Exhibit 7: Test Report

Table of Contents

EXHIBIT 7.0 : REPORT OF MEASUREMENTS 55

7.0 INTRODUCTION 55
7.1 TEST FACILITY QUALIFICATIONS 55
7.1.1 National Institute of Standards and Technology (NVLAP) 55
7.1.2 Test Results Tractability 55
7.1.3 Standards Referenced 56
7.1.4 Test Results Summary 57
7.1.5 General Test Procedures 58
7.1.6 TEST EQUIPMENT 59
7.2 RF POWER OUTPUT 60
7.2.1 Controlling FCC Regulation – 47 CFR § 2.985 (a) 60
7.2.2 Test Procedure 60
7.2.3 Test Setup Block Diagram 61
Figure 1: RF Power Output Test Setup Block Diagram 61
7.2.4 Test Results – RF Power Output 62
Test Data : RF Power Output Graph (951.6 MHz) 63
7.3 MODULATION CHARACTERISTICS 64
7.3.1 Controlling FCC Regulation – 47 CFR § 2.987 (d) 64
7.3.2 Test Procedure 64
Test Data : Modulation Characteristics – (Code 0) 65
Test Data : Modulation Characteristics – (Code 7) 66
Test Data : Modulation Characteristics – (Code 14) 67
7.4 OCCUPIED BANDWIDTH 68
7.4.1 Controlling FCC Regulations 68
7.4.2 Test Procedure 68
7.4.3 MASK CALCULATIONS 70
7.4.4 Test Setup Block Diagram 70
7.4.5 Test Results – Occupied Bandwidth 71
Test Data : Plot of Occupied Bandwidth @ 951 MHz (3s Sweep Time) 72
Test Data : Plot of Occupied Bandwidth @ 951 MHz (12s Sweep Time) 72
Test Data : Plot of Occupied Bandwidth @ 961 MHz (3s Sweep Time) 73
Test Data : Plot of Occupied Bandwidth @ 951 MHz (12s Sweep Time) 73
7.5 SPURIOUS EMISSIONS AT ANTENNA TERMINAL 74
7.5.1 Controlling FCC Regulations 74
7.5.2 Test Procedure 74
7.5.3 Test Setup Block Diagram 75
7.5.4 Spurious Limit – Part 101.111(a)(1)(iii) 75

7.5.5 Test Results – Spurious Emissions at Antenna Terminal 76
Test Data : Spurious Emission: 100Hz to 900MHz 77
Test Data : Spurious Emission: 900 MHz to 1GHz 77
Test Data : Spurious Emission: 1GHz to 2GHz 78
Test Data : Spurious Emission: 2GHz to 3GHz 78
Test Data : Spurious Emission: 3GHz to 4GHz 79
Test Data : Spurious Emission: 4GHz to 5GHz 79
Test Data : Spurious Emission: 5GHz to 7GHz 80
Test Data : Spurious Emission: 7GHz to 10GHz 80
Test Data : Fo = Fundamental Frequency = 954.6 MHz 81
Test Data : 2Fo = 1,903.2 MHz 81
Test Data : 3Fo = 2,854.8 MHz 82
Test Data : 5Fo = 4,758.0 MHz 82
7.6 FIELD INTENSITY OF SPURIOUS RADIATION 83
7.6.1 Controlling FCC Regulations 83
7.6.2 Test Procedure 83
7.6.3 Test Setup Block Diagram 84
7.6.4 Spurious Limit – Part 101.111(a)(1)(iii) 85
7.6.5 Test Results – Spurious Emissions at Antenna Terminal 86
7.7 OPERATIONAL STABILITY PERFORMANCE 87
7.7.1 Controlling FCC Regulations 87
7.7.2 Test Procedure 87
7.7.3 Test Setup Block Diagram 88
7.7.4 Test Results – Operational Stability Performance 89

Exhibit 7.0 : REPORT OF MEASUREMENTS

7.0 Introduction

7.1 Test Facility Qualifications

The CTL test facility is listed by the FCC, reference number 31040/PRV – 1300F2, as being a site from which the FCC will accept radiated and conducted emissions test data.

7.1.1 National Institute of Standards and Technology (NVLAP)

The CTL test facility has achieved NVLAP accreditation in the area of radiated and conducted emissions as specified below:

- International Special Committee on Radio Interference (CISPR)
  12/CIS22 : IEC/CISPR 22: 1993: Limits and methods of measurement of radio disturbance characteristics of information technology equipment.

- FCC Methods
  (a) 12/F01 : FCC Method – 47 CFR Part 15 – Digital Devices
  (b) 12/F01a : Conducted Emissions, Power Lines, 450 kHz to 30 MHz
  (c) 12/F01b : Radiated Emissions

- Australian Standards referred to by clauses in AUSTEL Technical Standards
  (a) 12/T50 : AS/NZS 3260: Safety of ITE including Electrical Business Equipment
  (b) 12/T51 : AS/NZS 3548: Electromagnetic Interference

7.1.2 Test Results Tractability

CTL personnel performed all testing. All measurements are traceable to NIST as measurements were made using:

- Calibrated test site w/procedures in accordance with ANSI 63.4 1992
- Calibrated measuring instruments traceable to NIST

7.1.3 Standards Referenced

Standards Applicable to EUT

- ANSI, *Methods of Measurement of Radio-Noise Emissions form Low-Voltage Electrical and Electronic Equipment in the Range of 9kHz to 40GHz*, C63.4 (1992).

- Title 47 CFR Part 15, *Radio Frequency Devices* (October 1, 1997).

- Title 47 CFR Part 2, *Frequency Allocations and Radio Treaty Matters; General Rules and Regulations* (October 1, 1997).

- Title 47 CFR Part 101, *Fixed Microwave Services*, (October 1, 1997).

Standards Applicable to Measurement Procedures

- *CISPR Specifications for Radio Interference Measuring Apparatus and Measurement Methods*, CISPR Publication 16, 2nd Edition (1996).

7.1.4 Test Results Summary

7.1.5 General Test Procedures

The test procedures used in determining compliance with applicable FCC regulations were in accordance with applicable FCC test procedure requirements, and more specifically, with ANSI C63.4.[1] All measurements were performed using the peak, CISPR quasi-peak, or average detector function of the test receiver or spectrum analyzer. The detector bandwidths were as follows:

1. Frequencies Range - 10kHz to 150kHz
   - Quasi-Peak : 200 Hz
   - Peak : 200 Hz
   - Average : 200 Hz
2. Frequency Range - 150kHz to 30kHz
   - Quasi-Peak : 9 kHz
   - Peak : 10 kHz
   - Average : 10 kHz
3. Frequency Range - 30MHz to 1GHz
   - Quasi-Peak : 120 kHz
   - Peak : 100 kHz
   - Average : 100 kHz
4. Frequency Range - > 1GHz
   - Quasi-Peak : N/A
   - Peak : 1 MHz
   - Average : 1 MHz

[1] ANSI, *Methods of Measurement of Radio-Noise Emissions form Low-Voltage Electrical Equipment in the Range of 9kHz to 40GHz*, C63.4 (1992).

7.1.6 TEST EQUIPMENT

The tables below present the test equipment used to collect the data present in this exhibit:

DESCRIPTION	MANUFACTURER	MODEL	LAST CAL	CAL DUE	START FREQUENCY	STOP FREQUENCY
RECEIVER I	Rohde & Schwarz	ESMI	**06-22 -99**	06-22-00	20 Hz	26.5 GHz
RECEIVER II	Rohde & Schwarz	ESMI	**07-23-99**	07-23-00	20 Hz	26.5 GHz
Receiver	Rohde & Schwarz	ESVP	**N/A**	N/A	20 MHz	1.3 GHz
BiLog Antenna	Chase 1044	CBL6111	**02-15-99**	02-15-00	20 MHz	2.0 GHz
Horn Antenna	Spectrum Tech.	DRH-0118	**01-03-99**	01-03-00	1 GHz	25 GHz
Antenna Mast	EMCO	1050	**N/A**	N/A	N/A	N/A
Turntable	Macton		**N/A**	N/A	N/A	N/A
Antenna Mast	CTL	N/A	**N/A**	N/A	N/A	N/A
LISN	CHASE	ALN2070A	**08-24-99**	08-24-00	0 Hz	30 MHz
PULSE LIMITER	CHASE	CFL9206	**N/A**	N/A	0 Hz	30 MHz

7.2 RF Power Output

7.2.1 Controlling FCC Regulation – 47 CFR § 2.985 (a)

For transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in § 2.983(d)(5)

The electrical characteristics of the radio frequency load attached to the output terminals when this test is made shall be stated.

7.2.2 Test Procedure

The following Test Procedures / Measurement Standards were followed:

- Direct Connection
  The EUT's antenna port was connected to a Weinschel 30dB (25watt) attenuator, and from the attenuator, directly to the input of a Rohde & Swartz EMI analyzer via a short coax cable. See Figure 1 on the next page for more information.

- EMI Analyzer Setup
  Resolution Band Width: 120 kHz;
  Detection Mode : Quasi-Peak;
  Frequency Measured : 951.6 MHz;
  Frequency Span : 2.5 MHz;

- RF Load
  Load Type : 30 dB Attenuator (25 watt);
  Manufacturer : Weinschel
  Model Number : 46-30-34 (DC to 18GHz)

