APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

This test report is to demonstrate the compliance of the D-ICLA manufactured by Andrew Corporation and sold by Lucent Technologies, filed under FCC ID: AS5CMP-45 is in full compliance with all requirements of the Rules of the Commission as specified in the Code of Federal Regulations (CFR), Title 47 – Telecommunication; Part 24, Subpart E – Broadband PCS; Section 24.238 - Emission Limits; effective October 1, 2000. All testing was performed in accordance with CFR 47, Part 2, Subpart J – Equipment Authorization Procedures; Revised January 31, 2001.

All testing was performed in the Lucent Technologies, Whippany, NJ, compliance laboratory by F. E. Chetwynd and T. T. Aikin during the period July 2, and August xx, 2001. This test program was implemented in adherence to a test plan generated by M. P. Farina, in accordance with Lucent's ISO-9001 Registration. All measurement instrumentation utilized were calibrated also in compliance with Lucent's ISO-9001 Registration. The Whippany 3 & 10 Meter Open Area Test Site (OATS) is authorized by the Federal Communications Commission (FCC) under Registration Number: 90770, in compliance with the the requirements of Section 2.948 of the Rules of the Commission. The test set-up was a One BTS PCS cell base station, the signal source was a Lucent DRM TDMA transceiver FCC ID: AS5CMP-30.

APPLICABLE FCC RULES AND INDUSTRY STANDARDS:

The One BTS t1900 D_ICLA, subject of this application for certification under FCC ID: AS5CMP-45 demonstrated full compliance with CFR 47, Part 24, Subpart E – Broadband PCS, and Part 24.238 Emission Limits, effective October 1, 2000; following the test procedures and requirements specified in CFR 47, Part 2, Subpart J – Equipment Authorization Procedures; Revised January 31, 2001. The specific test procedures that are both required for and are applicable to the D-ICLA are:

Part 2.1046	RF Power Output
Part 2.1049	Occupied Bandwidth
Part 2.1051	Spurious Emissions at the Antenna Terminals.
Part 2.1053	Field Strength of Spurious Radiation
Part 22.917	Emission Limitations for Cellular (d) Occupied Bandwidth emission mask for F1D: wideband data and TDMA (h) Measurement Procedure: required spectrum analyzer settings for resolution bandwidth
Part 24	Personal Communications Services; Subpart E – Broadband PCS
Part 24.238	Emission Limits

ANSI C63.4-1992	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic in the Range of 9 kHz to 40 GHz; July 17, 1992.
TIA/EIA/IS-138-A	TDMA Cellular/PCS – Radio Interface- Minimum Performance Standards for Base Stations; July 1996.

APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

PART 2.1046 MEASUREMENTS REQUIRED: RF POWER OUTPUT

This is a measure of the transmit power linearity, and control, across the PCS frequency band from PCS Ch 2 (1930.08 MHz) to PCS CH 1998 (1989.96 MHz), at the One BTS t1900 PCS TDMA cabinet J4 transmit antenna terminal. The D-ICLA rated maximum output power is 60 Watts (47.8 dBm) average per single carrier, which corresponds to the rated output power level at the J4 transmit antenna terminal of 25 Watts (44.0 dBm) average. Note that all conducted emissions tests were performed at the J4 transmit antenna terminal with the single carrier power level adjusted to provide 60 Watts at the output terminal of the amplifier. The output power of the amplifier was adjusted to 60 Watts at the center channel of each frequency block. The signal source was the current production, cellular frequency, DRM Radio Unit,

previously authorized under FCC ID: AS5CMP-30. The TDMA carrier was modulated in all 3 time slots with a pseudo-random data stream. Current production PCS dual band transmit bandpass filters: A/D, B/E and F/C, were utilized in the tests covered by this report , plots of these filters are presented in Exhibit 3. Then, without making additional adjustments, the power level at each block edge frequency was measured and recorded. This was performed for each of the 6 PCS Frequency Blocks and for both amplifiers in the module.

The FCC does not specify tolerance limits or values for the output power. However, IS-138-A, Section 3.2.1.2 recommends a range of +1dB to –3 dB of the nominal 47.78 dBm value. Similarly, the FCC does not specify what channels and how many channels are required for this procedure. Since Part 24.238 does require emissions to be measured at both the lower and upper frequency block edges for each PCS frequency block, the following table lists the channels/frequencies measured at the amplifier output and the antenna terminal, corresponding to PCS Frequency Blocks: A, D, B, E, F and C the high end channels for blocks B (1165), D (665), and E (1332) are not included because the radio can not meet the block edge requirements for occupied bandwidth if they are, our customers are told not to operate on these channels. The same frequencies are used for all conducted emission tests (i.e., Occupied Bandwidth) performed at the antenna terminal (J4) in this report.

Single Carrier Power Measurement at the D-ICLA Output and at The Transmit Antrenna Terminal (J4) and the Corresponding Channel Frequency Assignment

POWER CHART 60 WATT DICLA TX1

PCS BLOCK	PCS CHANNEL	PCS f MHz	POWER IN dBm	POWER OUT dBm	ANTENNA POWER dBm
A	2	1930.08	10.41	47.59	44.47
A	250	1937.52	10.48	47.78	44.84
A	498	1944.96	10.39	47.86	44.66
D	502	1945.08	10.06	47.88	44.59
D	583	1947.51	10.07	47.78	44.71
D	664	1949.94	10.09	47.67	44.74
D	665	1949.97	10.10	47.67	44.75
B	668	1950.06	10.10	47.95	44.64
B	917	1957.53	10.01	47.78	44.4
B	1164	1964.94	9.96	47.66	44.19
B	1165	1964.97	9.95	47.65	44.16
E	1168	1965.06	9.94	47.85	44.09
E	1250	1967.52	9.96	47.78	43.85
E	1331	1969.95	9.94	47.67	43.9
E	1332	1969.98	9.95	47.64	43.89
F	1335	1970.07	10.06	47.84	43.99
F	1417	1972.53	10.05	47.78	44.13

F	1498	1974.96	9.99	47.76	44.02
C	1502	1975.08	9.96	47.73	44.04
C	1750	1982.52	9.80	47.78	43.9
C	1998	1989.96	9.67	47.62	43.61

RESULTS: **The power levels measured at the lowest settable and at the highest settable block edge frequencies are all well within +1 dB to –3 dB of the block center frequency adjustment to the rated 44.0 dBm (25 Watts) at the at the transmit (Tx) antenna terminal (J4). The PCS TDMA D-ICLA, subject of this application for certification under FCC ID: AS5CMP-45, demonstrated full compliance with the of FCC Rule Part 2. requirements 1046.**

Block Diagram Of The Power Measurement Test Set-Up And Test Equipment Configuration:

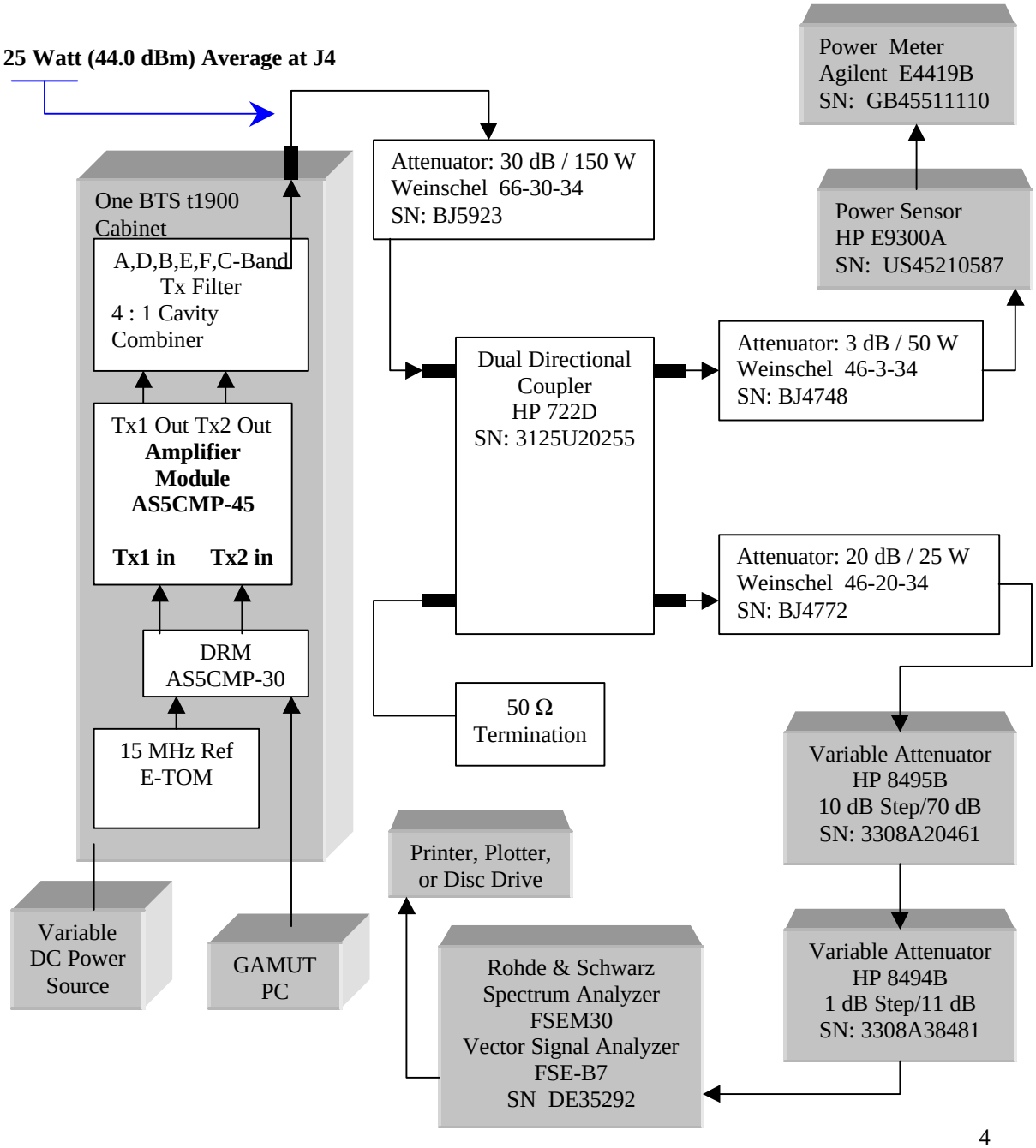


EXHIBIT 10: TEST REPORT

PART 2.1049 MEASUREMENTS REQUIRED: OCCUPIED BANDWIDTH

This test procedure demonstrates that the D-ICLA does not alter or degrade the occupied bandwidth of the modulated TDMA carrier, from cellular frequency input to PCS frequency output at the J4 transmit antenna terminal. Measurements were made at both the D-ICLA J1 RF input terminal and at the J4 transmit antenna terminal with the carrier power level set to provide 44.0 dBm (25 Watts) average at the J4 antenna terminal. The power level was measured and recorded on each data plot for both input and J4 output. The TDMA carrier was modulated in all 3 time slots with a pseudo-random data stream. In compliance with Part 24.238, occupied bandwidth emissions were measured at both the lowest settable and the highest settable frequency channels, corresponding to the block edge requirement, for each PCS frequency block.

Since the TDMA carrier input to the D-ICLA is in the cellular frequency band, the spectrum analyzer configuration and the occupied bandwidth emission mask are as specified in Part 22.917(h) *Measurement Procedure* and (d) *F1D Emission Mask*. For Part 24.238 allows measurements the Resolution Bandwidth to be set to 1% of the occupied bandwidth for measurements made within the spectrum +/- 1 MHz of the block being analyzed. Thus spectrum analyzer was set to a Resolution Bandwidth (RBW) of 300 Hz and a Video Bandwidth (VBW) of 3 kHz or greater (i.e., 10 x RBW). The Span utilized was 120 kHz.

Since there was no other guidance given in the FCC Rules in accordance with Part 22.917(d), the emission mask for wideband data (WBD) signals was used for 30 kHz TDMA digital signals. The occupied bandwidth plot need not extend beyond a 120 kHz span.

Occupied Bandwidth Emission Mask for **TDMA**	Displacement from the Carrier Center Frequency in a **120 kHz Span**	Attenuation below the Unmodulated Carrier (dBc) in a **120 kHz Span**
Part 22.917(d)(1)	20 kHz to 45 kHz	26 dBc
Part 22.917(d)(2)	45 kHz to 90 kHz	45 dBc
Part 22.917(d)(3)	> 90 kHz to 1st Harmonic	At least 60 dBc Or 43 + 10 log P (watts) dBc, Whichever is the lesser attenuation.

In accordance with Part 24.238(a), emissions at each PCS Block edge frequency must be attenuated by 43 + 10 log (*P*) dBc, which corresponds to 57 dBc for 25 Watts at the J4 antenna terminal. In accordance with Part 24.229, the PCS block edge frequencies are: A-Block 1930-1945 MHz; D-Block 1945-1950 MHz; B-Block 1950-1965 MHz; E-Block 1965-1970 MHz; F-Block 1970-1975 MHz; and C-Block 1975-1990 MHz.

The following table lists the corresponding channel numbers and carrier center frequencies that were measured: **1)** the lowest settable block edge, **2)** block center, and **3)** the highest settable (upper) block edge:

A plot of **channel 1502 (C Block) from Tx2** was included to show the high degree of similarity between the two amplifiers in the dual channel configuration.

PCS Frequency Block	PCS Channel No.	PCS Frequency
Tx1 A (Low)	2	1930.08 MHz
Tx1 A (Center)	250	1937.52 MHz
Tx1 A (High)	498	1944.96 MHz
Tx1 D (Low)	502	1945.08 MHz
Tx1 D (Center)	583	1947.51 MHz
Tx1 D (High)	664	1949.94 MHz
Tx1 B (Low)	668	1950.06 MHz
Tx1 B (Center)	917	1957.53 MHz
Tx1 B (High)	1164	1964.94 MHz
Tx1 E (Low)	1168	1965.06 MHz
Tx1 E (Center)	1250	1967.52 MHz
Tx1 E (High)	1331	1969.95 MHz
Tx1 F (Low)	1335	1970.07 MHz
Tx1 F (Center)	1417	1972.53 MHz
Tx1 F (High)	1498	1974.96 MHz
Tx1 C (Low)	1502	1975.08 MHz
Tx1 C (Center)	1750	1982.52 MHz
Tx1 C (High)	1998	1989.96 MHz
Tx2 C (Low)	1502	1975.08 MHz
Tx2 C (Center)	1750	1982.52 MHz
Tx2 C (High)	1998	1989.96 MHz

Measurement Procedure:

The occupied bandwidth emission limitations are based on attenuation below the *unmodulated* carrier. However, the TDMA carrier must be modulated with a pseudo-random bit stream in all three time slots, and can not exist as an unmodulated carrier. The power level of the carrier was first set to 44.0 dBm (25 Watts) average at the J4 Tx antenna terminal for each block center frequency. The carrier power level was then measured for each occupied bandwidth measurement both at the D-ICLA input and at the J4 antenna terminal, and recorded on the data plot.

The spectrum analyzer display is configured such that the top of the display reticle is set to 0 dBm reference level; all emission attenuation will then be read directly from the grid as dBc. Since the occupied bandwidth limitations are specified as required attenuation below the mean power of the unmodulated carrier, the center frequency of the carrier should be displaced from the top of the analyzer display reticle by the following value:

10 log (carrier bandwidth/resolution bandwidth)
10 log (30 kHz/300 Hz) = 20.0 dB offset

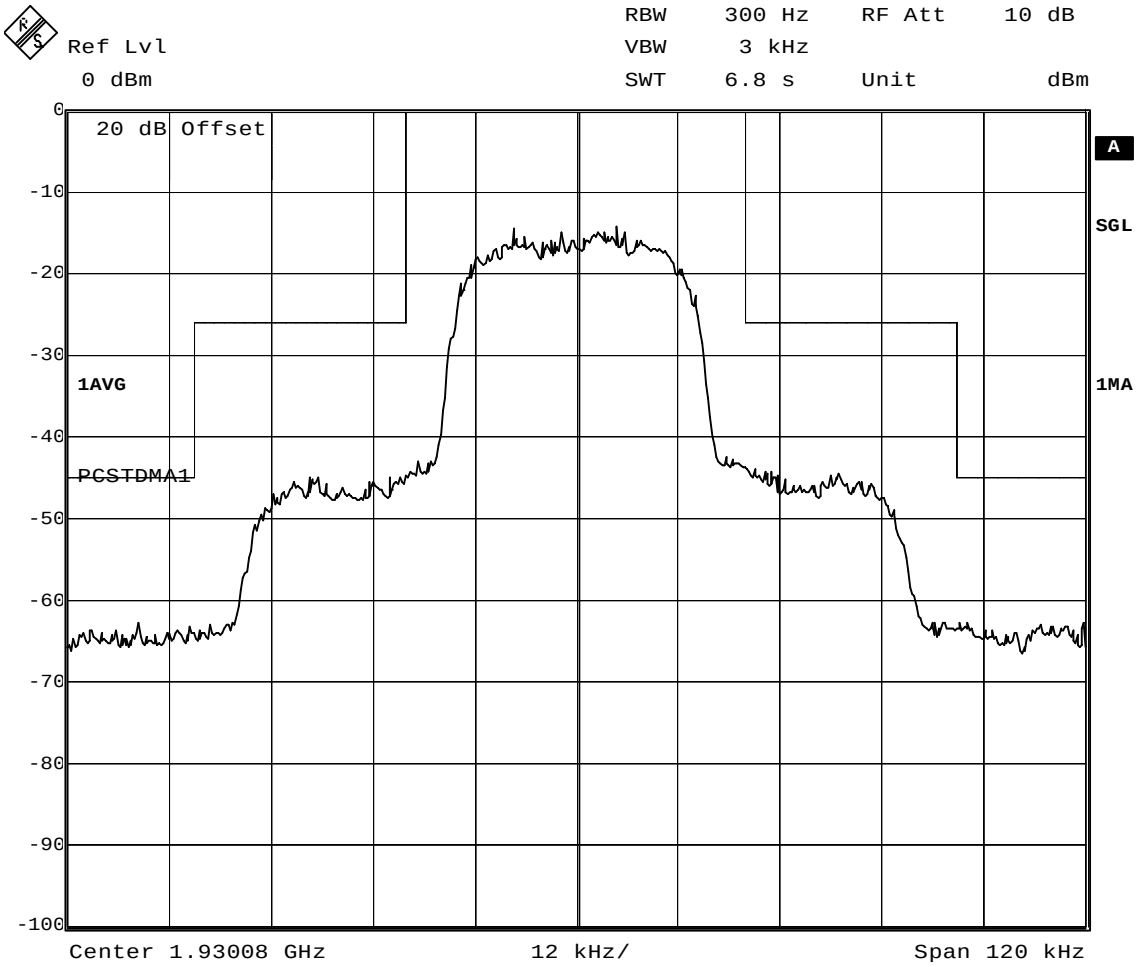
This is accomplished by using a variable attenuator. The spectrum analyzer is first set to a 1 MHz Resolution Bandwidth (RBW), or larger, and the center frequency of the modulated carrier is then positioned to the top of the spectrum analyzer reticle which was previously set at 0 dBm, to establish and set the reference level. The spectrum analyzer is next re-set to the required 300 Hz RBW; this method produces the required nominal 20 dB offset. The detector function is then set to 10 sweep average. The occupied bandwidth data plots for each of the 6 PCS frequency blocks are shown below for each corresponding D-ICLA input and output signal, in accordance with the above cited table of required measurement frequencies.

Test Set-up and Configuration: Same as previously used for Part 2.1046 RF Power Measurement.

RESULTS: The PCS TDMA Transmit Unit (D-ICLA), subject of this application for certification under FCC ID: AS5CMP-45, demonstrated full compliance with the requirements of FCC Rule Part 2.1049 and with Part 24.238. The occupied bandwidth emissions from the lowest settable to the highest settable frequency (channel) in each of the 6 PCS frequency blocks demonstrated full compliance with the emission mask limitations and with the PCS block edge limitations, for the carrier center frequencies shown above for each specific PCS block.

EXHIBIT 10: TEST REPORT

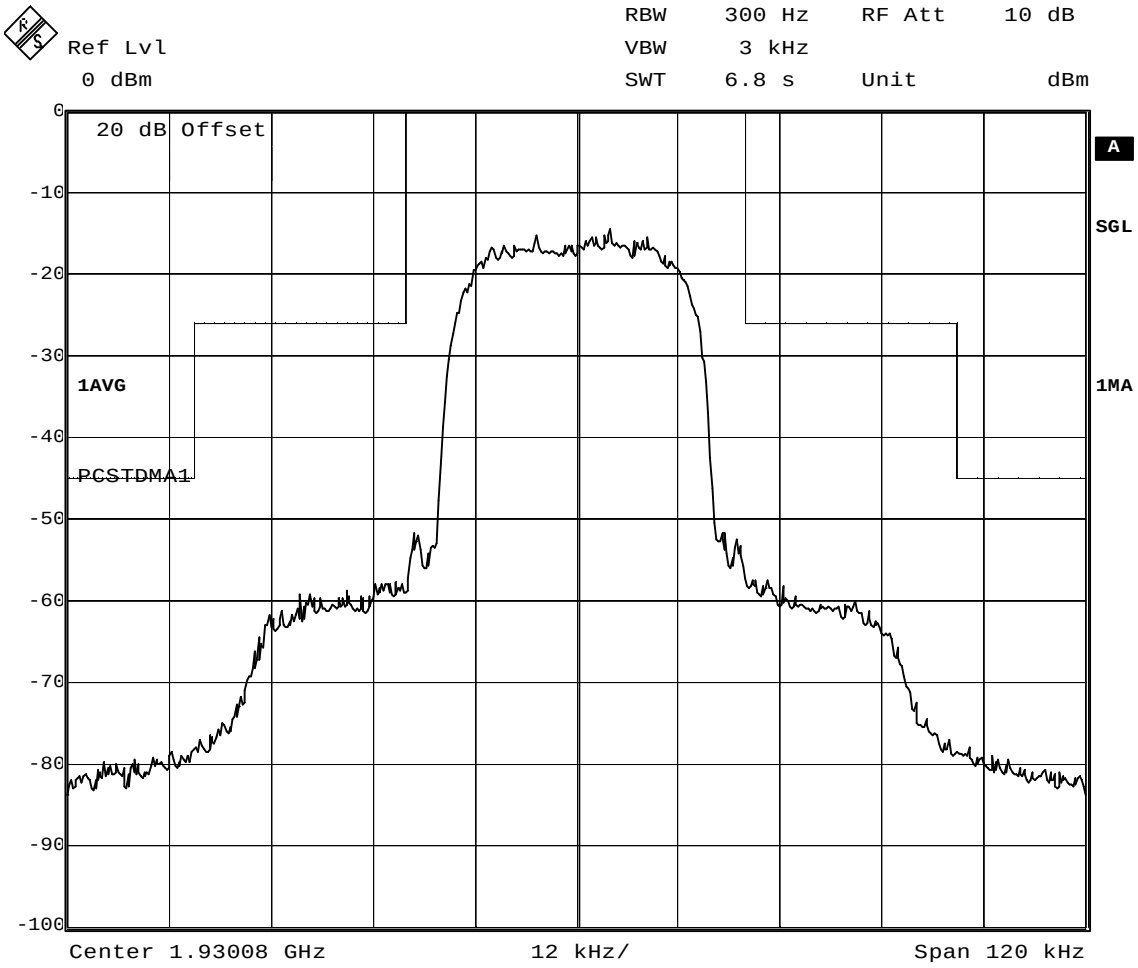
Occupied Bandwidth; Measured at Antenna Terminal; Block A; PCS Ch 2; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 2;
Occ. Bw; Ant. Term.
Date: 11.JUL.2001 06:22:00

EXHIBIT 10: TEST REPORT

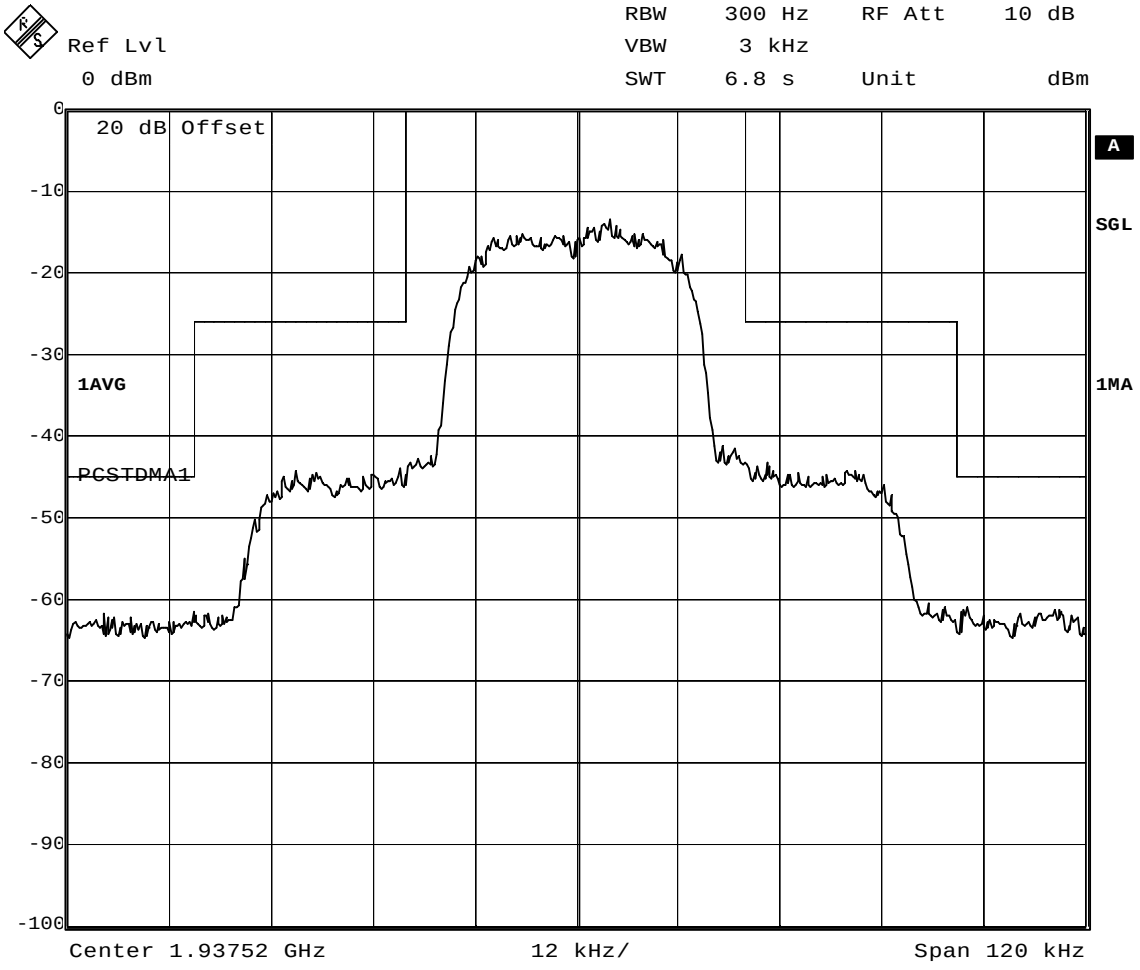
Occupied Bandwidth; Measured at Amplifier TX1 Input Terminal; Block A; PCS Ch 2; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal. Input Power; 10.62 dBm.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 2;
Occ. Bw; Input to Amplifier.
Date: 12.JUL.2001 01:43:10

EXHIBIT 10: TEST REPORT

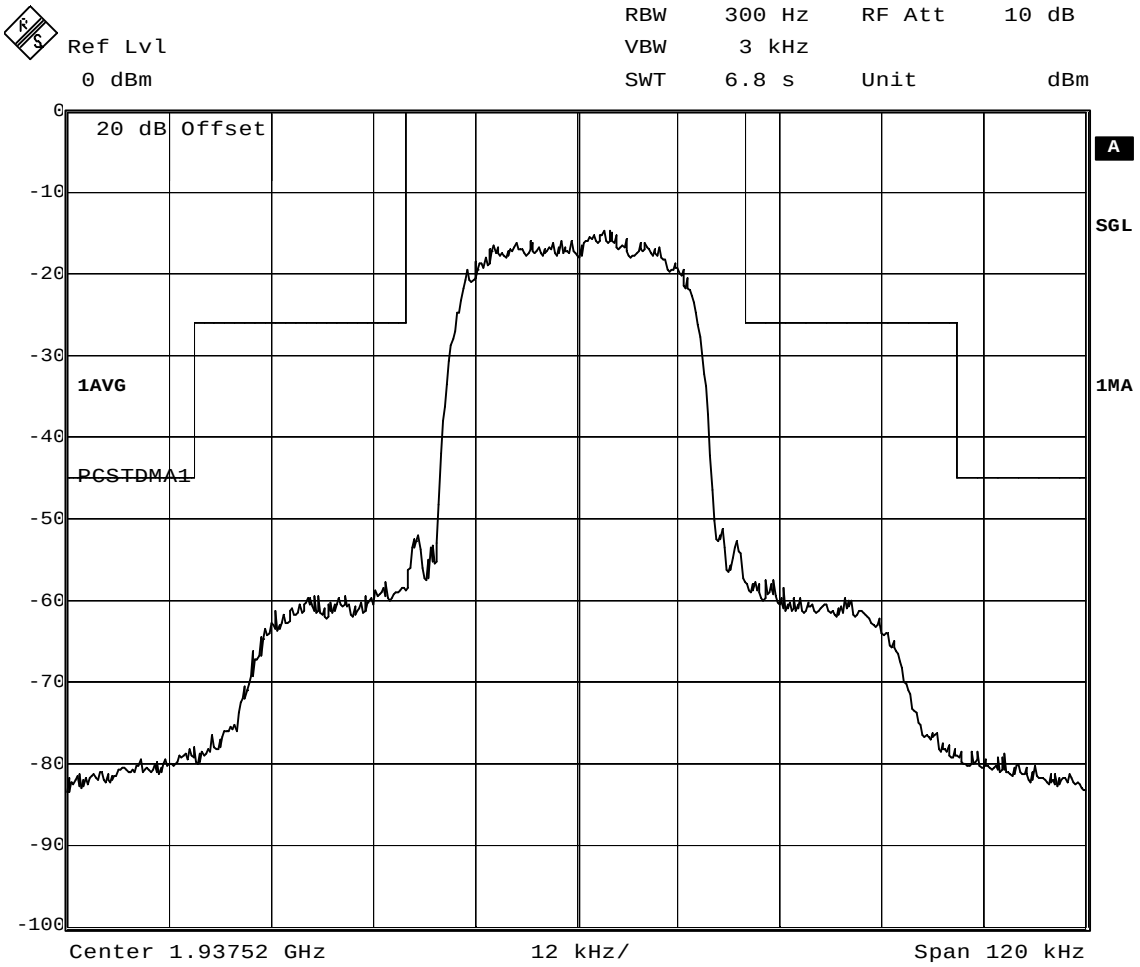
Occupied Bandwidth; Measured at Antenna Terminal; Block A; PCS Ch 250; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 250;
Occ. Bw; Ant. Term.
Date: 11.JUL.2001 06:25:20

EXHIBIT 10: TEST REPORT

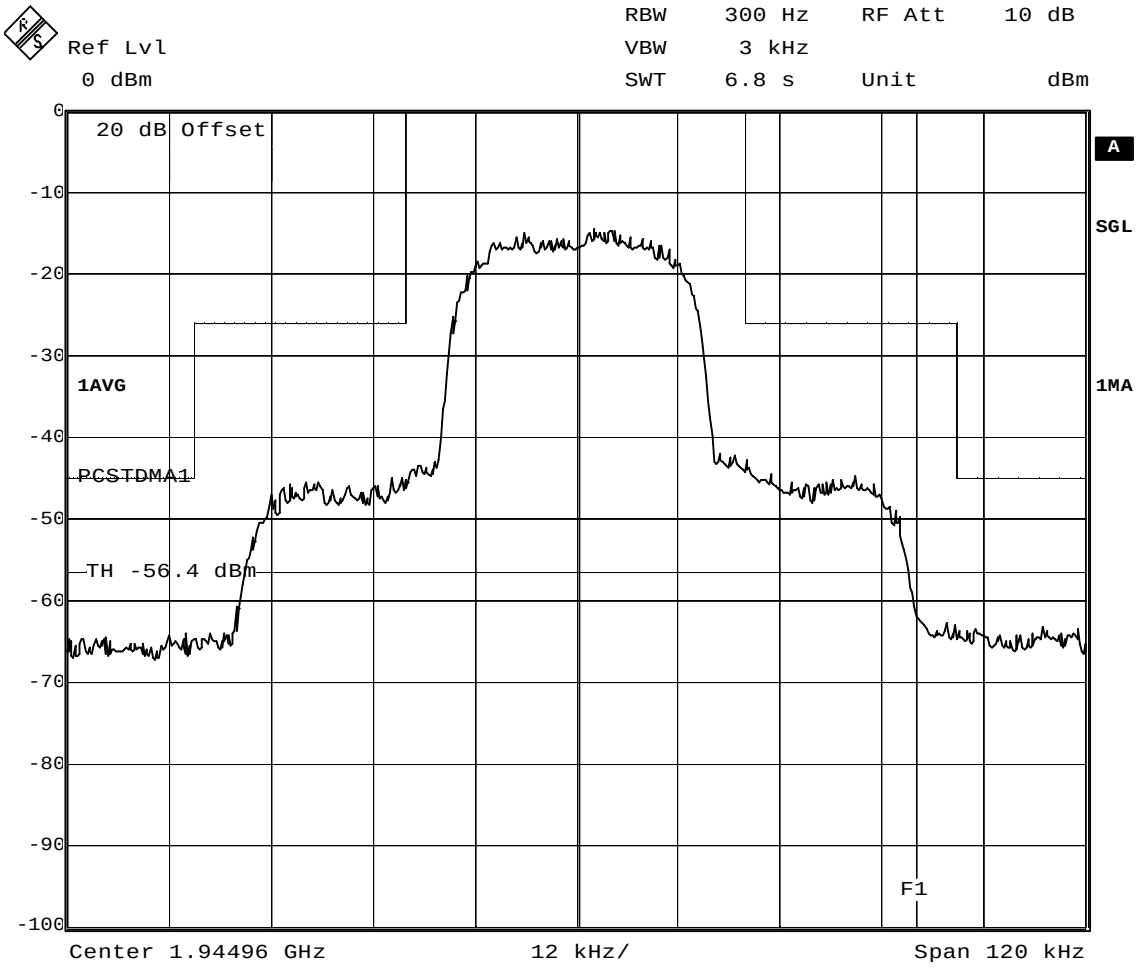
Occupied Bandwidth; Measured at Amplifier TX1 Input Terminal; Block A; PCS Ch 250; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal. Input Power; 10.48 dBm.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 250;
Occ. Bw; Input to Amplifier.
Date: 12.JUL.2001 01:46:33

