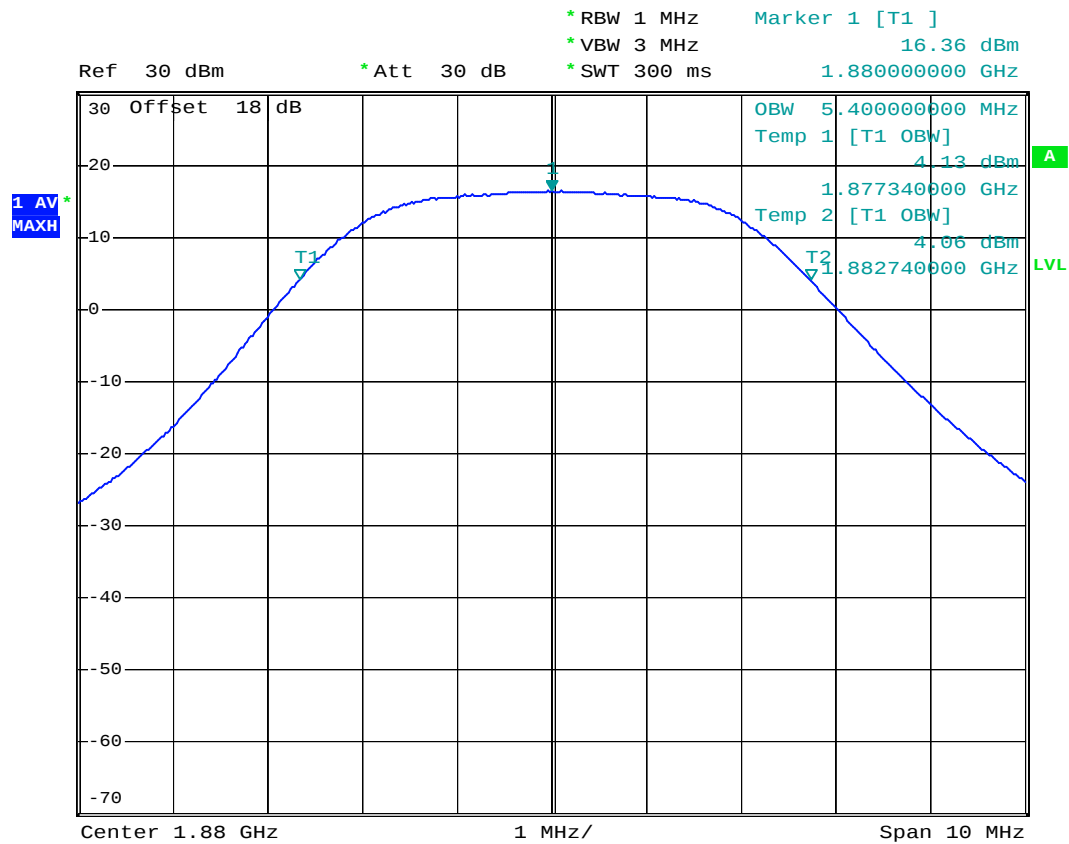
Date: 17.JUL.2007 02:02:50



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band II (HSDPA) CH9400 99% Occupied Bandwidth
- Power State : High



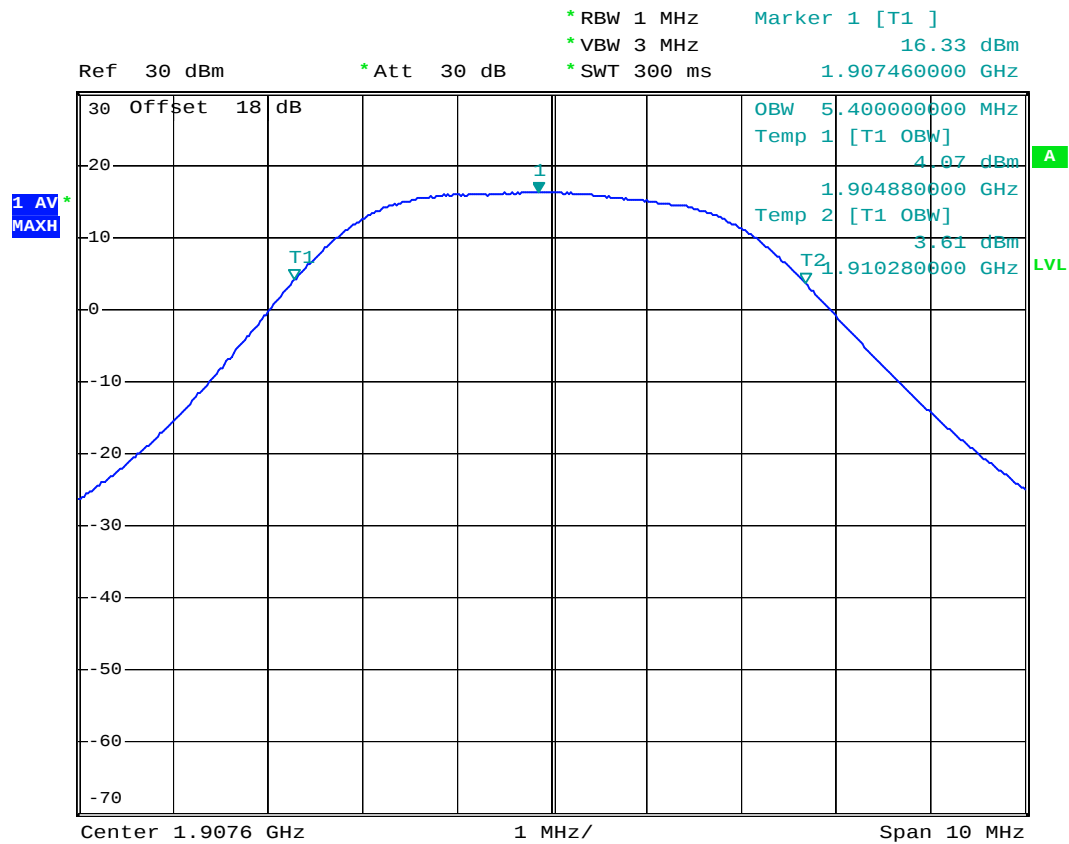
Date: 17.JUL.2007 02:03:26



FCC TEST REPORT

Report No. : FG761327-04A

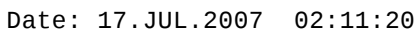
- Test Mode : WCDMA Band II (HSDPA) CH9538 99% Occupied Bandwidth
- Power State : High



Date: 17.JUL.2007 02:04:33



- Test Mode : WCDMA Band II (HSDPA) CH9262 26dB Bandwidth
- Power State : High

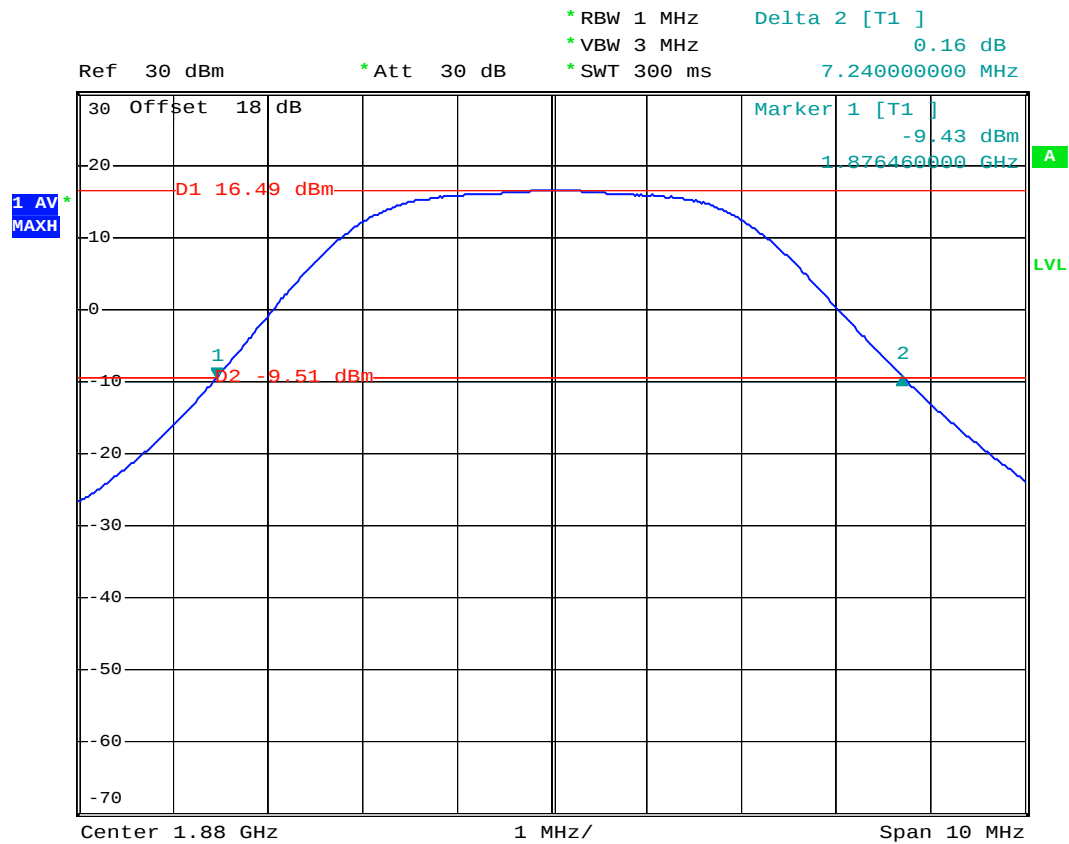




FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band II (HSDPA) CH9400 26dB Bandwidth
- Power State : High



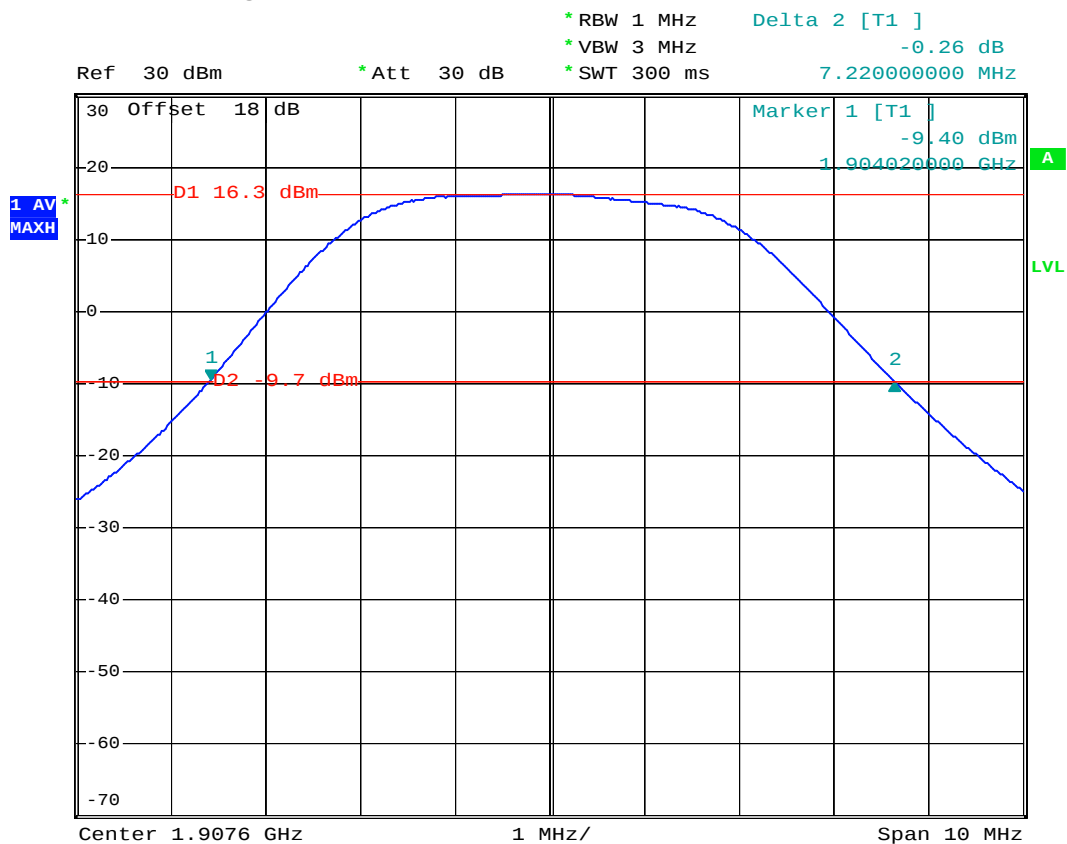
Date: 17.JUL.2007 02:09:42



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band II (HSDPA) CH9538 26dB Bandwidth
- Power State : High



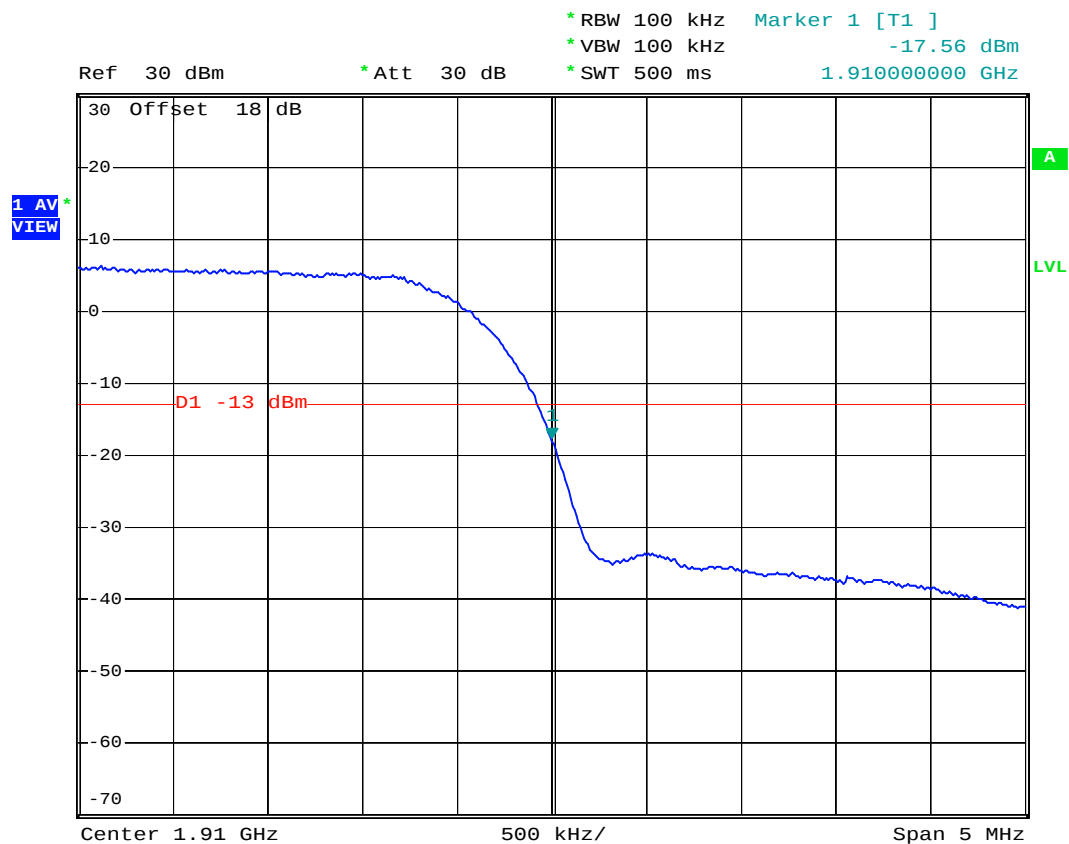
Date: 17.JUL.2007 02:07:51



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band II (HSDPA) CH9538 Higher Band Edge
- Power State : High



Date: 7.JUL.2007 23:56:06

4.5 Conducted Emission

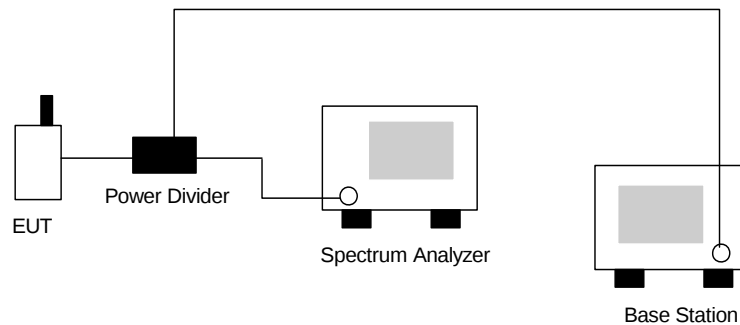
4.5.1 Measurement Instruments

As described in chapter 5 of this test report.

4.5.2 Test Procedure

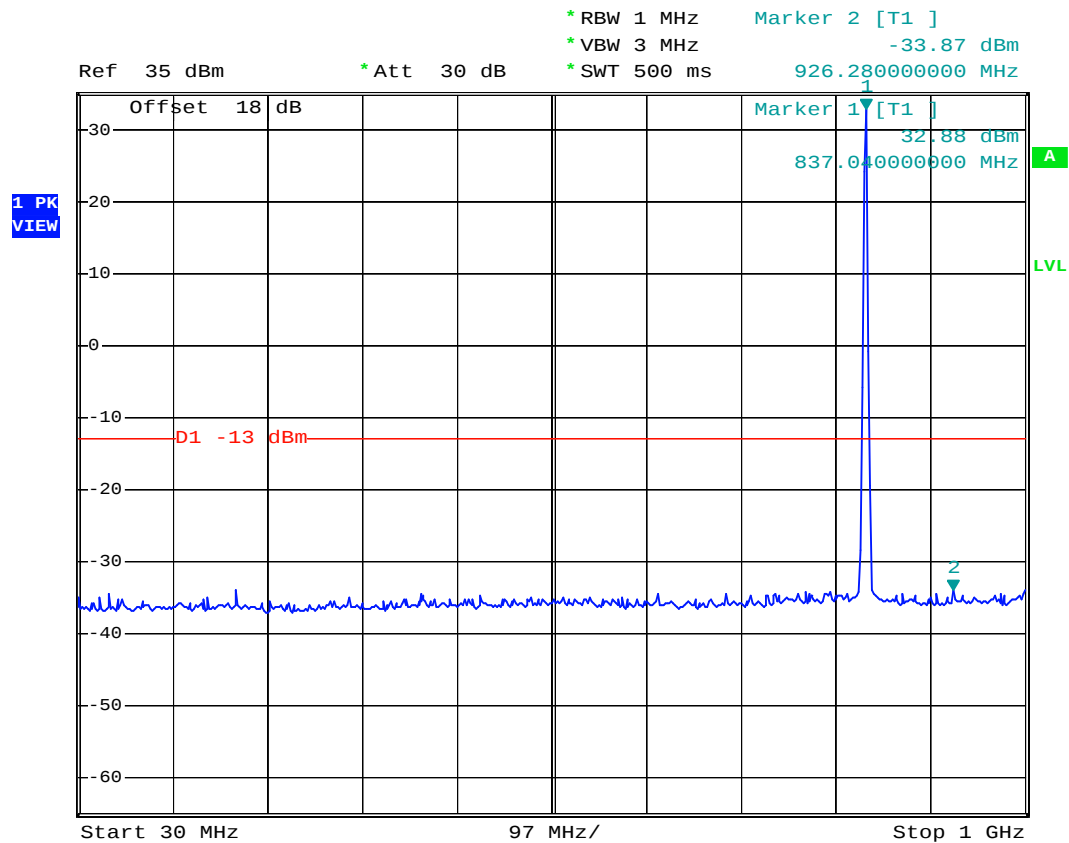
1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The middle channel for the highest RF power within the transmitting frequency was measured.
3. The conducted spurious emission for the whole frequency range was taken.

4.5.3 Test Setup Layout



**4.5.4 Test Result**

- Mode 1
- Test Mode : GSM850 (GSM) CH189
- Frequency Range : 30M-1G



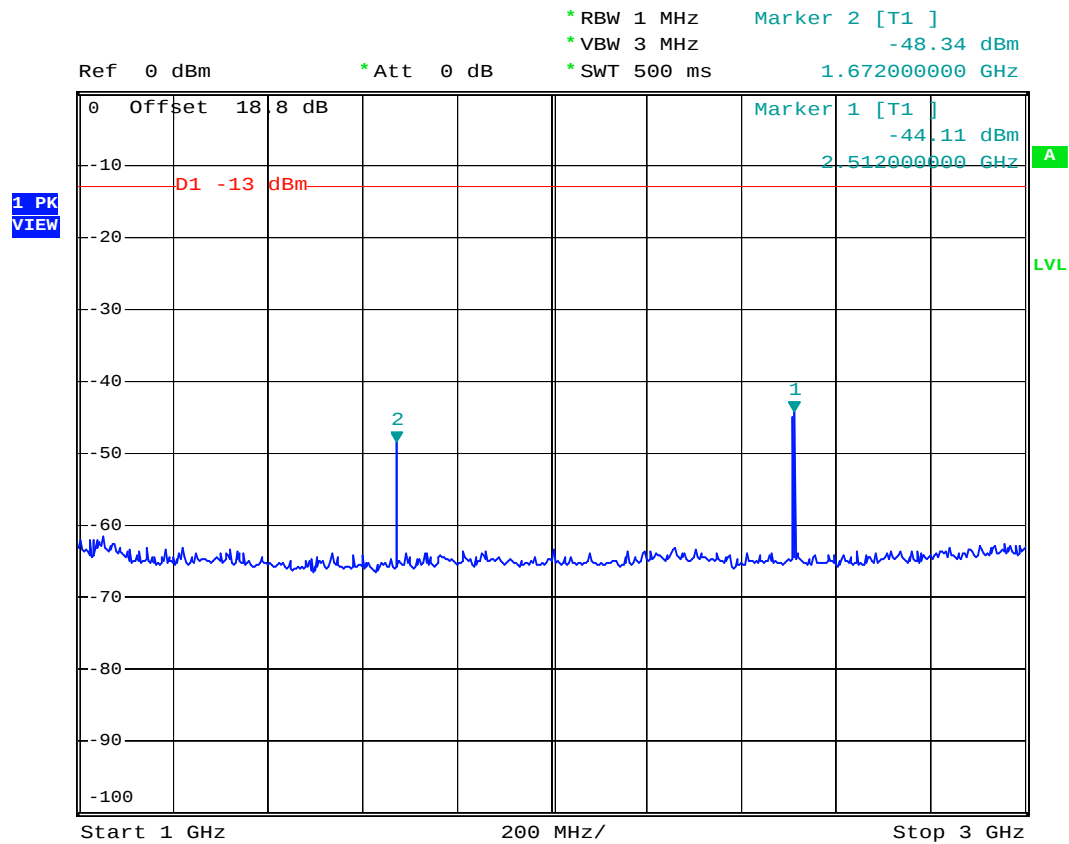
Date: 4.JUL.2007 00:02:26



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : GSM850 (GSM) CH189
- Frequency Range : 1G-3G



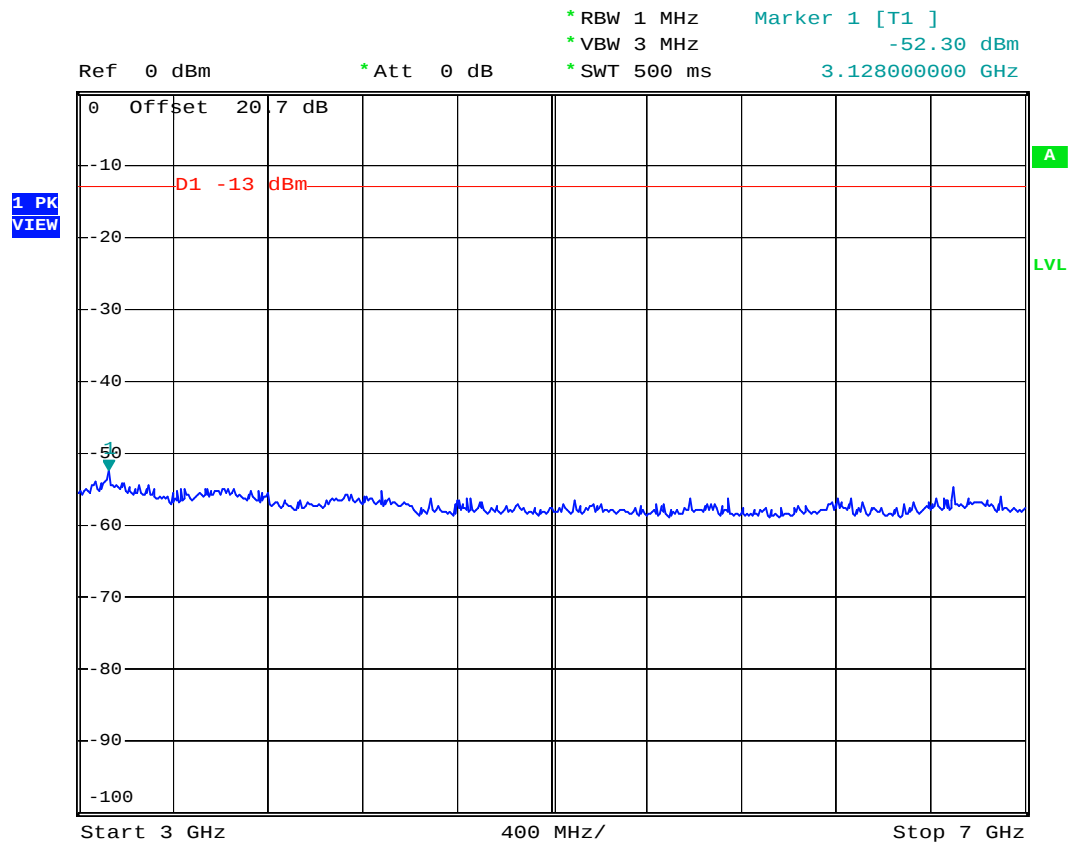
Date: 4.JUL.2007 00:09:52



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : GSM850 (GSM) CH189
- Frequency Range : 3G-7G



