Exhibit 11

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 **PCS Outdoor Flexent OneBTS Modular Cell 3.0** is the 10 MHz rubidium reference oscillator. Conducted spurious measurements were performed over the range of 10 kHz to 20GHz which is above the tenth harmonic of the transmit frequency range.

The following pages include the data required for the Type Acceptance authorization of the **kLAM / FCC ID: AS5ONEBTS-02**, 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

SECTION 2.1046

MEASUREMENT OF RADIO FREQUENCY POWER OUTPUT

The test arrangements used to measure the radio frequency power output of the **kLAM/ AS5ONEBTS-02** Linear Amplifier Module, Model k/ Multi Carrier Amplifier is on the following page. Measurements were made respectively at each frequency where Occupied Bandwidth measurements were performed. The use of the **kLAM** is for one to three CDMA carriers. This 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 at the center channel for each Block.

The **kLAM** system has a maximum power output at the antenna terminals of 20.0 Watts (43.01 dBm) +2 / -4 dB, it also has a minimum power output at the antenna terminals of 0.010 Watts (10.01 dBm +2 / -4 dB, across the PCS downlink Band (1930.00-1990.00 MHz). The signal applied to the **kLAM** is defined in Table 12.1. The power was reset to a minimum of 20.0 Watts at each measurement frequency to verify the spectral performance at that power level at each specific frequency of interest. The attenuation range was also verified. The specific Frequencies and channels and set power level was documented on each "Occupied Bandwidth" sheet.

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

TABLE 12.1 Base Station Test Model, Nominal

Exhibit 12 RF Power Test Configuration

Figure 12A/14A/15A Test Configuration For RF Power, Occupied Bandwidth and Conducted Spurious

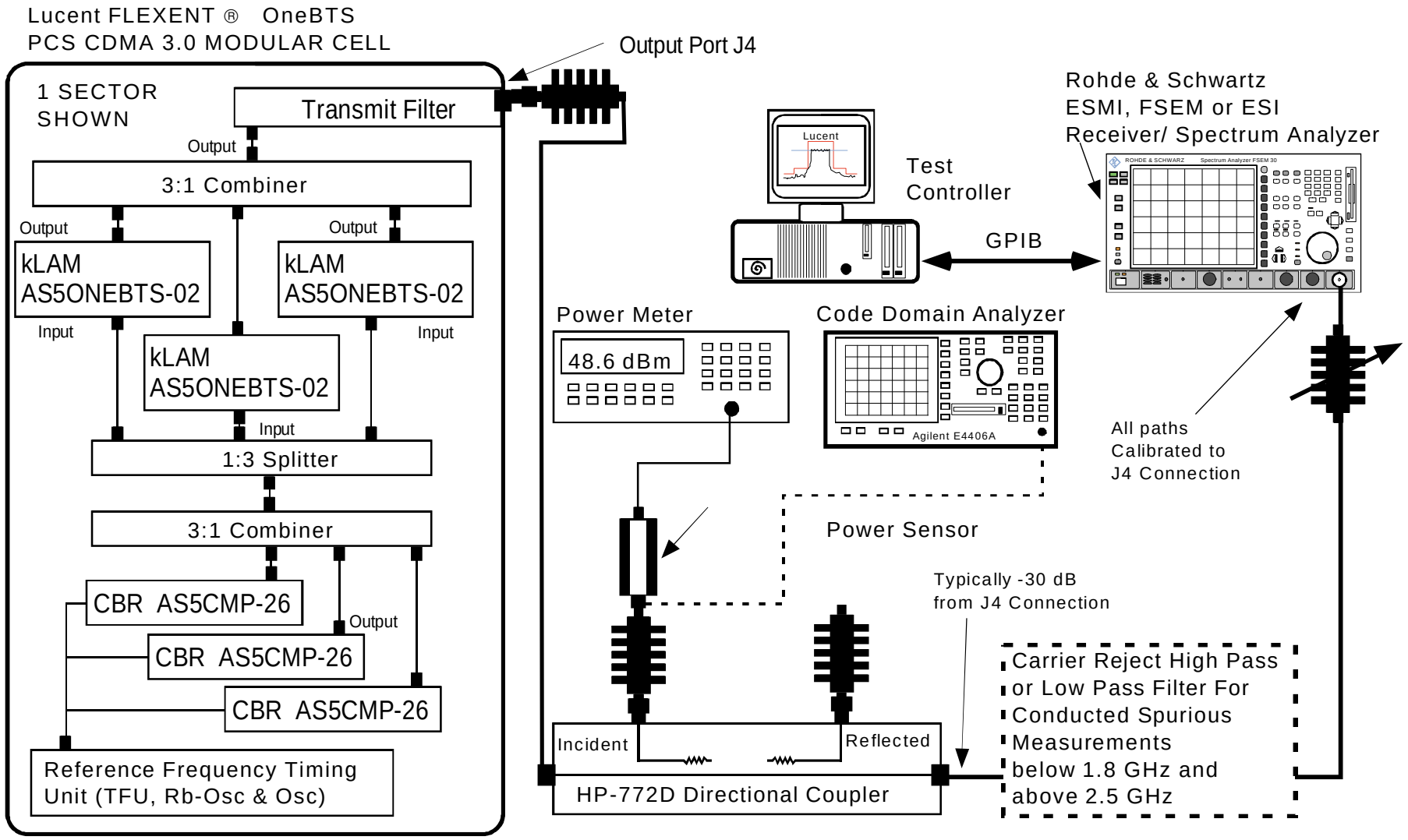

Exhibit 12 *continued*

Measurement Equipment used in Figure 12 For Measurement of RF Power

Equipment	**Description**
Product Frame:	PCS Outdoor Flexent OneBTS Modular Cell 3.0 with 9 CBR's and 9 kLAMs
CBR:	CDMA Baseband Radio **(FCC ID: AS5CMP-26)**
kLAM:	Linear Amplifier Module, Model k **(FCC ID: AS5ONEBTS-02)**
Transmit Filter:	PCS Band Transmit Filter appropriate for the investigated Block
Directional Coupler:	HP 778D and 772D Dual Directional Coupler
Power Meter:	Agilent E4419B Power Meter with EPC-E18A Power Sensor or HP Model 437 Power Meter with HP-8481A Power Sensor
Test Cables:	W.L. Gore; Low loss test cables custom mfg. for Lucent FCC Laboratory
Plotter:	HP Model 7470A Plotter
Printer:	HP Model 4500DN Printer
Attenuator, Variable	HP 8494B and 8495B DC-18 GHz digital attenuators
Attenuator, Fixed	Weinschel Corp DC-18 GHz, various values
Band Pass Filters:	Trialithic, Various 10 MHz-20 GHz, Custom manufactured for Lucent FCC Laboratory
Spectrum Analyzer:	Rohde & Schwarz ESMI EMI Test Receiver or Rohde & Schwarz FSEM Spectrum Analyzer
Code Domain Analyzer	H-P and Agilent E4406A VSA Series Transmitter Tester
Computer Controller:	EG Technology, Custom Mfg for FCC Laboratory, Intel™ Pentium III & IV, 550 and 1600 MHz controllers with TILE ™ software

Exhibit 12 *continued*

RESULTS:

The **kLAM/ AS5ONEBTS-02** was configured in the test setup shown in Figure 12A. For each of the PCS channels tested the **kLAM/ AS5ONEBTS-02** delivered a minimum of 20.0 Watts +2/-0 dB when measured at the J4 output connection.
This data is recorded on the Occupied Bandwidth Data Sheets for "Left edge" and "Right Edge" of each frequency Block. Data is presented for all PCS Blocks.

Note: The **kLAM/ AS5ONEBTS-02** is a multi channel linear amplifier and its maximum power level is verified at each cell site during setup of the Modular Cell.

Exhibit 13

SECTION 2.1047

MEASUREMENT OF MODULATION CHARACTERISTICS

The modulation characteristics and accuracy of the **kLAM/ AS5ONEBTS-02** output signal is a function of the input signal which is provided by the **CBR/ AS5CMP-26,** Granted 23 March 1999.

Exhibit 14

SECTION 2.1049 MEASUREMENT OF OCCUPIED BANDWIDTH

Because of the Multi Carrier application of the **kLAM,** occupied bandwidth measurements were performed for all three of the **MCA** configurations. This documents the typical performance of the **kLAM** while supplied with single, dual and three CDMA carriers. Since the **kLAM** is a fixed gain device all power adjustments were performed via the **CBR/ FCC ID: AS5CMP-26.**

The occupied bandwidth of the **kLAM/ FCC ID: AS5CMP-36** was measured using a Rohde & Schwarz FSEM-30 Spectrum Analyzer, a PC based instrumentation controller using TILE™ software and calibrated RF equipment. The RF power level was measured and adjusted via the test setup in Figure 14A. The calibrated RF output from the transmitter was reduced (to an amplitude usable by the spectrum analyzer) by using a calibrated broadband attenuator. This attenuation was offset on the display and the signal adjusted to the -16.2 dBc level corresponding to the corrected RF power level for 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. Additionally a power calibration was performed to calibrate the setting of the measured 30 kHz Occupied Bandwidth signal at the –16.2 dBc line and a 3 MHz RBW measurement against the "Top of Mask" limit which corresponds to the output power at an RBW setting of $\geq$ 1.25 MHz. These measurements were performed prior to each Occupied Bandwidth measurement. The signals measured at RBW's of 3 MHz and 30 kHz were plotted and a digital attenuation was adjusted to place the 3 MHz RBW signal at the "Top of Mask". The carrier was measured with a 30 kHz RBW and used the same attenuation. These two graphs are co-plotted and shown in Figure 14C Typical Power Calibration.

This test procedure above 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 20 watts per carrier / 43.01 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 performance. This data was electronically recorded using the TILE™ software and electronically placed in the Occupied Bandwidth Data Sheets. These sheets contain data for "Left Edge of Block", and "Right Edge of Block" for each PCS frequency Block in the application.

Block Organization and Tests Performed

The FLEXENT PCS Modular cell product line uses transmit filters which divide each of the 15 MHz PCS Blocks (A, B and C) into 4 subBlocks. These large PCS Blocks have 11 CDMA Channels each and are organized into subblocks of 3,3,3 and 2 channels apiece. The A Block is divided into A1 (channels 25,50,75), A2 (channels 100,125 & 150), A3 (channels 175,200 & 225), and A4 (channels 250 & 275). PCS Blocks, B and C, are identically organized. The 5 MHz Blocks (D, E & F) each have a single filter for 3 CDMA Carriers without division. These are the standard filter organization although de-aggregation has generated a larger set for special purposes. All of the filters used have been previously qualified and documented for the higher power Ultra Linear Amplifier Module (**ULAM)** authorized under **FCC ID: AS5CMP-36**

All of the **kLAM's** – filters combinations tests were performed for the one, two and three carrier operational configurations of the **kLAM**. When a second source manufacturers 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, from a CBR FCC ID: AS5CMP-26, met the recommended characteristics per ANSI J-STD-008 section 3.1.4 as defined below.

Type	Number of Channels	Fraction of Power (Linear)	Fraction of Power (dB)	Comments
Pilot	1	0.1490	-8.3	Walsh 0
Sync	1	0.015/p	-18.3	Walsh 32, always 1/8 rate
Paging	1	0.054	-12.7	Walsh 1, full rate only
Traffic	6	0.13 each	-8.8 each	Variable Walsh Assignments, full rate only

TABLE 14.1 Base Station Test Model, Nominal

Measurement Offset

The spectrum analysis output plots shows the peak of the CDMA channel signal 16.19 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. Since the CDMA signal is Broadband and 1.25 MHz wide, all measurements performed at narrower resolution bandwidths need be adjusted for the reduction in signal energy. The following relationship was used to provide the correct level for an unmodulated carrier vs. the modulated signal.

10*log (Resolution Bandwidth/ Transmit Bandwidth) = Signal Offset (1)

For the peak of the 1.25 MHz CDMA signal measured with a RBW of 30 kHz the signal offset is:

Signal Offset = 10*log (30 kHz /1.25 MHz) = -16.19 dB

Limits which are specified as appropriate at a given RBW can be measured and evaluated at other RBW's if the limit is adjusted per equation (1)

Require Levels

The minimum standard presented in ANSI-J-STD-008 Section 4.5.1.3.1 was followed for Suppression Inside the Licensee's Frequency Block(s)

Signals that are within the base station transmit band of 1930.000 to 1990.000 MHz and are within the specific block(s) allocated to the operator's system, the total conducted spurious emissions in any 30 kHz band greater than 885 kHz from the CDMA channel center frequency shall not exceed a level of -45 dBc….

The Limit in 47 CFR 24.238(a)(b) for emissions in the 1 MHz band immediately outside and adjacent to a licensees frequency block is:

Emissions $\leq$1 MHz outside the Block *when measured with a RBW of 1%* of the emissions Bandwidth shall be attenuated by :

-{43+10log (mean power output in watts)} = -13 dBm

The Limit in 47 CFR 24.238(a) for emissions outside a licensees frequency block is:

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

-{43+10log (mean power output in watts)} = -13 dBm.

Measurement at a Resolution Bandwidth of 30 kHz is based on our experience with 47 CFR 24.238 and lacking other guidance.

Exhibit 14 *continued*

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 24.238 and lacking other guidance.

1. On any frequency removed from the carrier center frequency by greater than 885 kHz up to 1.25 MHz - at least 45 decibels below the carrier; and

2. On any frequency removed from the carrier center frequency by greater than 1.25 MHz to 2.25 MHz the level shall not exceed -9.2 dBm/-52.21 dBc when measured in a 30 kHz resolution bandwidth (Note 2 below); and

3. From the edge of the Block to the 10th harmonic of the carrier at least
   -{43+10log (mean power output in watts)} dBm,
   whichever is the lesser attenuation. For 24 Watts the required level is –71.21 dBc / -28.2 dBm as measured with a 30 kHz resolution bandwidth (see Note 3). This is equal to -13 dBm measured with a 1 MHz resolution bandwidth

Note 2: The -9.2 dBm/-52.21 dBc level was computed as follows: The limit is specified as
-{43+10log (mean power output in watts) } dB = -13 dBm
When measured in a resolution bandwidth not less than 1% of the signal bandwidth.
Since the carrier is a 1.25 MHz bandwidth signal, the limit is adjusted to
-13 + 10LOG(30kHz/12.5 kHz) dBm = -9.2 dBm / -52.21 dBc

Note 3: The -28.2 dBm / -71.21 dBc level is computed from -13 dBm measured with a 1 MHz resolution bandwidth adjusted by :
-13 + 10LOG(30kHz/1.0 MHz) dBm = -28.2 dBm / -71.21 dBc

Mask Description for Single Carrier

The Mask limits are identical for the left and right side of the PCS Blocks and are as follows.
Figure 14B shows the Mask limit for PCS channel 925 which is the left block edge for Block C and shows limits levels identical for the band edge of the PCS 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 line is based on equation 1, and the ratio of the 1.25 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 885 kHz from the center of channel 925 (i.e. Fc), per ANSI J-STD-008. The horizontal line b-c is 45 dB below the 43.01 dBm/ 0 dBc reference level. The vertical line c-d is at 1.25 MHz from the center of the channel. The placement of line d-e is derived from evaluation of the signal and 12.5 kHz (1%)resolution bandwidth, using the suggested value in section 24.238 of the rules. The ratio of 30 kHz to 12.5 kHz in equation (1) gives 3.8 dB. Adjusting the tolerance line to reflect this difference puts the -13 dBm limit line at -9.2 dBm or –52.21 dBc below the reference line. The vertical line, e-f is at 2.25 MHz from the center of channel 925. The horizontal line f-g is drawn at –71.21 dBc below the 0 dBc / 43.01 dBm reference because the rules require a 1 MHz resolution bandwidth for measurements 1 MHz or greater outside the PCS band. Again, equation (1) and the ratio of 1 MHz to 1.25 MHz provides this value. The same logic was used in determining the other block and band edge tolerances.

Exhibit 14 *continued*

Mask Description for Multiple Carrier

The mask for multiple carriers only adjusts the width of the carrier portion of the mask.
For the example given above...with multiple carriers there would be no adjustments made to the "Left Edge of Block" requirements. The specified "Right Edge Limit" is treated as an expansion of the non Block edge corner **bb** to be the required + 885 kHz from the center of the "right most" channel. The "Right Edge of Block" limits were derived consistently.

Measurement

All of the tolerance lines for the output are referenced to the top of the Occupied Bandwidth mask, which is defined as 43.01 dBm/ zero dBc. For all measurements of the **kLAM / MCA's** Occupied Bandwidth, the output power was measured / adjusted individually to the 24 W level for each carrier and this is the 43.01 dBm value at the 0 dBc reference line.

In order to depict the tolerance lines that are required by Sec 24.238 of the FCC Rules and ANSI J-STD-008, 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.

Presented Results

The Block designation, PCS channels, frequencies and Measured RF Power are tabulated on each plot. Input and output signals are plotted for each frequency/ channel of interest. Plots are provided for Left Edge and Right Edge of each PCS Block evaluated. These frequencies were chosen to show the occupied bandwidth in the channels in each of the PCS Blocks in which this product can be operated, in compliance with Section 24.229 and 24.238 (c) 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 in ANSI-J-STD-008 Section 3.1.4. The power output level was adjusted to provide the documented value on each chart.

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

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W. Steve Majkowski NCE

Exhibit 14 *continued* **Test Equipment and Results**

Table 14-2
Equipment used for Measurement of RF Transmit Power, Occupied Bandwidth and Conducted Spurious Emissions

Equipment	Description
Product Frame:	PCS Outdoor FLEXENT ™ OneBTS Modular Cell 3.0 with **9** CBR's **and 9** kLAMs
CBR:	CDMA Baseband Radio **(FCC ID: AS5CMP-26)**
kLAM:	Linear Amplifier Module, Model k **(FCC ID: AS5ONEBTS-02)**
OM 1&2 :	Oscillator Module, 15 MHz Rubidium and Crystal types
Transmit Filter:	PCS Band Transmit Filter appropriate for the investigated Block
Directional Coupler:	HP 778D and 772D Dual Directional Coupler
Power Meter:	Agilent E4419B Power Meter with EPC-E18A Power Sensor or HP Model 437 Power Meter with HP-8481A Power Sensor
Test Cables:	W.L. Gore; Low loss test cables custom mfg. for Lucent FCC Laboratory
Plotter:	HP Model 7470A Plotter
Printer:	HP Model 4500DN Printer
Attenuator, Variable	HP 8494B and 8495B DC-18 GHz digital attenuators
Attenuator, Fixed	Weinschel Corp DC-18 GHz, various values
High Pass Filters:	Trialithic, 1-18 GHz, Custom manufactured for Lucent FCC Laboratory
Low Pass Filters:	Trialithic, 10MHz –1.8 GHz, Custom manufactured for Lucent FCC Laboratory
Spectrum Analyzer:	Rohde & Schwarz ESMI EMI Test Receiver or Rohde & Schwarz FSEM Spectrum Analyzer
Code Domain Analyzer	H-P and Agilent E4406A VSA Series Transmitter Tester
Computer Controller:	EG Technology, Custom Mfg for FCC Laboratory, Intel™ Pentium III & IV, 550 and 1600 MHz controllers with TILE ™ software

Figure 14A Test Setup for Antenna Port Measurement of Transmit Power, Occupied Bandwidth and Conducted Spurious Emissions

Figure 12A/14A/15A Test Configuration For RF Power, Occupied Bandwidth and Conducted Spurious

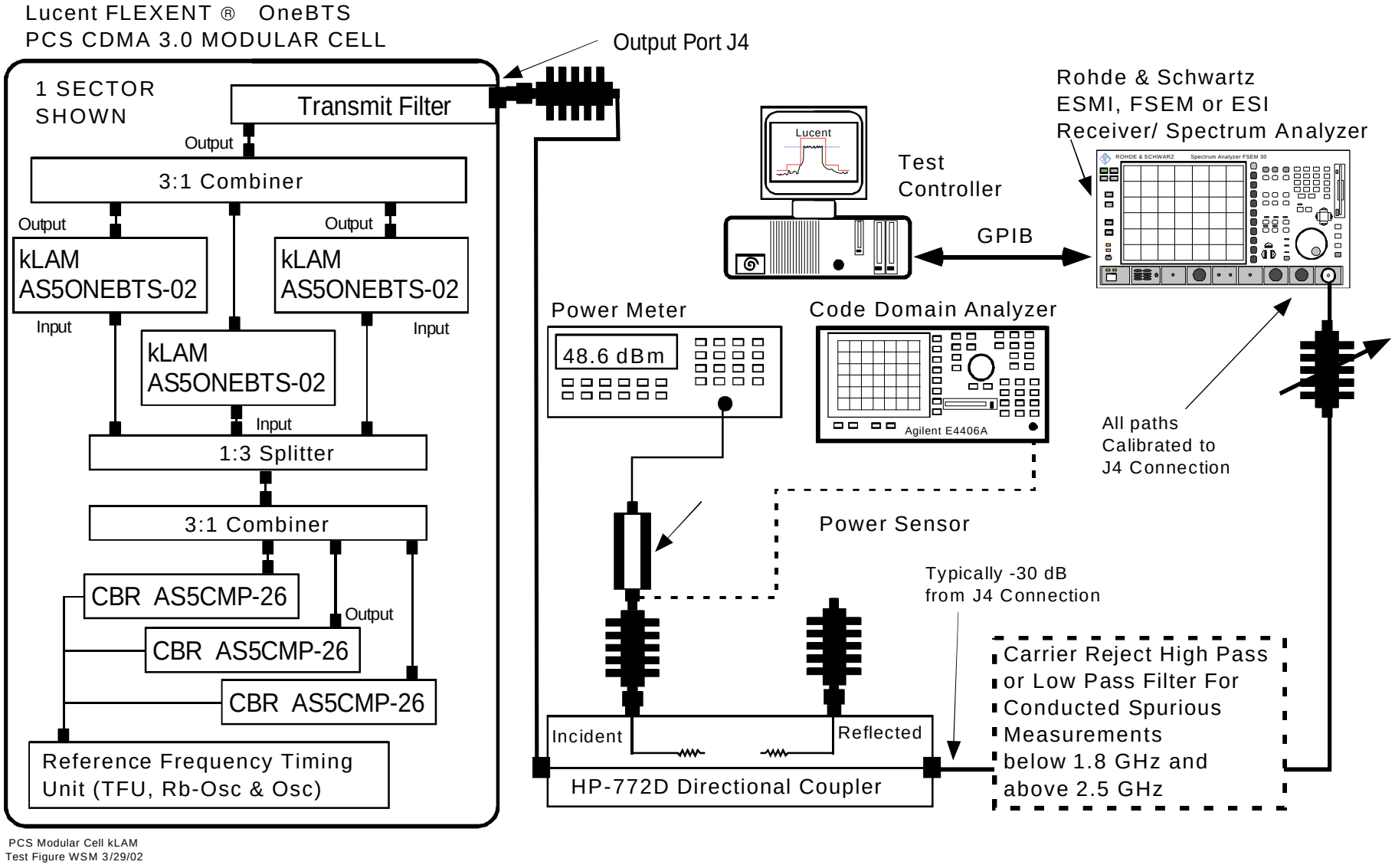


Figure 14B Occupied Bandwidth Mask

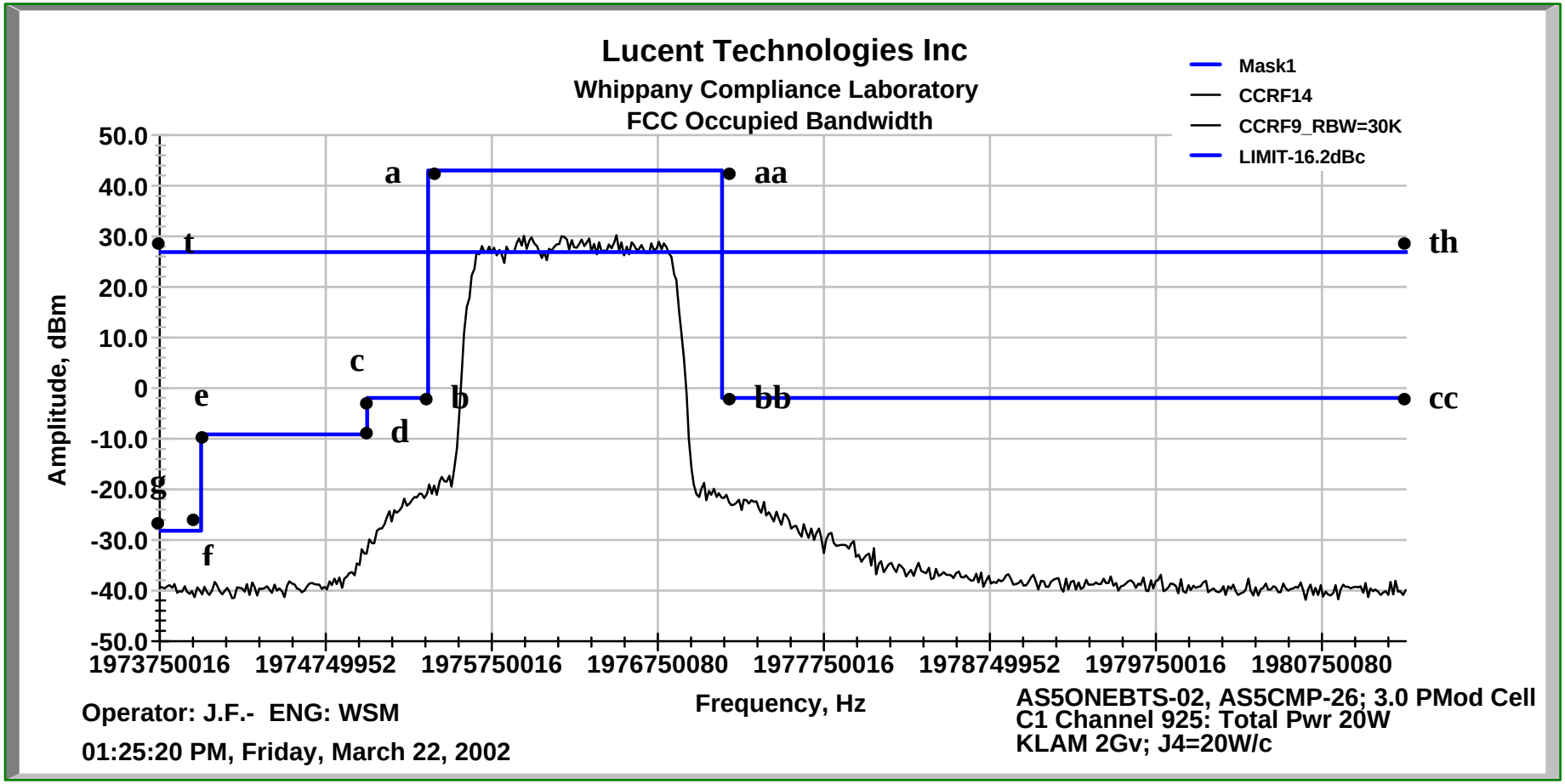


Figure 14C Typical Power Calibration

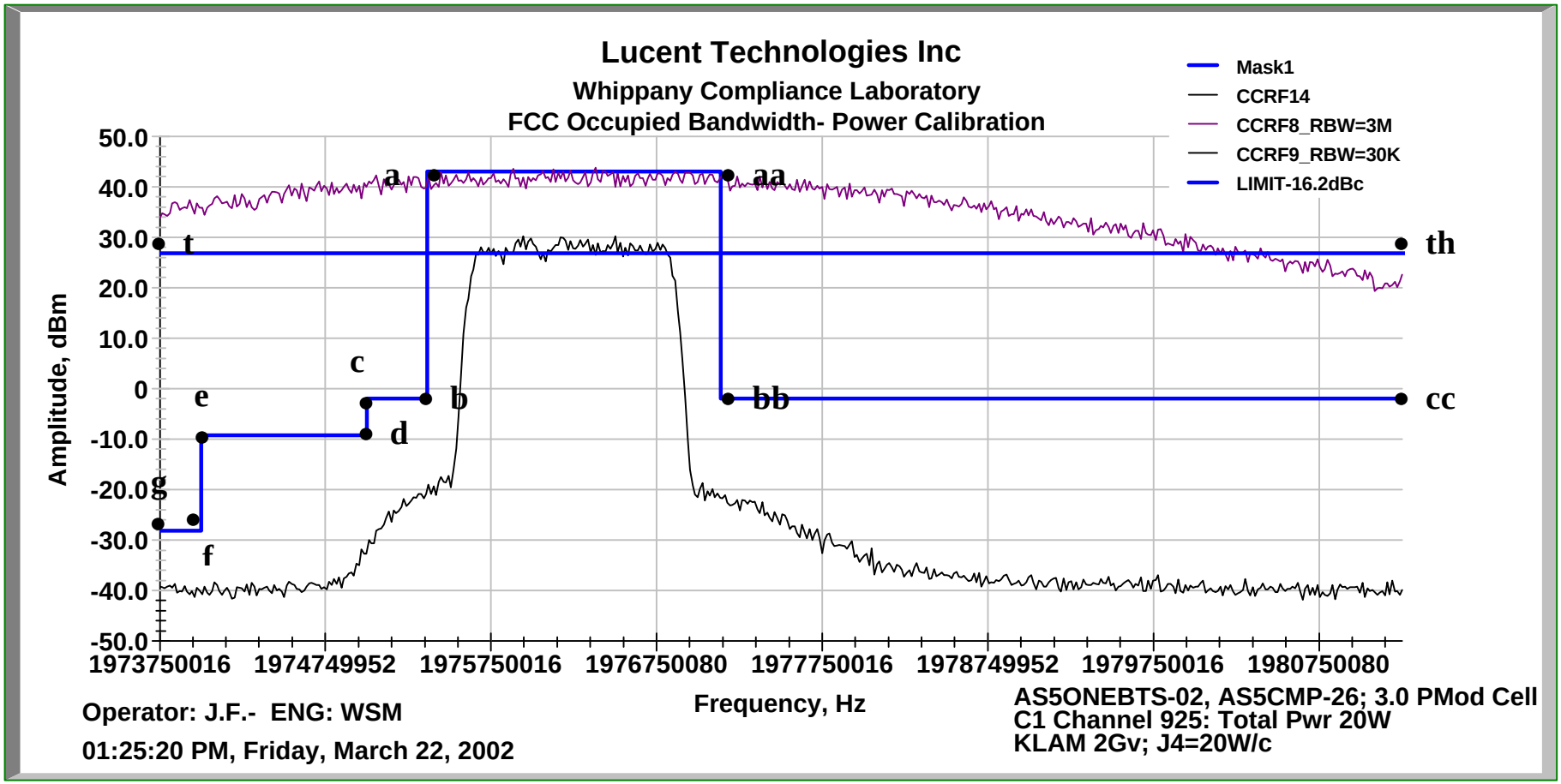


Exhibit 14: Data

FCC
Occupied Bandwidth Data
for
Lucent Technologies Inc.

