TESTING
CERT #803.01, 803.02, 803.05, 803.06

WILSON ELECTRONICS TEST REPORT

FOR THE

SIGNAL BOOST IN-BUILDING WIRELESS CELLULAR/PCS AMPLIFIERS 271247-50 & 271247-75

FCC PART 22H AND RSS-131

TESTING

DATE OF ISSUE: NOVEMBER 18, 2008

PREPARED FOR:

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

P.O. No.: 271247-1
W.O. No.: 88636

PREPARED BY:

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

Date of test: October 13 - November 9, 2008

Report No.: FC08-107

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ADMINISTRATIVE INFORMATION

DATE OF TEST: October 13 - November 9, 2008

DATE OF RECEIPT: October 13, 2008

REPRESENTATIVE: Riki Kline

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

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

FREQUENCY RANGE TESTED: 9 kHz-20 GHz

TEST METHOD: FCC Part 22H and RSS-131

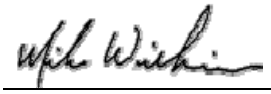
PURPOSE OF TEST: To perform the testing of the Signal Boost In-Building Wireless Cellular/PCS Amplifiers 271247-50 & 271247-75 with the requirements for FCC Part 22H and RSS-131 devices.

APPROVALS

Steve Behm, Director of Engineering Services

QUALITY ASSURANCE:

TEST PERSONNEL:



Mike Wilkinson, Senior EMC Engineer/Lab Manager

SUMMARY OF RESULTS

Test	Specification	Results
RF Power Output	FCC 2.1046/Part 22.913 RSS-131 Section 6.2	Pass
Occupied Bandwidth	FCC 2.1049	Pass
Spurious Emissions at Antenna Terminal	FCC 2.1051/Part 22.917	Pass
Spurious Emissions Field Strength	FCC 2.1053/Part 22.917	Pass
Block Edge	FCC 2.1051	Pass
Input and Output Plots		Pass
Intermodulation Attenuation	FCC 2.1051	Pass
Out of Band Rejection	FCC 2.1051	Pass
Passband Gain and Bandwidth	RSS-131	Pass
Site File No.	FCC 90477 IC3082-A	

CONDITIONS DURING TESTING

No modifications to the EUT were necessary during testing. The customer declares the uplink circuitry is identical in both the 271247-75 and 271247-50 versions of the EUT. Therefore, only one version of the uplink was tested.

EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The customer declares the EUT tested by CKC Laboratories was representative of a production unit. These are wireless, in-building, dual-band bi-directional amplifiers for enhancing the range of cell phones. A 75 ohm F-type connector connects the amplifiers to a 75 ohm coaxial cable feeding an outside antenna. There are two models with the only difference being the impedance of the connection for the inside antenna. The first model (271247-50) provides a 50 ohm TNC connector enabling a 50 ohm coaxial cable to be connected between the amplifier and an inside antenna. The second model (271247-75) provides a 75 ohm F-type connector enabling a 75 ohm coaxial cable to be connected between the amplifier and an inside antenna. Both models allow the direct mounting of an appropriate small antenna on the amplifier itself. The 75 ohm inside antenna connection is achieved by the addition of a passive 50:75 ohm RF transformer. Other than the addition of the transformer and change in connector, the 75 ohm model is identical to the 50 ohm model.

EQUIPMENT UNDER TEST

Signal Boost In-Building Wireless Cellular/PCS Amplifier

Manuf:	Wilson Electronics
Model:	271247-50
Serial:	80124799021181716
FCC ID:	PWO271247ASB
IC:	4726A-271247ASB

Signal Boost In-Building Wireless Cellular/PCS Amplifier

Manuf:	Wilson Electronics
Model:	271247-75
Serial:	8012659901118715
FCC ID:	PWO271247ASB
IC:	4726A-271247ASB

PERIPHERAL DEVICES

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

Signal Generator

Manuf:	Agilent
Model:	E4437B
Serial:	MY41000126

Signal Generator

Manuf:	Agilent
Model:	E4437B
Serial:	US39260577

Power Supply

Manuf:	Wilson
Model:	HK-B18-A06
Serial:	NA

Splitter, 4-Way

Manuf:	Motorola
Model:	NA
Serial:	ANP01314

Step Attenuator

Manuf:	HP
Model:	8494B
Serial:	AN02475

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
GXW, G7W, F9W

FCC 2.1033 (c)(5) FREQUENCY RANGE
824-849 MHz for uplink path and 869-894 MHz for downlink path

FCC 2.1033 (c)(6) OPERATING POWER
2089.3 mW Uplink and 37.15 mW Downlink

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.

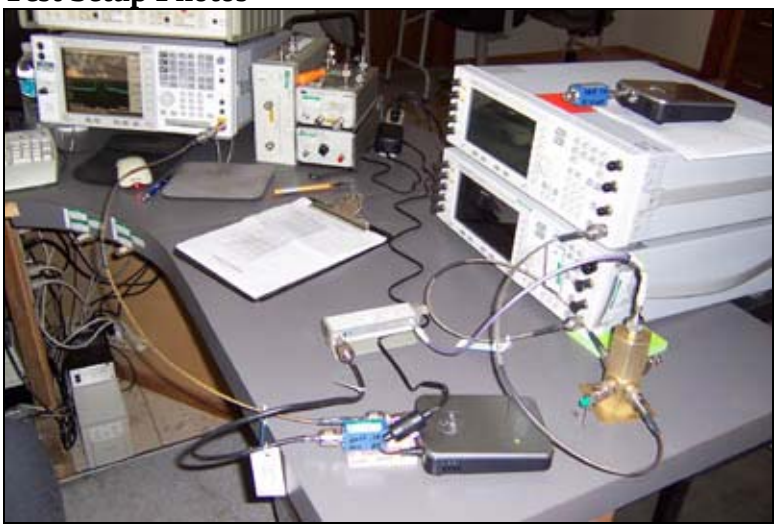
FCC 2.1033(c)(11) LABEL AND PLACEMENT
The necessary information is contained in a separate document.

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

FCC 2.1033 (c)(13) MODULATION INFORMATION
CDMA, EDGE, GSM and WCDMA. The base interface CDMA2000 and WCDMA modulation types tested are intended to additionally demonstrate compliance with EVDO and HSPA extensions. Reference: FCC KDB Publication 935210.

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

Test Setup Photos



Test Data Sheets

Test Location: CKC Laboratories, Inc. •5046 Sierra Pines Dr. • Mariposa, CA 95338 • 209 966-5240

Customer:	**Wilson Electronics**		
Specification:	**FCC 22.913**		
Work Order #:	**88636**	Date:	11/3/2008
Test Type:	**Maximized Emissions**	Time:	15:18:04
Equipment:	**Signal Boost In-Builging Wireless Cellular/PCS Amplifier**	Sequence#:	1
Manufacturer:	Wilsion Electronics	Tested By:	Mike Wilkinson
Model:	271247-50 &271247-75		
S/N:	80124799021181716 & 8012659901118715		

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	08/07/2008	08/07/2010	02660
Wilson 50-75 Ohm Adapter	None	10/14/2008	10/14/2010	C00013
Cable 3' 40 GHz Astrolab	NA	01/15/2008	01/15/2010	AN03012
HP 8491A 10dB Attenuator	2708A47453	11/30/2006	11/30/2008	P01350
10 dB 10W Attenuator	None	11/30/2006	11/30/2008	P02229

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

Function	Manufacturer	Model #	S/N
Signal Boost In-Builging Wireless Cellular/PCS Amplifier*	Wilson Electronics	271247-50	80124799021181716

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	Agilent	E4437B	MY41000126
Signal Generator	Agilent	E4437B	US39260577
Power Supply	Wilson	HK-B18-A06	None
Step Attenuator	HP	8494B	AN02475
Splitter, 4-Way	Motorola	None	ANP01314

Test Conditions / Notes:

This is an in-building, dual-band bi-directional amplifier for enhancing the range of cell phones in-building environments. EUT operating frequency ranges are 824-849 MHz and 1850-1910 MHz for uplink path and 869-894 MHz and 1930-1990 MHz for downlink path. EUT is connected directly to a spectrum analyzer via suitable attenuation. Reported power levels indicate the maximum compliant power output measured at an input level just below that which will cause the EUT to fail harmonic, intermodulation or band edge limits, which ever results in the lowest power output for each modulation and channel setting. Frequency Range Investigated: Carrier. Temperature: 22.3ºC, Relative Humidity: 35%. GSM/EDGE RBW = 1MHz CDMA RBW = 3 MHz WCDMA RBW = 10 MHz VBW = 3 x RBW. Reported power levels are not corrected to ERP

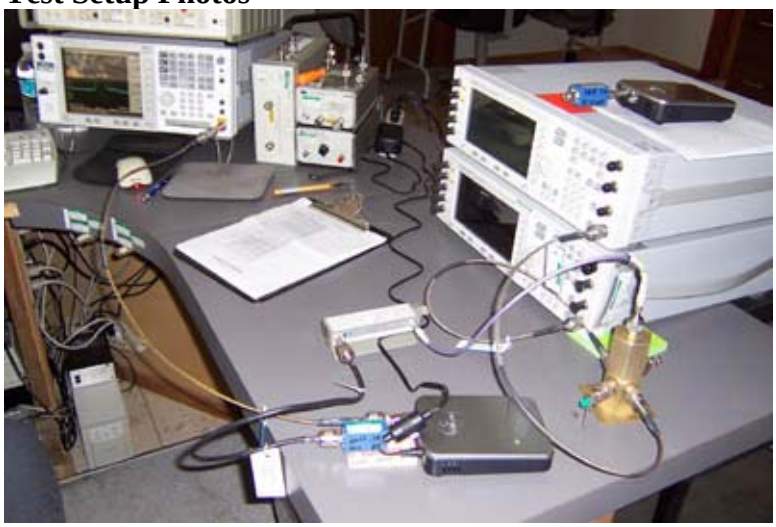
Uplink -50	**Part**	**Frequency**	**dBm**	**mW**
GSM Low	22	824.85	14.6	28.8
GSM Mid	22	836.50	31.6	1445.4
GSM High	22	848.17	12.4	17.3
EDGE Low	22	824.82	14.8	30.19
EDGE Mid	22	836.50	26.9	489.77
EDGE High	22	848.73	16.1	40.73
CDMA Low	22	825.27	24.4	275.42
CDMA Mid	22	836.50	29.9	977.24
CDMA High	22	845.27	24.8	302
WCDMA Low	22	838.50	24.2	263
WCDMA Mid	22	836.50	33.2	2089.3
WCDMA High	22	840.17	25.6	363

Downlink -50	**Part**	**Frequency**	**dBm**	**mW**
GSM Low	22	869..28	6.7	4.67
GSM Mid	22	881.50	11.5	14.12
GSM High	22	893.72	6.1	4.07
EDGE Low	22	869..28	6.8	4.78
EDGE Mid	22	881.50	12.6	18.19
EDGE High	22	893.72	6.1	4.07
CDMA Low	22	870.25	11.6	14.45
CDMA Mid	22	881.50	11.9	15.48
CDMA High	22	892.75	11.8	15.13
WCDMA Low	22	873.50	13.8	24
WCDMA Mid	22	881.50	15.7	37.15
WCDMA High	22	889.50	13.2	20.9

Downlink -75	Part	Frequency	dBm	mW
GSM Mid	22	881.50	12.1	16.21
EDGE Mid	22	881.50	12.3	16.98
CDMA Mid	22	881.50	12.5	17.78
WCDMA Mid	22	881.50	12.7	18.62

RSS-131 SECTION 6.2 - RF POWER OUTPUT

Test Setup Photos



Test Data

Test Location: CKC Laboratories, Inc. •5046 Sierra Pines Dr. • Mariposa, CA 95338 • 209 966-5240

Customer:	**Wilson Electronics**		
Specification:	**RSS 131**		
Work Order #:	**88636**	Date:	11/3/2008
Test Type:	**Maximized Emissions**	Time:	15:18:04
Equipment:	**Signal Boost In-Building Wireless Cellular/PCS Amplifier**	Sequence#:	1
Manufacturer:	Wilson Electronics	Tested By:	Mike Wilkinson
Model:	271247-50 &271247-75		
S/N:	80124799021181716 & 8012659901118715		

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	08/07/2008	08/07/2010	02660
Wilson 50-75 Ohm Adapter	None	10/14/2008	10/14/2010	C00013
Cable 3' 40 GHz Astrolab	NA	01/15/2008	01/15/2010	AN03012
HP 8491A 10dB Attenuator	2708A47453	11/30/2006	11/30/2008	P01350
10 dB 10W Attenuator	None	11/30/2006	11/30/2008	P02229

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

Function	Manufacturer	Model #	S/N
Signal Boost In-Building Wireless Cellular/PCS Amplifier*	Wilson Electronics	271247-50	80124799021181716

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	Agilent	E4437B	MY41000126
Signal Generator	Agilent	E4437B	US39260577
Power Supply	Wilson	HK-B18-A06	None
Step Attenuator	HP	8494B	AN02475
Splitter, 4-Way	Motorola	None	ANP01314

Test Conditions / Notes:

This is an in-building, dual-band bi-directional amplifier for enhancing the range of cell phones in-building environments. EUT operating frequency ranges are 824-849 MHz and 1850-1910 MHz for uplink path and 869-894 MHz and 1930-1990 MHz for downlink path. EUT is connected directly to a spectrum analyzer via suitable attenuation. Frequency Range Investigated: Carrier. Temperature: 22.3ºC, Relative Humidity: 35%. Input signals are CW for Multi-Carrier Operation in accordance with RSS 131. Fundamental output power was measured at the point which the intermodulation product reached -13dBm. RBW=100 kHz.

