Cellphone-Mate, Inc.

REVISED TEST REPORT TO 98360-12A

Dual Band Consumer Booster
Model: EZ CALL

Tested to The Following Standard:

FCC Part 20.21

Report No.: 98360-12B

Date of issue: March 27, 2019

ACCREDITED
Testing Certificates:
803.01, 803.02, 803.05, 803.06

This test report bears the accreditation symbol indicating that the testing performed herein meets the test and reporting requirements of ISO/IEC 17025 under the applicable scope of EMC testing for CKC Laboratories, Inc.

We strive to create long-term, trust based relationships by providing sound, adaptive, customer first testing services. We embrace each of our customers' unique EMC challenges, not as an interruption to set processes, but rather as the reason we are in business.

Testing the Future
CKC LABORATORIES, INC.

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ADMINISTRATIVE INFORMATION

Test Report Information

REPORT PREPARED FOR:

Cellphone-Mate, Inc.
48346 Milmont Drive
Fremont, CA 94538

Representative: Dennis Findley
Customer Reference Number: CKC2016429

REPORT PREPARED BY:

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CKC Laboratories, Inc.
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Project Number: 98360

DATE OF EQUIPMENT RECEIPT: April 21, 2016
DATE(S) OF TESTING: April 21 May 11, 2016
March 4, 2019

Revision History

Original: Testing of Dual Band Consumer Booster, Model: EZ-3G, to FCC Part 20.21.
Addendum A: Since the time of testing, the manufacturer has chosen to rename the model EZ CALL.
Corrected the Section 5.5 power table values for DL1930-1995 and DL869-894 in Section 7.2, Maximum Power.
Revision B: To replace section 7.4 with corrected test data.

Report Authorization

The test data contained in this report documents the observed testing parameters pertaining to and are relevant for only the sample equipment tested in the agreed upon operational mode(s) and configuration(s) as identified herein. Compliance assessment remains the client's responsibility. This report may not be used to claim product endorsement by A2LA or any government agencies. This test report has been authorized for release under quality control from CKC Laboratories, Inc.

Steve Behm
Director of Quality Assurance & Engineering Services
CKC Laboratories, Inc.

Test Facility Information

Our laboratories are configured to effectively test a wide variety of product types. CKC utilizes first class test equipment, anechoic chambers, data acquisition and information services to create accurate, repeatable and affordable test results.

TEST LOCATION(S):
CKC Laboratories, Inc.
1120 Fulton Place
Fremont, CA 94539

Software Versions

CKC Laboratories Proprietary Software	Version
EMITest Emissions	5.03.02
EMITest Emissions	5.03.11
EMITest Immunity	5.03.02

Site Registration & Accreditation Information

Location	CB #	TAIWAN	CANADA	FCC	JAPAN
Fremont	US0082	SL2-IN-E-1148R	3082B-1	958979	A-0149

SUMMARY OF RESULTS

Standard / Specification: FCC Part 20.21

KDB 935210 D03 Wideband Consumer Signal Booster Measurement Guidance v04, Feb 12, 2016		FCC Part Section Correlation		Mods	Results
Guidance Sec #	**Guidance Description**	**FCC Sec #**	**FCC Rule Description**		
7.1 a) - k)	Authorized Frequency Band Verification Test	20.21(e)(3)	Frequency Bands		Pass
7.2.2 a) - k)	Maximum Power Measurement Procedure	2.1046/20.21(e)(8)(i)(D)	Power Limit		Pass
7.3 a) - d)	Maximum Booster Gain Computation	20.21(e)(8)(i)(B)	Bidirectional Capabilities		Pass
7.4 a) - n)	Intermodulation Product	20.21(e)(8)(i)(F)	Intermodulation Limit		Pass
7.5 a) - n)	Out of Band Emissions	20.21(e)(8)(i)(E)	Out of Band Emission		Pass
7.6 a) - e)	Conducted Spurious Emission	2.1051/22/24	Spurious emission		NA[1]
7.7.1 a) - g) 7.7.1 h) - n) 7.7.2 a) - g)	Noise Limit Procedure Variable Noise Variable Noise Timing	20.21(e)(8)(i)(A)(2)(i) 20.21(e)(8)(i)(A)(1) 20.21(e)(8)(i)(H)	Noise Limits Transmit Power Off Mode		Pass
7.8 a) - l)	Uplink inactivity	20.21(e)(8)(i)(I)	Uplink Inactivity		Pass
7.9.1 a) - l) 7.9.2 a) - f)	Variable Booster Gain Variable Uplink Gain Timing	20.21(e)(8)(i)(C) (1), (2)(i) 20.21(e)(8)(i)(H)	Booster Gain Transmit Power Off Mode		Pass
7.10.a) - j)	Occupied Band Width	2.1049/22/24	Occupied Band Width		NA[1]
7.11.2 a) - r) 7.11.3 a) - h) 7.11.4 a) - h) (alternate to 7.11.3)	Anti-Oscillation	20.21(e)(8)(ii)(A)	Anti-Oscillation		Pass

Standard / Specification: FCC Part 20.21 - continued

KDB 935210 D03 Wideband Consumer Signal Booster Measurement Guidance v04, Feb 12, 2016		FCC Part Section Correlation		Mods	Results
Guidance Sec #	Guidance Description	FCC Sec #	FCC Rule Description		
7.12a) - f)	Radiated Spurious Emission	2.1053/ 22/24	Spurious Emission		NA[1]
7.13 a) - c)	Spectrum Block Filter[2]	NA[2]	NA[2]		NA[2]

NA[1] = A different standard applies; see applicable test report.
NA[2] = Not applicable. See the section in the report for the reason.

Modifications During Testing

This list is a summary of the modifications made to the equipment during testing.

Summary of Conditions
No modifications were made during testing.

Modifications listed above must be incorporated into all production units.

Conditions During Testing

This list is a summary of the conditions noted to the equipment during testing.

Summary of Conditions
None

EQUIPMENT UNDER TEST (EUT)

During testing numerous configurations may have been utilized. The configurations listed below support compliance to the standard(s) listed in the Summary of Results section.

Configuration 1

Equipment Tested

Device	Manufacturer	Model #	S/N
Switching Power Adapter	GME	GME18A-050300FUR	1511-0000069
Dual Band Consumer Booster	Cellphone-Mate, Inc.	EZ CALL	01

Support Equipment:

Device	Manufacturer	Model #	S/N
Signal Generator	Agilent	E4438C	MY42082260

Configuration 1-for tests performed on March 4, 2019 only

Equipment Tested:

Device	Manufacturer	Model #	S/N
Switching Power Adapter	GME	GME18A-050300FUR	1511-0000069
Dual Band Consumer Booster	Cellphone-Mate, Inc	EZ CALL	01

Support Equipment:

Device	Manufacturer	Model #	S/N
None			

FCC PART 20.21

7.1 Authorized Frequency Band Verification

Test Conditions / Setup

Test Location:	CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170		
Customer:	Cellphone-Mate, Inc.		
Specification:	**7.1 Authorized Frequency Band Verification**		
Work Order #:	**98360**	Date:	04/22/2016
Test Type:	**Conducted Emissions**	Time:	09:46:42
Tested By:	Daniel Bertran	Sequence#:	1
Software:	EMITest 5.03.00		

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

The equipment under test (EUT) is a Fixed Wideband Consumer Booster. The EUT is placed on the test bench. Evaluation performed at the Outside (Donor) and Inside (Server) antenna port. The EUT Donor port is a type SMA connector and 50ohm impedance. The EUT Server port is type F connector and 75ohm impedance. During testing there is a 75 ohm to 50 ohm matching pad connected to the EUT type F connector. This matching pad has a 5.8dB correction factor.

Part 22
UL: 824-849MHz
DL: 869-894MHz

Part 24
UL: 1850-1915MHz
DL: 1930-1995MHz

Test environment conditions: 21°C, 49% Relative Humidity,101.4 kPa

Test procedure:
The test was performed in accordance with section 7.1 of the FCC document: 935210 D03 Wideband Consumer Signal Booster Measurement Guidance v04 Dated February 12, 2016.

Firmware: V1.0

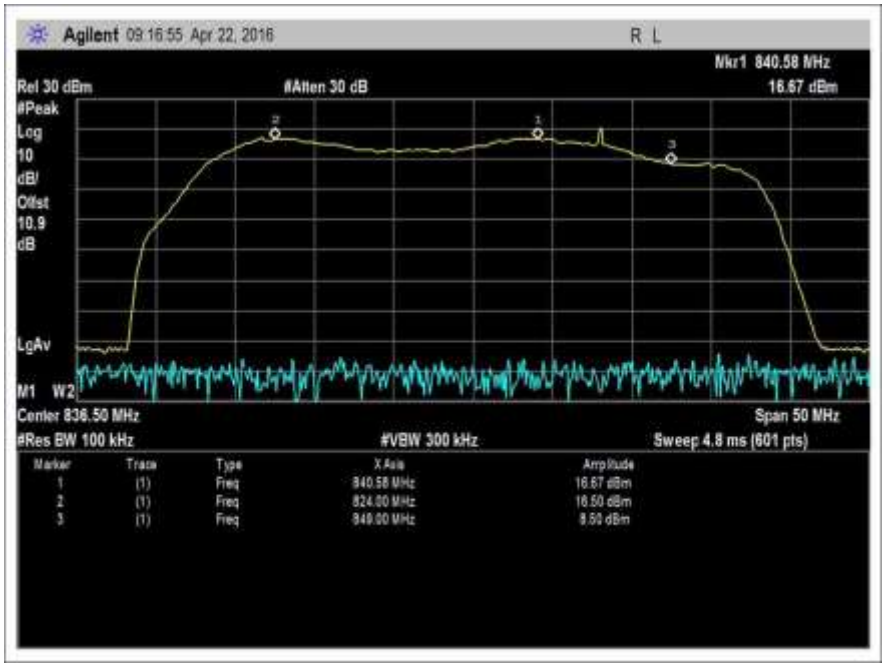
Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	ANP06709	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	ANP06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	AN03470	Spectrum Analyzer	E4440A	12/9/2015	12/9/2017
	ANP06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	ANP06239	Attenuator	54A-10	7/9/2014	7/9/2016

Summary of Results

Pass: The plots below show the device only operates on the CMRS frequency bands authorized for use by the NPS.

Plots



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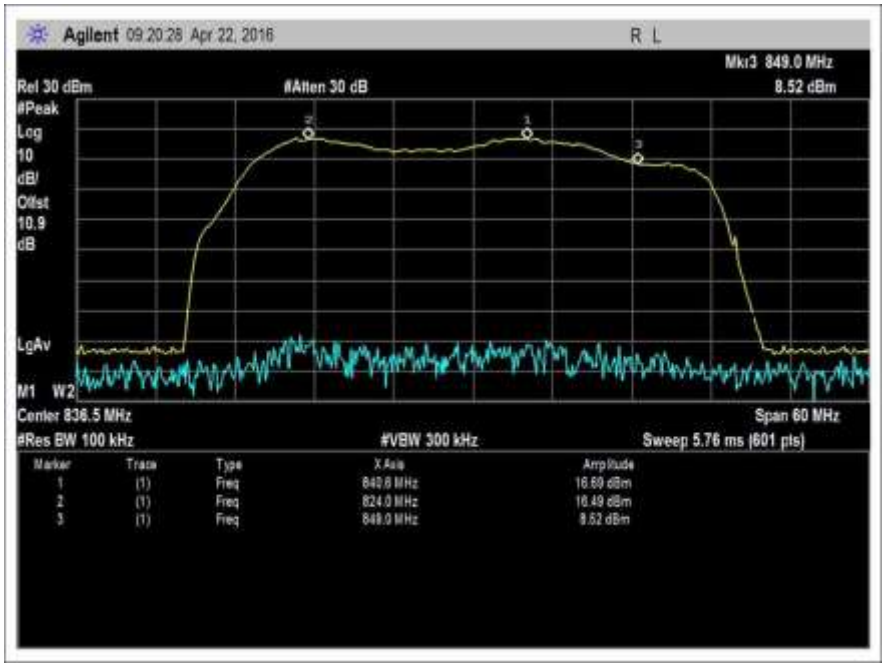

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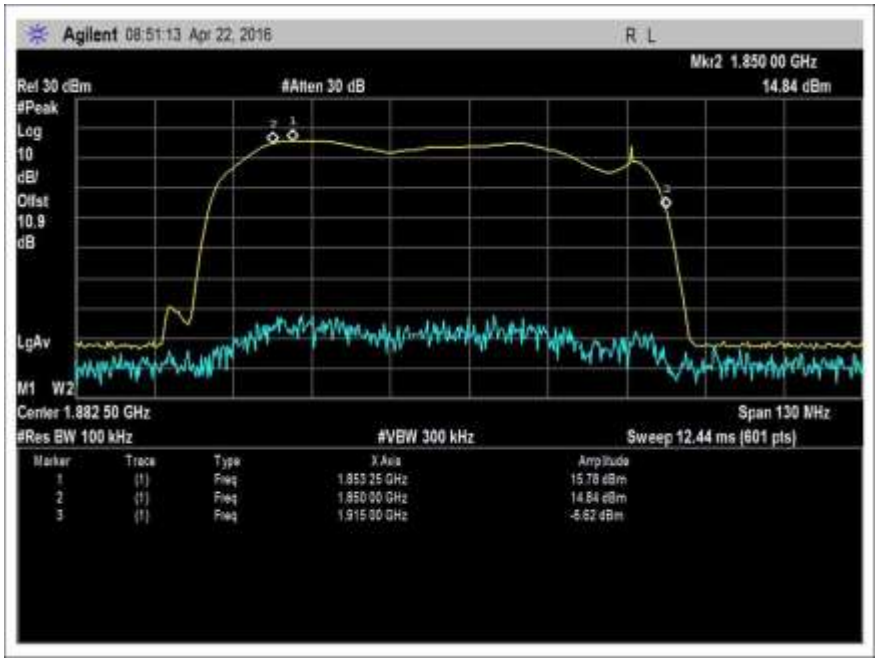
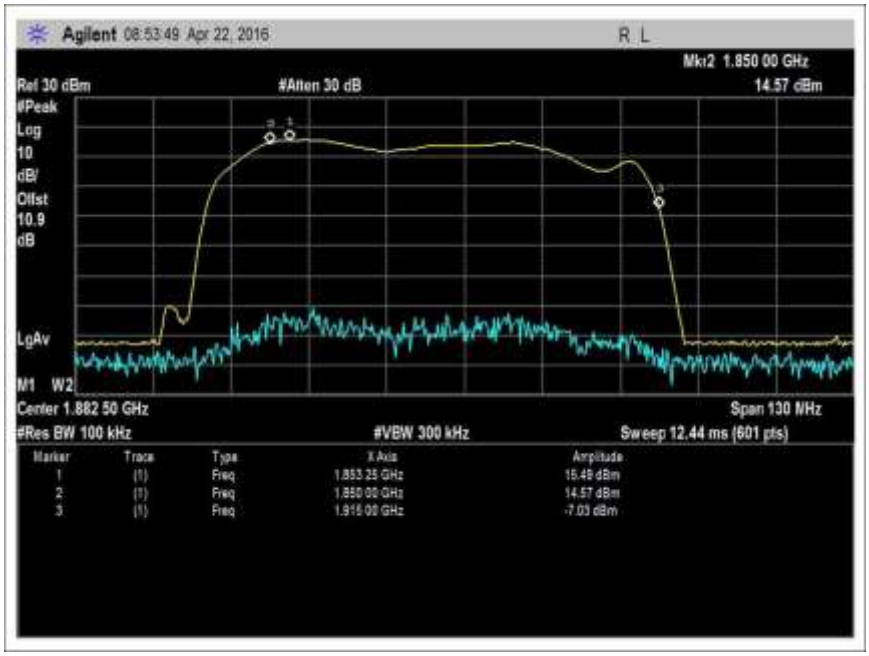


