WILSON ELECTRONICS TEST REPORT

FOR THE

DUAL BAND BIDIRECTIONAL AMPLIFIER, 811201

FCC PART 22H AND RSS 131

COMPLIANCE

DATE OF ISSUE: MARCH 16, 2004

PREPARED FOR:

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

P.O. No.: PW0819D
W.O. No.: 81935

PREPARED BY:

Mary Ellen Clayton
CKC Laboratories, Inc.
5473A Clouds Rest
Mariposa, CA 95338

Date of test: March 1-12, 2004

Report No.: FC04-021

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ADMINISTRATIVE INFORMATION

DATE OF TEST:	March 1-12, 2004
DATE OF RECEIPT:	March 1, 2004
PURPOSE OF TEST:	To demonstrate the compliance of the Dual Band Bidirectional Amplifier, 811201 with the requirements for FCC Part 22H and RSS 131 devices.
TEST METHOD:	FCC Part 22H, RSS 131 and TIA/EIA 603
FREQUENCY RANGE TESTED:	30 MHz-10GHz
MANUFACTURER:	Wilson Electronics 3301 East Deseret Drive St. George, UT 84790
REPRESENTATIVE:	Patrick Cook
TEST LOCATION:	CKC Laboratories, Inc. 5473A Clouds Rest Mariposa, CA 95338

SUMMARY OF RESULTS

As received, the Wilson Electronics Dual Band Bidirectional Amplifier, 811201 was found to be fully compliant with the following standards and specifications:

United States
- FCC Part 22H using:
- TIA/EIA 603

FCC Site No. 90477

Canada

RSS 131 using:
- FCC Part 22H
- TIA/EIA 603

Industry of Canada File No. IC 3082-B

CONDITIONS FOR COMPLIANCE

No modifications to the EUT were necessary to comply.

APPROVALS

Steve Behm, Director of Engineering Services

QUALITY ASSURANCE:

Joyce Walker, Quality Assurance Administrative Manager

TEST PERSONNEL:

Mike Wilkinson, Lab Manager

EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The EUT tested by CKC Laboratories was a production unit

EQUIPMENT UNDER TEST

Amplifier Power Supply
Manuf: Wilson Electronics
Model: JOD-48U-36
Serial: NA
FCC ID: NA

Dual Band Bidirectional Amplifier
Manuf: Wilson Electronics
Model: 811201
Serial: DD1-008900
FCC ID: pending

PERIPHERAL DEVICES

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

Signal Generator
Manuf: HP
Model: E4432B
Serial: US40052283 & US38330168
FCC ID: DoC

Signal Generator
Manuf: HP
Model: 8921A
Serial: 3519A01796
FCC ID: DoC

Signal Generator (CDMA Adapter)
Manuf: HP
Model: 83205A
Serial: US37461985
FCC ID: DoC

Preamp Driver
Manuf: Wilson Electronics
Model: Prototpye
Serial: NA
FCC ID: DoC

Preamp
Manuf: Mini-Circuits
Model: ZHL-42-SMA
Serial: D030204-#19
FCC ID: DoC

RF Combiner
Manuf: Motorola
Model: NA
Serial: P1314
FCC ID: DoC

MEASUREMENT UNCERTAINTY

TEST	HIGHEST UNCERTAINTY
Radiated Emissions	+/- 2.94 dB
Conducted Emissions	+/- 1.56 dB

Note: Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k=2. Statements of compliance are based on the nominal values only.

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
F9W, GXW, G7W, F1D

FCC 2.1033 (c)(5) FREQUENCY RANGE
869-894MHz Downlink, 824-849MHz Uplink

FCC 2.1033 (c)(6) OPERATING POWER
5.88 mW Downlink, 3 Watts Uplink

FCC 2.1033 (c)(7) MAXIMUM POWER RATING
7 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, CDMA, EDGE, GSM

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

Test Conditions: EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz

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:
CDMA, AMPS and TDMA (EDGE & GSM) formats: 3Watts

Downlink Output Ratings:
All: 10mW

RF power output of the amplifier is routed to a spectrum analyzer through suitable attenuation.

Downlink

Frequency (MHz)	*Modulation*	*Power Output (milliWatts)*
870.25	CDMA	5.24
881.5	CDMA	5.24
892.75	CDMA	5.37
869.28	GSM	4.57
881.5	GSM	4.90
893.72	GSM	4.90
869.28	EDGE	5.62
881.5	EDGE	5.88
893.72	EDGE	5.75
869.03	AMPS	2.82
881.5	AMPS	3.10
893.97	AMPS	2.82

Uplink

Frequency (MHz)	*Modulation*	*Power Output (Watts)*
825.25	CDMA	3.00
836.5	CDMA	2.88
847.75	CDMA	2.45
824.28	GSM	3.00
836.5	GSM	3.00
848.72	GSM	1.91
824.28	EDGE	2.82
836.5	EDGE	2.88
848.72	EDGE	2.09
824.03	AMPS	2.88
836.5	AMPS	2.82
848.97	AMPS	1.86

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

PHOTOGRAPH SHOWING DIRECT CONNECT TEST SETUP

This photo represents all direct connect test setups: RF power, spurious emissions at antenna terminal, occupied bandwidth, band edge, intermodulation attenuation, output, input and RSS 131.

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

Not applicable to this unit.

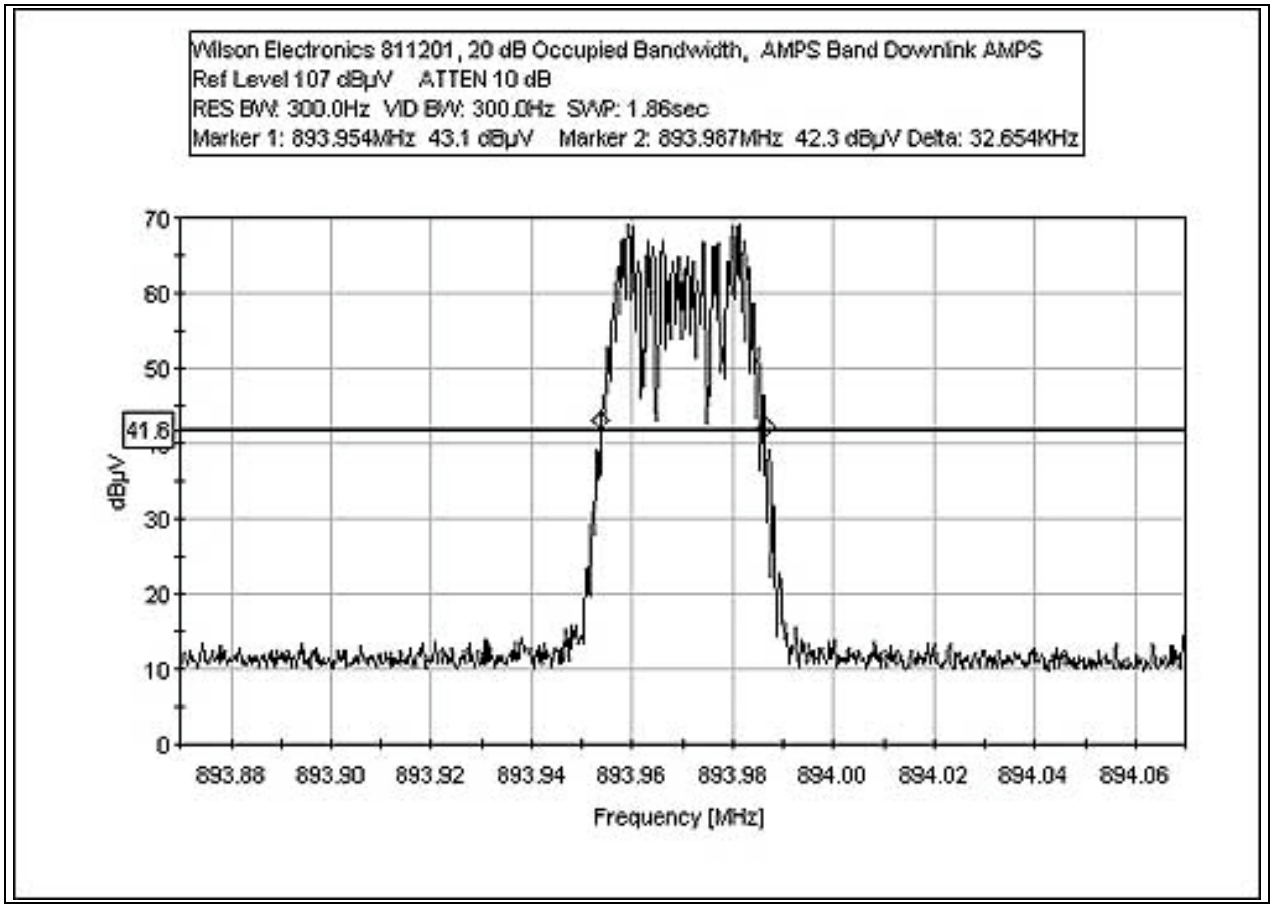
FCC 2.1033(c)(14)/2.1047(b) MODULATION CHARACTERISTICS– Modulation Limiting Response

Not applicable to this unit.

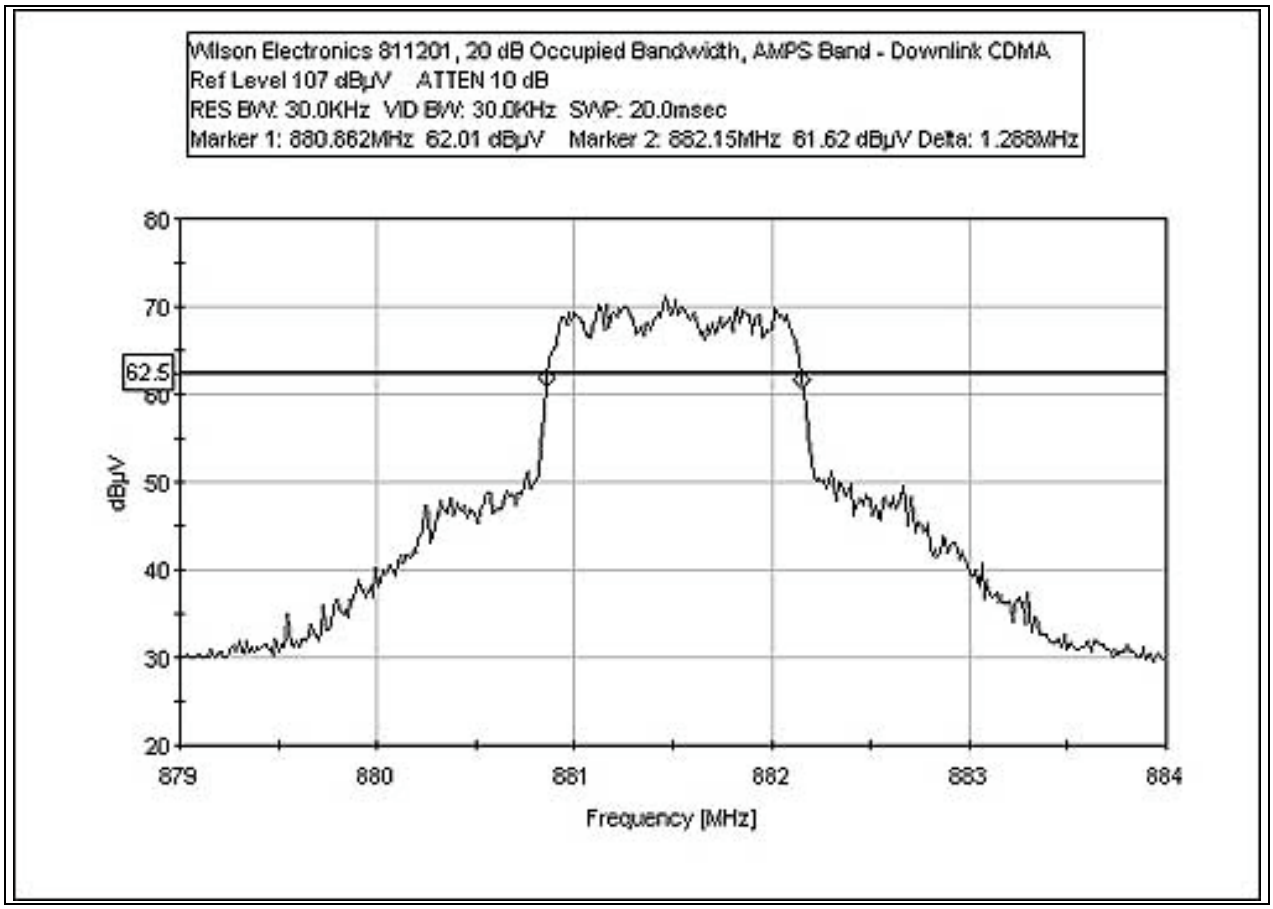
FCC 2.1033(c)(14)/2.1049(i)- OCCUPIED BANDWIDTH

Test Conditions: 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. RF power output of the amplifier is routed to a spectrum analyzer through suitable attenuation.

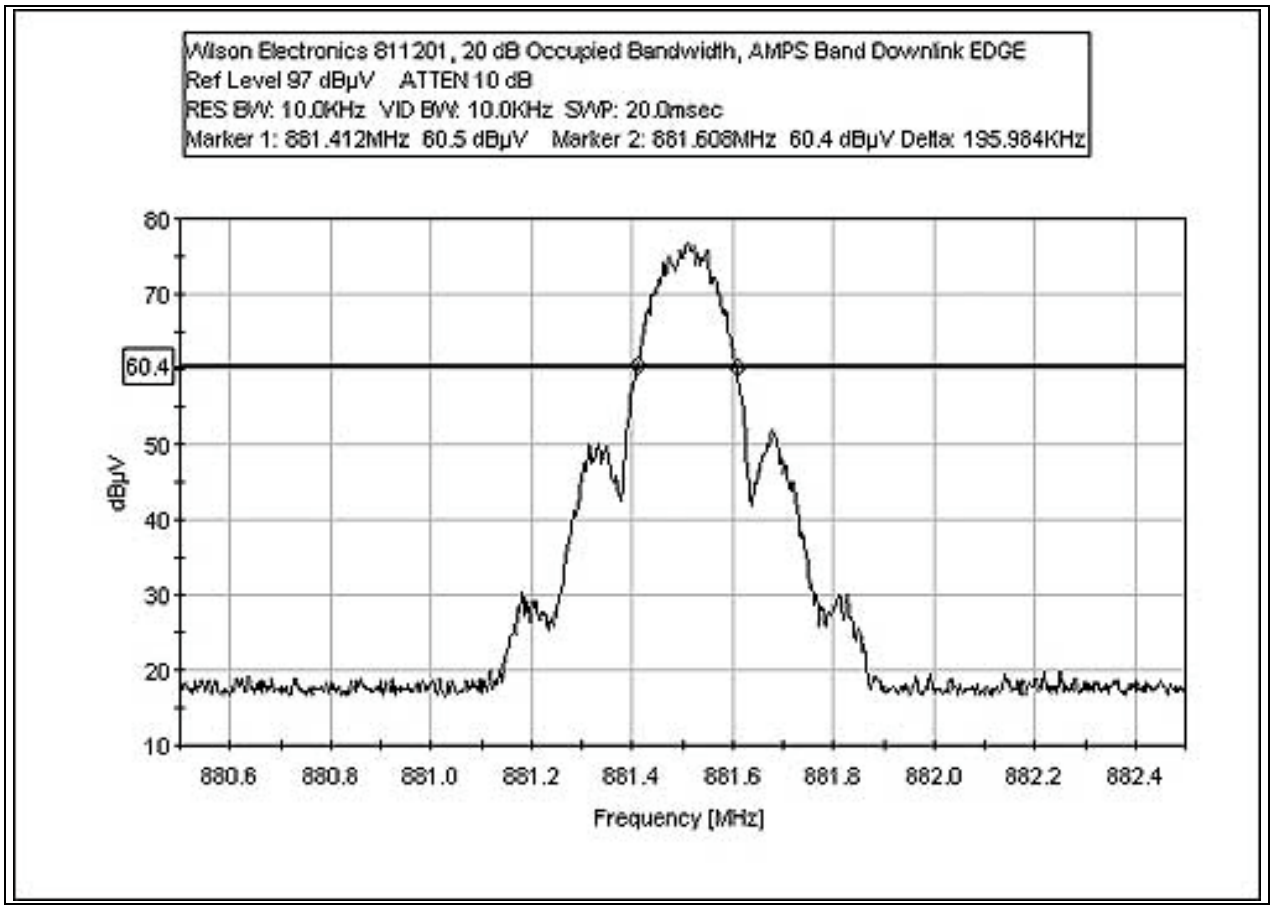
FCC 2.1049 Downlink 20dB Occupied Bandwidth AMPS Band AMPS



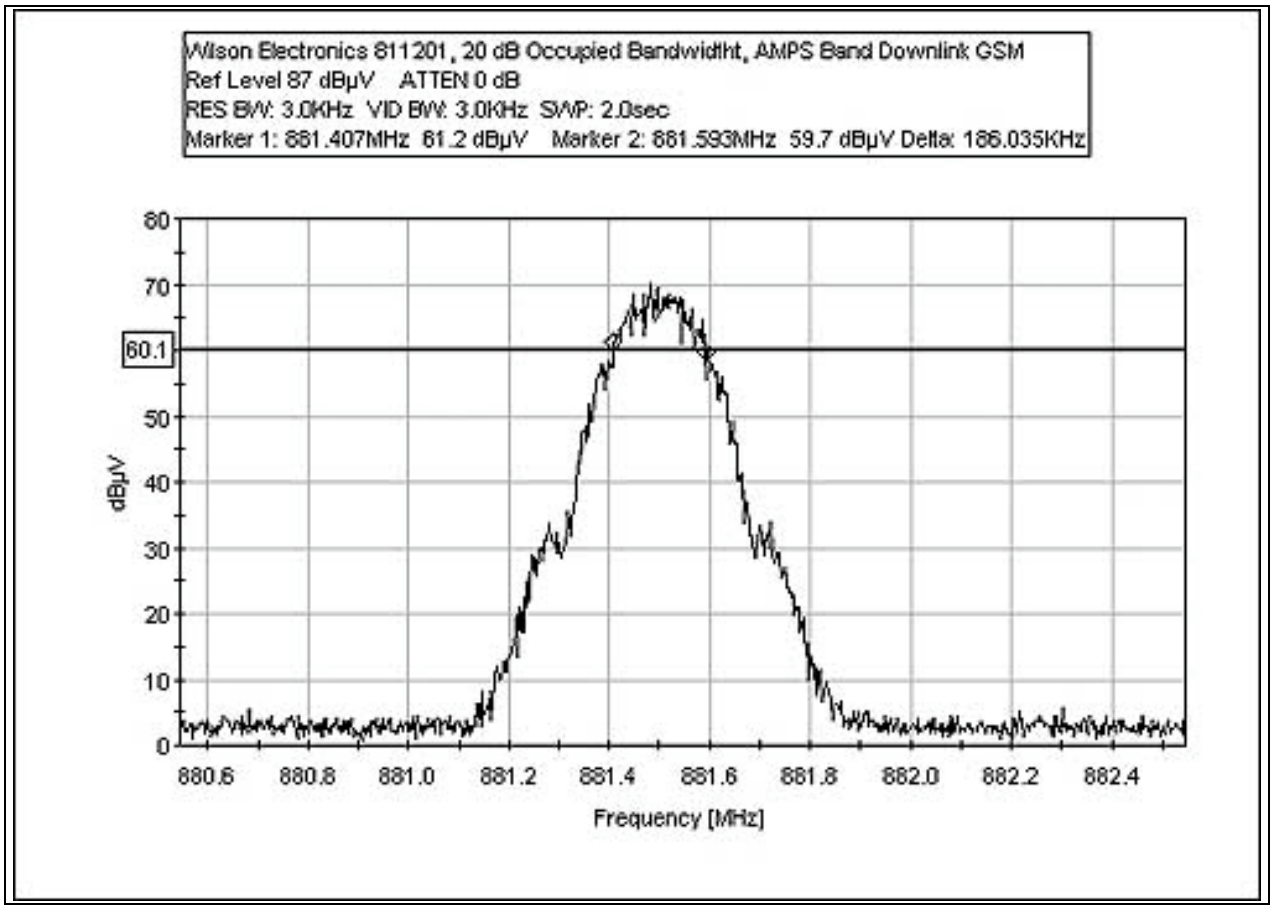
FCC 2.1049 Downlink 20dB Occupied Bandwidth AMPS Band CDMA



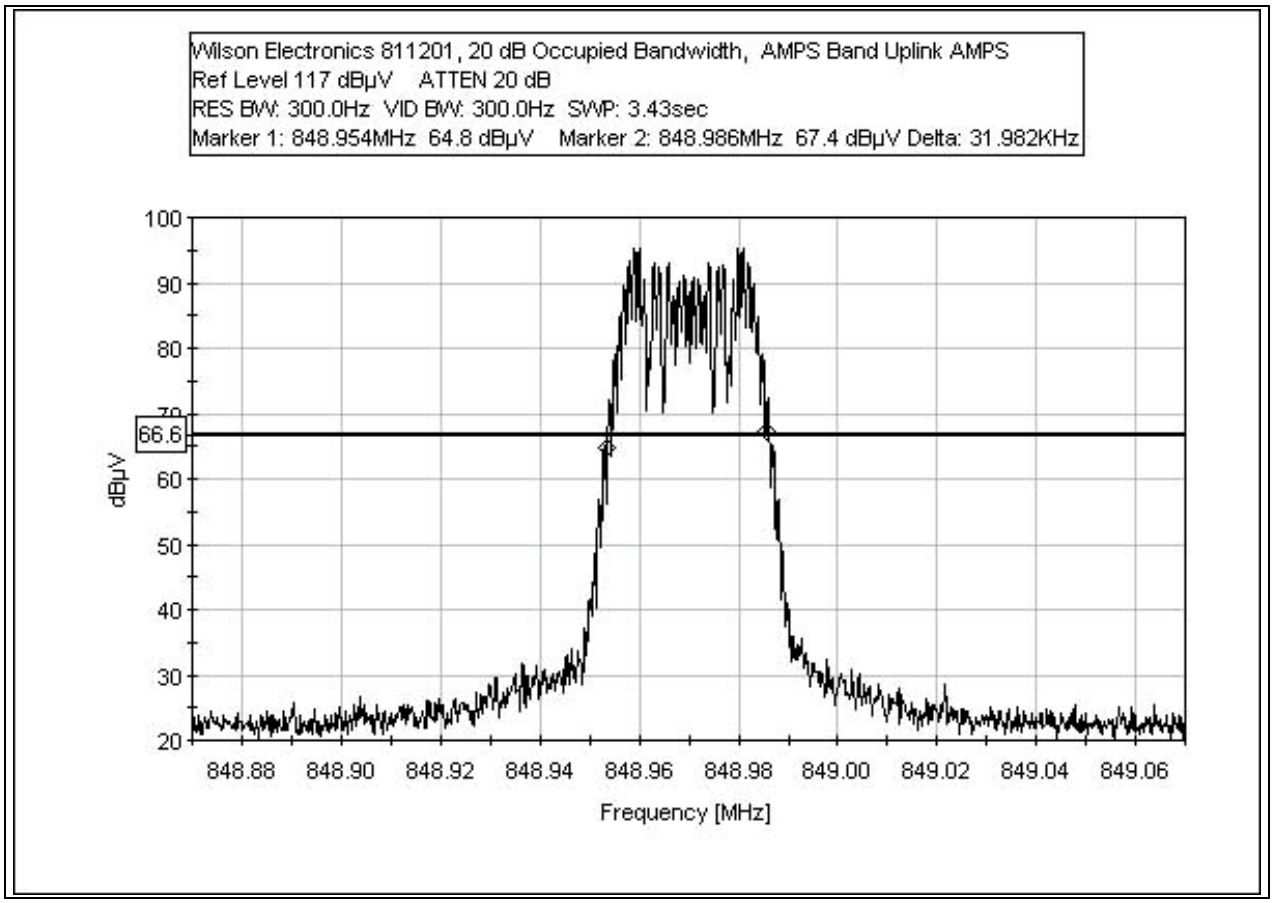
FCC 2.1049 Downlink 20dB Occupied Bandwidth AMPS Band EDGE



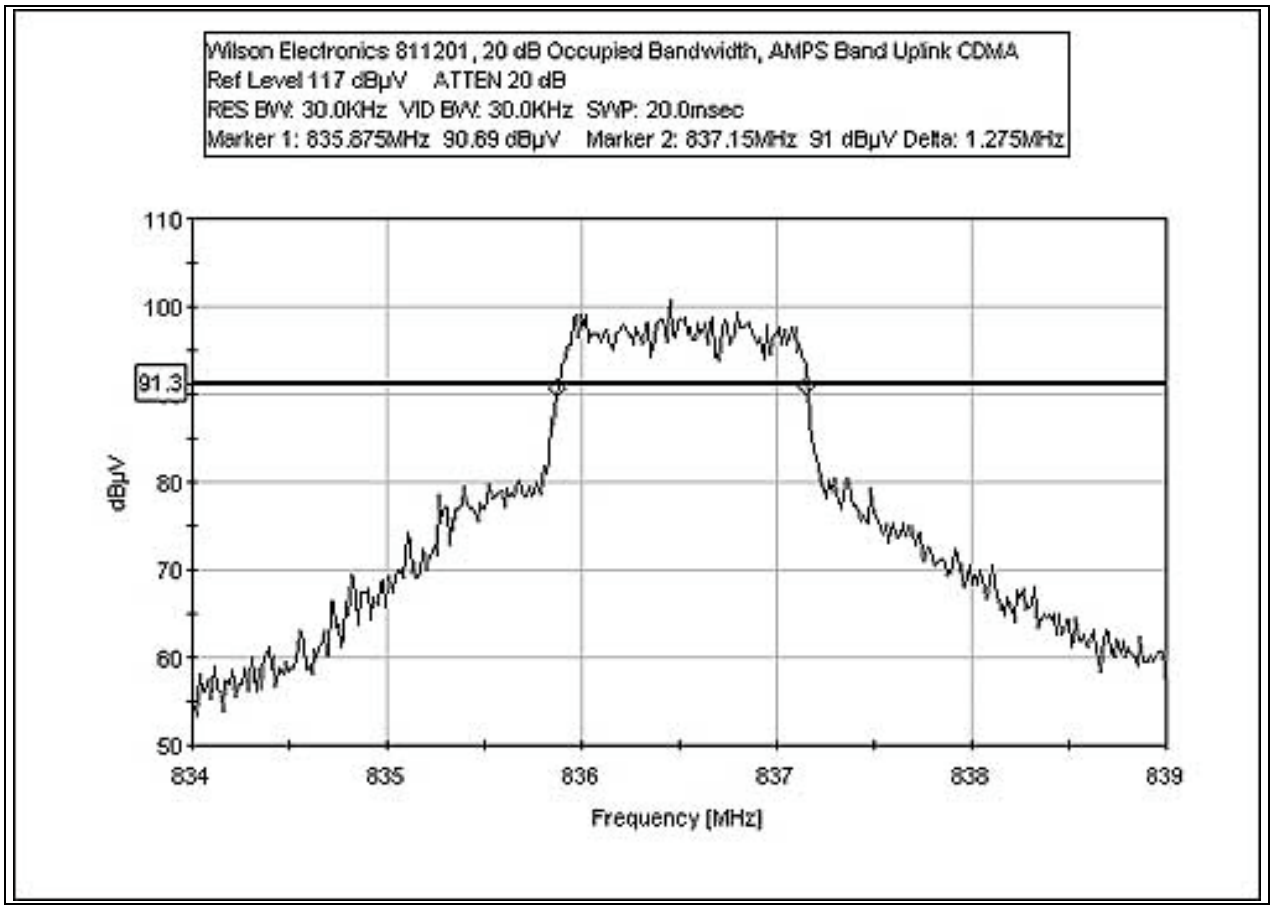
FCC 2.1049 Downlink 20dB Occupied Bandwidth AMPS Band GSM



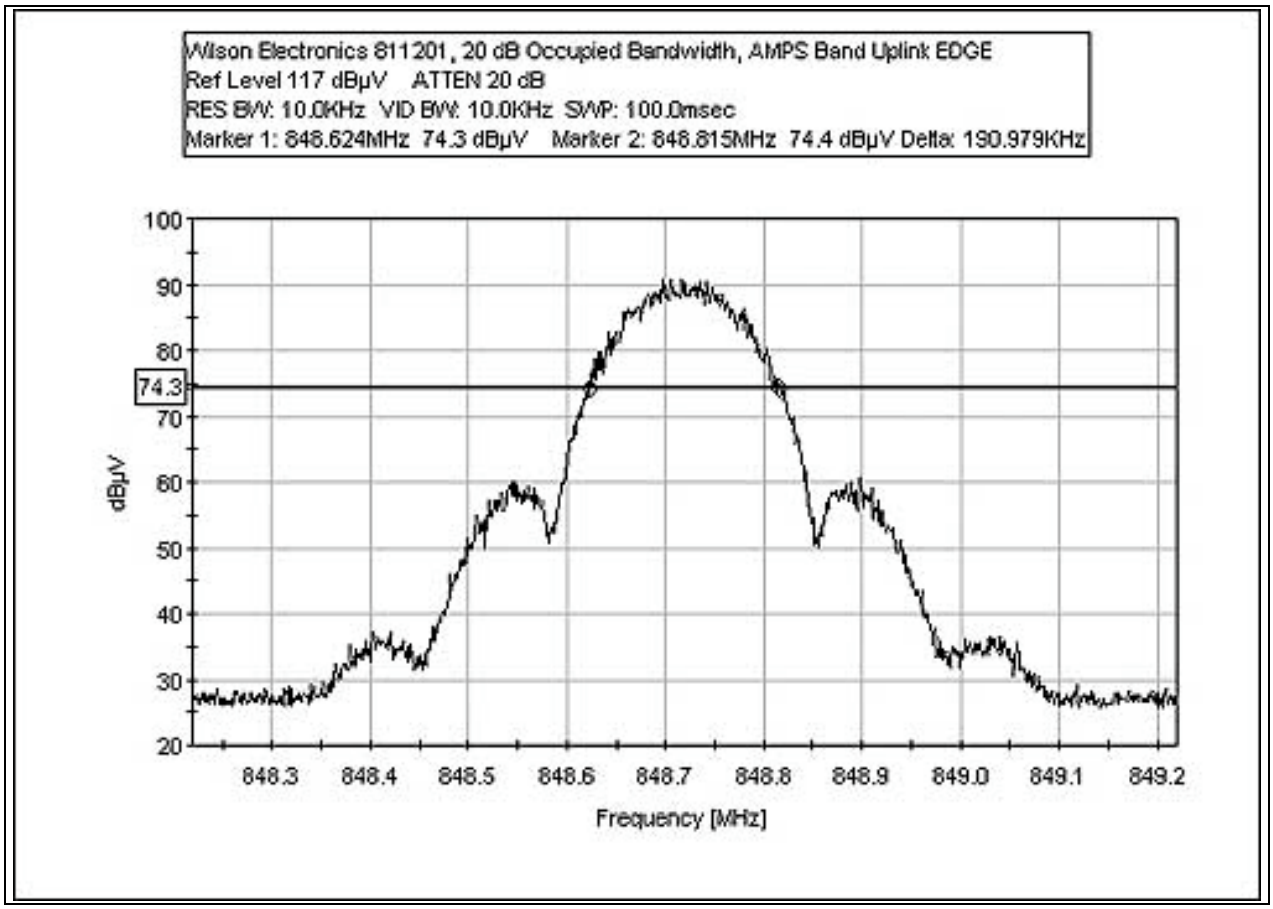
FCC 2.1049 Uplink 20dB Occupied Bandwidth AMPS Band AMPS



