ADDENDUM TO WILSON ELECTRONICS TEST REPORT FC07-005

FOR THE

IDEN 900 MHZ AMPLIFIER, 2B4121

FCC PART 90 AND RSS-131

COMPLIANCE

DATE OF ISSUE: FEBRUARY 19, 2007

PREPARED FOR:

Wilson Electronics
3301 East Deseret Drive
St. George, UT 84790

P.O. No.: IDN2B4121-1
W.O. No.: 85944

PREPARED BY:

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

Date of test: January 12-16, 2007

Report No.: FC07-005A

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ADMINISTRATIVE INFORMATION

DATE OF TEST: January 12-16, 2007

DATE OF RECEIPT: January 12, 2007

FREQUENCY RANGE TESTED: 9 kHz-10 GHz

MANUFACTURER: Wilson Electronics
3301 East Deseret Drive
St. George, UT 84790

REPRESENTATIVE: Riki Kline

TEST LOCATION: CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

TEST METHOD: FCC Part 90, RSS-131 and RSS GEN

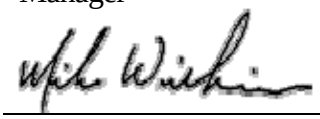
PURPOSE OF TEST: **Original Report:** To demonstrate the compliance of the iDEN 900 MHz Amplifier, 2B4121 with the requirements for FCC Part 90 and RSS-131 devices.
Addendum A: To revise the emissions designator on page 6.

APPROVALS:

Steve Behm, Director of Engineering Services

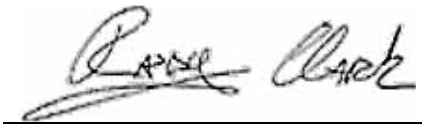
QUALITY ASSURANCE:

Joyce Walker, Quality Assurance Administrative Manager



Mike Wilkinson, EMC Engineer/Lab Manager

TEST PERSONNEL:



Randy Clark, EMC Engineer

FCC TO CANADA STANDARD CORRELATION MATRIX

Canadian Standard	Canadian Section	FCC Standard	FCC Section	Test Description
RSS 131	5.4	NA	NA	External Controls
RSS 131	5.5	47 CFR	1.1307	RF Exposure
RSS 131	6.1	NA	NA	Passband Gain and Bandwidth
RSS 131	6.2	47 CFR	90.205	RF Power Output
RSS 131	6.3	TIA/EIA	603	Non-Linearity (Intermodulation Attenuation)
RSS 131	6.4	47 CFR	90.210	Spurious Emissions Limitations
RSS 131	6.5	NA	NA	Frequency Stability (Band Translators)
	3082A-1		784962	Site File No.

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

iDEN 900 MHz Amplifier
Manuf: Wilson Electronics
Model: 2B4121
Serial: 2B41219910000
FCC ID: PWO2B4121SD

PERIPHERAL DEVICES

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

EUT Power Supply
Manuf: I.T.E Power Supply
Model: HK-B118-A06
Serial: 0106C

Input Amplifier
Manuf: Amplifier Research
Model: 10W1000
Serial: 4532

Combiner
Manuf: Motorola
Model: NA
Serial: NA

Signal Generator
Manuf: Agilent
Model: E4431B
Serial: US38440201

Signal Generator
Manuf: Agilent
Model: E4436B
Serial: US39260137

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

FCC 2.1033 (c)(5) FREQUENCY RANGE
Uplink band is 896-901 MHz. Downlink band is 935-940 MHz.

FCC 2.1033 (c)(6) OPERATING POWER
Uplink: 4.68 Watts. Downlink: 0.0069 Watts

FCC 2.1033 (c)(7) MAXIMUM POWER RATING
Uplink Output Ratings: iDEN format: 5Watts
Downlink Output Ratings: iDEN: <10mW

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

FCC 2.1033(c)(14)/2.1046/90.205 - RF POWER OUTPUT

Test Conditions

Equipment is a direct connect, mobile and in-building 900MHz bidirectional amplifier for enhancing the range of iDEN cellular phones. Uplink band is 896-901 MHz. Downlink band is 935-940 MHz. Equipment is connected directly to a spectrum analyzer through suitable attenuation.

RF Power Output Test: Only one signal is input to the amplifier. The input from the signal generator is set such that the maximum output is provided at the antenna terminals. The internal ALC of the amplifier limits the maximum power output to a factory set level. Power output is continuously variable and directly proportional to the supplied RF input. Minimum RF output power of 0.00 Watts is achieved with a 0.00 Watt RF input signal.

Uplink Output Ratings: iDEN format: 5Watts

Downlink Output Ratings: iDEN: <10mW

RF power output of the amplifier is routed to a spectrum analyzer through suitable attenuation. Coupling Loss: 29.7dB for uplink and 19.9dB for downlink.

Downlink - Conducted Power

Frequency (MHz)	*Modulation*	*Power Output (Watts)*
935.032	iDEN	0.0058
937.505	iDEN	0.0069
939.993	iDEN	0.0069

Uplink – Conducted Power

Frequency (MHz)	*Modulation*	*Power Output (Watts)*
896.013	iDEN	4.68
898.485	iDEN	4.47
900.955	iDEN	3.89

Test Location: CKC Laboratories, Inc. •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer:	**Wilson Electrons**		
Specification:	**90.210(J) - Downlink Low Channel**		
Work Order #:	**85944**	Date:	1/15/2007
Test Type:	**Antenna Conducted**	Time:	15:58:23
Equipment:	**iDEN 900 MHz Amplifier**	Sequence#:	1
Manufacturer:	Wilson Electronics	Tested By:	Randal Clark
Model:	2B4121		120V 60Hz
S/N:	2B41219910000		

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8564E SA	3623A00539	10/27/2006	10/27/2008	01406
Bird 30dB Attenuator	9949	05/20/2005	05/20/2007	P01572
Weinschel 33-10-33 Attenuator	AH5409	05/23/2005	05/23/2007	P01681
HP 8491A 10dB Attenuator	2708A47453	11/30/2006	11/30/2008	P01350

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

Function	Manufacturer	Model #	S/N
iDEN 900 MHz Amplifier*	Wilson Electronics	2B4121	2B41219910000

Support Devices:

Function	Manufacturer	Model #	S/N
EUT Power Supply	I.T.E Power Supply	HK-B118-A06	0106C
Signal Generator	Agilent	E4431B	US38440201
Input Amplifier	Amplifier Research	10W1000	4532

Test Conditions / Notes:

Equipment is a direct connect, mobile and in-building 900MHz bidirectional amplifier for enhancing the range of iDEN cellular phones. Uplink band is 896-901 MHz. Downlink band is 935-940 MHz. Equipment is connected directly to a spectrum analyzer through suitable attenuation.
Frequency Band Tested: Uplink and Downlink
Channel Tested: Low, Mid and High
Frequency Range Investigated: Carrier
Bandwidth Settings: RBW = VBW = 300kHz.
Temperature: 70°F, Relative Humidity: 19%.

RSS 131 Power Output

Test Conditions:
Equipment is a direct connect, mobile and in-building 900MHz bidirectional amplifier for enhancing the range of iDEN cellular phones. Uplink band is 896-901 MHz. Downlink band is 935-940 MHz. Equipment is connected directly to a spectrum analyzer through suitable attenuation. For downlink output power measurements, the signal generator output is fed through a combiner to a preamplifier prior to input to the EUT. Harmonic content of the preamplifier is checked prior to amplifier tests. The mean power (p mean) is evaluated at the antenna port of the EUT with a spectrum analyzer via suitable attenuation. Coupling Loss: 29.7dB for uplink and 19.9dB for downlink.

Injection Frequencies (MHz)	Highest Measured Output Power (P dBm)	Mean Output Power (P + 3dB dBm)	Mean Output Power (Watts)
Downlink Multi-Channel Measurements**			
935.500	3.1	6.1	0.0041
936.500	3.1	6.1	0.0041
939.500	3.1	6.1	0.0041
938.500	3.1	6.1	0.0041
Uplink Single Channel Measurements			
896.013	36.7	NA	4.68
898.485	36.5	NA	4.47
900.955	35.9	NA	3.89

** Could not generate 3 or 4th order harmonic levels at -13dBm at indicated frequencies without saturating the EUT. Power output reported consists of highest measured output power prior to amplifier saturation.

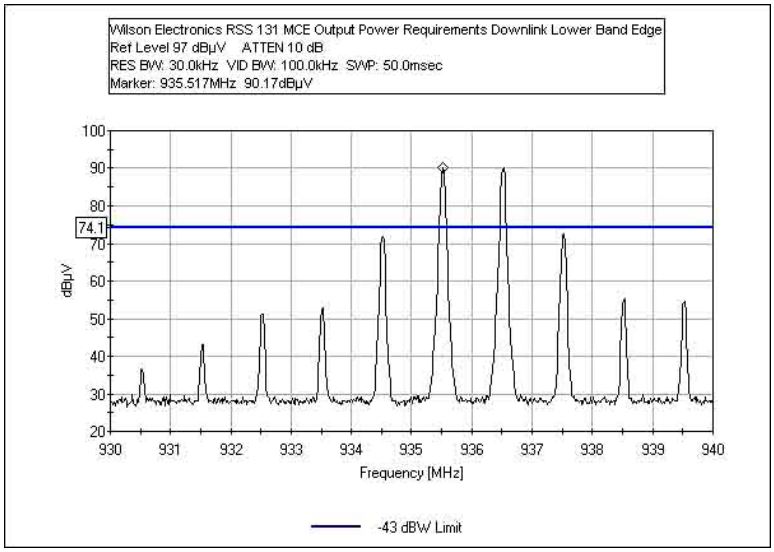
***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8564E SA	3623A00539	10/27/2006	10/27/2008	01406
Bird 30dB Attenuator	9949	05/20/2005	05/20/2007	P01572
Weinschel 33-10-33 Attenuator	AH5409	05/23/2005	05/23/2007	P01681
HP 8491A 10dB Attenuator	2708A47453	11/30/2006	11/30/2008	P01350

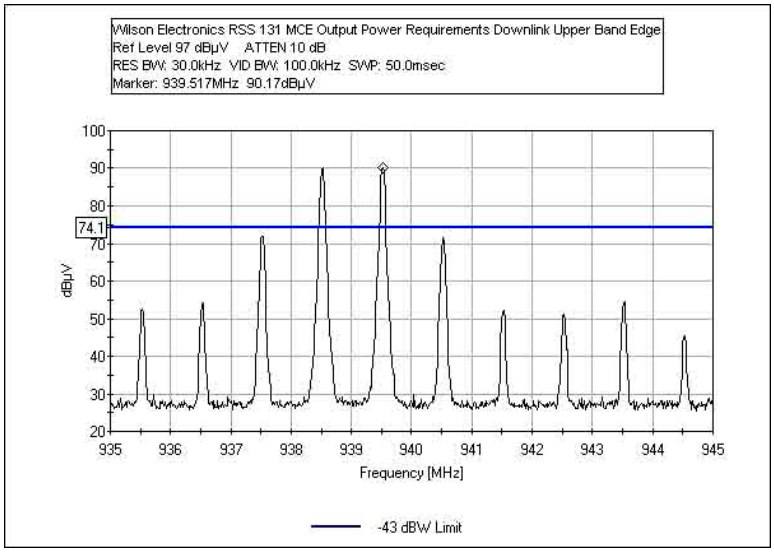
Support Devices:

Function	Manufacturer	Model #	S/N
EUT Power Supply	I.T.E Power Supply	HK-B118-A06	0106C
Signal Generator	Agilent	E4431B	US38440201
Input Amplifier	Amplifier Research	10W1000	4532
Signal Generator	Agilent	E4436B	US39260137
Combiner	Motorola	None	None

RSS-131 MCE POWER OUTPUT REQUIREMENTS DOWNLINK LOW



RSS-131 MCE POWER OUTPUT REQUIREMENTS DOWNLINK HIGH

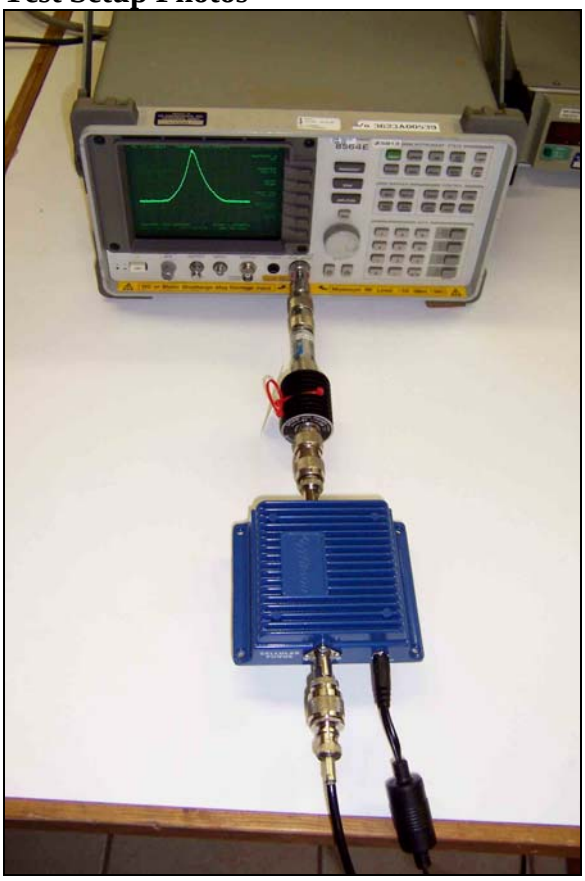


Test Setup Photos

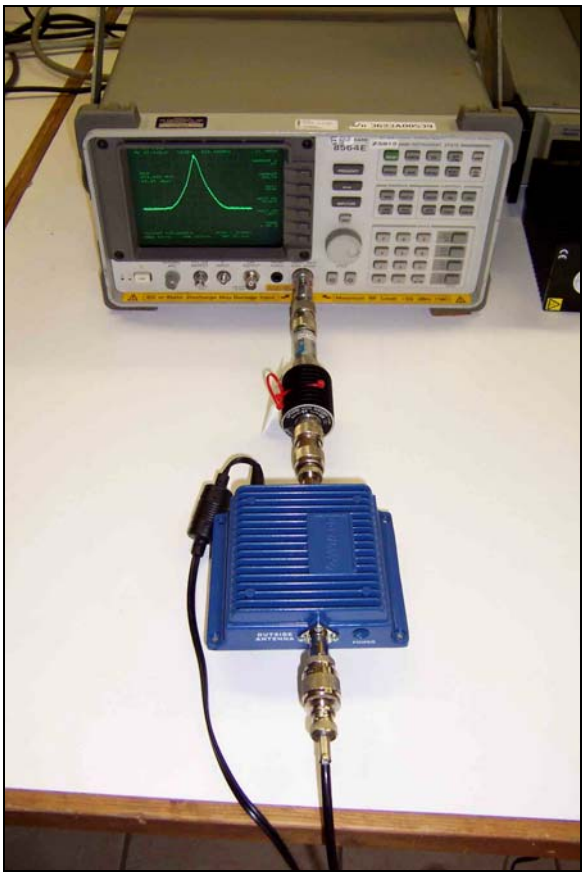
Uplink RF Power

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

Test Setup Photos



Uplink Direct Connect Test Setup



Downlink Direct Connect Test Setup

Test Location: CKC Laboratories, Inc. •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electrons**
Specification: **90.210(J) - Uplink Low Channel**
Work Order #: **85944** Date: 1/15/2007
Test Type: **Antenna Conducted** Time: 11:20:01
Equipment: **iDEN 900 MHz Amplifier** Sequence#: 2
Manufacturer: Wilson Electronics Tested By: Randal Clark
Model: 2B4121 120V 60Hz
S/N: 2B41219910000

