



FCC TEST REPORT

for

47 CFR Part 22H, 24E

Equipment : GSM Quad-band mobile phone with GPRS, Bluetooth, Wi-Fi, GPS
Trade Name : glofiish
Model No. : X500 / X500⁺
FCC ID : SPUX500
Tx Frequency Range : GSM850 : 824~849 MHz
PCS1900 : 1850~1910 MHz
Max. ERP/EIRP Power : GSM850 (GSM) : 0.35 W
GSM850 (EDGE) : 0.05 W
PCS1900 (GSM) : 0.48 W
PCS1900 (EDGE) : 0.22 W
Emission Designator : GSM : 300KGXW
EDGE : 300KG7W
Applicant : E-TEN Information Systems Co., Ltd.
9F., No. 256, Yangguang Street, Neihu Chiu, Taipei,
Taiwan114, R.O.C.

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- The data shown in this test report were carried out on Oct. 04, 2006 at **Sporton International Inc. LAB.**
- Report No.: FG6D0809, Report Version: Rev. 01.

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Report Version: Rev. 01



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Appendix A - Setup Photographs



History of this test report

Report Issue Date: Dec. 12, 2006

Report No.	Description



1. General Information

1.1. Applicant

E-TEN Information Systems Co., Ltd.

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

1.2 Manufacturer

E-TEN Information Systems Co., Ltd.

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

1.3 Basic Description of Equipment under Test

Equipment	: GSM Quad-band mobile phone with GPRS, Bluetooth, Wi-Fi, GPS
Trade Name	: glofiish
Model No.	: X500 / X500 ⁺
FCC ID	: SPUX500
Power Supply Type	: Switching, From battery 3.7V
AC Power Cord	: AC 120V, Wall-mount, 2.0 meter, 2 pin
Adapter	: Phihong, PSC05R
Battery	: Foxlink, 454261
Earphone	: Merry, EMC147-018-01
Data Cable	: Golden Bridge, GB-A5049

**1.4 Feature of Equipment under Test**

DUT Type :	GSM Quad-band mobile phone with GPRS, Bluetooth, Wi-Fi, GPS
Trade Name :	glofiish
Model Name :	X500 / X500 ⁺
FCC ID :	SPUX500
Tx Frequency :	GSM850 : 824 ~ 849 MHz PCS1900 : 1850 ~1910 MHz
Rx Frequency :	GSM850 : 869 ~ 894 MHz PCS1900 : 1930 ~ 1990 MHz
Maximum Output Power to Antenna :	GSM850(GSM) : 32.03 dBm GSM850(EDGE) : 26.4 dBm PCS1900(GSM) : 28.8 dBm PCS1900(EDGE) : 25.0 dBm
Maximum ERP/EIRP :	GSM850(GSM) : 0.35 W (25.39 dBm) ; GSM850(EDGE) : 0.05 W (17.03 dBm) PCS1900(GSM) : 0.48 W (26.79 dBm) ; PCS1900(EDGE) : 0.22 W (23.51 dBm)
Antenna Type :	Fixed Internal
Antenna Gain :	GSM850 : -1 dBi PCS1900 : 1 dBi Bluetooth : -2 dBi WLAN : 1 dBi
HW Version :	D2H
SW Version :	R30_032_0220
Power Rating (DC/AC , Voltage and Current of RF element or PA) :	DC 3.7V / 1530mA
Digital Modulation Emission :	GSM : GMSK EDGE : 8PSK
Type of Emission :	GSM : 300KGXW EDGE : 300KG7W
Device Power Class :	GSM850 : 4 PCS1900 : 1
DUT Stage :	Production Unit

1.5 Report Date

EUT Received : Oct. 04, 2006

Report Date : Dec. 12, 2006

2 Test Configuration of Equipment under Test

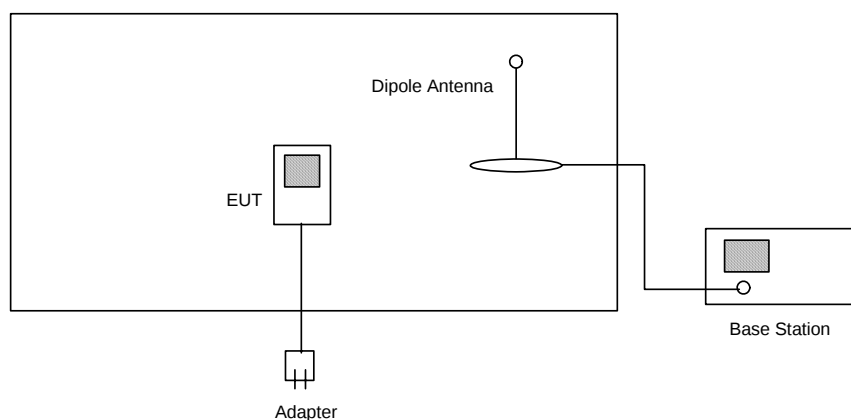
2.1 Test Manner

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

2.2 Test Mode

Application	GSM850	PCS1900
Radiated Emission	☒ Mode 1: GSM Link_CH 189	☒ Mode 3: GSM Link_CH 661
	☒ Mode 2: EDGE Link_CH 189	☒ Mode 4: EDGE Link_CH 661
Conducted Measurement	☒ Mode 1: GSM_CH 189	☒ Mode 3: GSM_CH 661
	☒ Mode 2: EDGE_CH 189	☒ Mode 4: EDGE_CH 661

2.3 Connection Diagram of Test System



2.4 Ancillary Equipment List

Item	Equipment	Model No.	Serial No.
1.	Base Station(R&S)	CMU200	106656



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

120V/ 60Hz

3.2 Test in Compliance with

47 CFR Part 22H, 24E, Part 2.

3.3 Frequency Range Investigated

- a. Radiation: from 30MHz to 9000MHz for GSM850.
- b. Radiation: from 30 MHz to 19000 MHz for PCS.

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

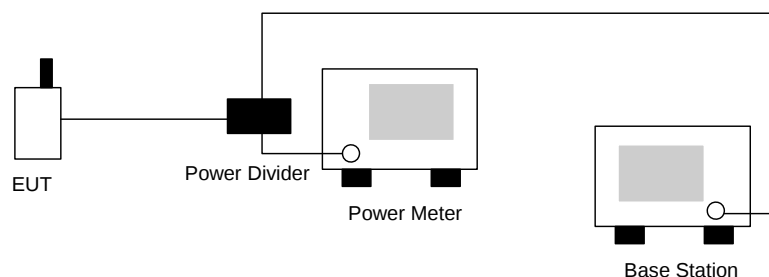
4.2.1 Measurement Instruments :

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 at PCL=5 for GSM850 and/or PCL=0 for PCS1900 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)	32.01	1.589
	189	836.4 (Mid)	32.00	1.585
	251	848.8 (High)	32.03	1.596
PCS1900 (GSM)	512	1850.2 (Low)	28.76	0.752
	661	1880.0 (Mid)	28.74	0.748
	810	1909.8 (High)	28.80	0.759
GSM850 (EDGE10)	128	824.2 (Low)	26.40	0.437
	189	836.4 (Mid)	26.30	0.427
	251	848.8 (High)	26.30	0.427
PCS1900 (EDGE10)	512	1850.2 (Low)	25.00	0.316
	661	1880.0 (Mid)	24.70	0.295
	810	1909.8 (High)	24.90	0.309



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 rotatable 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.

$E_t = R_t + AF$

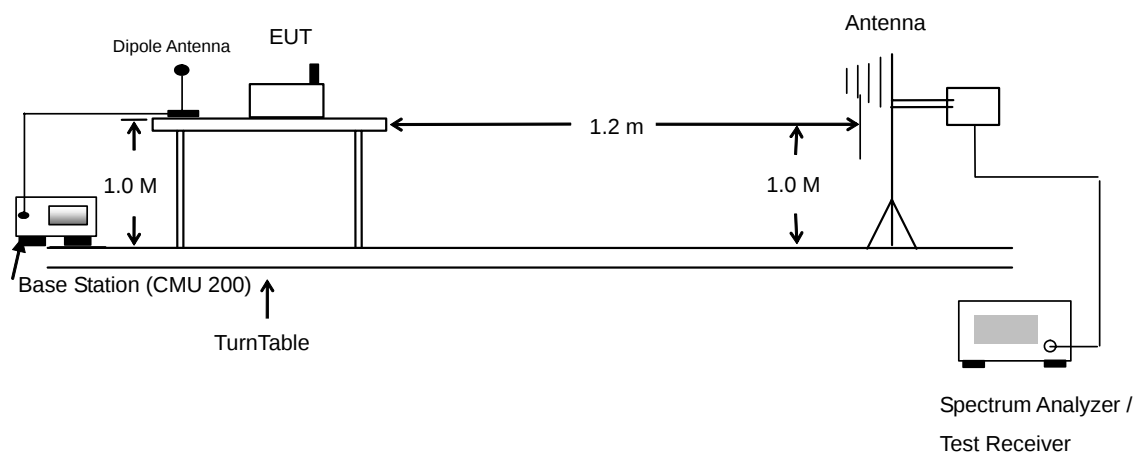
$E_s = R_s + AF$

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	-22.38	-48.12	0.00	-1.08	24.66	0.29
836.40	-22.59	-48.28	0.00	-0.93	24.76	0.30
848.80	-22.20	-48.35	0.00	-0.76	25.39	0.35
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	ERP (W)
824.20	-35.89	-47.97	0.00	-1.08	11.00	0.01
836.40	-35.84	-48.01	0.00	-0.93	11.24	0.01
848.80	-35.84	-48.05	0.00	-0.76	11.45	0.01

GSM850 (EDGE) Radiated Power ERP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	ERP (W)
824.20	-30.11	-48.12	0.00	-1.08	16.93	0.05
836.40	-31.06	-48.28	0.00	-0.93	16.29	0.04
848.80	-30.56	-48.35	0.00	-0.76	17.03	0.05
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBd)	ERP (dBm)	ERP (W)
824.20	-44.11	-47.97	0.00	-1.08	2.78	0.0019
836.40	-43.70	-48.01	0.00	-0.93	3.38	0.0022
848.80	-44.68	-48.05	0.00	-0.76	2.61	0.0018



PCS1900 (GSM) Radiated Power EIRP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1850.20	-27.87	-51.88	0.00	1.96	25.97	0.40
1880.00	-28.20	-52.99	0.00	2.00	26.79	0.48
1909.80	-29.86	-54.28	0.00	1.98	26.40	0.44
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1850.20	-29.21	-52.13	0.00	1.96	24.88	0.31
1880.00	-30.93	-53.17	0.00	2.00	24.24	0.27
1909.80	-32.75	-54.13	0.00	1.98	23.36	0.22

PCS1900 (EDGE) Radiated Power EIRP						
Horizontal Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1850.20	-30.33	-51.88	0.00	1.96	23.51	0.22
1880.00	-31.51	-52.99	0.00	2.00	23.48	0.22
1909.80	-33.87	-54.28	0.00	1.98	22.39	0.17
Vertical Polarization						
Frequency (MHz)	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	EIRP (dBm)	EIRP (W)
1850.20	-32.49	-52.13	0.00	1.96	21.60	0.14
1880.00	-32.52	-53.17	0.00	2.00	22.65	0.18
1909.80	-34.59	-54.13	0.00	1.98	21.52	0.14

Occupied Bandwidth and Band Edge Measurement

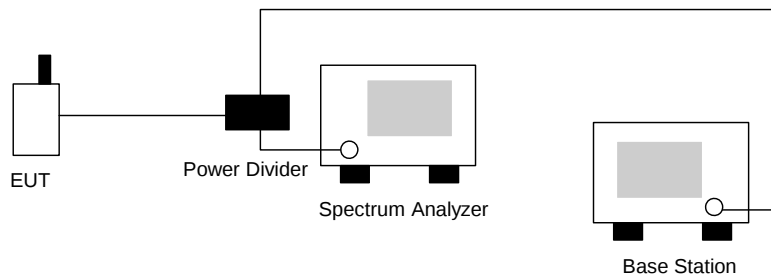
4.4.1 Measurement Instruments

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 $BW/100$.

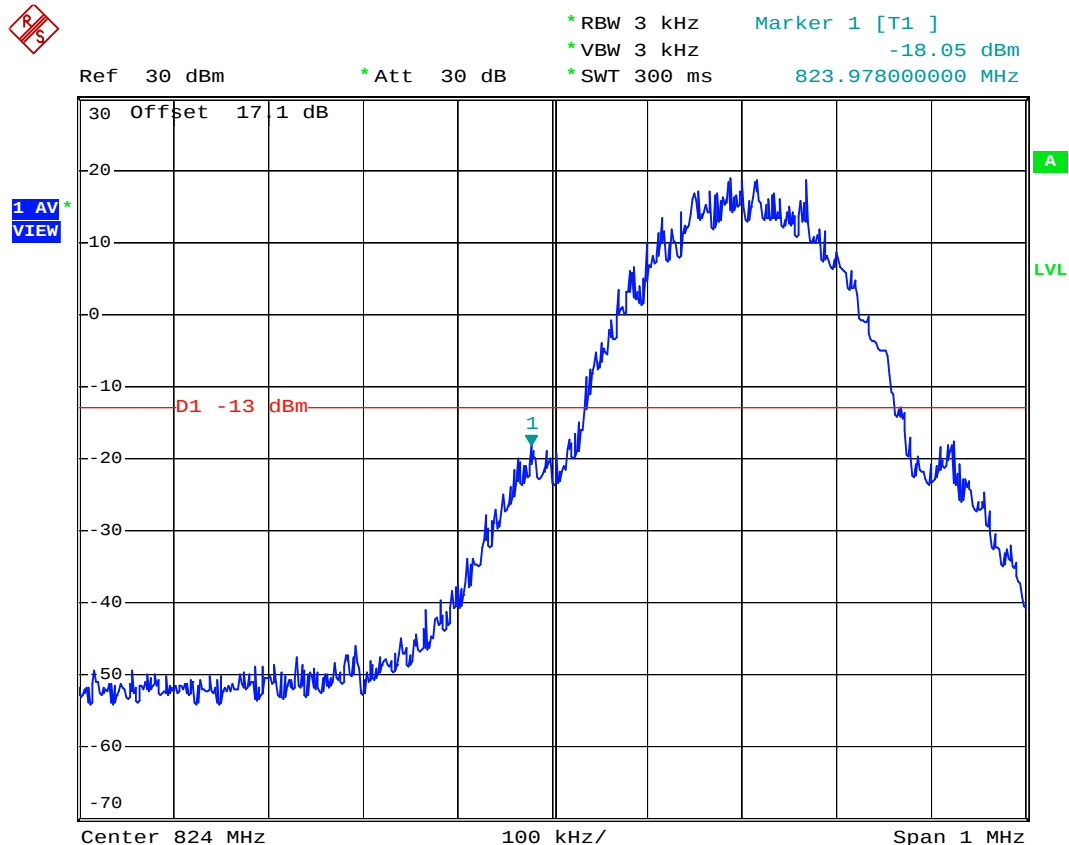
4.4.3 Test Setup Layout





4.4.4 Test Result

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



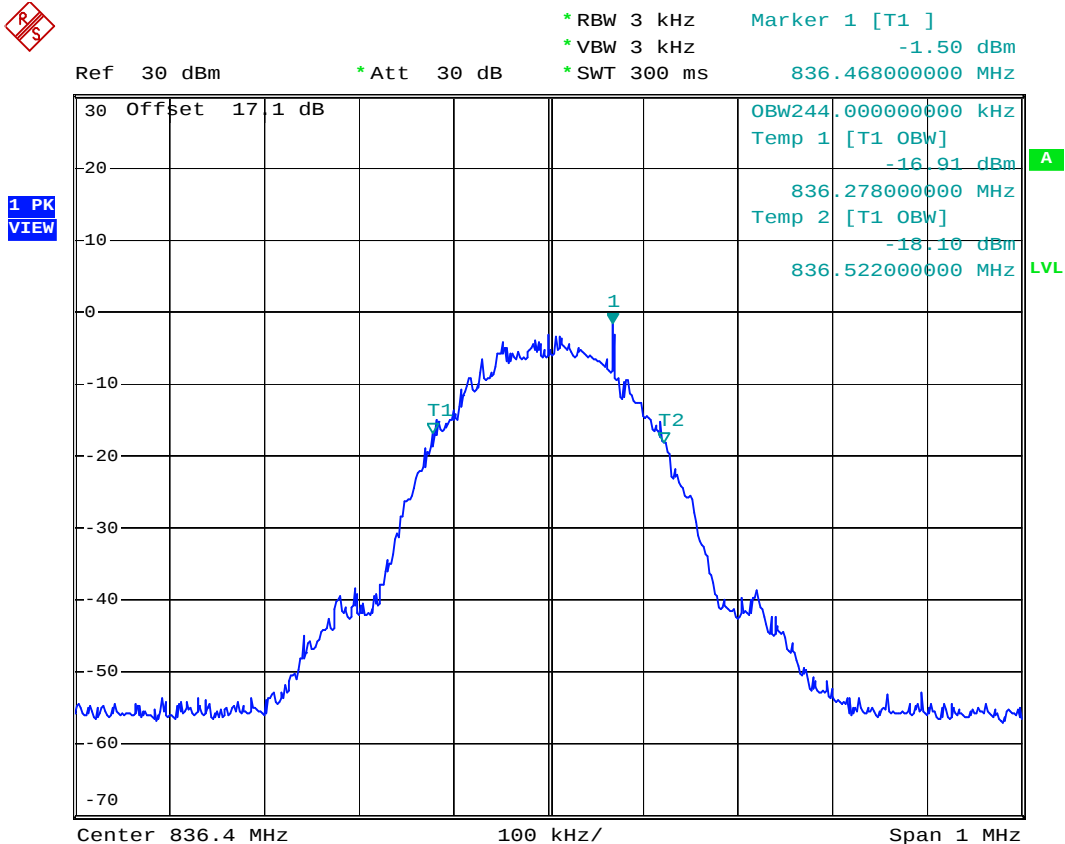
Date: 12.OCT.2006 04:01:24



FCC IC TEST REPORT

Report No. : FG6D0809

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



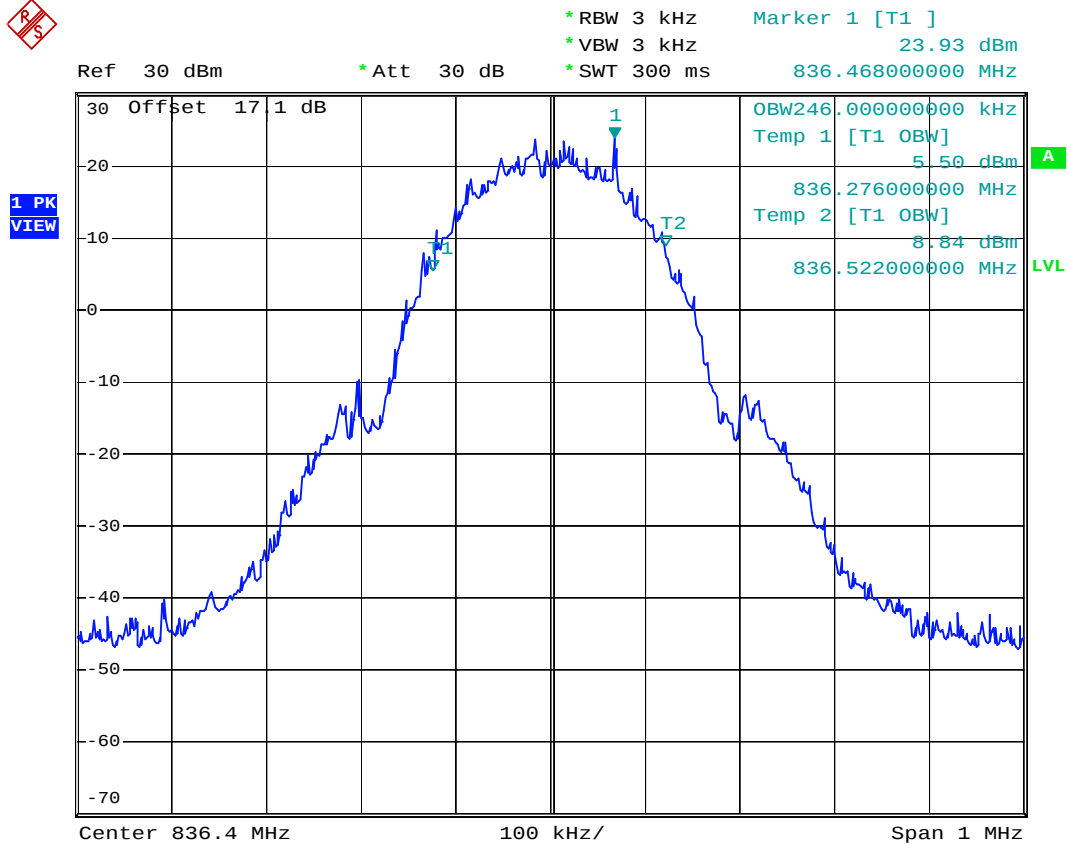
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FCC IC TEST REPORT

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



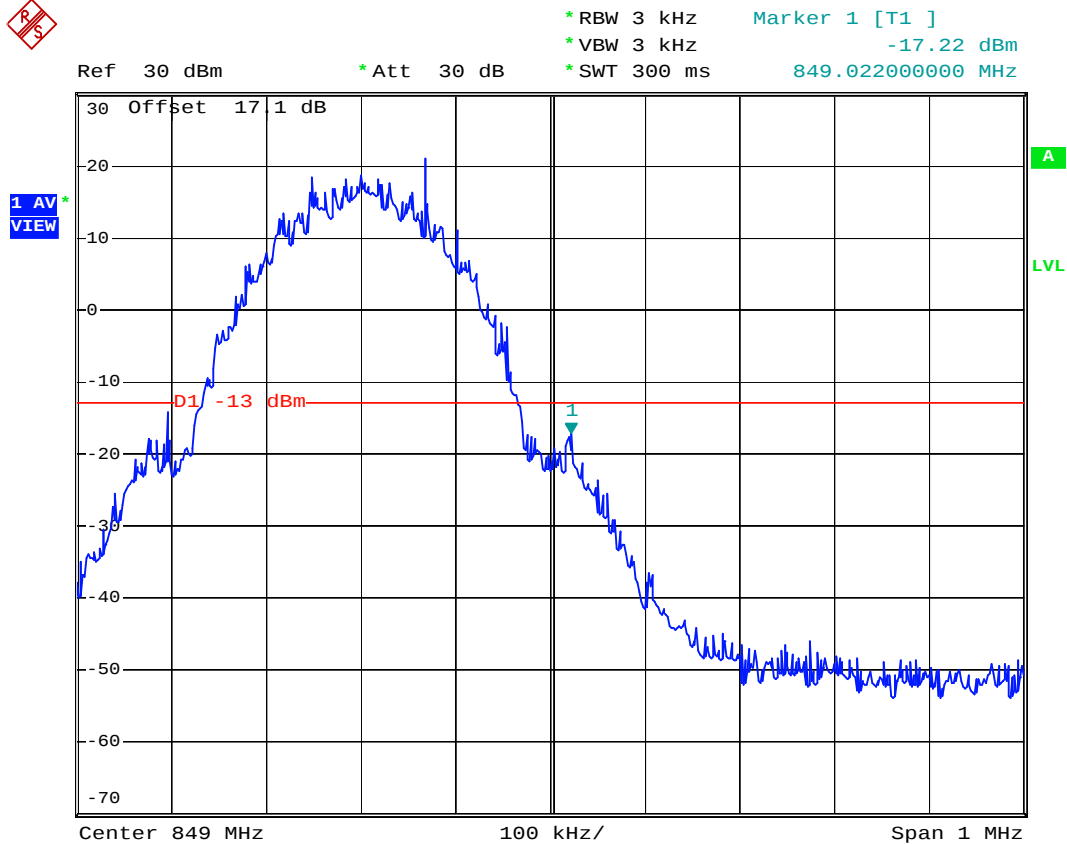
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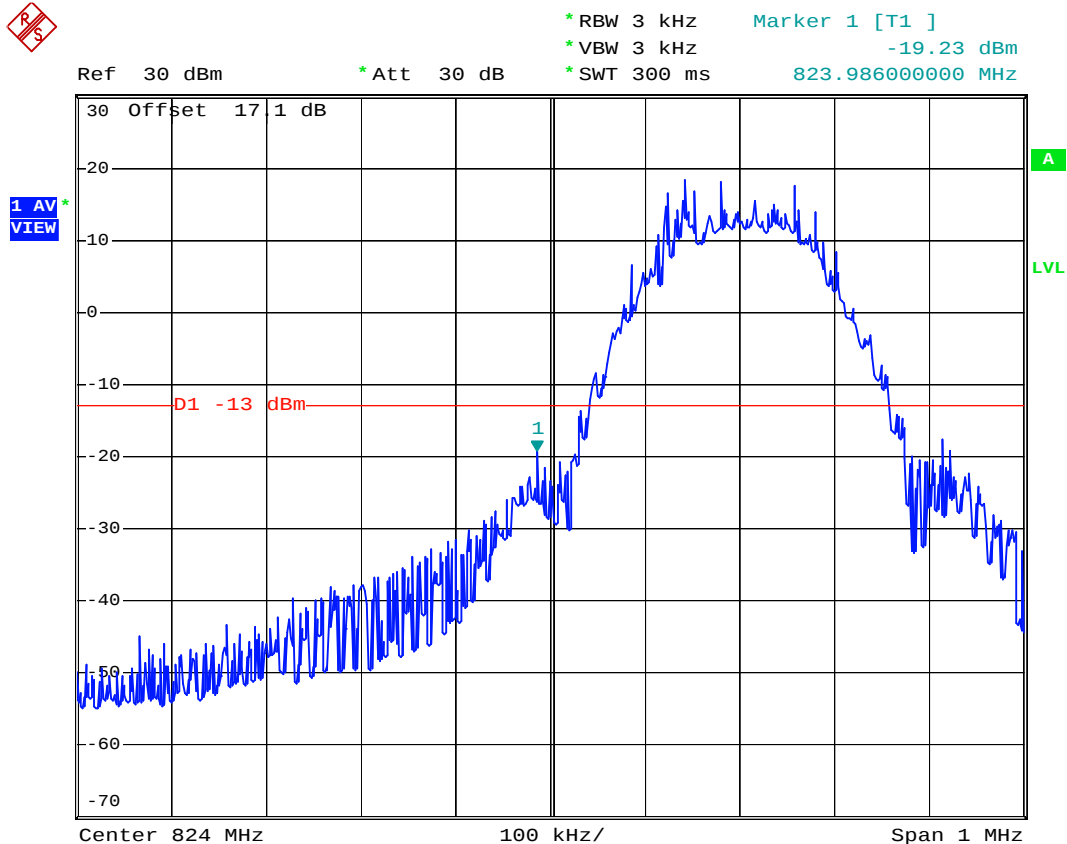
- Test Mode : GSM850 (GSM) CH251 Higher Band Edge
- Power State : High



Date: 12.OCT.2006 04:00:06



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



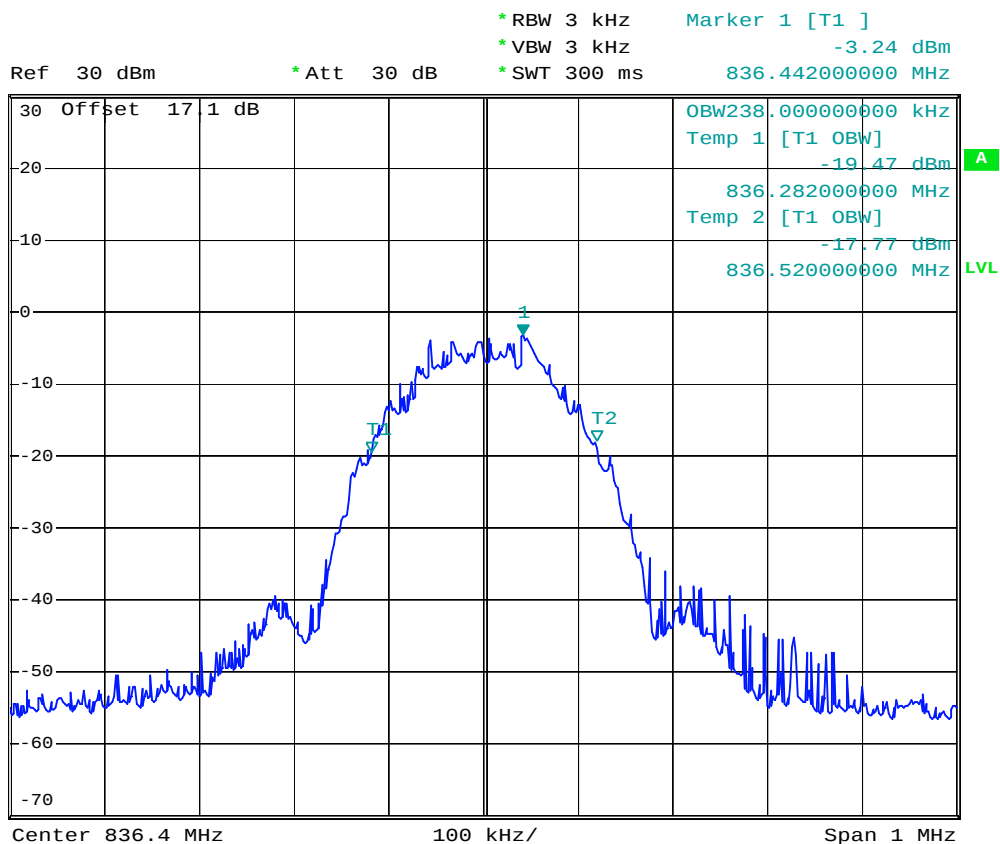
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FCC IC TEST REPORT

