

Exhibit 11: Listing of Required Measurements**SECTION 2.1033(c)(14)**

The data required by Section 2.1046 through 2.1057, inclusive, measured in accordance with the procedures set out in Section 2.1041.

RESPONSE:

The lowest clock frequency in the **Flexent OneBTS Cellular Modular Cell 4.0** is the 10 MHz rubidium reference oscillator. Conducted spurious measurements were performed over the range of 10 MHz to 10GHz which is above the tenth harmonic of the transmit frequency range.

The following pages include the data required for the Product Certification authorization of the **UCR-850 / FCC ID: AS5ONEBTS-15**, measured in accordance with the procedures set out in Section 2.1041 of the Rules.

Each required measurement and its corresponding exhibit number are:

Exhibit 12	Section 2.1046	Measurement of Radio Frequency Power Output
Exhibit 13	Section 2.1047	Measurement of Modulation Characteristics
Exhibit 14	Section 2.1049	Measurement of Occupied Bandwidth
Exhibit 15	Section 2.1051	Measurement of Spurious Emissions at Antenna
Exhibit 16	Section 2.1053	Field Strength of Spurious Radiation
Exhibit 17	Section 2.1055	Measurement of Frequency Stability

Exhibit 12: Measurement of Radio Frequency Power Output

SECTION 2.1046 MEASUREMENT OF RADIO FREQUENCY POWER OUTPUT

Measurements were performed to ascertain the RF output power level at the transmit output port of the **UCR-850/ AS5ONEBTS-15** in accordance with Section 2.1047 of the Code. Six **UCR-850/ AS5ONEBTS-15** radios were configured in the test arrangements depicted in Figure 12A. Each **UCR-850** was configured with the Applied Signal as specified below.

The use of the **UCR-850** requires that the J4 power level be calibrated for the specific channel of use. The test configuration, Figure 12A, allowed the measurement of output power for each channel investigated for Occupied Bandwidth. These included the upper and lower Block edges and for multiple carriers for each applicable Block.

Measurements were made respectively at every standard CDMA channel / frequency where occupied bandwidth measurements were performed. These include the left, center and right side of the individual bands. The attenuation range was also verified. And additional measurements of output power were recorded during Occupied Bandwidth measurements and are recorded on those plots in Exhibit 14.

Applied Signal

The applied signal, from a UCR-850 FCC ID: AS5ONEBTS-15, met the recommended characteristics per "Table 6.5.2-1 Base Station Test Model, Nominal" from **3GPP2 TSG-C.S0010-C-v1.00, February 2005**, Recommended Minimum Performance Standards for cdma2000 Spread Spectrum Base Stations, as defined below in table 12.1.

Type	Number of Channels	Fraction of Power (Linear)	Fraction of Power (dB)	Comments
Pilot	1	0.2	-7	Code channel W_0^{128}
Sync	1	0.0471	-13.3	Code channel W_{32}^{64} ; always 1/8 rate
Paging	1	0.1882	-7.3	Code channel W_1^{64} ; full rate only
Traffic	6	0.09412	-10.3	Variable code channel assignments; full rate only

TABLE 12.1 Base Station Test Model, Nominal for Main Path

Type	Number of Channels	Fraction of Power (Linear)	Fraction of Power (dB)	Comments
Transmit Diversity Pilot	1	0.2	-7	Code channel W_{16}^{128}
Traffic	6	0.09412	-10.3	Variable code channel assignments; full rate only

TABLE 12.2 Base Station Test Model, Nominal for Transmit Diversity Path

Exhibit 12 *continued***Specified Performance:**

The **UCR-850** has a maximum specified power output at its RF output terminals of 0.0033 Watts (5.2 dBm) for a single carrier, 0.0066 Watts (8.2 dBm) for two carriers, and 0.010 Watts (+10.0 dBm) for three carriers which is also its a maximum specified output power. The steady state range of power adjustment at the output is 30 dB. The minimum power is therefore 30 dB below the maximum (-24.8 dBm) for a single carrier across the Cellular down-link Band (869.00-894.00 MHz).

RESULTS:

The **UCR-850 / AS5ONEBTS-15** was configured in the test setup shown in Figure 12A. When measured at each of the Cellular channels tested the **UCR-850/ AS5ONEBTS-15** delivered a minimum of 0.0033 Watts per carrier (5.22 dBm +2/-0 dB) when measured at its output connection. Table 12.3 documents that the required total power levels of 8.2 dBm and 10.0 dBm (+2/-0 dB) for two and three carriers respectively were also met.

The specific Frequencies, channels and set power level was also documented on each "Occupied Bandwidth" data sheet for the typical integrated product. When operated with a Lucent Technologies transmit power amplifier, the overall integrated transmitter will maintain its rated output power with an accuracy of +2/-4 dB

Exhibit 12 *continued*

Block, Channel # and Frequency Parameters			Maximum Power Output from Radio Dual carrier		Maximum Power Output from Radio Three carrier		Maximum Power Output from Radio Single carrier	
850 Block Designation	UCR Channel	Carrier Frequency	Specified	Measured	Specified	Measured	Specified	Measured
	#	MHz	dBm	dBm	dBm	dBm	dBm	dBm
A"A3	1019	869.880	5.20	7.30	8.20	10.20		
A"A3	37	871.110						
A2	78	872.340	5.20	7.39	8.20	10.35	10.00	12.20
A2	119	873.570						
A2	160	874.800						
A1	201	876.030	5.20	7.75	8.20	10.64	10.00	12.40
A1	242	877.260						
A1	283	878.490						
B1	384	881.520	5.20	7.83	8.20	10.70	10.00	12.42
B1	425	882.750						
B1	466	883.980						
B2	507	885.210	5.20	7.50	8.20	10.35	10.00	12.13
B2	548	886.440						
B2	589	887.670						
B3	630	888.900	5.20	7.17				
A'	691	890.730	5.20	7.10				
B'	770	893.100	5.20	7.04				

TABLE 12.3 UCR-850 Maximum Transmit Power Compliance Data

Lucent Technologies Inc. - Proprietary
Use pursuant to Company Instructions.

Exhibit 12 *continued***Equipment used for RF Power, Modulation, Occupied bandwidth, Conducted and Radiated Spurious Measurements**

<u>Equipment</u>	<u>Description</u>	<u>Calibration Reference Number</u>	<u>Version date or Calibration</u>
Power Meter:	Agilent E4419A Power Meter	167433	15 Jun 05
Power Head	Agilent E9300A Power Head	157704UR	16 Dec 04
Power Head	Agilent E9300A Power Head	157451UR	14 Jul 05
Spectrum Analyzer:	Rohde & Schwarz FSEM-30	167438UR	08 Apr 05
EMC Receiver	Rohde & Schwarz ESIB-40 s/n 100101	563312005	2005-03-02
Code Domain Analyzer	Agilent E4406 VSA Transmitter Tester	169441UR	13 Jan 05
Computer Controller:	EG Technology, Intel Pentium PC w/Win2k OS	POR-2,4,6	N/A
EMC Test Software	TILE, Quantum Change,	Version 3.4.G.2	02 May 05
Printer:	HP Model 4500DN Printer	N/A	N/A
Low Pass Filters:	10 MHz-1.93 GHz, Custom manufactured	PCSLPF-2	07 Jan 05
High Pass Filters:	1.99-20 GHz, Custom manufactured	PCSHPF-2	07 Jan 05
Test Cables:	Low loss test cables custom mfg.	Chamber-1 set	07 Jan 05
Antenna	BiConiLog Antenna, ETS, Model 3142B	S/N 1775	18 Jan 05
Antenna	Double Ridge guide Antenna, ETS, Model 3115	S/N 1775	18 Jan 05
Preamplifier	Amplifier Low Noise, Miteq, 1.7 dB	LNA-1	07 Jan 05
GPS Receiver	Symmetricon 58503B (former Agilent)	KR93200849	N/A
<u>Gray Mule</u>	The equipment below is maintained and calibrated together		Gray-Lim
Directional Coupler:	772D Dual Directional Coupler		09 Aug 05
Attenuator, Variable	HP 8494B DC-18 GHz digital attenuator	157171	09 May 05
Attenuator, Variable	HP 8495B DC-18 GHz digital attenuator	157170	09 May 05
Attenuator, Fixed	Weinschel Corp DC-18 GHz, various values		
Test Cables:	Low loss test cables custom mfg.		
<u>Additional Frequency Stability Equipment</u>			
Spectrum Analyzer:	Agilent E4440A PSA	B/C 260054	19 Oct 04
Spectrum Analyzer:	Agilent E4440A PSA	B/C 260053	11 July 04
Frequency Counter:	Agilent HP5335A	B/C 124204	18 Oct 04

Table 12.4 List of test equipment and Calibration status for FCC Filing of UCR-850 FCC ID: AS5ONEBTS-15

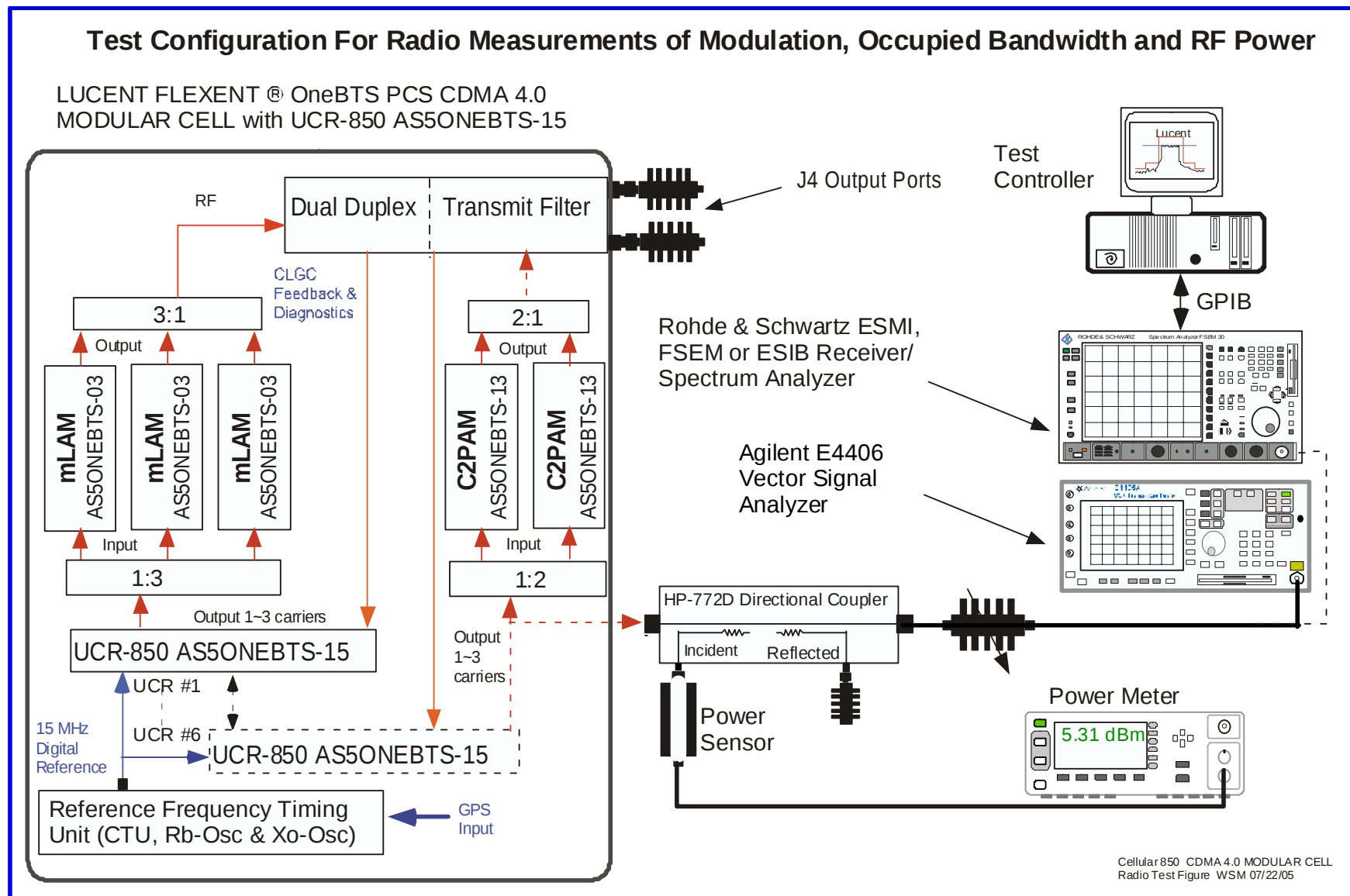
Exhibit 12 *continued***Figure 12A: Test configuration for Radio Output measurements of Modulation, RF Power, Occupied Bandwidth**

Exhibit 13: Measurement of Modulation Characteristics

SECTION 2.1047

MEASUREMENT OF MODULATION CHARACTERISTICS

The **UCR-850 / AS5ONEBTS-15** was configured in the test setup shown in **Figure 12A**. The **UCR-850** was configured with its pilot channel and the modulation quality measured with an Agilent - E4406A VSA Transmitter Tester.

Measurements were performed at Cellular Channels 1019, 283, and 384.

Required Level:

The required modulation quality is specified in paragraph 4.3.2.3 of 3GPP2 TSG-C.S0010-C-v1.00, February 2005. The requirement is a minimum waveform quality factor, ρ (rho) greater than 0.912 (Normalized Cross Correlation Coefficient).

Results:

For each of the Cellular channels tested, the **UCR-850/ AS5ONEBTS-15** modulation quality factor, ρ , was measured to be ≥ 0.98 . The **UCR-850** transmit signal modulation parameters, constellation, Code Domain and Channel Power performance for channel 283 is shown in Figures 13A and 13B below. The data for channel 283 is representative of the data recorded for the remaining channels listed above.

Exhibit 13 continued

Figure 13A UCR-850 Measured Transmit Signal Modulation Parameters for Channel 283

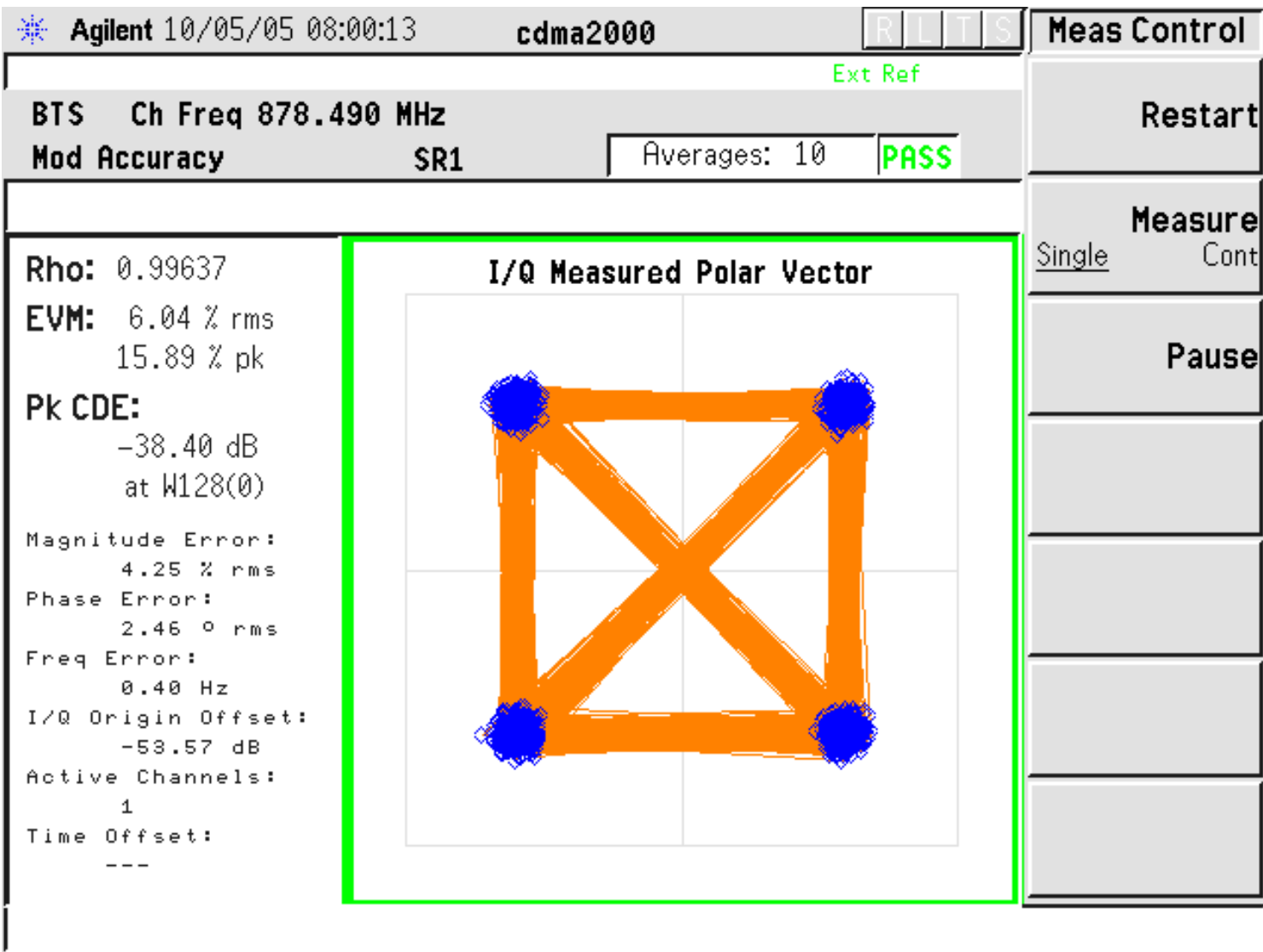


Figure 13B UCR-850 Measured Transmit Signal Modulation Parameters for Channel 283

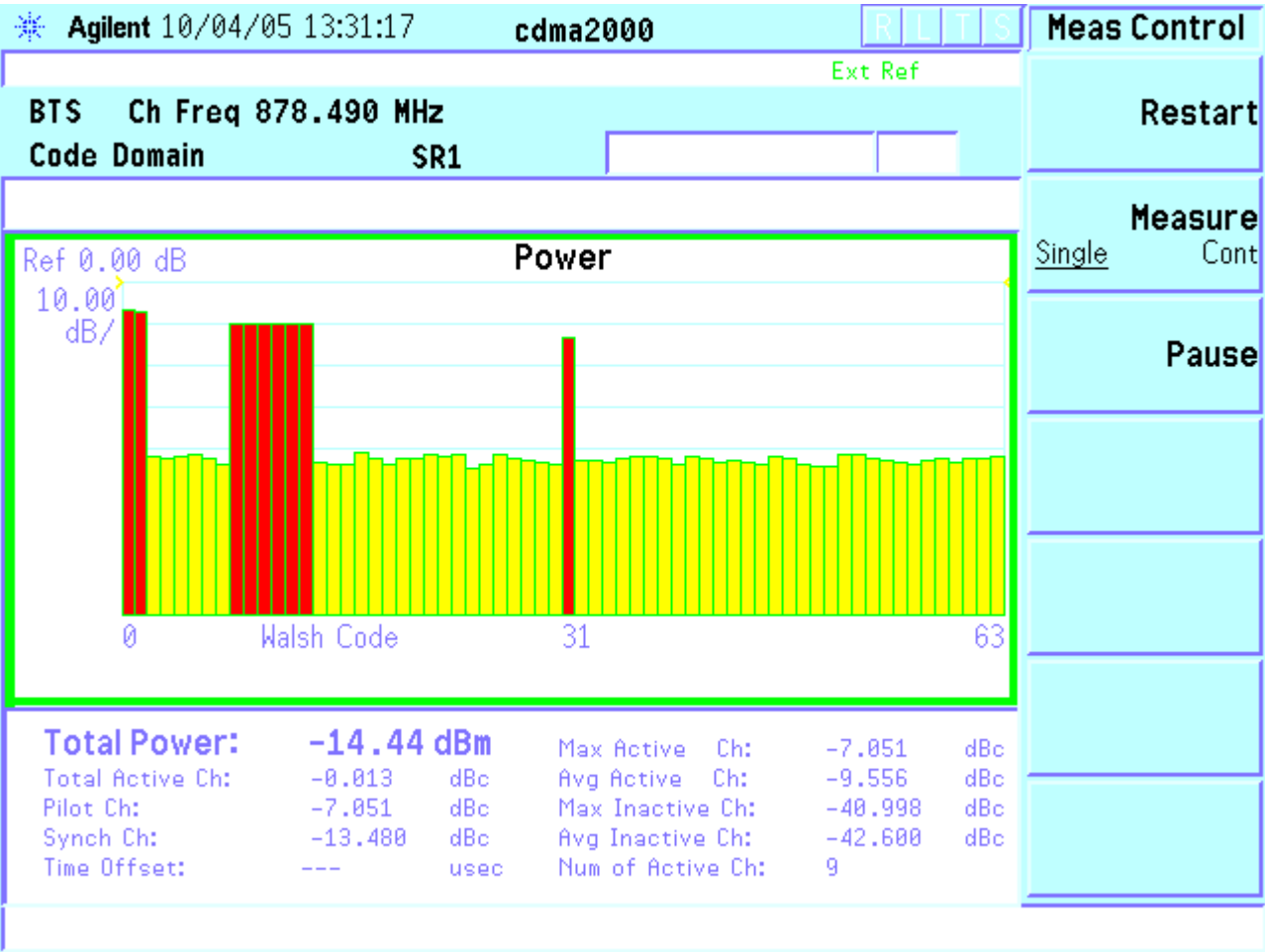


Exhibit 14 Measurement of Occupied Bandwidth

SECTION 2.1049 MEASUREMENT OF OCCUPIED BANDWIDTH

The **UCR-850** is designed to transmit one, two, or three contiguous 1.23 MHz CDMA channels. This exhibit documents the typical performance of the **UCR-850** when transmitting one, two or three CDMA carriers.