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8564E SA	3623A00539	10/27/2006	10/27/2008	01406
Weinschel 33-10-33 Attenuator	AH5409	05/23/2005	05/23/2007	P01681
HP 8491A 10dB Attenuator	2708A47453	11/30/2006	11/30/2008	P01350

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

Function	Manufacturer	Model #	S/N
iDEN 900 MHz Amplifier*	Wilson Electronics	2B4121	2B41219910000

Support Devices:

Function	Manufacturer	Model #	S/N
EUT Power Supply	I.T.E Power Supply	HK-B118-A06	0106C
Signal Generator	Agilent	E4431B	US38440201
Input Amplifier	Amplifier Research	10W1000	4532

Test Conditions / Notes:

Equipment is a direct connect, mobile and in-building 900MHz bidirectional amplifier for enhancing the range of iDEN cellular phones. Uplink band is 896-901 MHz. Downlink band is 935-940 MHz. Equipment is connected directly to a spectrum analyzer through suitable attenuation.
Frequency Band Tested: Uplink.
Channel Tested: Low.
Frequency Range Investigated: 9kHz to 10GHz.
Bandwidth Settings:
<250% of ABW or Fc<30MHz, RBW = 300Hz, VBW = 1kHz
>250% of ABW, RBW = 100kHz, VBW = 300kHz
Temperature: 70°F, Relative Humidity: 19%.

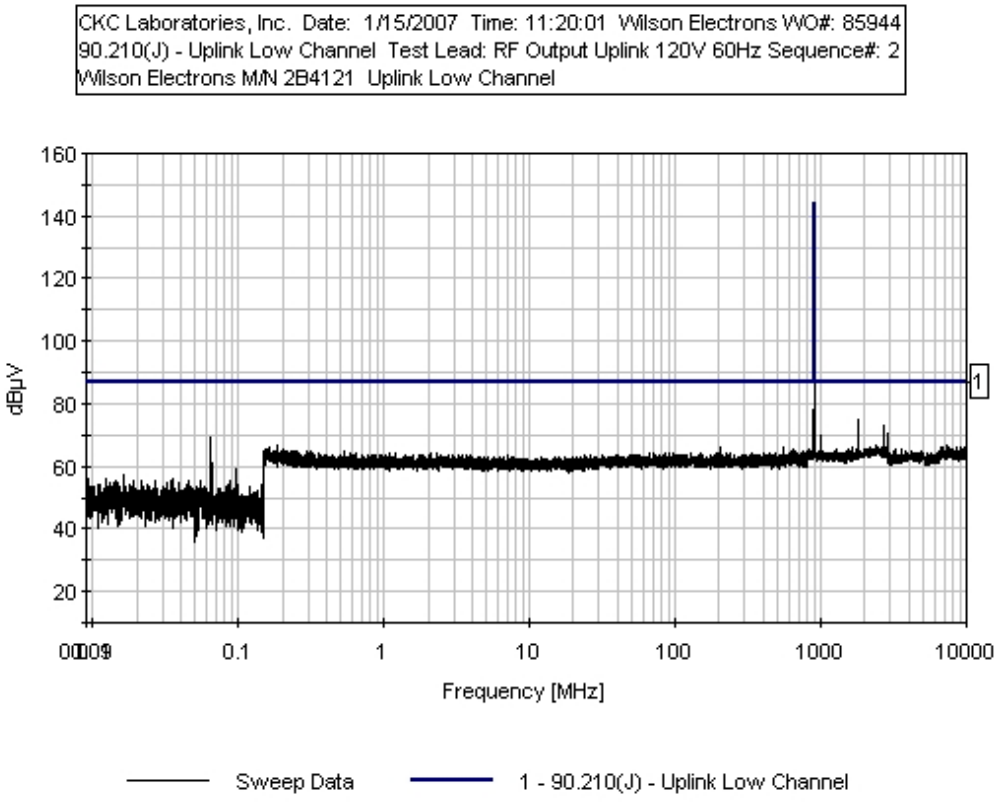
Transducer Legend:

T1=ATT P01350-113006 T2=ATT ANP01681

Measurement Data: Reading listed by margin. Test Lead: RF Output Uplink

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	895.996M	66.7	+10.2	+9.7			+0.0	86.6	87.0	-0.4	RF Ou
2	896.028M	66.7	+10.2	+9.7			+0.0	86.6	87.0	-0.4	RF Ou

3	896.013M	123.3	+10.2	+9.7		+0.0	143.2	144.0 Carrier		RF Ou
4	2688.037M	62.0	+10.1	+10.2		+0.0	82.3	87.0	-4.7	RF Ou
5	3584.052M	61.5	+10.3	+10.4		+0.0	82.2	87.0	-4.8	RF Ou
6	895.993M	62.0	+10.2	+9.7		+0.0	81.9	87.0	-5.1	RF Ou
7	896.002M	73.8	+10.2	+9.7		+0.0	93.7	99.4	-5.7	RF Ou
8	1792.038M	59.6	+10.1	+10.2		+0.0	79.9	87.0	-7.1	RF Ou
9	2690.334M	52.8	+10.1	+10.2		+0.0	73.1	87.0	-13.9	RF Ou
10	2914.643M	50.5	+10.2	+10.1		+0.0	70.8	87.0	-16.2	RF Ou
11	64.724k	49.7	+10.1	+9.3		+0.0	69.1	87.0	-17.9	RF Ou
12	896.006M	81.0	+10.2	+9.7		+0.0	100.9	119.7	-18.8	RF Ou



Test Location: CKC Laboratories, Inc. •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electrons**
Specification: **90.210(J) - Uplink Mid Channel**
Work Order #: **85944** Date: 1/15/2007
Test Type: **Antenna Conducted** Time: 11:51:37
Equipment: **iDEN 900 MHz Amplifier** Sequence#: 3
Manufacturer: Wilson Electronics Tested By: Randal Clark
Model: 2B4121 120V 60Hz
S/N: 2B41219910000

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8564E SA	3623A00539	10/27/2006	10/27/2008	01406
Weinschel 33-10-33 Attenuator	AH5409	05/23/2005	05/23/2007	P01681
HP 8491A 10dB Attenuator	2708A47453	11/30/2006	11/30/2008	P01350

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

Function	Manufacturer	Model #	S/N
iDEN 900 MHz Amplifier*	Wilson Electronics	2B4121	2B41219910000

Support Devices:

Function	Manufacturer	Model #	S/N
EUT Power Supply	I.T.E Power Supply	HK-B118-A06	0106C
Signal Generator	Agilent	E4431B	US38440201
Input Amplifier	Amplifier Research	10W1000	4532

Test Conditions / Notes:

Equipment is a direct connect, mobile and in-building 900MHz bidirectional amplifier for enhancing the range of iDEN cellular phones. Uplink band is 896-901 MHz. Downlink band is 935-940 MHz. Equipment is connected directly to a spectrum analyzer through suitable attenuation.
Frequency Band Tested: Uplink, Channel Tested: Mid,
Frequency Range Investigated: 9kHz to 10GHz.
Bandwidth Settings:
<250% of ABW or Fc<30MHz, RBW = 300Hz, VBW = 1kHz
>250% of ABW, RBW = 100kHz, VBW = 300kHz
Temperature: 70F, Relative Humidity: 19%.

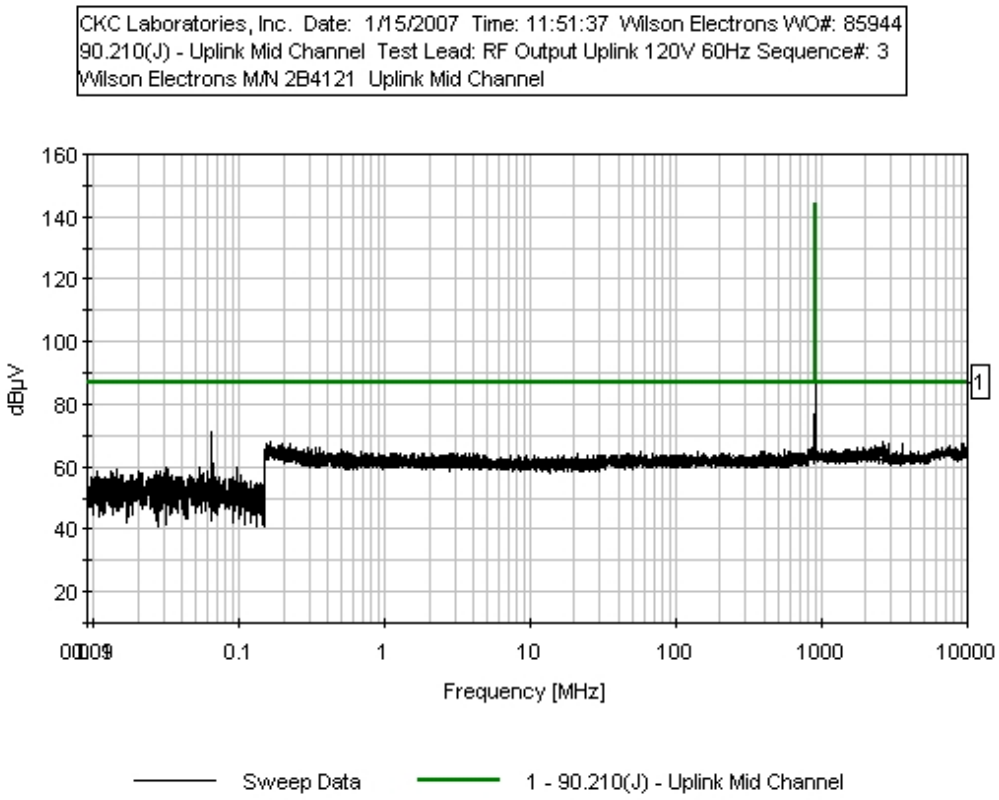
Transducer Legend:

T1=ATT P01350-113006	T2=ATT ANP01681

Measurement Data: Reading listed by margin. Test Lead: RF Output Uplink

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	898.488M	66.8	+10.2	+9.7			+0.0	86.7	87.3	-0.6	RF Ou
2	898.519M	66.1	+10.2	+9.7			+0.0	86.0	87.0	-1.0	RF Ou
3	898.484M	65.7	+10.2	+9.7			+0.0	85.6	87.0	-1.4	RF Ou
4	898.498M	122.7	+10.2	+9.7			+0.0	142.6	144.0 Carrier		RF Ou

5	898.523M	65.3	+10.2	+9.7	+0.0	85.2	87.0	-1.8	RF Ou
6	898.477M	63.7	+10.2	+9.7	+0.0	83.6	87.0	-3.4	RF Ou
7	898.524M	61.5	+10.2	+9.7	+0.0	81.4	87.0	-5.6	RF Ou
8	898.331M	61.5	+10.2	+9.7	+0.0	81.4	87.0	-5.6	RF Ou
9	2695.494M	61.0	+10.1	+10.2	+0.0	81.3	87.0	-5.7	RF Ou
10	1796.996M	59.8	+10.1	+10.2	+0.0	80.1	87.0	-6.9	RF Ou
11	877.629M	57.0	+10.2	+9.7	+0.0	76.9	87.0	-10.1	RF Ou
12	899.332M	56.3	+10.2	+9.7	+0.0	76.2	87.0	-10.8	RF Ou
13	3594.000M	53.5	+10.3	+10.4	+0.0	74.2	87.0	-12.8	RF Ou
14	878.798M	52.5	+10.2	+9.7	+0.0	72.4	87.0	-14.6	RF Ou
15	878.464M	52.0	+10.2	+9.7	+0.0	71.9	87.0	-15.1	RF Ou
16	64.724k	52.0	+10.1	+9.3	+0.0	71.4	87.0	-15.6	RF Ou
17	901.511M	48.5	+10.2	+9.7	+0.0	68.4	87.0	-18.6	RF Ou
18	162.090k	48.8	+10.1	+9.3	+0.0	68.2	87.0	-18.8	RF Ou
19	894.825M	48.2	+10.2	+9.7	+0.0	68.1	87.0	-18.9	RF Ou
20	892.321M	48.0	+10.2	+9.7	+0.0	67.9	87.0	-19.1	RF Ou
21	4492.490M	46.8	+10.4	+10.5	+0.0	67.7	87.0	-19.3	RF Ou


CKC Laboratories, Inc. Date: 1/15/2007 Time: 11:51:37 Wilson Electrons WO#: 85944
90.210(J) - Uplink Mid Channel Test Lead: RF Output Uplink 120V 60Hz Sequence#: 3
Wilson Electrons M/N 2B4121 Uplink Mid Channel
160
140
120
100
80
60
40
20
dBµV
1
0.1
1
10
100
1000
10000
Frequency [MHz]
Sweep Data
1 - 90.210(J) - Uplink Mid Channel

Test Location: CKC Laboratories, Inc. •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electrons**
Specification: **90.210(J) - Uplink High Channel**
Work Order #: **85944** Date: 1/15/2007
Test Type: **Antenna Conducted** Time: 12:14:17
Equipment: **iDEN 900 MHz Amplifier** Sequence#: 4
Manufacturer: Wilson Electronics Tested By: Randal Clark
Model: 2B4121 120V 60Hz
S/N: 2B41219910000

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8564E SA	3623A00539	10/27/2006	10/27/2008	01406
Weinschel 33-10-33 Attenuator	AH5409	05/23/2005	05/23/2007	P01681
HP 8491A 10dB Attenuator	2708A47453	11/30/2006	11/30/2008	P01350

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

Function	Manufacturer	Model #	S/N
iDEN 900 MHz Amplifier*	Wilson Electronics	2B4121	2B41219910000

Support Devices:

Function	Manufacturer	Model #	S/N
EUT Power Supply	I.T.E Power Supply	HK-B118-A06	0106C
Signal Generator	Agilent	E4431B	US38440201
Input Amplifier	Amplifier Research	10W1000	4532

Test Conditions / Notes:

Equipment is a direct connect, mobile and in-building 900MHz bidirectional amplifier for enhancing the range of iDEN cellular phones. Uplink band is 896-901 MHz. Downlink band is 935-940 MHz. Equipment is connected directly to a spectrum analyzer through suitable attenuation.
Frequency Band Tested: Uplink.
Channel Tested: High.
Frequency Range Investigated: 9kHz to 10GHz.
Bandwidth Settings:
<250% of ABW or Fc<30MHz, RBW = 300Hz, VBW = 1kHz
>250% of ABW, RBW = 100kHz, VBW = 300kHz
Temperature: 70°F, Relative Humidity: 19%.