Report No. : FG6D0809

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



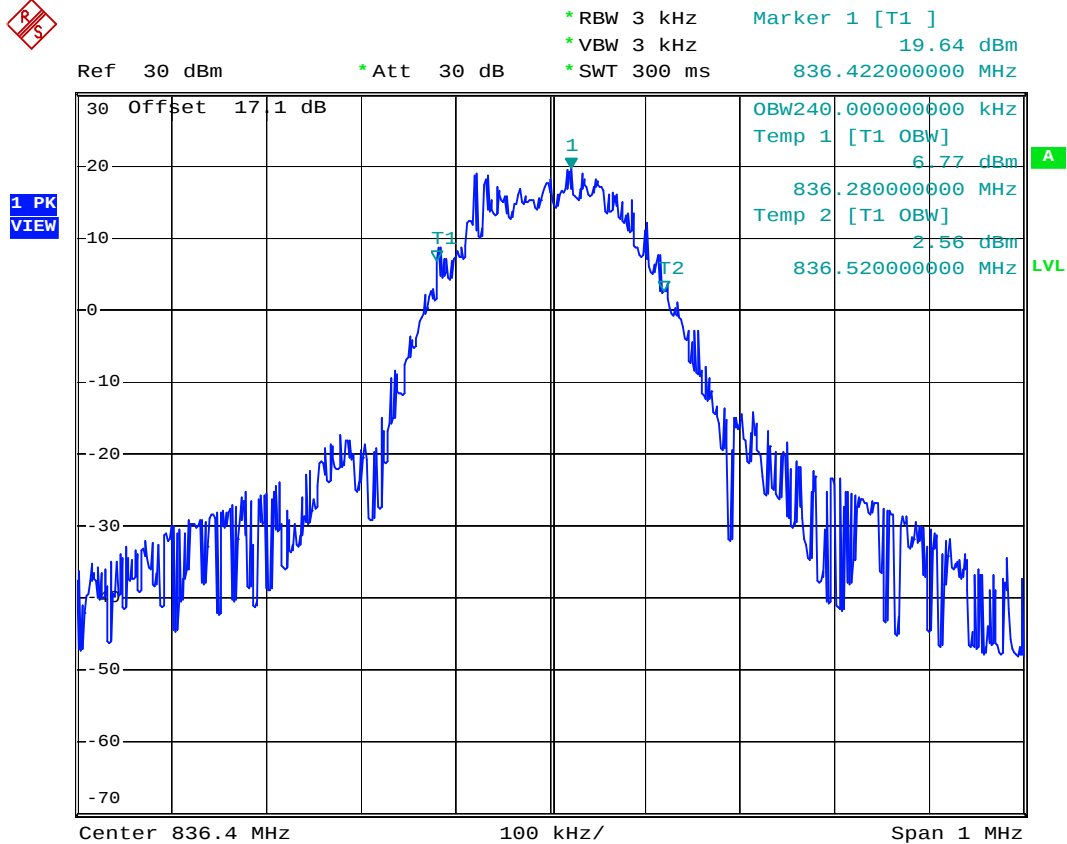
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FCC IC TEST REPORT

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



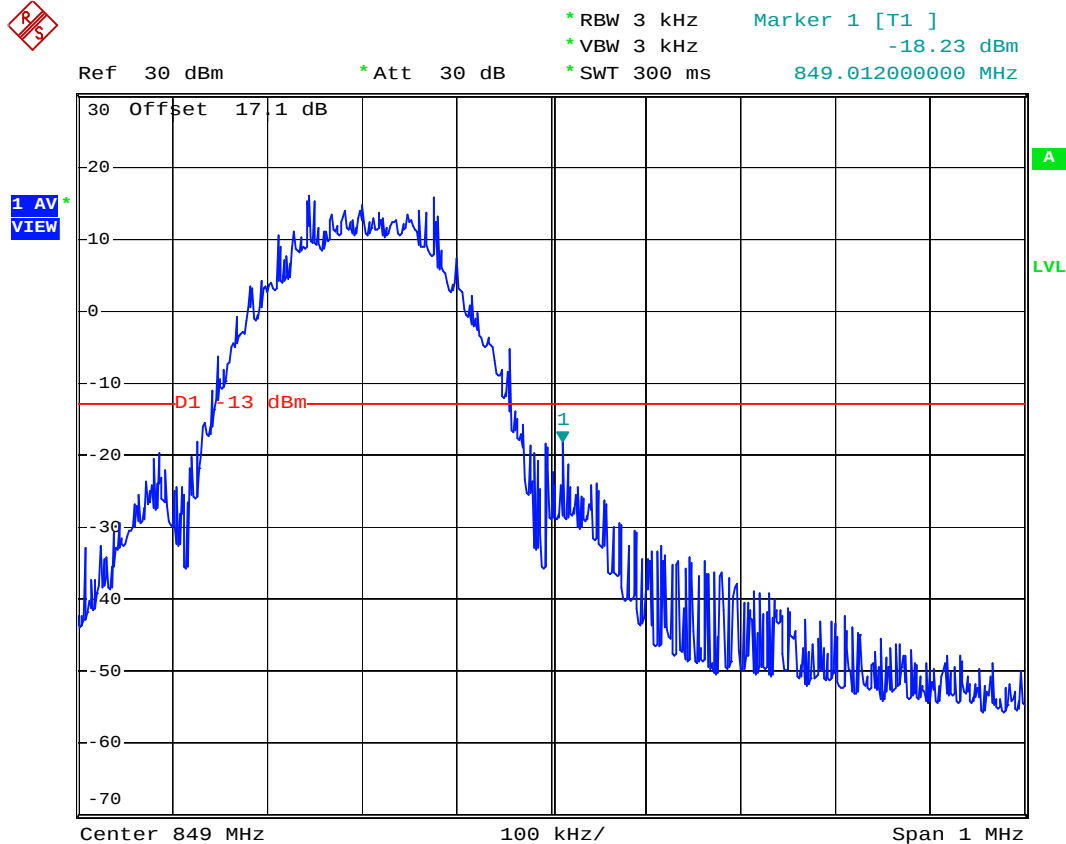
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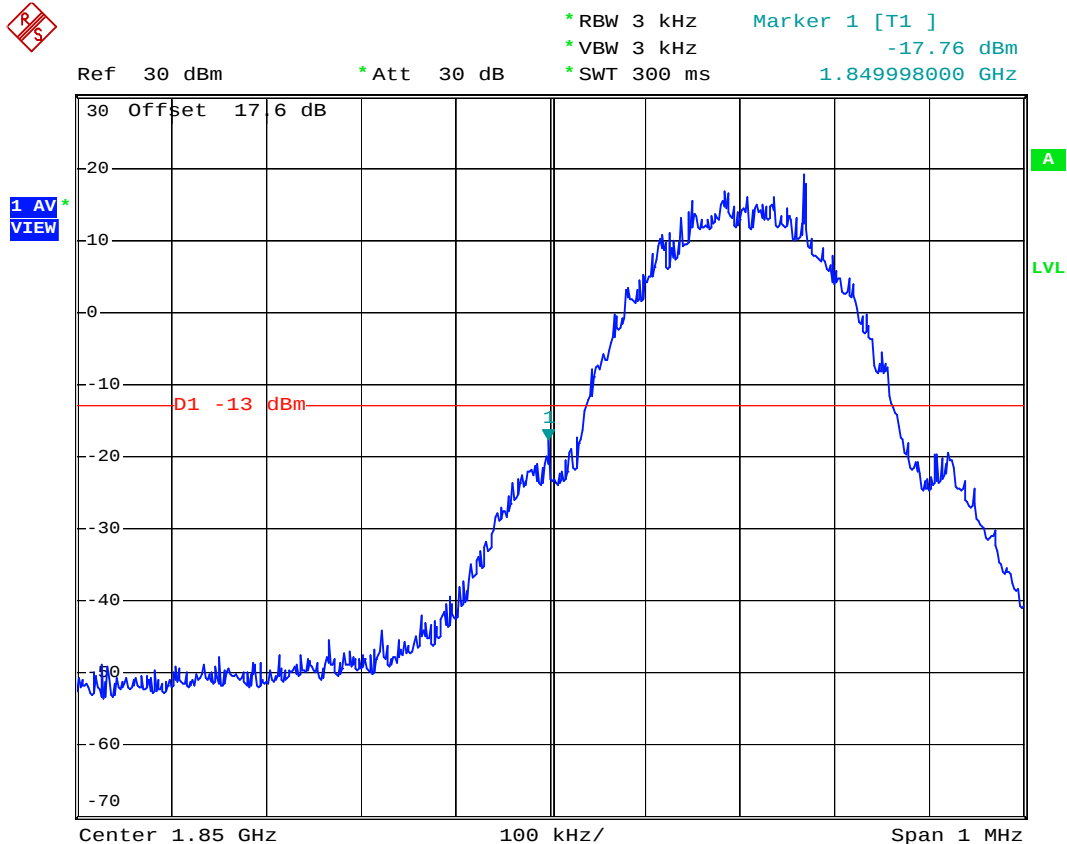
- Test Mode : GSM850 (EDGE) CH251 Higher Band Edge
- Power State : High



Date: 12.OCT.2006 06:24:19



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



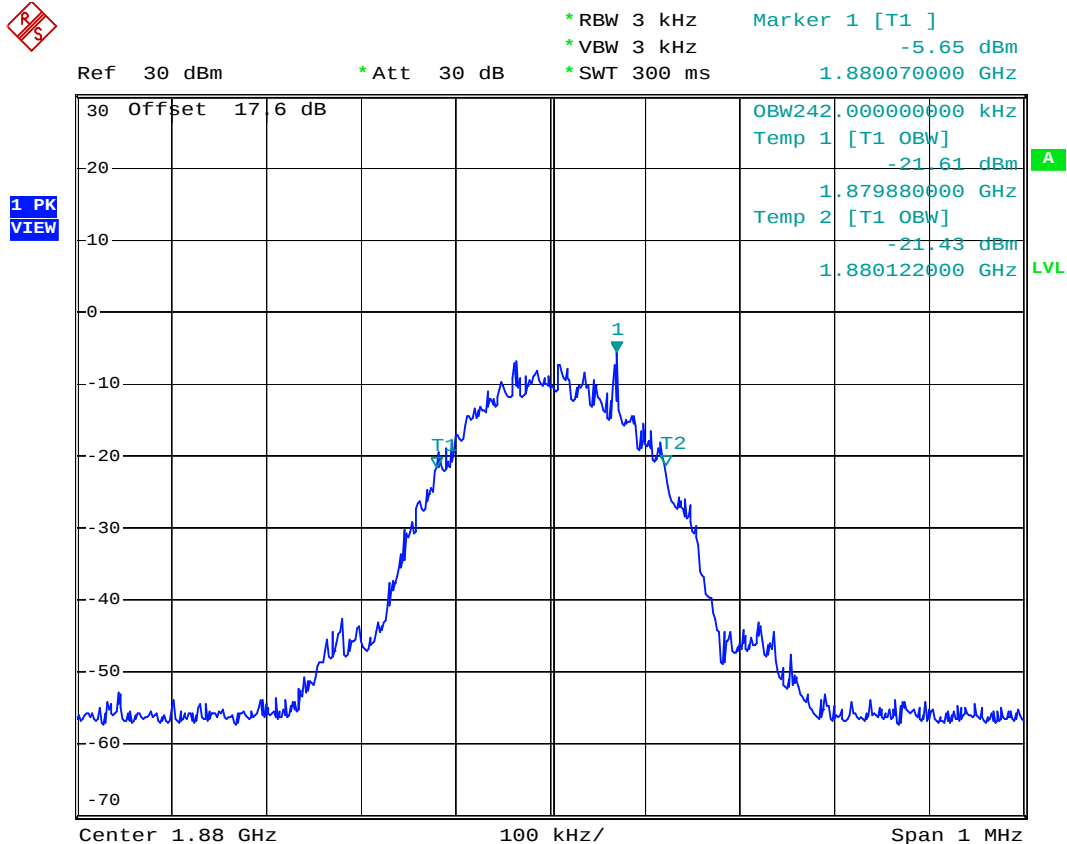
Date: 12.OCT.2006 02:57:54



FCC IC TEST REPORT

Report No. : FG6D0809

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



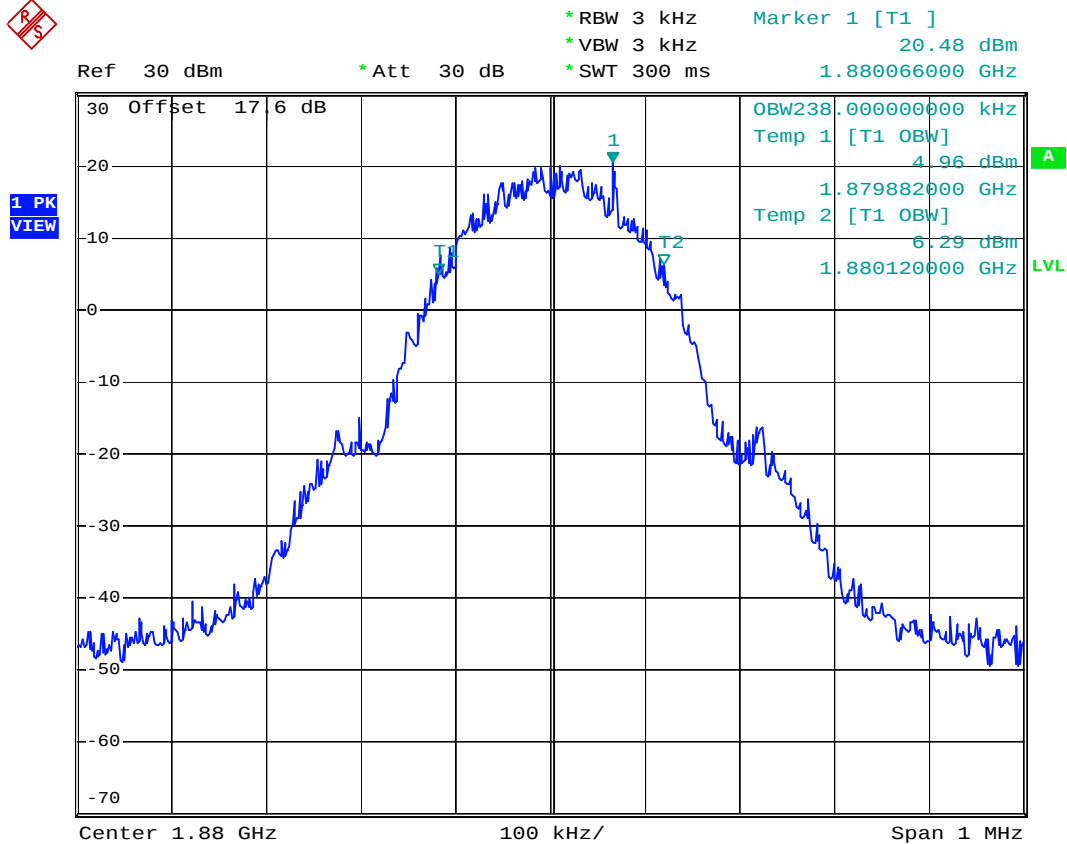
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FCC IC TEST REPORT

Report No. : FG6D0809

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



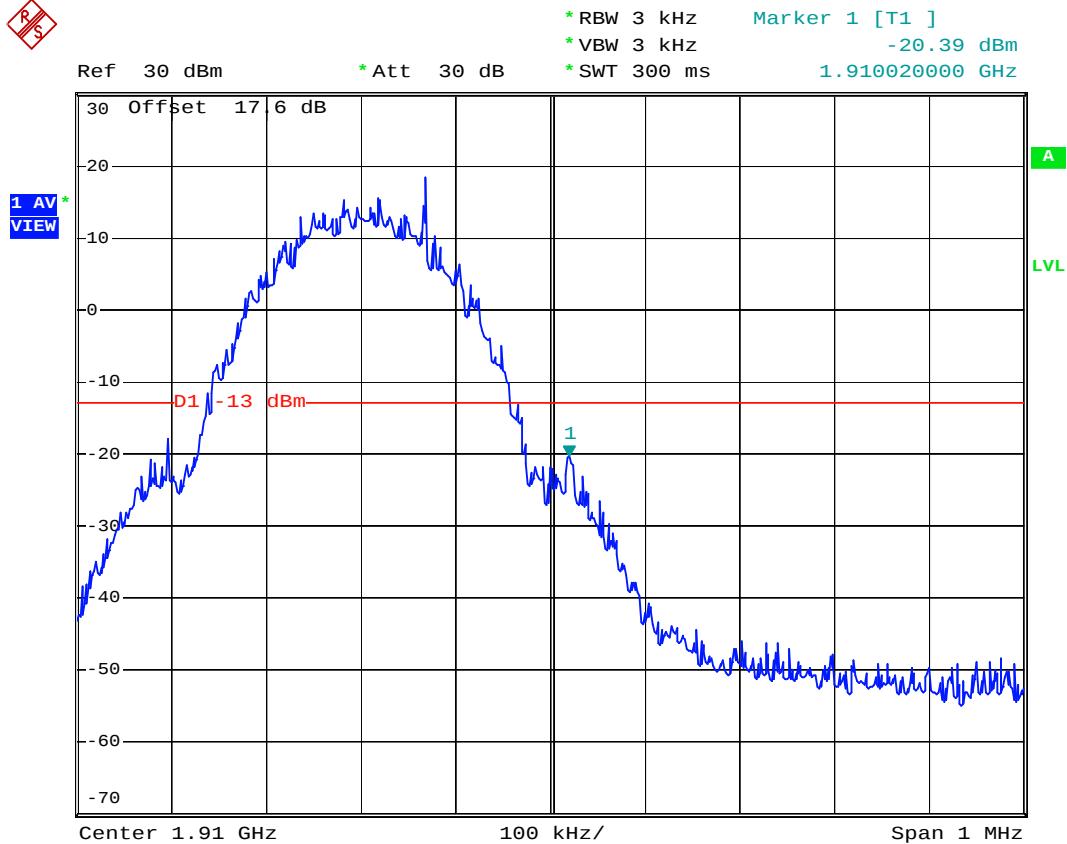
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FCC IC TEST REPORT

Report No. : FG6D0809

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



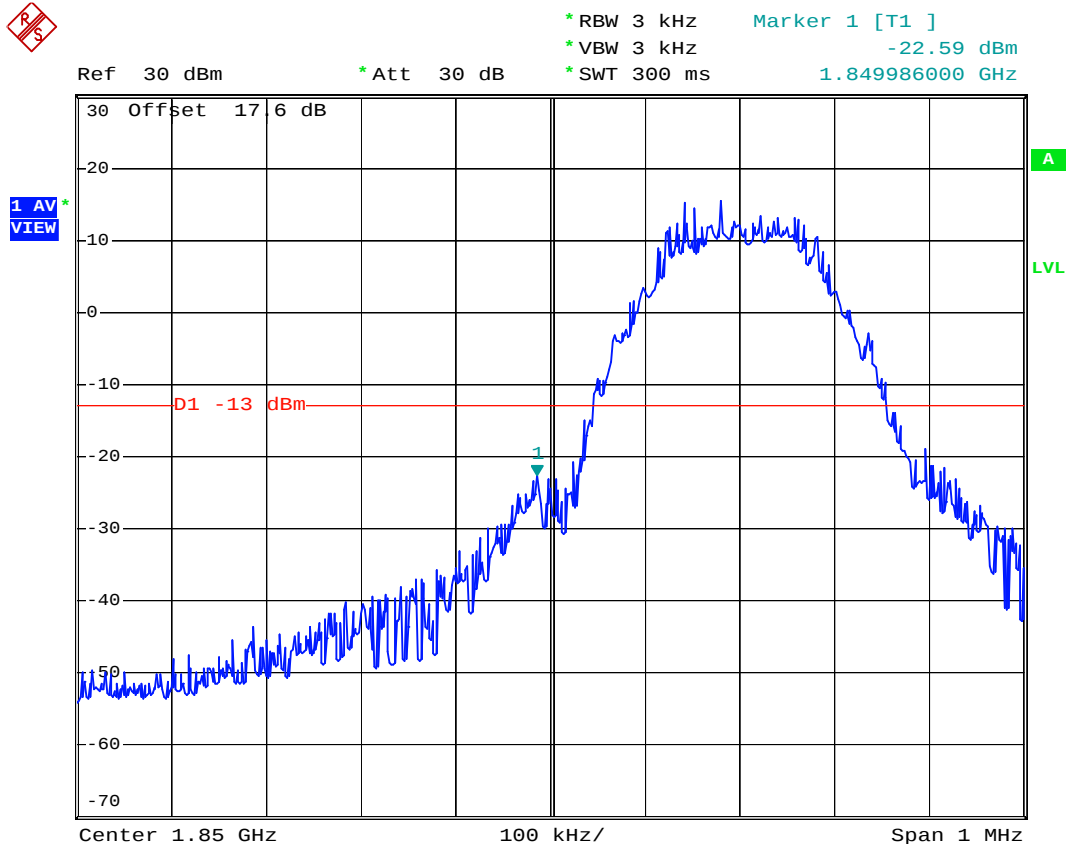
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FCC IC TEST REPORT

Report No. : FG6D0809

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



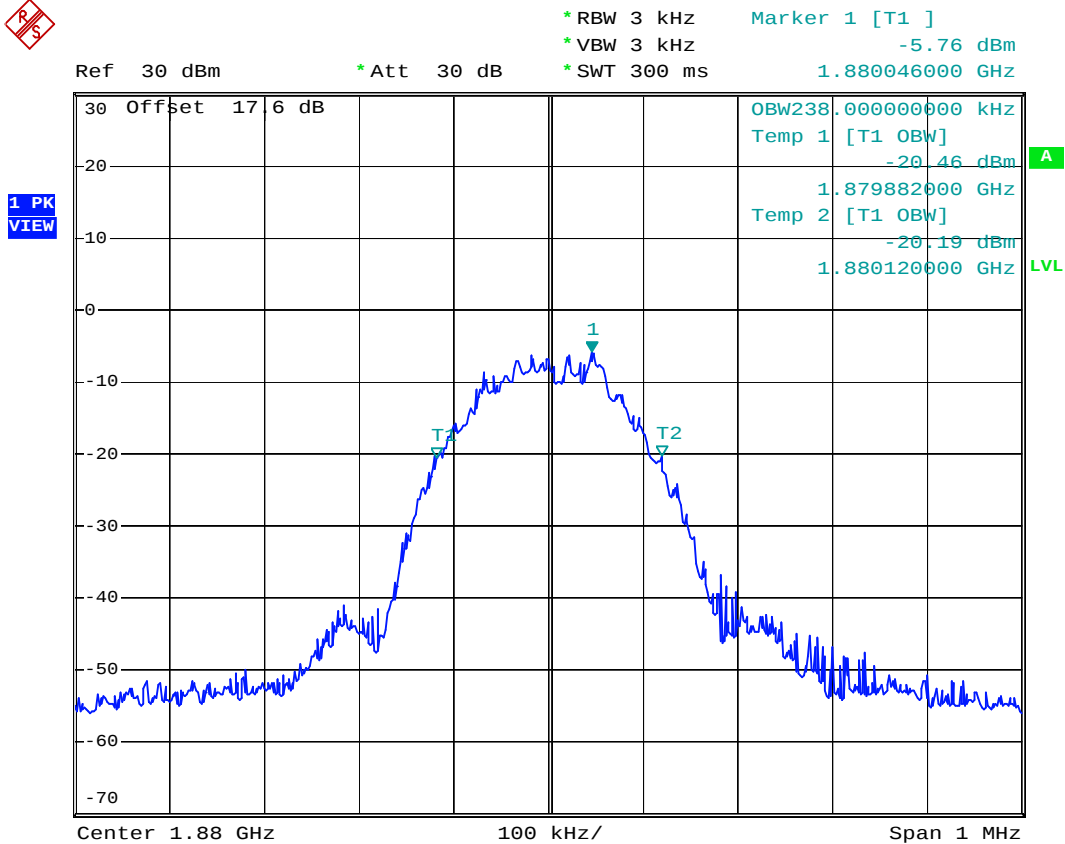
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FCC IC TEST REPORT

Report No. : FG6D0809

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



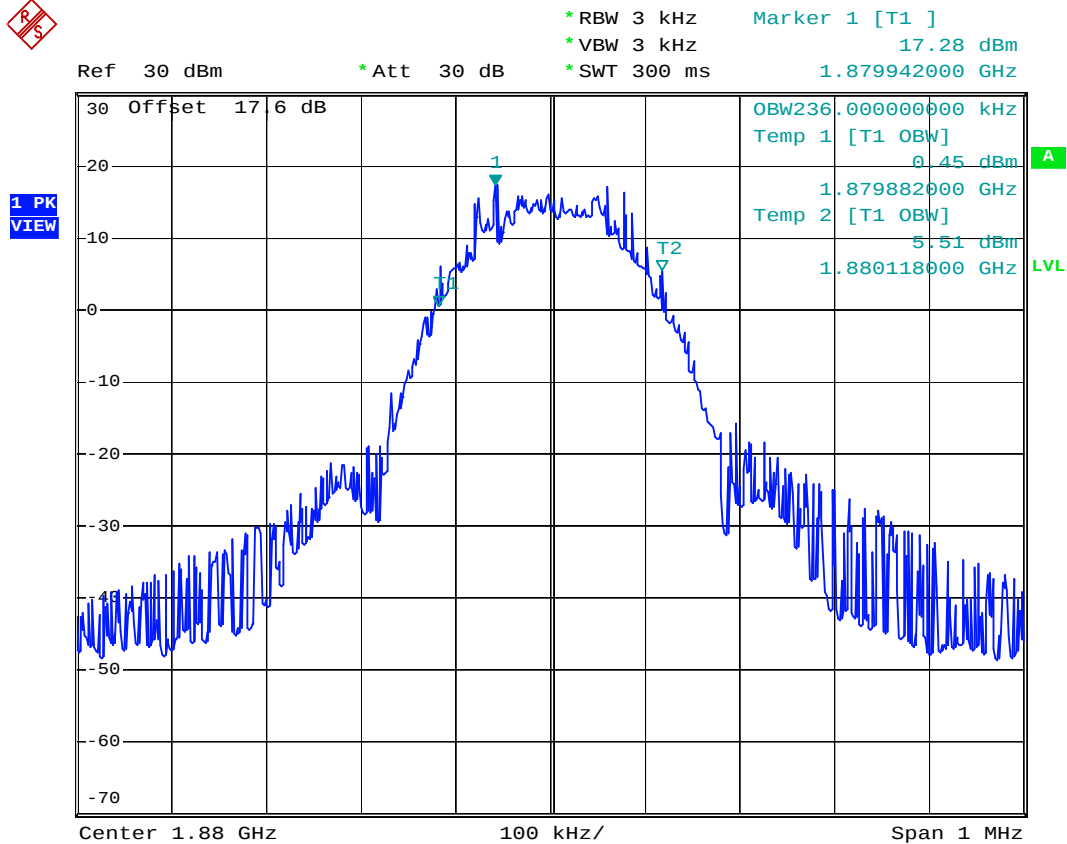
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FCC IC TEST REPORT

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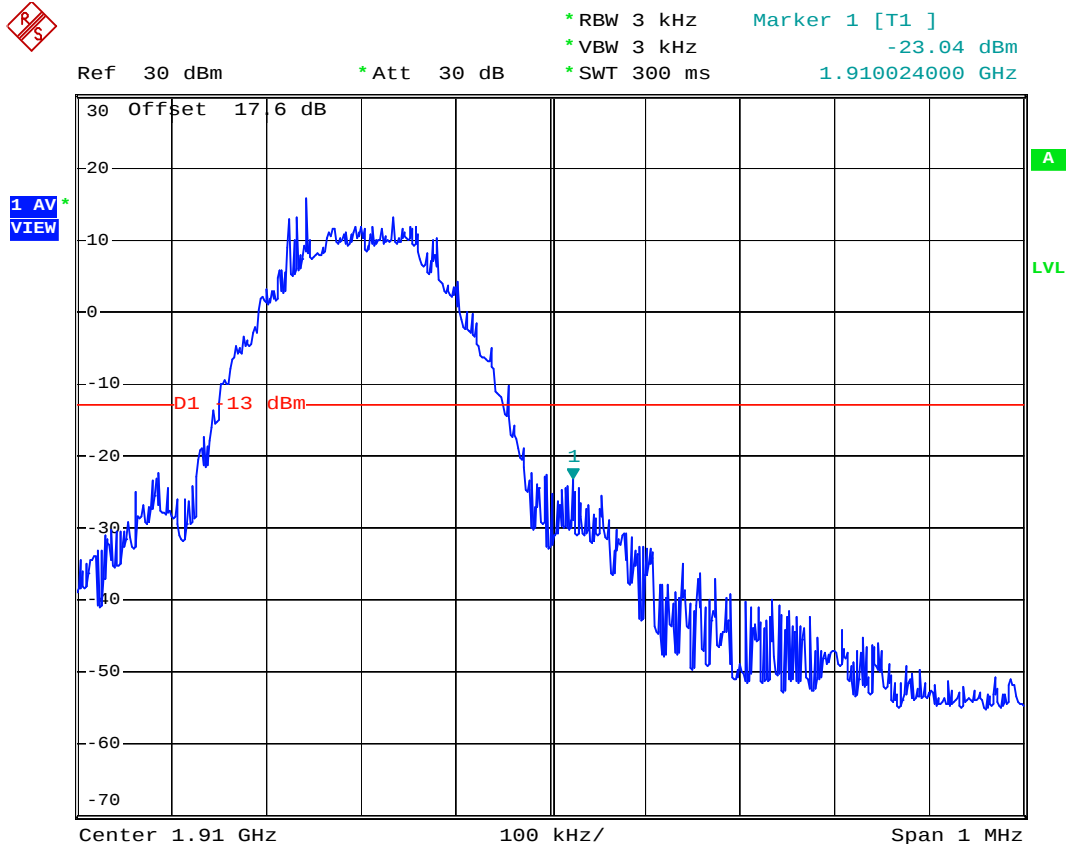
- Test Mode : PCS1900 (EDGE) CH661 99% Occupied Bandwidth
- Power State : High



Date: 12.OCT.2006 04:39:44



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



Date: 12.OCT.2006 04:51:17

4.4 Conducted Emission

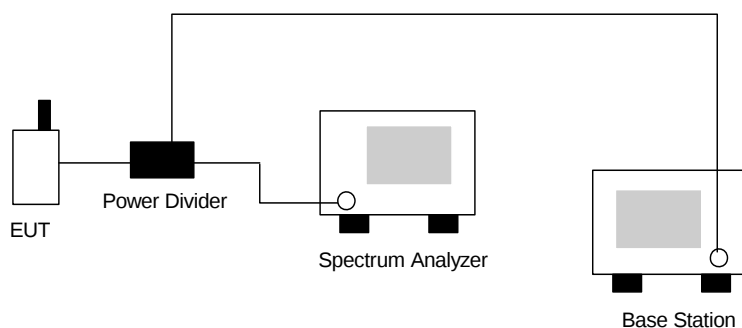
4.5.1 Measurement Instruments

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.

