

**ADC Telecommunications Inc.  
FlexWave microBTS Base Station  
Cellular Radio GSM Base Station**

**FCC ID: F8I-FWM0801A  
IC: 120G-FW0801A**

**FCC Rule Parts: 2, 22**

**General Overview**

The FlexWave microBTS is a complete GSM base station system in 850MHz band and provides full BSS operation for normal GMSK modulation and 8PSK (EDGE) modulation at nominal 2W output when connected with a BSC via IP network. There are two identical radio transceiver modules providing two independent frequency channels.

**SPECIFICATIONS**

Transmitter

TX operating frequency:	869.2-893.8 MHz
TX output power:	2 watts Average nominal per radio,
Modulation:	GSM (GMSK), 8PSK Modulation is internally generated and limited
Power requirements:	110VAC/220VAC, 50/60 Hz
Frequency Tolerance	6 Hz = $6.81 \times 10^{-9}$ (ppb) -30 to +50 C 85%-115% supply voltage at 25C

**Test Dates:** 27-28 April 2009 – antenna port conducted,  
frequency stability  
5 May 2009 – radiated, unintentional radiated,  
AC line conducted

**Test Site**

Antenna port conducted tests and frequency stability tests were performed at the ADC test lab location in San Jose, CA. Radiated spurious emissions, unintentional radiator emission, and AC line conducted tests were performed at Compliance Certification Services in Fremont, CA.



THOMAS N. COKENIAS

18 June 2009

ADC Telecommunications Inc.  
Model Nos. FWB-MBTS-A10N00, FWB-MBTS-A20N00  
Test Report No. 09PRO006 REV1  
Consultant, EMC&Radio Type Approvals  
Agent for ADC Telecommunications Inc.

FCC ID: F8I-FWM0801A  
IC: 1208G-FWM0801A  
Issued 18 June 2009

## Report Revision Information

Revision No.	Date	Description	Revised by
-	5/27/2009	Original Issue	T. Cokenias
1	6/18/2009	Correct emission designator to G7W	T. Cokenias

## FCC CERTIFICATION INFORMATION

The following information is in accordance with FCC Rules, 47CFR Part 2.

**Test Procedure:** TIA/EIA 603-B Land Mobile FM or PM Communication  
Equipment, Measurement and Performance Standards  
ANSI C63.4: 2003

**2.1033(c)1** Applicant: ADC Telecommunications Inc  
P. O. Box 1101  
Minneapolis Minnesota  
United States 55440-1101

**2.1033(c)2** FCC ID: F8I-FWM0801A

**2.1033(c)4,5** Emission type and Frequency range

<u>Modulation</u>	<u>-26dBc BW</u>	<u>Emission Designator</u>
GMSK	316.6 kHz	317KG7W
8PSK	314.6 kHz	315KG7W

**2.1033(c) 6 Range of Operating Power**

**2.1033(c) 7 Maximum Power Rating**

2 watts/33 dBm nominal Average GMSK per radio, measured: 33.5 dBm Ave, 33.9 dBm Pk  
2 watts/33 dBm nominal Average 8PSK per radio, measured: 33.8 dBm Ave, 37.4 dBm Pk

**2.1033(c) 13 Description of Modulation System**

GMSK and 8PSK per the GSM standard

## 2.1033(c) 14 Test Data per 2.1046 – 2.1057, 15.107, 15.109

### CCS Test Equipment

Description	Manufacturer	Model	Asset/SN number	Cal due
Bilog antenna	Sunol Sciences	JB1	CO1016	1/14/10
Pre-amplifier	HP	8447D	T64	8/31/09
Horn antenna	EMCO	3115	T73	1/29/10
Pre-amplifier	HP	HP8449B	T144	1/6/10
Spectrum analyzer	Agilent	E4446A	C01069	1/5/10
EMI Receiver	R & S	ESHS-20	827129/006	01/27/09
LISN	FCC	LISN50/250-25-2	2023	10/29/09

### ADC Test Equipment

No.	Description	Manufacturer	Model	Serial No.	Cal Date	Cal Type
1	Communications Tester	Rhode&Schwarz	CMU300	100107	2008-07-09	R&S
2	Spectrum Analyzer	Rhode&Schwarz	FSEM30	849016/022	2009-03-09	SE LAB
3	Signal Generator	Hewlett Packard	8665A	3015A00197	2009-04-20	SE LAB
4	Network Analyzer	Hewlett Packard	8753C	3033000799	2009-01-27	SE LAB
5	Digital Multimeter	Fluke	45	5630081	2009-04-20	SE LAB
6	Rubidium Frequency Source	Quartzlock	A8-Rb	048	None	No Calibration Required
7	Power Supply	Kikusui	PCR-1000L	AF002859	None	No Calibration Required
8	Attenuator, 10dB	Bird Electronics	50-A-MFN-10	None	None	Verified by ADC*
9	Attenuator, 10dB	Weinschel	24-10-34	BF4869	None	Verified by ADC*
10	Dummy Load	Weinschel	1427-4	BL9141/BL9167 /BL9129	None	No Calibration Required

## 2.1046 RF Output Power

Requirement Limits 22. 913(a): 1000 watts eirp

Same set up was used for Conducted Power and Frequency measurement. The set-up block diagram was shown in the Figure – 1.

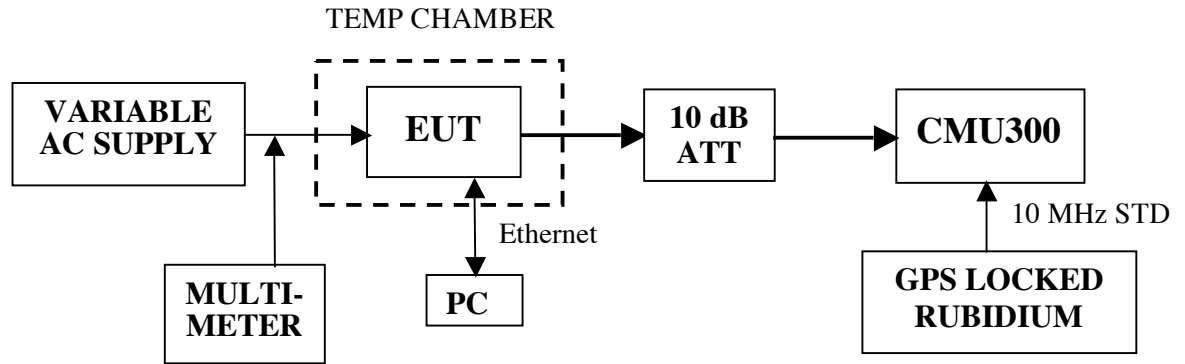


Figure - 1

### Power Measurement Data

Power (dBm)	Ch 128, TS=1		Ch 189, TS=4		Ch 251, TS=7	
	GMSK	8PSK	GMSK	8PSK	GMSK	8PSK
TX 1, Ave.	32.8	32.8	33.2	33.5	32.7	33.1
TX 1, Peak	33.3	36.1	33.6	36.9	33.2	36.7
TX 2, Ave.	33.5	33.3	33.5	33.8	33.0	33.4
TX 2, Peak	33.9	37.0	33.9	37.4	33.5	37.2

Ch 128 = Low channel, 869.2 MHz, Ch 189 = Mid channel, 881.4 MHz,

Ch 251 = High channel, 893.8 MHz

Under nominal condition, 25 °C, 120V AC

Cable and ATT loss = 10.8 dB

## 2.1055 Frequency Stability

Requirement Limits 22.355: 1.5 ppm

Frequency offset in hertz from the nominal frequency was measured.

### A) Temperature Variation

Temperature (°C)	TX1			TX2		
	Ch 128	Ch 189	Ch 251	Ch 128	Ch 189	Ch 251
-30	12	13	13	13	14	15
-20	11	12	12	14	14	14
-10	10	11	11	11	12	12
0	10	11	11	11	12	12
+10	9	10	10	10	11	11
+25	8	9	9	9	9	9
+35	8	9	9	9	10	10
+45	9	9	10	10	11	11
+55	8	9	9	8	8	9

Max deviation = 6 Hz =  $6.81 \times 10^{-9}$  (ppb)

### B) Voltage Variation

Voltage (V, AC)	TX1			TX2		
	Ch 128	Ch 189	Ch 251	Ch 128	Ch 189	Ch 251
102.0	8	9	9	9	9	9
120.0	8	9	9	9	9	9
138.0	8	9	9	9	9	9

Max deviation = 0 Hz

## 2.1047 Modulation Characteristics

### 2.1049 Occupied Bandwidth

Requirement Limits 22.917

Set up is shown in the Figure – 2. Cable and ATT loss = 10.8 dB

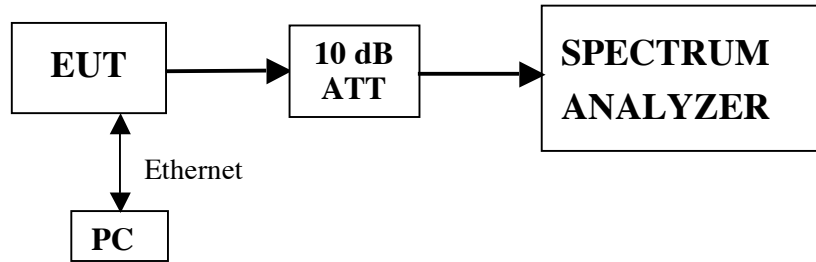
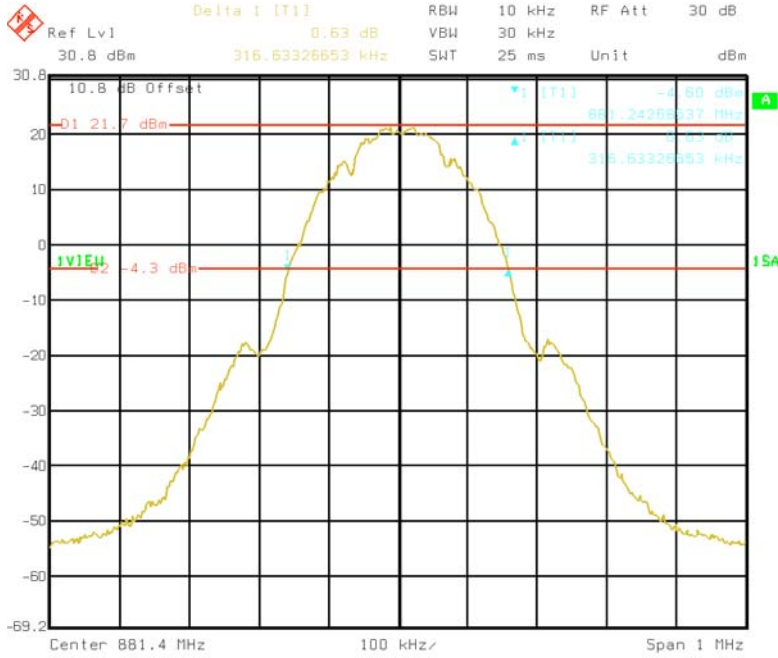