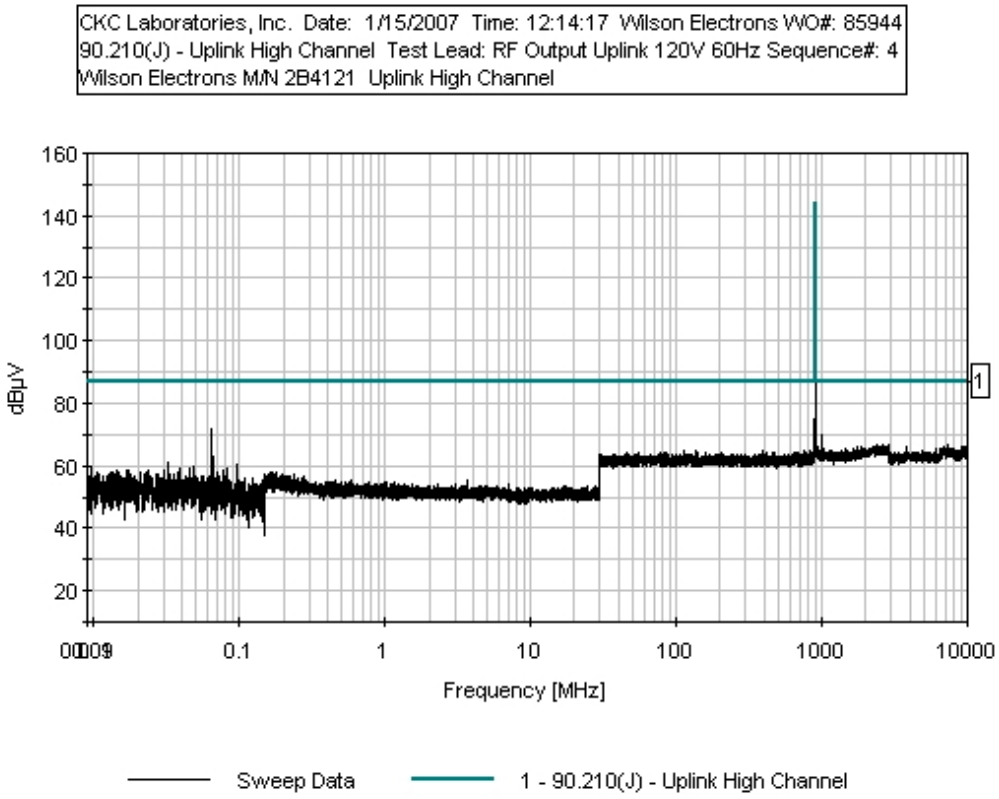
Transducer Legend:

T1=ATT P01350-113006 T2=ATT ANP01681

Measurement Data: Reading listed by margin. Test Lead: RF Output Uplink

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	901.003M	66.5	+10.2	+9.7			+0.0	86.4	87.0	-0.6	RF Ou
2	900.998M	76.8	+10.2	+9.7			+0.0	96.7	97.5 Carrier		RF Ou

3	900.971M	65.8	+10.2	+9.7		+0.0	85.7	87.0	-1.3	RF Ou
4	900.988M	122.3	+10.2	+9.7		+0.0	142.2	144.0	-1.8	RF Ou
5	2702.958M	63.8	+10.1	+10.2		+0.0	84.1	87.0	-2.9	RF Ou
6	901.010M	63.8	+10.2	+9.7		+0.0	83.7	87.0	-3.3	RF Ou
7	900.967M	63.5	+10.2	+9.7		+0.0	83.4	87.0	-3.6	RF Ou
8	1801.966M	61.7	+10.1	+10.2		+0.0	82.0	87.0	-5.0	RF Ou
9	900.978M	78.2	+10.2	+9.7		+0.0	98.1	103.2	-5.1	RF Ou
10	879.342M	55.2	+10.2	+9.7		+0.0	75.1	87.0	-11.9	RF Ou
11	3603.944M	52.0	+10.3	+10.5		+0.0	72.8	87.0	-14.2	RF Ou
12	64.724k	52.3	+10.1	+9.3		+0.0	71.7	87.0	-15.3	RF Ou
13	902.204M	50.2	+10.2	+9.7		+0.0	70.1	87.0	-16.9	RF Ou
14	899.983M	50.0	+10.2	+9.7		+0.0	69.9	87.0	-17.1	RF Ou
15	1012.212M	50.0	+10.1	+9.8		+0.0	69.9	87.0	-17.1	RF Ou
16	4504.928M	43.8	+10.4	+10.5		+0.0	64.7	87.0	-22.3	RF Ou


CKC Laboratories, Inc. Date: 1/15/2007 Time: 12:14:17 Wilson Electrons WO#: 85944
90.210(J) - Uplink High Channel Test Lead: RF Output Uplink 120V 60Hz Sequence#: 4
Wilson Electrons M/N 2B4121 Uplink High Channel
160
140
120
100
80
60
40
20
dBµV
1
0.1
1
10
100
1000
10000
Frequency [MHz]
Sweep Data
1 - 90.210(J) - Uplink High Channel

Test Location: CKC Laboratories, Inc. •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electrons**
Specification: **90.210(J) - Downlink Low Channel**
Work Order #: **85944** Date: 1/15/2007
Test Type: **Antenna Conducted** Time: 16:13:28
Equipment: **iDEN 900 MHz Amplifier** Sequence#: 6
Manufacturer: Wilson Electronics Tested By: Randal Clark
Model: 2B4121 120V 60Hz
S/N: 2B41219910000

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8564E SA	3623A00539	10/27/2006	10/27/2008	01406
Weinschel 33-10-33 Attenuator	AH5409	05/23/2005	05/23/2007	P01681
HP 8491A 10dB Attenuator	2708A47453	11/30/2006	11/30/2008	P01350

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

Function	Manufacturer	Model #	S/N
iDEN 900 MHz Amplifier*	Wilson Electronics	2B4121	2B41219910000

Support Devices:

Function	Manufacturer	Model #	S/N
EUT Power Supply	I.T.E Power Supply	HK-B118-A06	0106C
Signal Generator	Agilent	E4431B	US38440201

Test Conditions / Notes:

Equipment is a direct connect, mobile and in-building 900MHz bidirectional amplifier for enhancing the range of iDEN cellular phones. Uplink band is 896-901 MHz. Downlink band is 935-940 MHz. Equipment is connected directly to a spectrum analyzer through suitable attenuation.
Frequency Band Tested: Downlink.
Channel Tested: Low.
Frequency Range Investigated: 9kHz - 10GHz
Bandwidth Settings:
<250% of ABW or Fc<30MHz, RBW = 300Hz, VBW = 1kHz
>250% of ABW, RBW = 100kHz, VBW = 300kHz.
Temperature: 70°F, Relative Humidity: 19%.

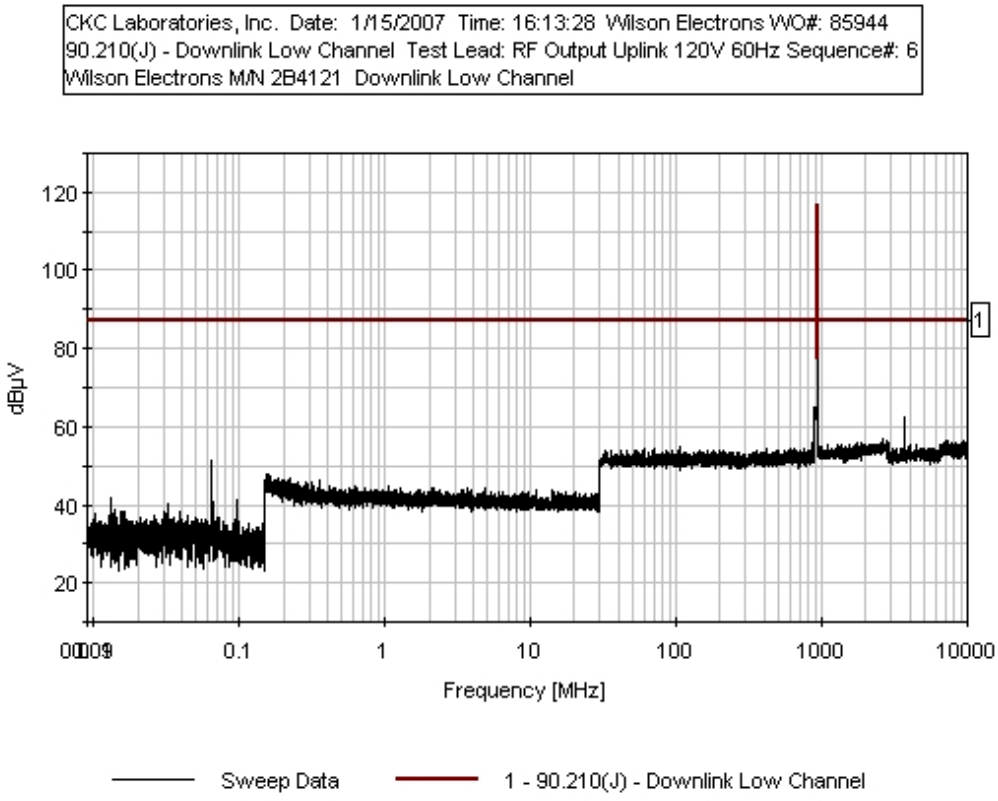
Transducer Legend:

T1=ATT P01350-113006	T2=ATT ANP01681

Measurement Data: Reading listed by margin. Test Lead: RF Output Uplink

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	935.012M	94.3	+10.2	+9.7			+0.0	114.2	117.0 Carrier		RF Ou
2	2805.039M	60.5	+10.2	+10.2			+0.0	80.9	87.0	-6.1	RF Ou
3	935.021M	55.7	+10.2	+9.7			+0.0	75.6	82.5	-6.9	RF Ou

4	935.004M	55.2	+10.2	+9.7	+0.0	75.1	83.9	-8.8	RF Ou
5	1870.025M	56.3	+10.1	+10.2	+0.0	76.6	87.0	-10.4	RF Ou
6	935.005M	55.5	+10.2	+9.7	+0.0	75.4	90.1	-14.7	RF Ou
7	935.019M	60.3	+10.2	+9.7	+0.0	80.2	96.9	-16.7	RF Ou
8	3740.050M	46.7	+10.4	+10.3	+0.0	67.4	87.0	-19.6	RF Ou
9	935.007M	61.7	+10.2	+9.7	+0.0	81.6	102.0	-20.4	RF Ou



Test Location: CKC Laboratories, Inc. •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer:	**Wilson Electrons**		
Specification:	**90.210(J) - Downlink Mid Channel**		
Work Order #:	**85944**	Date:	1/15/2007
Test Type:	**Antenna Conducted**	Time:	16:43:04
Equipment:	**iDEN 900 MHz Amplifier**	Sequence#:	7
Manufacturer:	Wilson Electronics	Tested By:	Randal Clark
Model:	2B4121		120V 60Hz
S/N:	2B41219910000		

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8564E SA	3623A00539	10/27/2006	10/27/2008	01406
Weinschel 33-10-33 Attenuator	AH5409	05/23/2005	05/23/2007	P01681
HP 8491A 10dB Attenuator	2708A47453	11/30/2006	11/30/2008	P01350

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

Function	Manufacturer	Model #	S/N
iDEN 900 MHz Amplifier*	Wilson Electronics	2B4121	2B41219910000

Support Devices:

Function	Manufacturer	Model #	S/N
EUT Power Supply	I.T.E Power Supply	HK-B118-A06	0106C
Signal Generator	Agilent	E4431B	US38440201

Test Conditions / Notes:

Equipment is a direct connect, mobile and in-building 900MHz bidirectional amplifier for enhancing the range of iDEN cellular phones. Uplink band is 896-901 MHz. Downlink band is 935-940 MHz. Equipment is connected directly to a spectrum analyzer through suitable attenuation.
Frequency Band Tested: Downlink.
Channel Tested: Mid.
Frequency Range Investigated: 9kHz - 10GHz.
Bandwidth Settings:
<250% of ABW or Fc<30MHz, RBW = 300Hz, VBW = 1kHz
>250% of ABW, RBW = 100kHz, VBW = 300kHz
Temperature: 70°F, Relative Humidity: 19%.