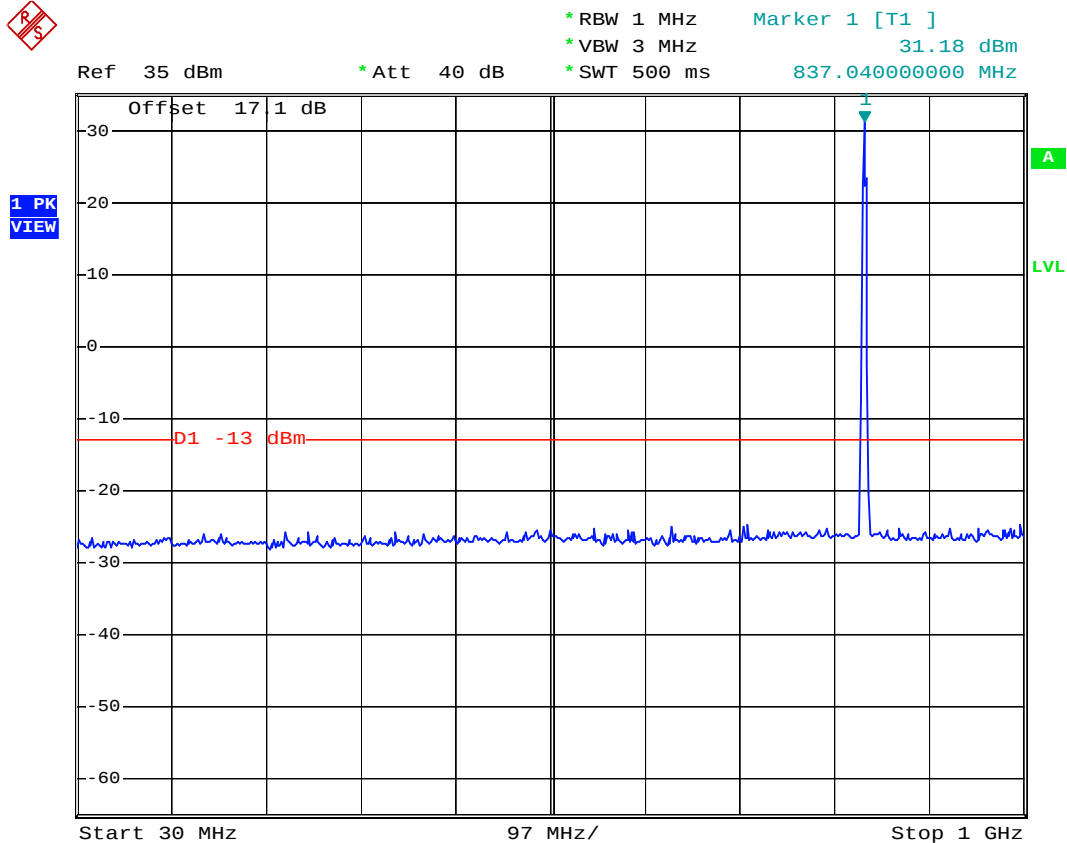
4.5.3 Test Setup Layout





4.5.4 Test Result

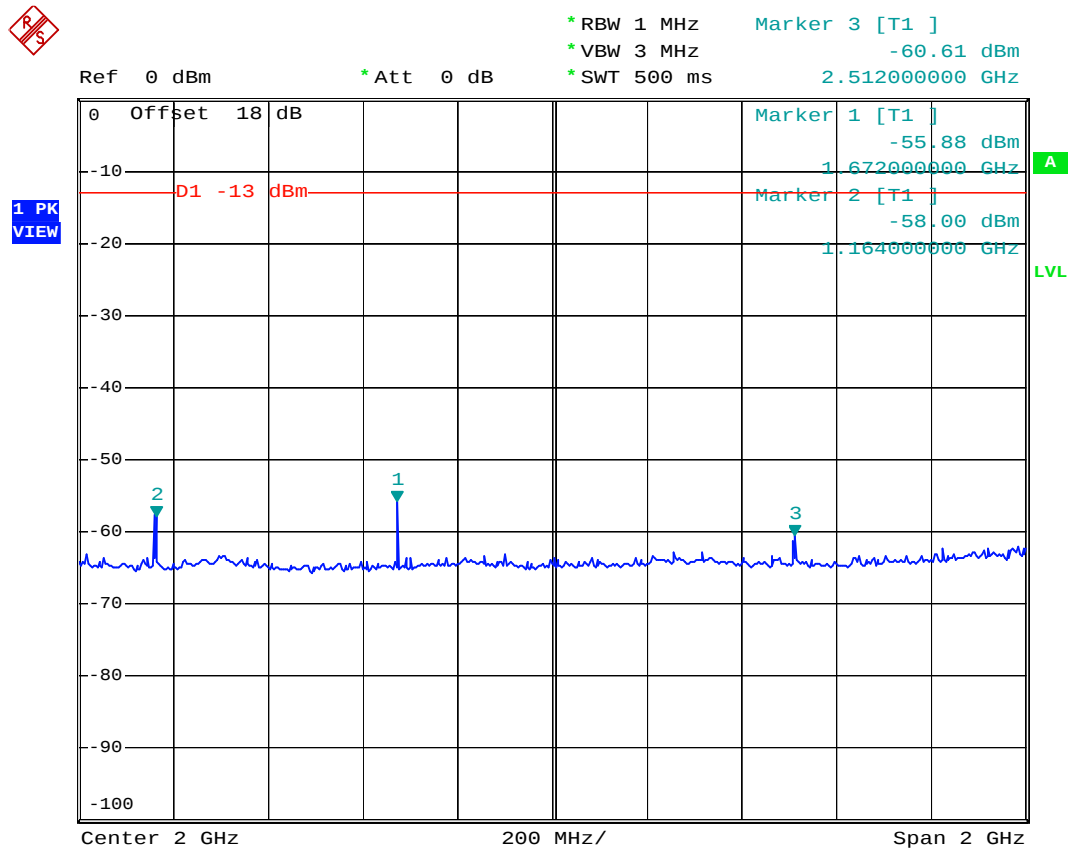
- Mode 1
- Test Mode : GSM850 (GSM) CH189
- Frequency Range : 30M-1G



Date: 12.OCT.2006 04:12:45



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



Date: 12.OCT.2006 04:17:49



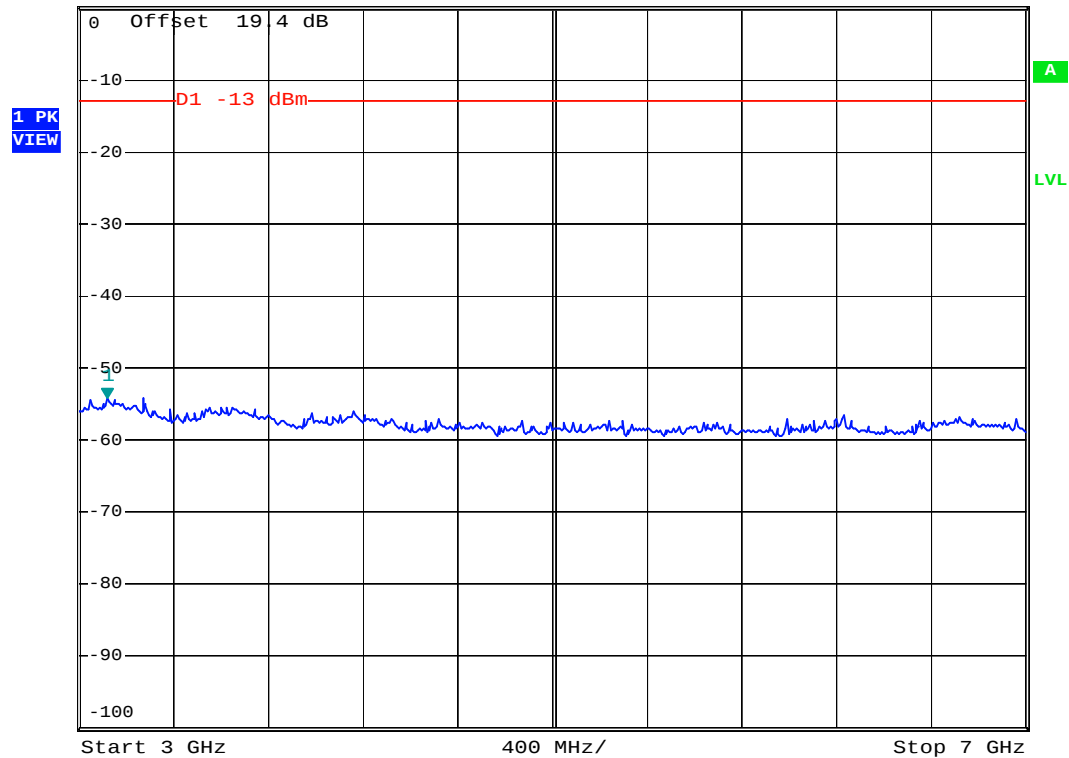
FCC IC TEST REPORT

Report No. : FG6D0809

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



Ref 0 dBm * Att 0 dB * RBW 1 MHz Marker 1 [T1]
* VBW 3 MHz -54.12 dBm
* SWT 500 ms 3.120000000 GHz



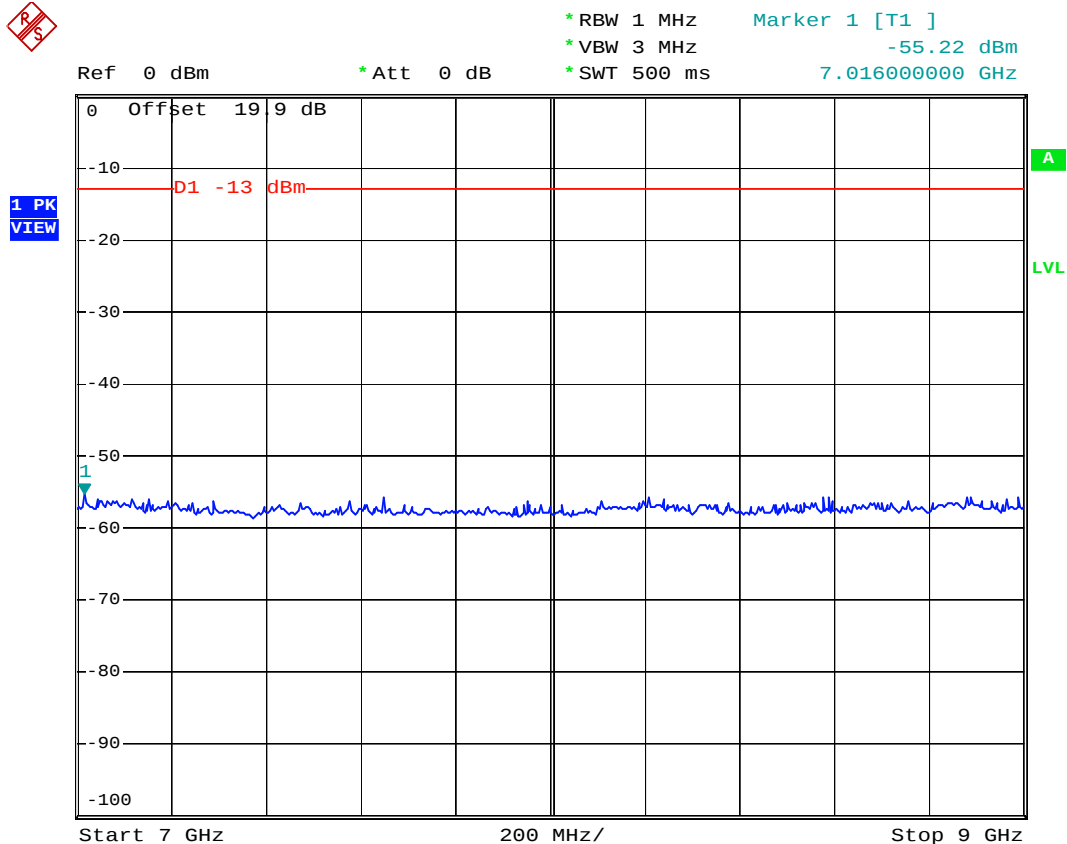
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FCC IC TEST REPORT

Report No. : FG6D0809

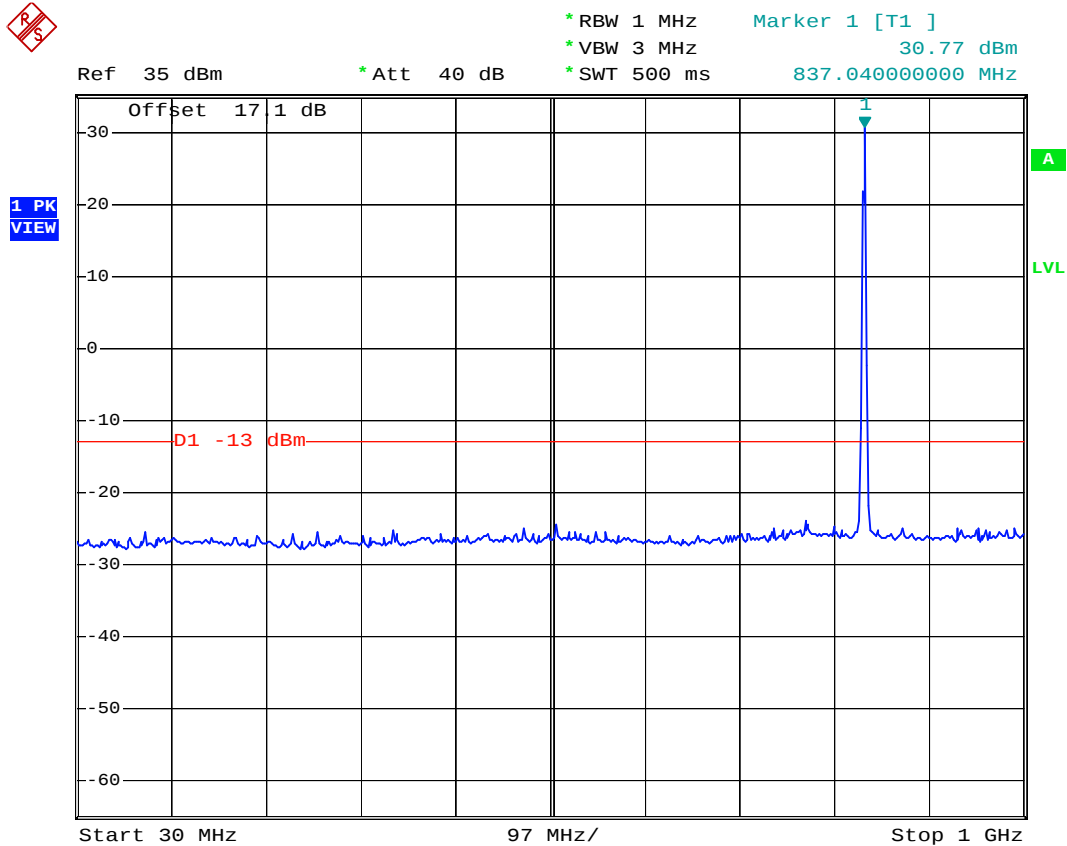
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- Frequency Range : 7G-9G



Date: 12.OCT.2006 04:20:44



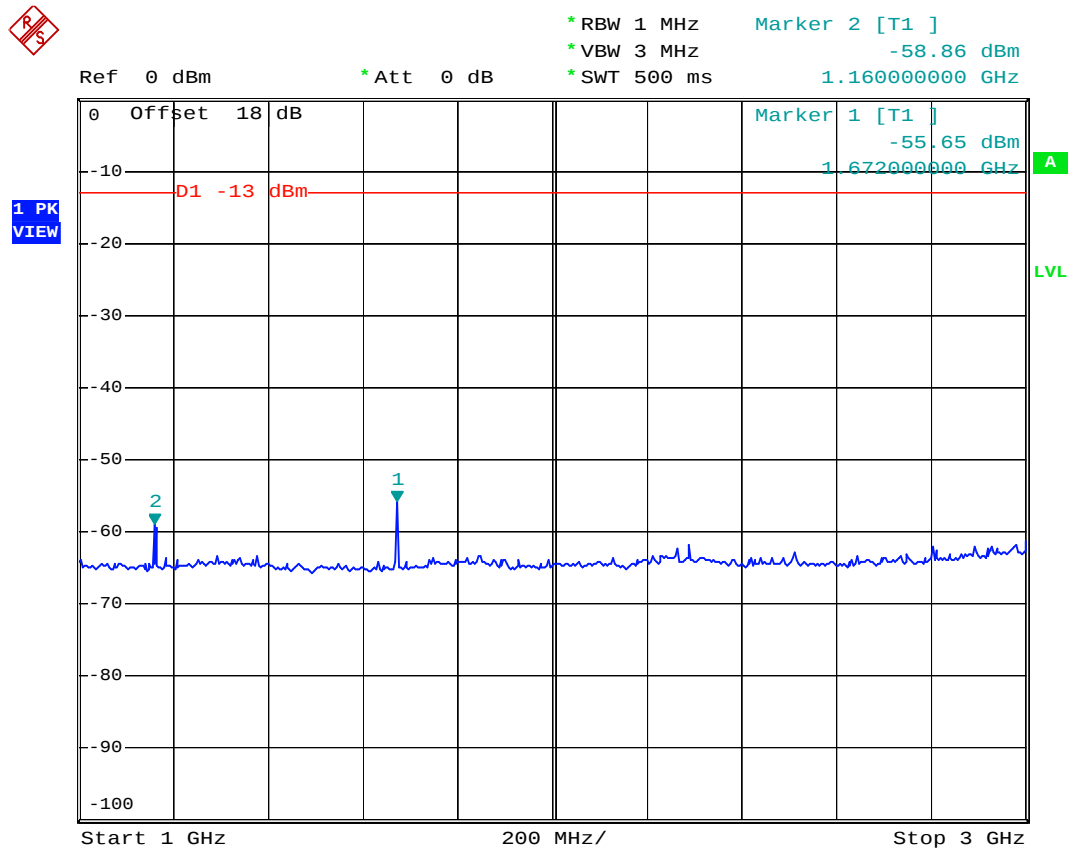
- Mode 2
- Test Mode : GSM850 (EDGE) CH189
- Frequency Range : 30M-1G



Date: 12.OCT.2006 06:29:02



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



Date: 12.OCT.2006 06:35:16



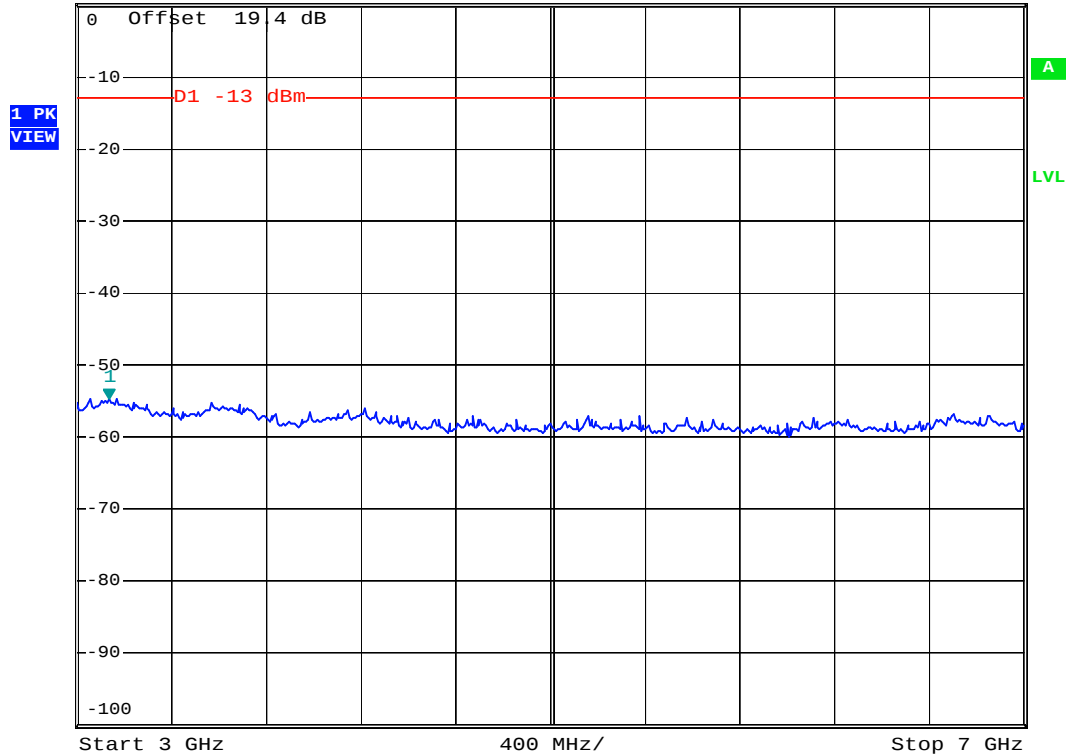
FCC IC TEST REPORT

Report No. : FG6D0809

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



Ref 0 dBm * Att 0 dB * RBW 1 MHz Marker 1 [T1]
* VBW 3 MHz -54.75 dBm
* SWT 500 ms 3.136000000 GHz



Date: 12.OCT.2006 06:36:50



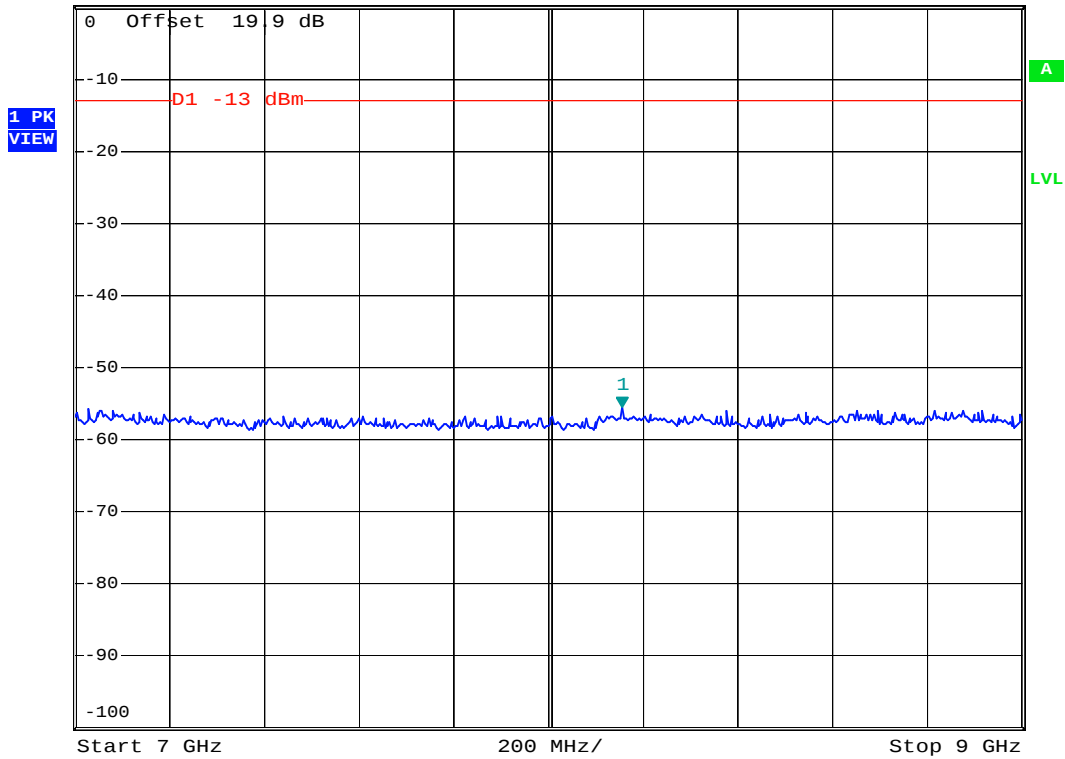
FCC IC TEST REPORT

Report No. : FG6D0809

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



Ref 0 dBm * Att 0 dB * RBW 1 MHz Marker 1 [T1]
* VBW 3 MHz -55.49 dBm
* SWT 500 ms 8.156000000 GHz