7.2.3 Test Setup Block Diagram

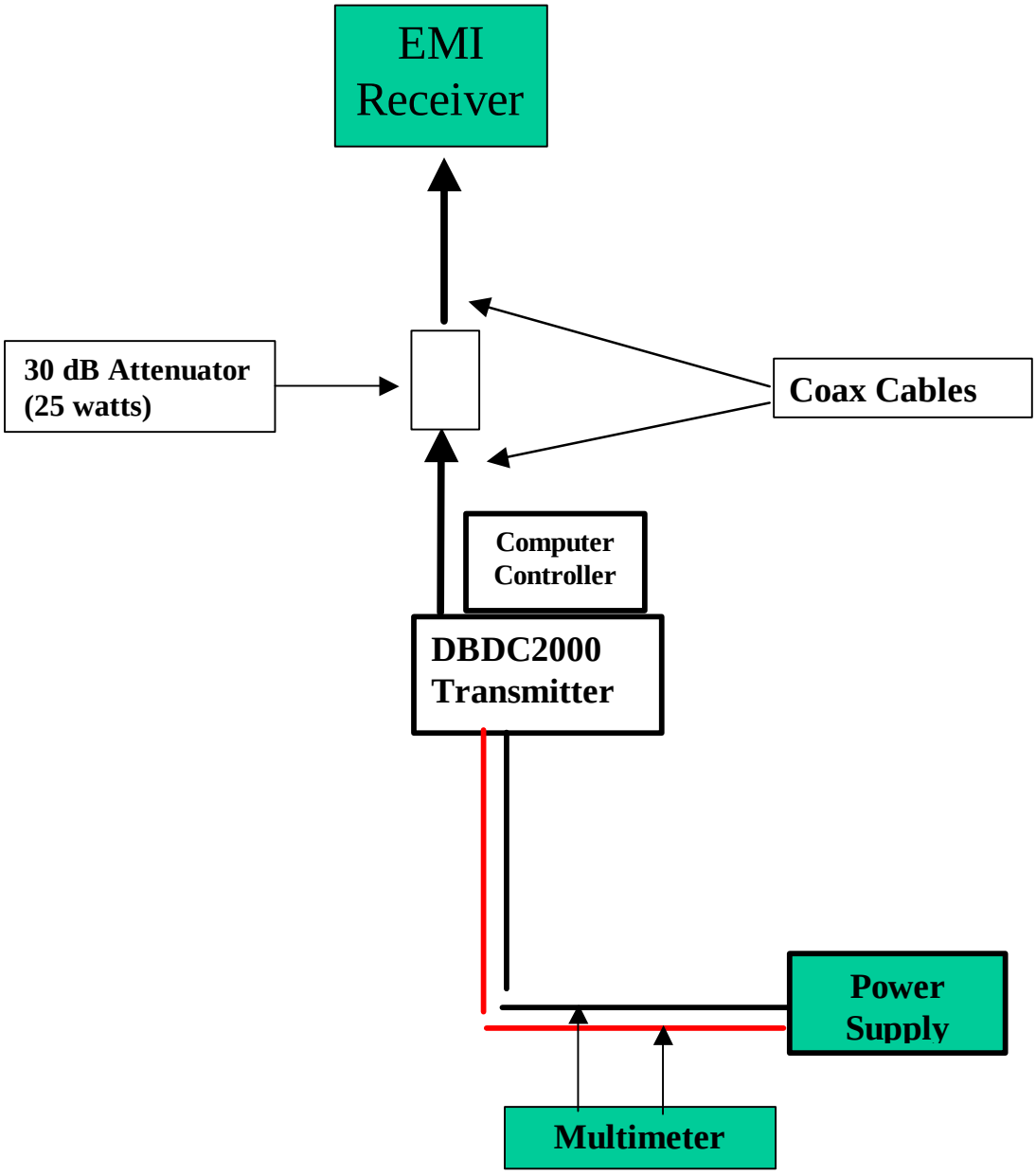


Figure 1: RF Power Output Test Setup Block Diagram

7.2.4 Test Results – RF Power Output

Test Date: November 2, 1999
Equipment Under Test: DBDC2000
Manufacturer: Schlumberger

Conversion Formulas

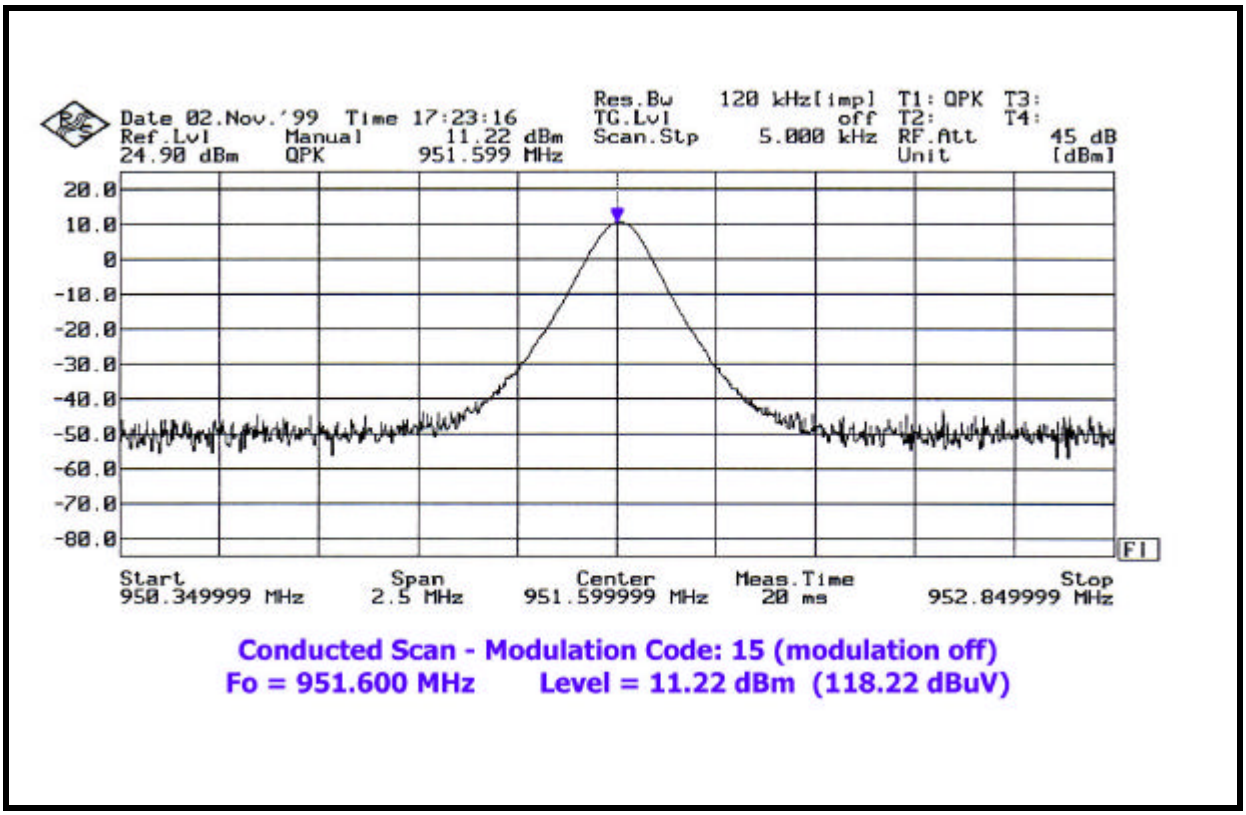
- $P_{dBm} = 30 + 10 \times \text{Log}_{10}(P_{Watts})$;
- $P_{(watts)} = 10^{[(P_{dbm} - 30)/10]}$;
- $P_{(dBm)} + 107 = V_{(dB\mu V)}$;

Test Results – RF Power Output

- Measured RF Power Output : 11.22 dBm;
- Measured RF Load Attenuation : 29.0 dB;

Corrected Reading = (11.22 dBm) + (29.0 dB) = 40.22 dBm

Measured RF Power Output = $10^{[(40.22dbm - 30)/10]}$ = **10.52 Watts**;



Test Data : RF Power Output Graph (951.6 MHz)

7.3 Modulation Characteristics

7.3.1 Controlling FCC Regulation – 47 CFR § 2.987 (d)

A curve (or equivalent data) that shows the equipment will meet the modulation requirements of the rules under which the equipment is to be licensed.

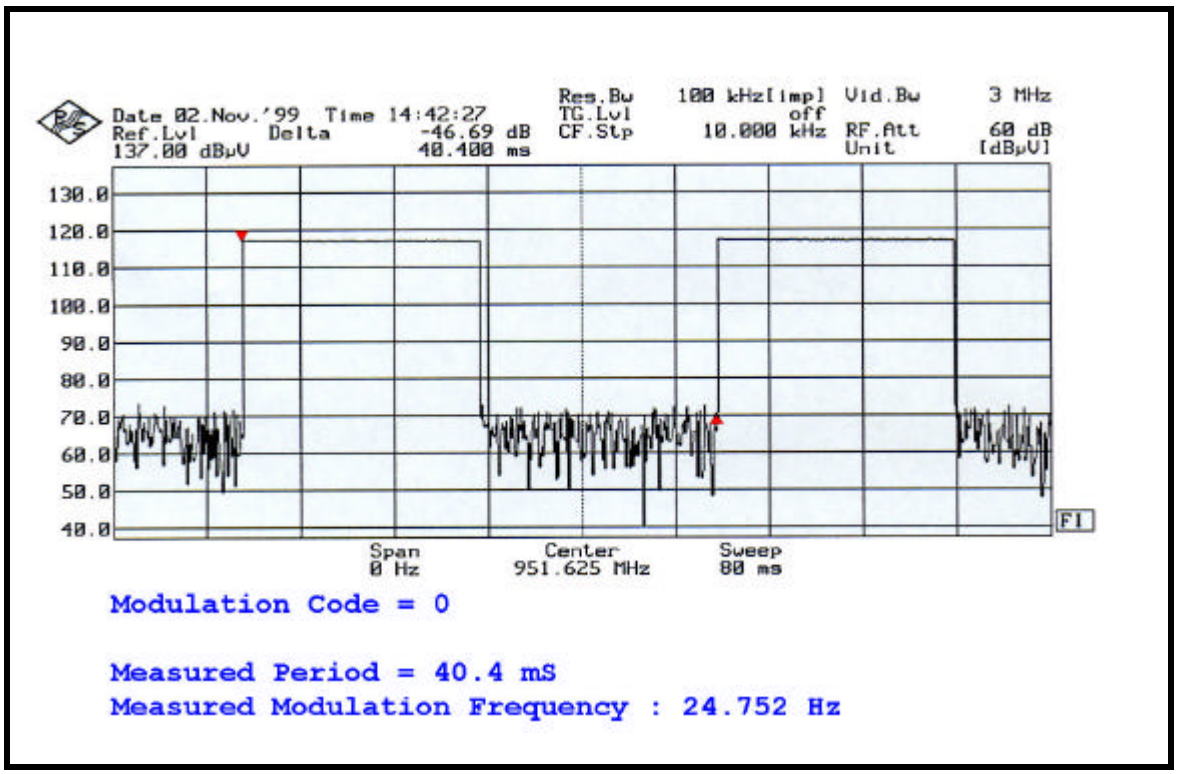
7.3.2 Test Procedure

The following Test Procedures / Measurement Standards were followed:

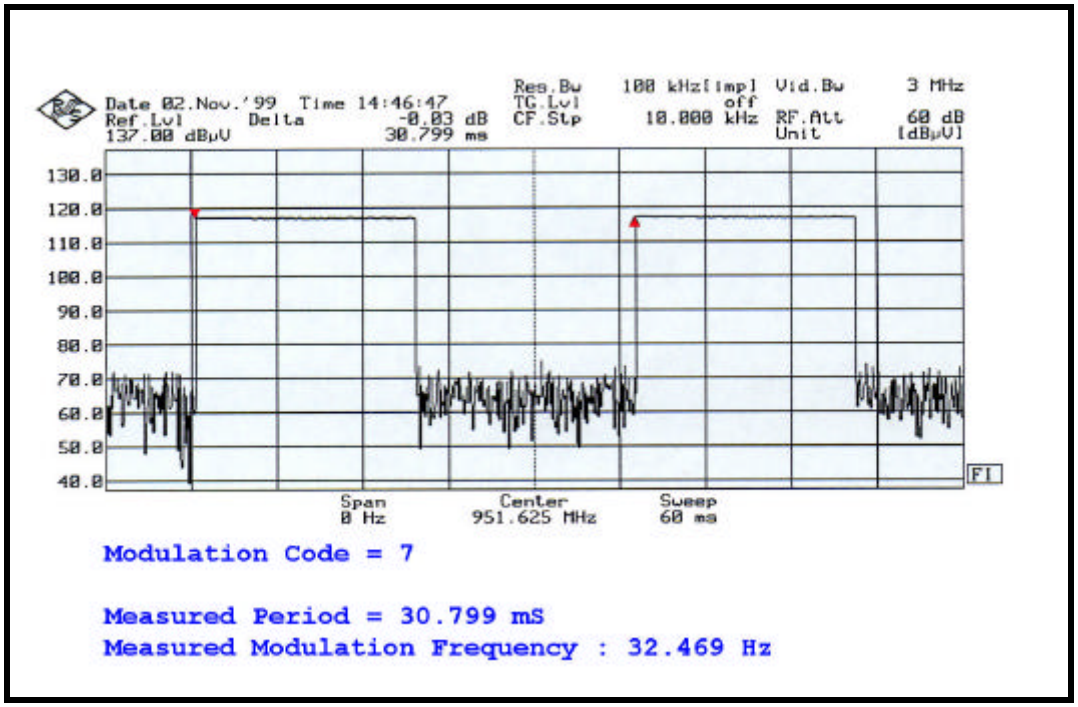
- Direct Connection
  The EUT's antenna port was connected to a Weinschel 30dB (25watt) attenuator, and from the attenuator, directly to the input of a Rohde & Swartz EMI analyzer via a short coax cable. See Block Diagram on Page 61 for more information.

- EMI Analyzer Setup
  Resolution Band Width: 100 kHz;
  Detection Mode : Peak;
  Frequency Measured : 951.625 MHz;
  Frequency Span : 0 MHz;

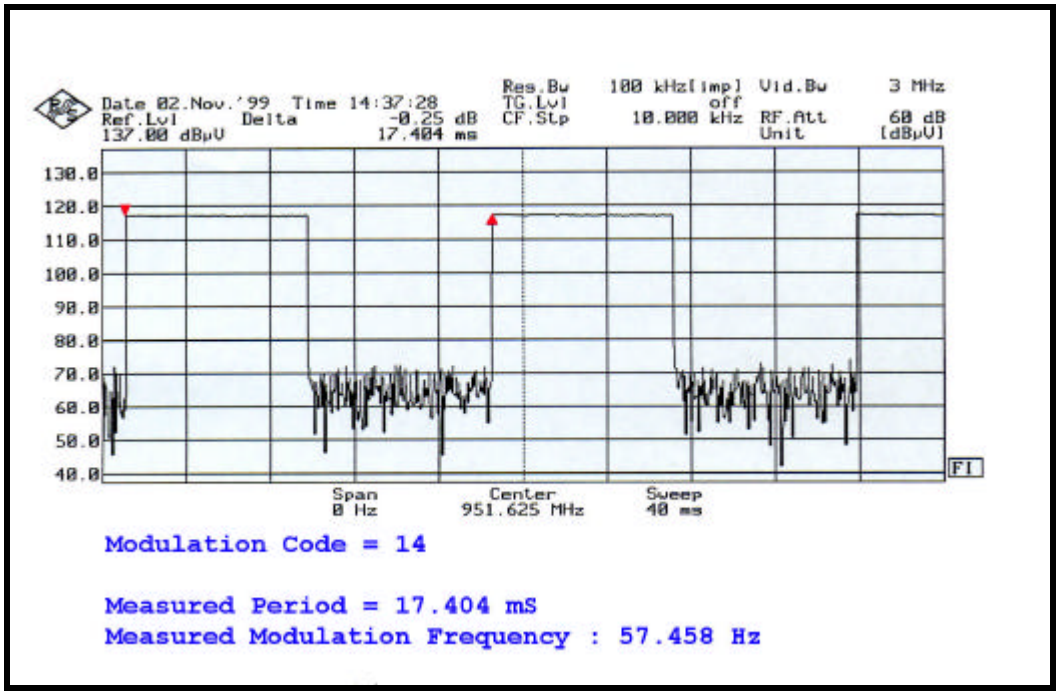
- RF Load
  Load Type : 30 dB Attenuator (25 watt);
  Manufacturer : Weinschel
  Model Number : 46-30-34 (DC to 18GHz)



Test Data : Modulation Characteristics – (Code 0)



Test Data : Modulation Characteristics – (Code 7)



Test Data : Modulation Characteristics – (Code 14)

7.4 Occupied Bandwidth

7.4.1 Controlling FCC Regulations

47 CFR §2.989(a)

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5% of the total mean power radiated by a given emission shall be measured.

47 CFR §101.111

(a) The mean power of emissions must be attenuated below the mean output power of the transmitter in accordance with the following schedule:

(1) When using transmissions other than those employing digital modulation techniques:

(i) On any frequency removed from the assigned frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: At least 25 decibels;
(ii) On any frequency removed from the assigned frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: At least 35 decibels;
(iii) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least $43 + 10 \text{ Log}_{10}$ (mean output power in watts) decibels, or 80 decibels, whichever is the lesser attenuation.

7.4.2 Test Procedure

The following Test Procedures / Measurement Standards were followed:

- Direct Connection
  The EUT's antenna port was connected to a Weinschel 30dB (25watt) attenuator, and from the attenuator, directly to the input of a Rohde & Swartz EMI analyzer via a short coax cable. See Block Diagram on Page 61 for more information.

- EMI Analyzer Setup

Resolution Band Width:		200 Hz;
Detection Mode	:	Peak;
Frequency Measured	:	951.0 MHz and 961 MHz;
Frequency Span	:	75 kHz;
Sweep Time	:	3 and 12 Seconds;
Sweep Mode	:	Single Sweep

- RF Load

Load Type	: 30 dB Attenuator (25 watt);

Manufacturer : Weinschel
Model Number : 46-30-34 (DC to 18GHz)

7.4.3 MASK CALCULATIONS

Authorized Bandwidth = 12.5 kHz;
AF = Authorized Frequency

Section 101.111(a)(1)(i)

- From 50% to 100% of authorized bandwidth: **Attenuation = 25dB**;
- (.5)(12.5kHz) to (1)(12.5kHz) = (AF +/- 6.25 kHz) to (AF +/- 12.5kHz);

Section 101.111(a)(1)(ii)

- From 100% to 250% of authorized bandwidth: **Attenuation = 35dB**;
- (1)(12.5kHz) to (2.5)(12.5kHz) = (AF +/- 12.5kHz) to (AF +/- 31.25kHz);

Section 101.111(a)(1)(iii)

- From 250% of authorized bandwidth: Attenuation = $43 + 10\text{Log}_{10}(10w)$ = **53 dB**;
- > AF +/- 31.25kHz;

The above-calculated mask was placed on the plot presented on the next page.

7.4.4 Test Setup Block Diagram

The test setup block diagram is identical to the test setup block diagram presented on Page 61 of this exhibit.

7.4.5 Test Results – Occupied Bandwidth

Test Date: November 2, 1999
Equipment Under Test: DBDC2000
Manufacturer: Schlumberger

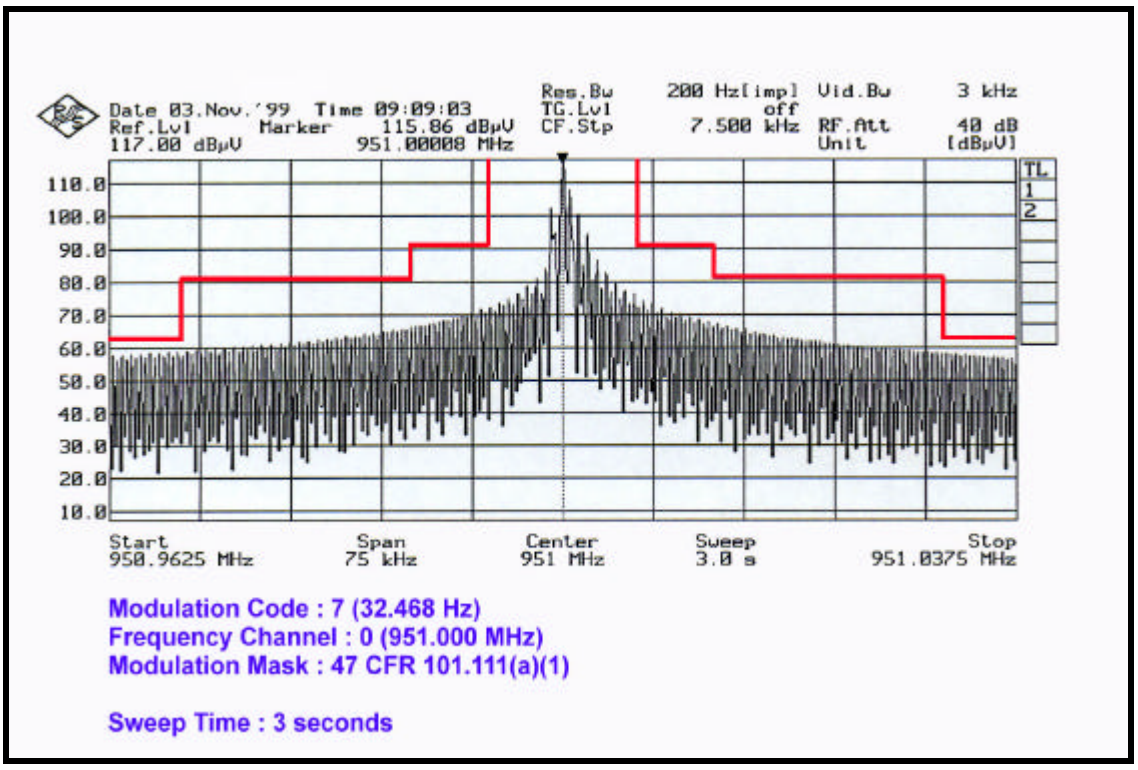
Test Results

The EUT is compliant with the FCC regulations reference in this section.

