POWERWAVE TECHNOLOGIES, INC. TEST REPORT

FOR THE

POWER AMPLIFIER FRAME, PAF-08XX-XXX

FCC PART 22

COMPLIANCE

DATE OF ISSUE: JANUARY 16, 2007

PREPARED FOR:

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

P.O. No.: 110980
W.O. No.: 85903

PREPARED BY:

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

Date of test: November 14, 2006-
January 11, 2007

Report No.: FC07-004

TABLE OF CONTENTS

ADMINISTRATIVE INFORMATION

DATE OF TEST: November 14, 2006- January 11, 2007

DATE OF RECEIPT: November 14, 2006

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 92823

TEST METHOD: FCC Part 22

PURPOSE OF TEST: To demonstrate the compliance of the Power Amplifier Frame, PAF-08XX-XXX with the requirements for FCC Part 22 devices.

APPROVALS:

Steve Behm, Director of Engineering Services

QUALITY ASSURANCE:

Joyce Walker, Quality Assurance Administrative Manager

TEST PERSONNEL:

Eddie Wong, EMC Engineer

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

EQUIPMENT UNDER TEST (EUT) DESCRIPTION

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

EQUIPMENT UNDER TEST

Power Amplifier Frame

Manuf: Powerwave Technologies, Inc.
Model: PAF-08XX-XXX
Serial: NA

PERIPHERAL DEVICES

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

Power Supply

Manuf: Power Ten
Model: NA
Serial: NA

Spectrum Analyzer

Manuf: HP
Model: 8563E
Serial: NA

Power Meter

Manuf: Agilent
Model: E4419B
Serial: MY40510694

ESG

Manuf: Agilent
Model: E4433B
Serial: US40053250 & US40051840

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
F1D, F8W, F9W

FCC 2.1033 (c)(5) FREQUENCY RANGE
869 MHz – 894 MHz

FCC 2.1033 (c)(6) OPERATING POWER
500 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.

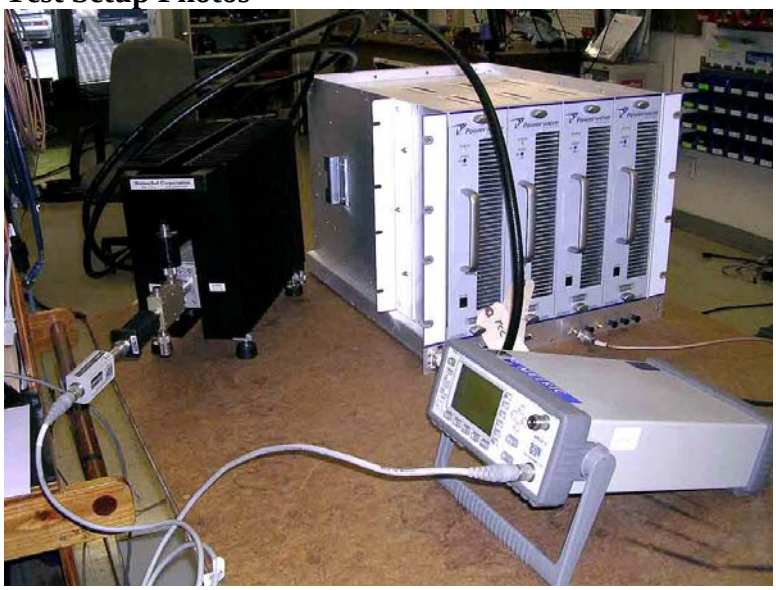
FCC 2.1033 (c)(13) MODULATION INFORMATION
AMPS Voice, AMPS Data, CDMA_EVDO1X

FCC 2.1033(c)(14)/2.1046/22.913 - RF POWER OUTPUT

Test Equipment

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
RF Power meter	02778	HP	EPM-441A	GB37170458	012706	012708
Power Sensor	02777	HP	E4412A	MY41499662	012706	012708

Test Setup Photos



Test Data

22.913 RF Output power

a) Maximum ERP. The effective radiated power (ERP) of base transmitters and cellular repeaters must not exceed 500 Watts.
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 FCC24.23a (a).

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 100 watts. RF in of section 2 is connected to remote Signal generator. RF out of Section 2 is connected to a RF load. All other ports are left blank. The EUT obtains DC power from a remote power source.
Frequency: 893 MHz
Modulation: AMPS Data, AMPS Voice, CDMA_EVDO1X

Conclusion: As indicated below, each single channel does not exceed the 500 Watts peak power limit.

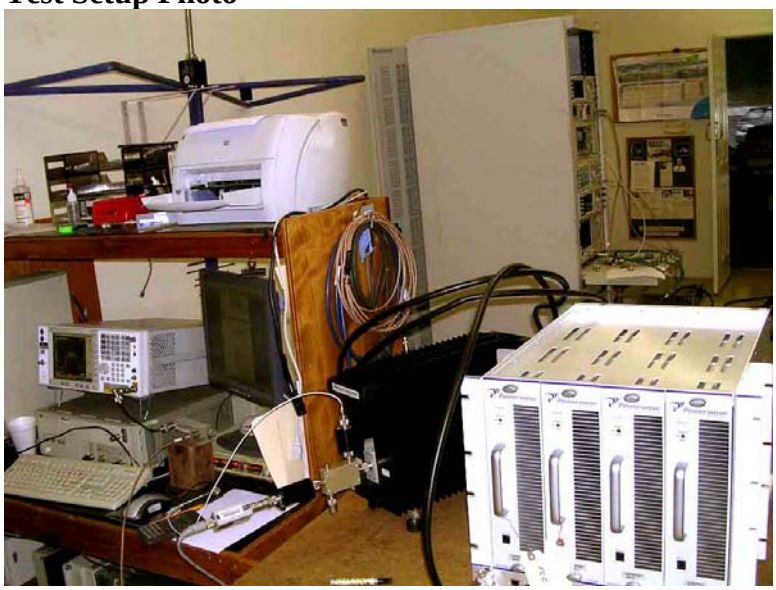
Frequency	Modulation	Measured Power
871 MHz	CDMA	500W / Carrier
881 MHz	CDMA	500W/ Carrier
892 MHz	CDMA	500W/ Carrier
869MHz	AMPS_Voice	500W/ Carrier
881MHz	AMPS_Voice	500W/ Carrier
894MHz	AMPS_Voice	500W/ Carrier
869MHz	AMPS_Data	500W/ Carrier
881MHz	AMPS_Data	500W/ Carrier
894MHz	AMPS_Data	500W/ Carrier

FCC 2.1033(c)(14)/2.1051/22.917(a) - SPURIOUS EMISSIONS AT ANTENNA TERMINAL

Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	US44300438	01/03/2007	01/03/2009	02672
1.5 GHz HPF	3643A00027	06/27/2005	06/27/2007	02116
24" SMA Cable	1-40GHz_white	02/08/2005	02/08/2007	P05204

Test Setup Photo



Limit line for Spurious Conducted Emission

Required Attenuation = 43+10 Log P dB

Limit line (dBuV) = V_{dBuv} - Attenuation

V_{dBuV} = $20 \text{ Log } \frac{V}{1 \text{ x } 10^{-6}}$

= $20\left(\text{Log } V - \text{Log } 1 \text{ x } 10^{-6}\right)$

= $20 \text{ Log } V - 20 \text{ Log} 1 \text{ x } 10^{-6}$

= $20 \text{ Log } V - 20(-6)$

= $20 \text{ Log } V + 120$

Attenuation = $43 + 10 \text{ Log } P$

= $43 + 10 \text{ Log } \frac{V^2}{R}$

= $43 + 10\left(\text{Log } V^2 - \text{Log } R\right)$

= $43 + 10(2 \text{ Log } V - \text{Log } R)$

= $43 + 20 \text{ Log } V - 10 \text{ Log } R$

Limit line = V_{dBuv} - Attenuation

= 20 Log V + 120 – (43 + 20 Log V – 10Log R)

= 20 Log V + 120 – 43 – 20 Log V + 10Log R

= 20 Log V + 120 – 43 – 20 Log V + 10Log R

= 120 – 43 + 10 Log 50 Note : R = 50 Ω

= 120 –43 + 16.897

= 94 dBuV at any power level

Test Data Sheets

Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer:	**Powerwave Technologies, Inc.**		
Specification:	**FCC Part 22.917(a) Conducted Spurious Emission**		
Work Order #:	**85903**	Date:	1/11/2007
Test Type:	**Conducted Emissions**	Time:	10:05:07
Equipment:	**Power Amplifier Frame**	Sequence#:	25
Manufacturer:	Powerwave Technologies, Inc	Tested By:	E. Wong
Model:	PAF-08XX-XXX		27V dc
S/N:	NA		

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

Function	Manufacturer	Model #	S/N
Power Amplifier Frame*	Powerwave Technologies, Inc	PAF-08XX-XXX	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Power Ten	NA	NA
Spectrum Analyzer	HP	8563E	NA
Power Meter	Agilent	E4419B	MY40510694
ESG	Agilent	E4433B	US40051840
ESG	Agilent	E4433B	US40053250

Test Conditions / Notes:

RF in of section 2 is connected to remote signal generator. RF out of section 2 is connected to a RF load. All other ports are left blank. The EUT obtains DC power from a remote power source. Frequency: 893 MHz. Modulation: AMPS Voice. Power: 500 Watts. Conducted spurious emissions evaluated at the antenna port. 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. 27VDC (from a 220 3 phase source), 22°C, 35% relative humidity.

Transducer Legend:

T1=1-40 GHz Cable_020807	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/m	Spec dBµV/m	Margin dB	Polar Ant
1	2679.000M Ave	75.8	+1.1	+0.6			+0.0	77.5	94.0	-16.5	Anten
^	2679.000M	82.7	+1.1	+0.6			+0.0	84.4	94.0	-9.6	Anten

Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer:	**Powerwave Technologies, Inc.**		
Specification:	**FCC Part 22.917(a) Conducted Spurious Emission**		
Work Order #:	**85903**	Date:	1/11/2007
Test Type:	**Conducted Emissions**	Time:	10:02:06
Equipment:	**Power Amplifier Frame**	Sequence#:	24
Manufacturer:	Powerwave Technologies, Inc	Tested By:	E. Wong
Model:	PAF-08XX-XXX		27V dc
S/N:	NA		

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

Function	Manufacturer	Model #	S/N
Power Amplifier Frame*	Powerwave Technologies, Inc	PAF-08XX-XXX	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Power Ten	NA	NA
Spectrum Analyzer	HP	8563E	NA
Power Meter	Agilent	E4419B	MY40510694
ESG	Agilent	E4433B	US40051840
ESG	Agilent	E4433B	US40053250

Test Conditions / Notes:

RF in of section 2 is connected to remote signal generator. RF out of section 2 is connected to a RF load. All other ports are left blank. The EUT obtains DC power from a remote power source. Frequency: 881 MHz. Modulation: AMPS Voice. Power: 500 Watts. Conducted spurious emissions evaluated at the antenna port. 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. 27VDC (from a 220 3 phase source), 22°C, 35% relative humidity.

Transducer Legend:

T1=1-40 GHz Cable_020807	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/m	Spec dBµV/m	Margin dB	Polar Ant
1	2643.130M Ave	74.8	+1.0	+0.6			+0.0	76.4	94.0	-17.6	Anten
^	2643.130M	82.1	+1.0	+0.6			+0.0	83.7	94.0	-10.3	Anten

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Customer:	**Powerwave Technologies, Inc.**		
Specification:	**FCC Part 22.917(a) Conducted Spurious Emission**		
Work Order #:	**85903**	Date:	1/11/2007
Test Type:	**Conducted Emissions**	Time:	09:56:52
Equipment:	**Power Amplifier Frame**	Sequence#:	23
Manufacturer:	Powerwave Technologies, Inc	Tested By:	E. Wong
Model:	PAF-08XX-XXX		27V dc
S/N:	NA		

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

Function	Manufacturer	Model #	S/N
Power Amplifier Frame*	Powerwave Technologies, Inc	PAF-08XX-XXX	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Power Ten	NA	NA
Spectrum Analyzer	HP	8563E	NA
Power Meter	Agilent	E4419B	MY40510694
ESG	Agilent	E4433B	US40051840
ESG	Agilent	E4433B	US40053250

Test Conditions / Notes:

RF in of section 2 is connected to remote signal generator. RF out of section 2 is connected to a RF load. All other ports are left blank. The EUT obtains DC power from a remote power source. Frequency: 869 MHz. Modulation: AMPS Voice. Power: 500 Watts. Conducted spurious emissions evaluated at the antenna port. 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. 27VDC (from a 220 3 phase source), 22°C, 35% relative humidity.

Transducer Legend:

T1=1-40 GHz Cable_020807	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/m	Spec dBµV/m	Margin dB	Polar Ant
1	1738.000M	81.9	+0.8	+0.6			+0.0	83.3	94.0	-10.7	Anten
2	2606.880M Ave	74.0	+1.0	+0.6			+0.0	75.6	94.0	-18.4	Anten
^	2606.820M	81.8	+1.0	+0.6			+0.0	83.4	94.0	-10.6	Anten
4	1738.170M Ave	73.6	+0.8	+0.6			+0.0	75.0	94.0	-19.0	Anten

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Customer:	**Powerwave Technologies, Inc.**		
Specification:	**FCC Part 22.917(a) Conducted Spurious Emission**		
Work Order #:	**85903**	Date:	1/11/2007
Test Type:	**Conducted Emissions**	Time:	10:12:53
Equipment:	**Power Amplifier Frame**	Sequence#:	26
Manufacturer:	Powerwave Technologies, Inc	Tested By:	E. Wong
Model:	PAF-08XX-XXX		27V dc
S/N:	NA		

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

Function	Manufacturer	Model #	S/N
Power Amplifier Frame*	Powerwave Technologies, Inc	PAF-08XX-XXX	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Power Ten	NA	NA
Spectrum Analyzer	HP	8563E	NA
Power Meter	Agilent	E4419B	MY40510694
ESG	Agilent	E4433B	US40051840
ESG	Agilent	E4433B	US40053250

Test Conditions / Notes:

RF in of section 2 is connected to remote signal generator. RF out of section 2 is connected to a RF load. All other ports are left blank. The EUT obtains DC power from a remote power source. Frequency: 869 MHz. Modulation: AMPS Data. Power: 500 Watts. Conducted spurious emissions evaluated at the antenna port. 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. 27VDC (from a 220 3 phase source), 22°C, 35% relative humidity.

Transducer Legend:

T1=1-40 GHz Cable_020807	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/m	Spec dBµV/m	Margin dB	Polar Ant
1	1738.170M	82.1	+0.8	+0.6			+0.0	83.5	94.0	-10.5	Anten
2	2607.570M Ave	76.9	+1.0	+0.6			+0.0	78.5	94.0	-15.5	Anten
^	2607.570M	81.9	+1.0	+0.6			+0.0	83.5	94.0	-10.5	Anten
4	1738.330M Ave	75.9	+0.8	+0.6			+0.0	77.3	94.0	-16.7	Anten

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Customer:	**Powerwave Technologies, Inc.**		
Specification:	**FCC Part 22.917(a) Conducted Spurious Emission**		
Work Order #:	**85903**	Date:	1/11/2007
Test Type:	**Conducted Emissions**	Time:	10:17:51
Equipment:	**Power Amplifier Frame**	Sequence#:	27
Manufacturer:	Powerwave Technologies, Inc	Tested By:	E. Wong
Model:	PAF-08XX-XXX		27V dc
S/N:	NA		

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

Function	Manufacturer	Model #	S/N
Power Amplifier Frame*	Powerwave Technologies, Inc	PAF-08XX-XXX	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Power Ten	NA	NA
Spectrum Analyzer	HP	8563E	NA
Power Meter	Agilent	E4419B	MY40510694
ESG	Agilent	E4433B	US40051840
ESG	Agilent	E4433B	US40053250

Test Conditions / Notes:

RF in of section 2 is connected to remote signal generator. RF out of section 2 is connected to a RF load. All other ports are left blank. The EUT obtains DC power from a remote power source. Frequency: 881 MHz. Modulation: AMPS Data. Power: 500 Watts. Conducted spurious emissions evaluated at the antenna port. 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. 27VDC (from a 220 3 phase source), 22°C, 35% relative humidity.

