Introduction

The following information is submitted for Type Acceptance of a Broadband PCS Base Station for Northern Telecom, Inc., in accordance with Part 24, Subpart E and Part 2, subpart J of the FCC Rules and Regulations. The measurement procedures were in accordance with the requirements of Part 2.999.

2.983(a) Name of Applicant

Applicant:	NORTEL Northern Telecom, Inc. 2305 Mission College Blvd. Santa Clara, CA 95054
Manufacturer:	NORTEL Northern Telecom Canada Limited 5111 47TH Street NE Calgary, Alberta, CANADA T5J 3G1

2.983(b) Equipment Identification

Applicant:	NORTEL Northern Telecom, Inc.
Model No:	NTMQ75AA
Trade Name:	Picocell 1900
FCC ID:	AB6NTMQ75AA

2.983(c) Production Quantity

Production quantity is planned.

2.983(d) Technical Description

See the technical description attachment. Circuit Schematics and User Documentation attachments are also included.

2.983(e) Measurement Data

The measurement data required by FCC Part 2 sections 2.985 through 2.997, inclusive, measured in accordance with the procedures set out in section 2.999 can be found in the following sections of this report.. An attestation confirming compliance with IEEE C95.1-1991 is also attached to this application.

2.983(f) Equipment Identification Label

An engineering drawing and placement location of the equipment identification label is attached to this application.

2.983(g) Product Photographs

Product photographs are attached to this application.

2.983(h) Encoder Device

This requirement is not applicable.

2.983(i) Part 97 Application

This requirement is not applicable.

2.983(j) AM Broadcast Application

This requirement is not applicable.

Measurement Results Summary

Table 1 is a summary of the measurement results for the BTS.

Table 1: Measurement Results Summary

FCC Measurement Specification	FCC Limit Specification	Description	Result
2.985	24.232	RF Power Output	$Power_{(max)}$=21.5 dBm
2.987		Modulation Characteristics	NA
2.989		Occupied Bandwidth	$OBW_{(max)}$= 28.66 kHz
2.991, 2.997	24.238	Spurious Emissions at Antenna Terminals	Minimum of 10.9dB margin
2.993, 2.997	24.238	Field Strength of Spurious Radiation	
2.995	24.235	Frequency Stability	<0.04 ppm
24.51 d)	24.51 d)	RF Hazard	Complies (see Exhibit G)

Declaration of the Accuracy of Data

The undersigned attest to the accuracy of the measurement data contained in this document.

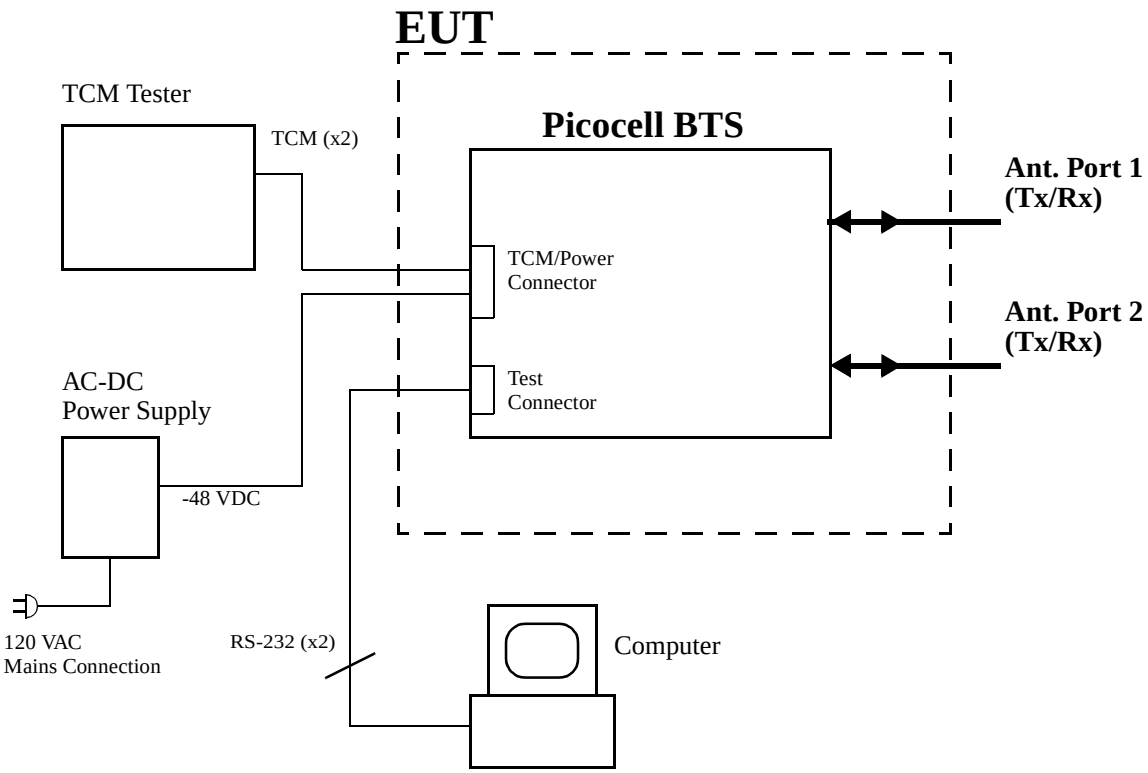
Stephen Cassidy
Radio Compliance Engineer
Nortel Technology

Denis Lalonde
Radio Compliance Engineer
Nortel Technology

General Test Setup

Figure 1 shows the general test setup used during testing of the BTS.

Figure 1: General Test Setup



The base station was configured as detailed in the Technical Description (Exhibit B). The TCM tester was used to produce voice and signalling data on the two TCM links typical of “real” system activity. The computer was used to configure Tx channel mode, channel selection and output power level for the two transmitters. The computer was connected to the BTS via an RS-232 link to the BTS test connector. Prior to performing all RF measurements, the RS-232 connection was removed once the transmitters were configured. An AC/DC power supply connected to the 120 VAC Mains was used to supply the BTS with -48 VDC.

Measurement Results

The following section contains the measurement results.

Name of Test:2.985 RF Power Output

1.0 FCC Requirements

1.1 FCC Part 24.232

(a) Base stations are limited to 1640 Watts peak equivalent isotropically radiated power (e.i.r.p.) with an antenna height up to 300 meters HAAT. See 24.53 for HAAT calculation method. Base station antenna heights may exceed 300 meters with a corresponding reduction in power. In no case may the peak output power of a base station transmitter exceed 100 Watts.

(c) Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. the measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

2.0 Test Results

Table 2 shows the test results for RF Output Power.

Table 2: Test Results for RF Output Power

Ch. #	Freq. (MHz)	Measured RF Output Power (dBm)				Maximum Rated Power (dBm)	Limit (dBm)
		Radio 1		Radio 2			
		Port 1	Port 2	Port 1	Port 2		
2	1930.08	19.7	19.6	20.5	19.3	21.5	50
250	1937.52	20.6	20.9	21.2	19.4	21.5	50
498	1944.96	21.3	21.3	21.3	19.7	21.5	50
502	1945.08	21.3	21.3	21.3	19.7	21.5	50
584	1947.54	21.5	21.4	21.2	19.8	21.5	50
665	1949.97	20.6	20.4	21.2	19.9	21.5	50
668	1950.06	20.6	20.4	21.2	19.9	21.5	50
916	1957.5	21.0	20.5	21.1	20.2	21.5	50
1165	1964.97	21.3	20.6	21.0	20.2	21.5	50
1168	1965.06	21.3	20.5	21.0	20.2	21.5	50
1250	1967.52	21.3	20.6	20.9	20.2	21.5	50

Table 2: Test Results for RF Output Power (continued)

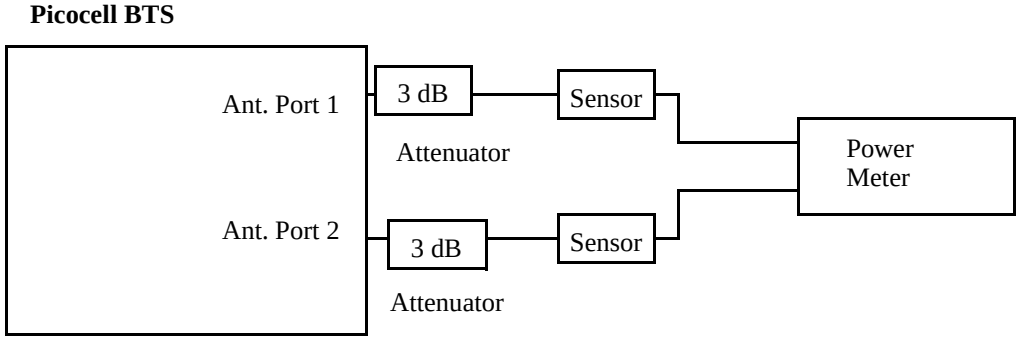
Ch. #	Freq. (MHz)	Measured RF Output Power (dBm)				Maximum Rated Power (dBm)	Limit (dBm)
		Radio 1		Radio 2			
		Port 1	Port 2	Port 1	Port 2		
1332	1969.98	21.3	20.6	20.9	20.3	21.5	50
1335	1970.07	21.3	20.6	20.9	20.3	21.5	50
1416	1972.5	21.4	20.6	20.9	20.3	21.5	50
1498	1974.96	21.4	20.6	20.8	20.3	21.5	50
1502	1975.08	21.4	20.6	20.8	20.3	21.5	50
1750	1982.52	21.3	20.6	20.8	20.3	21.5	50
1998	1989.96	21.2	20.6	20.7	20.3	21.5	50

From the results shown in Table 2, the BTS complies with the requirement.