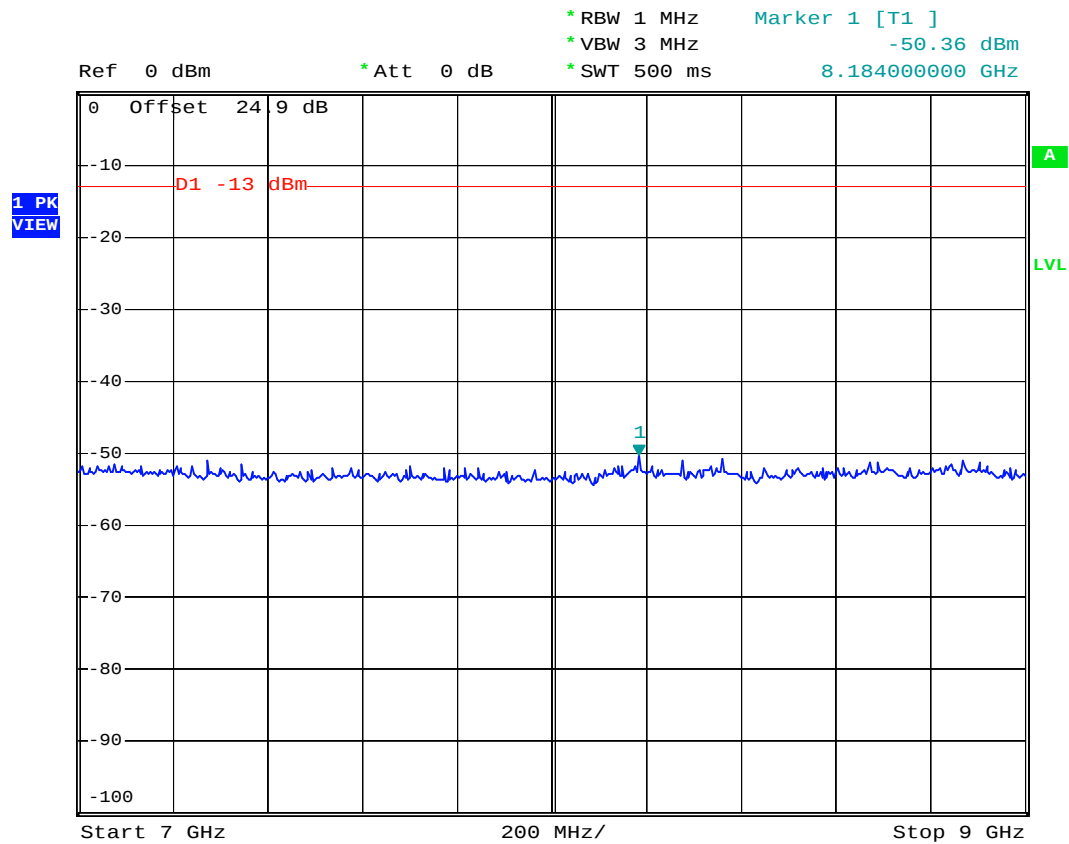
Date: 4.JUL.2007 00:11:54



FCC TEST REPORT

Report No. : FG761327-04A

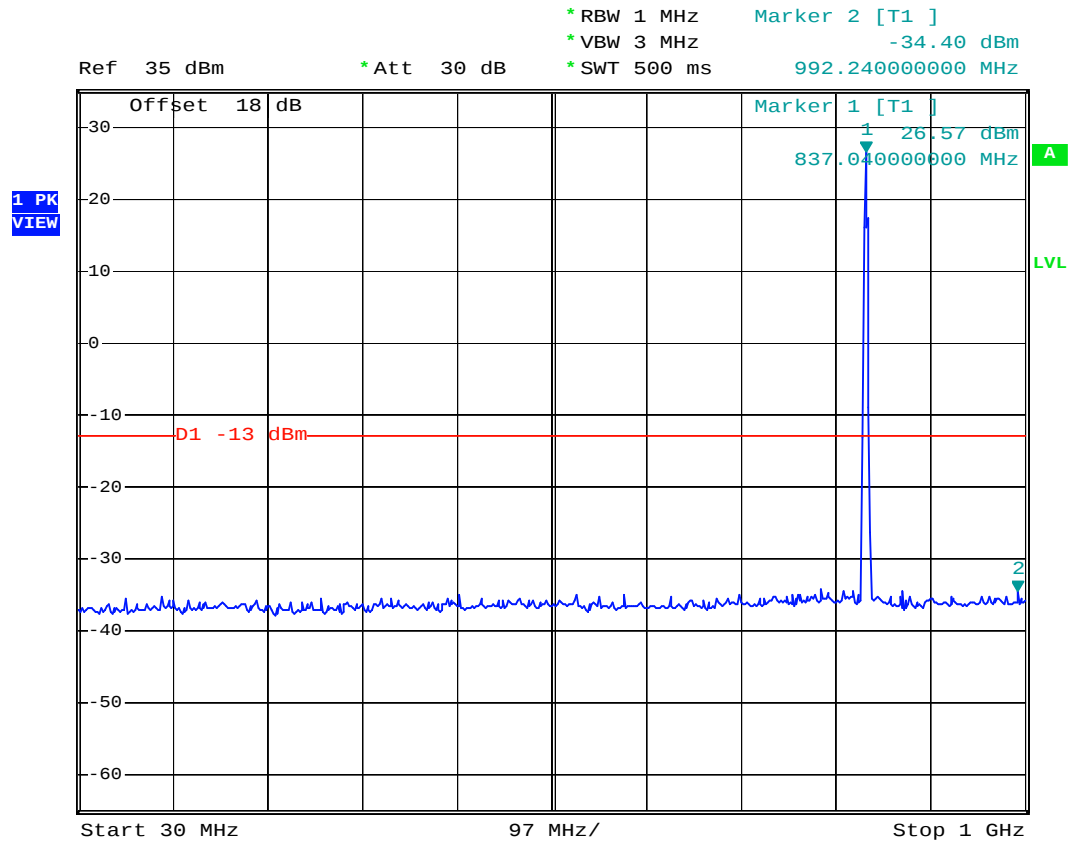
- Test Mode : GSM850 (GSM) CH189
- Frequency Range : 7G-9G



Date: 4.JUL.2007 00:12:26



- Mode 2
- Test Mode : GSM850 (EDGE) CH189
- Frequency Range : 30M-1G



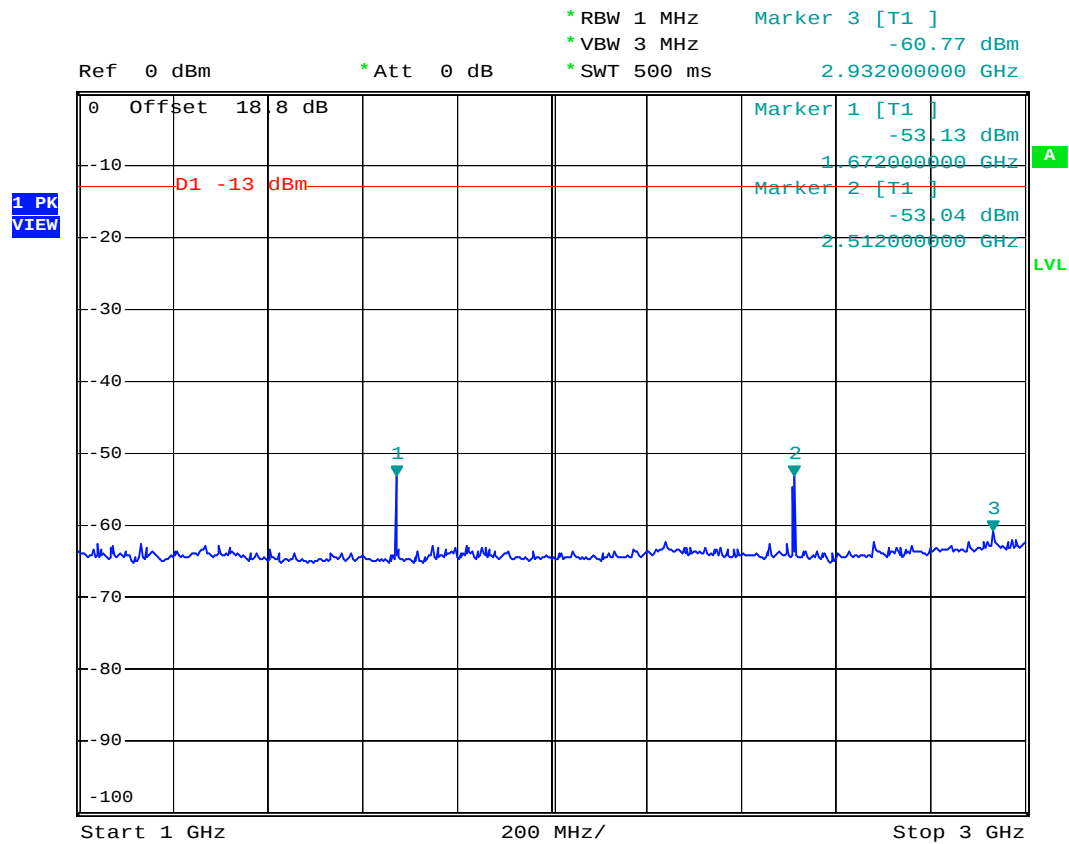
Date: 16.JUL.2007 23:03:32



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : GSM850 (EDGE) CH189
- Frequency Range : 1G-3G



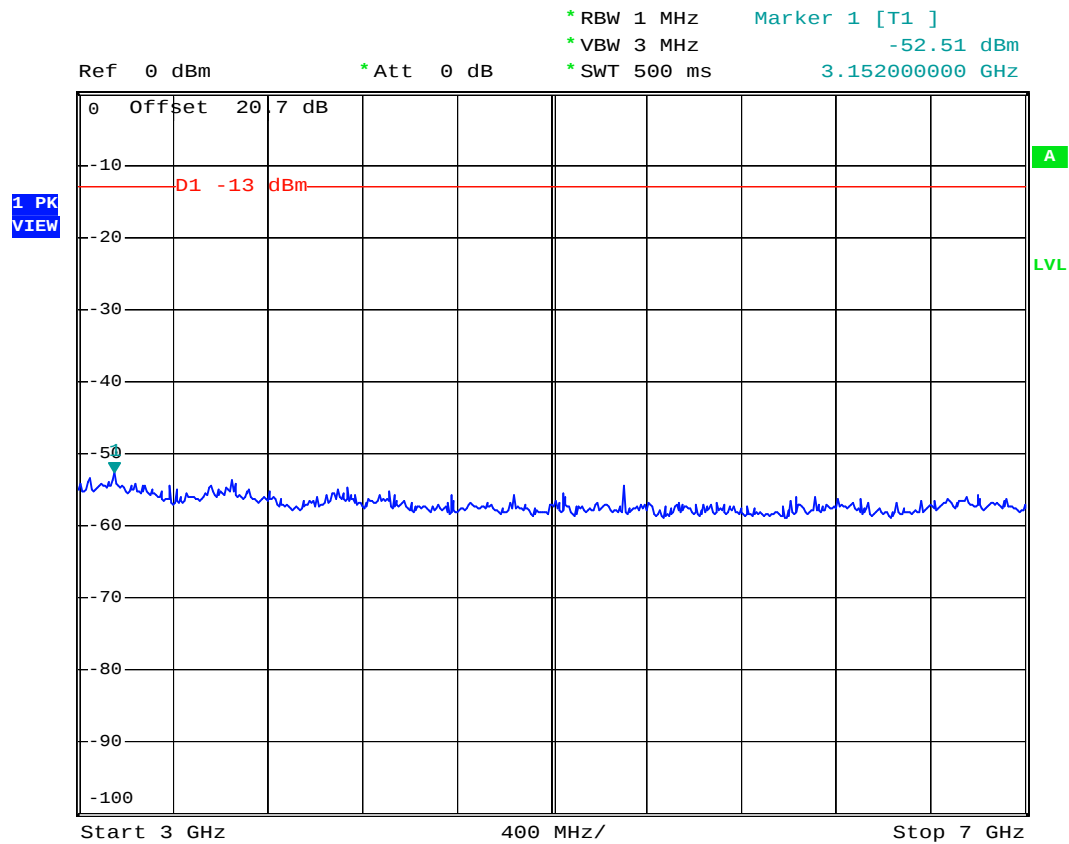
Date: 16.JUL.2007 22:16:01



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : GSM850 (EDGE) CH189
- Frequency Range : 3G-7G



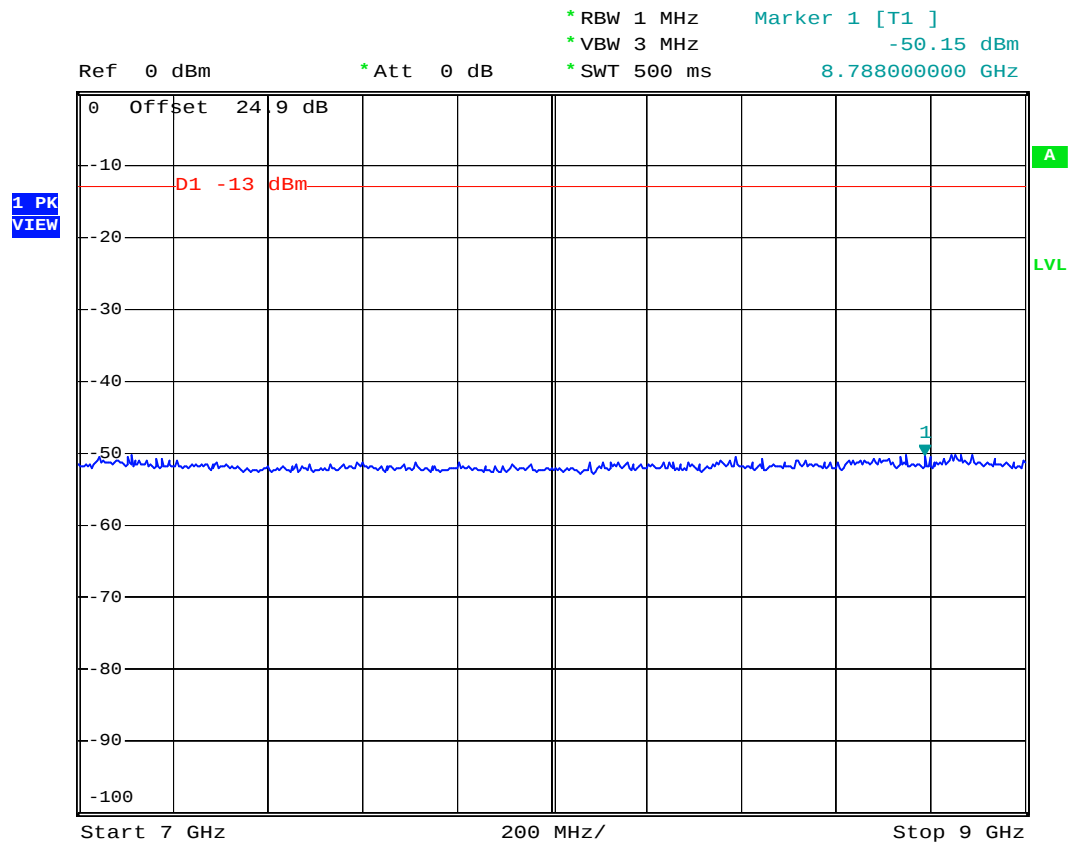
Date: 16.JUL.2007 22:23:23



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : GSM850 (EDGE) CH189
- Frequency Range : 7G-9G



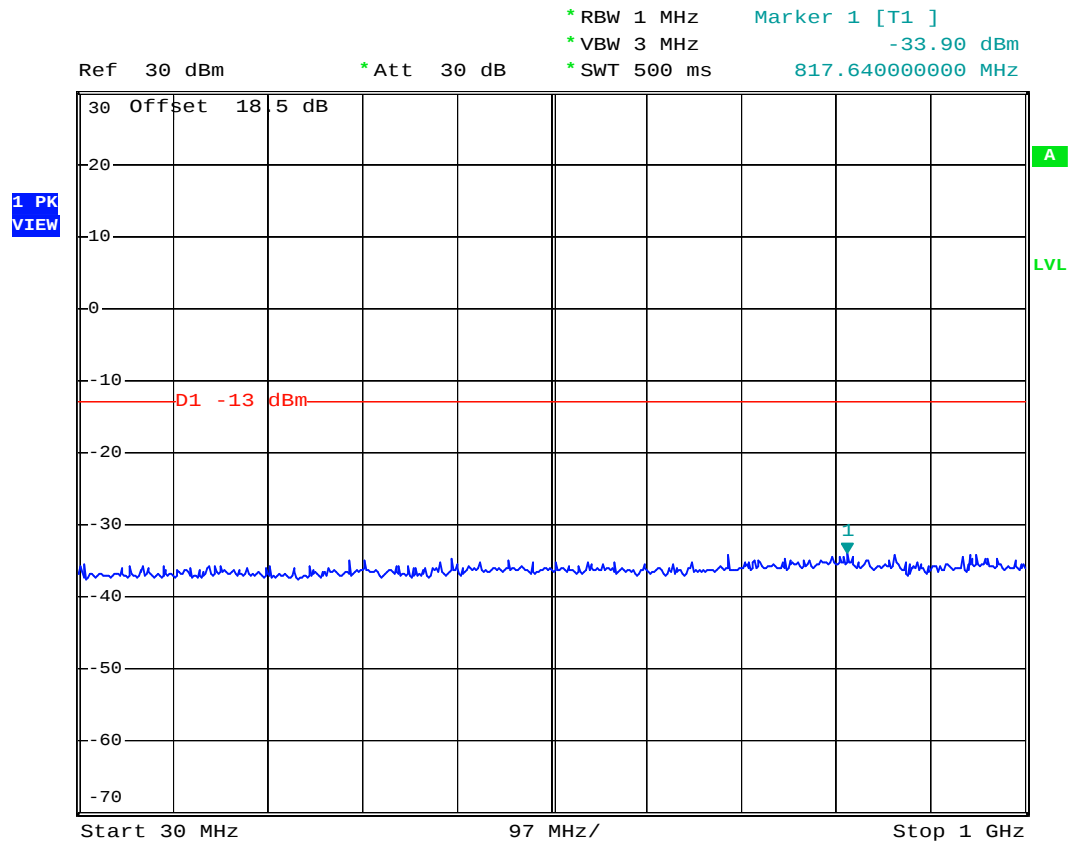
Date: 16.JUL.2007 22:27:33



FCC TEST REPORT

Report No. : FG761327-04A

- Mode 3
- Test Mode : PCS1900 (GSM) CH661
- Frequency Range : 30M-1G



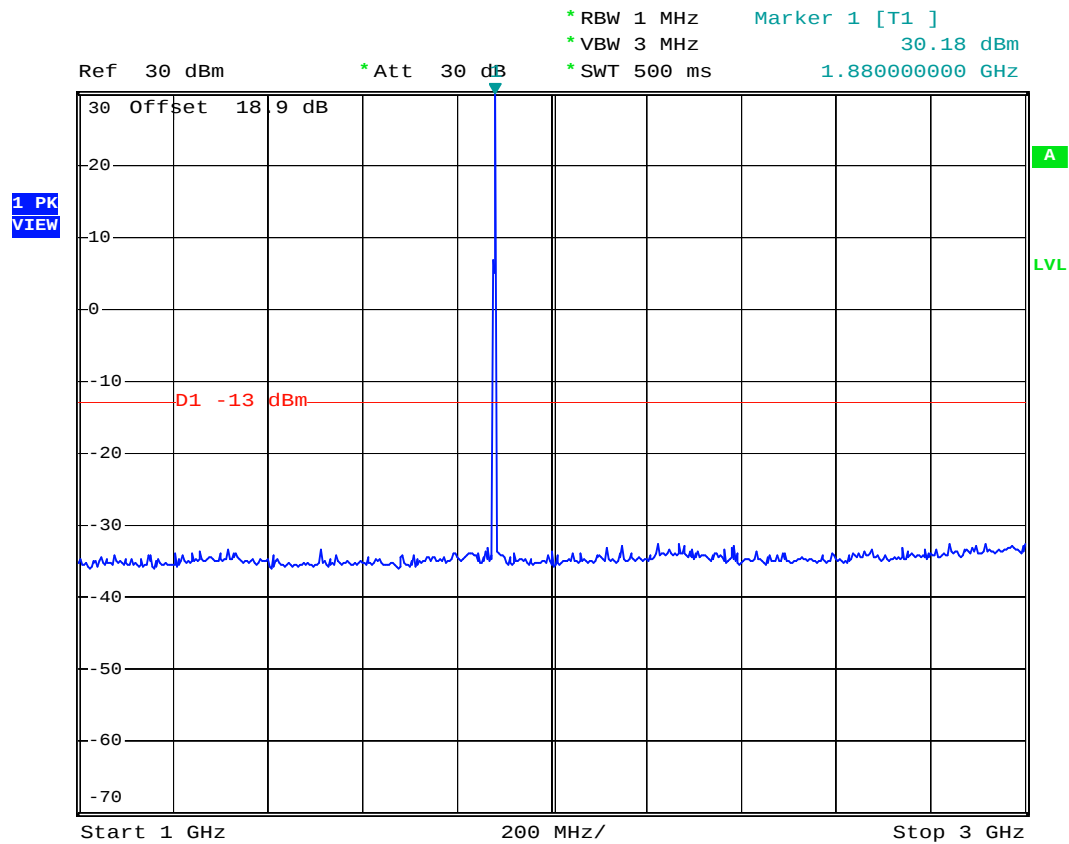
Date: 4.JUL.2007 01:03:34



FCC TEST REPORT

Report No. : FG761327-04A

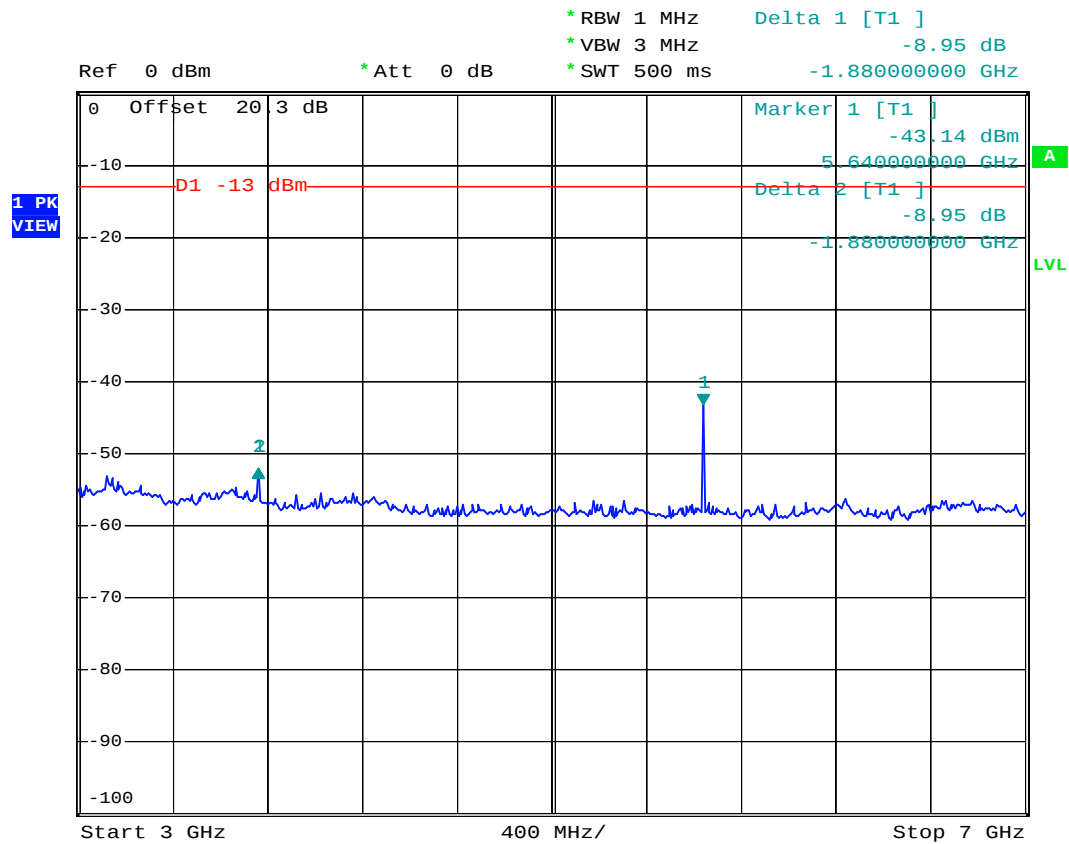
- Test Mode : PCS1900 (GSM) CH661
- Frequency Range : 1G-3G



Date: 4.JUL.2007 01:05:14



- Test Mode : PCS1900 (GSM) CH661
- Frequency Range : 3G-7G



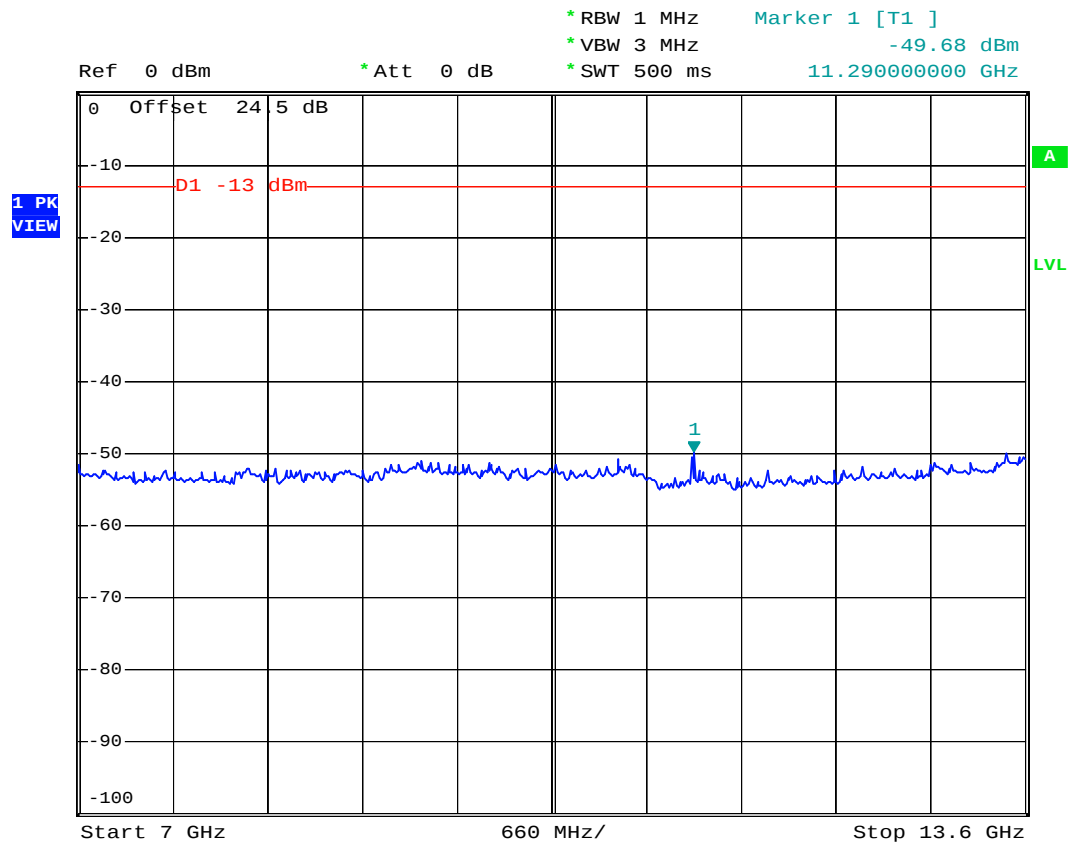
Date: 4.JUL.2007 01:06:18



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : PCS1900 (GSM) CH661
- Frequency Range : 7G-13.6G