EXHIBIT 10: TEST REPORT

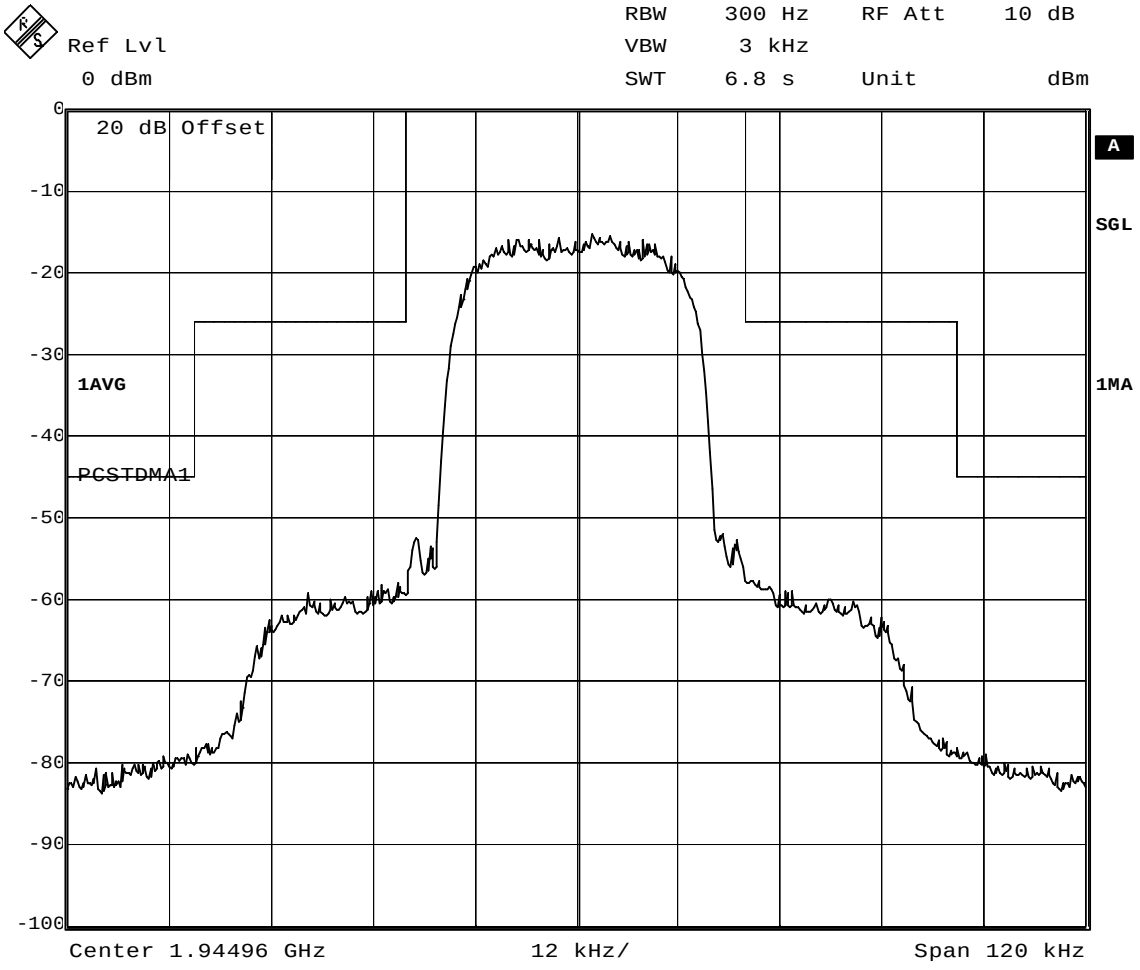
Occupied Bandwidth; Measured at Antenna Terminal; Block A; PCS Ch 498; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 498;
Occ. Bw; Ant. Term.
Date: 11.JUL.2001 22:08:22

EXHIBIT 10: TEST REPORT

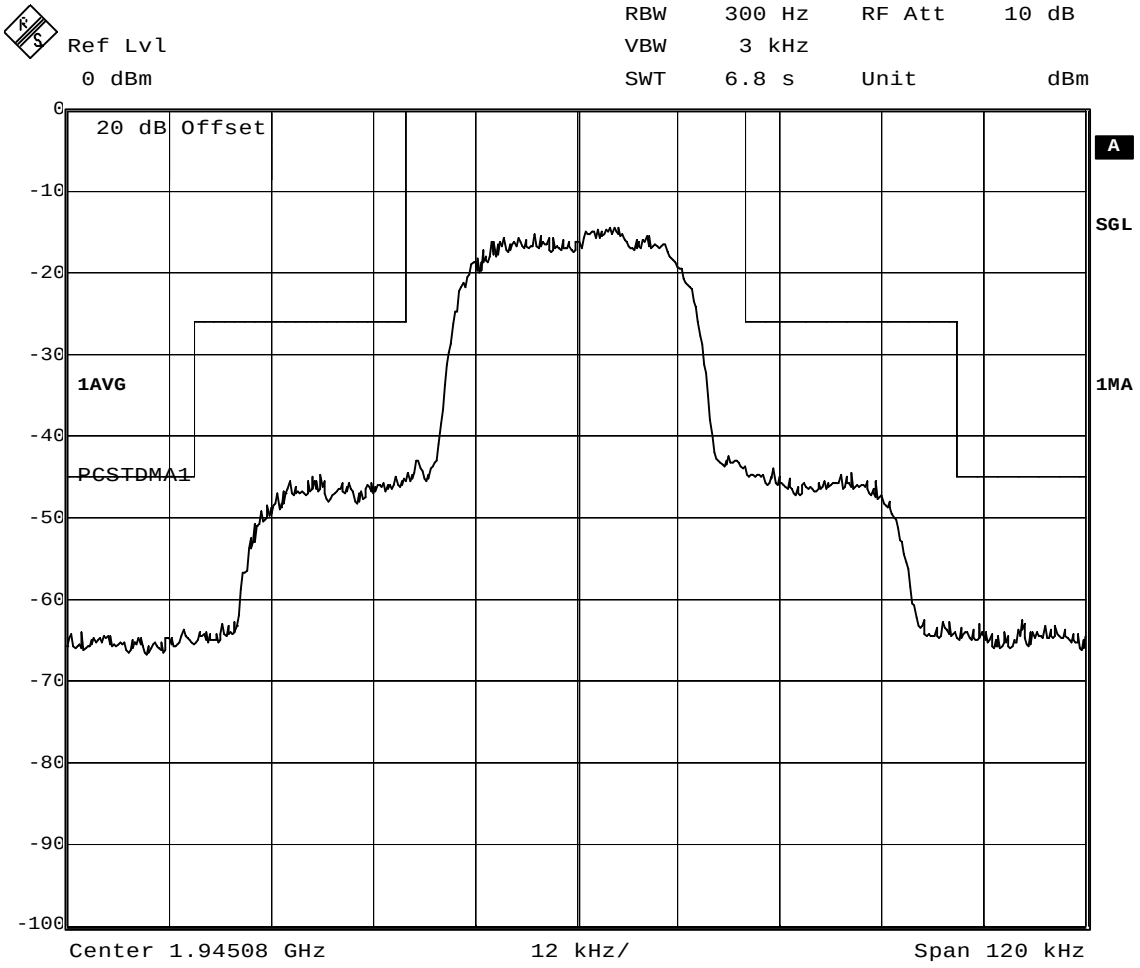
Occupied Bandwidth; Measured at Amplifier TX1 Input Terminal; Block A; PCS Ch 498; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal. Input Power; 10.41 dBm.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 498;
Occ. Bw; Input to Amplifier.
Date: 12.JUL.2001 01:48:58

EXHIBIT 10: TEST REPORT

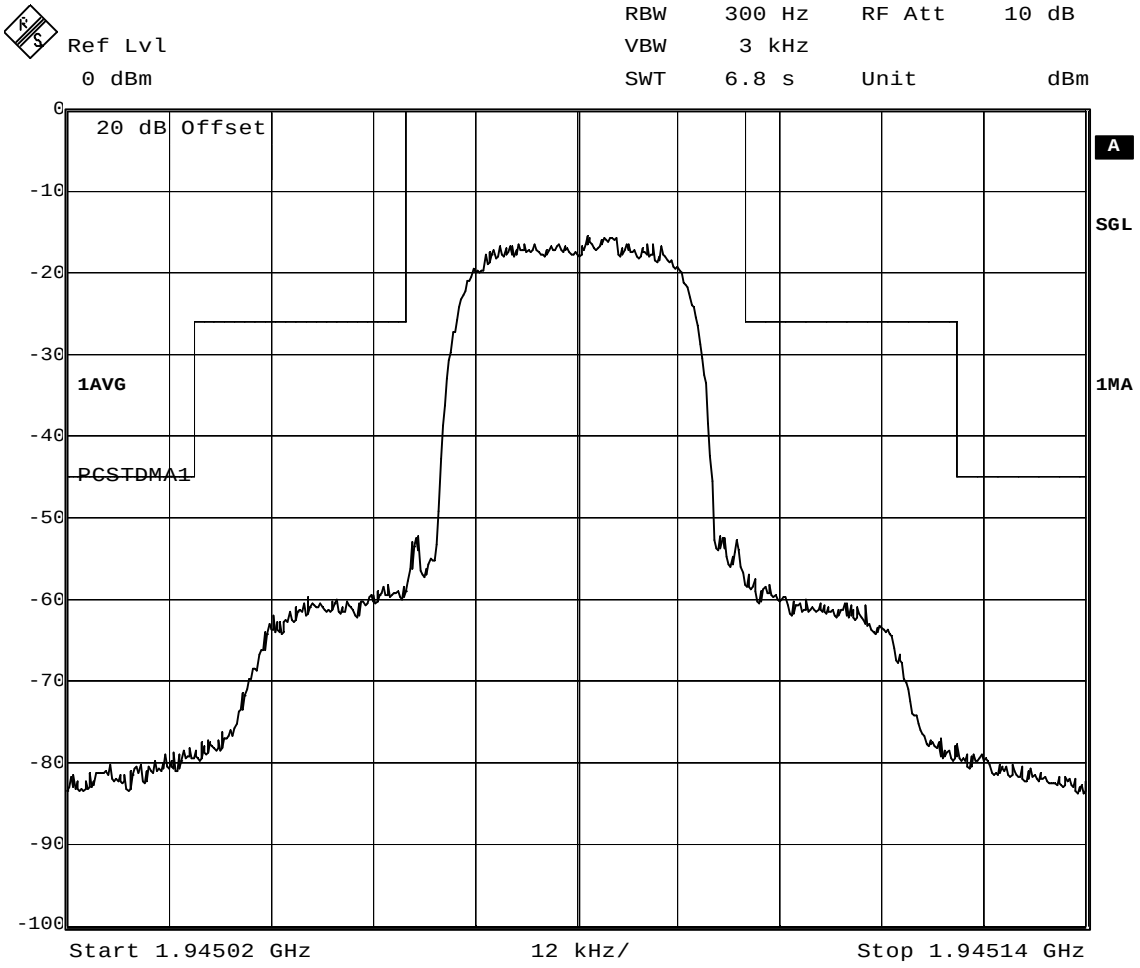
Occupied Bandwidth; Measured at Antenna Terminal; Block D; PCS Ch 502; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 502;
Occ. Bw; Ant. Term.
Date: 11.JUL.2001 22:54:39

EXHIBIT 10: TEST REPORT

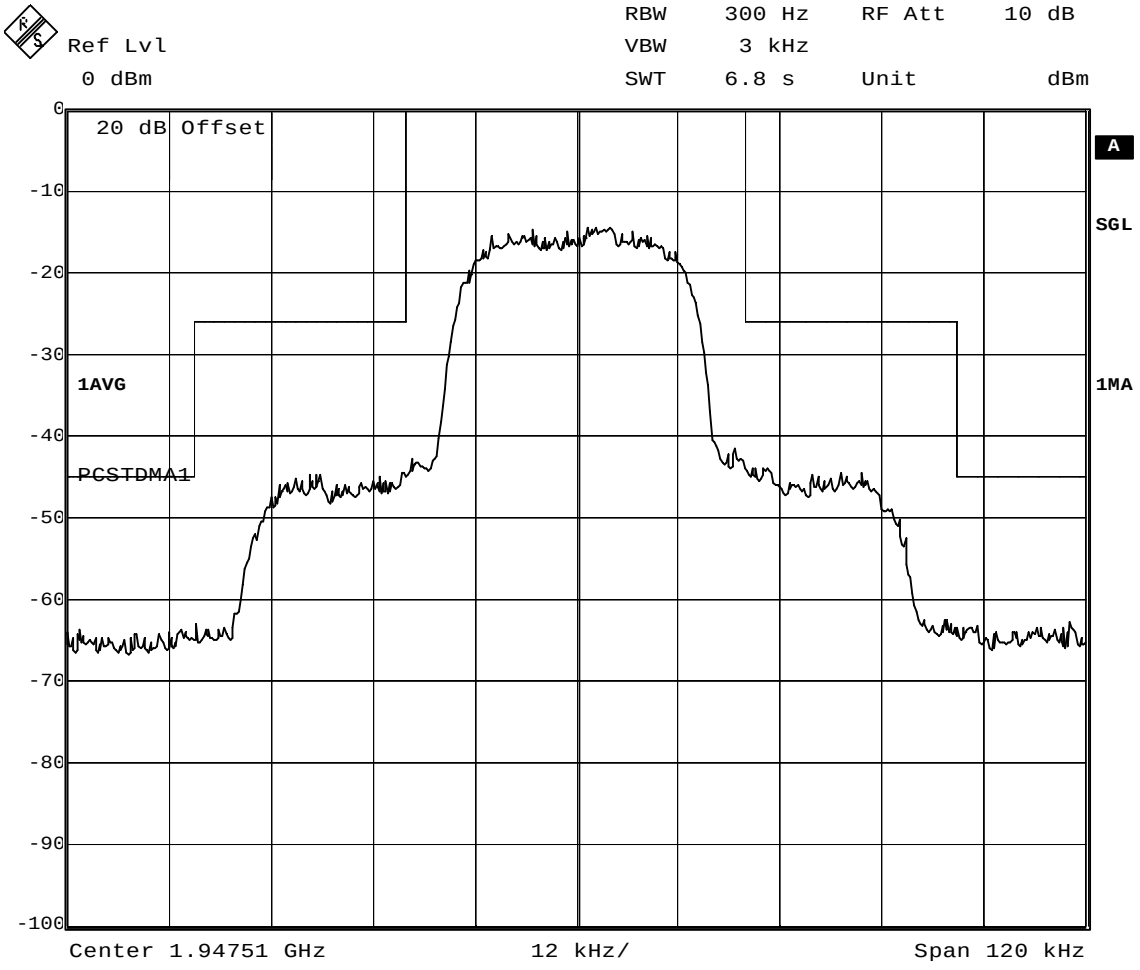
Occupied Bandwidth; Measured at Amplifier TX1 Input Terminal; Block D; PCS Ch 502; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal. Input Power; 10.02 dBm.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 502;
Occ. Bw; Input to Amplifier.
Date: 12.JUL.2001 01:53:37

EXHIBIT 10: TEST REPORT

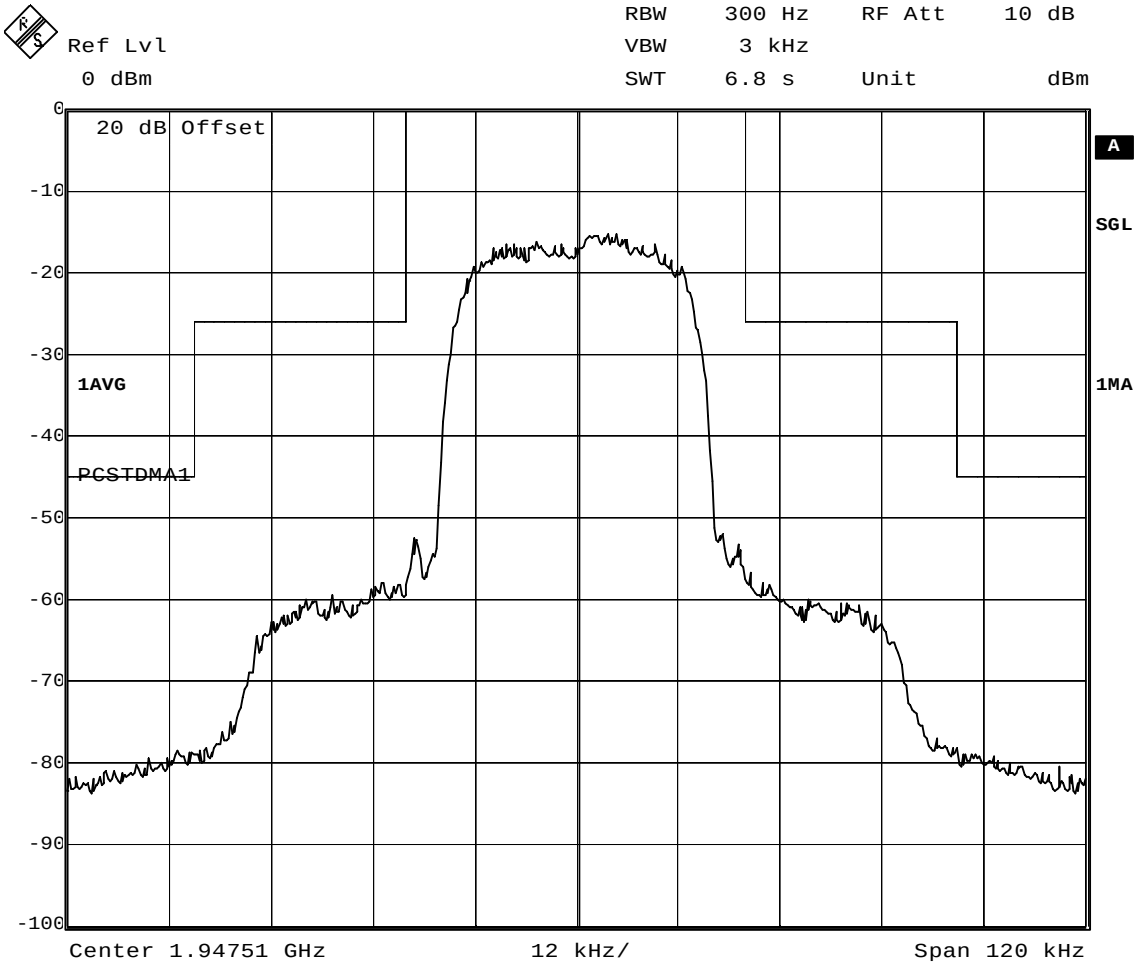
Occupied Bandwidth; Measured at Antenna Terminal; Block D; PCS Ch 583; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 583;
Occ. Bw; Ant. Term.
Date: 11.JUL.2001 22:51:09

EXHIBIT 10: TEST REPORT

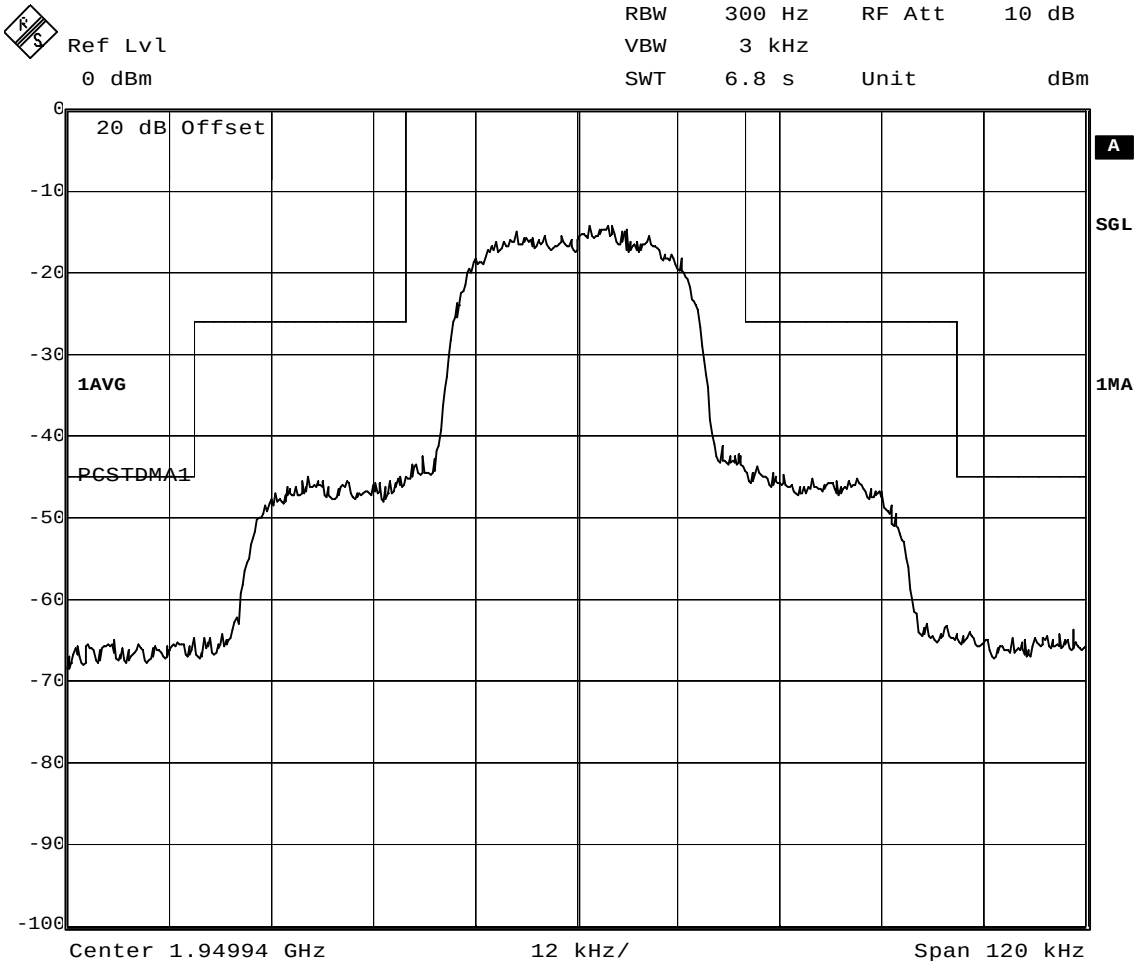
Occupied Bandwidth; Measured at Amplifier TX1 Input Terminal; Block D; PCS Ch 583; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal. Input Power; 10.07 dBm.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 583;
Occ. Bw; Input to Amplifier.
Date: 12.JUL.2001 01:56:37

EXHIBIT 10: TEST REPORT

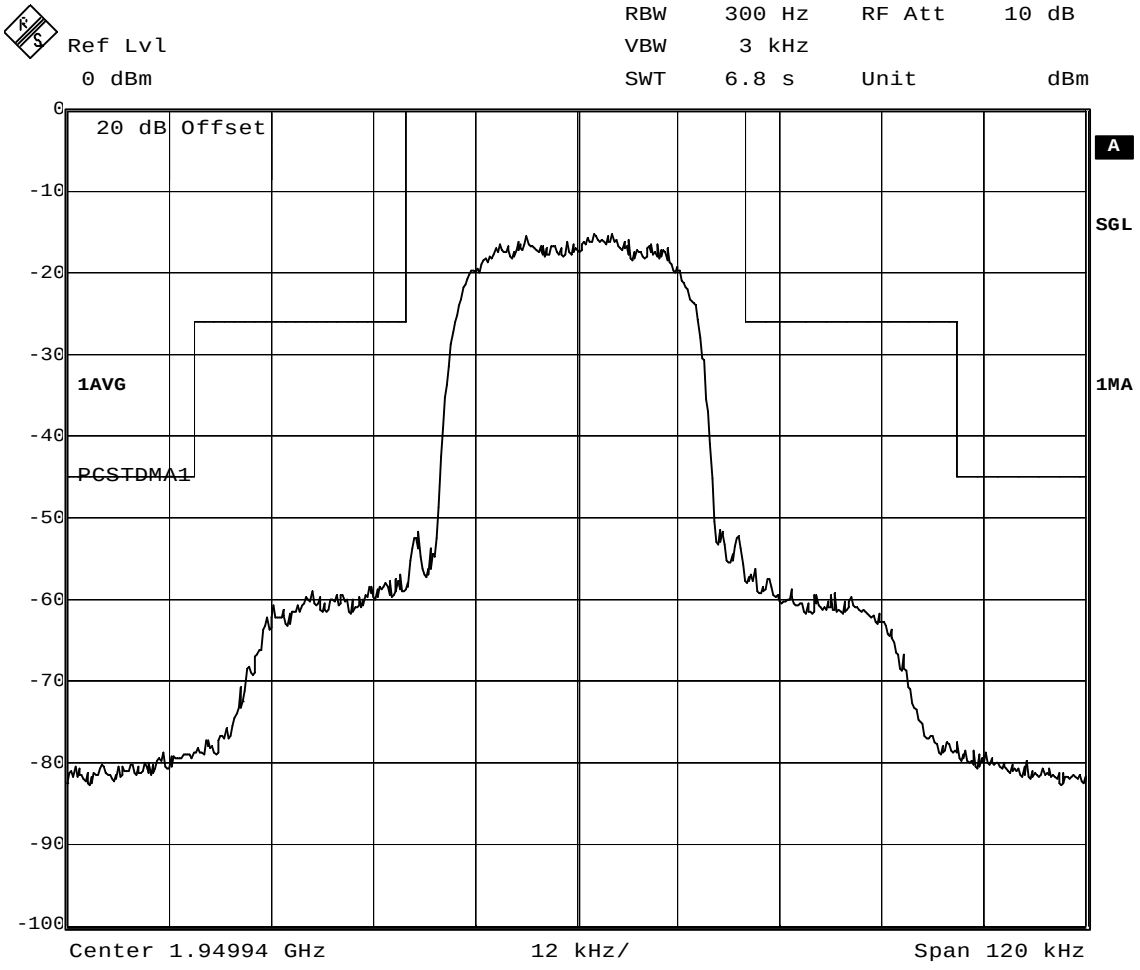
Occupied Bandwidth; Measured at Antenna Terminal; Block D; PCS Ch 664; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 664;
Occ. Bw; Ant. Term.
Date: 11.JUL.2001 22:48:17

EXHIBIT 10: TEST REPORT

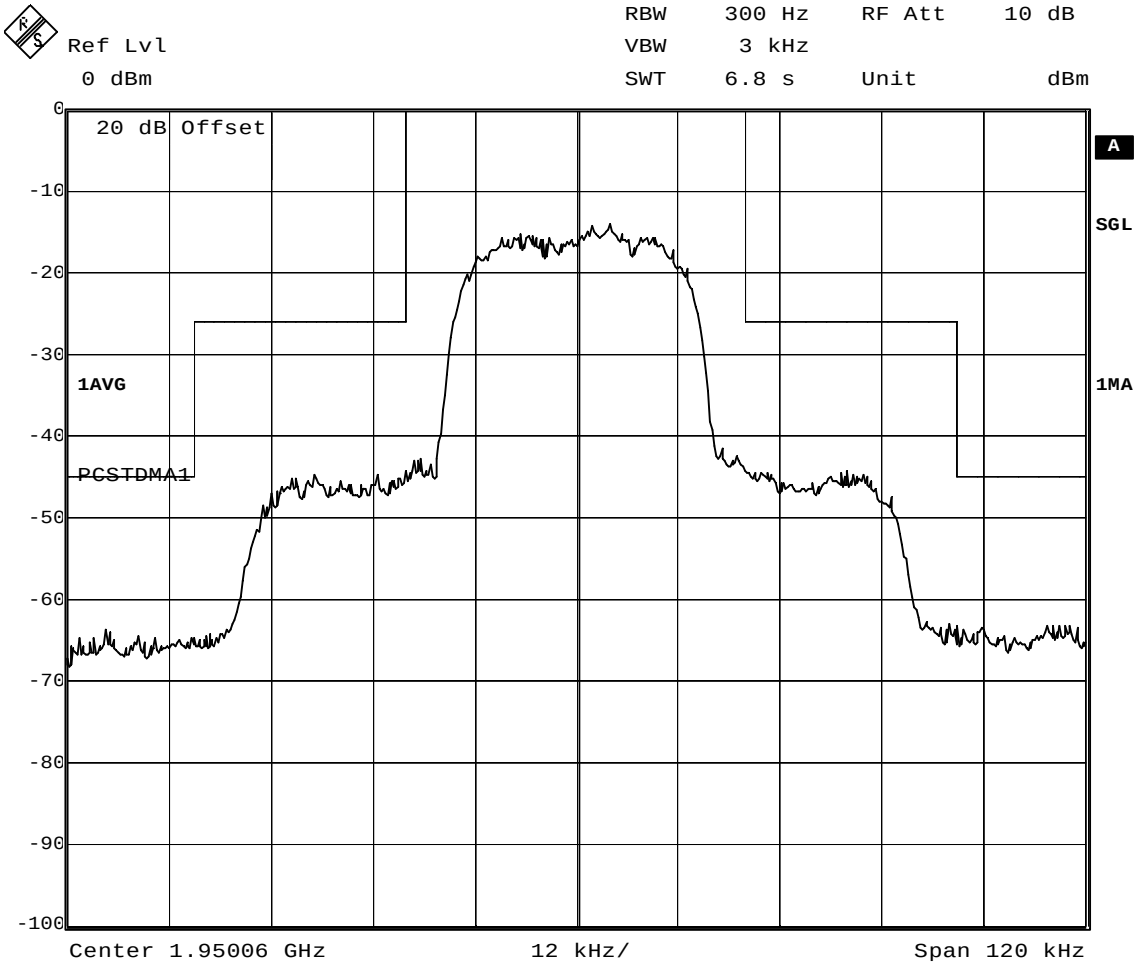
Occupied Bandwidth; Measured at Amplifier TX1 Input Terminal; Block D; PCS Ch 664; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal. Input Power; 10.16 dBm.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 664;
Occ. Bw; Input to Amplifier.
Date: 12.JUL.2001 02:00:14

EXHIBIT 10: TEST REPORT

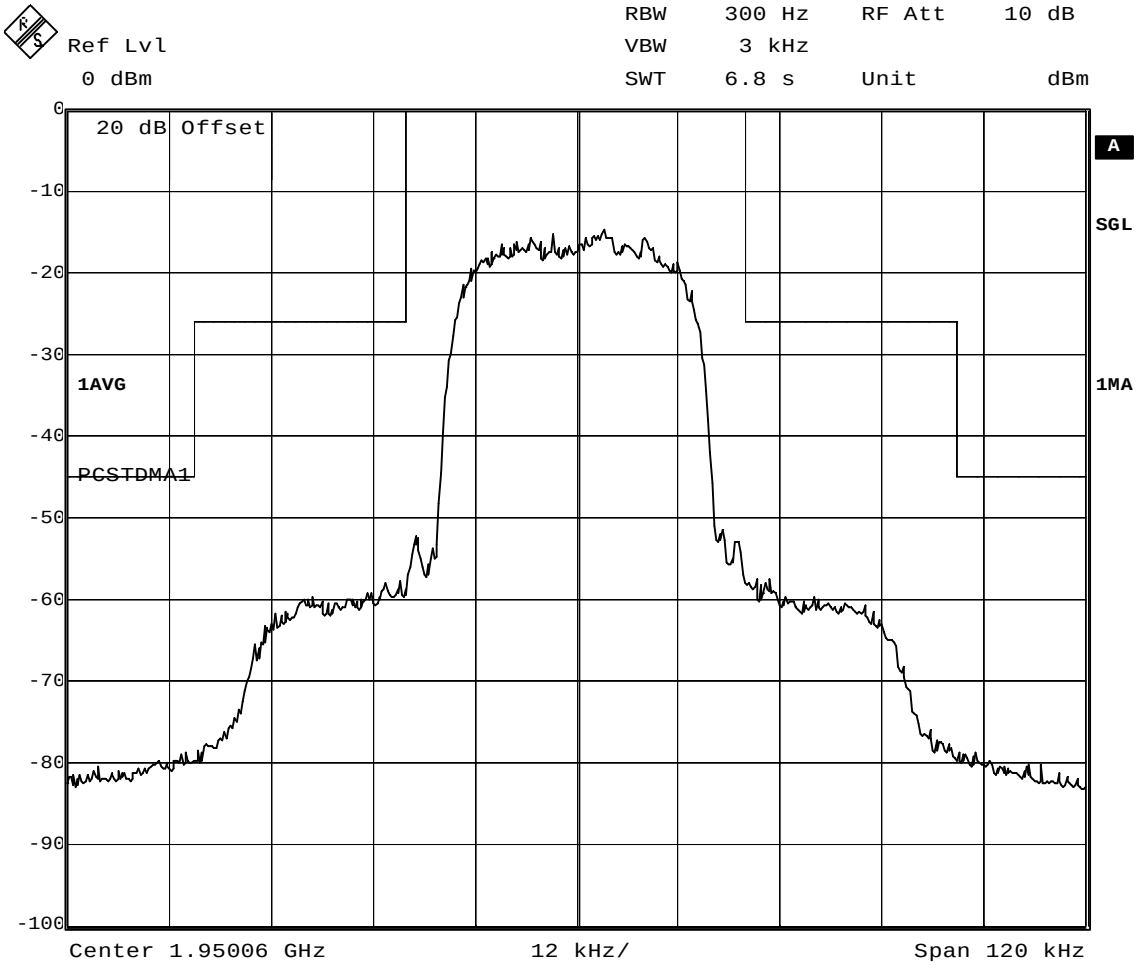
Occupied Bandwidth; Measured at Antenna Terminal; Block B; PCS Ch 668; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 668;
Occ. Bw; Ant. Term.
Date: 12.JUL.2001 00:12:49

EXHIBIT 10: TEST REPORT

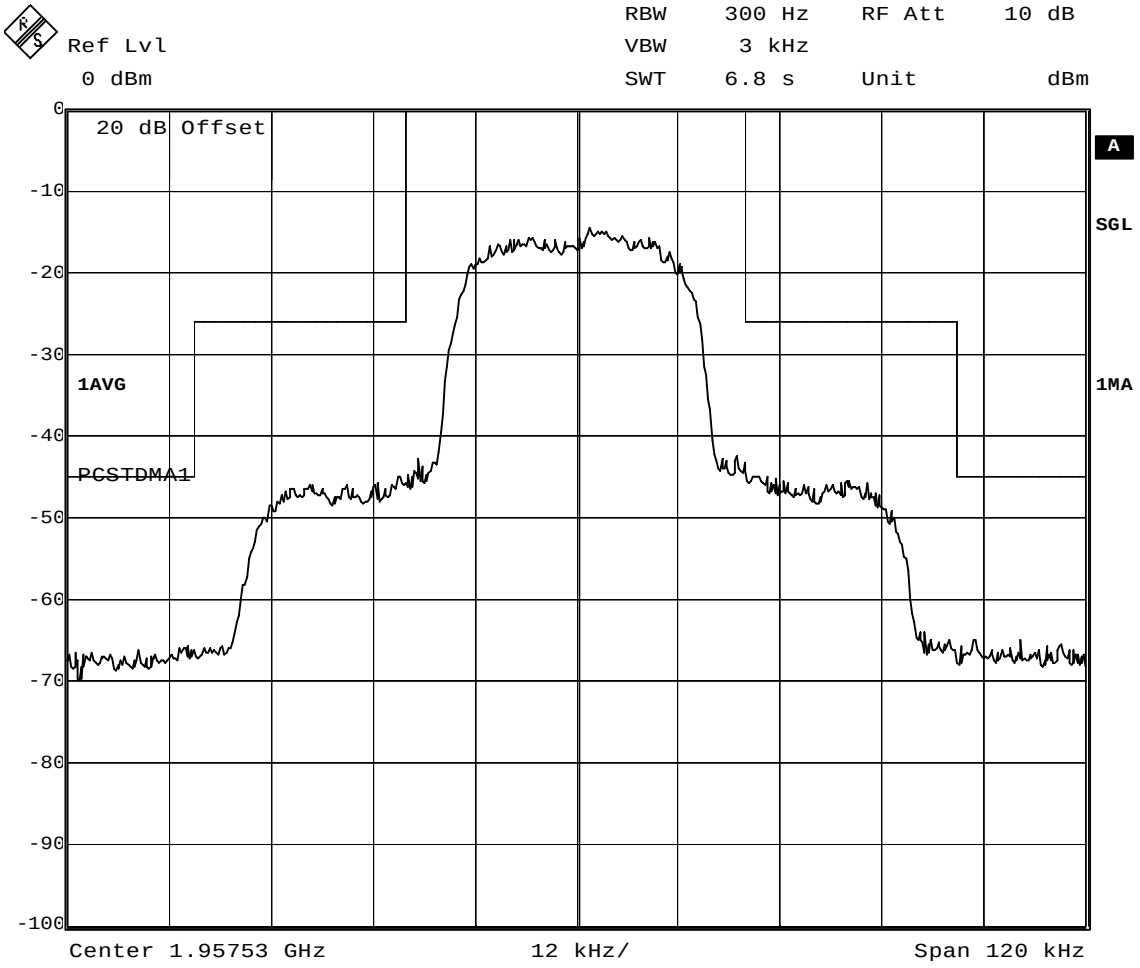
Occupied Bandwidth; Measured at Amplifier TX1 Input Terminal; Block B; PCS Ch 668; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal. Input Power; 9.96 dBm.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 668;
Occ. Bw; Input to Amplifier.
Date: 12.JUL.2001 02:07:10

