FCC CFR47 PART 24 E CERTIFICATION

TEST REPORT

FOR

ULTRA SLIM CDMA REPEATER (BLOCK B)

MODEL: USR-1900B

FCC ID: L9UUSR-1900

REPORT NUMBER: 01U0760-1

ISSUE DATE: April 25, 2001

Prepared for
ACE ANTENNA, INC.
21010 SUPERIOR STREET
CHATSWORTH, CA 91311
USA

Prepared by
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d.b.a
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LAB CODE:200065-0

TABLE OF CONTENT

1. TEST RESULT CERTIFICATION

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EUT DESCRIPTION: ULTRA SLIM CDMA REPEATER (BLOCK B)

MODEM NAME: USR-1900B

DATE TESTED: APRIL 24, 2001

TYPE OF EQUIPMENT	INTENTIONAL RADIATOR
EQUIPMENT TYPE	1870-1885 MHz paired with 1950-1965 MHz REPEATER
MEASUREMENT PROCEDURE	ANSI 63.4 / 1992, TIA/EIA 603
PROCEDURE	CERTIFICATION
FCC RULE	CFR 47 PART 24 Subpart E

Compliance Certification Services, Inc. tested the above equipment for compliance with the requirement set forth in CFR 47, PART 24 Subpart E-Broadband PCS. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

Warning : This document reports conditions under which testing was conducted and results of tests performed. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document.

Released For CCS By:

STEVE CHENG
EMC DEPARTMENT MANAGER
COMPLIANCE CERTIFICATION SERVICES

Test By:

KERWIN CORPUZ
EMC ASSOCIATE ENGINEER
COMPLIANCE CERTIFICATION SERVICES

2. EUT DESCRIPTION

This product is designed for offices, hotel rooms, small parking lots, garages or small buildings, helping to improve PCS communications signal and coverage by extending the coverage of a base station.

Outdoor antenna receives from a PCS base station, then USR1900 repeater amplifies the signal. After amplification, the signal is passed through to the indoor antennas. Conversely, signals from handsets are amplified and retransmitted to the base station.

3. TEST METHODOLOGY

Both conducted and radiated testing were performed according to the procedures documented on chapter 13 of ANSI C63.4 and FCC CFR 47 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055 and 2.1057.

4. TEST FACILITY

The open area test sites and conducted measurement facilities used to collect the radiated data are located at 561F Monterey Road, Morgan Hill, California, USA. The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.

5. ACCREDITATION AND LISTING

The test facilities used to perform radiated and conducted emissions tests are accredited by National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under Lab Code: 200065-0 to perform Electromagnetic Interference tests according to FCC PART 15 AND CISPR 22 requirements. No part of this report may be used to claim or imply product endorsement by NVLAP or any agency of the US Government. In addition, the test facilities are listed with Federal Communications Commission (reference no: 31040/SIT (1300B3) and 31040/SIT (1300F2))

6. MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

7. APPLICABLE RULES AND BRIEF TEST RESULT

§24.232- POWER LIMIT

24.232(a); Maximum Peak output power for base station transmitters should not exceed 100 Watts EIRP (equivalent isotropically radiated power).

24.232(b); Mobile/Portable stations are limited to 2 Watts EIRP peak power.

Spec limit: As specified above, 2W maximum.
Test result: Measured with power meter. All outputs were adjusted to maximum power 14.0dBm (0.0251Watts), during testing.

TYPE OF EMISSION

G7W

§24.235- FREQUENCY STABILITY

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

Spec limit: As stated above.
Test result: This measurement results shows that the EUT complies with the rule.

§24.238- EMISSION LIMITS

24.238(a); The magnitude of each spurious and harmonic emission that can be detected when the equipment is operated under conditions specified in the instruction manual and/or alignment procedure, shall not be less than 43+10 log (mean output power in watts) dBc below the mean power output outside a licensee's frequency block.

Repeater Mean Power = 0.025 Watts (14dBm)
43 + 10 log (0.025 Watts) = 27 dB

Out-of-Band and Band-Edges emissions must be attenuated by the following amount:
14 dBm – 27 dB = -13dBm
24.238(b) & (c);

(1) Compliance with the out-of-band emissions requirement is based on test being performed with 1MHz analyzer RES BW.

(2) At block edges, RES BW may be adjusted to a level at least as large as 1% of emission bandwidth. The emissions bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. For the EUT this is at least:

CDMA:
0.01 * 1.25 MHz = 12.5 kHz. A RES BW of 30 kHz was used for measuring at the block edges.

Spec limit: As specified as above.
Test result: This measurement results shows that the EUT complies with the rule.

§2.1057- SPECTRUM RANGE TO BE INVESTIGATED

Lowest radio frequency signal generated in the equipment, without going below 9 kHz, up to at least the frequency shown below:

(1) If the equipment operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

(2) If the equipment operates at or above 10 GHz and below 30 GHz:
to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.

(3) If the equipment operates at or above 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 200 GHz, whichever is lower.

(b) Particular attention should be paid to harmonics and sub-harmonics of the carrier frequency as well as to those frequencies removed from the carrier by multiples of the oscillator frequency.
Radiation at the frequencies of multiplier stages should also be checked.

(c) The amplitude of spurious emissions, which are attenuated more than 20 dB below the permissible value, need not be reported.

(d) Unless otherwise specified, measurements above 40 GHz shall be performed using a minimum resolution bandwidth of 1 MHz.

Spec limit: Frequency investigation range from 15M to tenth harmonic (i.e. 20 GHz.).

§PART 15 RADIATED EMISSION

Since digital control device is also used in the EUT to control the Tx and Rx, The part 15 compliance test was also performed to evaluate the compliance with the applicable rule 15.109

FCC PART 15 CLASS A

MEASURING DISTANCE OF 10 METER		
FREQUENCY RANGE (MHz)	FIELD STRENGTH (Microvolts/m)	FIELD STRENGTH (dBuV/m)
30-88	90	39.1
88-216	150	43.5
216-960	210	46.4
Above 960	300	49.5

FCC PART 15 CLASS B

MEASURING DISTANCE OF 3 METER		
FREQUENCY RANGE (MHz)	FIELD STRENGTH (Microvolts/m)	FIELD STRENGTH (dBuV/m)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Spec limit: As specified above.
Test result: This measurement results shows that the EUT complies with the rule.

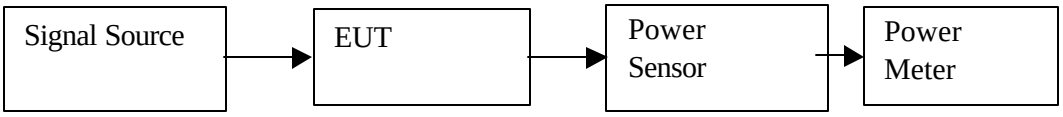
8. TEST SETUP, PROCEDURE AND RESULT

8.1. SECTION 2.1046: RF POWER OUTPUT

INSTRUMENTS LIST

EQUIPMENT	MANUFACTURE	MODEL NO.	CAL. DUE DATE
Power Meter	HP	436A	4/2/02
Power Sensor	HP	8482A	4/2/02
Signal Source	HP	E4432B-1E5-H9	7/28/02

TEST SETUP



TEST PROCEDURE

The EUT was set to maximum output power (maximum gain). RF output power was measured with Power Meter.

RESULT

Measured with power meter. All outputs were adjusted to 0.025 watts (14 dBm) during testing.

8.2. SECTION 2.1047: MODULATION CHARACTERISTICS

(NOT APPLICABLE TO THIS REPEATER, THE EUT DOESN'T HAVE A FREQUENCY TRANSLATOR OR MODULATOR INSIDE OF EUT. THE EUT IS AN AMPLIFIER TYPE REPEATER.)

8.3. SECTION 2.1049: OCCUPIED BANDWIDTH

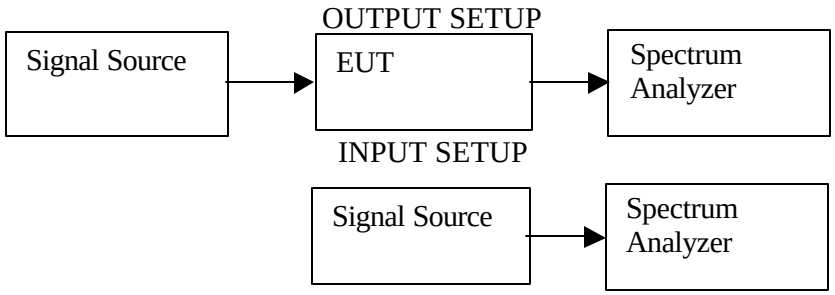
SECTION 2.1049(i)

Transmitters designed for other types of modulation – when modulated by an appropriate signal of sufficient amplitude to be representative of the type of service in which used. A description of the input signal should be supplied.

INSTRUMENTS LIST

EQUIPMENT	MANUFACTURE	MODEL NO.	CAL. DUE DATE
Spectrum Analyzer	HP	436A	4/2/02
Signal Source	HP	E4432B-1E5-H9	7/28/02

TEST SETUP



TEST PROCEDURE

The EUT's occupied bandwidth output plot is compared with the input source plot to check that no distortion is created when the input signal is amplified by the EUT. Identical bandwidths, spans and center frequencies are used for both plots. Reference levels and attenuation are adjusted.

RESULT

Plots of the input and output are included. Please refer to Section 9.6 plots number 1&2; 20&21.

8.4. SECTION 2.1051: SPURIOUS EMISSION AT ANTENNA TERMINAL

INSTRUMENTS LIST

EQUIPMENT	MANUFACTURE	MODEL NO.	CAL. DUE DATE
Spectrum Analyzer	HP	436A	4/2/02
Signal Source	HP	E4432B-1E5-H9	7/28/02

TEST SETUP

TEST PROCEDURE

1) Three balanced signals were applied to the RF input. One set as close as possible to the bottom of the block edge and one set as close as possible to the top of the block edge. Set the RES BW to 1% of the emission bandwidth to show compliance with the –13dBm limit, in the 1 MHz bands immediately outside and adjacent to the top and bottom edges of the frequency block.

2) For the Out-of-Band measurements a 1 MHz RES BW was used to scan from 15 MHz to 10xf_o of the fundamental carrier for all frequency block. A display line was placed at –13dBm to show compliance.

RESULT

Complies, Please refer to Section 9.6 Measurement Result Plots 3-19 & 22-38.

8.5. SECTION 2.1053: FIELD STRENGTH OF SPURIOUS RADIATION

INSTRUMENTS LIST

EQUIPMENT	MANUFACTURE	MODEL NO.	CAL. DUE DATE
Spectrum Analyzer	HP	8593EM	05/25/01
Amplifier	HP	8449B	4/12/01
Signal Source	HP	E4432B-1E5-H9	7/28/02
Signal Generator	HP	83732B	3/21/02
Tx Horn Antenna	EMCO	3115	1/5/02
Rx Horn Antenna	EMCO	3115	9/24/01
HPF	MICROLAB	FH-2400H	N/A
50 ohm terminator	NARDA	370BNM	N/A

Detector Function Setting of Test Receiver

Frequency Range (MHz)	Detector Function	Resolution Bandwidth	Video Bandwidth
Above 1000	☒ Peak ☐ Average	☒ 1 MHz ☐ 1 MHz	☒ 1 MHz ☐ 10 Hz

TEST SETUP

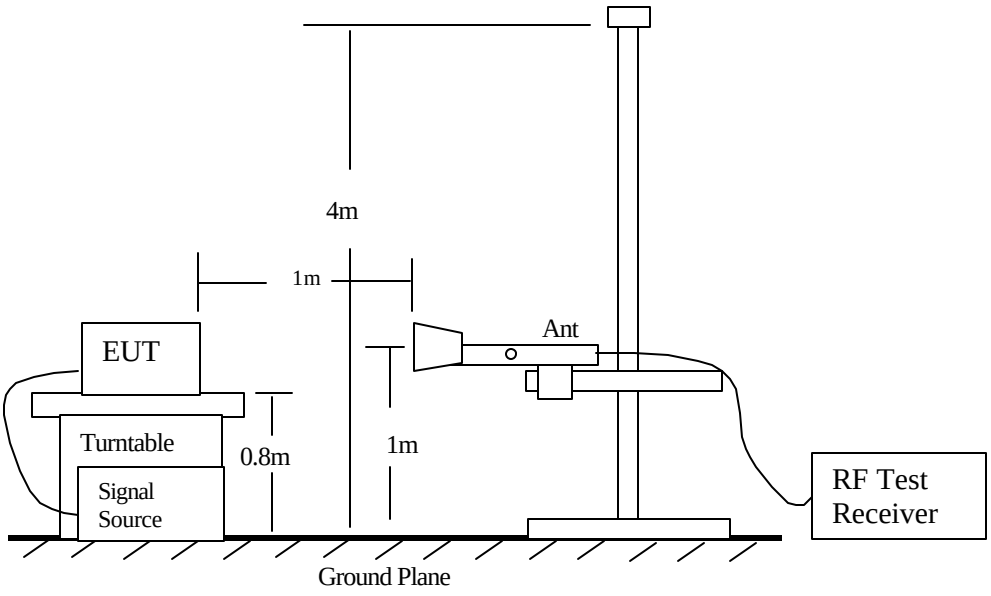


Fig 1: Radiated Emission Measurement

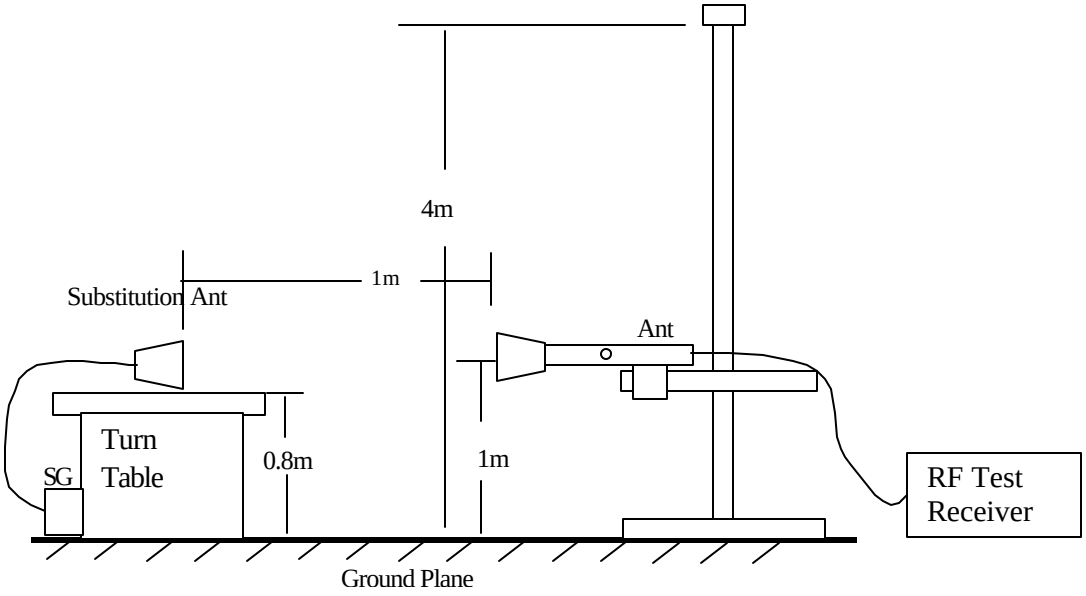


Fig 2: Radiated Emission – Substitution Method set-up

TEST PROCEDURE

1). On a test site, the EUT shall be placed on a turntable, and in the position closest to the normal use as declared by the user.
2). The test antenna shall be oriented initially for vertical polarization located 1m from the EUT to correspond to the frequency of the transmitter.
3). The output of the test antenna shall be connected to the measuring receiver and either a peak or average detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.
4). The transmitter shall be switched on, if possible, without the modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.
5). The test antenna shall be raised and lowered through the specified range of height until a maximum signal level is detected by the measuring receiver.
6). The transmitter shall than be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
7). The test antenna shall be raised and lowered again through the specified range of height until a maximum signal level is detected by the measuring receiver.
8). The maximum signal level detected by the measuring receiver shall be noted.
9). The transmitter shall be replaced by a substitution antenna.
10). The substitution antenna shall be oriented for vertical polarization.
11). The substitution antenna shall be connected to a calibrated signal generator.
12). If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
13). The test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.