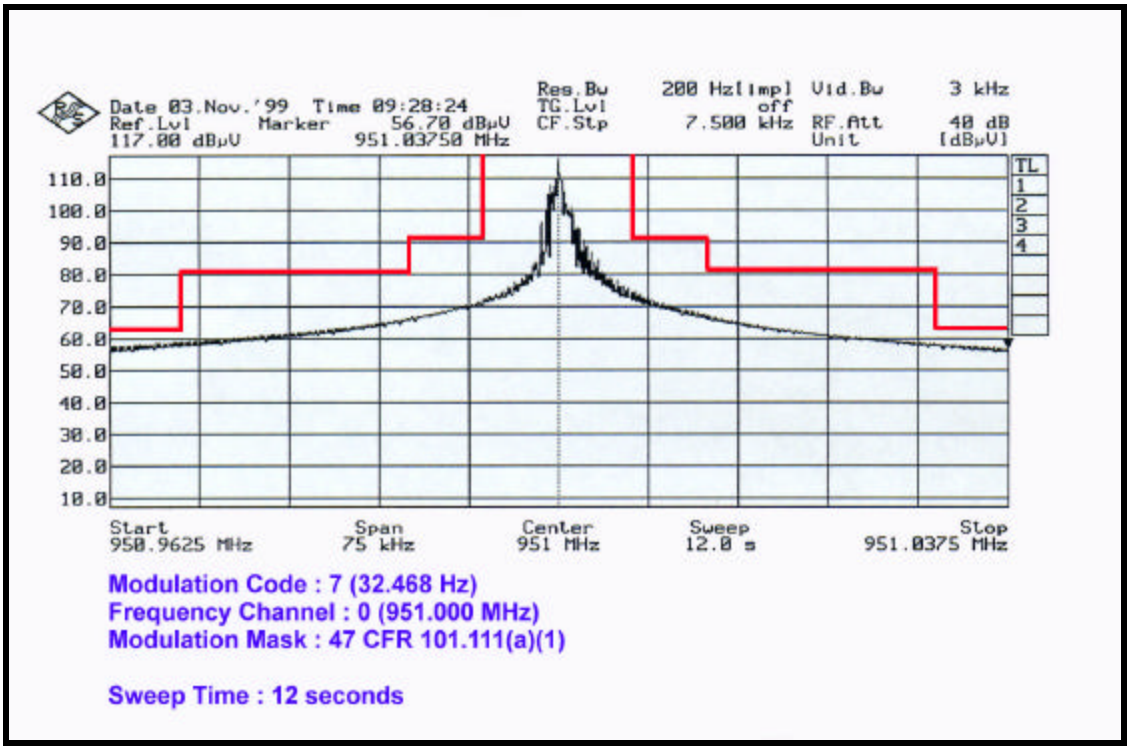
Notes

(1) Audio Input: Internal AM Data Generation, software programmed tone frequency (between 24.752 Hz and 57.471 Hz). The one frequency used for this test was 32.468 Hz.

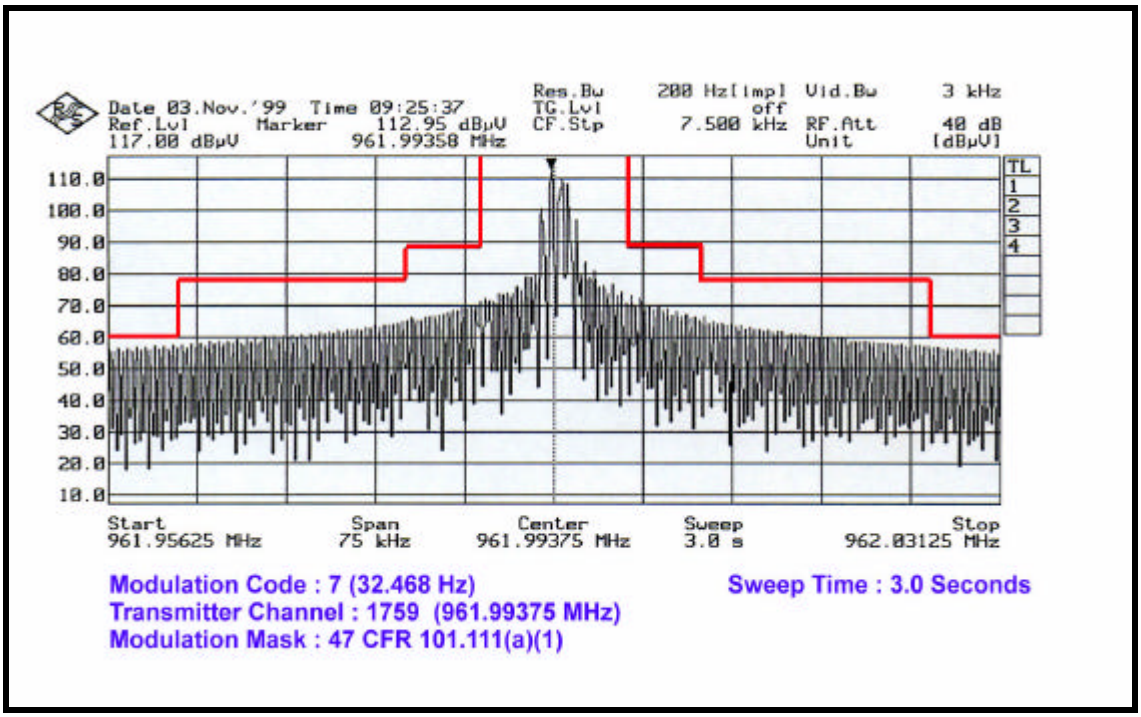
(2) Data Screen: Essentially a square wave with modulation depth measured to be approximately 60 dBµV.



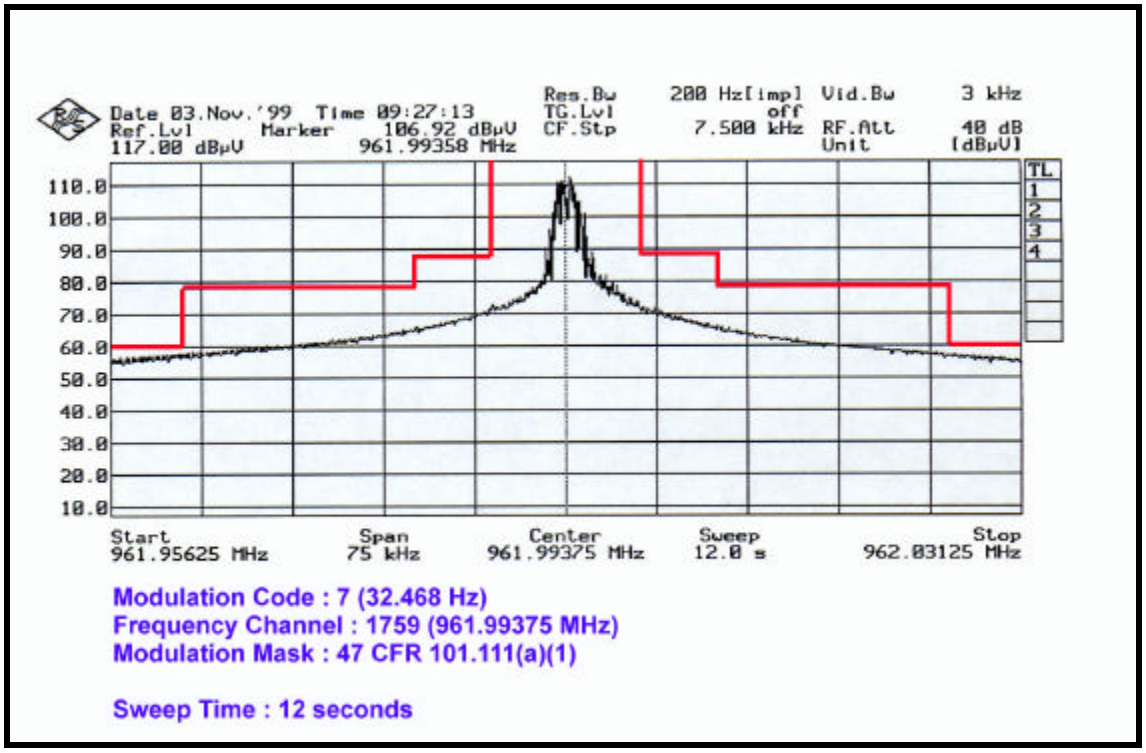
Test Data : Plot of Occupied Bandwidth @ 951 MHz (3s Sweep Time)



Test Data : Plot of Occupied Bandwidth @ 951 MHz (12s Sweep Time)



Test Data : Plot of Occupied Bandwidth @ 961 MHz (3s Sweep Time)



Test Data : Plot of Occupied Bandwidth @ 951 MHz (12s Sweep Time)

7.5 Spurious Emissions at Antenna Terminal

7.5.1 Controlling FCC Regulations

47 CFR §2.991

The radio frequency voltage or powers generated within the equipment and appearing on a spurious frequency shall be checked at the equipment output terminals when properly loaded with a suitable artificial antenna. Curves or equivalent data shall show the magnitude of each harmonic and other spurious emission that can be detected when the equipment is operated under the conditions specified in §2.989 as appropriate.

The magnitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be specified.

47 CFR §101.111

(a) The mean power of emissions must be attenuated below the mean output power of the transmitter in accordance with the following schedule:

(2) When using transmissions other than those employing digital modulation techniques:

(iv) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 + 10 Log_{10} (mean output power in watts) decibels, or 80 decibels, whichever is the lesser attenuation.

7.5.2 Test Procedure

The following Test Procedures / Measurement Standards were followed:

- Direct Connection
  The EUT's antenna port was connected to a Weinschel 30dB (25watt) attenuator, and from the attenuator, directly to the input of a Rohde & Swartz EMI analyzer via a short coax cable. See Block Diagram on Page 61 for more information.

- **Scan Procedure**: Scan for harmonic emissions over the frequency span of 100Hz to 10GHz. For each harmonic detected (or any other spurious emission), measure the power level using the following EMI Analyzer settings:

  Resolution Band Width : F < 1GHz :120 kHz ; F > 1GHz : 1 MHz;
  Detection Mode : Below 1GHz : Quasi-Peak; Above 1GHz – Average;
  Frequency Span Investigated : 100 Hz to 10 GHz;

- RF Load
  Load Type : 30 dB Attenuator (25 watt);
  Manufacturer : Weinschel
  Model Number : 46-30-34 (DC to 18GHz)

7.5.3 Test Setup Block Diagram

The test setup block diagram is identical to the test setup block diagram presented on Page 61 of this exhibit.

7.5.4 Spurious Limit – Part 101.111(a)(1)(iii)

On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 + 10 Log_{10} (mean output power in watts) decibels, or 80 decibels, whichever is the lesser attenuation.

(1) 80 dB or

(2) 43 + 10 Log_{10} (mean output power in watts);
Measured Output Power : 10.52 Watts (40.22 dBm) [See Page 62]

Attenuation = 43 +10 x Log (10.52) = 53.22 dB

Since **53.22 dB** is the lesser attenuation, all spurious emissions must be 53.22 dB below the fundamental power level.