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Band	**Frequency (MHz)**	**Power (dBm)**	**Po+3dB (dBm)**	**Pmean (mW)**
Downlink 800 MHz	868.997	4.92	7.92	6.19
Downlink 800 MHz	869.497	4.97	7.97	6.26
Downlink 800 MHz	881.000	4.27	7.27	5.33
Downlink 800 MHz	881.490	4.33	7.33	5.40
Downlink 800 MHz	891.995	5.29	7.29	5.36
Downlink 800 MHz	892.500	5.29	7.29	5.36

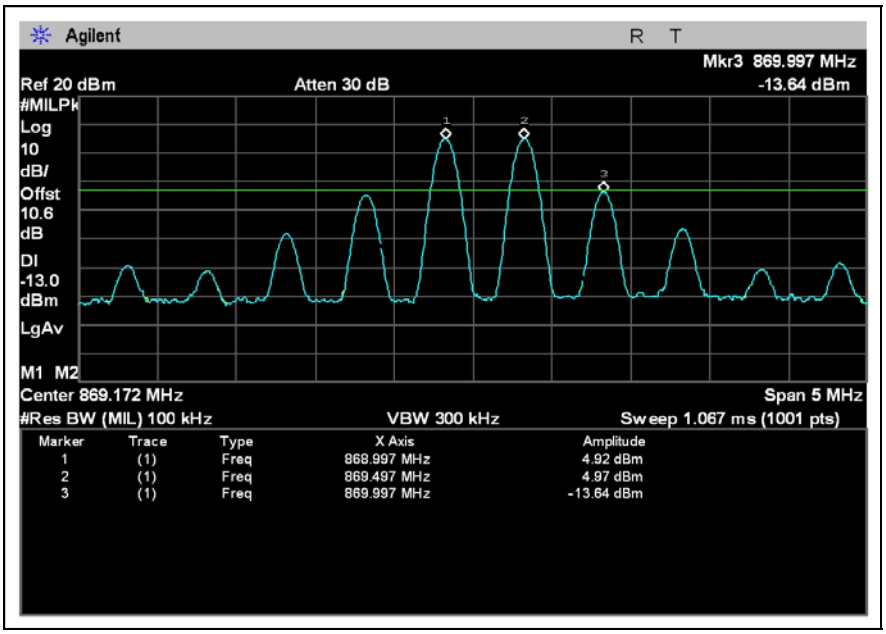
-75

Band	**Frequency (MHz)**	**Power (dBm)**	**Po+3dB (dBm)**	**Pmean (mW)**
Downlink 800 MHz	868.995	2.19	5.19	3.30
Downlink 800 MHz	869.500	2.12	5.12	3.25
Downlink 800 MHz	880.995	3.21	6.21	4.17
Downlink 800 MHz	881.500	3.18	6.18	4.14
Downlink 800 MHz	891.995	3.22	6.22	4.18
Downlink 800 MHz	893.000	3.37	6.37	4.33

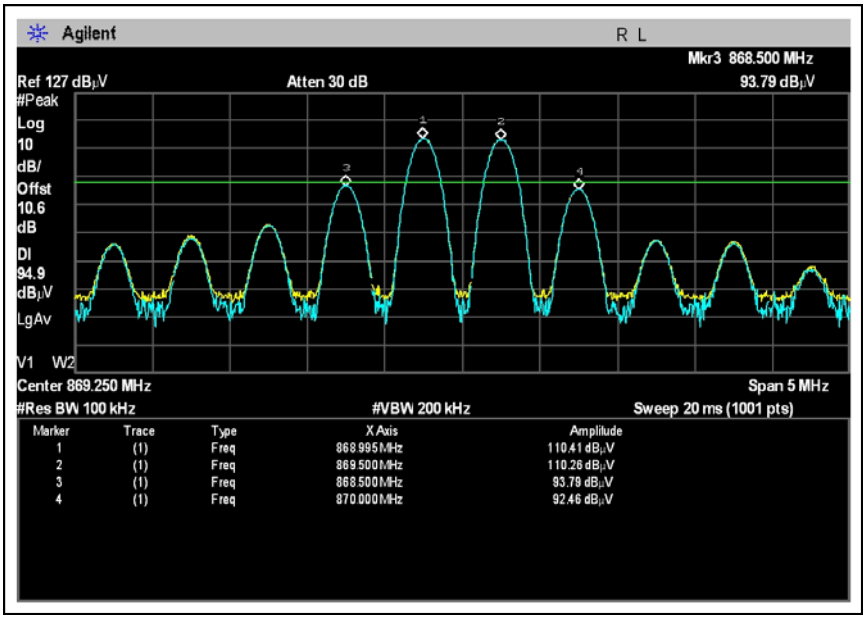
-50

Band	**Frequency (MHz)**	**Power (dBm)**	**Po+3dB (dBm)**	**Pmean (mW)**
Uplink 800 MHz	825.000	20.04	23.04	201.37
Uplink 800 MHz	825.500	19.95	22.95	197.24
Uplink 800 MHz	836.000	19.23	22.23	167.11
Uplink 800 MHz	836.500	18.53	21.53	142.23
Uplink 800 MHz	847.500	18.36	21.36	136.77
Uplink 800 MHz	847.000	18.79	21.79	151.00

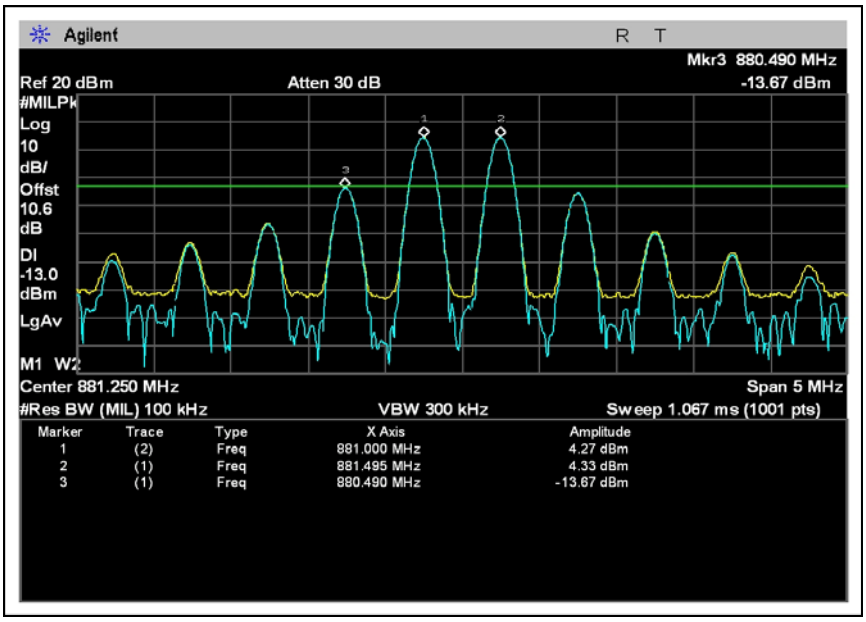
Test Plots
RSS-131 SECTION 6.2 OUTPUT POWER DOWNLINK – LOW CHANNEL 50



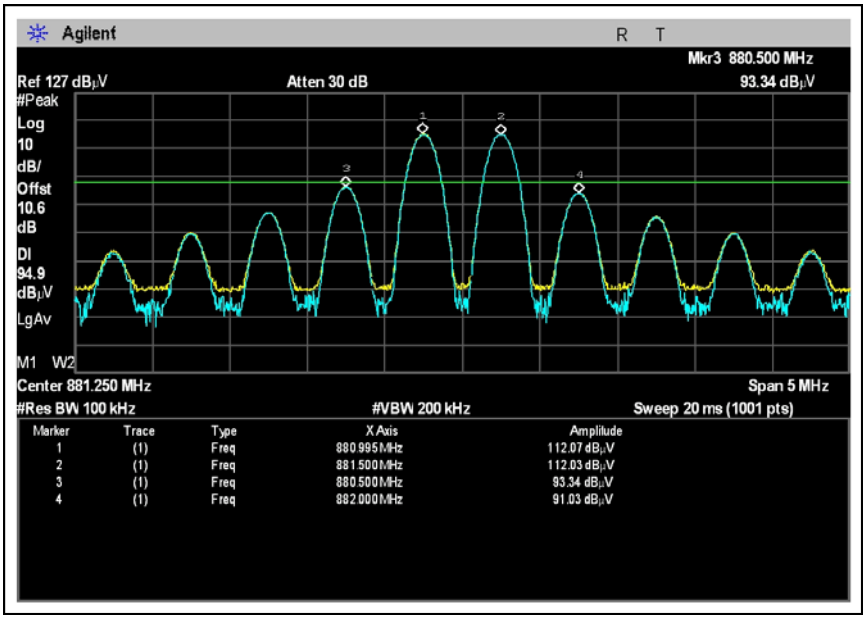
RSS-131 SECTION 6.2 OUTPUT POWER DOWNLINK – LOW CHANNEL 75



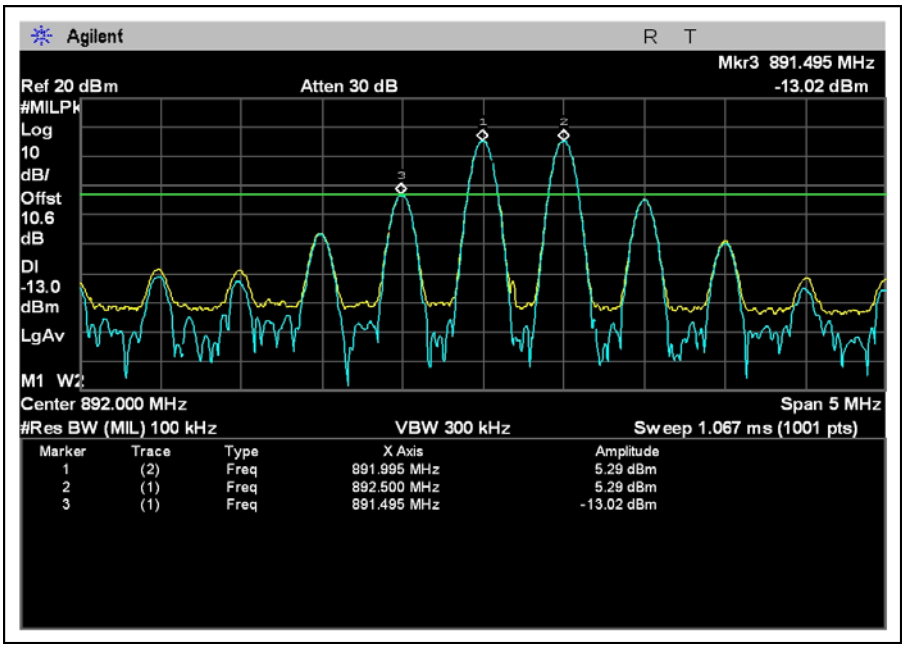
RSS-131 SECTION 6.2 OUTPUT POWER DOWNLINK – MID CHANNEL 50



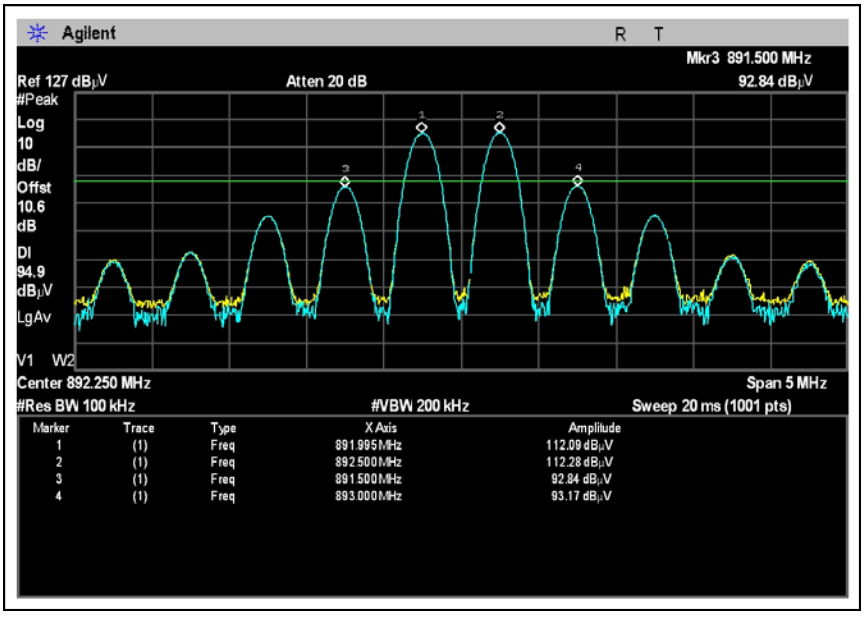
RSS-131 SECTION 6.2 OUTPUT POWER DOWNLINK – MID CHANNEL 75



