



ADDENDUM TO CELLYNX GROUP, INC. TEST REPORT FC09-112 FOR THE

MOBILE CELLULAR BOOSTER, MD015A

FCC PART 22H & RSS-131 (2003)

TESTING

DATE OF ISSUE: JULY 17, 2009

PREPARED FOR:

PREPARED BY:

Cellynx Group, Inc. 5047 Robert J. Matthews El Dorado Hills, CA 95762 Mary Ellen Clayton CKC Laboratories, Inc. 5046 Sierra Pines Drive Mariposa, CA 95338

W.O. No.: 89227 Date of test: July 1 - 8, 2009

Report No.: FC09-112A

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ADMINISTRATIVE INFORMATION

DATE OF TEST: July 1 - 8, 2009 **DATE OF RECEIPT:** July 1, 2009

REPRESENTATIVE: Michael Cecil

MANUFACTURER: Cellynx Group, Inc.

5047 Robert J. Matthews El Dorado Hills, CA 95762 **TEST LOCATION:**

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

TEST METHOD: FCC PART 22H & RSS-131 (2003)

PURPOSE OF TEST:

Original Report: To perform the testing of the Mobile Cellular Booster, MD015A with the

requirements for FCC Part 22H & RSS-131 devices. **Addendum A:** To correct the header on page 16.

APPROVALS

Steve Behm, Director of Engineering Services

TEST PERSONNEL:

Randy Clark, EMC Engineer

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SUMMARY OF RESULTS

Test	Specification/Method	Results
RF Power Output	FCC 2.1033(c)(14)/2.1046/22.913 RSS 131 §6.2	Pass
Occupied Bandwidth Input and Output Plots	FCC 2.1033(c)(14)/2.1049(i)	Pass
Spurious Emissions at Antenna Terminal	FCC 2.1033(c)(14)/2.1051/22.917	Pass
Field Strength of Spurious Radiation	FCC 2.1033(c)(14)/2.1053/22.917	Pass
Blockedge		Pass
Input vs Output Plots		Pass
Intermodulation	FCC 2.1051 RSS 131 §6.3	Pass
Out of Band Rejection	FCC 2.1051	Pass
Passband Gain	RSS 131 §6.1	Pass
Bandwidth	RSS 131 §6.1	Pass
FCC Site File No.	90477	
IC Site File No.	3082A-2	

CONDITIONS DURING TESTING

No modifications to the EUT were necessary during testing.

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EQUIPMENT UNDER TEST (EUT) DESCRIPTION

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

EQUIPMENT UNDER TEST

Mobile Cellular Booster

Manuf: Cellynx Model: MD015A Serial: 09262100003

PERIPHERAL DEVICES

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

Power Supply

Manuf: Sceptre Power Model: S012BU1200100

Serial: NA

Signal Generator

Manuf: Agilent

Model: E4437B

Serial: MY41000126

Support Computer

Manuf: Dell Model: PP23LB

Serial: 28862556913

Signal Generator

Manuf: Agilent Model: E4437B

Serial: US39260159

Laptop Power Supply

Manuf: Dell

Model: LA65N50-00

Serial: CN-0DF263-71615-850-9C16

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TEMPERATURE AND HUMIDITY DURING TESTING

The temperature during testing was within $+15^{\circ}$ C and $+35^{\circ}$ 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

Downlink: 869-894 MHz and 1930-1990 MHz Uplink: 824 – 849 MHz and 1850-1910 MHz

FCC 2.1033(c)(6) OPERATING POWER

Downlink: 322mW Uplink: 513mW

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, WCDMA, GSM, EDGE

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MEASUREMENT UNCERTAINTIES

Uncertainty Value	Parameter
4.73 dB	Radiated Emissions
3.34 dB	Mains Conducted Emissions
3.30 dB	Disturbance Power

The reported measurement uncertainties are calculated based on the worst case of all laboratory environments from CKC Laboratories, Inc. test sites. Only those parameters which require estimation of measurement uncertainty are reported. The reported worst case measurement uncertainty is less than the maximum values derived in CISPR 16-4-2. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k=2. Compliance is deemed to occur provided measurements are below the specified limits.

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Test Setup Photo



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Test Location: CKC Laboratories, Inc. •5046 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: Cellynx Group Specification: FCC 22.913

Work Order #: **89227** Date: 7/6/2009

Test Type: Antenna Conducted Time: Equipment: Mobile Cellular Booster Sequence#: 9

Manufacturer: Cellynx Tested By: Randal Clark Model: MD015A Tested By: Randal Clark 120V 60Hz

S/N: 09262100003

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A	US44300507	07/08/2008	07/08/2010	AN02660
Cable, 10' 2.92mm 40	na	06/10/2009	06/10/2011	ANP01403
GHz				
Weinchel 10dB	C8596	05/20/2009	05/20/2011	ANP02138
attenuator				
Inmet DC Block	NA	07/01/2009	07/01/2011	ANP05551

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Mobile Cellular Booster*	Cellynx	MD015A	09262100003

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Sceptre Power	S012BU1200100	NA
Signal Generator	Agilent	E4437B	US39260159
Signal Generator	Agilent	E4437B	MY41000126
Laptop Power Supply	Dell	LA65N50-00	CN-0DF263-71615-850-
			9C16
Support Computer	Dell	PP23LB	28862556913

Test Conditions / Notes:

Equipment is a bidirectional mobile cellular booster amplifier operating on 824-849 paired with 869-894 MHz and 1850-1910 paired with 1930-1990 MHz. The equipment is connected directly to a signal generator source. The power output is measured using multi-carrier mode using two tone input. The signal generators are set such that both signals are at equal amplitude at the output and such that the 3rd order intermodulation products meet the spurious emissions requirements of 22.917. Peak measurements are taken using the analyzer's internal channel power measurement.

The amplifier is controlled using an external computer running Gemini Program Interface GUI software v8.4.1.1. The software is used to control the internal attenuation of the amplifier. The tests were performed with the attenuators set to a static value of 6.0 corresponding to approximately 6dB of internal attenuation. In normal operation, the amplifier would insert attenuation automatically in order to ensure the input signal levels do not exceed a predetermined value. The firmware in the amplifier is v04.10.84.

Frequency Range Investigated: Carrier Operating Band: Uplink and Downlink

Temperature: 25°C Rel Humidity: 40%

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Downlink Power Output Measurements

Modulation	Channel	Peak Multicarrier Output (dBm)	Peak Multicarrier Output (mW)
	Low	25.02	317.7
WCDMA	Mid	25.05	319.9
	High	25.08	322.1
	Low	24.08	255.9
CDMA	Mid	24.91	309.7
	High	24.07	255.3
	Low	23.04	201.4
GSM	Mid	23.46	221.8
	High	22.49	177.4
EDGE	Low	22.18	165.2
	Mid	23.34	215.8
	High	22.42	174.6

The maximum RF output for downlink is 322mW.

The maximum allowable antenna gain is 9.62dBi in order to satisfy both the power output requirements of 22.913 and RF Exposure requirements at a 20cm separation distance.

Uplink Power Output Measurements

Modulation	Channel	Peak Multicarrier Output (dBm)	Peak Multicarrier Output (mW)
	Low	26.75	473.2
WCDMA	Mid	26.93	493.2
	High	26.99	500.0
	Low	27.08	510.5
CDMA	Mid	26.03	400.9
	High	27.10	512.9
	Low	25.93	391.7
GSM	Mid	24.69	294.4
	High	25.44	349.9
	Low	25.58	361.4
EDGE	Mid	24.36	272.9
	High	24.86	306.2

The maximum RF output for uplink is 513mW.

The maximum allowable antenna gain is 7.37dBi in order to satisfy both the power output requirements of 22.913 and RF Exposure requirements at a 20cm separation distance.

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

Test Setup Photo



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Test Location: CKC Laboratories, Inc. •5046 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: Cellynx Group
Specification: FCC 2.1049

Work Order #: **89227** Date: 7/6/2009

Test Type: Antenna Conducted Time: Equipment: Mobile Cellular Booster Sequence#: 14

Manufacturer: Cellynx Tested By: Randal Clark Model: MD015A 120V 60Hz

S/N: 09262100003

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A	US44300507	07/08/2008	07/08/2010	AN02660
Cable, 10' 2.92mm 40 GHz	na	06/10/2009	06/10/2011	ANP01403
Weinchel 10dB attenuator	C8596	05/20/2009	05/20/2011	ANP02138
Inmet DC Block	NA	07/01/2009	07/01/2011	ANP05551

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Mobile Cellular Booster*	Cellynx	MD015A	09262100003

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Sceptre Power	S012BU1200100	NA
Signal Generator	Agilent	E4437B	MY41000126
Laptop Power Supply	Dell	LA65N50-00	CN-0DF263-71615-850-9C16
Support Computer	Dell	PP23LB	28862556913

Test Conditions / Notes:

Equipment is a bidirectional mobile cellular booster amplifier operating on 824-849 paired with 869-894 MHz and 1850-1910 paired with 1930-1990 MHz. The equipment is connected directly to a signal generator source.

The amplifier is controlled using an external computer running Gemini Program Interface GUI software v8.4.1.1. The software is used to control the internal attenuation of the amplifier. The tests were performed with the attenuators set to a static value of 6.0 corresponding to approximately 6dB of internal attenuation. In normal operation, the amplifier would insert attenuation automatically in order to ensure the input signal levels do not exceed a predetermined value.

Frequency Range Investigated: Middle channel of each band.

