EXHIBIT 11

TEST REPORT

This test report presents the measurement data required by the Commission for certifying the AS5ONEBTS-08 MCR850 cellular transceiver, subject of this application. All the testing was performed during the period of September 7 – November 5, 2004. The measurement results have demonstrated the AS5ONEBTS-08 MCR850 transceiver is in full compliance with the Rules of the Commission.

For some of the required measurements where FCC Parts 2 and 22 did not give specific requirements, TIA/EIA-97-D's requirements were used in the report, which are almost identical to the 3GPP2 C.S0010-A v1.0's requirements.

SUBEXHIBIT 11.1

Section 2.1033 (c)(14) REQUIRED MEASUREMENT DATA

The required measurement data is presented in the following exhibits as follows:

SUBEXHIBIT 11.2	Section 2.1046	Measurements Required: RF Power Output
SUBEXHIBIT 11.3	Section 2.1047	Measurements Required: Modulation Characteristics
SUBEXHIBIT 11.4	Section 2.1049	Measurements Required: Occupied Bandwidth
SUBEXHIBIT 11.5	Section 2.1051	Measurements Required: Spurious Emissions at Antenna Terminals
SUBEXHIBIT 11.6	Section 2.1053	Measurements Required: Field Strength of Spurious Radiation
SUBEXHIBIT 11.7	Section 2.1055	Measurements Required: Frequency Stability
SUBEXHIBIT 11.8	Section 2.947	Listing of Test Equipment Used

SUBEXHIBIT 11.2

Section 2.1046 MEASUREMENT REQUIRED: RF POWER OUTPUT

This test is a measurement of the RF power level transmitted at the AS5ONEBTS-08 MCR850 output terminal combiner, as shown in the accompanying test set-up diagram. All the carriers were configured with a combination of Pilot, Sync, Paging and Traffic channels. The Pilot/Sync/Page channels were set up according to the recommended test model for base stations given in TIA/EIA-97-D (Section 6), as shown in the following table. The AS5ONEBTS-08 MCR850 does not have transmit diversity.

Table 11.2.1. Base Station Test Model, Nominal

Type	Number of Channels	Fraction of Power (linear)	Fraction of Power (dB)	Comments
Pilot	1	0.2000	-7.0	Walsh 0
Sync	1	0.0471	-13.3	Walsh 32, always 1/8 rate
Paging	1	0.1882	-7.3	Walsh 1, full rate only
Traffic	6	0.09412 each	-10.3 each	Variable Walsh assignments, full rate only

Power measurements were made with a Giga-tronics 8542C Universal Power Meter with 80621A Power Sensor (0.01 – 18 GHz) in the average mode. The test set-up for conducting the RF power output measurement from the MCR850 is shown in the following figure. Before the testing was started, the Base Station was given a sufficient "warm-up" period as required.

The measured channels and results are tabulated in the following table:

Table 11.2.2.1 Results of RF Power Output – Single Carrier

Cellular Channel No.	Frequency (MHz)	Cellular Frequency Band	MCR850 Output (dBm)
1019	869.88	A"	4.92
37	871.11	A3	4.90
78	872.34	A2	4.87
119	873.57		4.86
160	874.80		4.89
201	876.03	A1	4.91
242	877.26		4.89
283	878.49		4.90
384	881.52	B1	4.95
425	882.75		4.94
466	883.98		4.90
507	885.21	B2	4.89
548	886.44		4.91
589	887.67		4.92
630	888.90	B3	4.89
691	890.73	A'	4.90
777	893.31	B'	4.95

Table 11.2.2.2 RF Power Output – Multi-Carrier Left Edge / Right Edge

2 Carrier

Channel No.	Cellular Band	Power Output (dBm)	Power Output (Milli-Watts)
1019, 37	A"/A3	8.05	6.4
589, 630	B3/B2	8.05	6.47

3 Carrier

Channel No.	Cellular Band	Power Output (dBm)	Power Output (Milli-Watts)
1019, 37, 78	A"/A3/A2	9.55	9.1
548, 589, 630	B3/B2	9.87	9.8

4 Carrier

Channel No.	Cellular Band	Power Output (dBm)	Power Output (Milli-Watts)
1019, 37, 78, 119	A"/A3/A2	11.14	13
507, 548, 589, 630	B3/B2	11.14	13

5 Carrier

Channel No.	Cellular Band	Power Output (dBm)	Power Output (Milli-Watts)
1019, 37, 78, 119, 160	A"/A3/A2	12.01	16
466, 507, 548, 589, 630	B3/B2/B1	12.02	16

6 Carrier

Channel No.	Cellular Band	Power Output (dBm)	Power Output (Milli-Watts)
1019, 37, 78, 119, 160, 201	A"/A3/A2/A1	12.9	19.2
425, 466, 507, 548, 589, 630	B3/B2/A1	12.81	19

7 Carrier

Channel No.	Cellular Band	Power Output (dBm)	Power Output (Milli-Watts)
1019, 37, 78, 119, 160, 201, 242	A"/A3/A2/A1	13.42	22.1
384, 425, 466, 507, 548, 589, 630	B3/B2/B1	13.4	22

8 Carrier

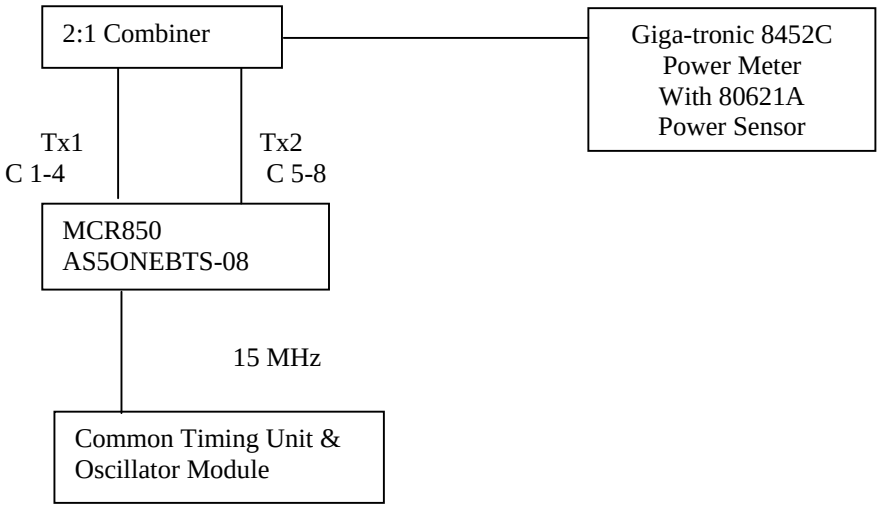
Channel No.	Cellular Band	Power Output (dBm)	Power Output (Milli-Watts)
1019, 37, 78, 119, 160, 201, 242, 283	A"/A3/A2/A1	13.97	25

Results:

The above RF power measurements meet TIA/EIA-97-D, Section 4.3.1.3, which specifies that the total power per carrier should remain within +2dB and -4dB of the manufacturer's rated power.

The RF power outputs of the MCR850 across the Cellular Frequency Band 869.0 – 894 MHz are in full compliance with the Rules of the Commission.

FIGURE 11.2.1 TEST SET-UP FOR MEASUREMENT OF RADIO FREQUENCY POWER OUTPUT



SUBEXHIBIT 11.3

Section 2.1047 MEASUREMENT REQUIRED: MODULATION CHARACTERISTICS

The MCR850 utilizes digital QPSK modulation. The modulation accuracy measures the ability of the transmitter to generate the ideal signal which is defined by the waveform quality. The waveform quality is measured by determining the normalized correlated power between the actual waveform and the ideal waveform. TIA/EIA-97D, Section 4.2.2.3, requires the normalized cross correlation coefficient ρ shall be greater than 0.912.

The modulation accuracy measurements were performed with a carrier configured with the forward pilot channel only. The measurements were made at the output terminal of the MCR850 AS5ONEBTS-08.

The measurements were performed with an Agilent E4440A PSA Spectrum Analyzer which was calibrated in accordance with ISO 9001 process.

The test set-up diagram is given in the Figure 11.3.1, where the Agilent E4440A PSA Spectrum Analyzer used the external signals from the base station as its trigger source and time reference.

Results:

The wave quality factors ρ (rho) measured all ≥ 0.99. Figure 11.3.2 shows two representative screen plots of the modulation accuracy measurement at Channels 1019 and 777 in CDMA2000 mode. The modulation accuracy of the MCR850 AS5ONEBTS-08 is in full compliance with the Rules of the Commission across the Cellular Frequency Band 869.0 – 894.0 MHz.

FIGURE 11.3.1 TEST SET-UP FOR MEASUREMENT OF MODULATION ACCURACY

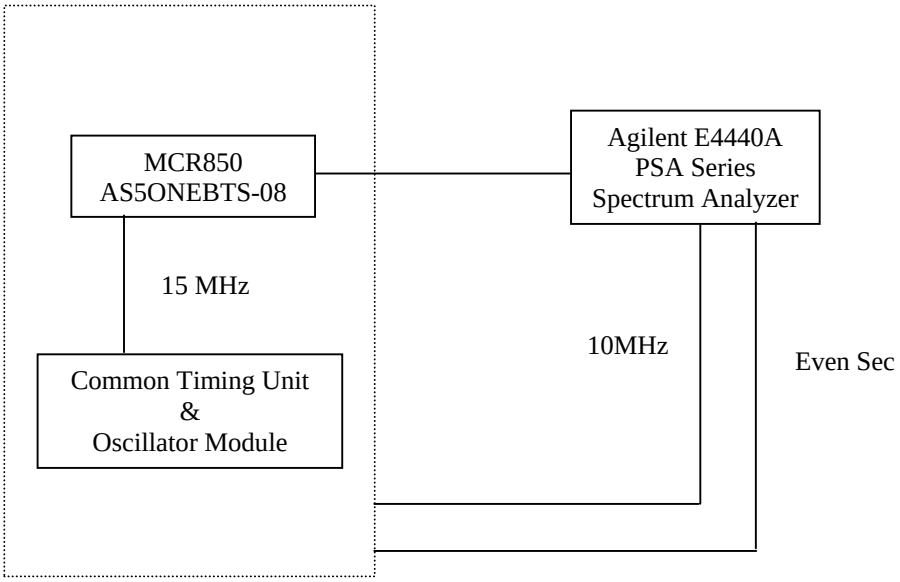
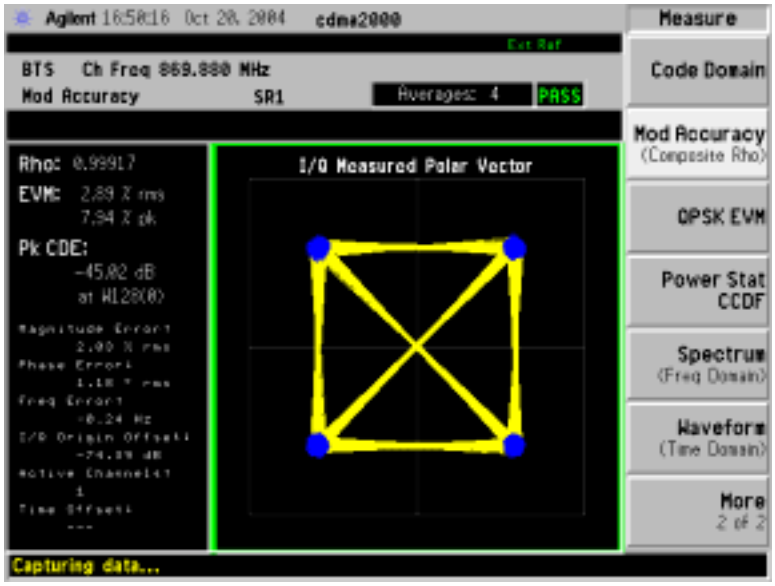
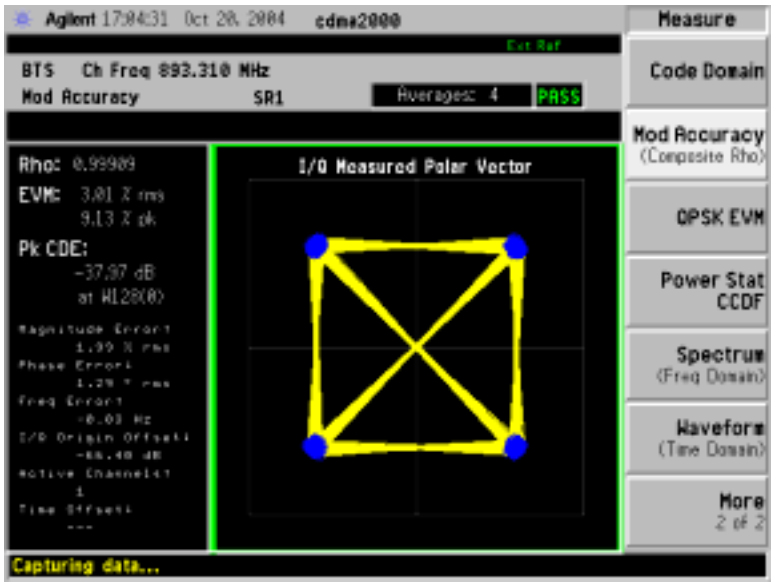


FIGURE 11.3.2 SCREEN PLOT OF MODULATION ACCURACY MEASUREMENT FOR CHANNELS 1019 AND 777





SUBEXHIBIT 11.4

Section 2.1049 MEASUREMENT REQUIRED: OCCUPIED BANDWIDTH

In compliance with Section 2.1049(h), the MCR850 radio was configured with a combination of Pilot, Sync, Paging and Traffic channels. The Pilot/Sync/Page channels were setup according to the recommended test model for base stations given in TIA/EIA-97-D (Section 6), as shown in Table 11.2.1.

The occupied bandwidth measurements were made at the output terminal combiner of the MCR850 from : 1. the lowest available cellular CDMA channels in the A band, Ch 1019 at 869.88 MHz 2. two to eight contiguous A band channels (A", A3, A2 and A1), 3. the highest available cellular CDMA channels in the B band, Ch 777 at 893.31 MHz (B'), Ch 691 at 890.73 MHz (A'), and Ch 630 at 888.90 MHz (B3) 4. two to seven contiguous B band channels (B3, B2 and B1) The carrier power level at the output terminal combiner of the MCR850 was transmitting to the maximum rated mean power.

The emission limitations and the setting of measurement equipment for the occupied bandwidth measurement of a 1.23MHz CDMA cellular carrier were specified in Appendix A, Section 10 of FCC 02-229 Report and Order. FCC's requirements are tabulated in the following table:

Table 11.4.1 FCC Part 22 Spurious Emission Limits

Frequency	Required Minimum Attenuation below the Mean Carrier Power *P*	Minimum Resolution Bandwidth of Spectrum Analyzer
1MHz Bands Immediately Outside the Transmitting Frequency Band	(43 + P dBW) dBc	12.3 kHz
Out-of-Band (other than above)	(43 + P dBW) dBc	100 kHz

The requirements specified in TIA/EIA-97D Section 4.4 are tabulated in the following table:

Table 11.4.2 TIA/EIA-97D Spurious Emission Limits

Displacement from the Carrier Center Frequency f_c	Required Minimum Attenuation	Resolution Bandwidth of Spectrum Analyzer
750 kHz < $\|f - f_c\| \leq$ 1.98 MHz	45 dBc	30 kHz
1.98 MHz < $\|f - f_c\| \leq$ 4.0 MHz	55 dBc	30 kHz

A combined requirement of FCC Part 22 and TIA/EIA-97D was used as the required emissions limit mask in the measurement. The measurements were performed with an Rohde & Schwartz EMI Test Receiver (ESMI) which was calibrated in accordance with ISO 9001 process. The test set-up diagram is given in the following.