7.1_band verify_UL_1850-1915MHz_1



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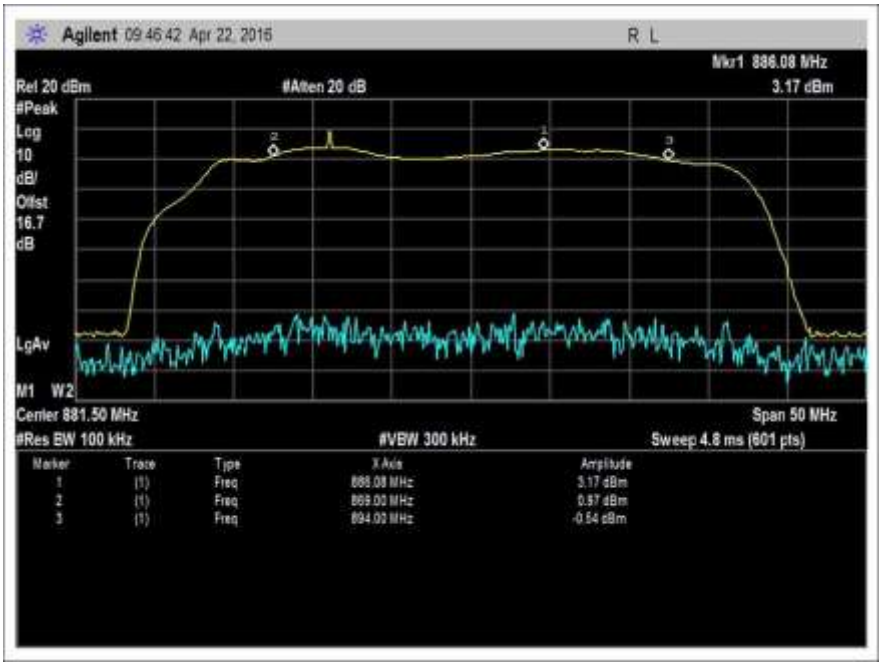
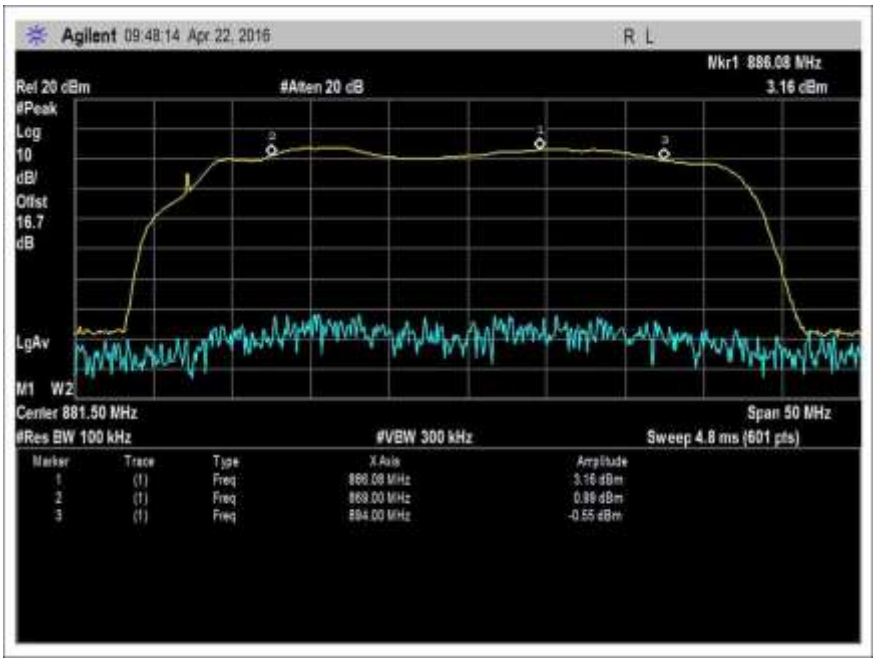
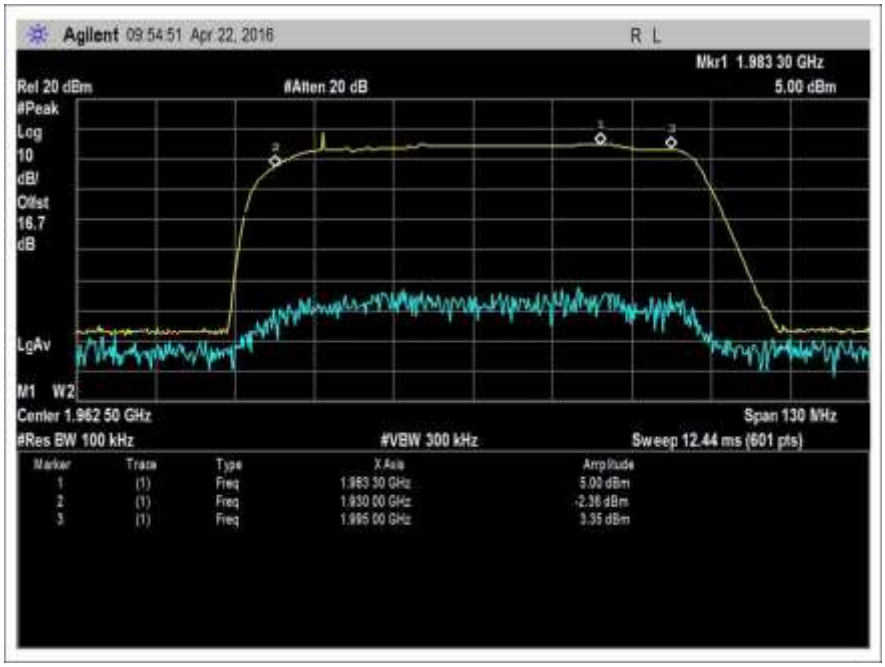


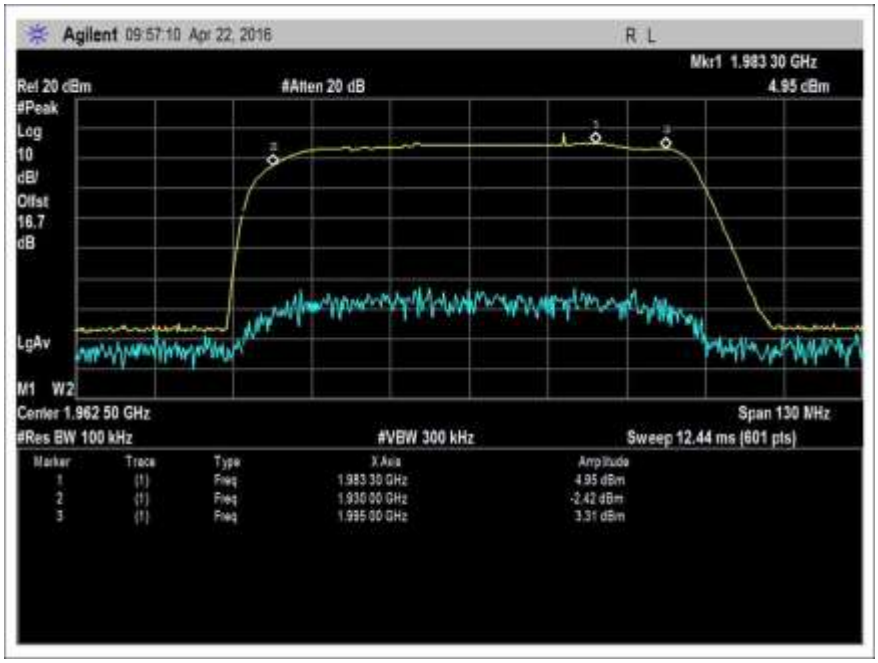
7.1_band verify_DL_869-894MHz_1



7.1_band verify_DL_869-894MHz_2



7.1_band verify_DL_1930-1995MHz_1



7.1_band verify_DL_1930-1995MHz_2

7.2 Maximum Power

Test Conditions / Setup

Test Location:	CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170		
Customer:	Cellphone-Mate, Inc.		
Specification:	**7.2 Maximum Power Measurement**		
Work Order #:	**98360**	Date:	04/22/2016
Test Type:	**Conducted Emissions**	Time:	10:16:12
Tested By:	Daniel Bertran	Sequence#:	1
Software:	EMITest 5.03.00		

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

The equipment under test (EUT) is a Fixed Wideband Consumer Booster.
The EUT is placed on the test bench. Evaluation performed at the Outside (Donor) and Inside (Server) antenna port.
The EUT Donor port is a type SMA connector and 50ohm impedance.
The EUT Server port is type F connector and 75ohm impedance.
During testing there is a 75 ohm to 50 ohm matching pad connected to the EUT type F connector.
This matching pad has a 5.8dB correction factor.

Part 22
UL: 824-849MHz
DL: 869-894MHz

Part 24
UL: 1850-1915MHz
DL: 1930-1995MHz

Test environment conditions: 21°C, 49% Relative Humidity,101.4 kPa

Test procedure:
The test was performed in accordance with section 7.2 of the FCC document: 935210 D03 Wideband Consumer Signal Booster Measurement Guidance v04 Dated February 12, 2016

Firmware: V1.0

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	ANP06709	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	ANP06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	AN03470	Spectrum Analyzer	E4440A	12/9/2015	12/9/2017
	ANP06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	ANP06239	Attenuator	54A-10	7/9/2014	7/9/2016

The booster is to be deployed with antenna kit with the following characteristic:

Antenna Kitting Information

Component	Prod No. Description	Gain/Loss	
		800MHz	1900MHz
Outdoor Antenna	SC500W	6dBi	7dBi
Indoor Cable	SC-RG6 -50 50Feet	3.75dB	6.42dB
Indoor Antenna	SC249W	7dBi	10dBi
	SC312W	3dBi	5dBi
*All equivalent antennas and cables are suitable for use with the EZ 3G.			

Summary of Results

Pass: as summarized in table below, measured EIRP, Gain and UL/DL gain ratio are within limits.

	Pre AGC			Pre AGC		
	Pulse GSM			4.1 MHz AWGN		
Frequency (MHz)	Input (dBm)	Output (dBm)	Gain (dB)	Input (dBm)	Output (dBm)	Gain (dB)
UL1850-1915	-48.4	20.2	68.6	-47.4	21.0	68.4
UL824-849	-40.4	20.7	61.1	-39.9	20.7	60.6
DL1930-1995	-57.4	9.0	66.4	-59.2	7.1	66.3
DL869-894	-51.3	8.9	60.2	-53.2	6.9	60.1

Pulse GSM					Conducted	Conducted and EIRP
Frequency (MHz)	Output Power (dBm)	Ant Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit Min (dBm)	Limit Max (dBm)
UL1850-1915	20.2	7	0	**27.2**	17	30
UL824-849	20.7	6	0	**26.7**	17	30
DL1930-1995	9.0	10	6.42	**12.6**	na	17
DL869-894	8.9	7	3.75	**12.2**	na	17

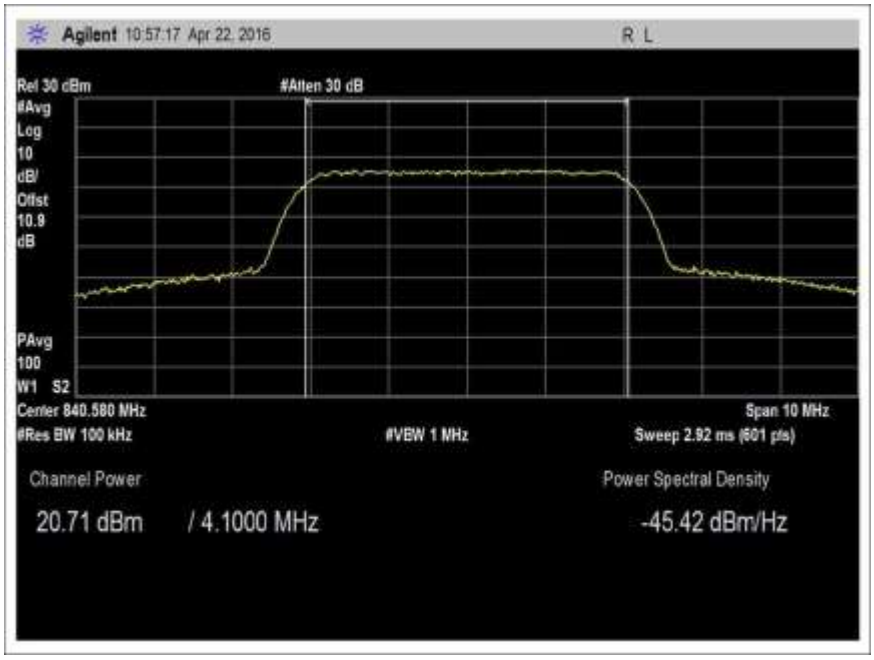
4.1MHz AWGN					Conducted	Conducted and EIRP
Frequency (MHz)	Output Power (dBm)	Ant Gain (dBi)	Cable Loss (dB)	EIRP (dBm)	Limit Min (dBm)	Limit Max (dBm)
UL1850-1915	21.0	7	0	**28.0**	17	30
UL824-849	20.7	6	0	**26.7**	17	30
DL1930-1995	7.1	10	6.42	**10.7**	na	17
DL869-894	6.9	7	3.75	**10.1**	na	17

Section 5.5 power						
	Pulse GSM			4.1 MHz AWGN		
Frequency (MHz)	Input (dBm)	Output (dBm)	Gain (dB)	Input (dBm)	Output (dBm)	Gain (dB)
UL1850-1915	-39.4	20.1	59.5	-37.2	20.5	57.7
UL824-849	-30.1	20.8	50.9	-29.9	20.4	50.3
DL1930-1995	-50.1	8.2	58.3	-52.6	7.2	59.8
DL869-894	-42.3	8.8	51.1	-43.3	6.8	50.1

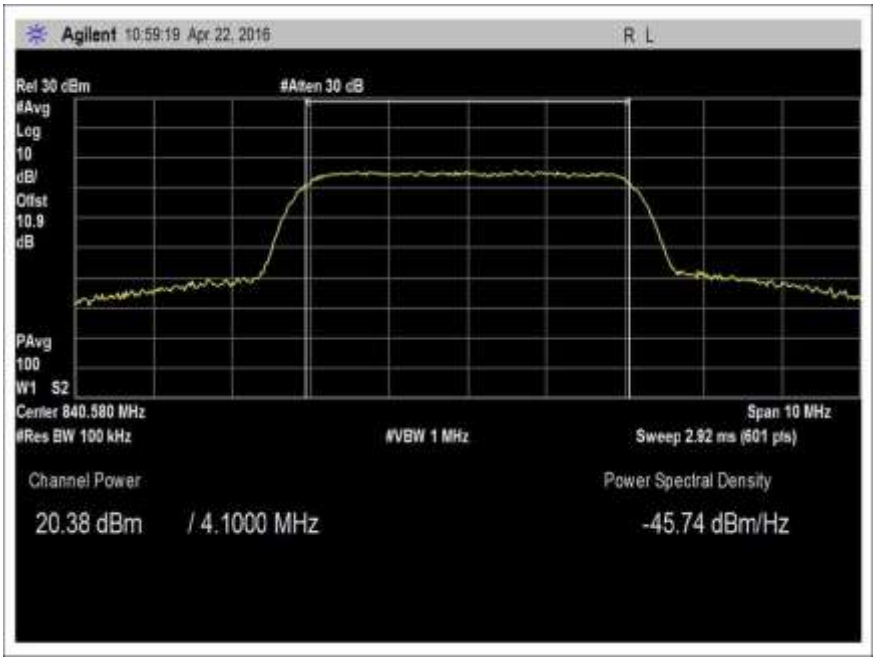
Note: The booster went into Transmitter off mode at Max input power of +0dBm (UL) and -20dBm (DL).
Results presented on the above table are at 1 dB below the Transmit off RF input level.