Operating Band: Uplink and Downlink Temperature: 25°C & Rel Humidity: 40%

Modulation Type	Band	Measurement	Units
WCDMA	Downlink	4.13	MHz
WCDMA	Uplink	4.12	MHz
CDMA	Downlink	1.26	MHz
CDMA	Uplink	1.26	MHz
GSM	Downlink	244.7	kHz
GSM	Uplink	244.1	kHz
EDGE	Downlink	245.7	kHz
EDGE	Uplink	243.3	kHz

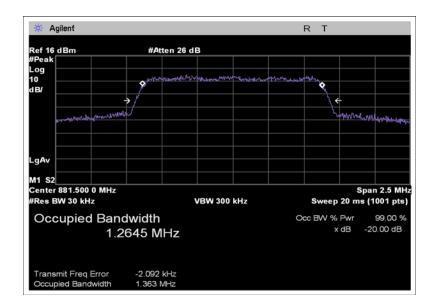
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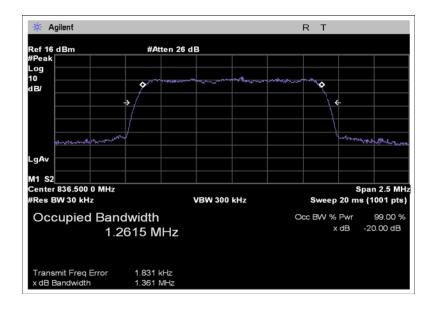
Test Plots

Tested By: Randy Clark

OCCUPIED BANDWIDTH - CDMA DOWNLINK

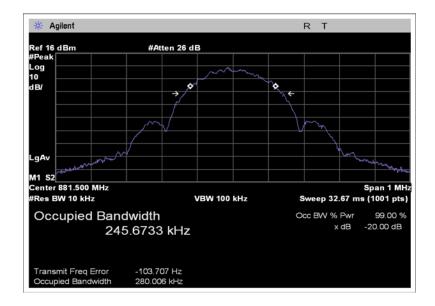


OCCUPIED BANDWIDTH - CDMA UPLINK

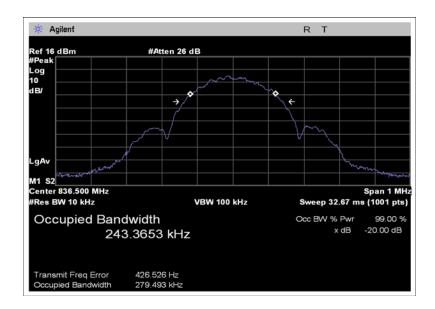


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OCCUPIED BANDWIDTH - EDGE DOWNLINK



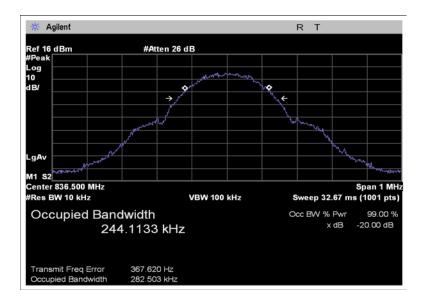
OCCUPIED BANDWIDTH - EDGE UPLINK



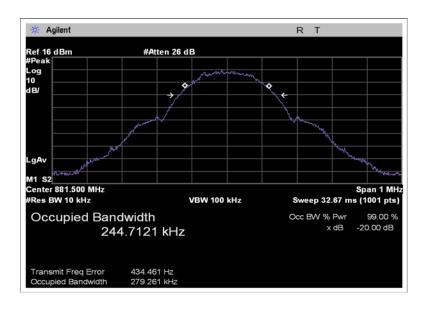
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OCCUPIED BANDWIDTH - GSM DOWNLINK



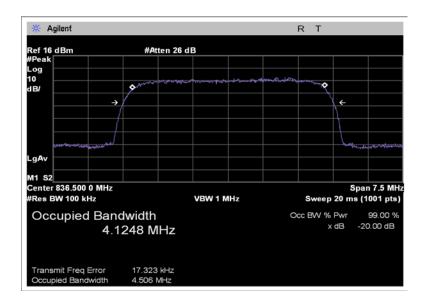
OCCUPIED BANDWIDTH - GSM UPLINK



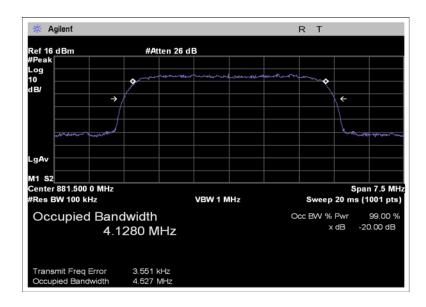
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OCCUPIED BANDWIDTH - WCDMA DOWNLINK



OCCUPIED BANDWIDTH - WCDMA UPLINK

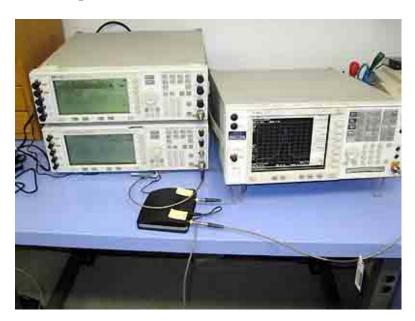


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FCC 2.1033(c)(14)/2.1051/22.917 - SPURIOUS EMISSIONS AT ANTENNA TERMINAL

Test Setup Photos



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Test Data Sheets

Test Location: CKC Laboratories, Inc. •5046 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: Cellynx Group Specification: FCC 22.917

Work Order #: 89227 Date: 7/7/2009
Test Type: Antenna Conducted Time: 11:05:25
Equipment: Mobile Cellular Booster Sequence#: 8

Manufacturer: Cellynx Tested By: Randal Clark Model: MD015A 120V 60Hz

S/N: 09262100003

Test Equipment:

1.1				
Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A	US44300507	07/08/2008	07/08/2010	AN02660
Cable, 10' 2.92mm 40) NA	06/10/2009	06/10/2011	ANP01403
GHz				
Weinchel 10dB	C8596	05/20/2009	05/20/2011	ANP02138
attenuator				
Inmet DC Block	NA	07/01/2009	07/01/2011	ANP05551
Cable, 24" 2.92mm	NA	01/15/2008	01/15/2010	AN03008
40GHz		01/13/2006	01/13/2010	

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Mobile Cellular Booster*	Cellynx	MD015A	09262100003

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Sceptre Power	S012BU1200100	NA
Signal Generator	Agilent	E4437B	MY41000126
Laptop Power Supply	Dell	LA65N50-00	CN-0DF263-71615-850-
			9C16
Support Computer	Dell	PP23LB	28862556913

Test Conditions / Notes:

Equipment is a bidirectional mobile cellular booster amplifier operating on 824-849 paired with 869-894 MHz and 1850-1910 paired with 1930-1990 MHz. The equipment is connected directly to a signal generator source.

The amplifier is controlled using an external computer running Gemini Program Interface GUI software v8.4.1.1. The software is used to control the internal attenuation of the amplifier. The tests were performed with the attenuators set to a static value of 6.0 corresponding to approximately 6dB of internal attenuation. In normal operation, the amplifier would insert attenuation automatically in order to ensure the input signal levels do not exceed a predetermined value. The firmware in the amplifier is v04.10.84.

Bandwidths used: RBW=100kHz, VBW=300kHz

Frequency Range Investigated: 30MHz to 10GHz

Operating Band: Uplink and Downlink

Temperature: 25°C Rel Humidity: 40%

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*Transducer Legend:*T1=ATT-ANP02138-052009-10dB T2=CAB-AN03008-40GHZ-2FT T3=ATT-ANP05551-070109-DC BLOCK

Measu	rement Data:		eading lis	ted by ma	argin.	Test Lead: Downlink					
#	Freq	Rdng	T1	T2	T3		Dist	Corr	-	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	dΒμV	dΒμV	dB	Ant
1	4121.408M	72.4	+10.1	+0.5	+0.0		+0.0	83.0	94.0	-11.0	Uplin
									EDGE Low		
2	2472 70214	71.7	. 10.0	.0.4	.00		.00	02.1	Channel	11.0	T.T., 11
2	2472.792M	71.7	+10.0	+0.4	+0.0		+0.0	82.1	94.0	-11.9	Uplin
									EDGE Low Channel		
3	1648.534M	71.0	+9.9	+0.3	+0.0		+0.0	81.2	94.0	-12.8	Uplin
	1010.33111	71.0	17.7	10.5	10.0		10.0	01.2	EDGE Low	12.0	Ории
									Channel		
4	2476.550M	69.2	+10.0	+0.4	+0.0		+0.0	79.6	94.0	-14.4	Uplin
									CDMA Low		-
									Channel		
5	1672.962M	67.5	+9.9	+0.4	+0.0		+0.0	77.8	94.0	-16.2	Uplin
									EDGE Mid C		
6	3297.128M	66.6	+10.0	+0.5	+0.0		+0.0	77.1	94.0	-16.9	Uplin
									EDGE Low		
7	5769.848M	65.2	+10.1	+0.6	+0.0		+0.0	75.9	Channel 94.0	-18.1	Uplin
/	3/09.046WI	03.2	+10.1	+0.0	+0.0		+0.0	13.9	EDGE Low	-10.1	Opini
									Channel		
8	3301.660M	64.8	+10.0	+0.5	+0.0		+0.0	75.3	94.0	-18.7	Uplin
									CDMA Low		- 1
									Channel		
9	1648.680M	65.0	+9.9	+0.3	+0.0		+0.0	75.2	94.0	-18.8	Uplin
									GSM Low C		
10	1650.140M	64.1	+9.9	+0.4	+0.0		+0.0	74.4	94.0	-19.6	Uplin
									CDMA Low		
11	1697.414M	62.3	+9.9	+0.4	+0.0		+0.0	72.6	Channel	-21.4	Linlin
11	1097.414M	02.3	+9.9	+0.4	+0.0		+0.0	72.0	94.0 EDGE High	-21.4	Uplin
									Channel		
12	4182.428M	61.8	+10.0	+0.5	+0.0		+0.0	72.3	94.0	-21.7	Uplin
	.102201.1	01.0	. 10.0	. 0.2	. 0.0		. 0.0	,	EDGE Mid C		Opini
13	1673.140M	61.6	+9.9	+0.4	+0.0		+0.0	71.9	94.0	-22.1	Uplin
									GSM Mid Ch	nannel	-
14	4126.910M	60.8	+10.1	+0.5	+0.0		+0.0	71.4	94.0	-22.6	Uplin
									CDMA Low		
									Channel		
15	5855.398M	60.5	+10.1	+0.6	+0.0		+0.0	71.2	94.0	-22.8	Uplin
1.0	1672 22014	<i>4</i> 0.0	+ O O	ι Ο 4	100		100	71.2	EDGE Mid C		I Imlia
16	1673.320M	60.9	+9.9	+0.4	+0.0		+0.0	71.2	94.0 CDMA Mid	-22.8	Uplin
									Channel		
17	4183.080M	60.3	+10.0	+0.5	+0.0		+0.0	70.8	94.0	-23.2	Uplin
1	1102.0001/1	50.5	. 20.0	. 0.0	. 0.0		. 0.0	. 0.0	CDMA Mid	20.2	Crim
									Channel		