3.0 Test Procedure

The equipment was configured as shown in Figure 2.

Figure 2: Test Configuration for RF Output Power



The BTS was configured to transmit at maximum power. Measurements were made at frequencies which were at the bottom, middle and top of each of the licensed blocks.

The output power was measured using a Hewlett Packard power meter Model 438A which had 2 HP8482A power sensors.

Name of Test:2.989 Occupied Bandwidth

1.0 FCC Requirements

1.1 FCC Part 2.989

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 percent of the total mean power radiated by a given emission shall be measured under the following conditions as applicable:...

2.0 Test Results

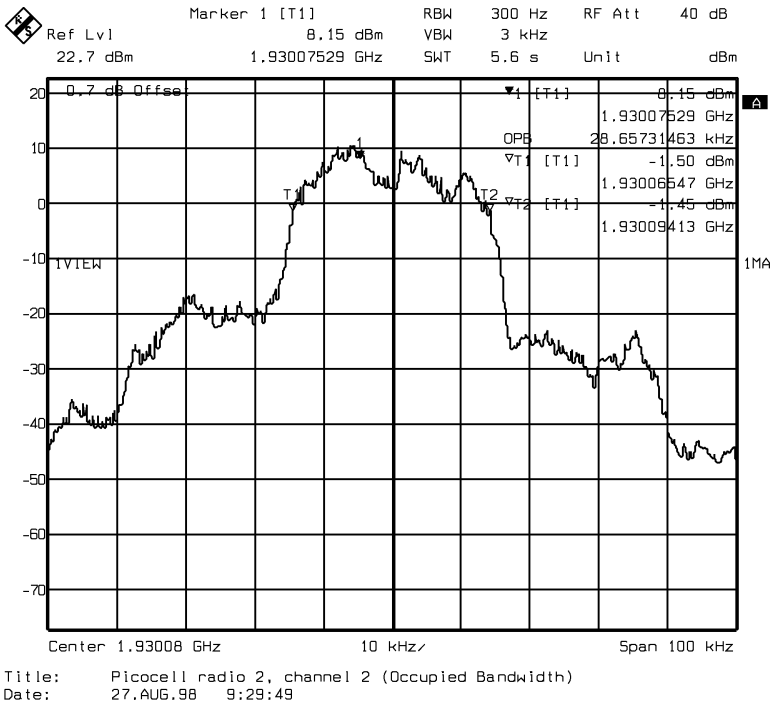
Table 3 shows the results for Occupied Bandwidth.

Table 3: Test Results for Occupied Bandwidth

Channel #	Frequency (MHz)	Measured Occupied Bandwidth Radio 1 (KHz)	Measured Occupied Bandwidth Radio 2 (KHz)
2	1930.08	27.3	28.7
498	1944.96	27.3	28.5
502	1945.08	27.3	28.3
665	1949.97	27.3	28.3
668	1950.06	27.3	28.3
1165	1964.97	27.3	28.1
1168	1965.06	27.3	28.3
1332	1969.98	27.1	28.3
1335	1970.07	27.3	28.3
1498	1974.96	27.3	28.3
1502	1975.08	27.3	28.3
1998	1989.96	27.1	28.3

Figure 3 shows a sample plot for case of the maximum measured occupied bandwidth. The maximum occupied bandwidth was found to be 28.7 kHz.

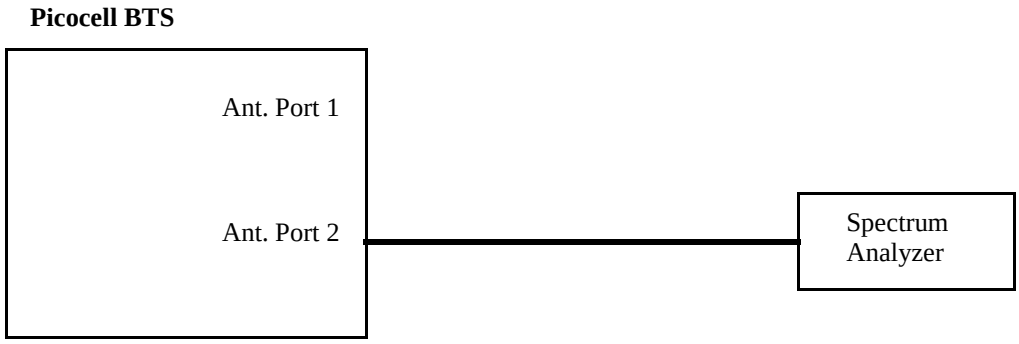
Figure 3: Sample Plot for Occupied Bandwidth



3.0 Test Procedure

The equipment was configured as shown in Figure 4.

Figure 4: Test Configuration for Occupied Bandwidth



The BTS was configured to transmit at maximum power. Measurements were made at frequencies which were at the bottom and top of each of the licensed blocks.

The occupied bandwidth was measured using the channel power (99% power) feature of the Rohde and Schwarz FSEA30 spectrum analyzer which had the following settings:

Resolution Bandwidth:	300 Hz
Video Bandwidth:	3 kHz
Span:	100 kHz
Reference Level:	22.7 dB
Level Range:	100 dB
Sweep Time:	5.6 s

Name of Test:2.991 Spurious Emissions at Antenna Terminals

1.0 FCC Requirements

1.1 FCC Part 24.238

(a) On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB.

(b) Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

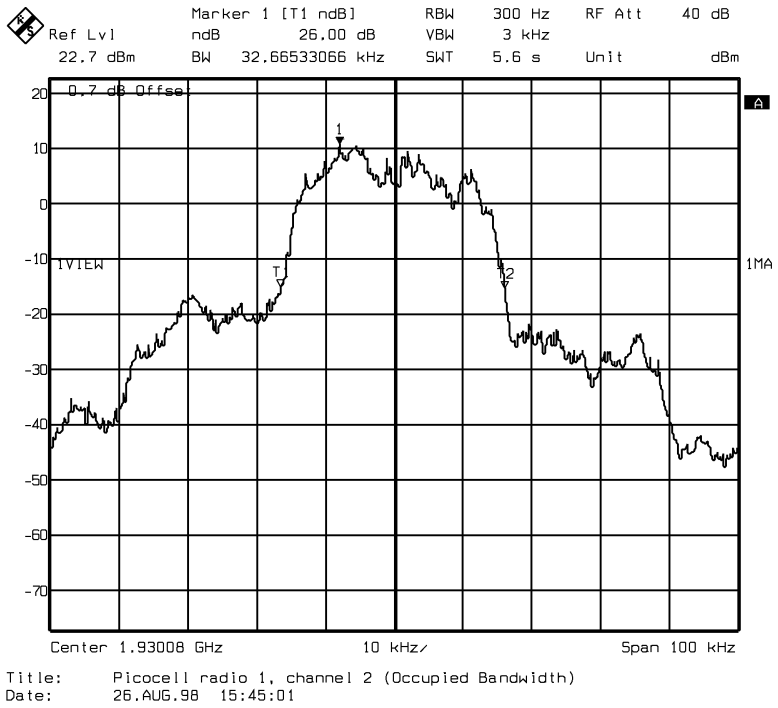
(c) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the licensee's frequency block edges, both upper and lower, as the design permits.

(d) The measurements of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power.

2.0 Test Results

The widest emission bandwidth was found to be 32.7 kHz. A sample plot for the emission bandwidth measurement is shown in Figure 5. This value was used to determine the resolution bandwidth required for measurements in the first adjacent MHz outside the licensee's frequency block.