Plots

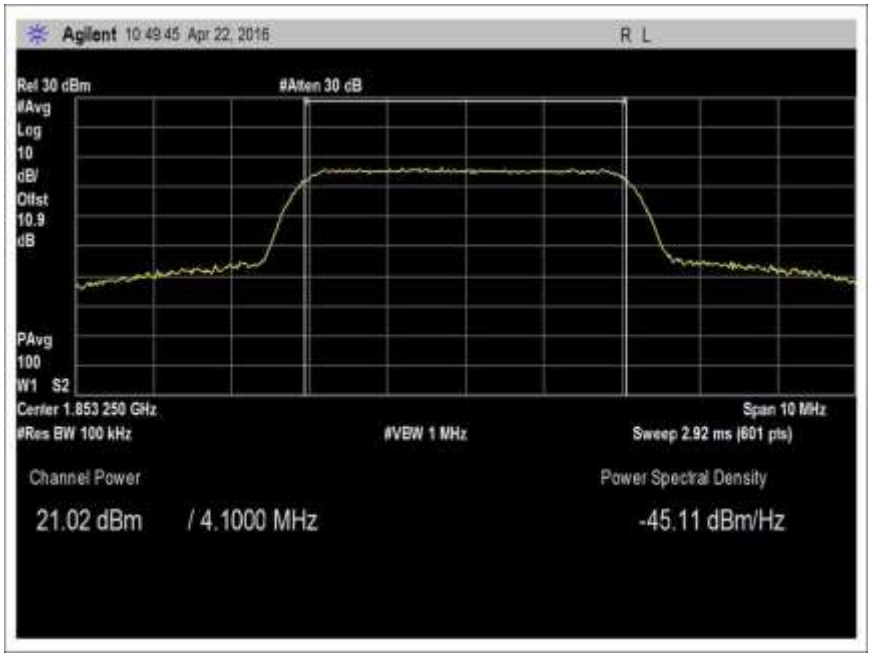
AWGN



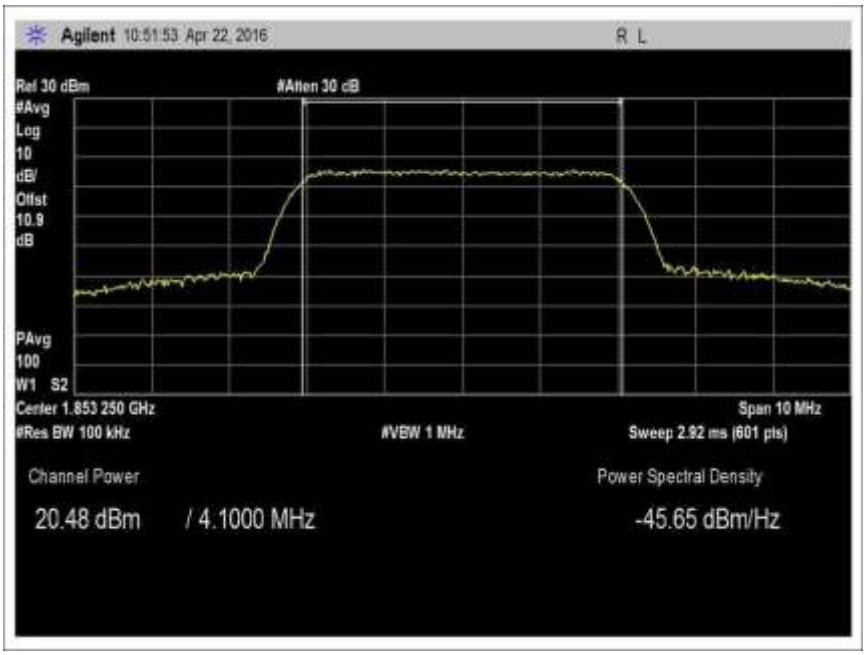
7.2_Power_Gain_UL_824-849_AWGN



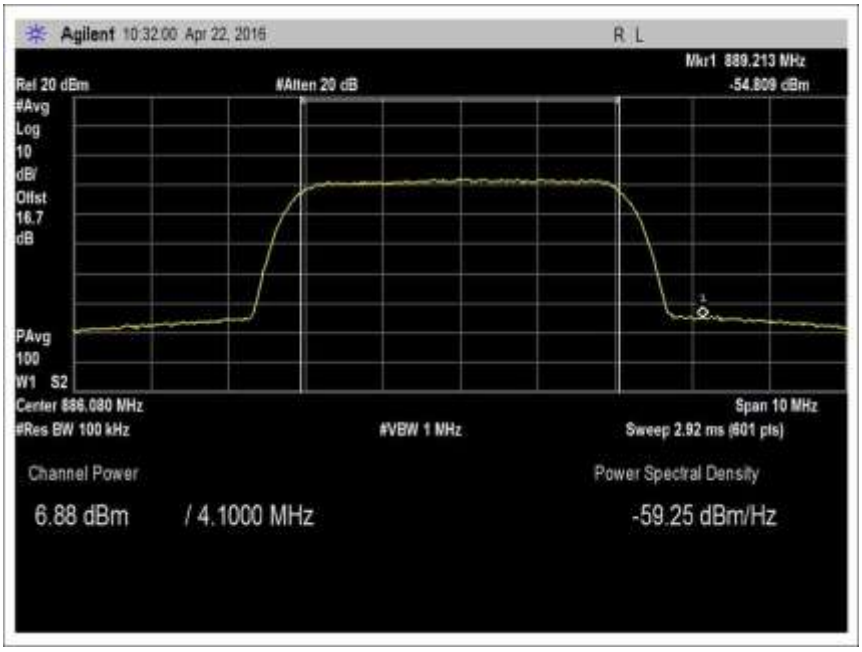
7.2_Power_Gain_UL_824-849_AWGN-Max



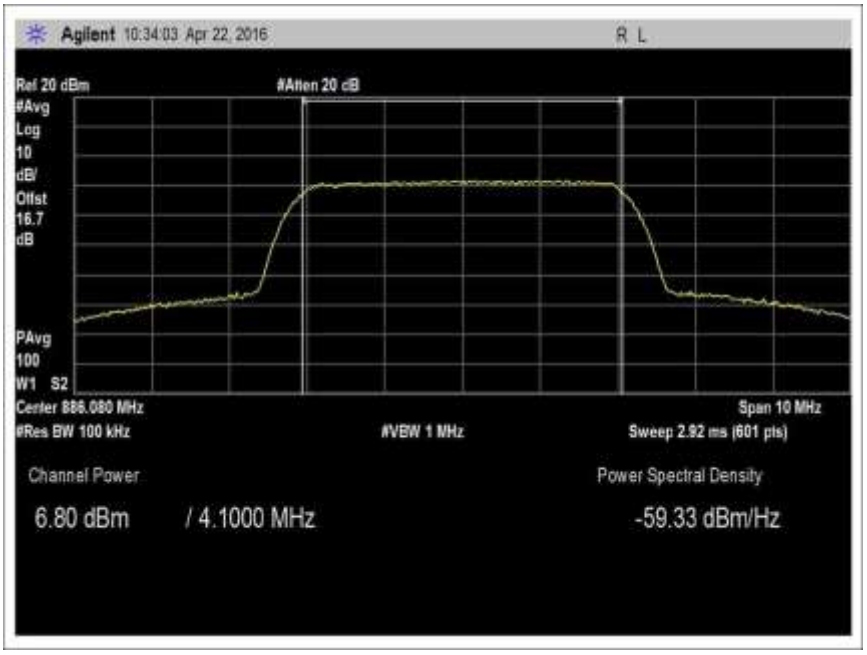
7.2_Power_Gain_UL_1850-1915_AWGN



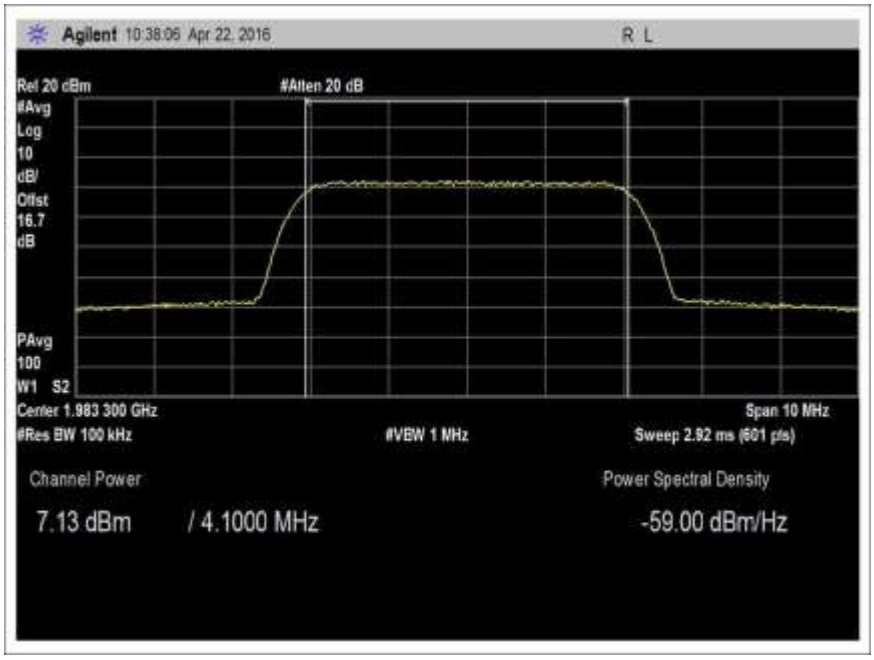
7.2_Power_Gain_UL_1850-1915_AWGN-Max



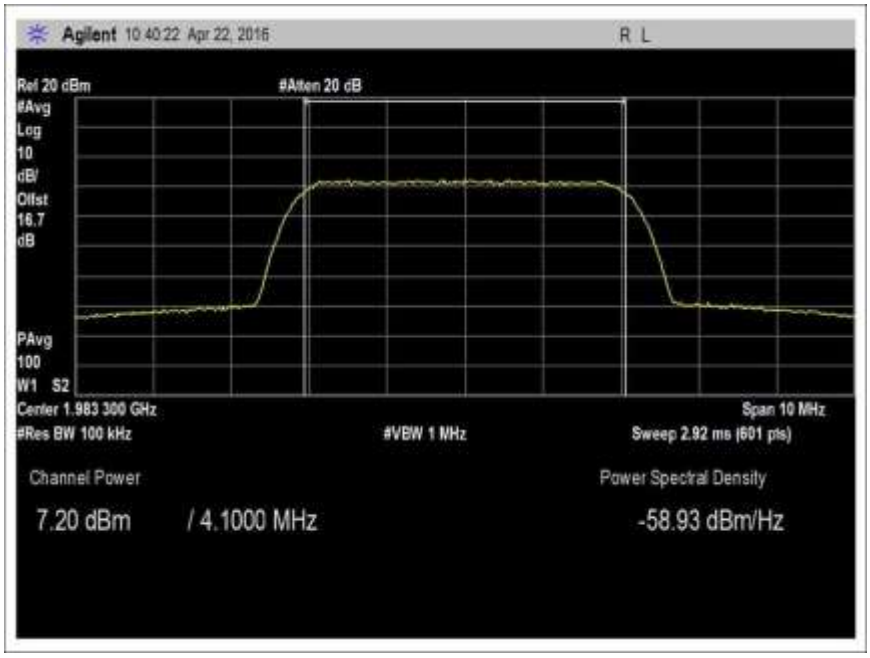
7.2_Power_Gain_DL_869-894_AWGN



7.2_Power_Gain_DL_869-894_AWGN-Max

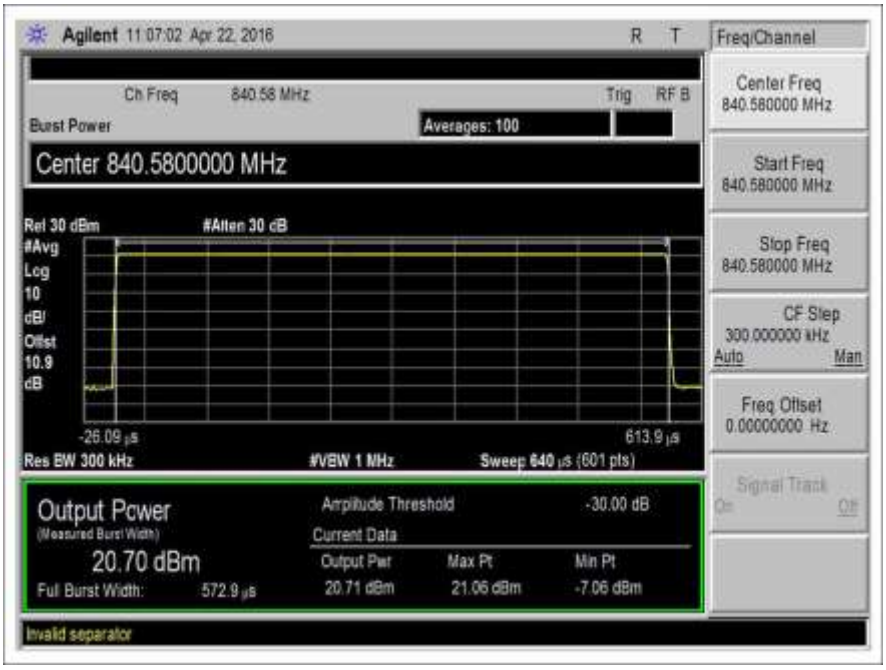


7.2_Power_Gain_DL_1930-1995_AWGN

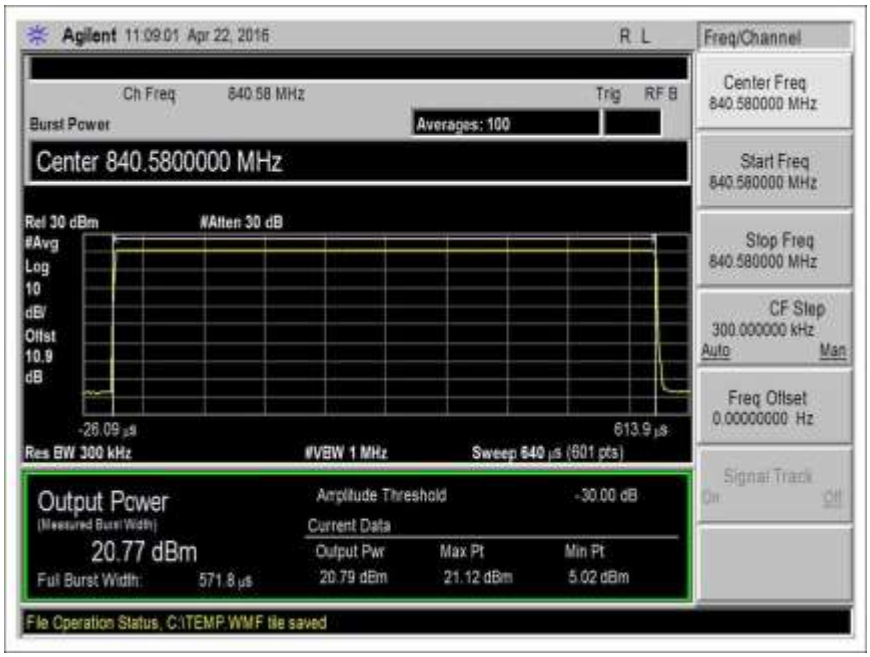


7.2_Power_Gain_DL_1930-1995_AWGN-Max

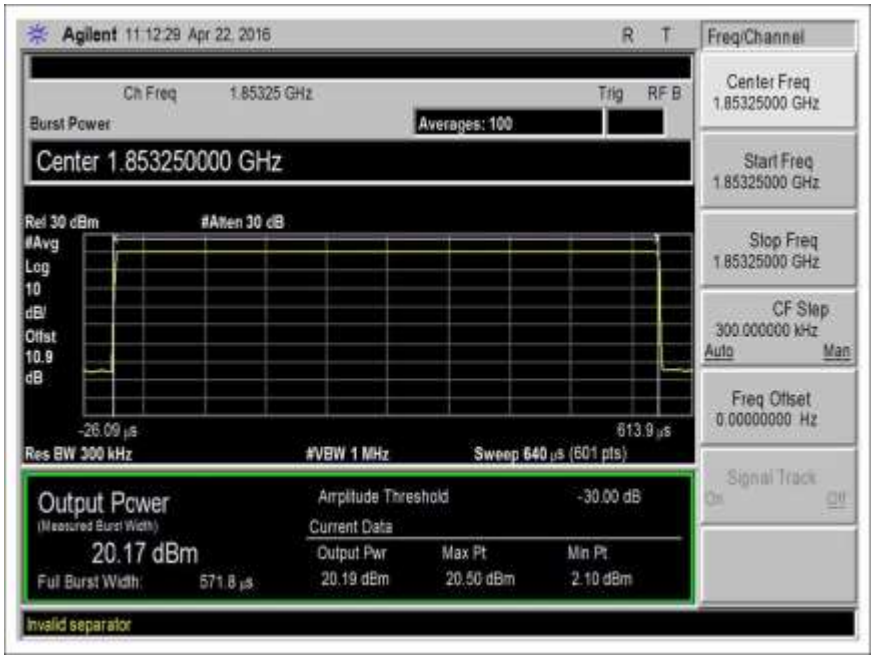
GSM



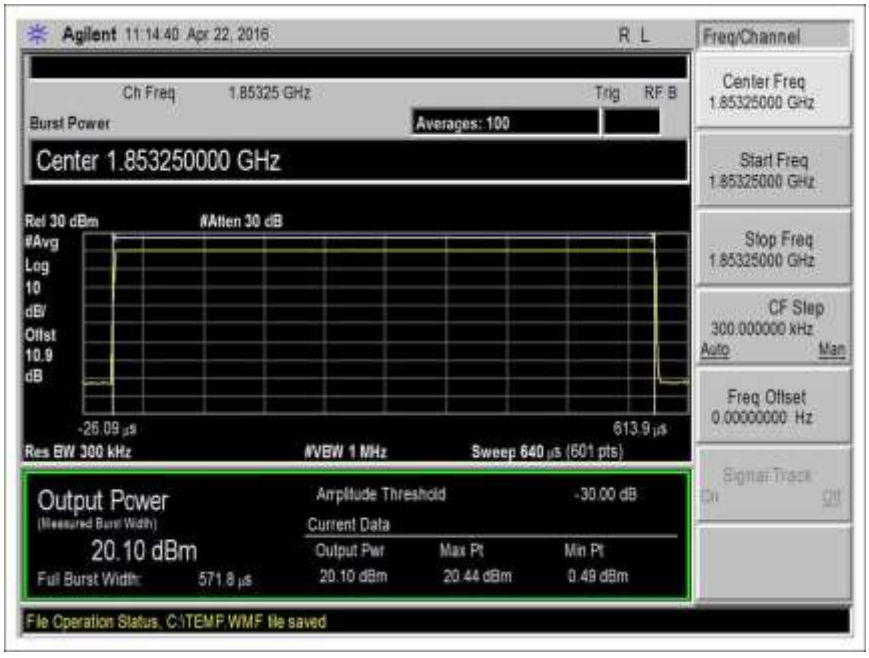
7.2_Power_Gain_UL_824-849_GSM



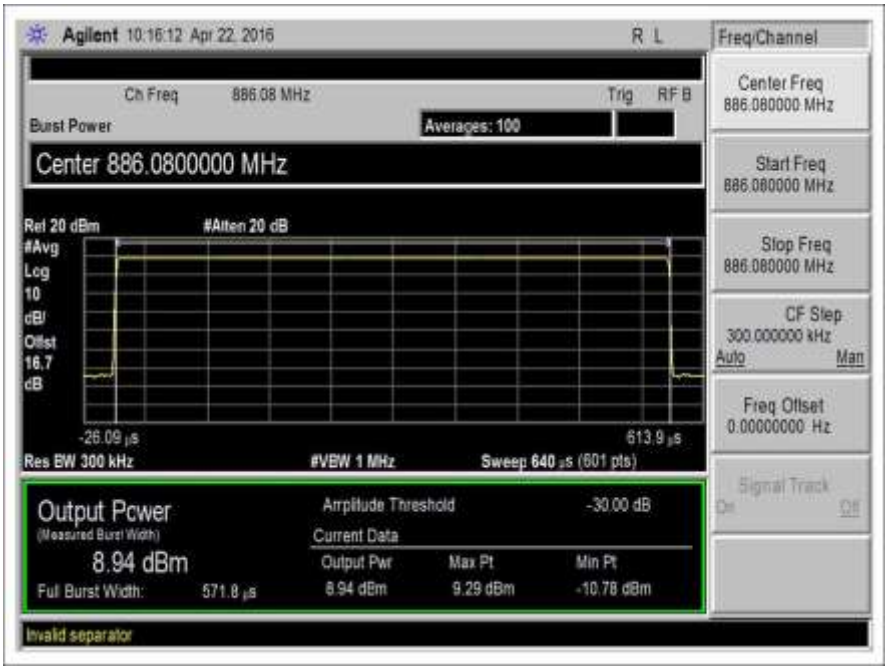
7.2_Power_Gain_UL_824-849_GSM-Max



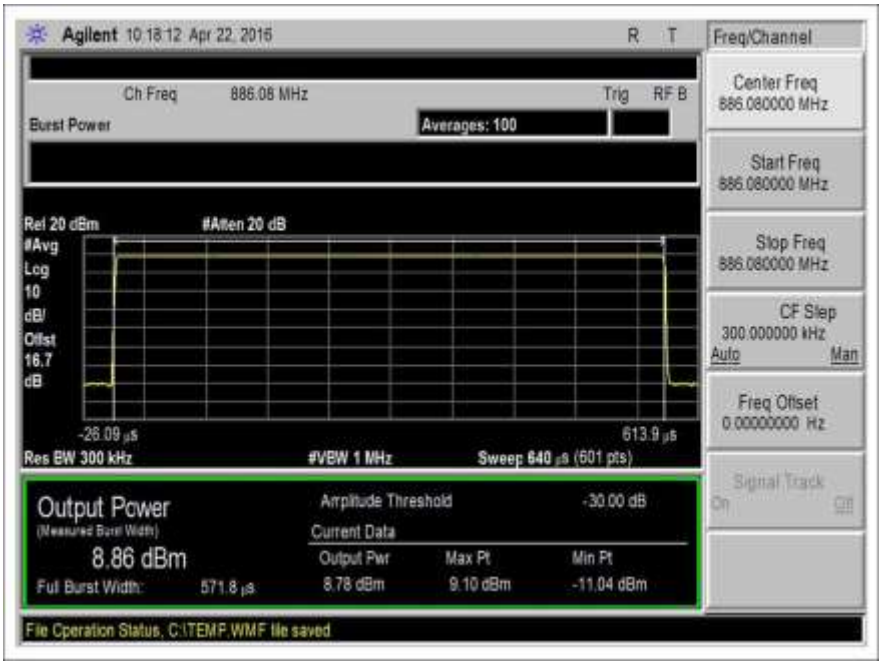
7.2_Power_Gain_UL_1850-1915_GSM



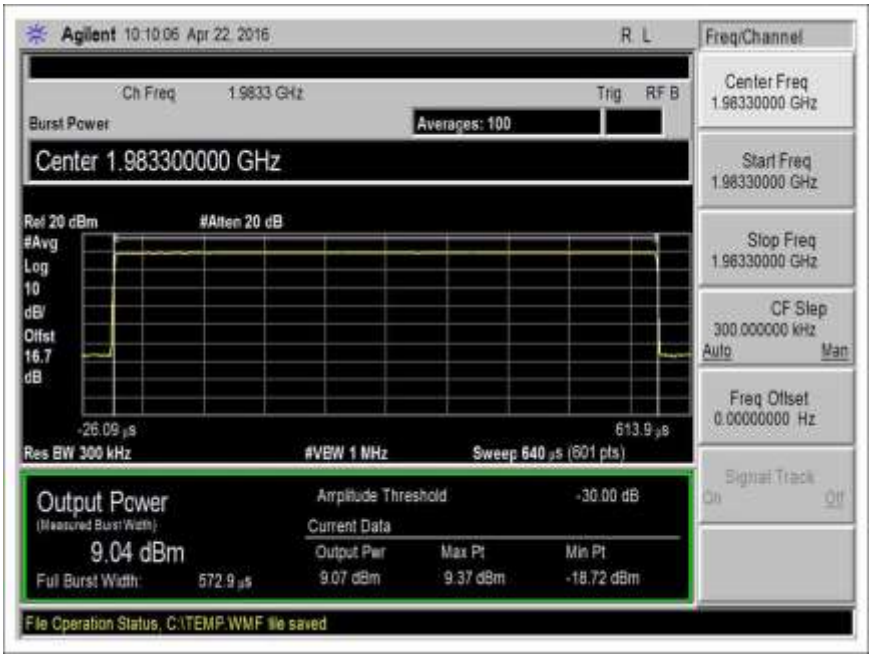
7.2_Power_Gain_UL_1850-1915_GSM-Max



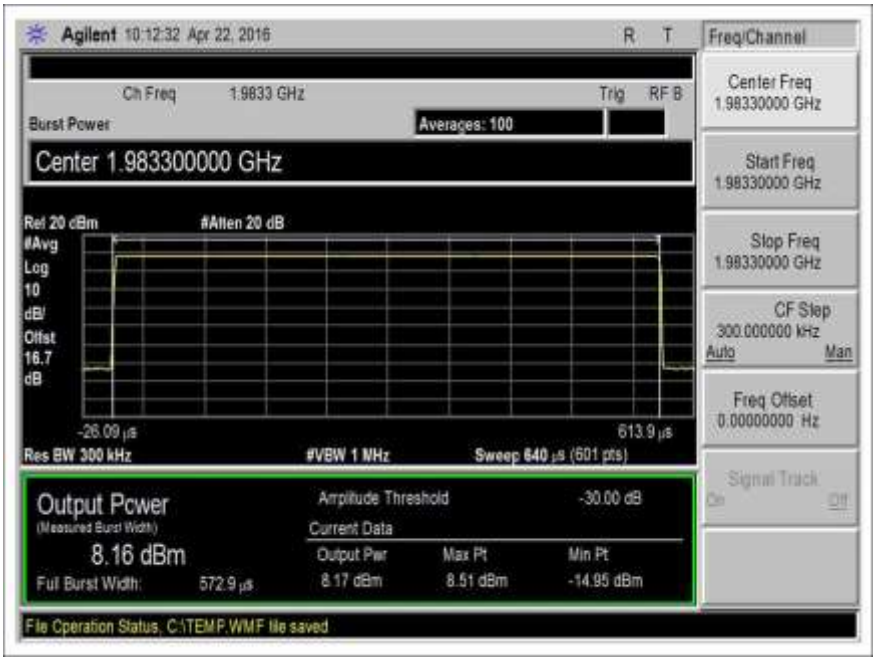
7.2_Power_Gain_DL_869-894_GSM



7.2_Power_Gain_DL_869-894_GSM-Max



7.2_Power_Gain_DL_1930-1995_GSM



7.2_Power_Gain_DL_1930-1995_GSM-Max

7.3 Maximum Gain

Test Conditions / Setup

Test Location:	CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170		
Customer:	Cellphone-Mate, Inc.		
Specification:	**7.3 Maximum Booster Gain**		
Work Order #:	**98360**	Date:	04/22/2016
Test Type:	**Conducted Emissions**	Time:	10:16:12
Tested By:	Daniel Bertran	Sequence#:	1
Software:	EMITest 5.03.00		

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

The equipment under test (EUT) is a Fixed Wideband Consumer Booster.
The EUT is placed on the test bench. Evaluation performed at the Outside (Donor) and Inside (Server) antenna port.
The EUT Donor port is a type SMA connector and 50ohm impedance.
The EUT Server port is type F connector and 75ohm impedance.
During testing there is a 75 ohm to 50 ohm matching pad connected to the EUT type F connector.
This matching pad has a 5.8dB correction factor.

Part 22
UL: 824-849MHz
DL: 869-894MHz

Part 24
UL: 1850-1915MHz
DL: 1930-1995MHz

Test environment conditions: 21°C, 49% relative humidity,101.4 kPa

Test procedure:
The test was performed in accordance with section 7.3 of the FCC document: 935210 D03 Wideband Consumer Signal Booster Measurement Guidance v04 Dated February 12, 2016.

Firmware: V1.0

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	ANP06709	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	ANP06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	AN03470	Spectrum Analyzer	E4440A	12/9/2015	12/9/2017
	ANP06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	ANP06239	Attenuator	54A-10	7/9/2014	7/9/2016

Summary of Results

Pass: as summarized in table below.

	Pre AGC			Pre AGC		
	Pulse GSM			4.1 MHz AWGN		
Frequency (MHz)	Input (dBm)	Output (dBm)	Gain (dB)	Input (dBm)	Output (dBm)	Gain (dB)
UL1850-1915	-48.4	20.2	68.6	-47.4	21.0	68.4
UL824-849	-40.4	20.7	61.1	-39.9	20.7	60.6
DL1930-1995	-57.4	9.0	66.4	-59.2	7.1	66.3
DL869-894	-51.3	8.9	60.2	-53.2	6.9	60.1

*Fixed Booster maximum gain shall not exceed 6.5 dB + 20 Log10 (Frequency), where Frequency is the uplink mid-band frequency of the supported spectrum bands in MHz

	Pulse GSM	4.1MHz AWGN	Limit (dB)
UL gain vs DL gain 1850/1930	2.1	2.1	9.0
UL gain vs DL gain 824/869	0.9	0.5	9.0

7.4 Intermodulation Product

Test Conditions / Setup

Test Location:	CKC Laboratories, Inc • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170
Customer:	Cellphone-Mate, Inc
Specification:	**7.4 Intermodulation Product**
Work Order #:	**98360** Date 03/04/2019
Test Type:	**Conducted Emissions**
Tested By:	**Hieu S. Nguyenpham**
Software:	EMITest 5.03.11