14). The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.
15). The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.
16). The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.
17). The measure of the effective radiated power is the larger of the two levels recorded, at the input to the substitution antenna, corrected for the gain of the substitution antenna if necessary.

RESULT

Complies, as shown below

fo = 1957.5 MHz (MID); BLOCK B-uplink, S/N: 20010014 4/23/01

frequency (MHz)	SA reading (dBuV)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)
3915*	41.6	-85.3	1.1	9.7	7.55	-78.85	-13	-65.85
5872.5*	41.8	-78	1.38	11.1	8.95	-70.43	-13	-57.43
7830*	46	-75	1.58	11.2	9.05	-67.53	-13	-54.53
9787.5*	46	-73	1.81	12.4	10.25	-64.56	-13	-51.56
11745*	47.3	-70	1.98	12.5	10.35	-61.63	-13	-48.63

fo = 1877.5 MHz (MID); BLOCK B-downlink, S/N: 20010014

frequency (MHz)	SA reading (dBuV)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)
3755*	43	-85.3	1.06	9.6	7.45	-78.91	-13	-65.91
5632.5*	42.9	-78	1.35	10.9	8.75	-70.6	-13	-57.6
7510*	45.9	-75	1.55	10.6	8.45	-68.1	-13	-55.1
9387.5*	46.2	-73	1.77	11	8.85	-65.92	-13	-52.92
11265*	47	-70	1.94	12.7	10.55	-61.39	-13	-48.39

NOTE: * Measured noise floor (worse case vertical); H=horizontal and V=vertical
Gain (dBd) = Gain (dBi) - 2.15 **EPR =** SG reading - CL + Gain (dBd)
Margin = EPR - Limit

SA: Spectrum Analyzer, HP 8593EM, S/N: 3710A00205
SG: Signal Generator, HP 83732B, S/N: US34490599
CL: cable loss (4ft), FLEXCO **HPF:** High Pass Filter (MICROLAB, FH-2400H)
TX Antenna: EMCO 3115, S/N: 9001-3245 (dBi) **RX Antenna:** EMCO 3115, S/N: 2238
Pre-Amp: HP 8449B, S/N: 3008A00369

8.6. SECTION 2.1055: FREQUENCY STABILITY

INSTRUMENTS LIST

EQUIPMENT	MANUFACTURE	MODEL NO.	CAL. DUE DATE
Spectrum Analyzer	HP	8593EM	05/25/01
Signal Source	HP	E4432B-1E5-H9	7/28/02
Environmental Chamber	TEC	TTS-40350	5/12/01

Detector Function Setting of Test Receiver

Frequency Range (MHz)	Detector Function	Resolution Bandwidth	Video Bandwidth
Above 1000	Peak	30 Hz	30 Hz

TEST SETUP

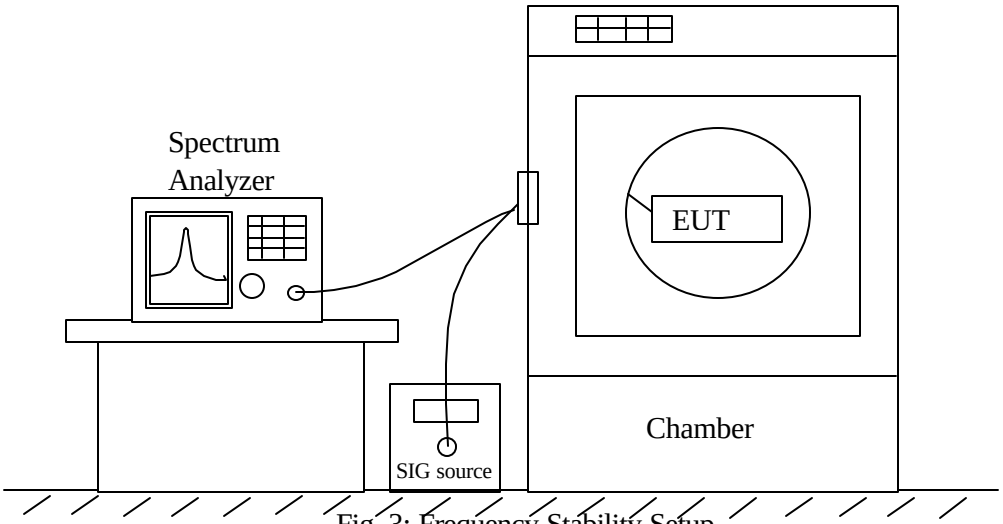


Fig. 3: Frequency Stability Setup

TEST PROCEDURE

- **Frequency stability versus environmental temperature**

1). Setup the configuration per figure 6 for frequencies measurement inside the environmental chamber. Set the temperature of the chamber to 25°C. Set SA Resolution Bandwidth low enough to obtain the desired frequency resolution and measure the EUT 25°C operating frequency as reference frequency.
2). Turn EUT off and set Chamber temperature to -30°C.
3). Allow sufficient time (approximately 20 to 30 minus after chamber reach the assigned temperature) for EUT to stabilize. Turn on EUT and measure the EUT operating frequency. Turn off EUT after the measurement.
4). Repeat step 3 with a 10°C increased per stage until the highest temperature of +50°C reached, record all measured frequencies on each temperature step.

- **Frequency stability versus AC input voltage**

1). Setup the configuration per figure 6 and set chamber temperature to 25°C. Use a variable AC power supply to power the EUT and set AC output voltage to EUT nominal input AC voltage. Set SA Resolution Bandwidth low enough to obtain the desired frequency resolution and measure the EUT 25°C operating frequency as reference frequency.
2). Slowly reduce the EUT input voltage to specified extreme voltage variation and record the maximum frequency change.

RESULT

Complies, as shown below because the EUT uses the same OSC in both receiver and transmitter LO circuit. As a result, the frequency does not shift in Frequency Stability Test.

Frequency stability versus environmental temperature

Reference Frequency: 1951.249900 MHz (uplink) Limit: to stay within the authorized frequency block		
Environment Temperature (°C)	Power Supplied (Vac)	Frequency deviation measured with time elapse
		MHz
50	Fixed 115 Vac	EUT auto shut down
40	Fixed 115 Vac	1951.249900
30	Fixed 115 Vac	1951.249900
20	Fixed 115 Vac	1951.249900
10	Fixed 115 Vac	1951.249900
0	Fixed 115 Vac	1951.249900
-10	Fixed 115 Vac	1951.249900
-20	Fixed 115 Vac	EUT auto shut down
-30	Fixed 115 Vac	EUT auto shut down

Reference Frequency: 1871.249900 MHz (downlink) Limit: to stay within the authorized frequency block		
Environment Temperature (°C)	Power Supplied (Vac)	Frequency deviation measured with time elapse
		MHz
50	Fixed 115 Vac	EUT auto shut down
40	Fixed 115 Vac	1871.249900
30	Fixed 115 Vac	1871.249900
20	Fixed 115 Vac	1871.249900
10	Fixed 115 Vac	1871.249900
0	Fixed 115 Vac	1871.249900
-10	Fixed 115 Vac	1871.249900
-20	Fixed 115 Vac	EUT auto shut down
-30	Fixed 115 Vac	EUT auto shut down

Frequency stability versus AC input voltage

Reference Frequency: 1951.249900 MHz (uplink) Limit: to stay within the authorized frequency block		
Environment Temperature (°C)	Power Supplied (Vac)	Frequency deviation measured with time elapse
		MHz
24	115	1951.249900
24	85	1951.249900
24	132	1951.249900

Reference Frequency: 1871.249900 MHz (downlink) Limit: to stay within the authorized frequency block		
Environment Temperature (°C)	Power Supplied (Vac)	Frequency deviation measured with time elapse
		MHz
24	115	1871.249900
24	85	1871.249900
24	132	1871.249900

8.7. RADIATED EMISSION: part 15.209

INSTRUMENTS LIST

EQUIPMENT	MANUFACTURE	MODEL NO.	CAL. DUE DATE
Spectrum Analyzer	HP	8593EM	05/25/01
Bilog Antenna	CHASE EMC LTD	CBL6112	11/23/00
Amplifier	HP	8447D(P_1)	11/12/01
Signal Source	HP	E4432B-1E5-H9	7/28/02

Detector Function Setting of Test Receiver

Frequency Range (MHz)	Detector Function	Resolution Bandwidth	Video Bandwidth
30 to 1000	☒ Peak ☐ Quasi Peak	☒ 100 KHz ☐ 120 KHz	☒ 100 KHz ☐ 120 KHz

TEST SETUP

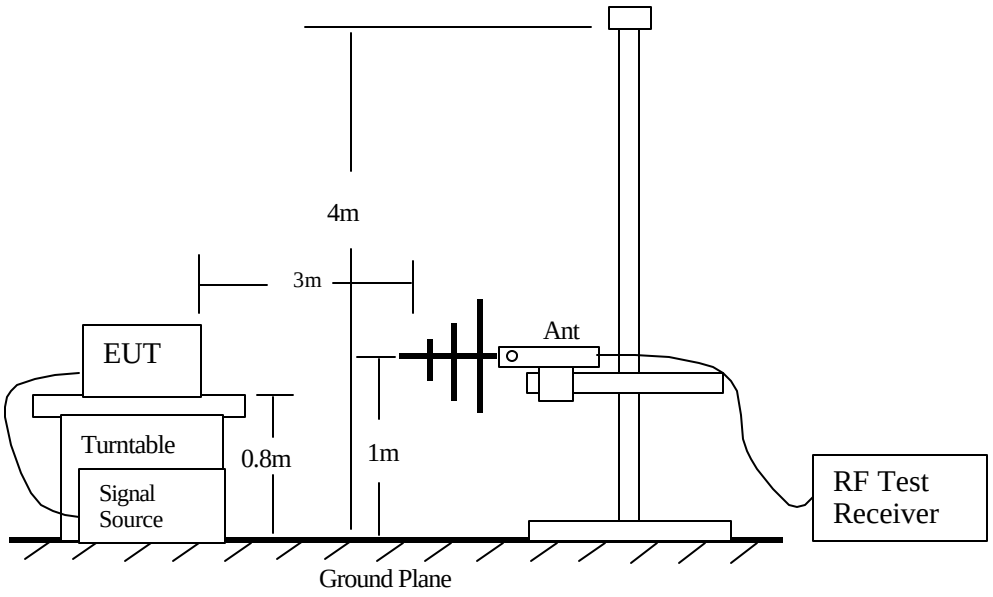


Fig. 4: PART 15.209-Radiated Emission

PROCEDURE

Place the EUT on the 1x1.5 meter turntable with a height of 0.8 meter as shown in figure 4. The EUT was placed to the center of the turntable. Activated EUT to transmit.

The Bilog search antenna was place at a distance of 3 meters. The antenna was raised and lowered and the EUT rotated on the turntable to produce maximum emission levels on the spectrum analyzer.

RESULT

Complies, as shown below.