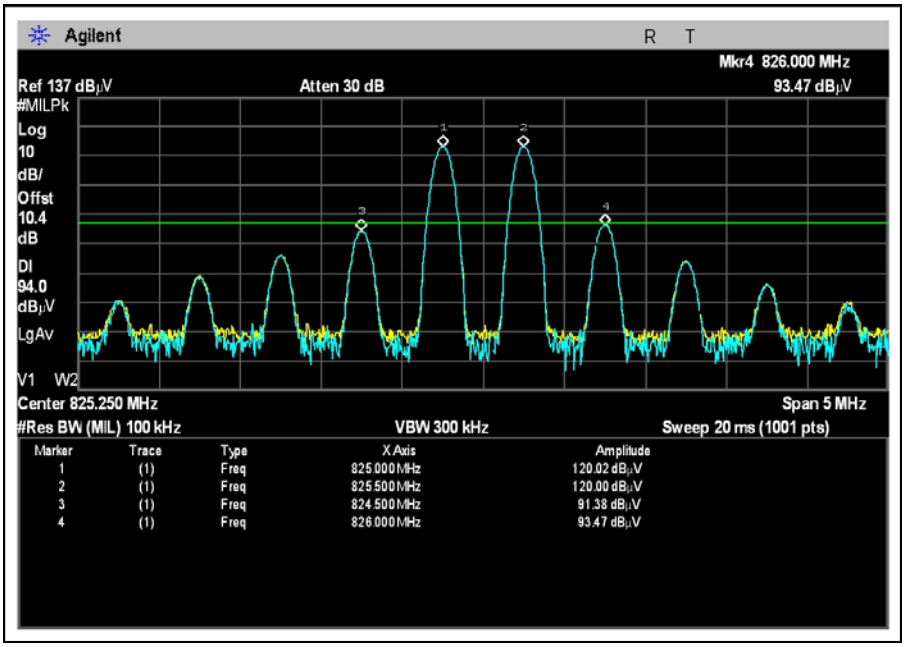
RSS-131 SECTION 6.2 OUTPUT POWER DOWNLINK – HIGH CHANNEL 50



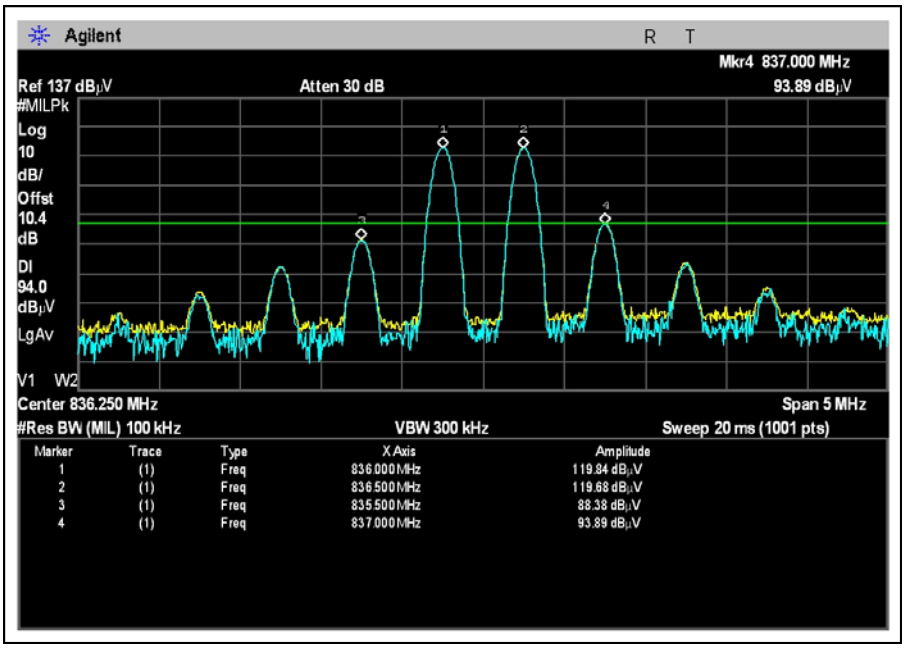
RSS-131 SECTION 6.2 OUTPUT POWER DOWNLINK – HIGH CHANNEL 75



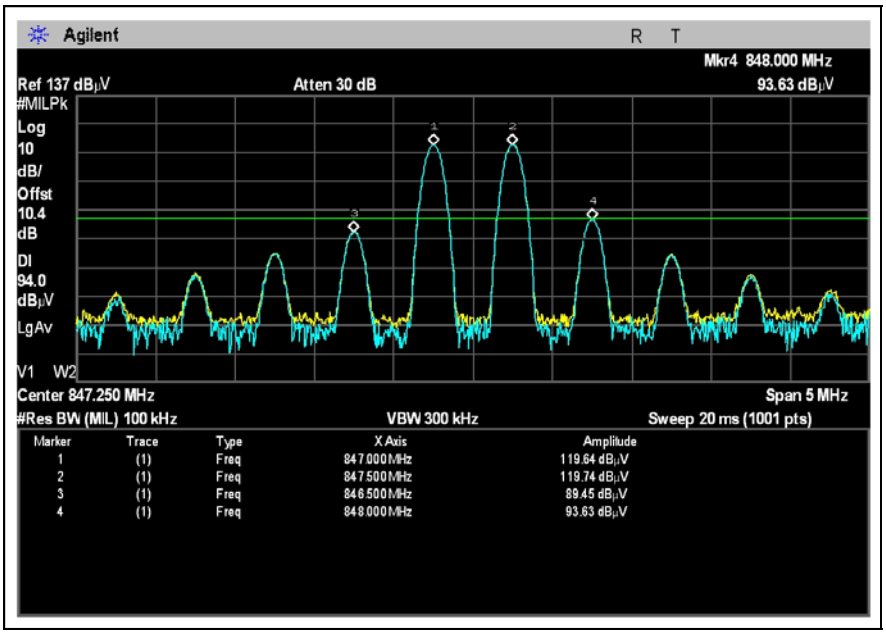
RSS-131 SECTION 6.2 OUTPUT POWER UPLINK – LOW CHANNEL 50



RSS-131 SECTION 6.2 OUTPUT POWER UPLINK – MID CHANNEL 50



RSS-131 SECTION 6.2 OUTPUT POWER UPLINK – HIGH CHANNEL 50



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

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	08/07/2008	08/07/2010	02660
Wilson 50-75 Ohm Adapter	None	10/14/2008	10/14/2010	C00013
Cable 3' 40 GHz Astrolab	NA	01/15/2008	01/15/2010	AN03012
HP 8491A 10dB Attenuator	2708A47453	11/30/2006	11/30/2008	P01350
10 dB 10W Attenuator	None	11/30/2006	11/30/2008	P02229

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Signal Generator	Agilent	E4437B	US39260577
Power Supply	Wilson	HK-B18-A06	None
Step Attenuator	HP	8494B	AN02475
Splitter, 4-Way	Motorola	None	ANP01314

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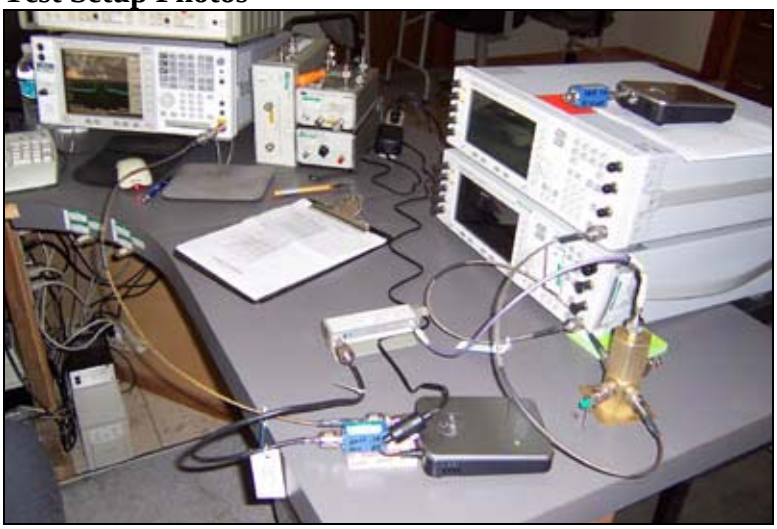
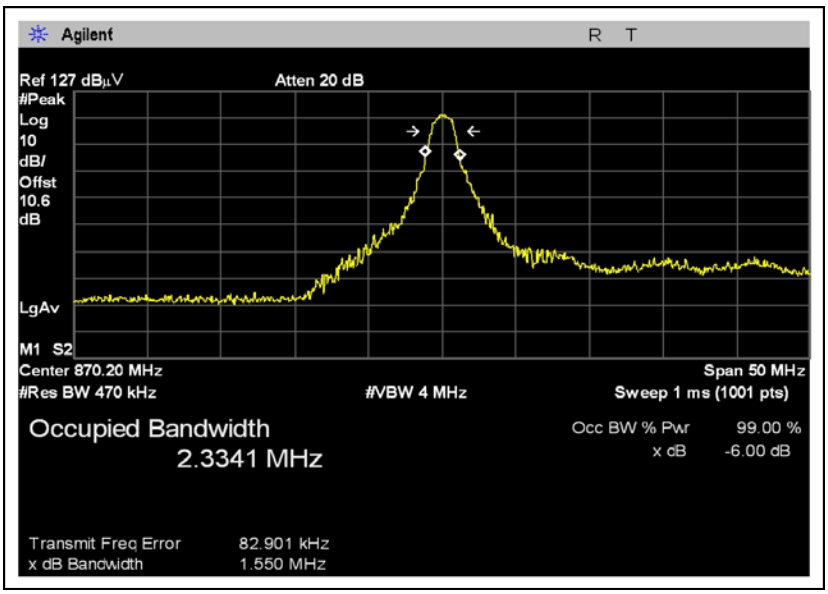
Test Setup Photos

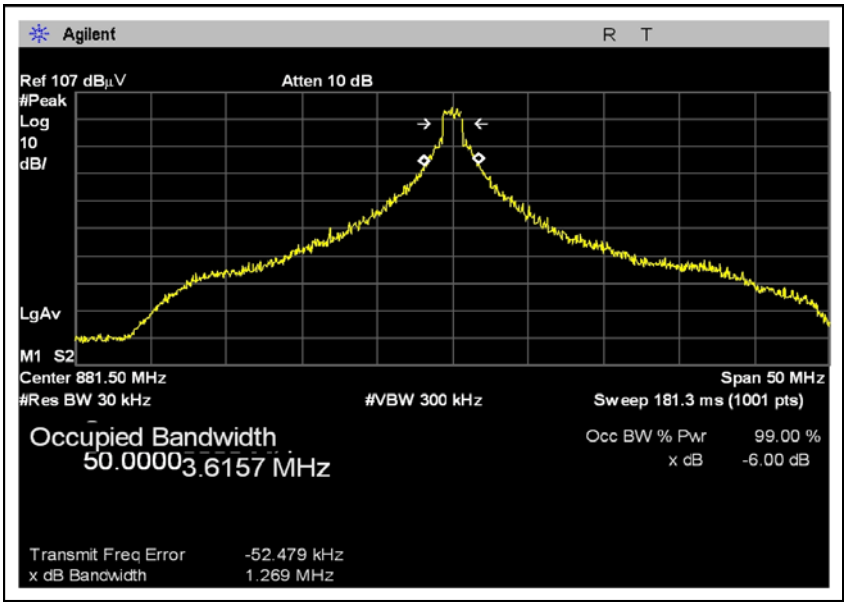


Test Plots

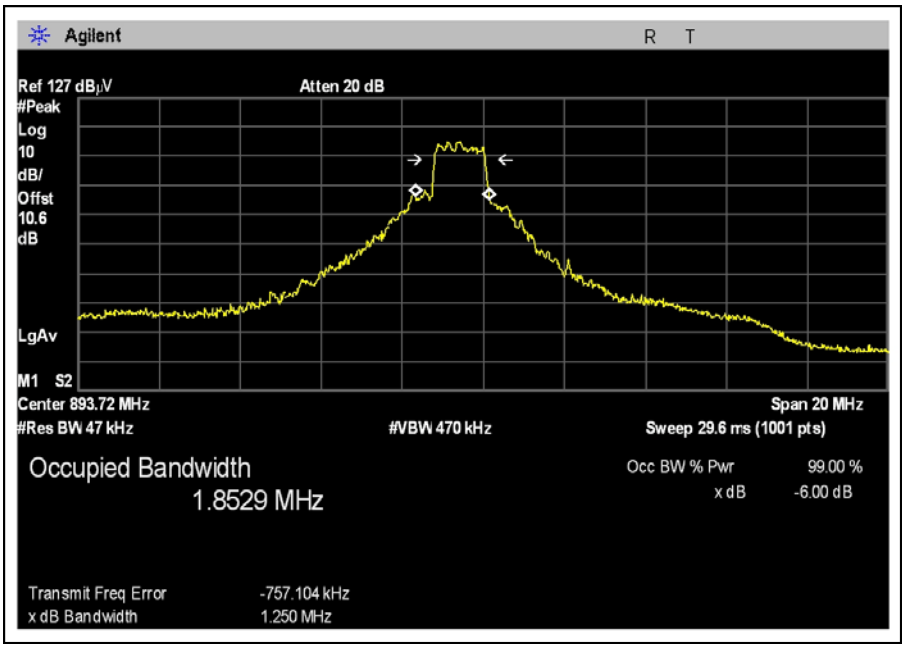
99% OCCUPIED BANDWIDTH DOWNLINK – CDMA LOW CHANNEL