PCS
Linear Amplifier Module /Multi Carrier Amplifier
(kLAM/ MCA)

Single, Dual and Three Carrier
MCA Configurations
All PCS Blocks

Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS A Block, Sub-Block A1, Single Carrier Configuration KLAM/MCA

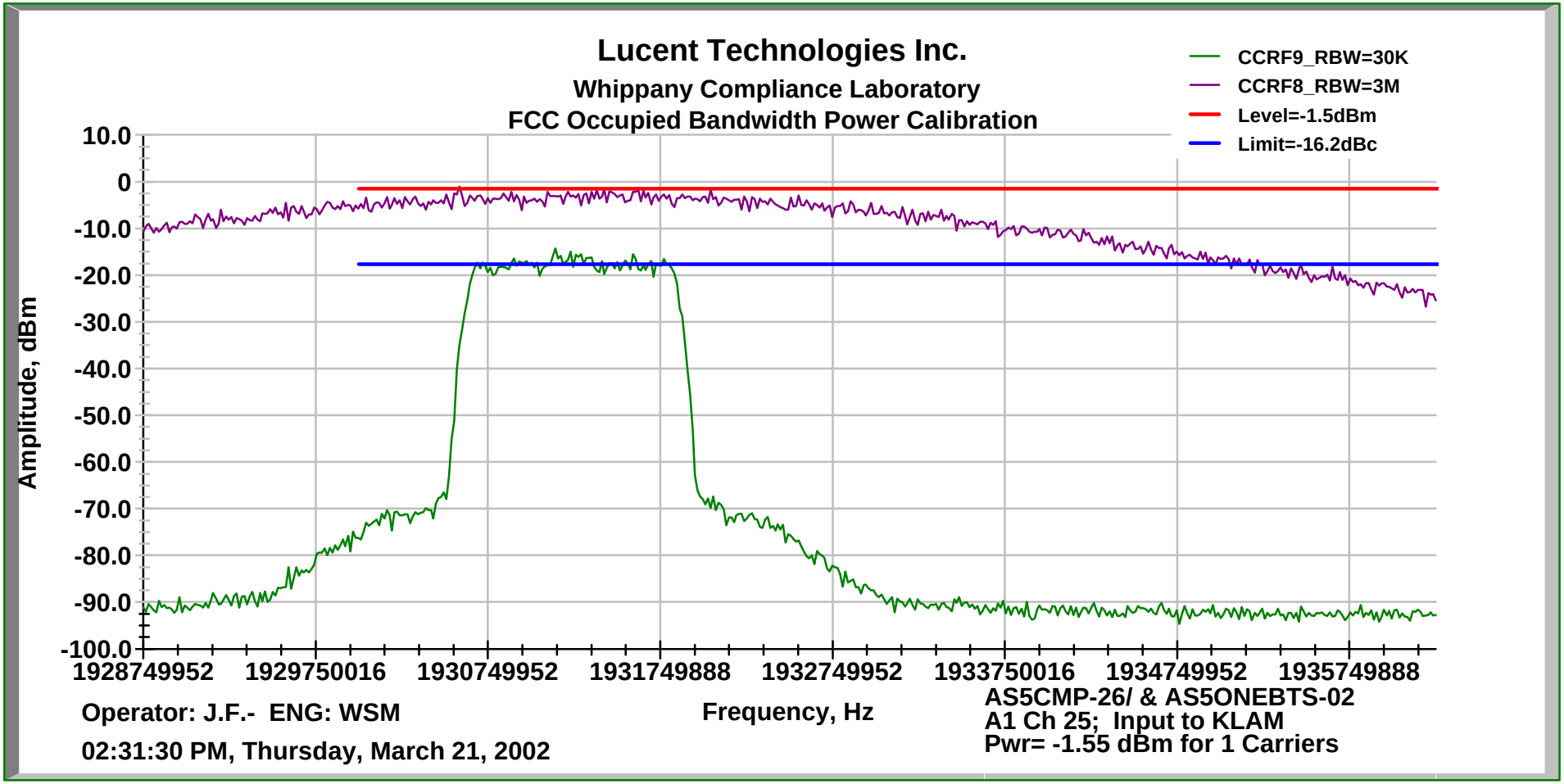


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS A Block, Sub-Block A1, Single Carrier Configuration KLAM/MCA

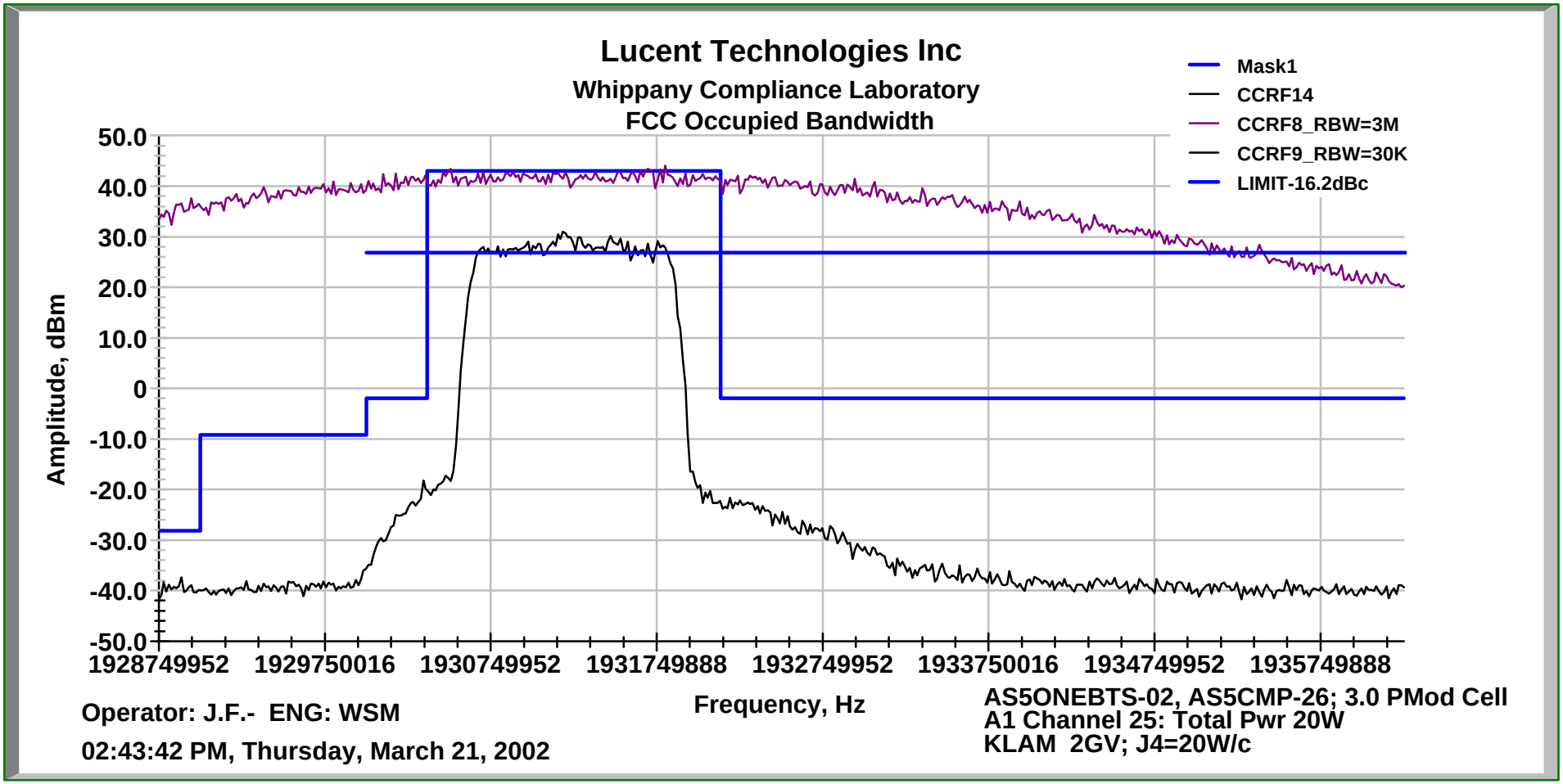


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS A Block, Sub-Block A1, Dual Carrier Configuration KLAM/MCA

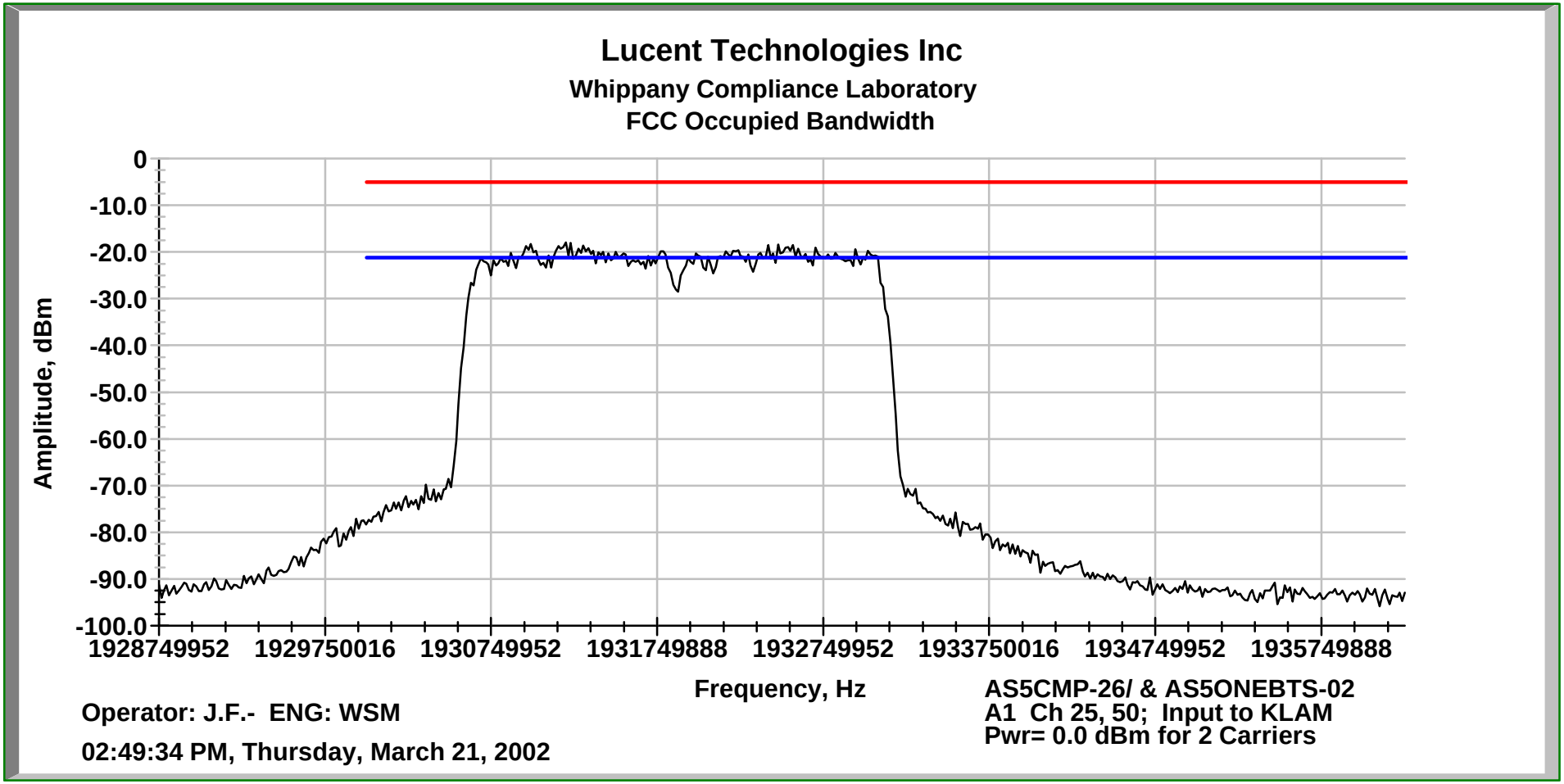


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS A Block, Sub-Block A1, Dual Carrier Configuration KLAM/MCA

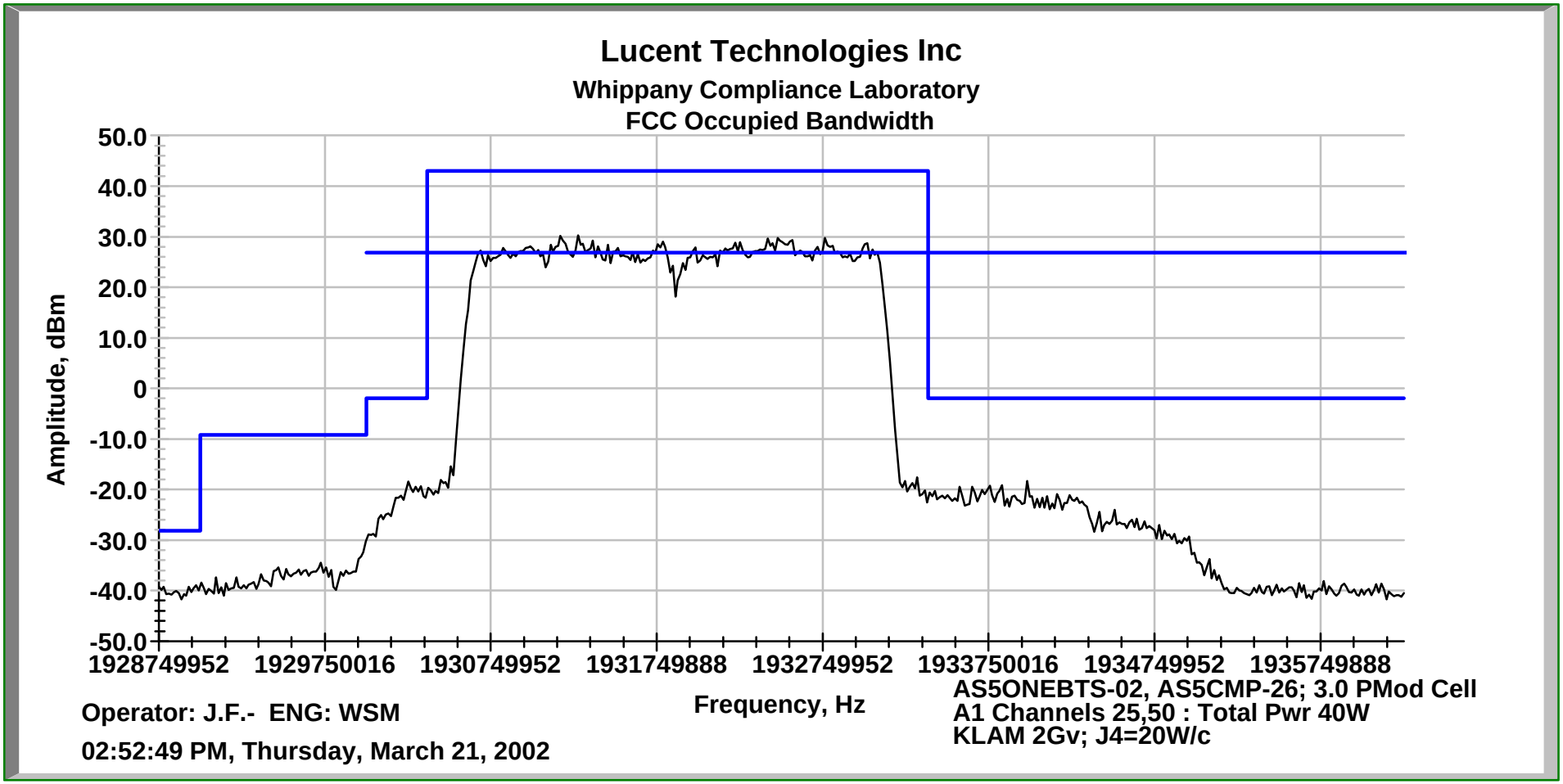


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS A Block, Sub-Block A1, Three Carrier Configuration KLAM/MCA

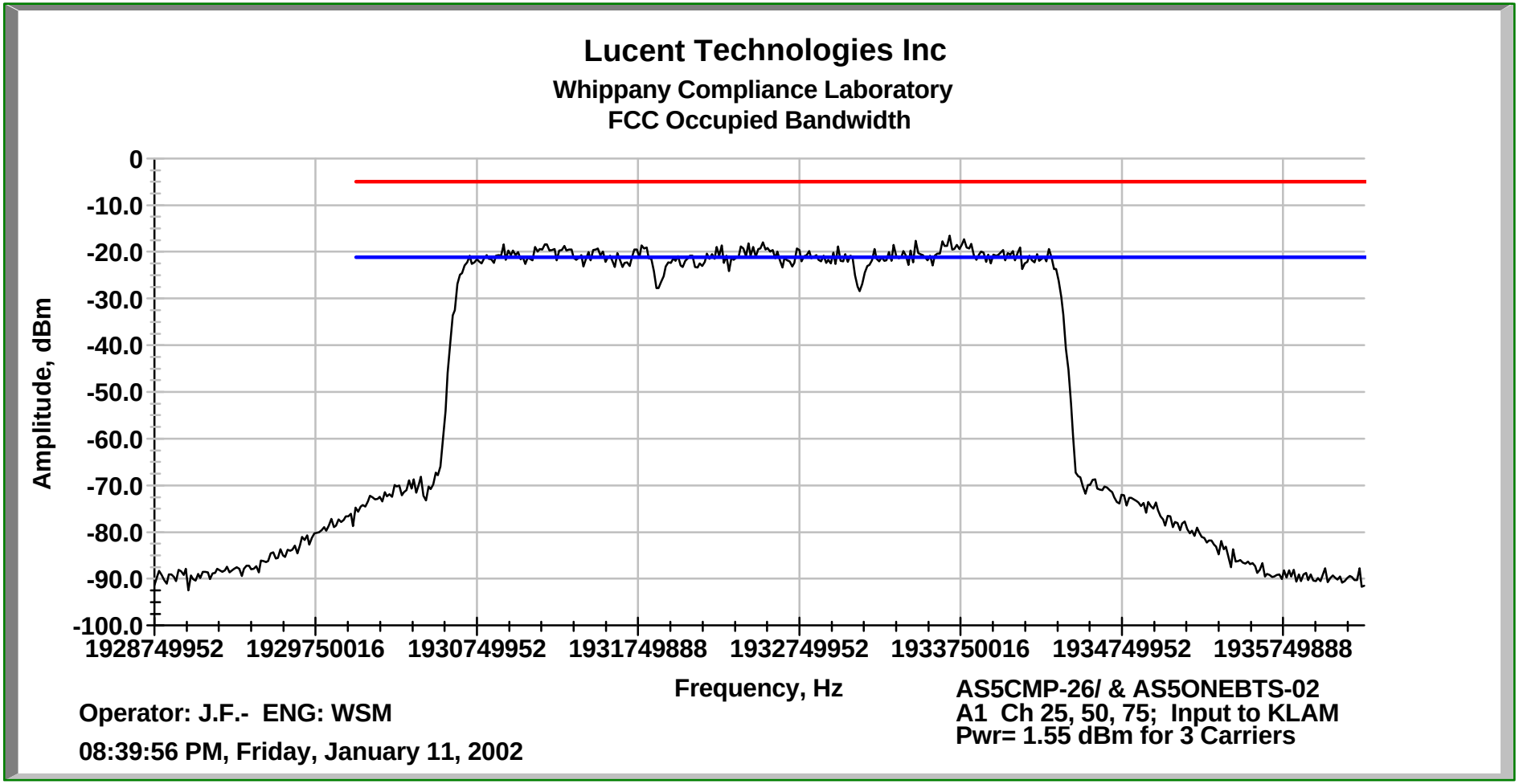


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS A Block, Sub-Block A1, Three Carrier Configuration KLAM/MCA

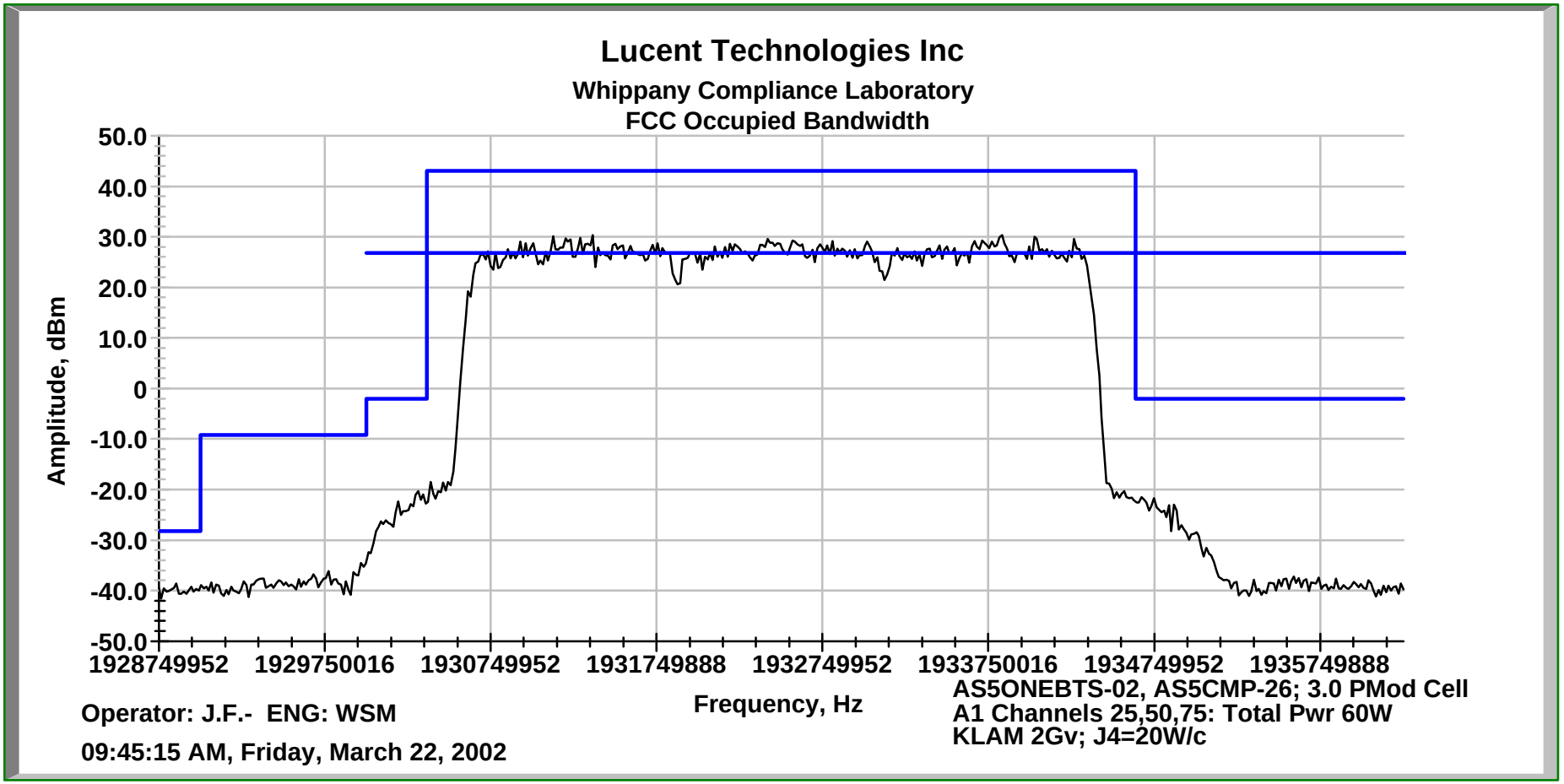


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS A Block, Sub-Block A4, Single Carrier Configuration KLAM/MCA

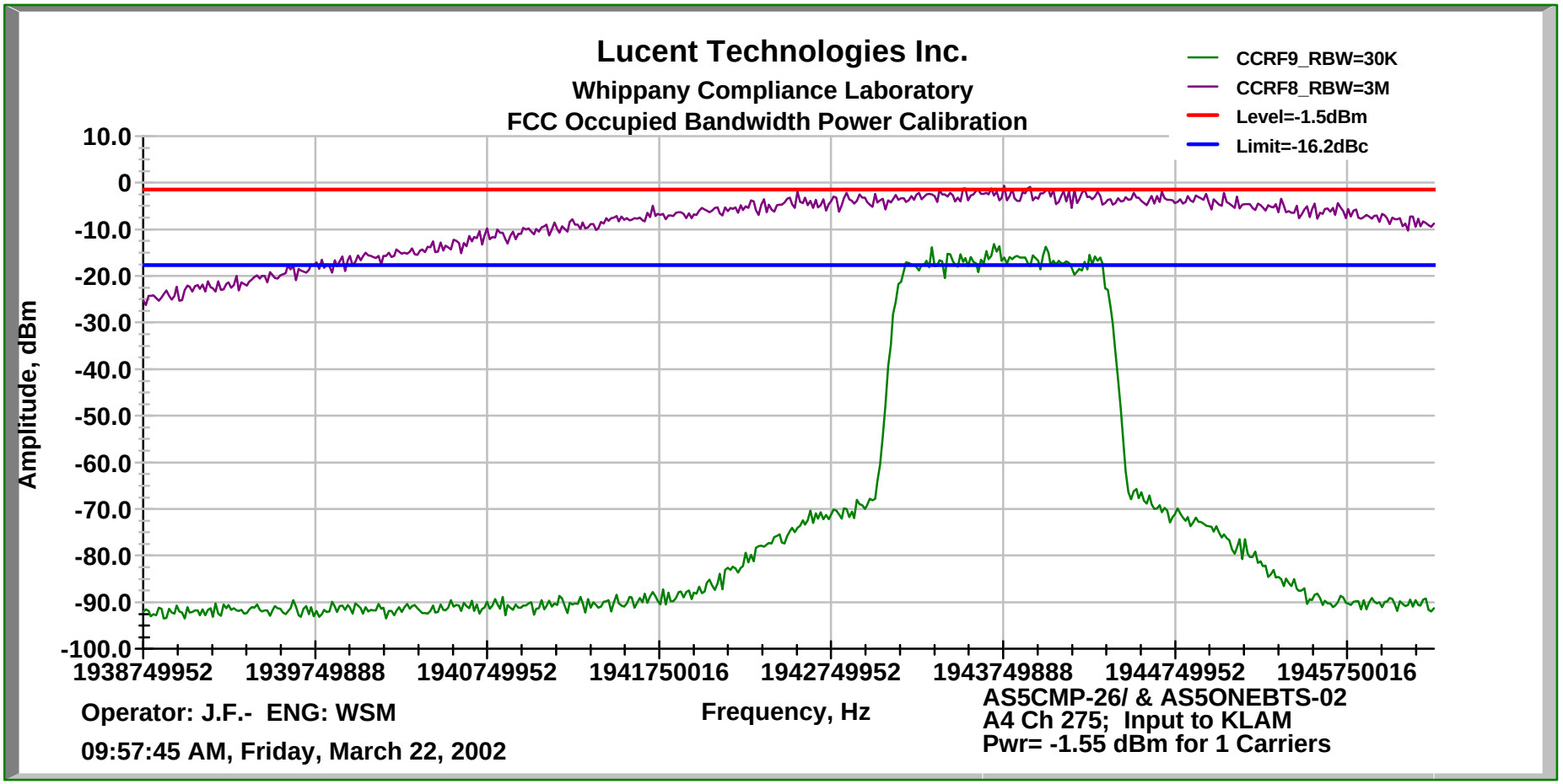


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS A Block, Sub-Block A4, Single Carrier Configuration KLAM/MCA

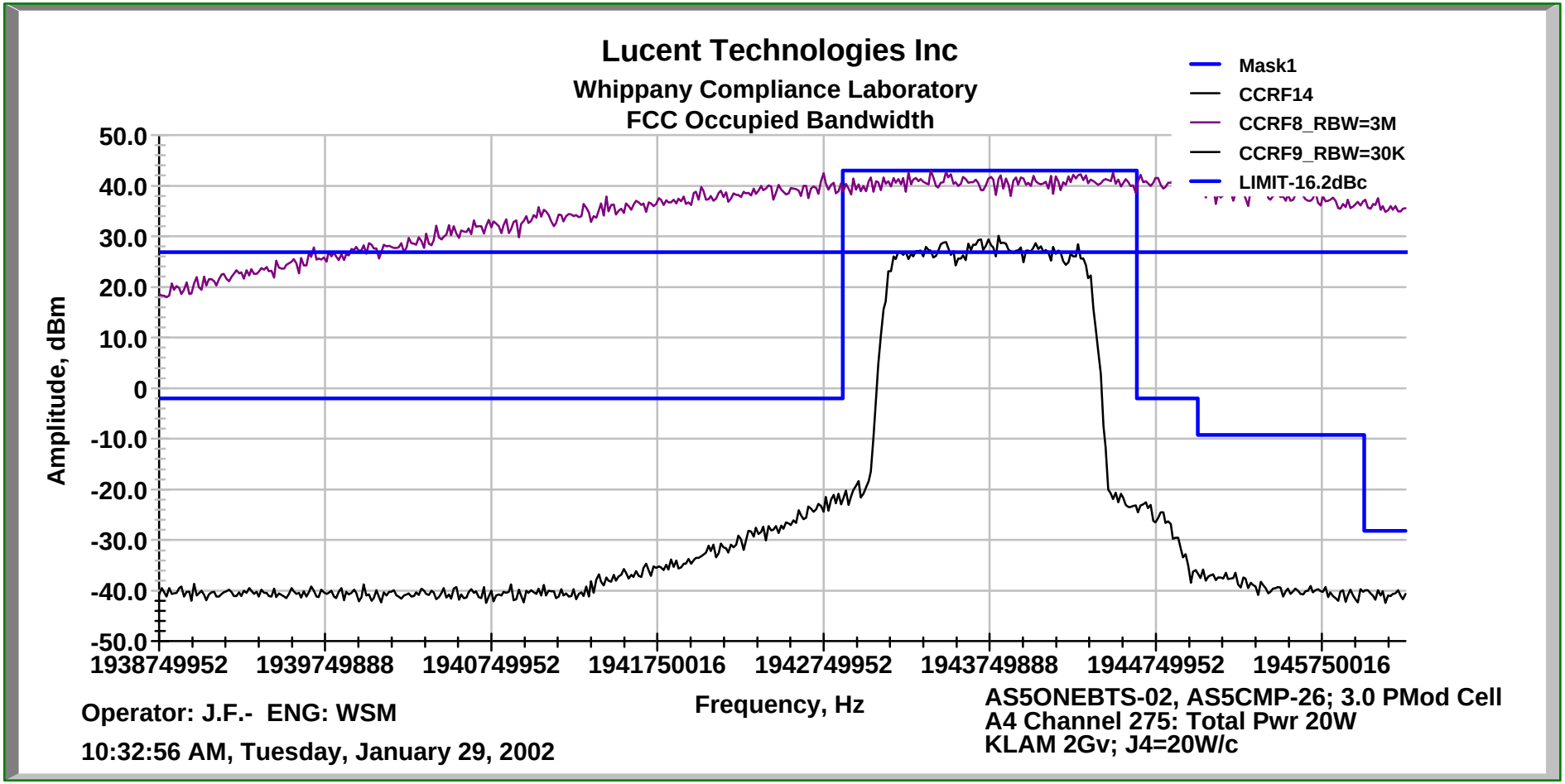


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS A Block, Sub-Block A4, Dual Carrier Configuration KLAM/MCA

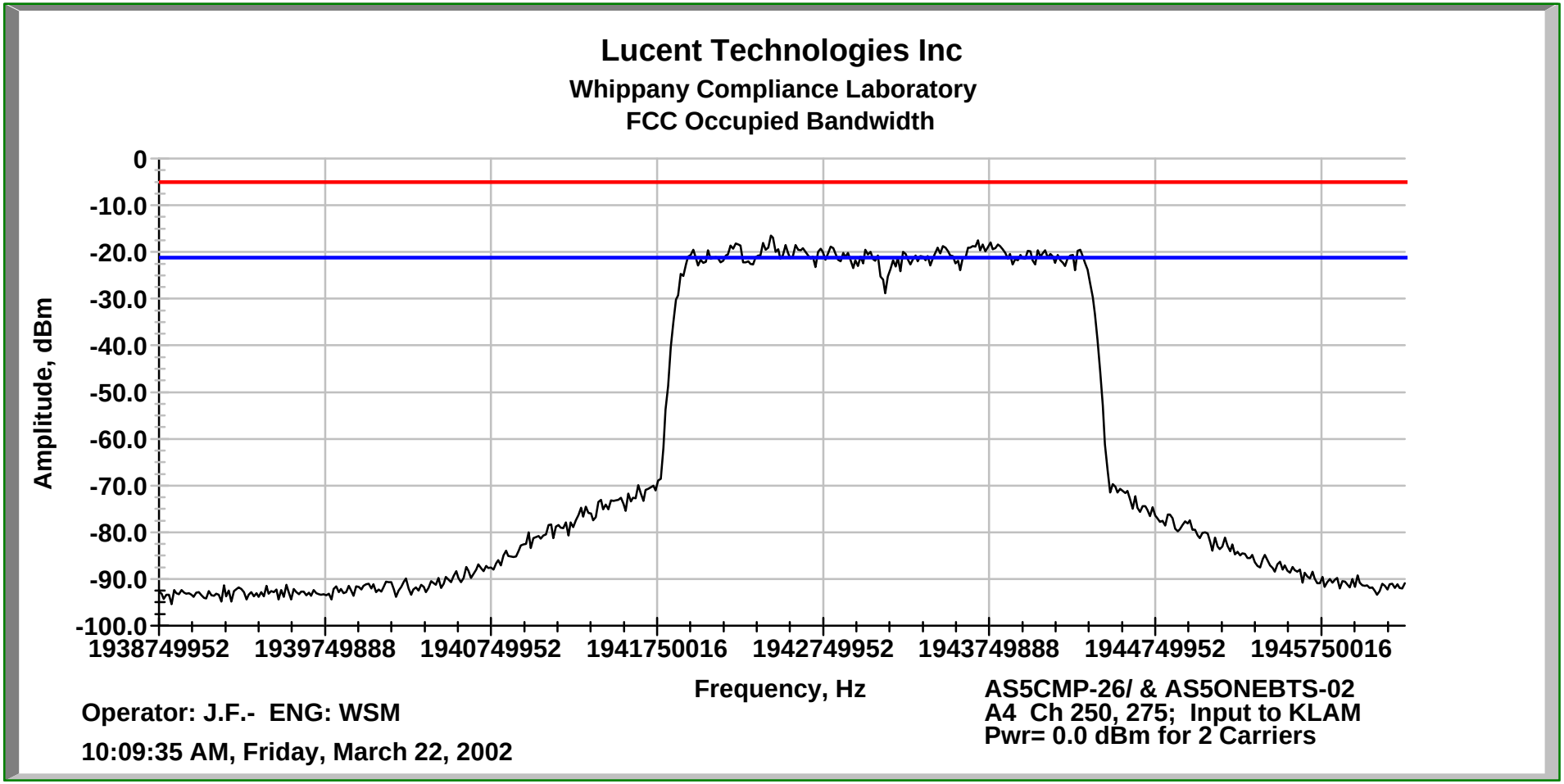


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS A Block, Sub-Block A4, Dual Carrier Configuration KLAM/MCA