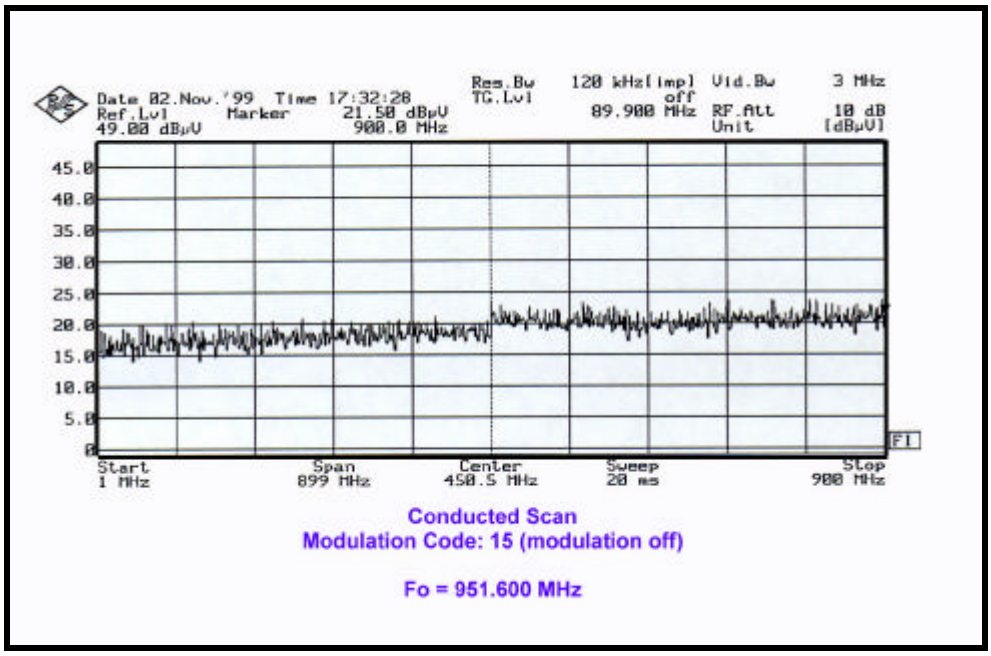
Thus, the Spurious Limit = (40.22 dBm) + (107) – 53.22 dB;

Spurious Limit = 94.0 dBµV

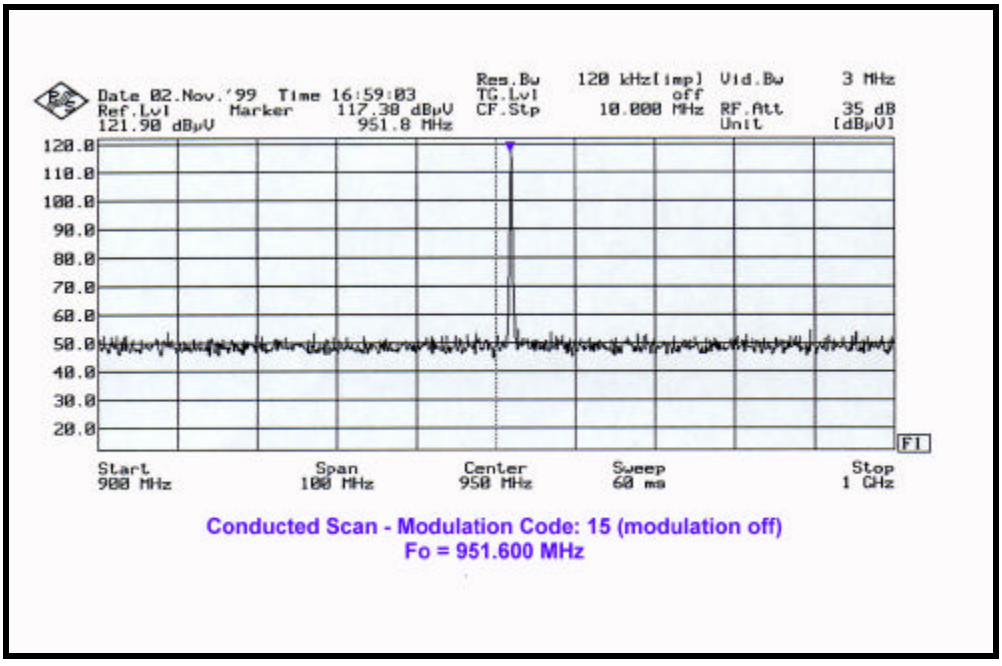
7.5.5 Test Results – Spurious Emissions at Antenna Terminal

Test Date: November 2, 1999
Equipment Under Test: DBDC2000
Manufacturer: Schlumberger

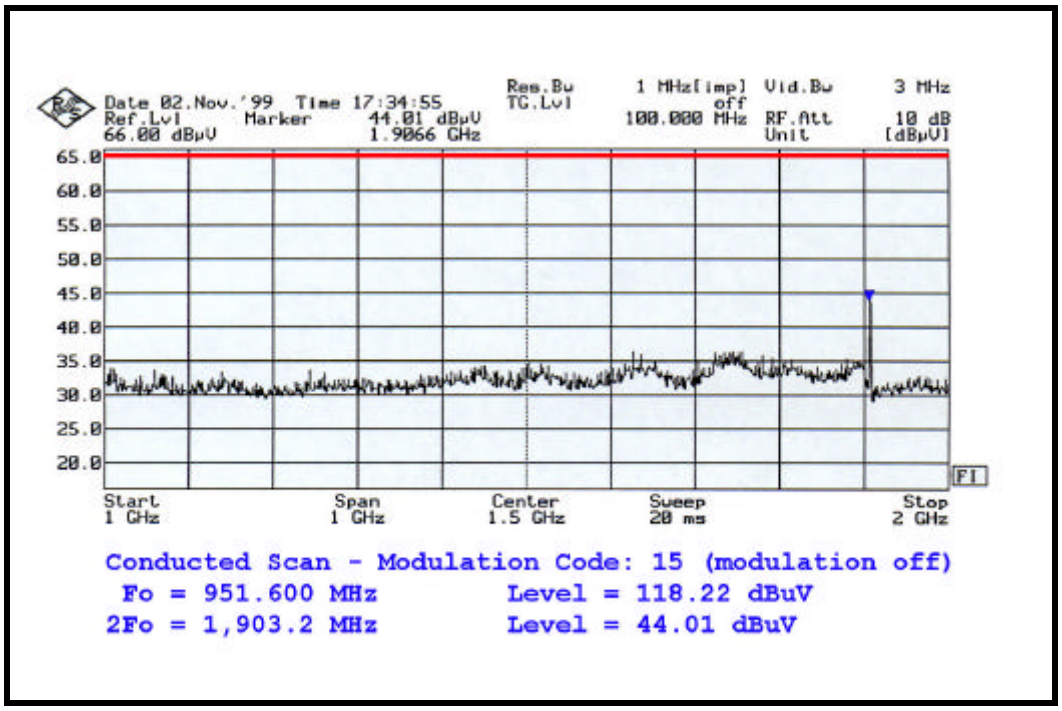
Frequency (MHz)	Detector Mode	Measured Emission (dBµV)	Correction Value (dB)	Corrected Value (dBµV)	Limit (dBµV)	Margin (dBµV)
951.6	Quasi-Peak	118.22	29.0	147.22	N/A	N/A
1,903.2	Average	42.29	29.5	71.8	94.0	22.21
2,854.8	**Average**	**56.4**	**29.6**	**86.0**	**94.0**	**8.0**
3,806.4	Average	-----	29.7	-----	94.0	-----
4,758.0	Average	40.7	30.1	70.8	94.0	23.2
5,709.6	Average	-----	-----	-----	94.0	-----
6,661.2	Average	-----	-----	-----	94.0	-----
7,612.8	Average	-----	-----	-----	94.0	-----
8,564.4	Average	-----	-----	-----	94.0	-----
9,516.0	Average	-----	-----	-----	94.0	-----



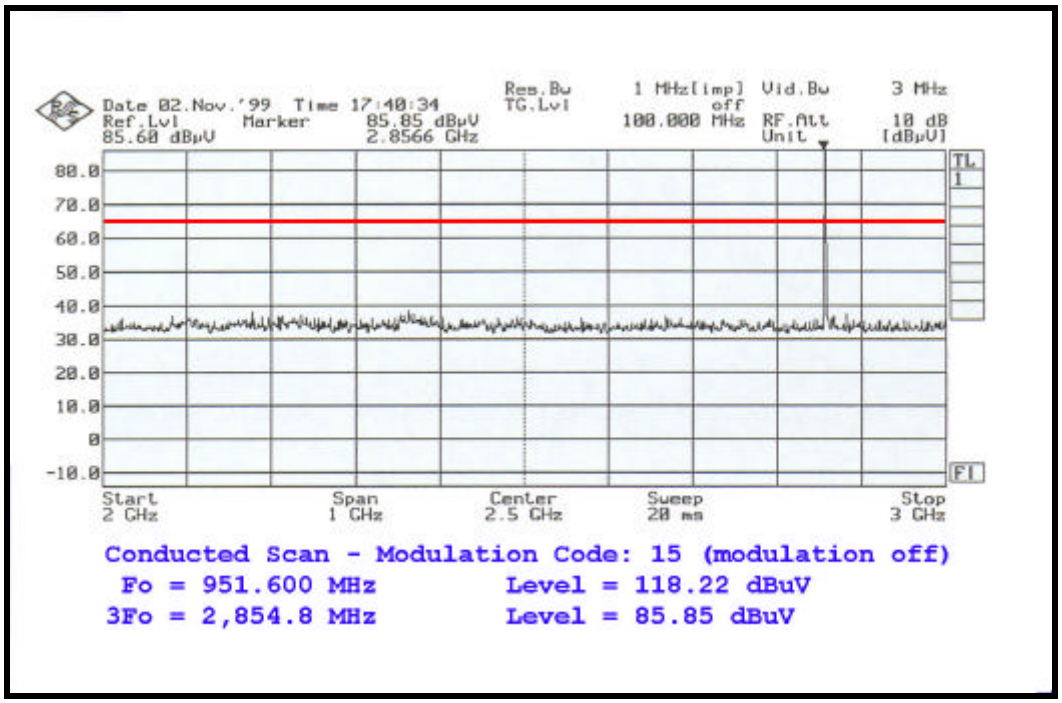
Test Data : Spurious Emission: 100Hz to 900MHz