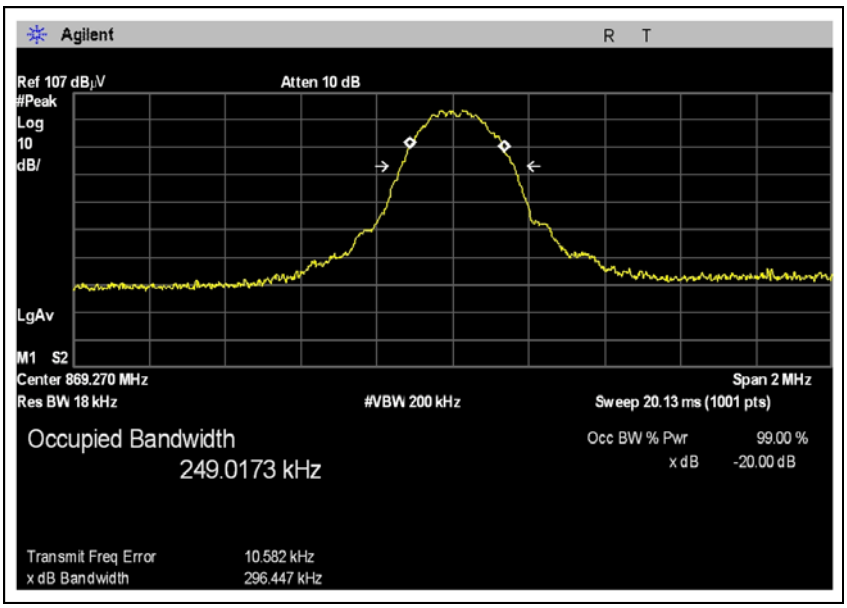
99% OCCUPIED BANDWIDTH DOWNLINK – CDMA MID CHANNEL



99% OCCUPIED BANDWIDTH DOWNLINK – CDMA HIGH CHANNEL



99% OCCUPIED BANDWIDTH DOWNLINK – EDGE LOW CHANNEL



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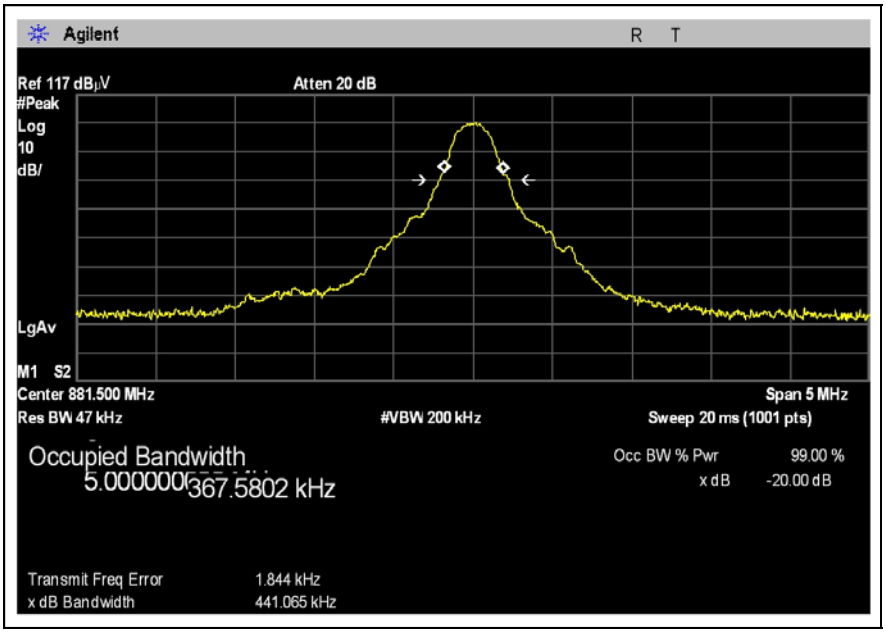
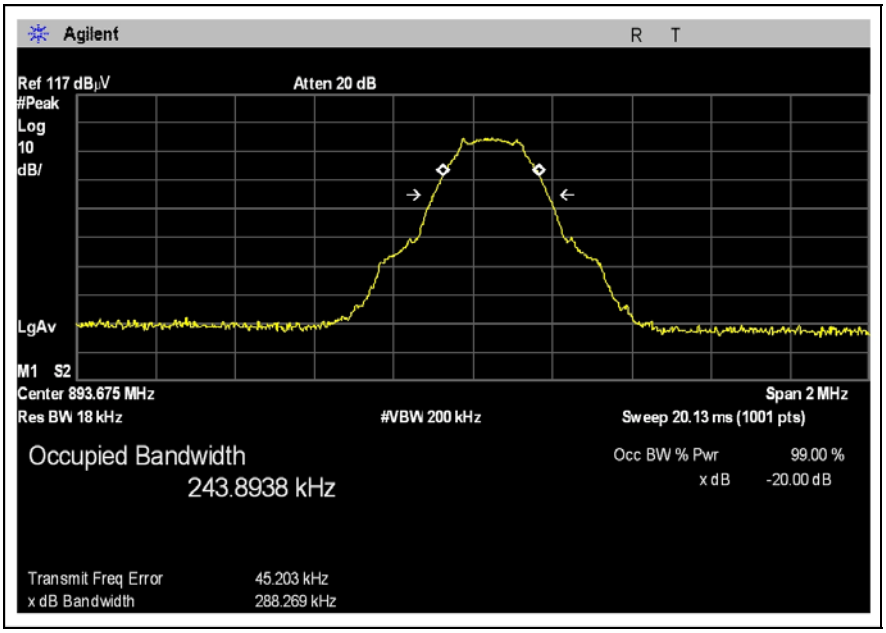


99% OCCUPIED BANDWIDTH DOWNLINK – EDGE HIGH CHANNEL



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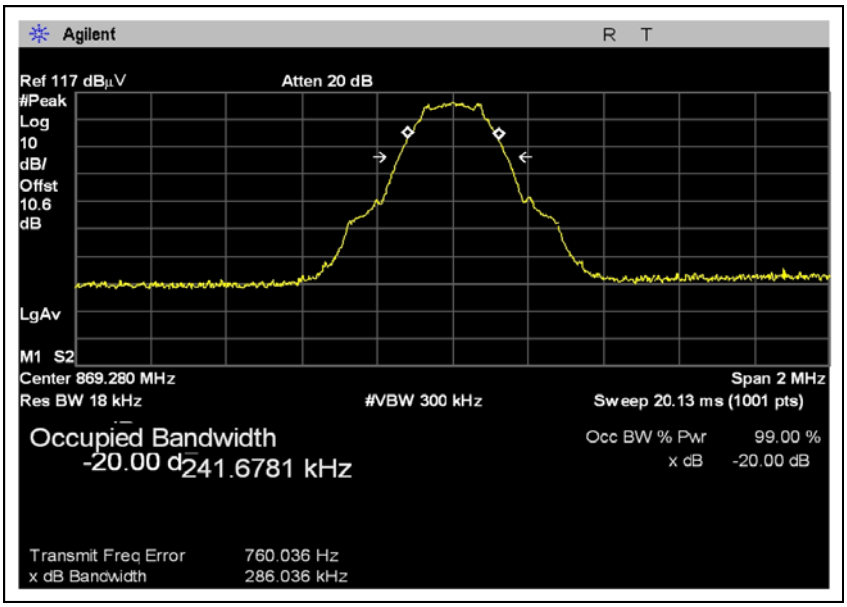
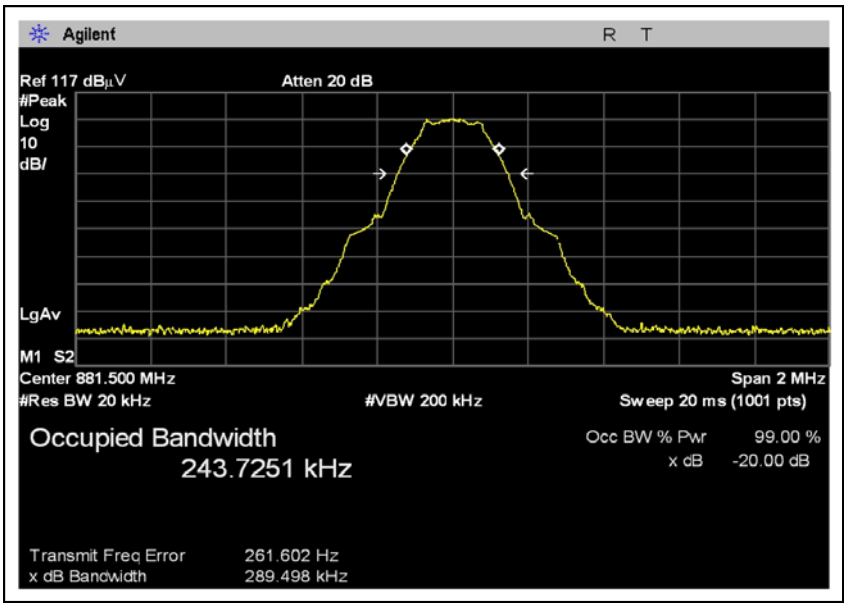
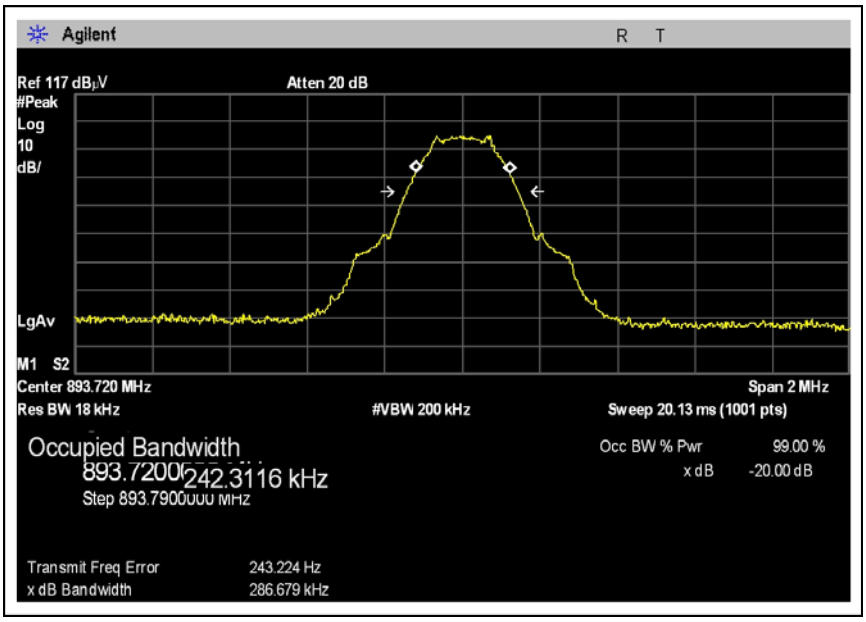


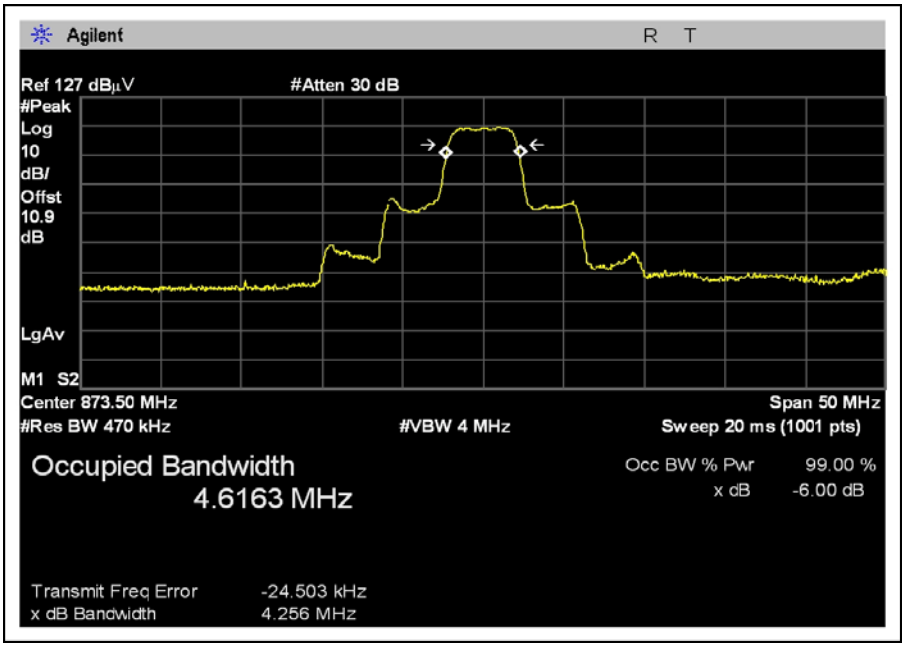
99% OCCUPIED BANDWIDTH DOWNLINK – GSM MID CHANNEL