Transducer Legend:

T1=1-40 GHz Cable_020807	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/m	Spec dBµV/m	Margin dB	Polar Ant
1	2643.100M Ave	75.7	+1.0	+0.6			+0.0	77.3	94.0	-16.7	Anten
^	2643.100M	83.1	+1.0	+0.6			+0.0	84.7	94.0	-9.3	Anten

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Customer:	**Powerwave Technologies, Inc.**		
Specification:	**FCC Part 22.917(a) Conducted Spurious Emission**		
Work Order #:	**85903**	Date:	1/11/2007
Test Type:	**Conducted Emissions**	Time:	10:26:52
Equipment:	**Power Amplifier Frame**	Sequence#:	28
Manufacturer:	Powerwave Technologies, Inc	Tested By:	E. Wong
Model:	PAF-08XX-XXX		27V dc
S/N:	NA		

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

Function	Manufacturer	Model #	S/N
Power Amplifier Frame*	Powerwave Technologies, Inc	PAF-08XX-XXX	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Power Ten	NA	NA
Spectrum Analyzer	HP	8563E	NA
Power Meter	Agilent	E4419B	MY40510694
ESG	Agilent	E4433B	US40051840
ESG	Agilent	E4433B	US40053250

Test Conditions / Notes:

RF in of section 2 is connected to remote signal generator. RF out of section 2 is connected to a RF load. All other ports are left blank. The EUT obtains DC power from a remote power source. Frequency: 893 MHz. Modulation: AMPS Data. Power: 500 Watts. Conducted spurious emissions evaluated at the antenna port. 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. 27VDC (from a 220 3 phase source), 22°C, 35% relative humidity.

Transducer Legend:

T1=1-40 GHz Cable_020807	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/m	Spec dBµV/m	Margin dB	Polar Ant
1	2679.000M	83.0	+1.1	+0.6			+0.0	84.7	94.0	-9.3	Anten
2	2679.000M	74.0	+1.1	+0.6			+0.0	75.7	94.0	-18.3	Anten

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Customer:	**Powerwave Technologies, Inc.**		
Specification:	**FCC Part 22.917(a) Conducted Spurious Emission**		
Work Order #:	**85903**	Date:	1/11/2007
Test Type:	**Conducted Emissions**	Time:	08:56:37
Equipment:	**Power Amplifier Frame**	Sequence#:	20
Manufacturer:	Powerwave Technologies, Inc	Tested By:	E. Wong
Model:	PAF-08XX-XXX		27V dc
S/N:	NA		

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

Function	Manufacturer	Model #	S/N
Power Amplifier Frame*	Powerwave Technologies, Inc	PAF-08XX-XXX	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Power Ten	NA	NA
Spectrum Analyzer	HP	8563E	NA
Power Meter	Agilent	E4419B	MY40510694
ESG	Agilent	E4433B	US40051840
ESG	Agilent	E4433B	US40053250

Test Conditions / Notes:

RF in of section 2 is connected to remote signal generator. RF out of section 2 is connected to a RF load. All other ports are left blank. The EUT obtains DC power from a remote power source. Frequency: 871 MHz. Modulation: CDMA 1x EVDO Power: 500 Watts. Conducted spurious emissions evaluated at the antenna port. 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. 27VDC (from a 220 3 phase source), 22°C, 35% relative humidity. Detection was performed with reduced resolution bandwidth or with the aid of High Pass Filter at the required resolution bandwidth. **No Emission found**.

Transducer Legend:

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

#	Freq	Rdng					Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant

Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer:	**Powerwave Technologies, Inc.**		
Specification:	**FCC Part 22.917(a) Conducted Spurious Emission**		
Work Order #:	**85903**	Date:	1/11/2007
Test Type:	**Conducted Emissions**	Time:	09:32:27
Equipment:	**Power Amplifier Frame**	Sequence#:	21
Manufacturer:	Powerwave Technologies, Inc	Tested By:	E. Wong
Model:	PAF-08XX-XXX		27V dc
S/N:	NA		

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

Function	Manufacturer	Model #	S/N
Power Amplifier Frame*	Powerwave Technologies, Inc	PAF-08XX-XXX	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Power Ten	NA	NA
Spectrum Analyzer	HP	8563E	NA
Power Meter	Agilent	E4419B	MY40510694
ESG	Agilent	E4433B	US40051840
ESG	Agilent	E4433B	US40053250

Test Conditions / Notes:

RF in of section 2 is connected to remote signal generator. RF out of section 2 is connected to a RF load. All other ports are left blank. The EUT obtains DC power from a remote power source. Frequency: 881 MHz. Modulation: CDMA 1x EVDO. Power: 500 Watts. Conducted spurious emissions evaluated at the antenna port. 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. 27VDC (from a 220 3 phase source), 22°C, 35% relative humidity. Detection was performed with reduced resolution bandwidth or with the aid of High Pass Filter at the required resolution bandwidth. **No Emission found.**

Transducer Legend:

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

#	Freq	Rdng					Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant

Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer:	**Powerwave Technologies, Inc.**		
Specification:	**FCC Part 22.917(a) Conducted Spurious Emission**		
Work Order #:	**85903**	Date:	1/11/2007
Test Type:	**Conducted Emissions**	Time:	09:40:59
Equipment:	**Power Amplifier Frame**	Sequence#:	22
Manufacturer:	Powerwave Technologies, Inc	Tested By:	E. Wong
Model:	PAF-08XX-XXX		27V dc
S/N:	NA		

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

Function	Manufacturer	Model #	S/N
Power Amplifier Frame*	Powerwave Technologies, Inc	PAF-08XX-XXX	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Power Ten	NA	NA
Spectrum Analyzer	HP	8563E	NA
Power Meter	Agilent	E4419B	MY40510694
ESG	Agilent	E4433B	US40051840
ESG	Agilent	E4433B	US40053250

Test Conditions / Notes:

RF in of section 2 is connected to remote signal generator. RF out of section 2 is connected to a RF load. All other ports are left blank. The EUT obtains DC power from a remote power source. Frequency: 892 MHz. Modulation: CDMA 1x EVDO. Power: 500 Watts. Conducted spurious emissions evaluated at the antenna port. 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. 27VDC (from a 220 3 phase source), 22°C, 35% relative humidity. Detection was performed with reduced resolution bandwidth or with the aid of High Pass Filter at the required resolution bandwidth. **No Emission found.**

Transducer Legend:

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

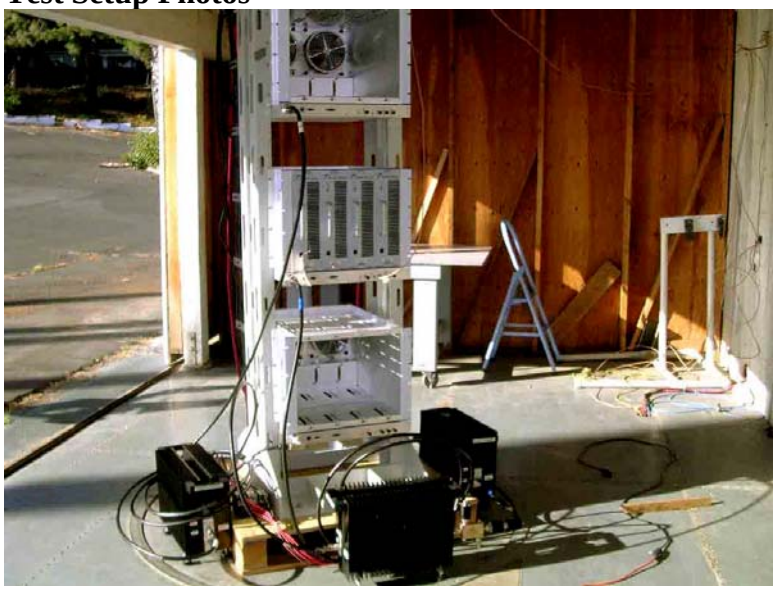
#	Freq	Rdng					Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant

FCC 2.1033(c)(14)/2.1053/22.917(a) - FIELD STRENGTH OF SPURIOUS RADIATION

Test Equipment

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
Spectrum Analyzer	02672	Agilent	E4446A	US44300438	011405	011407
9kHz-30MHz						
Loop Antenna	00314	EMCO	6502	2014	061406	061408
30-1000MHz						
Bilog Antenna	01995	Chase	CBL6111C	2451	020206	020208
Pre-amp	00309	HP	8447D	1937A02548	060106	060108
Antenna cable	P05198	Belden	8268 (RG-214)	Cable#15	010305	010307
Pre-amp to SA cable	P05050	Pasternack	RG223/U	Cable#10	051605	051607
1-9GHz						
Horn Antenna	00849	EMCO	3115	6246	062906	062908
Microwave Pre-amp	00786	HP	83017A	3123A00281	071906	071908
Heliax Antenna cable	P05565	Andrew	LDF1-50	P5565	091806	091808
24” SMA Cable (White)	P05204	Pasterneck	35591-48	1-40GHz_white	020805	020807
1.0 GHz HPF	02749	K&L	9SH10-1000	1	030706	030708

Test Setup Photos



Test Data Sheets

Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer:	**Powerwave Technologies, Inc.**		
Specification:	**FCC Part 22.917(a) Radiated Spurious Emission**		
Work Order #:	**85903**	Date:	12/20/2006
Test Type:	**Radiated Scan**	Time:	11:45:42
Equipment:	**Power Amplifier Frame**	Sequence#:	7
Manufacturer:	Powerwave Technologies, Inc	Tested By:	E. Wong
Model:	PAF-08XX-XXX		
S/N:	NA		

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

Function	Manufacturer	Model #	S/N
Power Amplifier Frame*	Powerwave Technologies, Inc	PAF-08XX-XXX	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Power Ten	NA	NA
Spectrum Analyzer	HP	8563E	NA
Power Meter	Agilent	E4419B	MY40510694
ESG	Agilent	E4433B	US40051840
ESG	Agilent	E4433B	US40053250

Test Conditions / Notes:

RF in of section 2 is connected to remote signal generator. RF out of section 2 is connected to a RF load. All other ports are left blank. The EUT obtains DC power from a remote power source; the RF Output was verified prior to testing. Power: 500 Watts. 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. 27VDC (from a 220 3 phase source), 22°C, 35% relative humidity.

Frequency: 893.8 MHz. Modulation: AMPS Voice
Frequency: 881.5 MHz. Modulation: AMPS Voice
Frequency: 869.2 MHz. Modulation: AMPS Voice
Frequency: 869.2 MHz. Modulation: AMPS Data
Frequency: 881.5 MHz. Modulation: AMPS Data
Frequency: 893.8 MHz. Modulation: AMPS Data
Frequency: 871 MHz. Modulation: CDMA 1x EVDO
Frequency: 881.5 MHz. Modulation: CDMA 1x EVDO
Frequency: 892 MHz. Modulation: CDMA 1x EVDO

Operating Frequency: 869 MHz -893 MHz
Channels: AMPS Voice Low, Mid and High
Highest Measured Output Power: 56.99 ERP(dBm)= 500 ERP(Watts)
Distance: 3 meters
Limit: 43+10Log(P) 69.99 dBc

Freq. (MHz)	Reference Level (dBm)	Antenna Polarity (H/V)	dBc
4,345.97	-19.2	Horiz	76.19
4,345.91	-22.3	Vert	79.29
6,084.35	-25.2	Vert	82.19
5,215.13	-29.6	Vert	86.59
5,215.19	-30	Horiz	86.99
3,476.69	-34.8	Vert	91.79
3,476.87	-35.4	Horiz	92.39
8,691.87	-37.5	Horiz	94.49
8,692.01	-37.7	Vert	94.69
1,738.43	-37.9	Horiz	94.89
7,822.85	-42.4	Horiz	99.39
7,822.79	-43.5	Vert	100.49
1,738.25	-44.6	Vert	101.59
2,607.65	-46.9	Horiz	103.89
6,953.63	-48.3	Horiz	105.29
6,953.57	-49	Vert	105.99
2,607.47	-52	Vert	108.99
4,407.50	-19.5	Vert	76.49
4,407.52	-18.7	Vert	75.69
4,407.45	-27.3	Horiz	84.29
5,288.95	-33.4	Horiz	90.39
6,170.45	-33.8	Horiz	90.79
6,170.53	-36.9	Vert	93.89
5,289.17	-38.5	Vert	95.49
3,526.28	-40	Vert	96.99
3,526.03	-40.5	Horiz	97.49
8,815.03	-40.9	Vert	97.89
8,814.95	-41.5	Horiz	98.49
1,763.03	-42.5	Horiz	99.49
7,933.53	-43.1	Vert	100.09
1,762.86	-46.4	Vert	103.39
7,052.03	-47.1	Vert	104.09
2,644.53	-47.7	Horiz	104.69
2,644.36	-47.9	Vert	104.89
7,933.45	-48	Horiz	104.99
7,051.95	-49	Horiz	105.99
4,469.03	-20.9	Vert	77.89
4,468.93	-22.6	Horiz	79.59
6,256.67	-28.4	Vert	85.39
6,256.69	-28.7	Horiz	85.69

5,362.85	-37.5	Vert	94.49
8,044.30	-37.8	Vert	94.79
5,362.75	-38.3	Horiz	95.29
3,575.27	-39.4	Horiz	96.39
1,787.63	-40.8	Horiz	97.79
8,044.35	-42	Horiz	98.99
3,575.22	-42.1	Vert	99.09
8,938.17	-42.3	Horiz	99.29
7,150.48	-43.8	Vert	100.79
1,787.58	-44.8	Vert	101.79
2,681.45	-45.9	Horiz	102.89
2,681.40	-48.5	Vert	105.49
7,136.00	-50.5	Horiz	107.49

Operating Frequency: 869 MHz -893 MHz
Channels: AMPS Data Low, Mid and High
Highest Measured Output Power: 56.99 ERP(dBm)= 500 ERP(Watts)
Distance: 3 meters
Limit: 43+10Log(P) 69.99 dBc

Freq. (MHz)	Reference Level (dBm)	Antenna Polarity (H/V)	dBc
4,346.00	-20.3	Vert	77.29
4,346.03	-20.4	Horiz	77.39
6,084.40	-24.5	Vert	81.49
5,215.20	-27.8	Vert	84.79
6,084.43	-28.4	Horiz	85.39
5,215.23	-31.6	Horiz	88.59
3,476.80	-33.1	Vert	90.09
8,691.99	-33.2	Vert	90.19
3,476.83	-34.5	Horiz	91.49
8,692.03	-37.5	Horiz	94.49
1,738.43	-39	Horiz	95.99
7,822.83	-41.9	Horiz	98.89
1,738.40	-43.3	Vert	100.29
6,953.59	-44.9	Vert	101.89
7,822.79	-45.3	Vert	102.29
6,953.63	-46.6	Horiz	103.59
2,607.63	-47.1	Horiz	104.09
2,607.60	-51.6	Vert	108.59
4,407.50	-22	Vert	78.99
4,407.50	-23.1	Horiz	80.09
6,170.50	-31.9	Vert	88.89
5,289.00	-33.5	Horiz	90.49
6,170.50	-33.9	Horiz	90.89
5,289.00	-35.3	Vert	92.29
3,526.00	-38	Vert	94.99
3,526.00	-39.2	Horiz	96.19
8,815.00	-39.3	Vert	96.29
8,815.00	-39.3	Horiz	96.29
7,933.50	-41.3	Vert	98.29
7,933.50	-41.5	Horiz	98.49
1,763.00	-43.5	Horiz	100.49
7,052.00	-45.8	Horiz	102.79
2,644.50	-45.9	Horiz	102.89
1,763.00	-46.9	Vert	103.89
7,052.00	-48.7	Vert	105.69

2,644.50	-49.8	Vert	106.79
4,468.92	-24.7	Vert	81.69
6,256.53	-29.2	Horiz	86.19
6,256.48	-31.1	Vert	88.09
5,362.70	-38.5	Vert	95.49
5,362.75	-38.6	Horiz	95.59
3,575.18	-39.8	Horiz	96.79
8,044.05	-40.7	Vert	97.69
3,575.13	-42	Vert	98.99
1,787.62	-42.1	Horiz	99.09
7,150.56	-42.3	Horiz	99.29
1,787.57	-43	Vert	99.99
7,150.27	-44.3	Vert	101.29
8,044.15	-46.2	Horiz	103.19
2,681.40	-46.7	Horiz	103.69
8,937.83	-46.7	Vert	103.69
2,681.35	-48	Vert	104.99