Figure - 2

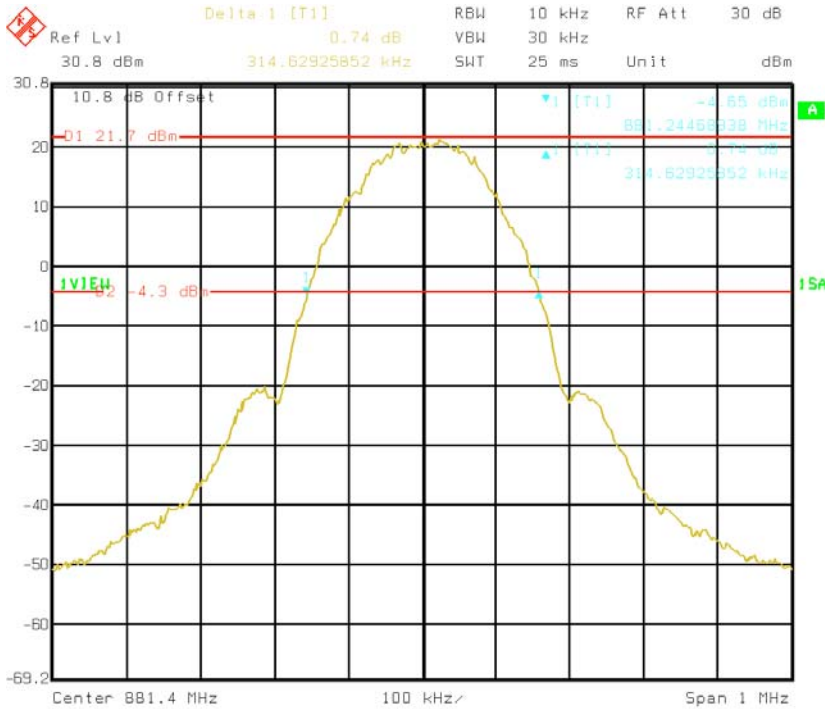
A) Occupied Bandwidth was measured -26 dBc occupied bandwidth using a spectrum analyzer display line and delta marker functions.

### Channel 189 GMSK



Title: Occupied Bandwidth, Ch 189, Power= 33.2 dBm, GMSK modulation  
 Comment A: 26 dB method, D1=+21.7 dBm, D2=-4.3 dBm, Delta=316.6kHz  
 Date: 27.APR.2009 14:59:01

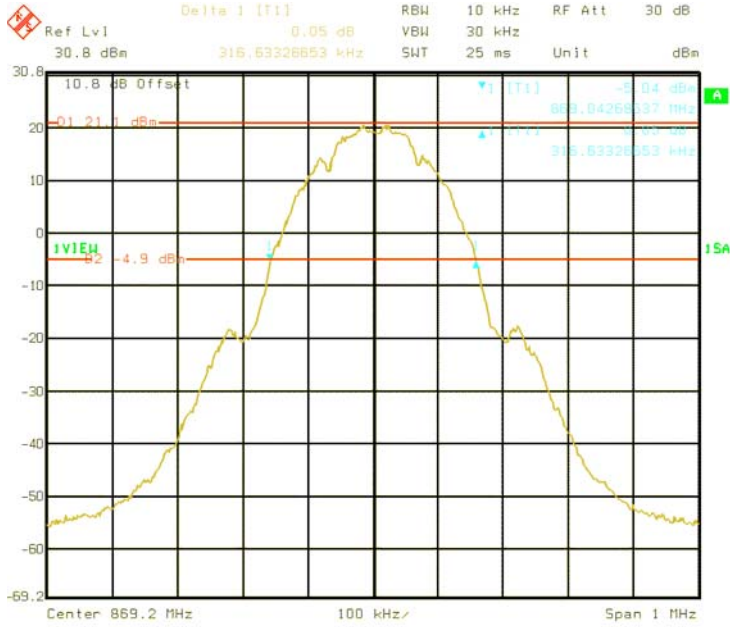
### Channel 189 8PSK



Title: Occupied Bandwidth, Ch 189, Power= 33.2 dBm, 8PSK modulation  
 Comment A: 26 dB method, D1=+21.7 dBm, D2=-4.3 dBm, Delta=314.6kHz  
 Date: 27.APR.2009 15:02:15

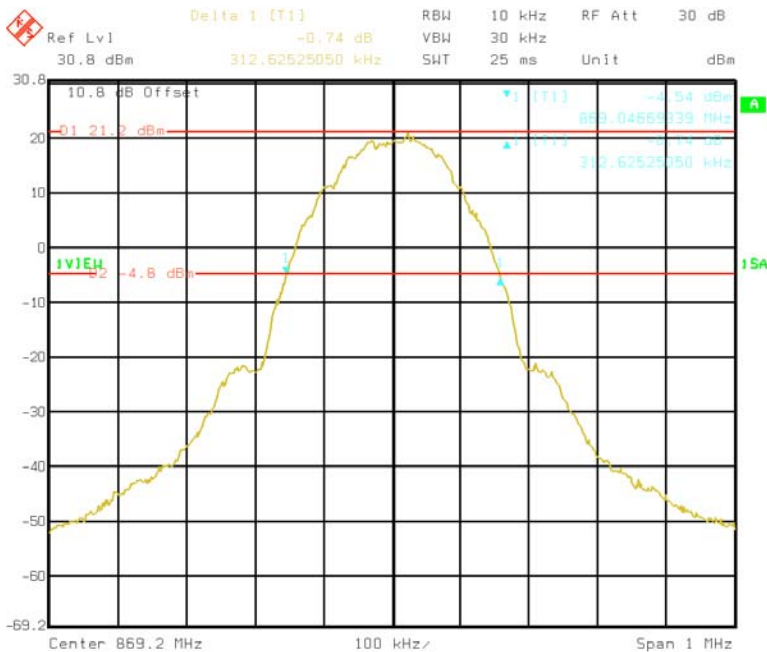


### Channel 128 GMSK



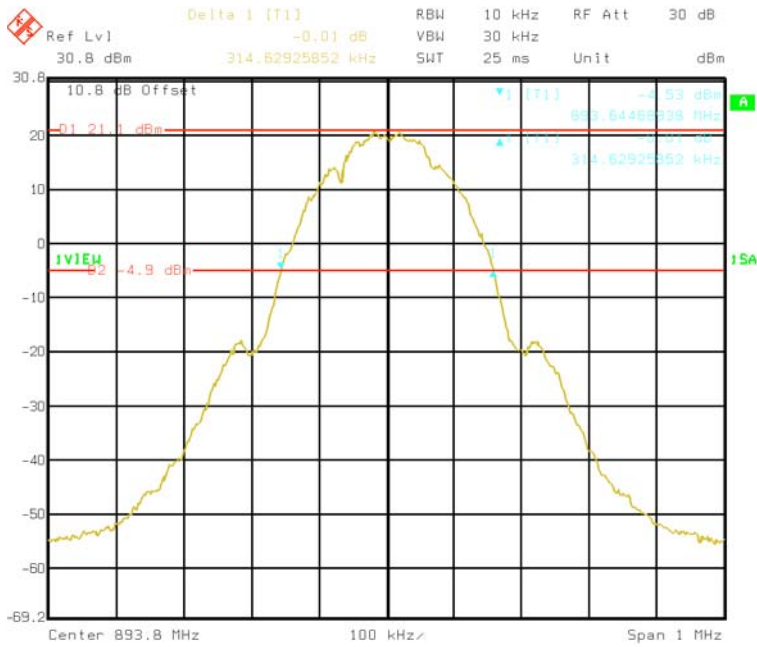
Title: Occupied Bandwidth, Ch 128, Power= 32.8 dBm, GMSK modulation  
 Comment A: 26 dB method, D1=+21.1 dBm, D2=-4.9 dBm, Delta=316.6kHz  
 Date: 27.APR.2009 15:09:04

### Channel 128 8PSK



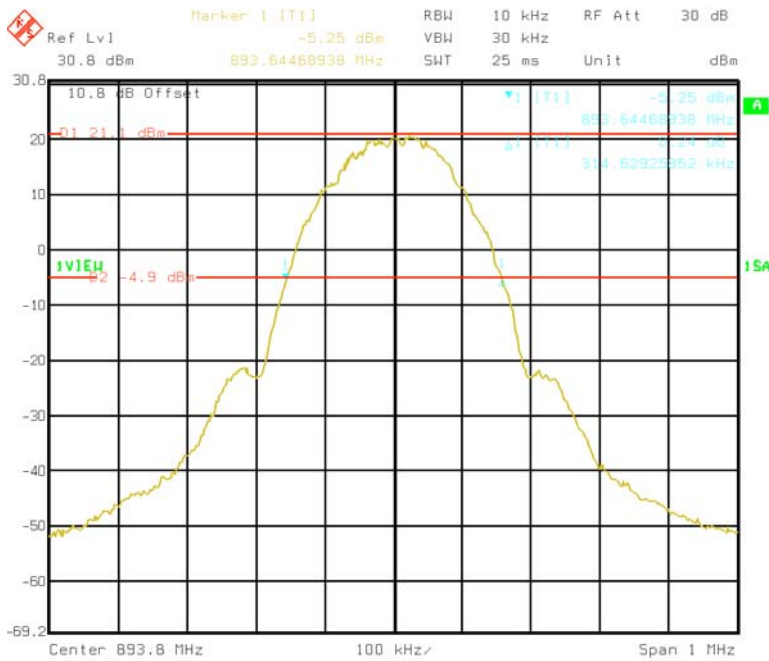
Title: Occupied Bandwidth, Ch 128, Power= 32.8 dBm, BPSK modulation  
 Comment A: 26 dB method, D1=+21.2 dBm, D2=-4.8 dBm, Delta=312.6kHz  
 Date: 27.APR.2009 15:06:11

**Channel 251 GMSK**



Title: Occupied Bandwidth, Ch 251, Power= 32.7 dBm, GMSK modulation  
 Comment A: 26 dB method, D1=+21.1 dBm, D2=-4.9 dBm, Delta=314.6kHz  
 Date: 27.APR.2009 15:11:58

**Channel 251 8PSK**

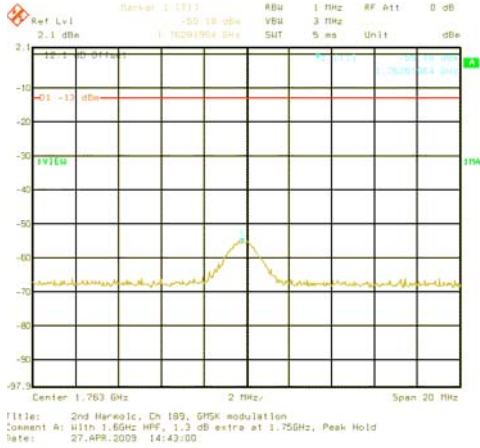


Title: Occupied Bandwidth, Ch 251, Power= 32.7 dBm, 8PSK modulation  
 Comment A: 26 dB method, D1=+21.1 dBm, D2=-4.9 dBm, Delta=314.6kHz  
 Date: 27.APR.2009 15:37:22