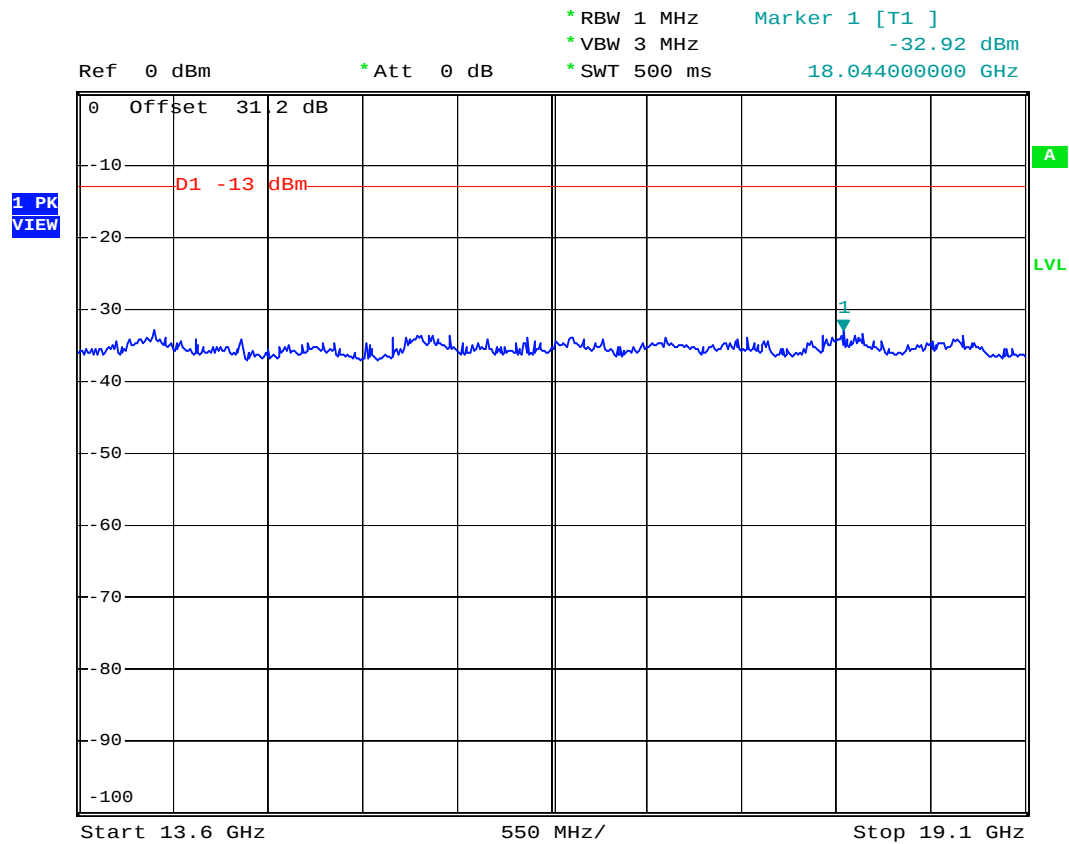
Date: 4.JUL.2007 01:07:15



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : PCS1900 (GSM) CH661
- Frequency Range : 13.6G-19.1G



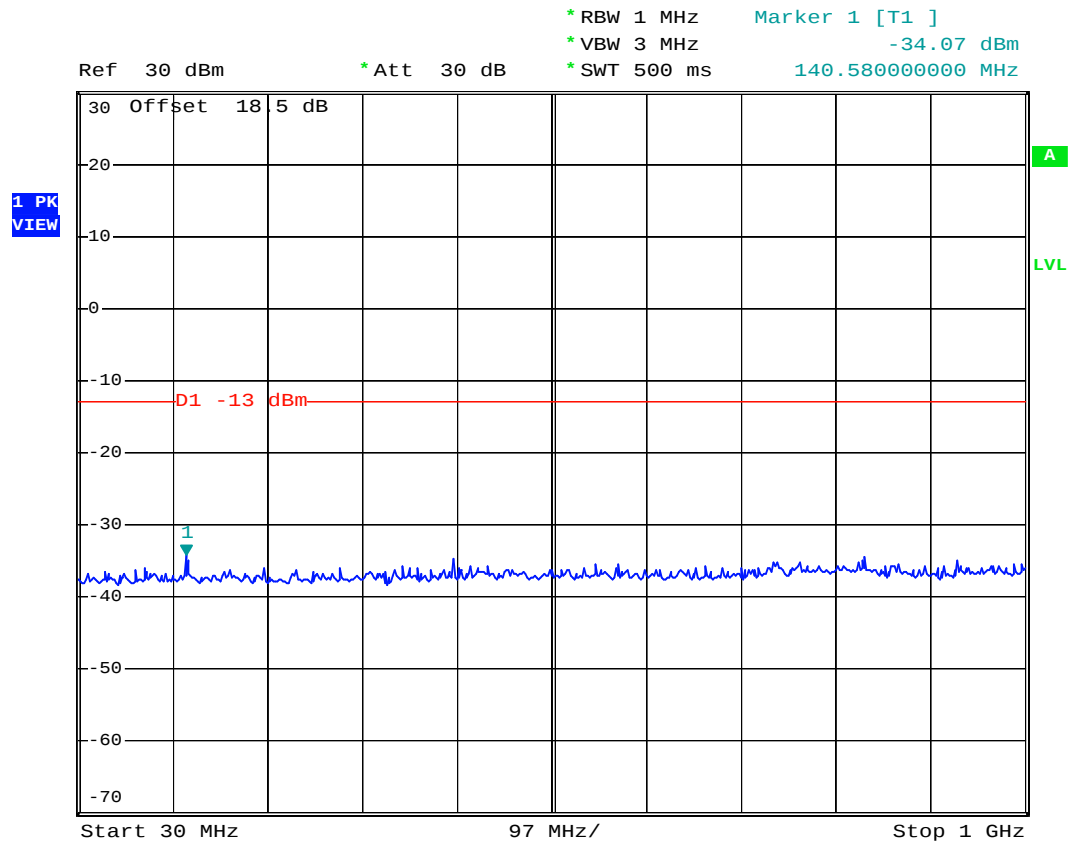
Date: 4.JUL.2007 01:08:23



FCC TEST REPORT

Report No. : FG761327-04A

- Mode 4
- Test Mode : PCS1900 (EDGE) CH661
- Frequency Range : 30M-1G



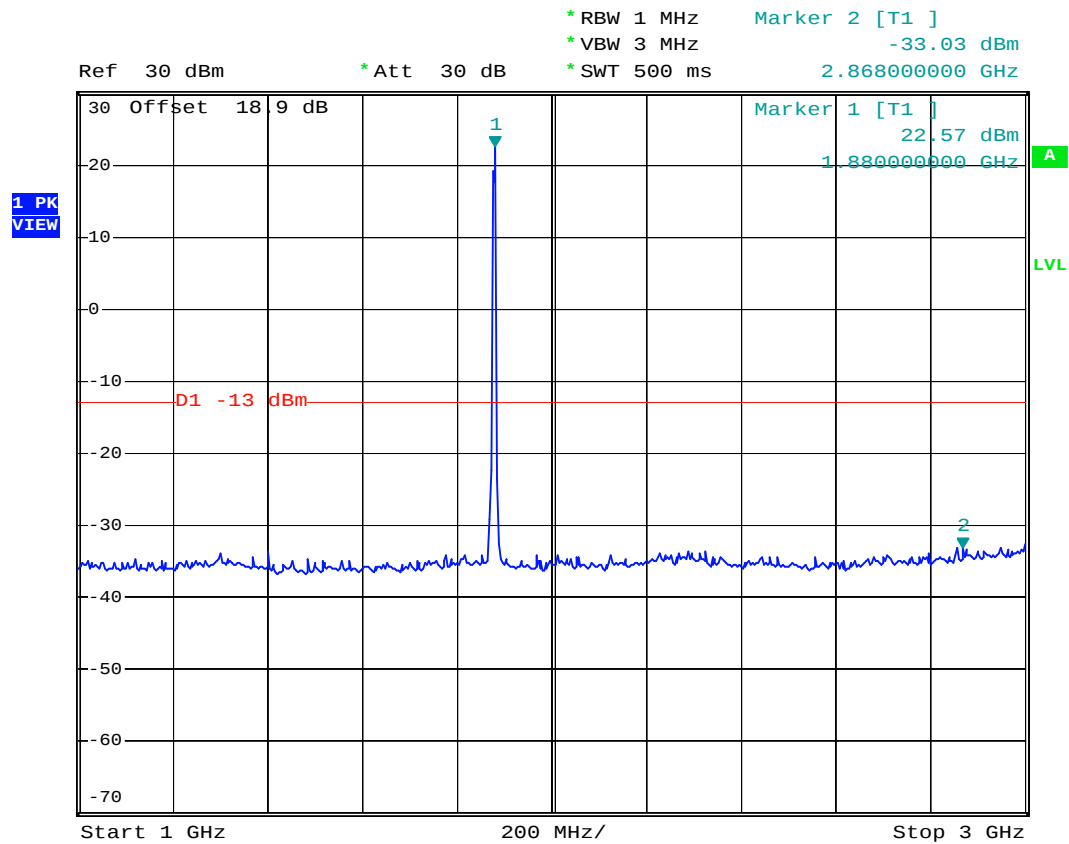
Date: 8.JUL.2007 02:24:04



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : PCS1900 (EDGE) CH661
- Frequency Range : 1G-3G



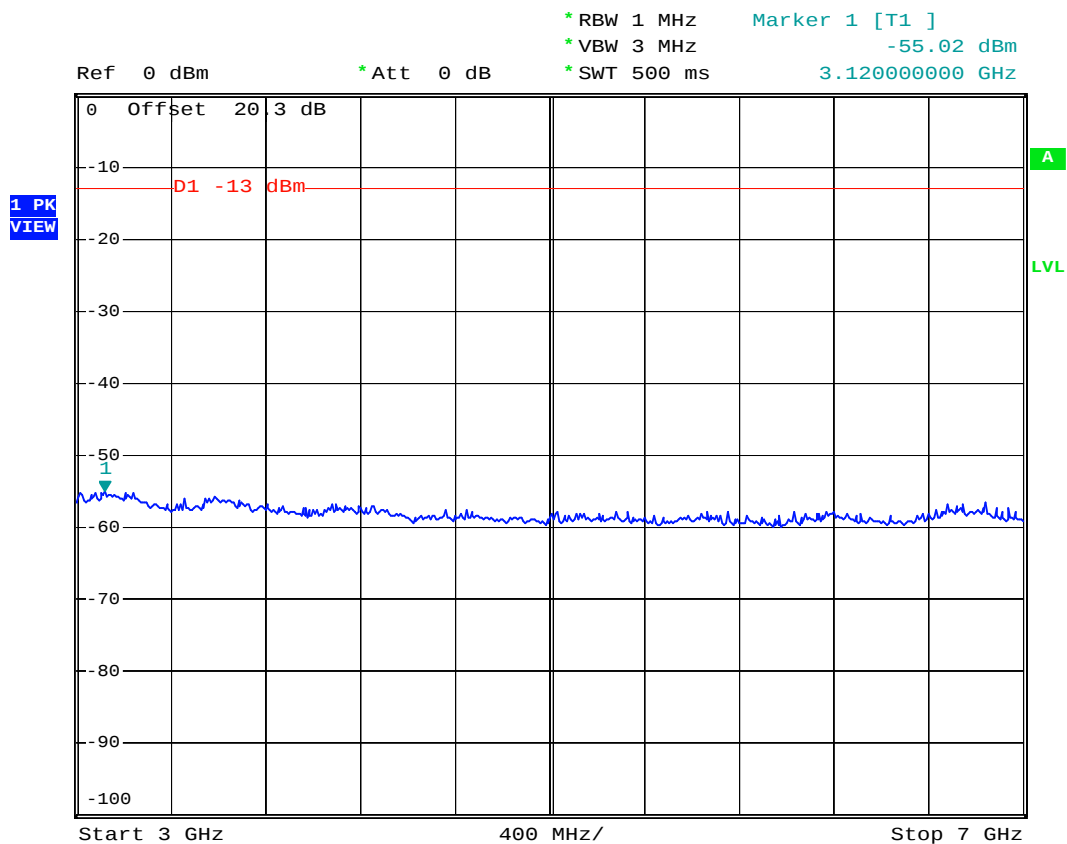
Date: 8.JUL.2007 02:26:52



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : PCS1900 (EDGE) CH661
- Frequency Range : 3G-7G



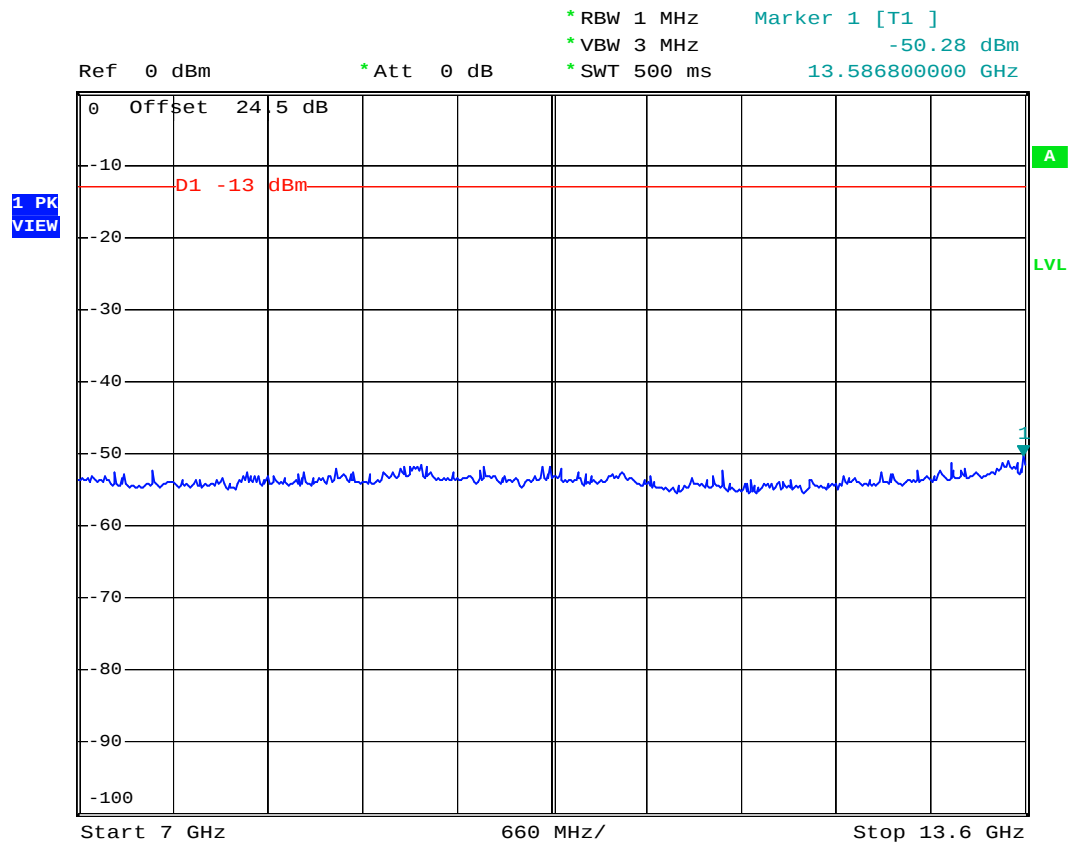
Date: 8.JUL.2007 02:30:25



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : PCS1900 (EDGE) CH661
- Frequency Range : 7G-13.6G



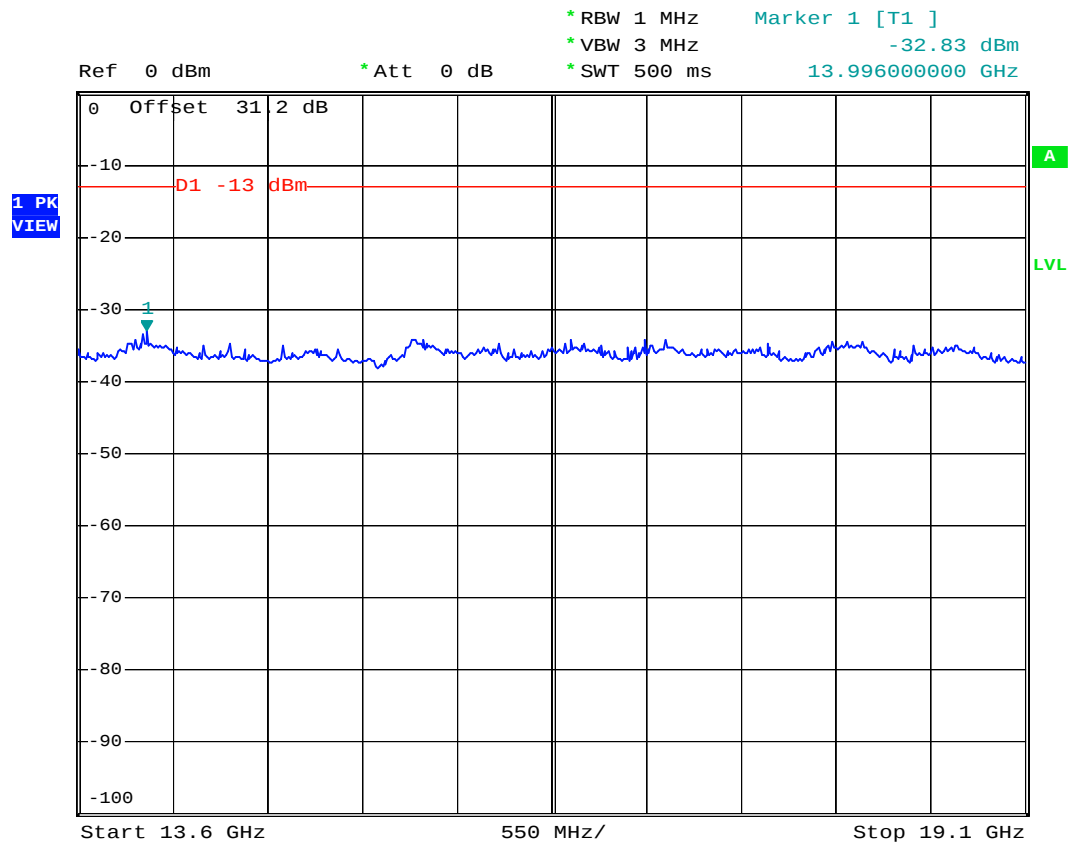
Date: 8.JUL.2007 02:32:28



FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : PCS1900 (EDGE) CH661
- Frequency Range : 13.6G-19.1G



Date: 8.JUL.2007 02:34:34



Report No. : FG761327-04A

- ```
* RBW 1 MHz Marker 2 [T1]
* VBW 3 MHz -34.79 dBm
* SWT 500 ms 482.020000000 MHz
```



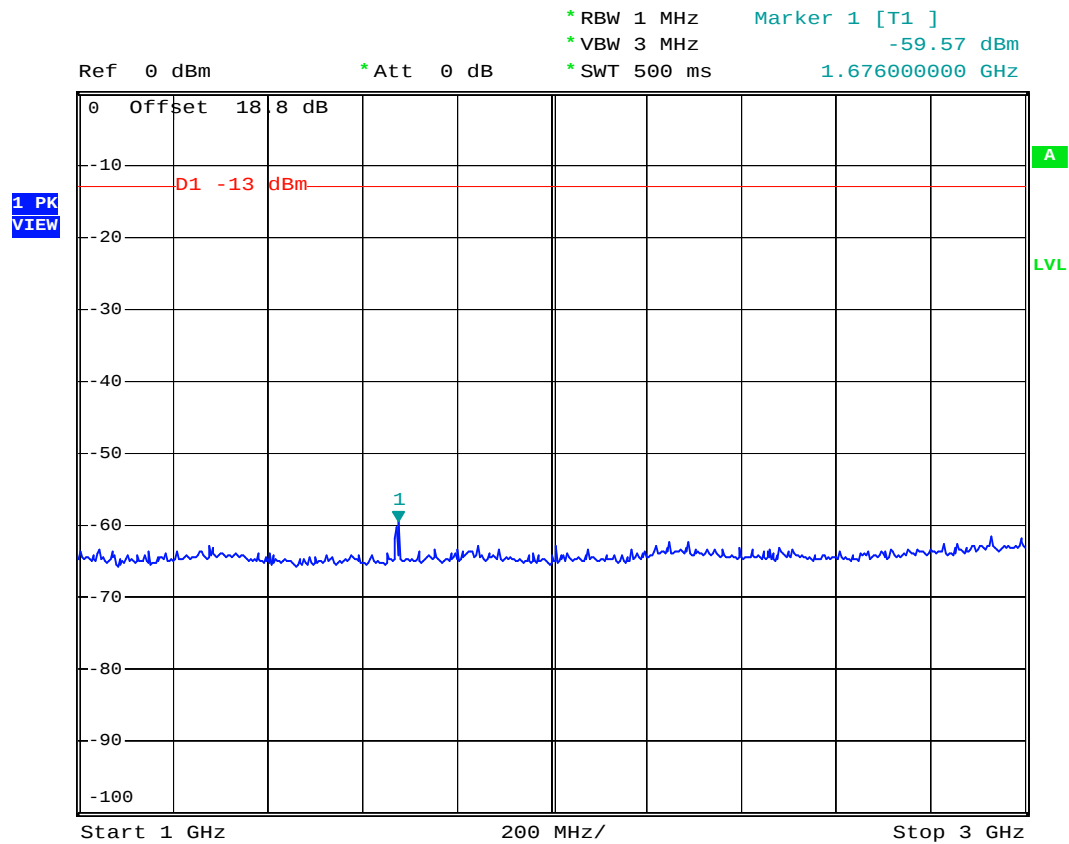
Date: 4.JUL.2007 04:04:16



## FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band V CH4182
- Frequency Range : 1G-3G



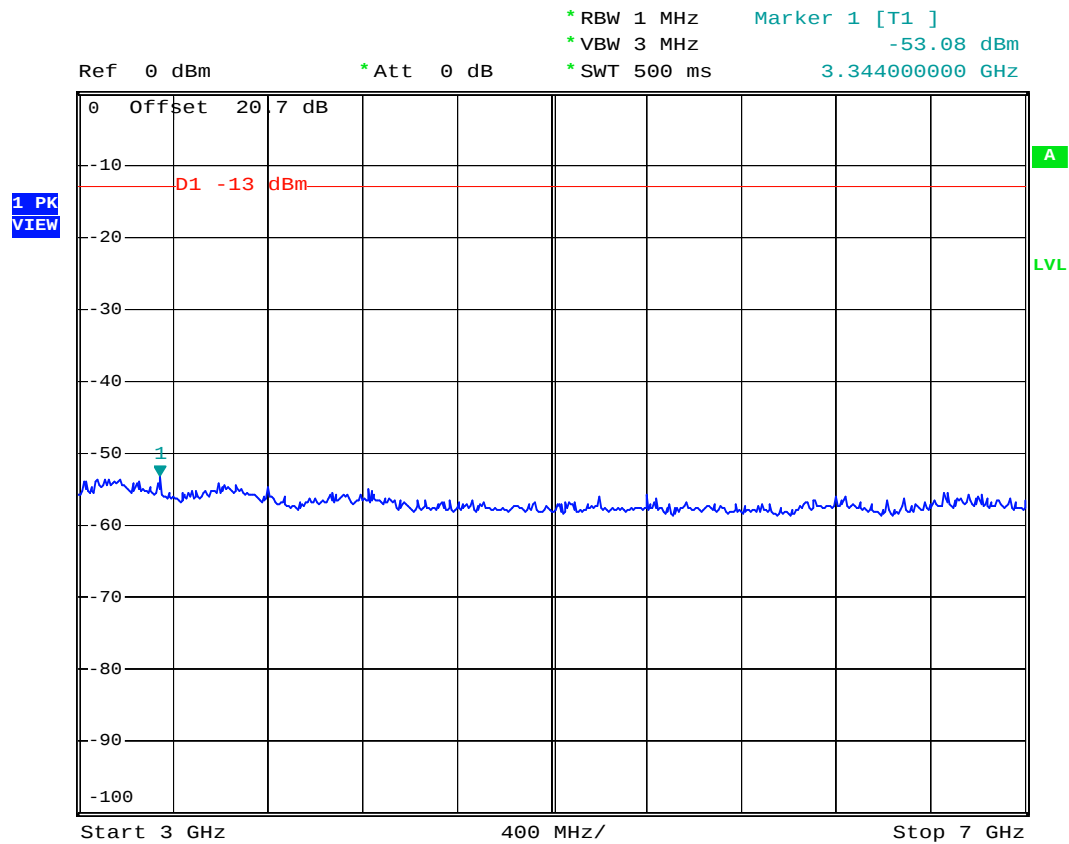
Date: 4.JUL.2007 04:08:40



# FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band V CH4182
- Frequency Range : 3G-7G



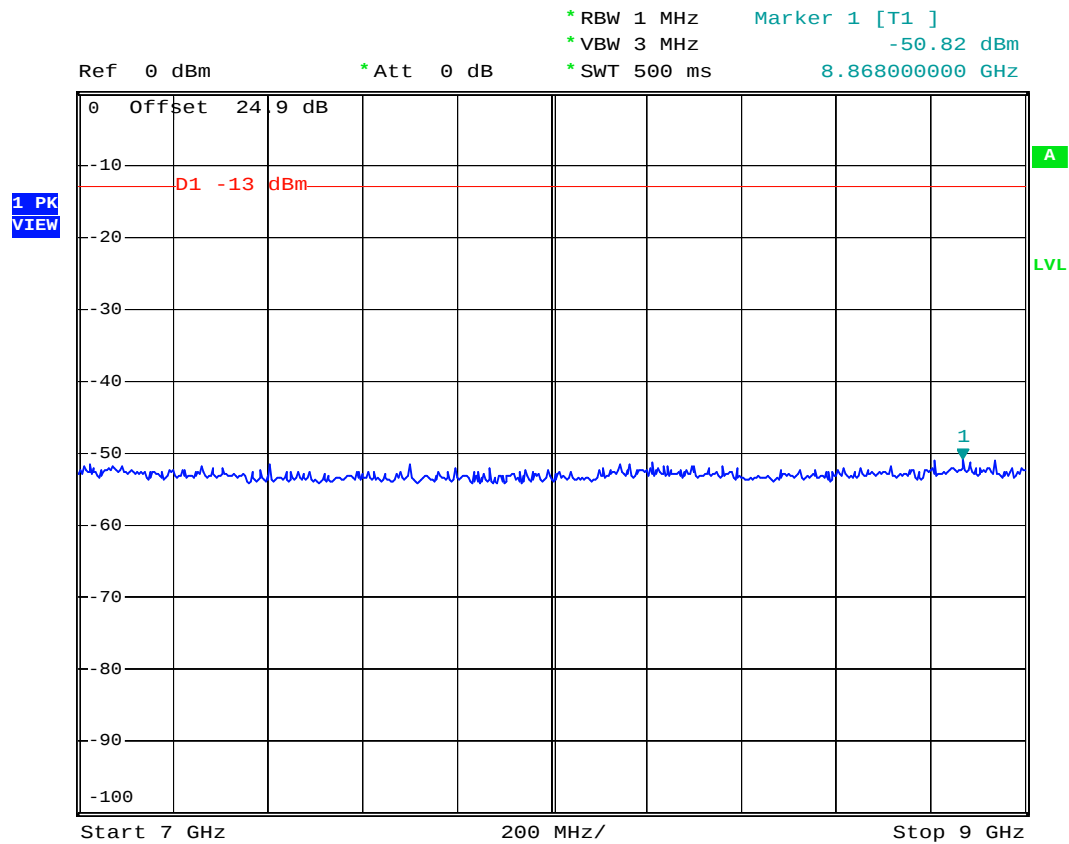
Date: 4.JUL.2007 04:09:44



# FCC TEST REPORT

Report No. : FG761327-04A

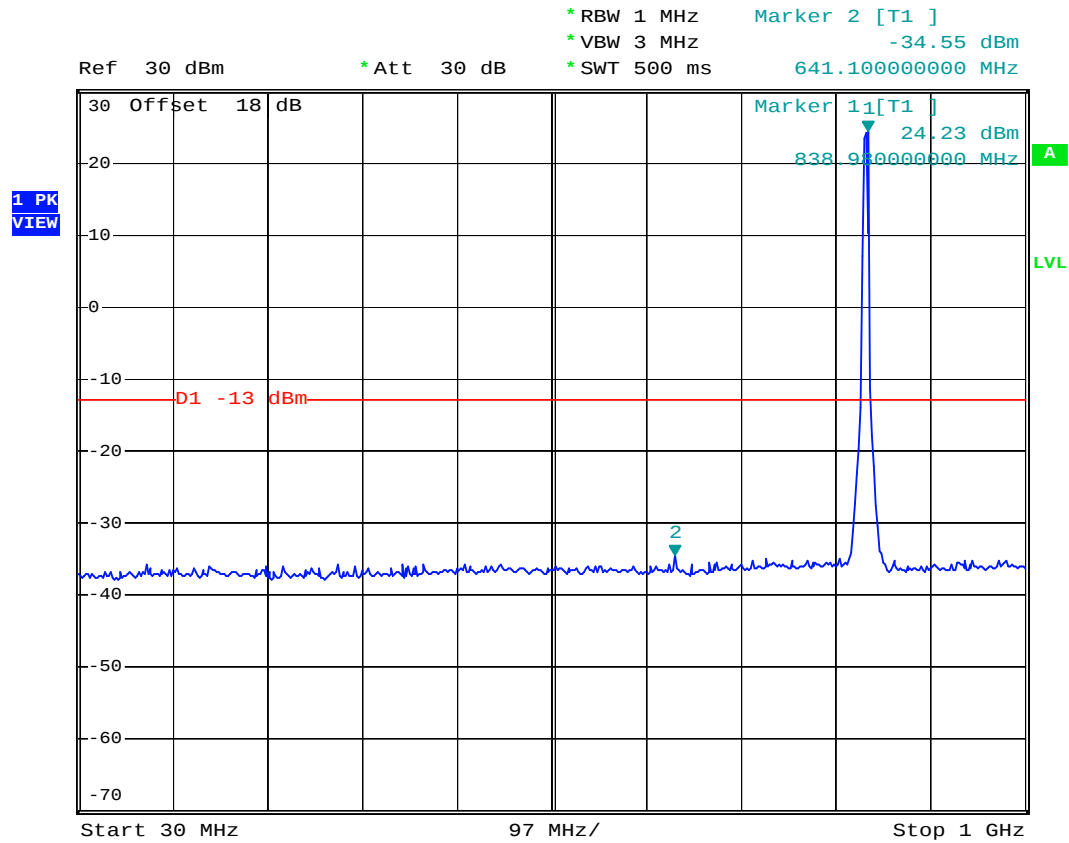
- Test Mode : WCDMA Band V CH4182
- Frequency Range : 7G-9G