Figure 5: Sample Plot for Emission Bandwidth



The reference level for spurious emissions at the antenna terminals was taken from the measured output power (21.5 dBm = 0.141 Watt). Therefore the spurious emissions must be attenuated by at least 43 + 10 log (0.141) = 34.5 dB. The measured output power was 21.5 dBm; therefore the limit is 21.5 - 34.5 = -13 dBm.

Table 4 shows the results for Spurious Emissions at Antenna Terminals.

Table 4: Test Results for Spurious Emissions at Antenna Terminals

Frequency (MHz)	Spurious Emissions Level (dBm) Radio 1 / Radio 2	Limit (dBm)	Margin (dB)
(@Ch. 2)	-57.4 / -53.7 (1st Adjacent MHz)	-13	40.7
(@Ch. 1998)	-38.8 / -37.4 (1st Adjacent MHz)	-13	24.4
(@Ch. 1168)	-50.1 / -45.7 (1st Adjacent MHz)	-13	32.7
(@Ch. 1332)	-23.9 / -23.9 (1st Adjacent MHz)	-13	10.9
10 - 3000	-35.8 / -36.2	-13	22.8
3000 - 5000	-33.7 / -33.2	-13	20.2
5000 - 10000	-36.9 / -35.6	-13	22.6
10000 - 20000	-36.0 / -36.0	-13	23.0

Notes:

Figure 6 shows a sample plot for the case when the transmitter was tuned to Channel 2 (lowest channel in Tx band).

Figure 7 shows a sample plot for the case when the transmitter was tuned to Channel 1998 (highest channel in Tx band).

Figure 8 shows a sample plot for the case when the transmitter was tuned to Channel 1168.

Figure 9 shows a sample plot for the case when the transmitter was tuned to Channel 1332.

Figure 10 to Figure 13 show sample plots for frequency spans from 0 to 20 GHz

Figure 6: Sample Plot for Ch. 2 (1st Adjacent MHz)

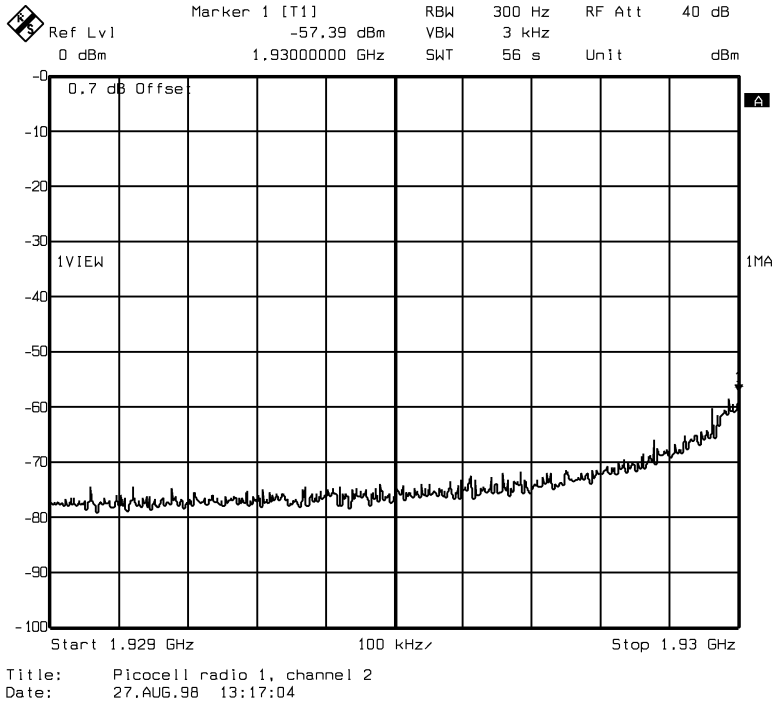


Figure 7: Sample Plot for Ch. 1998 (1st Adjacent MHz)

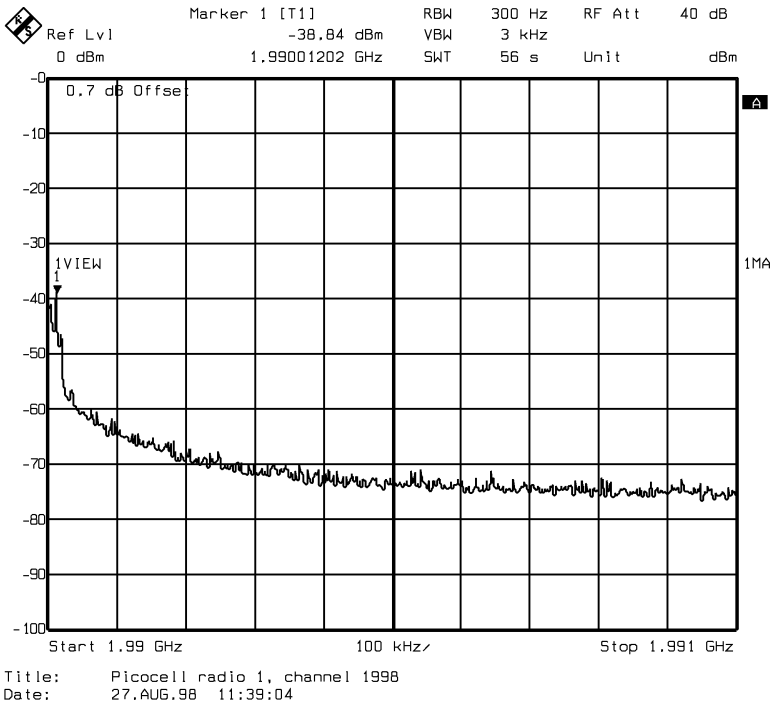


Figure 8: Sample Plot for Ch. 1168 (1st Adjacent MHz)

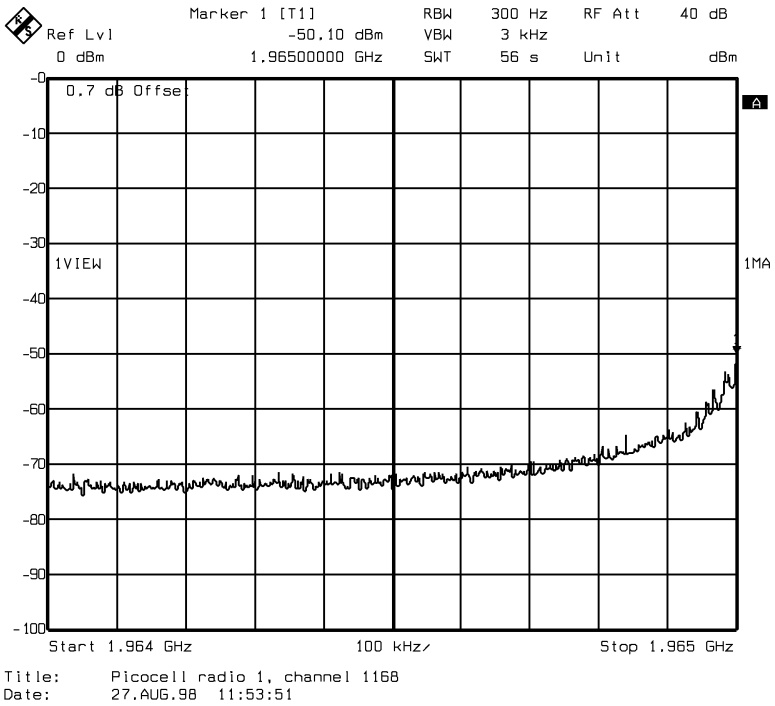


Figure 9: Sample Plot for Ch. 1332 (1st Adjacent MHz)