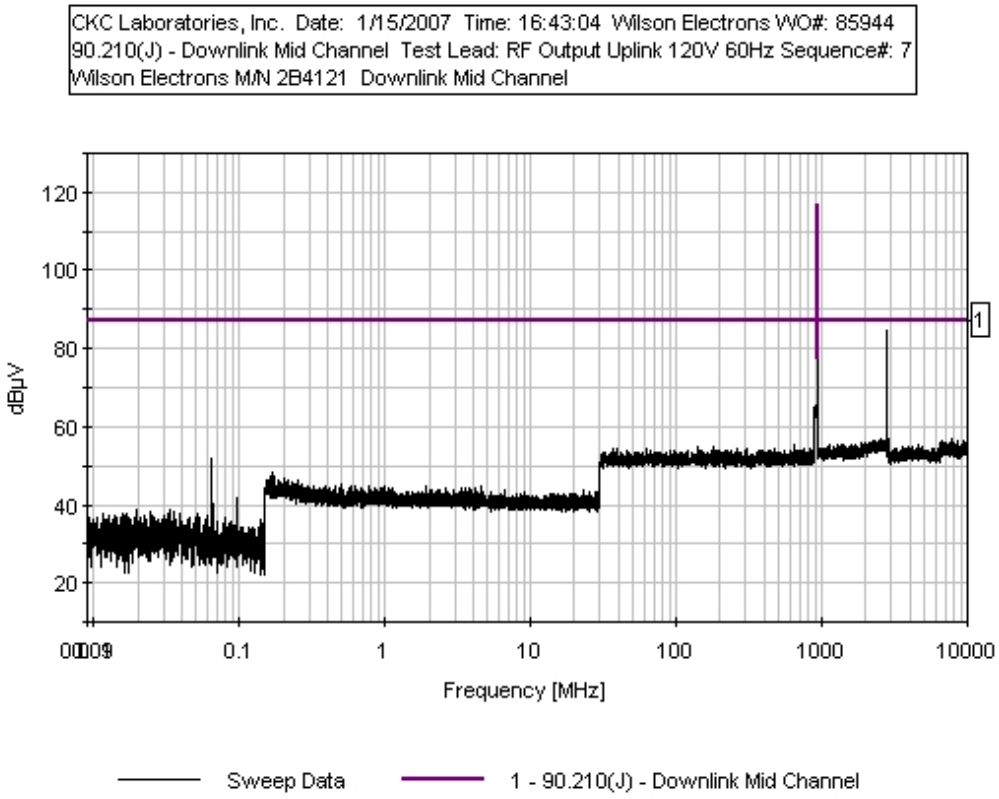
Transducer Legend:

T1=ATT P01350-113006	T2=ATT ANP01681

Measurement Data: Reading listed by margin. Test Lead: RF Output Uplink

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	2812.507M	65.0	+10.2	+10.2			+0.0	85.4	87.0	-1.6	RF Ou
2	937.500M	95.3	+10.2	+9.7			+0.0	115.2	117.0 Carrier		RF Ou
3	2814.200M	64.3	+10.2	+10.2			+0.0	84.7	87.0	-2.3	RF Ou

4	1875.019M	63.3	+10.1	+10.2		+0.0	83.6	87.0	-3.4	RF Ou
5	937.492M	61.2	+10.2	+9.7		+0.0	81.1	84.8	-3.7	RF Ou
6	939.983M	63.3	+10.2	+9.7		+0.0	83.2	87.0	-3.8	RF Ou
7	939.995M	62.5	+10.2	+9.7		+0.0	82.4	87.0	-4.6	RF Ou
8	939.981M	61.0	+10.2	+9.7		+0.0	80.9	87.0	-6.1	RF Ou
9	937.508M	61.5	+10.2	+9.7		+0.0	81.4	88.7	-7.3	RF Ou
10	939.979M	56.3	+10.2	+9.7		+0.0	76.2	87.0	-10.8	RF Ou
11	939.999M	56.0	+10.2	+9.7		+0.0	75.9	87.0	-11.1	RF Ou
12	937.494M	61.8	+10.2	+9.7		+0.0	81.7	93.1	-11.4	RF Ou
13	937.506M	64.2	+10.2	+9.7		+0.0	84.1	96.7	-12.6	RF Ou
14	3750.007M	52.5	+10.4	+10.3		+0.0	73.2	87.0	-13.8	RF Ou
15	937.495M	65.0	+10.2	+9.7		+0.0	84.9	103.2	-18.3	RF Ou


CKC Laboratories, Inc. Date: 1/15/2007 Time: 16:43:04 Wilson Electrons WO#: 85944
90.210(J) - Downlink Mid Channel Test Lead: RF Output Uplink 120V 60Hz Sequence#: 7
Wilson Electrons M/N 2B4121 Downlink Mid Channel
120
100
80
60
40
20
dBµV
0.1
1
10
100
1000
10000
Frequency [MHz]
1
Sweep Data
1 - 90.210(J) - Downlink Mid Channel

Test Location: CKC Laboratories, Inc. •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electrons**
Specification: **90.210(J) - Downlink High Channel**
Work Order #: **85944** Date: 1/15/2007
Test Type: **Antenna Conducted** Time: 16:52:44
Equipment: **iDEN 900 MHz Amplifier** Sequence#: 8
Manufacturer: Wilson Electronics Tested By: Randal Clark
Model: 2B4121 120V 60Hz
S/N: 2B41219910000

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8564E SA	3623A00539	10/27/2006	10/27/2008	01406
Weinschel 33-10-33 Attenuator	AH5409	05/23/2005	05/23/2007	P01681
HP 8491A 10dB Attenuator	2708A47453	11/30/2006	11/30/2008	P01350

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

Function	Manufacturer	Model #	S/N
iDEN 900 MHz Amplifier*	Wilson Electronics	2B4121	2B41219910000

Support Devices:

Function	Manufacturer	Model #	S/N
EUT Power Supply	I.T.E Power Supply	HK-B118-A06	0106C
Signal Generator	Agilent	E4431B	US38440201

Test Conditions / Notes:

Equipment is a direct connect, mobile and in-building 900MHz bidirectional amplifier for enhancing the range of iDEN cellular phones. Uplink band is 896-901 MHz. Downlink band is 935-940 MHz. Equipment is connected directly to a spectrum analyzer through suitable attenuation.
Frequency Band Tested: Downlink.
Channel Tested: Mid.
Frequency Range Investigated: 9kHz - 10GHz.
Bandwidth Settings:
<250% of ABW or Fc<30MHz, RBW = 300Hz, VBW = 1kHz
>250% of ABW, RBW = 100kHz, VBW = 300kHz
Temperature: 70°F, Relative Humidity: 19%.

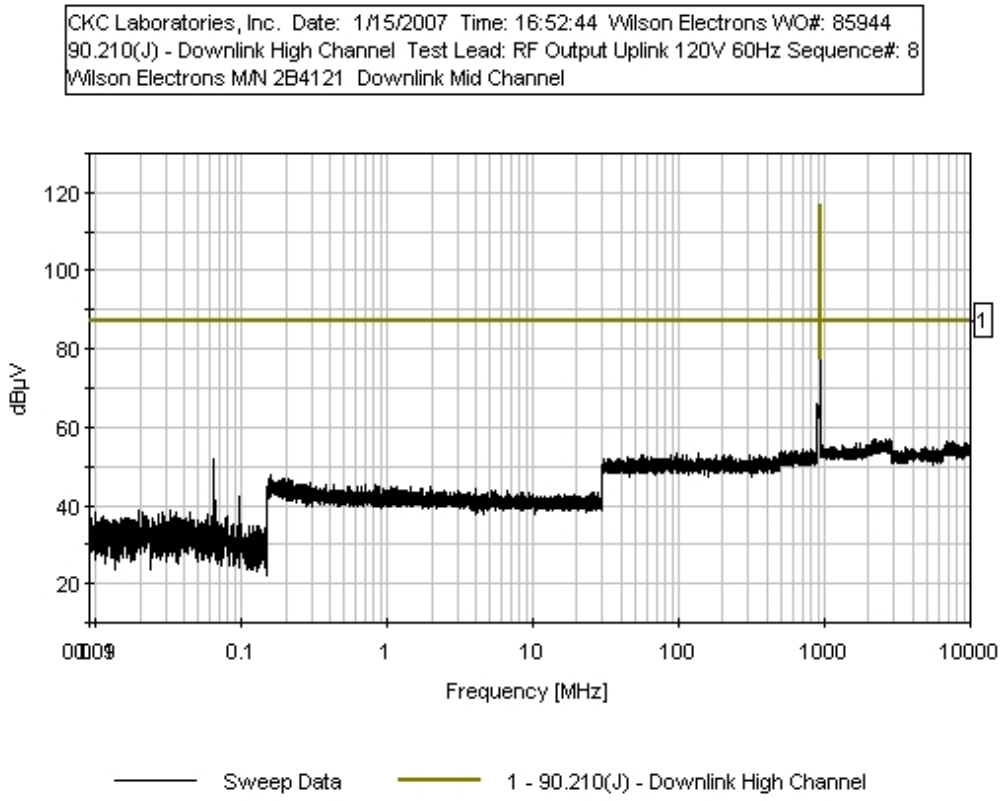
Transducer Legend:

T1=ATT P01350-113006	T2=ATT ANP01681

Measurement Data: Reading listed by margin. Test Lead: RF Output Uplink

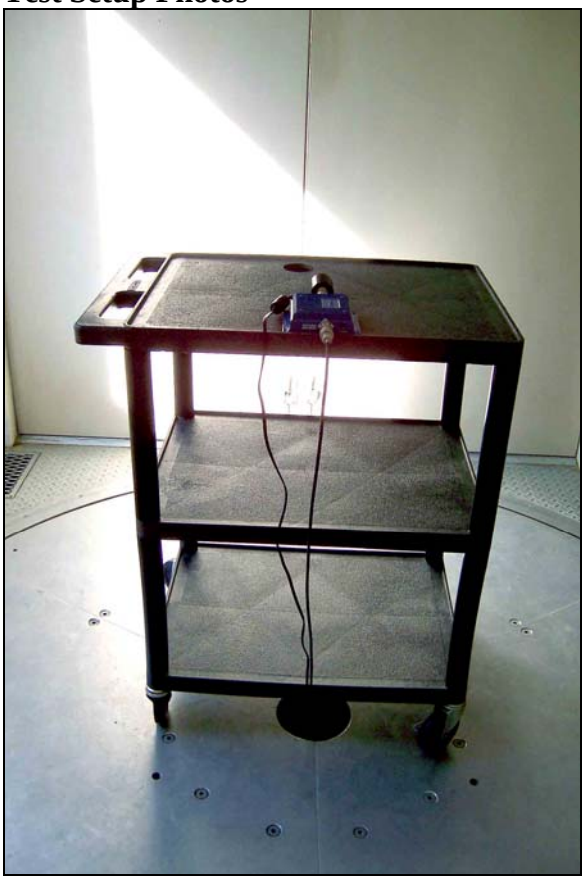
#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	939.988M	96.0	+10.2	+9.7			+0.0	115.9	117.0 Carrier		RF Ou
2	939.979M	56.3	+10.2	+9.7			+0.0	76.2	81.4	-5.2	RF Ou
3	2819.983M Ave	61.0	+10.2	+10.2			+0.0	81.4	87.0	-5.6	RF Ou
4	1879.963M Ave	61.0	+10.1	+10.2			+0.0	81.3	87.0	-5.7	RF Ou

5	939.995M	62.5	+10.2	+9.7	+0.0	82.4	88.6	-6.2	RF Ou
6	939.999M	56.0	+10.2	+9.7	+0.0	75.9	87.0	-11.1	RF Ou
7	939.981M	61.0	+10.2	+9.7	+0.0	80.9	94.9	-14.0	RF Ou
8	3759.952M	52.2	+10.4	+10.3	+0.0	72.9	87.0	-14.1	RF Ou
9	939.983M	63.3	+10.2	+9.7	+0.0	83.2	105.6	-22.4	RF Ou



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

Test Setup Photos



Test Data Sheets

Test Location: CKC Laboratories, Inc. •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer:	**Wilson Electrons**		
Specification:	**FCC 90.210**		
Work Order #:	**85944**	Date:	1/16/2007
Test Type:	**Maximized Emissions**	Time:	09:20:05
Equipment:	**iDEN 900 MHz Amplifier**	Sequence#:	9
Manufacturer:	Wilson Electronics	Tested By:	Randal Clark
Model:	2B4121		
S/N:	2B41219910000		

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/03/2007	01/03/2009	02660
Chase CBL6111C Bilog	2456	06/07/2005	06/07/2007	01991
EMCO 3115 Horn Antenna	9307-4085	04/29/2005	04/29/2007	00656
EMCO Loop Antenna	1074	05/13/2005	05/13/2007	00226
HP 8447D Preamp	1937A02604	03/11/2005	03/11/2007	00099
Cable, Pasternack 36"	NA	02/08/2005	02/08/2007	P05202
Cable, Pasternack 48"	NA	02/08/2005	02/08/2007	P05203
Cable, Andrews Hardline HF-005-20	NA	05/27/2005	05/27/2007	P04275

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

Function	Manufacturer	Model #	S/N
iDEN 900 MHz Amplifier*	Wilson Electronics	2B4121	2B41219910000

Support Devices:

Function	Manufacturer	Model #	S/N
EUT Power Supply	I.T.E Power Supply	HK-B118-A06	0106C
Signal Generator	Agilent	E4431B	US38440201

Test Conditions / Notes:

Equipment is a direct connect, mobile and in-building 900MHz bidirectional amplifier for enhancing the range of iDEN cellular phones. Uplink band is 896-901 MHz. Downlink band is 935-940 MHz. Equipment is connected directly to a matched termination.
Frequency Band Tested: Uplink and Downlink.
Channel Tested: Low, Middle and High.
Frequency Range Investigated: 9kHz - 10GHz.
Bandwidth Settings:
<250% of ABW or Fc<30MHz, RBW = 300Hz, VBW = 1kHz
>250% of ABW, RBW = 100kHz, VBW = 300kHz
Temperature: 61°F, Relative Humidity: 11%.

No EUT emissions detected within 20dB of the limit.