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18	4237.610M	58.5	+10.0	+0.5	+0.0	+0.0	69.0	94.0 -25.0	Uplin
								CDMA High	
								Channel	
19	2510.180M	58.2	+10.0	+0.4	+0.0	+0.0	68.6	94.0 -25.4	Uplin
								CDMA Mid	•
								Channel	
20	1655.060M	56.9	+9.9	+0.4	+0.0	+0.0	67.2	94.0 -26.8	Uplin
								WCDMA Low	- r
								Channel	
2.1	5775.510M	56.4	+10.1	+0.6	+0.0	+0.0	67.1	94.0 -26.9	Uplin
	3773.310111	20.1	110.1	10.0	10.0	10.0	07.1	CDMA Low	Cpiiii
								Channel	
22	1674.940M	56.7	+9.9	+0.4	+0.0	+0.0	67.0	94.0 -27.0	Uplin
22	1074.240141	30.7	1 7.7	10.4	10.0	10.0	07.0	WCDMA Mid	Ории
								Channel	
23	1697.300M	56.6	+9.9	+0.4	+0.0	+0.0	66.9	94.0 -27.1	Uplin
23	1097.300M	30.0	+9.9	+0.4	+0.0	+0.0	00.9		Opini
24	2245 40014	5.6.1	. 10.0	.0.5	. 0. 0	. 0. 0	(()	GSM High Channel	T.T., 1'
24	3345.400M	56.4	+10.0	+0.5	+0.0	+0.0	66.9	94.0 -27.1	Uplin
								CDMA Mid	
2.5	224602016	7.6.0	10.0	0.5	0.0	0.0		Channel	T.T. 11
25	3346.020M	56.2	+10.0	+0.5	+0.0	+0.0	66.7	94.0 -27.3	Uplin
2.5	2500 460 5	7.0	10.0	0.4	0.0	0.0		EDGE Mid Channel	** 11
26	2509.466M	56.2	+10.0	+0.4	+0.0	+0.0	66.6	94.0 -27.4	Uplin
								EDGE Mid Channel	
27	1695.200M	56.3	+9.9	+0.4	+0.0	+0.0	66.6	94.0 -27.4	Uplin
								CDMA High	
								Channel	
28	3390.820M	55.9	+10.1	+0.5	+0.0	+0.0	66.5	94.0 -27.5	Uplin
								CDMA High	
								Channel	
29	1687.080M	55.9	+9.9	+0.4	+0.0	+0.0	66.2	94.0 -27.8	Uplin
								WCDMA High	
								Channel	
30	2542.710M	55.2	+10.0	+0.4	+0.0	+0.0	65.6	94.0 -28.4	Uplin
								CDMA High	_
								Channel	
31	4945.758M	54.4	+10.1	+0.6	+0.0	+0.0	65.1	94.0 -28.9	Uplin
								EDGE Low	•
								Channel	
32	5856.800M	53.6	+10.1	+0.6	+0.0	+0.0	64.3	94.0 -29.7	Uplin
								CDMA Mid	1
								Channel	
33	4217.200M	52.6	+10.0	+0.5	+0.0	+0.0	63.1	94.0 -30.9	Uplin
	.217.2001.1	22.0	. 10.0	. 3.2	. 5.0	10.0	55.1	WCDMA High	~ r
								Channel	
34	4143.960M	50.4	+10.1	+0.5	+0.0	+0.0	61.0	94.0 -33.0	Uplin
54	11 13.700141	50.7	10.1	10.5	10.0	10.0	01.0	WCDMA Low	○ Piiii
								Channel	
25	4182.960M	50.4	+10.0	+0.5	+0.0	+0.0	60.9	94.0 -33.1	Uplin
	7102.700IVI	50.4	10.0	ru.J	10.0	+0.0	00.7	WCDMA Mid	Ории
								Channel	
26	5933.170M	50.0	+10.1	+0.6	+0.0	+0.0	60.7	94.0 -33.3	Uplin
30	3733.1 / UIVI	50.0	+10.1	+0.0	+0.0	+0.0	00.7		Ории
								CDMA High	
								Channel	Page 20

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37 1762.980M 50.0 49.9 +0.4 +0.2 +0.0 60.5 94.0 -33.5 Downl										
38 1738.565M	3	7 1762.980M	50.0	+9.9	+0.4	+0.2	+0.0	60.5		Downl
Section	2	0 1720 565M	40.6	+ O. O.	+0.4	+0.2	+0.0	60.1		Dorrin1
Channel	3	8 1/38.303M	49.0	+9.9	+0.4	+0.2	+0.0	00.1		DOWIII
39 3378.020M										
WCDMA High Channel	3	0 3378 020M	18.0	±10.1	±0.5	±0.0	±0.0	50.5		Unlin
40 1787.475M	,	9 3376.020W	40.7	+10.1	+0.5	+0.0	+0.0	39.3		Opini
40 1787.475M										
SEDGE High Channel 41 1762.840M	4	0 1787.475M	48.9	+9.9	+0.4	+0.2	+0.0	59.4		Downl
1762.840M		0 17071170111	.0.,			. 0.2	. 0.0			20,,,,,,
42 1738.535M										
42 1738.535M	4	1 1762.840M	48.6	+9.9	+0.4	+0.2	+0.0	59.1	94.0 -34.9	Downl
43 5018.902M 48.2 +10.0 +0.6 +0.0 +0.0 58.8 94.0 -35.2 Uplin										
43 5018,902M 48.2 +10.0 +0.6 +0.0 +0.0 58.8 94.0 -35.2 Uplin EDGE Mid Channel 44 2485,480M 48.1 +10.0 +0.4 +0.0 +0.0 58.5 94.0 -35.5 Uplin WCDMA Low Channel 45 5863,600M 47.7 +10.1 +0.6 +0.0 +0.0 58.4 94.0 -35.6 Uplin WCDMA Mid Channel 46 3346,040M 47.5 +10.0 +0.5 +0.0 +0.0 58.0 94.0 -36.0 Uplin WCDMA Mid Channel 47 5940,922M 47.2 +10.1 +0.6 +0.0 +0.0 57.9 94.0 -36.1 Uplin EDGE High Channel 48 3394,844M 47.3 +10.1 +0.5 +0.0 +0.0 57.9 94.0 -36.1 Uplin EDGE High Channel 49 3312,100M 47.1 +10.0 +0.5 +0.0 +0.0 57.6 94.0 -36.4 Uplin WCDMA Low Channel 50 1787,300M 47.0 +9.9 +0.4 +0.2 +0.0 57.5 94.0 -37.0 Uplin EDGE High Channel 51 4243,546M 46.5 +10.0 +0.5 +0.0 +0.0 57.0 94.0 -37.0 Uplin EDGE High Channel 52 2510,540M 46.6 +10.0 +0.4 +0.0 +0.0 57.0 94.0 -37.0 Uplin EDGE High Channel 52 2510,540M 46.6 +10.0 +0.4 +0.0 +0.0 57.0 94.0 -37.1 Uplin EDGE Low Channel 54 2533,620M 46.3 +10.0 +0.4 +0.0 +0.0 56.7 94.0 -37.3 Uplin UCDMA Mid Channel 55 5020,420M 45.9 +10.0 +0.6 +0.0 +0.0 56.5 94.0 -37.5 Uplin UCDMA Mid Channel	4	2 1738.535M	48.3	+9.9	+0.4	+0.2	+0.0	58.8	94.0 -35.2	Downl
EDGE Mid Channel FUND FU									GSM Low Channel	
44 2485.480M	4	3 5018.902M	48.2	+10.0	+0.6	+0.0	+0.0	58.8	94.0 -35.2	Uplin
WCDMA Low Channel									EDGE Mid Channel	
Channel	4	4 2485.480M	48.1	+10.0	+0.4	+0.0	+0.0	58.5		Uplin
45 5863.600M										
WCDMA Mid Channel										
A6 3346.040M 47.5 +10.0 +0.5 +0.0 +0.0 58.0 94.0 -36.0 Uplin WCDMA Mid Channel	4	5 5863.600M	47.7	+10.1	+0.6	+0.0	+0.0	58.4		Uplin
46 3346.040M										
WCDMA Mid Channel										
Channel CDMA Mid Channel Channel CDMA Mid Channel CDMA	4	6 3346.040M	47.5	+10.0	+0.5	+0.0	+0.0	58.0		Uplin
47 5940.922M 47.2 +10.1 +0.6 +0.0 57.9 94.0 -36.1 Uplin EDGE High Channel 48 3394.844M 47.3 +10.1 +0.5 +0.0 +0.0 57.9 94.0 -36.1 Uplin EDGE High Channel 49 3312.100M 47.1 +10.0 +0.5 +0.0 +0.0 57.6 94.0 -36.4 Uplin WCDMA Low Channel 50 1787.300M 47.0 +9.9 +0.4 +0.2 +0.0 57.5 94.0 -36.5 Downl GSM High Channel 51 4243.546M 46.5 +10.0 +0.5 +0.0 +0.0 57.0 94.0 -37.0 Uplin EDGE High Channel 52 2510.540M 46.6 +10.0 +0.4 +0.0 57.0 94.0 -37.0 Uplin WCDMA Mid Channel 53 6594.232M 46.1 +10.1 +0.7 +0.0 +0.0 56.9 94.0 -37.1 Uplin EDGE Low Channel 54 2533.620M 46.3 +10.0<										
BDGE High Channel	_	7 5040 02214	47.0	. 10.1	.0.6	. 0. 0	. 0. 0	57.0		TT 11
Channel Channel Channel Channel	4	/ 5940.922M	47.2	+10.1	+0.6	+0.0	+0.0	57.9		Uplin
48 3394.844M 47.3 +10.1 +0.5 +0.0 57.9 94.0 -36.1 Uplin EDGE High Channel 49 3312.100M 47.1 +10.0 +0.5 +0.0 +0.0 57.6 94.0 -36.4 Uplin WCDMA Low Channel 50 1787.300M 47.0 +9.9 +0.4 +0.2 +0.0 57.5 94.0 -36.5 Downl GSM High Channel 51 4243.546M 46.5 +10.0 +0.5 +0.0 57.0 94.0 -37.0 Uplin EDGE High Channel 52 2510.540M 46.6 +10.0 +0.4 +0.0 57.0 94.0 -37.0 Uplin WCDMA Mid Channel 53 6594.232M 46.1 +10.1 +0.7 +0.0 56.9 94.0 -37.1 Uplin EDGE Low Channel 54 2533.620M 46.3 +10.0 +0.4 +0.0 +0.0 56.7 94.0 -37.3 Uplin WCDMA High Channel 55 5020.420M 45.9 +10.0 +0.6 +0.0									_	
BDGE High Channel CDMA Mid Cha	1	Q 2204 Q44M	17.3	+10.1	10.5	+0.0	+0.0	57.0		Unlin
Channel Channel Channel Channel Channel Channel WCDMA Low Channel CDMA Mid Channel Channel CDMA Mid CDMA	4	0 3374.044WI	47.3	+10.1	+0.5	+0.0	+0.0	31.9		Opini
49 3312.100M 47.1 +10.0 +0.5 +0.0 +0.0 57.6 94.0 -36.4 Uplin WCDMA Low Channel 50 1787.300M 47.0 +9.9 +0.4 +0.2 +0.0 57.5 94.0 -36.5 Downl GSM High Channel 51 4243.546M 46.5 +10.0 +0.5 +0.0 +0.5 +0.0 57.0 94.0 -37.0 Uplin EDGE High Channel 52 2510.540M 46.6 +10.0 +0.4 +0.0 +0.4 +0.0 57.0 94.0 -37.0 Uplin WCDMA Mid Channel 53 6594.232M 46.1 +10.1 +0.7 +0.0 +0.0 56.9 94.0 -37.1 Uplin EDGE Low Channel 54 2533.620M 46.3 +10.0 +0.4 +0.0 +0.0 56.7 94.0 -37.3 Uplin WCDMA High Channel 55 5020.420M 45.9 +10.0 +0.6 +0.0 +0.0 56.5 94.0 -37.5 Uplin CDMA Mid Channel										
WCDMA Low Channel Solution Solution Channel Channel Solution Channel Channel Channel Channel Channel Channel Company Channel Company Channel Company Company Channel Company Com	4	9 3312 100M	<i>4</i> 7 1	+10.0	+0.5	+0.0	+0.0	57.6		Unlin
So 1787.300M	') 3312.100IVI	17.1	110.0	10.5	10.0	10.0	37.0		Cpiiii
50 1787.300M 47.0 +9.9 +0.4 +0.2 +0.0 57.5 94.0 -36.5 Downl GSM High Channel 51 4243.546M 46.5 +10.0 +0.5 +0.0 57.0 94.0 -37.0 Uplin EDGE High Channel 52 2510.540M 46.6 +10.0 +0.4 +0.0 57.0 94.0 -37.0 Uplin WCDMA Mid Channel 53 6594.232M 46.1 +10.1 +0.7 +0.0 56.9 94.0 -37.1 Uplin EDGE Low Channel 54 2533.620M 46.3 +10.0 +0.4 +0.0 56.7 94.0 -37.3 Uplin WCDMA High Channel 55 5020.420M 45.9 +10.0 +0.6 +0.0 56.5 94.0 -37.5 Uplin CDMA Mid Channel										
S1 4243.546M	5	0 1787.300M	47.0	+9.9	+0.4	+0.2	+0.0	57.5		Downl
51 4243.546M 46.5 +10.0 +0.5 +0.0 57.0 94.0 -37.0 Uplin EDGE High Channel 52 2510.540M 46.6 +10.0 +0.4 +0.0 57.0 94.0 -37.0 Uplin WCDMA Mid Channel 53 6594.232M 46.1 +10.1 +0.7 +0.0 +0.0 56.9 94.0 -37.1 Uplin EDGE Low Channel 54 2533.620M 46.3 +10.0 +0.4 +0.0 +0.0 56.7 94.0 -37.3 Uplin WCDMA High Channel 55 5020.420M 45.9 +10.0 +0.6 +0.0 +0.0 56.5 94.0 -37.5 Uplin CDMA Mid Channel										_ , , , , , ,
EDGE High Channel	5	1 4243.546M	46.5	+10.0	+0.5	+0.0	+0.0	57.0		Uplin
52 2510.540M 46.6 +10.0 +0.4 +0.0 57.0 94.0 -37.0 Uplin WCDMA Mid Channel 53 6594.232M 46.1 +10.1 +0.7 +0.0 56.9 94.0 -37.1 Uplin EDGE Low Channel 54 2533.620M 46.3 +10.0 +0.4 +0.0 56.7 94.0 -37.3 Uplin WCDMA High Channel 55 5020.420M 45.9 +10.0 +0.6 +0.0 56.5 94.0 -37.5 Uplin CDMA Mid Channel										•
WCDMA Mid Channel S5 6594.232M 46.1 +10.1 +0.7 +0.0 +0.0 56.9 94.0 -37.1 Uplin EDGE Low Channel									Channel	
Channel S3 6594.232M 46.1 +10.1 +0.7 +0.0 +0.0 56.9 94.0 -37.1 Uplin EDGE Low Channel 54 2533.620M 46.3 +10.0 +0.4 +0.0 +0.0 56.7 94.0 -37.3 Uplin WCDMA High Channel 55 5020.420M 45.9 +10.0 +0.6 +0.0 +0.0 56.5 94.0 -37.5 Uplin CDMA Mid Channel Channel	5	2 2510.540M	46.6	+10.0	+0.4	+0.0	+0.0	57.0	94.0 -37.0	Uplin
53 6594.232M 46.1 +10.1 +0.7 +0.0 56.9 94.0 -37.1 Uplin EDGE Low Channel 54 2533.620M 46.3 +10.0 +0.4 +0.0 56.7 94.0 -37.3 Uplin WCDMA High Channel 55 5020.420M 45.9 +10.0 +0.6 +0.0 56.5 94.0 -37.5 Uplin CDMA Mid Channel										
EDGE Low Channel 54 2533.620M 46.3 +10.0 +0.4 +0.0 +0.0 56.7 94.0 -37.3 Uplin WCDMA High Channel 55 5020.420M 45.9 +10.0 +0.6 +0.0 +0.0 56.5 94.0 -37.5 Uplin CDMA Mid Channel										
Channel S4 2533.620M 46.3 +10.0 +0.4 +0.0 +0.0 56.7 94.0 -37.3 Uplin WCDMA High Channel 55 5020.420M 45.9 +10.0 +0.6 +0.0 +0.0 56.5 94.0 -37.5 Uplin CDMA Mid Channel CDMA Mid Channel CDMA Mid Channel CDMA Mid Channel	5	3 6594.232M	46.1	+10.1	+0.7	+0.0	+0.0	56.9		Uplin
54 2533.620M 46.3 +10.0 +0.4 +0.0 +0.0 56.7 94.0 -37.3 Uplin WCDMA High Channel 55 5020.420M 45.9 +10.0 +0.6 +0.0 +0.0 56.5 94.0 -37.5 Uplin CDMA Mid Channel										
WCDMA High Channel 55 5020.420M 45.9 +10.0 +0.6 +0.0 +0.0 56.5 94.0 -37.5 Uplin CDMA Mid Channel				40 -		2.5				** **
Channel	5	4 2533.620M	46.3	+10.0	+0.4	+0.0	+0.0	56.7		Uplin
55 5020.420M 45.9 +10.0 +0.6 +0.0 +0.0 56.5 94.0 -37.5 Uplin CDMA Mid Channel										
CDMA Mid Channel		5 5000 4003 f	45.0	. 10.0	,0.0	.00	.00	5.7.7		TT1!
Channel	5	5 5020.420M	45.9	+10.0	+0.6	+0.0	+0.0	36.5		∪plin
1 30 7/30.420M1 43.3 ±10.0 ±0.0 ±0.0 ±0.0 50.1 94.0 -3/.9 Opini	-	6 4950 420M	15.5	±10 0	⊥ 0.6	±0.0		56 1		Unlin
	1 3	0 4930.4201 V I	+3.3	±10.0	±0.0	+0.0	+0.0	50.1	24.0 -31.9	Opini