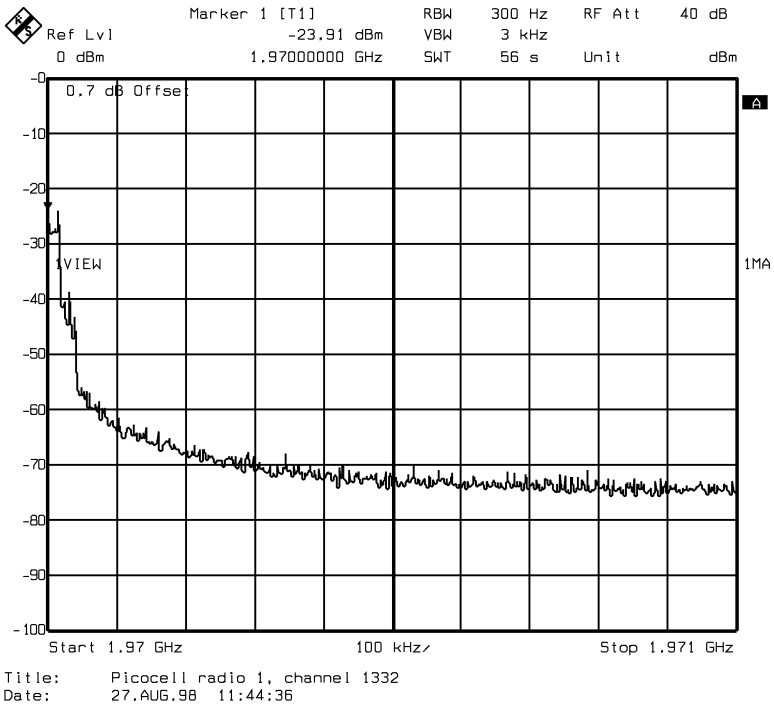


Figure 10: Sample Plot for 0.01 - 3 GHz Span

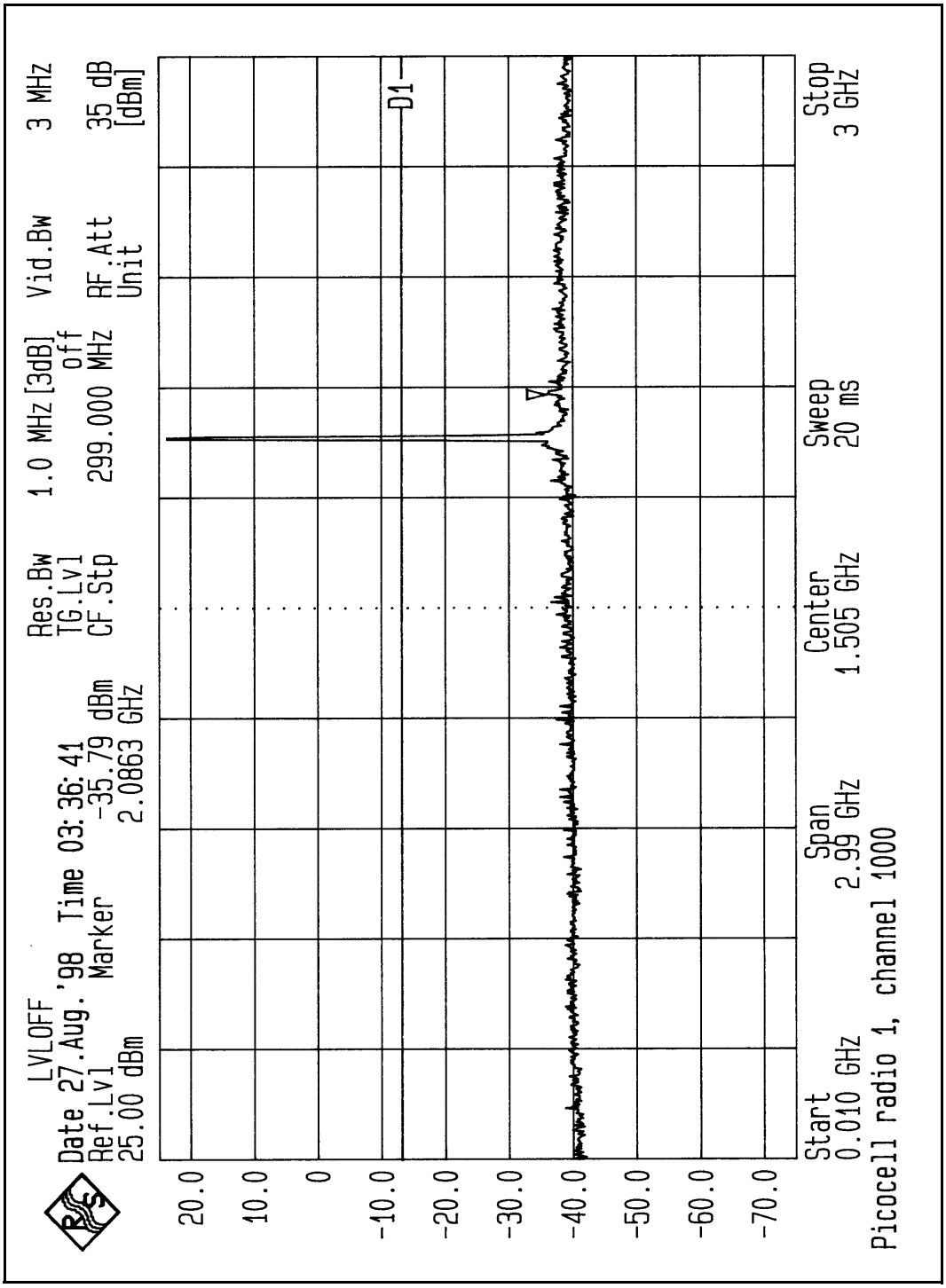


Figure 11: Sample Plot for 3 - 5 GHz Span

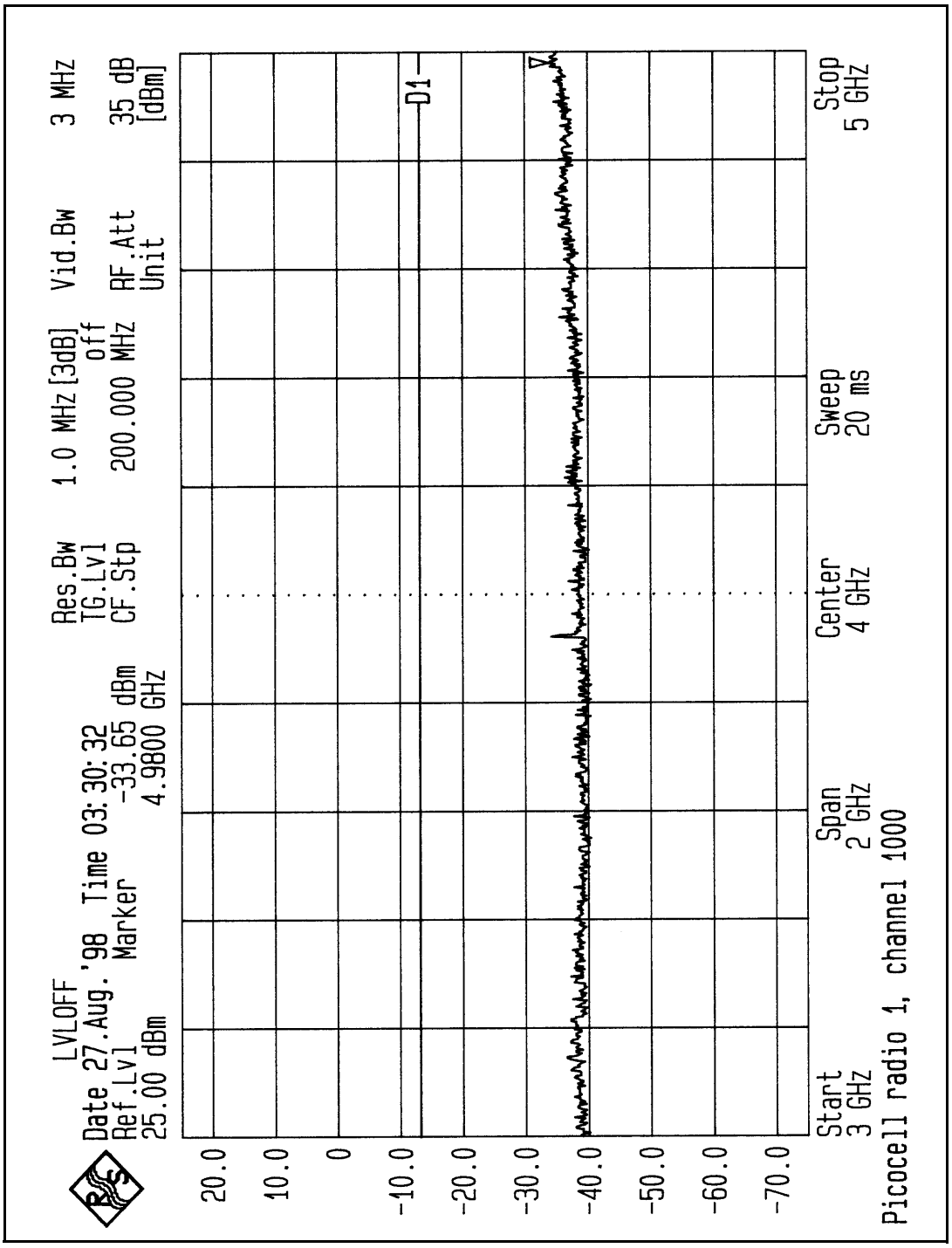


Figure 12: Sample Plot for 5 - 10 GHz Span