Transducer Legend:

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

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

EMISSIONS MASKS

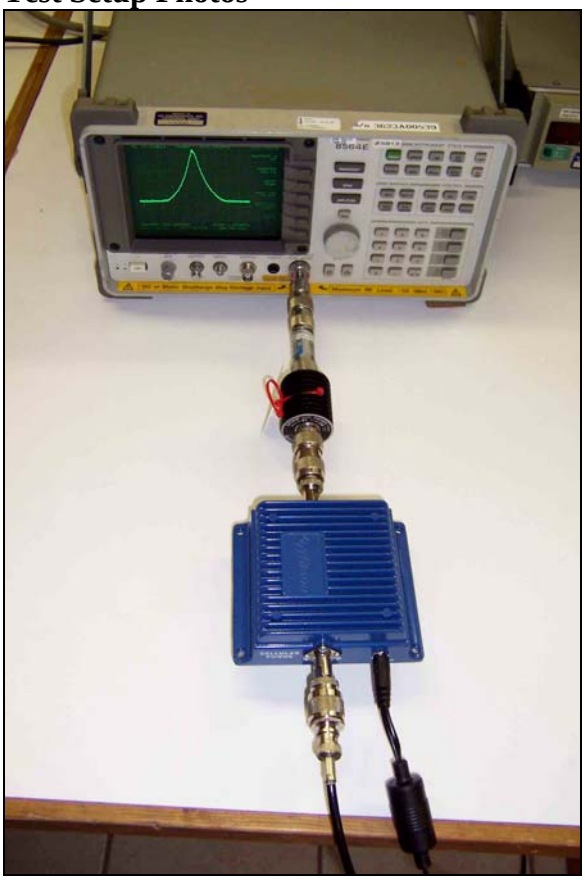
Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8564E SA	3623A00539	10/27/2006	10/27/2008	01406
Weinschel 33-10-33 Attenuator	AH5409	05/23/2005	05/23/2007	P01681
HP 8491A 10dB Attenuator	2708A47453	11/30/2006	11/30/2008	P01350

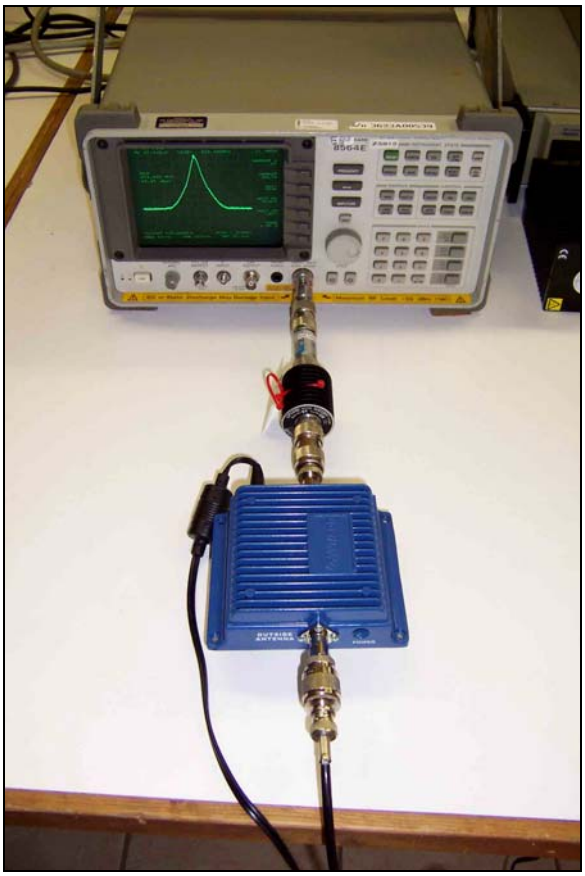
Test Conditions

Equipment is a direct connect, mobile and in-building 900MHz bidirectional amplifier for enhancing the range of iDEN cellular phones. Uplink band is 896-901 MHz. Downlink band is 935-940 MHz. Equipment is connected directly to a spectrum analyzer through suitable attenuation.
Frequency Band Tested: Uplink.
Channel Tested: Low.
Frequency Range Investigated: 9kHz to 10GHz.
Bandwidth Settings:
<250% of ABW or Fc<30MHz, RBW = 300Hz, VBW = 1kHz
>250% of ABW, RBW = 100kHz, VBW = 300kHz
Temperature: 70°F, Relative Humidity: 19%.

Test Setup Photos



Uplink Direct Connect Test Setup



Downlink Direct Connect Test Setup

47 CFR 90.210(j)
Calculation of Spurious Emissions Mask

Carrier Frequency:	896.000	MHz
Authorized Bandwidth:	13.6	kHz
Peak Power Output:	36.9897	dBm
Peak Power Output:	5.0000	Watts

Calculation of Attenuation Requirements:
P is the peak unmodulated carrier output power in Watts, and fd is the displacement frequency from the center of the authorized bandwidth in kHz.

NOTE: Only the endpoints are calculated. The limit line is linearly interpolated between the two points on a LOG - Linear scale.

90.210(j)(1)
On any frequency removed from the center of the authorized bandwidth by a displacement frequency (fd in kHz) of more than 2.5 kHz, but no more than 6.25 kHz: At least 53 log (fd/2.5) dB

F(fd) = 53*LOG(fd/2.5)

F(6.25) =	0.0	dBc
F(9.5) =	21.1	dBc

90.210(j)(2)
On any frequency removed from the center of the authorized bandwidth by a displacement frequency (fd in kHz) of more than 6.25 kHz, but no more than 9.5 kHz: At least 103 log (fd/3.9) dB

F(fd) = 103*LOG(fd/3.9)

F(6.25) =	21.1	dBc
F(9.5) =	39.8	dBc

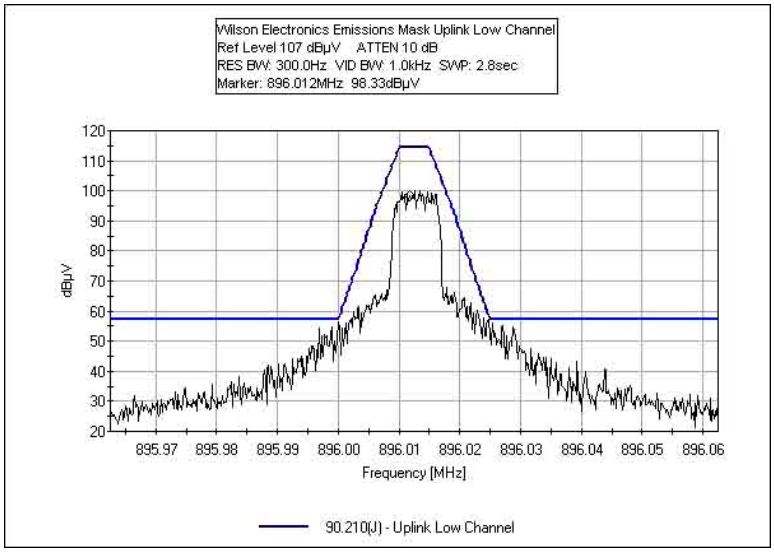
90.210(j)(3)
On any frequency removed from the center of the authorized bandwidth by a displacement frequency (fd in kHz) of more than 9.5 kHz: At least 157 log (fd/5.3) dB, or 50 + 10 log (P) dB or 70 dB, whichever is the lesser attenuation

Attenuation:

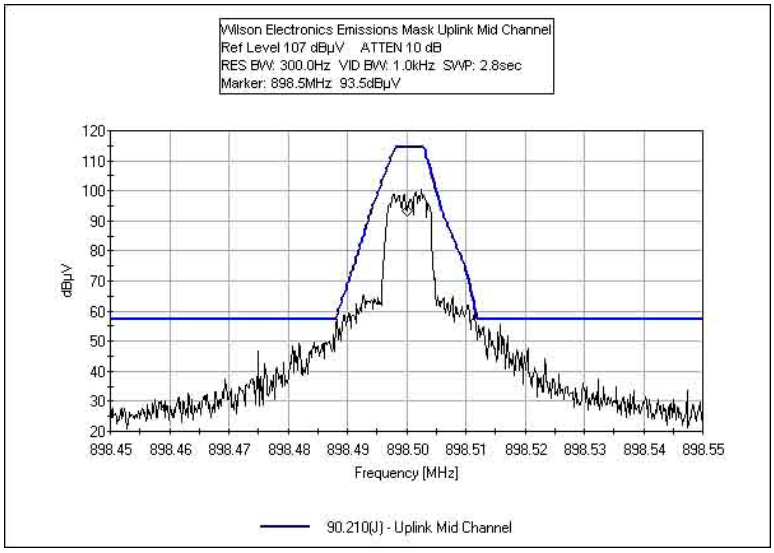
Point	fd (kHz)	157*LOG(fd/5.3)	50+10LOG(P)	70
1	9.5	39.8	57.0	70
2	12.2	57.0	57.0	70

Point 2 is when 157LOG(fd/5.3) is equal to the lesser of 50+10LOG(P) or 70dB

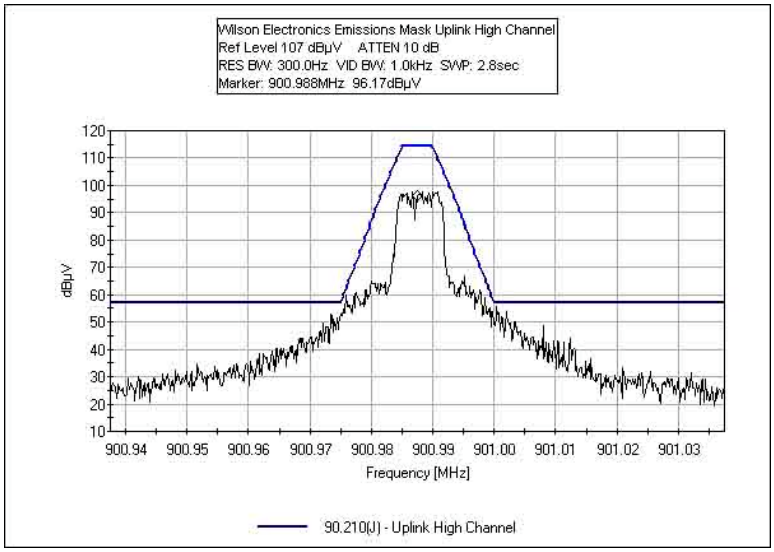
EMISSIONS MASK UPLINK LOW CHANNEL



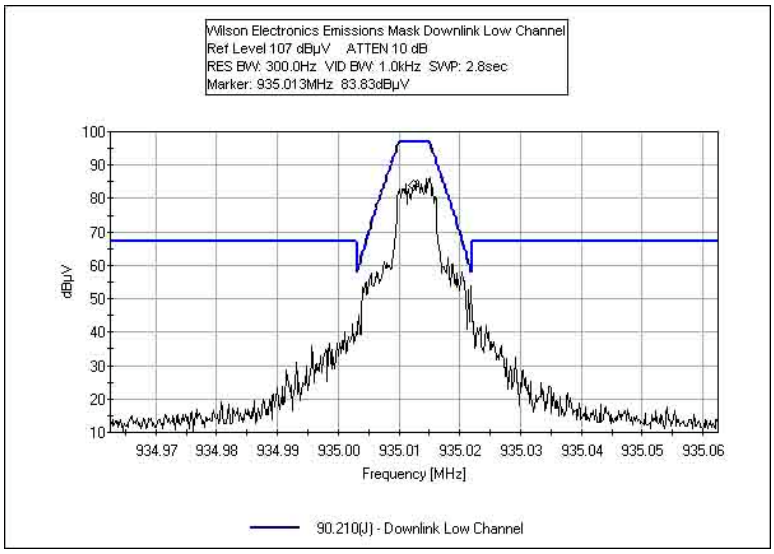
EMISSIONS MASK UPLINK MID CHANNEL



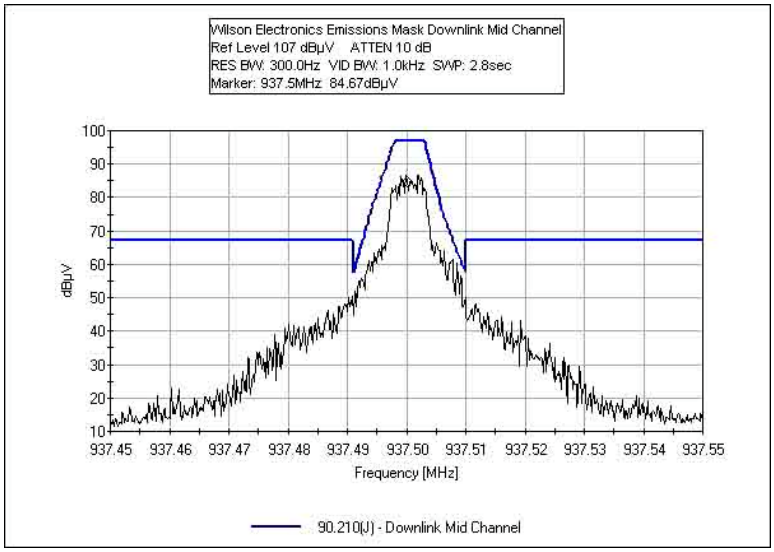
EMISSIONS MASK UPLINK HIGH CHANNEL



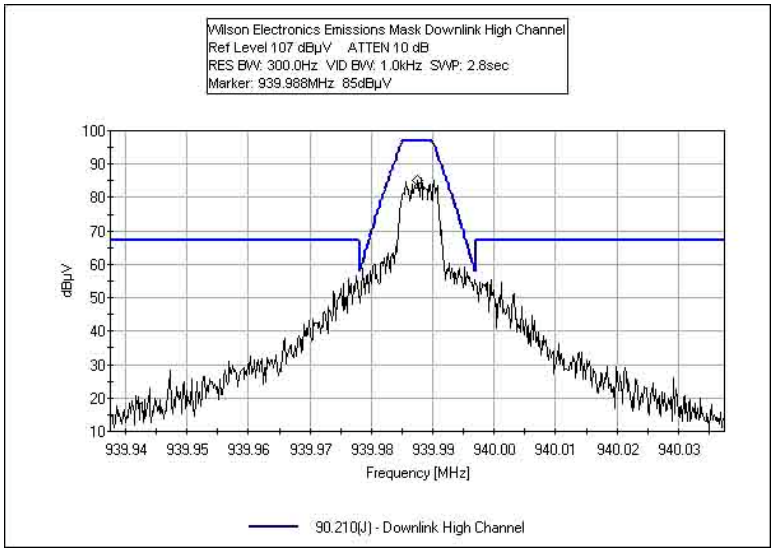
EMISSIONS MASK DOWNLINK LOW CHANNEL



EMISSIONS MASK DOWNLINK MID CHANNEL



EMISSIONS MASK DOWNLINK HIGH CHANNEL



INPUT PLOTS

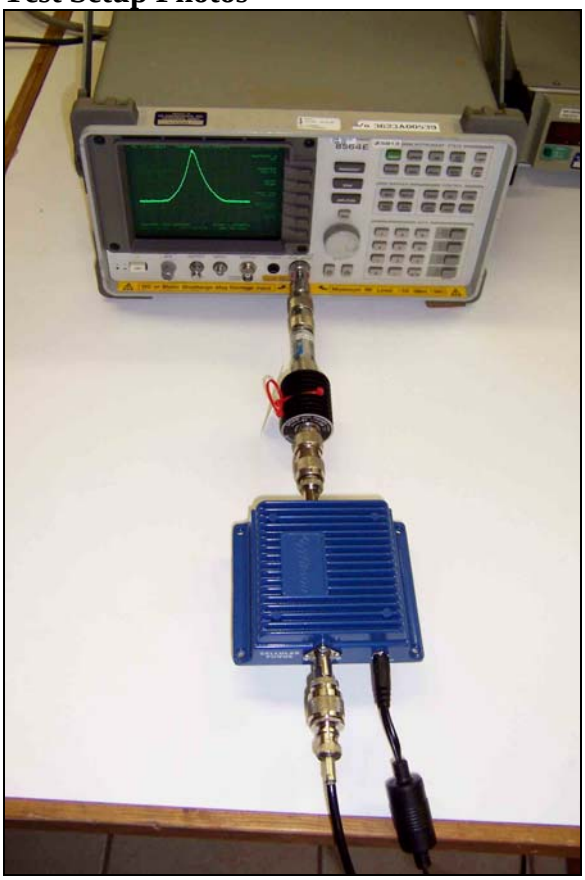
Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8564E SA	3623A00539	10/27/2006	10/27/2008	01406
Weinschel 33-10-33 Attenuator	AH5409	05/23/2005	05/23/2007	P01681
HP 8491A 10dB Attenuator	2708A47453	11/30/2006	11/30/2008	P01350