COMPLIANCE Certification Services

FCC, VCCI, CISPR, CE, AUSTEL, NZ
UL, CSA, TUV, BSMI, DHHS, NVLAP

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Project #:	01U0760-1
Report #:	010411A1
Date& Time:	04/11/01 4:13 PM
Test Engr:	KERWIN CORPUZ
Company:	ACE ANTENNA
EUT Description:	ULTRA SLIM CDMA REPEATER (M/N: USR-1900B)
Test Configuration :	EUT/SIGNAL GENERATOR
Type of Test:	FCC CLASS B
Mode of Operation:	TX/RX

(•) A-Site ( ) B-Site ( ) C-Site ( ) F-Site 6 Worst Data Descending

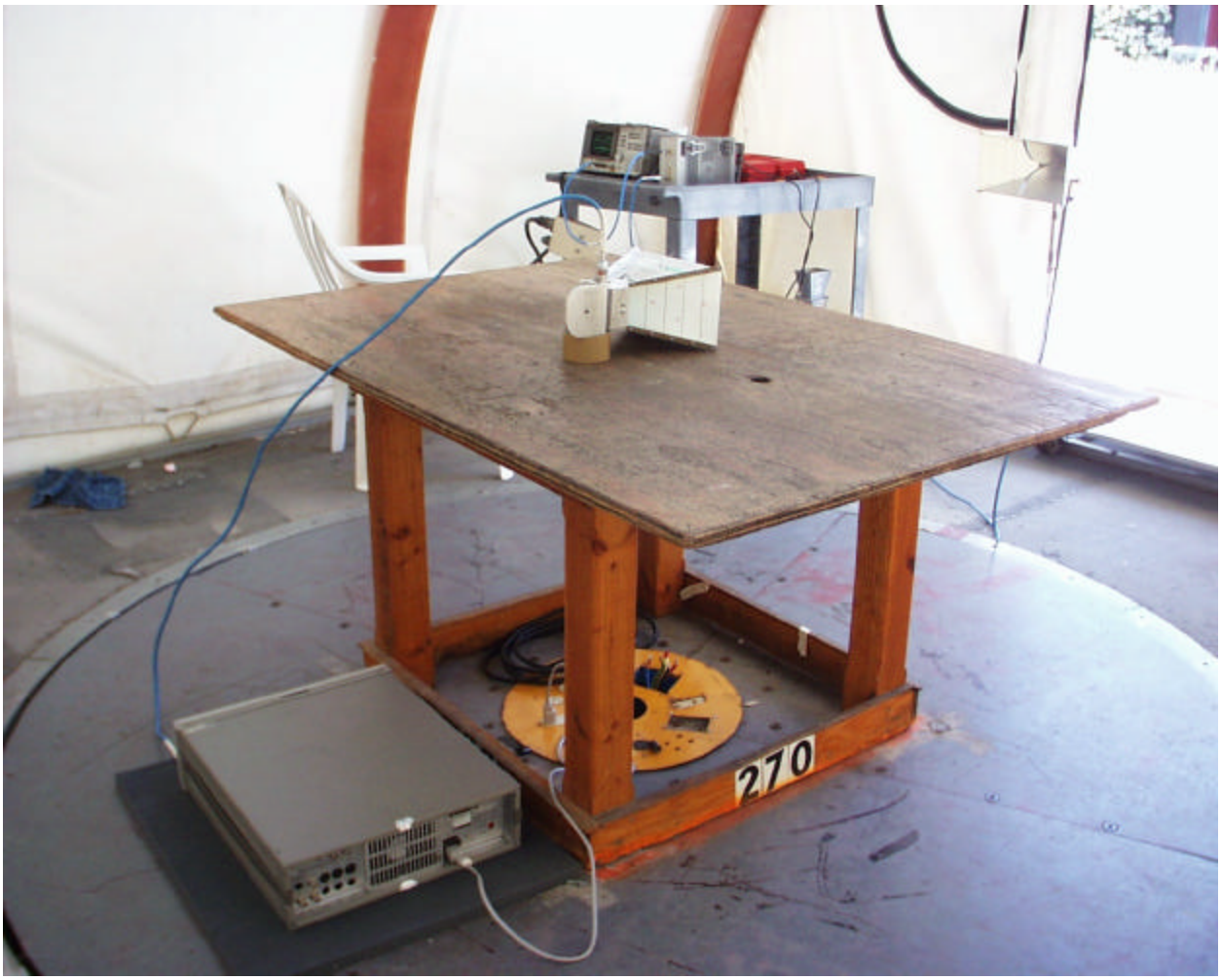
Freq. (MHz)	Reading (dBuV)	AF (dB)	Closs (dB)	Pre-amp (dB)	Level (dBuV/m)	Limit FCC_B	Margin (dB)	Pol (H/V)	Az (Deg)	Height (Meter)	Mark (P/Q/A)
BROADBAND											
35.50	36.20	20.80	0.83	27.83	30.00	40.00	-10.00	3mV	180.00	1.00	P
43.65	36.10	15.23	0.87	27.84	24.36	40.00	-15.64	3mV	180.00	1.00	P
49.65	41.60	12.27	0.93	27.83	26.96	40.00	-13.04	3mV	180.00	1.00	P
57.60	37.40	9.06	1.00	27.83	19.63	40.00	-20.37	3mV	180.00	1.00	P
69.90	40.60	7.11	1.08	27.80	20.99	40.00	-19.01	3mV	180.00	1.00	P
74.25	41.40	7.57	1.12	27.82	22.27	40.00	-17.73	3mV	180.00	1.00	P
COMPLETED SCAN 30 - 1000 MHz, VERTICAL AND HORIZONTAL POLARIZATION											
Total data #: 6											
V.2a											