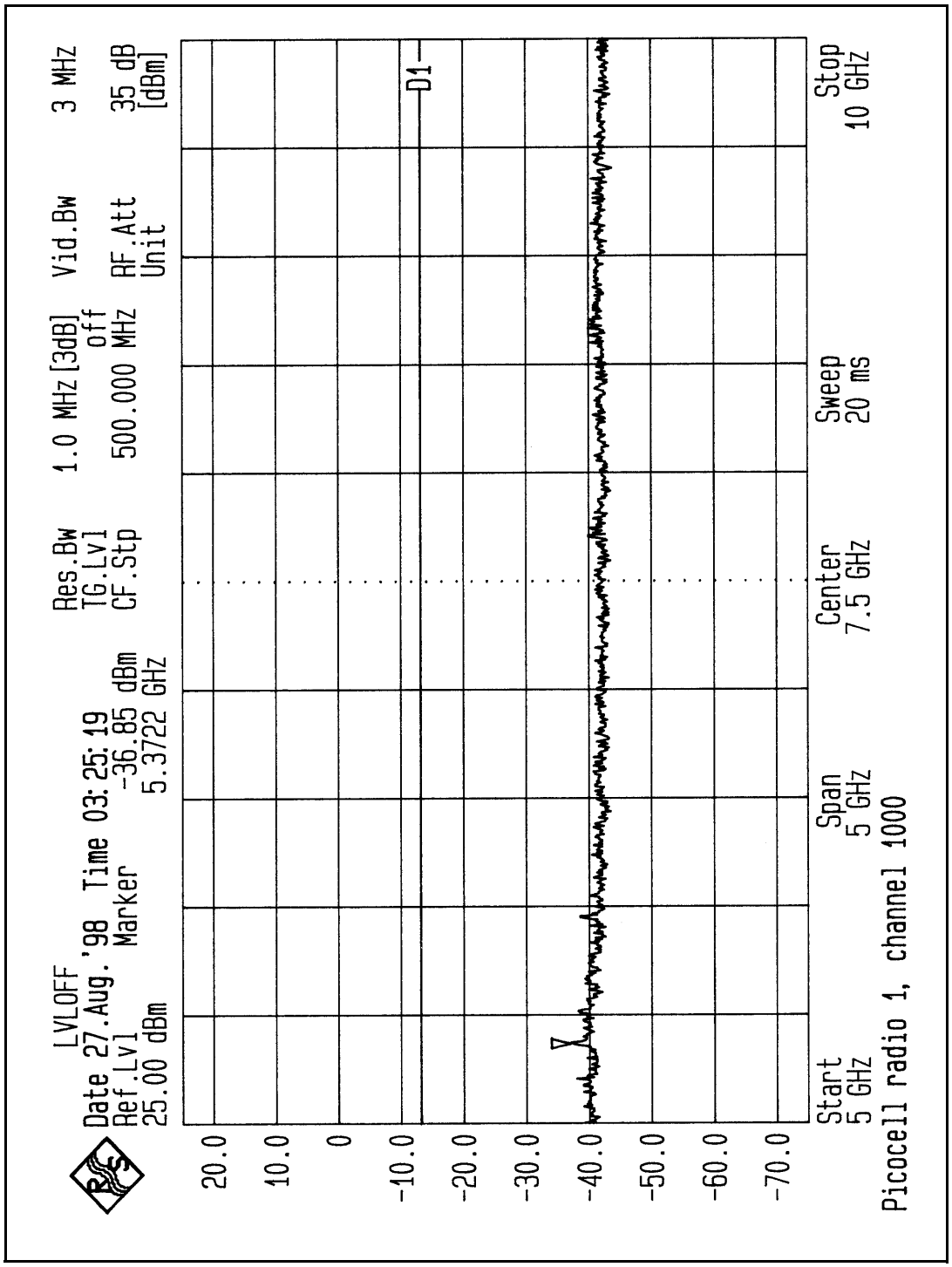
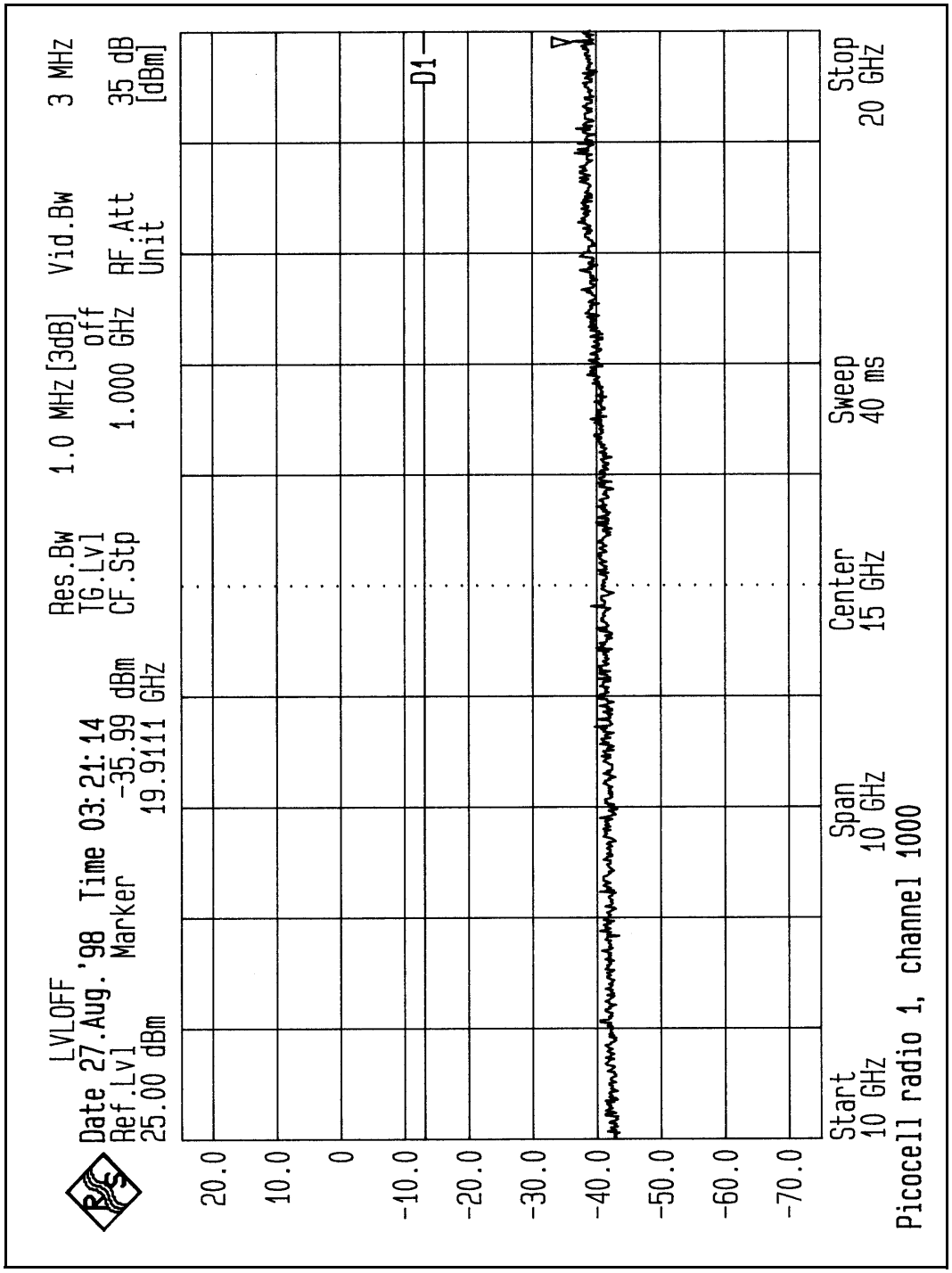


Figure 13: Sample Plot for 10 - 20 GHz Span

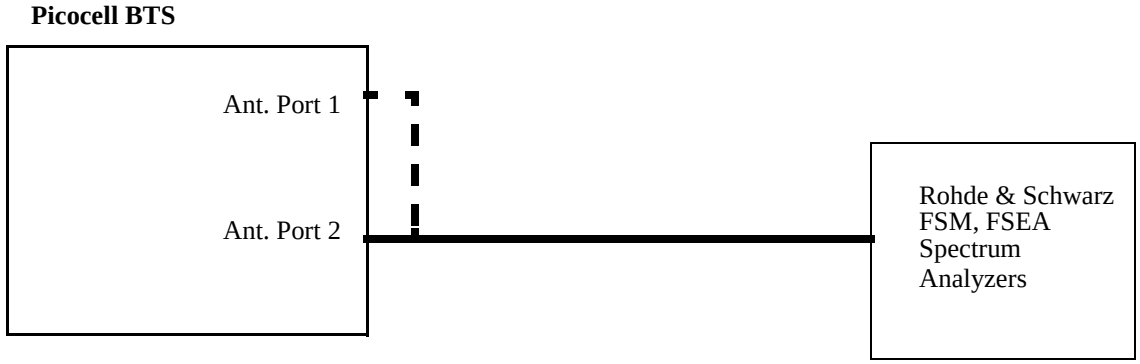


From the results shown in Table 4, the BTS complies with the requirement.