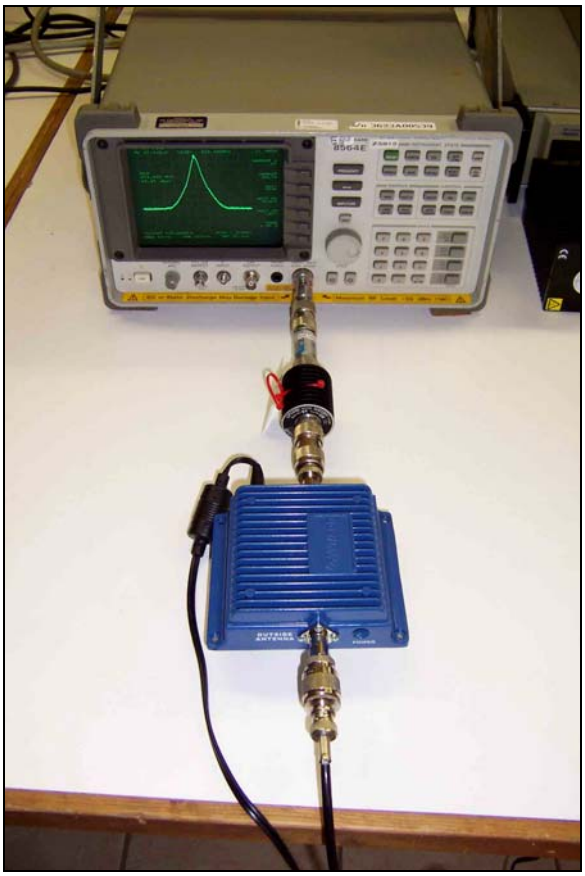
Test Conditions

Equipment is a direct connect, mobile and in-building 900MHz bidirectional amplifier for enhancing the range of iDEN cellular phones. Uplink band is 896-901 MHz. Downlink band is 935-940 MHz. Equipment is connected directly to a spectrum analyzer through suitable attenuation.
Frequency Band Tested: Uplink.
Channel Tested: Low.
Frequency Range Investigated: 9kHz to 10GHz.
Bandwidth Settings:
<250% of ABW or Fc<30MHz, RBW = 300Hz, VBW = 1kHz
>250% of ABW, RBW = 100kHz, VBW = 300kHz
Temperature: 70°F, Relative Humidity: 19%.

Test Setup Photos

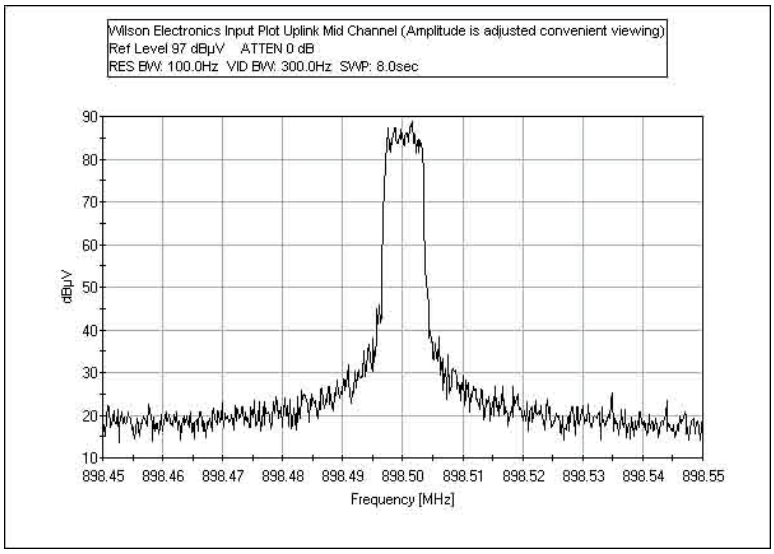


Uplink Direct Connect Test Setup

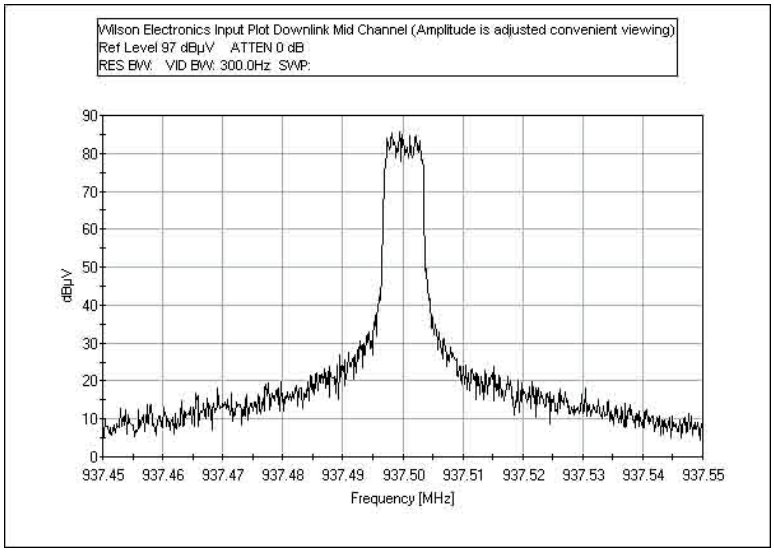


Downlink Direct Connect Test Setup

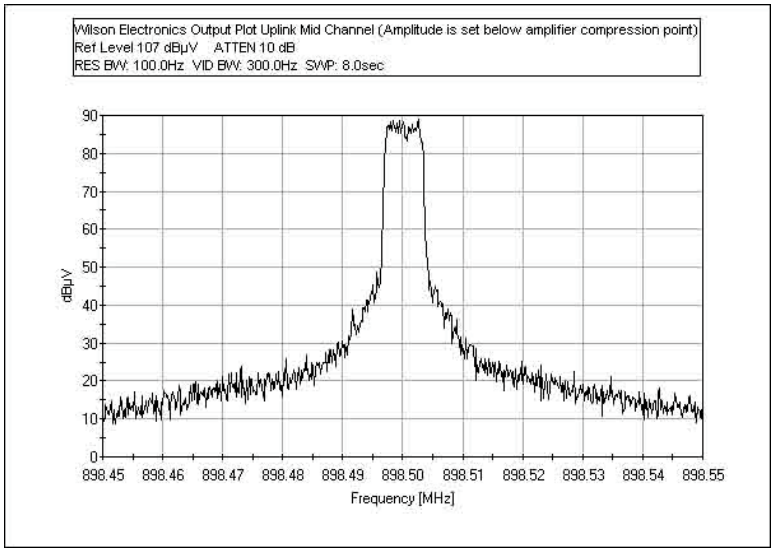
INPUT PLOT UPLINK MID CHANNEL



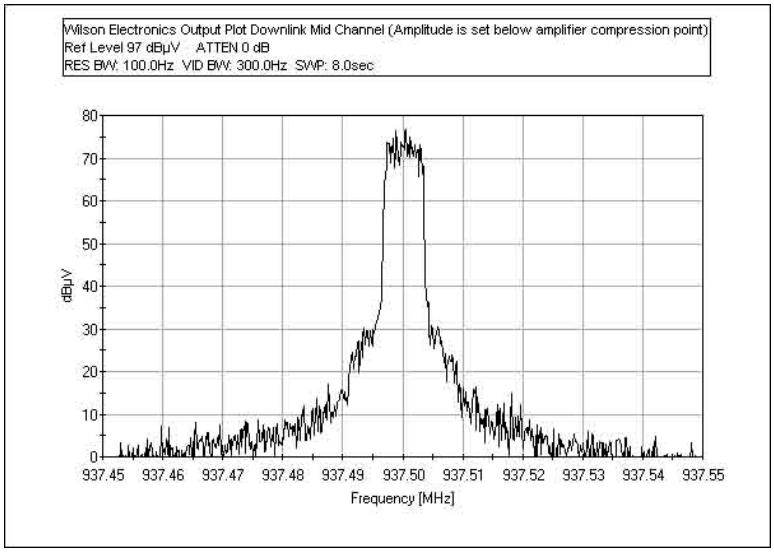
INPUT PLOT DOWNLINK MID CHANNEL



OUTPUT PLOT UPLINK MID CHANNEL



OUTPUT PLOT DOWNLINK MID CHANNEL



99% BANDWIDTH

Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8564E SA	3623A00539	10/27/2006	10/27/2008	01406
Weinschel 33-10-33 Attenuator	AH5409	05/23/2005	05/23/2007	P01681
HP 8491A 10dB Attenuator	2708A47453	11/30/2006	11/30/2008	P01350

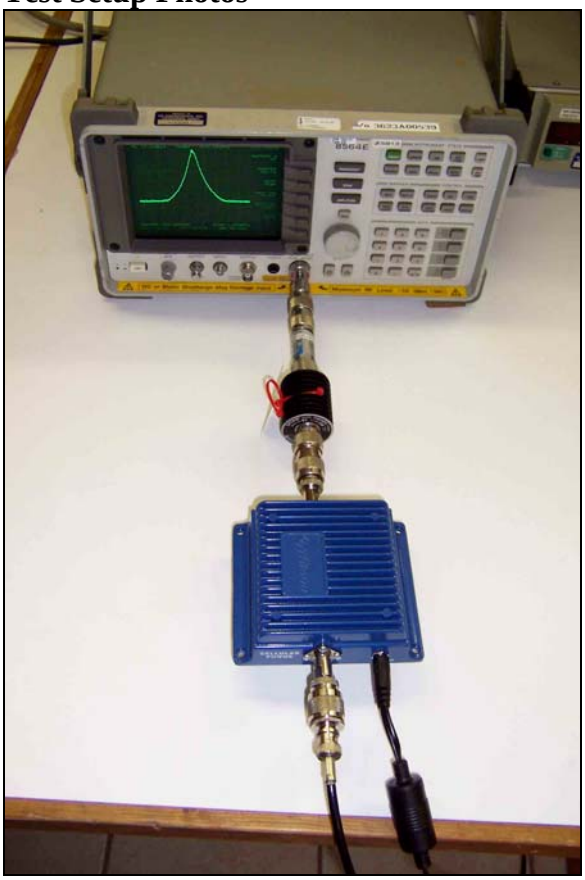
Test Conditions

Equipment is a direct connect, mobile and in-building 900MHz bidirectional amplifier for enhancing the range of iDEN cellular phones. Uplink band is 896-901 MHz. Downlink band is 935-940 MHz. Equipment is connected directly to a spectrum analyzer through suitable attenuation.
Frequency Band Tested: Uplink.
Channel Tested: Low.
Frequency Range Investigated: 9kHz to 10GHz.
Bandwidth Settings:
<250% of ABW or Fc<30MHz, RBW = 300Hz, VBW = 1kHz
>250% of ABW, RBW = 100kHz, VBW = 300kHz
Temperature: 70°F, Relative Humidity: 19%.

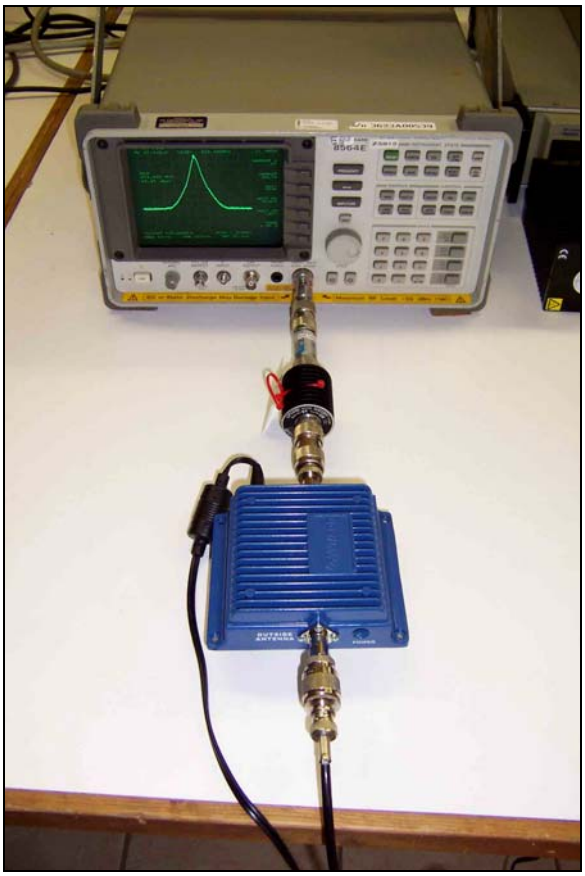
99% Bandwidth Measurements

Path	Measured Bandwidth
Uplink	6.04 kHz
Downlink	6.00 kHz

Test Setup Photos

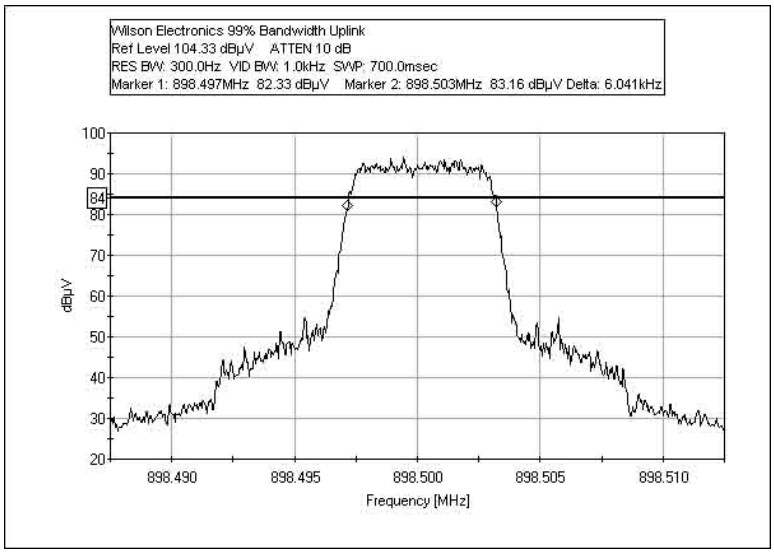


Uplink Direct Connect Test Setup

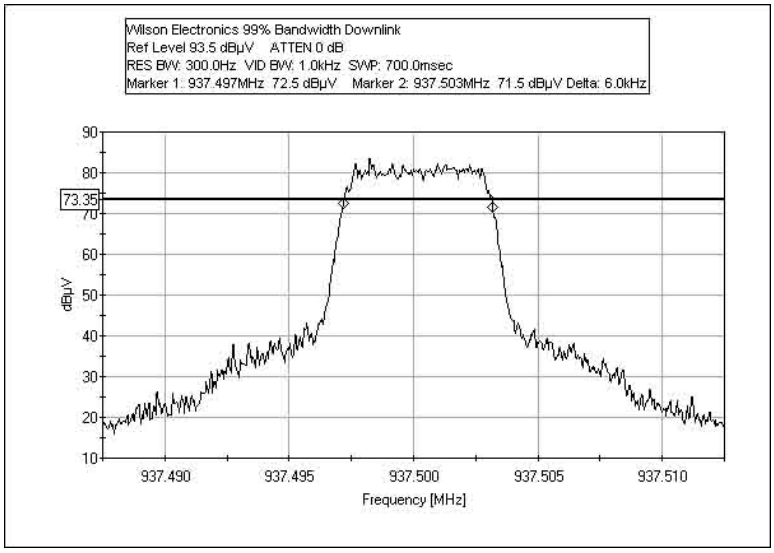


Downlink Direct Connect Test Setup

99% BANDWIDTH UPLINK



99% BANDWIDTH DOWNLINK



INTERMODULATION ATTENUATION

Test Location: CKC Laboratories, Inc. •4933 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer:	**Wilson Electrons**		
Specification:	**90.210(j) Out of Band Spurs**		
Work Order #:	**85944**	Date:	1/15/2007
Test Type:	**Antenna Conducted**	Time:	14:39:59
Equipment:	**iDEN 900 MHz Amplifier**	Sequence#:	5
Manufacturer:	Wilson Electronics	Tested By:	Randal Clark
Model:	2B4121		120V 60Hz
S/N:	2B41219910000		

