POWERWAVE TECHNOLOGIES, INC. TEST REPORT

FOR THE

RF AMPLIFIER, G3H-851-80

FCC PART 90

COMPLIANCE

DATE OF ISSUE: OCTOBER 25, 2005

PREPARED FOR:

Powerwave Technologies, Inc.
1801 E. St. Andrew Place
Santa Ana, CA 92705

P.O. No.: 103166
W.O. No.: 84232

PREPARED BY:

Mary Ellen Clayton
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

Date of test: September 15 – October 24, 2005

Report No.: FC05-071

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ADMINISTRATIVE INFORMATION

DATE OF TEST:	September 15 – October 24, 2005
DATE OF RECEIPT:	September 15, 2005
FREQUENCY RANGE TESTED:	9 kHz-9 GHz
MANUFACTURER:	Powerwave Technologies, Inc. 1801 E. St. Andrew Place Santa Ana, CA 92705
REPRESENTATIVE:	Jeffrey Dale
TEST LOCATION:	CKC Laboratories, Inc. 110 Olinda Place Brea, CA 92621
TEST METHOD:	FCC Part 90
PURPOSE OF TEST:	To demonstrate the compliance of the RF Amplifier, G3H-851-80 with the requirements for FCC Part 90 devices.

CONDITIONS FOR COMPLIANCE
No modifications to the EUT were necessary to comply.

APPROVALS

Steve Behm, Director of Engineering Services

QUALITY ASSURANCE:	**TEST PERSONNEL:**
Joyce Walker, Quality Assurance Administrative Manager	Eddie Wong, EMC Engineer

EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The customer declares the EUT tested by CKC Laboratories was representative of a production unit.

EQUIPMENT UNDER TEST

RF Amplifier

Manuf:	Powerwave Technologies
Model:	G3H-851-80
Serial:	NA
FCC ID:	pending

PERIPHERAL DEVICES

The EUT was tested with the following peripheral device(s):

Power Meter

Manuf:	Agilent
Model:	E4419A
Serial:	US38260914

ESG

Manuf:	Agilent
Model:	E4433B
Serial:	GB40051459

ESG

Manuf:	Agilent
Model:	E4433B
Serial:	US40051477

ESG

Manuf:	Agilent
Model:	E4433B
Serial:	US40052296

TEMPERATURE AND HUMIDITY DURING TESTING
The temperature during testing was within +15°C and + 35°C.
The relative humidity was between 20% and 75%.

FCC 2.1033(c)(3) USER'S MANUAL
The necessary information is contained in a separate document.

FCC 2.1033 (c)(4) TYPE OF EMISSIONS
D7W, D9W

FCC 2.1033 (c)(5) FREQUENCY RANGE
851.5 MHz – 868.5 MHz

FCC 2.1033 (c)(6) OPERATING POWER
iDEN – 110 Watts, 1X-EVDO(IS95) – 120 Watts.

FCC 2.1033 (c)(7) MAXIMUM POWER RATING
500 Watts

FCC 2.1033 (c)(8) DC VOLTAGES
The necessary information is contained in a separate document.

FCC 2.1033 (c)(9) TUNE-UP PROCEDURE
The necessary information is contained in a separate document.

FCC 2.1033(c)(10) SCHEMATICS AND CIRCUITRY DESCRIPTION
The necessary information is contained in a separate document.

FCC 2.1033(c)(11) LABEL AND PLACEMENT
The necessary information is contained in a separate document.

FCC 2.1033(c)(12) SUBMITTAL PHOTOS
The necessary information is contained in a separate document.

FCC 2.1033 (c)(13) MODULATION INFORMATION
iDEN and 1X-EVDO(IS95)

FCC 2.1033(c)(14)/2.1046/90.635 - RF POWER OUTPUT

The EUT is a RF amplifier. The manufacturer does not provide an antenna for sale with the product, hence EIRP is not measured nor calculated. The end user of this product is to exercise proper engineering judgement to select the appropriate antenna to comply with the EIRP limitation set forth by FCC90.635

The RF power of the EUT was measured at the antenna port. The measurement satisfies the above requirement by demonstrating the measured power is below 500 watts.

Test setup: The EUT is stand alone on the wooden tabletop. RF out is connected to remote load string and power meter. RF in receives RF signal via remote ESG and a preamp. The RF level is adjusted to maintain the transmit power.

RF Output power is measured at antenna port.

Modulation : IDEN
851.5 MHz 110 watts
860.0 MHz 110 watts
868.5 MHz 110 watts

Modulation : 1X-EVDO(IS95)
851.5 MHz 120 watts
860.0 MHz 120 watts
868.5 MHz 120 watts

Conclusion: Each single channel does not exceed the 500 Watt power limit.

Test Equipment

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
RF Power meter	02082	HP	435B	2445A11881	061704	061706
Power Sensor	02036	HP	8482A	1551A01004	061806	061806

PHOTOGRAPH SHOWING RF OUTPUT POWER

FCC 2.1033(c)(14)/2.1047(a) - MODULATION CHARACTERISTICS - AUDIO FREQUENCY RESPONSE

Not applicable to this unit.

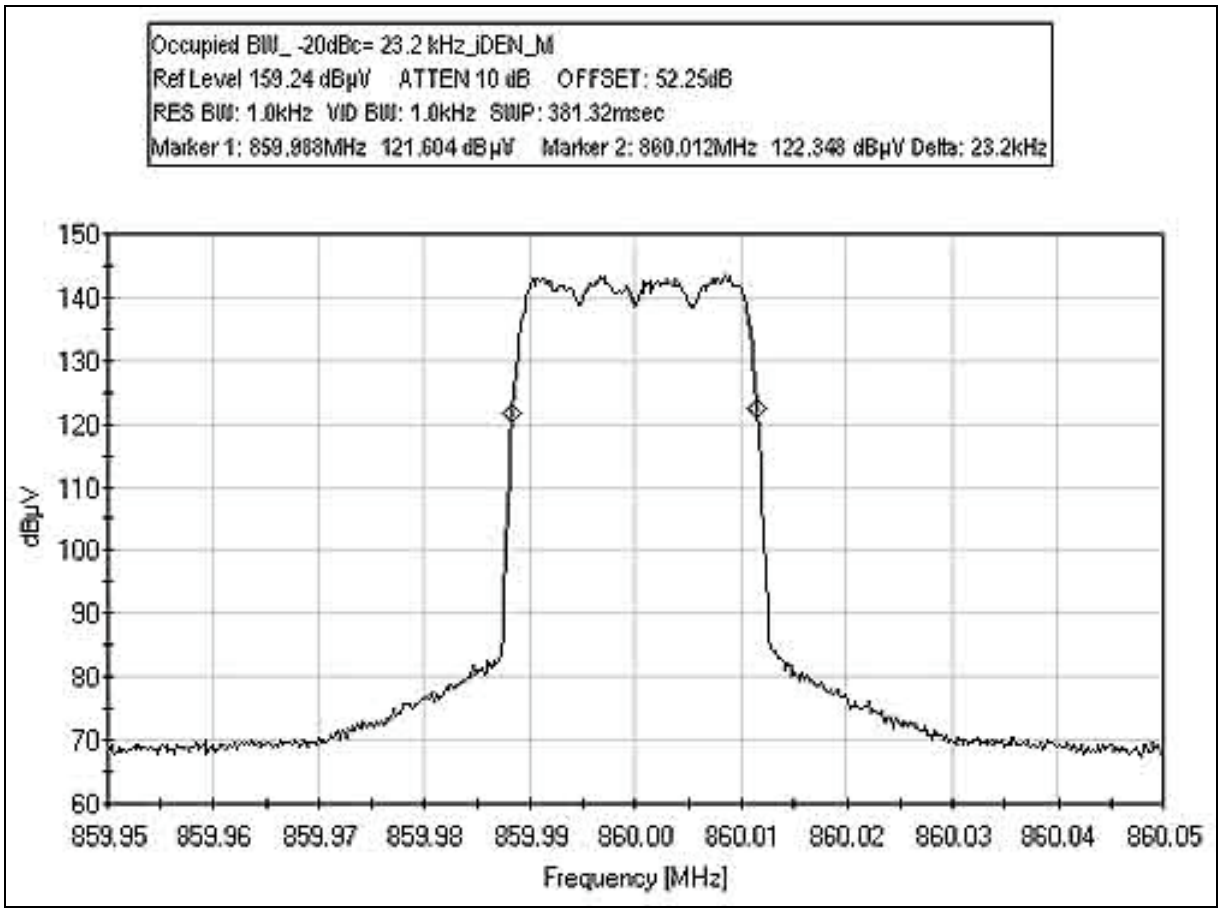
FCC 2.1033(c)(14)/2.1047(b) MODULATION CHARACTERISTICS– Modulation Limiting Response

Not applicable to this unit.

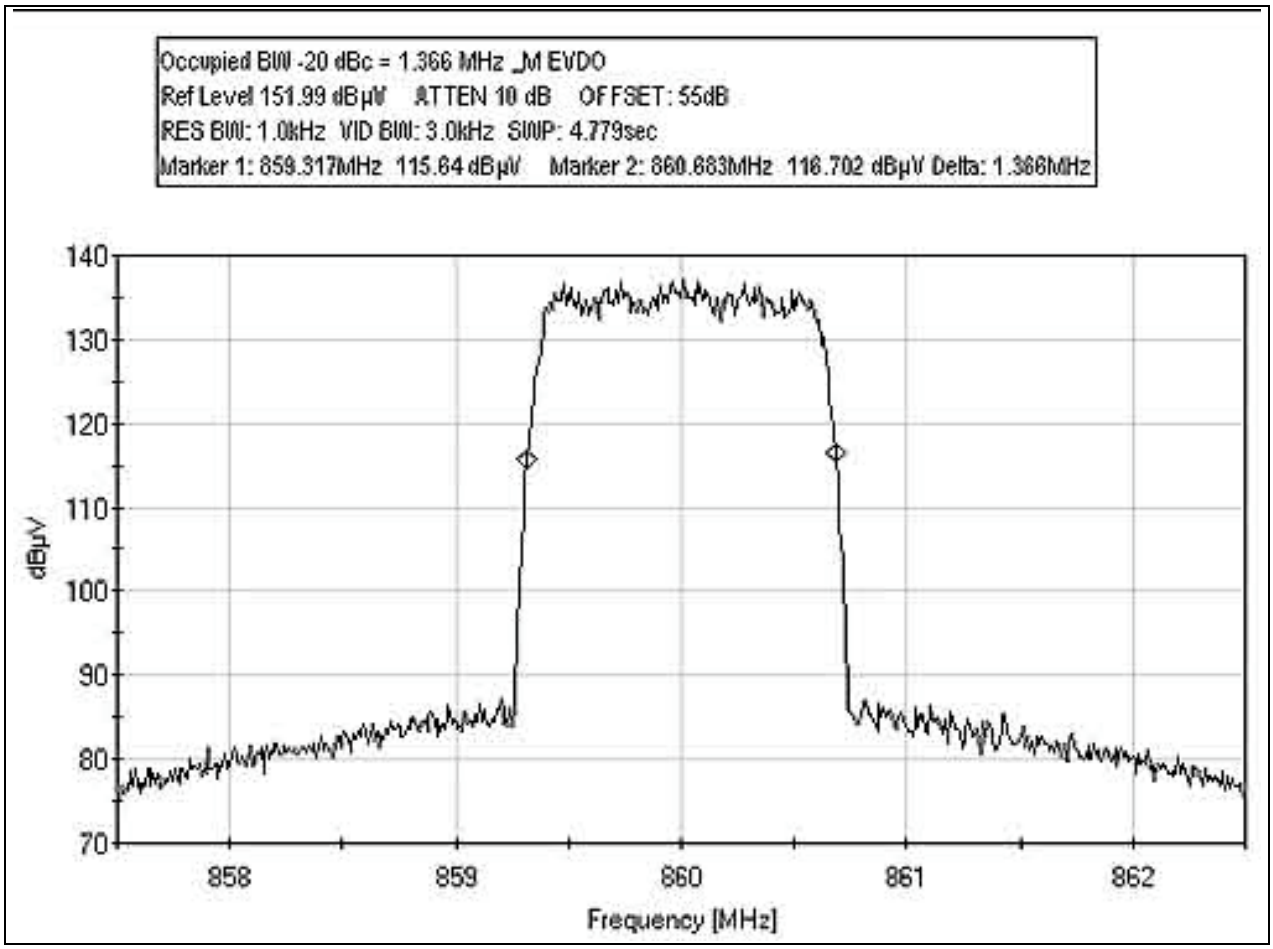
FCC 2.1033(c)(14)/2.1049(i)- OCCUPIED BANDWIDTH

OCCUPIED BANDWIDTH -20dBc - MID - iDEN

Test Conditions: The EUT is stand alone on the wooden tabletop. RF out is connected to remote load string and power meter. RF in receives RF signal via remote ESG and a preamp. The RF level is adjusted to maintain the transmit power.