EXHIBIT 10: TEST REPORT

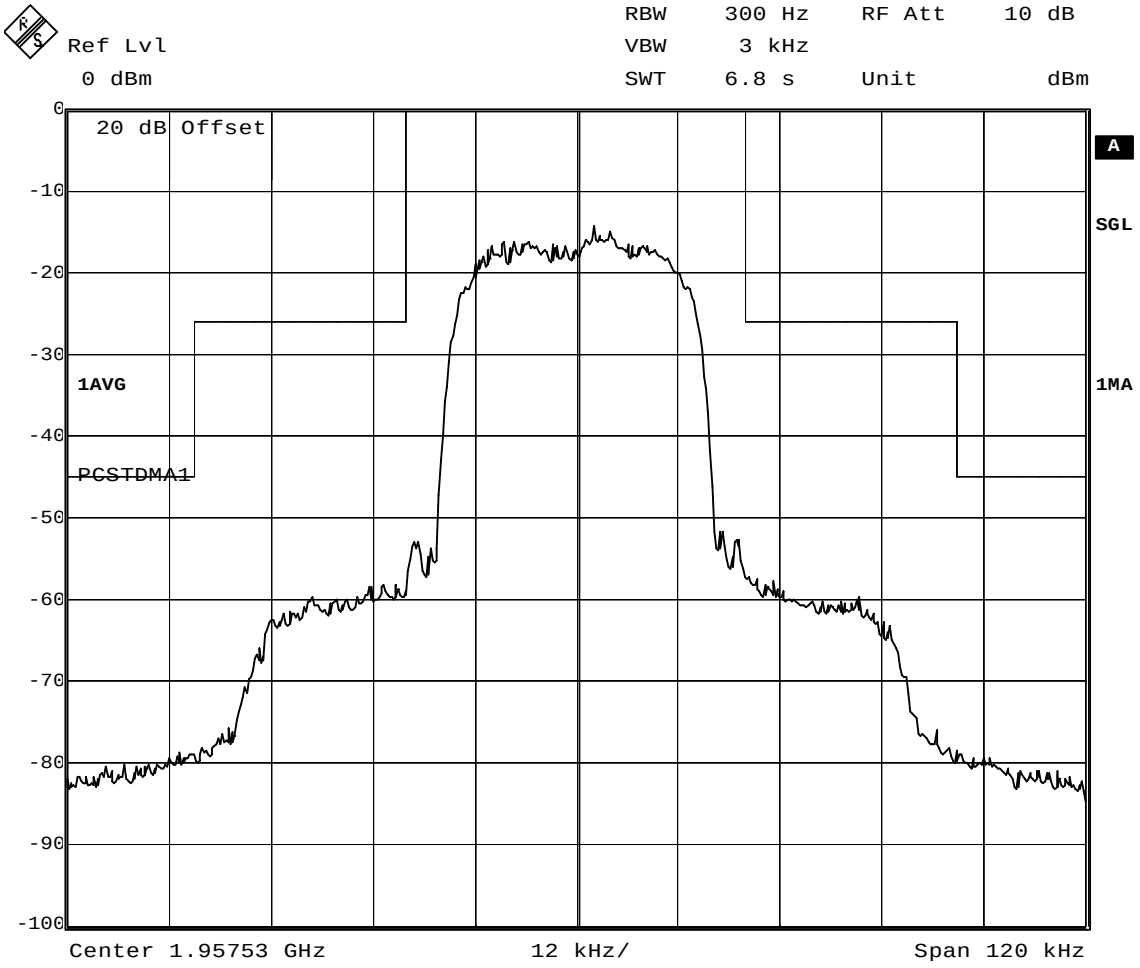
Occupied Bandwidth; Measured at Antenna Terminal; Block B; PCS Ch 917; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 917;
Occ. Bw; Ant. Term.
Date: 12.JUL.2001 00:17:42

EXHIBIT 10: TEST REPORT

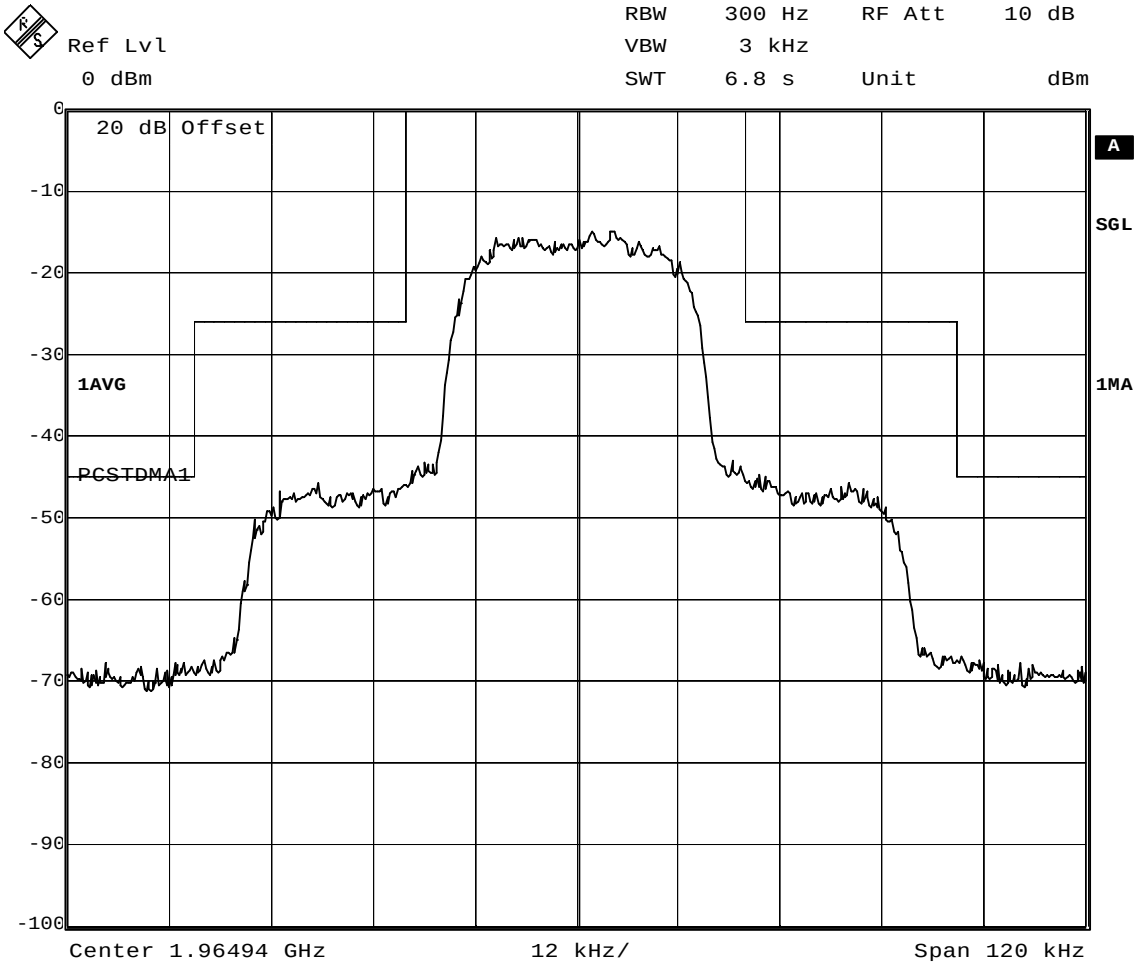
Occupied Bandwidth; Measured at Amplifier TX1 Input Terminal; Block B; PCS Ch 917; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal. Input Power; 10.01 dBm.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 917;
Occ. Bw; Input to Amplifier.
Date: 12.JUL.2001 02:09:47

EXHIBIT 10: TEST REPORT

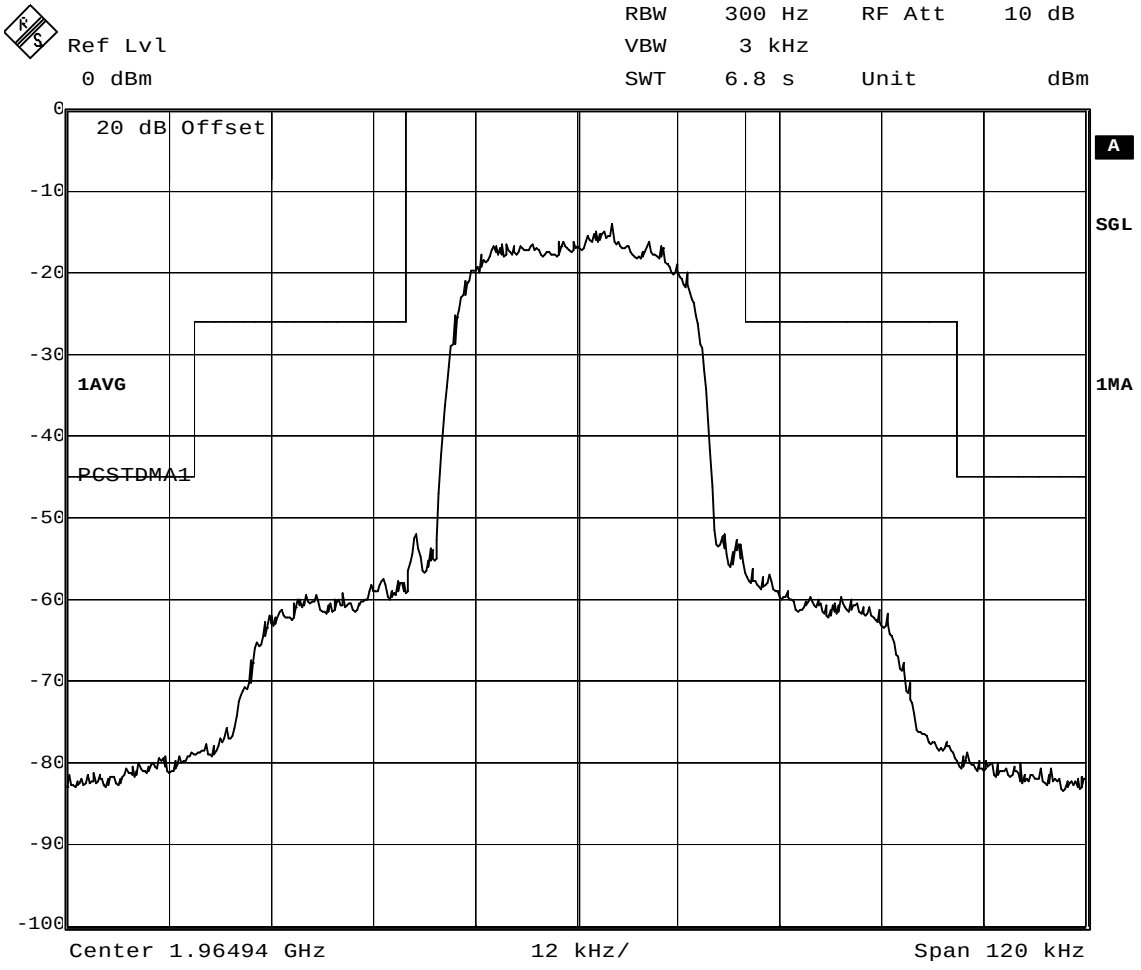
Occupied Bandwidth; Measured at Antenna Terminal; Block B; PCS Ch 1164; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1164;
Occ. Bw; Ant. Term.
Date: 12.JUL.2001 00:20:30

EXHIBIT 10: TEST REPORT

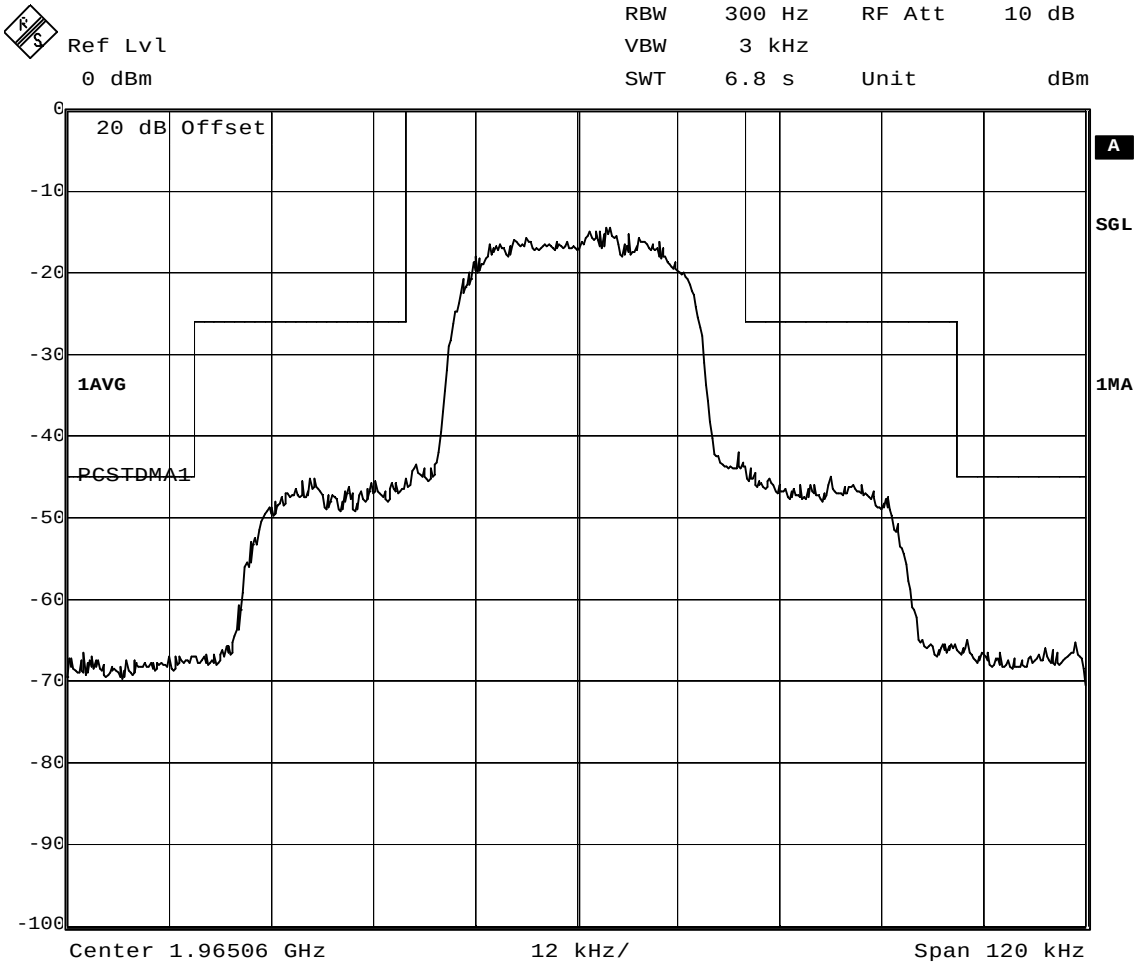
Occupied Bandwidth; Measured at Amplifier TX1 Input Terminal; Block B; PCS Ch 1164; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal. Input Power; 10.08 dBm.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1164;
Occ. Bw; Input to Amplifier.
Date: 12.JUL.2001 02:12:35

EXHIBIT 10: TEST REPORT

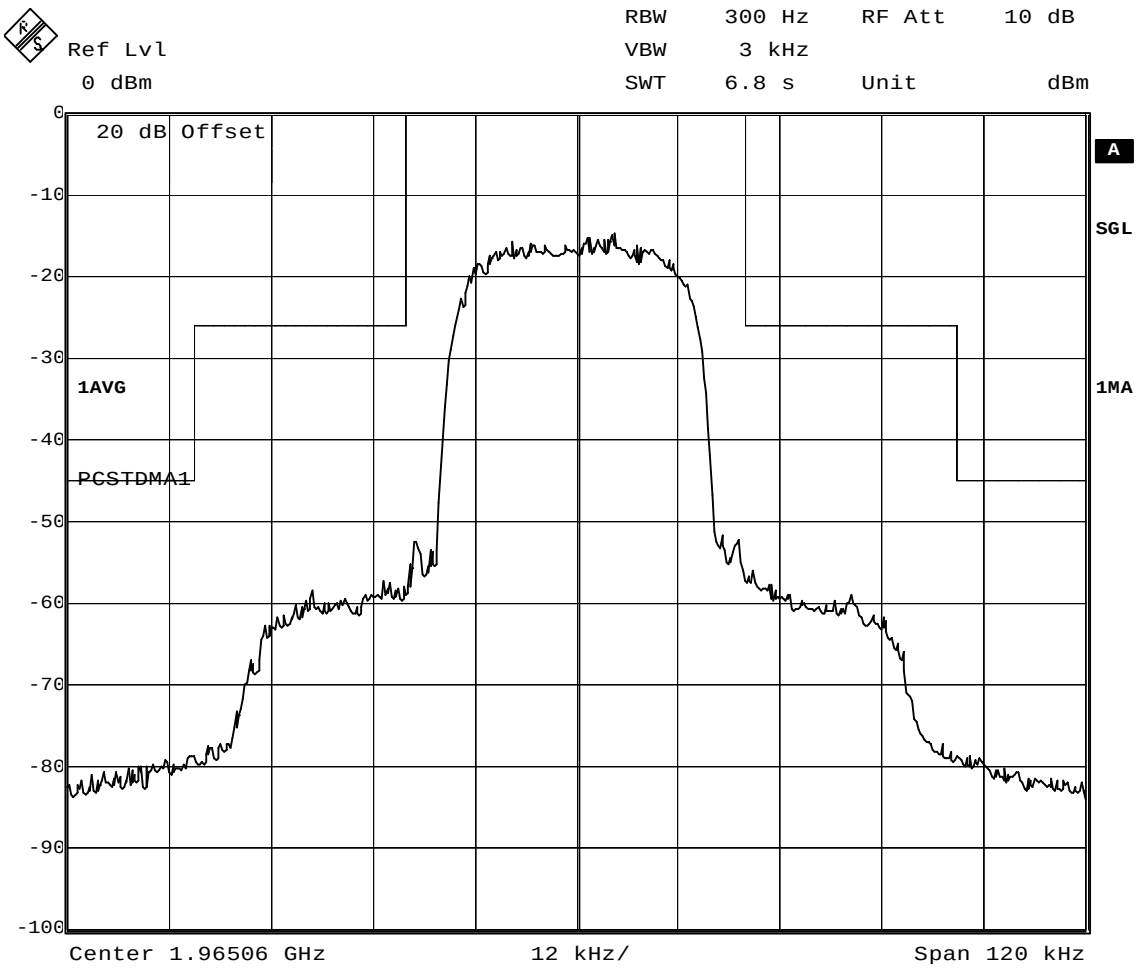
Occupied Bandwidth; Measured at Antenna Terminal; Block E; PCS Ch 1168; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1168;
Occ. Bw; Ant. Term.
Date: 12.JUL.2001 00:26:11

EXHIBIT 10: TEST REPORT

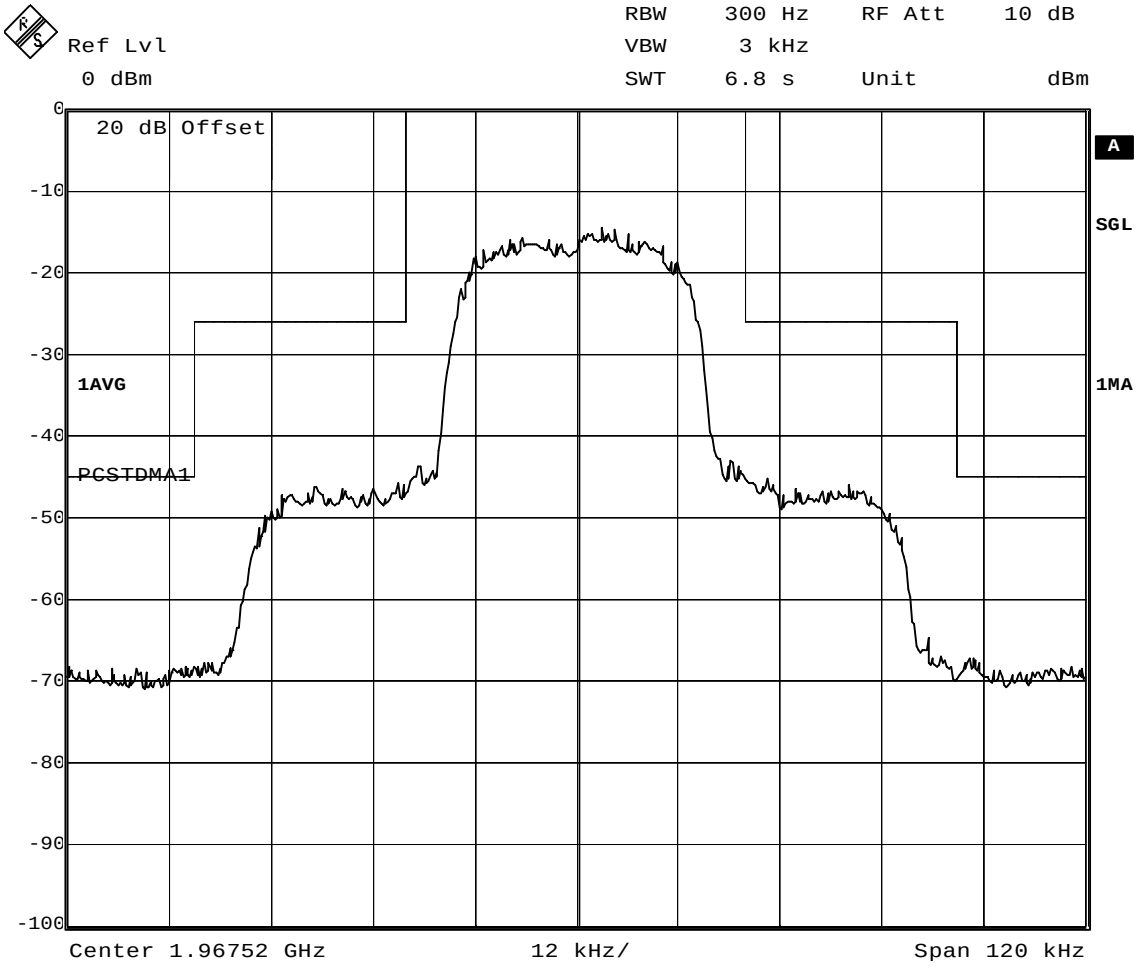
Occupied Bandwidth; Measured at Amplifier TX1 Input Terminal; Block E; PCS Ch 1168; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal. Input Power; 9.90 dBm.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1168;
Occ. Bw; Input to Amplifier.
Date: 12.JUL.2001 02:18:17

EXHIBIT 10: TEST REPORT

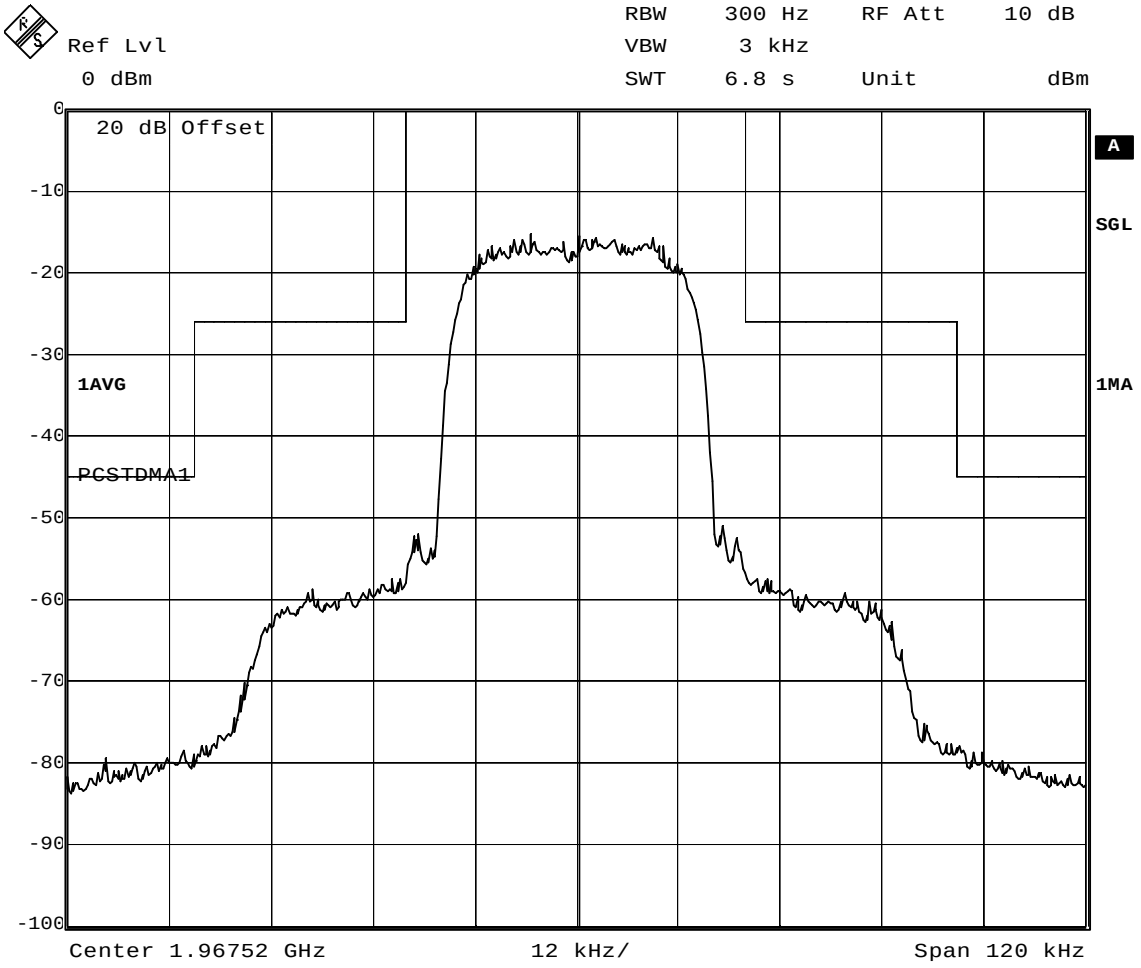
Occupied Bandwidth; Measured at Antenna Terminal; Block E; PCS Ch 1250; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1250;
Occ. Bw; Ant. Term.
Date: 12.JUL.2001 00:29:00

EXHIBIT 10: TEST REPORT

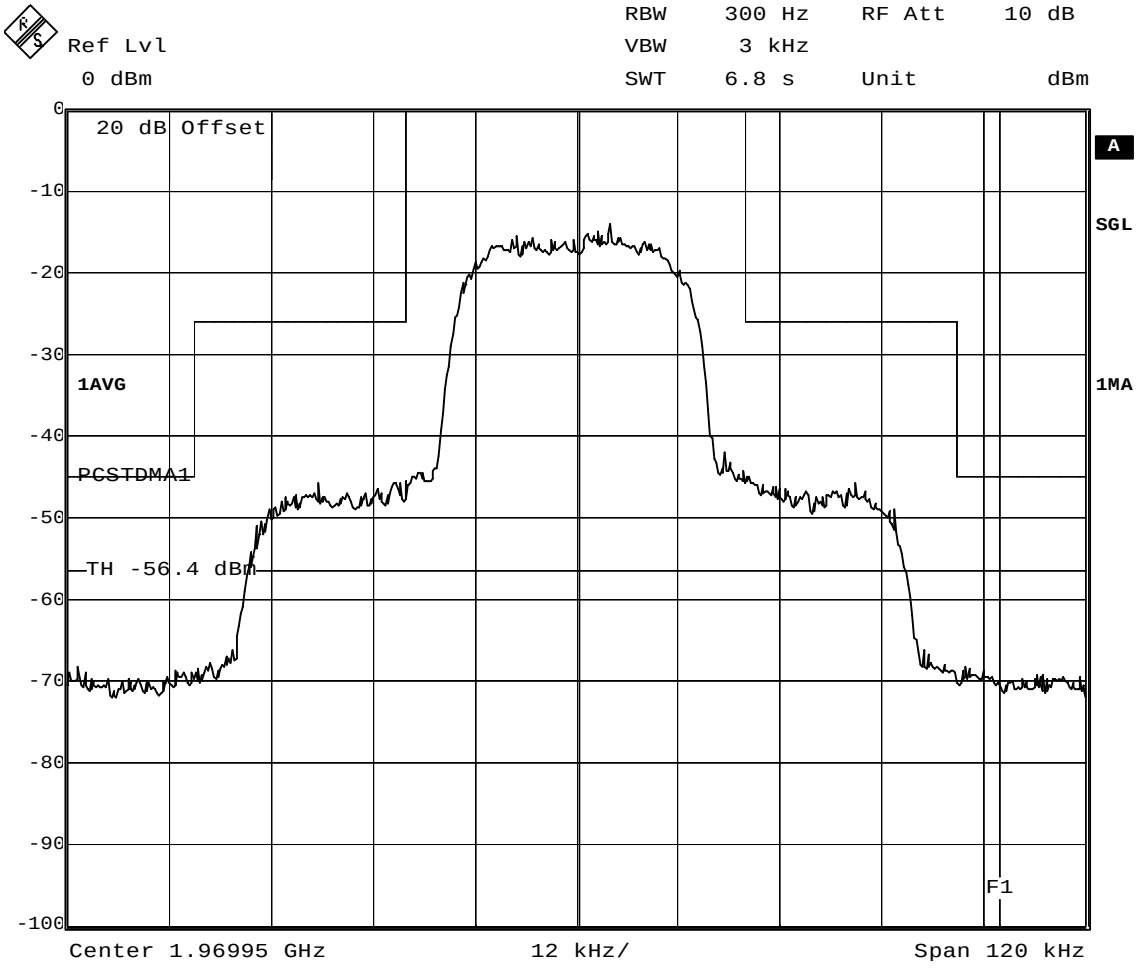
Occupied Bandwidth; Measured at Amplifier TX1 Input Terminal; Block E; PCS Ch 1250; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal. Input Power; 9.96 dBm.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1250;
Occ. Bw; Input to Amplifier.
Date: 12.JUL.2001 02:30:12

EXHIBIT 10: TEST REPORT

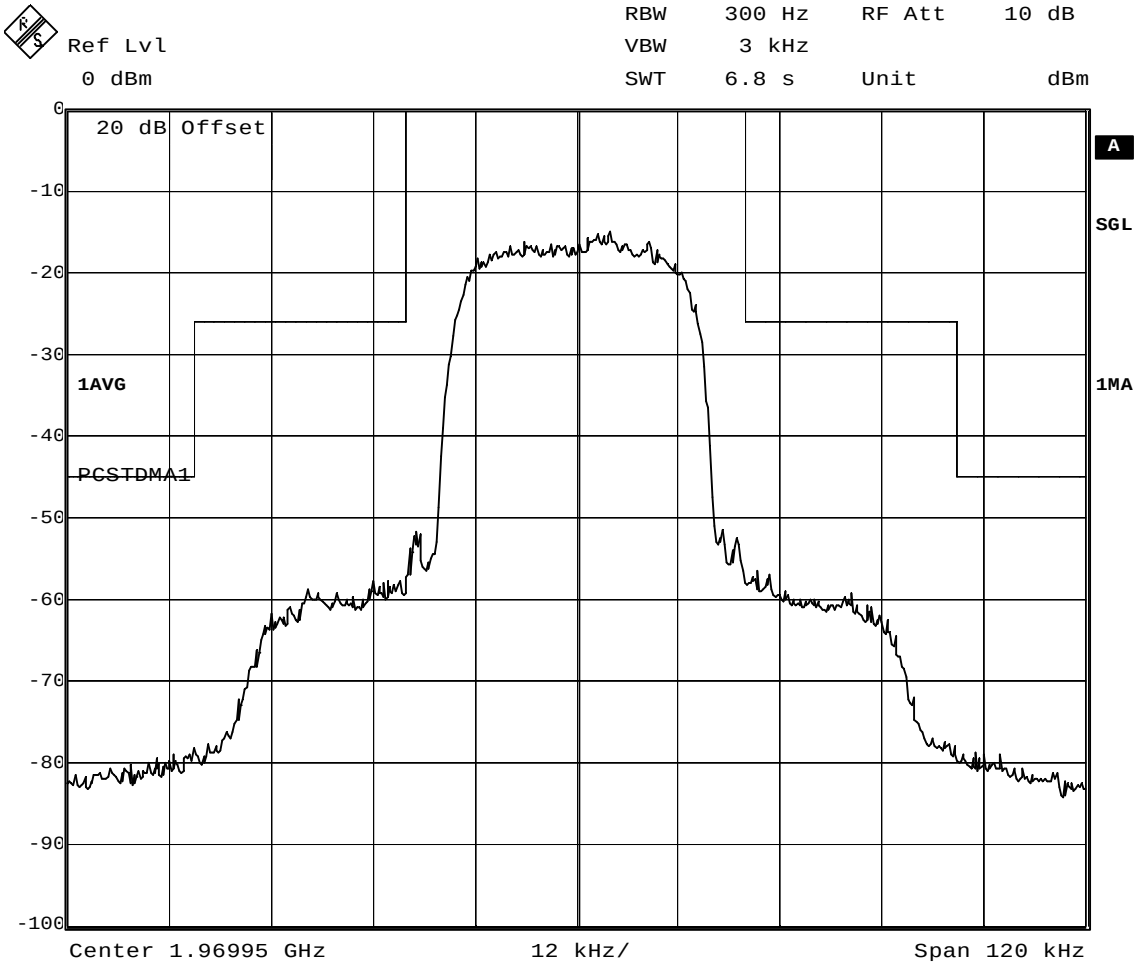
Occupied Bandwidth; Measured at Antenna Terminal; Block E; PCS Ch 1331; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1331;
Occ. Bw; Ant. Term.
Date: 12.JUL.2001 00:32:29