9. ATTACHMENT

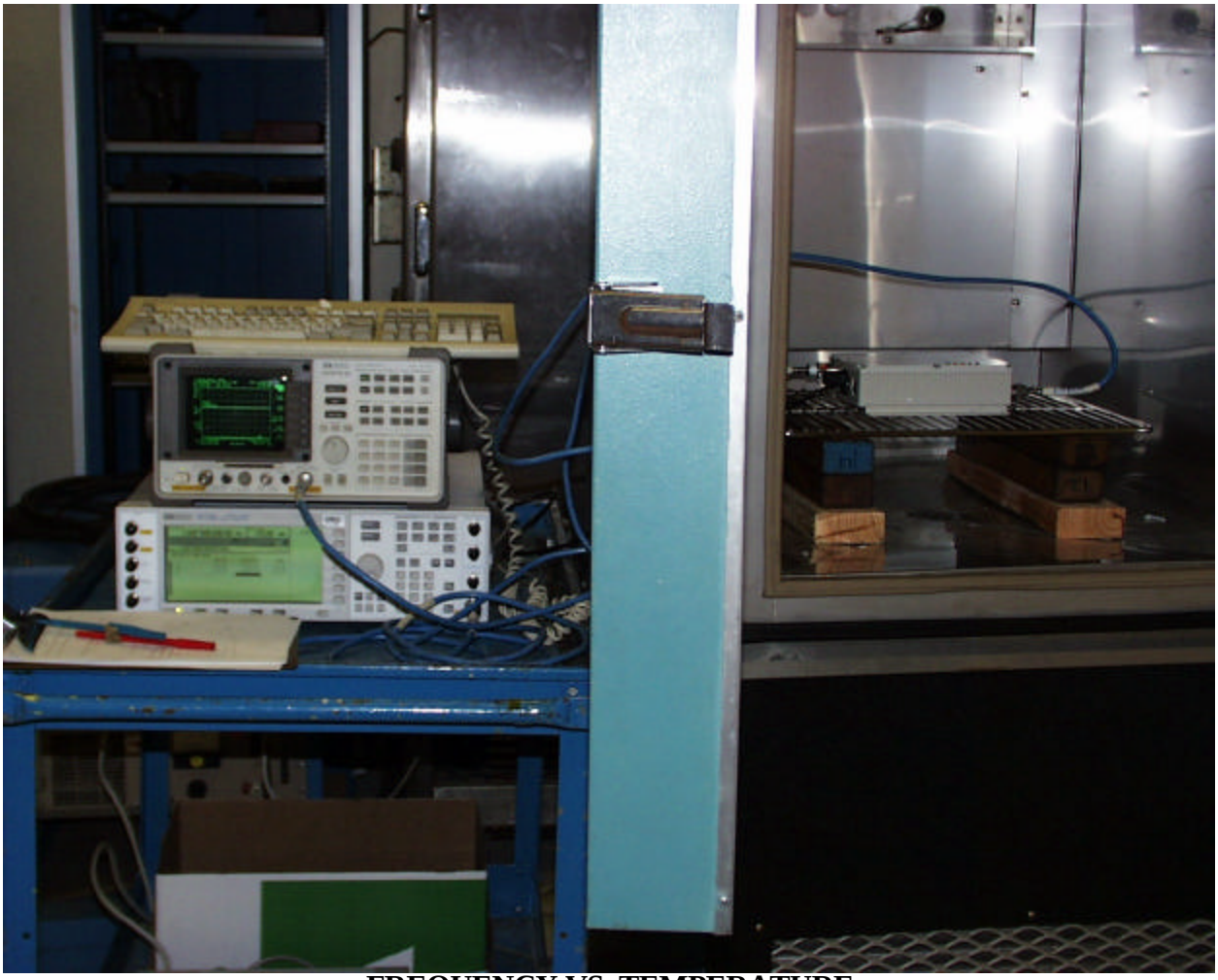
9.1. EUT SETUP PHOTOS

CONDUCTED MEASUREMENT

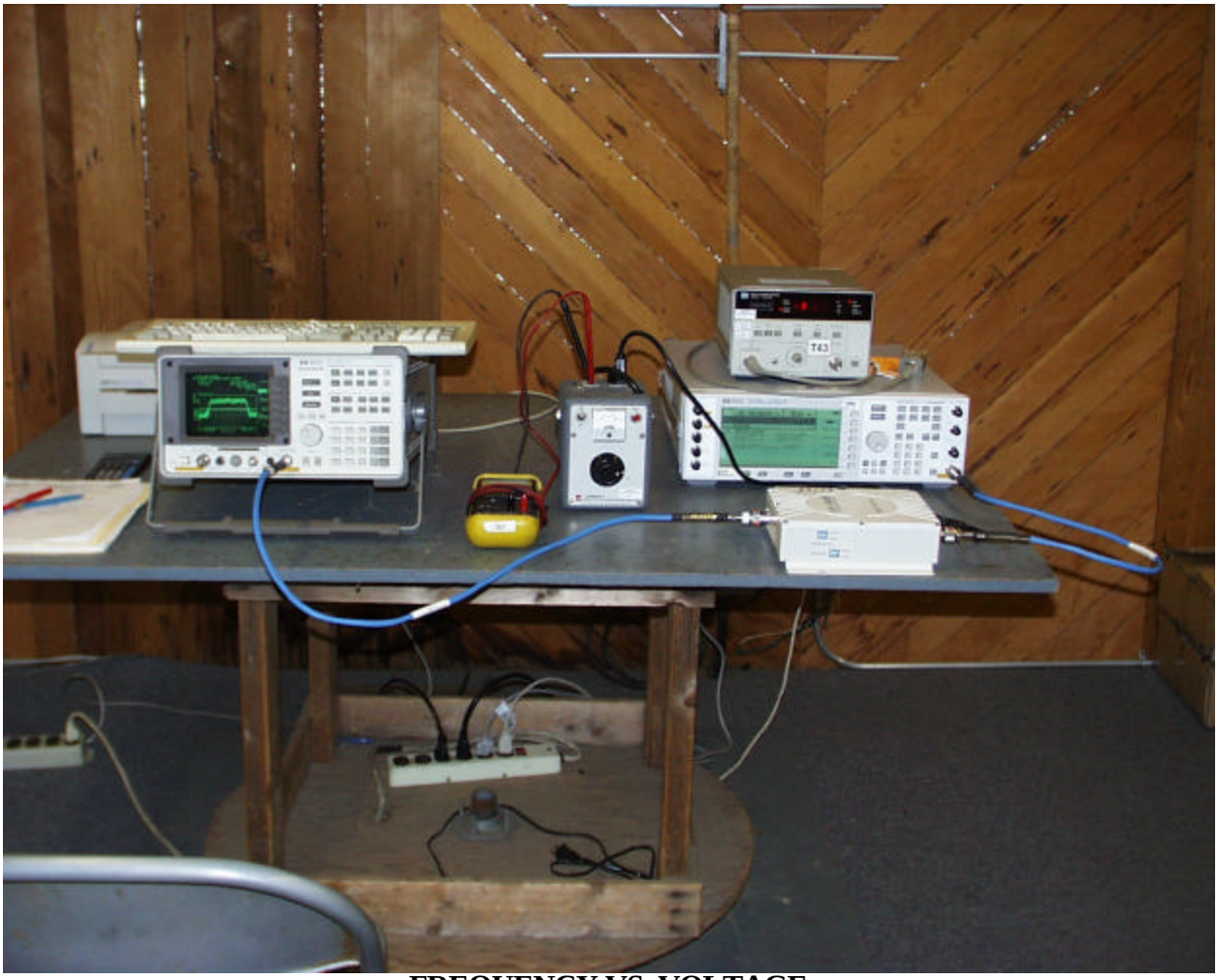
HARMONIC MEASUREMENT



SUBSTITUTION METHOD



FREQUENCY VS. TEMPERATURE

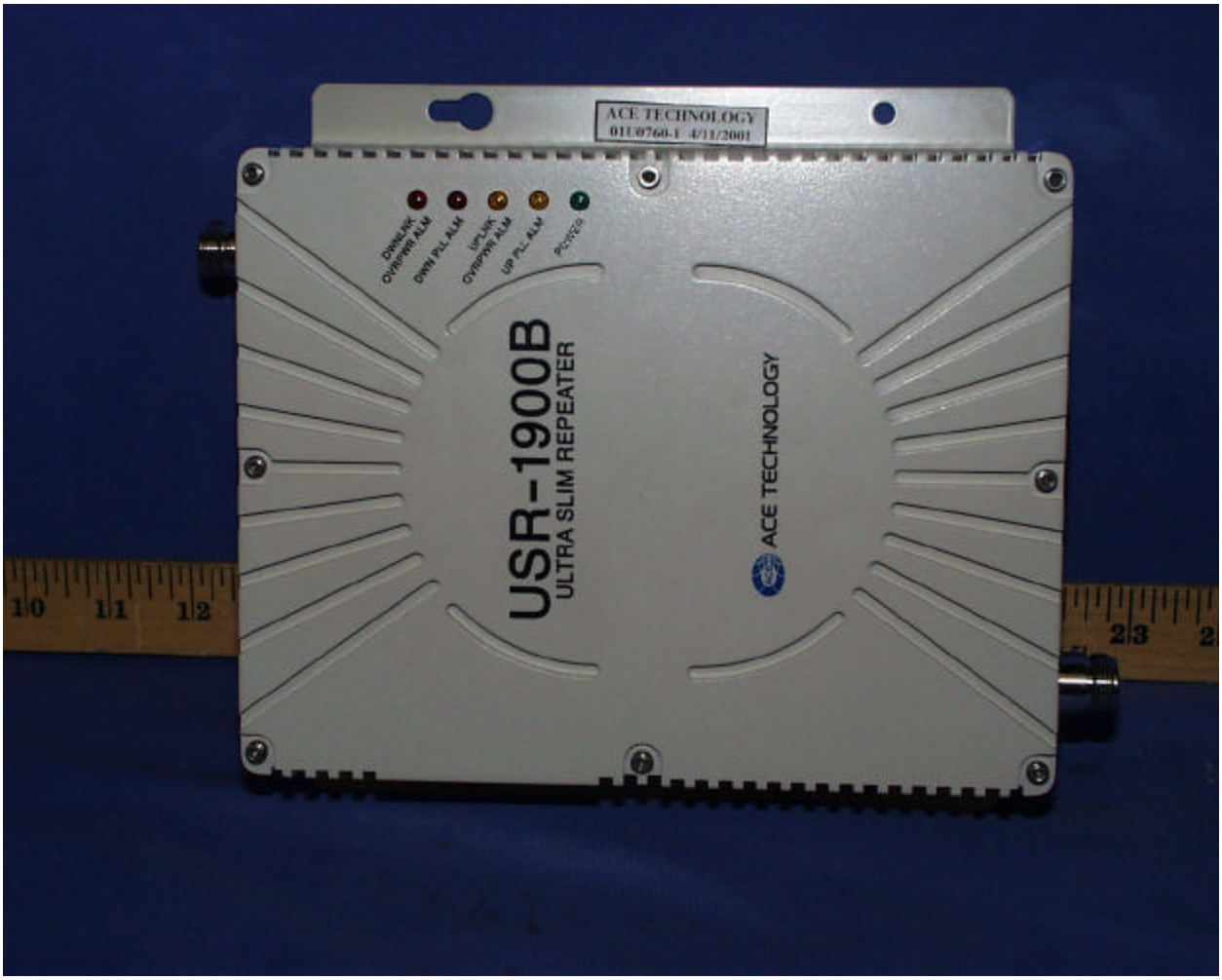


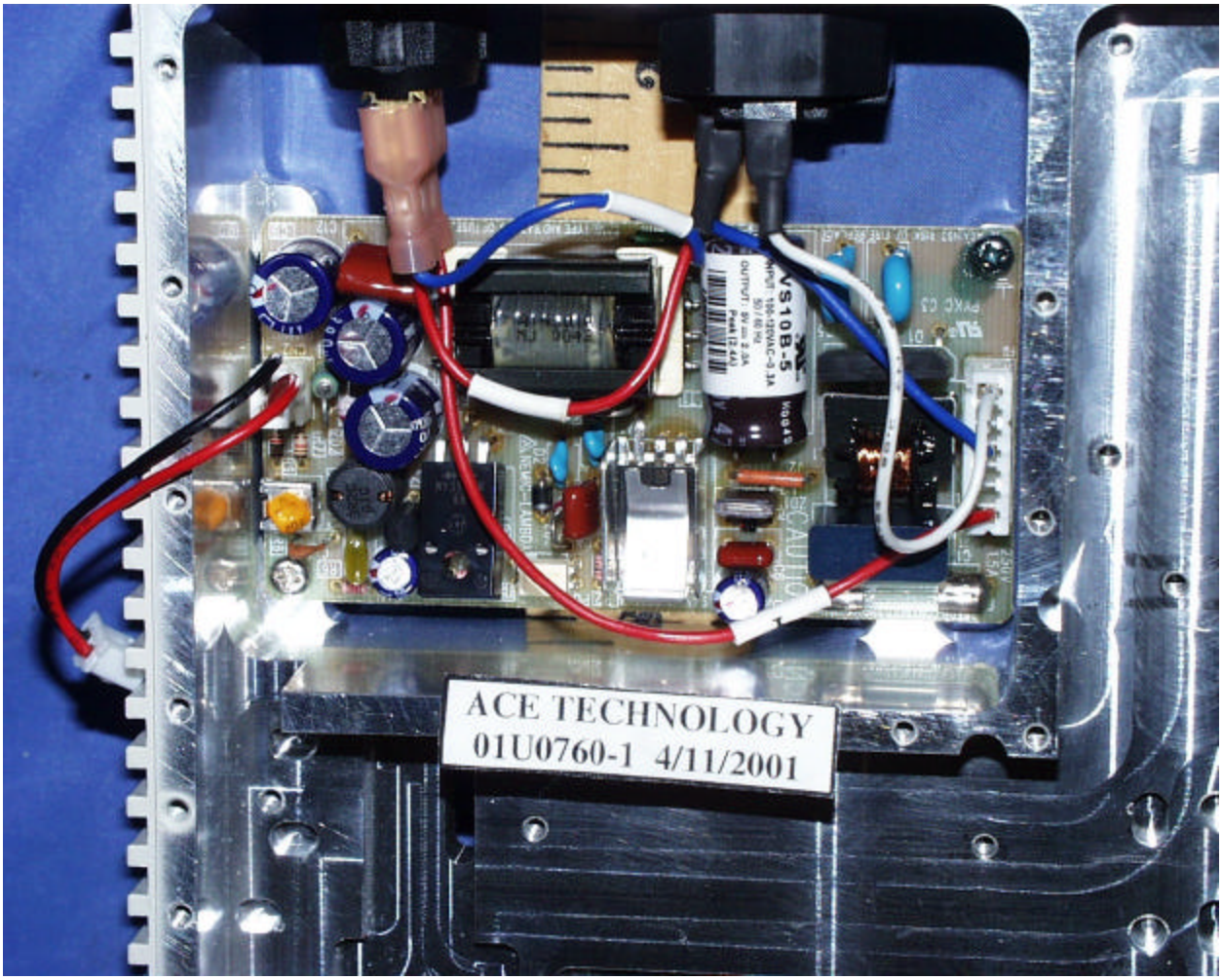
FREQUENCY VS. VOLTAGE

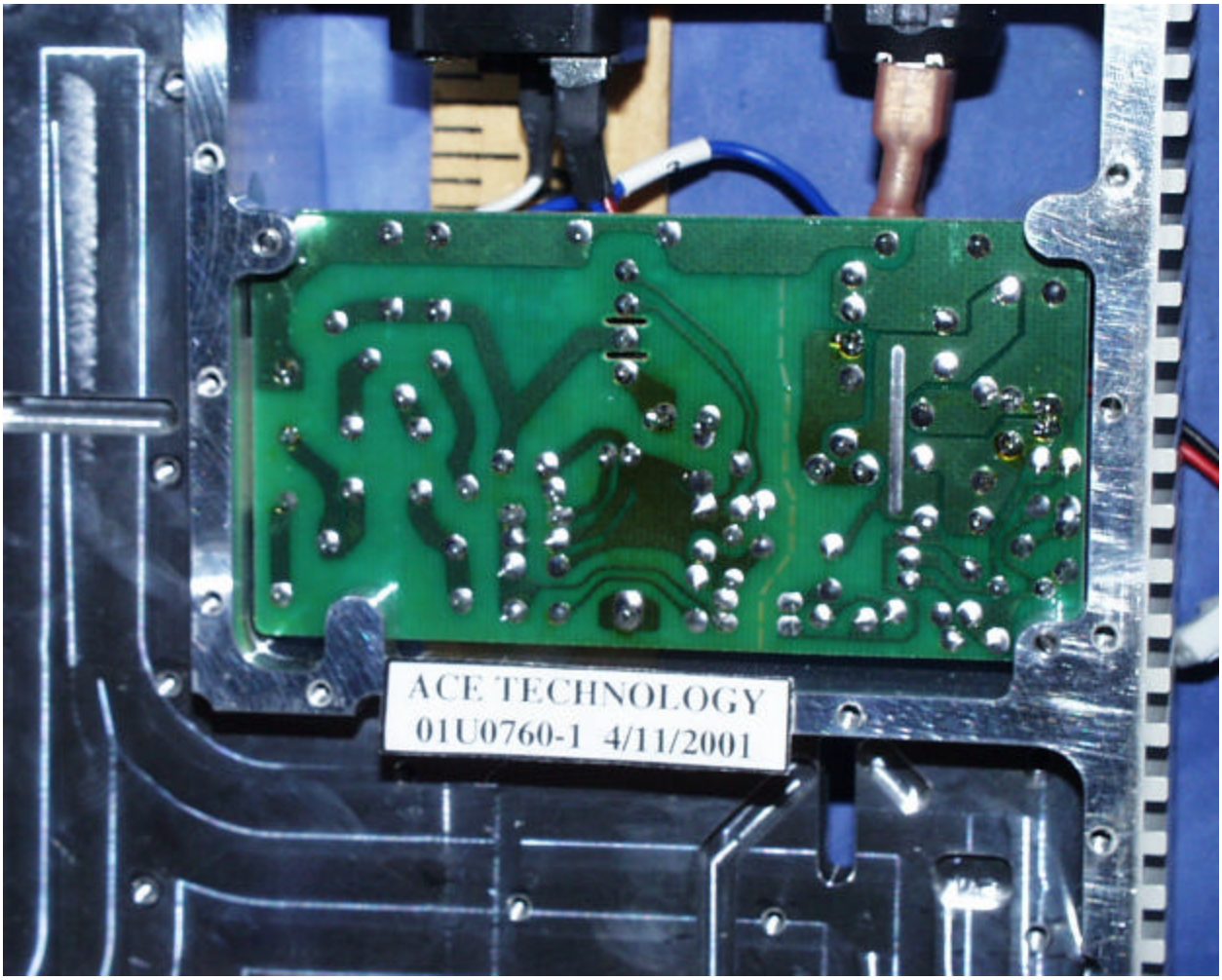
RADIATION FRONT

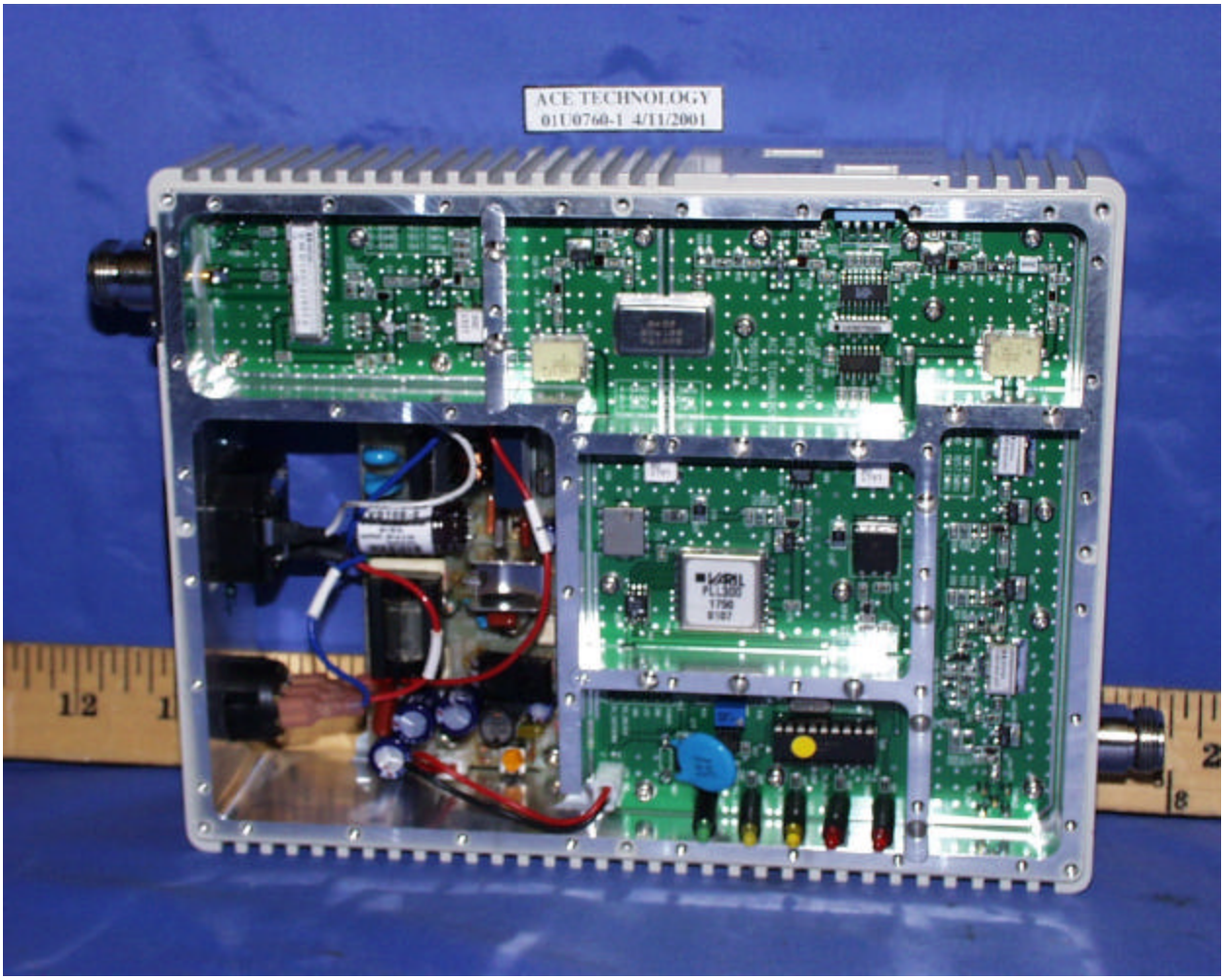
RADIATION BACK

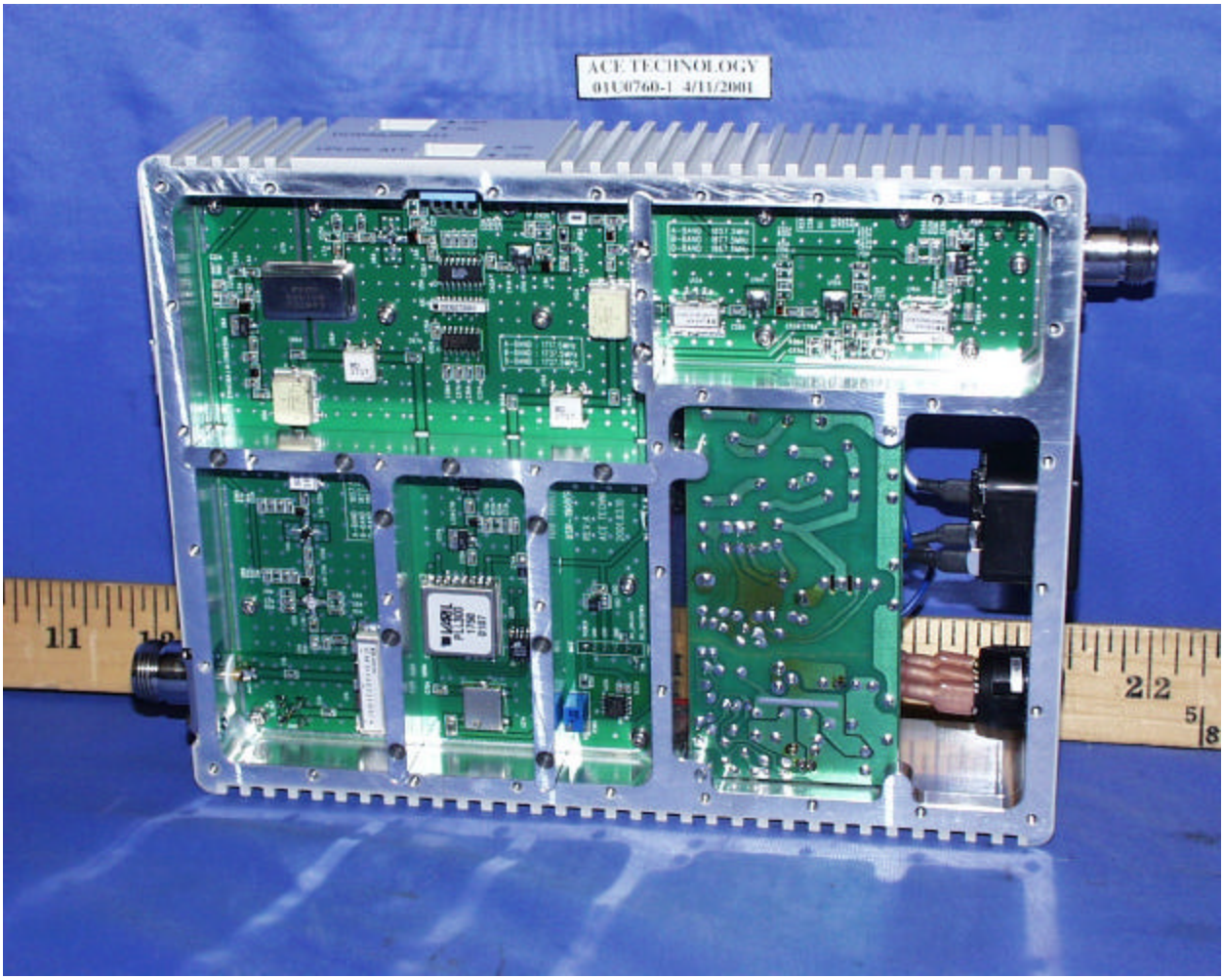
9.2. EUT PHOTOGRAPHS

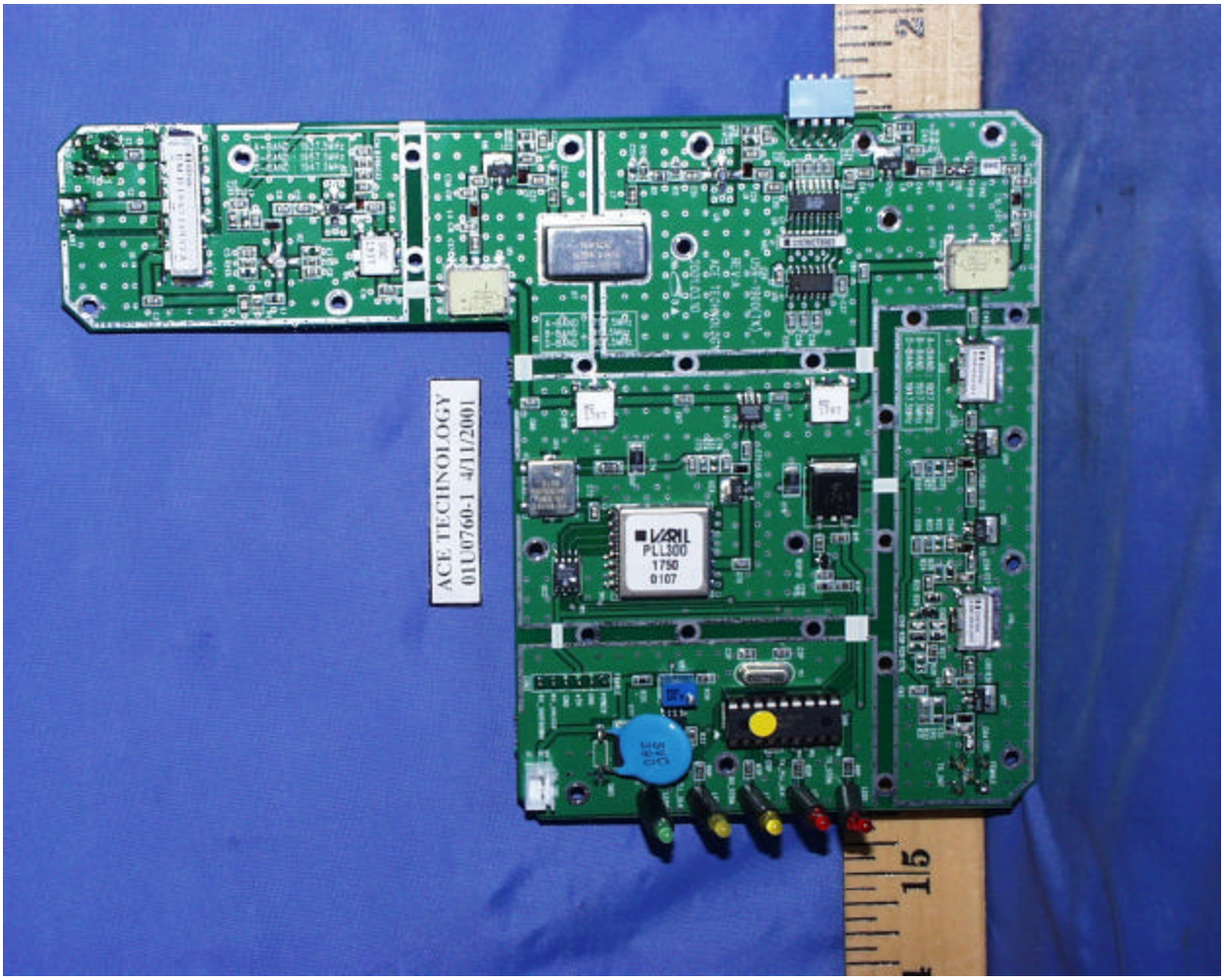


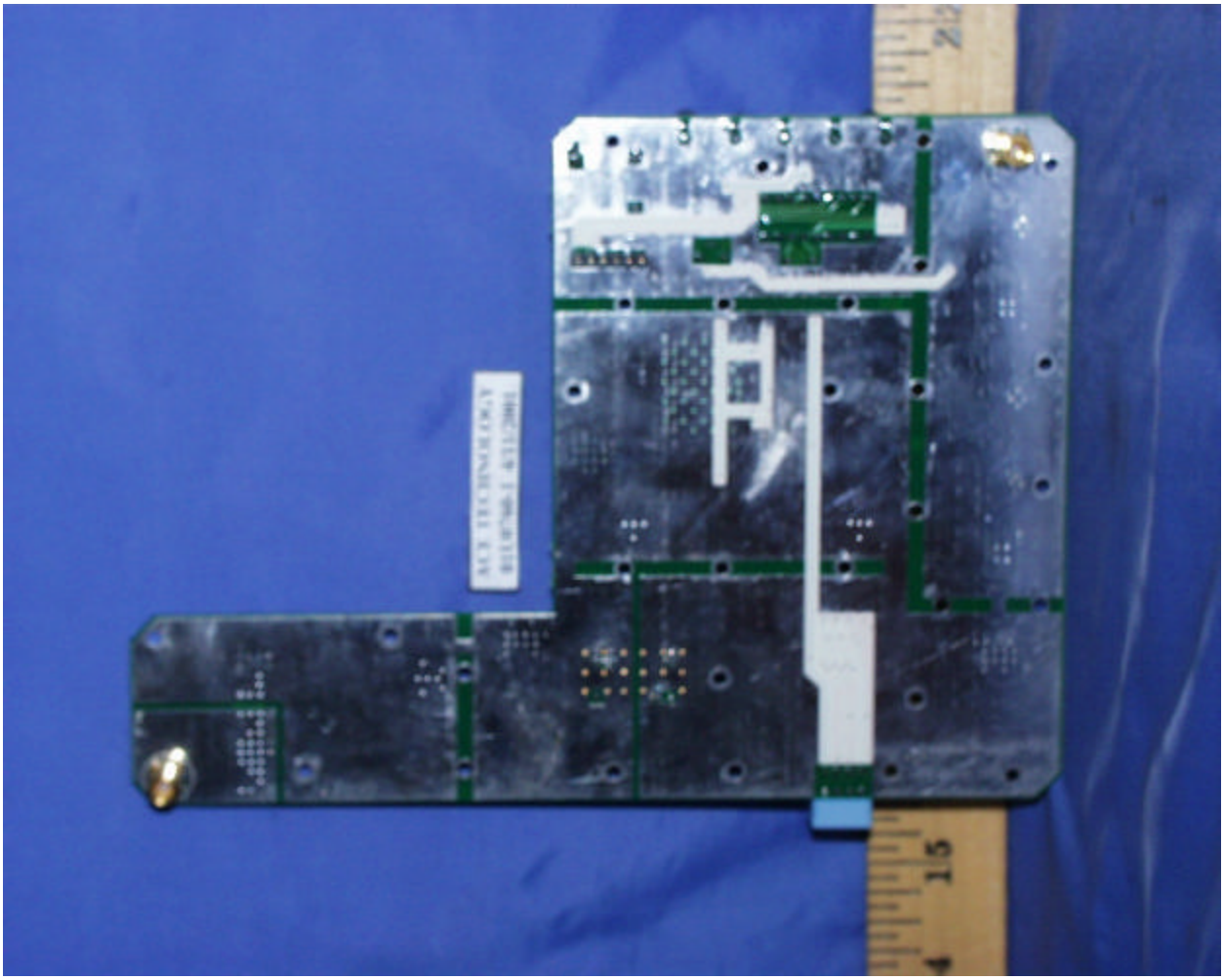


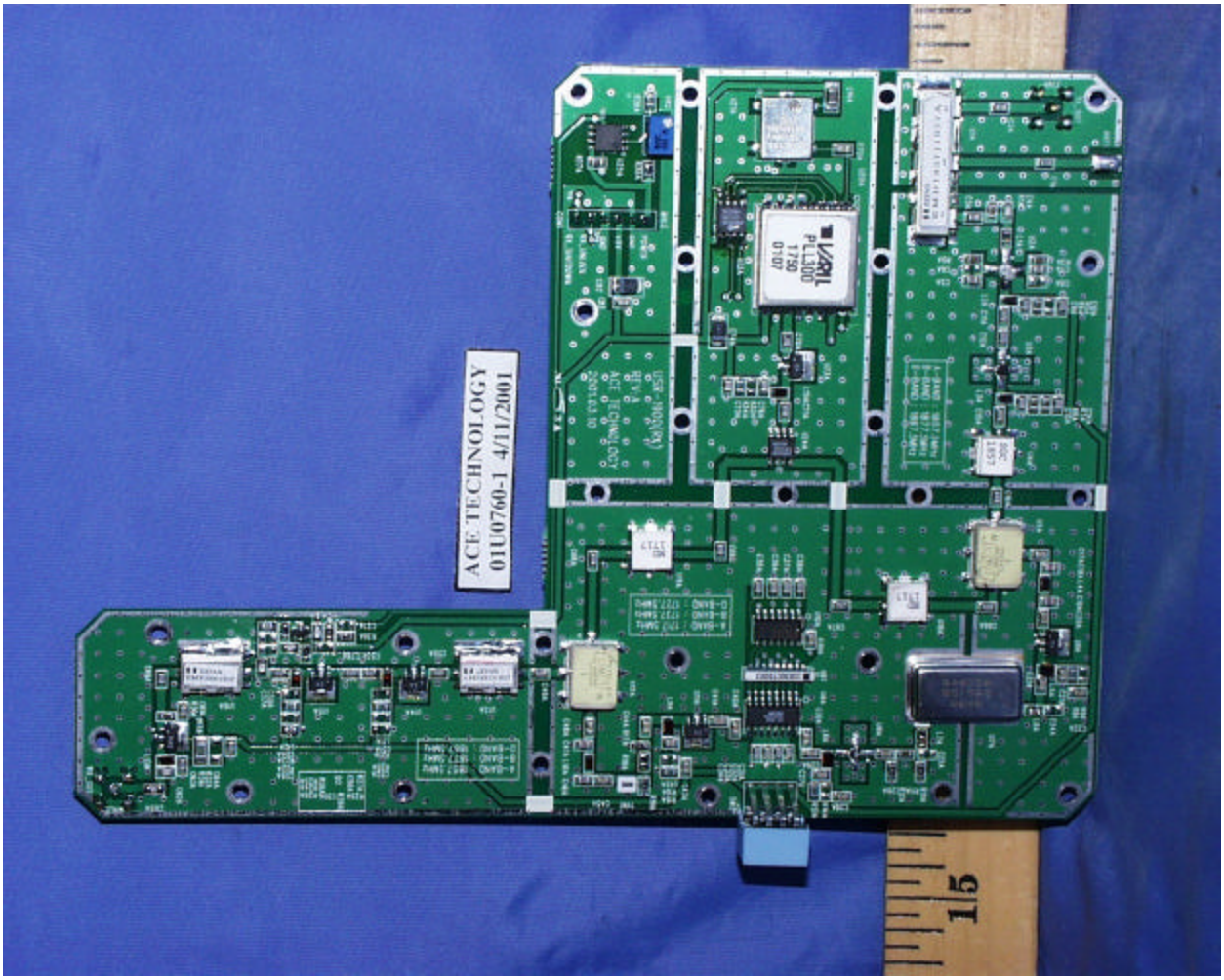


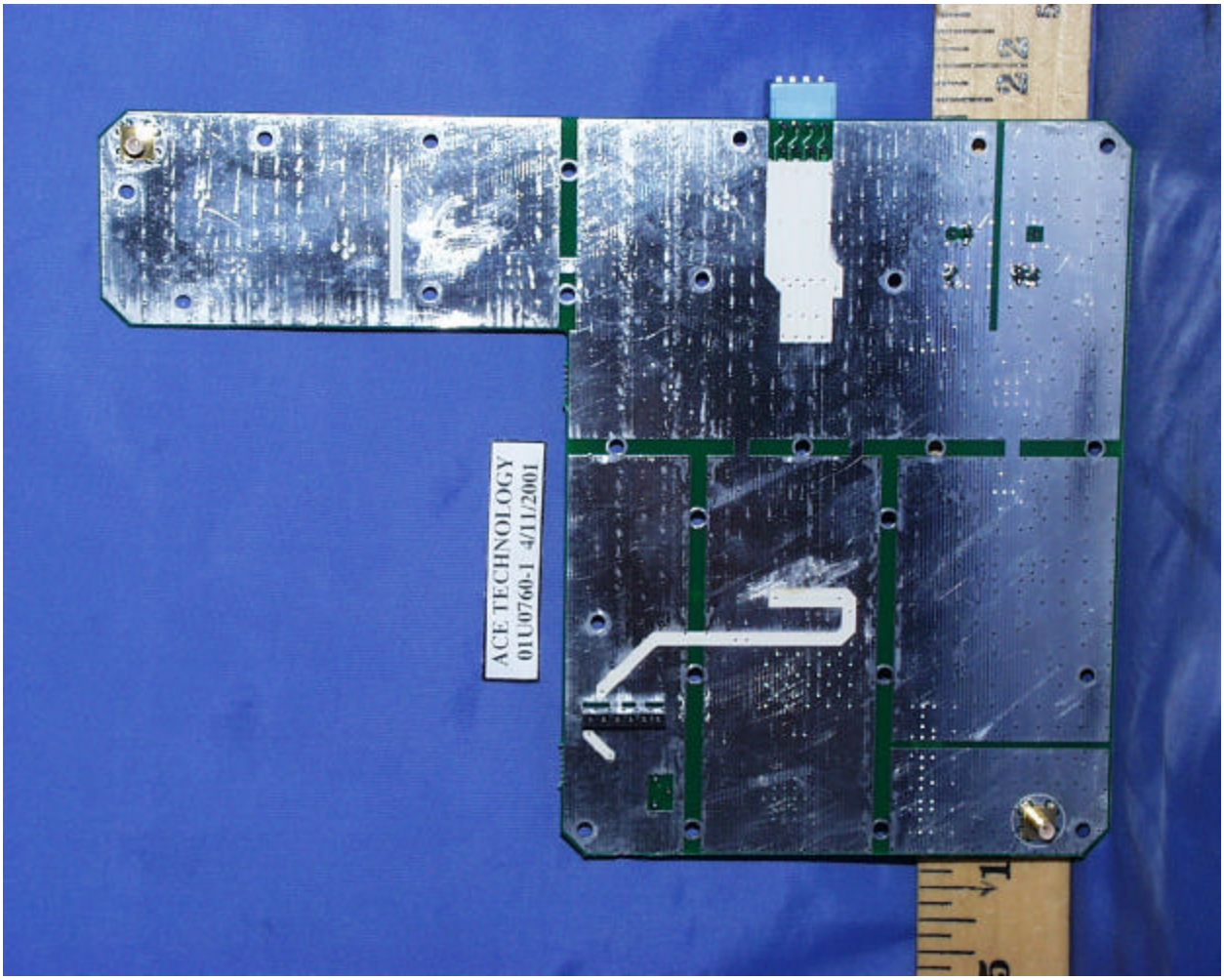












9.3. INSTALLATION AND SERVICE MANUAL

9.4. SCHEMATIC, PART LISTS AND BLOCK DIAGRAM

9.5. PROPOSED FCC ID LABEL FORMAT

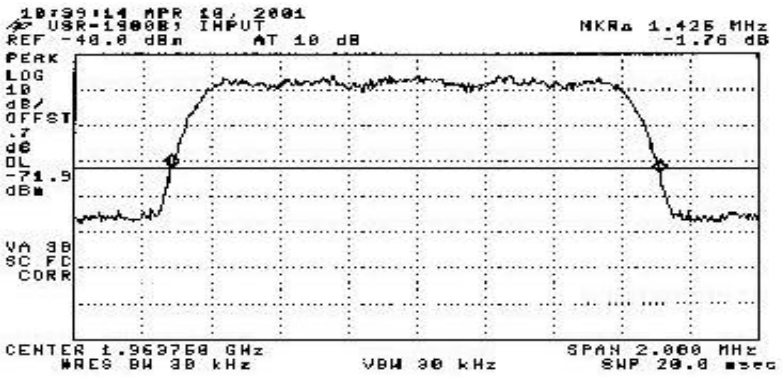
9.6. MEASUREMENT RESULT PLOTS

RESULT

The following table indicates the plot number associated with the Input Bandwidth, Output Bandwidth, Block Edges, Intermodulation, Out-of-Band and Low, Mid, High Power Outputs emission plots. All measurements are in peak detector mode.

CDMA SIGNAL (BLOCK B-uplink, UNIT S/N: 20010014)		
Plot#	**Description**	**Frequency Range (MHz)**
1	Input Bandwidth	1963.75
2	Output Bandwidth	1963.75