The spectrum analyzer was set with a 30 kHz resolution bandwidth and a 8 MHz span, as shown in the plots of the occupied bandwidth measurement attached in the following pages. The emissions outside the 8MHz span was evaluated in Measurement Required: Spurious Emissions at the Antenna Terminal. The maximum mean output power of the CDMA carrier, measured with a 3 MHz resolution bandwidth, aligns with the top of the spectrum analyzer display reticule, i.e., 0 dBm, by adjusting the REF LEVEL OFFSET of the spectrum analyzer. The top of the carrier measured with a 30 kHz resolution bandwidth, thus, was

16.1 dB below the carrier power measured with a resolution bandwidth greater than the carrier bandwidth 1.23 MHz. This 16.1dB offset was due to the fact that 10 log (1230kHz/30kHz) = 16.1 dB.

Results:

From the occupied bandwidth plots attached in the following, it can be seen that all the waveforms are under the required emission mask with adequate margins. The measurement results demonstrate the full compliance with the Rules of the Commission across the Cellular Frequency Band 869.0 – 894.0 MHz.
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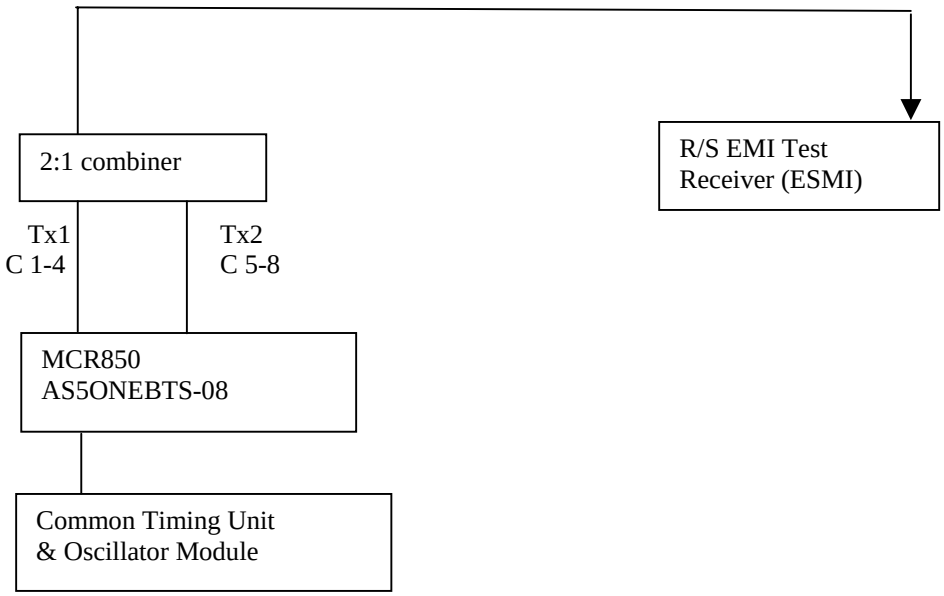
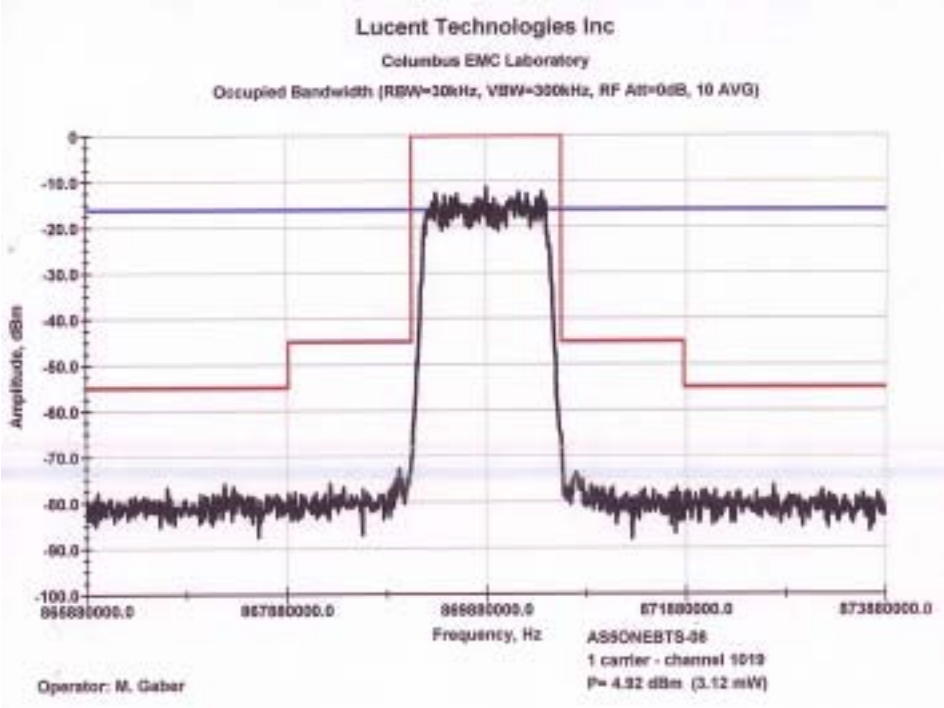
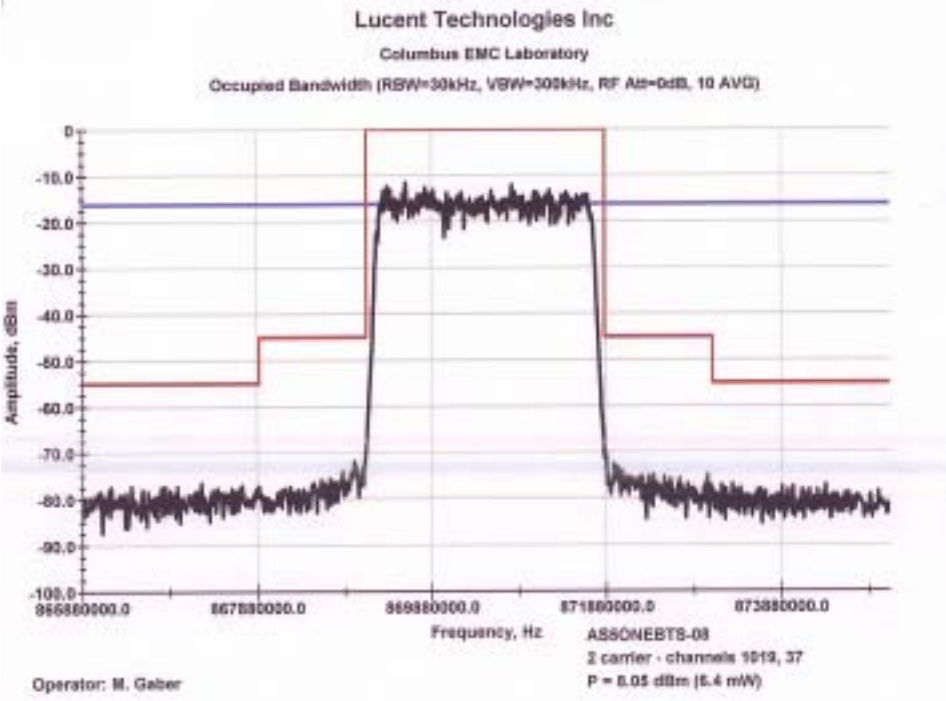
FIGURE 11.4.1 TEST SET-UP FOR MEASUREMENT OF OCCUPIED BANDWIDTH



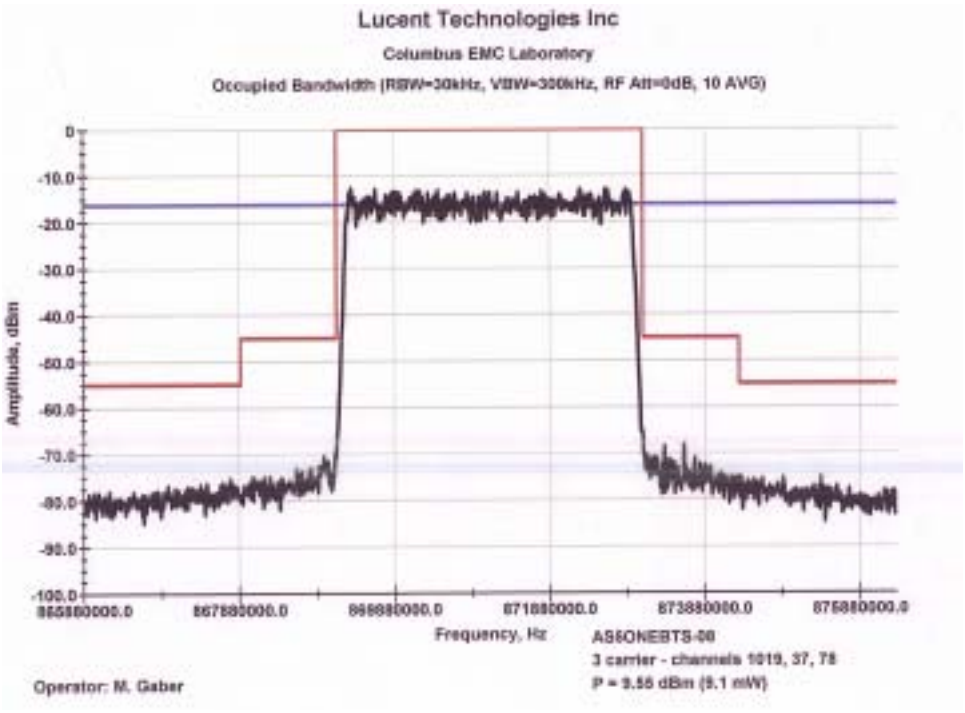
Occupied Bandwidth Plots:



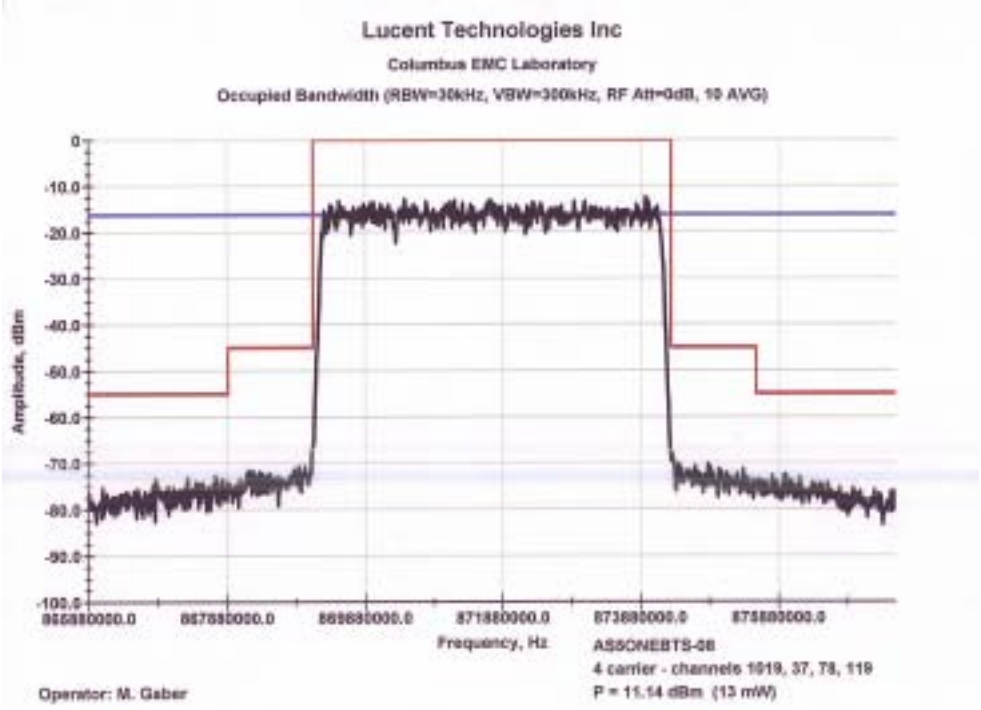
Cellular A" Band – Lower Edge Channel
Channel 1019, 869.88 MHz



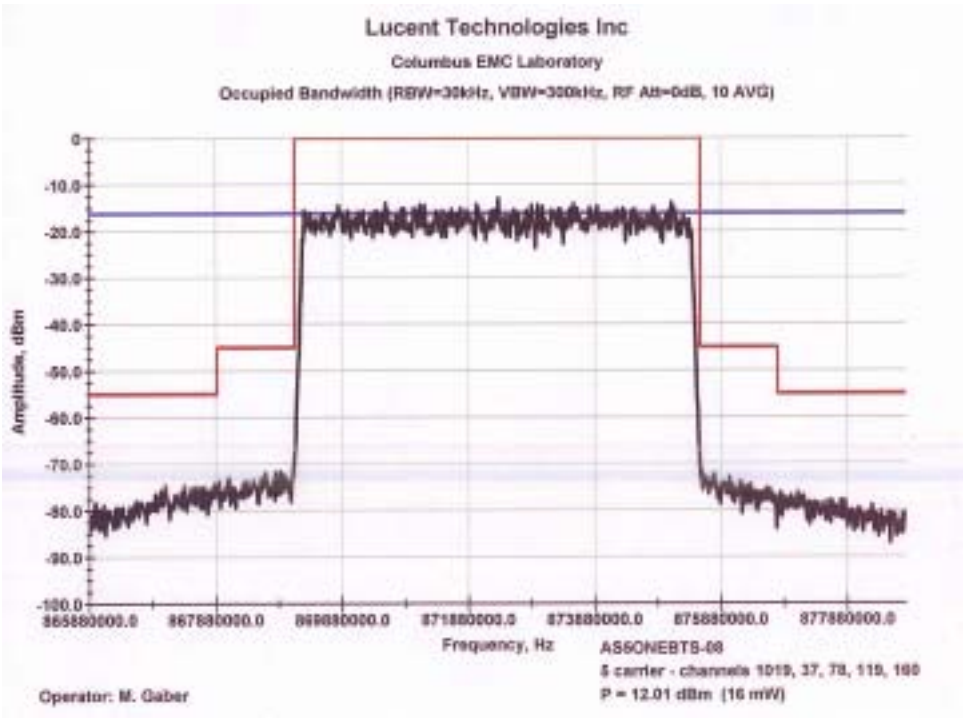
Cellular A-Band (A", A3)
2 Carrier - Channels 1019, 37



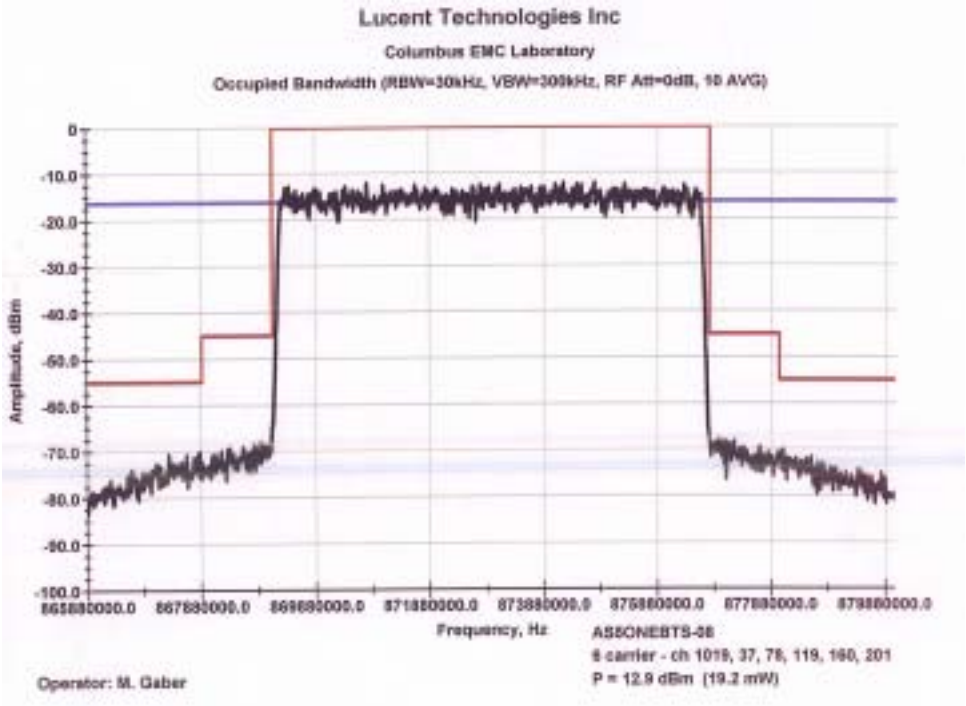
Cellular A-Band (A", A3, A2)
3 Carrier - Channels 1019, 37, 78