The occupied bandwidth of the **UCR-850/ FCC ID: AS5ONEBTS-15** was measured using a Rohde & Schwarz FSEM spectrum analyzer, a PC based instrumentation controller using TILE™ software and calibrated RF equipment. Six UCR-850's were configured in a Modular Cell 4.0 to provide a specific channel CDMA signal as defined in the Applied Signal section below. The RF power output of the Radio was adjusted to provide the appropriate power level at the transmitter J4 output. Measurements at the J4 Transmitter output were performed using the test setup in Figure 14A. Measurements of the Radio output were performed via the test setup in Figure 12A. In each setup the RF output from the transmitter was calibrated and reduced (to an amplitude usable by the spectrum analyzer) by using calibrated broadband fixed and adjustable attenuators. The total attenuation was set to avoid overdrive of the spectrum analyzer, yet, still allow high dynamic range measurements. Because of the broadband nature of the CDMA signal and the 30 kHz resolution measurement bandwidth, a power calibration was performed to validate the accuracy of the -16.2 dBc setpoint. The -16.2 dBc level corresponds to the corrected RF power level for a 1.23 MHz signal measured with a 30 kHz resolution bandwidth (RBW). This set-point was performed as follows:

The power calibration was individually verified at each carrier using a power meter in the Figure 14A setup. The broadband measurement was then calibrated to set the 3 MHz resolution bandwidth (RBW) signal against the "Top of Mask" limit. The "Top of Mask" corresponds to the output power at an RBW setting of ≥ 1.25 MHz. The calibration additionally validates the setting of the measured 30 kHz Occupied Bandwidth signal at the -16.2 dBc line. These measurements are performed as part of each Occupied Bandwidth measurement.

Figure 14B depicts the typical results below. The single carrier signal was measured with RBW's of 3 MHz and 30 kHz and is co-plotted and shown in Figure 14B. To avoid the discrepancy and offset between different detector types the Calibrated power meter value is used as the absolute reference. The digital attenuation is therefore set to place the 3 MHz RBW signal at the "Top of Mask".

The multi-carrier measurements were performed with the required 30 kHz RBW and used the same exact attenuation values. The power calibration line for multiple carrier signals above the mask and are adjusted based upon the ratio of signal vs. resolution bandwidth. Figure 14C depicts the typical results of the multi-carrier configuration A1. This Occupied Bandwidth plots present three center channel performance charts at the Right Edge of Block for A1.

The above procedure calibrates the carrier power to the "Top of Mask" and accurately places the 30 kHz RBW measured carrier at the -16.2 dBc line. This process also documents the carrier power at the specified power level of 25 watts per carrier / 43.98 dBm. All of the plots are presented with a 7.5 MHz span and the center frequency of the specific Sub-Block of interest. This allows for ease of comparison of the single, dual and three carrier signals performance. The data was electronically recorded, corrected and plotted using the TILE™ software and is shown in the Occupied Bandwidth Data Sheets. These sheets contain data for Cellular frequency Blocks A3, B1, and B' in the application.

Block Organization and Tests Performed

For Cellular Band A, Sub-Block filter A" A3 is designed for a maximum of two carriers and represents the "Left Edge of the Cellular Band". Table 12.3 identifies the sub-Block nomenclature, channel plan and frequencies associated with CDMA service in the US.

Filter combination tests were performed for the one, two and three carrier operational configurations of the **UCR-850** where applicable. When a second source manufacturer is to be qualified for a granted block, the tests are performed and the source approved via a Class I change to each of the applicable filings.

Exhibit 14 *continued***Applied Signal**

The applied signal met the recommended characteristics per "**Table 6.5.2-1 Base Station Test Model, Nominal**" from **3GPP2 TSG-C.S0010-B-v2.0 March 2004**, Recommended Minimum Performance Standards for cdma2000 Spread Spectrum Base Stations, as defined below.

Type	Number of Channels	Fraction of Power (Linear)	Fraction of Power (dB)	Comments
Pilot	1	0.2	-7	Code channel W_0^{128}
Sync	1	0.0471	-13.3	Code channel W_{32}^{64} ; always 1/8 rate
Paging	1	0.1882	-7.3	Code channel W_1^{64} ; full rate only
Traffic	6	0.09412	-10.3	Variable code channel assignments; full rate only

TABLE 14.1 Base Station Test Model, Nominal for Main Path

Type	Number of Channels	Fraction of Power (Linear)	Fraction of Power (dB)	Comments
Transmit Diversity Pilot	1	0.2	-7	Code channel W_{16}^{128}
Traffic	6	0.09412	-10.3	Variable code channel assignments; full rate only

TABLE 14.2 Base Station Test Model, Nominal for Transmit Diversity Path

The FCC limits contained in **47CFR 22.917 1-Oct-2004** were followed along with the minimum standard presented in **3GPP2 TSG-C.S0010-B-v2.0 March 2004**.

22.917 Emission limitations for cellular equipment.

The rules in this section govern the spectral characteristics of emissions in the Cellular Radiotelephone Service.

(a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

(b) Measurement procedure. Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz of 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

Limit Interpretation**Suppression inside the licensee's frequency band(s)**

The minimum standard presented in 3GPP2 TSG-C.S0010-B-v2.0 and IS-97-D Section 4.5.1.3.1 was followed for Suppression Inside the Licensee's Frequency Block(s)

For all frequencies within the base station transmit band of 869 – 894 MHz that are within the specific block(s) allocated to the operator's system, the total conducted spurious emissions in any 30kHz band greater than 750 kHz for the CDMA channel center frequency shall not exceed a level of -45 dBc....

Suppression immediately outside the licensee's frequency band(s) "The 1st 1 MHz"

The Limit in 47 CFR 22.917(a)(b) for emissions in the 1 MHz band immediately outside and adjacent to a licensee's frequency block is:

Emissions ≤ 1 MHz outside the Block *when measured with a RBW of 1% of the emissions*

Bandwidth shall be attenuated by :

$$-\{43+10\log(P)\} = -13 \text{ dBm} \quad \text{Where P is the mean power output in watts.}$$

Suppression outside the licensee's frequency band(s) "The 2nd MHz and beyond"

The Limit in 47 CFR 22.917(a) for emissions outside a licensee's frequency block is:

Emissions > 1 MHz outside the Block, *when measured with a RBW of 100 kHz*, shall be attenuated by :

$$-\{43+10\log(P)\} = -13 \text{ dBm} \quad \text{Where P is the mean power output in watts.}$$

Measurement Resolution Bandwidth Selection

Measurement at a Resolution Bandwidth of 30 kHz is based on our experience with Section 22.917 of The Code and lacking other guidance.

Reference Line for Selected Measurement Resolution Bandwidth

The attached corrected spectrum analyzer output plots shows the peak of the CDMA channel signal 16.2 dB below the Mask reference / "zero dBc line" of the spectrum analyzer for the following reason: For the CDMA system there is no carrier without modulation. The following relationship was used to provide the correct level for an unmodulated carrier vs. the modulated signal.

$$\text{Equation (1): Signal Offset} = 10 \cdot \log (\text{Measured resolution bandwidth} / \text{Transmit signal bandwidth})$$

For the peak of the CDMA signal measured with a resolution bandwidth of 30 kHz the signal offset is:

$$\text{Signal Offset} = 10 \cdot \log (30 \text{ kHz} / 1.25 \text{ MHz}) = -16.19 \text{ or } 16.2 \text{ dB}$$

Mask Reference Power Levels

All of the tolerance lines for the output are referenced to the top of the Occupied Bandwidth mask, which is defined as 43.98 dBm/ zero dBc. For all measurements of the **UCR-850's** Occupied Bandwidth, the output power was measured / adjusted individually to the 25 W level for each carrier and this is the 43.98 dBm value at the 0 dBc reference line.

In order to depict the tolerance lines that are required by Sec 22.917 of the FCC Rules, all measurements were made with a resolution bandwidth of 30 kHz and the limits were adjusted using equation (1). An average detector was employed using minimum of 25 sweeps per trace.

Exhibit 14 *continued***Occupied Bandwidth Mask Adjusted Levels**

The following levels apply when measurements of the above limits are performed with an RBW of 30 kHz. Measurement at a Resolution Bandwidth of 30 kHz is based on our experience with 47 CFR 22.917 and lacking other guidance. The criteria in this section applies to a cellular carrier rated for 25 Watts (43.98 dBm) at the antenna port (J4).

1. For all frequencies within the base station transmit band of 869 – 894 MHz that are within the specific block(s) allocated to the operator's system, the total conducted spurious emissions in any 30kHz band greater than 750 kHz from the CDMA channel center frequency shall not exceed a level of -45 dBc
2. On any frequency in the 1 MHz band immediately outside and adjacent to a licensee's frequency the level shall not exceed -9.13 dBm/-53.11 dBc when measured in a 30 kHz resolution bandwidth (Note 2 below); and
3. On any frequency beyond the 1 MHz band immediately outside and adjacent to a licensee's frequency to the 10th harmonic of the carrier at least:

Equation (2): $- \{ 43 + 10 \log(P) \} = -13 \text{ dBm}$, Where P is the mean power output in watts.

For 25 Watts the required level is -62.21 dBc / -18.23 dBm as measured with a 30 kHz resolution bandwidth (see Note 3). This is equal to -13 dBm measured with a 100 kHz resolution bandwidth

Note 2: The -9.13 dBm/-53.11 dBc level was computed as follows: The limit is specified as $- \{ 43 + 10 \log(P) \}$ dB = -13 dBm

When measured in a resolution bandwidth not less than 1% of the signal bandwidth.
Since the carrier is a 1.23 MHz bandwidth signal, the limit is adjusted to:

$$-13 \text{ dBm} + 10 \log(30 \text{ kHz} / 12.3 \text{ kHz}) \text{ dB} = -9.13 \text{ dBm} / -53.11 \text{ dBc}$$

Note 3: The -18.23 dBm / -62.21 dBc level is computed from -13 dBm measured with a 1 MHz resolution bandwidth adjusted by :

$$-13 \text{ dBm} + 10 \log(30 \text{ kHz} / 100.0 \text{ kHz}) \text{ dB} = -18.23 \text{ dBm} / -62.21 \text{ dBc}$$

Exhibit 14 *continued***Mask Description for Single Carrier**

The Mask limits are identical for the left and right side of the Cellular Blocks and are as follows.

Figure 14B shows the Mask limit for Cellular channel 1019 which is located at the left block edge for Block A''. Channel 1019 also represents the lowest frequency channel in the cellular transmit band. The Spectrum Analyzer reference level is set above the Signal Reference to allow for the necessary dynamic range of a three CDMA carrier presentation. The top of a typical 43.01 dBm single carrier CDMA signal viewed at a resolution bandwidth of 30 kHz is shown at the 26.81 dBm/ -16.2 dBc line. This horizontal line h-hh on Figure 14B is based on equation 1, and the ratio of the 1.23 MHz bandwidth and the 30 kHz resolution bandwidth of the spectrum analyzer. The vertical line from a to b (i.e. a-b) is at 750 kHz from the center of channel 1019 (i.e. Fc). The horizontal line b-c is 45 dB below the 43.01 dBm/ 0 dBc reference level. The vertical line c-d on this chart is at 869 MHz which is the left band edge for the A'' extended cellular band and the overall 869-894 MHz cellular downlink band. The placement of the line d-e is derived from evaluation of the signal and a 12.3 kHz (1%) resolution bandwidth, using the suggested value in section 22.917 of the rules. The ratio of 30 kHz to 12.3 kHz in equation (1) gives 3.87 dB. Adjusting the tolerance line to reflect this difference puts the -13 dBm limit line at -9.13 dBm or -53.11 dBc below the reference line. The vertical line, e-f is at 1 MHz from the left band edge for the A'' cellular block and the 869-894 MHz Cellular Band. The horizontal line f-g is drawn at -62.21 dBc below the 0 dBc / 43.01 dBm reference because the rules require a 100 kHz resolution bandwidth for measurements 1 MHz or greater outside the Cellular band. The ratio of 30 kHz to 100 kHz in equation (1) gives -5.23 dB. Adjusting the tolerance line to reflect this difference puts the -13 dBm limit line at -18.23 dBm or -62.21 dBc below the reference line. The same logic was used in determining the other block and band edge tolerances.

Mask Description for Multiple Carrier

The mask for multiple carriers adjusts the width of the carrier portion of the mask. Although the example above is for a single carrier cellular frequency block (A''), the edge of block treatment for a multiple carrier cellular block is identical. Cellular block A1 is an example of a multi-carrier block that utilizes the edge of block treatment described for the single carrier case above. Figure 2 shows the Mask limit for the cellular block A1 three carrier configuration. The right edge of the block is an edge of block configuration and the mask is derived as described in the single carrier case described above. The vertical line from a to b (i.e. a-b) is at 750 kHz from the center of channel 283 (i.e. Fc), per IS-97-D. The horizontal line b-c is 45 dB below the 43.01 dBm/ 0 dBc reference level. The vertical line c-d on this chart is at 880 MHz which is the right band edge for the A band cellular block. The placement of the line d-e is derived from evaluation of the signal and a 12.3 kHz (1%) resolution bandwidth, using the suggested value in section 22.917 of the rules. The ratio of 30 kHz to 12.3 kHz in equation (1) gives 3.87 dB. Adjusting the tolerance line to reflect this difference puts the -13 dBm limit line at -9.13 dBm or -53.11 dBc below the reference line. The vertical line, e-f is at 1 MHz from the right band edge for the A band cellular block. The horizontal line f-g is drawn at -62.21 dBc below the 0 dBc / 43.01 dBm reference because the rules require a 100 kHz resolution bandwidth for measurements 1 MHz or greater outside each block within the Cellular band. The specified "Left Edge Limit" is treated as an expansion of the non Block edge corner **bb** from the single carrier case to be the required + 750 kHz from the center of the "left most" channel.

Exhibit 14 *continued***Presented Results**

The frequencies and channels used are tabulated on the bottom of each plot. Input and output signals are plotted at each frequency/ channel of interest. Plots are provided for Left and Right side of both the A and B extended Cellular Bands in compliance with filing guidelines and Section 22.917 of the Commission code. There are no SAT or Wide band data signals associated with CDMA. The signal used to show the occupied bandwidth is defined in table 14.1. This is the signal recommended 3GPP2 TSG-C.S0010-B-v2.0 and IS-97-D Section 4.5.1.3. The power output level of the radios were adjusted to provide the FCC Product Certified power levels of 25 W/carrier for the overall transmitter. The Radio output/ amplifier input charts document the corresponding Radio performance and power levels at the bottom of each chart.

RESULTS: The following exhibits illustrate the spectrums investigated and document compliance.

W. Steve Majkowski

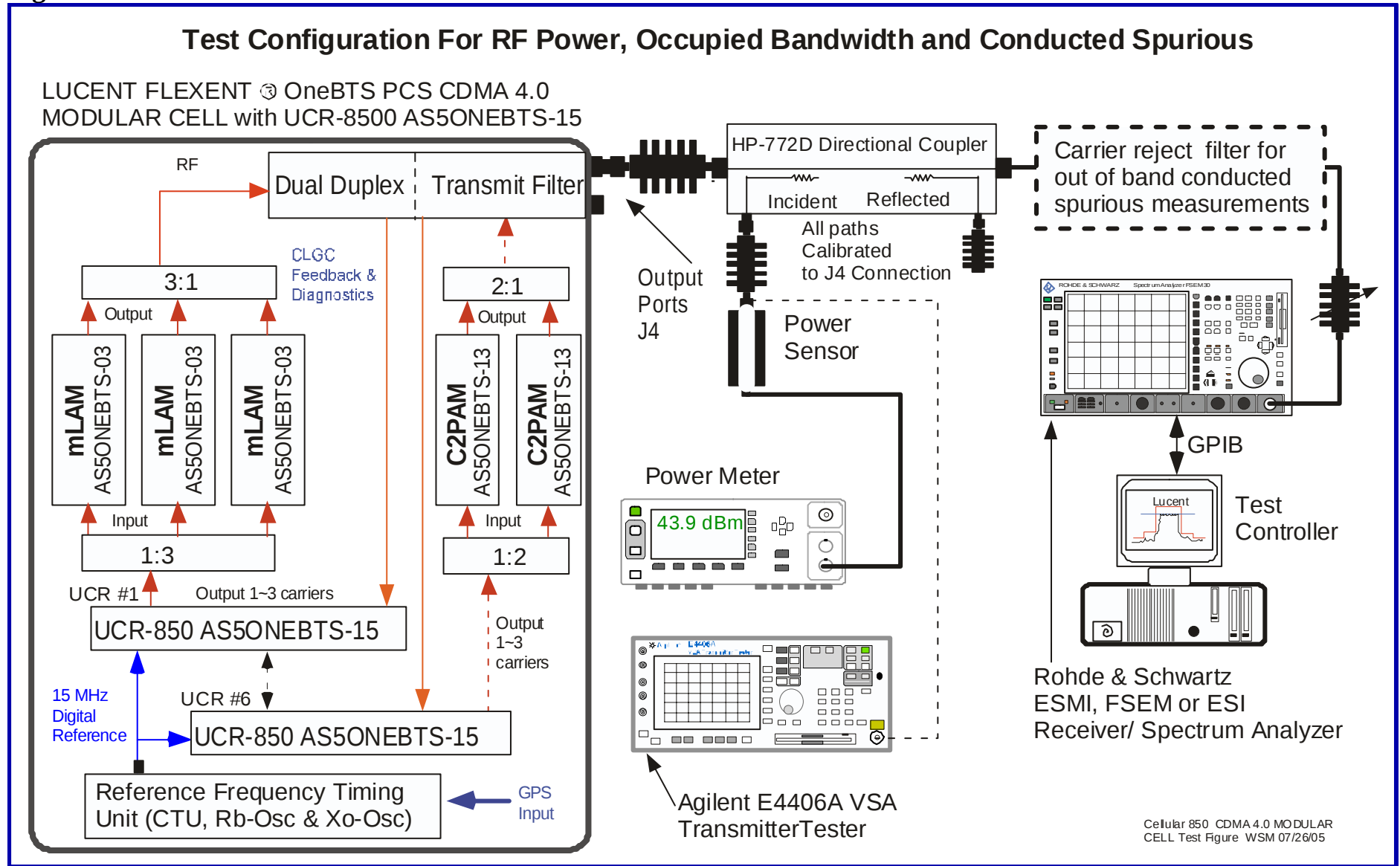
Exhibit 14 *continued***Figure 14A**

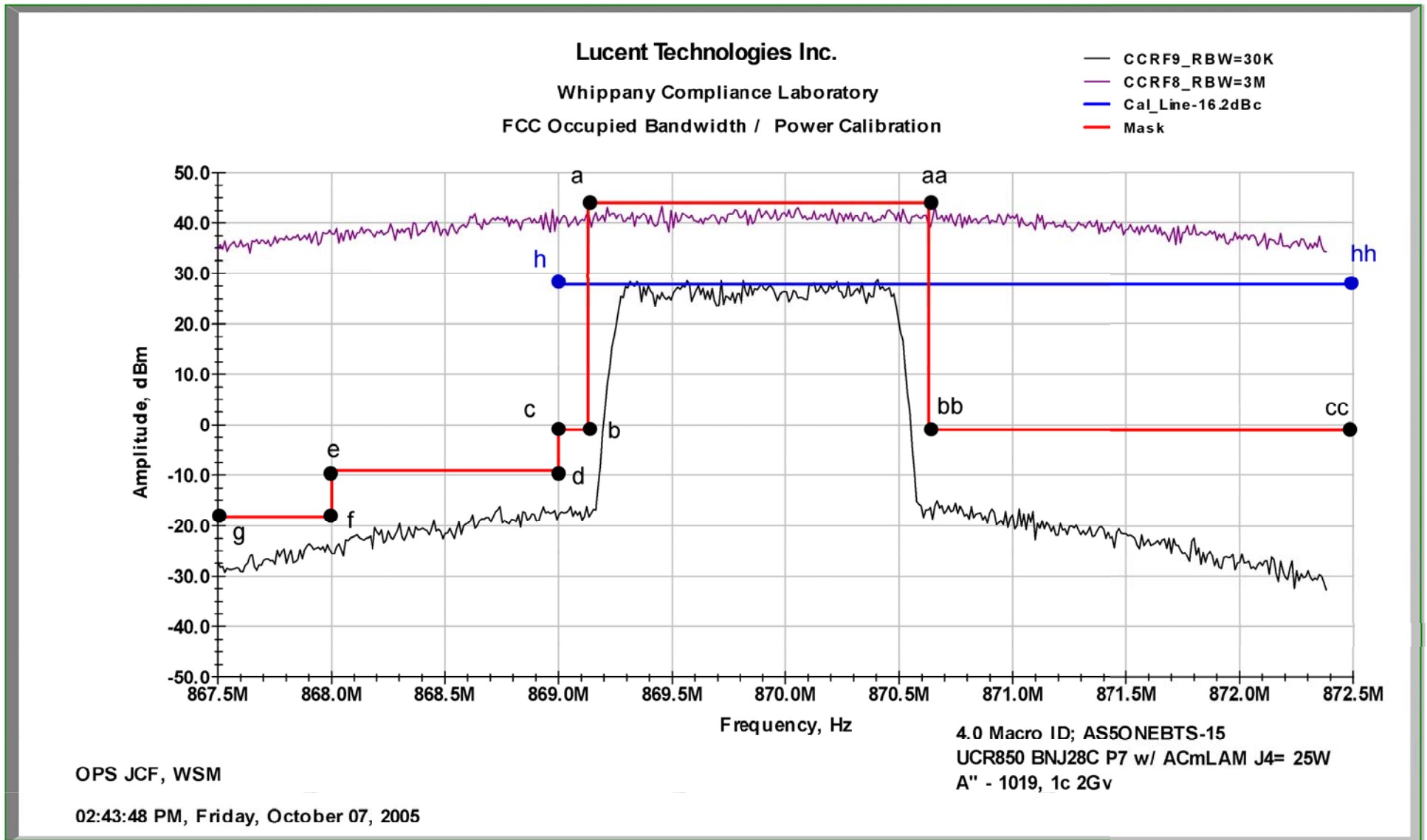
Figure 14B Occupied Bandwidth Mask and Power Calibration