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								CDMA Low Channel	
57	5791.220M	45.3	+10.1	+0.6	+0.0	+0.0	56.0	94.0 -38.0 WCDMA Low Channel	Uplin
58	5902.640M	45.2	+10.1	+0.6	+0.0	+0.0	55.9	94.0 -38.1 WCDMA High Channel	Uplin
59	1762.680M	45.2	+9.9	+0.4	+0.2	+0.0	55.7	94.0 -38.3 CDMA Mid Channel	Downl
60	4346.425M	44.9	+10.0	+0.5	+0.3	+0.0	55.7	94.0 -38.3 EDGE Low Channel	Downl
61	5769.545M	44.6	+10.1	+0.6	+0.0	+0.0	55.3	94.0 -38.7 GSM Low Channel	Uplin
62	1740.210M	44.2	+9.9	+0.4	+0.2	+0.0	54.7	94.0 -39.3 CDMA Low Channel	Downl
63	4407.510M	43.8	+9.9	+0.5	+0.4	+0.0	54.6	94.0 -39.4 EDGE Mid Channel	Downl
64	2681.205M	43.6	+10.0	+0.4	+0.4	+0.0	54.4	94.0 -39.6 EDGE High Channel	Downl
65	3525.945M	42.6	+10.0	+0.5	+0.3	+0.0	53.4	94.0 -40.6 EDGE Mid Channel	Downl
66	1785.810M	42.8	+9.9	+0.4	+0.2	+0.0	53.3	94.0 -40.7 CDMA High Channel	Downl
67	2644.445M	42.6	+10.0	+0.4	+0.3	+0.0	53.3	94.0 -40.7 EDGE Mid Channel	Downl
68	1761.320M	41.6	+9.9	+0.4	+0.2		52.1	94.0 -41.9 WCDMA Mid Channel	Downl
	4468.330M	40.6	+9.9	+0.5	+0.4		51.4	94.0 -42.6 EDGE High Channel	Downl
70	1777.060M	40.4	+9.9	+0.4	+0.2	+0.0	50.9	94.0 -43.1 WCDMA High Channel	Downl
71	1747.960M	39.8	+9.9	+0.4	+0.2	+0.0	50.3	94.0 -43.7 WCDMA Low Channel	Downl

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$\underline{FCC~2.1033(c)(14)/2.1053/22.917-FIELD~STRENGTH~OF~SPURIOUS~RADIATION}$

Test Setup Photos





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Test Data Sheets

Test Location: CKC Laboratories, Inc. •5046 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: Cellynx Group
Specification: FCC 22.917

Work Order #:89227Date:7/7/2009Test Type:Radiated ScanTime:14:32:11Equipment:Mobile Cellular BoosterSequence#:19

Manufacturer: Cellynx Tested By: Randal Clark

Model: MD015A S/N: 09262100003

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A	US44300507	07/08/2008	07/08/2010	AN02660
Site A 10 meter cable		05/10/2009	05/10/2011	MA10M
set				
6dB Attenuator	none	05/20/2009	05/20/2011	ANP05656
HP-8447D Preamp	2727A05444	06/20/2008	06/20/2010	AN00062
Antenna, Bilog	2455	12/22/2008	12/22/2010	AN01992
Cable, 10' 2.92mm 40	na	06/10/2009	06/10/2011	ANP01403
GHz				
Andrew-25'	N/A	05/19/2009	05/19/2011	AN01012
Cable, Andrews	NA	05/20/2009	05/20/2011	ANP04274
Hardline HF-005-20				
Preamp HP83051A	3332A00309	11/13/2008	11/13/2010	AN02115
EMCO 3115 Horn	9006-3413	06/06/2008	06/06/2010	AN00327
Antenna				

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Mobile Cellular Booster*	Cellynx	MD015A	09262100003

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Sceptre Power	S012BU1200100	NA
Signal Generator	Agilent	E4437B	MY41000126
Laptop Power Supply	Dell	LA65N50-00	CN-0DF263-71615-850-
			9C16
Support Computer	Dell	PP23LB	28862556913

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Test Conditions / Notes:

Equipment is a bidirectional mobile cellular booster amplifier operating on 824-849 paired with 869-894 MHz and 1850-1910 paired with 1930-1990 MHz. The equipment is connected directly to a signal generator source. The signal generator is located below the floor. The laptop is located on the table next to the equipment under test.

The amplifier is controlled using an external computer running Gemini Program Interface GUI software v8.4.1.1. The software is used to control the internal attenuation of the amplifier. The tests were performed with the attenuators set to a static value of 6.0 corresponding to approximately 6dB of internal attenuation. In normal operation, the amplifier would insert attenuation automatically in order to ensure the input signal levels do not exceed a predetermined value. The firmware in the amplifier is v04.10.84.