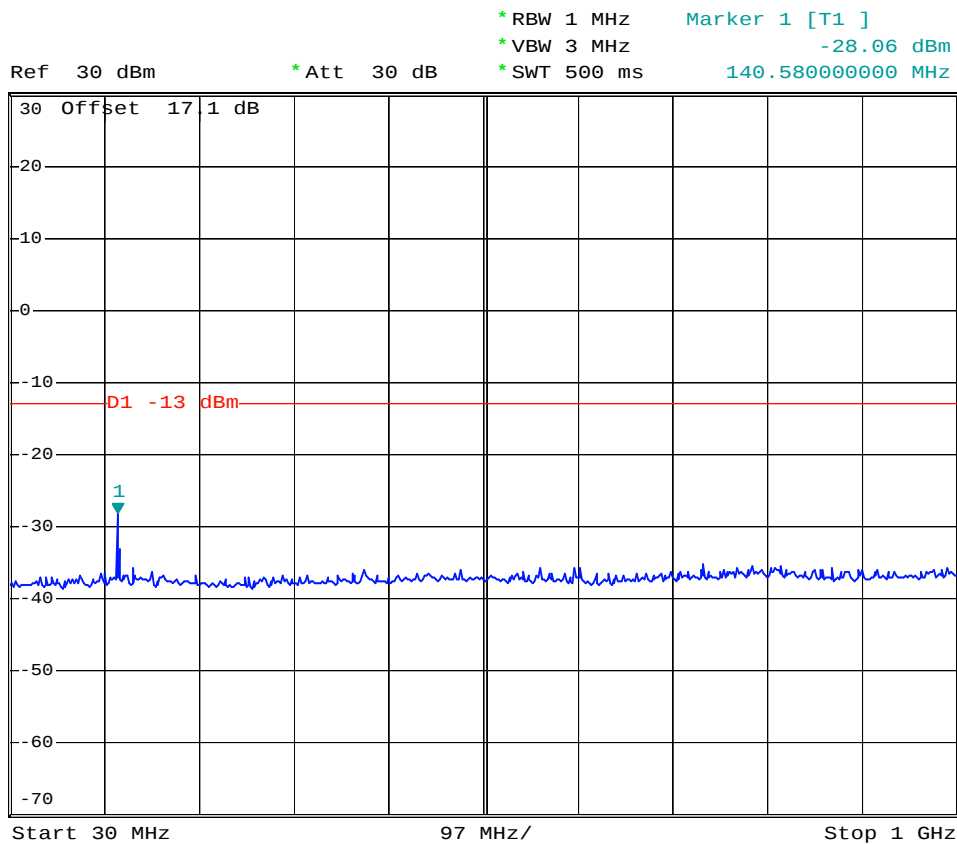
Date: 12.OCT.2006 06:38:12



FCC IC TEST REPORT

Report No. : FG6D0809

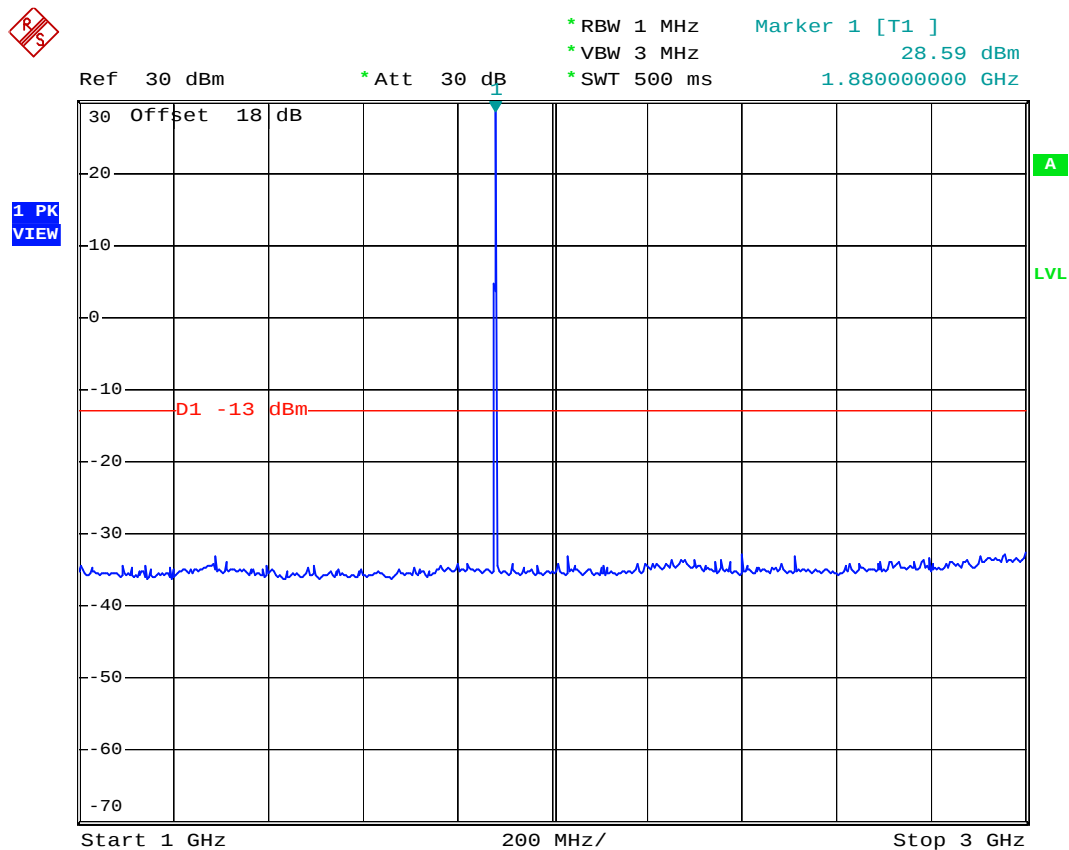
- Mode 3
- Test Mode : PCS1900 (GSM) CH661
- Frequency Range : 30M-1G



Date: 12.OCT.2006 03:32:58



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



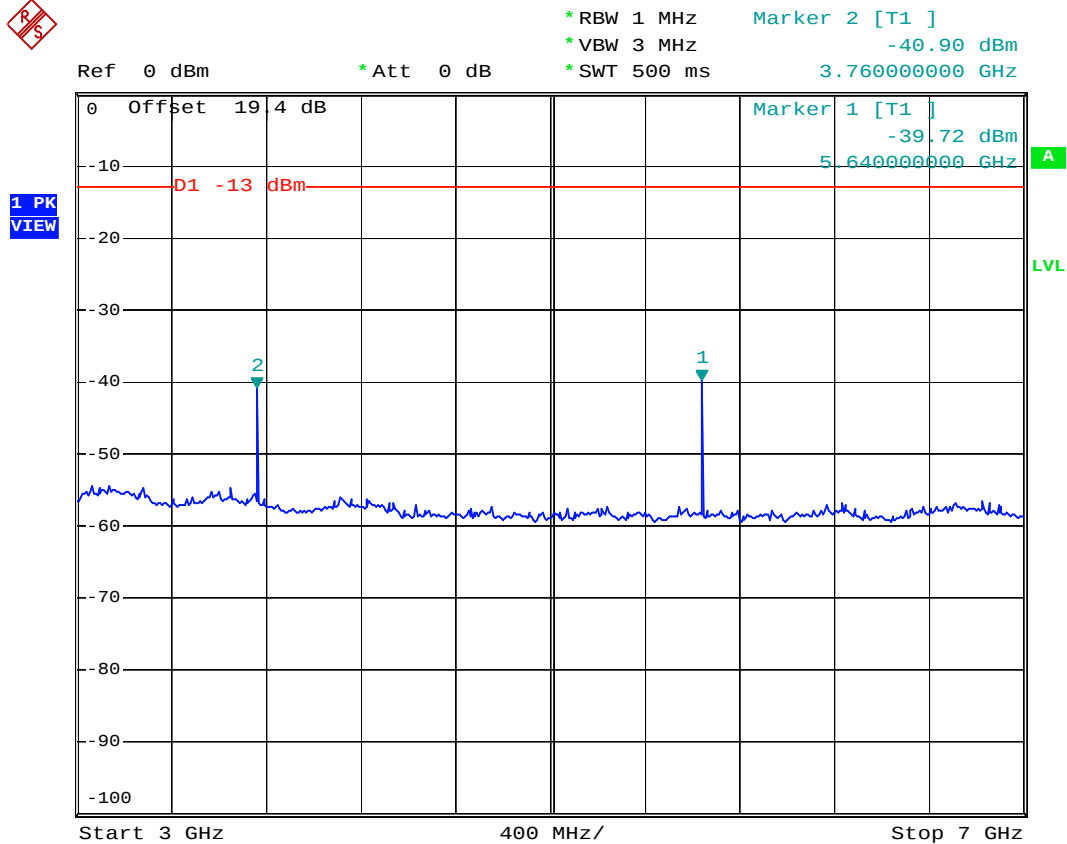
Date: 12.OCT.2006 03:35:40



FCC IC TEST REPORT

Report No. : FG6D0809

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



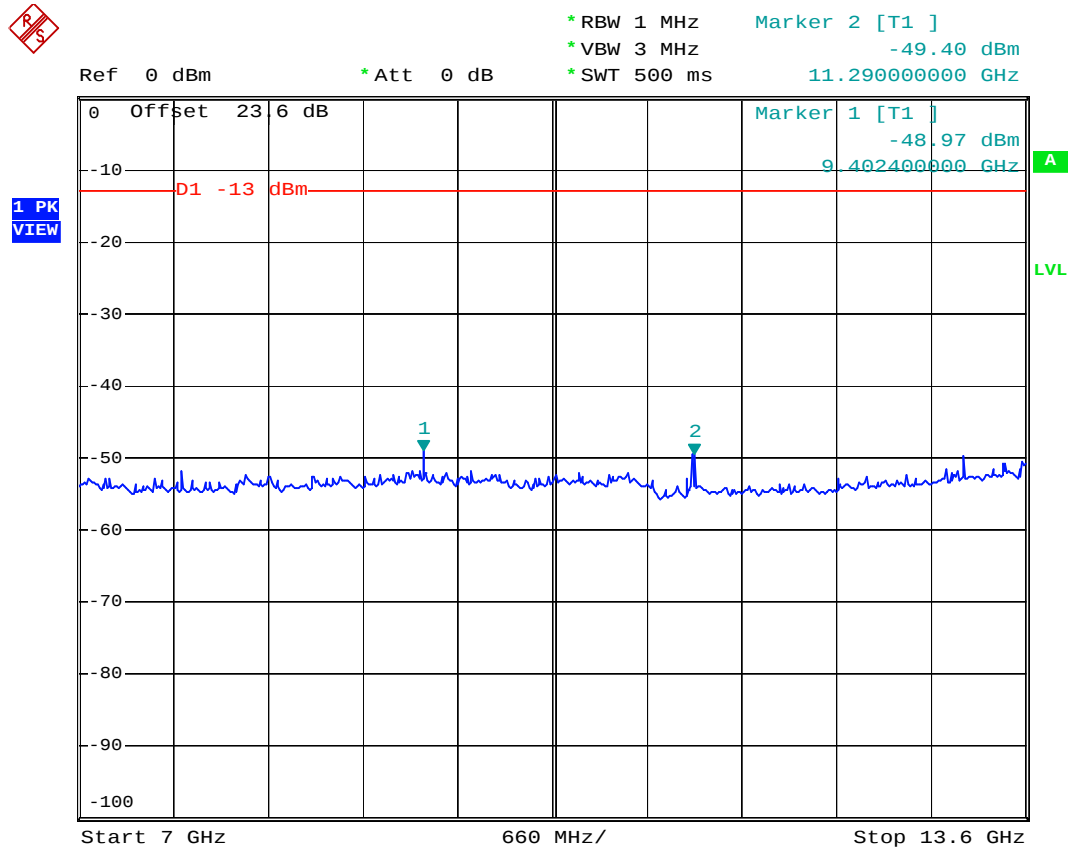
Date: 12.OCT.2006 03:38:26



FCC IC TEST REPORT

Report No. : FG6D0809

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



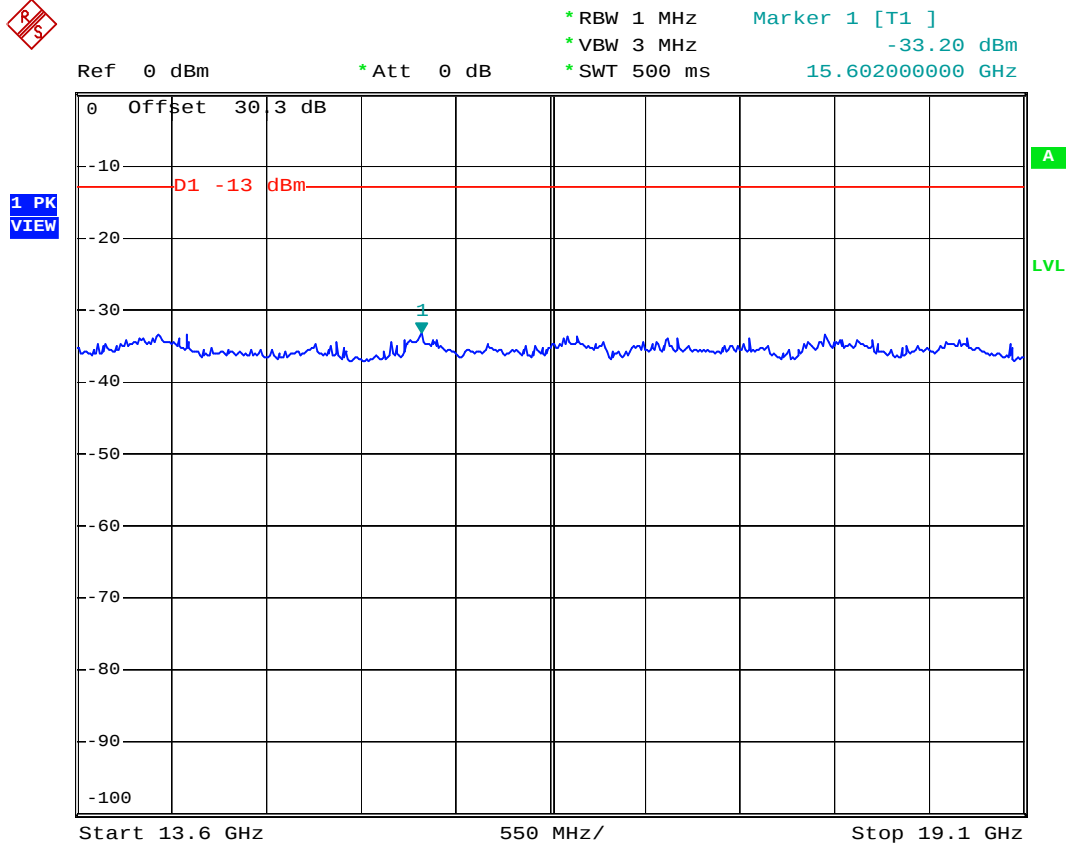
Date: 12.OCT.2006 03:41:12



FCC IC TEST REPORT

Report No. : FG6D0809

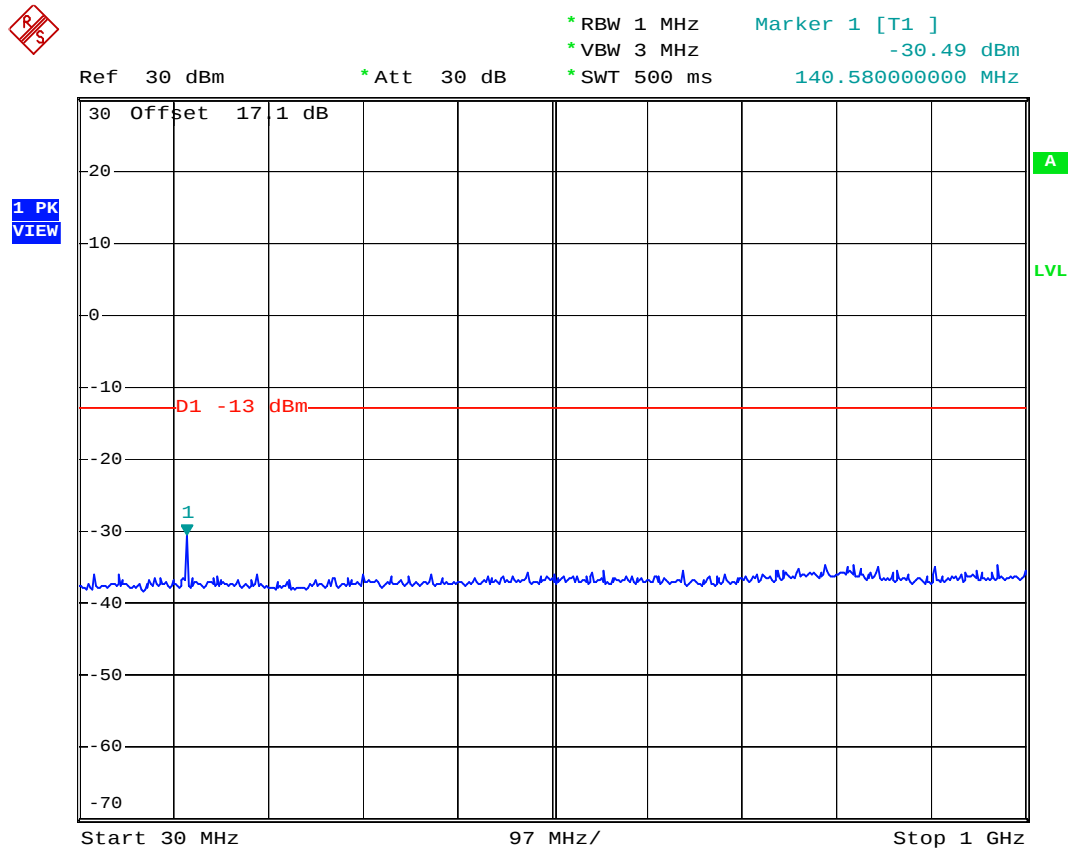
- Test Mode : PCS1900 (GSM) CH661
- Frequency Range : 13.6G-19.1G



Date: 12.OCT.2006 03:42:49



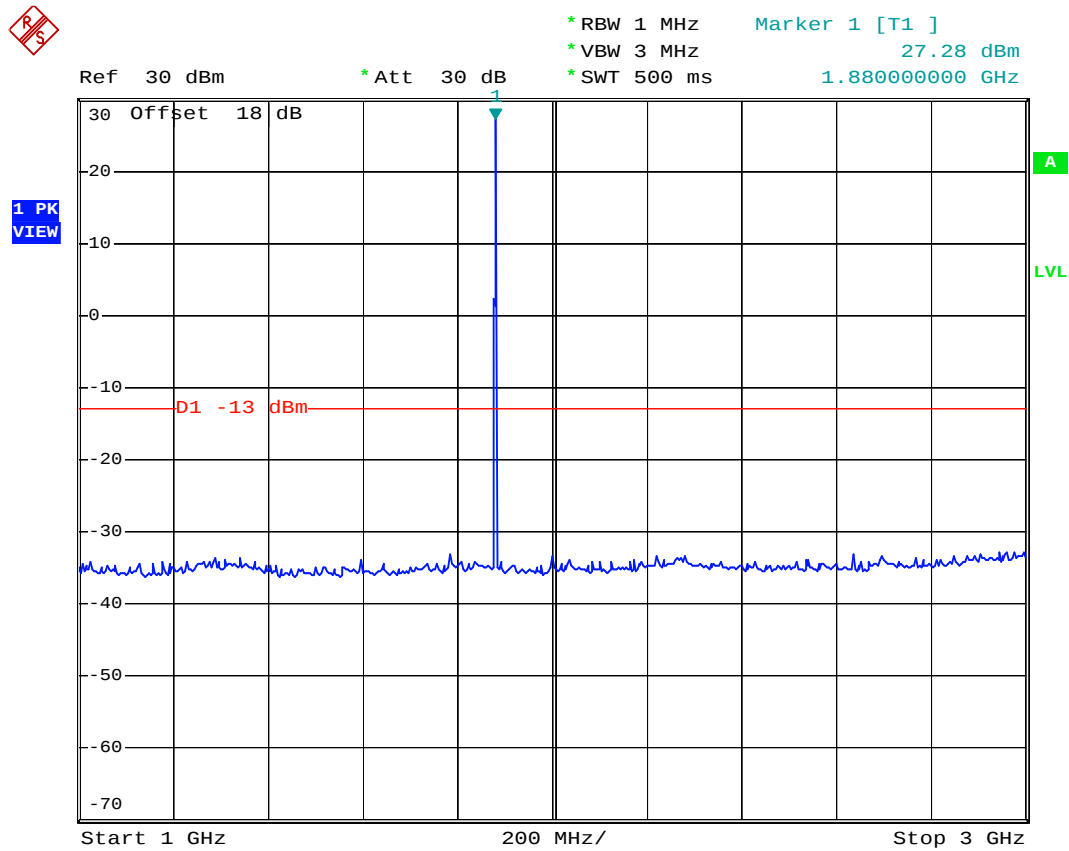
- Mode 4
- Test Mode : PCS1900 (EDGE) CH661
- Frequency Range : 30M-1G



Date: 12.OCT.2006 04:57:03



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



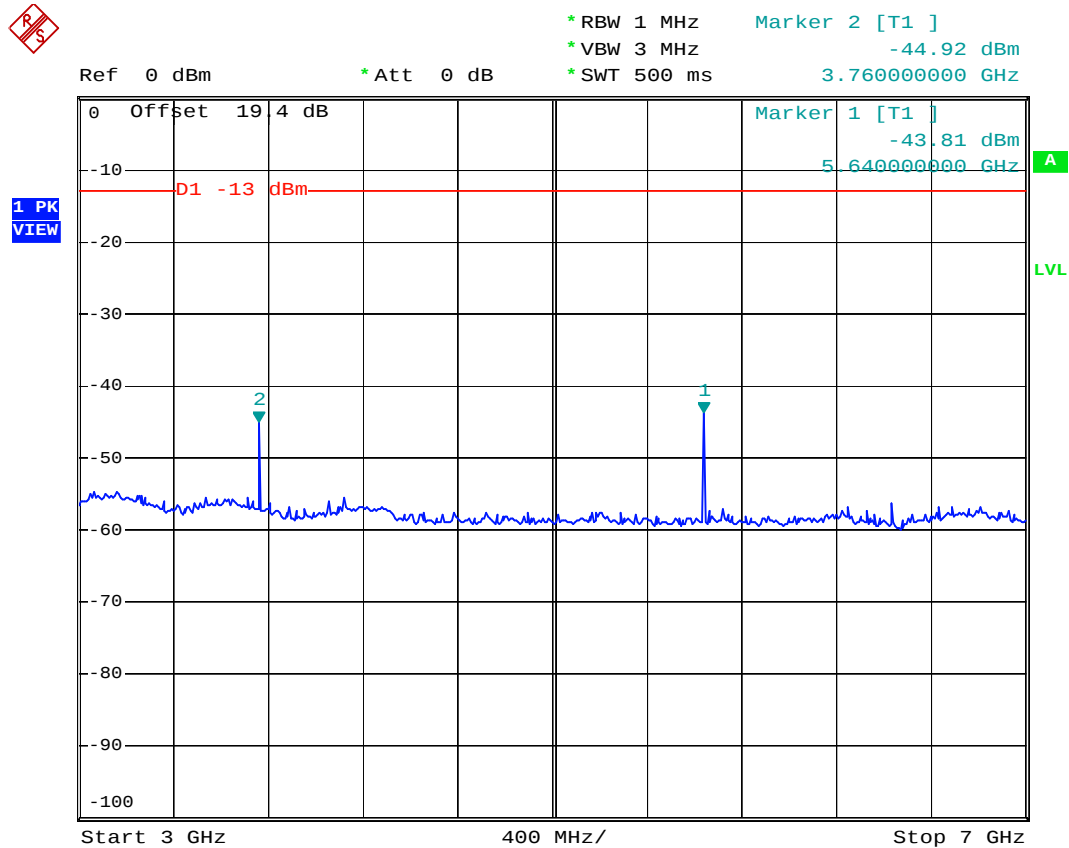
Date: 12.OCT.2006 04:58:44



FCC IC TEST REPORT

Report No. : FG6D0809

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



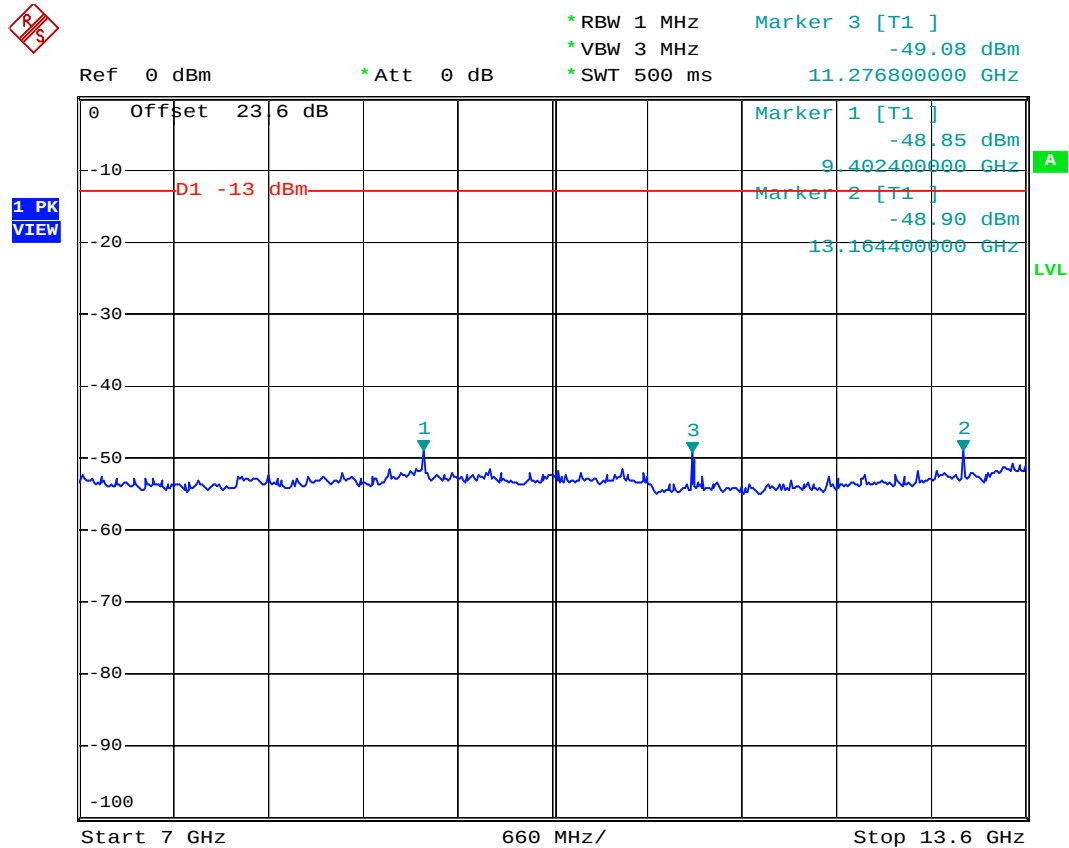
Date: 12.OCT.2006 05:00:39



FCC IC TEST REPORT

Report No. : FG6D0809

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



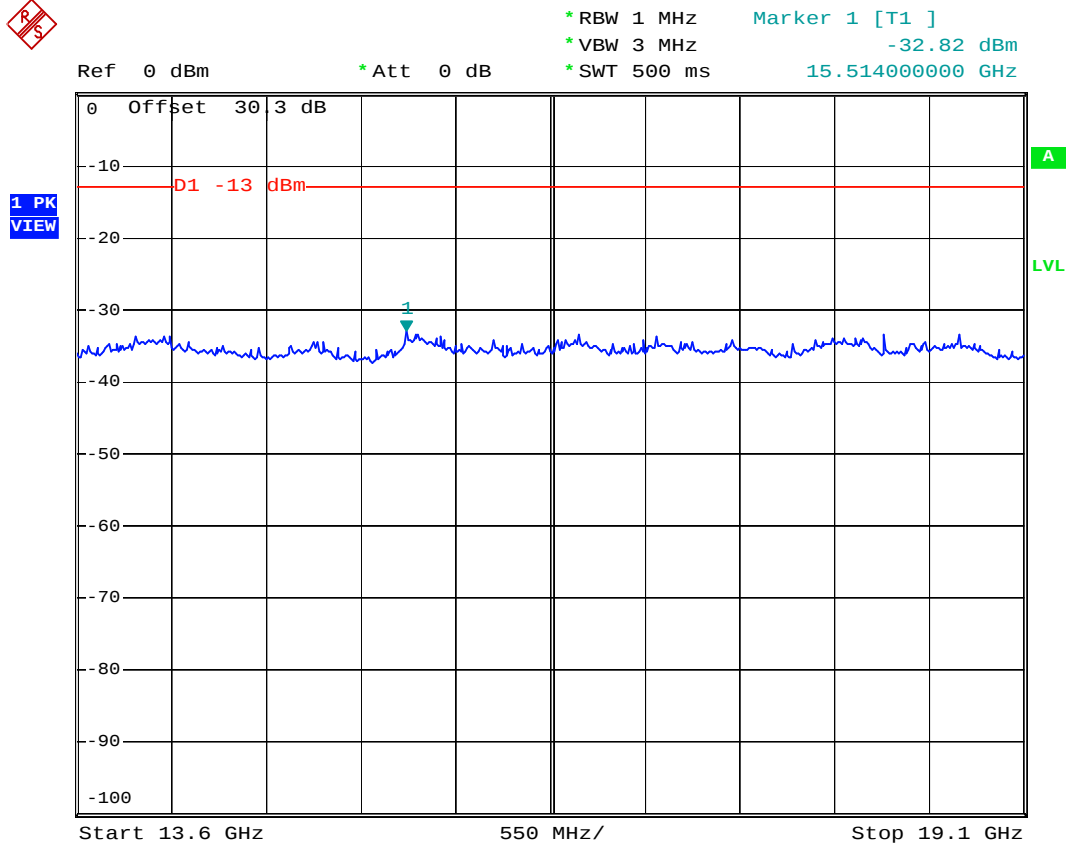
Date: 12.OCT.2006 05:02:34



FCC IC TEST REPORT

Report No. : FG6D0809

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



Date: 12.OCT.2006 05:03:51

4.6 Field Strength of Spurious Radiation

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

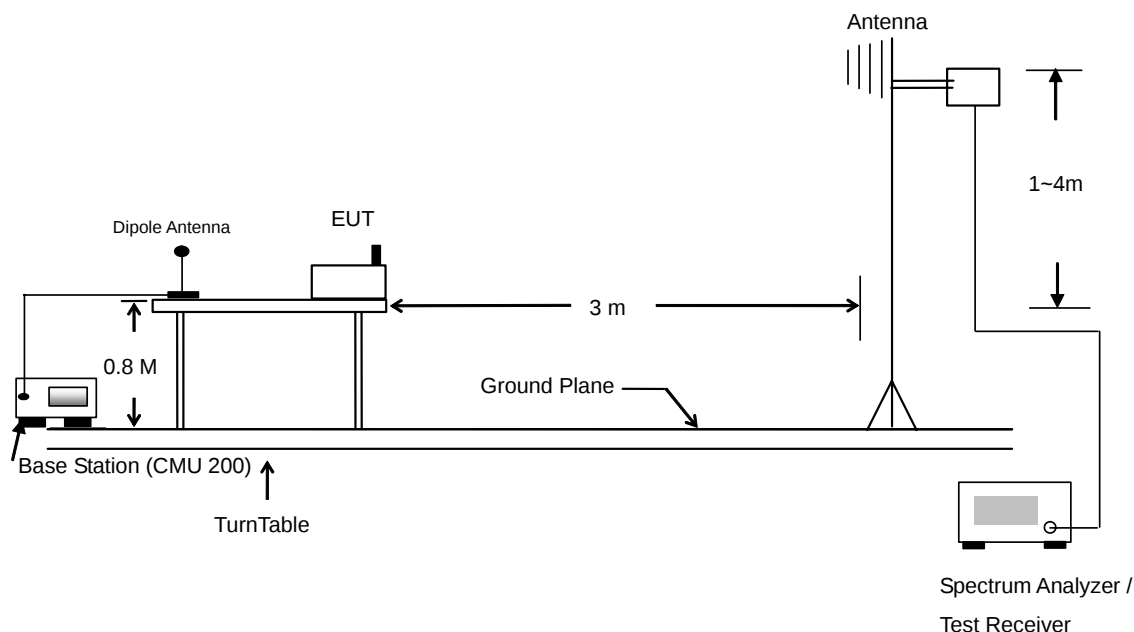
4.6.1 Measurement Instruments

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

GSM850 (GSM) Radiated Spurious ERP							
H Polarization				V Polarization			
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)
42.690	-64.890	-13	-51.89	58.080	-56.510	-13	-43.51
57.540	-64.000	-13	-51.00	118.830	-58.310	-13	-45.31
103.980	-65.600	-13	-52.60	202.530	-52.550	-13	-39.55
994.400	-66.820	-13	-53.82	325.900	-62.710	-13	-49.71
1674.000	-51.750	-13	-38.75	1674.000	-55.050	-13	-42.05