Operating Frequency: 871 MHz - 892 MHz
Channels: CDMA Low, Mid and High
Highest Measured Output Power: 56.99 ERP(dBm)= 500 ERP(Watts)
Distance: 3 meters
Limit: 43+10Log(P) 69.99 dBc

Freq. (MHz)	Reference Level (dBm)	Antenna Polarity (H/V)	dBc
6,097.00	-19.9	Horiz	76.89
8,709.80	-21.7	Vert	78.69
8,710.33	-28.2	Horiz	85.19
3,484.00	-28.8	Vert	85.79
7,838.00	-29.4	Vert	86.39
3,483.60	-29.5	Horiz	86.49
4,355.00	-30.2	Vert	87.19
7,839.50	-32.2	Horiz	89.19
4,355.00	-33.9	Horiz	90.89
5,226.00	-34	Vert	90.99
1,741.80	-35.8	Horiz	92.79
5,226.00	-36.4	Horiz	93.39
6,097.00	-38.2	Vert	95.19
2,612.60	-38.4	Horiz	95.39
6,967.20	-40	Vert	96.99
1,742.00	-41.8	Vert	98.79
2,613.00	-44.6	Vert	101.59
6,170.53	-19.2	Horiz	76.19
7,933.53	-26.6	Vert	83.59
4,407.12	-26.9	Vert	83.89
4,407.50	-29	Horiz	85.99
3,526.07	-29.3	Horiz	86.29
3,526.02	-29.4	Vert	86.39
7,052.17	-30.9	Vert	87.89
5,288.87	-31.4	Vert	88.39
8,815.30	-33.7	Vert	90.69
7,933.80	-33.9	Horiz	90.89
8,815.30	-34.8	Horiz	91.79
2,644.57	-36.9	Horiz	93.89
6,170.37	-37.6	Vert	94.59
2,644.52	-37.6	Vert	94.59
2,644.52	-38	Vert	94.99
7,052.17	-38	Horiz	94.99
1,763.07	-38.2	Horiz	95.19
5,289.00	-39.1	Horiz	96.09
1,763.17	-44.6	Vert	101.59
6,244.37	-19.9	Horiz	76.89
5,350.62	-20.8	Horiz	77.79

8,030.23	-26.1	Vert	83.09
8,028.70	-26.7	Horiz	83.69
3,567.92	-28	Horiz	84.99
4,460.37	-30.9	Horiz	87.89
3,569.60	-31	Vert	87.99
4,460.23	-35.4	Vert	92.39
6,244.23	-36.6	Vert	93.59
1,784.20	-38.4	Horiz	95.39
2,676.53	-38.5	Horiz	95.49
5,352.50	-38.5	Vert	95.49
8,919.47	-38.6	Horiz	95.59
1,784.43	-40.5	Vert	97.49
7,135.00	-41.2	Vert	98.19
7,135.00	-42	Horiz	98.99
2,676.43	-43.7	Vert	100.69

INPUT PLOTS

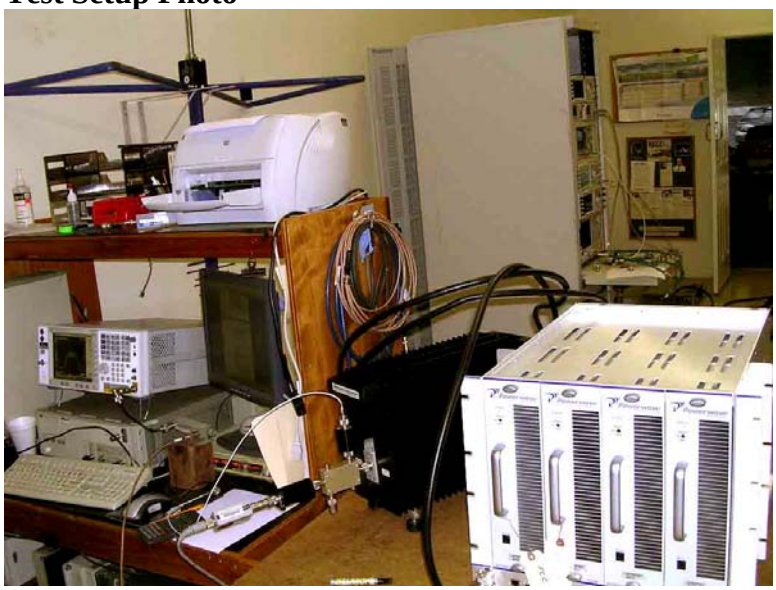
Test Equipment

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

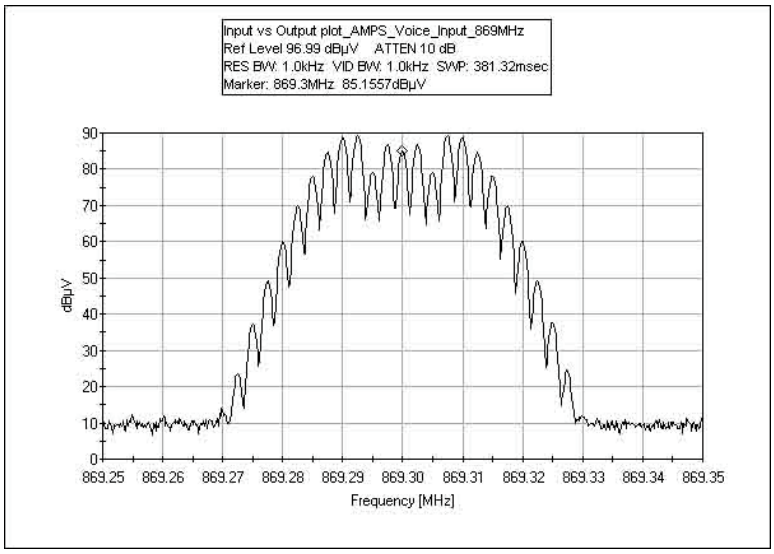
Test Conditions

RF in of section 2 is connected to remote signal generator. RF out of section 2 is connected to a RF load. All other ports are left blank. The EUT obtains DC power from a remote power source; the RF Output was verified prior to testing. Power: 500 Watts. Output wave form evaluated at the antenna port. Input wave form evaluated at the RF in port.