EXHIBIT 10: TEST REPORT

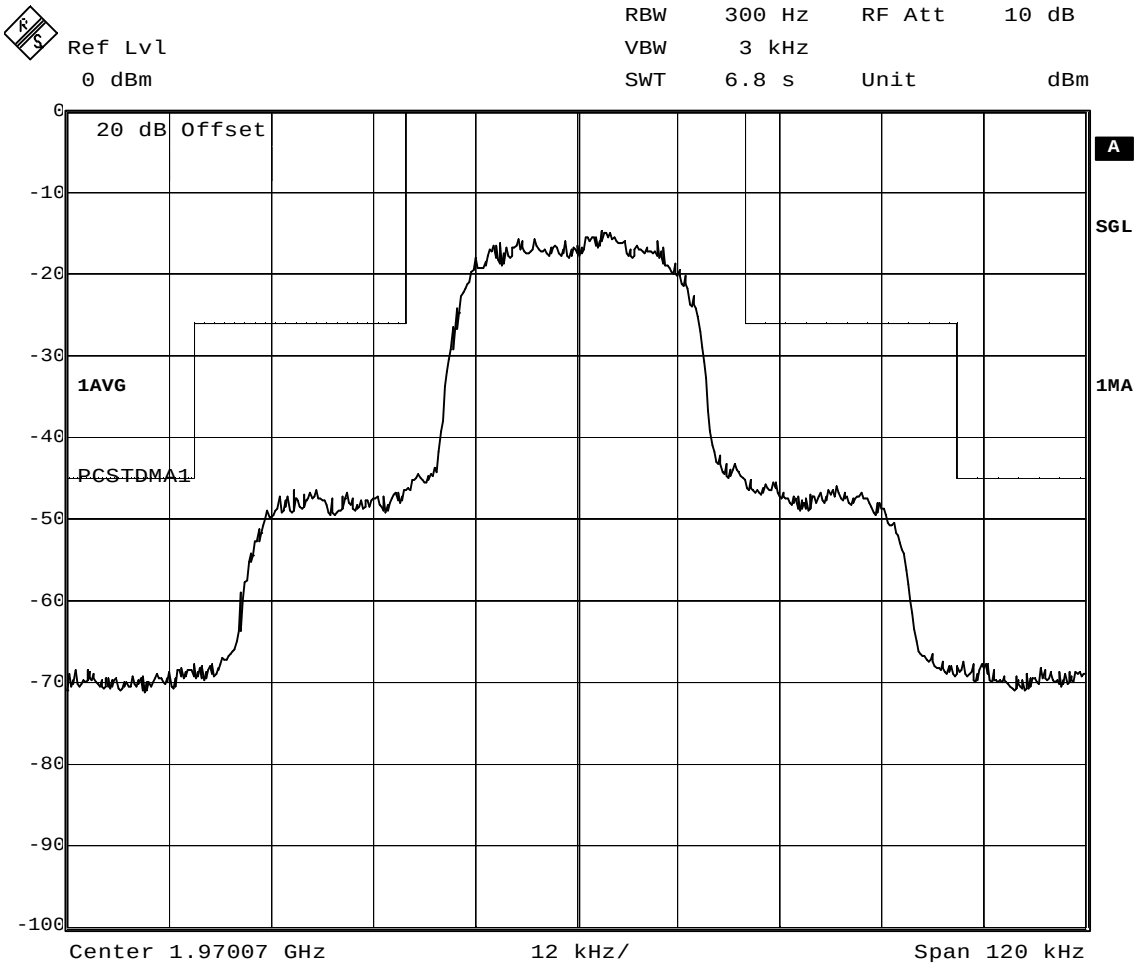
Occupied Bandwidth; Measured at Amplifier TX1 Input Terminal; Block E; PCS Ch 1331; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal. Input Power; 10.02 dBm.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1331;
Occ. Bw; Input to Amplifier.
Date: 12.JUL.2001 02:34:42

EXHIBIT 10: TEST REPORT

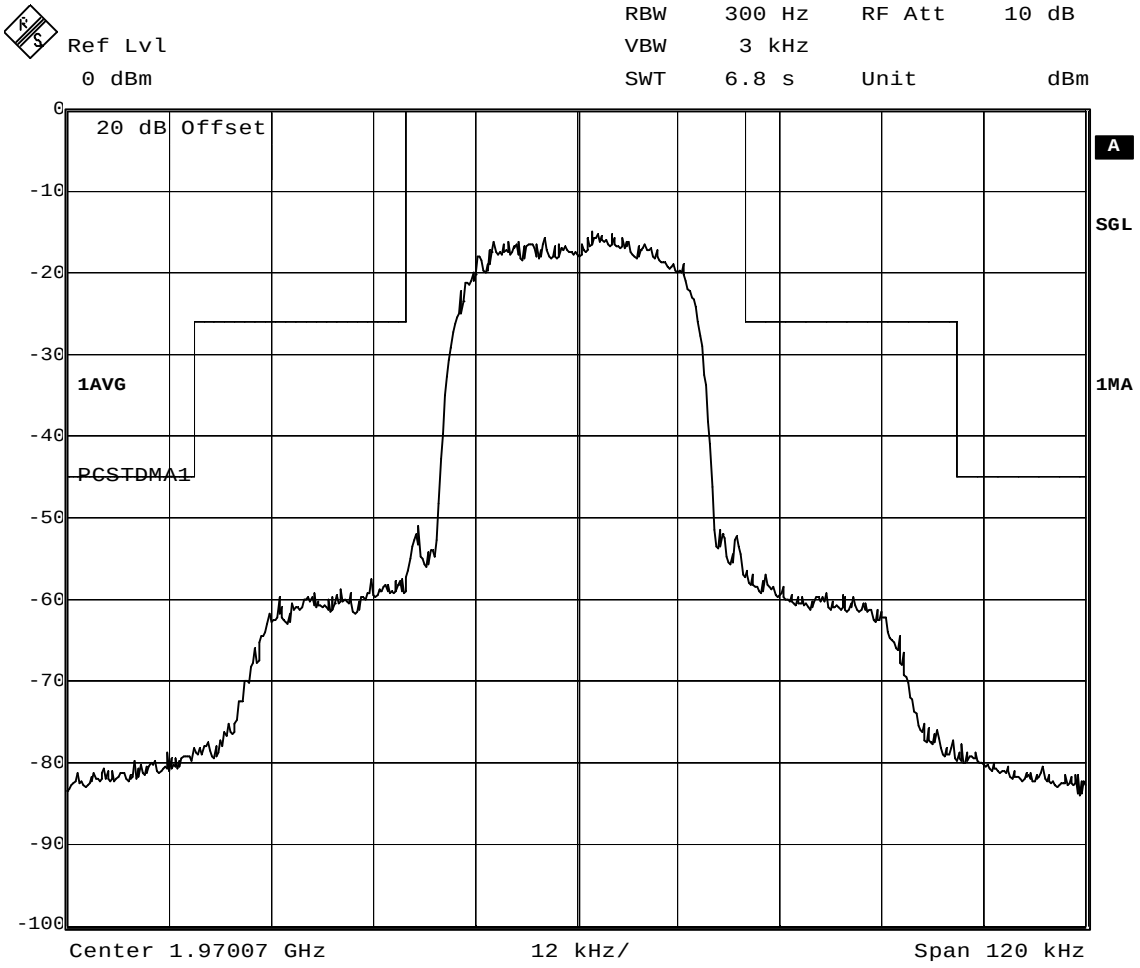
Occupied Bandwidth; Measured at Antenna Terminal; Block F; PCS Ch 1335; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1335;
Occ. Bw; Ant. Term.
Date: 11.JUL.2001 05:50:55

EXHIBIT 10: TEST REPORT

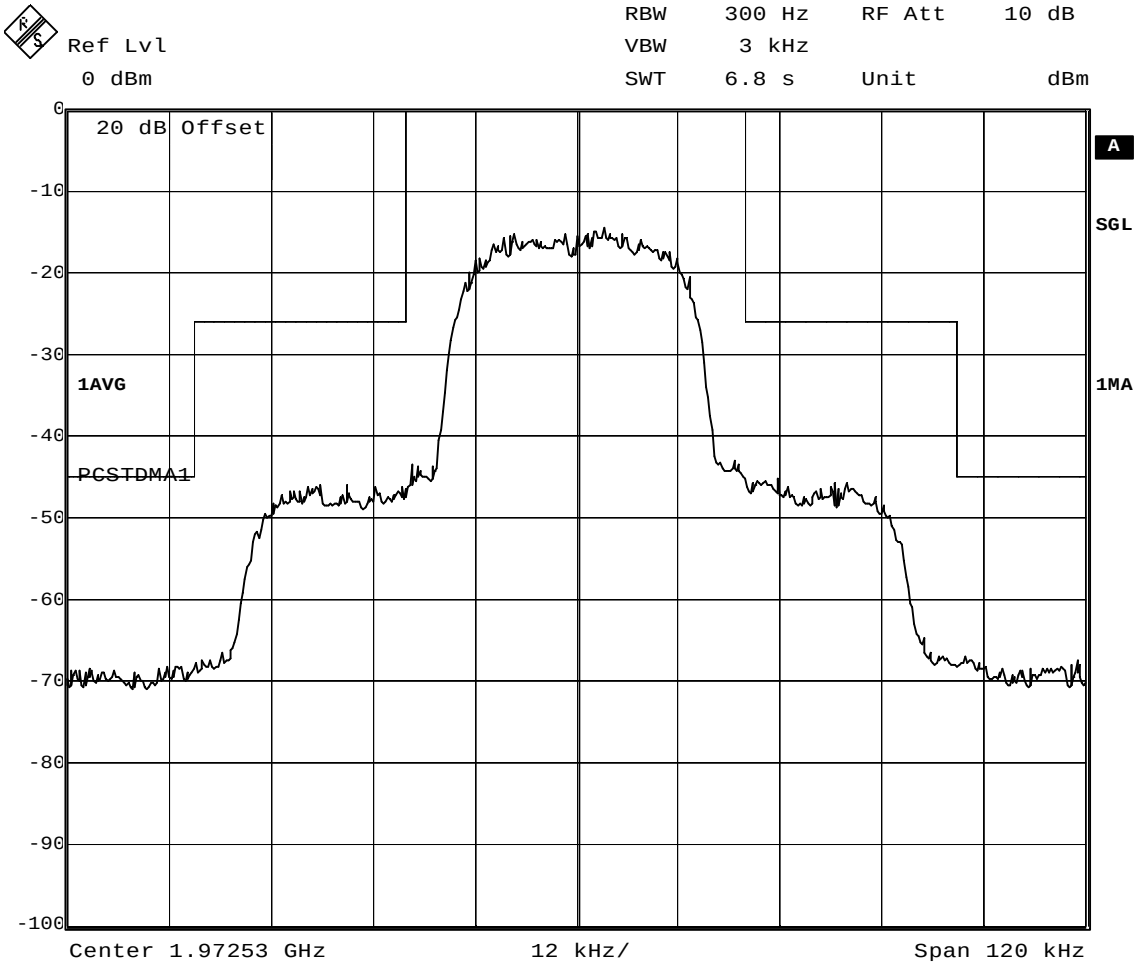
Occupied Bandwidth; Measured at Amplifier TX1 Input Terminal; Block F; PCS Ch 1335; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal. Input Power; 9.98 dBm.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1335;
Occ. Bw; Input to Amplifier.
Date: 12.JUL.2001 02:41:16

EXHIBIT 10: TEST REPORT

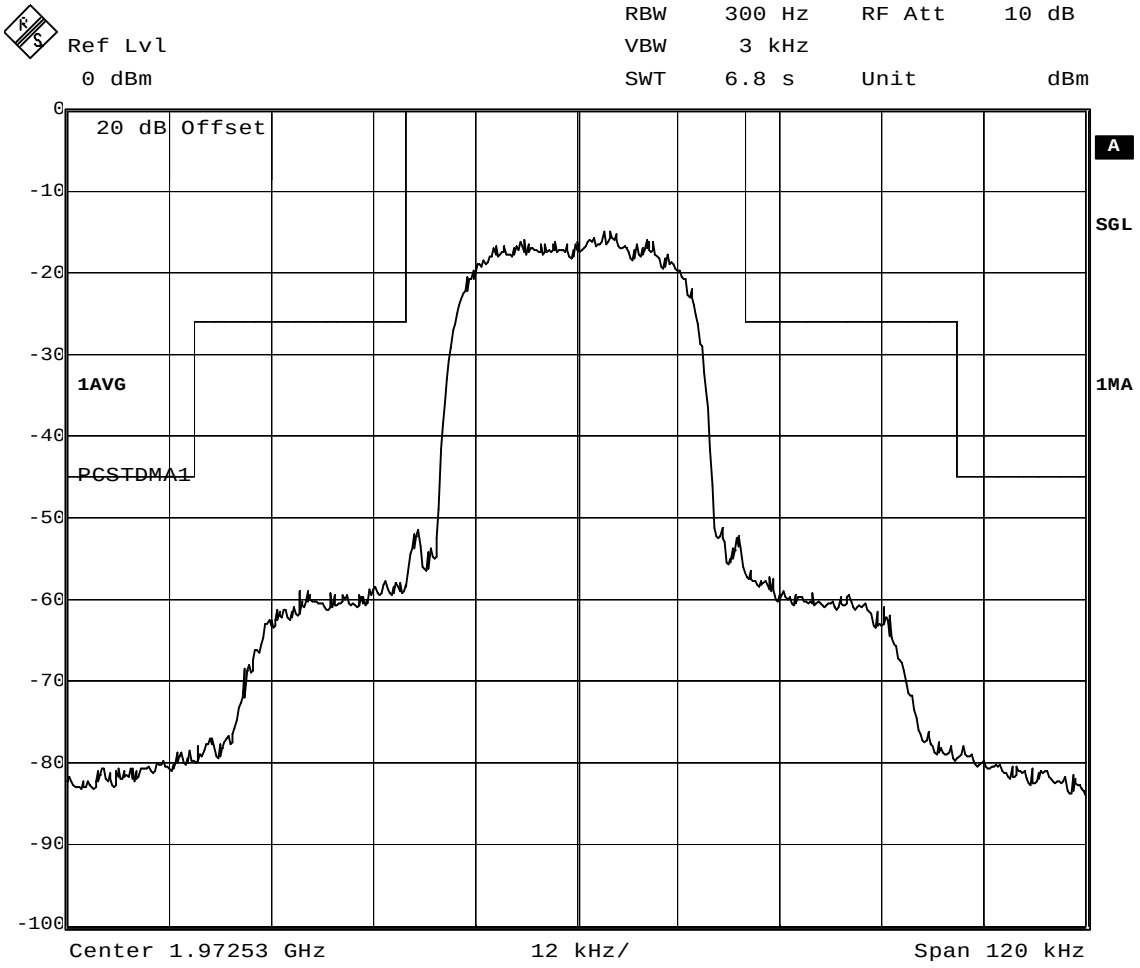
Occupied Bandwidth; Measured at Antenna Terminal; Block F; PCS Ch 1417; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1417;
Occ. Bw; Ant. Term.
Date: 11.JUL.2001 05:53:53

EXHIBIT 10: TEST REPORT

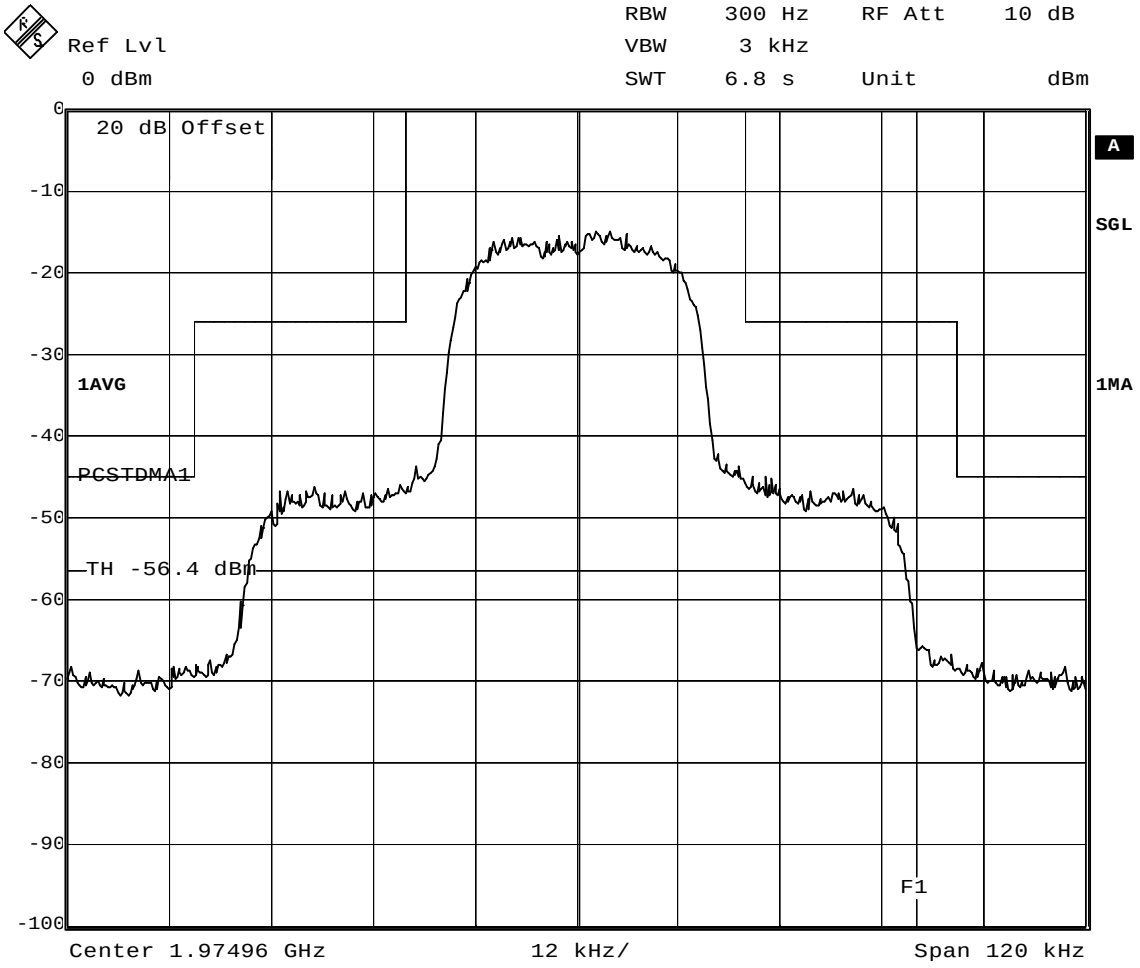
Occupied Bandwidth; Measured at Amplifier TX1 Input Terminal; Block F; PCS Ch 1417; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal. Input Power; 10.05 dBm.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1417;
Occ. Bw; Input to Amplifier.
Date: 12.JUL.2001 02:44:15

EXHIBIT 10: TEST REPORT

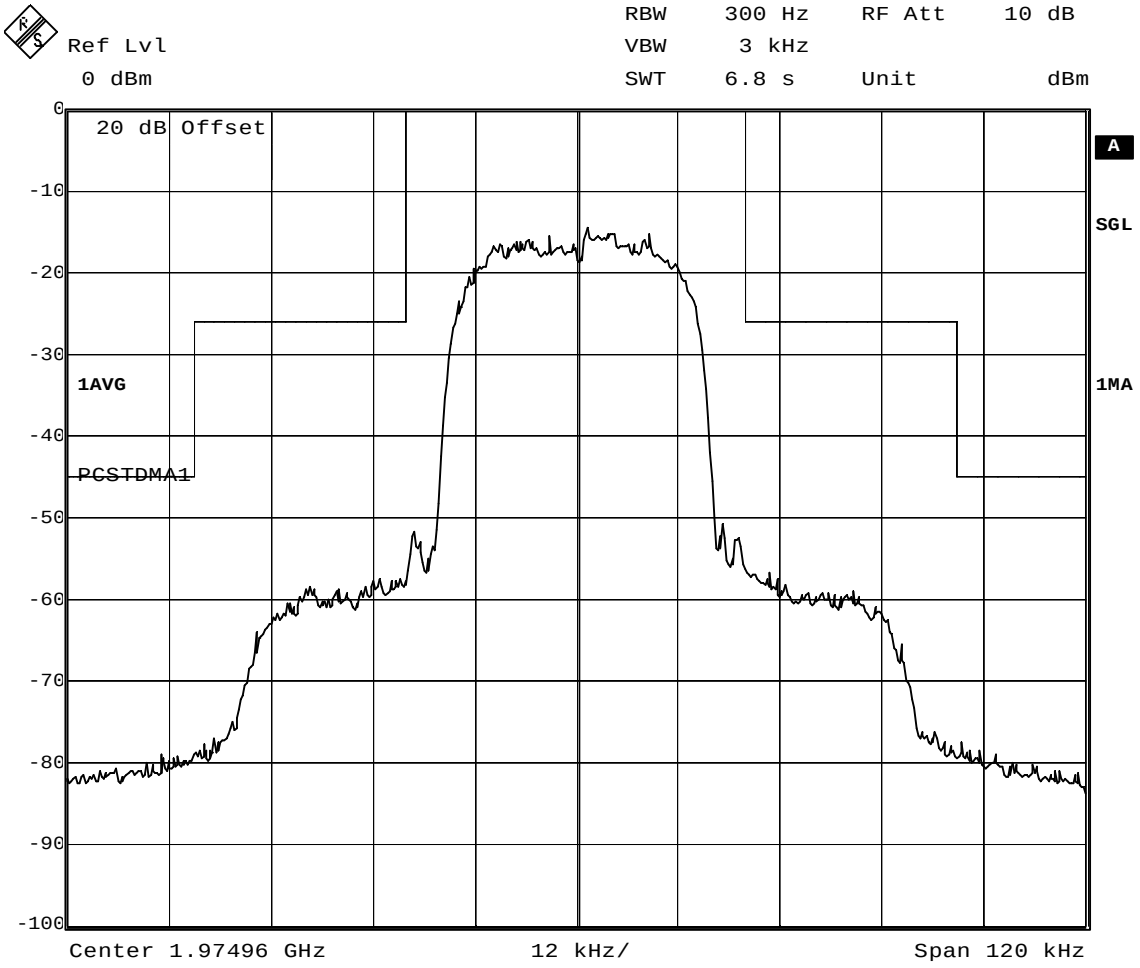
Occupied Bandwidth; Measured at Antenna Terminal; Block F; PCS Ch 1498; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1498;
Occ. Bw; Ant. Term.
Date: 11.JUL.2001 05:57:15

EXHIBIT 10: TEST REPORT

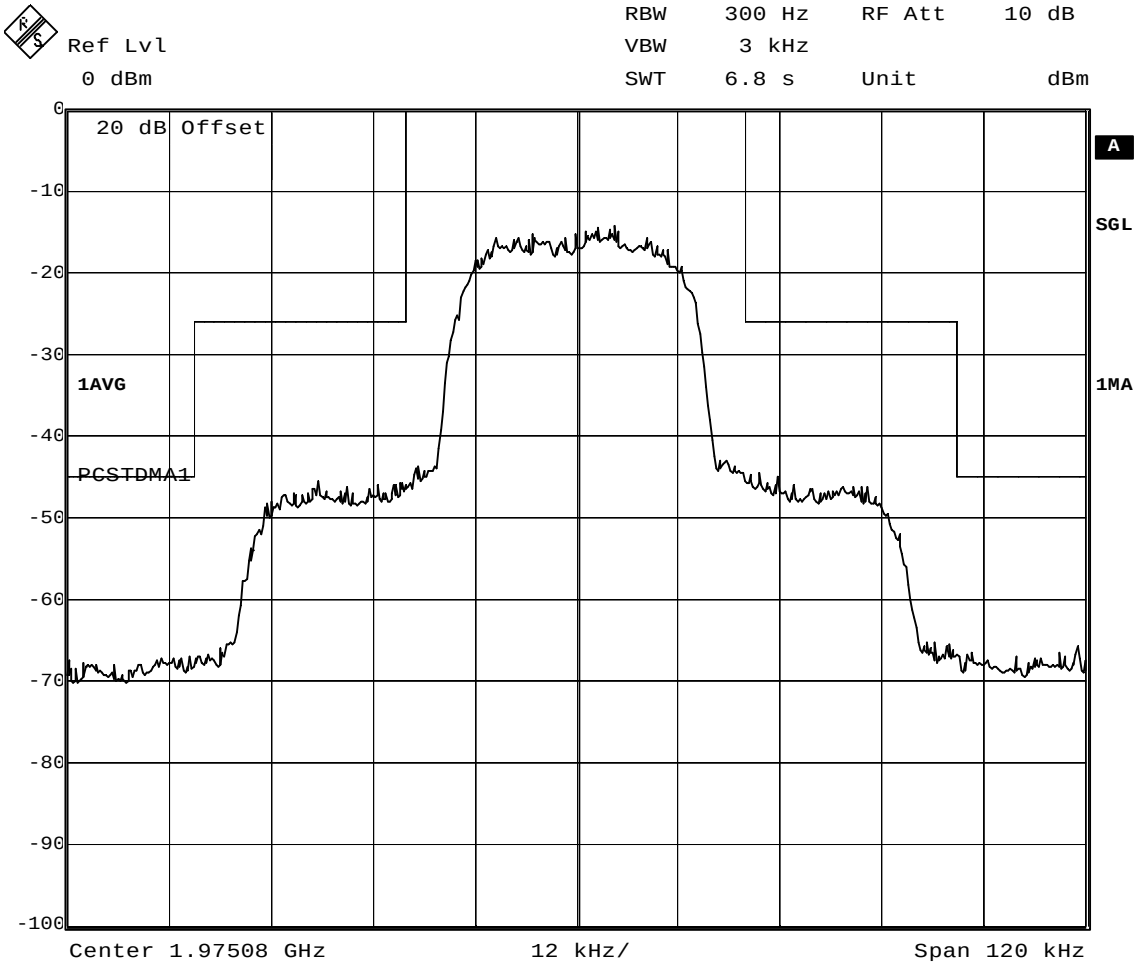
Occupied Bandwidth; Measured at Amplifier TX1 Input Terminal; Block F; PCS Ch 1498; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal. Input Power; 10.07 dBm.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1498;
Occ. Bw; Input to Amplifier.
Date: 12.JUL.2001 02:46:55

EXHIBIT 10: TEST REPORT

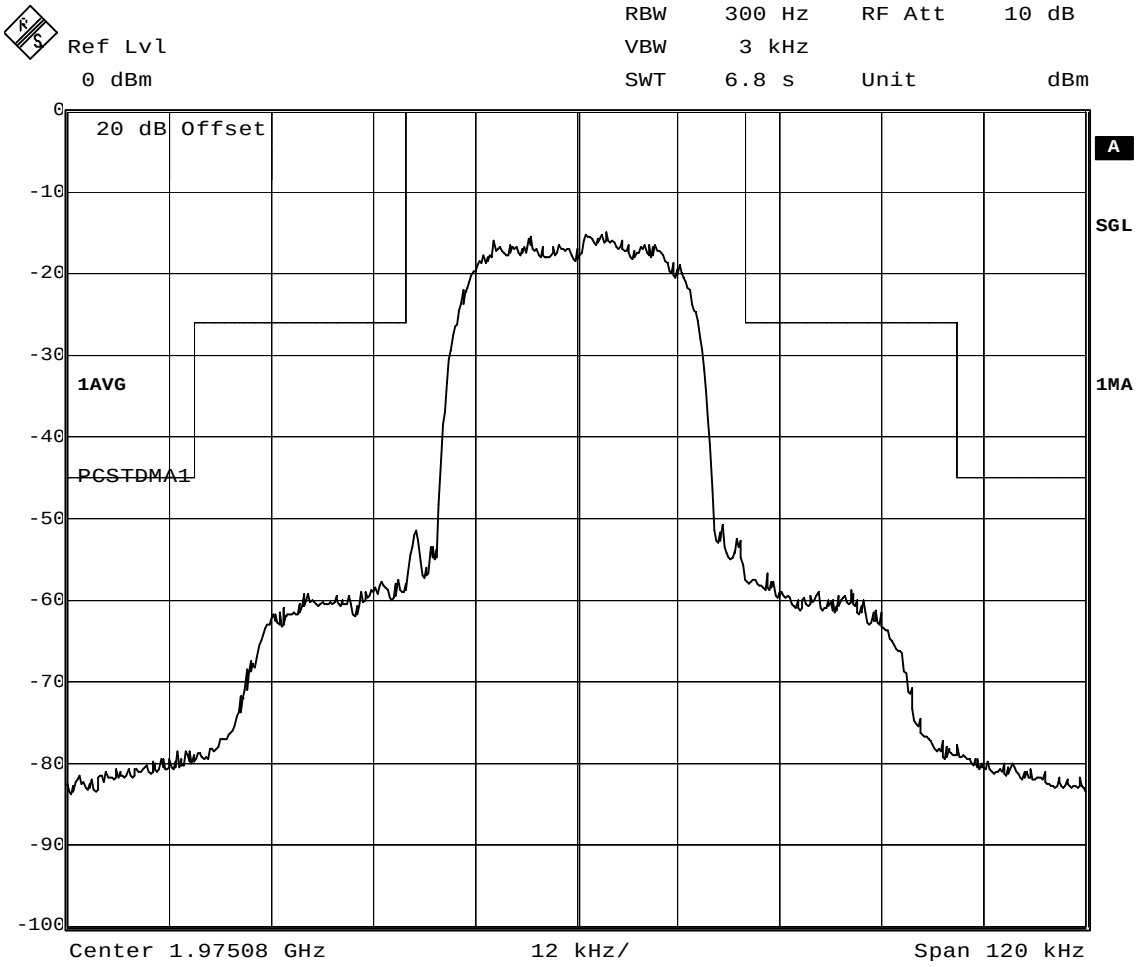
Occupied Bandwidth; Measured at Antenna Terminal; Block C; PCS Ch 1502; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1502;
Occ. Bw; Ant. Term.
Date: 11.JUL.2001 05:45:19

EXHIBIT 10: TEST REPORT

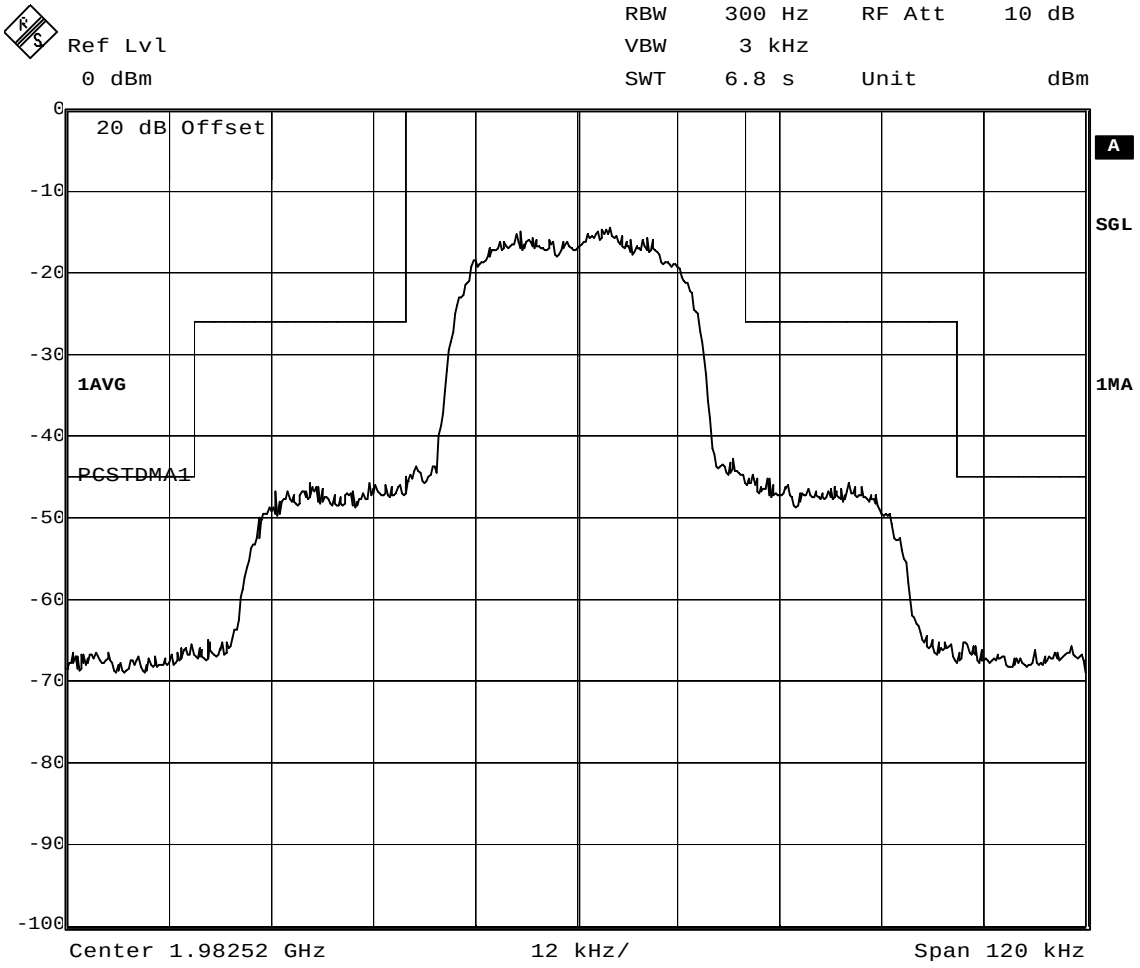
Occupied Bandwidth; Measured at Amplifier TX1 Input Terminal; Block C; PCS Ch 1502; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal. Input Power; 9.86 dBm.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1502;
Occ. Bw; Input to Amplifier.
Date: 12.JUL.2001 02:50:23

EXHIBIT 10: TEST REPORT

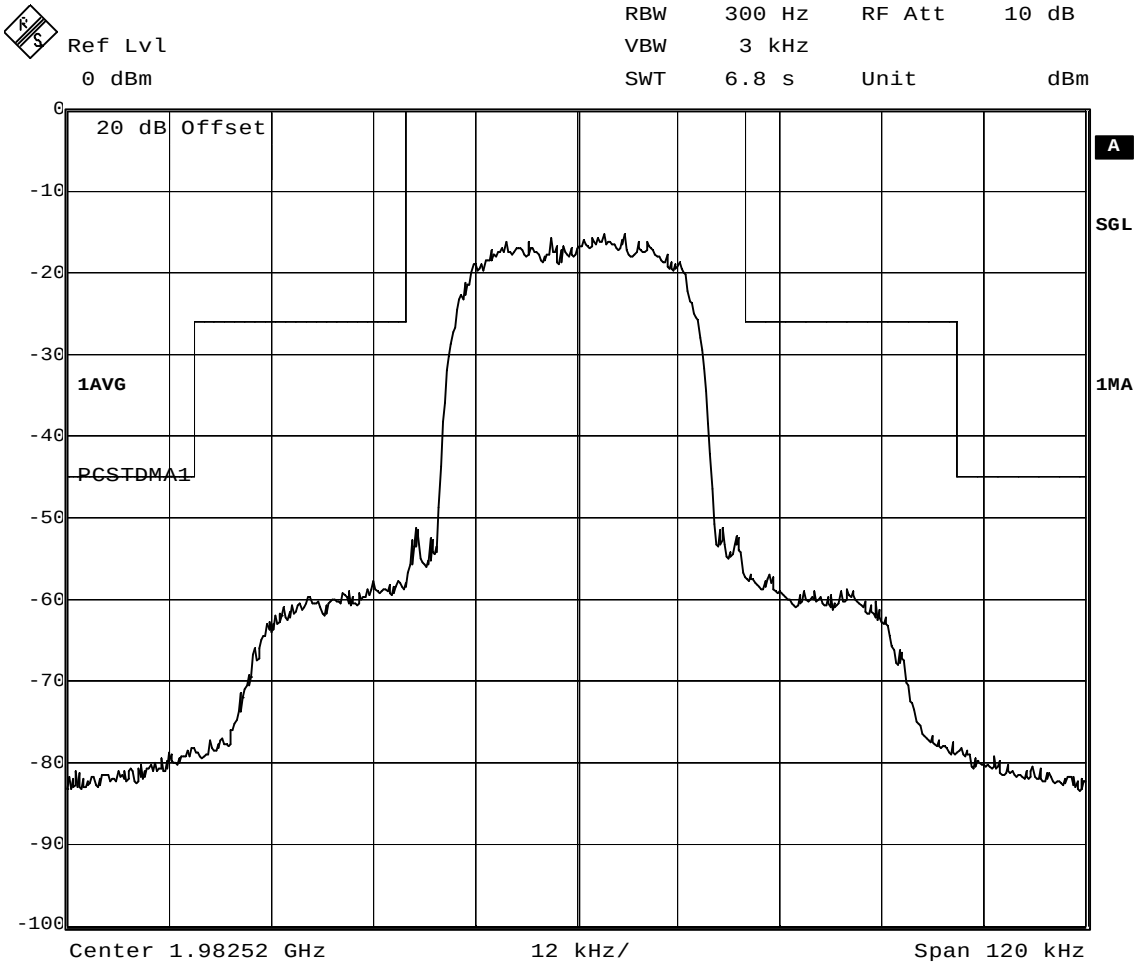
Occupied Bandwidth; Measured at Antenna Terminal; Block C; PCS Ch 1750; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1750;
Occ. Bw; Ant. Term.
Date: 11.JUL.2001 05:32:29