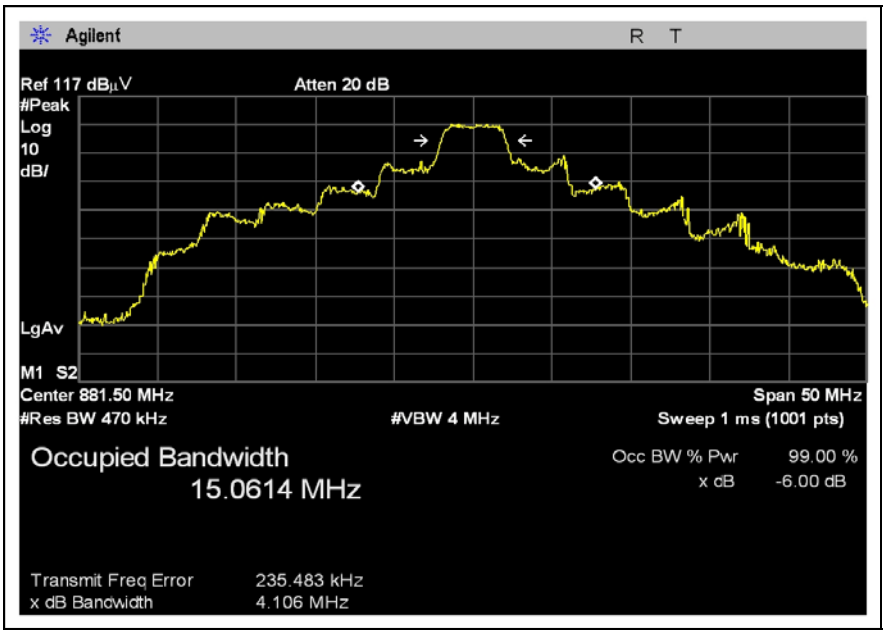
99% OCCUPIED BANDWIDTH DOWNLINK – GSM HIGH CHANNEL



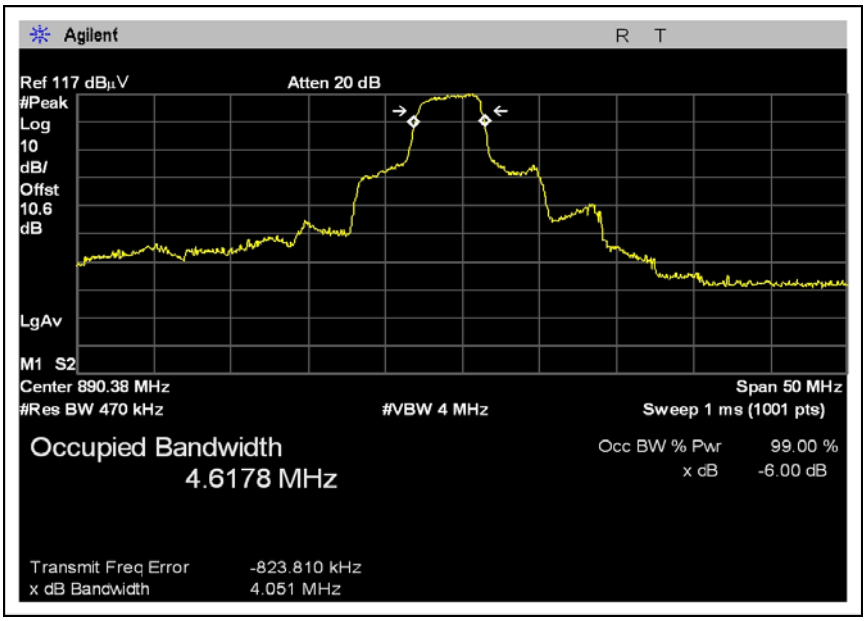
99% OCCUPIED BANDWIDTH DOWNLINK – WCDMA LOW CHANNEL



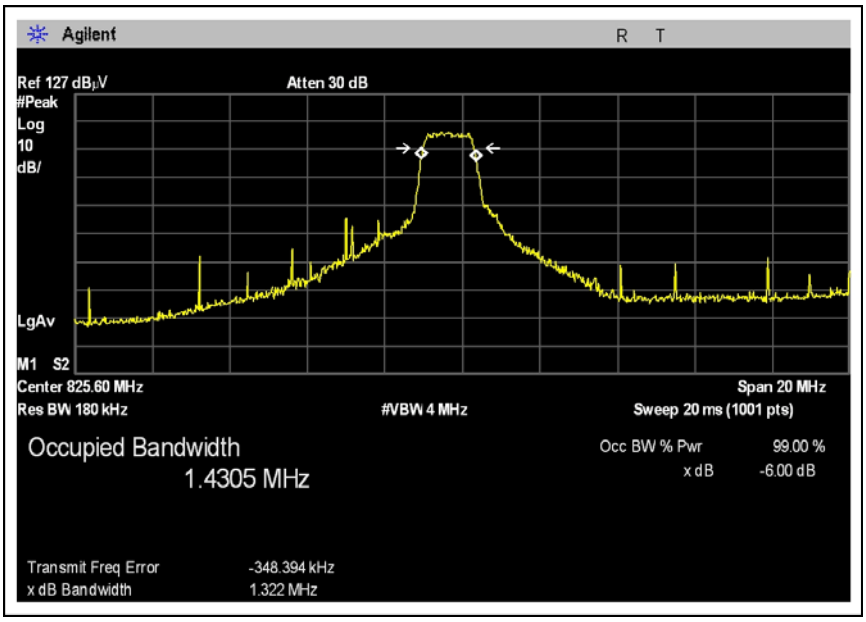
99% OCCUPIED BANDWIDTH DOWNLINK – WCDMA MID CHANNEL



99% OCCUPIED BANDWIDTH DOWNLINK – WCDMA HIGH CHANNEL



99% OCCUPIED BANDWIDTH UPLINK – CDMA LOW CHANNEL



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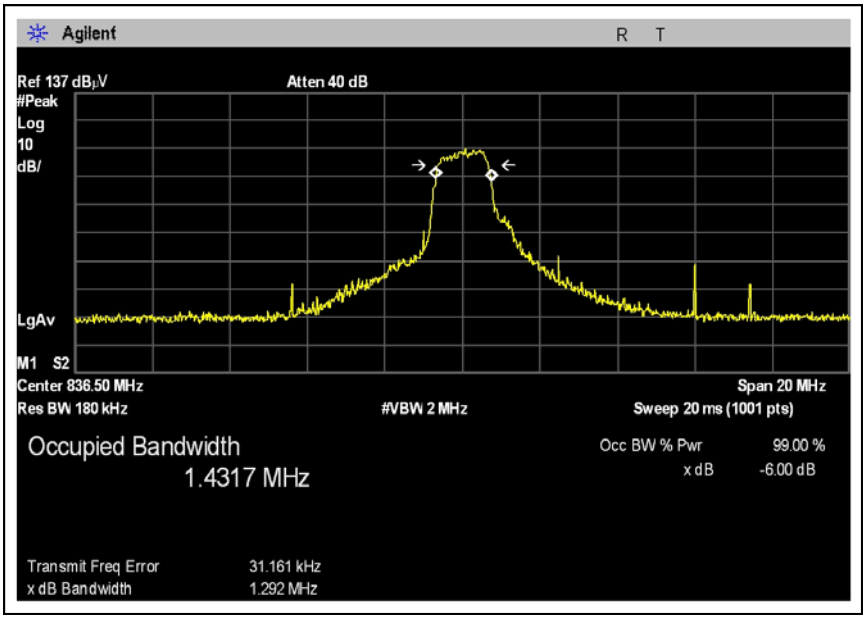
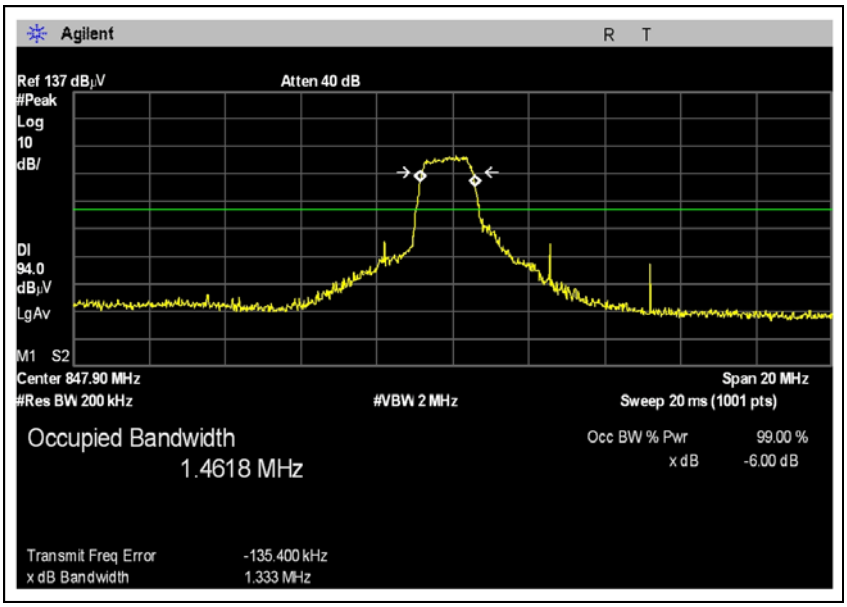
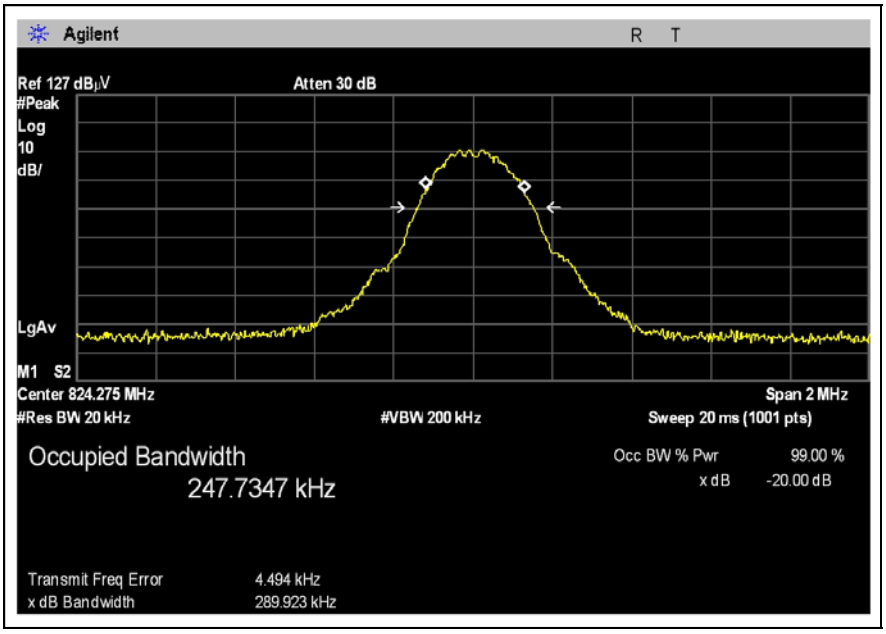


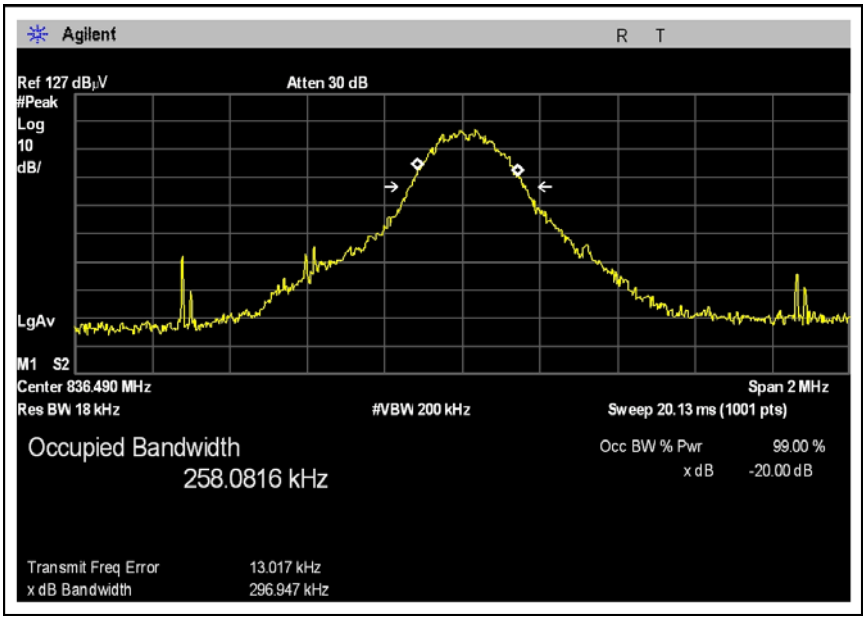
99% OCCUPIED BANDWIDTH UPLINK – CDMA HIGH CHANNEL