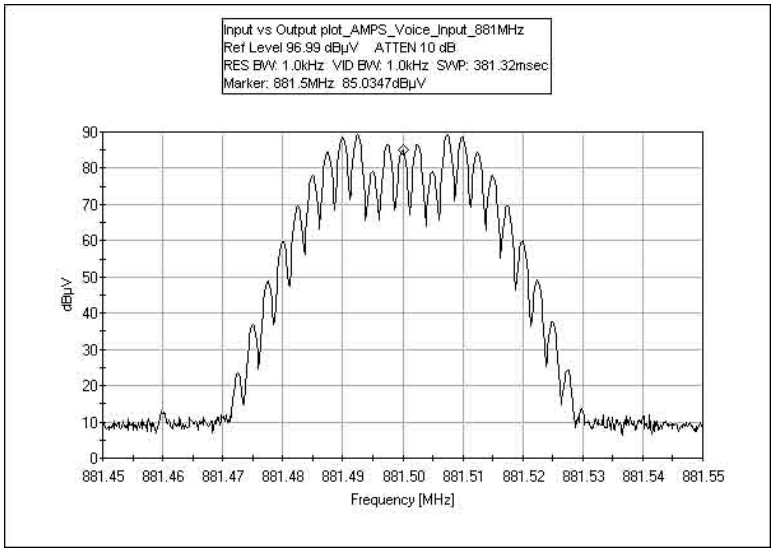
Test Setup Photo



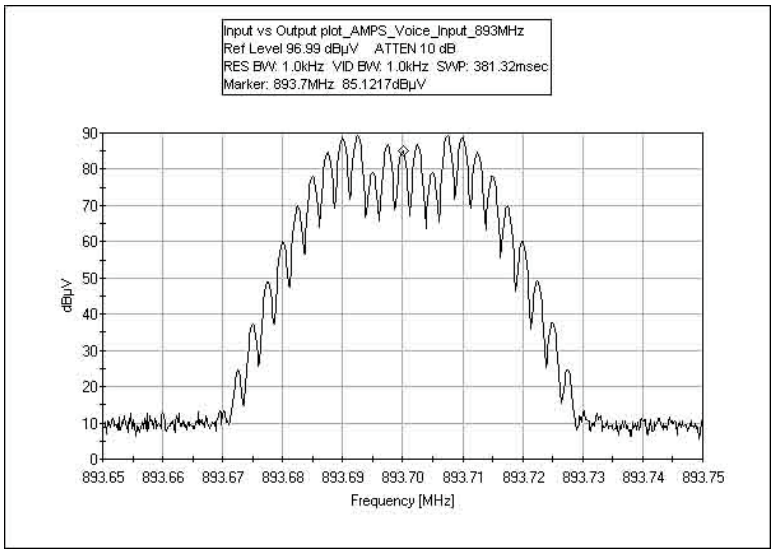
INPUT PLOT - AMPS VOICE 869 MHz



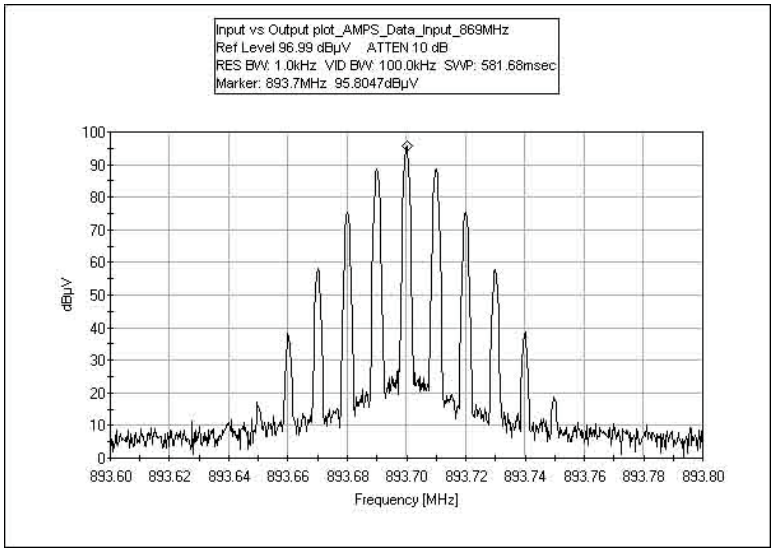
INPUT PLOT - AMPS VOICE 881 MHz



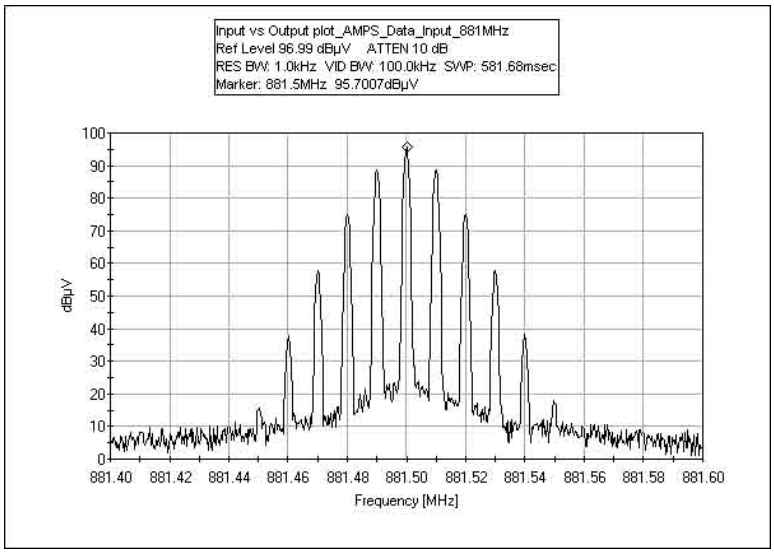
INPUT PLOT - AMPS VOICE 893 MHz



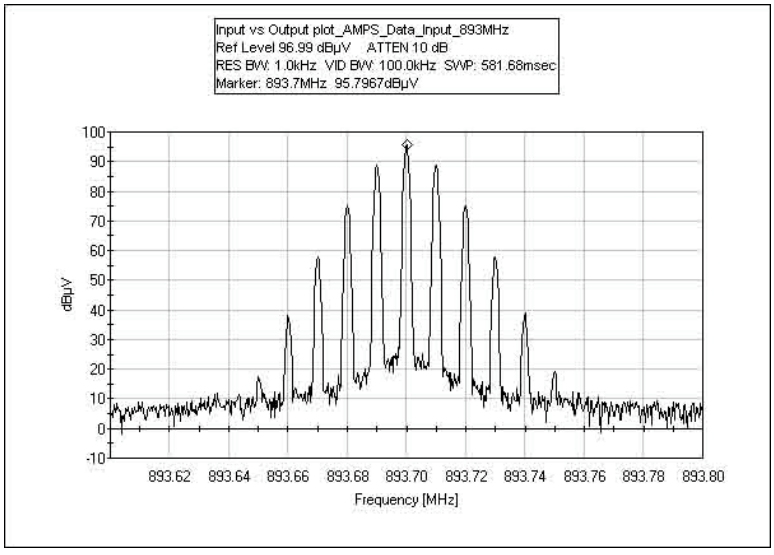
INPUT PLOT - AMPS DATA 869 MHz



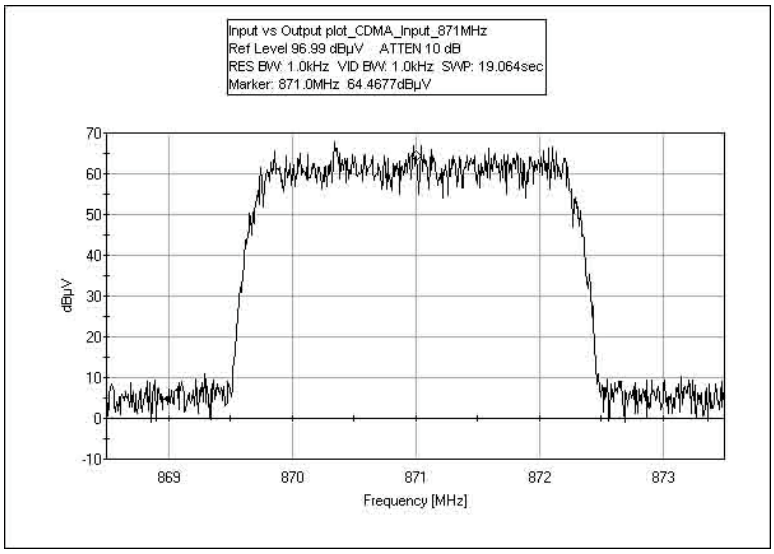
INPUT PLOT - AMPS DATA 881 MHz



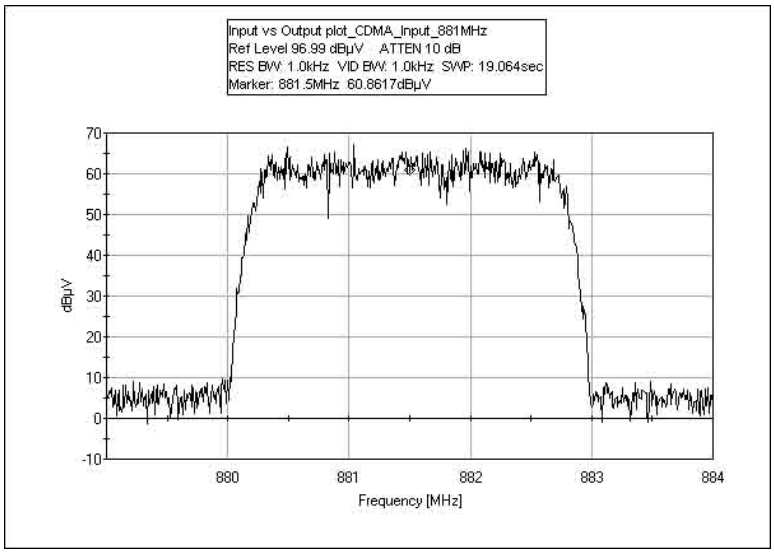
INPUT PLOT - AMPS DATA 893 MHz



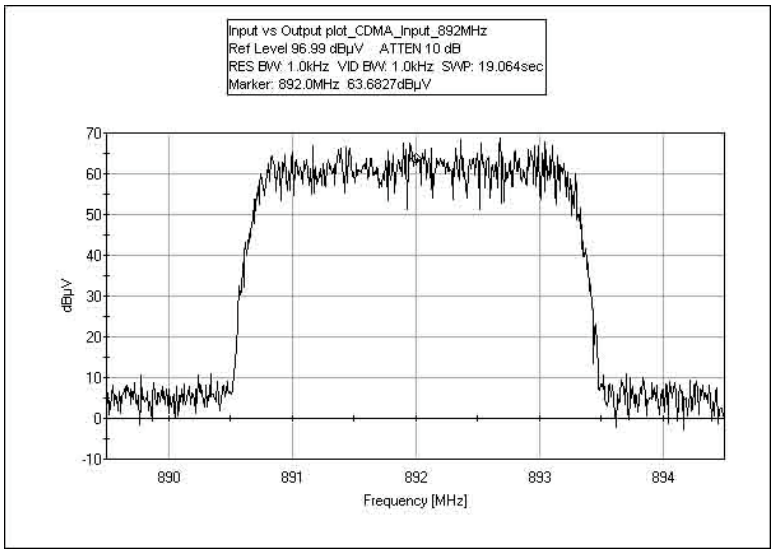
INPUT PLOT - CDMA 871 MHz



INPUT PLOT - CDMA 881 MHz



INPUT PLOT - CDMA 892 MHz



OUTPUT PLOTS

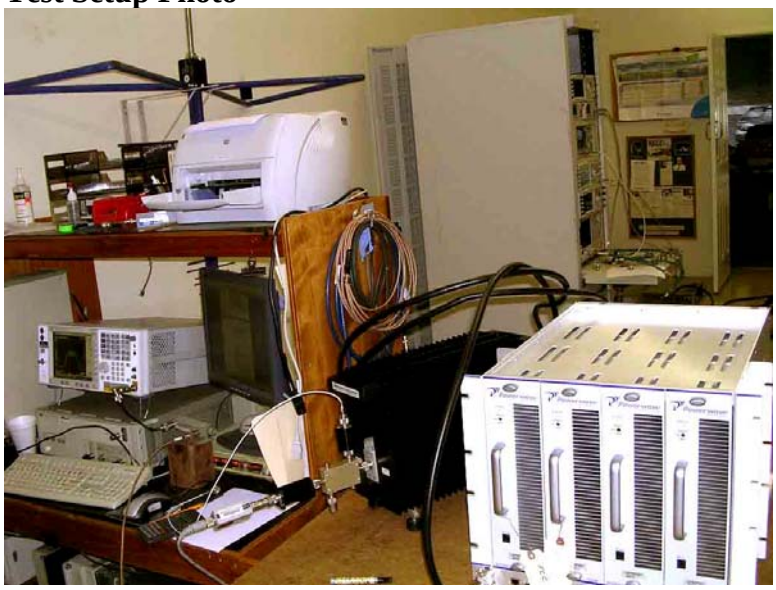
Test Equipment

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

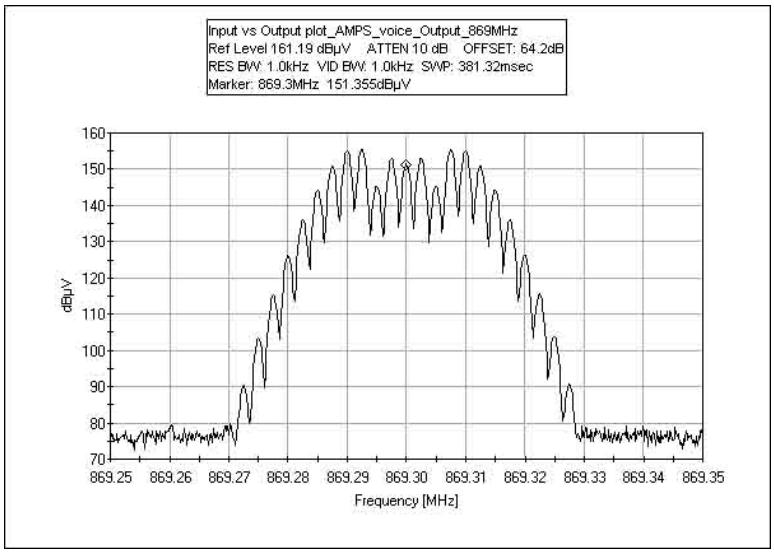
Test Conditions

RF in of section 2 is connected to remote signal generator. RF out of section 2 is connected to a RF load. All other ports are left blank. The EUT obtains DC power from a remote power source; the RF Output was verified prior to testing. Power: 500 Watts. Output wave form evaluated at the antenna port. Input wave form evaluated at the RF in port.