3	Top Block Edge	1963.75 to 1968
4	Bottom Block Edge	1947 to 1951.25
5	Bottom Block Edge out-of-band	15 to 2900
6	Bottom Block Edge out-of-band	2900 to 20000
7	Top Block Edge out-of-band	15 to 2900
8	Top Block Edge out-of-band	2900 to 20000
9	Bottom Block Intermod	1951.25, 1953.75, 1963.75 (zoom in)
10	Bottom Block Intermod	1951.25, 1953.75, 1963.75 (zoom out)
11	Bottom Block Intermod out-of-band	15 to 2900
12	Bottom Block Intermod out-of-band	2900 to 20000
13	Top Block Intermod	1951.25, 1961.25, 1963.75 (zoom in)
14	Top Block Intermod	1951.25, 1961.25, 1963.75 (zoom out)
15	Top Block Intermod out-of-band	15 to 2900
16	Top Block Intermod out-of-band	2900 to 20000
17	Bottom Block Power Output	1951.25
18	Mid Block Power Output	1957.5
19	Top Block Power Output	1963.75

CDMA SIGNAL (BLOCK B-downlink, UNIT S/N: 20010014)		
Plot#	**Description**	**Frequency Range (MHz)**
20	Output Bandwidth	1871.25
21	Input Bandwidth	1871.25
22	Bottom Block Edge	1867 to 1871.25
23	Top Block Edge	1882.75 to1888
24	Top Block Edge out-of-band	15 to 2900
25	Top Block Edge out-of-band	2900 to 20000
26	Bottom Block Edge out-of-band	15 to 2900
27	Bottom Block Edge out-of-band	2900 to 20000
28	Bottom Block Intermod	1871.25, 1873.75, 1883.75 (zoom in)
29	Bottom Block Intermod	1871.25, 1873.75, 1883.75 (zoom out)