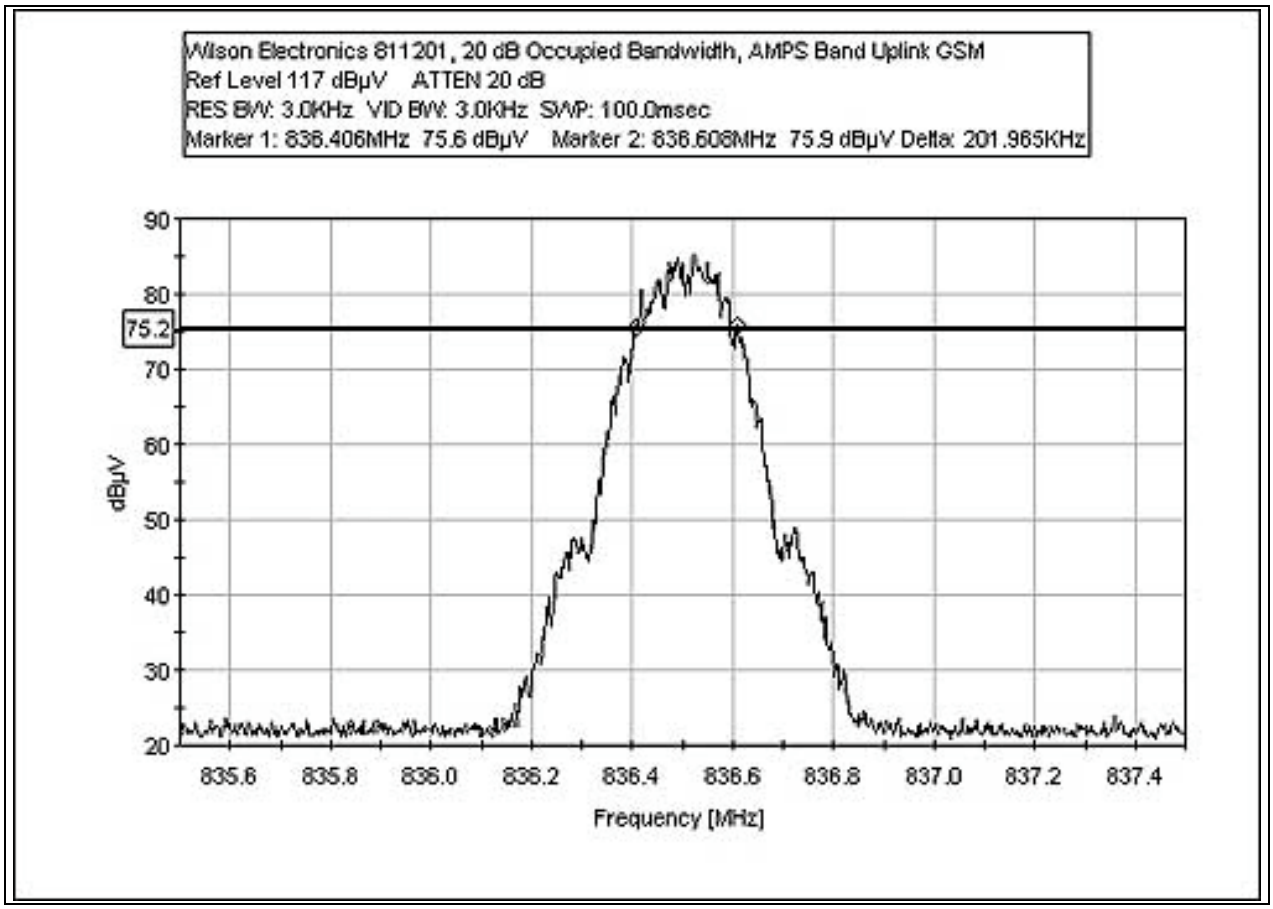
FCC 2.1049 Uplink 20dB Occupied Bandwidth AMPS Band CDMA



FCC 2.1049 Uplink 20dB Occupied Bandwidth AMPS Band EDGE



FCC 2.1049 Uplink 20dB Occupied Bandwidth AMPS Band GSM



***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/05/2004
Test Type: **Antenna Terminals** Time: 12:58:32
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 35
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: AMPS. Frequencies Tested: Downlink Mid - 881.5MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	881.482M	81.0	+30.3	+0.6			+0.0	111.9	117.0 Fundamental	-5.1	None
2	1762.980M	45.2	+30.3	+0.6			+0.0	76.1	94.0	-17.9	None
3	7051.544M	37.0	+27.0	+0.6			+0.0	64.6	94.0	-29.4	None

4	4407.492M	34.8	+28.9	+0.6	+0.0	64.3	94.0	-29.7	None
5	2644.452M	33.7	+29.9	+0.6	+0.0	64.2	94.0	-29.8	None
6	6170.596M	34.5	+27.6	+0.6	+0.0	62.7	94.0	-31.3	None
7	773.100M	31.3	+30.4	+0.6	+0.0	62.3	94.0	-31.7	None
8	3526.012M	31.6	+29.8	+0.6	+0.0	62.0	94.0	-32.0	None
9	5289.096M	33.0	+28.1	+0.6	+0.0	61.7	94.0	-32.3	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/05/2004
Test Type: **Antenna Terminals** Time: 12:54:46
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 34
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: AMPS. Frequencies Tested: Downlink Low - 869.03MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	869.027M	80.6	+30.3	+0.6			+0.0	111.5	117.0 Fundamental	-5.5	None
2	1738.037M	43.8	+30.3	+0.6			+0.0	74.7	94.0	-19.3	None
3	2607.130M	35.9	+29.9	+0.6			+0.0	66.4	94.0	-27.6	None
4	6952.811M	38.5	+27.1	+0.6			+0.0	66.2	94.0	-27.8	None
5	6082.790M	37.4	+27.7	+0.6			+0.0	65.7	94.0	-28.3	None

6	59.900M	32.3	+30.5	+0.6		+0.0	63.4	94.0	-30.6	None
7	3476.132M	32.9	+29.8	+0.6		+0.0	63.3	94.0	-30.7	None
8	5214.132M	34.1	+28.1	+0.6		+0.0	62.8	94.0	-31.2	None
9	634.300M	31.5	+30.4	+0.6		+0.0	62.5	94.0	-31.5	None
10	4345.162M	31.8	+29.0	+0.6		+0.0	61.4	94.0	-32.6	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/05/2004
Test Type: **Antenna Terminals** Time: 13:03:24
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 36
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: AMPS. Frequencies Tested: Downlink High - 893.97MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	893.966M	80.3	+30.3	+0.6			+0.0	111.2	117.0	-5.8	None
2	1787.944M	49.1	+30.3	+0.6			+0.0	80.0	94.0	-14.0	None
3	3575.830M	41.8	+29.8	+0.6			+0.0	72.2	94.0	-21.8	None
4	2681.946M	37.7	+29.8	+0.6			+0.0	68.1	94.0	-25.9	None

5	8939.758M	37.0	+25.0	+0.6	+0.0	62.6	94.0	-31.4	None
6	6257.834M	34.2	+27.5	+0.6	+0.0	62.3	94.0	-31.7	None
7	4469.894M	32.8	+28.8	+0.6	+0.0	62.2	94.0	-31.8	None
8	5363.864M	30.1	+28.0	+0.6	+0.0	58.7	94.0	-35.3	None
9	8045.774M	30.8	+24.3	+0.6	+0.0	55.7	94.0	-38.3	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/02/2004
Test Type: **Antenna Terminals** Time: 13:14:19
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 7
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: CDMA. Frequencies Tested: Downlink Mid - 881.5MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	881.487M	83.3	+30.3	+0.6			+0.0	114.2	117.0 Fundamental	-2.8	None
2	1763.313M	49.7	+30.3	+0.6			+0.0	80.6	94.0	-13.4	None
3	2644.363M	48.1	+29.9	+0.6			+0.0	78.6	94.0	-15.4	None
4	724.863M	46.2	+30.4	+0.6			+0.0	77.2	94.0	-16.8	None

5	7051.863M	46.2	+27.0	+0.6	+0.0	73.8	94.0	-20.2	None
6	3525.863M	42.8	+29.8	+0.6	+0.0	73.2	94.0	-20.8	None
7	4407.363M	43.2	+28.9	+0.6	+0.0	72.7	94.0	-21.3	None
8	724.863M	40.7	+30.4	+0.6	+0.0	71.7	94.0	-22.3	None
9	5288.863M	42.1	+28.1	+0.6	+0.0	70.8	94.0	-23.2	None
10	6170.363M	41.0	+27.6	+0.6	+0.0	69.2	94.0	-24.8	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/02/2004
Test Type: **Antenna Terminals** Time: 13:08:10
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 6
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: CDMA. Frequencies Tested: Downlink Low - 870.25MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	870.462M	83.3	+30.3	+0.6			+0.0	114.2	117.0 Fundamental	-2.8	None
2	1741.100M	46.9	+30.3	+0.6			+0.0	77.8	94.0	-16.2	None
3	2611.600M	41.9	+29.9	+0.6			+0.0	72.4	94.0	-21.6	None
4	6964.200M	44.6	+27.1	+0.6			+0.0	72.3	94.0	-21.7	None

5	728.500M	41.1	+30.4	+0.6	+0.0	72.1	94.0	-21.9	None
6	4352.700M	39.5	+29.0	+0.6	+0.0	69.1	94.0	-24.9	None
7	5223.200M	38.9	+28.1	+0.6	+0.0	67.6	94.0	-26.4	None
8	6093.700M	38.6	+27.7	+0.6	+0.0	66.9	94.0	-27.1	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/02/2004
Test Type: **Antenna Terminals** Time: 13:19:30
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 8
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: CDMA. Frequencies Tested: Downlink High - 892.75MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

Measurement Data: Reading listed by margin. Test Distance: None

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

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/05/2004
Test Type: **Antenna Terminals** Time: 08:02:58
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 28
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: EDGE. Frequencies Tested: Downlink Low - 869.28MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	869.274M	83.6	+30.3	+0.6			+0.0	114.5	117.0 Fundamental	-2.5	None
2	1738.550M	42.5	+30.3	+0.6			+0.0	73.4	94.0	-20.6	None
3	2607.784M	30.1	+29.9	+0.6			+0.0	60.6	94.0	-33.4	None
4	3477.102M	28.9	+29.8	+0.6			+0.0	59.3	94.0	-34.7	None

5	5215.660M	28.2	+28.1	+0.6	+0.0	56.9	94.0	-37.1	None
6	6085.527M	26.5	+27.7	+0.6	+0.0	54.8	94.0	-39.2	None
7	4346.328M	23.8	+29.0	+0.6	+0.0	53.4	94.0	-40.6	None
8	640.100M	20.4	+30.4	+0.6	+0.0	51.4	94.0	-42.6	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/05/2004
Test Type: **Antenna Terminals** Time: 08:34:49
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 29
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: EDGE. Frequencies Tested: Downlink Mid - 881.5MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	881.488M	83.8	+30.3	+0.6			+0.0	114.7	117.0 Fundamental	-2.3	None
2	1762.988M	45.6	+30.3	+0.6			+0.0	76.5	94.0	-17.5	None
3	2644.480M	28.3	+29.9	+0.6			+0.0	58.8	94.0	-35.2	None
4	4407.522M	26.4	+28.9	+0.6			+0.0	55.9	94.0	-38.1	None

5	3525.892M	25.1	+29.8	+0.6	+0.0	55.5	94.0	-38.5	None
6	7933.516M	29.8	+24.6	+0.6	+0.0	55.0	94.0	-39.0	None
7	6170.732M	26.7	+27.6	+0.6	+0.0	54.9	94.0	-39.1	None
8	7052.196M	26.8	+27.0	+0.6	+0.0	54.4	94.0	-39.6	None
9	9696.504M	29.5	+24.0	+0.6	+0.0	54.1	94.0	-39.9	None
10	5289.152M	22.1	+28.1	+0.6	+0.0	50.8	94.0	-43.2	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/05/2004
Test Type: **Antenna Terminals** Time: 09:07:19
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 30
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: EDGE. Frequencies Tested: Downlink High - 893.72MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	893.722M	83.7	+30.3	+0.6			+0.0	114.6	117.0 Fundamental	-2.4	None
2	1787.428M	49.8	+30.3	+0.6			+0.0	80.7	94.0	-13.3	None
3	3574.872M	44.6	+29.8	+0.6			+0.0	75.0	94.0	-19.0	None
4	894.052M	42.1	+30.3	+0.6			+0.0	73.0	94.0	-21.0	None

5	2681.166M	38.6	+29.8	+0.6	+0.0	69.0	94.0	-25.0	None
6	894.182M	33.1	+30.3	+0.6	+0.0	64.0	94.0	-30.0	None
7	4468.660M	26.4	+28.8	+0.6	+0.0	55.8	94.0	-38.2	None
8	7149.712M	26.4	+26.7	+0.6	+0.0	53.7	94.0	-40.3	None
9	6255.682M	25.4	+27.5	+0.6	+0.0	53.5	94.0	-40.5	None
10	5362.216M	24.8	+28.0	+0.6	+0.0	53.4	94.0	-40.6	None
11	8937.344M	25.8	+25.0	+0.6	+0.0	51.4	94.0	-42.6	None
12	8043.336M	26.4	+24.3	+0.6	+0.0	51.3	94.0	-42.7	None
13	256.700M	13.1	+30.4	+0.6	+0.0	44.1	94.0	-49.9	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/03/2004
Test Type: **Antenna Terminals** Time: 15:14:22
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 10
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: GSM. Frequencies Tested: Downlink Low - 869.28MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	869.272M	82.7	+30.3	+0.6			+0.0	113.6	117.0 Fundamental	-3.4	None
2	1738.692M	30.4	+30.3	+0.6			+0.0	61.3	94.0	-32.7	None
3	6954.911M	25.2	+27.1	+0.6			+0.0	52.9	94.0	-41.1	None
4	2607.656M	22.4	+29.9	+0.6			+0.0	52.9	94.0	-41.1	None

5	6084.860M	24.4	+27.7	+0.6	+0.0	52.7	94.0	-41.3	None
6	3476.840M	19.8	+29.8	+0.6	+0.0	50.2	94.0	-43.8	None
7	8693.647M	24.1	+24.1	+0.6	+0.0	48.8	94.0	-45.2	None
8	807.200M	17.7	+30.4	+0.6	+0.0	48.7	94.0	-45.3	None
9	4347.200M	18.8	+29.0	+0.6	+0.0	48.4	94.0	-45.6	None
10	5216.480M	17.1	+28.1	+0.6	+0.0	45.8	94.0	-48.2	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/03/2004
Test Type: **Antenna Terminals** Time: 15:20:31
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 11
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: GSM. Frequencies Tested: Downlink Mid - 881.5MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	881.502M	83.0	+30.3	+0.6			+0.0	113.9	117.0 Fundamental	-3.1	None
2	1762.868M	33.8	+30.3	+0.6			+0.0	64.7	94.0	-29.3	None
3	2644.677M	27.1	+29.9	+0.6			+0.0	57.6	94.0	-36.4	None
4	6168.076M	27.2	+27.6	+0.6			+0.0	55.4	94.0	-38.6	None

5	7051.860M	27.4	+27.0	+0.6	+0.0	55.0	94.0	-39.0	None
6	3529.230M	22.9	+29.8	+0.6	+0.0	53.3	94.0	-40.7	None
7	632.800M	21.1	+30.4	+0.6	+0.0	52.1	94.0	-41.9	None
8	7933.790M	26.8	+24.6	+0.6	+0.0	52.0	94.0	-42.0	None
9	5287.510M	22.3	+28.1	+0.6	+0.0	51.0	94.0	-43.0	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/03/2004
Test Type: **Antenna Terminals** Time: 15:39:19
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 12
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: GSM. Frequencies Tested: Downlink High - 893.72MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	893.710M	83.0	+30.3	+0.6			+0.0	113.9	117.0 Fundamental	-3.1	None
2	1787.560M	42.9	+30.3	+0.6			+0.0	73.8	94.0	-20.2	None
3	3575.120M	33.0	+29.8	+0.6			+0.0	63.4	94.0	-30.6	None
4	2680.935M	30.8	+29.8	+0.6			+0.0	61.2	94.0	-32.8	None

5	4468.225M	26.8	+28.8	+0.6	+0.0	56.2	94.0	-37.8	None
6	6257.929M	26.7	+27.5	+0.6	+0.0	54.8	94.0	-39.2	None
7	7150.180M	26.9	+26.7	+0.6	+0.0	54.2	94.0	-39.8	None
8	168.000M	21.5	+30.5	+0.6	+0.0	52.6	94.0	-41.4	None
9	5361.720M	22.2	+28.0	+0.6	+0.0	50.8	94.0	-43.2	None
10	8043.900M	24.3	+24.3	+0.6	+0.0	49.2	94.0	-44.8	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/05/2004
Test Type: **Antenna Terminals** Time: 16:25:15
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 38
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: AMPS. Frequencies Tested: Uplink Low - 824.03MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	824.022M	110.6	+30.4	+0.6			+0.0	141.6	141.7 Fundamental	-0.1	None
2	1648.036M	57.8	+30.2	+0.6			+0.0	88.6	94.0	-5.4	None
3	2472.098M	49.0	+30.1	+0.6			+0.0	79.7	94.0	-14.3	None
4	3297.072M	42.0	+29.6	+0.6			+0.0	72.2	94.0	-21.8	None

5	4944.252M	36.6	+28.3	+0.6	+0.0	65.5	94.0	-28.5	None
6	750.600M	31.4	+30.4	+0.6	+0.0	62.4	94.0	-31.6	None
7	4119.686M	31.4	+29.4	+0.6	+0.0	61.4	94.0	-32.6	None
8	5768.726M	32.6	+27.8	+0.6	+0.0	61.0	94.0	-33.0	None
9	6592.755M	33.0	+27.2	+0.6	+0.0	60.8	94.0	-33.2	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/05/2004
Test Type: **Antenna Terminals** Time: 16:46:35
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 39
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: AMPS. Frequencies Tested: Uplink Low - 836.5MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	836.490M	110.5	+30.4	+0.6			+0.0	141.5	141.7 Fundamental	-0.2	None
2	1672.995M	54.1	+30.2	+0.6			+0.0	84.9	94.0	-9.1	None
3	3346.030M	42.8	+29.7	+0.6			+0.0	73.1	94.0	-20.9	None
4	2509.460M	41.9	+30.1	+0.6			+0.0	72.6	94.0	-21.4	None

5	4181.550M	42.4	+29.3	+0.6	+0.0	72.3	94.0	-21.7	None
6	5856.670M	37.6	+27.8	+0.6	+0.0	66.0	94.0	-28.0	None
7	5019.020M	34.9	+28.3	+0.6	+0.0	63.8	94.0	-30.2	None
8	698.400M	28.3	+30.4	+0.6	+0.0	59.3	94.0	-34.7	None
9	825.800M	34.0	+30.4	+0.6	+0.0	65.0	141.7	-76.7	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/05/2004
Test Type: **Antenna Terminals** Time: 16:53:09
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 40
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: AMPS. Frequencies Tested: Uplink High - 848.97MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	848.964M	108.8	+30.3	+0.6			+0.0	139.7	141.7 Fundamental	-2.0	None
2	1697.892M	53.6	+30.2	+0.6			+0.0	84.4	94.0	-9.6	None
3	3395.926M	44.4	+29.7	+0.6			+0.0	74.7	94.0	-19.3	None
4	5093.788M	40.6	+28.2	+0.6			+0.0	69.4	94.0	-24.6	None

5	6791.069M	38.2	+27.1	+0.6	+0.0	65.9	94.0	-28.1	None
6	5942.682M	36.7	+27.8	+0.6	+0.0	65.1	94.0	-28.9	None
7	7640.642M	38.2	+25.5	+0.6	+0.0	64.3	94.0	-29.7	None
8	4244.786M	33.8	+29.1	+0.6	+0.0	63.5	94.0	-30.5	None
9	2546.878M	31.9	+30.0	+0.6	+0.0	62.5	94.0	-31.5	None
10	9338.143M	36.1	+24.9	+0.6	+0.0	61.6	94.0	-32.4	None
11	8489.561M	35.7	+23.4	+0.6	+0.0	59.7	94.0	-34.3	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/02/2004
Test Type: **Antenna Terminals** Time: 08:58:32
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 2
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Preamp Driver	Wilson Electronics	Prototype	N/A

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: CDMA. Frequencies Tested: Uplink Low - 825.25MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	825.250M	110.7	+30.4	+0.6			+0.0	141.7	141.7 Fundamental	+0.0	None
2	1650.500M	49.9	+30.2	+0.6			+0.0	80.7	94.0	-13.3	None
3	2476.238M	42.0	+30.1	+0.6			+0.0	72.7	94.0	-21.3	None
4	3301.025M	24.6	+29.6	+0.6			+0.0	54.8	94.0	-39.2	None

5	766.800M	20.3	+30.4	+0.6	+0.0	51.3	94.0	-42.7	None
6	372.500M	20.1	+30.3	+0.6	+0.0	51.0	94.0	-43.0	None
7	4126.275M	18.9	+29.4	+0.6	+0.0	48.9	94.0	-45.1	None
8	115.900M	17.3	+30.5	+0.6	+0.0	48.4	94.0	-45.6	None
9	4951.525M	16.9	+28.3	+0.6	+0.0	45.8	94.0	-48.2	None
10	4951.773M	16.3	+28.3	+0.6	+0.0	45.2	94.0	-48.8	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/02/2004
Test Type: **Antenna Terminals** Time: 09:19:38
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 3
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Preamp Driver	Wilson Electronics	Prototype	N/A

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: CDMA. Frequencies Tested: Uplink Mid - 836.5MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	836.550M	110.6	+30.4	+0.6			+0.0	141.6	141.7 Fundamental	-0.1	None
2	1673.050M	56.9	+30.2	+0.6			+0.0	87.7	94.0	-6.3	None
3	2509.688M	49.0	+30.1	+0.6			+0.0	79.7	94.0	-14.3	None
4	2508.613M	45.6	+30.1	+0.6			+0.0	76.3	94.0	-17.7	None

5	3346.025M	39.9	+29.7	+0.6	+0.0	70.2	94.0	-23.8	None
6	4182.588M	34.1	+29.3	+0.6	+0.0	64.0	94.0	-30.0	None
7	603.300M	30.8	+30.4	+0.6	+0.0	61.8	94.0	-32.2	None
8	712.800M	30.7	+30.4	+0.6	+0.0	61.7	94.0	-32.3	None
9	454.400M	28.2	+30.4	+0.6	+0.0	59.2	94.0	-34.8	None
10	5019.088M	28.3	+28.3	+0.6	+0.0	57.2	94.0	-36.8	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/02/2004
Test Type: **Antenna Terminals** Time: 09:34:20
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 4
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Preamp Driver	Wilson Electronics	Prototype	N/A

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: CDMA. Frequencies Tested: Uplink High 847.75MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	847.812M	109.9	+30.4	+0.6			+0.0	140.9	141.7 Fundamental	-0.8	None
2	1696.088M	52.0	+30.2	+0.6			+0.0	82.8	94.0	-11.2	None
3	2542.500M	42.8	+30.0	+0.6			+0.0	73.4	94.0	-20.6	None
4	3391.000M	41.1	+29.7	+0.6			+0.0	71.4	94.0	-22.6	None

5	6780.280M	39.9	+27.1	+0.6	+0.0	67.6	94.0	-26.4	None
6	914.500M	35.4	+30.3	+0.6	+0.0	66.3	94.0	-27.7	None
7	5086.575M	37.4	+28.2	+0.6	+0.0	66.2	94.0	-27.8	None
8	8478.620M	41.3	+23.4	+0.6	+0.0	65.3	94.0	-28.7	None
9	4240.325M	35.1	+29.2	+0.6	+0.0	64.9	94.0	-29.1	None
10	5935.300M	34.0	+27.8	+0.6	+0.0	62.4	94.0	-31.6	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/04/2004
Test Type: **Antenna Terminals** Time: 13:55:03
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 22
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: EDGE. Frequencies Tested: Uplink Low - 824.28MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	824.262M	110.5	+30.4	+0.6			+0.0	141.5	141.7 Fundamental	-0.2	None
2	1648.542M	44.6	+30.2	+0.6			+0.0	75.4	94.0	-18.6	None
3	746.000M	36.0	+30.4	+0.6			+0.0	67.0	94.0	-27.0	None
4	257.000M	35.1	+30.4	+0.6			+0.0	66.1	94.0	-27.9	None

5	823.990M	33.5	+30.4	+0.6	+0.0	64.5	94.0	-29.5	None
6	2472.836M	33.2	+30.1	+0.6	+0.0	63.9	94.0	-30.1	None
7	3296.276M	25.3	+29.6	+0.6	+0.0	55.5	94.0	-38.5	None
8	4122.083M	25.3	+29.4	+0.6	+0.0	55.3	94.0	-38.7	None
9	4945.778M	25.6	+28.3	+0.6	+0.0	54.5	94.0	-39.5	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/04/2004
Test Type: **Antenna Terminals** Time: 14:02:38
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 23
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: EDGE. Frequencies Tested: Uplink Mid - 836.5MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	836.496M	110.6	+30.4	+0.6			+0.0	141.6	141.7 Fundamental	-0.1	None
2	1672.994M	48.0	+30.2	+0.6			+0.0	78.8	94.0	-15.2	None
3	5855.460M	42.1	+27.8	+0.6			+0.0	70.5	94.0	-23.5	None
4	2509.472M	36.6	+30.1	+0.6			+0.0	67.3	94.0	-26.7	None

5	581.200M	35.7	+30.4	+0.6	+0.0	66.7	94.0	-27.3	None
6	179.800M	35.4	+30.4	+0.6	+0.0	66.4	94.0	-27.6	None
7	4182.168M	36.3	+29.3	+0.6	+0.0	66.2	94.0	-27.8	None
8	3346.459M	35.9	+29.7	+0.6	+0.0	66.2	94.0	-27.8	None
9	5018.568M	35.8	+28.3	+0.6	+0.0	64.7	94.0	-29.3	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/04/2004
Test Type: **Antenna Terminals** Time: 14:09:19
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 24
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: EDGE. Frequencies Tested: Uplink Mid - 848.72MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	848.728M	109.3	+30.3	+0.6			+0.0	140.2	141.7 Fundamental	-1.5	None
2	849.002M	38.6	+30.3	+0.6			+0.0	69.5	94.0	-24.5	None
3	1697.452M	37.9	+30.2	+0.6			+0.0	68.7	94.0	-25.3	None
4	6791.499M	32.7	+27.1	+0.6			+0.0	60.4	94.0	-33.6	None

5	5941.520M	31.0	+27.8	+0.6	+0.0	59.4	94.0	-34.6	None
6	2546.090M	27.5	+30.0	+0.6	+0.0	58.1	94.0	-35.9	None
7	3395.347M	25.4	+29.7	+0.6	+0.0	55.7	94.0	-38.3	None
8	4244.139M	25.7	+29.1	+0.6	+0.0	55.4	94.0	-38.6	None
9	5091.800M	25.6	+28.2	+0.6	+0.0	54.4	94.0	-39.6	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/04/2004
Test Type: **Antenna Terminals** Time: 10:28:45
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 16
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: GSM. Frequencies Tested: Uplink Low - 824.28MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	824.277M	110.7	+30.4	+0.6			+0.0	141.7	141.7 Fundamental	+0.0	None
2	1648.675M	49.6	+30.2	+0.6			+0.0	80.4	94.0	-13.6	None
3	2473.020M	46.9	+30.1	+0.6			+0.0	77.6	94.0	-16.4	None
4	823.990M	42.7	+30.4	+0.6			+0.0	73.7	94.0	-20.3	None

5	813.710M	25.6	+30.4	+0.6	+0.0	56.6	94.0	-37.4	None
6	823.900M	23.9	+30.4	+0.6	+0.0	54.9	94.0	-39.1	None
7	3297.340M	23.7	+29.6	+0.6	+0.0	53.9	94.0	-40.1	None
8	6593.510M	24.7	+27.2	+0.6	+0.0	52.5	94.0	-41.5	None
9	4946.110M	22.8	+28.3	+0.6	+0.0	51.7	94.0	-42.3	None
10	5768.070M	21.6	+27.8	+0.6	+0.0	50.0	94.0	-44.0	None
11	8242.320M	25.4	+23.9	+0.6	+0.0	49.9	94.0	-44.1	None
12	4121.620M	19.1	+29.4	+0.6	+0.0	49.1	94.0	-44.9	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/04/2004
Test Type: **Antenna Terminals** Time: 10:35:26
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 17
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: GSM. Frequencies Tested: Uplink Mid = 836.5MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	836.504M	110.7	+30.4	+0.6			+0.0	141.7	141.7 Fundamental	+0.0	None
2	1672.864M	37.3	+30.2	+0.6			+0.0	68.1	94.0	-25.9	None
3	1672.864M	36.7	+30.2	+0.6			+0.0	67.5	94.0	-26.5	None
4	810.000M	21.9	+30.4	+0.6			+0.0	52.9	94.0	-41.1	None

5	2509.034M	14.8	+30.1	+0.6	+0.0	45.5	94.0	-48.5	None
6	3345.220M	14.6	+29.7	+0.6	+0.0	44.9	94.0	-49.1	None
7	5018.860M	14.7	+28.3	+0.6	+0.0	43.6	94.0	-50.4	None
8	4181.720M	11.7	+29.3	+0.6	+0.0	41.6	94.0	-52.4	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/04/2004
Test Type: **Antenna Terminals** Time: 10:47:03
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 18
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Spurious Emissions Test: One signal is input to the amplifier. The input signal 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. Input Modulation: GSM. Frequencies Tested: Uplink High = 848.72MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB	T2=Wilson Cable

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	848.714M	108.9	+30.3	+0.6			+0.0	139.8	141.7 Fundamental	-1.9	None
2	849.003M	42.8	+30.3	+0.6			+0.0	73.7	94.0	-20.3	None
3	1697.308M	34.2	+30.2	+0.6			+0.0	65.0	94.0	-29.0	None
4	849.073M	32.8	+30.3	+0.6			+0.0	63.7	94.0	-30.3	None

5	849.251M	20.6	+30.3	+0.6	+0.0	51.5	94.0	-42.5	None
6	6789.598M	22.7	+27.1	+0.6	+0.0	50.4	94.0	-43.6	None
7	2546.022M	15.7	+30.0	+0.6	+0.0	46.3	94.0	-47.7	None
8	129.446M	13.8	+30.5	+0.6	+0.0	44.9	94.0	-49.1	None
9	8486.594M	20.9	+23.4	+0.6	+0.0	44.9	94.0	-49.1	None
10	3394.074M	14.6	+29.7	+0.6	+0.0	44.9	94.0	-49.1	None
11	4243.552M	15.0	+29.1	+0.6	+0.0	44.7	94.0	-49.3	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/05/2004
Test Type: **Antenna Terminals** Time: 13:46:56
Equipment: **Bidirectional Amplifier Repeater** Sequence#: 37
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 801101
S/N: AV3-009920

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Bidirectional Amplifier Repeater*	Wilson Electronics	801101	AV3-009920
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Signal Generator	HP	E4432B	US38330168
Signal Generator	HP	8656A	2245A04338
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier repeater for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Intermodulation Attenuation and Spurious Emissions Test: Three signals are input to the amplifier through a combining network. The input signals are 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. Input Modulation: AMPS. Frequencies Tested: Downlink 869.03MHz, 870.12MHz, 893.97MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	869.150M	71.8	+30.3				+0.0	102.1	117.0	-14.9	None
2	870.100M	71.6	+30.3				+0.0	101.9	117.0	-15.1	None

3	893.970M	70.4	+30.3	+0.0	100.7	117.0	-16.3	None
4	895.050M	43.8	+30.3	+0.0	74.1	94.0	-19.9	None
5	867.890M	42.5	+30.3	+0.0	72.8	94.0	-21.2	None
6	1764.140M	32.4	+30.3	+0.0	62.7	94.0	-31.3	None
7	1739.060M	31.8	+30.3	+0.0	62.1	94.0	-31.9	None
8	1739.100M	31.6	+30.3	+0.0	61.9	94.0	-32.1	None
9	1763.900M	30.9	+30.3	+0.0	61.2	94.0	-32.8	None
10	1787.700M	27.8	+30.3	+0.0	58.1	94.0	-35.9	None
11	892.840M	45.6	+30.3	+0.0	75.9	117.0	-41.1	None
12	871.290M	41.6	+30.3	+0.0	71.9	117.0	-45.1	None
13	865.810M	17.4	+30.3	+0.0	47.7	94.0	-46.3	None
14	2632.900M	17.0	+29.9	+0.0	46.9	94.0	-47.1	None
15	867.010M	16.0	+30.3	+0.0	46.3	94.0	-47.7	None
16	2632.900M	16.1	+29.9	+0.0	46.0	94.0	-48.0	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 03/03/2004
Test Type: **Antenna Terminals** Time: 11:55:00
Equipment: **Bidirectional Amplifier Repeater** Sequence#: 9
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 801101
S/N: AV3-009920

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Bidirectional Amplifier Repeater*	Wilson Electronics	801101	AV3-009920
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Signal Generator	HP	8921A	3519A01796
Signal Generator (CDMA Adapter)	HP	83205A	US37461985