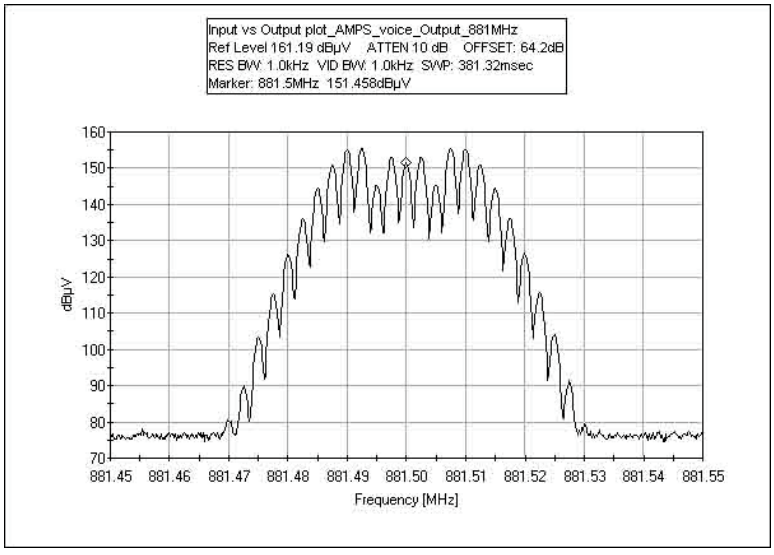
Test Setup Photo



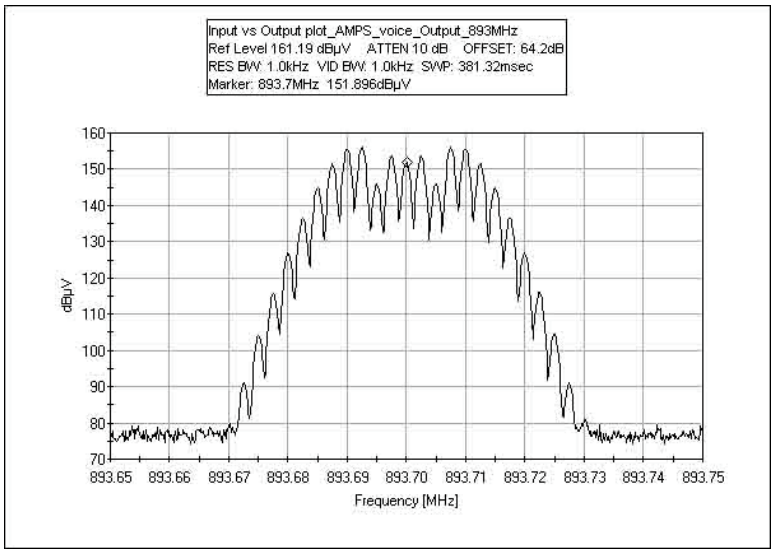
OUTPUT PLOT - AMPS VOICE 869 MHz



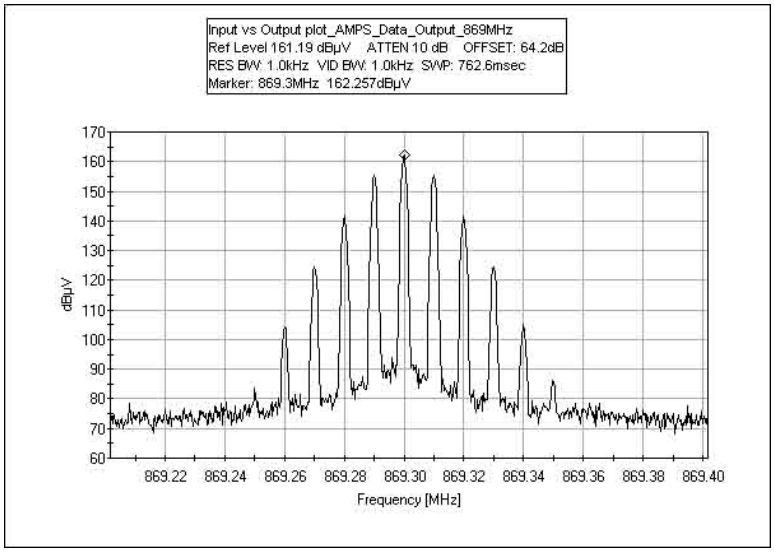
OUTPUT PLOT - AMPS VOICE 881 MHz



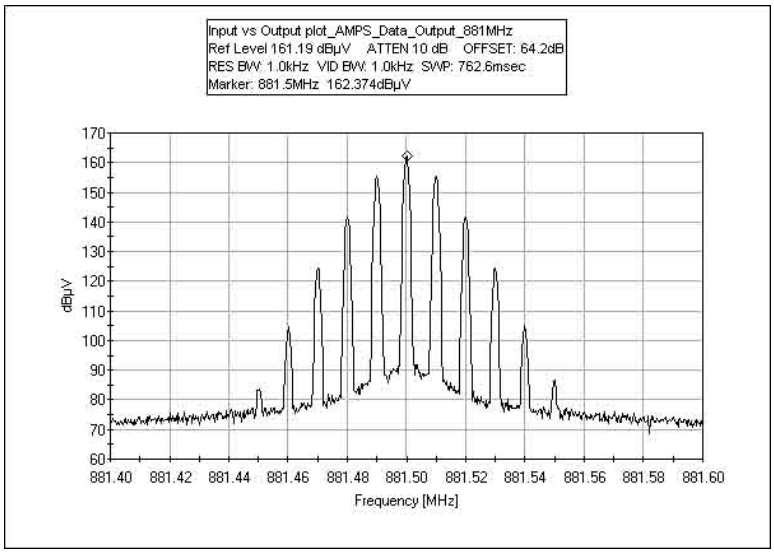
OUTPUT PLOT - AMPS VOICE 893 MHz



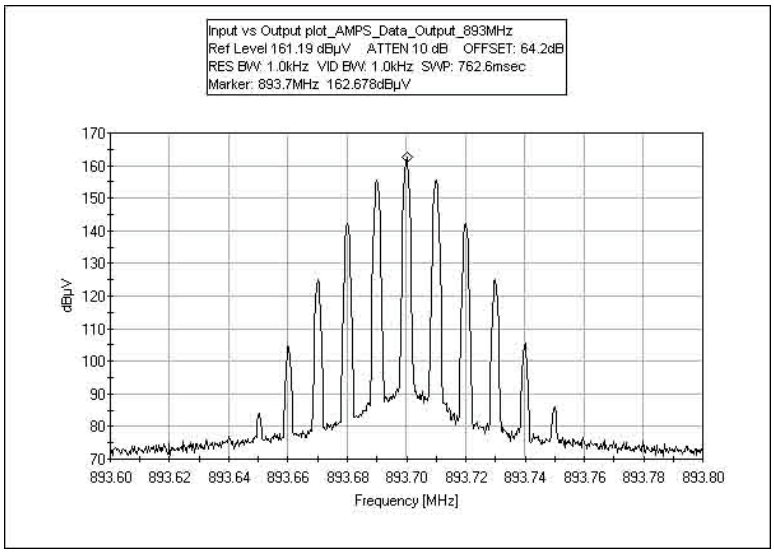
OUTPUT PLOT - AMPS DATA 869 MHz



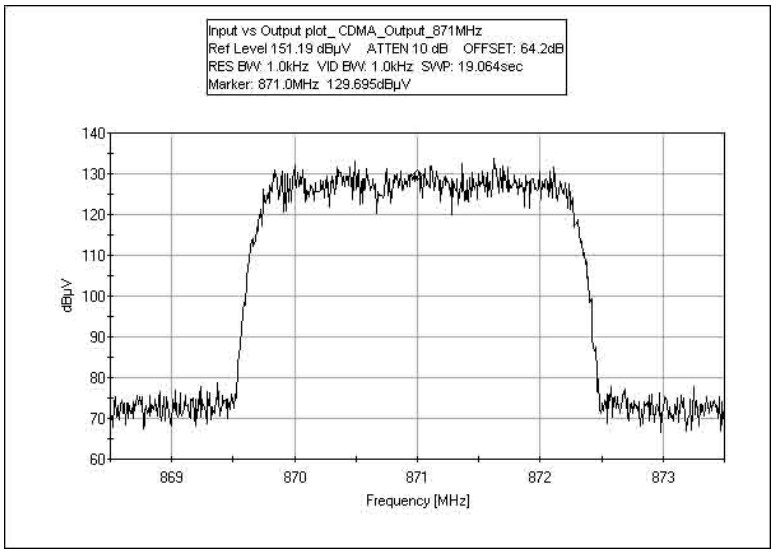
OUTPUT PLOT - AMPS DATA 881 MHz



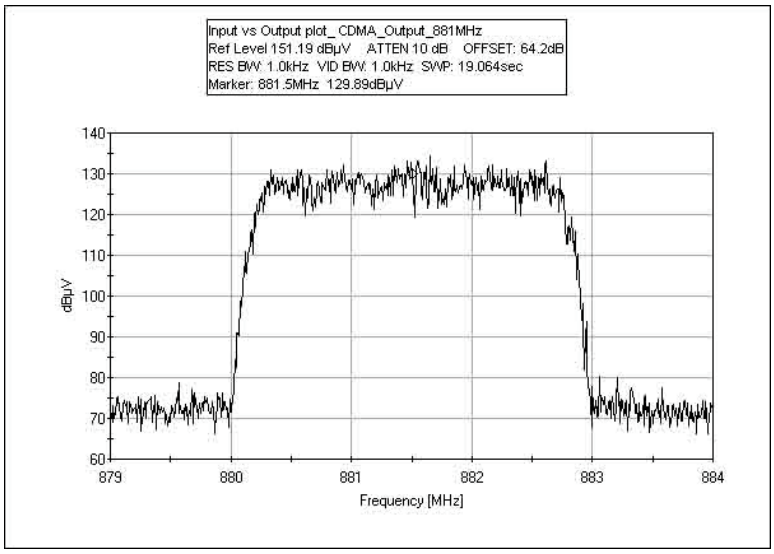
OUTPUT PLOT - AMPS DATA 893 MHz



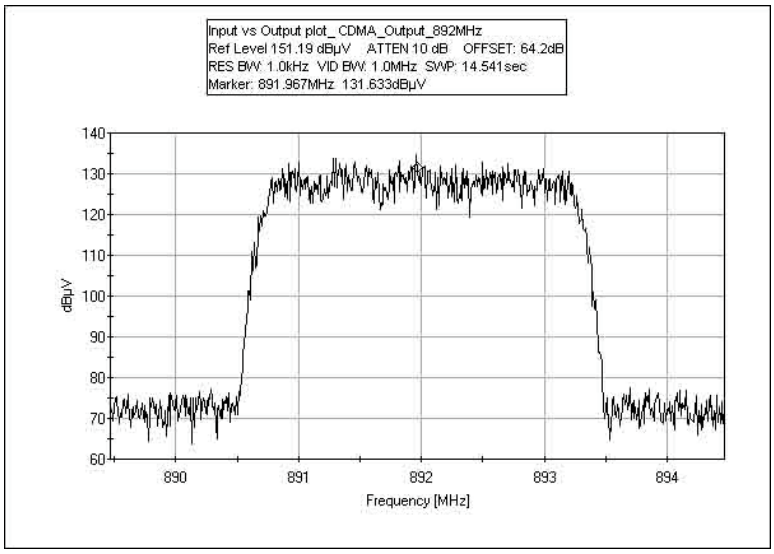
OUTPUT PLOT - CDMA 871 MHz



OUTPUT PLOT - CDMA 881 MHz



OUTPUT PLOT - CDMA 892 MHz



BLOCKEDGE PLOTS

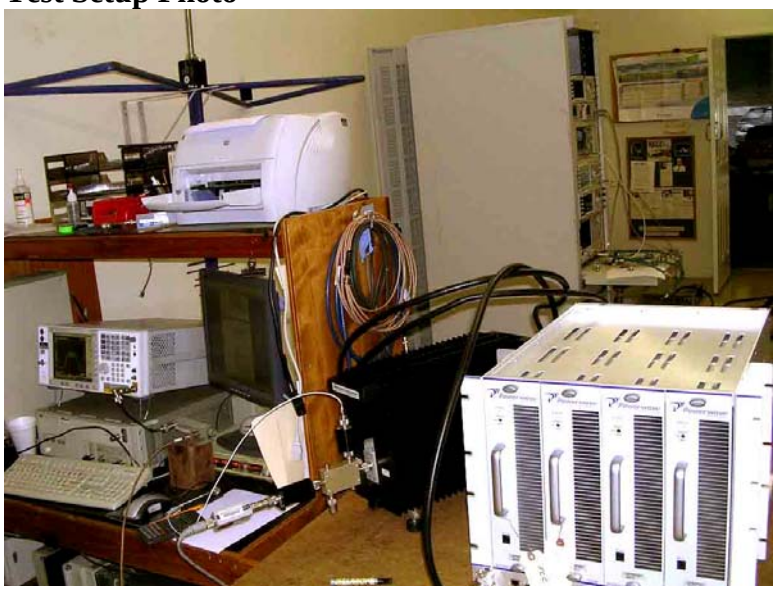
Test Equipment

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

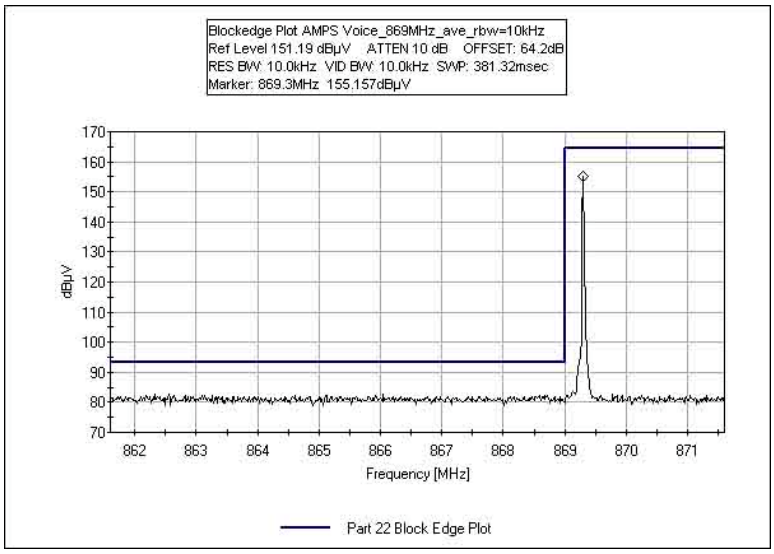
Test Conditions

RF in of section 2 is connected to remote signal generator. RF out of section 2 is connected to a RF load. All other ports are left blank. The EUT obtains DC power from a remote power source; the RF Output was verified prior to testing. Power: 500 Watts. Output wave form evaluated at the antenna port. Input wave form evaluated at the RF in port. Note: Due to the high RF output level involved, the noise floor level measured at RBW of 100kHz is less than 10 dB from the limit line. Additional block-edge plot was measured at 10kHz to show the absence of offending emission.