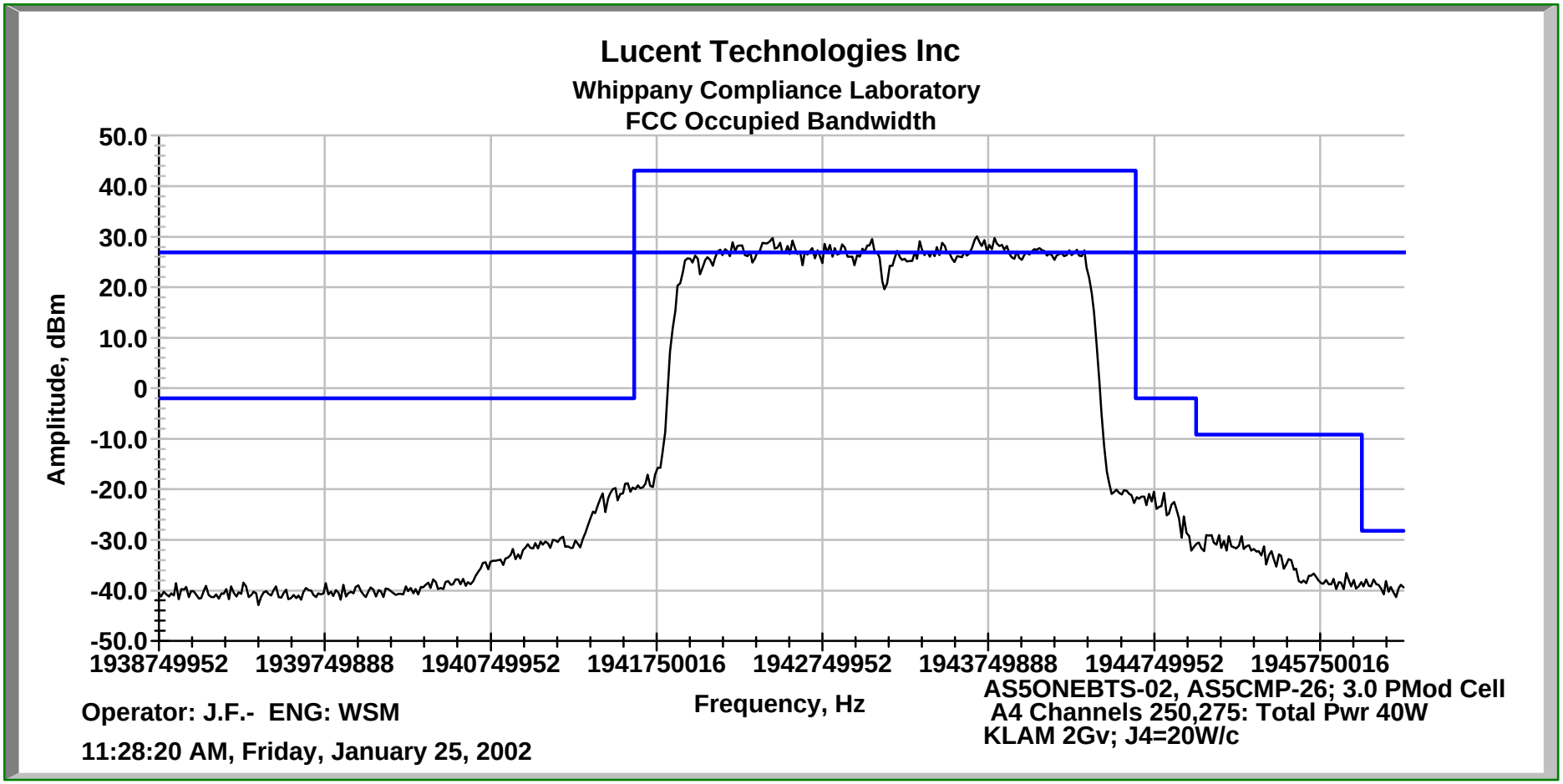


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS B Block, Sub-Block B1, Single Carrier Configuration KLAM/MCA

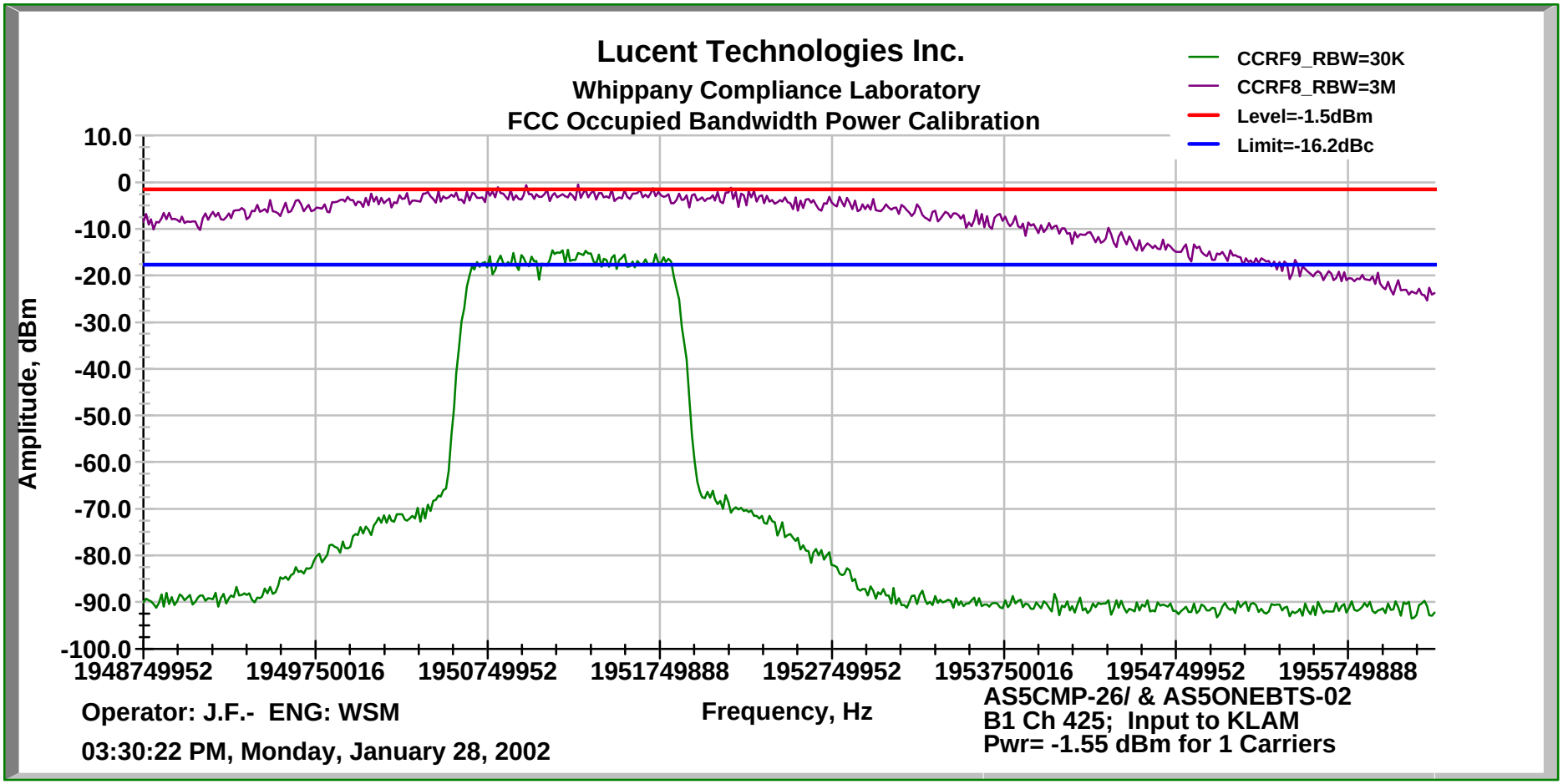


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS B Block, Sub-Block B1, Single Carrier Configuration KLAM/MCA

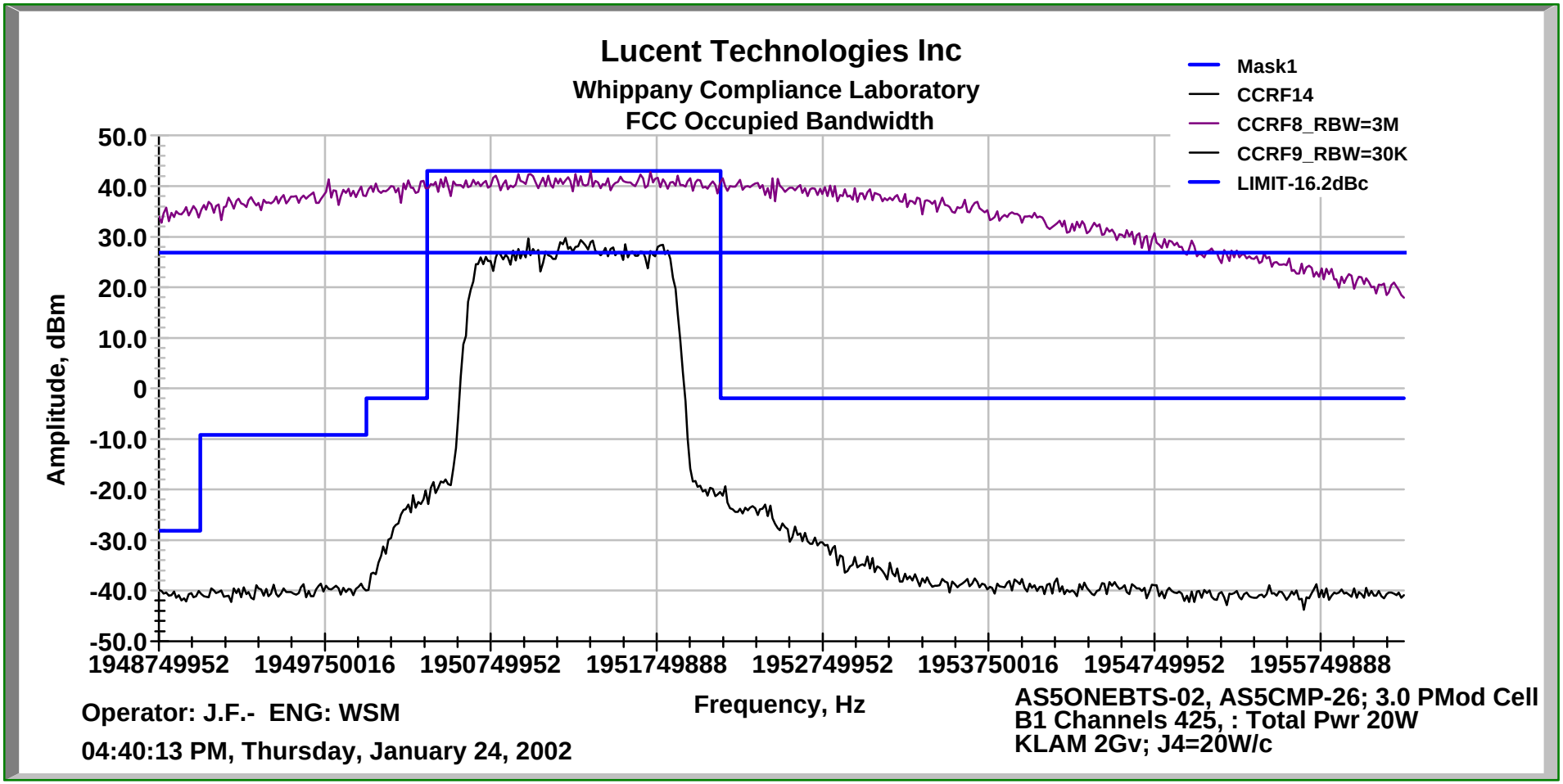


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS B Block, Sub-Block B1, Dual Carrier Configuration KLAM/MCA

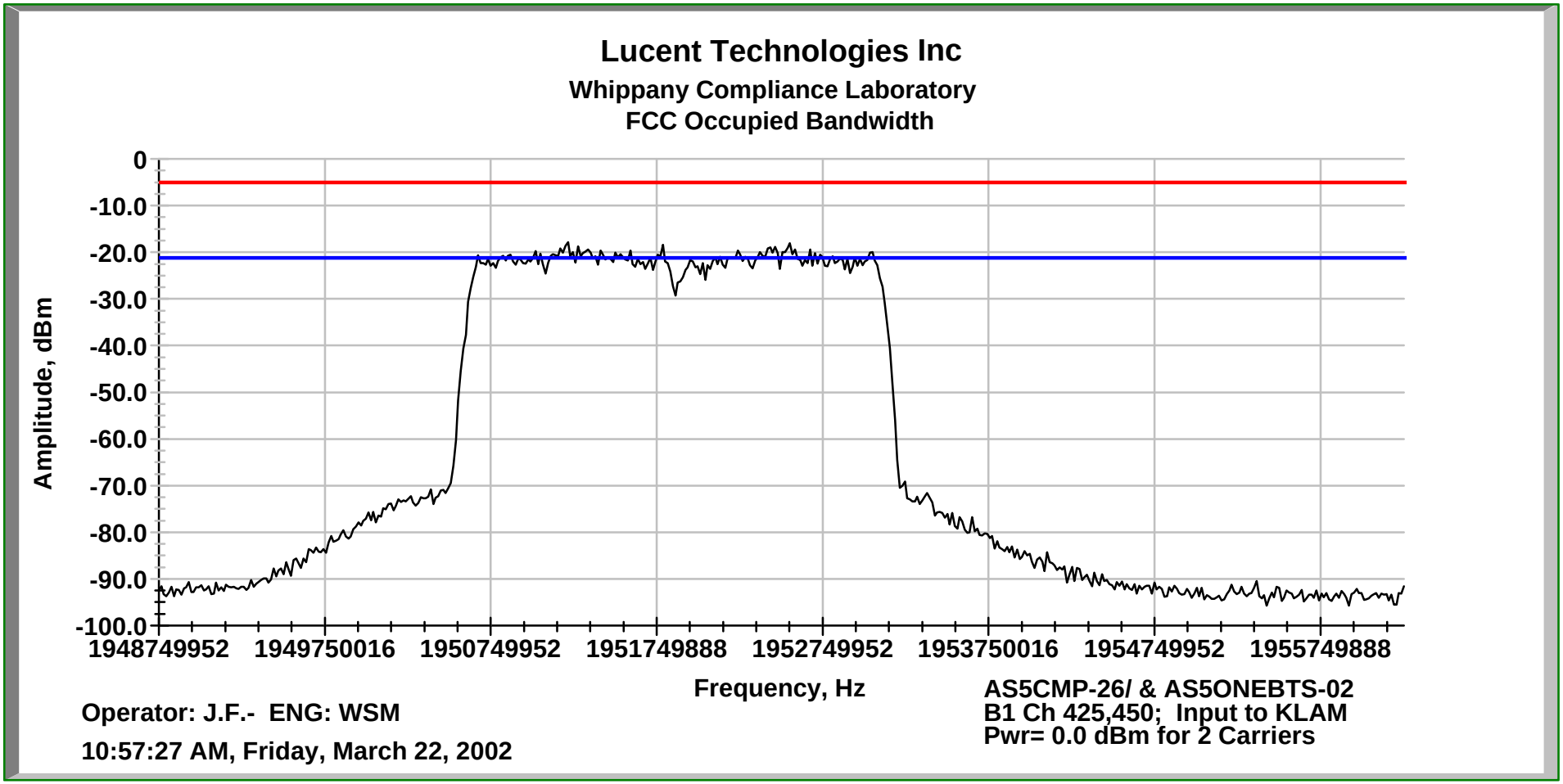


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS B Block, Sub-Block B1, Dual Carrier Configuration KLAM/MCA

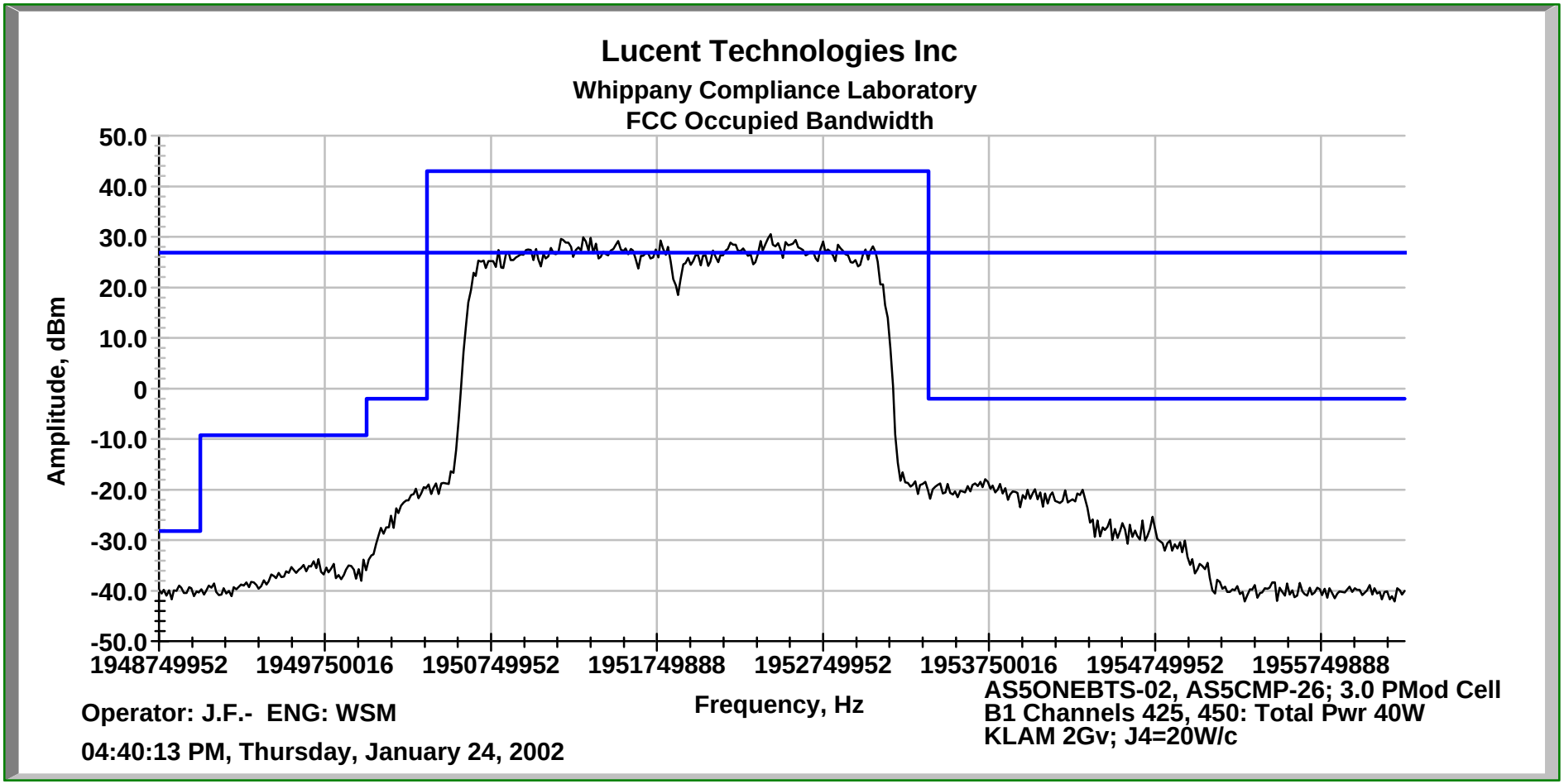


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS B Block, Sub-Block B1, Three Carrier Configuration KLAM/MCA

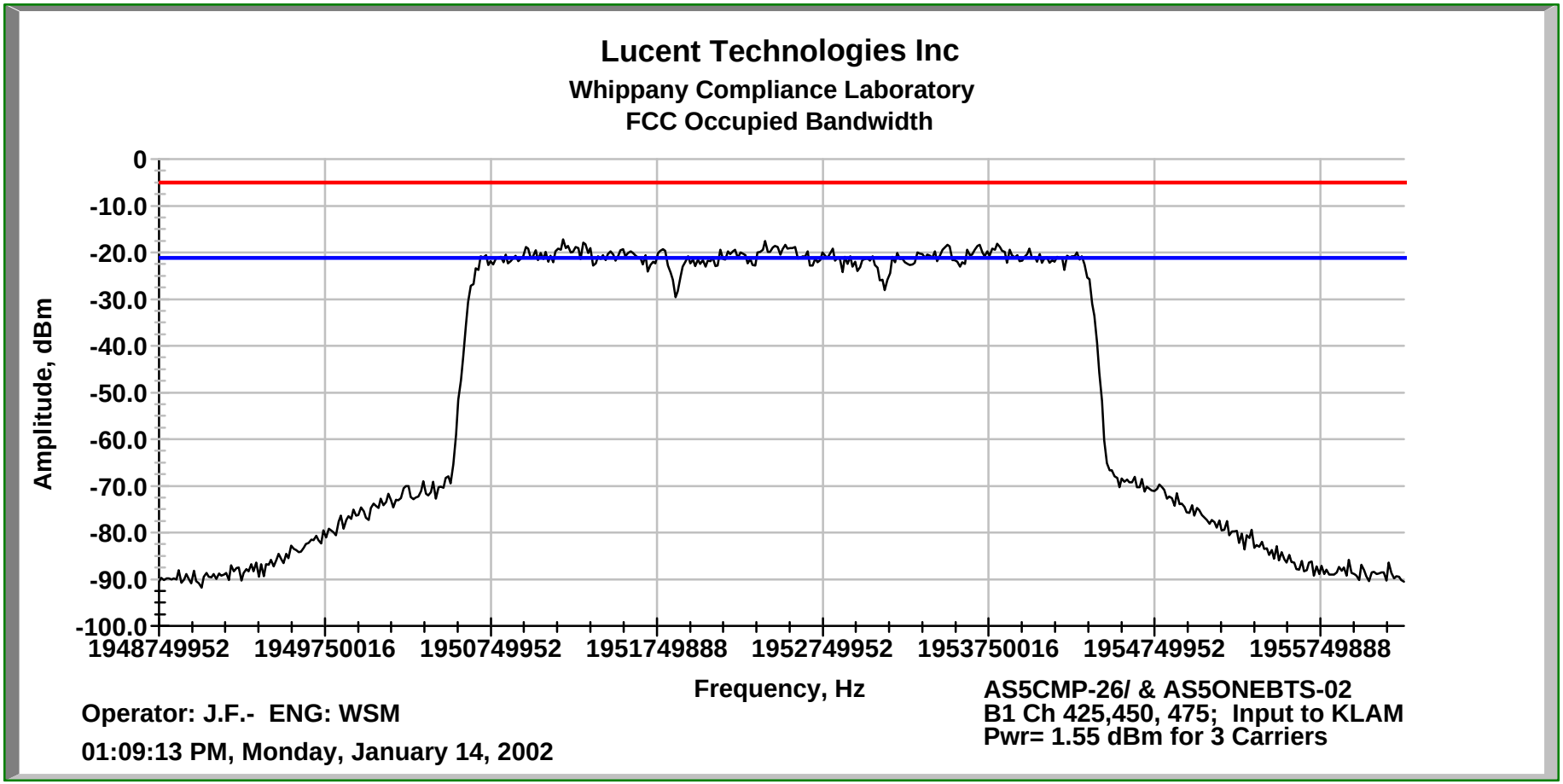


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS B Block, Sub-Block B1, Three Carrier Configuration KLAM/MCA

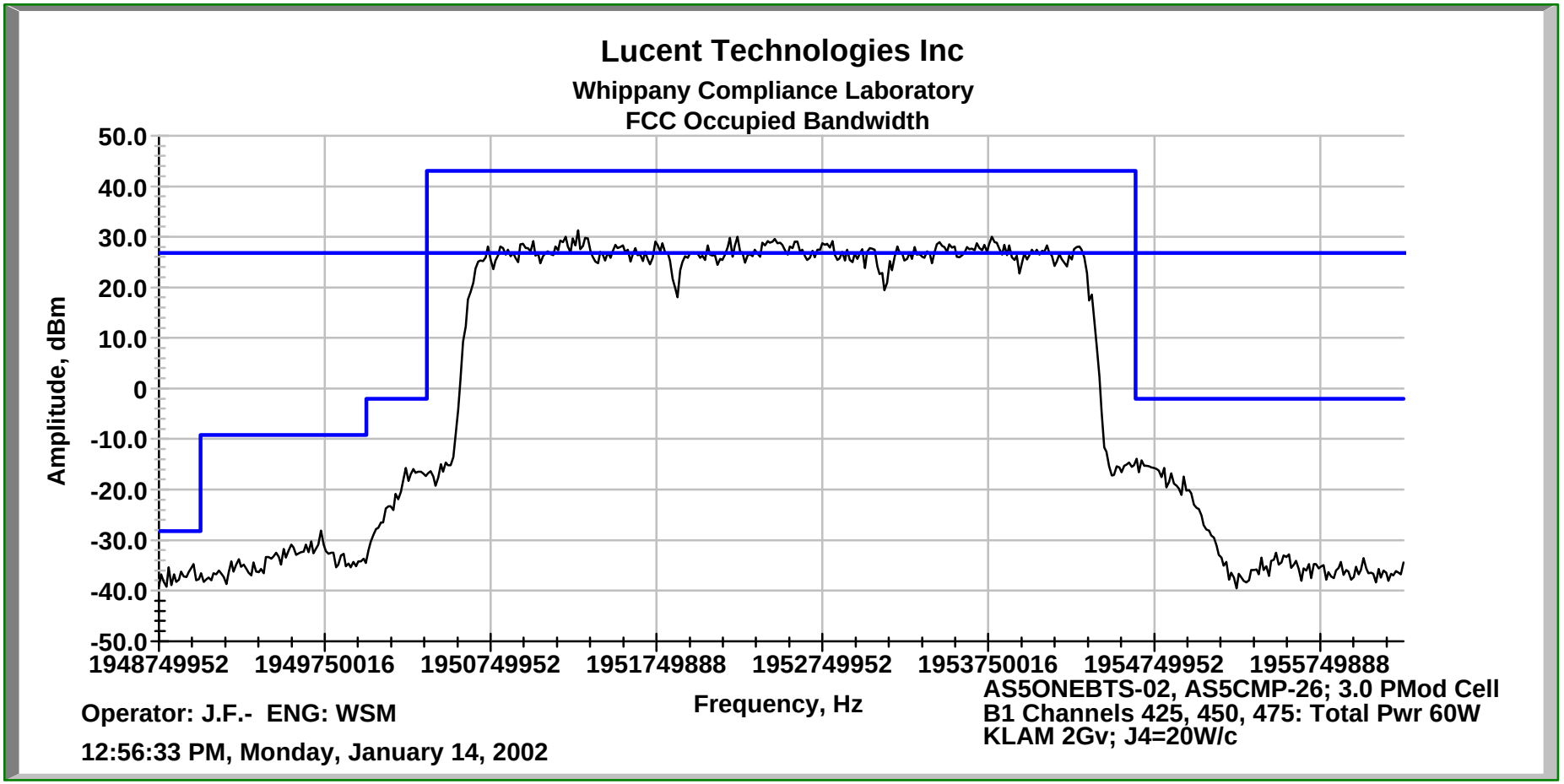


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS B Block, Sub-Block B4, Single Carrier Configuration KLAM/MCA

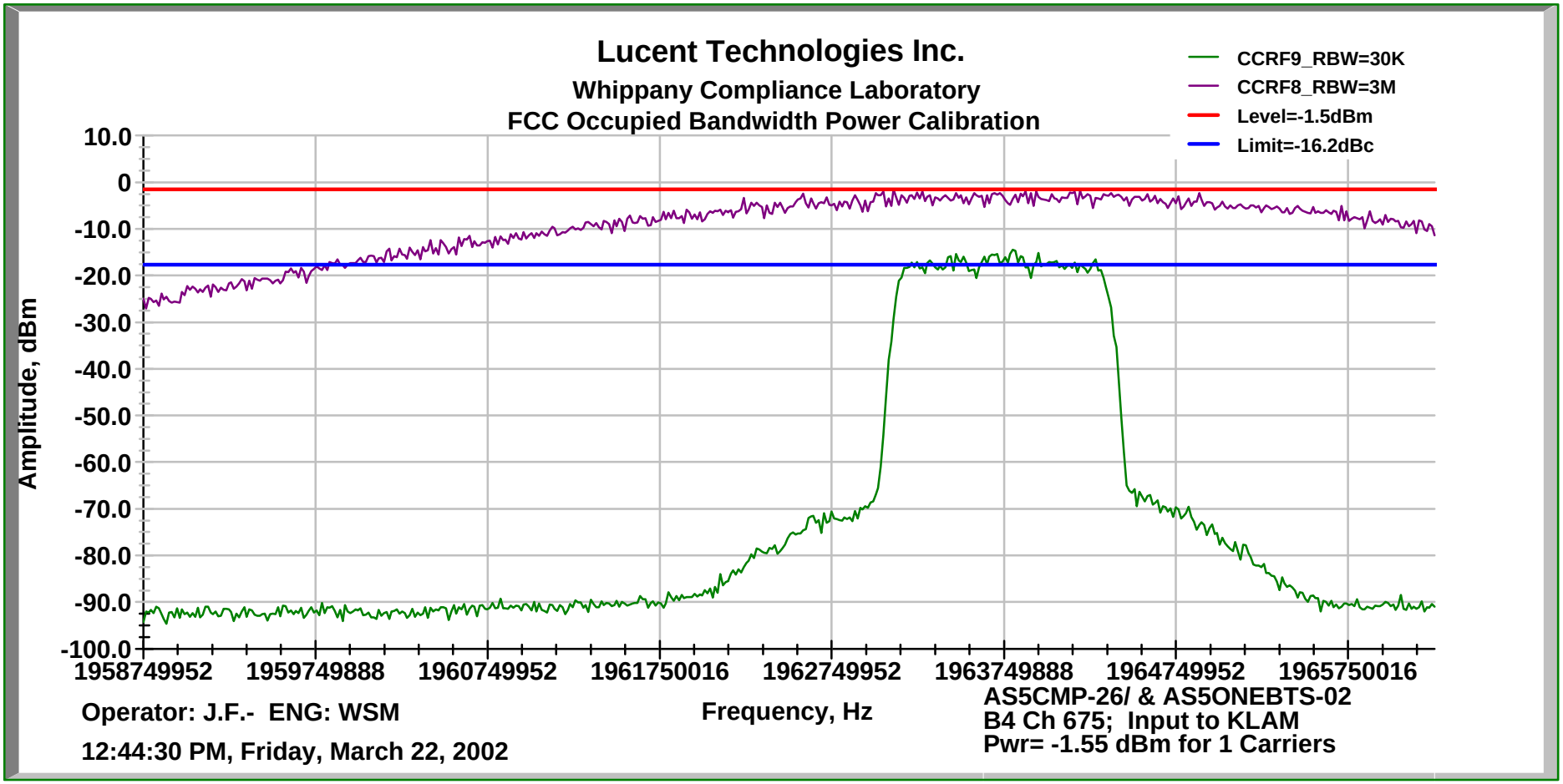


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS B Block, Sub-Block B4, Single Carrier Configuration KLAM/MCA

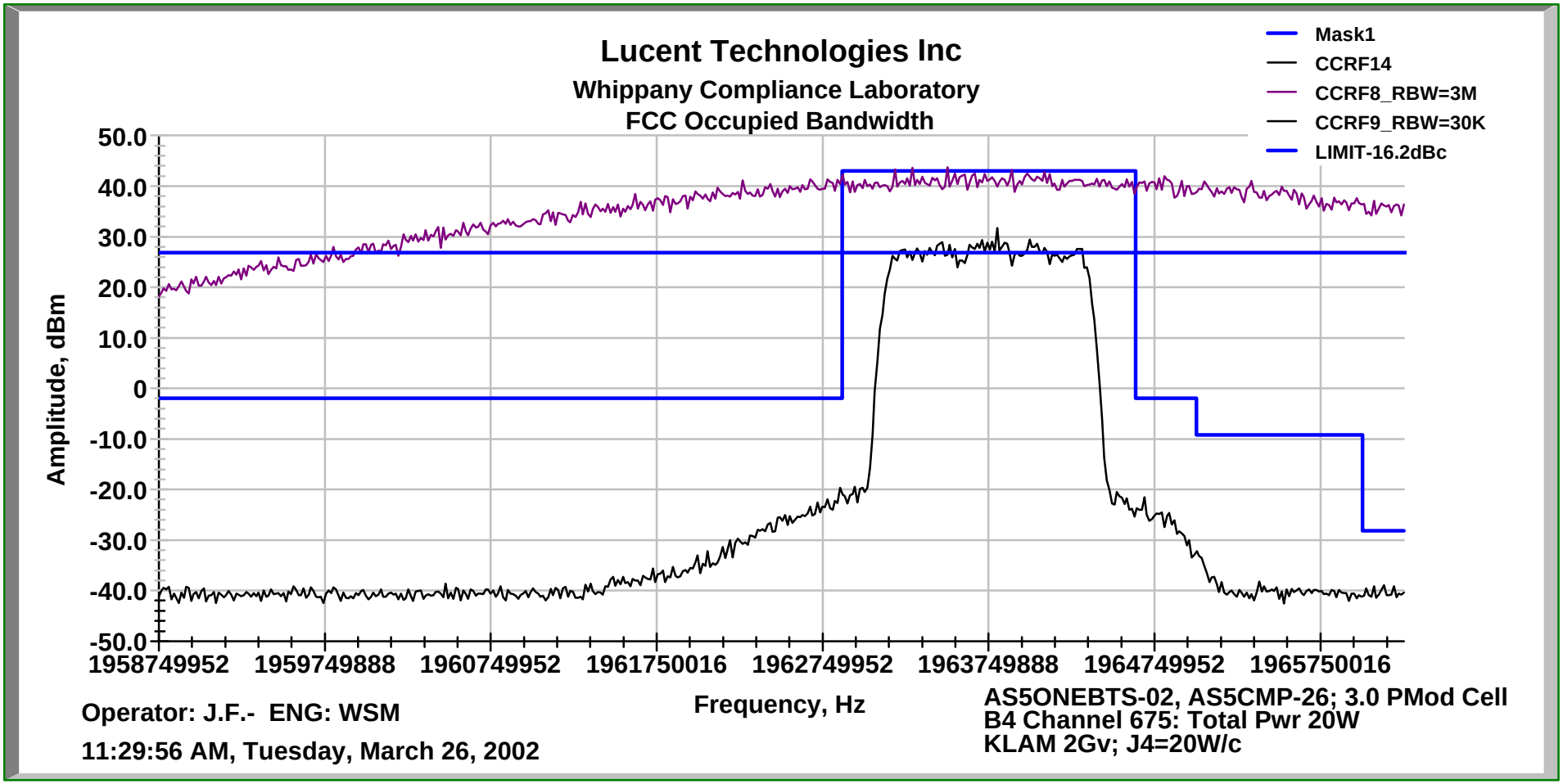


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS B Block, Sub-Block B4, Dual Carrier Configuration KLAM/MCA