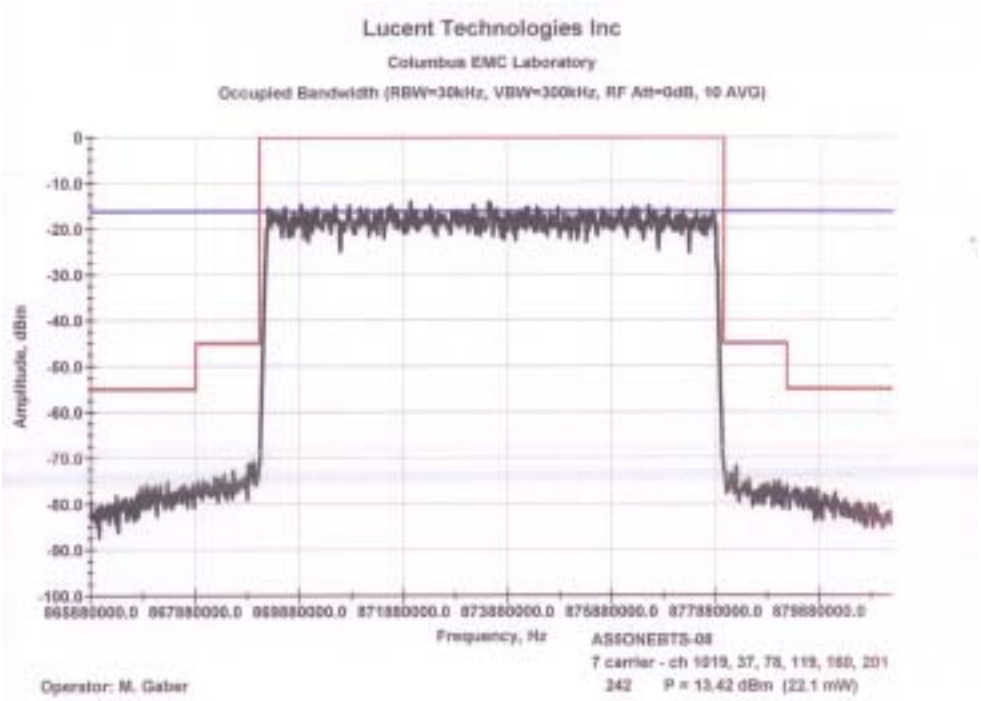
Cellular A-Band (A", A3, A2)
4 Carrier - Channels 1019, 37, 78, 119



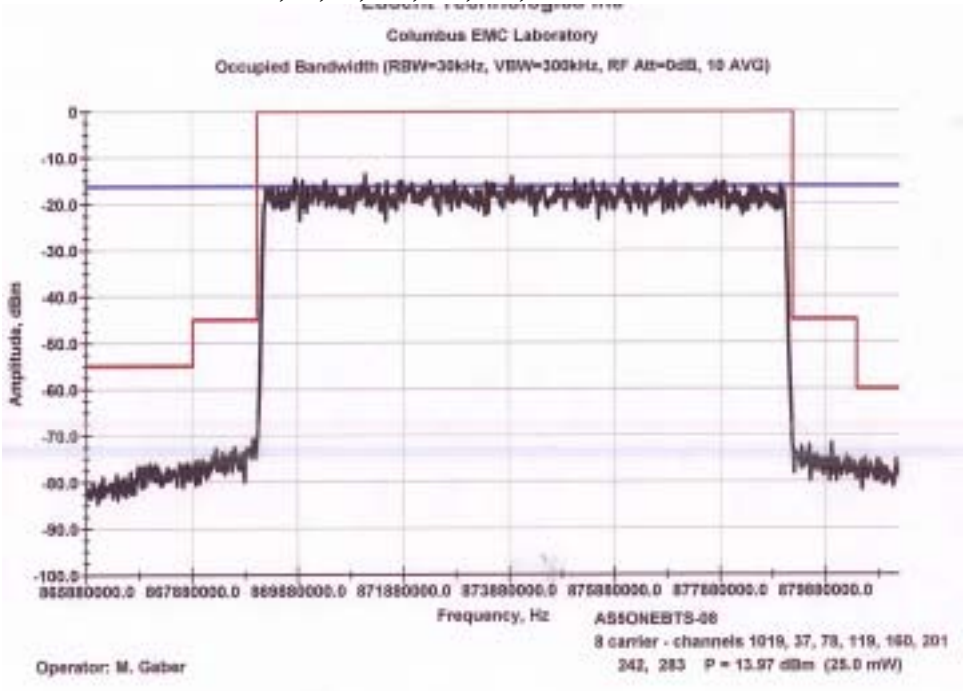
Cellular A-Band (A", A3, A2)
5 Carrier - Channels 1019, 37, 78, 119, 160



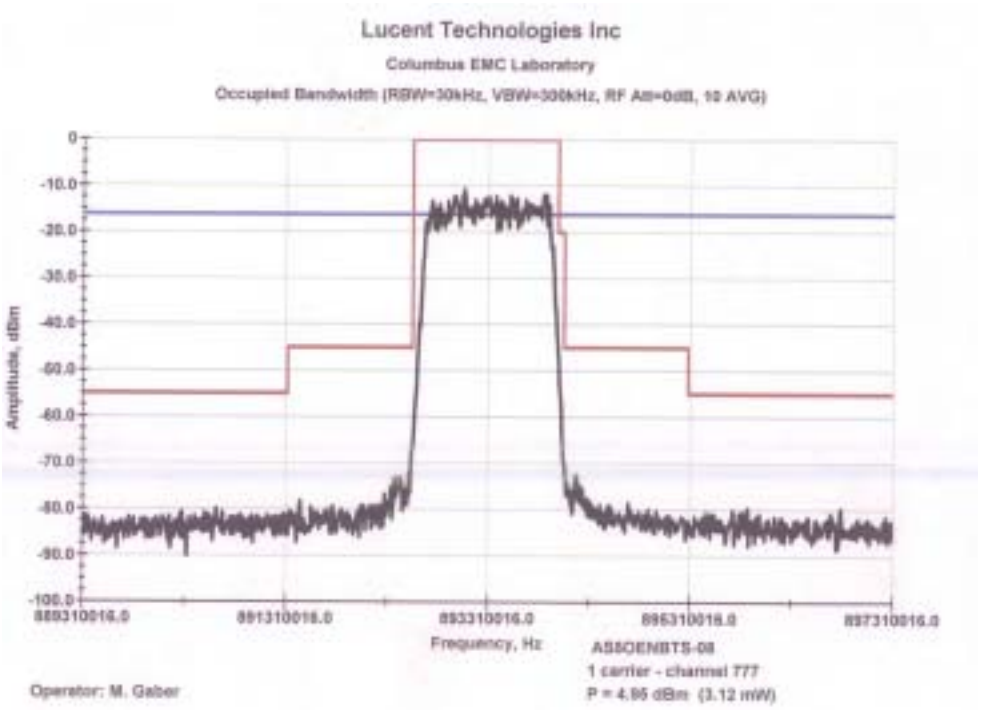
Cellular A-Band (A", A3, A2, A1)
6 Carrier - Channels 1019, 37, 78, 119, 160, 201



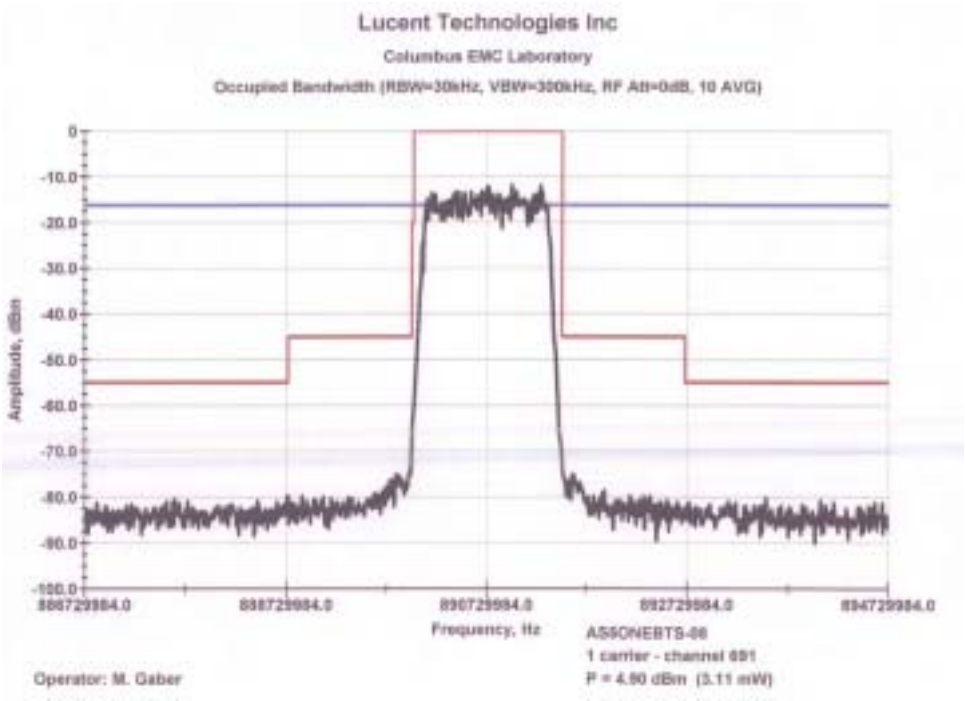
Cellular A-Band (A", A3, A2, A1)
7 Carrier - Channels 1019, 37, 78, 119, 160, 201, 242



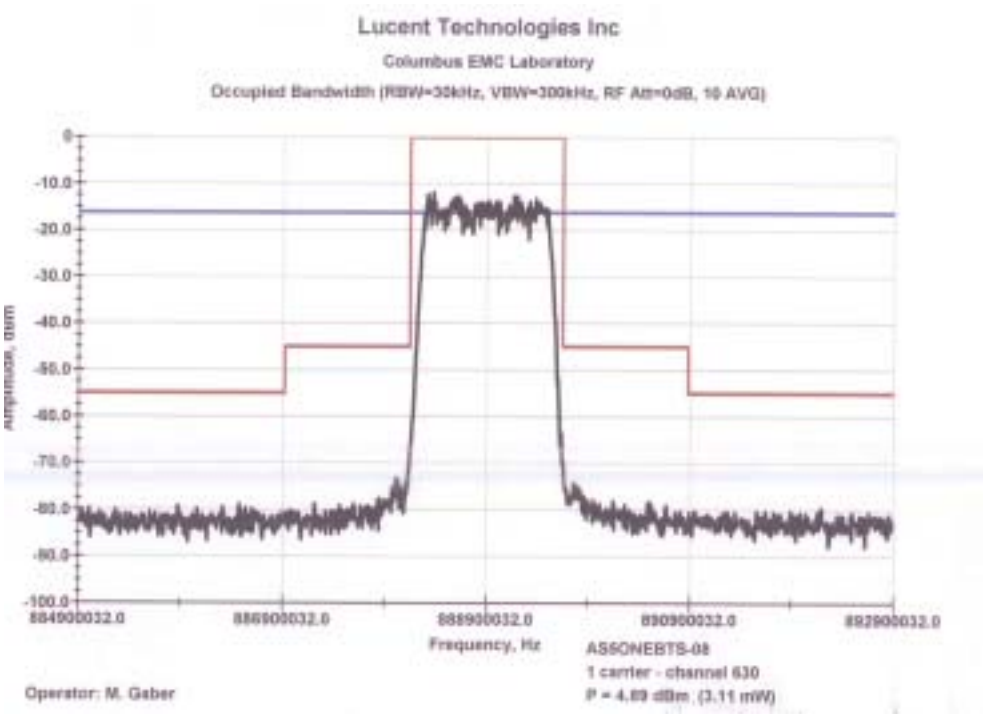
Cellular A-Band (A", A3, A2, A1)
8 Carrier - Channels 1019, 37, 78, 119, 160, 201, 242, 283



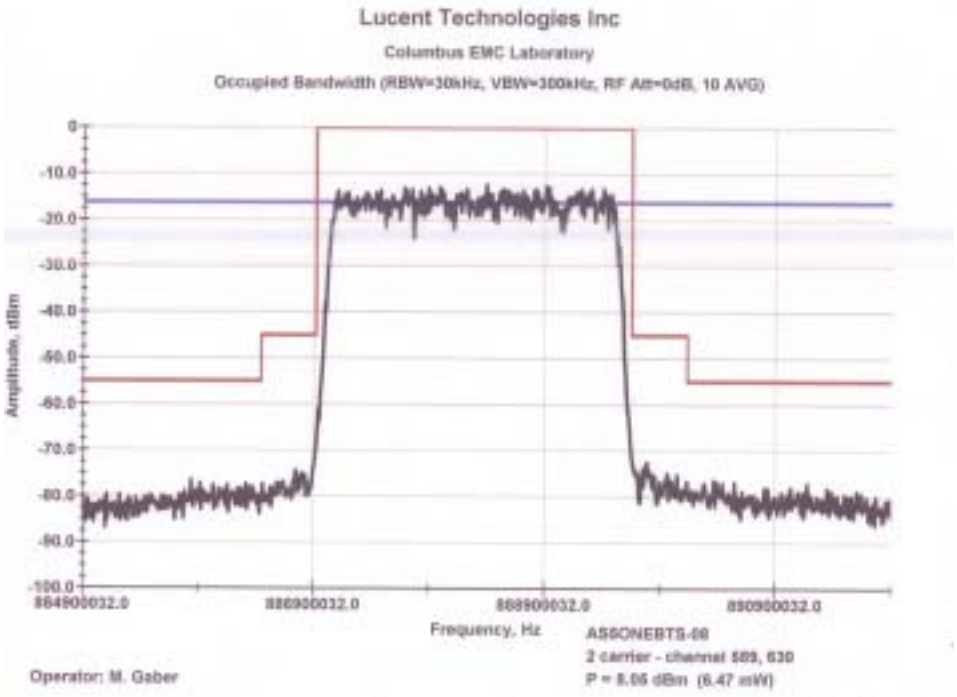
Cellular B'-Band: Upper Edge Channel
Channel 777, 893.31 MHz