Bandwidths used: RBW=100kHz, VBW=300kHz

Frequency Range Investigated: 30MHz to 10GHz

Operating Band: Uplink and Downlink

Input Signal: CW

Temperature: 25°C Rel Humidity: 40%

No EUT emissions detected within 20dB of the limit.

Transducer Legend:

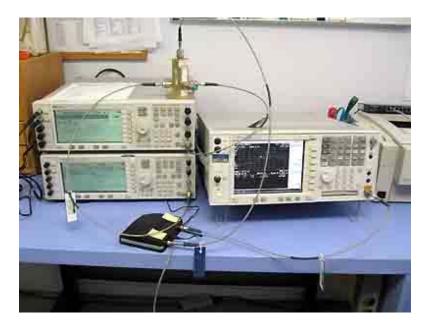
Measurement Data:			R	eading li	sted by n	nargin.		Te	st Distance	e: 10 Mete	rs	
	#	Freq	Rdng					Dist	Corr	Spec	Margin	Polar
		MHz	dBuV	dB	dB	dB	dB	Table	dΒμV	dBuV	dB	Ant

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FCC 2.1051/2.1053 – BLOCK EDGE

Test Setup Photos



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Test Data Sheets

Test Location: CKC Laboratories, Inc. •5046 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: Cellynx Group Specification: FCC 22.917

Work Order #: 89227 Date: 7/2/2009
Test Type: Antenna Conducted Time: 14:09:32
Equipment: Mobile Cellular Booster Sequence#: 5

Manufacturer: Cellynx Tested By: Randal Clark Model: MD015A 120V 60Hz

S/N: 09262100003

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #	
E4446A	US44300507	07/08/2008	07/08/2010	AN02660	
Cable, 10' 2.92mm 4	0 na	06/10/2009	06/10/2011	ANP01403	
GHz					
Weinchel 10dB	C8596	05/20/2009	05/20/2011	ANP02138	
attenuator					
Inmet DC Block	NA	07/01/2009	07/01/2011	ANP05551	
Cable, 24" 2.92mm	NA	01/15/2008	01/15/2010	AN03008	
40GHz					

Equipment Under Test (* = EUT):

_ * *			
Function	Manufacturer	Model #	S/N
Mobile Cellular Booster*	Cellynx	MD015A	09262100003

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Sceptre Power	S012BU1200100	NA
Signal Generator	Agilent	E4437B	US39260159
Signal Generator	Agilent	E4437B	MY41000126
Laptop Power Supply	Dell	LA65N50-00	CN-0DF263-71615-850-
			9C16
Support Computer	Dell	PP23LB	28862556913

Test Conditions / Notes:

Equipment is a bidirectional mobile cellular booster amplifier operating on 824-849 paired with 869-894 MHz and 1850-1910 paired with 1930-1990 MHz. The equipment is connected directly to a signal generator source. Two-tone signal input is used as required for intermodulation attenuation.

The amplifier is controlled using an external computer running Gemini Program Interface GUI software v8.4.1.1. The software is used to control the internal attenuation of the amplifier. The tests were performed with the attenuators set to a static value of 6.0 corresponding to approximately 6dB of internal attenuation. In normal operation, the amplifier would insert attenuation automatically in order to ensure the input signal levels do not exceed a predetermined value. The firmware in the amplifier is v04.10.84.

Frequency Range Investigated: Block Edge Operating Band: Uplink and Downlink

Temperature: 25°C Rel Humidity: 40%

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Transducer Legend:
T1=ATT-ANP02138-052009-10dB T2=ANP05551 DC Block T3=CAB-AN03008-40GHZ-2FT

Measur	rement Data:	Re	eading lis	ted by ma	argin.			Test Lea	ad: Uplink		
#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	868.710M	82.8	+9.9	+0.7	+0.3		+0.0	93.7	94.0 GSM	-0.3	Downl
2	849.260M	83.4	+9.9	+0.0	+0.3		+0.0	93.6	94.0 EDGE	-0.4	Uplin
3	868.710M	82.6	+9.9	+0.7	+0.3		+0.0	93.5	94.0 EDGE	-0.5	Downl
4	894.280M	82.3	+9.9	+0.7	+0.3		+0.0	93.2	94.0 EDGE	-0.8	Downl
5	867.780M	82.2	+9.9	+0.7	+0.3		+0.0	93.1	94.0 CDMA	-0.9	Downl
6	823.710M	82.6	+9.9	+0.0	+0.2		+0.0	92.7	94.0 EDGE	-1.3	Uplin
7	822.780M	81.7	+9.9	+0.0	+0.2		+0.0	91.8	94.0 CDMA	-2.2	Uplin
8	850.420M	81.2	+9.9	+0.0	+0.3		+0.0	91.4	94.0 CDMA	-2.6	Uplin
9	894.280M	80.4	+9.9	+0.7	+0.3		+0.0	91.3	94.0 GSM	-2.7	Downl
10	823.680M	79.7	+9.9	+0.0	+0.2		+0.0	89.8	94.0 GSM	-4.2	Uplin
11	849.260M	78.9	+9.9	+0.0	+0.3		+0.0	89.1	94.0 GSM	-4.9	Uplin
12	865.300M	77.9	+9.9	+0.7	+0.3		+0.0	88.8	94.0 WCDMA	-5.2	Downl
13	895.120M	77.3	+9.9	+0.7	+0.3		+0.0	88.2	94.0 CDMA	-5.8	Downl
14	897.100M	73.4	+9.9	+0.7	+0.3		+0.0	84.3	94.0 WCDMA	-9.7	Downl
15	819.800M	74.1	+9.9	+0.0	+0.2		+0.0	84.2	94.0 WCDMA	-9.8	Uplin
16	852.700M	73.5	+9.9	+0.0	+0.3		+0.0	83.7	94.0 WCDMA	-10.3	Uplin

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INPUT VS. OUTPUT PLOTS

Test Setup Photo



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Test Data Sheets

Test Location: CKC Laboratories, Inc. •5046 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: Cellynx Group Specification: FCC 2.1049

Work Order #: **89227** Date: 7/6/2009

Test Type: Antenna Conducted Time: Equipment: Mobile Cellular Booster Sequence#: 15

Manufacturer: Cellynx Tested By: Randal Clark Model: MD015A 120V 60Hz

S/N: 09262100003

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A	US44300507	07/08/2008	07/08/2010	AN02660
Cable, 10' 2.92mm 40	na	06/10/2009	06/10/2011	ANP01403
GHz				
Weinchel 10dB	C8596	05/20/2009	05/20/2011	ANP02138
attenuator				
Inmet DC Block	NA	07/01/2009	07/01/2011	ANP05551

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Mobile Cellular Booster*	Cellynx	MD015A	09262100003

Support Devices:

THE THE TANK			
Function	Manufacturer	Model #	S/N
Power Supply	Sceptre Power	S012BU1200100	NA
Signal Generator	Agilent	E4437B	US39260159
Signal Generator	Agilent	E4437B	MY41000126
Laptop Power Supply	Dell	LA65N50-00	CN-0DF263-71615-850-
			9C16
Support Computer	Dell	PP23LB	28862556913

Test Conditions / Notes:

Equipment is a bidirectional mobile cellular booster amplifier operating on 824-849 paired with 869-894 MHz and 1850-1910 paired with 1930-1990 MHz. The equipment is connected directly to a signal generator source. For the input plots, the signal generator is set to a static amplitude for all modulations which is higher than that which was used for the input signal for the output plots. For the output plots, the signal generator is set to a static amplitude for all modulations corresponding to approximately that which would give the maximum RF power output level.

The amplifier is controlled using an external computer running Gemini Program Interface GUI software v8.4.1.1. The software is used to control the internal attenuation of the amplifier. The tests were performed with the attenuators set to a static value of 6.0 corresponding to approximately 6dB of internal attenuation. In normal operation, the amplifier would insert attenuation automatically in order to ensure the input signal levels do not exceed a predetermined value. The firmware in the amplifier is v04.10.84.

Frequency Range Investigated: Middle channel of each band.

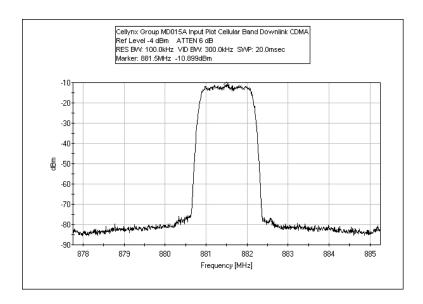
Operating Band: Uplink and Downlink

Temperature: 25°C Rel Humidity: 40%

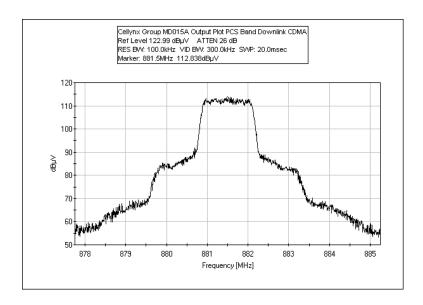
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INPUT VS. OUTPUT PLOTS - CDMA DOWNLINK - INPUT



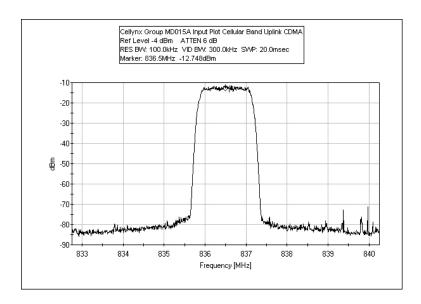
INPUT VS. OUTPUT PLOTS - CDMA DOWNLINK - OUTPUT



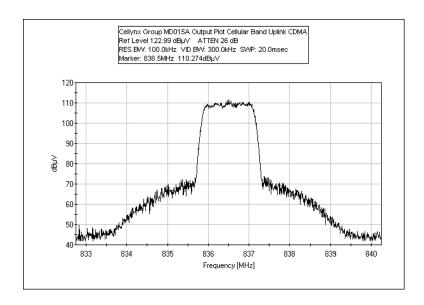
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INPUT VS. OUTPUT PLOTS - CDMA UPLINK - INPUT



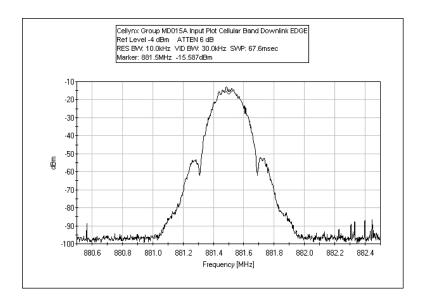
INPUT VS. OUTPUT PLOTS - CDMA UPLINK - OUTPUT



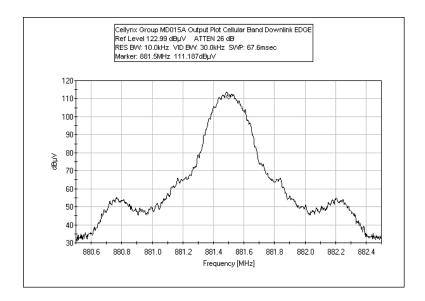
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INPUT VS. OUTPUT PLOTS - EDGE DOWNLINK - INPUT