OCCUPIED BANDWIDTH -20dBc - MID - EVDO



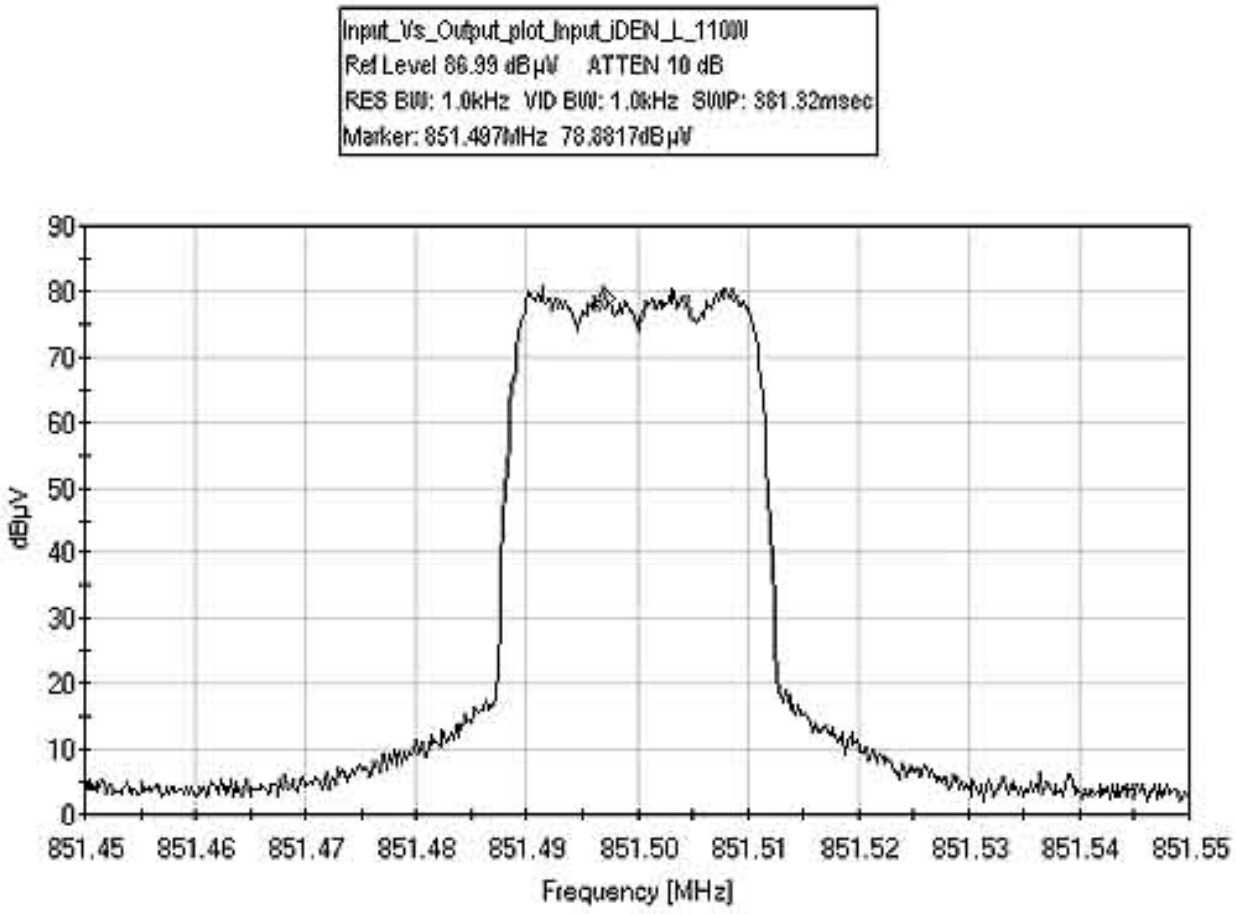
Test Equipment

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
Spectrum Analyzer	02672	Agilent	E4446A	US44300438	011405	011407

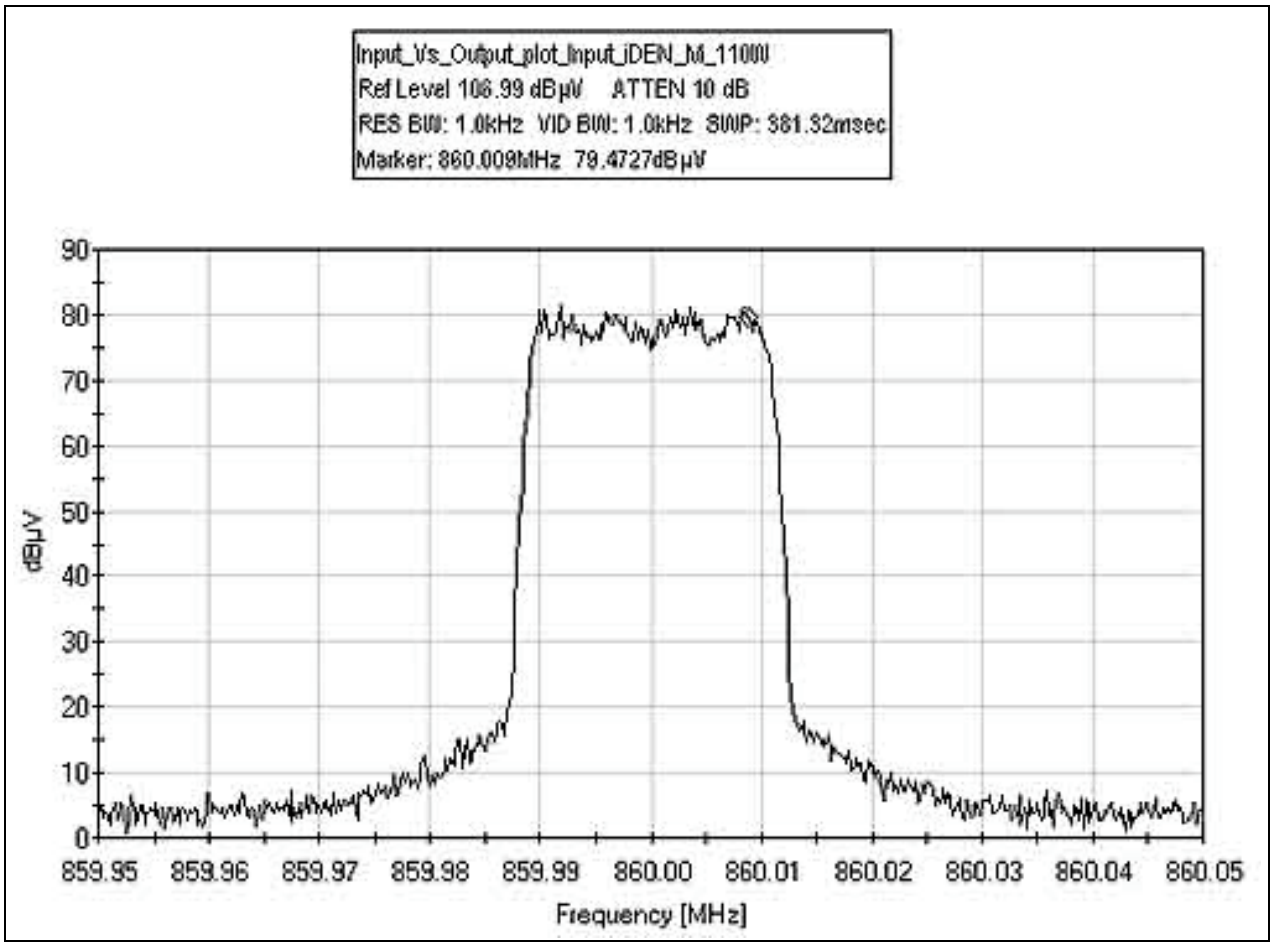
PHOTOGRAPH SHOWING DIRECT CONNECT TEST SETUP

INPUT PLOT - LOW - iDEN

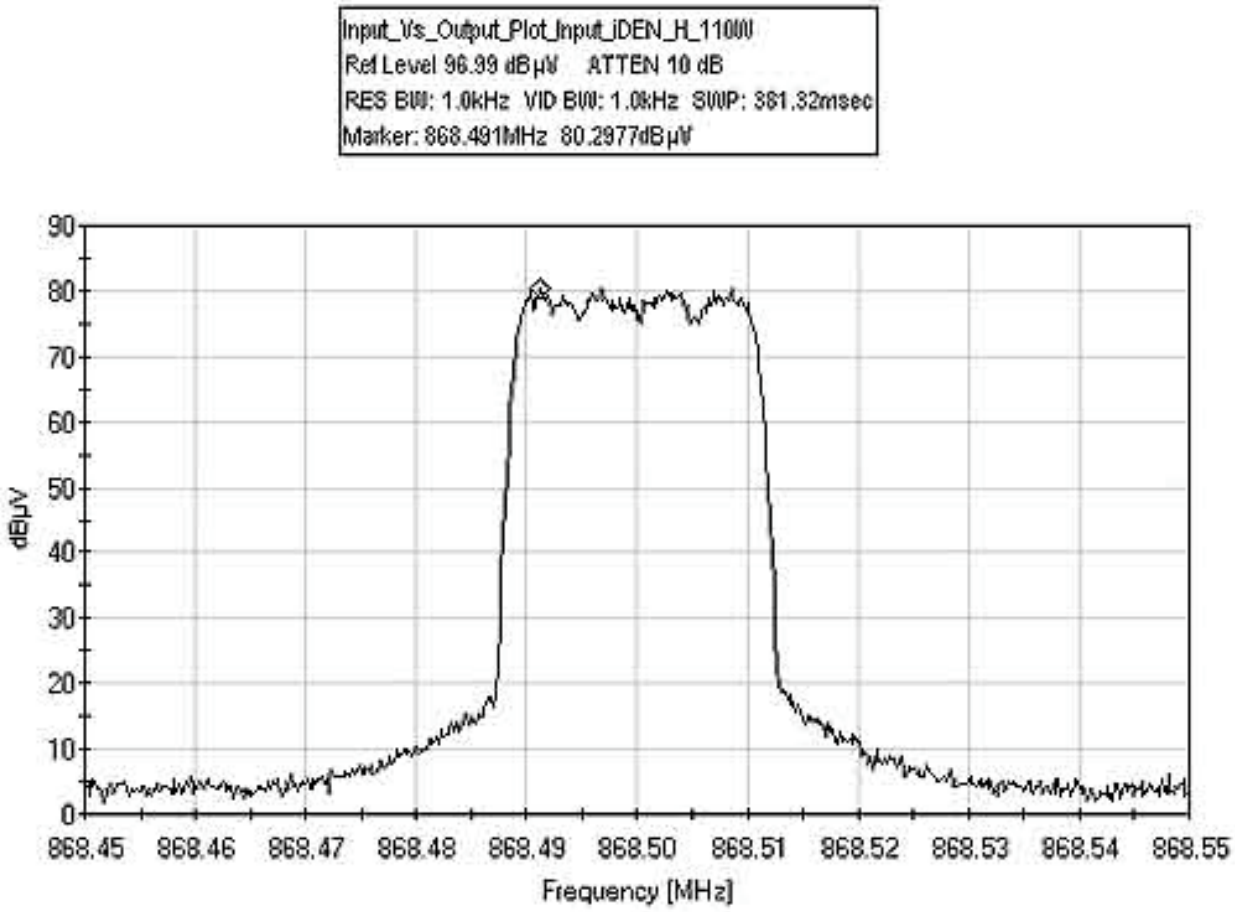
Test Conditions: The EUT is stand alone on the wooden tabletop. RF out is connected to remote load string and power meter. RF in receives RF signal via remote ESG and a preamp. The RF level is adjusted to maintain the transmit power.