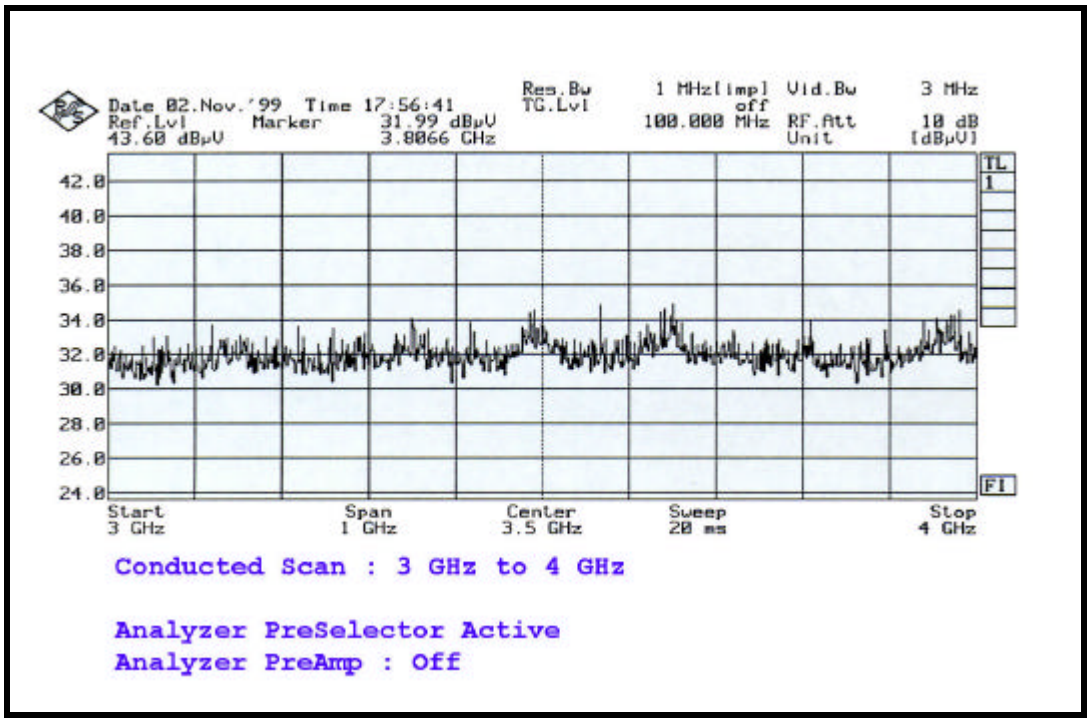
Test Data : Spurious Emission: 900 MHz to 1GHz



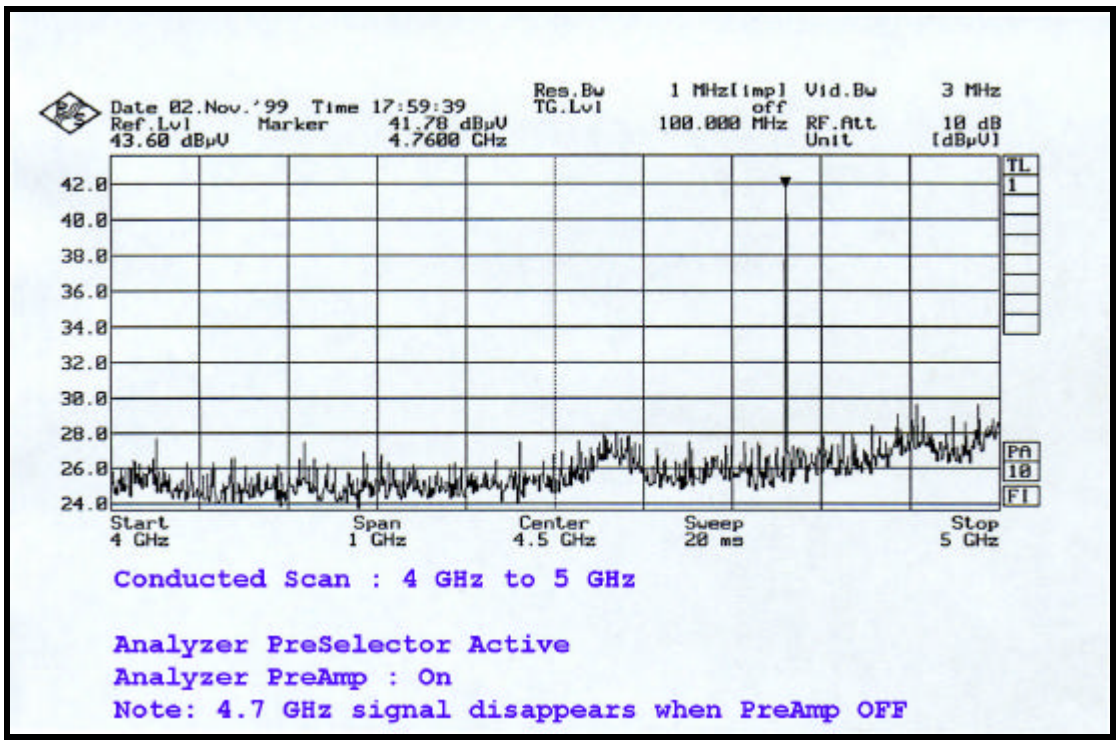
Test Data : Spurious Emission: 1GHz to 2GHz



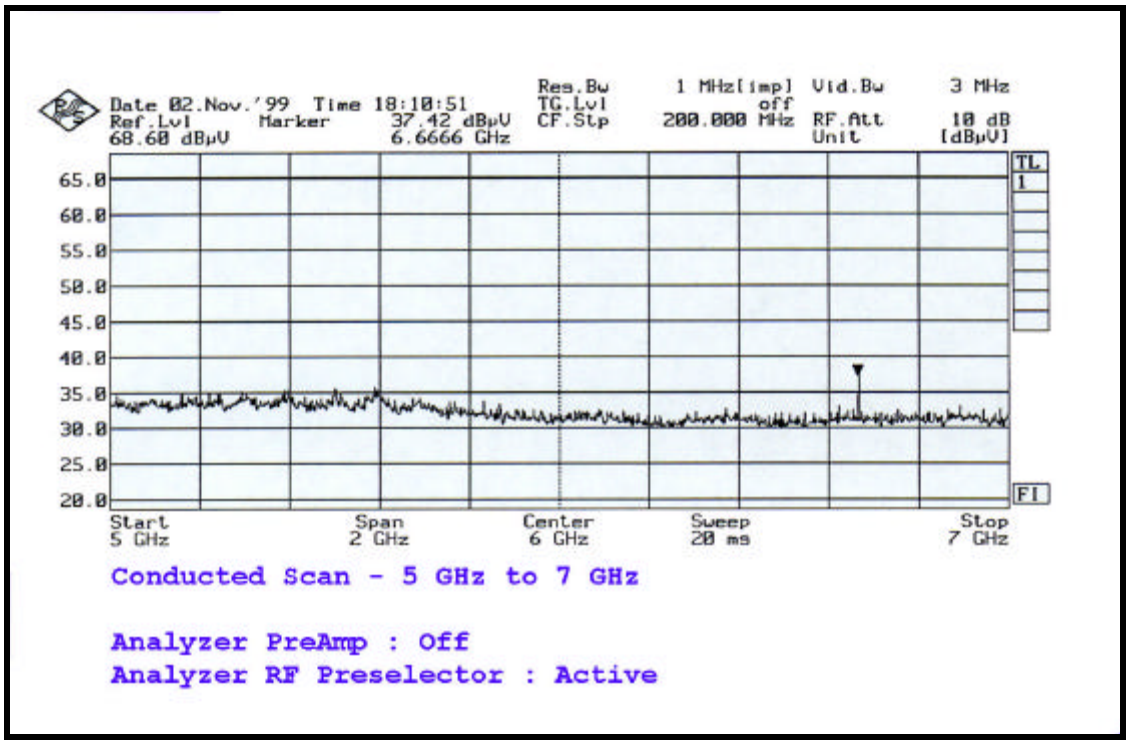
Test Data : Spurious Emission: 2GHz to 3GHz



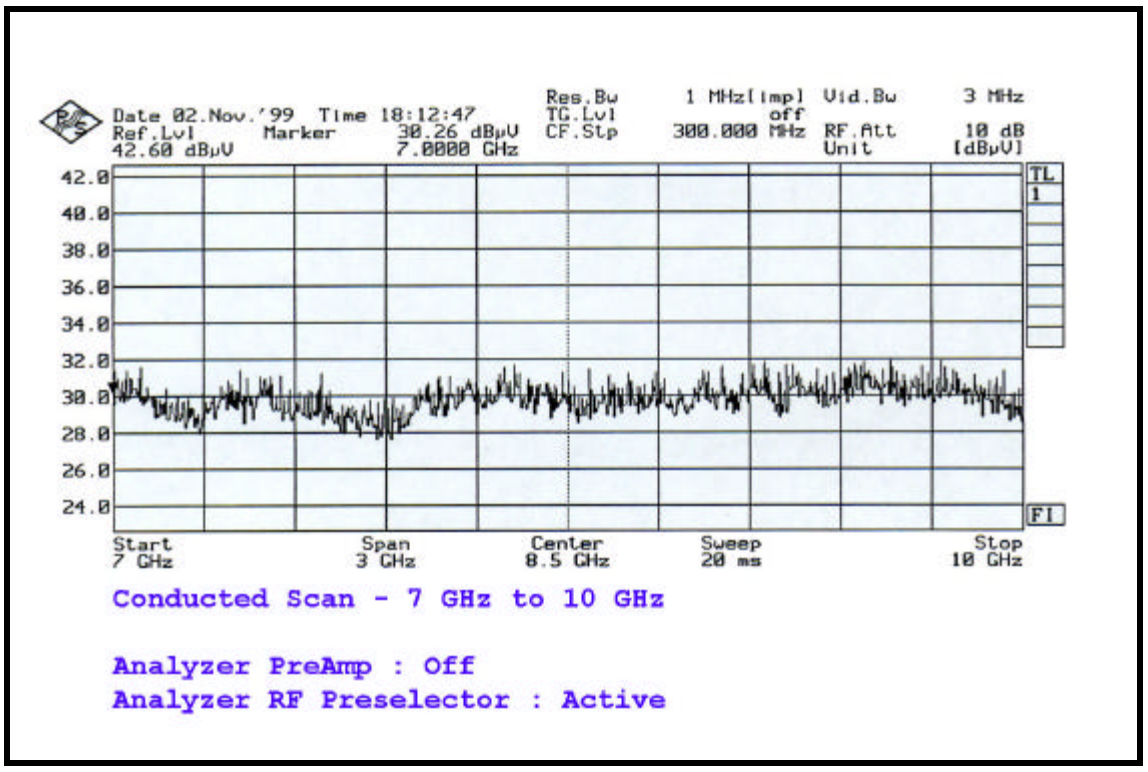
Test Data : Spurious Emission: 3GHz to 4GHz