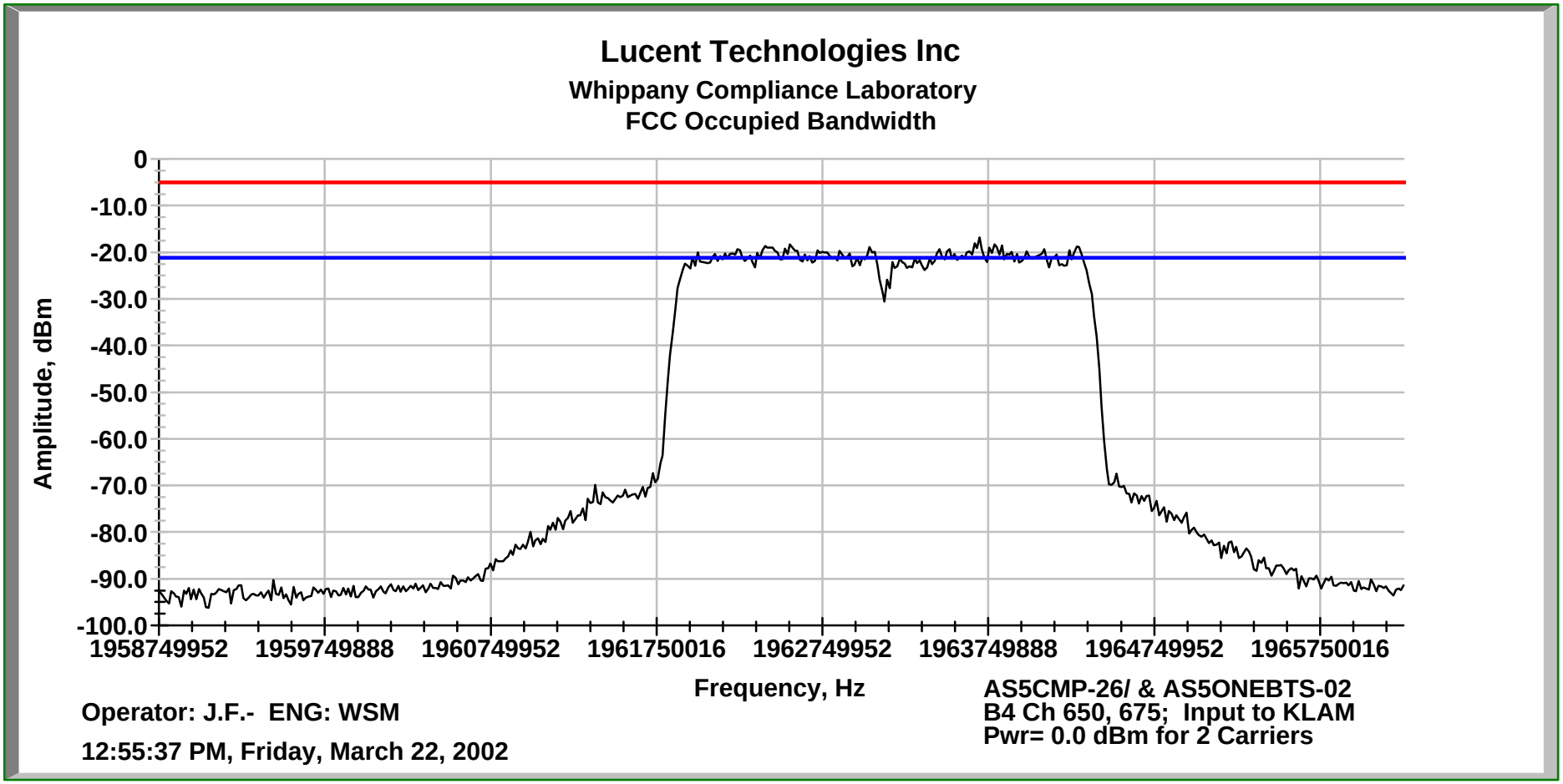


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS B Block, Sub-Block B4, Dual Carrier Configuration KLAM/MCA

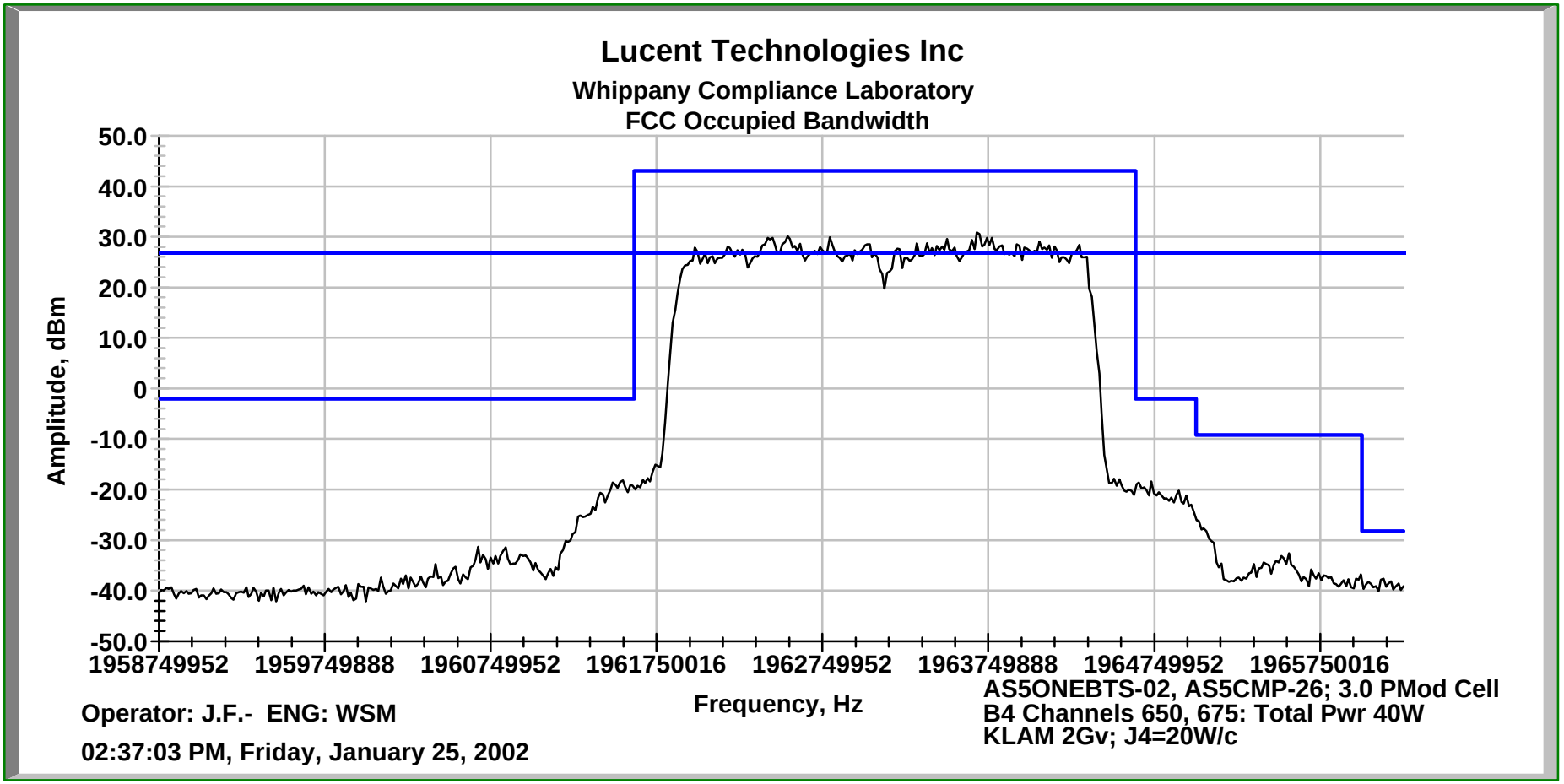


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS C Block, Sub-Block C1, Single Carrier Configuration KLAM/MCA

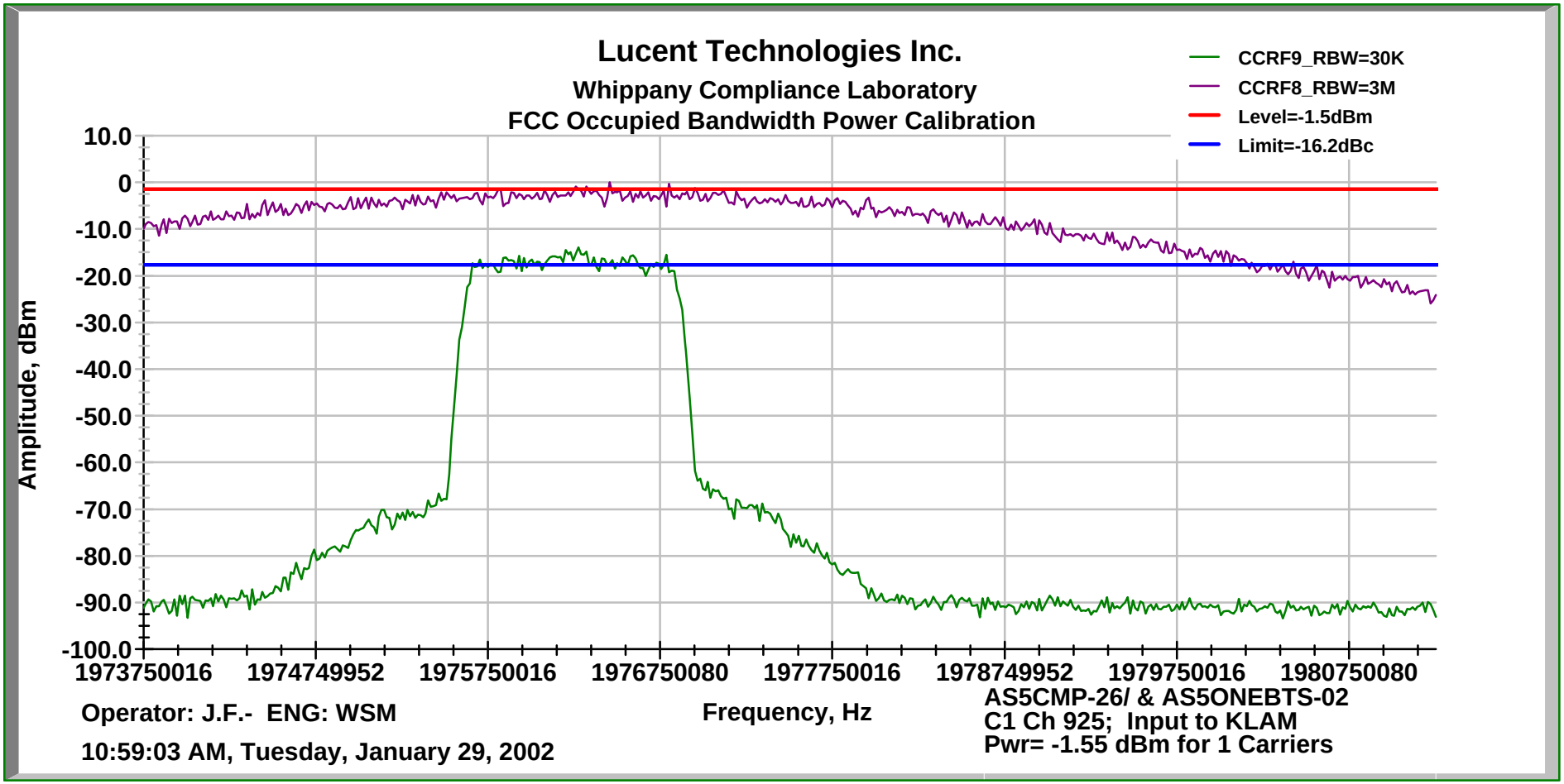


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS C Block, Sub-Block C1, Single Carrier Configuration KLAM/MCA

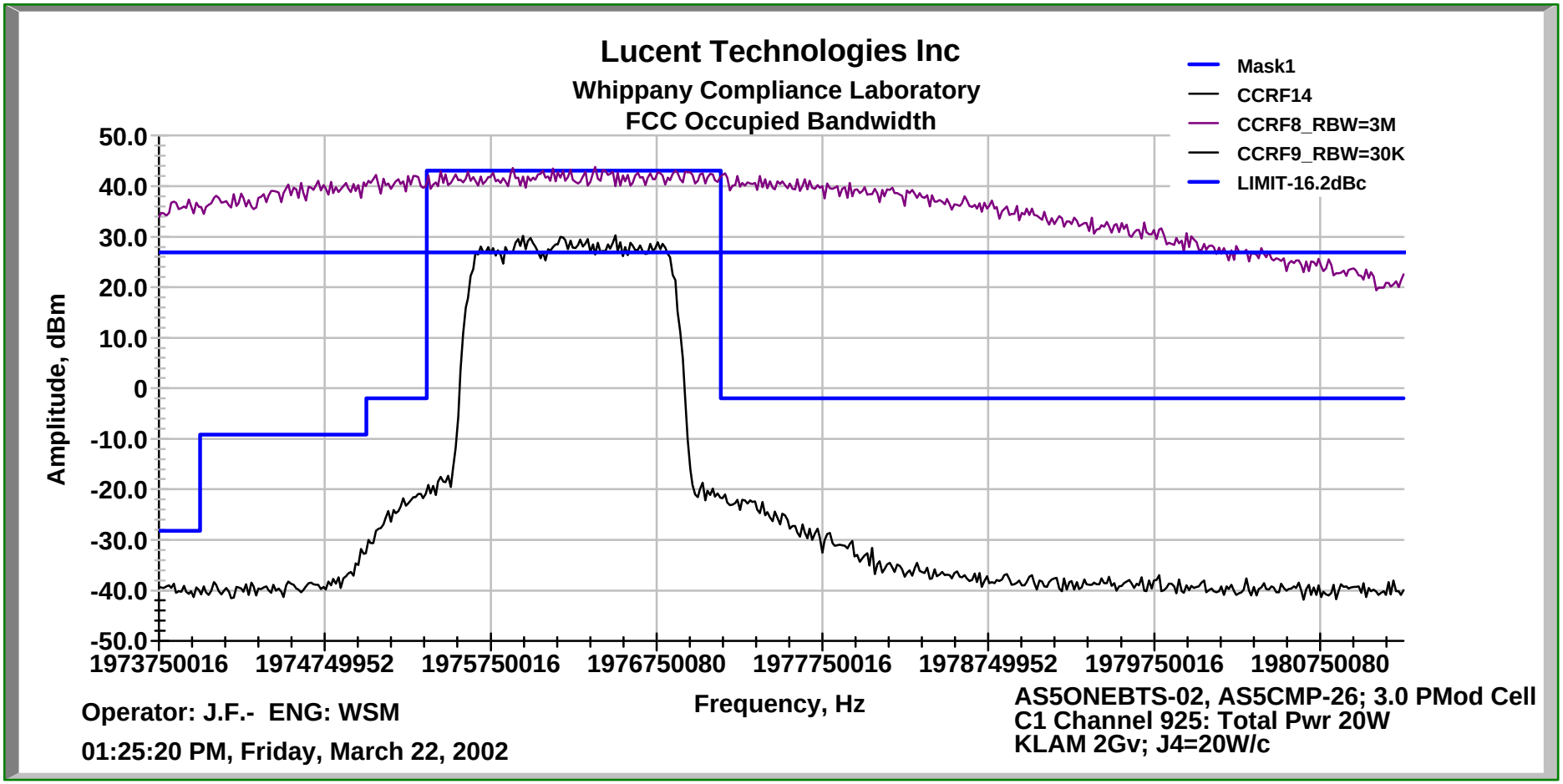


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS C Block, Sub-Block C1, Dual Carrier Configuration KLAM/MCA

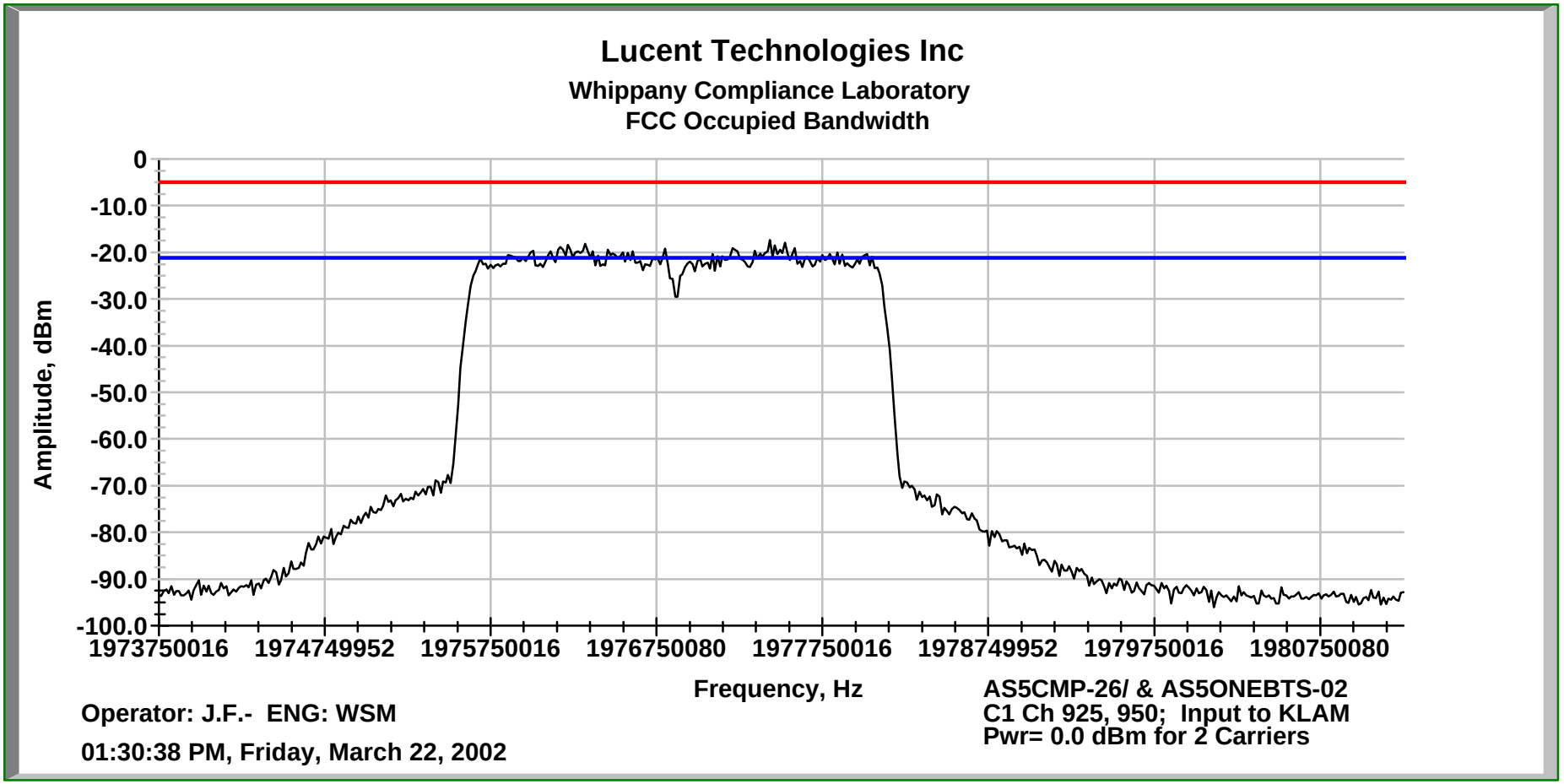


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS C Block, Sub-Block C1, Dual Carrier Configuration KLAM/MCA

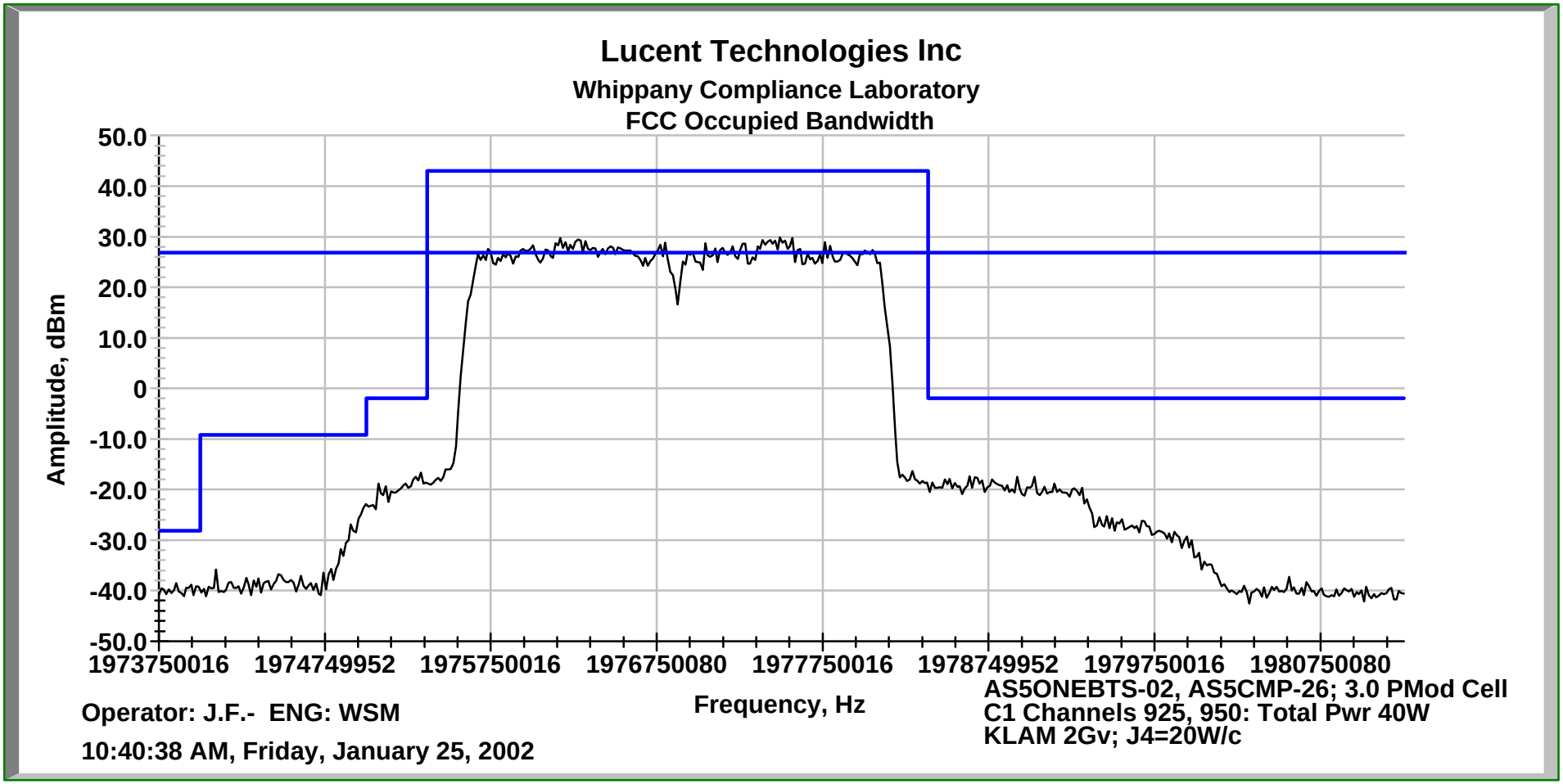


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS C Block, Sub-Block C1, Three Carrier Configuration KLAM/MCA

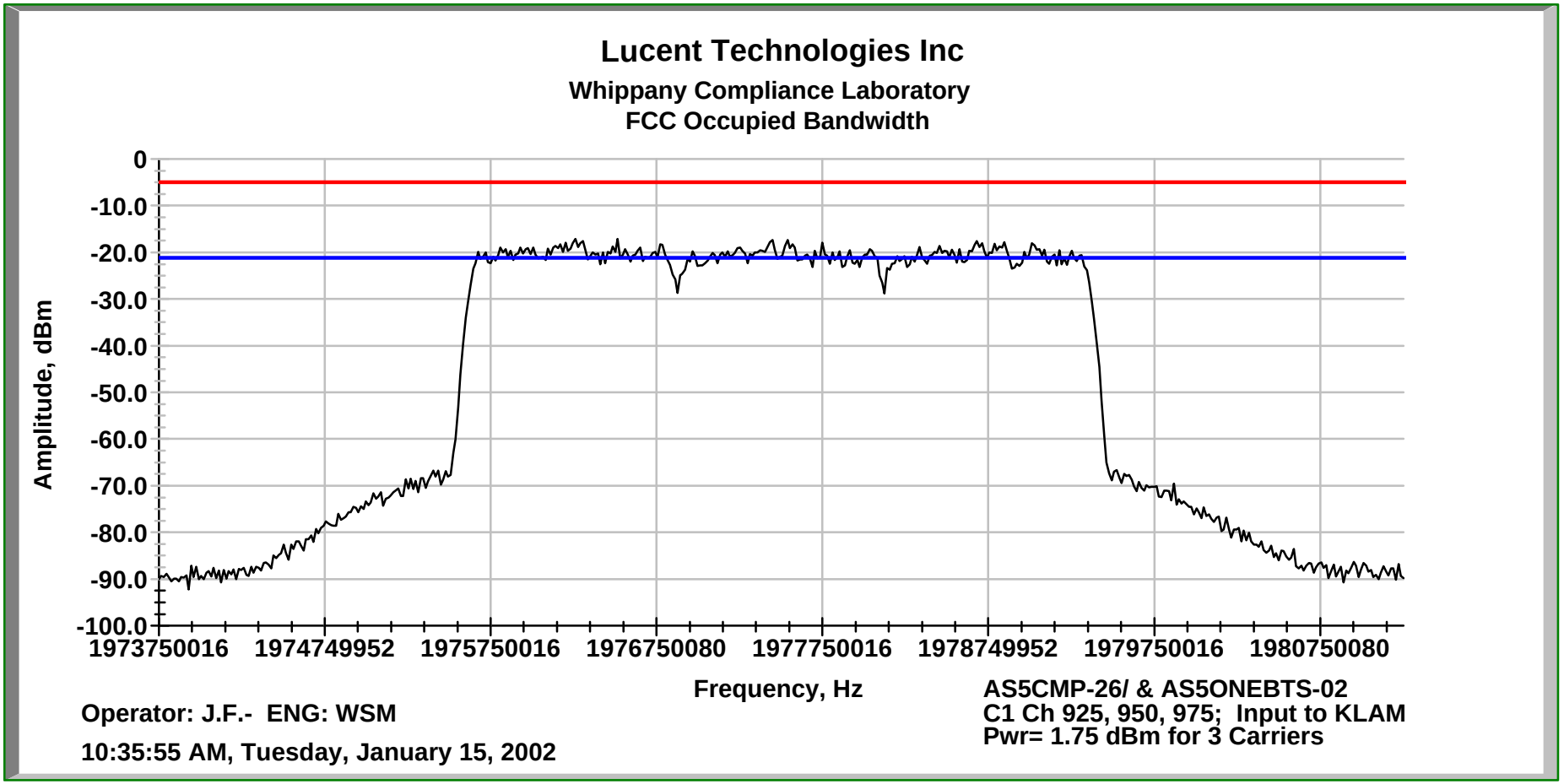


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS C Block, Sub-Block C1, Three Carrier Configuration KLAM/MCA

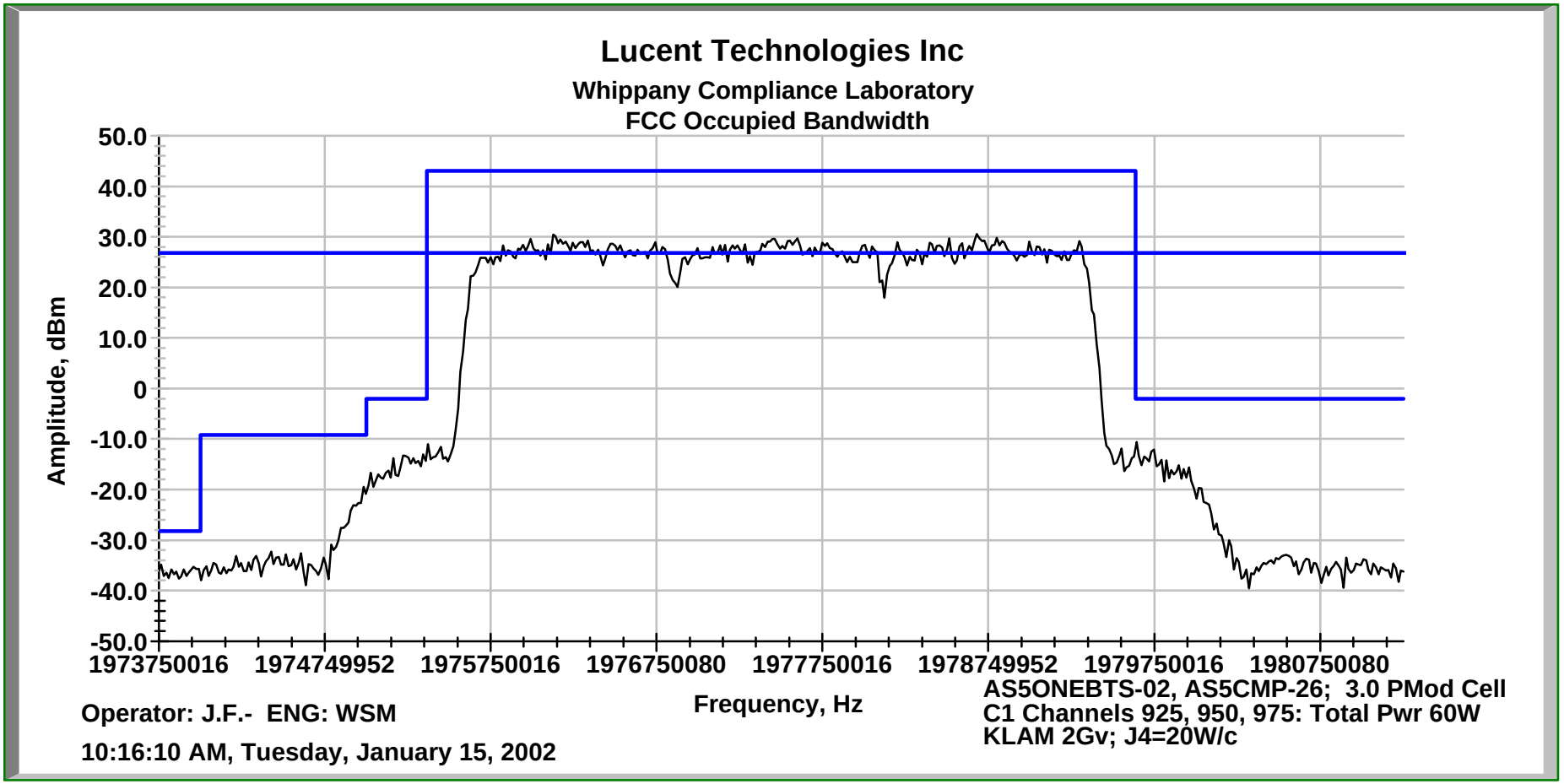


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS C Block, Sub-Block C4, Single Carrier Configuration KLAM/MCA