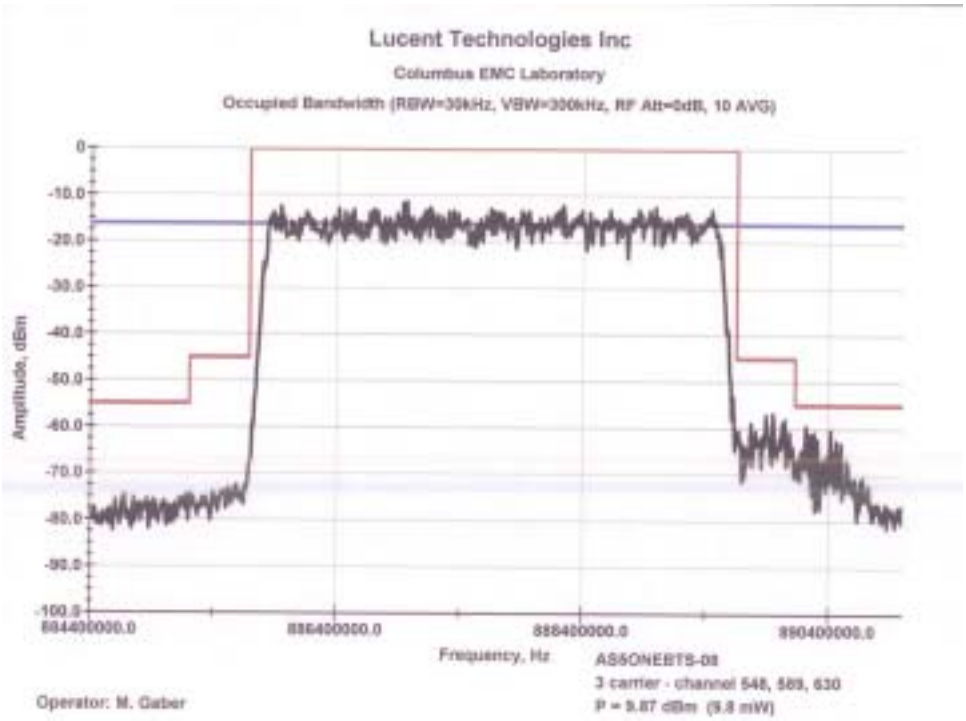
Cellular A'-Band
Channel 691, 890.73 MHz



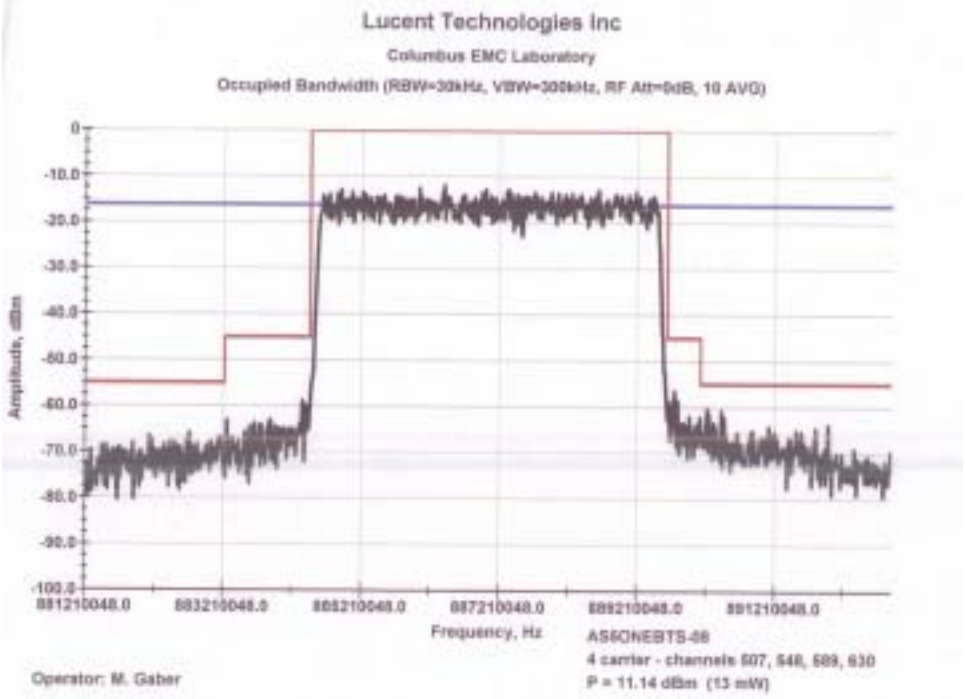
Cellular B-Band: Upper Edge Channel
Channel 630, 888.9 MHz



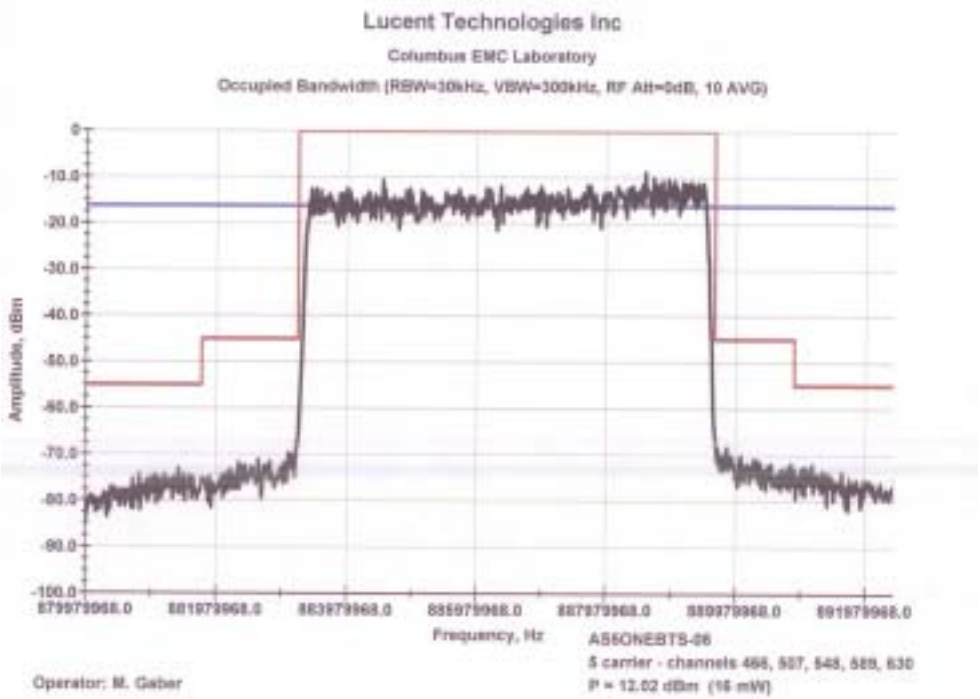
Cellular B-Band – B3, B2
2 Carrier – Channels 589, 630



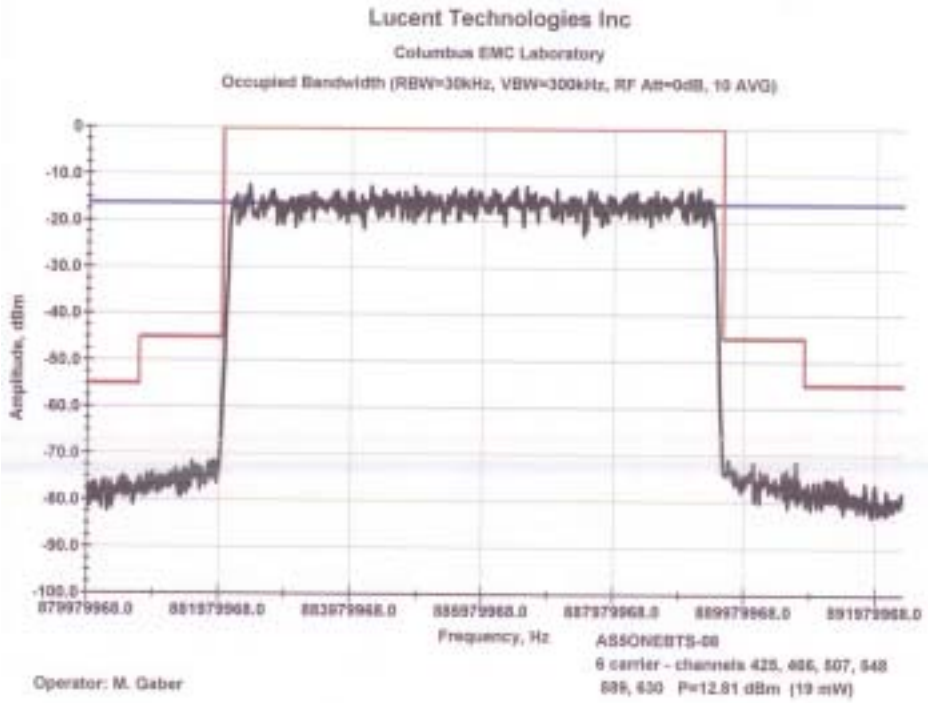
Cellular B-Band: B3, B2
3 Carrier – Channels 548, 589, 630



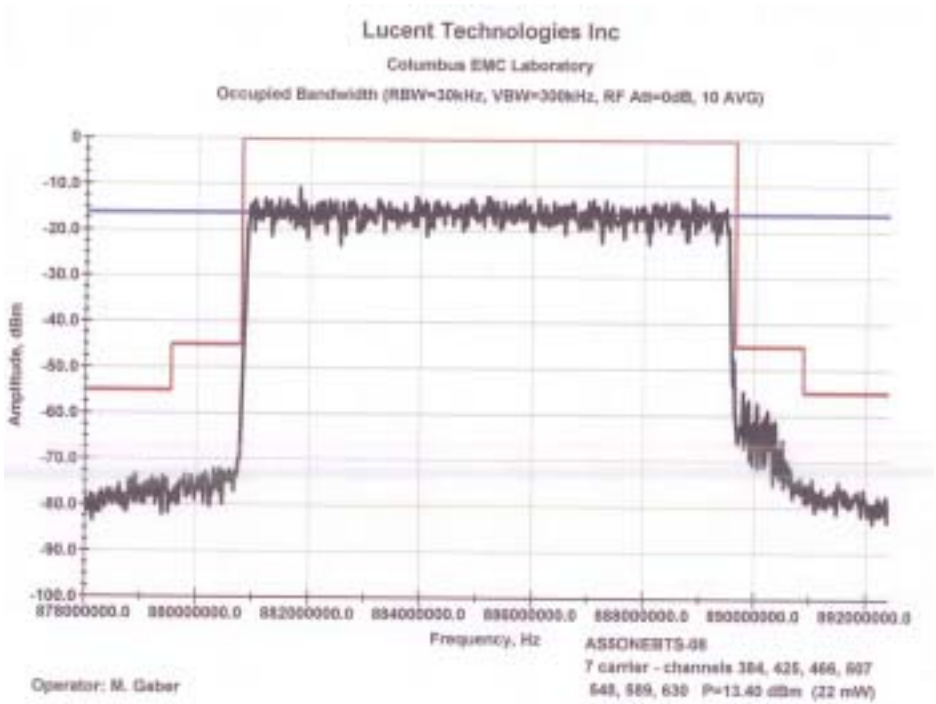
Cellular B-Band: B3, B2
4 Carrier – Channels 507, 548, 589, 630



Cellular B-Band: B3, B2, B1
5 Carrier – Channels 466, 507, 548, 589, 630



Cellular B-Band: B3, B2, B1
6 Carrier – Channels 425, 466, 507, 548, 589, 630



Cellular B-Band: B3, B2, B1
7 Carrier – Channels 382, 425, 466, 507, 548, 589, 630

SUBEXHIBIT 11.5

Section 2.1051 MEASUREMENT REQUIRED: SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS

The spurious emissions at the output terminal of the MCR850 were investigated from 10 MHz to the 10th harmonic of the carrier or 10 GHz, per Section 2.1057(a)(1). The MCR850 radio was configured by Pilot, Sync, Paging and Traffic channels, as shown in Table 11.2.1.

The spurious emission measurements were made at the output terminal combiner of the MCR850 from : 1. the lowest available cellular CDMA channels in the A band, Ch 1019 at 869.88 MHz 2. two to eight contiguous A band channels (A", A3, A2 and A1), 3. the highest available cellular CDMA channels in the B band, Ch 777 at 893.31 MHz (B'), Ch 691 at 890.73 MHz (A'), and Ch 630 at 888.90 MHz (B3) 4. two to seven contiguous B band channels (B3, B2 and B1) The carrier power level at the output terminal combiner of the MCR850 was transmitting to the maximum rated mean power.

The emission limitations and the setting of measurement equipment for the spurious emissions measurement of a 1.23MHz CDMA cellular carrier were specified in Appendix A, Section 10 of FCC 02-229 Report and Order. FCC's requirements are tabulated in the following table:

Table 11.4.1 FCC Part 22 Spurious Emission Limits

Frequency	Required Minimum Attenuation below the Mean Carrier Power *P*	Minimum Resolution Bandwidth of Spectrum Analyzer
1MHz Bands Immediately Outside the Transmitting Frequency Band	(43 + P dBW) dBc	12.3 kHz
Out-of-Band (other than above)	(43 + P dBW) dBc	100 kHz

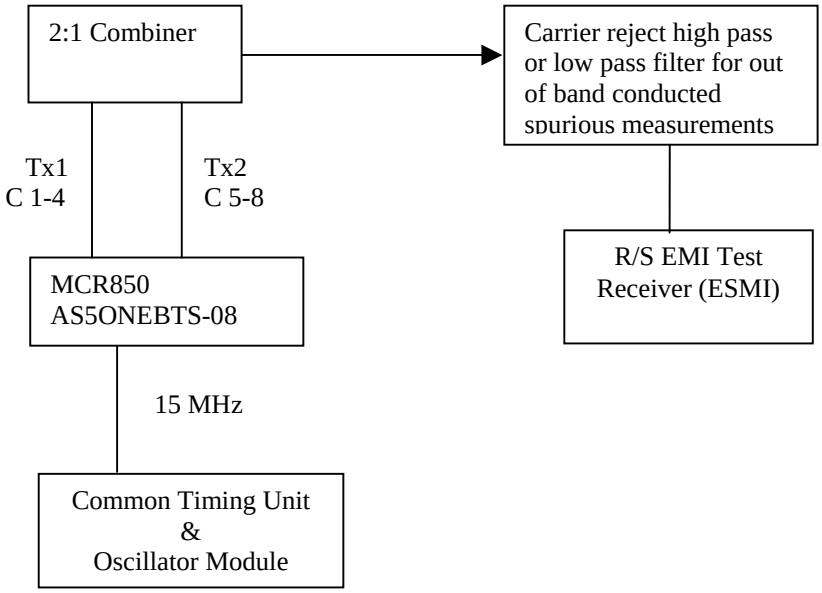
Sections 2.1051 and 2.1057(c) specify that the spurious emissions attenuated more than 20 dB below the permissible value need not be reported.

The measurements were performed with a Rohde & Schwarz ESMI Spectrum Analyzer which was calibrated in accordance with ISO 9001 process. The test set-up diagram is given in the following.

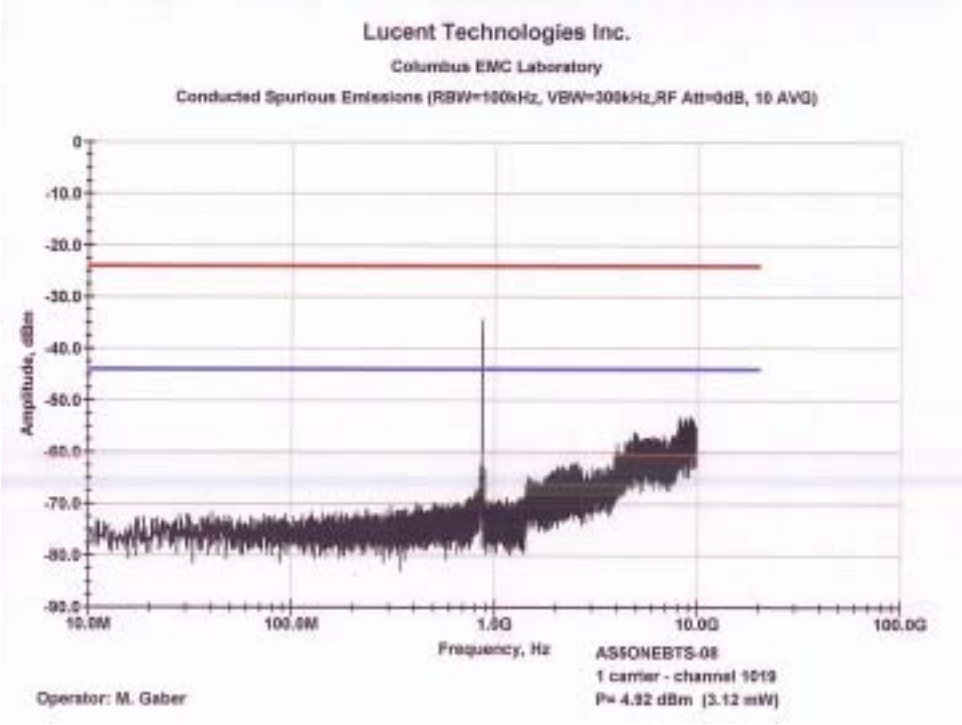
Results:

No reportable conducted spurious emissions were detected at the output terminal of the MCR850 transceiver during the entire spectrum investigated (10MHz to 10GHz). The measurement results of the AS5ONEBTS-08 MCR850 transceiver, subject of this application, demonstrate the full compliance with the Rules of the Commission of the Cellular bands.