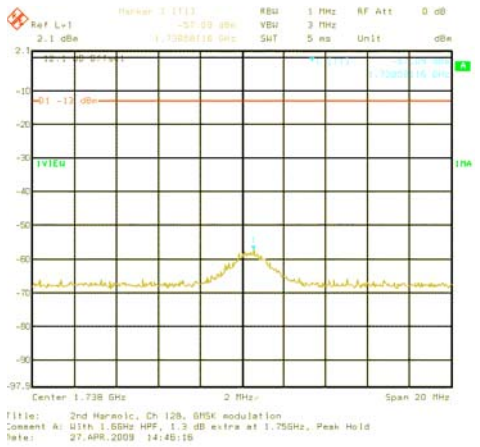
## 2.1051 Spurious and Harmonic Emissions at Antenna Terminals

Requirement Limit 22.917: attenuate by  $43 + 10\log P$  dB = -13 dBm

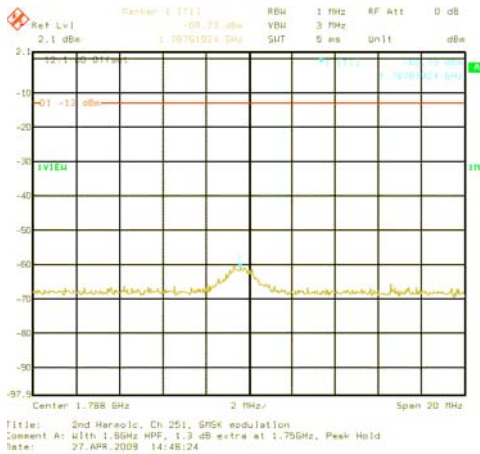
### A. Second Harmonic Channel 189



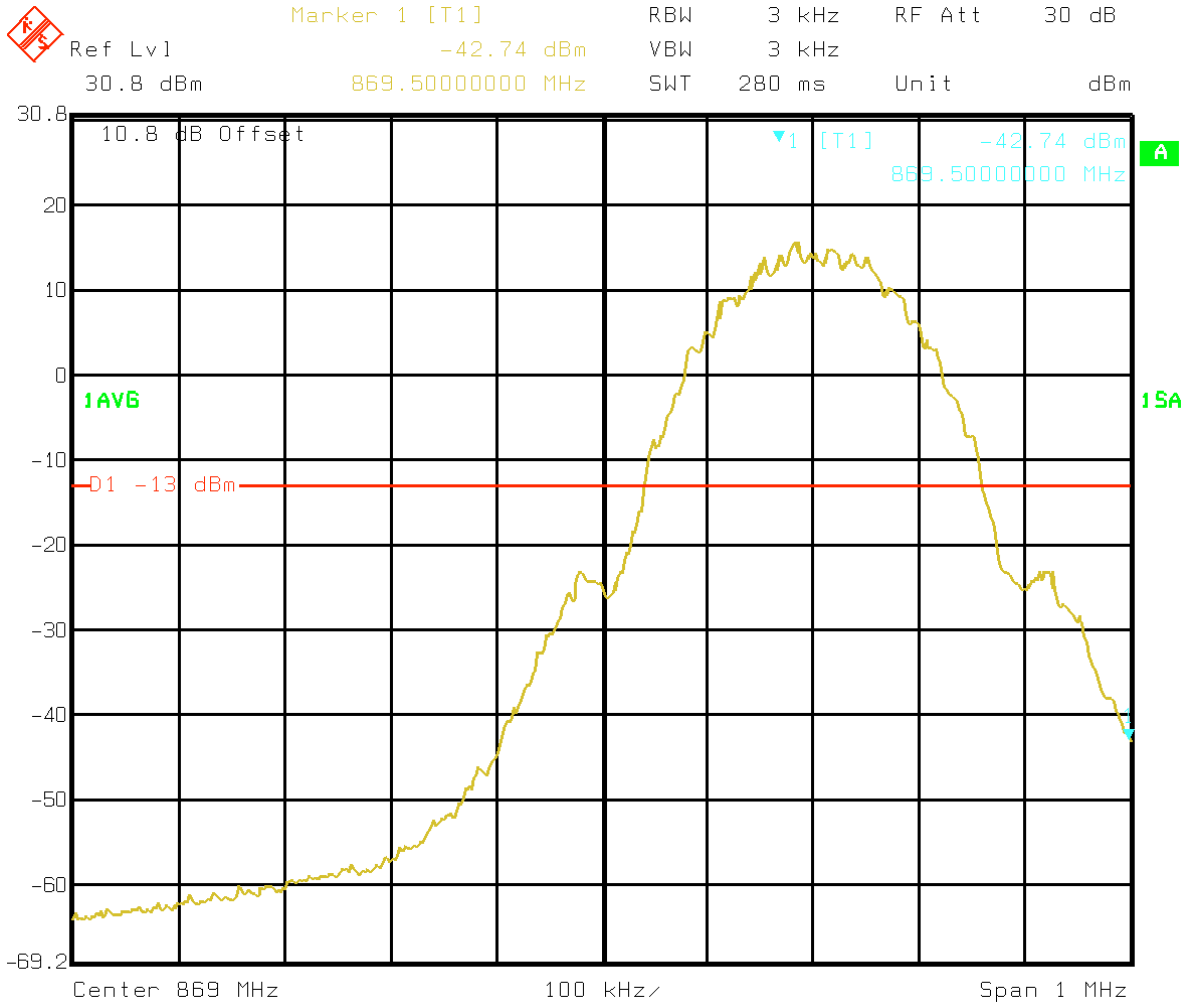
### Second Harmonic Channel 128



### Second Harmonic Channel 251



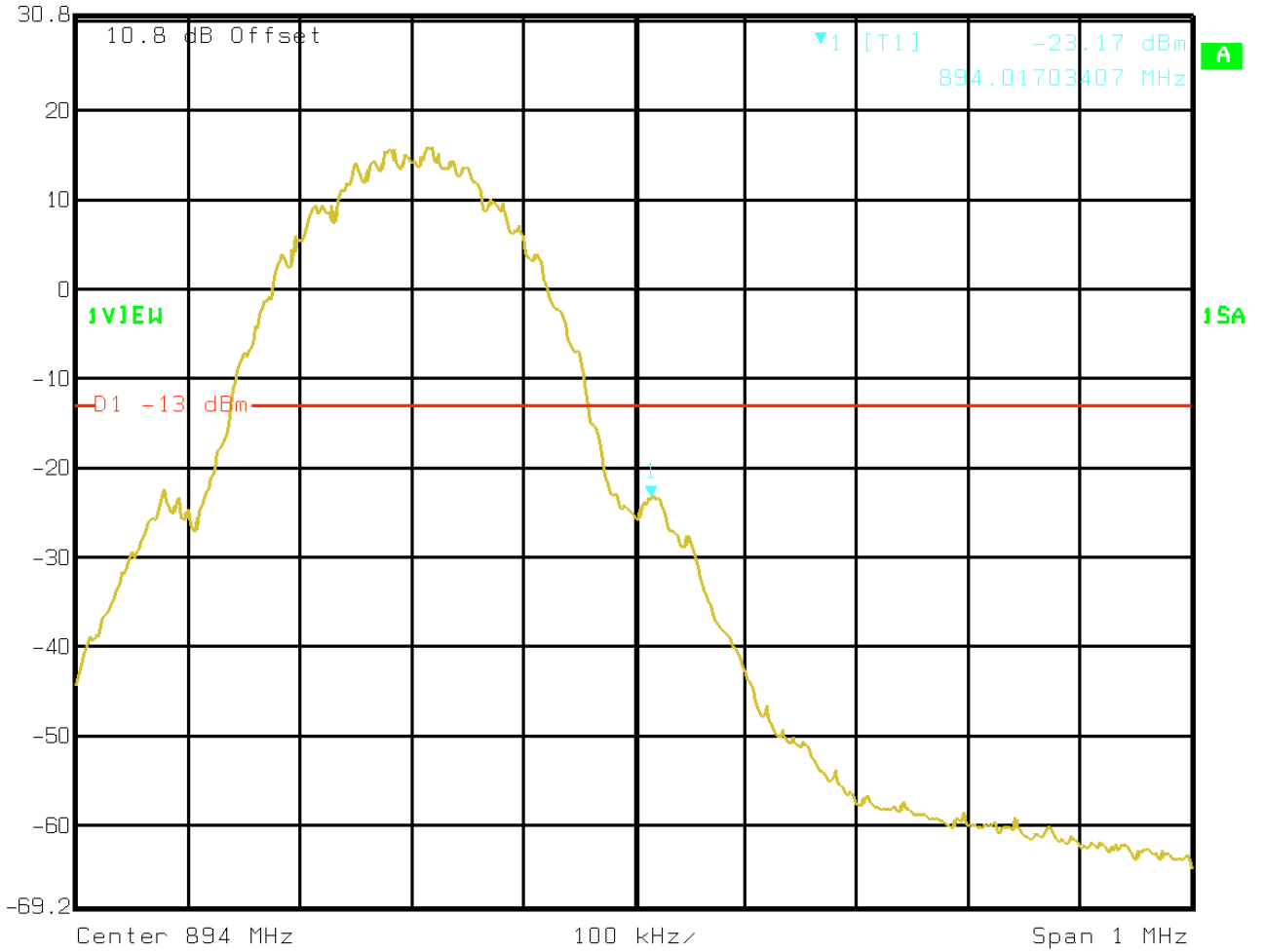
B) Band edge Spectrum



Title: Bandedge Spectrum, Ch 128, GMSK modulation  
 Comment A: Scan 200 average  
 Date: 27.APR.2009 13:41:54