30	Bottom Block Intermod out-of-band	15 to 2900
31	Bottom Block Intermod out-of-band	2900 to 20000
32	Top Block Intermod	1871.25, 1881.25, 1883.75 (zoom in)
33	Top Block Intermod	1871.25, 1881.25, 1883.75 (zoom out)
34	Top Block Intermod out-of-band	15 to 2900
35	Top Block Intermod out-of-band	2900 to 20000
36	Bottom Block Power Output	1871.25
37	Mid Block Power Output	1877.5
38	Top Block Power Output	1883.75



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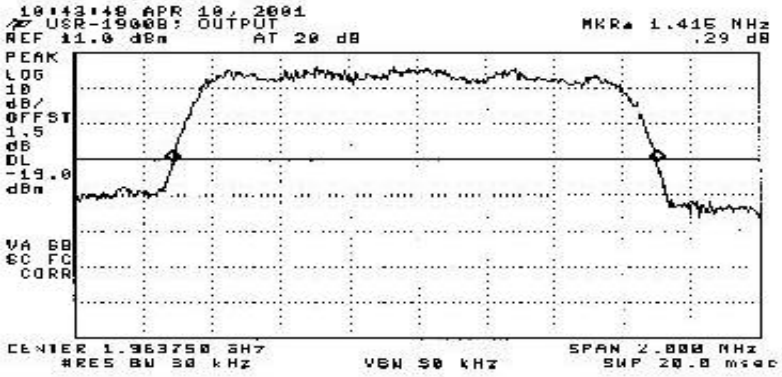

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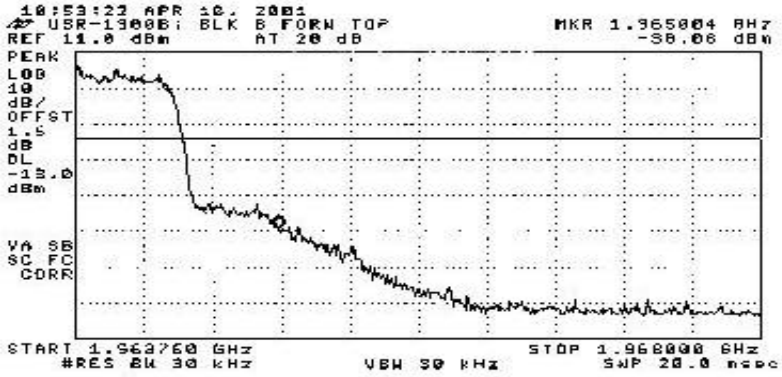

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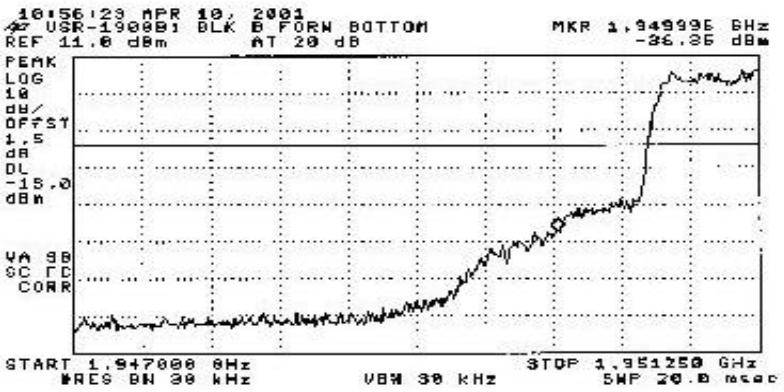

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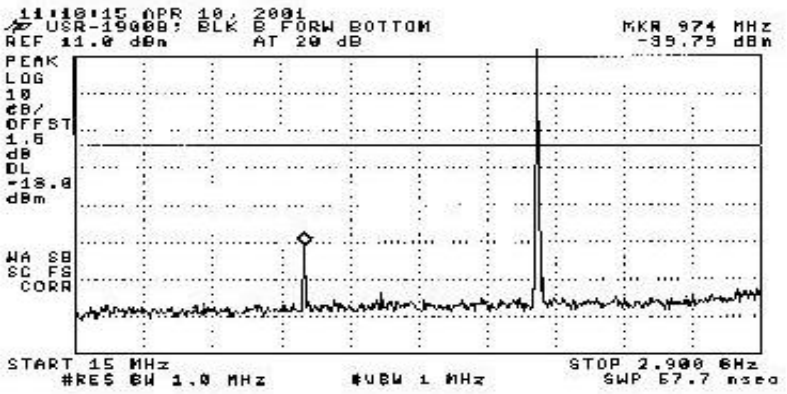

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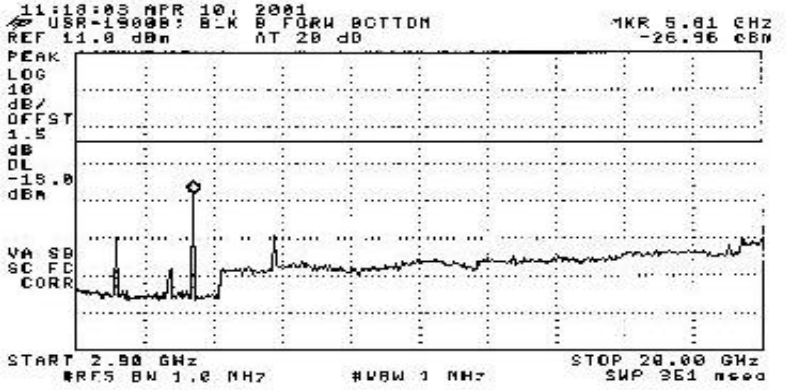

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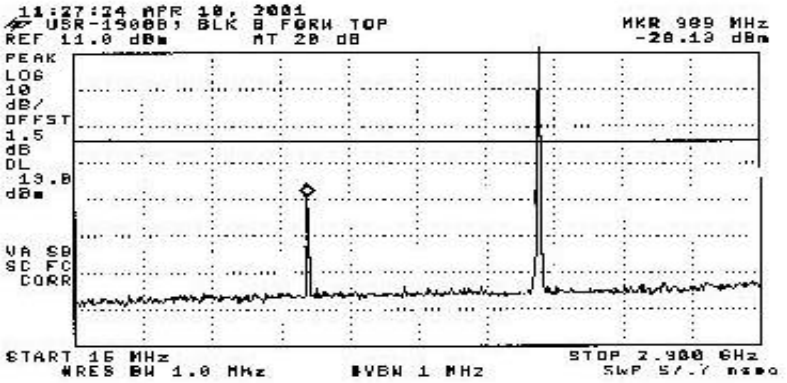

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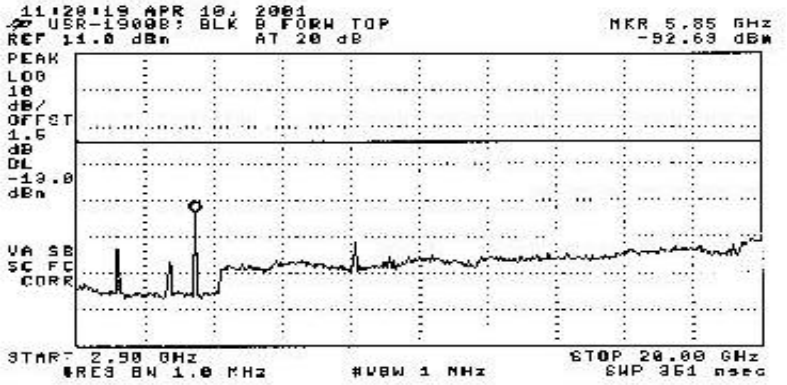

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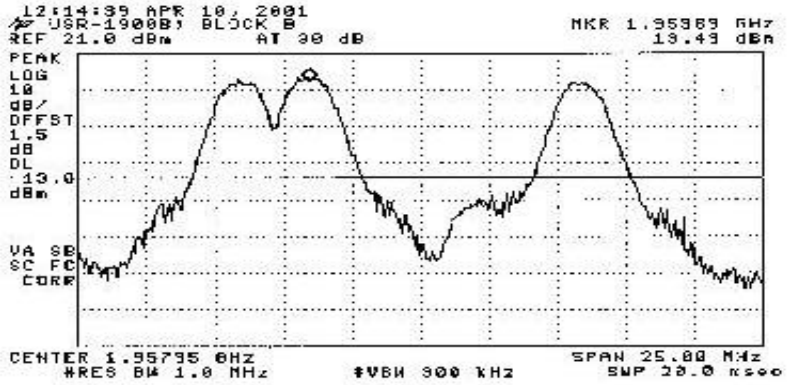

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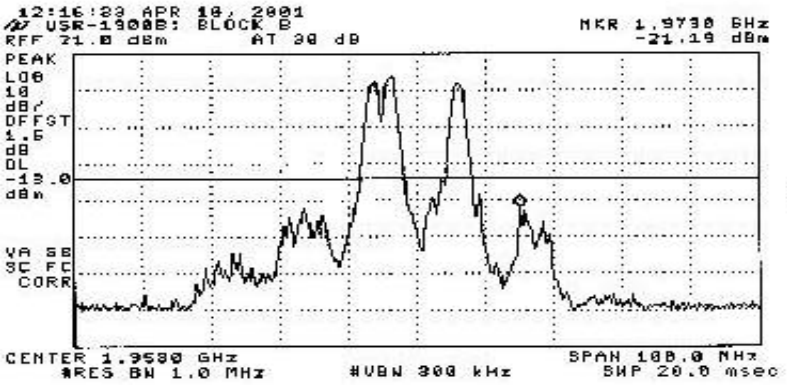