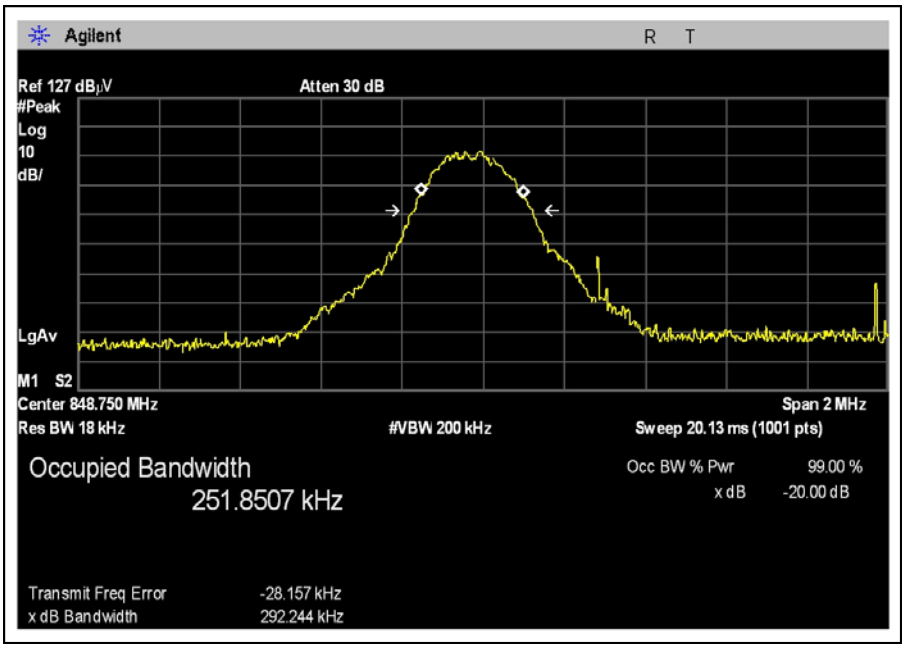
99% OCCUPIED BANDWIDTH UPLINK - EDGE LOW CHANNEL



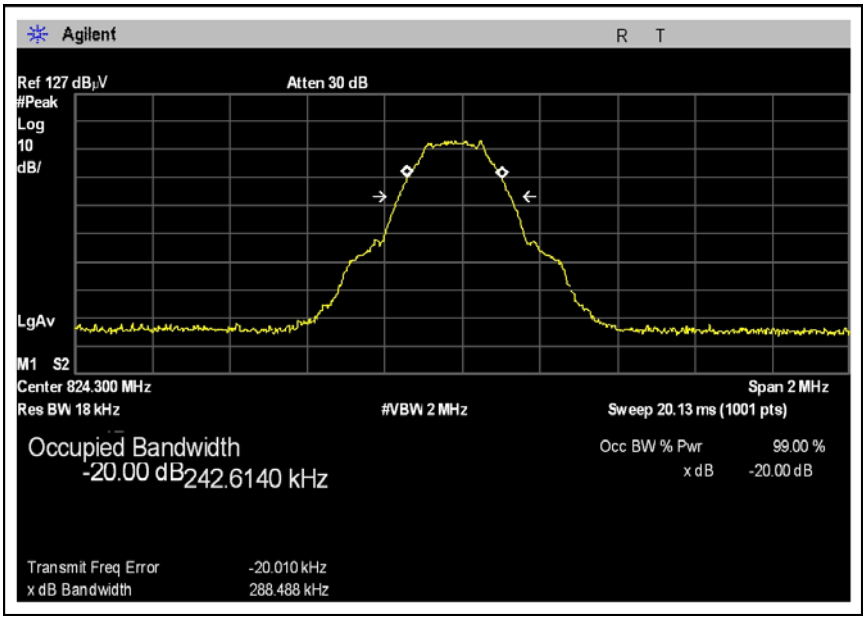
99% OCCUPIED BANDWIDTH UPLINK - EDGE MID CHANNEL



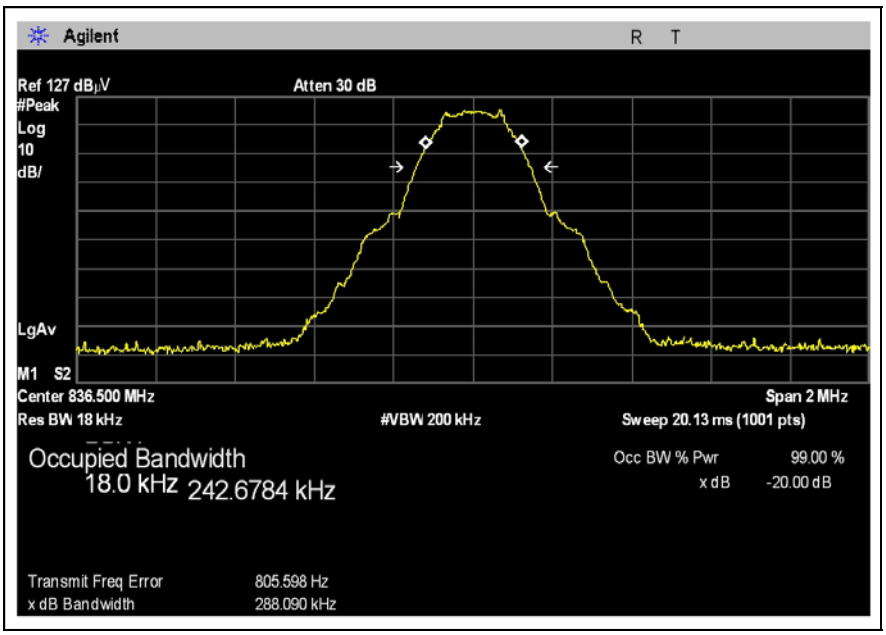
99% OCCUPIED BANDWIDTH UPLINK - EDGE HIGH CHANNEL



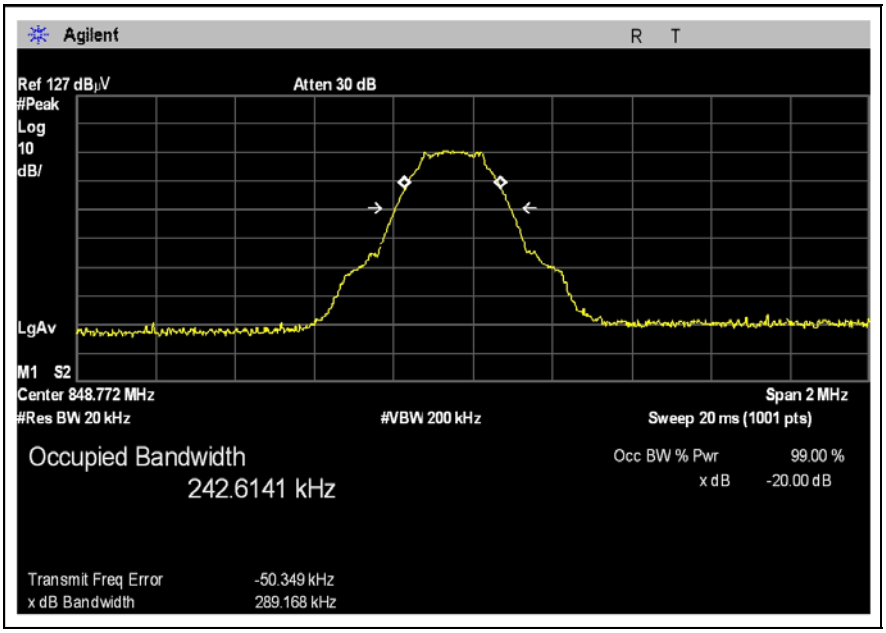
99% OCCUPIED BANDWIDTH UPLINK - GSM LOW CHANNEL



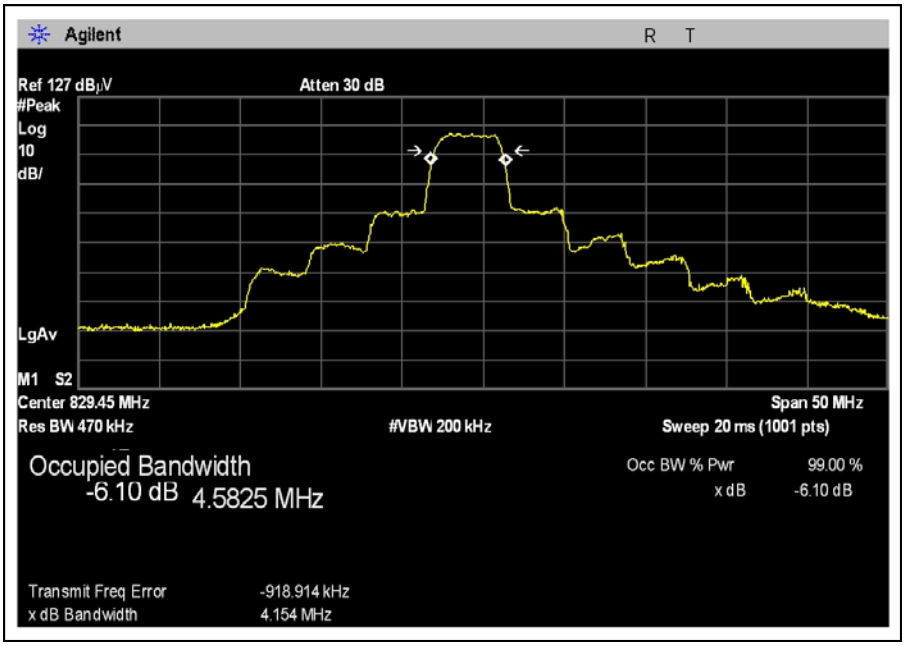
99% OCCUPIED BANDWIDTH UPLINK - GSM MID CHANNEL



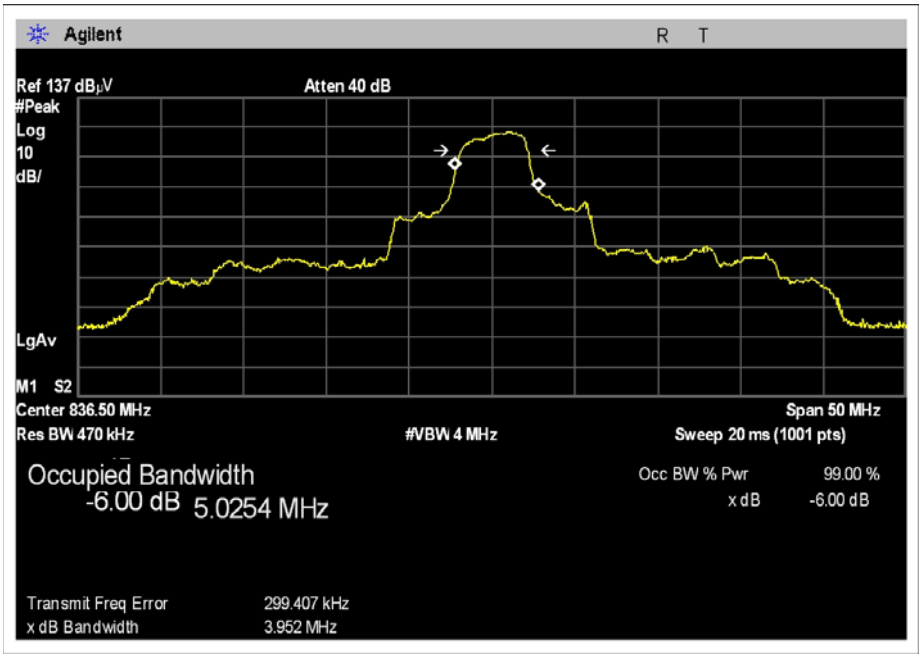
99% OCCUPIED BANDWIDTH UPLINK - GSM HIGH CHANNEL