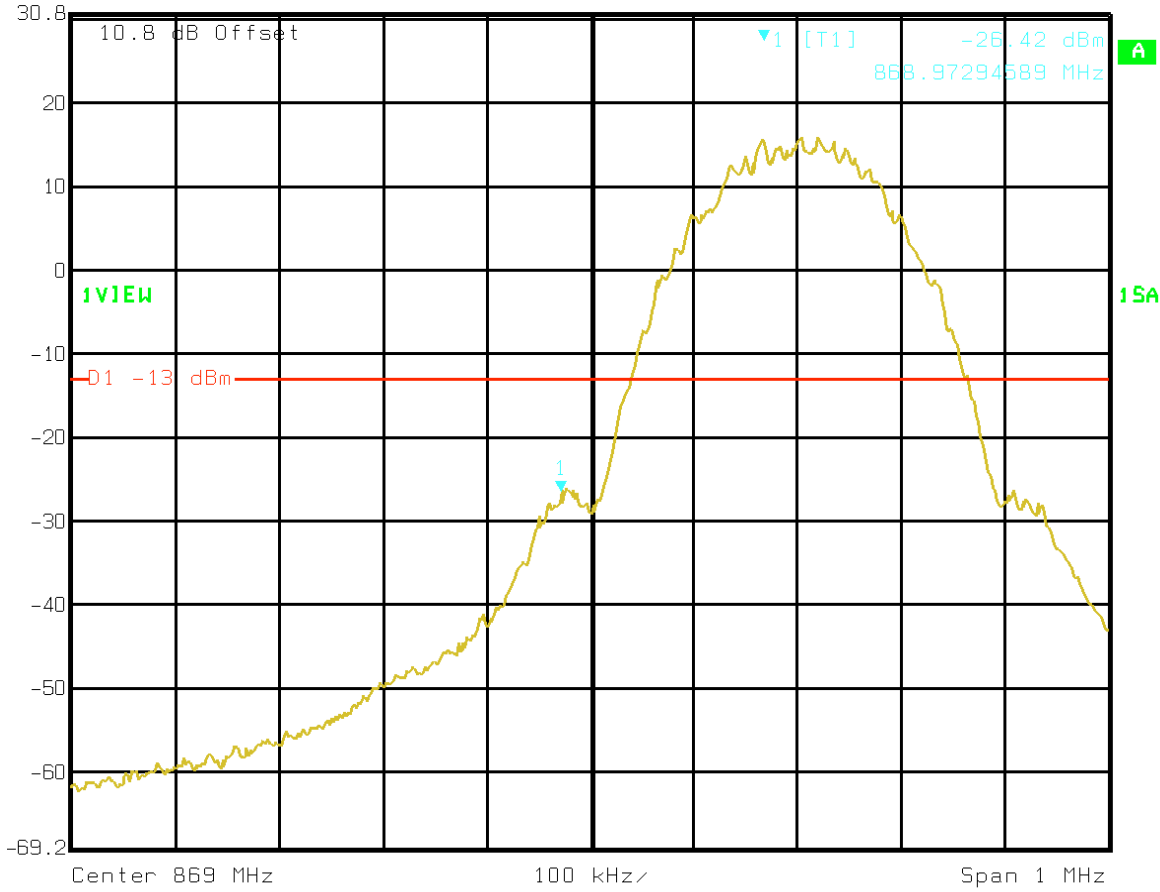


Ref Lvl	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
30.8 dBm	-23.17 dBm	VBW	3 kHz		
	894.01703407 MHz	SWT	280 ms	Unit	dBm



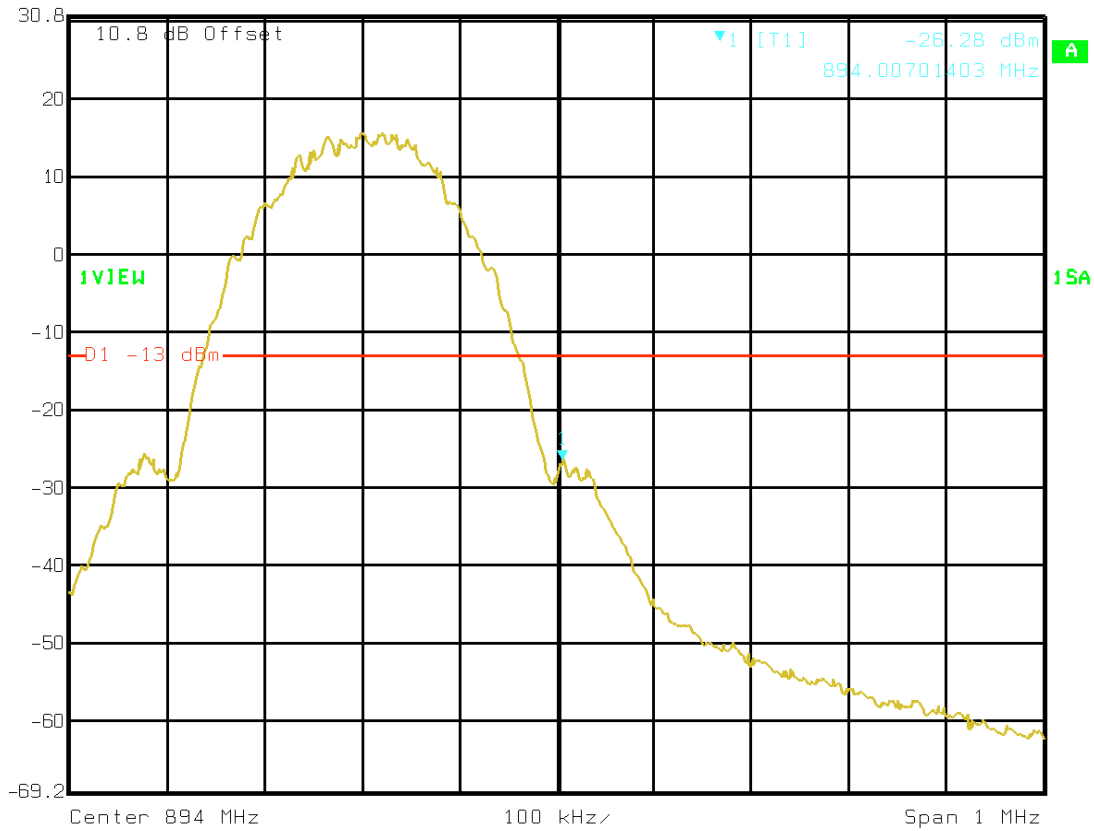
Title: Bandedge Spectrum, Ch 251, GMSK modulation  
 Comment A: Scan 200 average  
 Date: 27.APR.2009 13:52:23

	Marker 1 [T1]	RBW	3 kHz	RF Att	30 dB
	Ref Lvl	-26.42 dBm	VBW	3 kHz	
	30.8 dBm	868.97294589 MHz	SWT	280 ms	Unit
					dBm



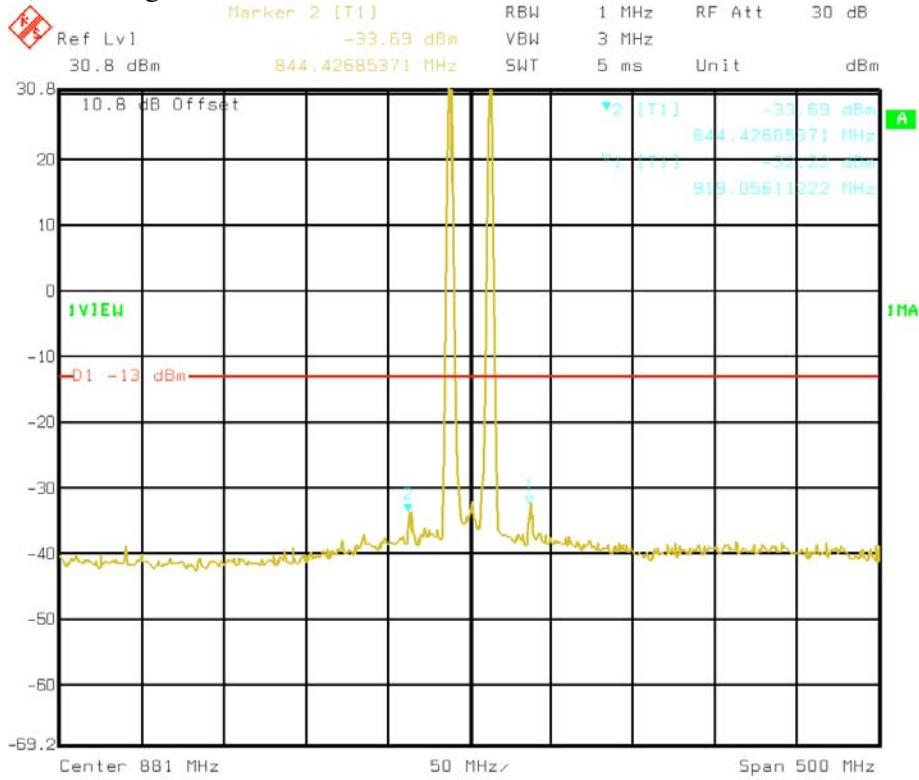
Title: Bandedge Spectrum, Ch 128, BPSK modulation  
 Comment A: Scan 200 average  
 Date: 27.APR.2009 13:46:44

 Marker 1 [T1] RBW 3 kHz RF Att 30 dB  
Ref Lvl -26.28 dBm VBW 3 kHz  
30.8 dBm 894.00701403 MHz SWT 280 ms Unit dBm



Title: Bandedge Spectrum, Ch 251, 8PSK modulation  
Comment A: Scan 200 average  
Date: 27.APR.2009 13:50:08