EXHIBIT 10: TEST REPORT

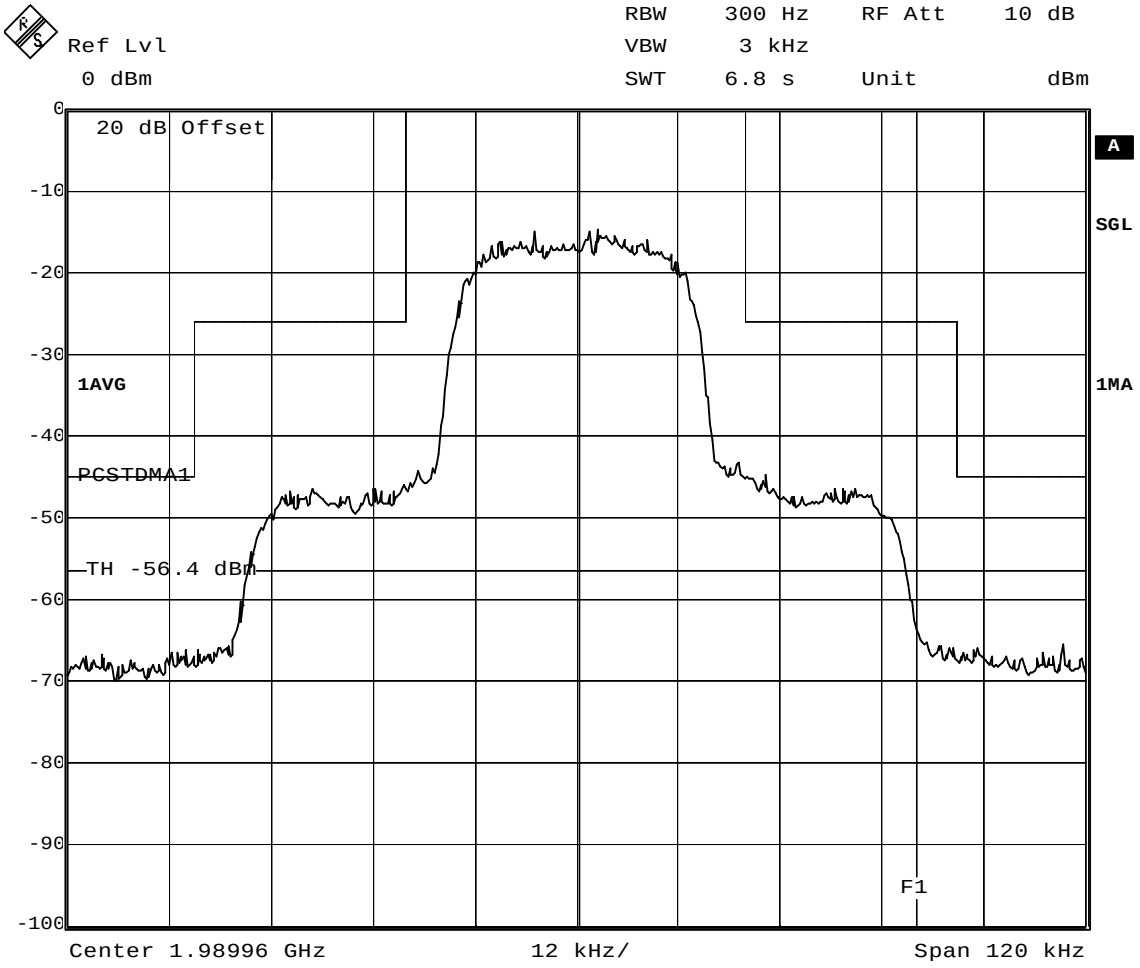
Occupied Bandwidth; Measured at Amplifier TX1 Input Terminal; Block C; PCS Ch 1750; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal. Input Power; 9.80 dBm.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1750;
Occ. Bw; Input to Amplifier.
Date: 12.JUL.2001 02:53:02

EXHIBIT 10: TEST REPORT

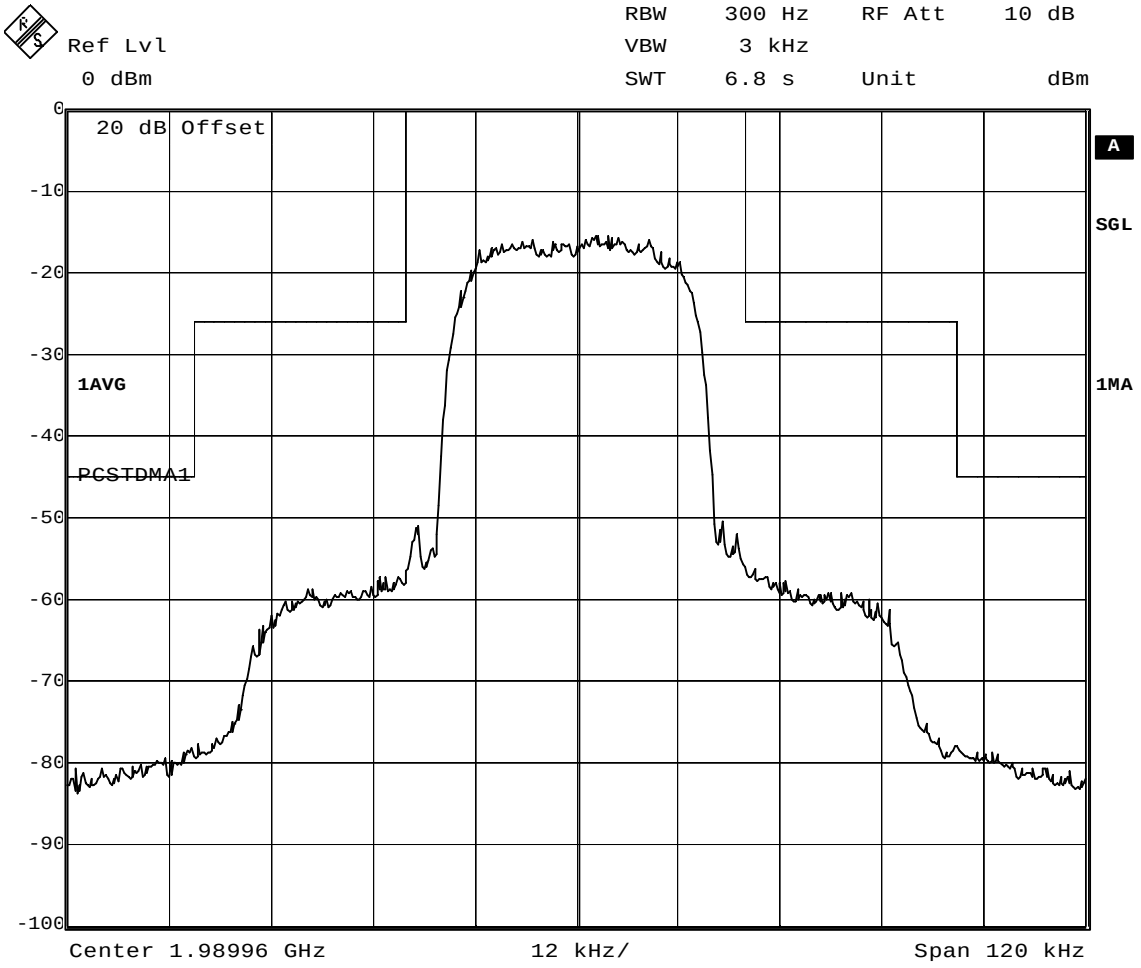
Occupied Bandwidth; Measured at Antenna Terminal; Block C; PCS Ch 1998; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1998;
Occ. Bw; Ant. Term.
Date: 11.JUL.2001 05:17:24

EXHIBIT 10: TEST REPORT

Occupied Bandwidth; Measured at Amplifier TX1 Input Terminal; Block C; PCS Ch 1998; Power set to 60 Watts (47.78 dBm) at Amplifier TX1 Output Terminal. Input Power; 9.82 dBm.

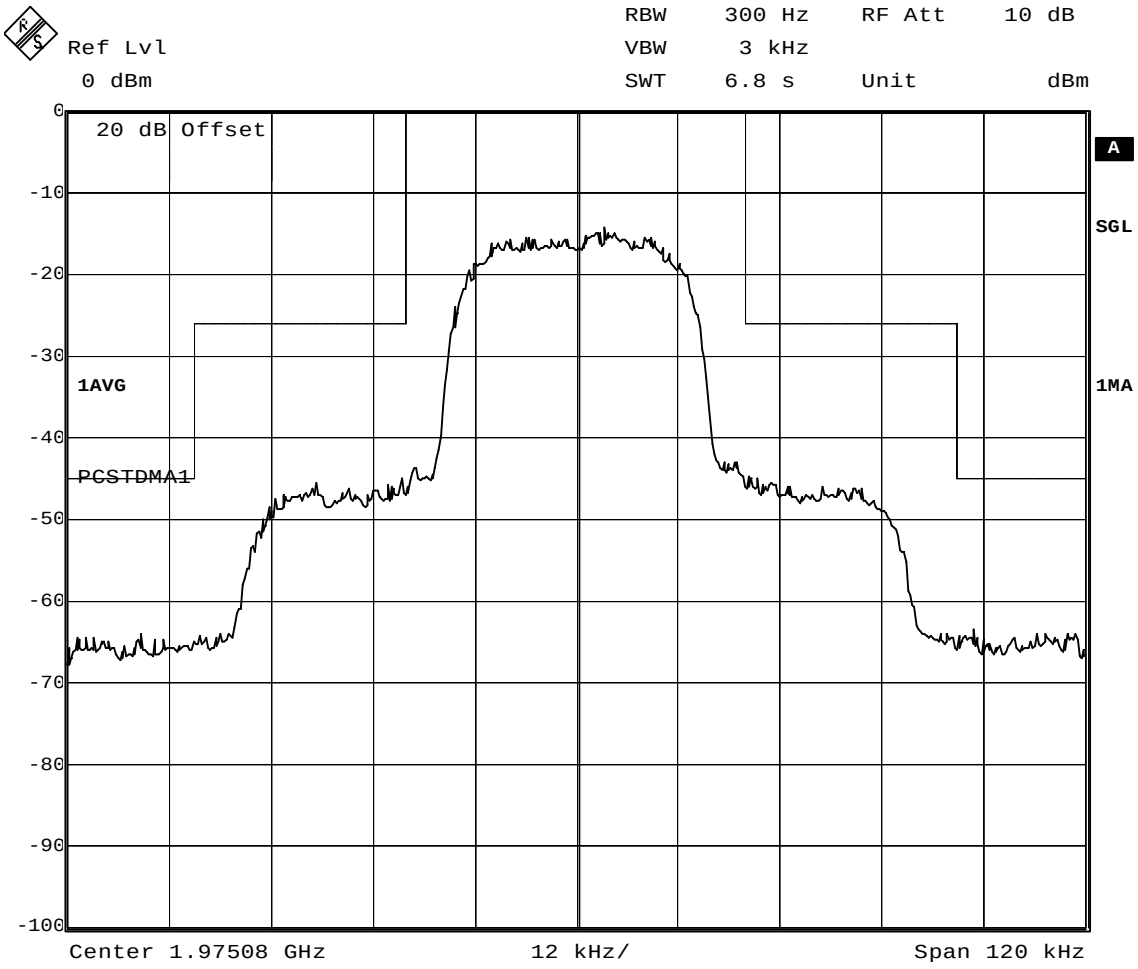


Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1998;
Occ. Bw; Input to Amplifier.
Date: 12.JUL.2001 03:05:22

EXHIBIT 10: TEST REPORT

The following occupied bandwidth plots have been included to show the similarity between the two amplifiers of the same circuit board

Occupied Bandwidth; Measured at Antenna Terminal; Block C; PCS Ch 1502; Power set to 60 Watts (47.78 dBm) at Amplifier TX2 Output Terminal.