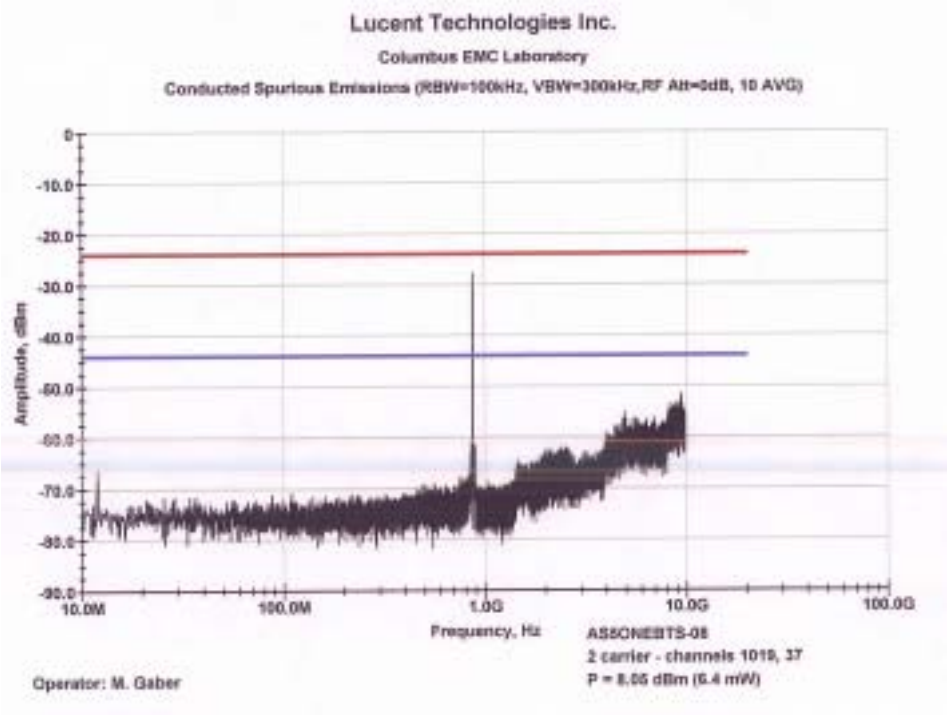
FIGURE 11.5.1 TEST SET-UP FOR MEASUREMENT OF CONDUCTED SPURIOUS EMISSIONS



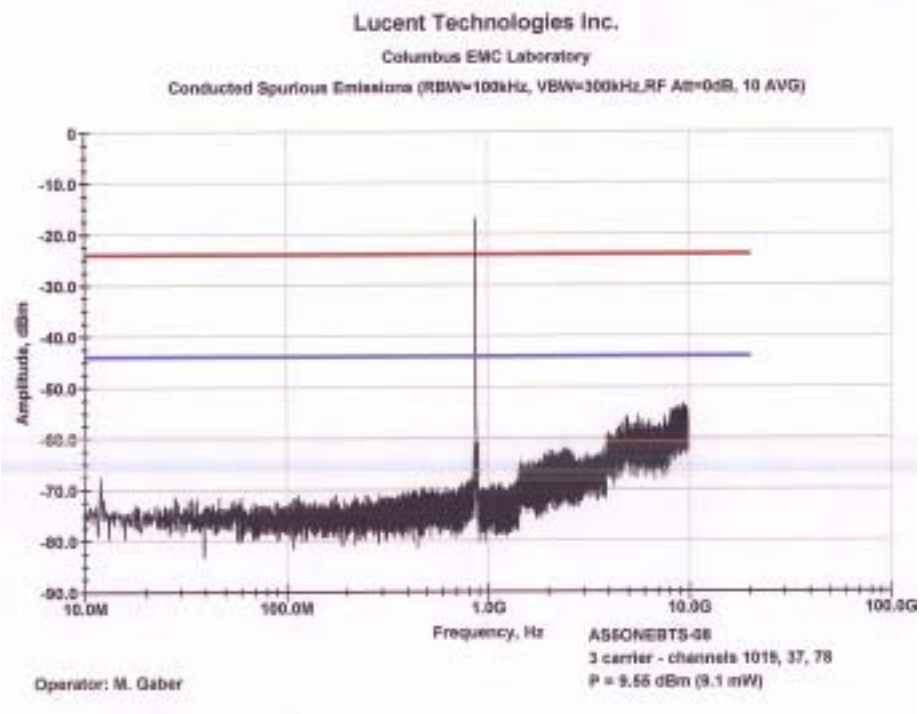
Conducted Spurious Plots



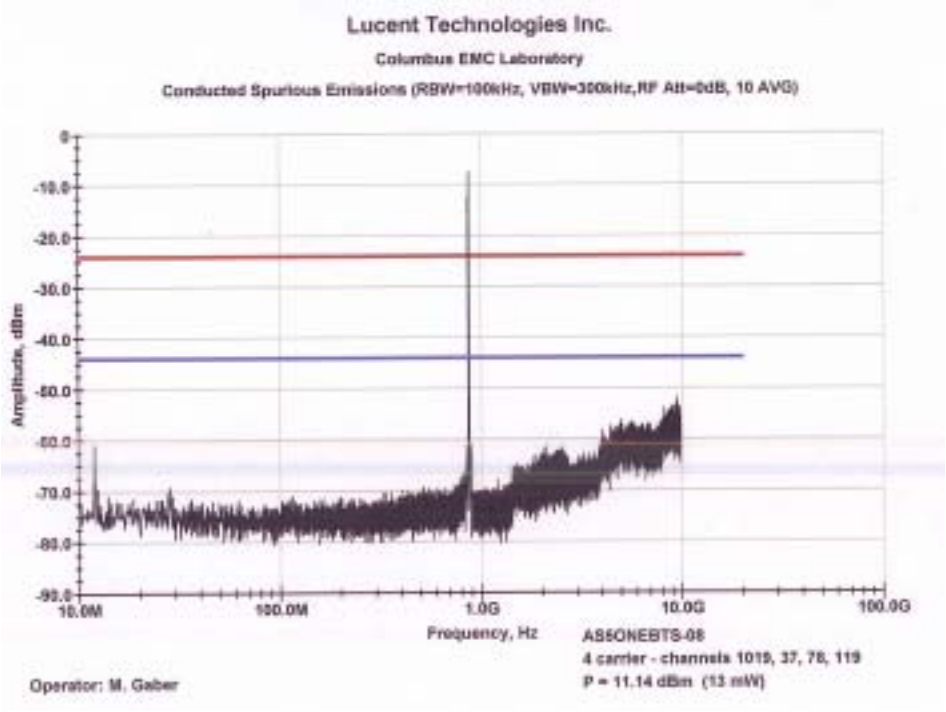
Cellular A" Band – Lower Edge Channel
Channel 1019, 869.88 MHz



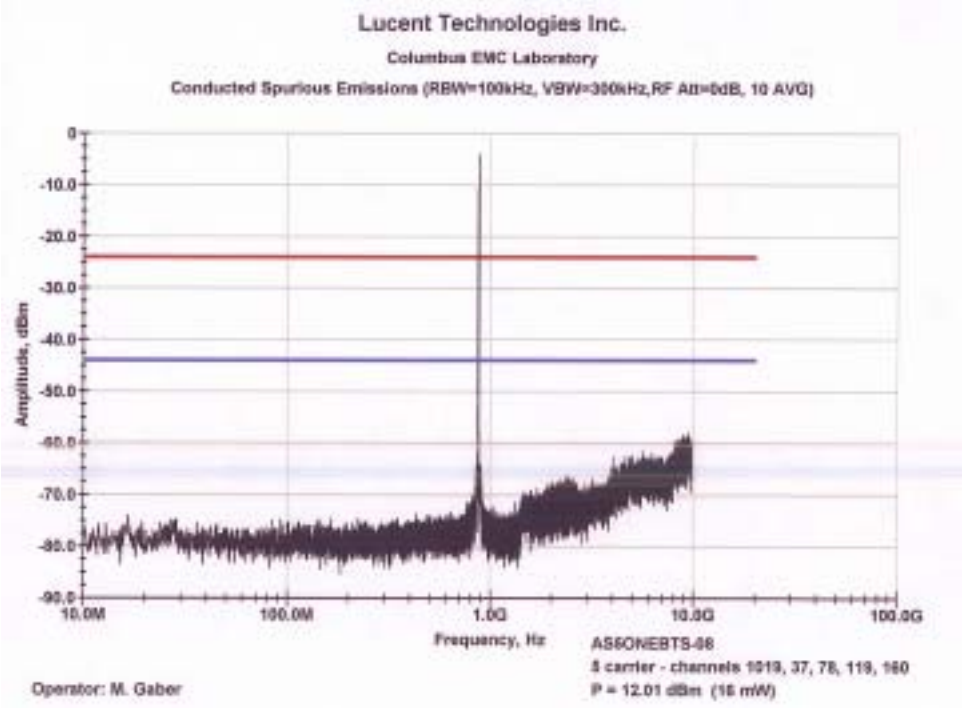
Cellular A-Band (A", A3)
2 Carrier - Channels 1019, 37



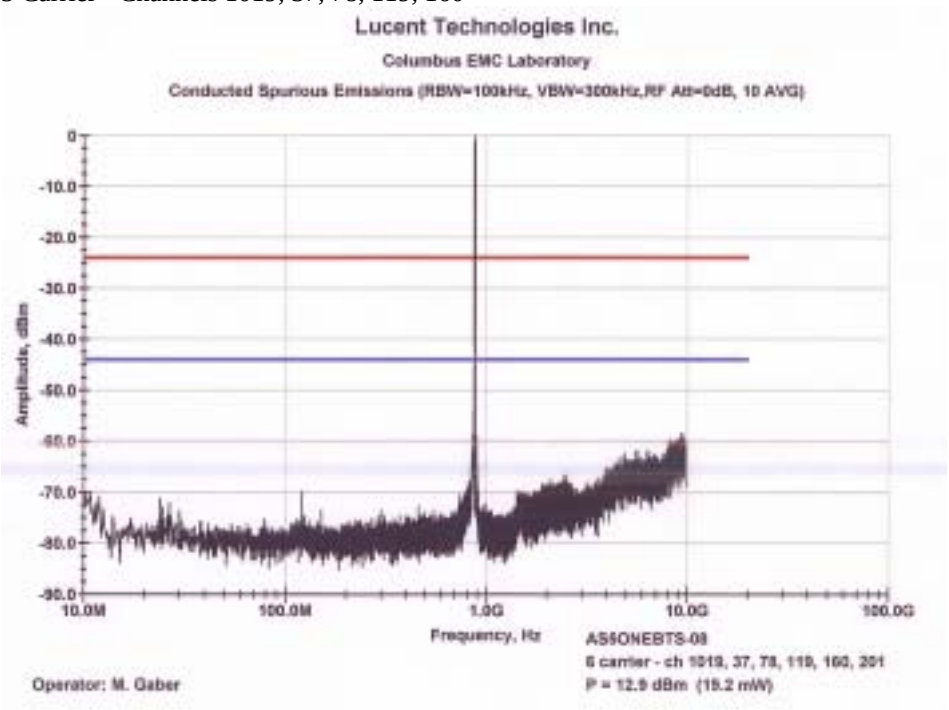
Cellular A-Band (A", A3, A2)
3 Carrier - Channels 1019, 37, 78



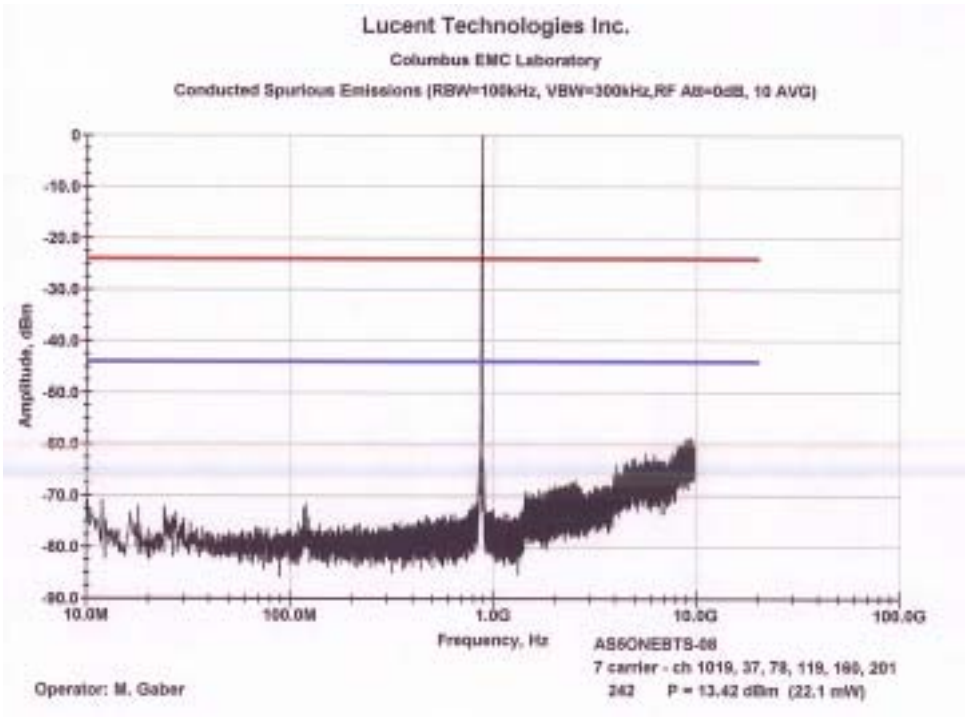
Cellular A-Band (A", A3, A2)
4 Carrier - Channels 1019, 37, 78, 119