Date: 4.JUL.2007 04:10:28



- Mode 6
- Test Mode : WCDMA Band V (HSDPA) CH4182
- Frequency Range : 30M-1G



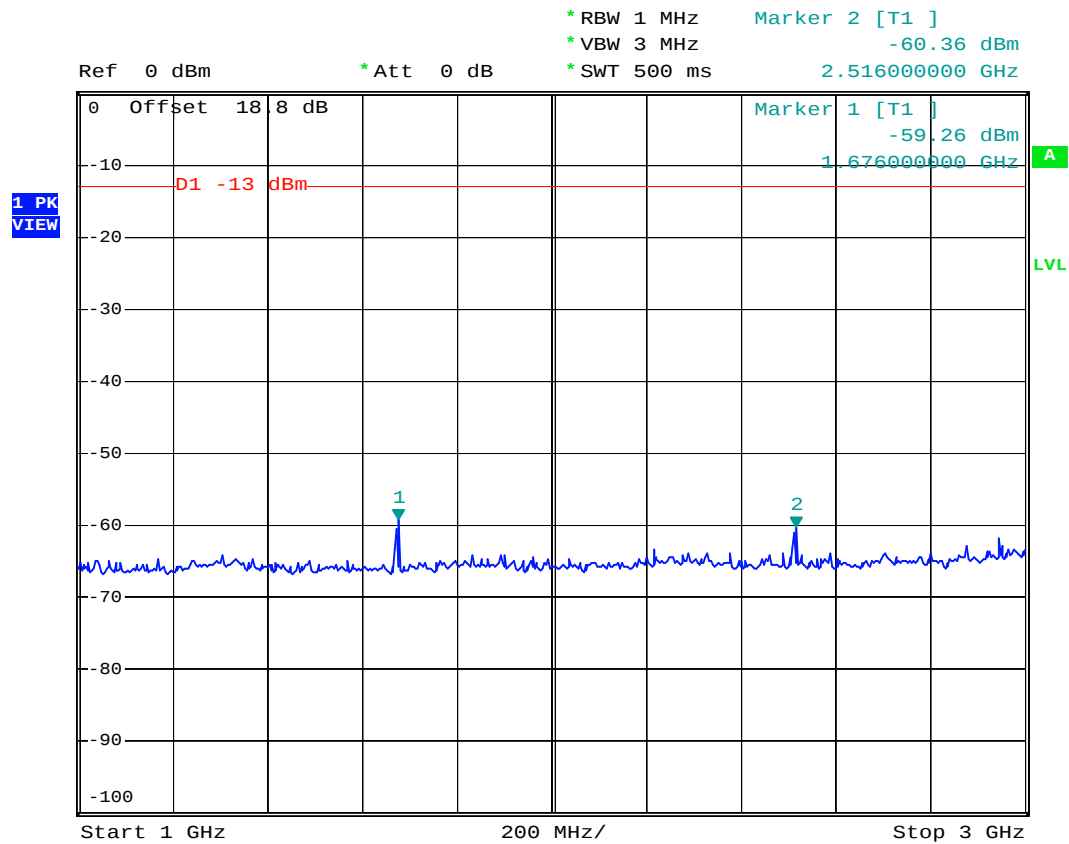
Date: 8.JUL.2007 02:39:03



# FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band V (HSDPA) CH4182
- Frequency Range : 1G-3G



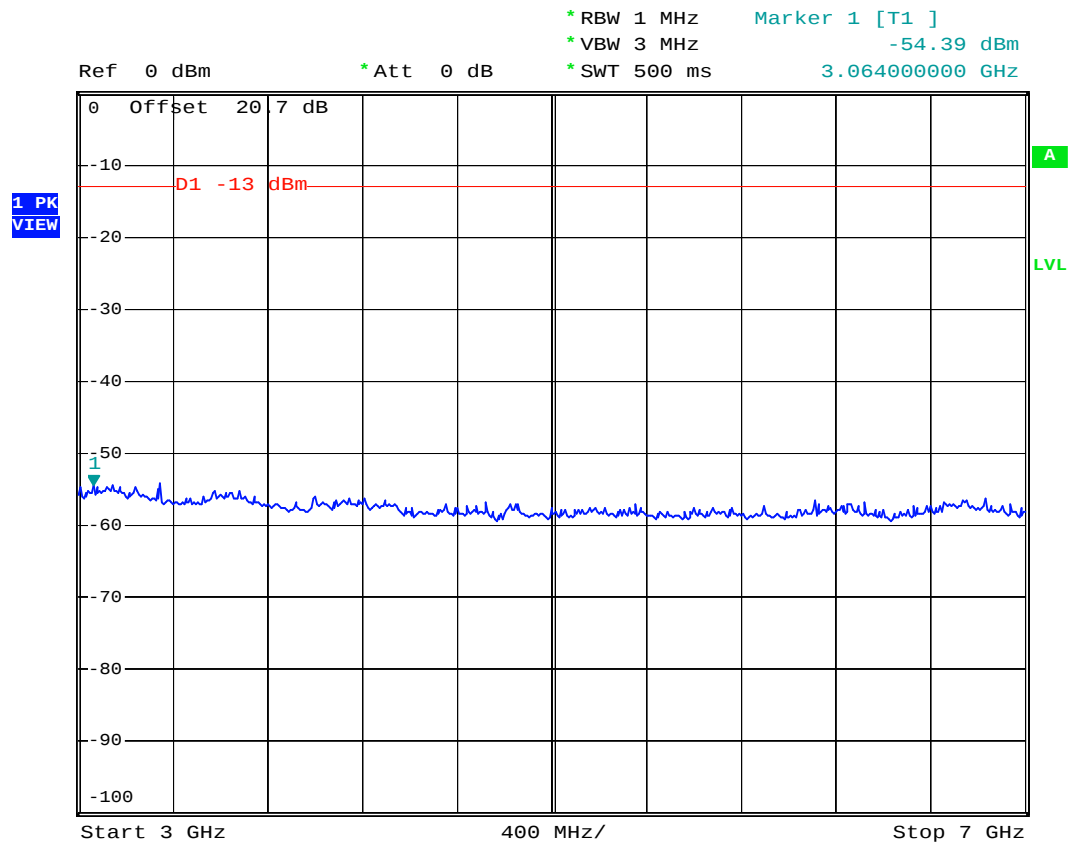
Date: 8.JUL.2007 02:46:58



# FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band V (HSDPA) CH4182
- Frequency Range : 3G-7G



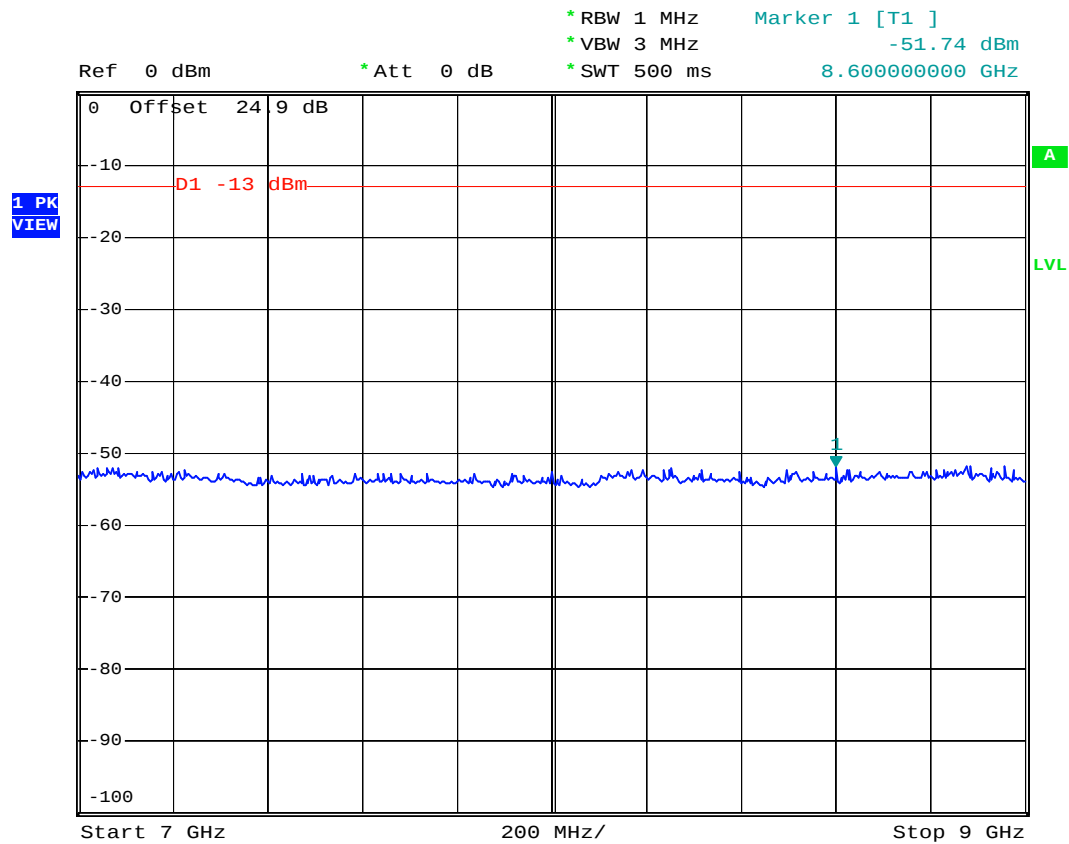
Date: 8.JUL.2007 02:49:50



# FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band V (HSDPA) CH4182
- Frequency Range : 7G-9G



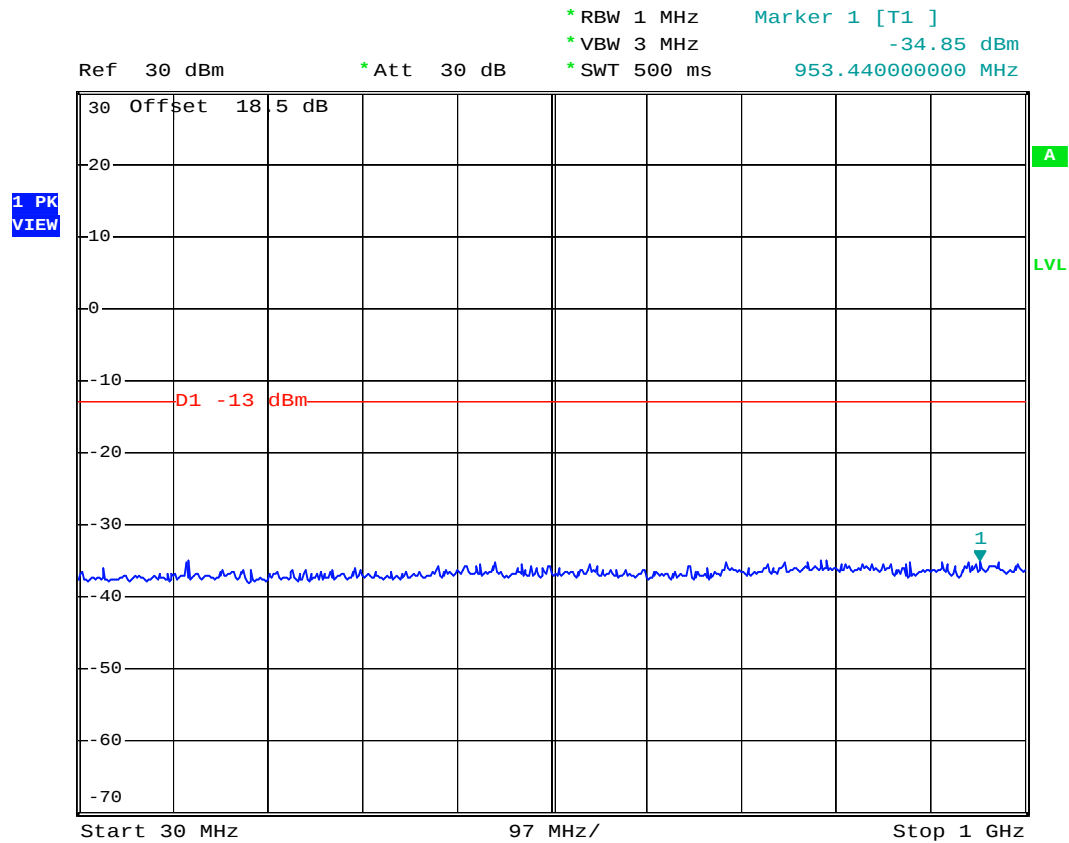
Date: 8.JUL.2007 02:52:00



# FCC TEST REPORT

Report No. : FG761327-04A

- Mode 7
- Test Mode : WCDMA Band II CH9400
- Frequency Range : 30M-1G



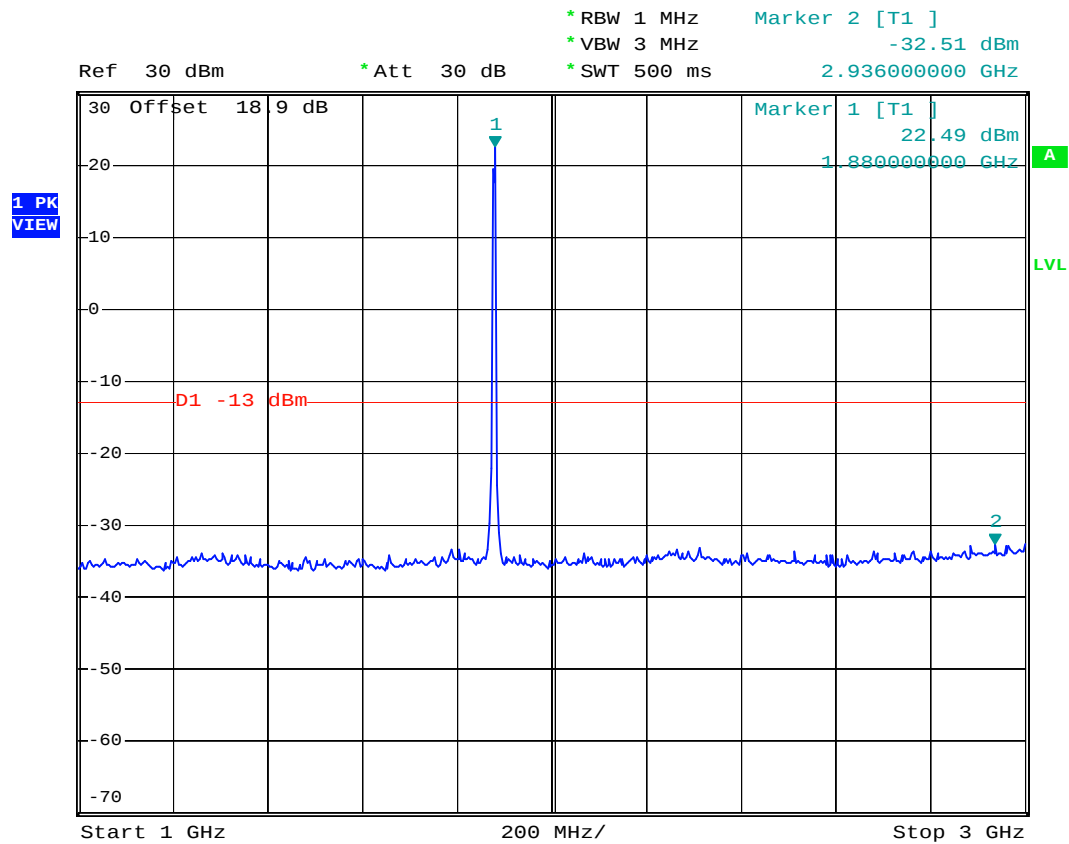
Date: 8.JUL.2007 02:23:42



# FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band II CH9400
- Frequency Range : 1G-3G



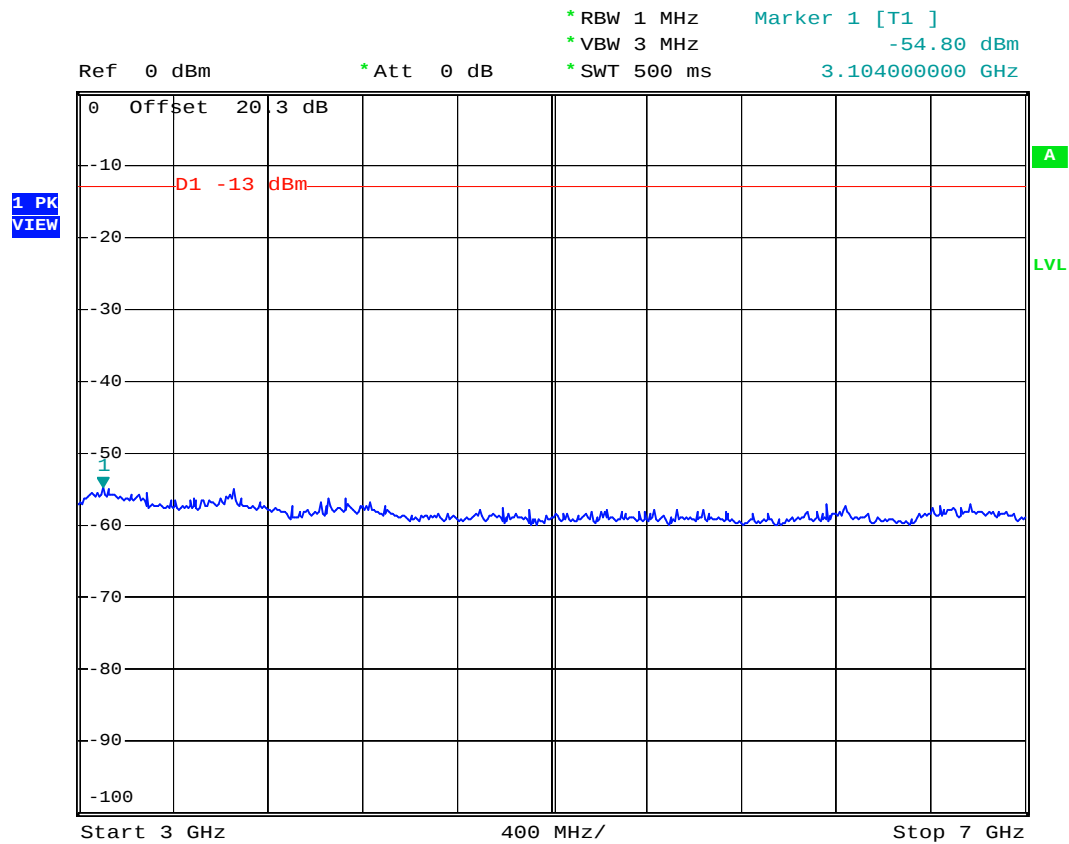
Date: 8.JUL.2007 02:25:47



# FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band II CH9400
- Frequency Range : 3G-7G



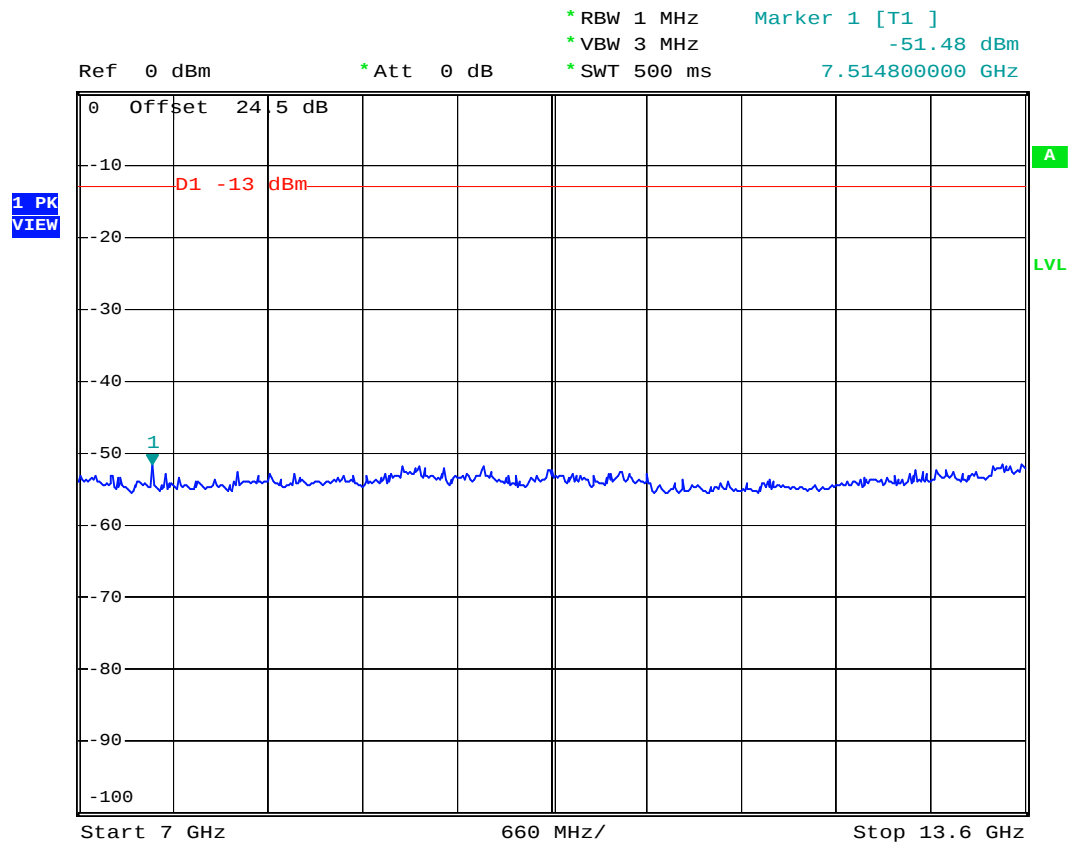
Date: 8.JUL.2007 02:31:01



# FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band II CH9400
- Frequency Range : 7G-13.6G



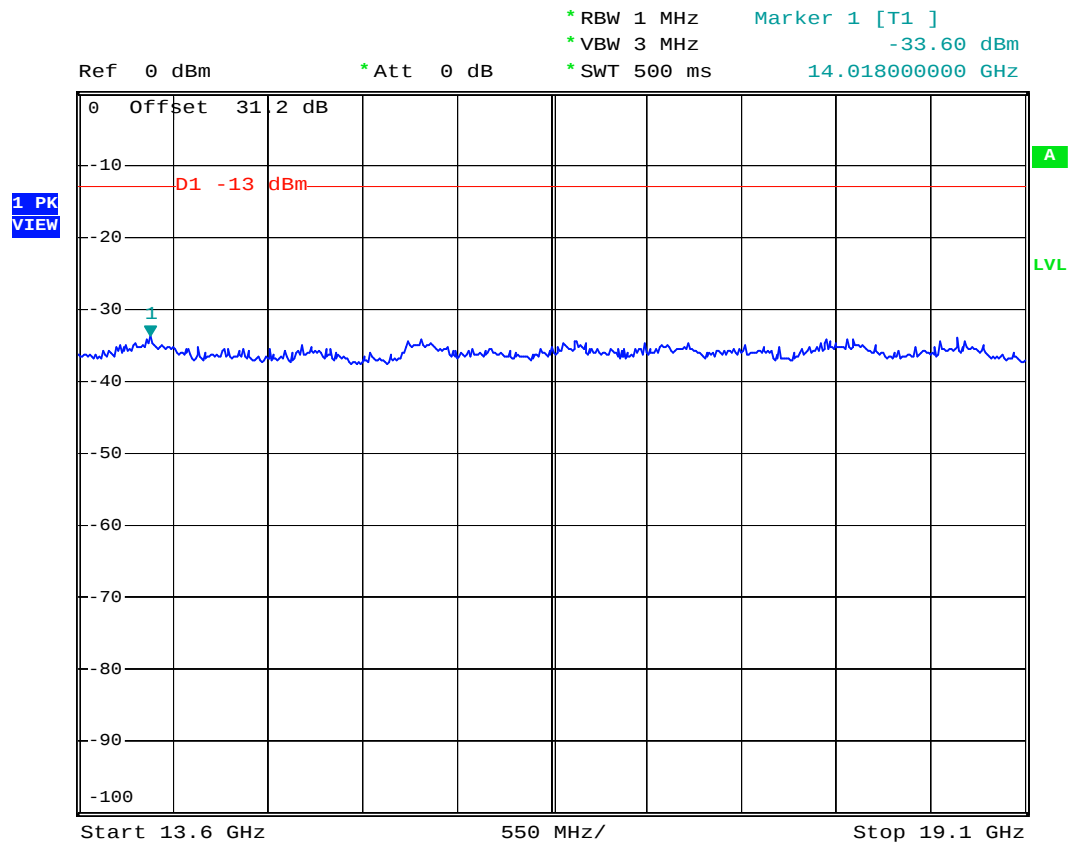
Date: 8.JUL.2007 02:33:12



# FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band II CH9400
- Frequency Range : 13.6G-19.1G



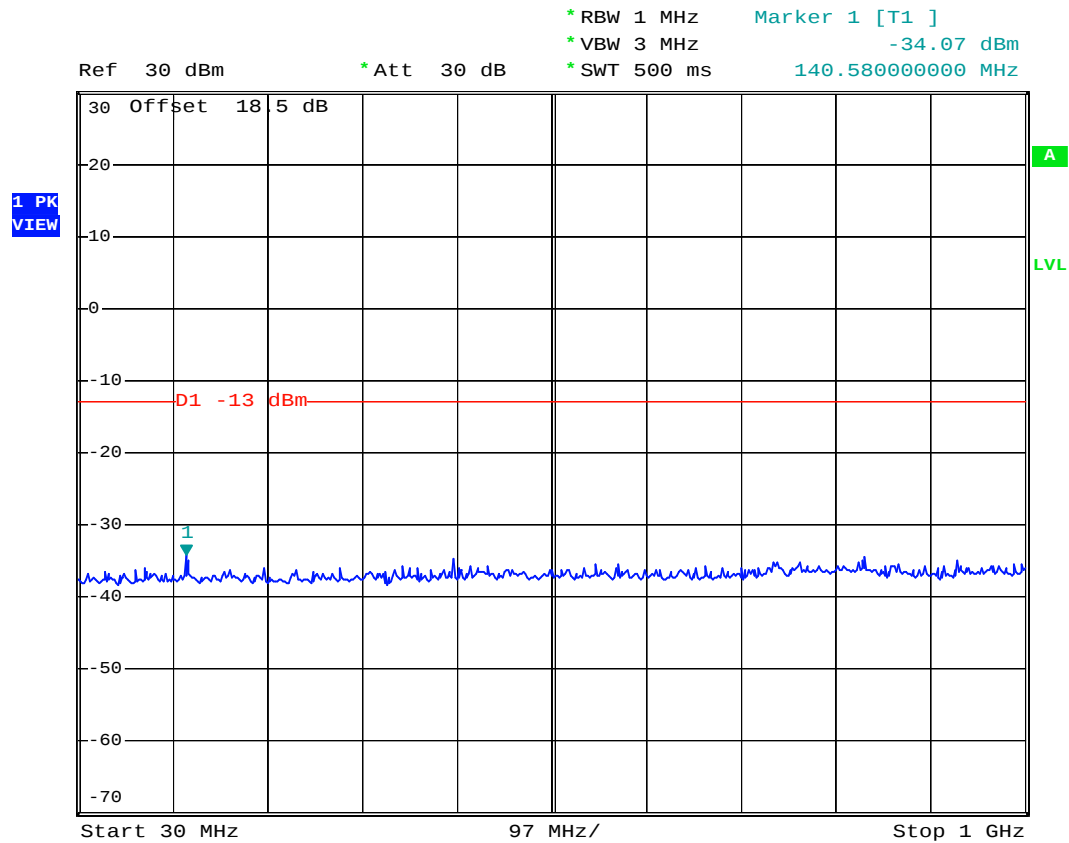
Date: 8.JUL.2007 02:35:15



# FCC TEST REPORT

Report No. : FG761327-04A

- Mode 8
- Test Mode : WCDMA Band II (HSDPA) CH9400
- Frequency Range : 30M-1G



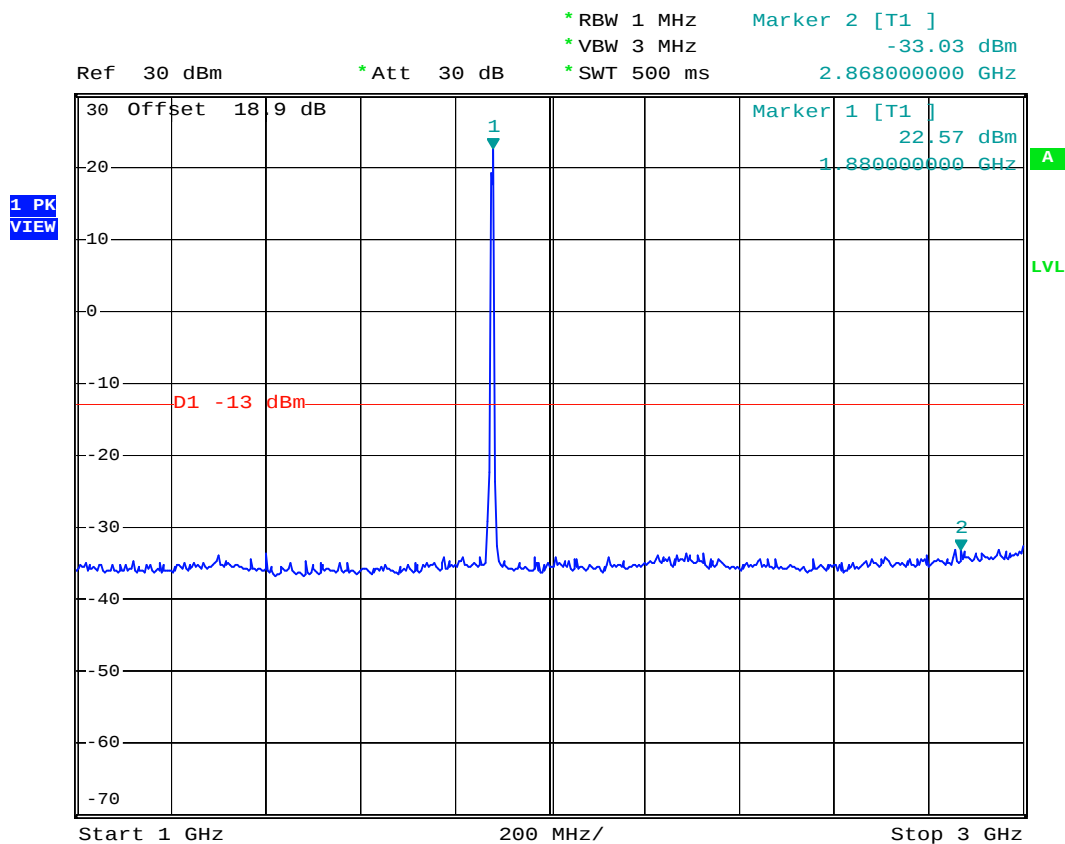
Date: 8.JUL.2007 02:24:04



# FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band II (HSDPA) CH9400
- Frequency Range : 1G-3G



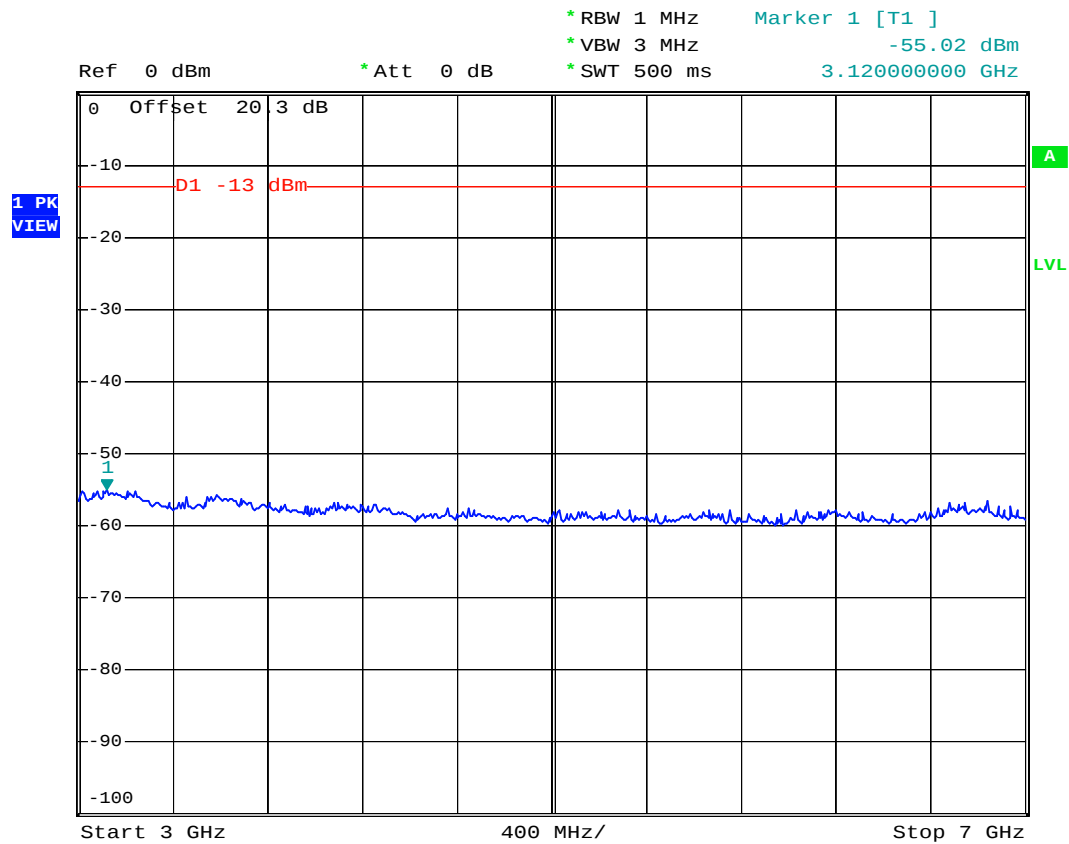
Date: 8.JUL.2007 02:26:52



# FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band II (HSDPA) CH9400
- Frequency Range : 3G-7G



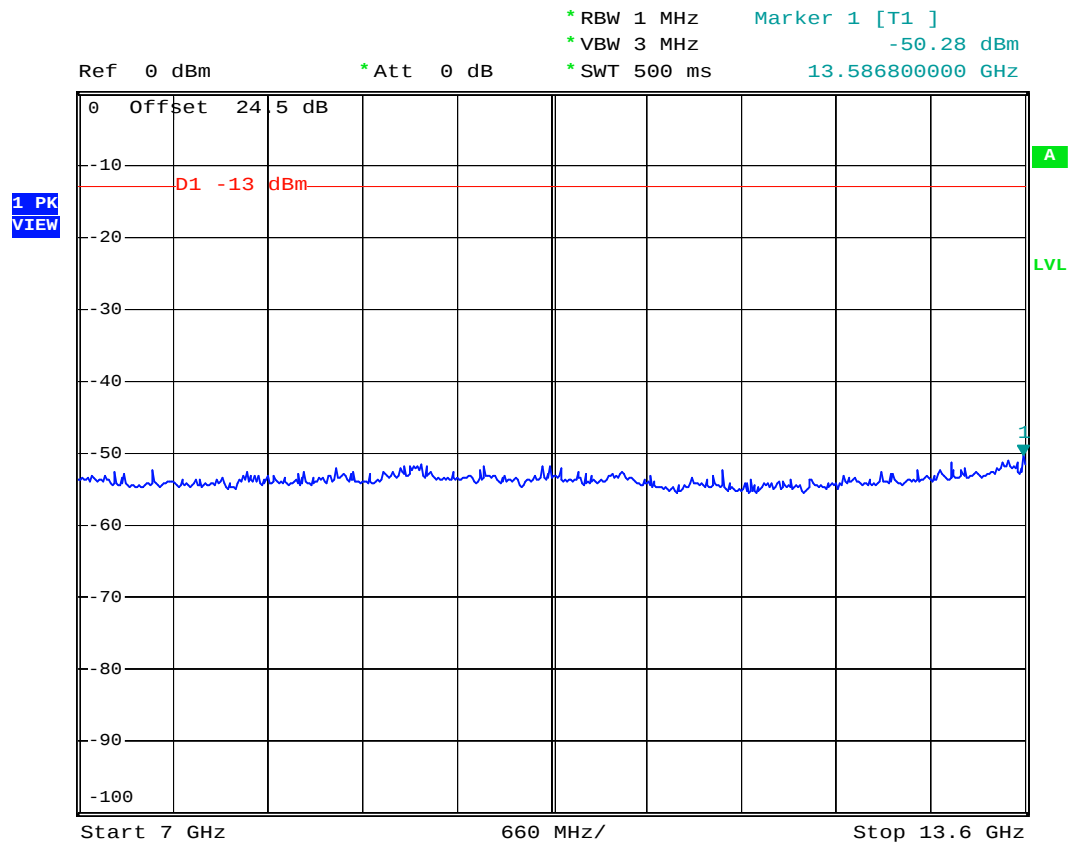
Date: 8.JUL.2007 02:30:25



# FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band II (HSDPA) CH9400
- Frequency Range : 7G-13.6G



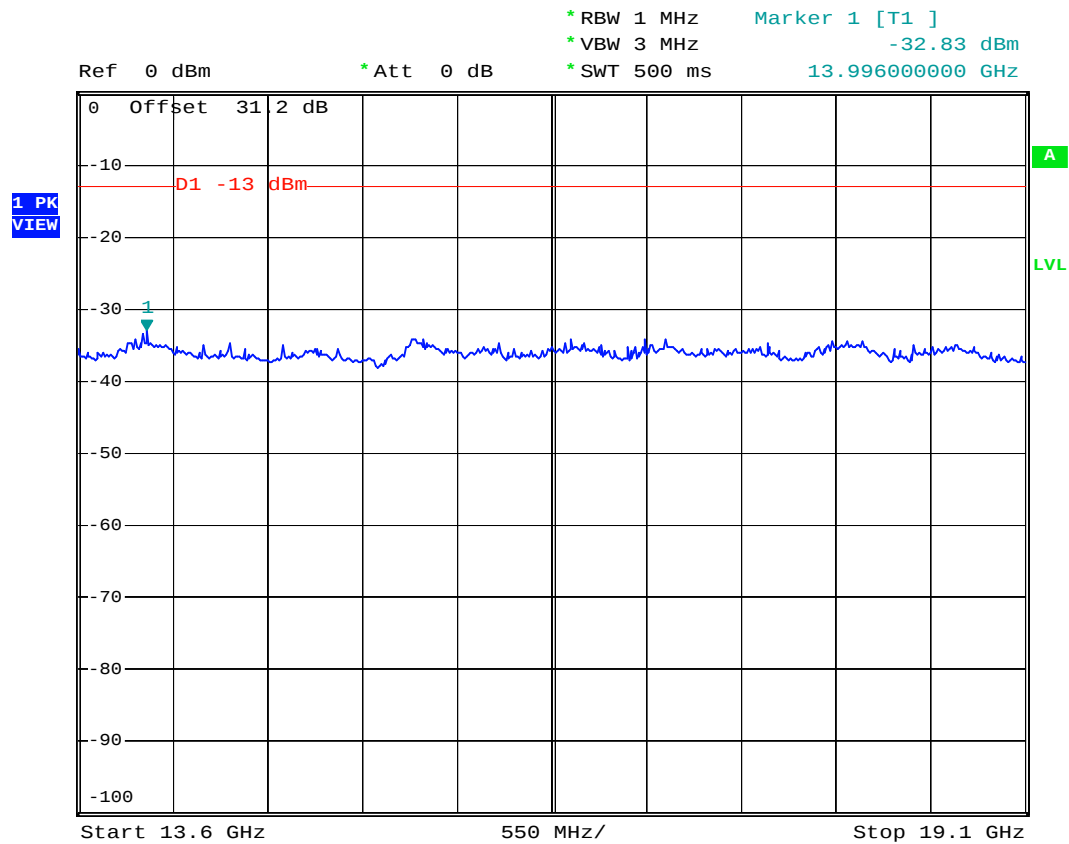
Date: 8.JUL.2007 02:32:28



# FCC TEST REPORT

Report No. : FG761327-04A

- Test Mode : WCDMA Band II (HSDPA) CH9400
- Frequency Range : 13.6G-19.1G



Date: 8.JUL.2007 02:34:34

## 4.6 Field Strength of Spurious Radiation

Equivalent isotropic radiated Power Measurements by substitution method according to ANSI/TIA/EIA-603-C.

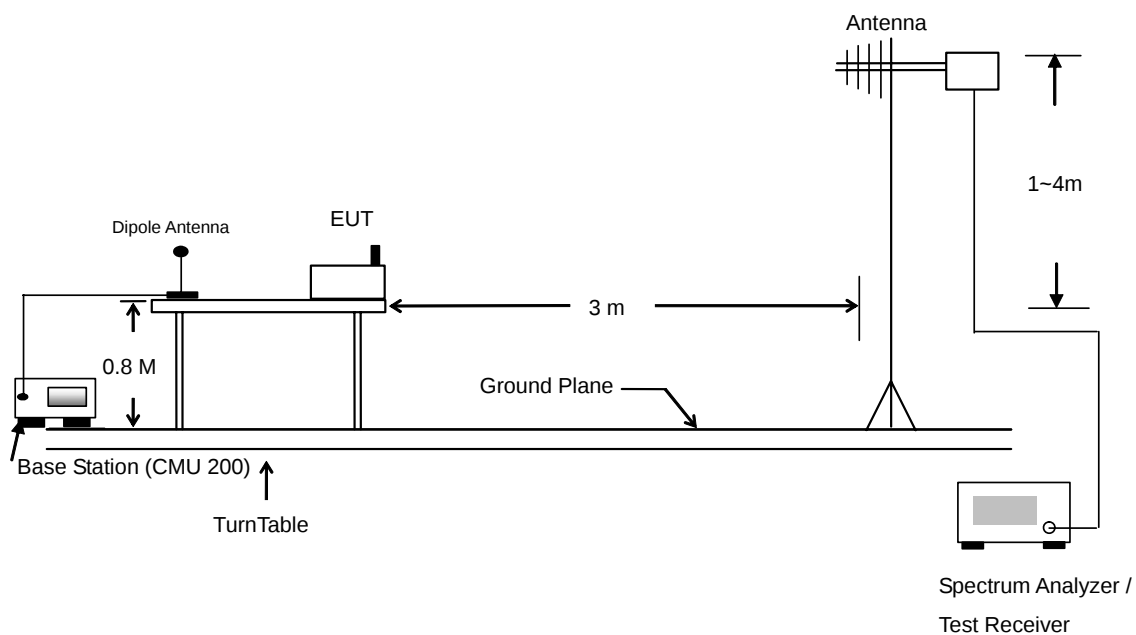
### 4.6.1 Measurement Instruments

As described in chapter 5 of this test report.

### 4.6.2 Test Procedure

1. The EUT was placed on a rotatable wooden table with 0.8 meter about ground.
2. The EUT was set 3 meters from the receiving antenna which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to reach the maximum spurious emission for both horizontal and vertical polarizations.
5. Taking the record of maximum spurious emission.
6. A Horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. Emission level (dBm) = output power + substitution Gain.

### 4.6.3 Test Setup Layout



**4.6.4 Test Result**
**• Test Mode : Mode 1**

| <b>GSM850 (GSM) Radiated Spurious ERP</b> |           |       |        |                |           |       |        |
|-------------------------------------------|-----------|-------|--------|----------------|-----------|-------|--------|
| H Polarization                            |           |       |        | V Polarization |           |       |        |
| Frequency                                 | ERP (dBm) | Limit | Margin | Frequency      | ERP (dBm) | Limit | Margin |
| (MHz)                                     |           | (dBm) | (dB)   | (MHz)          |           | (dBm) | (dB)   |
| 30.000                                    | -61.070   | -13   | -48.07 | 33.240         | -60.110   | -13   | -47.11 |
| 72.390                                    | -60.170   | -13   | -47.17 | 80.490         | -53.440   | -13   | -40.44 |
| 207.930                                   | -58.550   | -13   | -45.55 | 156.090        | -59.350   | -13   | -46.35 |
| 507.900                                   | -68.880   | -13   | -55.88 | 761.300        | -65.620   | -13   | -52.62 |
| 1674.000                                  | -47.660   | -13   | -34.66 | 1674.000       | -44.850   | -13   | -31.85 |
| 2508.000                                  | -41.410   | -13   | -28.41 | 2508.000       | -38.620   | -13   | -25.62 |

**• Test Mode : Mode 2**

| <b>GSM850 (EDGE) Radiated Spurious ERP</b> |           |       |        |                |           |       |        |
|--------------------------------------------|-----------|-------|--------|----------------|-----------|-------|--------|
| H Polarization                             |           |       |        | V Polarization |           |       |        |
| Frequency                                  | ERP (dBm) | Limit | Margin | Frequency      | ERP (dBm) | Limit | Margin |
| (MHz)                                      |           | (dBm) | (dB)   | (MHz)          |           | (dBm) | (dB)   |
| 30.000                                     | -63.000   | -13   | -50.00 | 35.130         | -60.290   | -13   | -47.29 |
| 66.990                                     | -65.840   | -13   | -52.84 | 81.030         | -57.900   | -13   | -44.90 |
| 156.090                                    | -62.720   | -13   | -49.72 | 232.230        | -58.330   | -13   | -45.33 |
| 374.900                                    | -67.310   | -13   | -54.31 | 507.900        | -66.340   | -13   | -53.34 |
| 1674.000                                   | -53.690   | -13   | -40.69 | 1674.000       | -54.240   | -13   | -41.24 |
| 2508.000                                   | -45.320   | -13   | -32.32 | 2508.000       | -47.910   | -13   | -34.91 |

• Test Mode : Mode 3

| <b>PCS1900 (GSM) Radiated Spurious EIRP</b> |            |       |        |                |            |       |        |
|---------------------------------------------|------------|-------|--------|----------------|------------|-------|--------|
| H Polarization                              |            |       |        | V Polarization |            |       |        |
| Frequency                                   | EIRP (dBm) | Limit | Margin | Frequency      | EIRP (dBm) | Limit | Margin |
| (MHz)                                       |            | (dBm) | (dB)   | (MHz)          |            | (dBm) | (dB)   |
| 31.080                                      | -57.600    | -13   | -44.60 | 31.080         | -52.430    | -13   | -39.43 |
| 189.030                                     | -57.460    | -13   | -44.46 | 76.440         | -49.360    | -13   | -36.36 |
| 214.680                                     | -55.630    | -13   | -42.63 | 187.680        | -52.900    | -13   | -39.90 |
| 714.400                                     | -65.850    | -13   | -52.85 | 300.000        | -62.130    | -13   | -49.13 |
| 857.900                                     | -64.610    | -13   | -51.61 | 854.400        | -61.820    | -13   | -48.82 |