Test Conditions / Notes:

EUT is a bidirectional amplifier repeater for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Intermodulation Attenuation and Spurious Emissions Test: Three signals are input to the amplifier through a combining network. The first two input signals are provided by the HP E4432B ESG. The input signals are 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. Input Modulation: CDMA. Frequencies Tested: Downlink 870.25MHz, 872.75MHz, 892.75MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	872.770M	65.3	+30.3				+0.0	95.6	117.0 Fundamental	-21.4	None
2	892.740M	63.8	+30.3				+0.0	94.1	117.0 Fundamental	-22.9	None

3	870.270M	63.3	+30.3	+0.0	93.6	117.0 Fundamental	-23.4	None
4	895.300M	33.4	+30.3	+0.0	63.7	94.0	-30.3	None
5	867.670M	32.8	+30.3	+0.0	63.1	94.0	-30.9	None
6	894.030M	29.4	+30.3	+0.0	59.7	94.0	-34.3	None
7	866.890M	26.6	+30.3	+0.0	56.9	94.0	-37.1	None
8	893.450M	45.9	+30.3	+0.0	76.2	117.0	-40.8	None
9	1742.980M	16.2	+30.3	+0.0	46.5	94.0	-47.5	None
10	864.870M	13.4	+30.3	+0.0	43.7	94.0	-50.3	None
11	869.150M	36.0	+30.3	+0.0	66.3	117.0	-50.7	None
12	861.690M	12.8	+30.3	+0.0	43.1	94.0	-50.9	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81935** Date: 03/05/2004
Test Type: **Antenna Terminals** Time: 09:26:08
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 31
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Signal Generator	HP	E4432B	US38330168
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Intermodulation Attenuation and Spurious Emissions Test: Two signals are input to the amplifier through a combining network. The input signals are 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. Input Modulation: EDGE. Frequencies Tested: Downlink 869.28MHz, 870.12MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	869.340M	75.3	+30.3				+0.0	105.6	117.0 Fundamental	-11.4	None
2	867.700M	51.5	+30.3				+0.0	81.8	94.0	-12.2	None
3	870.160M	74.5	+30.3				+0.0	104.8	117.0 Fundamental	-12.2	None

4	868.460M	51.3	+30.3	+0.0	81.6	94.0	-12.4	None
5	866.920M	41.4	+30.3	+0.0	71.7	94.0	-22.3	None
6	871.040M	51.0	+30.3	+0.0	81.3	117.0	-35.7	None
7	871.800M	48.7	+30.3	+0.0	79.0	117.0	-38.0	None
8	865.970M	23.7	+30.3	+0.0	54.0	94.0	-40.0	None
9	864.330M	22.2	+30.3	+0.0	52.5	94.0	-41.5	None
10	863.290M	19.7	+30.3	+0.0	50.0	94.0	-44.0	None
11	872.710M	39.9	+30.3	+0.0	70.2	117.0	-46.8	None
12	1764.320M	14.6	+30.3	+0.0	44.9	94.0	-49.1	None
13	2658.040M	11.4	+29.9	+0.0	41.3	94.0	-52.7	None
14	853.870M	11.0	+30.3	+0.0	41.3	94.0	-52.7	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81935** Date: 03/05/2004
Test Type: **Antenna Terminals** Time: 11:11:27
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 32
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Signal Generator	HP	E4432B	US38330168
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Intermodulation Attenuation and Spurious Emissions Test: Two signals are input to the amplifier through a combining network. The input signals are 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. Input Modulation: EDGE. Frequencies Tested: Downlink 892.88MHz, 893.72MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	894.600M	53.9	+30.3				+0.0	84.2	94.0	-9.8	None
2	893.720M	74.5	+30.3				+0.0	104.8	117.0 Fundamental	-12.2	None
3	892.870M	74.2	+30.3				+0.0	104.5	117.0 Fundamental	-12.5	None

4	895.360M	51.0	+30.3	+0.0	81.3	94.0	-12.7	None
5	1785.840M	48.8	+30.3	+0.0	79.1	94.0	-14.9	None
6	1786.650M	45.8	+30.3	+0.0	76.1	94.0	-17.9	None
7	896.310M	41.8	+30.3	+0.0	72.1	94.0	-21.9	None
8	3573.180M	41.3	+29.8	+0.0	71.1	94.0	-22.9	None
9	1787.540M	38.4	+30.3	+0.0	68.7	94.0	-25.3	None
10	2679.520M	38.8	+29.8	+0.0	68.6	94.0	-25.4	None
11	892.050M	57.0	+30.3	+0.0	87.3	117.0	-29.7	None
12	891.200M	54.2	+30.3	+0.0	84.5	117.0	-32.5	None
13	4466.110M	27.3	+28.8	+0.0	56.1	94.0	-37.9	None
14	897.120M	24.3	+30.3	+0.0	54.6	94.0	-39.4	None
15	897.910M	22.9	+30.3	+0.0	53.2	94.0	-40.8	None
16	890.350M	44.8	+30.3	+0.0	75.1	117.0	-41.9	None
17	5365.500M	16.1	+28.0	+0.0	44.1	94.0	-49.9	None
18	889.660M	27.3	+30.3	+0.0	57.6	117.0	-59.4	None
19	888.710M	26.9	+30.3	+0.0	57.2	117.0	-59.8	None
20	887.010M	19.4	+30.3	+0.0	49.7	117.0	-67.3	None
21	887.800M	19.3	+30.3	+0.0	49.6	117.0	-67.4	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81935** Date: 03/05/2004
Test Type: **Antenna Terminals** Time: 11:22:53
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 33
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Signal Generator	HP	E4432B	US38330168
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Intermodulation Attenuation and Spurious Emissions Test: Two signals are input to the amplifier through a combining network. The input signals are 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. Input Modulation: EDGE. Frequencies Tested: Downlink 869.28MHz, 893.72MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	893.790M	77.5	+30.3				+0.0	107.8	117.0 Fundamental	-9.2	None
2	869.280M	77.4	+30.3				+0.0	107.7	117.0 Fundamental	-9.3	None
3	1787.630M	38.6	+30.3				+0.0	68.9	94.0	-25.1	None

4	1738.560M	38.4	+30.3	+0.0	68.7	94.0	-25.3	None
5	1763.000M	37.7	+30.3	+0.0	68.0	94.0	-26.0	None
6	868.960M	35.0	+30.3	+0.0	65.3	94.0	-28.7	None
7	894.160M	32.8	+30.3	+0.0	63.1	94.0	-30.9	None
8	1812.140M	25.3	+30.3	+0.0	55.6	94.0	-38.4	None
9	844.950M	21.7	+30.4	+0.0	52.1	94.0	-41.9	None
10	820.410M	15.8	+30.4	+0.0	46.2	94.0	-47.8	None
11	2699.560M	15.0	+29.8	+0.0	44.8	94.0	-49.2	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81935** Date: 03/03/2004
Test Type: **Antenna Terminals** Time: 16:04:37
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 13
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Signal Generator	HP	E4432B	US38330168
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Intermodulation Attenuation and Spurious Emissions Test: Two signals are input to the amplifier through a combining network. The input signals are 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. Input Modulation: GSM. Frequencies Tested: Downlink 869.28MHz, 870.12MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	870.136M	80.0	+30.3				+0.0	110.3	117.0 Fundamental	-6.7	None
2	869.289M	77.3	+30.3				+0.0	107.6	117.0 Fundamental	-9.4	None
3	1740.093M	40.7	+30.3				+0.0	71.0	94.0	-23.0	None

4	1738.423M	30.2	+30.3	+0.0	60.5	94.0	-33.5	None
5	2610.548M	28.6	+29.9	+0.0	58.5	94.0	-35.5	None
6	2607.833M	20.3	+29.9	+0.0	50.2	94.0	-43.8	None
7	868.941M	19.1	+30.3	+0.0	49.4	94.0	-44.6	None
8	868.490M	17.5	+30.3	+0.0	47.8	94.0	-46.2	None
9	869.024M	37.1	+30.3	+0.0	67.4	117.0	-49.6	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81935** Date: 03/03/2004
Test Type: **Antenna Terminals** Time: 16:05:05
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 14
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Signal Generator	HP	E4432B	US38330168
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Intermodulation Attenuation and Spurious Emissions Test: Two signals are input to the amplifier through a combining network. The input signals are 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. Input Modulation: GSM. Frequencies Tested: Downlink 892.88MHz, 893.72MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

Measurement Data: Reading listed by margin. Test Distance: None

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

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81935** Date: 03/03/2004
Test Type: **Antenna Terminals** Time: 17:35:52
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 15
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Signal Generator	HP	E4432B	US38330168
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Intermodulation Attenuation and Spurious Emissions Test: Two signals are input to the amplifier through a combining network. The input signals are 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. Input Modulation: GSM. Frequencies Tested: Downlink 869.28MHz, 893.72MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	932.400M	78.4	+30.3				+0.0	108.7	94.0	+14.7	None
2	893.790M	79.6	+30.3				+0.0	109.9	117.0 Fundamental	-7.1	None
3	869.340M	77.1	+30.3				+0.0	107.4	117.0 Fundamental	-9.6	None

4	1787.690M	44.9	+30.3	+0.0	75.2	94.0	-18.8	None
5	2681.100M	31.6	+29.8	+0.0	61.4	94.0	-32.6	None
6	895.110M	15.8	+30.3	+0.0	46.1	94.0	-47.9	None
7	867.640M	15.4	+30.3	+0.0	45.7	94.0	-48.3	None
8	856.430M	14.5	+30.3	+0.0	44.8	94.0	-49.2	None
9	903.680M	14.0	+30.3	+0.0	44.3	94.0	-49.7	None
10	851.760M	13.9	+30.3	+0.0	44.2	94.0	-49.8	None
11	865.750M	13.8	+30.3	+0.0	44.1	94.0	-49.9	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81936** Date: 02/18/2004
Test Type: **Antenna Terminals** Time: 10:45:49
Equipment: **Bidirectional Amplifier Repeater** Sequence#: 5
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 801101
S/N: AV3-009920

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Bidirectional Amplifier Repeater*	Wilson Electronics	801101	AV3-009920
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Signal Generator	HP	8921A	3519A01796
Signal Generator (CDMA Adapter)	HP	83205A	US37461985
Preamp Driver	Wilson Electronics	Prototype	N/A

Test Conditions / Notes:

EUT is a bidirectional amplifier repeater for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Intermodulation Attenuation and Spurious Emissions Test: Three signals are input to the amplifier through a combining network. The first two input signals are provided by the HP E4432B ESG. The input signals are 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. Input Modulation: CDMA. Frequencies Tested: Uplink 825.25MHz, 827.25MHz, 847.75MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	823.980M	34.9	+30.4				+0.0	65.3	94.0	-28.7	None
2	827.560M	78.5	+30.4				+0.0	108.9	141.7 Fundamental	-32.8	None

3	825.380M	78.2	+30.4	+0.0	108.6	141.7 Fundamental	-33.1	None
4	6687.940M	32.5	+27.2	+0.0	59.7	94.0	-34.3	None
5	847.940M	73.1	+30.4	+0.0	103.5	141.7 Fundamental	-38.2	None
6	157.600M	24.5	+30.5	+0.0	55.0	94.0	-39.0	None
7	315.600M	24.2	+30.5	+0.0	54.7	94.0	-39.3	None
8	2500.560M	23.1	+30.1	+0.0	53.2	94.0	-40.8	None
9	1664.060M	22.5	+30.2	+0.0	52.7	94.0	-41.3	None
10	848.180M	44.1	+30.4	+0.0	74.5	141.7	-67.2	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81935** Date: 03/04/2004
Test Type: **Antenna Terminals** Time: 14:47:56
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 25
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Signal Generator	HP	E4432B	US38330168
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Intermodulation Attenuation and Spurious Emissions Test: Two signals are input to the amplifier through a combining network. The input signals are 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. Input Modulation: EDGE. Frequencies Tested: Uplink 824.28MHz, 825.12MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	823.464M	36.1	+30.4				+0.0	66.5	94.0	-27.5	None
2	737.700M	34.3	+30.4				+0.0	64.7	94.0	-29.3	None
3	2474.103M	34.3	+30.1				+0.0	64.4	94.0	-29.6	None

4	3298.703M	34.7	+29.6	+0.0	64.3	94.0	-29.7	None
5	1649.384M	33.7	+30.2	+0.0	63.9	94.0	-30.1	None
6	823.999M	32.4	+30.4	+0.0	62.8	94.0	-31.2	None
7	825.220M	79.6	+30.4	+0.0	110.0	141.7 Fundamental	-31.7	None
8	824.400M	79.3	+30.4	+0.0	109.7	141.7 Fundamental	-32.0	None
9	824.104M	45.7	+30.4	+0.0	76.1	141.7	-65.6	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81935** Date: 03/04/2004
Test Type: **Antenna Terminals** Time: 14:58:57
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 26
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Signal Generator	HP	E4432B	US38330168
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Intermodulation Attenuation and Spurious Emissions Test: Two signals are input to the amplifier through a combining network. The input signals are 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. Input Modulation: EDGE. Frequencies Tested: Uplink 847.88MHz, 848.72MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	850.443M	34.9	+30.3				+0.0	65.2	94.0	-28.8	None
2	2496.450M	35.0	+30.1				+0.0	65.1	94.0	-28.9	None
3	1673.890M	34.9	+30.2				+0.0	65.1	94.0	-28.9	None

4	849.504M	34.6	+30.3	+0.0	64.9	94.0	-29.1	None
5	632.200M	33.8	+30.4	+0.0	64.2	94.0	-29.8	None
6	3319.170M	34.3	+29.7	+0.0	64.0	94.0	-30.0	None
7	849.004M	33.3	+30.3	+0.0	63.6	94.0	-30.4	None
8	847.874M	79.7	+30.4	+0.0	110.1	141.7 Fundamental	-31.6	None
9	848.704M	79.2	+30.3	+0.0	109.5	141.7 Fundamental	-32.2	None
10	848.879M	45.0	+30.3	+0.0	75.3	141.7	-66.4	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81935** Date: 03/04/2004
Test Type: **Antenna Terminals** Time: 15:14:35
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 27
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Signal Generator	HP	E4432B	US38330168
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Intermodulation Attenuation and Spurious Emissions Test: Two signals are input to the amplifier through a combining network. The input signals are 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. Input Modulation: EDGE. Frequencies Tested: Uplink 824.28MHz, 848.72MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	1648.596M	34.4	+30.2				+0.0	64.6	94.0	-29.4	None
2	823.568M	34.1	+30.4				+0.0	64.5	94.0	-29.5	None
3	849.493M	34.2	+30.3				+0.0	64.5	94.0	-29.5	None

4	1697.855M	34.1	+30.2	+0.0	64.3	94.0	-29.7	None
5	823.972M	33.8	+30.4	+0.0	64.2	94.0	-29.8	None
6	849.000M	33.4	+30.3	+0.0	63.7	94.0	-30.3	None
7	824.350M	80.0	+30.4	+0.0	110.4	141.7 Fundamental	-31.3	None
8	823.998M	31.1	+30.4	+0.0	61.5	94.0	-32.5	None
9	848.950M	78.5	+30.3	+0.0	108.8	141.7 Fundamental	-32.9	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81935** Date: 03/04/2004
Test Type: **Antenna Terminals** Time: 11:03:50
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 19
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Signal Generator	HP	E4432B	US38330168
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Intermodulation Attenuation and Spurious Emissions Test: Two signals are input to the amplifier through a combining network. The input signals are 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. Input Modulation: GSM. Frequencies Tested: Uplink 824.28MHz, 825.12MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	823.996M	34.4	+30.4				+0.0	64.8	94.0	-29.2	None
2	825.190M	78.7	+30.4				+0.0	109.1	141.7 Fundamental	-32.6	None
3	824.400M	78.0	+30.4				+0.0	108.4	141.7 Fundamental	-33.3	None

4	823.938M	19.4	+30.4	+0.0	49.8	94.0	-44.2	None
5	1649.190M	15.0	+30.2	+0.0	45.2	94.0	-48.8	None
6	823.706M	14.7	+30.4	+0.0	45.1	94.0	-48.9	None
7	1647.580M	14.9	+30.2	+0.0	45.1	94.0	-48.9	None
8	2474.356M	14.5	+30.1	+0.0	44.6	94.0	-49.4	None
9	2471.860M	12.1	+30.1	+0.0	42.2	94.0	-51.8	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81935** Date: 03/04/2004
Test Type: **Antenna Terminals** Time: 11:14:20
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 20
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Signal Generator	HP	E4432B	US38330168
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Intermodulation Attenuation and Spurious Emissions Test: Two signals are input to the amplifier through a combining network. The input signals are 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. Input Modulation: GSM. Frequencies Tested: Uplink 847.88MHz, 848.72MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

T1=Pad 30dB

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBµV	T1 dB	dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	847.852M	76.8	+30.4				+0.0	107.2	141.7 Fundamental	-34.5	None
2	848.727M	76.3	+30.3				+0.0	106.6	141.7 Fundamental	-35.1	None
3	849.002M	27.3	+30.3				+0.0	57.6	94.0	-36.4	None

4	849.067M	19.5	+30.3	+0.0	49.8	94.0	-44.2	None
5	767.980M	15.5	+30.4	+0.0	45.9	94.0	-48.1	None
6	2544.837M	15.9	+30.0	+0.0	45.9	94.0	-48.1	None
7	821.000M	14.3	+30.4	+0.0	44.7	94.0	-49.3	None
8	1695.992M	14.5	+30.2	+0.0	44.7	94.0	-49.3	None
9	3393.827M	14.6	+29.7	+0.0	44.3	94.0	-49.7	None
10	849.437M	13.5	+30.3	+0.0	43.8	94.0	-50.2	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81935** Date: 03/04/2004
Test Type: **Antenna Terminals** Time: 11:22:43
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 21
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
Signal Generator	HP	E4432B	US38330168
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier for the 824 to 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Intermodulation Attenuation and Spurious Emissions Test: Two signals are input to the amplifier through a combining network. The input signals are 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. Input Modulation: GSM. Frequencies Tested: Uplink 824.28MHz, 848.72MHz. Frequency Range Investigated: 30MHz to 10GHz. 10MHz to 1000MHz - RBW=VBW=10kHz, 1000MHz to 10000MHz - RBW=VBW=100kHz.

Transducer Legend:

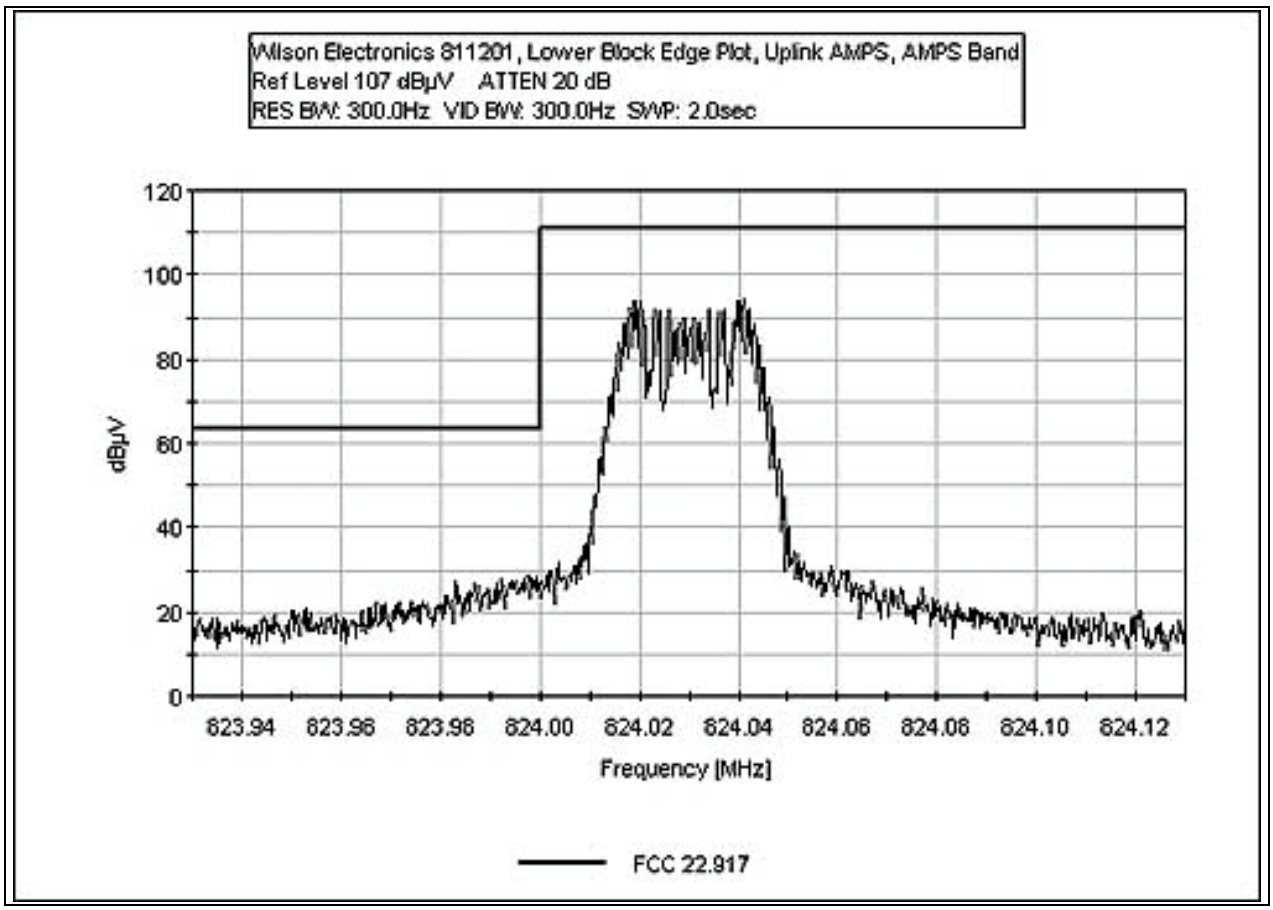
T1=Pad 30dB

Measurement Data: Reading listed by margin. Test Distance: None

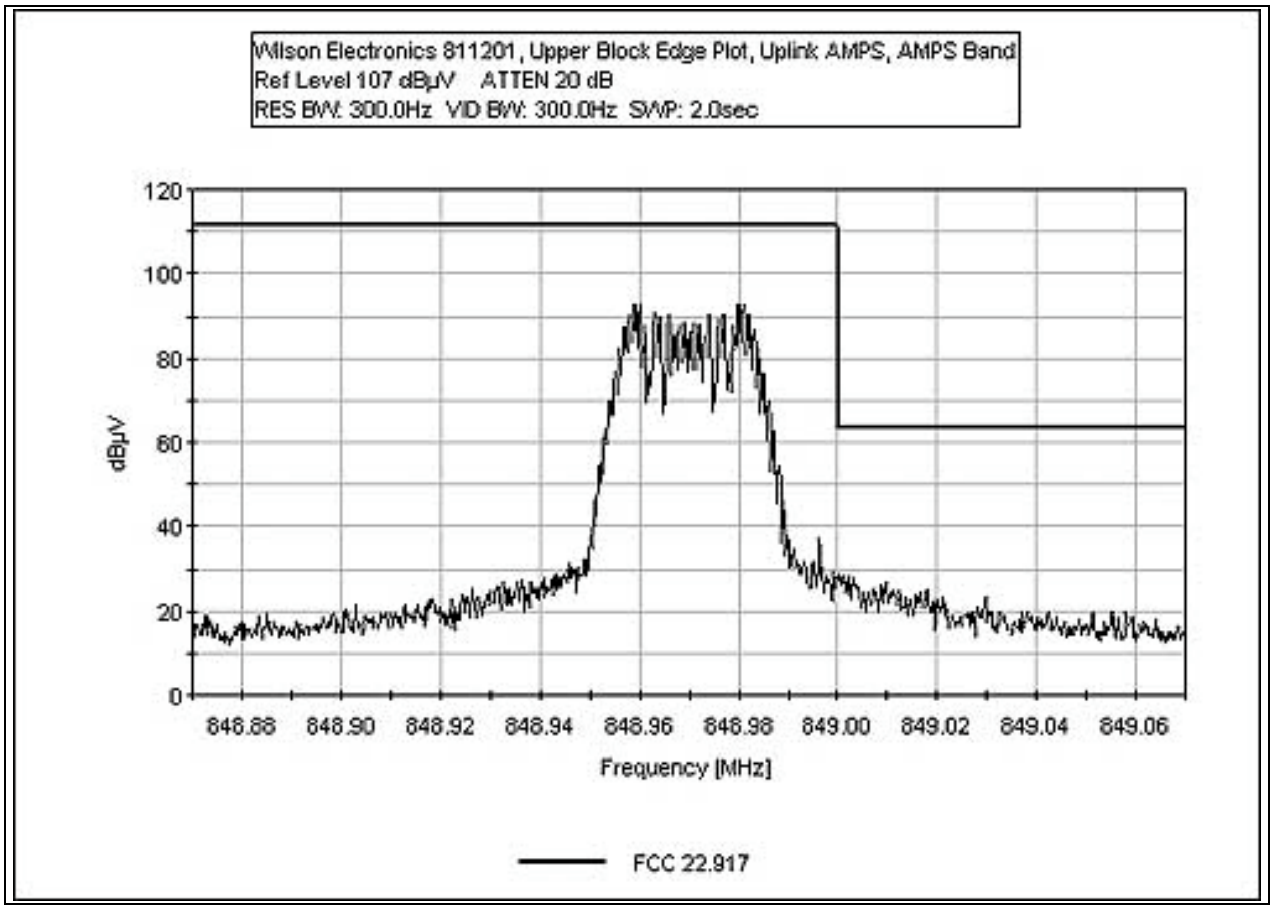
#	Freq MHz	Rdng dBµV	T1 dB	dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	823.995M	36.3	+30.4				+0.0	66.7	94.0	-27.3	None
2	848.710M	78.7	+30.3				+0.0	109.0	141.7 Fundamental	-32.7	None
3	824.205M	78.4	+30.4				+0.0	108.8	141.7 Fundamental	-32.9	None

4	849.005M	28.2	+30.3	+0.0	58.5	94.0	-35.5	None
5	1698.679M	15.4	+30.2	+0.0	45.6	94.0	-48.4	None
6	823.875M	14.6	+30.4	+0.0	45.0	94.0	-49.0	None
7	823.200M	13.8	+30.4	+0.0	44.2	94.0	-49.8	None
8	850.204M	13.9	+30.3	+0.0	44.2	94.0	-49.8	None
9	848.855M	59.9	+30.3	+0.0	90.2	141.7	-51.5	None

FCC 2.1051 - Lower Block Edge Uplink AMPS Band Amps



FCC 2.1051 Upper Block Edge Uplink AMPS Band Amps



***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

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

Test Location:	CKC Laboratories, Inc. •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)		
Customer:	**Wilson Electronics**		
Specification:	**FCC 22.917**		
Work Order #:	**81935**	Date:	03/12/2004
Test Type:	**Maximized Emissions**	Time:	09:51:29
Equipment:	**Dual Band Bidirectional Amplifier**	Sequence#:	68
Manufacturer:	Wilson Electronics	Tested By:	Mike Wilkinson
Model:	811201		
S/N:	DD1-008900		

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 8447D Preamp	1937A02604	03/07/2003	03/07/2005	00099
HP 8449B Preamp	3008A00301	10/21/2002	10/18/2004	2010
Chase CBL6111C Bilog	2456	12/13/2002	12/13/2004	01991
EMCO 3115 Horn Antenna	9006-3413	04/15/2003	04/25/2005	327
ARA MWH-1826/B Horn Antenna	1005	07/01/2003	07/01/2004	02046

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
RF Combiner	Motorola	None	P1314
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier repeater for the 824 - 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Radiated Intermodulation/Spurious Emissions Test: Two signals are input to the amplifier through a combining network. The input signals are set such that the maximum output per channel is provided at the antenna terminals. The internal ALC of the amplifier limits the combined maximum power output to a factory set level. Power output is continuously variable and directly proportional to the supplied RF input. Test setup is in accordance with TIA/EIA 603. Two input frequency configurations were investigated as follows, 869.28 & 870.12MHz and then 892.88 & 893.72MHz. Data represents measured worst care and represents all modulation types. Amplifier Gain: 10dB Input Modulation: EDGE. Frequencies Tested: Downlink. Frequency Range Investigated: 30MHz to 10GHz. Measurement Bandwidth Settings: 10MHz to 1000MHz - RBW=VBW=10kHz 1000MHz to 10000MHz - RBW=VBW=1MHz**. No EUT Emissions detected within 20dBc 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/m	dBµV/m	dB	Ant

Test Location: CKC Laboratories, Inc. •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Wilson Electronics**
Specification: **FCC 22.917**
Work Order #: **81935** Date: 03/12/2004
Test Type: **Maximized Emissions** Time: 13:50:58
Equipment: **Dual Band Bidirectional Amplifier** Sequence#: 69
Manufacturer: Wilson Electronics Tested By: Mike Wilkinson
Model: 811201
S/N: DD1-008900

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 8447D Preamp	1937A02604	03/07/2003	03/07/2005	00099
HP 8449B Preamp	3008A00301	10/21/2002	10/18/2004	2010
Chase CBL6111C Bilog	2456	12/13/2002	12/13/2004	01991
EMCO 3115 Horn Antenna	9006-3413	04/15/2003	04/25/2005	327
ARA MWH-1826/B Horn Antenna	1005	07/01/2003	07/01/2004	02046

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

Function	Manufacturer	Model #	S/N
Amplifier Power Supply	Wilson Electronics	JOD-48U-36	NA
Dual Band Bidirectional Amplifier*	Wilson Electronics	811201	DD1-008900

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	HP	E4432B	US40052283
RF Combiner	Motorola	None	P1314
Preamp	Mini-Circuits	ZHL-42-SMA	D030204-#19

Test Conditions / Notes:

EUT is a bidirectional amplifier repeater for the 824 - 894MHz band. Uplink frequency range 824 - 849MHz. Downlink frequency range 869 - 894MHz. Radiated Intermodulation /Spurious Emissions Test: Two signals are input to the amplifier through a combining network. The input signals are set such that the maximum output per channel is provided at the antenna terminals. The internal ALC of the amplifier limits the combined maximum power output to a factory set level. Power output is continuously variable and directly proportional to the supplied RF input. Test setup is in accordance with TIA/EIA 603. Two input frequency configurations were investigated as follows, 824.28 & 825.12MHz and then 847.88 & 848.72MHz. Data represents measured worst care and represents all modulation types. Amplifier Gain: 10dB. Input Modulation: GSM. Frequencies Tested: Uplink. Frequency Range Investigated: 30MHz to 10GHz. Measurement Bandwidth Settings: 10MHz to 1000MHz - RBW=VBW=10kHz 1000MHz to 10000MHz - RBW=VBW=1MHz. **No EUT Emissions detected within 20dBc of the limit.**

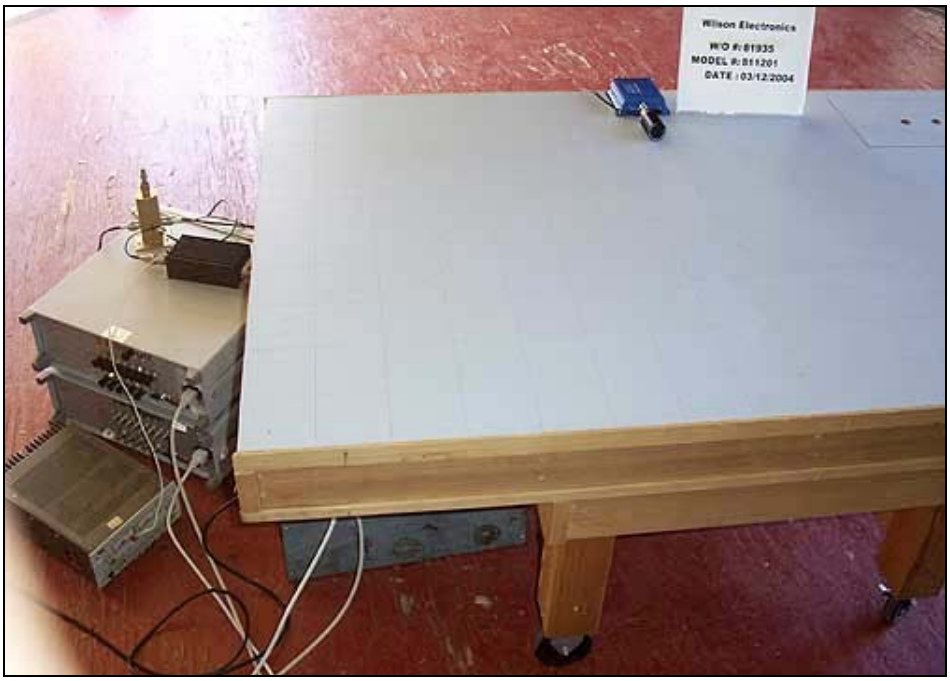
Transducer Legend:

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/m	dBµV/m	dB	Ant

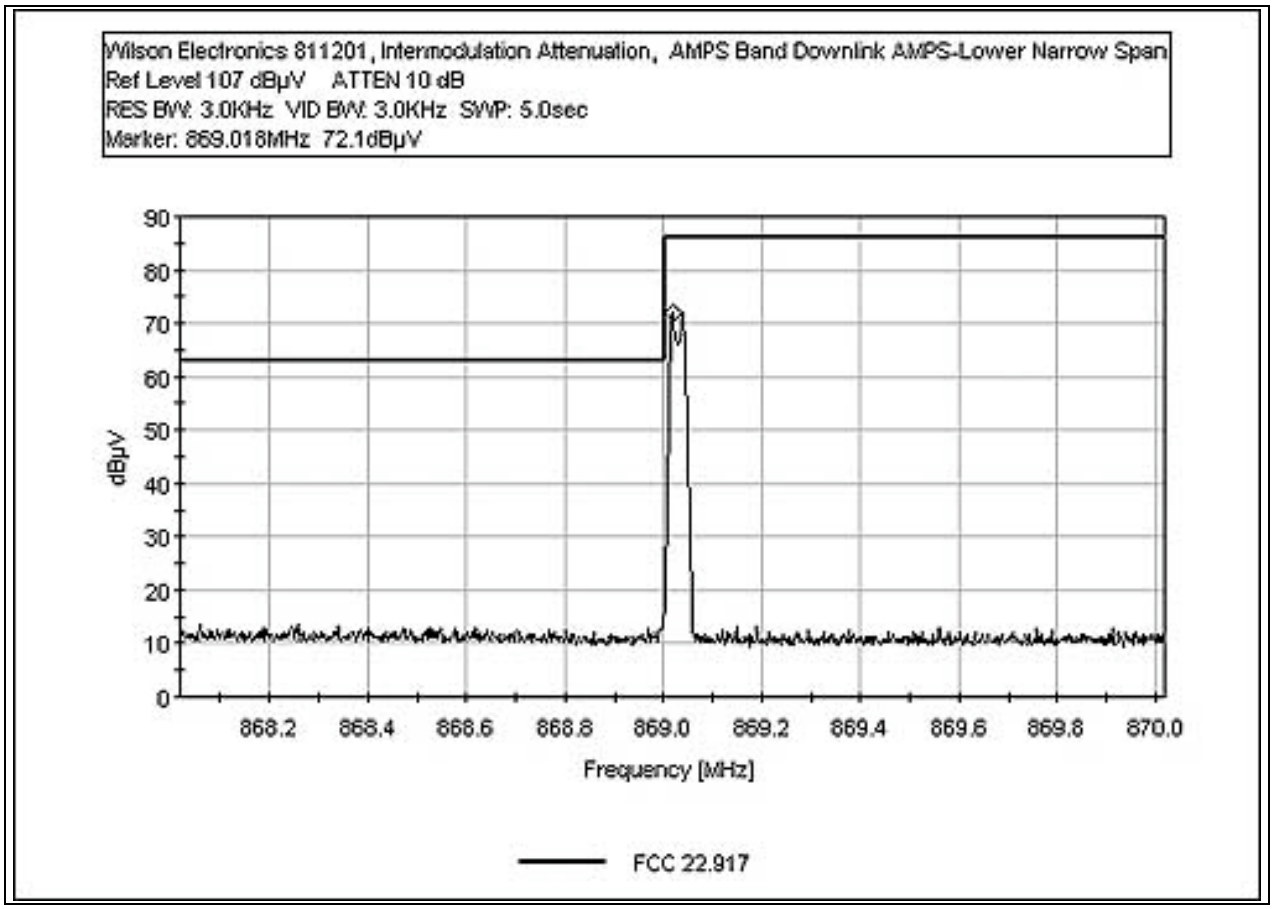
PHOTOGRAPH SHOWING RADIATED EMISSIONS

Radiated Emissions - Front View

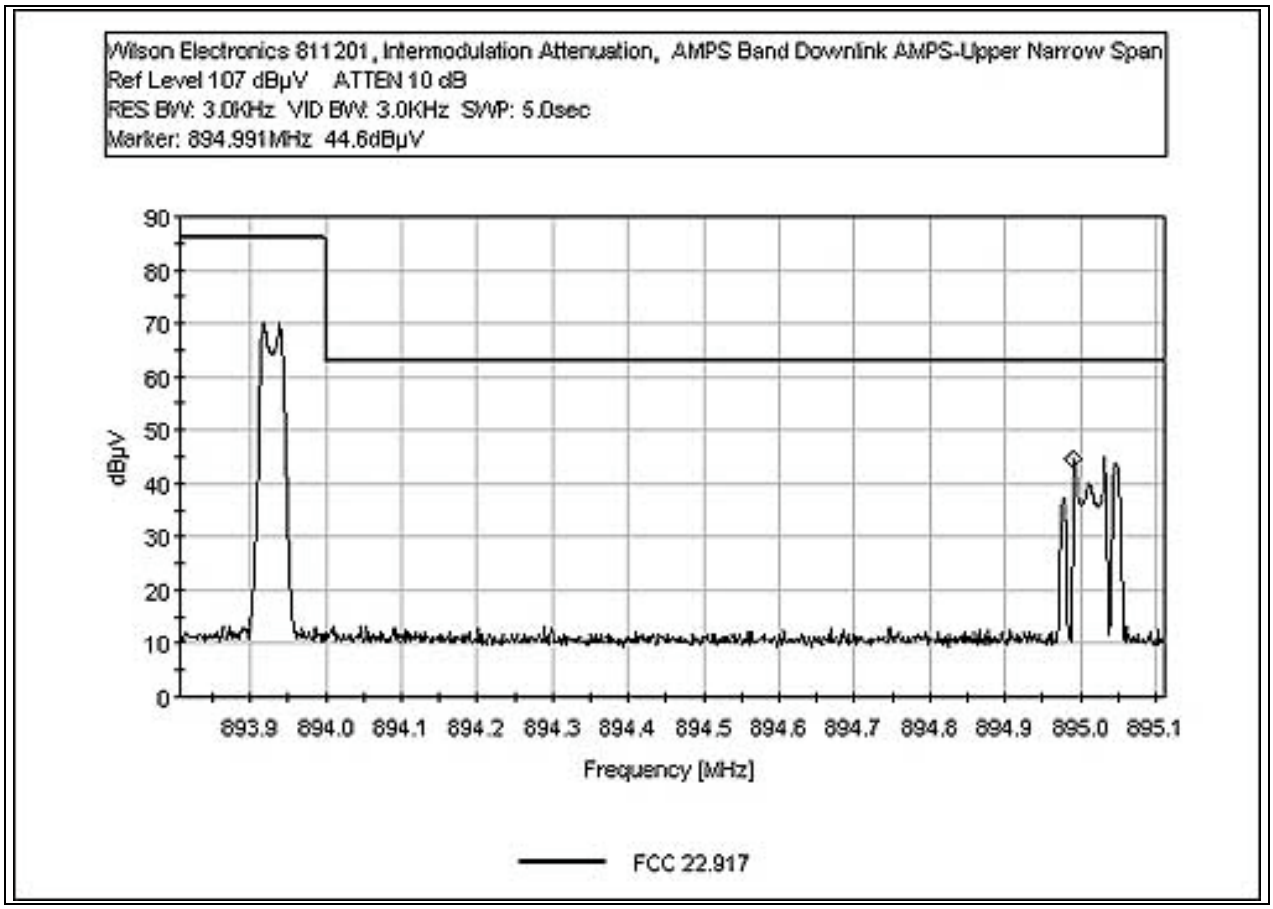


Radiated Emissions - Back View

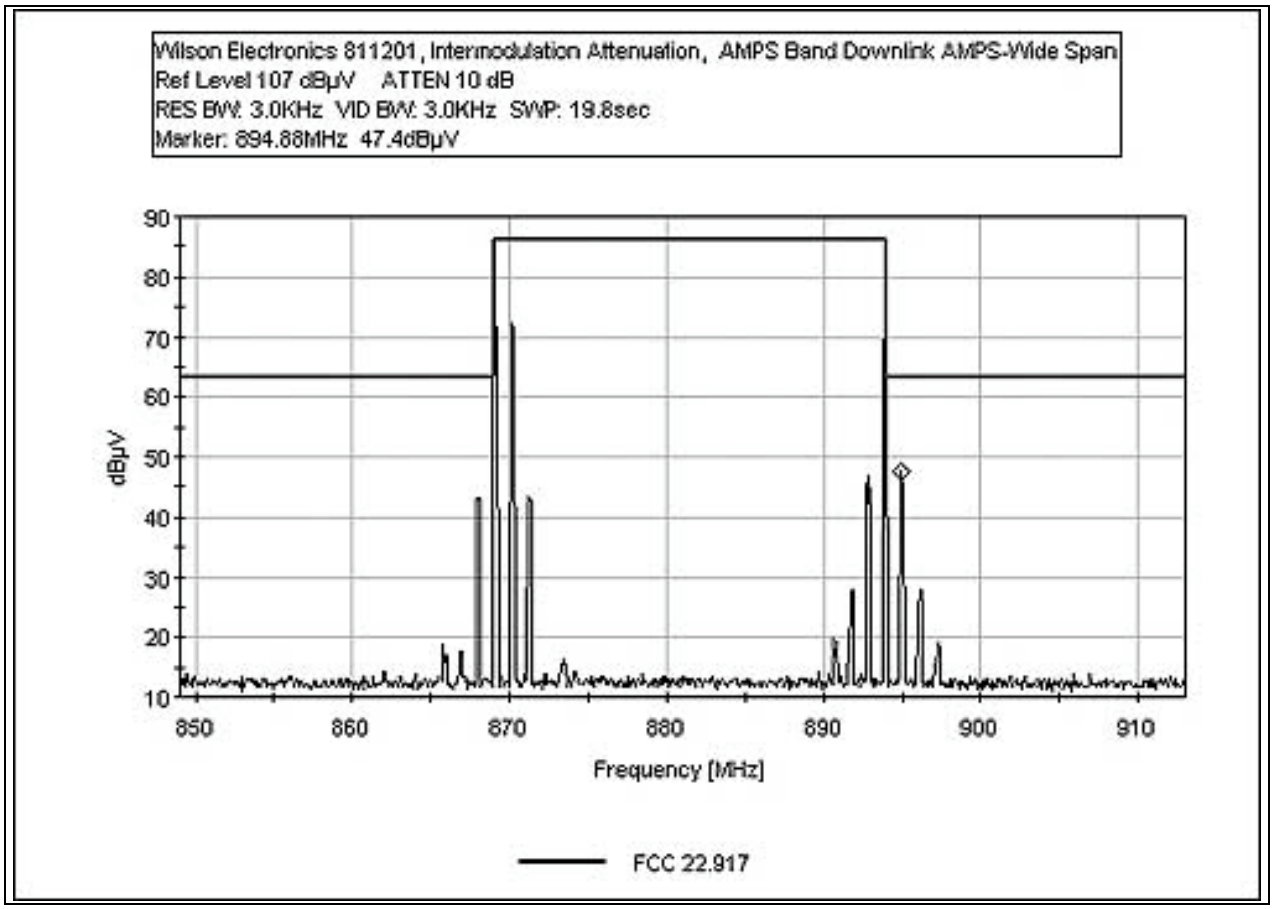
Intermodulation Attenuation Downlink AMPS Band AMPS Lower Narrow Span



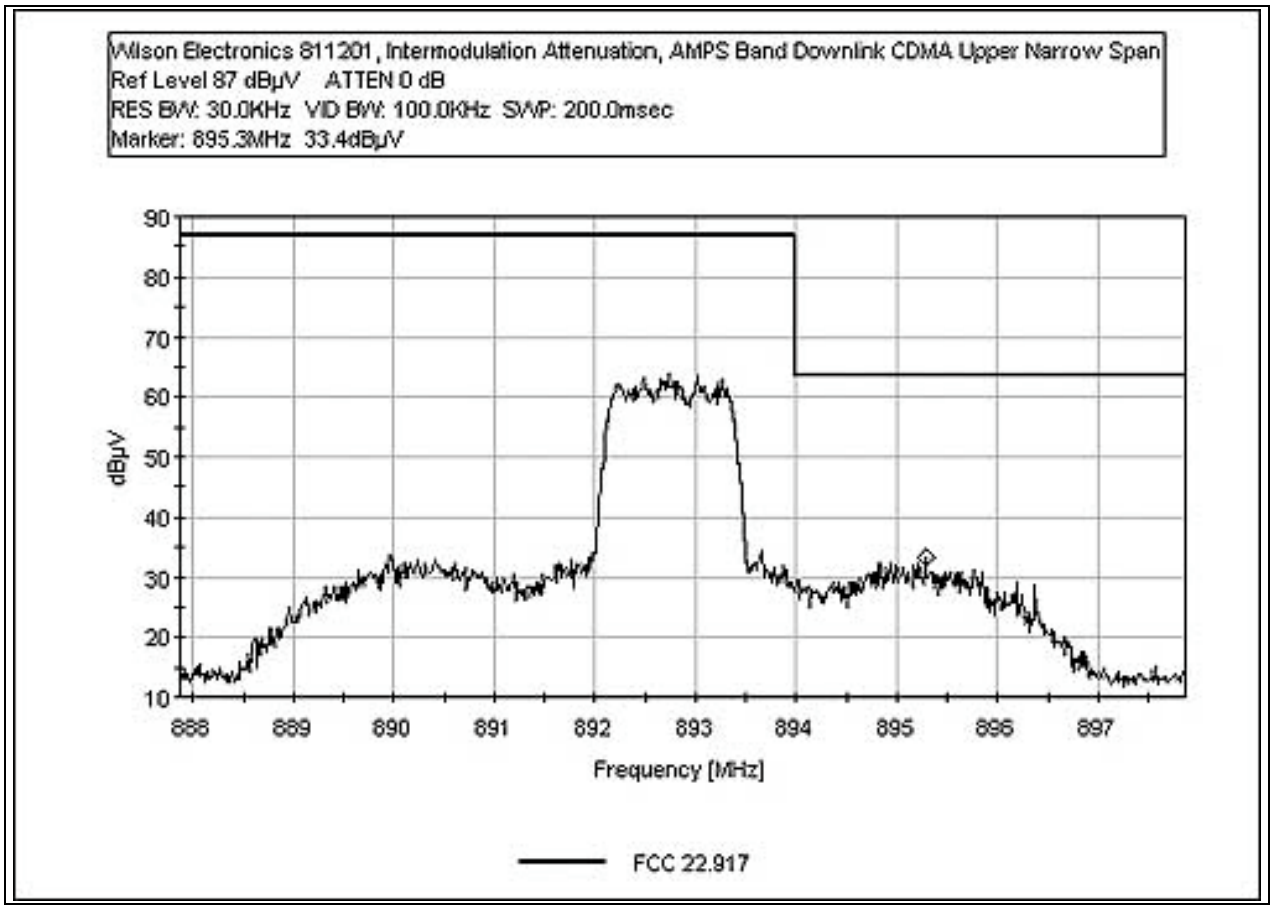
Intermodulation Attenuation Downlink AMPS Band AMPS Upper Narrow Span



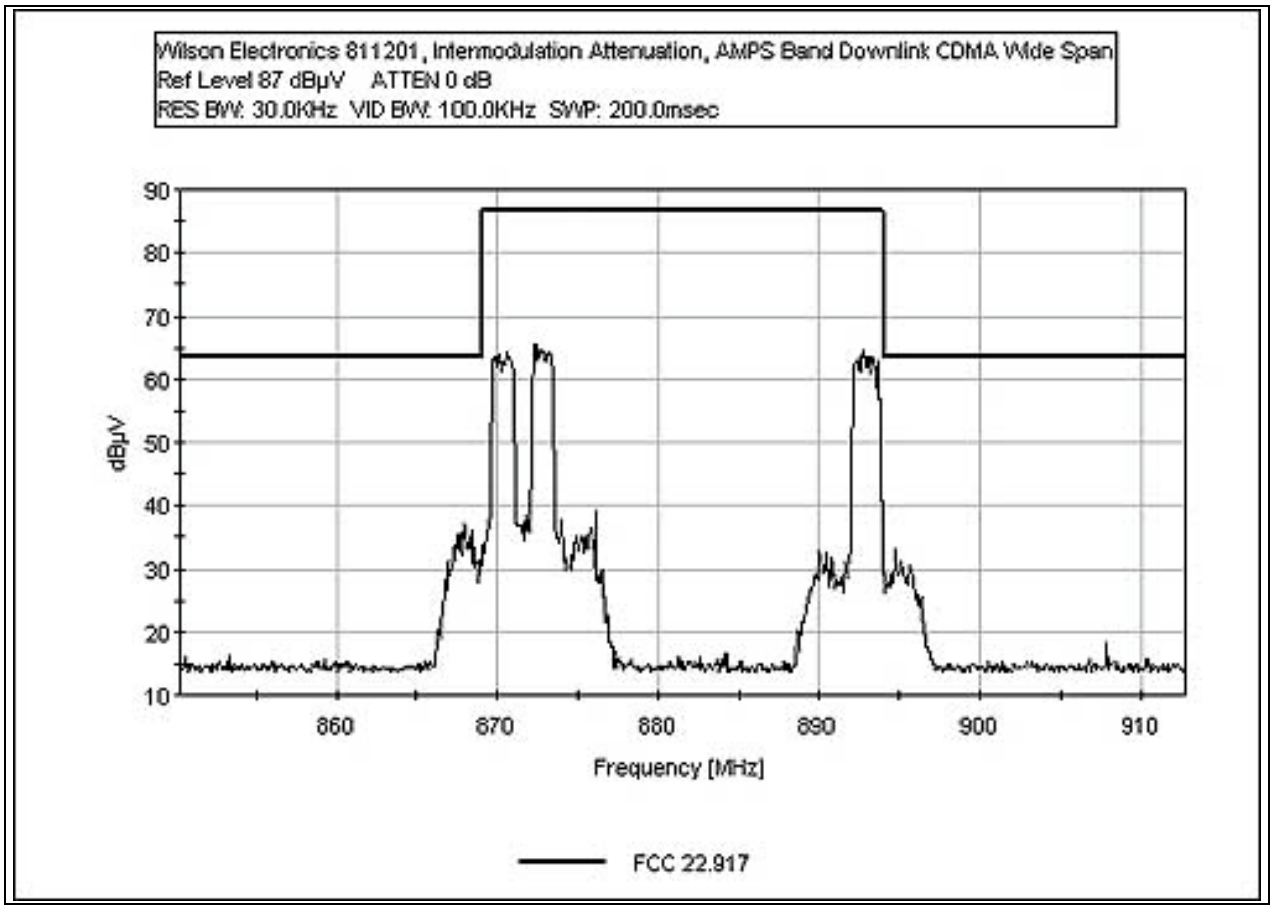
Intermodulation Attenuation Downlink AMPS Band AMPS Wide Span



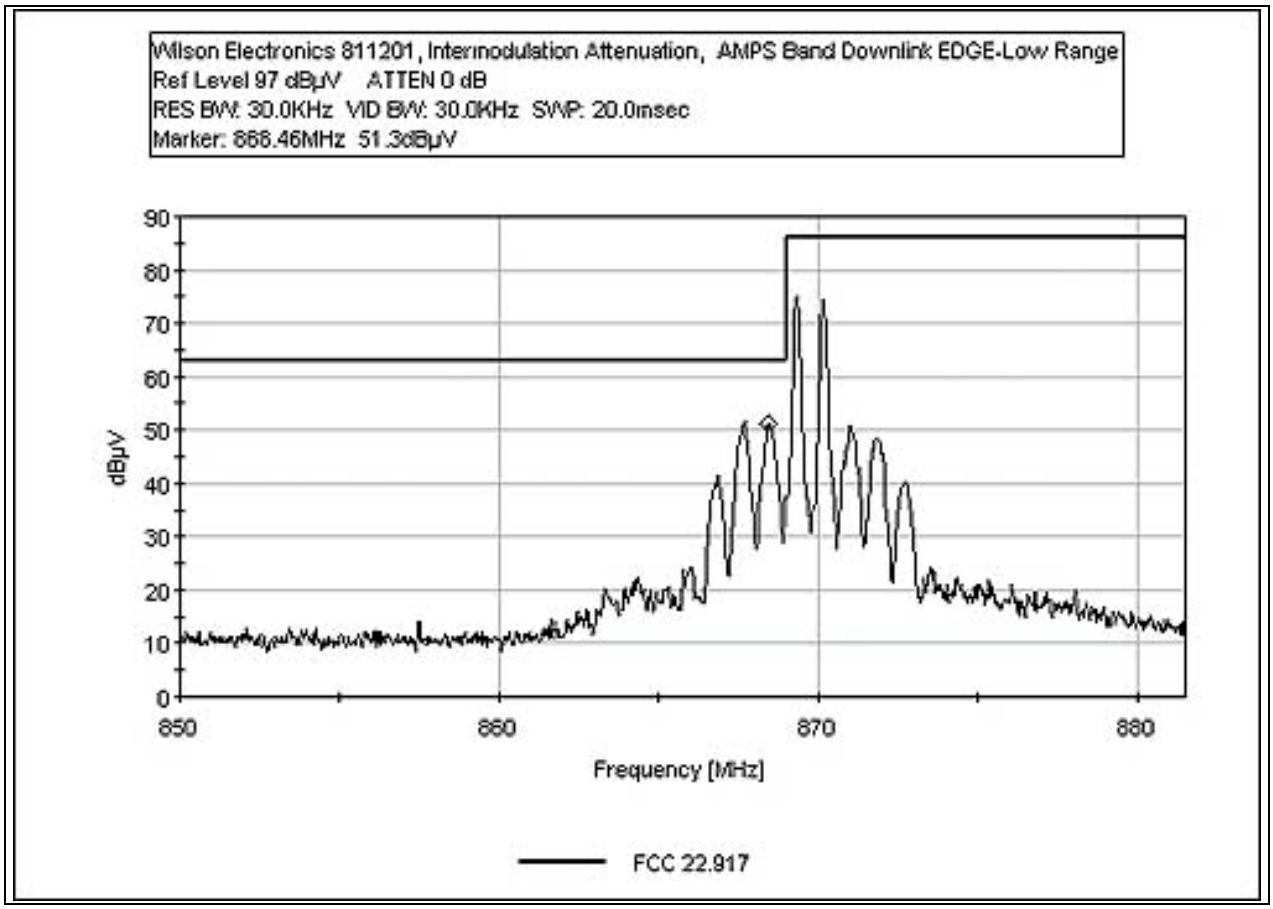
Intermodulation Attenuation Downlink AMPS Band CDMA Upper Narrow Span



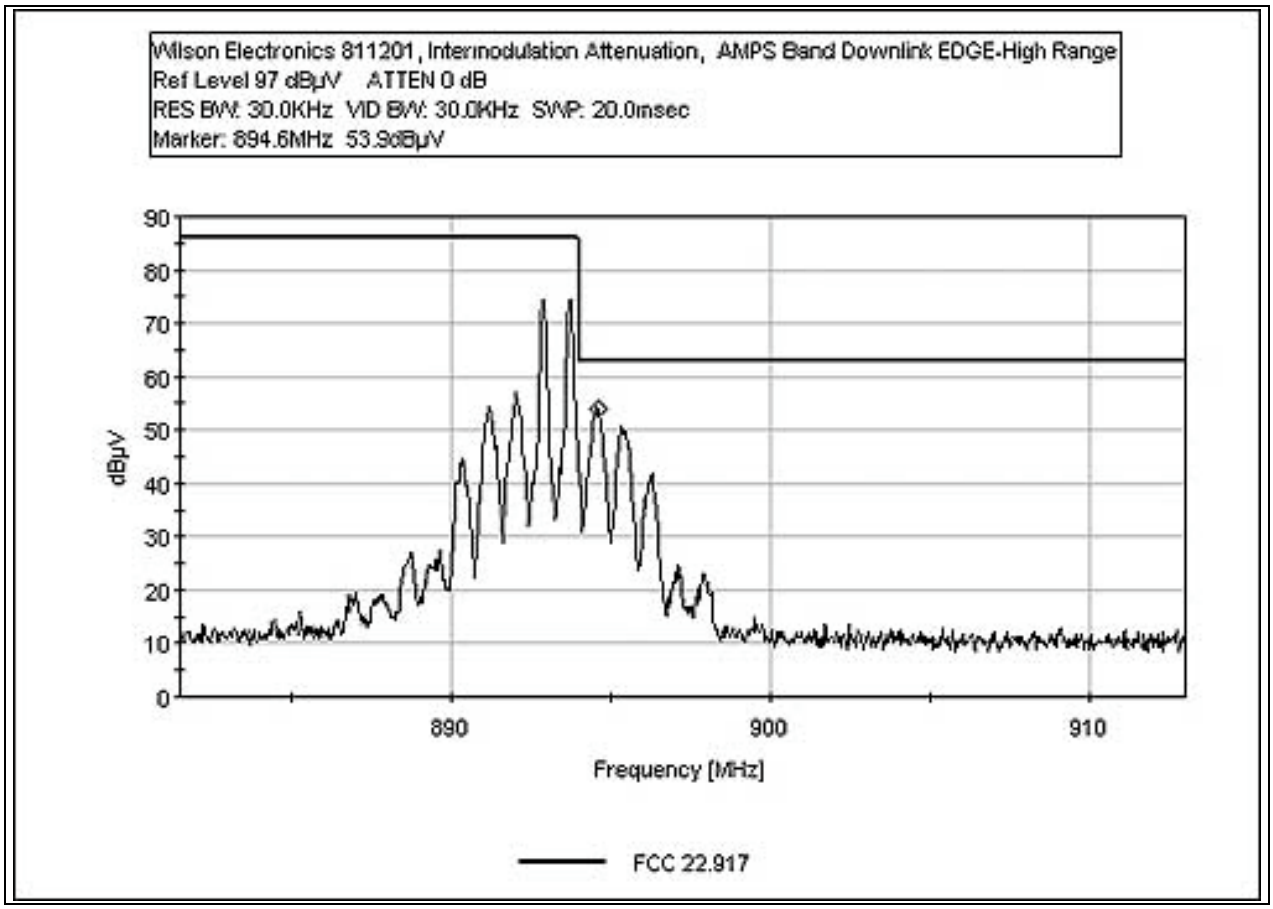
Intermodulation Attenuation Downlink AMPS Band CDMA Wide Span



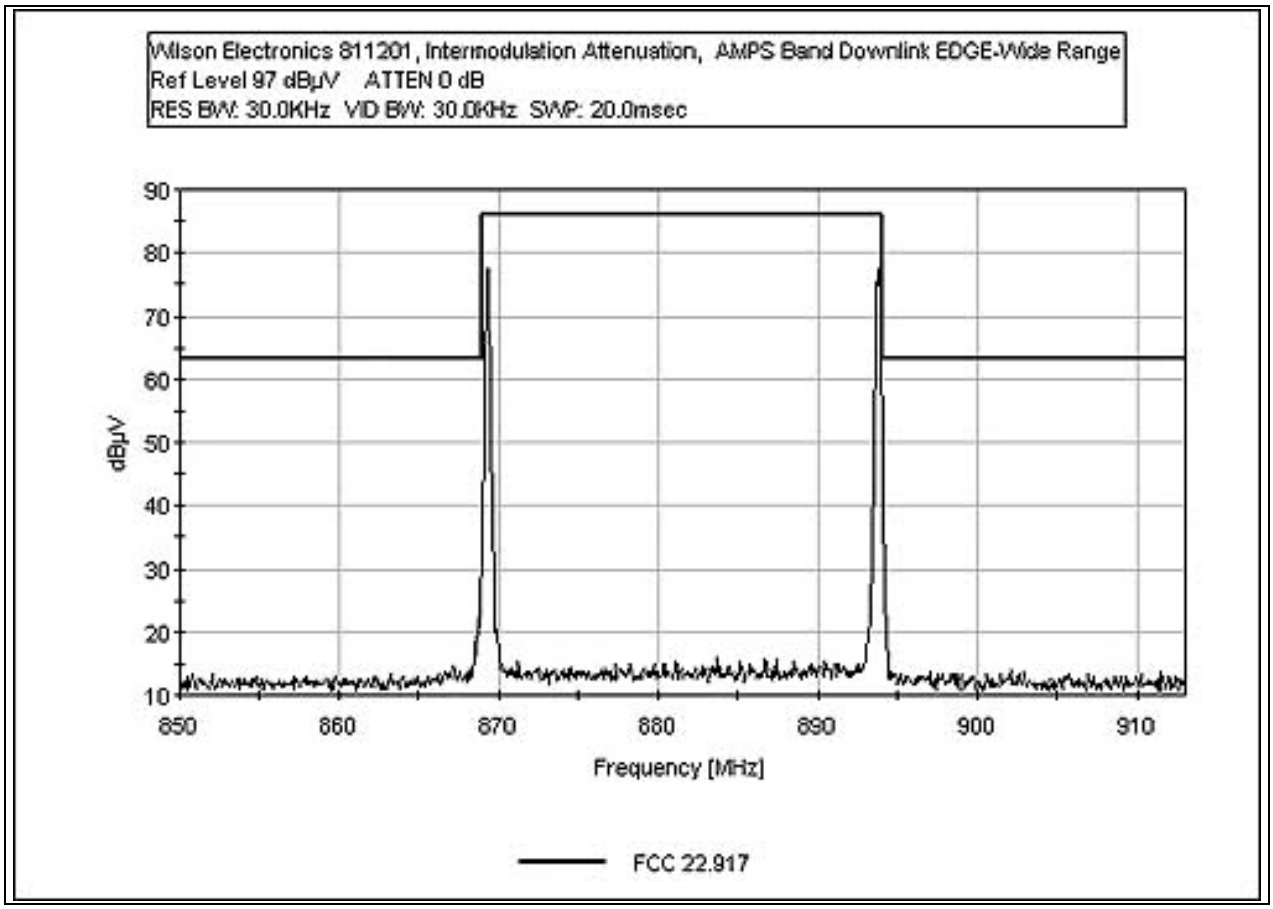
Intermodulation Attenuation Downlink AMPS Band EDGE Low Range



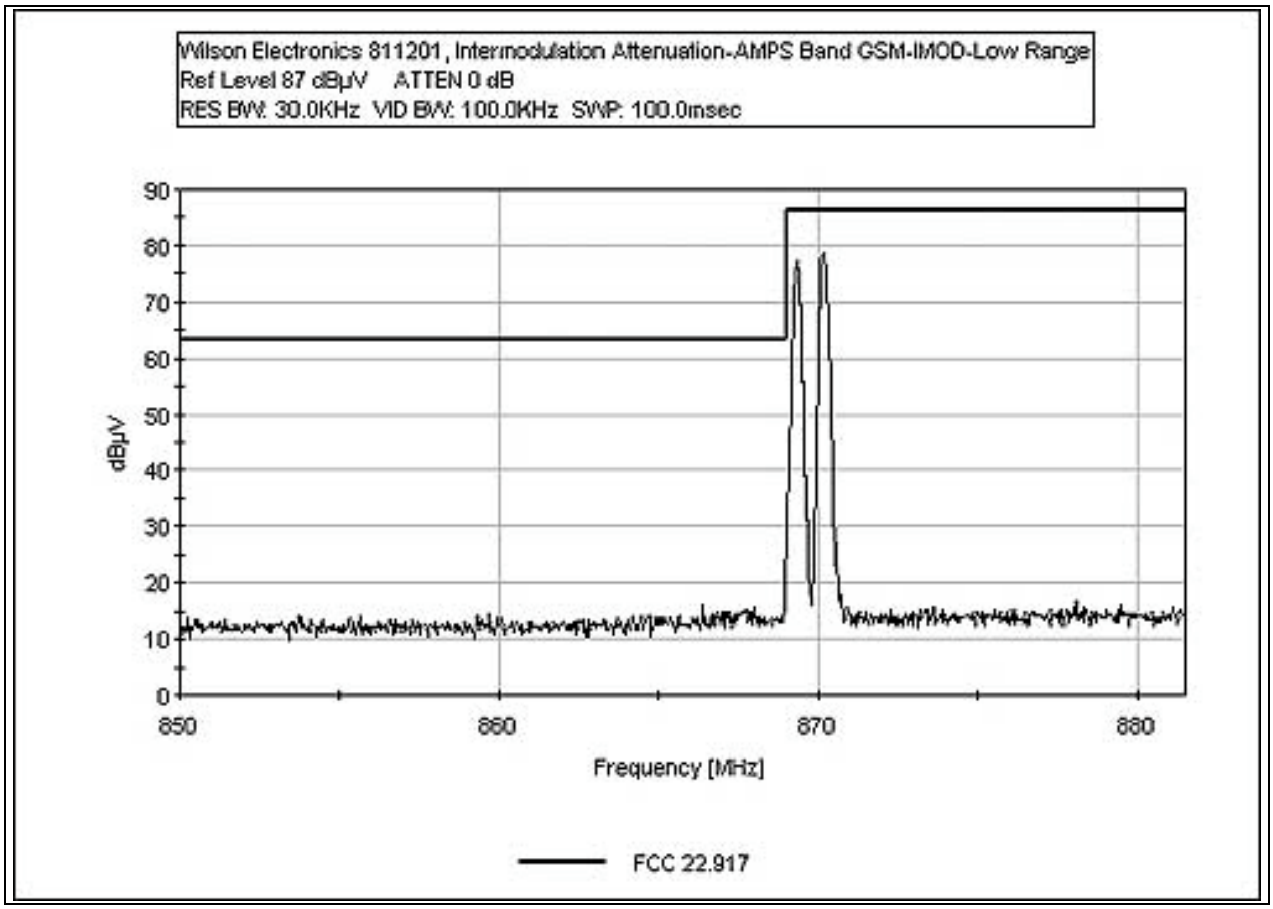
Intermodulation Attenuation Downlink AMPS Band EDGE High Range