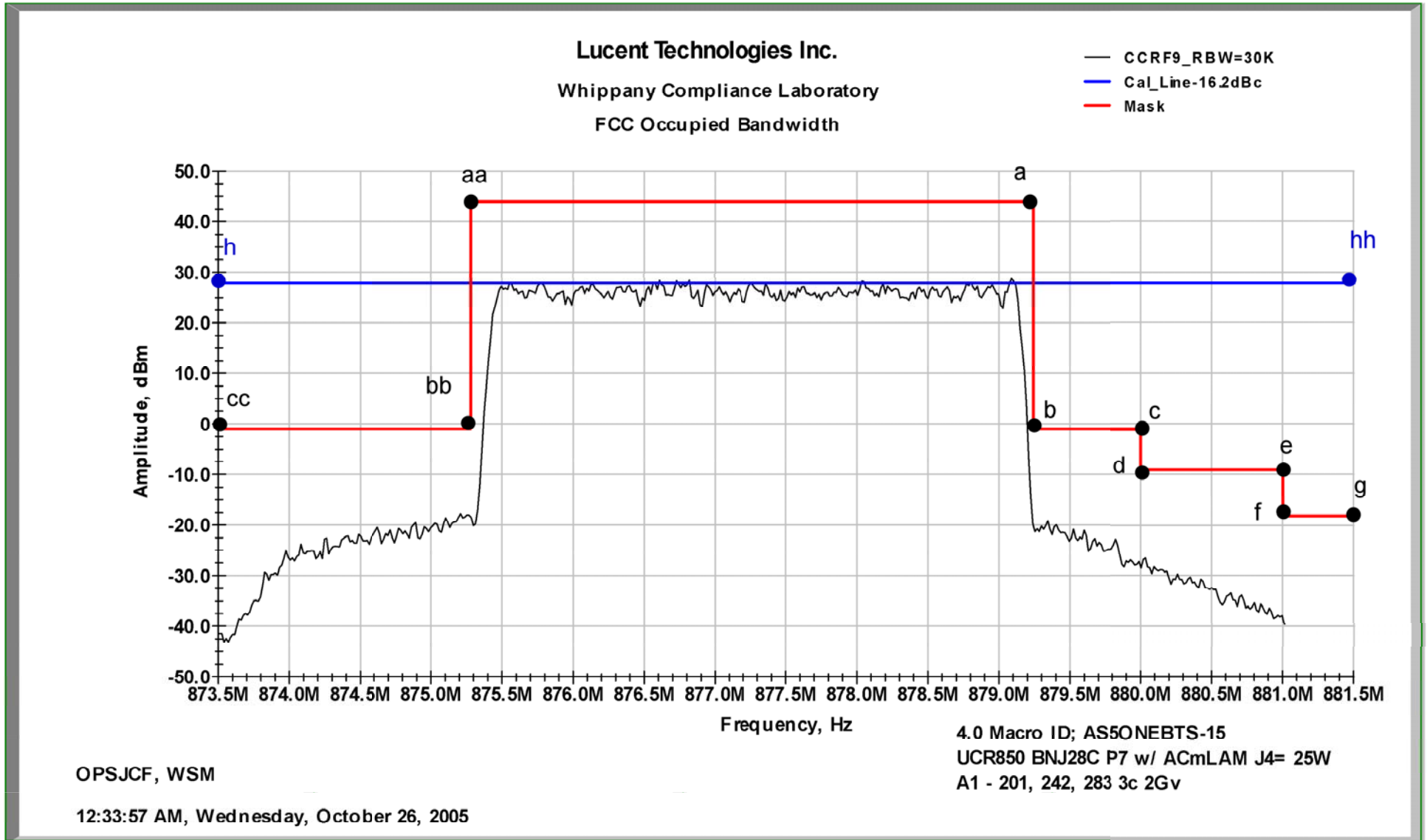
Figure 14C Occupied Bandwidth Mask for 3 carriers

Exhibit 14 *Continued*

**FCC
Occupied Bandwidth Data Scans
of
Lucent Technologies Inc.
Cellular 850 ONEBTS Modular Cell 4.0
Incorporating
Cellular 850 UMTS CDMA Radio
UCR-850 Filed under AS5ONEBTS-15
with
Cellular 850 Linear Amplifier Module, Model m
mLAM, FCC ID: AS5ONEBTS-03
Single, Dual and Three Carrier Configurations**

Exhibit 14 Continued

FCC Occupied Bandwidth: UCR-850 Output - Left edge of "A" Band; Channels 1019, and 37; 2 Carrier Configuration

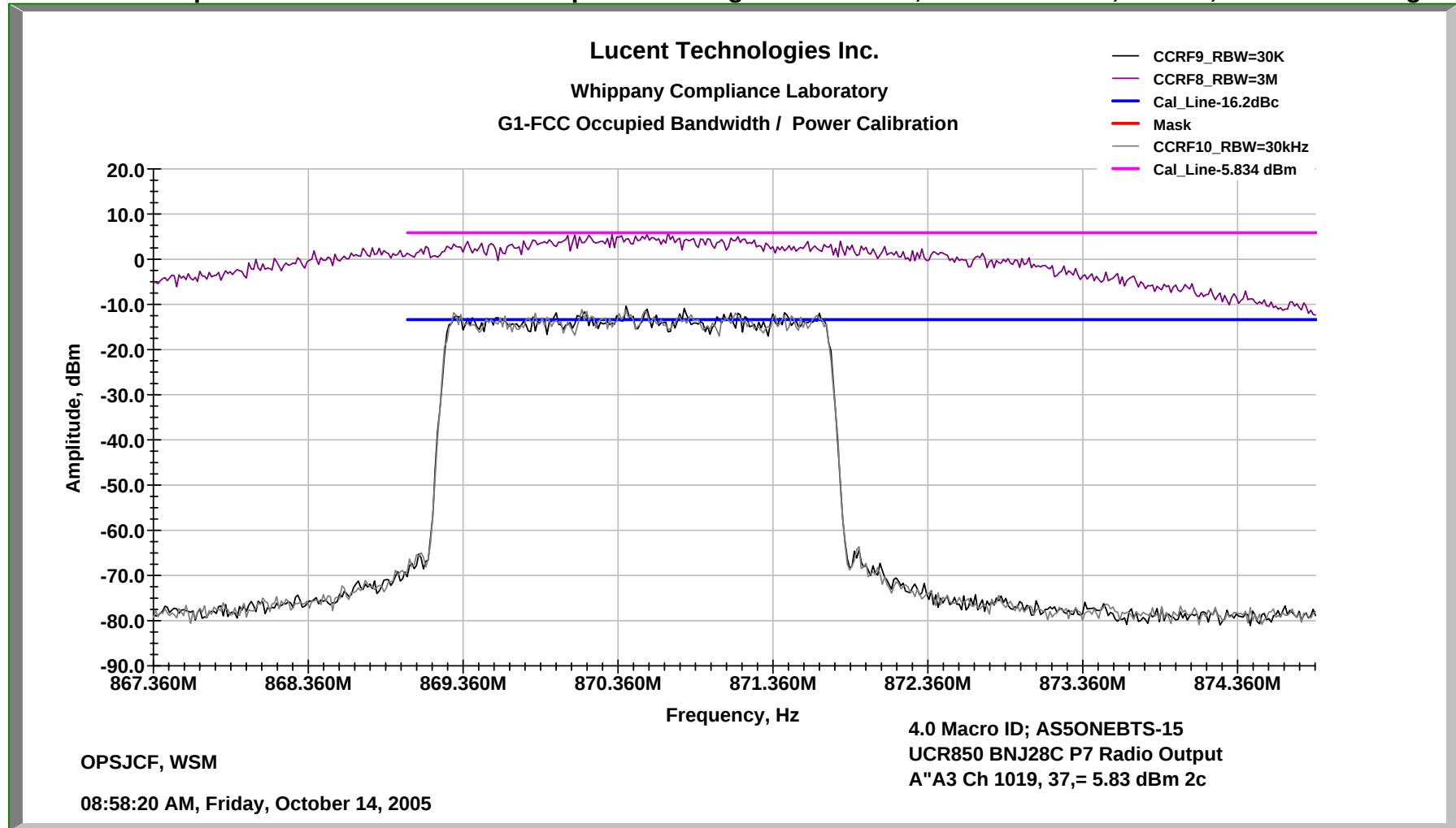


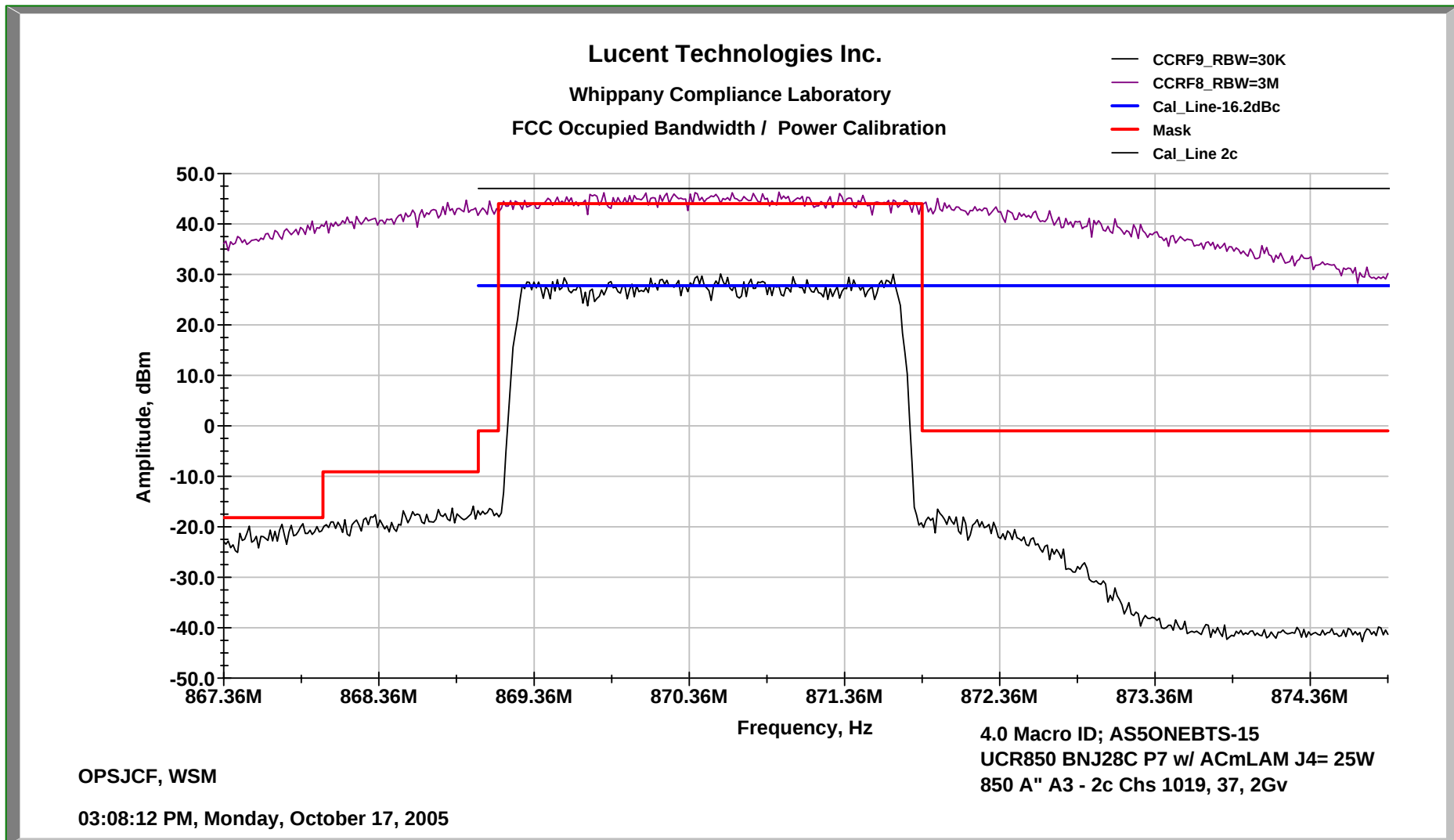
Exhibit 14 Continued**FCC Occupied Bandwidth: mLAM/MCA Output- Left edge of Cellular A Band, Channels 1019, and 37, 2 Carrier Configuration**

Exhibit 14 Continued

FCC Occupied Bandwidth: UCR-850 Output - Right side of Cellular A Band, Channel 283, Single Carrier Configuration

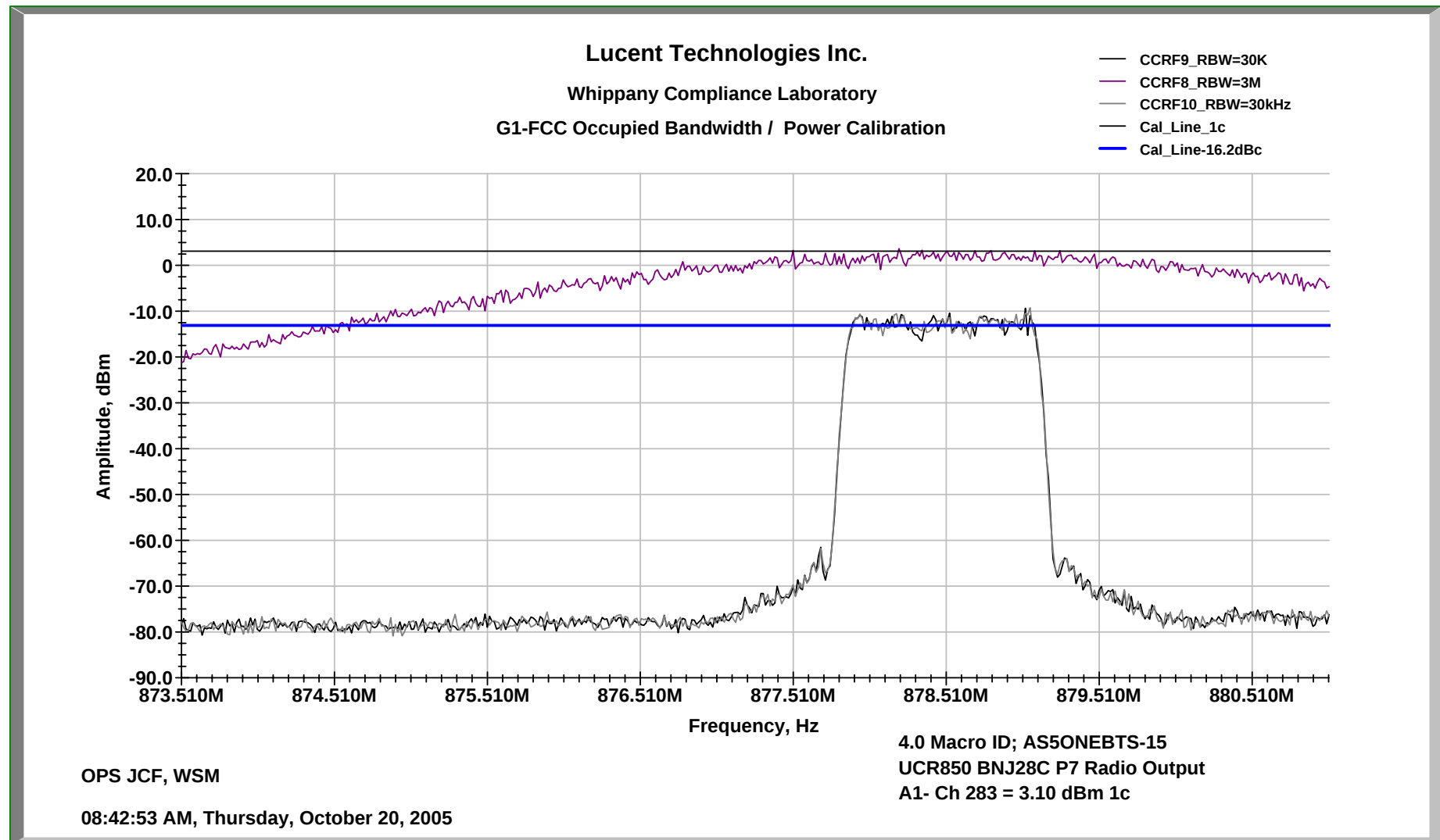


Exhibit 14 Continued

FCC Occupied Bandwidth: mLAM /MCA Output - Right side of Cellular A Band, Channel 283, Single Carrier Configuration