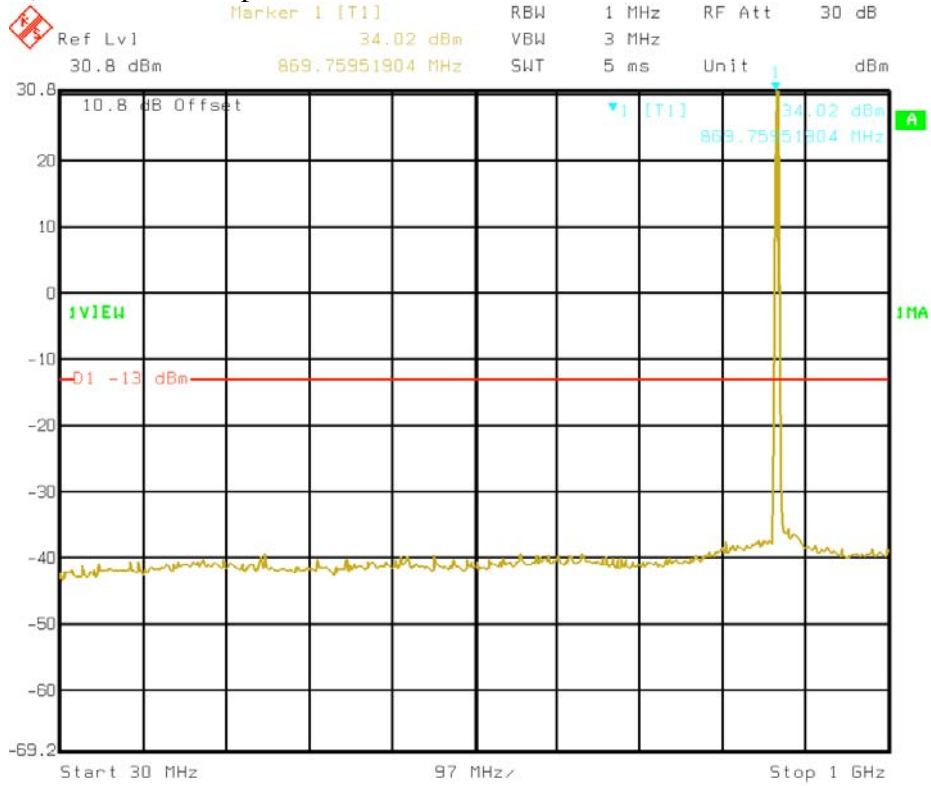
C) Two signal intermodulation



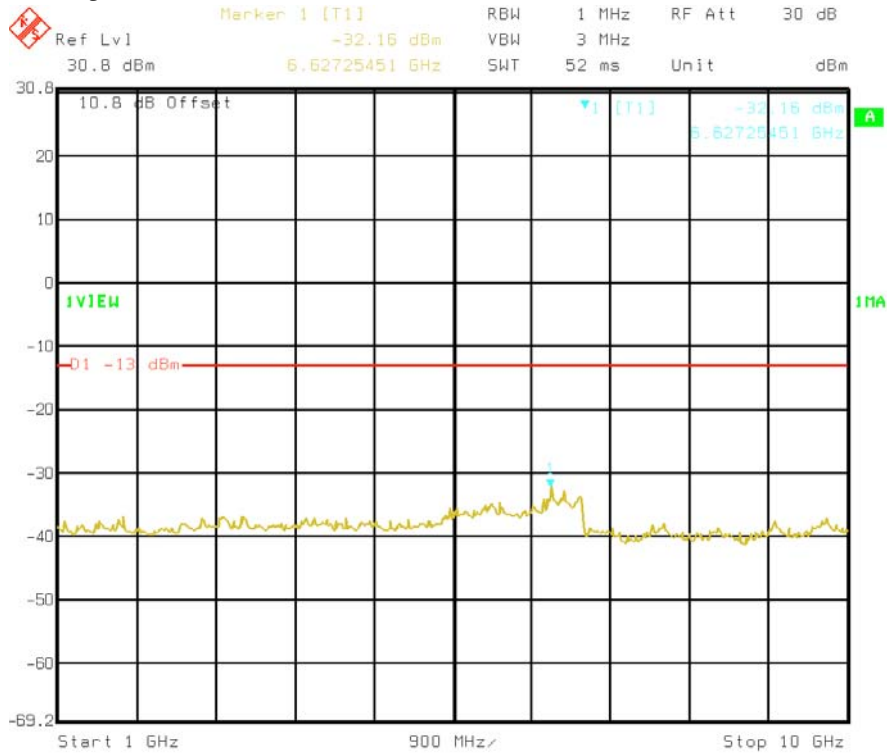
Title: 2 Signal Intermod, Ch 128 & 251, GMSK modulation  
 Comment A: Peak Hold  
 Date: 27.APR.2009 14:18:14



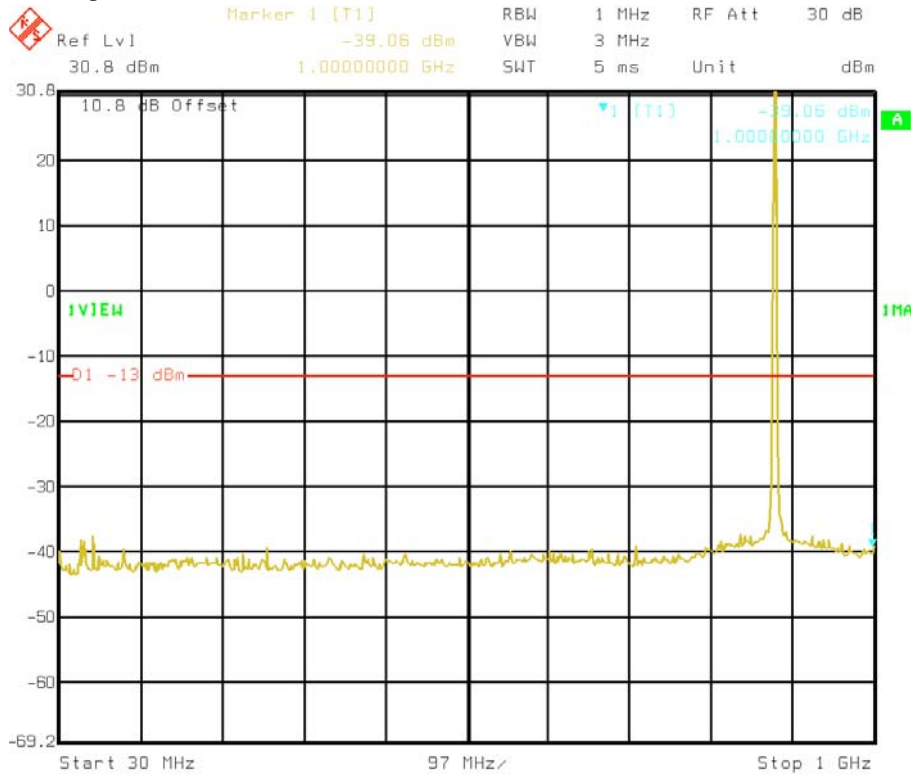
### D) Out of Band Spurious



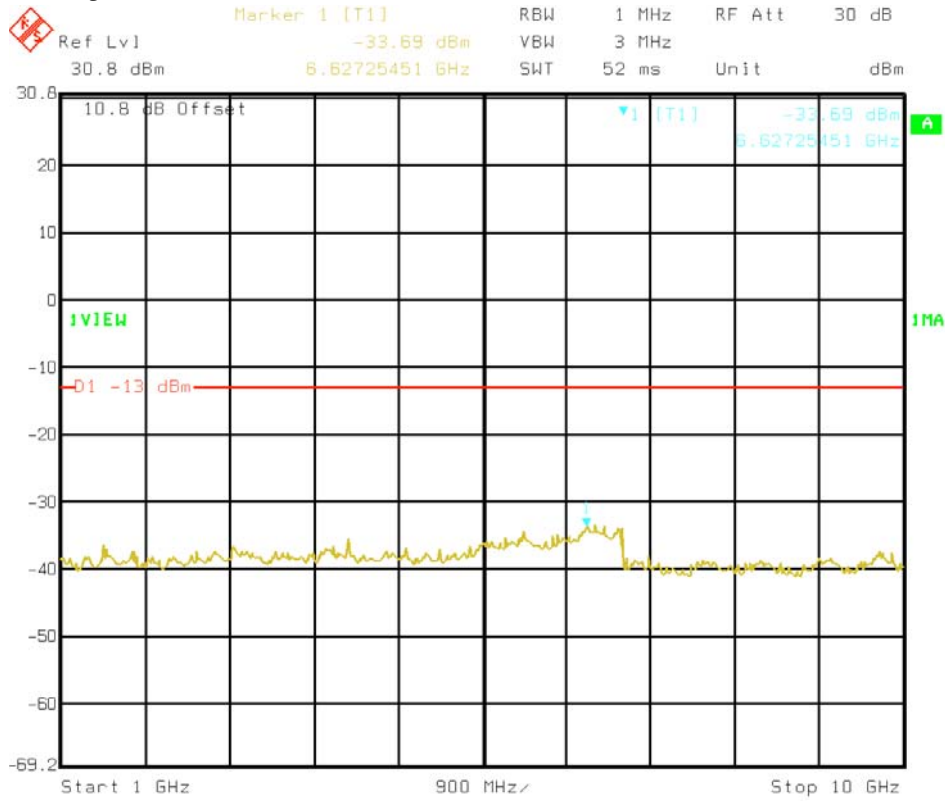
Title: Outband Spurious, Ch 12B, GMSK modulation  
Comment A: Peak Hold, 30MHz to 1.0 GHz  
Date: 27.APR.2009 14:23:27



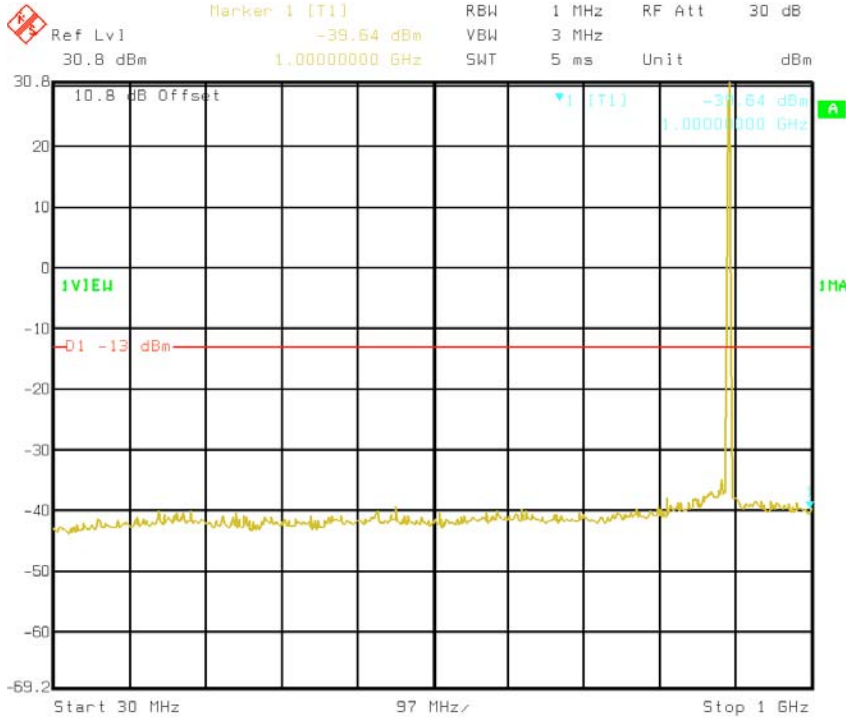
Title: Outband Spurious, Ch128, GMSK modulation  
Comment A: Peak Hold, 1.0 GHz to 10.0 GHz  
Date: 27.APR.2009 16:27:44



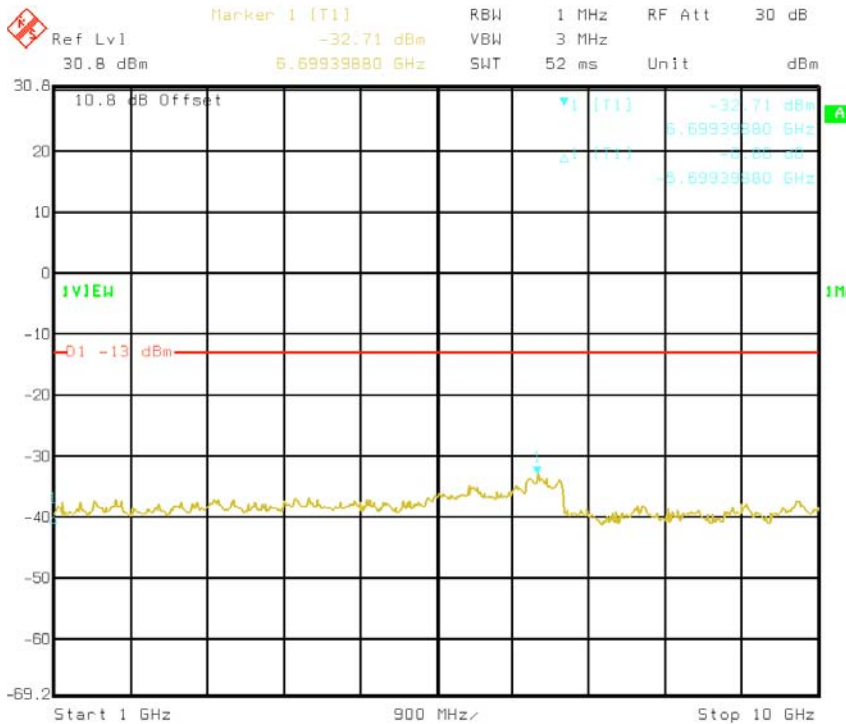
Title: Outband Spurious, Ch 189, GMSK modulation  
Comment A: Peak Hold, 30 MHz to 1.0 GHz  
Date: 27.APR.2009 14:34:54