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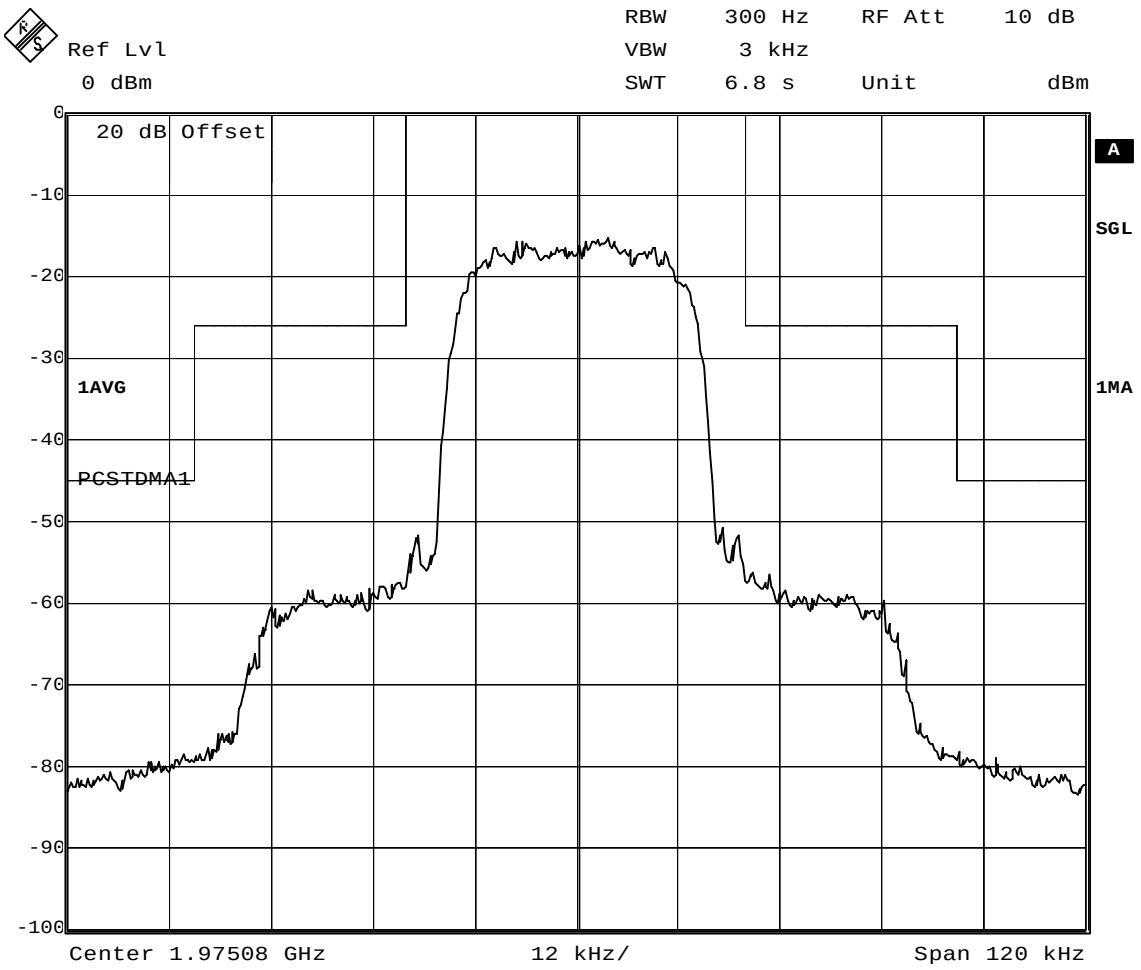
Title:     AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1502;
             Occ. Bw; Antenna Term.TX2.
Date:      13.JUL.2001  00:57:57
```

EXHIBIT 10: TEST REPORT

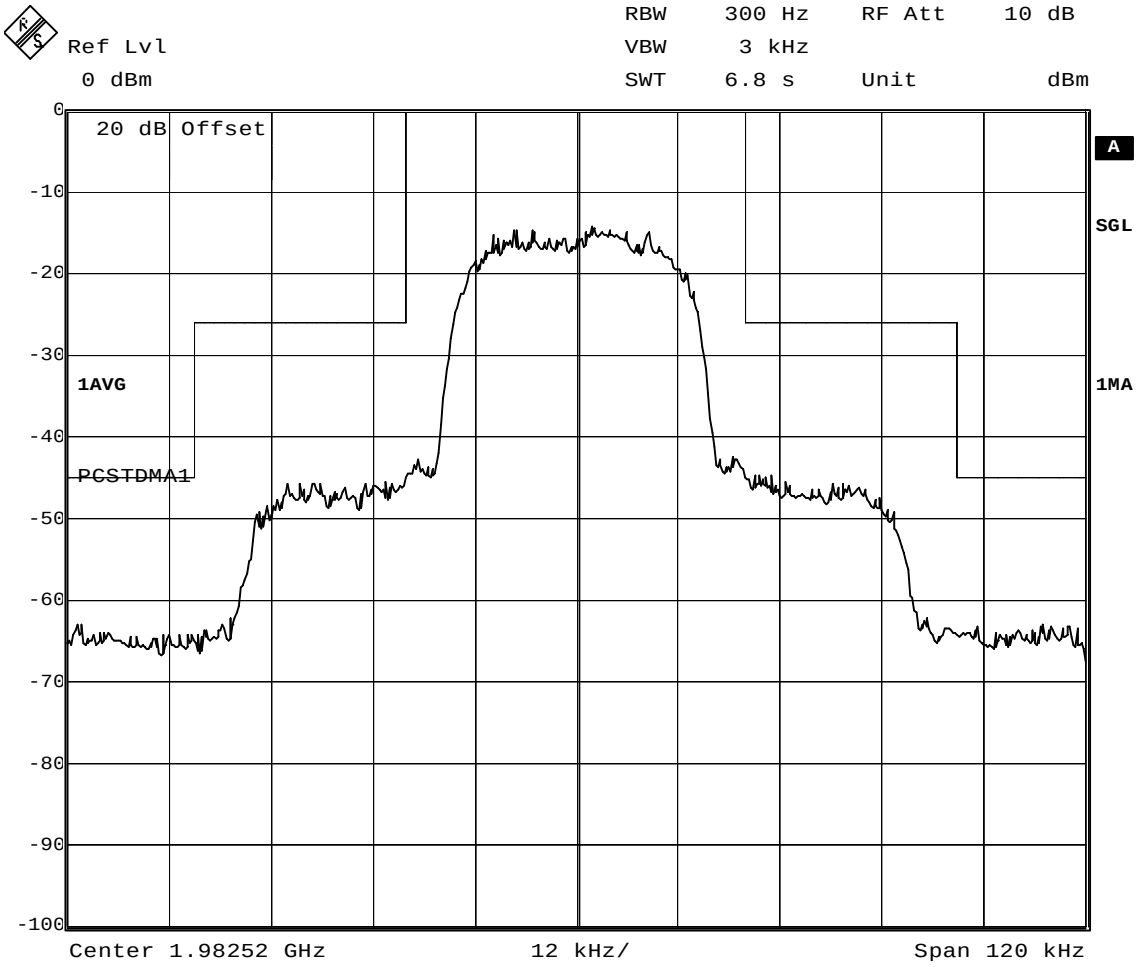
Occupied Bandwidth; Measured at Amplifier TX2 Input Terminal; Block C; PCS Ch 1502; Power set to 60 Watts (47.78 dBm) at Amplifier TX2 Output Terminal. Input Power; 9.91 dBm.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1502;
Occ. Bw; Input to AmplifierTX2.
Date: 12.JUL.2001 22:14:18

EXHIBIT 10: TEST REPORT

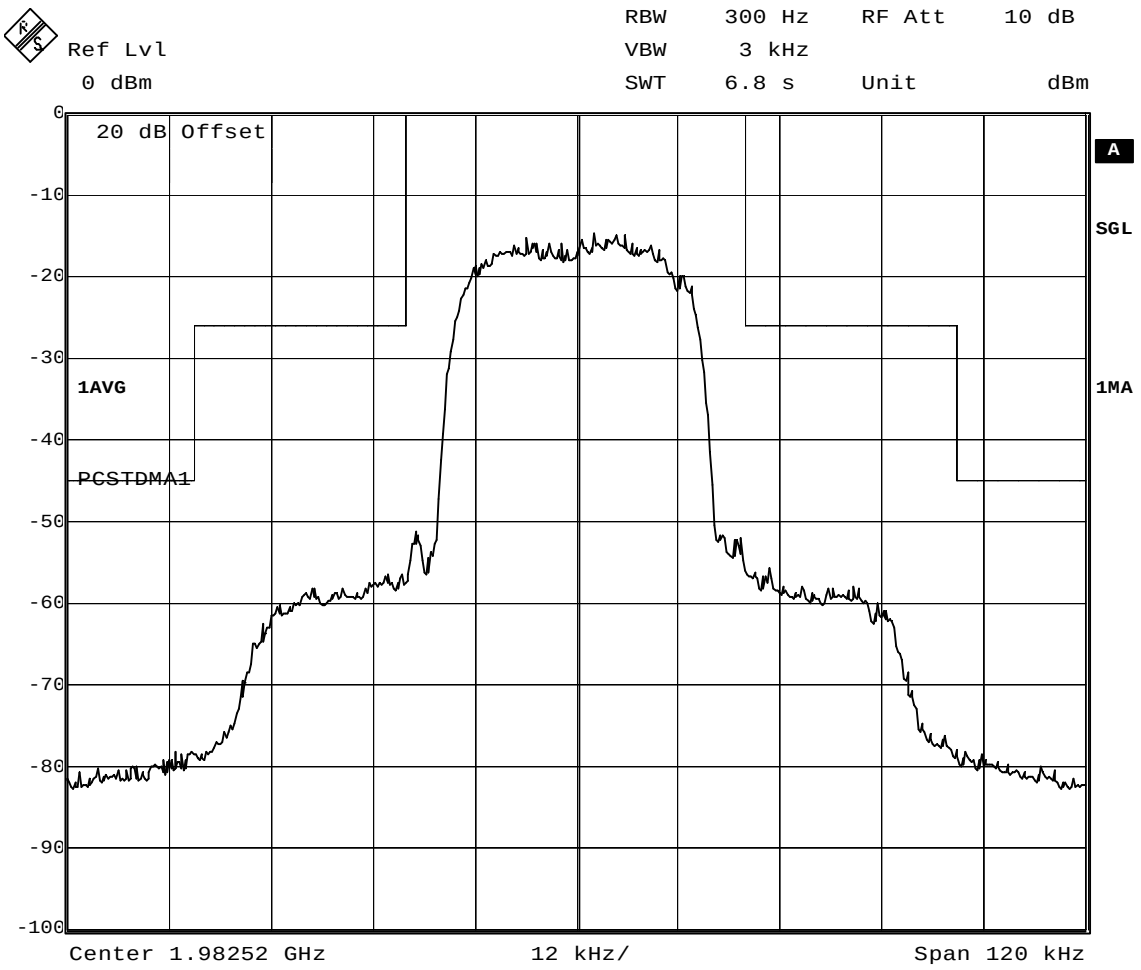
Occupied Bandwidth; Measured at Antenna Terminal; Block C; PCS Ch 1750; Power set to 60 Watts (47.78 dBm) at Amplifier TX2 Output Terminal.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1750;
Occ. Bw; Antenna Term.TX2.
Date: 13.JUL.2001 01:05:04

EXHIBIT 10: TEST REPORT

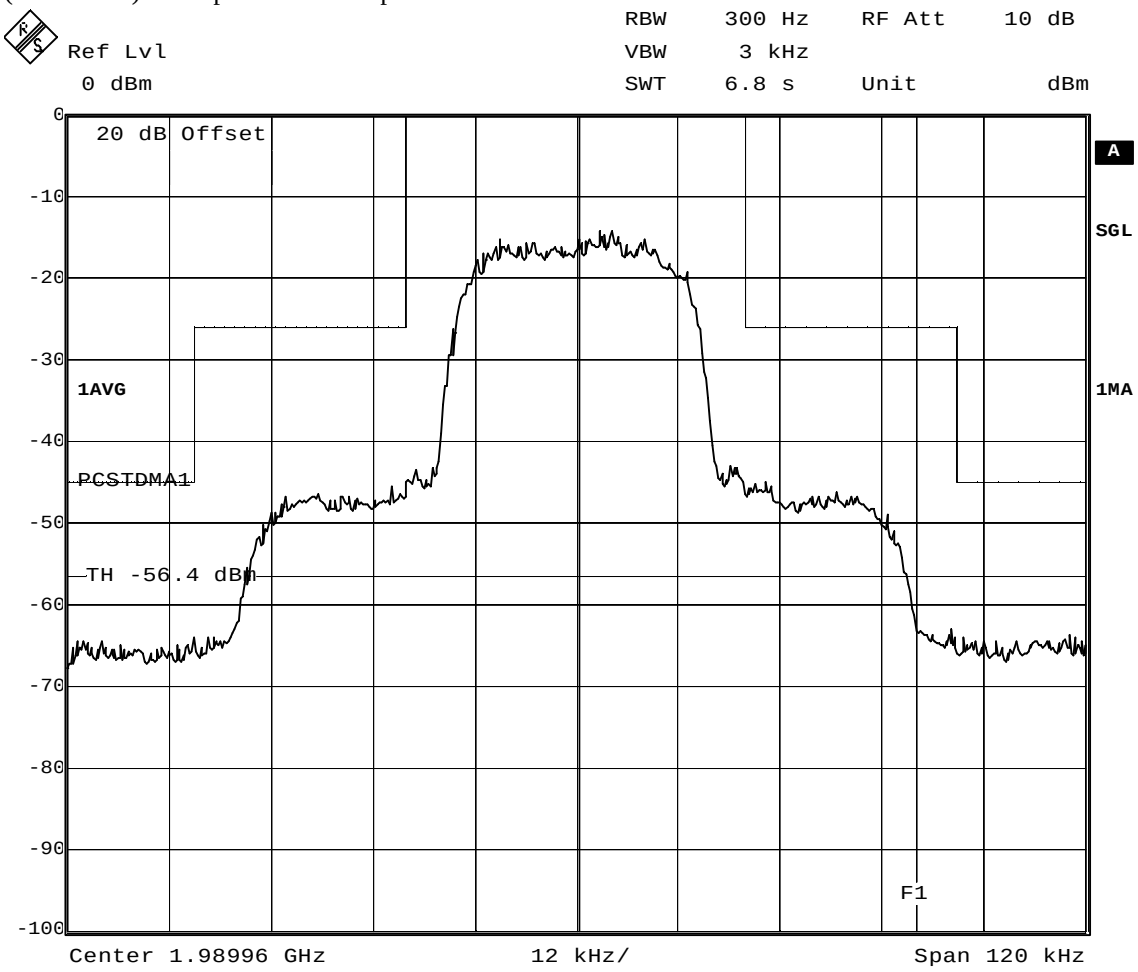
Occupied Bandwidth; Measured at Amplifier TX2 Input Terminal; Block C; PCS Ch 1750; Power set to 60 Watts (47.78 dBm) at Amplifier TX2 Output Terminal. Input Power; 10.03 dBm.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1750;
Occ. Bw; Input to AmplifierTX2.
Date: 12.JUL.2001 22:10:52

EXHIBIT 10: TEST REPORT

Occupied Bandwidth; Measured at Antenna Terminal; Block C; PCS Ch 1998; Power set to 60 Watts (47.78 dBm) at Amplifier TX2 Output Termin

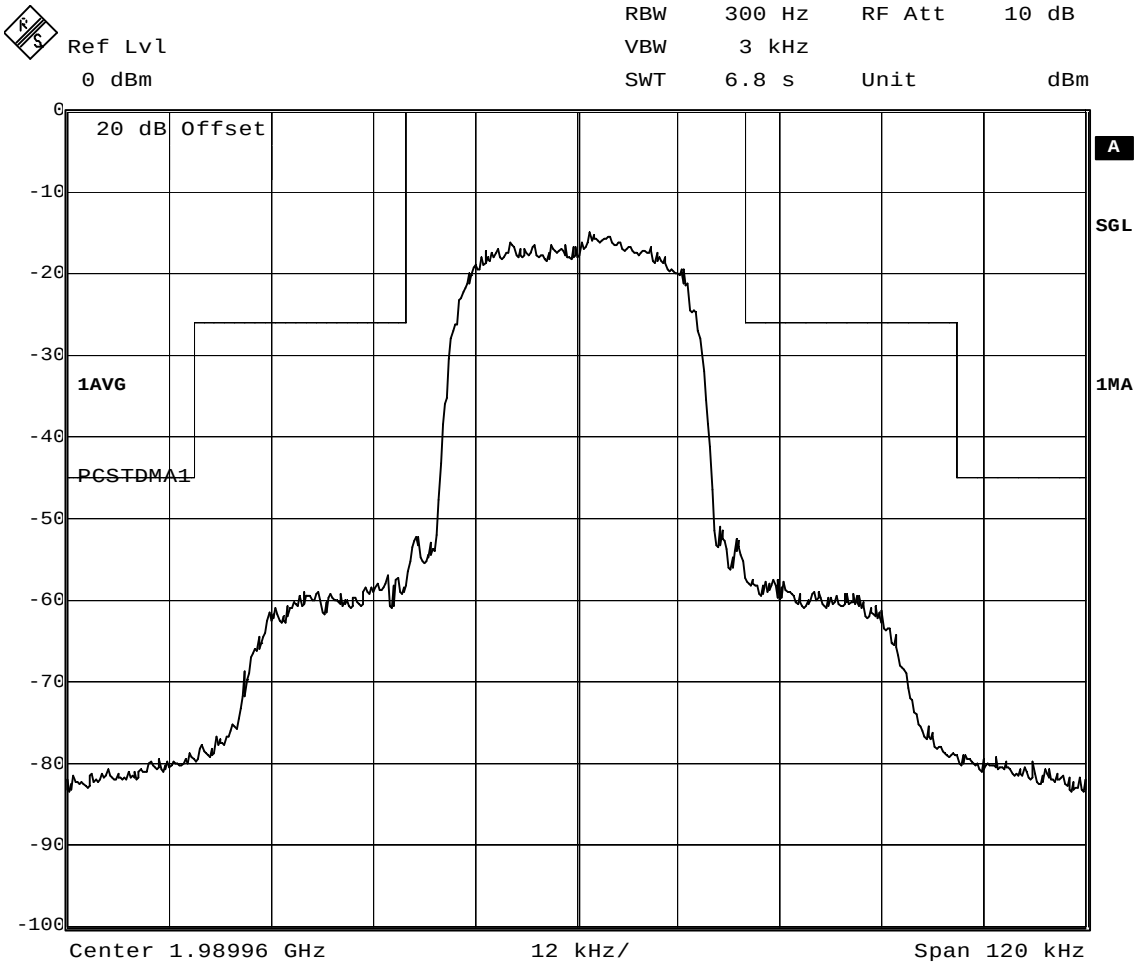


Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1998;
Occ. Bw; Antenna Term.TX2.
Date: 13.JUL.2001 01:46:25

APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

Occupied Bandwidth; Measured at Amplifier TX2 Input Terminal; Block C; PCS Ch 1998; Power set to 60 Watts (47.78 dBm) at Amplifier TX2 Output Terminal. Input Power; 10.26 dBm.



Title: AS5CMP-45
Comment A: Lucent Technologies: PCS-TDMA Dual ICLA; PCS Ch 1998;
Occ. Bw; Input to AmplifierTX2.
Date: 12.JUL.2001 22:07:35

APPLICANT: LUCENT TECHNOLOGIES FCC ID: AS5CMP-45

EXHIBIT 10: TEST REPORT

PART 2.1051 MEASUREMENTS REQUIRED: SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS.

This test procedure is an extension of the occupied bandwidth measurement at the J4 antenna terminal, using the same carrier frequencies, power level setting procedure and modulated carrier offset procedure. In accordance with Part 2.1057(a), the required frequency spectrum to be investigated extends from the lowest RF signal generated to the 10^{th} harmonic of the carrier at the J4 terminal. The emission limits at the antenna terminal are specified in Part 24.238 (a) … the power of any emission shall be attenuated below the transmitter power (*P*) by at least 43 + 10 log (*P*) dBc. The power *P* is the average carrier power measured at the J4 antenna terminal in Watts. Setting the power level at J4 to 25 Watts average, produces an emission attenuation below the carrier limit of 57.2 dBc. Part 24.238 (b) specifies the required Resolution Bandwidth (RBW) to be 1 MHz. In accordance with Part 2.1051, "the magnitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be specified"; i.e., these are not reportable. Hence, the measurement equipment must be adjusted and configured to provide an instrumentation noise floor that is at least 20 dB or more below the 43 + 10 log (*P*) dBc limit, which equates to 77.2 dBc. The pertinent test parameters are:

1.	Frequency Spectrum:	15 MHz to 20 GHz
2.	Resolution Bandwidth:	1 MHz (Part 24.238)
3.	Emission Limitation:	43 + 10 log (*P*) dBc = 43 + 10 log (25 Watts) = 57.2 dBc
4.	Instrumentation Noise Floor:	at least 20 dB greater than "43 + 10 log (*P*) dBc" = 77.2 dBc

Minimum Standard Requirement:

The emission limits at the antenna terminal are specified in Part 24.238 (a) … the power of any emission shall be attenuated below the transmitter power (*P*) by at least 43 + 10 log (*P*) dBc (i.e., attenuation below the unmodulated carrier). The power *P* is the average carrier power measured at the J4 antenna terminal in Watts. The measurement equipment must be adjusted and configured to provide an instrumentation noise floor that is 20 dB or more below the 43 + 10 log (*P*) dBc limit. In summary:

1. Carrier Power Level = 44.0 dBm
2. Emission Limitation = 44.0dBm – 57.2 dBc = -13.0 dBm
3. Reportable Emission Limit = -13.0 dBm – 20 dB = - 33.0 dBm
4. Emission power levels less than – 33.0 dBm are not reportable.

Test Set-up and Configuration: Same as previously used for Part 2.1046 RF Power Measurement.

Method of Measurement:

In order to suppress the instrumentation noise floor sufficient to detect and measure spurious signals that have power levels as low as 20 dB below the required limit, or as low as –33.0 dBm (i.e., 75 dBc), an EMC software package was employed to drive the spectrum analyzer, collect and compile the acquired data, perform mathematical corrections to the data by incorporating (i.e., programming) pre-measured path losses into the software, and then generate a graphical display as shown in this exhibit. The software package is: *TILE/IC (Total Integrated Laboratory Environment/Instrument Control System)*; purchased and licensed from Quantum Change/EMC Systems, Inc. The instrumentation noise floor is suppressed by the software's ability to split the spectrum being measured into many small segments, perform the

mathematical corrections to each segment, and then sequentially compile all the segments into a continuous graphical display.

Part 24.238 requires that emissions over the required spectrum 10 MHz to 20 GHz be measured using an instrumentation resolution bandwidth of 1 MHz. The TILE/IC software was able to sufficiently suppress to normally high noise floor associated with 1 MHz RBW by measuring the spectrum in a sequential series of short segments using a peak detector, in combination with an appropriate low-pass filter and then with an appropriate high-pass filter, installed at the input terminal of the spectrum analyzer, to prevent the carrier from over driving the spectrum analyzer, as shown in the table below. The spectrum portion 1.8 – 2.5 GHz, in close proximity to the carrier, was measured without filters, but with a 30 kHz RBW and sample detector.