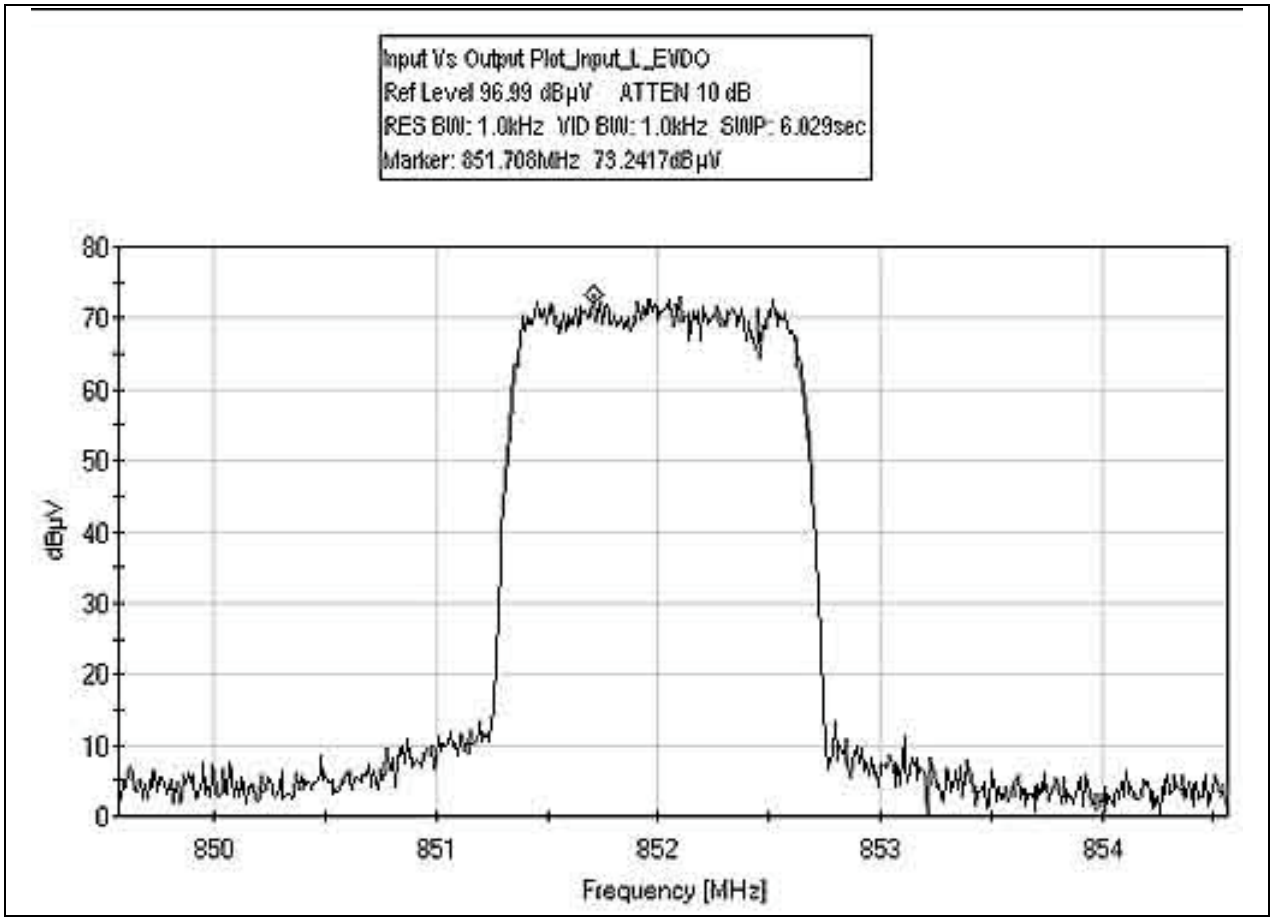
INPUT PLOT - MID - iDEN



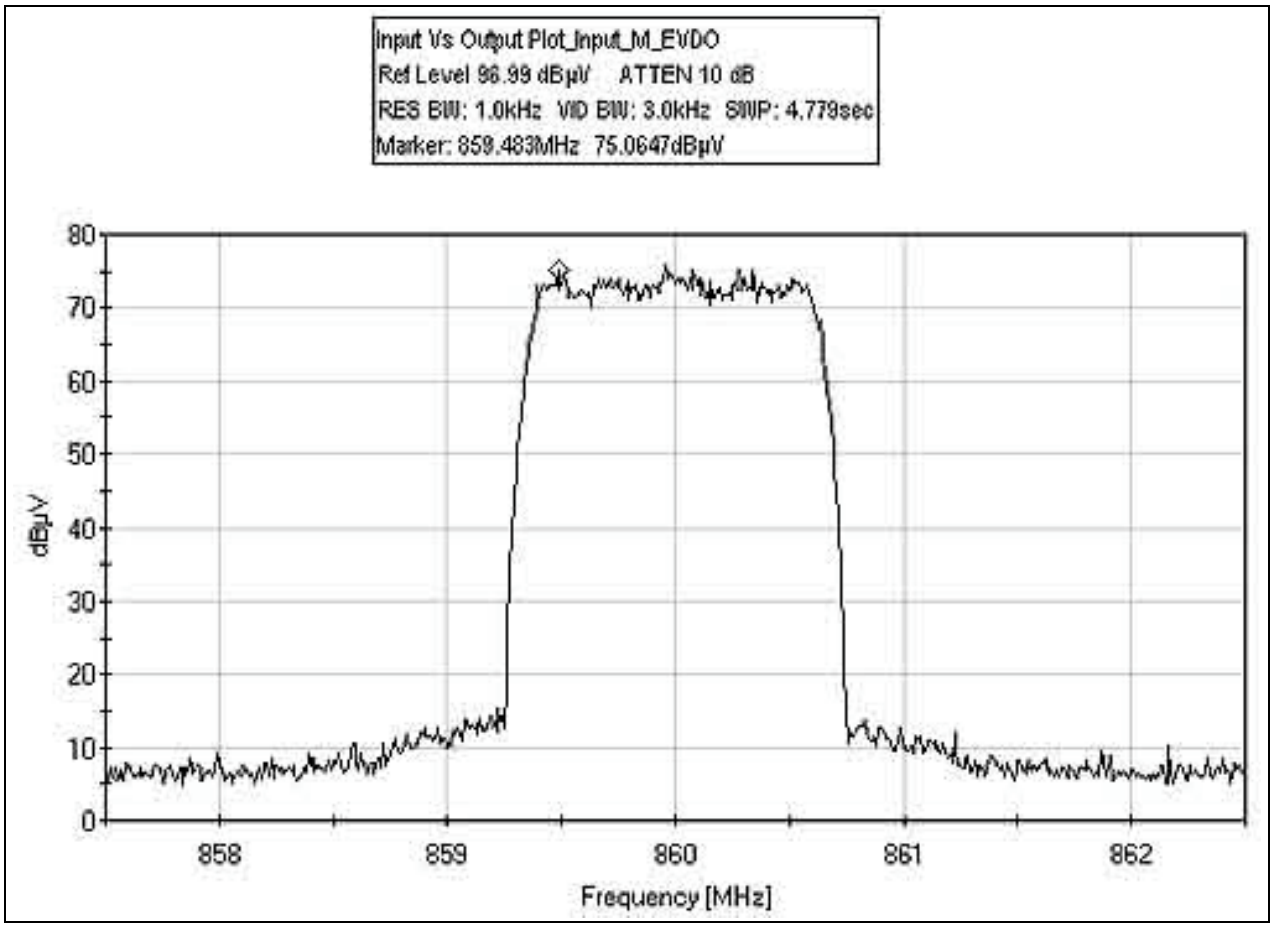
INPUT PLOT - HIGH – iDEN



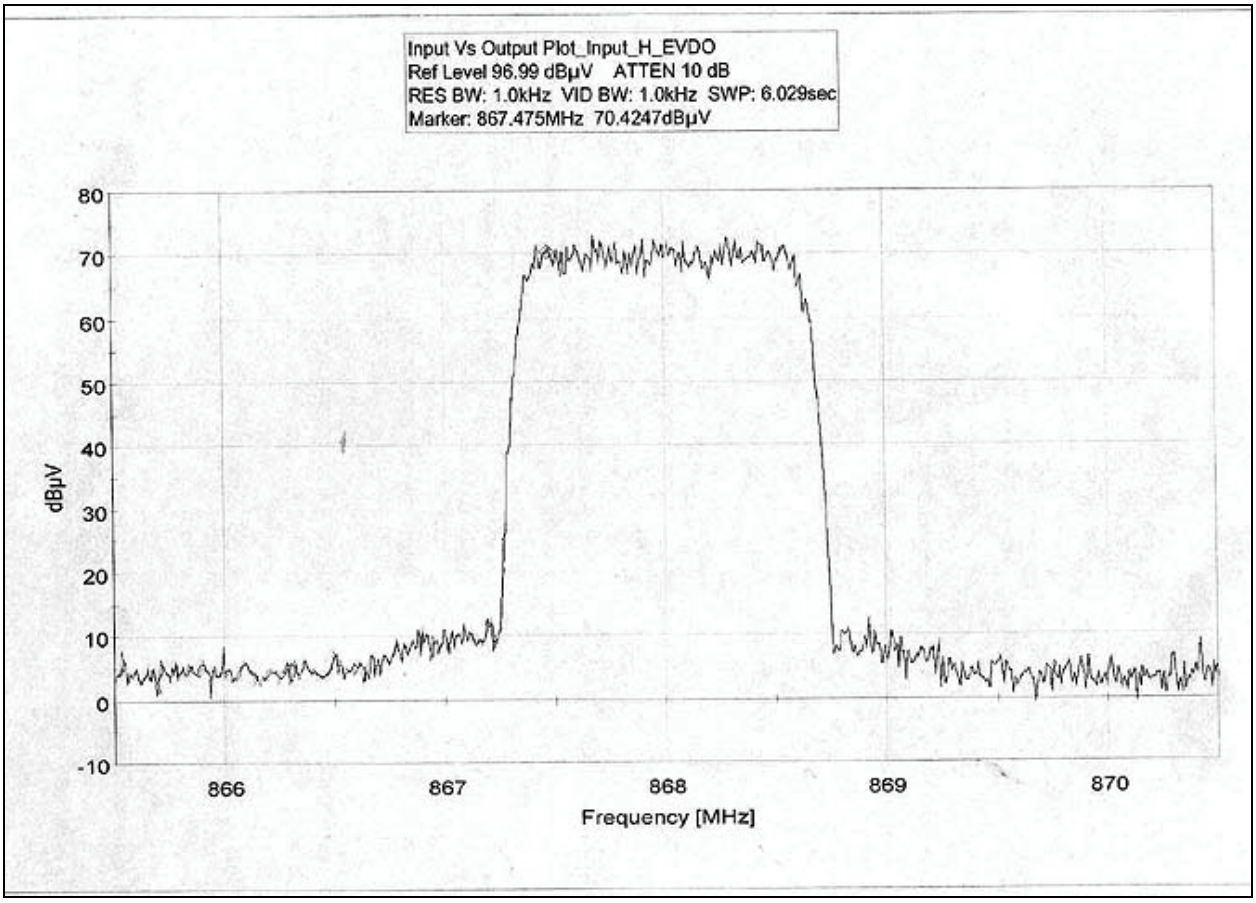
INPUT PLOT - LOW - EVDO



INPUT PLOT - MID - EVDO



INPUT PLOT - HIGH – EVDO



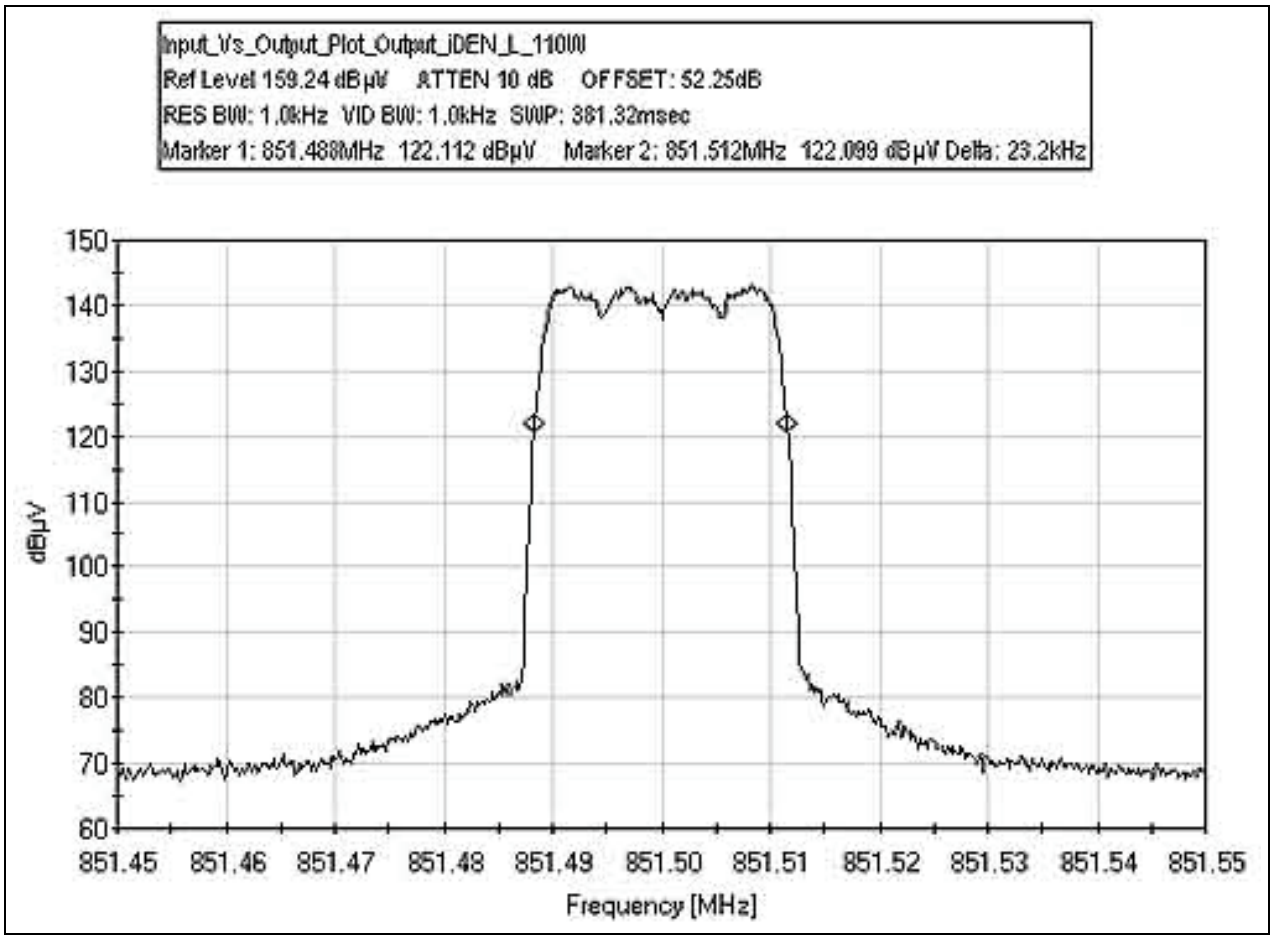
Test Equipment

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
Spectrum Analyzer	02672	Agilent	E4446A	US44300438	011405	011407