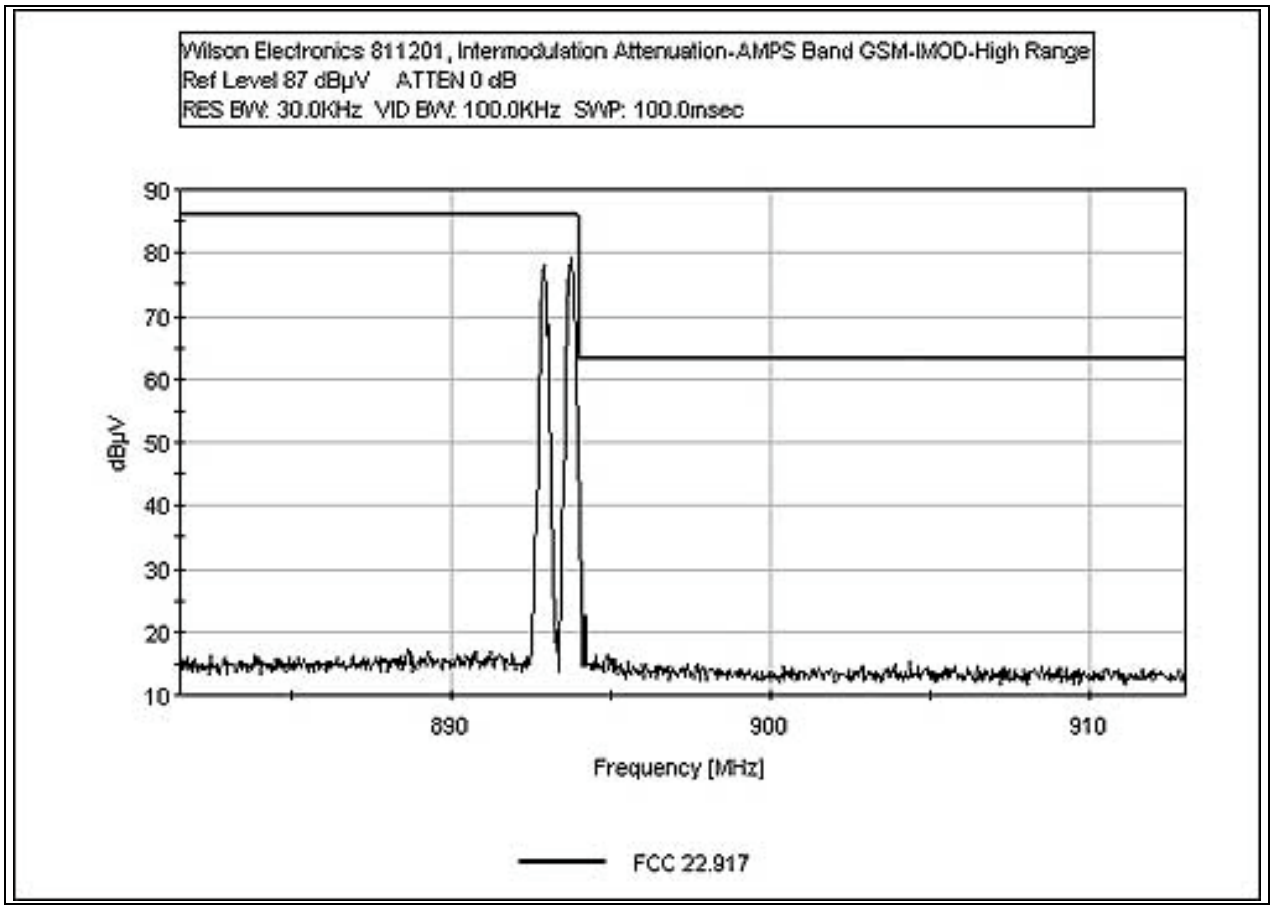
Intermodulation Attenuation Downlink AMPS Band EDGE Wide Range



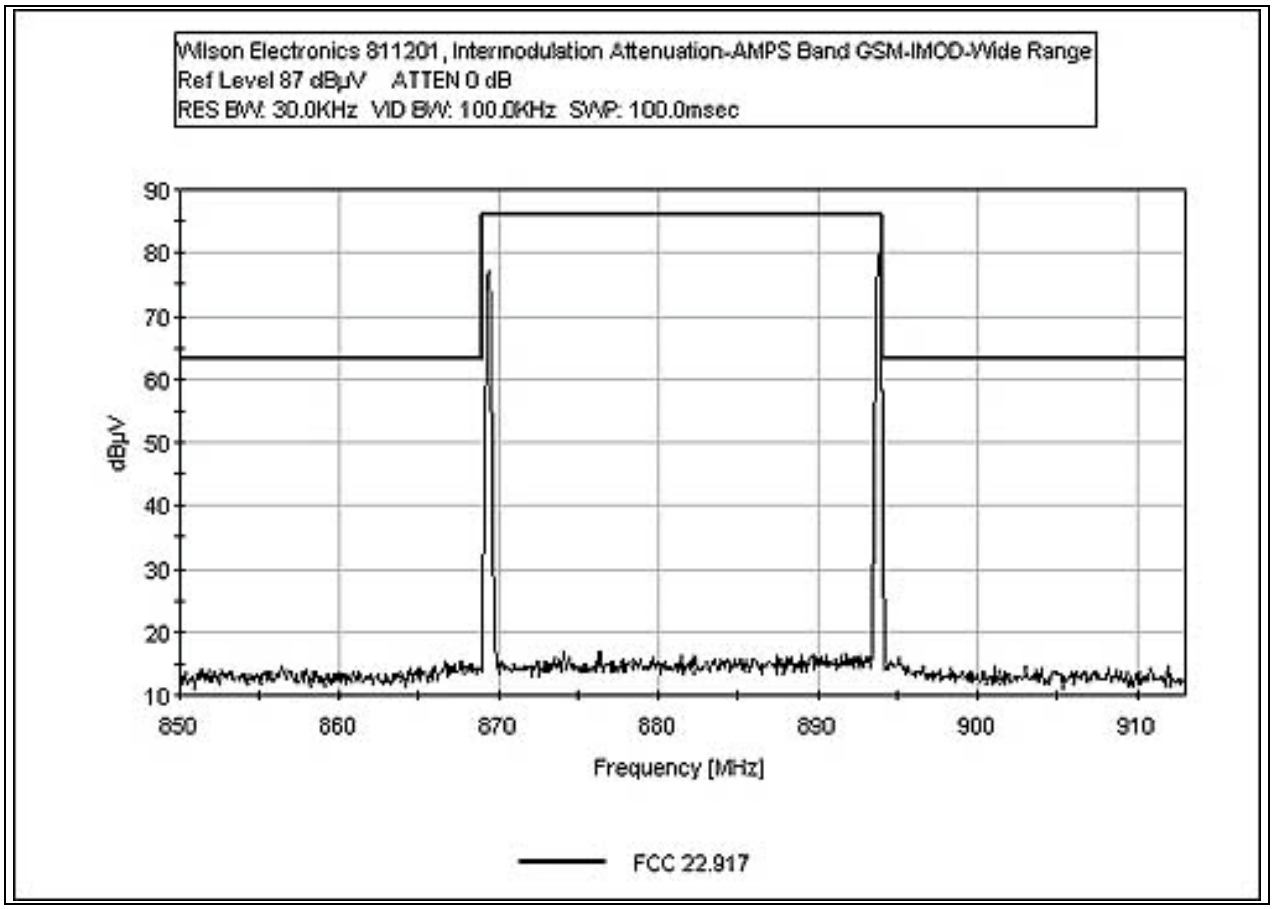
Intermodulation Attenuation Downlink AMPS Band GSM Low Range



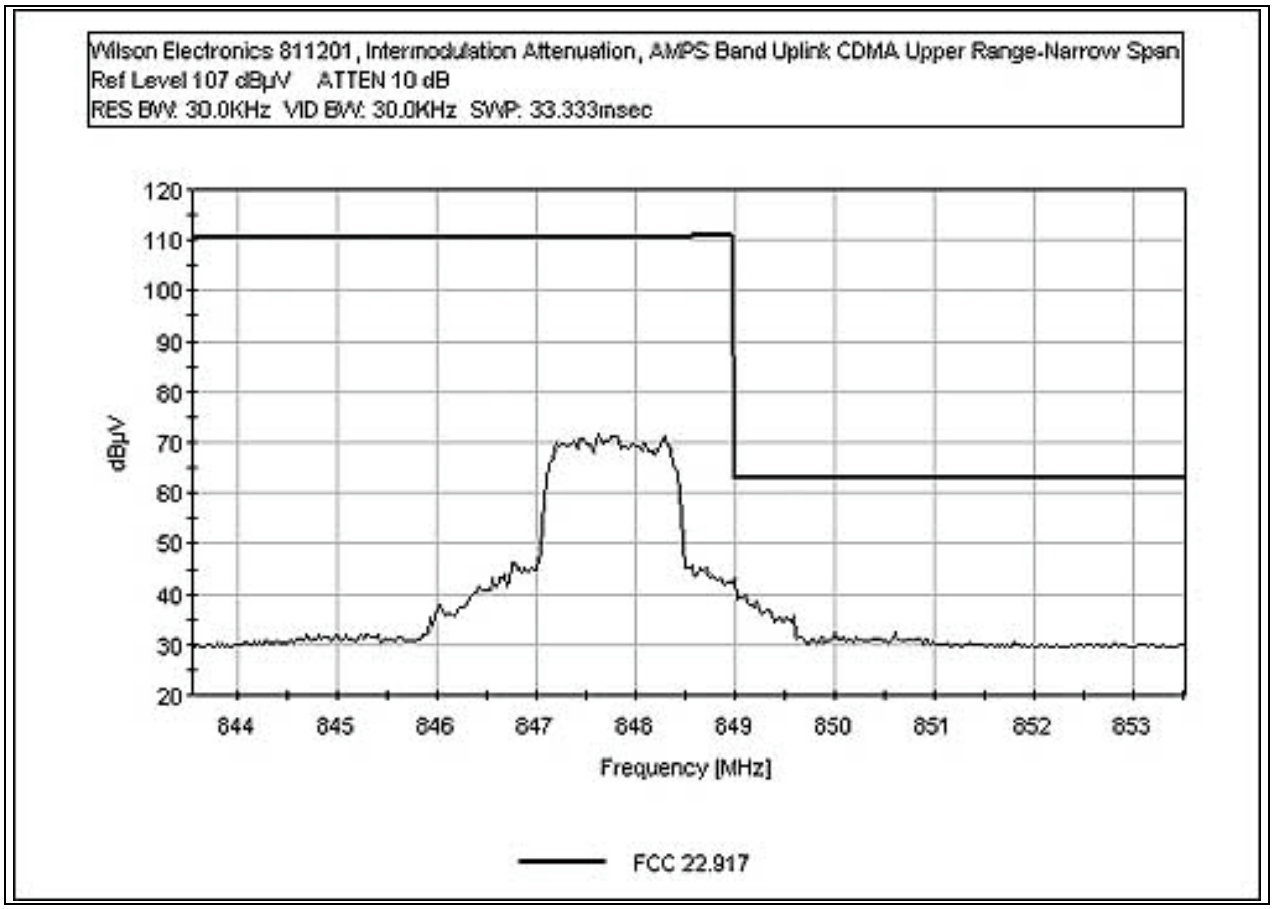
Intermodulation Attenuation Downlink AMPS Band GSM High Range



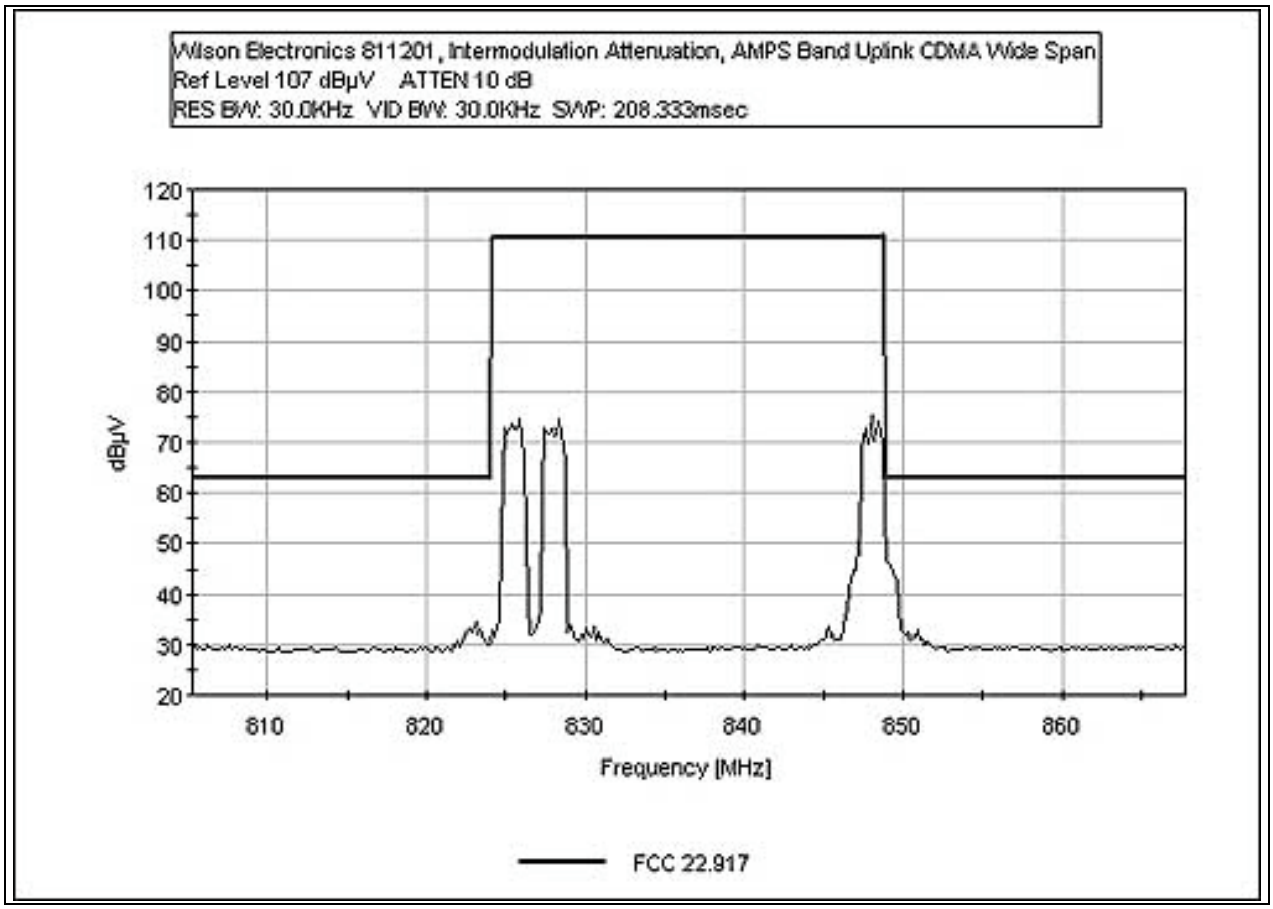
Intermodulation Attenuation Downlink AMPS Band GSM Wide Range



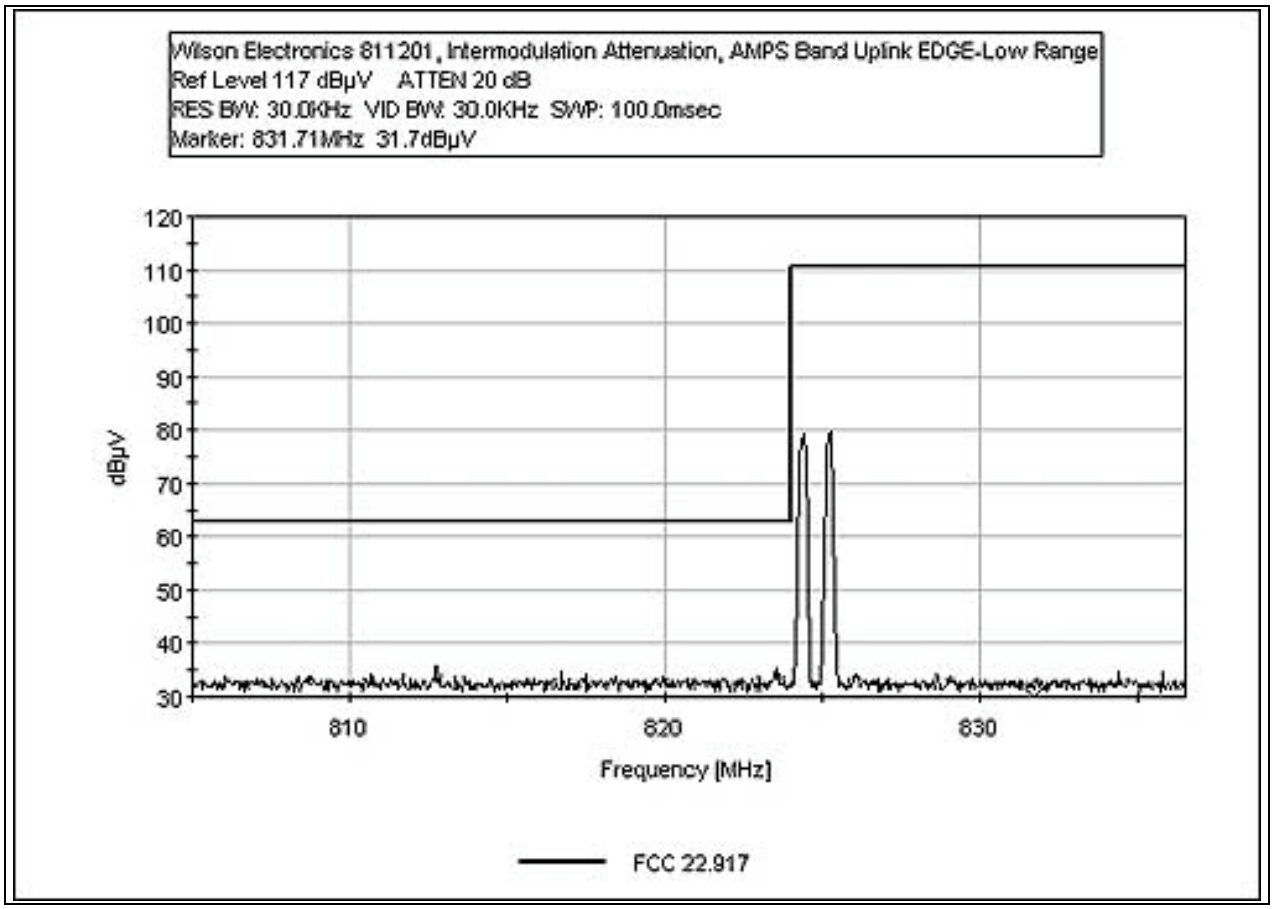
Intermodulation Attenuation Uplink AMPS Band CDMA Upper Range Narrow Span



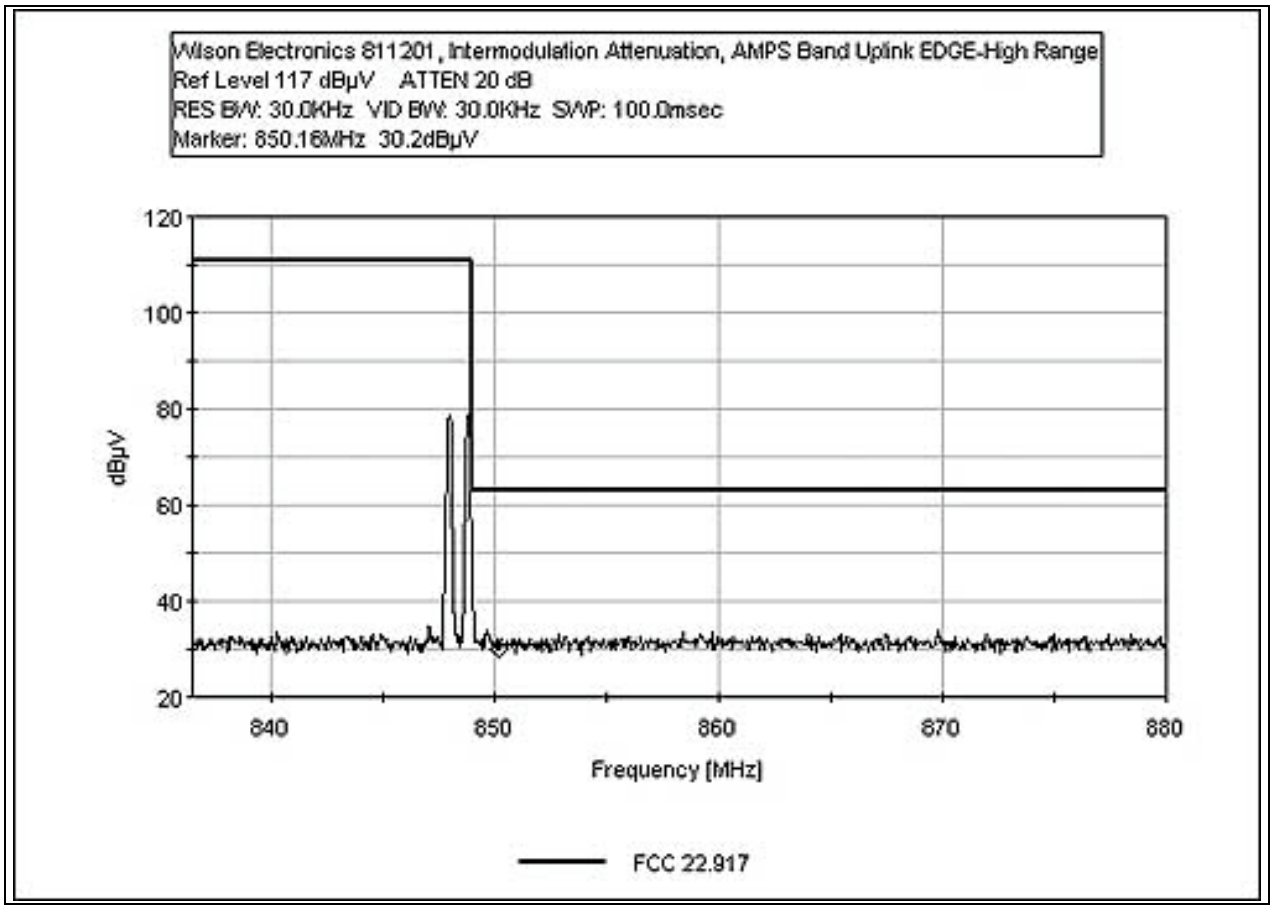
Intermodulation Attenuation Uplink AMPS Band CDMA Upper Range Wide Span



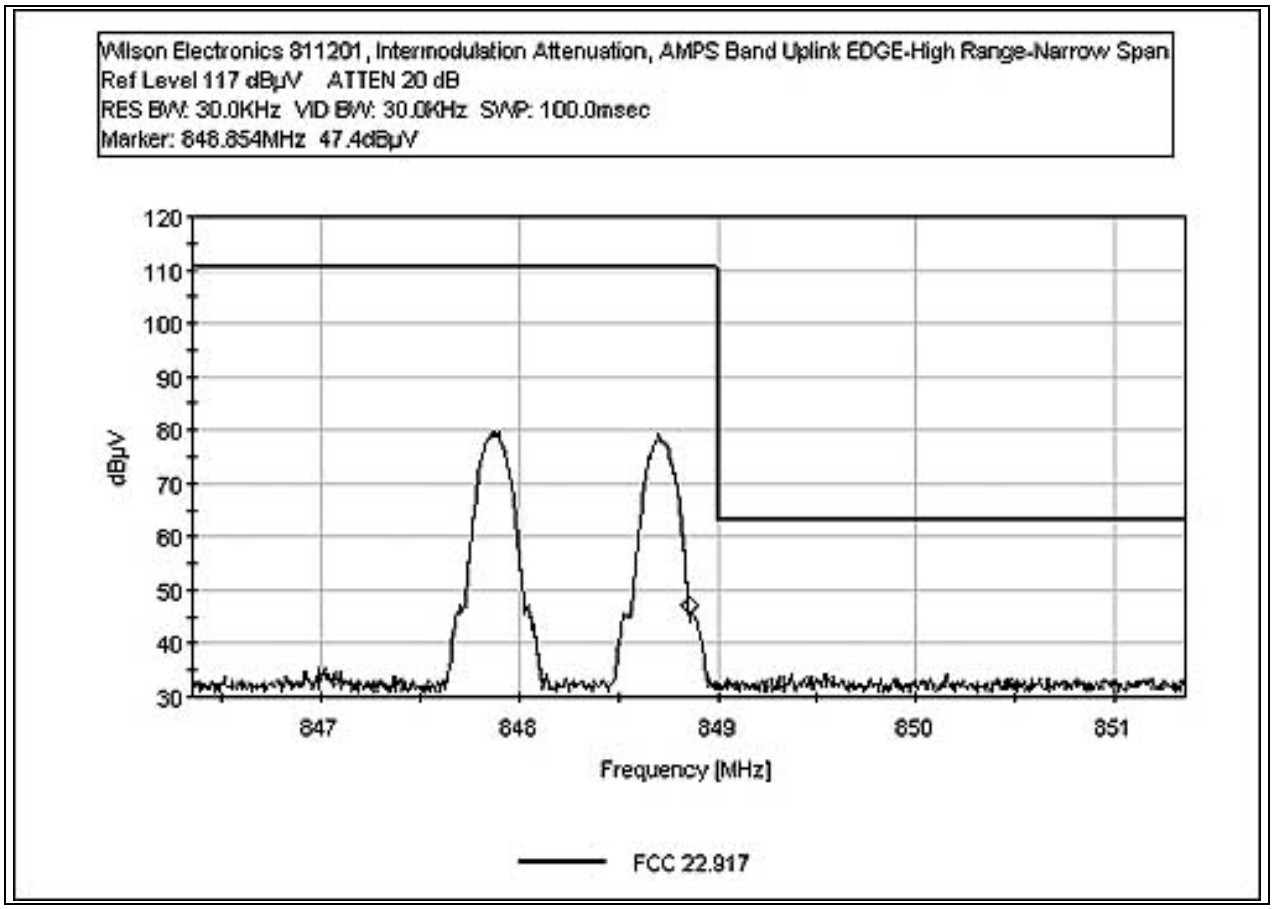
Intermodulation Attenuation Uplink AMPS Band EDGE Low Range



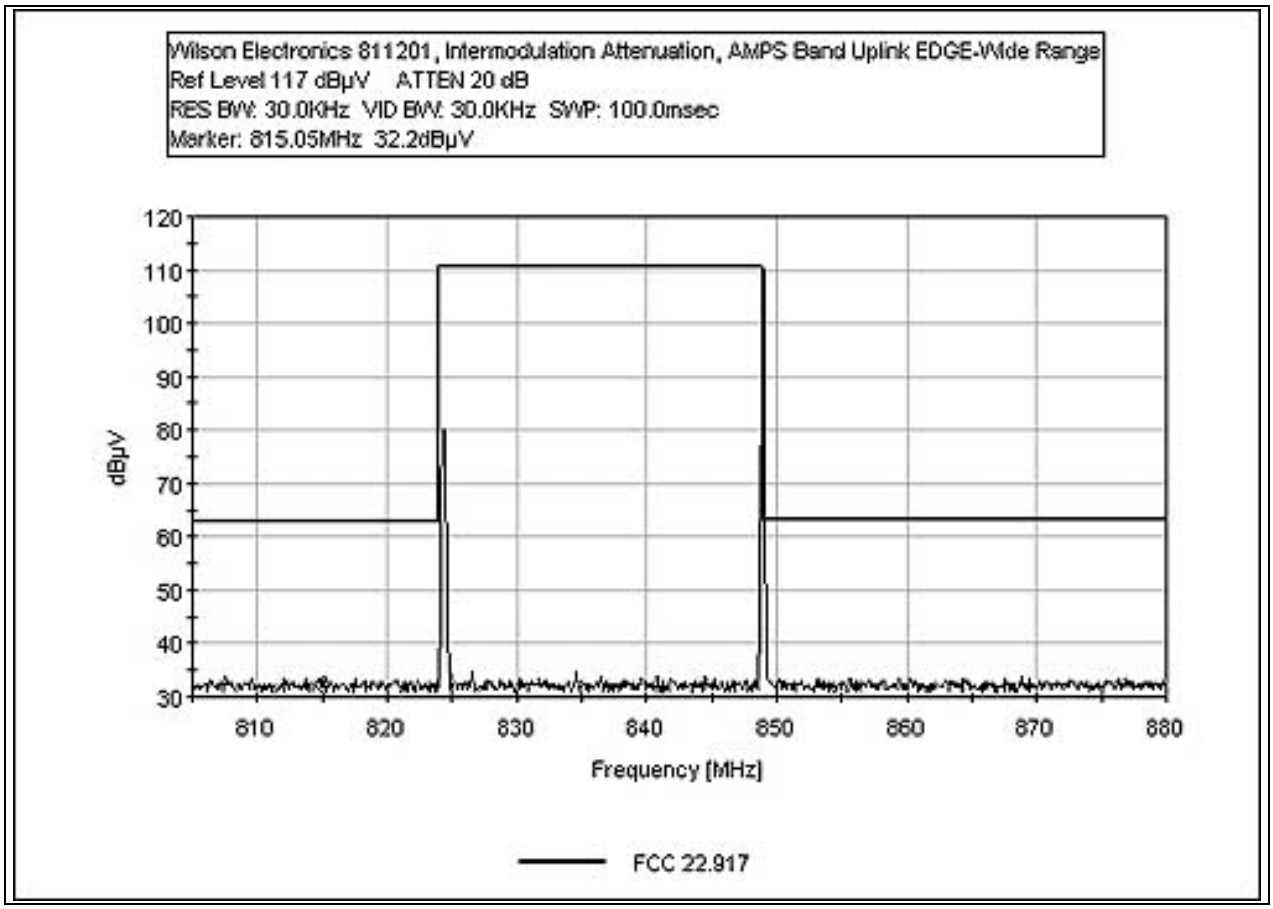
Intermodulation Attenuation Uplink AMPS Band EDGE High Range