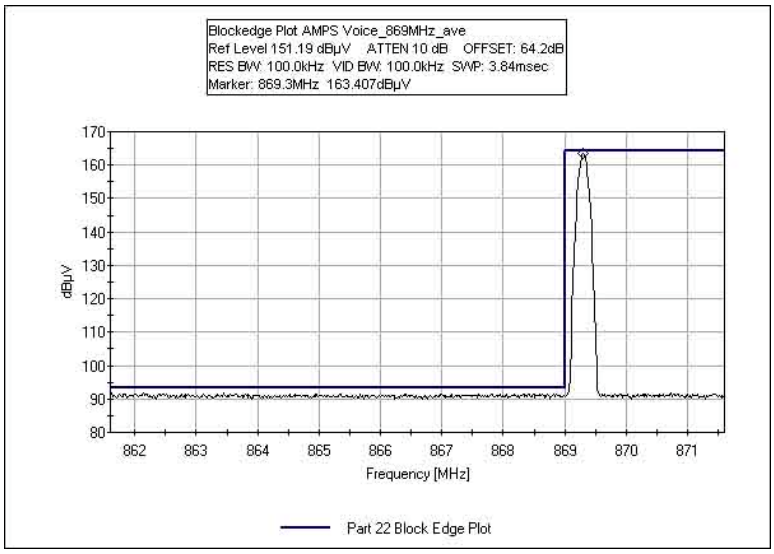
Test Setup Photo



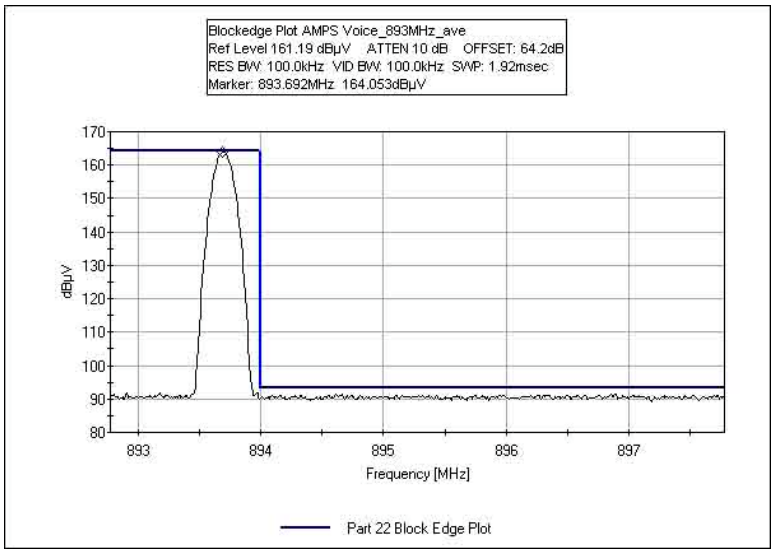
BLOCKEDGE PLOT - AMPS VOICE 869 MHz



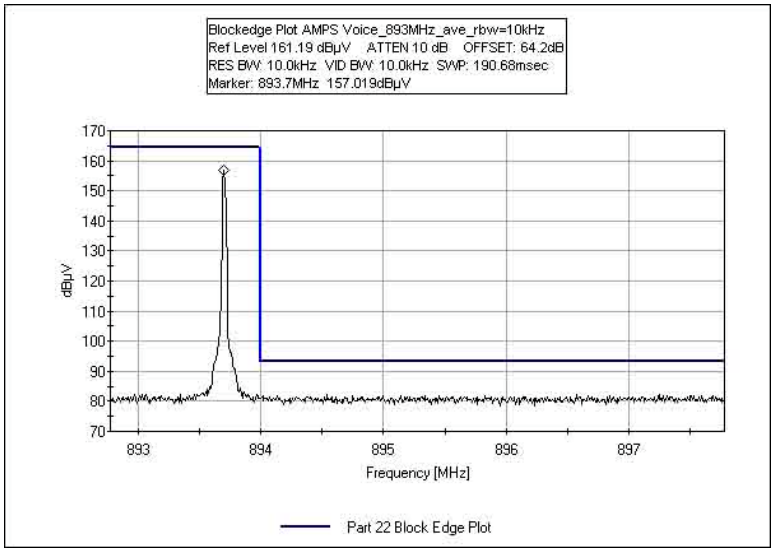
BLOCKEDGE PLOT - AMPS VOICE 869 MHz



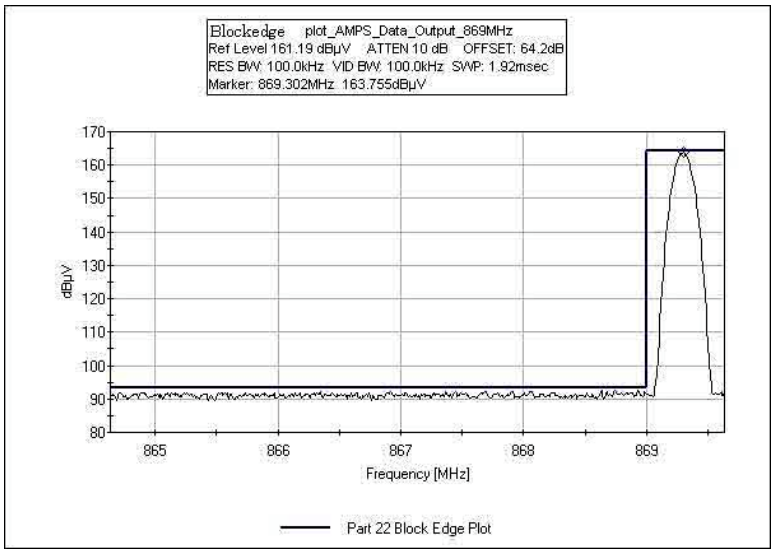
BLOCKEDGE PLOT - AMPS VOICE 893 MHz



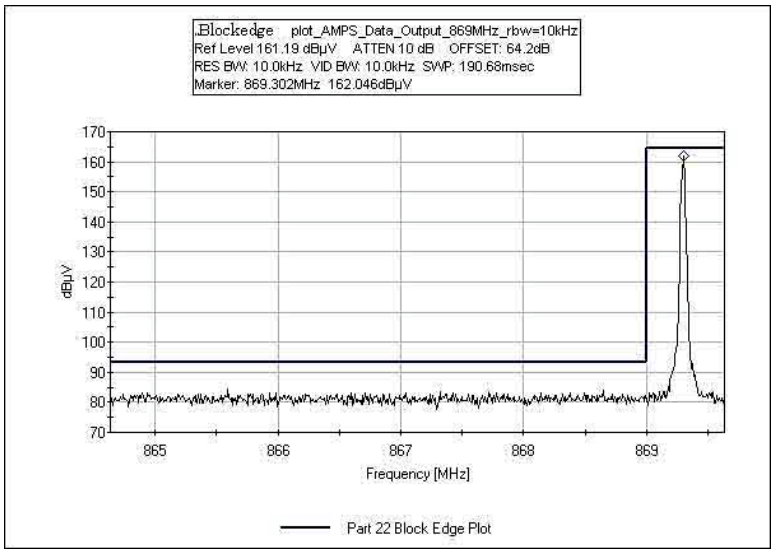
BLOCKEDGE PLOT - AMPS VOICE 893 MHz



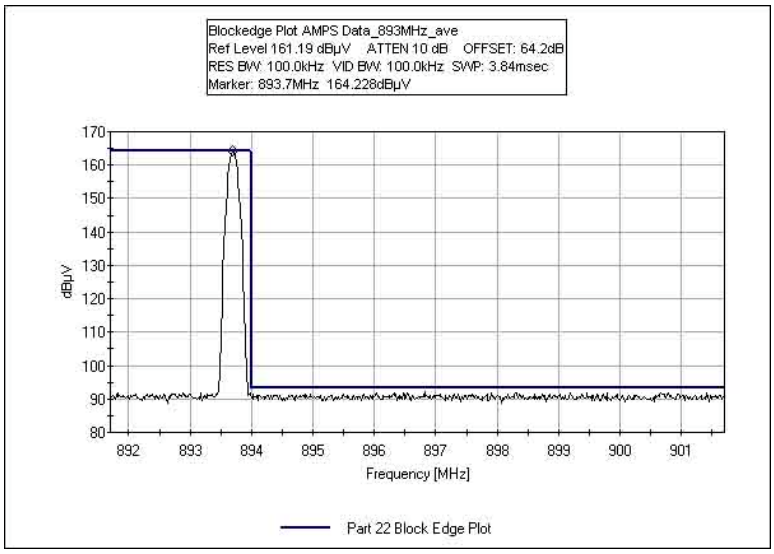
BLOCKEDGE PLOT - AMPS DATA 869 MHz



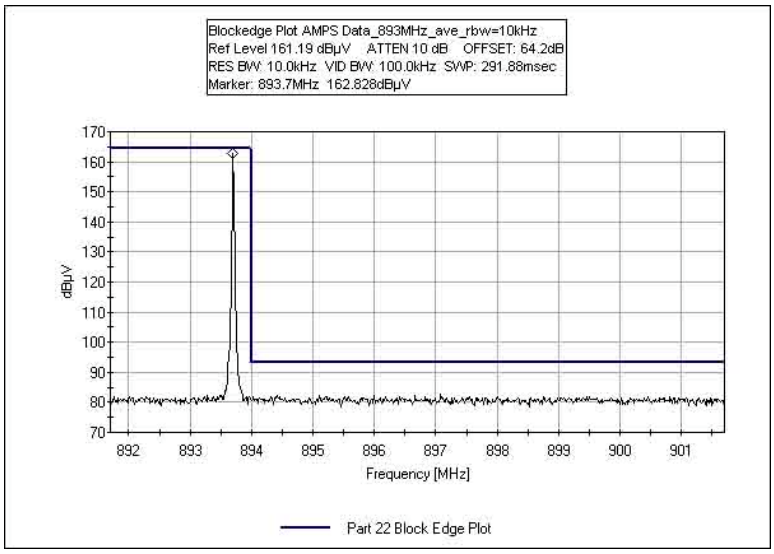
BLOCKEDGE PLOT - AMPS DATA 869 MHz



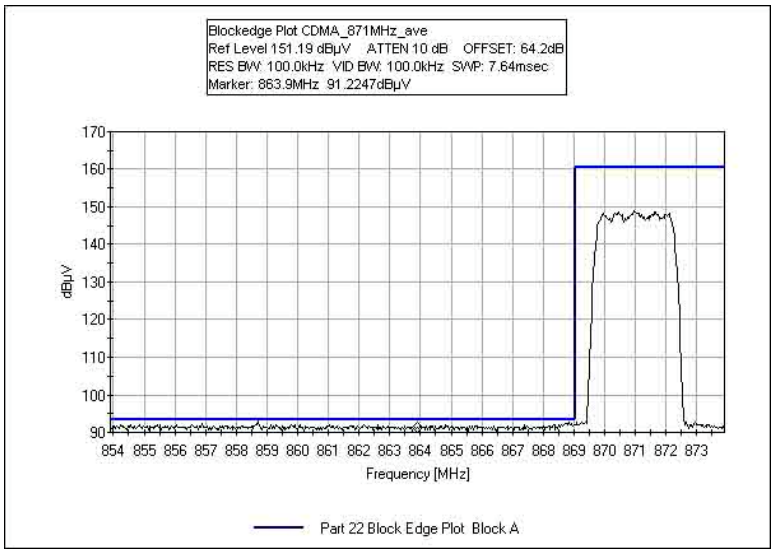
BLOCKEDGE PLOT - AMPS DATA 893 MHz



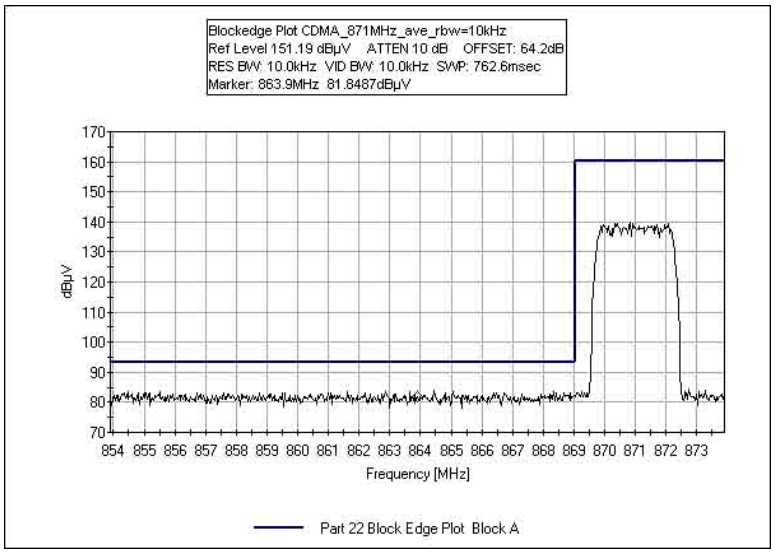
BLOCKEDGE PLOT - AMPS DATA 893 MHz



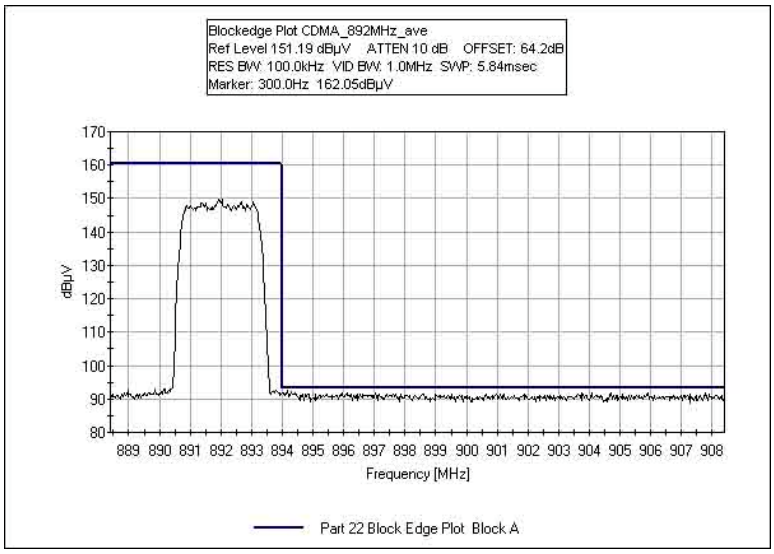
BLOCKEDGE PLOT - CDMA 871 MHz



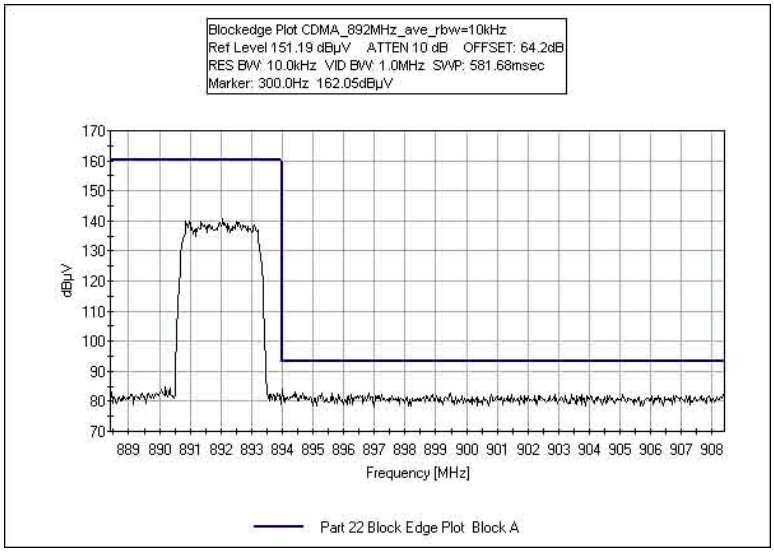
BLOCKEDGE PLOT - CDMA 871 MHz



BLOCKEDGE PLOT - CDMA 892 MHz



BLOCKEDGE PLOT - CDMA 892 MHz



INTERMODULATION PLOTS

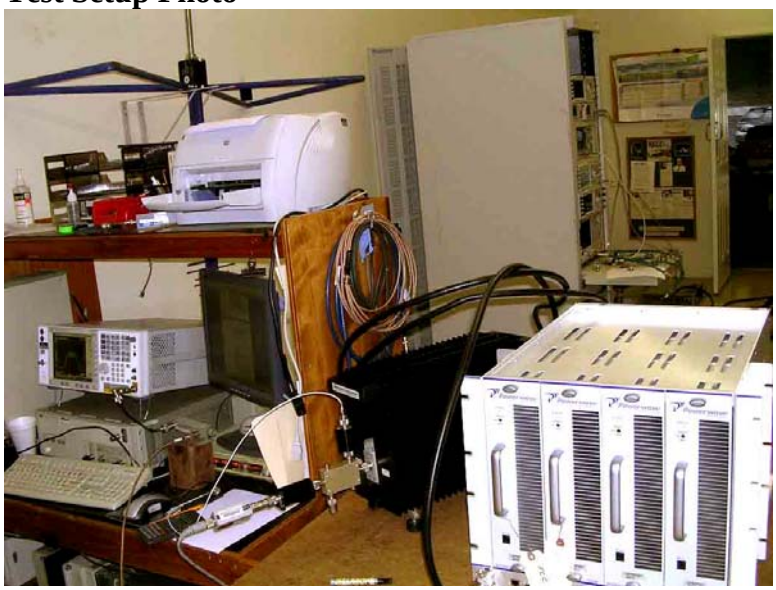
Test Equipment

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

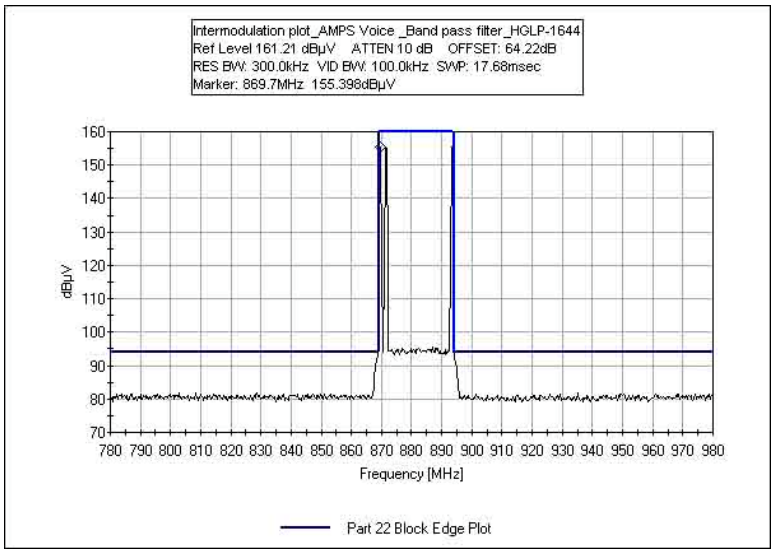
Test Conditions

RF in of section 2 is connected to remote signal generator. RF out of section 2 is connected to a RF load. All other ports are left blank. The EUT obtains DC power from a remote power source; the RF Output was verified prior to testing. Power: 500 Watts. Output wave form evaluated at the antenna port. Input wave form evaluated at the RF in port.

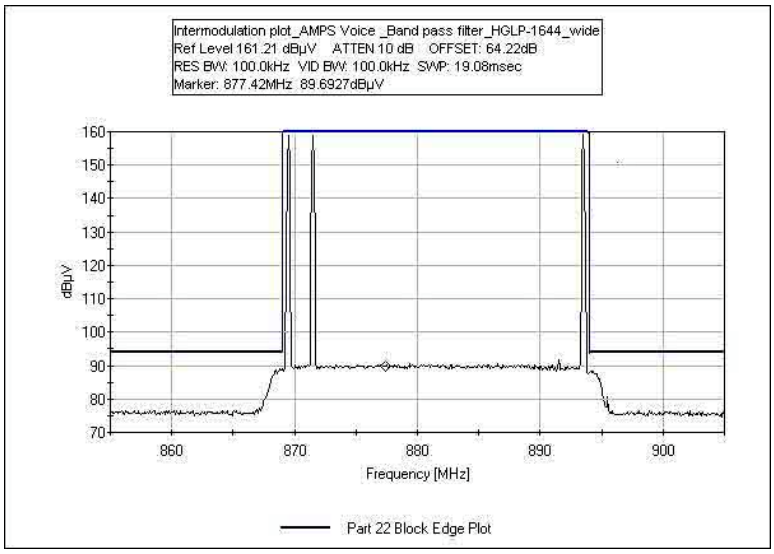
Test Setup Photo



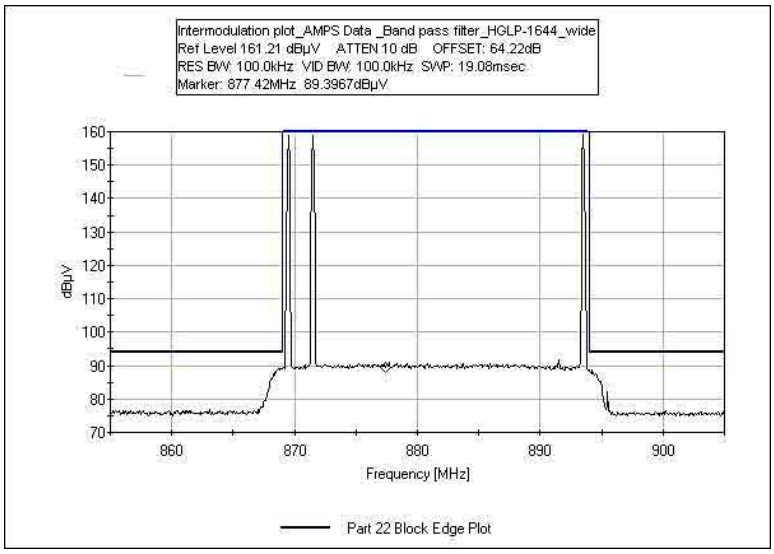
INTERMODULATION PLOT - AMPS VOICE



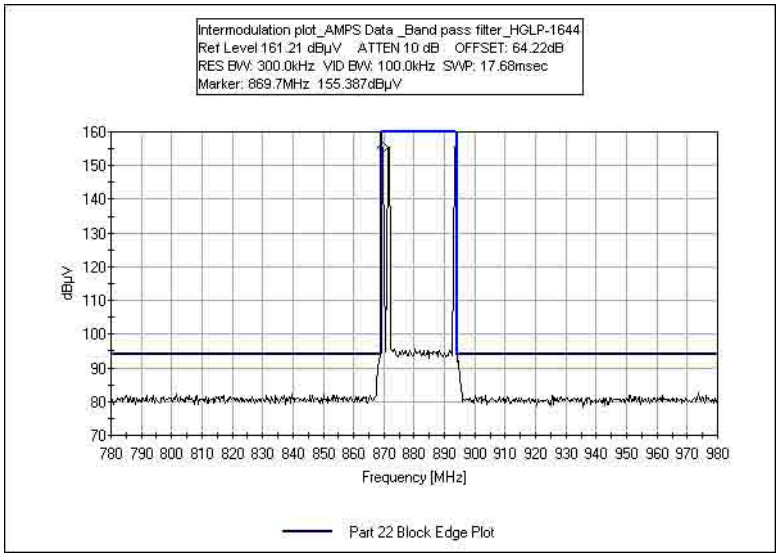
INTERMODULATION PLOT - AMPS VOICE



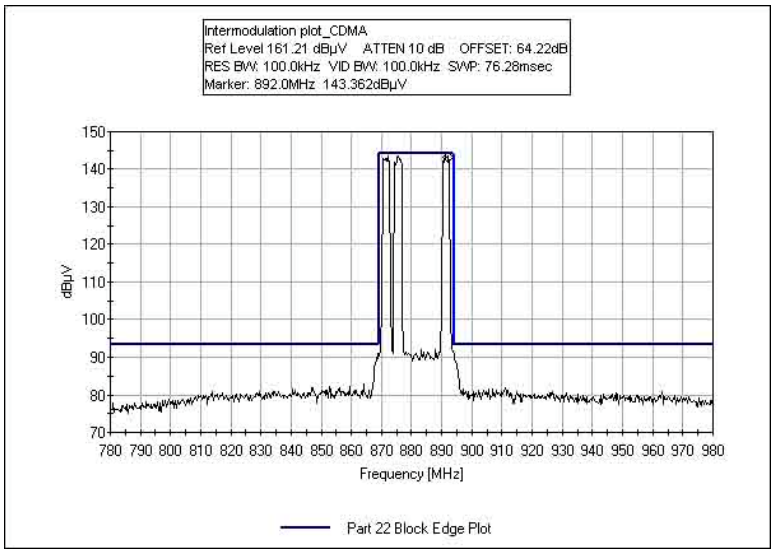
INTERMODULATION PLOT - AMPS DATA



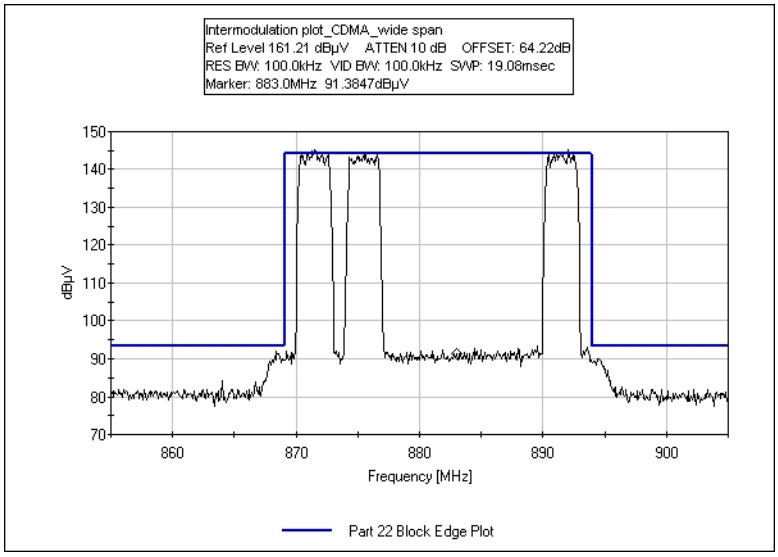
INTERMODULATION PLOT - AMPS DATA



INTERMODULATION PLOT - CDMA



INTERMODULATION PLOT - CDMA WIDE SPAN



APPENDIX A: ADDITIONAL TESTING

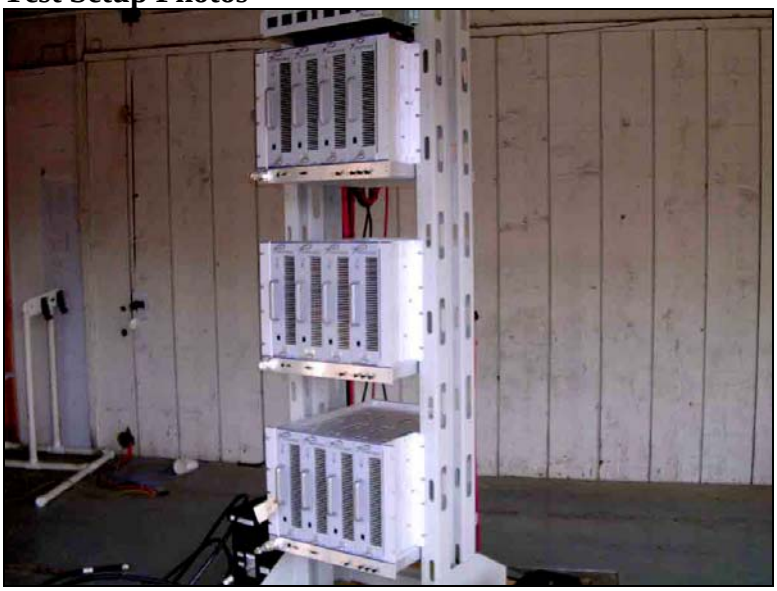
FCC 15.109 – RADIATED EMISSIONS

Test Equipment

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
Spectrum Analyzer	02672	Agilent	E4446A	US44300438	011405	011407
Bilog Antenna	01995	Chase	CBL6111C	2451	020206	020208
Pre-amp	00309	HP	8447D	1937A02548	060106	060108
Antenna cable	P05198	Belden	8268 (RG-214)	Cable#15	010305	010307
Pre-amp to SA cable	P05050	Pasternack	RG223/U	Cable#10	051605	051607

ANALYZER BANDWIDTH SETTINGS PER FREQUENCY RANGE			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz

Test Setup Photos



Test Data Sheets

Test Location: CKC Laboratories, Inc. •110. N. Olinda Place. • Brea, CA 92821 • (714) 993-6112

Customer:	**Powerwave Technologies, Inc.**		
Specification:	**FCC 15.109 Class A**		
Work Order #:	**85903**	Date:	12/15/2006
Test Type:	**Radiated Scan**	Time:	09:55:55
Equipment:	**Power Amplifier Frame**	Sequence#:	1
Manufacturer:	Powerwave Technologies, Inc	Tested By:	E. Wong
Model:	PAF-08XX-XXX		
S/N:	NA		

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

Function	Manufacturer	Model #	S/N
Power Amplifier Frame*	Powerwave Technologies, Inc	PAF-08XX-XXX	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Power Ten	NA	NA

Test Conditions / Notes:

The floor standing EUT is placed on the turntable. All 12 slots are populated with RF Amplifiers. Neither I/O cables nor RF cables are connected to the EUT. The EUT is connected to a remote DC Power Supply. EUT is set in idle mode during the test. 27VDC (from a 220 3 phase source), 22°C, 35% relative humidity.