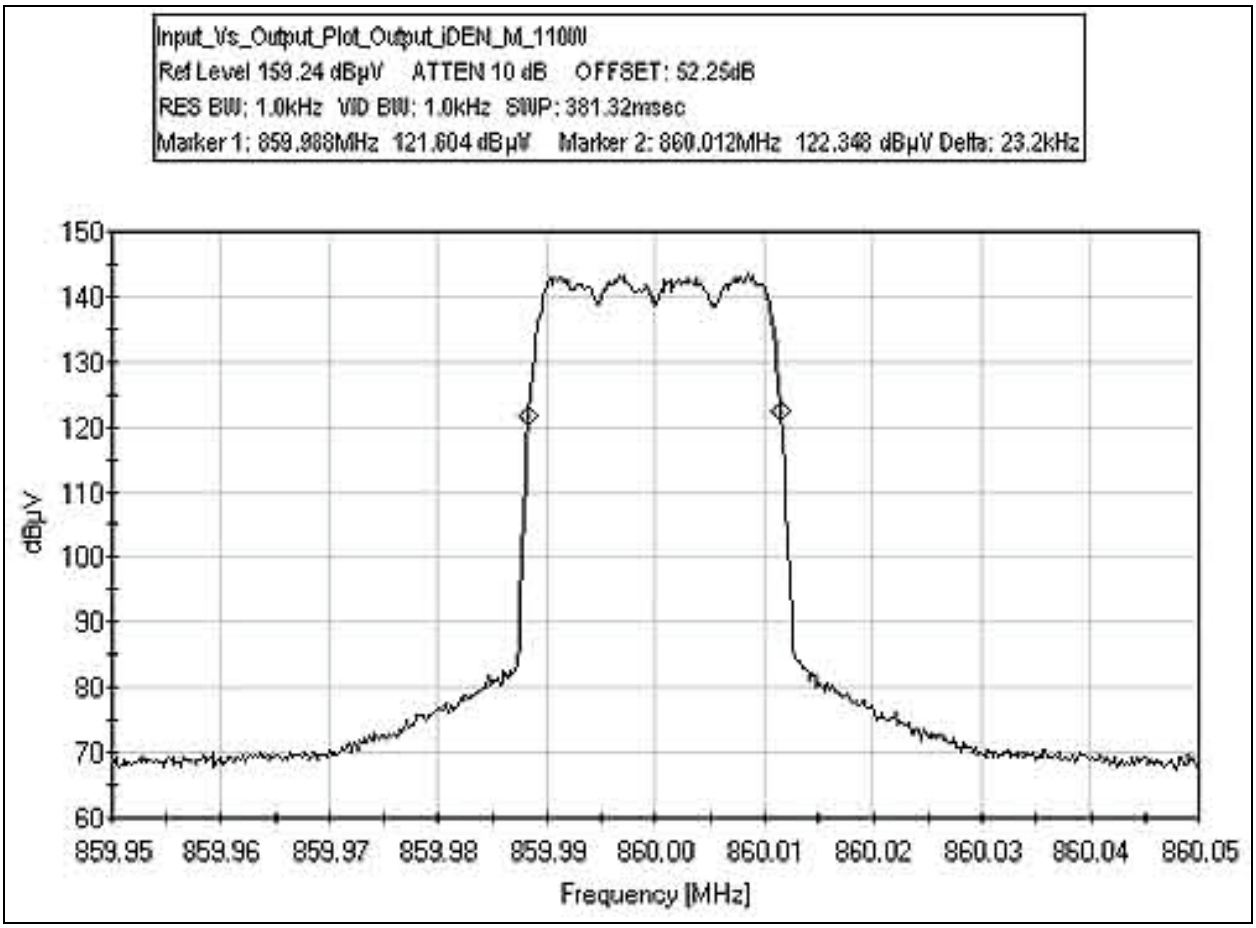
PHOTOGRAPH SHOWING DIRECT CONNECT TEST SETUP

OUTPUT PLOT - LOW - iDEN

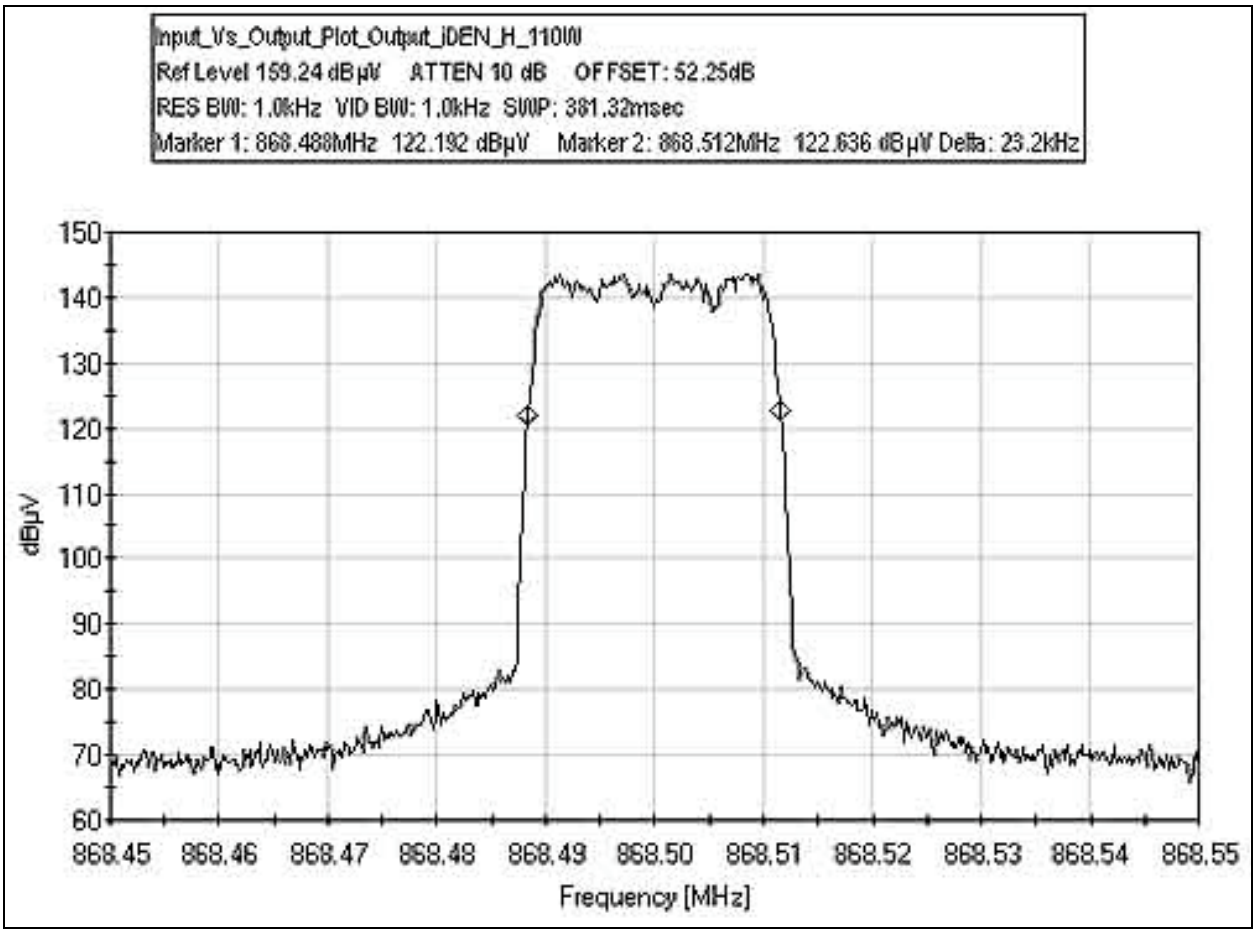
Test Conditions: The EUT is stand alone on the wooden tabletop. RF out is connected to remote load string and power meter. RF in receives RF signal via remote ESG and a preamp. The RF level is adjusted to maintain the transmit power.