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Test environment conditions:
Temperature: 20.8° C
Relative Humidity: 40%
Pressure: 102.1kPa

Test Equipment:

Asset #	Description	Manufacturer	Model	Calibration Date	Cal Due Date
P05411	Attenuator	Weinschel	54A-10	1/19/2018	1/19/2020
P07192	Cable	Astro	32022-29094K-29094K-48TC	10/9/2017	10/9/2019
P07191	Cable	Astro	32022-29094K-29094K-48TC	10/30/2017	10/30/2019
03418	Signal Generator	Agilent	E4438C	6/19/2017	6/19/2019
03471	Spectrum Analyzer	Agilent	E4440A	1/18/2018	1/18/2020
P06910	Attenuator	Pasternack	PE7083	12/20/2017	12/20/2019

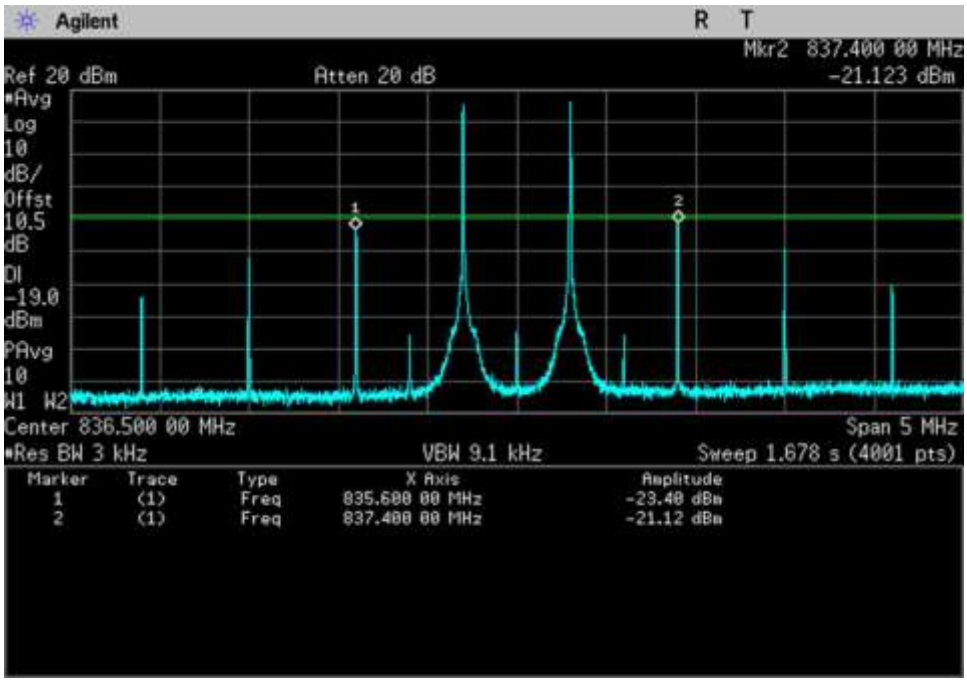
Summary of Results

Pass: As shown on the plots, all intermodulation products are measured below -19dbm limit.

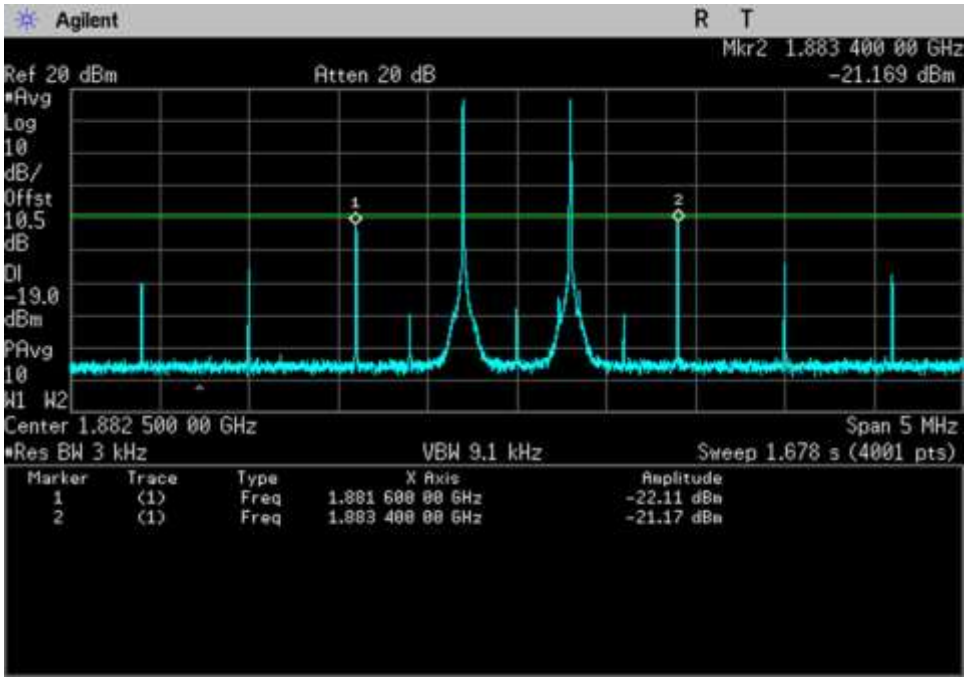
Inter Modulation Product			
Frequency (MHz)	**Pre AGC (dBm)**	**Limit (dBm)**	**Results**
UL 1850-1915	-21.2	-19	Pass
UL 824-894	-21.1	-19	Pass
DL 1930-1995	-37.5	-19	Pass
DL 869-894	-54.4	-19	Pass

Note: The EUT maintains compliance with the intermodulation limit at input power of AGC+10dB

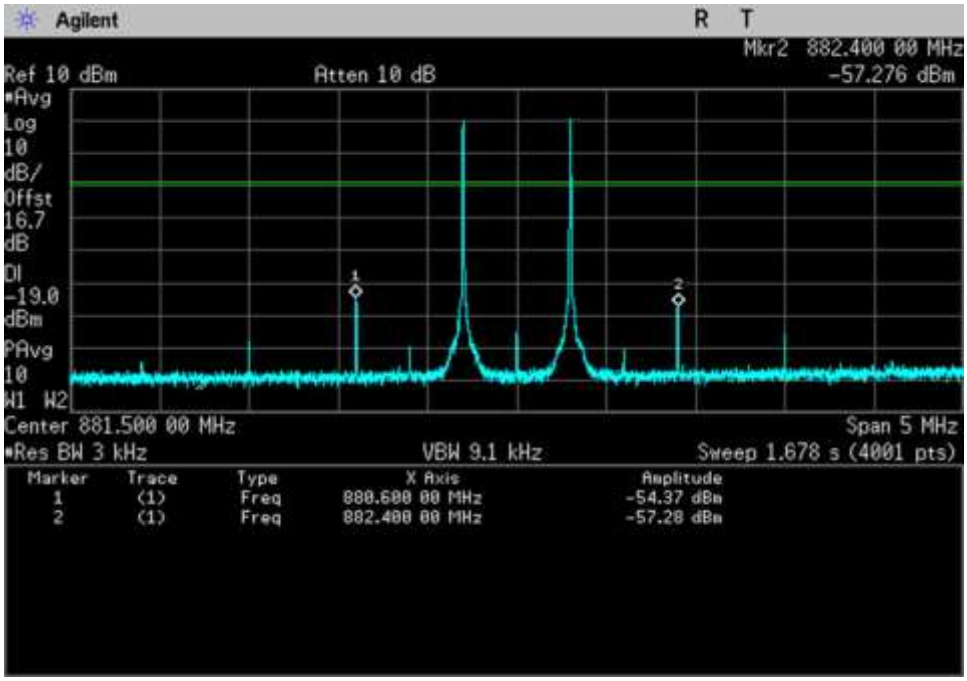
Plots



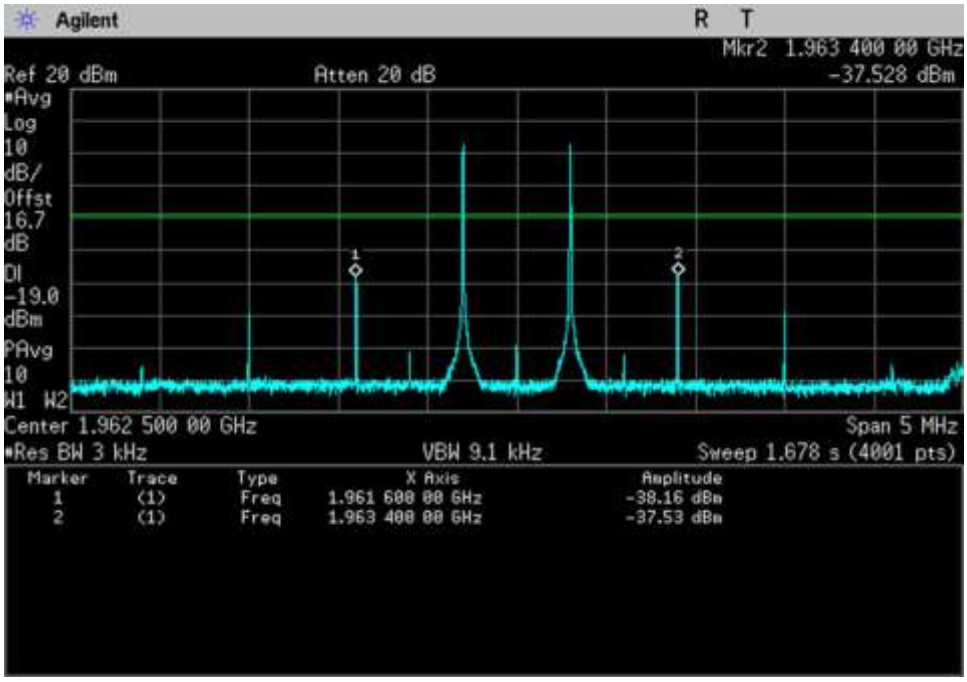
7.4_Intermod_UL_824-849MHz



7.4_Intermod_UL_1850-1915MHz



7.4_Intermod_DL_869-894MHz



7.4_Intermod_DL_1930-1995MHz

7.5 Out of Band Emissions

Test Conditions / Setup

Test Location:	CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170		
Customer:	Cellphone-Mate, Inc.		
Specification:	**7.5 Out-of-band Emissions**		
Work Order #:	**98360**	Date:	04/22/2016
Test Type:	**Conducted Emissions**	Time:	14:26:31
Tested By:	Daniel Bertran	Sequence#:	1
Software:	EMITest 5.03.00		

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

The equipment under test (EUT) is a Fixed Wideband Consumer Booster. The EUT is placed on the test bench. Evaluation performed at the Outside (Donor) and Inside (Server) antenna port. The EUT Donor port is a type SMA connector and 50ohm impedance. The EUT Server port is type F connector and 75ohm impedance. During testing there is a 75 ohm to 50 ohm matching pad connected to the EUT type F connector. This matching pad has a 5.8dB correction factor.

Part 22
UL: 824-849MHz
DL: 869-894MHz

Part 24
UL: 1850-1915MHz
DL: 1930-1995MHz

Test environment conditions: 21°C, 49% Relative Humidity,101.4 kPa

Test procedure:
The test was performed in accordance with section 7.5 of the FCC document: 935210 D03 Wideband Consumer Signal Booster Measurement Guidance v04 Dated February 12, 2016

Firmware: V1.0

Additional plots taken at 1dB before EUT shuts down and before reaching the maximum input level indicated in section 5.5 of above document.
- Maximum uplink transmitter test levels for fixed wideband consumer signal booster: +0 dBm
- The maximum downlink input level for all device types is −20 dBm

Lower RBW was used as applicable per rule part, in addition integration power function of the Spectrum Analyzers' Adjacent Channel Power tool was used to show compliance in instances where accuracy can be improved by integrating power measured in smaller RBW and linearly summed into standard bandwidth.

Used for testing the alternative test modulation types:
- CDMA (alternative 1.25 MHz AWGN*)
- LTE 5 MHz (alternative 4.1 MHz AWGN*)

*AWGN test signal, the bandwidth was measured 99% occupied bandwidth.

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	ANP06709	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	ANP06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	AN03470	Spectrum Analyzer	E4440A	12/9/2015	12/9/2017
	ANP06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	ANP06239	Attenuator	54A-10	7/9/2014	7/9/2016

Summary of Results

Pass: As shown on the plots, all out-of-band emissions are measured below -19dbm limit.