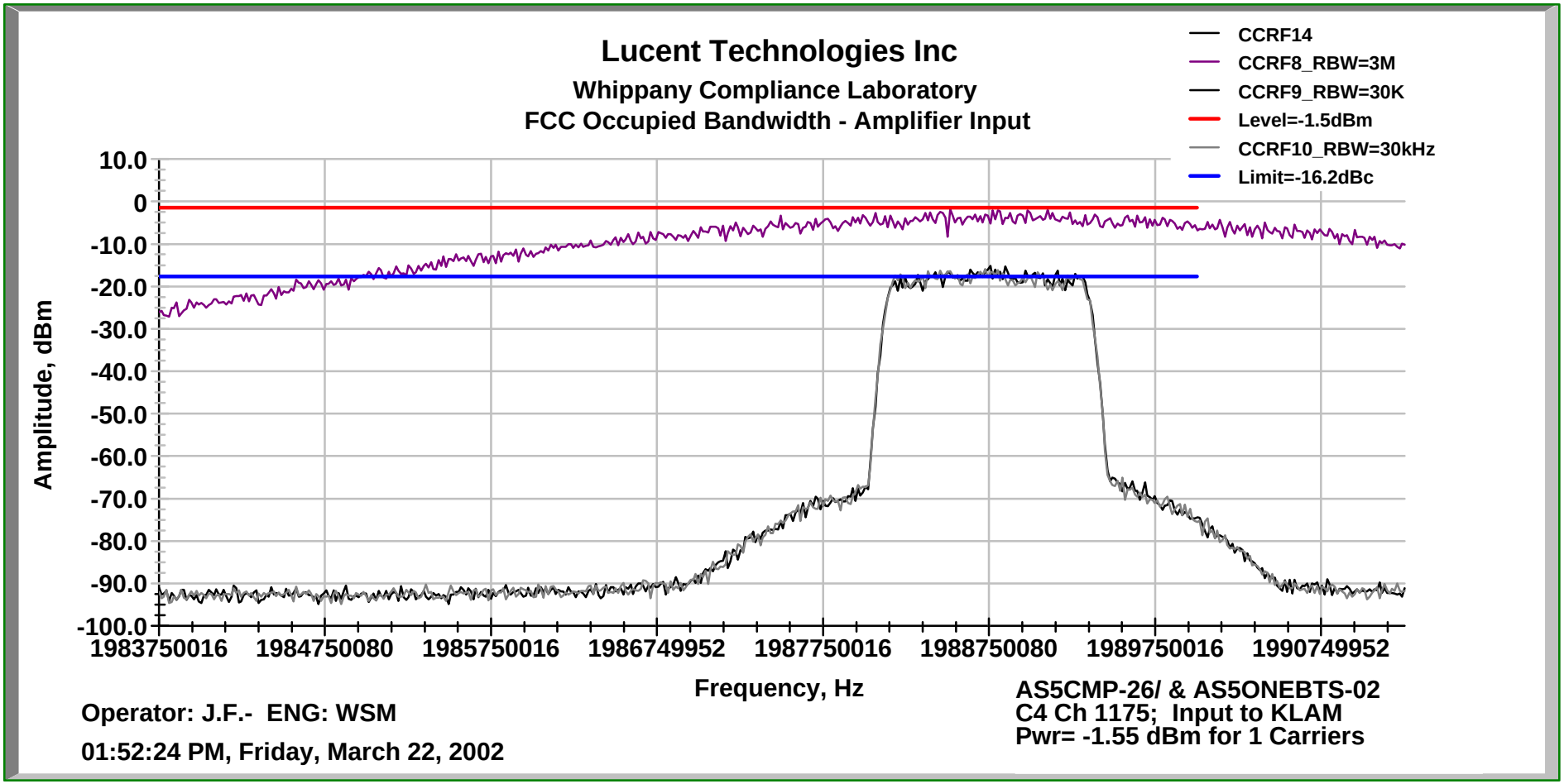


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS C Block, Sub-Block C4, Single Carrier Configuration KLAM/MCA

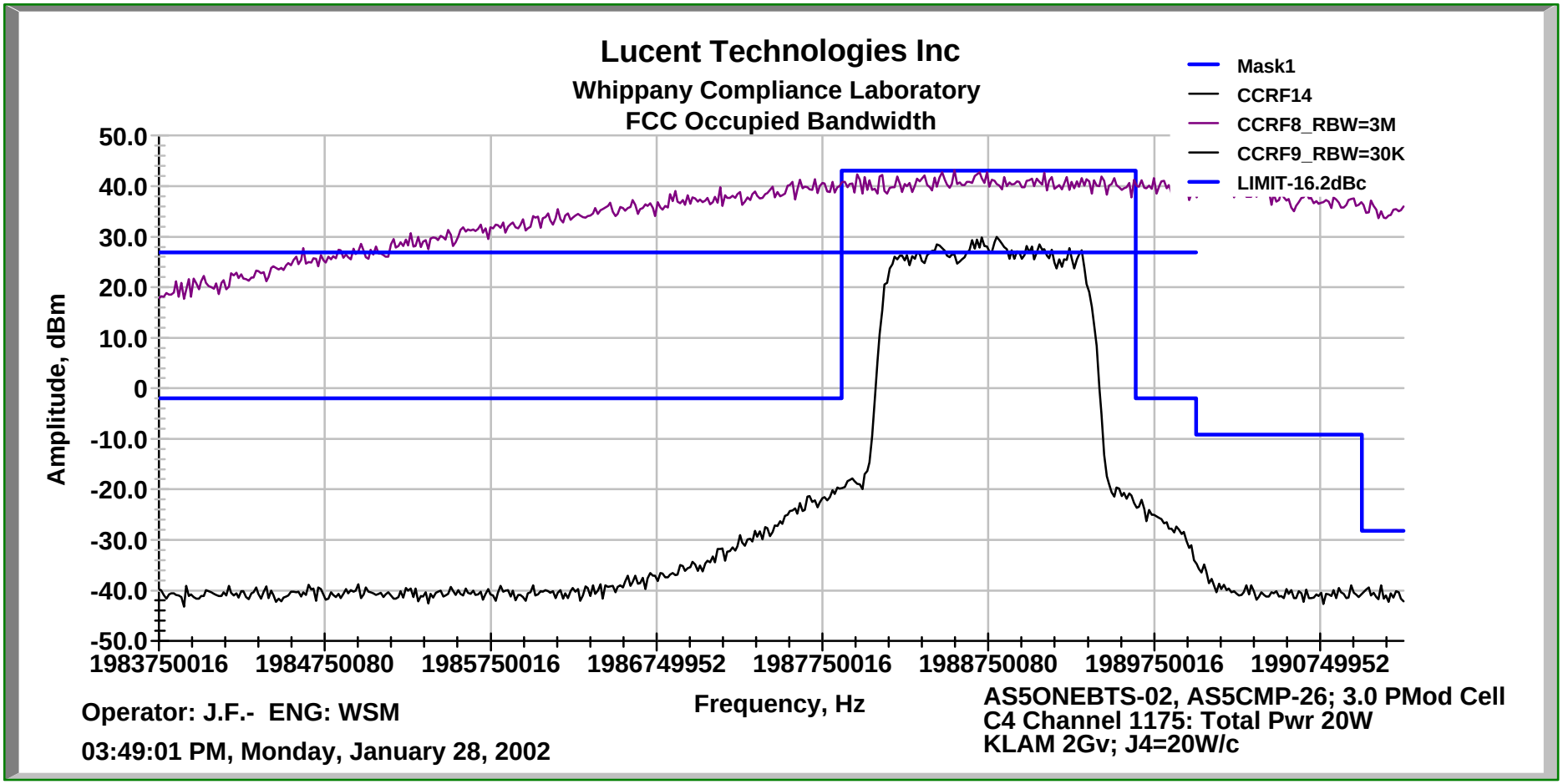


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS C Block, Sub-Block C4, Dual Carrier Configuration KLAM/MCA

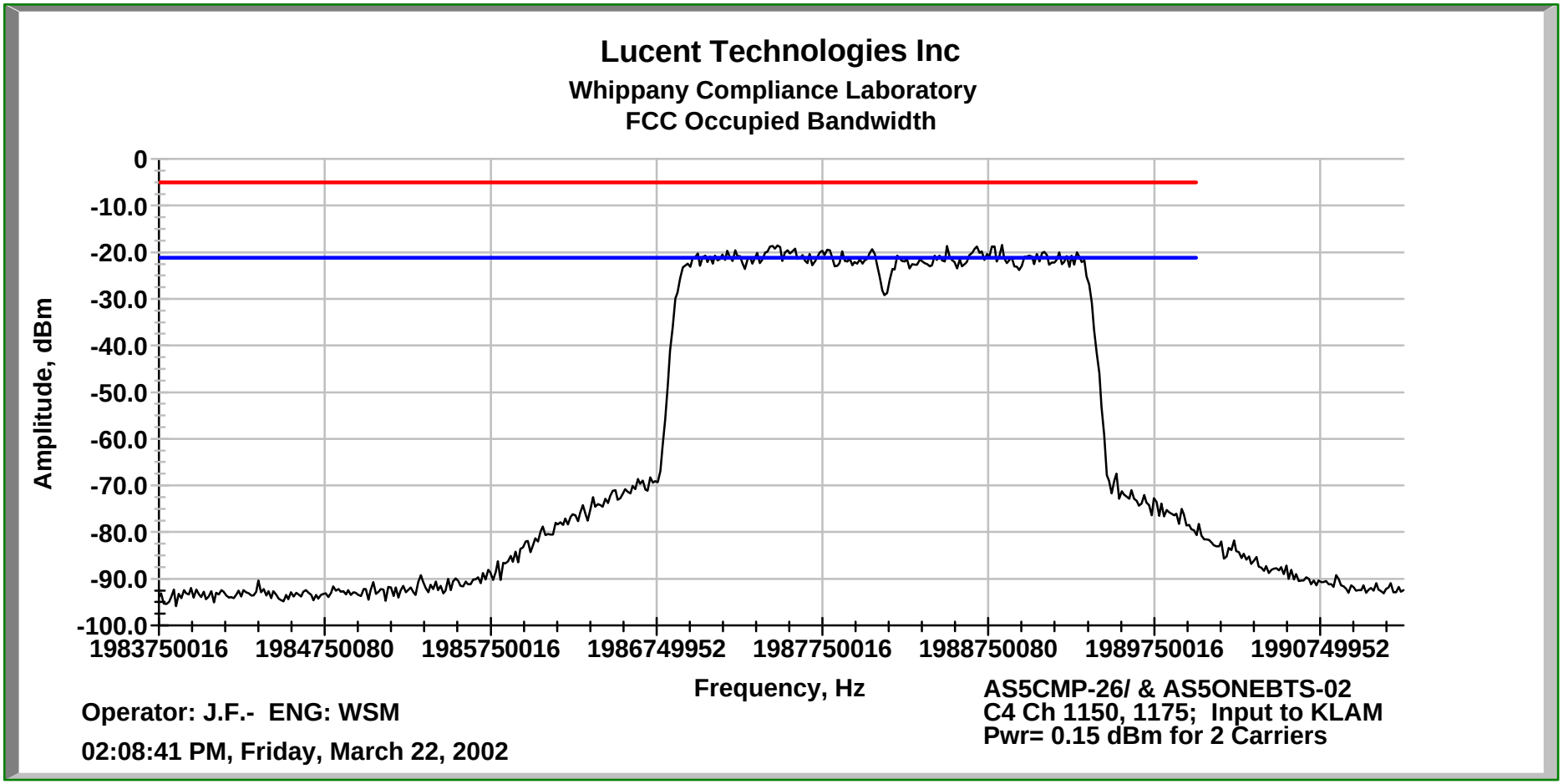


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS C Block, Sub-Block C4, Dual Carrier Configuration KLAM/MCA

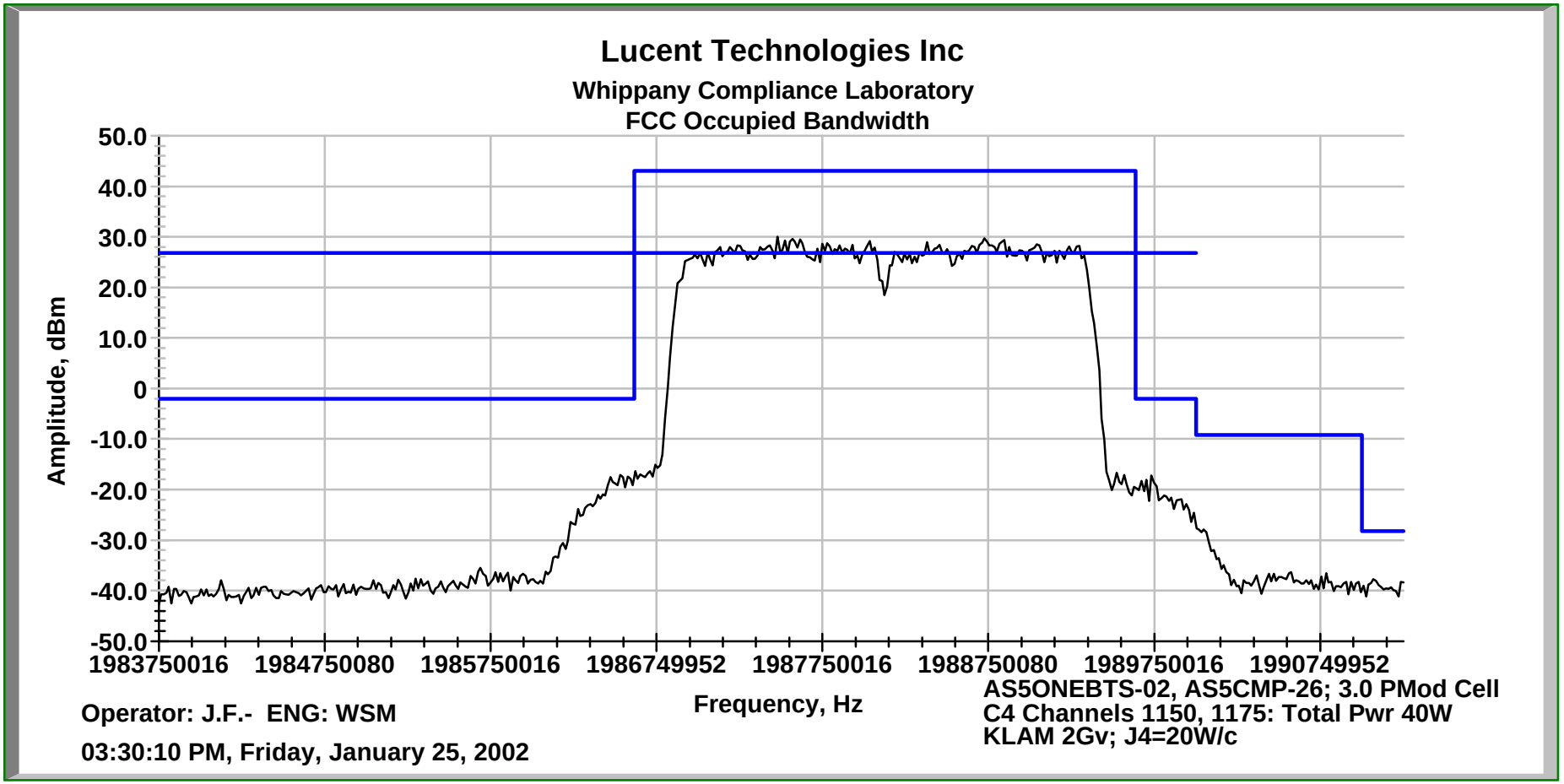


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS D Block, Single Carrier Configuration KLAM/MCA

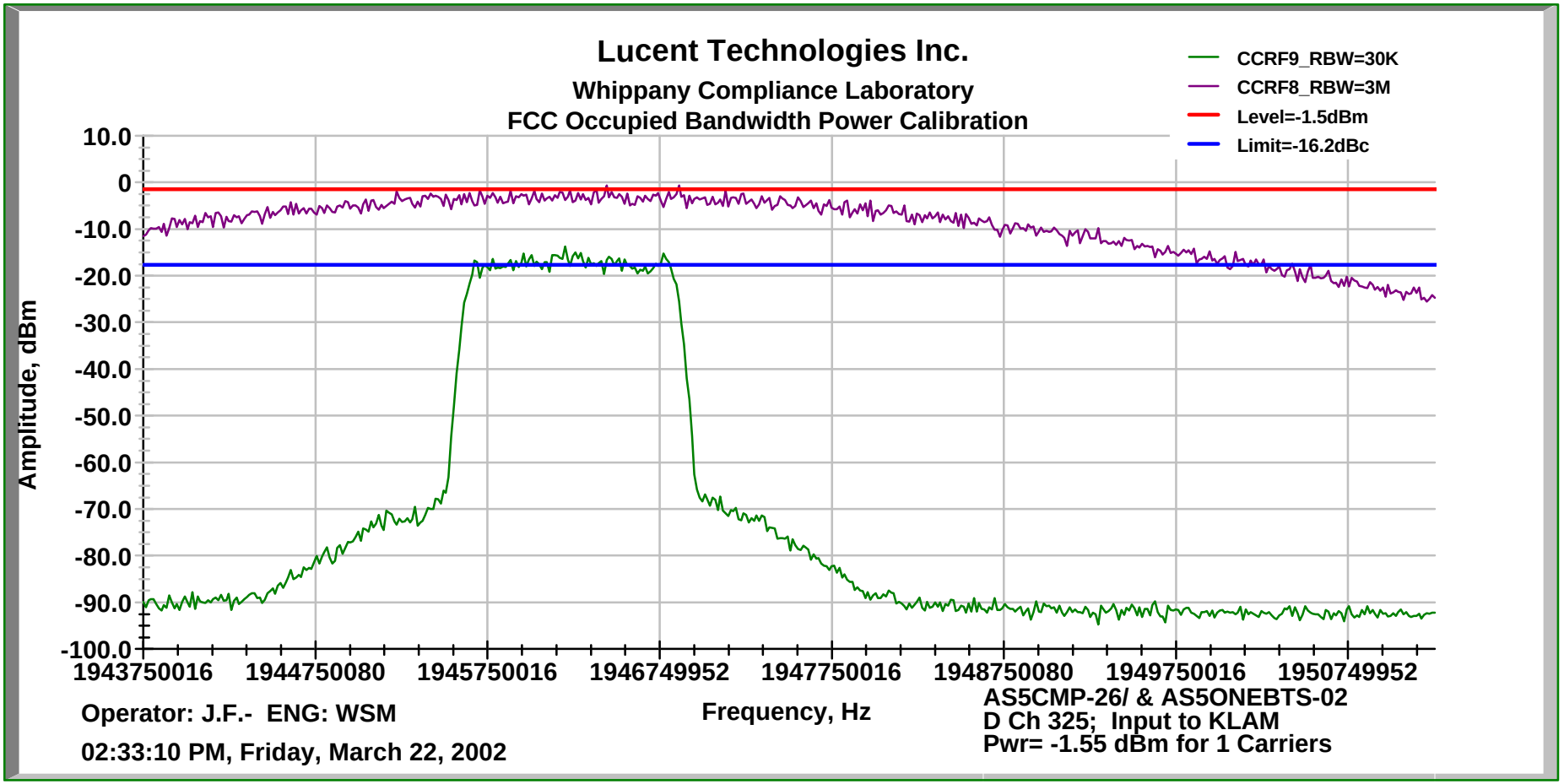


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS D Block, Single Carrier Configuration KLAM/MCA

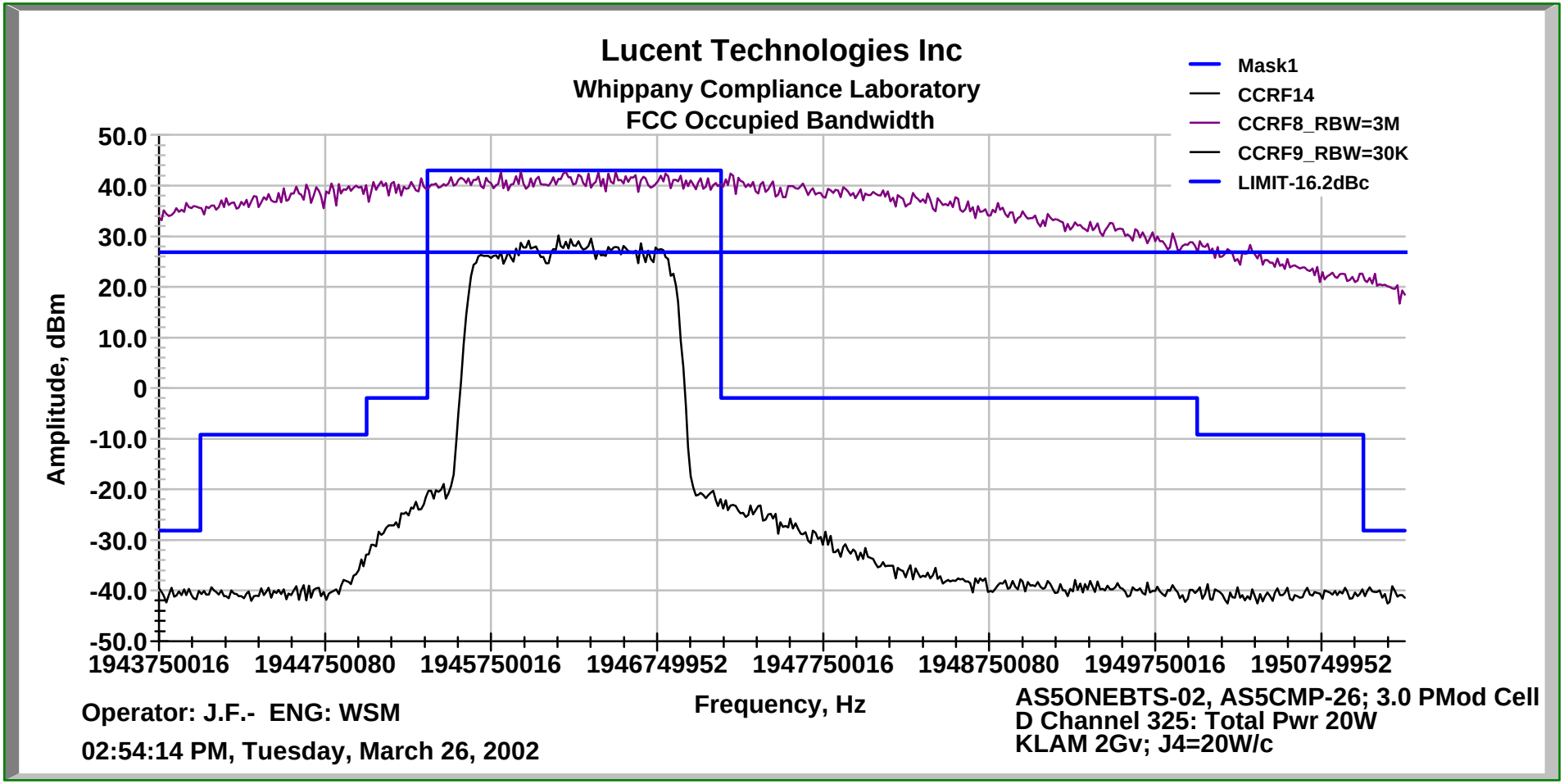


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS D Block, Dual Carrier Configuration KLAM/MCA

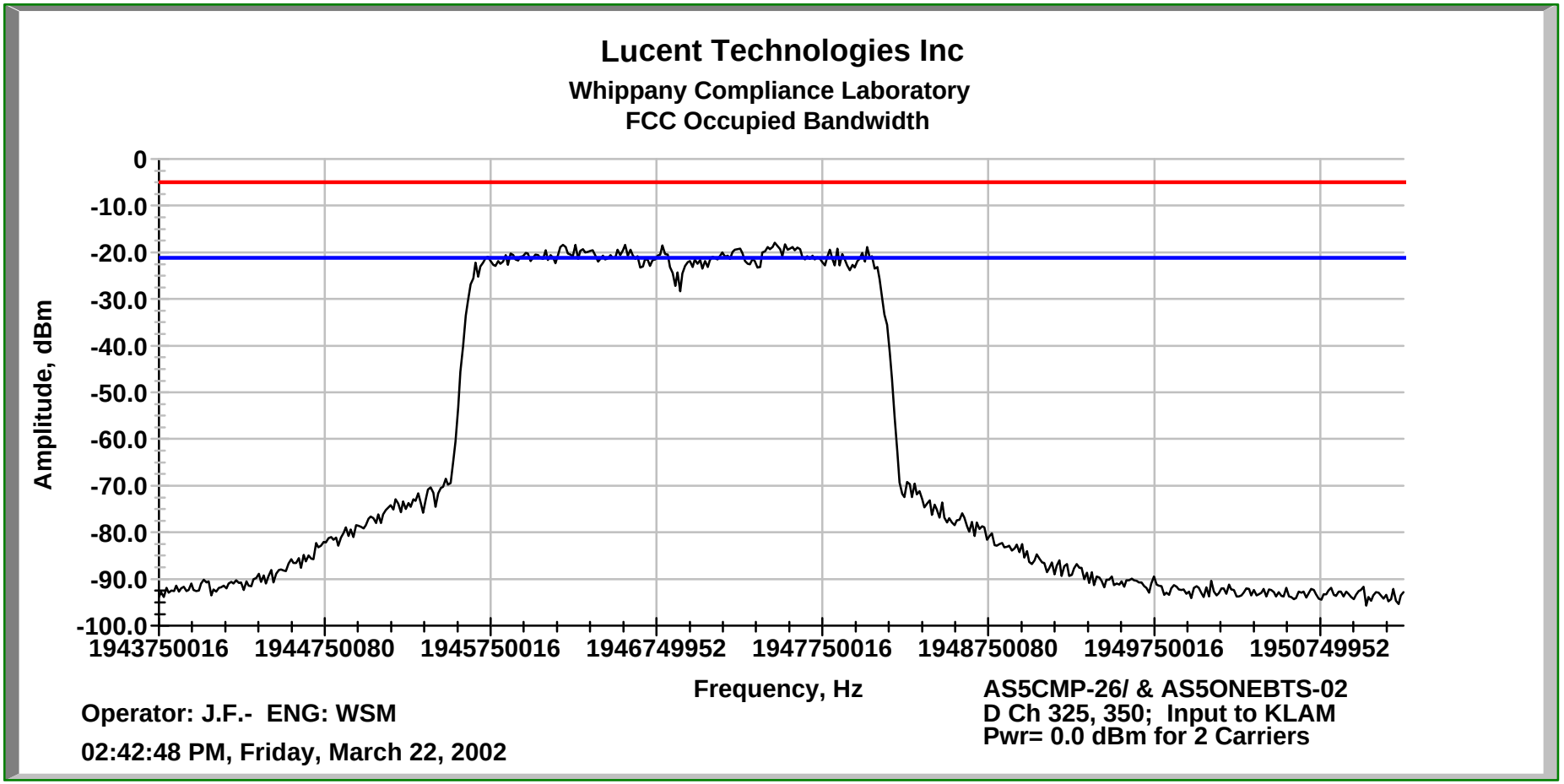


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS D Block, Dual Carrier Configuration KLAM/MCA

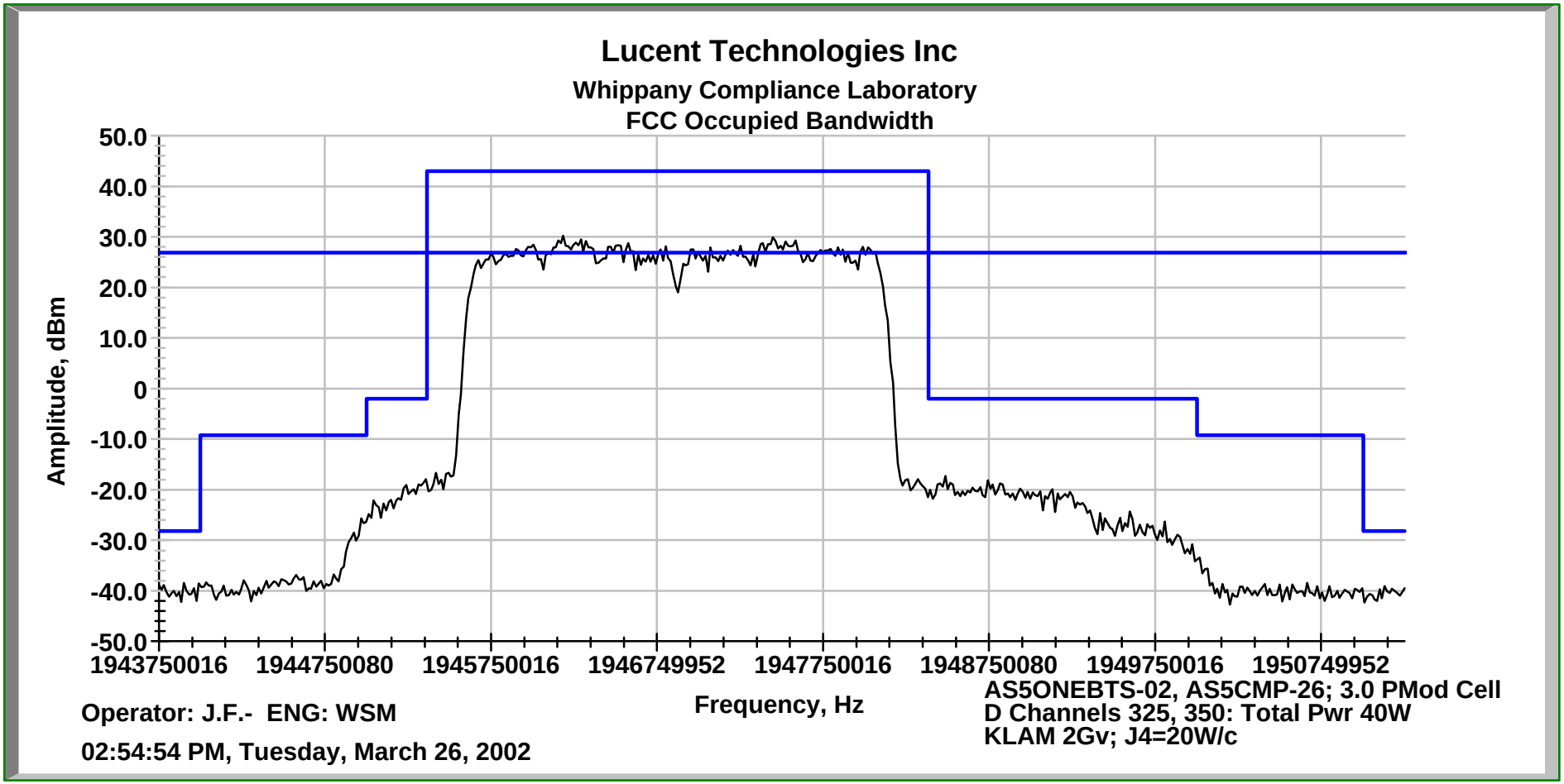


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS D Block, Three Carrier Configuration KLAM/MCA

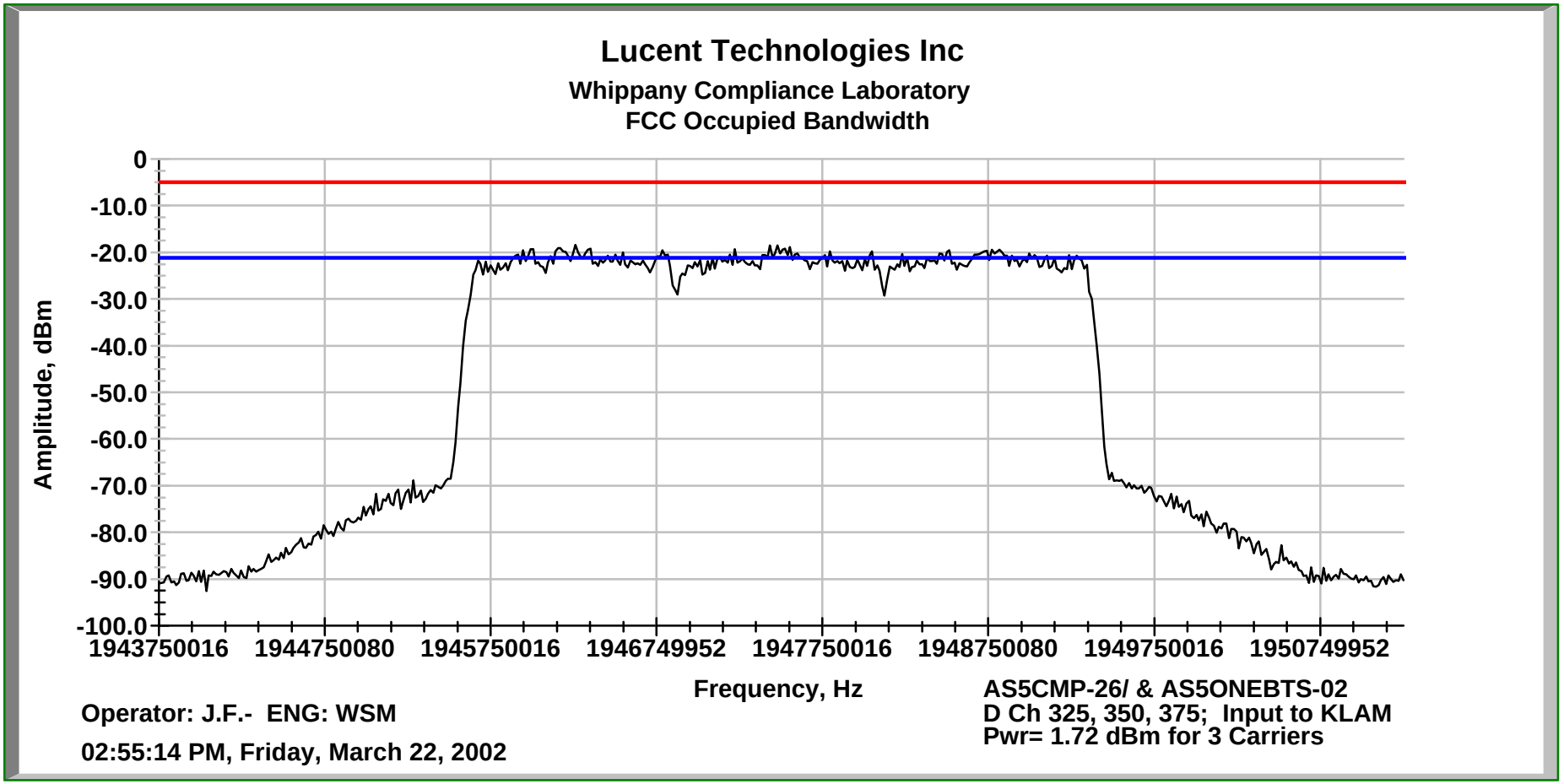


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS D Block, Three Carrier Configuration KLAM/MCA