3.0 Test Procedure

The equipment was configured as shown in Figure 14.

Figure 14: Test Configuration for Spurious Emissions at Antenna Terminals



For adjacent channel emissions, the BTS nominal carrier frequency was adjusted to the high and low edge channels.

For these measurements, the resolution bandwidth of the spectrum analyzer was set to approximately 1% of the emission bandwidth. In this case the emission bandwidth measured was 32.7 KHz. Therefore the resolution bandwidth was set to 300 Hz. For adjacent emissions in the 1st MHz, the spectrum analyzer had the following settings:

Resolution Bandwidth:	300 Hz
Video Bandwidth:	3 KHz
Span:	1 MHz
Attenuation:	40 dB
Reference Level:	0 dBm
Ref. Level Offset:	0.7 dB
Level Range:	100 dB
Sweep Time:	Coupled
Peak Hold:	Enabled

The emissions were investigated up to the tenth harmonic of the fundamental emission (20 GHz). The measured level of the emissions was recorded and compared to the -13 dBm limit. For emissions more than 1 MHz from the transmitted signal, channel 1000 was used and the spectrum analyzer had the following settings:

Resolution Bandwidth:	1 MHz
Video Bandwidth:	3 MHz
Span:	2 to 10 GHz
Attenuation:	35 dB
Reference Level:	25 dBm
Level Range:	100 dB
Sweep Time:	Coupled
Peak Hold:	Enabled

Name of Test:2.993 Field Strength of Spurious Radiation

1.0 FCC Requirements

1.1 FCC Part 24.238

(a) On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB.

1.2 FCC Part 2.993

(a) Measurements shall be made to detect spurious emissions that may be radiated directly from the cabinet, control circuits, power leads, or intermediate circuit elements under normal conditions of installation and operation. Curves or equivalent data shall be supplied showing the magnitude of each harmonic and other spurious emission.

2.0 Test Results

Table 5 shows the results for radiated spurious emissions measurements.

Table 5: Test Results for Spurious Emissions

Frequency (MHz)	Antenna Polarization	Measured Level (dBµV)	Correction Factor (dB)	Corrected Level (dBµV/m)	Limit (dBµV/m) @ 3m
87.076	Vertical	60.0	-15.1	44.9	84.4
1719.99	Horizontal	42.0	3.4	45.4	84.4
3439.98	Vertical	35.6	9.6	45.2	84.4
3860.16	Horizontal	32.4	13.6	46.0	84.4

The field strength is calculated by adding a correction factor to the measured level to obtain the corrected level. A sample calculation is as follows:

$\text{Correction Factor}_{(dB)} = \text{Cable Losses}_{(dB)} + \text{Antenna Factor}_{(dB)} - \text{pre-amplifier gain}_{(dB)}$

$\text{Correction Factor}_{(dB)} = 6.6\text{ dB} + 33.6\text{ dB} - 26.6\text{ dB} = 13.6\text{ dB}$

$\text{Corrected Level}_{(dB\mu V/m)} = \text{Measured Level}_{(dB\mu V/m)} + \text{Correction Factor}_{(dB)}$

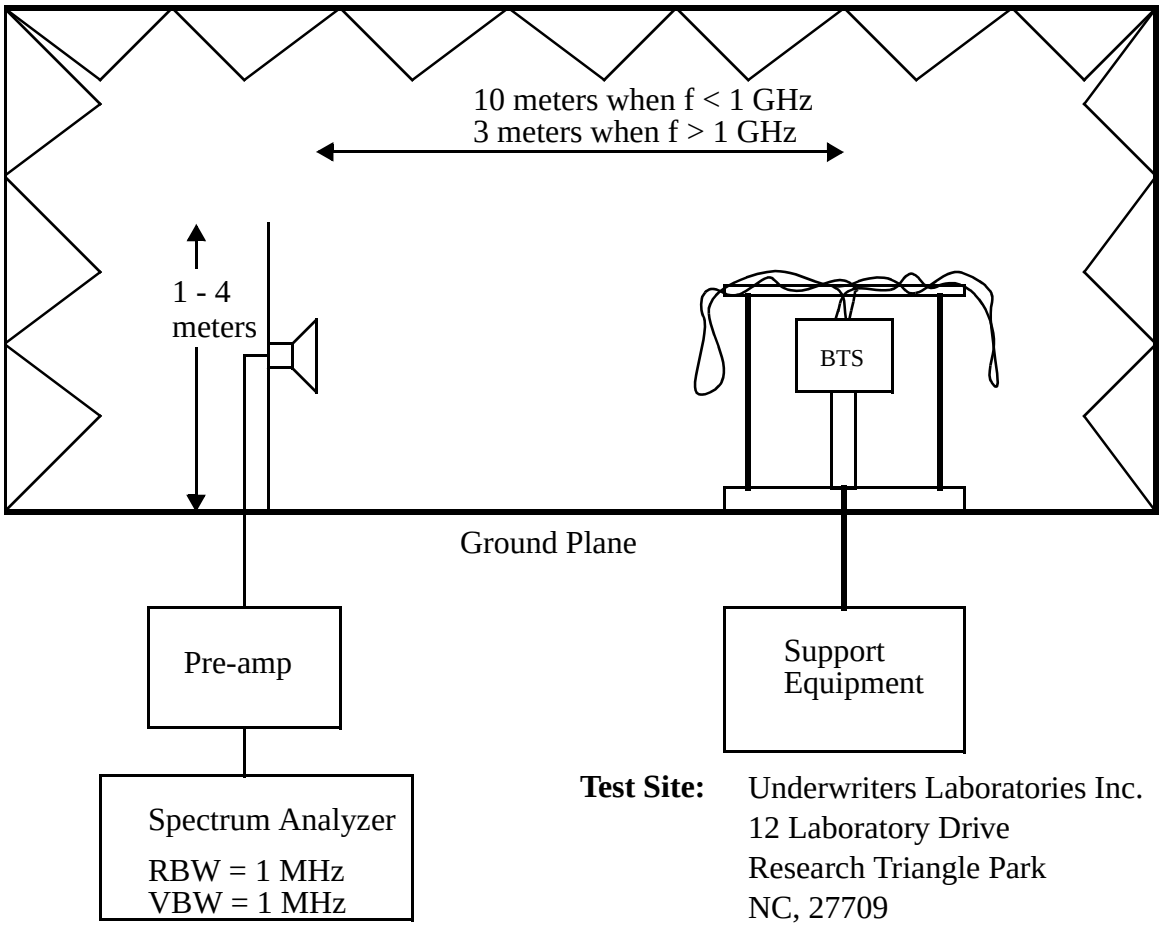
Corrected Level = 32.4 + 13.6 = 42.0 dBµV/m

All spurious emissions were below the limit by greater than 30 dB. The BTS complies with the requirement.

3.0 Test Procedure

The equipment was configured as shown in Figure 15.

Figure 15: Test Configuration for Radiated Spurious Emissions



Test Site: Underwriters Laboratories Inc.
12 Laboratory Drive
Research Triangle Park
NC, 27709

The BTS was configured to transmit at maximum power. Radio 1 was set to channel 2 (1930.08 MHz), Radio 2 was set to channel 1000 (1960.02 MHz)

Measurements were made according to the procedures outlined in ANSI C63.4.

The emissions were investigated up to the tenth harmonic of the fundamental emission (20 GHz). The measured level of the emissions was recorded and compared to the limit.

The reference level for spurious radiation was taken with reference to an ideal dipole antenna excited by the rated output power according to the following relationship:

$$E\left(\frac{V}{m}\right) = \frac{1}{R(m)} \bullet \sqrt{30 \bullet Pt \bullet G}$$

Where,

E = Field Strength in Volts/meter,
R = Measurement distance in meters,
Pt = Transmitter Rated Power in Watts,
G = Gain of Ideal Dipole (linear)

Therefore:

$$E\left(\frac{V}{m}\right) = \frac{1}{10} \bullet \sqrt{30 \bullet (0.141) \bullet 1.64}$$

E = 0.26 V/m = 108.4 dBµV/m

The spurious emissions must be attenuated by at least 43 + 10 log (0.141) = 34.5 dB

Therefore the field strength limit at 10 meters is:

E = 108.4 dBµV/m - 34.5 dB = 73.9 dBµV/m

And at 3 meters is:

E = 84.4 dBµV/m

Name of Test:2.995 Frequency Stability

1.0 FCC Requirements

1.1 FCC Part 24.235

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

2.0 Test Results

Table 6 shows the results for Frequency Stability versus Temperature Variation.