GSM

Low				Hi			
Out of Band Emission				Out of Band Emission			
Freq (MHz)	Pre AGC	Limit (dBm)	Results	Freq (MHz)	Pre AGC	Limit (dBm)	Results
UL1850-1915	-23.3	-19.0	Pass	UL1850-1915	-30.6	-19.0	Pass
UL824-849	-27.0	-19.0	Pass	UL824-849	-30.6	-19.0	Pass
DL1930-1995	-36.8	-19.0	Pass	DL1930-1995	-34.6	-19.0	Pass
DL869-894	-38.7	-19.0	Pass	DL869-894	-41.2	-19.0	Pass

CDMA

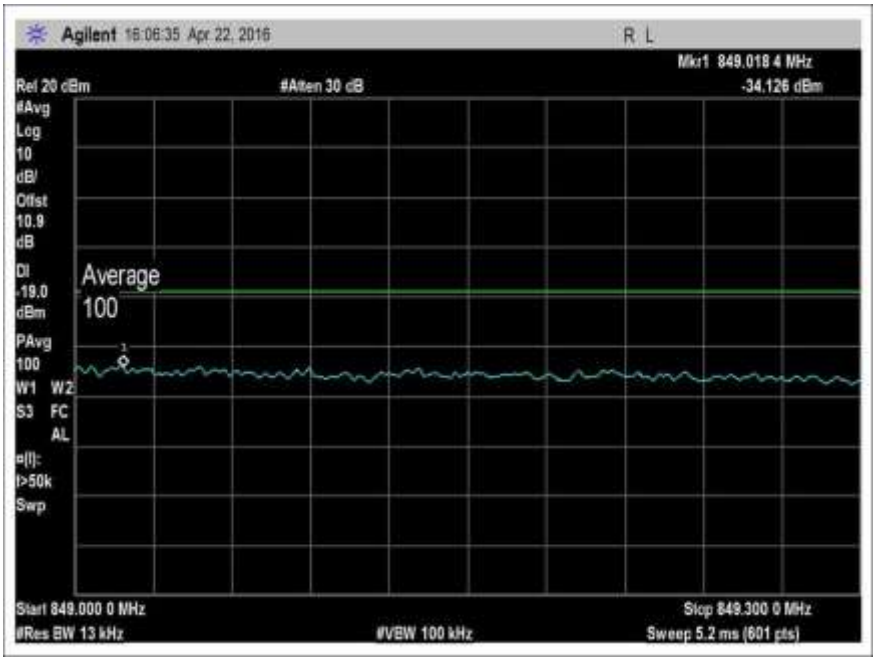
Low				Hi			
Out of Band Emission				Out of Band Emission			
Freq (MHz)	Pre AGC	Limit (dBm)	Results	Freq (MHz)	Pre AGC	Limit (dBm)	Results
UL1850-1915	-28.3	-19.0	Pass	UL1850-1915	-24.5	-19.0	Pass
UL824-849	-36.5	-19.0	Pass	UL824-849	-34.1	-19.0	Pass
DL1930-1995	-46.6	-19.0	Pass	DL1930-1995	-49.0	-19.0	Pass
DL869-894	-50.5	-19.0	Pass	DL869-894	-57.3	-19.0	Pass

WCDMA								
Low					Hi			
Out of Band Emission					Out of Band Emission			
Freq (MHz)	Pre AGC	Limit (dBm)	Results		Freq (MHz)	Pre AGC	Limit (dBm)	Results
UL1850-1915	-32.5	-19.0	Pass		UL1850-1915	-41.6	-19.0	Pass
UL824-849	-42.8	-19.0	Pass		UL824-894	-42.9	-19.0	Pass
DL1930-1995	-44.7	-19.0	Pass		DL1930-1995	-40.0	-19.0	Pass
DL869-894	-59.2	-19.0	Pass		DL869-894	-61.5	-19.0	Pass

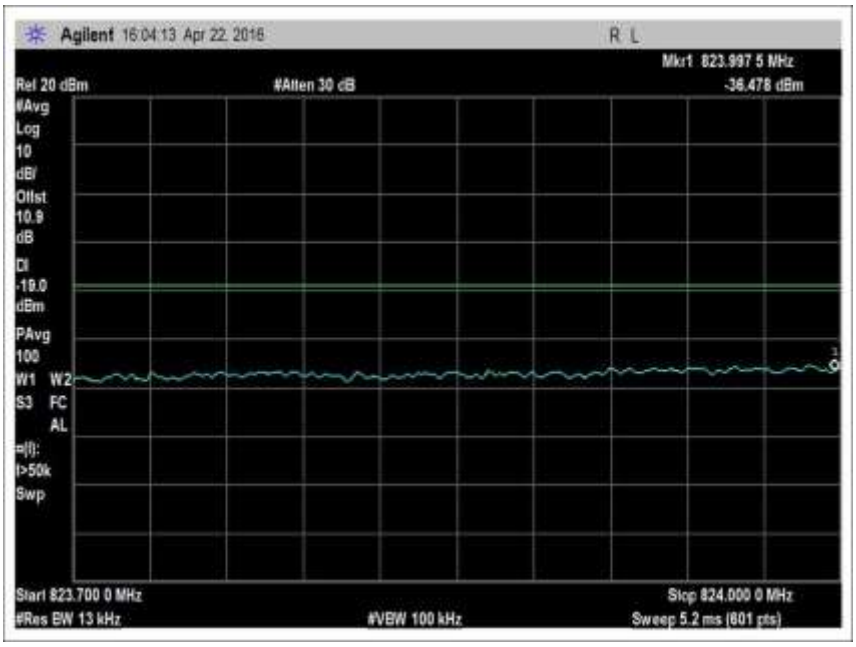
Note: The EUT maintains compliance with the OOB emission limit at input power of AGC+10dB.