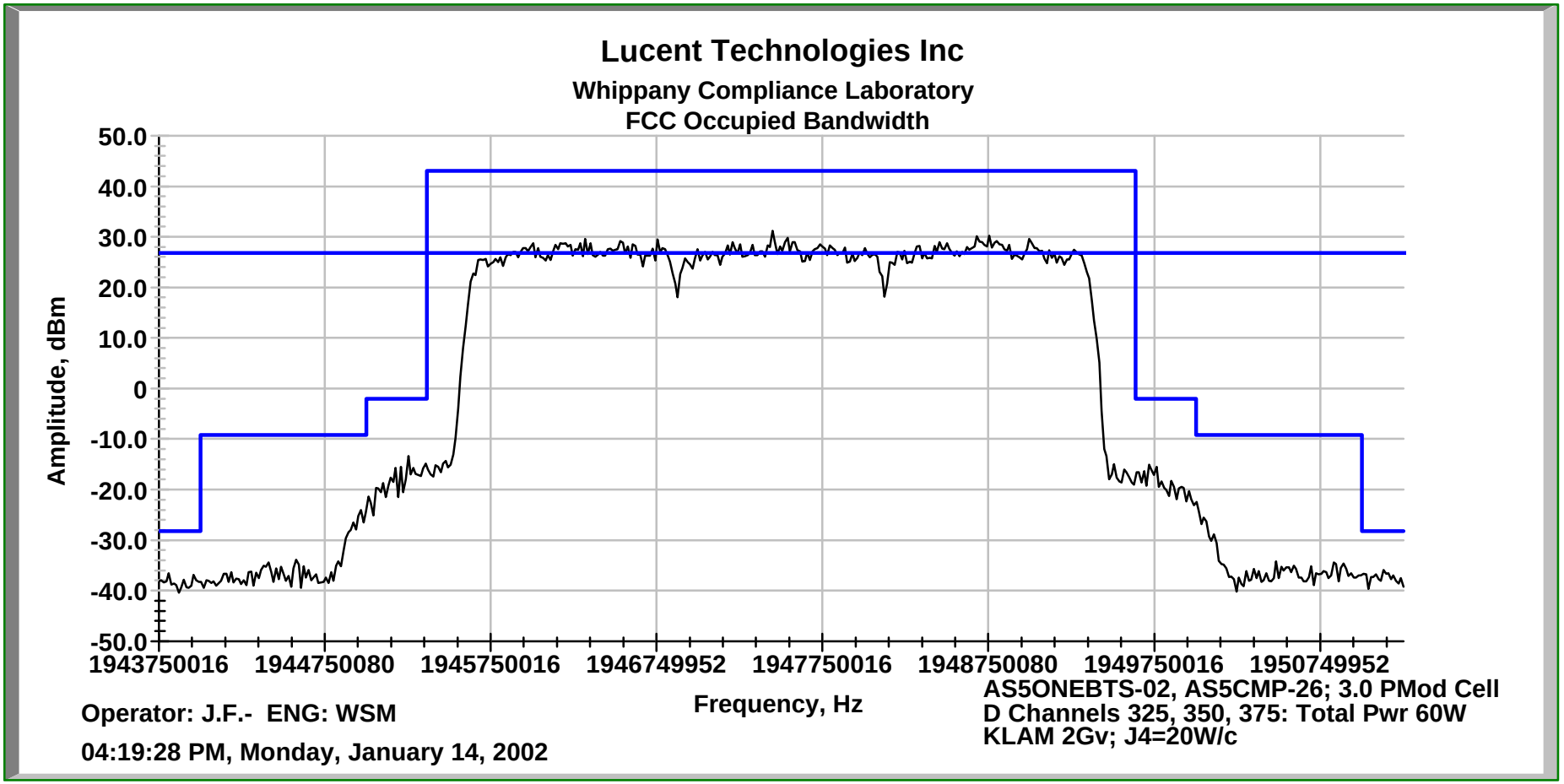


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS E Block, Single Carrier Configuration KLAM/MCA

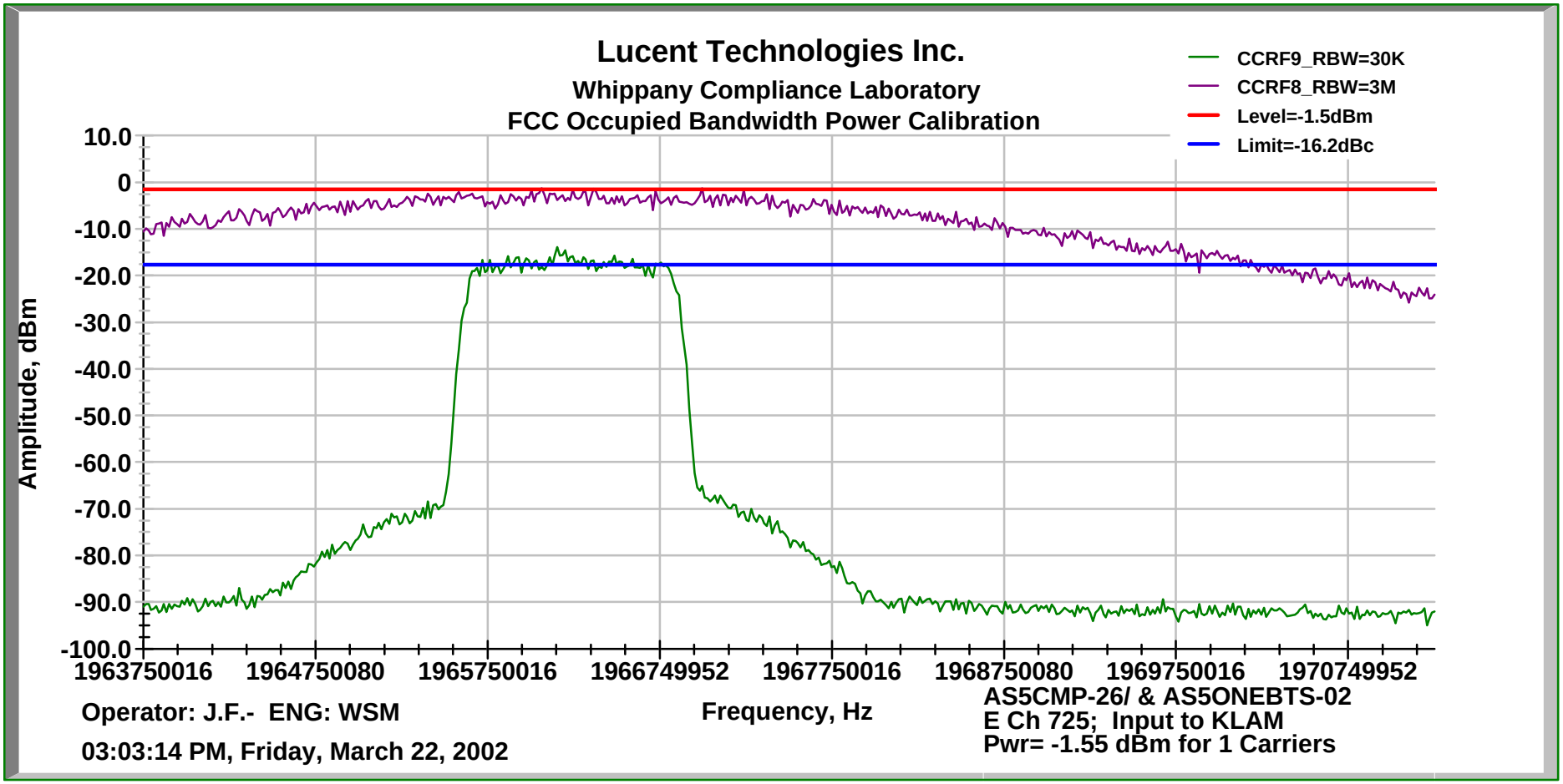


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS E Block, Single Carrier Configuration KLAM/MCA

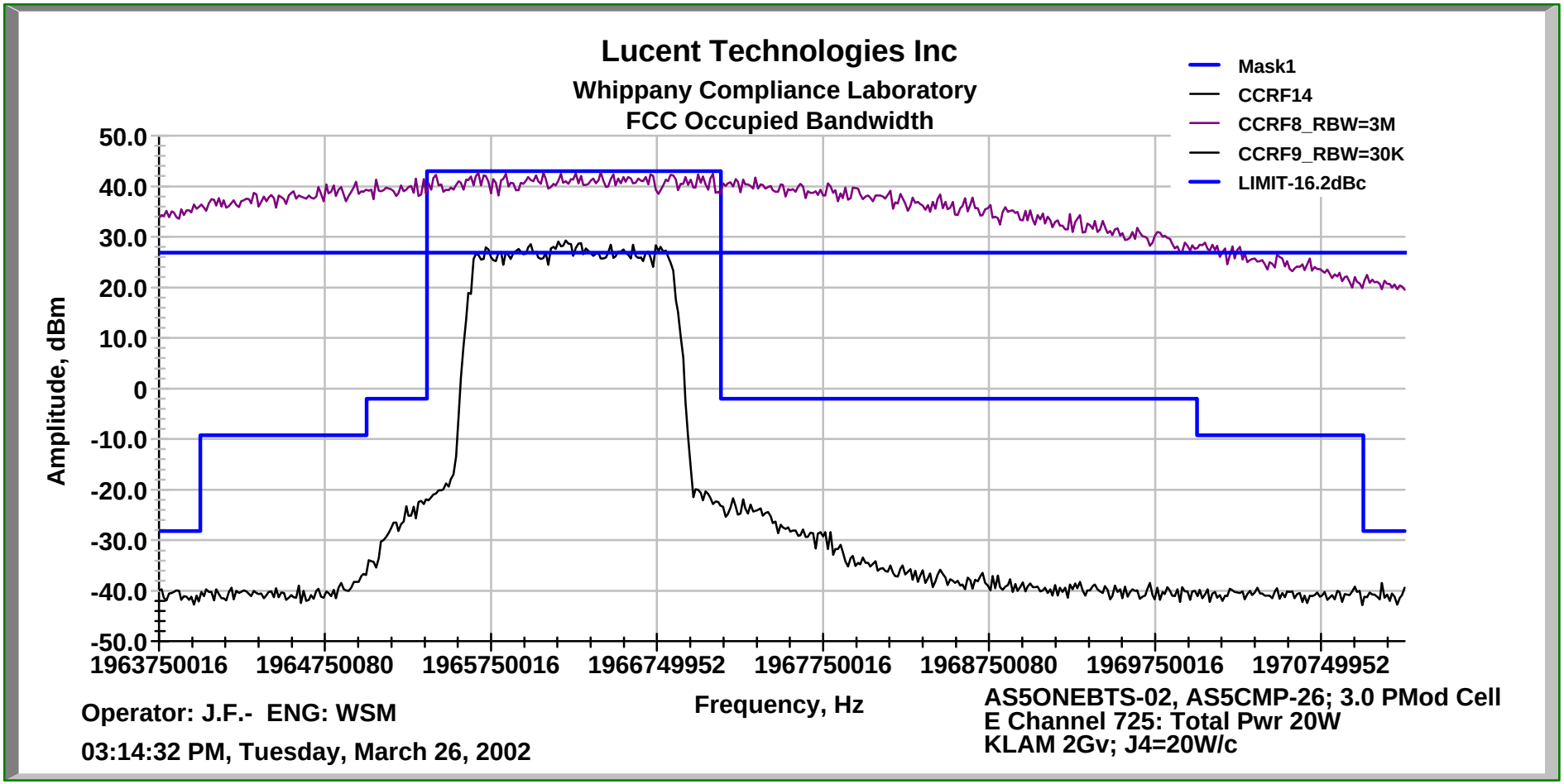


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS E Block, Dual Carrier Configuration KLAM/MCA

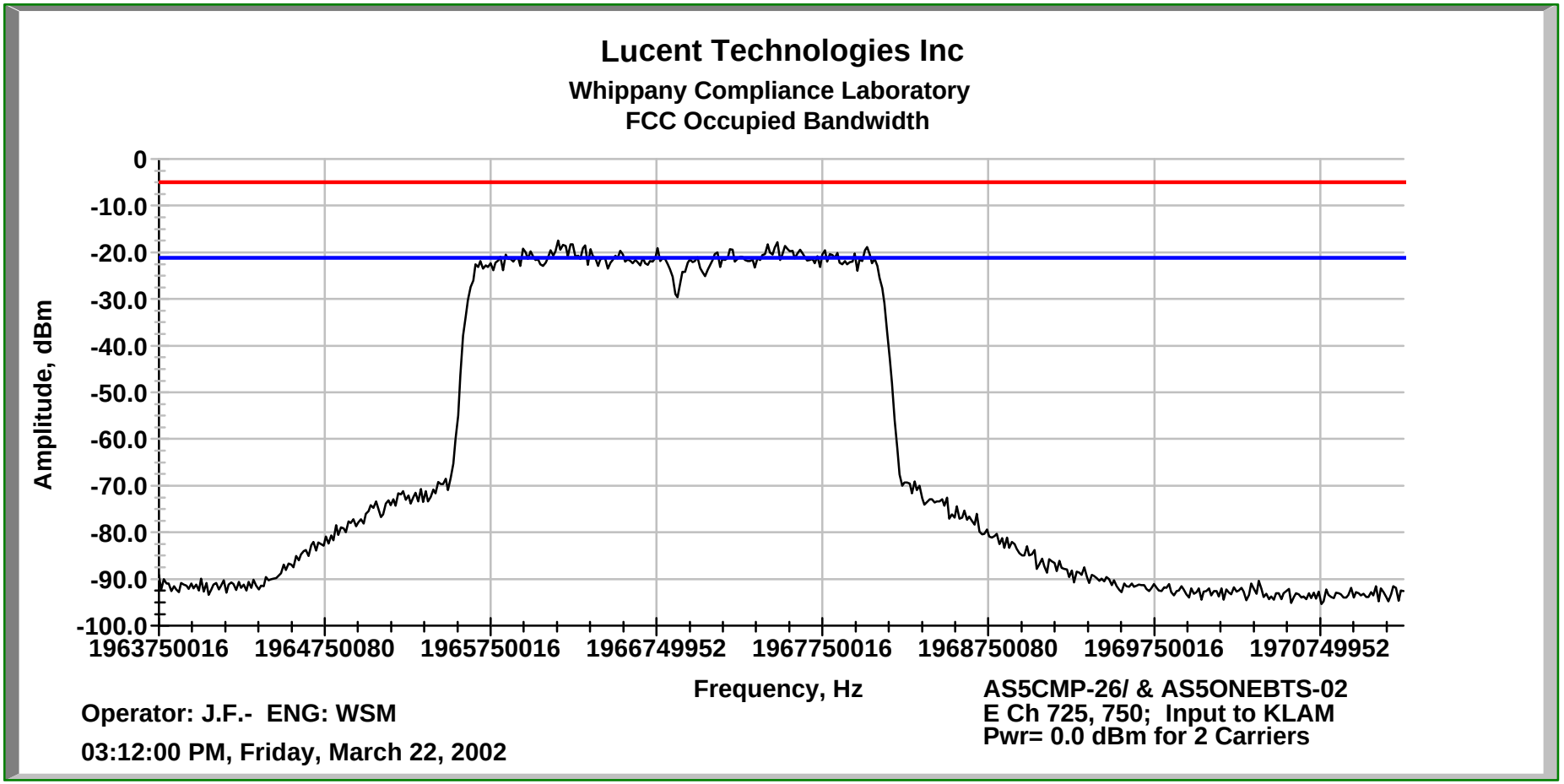


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS E Block, Dual Carrier Configuration KLAM/MCA

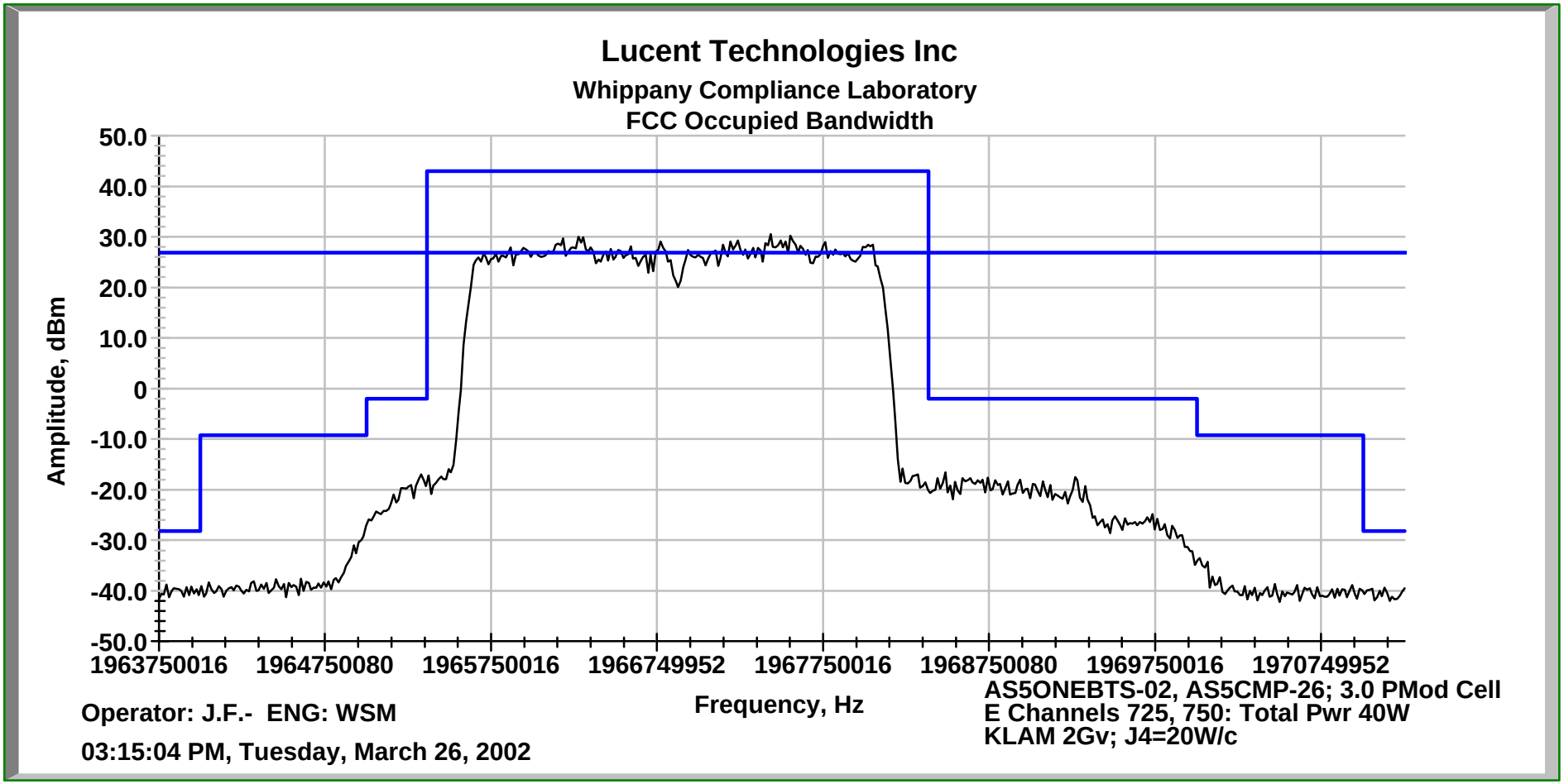


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS E Block, Three Carrier Configuration KLAM/MCA

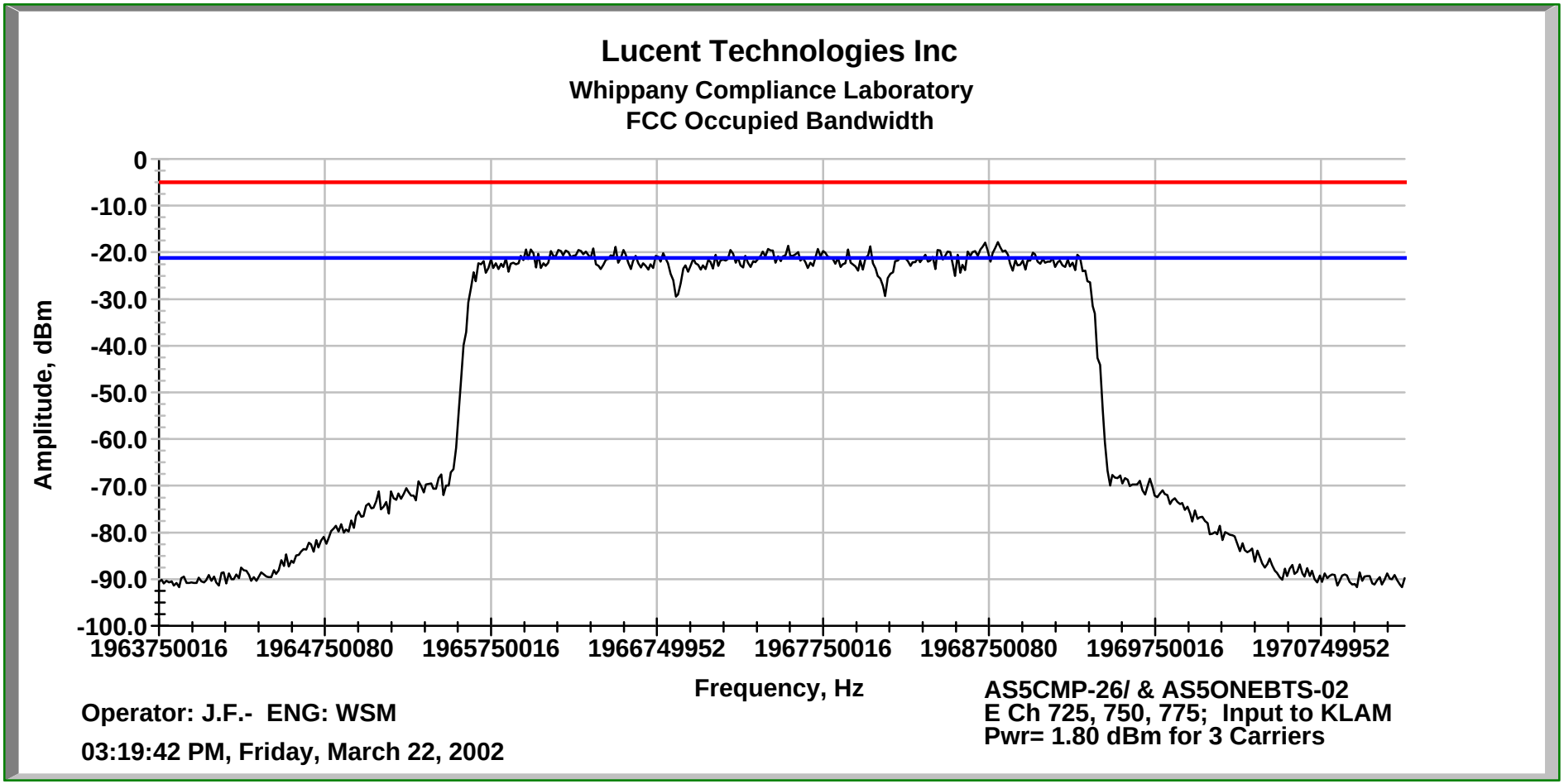


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS E Block, Three Carrier Configuration KLAM/MCA

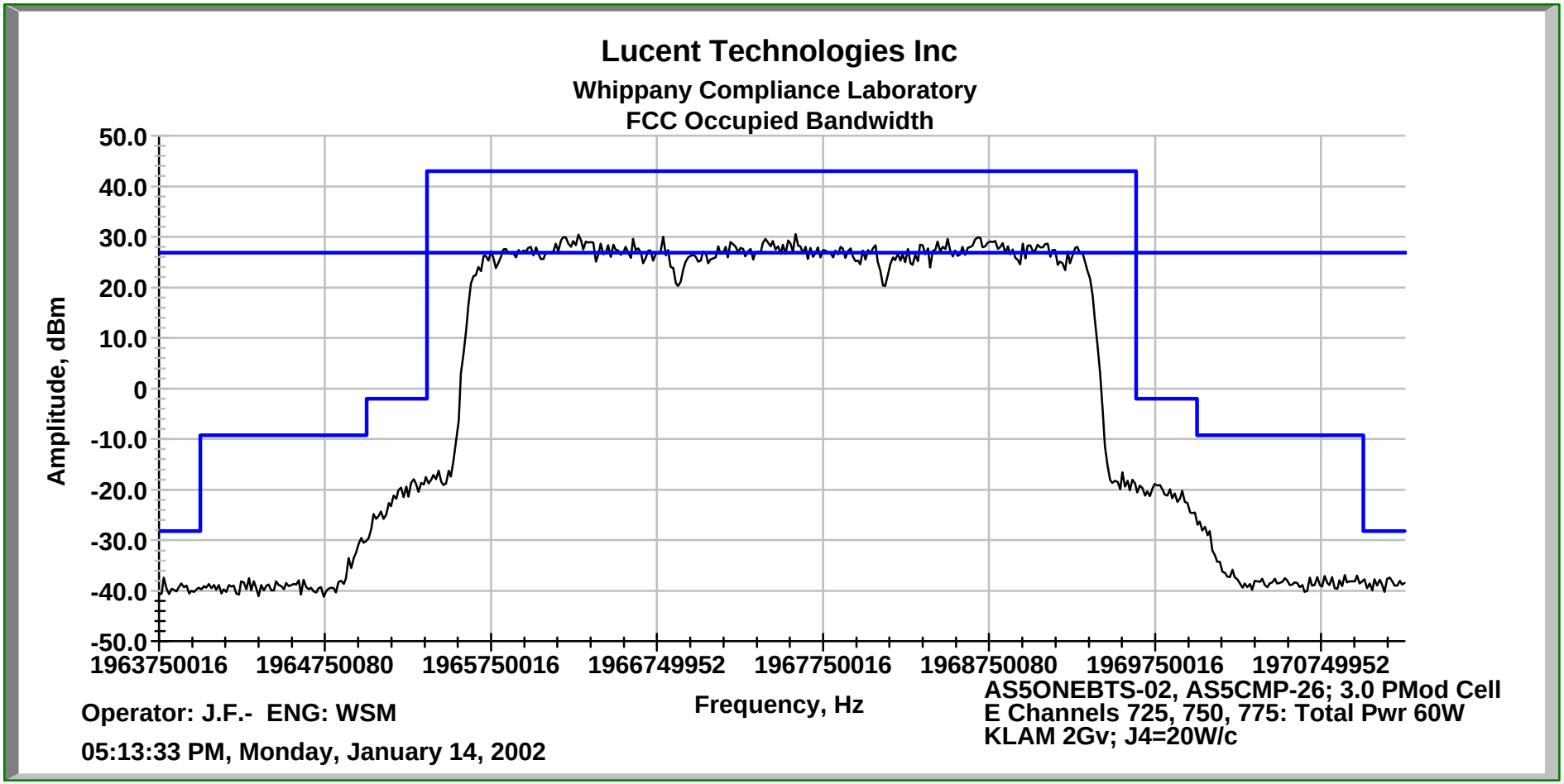


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS F Block, Single Carrier Configuration KLAM/MCA

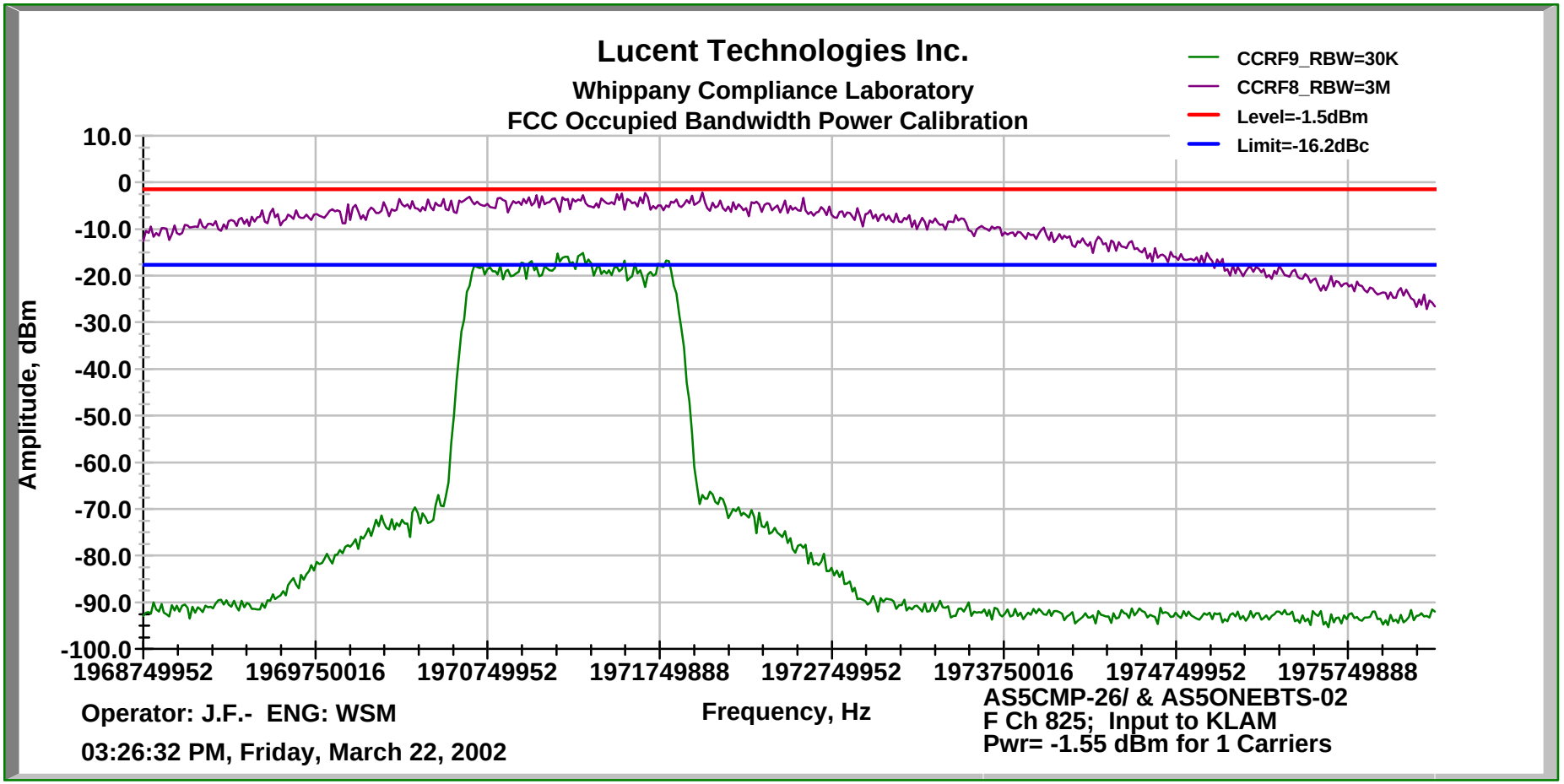


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS F Block, Single Carrier Configuration KLAM/MCA

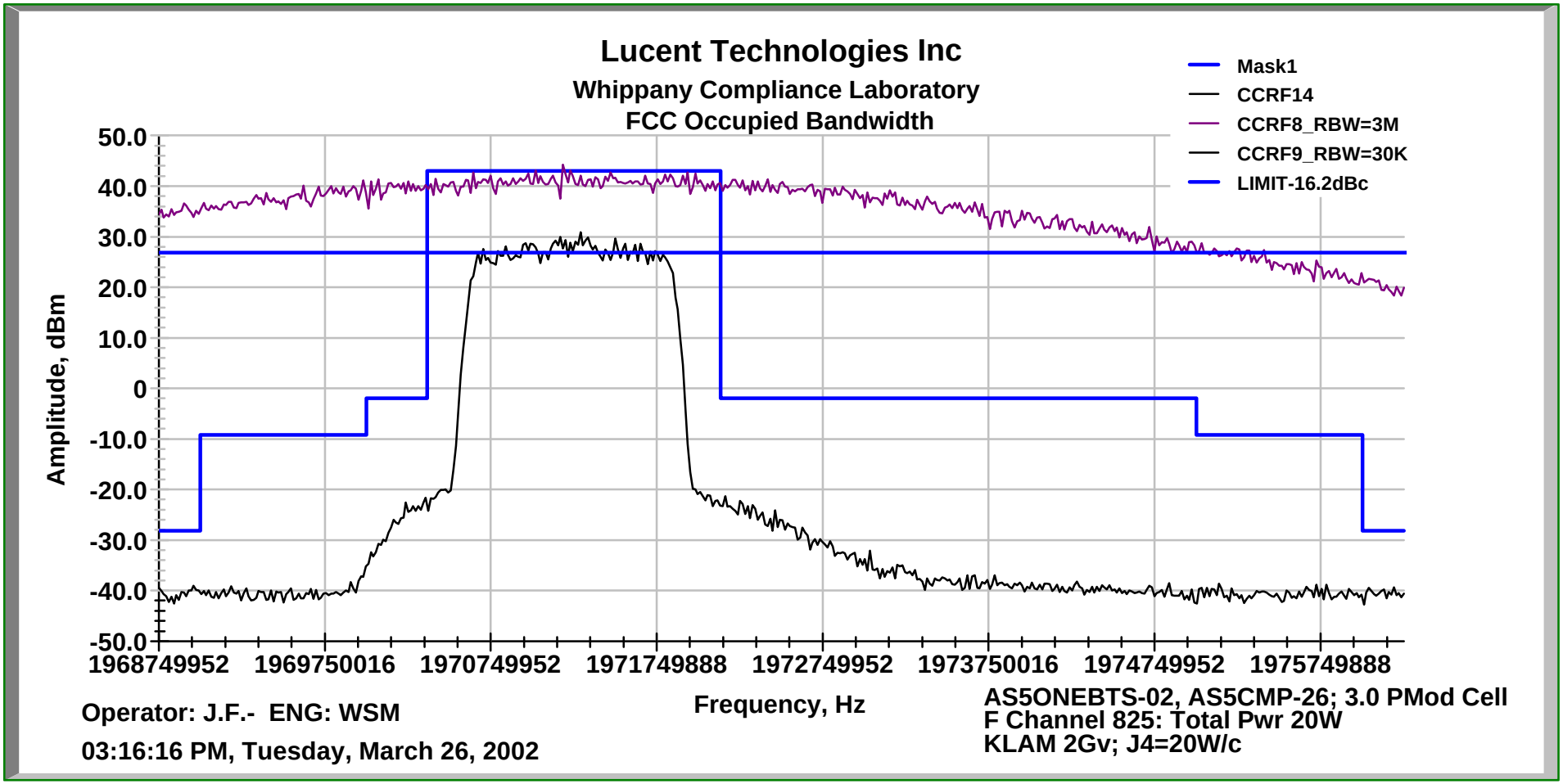


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS F Block, Dual Carrier Configuration KLAM/MCA