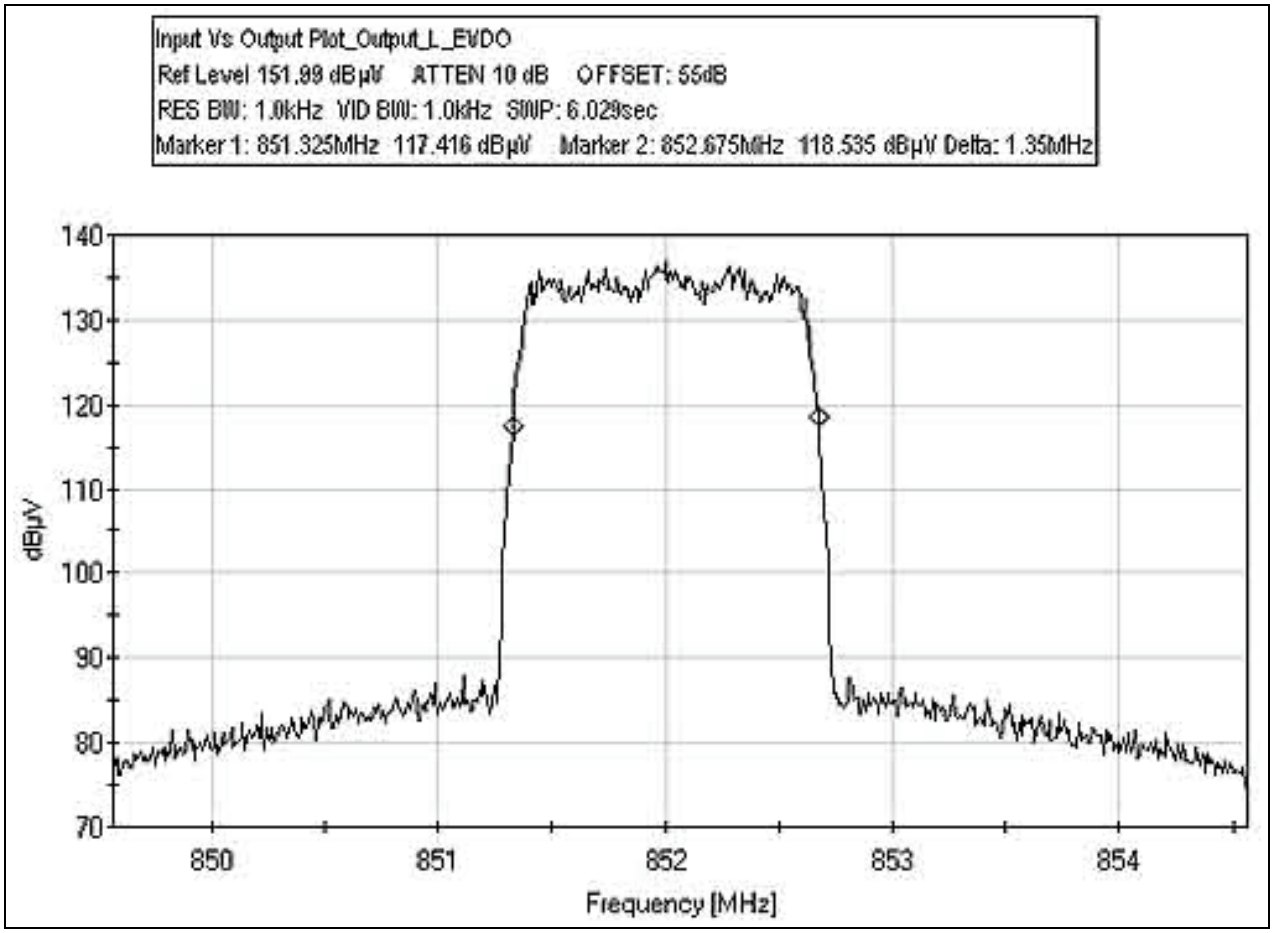
OUTPUT PLOT - MID - iDEN



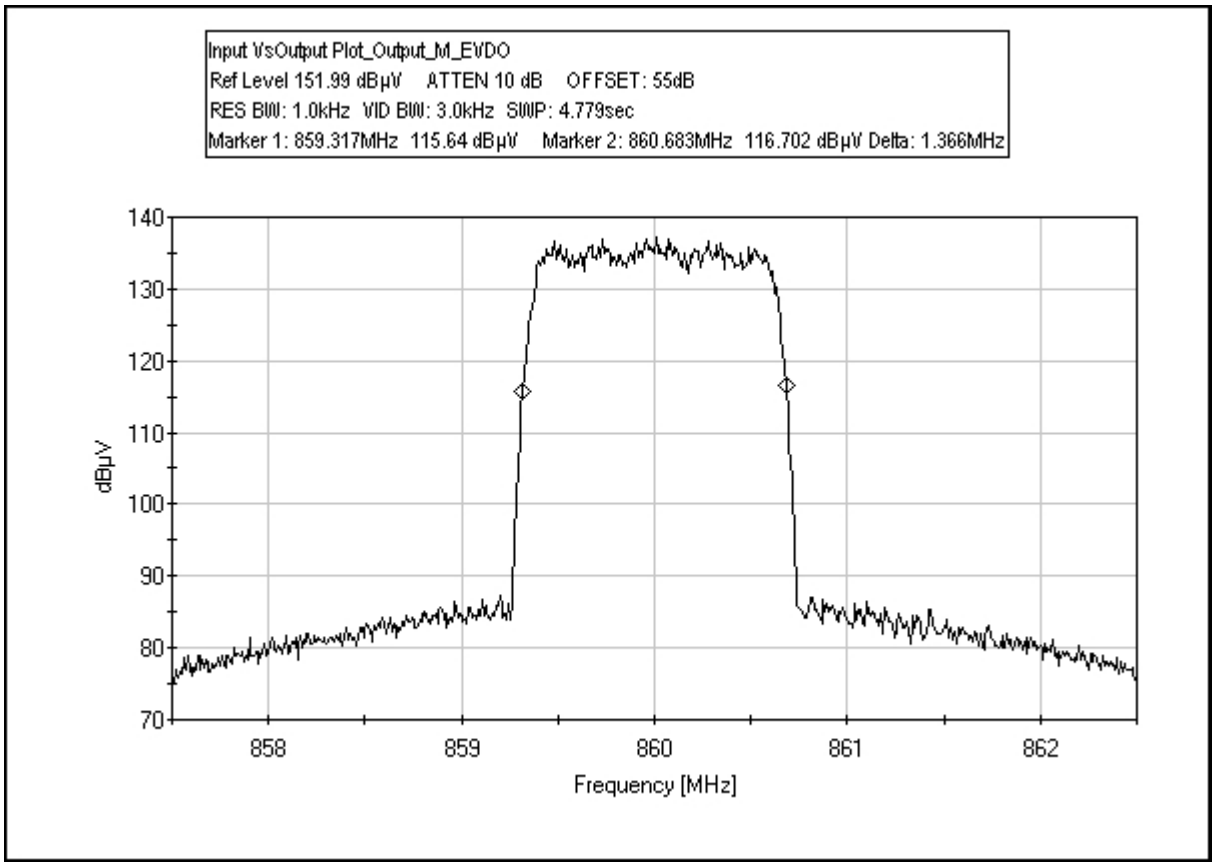
OUTPUT PLOT - HIGH – iDEN



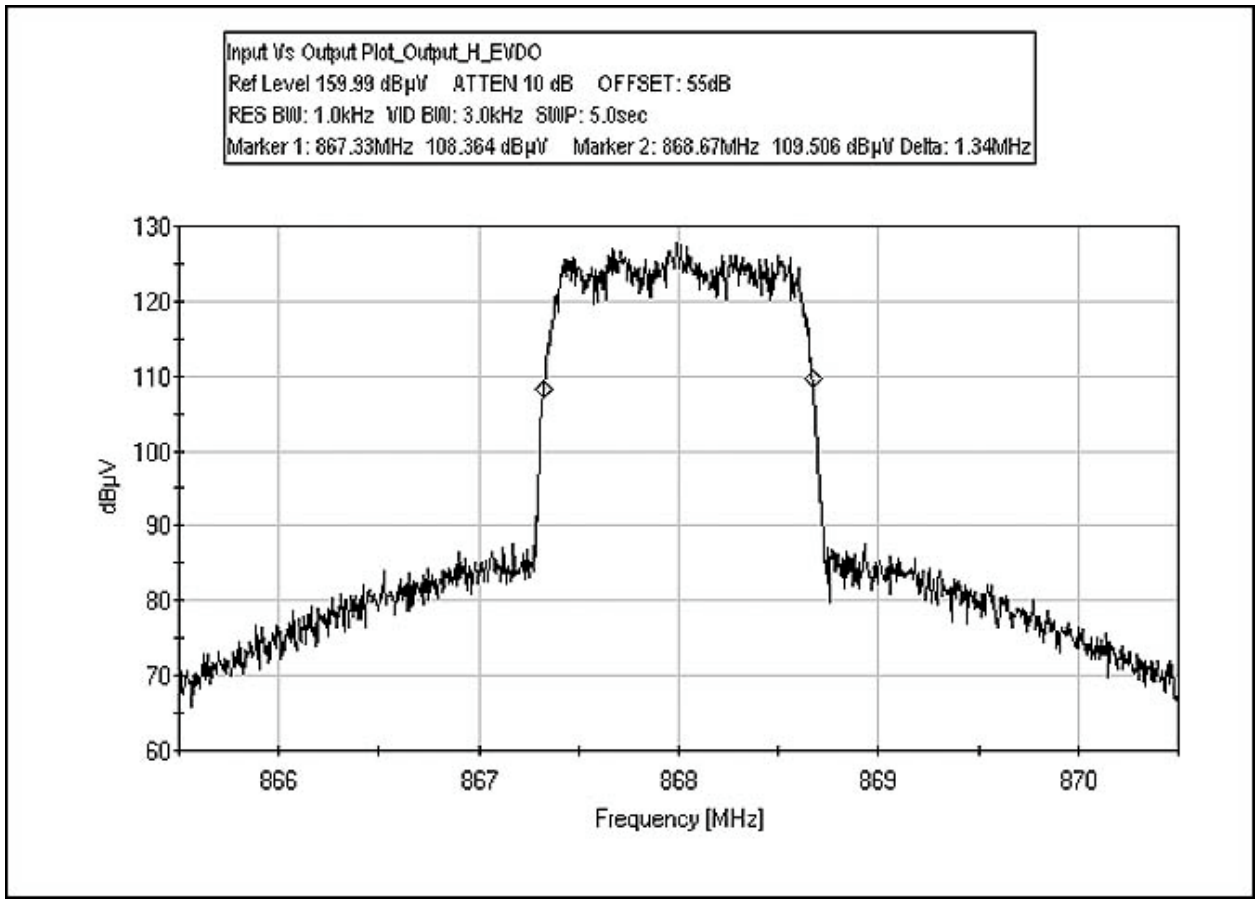
OUTPUT PLOT - LOW - EVDO



OUTPUT PLOT - MID - EVDO



OUTPUT PLOT - HIGH - EVDO



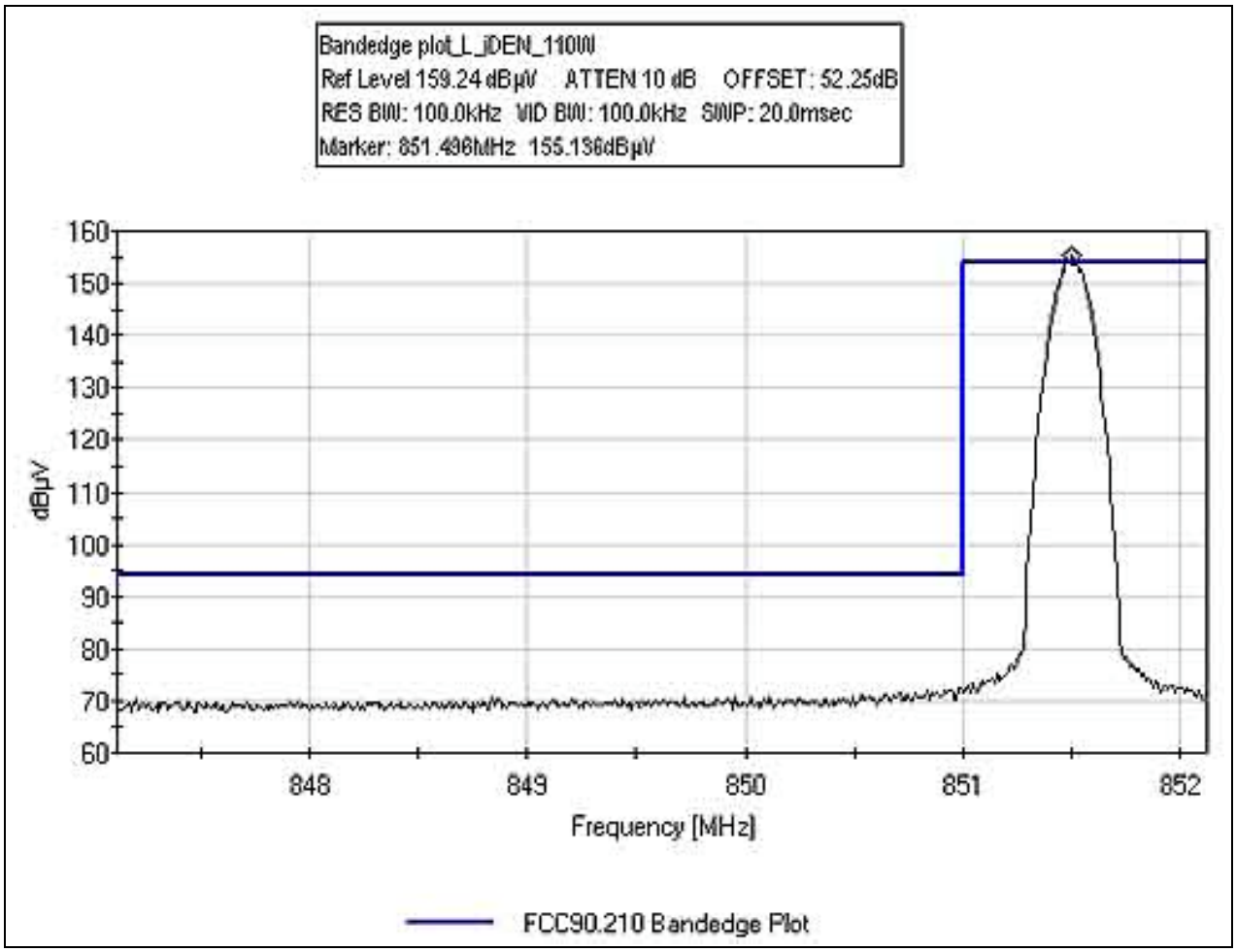
Test Equipment

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
Spectrum Analyzer	02672	Agilent	E4446A	US44300438	011405	011407