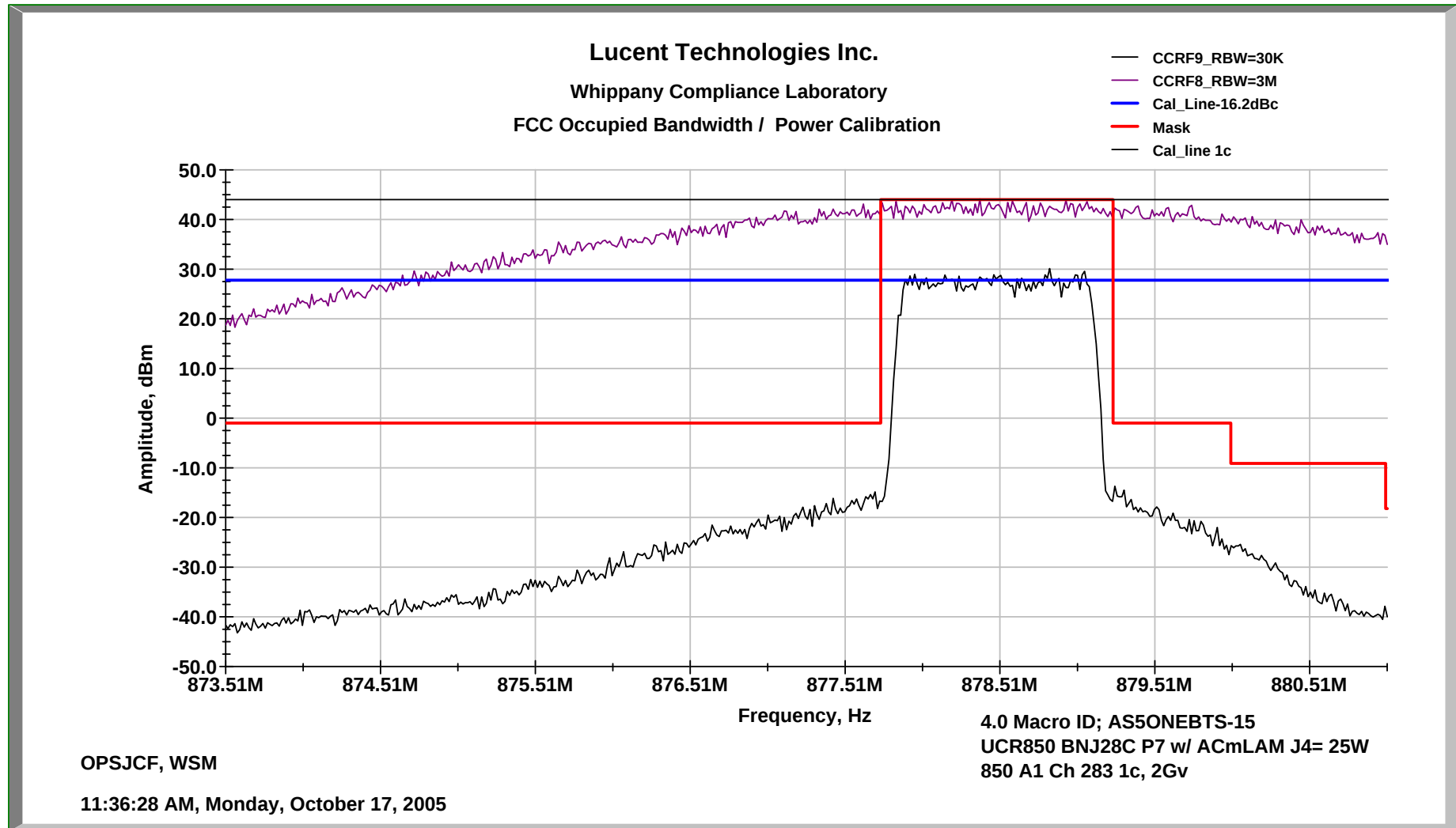


Exhibit 14 Continued

FCC Occupied Bandwidth: UCR-850 Output - Right side of Cellular A Band, Channels 242, 283, 2 Carrier Configuration

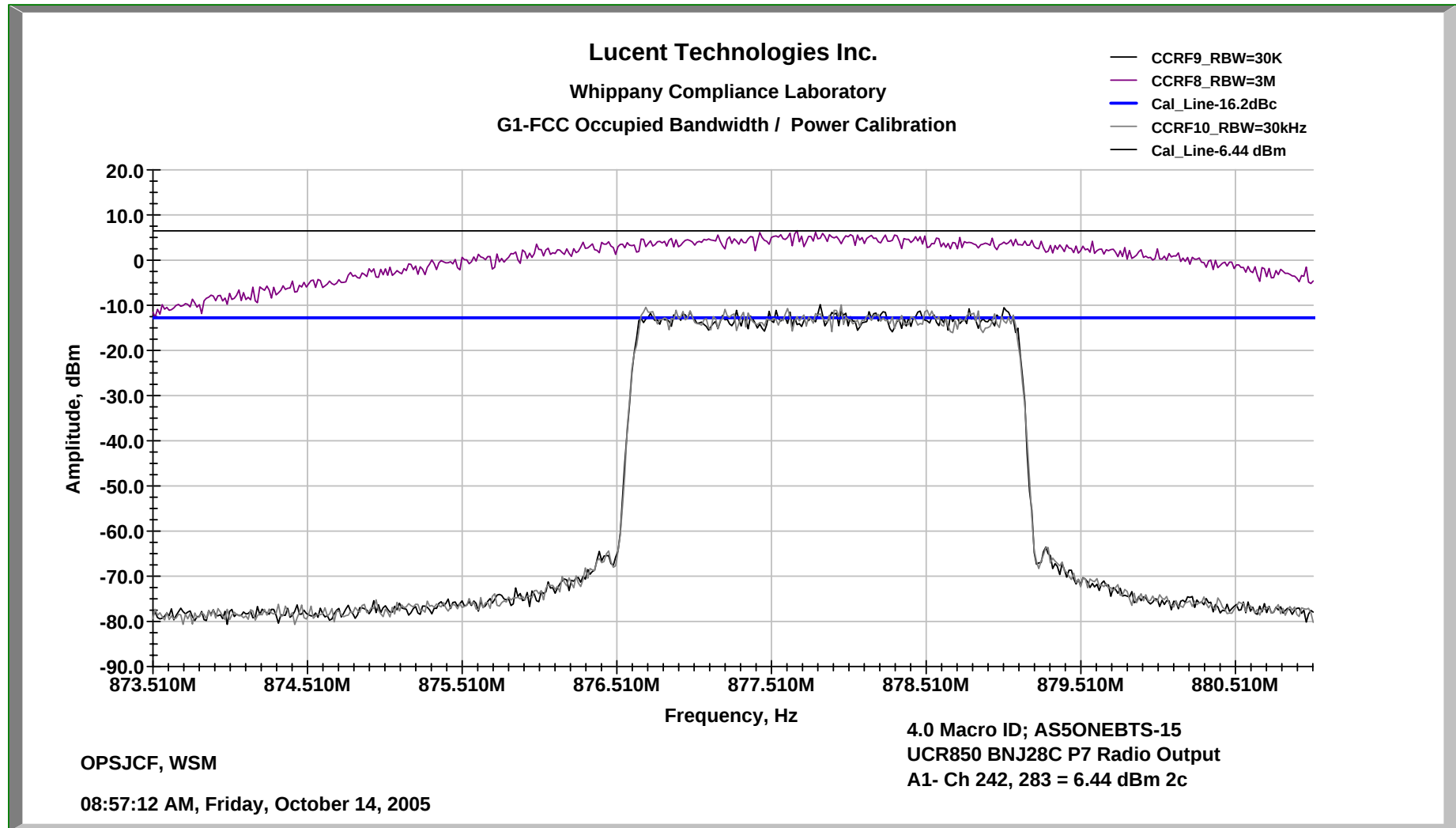


Exhibit 14 Continued

FCC Occupied Bandwidth: mLAM /MCA Output - Right side of Cellular A Band, Channels 242, 283, 2 Carrier Configuration

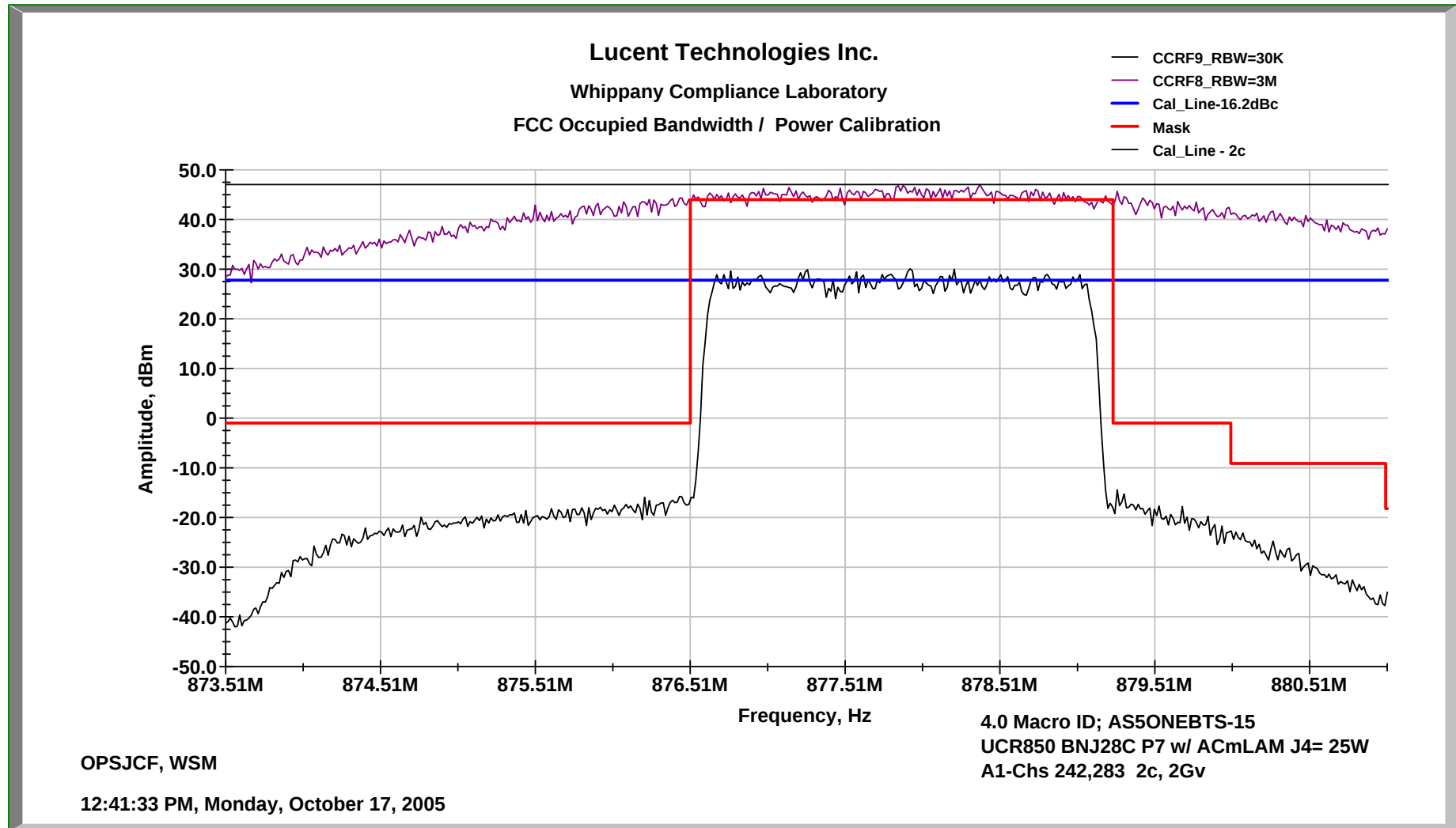


Exhibit 14 Continued

FCC Occupied Bandwidth: UCR-850 Output - Right side of Cellular A Band, Channels 201, 242, 283, 3 Carrier Configuration

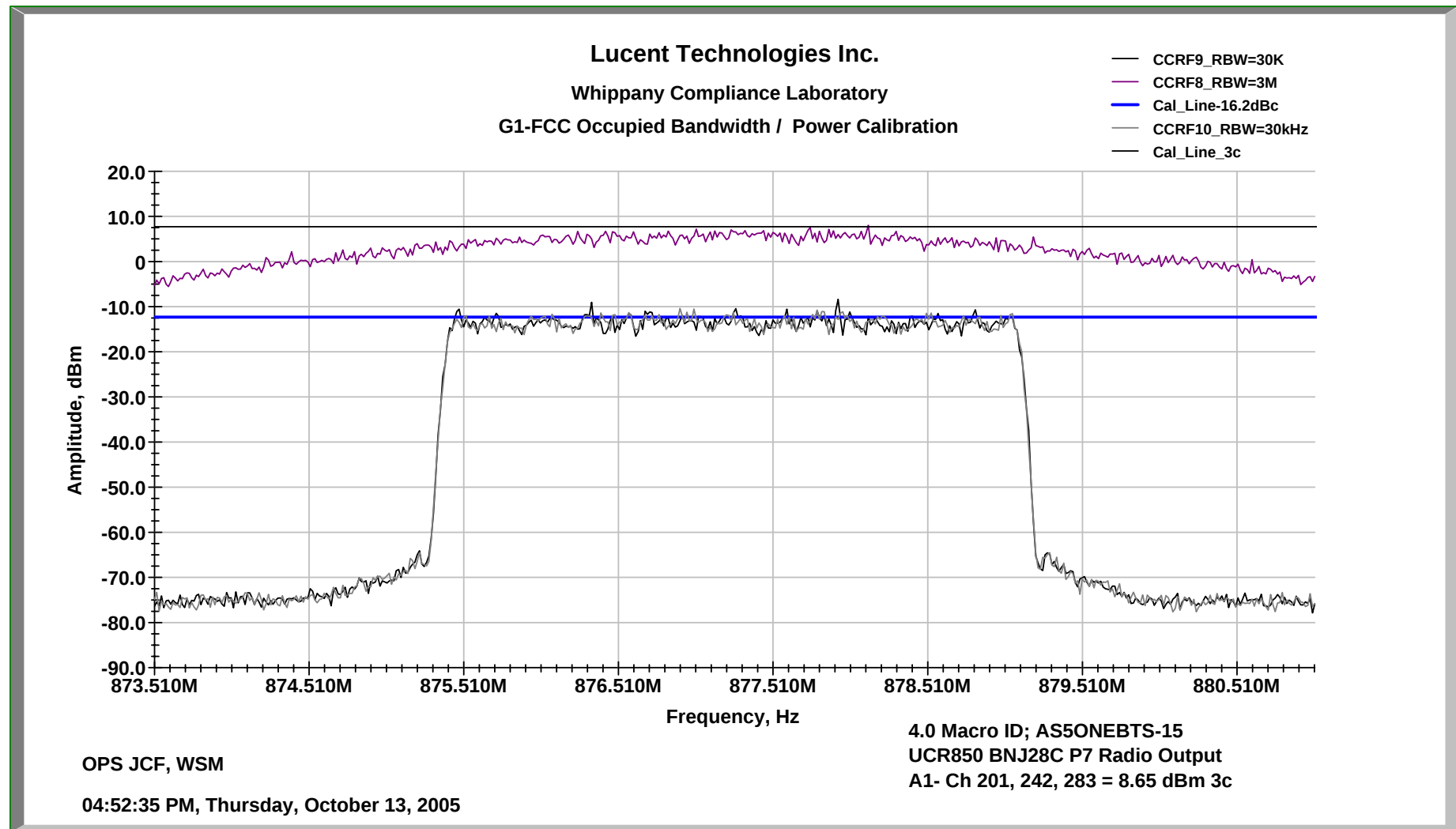


Exhibit 14 Continued

FCC Occupied Bandwidth: mLAM /MCA Output - Right side of Cellular A Band, Channels 201, 242, 283, 3 Carrier Configuration

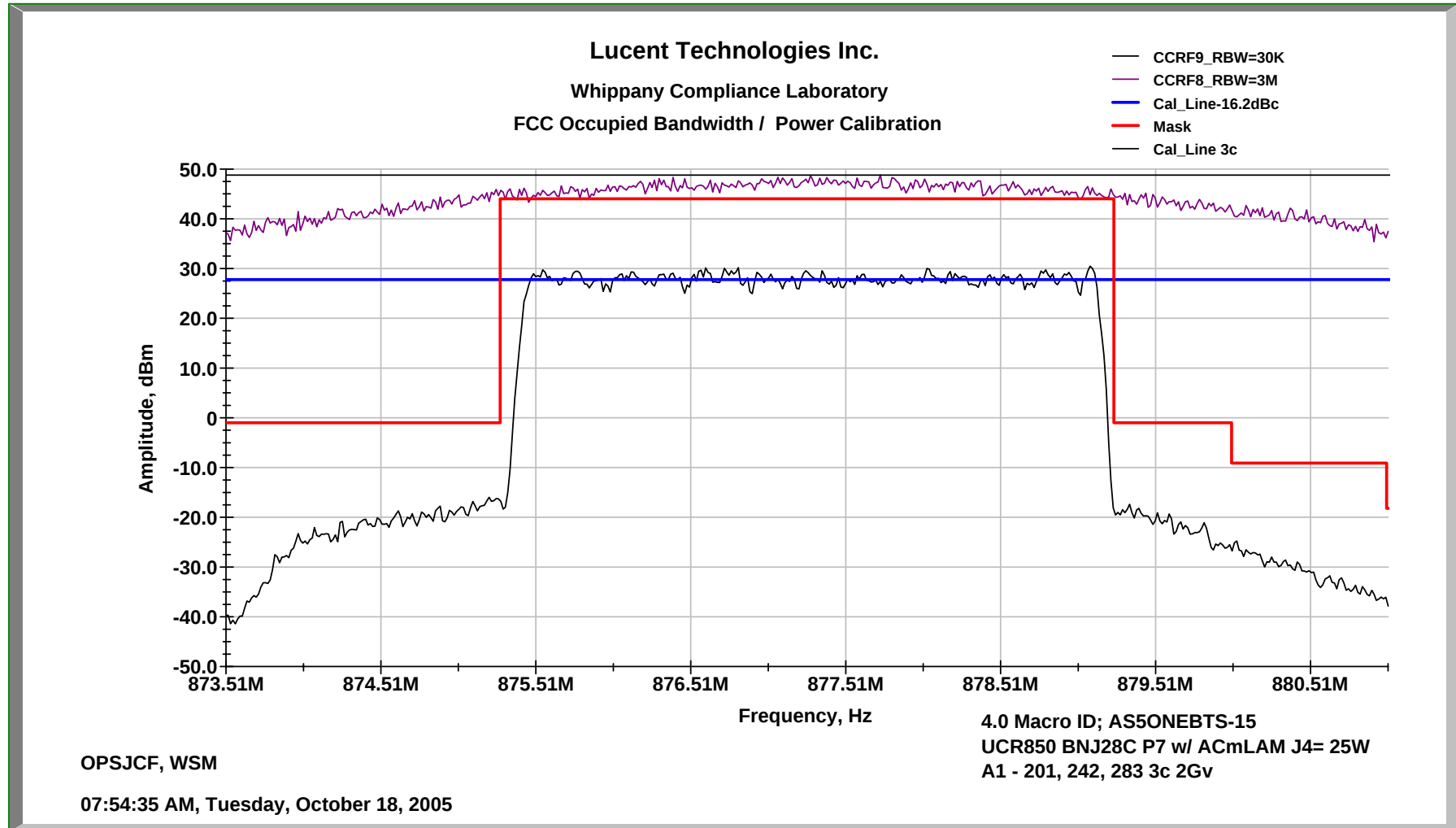


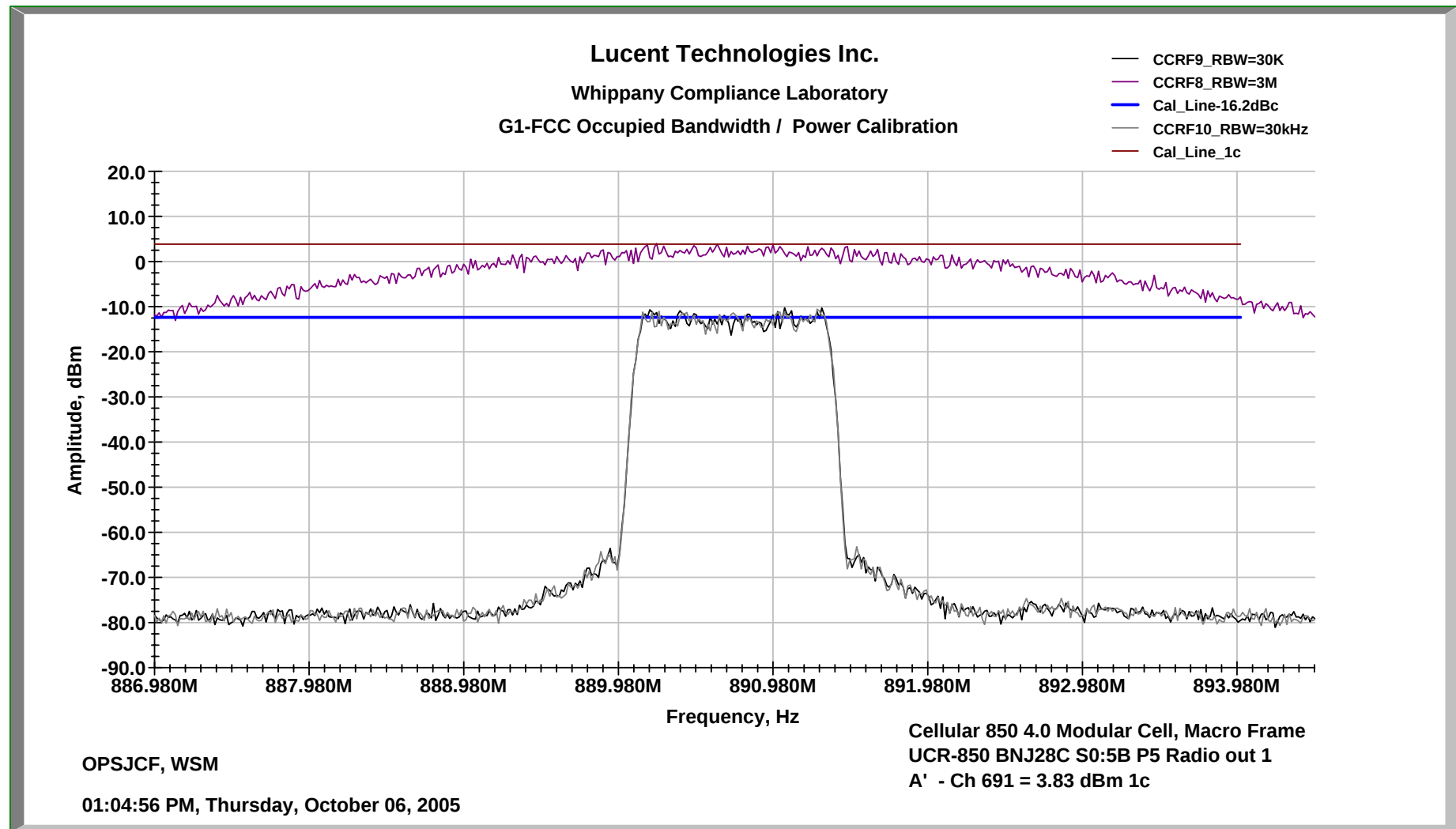
Exhibit 14 Continued**FCC Occupied Bandwidth: UCR-850 Output - Cellular A' Band, Channels 691, 1 Carrier Configuration**