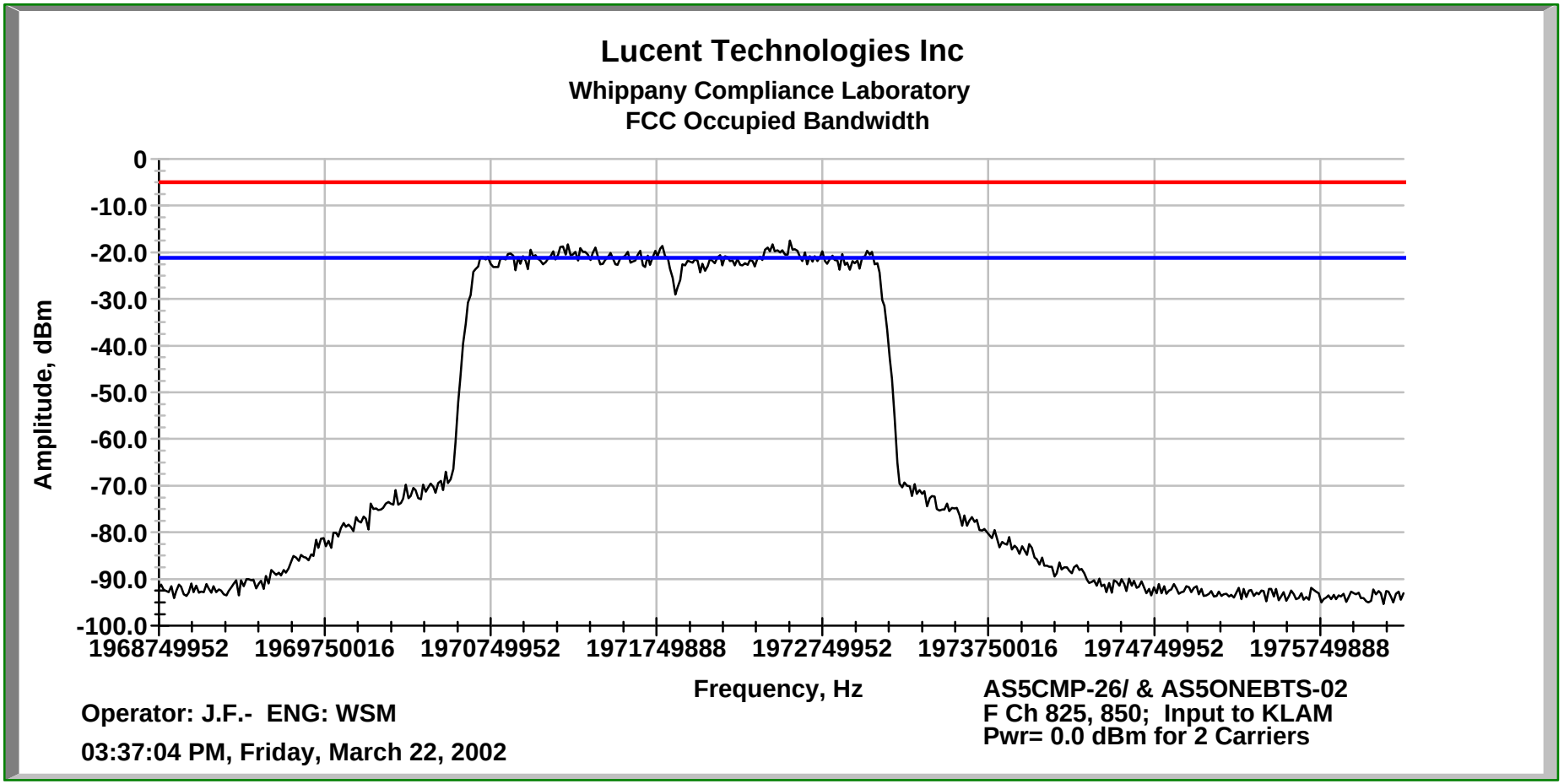


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS F Block, Dual Carrier Configuration KLAM/MCA

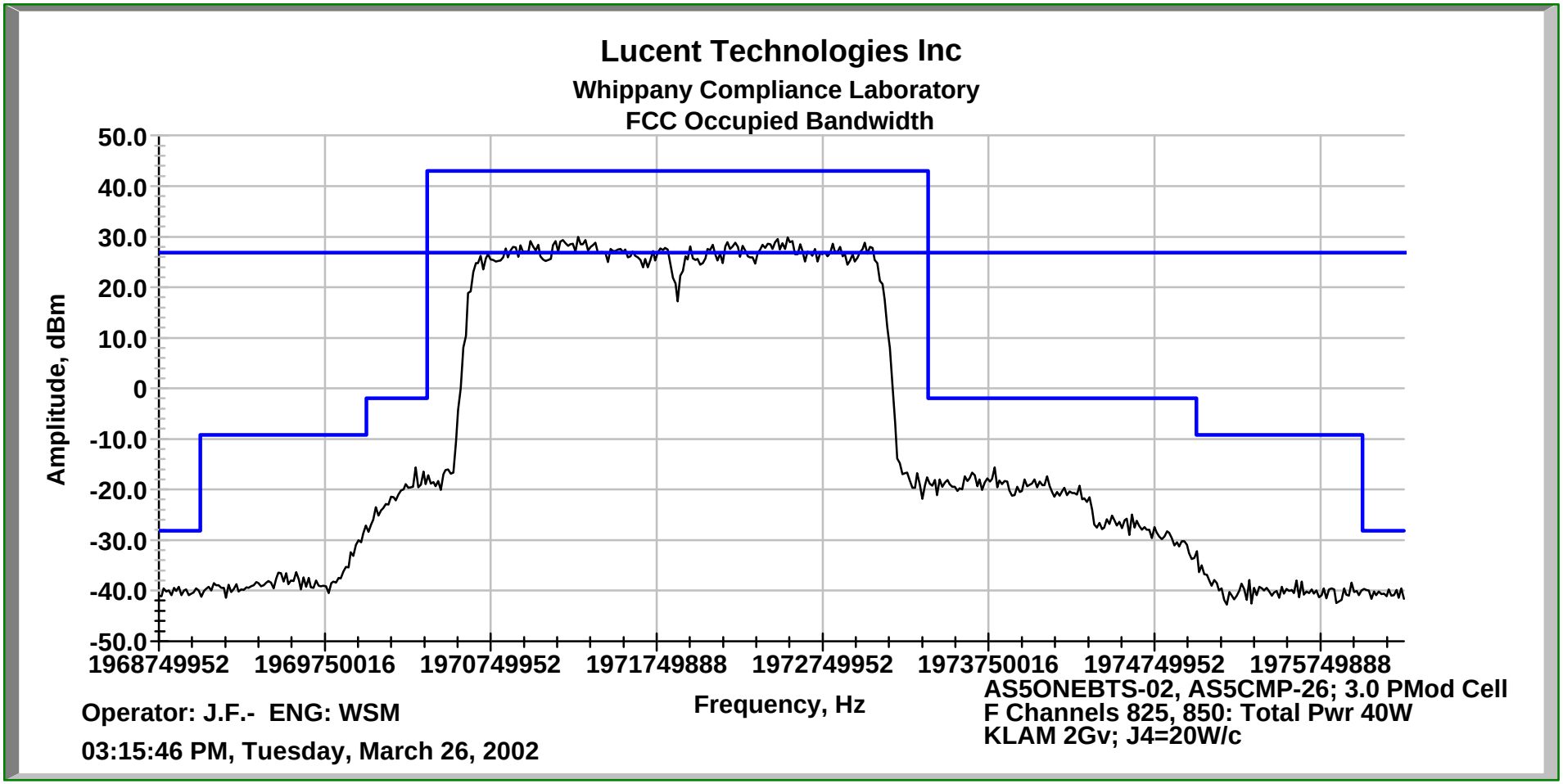


Exhibit 14: Data

FCC Occupied Bandwidth: Input Chart - PCS F Block, Three Carrier Configuration KLAM/MCA

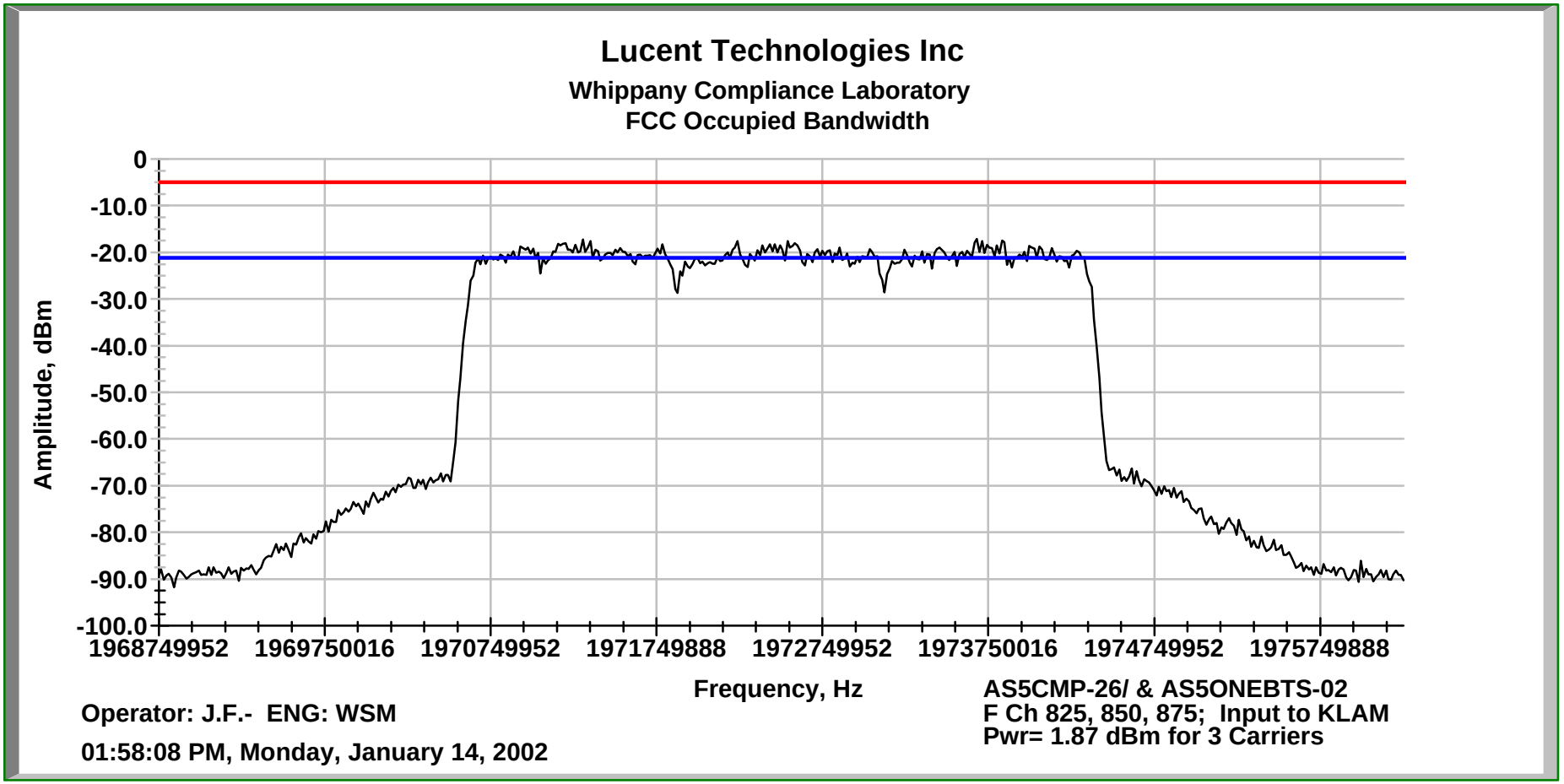


Exhibit 14: Data

FCC Occupied Bandwidth: Output Chart - PCS F Block, Three Carrier Configuration KLAM/MCA

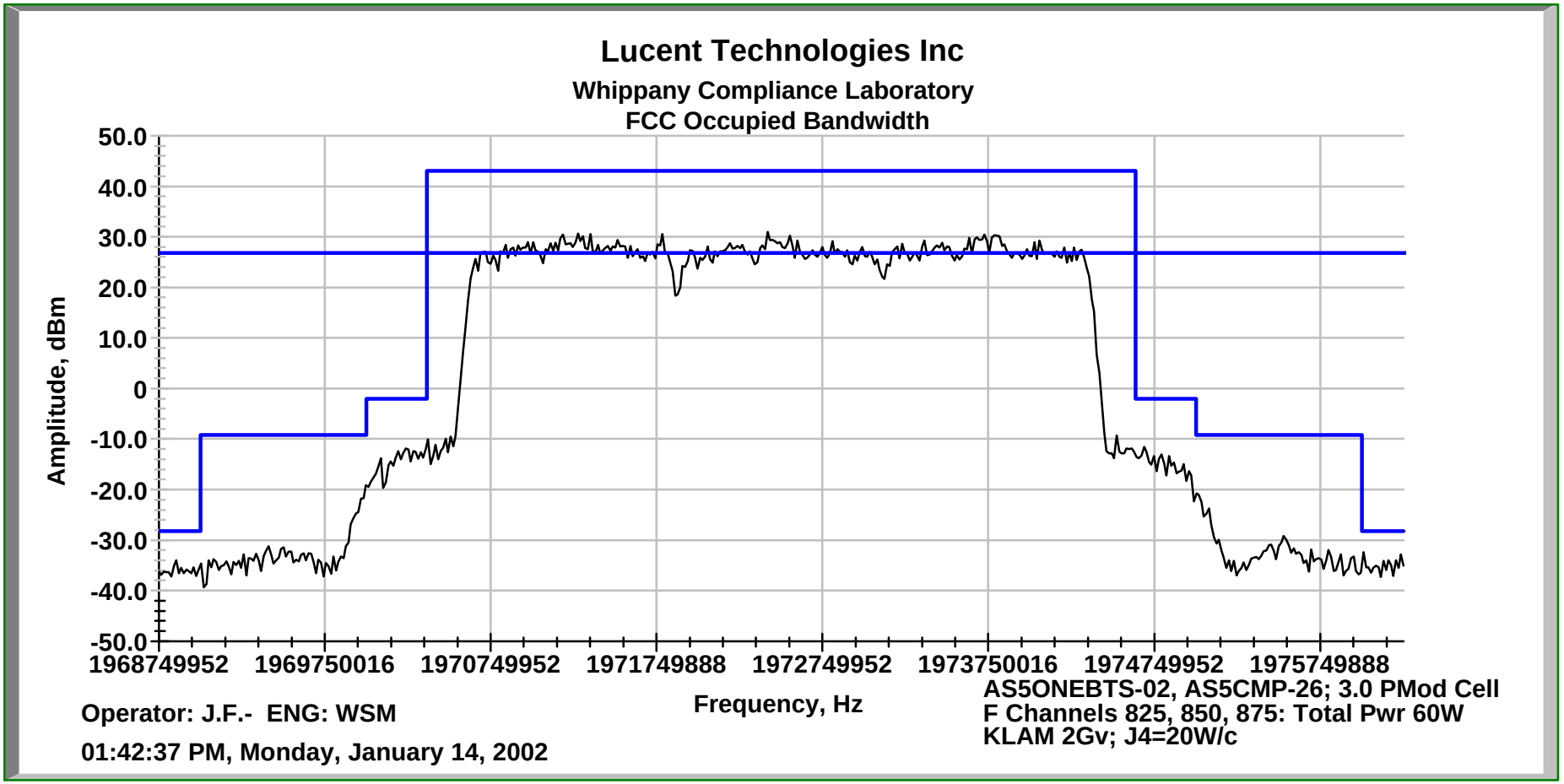


Exhibit 15:

Section 2.1051

Spurious Emissions at Antenna Terminals

Spurious Emissions at the antenna terminals were investigated over the frequency range of 10 MHz to 20 GHz which is 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 use of a broadband attenuator. The complete RF path was calibrated over the 10 MHz-20 GHz range. The RF power level was measured and monitored prior and during the test via the test setup in Figure 15A. The spurious measurements were made using an automated test system. The test system consists of a Rohde & Schwarz FSEM Spectrum Analyzer (or ESMI Test Receiver), a PC based computer test controller, calibrated test hardware and a TILE ™ 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 $x10^5$ data points over the frequency range of 10 MHz to 20 GHz.

The required emission limitation specified in Section 24.238 of the Code was applied to these tests. Based upon the criterion given in Section 24.238 of the Code and as developed in Exhibit 14, the required emission limit is -13 dBm when measured with a resolution bandwidth of 1 MHz. The measurements of the spurious signals were therefore made using a resolution bandwidth of 1 MHz. All spurious and harmonics of the CDMA Carrier was also shown to be lower than –13 dBm limit.

The carrier signal shown on these plots was measured at a resolution Bandwidths of 3 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.

The applied signal met the recommended characteristics per ANSI J-STD-008 section 3.1.4 as defined below.

Type	Number of Channels	Fraction of Power (Linear)	Fraction of Power (dB)	Comments
Pilot	1	0.1490	-8.3	Walsh 0
Sync	1	0.015/p	-18.3	Walsh 32, always 1/8 rate
Paging	1	0.054	-12.7	Walsh 1, full rate only
Traffic	6	0.13 each	-8.8 each	Variable Walsh Assignments, full rate only

TABLE 15.1 Base Station Test Model, Nominal

Test Results Summary:

Measurements were performed while transmitting at the upper and lower channels in each PCS Block tested. Measurement were additionally performed for the single, dual and three carrier **kLAM / MCA** transmit configurations at each PCS Block Edge.

The attached spectral plots are samples which depicting the **kLAM's** compliance for representative single, dual and three carrier **kLAM / MCA** transmit configurations. Table 15.2 documents the results of the performed measurements The performance charts show that there are no harmonics or spurious emissions above the applicable limit of –13 dBm. The attached data plots document the results for single, dual and

Exhibit 15: *continued*

three carrier **kLAM / MCA** test configurations for PCS sub-block A1. Table 15.2 lists the other PCS blocks that were tested and for which data is not attached. The data plots for these PCS blocks also show that there are no harmonics or spurious emissions above the applicable limit of –13 dBm, and demonstrate the **kLAM's** compliance.

PCS Block	Number of carriers	Test Results
A1	1	Compliant
A1	2	Compliant
A1	3	Compliant
A4	1 (1)	Compliant
A4	2 (1)	Compliant
B1	1	Compliant
B1	2	Compliant
B1	3	Compliant
B4	1 (1)	Compliant
B4	2 (1)	Compliant
C1	1	Compliant
C1	2	Compliant
C1	3	Compliant
C4	1 (1)	Compliant
C4	2 (1)	Compliant
D	1	Compliant
D	2	Compliant
D	3	Compliant
E	1	Compliant
E	2	Compliant
E	3	Compliant
F	1	Compliant
F	2	Compliant
F	3	Compliant

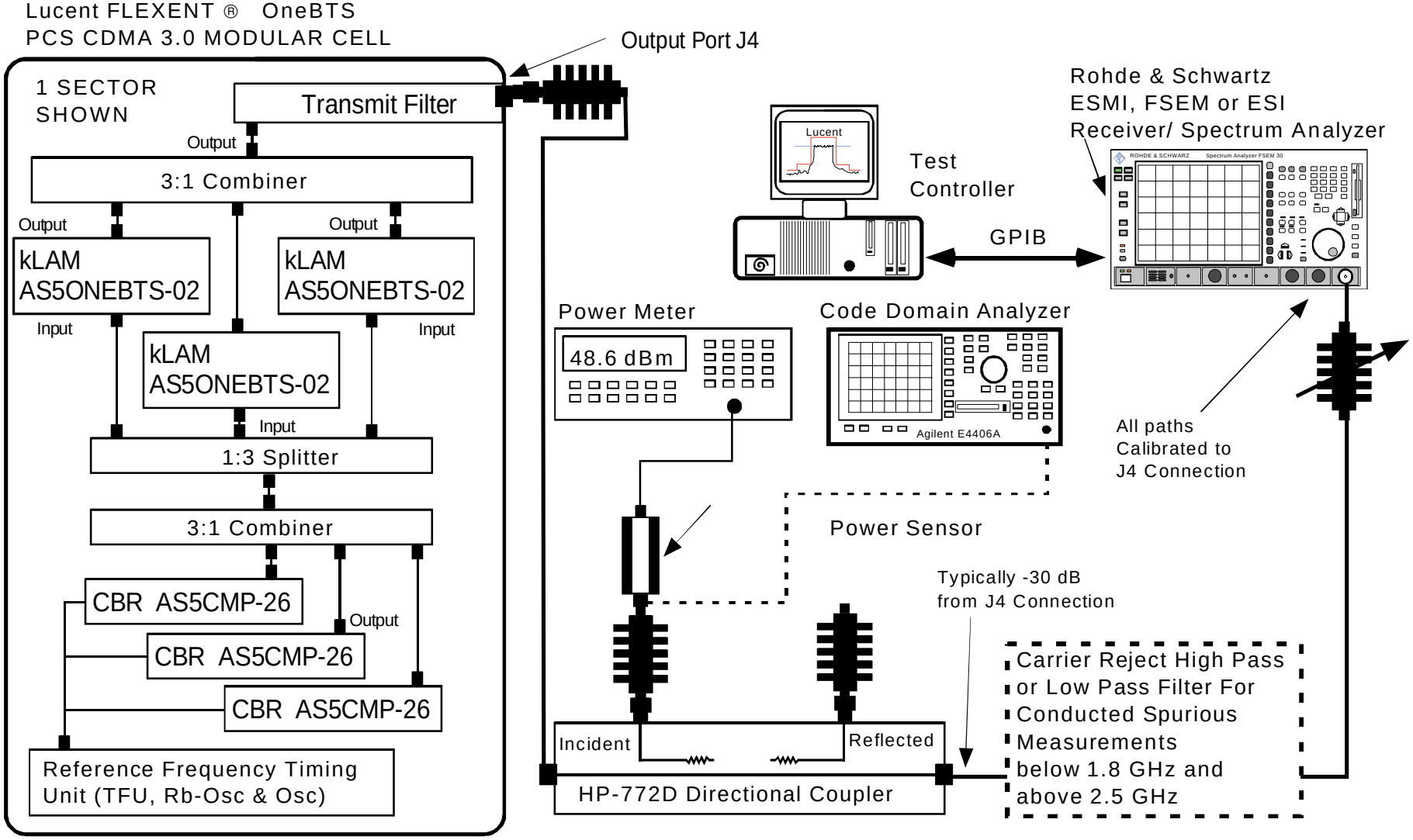
(1) The A4 B4 and C4 subblocks accommodate only 1 or 2 carrier Transmit configurations

TABLE 15.2 PCS Conducted Spurious Compliance Tabulation

Conducted Spurious tests on the Receiver antenna terminal additionally documented compliance with the 2 nW requirement of 47CFR Part 15 section 15.111**.**

Exhibit 15 *continued*

Figure 12A/14A/15A Test Configuration For RF Power, Occupied Bandwidth and Conducted Spurious



PCS Modular Cell kLAM
Test Figure WSM 3/29/02

Exhibit 15: Conducted Spurious Data

FCC
Conducted Spurious Data
for
Lucent Technologies Inc.

PCS
Linear Amplifier Module /Multi Carrier Amplifier
(kLAM/ MCA)

Single, Dual and Three Carrier
MCA Configurations
PCS Sub-Block “A1”