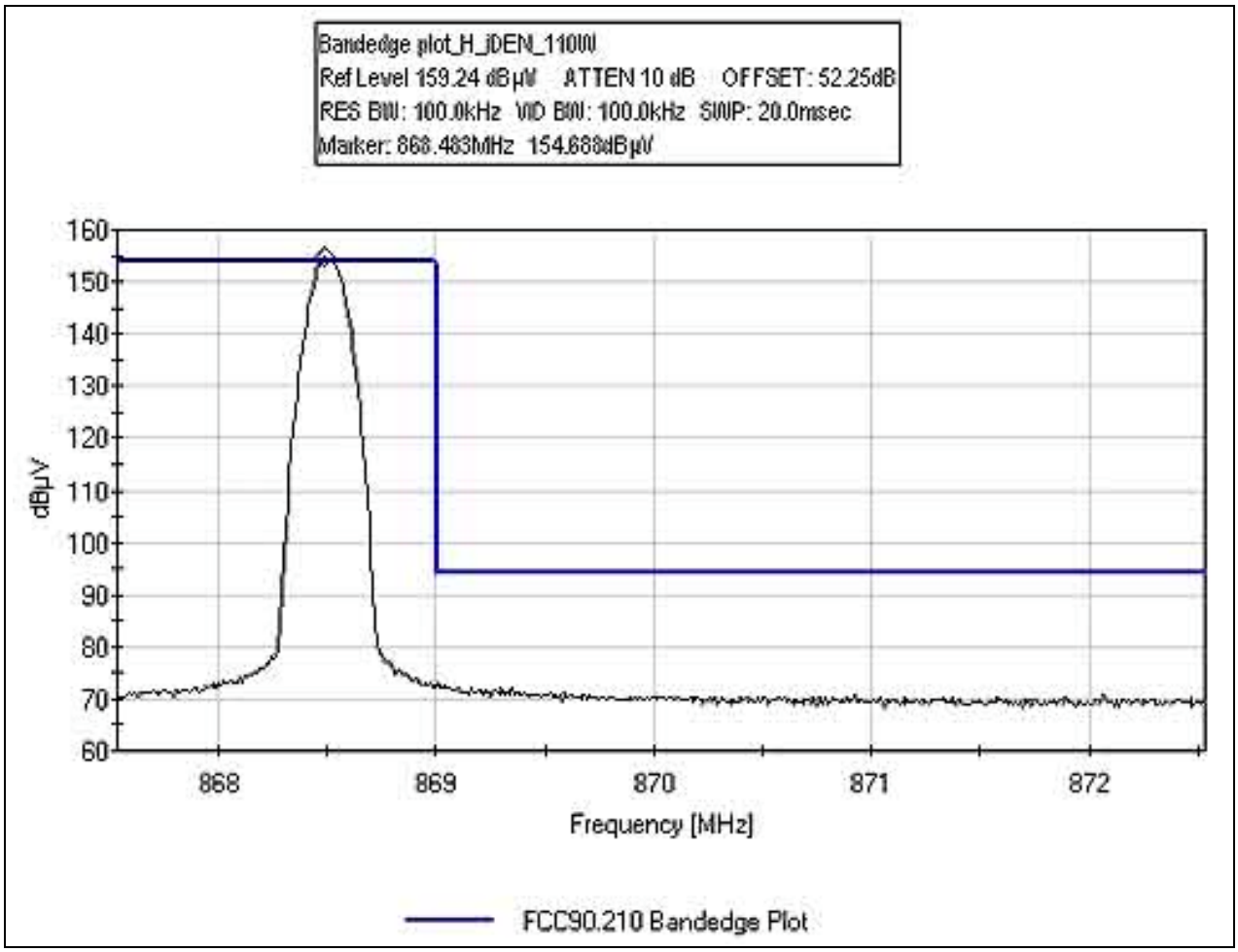
PHOTOGRAPH SHOWING DIRECT CONNECT TEST SETUP

BANDEDGE PLOT - LOW - iDEN

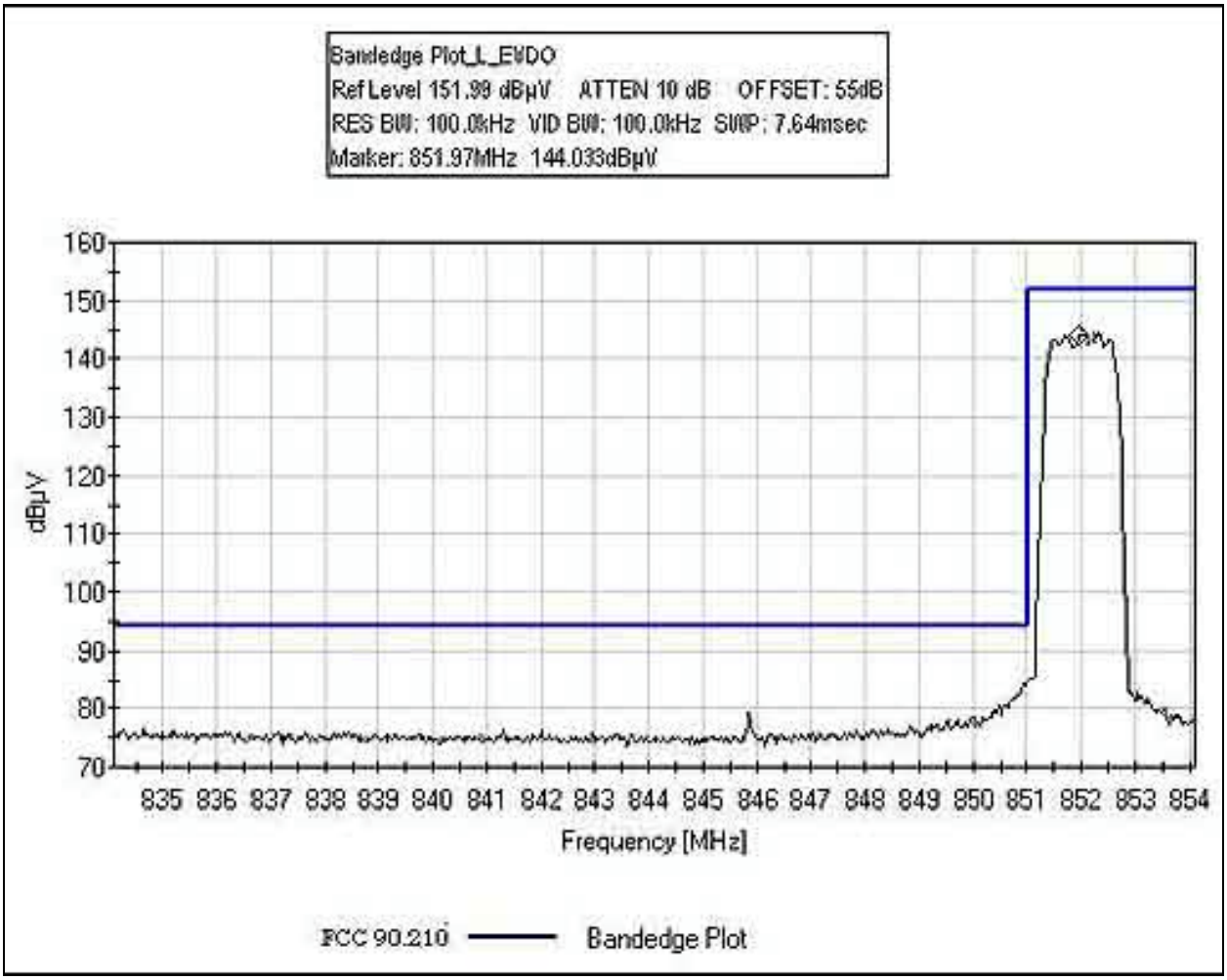
Test Conditions: The EUT is stand alone on the wooden tabletop. RF out is connected to remote load string and power meter. RF in receives RF signal via remote ESG and a preamp. The RF level is adjusted to maintain the transmit power.