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8564E SA	3623A00539	10/27/2006	10/27/2008	01406
Weinschel 33-10-33 Attenuator	AH5409	05/23/2005	05/23/2007	P01681
HP 8491A 10dB Attenuator	2708A47453	11/30/2006	11/30/2008	P01350

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

Function	Manufacturer	Model #	S/N
iDEN 900 MHz Amplifier*	Wilson Electronics	2B4121	2B41219910000

Support Devices:

Function	Manufacturer	Model #	S/N
EUT Power Supply	I.T.E Power Supply	HK-B118-A06	0106C
Signal Generator	Agilent	E4431B	US38440201
Input Amplifier	Amplifier Research	10W1000	4532
Signal Generator	Agilent	E4436B	US39260137
Combiner	Motorola	None	None

Test Conditions / Notes:

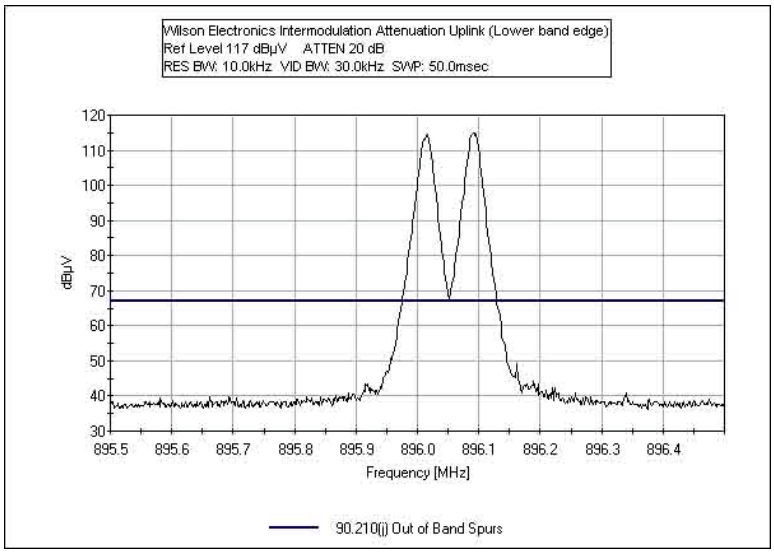
Equipment is a direct connect, mobile and in-building 900MHz bidirectional amplifier for enhancing the range of iDEN cellular phones. Uplink band is 896-901 MHz. Downlink band is 935-940 MHz. Equipment is connected directly to a spectrum analyzer through suitable attenuation. Signal generator output is fed through a combiner to a preamplifier prior to input to the EUT. Harmonic content of the preamplifier is checked prior to intermodulation attenuation tests.
Frequency Band Tested: Uplink and Downlink
Channel Tested: Intermodulation Attenuation
Frequency Range Investigated: 9kHz to 10GHz.
Bandwidth Settings: RBW = 10kHz, VBW = 30kHz
Temperature: 70F Relative Humidity: 19%
No intermodulation emissions detected within 20dB of the limit.

Transducer Legend:

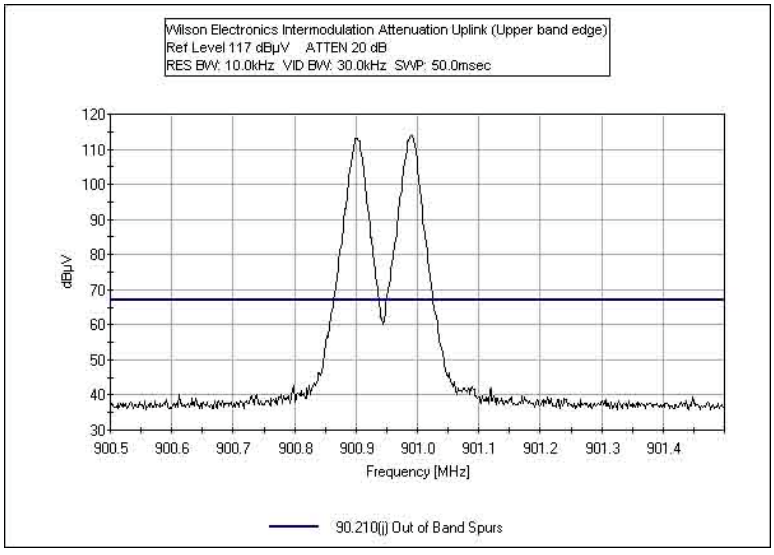
Measurement Data: Reading listed by margin. Test Lead: RF Output Uplink

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

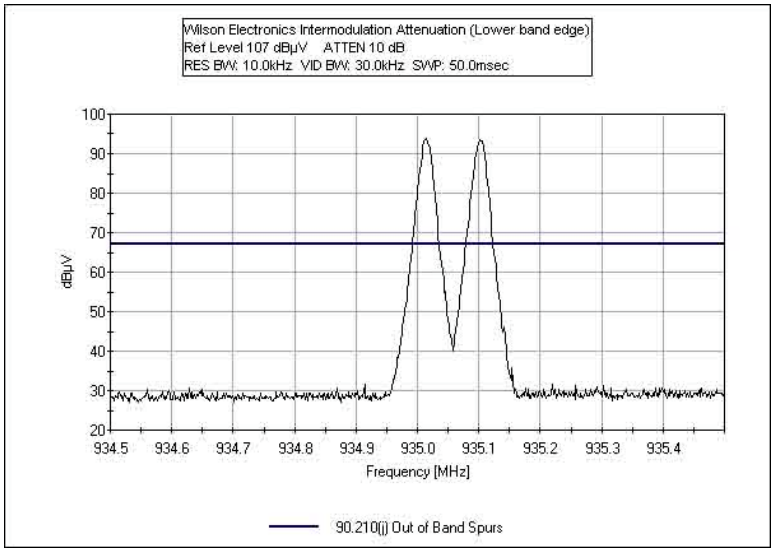
INTERMODULATION ATTENUATION UPLINK LOW



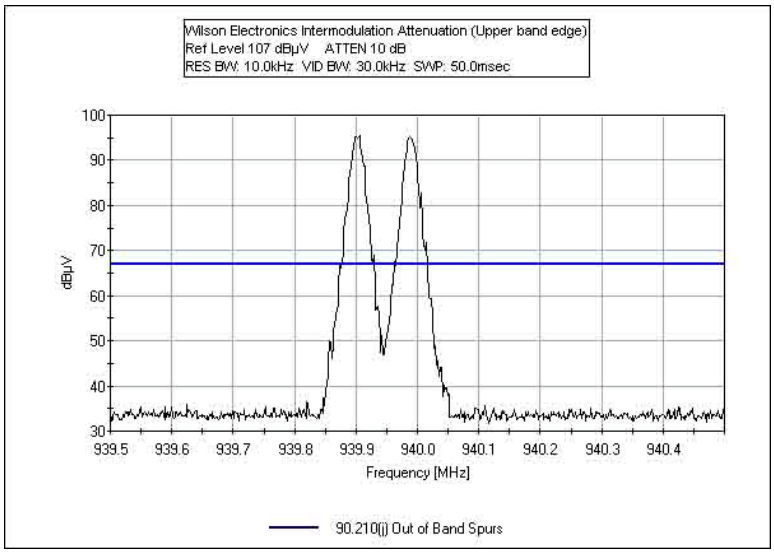
INTERMODULATION ATTENUATION UPLINK HIGH



INTERMODULATION ATTENUATION DOWNLINK LOW



INTERMODULATION ATTENUATION DOWNLINK HIGH



ATTENUATION OF OUT OF BAND SIGNALS

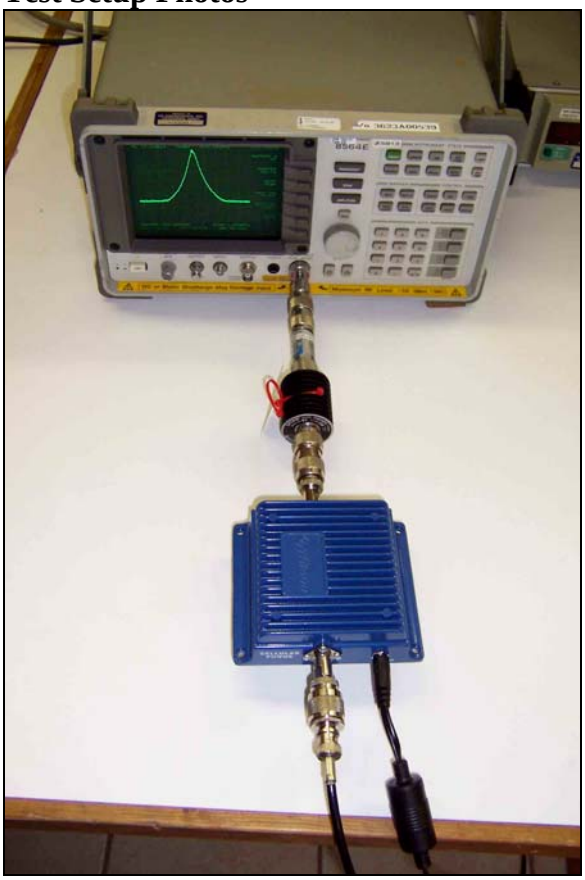
Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8564E SA	3623A00539	10/27/2006	10/27/2008	01406
Weinschel 33-10-33 Attenuator	AH5409	05/23/2005	05/23/2007	P01681
HP 8491A 10dB Attenuator	2708A47453	11/30/2006	11/30/2008	P01350

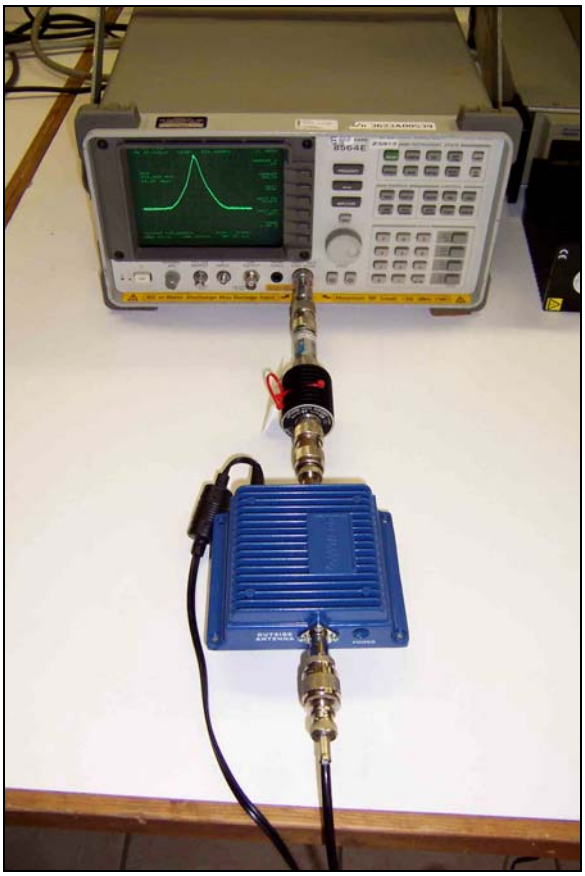
Test Conditions

Equipment is a direct connect, mobile and in-building 900MHz bidirectional amplifier for enhancing the range of iDEN cellular phones. Uplink band is 896-901 MHz. Downlink band is 935-940 MHz. Equipment is connected directly to a spectrum analyzer through suitable attenuation.
Frequency Band Tested: Uplink.
Channel Tested: Low.
Frequency Range Investigated: 9kHz to 10GHz.
Bandwidth Settings:
<250% of ABW or Fc<30MHz, RBW = 300Hz, VBW = 1kHz
>250% of ABW, RBW = 100kHz, VBW = 300kHz
Temperature: 70°F, Relative Humidity: 19%.