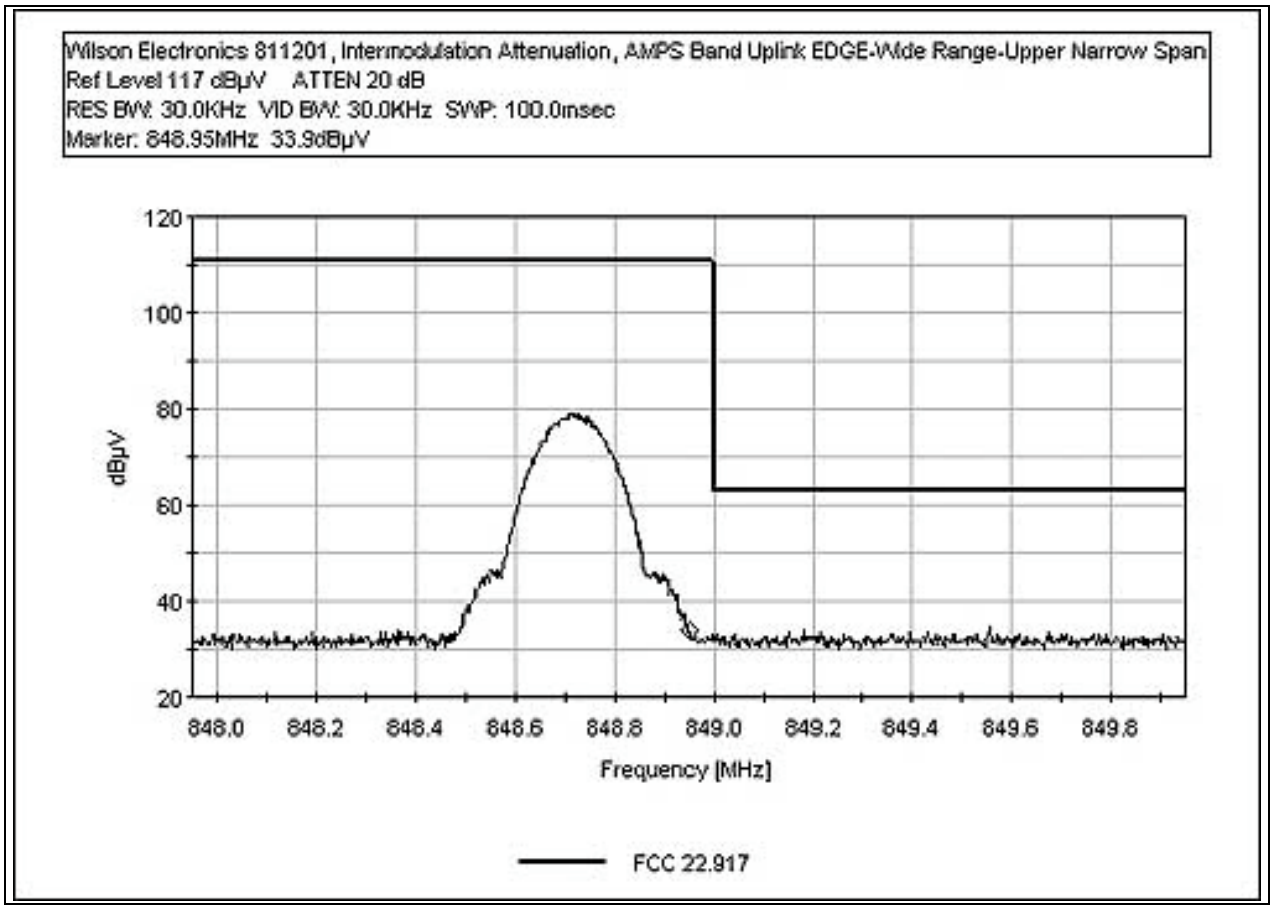
Intermodulation Attenuation Uplink AMPS Band EDGE High Range Narrow Span



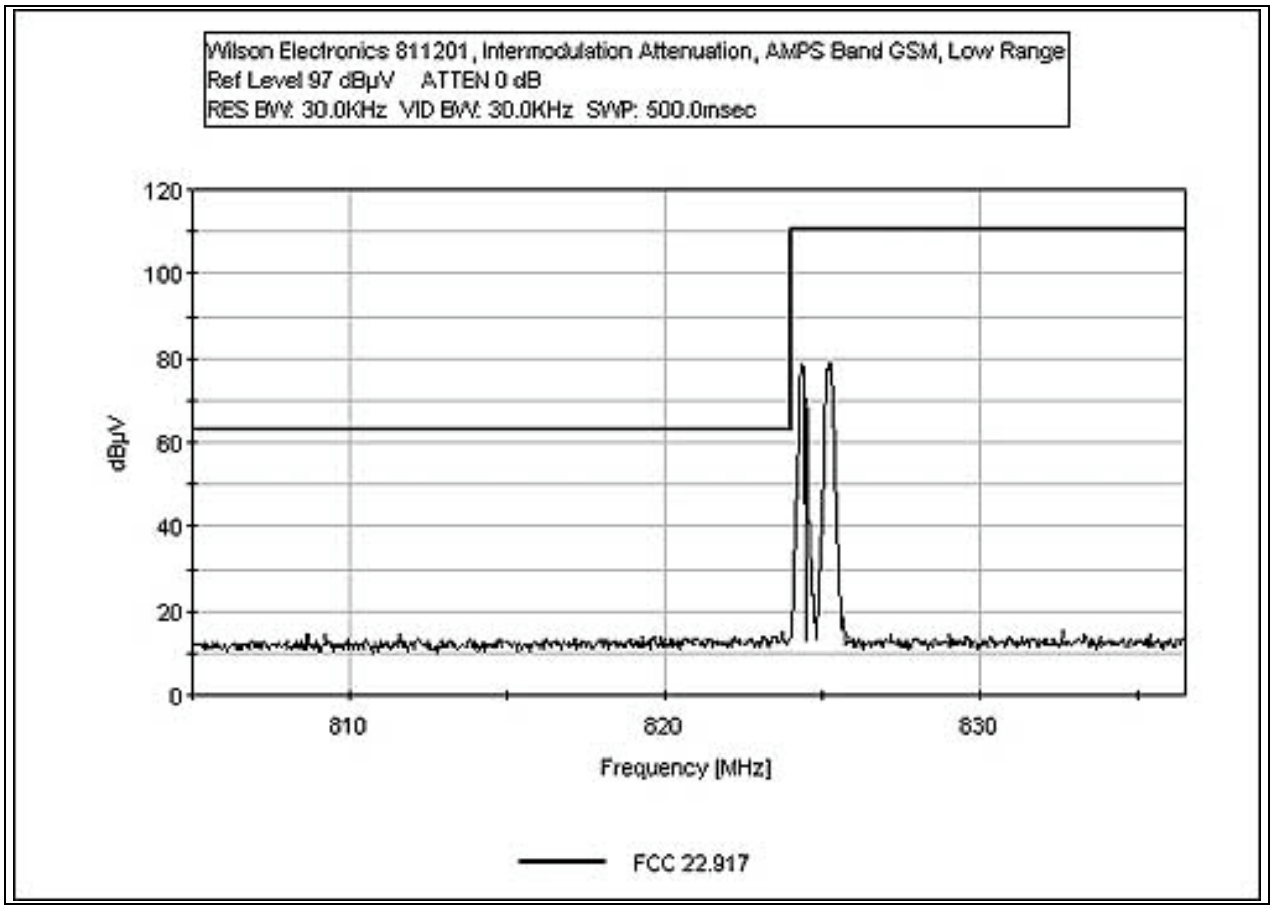
Intermodulation Attenuation Uplink AMPS Band EDGE Wide Range



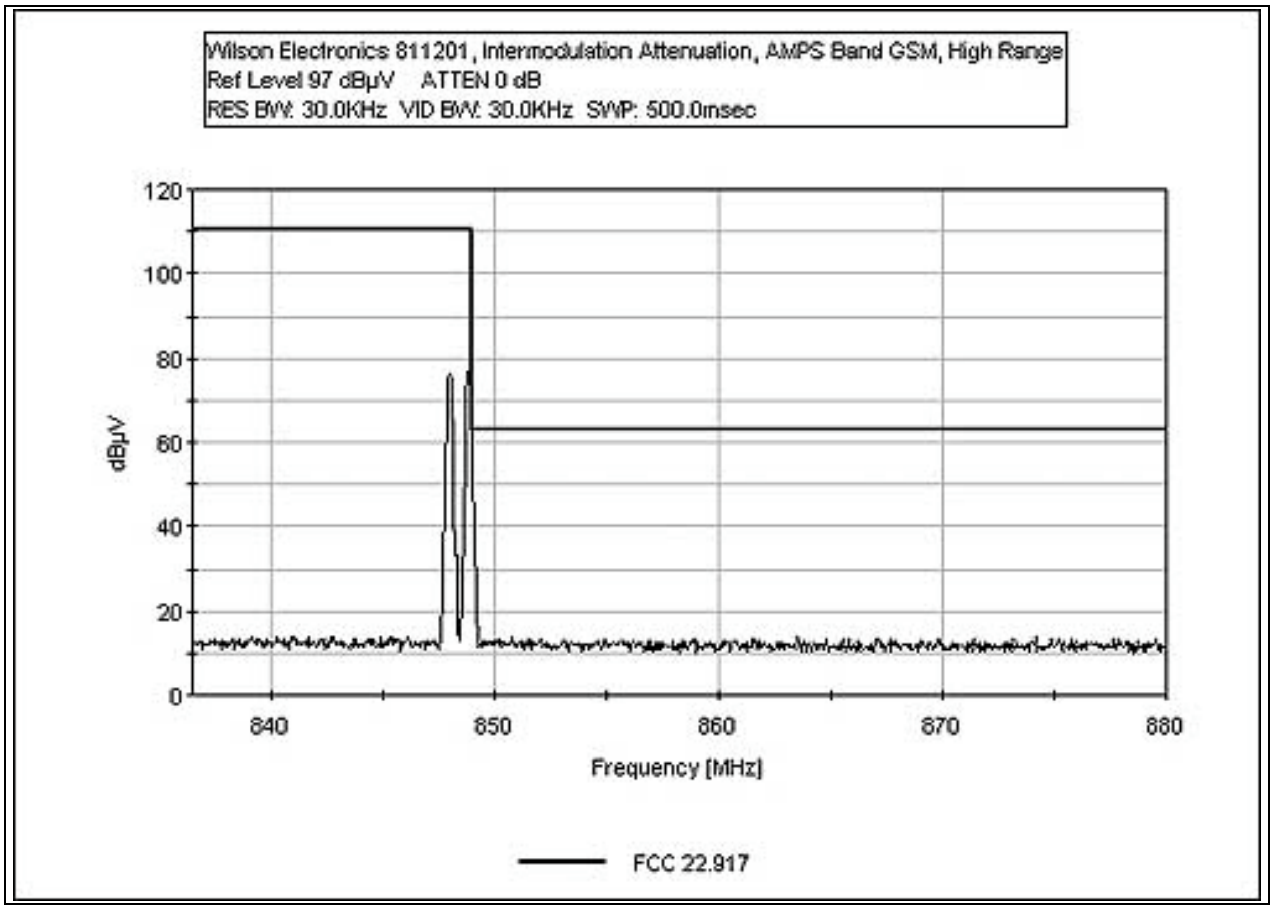
Intermodulation Attenuation Uplink AMPS Band EDGE Wide Range Upper Narrow Span



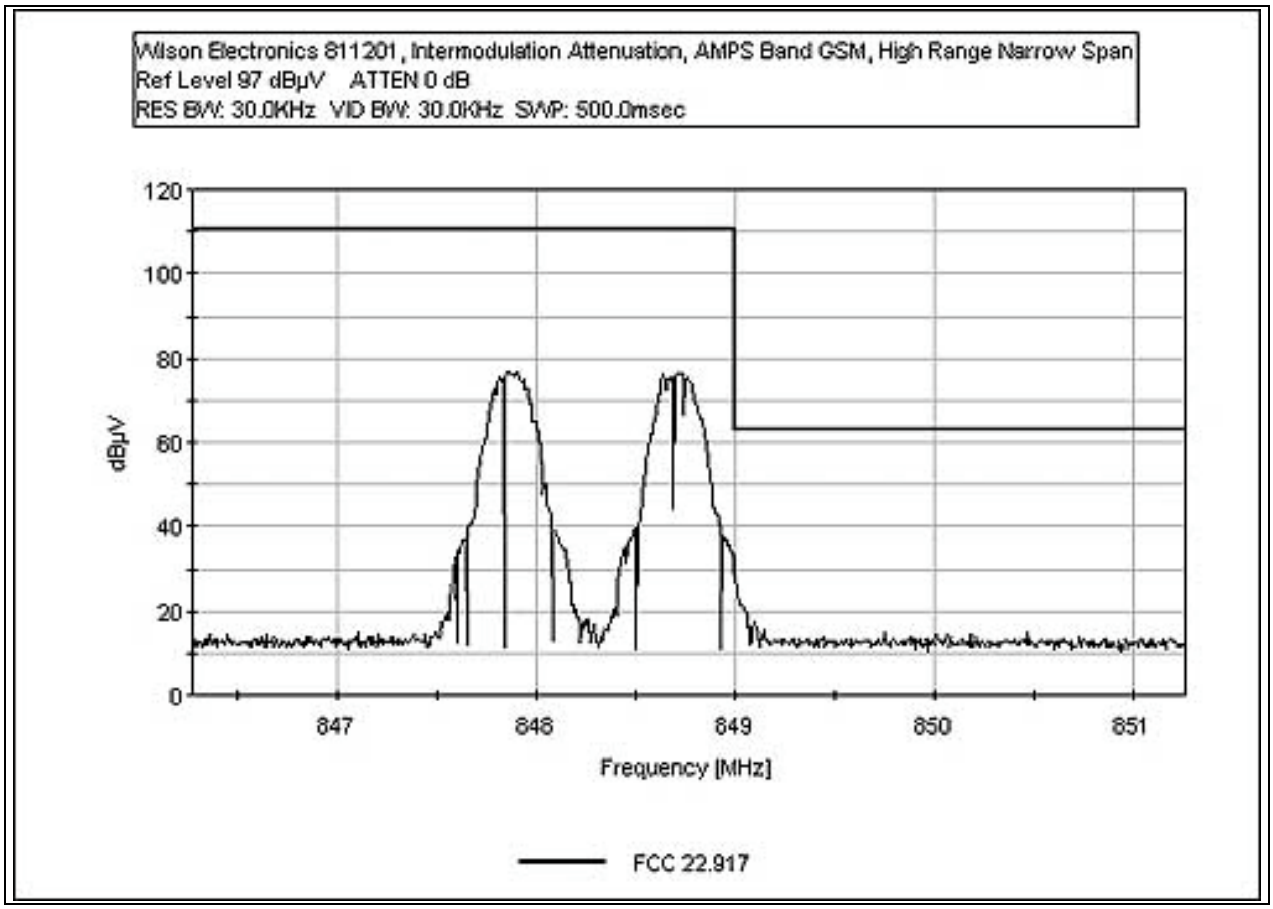
Intermodulation Attenuation Uplink AMPS Band GSM Low Range



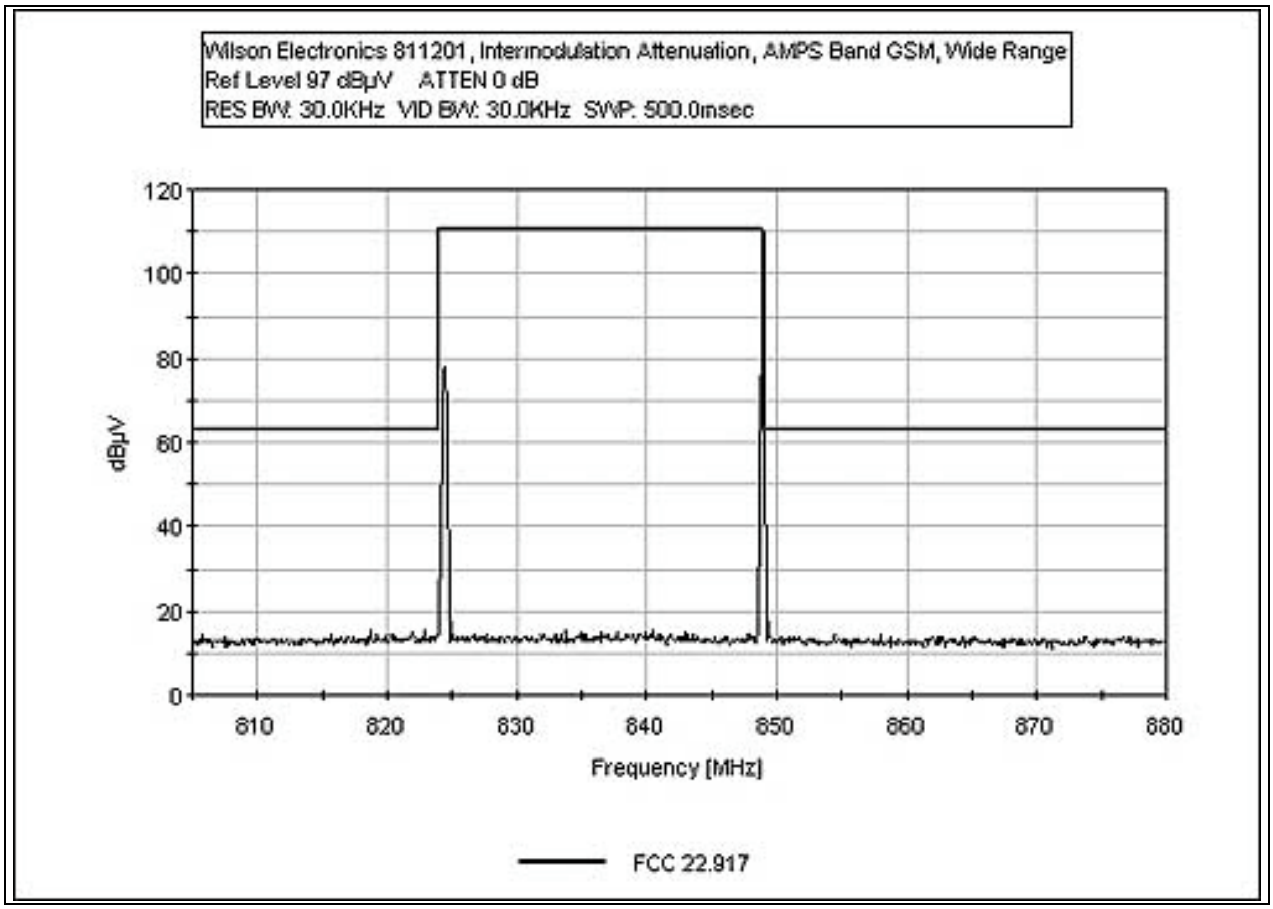
Intermodulation Attenuation Uplink AMPS Band GSM High Range



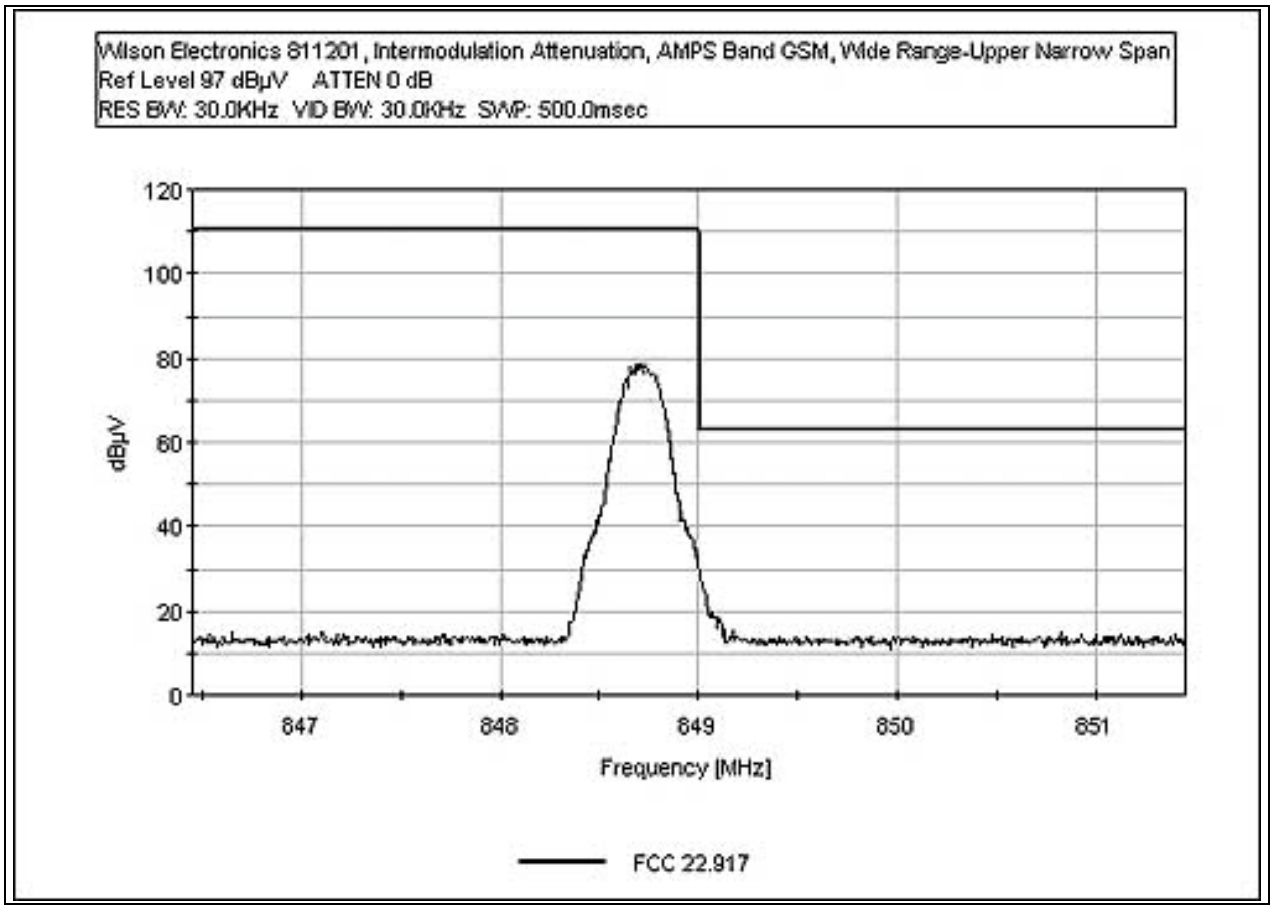
Intermodulation Attenuation Uplink AMPS Band GSM High Range Narrow Span



Intermodulation Attenuation Uplink AMPS Band GSM Wide Range

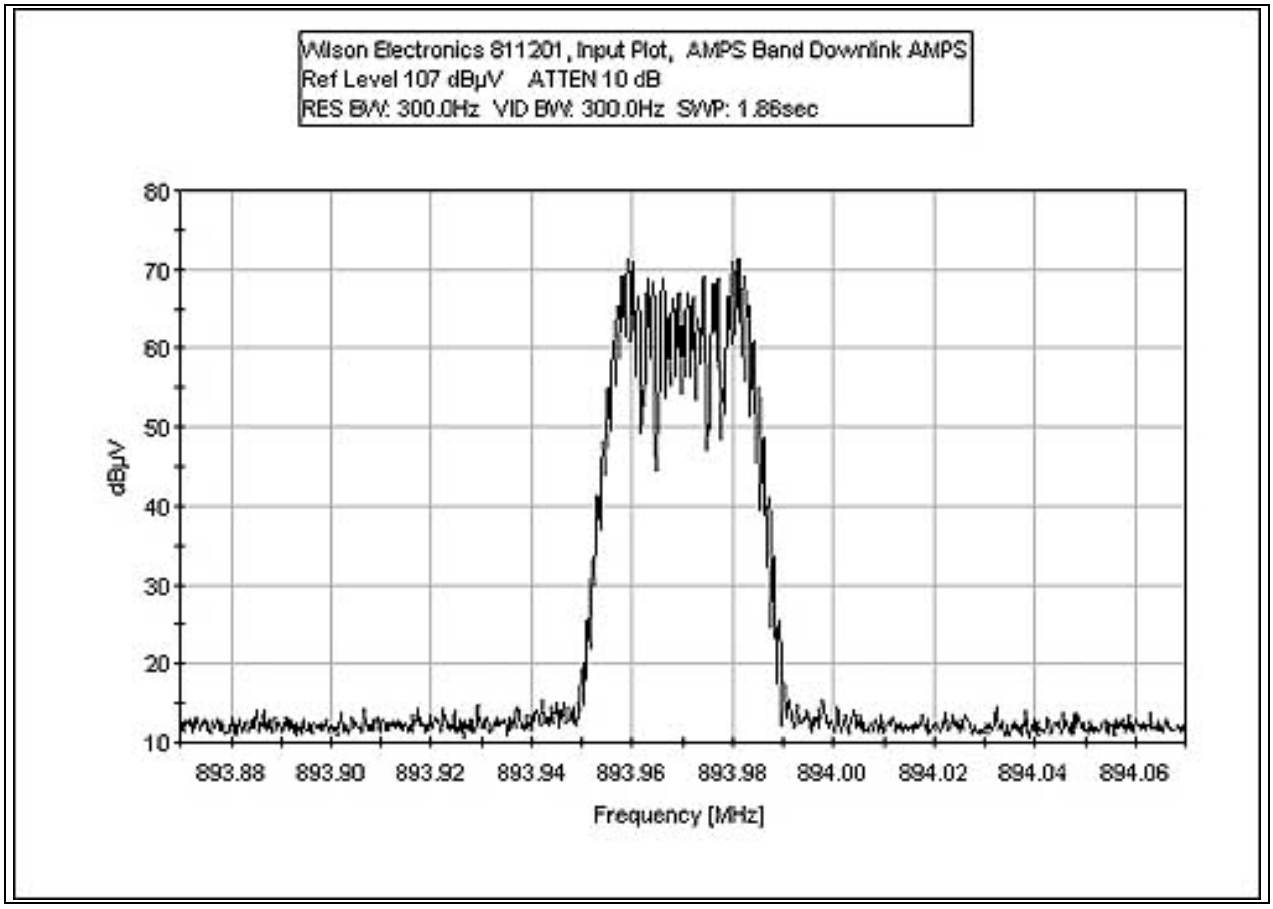


Intermodulation Attenuation Uplink AMPS Band GSM Wide Range Upper Narrow Span

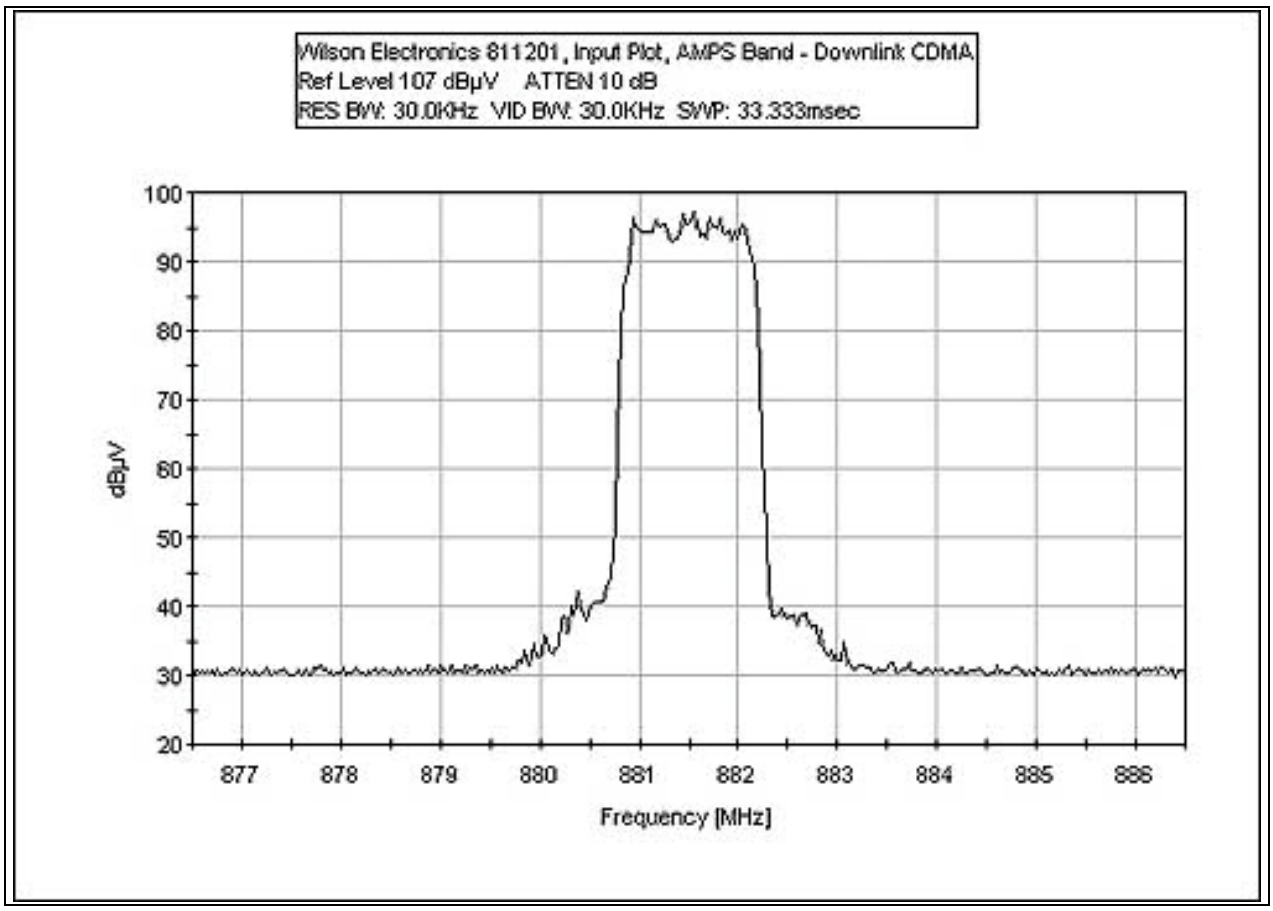


Input Downlink AMPS Band AMPS

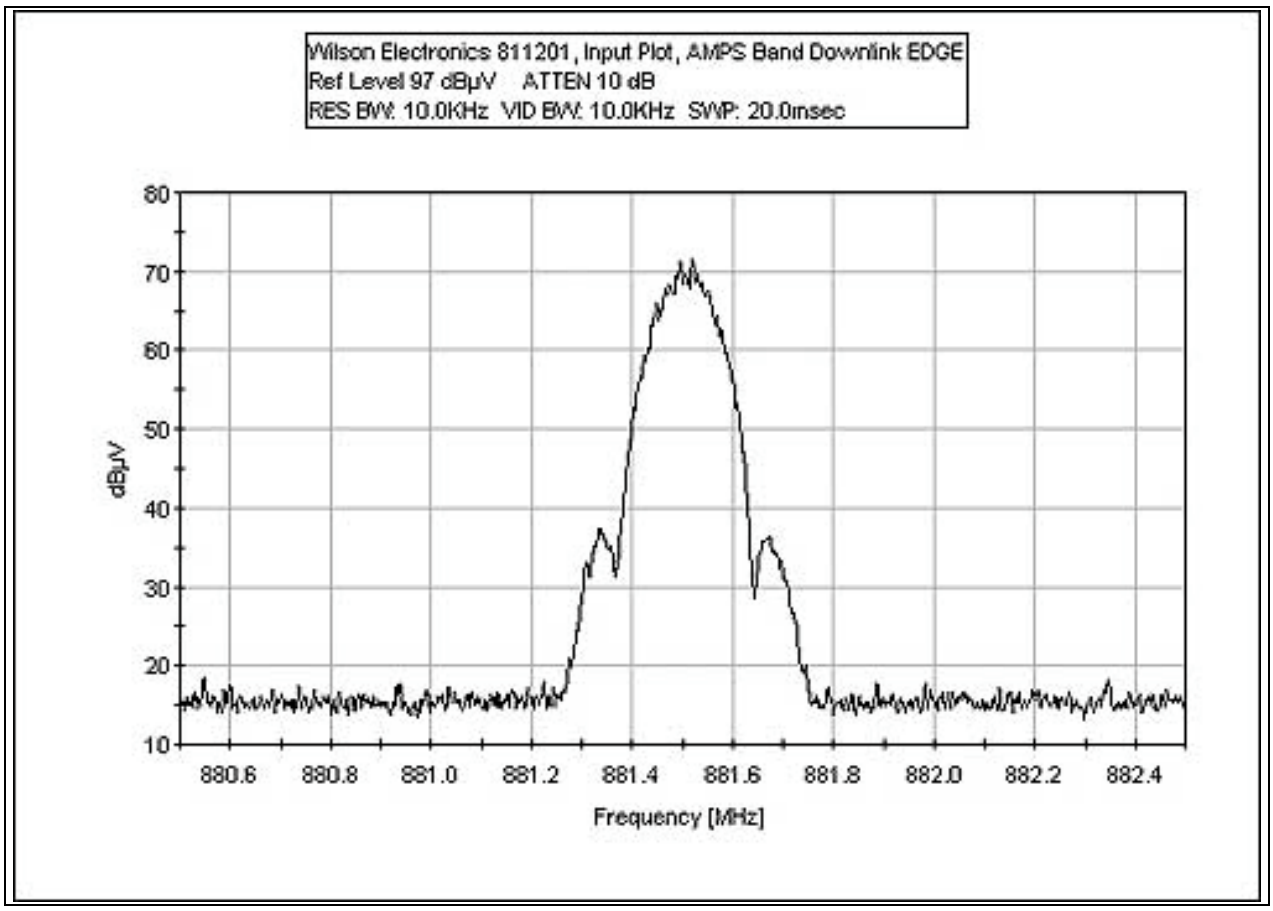
Test Conditions: Only one signal is input to the amplifier. The input from the signal generator is set such that the maximum output is provided at the antenna terminals. The internal ALC of the amplifier limits the maximum power output to a factory set level. Power output is continuously variable and 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. RF power output of the amplifier is routed to a spectrum analyzer through suitable attenuation.