Plots

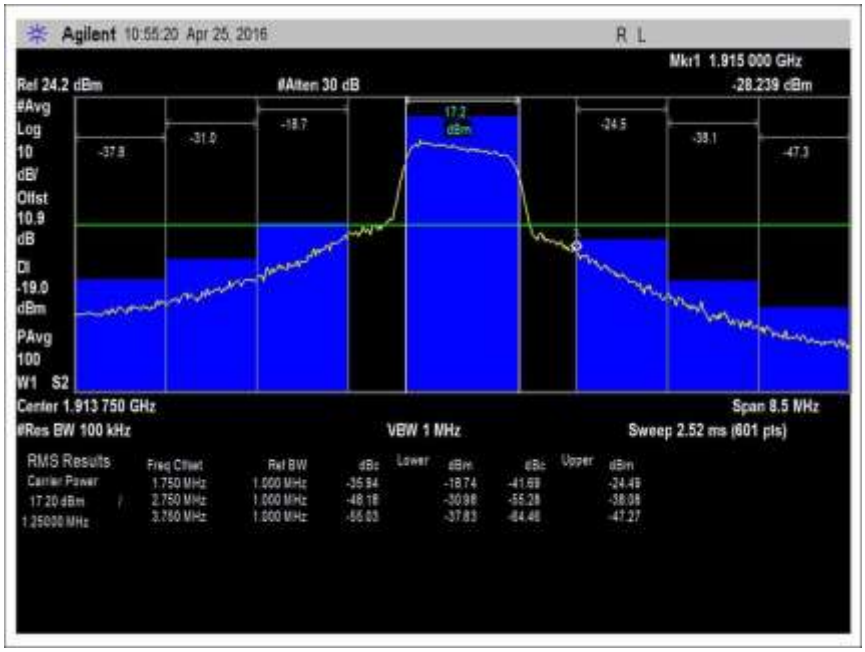
CDMA



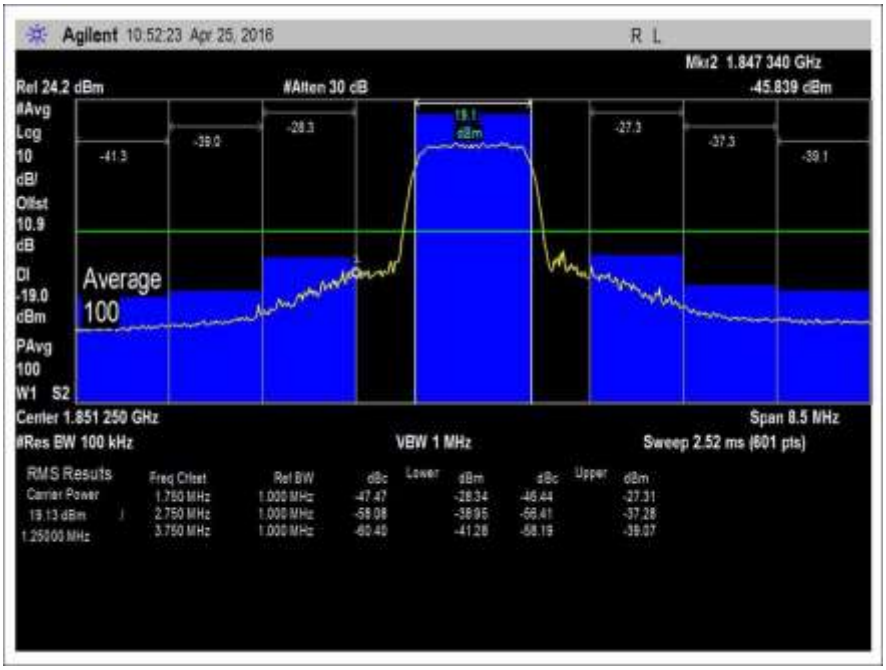
7.5_OBE_UL_824-849MHz_H_PreAGC



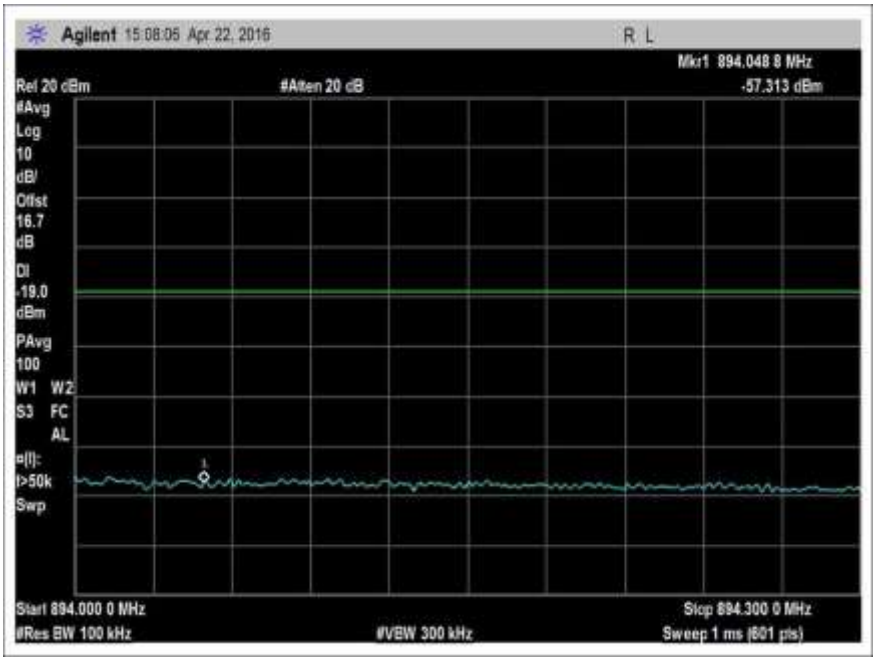
7.5_OBE_UL_824-849MHz_L_PreAGC



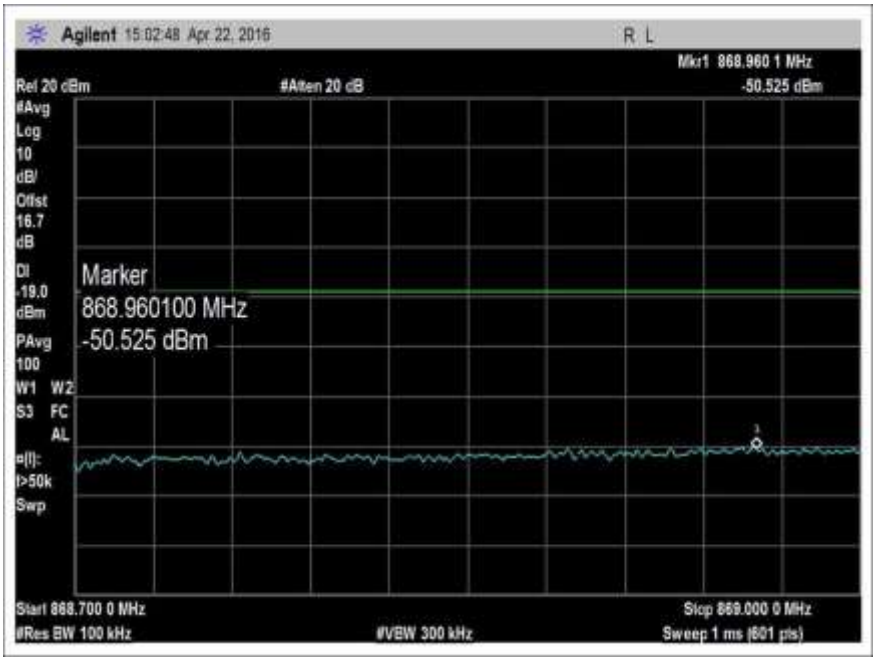
7.5_OBE_UL_1850-1915MHz_H_PreAGC



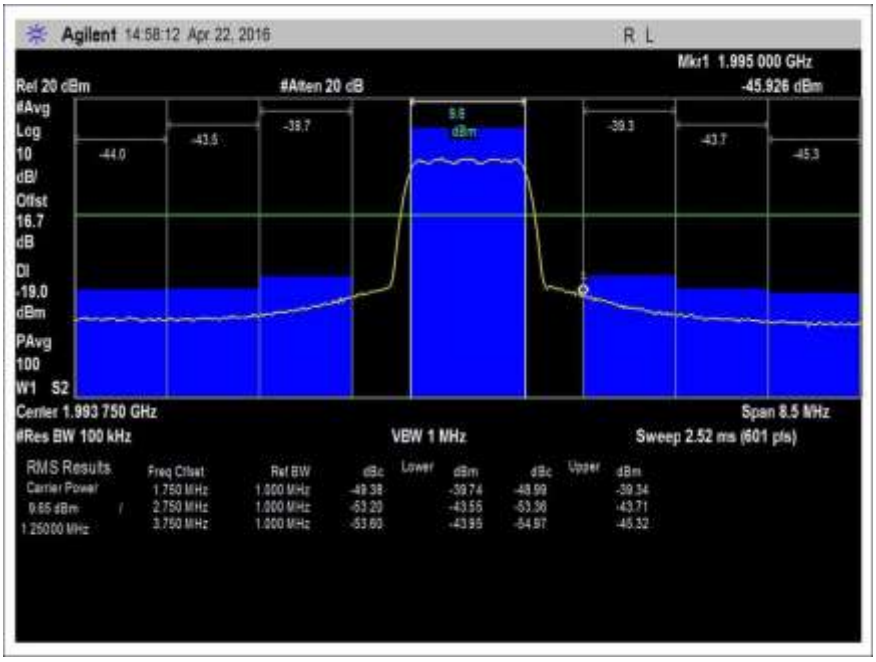
7.5_OBE_UL_1850-1915MHz_L_PreAGC



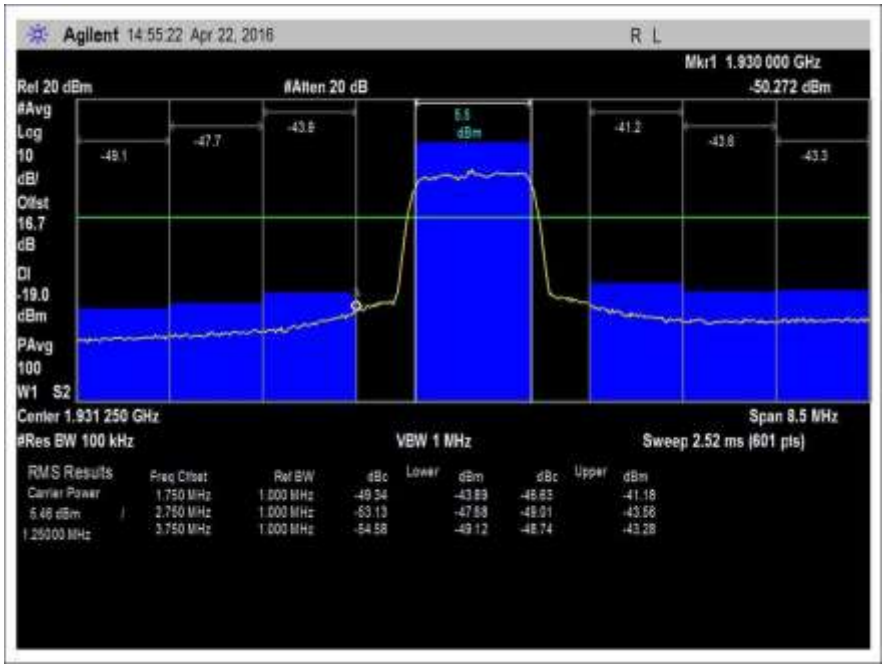
7.5_OBE_DL_869-894MHz_H_PreAGC



7.5_OBE_DL_869-894MHz_L_PreAGC

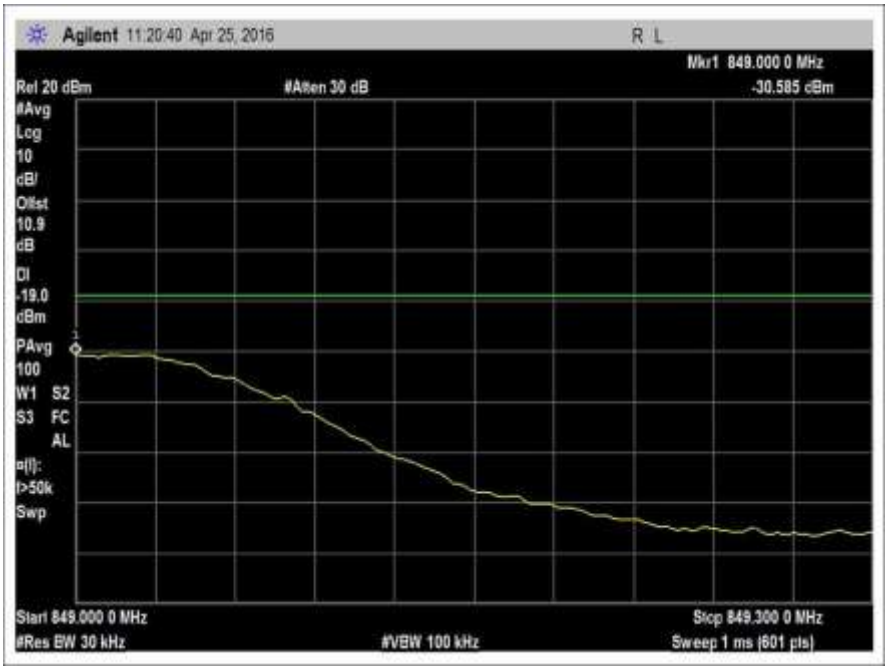


7.5_OBE_DL_1930-1995MHz_H_PreAGC

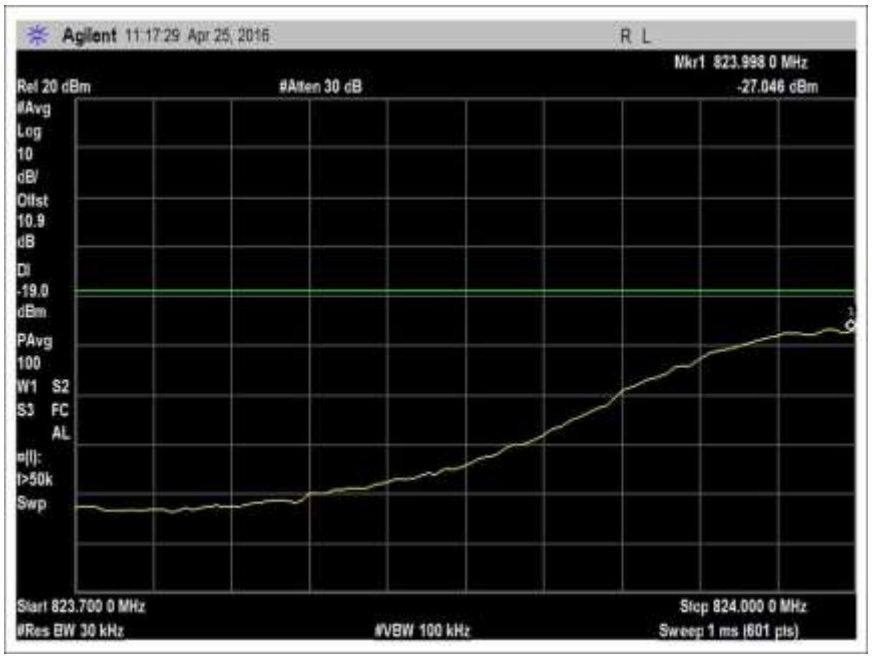


7.5_OBE_DL_1930-1995MHz_L_PreAGC

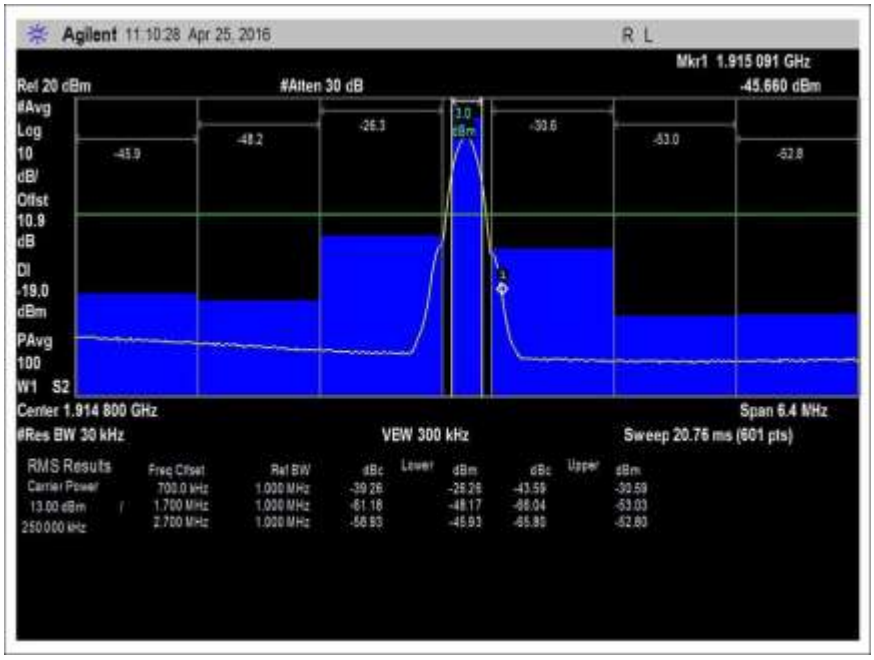
GSM



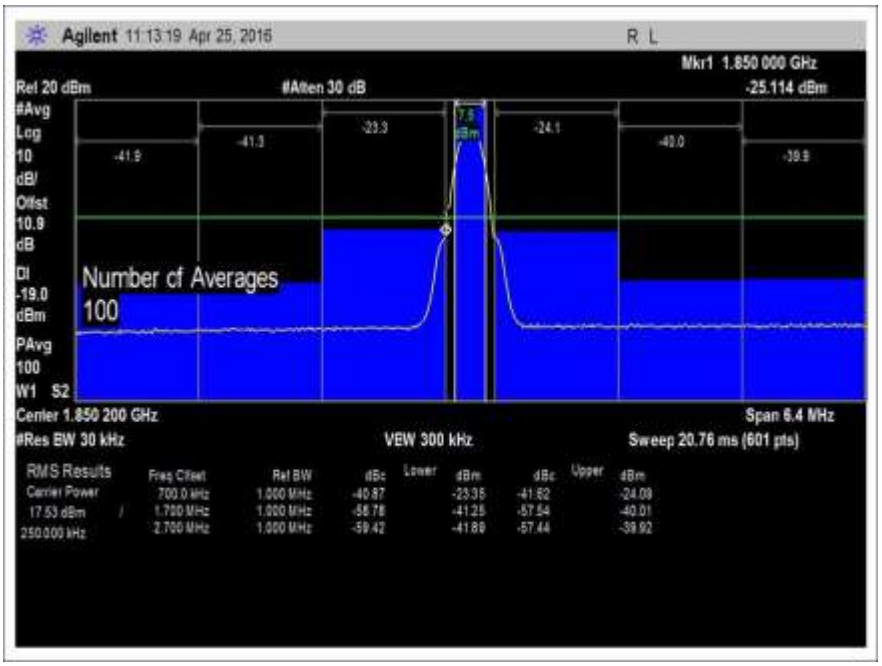
7.5_OBE_UL_824-849MHz_H_PreAGC



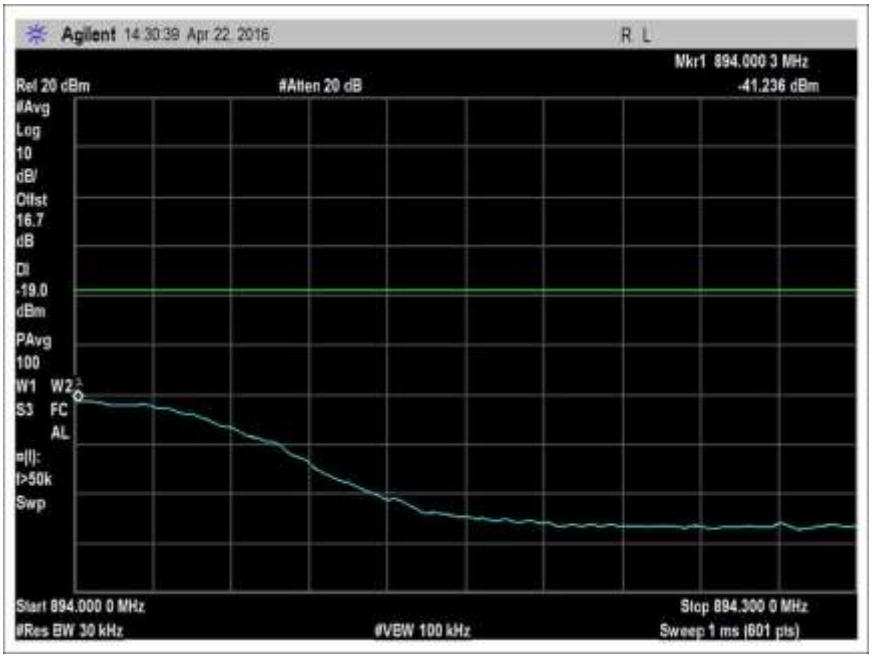
7.5_OBE_UL_824-849MHz_L_PreAGC



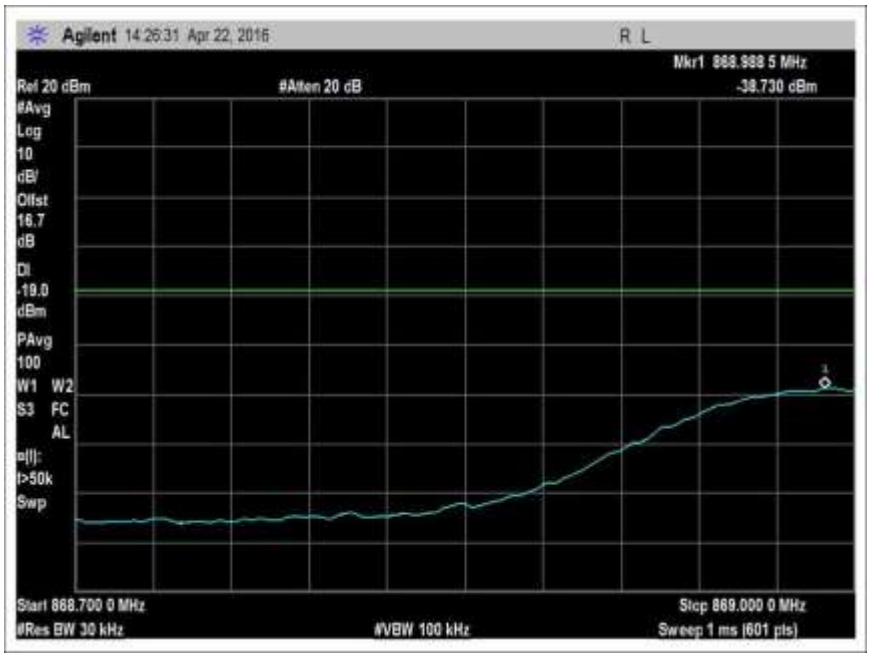
7.5_OBE_UL_1850-1915MHz_H_PreAGC



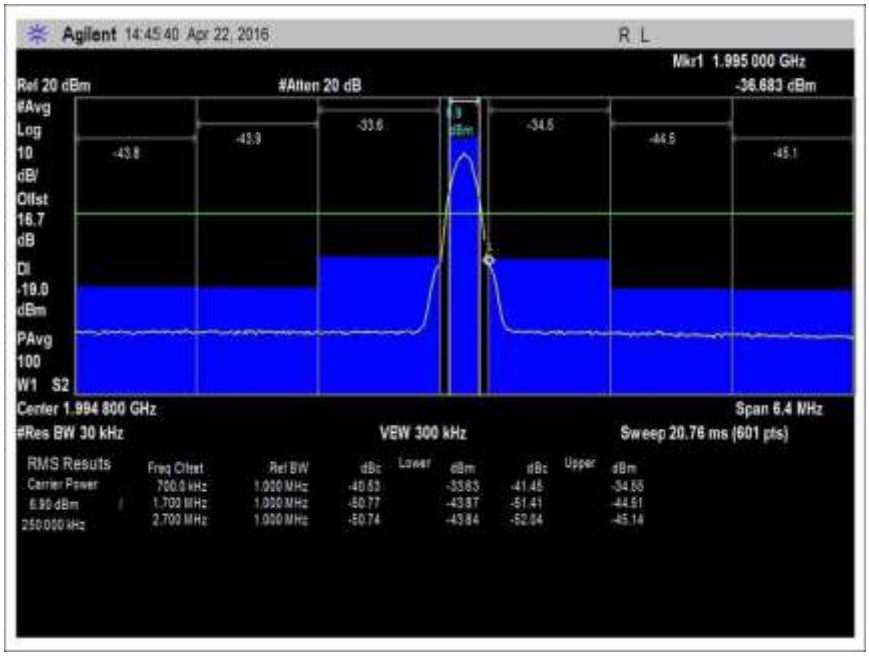
7.5_OBE_UL_1850-1915MHz_L_PreAGC



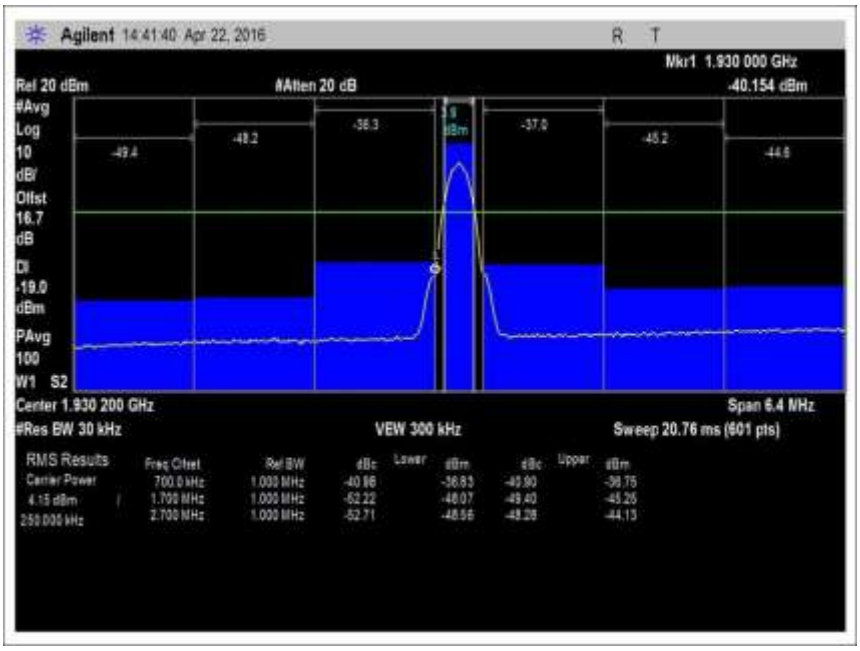
7.5_OBE_DL_869-894MHz_H_PreAGC



7.5_OBE_DL_869-894MHz_L_PreAGC

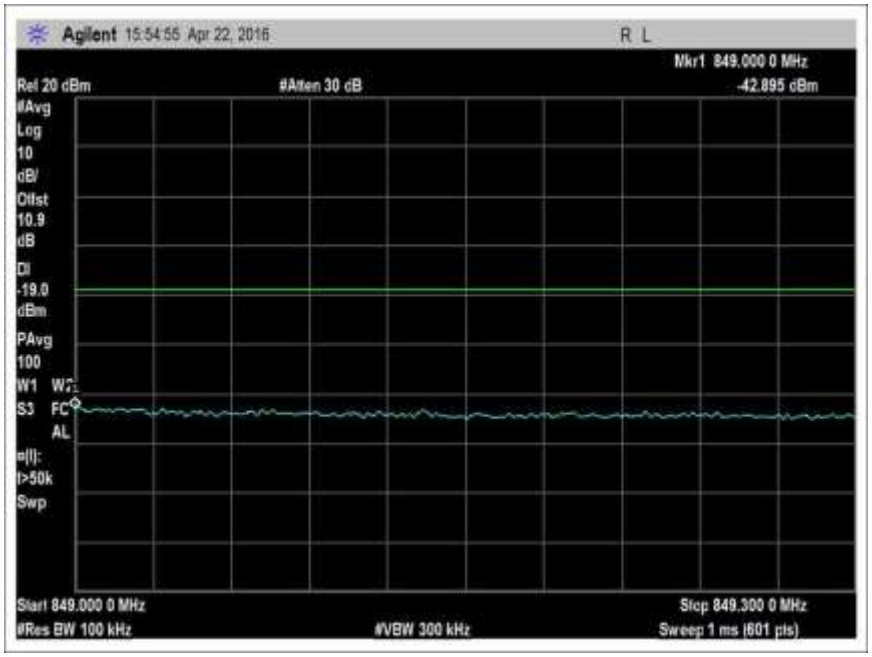


7.5_OBE_DL_1930-1995MHz_H_PreAGC

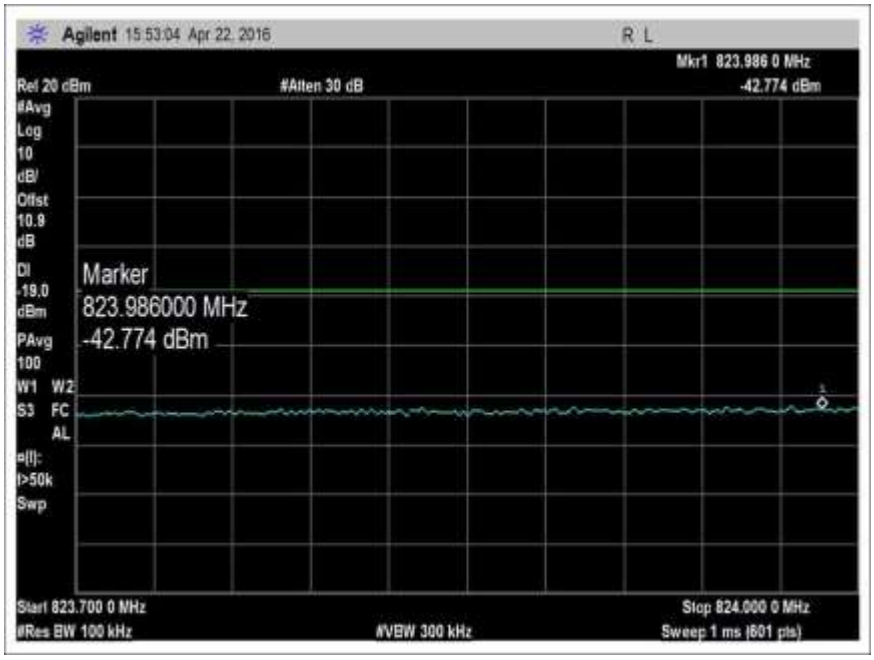


7.5_OBE_DL_1930-1995MHz_L_PreAGC

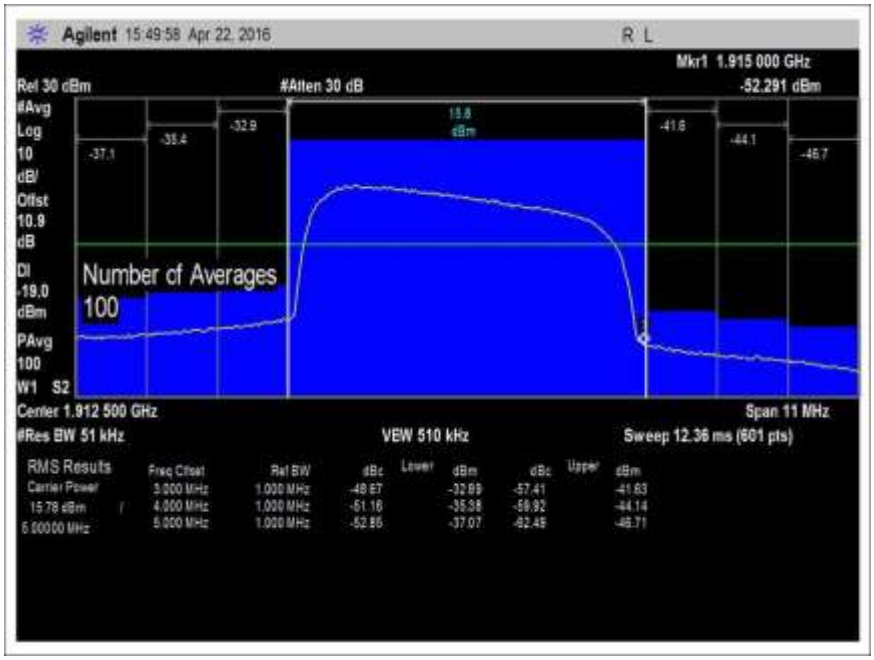
LTE



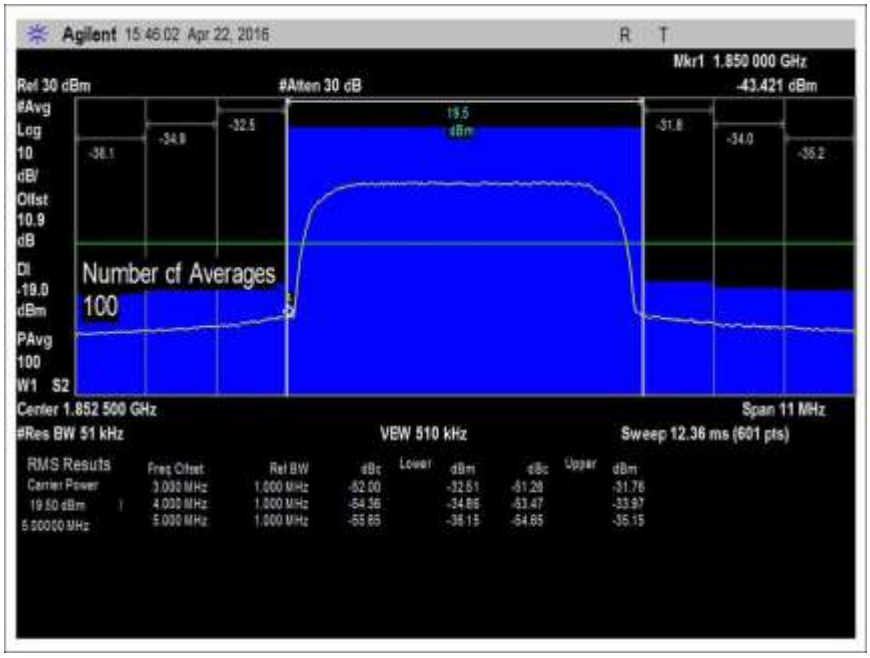
7.5_OBE_UL_824-849MHz_H_PreAGC



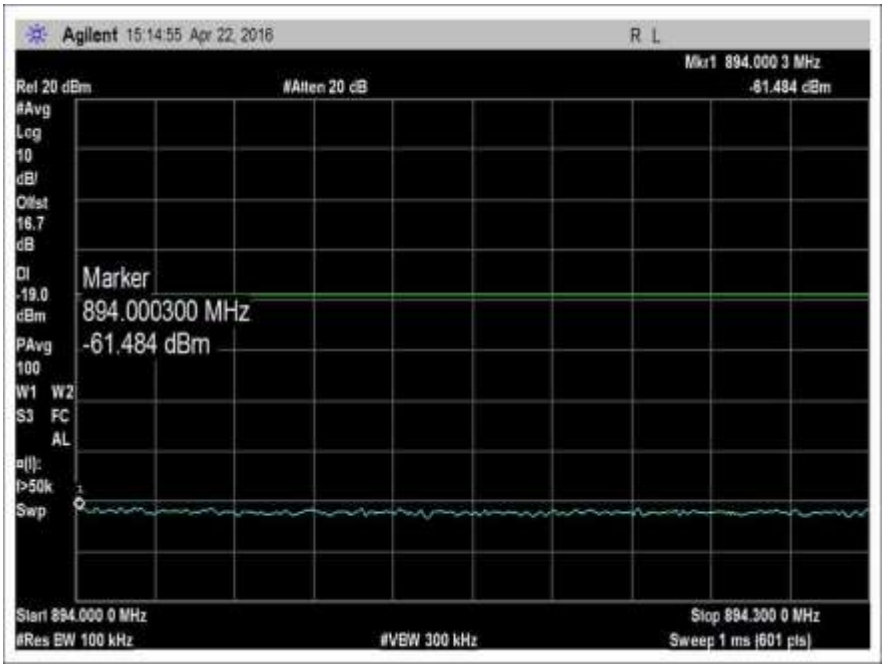
7.5_OBE_UL_824-849MHz_L_PreAGC



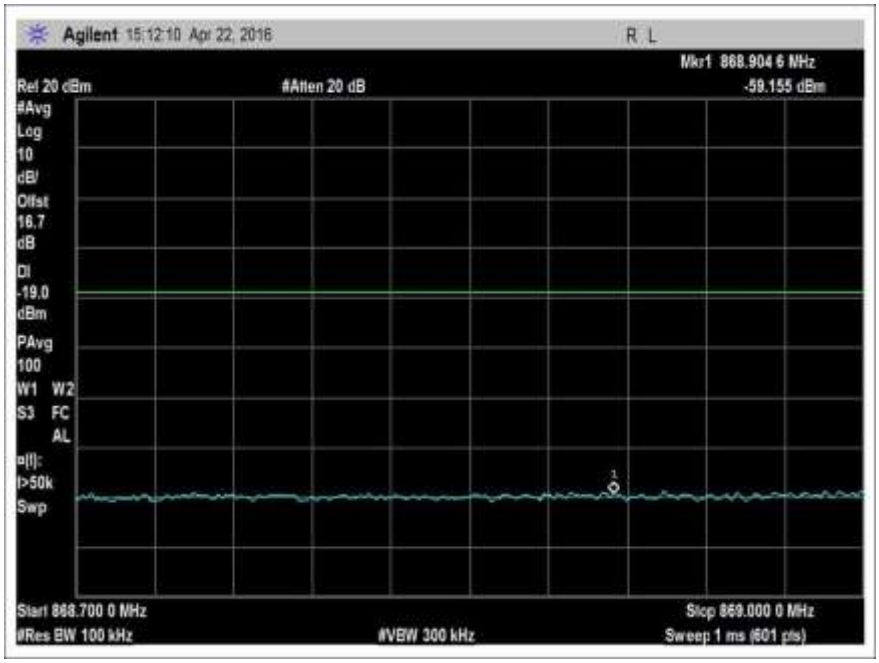
7.5_OBE_UL_1850-1915MHz_H_PreAGC



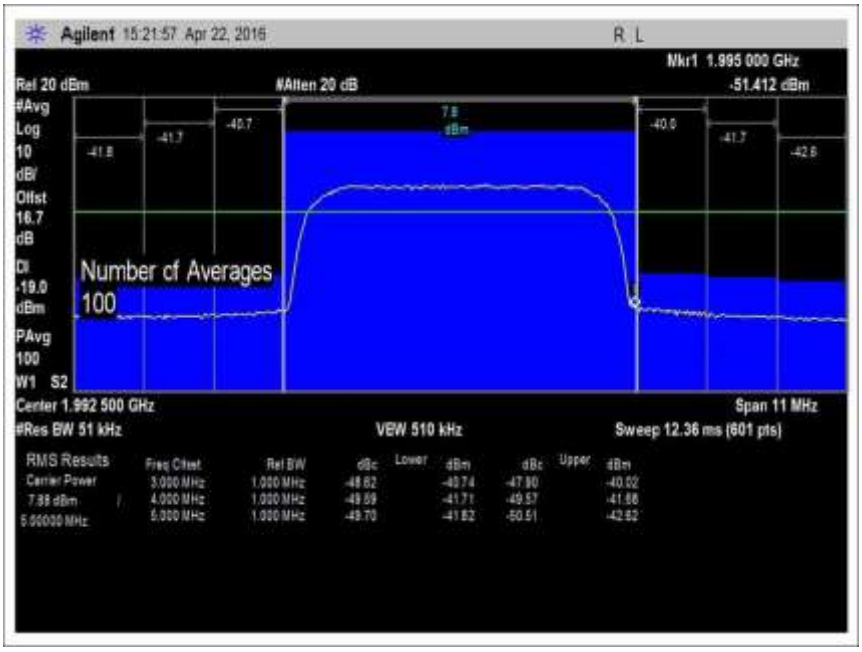
7.5_OBE_UL_1850-1915MHz_L_PreAGC



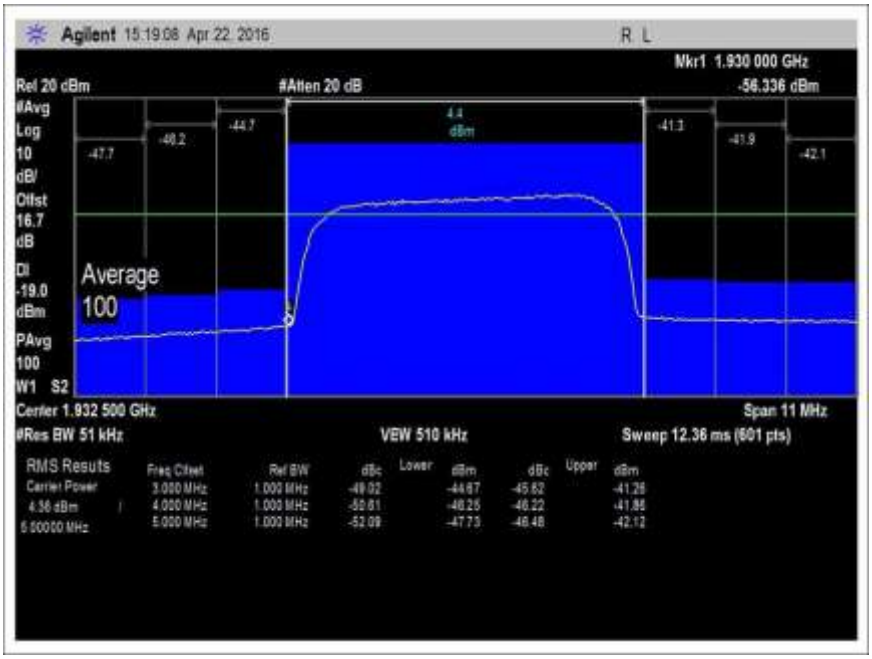
7.5_OBE_DL_869-894MHz_H_PreAGC



7.5_OBE_DL_869-894MHz_L_PreAGC



7.5_OBE_DL_1930-1995MHz_H_PreAGC



7.5_OBE_DL_1930-1995MHz_L_PreAGC

7.7 Noise limit

Test Conditions / Setup

Test Location:	CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170		
Customer:	Cellphone-Mate, Inc.		
Specification:	**7.7 Noise Limit (Maximum Transmitter Noise Power Level / Variable UL Noise Timing)**		
Work Order #:	**98360**	Date:	04/25/2016
Test Type:	**Conducted Emissions**	Time:	11:34:59
Tested By:	Daniel Bertran	Sequence#:	1
Software:	EMITest 5.03.00		