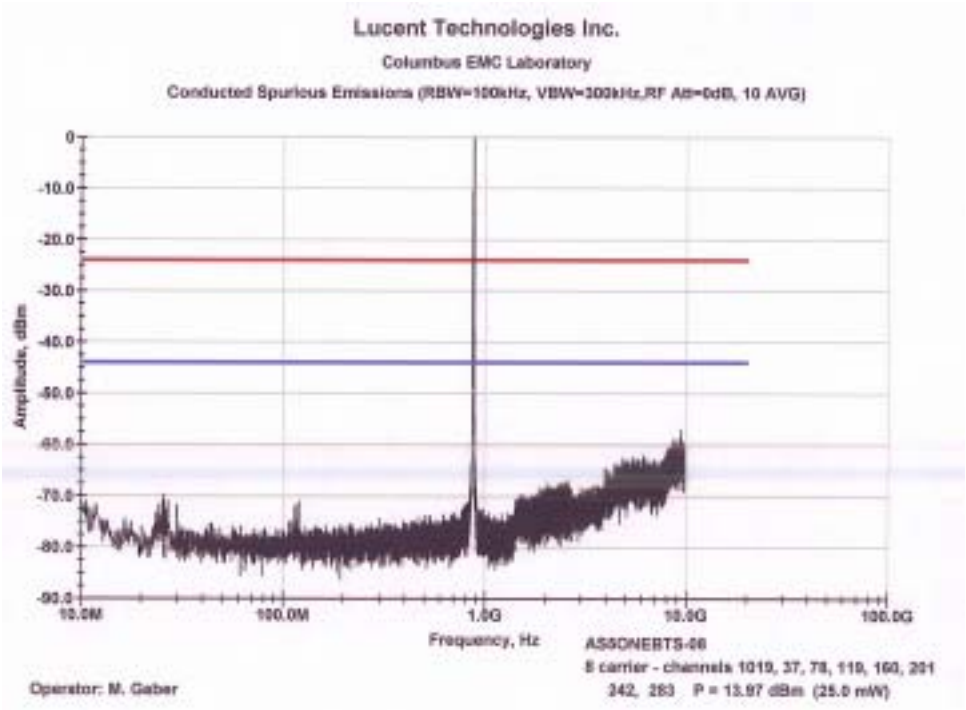
Cellular A-Band (A", A3, A2)
5 Carrier - Channels 1019, 37, 78, 119, 160



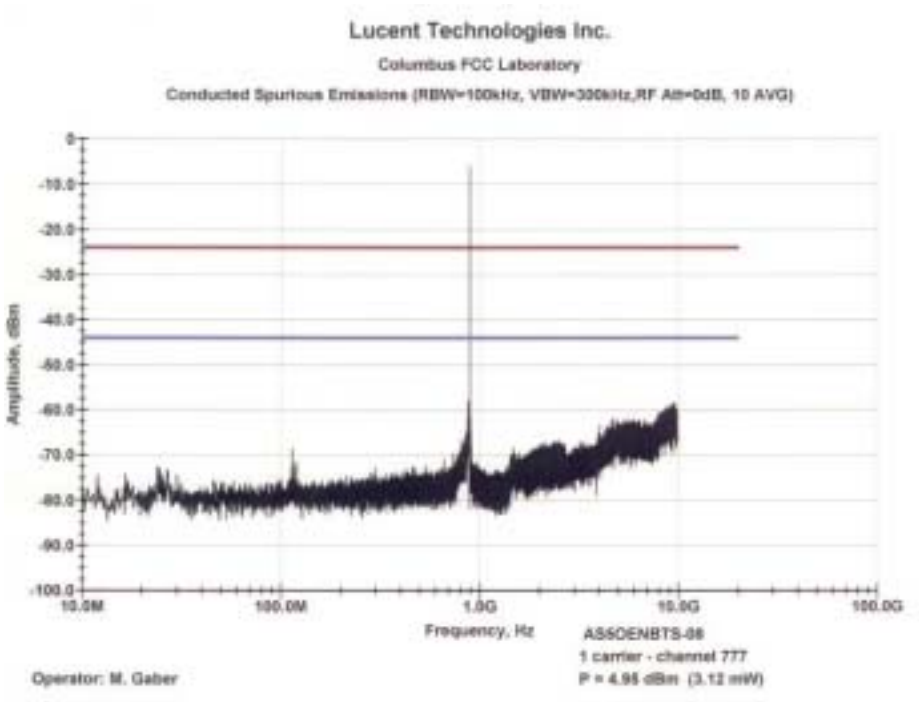
Cellular A-Band (A", A3, A2, A1)
6 Carrier - Channels 1019, 37, 78, 119, 160, 201



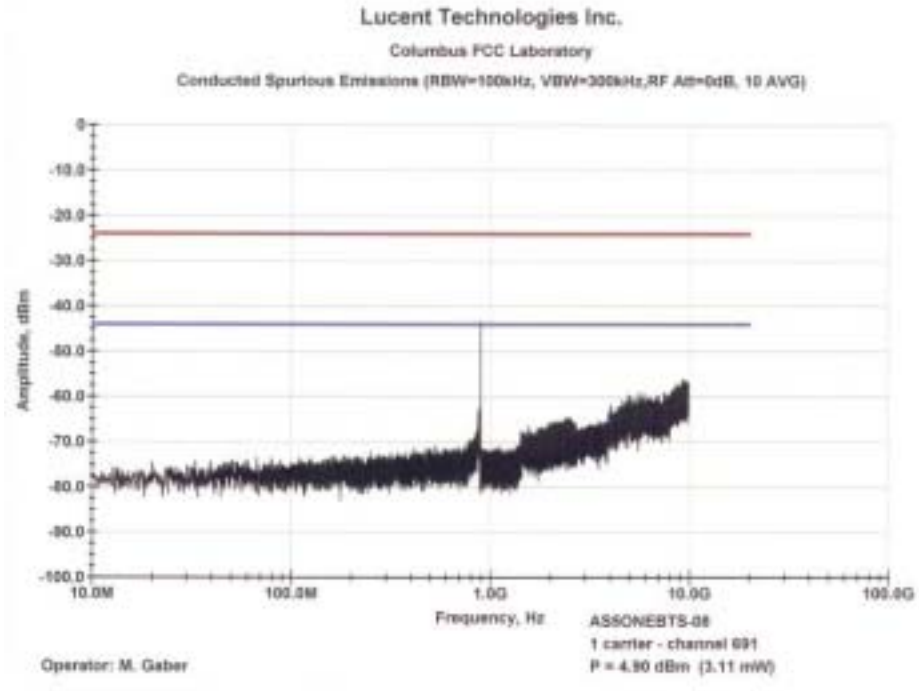
Cellular A-Band (A", A3, A2, A1)
7 Carrier - Channels 1019, 37, 78, 119, 160, 201, 242



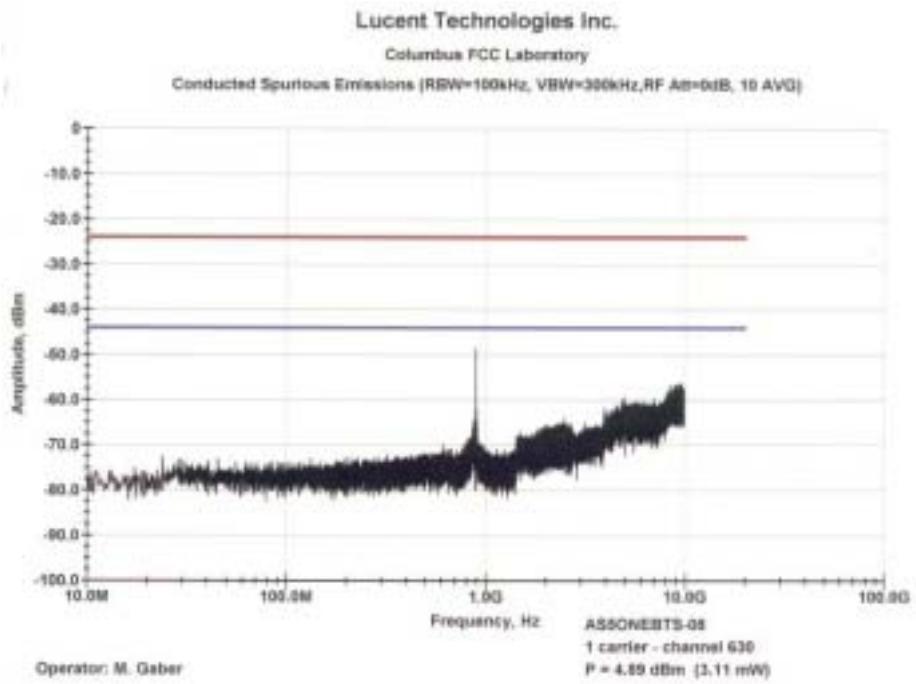
Cellular A-Band (A", A3, A2, A1)
8 Carrier - Channels 1019, 37, 78, 119, 160, 201, 242, 283



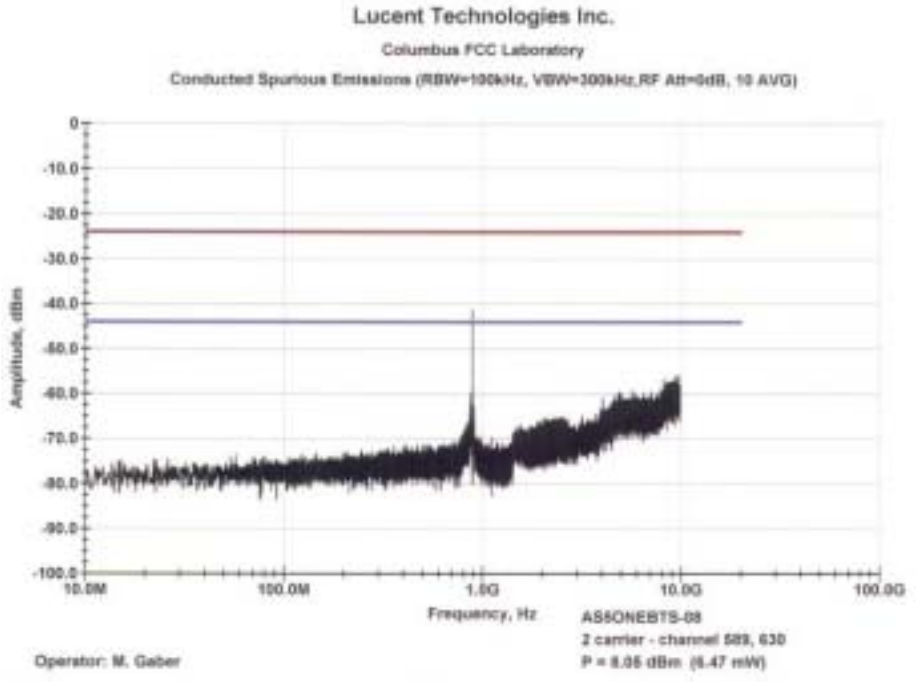
Cellular B'-Band: Upper Edge Channel
Channel 777, 893.31 MHz



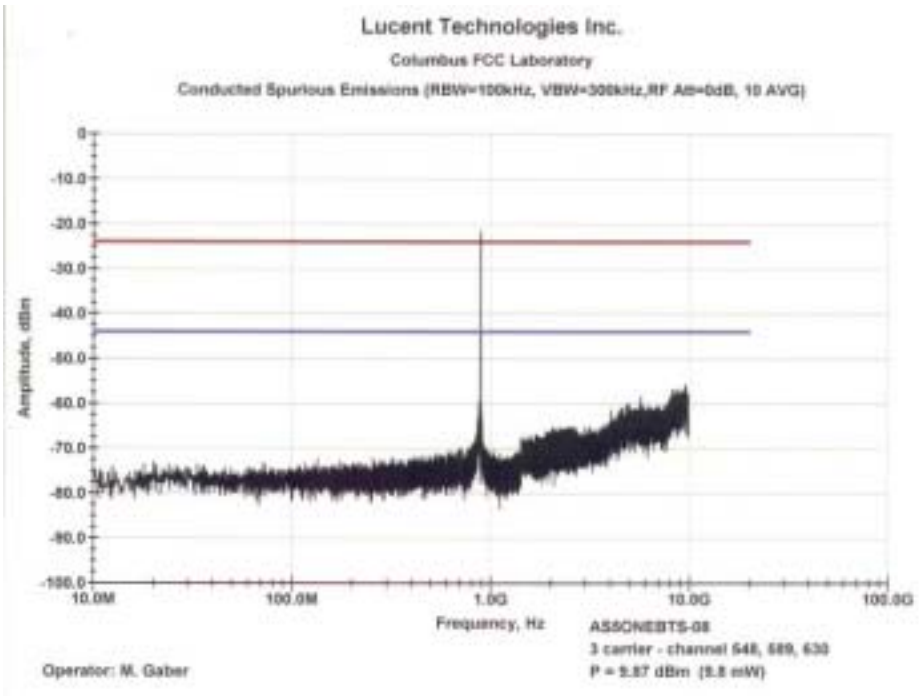
Cellular A'-Band
Channel 691, 890.73 MHz



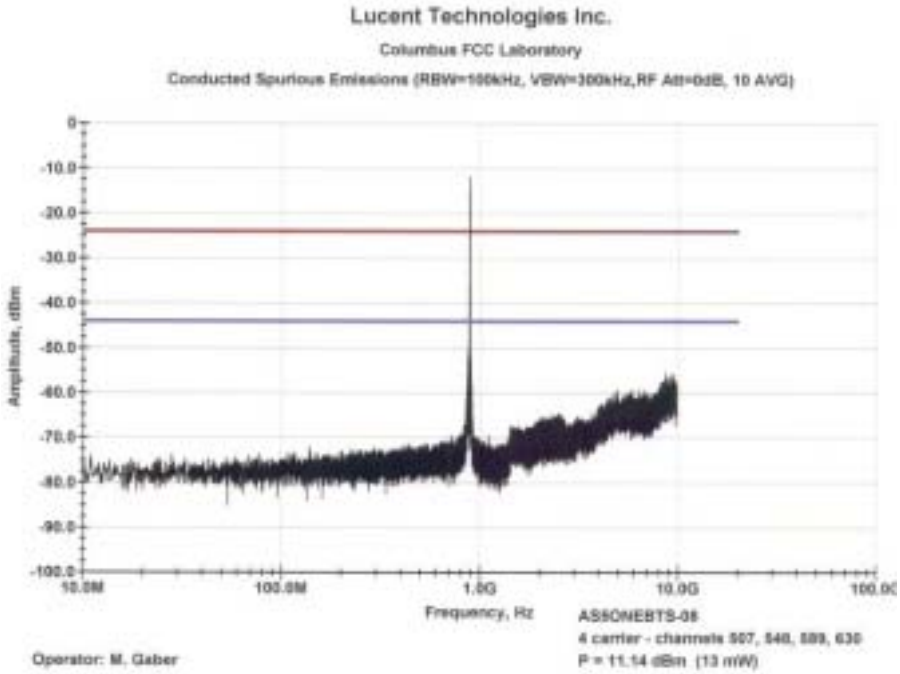
Cellular B-Band: Upper Edge Channel
Channel 630, 888.9 MHz



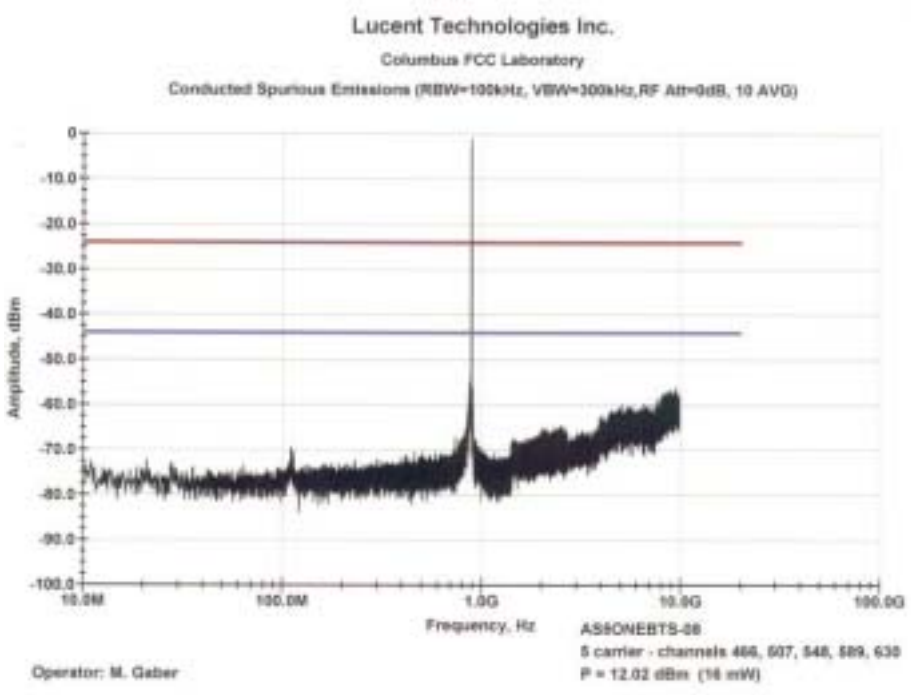
Cellular B-Band – B3, B2
2 Carrier – Channels 589, 630