| 988.800                                     | -63.900    | -13   | -50.90 | 994.400        | -61.490    | -13   | -48.49 |
| 3758.000                                    | -46.720    | -13   | -33.72 | 3758.000       | -42.730    | -13   | -29.73 |
| 5638.000                                    | -39.170    | -13   | -26.17 | 5638.000       | -33.500    | -13   | -20.50 |

• Test Mode : Mode 4

| <b>PCS1900 (EDGE) Radiated Spurious EIRP</b> |            |       |        |                |            |       |        |
|----------------------------------------------|------------|-------|--------|----------------|------------|-------|--------|
| H Polarization                               |            |       |        | V Polarization |            |       |        |
| Frequency                                    | EIRP (dBm) | Limit | Margin | Frequency      | EIRP (dBm) | Limit | Margin |
| (MHz)                                        |            | (dBm) | (dB)   | (MHz)          |            | (dBm) | (dB)   |
| 31.080                                       | -61.590    | -13   | -48.59 | 32.430         | -64.360    | -13   | -51.36 |
| 68.340                                       | -67.610    | -13   | -54.61 | 70.230         | -59.370    | -13   | -46.37 |
| 187.680                                      | -67.600    | -13   | -54.60 | 188.490        | -62.540    | -13   | -49.54 |
| 659.800                                      | -66.730    | -13   | -53.73 | 656.300        | -64.660    | -13   | -51.66 |
| 864.900                                      | -64.750    | -13   | -51.75 | 859.300        | -61.450    | -13   | -48.45 |
| 985.300                                      | -64.020    | -13   | -51.02 | 995.800        | -61.390    | -13   | -48.39 |
| 3758.000                                     | -46.720    | -13   | -33.72 | 3758.000       | -41.790    | -13   | -28.79 |
| 5638.000                                     | -36.690    | -13   | -23.69 | 5638.000       | -31.230    | -13   | -18.23 |



- Test Mode : Mode 5

| WCDMA Band V Radiated Spurious ERP |           |       |        |                |           |       |        |
|------------------------------------|-----------|-------|--------|----------------|-----------|-------|--------|
| H Polarization                     |           |       |        | V Polarization |           |       |        |
| Frequency                          | ERP (dBm) | Limit | Margin | Frequency      | ERP (dBm) | Limit | Margin |
| (MHz)                              |           | (dBm) | (dB)   | (MHz)          |           | (dBm) | (dB)   |
| 33.240                             | -60.420   | -13   | -47.42 | 31.080         | -58.460   | -13   | -45.46 |
| 125.040                            | -63.730   | -13   | -50.73 | 78.330         | -54.560   | -13   | -41.56 |
| 156.090                            | -62.240   | -13   | -49.24 | 155.280        | -60.960   | -13   | -47.96 |
| 348.300                            | -69.410   | -13   | -56.41 | 439.300        | -67.040   | -13   | -54.04 |
| 1674.000                           | -57.590   | -13   | -44.59 | 1674.000       | -54.060   | -13   | -41.06 |
| 2514.000                           | -46.300   | -13   | -33.30 |                |           |       |        |

- Test Mode : Mode 6

| WCDMA Band V (HSDPA) Radiated Spurious ERP |           |       |        |                |           |       |        |
|--------------------------------------------|-----------|-------|--------|----------------|-----------|-------|--------|
| H Polarization                             |           |       |        | V Polarization |           |       |        |
| Frequency                                  | ERP (dBm) | Limit | Margin | Frequency      | ERP (dBm) | Limit | Margin |
| (MHz)                                      |           | (dBm) | (dB)   | (MHz)          |           | (dBm) | (dB)   |
| 31.890                                     | -63.440   | -13   | -50.44 | 76.980         | -57.290   | -13   | -44.29 |
| 77.790                                     | -65.760   | -13   | -52.76 | 82.380         | -57.020   | -13   | -44.02 |
| 186.330                                    | -60.460   | -13   | -47.46 | 182.280        | -60.080   | -13   | -47.08 |
| 302.800                                    | -71.250   | -13   | -58.25 | 624.800        | -65.870   | -13   | -52.87 |
| 1670.000                                   | -53.290   | -13   | -40.29 | 1674.000       | -50.050   | -13   | -37.05 |

- Test Mode : Mode 7

| WCDMA Band II Radiated Spurious EIRP |            |       |        |                |            |       |        |
|--------------------------------------|------------|-------|--------|----------------|------------|-------|--------|
| H Polarization                       |            |       |        | V Polarization |            |       |        |
| Frequency                            | EIRP (dBm) | Limit | Margin | Frequency      | EIRP (dBm) | Limit | Margin |
| (MHz)                                |            | (dBm) | (dB)   | (MHz)          |            | (dBm) | (dB)   |
| 30.540                               | -61.970    | -13   | -48.97 | 52.140         | -57.010    | -13   | -44.01 |
| 44.580                               | -60.180    | -13   | -47.18 | 75.630         | -56.130    | -13   | -43.13 |
| 145.290                              | -57.540    | -13   | -44.54 | 125.040        | -60.940    | -13   | -47.94 |
| 782.300                              | -65.630    | -13   | -52.63 | 784.400        | -63.060    | -13   | -50.06 |
| 897.800                              | -64.090    | -13   | -51.09 | 885.900        | -62.040    | -13   | -49.04 |
| 995.800                              | -64.330    | -13   | -51.33 | 969.900        | -61.360    | -13   | -48.36 |



- Test Mode : Mode 8

| WCDMA Band II (HSDPA) Radiated Spurious EIRP |            |       |        |                |            |       |        |
|----------------------------------------------|------------|-------|--------|----------------|------------|-------|--------|
| H Polarization                               |            |       |        | V Polarization |            |       |        |
| Frequency                                    | EIRP (dBm) | Limit | Margin | Frequency      | EIRP (dBm) | Limit | Margin |
| (MHz)                                        |            | (dBm) | (dB)   | (MHz)          |            | (dBm) | (dB)   |
| 30.540                                       | -61.200    | -13   | -48.20 | 52.140         | -54.000    | -13   | -41.00 |
| 93.990                                       | -63.460    | -13   | -50.46 | 75.630         | -55.010    | -13   | -42.01 |
| 145.290                                      | -56.990    | -13   | -43.99 | 103.980        | -60.200    | -13   | -47.20 |
| 787.900                                      | -65.470    | -13   | -52.47 | 771.800        | -63.070    | -13   | -50.07 |
| 882.400                                      | -64.380    | -13   | -51.38 | 862.800        | -61.900    | -13   | -48.90 |
| 995.800                                      | -63.210    | -13   | -50.21 | 980.400        | -61.580    | -13   | -48.58 |