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

The equipment under test (EUT) is a Fixed Wideband Consumer Booster.
The EUT is placed on the test bench. Evaluation performed at the Outside (Donor) and Inside (Server) antenna port.
The EUT Donor port is a type SMA connector and 50ohm impedance.
The EUT Server port is type F connector and 75ohm impedance.
During testing there is a 75 ohm to 50 ohm matching pad connected to the EUT type F connector.
This matching pad has a 5.8dB correction factor.

7.7.1 Maximum Transmitter Noise Power Level

Per figure 3, input Donor port was terminated with 50 Ohm Pasternack load (MN: PE6187 and SN: 1443). Input server port was terminated with 50Ohm Pasternack load via a 75/50 Ohm impedance matching pad. (MN: PE6187 and SN: 1443).

7.7.2 Variable UL Noise Timing

Per figure 4, server port was terminated with 50 Ohm Pasternack load via a 75/50 Ohm impedance matching pad. (MN: PE6187 and SN: 1443).

Part 22
UL: 824-849MHz
DL: 869-894MHz
Part 24
UL: 1850-1915MHz
DL: 1930-1995MHz
Test environment conditions: 20°C, 45% Relative Humidity,101.5kPa
Test procedure:
The test was performed in accordance with section 7.7 of the FCC document: 935210 D03 Wideband Consumer Signal Booster Measurement Guidance v04 Dated February 12, 2016
Firmware: V1.0

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	ANP06709	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	ANP06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	AN03470	Spectrum Analyzer	E4440A	12/9/2015	12/9/2017
	ANP06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	ANP06239	Attenuator	54A-10	7/9/2014	7/9/2016

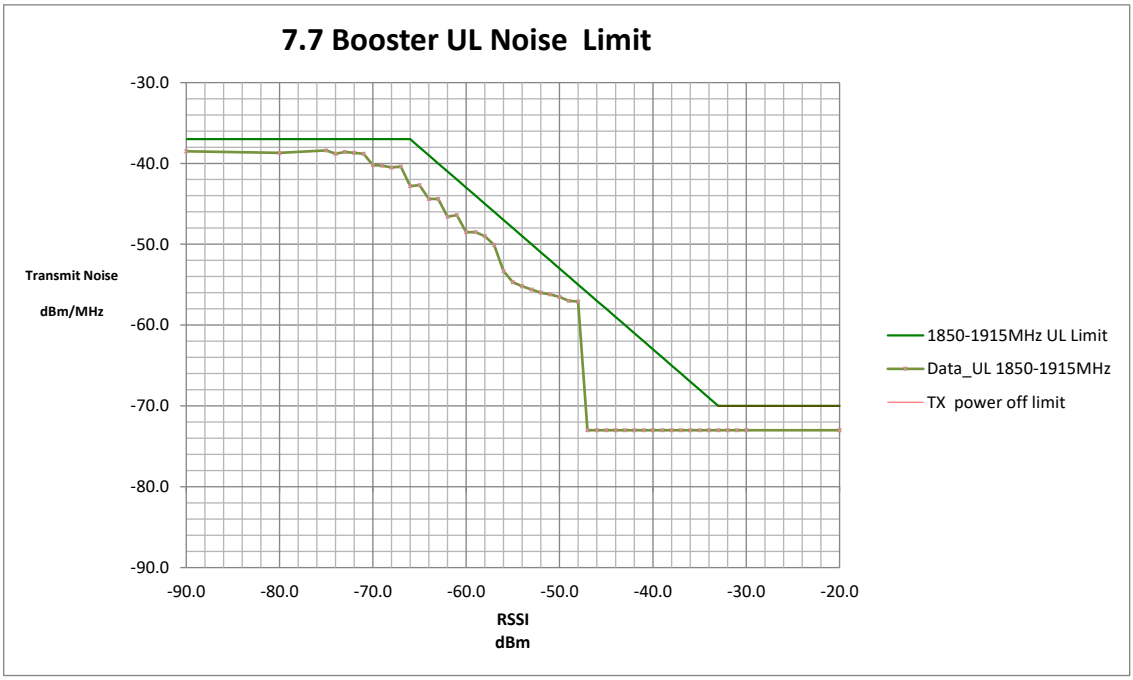
Summary of Results

7.7.1 Maximum transmitter noise power level

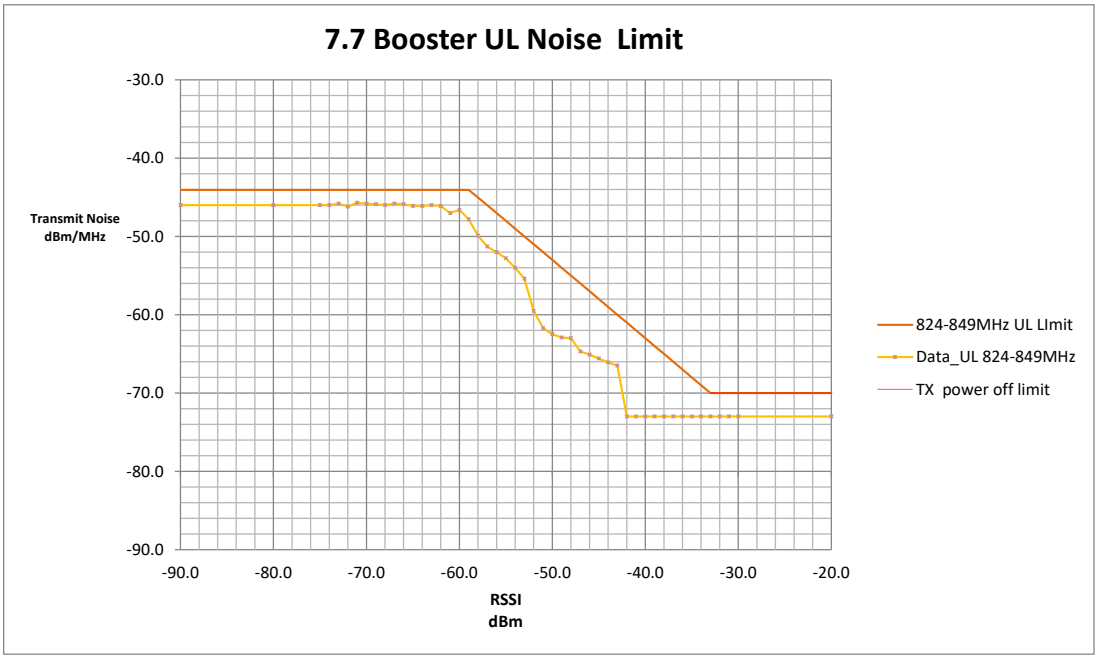
- 7.7.1 a-g: Maximum transmitter noise with 50-ohm shielded load

Maximum Noise Power			
Freq	**Measured**	**Limit**	**Margin**
MHz	**dBm./MHz**	**dBm/MHz**	
UL1850-1915	-39.33	-37.0	-2.3
UL824-849	-46.64	-44.1	-2.5
DL1930-1995	-40.83	-37.0	-3.8
DL869-894	-49.13	-44.1	-5.0

- 7.7.1 h-n: Maximum transmitter noise when varying the DL signal generator output level with a 4.1MHz AWGN signal.