Title: Outband Supurious, Ch189, GMSK modulation  
Comment A: Peak Hold, 1.0 GHz to 10.0 GHz  
Date: 27.APR.2009 16:25:55



Title: Outband Spurious, Ch 251, GMSK modulation  
 Comment A: Peak Hold, 30 MHz to 1.0 GHz  
 Date: 27.APR.2009 14:32:16



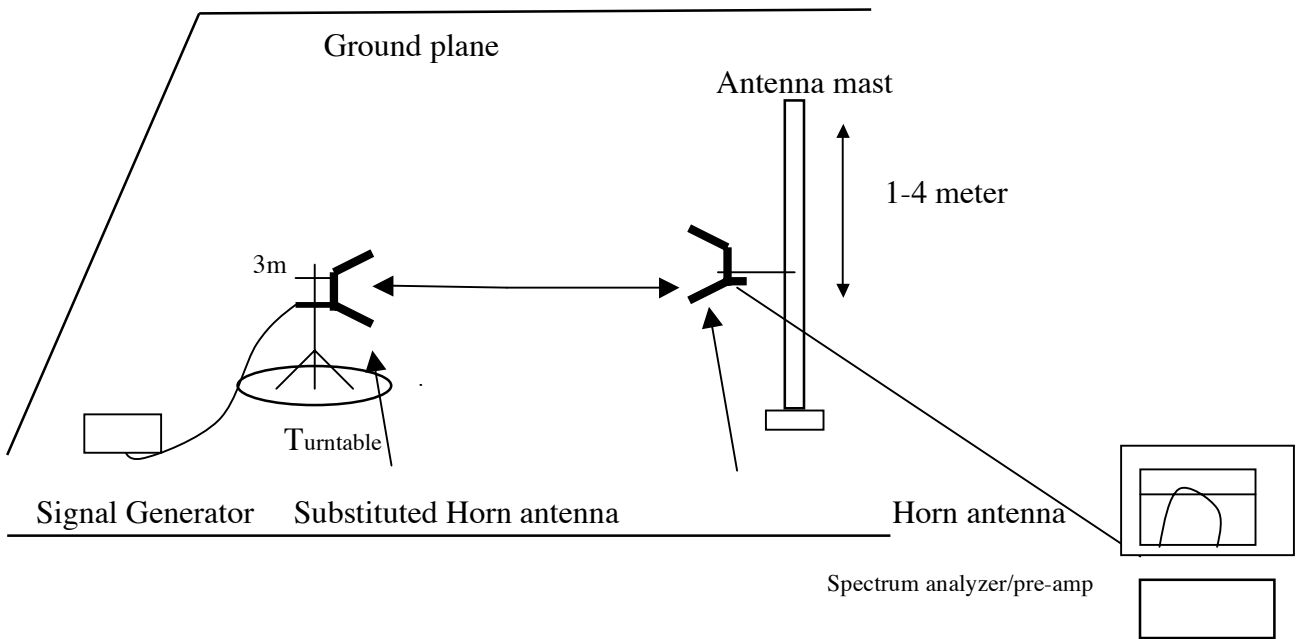
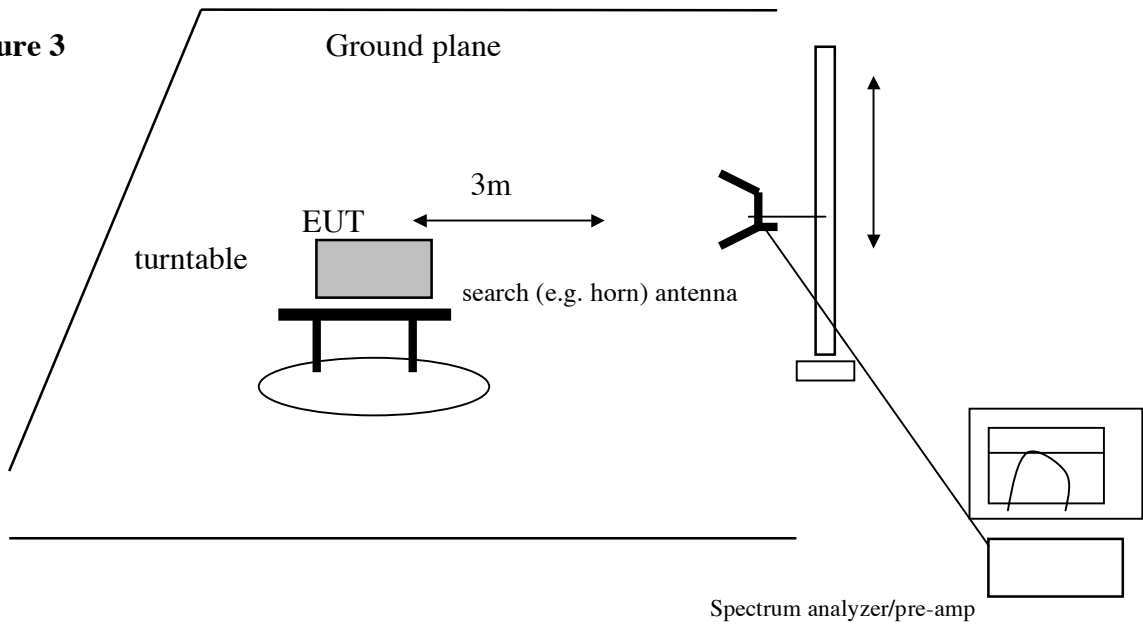
Title: Outband Spurious, Ch 251, GMSK modulation  
 Comment A: Peak Hold, 1.0 GHz to 10.0 GHz  
 Date: 27.APR.2009 16:23:46

## 2.1053 Field Strength of Spurious and Harmonic Radiation

Requirement Limit: attenuate by  $43+10\log P_{\text{watts}} = -13 \text{ dBm}$

### Test Set-Up

Figure 3



### Minimum Requirement

-13 dBm ERP

### **Test Method**

The antenna output port of the EUT was terminated with a 50-ohm load. With the transmitter operating at full power, the EUT was rotated 360° and the search antenna was raised and lowered in both polarities, all in an attempt to maximize the levels of the received emission for each harmonic and spurious emission up to 10 fo.

The EUT was removed and was replaced by a substitution antenna connected via coax to a signal generator. The generator output was set to each emission frequency detected, the search antenna was raised and lowered, the turntable was rotated, and until the maximum emission level was obtained. The signal generator output level was adjusted to match the radiated emission level from the EUT. After correcting for substitution antenna factor and generator cable loss, output power level is compared to the limit.

### **Test Results**

**Pass.** All emissions detected were at least 40 dB below limits. Refer to worst-case data below, taken with 8PSK modulation.

### Radiated Emissions Above 1 GHz

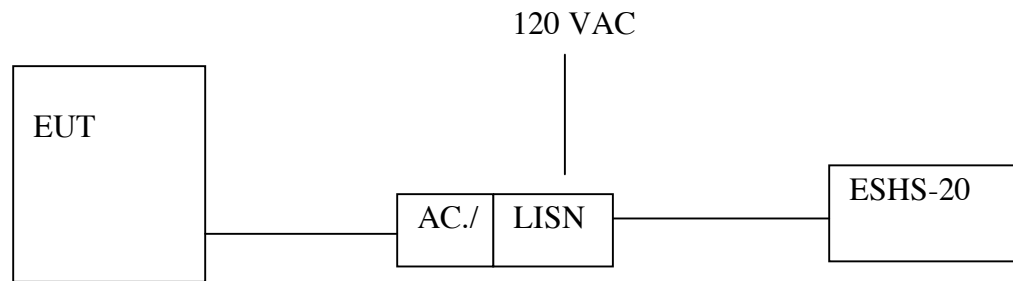
Compliance Certification Services										
Above 1GHz High Frequency Substitution Measurement										
Company:		ADC								
Project #:		09U12569								
Date:		05/05/09								
Test Engineer:		Vien Tran								
Configuration:		EUT Stand Alone								
Mode:		8PSK with 2W Average								
FCC ID:		F8I-FWM0801A								
IC:		1208G-FWM0801A								
Chamber		Pre-amplifier			Filter			Limit		
5m Chamber A		T 144 8449B						FCC PART 22		
f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
<b>LOW CHANNEL, 869.24MHz</b>										
1.67	-56.6	H	3.0	36.7	38.1		-58.0	-13.0	-45.0	
1.74	-55.5	H	3.0	37.4	38.0		-56.1	-13.0	-43.1	
2.60	-57.2	V	3.0	42.1	37.4		-52.5	-13.0	-39.5	
1.67	-55.3	V	3.0	37.0	38.1		-56.4	-13.0	-43.4	
1.74	-54.1	V	3.0	37.8	38.0		-54.3	-13.0	-41.3	
2.60	-58.2	V	3.0	42.1	37.4		-53.5	-13.0	-40.5	
<b>MID CHANNEL, 881.40MHz</b>										
1.67	-56.2	H	3.0	36.8	38.1		-57.6	-13.0	-44.6	
1.76	-54.3	H	3.0	37.6	38.0		-54.7	-13.0	-41.7	
2.64	-56.5	H	3.0	40.9	37.4		-53.0	-13.0	-40.0	
1.67	-55.4	V	3.0	37.1	38.1		-56.5	-13.0	-43.5	
1.76	-54.2	V	3.0	38.1	38.0		-54.1	-13.0	-41.1	
2.64	-59.2	V	3.0	42.2	37.4		-54.4	-13.0	-41.4	
<b>HIGH CHANNEL, 893.8MHz</b>										
1.67	-57.2	H	3.0	36.8	38.1		-58.6	-13.0	-45.6	
1.76	-56.1	H	3.0	37.6	38.0		-56.5	-13.0	-43.5	
2.64	-57.2	H	3.0	40.9	37.4		-53.7	-13.0	-40.7	
1.67	-56.2	V	3.0	37.1	38.1		-57.3	-13.0	-44.3	
1.76	-54.8	V	3.0	38.1	38.0		-54.7	-13.0	-41.7	
2.64	-58.8	V	3.0	42.2	37.4		-54.0	-13.0	-41.0	
Rev. 03.03.09										



## AC Line Conducted Emissions from digital network interface

Test Requirement: 15.107 class A

### AC Conducted Set-up



### Test Procedure

1. The EUT was placed on a non-conductive table, 40 cm from a vertical ground plane.
2. The EUT was set to transmit in normally.
3. Line conducted data was recorded for both NEUTRAL and HOT lines.