Start Frequency	**Stop Frequency**	**Number of Ranges (Segements)**	**Resolution Bandwidth**	**Dectector Function**
10.0 MHz	1.80 GHz	15	1 MHz	Peak
1.80 GHz	1.93 GHz	6	30 kHz	Sample
1.93 GHz	1.99 GHz	12	30 kHz	Sample
1.99 GHz	2.50 GHz	20	30 kHz	Sample
2.50 GHz	10.0 GHz	8	1 MHz	Peak
10.0 GHz	20.0 GHz	10	1 MHz	Peak

The specific EMC test filters used were manufactured by TRILITHIC, Inc., Indianapolis, IN:

1. Low Pass Filter: Model 10LC1790-3-AA; SN 200033011; Product No. 23042
2. High Pass Filter: Model 5HC2850/18050-1-.8-KK; SN 9926050; Product No. 23042

Part 24.238 requires that this test be performed for the lowest settable and for the highest settable carrier frequencies in each of the 6 PCS frequency blocks, which are summarized in the following table.

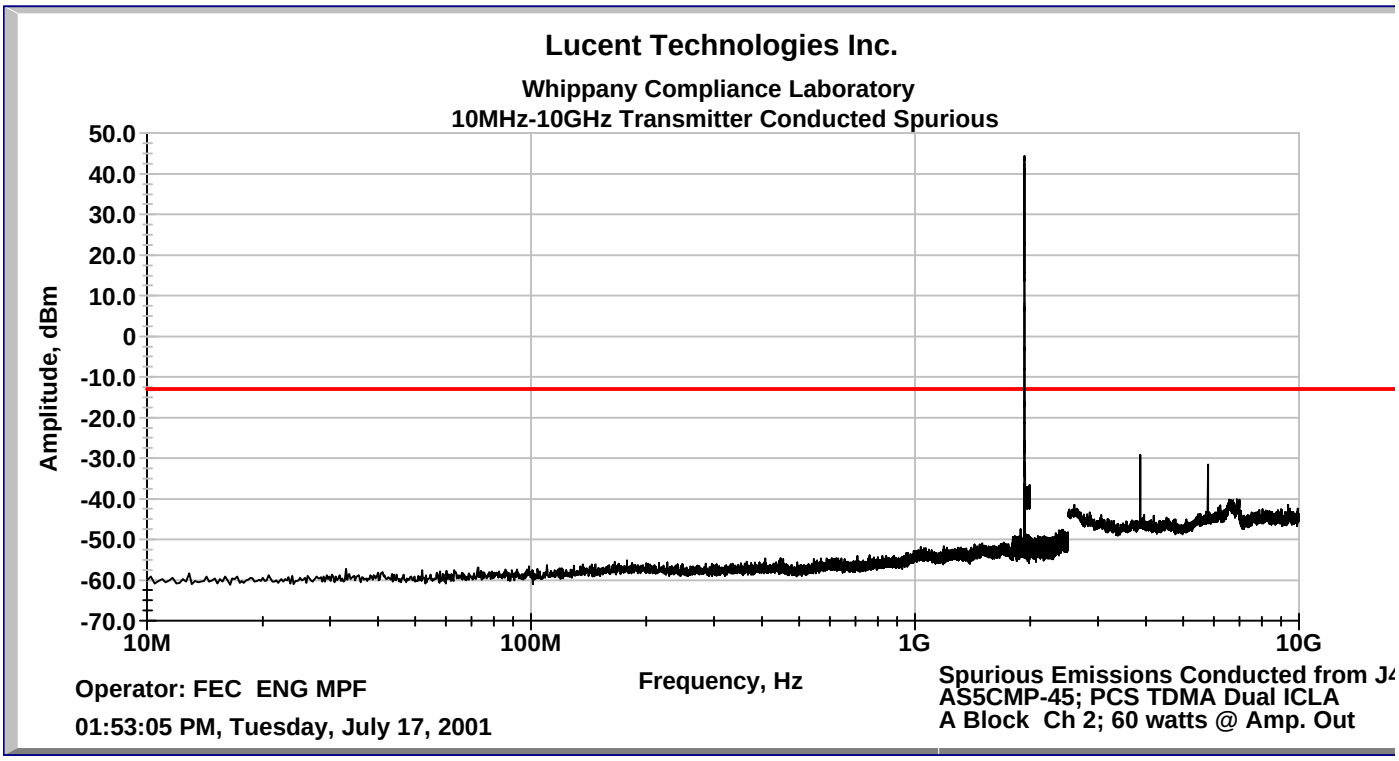
PCS Frequency Block	AMPS Channel No.	AMPS Frequency	PCS Channel No.	PCS Frequency
A (Low)	2	870.06 MHz	2	1930.08 MHz
A (High)	498	884.94 MHz	498	1944.96 MHz
D (Low)	502	885.06 MHz	502	1945.08 MHz
D (High)	664	889.92 MHz	664	1949.94 MHz
B (Low)	1	870.03 MHz	668	1950.06 MHz
B (High)	497	884.91 MHz	1224	1964.94 MHz
E (Low)	501	885.03 MHz	1228	1965.06 MHz
E (High)	664	889.92 MHz	1331	1969.95 MHz
F (Low)	1	870.03 MHz	1335	1970.07 MHz
F (High)	224	874.92 MHz	1498	1974.96 MHz
C (Low)	228	875.04 MHz	1502	1975.08 MHz
C (High)	664	889.92 MHz	1998	1989.96 MHz

RESULTS: The PCS TDMA Power Amplifier (D-ICLA), subject of this application for certification under FCC ID: AS5CMP-45, shows energy at the second and third harmonics of the carrier which are greater than –33 dBm, therefore plots to show that although the data is reportable the D-ICLA is still compliant.

APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

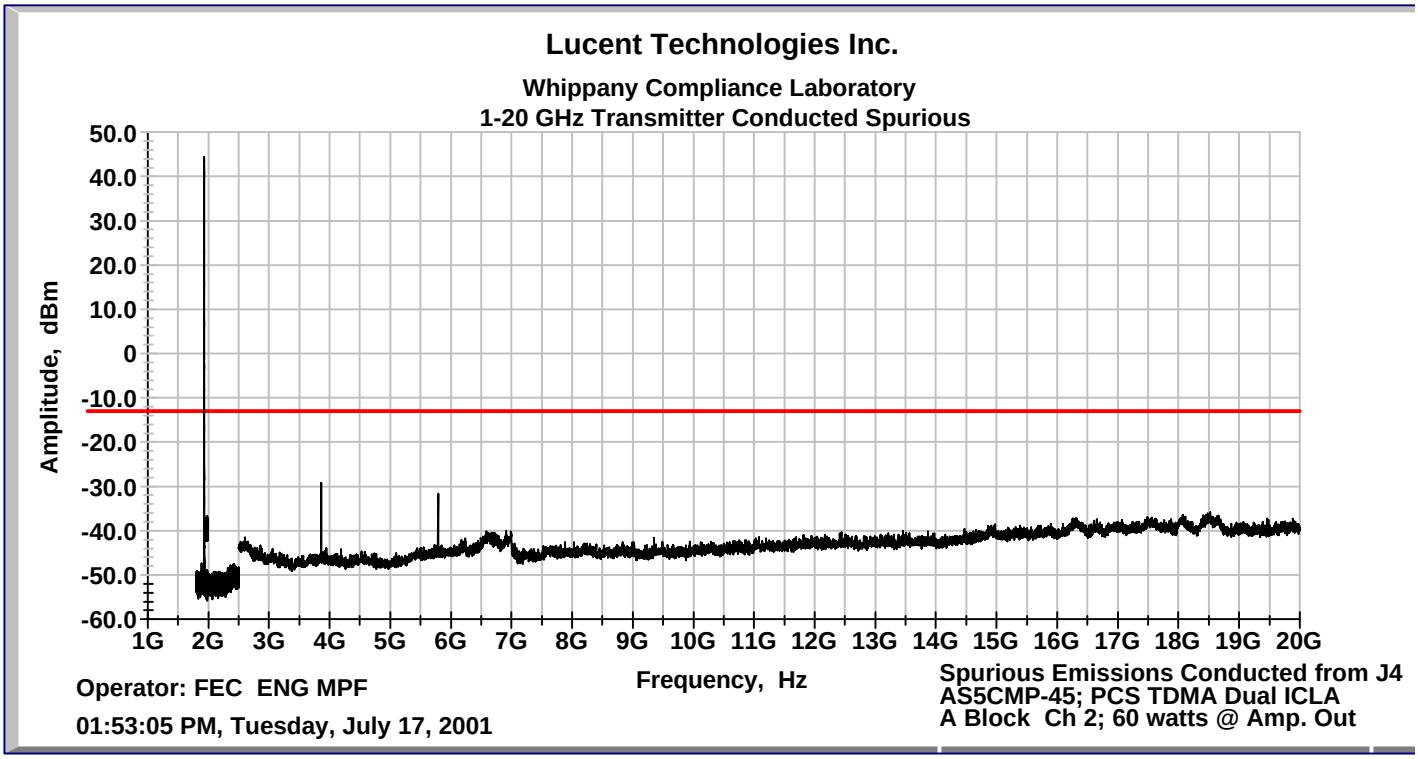
Conducted Spurious Emissions; Antenna Terminal; 10 MHz to 10 GHz;
Block A; PCS Ch 2



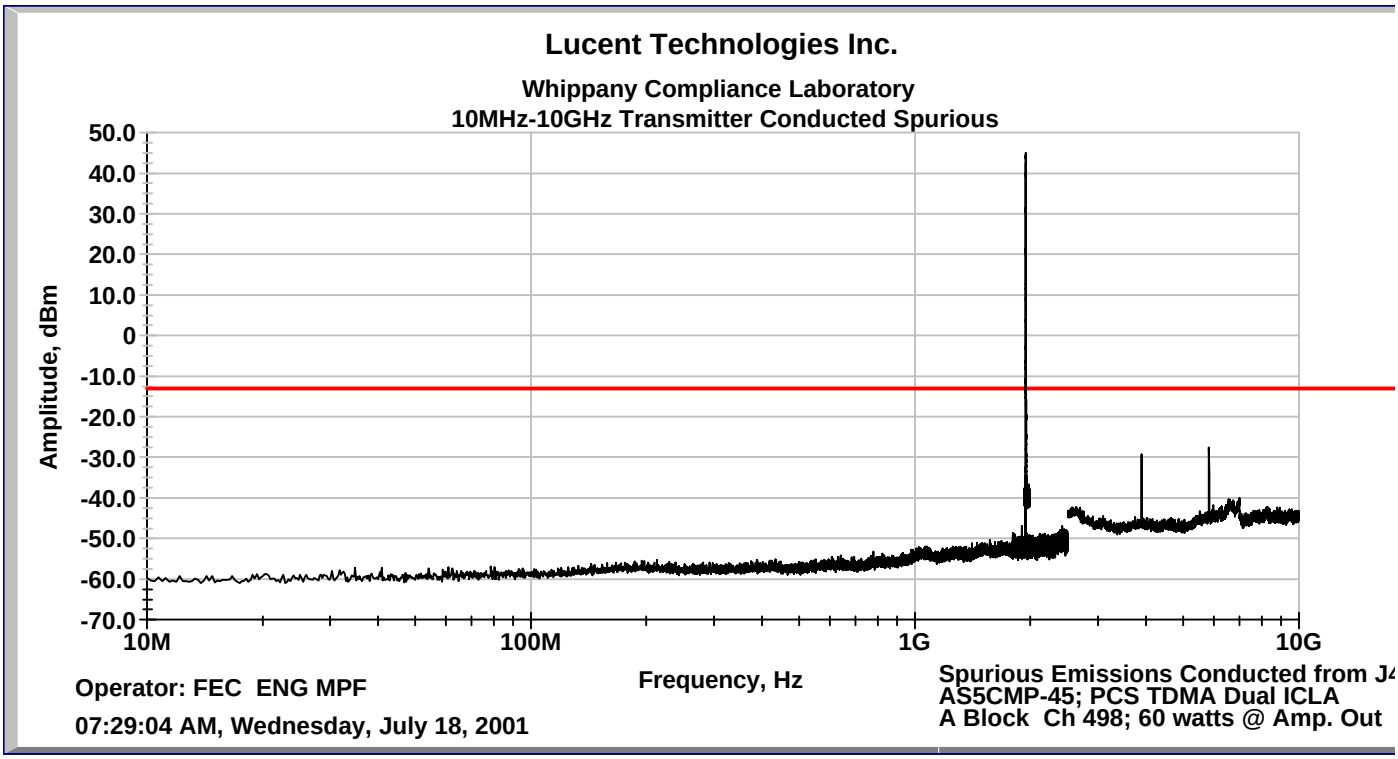
APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

Conducted Spurious Emissions; Antenna Terminal; 10 GHz to 20 GHz; ; Block A; PCS Ch 2



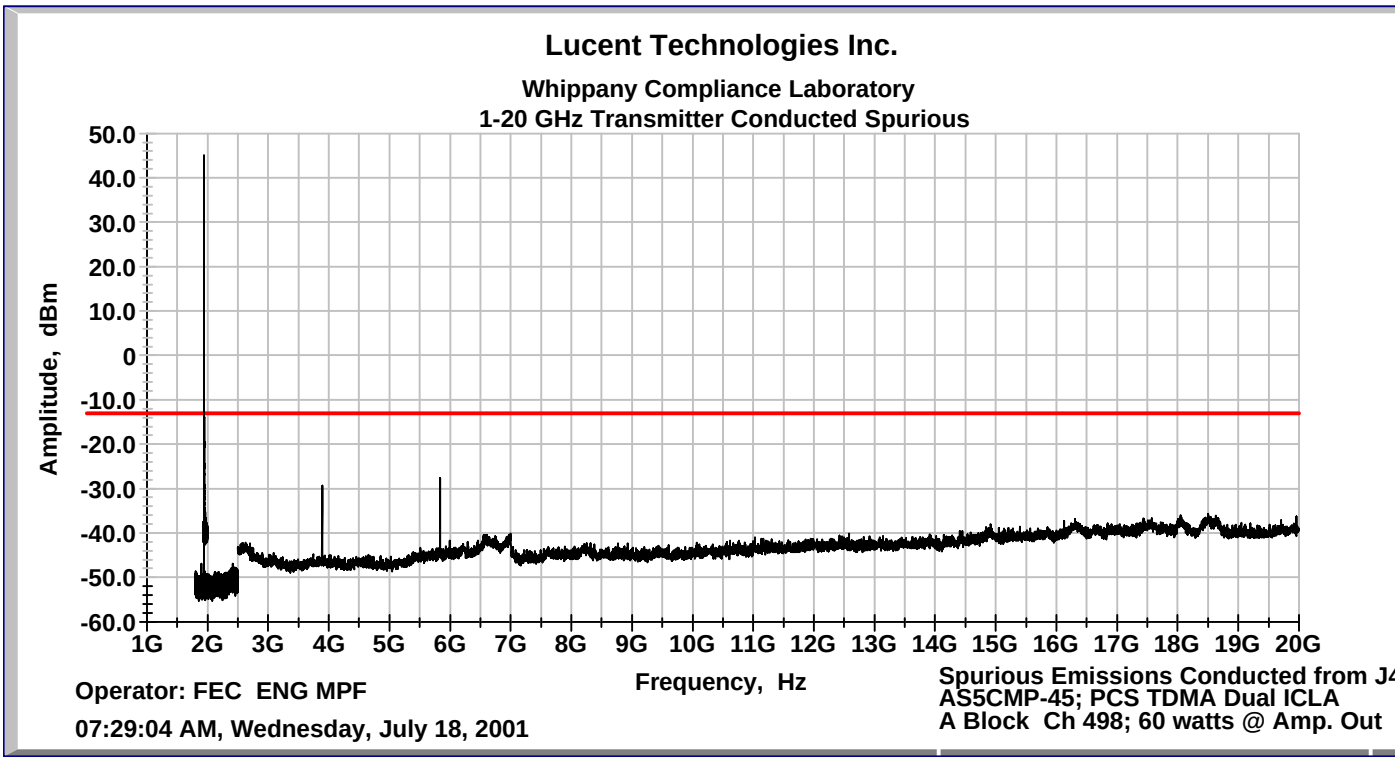
Conducted Spurious Emissions; Antenna Terminal; 10 MHz to 10 GHz; Block A; PCS Ch 498



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

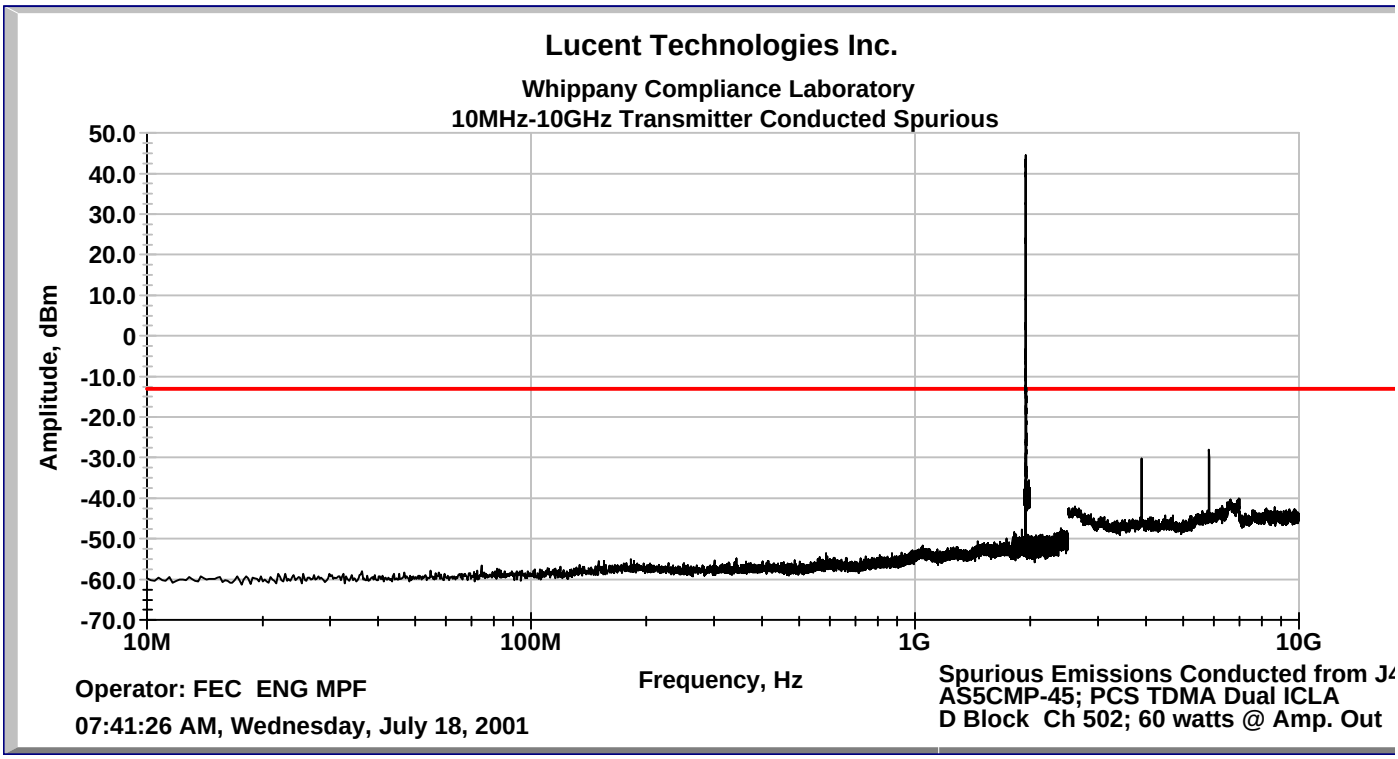
Conducted Spurious Emissions; Antenna Terminal; 10 GHz to 20 GHz; Block A; PCS Ch 498



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

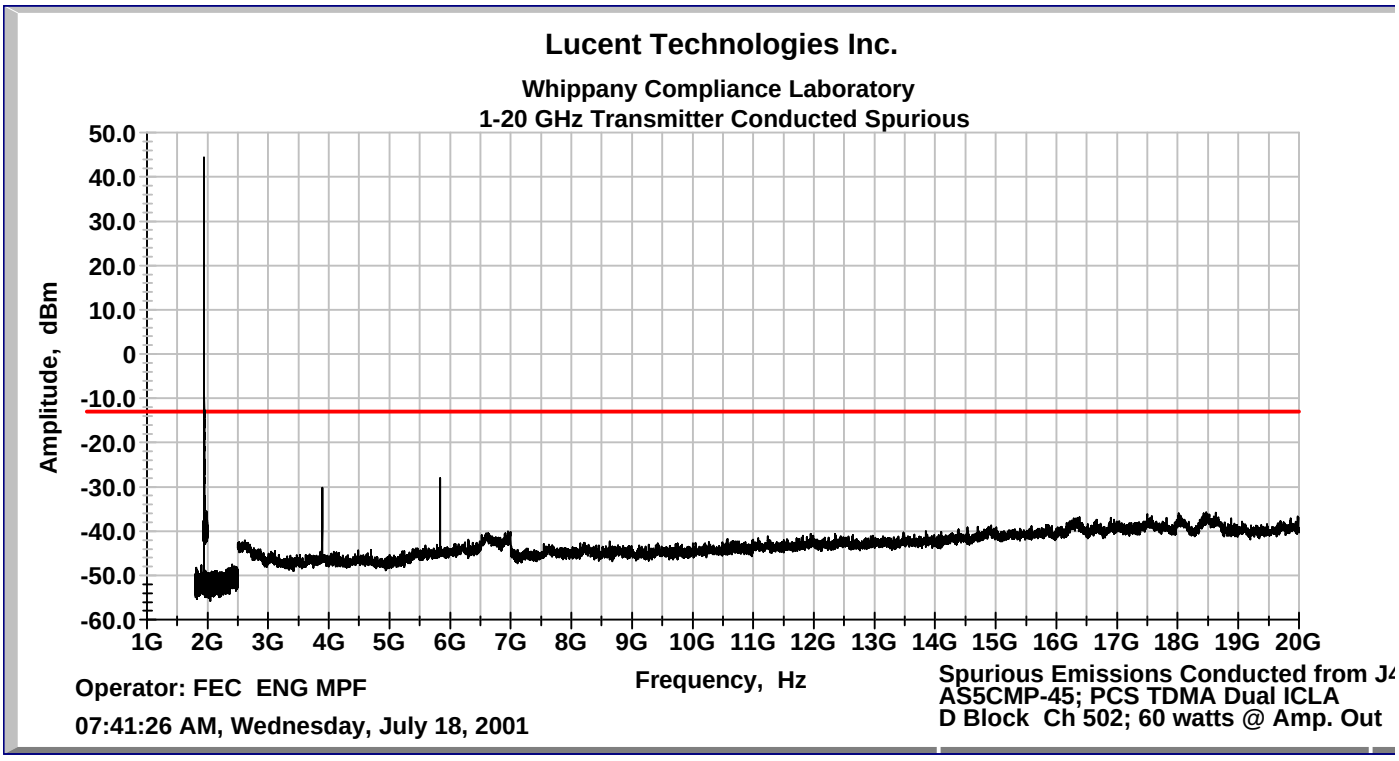
Conducted Spurious Emissions; Antenna Terminal; 10 MHz to 10 GHz; Block D; PCS Ch 502



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

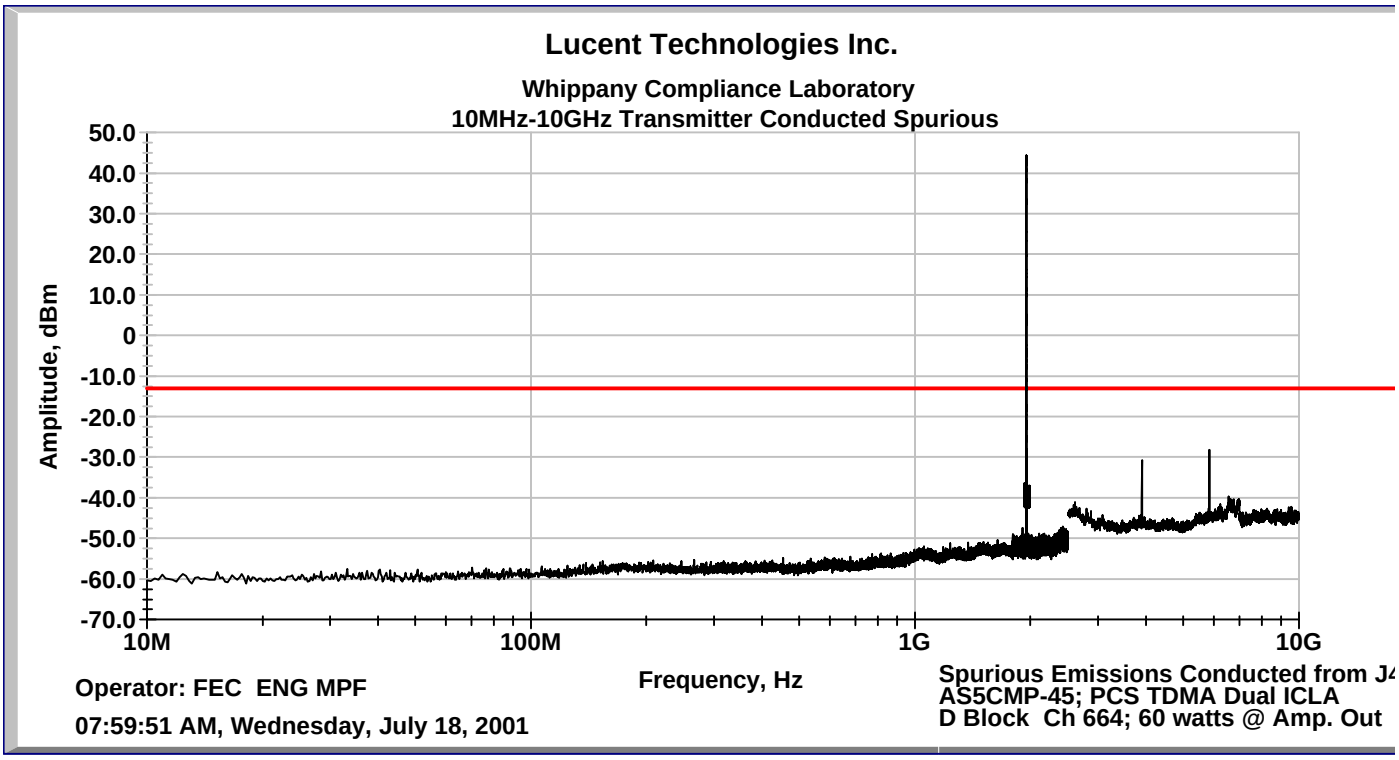
Conducted Spurious Emissions; Antenna Terminal; 10 GHz to 20 GHz; Block D; PCS Ch 502



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

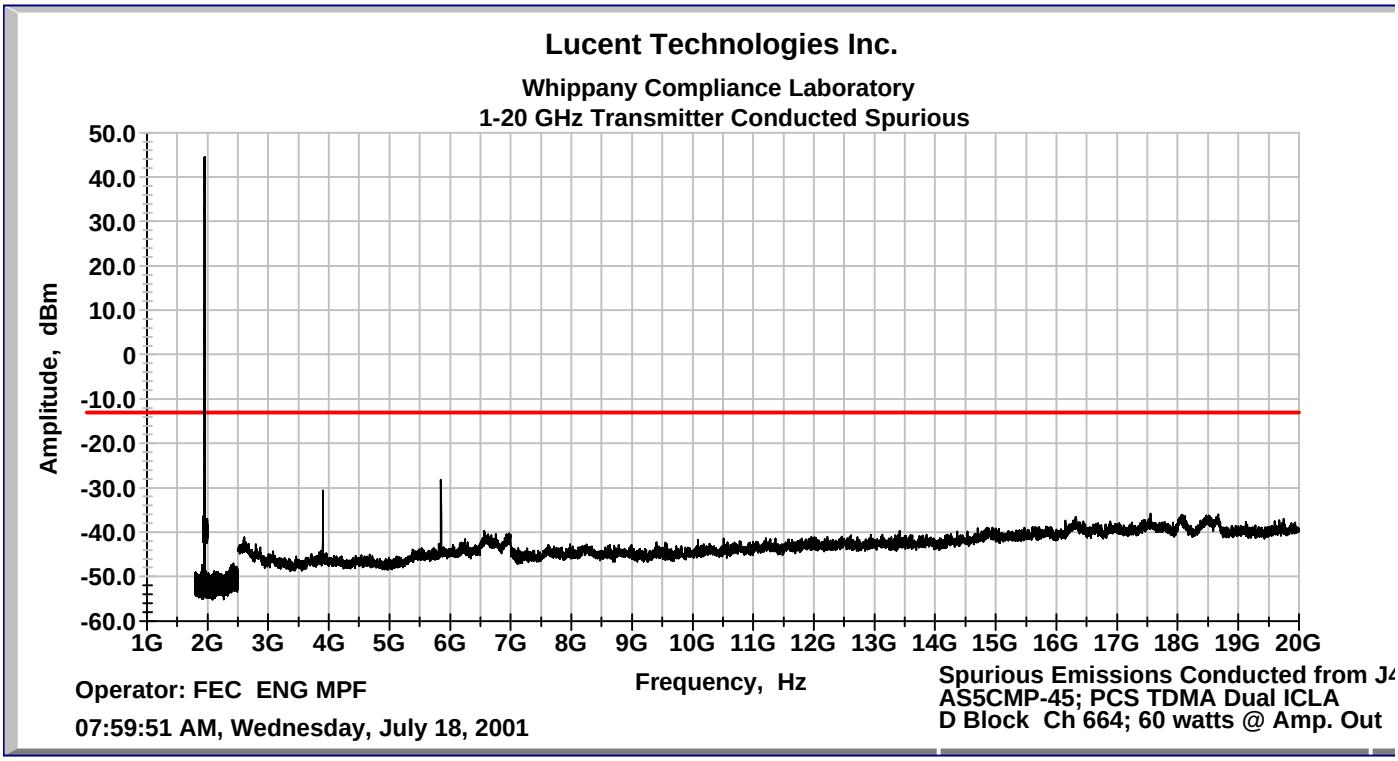
Conducted Spurious Emissions; Antenna Terminal; 10 MHz to 10 GHz; Block D; PCS Ch 664



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

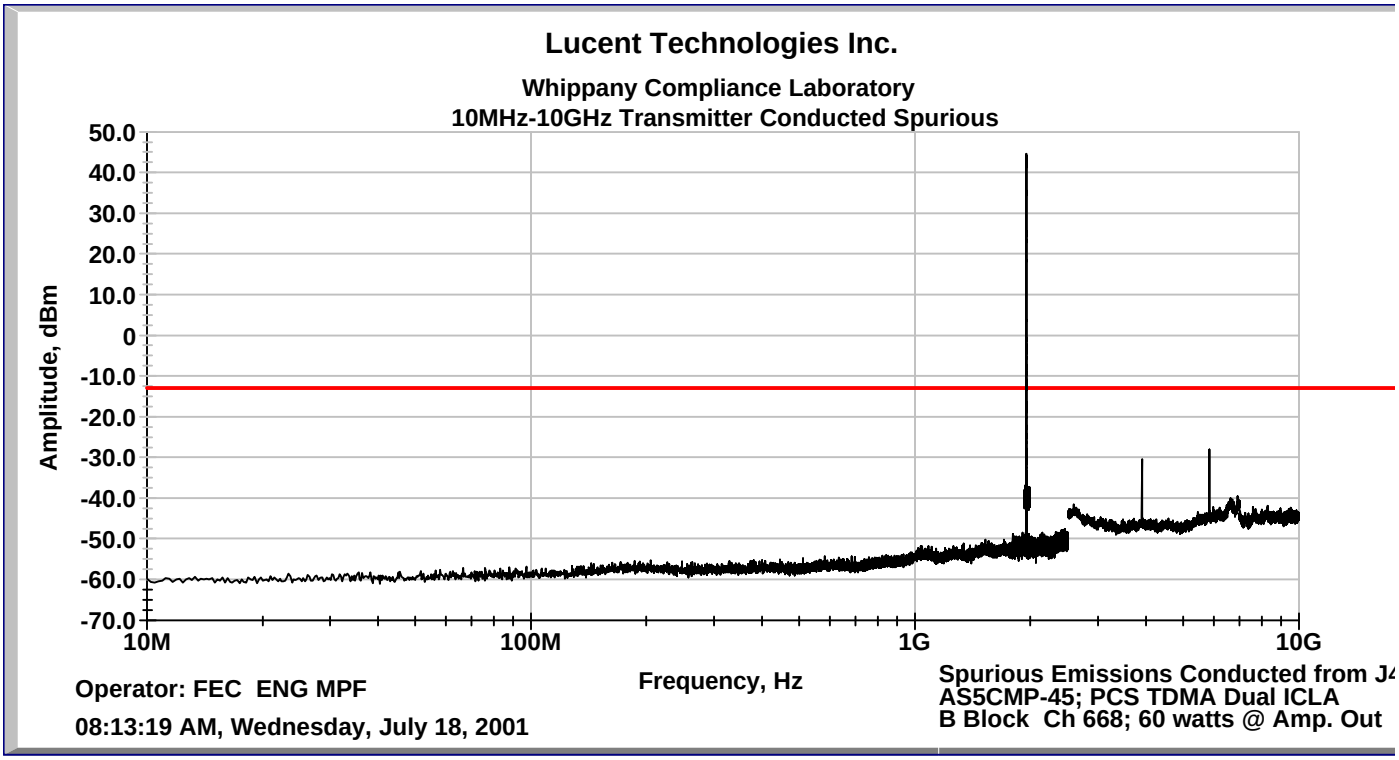
Conducted Spurious Emissions; Antenna Terminal; 10 GHz to 20 GHz; Block D; PCS Ch 664



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

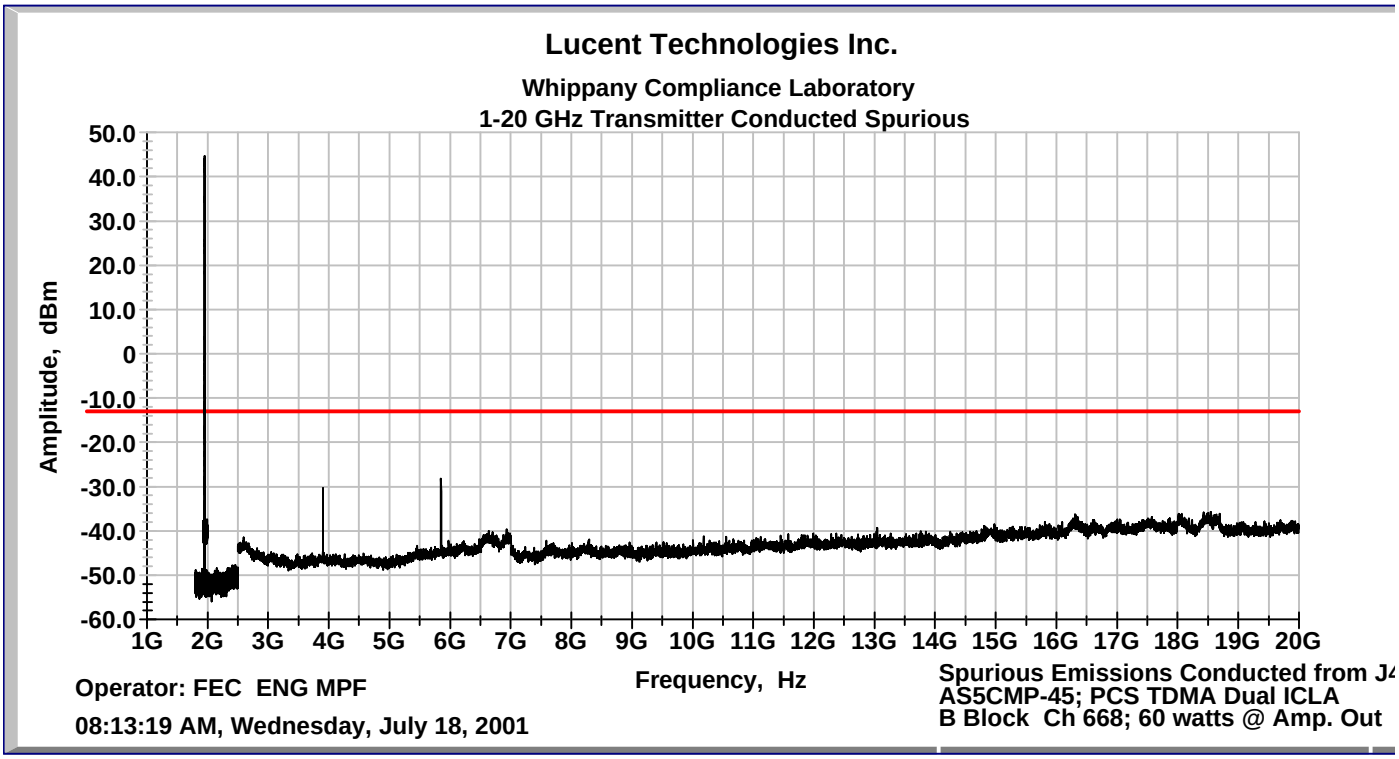
Conducted Spurious Emissions; Antenna Terminal; 10 MHz to 10 GHz; Block B; PCS Ch 668



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

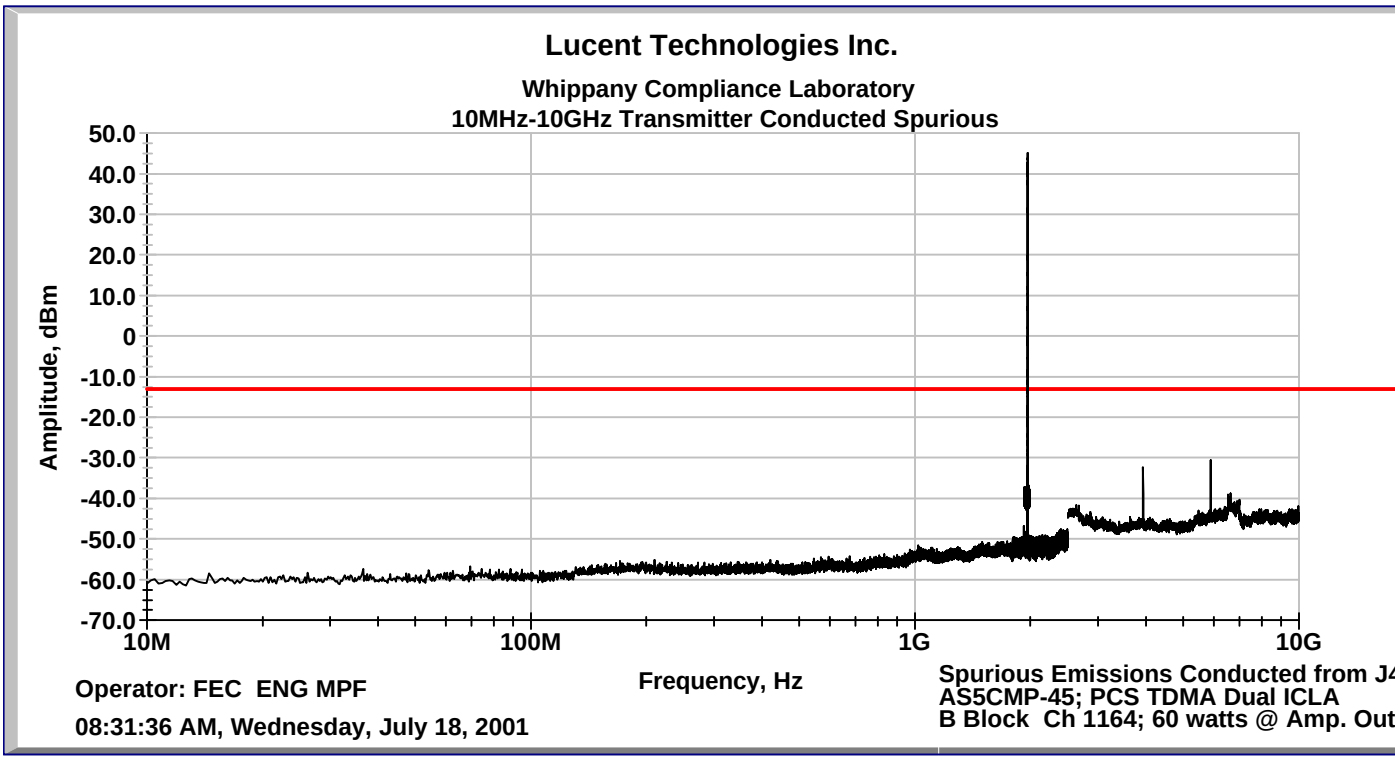
Conducted Spurious Emissions; Antenna Terminal; 10 GHz to 20 GHz; Block B; PCS Ch 668



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

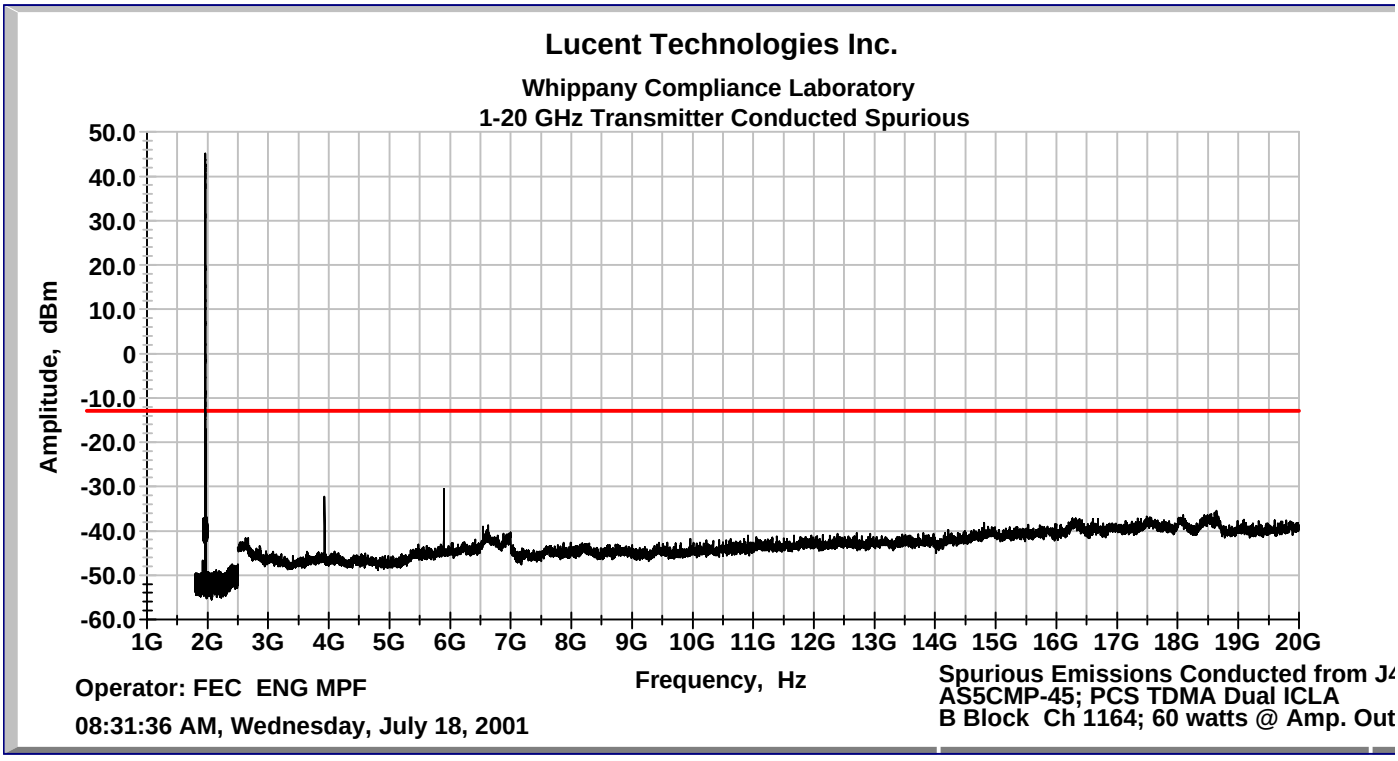
Conducted Spurious Emissions; Antenna Terminal; 10 MHz to 10 GHz; Block B; PCS Ch 1164



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

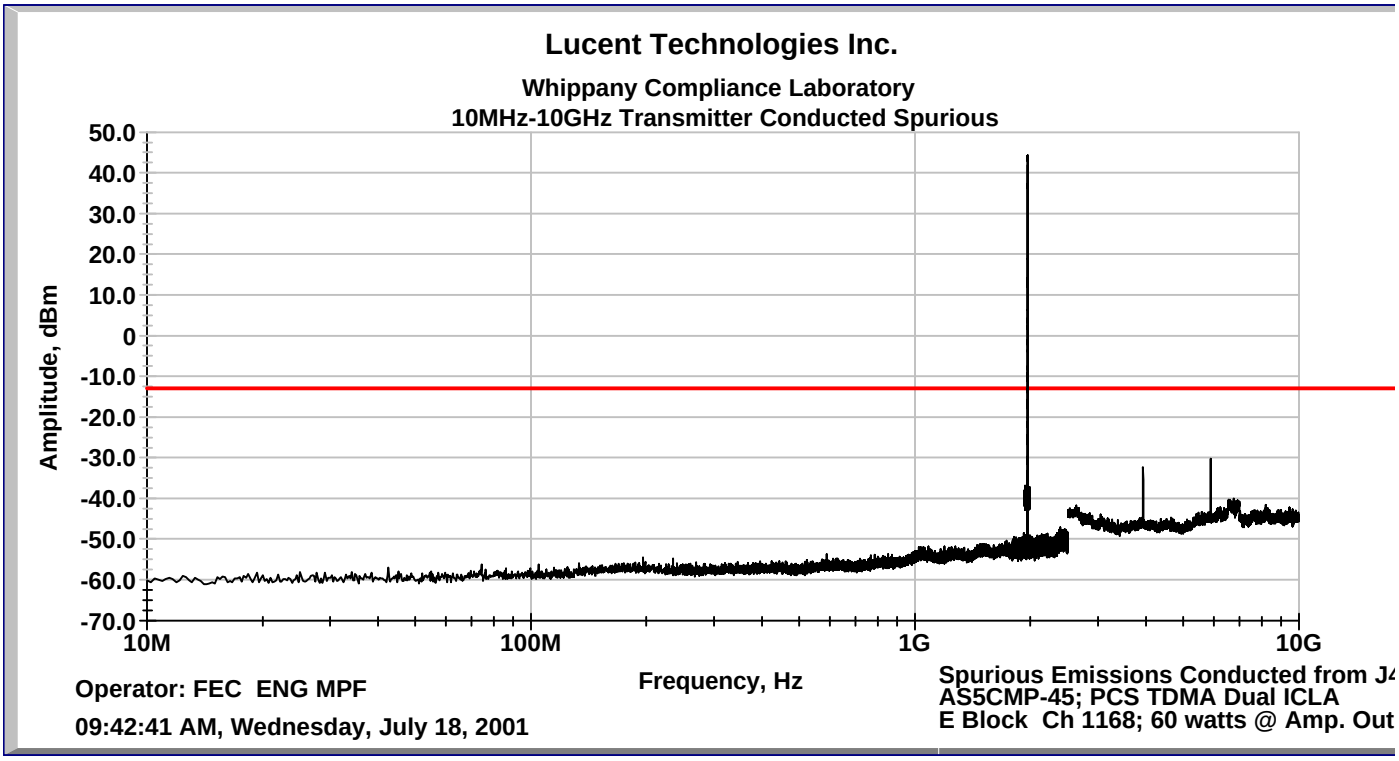
Conducted Spurious Emissions; Antenna Terminal; 10 GHz to 20 GHz; Block B; PCS Ch 1164



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

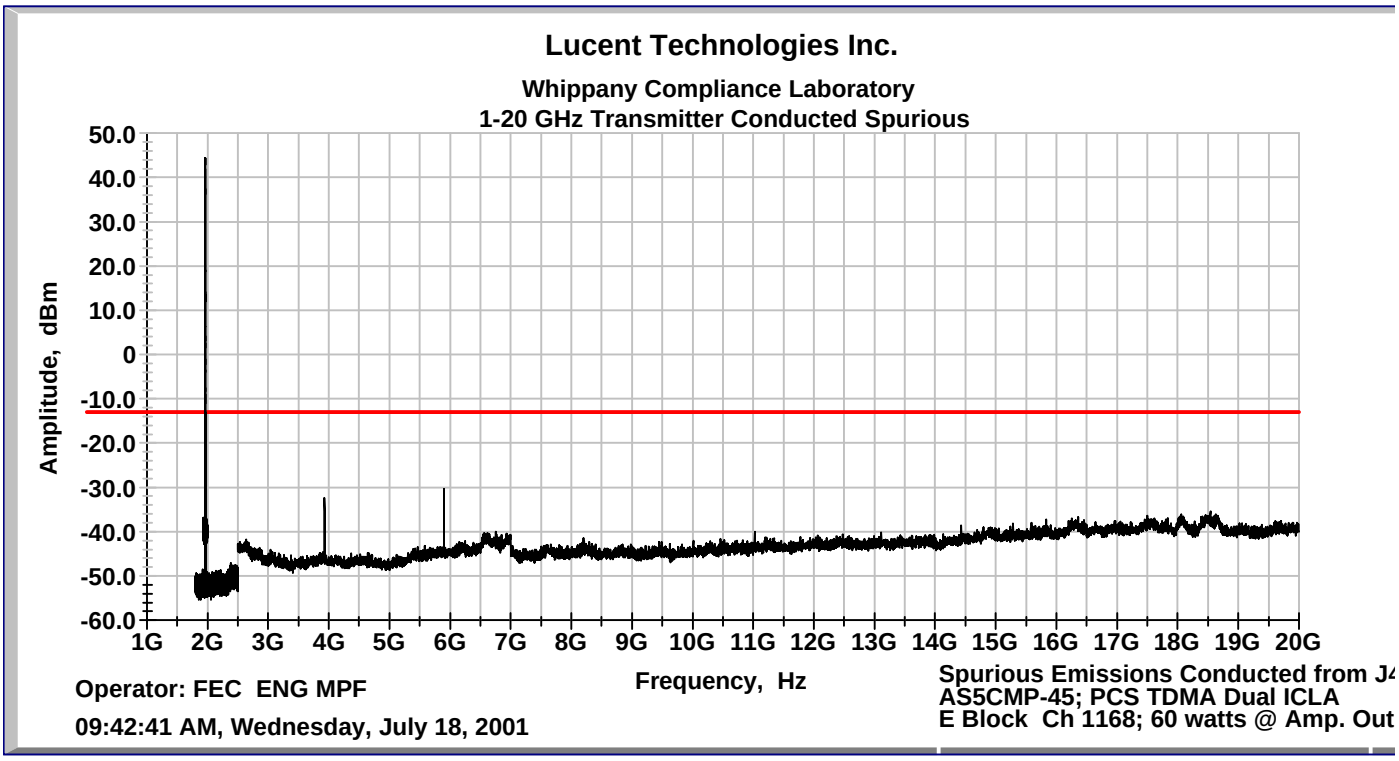
Conducted Spurious Emissions; Antenna Terminal; 10 MHz to 10 GHz; Block E; PCS Ch 1168



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

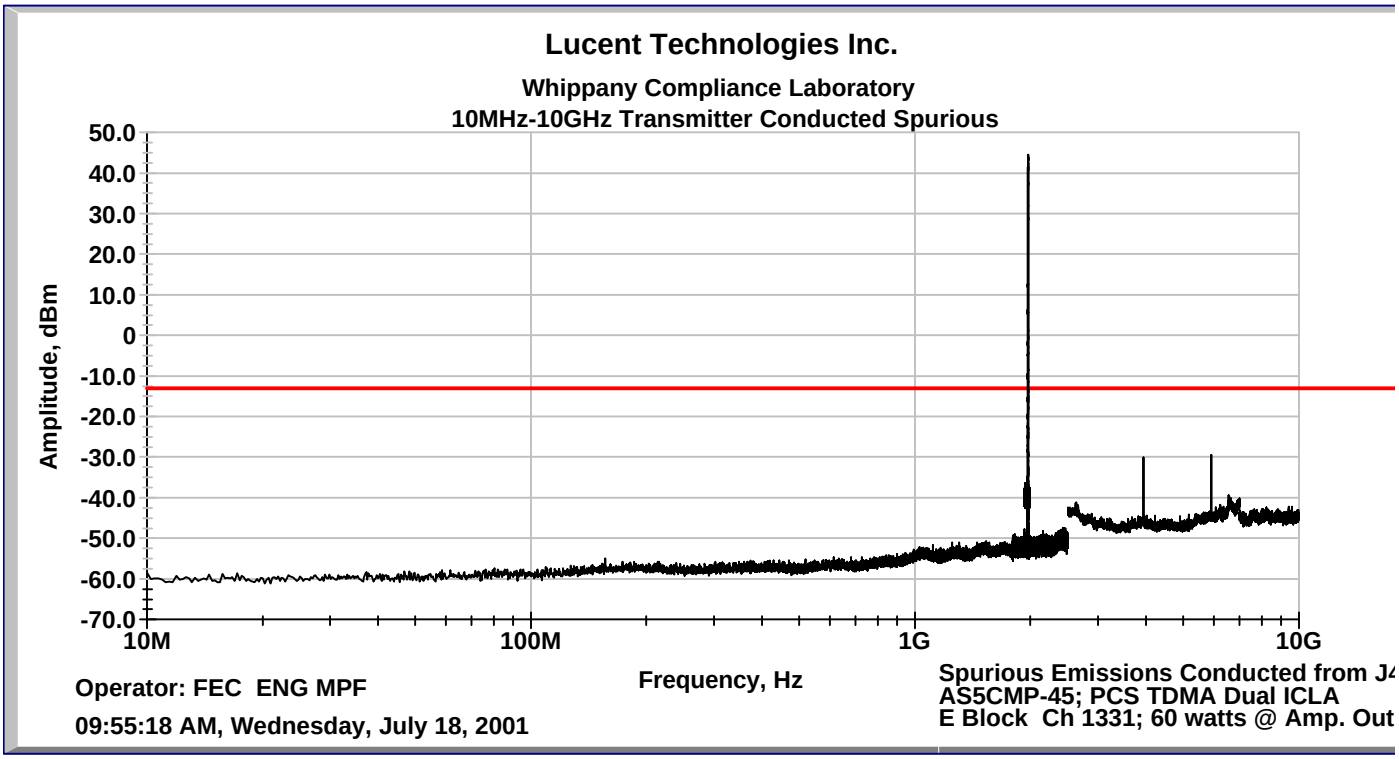
Conducted Spurious Emissions; Antenna Terminal; 10 GHz to 20 GHz; Block E; PCS Ch 1168



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

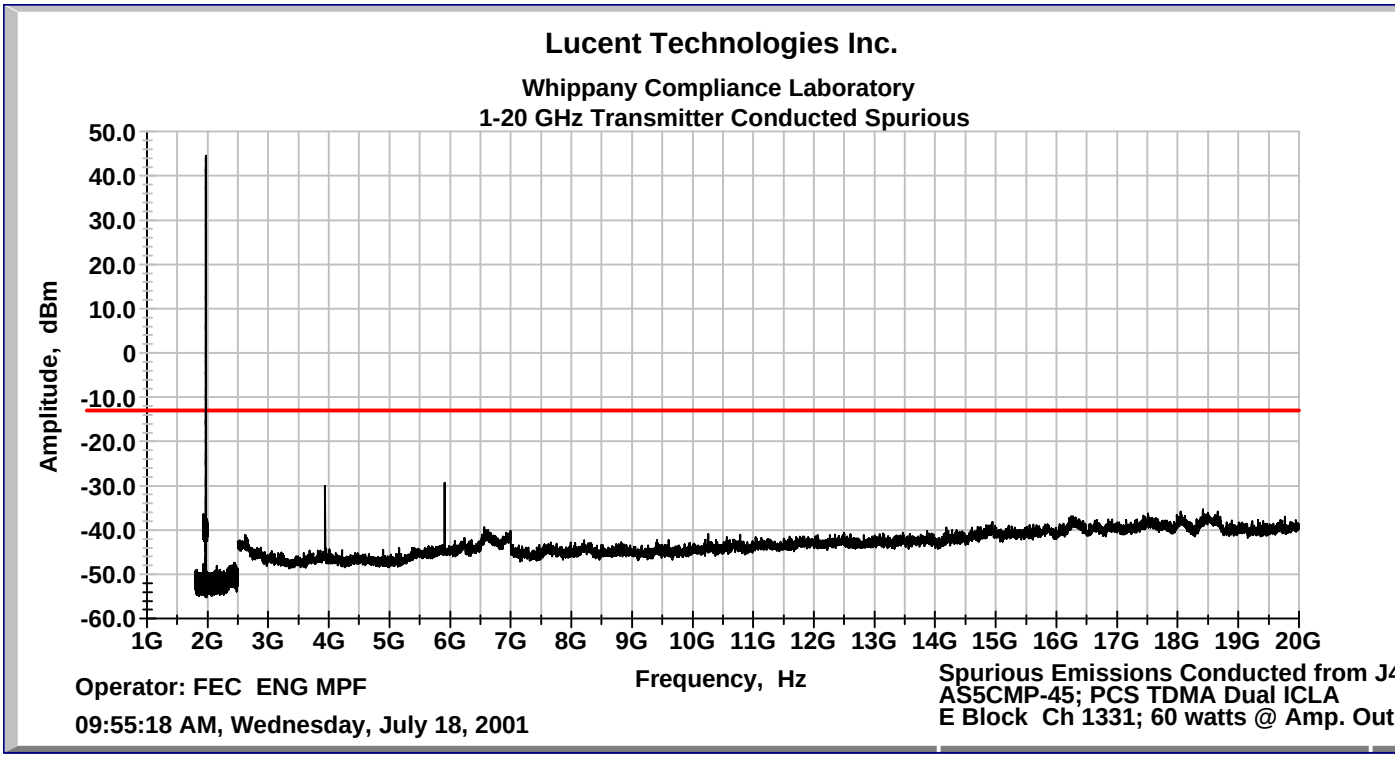
Conducted Spurious Emissions; Antenna Terminal; 10 MHz to 10 GHz; Block E; PCS Ch 1331



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

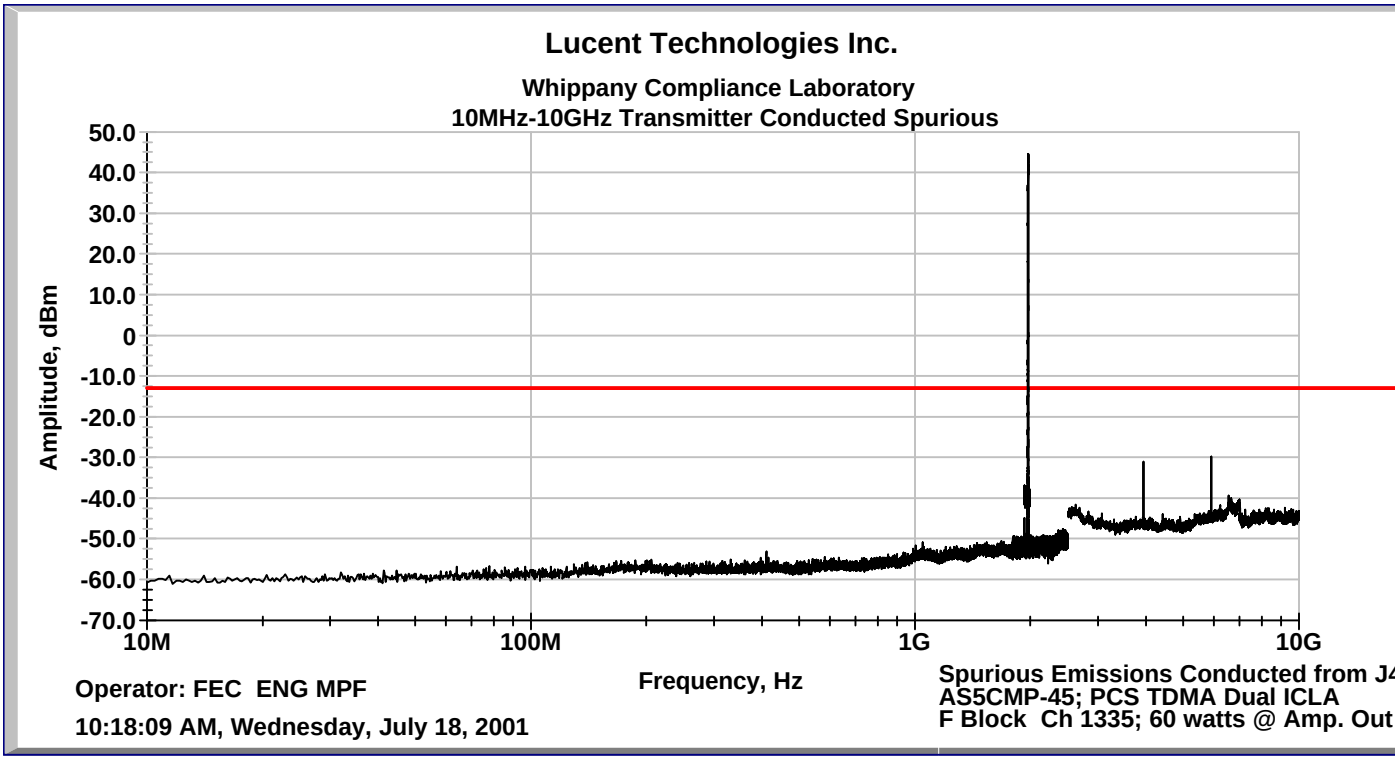
Conducted Spurious Emissions; Antenna Terminal; 10 GHz to 20 GHz; Block E; PCS Ch 1331



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

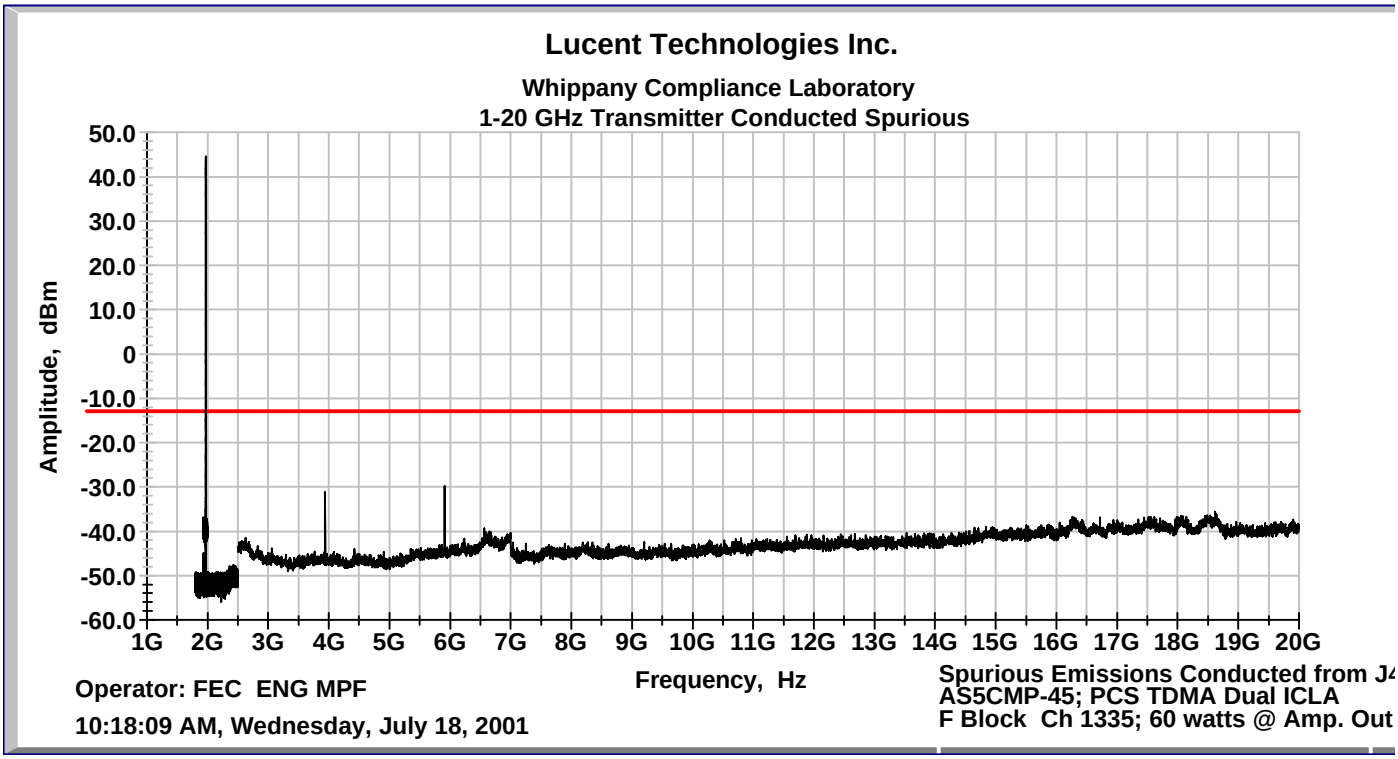
Conducted Spurious Emissions; Antenna Terminal; 10 MHz to 10 GHz; Block F; PCS Ch 1335



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

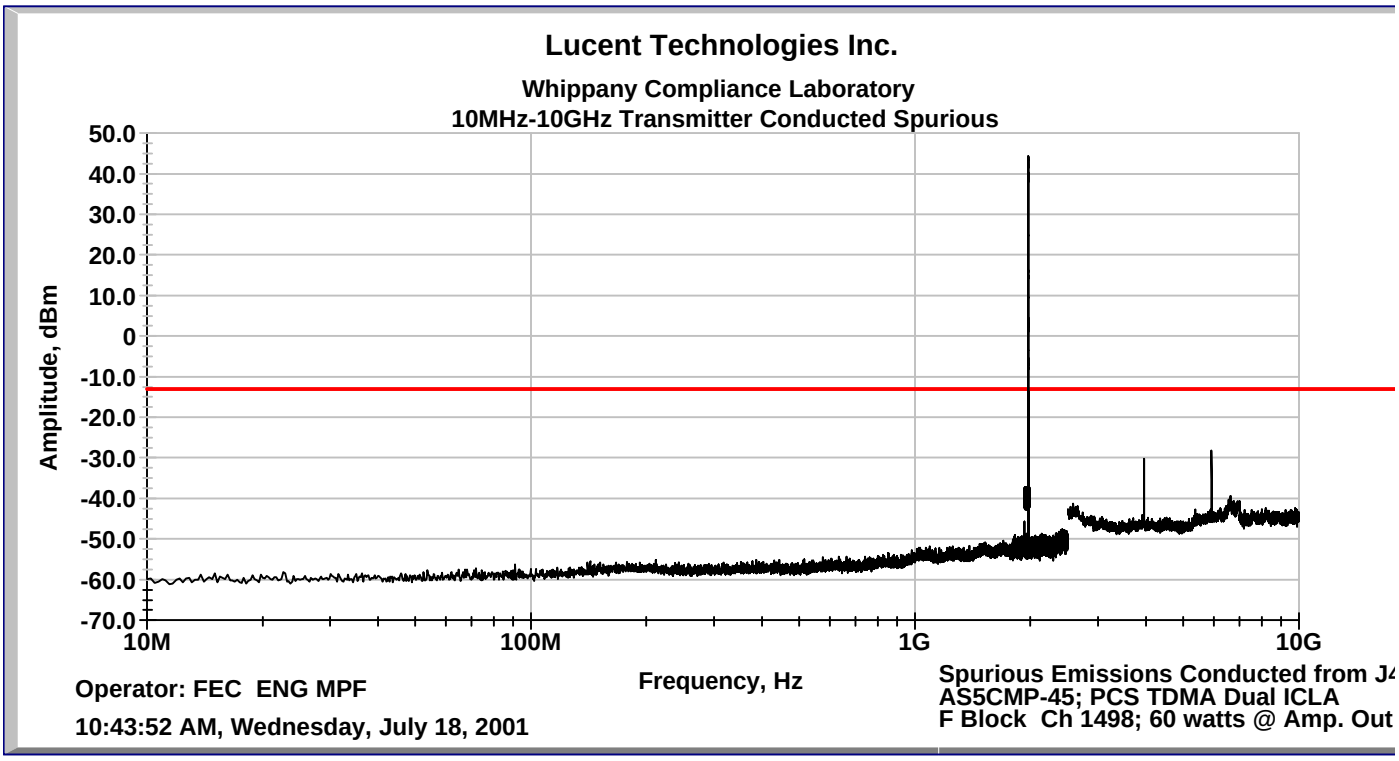
Conducted Spurious Emissions; Antenna Terminal; 10 GHz to 20 GHz; Block F; PCS Ch 1335



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

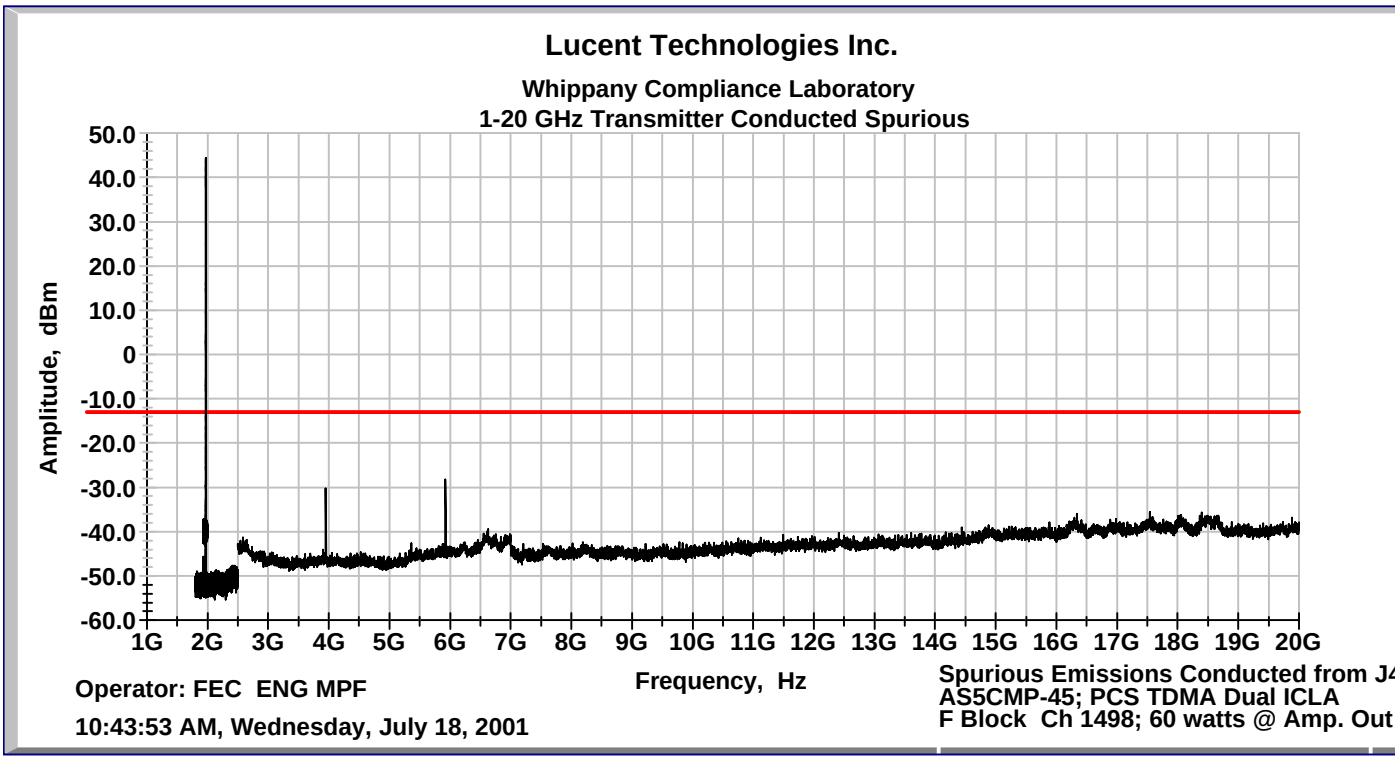
Conducted Spurious Emissions; Antenna Terminal; 10 MHz to 10 GHz; Block F; PCS Ch 1498



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

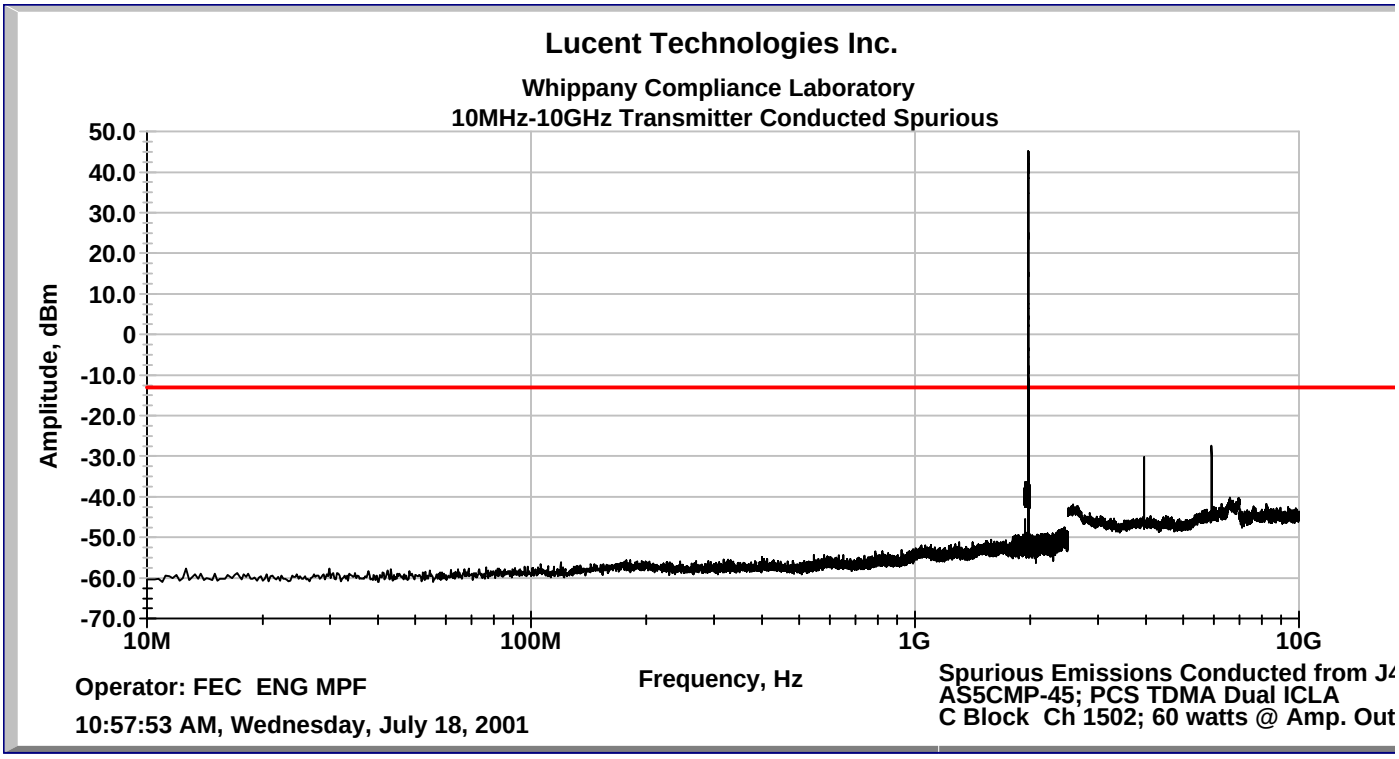
Conducted Spurious Emissions; Antenna Terminal; 10 GHz to 20 GHz; Block F; PCS Ch 1498



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

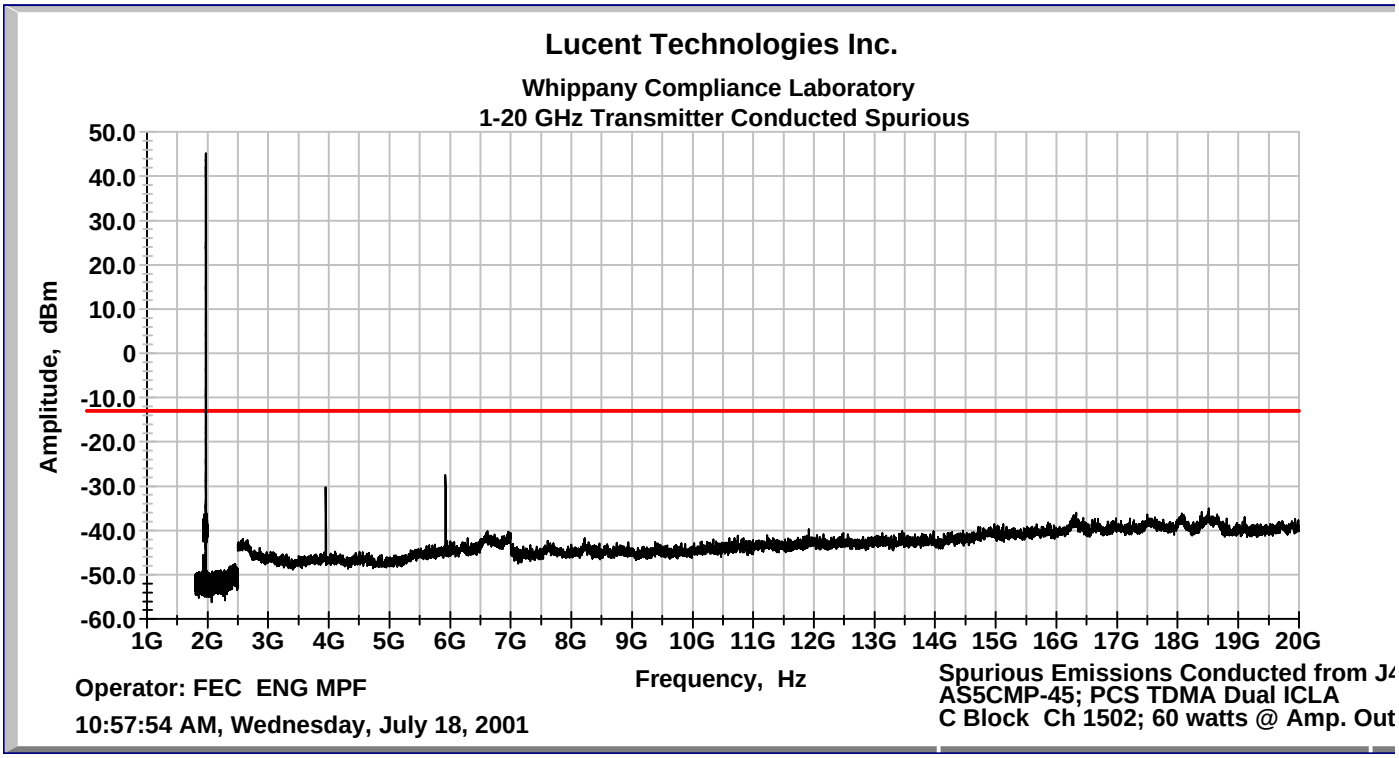
Conducted Spurious Emissions; Antenna Terminal; 10 MHz to 10 GHz; Block C; PCS Ch 1502



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

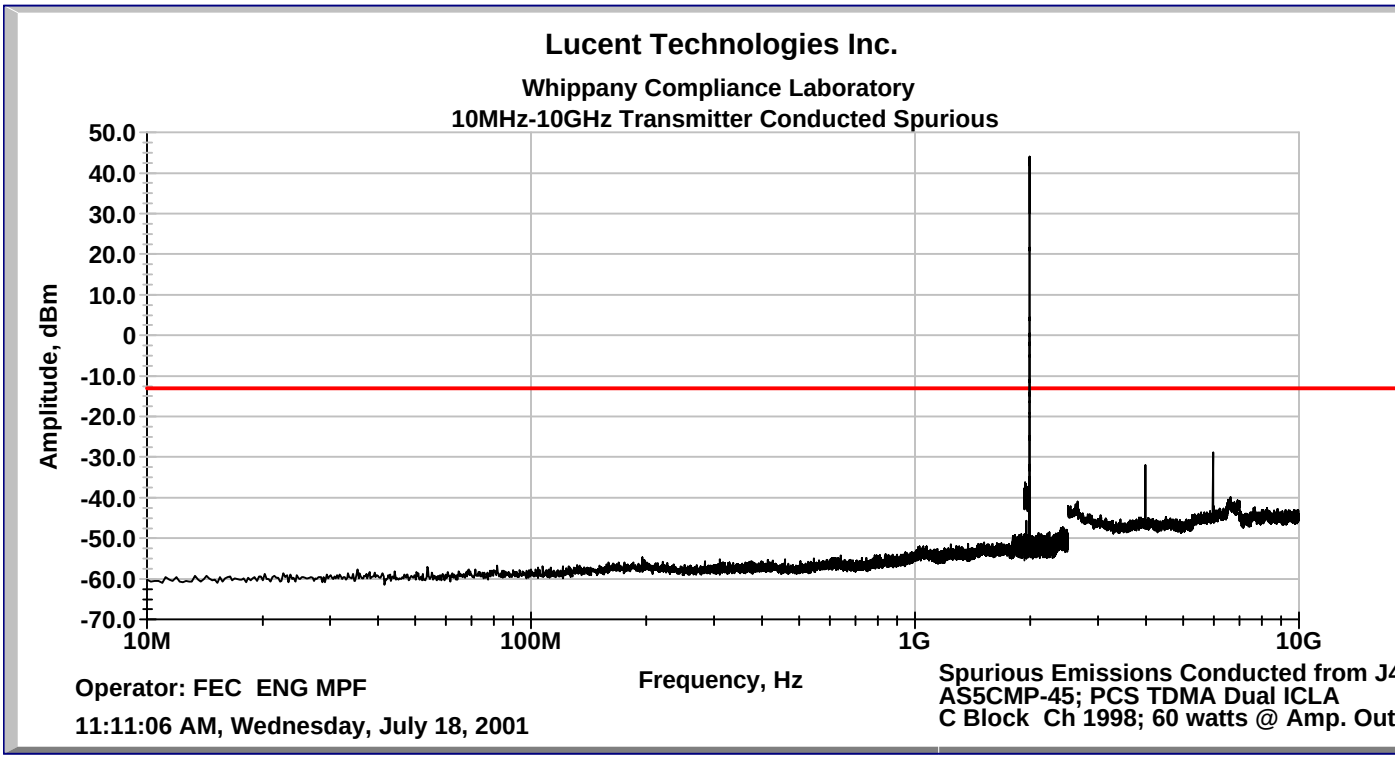
Conducted Spurious Emissions; Antenna Terminal; 10 GHz to 20 GHz; Block C; PCS Ch 1502