- Test Mode : Mode 2

GSM850 (EDGE) Radiated Spurious ERP							
H Polarization				V Polarization			
Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)
35.940	-65.080	-13	-52.08	41.340	-55.640	-13	-42.64
56.730	-68.020	-13	-55.02	57.540	-50.050	-13	-37.05
265.980	-66.380	-13	-53.38	262.740	-57.110	-13	-44.11
358.800	-64.470	-13	-51.47	343.400	-62.770	-13	-49.77
1674.000	-56.130	-13	-43.13	1674.000	-56.900	-13	-43.90



- Test Mode : Mode 3

PCS1900 (GSM) Radiated Spurious EIRP							
H Polarization				V Polarization			
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)
30.000	-44.820	-13	-31.82	45.390	-45.170	-13	-32.17
37.830	-37.450	-13	-24.45	72.930	-43.620	-13	-30.62
48.090	-44.330	-13	-31.33	99.930	-43.800	-13	-30.80
883.800	-63.280	-13	-50.28	836.900	-60.280	-13	-47.28
943.300	-63.080	-13	-50.08	955.900	-59.660	-13	-46.66
1000.000	-62.120	-13	-49.12	990.900	-59.870	-13	-46.87
3758.000	-40.030	-13	-27.03	1708.000	-57.480	-13	-44.48
5638.000	-49.820	-13	-36.82	3758.000	-39.890	-13	-26.89
				5638.000	-47.970	-13	-34.97

- Test Mode : Mode 4

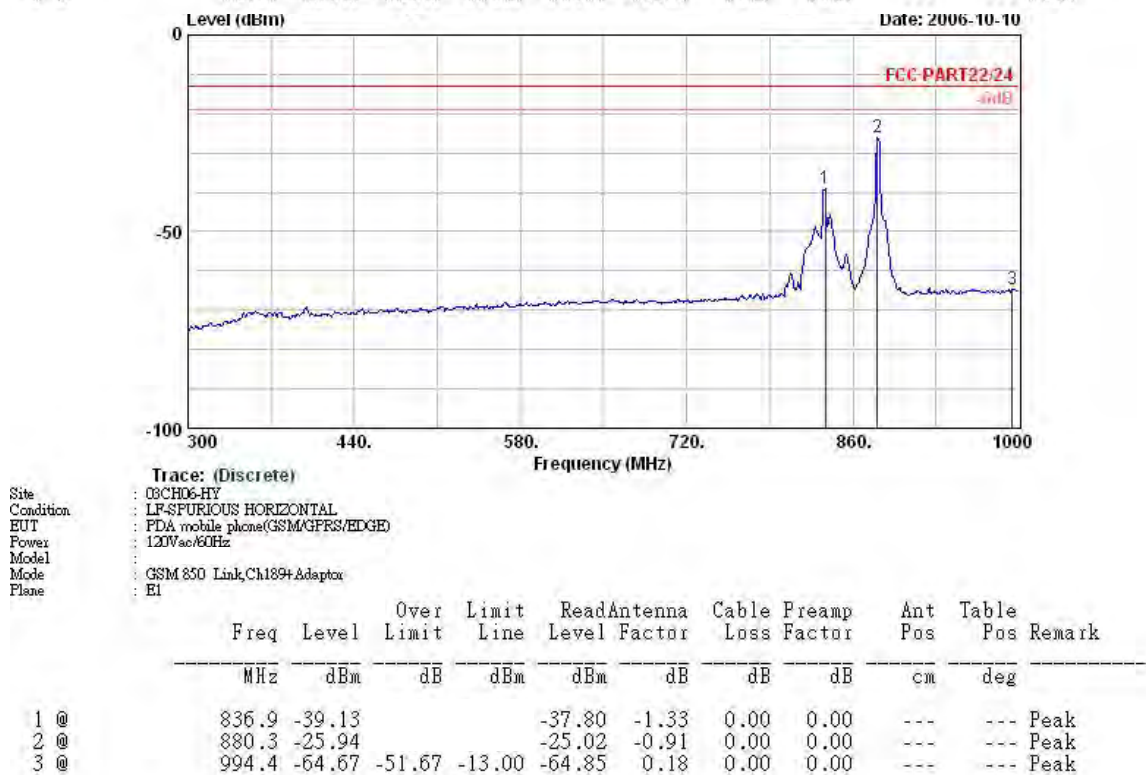
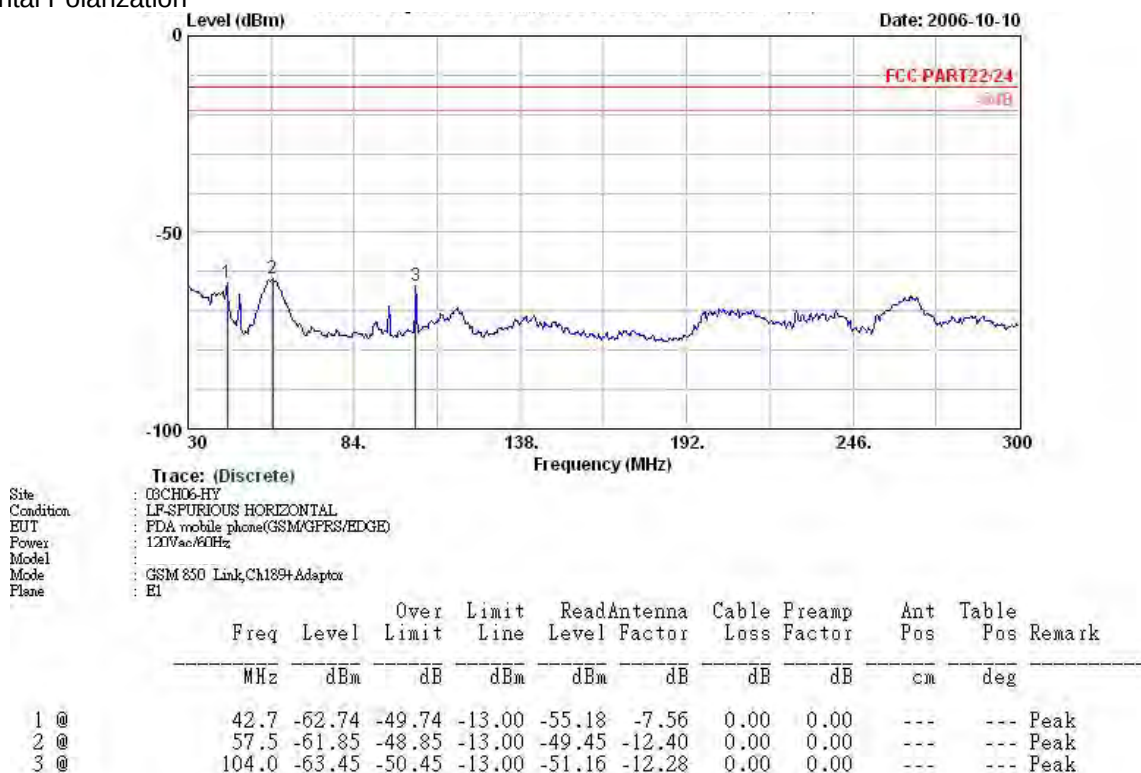
PCS1900 (EDGE) Radiated Spurious EIRP							
H Polarization				V Polarization			
Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)
30.000	-42.820	-13	-29.82	45.390	-47.170	-13	-34.17
38.370	-36.200	-13	-23.20	72.930	-45.620	-13	-32.62
48.090	-42.330	-13	-29.33	99.930	-45.800	-13	-32.80
826.400	-65.520	-13	-52.52	833.400	-57.240	-13	-44.24
957.300	-64.870	-13	-51.87	955.900	-61.660	-13	-48.66
1000.000	-64.120	-13	-51.12	990.900	-61.870	-13	-48.87
3758.000	-45.920	-13	-32.92	3758.000	-40.900	-13	-27.90
5638.000	-48.820	-13	-35.82	5638.000	-51.530	-13	-38.53



4.6.5 Test Data

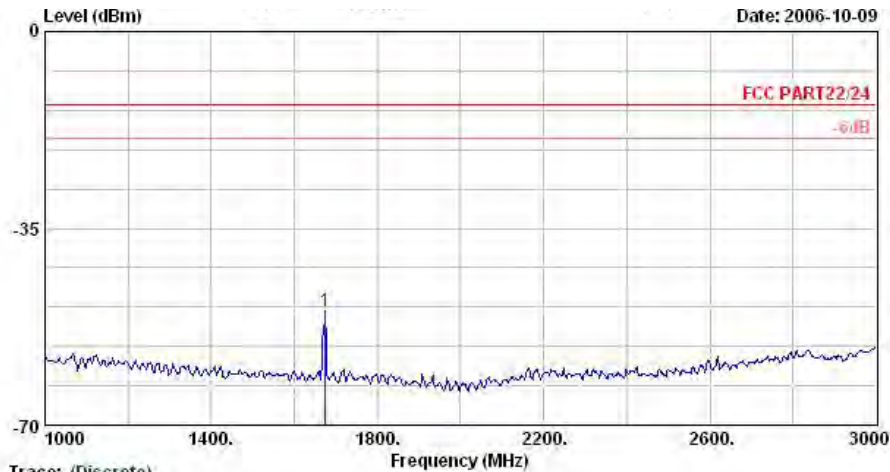
4.6.5.1 Mode 1

Horizontal Polarization

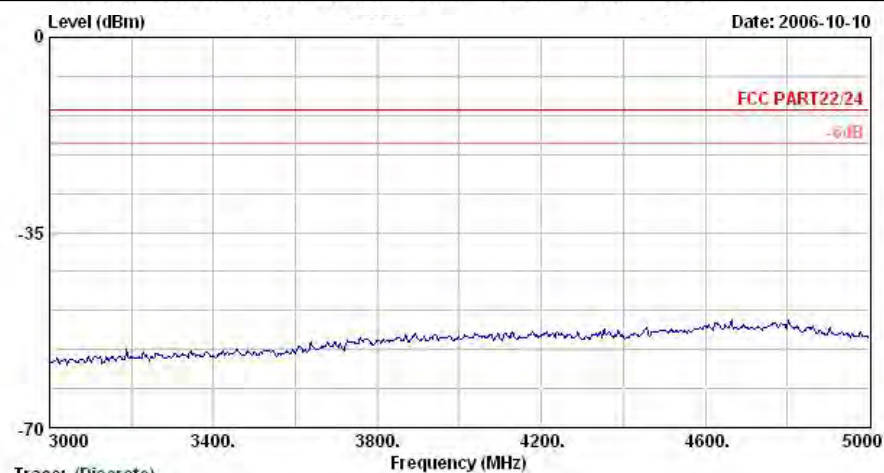


Remark:

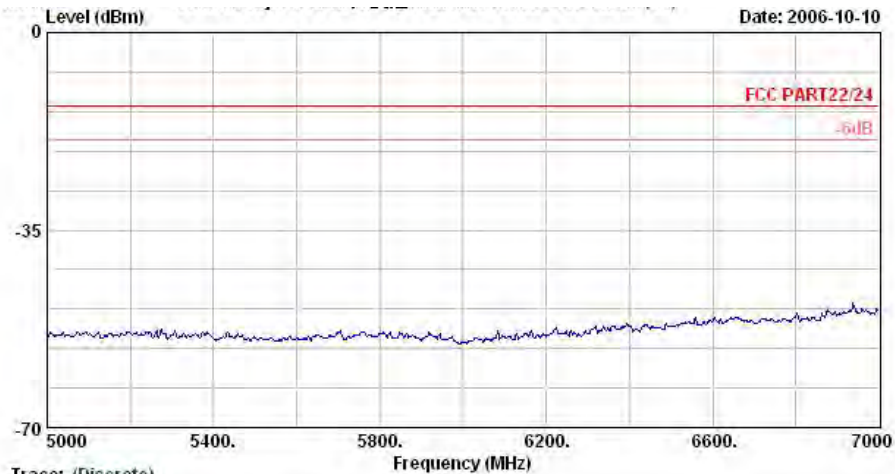
1. #1: MS TCH Signal
2. #2: BS TCH Signal



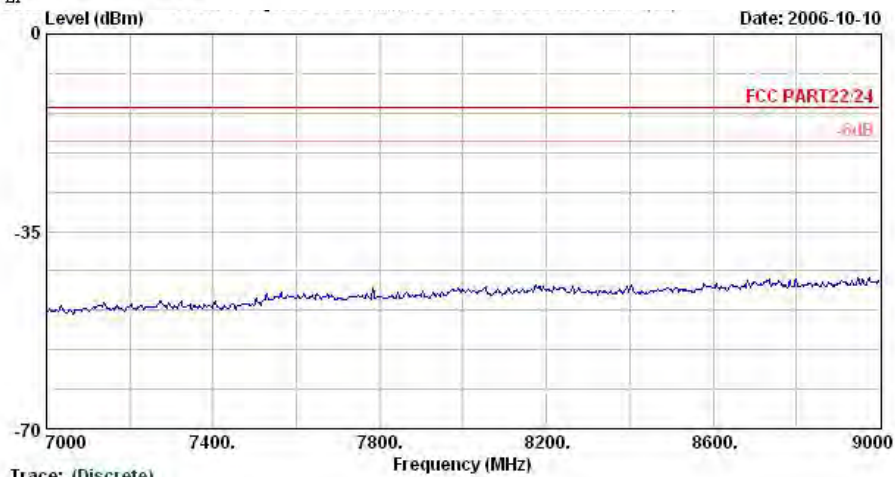
Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
MHz	dBm	dB	dBm	dBm	dB	dB	cm	deg	
1 @ 1674.0	-49.60	-36.60	-13.00	-49.82	0.22	0.00	---	---	Peak



Site : 08CH06-HY
Condition : HF-SPURIOUS HORIZONTAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : GSM 850 Link,Ch189+Adaptor
Plane : E1



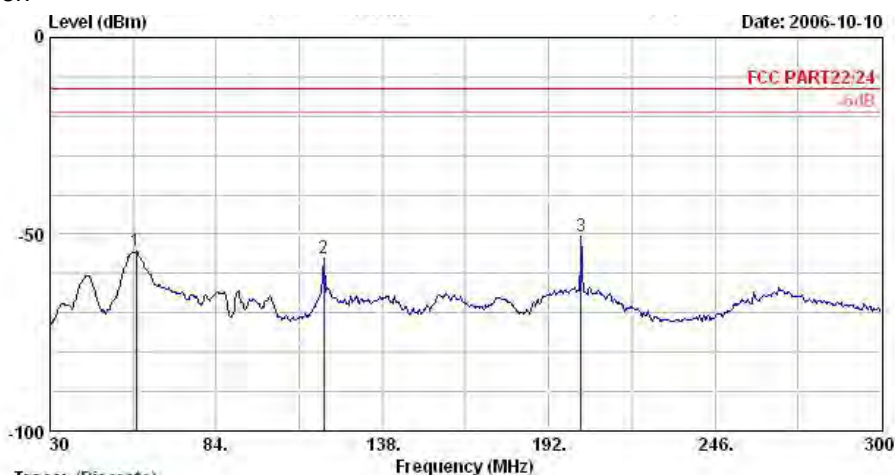
Trace: (Discrete)
Site : 03CH06-HY
Condition : HF-SPURIOUS HORIZONTAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : GSM 850 Link,Ch189+ Adaptor
Plane : E1



Trace: (Discrete)
Site : 03CH06-HY
Condition : HF-SPURIOUS HORIZONTAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : GSM 850 Link,Ch189+ Adaptor
Plane : E1

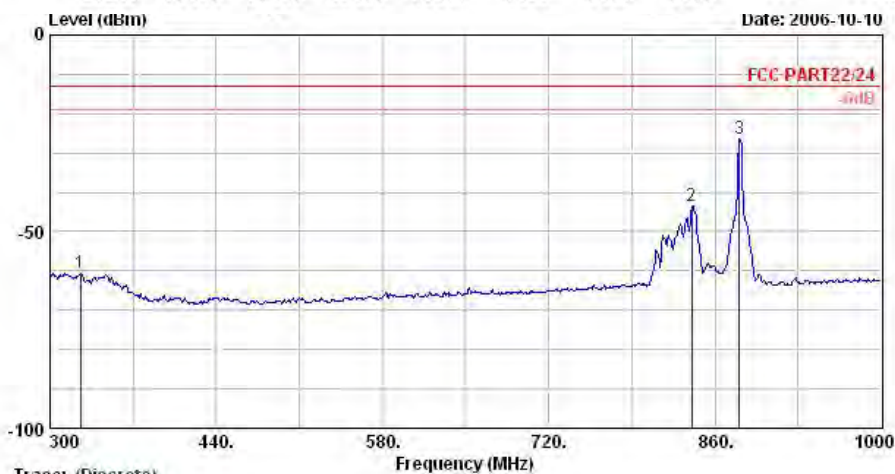


Vertical Polarization



Trace: (Discrete)
Site : 03CH06-HY
Condition : LP-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Wac/60Hz
Model :
Mode : GSM 850 Link,Ch189+Adaptor
Plane : E1

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBm	Limit	Line	Level	Loss	Factor	Pos	Pos	
			dB	dBm	Factor	dB	dB	cm	deg	
1 @	58.1	-54.36	-41.36	-13.00	-40.66	-13.70	0.00	0.00	---	Peak
2 @	118.8	-56.16	-43.16	-13.00	-48.30	-7.86	0.00	0.00	---	Peak
3 @	202.5	-50.40	-37.40	-13.00	-41.87	-8.53	0.00	0.00	---	Peak

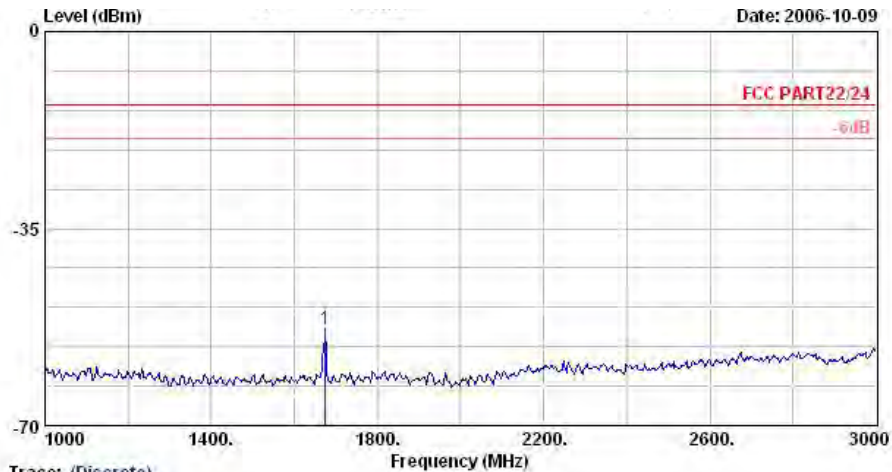


Trace: (Discrete)
Site : 03CH06-HY
Condition : LP-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Wac/60Hz
Model :
Mode : GSM 850 Link,Ch189+Adaptor
Plane : E1

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBm	Limit	Line	Level	Loss	Factor	Pos	Pos	
			dB	dBm	Factor	dB	dB	cm	deg	
1 @	325.9	-60.56	-47.56	-13.00	-54.66	-5.90	0.00	0.00	---	Peak
2 @	840.4	-43.31			-44.70	1.39	0.00	0.00	---	Peak
3 @	880.3	-26.56			-28.27	1.71	0.00	0.00	---	Peak

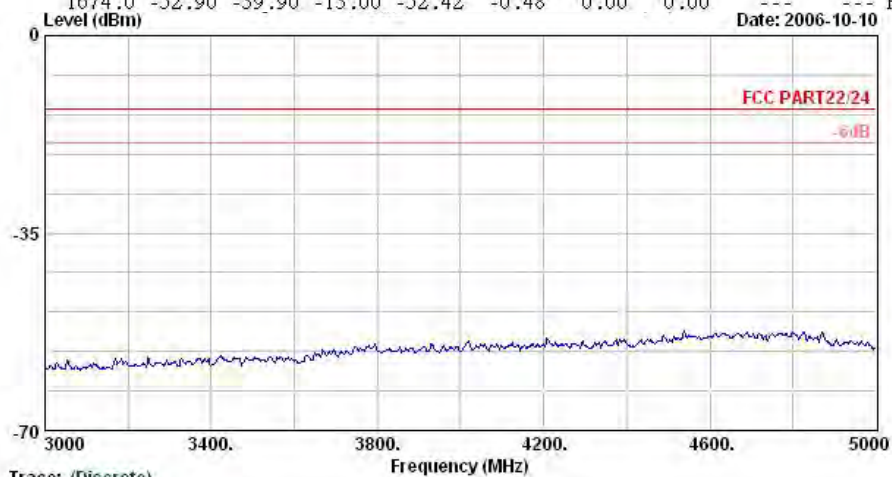
Remark:

1. #2: MS TCH Signal
2. #3: BS TCH Signal

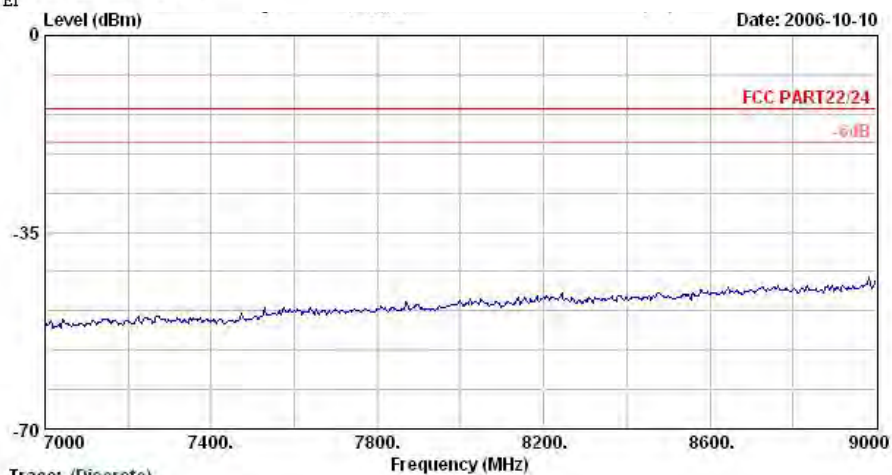
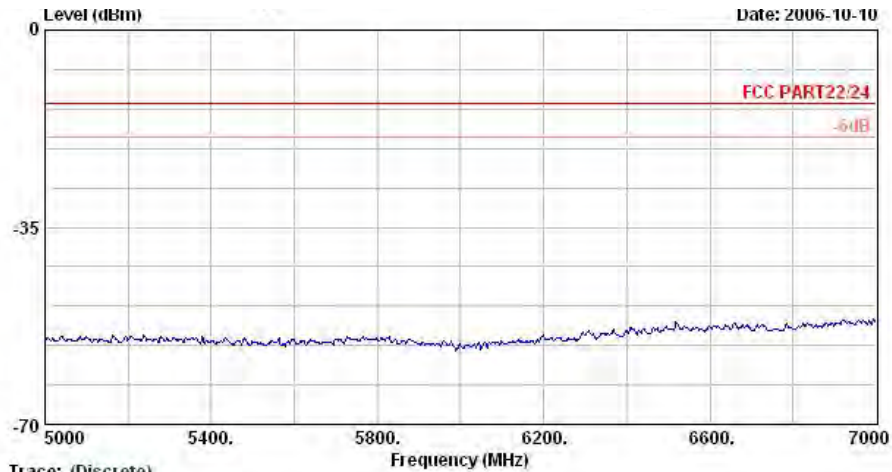


Trace: (Discrete)
Site : GSCH06-HY
Condition : HP-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Wac/60Hz
Model :
Mode : GSM 850 Link,Ch189+Adaptor
Plane : E1

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBm	Limit	Line	Level	Loss	Factor	Pos	Pos	Remark
			dB	dBm	dBm	dB	dB	cm	deg	
1 @	1674.0	-52.90	-39.90	-13.00	-52.42	-0.48	0.00	---	---	Peak



Trace: (Discrete)
Site : GSCH06-HY
Condition : HP-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Wac/60Hz
Model :
Mode : GSM 850 Link,Ch189+Adaptor
Plane : E1

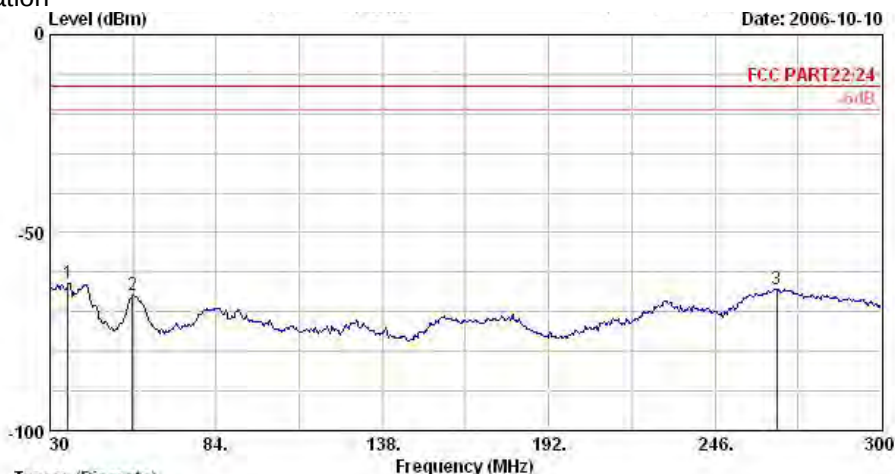


Remark : There is no more obvious emission except the listings above.