Exhibit 14 Continued

FCC Occupied Bandwidth: mLAM/ MCA Output - Cellular A' Band, Channels 691, 1 Carrier Configuration

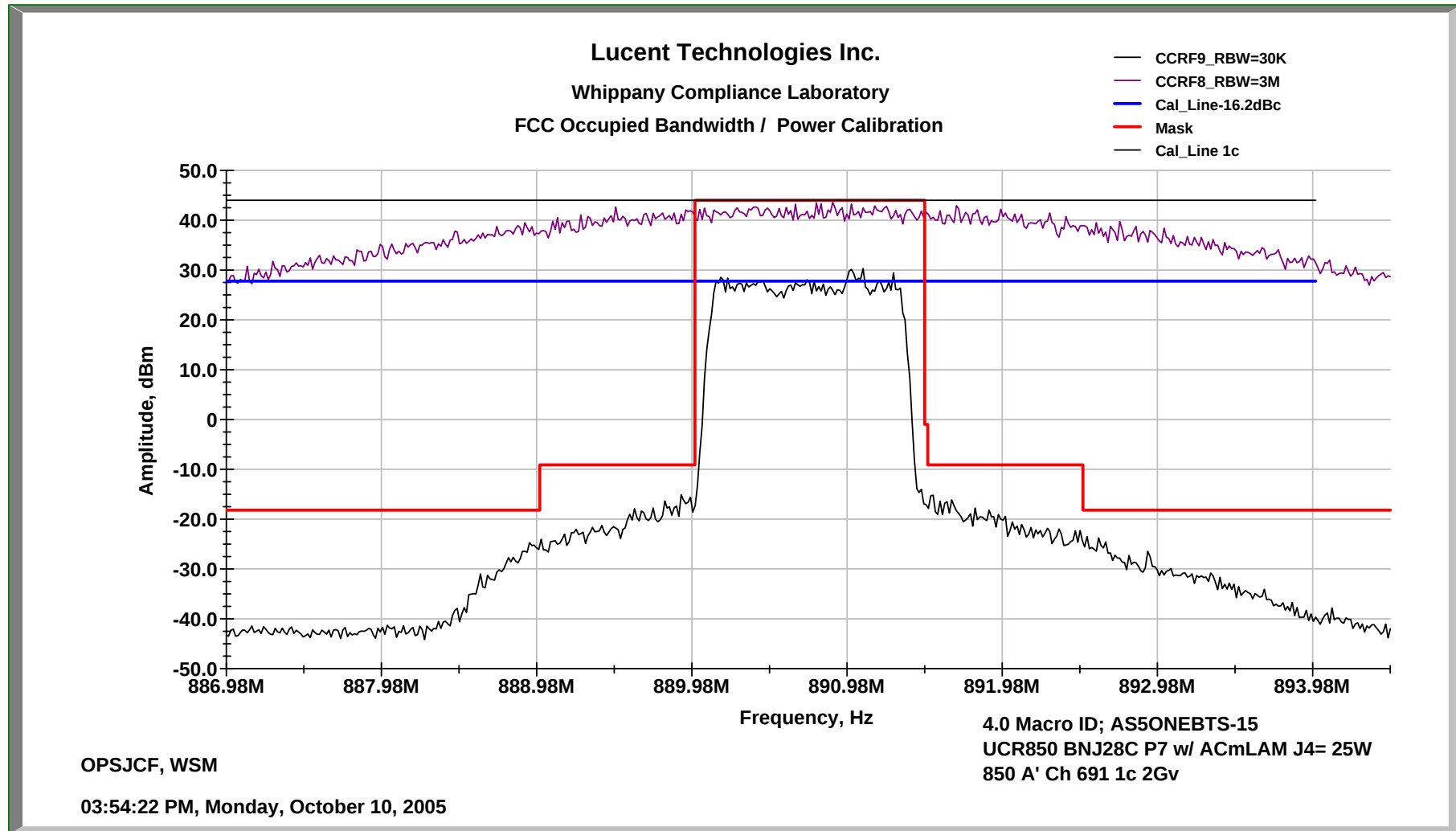


Exhibit 14 Continued

FCC Occupied Bandwidth: UCR-850 Output - Left side of Cellular B Band, Channels 384, 425, 466, 3 Carrier Configuration

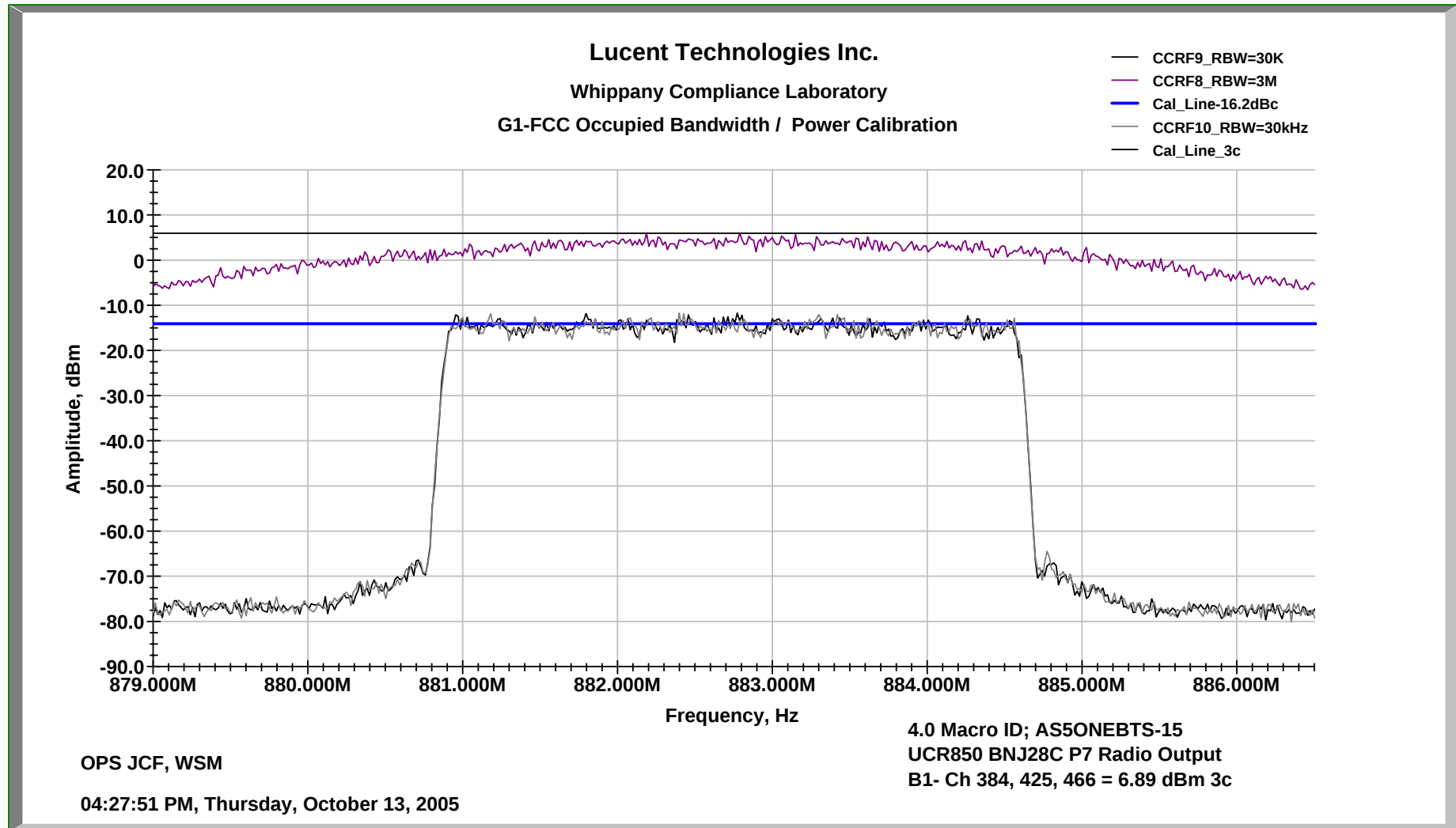


Exhibit 14 Continued

FCC Occupied Bandwidth: mLAM/MCA Output - Left side of Cellular B Band, Channels 384, 425, 466, 3 Carrier Configuration

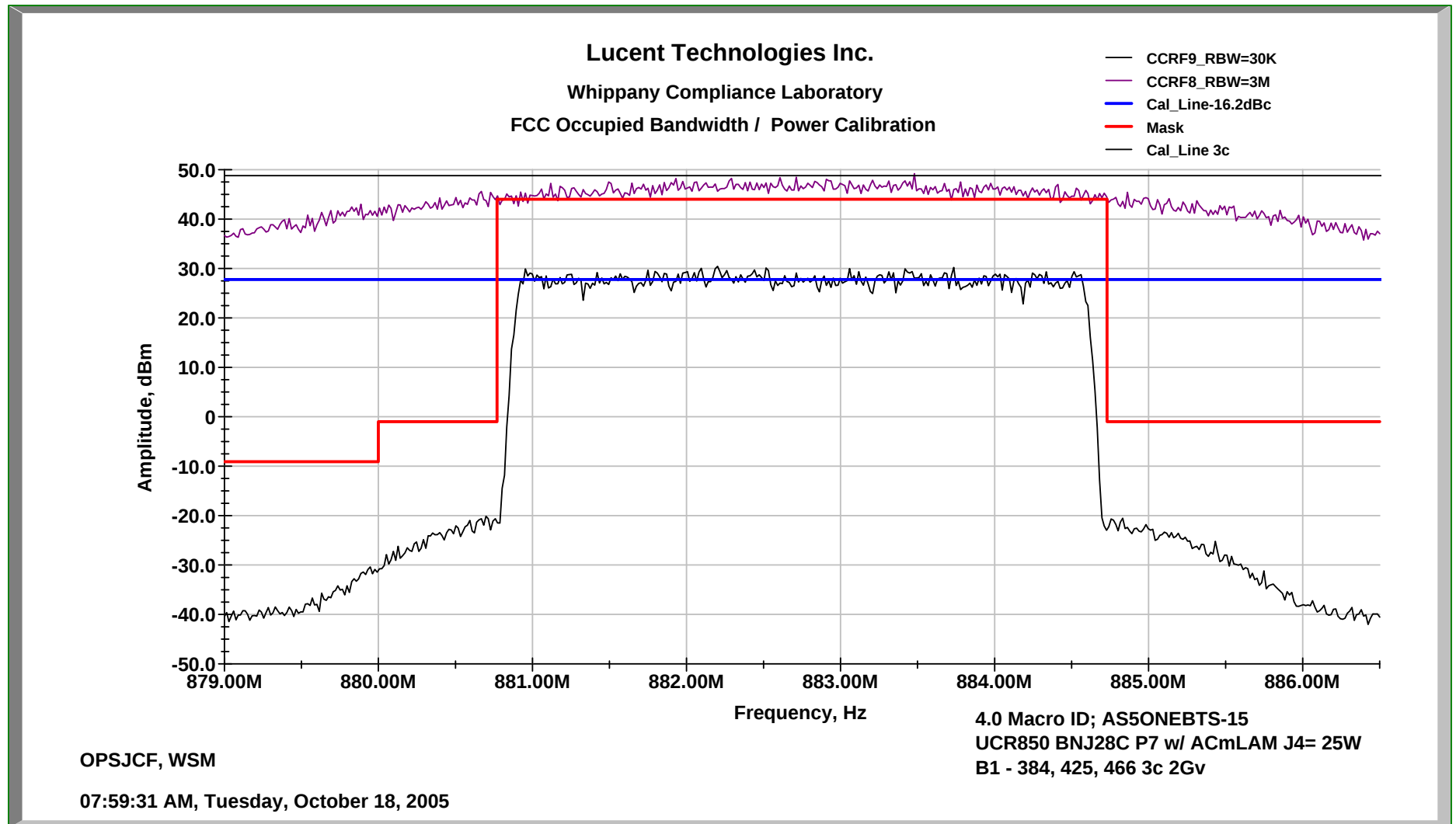


Exhibit 14 Continued

FCC Occupied Bandwidth: UCR-850 Output - Right side of Cellular B Band, Channels 630, 1 Carrier Configuration

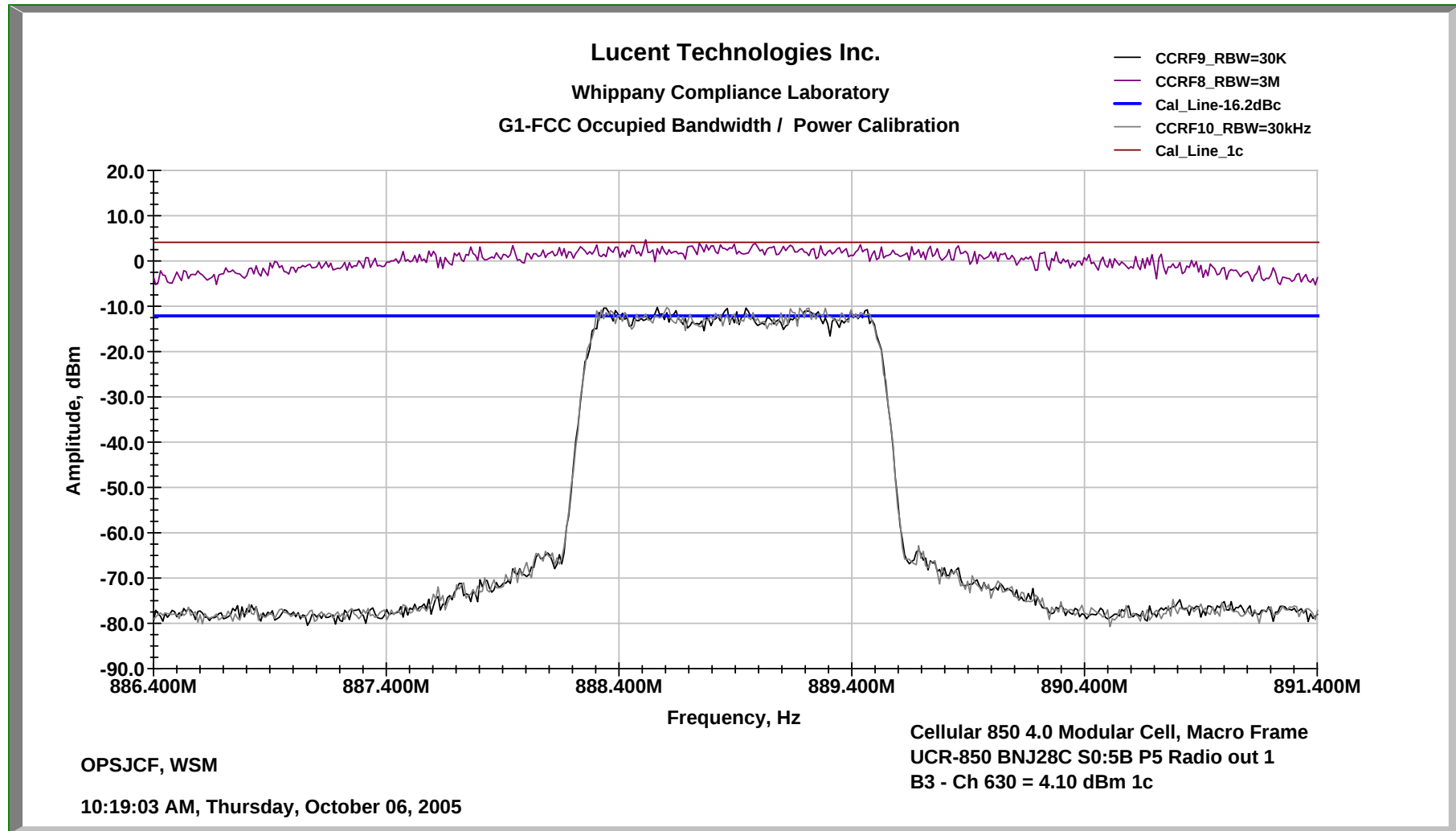


Exhibit 14 Continued

FCC Occupied Bandwidth: mLAM/MCA Output - Right side of Cellular B Band, Channels 630, 1 Carrier Configuration

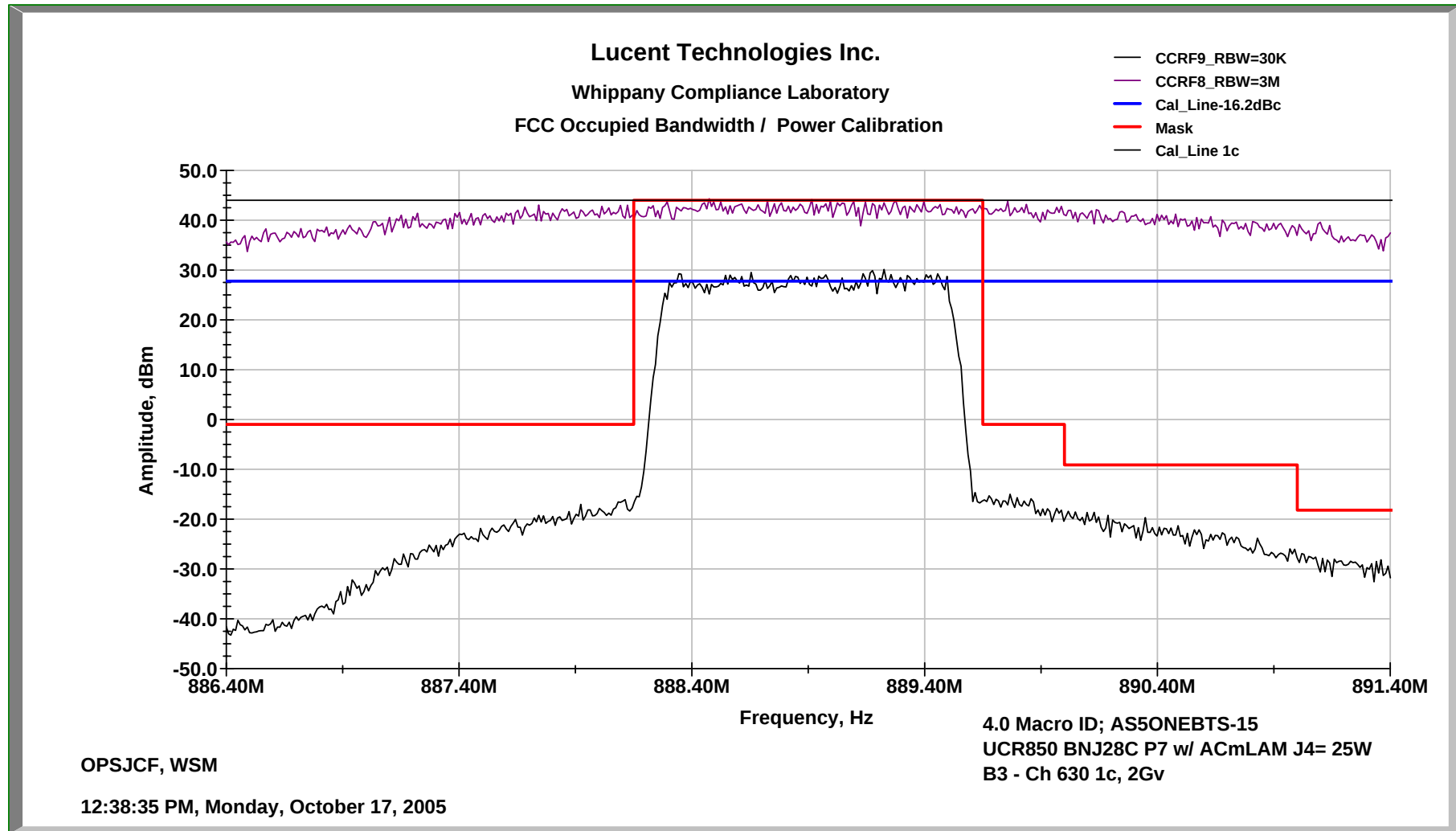


Exhibit 14 Continued

FCC Occupied Bandwidth: UCR-850 Output - Right side of Cellular B' Band, Channels 770, 1 Carrier Configuration