Transducer Legend:

T1=Preamp 8447D 060108	T2=Bilog AN01995 020208 Chase
T3=Cable #10 051607	T4=Cable #15, Site A, 010307

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	768.007M QP	48.0	-27.0	+22.1	+0.5	+5.5	-10.0	39.1	46.4	-7.3	Vert
^	768.007M	50.6	-27.0	+22.1	+0.5	+5.5	-10.0	41.7	46.4	-4.7	Vert
3	375.000M QP	56.8	-27.7	+15.2	+0.3	+3.7	-10.0	38.3	46.4	-8.1	Horiz
^	375.000M	57.7	-27.7	+15.2	+0.3	+3.7	-10.0	39.2	46.4	-7.2	Horiz
5	768.015M QP	46.3	-27.0	+22.1	+0.5	+5.5	-10.0	37.4	46.4	-9.0	Horiz
^	768.015M	47.9	-27.0	+22.1	+0.5	+5.5	-10.0	39.0	46.4	-7.4	Horiz
7	240.000M QP	59.1	-27.7	+11.8	+0.2	+2.9	-10.0	36.3	46.4	-10.1	Horiz
^	240.000M	60.2	-27.7	+11.8	+0.2	+2.9	-10.0	37.4	46.4	-9.0	Horiz
9	210.000M QP	58.5	-27.6	+9.6	+0.2	+2.6	-10.0	33.3	43.5	-10.2	Horiz
^	210.000M	59.8	-27.6	+9.6	+0.2	+2.6	-10.0	34.6	43.5	-8.9	Horiz
11	210.004M QP	58.3	-27.6	+9.6	+0.2	+2.6	-10.0	33.1	43.5	-10.4	Vert
^	210.004M	61.6	-27.6	+9.6	+0.2	+2.6	-10.0	36.4	43.5	-7.1	Vert
13	319.995M QP	56.0	-27.6	+13.7	+0.3	+3.4	-10.0	35.8	46.4	-10.6	Vert
^	319.995M	58.1	-27.6	+13.7	+0.3	+3.4	-10.0	37.9	46.4	-8.5	Vert
15	704.000M QP	45.9	-27.1	+20.7	+0.5	+5.2	-10.0	35.2	46.4	-11.2	Vert
^	704.000M	47.1	-27.1	+20.7	+0.5	+5.2	-10.0	36.4	46.4	-10.0	Vert
17	240.004M QP	57.6	-27.7	+11.8	+0.2	+2.9	-10.0	34.8	46.4	-11.6	Vert
^	240.004M	60.2	-27.7	+11.8	+0.2	+2.9	-10.0	37.4	46.4	-9.0	Vert
19	345.000M QP	52.9	-27.6	+14.4	+0.3	+3.6	-10.0	33.6	46.4	-12.8	Horiz
^	345.000M	53.0	-27.6	+14.4	+0.3	+3.6	-10.0	33.7	46.4	-12.7	Horiz

21 QP	255.000M	55.1	-27.7	+12.6	+0.2	+3.0	-10.0	33.2	46.4	-13.2	Horiz
^	255.000M	60.3	-27.7	+12.6	+0.2	+3.0	-10.0	38.4	46.4	-8.0	Horiz
23	391.019M	51.4	-27.8	+15.6	+0.3	+3.7	-10.0	33.2	46.4	-13.2	Vert
24	774.995M	41.8	-27.1	+22.0	+0.6	+5.5	-10.0	32.8	46.4	-13.6	Vert
25	740.957M	41.7	-27.0	+21.9	+0.5	+5.4	-10.0	32.5	46.4	-13.9	Horiz
26	390.009M	50.7	-27.8	+15.6	+0.3	+3.7	-10.0	32.5	46.4	-13.9	Horiz
27	784.063M	41.5	-27.1	+22.0	+0.6	+5.5	-10.0	32.5	46.4	-13.9	Horiz
28	560.314M	44.9	-27.4	+19.7	+0.5	+4.6	-10.0	32.3	46.4	-14.1	Horiz
29	775.007M	41.2	-27.1	+22.0	+0.6	+5.5	-10.0	32.2	46.4	-14.2	Vert
30	524.999M	45.5	-27.5	+18.9	+0.5	+4.4	-10.0	31.8	46.4	-14.6	Horiz
31	874.959M	39.2	-27.2	+23.2	+0.6	+5.9	-10.0	31.7	46.4	-14.7	Vert
32	41.050M	47.3	-27.8	+13.6	+0.1	+1.1	-10.0	24.3	39.1	-14.8	Vert
33	449.987M	47.8	-27.6	+17.1	+0.3	+4.0	-10.0	31.6	46.4	-14.8	Horiz
34	760.011M	40.1	-27.0	+22.1	+0.5	+5.4	-10.0	31.1	46.4	-15.3	Vert
35	782.724M	40.1	-27.1	+22.0	+0.6	+5.5	-10.0	31.1	46.4	-15.3	Horiz
36	280.674M	52.5	-27.7	+12.9	+0.3	+3.1	-10.0	31.1	46.4	-15.3	Vert
37	404.980M	48.8	-27.8	+15.9	+0.3	+3.7	-10.0	30.9	46.4	-15.5	Horiz
38	405.027M	48.6	-27.8	+15.9	+0.3	+3.7	-10.0	30.7	46.4	-15.7	Vert
39	285.009M	51.8	-27.7	+13.0	+0.3	+3.1	-10.0	30.5	46.4	-15.9	Vert
40	512.013M	44.6	-27.6	+18.5	+0.4	+4.3	-10.0	30.2	46.4	-16.2	Vert
41	720.023M	40.2	-27.1	+21.3	+0.5	+5.3	-10.0	30.2	46.4	-16.2	Vert
42	524.995M	43.8	-27.5	+18.9	+0.5	+4.4	-10.0	30.1	46.4	-16.3	Vert
43	896.026M	37.3	-27.2	+23.2	+0.6	+6.0	-10.0	29.9	46.4	-16.5	Vert

44	319.984M	49.6	-27.6	+13.7	+0.3	+3.4	-10.0	29.4	46.4	-17.0	Horiz
45	191.989M	52.3	-27.6	+8.9	+0.2	+2.6	-10.0	26.4	43.5	-17.1	Vert
46	254.994M	50.9	-27.7	+12.6	+0.2	+3.0	-10.0	29.0	46.4	-17.4	Vert
47	761.008M	37.6	-27.0	+22.1	+0.5	+5.4	-10.0	28.6	46.4	-17.8	Vert
48	280.020M	50.0	-27.7	+12.9	+0.3	+3.1	-10.0	28.6	46.4	-17.8	Vert
49	832.020M	36.6	-27.1	+22.8	+0.6	+5.7	-10.0	28.6	46.4	-17.8	Horiz
50	269.992M	50.1	-27.7	+12.8	+0.3	+3.1	-10.0	28.6	46.4	-17.8	Horiz
51	224.991M	52.5	-27.6	+10.8	+0.2	+2.7	-10.0	28.6	46.4	-17.8	Horiz
52	315.017M	48.9	-27.6	+13.6	+0.3	+3.3	-10.0	28.5	46.4	-17.9	Horiz
53	312.983M	48.7	-27.6	+13.6	+0.3	+3.3	-10.0	28.3	46.4	-18.1	Vert
54	269.985M	49.6	-27.7	+12.8	+0.3	+3.1	-10.0	28.1	46.4	-18.3	Vert
55	480.006M	43.3	-27.6	+17.7	+0.4	+4.2	-10.0	28.0	46.4	-18.4	Vert
56	280.688M	49.4	-27.7	+12.9	+0.3	+3.1	-10.0	28.0	46.4	-18.4	Horiz
57	194.999M	51.0	-27.6	+8.8	+0.2	+2.6	-10.0	25.0	43.5	-18.5	Horiz
58	480.015M	43.2	-27.6	+17.7	+0.4	+4.2	-10.0	27.9	46.4	-18.5	Horiz
59	960.029M	36.6	-27.1	+24.7	+0.6	+6.2	-10.0	31.0	49.5	-18.5	Horiz
60	800.015M	36.8	-27.1	+21.9	+0.6	+5.6	-10.0	27.8	46.4	-18.6	Horiz
61	191.995M	50.8	-27.6	+8.9	+0.2	+2.6	-10.0	24.9	43.5	-18.6	Horiz
62	256.016M	49.6	-27.7	+12.6	+0.2	+3.0	-10.0	27.7	46.4	-18.7	Vert
63	249.997M	49.6	-27.7	+12.5	+0.2	+3.0	-10.0	27.6	46.4	-18.8	Horiz
64	434.999M	44.4	-27.7	+16.7	+0.3	+3.9	-10.0	27.6	46.4	-18.8	Horiz
65	511.994M	42.0	-27.6	+18.5	+0.4	+4.3	-10.0	27.6	46.4	-18.8	Horiz
66	792.032M	36.5	-27.1	+21.9	+0.6	+5.6	-10.0	27.5	46.4	-18.9	Horiz

67	464.990M	43.3	-27.6	+17.4	+0.3	+4.1	-10.0	27.5	46.4	-18.9	Horiz
68	760.977M	36.3	-27.0	+22.1	+0.5	+5.4	-10.0	27.3	46.4	-19.1	Horiz
69	397.985M	45.2	-27.8	+15.8	+0.3	+3.7	-10.0	27.2	46.4	-19.2	Vert
70	448.005M	43.4	-27.6	+17.1	+0.3	+4.0	-10.0	27.2	46.4	-19.2	Horiz
71	180.000M	50.2	-27.7	+9.0	+0.2	+2.5	-10.0	24.2	43.5	-19.3	Horiz
72	299.020M	47.9	-27.6	+13.2	+0.3	+3.2	-10.0	27.0	46.4	-19.4	Vert
73	315.023M	47.4	-27.6	+13.6	+0.3	+3.3	-10.0	27.0	46.4	-19.4	Vert
74	570.007M	39.4	-27.4	+19.7	+0.5	+4.6	-10.0	26.8	46.4	-19.6	Horiz
75	419.999M	44.1	-27.7	+16.3	+0.3	+3.8	-10.0	26.8	46.4	-19.6	Horiz
76	273.680M	48.2	-27.7	+12.8	+0.3	+3.1	-10.0	26.7	46.4	-19.7	Vert
77	383.995M	44.9	-27.7	+15.4	+0.3	+3.7	-10.0	26.6	46.4	-19.8	Vert
78	294.669M	47.4	-27.6	+13.1	+0.3	+3.2	-10.0	26.4	46.4	-20.0	Vert
79	287.662M	47.4	-27.6	+13.0	+0.3	+3.2	-10.0	26.3	46.4	-20.1	Vert
80	809.996M	35.0	-27.1	+22.2	+0.6	+5.6	-10.0	26.3	46.4	-20.1	Horiz
81	285.005M	47.6	-27.7	+13.0	+0.3	+3.1	-10.0	26.3	46.4	-20.1	Horiz
82	224.983M	50.1	-27.6	+10.8	+0.2	+2.7	-10.0	26.2	46.4	-20.2	Vert
83	539.977M	39.2	-27.4	+19.4	+0.5	+4.5	-10.0	26.2	46.4	-20.2	Horiz
84	195.002M	49.3	-27.6	+8.8	+0.2	+2.6	-10.0	23.3	43.5	-20.2	Vert
85	899.993M	33.6	-27.2	+23.2	+0.6	+6.0	-10.0	26.2	46.4	-20.2	Horiz
86	528.358M	39.7	-27.5	+19.0	+0.5	+4.4	-10.0	26.1	46.4	-20.3	Horiz
87	772.040M	34.9	-27.0	+22.1	+0.5	+5.5	-10.0	26.0	46.4	-20.4	Vert
88	666.636M	37.0	-27.1	+20.5	+0.5	+5.1	-10.0	26.0	46.4	-20.4	Horiz
89	915.020M	32.5	-27.2	+23.7	+0.6	+6.1	-10.0	25.7	46.4	-20.7	Horiz

90	179.989M	48.8	-27.7	+9.0	+0.2	+2.5	-10.0	22.8	43.5	-20.7	Vert
91	449.151M	41.8	-27.6	+17.1	+0.3	+4.0	-10.0	25.6	46.4	-20.8	Vert
92	769.338M	34.3	-27.0	+22.1	+0.5	+5.5	-10.0	25.4	46.4	-21.0	Vert
93	549.977M	38.1	-27.4	+19.7	+0.5	+4.5	-10.0	25.4	46.4	-21.0	Horiz
94	817.951M	33.6	-27.1	+22.4	+0.6	+5.7	-10.0	25.2	46.4	-21.2	Vert
95	811.053M	33.8	-27.1	+22.2	+0.6	+5.6	-10.0	25.1	46.4	-21.3	Vert
96	291.991M	46.0	-27.6	+13.1	+0.3	+3.2	-10.0	25.0	46.4	-21.4	Vert
97	690.001M	35.6	-27.1	+20.6	+0.5	+5.2	-10.0	24.8	46.4	-21.6	Horiz
98	299.994M	45.6	-27.6	+13.2	+0.3	+3.2	-10.0	24.7	46.4	-21.7	Vert
99	816.039M	33.0	-27.1	+22.4	+0.6	+5.7	-10.0	24.6	46.4	-21.8	Horiz
100	300.015M	45.4	-27.6	+13.2	+0.3	+3.2	-10.0	24.5	46.4	-21.9	Horiz
101	272.021M	46.0	-27.7	+12.8	+0.3	+3.1	-10.0	24.5	46.4	-21.9	Vert
102	733.313M	33.9	-27.0	+21.7	+0.5	+5.3	-10.0	24.4	46.4	-22.0	Horiz
103	736.054M	33.5	-27.0	+21.8	+0.5	+5.3	-10.0	24.1	46.4	-22.3	Horiz
104	200.003M	47.2	-27.6	+8.8	+0.2	+2.6	-10.0	21.2	43.5	-22.3	Horiz
105	249.989M	46.1	-27.7	+12.5	+0.2	+3.0	-10.0	24.1	46.4	-22.3	Vert
106	312.996M	44.5	-27.6	+13.6	+0.3	+3.3	-10.0	24.1	46.4	-22.3	Horiz
107	294.643M	45.1	-27.6	+13.1	+0.3	+3.2	-10.0	24.1	46.4	-22.3	Vert
108	912.044M	31.1	-27.2	+23.6	+0.6	+6.0	-10.0	24.1	46.4	-22.3	Vert
109	374.987M	42.5	-27.7	+15.2	+0.3	+3.7	-10.0	24.0	46.4	-22.4	Vert
110	992.032M	32.5	-27.2	+24.6	+0.6	+6.4	-10.0	26.9	49.5	-22.6	Horiz
111	499.993M	38.6	-27.6	+18.1	+0.4	+4.3	-10.0	23.8	46.4	-22.6	Horiz
112	383.995M	42.0	-27.7	+15.4	+0.3	+3.7	-10.0	23.7	46.4	-22.7	Vert