- Test Mode : Mode 9

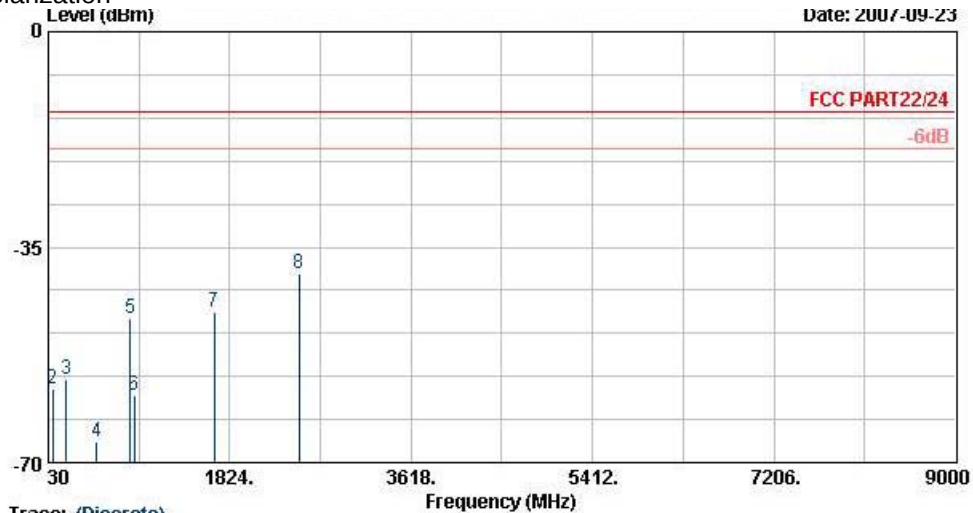
| GSM850 (GSM) with Bluetooth Radiated Spurious ERP |           |       |        |                |           |       |        |
|---------------------------------------------------|-----------|-------|--------|----------------|-----------|-------|--------|
| H Polarization                                    |           |       |        | V Polarization |           |       |        |
| Frequency                                         | ERP (dBm) | Limit | Margin | Frequency      | ERP (dBm) | Limit | Margin |
| (MHz)                                             |           | (dBm) | (dB)   | (MHz)          |           | (dBm) | (dB)   |
| 71.040                                            | -60.850   | -13   | -47.85 | 32.430         | -55.380   | -13   | -42.38 |
| 161.490                                           | -57.930   | -13   | -44.93 | 73.740         | -51.960   | -13   | -38.96 |
| 185.790                                           | -59.350   | -13   | -46.35 | 193.080        | -54.670   | -13   | -41.67 |
| 374.900                                           | -65.710   | -13   | -52.71 | 302.800        | -62.840   | -13   | -49.84 |
| 1674.000                                          | -51.100   | -13   | -38.10 | 1674.000       | -53.750   | -13   | -40.75 |
| 2458.000                                          | -3.900    | -13   | 9.10   | 2478.000       | -9.740    | -13   | 3.26   |
| 2508.000                                          | -39.010   | -13   | -26.01 | 2508.000       | -46.720   | -13   | -33.72 |
| 4178.000                                          | -45.480   | -13   | -32.48 |                |           |       |        |
| 4818.000                                          | -41.780   | -13   | -28.78 |                |           |       |        |
| 4944.000                                          | -41.790   | -13   | -28.79 |                |           |       |        |



## 4.6.5 Test Data

## 4.6.5.1 Mode 1

## Horizontal Polarization



Site : 09CHD6-HY  
 Condition : HF-SPURIOUS-060929 HORIZONTAL  
 EUT : GSM/EDGE 850/900/1800/1900 WCDMA/HSDPA  
 : 850/1900/2100 PDA Phone  
 Power : 120Vac/60Hz  
 Model : FG 761327-04  
 Mode : GSM850 Link;Ch189+Earphone+Adaptor  
 Plane : E2

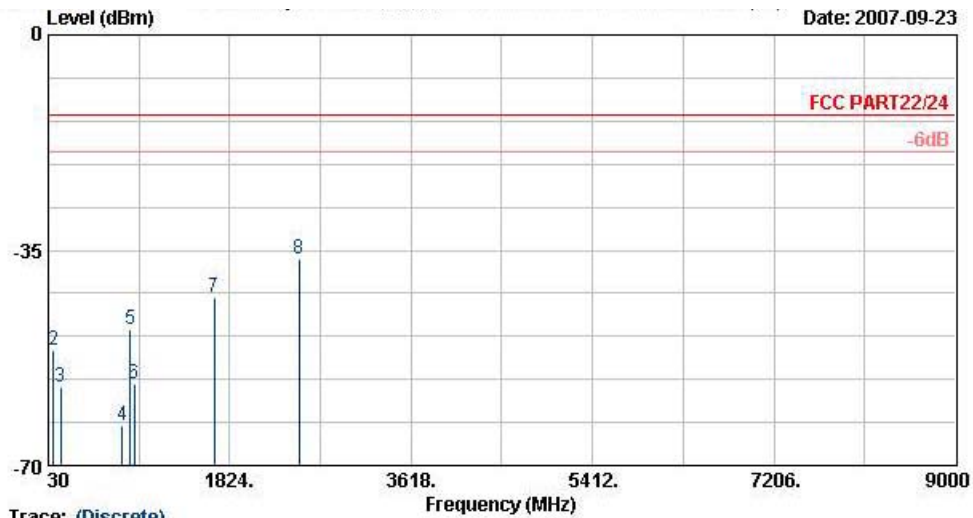
|   | Freq   | Level  | Over   | Limit  | Read   | Factor | Remark | Pol/Phase  |
|---|--------|--------|--------|--------|--------|--------|--------|------------|
|   | MHz    | dBm    | Limit  | Line   | Level  | dB     |        |            |
| 1 | 30.0   | -58.92 | -45.92 | -13.00 | -59.28 | 0.36   | Peak   | HORIZONTAL |
| 2 | 72.4   | -58.02 | -45.02 | -13.00 | -45.68 | -12.34 | Peak   | HORIZONTAL |
| 3 | 207.9  | -56.40 | -43.40 | -13.00 | -43.28 | -13.12 | Peak   | HORIZONTAL |
| 4 | 507.9  | -66.73 | -53.73 | -13.00 | -61.72 | -5.01  | Peak   | HORIZONTAL |
| 5 | 836.9  | -46.52 |        |        | -45.18 | -1.33  | Peak   | HORIZONTAL |
| 6 | 880.3  | -59.06 |        |        | -58.15 | -0.91  | Peak   | HORIZONTAL |
| 7 | 1674.0 | -45.51 | -32.51 | -13.00 | -47.87 | 2.36   | Peak   | HORIZONTAL |
| 8 | 2508.0 | -39.26 | -26.26 | -13.00 | -45.95 | 6.69   | Peak   | HORIZONTAL |

## Remark:

- #5: MS Signal
- #6: BS Signal



## Vertical Polarization



Trace: (Discrete)

Site : 03CHD6-HY  
 Condition : HF-SPURIOUS-060929 VERTICAL  
 EUT : GSM/EDGE 850/900/1800/1900 WCDMA/HSDPA  
 : 850/1900/2100 FDA Phone  
 Power : 120Vac/60Hz  
 Model : FG 761327-04  
 Mode : GSM850 Link;Ch189+Earphone+Adaptor  
 Plane : E2

|   | Freq   | Level  | Over   | Limit  | Read   |        |        |           |
|---|--------|--------|--------|--------|--------|--------|--------|-----------|
|   | MHz    | dBm    | Limit  | Line   | Level  | Factor | Remark | Pol/Phase |
|   | MHz    | dBm    | dB     | dBm    | dBm    | dB     |        |           |
| 1 | 33.2   | -57.96 | -44.96 | -13.00 | -48.07 | -9.89  | Peak   | VERTICAL  |
| 2 | 80.5   | -51.29 | -38.29 | -13.00 | -40.81 | -10.49 | Peak   | VERTICAL  |
| 3 | 156.1  | -57.20 | -44.20 | -13.00 | -49.00 | -8.20  | Peak   | VERTICAL  |
| 4 | 761.3  | -63.47 | -50.47 | -13.00 | -63.96 | 0.49   | Peak   | VERTICAL  |
| 5 | 836.9  | -47.89 |        |        | -49.26 | 1.36   | Peak   | VERTICAL  |
| 6 | 880.3  | -56.66 |        |        | -58.37 | 1.71   | Peak   | VERTICAL  |
| 7 | 1674.0 | -42.70 | -29.70 | -13.00 | -44.86 | 2.16   | Peak   | VERTICAL  |
| 8 | 2508.0 | -36.47 | -23.47 | -13.00 | -43.65 | 7.18   | Peak   | VERTICAL  |

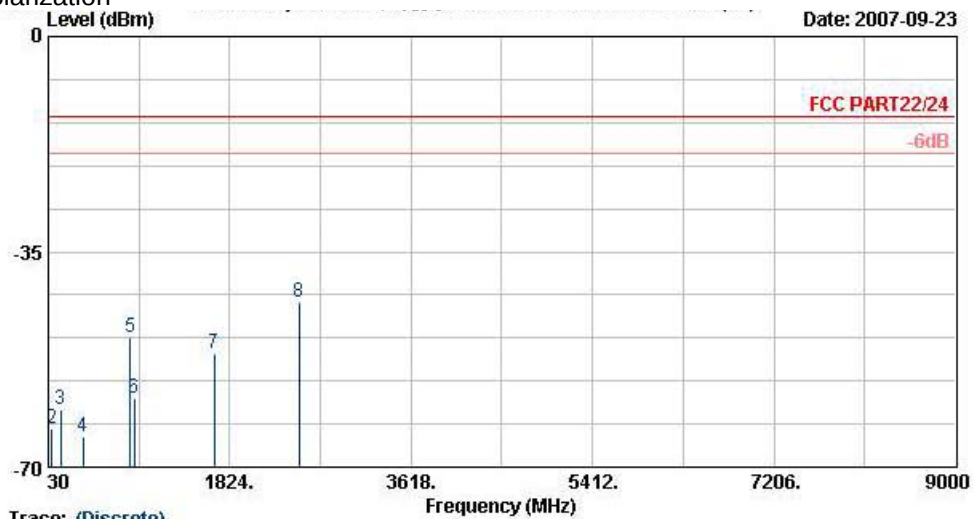
## Remark:

- #5: MS Signal
- #6: BS Signal
- There is no more obvious emission except the listings above.



## 4.6.5.2 Mode 2

Horizontal Polarization



Trace: (Discrete)

Site : 08CH06-HY  
 Condition : HF-SPURIOUS-060929 HORIZONTAL  
 EUT : GSM/EDGE 850/900/1800/1900 WCDMA/HSDPA  
 : 850/1900/2100 PDA Phone  
 Power : 120Vac/60Hz  
 Model : FG 761327-04  
 Mode : EDGE Link;Ch189+Earphone+Adaptor  
 Plane : E2

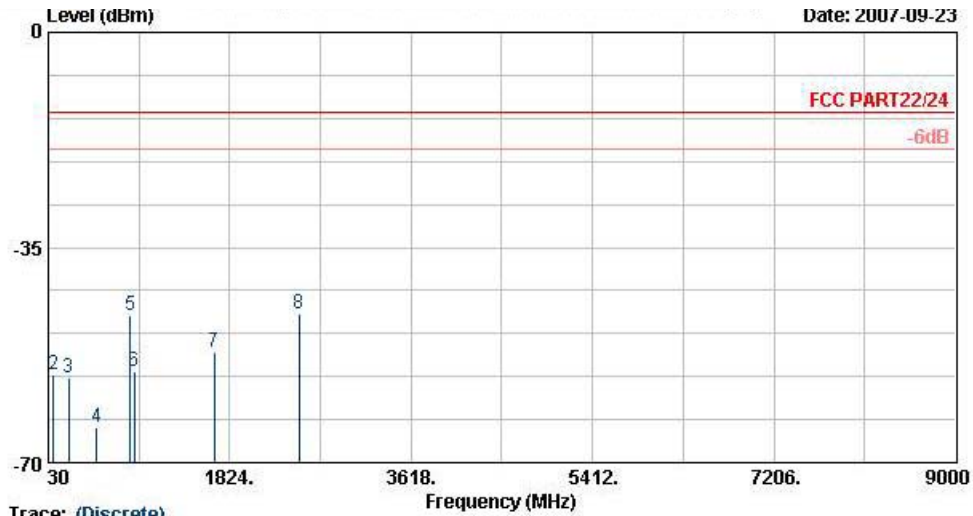
|   | Freq   | Level  | Over   | Limit  | Read   |        |        |            |
|---|--------|--------|--------|--------|--------|--------|--------|------------|
|   | MHz    | dBm    | Limit  | Line   | Level  | Factor | Remark | Pol/Phase  |
|   |        |        | dB     | dBm    | dBm    | dB     |        |            |
| 1 | 30.0   | -60.85 | -47.85 | -13.00 | -61.21 | 0.36   | Peak   | HORIZONTAL |
| 2 | 67.0   | -63.69 | -50.69 | -13.00 | -51.32 | -12.37 | Peak   | HORIZONTAL |
| 3 | 156.1  | -60.57 | -47.57 | -13.00 | -47.68 | -12.89 | Peak   | HORIZONTAL |
| 4 | 374.9  | -65.16 | -52.16 | -13.00 | -57.83 | -7.34  | Peak   | HORIZONTAL |
| 5 | 836.9  | -49.03 |        |        | -47.70 | -1.33  | Peak   | HORIZONTAL |
| 6 | 880.3  | -58.79 |        |        | -57.88 | -0.91  | Peak   | HORIZONTAL |
| 7 | 1674.0 | -51.54 | -38.54 | -13.00 | -53.89 | 2.36   | Peak   | HORIZONTAL |
| 8 | 2508.0 | -43.17 | -30.17 | -13.00 | -49.86 | 6.69   | Peak   | HORIZONTAL |

Remark:

- #5: MS Signal
- #6: BS Signal



## Vertical Polarization



Site : 08CH06-HY  
Condition : HF-SPURIOUS-060929 VERTICAL  
EUT : GSM/EDGE 850/900/1800/1900 WCDMA/HSDPA  
850/1900/2100 PDA Phone  
Power : 120V<sub>ac</sub>/60Hz  
Model : FG 761327-04  
Mode : EDGE Link;CH189+Earphone+Adaptor  
Plane : E2

|   | Freq   | Level  | Over   | Limit  | Read   |        |        |           |
|---|--------|--------|--------|--------|--------|--------|--------|-----------|
|   | MHz    | dBm    | Limit  | Line   | Level  | Factor | Remark | Pol/Phase |
|   | MHz    | dBm    | dB     | dBm    | dBm    | dB     |        |           |
| 1 | 35.1   | -58.14 | -45.14 | -13.00 | -47.70 | -10.44 | Peak   | VERTICAL  |
| 2 | 81.0   | -55.75 | -42.75 | -13.00 | -45.41 | -10.35 | Peak   | VERTICAL  |
| 3 | 232.2  | -56.18 | -43.18 | -13.00 | -48.28 | -7.91  | Peak   | VERTICAL  |
| 4 | 507.9  | -64.19 | -51.19 | -13.00 | -61.16 | -3.03  | Peak   | VERTICAL  |
| 5 | 836.9  | -46.10 |        |        | -47.47 | 1.36   | Peak   | VERTICAL  |
| 6 | 880.3  | -55.28 |        |        | -56.99 | 1.71   | Peak   | VERTICAL  |
| 7 | 1674.0 | -52.09 | -39.09 | -13.00 | -54.24 | 2.16   | Peak   | VERTICAL  |
| 8 | 2508.0 | -45.76 | -32.76 | -13.00 | -52.95 | 7.18   | Peak   | VERTICAL  |

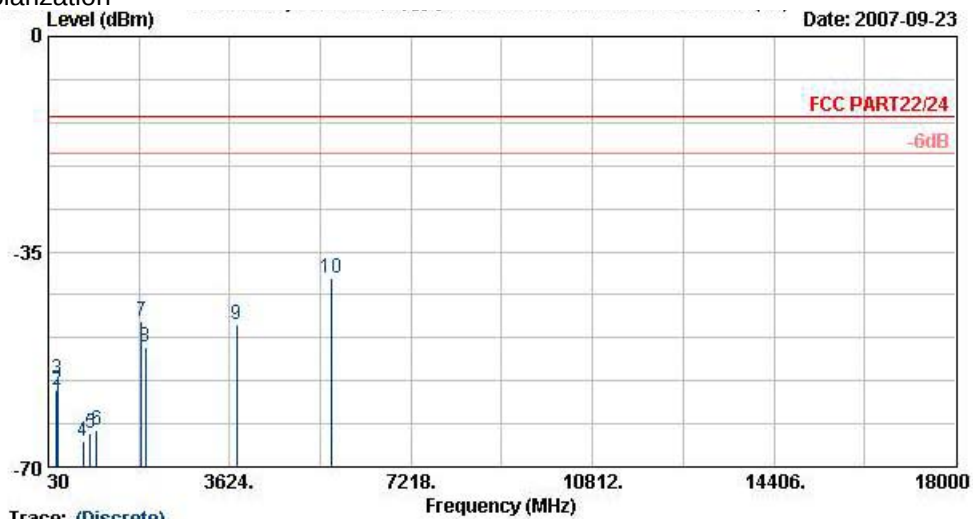
## Remark:

1. #5: MS Signal
2. #6: BS Signal
3. There is no more obvious emission except the listings above.



## 4.6.5.3 Mode 3

Horizontal Polarization



Trace: (Discrete)

Site : 08CH06-HY  
 Condition : HF-SPURIOUS-060929 HORIZONTAL  
 EUT : GSM/EDGE 850/900/1800/1900 WCDMA/HSDPA  
 : 850/1900/2100 PDA Phone  
 Power : 120Vao/60Hz  
 Model : FG 761327-04  
 Mode : PCS1900 Link;Ch661+Earphone+Adaptor  
 Plane : E2

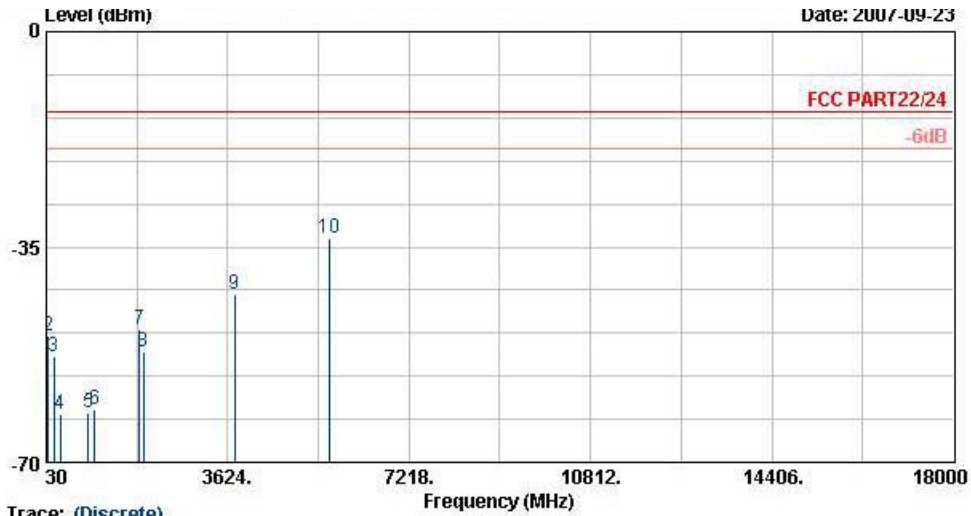
|    | Freq   | Level  | Over   | Limit  | Read   |        |        |            |
|----|--------|--------|--------|--------|--------|--------|--------|------------|
|    | MHz    | dBm    | Limit  | Line   | Level  | Factor | Remark | Pol/Phase  |
|    |        |        | dB     | dBm    | dBm    | dB     |        |            |
| 1  | 31.1   | -57.60 | -44.60 | -13.00 | -57.35 | -0.25  | Peak   | HORIZONTAL |
| 2  | 189.0  | -57.46 | -44.46 | -13.00 | -44.20 | -13.27 | Peak   | HORIZONTAL |
| 3  | 214.7  | -55.63 | -42.63 | -13.00 | -42.74 | -12.89 | Peak   | HORIZONTAL |
| 4  | 714.4  | -65.85 | -52.85 | -13.00 | -63.28 | -2.57  | Peak   | HORIZONTAL |
| 5  | 857.9  | -64.61 |        |        | -63.48 | -1.13  | Peak   | HORIZONTAL |
| 6  | 988.8  | -63.90 |        |        | -64.03 | 0.13   | Peak   | HORIZONTAL |
| 7  | 1884.0 | -46.39 | -33.39 | -13.00 | -50.29 | 3.90   | Peak   | HORIZONTAL |
| 8  | 1958.0 | -50.50 | -37.50 | -13.00 | -54.91 | 4.41   | Peak   | HORIZONTAL |
| 9  | 3758.0 | -46.72 | -33.72 | -13.00 | -57.13 | 10.41  | Peak   | HORIZONTAL |
| 10 | 5638.0 | -39.17 | -26.17 | -13.00 | -57.62 | 18.45  | Peak   | HORIZONTAL |

Remark:

- #5: MS Signal
- #6: BS Signal



## Vertical Polarization



## Trace: (Discrete)

Site : 08CHD6-HY  
 Condition : HF-SPURIOUS-060929 VERTICAL  
 EUT : GSM/EDGE 850/900/1800/1900 WCDMA/HSDPA  
 : 850/1900/2100 PDA Phone  
 Power : 120Vao/60Hz  
 Model : FG 761327-04  
 Mode : PCS1900 Link;Ch661+Earphone+Adaptor  
 Plane : E2

|    | Freq   | Level  | Over   | Limit  | Read   | Factor | Remark | Pol/Phase |
|----|--------|--------|--------|--------|--------|--------|--------|-----------|
|    | MHz    | dBm    | Limit  | Line   | Level  | dB     |        |           |
| 1  | 31.1   | -52.43 | -39.43 | -13.00 | -43.09 | -9.34  | Peak   | VERTICAL  |
| 2  | 76.4   | -49.36 | -36.36 | -13.00 | -38.31 | -11.05 | Peak   | VERTICAL  |
| 3  | 187.7  | -52.90 | -39.90 | -13.00 | -44.42 | -8.49  | Peak   | VERTICAL  |
| 4  | 300.0  | -62.13 | -49.13 | -13.00 | -55.67 | -6.46  | Peak   | VERTICAL  |
| 5  | 854.4  | -61.82 | -48.82 | -13.00 | -63.32 | 1.50   | Peak   | VERTICAL  |
| 6  | 994.4  | -61.49 | -48.49 | -13.00 | -64.10 | 2.61   | Peak   | VERTICAL  |
| 7  | 1884.0 | -48.28 |        |        | -52.57 | 4.29   | Peak   | VERTICAL  |
| 8  | 1958.0 | -51.94 |        |        | -56.94 | 5.01   | Peak   | VERTICAL  |
| 9  | 3758.0 | -42.73 | -29.73 | -13.00 | -52.62 | 9.89   | Peak   | VERTICAL  |
| 10 | 5638.0 | -33.50 | -20.50 | -13.00 | -50.47 | 16.97  | Peak   | VERTICAL  |

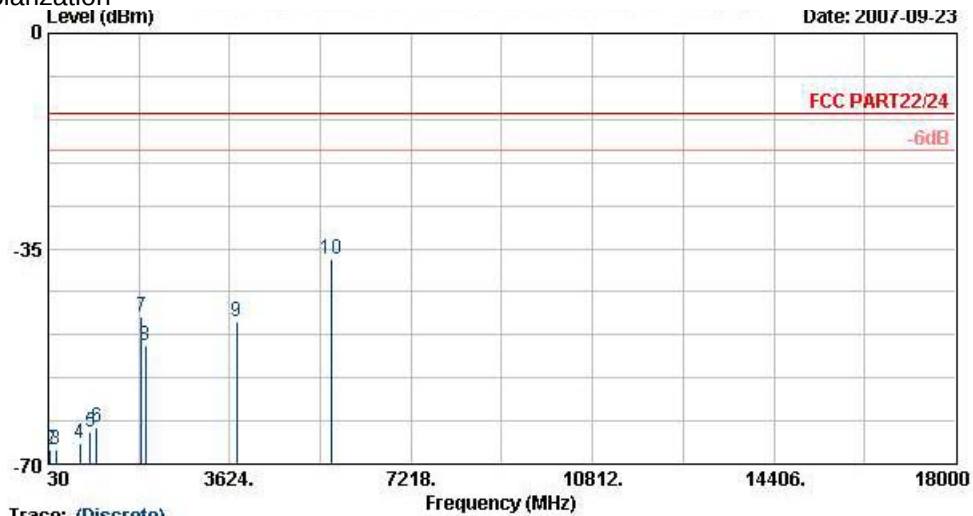
## Remark:

- #7: MS Signal
- #8: BS Signal
- There is no more obvious emission except the listings above.