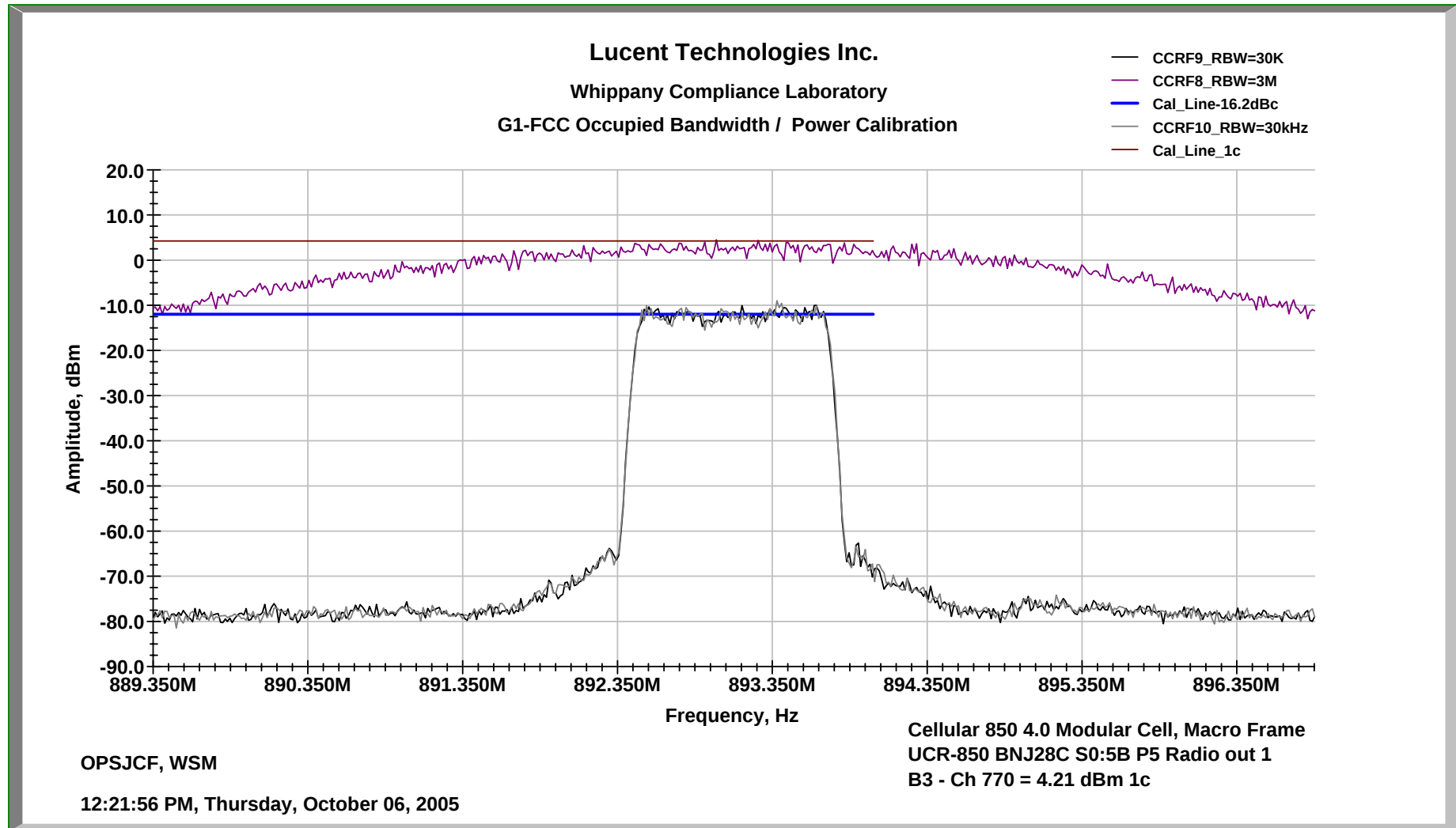


Exhibit 14 Continued

FCC Occupied Bandwidth: mLAM/MCA Output - Right side of Cellular B' Band, Channels 770, 1 Carrier Configuration

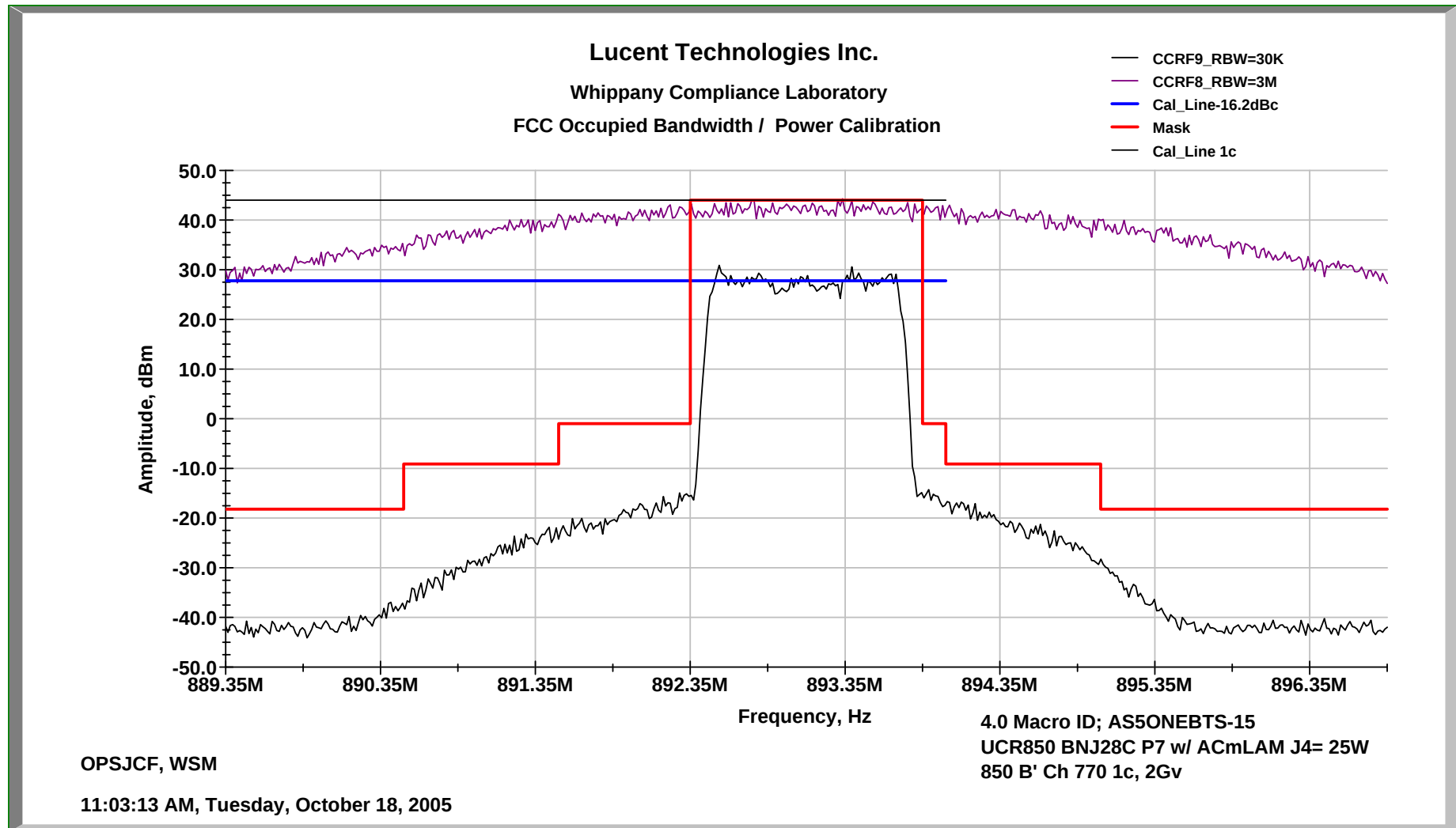


Exhibit 15: Measurement of Spurious Emissions at Antenna Terminals

Section 2.1051 Spurious Emissions at Antenna Terminals

The **UCR-850** will typically be utilized with a FCC Product Certified Cellular power amplifier such as the **mLAM (AS5ONEBTS-03)** or **C2PAM (AS5ONEBTS-13)**. Data was collected for the **UCR-850** alone and for the typical case in the **FLEXENT OneBTS 4.0 Modular Cell** where the **UCR-850** is integrated with the **mLAM/ FCC ID: AS5ONEBTS-03**. The FCC Conducted Spurious emissions from the **UCR-850** integrated with the **mLAM FCC ID: AS5ONEBTS-03**, are compliant and within the parameters as previously filed with the FCC. The test methodology is described below and the test results are attached.

Spurious Emissions at the antenna terminals were investigated over the frequency range of 10 MHz to beyond the 10th harmonic of the carrier frequency. The RF output from the transmitter was reduced (to an amplitude usable by the spectrum analyzer) by using a attenuator calibrated over the 10 MHz-10GHz range. The RF power level was measured during setup and monitored continuously during the test via the test setup in Figure 14A.

Measurements were made using a Rohde & Schwarz FSEM Spectrum Analyzer, a PC based computer test controller, specialized RF components and a TILE TM software program to acquire the test data. This system allows measurement and presentation of the data in an accurate and compact form for FCC review. The volume of collected data is greater than 2×10^6 data points over the frequency range of 10 MHz to 10 GHz.

The use of a High-Pass Carrier reject filter allows for rapid and accurate acquisition of CDMA broadband spurious without desensitization or spurious generation by the carrier in the front end of the spectrum analyzer. The high pass filter and the entire RF test setup is calibrated as a unit over the frequency range.

The required emission limitation specified in Section 22.917(H) of the Code was applied to these tests. Based upon the criterion given in Section 22.917(H) of the Code the required out of band emission limit is equal to -56.98 dBc or -13 dBm . The -13 dBm limit holds for all out of band signals when measured with the specified 100 kHz resolution bandwidth. The measurements of the spurious signals on the attached charts in this section were made using a minimum resolution bandwidth of 100 kHz and a step size appropriate to acquire all spurious emissions. The carrier signal shown on these plots is the sum of measurements at resolution Bandwidths of 120 kHz and 1 MHz. This was done so that the carrier plot correctly and accurately depicts the carrier output power in relation to the spurious signals and the defined limit. There were no adjustments made to any signals for resolution bandwidth.

The measurements of the spurious signals close to the carrier can also be evaluated in the Occupied Bandwidth plots, which were made using a resolution bandwidth of 30 kHz. Harmonics of the CDMA Carrier must be shown to be lower than -13 dBm as specified in 47CFR 22.917(H). The measurement of narrow-band spurious signals, such as clocks, oscillators and other pure tone types of signals are unchanged by variation of the analyzers resolution bandwidth. Per 47CFR 22.917(H) the -13 dBm limit is therefore appropriate for all narrowband or broadband signals.

Exhibit 15:continued

The applied signal met the recommended characteristics per "**Table 6.5.2-1 Base Station Test Model, Nominal**" from **3GPP2 TSG-C.S0010-B-v2.0 March 2004**, Recommended Minimum Performance Standards for cdma2000 Spread Spectrum Base Stations, as defined below.

Type	Number of Channels	Fraction of Power (Linear)	Fraction of Power (dB)	Comments
Pilot	1	0.2	-7	Code channel W_0^{128}
Sync	1	0.0471	-13.3	Code channel W_{32}^{64} ; always 1/8 rate
Paging	1	0.1882	-7.3	Code channel W_1^{64} ; full rate only
Traffic	6	0.09412	-10.3	Variable code channel assignments; full rate only

TABLE 15.1 Base Station Test Model, Nominal for Main Path

Type	Number of Channels	Fraction of Power (Linear)	Fraction of Power (dB)	Comments
Transmit Diversity Pilot	1	0.2	-7	Code channel W_{16}^{128}
Traffic	6	0.09412	-10.3	Variable code channel assignments; full rate only

TABLE 15.2 Base Station Test Model, Nominal for Transmit Diversity Path**Test Results Summary:**

Measurements were performed while transmitting at the left and right side of the cellular downlink bands. The attached spectral plots document the compliance and shows that there are no emissions above the applicable limit of -13. dBm for harmonics and spurious. The attached data plots also document the results for the **UCR-850** integrated with an external power amplifier, **mLAM/ FCC ID: AS5ONEBTS-03**, for single, dual and three carrier test configurations.

Conducted Spurious tests on the Receiver antenna terminal documented compliance with the **2 nW requirement of 47CFR Part 15 section 15.**

Exhibit 15 *continued*

**FCC Conducted Spurious Data
at
Transmitter Output
for
Lucent Technologies Inc.
Cellular 850 ONEBTS Modular Cell 4.0
Incorporating
Cellular 850 UMTS CDMA Radio (UCR-850)
Filed under FCC ID: AS5ONEBTS-15
with
Cellular 850 Linear Amplifier Module, Model m
mLAM, FCC ID: AS5ONEBTS-03
Single, Dual and Three Carrier Configurations**