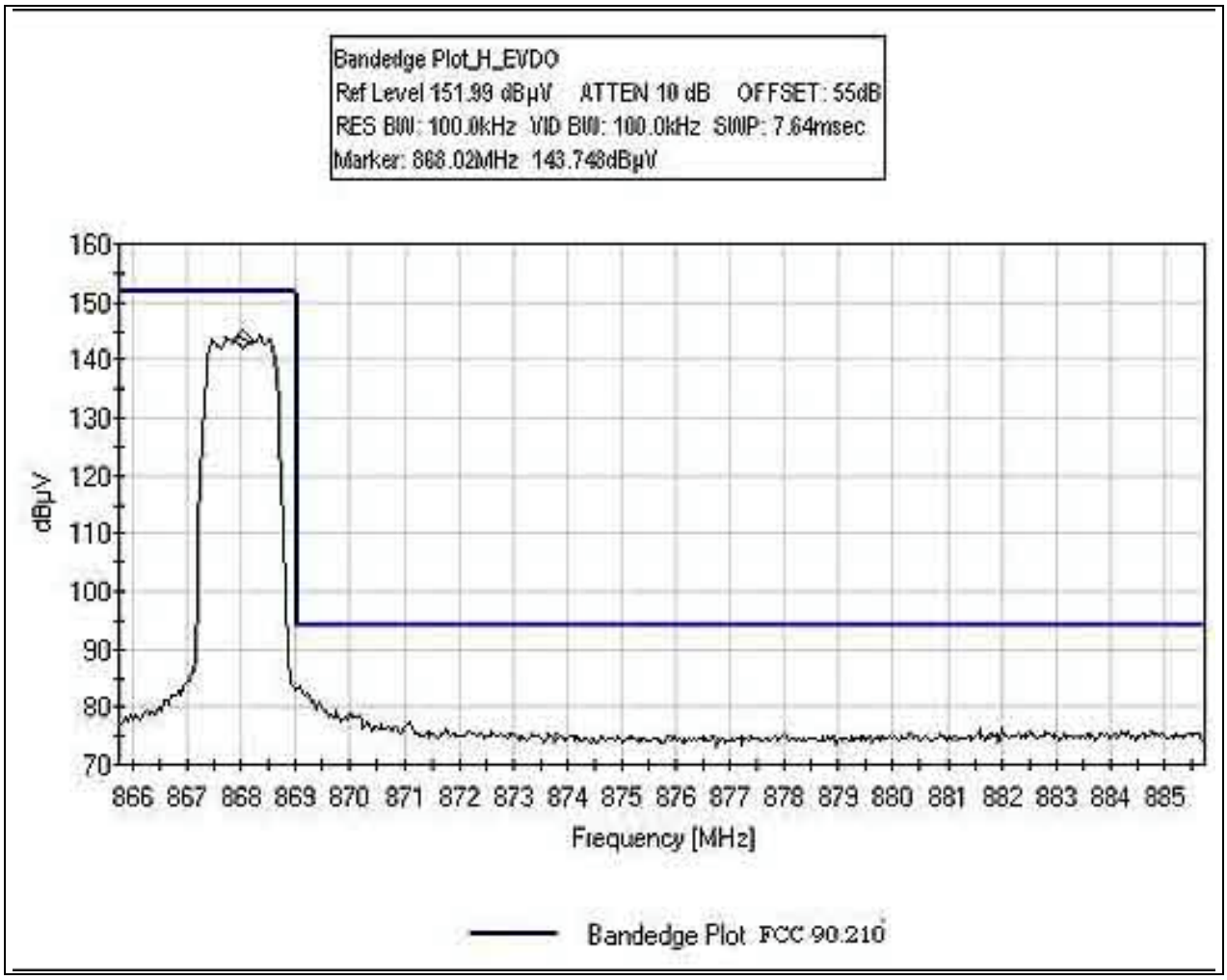
BANDEDGE PLOT - HIGH - iDEN



BANDEDGE PLOT - LOW - EVDO



BANDEDGE PLOT - HIGH - EVDO



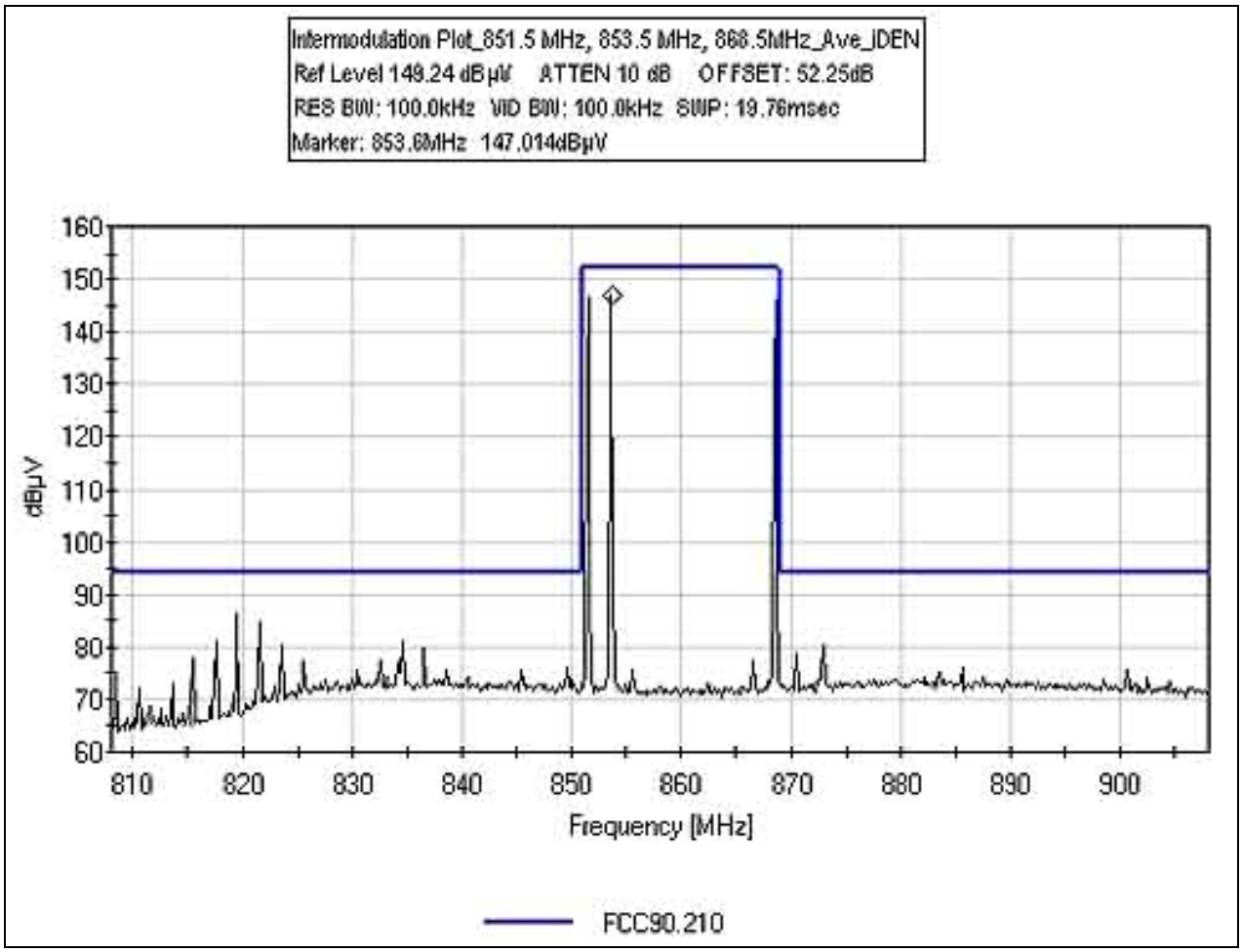
Test Equipment

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
Spectrum Analyzer	02672	Agilent	E4446A	US44300438	011405	011407

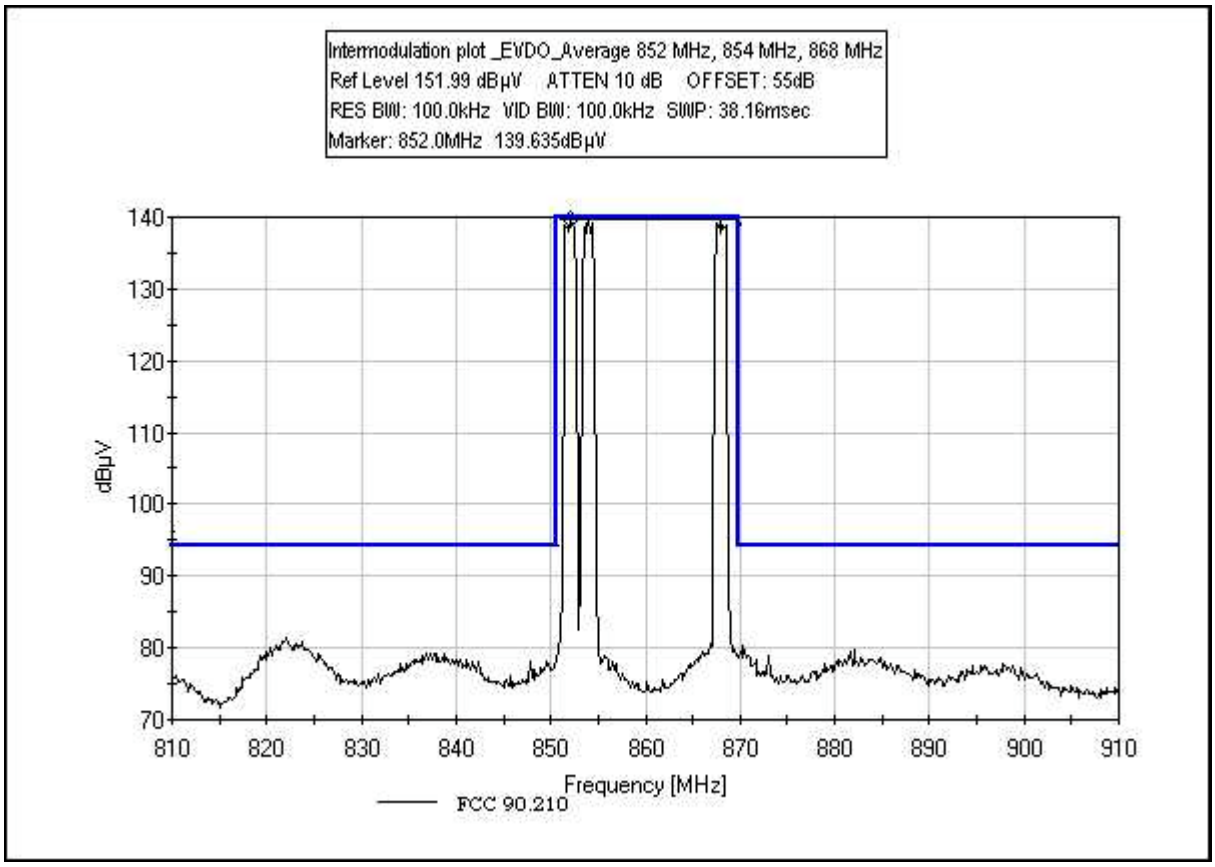
PHOTOGRAPH SHOWING DIRECT CONNECT TEST SETUP

INTERMODULATION PLOT - iDEN

Test Conditions: The EUT is stand alone on the wooden tabletop. RF out is connected to remote load string and power meter. RF in receives RF signal via remote ESG and a preamp. The RF level is adjusted to maintain the transmit power.



INTERMODULATION PLOT - EVDO



Test Equipment

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
Spectrum Analyzer	02672	Agilent	E4446A	US44300438	011405	011407

PHOTOGRAPH SHOWING DIRECT CONNECT TEST SETUP

FCC 2.1033(c)(14)/2.1051/90.210(a)(2) - SPURIOUS EMISSIONS AT ANTENNA TERMINAL

Test Location: CKC Laboratories, Inc. •110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer:	**Powerwave Technologies, Inc.**		
Specification:	**FCC90.210 Bandedge Plot**		
Work Order #:	**84232**	Date:	10/24/2005
Test Type:	**Conducted Emissions**	Time:	14:59:38
Equipment:	**RFAmplifier**	Sequence#:	35
Manufacturer:	Powerwave Technologies	Tested By:	E. Wong
Model:	G3H-851-80 (Python_Nextel)		230V 50Hz
S/N:	NA		

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Rf Amplifier*	Powerwave Technologies	G3H-851-80 (Python_Nextel)	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Power Meter	Agilent	E4419A	US38260914
ESG	Agilent	E4433B	US40051477
ESG	Agilent	E4433B	GB40051459
ESG	Agilent	E4433B	US40052296

Test Conditions / Notes:

The EUT is stand alone on the wooden tabletop RF out is connected to remote load string and power meter. RF in receives RF signal via remote ESG and a premap. The RF level is adjusted to maintain the transmit power. Modulation: iDEN. Power = 110 watts. Frequency = 851.5 MHz. Frequency range of measurement = 9 kHz - 9 GHz. Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz - 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 9000 MHz RBW=1 MHz, VBW=1 MHz. 23°C, 53% relative humidity.

Transducer Legend:

T1=SMA Cable 1-40GHz AN2604_012306	T2=HPF_AN02116_1.5GHz_062707

Measurement Data: Reading listed by margin. Test Lead: Antenna Terminal

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	1703.020M Ave	68.4	+0.4	+0.6			+0.0	69.4	94.0	-24.6	Anten
^	1703.020M	90.4	+0.4	+0.6			+0.0	91.4	94.0	-2.6	Anten
3	2554.493M Ave	67.9	+0.5	+0.6			+0.0	69.0	94.0	-25.0	Anten
^	2554.492M	102.7	+0.5	+0.6			+0.0	103.8	94.0	+9.8	Anten

Test Location: CKC Laboratories, Inc. •110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer:	**Powerwave Technologies, Inc.**		
Specification:	**FCC 90.210 Conducted Spurious Emission**		
Work Order #:	**84232**	Date:	10/24/2005
Test Type:	**Conducted Emissions**	Time:	15:29:09
Equipment:	**RFAmplifier**	Sequence#:	36
Manufacturer:	Powerwave Technologies	Tested By:	E. Wong
Model:	G3H-851-80 (Python_Nextel)		230V 50Hz
S/N:	NA		

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Rf Amplifier*	Powerwave Technologies	G3H-851-80 (Python_Nextel)	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Power Meter	Agilent	E4419A	US38260914
ESG	Agilent	E4433B	US40051477
ESG	Agilent	E4433B	GB40051459
ESG	Agilent	E4433B	US40052296

Test Conditions / Notes:

The EUT is stand alone on the wooden tabletop RF out is connected to remote load string and power meter. RF in receives RF signal via remote ESG and a premap. The RF level is adjusted to maintain the transmit power. Modulation: iDEN. Power = 110 watts. Frequency = 860 MHz. Frequency range of measurement = 9 kHz - 9 GHz. Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz - 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 9000 MHz RBW=1 MHz, VBW=1 MHz. 23°C, 53% relative humidity.

Transducer Legend:

T1=SMA Cable 1-40GHz AN2604_012306	T2=HPF_AN02116_1.5GHz_062707

Measurement Data: Reading listed by margin. Test Lead: Antenna Terminal

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	2580.000M Ave	67.3	+0.5	+0.6			+0.0	68.4	94.0	-25.6	Anten
^	2580.000M	101.1	+0.5	+0.6			+0.0	102.2	94.0	+8.2	Anten
3	1720.000M Ave	67.2	+0.4	+0.6			+0.0	68.2	94.0	-25.8	Anten
^	1720.000M	88.0	+0.4	+0.6			+0.0	89.0	94.0	-5.0	Anten

Test Location: CKC Laboratories, Inc. •110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer:	**Powerwave Technologies, Inc.**		
Specification:	**FCC 90.210 Conducted Spurious Emission**		
Work Order #:	**84232**	Date:	10/24/2005
Test Type:	**Conducted Emissions**	Time:	15:55:33
Equipment:	**RFAmplifier**	Sequence#:	37
Manufacturer:	Powerwave Technologies	Tested By:	E. Wong
Model:	G3H-851-80 (Python_Nextel)		230V 50Hz
S/N:	NA		

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Rf Amplifier*	Powerwave Technologies	G3H-851-80 (Python_Nextel)	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Power Meter	Agilent	E4419A	US38260914
ESG	Agilent	E4433B	US40051477
ESG	Agilent	E4433B	GB40051459
ESG	Agilent	E4433B	US40052296

Test Conditions / Notes:

The EUT is stand alone on the wooden tabletop RF out is connected to remote load string and power meter. RF in receives RF signal via remote ESG and a premap. The RF level is adjusted to maintain the transmit power. Modulation: iDEN. Power = 110 watts. Frequency = 868.5 MHz. Frequency range of measurement = 9 kHz - 9 GHz. Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz - 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 9000 MHz RBW=1 MHz, VBW=1 MHz. 23°C, 53% relative humidity.