Exhibit 15: Conducted Spurious Data

Block A, Sub-Block A1, 1 Carrier Configuration 10 MHz -10GHz

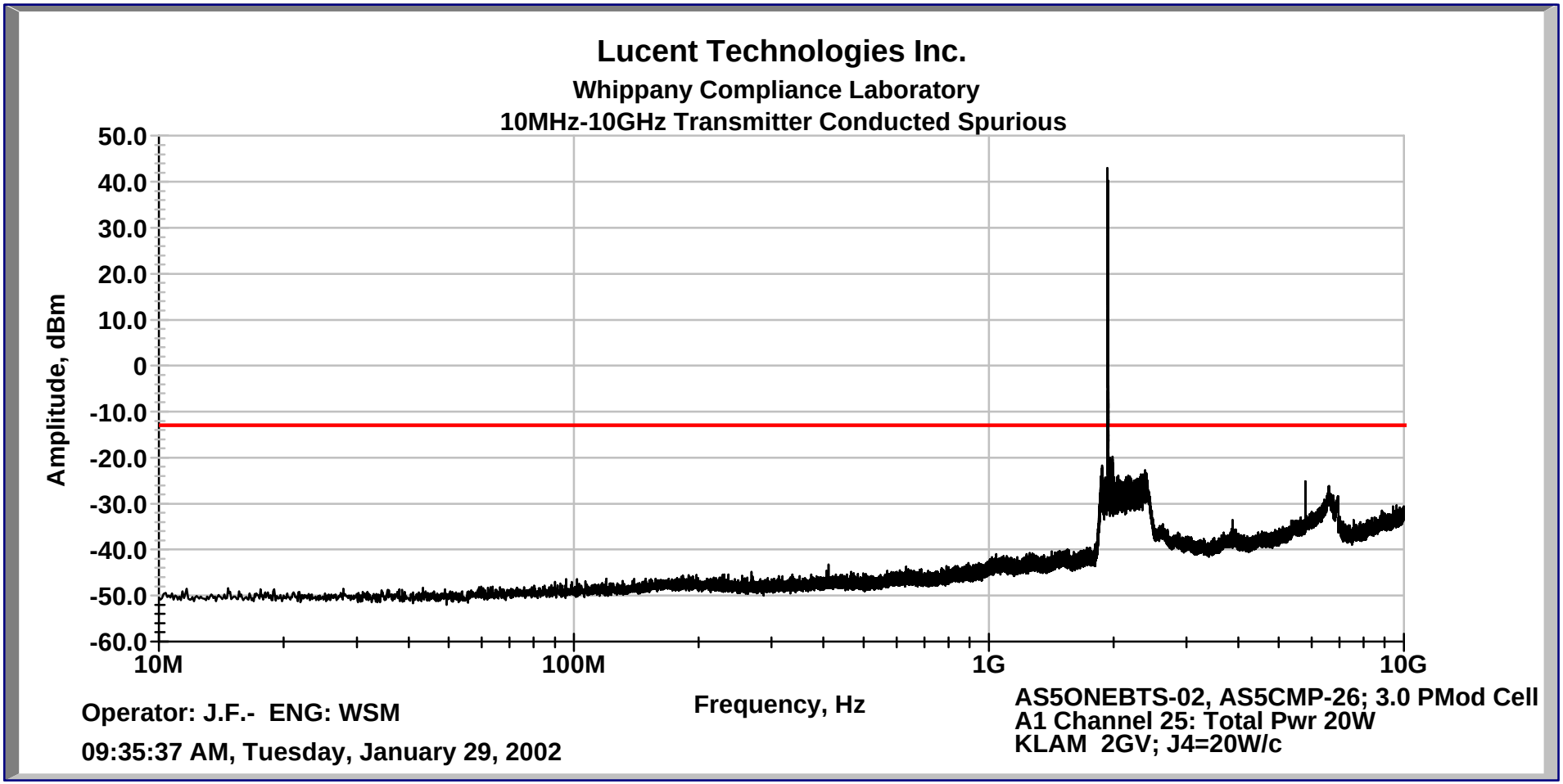


Exhibit 15: Conducted Spurious Data

Block A, Sub-Block A1, 1 Carrier Configuration 1 GHz -20GHz

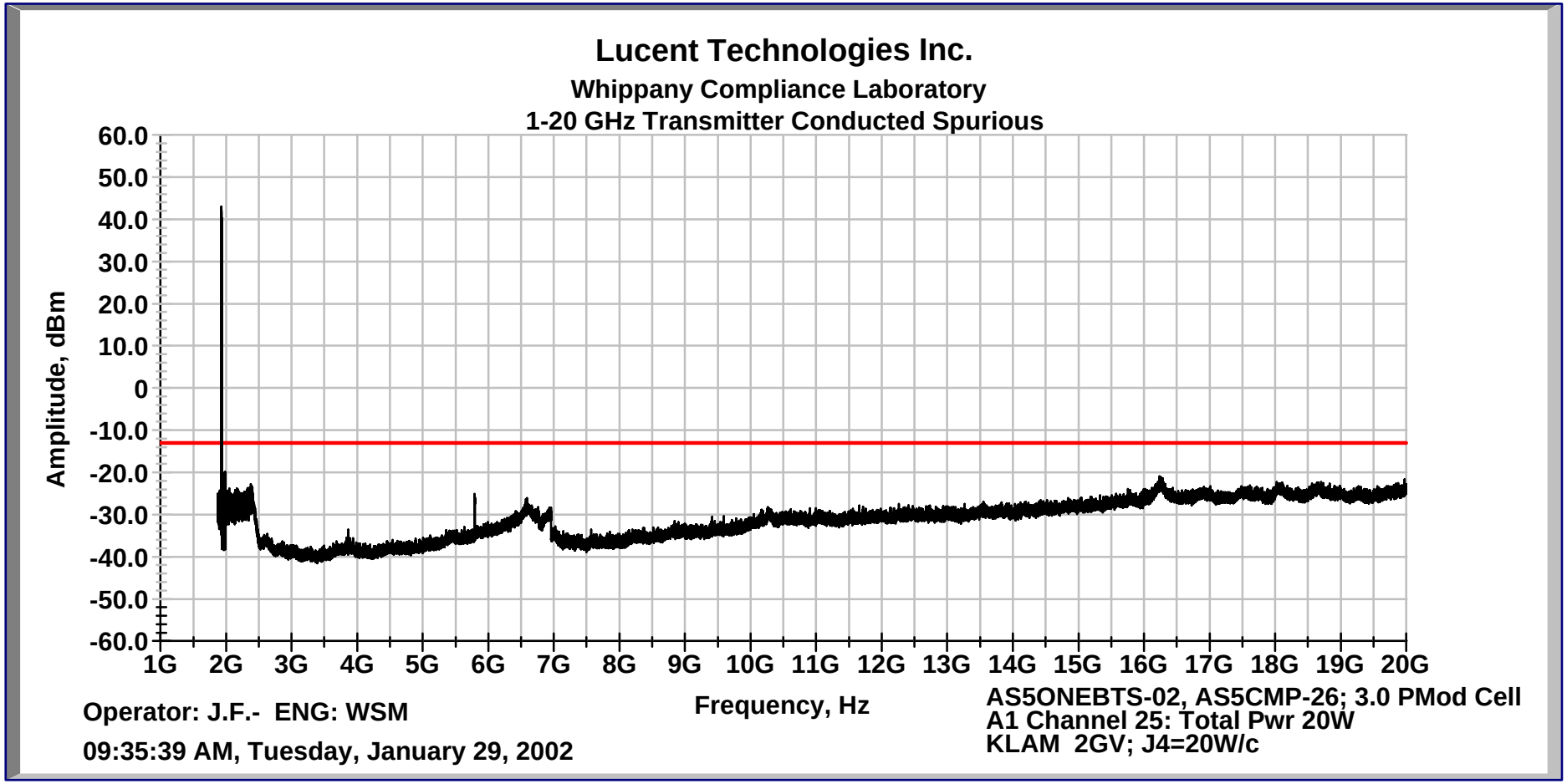


Exhibit 15: Conducted Spurious Data

Block A, Sub-Block A1, 2 Carrier Configuration 10 MHz -10GHz

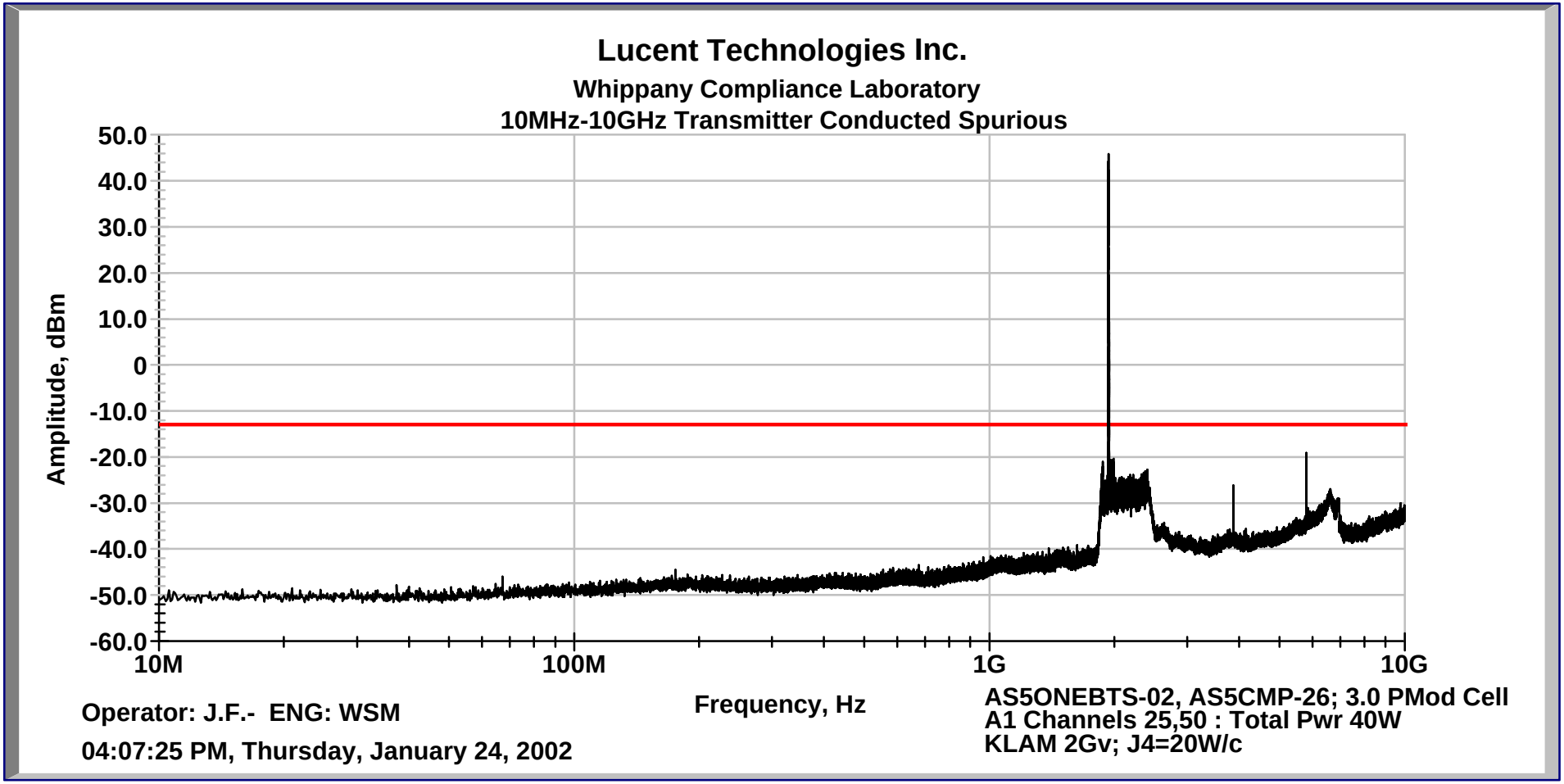


Exhibit 15: Conducted Spurious Data

Block A, Sub-Block A1, 2 Carrier Configuration 1 GHz -20GHz

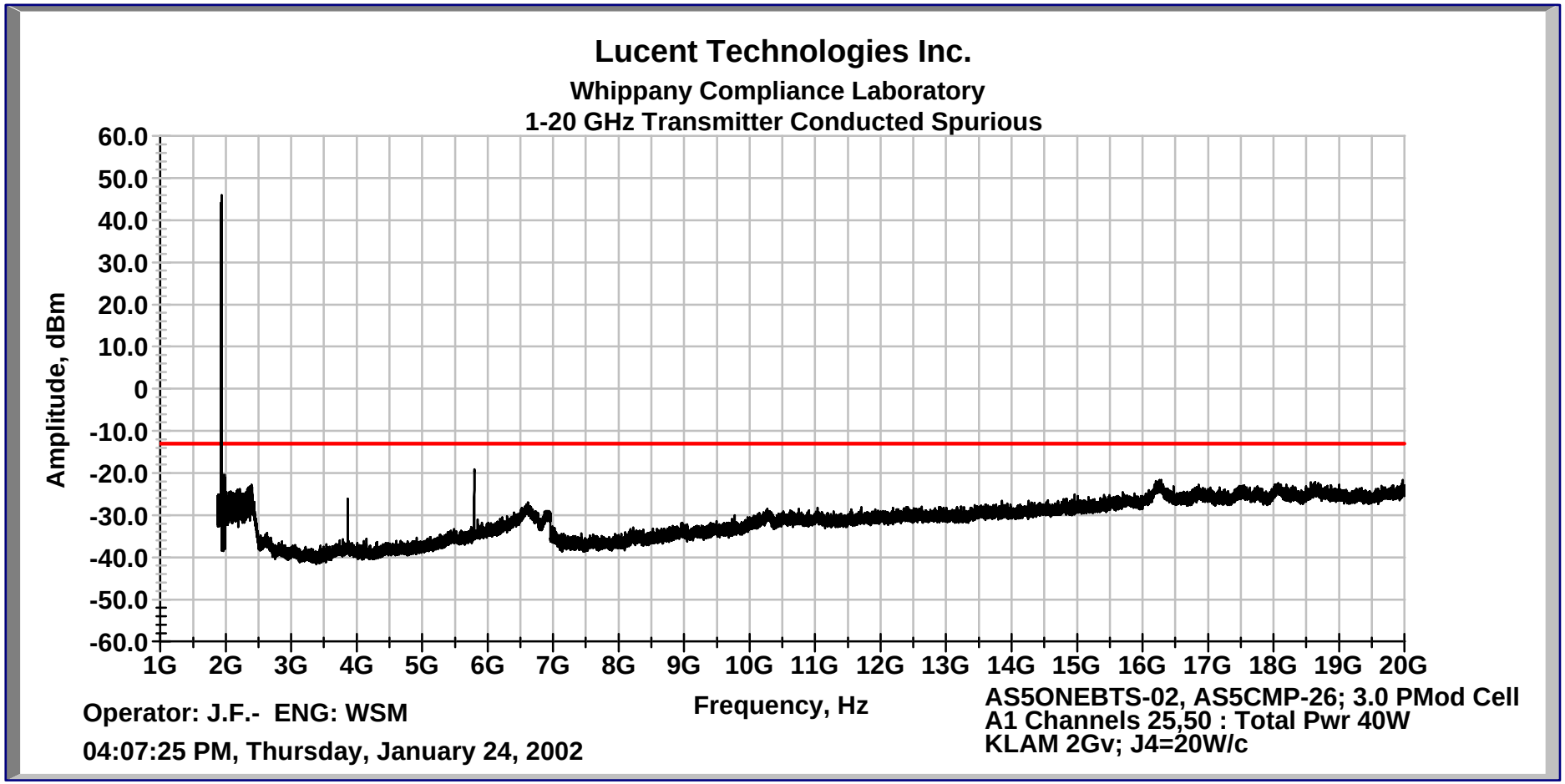


Exhibit 15: Conducted Spurious Data

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

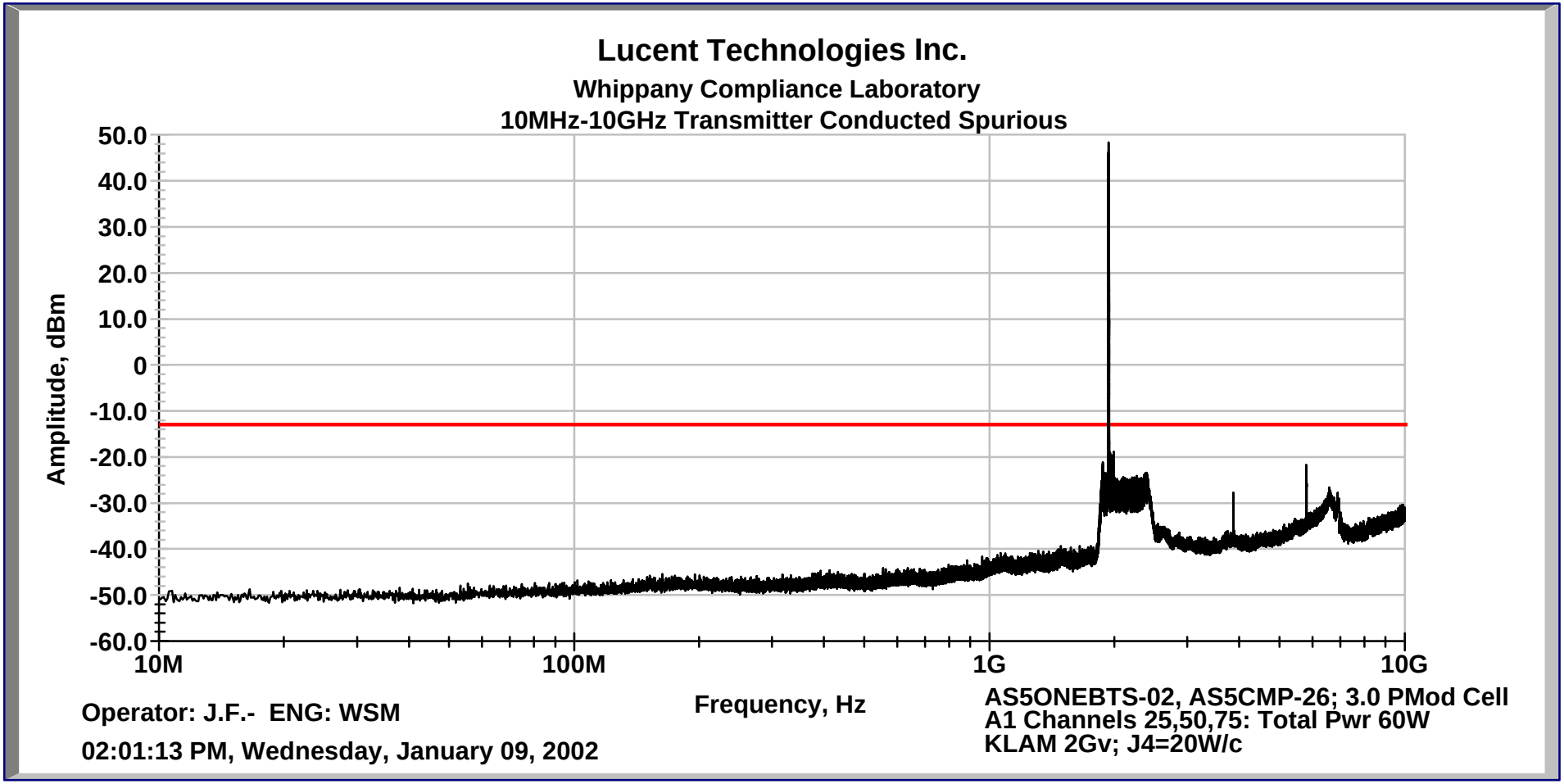


Exhibit 15: Conducted Spurious Data

Block A, Sub-Block A1, 3 Carrier Configuration 1 GHz – 20 GHz

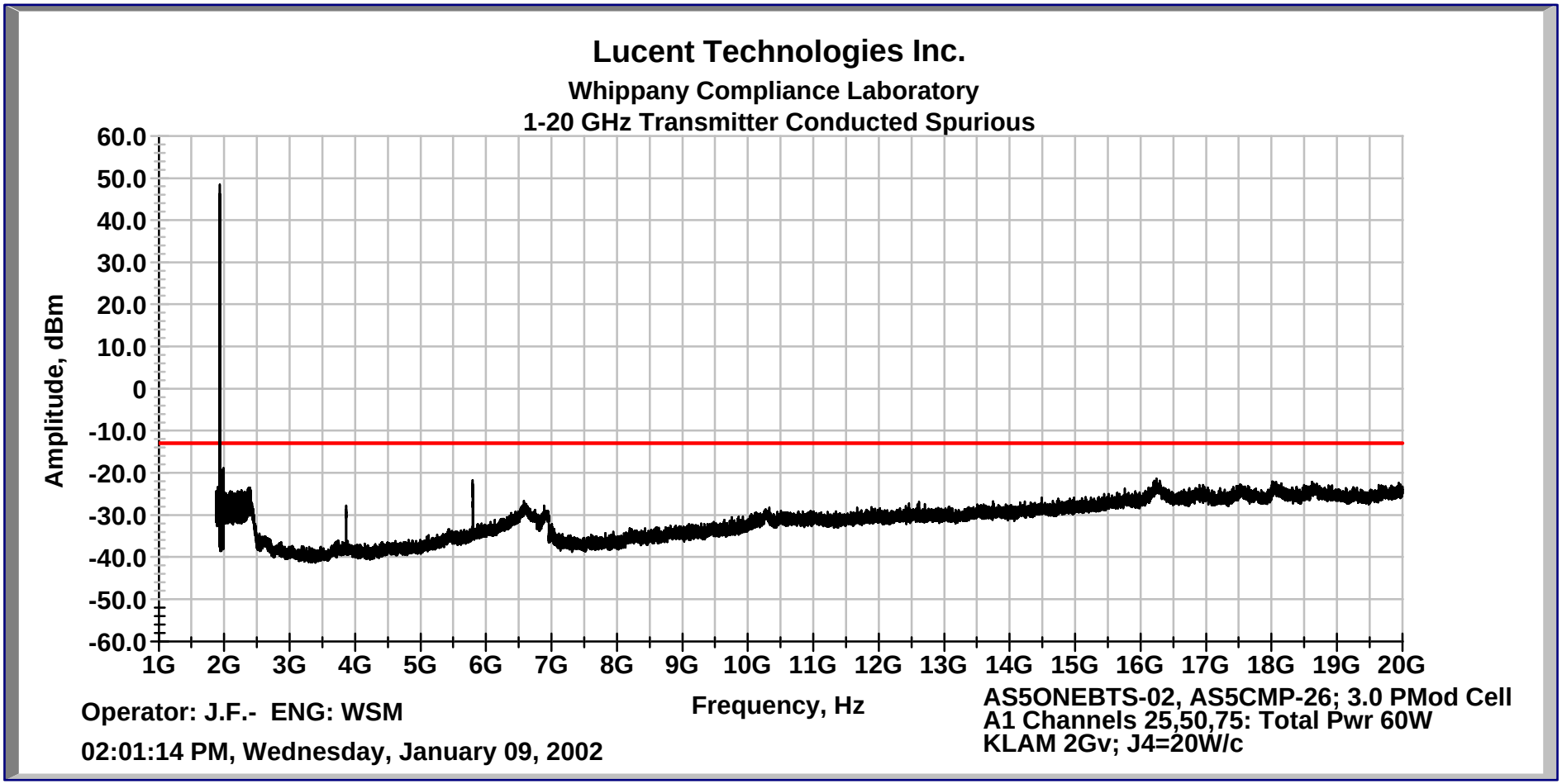


Exhibit 16

SECTION 2.1053
FIELD STRENGTH OF SPURIOUS RADIATION

Field strength measurements of radiated spurious emissions were made at a ten meter test site (open field) maintained by Lucent Technologies Bell Laboratories FCC Compliance Laboratory in Whippany, New Jersey. A complete description and full measurement data for the site have been placed on file with the Commission.

The 9 CBRs were configured with 9 **kLAMs** and all other associated equipment in a **PCS Outdoor FLEXENT ® OneBTS Modular Cell 3.0**. The spectrum from 10 MHz to the tenth harmonic of the carrier was searched for spurious radiation. Measurements were made using both horizontally and vertically polarized antennas. The emissions which were more than 20 dB below the specification limit were considered not reportable (Section 2.1053).

The calculated emission levels were found by:

Pmeas (dBm) + Cable Loss(dB) + Antenna Factor(dB) + 107 (dBμV/dBm) -Amplifier Gain (dB) = Field Strength (dBμV/m)

Section 24.238 and 2.1053 contains the requirements for the levels of spurious radiation as a function of the EIRP of the unmodulated carrier. 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.

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

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

Where: E = Field Intensity in Volts/ meter
P = Transmitted Power in watts = 20 W/ Carrier
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 dBμV/meter. Reportable measurements are equal to or greater than 51.8 dB μV/meter. Over the spectrum investigated, 10 MHz to tenth harmonic of the carrier, no reportable spurious emissions were detected. This demonstrates that the Linear Amplifier Module/ Multi Carrier Amplifier (**kLAM/ MCA**), 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.
Conducted Spurious tests on the receiver antenna terminal documented compliance with the 2 nW requirement of 47CFR Part 15.

Exhibit 17

SECTION 2.1055 MEASUREMENT OF FREQUENCY STABILITY

RESPONSE:

The frequency stabilization and accuracy of the CDMA signal amplified by the **kLAM** is a function of the input signal which is provided from the **CBR** (**FCC ID: AS5CMP-26**). The Time Frequency Unit (TFU) provides the time and frequency reference used by the **CBR** (**FCC ID: AS5CMP-26**). The TFU 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 Oscillator Modules (OM) can provides up to 24 hours of flywheel operation. The system provides for automatic timing synchronization upon reacquisition of GPS lock. These units are typically powered by AC-DC power converter with battery backup to provide immunity to power fluctuations and failures. Additional DC-DC power converter in the Modular Cell and on Circuit packs provide additional immunity to power fluctuations.

This system complies with the frequency stability requirements necessary for **FLEXENT ®** system compliance with FCC Rules for frequency stability. These devices are compliant with FCC Part 15 rules when powered by and installed in a Lucent Technologies Inc. **FLEXENT ®** Modular Cell.

The following frequency stability test data for the TFU, CBR and OM was measured as installed and tested, per Figure 17A, in a **FLEXENT®** Modular Cell. The entire Modular Cell was subjected to the FCC specified environments while operating at full rated power. Both carrier center frequency and reference oscillator deviations were measured. Voltage variance was applied to the DC input of the Modular Cell.

RESULTS:

The frequency stability performance for the CBR / FCC ID AS5CMP-26 when operated in a FLEXENT® Modular Cell is equivalent or better to the performance presented in the original filing and is compliant with FCC requirements. The data provided below documents that the maximum frequency deviation measured for the RF carrier frequency (1953.75 MHz) at the transmit antenna port was +0.014 ppm (27.08 Hz). The specification for FCC compliance is +/- 0.05 ppm (+/-97.68 Hz). The maximum frequency deviation measured for the OMRB output (15MHz) was -0.000047 ppm (-7 x10^{-4} Hz). The specification for FCC compliance is +/- 0.05 ppm (+/-0.75 Hz).

The measured data is attached below.

Figure 17A. Test Configuration For Frequency Stability

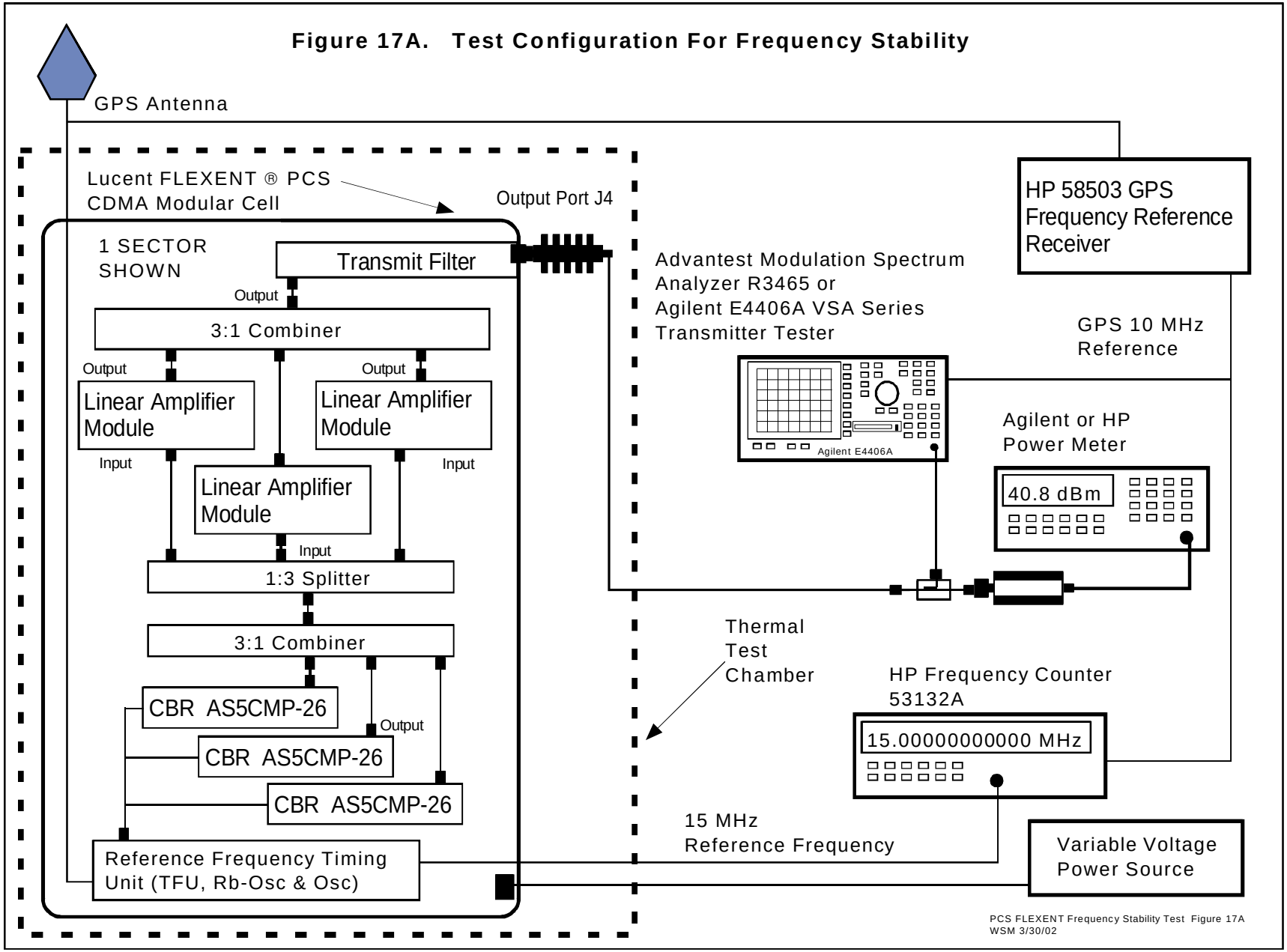


Exhibit 17: Measurement of Frequency Stability of FLEXENT™ PCS Modular Cell

PCS Sub- Block Tested: ***B1, PCS Channel 475, 1953.75MHz***

Baseline Measurement at +20°C

Reference and Transmit Frequency Deviation From GPS at +20°C at 100% of Nominal Voltage, 24VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-4	-2.46
0.5	-3	0.87
1.0	-3	-11.34
1.5	-3	13.27
2.0	-3	2.13
2.5	-4	22.28
3.0	-4	3.49
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at +20°C at 85% of Nominal Voltage, 20.4VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-2	20.14
0.5	-2	24.27
1.0	-2	17.60
1.5	-1	-13.42
2.0	-2	-5.23
2.5	-2	-3.41
3.0	-2	15.40
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at +20°C at 115% of Nominal Voltage, 27.6VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-1	-5.66
0.5	0	10.91
1.0	0	-0.69
1.5	0	12.38
2.0	0	3.41
2.5	-1	20.52
3.0	0	-1.33
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Exhibit 17: Measurement of Frequency Stability of FLEXENT™ PCS Modular Cell

Reference and Transmit Frequency Deviation From GPS at –40°C at 100% of Nominal Voltage, 24VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-3	0.44
0.5	-3	-21.18
1.0	-3	-.06
1.5	-4	12.71
2.0	-3	-5.83
2.5	-2	10.72
3.0	-3	0.75
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at –40°C at 85% of Nominal Voltage, 20.4VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-3	17.34
0.5	-2	21.59
1.0	-3	18.48
1.5	-3	15.52
2.0	-3	15.09
2.5	-2	-1.55
3.0	-2	-12.89
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at –40°C at 115% of Nominal Voltage, 27.6VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	1	-0.29
0.5	0	3.11
1.0	0	11.80
1.5	1	1.83
2.0	1	-2.08
2.5	1	20.39
3.0	1	-.62
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Exhibit 17: Measurement of Frequency Stability of FLEXENT™ PCS Modular Cell

Reference and Transmit Frequency Deviation From GPS at –30°C at 100% of Nominal Voltage, 24VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-1	-2.82
0.5	-2	-2.90
1.0	-1	0.16
1.5	-1	11.71
2.0	-1	10.95
2.5	-1	-14.69
3.0	-1	3.85
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at –30°C at 85% of Nominal Voltage, 20.4VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-5	-0.57
0.5	-6	2.11
1.0	-5	-23.03
1.5	-7	24.83
2.0	-6	16.88
2.5	-5	-11.97
3.0	-6	-19.64
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at –30°C at 115% of Nominal Voltage, 27.6VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	0	-2.16
0.5	1	5.13
1.0	1	3.00
1.5	0	10.42
2.0	1	-3.57
2.5	0	15.48
3.0	1	0.68
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Exhibit 17: Measurement of Frequency Stability of FLEXENT™ PCS Modular Cell

Reference and Transmit Frequency Deviation From GPS at –20°C at 100% of Nominal Voltage, 24VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-3	4.82
0.5	-4	-2.87
1.0	-4	13.60
1.5	-4	4.73
2.0	-4	11.22
2.5	-4	0.54
3.0	-3	-1.43
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at –20°C at 85% of Nominal Voltage, 20.4VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-6	12.27
0.5	-5	16.07
1.0	-5	-0.78
1.5	-4	20.73
2.0	-5	24.78
2.5	-4	-0.42
3.0	-6	4.62
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at –20°C at 115% of Nominal Voltage, 27.6VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-2	14.08
0.5	-3	-2.30
1.0	-2	2.13
1.5	-2	1.50
2.0	-2	10.59
2.5	-2	10.28
3.0	-2	6.38
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Exhibit 17: Measurement of Frequency Stability of FLEXENT™ PCS Modular Cell

Reference and Transmit Frequency Deviation From GPS at –10°C at 100% of Nominal Voltage, 24VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-3	-11.69
0.5	-2	4.40
1.0	-2	5.13
1.5	-2	11.04
2.0	-1	6.38
2.5	-1	-1.53
3.0	-1	11.34
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at -10°C at 85% of Nominal Voltage, 20.4VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-2	4.86
0.5	-1	24.48
1.0	-1	13.23
1.5	-2	-18.50
2.0	-1	-2.92
2.5	-1	11.14
3.0	-1	-13.94
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at -10°C at 115% of Nominal Voltage, 27.6VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-4	10.35
0.5	-4	-10.58
1.0	-4	13.10
1.5	-4	2.94
2.0	-5	10.80
2.5	-5	-0.31
3.0	-3	-1.33
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Exhibit 17: Measurement of Frequency Stability of FLEXENT™ PCS Modular Cell

Reference and Transmit Frequency Deviation From GPS at 0°C at 100% of Nominal Voltage, 24VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	2	2.50
0.5	4	-10.37
1.0	3	-2.72
1.5	4	12.65
2.0	3	-2.73
2.5	3	-4.0
3.0	4	3.72
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at 0°C at 85% of Nominal Voltage, 20.4VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-1	2.35
0.5	-2	-21.73
1.0	-2	1.22
1.5	-2	10.25
2.0	-1	10.36
2.5	-2	21.36
3.0	-2	-21.54
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at 0°C at 115% of Nominal Voltage, 27.6VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-2	-2.54
0.5	-4	3.11
1.0	-4	4.82
1.5	-4	10.05
2.0	-5	10.58
2.5	-4	3.14
3.0	-4	-11.19
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Exhibit 17: Measurement of Frequency Stability of FLEXENT™ PCS Modular Cell

Reference and Transmit Frequency Deviation From GPS at +10°C at 100% of Nominal Voltage, 24VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-3	0.20
0.5	-4	6.26
1.0	-3	4.30
1.5	-3	-11.84
2.0	-2	10.98
2.5	-4	10.94
3.0	-2	2.42
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at +10°C at 85% of Nominal Voltage, 20.4VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-1	-12.89
0.5	-1	23.63
1.0	-1	-10.57
1.5	-1	-12.52
2.0	0	18.27
2.5	0	9.97
3.0	1	7.26
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at +10°C at 115% of Nominal Voltage, 27.6VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-1	-1.38
0.5	0	-0.47
1.0	0	10.85
1.5	0	1.55
2.0	0	-2.42
2.5	0	-1.83
3.0	0	10.34
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Exhibit 17: Measurement of Frequency Stability of FLEXENT™ PCS Modular Cell

Reference and Transmit Frequency Deviation From GPS at +20°C at 100% of Nominal Voltage, 24VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-2	6.71
0.5	-2	-6.36
1.0	-2	0.39
1.5	-2	17.55
2.0	-1	5.60
2.5	-1	5.04
3.0	-1	-10.01
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at +20°C at 85% of Nominal Voltage, 20.4VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-4	-9.63
0.5	-6	19.09
1.0	-4	26.15
1.5	-4	14.13
2.0	-4	7.41
2.5	-5	13.98
3.0	-5	-14.18
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at +20°C at 115% of Nominal Voltage, 27.6VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-4	4.49
0.5	-4	-13.93
1.0	-4	1.71
1.5	-5	1.90
2.0	-4	-1.22
2.5	-3	12.65
3.0	-3	2.30
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Exhibit 17: Measurement of Frequency Stability of FLEXENT™ PCS Modular Cell

Reference and Transmit Frequency Deviation From GPS at +30°C at 100% of Nominal Voltage, 24VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	1	12.35
0.5	0	2.34
1.0	2	-0.60
1.5	1	0.77
2.0	2	-10.99
2.5	2	-0.56
3.0	2	2.88
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at +30°C at 85% of Nominal Voltage, 20.4VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	2	1.39
0.5	1	-20.03
1.0	1	10.75
1.5	1	-12.65
2.0	1	0.44
2.5	1	19.17
3.0	0	8.79
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at +30°C at 115% of Nominal Voltage, 27.6VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	2	0.94
0.5	3	-10.58
1.0	4	1.09
1.5	3	-3.36
2.0	4	4.03
2.5	4	11.61
3.0	4	4.86
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Exhibit 17: Measurement of Frequency Stability of FLEXENT™ PCS Modular Cell

Reference and Transmit Frequency Deviation From GPS at +40°C at 100% of Nominal Voltage, 24VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-5	-1.61
0.5	-5	-0.73
1.0	-5	3.99
1.5	-5	10.52
2.0	-7	-2.50
2.5	-6	0.56
3.0	-7	-14.27
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at +40°C at 85% of Nominal Voltage, 20.4VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-2	22.31
0.5	-2	2.62
1.0	-2	-18.58
1.5	-3	13.31
2.0	-2	15.86
2.5	-3	-2.30
3.0	-2	14.99
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at +40°C at 115% of Nominal Voltage, 27.6VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-3	-0.94
0.5	-2	4.96
1.0	-2	7.18
1.5	-2	-10.06
2.0	-2	-3.41
2.5	-3	-1.37
3.0	-3	10.32
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Exhibit 17: Measurement of Frequency Stability of FLEXENT™ PCS Modular Cell

Reference and Transmit Frequency Deviation From GPS at +50°C at 100% of Nominal Voltage, 24VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	1	-3.69
0.5	2	-12.29
1.0	2	-2.13
1.5	1	-3.23
2.0	2	10.30
2.5	1	-3.25
3.0	1	-1.79
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at +50°C at 85% of Nominal Voltage, 20.4VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-2	5.38
0.5	-1	13.27
1.0	-2	21.37
1.5	-2	3.87
2.0	-1	-18.10
2.5	-1	15.40
3.0	-1	18.52
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at +50°C at 115% of Nominal Voltage, 27.6VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	1	-2.26
0.5	1	-5.30
1.0	1	13.55
1.5	0	-11.99
2.0	0	2.70
2.5	-2	-7.88
3.0	-1	-7.63
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Exhibit 17: Measurement of Frequency Stability of FLEXENT™ PCS Modular Cell

Upon return to +20°C.

Reference and Transmit Frequency Deviation From GPS at +20°C at 100% of Nominal Voltage, 24VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-2	12.42
0.5	-1	8.70
1.0	0	15.24
1.5	-1	-0.15
2.0	-2	-8.12
2.5	-2	9.18
3.0	-1	-7.60
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at +20°C at 85% of Nominal Voltage, 20.4VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	-4	27.08
0.5	-3	9.61
1.0	-3	15.34
1.5	-3	8.91
2.0	-3	-14.90
2.5	-2	16.65
3.0	-3	-15.23
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS

Reference and Transmit Frequency Deviation From GPS at +20°C at 115% of Nominal Voltage, 27.6VDC		
Time (minutes)	15 MHz Deviation from GPS ($x10^{-4}$ Hz)	Transmit Carrier Deviation (Hz)
0	0	1.85
0.5	0	5.38
1.0	0	11.91
1.5	2	2.32
2.0	2	4.74
2.5	1	-7.48
3.0	2	-10.06
FCC SPECIFICATION	+/- 15.0 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-0.75 Hz	+/-1953.75 MHz (+/- 0.05 ppm) +/-0.05 ppm = +/-97.68 Hz
FCC RESULT	PASS	PASS