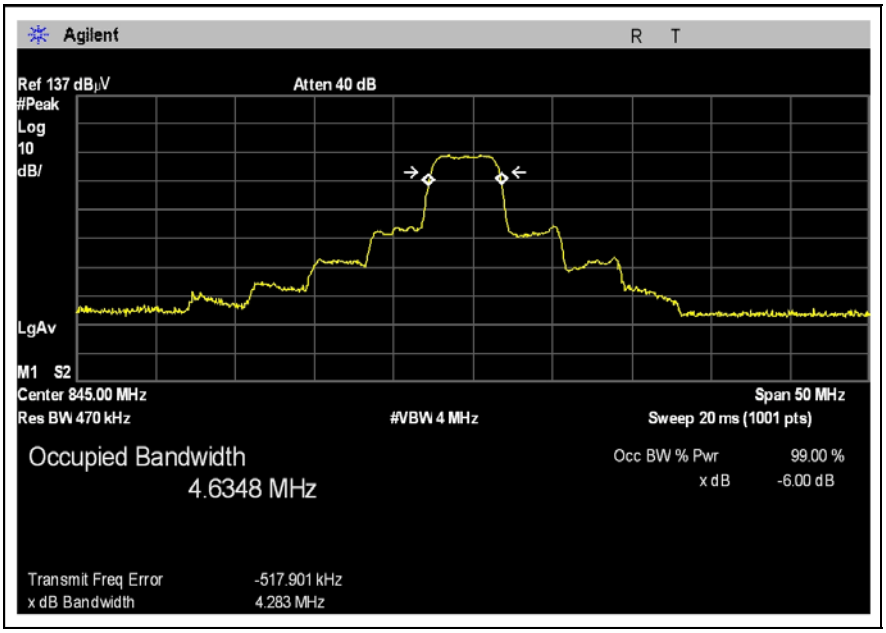
99% OCCUPIED BANDWIDTH UPLINK - WCDMA LOW CHANNEL



99% OCCUPIED BANDWIDTH UPLINK - WCDMA MID CHANNEL

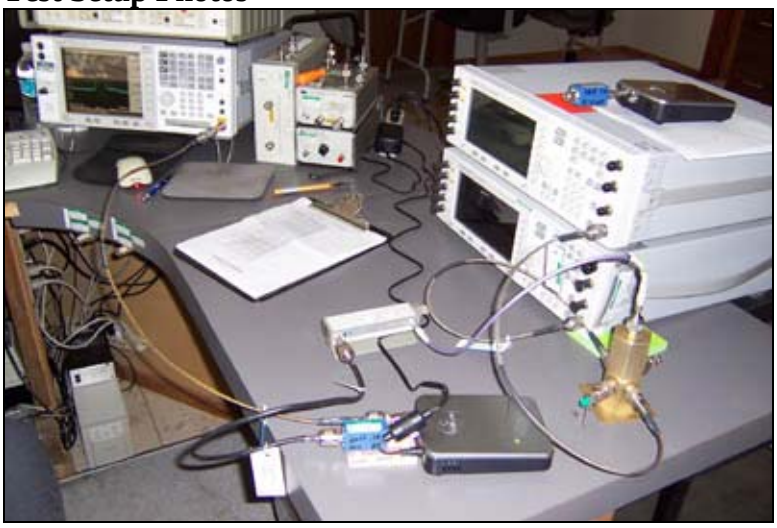


99% OCCUPIED BANDWIDTH UPLINK – WCDMA HIGH CHANNEL



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

Test Setup Photos



Test Data Sheets

Test Location: CKC Laboratories, Inc. •5046 Sierra Pines Dr. • Mariposa, CA 95338 • 209 966-5240

Customer:	**Wilson Electronics**		
Specification:	**FCC 22.917**		
Work Order #:	**88636**	Date:	11/3/2008
Test Type:	**Maximized Emissions**	Time:	15:19:42
Equipment:	**Signal Boost In-Building Wireless Cellular/PCS Amplifier**	Sequence#:	3
Manufacturer:	Wilson Electronics	Tested By:	Mike Wilkinson
Model:	271247-50		
S/N:	80124799021181716		

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/03/2007	01/03/2009	02660
Cable 2' 40 GHz Astrolab	NA	01/15/2008	01/15/2010	AN03008
Weinchel 10dB attenuator	C8597	11/30/2006	11/30/2008	P02139

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

Function	Manufacturer	Model #	S/N
Signal Boost In-Building Wireless Cellular/PCS Amplifier*	Wilson Electronics	271247-50	80124799021181716

Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	Agilent	E4437B	MY41000126
Signal Generator	Agilent	E4437B	US39260577
Power Supply	Wilson	HK-B18-A06	None
Splitter, 4-Way	Motorola	None	ANP01314
Step Attenuator	HP	8494B	AN02475

Test Conditions / Notes:

This is an in-building, dual-band bi-directional amplifier for enhancing the range of cell phones in-building environments. EUT operating frequency ranges are 824-849 MHz and 1850-1910 MHz for uplink path and 869-894 MHz and 1930-1990 MHz for downlink path. EUT is connected directly to a spectrum analyzer via suitable attenuation. Reported power levels indicate the maximum compliant power output measured at an input level just below that which will cause the EUT to fail harmonic, intermodulation or band edge limits, whichever results in the lowest power output for each modulation and channel setting. Combined cable and attenuator insertion loss accounted for in the measurements were: 10.6 dB for the frequency range of 869 to 894 MHz. 10.6 dB for the frequency range of 824 to 849 MHz Frequency Range Investigated: 9 kHz to 10000 MHz. Temperature: 22.3ºC, Relative Humidity: 35%. GSM/EDGE RBW = 1MHz, CDMA RBW = 3 MHz, WCDMA RBW = 10 MHz, VBW = 3 x RBW.

Transducer Legend:

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

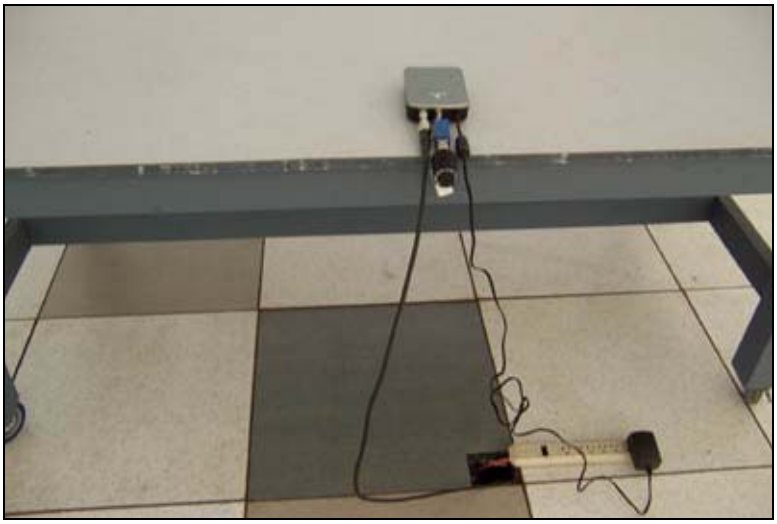
#	Freq MHz	Rdng dBµV	dB	dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	1690.500M	83.9					+0.0	83.9	94.0	-10.1	None
									UL-HIGH CH-WCDMA		
2	1695.880M	77.2					+0.0	77.2	94.0	-16.8	None
									UL-HIGH CH-CDMA		
3	1674.550M	75.8					+0.0	75.8	94.0	-18.2	None
									UL-MID CH-WCDMA		
4	1658.900M	74.1					+0.0	74.1	94.0	-19.9	None
									UL-LOW CH-WCDMA		
5	1673.000M	73.6					+0.0	73.6	94.0	-20.4	None
									UL-MID CH-GSM		
6	1672.940M	73.5					+0.0	73.5	94.0	-20.5	None
									UL-MID CH-CDMA		
7	1697.544M	73.2					+0.0	73.2	94.0	-20.8	None
									UL-HIGH CH-GSM		
8	1650.560M	73.1					+0.0	73.1	94.0	-20.9	None
									UL-LOW CH-CDMA		
9	1648.420M	72.1					+0.0	72.1	94.0	-21.9	None
									UL-LOW CH-GSM		

10	1738.700M	66.3		+0.0	66.3	94.0	-27.7	None DL-MID CD-EDGE
11	1648.540M	61.4		+0.0	61.4	94.0	-32.6	None UL-LOW CH-EDGE
12	1685.228M	60.6		+0.0	60.6	94.0	-33.4	None UL-HIGH CH-EDGE
13	1673.004M	59.4		+0.0	59.4	94.0	-34.6	None UL-MID CH-EDGE
14	1763.450M	59.1		+0.0	59.1	94.0	-34.9	None DL-MID CH-CDMA
15	2681.180M	58.8		+0.0	58.8	94.0	-35.2	None DL-HIGH CH-EDGE
16	1787.470M	58.5		+0.0	58.5	94.0	-35.5	None DL-HIGH CH-EDGE
17	1740.700M	58.1		+0.0	58.1	94.0	-35.9	None DL-LOW CH-CDMA
18	1785.300M	57.7		+0.0	57.7	94.0	-36.3	None DL-HIGH CH-CDMA
19	1763.060M	57.1		+0.0	57.1	94.0	-36.9	None DL-MID CH-GSM
20	1738.540M	57.1		+0.0	57.1	94.0	-36.9	None DL-LOW CH-GSM
21	1787.580M	53.9		+0.0	53.9	94.0	-40.1	None DL-HIGH CH-GSM
22	2607.810M	53.3		+0.0	53.3	94.0	-40.7	None DL-LOW CH-GSM
23	1779.250M	53.3		+0.0	53.3	94.0	-40.7	None DL-HIGH CH-WCDMA
24	2608.050M	53.2		+0.0	53.2	94.0	-40.8	None DL-MID CD-EDGE
25	1747.060M	51.5		+0.0	51.5	94.0	-42.5	None DL-LOW CH-WCDMA

26	1763.180M	51.1		+0.0	51.1	94.0	-42.9	None
						DL-MID CH-WCDMA		
27	1738.465M	49.3		+0.0	49.3	94.0	-44.7	None
						DL-LOW CH-EDGE		
28	2607.810M	45.6		+0.0	45.6	94.0	-48.4	None
						DL-LOW CH-EDGE		

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

Test Setup Photos



Test Data Sheets

Test Location: CKC Laboratories, Inc. •5046 Sierra Pines Dr. • Mariposa, CA 95338 • 209 966-5240

Customer:	**Wilson Electronics**		
Specification:	**FCC 22.917**		
Work Order #:	**88636**	Date:	11/6/2008
Test Type:	**Radiated Scan**	Time:	12:53:59
Equipment:	**Signal Boost In-Building Wireless Cellular/PCS Amplifier**	Sequence#:	7
Manufacturer:	Wilson Electronics	Tested By:	Mike Wilkinson
Model:	271247-50		
S/N:	80124799021181716		

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer HP 8593EM	3624A00159	03/23/2007	03/23/2009	02111
Bilog Antenna	2455	04/27/2007	04/27/2009	01992
Site A 10 meter cable set		05/11/2007	05/11/2009	MA10M
HP-8447D Preamp	2727A05444	06/20/2008	06/20/2010	00062
EMCO 3115 Horn Antenna	9307-4085	03/17/2007	03/17/2009	00656
HP 8449B Preamp	3008A00301	12/13/2006	12/13/2008	2010
Cable 2' 40 GHz Astrolab	NA	01/15/2008	01/15/2010	AN03008
Cable 2' 40 GHz Astrolab	NA	01/15/2008	01/15/2010	AN03011
Cable 12' 40 GHz Astrolab	NA	07/03/2008	07/03/2010	AN05769
ARA MWH-1826/B Horn Antenna	1005	11/26/2006	11/26/2008	02046
EMCO Loop Antenna	1074	05/01/2007	05/01/2009	00226

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

Function	Manufacturer	Model #	S/N
Signal Boost In-Building	Wilson Electronics	271247-50	80124799021181716

Wireless Cellular/PCS Amplifier*			
Power Supply	Wilson	HK-B18-A06	None

Support Devices:

Function	Manufacturer	Model #	S/N

Test Conditions / Notes:

This is an in-building, dual-band bi-directional amplifier for enhancing the range of cell phones in-building environments. EUT operating frequency ranges are 824-849 MHz and 1850-1910 MHz for uplink path and 869-894 MHz and 1930-1990 MHz for downlink path. An input level just below that which will cause the EUT to fail harmonic, intermodulation or band edge limits, whichever results in the lowest power output for each modulation and channel setting was applied to the inputs. EUT RF output ports are terminated in 50 Ohms. Modulation for all readings is CW (worst case). Frequency Range Investigated: 9 kHz to 20000 MHz. Frequencies 9kHz-1000MHz were measured at 10 meters distance. Frequencies 1000-10000MHz were measured at 3 meters distance. Uplink & Downlink Paths tested as noted in the data. Low, Mid and High channels tested as noted in the data. Temperature: 22.3ºC, Relative Humidity: 35%. RBW = 9 kHz. 9 kHz-30 MHz RBW = 100 kHz, 30-2000 MHz VBW = 3 x RBW

Operating Frequency: 824-849 MHz for uplink path and 869-894 MHz for downlink path
Channels: Multiple
Highest Measured Output Power: 29.20 ERP(dBm)= 0.831 ERP(Watts)
Distance: 3 meters
Limit: 43+10Log(P) 42.20 dBc