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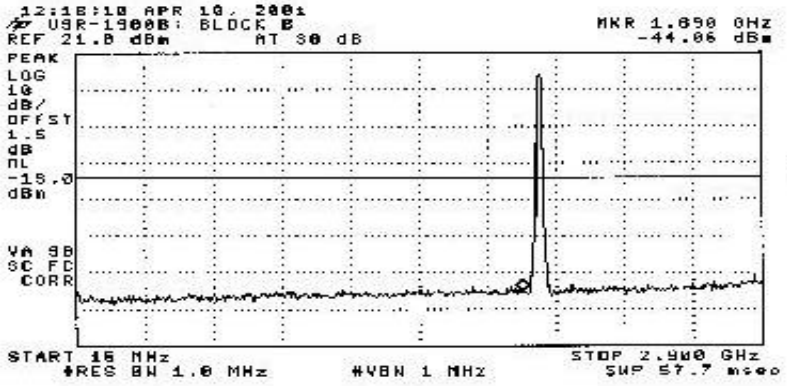

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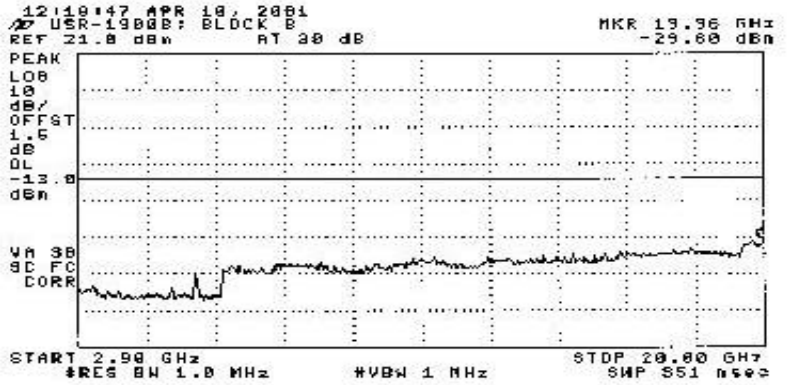

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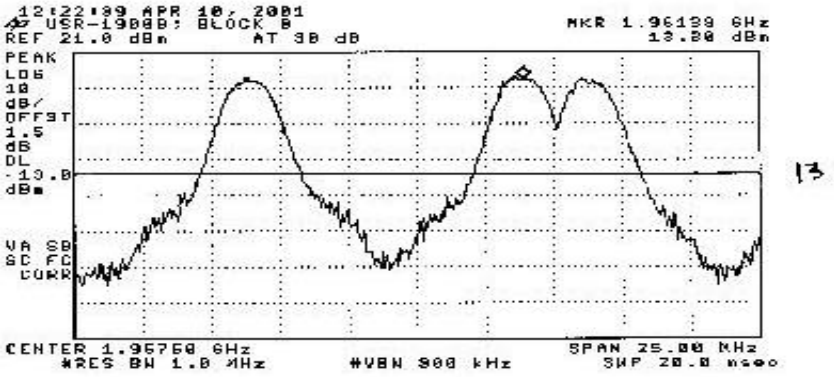

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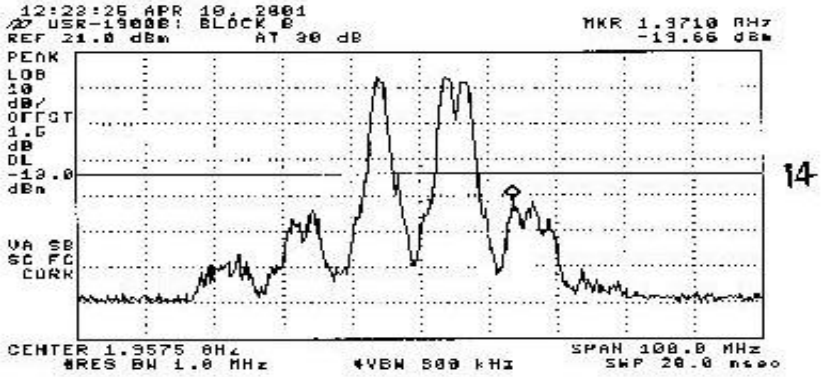

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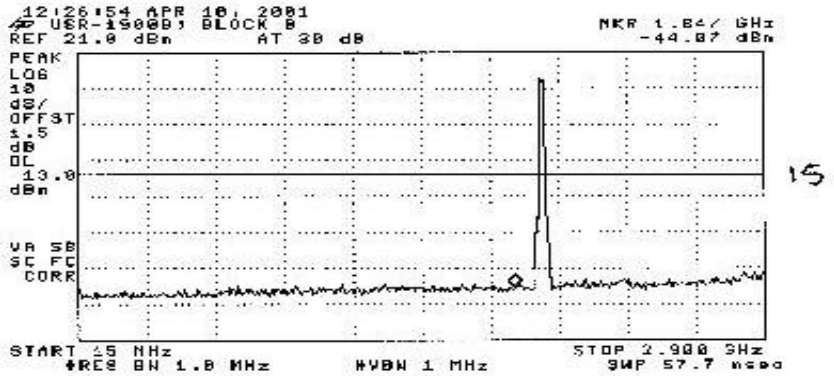

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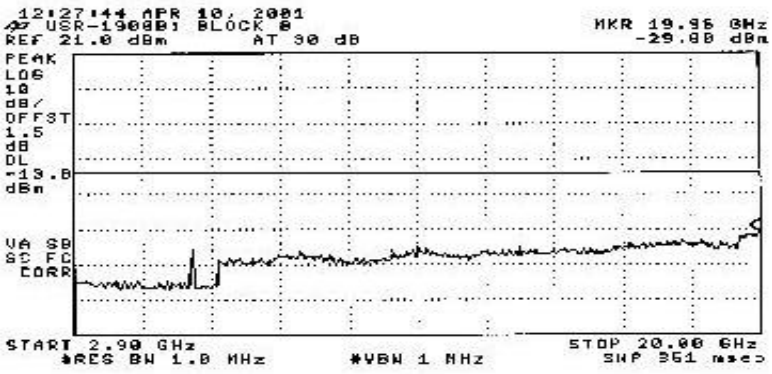

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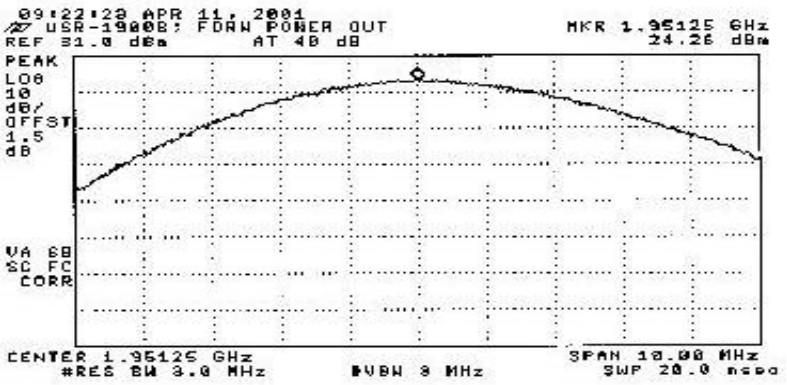

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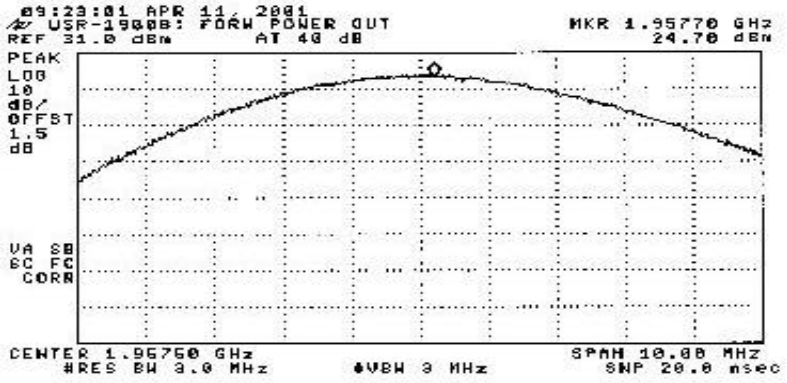

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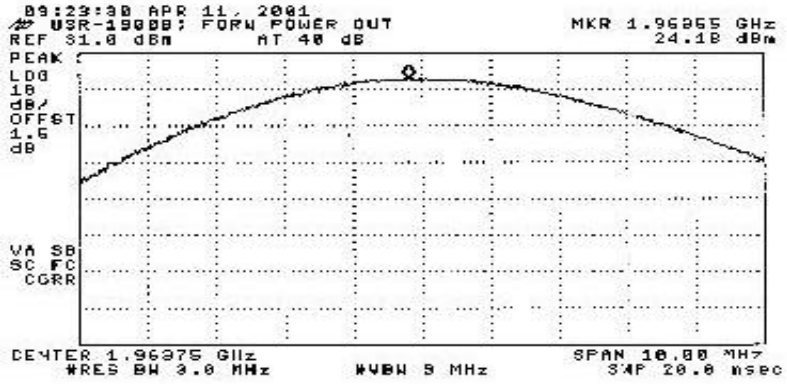

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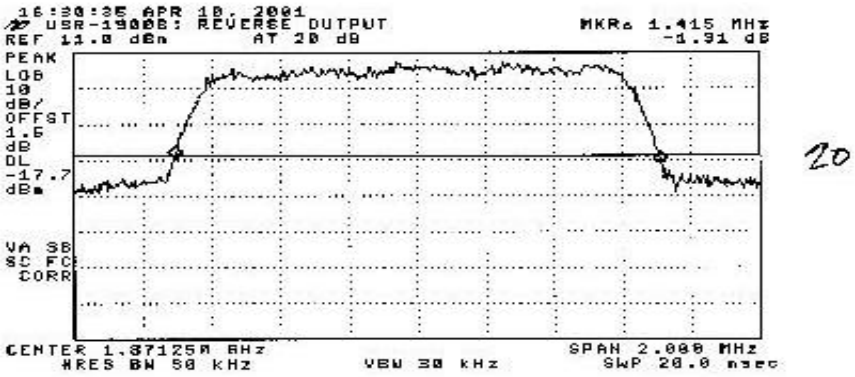

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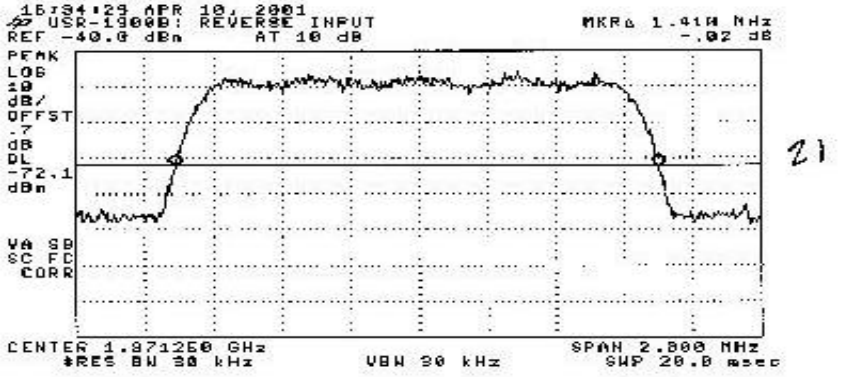

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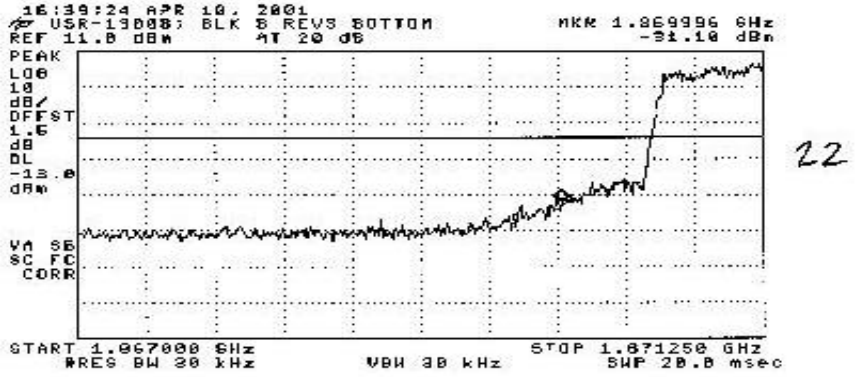

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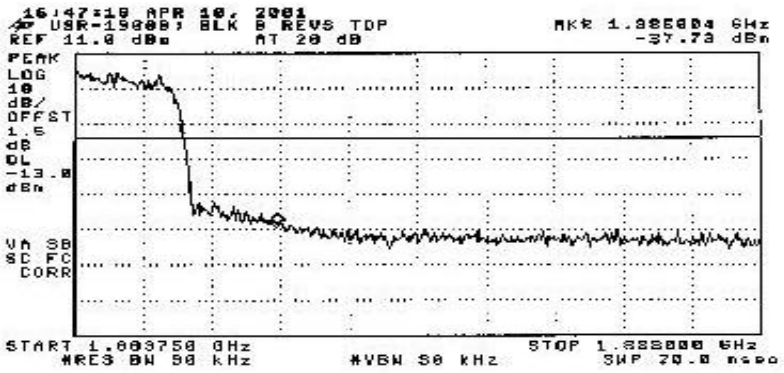

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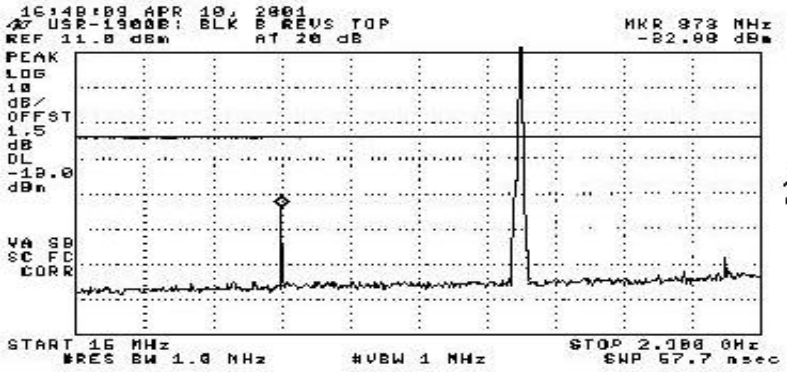