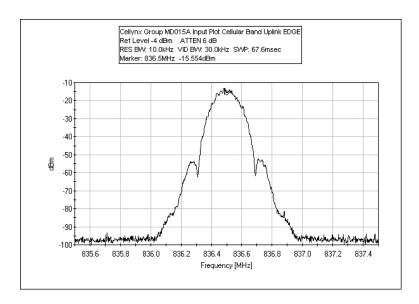
INPUT VS. OUTPUT PLOTS - EDGE DOWNLINK - OUTPUT



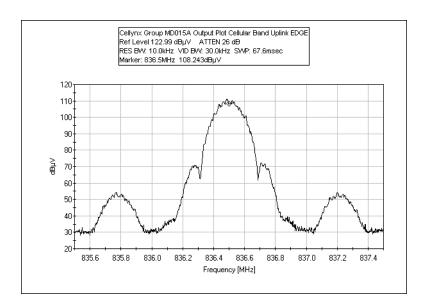
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INPUT VS. OUTPUT PLOTS - EDGE UPLINK - INPUT



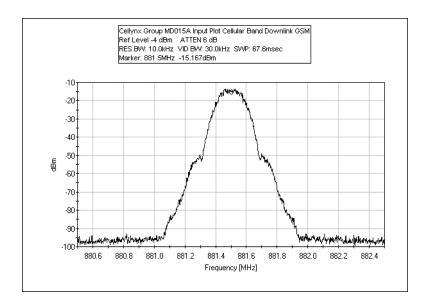
INPUT VS. OUTPUT PLOTS - EDGE UPLINK - OUTPUT



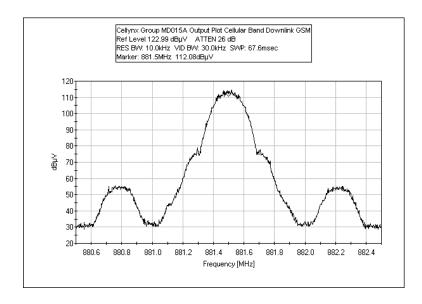
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INPUT VS. OUTPUT PLOTS - GSM DOWNLINK - INPUT



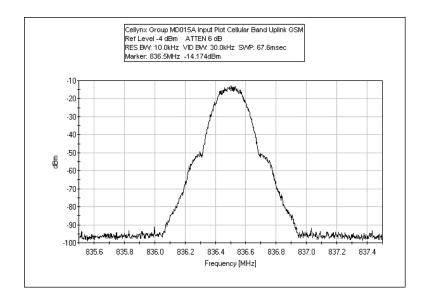
INPUT VS. OUTPUT PLOTS - GSM DOWNLINK - OUTPUT



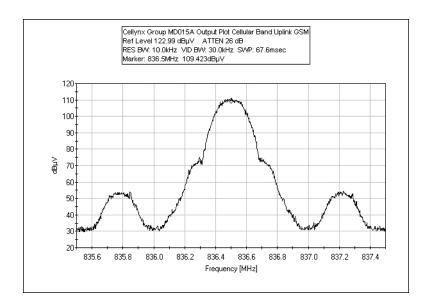
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INPUT VS. OUTPUT PLOTS - GSM UPLINK - INPUT



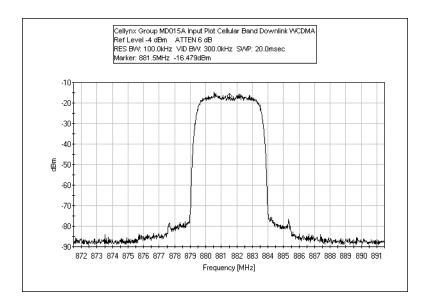
INPUT VS. OUTPUT PLOTS - GSM UPLINK - OUTPUT



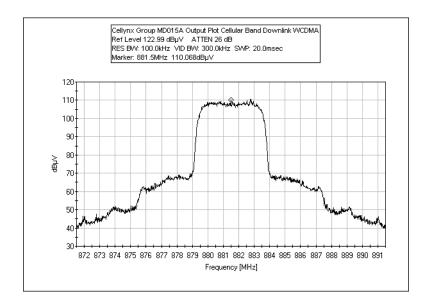
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INPUT VS. OUTPUT PLOTS - WCDMA DOWNLINK - INPUT



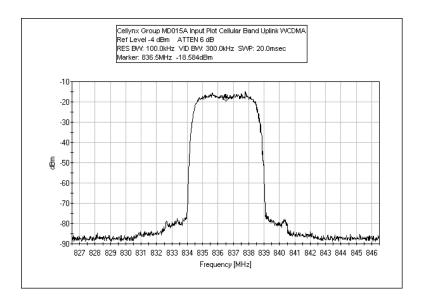
INPUT VS. OUTPUT PLOTS - WCDMA DOWNLINK - OUTPUT



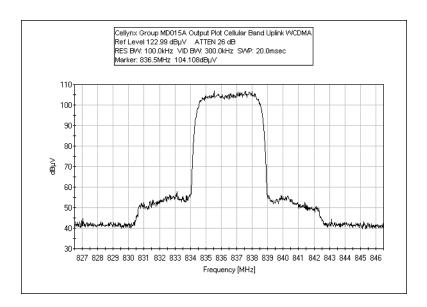
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INPUT VS. OUTPUT PLOTS - WCDMA UPLINK - INPUT



INPUT VS. OUTPUT PLOTS - WCDMA UPLINK - OUTPUT

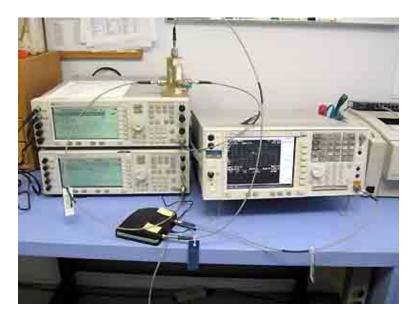


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FCC 2.1051 – INTERMODULATION

Test Setup Photo



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Test Location: CKC Laboratories, Inc. •5046 Sierra Pines Dr. • Mariopsa, CA 95338 • 1-800-500-4EMC (4362)

Customer: Cellynx Group Specification: FCC 22.917

Work Order #: **89227** Date: 7/2/2009

Test Type: Antenna Conducted
Equipment: Mobile Cellular Booster

Manufacturer: Cellynx Tested By: Randal Clark Model: MD015A 120V 60Hz

S/N: 09262100003

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A	US44300507	07/08/2008	07/08/2010	AN02660
Cable, 10' 2.92mm 40	na	06/10/2009	06/10/2011	ANP01403
GHz				
Weinchel 10dB	C8596	05/20/2009	05/20/2011	ANP02138
attenuator				
Inmet DC Block	NA	07/01/2009	07/01/2011	ANP05551

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Mobile Cellular Booster*	Cellynx	MD015A	09262100003

Support Devices:

Support Devices.			
Function	Manufacturer	Model #	S/N
Power Supply	Sceptre Power	S012BU1200100	NA
Signal Generator	Agilent	E4437B	US39260159
Signal Generator	Agilent	E4437B	MY41000126
Laptop Power Supply	Dell	LA65N50-00	CN-0DF263-71615-850-
			9C16
Support Computer	Dell	PP23LB	28862556913

Test Conditions / Notes:

Equipment is a bidirectional mobile cellular booster amplifier operating on 824-849 paired with 869-894 MHz and 1850-1910 paired with 1930-1990 MHz. The equipment is connected directly to a signal generator source. Signal generator source provides two-tone input for the amplifier. Input level is set such that the maximum aggregate authorized power output level is obtained.

The amplifier is controlled using an external computer running Gemini Program Interface GUI software v8.4.1.1. The software is used to control the internal attenuation of the amplifier. The tests were performed with the attenuators set to a static value of 6.0 corresponding to approximately 6dB of internal attenuation. In normal operation, the amplifier would insert attenuation automatically in order to ensure the input signal levels do not exceed a predetermined value. The firmware in the amplifier is v04.10.84.

Frequency Range Investigated: Carrier Operating Band: Uplink and Downlink

Temperature: 25°C Rel Humidity: 40%

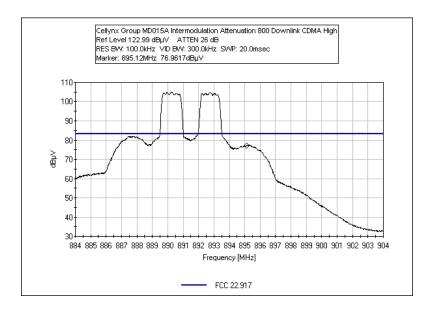
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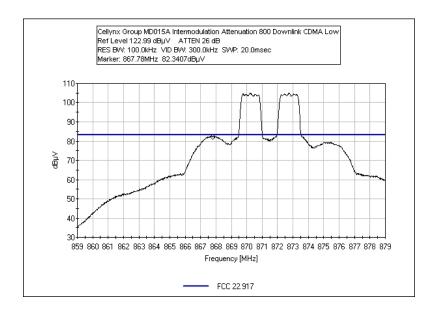
Test Plots

Tested By: Randy Clark

FCC 2.1051 INTERMODULATION - CDMA DOWNLINK - HIGH



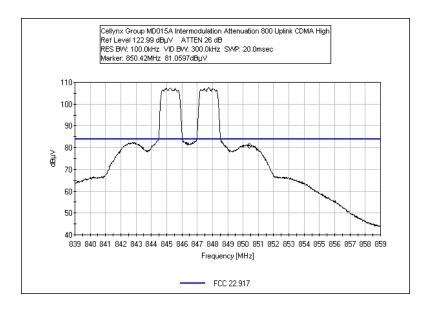
FCC 2.1051 INTERMODULATION - CDMA DOWNLINK - LOW



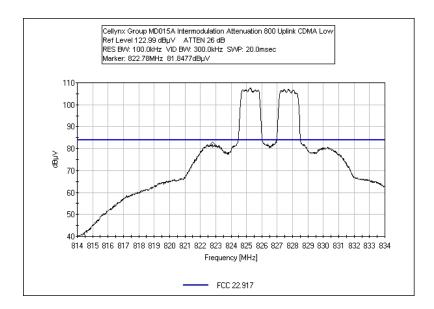
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FCC 2.1051 INTERMODULATION - CDMA UPLINK - HIGH



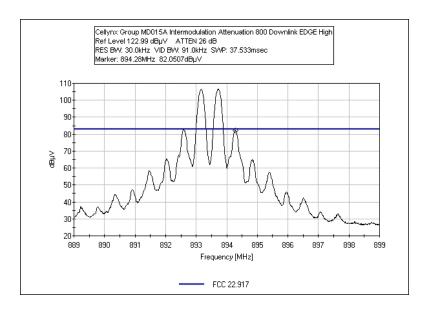
FCC 2.1051 INTERMODULATION - CDMA UPLINK - LOW