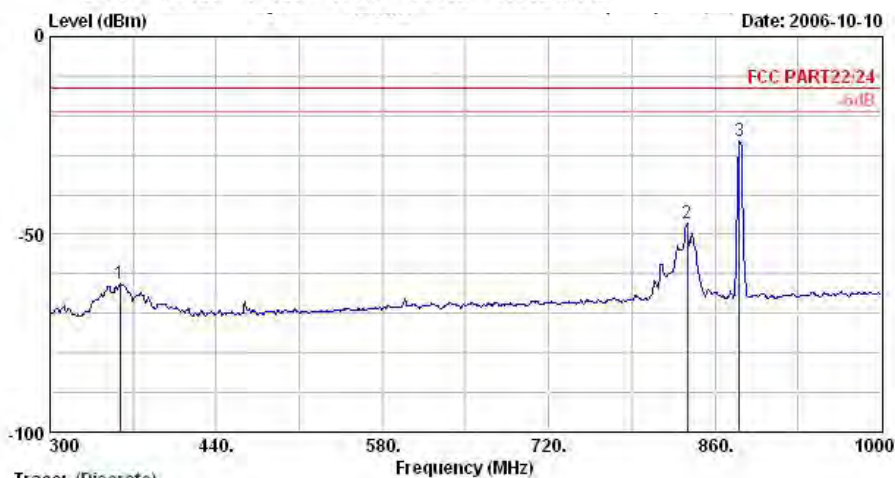
4.6.5.2 Mode 2

Horizontal Polarization



Trace: (Discrete)
Site : Q3CH06-HY
Condition : LP-SPURIOUS HORIZONTAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Wac/60Hz
Model :
Mode : EDGE Link;Ch189+Adaptor
Plane : E1

	Freq	Level	Over	Limit	Read	
	MHz	dBm	Limit	Line	Level	Factor Remark
		dBm	dB	dBm	dBm	dB
1 @	35.9	-62.93	-49.93	-13.00	-59.63	-3.29 Peak
2	56.7	-65.87	-52.87	-13.00	-53.47	-12.40 Peak
3	266.0	-64.23	-51.23	-13.00	-53.12	-11.12 Peak

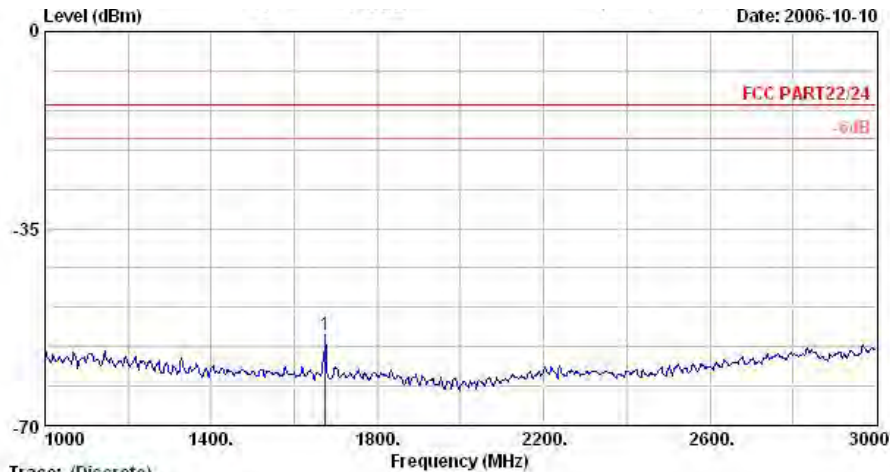


Trace: (Discrete)
Site : Q3CH06-HY
Condition : LP-SPURIOUS HORIZONTAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Wac/60Hz
Model :
Mode : EDGE Link;Ch189+Adaptor
Plane : E1

	Freq	Level	Over	Limit	Read	
	MHz	dBm	Limit	Line	Level	Factor Remark
		dBm	dB	dBm	dBm	dB
1 @	358.8	-62.32	-49.32	-13.00	-54.41	-7.90 Peak
2 @	836.9	-47.19			-45.86	-1.33 Peak
3 @	880.3	-26.38			-25.47	-0.91 Peak

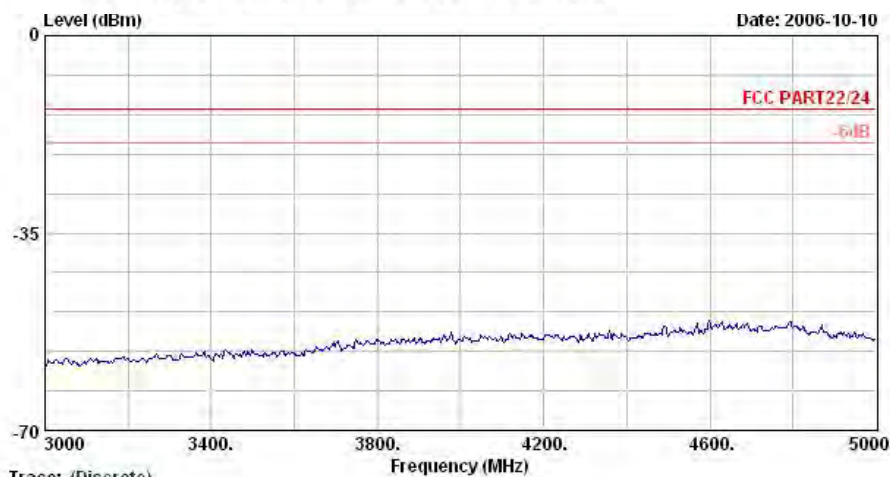
Remark:

1. #2: MS TCH Signal
2. #3: BS TCH Signal

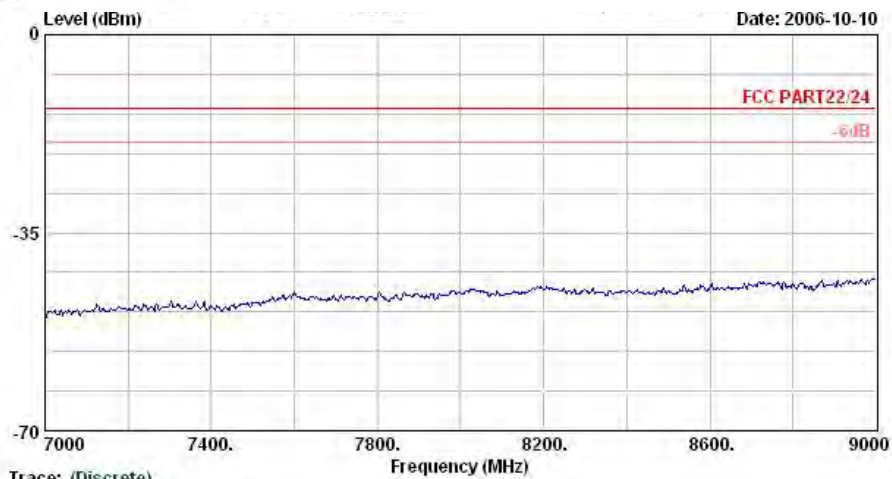
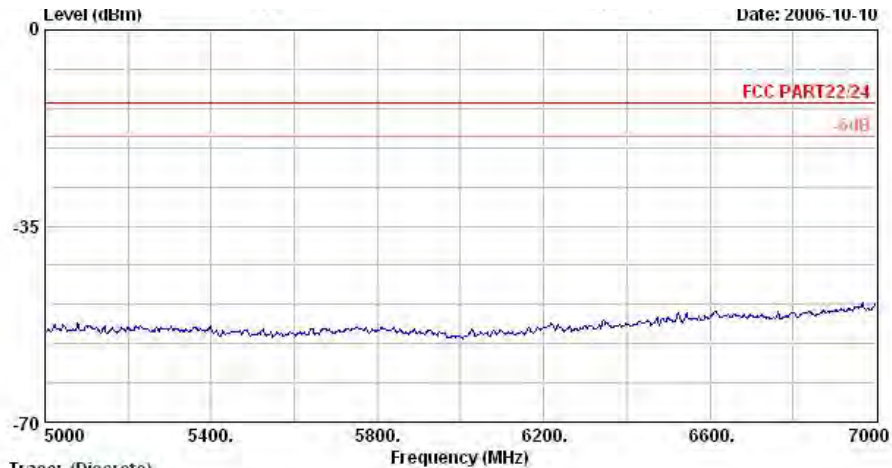


Site : 03CH06-HY
Condition : HF-SPURIOUS HORIZONTAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Wac/60Hz
Model :
Mode : EDGE Link;Ch189+Adaptor
Plane : E1

Freq	Level	Over	Limit	Read		
MHz	dBm	Limit	Line	Level	Factor	Remark
		dB	dBm	dBm	dB	
1 @ 1674.0	-53.98	-40.98	-13.00	-54.20	0.22	Peak

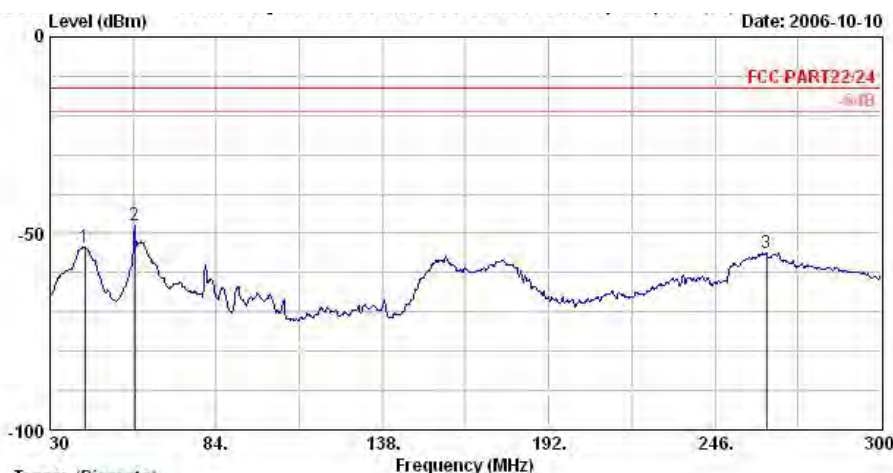


Site : 03CH06-HY
Condition : HF-SPURIOUS HORIZONTAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Wac/60Hz
Model :
Mode : EDGE Link;Ch189+Adaptor
Plane : E1





Vertical Polarization



Trace: (Discrete)
Site : 03CH06-HY
Condition : LF-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode :
Plane : EDGE Link;Ch189+Adaptor
E1

	Freq	Level	Over	Limit	Read	
	MHz	dBm	Limit	Line	Level	Factor Remark
			dB	dBm	dBm	dB
1 @	41.3	-53.49	-40.49	-13.00	-41.13	-12.36 Peak
2 @	57.5	-47.90	-34.90	-13.00	-34.06	-13.84 Peak
3 @	262.7	-54.96	-41.96	-13.00	-47.71	-7.25 Peak

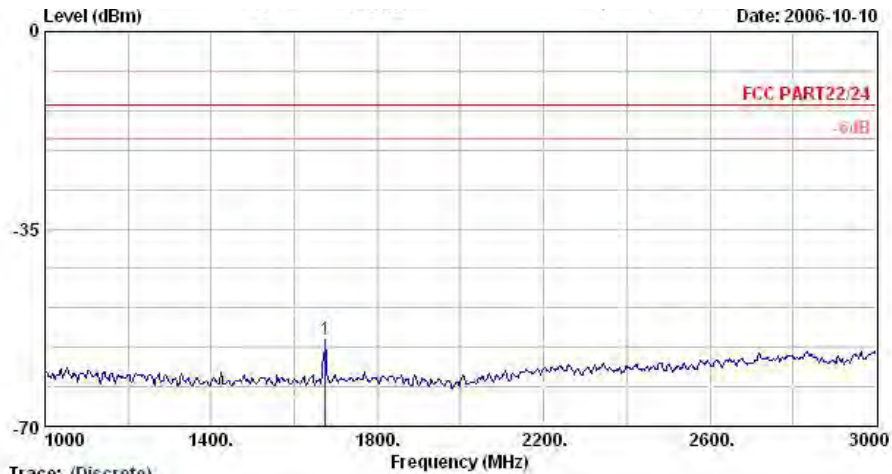


Trace: (Discrete)
Site : 03CH06-HY
Condition : LF-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode :
Plane : EDGE Link;Ch189+Adaptor
E1

	Freq	Level	Over	Limit	Read	
	MHz	dBm	Limit	Line	Level	Factor Remark
			dB	dBm	dBm	dB
1 @	343.4	-60.62	-47.62	-13.00	-55.09	-5.53 Peak
2 @	840.4	-48.65			-50.04	1.39 Peak
3 @	880.3	-26.45			-28.16	1.71 Peak

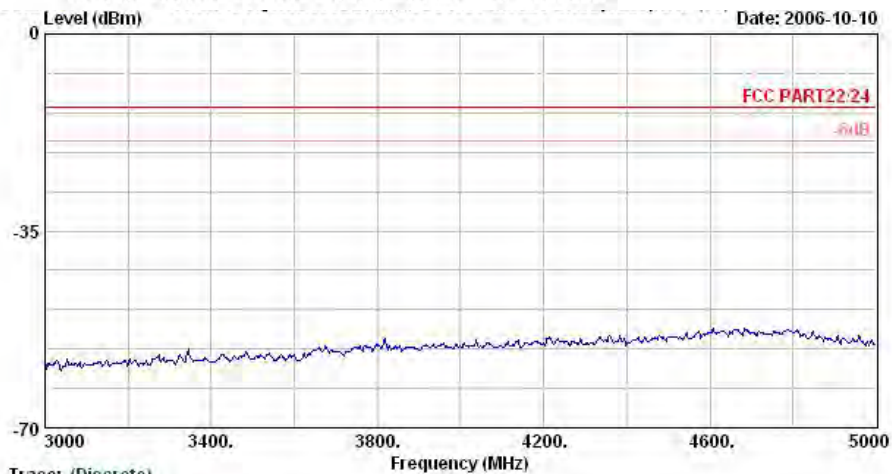
Remark:

1. #2: MS TCH Signal
2. #3: BS TCH Signal

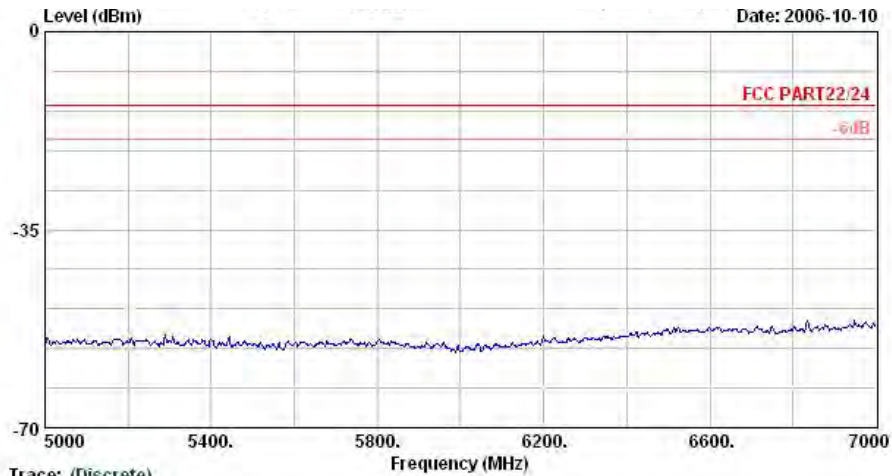


Trace: (Discrete)
Site : 03CH06-HY
Condition : HF-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : EDGE Link;Ch189+Adaptor
Plane : E1

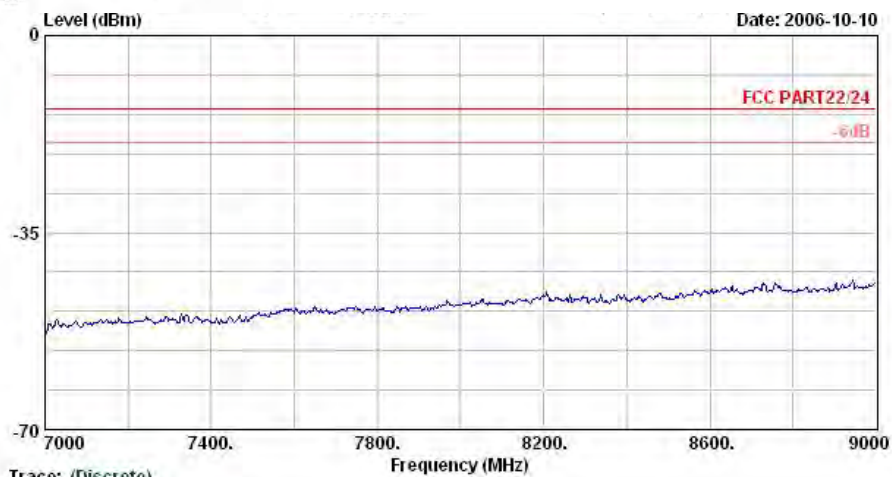
	Freq	Level	Over	Limit	Read	
	MHz	dBm	Limit	Line	Level	Factor Remark
			dB	dBm	dBm	dB
1 @	1674.0	-54.75	-41.75	-13.00	-54.27	-0.48 Peak



Trace: (Discrete)
Site : 03CH06-HY
Condition : HF-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : EDGE Link;Ch189+Adaptor
Plane : E1



Trace: (Discrete)
Site : 03CH06-HY
Condition : HP-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : EDGE Link;Ch189+Adaptor
Plane : E1



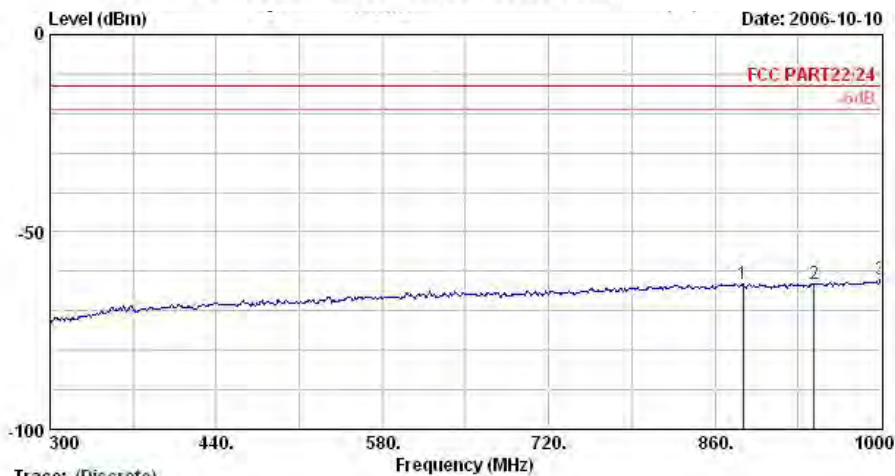
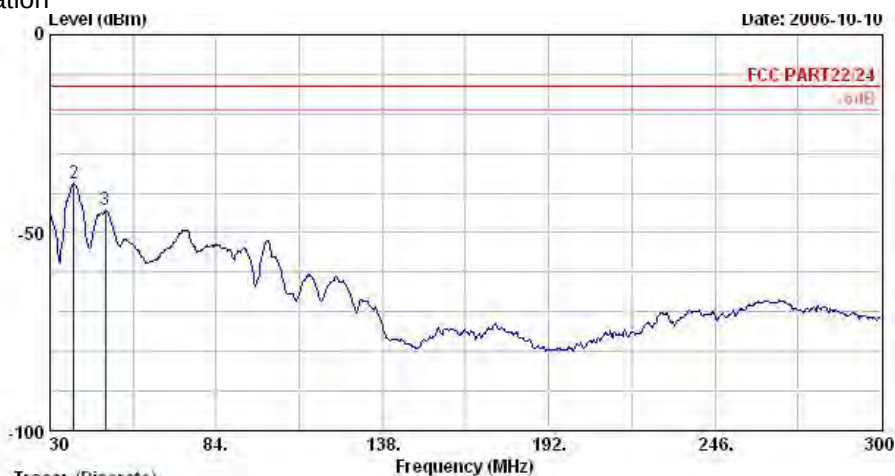
Trace: (Discrete)
Site : 03CH06-HY
Condition : HP-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : EDGE Link;Ch189+Adaptor
Plane : E1

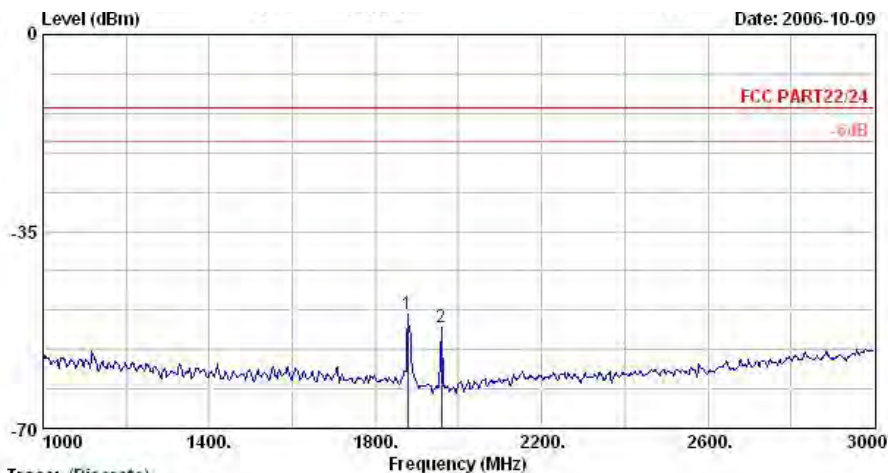
Remark : There is no more obvious emission except the listings above.



4.6.5.3 Mode 3

Horizontal Polarization



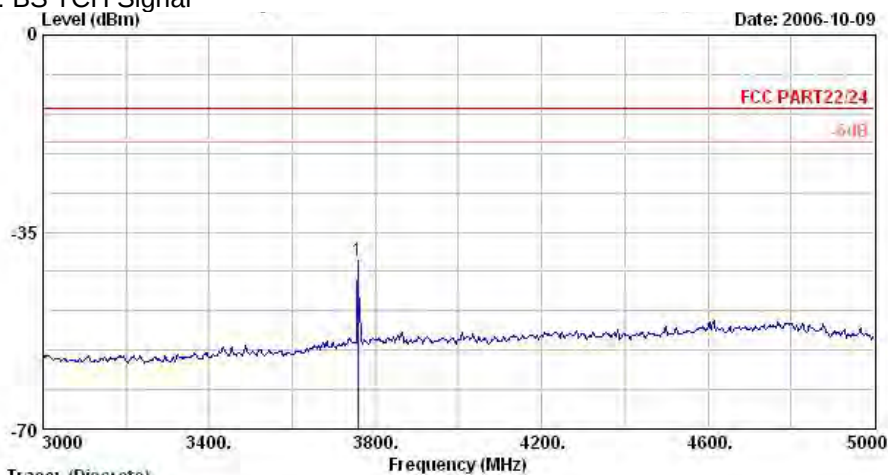


Trace: (Discrete)
Site : 03CH06-HY
Condition : HF-SPURIOUS HORIZONTAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : PCS 1900 Link;Ch661+Adaptor
Plane : H

	Freq	Level	Over	Limit	Read	
	MHz	dBm	Limit	Line	Level	Factor Remark
		dBm	dB	dBm	dBm	dB
1	1878.0	-49.71			-49.20	-0.51 Peak
2	1958.0	-51.94			-50.83	-1.11 Peak

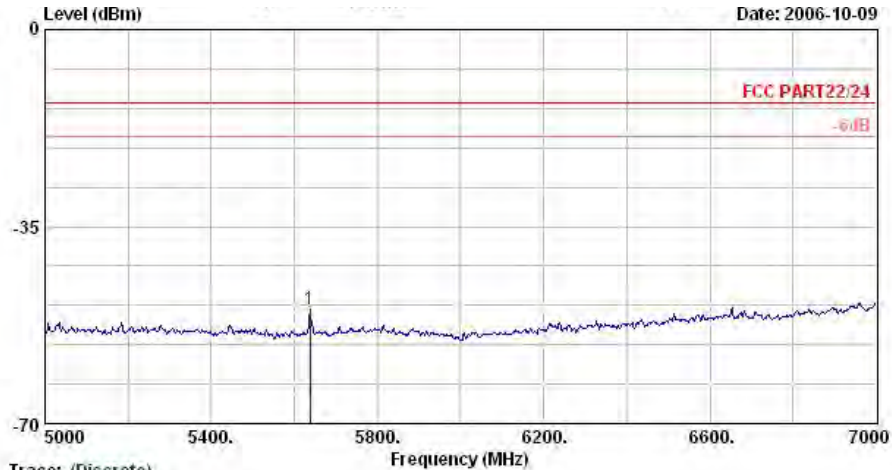
Remark:

1. #1: MS TCH Signal
2. #2: BS TCH Signal



Trace: (Discrete)
Site : 03CH06-HY
Condition : HF-SPURIOUS HORIZONTAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : PCS 1900 Link;Ch661+Adaptor
Plane : H

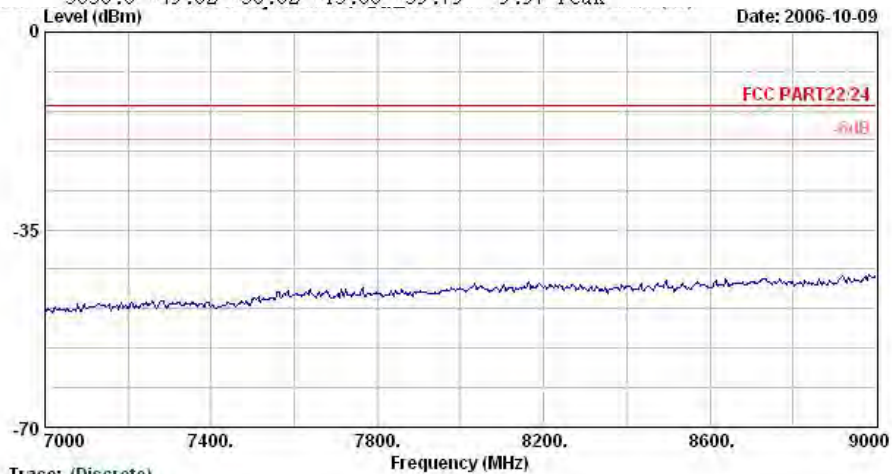
	Freq	Level	Over	Limit	Read	
	MHz	dBm	Limit	Line	Level	Factor Remark
		dBm	dB	dBm	dBm	dB
1	3758.0	-40.03	-27.03	-13.00	-47.95	7.92 Peak



Site : 03CH06-HY
Condition : HF-SPURIOUS HORIZONTAL
EUT : FDA mobile phone(GSM/GPRS/EDGE)
Power : 120Wac/60Hz
Model :
Mode : PCS 1900 Link;Ch661+Adaptor
Plane : H

Freq	Level	Over	Limit	Read		
MHz	dBm	Limit	Line	Level	Factor	Remark
		dB	dBm	dBm	dB	

1 5638.0 -49.82 -36.82 -13.00 -59.79 9.97 Peak

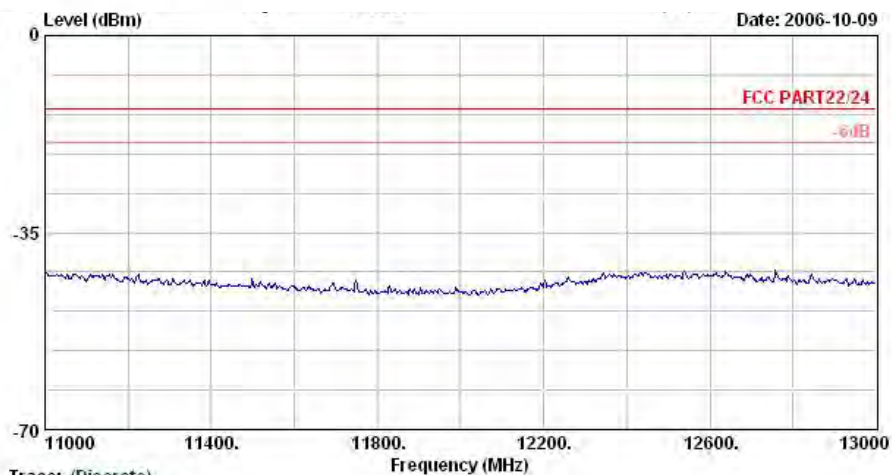
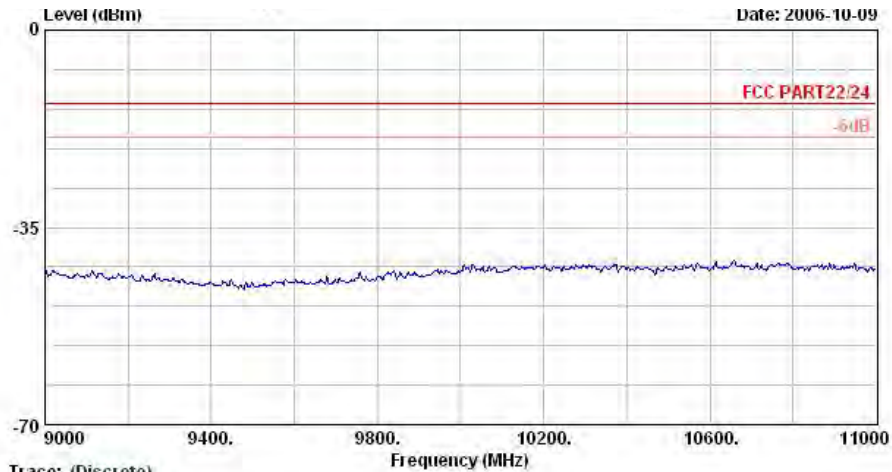


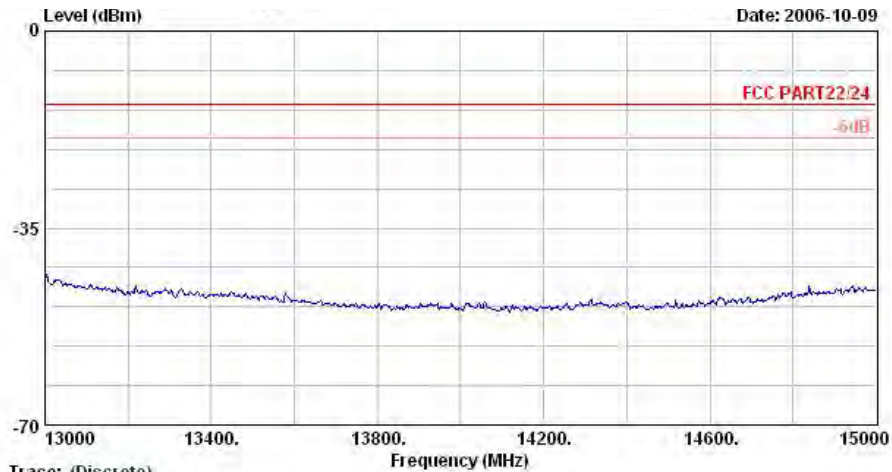
Site : 03CH06-HY
Condition : HF-SPURIOUS HORIZONTAL
EUT : FDA mobile phone(GSM/GPRS/EDGE)
Power : 120Wac/60Hz
Model :
Mode : PCS 1900 Link;Ch661+Adaptor
Plane : H