Table 6: Test Results for Frequency Stability versus Temperature

Temperature (°C)	Maximum Carrier Frequency Deviation (Hz)	
	Radio 1	Radio 2
-30	+72.0	+75.1
-20	+57.5	+59.5
-10	+40.1	+44.4
0	+23.1	+22.0
10	+12.0	+12.8
20	+14.0	+19.0
30	+52.3	+54.3
40	+31.7	+32.3
50	+31.7	+32.3

Table 7 shows the results for Frequency Stability versus Power Supply Voltage.

Table 7: Test Results for Frequency Stability versus Power Supply Voltage

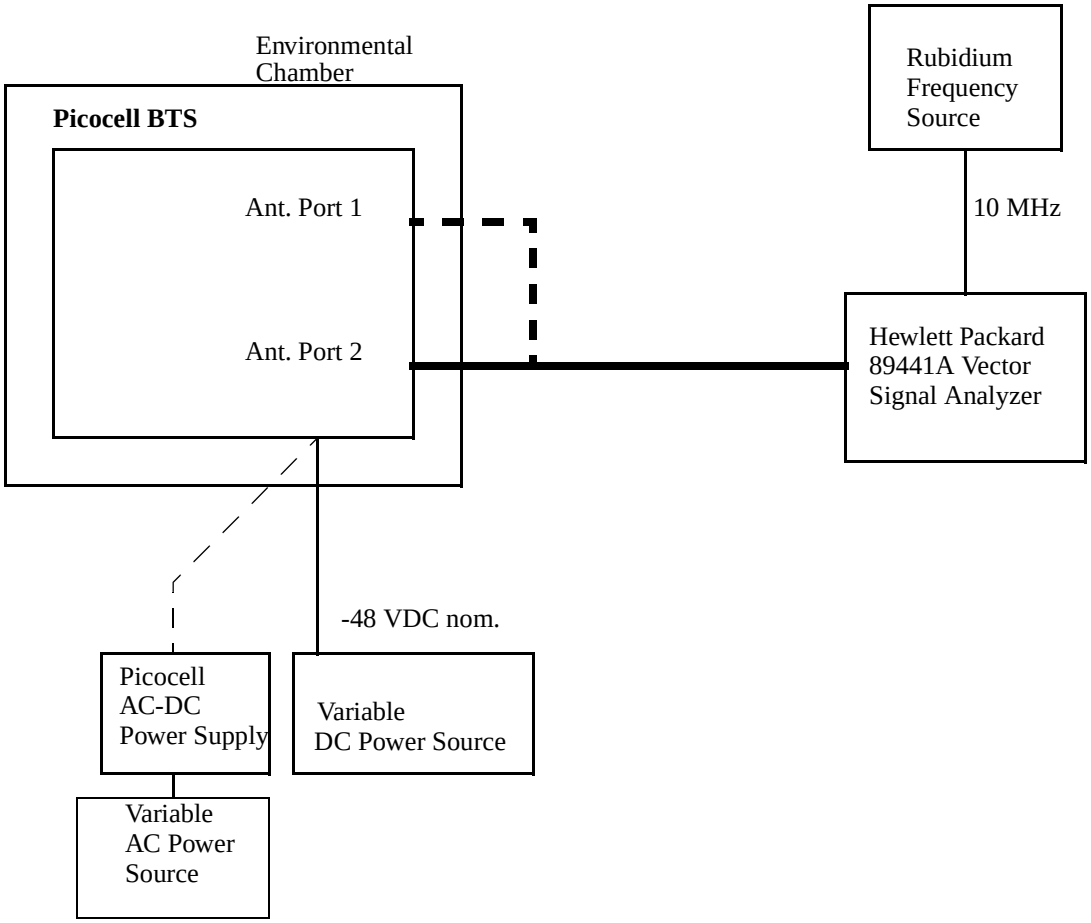
Power Supply Voltage	Maximum Carrier Frequency Deviation (Hz)	
	Radio 1	Radio 2
-40.8 VDC	+44.2	+40.7
-48 VDC (Nominal)	+42.7	+40.7
-55.2 VDC	+44.0	+41.7
102 VAC	+41.9	+39.8
120 VAC (Nominal)	+41.3	+41.5
138 VAC	+41.3	+40.2

The maximum frequency deviation was found to be 75.1 Hz or (0.04 ppm). This deviation is more than sufficient to ensure that the fundamental emission stays within the authorized frequency block. Therefore the BTS complies with the requirement.

3.0 Test Procedure

The equipment was configured as shown in Figure 16.

Figure 16: Test Configuration for Frequency Stability



The BTS was configured to transmit at maximum power. Radio 1 and 2 were alternately set to transmit on channel 1000 (1960.02 MHz).

The BTS was subjected to ambient temperatures from -30 to +50 centigrade at intervals of 10 centigrade. A period of at least 1 hour was allowed prior to measurement to ensure that the all of the components of the oscillator circuit had stabilized at each temperature.

At each of the above specified ambient temperatures, the maximum carrier deviation was recorded from the time the transmitter was keyed-on for a period of ten minutes using a Hewlett Packard 89441A Vector Signal Analyzer. An external 10 MHz reference signal from the rubidium source was used as the frequency reference for the VSA.

At 20 centigrade ambient temperature, measurements were made with the primary supply voltage set to 85, 100 and 115 percent of the nominal value. The nominal primary supply voltage for the BTS in DC power mode is -48 VDC. The nominal primary supply voltage for the BTS in AC power mode is 120 VAC.

Name of Test:24.51 d) RF hazard

1.0 FCC Requirements

1.1 FCC Part 24.51

(d) Applicants for type acceptance of transmitters that operate in these services must determine that the equipment complies with IEEE C95.1-1991, “IEEE Standards for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz” as measured using methods specified in IEEE C95.3-1991, “Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave”. The applicant for type acceptance is required to submit a statement affirming that the equipment complies with these standards as measured by an approved method and to maintain a record showing the basis for the statement of compliance with IEEE C.95.1-1991.

1.2 Limit

The maximum field strength limit was derived from the newly adopted NCRP recommended limits for maximum permissible exposure for uncontrolled environments of 1 mW/cm^2 as follows:

$$PowerDensity\left(\frac{W}{m^2}\right) = \frac{EField\left(\frac{V}{m}\right)^2}{\eta}$$

$$EField\left(\frac{V}{m}\right) = \sqrt{PowerDensity\left(\frac{W}{m^2}\right) \bullet \eta}$$

$$EField\left(\frac{V}{m}\right) = \sqrt{10\left(\frac{W}{m^2}\right) \bullet 377\Omega}$$

Therefore,

E Field = 61.4 V/m = 155.8 dBµV/m

2.0 Test Results

Table 8 shows the results for RF Hazards measurements.

Table 8: Test Results for RF Hazards

Measurement Method	Frequency (MHz)	Distance (m)	Measured E Field (dBµV/m)	Limit (dBµV/m)
Broadband Probe	1960	0.2	148	155.8
Horn Antenna	1960	0.2	142.9	155.8
	1960	0.5	140.1	155.8
	1960	1	136.5	155.8
	1960	2	129.8	155.8
	1960	3.2	126.8	155.8

As shown in Table 8, the field strength is below the allowed limit set by ANSI/IEEE C95.1-1992 and NCRP recommendations.

The Picocell BTS complies with the requirement. A safety margin of 7.8 dB was obtained for the 61.4 V/m limit.