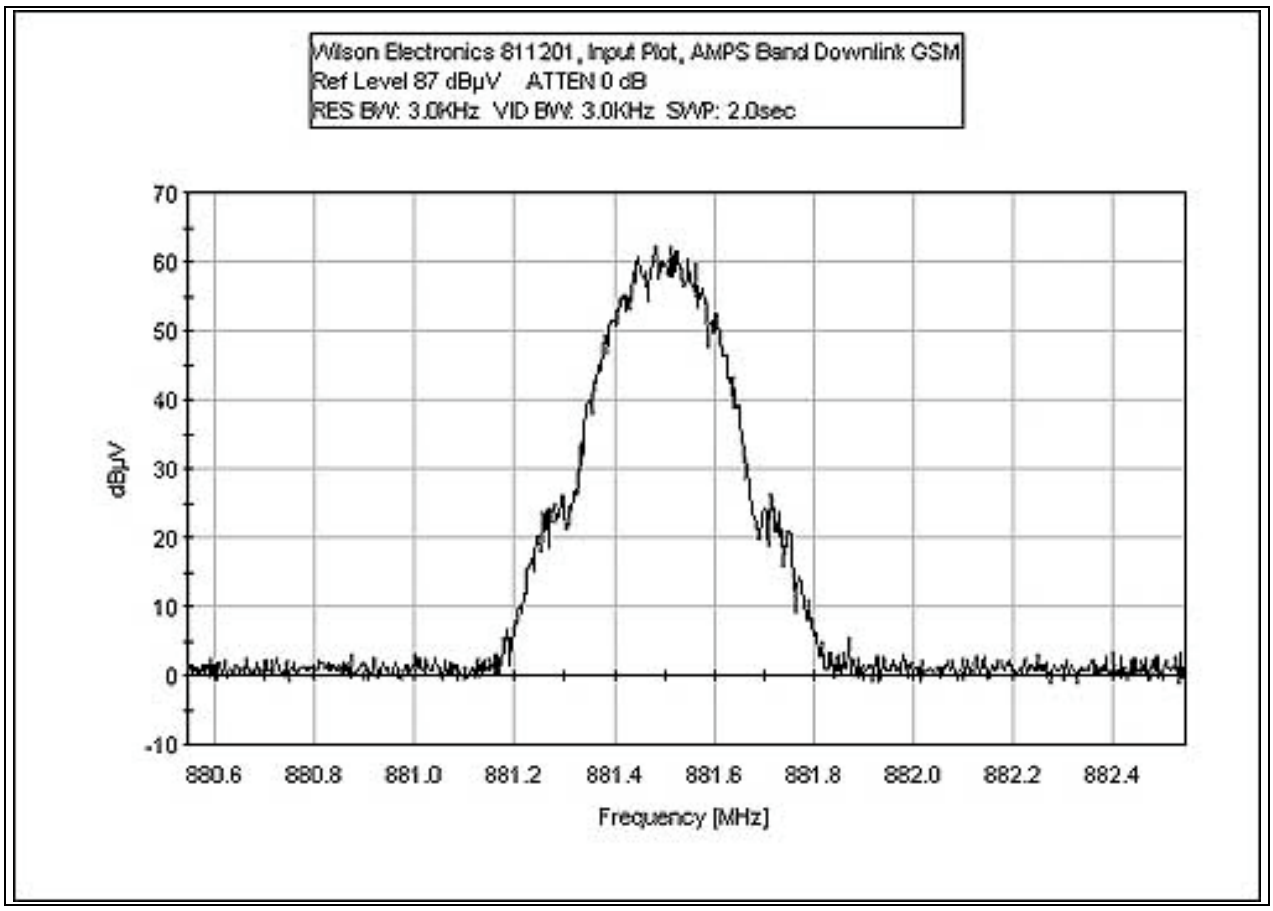
Input Downlink AMPS Band CDMA



Input Downlink AMPS Band EDGE

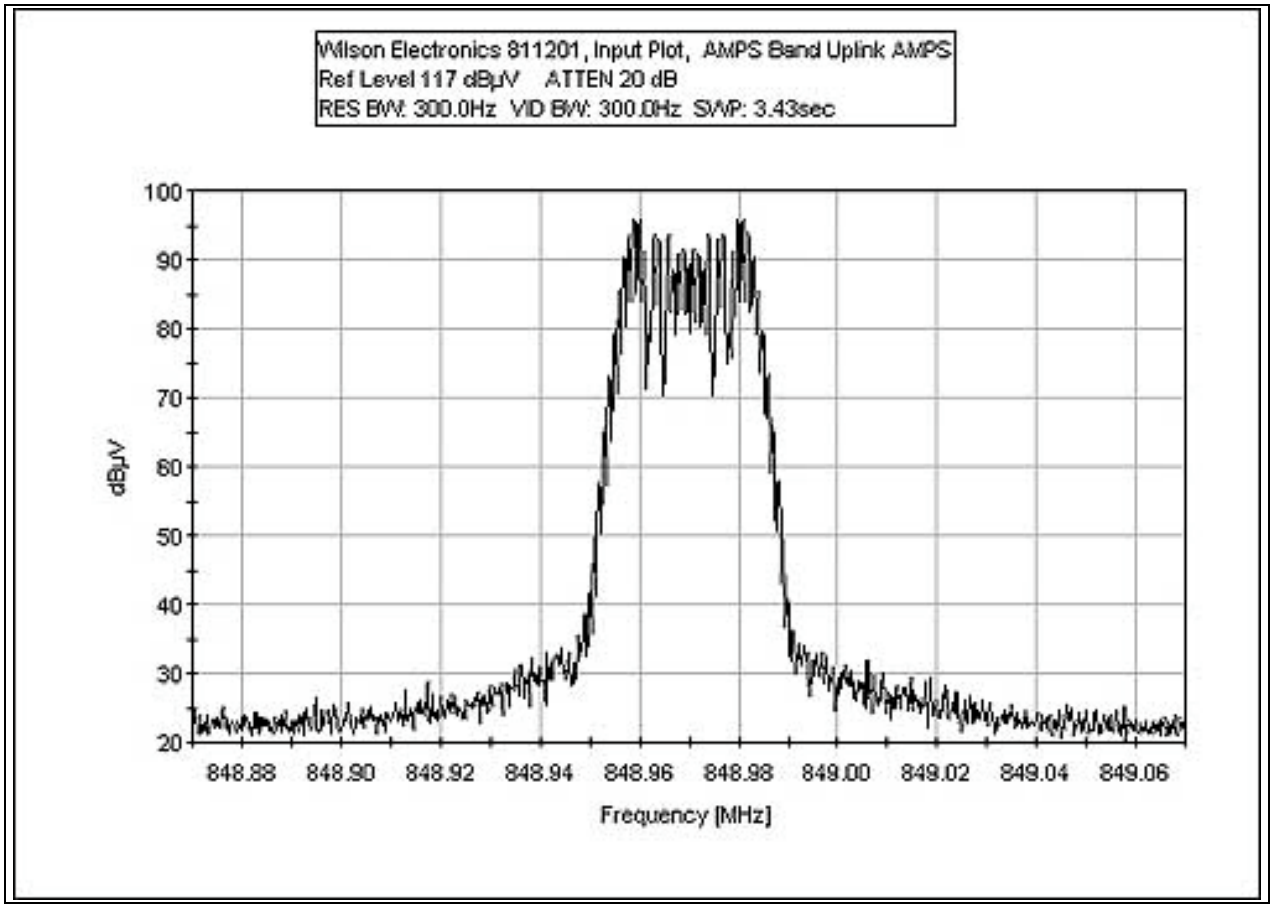


Input Downlink AMPS Band GSM

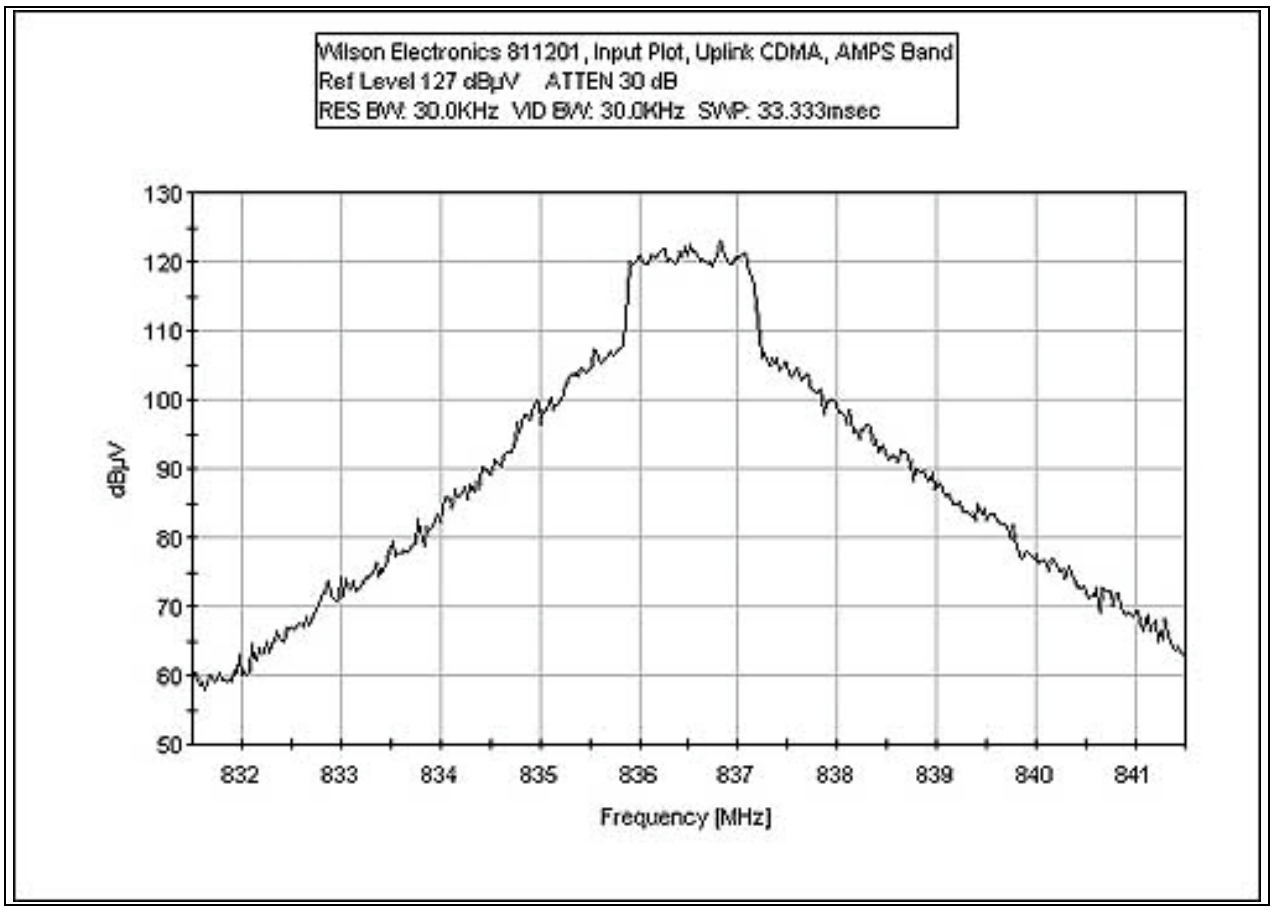


Input Uplink AMPS Band AMPS

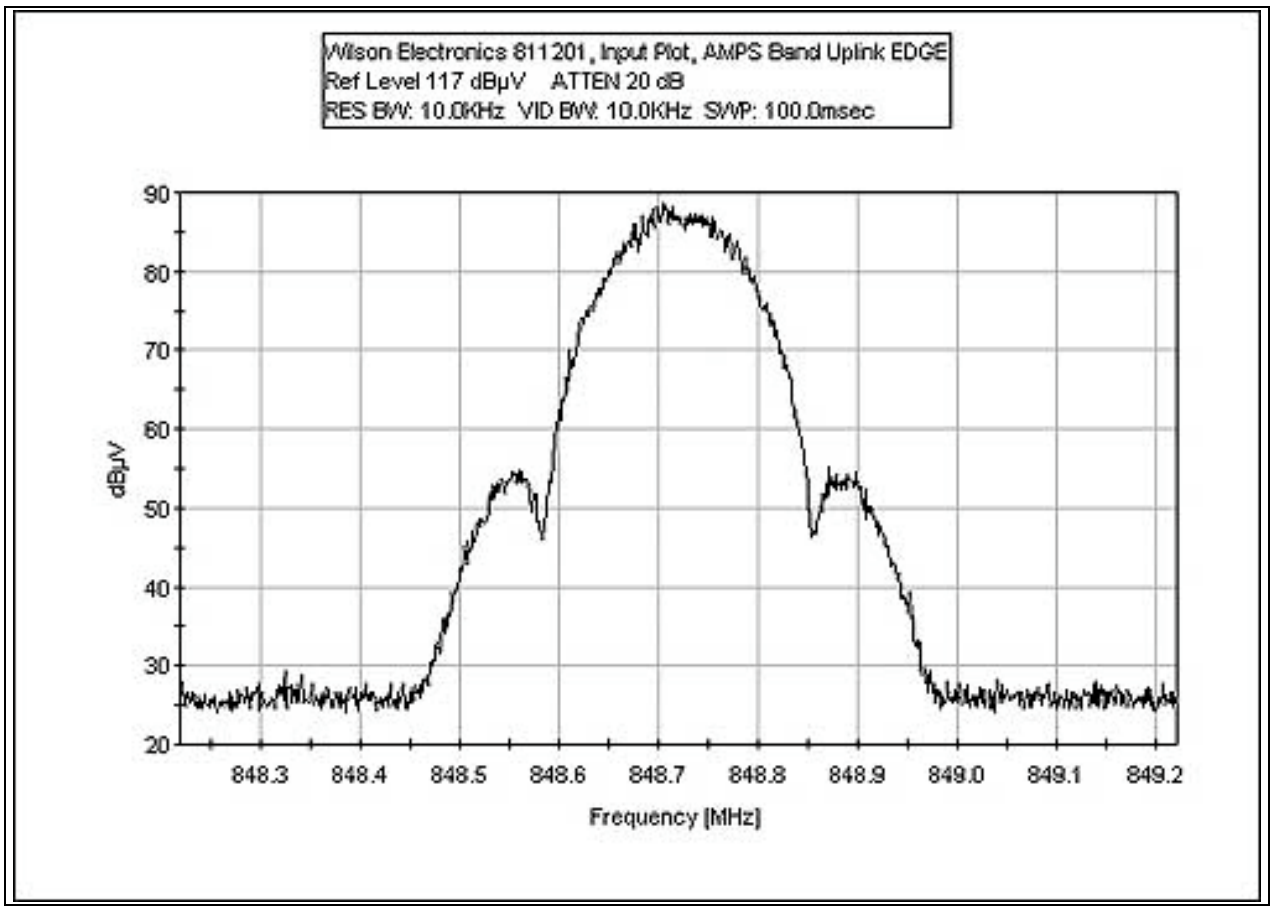
Test Conditions: Only one signal is input to the amplifier. The input from the signal generator is set such that the maximum output is provided at the antenna terminals. The internal ALC of the amplifier limits the maximum power output to a factory set level. Power output is continuously variable and 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. RF power output of the amplifier is routed to a spectrum analyzer through suitable attenuation.



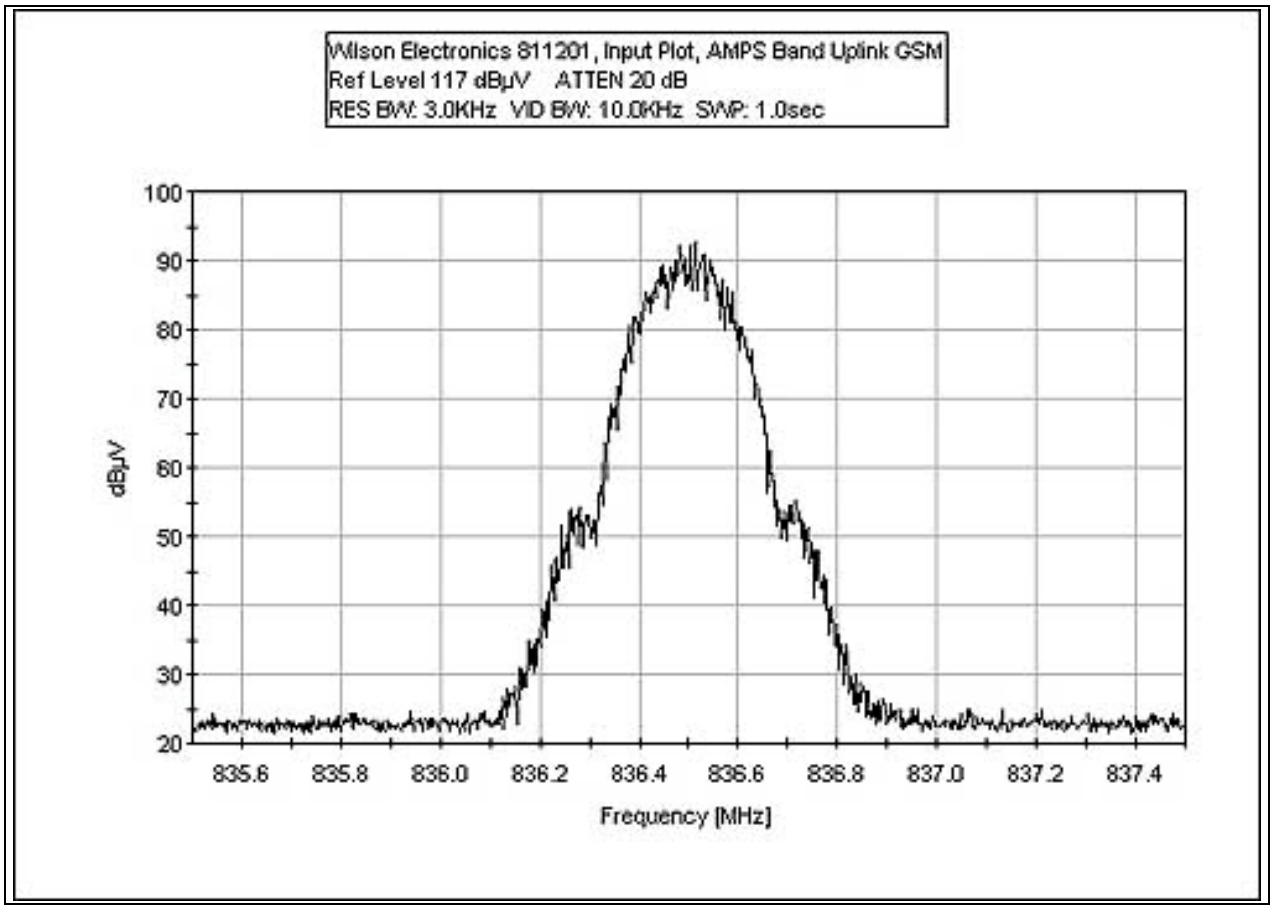
Input Uplink AMPS Band CDMA



Input Uplink AMPS Band EDGE



Input Uplink AMPS Band GSM

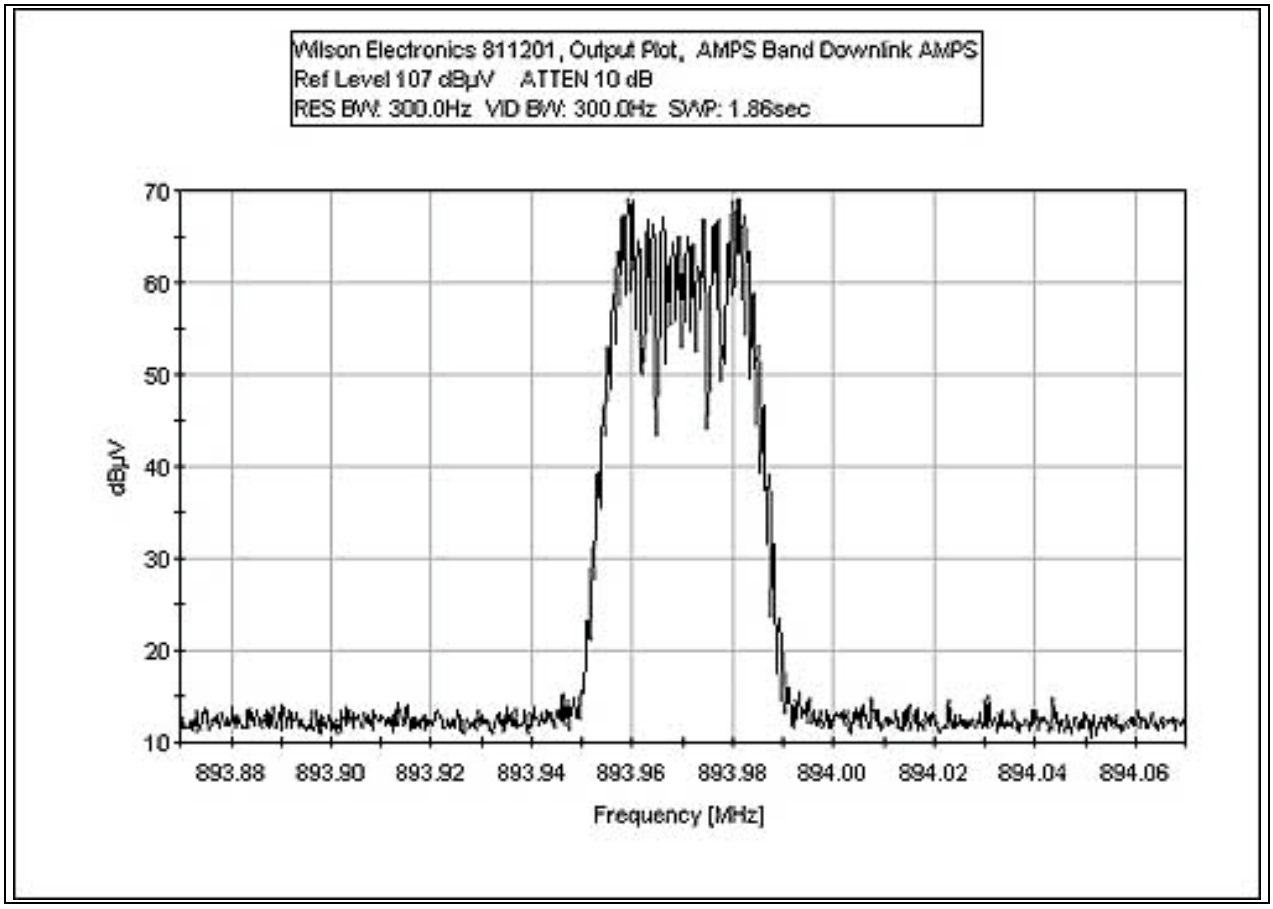


***Test Equipment*:**

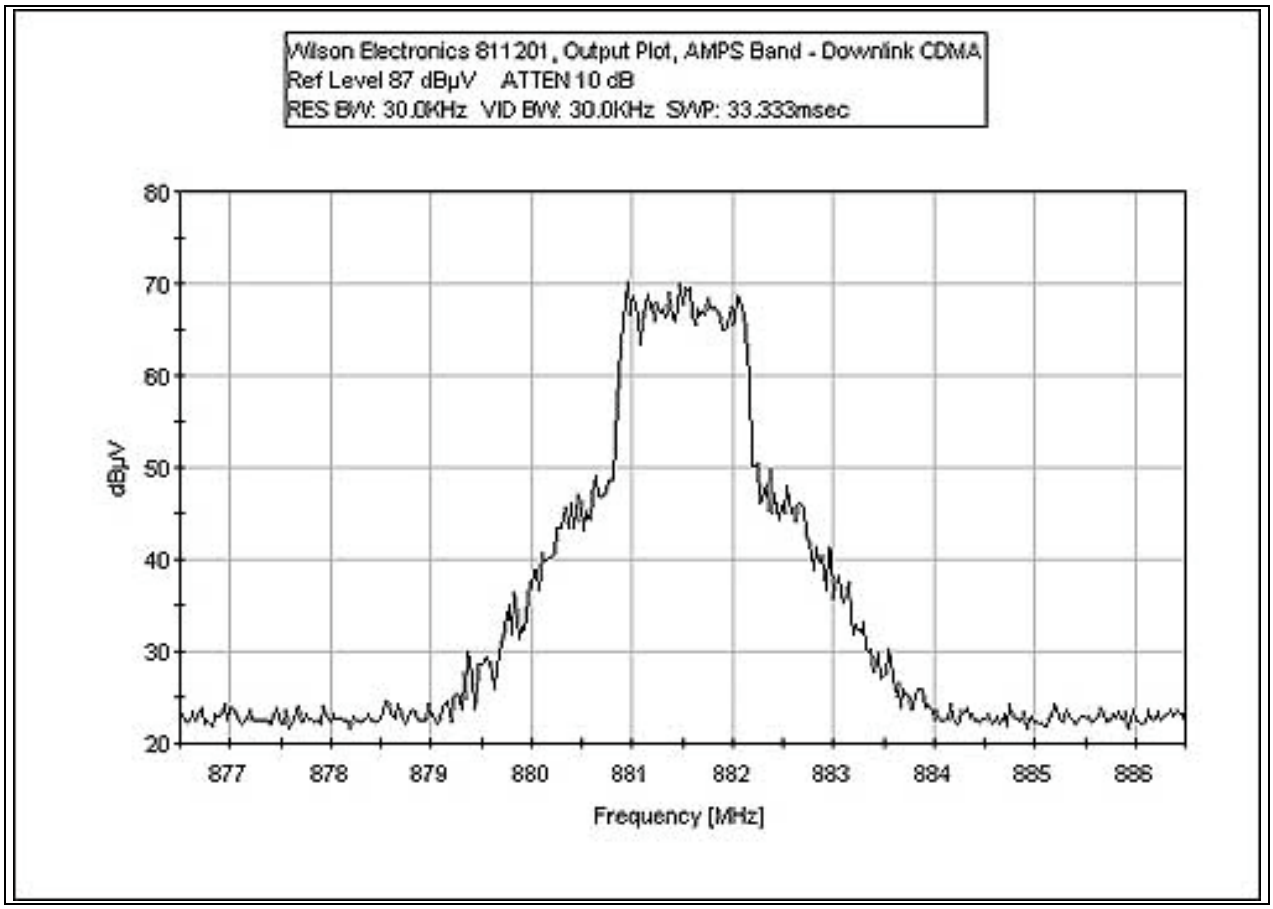
Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

Output Downlink AMPS Band AMPS

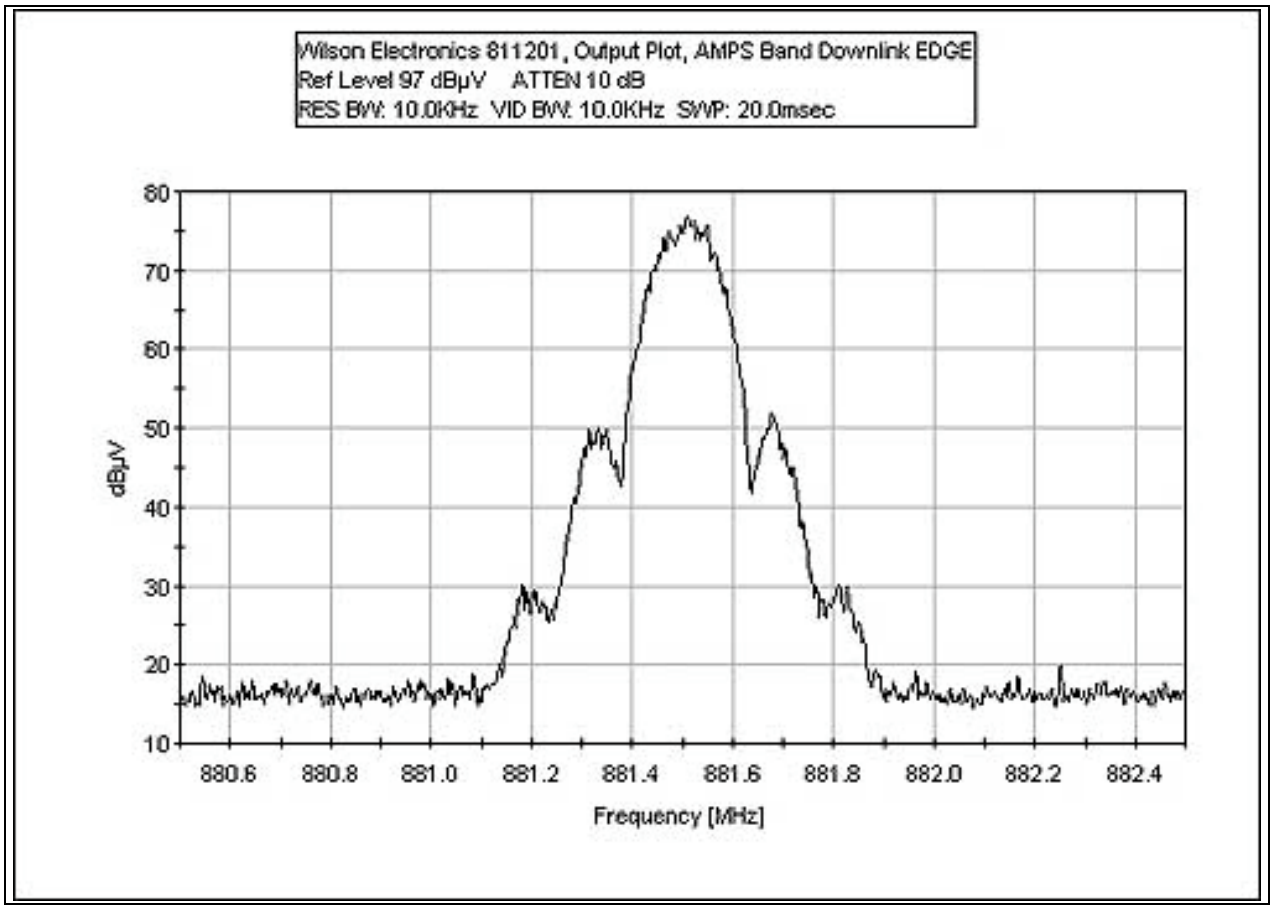
Test Conditions: Only one signal is input to the amplifier. The input from the signal generator is set such that the maximum output is provided at the antenna terminals. The internal ALC of the amplifier limits the maximum power output to a factory set level. Power output is continuously variable and 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. RF power output of the amplifier is routed to a spectrum analyzer through suitable attenuation.