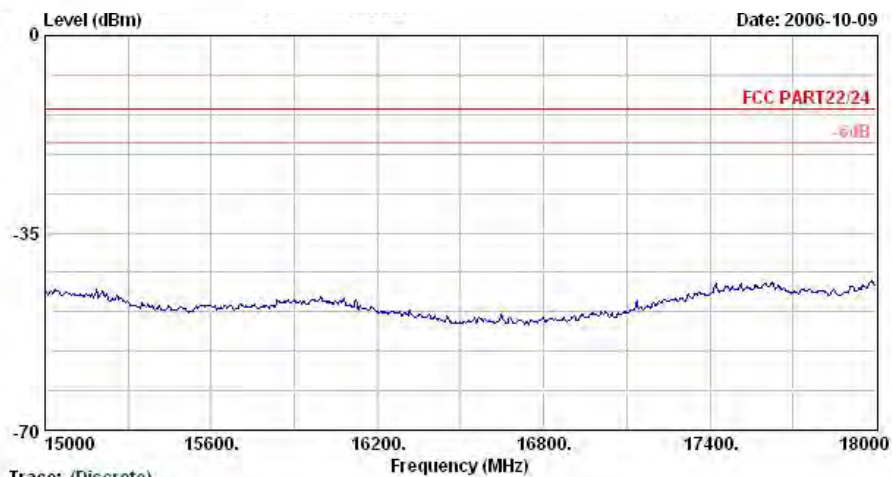
FCC IC TEST REPORT

Report No. : FG6D0809





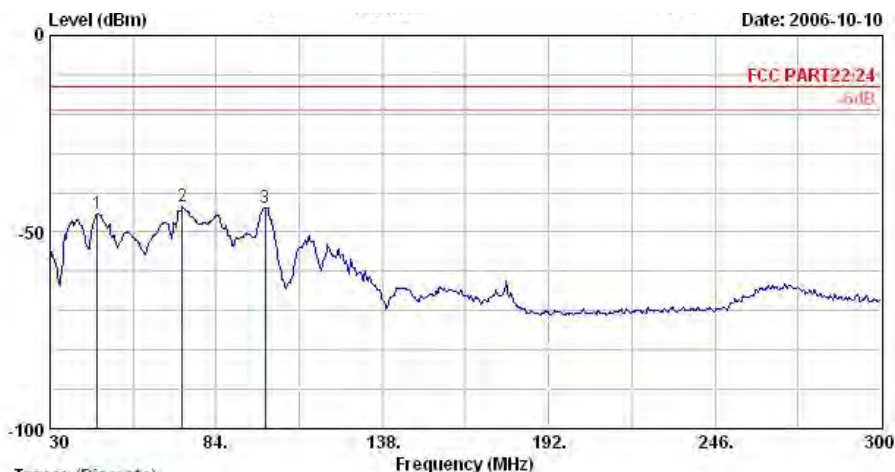
Trace: (Discrete)
Site : 03CH06-HY
Condition : HF-SPURIOUS HORIZONTAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Wac/60Hz
Model :
Mode : PCS 1900 Link;Ch661+Adaptor
Plane : H



Trace: (Discrete)
Site : 03CH06-HY
Condition : HF-SPURIOUS HORIZONTAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Wac/60Hz
Model :
Mode : PCS 1900 Link;Ch661+Adaptor
Plane : H

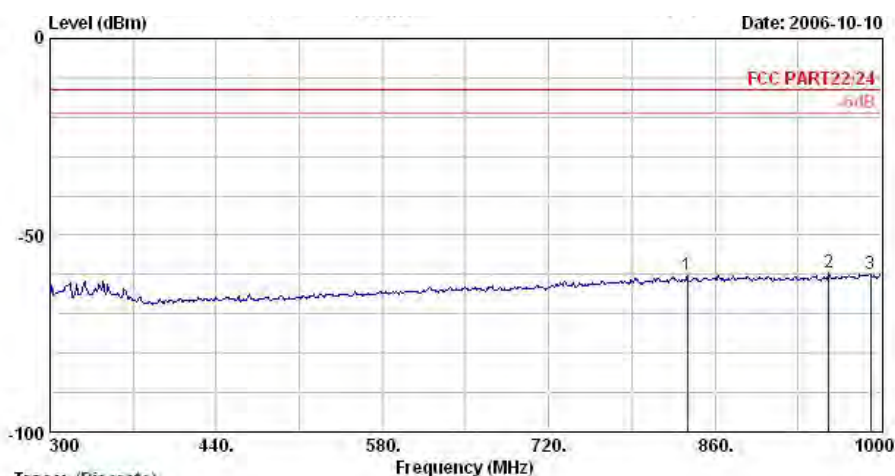


Vertical Polarization



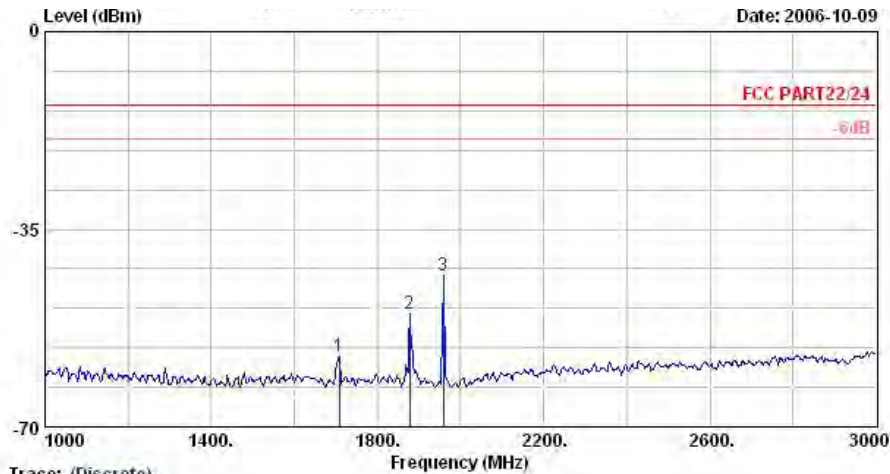
Trace: (Discrete)
Site : 03CH06-HY
Condition : LF-SPURIOUS VERTICAL
EUT : FDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : PCS 1900 Link;Ch661+Adaptor
Plane : H

	Freq	Level	Over	Limit	Read		
	MHz	dBm	Limit	Line	Level	Factor	Remark
			dB	dBm	dBm	dB	
1	45.4	-45.17	-32.17	-13.00	-31.72	-13.45	Peak
2	72.9	-43.62	-30.62	-13.00	-32.01	-11.60	Peak
3	99.9	-43.80	-30.80	-13.00	-36.11	-7.69	Peak



Trace: (Discrete)
Site : 03CH06-HY
Condition : LF-SPURIOUS VERTICAL
EUT : FDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : PCS 1900 Link;Ch661+Adaptor
Plane : H

	Freq	Level	Over	Limit	Read		
	MHz	dBm	Limit	Line	Level	Factor	Remark
			dB	dBm	dBm	dB	
1	836.9	-60.28	-47.28	-13.00	-61.65	1.36	Peak
2	955.9	-59.66	-46.66	-13.00	-61.97	2.31	Peak
3	990.9	-59.87	-46.87	-13.00	-62.46	2.59	Peak

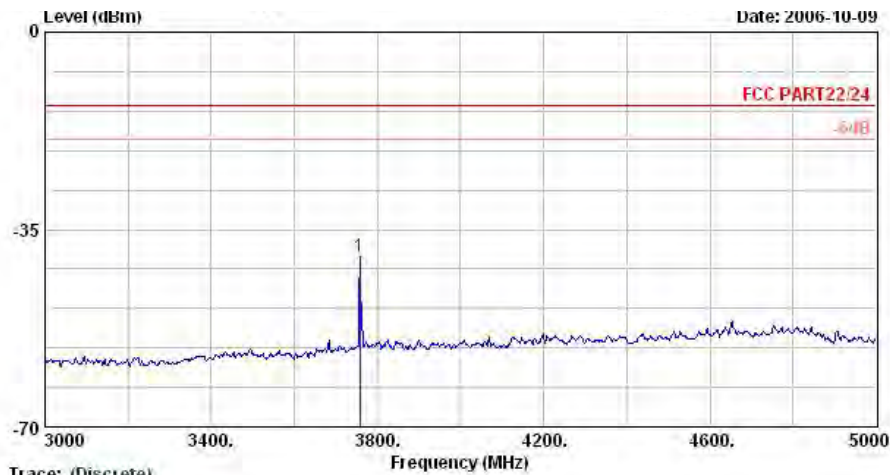


Trace: (Discrete)
Site : 03CH06-HY
Condition : HF-SPURIOUS VERTICAL
EUT : FDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : PCS 1900 Link;Ch661+Adaptor
Plane : H

	Freq	Level	Over	Limit	Read		
	MHz	dBm	Limit	Line	Level	Factor	Remark
			dB	dBm	dBm	dB	
1	1708.0	-57.48	-44.48	-13.00	-57.06	-0.42	Peak
2	1878.0	-49.91			-49.51	-0.40	Peak
3	1958.0	-43.28			-42.69	-0.60	Peak

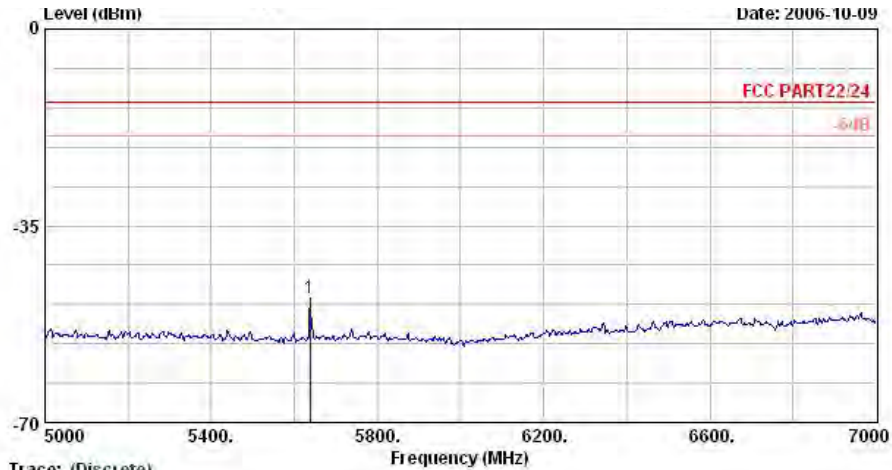
Remark:

1. #2: MS TCH Signal
2. #3: BS TCH Signal



Trace: (Discrete)
Site : 03CH06-HY
Condition : HF-SPURIOUS VERTICAL
EUT : FDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : PCS 1900 Link;Ch661+Adaptor
Plane : H

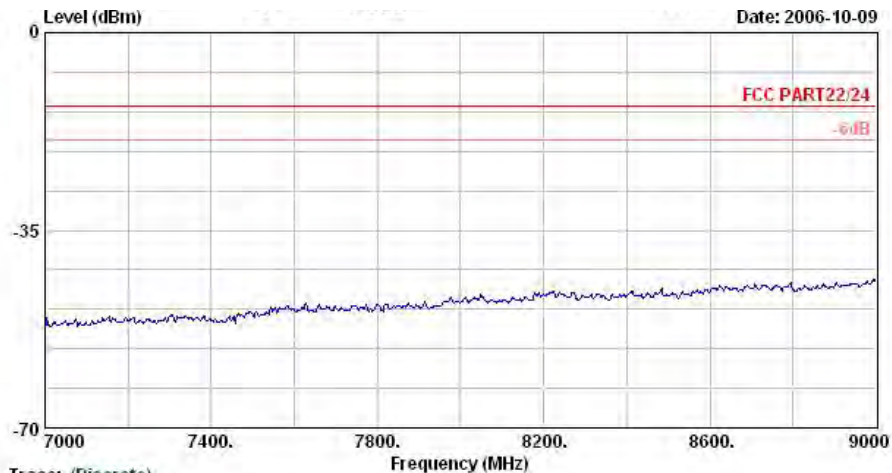
	Freq	Level	Over	Limit	Read		
	MHz	dBm	Limit	Line	Level	Factor	Remark
			dB	dBm	dBm	dB	
1	3758.0	-39.89	-26.89	-13.00	-46.53	6.64	Peak



Trace: (Discrete)

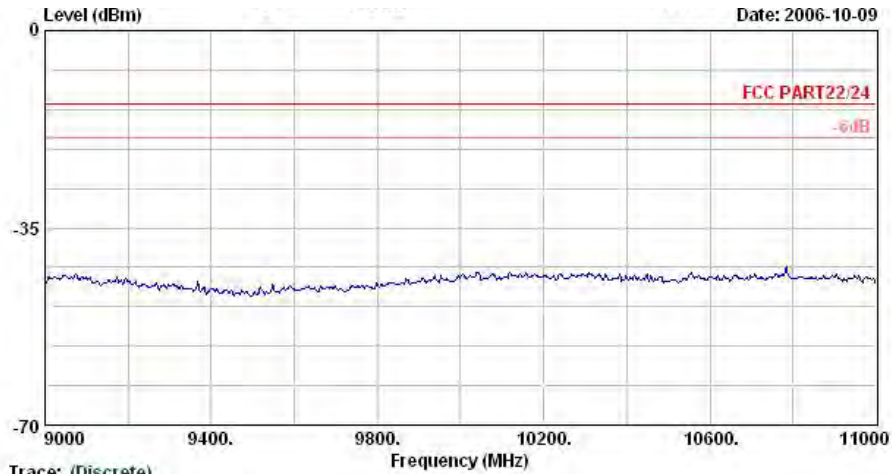
Site : 03CH06-HY
Condition : HF-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : PCS 1900 Link;Ch661+Adaptor
Plane : H

	Freq	Level	Over	Limit	Read	
	MHz	dBm	Limit	Line	Level	Factor Remark
		dBm	dB	dBm	dBm	dB
1	5638.0	-47.97	-34.97	-13.00	-56.63	8.65 Peak

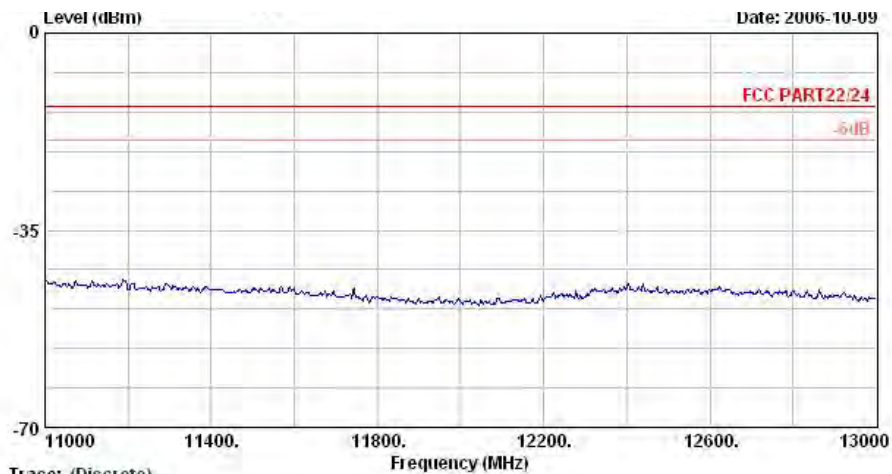


Trace: (Discrete)

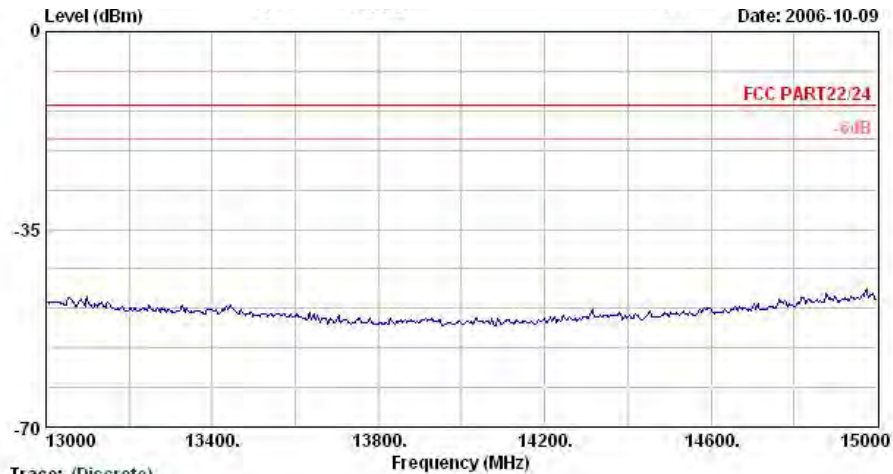
Site : 03CH06-HY
Condition : HF-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : PCS 1900 Link;Ch661+Adaptor
Plane : H



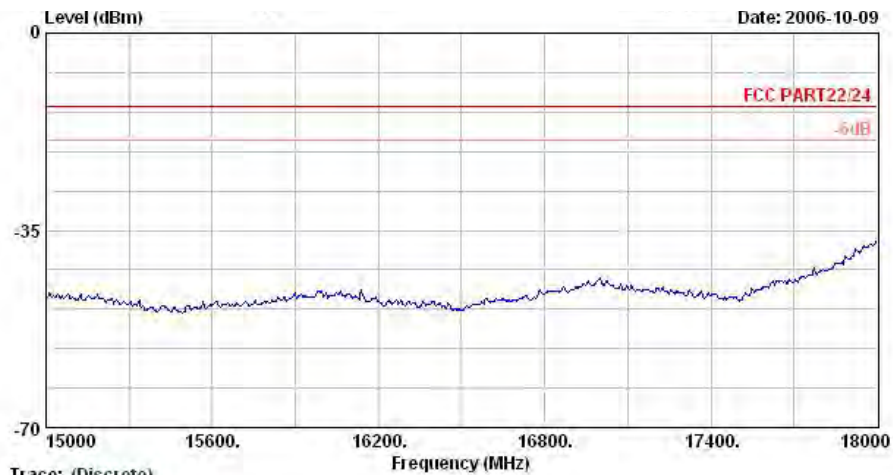
Trace: (Discrete)
Site : 03CH06-HY
Condition : HF-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Wac/60Hz
Model :
Mode : FCS 1900 Link;Ch661+Adaptor
Plane : H



Trace: (Discrete)
Site : 03CH06-HY
Condition : HF-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Wac/60Hz
Model :
Mode : FCS 1900 Link;Ch661+Adaptor
Plane : H



Trace: (Discrete)
Site : GSCH06-HY
Condition : HF-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : PCS 1900 Link;Ch661+Adaptor
Plane : H



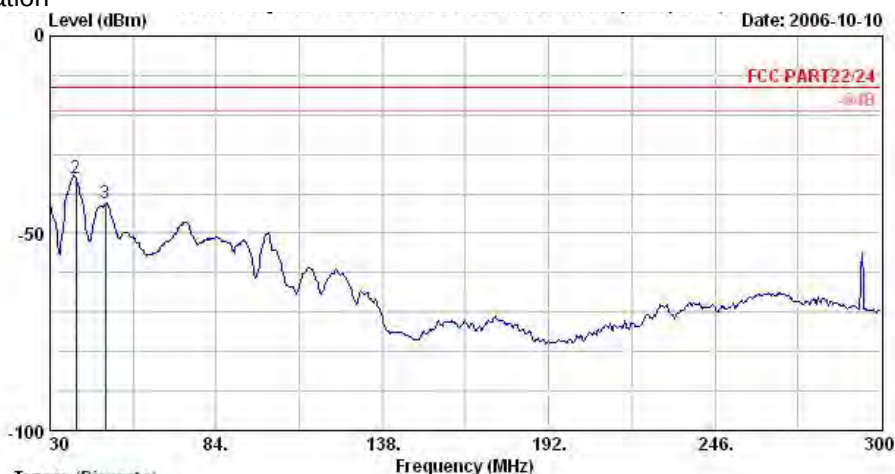
Trace: (Discrete)
Site : GSCH06-HY
Condition : HF-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : PCS 1900 Link;Ch661+Adaptor
Plane : H

Remark: There is no more obvious emission except the listings above.



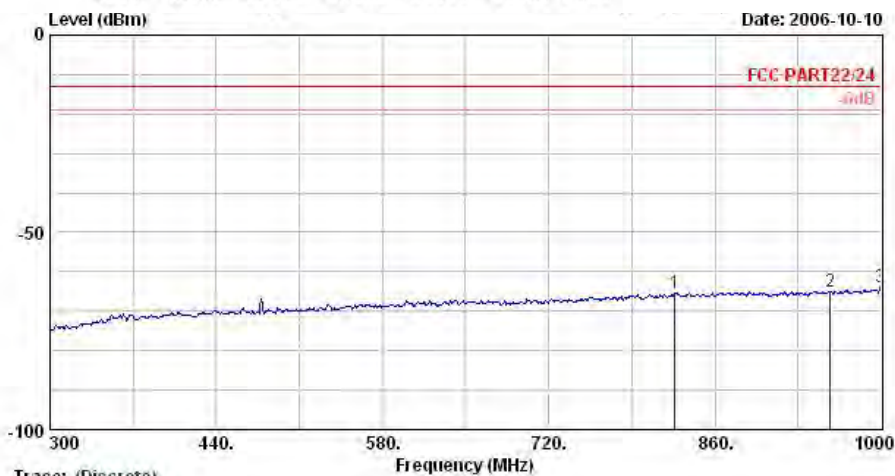
4.6.5.4 Mode 4

Horizontal Polarization



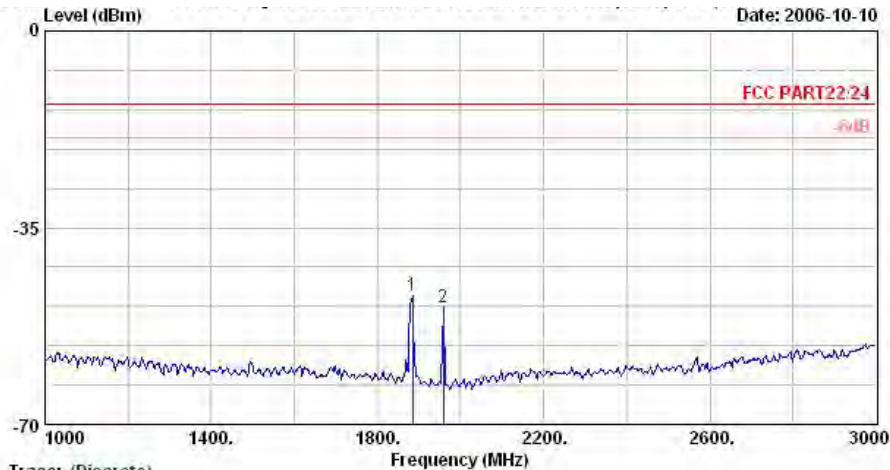
Trace: (Discrete)
Site : 03CH06-HY
Condition : LP-SPURIOUS HORIZONTAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : EDGE Link;Ch661+Adaptor
Plane : H

	Freq	Level	Over	Limit	Read	
	MHz	dBm	Limit	Line	Level	Factor Remark
		dBm	dB	dBm	dBm	dB
1	30.0	-42.82	-29.82	-13.00	-43.18	0.36 Peak
2 @	38.4	-36.20	-23.20	-13.00	-31.07	-5.12 Peak
3	48.1	-42.33	-29.33	-13.00	-31.11	-11.21 Peak



Trace: (Discrete)
Site : 03CH06-HY
Condition : LP-SPURIOUS HORIZONTAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : EDGE Link;Ch661+Adaptor
Plane : H

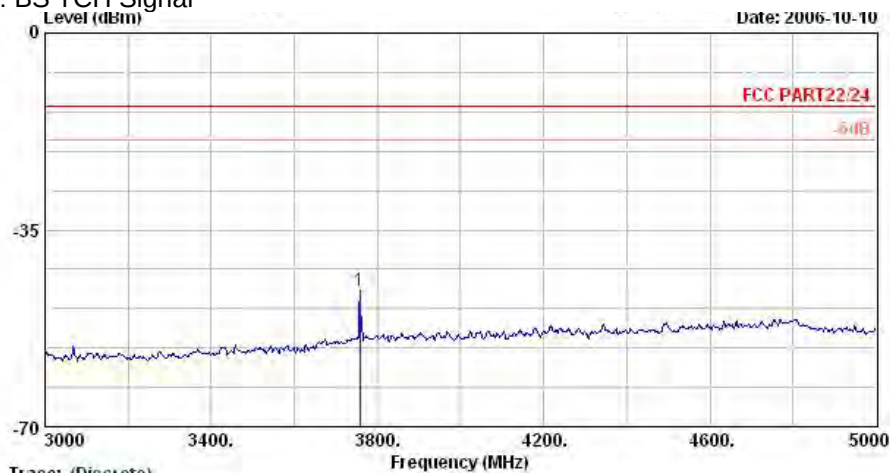
	Freq	Level	Over	Limit	Read	
	MHz	dBm	Limit	Line	Level	Factor Remark
		dBm	dB	dBm	dBm	dB
1	826.4	-65.52	-52.52	-13.00	-64.08	-1.44 Peak
2	957.3	-64.87	-51.87	-13.00	-64.70	-0.17 Peak
3	1000.0	-64.12	-51.12	-13.00	-64.36	0.24 Peak



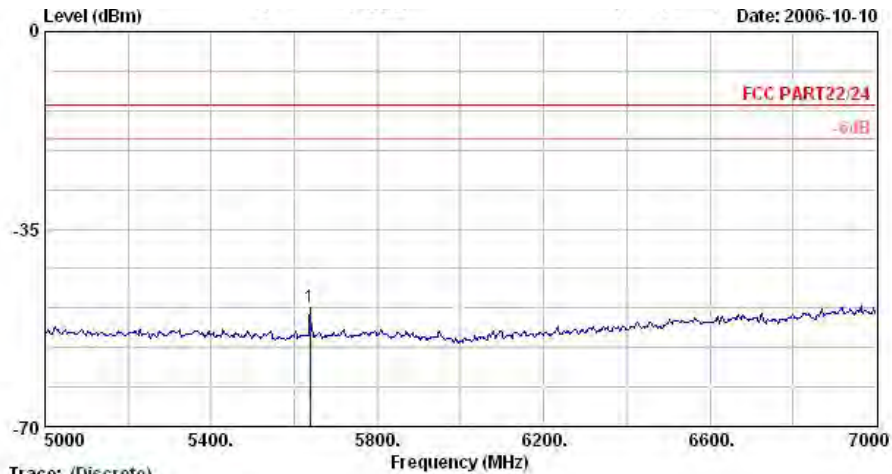
	Freq	Level	Over	Limit	Read	
	MHz	dBm	Limit	Line	Level	Factor Remark
			dB	dBm	dBm	dB
1	1884.0	-47.14			-46.47	-0.68 Peak
2	1958.0	-49.07			-47.96	-1.11 Peak

Remark:

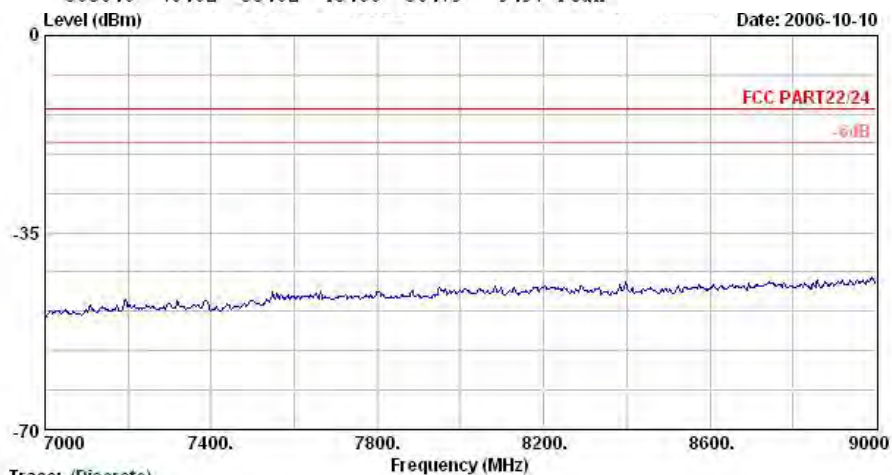
1. #1: MS TCH Signal
2. #2: BS TCH Signal



	Freq	Level	Over	Limit	Read	
	MHz	dBm	Limit	Line	Level	Factor Remark
			dB	dBm	dBm	dB
1	3758.0	-45.92	-32.92	-13.00	-53.85	7.92 Peak