## 4.6.5.4 Mode 4

Horizontal Polarization



Trace: (Discrete)

Site : 08CH06-HY  
 Condition : HF-SPURIOUS-060929 HORIZONTAL  
 EUT : GSM/EDGE 850/900/1800/1900 WCDMA/HSDPA  
 : 850/1900/2100 PDA Phone  
 Power : 120Vac/60Hz  
 Model : FG 761327-04  
 Mode : EDGE Link;Ch661+Earphone+Adaptor  
 Plane : E2

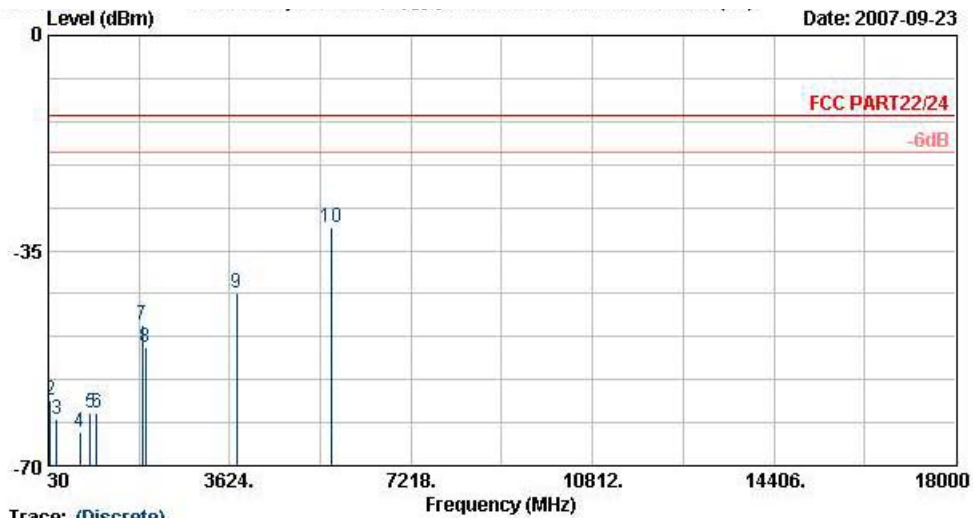
|    | Freq   | Level  | Over   | Limit  | Read   |        |        |            |
|----|--------|--------|--------|--------|--------|--------|--------|------------|
|    | MHz    | dBm    | Limit  | Line   | Level  | Factor | Remark | Pol/Phase  |
|    |        |        | dB     | dBm    | dBm    | dB     |        |            |
| 1  | 31.1   | -61.59 | -48.59 | -13.00 | -61.34 | -0.25  | Peak   | HORIZONTAL |
| 2  | 68.3   | -67.61 | -54.61 | -13.00 | -55.25 | -12.36 | Peak   | HORIZONTAL |
| 3  | 187.7  | -67.60 | -54.60 | -13.00 | -54.34 | -13.26 | Peak   | HORIZONTAL |
| 4  | 659.8  | -66.73 | -53.73 | -13.00 | -63.60 | -3.13  | Peak   | HORIZONTAL |
| 5  | 864.9  | -64.75 | -51.75 | -13.00 | -63.68 | -1.06  | Peak   | HORIZONTAL |
| 6  | 985.3  | -64.02 | -51.02 | -13.00 | -64.12 | 0.10   | Peak   | HORIZONTAL |
| 7  | 1884.0 | -45.96 |        |        | -49.86 | 3.90   | Peak   | HORIZONTAL |
| 8  | 1958.0 | -50.72 |        |        | -55.13 | 4.41   | Peak   | HORIZONTAL |
| 9  | 3758.0 | -46.72 | -33.72 | -13.00 | -57.12 | 10.41  | Peak   | HORIZONTAL |
| 10 | 5638.0 | -36.69 | -23.69 | -13.00 | -55.13 | 18.45  | Peak   | HORIZONTAL |

Remark:

- #7: MS Signal
- #8: BS Signal



## Vertical Polarization



## Trace: (Discrete)

Site : 03CHD6-HY  
 Condition : HF SPURIOUS-060929 VERTICAL  
 EUT : GSM/EDGE 850/900/1800/1900 WCDMA/HSDPA  
 : 850/1900/2100 FDA Phone  
 Power : 120V<sub>ac</sub>/60Hz  
 Model : FG 761327-04  
 Mode : EDGE Link;Ch661+Earphone+Adaptor  
 Plane : E2

|      | Freq   | Level  | Over   | Limit  | Read   |        |        |           |
|------|--------|--------|--------|--------|--------|--------|--------|-----------|
|      | MHz    | dBm    | Limit  | Line   | Level  | Factor | Remark | Pol/Phase |
|      | MHz    | dBm    | dB     | dBm    | dBm    | dB     |        |           |
| 1    | 32.4   | -64.36 | -51.36 | -13.00 | -54.47 | -9.89  | Peak   | VERTICAL  |
| 2    | 70.2   | -59.37 | -46.37 | -13.00 | -47.34 | -12.02 | Peak   | VERTICAL  |
| 3    | 188.5  | -62.55 | -49.55 | -13.00 | -54.06 | -8.49  | Peak   | VERTICAL  |
| 4    | 656.3  | -64.66 | -51.66 | -13.00 | -63.57 | -1.09  | Peak   | VERTICAL  |
| 5    | 859.3  | -61.45 | -48.45 | -13.00 | -63.00 | 1.54   | Peak   | VERTICAL  |
| 6    | 995.8  | -61.39 | -48.39 | -13.00 | -64.02 | 2.63   | Peak   | VERTICAL  |
| 7    | 1888.0 | -47.10 |        |        | -51.39 | 4.29   | Peak   | VERTICAL  |
| 8    | 1958.0 | -50.80 |        |        | -55.80 | 5.01   | Peak   | VERTICAL  |
| 9    | 3758.0 | -41.79 | -28.79 | -13.00 | -51.68 | 9.89   | Peak   | VERTICAL  |
| 10 @ | 5638.0 | -31.23 | -18.23 | -13.00 | -48.20 | 16.97  | Peak   | VERTICAL  |

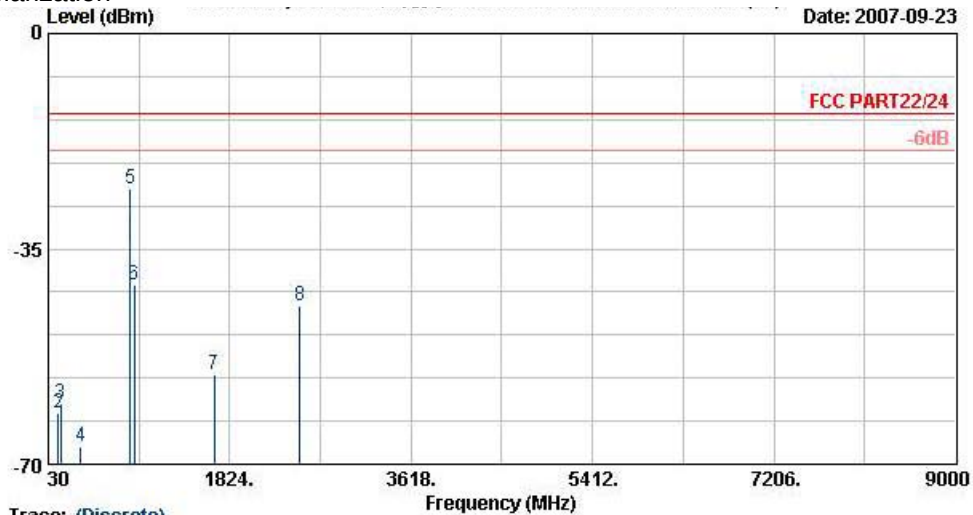
## Remark:

- #7: MS Signal
- #8: BS Signal
- There is no more obvious emission except the listings above.



## 4.6.5.5 Mode 5

## Horizontal Polarization



Site : 08CH06-HY  
 Condition : HF-SPURIOUS-060929 HORIZONTAL  
 EUT : GSM/EDGE 850/900/1800/1900 WCDMA/HSDPA  
 : 850/1900/2100 PDA Phone  
 Power : 120Vac/60Hz  
 Model : FG 761327-04  
 Mode : WCDMA Link;Ch4182+Earphone+Adaptor  
 Plane : E2

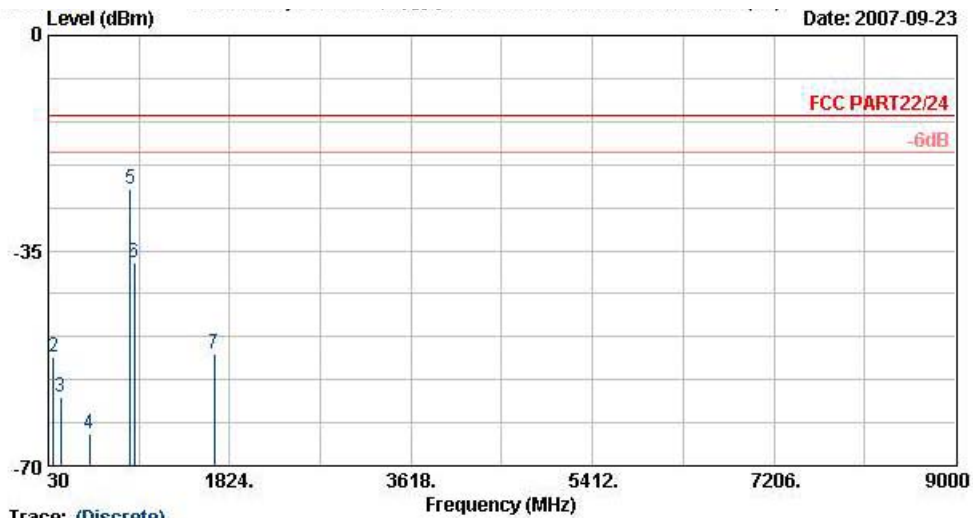
|   | Freq   | Level  | Over   | Limit  | Read   |        |        |            |
|---|--------|--------|--------|--------|--------|--------|--------|------------|
|   | MHz    | dBm    | Limit  | Line   | Level  | Factor | Remark | Pol/Phase  |
|   |        |        | dB     | dBm    | dBm    | dB     |        |            |
| 1 | 33.2   | -58.27 | -45.27 | -13.00 | -56.81 | -1.47  | Peak   | HORIZONTAL |
| 2 | 125.0  | -61.58 | -48.58 | -13.00 | -49.05 | -12.53 | Peak   | HORIZONTAL |
| 3 | 156.1  | -60.09 | -47.09 | -13.00 | -47.20 | -12.89 | Peak   | HORIZONTAL |
| 4 | 348.3  | -67.26 | -54.26 | -13.00 | -58.99 | -8.27  | Peak   | HORIZONTAL |
| 5 | 838.3  | -25.37 |        |        | -24.04 | -1.32  | Peak   | HORIZONTAL |
| 6 | 880.3  | -40.77 |        |        | -39.86 | -0.91  | Peak   | HORIZONTAL |
| 7 | 1674.0 | -55.44 | -42.44 | -13.00 | -57.80 | 2.36   | Peak   | HORIZONTAL |
| 8 | 2514.0 | -44.15 | -31.15 | -13.00 | -50.83 | 6.69   | Peak   | HORIZONTAL |

## Remark:

- #5: MS Signal
- #6: BS Signal



## Vertical Polarization



## Trace: (Discrete)

Site : 03CHD6-HY  
 Condition : HF-SPURIOUS-060929 VERTICAL  
 EUT : GSM/EDGE 850/900/1800/1900 WCDMA/HSDPA  
 : 850/1900/2100 FDA Phone  
 Power : 120V<sub>ac</sub>/60Hz  
 Model : FG 761327-04  
 Mode : WCDMA Link;Ck4182+Earphone+Adaptor  
 Plane : E2

|     | Freq   | Level  | Over   | Limit  | Read   |        |        |           |
|-----|--------|--------|--------|--------|--------|--------|--------|-----------|
|     | MHz    | dBm    | Limit  | Line   | Level  | Factor | Remark | Pol/Phase |
|     | MHz    | dBm    | dB     | dBm    | dBm    | dB     |        |           |
| 1   | 31.1   | -56.31 | -43.31 | -13.00 | -46.97 | -9.34  | Peak   | VERTICAL  |
| 2   | 78.3   | -52.41 | -39.41 | -13.00 | -41.64 | -10.77 | Peak   | VERTICAL  |
| 3   | 155.3  | -58.81 | -45.81 | -13.00 | -50.62 | -8.19  | Peak   | VERTICAL  |
| 4   | 439.3  | -64.89 | -51.89 | -13.00 | -61.04 | -3.85  | Peak   | VERTICAL  |
| 5 @ | 838.3  | -24.94 |        |        | -26.31 | 1.37   | Peak   | VERTICAL  |
| 6   | 880.3  | -37.01 |        |        | -38.72 | 1.71   | Peak   | VERTICAL  |
| 7   | 1674.0 | -51.91 | -38.91 | -13.00 | -54.07 | 2.16   | Peak   | VERTICAL  |

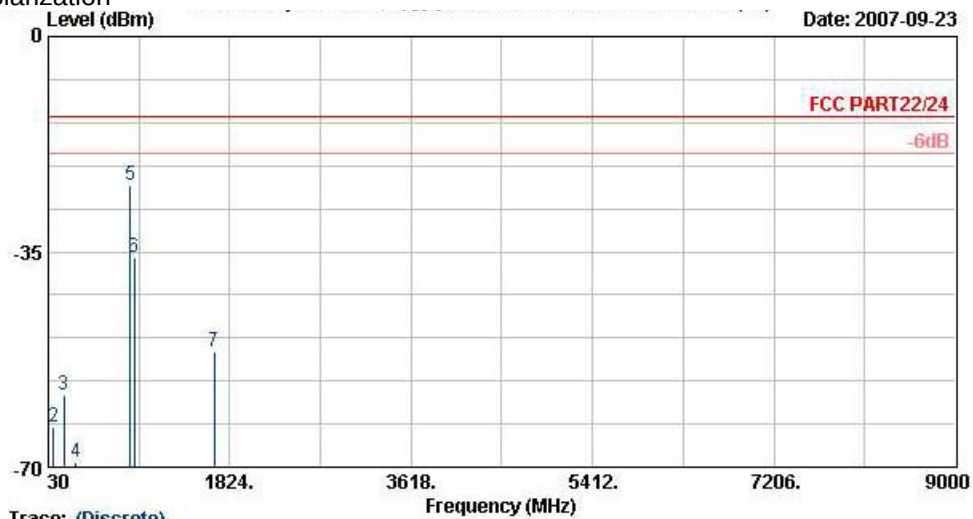
## Remark:

- #5: MS Signal
- #6: BS Signal
- There is no more obvious emission except the listings above.



## 4.6.5.6 Mode 6

Horizontal Polarization



Trace: (Discrete)

Site : 08CH06-HY  
 Condition : HF-SPURIOUS-060929 HORIZONTAL  
 EUT : GSM/EDGE 850/900/1800/1900 WCDMA/HSDPA  
 : 850/1900/2100 PDA Phone  
 Power : 120V<sub>ac</sub>/60Hz  
 Model : FG 761327-04  
 Mode : HSDPA Link;Ch4182+Earphone+Adaptor  
 Plane : E2

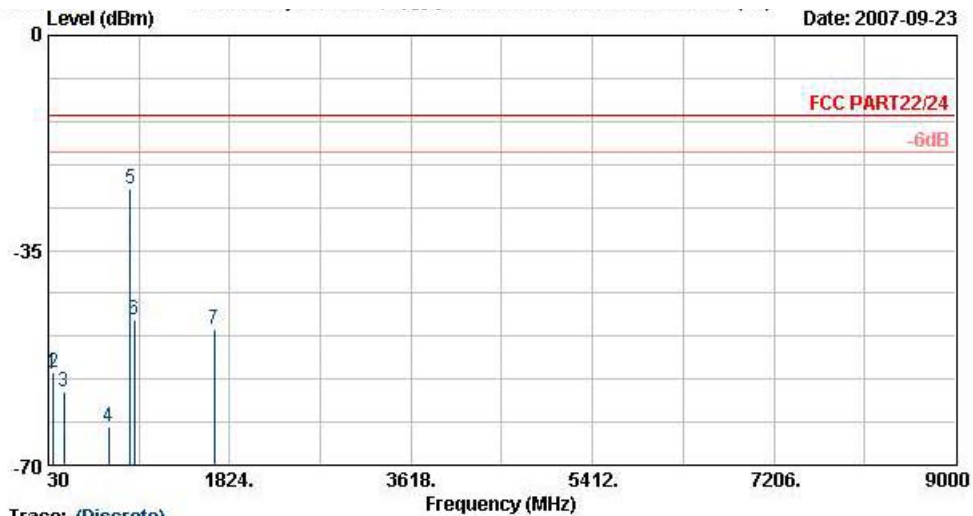
|     | Freq   | Level  | Over   | Limit  | Read   |        |        |            |
|-----|--------|--------|--------|--------|--------|--------|--------|------------|
|     | MHz    | dBm    | Limit  | Line   | Level  | Factor | Remark | Pol/Phase  |
|     |        |        | dB     | dBm    | dBm    | dB     |        |            |
| 1   | 31.9   | -61.29 | -48.29 | -13.00 | -60.43 | -0.86  | Peak   | HORIZONTAL |
| 2   | 77.8   | -63.61 | -50.61 | -13.00 | -51.29 | -12.33 | Peak   | HORIZONTAL |
| 3   | 186.3  | -58.31 | -45.31 | -13.00 | -45.08 | -13.23 | Peak   | HORIZONTAL |
| 4   | 302.8  | -69.10 | -56.10 | -13.00 | -59.25 | -9.84  | Peak   | HORIZONTAL |
| 5 @ | 838.3  | -24.10 |        |        | -22.78 | -1.32  | Peak   | HORIZONTAL |
| 6 @ | 880.3  | -35.82 |        |        | -34.91 | -0.91  | Peak   | HORIZONTAL |
| 7   | 1670.0 | -51.14 | -38.14 | -13.00 | -53.37 | 2.23   | Peak   | HORIZONTAL |

Remark:

1. #5: MS Signal
2. #6: BS Signal



## Vertical Polarization



Trace: (Discrete)

Site : 03CHD6-HY  
 Condition : HF-SPURIOUS-060929 VERTICAL  
 EUT : GSM/EDGE 850/900/1800/1900 WCDMA/HSDPA  
 : 850/1900/2100 PDA Phone  
 Power : 120V<sub>ac</sub>/60Hz  
 Model : FG 761327-04  
 Mode : HSDPA Link;Ch4182+Earphone+Adaptor  
 Plane : E2

|     | Freq   | Level  | Over   | Limit  | Read   |        |        |           |
|-----|--------|--------|--------|--------|--------|--------|--------|-----------|
|     | MHz    | dBm    | Limit  | Line   | Level  | Factor | Remark | Pol/Phase |
|     | MHz    | dBm    | dB     | dBm    | dBm    | dB     |        |           |
| 1   | 77.0   | -55.14 | -42.14 | -13.00 | -44.09 | -11.05 | Peak   | VERTICAL  |
| 2   | 82.4   | -54.87 | -41.87 | -13.00 | -44.67 | -10.21 | Peak   | VERTICAL  |
| 3   | 182.3  | -57.93 | -44.93 | -13.00 | -49.50 | -8.43  | Peak   | VERTICAL  |
| 4   | 624.8  | -63.72 | -50.72 | -13.00 | -62.15 | -1.57  | Peak   | VERTICAL  |
| 5 @ | 838.3  | -25.05 |        |        | -26.43 | 1.37   | Peak   | VERTICAL  |
| 6   | 880.3  | -46.27 |        |        | -47.99 | 1.71   | Peak   | VERTICAL  |
| 7   | 1674.0 | -47.90 | -34.90 | -13.00 | -50.06 | 2.16   | Peak   | VERTICAL  |

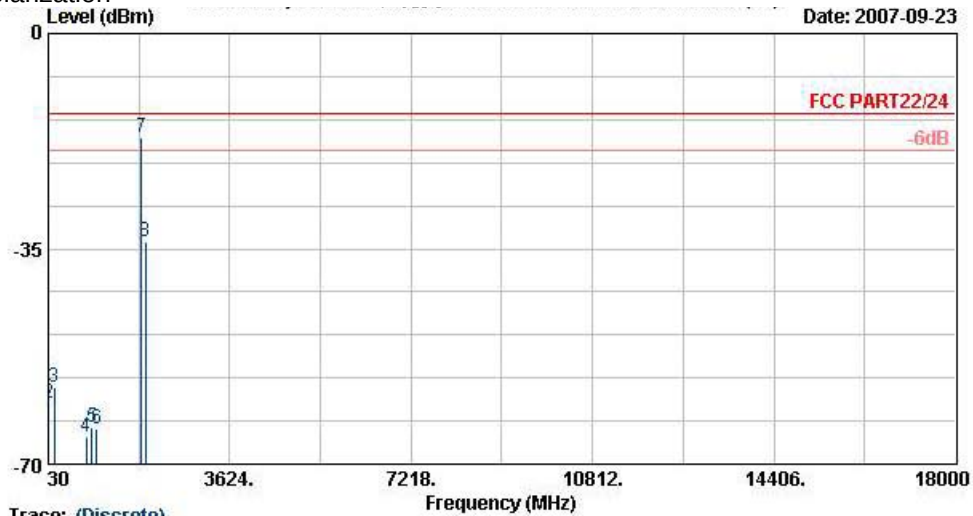
## Remark:

- #5: MS Signal
- #6: BS Signal
- There is no more obvious emission except the listings above.



## 4.6.5.7 Mode 7

## Horizontal Polarization



Trace: (Discrete)

Site : 08CH06-HY  
 Condition : HF-SPURIOUS-060929 HORIZONTAL  
 EUT : GSM/EDGE 850/900/1800/1900 WCDMA/HSDPA  
 : 850/1900/2100 PDA Phone  
 Power : 120Vac/60Hz  
 Model : FG 761327-04  
 Mode : WCDMA Link, CH9400+ Earphone+Adaptor  
 Plane : E2

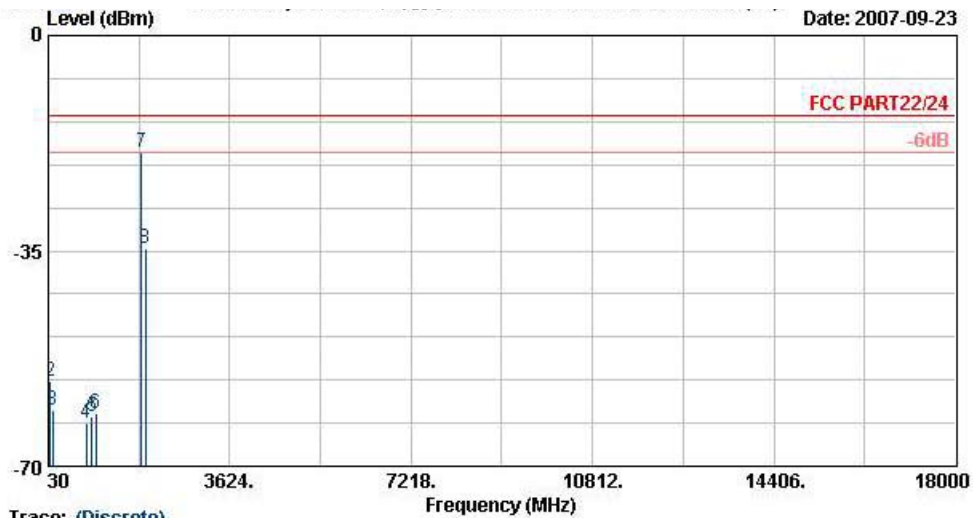
|     | Freq   | Level  | Over   | Limit  | Read   | Factor | Remark | Pol/Phase  |
|-----|--------|--------|--------|--------|--------|--------|--------|------------|
|     | MHz    | dBm    | Limit  | Line   | Level  | dB     |        |            |
| 1   | 30.5   | -61.97 | -48.97 | -13.00 | -61.73 | -0.25  | Peak   | HORIZONTAL |
| 2   | 44.6   | -60.18 | -47.18 | -13.00 | -51.40 | -8.78  | Peak   | HORIZONTAL |
| 3   | 145.3  | -57.54 | -44.54 | -13.00 | -44.78 | -12.76 | Peak   | HORIZONTAL |
| 4   | 782.3  | -65.63 | -52.63 | -13.00 | -63.76 | -1.87  | Peak   | HORIZONTAL |
| 5   | 897.8  | -64.09 | -51.09 | -13.00 | -63.35 | -0.74  | Peak   | HORIZONTAL |
| 6   | 995.8  | -64.33 | -51.33 | -13.00 | -64.53 | 0.20   | Peak   | HORIZONTAL |
| 7 @ | 1878.0 | -16.84 |        |        | -20.74 | 3.90   | Peak   | HORIZONTAL |
| 8   | 1958.0 | -33.82 |        |        | -38.23 | 4.41   | Peak   | HORIZONTAL |

## Remark:

- #7: MS Signal
- #8: BS Signal



## Vertical Polarization



## Trace: (Discrete)

Site : 03CH06-HY  
 Condition : HF-SPURIOUS-060929 VERTICAL  
 EUT : GSM/EDGE 850/900/1800/1900 WCDMA/HSDPA  
 : 850/1900/2100 FDA Phone  
 Power : 120V<sub>ac</sub>/60Hz  
 Model : FG 761327-04  
 Mode : WCDMA Link, C19400+ Earphone+ Adaptor  
 Plane : E2

|     | Freq   | Level  | Over   | Limit  | Read   | Factor | Remark | Pol/Phase |
|-----|--------|--------|--------|--------|--------|--------|--------|-----------|
|     | MHz    | dBm    | dB     | dBm    | dBm    | dB     |        |           |
| 1   | 52.1   | -57.01 | -44.01 | -13.00 | -42.47 | -14.54 | Peak   | VERTICAL  |
| 2   | 75.6   | -56.13 | -43.13 | -13.00 | -44.94 | -11.19 | Peak   | VERTICAL  |
| 3   | 125.0  | -60.94 | -47.94 | -13.00 | -53.02 | -7.92  | Peak   | VERTICAL  |
| 4   | 784.4  | -63.06 | -50.06 | -13.00 | -63.90 | 0.84   | Peak   | VERTICAL  |
| 5   | 885.9  | -62.04 | -49.04 | -13.00 | -63.79 | 1.75   | Peak   | VERTICAL  |
| 6   | 969.9  | -61.36 | -48.36 | -13.00 | -63.78 | 2.42   | Peak   | VERTICAL  |
| 7 @ | 1878.0 | -19.11 |        |        | -23.40 | 4.29   | Peak   | VERTICAL  |
| 8   | 1958.0 | -34.57 |        |        | -39.58 | 5.01   | Peak   | VERTICAL  |

## Remark:

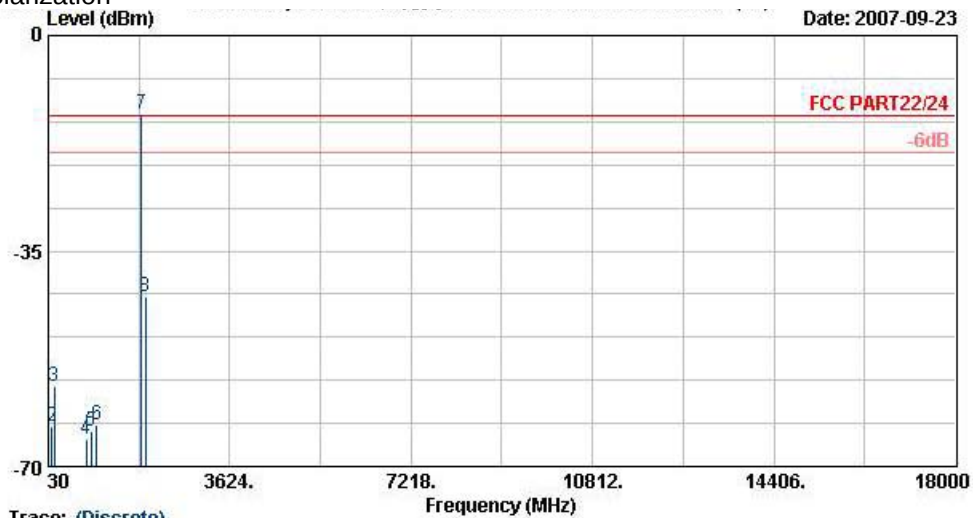
- #7: MS Signal
- #8: BS Signal
- There is no more obvious emission except the listings above.