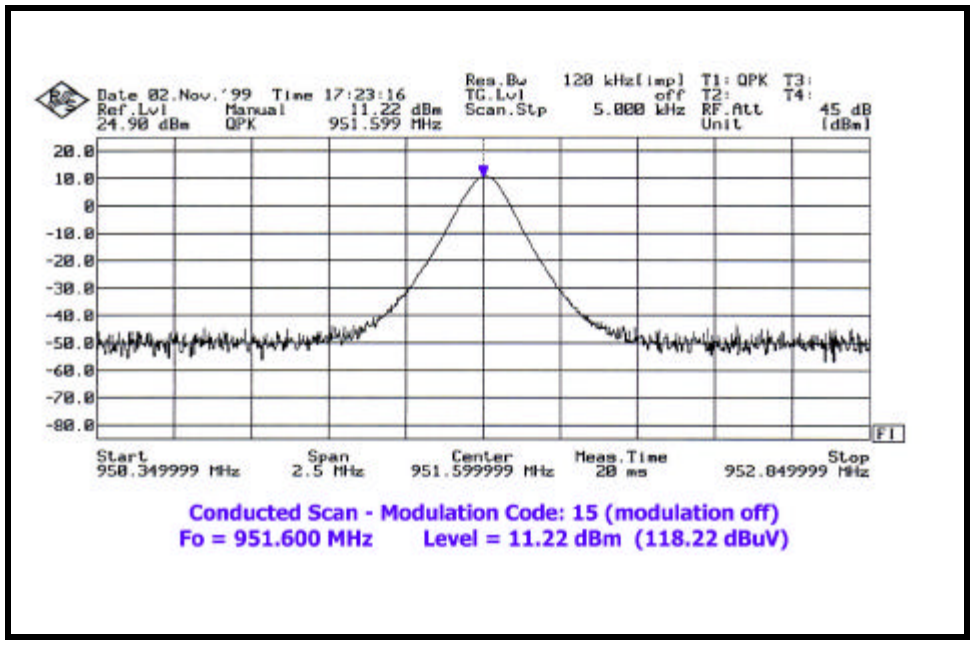
Test Data : Spurious Emission: 4GHz to 5GHz



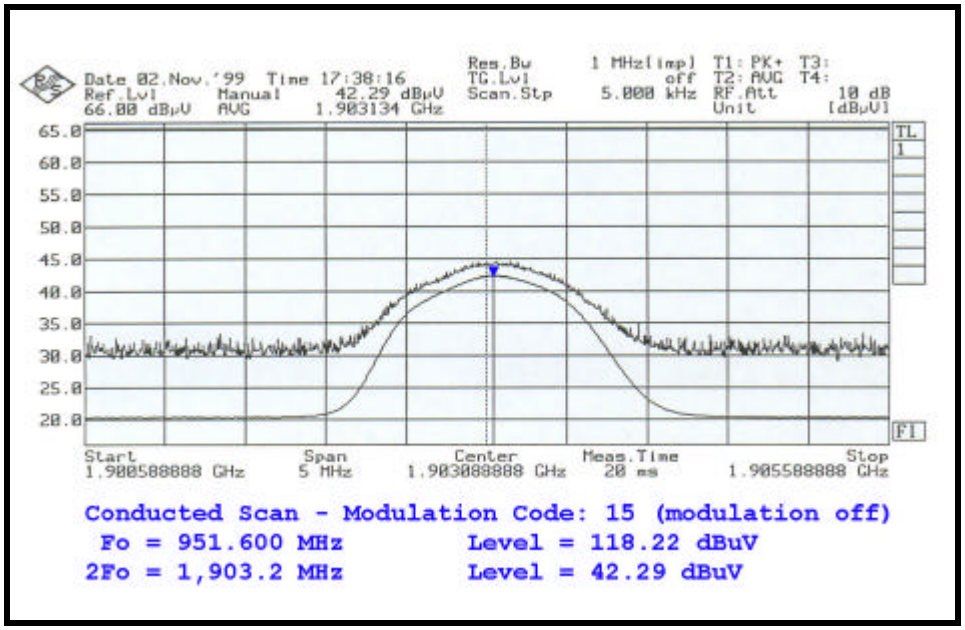
Test Data : Spurious Emission: 5GHz to 7GHz



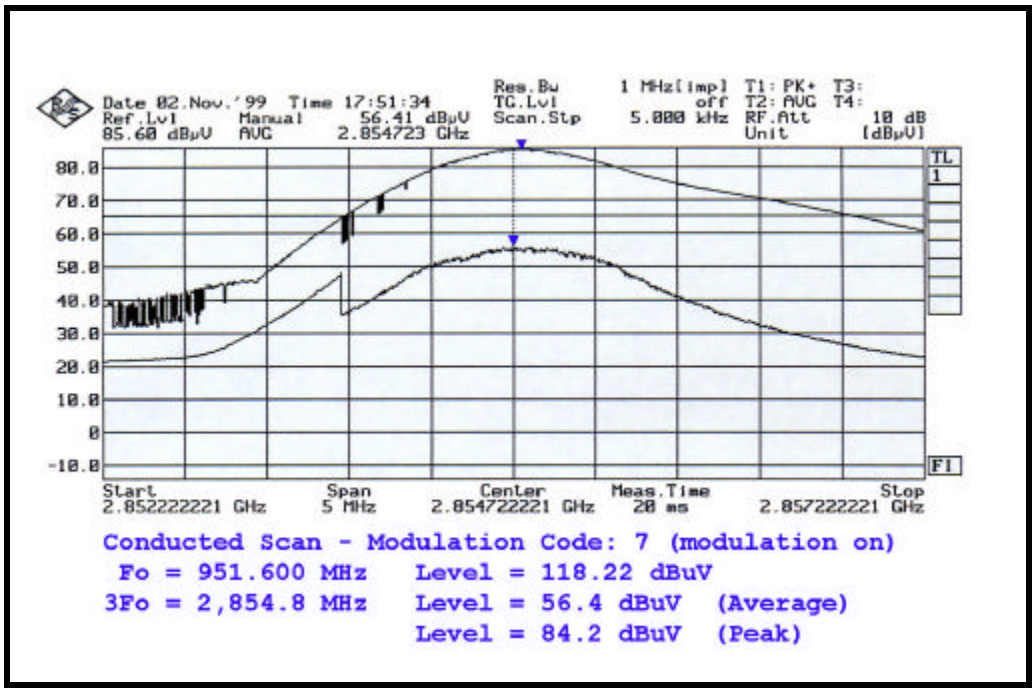
Test Data : Spurious Emission: 7GHz to 10GHz



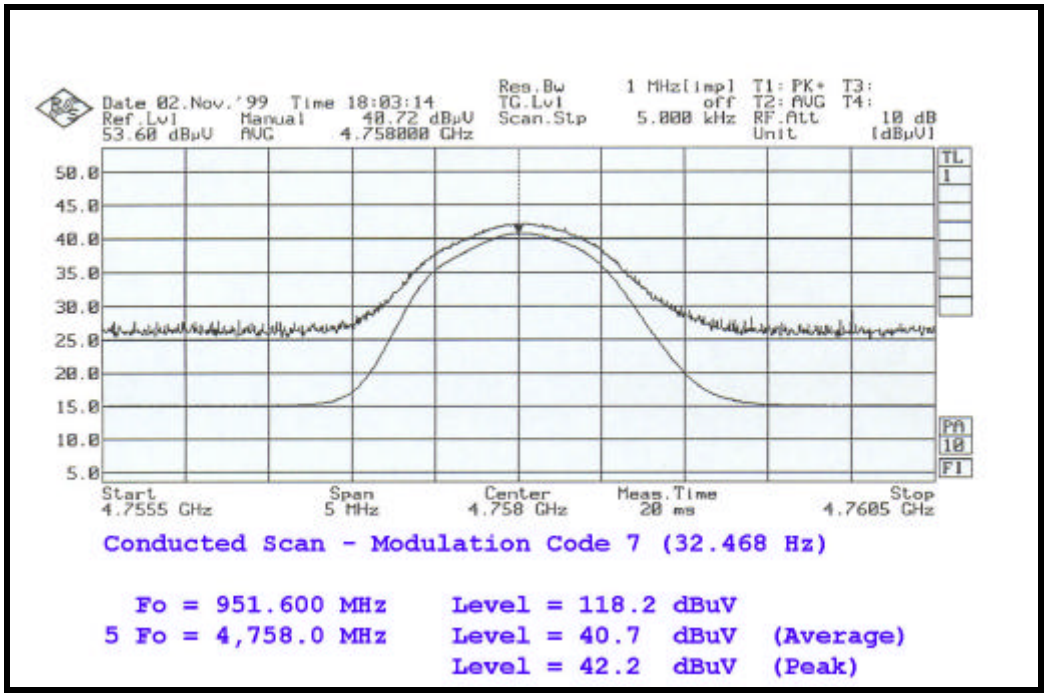
Test Data : Fo = Fundamental Frequency = 954.6 MHz



Test Data : 2Fo = 1,903.2 MHz



Test Data : 3Fo = 2,854.8 MHz



Test Data : 5Fo = 4,758.0 MHz

7.6 Field Intensity of Spurious Radiation

7.6.1 Controlling FCC Regulations

47 CFR §101.111

(b) The mean power of emissions must be attenuated below the mean output power of the transmitter in accordance with the following schedule:

(3) When using transmissions other than those employing digital modulation techniques:

(v) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 + 10 Log_{10} (mean output power in watts) decibels, or 80 decibels, whichever is the lesser attenuation.

7.6.2 Test Procedure

- **Test Setup**
  The EUT is setup on a RF transparent table that rests on an EMCO turntable capable of rotating from 0 to 360 degrees. EUT cables are oriented to maximize the field strength amplitudes. Three meters from the EUT is an EMCO antenna mast capable of moving the receiving antenna up and down (from 1 meter to 4 meters).