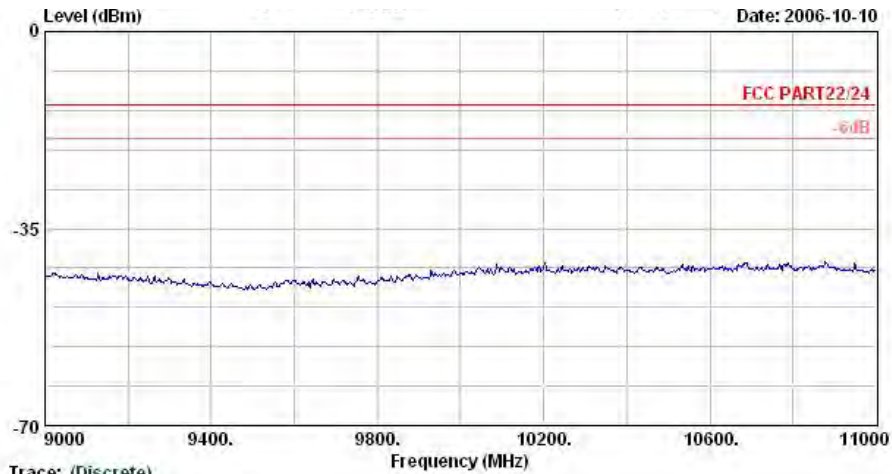
Freq	Level	Over	Limit	Read		
MHz	dBm	Limit	Line	Level	Factor	Remark
		dB	dBm	dBm	dB	
1	5638.0	-48.82	-35.82	-13.00	-58.79	9.97 Peak



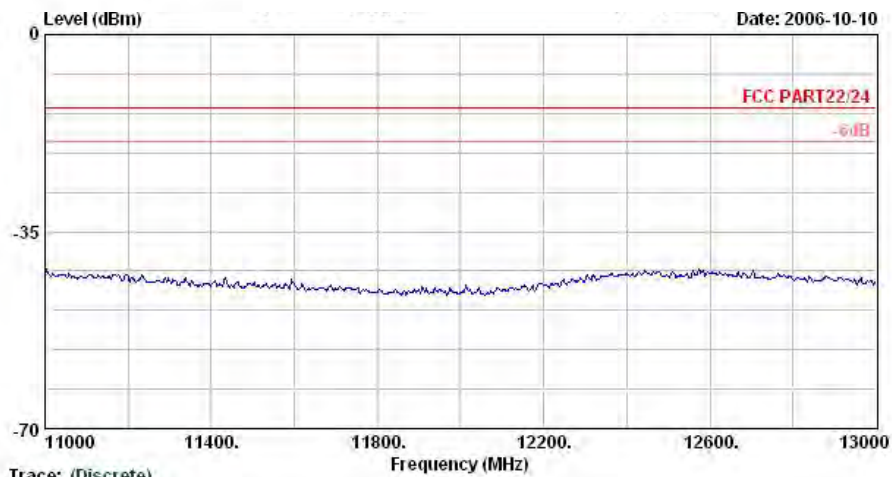


FCC IC TEST REPORT

Report No. : FG6D0809



Trace: (Discrete)
Site : 03CH06-HY
Condition : HF-SPURIOUS HORIZONTAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : EDGE Link;Ch661+Adaptor
Plane : H

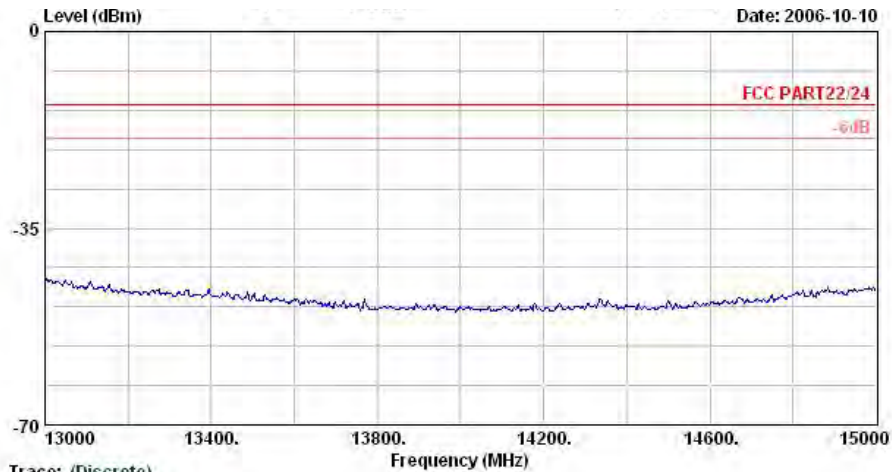


Trace: (Discrete)
Site : 03CH06-HY
Condition : HF-SPURIOUS HORIZONTAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : EDGE Link;Ch661+Adaptor
Plane : H

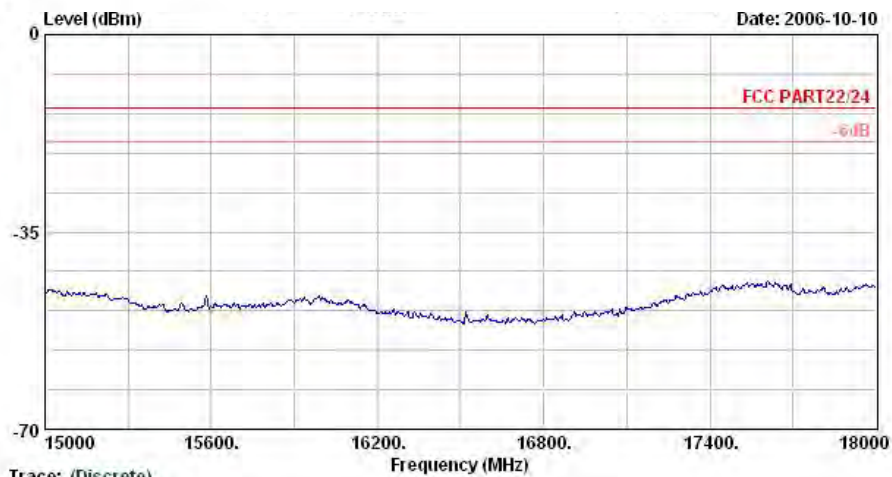


FCC IC TEST REPORT

Report No. : FG6D0809



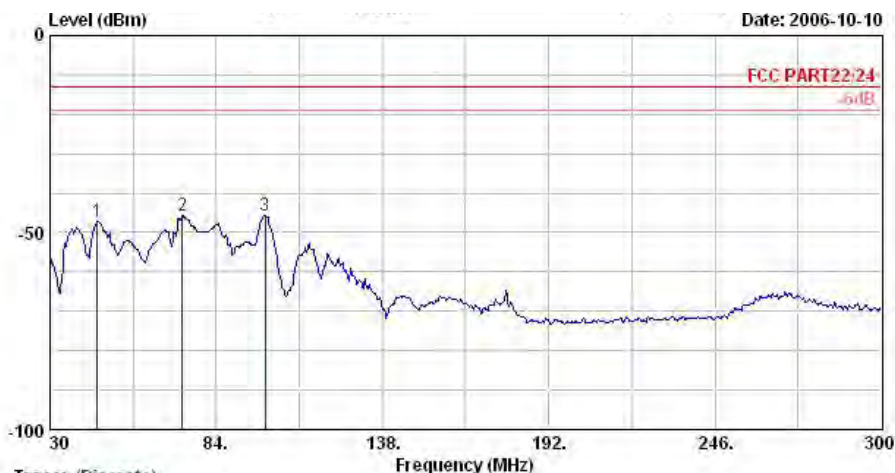
Trace: (Discrete)
Site : 03CH06-HY
Condition : HF-SPURIOUS HORIZONTAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : EDGE Link;Ch661+Adaptor
Plane : H



Trace: (Discrete)
Site : 03CH06-HY
Condition : HF-SPURIOUS HORIZONTAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : EDGE Link;Ch661+Adaptor
Plane : H

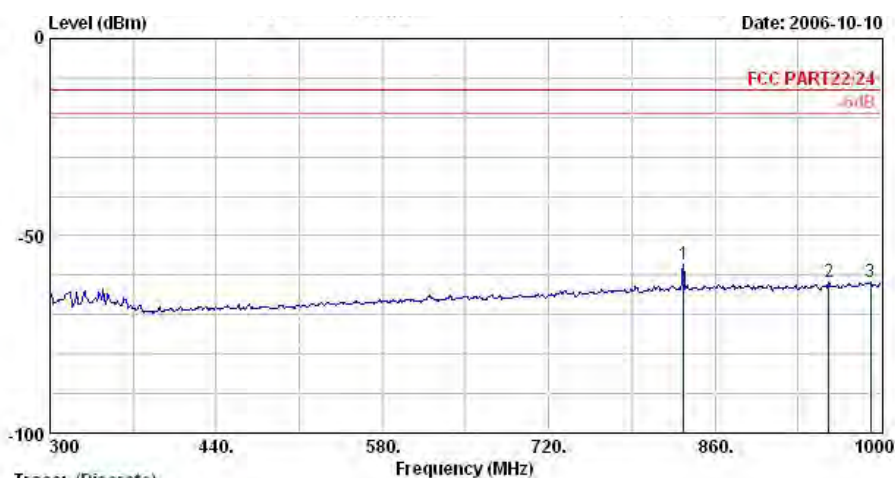


Vertical Polarization



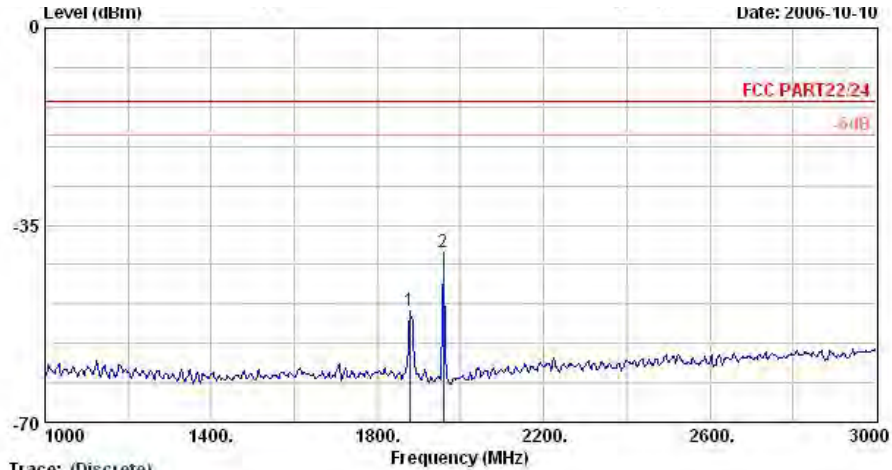
Trace: (Discrete)
Site : 03CH06-HY
Condition : LF-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : EDGE Link;Ch661+Adaptor
Plane : H

	Freq	Level	Over	Limit	Read		
	MHz	dBm	Limit	Line	Level	Factor	Remark
			dB	dBm	dBm	dB	
1	45.4	-47.17	-34.17	-13.00	-33.72	-13.45	Peak
2	72.9	-45.62	-32.62	-13.00	-34.01	-11.60	Peak
3	99.9	-45.80	-32.80	-13.00	-38.11	-7.69	Peak



Trace: (Discrete)
Site : 03CH06-HY
Condition : LF-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : EDGE Link;Ch661+Adaptor
Plane : H

	Freq	Level	Over	Limit	Read		
	MHz	dBm	Limit	Line	Level	Factor	Remark
			dB	dBm	dBm	dB	
1	833.4	-57.24	-44.24	-13.00	-58.57	1.33	Peak
2	955.9	-61.66	-48.66	-13.00	-63.97	2.31	Peak
3	990.9	-61.87	-48.87	-13.00	-64.46	2.59	Peak



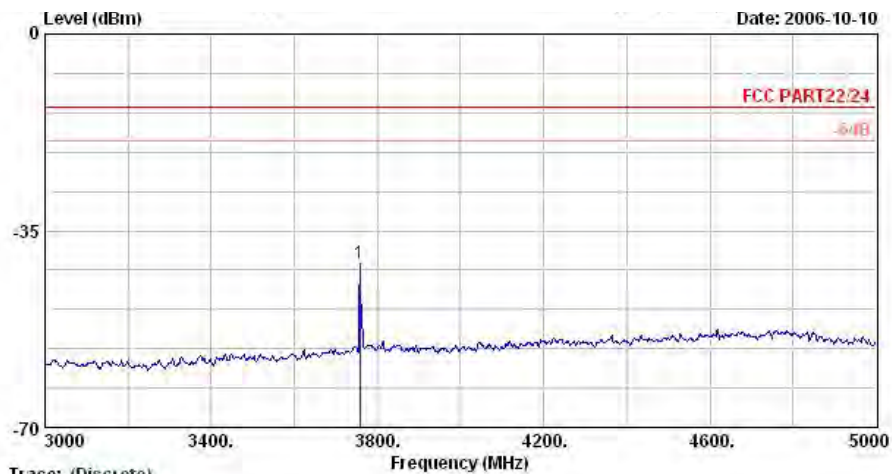
Trace: (Discrete)

Site : 08CH06-HY
Condition : HF-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Wac/60Hz
Model :
Mode : EDGE Link;Ch661+Adaptor
Plane : H

	Freq	Level	Over	Limit	Read		
	MHz	dBm	Limit	Line	Level	Factor	Remark
			dB	dBm	dBm	dB	
1	1878.0	-50.22			-49.82	-0.40	Peak
2	1958.0	-39.71			-39.11	-0.60	Peak

Remark:

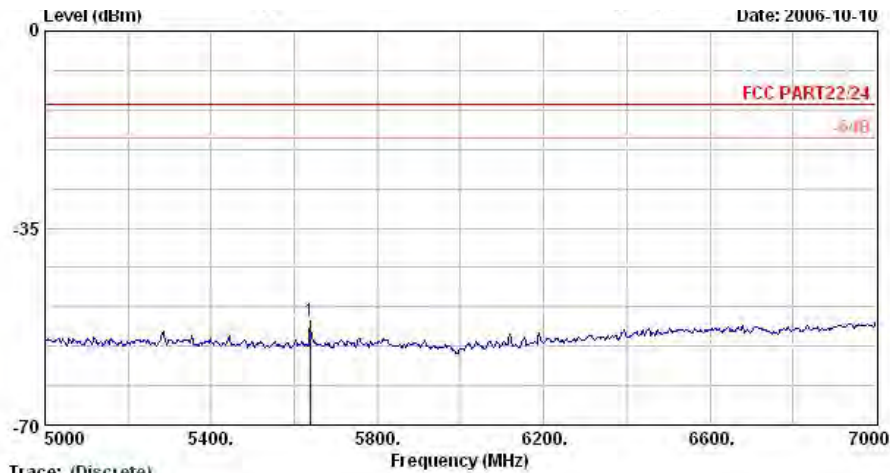
1. #1: MS TCH Signal
2. #2: BS TCH Signal



Trace: (Discrete)

Site : 08CH06-HY
Condition : HF-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Wac/60Hz
Model :
Mode : EDGE Link;Ch661+Adaptor
Plane : H

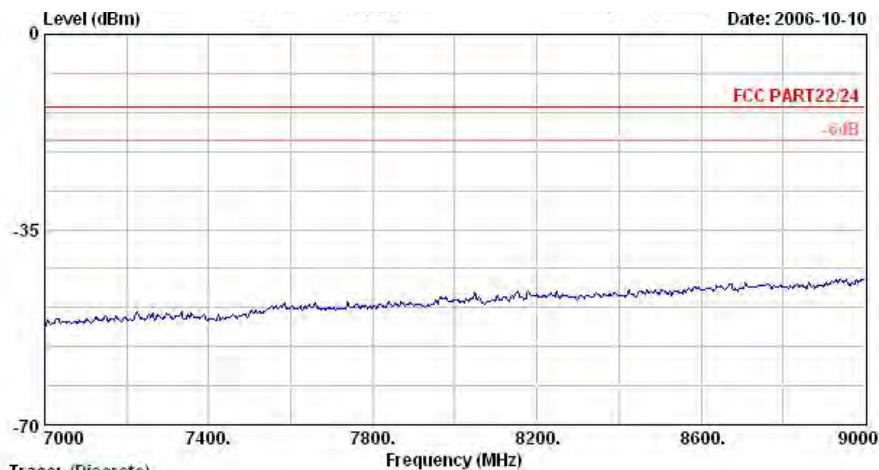
	Freq	Level	Over	Limit	Read		
	MHz	dBm	Limit	Line	Level	Factor	Remark
			dB	dBm	dBm	dB	
1	3758.0	-40.90	-27.90	-13.00	-47.54	6.64	Peak



Trace: (Discrete)

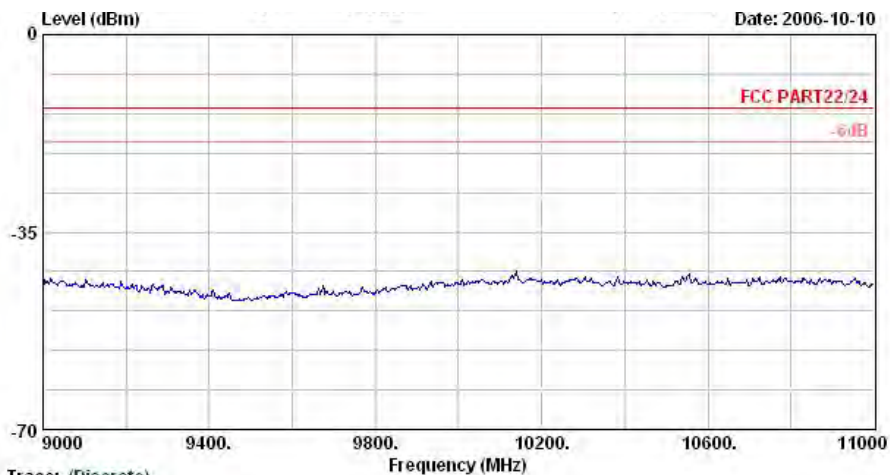
Site : 03CH06-HY
Condition : HF-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : EDGE Link;Ch661+Adaptor
Plane : H

	Freq	Level	Over	Limit	Read	
	MHz	dBm	Limit	Line	Level	Factor Remark
		dBm	dB	dBm	dBm	dB
1	5638.0	-51.53	-38.53	-13.00	-60.19	8.65 Peak

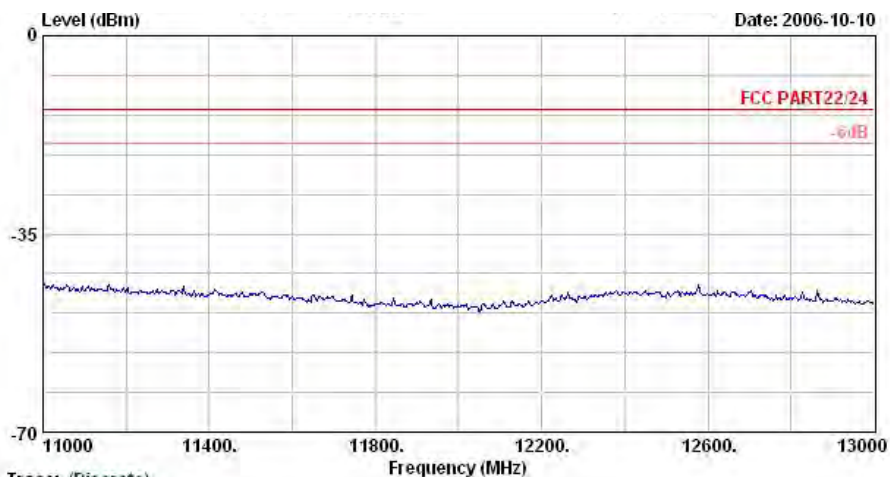


Trace: (Discrete)

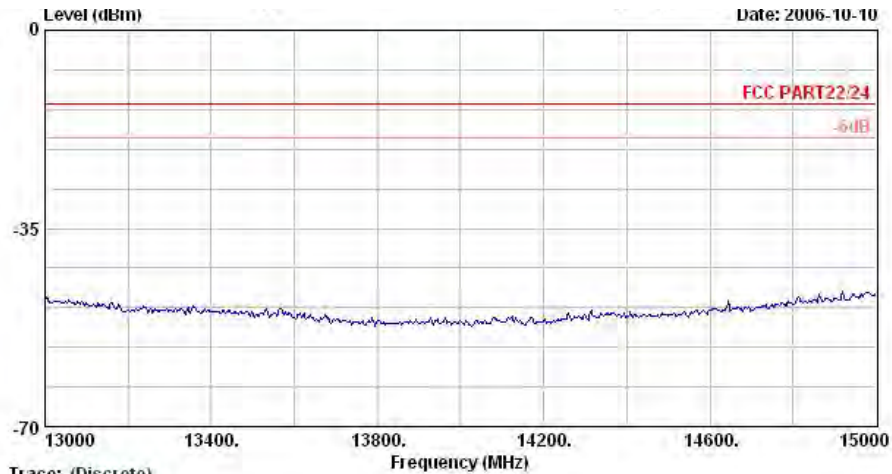
Site : 03CH06-HY
Condition : HF-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : EDGE Link;Ch661+Adaptor
Plane : H



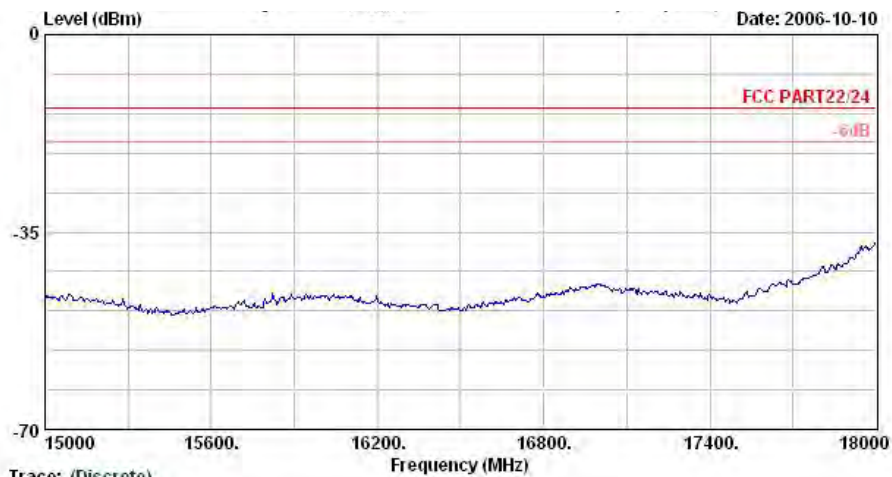
Trace: (Discrete)
Site : 03CH06-HY
Condition : HF-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : EDGE Link;Ch661+Adaptor
Plane : H



Trace: (Discrete)
Site : 03CH06-HY
Condition : HF-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
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Site : 03CH06-HY
Condition : HF-SPURIOUS VERTICAL
EUT : PDA mobile phone(GSM/GPRS/EDGE)
Power : 120Vac/60Hz
Model :
Mode : EDGE Link;Ch661+Adaptor
Plane : H

Remark: There is no more obvious emission except the listings above.

4.7 Frequency Stability (Temperature Variation)

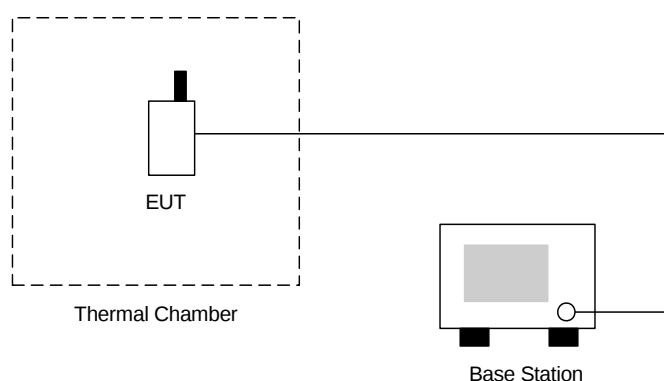
4.7.1 Measurement Instrument

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°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°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	30	0.02	2.5	Passed
-20	21	0.01		
-10	-18	-0.01		
0	15	0.01		
10	21	0.01		
20	19	0.01		
30	-15	-0.01		
40	-10	-0.01		
50	-27	-0.01		

▪ Test Mode : PCS1900 (GSM) CH661

Temperature(°C)	Change (Hz)	Change (ppm)	Limit (ppm)	Result
-30	-19	-0.01	2.5	Passed
-20	33	0.02		
-10	38	0.02		
0	14	0.01		
10	-21	-0.01		
20	10	0.01		
30	-11	-0.01		
40	-21	-0.01		
50	-15	-0.01		

▪ Test Mode : GSM850 (EDGE) CH189

Temperature(°C)	Change (Hz)	Change (ppm)	Limit (ppm)	Result
-30	27	0.01	2.5	Passed
-20	-19	-0.01		
-10	-15	-0.01		
0	-10	-0.01		
10	-18	-0.01		
20	24	0.01		
30	-12	-0.01		
40	16	0.01		
50	-22	-0.01		



- Test Mode : PCS1900 (EDGE) CH661

Temperature(°C)	Change (Hz)	Change (ppm)	Limit (ppm)	Result
-30	-28	-0.01	2.5	Passed
-20	24	0.01		
-10	-31	-0.02		
0	19	0.01		
10	14	0.01		
20	-9	0.00		
30	11	0.01		
40	-24	-0.01		
50	22	0.01		

4.8 Frequency Stability (Voltage Variation)

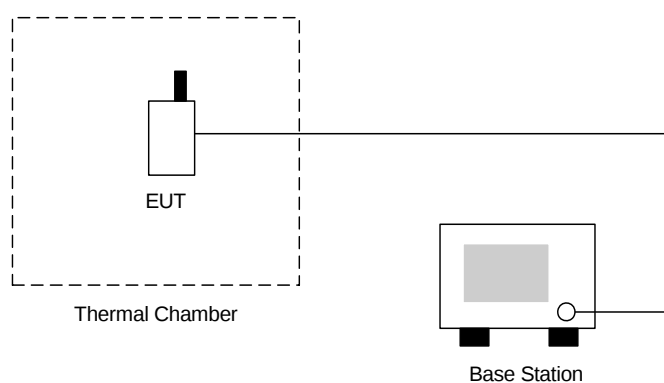
4.8.1 Measurement Instrument

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	18.0	0.01	2.5	Passed
BEP	-12.0	-0.01		
4.3	-21.0	-0.01		

- Test Mode : PCS1900 (GSM) CH661

Voltage(Volt)	Change (Hz)	Change (ppm)	Limit (ppm)	Result
3.7	13.0	0.01	2.5	Passed
BEP	-9.0	0.00		
4.3	17.0	0.01		

- Test Mode : GSM850 (EDGE) CH189

Voltage(Volt)	Change (Hz)	Change (ppm)	Limit (ppm)	Result
3.7	23.0	0.01	2.5	Passed
BEP	16.0	0.01		
4.3	-18.0	-0.01		

- Test Mode : PCS1900 (EDGE) CH661

Voltage(Volt)	Change (Hz)	Change (ppm)	Limit (ppm)	Result
3.7	-15.0	-0.01	2.5	Passed
BEP	-12.0	-0.01		
4.3	19.0	0.01		

Remark:

1. Normal Voltage=3.7V.
2. Battery End Point (BEP)=3.1 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	Jul. 25, 2006	Jul. 24, 2007	Radiation (03CH06-HY)
Receiver	R&S	ESCS30	100356	9KHz-2.75GHz	Jun. 26, 2006	Jun. 25, 2007	Radiation (03CH06-HY)
Controller	CT	SC100	N/A	N/A	N/A	N/A	Radiation (03CH06-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz -2GHz	Nov. 21, 2004	Nov. 20, 2006	Radiation (03CH06-HY)
Horn Antenna	Com-Power	AH118	071025	1G-18G	Feb. 1, 2005	Jan. 31, 2007	Radiation (03CH06-HY)
SHF-EHF Horn	SCHWARZBECK	BBHA 9170	9170-249	14G - 40G	Jul. 21, 2006	Jul. 20, 2007	Radiation (03CH06-HY)
HF Amplifier	MITEQ	AFS44	973248	0.1G - 26.5G	Dec. 17, 2005	Dec. 17, 2006	Radiation (03CH06-HY)
Amplifier	MITEQ	AMF-6F	997165	26G - 40G	Jul. 21, 2006	Jul. 20, 2007	Radiation (03CH06-HY)
Turn Table	HD	DS 420	420/650/00	0 ~ 360 degree	N/A	N/A	Radiation (03CH06-HY)
Antenna Mast	HD	MA 240	240/560/00	1 m - 4 m	N/A	N/A	Radiation (03CH06-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
combined standard uncertainty Uc(y)	1.27		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	2.54		

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 Receiver VSWR $\Gamma_1 = 0.197$ Antenna VSWR $\Gamma_2 = 0.194$ Uncertainty = $20 \log(1 - \Gamma_1 * \Gamma_2 * \Gamma_3)$	+0.34/-0.35	U-shaped	0.244	1	0.244
Combined standard uncertainty Uc(y)	2.36				
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	4.72				

END OF TEST REPORT