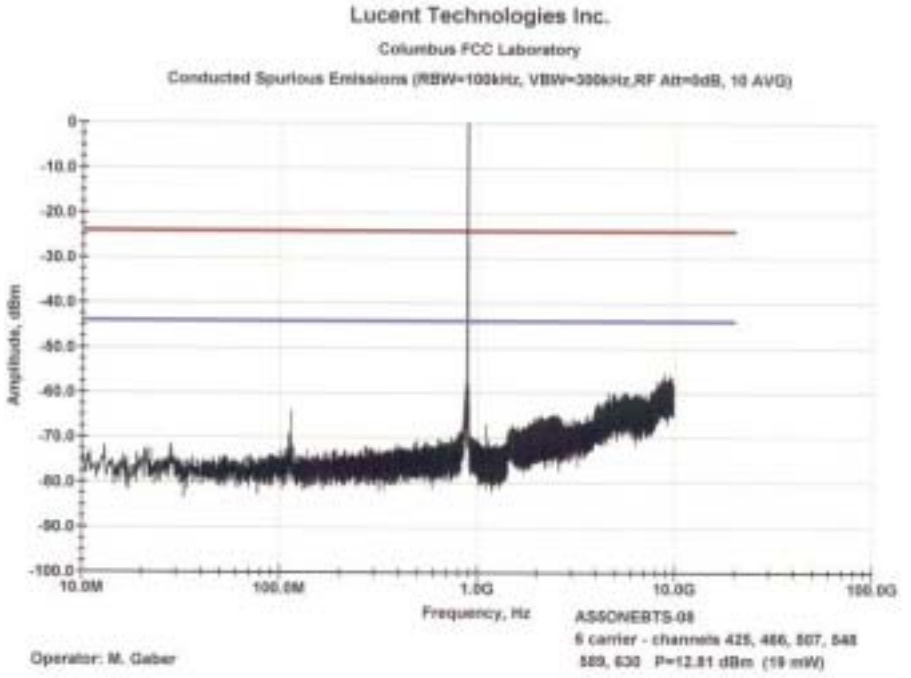
Cellular B-Band: B3, B2
3 Carrier – Channels 548, 589, 630



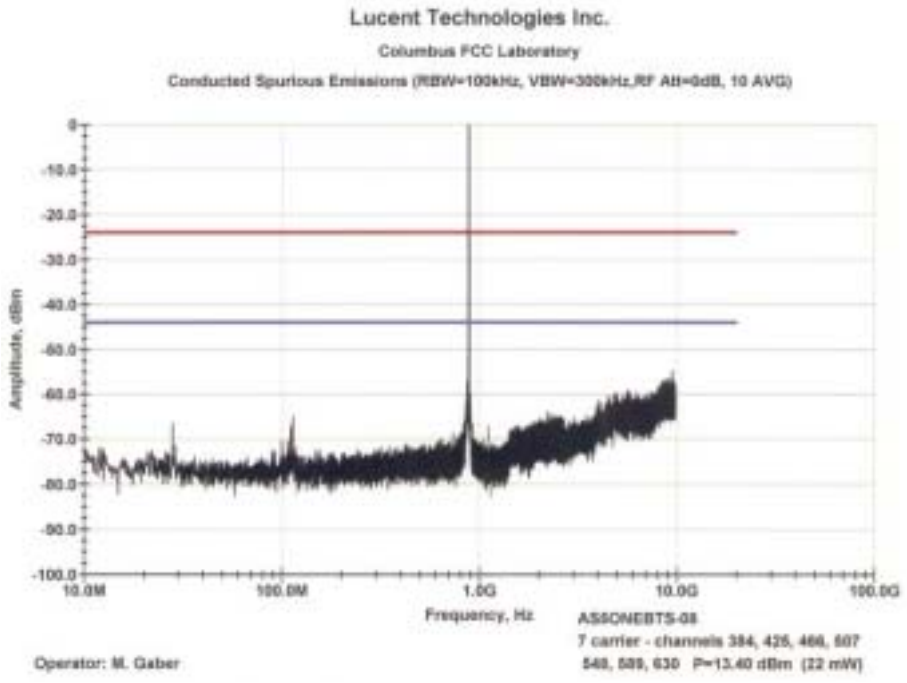
Cellular B-Band: B3, B2
4 Carrier – Channels 507, 548, 589, 630



Cellular B-Band: B3, B2, B1
5 Carrier – Channels 466, 507, 548, 589, 630



Cellular B-Band: B3, B2, B1
6 Carrier – Channels 425, 466, 507, 548, 589, 630



Cellular B-Band: B3, B2, B1
7 Carrier – Channels 382, 425, 466, 507, 548, 589, 630

SUBEXHIBIT 11.6

Section 2.1053 MEASUREMENT REQUIRED: FIELD STRENGTH OF SPURIOUS RADIATION

The field strength measurements of radiated spurious emissions were made in a FCC registered three meter semi-anechoic chamber which is maintained by Lucent Technologies Bell Laboratories in Columbus, Ohio.

The MCR850 was investigated from 10 MHz to the 10th harmonic of the carrier or 10 GHz, per Section 2.1057(a)(1). The equipment under test (EUT) was configured as in the normal mode of the installation and operation. The recommendations of ANSI C63.4–1992 were followed for EUT testing setup and cabling..

The emission limitations and the setting of measurement equipment for the occupied bandwidth measurement of a 1.23MHz CDMA cellular carrier were specified in Appendix A, Section 10 of FCC 02-229 Report and Order and shown in Table 11.4.1.

By using the relation between the electric field strength of an ideal dipole and its excitation power given in Reference Data for Radio Engineers, page 676, 4th edition, ITT Corp., the emission limit calculated equals

Frequency of Emission (MHz)	Distance (m)	E (dBμV/m)	E (dBm)	RBW
10-10,000	3	84.1	-22.9	100kHz

The field strength of radiated spurious emissions measured was determined by

$$E\ (\text{dB}\mu\text{V/m}) = V_{meas}\ (\text{dB}\mu\text{V}) + \text{Amplifier Gain / Cable Loss (dB)} + \text{Antenna Factor (dB1/m)}.$$

Sections 2.1051 and 2.1057(c) specify that the spurious emissions attenuated more than 20 dB below the permissible value need not be reported. Therefore, the reportable limit at 3 meter is 64.1 dBμV/m (-42.9 dBm).

All the measurement equipment used, including antennas, R/S ESMI EMI Test Receiver, HP Spectrum Analyzer, pre-amplifiers, etc., was calibrated in accordance with ISO 9001 process. The EUT configuration diagram is given in the following.

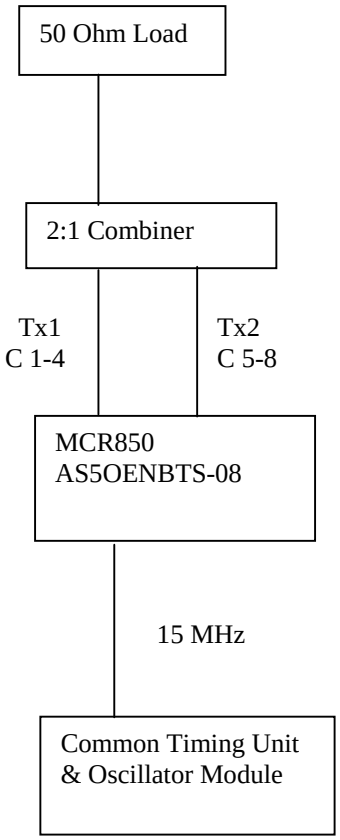
Results:

Over the frequency spectrum investigated (10MHz to 10GHz), no reportable radiated spurious emissions were detected. The measurement results of the MCR850 transceiver, subject of this application, demonstrate the full compliance with the Rules of the Commission.

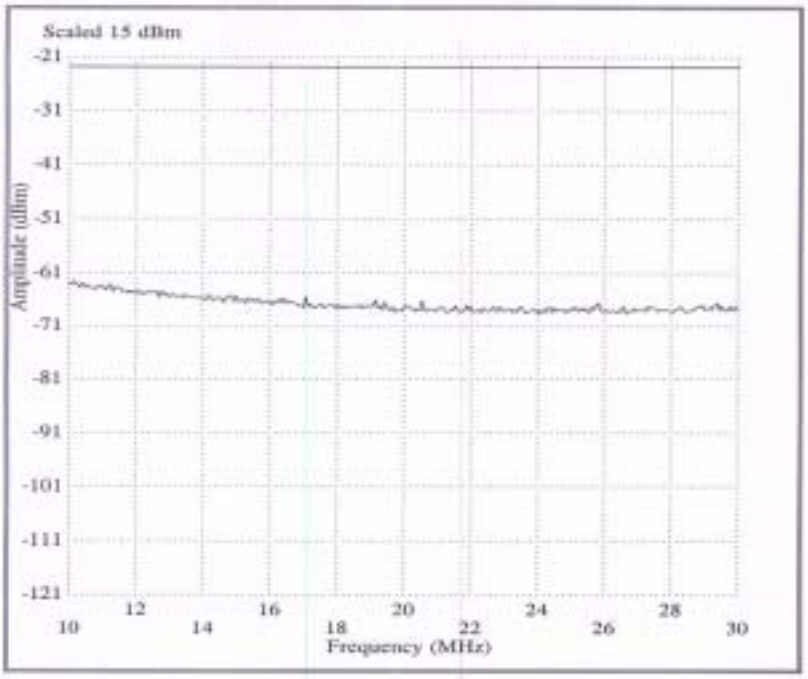
Worst Case Radiated Spurious Emissions

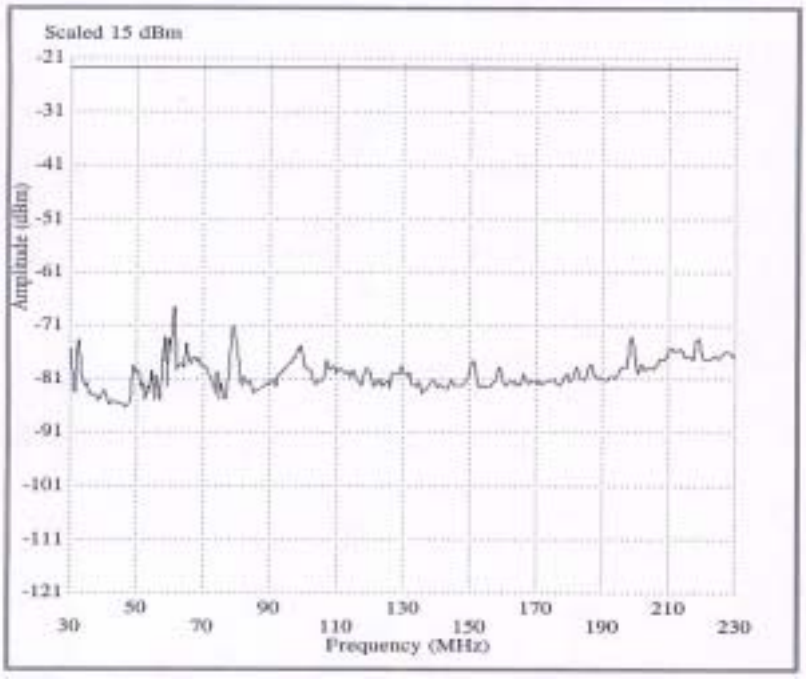
Frequency (MHz)	Antenna Polarity	Measured Radiated Field Strength (dBm)	Measured Radiated Field Strength (dBuV/m)	Path Gain Amplifier / Cable (dB)	Antenna Factor (dB)	Equivalent Transmit Power (dBm)	Pass/Fail
926.4	V	-56.10	50.9	16.37	24.09	-48.38	Pass

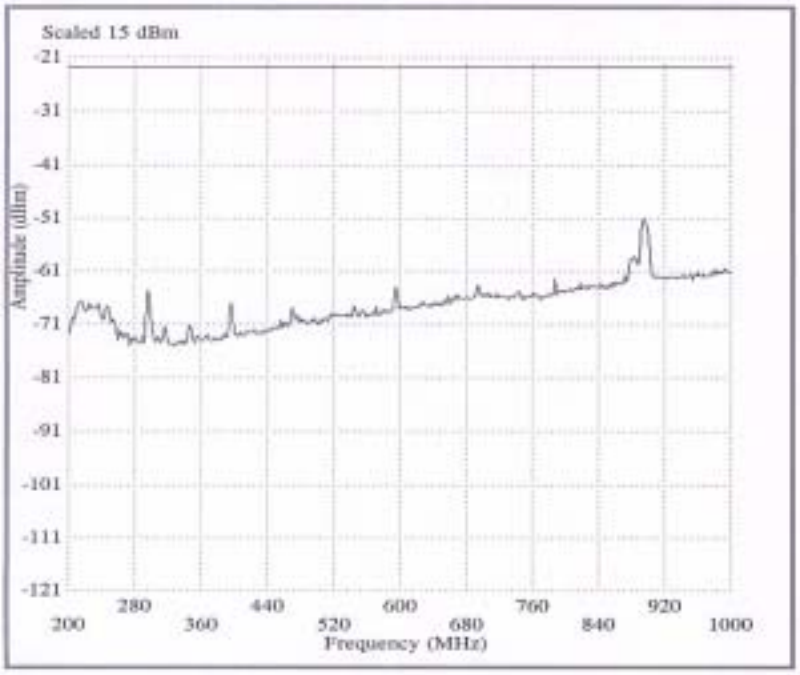
FIGURE 11.6.1 EUT FOR MEASUREMENT OF RADIATED SPURIOUS EMISSIONS

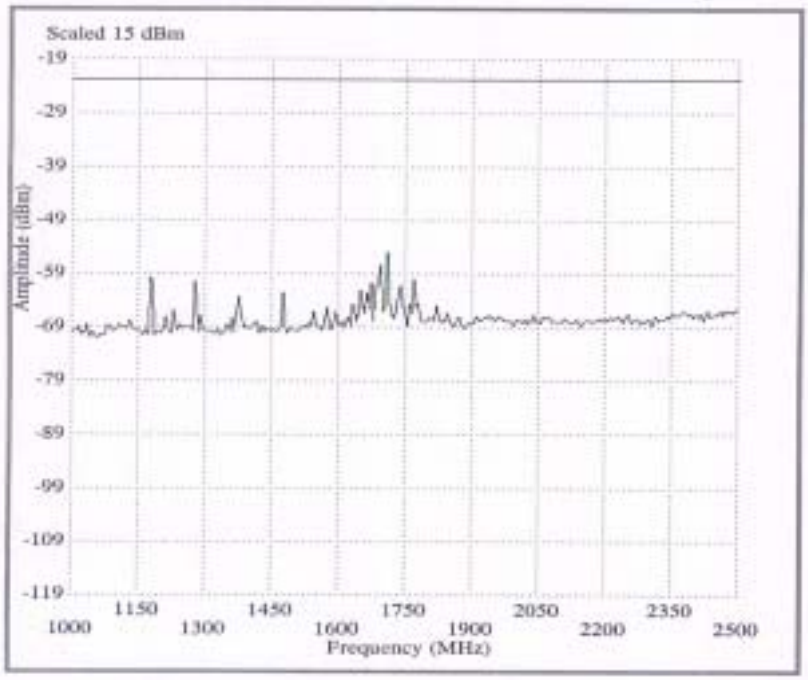


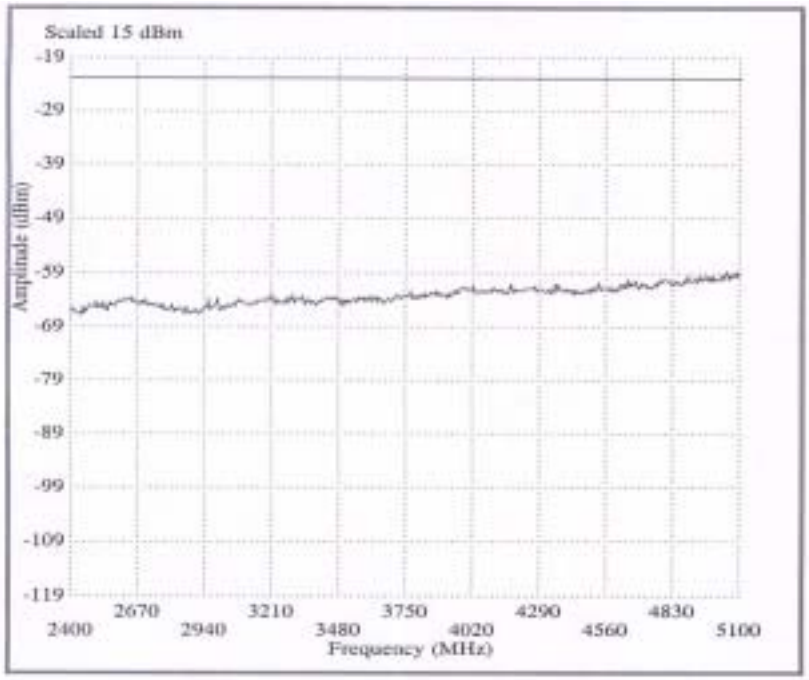
Radiated Spurious Emissions Plots:

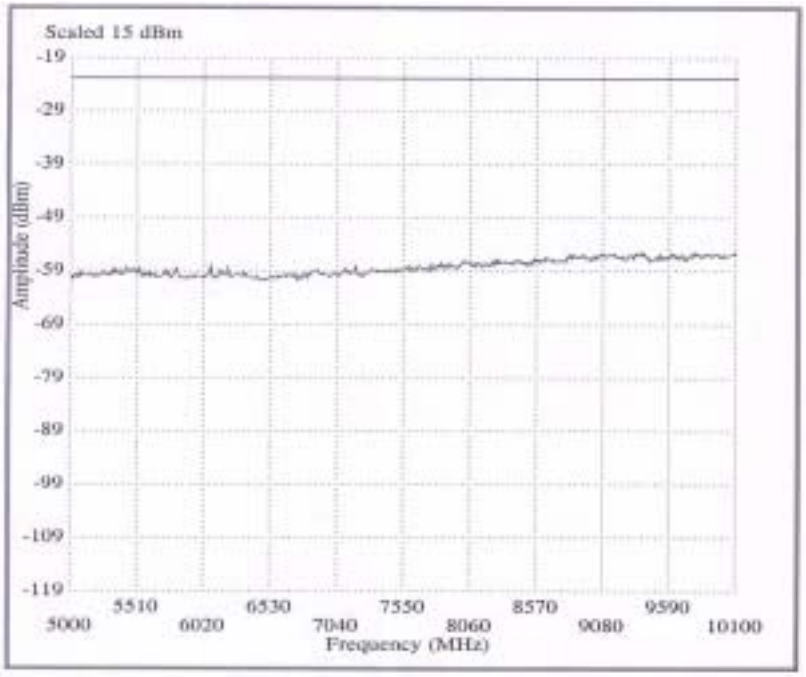





Scaled 15 dBm
-21
-31
-41
-51
-61
-71
-81
-91
-101
-111
-121
Amplitude (dBm)
200
280
360
440
520
600
680
760
840
920
1000
Frequency (MHz)


Scaled 15 dBm
-19
-29
-39
-49
-59
-69
-79
-89
-99
-109
-119
Amplitude (dBm)
1000
1150
1300
1450
1600
1750
1900
2050
2200
2350
2500
Frequency (MHz)


Scaled 15 dBm
-19
-29
-39
-49
-59
-69
-79
-89
-99
-109
-119
Amplitude (dBm)
2400
2670
2940
3210
3480
3750
4020
4290
4560
4830
5100
Frequency (MHz)


Scaled 15 dBm
-19
-29
-39
-49
-59
-69
-79
-89
-99
-109
-119
Amplitude (dBm)
5000
5510
6020
6530
7040
7550
8060
8570
9080
9590
10100
Frequency (MHz)

SUBEXHIBIT 11.7

Section 2.1055 MEASUREMENT REQUIRED: FREQUENCY STABILITY

The output frequency of the MCR-850 is determined by the internal transmit synthesizer and the external OM. The 15 MHz output frequency of OM is disciplined by the CTU using a PLL and GPS reference.

The stability of the MCR850 output frequency was measured at the MCR850 output terminal from –30 °C to +55 °C in 5 and 10 °C steps and with a variation of primary supply voltage from 85% to 115% of the nominal value per Section 2.1055. The nominal supply voltage is +24 VDC. The 85% of 24 VDC is 20.4 V and 115% is 27.6 V. One MCR850 was set to transmit at CDMA Cellular Channel 425, 882.75 MHz. The carrier was modulated with a combination of Pilot, Sync, Paging and Traffic channels. The output power of the MCR850 was set to its maximum rated value at the transmit port. The frequency was measured at the radio output every 30 seconds at each temperature and each supply voltage. Seven data were collected at each temperature and each supply voltage.

At each temperature and each supply voltage, the MCR850 was given sufficient time for its thermal stabilization. Thermal-couplers were attached to the MCR faceplate, CTU faceplate and the exterior surface of the Modular Cell. The primary OM was used for providing 15MHz reference frequency to the CTU. The temperature was recorded during the testing to ensure that the thermal stability was achieved at each temperature prior to frequency measurement.

The minimum requirement specified in Section 22.355 for CDMA Cellular transmitter is ±1.50 ppm. TIA/EIA-97-D Section 4.1.2.3 specifies the minimum requirement is ±0.050 ppm.

The maximum measured frequency derivations (Δf) from 882.75MHz at each temperature and supply voltage are summarized in the following table.

Stabilized Temp. (°C)	**Δf 85% V_{norm} (ppm)**	**Δf 100% V_{norm} (ppm)**	**Δf 115% V_{norm} (ppm)**
-30	4.99E-3	5.03E-3	6.04E-3
-25	4.18E-3	4.96E-3	5.09E-3
-15	4.61E-3	4.57E-3	4.83E-3
-5	4.23E-3	4.01E-3	4.49E-3
5	4.72E-3	3.99E-3	3.51E-3
+15	4.88E-3	3.85E-3	4.53E-3
+25	4.19E-3	3.80E-3	3.85E-3
+35	3.54E-3	3.87E-3	3.74E-3
+45	3.83E-3	4.16E-3	4.56E-3
+55	3.47E-3	3.79E-3	4.08E-3

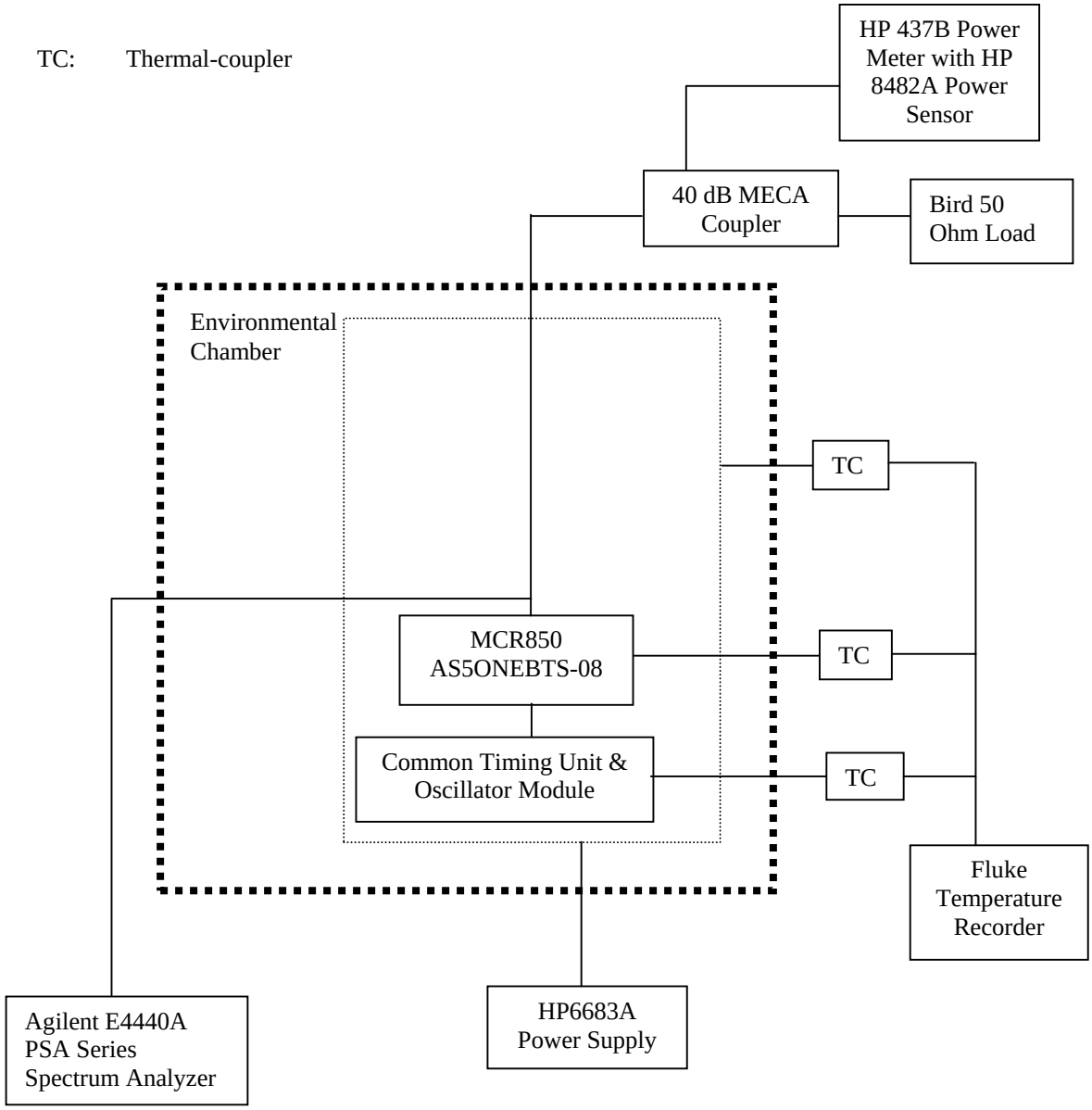
All the measurement equipment was calibrated in accordance with ISO 9001 process. The EUT configuration diagram is given in the following.

Results:

The output frequency of the 850 MCR at the Channel 425 deviated from the 882.75 MHz by a maximum error of 6.04E-3 ppm. The AS5ONEBTS-08 MCR transceiver, subject of this application, demonstrate full compliance with the Rules of the Commission.

SET-UP FOR MEASUREMENT OF FREQUENCY STABILITY

TC: Thermal-coupler



SUBEXHIBIT 11.8

Section 2.947 LISTING OF TEST EQUIPMENT USED

Equipment	Manufacturer	Model	Serial No.	Calibrated Date	Due Cal. Date
Power Meter	Giga-tronics	8542C	1834280	10/5/04	10/5/05
Power Sensor	Giga-tronics	80621A	1950053	10/5/04	10/5/05
Spectrum analyzer, RF Sec	Hewlett-Packard	8566B	3026A19151	4/1/04	4/1/05
Spectrum analyzer, Disp Sec	Hewlett-Packard	8566B	3014A06682	4/1/04	4/1/05
EMI Test Receiver, Disp Sec	Rohde & Schwarz	ESA1-D	DE25102	6/4/04	6/4/05
EMI Test Receiver, RF Sec	Rohde & Schwarz	EMS1-RF	DE25102	6/4/04	6/4/05
Attenuator	Weinschel	6dB	AV9010	N/A	N/A
RF Limiter	Hewlett-Packard	11867A	03533	N/A	N/A
Loop Antenna	EMCO	6502	3441	6/3/04	6/3/05
Biconical Antenna	EMCO	3110B	9807-3128	3/16/04	3/16/05
Log-periodic Antenna	EMCO	3148	9707-1029	3/12/04	3/12/05
Double Ridged Horn Ant.	EMCO	3115	9812-5638	3/8/04	3/8/05
Pre-amplifier	Hewlett-Packard	8449B	3008A01355	1/10/04	1/10/05
Pre-amplifier	Sonoma - HP	310	185704	10/16/04	10/16/05
Multi-device Controller	EMCO	2090	9912-147-7	N/A	N/A
Temperature Record	Fluke	Hydra Data Bucket Type T Thermocouples	206173	10/16/04	10/16/05
Frequency Counter	Hewlett-Packard	53131A	260058	1/13/04	1/13/05
PSA	Hewlett-Packard	E4440A	260035	5/24/04	5/25/05
Thermotron Controller	Thermotron	Thermotron01	PAD01	1/21/04	1/21/05
Thermal Coupler	Omega	T	N/A	N/A	N/A
Directional Coupler	MECA	715-40-3.5	N/A	N/A	N/A
50Ω Resistive Load	Bird Electronic	8166	9349	N/A	N/A
50Ω Resistive Load	Bird Electronic	8166	8283	N/A	N/A
50Ω Resistive Load	Bird Electronic	8166	8276	N/A	N/A
28V Power Supply	Hewlett-Packard	6684A	US36410429	N/A	N/A
28V Power Supply	Hewlett-Packard	6684A	US36410433	N/A	N/A
DC Power Supply	Hewlett-Packard	6683A	36420289	N/A	N/A
DC Power Supply	Hewlett-Packard	6038A	3025A-09939	N/A	N/A
Multi-meter	Tektronix	TX3	B015826	1/14/04	1/14/05
Multi-meter	Fluke	23	49330331	1/7/04	1/7/05
RF Switch	Hewlett-Packard	11713A	2223A01767	N/A	N/A
RF Switch	Hewlett-Packard	44477A	MY42000146	N/A	N/A
RF Switch	Hewlett-Packard	44477A	MY42000147	N/A	N/A
RF Switch	Hewlett-Packard	8764C	3241A00605	N/A	N/A
RF Switch	Hewlett-Packard	8764C	3241A00622	N/A	N/A
RF Switch	Agilent	8761B	74304	N/A	N/A
RF Switch	Agilent	8761B	74261	N/A	N/A
RF Switch	Agilent	8761B	74305	N/A	N/A
RF Switch	Agilent	8761B	74263	N/A	N/A
Switch Control Unit	Hewlett-Packard	3488A	204925	N/A	N/A
Switch Control Unit	Hewlett-Packard	3488A	14202	N/A	N/A
Tunable Bandreject Filter	K&L	3TNF-500/1000-N/N	1	N/A	N/A

Low Pass Filter	Trilithic	10LC800-3-AA	200201001	N/A	N/A
High Pass Filter	Hewlett-Packard	84300-80037	015	N/A	N/A
2:1 Combiner	Minicircuits	RMOD-1	00428	N/A	N/A
Clip-on AC/DC Meter	F.W. Bell	C-600	94040227	1/7/04	1/7/05