113	360.017M	42.5	-27.6	+14.8	+0.3	+3.6	-10.0	23.6	46.4	-22.8	Horiz
114	522.754M	37.4	-27.5	+18.8	+0.4	+4.4	-10.0	23.5	46.4	-22.9	Horiz
115	554.979M	36.2	-27.4	+19.7	+0.5	+4.5	-10.0	23.5	46.4	-22.9	Horiz
116	256.018M	45.4	-27.7	+12.6	+0.2	+3.0	-10.0	23.5	46.4	-22.9	Horiz
117	149.984M	44.8	-27.7	+11.0	+0.2	+2.2	-10.0	20.5	43.5	-23.0	Horiz
118	584.989M	35.8	-27.4	+19.8	+0.5	+4.7	-10.0	23.4	46.4	-23.0	Horiz
119	928.059M	29.6	-27.1	+24.1	+0.6	+6.1	-10.0	23.3	46.4	-23.1	Horiz
120	390.012M	41.4	-27.8	+15.6	+0.3	+3.7	-10.0	23.2	46.4	-23.2	Vert
121	384.012M	41.4	-27.7	+15.4	+0.3	+3.7	-10.0	23.1	46.4	-23.3	Horiz
122	206.011M	45.7	-27.6	+9.3	+0.2	+2.6	-10.0	20.2	43.5	-23.3	Vert
123	397.994M	41.1	-27.8	+15.8	+0.3	+3.7	-10.0	23.1	46.4	-23.3	Horiz
124	399.985M	41.1	-27.8	+15.8	+0.3	+3.7	-10.0	23.1	46.4	-23.3	Horiz
125	266.651M	44.6	-27.7	+12.7	+0.3	+3.1	-10.0	23.0	46.4	-23.4	Vert
126	406.410M	40.7	-27.8	+16.0	+0.3	+3.7	-10.0	22.9	46.4	-23.5	Vert
127	399.993M	40.9	-27.8	+15.8	+0.3	+3.7	-10.0	22.9	46.4	-23.5	Horiz
128	466.663M	38.6	-27.6	+17.4	+0.3	+4.1	-10.0	22.8	46.4	-23.6	Horiz
129	230.617M	46.2	-27.6	+11.2	+0.2	+2.8	-10.0	22.8	46.4	-23.6	Horiz
130	164.987M	45.0	-27.7	+9.9	+0.2	+2.4	-10.0	19.8	43.5	-23.7	Horiz
131	391.019M	40.9	-27.8	+15.6	+0.3	+3.7	-10.0	22.7	46.4	-23.7	Horiz
132	324.999M	42.7	-27.6	+13.9	+0.3	+3.4	-10.0	22.7	46.4	-23.7	Vert
133	399.970M	40.6	-27.8	+15.8	+0.3	+3.7	-10.0	22.6	46.4	-23.8	Vert
134	660.029M	33.8	-27.1	+20.4	+0.5	+5.0	-10.0	22.6	46.4	-23.8	Horiz
135	533.003M	36.0	-27.5	+19.2	+0.5	+4.4	-10.0	22.6	46.4	-23.8	Vert

136	483.313M	37.7	-27.6	+17.8	+0.4	+4.2	-10.0	22.5	46.4	-23.9	Horiz
137	408.017M	40.2	-27.8	+16.0	+0.3	+3.8	-10.0	22.5	46.4	-23.9	Vert
138	408.016M	40.2	-27.8	+16.0	+0.3	+3.8	-10.0	22.5	46.4	-23.9	Horiz
139	230.616M	45.9	-27.6	+11.2	+0.2	+2.8	-10.0	22.5	46.4	-23.9	Vert
140	345.319M	41.7	-27.6	+14.4	+0.3	+3.6	-10.0	22.4	46.4	-24.0	Vert
141	245.776M	44.7	-27.7	+12.2	+0.2	+3.0	-10.0	22.4	46.4	-24.0	Horiz
142	228.014M	46.1	-27.6	+11.0	+0.2	+2.7	-10.0	22.4	46.4	-24.0	Vert
143	286.293M	43.7	-27.7	+13.0	+0.3	+3.1	-10.0	22.4	46.4	-24.0	Vert
144	553.766M	35.0	-27.4	+19.7	+0.5	+4.5	-10.0	22.3	46.4	-24.1	Horiz
145	804.022M	31.1	-27.1	+22.0	+0.6	+5.6	-10.0	22.2	46.4	-24.2	Horiz
146	411.962M	39.7	-27.7	+16.1	+0.3	+3.8	-10.0	22.2	46.4	-24.2	Vert
147	435.000M	38.9	-27.7	+16.7	+0.3	+3.9	-10.0	22.1	46.4	-24.3	Vert
148	840.018M	29.8	-27.1	+23.0	+0.6	+5.8	-10.0	22.1	46.4	-24.3	Horiz
149	516.661M	36.0	-27.5	+18.7	+0.4	+4.4	-10.0	22.0	46.4	-24.4	Vert
150	544.041M	34.9	-27.4	+19.5	+0.5	+4.5	-10.0	22.0	46.4	-24.4	Horiz
151	792.012M	31.0	-27.1	+21.9	+0.6	+5.6	-10.0	22.0	46.4	-24.4	Vert
152	412.880M	39.5	-27.7	+16.1	+0.3	+3.8	-10.0	22.0	46.4	-24.4	Horiz
153	275.018M	43.3	-27.7	+12.9	+0.3	+3.1	-10.0	21.9	46.4	-24.5	Vert
154	200.009M	45.0	-27.6	+8.8	+0.2	+2.6	-10.0	19.0	43.5	-24.5	Vert
155	308.684M	42.4	-27.6	+13.4	+0.3	+3.3	-10.0	21.8	46.4	-24.6	Vert
156	289.633M	42.8	-27.6	+13.1	+0.3	+3.2	-10.0	21.8	46.4	-24.6	Vert
157	349.987M	40.9	-27.6	+14.5	+0.3	+3.6	-10.0	21.7	46.4	-24.7	Horiz
158	733.333M	31.0	-27.0	+21.7	+0.5	+5.3	-10.0	21.5	46.4	-24.9	Vert

159	449.997M	37.5	-27.6	+17.1	+0.3	+4.0	-10.0	21.3	46.4	-25.1	Vert
160	488.868M	36.3	-27.6	+17.9	+0.4	+4.2	-10.0	21.2	46.4	-25.2	Horiz
161	343.992M	40.5	-27.6	+14.4	+0.3	+3.6	-10.0	21.2	46.4	-25.2	Vert
162	134.998M	42.2	-27.6	+11.4	+0.1	+2.1	-10.0	18.2	43.5	-25.3	Horiz
163	153.342M	42.8	-27.7	+10.7	+0.2	+2.2	-10.0	18.2	43.5	-25.3	Horiz
164	731.983M	30.7	-27.0	+21.6	+0.5	+5.3	-10.0	21.1	46.4	-25.3	Horiz
165	327.007M	40.9	-27.6	+13.9	+0.3	+3.4	-10.0	20.9	46.4	-25.5	Vert
166	393.220M	39.1	-27.8	+15.6	+0.3	+3.7	-10.0	20.9	46.4	-25.5	Vert
167	249.021M	42.9	-27.7	+12.4	+0.2	+3.0	-10.0	20.8	46.4	-25.6	Horiz
168	304.009M	41.6	-27.6	+13.3	+0.3	+3.2	-10.0	20.8	46.4	-25.6	Vert
169	431.983M	37.7	-27.7	+16.6	+0.3	+3.9	-10.0	20.8	46.4	-25.6	Vert
170	411.975M	38.2	-27.7	+16.1	+0.3	+3.8	-10.0	20.7	46.4	-25.7	Horiz
171	718.019M	30.7	-27.1	+21.2	+0.5	+5.3	-10.0	20.6	46.4	-25.8	Vert
172	362.482M	39.5	-27.7	+14.8	+0.3	+3.6	-10.0	20.5	46.4	-25.9	Horiz
173	456.040M	36.4	-27.6	+17.2	+0.3	+4.0	-10.0	20.3	46.4	-26.1	Horiz
174	442.331M	36.7	-27.6	+16.9	+0.3	+4.0	-10.0	20.3	46.4	-26.1	Horiz
175	330.015M	40.2	-27.6	+14.0	+0.3	+3.4	-10.0	20.3	46.4	-26.1	Vert
176	208.023M	42.7	-27.6	+9.5	+0.2	+2.6	-10.0	17.4	43.5	-26.1	Horiz
177	461.478M	36.2	-27.6	+17.3	+0.3	+4.1	-10.0	20.3	46.4	-26.1	Horiz
178	415.995M	37.6	-27.7	+16.2	+0.3	+3.8	-10.0	20.2	46.4	-26.2	Vert
179	431.982M	37.1	-27.7	+16.6	+0.3	+3.9	-10.0	20.2	46.4	-26.2	Horiz
180	539.983M	33.0	-27.4	+19.4	+0.5	+4.5	-10.0	20.0	46.4	-26.4	Vert
181	325.010M	39.9	-27.6	+13.9	+0.3	+3.4	-10.0	19.9	46.4	-26.5	Horiz

182	386.364M	38.0	-27.7	+15.5	+0.3	+3.7	-10.0	19.8	46.4	-26.6	Vert
183	424.010M	37.0	-27.7	+16.4	+0.3	+3.8	-10.0	19.8	46.4	-26.6	Horiz
184	356.004M	38.8	-27.6	+14.7	+0.3	+3.6	-10.0	19.8	46.4	-26.6	Vert
185	331.777M	39.5	-27.6	+14.0	+0.3	+3.5	-10.0	19.7	46.4	-26.7	Horiz
186	372.011M	38.4	-27.7	+15.1	+0.3	+3.6	-10.0	19.7	46.4	-26.7	Horiz
187	336.020M	39.0	-27.6	+14.2	+0.3	+3.5	-10.0	19.4	46.4	-27.0	Vert
188	175.997M	42.2	-27.7	+9.3	+0.2	+2.5	-10.0	16.5	43.5	-27.0	Horiz
189	335.981M	38.9	-27.6	+14.2	+0.3	+3.5	-10.0	19.3	46.4	-27.1	Horiz
190	376.994M	37.7	-27.7	+15.2	+0.3	+3.7	-10.0	19.2	46.4	-27.2	Horiz
191	360.022M	38.0	-27.6	+14.8	+0.3	+3.6	-10.0	19.1	46.4	-27.3	Vert
192	263.003M	40.6	-27.7	+12.7	+0.3	+3.1	-10.0	19.0	46.4	-27.4	Vert
193	358.669M	38.0	-27.6	+14.7	+0.3	+3.6	-10.0	19.0	46.4	-27.4	Vert
194	372.005M	37.5	-27.7	+15.1	+0.3	+3.6	-10.0	18.8	46.4	-27.6	Vert
195	423.939M	36.0	-27.7	+16.4	+0.3	+3.8	-10.0	18.8	46.4	-27.6	Vert
196	367.508M	37.6	-27.7	+15.0	+0.3	+3.6	-10.0	18.8	46.4	-27.6	Horiz
197	290.996M	39.7	-27.6	+13.1	+0.3	+3.2	-10.0	18.7	46.4	-27.7	Horiz
198	493.710M	33.5	-27.6	+18.0	+0.4	+4.3	-10.0	18.6	46.4	-27.8	Vert
199	276.984M	39.9	-27.7	+12.9	+0.3	+3.1	-10.0	18.5	46.4	-27.9	Vert
200	416.668M	35.8	-27.7	+16.3	+0.3	+3.8	-10.0	18.5	46.4	-27.9	Horiz
201	552.018M	31.2	-27.4	+19.7	+0.5	+4.5	-10.0	18.5	46.4	-27.9	Vert
202	282.602M	39.8	-27.7	+13.0	+0.3	+3.1	-10.0	18.5	46.4	-27.9	Vert
203	426.961M	35.4	-27.7	+16.5	+0.3	+3.9	-10.0	18.4	46.4	-28.0	Vert
204	340.982M	37.8	-27.6	+14.3	+0.3	+3.5	-10.0	18.3	46.4	-28.1	Vert

205	425.979M	35.3	-27.7	+16.5	+0.3	+3.9	-10.0	18.3	46.4	-28.1	Horiz
206	370.833M	36.8	-27.7	+15.1	+0.3	+3.6	-10.0	18.1	46.4	-28.3	Horiz
207	275.249M	39.5	-27.7	+12.9	+0.3	+3.1	-10.0	18.1	46.4	-28.3	Horiz
208	350.012M	37.3	-27.6	+14.5	+0.3	+3.6	-10.0	18.1	46.4	-28.3	Vert
209	330.004M	37.9	-27.6	+14.0	+0.3	+3.4	-10.0	18.0	46.4	-28.4	Horiz
210	352.000M	37.1	-27.6	+14.6	+0.3	+3.6	-10.0	18.0	46.4	-28.4	Horiz
211	280.021M	39.4	-27.7	+12.9	+0.3	+3.1	-10.0	18.0	46.4	-28.4	Horiz
212	131.598M	39.0	-27.6	+11.4	+0.1	+2.1	-10.0	15.0	43.5	-28.5	Horiz
213	326.964M	37.8	-27.6	+13.9	+0.3	+3.4	-10.0	17.8	46.4	-28.6	Horiz
214	351.002M	37.0	-27.6	+14.5	+0.3	+3.6	-10.0	17.8	46.4	-28.6	Vert
215	458.302M	33.5	-27.6	+17.3	+0.3	+4.1	-10.0	17.6	46.4	-28.8	Horiz
216	474.996M	32.9	-27.6	+17.6	+0.4	+4.2	-10.0	17.5	46.4	-28.9	Vert
217	294.902M	38.5	-27.6	+13.1	+0.3	+3.2	-10.0	17.5	46.4	-28.9	Horiz
218	340.982M	37.0	-27.6	+14.3	+0.3	+3.5	-10.0	17.5	46.4	-28.9	Horiz
219	432.508M	34.2	-27.7	+16.7	+0.3	+3.9	-10.0	17.4	46.4	-29.0	Horiz
220	299.071M	38.2	-27.6	+13.2	+0.3	+3.2	-10.0	17.3	46.4	-29.1	Horiz
221	365.660M	36.2	-27.7	+14.9	+0.3	+3.6	-10.0	17.3	46.4	-29.1	Vert
222	224.024M	41.2	-27.6	+10.7	+0.2	+2.7	-10.0	17.2	46.4	-29.2	Horiz
223	365.676M	35.8	-27.7	+14.9	+0.3	+3.6	-10.0	16.9	46.4	-29.5	Horiz
224	312.014M	37.3	-27.6	+13.5	+0.3	+3.3	-10.0	16.8	46.4	-29.6	Vert
225	444.045M	33.1	-27.6	+17.0	+0.3	+4.0	-10.0	16.8	46.4	-29.6	Vert
226	235.016M	39.9	-27.6	+11.5	+0.2	+2.8	-10.0	16.8	46.4	-29.6	Horiz
227	306.028M	37.3	-27.6	+13.4	+0.3	+3.3	-10.0	16.7	46.4	-29.7	Vert

228	292.007M	37.5	-27.6	+13.1	+0.3	+3.2	-10.0	16.5	46.4	-29.9	Horiz
229	344.046M	35.8	-27.6	+14.4	+0.3	+3.6	-10.0	16.5	46.4	-29.9	Horiz
230	292.504M	37.1	-27.6	+13.1	+0.3	+3.2	-10.0	16.1	46.4	-30.3	Horiz
231	220.003M	40.2	-27.6	+10.4	+0.2	+2.7	-10.0	15.9	46.4	-30.5	Horiz
232	172.502M	38.4	-27.7	+9.5	+0.2	+2.5	-10.0	12.9	43.5	-30.6	Horiz
233	320.815M	35.9	-27.6	+13.8	+0.3	+3.4	-10.0	15.8	46.4	-30.6	Horiz
234	155.971M	37.6	-27.7	+10.5	+0.2	+2.3	-10.0	12.9	43.5	-30.6	Horiz
235	283.371M	37.0	-27.7	+13.0	+0.3	+3.1	-10.0	15.7	46.4	-30.7	Horiz
236	132.671M	36.4	-27.6	+11.4	+0.1	+2.1	-10.0	12.4	43.5	-31.1	Horiz
237	216.666M	39.8	-27.6	+10.1	+0.2	+2.7	-10.0	15.2	46.4	-31.2	Vert
238	369.952M	33.4	-27.7	+15.0	+0.3	+3.6	-10.0	14.6	46.4	-31.8	Vert
239	126.979M	35.7	-27.6	+11.5	+0.1	+2.0	-10.0	11.7	43.5	-31.8	Horiz
240	134.692M	35.6	-27.6	+11.4	+0.1	+2.1	-10.0	11.6	43.5	-31.9	Horiz
241	349.062M	33.6	-27.6	+14.5	+0.3	+3.6	-10.0	14.4	46.4	-32.0	Vert
242	312.011M	34.7	-27.6	+13.5	+0.3	+3.3	-10.0	14.2	46.4	-32.2	Horiz
243	307.232M	34.2	-27.6	+13.4	+0.3	+3.3	-10.0	13.6	46.4	-32.8	Horiz
244	121.486M	31.9	-27.6	+11.4	+0.1	+2.0	-10.0	7.8	43.5	-35.7	Horiz