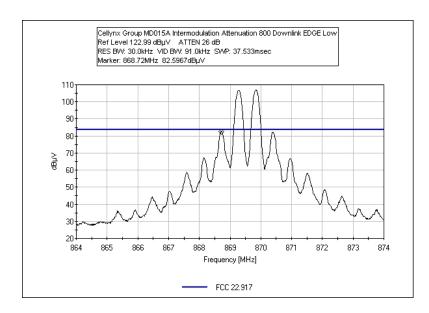
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FCC 2.1051 INTERMODULATION – EDGE DOWNLINK – HIGH



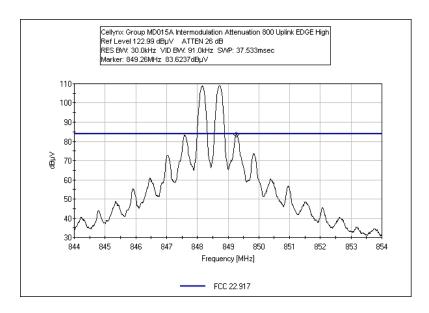
FCC 2.1051 INTERMODULATION - EDGE DOWNLINK - LOW



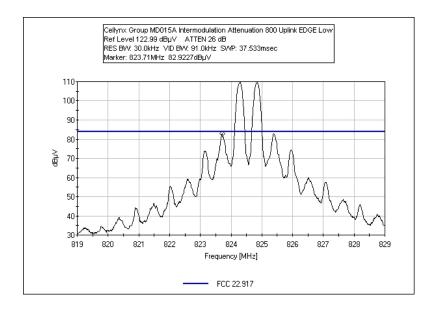
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FCC 2.1051 INTERMODULATION - EDGE UPLINK - HIGH



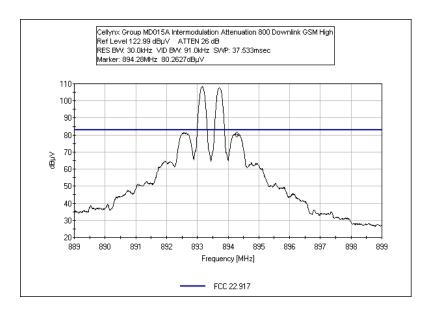
FCC 2.1051 INTERMODULATION – EDGE UPLINK – LOW



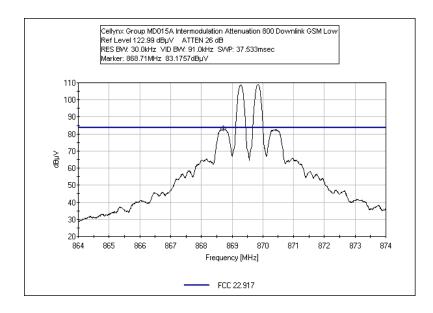
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FCC 2.1051 INTERMODULATION - GSM DOWNLINK - HIGH



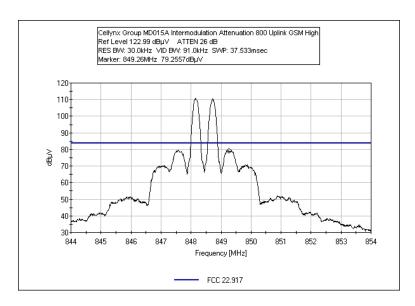
FCC 2.1051 INTERMODULATION – GSM DOWNLINK – LOW



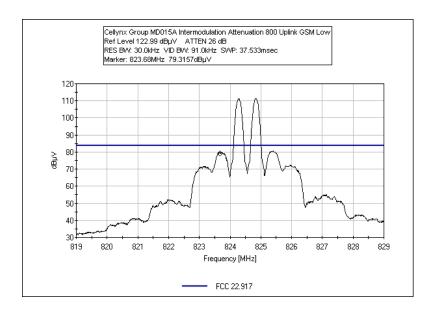
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FCC 2.1051 INTERMODULATION - GSM UPLINK - HIGH



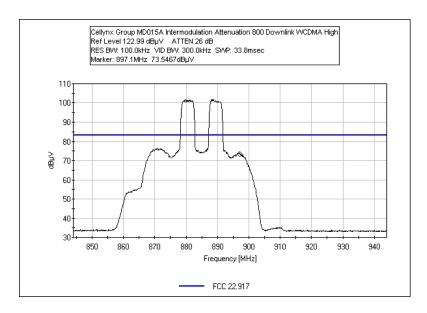
FCC 2.1051 INTERMODULATION - GSM UPLINK - LOW



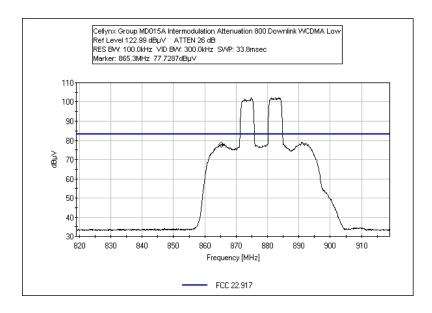
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FCC 2.1051 INTERMODULATION - WCDMA DOWNLINK - HIGH



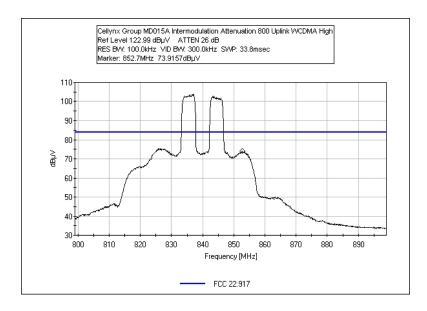
FCC 2.1051 INTERMODULATION – WCDMA DOWNLINK – LOW



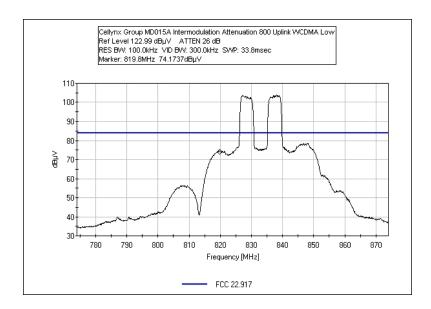
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FCC 2.1051 INTERMODULATION - WCDMA UPLINK - HIGH



FCC 2.1051 INTERMODULATION - WCDMA UPLINK - LOW



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FCC 2.1051 – OUT OF BAND REJECTION

Test Setup Photo



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Test Location: CKC Laboratories, Inc. •5046 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: Cellynx Group Specification: FCC 22.917

Work Order #: **89227** Date: 7/1/2009

Test Type: Antenna Conducted
Equipment: Mobile Cellular Booster

Manufacturer: Cellynx Tested By: Randal Clark Model: MD015A 120V 60Hz

S/N: 09262100003

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A	US44300507	07/08/2008	07/08/2010	AN02660
Cable, 10' 2.92mm 40	na	06/10/2009	06/10/2011	ANP01403
GHz				
Weinchel 10dB	C8596	05/20/2009	05/20/2011	ANP02138
attenuator				
Inmet DC Block	NA	07/01/2009	07/01/2011	ANP05551

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Mobile Cellular Booster*	Cellynx	MD015A	09262100003

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Sceptre Power	S012BU1200100	NA
Signal Generator	Agilent	E4437B	US39260159
Signal Generator	Agilent	E4437B	MY41000126
Laptop Power Supply	Dell	LA65N50-00	CN-0DF263-71615-850-
			9C16
Support Computer	Dell	PP23LB	28862556913

Test Conditions / Notes:

Equipment is a bidirectional mobile cellular booster amplifier operating on 824-849 paired with 869-894 MHz and 1850-1910 paired with 1930-1990 MHz. The equipment is connected directly to a signal generator source. The reference signal is injected at -30dBm (output at signal generator). The signal generator is adjusted over the entire range of the provided plot.

The amplifier is controlled using an external computer running Gemini Program Interface GUI software v8.4.1.1. The software is used to control the internal attenuation of the amplifier. The tests were performed with the attenuators set to a static value of 6.0 corresponding to approximately 6dB of internal attenuation. In normal operation, the amplifier would insert attenuation automatically in order to ensure the input signal levels do not exceed a predetermined value. The firmware in the amplifier is v04.10.84.

Frequency Range Investigated: Carrier Operating Band: Uplink and Downlink

Temperature: 25°C Rel Humidity: 40%

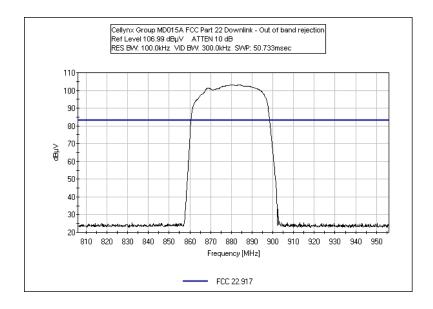
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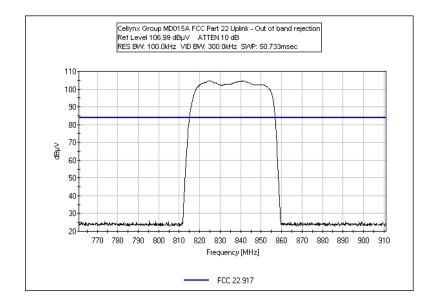
Test Plots

Tested By: Randy Clark

FCC 2.1051 - OUT OF BAND REJECTION - DONWLINK



FCC 2.1051 - OUT OF BAND REJECTION - UPLINK

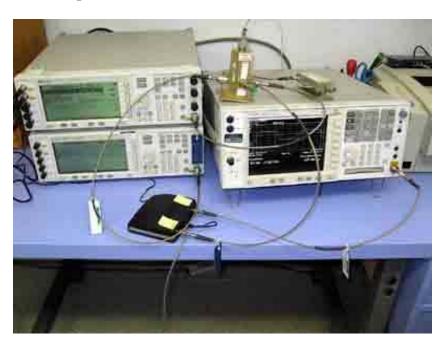


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RSS 131 §6.1 – PASSBAND GAIN

Test Setup Photo



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Test Location: CKC Laboratories, Inc. •5046 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: Cellynx Group

Specification: RSS 131

Work Order #: **89227** Date: 7/1/2009

Test Type: Antenna Conducted
Equipment: Mobile Cellular Booster

Manufacturer: Cellynx Tested By: Randal Clark Model: MD015A 120V 60Hz

S/N: 09262100003

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A	US44300507	07/08/2008	07/08/2010	AN02660
Cable, 10' 2.92mm 40	na	06/10/2009	06/10/2011	ANP01403
GHz				
Weinchel 10dB	C8596	05/20/2009	05/20/2011	ANP02138
attenuator				
Inmet DC Block	NA	07/01/2009	07/01/2011	ANP05551

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Mobile Cellular Booster*	Cellynx	MD015A	09262100003

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Sceptre Power	S012BU1200100	NA
Signal Generator	Agilent	E4437B	US39260159
Signal Generator	Agilent	E4437B	MY41000126
Laptop Power Supply	Dell	LA65N50-00	CN-0DF263-71615-850-
			9C16
Support Computer	Dell	PP23LB	28862556913

Test Conditions / Notes:

Equipment is a bidirectional mobile cellular booster amplifier operating on 824-849 paired with 869-894 MHz and 1850-1910 paired with 1930-1990 MHz. The equipment is connected directly to a signal generator source. The reference signal is injected at -40dBm (output at signal generator). The measured gain is the peak gain from the signal generator at a constant input.