Test Setup Photos

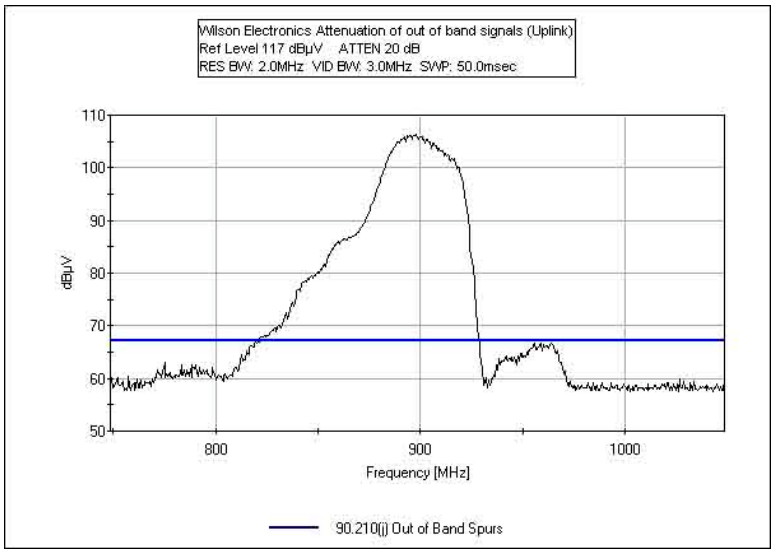


Uplink Direct Connect Test Setup

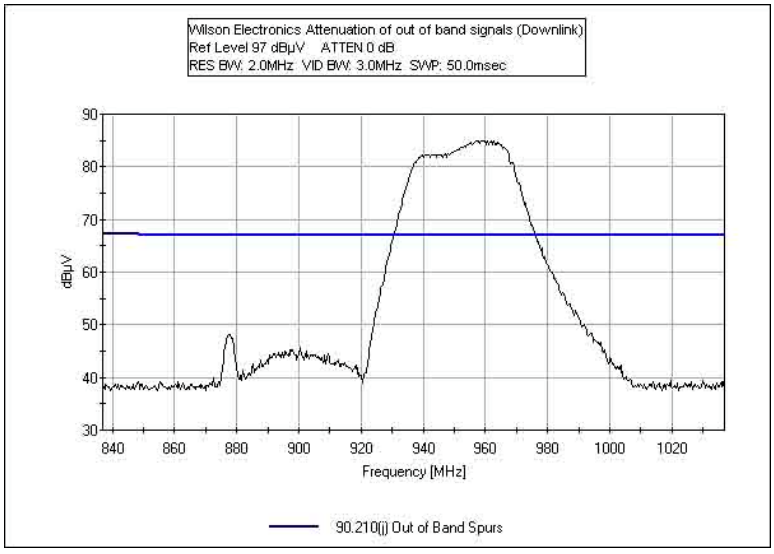


Downlink Direct Connect Test Setup

ATTENUATION OF OUT OF BAND SIGNALS UPLINK



ATTENUATION OF OUT OF BAND SIGNALS DOWNLINK



RSS-131 PASSBAND GAIN UPLINK

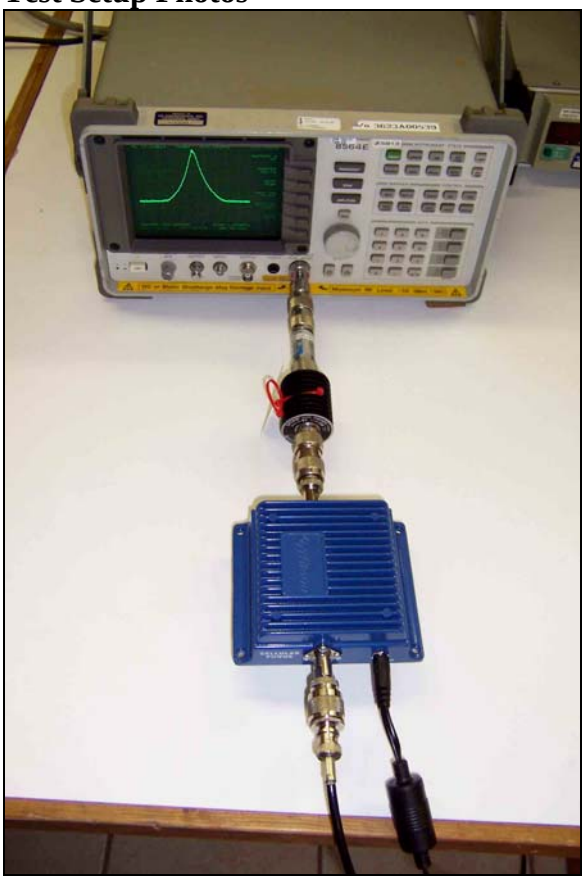
Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8564E SA	3623A00539	10/27/2006	10/27/2008	01406
Weinschel 33-10-33 Attenuator	AH5409	05/23/2005	05/23/2007	P01681
HP 8491A 10dB Attenuator	2708A47453	11/30/2006	11/30/2008	P01350

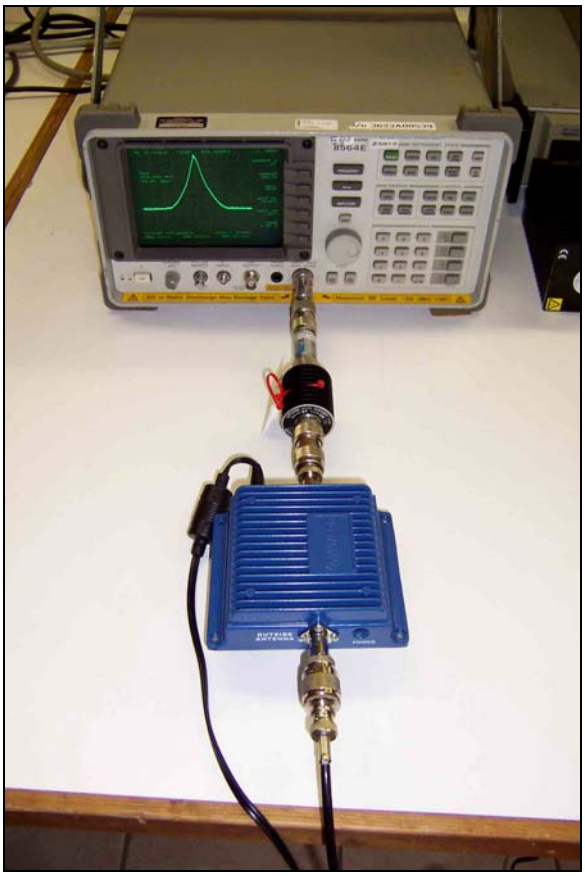
Test Conditions

Equipment is a direct connect, mobile and in-building 900MHz bidirectional amplifier for enhancing the range of iDEN cellular phones. Uplink band is 896-901 MHz. Downlink band is 935-940 MHz. Equipment is connected directly to a spectrum analyzer through suitable attenuation.
Frequency Band Tested: Uplink.
Channel Tested: Low.
Frequency Range Investigated: 9kHz to 10GHz.
Bandwidth Settings:
<250% of ABW or Fc<30MHz, RBW = 300Hz, VBW = 1kHz
>250% of ABW, RBW = 100kHz, VBW = 300kHz
Temperature: 70°F, Relative Humidity: 19%.

Test Setup Photos

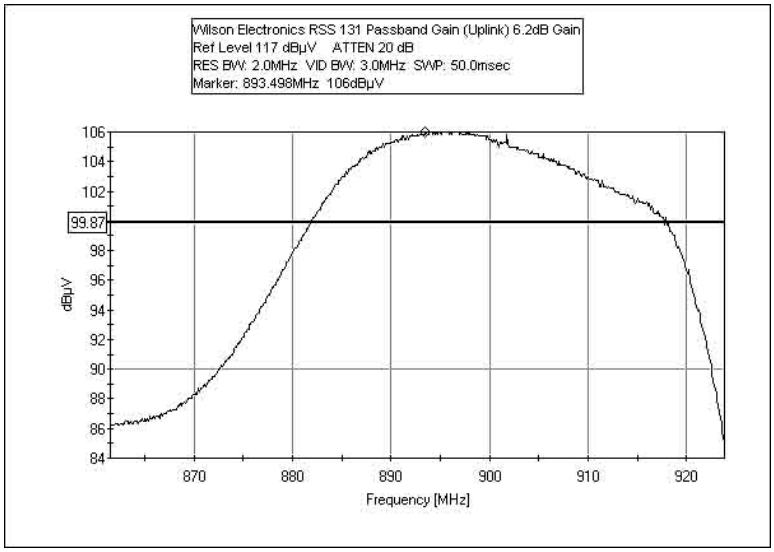


Uplink Direct Connect Test Setup

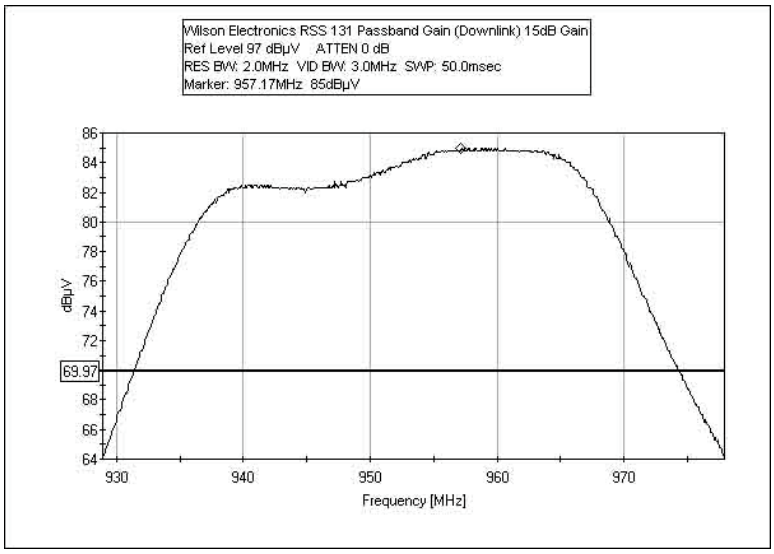


Downlink Direct Connect Test Setup

RSS-131 PASSBAND GAIN UPLINK



RSS-131 PASSBAND GAIN DOWNLINK



RSS-131 PASS BANDWIDTH UPLINK

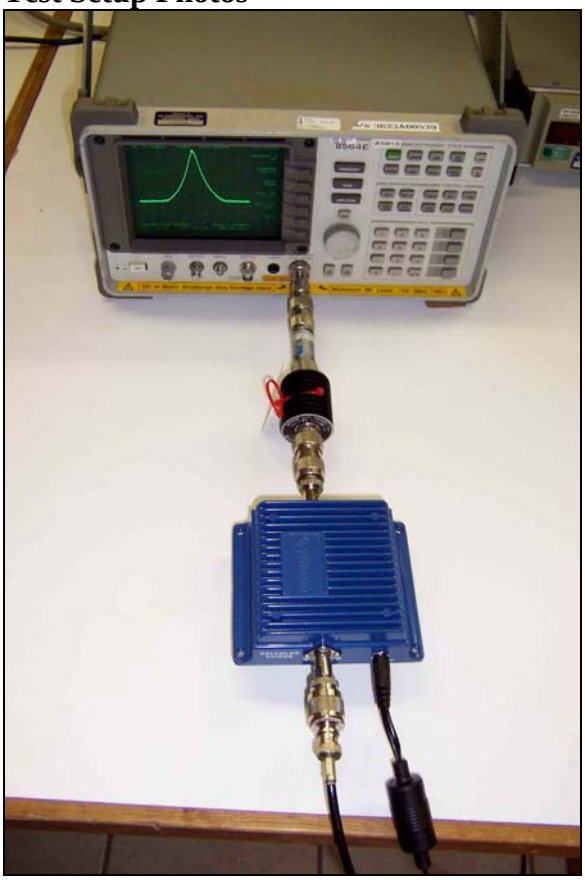
Test Equipment

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8564E SA	3623A00539	10/27/2006	10/27/2008	01406
Weinschel 33-10-33 Attenuator	AH5409	05/23/2005	05/23/2007	P01681
HP 8491A 10dB Attenuator	2708A47453	11/30/2006	11/30/2008	P01350

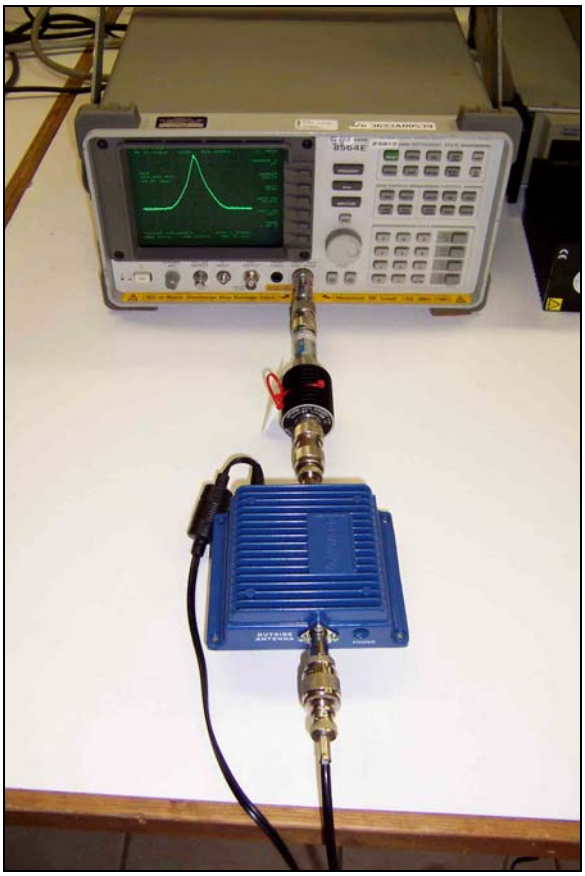
Test Conditions

Equipment is a direct connect, mobile and in-building 900MHz bidirectional amplifier for enhancing the range of iDEN cellular phones. Uplink band is 896-901 MHz. Downlink band is 935-940 MHz. Equipment is connected directly to a spectrum analyzer through suitable attenuation.
Frequency Band Tested: Uplink.
Channel Tested: Low.
Frequency Range Investigated: 9kHz to 10GHz.
Bandwidth Settings:
<250% of ABW or Fc<30MHz, RBW = 300Hz, VBW = 1kHz
>250% of ABW, RBW = 100kHz, VBW = 300kHz
Temperature: 70°F, Relative Humidity: 19%.

Test Setup Photos

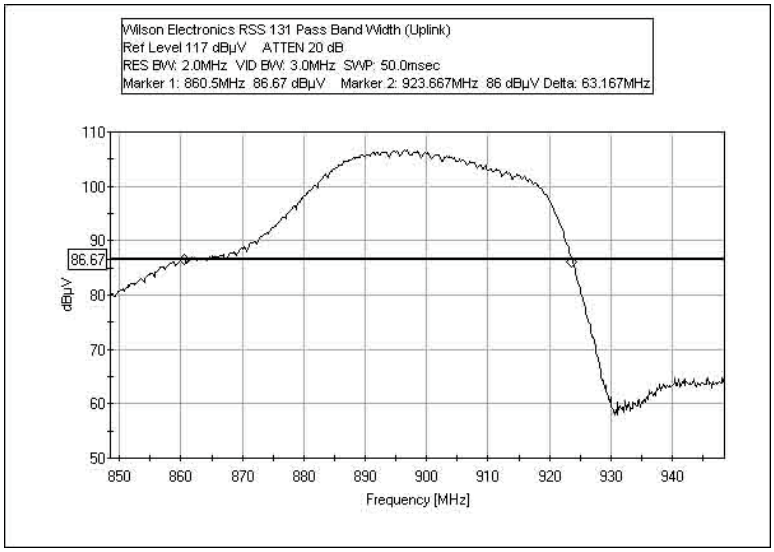


Uplink Direct Connect Test Setup



Downlink Direct Connect Test Setup

RSS-131 PASS BANDWIDTH UPLINK



RSS-131 PASS BANDWIDTH DOWNLINK