Exhibit 15 *continued*

Band A, Sub-Block A”A3, 2 Carrier Configuration 10 MHz -10GHz

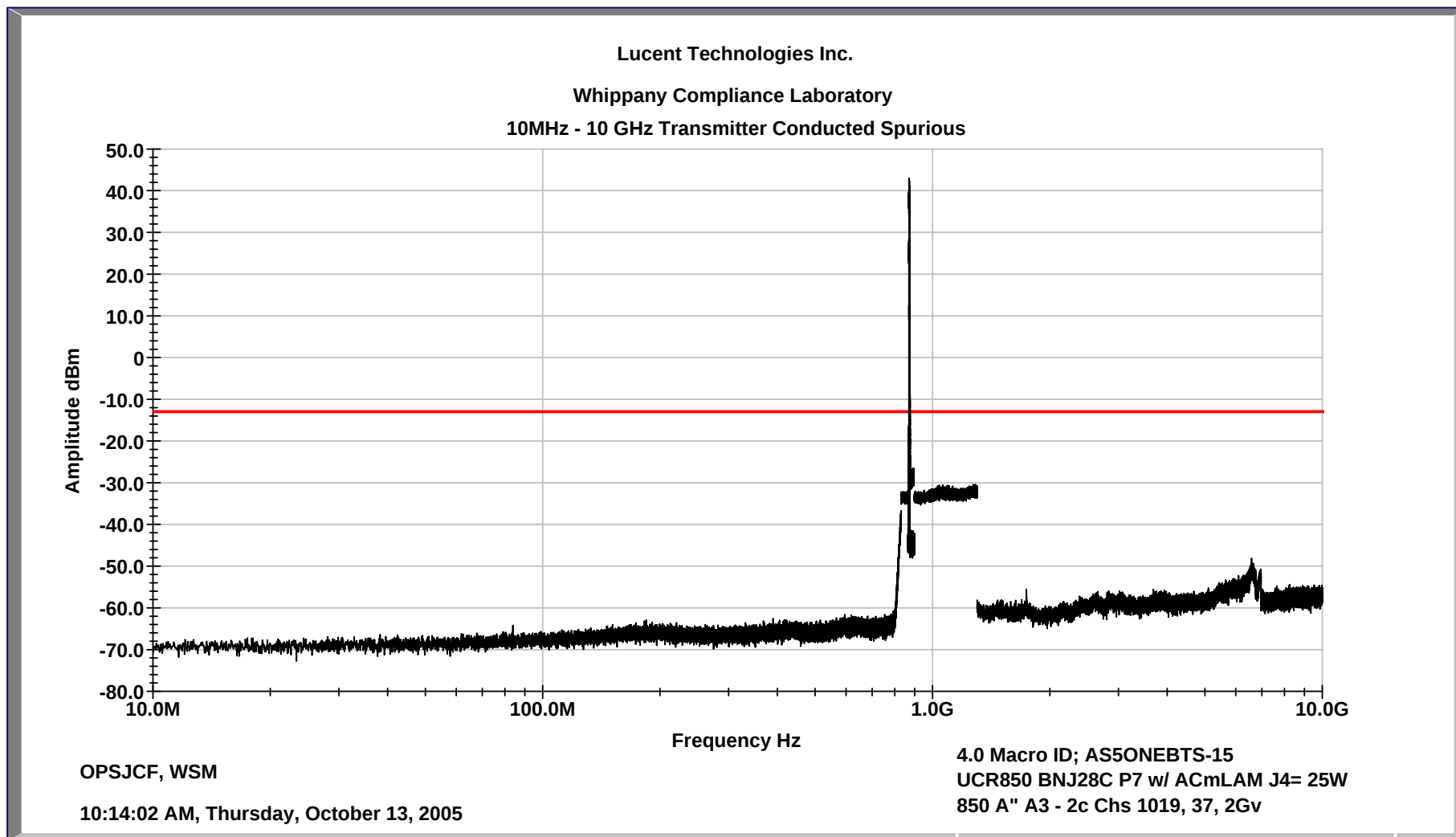


Exhibit 15 *continued*

Band A, Sub-Block A1, 3 Carrier Configuration 10 MHz -10GHz

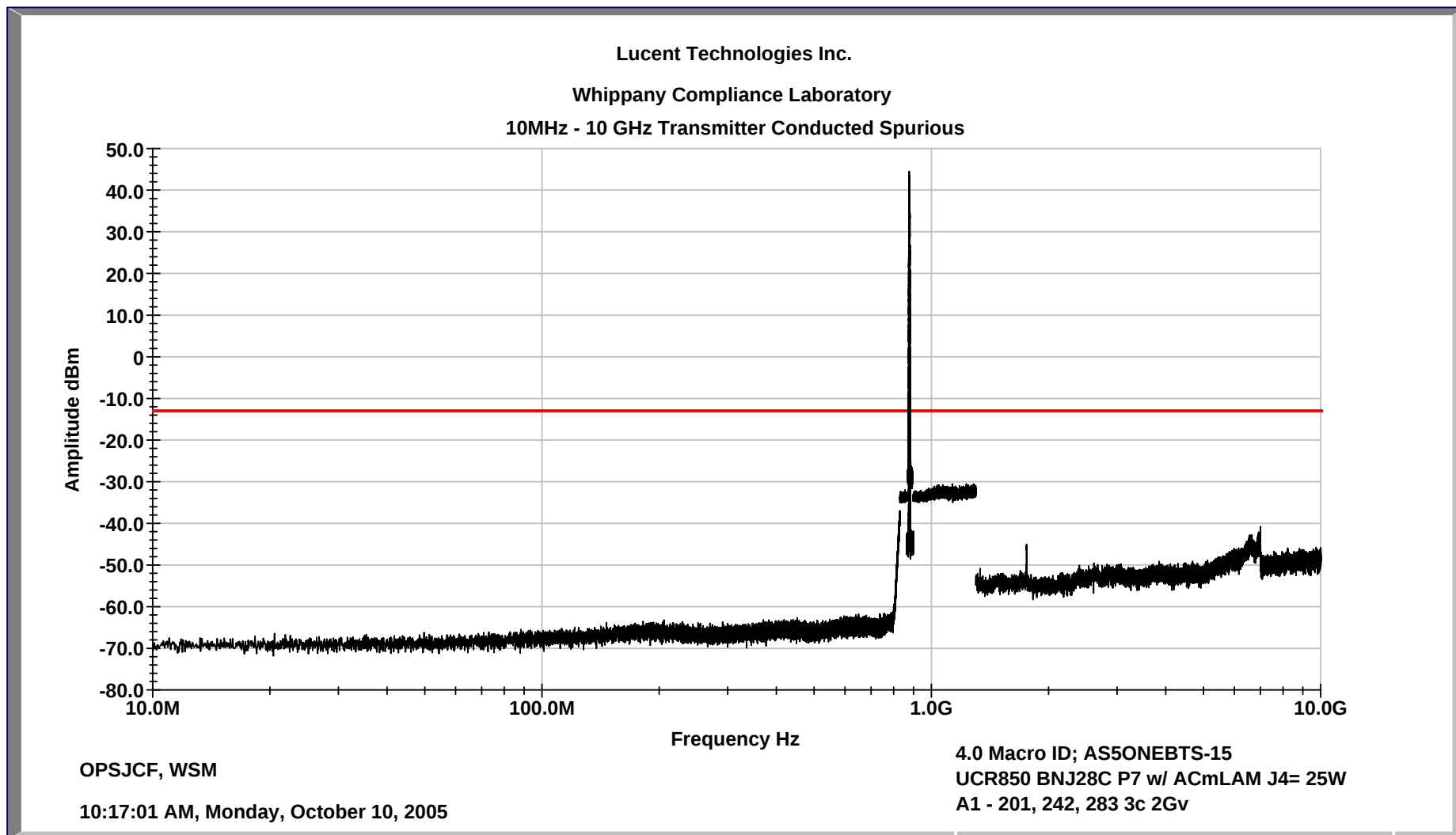


Exhibit 15 *continued*

Band B, Sub-Block B1, 1 Carrier Configuration 10 MHz -10GHz

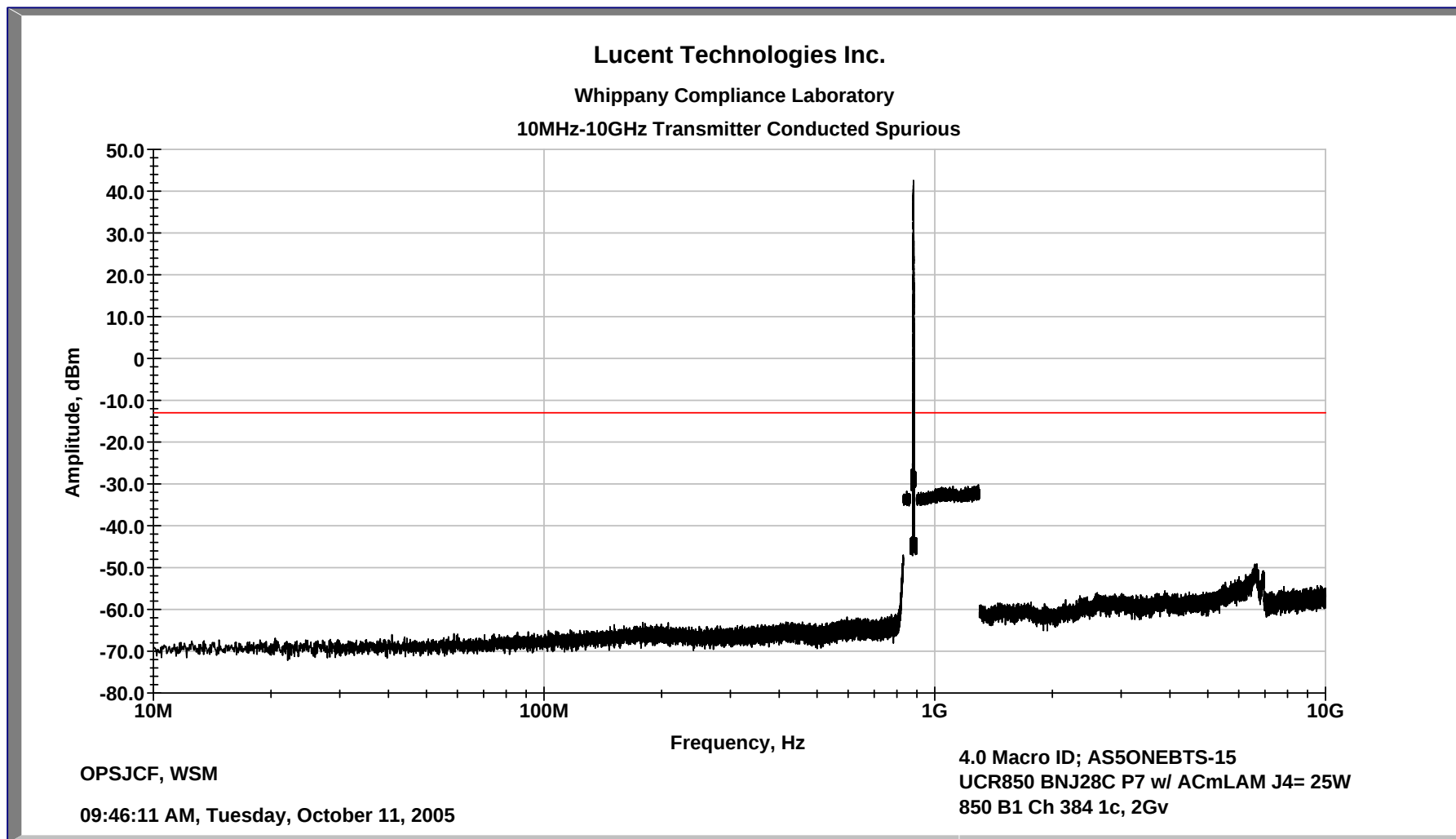


Exhibit 15 *continued*

Band B, Sub-Block B1, 2 Carrier Configuration 10 MHz -10GHz

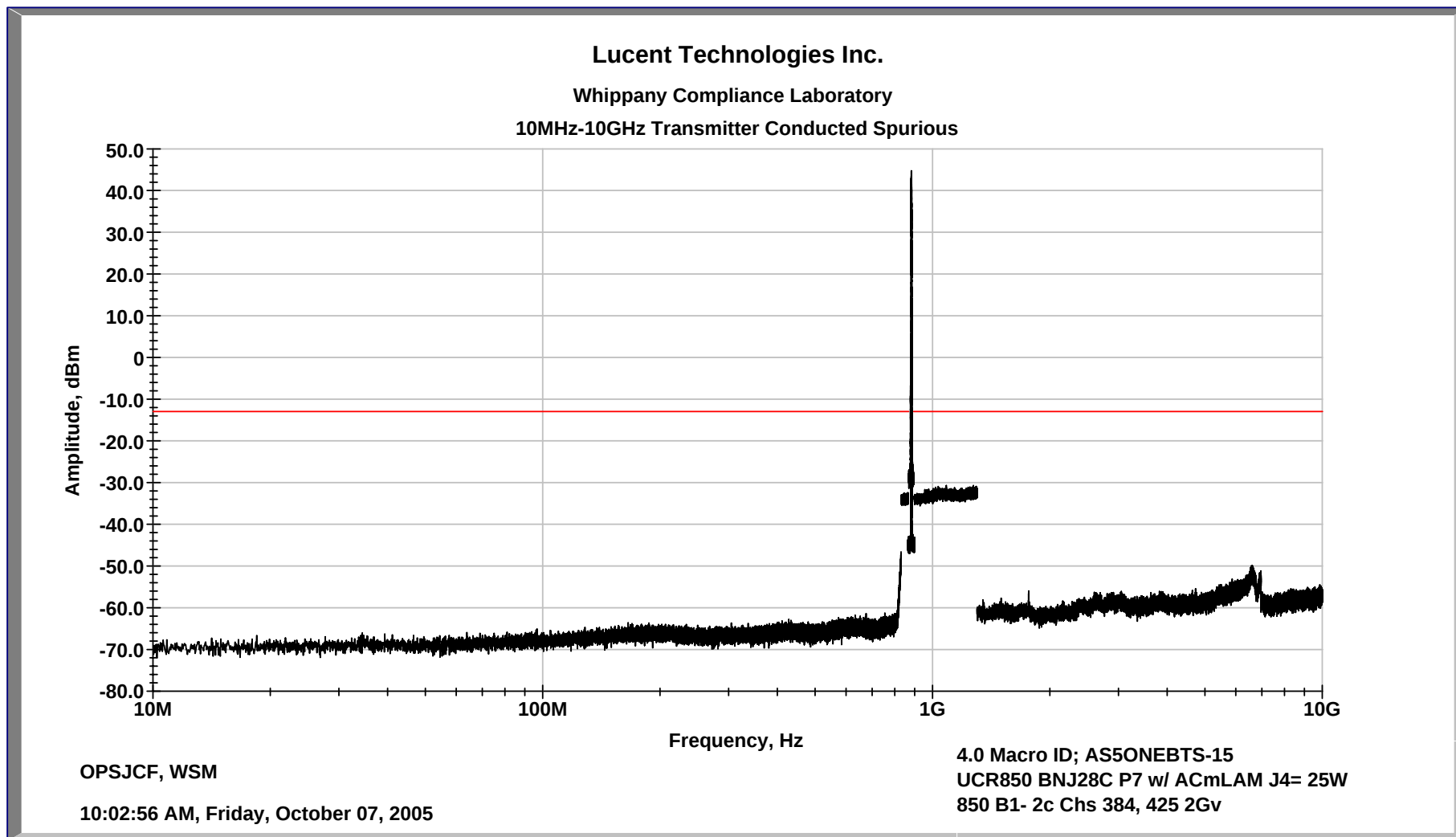


Exhibit 15 *continued*

Band B, Sub-Block B1, 3 Carrier Configuration 10 MHz -10GHz

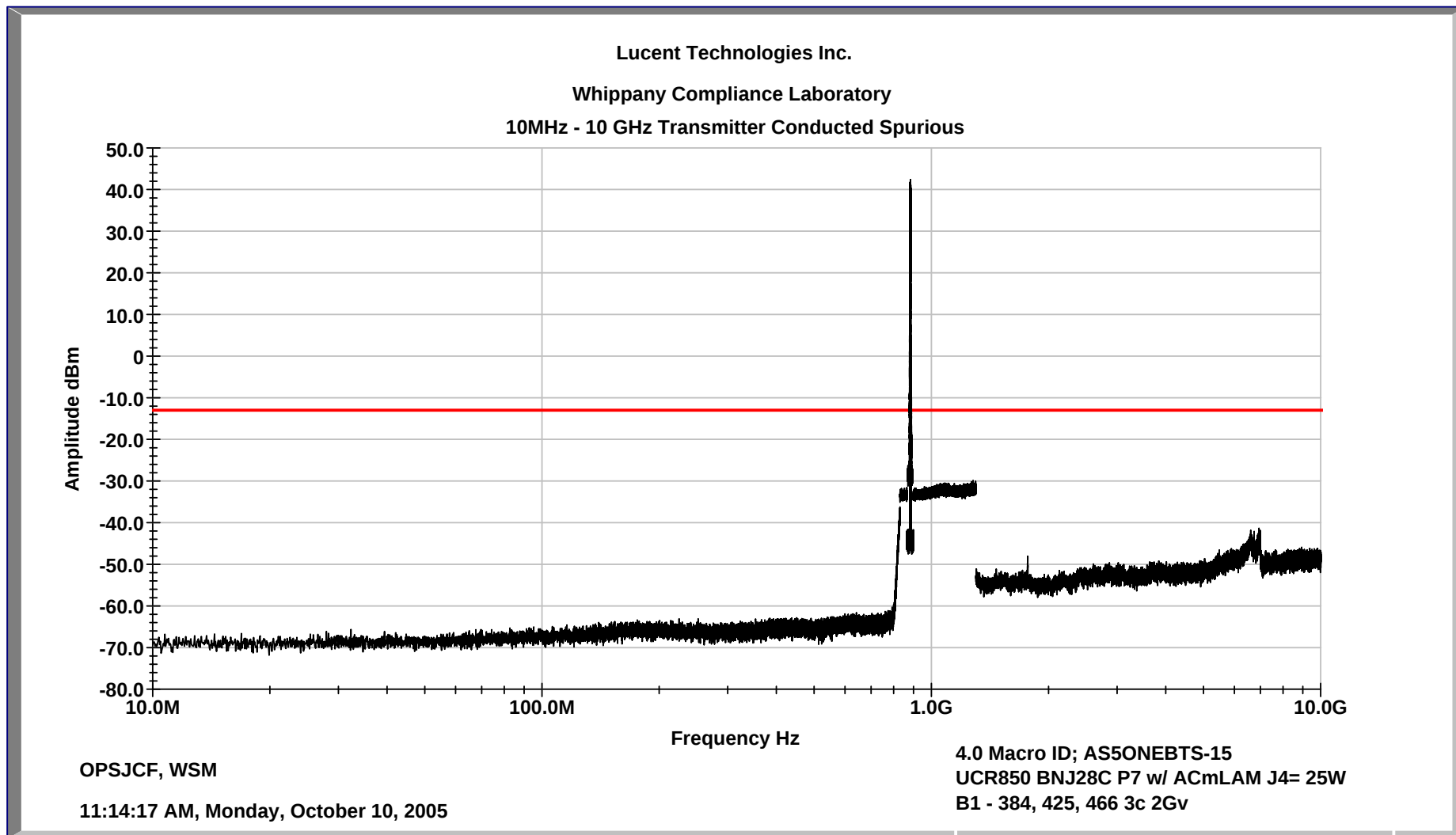


Exhibit 15 *continued*

Band B, Sub-Block B', 1 Carrier Configuration 10 MHz -10GHz

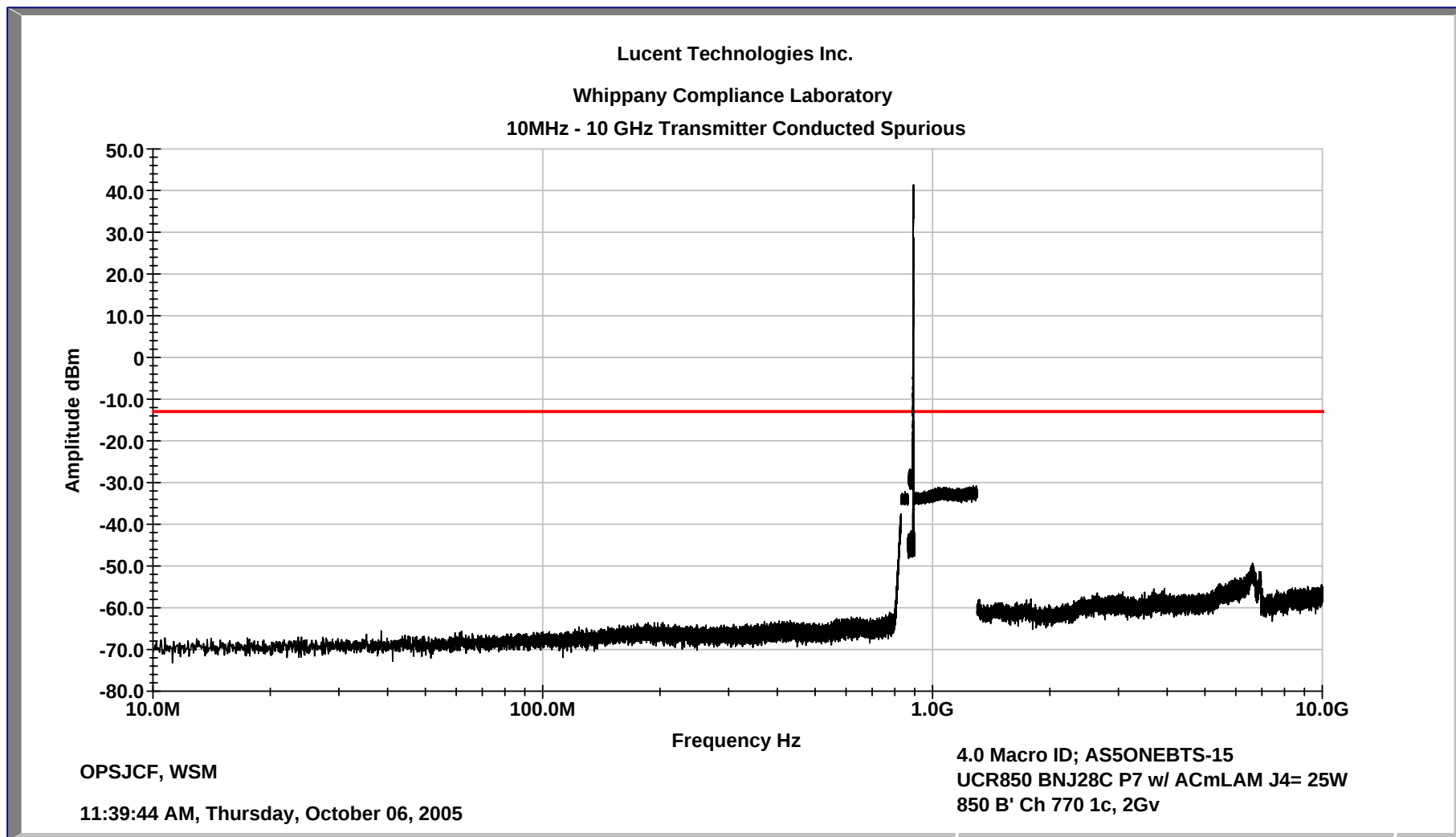


Exhibit 16: Measurement of Field Strength of Spurious Radiation**SECTION 2.1053 Measurement of Field Strength of Spurious Radiation**

Field strength measurements of radiated spurious emissions are evaluated at a ten meter Open Air Test Site (OATS) and a 3 meter semi-Anechoic precompliance chamber maintained by Lucent Technologies Bell Laboratories Wireless Compliance Laboratory in Whippany, New Jersey. A complete description and full measurement data for the open air test site have been placed on file with the Commission.

Six UCR-850's FCC ID: AS5ONEBTS-15 were assembled with twelve mLAM's FCC ID: AS5ONEBTS-03 and all other associated equipment in a FLEXENT® OneBTS Cellular 850 Modular Cell 4.0. The spectrum from 10 MHz to beyond the tenth harmonic of the carrier (10 GHz) was searched for spurious radiation. Measurements were made using both horizontally and vertically polarized broadband antennas. Per FCC regulations, the comparison of out of band spurious emissions directly to the limit is appropriately made using the substitution method. However, when the emissions are more than 20 dB below the specification limit, the use of field strength measurements for compliance determination is acceptable and those emissions are considered not reportable (Section 2.1053 and the FCC Interpretive database for 2.1053). For this case the evaluation of acceptable radiated field strength is as follows.

The calculated emission levels were found by:

$$P_{\text{measured}} (\text{dBm}) + \text{Cable Loss}(\text{dB}) + \text{Antenna Factor}(\text{dB}) + 107 (\text{dB}\mu\text{V}/\text{dBm}) - \text{Amplifier Gain} (\text{dB}) \\ = \text{Field Strength} (\text{dB}\mu\text{V}/\text{m})$$

Section 22.917 and 2.1053 contains the requirements for the levels of spurious radiation as a function of the level of the unmodulated carrier. The reference level for the unmodulated carrier can be calculated from either a dipole antenna or an isotropic radiator. The isotropic radiator calculation is the more severe requirement and is used herein. The reference level for the unmodulated carrier is calculated as the field produced by an isotropic radiator excited by the transmitter output power according to the following relation taken from Reference Data for Radio Engineers, page 27-7, 6th edition, IT&T Corp.

$$P = P_t / 4\pi R^2 \quad \text{Watts/meter}^2$$

$$E = (120\pi P)^{1/2} = [(30 * P_t)^{1/2}] / R$$

$$20 \log (E * 10^6) - (43 + 10 \log P) = 71.77 \text{ dB } \mu\text{V}/\text{meter}$$

Where: E = Field Intensity in Volts/ meter
 P_t = Transmitted Power in watts = 25 W/ Carrier
 P = Power density in Watts/meter²
 R = Distance in meters = 10 m

RESULTS:

For this particular test, the field strength of any spurious radiation is required to be less than 71.8 dB μ V/meter. Reportable measurements are equal to or greater than 51.8 dB μ V/meter. Outside the transmit band of 869-894 MHz and over the spectrum investigated, 10 MHz to tenth harmonic of the carrier, no reportable spurious emissions were detected. This demonstrates that the **Cellular UMTS CDMA Radio (UCR-850)**, the subject of this application, complies with Sections 2.1053, 24.238 and 2.1057 of the Rules.

Additional testing to 47CFR Part 15 documented compliance with the Class B requirements.

Exhibit 17 Measurement of Frequency Stability**SECTION 2.995 Measurement of Frequency Stability**

The following frequency stability test data for the **UCR-850/ AS5ONEBTS-15** was measured as installed and tested, per Figure 17A, in a **FLEXENT ® OneBTS Cellular 850 Outdoor Modular Cell 4.0**. The **Cellular 850 Outdoor Modular Cell 4.0** was subjected to the FCC specified environments over its maximum allowable temperature range of -40 deg C to +50 deg C while operating at full rated power. At each temperature the DC input line voltage was varied +/- 15% . Software and hardware controls internal to the **Modular Cell 4.0** will disable the transmitter should either the internal temperatures exceed the maximum range or the frequency stability of the transmitter be compromised.

The frequency stabilization and accuracy of the CDMA signal amplified by the **mLAM** and measured at the **Cellular 850 Indoor Modular Cell 4.0** J4 connector is a function of the input signal from the **UCR-850 (FCC ID: AS5ONEBTS-15)**. The Common Timing Unit (CTU) provides the time and frequency reference used by the **UCR-850 (FCC ID: AS5ONEBTS-15)**. The CTU is a highly accurate time and frequency unit which relies upon a signal lock of GPS satellite signals to provide the primary discipline of system timing. In the event of loss of GPS lock the Rubidium Reference Oscillator (**OMU-RB**) or the Crystal Oscillator Module (**OMU-XO**) can provides up to eight hours of flywheel operation. The system provides for automatic timing synchronization upon reacquisition of GPS lock. The **Flexent OneBTS Cellular Modular Cell 4.0** system is powered by DC-DC power converters with battery backup to provide immunity to power fluctuations and failures.