## 4.6.5.8 Mode 8

## Horizontal Polarization

Date: 2007-09-23



Trace: (Discrete)

Site : 08CH06-HY  
 Condition : HF-SPURIOUS-060929 HORIZONTAL  
 EUT : GSM/EDGE 850/900/1800/1900 WCDMA/HSDPA  
 : 850/1900/2100 PDA Phone  
 Power : 120V<sub>ac</sub>/60Hz  
 Model : FG 761327-04  
 Mode : HSDPA Link, Ck9400+Earphone+Adaptor  
 Plane : E2

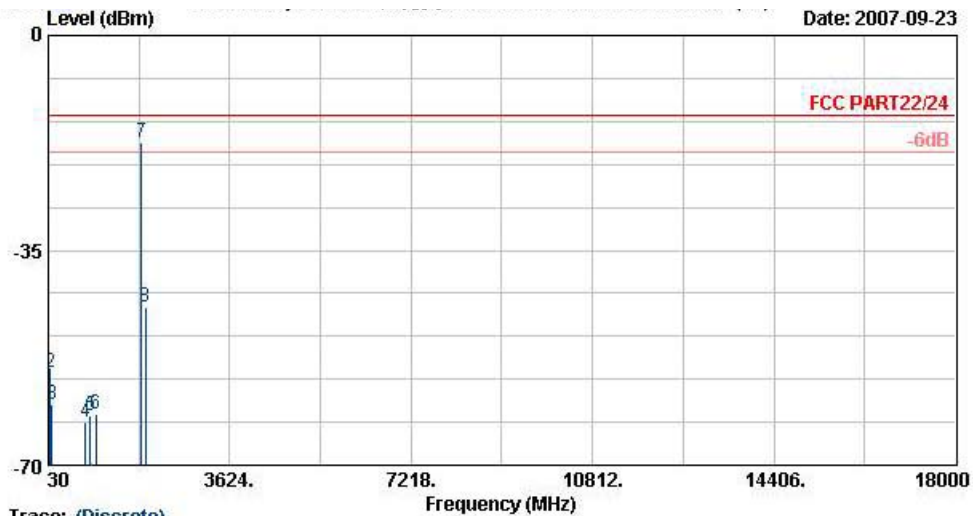
|     | Freq   | Level  | Over   | Limit  | Read   | Factor | Remark | Pol/Phase  |
|-----|--------|--------|--------|--------|--------|--------|--------|------------|
|     | MHz    | dBm    | Limit  | Line   | Level  | dB     |        |            |
| 1   | 30.5   | -61.20 | -48.20 | -13.00 | -60.96 | -0.25  | Peak   | HORIZONTAL |
| 2   | 94.0   | -63.46 | -50.46 | -13.00 | -51.20 | -12.26 | Peak   | HORIZONTAL |
| 3   | 145.3  | -56.99 | -43.99 | -13.00 | -44.22 | -12.76 | Peak   | HORIZONTAL |
| 4   | 787.9  | -65.47 | -52.47 | -13.00 | -63.66 | -1.82  | Peak   | HORIZONTAL |
| 5   | 882.4  | -64.38 | -51.38 | -13.00 | -63.48 | -0.89  | Peak   | HORIZONTAL |
| 6   | 995.8  | -63.21 | -50.21 | -13.00 | -63.42 | 0.20   | Peak   | HORIZONTAL |
| 7 @ | 1878.0 | -12.86 |        |        | -16.76 | 3.90   | Peak   | HORIZONTAL |
| 8   | 1958.0 | -42.46 |        |        | -46.88 | 4.41   | Peak   | HORIZONTAL |

## Remark:

- #7: MS Signal
- #8: BS Signal



## Vertical Polarization



## Trace: (Discrete)

Site : 03CHD6-HY  
 Condition : HF-SPURIOUS-060929 VERTICAL  
 EUT : GSM/EDGE 850/900/1800/1900 WCDMA/HSDPA  
 : 850/1900/2100 PDA Phone  
 Power : 120V<sub>ac</sub>/60Hz  
 Model : FG 761327-04  
 Mode : HSDPA Link, Ch9400+Earphone+Adaptor  
 Plane : E2

|     | Freq   | Level  | Over   | Limit  | Read   |        |        |           |
|-----|--------|--------|--------|--------|--------|--------|--------|-----------|
|     | MHz    | dBm    | Limit  | Line   | Level  | Factor | Remark | Pol/Phase |
|     | MHz    | dBm    | dB     | dBm    | dBm    | dB     |        |           |
| 1   | 52.1   | -54.00 | -41.00 | -13.00 | -39.46 | -14.54 | Peak   | VERTICAL  |
| 2   | 75.6   | -55.01 | -42.01 | -13.00 | -43.83 | -11.19 | Peak   | VERTICAL  |
| 3   | 104.0  | -60.20 | -47.20 | -13.00 | -52.47 | -7.72  | Peak   | VERTICAL  |
| 4   | 771.8  | -63.07 | -50.07 | -13.00 | -63.72 | 0.65   | Peak   | VERTICAL  |
| 5   | 862.8  | -61.90 | -48.90 | -13.00 | -63.47 | 1.57   | Peak   | VERTICAL  |
| 6   | 980.4  | -61.58 | -48.58 | -13.00 | -64.09 | 2.51   | Peak   | VERTICAL  |
| 7 @ | 1884.0 | -17.51 |        |        | -21.81 | 4.29   | Peak   | VERTICAL  |
| 8   | 1958.0 | -44.24 |        |        | -49.25 | 5.01   | Peak   | VERTICAL  |

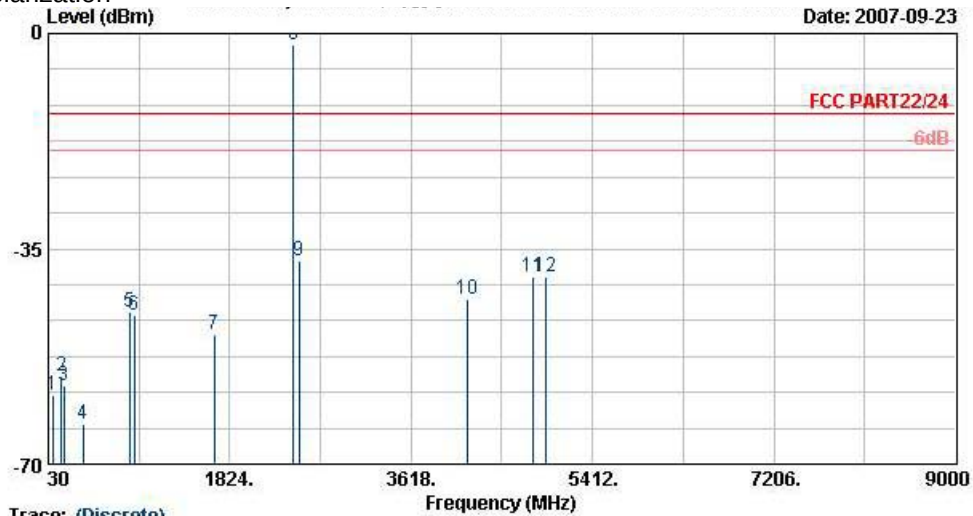
## Remark:

- #7: MS Signal
- #8: BS Signal
- There is no more obvious emission except the listings above.



## 4.6.5.9 Mode 9

Horizontal Polarization



Trace: (Discrete)

Site : 03CH06-HV  
 Condition : FCC PART 22/24 HF-SPURIOUS-060929 HORIZONTAL  
 EUT : PDA PHONE  
 Power : 120Vac/60Hz  
 Model : FC 761327-04  
 Memo : GSM 850 Link Mode;Ch189+BT Link  
 Plane : +Earphone+Adapter  
 E2

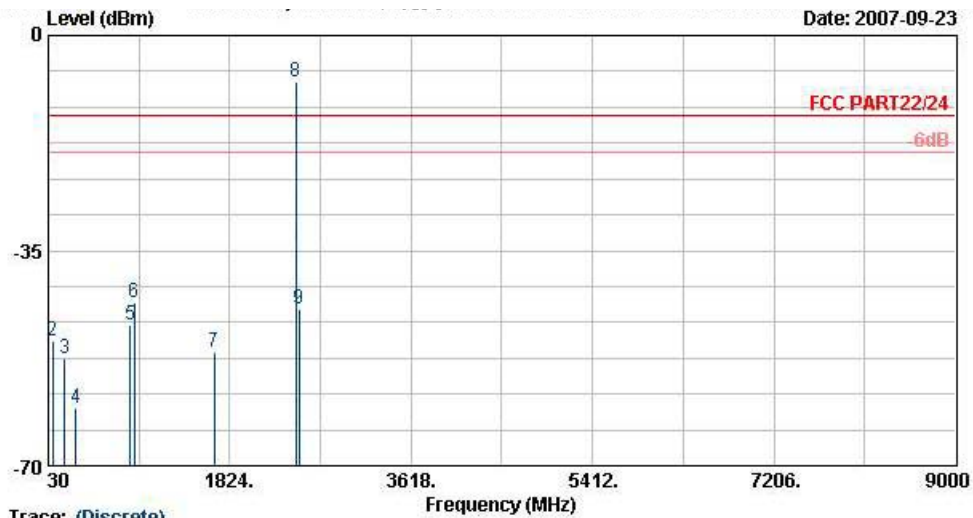
|     | Freq    | Level  | Over   | Limit  | Read   |        |        |
|-----|---------|--------|--------|--------|--------|--------|--------|
|     | MHz     | dBm    | Limit  | Line   | Level  | Factor | Remark |
|     |         |        | dB     | dBm    | dBm    | dB     |        |
| 1   | 71.04   | -58.70 | -45.70 | -13.00 | -46.34 | -12.35 | Peak   |
| 2   | 161.49  | -55.78 | -42.78 | -13.00 | -42.82 | -12.95 | Peak   |
| 3   | 185.79  | -57.20 | -44.20 | -13.00 | -43.97 | -13.23 | Peak   |
| 4   | 374.90  | -63.56 | -50.56 | -13.00 | -56.23 | -7.34  | Peak   |
| 5   | 834.80  | -45.20 |        |        | -43.85 | -1.35  | Peak   |
| 6   | 880.30  | -45.80 |        |        | -44.88 | -0.91  | Peak   |
| 7   | 1674.00 | -48.95 | -35.95 | -13.00 | -51.31 | 2.36   | Peak   |
| 8 @ | 2458.00 | -1.75  |        |        | -8.25  | 6.50   | Peak   |
| 9   | 2508.00 | -36.86 | -23.86 | -13.00 | -43.55 | 6.69   | Peak   |
| 10  | 4178.00 | -43.33 | -30.33 | -13.00 | -55.31 | 11.98  | Peak   |
| 11  | 4818.00 | -39.63 | -26.63 | -13.00 | -54.91 | 15.27  | Peak   |
| 12  | 4944.00 | -39.64 | -26.64 | -13.00 | -55.44 | 15.80  | Peak   |

Remark:

- #5: MS Signal
- #6: BS Signal
- #8: BT Signal



## Vertical Polarization



Site : 03CH06-HY  
 Condition : FCC PART22/24 HF-SPURIOUS-060020 VERTICAL  
 EUT : PDA PHONE  
 Power : 120Vac/60Hz  
 Model : FG 761327-04  
 Memo : GSM 850 Link Mode;Ch180+BT Link  
 Memo : +Earphone+Adapter  
 Plane : E2

|     | Freq    | Level  | Over   | Limit  | Read   |        |        |
|-----|---------|--------|--------|--------|--------|--------|--------|
|     | MHz     | dBm    | Limit  | Line   | Level  | Factor | Remark |
|     |         |        | dB     | dBm    | dBm    | dB     |        |
| 1   | 32.43   | -53.23 | -40.23 | -13.00 | -43.34 | -9.89  | Peak   |
| 2   | 73.74   | -49.81 | -36.81 | -13.00 | -38.34 | -11.46 | Peak   |
| 3   | 193.08  | -52.52 | -39.52 | -13.00 | -43.99 | -8.53  | Peak   |
| 4   | 302.80  | -60.69 | -47.69 | -13.00 | -54.30 | -6.40  | Peak   |
| 5   | 836.90  | -47.20 |        |        | -48.56 | 1.36   | Peak   |
| 6   | 880.30  | -43.51 |        |        | -45.22 | 1.71   | Peak   |
| 7   | 1674.00 | -51.60 | -38.60 | -13.00 | -53.76 | 2.16   | Peak   |
| 8 @ | 2478.00 | -7.59  |        |        | -14.70 | 7.11   | Peak   |
| 9   | 2508.00 | -44.57 | -31.57 | -13.00 | -51.75 | 7.18   | Peak   |

## Remark:

- #5: MS Signal
- #6: BS Signal
- #8: BT Signal
- There is no more obvious emission except the listings above.

## **4.7 Frequency Stability (Temperature Variation)**

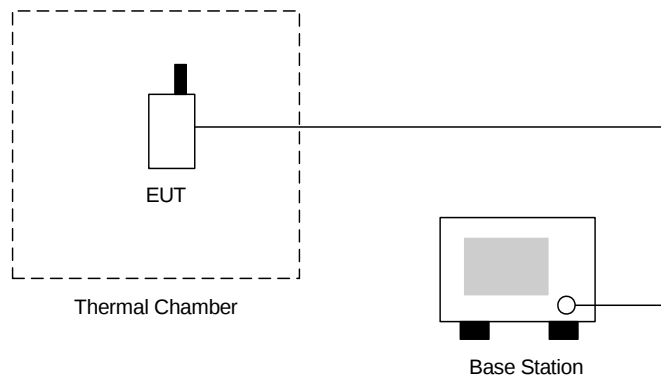
### **4.7.1 Measurement Instrument**

As described in chapter 5 of this test report.

### **4.7.2 Test Procedure**

1. The EUT and test equipment were set up as shown on the following section.
2. With all power removed, the temperature was decreased to  $-30^{\circ}\text{C}$  and permitted to stabilize for three hours. Power was applied and the maximum change in frequency was noted within one minute.
3. With power OFF, the temperature was raised in  $10^{\circ}\text{C}$  steps. The sample was permitted to stabilize at each step for at least one-half hour. Power was applied and the maximum frequency change was noted within one minute.
4. The temperature tests were performed for the worst case.
5. Test data was recorded.

### **4.7.3 Test Setup Layout**



**4.7.4 Test Result**

• Test Mode : GSM850 (GSM) CH189

| Temperature(°C) | Change (Hz) | Change (ppm) | Limit (ppm) | Result |
|-----------------|-------------|--------------|-------------|--------|
| -30             | -48         | -0.03        | 2.5         | Passed |
| -20             | -35         | -0.04        |             |        |
| -10             | -18         | -0.02        |             |        |
| 0               | 14          | 0.02         |             |        |
| 10              | 8           | 0.01         |             |        |
| 20              | -8          | -0.01        |             |        |
| 30              | 21          | 0.02         |             |        |
| 40              | 16          | 0.02         |             |        |
| 50              | 10          | 0.01         |             |        |

• Test Mode : GSM850 (EDGE) CH189

| Temperature(°C) | Change (Hz) | Change (ppm) | Limit (ppm) | Result |
|-----------------|-------------|--------------|-------------|--------|
| -30             | -52         | -0.03        | 2.5         | Passed |
| -20             | -42         | -0.05        |             |        |
| -10             | -34         | -0.04        |             |        |
| 0               | -8          | -0.01        |             |        |
| 10              | 24          | 0.03         |             |        |
| 20              | 15          | 0.02         |             |        |
| 30              | 20          | 0.02         |             |        |
| 40              | -11         | -0.01        |             |        |
| 50              | 20          | 0.02         |             |        |

• Test Mode : PCS1900 (GSM) CH661

| Temperature(°C) | Change (Hz) | Change (ppm) | Limit (ppm) | Result |
|-----------------|-------------|--------------|-------------|--------|
| -30             | -75         | -0.04        | 2.5         | Passed |
| -20             | -54         | -0.03        |             |        |
| -10             | -31         | -0.02        |             |        |
| 0               | -8          | 0.00         |             |        |
| 10              | 10          | 0.01         |             |        |
| 20              | -9          | 0.00         |             |        |
| 30              | 12          | 0.01         |             |        |
| 40              | -18         | -0.01        |             |        |
| 50              | 20          | 0.01         |             |        |



- Test Mode : PCS1900 (EDGE) CH661

| Temperature(°C) | Change (Hz) | Change (ppm) | Limit (ppm) | Result |
|-----------------|-------------|--------------|-------------|--------|
| -30             | -84         | -0.04        | 2.5         | Passed |
| -20             | -62         | -0.03        |             |        |
| -10             | -44         | -0.02        |             |        |
| 0               | -34         | -0.02        |             |        |
| 10              | -21         | -0.01        |             |        |
| 20              | -11         | -0.01        |             |        |
| 30              | 18          | 0.01         |             |        |
| 40              | 6           | 0.00         |             |        |
| 50              | 20          | 0.01         |             |        |

- Test Mode : WCDMA Band V CH4182

| Temperature(°C) | Change (Hz) | Change (ppm) | Limit (ppm) | Result |
|-----------------|-------------|--------------|-------------|--------|
| -30             | 68          | 0.08         | 2.5         | Passed |
| -20             | 44          | 0.05         |             |        |
| -10             | 30          | 0.04         |             |        |
| 0               | 21          | 0.02         |             |        |
| 10              | 18          | 0.02         |             |        |
| 20              | 14          | 0.02         |             |        |
| 30              | 10          | 0.01         |             |        |
| 40              | 20          | 0.02         |             |        |
| 50              | 18          | 0.02         |             |        |

- Test Mode : WCDMA Band V (HSDPA) CH4182

| Temperature(°C) | Change (Hz) | Change (ppm) | Limit (ppm) | Result |
|-----------------|-------------|--------------|-------------|--------|
| -30             | 75          | 0.09         | 2.5         | Passed |
| -20             | 62          | 0.07         |             |        |
| -10             | 31          | 0.04         |             |        |
| 0               | 24          | 0.03         |             |        |
| 10              | 18          | 0.02         |             |        |
| 20              | 9           | 0.01         |             |        |
| 30              | 14          | 0.02         |             |        |
| 40              | 19          | 0.02         |             |        |
| 50              | 24          | 0.03         |             |        |



- Test Mode : WCDMA Band II CH9400

| Temperature(°C) | Change (Hz) | Change (ppm) | Limit (ppm) | Result |
|-----------------|-------------|--------------|-------------|--------|
| -30             | 83          | 0.04         | 2.5         | Passed |
| -20             | 49          | 0.03         |             |        |
| -10             | 38          | 0.02         |             |        |
| 0               | 24          | 0.01         |             |        |
| 10              | 18          | 0.01         |             |        |
| 20              | 16          | 0.01         |             |        |
| 30              | 24          | 0.01         |             |        |
| 40              | 30          | 0.02         |             |        |
| 50              | 19          | 0.01         |             |        |

- Test Mode : WCDMA Band II (HSDPA) CH9400

| Temperature(°C) | Change (Hz) | Change (ppm) | Limit (ppm) | Result |
|-----------------|-------------|--------------|-------------|--------|
| -30             | 88          | 0.05         | 2.5         | Passed |
| -20             | 64          | 0.03         |             |        |
| -10             | 42          | 0.02         |             |        |
| 0               | 35          | 0.02         |             |        |
| 10              | 18          | 0.01         |             |        |
| 20              | 17          | 0.01         |             |        |
| 30              | 20          | 0.01         |             |        |
| 40              | 18          | 0.01         |             |        |
| 50              | 14          | 0.01         |             |        |

## 4.8 Frequency Stability (Voltage Variation)

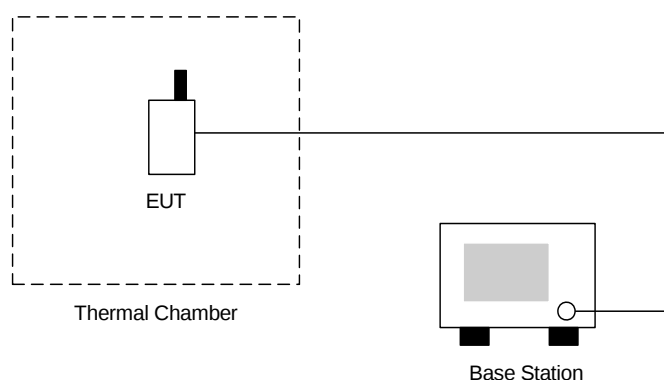
### 4.8.1 Measurement Instrument

As described in chapter 5 of this test report.

### 4.8.2 Test Procedure

1. The EUT was placed in a temperature chamber at  $25 \pm 5^{\circ}\text{C}$  and connected as the following section.
2. The power supply voltage to the EUT was varied from BEP to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

### 4.8.3 Test Setup Layout



### 4.8.4 Test Result

- Test Mode : GSM850 (GSM) CH189

| Voltage(Volt) | Change (Hz) | Change (ppm) | Limit (ppm) | Result |
|---------------|-------------|--------------|-------------|--------|
| 3.7           | -8.0        | -0.01        | 2.5         | Passed |
| BEP           | 24.0        | 0.03         |             |        |
| 4.2           | 16.0        | 0.02         |             |        |

- Test Mode : GSM850 (EDGE) CH189

| Voltage(Volt) | Change (Hz) | Change (ppm) | Limit (ppm) | Result |
|---------------|-------------|--------------|-------------|--------|
| 3.7           | 21.0        | 0.02         | 2.5         | Passed |
| BEP           | 18.0        | 0.02         |             |        |
| 4.2           | 38.0        | 0.04         |             |        |



- Test Mode : PCS1900 (GSM) CH661

| Voltage(Volt) | Change (Hz) | Change (ppm) | Limit (ppm) | Result |
|---------------|-------------|--------------|-------------|--------|
| 3.7           | 24.0        | 0.01         | 2.5         | Passed |
| BEP           | 30.0        | 0.02         |             |        |
| 4.2           | 48.0        | 0.03         |             |        |

- Test Mode : PCS1900 (EDGE) CH661

| Voltage(Volt) | Change (Hz) | Change (ppm) | Limit (ppm) | Result |
|---------------|-------------|--------------|-------------|--------|
| 3.7           | 20.0        | 0.01         | 2.5         | Passed |
| BEP           | 44.0        | 0.02         |             |        |
| 4.2           | 38.0        | 0.02         |             |        |

- Test Mode : WCDMA Band V CH4182

| Voltage(Volt) | Change (Hz) | Change (ppm) | Limit (ppm) | Result |
|---------------|-------------|--------------|-------------|--------|
| 3.7           | 18          | 0.02         | 2.5         | Passed |
| BEP           | 34          | 0.04         |             |        |
| 4.2           | 40          | 0.05         |             |        |

- Test Mode : WCDMA Band V (HSDPA) CH4182

| Voltage(Volt) | Change (Hz) | Change (ppm) | Limit (ppm) | Result |
|---------------|-------------|--------------|-------------|--------|
| 3.7           | 16          | 0.02         | 2.5         | Passed |
| BEP           | 24          | 0.03         |             |        |
| 4.2           | 30          | 0.04         |             |        |

- Test Mode : WCDMA Band II CH9400

| Voltage(Volt) | Change (Hz) | Change (ppm) | Limit (ppm) | Result |
|---------------|-------------|--------------|-------------|--------|
| 3.7           | 18          | 0.01         | 2.5         | Passed |
| BEP           | 28          | 0.01         |             |        |
| 4.2           | 38          | 0.02         |             |        |

- Test Mode : WCDMA Band II (HSDPA) CH9400

| Voltage(Volt) | Change (Hz) | Change (ppm) | Limit (ppm) | Result |
|---------------|-------------|--------------|-------------|--------|
| 3.7           | 24          | 0.01         | 2.5         | Passed |
| BEP           | 19          | 0.01         |             |        |
| 4.2           | 35          | 0.02         |             |        |

Remark:

1. Normal Voltage=3.7V.
2. Battery End Point (BEP)= 3.2 V.



## 5. List of Measurement Equipments

| Instrument                | Manufacturer     | Model No. | Serial No. | Characteristics | Calibration Date | Due Date      | Remark                |
|---------------------------|------------------|-----------|------------|-----------------|------------------|---------------|-----------------------|
| Spectrum Analyzer         | Agilent          | E4408B    | MY44211030 | 9KHz-26.5GHz    | Oct. 05, 2007    | Oct. 04, 2008 | Radiation (03CH06-HY) |
| EMI Test Receiver         | R&S              | ESCS30    | 100356     | 9KHz-2.75GHz    | Jul. 26, 200     | Jul. 25, 2008 | Radiation (03CH06-HY) |
| Bilog Antenna             | SCHAFFNER        | CBL6112B  | 2885       | 30MHz -2GHz     | Nov. 20, 2006    | Nov. 19, 2007 | Radiation (03CH06-HY) |
| Double Ridge Horn Antenna | Com-Power        | AH118     | 071025     | 1G~18G          | Jun. 04, 2007    | Jun. 03, 2008 | Radiation (03CH06-HY) |
| SHF-EHF Horn              | SCHWARZBECK      | BBHA 9170 | 9170-249   | 14G - 40G       | Nov. 20, 2006    | Nov. 19, 2008 | Radiation (03CH06-HY) |
| Pre Amplifier             | Agilent          | 8449B     | 3008A01917 | 1G - 26.5G      | Nov. 15, 2006    | Nov. 14, 2007 | Radiation (03CH06-HY) |
| Pre Amplifier             | Mini Circuits    | ZKL-2     | D092004-1  | 10~2500MHz      | Nov. 15, 2006    | Nov. 14, 2007 | Radiation (03CH06-HY) |
| Base Station Simulator    | R & S            | CMU200    | 106656     | WCDMA           | Nov. 20, 2006    | Nov. 19, 2007 | Radiation (03CH06-HY) |
| Thermal Chamber           | Tenxi technology | TTH-D35P  | TBN-930701 | N/A             | Aug. 02, 2007    | Aug. 01, 2008 | Conduction (TH02-HY)  |
| Spectrum                  | R&S              | FSP40     | 100055     | 9KHz~40GHz      | Jun. 25, 2007    | Jun. 24, 2008 | Conduction (TH02-HY)  |
| Bluetooth Test            | ANRITSU          | MT8852A   | 6K00003939 | N/A             | N/A              | N/A           | Conduction (TH02-HY)  |
| Dc Power Supply           | TOPWARD          | 3303D     | 740889     | N/A             | May 25, 2005     | May 24, 2009  | Conduction (TH02-HY)  |
| Power Meter               | Agilent          | E4416A    | GB41292344 | N/A             | Feb. 08, 2007    | Feb. 07, 2008 | Conduction (TH02-HY)  |
| Power Sensor              | Agilent          | E9327A    | US40441548 | N/A             | Feb. 08, 2007    | Feb. 07, 2008 | Conduction (TH02-HY)  |



## 6. Uncertainty Evaluation

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

| Contribution                                                           | Uncertainty of $x_i$ |                          | $u(x_i)$ |
|------------------------------------------------------------------------|----------------------|--------------------------|----------|
|                                                                        | dB                   | Probability Distribution |          |
| Receiver reading                                                       | 0.41                 | Normal(k=2)              | 0.21     |
| Antenna factor calibration                                             | 0.83                 | Normal(k=2)              | 0.42     |
| Cable loss calibration                                                 | 0.25                 | Normal(k=2)              | 0.13     |
| Pre Amplifier Gain calibration                                         | 0.27                 | Normal(k=2)              | 0.14     |
| RCV/SPA specification                                                  | 2.50                 | Rectangular              | 0.72     |
| Antenna Factor Interpolation for Frequency                             | 1.00                 | Rectangular              | 0.29     |
| Site imperfection                                                      | 1.43                 | Rectangular              | 0.83     |
| Mismatch                                                               | +0.39/-0.41          | U-shaped                 | 0.28     |
| <b>Combined standard uncertainty Uc(y)</b>                             | <b>1.27</b>          |                          |          |
| <b>Measuring uncertainty for a level of confidence of 95% U=2Uc(y)</b> | <b>2.54</b>          |                          |          |

### Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)

| Contribution                                                                                                                      | Uncertainty of $x_i$ |                          | $u(x_i)$ | $C_i$ | $C_i * u(x_i)$ |
|-----------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------------|----------|-------|----------------|
|                                                                                                                                   | dB                   | Probability Distribution |          |       |                |
| Receiver reading                                                                                                                  | ±0.10                | Normal(k=1)              | 0.10     | 1     | 0.10           |
| Antenna factor calibration                                                                                                        | ±1.70                | Normal(k=2)              | 0.85     | 1     | 0.85           |
| Cable loss calibration                                                                                                            | ±0.50                | Normal(k=2)              | 0.25     | 1     | 0.25           |
| Receiver Correction                                                                                                               | ±2.00                | Rectangular              | 1.15     | 1     | 1.15           |
| Antenna Factor Directional                                                                                                        | ±1.50                | Rectangular              | 0.87     | 1     | 0.87           |
| Site imperfection                                                                                                                 | ±2.80                | Triangular               | 1.14     | 1     | 1.14           |
| Mismatch<br>Receiver VSWR $\Gamma_1 = 0.197$<br>Antenna VSWR $\Gamma_2 = 0.194$<br>Uncertainty = $20 \log(1 - \Gamma_1 \Gamma_2)$ | +0.34/-0.35          | U-shaped                 | 0.244    | 1     | 0.244          |
| <b>Combined standard uncertainty Uc(y)</b>                                                                                        | <b>2.36</b>          |                          |          |       |                |
| <b>Measuring uncertainty for a level of confidence of 95% U=2Uc(y)</b>                                                            | <b>4.72</b>          |                          |          |       |                |

END OF TEST REPORT