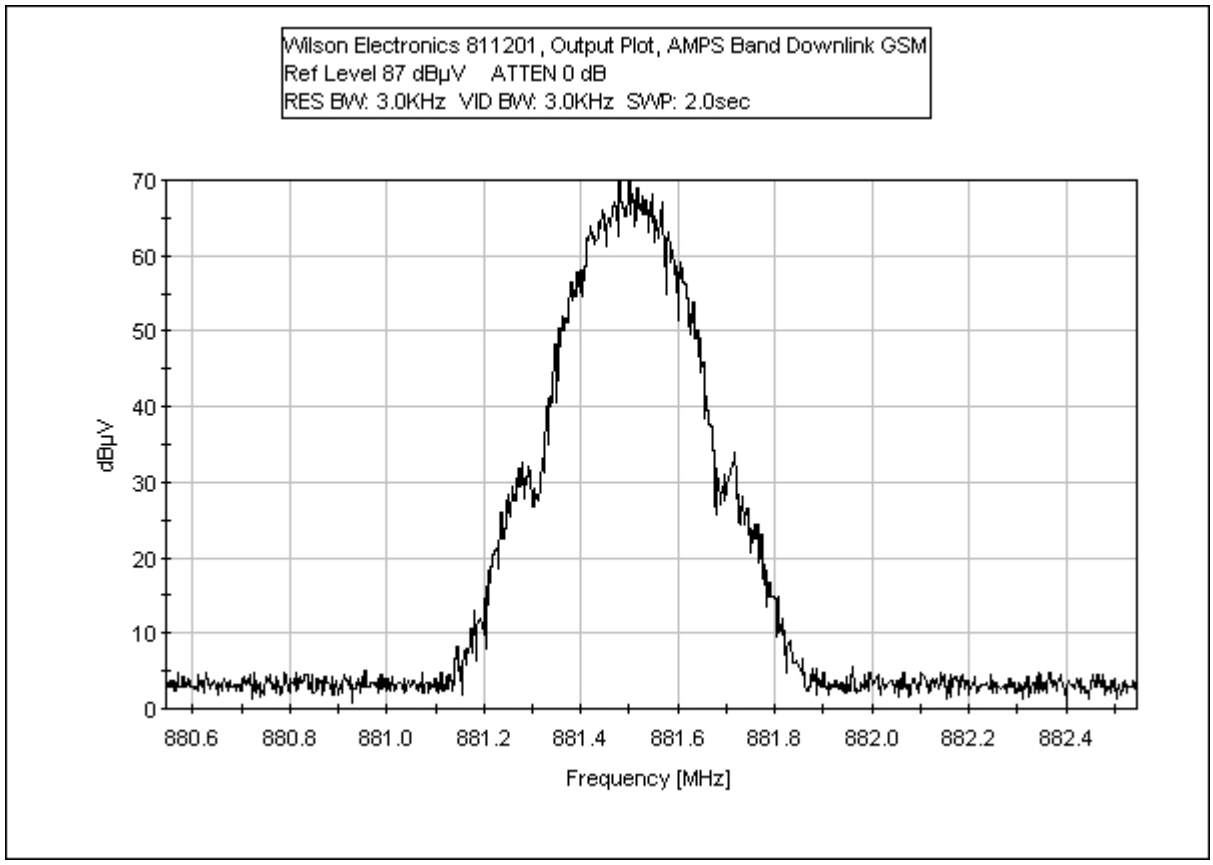
Output Downlink AMPS Band CDMA



Output Downlink AMPS Band EDGE

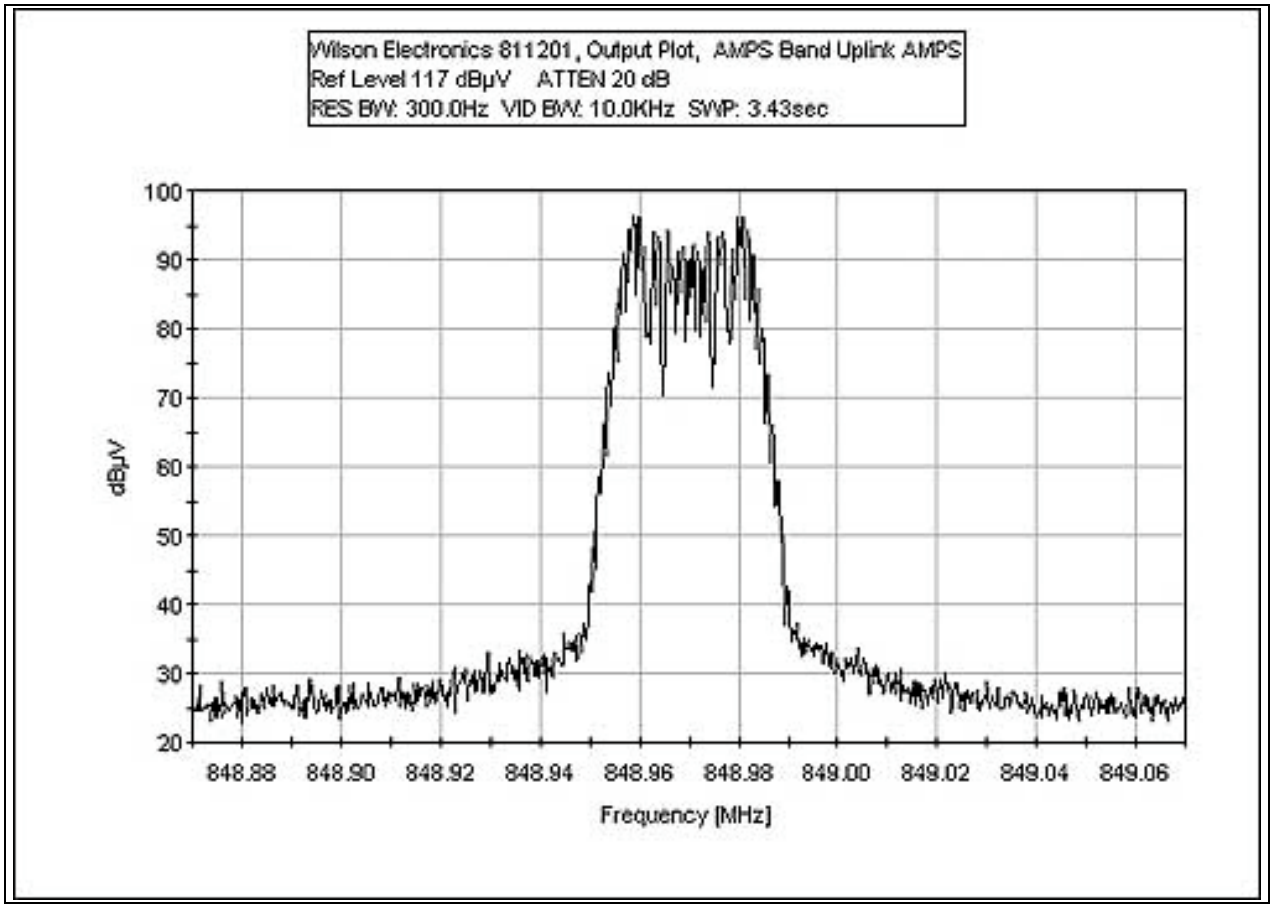


Output Downlink AMPS Band GSM

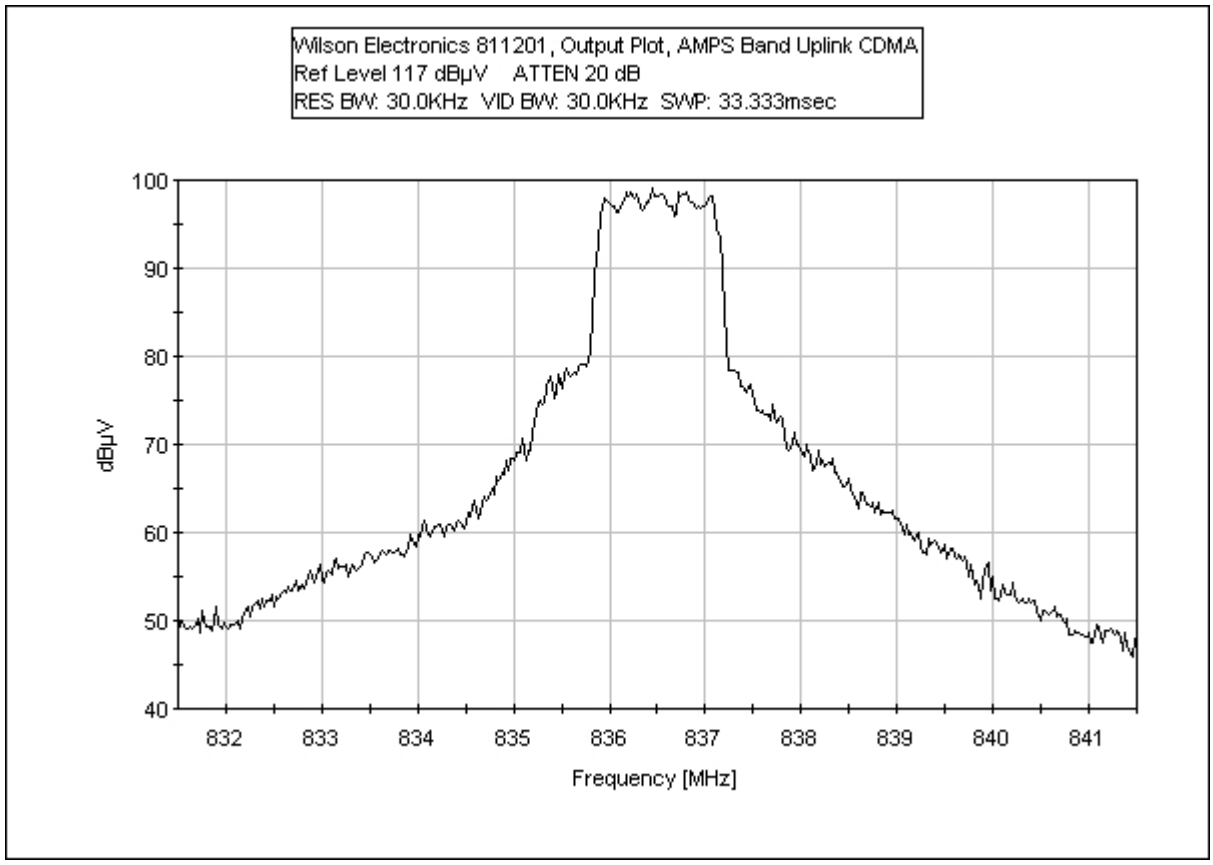


Output Uplink AMPS Band AMPS

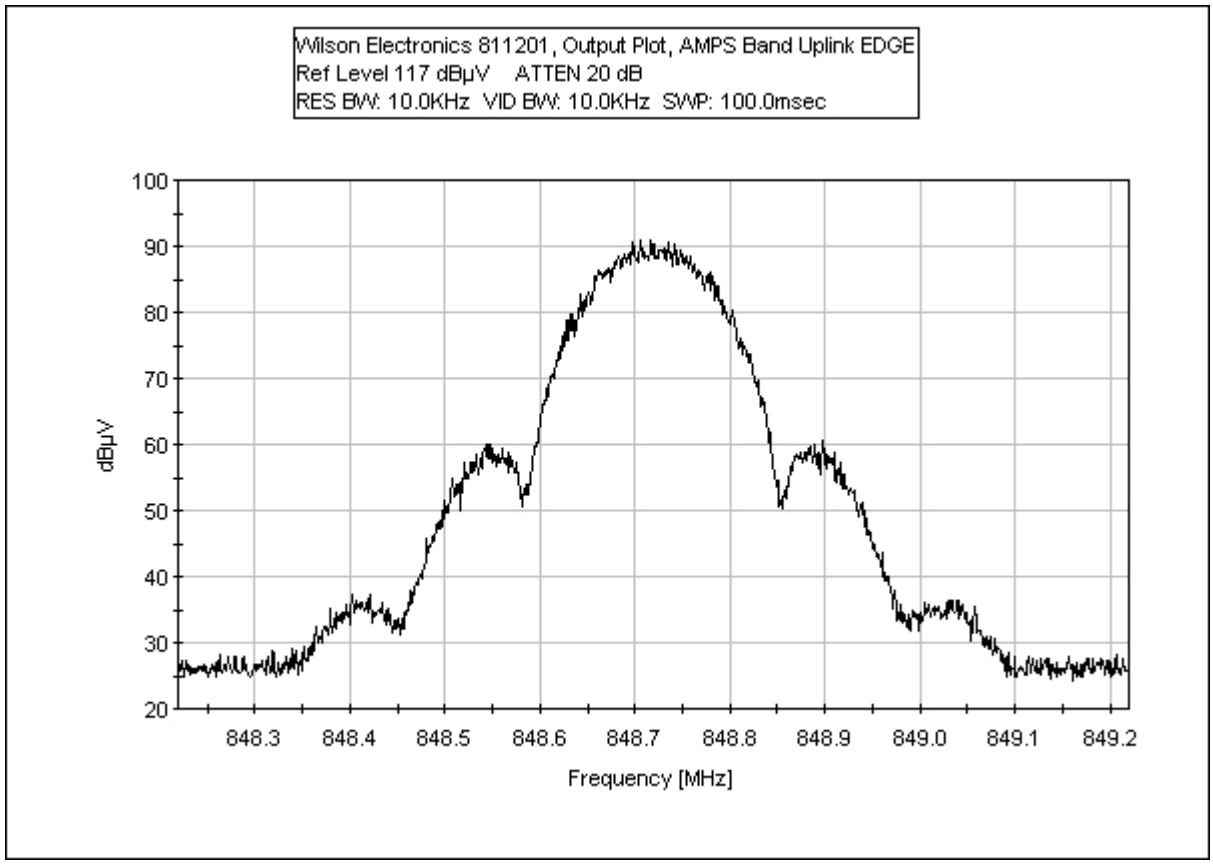
Test Conditions: Only one signal is input to the amplifier. The input from the signal generator is set such that the maximum output is provided at the antenna terminals. The internal ALC of the amplifier limits the maximum power output to a factory set level. Power output is continuously variable and 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. RF power output of the amplifier is routed to a spectrum analyzer through suitable attenuation.



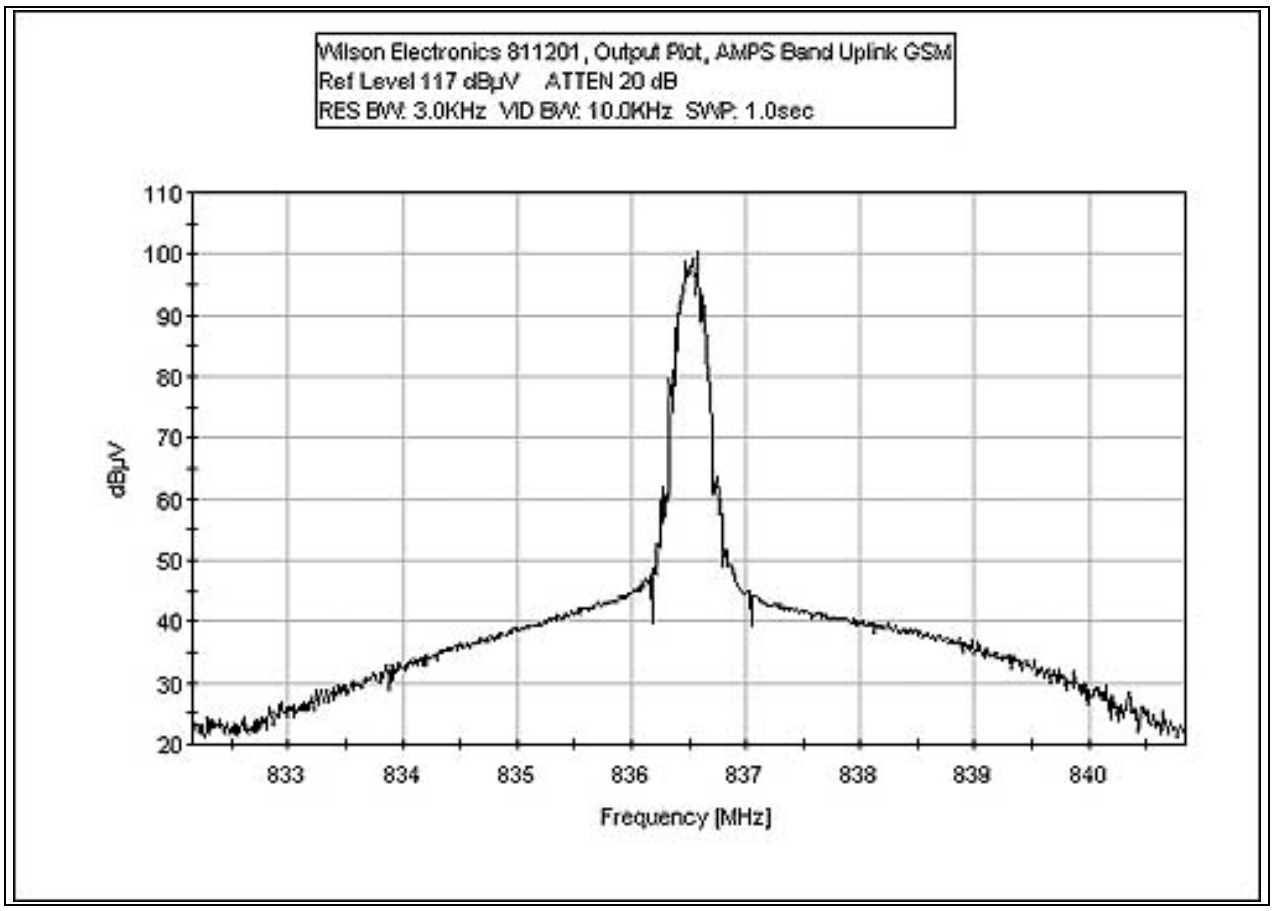
Output Uplink AMPS Band CDMA



Output Uplink AMPS Band EDGE



Output Uplink AMPS Band GSM

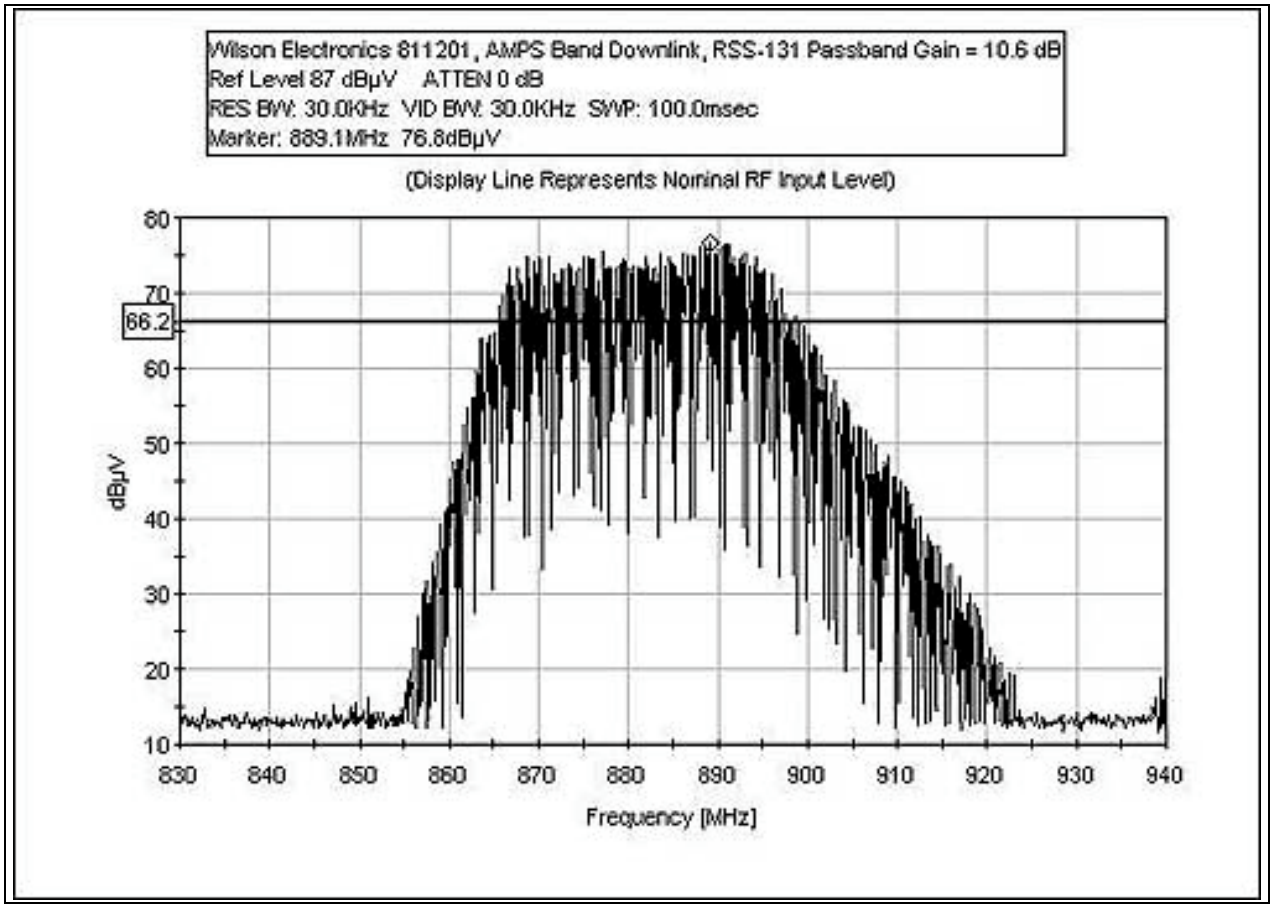


***Test Equipment*:**

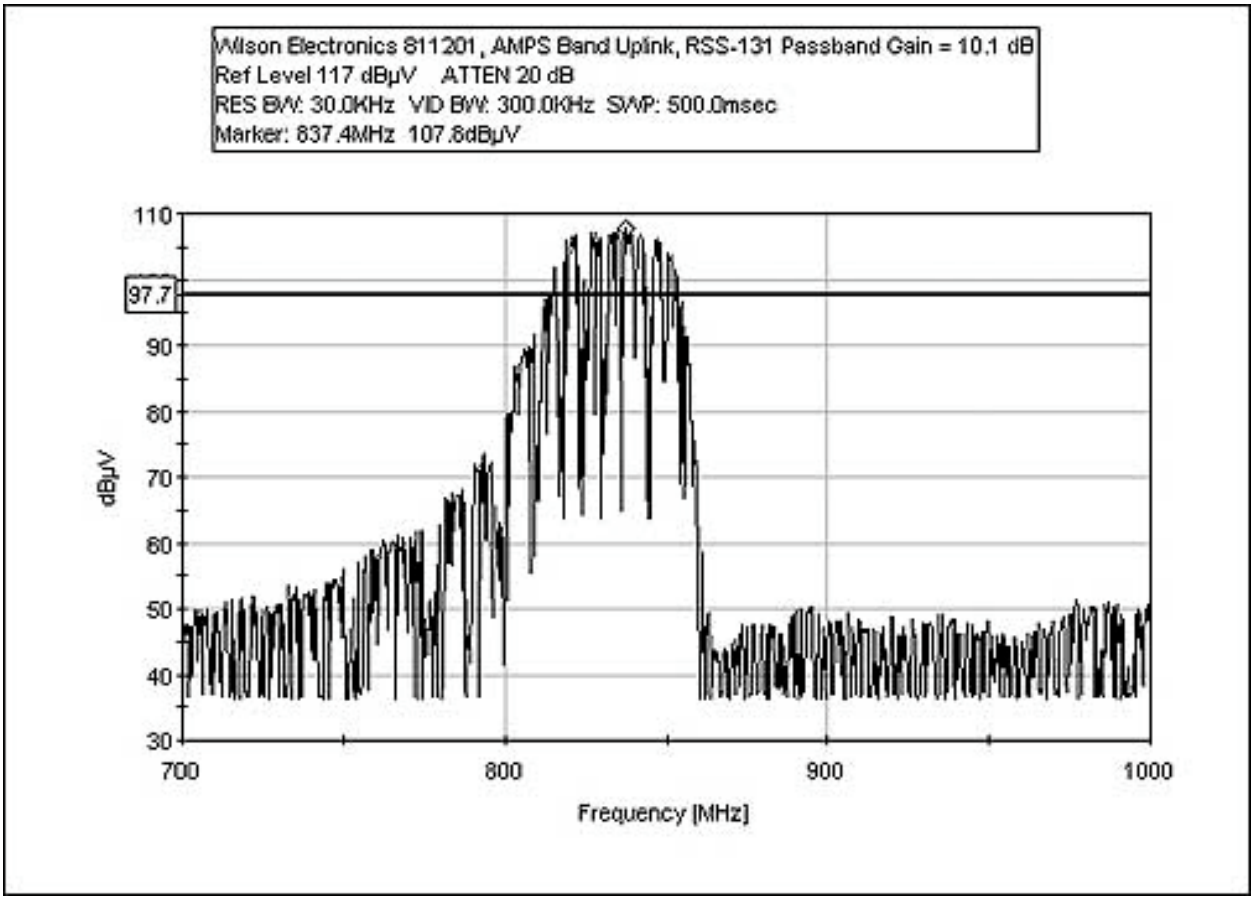
Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

RSS 131 Downlink Passband Gain AMPS Band

Test Conditions: 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. RF power output of the amplifier is routed to a spectrum analyzer through suitable attenuation.



RSS 131 Uplink Passband Gain AMPS Band

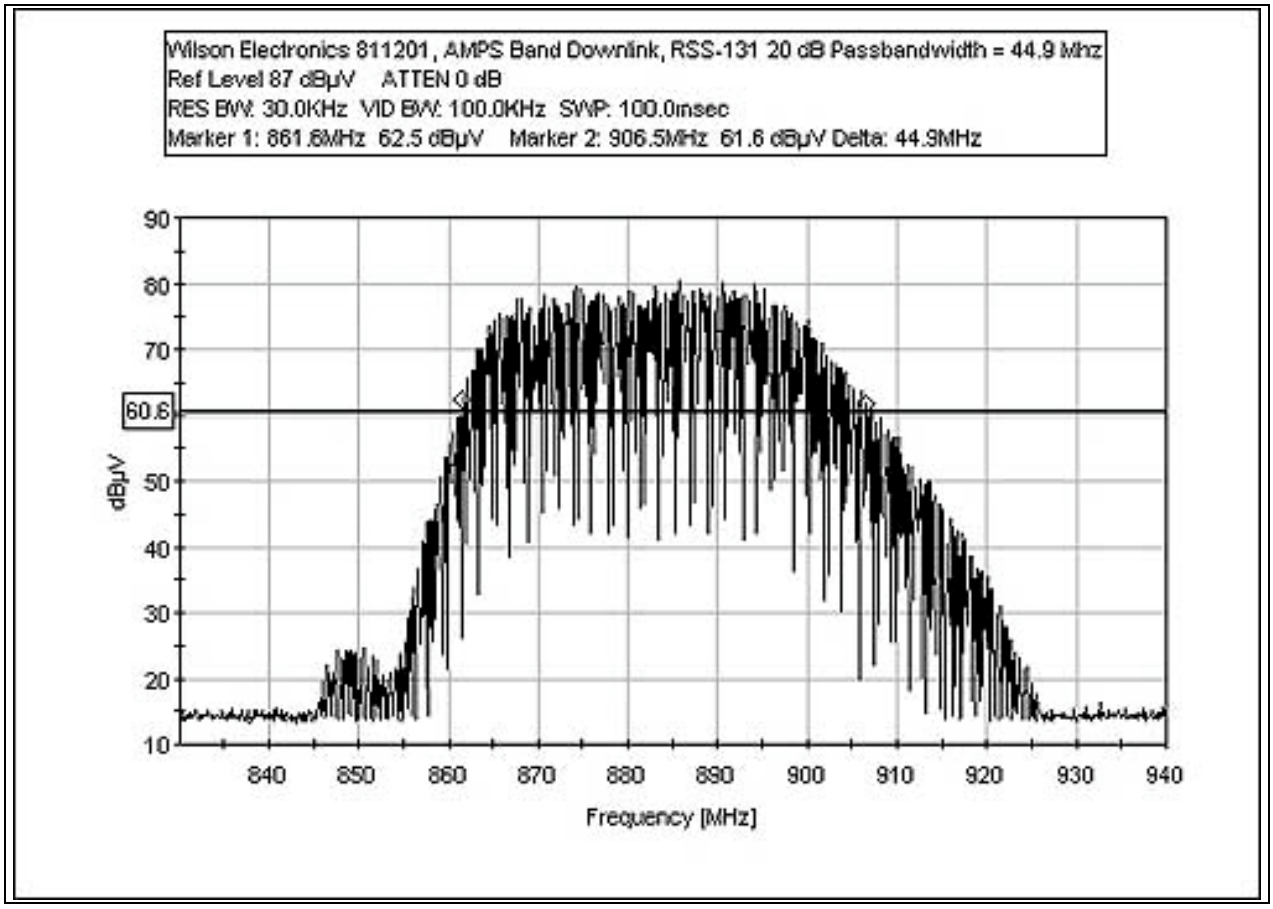


***Test Equipment*:**

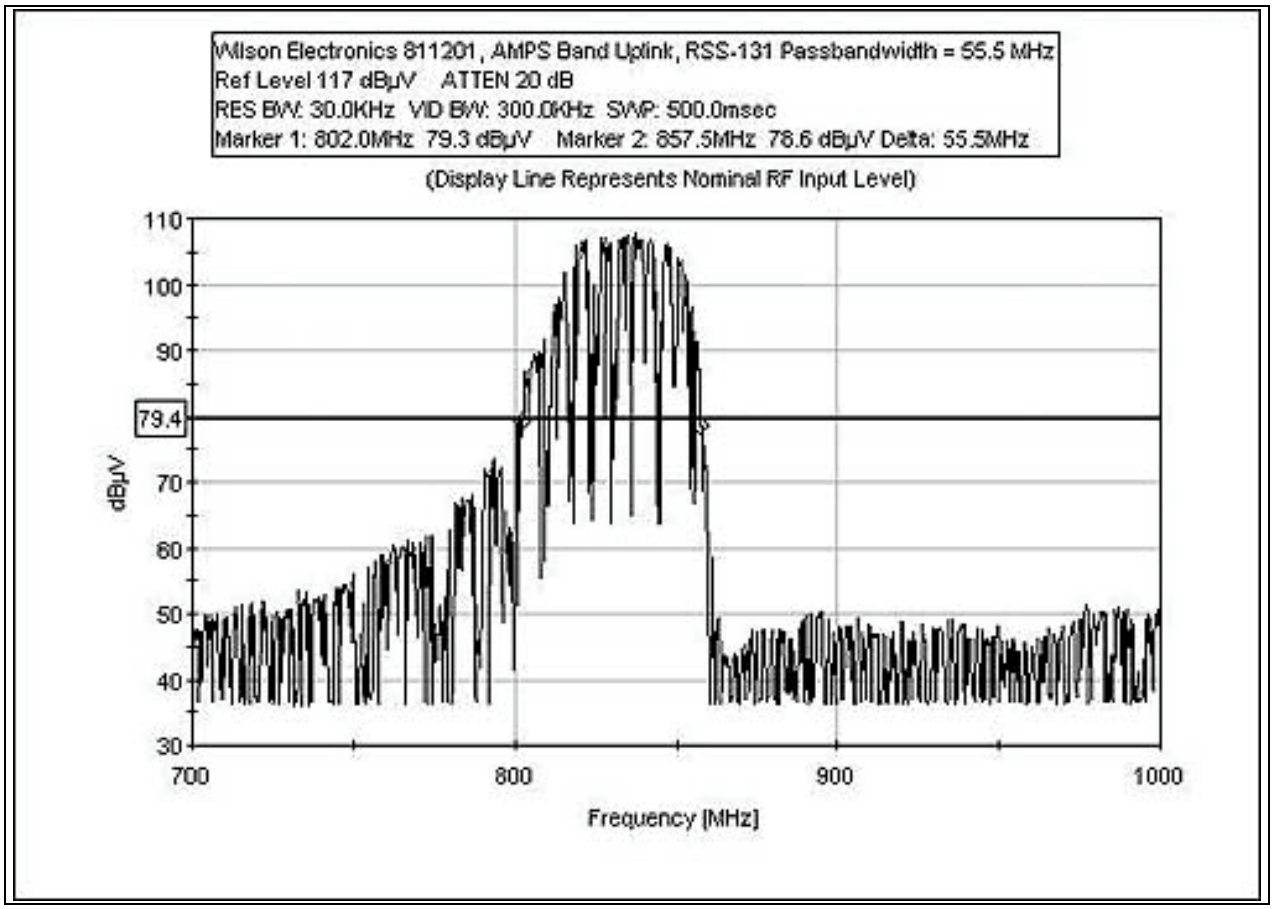
Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577

RSS 131 Downlink 20dB Passbandwidth AMPS Band

Test Conditions: 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. RF power output of the amplifier is routed to a spectrum analyzer through suitable attenuation.



RSS 131 Uplink 20dB Passbandwidth AMPS Band



***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8566B SA	2209A01404	02/26/2003	02/26/2005	00490
HP 8566B SA Display	2403A08241	02/26/2003	02/26/2005	00489
HP 85650A QPA	2811A01267	02/26/2003	02/26/2005	00478
Bird Attenuator, 25A-MFN-30	9724	05/08/2003	05/08/2005	P01577