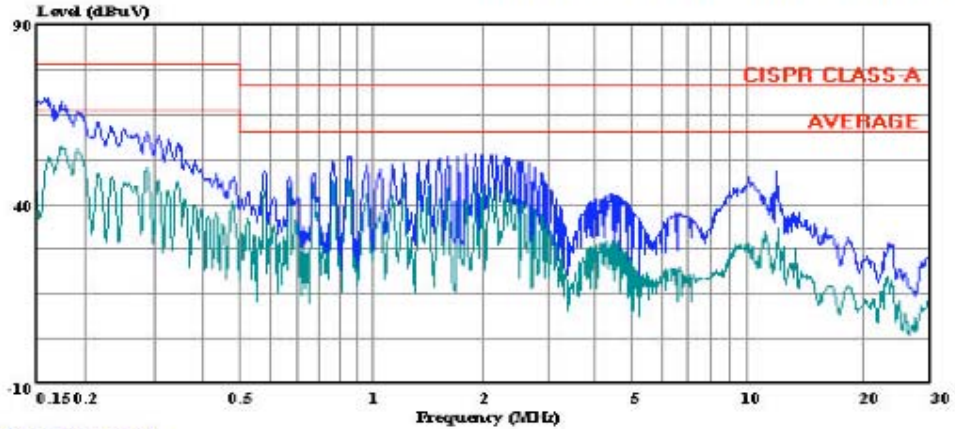
### Test Results

Pass. Meets class A EN55022 limits.



Compliance Certification Services  
47173 Benicia Street  
Fremont, CA 94538  
Tel: (510) 771-1000  
Fax: (510) 661-0888

Data#: 7 File#: ADC\_09U12569\_LC.EMI Date: 05-05-2009 Time: 16:07:21



(Line Conduction)  
Trace: 5

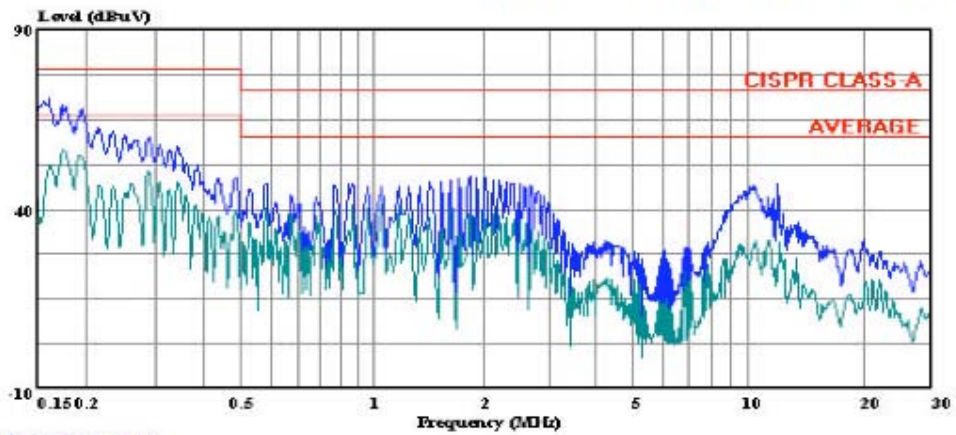
Ref Trace:

Condition: CISPR CLASS-A  
Test Operator:: Vien Tran  
Project #: : 09U12569  
Company: : ADC  
Configuration:: EUT alone  
Mode: : Normal Mode  
Target: : FCC Class A  
Voltage: : 115VAC/60 Hz  
: Line 1:Blue (Peak); Green (Average)



Compliance Certification Services  
47173 Benicia Street  
Fremont, CA 94538  
Tel: (510) 771-1000  
Fax: (510) 661-0888

Data#: 14 File#: ADC\_09U12569\_LC.EMI Date: 05-05-2009 Time: 16:22:21



(Line Conduction)  
Trace: 12

Ref Trace:

Condition: CISPR CLASS-A  
Test Operator:: Vien Tran  
Project #: : 09U12569  
Company: : ADC  
Configuration:: EUT alone  
Mode: : Normal Mode  
Target: : FCC Class A  
Voltage: : 115VAC/60 Hz  
: Line 2:Blue (Peak); Green (Average)

## **Radiated emissions from receiver section and digital network interface**

Rule Section: 15.109: EN55022 Class A

Emissions from the digital portion of the EUT were tested to class A limits as the EUT is not sold or used in residences.

Emissions from the receiver portion of the EUT were tested to 15.109 general limits.

### **Test Procedures**

The EUT was placed on a turntable located in a 5m anechoic chamber. EUT emissions were maximized by raising the search antenna 1-4 m in both horizontal and vertical polarities, and by rotating the turntable through a full 360 degrees.

### **Test Results**

PASS. Radiated emissions meet class A limit for digital portion, class B (general 15.109) limits for the receiver portion.

**Receiver portion, tabulated results**

30-1000MHz Frequency Measurement													
Compliance Certification Services, Fremont 5m Chamber													
Test Engr:		Vien Tran											
Date:		05/05/09											
Project #:		09U12569											
Company:		ADC											
EUT Description:		Cell Phone Base Station											
Test Target:		FCC IC Class B											
Mode Oper:		Rx Mode											
f	Measurement Frequency	Amp	Preamp Gain	Margin	Margin vs. Limit								
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters										
Read	Analyzer Reading	Filter	Filter Insert Loss										
AF	Antenna Factor	Corr.	Calculated Field Strength										
CL	Cable Loss	Limit	Field Strength Limit										
f MHz	Dist (m)	Read dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filter dB	Corr. dBuV/m	Limit dBuV/m	Margin dB	Ant. Pol. V/H	Det. P/A/QP	Notes
Horizontal													
32.520	3.0	34.0	19.0	0.5	28.4	0.0	0.0	25.2	40.0	-14.8	H	P	
153.605	3.0	49.9	12.3	1.1	28.3	0.0	0.0	35.0	43.5	-8.5	H	P	
372.254	3.0	51.8	14.5	1.7	28.1	0.0	0.0	39.8	46.0	-6.2	H	P	
Vertical													
32.880	3.0	36.6	18.9	0.5	28.4	0.0	0.0	27.5	40.0	-12.5	V	P	
153.245	3.0	46.5	12.3	1.1	28.3	0.0	0.0	31.7	43.5	-11.8	V	P	
558.022	3.0	40.4	17.7	2.2	27.6	0.0	0.0	32.6	46.0	-13.4	V	P	
640.465	3.0	38.3	18.9	2.3	27.4	0.0	0.0	32.1	46.0	-13.9	V	P	

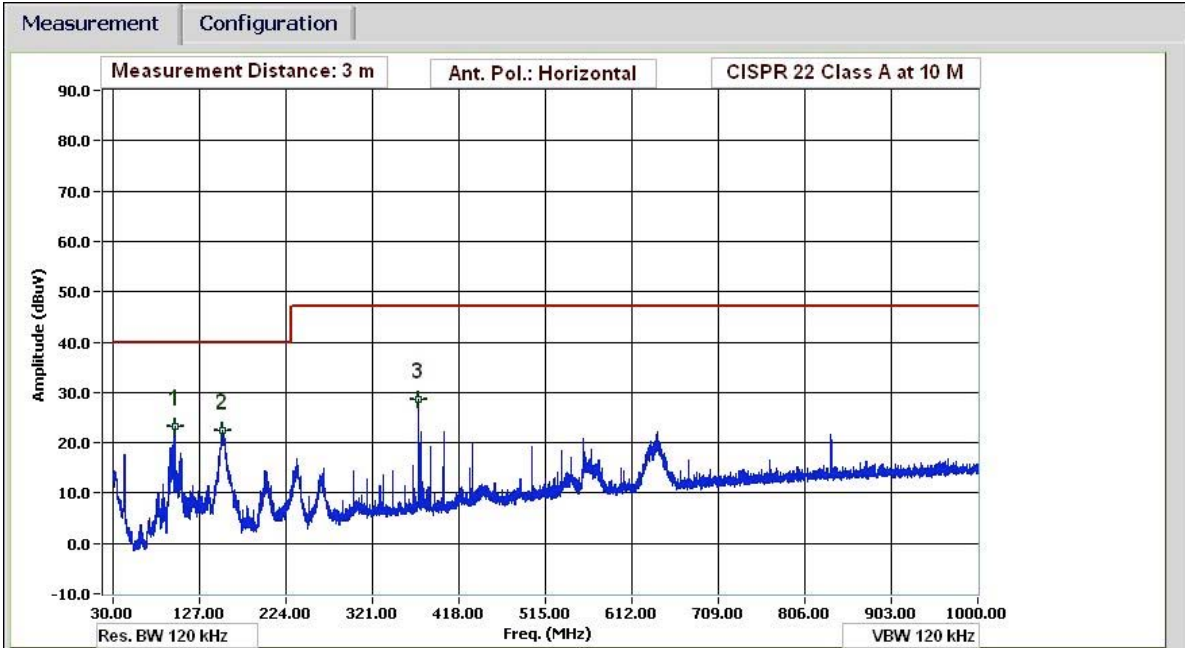
Rev. 1.27.09  
 Note: No other emissions were detected above the system noise floor.

High Frequency Measurement																			
Compliance Certification Services, Fremont 5m Chamber																			
Company:		ADC																	
Project #:		09U12569																	
Date:		05/05/09																	
Test Engineer:		Vien Tran																	
Configuration:		EUT Stand Alone with antenna																	
Mode:		Rx																	
Test Equipment:																			
Hom 1-18GHz				Pre-amplifier 1-26GHz				Pre-amplifier 26-40GHz				Horn > 18GHz							
173; S/N: 6717 @3m				T144 Miteq 9008A00831															
HI Frequency Cables																			
3' cable 22807700				12' cable 22807600				20' cable 22807500				HPF				Reject Filter			
3' cable 22807700				12' cable 22807800				20' cable 22807600											
Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz; VBW=10Hz																			
f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)				
1.666	3.0	51.5	45.3	26.1	3.1	-38.5	0.0	0.0	42.2	36.0	74	54	-31.8	-18.0	H				
1.666	3.0	52.7	44.9	26.1	3.1	-38.5	0.0	0.0	43.4	35.6	74	54	-30.6	-18.4	V				
No other emissions were detected above system noise floor																			
Rev. 03.03.09																			
f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit														
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit														
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit														
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit														
CL	Cable Loss	HPF	High Pass Filter																