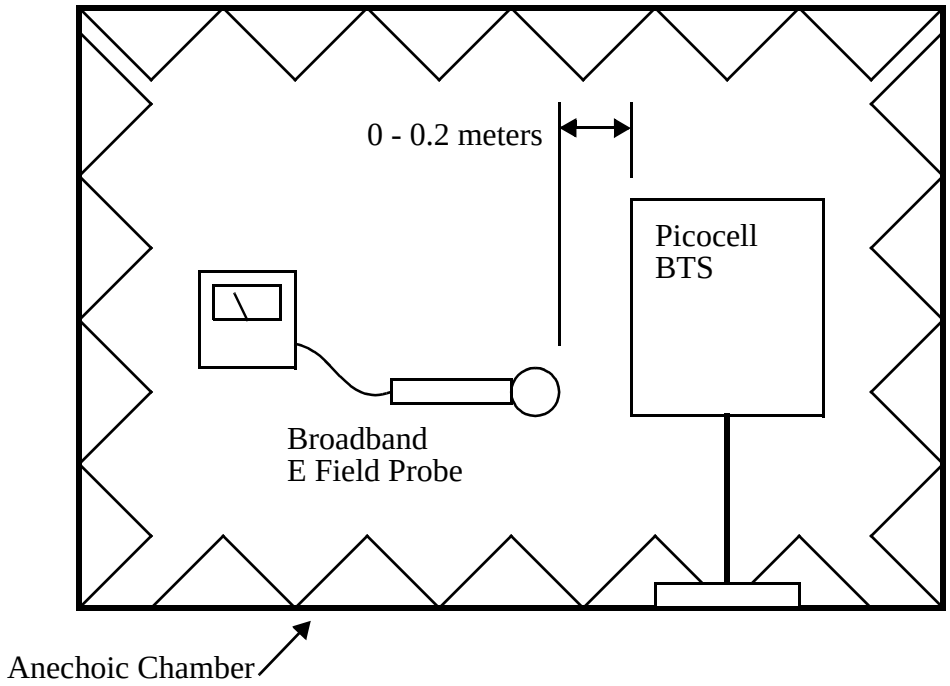
An attestation of compliance is included in Exhibit G of this document.

3.0 Test Procedure

3.1 Broadband E Field Probe

The equipment was configured as shown in Figure 17.

Figure 17: Test Configuration using Broadband E Field Probe



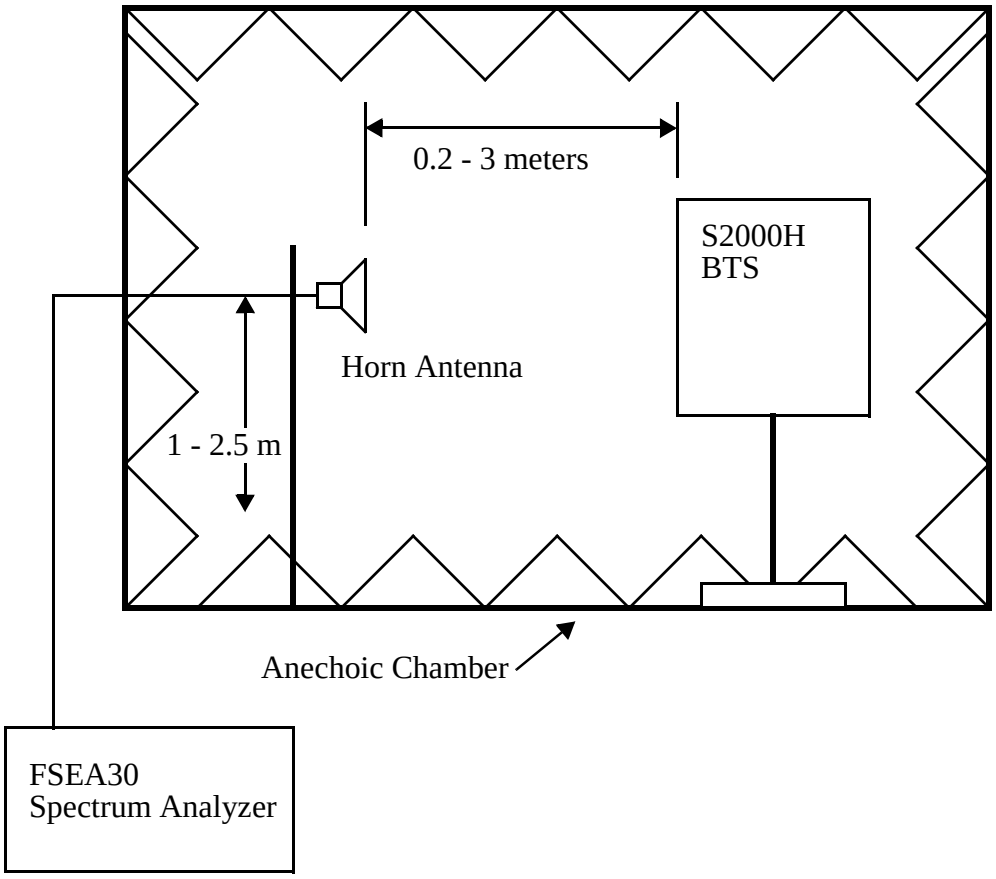
The BTS was configured to transmit at maximum power. Both Ant. 1 and Ant. 2 were connected to their respective transmitters.

Measurements were made at distances from the BTS of 3 to 0.2 m. The hand held probe was positioned around the entire base station and the maximum E Field level was recorded.

3.2 Horn Antenna

The equipment was configured as shown in Figure 18.

Figure 18: Test Configuration using Horn Antenna



The BTS was configured to transmit at maximum power. Both Ant. 1 and Ant. 2 were connected to their respective transmitters.

Measurements were made at distances from the BTS of 0.2 to 3 m. The horn antenna was connected to the spectrum analyzer to measure the field strength. In order to integrate the response of both transmitters (transmitting on channel 1000 and 1009), a resolution bandwidth of 3 MHz was used. The position of the base station which produced the highest level was located and the maximum field strength was recorded.

Measurement Equipment List

Table 9 is a list of all of the measurement equipment used in this report.

Table 9: Measurement Equipment List

Equipment Description	Manufacturer	Model No.	Serial No.	Cal. Due Date
Spectrum Analyzer	Rohde & Schwarz	FSEA	845394/003	29/12/98
Spectrum Analyzer Display	Rohde & Schwarz	FSA-D	827831/016	06/08/98
Spectrum Analyzer RF	Rohde & Schwarz	FSM-RF	828260/005	06/08/98
Power Meter	Hewlett Packard	438A	2822A05129	02/04/99
Power Sensor	Hewlett Packard	8482A	3318A23516	22/09/98
Power Sensor	Hewlett Packard	8482A	2652A15075	03/04/99
Attenuator (3 dB) 2W	Hewlett Packard	8491A	2708A28235	14/08/99
Attenuator (3 dB) 2W	Weinschel	210-3	A1767	24/10/98
RF Signal Generator	Hewlett Packard	83732A	3314A00190	04/09/98
Vector Signal Analyzer - IF	Hewlett Packard	89441A	3416A00853	11/05/99
Vector Signal Analyzer - RF	Hewlett Packard	89441A	3415A00228	11/05/99
Rubidium Source	UTC	2008	A1010	02/0799
Variac	General Radio Co.	W5MT3A	911121-2	23/12/98
DC Power Supply	Hewlett Packard	6294A	1202A01974	18/08/98
Digital Multimeter	Fluke	83	47300038	20/10/98
Horn Antenna	EMCO	3115	9603-4690	16/10/98
Field Strength Meter	Holaday Ind.	HI-3004	39449	27/09/99
Environmental Chamber	Sexton-Espec	WC-PT-H-14-2-2	15102	07/05/99
Biconical Antenna (20-300MHz)	EM	6912	728	04/99
Log Periodic Antenna (200-1000MHz)	EM	6950	962	04/98
Double Ridge Horn (1-18GHz)	EM	6961	6276	05/99

Table 9: Measurement Equipment List

Equipment Description	Manufacturer	Model No.	Serial No.	Cal. Due Date
Horn Antenna	EMCO	3115	2703	10/98
RF Amplifier (25dB, 0.1-1300MHz)	Hewlett-Packard	8447D/10	2944A07031	05/99
1-26.5GHz Preamp	Hewlett-Packard	8449B	3008A00861	11/98
Quasi-Peak Adaptor	Hewlett-Packard	85650A	3303A01833	Nov 11/
Spectrum Analyzer (22GHz)	Hewlett-Packard	8566B	3552A22037 (Display) 3638A08594 (RF Section)	11/98
RF Preselector	Hewlett-Packard	85685A	3506A01536	11/98
Cable#1 (Antenna to Preamp <1000MHz)			ATA038	07/99
Cable#2 (Preamp. to Ground Plane <1000MHz)			ATA033	08/99
Cable#3 (S.A. to Ground Plane <1000MHz)			ATA040	04/99
Power Meter	Rohde & Schwarz	NRVD	DE21529	09/98
Power Sensor	Rohde & Schwarz		DE21531	09/98
50ohm termination	Narda	374BNM	141	05/98

EUT Identification List

Table 10 is a identification list of the equipment tested in this report.

Table 10: EUT Identification List

Equipment Description	Technical Status	Manufacturer	Serial No.
Picocell BTS	NTMQ75AA	Nortel	NNTN5320X0EE
AC-DC Power Supply	PW100	Ault Inc.	9829