Freq. (MHz)	Reference Level (dBm)	Antenna Polarity (H/V)	dBc
1,683.51	-72.6	Horiz	101.80
1,672.00	-72.6	Vert	101.80
1,762.00	-72.6	Horiz	101.80
1,762.00	-72.6	Vert	101.80
1,785.00	-72.9	Vert	102.10
1,738.00	-73.3	Vert	102.50
1,650.00	-73.9	Horiz	103.10
1,683.51	-74.5	Vert	103.70
1,672.01	-75.2	Horiz	104.40
1,738.00	-76.2	Horiz	105.40
1,785.00	-77.9	Horiz	107.10
1,650.00	-78	Vert	107.20

FCC 2.1051/2.1053- BLOCK EDGE

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	08/07/2008	08/07/2010	02660
Wilson 50-75 Ohm Adapter	None	10/14/2008	10/14/2010	C00013
Cable 3' 40 GHz Astrolab	NA	01/15/2008	01/15/2010	AN03012
HP 8491A 10dB Attenuator	2708A47453	11/30/2006	11/30/2008	P01350
10 dB 10W Attenuator	None	11/30/2006	11/30/2008	P02229

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

Function	Manufacturer	Model #	S/N
Signal Boost In-Building Wireless Cellular/PCS Amplifier*	Wilson Electronics	271247-50	80124799021181716

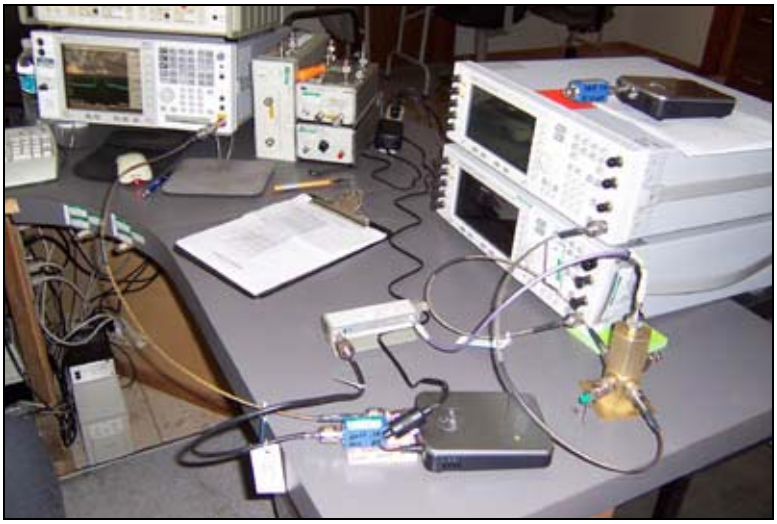
Support Devices:

Function	Manufacturer	Model #	S/N
Signal Generator	Agilent	E4437B	MY41000126
Signal Generator	Agilent	E4437B	US39260577
Power Supply	Wilson	HK-B18-A06	None
Step Attenuator	HP	8494B	AN02475
Splitter, 4-Way	Motorola	None	ANP01314

Test Conditions / Notes:

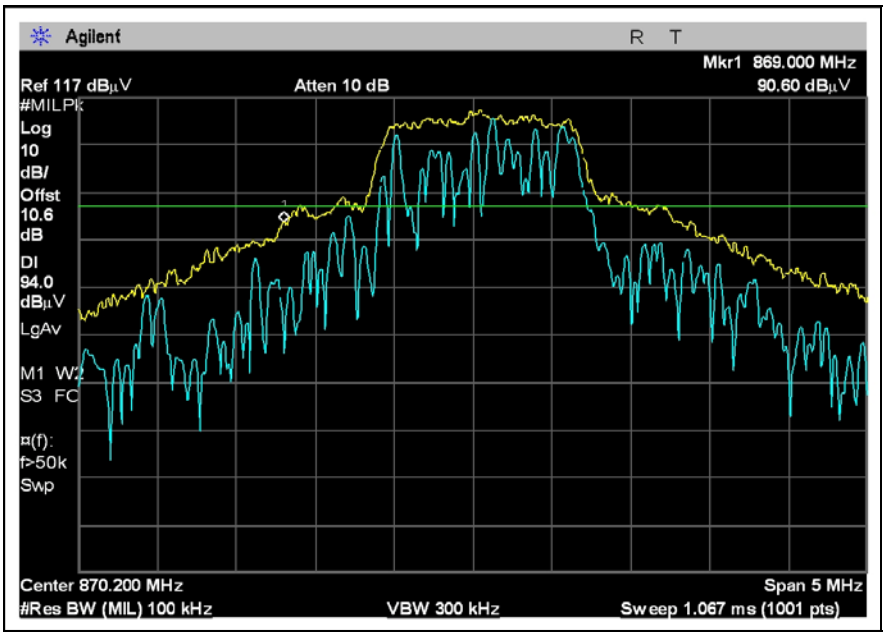
This is an in-building, dual-band bi-directional amplifier for enhancing the range of cell phones in-building environments. EUT operating frequency ranges are 824-849 MHz and 1850-1910 MHz for uplink path and 869-894 MHz and 1930-1990 MHz for downlink path. EUT is connected directly to a spectrum analyzer via suitable attenuation. Reported power levels indicate the maximum compliant power output measured at an input level just below that which will cause the EUT to fail harmonic, intermodulation or band edge limits, whichever results in the lowest power output for each modulation and channel setting. Frequency Range Investigated: Carrier. Temperature: 22.3ºC, Relative Humidity: 35%.

Test Setup Photos

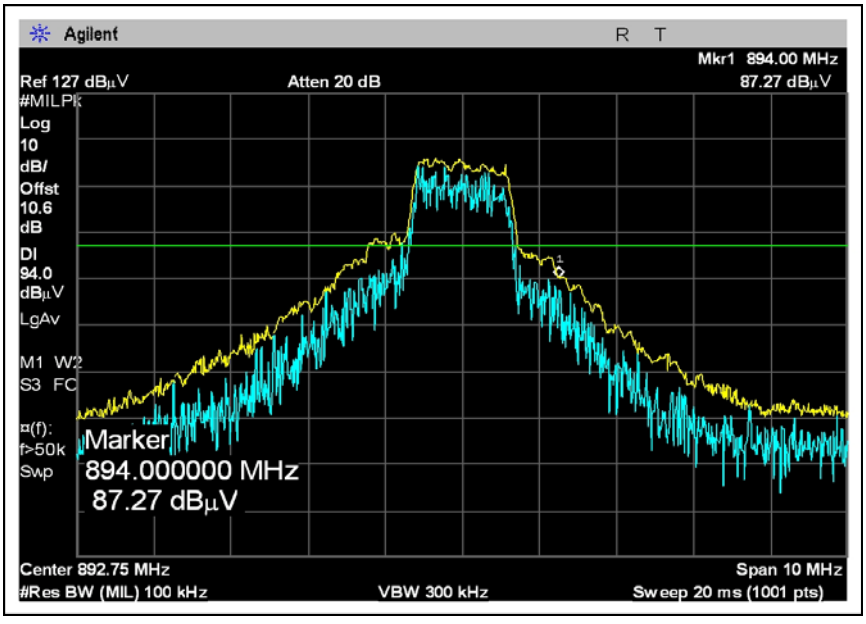


Test Plots

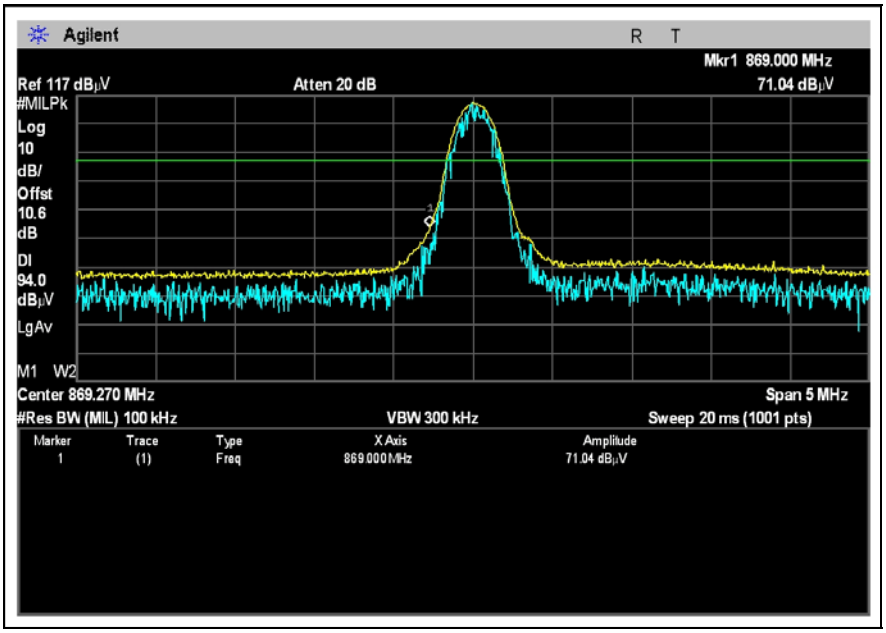
BLOCK EDGE DOWNLINK - CDMA LOW CHANNEL



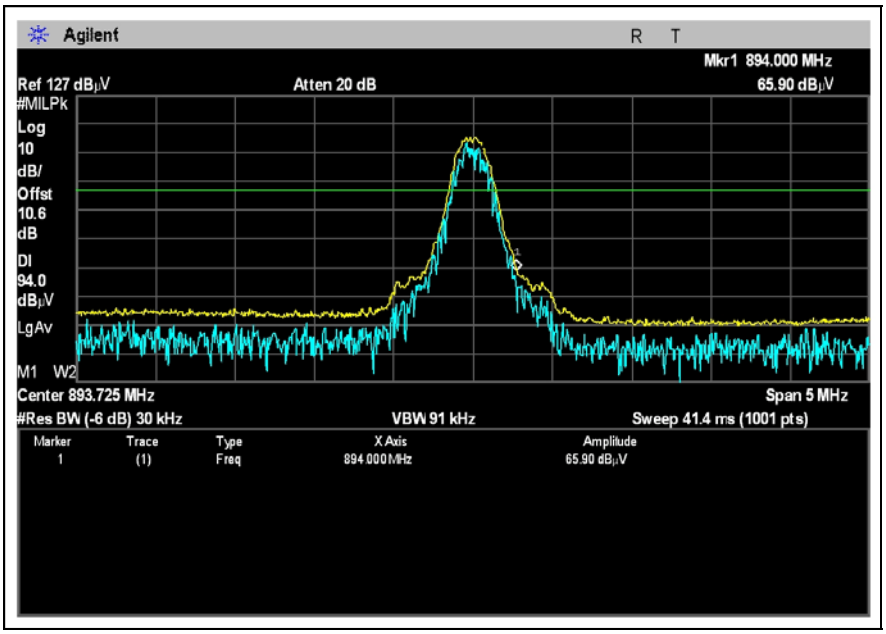
BLOCK EDGE DOWNLINK - CDMA HIGH CHANNEL



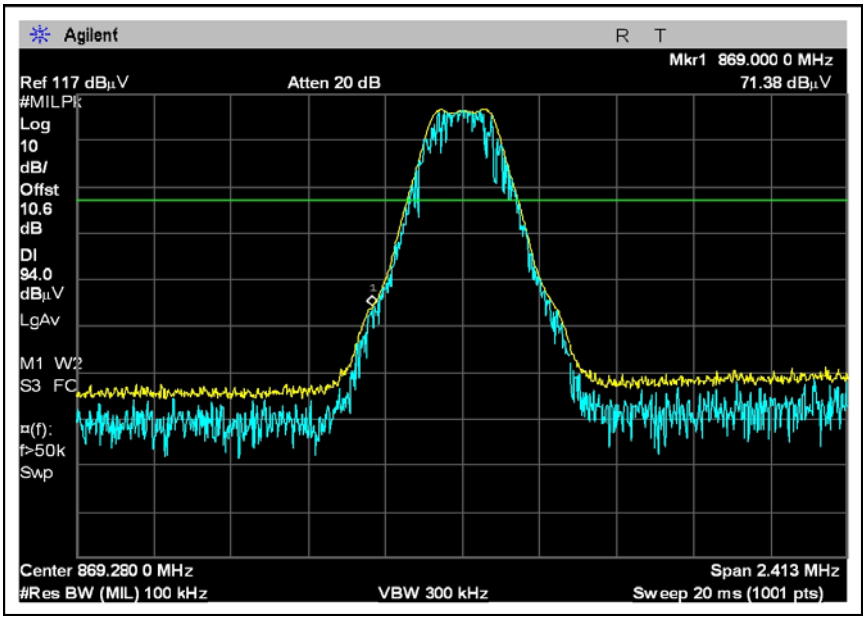
BLOCK EDGE DOWNLINK - EDGE LOW CHANNEL



BLOCK EDGE DOWNLINK - EDGE HIGH CHANNEL



BLOCK EDGE DOWNLINK - GSM LOW CHANNEL



BLOCK EDGE DOWNLINK - GSM HIGH CHANNEL