Transducer Legend:

T1=SMA Cable 1-40GHz AN2604_012306	T2=HPF_AN02116_1.5GHz_062707

Measurement Data: Reading listed by margin. Test Lead: Antenna Terminal

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	2605.500M Ave	72.2	+0.5	+0.6			+0.0	73.3	94.0	-20.7	Anten
^	2605.500M	99.2	+0.5	+0.6			+0.0	100.3	94.0	+6.3	Anten
3	1737.000M Ave	70.4	+0.5	+0.6			+0.0	71.5	94.0	-22.5	Anten
^	1737.000M	89.3	+0.5	+0.6			+0.0	90.4	94.0	-3.6	Anten

Test Location: CKC Laboratories, Inc. •110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer:	**Powerwave Technologies, Inc.**		
Specification:	**FCC 90.210 Antenna Spurious Emission**		
Work Order #:	**84232**	Date:	9/16/2005
Test Type:	**Conducted Emissions**	Time:	13:51:24
Equipment:	**RF Amplifier**	Sequence#:	20
Manufacturer:	Powerwave Technologies	Tested By:	E. Wong
Model:	G3H-851-80 (Python_Nextel)		27V dc
S/N:	NA		

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Rf Amplifier*	Powerwave Technologies	G3H-851-80 (Python_Nextel)	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Power Meter	Agilent	E4419A	US38260914
ESG	Agilent	E4433B	US40051477
ESG	Agilent	E4433B	GB40051459
ESG	Agilent	E4433B	US40052296

Test Conditions / Notes:

The EUT is stand alone on the wooden tabletop. RF out is connected to remote load string and power meter. RF in receives RF signal via remote ESG and a preamp. The RF level is adjusted to maintain the transmit power. Antenna conducted spurious emissions measured at antenna port. Modulation: 1X-EVDO(IS95) Power = 120 watts. Frequency=852 MHz. Frequency range of measurement = 9 kHz - 9 GHz. Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz - 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 9000 MHz RBW=1 MHz, VBW=1 MHz. 23°C, 53% relative humidity.

Transducer Legend:

T1=SMA Cable 1-40GHz AN2604_012306	T2=HPF_AN02116_1.5GHz_062707

Measurement Data: Reading listed by margin. Test Lead: Antenna Terminal

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	1704.050M Ave	66.1	+0.4	+0.6			+0.0	67.1	94.0	-26.9	Anten
^	1704.050M	88.0	+0.4	+0.6			+0.0	89.0	94.0	-5.0	Anten
3	2556.050M Ave	64.4	+0.5	+0.6			+0.0	65.5	94.0	-28.5	Anten
^	2556.050M	89.9	+0.5	+0.6			+0.0	91.0	94.0	-3.0	Anten

Test Location: CKC Laboratories, Inc. •110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer:	**Powerwave Technologies, Inc.**		
Specification:	**FCC 90.210 Antenna Spurious Emission**		
Work Order #:	**84232**	Date:	9/16/2005
Test Type:	**Conducted Emissions**	Time:	13:58:25
Equipment:	**RF Amplifier**	Sequence#:	21
Manufacturer:	Powerwave Technologies	Tested By:	E. Wong
Model:	G3H-851-80 (Python_Nextel)		27V dc
S/N:	NA		

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Rf Amplifier*	Powerwave Technologies	G3H-851-80 (Python_Nextel)	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Power Meter	Agilent	E4419A	US38260914
ESG	Agilent	E4433B	US40051477
ESG	Agilent	E4433B	GB40051459
ESG	Agilent	E4433B	US40052296

Test Conditions / Notes:

The EUT is stand alone on the wooden tabletop. RF out is connected to remote load string and power meter. RF in receives RF signal via remote ESG and a preamp. The RF level is adjusted to maintain the transmit power. Antenna conducted spurious emissions measured at antenna port. Modulation: 1X-EVDO(IS95) Power = 120 watts. Frequency=860.0 MHz. Frequency range of measurement = 9 kHz - 9 GHz. Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz- 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 9000 MHz RBW=1 MHz, VBW=1 MHz. 23°C, 53% relative humidity.

Transducer Legend:

T1=SMA Cable 1-40GHz AN2604_012306	T2=HPF_AN02116_1.5GHz_062707

Measurement Data: Reading listed by margin. Test Lead: Antenna Terminal

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	1720.500M Ave	66.6	+0.4	+0.6			+0.0	67.6	94.0	-26.4	Anten
^	1720.500M	87.1	+0.4	+0.6			+0.0	88.1	94.0	-5.9	Anten
3	2580.300M Ave	64.8	+0.5	+0.6			+0.0	65.9	94.0	-28.1	Anten
^	2580.300M	89.8	+0.5	+0.6			+0.0	90.9	94.0	-3.1	Anten

Test Location: CKC Laboratories, Inc. •110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer:	**Powerwave Technologies, Inc.**		
Specification:	**Bandedge Plot**		
Work Order #:	**84232**	Date:	9/16/2005
Test Type:	**Conducted Emissions**	Time:	14:04:54
Equipment:	**RF Amplifier**	Sequence#:	22
Manufacturer:	Powerwave Technologies	Tested By:	E. Wong
Model:	G3H-851-80 (Python_Nextel)		27V dc
S/N:	NA		

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Rf Amplifier*	Powerwave Technologies	G3H-851-80 (Python_Nextel)	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Power Meter	Agilent	E4419A	US38260914
ESG	Agilent	E4433B	US40051477
ESG	Agilent	E4433B	GB40051459
ESG	Agilent	E4433B	US40052296

Test Conditions / Notes:

The EUT is stand alone on the wooden tabletop. RF out is connected to remote load string and power meter. RF in receives RF signal via remote ESG and a preamp. The RF level is adjusted to maintain the transmit power. Antenna conducted spurious emissions measured at antenna port. Modulation: 1X-EVDO(IS95). Power = 120 watts. Frequency=868.0 MHz. Frequency range of measurement = 9 kHz - 9 GHz. Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz - 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 9000 MHz RBW=1 MHz, VBW=1 MHz. 23°C, 53% relative humidity.

Transducer Legend:

T1=SMA Cable 1-40GHz AN2604_012306	T2=HPF_AN02116_1.5GHz_062707

Measurement Data: Reading listed by margin. Test Lead: Antenna Terminal

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	2605.500M Ave	67.2	+0.5	+0.6			+0.0	68.3	94.0	-25.7	Anten
^	2605.500M	87.9	+0.5	+0.6			+0.0	89.0	94.0	-5.0	Anten
3	1737.000M Ave	65.5	+0.5	+0.6			+0.0	66.6	94.0	-27.4	Anten
^	1737.000M	86.0	+0.5	+0.6			+0.0	87.1	94.0	-6.9	Anten

Test Equipment

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
Spectrum Analyzer	02672	Agilent	E4446A	US44300438	011405	011407

PHOTOGRAPH SHOWING DIRECT CONNECT TEST SETUP

FCC 2.1033(c)(14)/2.1053/90.210(a)(2) - FIELD STRENGTH OF SPURIOUS RADIATION

Test Location: CKC Laboratories, Inc. •110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer:	**Powerwave Technologies, Inc.**		
Specification:	**FCC 90.210 Radiated Spurious Emisison**		
Work Order #:	**84232**	Date:	10/20/2005
Test Type:	**Radiated Scan**	Time:	13:58:44
Equipment:	**RFAmplifier**	Sequence#:	30
Manufacturer:	Powerwave Technologies	Tested By:	E. Wong
Model:	G3H-851-80 (Python_Nextel)		
S/N:	NA		

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Rf Amplifier*	Powerwave Technologies	G3H-851-80 (Python_Nextel)	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Power Meter	Agilent	E4419A	US38260914
ESG	Agilent	E4433B	US40051477
ESG	Agilent	E4433B	GB40051459
ESG	Agilent	E4433B	US40052296

Test Conditions / Notes:

The EUT is stand alone on the wooden tabletop RF out is connected to remote load string and power meter. RF in receives RF signal via remote ESG and a premap. The RF level is adjusted to maintain the transmit power. Modulation: iDEN. Power = 110 watts. Frequency = 851.5 MHz, 860.0 MHz and 868.0 MHz. Frequency range of measurement = 9 kHz - 9 GHz. Frequency 9 kHz - 150 kHz RBW=200 Hz, VBW=200 Hz; 150 kHz - 30 MHz RBW=9 kHz, VBW=9 kHz; 30 MHz - 1000 MHz RBW=120 kHz, VBW=120 kHz; 1000 MHz - 9000 MHz RBW=1 MHz, VBW=1 MHz. 23°C, 53% relative humidity.

Operating Frequency: 851.5 MHz - 868.5 MHz
Channels: Low, Mid and High
Highest Measured Output Power: 50.41 ERP(dBm)= 110 ERP(Watts)
Distance: 3 meters
Limit: 43+10Log(P) 63.41 dBc

Freq. (MHz)	Reference Level (dBm)	Antenna Polarity (H/V)	dBc
2,554.58	-25	Vert	75.41
2,554.55	-25.6	Horiz	76.01
4,257.52	-27.5	Horiz	77.91
5,960.48	-28.1	Horiz	78.51
4,257.68	-28.2	Vert	78.61
1,703.00	-30.1	Vert	80.51
1,702.84	-32.9	Horiz	83.31

5,960.53	-34	Vert	84.41
3,405.98	-40.5	Horiz	90.91
5,109.10	-41.7	Vert	92.11
5,109.02	-44.4	Horiz	94.81
3,406.06	-45.7	Vert	96.11
3,406.06	-18.1	Vert	68.51
2,580.00	-21.8	Horiz	72.21
7,740.00	-23	Vert	73.41
2,580.13	-24.1	Vert	74.51
8,599.49	-24.3	Vert	74.71
1,720.00	-27	Horiz	77.41
6,879.96	-29.3	Vert	79.71
1,719.87	-30.6	Vert	81.01
4,300.00	-32	Vert	82.41
4,300.00	-32.5	Horiz	82.91
6,020.10	-37.4	Horiz	87.81
3,440.00	-40.1	Vert	90.51
3,440.00	-16.3	Vert	66.71
5,160.00	-41.9	Vert	92.31
5,160.00	-43.5	Horiz	93.91
3,440.00	-44.1	Horiz	94.51
7,816.50	-23	Vert	73.41
2,605.50	-24.5	Vert	74.91
2,605.50	-25.9	Horiz	76.31
3,474.00	-26.8	Vert	77.21
6,079.50	-27.2	Horiz	77.61
4,342.50	-28.5	Horiz	78.91
7,816.51	-29	Horiz	79.41
1,737.00	-29.3	Vert	79.71
5,211.00	-29.5	Vert	79.91
6,079.50	-29.8	Vert	80.21
4,342.50	-30.2	Vert	80.61
3,474.00	-31.4	Horiz	81.81
3,474.00	-17.1	Horiz	67.51
8,684.88	-33.5	Vert	83.91
1,737.00	-36.4	Horiz	86.81
5,211.00	-41.5	Horiz	91.91
5,211.00	-22.2	Horiz	72.61

Test Equipment

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
Spectrum Analyzer	02672	Agilent	E4446A	US44300438	011405	011407
30-1000MHz						
Biconilog Antenna	01995	Chase	CBL6111C	2451	080105	080107
Pre-amp	00309	HP	8447D	1937A02548	071404	071406
Antenna cable	NA	NA	RG214	Cable#15	010305	010306
Pre-amp to SA cable	NA	Pasternack	RG223/U	Cable#10	051605	051606
1-9GHz						
Horn Antenna	0849	EMCO	3115	6246	072204	072206
Microwave Pre-amp	00786	HP	83017A	3123A00281	081204	081206
Heliax Antenna cable	NA	Andrew	LDF1-50	Cable#20	091604	091606
24” SMA Cable	2604	Argosy	UFA147A	0-0360-200200	012304	012306
1.5 GHz HPF	02116	HP	84300-80037	3643A00027	062705	062707
Loop Antenna	00314	EMCO	6502	2014	062804	062806
9kHz-30MHz						
Loop Antenna	00314	EMCO	6502	2014	062804	062806

PHOTOGRAPH SHOWING RADIATED EMISSIONS

Radiated Emissions - Front View

PHOTOGRAPH SHOWING RADIATED EMISSIONS

Radiated Emissions - Back View

PHOTOGRAPH SHOWING RADIATED EMISSIONS

Radiated Emissions - Loop Antenna