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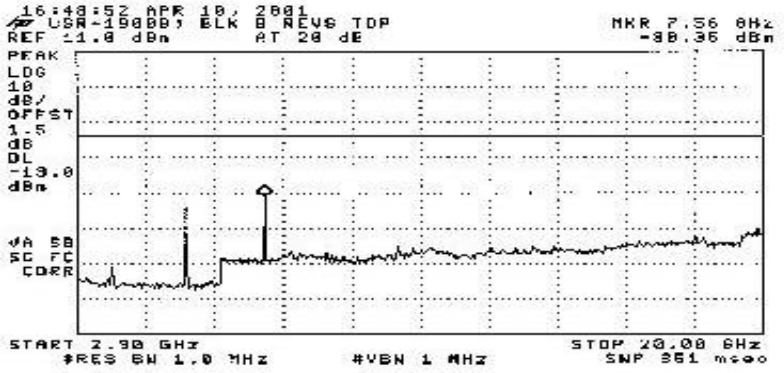

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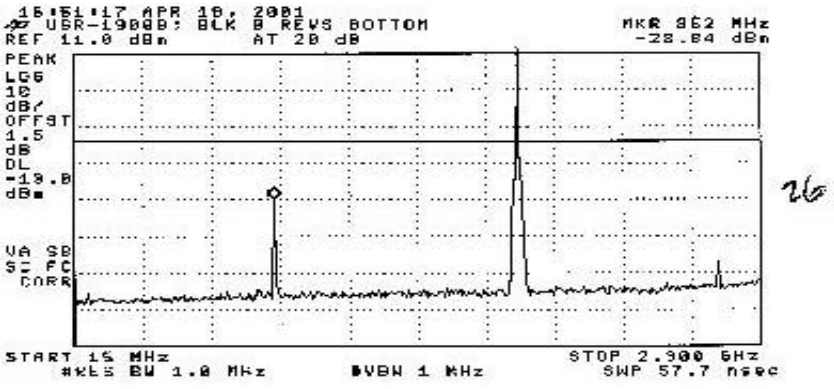

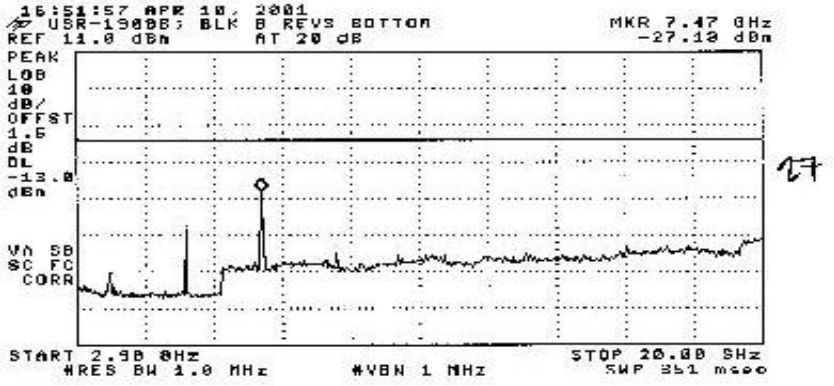

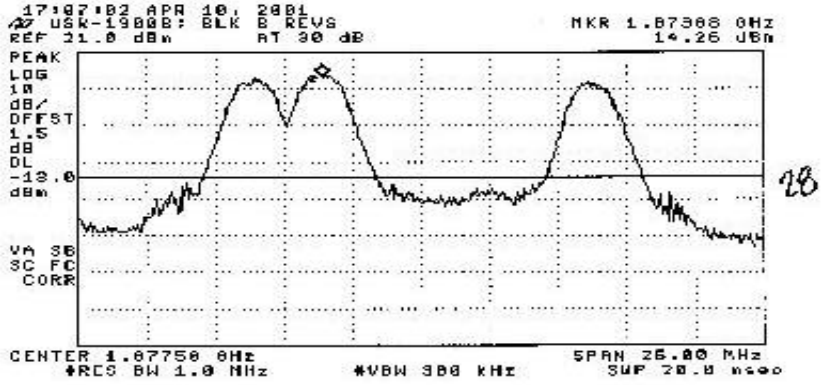

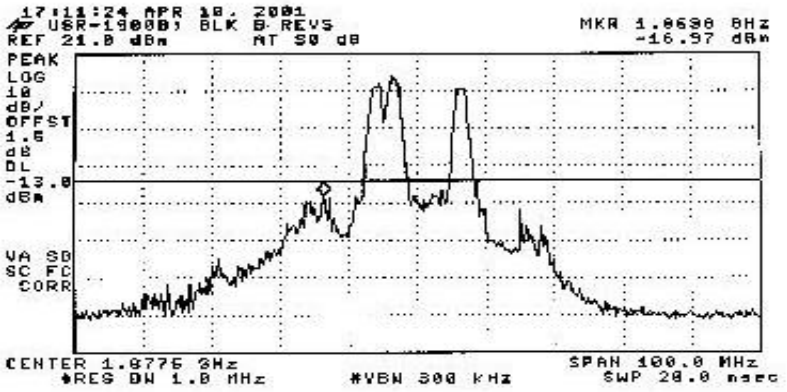

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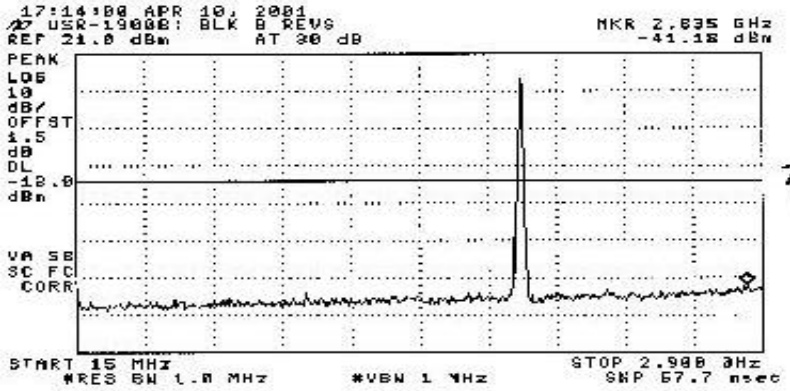

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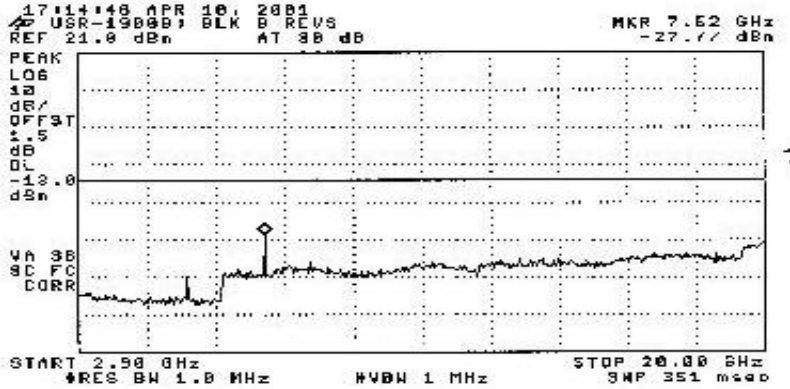

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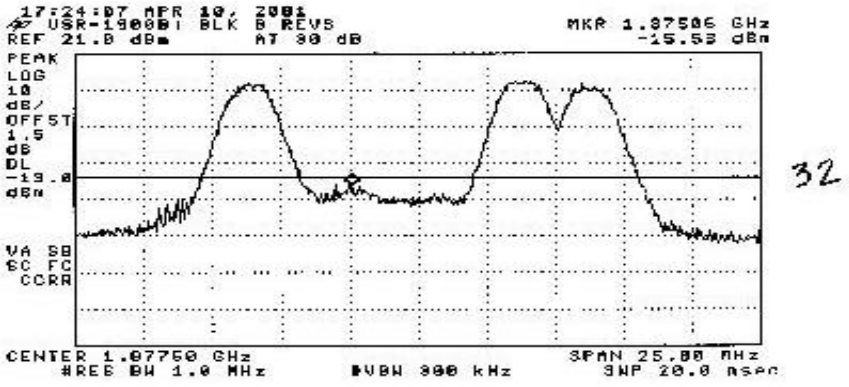

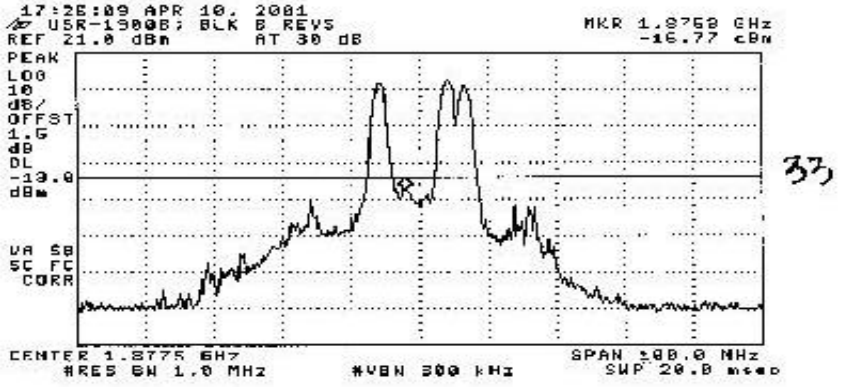

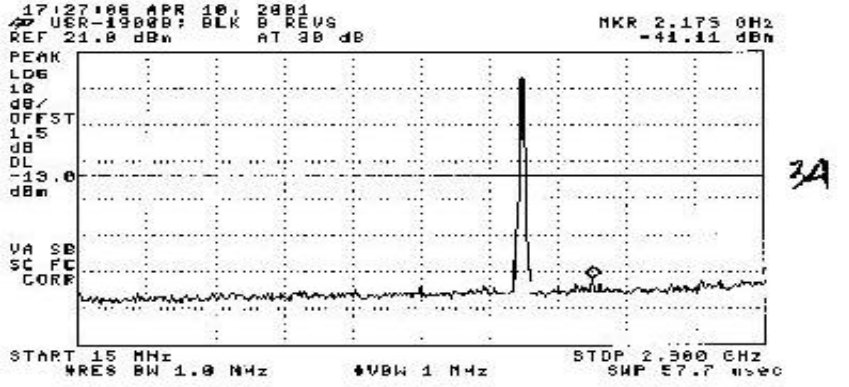

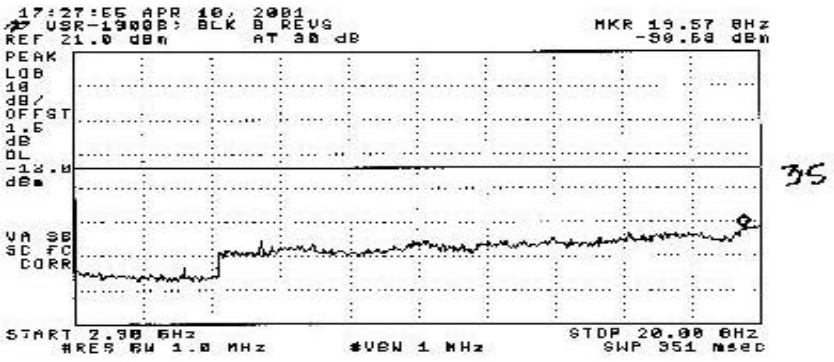

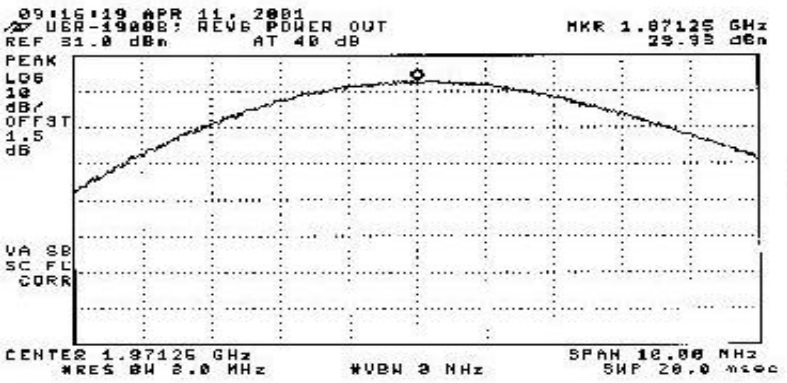

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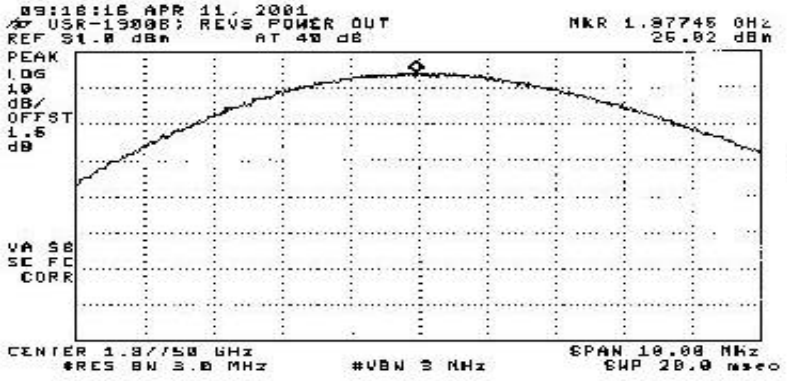

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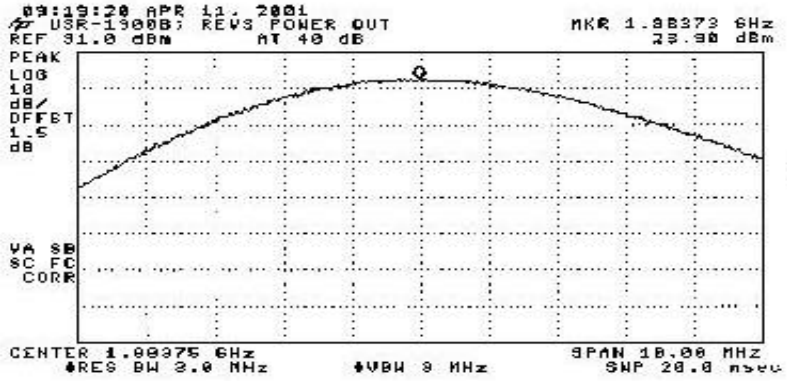

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