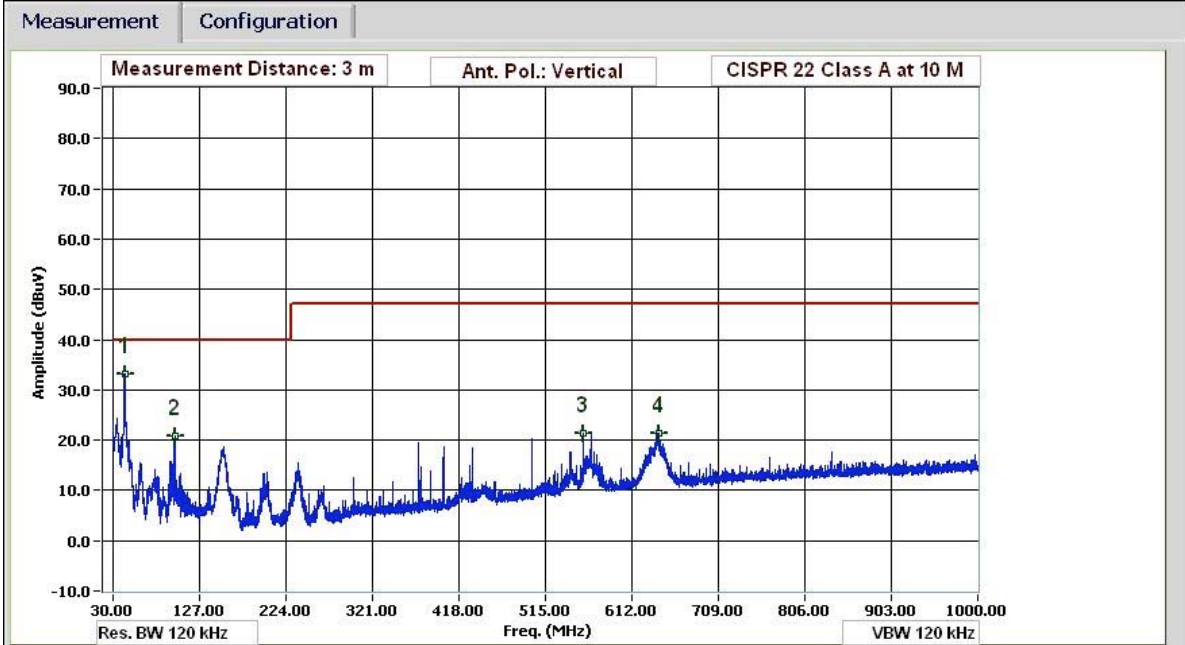
**Digital portion, tabulated results**

30-1000MHz Frequency Measurement													
Compliance Certification Services, Fremont 5m Chamber													
Test Engr:		Vien Tran											
Date:		05/05/09											
Project #:		09U12569											
Company:		ADC											
EUT Description:		Cell Phone Base Station											
Test Target:		CISPR Class A											
Mode Oper:		Digital											
f	Measurement Frequency	Amp	Preamp Gain	Margin	Margin vs. Limit								
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters										
Read	Analyzer Reading	Filter	Filter Insert Loss										
AF	Antenna Factor	Corr.	Calculated Field Strength										
CL	Cable Loss	Limit	Field Strength Limit										
f	Dist	Read	AF	CL	Amp	D Corr	Filter	Corr.	Limit	Margin	Ant. Pol.	Det.	Notes
MHz	(m)	dBuV	dB/m	dB	dB	dB	dB	dBuV/m	dBuV/m	dB	V/H	P/A/QP	
<b>Horizontal</b>													
100.323	3.0	51.0	10.0	0.9	28.3	-10.5	0.0	23.2	40.0	-16.8	H	P	
152.765	3.0	47.7	12.4	1.1	28.3	-10.5	0.0	22.5	40.0	-17.5	H	P	
372.254	3.0	50.9	14.5	1.7	28.1	-10.5	0.0	28.6	47.0	-18.4	H	P	
<b>Vertical</b>													
47.961	3.0	59.4	12.1	0.6	28.4	-10.5	0.0	33.2	40.0	-6.8	V	P	
100.323	3.0	48.7	10.0	0.9	28.3	-10.5	0.0	20.8	40.0	-19.2	V	P	
558.142	3.0	39.6	17.7	2.2	27.6	-10.5	0.0	21.4	47.0	-25.6	V	P	
641.665	3.0	38.0	18.9	2.3	27.4	-10.5	0.0	21.4	47.0	-25.6	V	P	
Rev. 1.27.09													
Note: No other emissions were detected above the system noise floor.													

### Digital portion, graphical results



Project No.: 09U12569



Project No.: 09U12569

## **RF hazards.**

Per the requirements of FCC Rule Sections 1.1307 and 1.1310, RF exposure issues will be addressed at time of licensing.

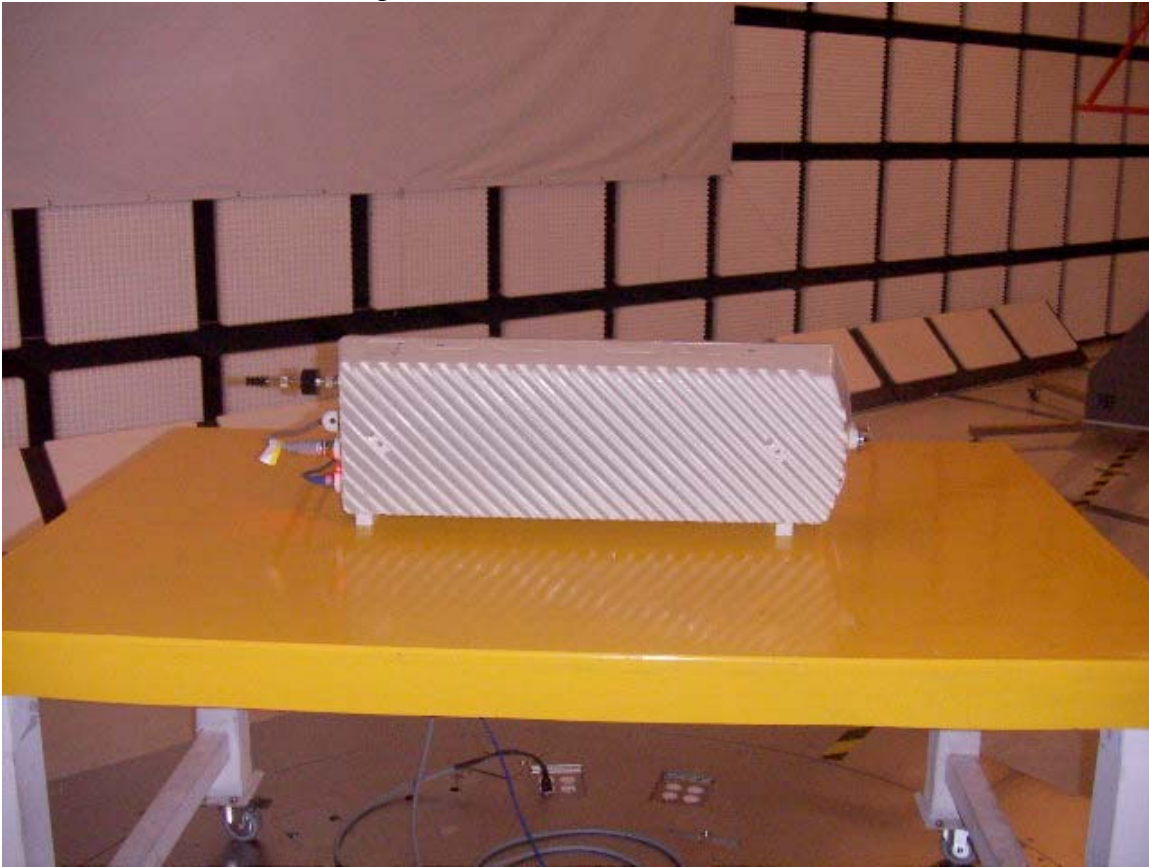
The user manual for this product contains a note recommending antenna separation distances of at least 6 m for systems that have 1640 watts eirp. MPE calculations indicate the safe distance for 1640 W eirp at 869 MHz is approximately 4.75 m.



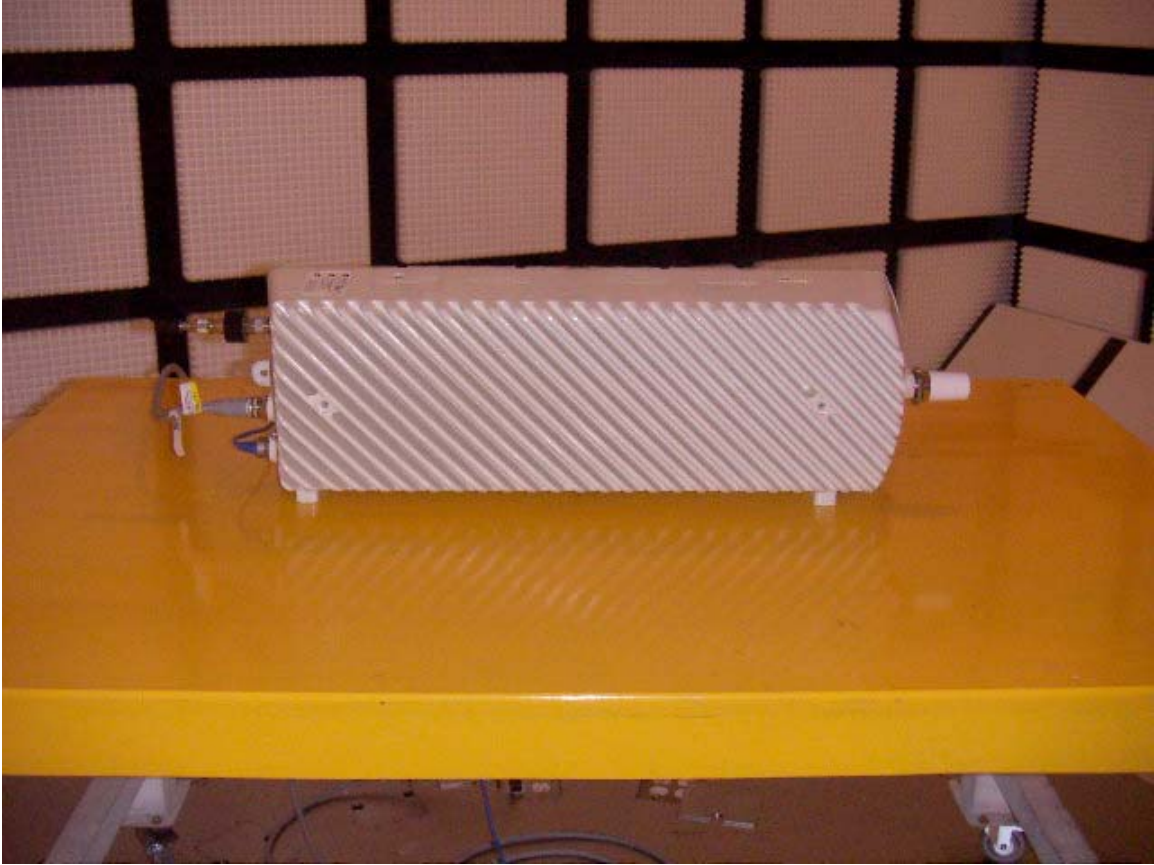
## **Test Set-up Photographs**

Antenna port conducted emissions

PHOTO NOT AVAILABLE



Radiated Emissions with Network Listen antenna for RX and Digital Device Emissions



**AC Line Conducted Emissions**



**END OF REPORT**