- **30MHz to 2GHz**: The frequency band from 30MHz to 2GHz was scanned and the spurious EMI emissions measured and recorded; The quasi-peak detector function is used for frequencies between 30MHz and 2GHz, and the average detector function is used for frequencies between 1 GHz and 2 GHz;

- **2GHz to 10GHz**: The measurement procedure used to verify compliance to the above-referenced regulations is given below:

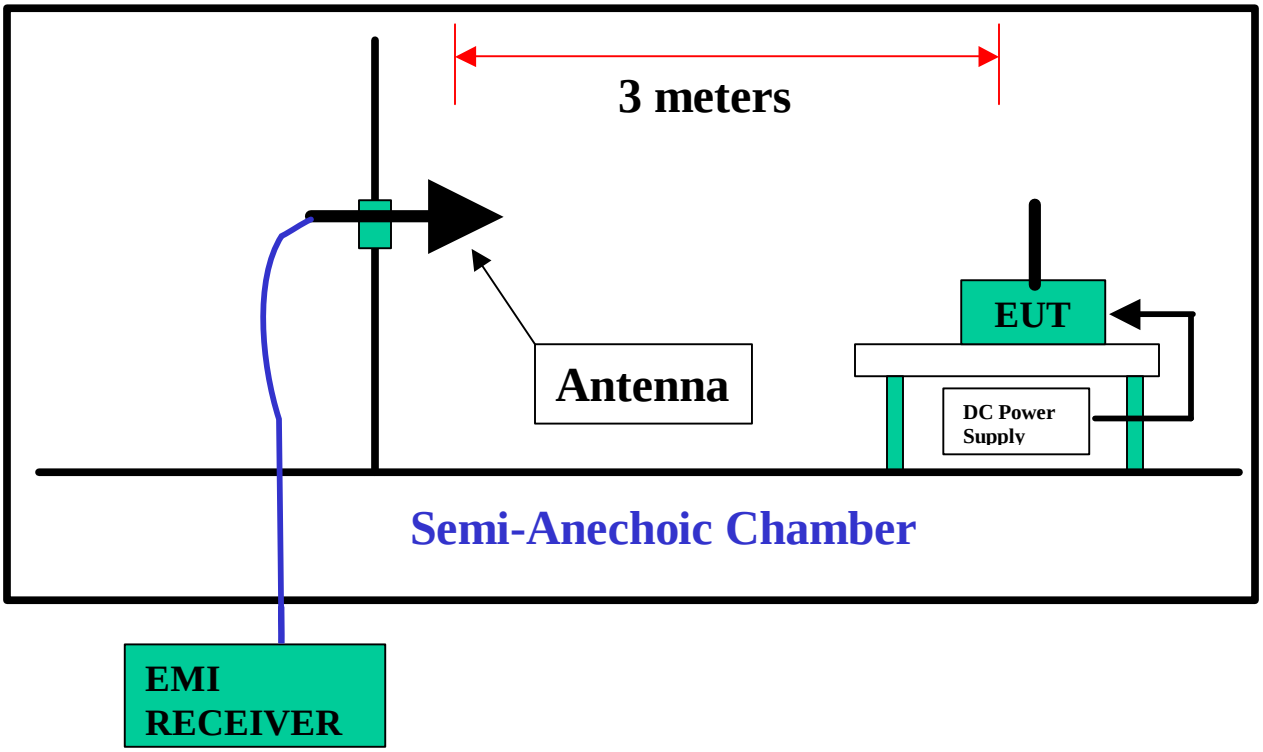
  (1) Set EUT to transmit, continuously, at the desired frequency;
  (2) Tune the receiver to the Harmonic of interest;
  (3) Setup measurement instrumentation in proper measurement mode;
  (4) Place the antenna in the horizontal position and move to find height where maximum reception occurs;
  (5) Rotate EUT and record the maximum emission level detected, antenna height, antenna polarization, and turntable angle;
  (6) Place the antenna in the vertical position and move to find height where maximum reception occurs;
  (7) Rotate EUT and record the maximum emission level detected, antenna height, antenna polarization, and turntable angle;
  (8) Return to step (2) and repeat for each harmonic;
  (9) Return to step (1) for each fundamental frequency;

  Create a report presenting the test results;

(This procedure was used as scans above 2GHz proved that the only detectable emissions above 2GHz were harmonics of the fundamental transmitter frequency)

7.6.3 Test Setup Block Diagram

The test setup block diagram is below:



7.6.4 Spurious Limit – Part 101.111(a)(1)(iii)

On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 + 10 Log_{10} (mean output power in watts) decibels, or 80 decibels, whichever is the lesser attenuation.

(1) 80 dB or

(2) 43 + 10 Log_{10} (mean output power in watts);
Measured Output Power : 10.52 Watts (40.22 dBm) [See Page 62]

Attenuation = 43 +10 x Log (10.52) = 53.22 dB

Since **53.22 dB** is the lesser attenuation, all spurious emissions must be 53.22 dB below the fundamental power level.

Thus, the Spurious Limit = 124.7 dBµV – 53.22 dB;

Spurious Limit = 71.48 dBµV

7.6.5 Test Results – Spurious Emissions at Antenna Terminal

Test Date: November 3, 1999
Equipment Under Test: DBDC2000
Manufacturer: Schlumberger

Frequency (MHz)	Detector Mode	Measured Emission (dBµV)	Correction Value (dB)	Corrected Value (dBµV)	Limit (dBµV)	Margin (dBµV)
951.6	Quasi-Peak	93.5	31.2	124.7	N/A	N/A
1,903.2	Average	17.5	47.4	64.9	71.5	6.6
2,854.8	**Average**	21.0	**46.9**	**67.9**	**71.5**	**3.6**
3,806.4	Average	-----	-----	-----	71.5	-----
4,758.0	Average	-----	-----	-----	71.5	-----
5,709.6	Average	-----	-----	-----	71.5	-----
6,661.2	Average	-----	-----	-----	71.5	-----
7,612.8	Average	-----	-----	-----	71.5	-----
8,564.4	Average	-----	-----	-----	71.5	-----
9,516.0	Average	-----	-----	-----	71.5	-----

7.7 Operational Stability Performance

7.7.1 Controlling FCC Regulations

47 CFR §101.147(b)
… Equipment that is used to create additional frequencies by narrowing bandwidth (whether authorized for a 12.5 kHz, 25 kHz or greater bandwidth) will be required to meet, at a minimum, the +/- 0.00015 % tolerance requirement so that all subfrequencies will be within the emissions mask. . . .

47 CFR §101.107(a)
The carrier frequency of each transmitter authorized in these services must be maintained within the following percentage of the reference frequency . . . 952 MHz to 960MHz . . . +/- 0.00015% for multiple address remote stations with 12.5 kHz bandwidths . . .

47 CFR §2.995 – Measurements Required: Frequency Stability
The frequency stability shall be measured with variation of ambient temperature as follows: From -30° to +50° centigrade . . .

7.7.2 Test Procedure

- **Test Setup**
  The EUT is setup in an environmental chamber capable of varying the chamber's internal temperature from -50° to 100° centigrade. The coax cable connects to the EUT's antenna port, runs outside the chamber, and connects to a load (described below). The load is connected, via another coax cable, to the input of a frequency counter.

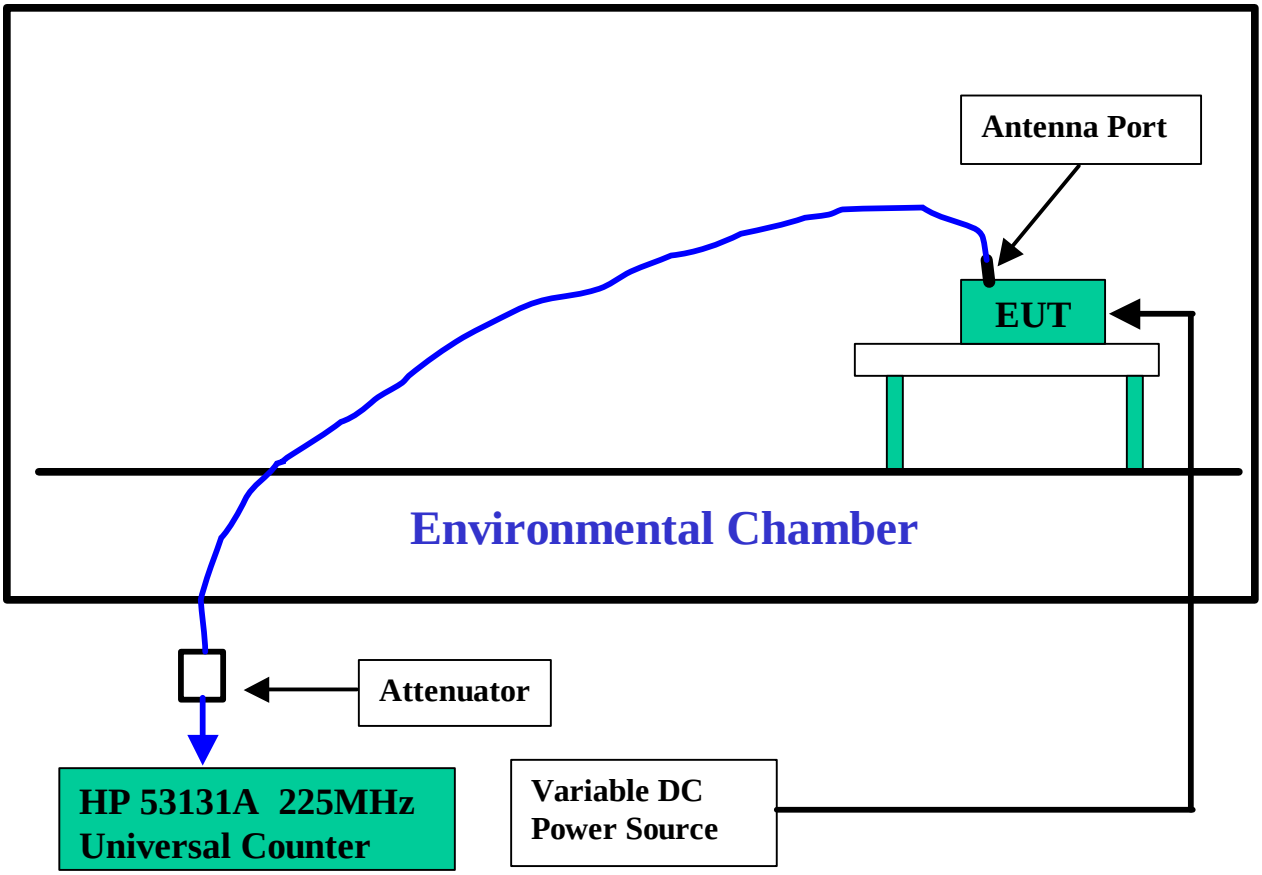
- The chamber temperature is varied from 50° centigrade down to -30° centigrade in steps of 10° centigrade. [47 CFR §2.995(a)(1)]

- The dwell time at each temperature is the time required to stabilize all of the components of the oscillator circuit – typically 1 hour. [47 CFR §2.995(b)]

- The frequency stability at each temperature was measured varying the primary supply voltage from 85% to 115% of nominal. [47 CFR §2.995(d)(1)]

7.7.3 Test Setup Block Diagram

The test setup block diagram is below:



7.7.4 Test Results – Operational Stability Performance

Test Date: November 1, 1999
Equipment Under Test: DBDC2000
Manufacturer: Schlumberger

Measured Carrier Frequency @ 25° C, 5.0 Vdc: **951.314206 MHz**

Frequency Drift Upper Limit: **Carrier + 1.427 kHz**
Frequency Drift Lower Limit: **Carrier – 1.427 kHz**

Table : CARRIER FREQUENCY DRIFT (in Hz)

Voltage (DC)	-30° C	-13° C	-10° C	0° C	10° C	20° C	30° C	40° C	50° C
13.8	-----	-866	-642	0	147	67	-168	- 446	- 676
13.0	-----	-863	-642	0	146	65	-169	-444	-676
12.0	-----	-863	-641	1	146	65	-168	-444	-675
11.0	-----	-864	-642	1	146	66	-168	-445	-675
10.0	-----	-864	-642	1	146	66	-168	-445	-676
Time at Specified Temperature	N/A	1 Hour	1 Hour	1 Hour	1 Hour	1 Hour	1 Hour	1 Hour	1 Hour

Note: EUT stops transmitting at **-13° C;**