The amplifier is controlled using an external computer running Gemini Program Interface GUI software v8.4.1.1. The software is used to control the internal attenuation of the amplifier. The tests were performed with the attenuators set to a static value of 6.0 corresponding to approximately 6dB of internal attenuation. In normal operation, the amplifier would insert attenuation automatically in order to ensure the input signal levels do not exceed a predetermined value. The firmware in the amplifier is v04.10.84.

Frequency Range Investigated: Carrier Operating Band: Uplink and Downlink

Temperature: 25°C Rel Humidity: 40%

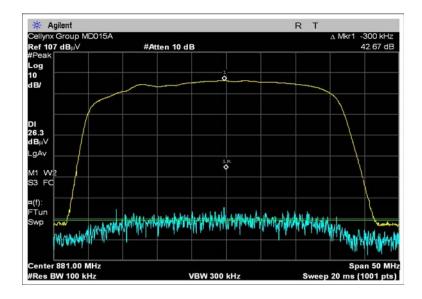
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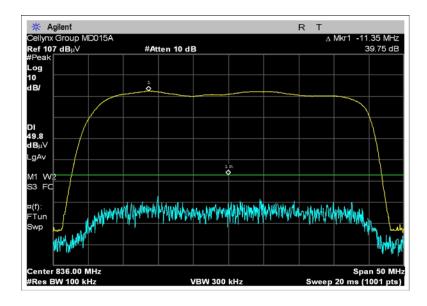
Test Plots

Tested By: Randy Clark

RSS 131 §6.1 – PASSBAND GAIN – DOWNLINK



RSS 131 §6.1 – PASSBAND GAIN – UPLINK



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RSS 131 §6.1 –BANDWIDTH

Test Setup Photo



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Test Location: CKC Laboratories, Inc. •5046 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: Cellynx Group

Specification: RSS 131

Work Order #: **89227** Date: 7/1/2009

Test Type: Antenna Conducted
Equipment: Mobile Cellular Booster

Manufacturer: Cellynx Tested By: Randal Clark Model: MD015A 120V 60Hz

S/N: 09262100003

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A	US44300507	07/08/2008	07/08/2010	AN02660
Cable, 10' 2.92mm 40	na	06/10/2009	06/10/2011	ANP01403
GHz				
Weinchel 10dB	C8596	05/20/2009	05/20/2011	ANP02138
attenuator				
Inmet DC Block	NA	07/01/2009	07/01/2011	ANP05551

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Mobile Cellular Booster*	Cellynx	MD015A	09262100003

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Sceptre Power	S012BU1200100	NA
Signal Generator	Agilent	E4437B	US39260159
Signal Generator	Agilent	E4437B	MY41000126
Laptop Power Supply	Dell	LA65N50-00	CN-0DF263-71615-850-
			9C16
Support Computer	Dell	PP23LB	28862556913

Test Conditions / Notes:

Equipment is a bidirectional mobile cellular booster amplifier operating on 824-849 paired with 869-894 MHz and 1850-1910 paired with 1930-1990 MHz. The equipment is connected directly to a signal generator source. The reference signal is injected at -30dBm (output at signal generator). The signal generator is adjusted over the entire range of the provided plot. Pass band gain is measured at the 20dBc points from the peak output of the amplifier.

The amplifier is controlled using an external computer running Gemini Program Interface GUI software v8.4.1.1. The software is used to control the internal attenuation of the amplifier. The tests were performed with the attenuators set to a static value of 6.0 corresponding to approximately 6dB of internal attenuation. In normal operation, the amplifier would insert attenuation automatically in order to ensure the input signal levels do not exceed a predetermined value. The firmware in the amplifier is v04.10.84.

Frequency Range Investigated: Carrier Operating Band: Uplink and Downlink

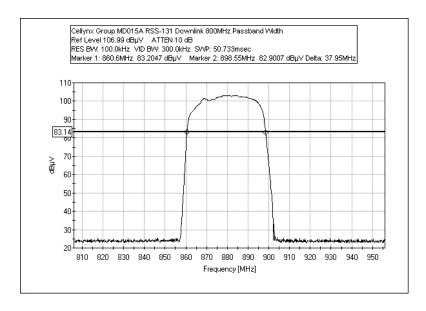
Temperature: 25°C Rel Humidity: 40%

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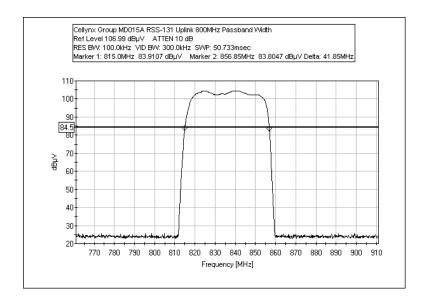


Test Plots
Tested By: Randy Clark

RSS 131 §6.1 –BANDWIDTH – DOWNLINK



RSS 131 §6.1 –BANDWIDTH – UPLINK



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RSS 131 §6.2 - RF POWER OUTPUT

Test Setup Photo



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Test Location: CKC Laboratories, Inc. •5046 Sierra Pines Dr. • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: Cellynx Group

Specification: RSS 131

Work Order #: 89227 Date: 7/1/2009
Test Type: Antenna Conducted Time: 14:06:50
Equipment: Mobile Cellular Booster Sequence#: 1

Manufacturer: Cellynx Tested By: Randal Clark Model: MD015A 120V 60Hz

S/N: 09262100003

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A	US44300507	07/08/2008	07/08/2010	AN02660
Cable, 10' 2.92mm 40 GHz	na	06/10/2009	06/10/2011	ANP01403
Weinchel 10dB attenuator	C8596	05/20/2009	05/20/2011	ANP02138
Inmet DC Block	NA	07/01/2009	07/01/2011	ANP05551

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Mobile Cellular Booster*	Cellynx	MD015A	09262100003

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Sceptre Power	S012BU1200100	NA
Signal Generator	Agilent	E4437B	US39260159
Signal Generator	Agilent	E4437B	MY41000126
Laptop Power Supply	Dell	LA65N50-00	CN-0DF263-71615-850-9C16
Support Computer	Dell	PP23LB	28862556913

Test Conditions / Notes:

Equipment is a bidirectional mobile cellular booster amplifier operating on 824-849 paired with 869-894 MHz and 1850-1910 paired with 1930-1990 MHz. The equipment is connected directly to a signal generator source

The amplifier is controlled using an external computer running Gemini Program Interface GUI software v8.4.1.1. The software is used to control the internal attenuation of the amplifier. The tests were performed with the attenuators set to a static value of 6.0 corresponding to approximately 6dB of internal attenuation. In normal operation, the amplifier would insert attenuation automatically in order to ensure the input signal levels do not exceed a predetermined value. The firmware in the amplifier is v04.10.84.

Frequency Range Investigated: Carrier Operating Band: Uplink and Downlink

Temperature: 25°C & Rel Humidity: 40%

Band	Channel	Single Channel Output Power (dBm)	Rated Output Power Prated (dBm)
Downlink	Low	16.0	19.0
	Mid	16.0	19.0
	High	15.3	18.3
Uplink	Low	17.9	20.9
	Mid	16.4	19.4
	High	17.4	20.4

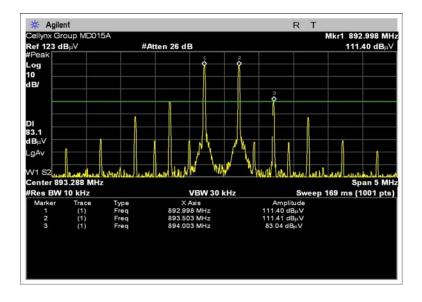
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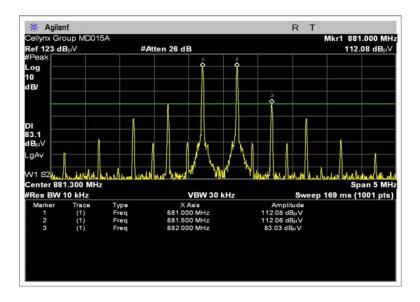
Test Plots

Tested By: Randy Clark

RSS 131 §6.2 - RF POWER OUTPUT – DOWNLINK – HIGH

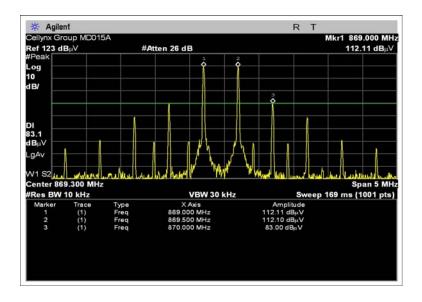


RSS 131 §6.2 - RF POWER OUTPUT – DOWNLINK – MIDDLE

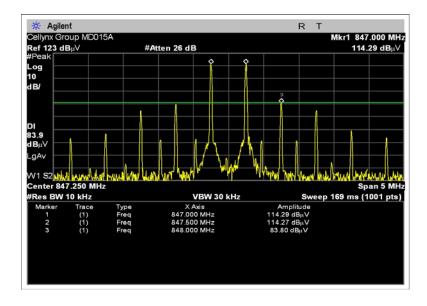


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RSS 131 §6.2 - RF POWER OUTPUT – DOWNLINK - LOW

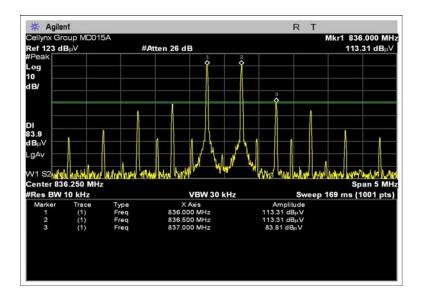


RSS 131 §6.2 - RF POWER OUTPUT - UPLINK - HIGH

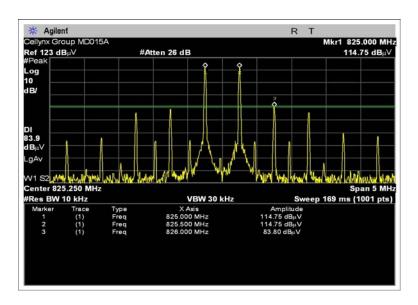


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RSS 131 §6.2 - RF POWER OUTPUT – UPLINK – MIDDLE



RSS 131 §6.2 - RF POWER OUTPUT – UPLINK - LOW



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