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

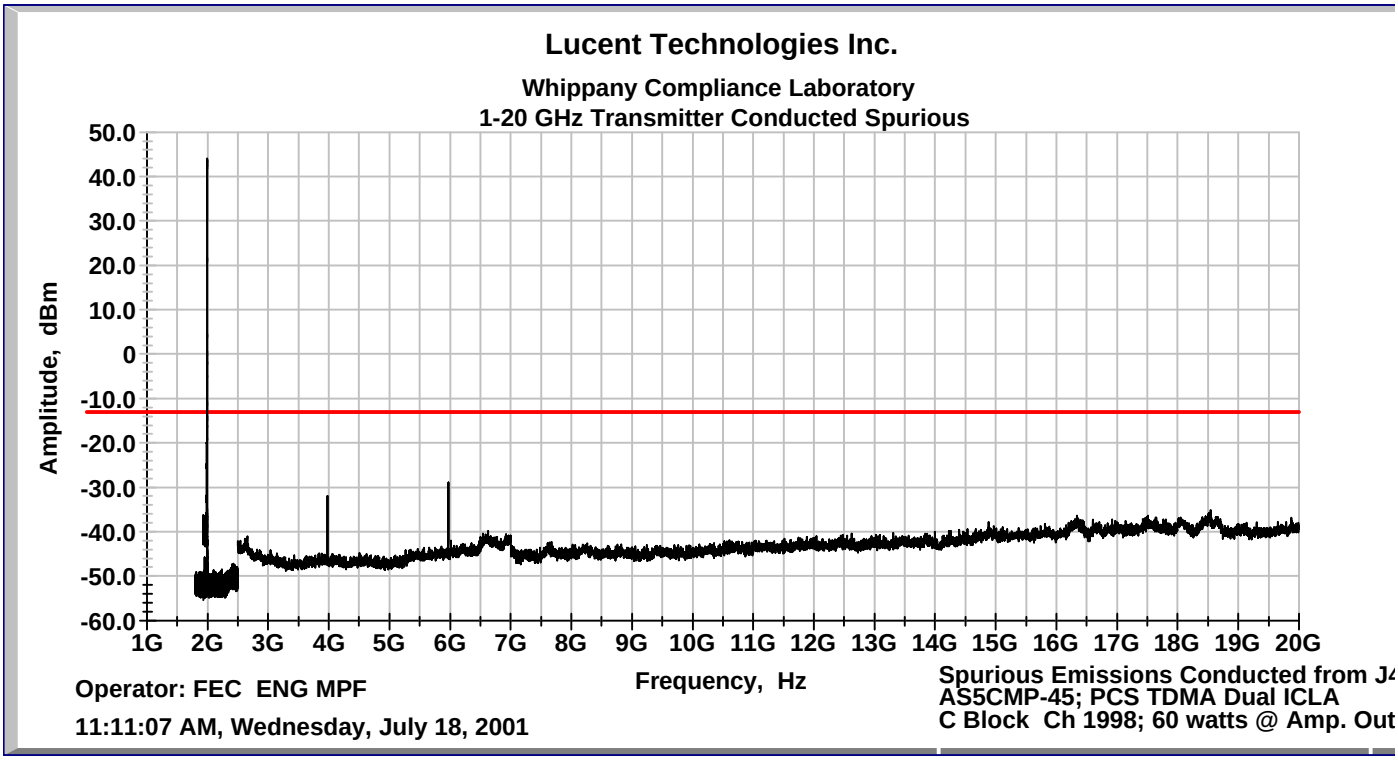
Conducted Spurious Emissions; Antenna Terminal; 10 MHz to 10 GHz; Block C; PCS Ch 1998



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

Conductd Spurious Emissions; Antenna Terminal; 10 GHz to 20 GHz; Block C; PCS Ch 1998

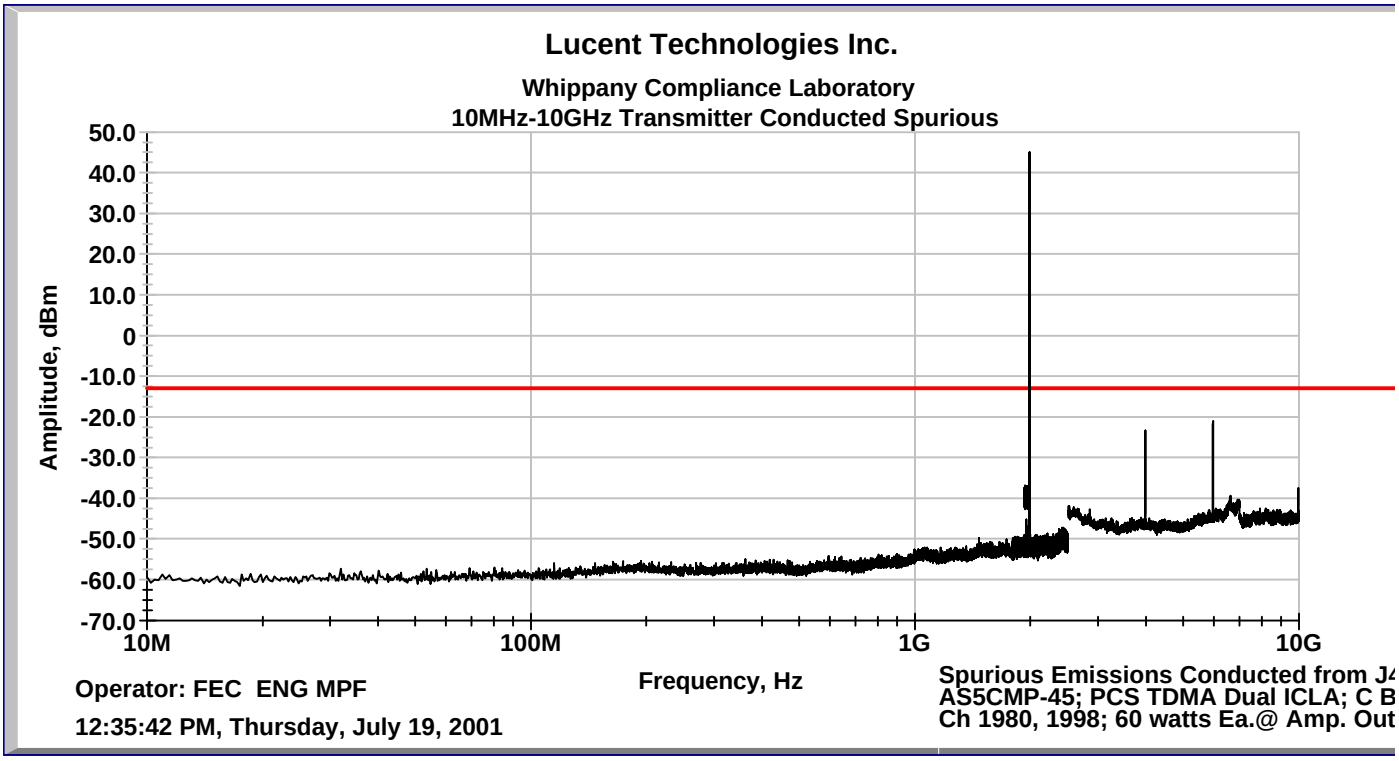


APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

The following plots have been included to demonstrate that there is no interaction between the two amplifiers even though they are on the same circuit board and operating simultaneously.
The normal channel spacing can be either 18 of 21 channels apart, an example of each spacing is included.

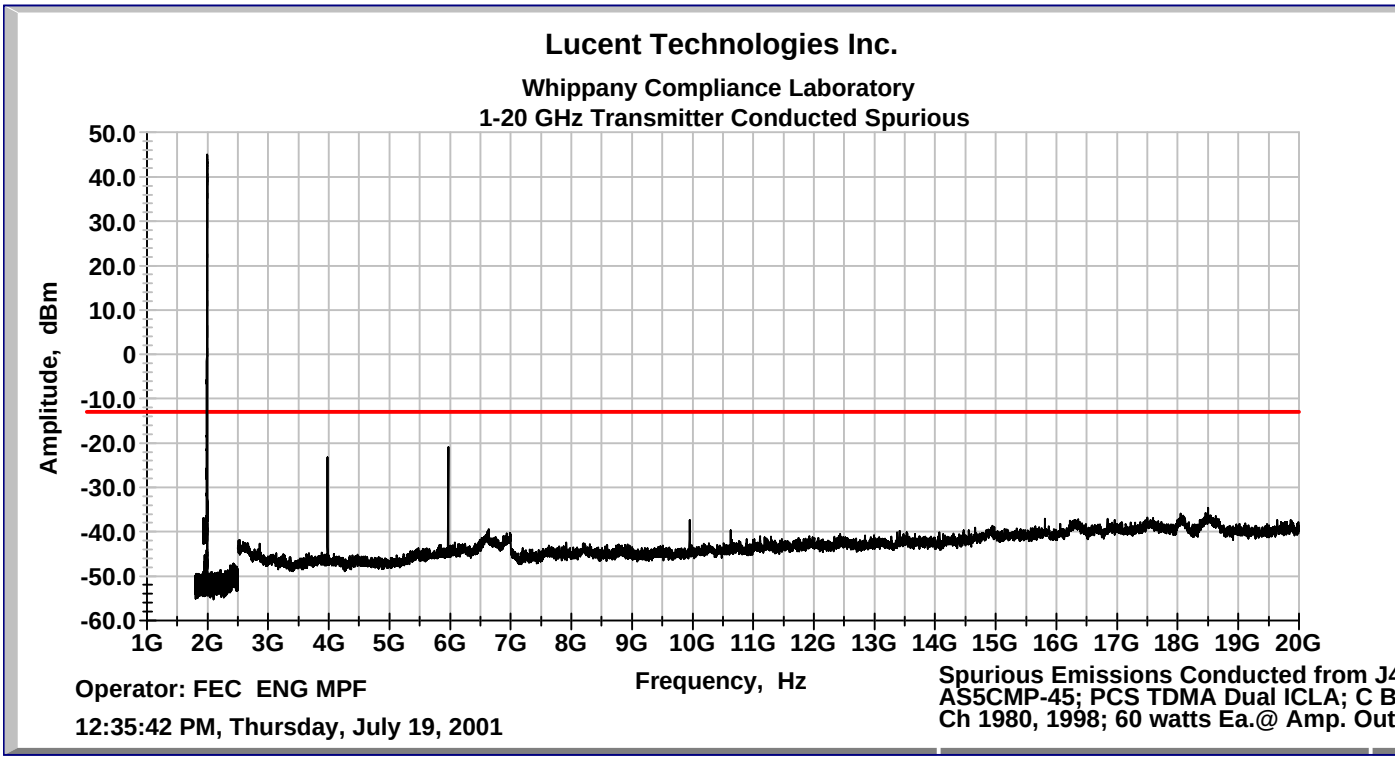
Conducted Spurious Emissions; Antenna Terminal; 10 MHz to 10GHz; Two Carriers; CH1998 on TX1 and CH1980 on TX2. 60 Watts each at amplifier output terminals.



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

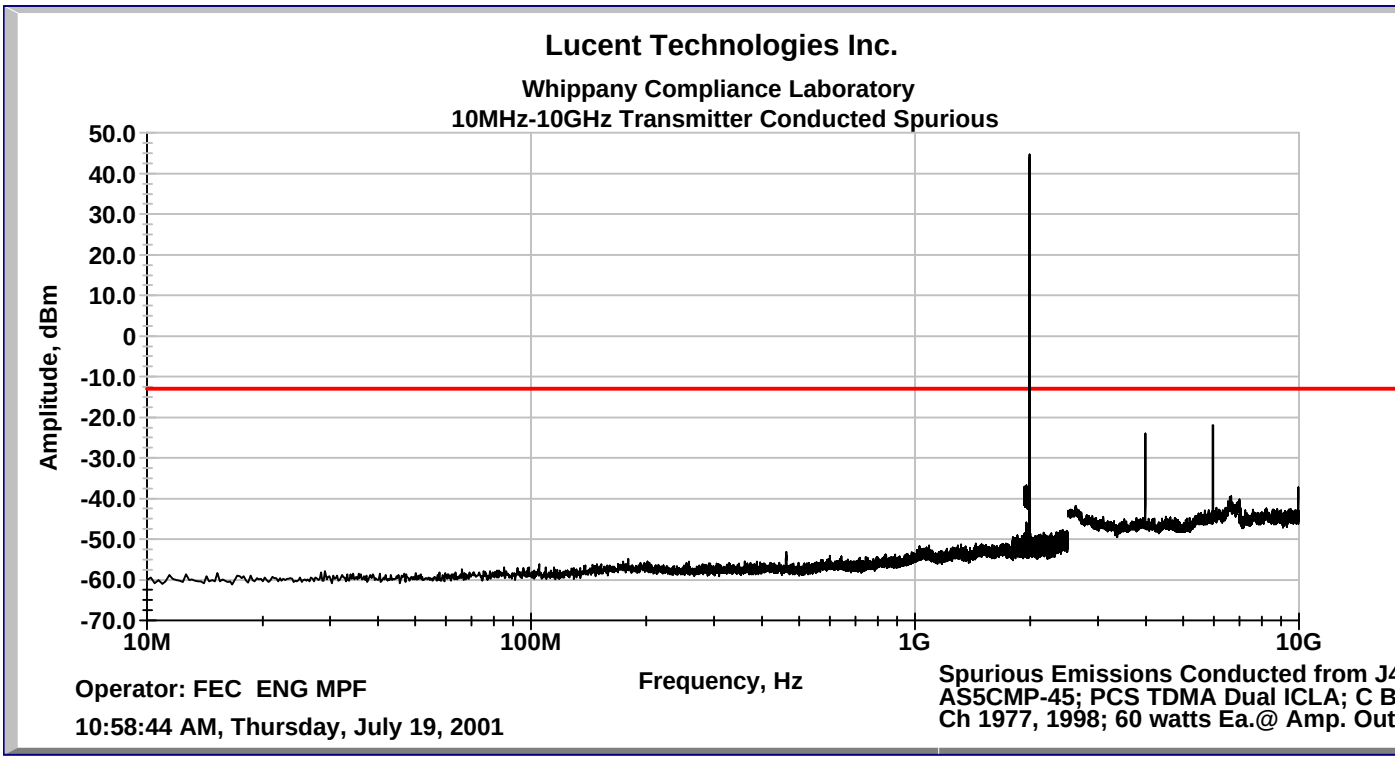
Conducted Spurious Emissions; Antenna Terminal; 10 GHz to 20GHz; Two Carriers; CH1998 on TX1 and CH1980 on TX2. 60 Watts each at amplifier output terminals.



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

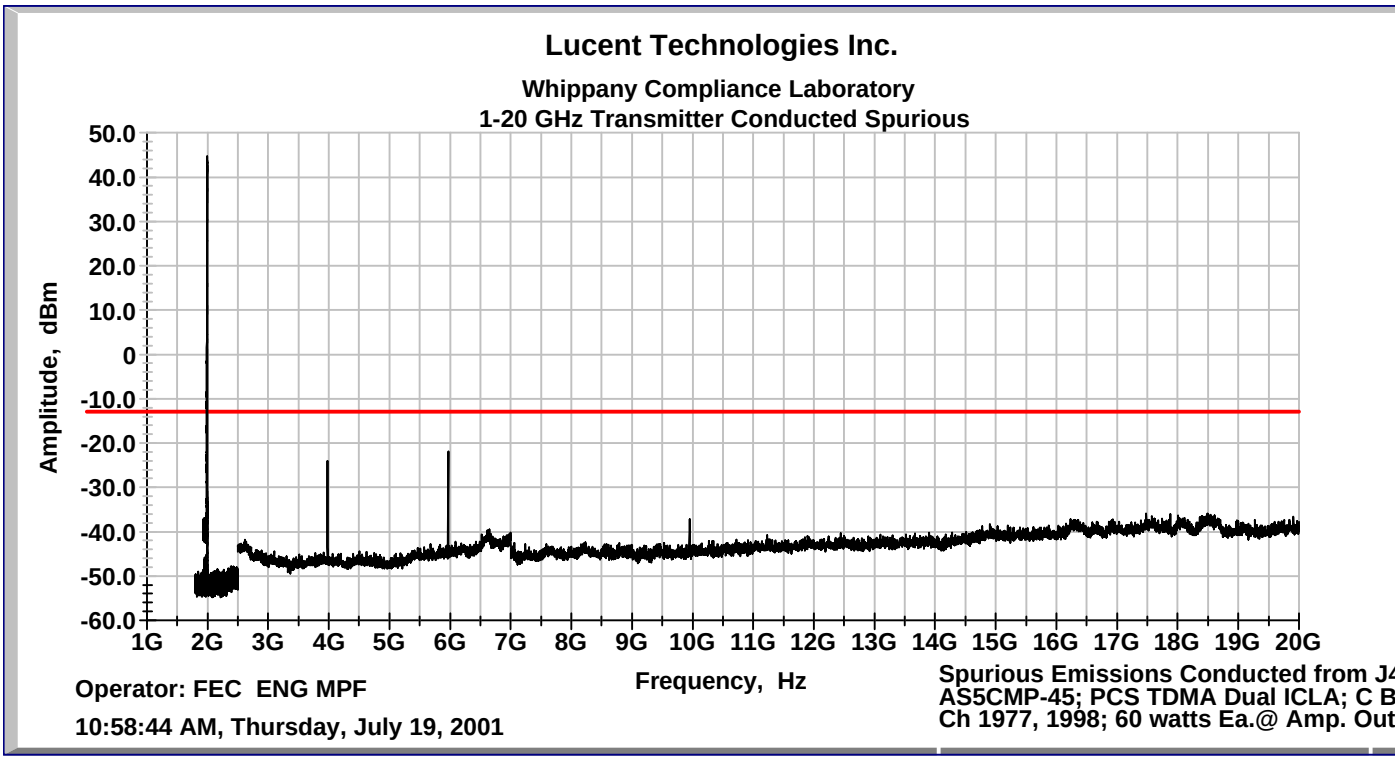
Conducted Spurious Emissions; Antenna Terminal; 10 MHz to 10GHz; Two Carriers; CH1998 on TX1 and CH1977 on TX2. 60 Watts each at amplifier output terminals.



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

Conducted Spurious Emissions; Antenna Terminal; 10 GHz to 20GHz; Two Carriers; CH1998 on TX1 and CH1977 on TX2. 60 Watts each at amplifier output terminals.



APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

RESULTS: The One BTS t1900 D-ICLA, subject of this application for certification under FCC ID: AS5CMP-45, demonstrated full compliance with the requirements of FCC Rule Part 2.1051 and with Part 24.238.

APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5CMP-45**

EXHIBIT 10: TEST REPORT

PART 2.1053 MEASUREMENTS REQUIRED: FIELD STRENGTH OF SPURIOUS RADIATION

This test requires a single carrier, at maximum rated power, transmitting into a non-radiating dummy load. As required, the frequency range investigated was from 10 MHz to 20 GHz as in the previous conducted spurious emissions test procedure. This test was performed for each of the 6 PCS frequency blocks, with a single carrier set to the block center frequency, as cited in the previous occupied bandwidth tests, and adjusted to provide 25 Watts (44.0 dBm) at the J4 transmit antenna terminal. In compliance with the guidelines of ANSI C63.4-1992, the equipment under test (EUT) was first evaluated in an RF shielded chamber, while configured as recommended for *floor standing equipment*. The EUT was installed and operated as in the *normal mode of operation* with external alarm and T1 cables connected to the EUT and routed as prescribed in ANSI C63.4-1992. The 10 highest field strength signals, between 10 MHz and 1000 MHz, were identified in the preliminary scans conducted in the RF chamber and then accurately remeasured on the Whippany Open Area Test Site (OATS), which is FCC listed and approved. Knowing the exact local oscillator (LO) and harmonic frequencies between 1 GHz and 20 GHz, these emissions were directly measured on the Whippany OATS, without the need of a preliminary procedure.

Any emissions radiating from the cabinet are treated as radiating from a halfwave dipole antenna. Limitations are based on attenuation below the carrier (dBc) using the formula 43 + 10 log (P Watts) = dBc, where P is the signal power level at the transmit antenna terminal (J4). In accordance with Part 24.238, the required resolution bandwidth was 1 MHz. However, the 1 MHz RBW produced too high an instrumentation noise floor and was then reduced to 30 kHz in order to detect and measure the spurious emissions and be able to distinguish them from the RF ambient. In all tests, spectrum analyzer was set to max hold. As stated in Part 2.1051, the magnitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be specified.

For a dipole antenna in free space:

$$E = [(49.2)(P)\exp(1/2)]/R$$

Where: E = field intensity in Volts/Meter
P = transmitted power in Watts
R = distance in meters

The required attenuation is:

$$Att = 43 + 10\log (P \text{ in Watts}) \text{ dBc}$$

The required limitation is then:

$$E(lim) = E - Att \text{ (in dBuV/m)}$$

Minimum Standard Requirement:

Radiated emission measurements in the frequency range 30 MHz to 1000 MHz were performed on the Whippany OATS using calibrated biconical and log periodic antennas, at a separation distance from the EUT of 4 meters. Both vertical and horizontal antenna polarization was utilized. .This separation was

necessary in order to aid distinguishing the EUT emission from the RF ambient. Using the above equations for a carrier power level of 25 Watts and 4 meters separation, the FCC field strength limitation is 81.9 dBuV/m.

Radiated emission measurements in the frequency range 1.0 GHz to 18 GHz were performed on the Whippany OATS using a calibrated double ridged guide antenna at a separation distance from the EUT of 3 meters, and both vertical and horizontal antenna polarization. Since the exact local oscillators (LO) and carrier harmonic frequencies were known above 1.0 GHz, a preliminary test procedure in an RF chamber was not required. Using the above equations for a carrier power level of 25 Watts and 3 meters separation, the FCC field strength limitation is 84.4 dBuV/m.

RESULTS:

The PCS TDMA D-ICLA, subject of this application for certification under FCC ID: AS5CMP-45, demonstrated full compliance with the requirements of FCC Rule Part 2.1053 and with the requirements of Part 24.238. All radiated emissions that were detected and measured had field strenghts that were substantially greater than 20 dB below the FCC limitation. Therefor, there are no reportable radiated spurious emissions.