Requirements:

The specification for FCC compliance per 22.355 is 1.5 ppm (1.5×10^{-6}). The Lucent Technologies design requirement is +/- 0.05 ppm ($\pm 5.0 \times 10^{-8}$) This requirement is the recommended characteristics per Paragraph 4.1.2.3 -CDMA Transmitter- Frequency Stability -Minimum Standards from **3GPP2 TSG-C.S0010-C-v1.00, February 2005**, Recommended Minimum Performance Standards for cdma2000 Spread Spectrum Base Stations,

RESULTS:

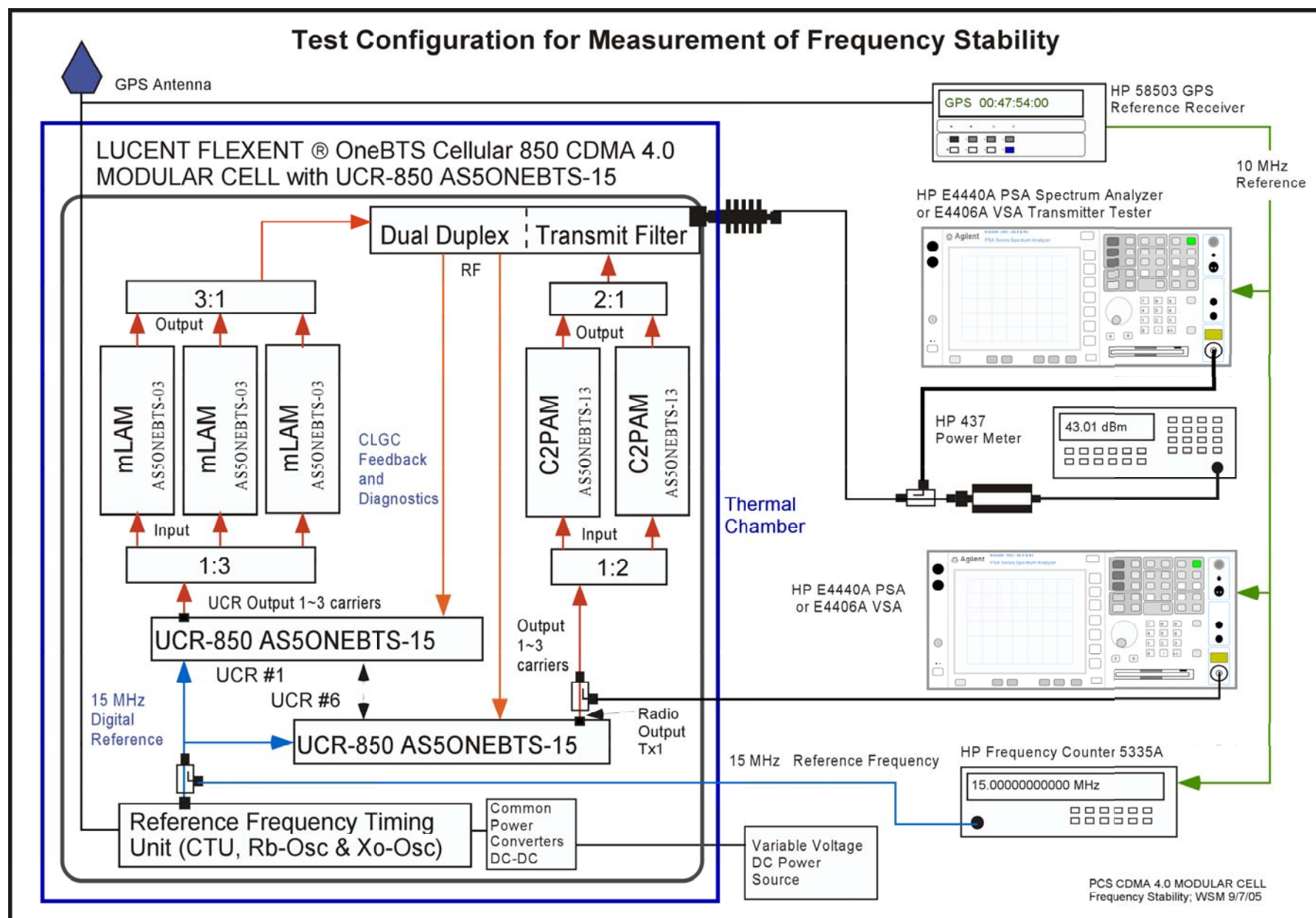
The measured data below is the FCC Frequency Stability Test Results for the **UCR-850, FCC ID: AS5ONEBTS-15**. The data was sequentially recorded at both the radio output and the transmitter output.

This system complies with FCC Rules for frequency stability and those required for system compliance with **3GPP2**. The **UCR-850** is compliant with **FCC Part 2 and 22 rules** when powered by and installed in a Lucent Technologies Inc. **FLEXENT ® OneBTS Cellular 850 Modular Cell 4.0**.

The data provided below documents that the maximum frequency deviation measured for the RF carrier frequency (882.75 MHz) at either the radio output or the transmit antenna port was +0.0069 ppm (6.05 Hz).

This value is well within the FCC allowable limit of 1324 Hz and the 3GPP2 required 44.1 Hz.

The measured data is attached below.



Cellular Block Tested: B1, Cellular Channel 425, 882.75MHz
 Baseline 20 degrees C

	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	-1.4978	1.3050	20.0	20.4
0.50	-3.9441	1.8770	20.0	20.4
1.00	1.5328	-2.5634	20.0	20.4
1.50	-0.3228	1.5472	20.0	20.4
2.00	-1.5342	0.7768	20.0	20.4
2.50	-0.1697	-1.7309	20.0	20.4
3.00	-1.6654	1.8335	20.0	20.4
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	-0.6601	1.6483	20.0	24.0
0.50	-0.8457	-0.8730	20.0	24.0
1.00	-0.5821	1.0700	20.0	24.0
1.50	-1.7693	0.1971	20.0	24.0
2.00	0.2343	0.2422	20.0	24.0
2.50	0.1160	-1.2199	20.0	24.0
3.00	0.1915	-0.7651	20.0	24.0
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	-1.0933	0.6340	20.0	27.6
0.50	-1.0884	1.4796	20.0	27.6
1.00	0.1306	2.7343	20.0	27.6
1.50	-1.7351	0.8378	20.0	27.6
2.00	-0.5079	-0.0063	20.0	27.6
2.50	-0.2682	-0.2635	20.0	27.6
3.00	0.6766	-0.0307	20.0	27.6

Cellular Block Tested: B1, Cellular Channel 425, 882.75MHz
 Data at -40 degrees C

	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	2.4515	1.8794	-40.0	20.4
0.50	-0.9296	0.7987	-40.0	20.4
1.00	0.3055	-0.4710	-40.0	20.4
1.50	0.4637	-1.0626	-40.0	20.4
2.00	1.8502	2.3141	-40.0	20.4
2.50	-0.1348	-0.0161	-40.0	20.4
3.00	0.2713	0.0845	-40.0	20.4
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	1.4503	-0.0426	-40.0	24.0
0.50	0.0730	1.9429	-40.0	24.0
1.00	0.3669	2.1283	-40.0	24.0
1.50	-2.5355	0.5839	-40.0	24.0
2.00	2.3756	2.1695	-40.0	24.0
2.50	-0.2470	-0.5379	-40.0	24.0
3.00	1.6326	-1.1417	-40.0	24.0
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	-1.3402	1.2388	-40.0	27.6
0.50	-0.4283	0.2052	-40.0	27.6
1.00	2.2353	0.0859	-40.0	27.6
1.50	-1.1077	0.6245	-40.0	27.6
2.00	-1.3934	0.9562	-40.0	27.6
2.50	0.0286	0.9825	-40.0	27.6
3.00	0.2780	0.3113	-40.0	27.6

Cellular Block Tested: B1, Cellular Channel 425, 882.75MHz
 Data at -30 degrees C

	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	-2.8733	-1.4544	-30.0	20.4
0.50	2.3034	0.1761	-30.0	20.4
1.00	-1.5506	-0.0207	-30.0	20.4
1.50	-1.1443	1.4181	-30.0	20.4
2.00	1.4863	2.9736	-30.0	20.4
2.50	0.5662	0.3139	-30.0	20.4
3.00	0.8315	-0.3712	-30.0	20.4
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	-0.0517	1.7748	-30.0	24.0
0.50	0.3315	-0.1512	-30.0	24.0
1.00	-1.5782	1.1308	-30.0	24.0
1.50	0.8188	-2.4724	-30.0	24.0
2.00	-0.5321	1.8932	-30.0	24.0
2.50	0.9945	0.0466	-30.0	24.0
3.00	-0.3292	-0.6600	-30.0	24.0
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	-0.5900	1.3216	-30.0	27.6
0.50	-0.6525	0.6822	-30.0	27.6
1.00	0.2256	0.8356	-30.0	27.6
1.50	1.8686	1.0304	-30.0	27.6
2.00	1.3462	1.8786	-30.0	27.6
2.50	0.5381	-0.1780	-30.0	27.6
3.00	-3.3083	0.2292	-30.0	27.6

Cellular Block Tested: B1, Cellular Channel 425, 882.75MHz
 Data at -20 degrees C

	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	°C	(VDC)
0.00	-3.4285	-0.2109	-20.0	20.4
0.50	1.7522	1.6797	-20.0	20.4
1.00	1.4187	1.2096	-20.0	20.4
1.50	-0.5695	-0.6126	-20.0	20.4
2.00	-0.0993	-1.1833	-20.0	20.4
2.50	-1.2815	1.1549	-20.0	20.4
3.00	0.3723	0.7451	-20.0	20.4
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	°C	(VDC)
0.00	1.4408	0.1903	-20.0	24.0
0.50	-0.2085	1.1532	-20.0	24.0
1.00	-0.2536	0.2686	-20.0	24.0
1.50	-1.2679	0.3478	-20.0	24.0
2.00	0.7119	1.3197	-20.0	24.0
2.50	0.4680	1.8244	-20.0	24.0
3.00	-0.2398	0.5265	-20.0	24.0
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	°C	(VDC)
0.00	1.6525	1.0465	-20.0	27.6
0.50	0.3000	0.4650	-20.0	27.6
1.00	0.0683	0.6619	-20.0	27.6
1.50	1.2191	1.2136	-20.0	27.6
2.00	1.8927	-0.5732	-20.0	27.6
2.50	0.9511	0.1363	-20.0	27.6
3.00	-1.0637	1.8631	-20.0	27.6

Cellular Block Tested: B1, Cellular Channel 425, 882.75MHz
 Data at -10 degrees C

	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	0.7724	1.0067	-10.0	20.4
0.50	-1.8413	-0.6950	-10.0	20.4
1.00	0.4692	-0.8093	-10.0	20.4
1.50	0.3026	-1.4674	-10.0	20.4
2.00	2.2372	1.3204	-10.0	20.4
2.50	0.5475	0.1070	-10.0	20.4
3.00	-0.6285	-1.7321	-10.0	20.4
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	0.3428	0.5372	-10.0	24.0
0.50	0.7305	1.2161	-10.0	24.0
1.00	-1.0452	-1.3065	-10.0	24.0
1.50	-0.3895	3.4385	-10.0	24.0
2.00	1.3162	3.1511	-10.0	24.0
2.50	2.0724	1.2935	-10.0	24.0
3.00	0.1783	3.5744	-10.0	24.0
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	3.3868	1.6483	-10.0	27.6
0.50	-0.6883	1.5339	-10.0	27.6
1.00	-0.3539	0.8232	-10.0	27.6
1.50	-0.7535	1.0093	-10.0	27.6
2.00	0.2454	1.0656	-10.0	27.6
2.50	0.3263	-0.8618	-10.0	27.6
3.00	-0.9221	-0.6216	-10.0	27.6

Cellular Block Tested: B1, Cellular Channel 425, 882.75MHz

Data at 0 degrees C

	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	°C	(VDC)
0.00	0.7583	-0.7927	0.0	20.4
0.50	0.5882	1.3443	0.0	20.4
1.00	-1.3490	2.1035	0.0	20.4
1.50	-0.0701	2.4732	0.0	20.4
2.00	-1.6273	1.4883	0.0	20.4
2.50	-2.5398	2.2134	0.0	20.4
3.00	-1.1055	0.4173	0.0	20.4
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	°C	(VDC)
0.00	-1.0984	1.1214	0.0	24.0
0.50	0.3809	-0.3266	0.0	24.0
1.00	-0.9382	0.4913	0.0	24.0
1.50	-0.6980	0.7230	0.0	24.0
2.00	-1.1316	2.9386	0.0	24.0
2.50	1.1409	1.9624	0.0	24.0
3.00	-0.6626	0.5771	0.0	24.0
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	°C	(VDC)
0.00	-0.2137	-0.8102	0.0	27.6
0.50	-0.8005	-0.5579	0.0	27.6
1.00	0.0085	0.6963	0.0	27.6
1.50	-0.6747	1.6888	0.0	27.6
2.00	0.4747	-0.4441	0.0	27.6
2.50	-1.7837	1.0738	0.0	27.6
3.00	-0.1200	-2.2095	0.0	27.6

Cellular Block Tested: B1, Cellular Channel 425, 882.75MHz
 Data at 10 degrees C

	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	-0.3607	0.8387	10.0	20.4
0.50	-0.7991	0.3351	10.0	20.4
1.00	0.0563	1.2929	10.0	20.4
1.50	-2.1806	1.1771	10.0	20.4
2.00	-1.0410	-0.8327	10.0	20.4
2.50	0.2240	0.5435	10.0	20.4
3.00	0.7885	0.5557	10.0	20.4
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	0.2941	0.7048	10.0	24.0
0.50	0.3163	1.7505	10.0	24.0
1.00	-2.7222	-0.0257	10.0	24.0
1.50	1.9809	1.3815	10.0	24.0
2.00	-0.3672	0.4039	10.0	24.0
2.50	-1.0603	-0.9517	10.0	24.0
3.00	-0.4473	1.7525	10.0	24.0
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	0.5694	0.0738	10.0	27.6
0.50	1.0530	0.8004	10.0	27.6
1.00	2.2968	1.4552	10.0	27.6
1.50	-1.7989	1.1000	10.0	27.6
2.00	-2.2479	1.6319	10.0	27.6
2.50	-1.0795	0.4698	10.0	27.6
3.00	0.2623	0.0043	10.0	27.6

Cellular Block Tested: B1, Cellular Channel 425, 882.75MHz
 Data at 20 degrees C

	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	°C	(VDC)
0.00	0.7610	1.1875	20.0	20.4
0.50	0.8329	1.5483	20.0	20.4
1.00	-0.0169	0.1629	20.0	20.4
1.50	0.4867	0.8218	20.0	20.4
2.00	-0.9454	0.9618	20.0	20.4
2.50	-0.1405	0.4463	20.0	20.4
3.00	-0.7966	-0.1528	20.0	20.4
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	°C	(VDC)
0.00	0.4726	0.5861	20.0	24.0
0.50	0.2279	-1.3333	20.0	24.0
1.00	-0.5855	3.8905	20.0	24.0
1.50	0.7044	0.3407	20.0	24.0
2.00	-1.2490	1.6002	20.0	24.0
2.50	-0.9507	0.0338	20.0	24.0
3.00	-0.9575	0.2412	20.0	24.0
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	°C	(VDC)
0.00	0.2045	1.8918	20.0	27.6
0.50	-1.3156	1.9709	20.0	27.6
1.00	0.0752	0.2275	20.0	27.6
1.50	-0.9622	0.1786	20.0	27.6
2.00	0.3034	-1.4007	20.0	27.6
2.50	2.5887	-0.0435	20.0	27.6
3.00	0.2653	0.6270	20.0	27.6

Cellular Block Tested: B1, Cellular Channel 425, 882.75MHz
 Data at 30 degrees C

	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	0.3623	1.3111	30.0	20.4
0.50	-0.7382	0.9412	30.0	20.4
1.00	-0.4576	1.0169	30.0	20.4
1.50	-0.9311	1.1141	30.0	20.4
2.00	0.3814	1.3395	30.0	20.4
2.50	-0.3413	1.4151	30.0	20.4
3.00	-1.1559	1.3572	30.0	20.4
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	-1.7019	-2.1191	30.0	24.0
0.50	-0.1426	-2.1128	30.0	24.0
1.00	0.1425	1.6988	30.0	24.0
1.50	-0.3072	0.3340	30.0	24.0
2.00	0.1393	5.0485	30.0	24.0
2.50	0.8930	-0.3993	30.0	24.0
3.00	0.1109	1.7028	30.0	24.0
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	-0.2970	-1.2622	30.0	27.6
0.50	-0.9423	1.1656	30.0	27.6
1.00	1.2312	0.1007	30.0	27.6
1.50	-0.4980	0.7276	30.0	27.6
2.00	-1.7065	0.8687	30.0	27.6
2.50	-0.1205	0.6668	30.0	27.6
3.00	-0.6125	-0.1310	30.0	27.6

Cellular Block Tested: B1, Cellular Channel 425, 882.75MHz
 Data at 40 degrees C

	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	°C	(VDC)
0.00	-2.7429	1.4913	40.0	20.4
0.50	0.2870	0.3689	40.0	20.4
1.00	0.2814	1.3739	40.0	20.4
1.50	-0.1207	-0.1701	40.0	20.4
2.00	-0.9125	1.3933	40.0	20.4
2.50	-0.7234	0.8667	40.0	20.4
3.00	-0.8820	0.3463	40.0	20.4
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	°C	(VDC)
0.00	-2.9721	2.4086	40.0	24.0
0.50	1.8461	-0.2744	40.0	24.0
1.00	1.4435	-0.0278	40.0	24.0
1.50	-0.1582	0.5352	40.0	24.0
2.00	-1.9682	2.3904	40.0	24.0
2.50	-0.8342	0.7295	40.0	24.0
3.00	-2.6576	3.3638	40.0	24.0
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	°C	(VDC)
0.00	0.8137	0.3838	40.0	27.6
0.50	0.0471	1.7722	40.0	27.6
1.00	0.7038	1.1235	40.0	27.6
1.50	-0.3392	0.5104	40.0	27.6
2.00	-0.7296	3.4793	40.0	27.6
2.50	-2.9931	3.1004	40.0	27.6
3.00	-0.5678	6.0540	40.0	27.6

Cellular Block Tested: B1, Cellular Channel 425, 882.75MHz
 Data at 50 degrees C

	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	-4.3516	1.2327	50.0	20.4
0.50	-3.1118	3.7278	50.0	20.4
1.00	-1.2335	0.9255	50.0	20.4
1.50	-2.1653	1.2559	50.0	20.4
2.00	-1.4928	2.5023	50.0	20.4
2.50	-0.6164	0.8746	50.0	20.4
3.00	-2.7614	1.3392	50.0	20.4
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	-1.8042	2.2458	50.0	24.0
0.50	2.2625	-0.9764	50.0	24.0
1.00	-3.0341	-1.3200	50.0	24.0
1.50	0.3606	-0.5174	50.0	24.0
2.00	-1.4882	0.4596	50.0	24.0
2.50	-2.3022	5.0337	50.0	24.0
3.00	-1.1065	-0.0843	50.0	24.0
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	-1.1432	-1.6975	50.0	27.6
0.50	-1.5287	-0.5983	50.0	27.6
1.00	-0.3016	-0.6423	50.0	27.6
1.50	0.1330	1.0738	50.0	27.6
2.00	0.7009	0.2359	50.0	27.6
2.50	-1.9183	0.5810	50.0	27.6
3.00	1.3790	1.2444	50.0	27.6

Cellular Block Tested: B1, Cellular Channel 425, 882.75MHz

Data at Return to baseline 20 degrees C

	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	-3.1114	-0.4405	20.0	20.4
0.50	2.8125	0.2428	20.0	20.4
1.00	-1.6657	1.4264	20.0	20.4
1.50	0.2488	1.6826	20.0	20.4
2.00	-0.3881	-0.9932	20.0	20.4
2.50	0.2028	2.4936	20.0	20.4
3.00	-0.0116	-0.3676	20.0	20.4
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	0.6067	1.5275	20.0	24.0
0.50	0.3228	2.0304	20.0	24.0
1.00	0.8518	0.2476	20.0	24.0
1.50	0.7601	0.8215	20.0	24.0
2.00	-0.3872	-0.6879	20.0	24.0
2.50	-0.4455	1.0142	20.0	24.0
3.00	-0.3441	2.0562	20.0	24.0
	Radio	Antenna		
Time	Transmit Carrier Deviation	Transmit Carrier Deviation	Temperature	Voltage
(Minutes)	(Hz)	(Hz)	(C)	(VDC)
0.00	0.2171	0.8930	20.0	27.6
0.50	-1.4096	2.8835	20.0	27.6
1.00	0.2694	2.3789	20.0	27.6
1.50	-0.1336	0.9044	20.0	27.6
2.00	0.7080	-0.0759	20.0	27.6
2.50	2.9345	1.3298	20.0	27.6
3.00	-0.1603	-0.3240	20.0	27.6