1850.0	1915.0	MHz			
		Limit			Margin
RSSI (dBm)	Measured Noise (dBm/MHz)	RSSI Dependent	Fixed Booster Limit	TX off	
-90.0	-38.5		-37.0		-1.5
-75.0	-38.4		-37.0		-1.4
-58.0	-49.0	-45.0			-4.0
-50.0	-56.5	-53.0			-3.5
-49.0	-57.0	-54.0			-3.0
-48.0	-57.1	-55.0			-2.1
-32.0	-73.0			-70	-3.0



824.0	849.0	MHz			
		Limit			Margin
RSSI (dBm)	Measured Noise (dBm/MHz)	RSSI Dependent	Fixed Booster Limit	TX off	
-71.0	-45.7		-44.1		-1.6
-67.0	-45.8		-44.1		-1.7
-58.0	-49.9	-45.0			-4.9
-56.0	-52.0	-47.0			-5.0
-34.0	-73.0	-69.0			-4.0
-33.0	-73.0	-70.0			-3.0
-32.0	-73.0			-70	-3.0

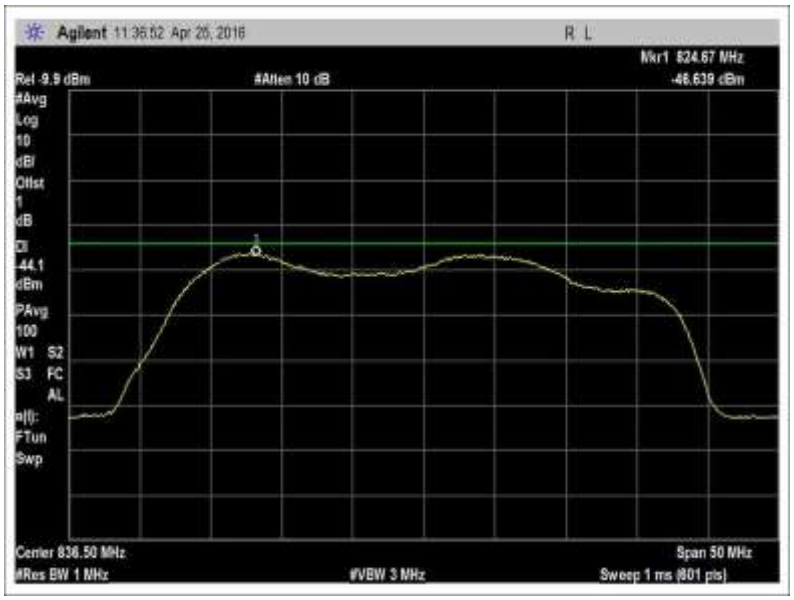
7.7.2 Variable uplink noise timing

Uplink Noise timing		
Freq	Measured	Limit
MHz	Sec	sec
UL1850-1915	1.4	3
UL824-849	1.5	3

7.7.1 Maximum Transmitter Noise Power Level

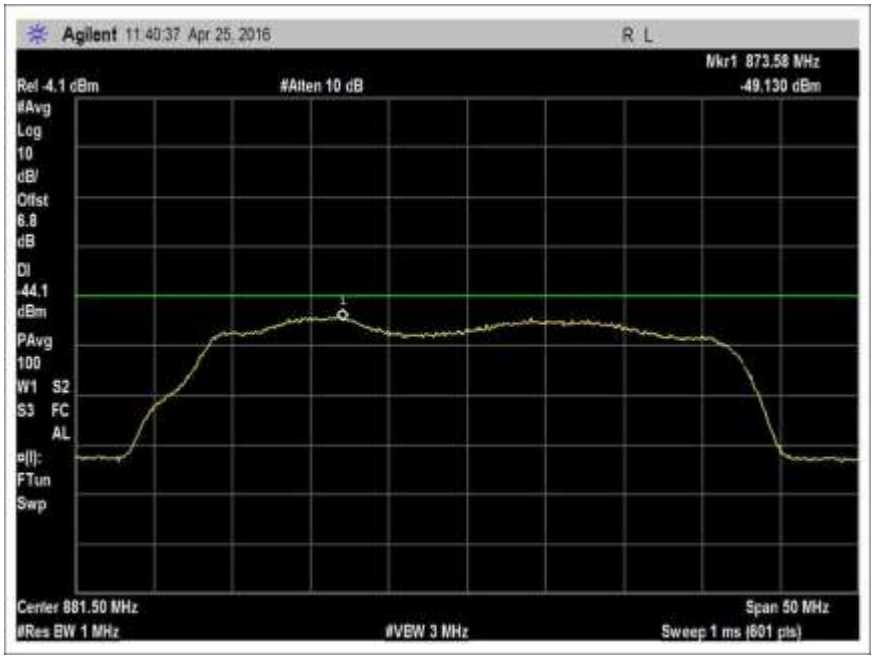
Plots

a – g Noise 50

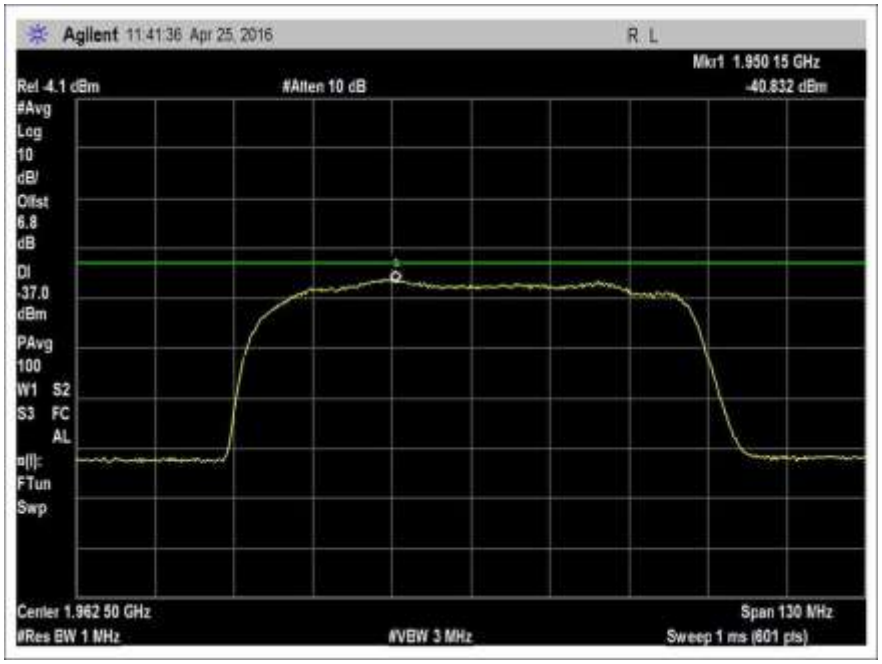


7.7_ Noise_UL_824-849MHz

7.7_ Noise_UL_1850-1915MHz



7.7_ Noise_DL_869-894MHz



7.7_ Noise_DL_1930-1995MHz

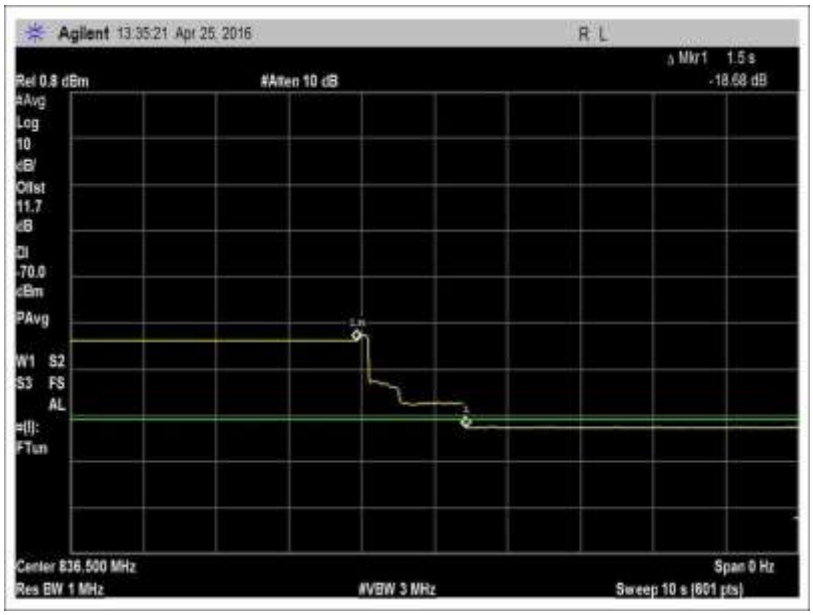
h – n Tx Noise

Note: For this subsection, see summary of results of 7.7.
7.7.1 h-n: Maximum transmitter noise when varying the DL signal generator output level with a 4.1MHz AWGN signal.

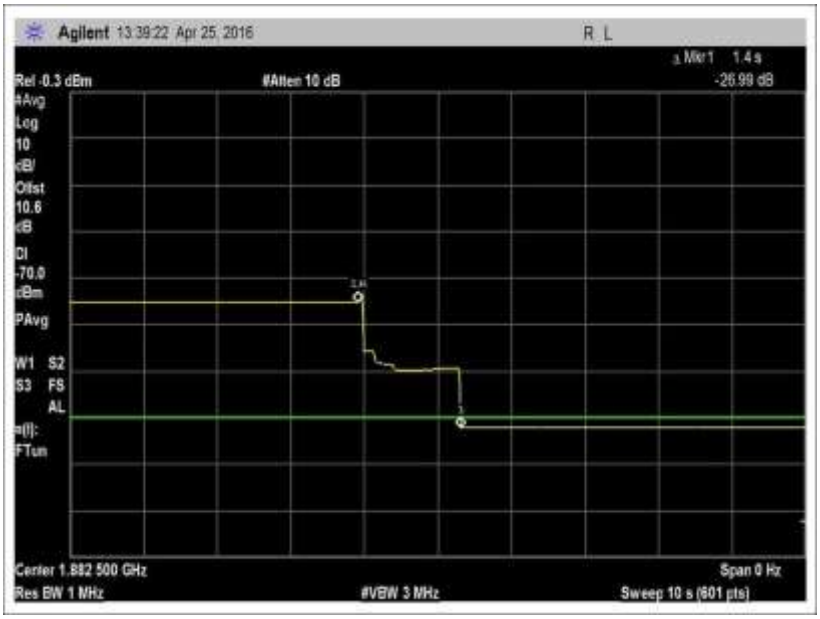
7.7.2 Variable UL Noise Timing

Plots

a – g Timing



7.7_ VarNoise_UL_824-849MHz



7.7_ VarNoise_UL_1850-1915MHz

7.8 Uplink Inactivity

Test Conditions / Setup

Test Location:	CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170		
Customer:	Cellphone-Mate, Inc.		
Specification:	**7.8 Uplink Inactivity**		
Work Order #:	**98360**	Date:	04/25/2016
Test Type:	**Conducted Emissions**	Time:	13:52:19
Tested By:	Daniel Bertran	Sequence#:	1
Software:	EMITest 5.03.00		

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

The equipment under test (EUT) is a Fixed Wideband Consumer Booster.
The EUT is placed on the test bench. Evaluation performed at the Outside (Donor) and Inside (Server) antenna port.
The EUT Donor port is a type SMA connector and 50ohm impedance.
The EUT Server port is type F connector and 75ohm impedance.
During testing there is a 75 ohm to 50 ohm matching pad connected to the EUT type F connector.
This matching pad has a 5.8dB correction factor.

Part 22
UL: 824-849MHz
DL: 869-894MHz

Part 24
UL: 1850-1915MHz
DL: 1930-1995MHz

Test environment conditions: 20°C, 45% Relative Humidity,101.5 kPa
Test procedure:
The test was performed IAW section 7.8 of the FCC document: 935210 D03 Wideband Consumer Signal Booster Measurement Guidance v04 Dated February 12, 2016

Firmware: V1.0

Test Equipment:

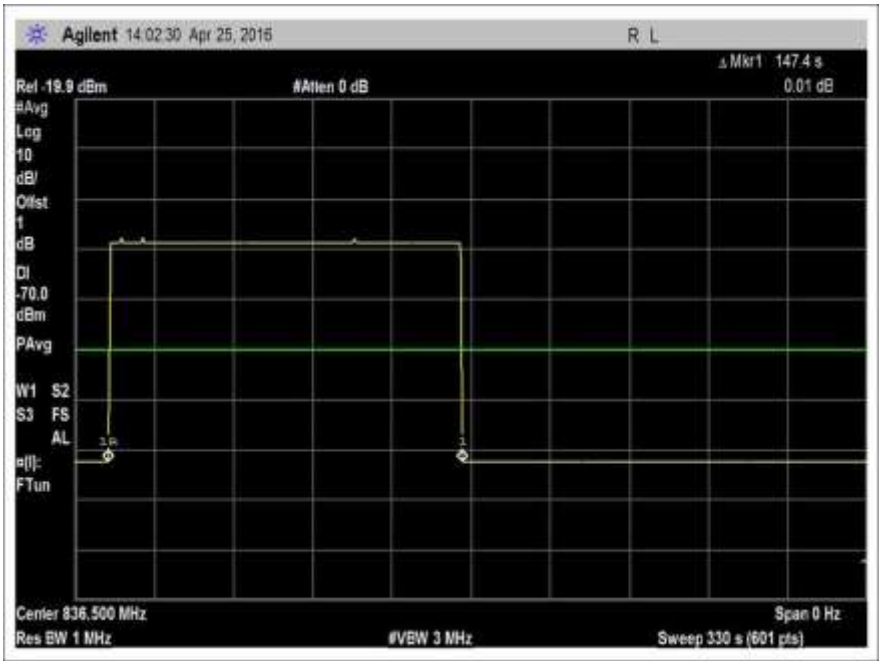
ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	ANP06709	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	AN03470	Spectrum Analyzer	E4440A	12/9/2015	12/9/2017
	ANP06239	Attenuator	54A-10	7/9/2014	7/9/2016

Summary of Results

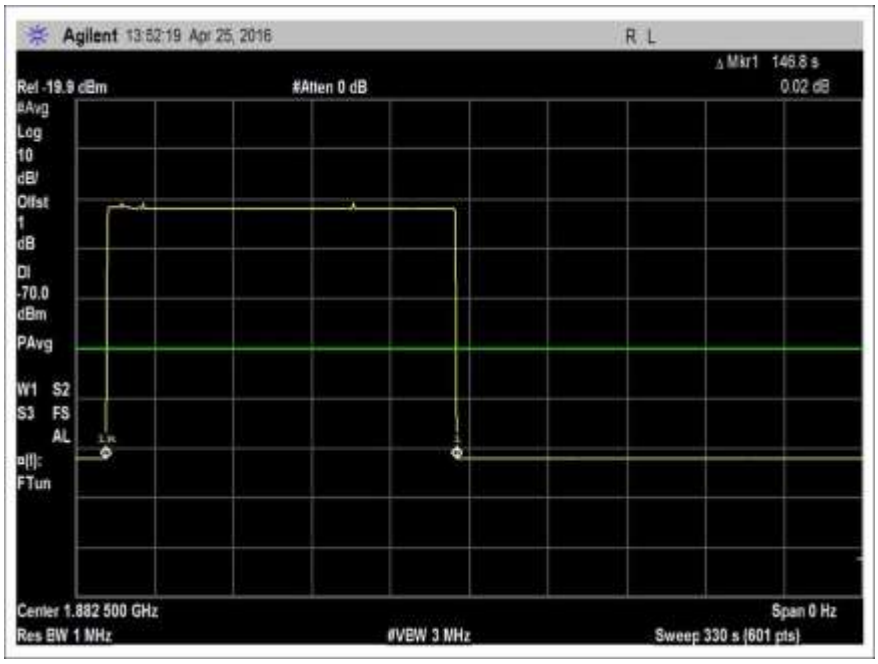
Pass: As demonstrated, when the booster is not serving an active device connection after 5 minutes the uplink noise power does not exceed -70dBm/MHz

Uplink Inactivity		
Freq	**Measured**	**Limit**
MHz	**Min**	**Min**
UL1850-1915	2.45	5.0
UL824-849	2.46	5.0

Plots



7.8_ Inactivity_UL_824-849MHz



7.8_ Inactivity_UL_1850-1915MHz

7.9 Booster Gain Limit

Test Conditions / Setup

Test Location:	CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170		
Customer:	Cellphone-Mate, Inc.		
Specification:	**7.9 Variable Booster gain(Max Gain / Variable Uplink Gain Timing)**		
Work Order #:	**98360**	Date:	04/25/2016
Test Type:	**Conducted Emissions**	Time:	14:10:04
Tested By:	Daniel Bertran	Sequence#:	1
Software:	EMITest 5.03.00		

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

The equipment under test (EUT) is a Fixed Wideband Consumer Booster.
The EUT is placed on the test bench. Evaluation performed at the Outside (Donor) and Inside (Server) antenna port.
The EUT Donor port is a type SMA connector and 50ohm impedance.
The EUT Server port is type F connector and 75ohm impedance.
During testing there is a 75 ohm to 50 ohm matching pad connected to the EUT type F connector.
This matching pad has a 5.8dB correction factor.

Part 22
UL: 824-849MHz
DL: 869-894MHz

Part 24
UL: 1850-1915MHz
DL: 1930-1995MHz

Test environment conditions: 20°C, 45% Relative Humidity,101.5 kPa
Test procedure:
The test was performed in accordance with section 7.9 of the FCC document: 935210 D03 Wideband Consumer Signal Booster Measurement v04 Dated February 12, 2016

Firmware: V1.0
Note:
Used MSCL provided by the manufacturer's antenna kitting.

Mobile station coupling loss (MSCL): *the minimum coupling loss (in dB) between the wireless device and the input (server) port of the consumer booster. MSCL must be calculated or measured for each band of operation and provided in compliance test reports. MSCL includes the path loss from the wireless device, and the booster's server antenna gain and cable loss. The wireless device is assumed to be an isotropic (0 dBi) antenna reference. Minimum standoff distances from inside wireless devices to the booster's server antenna must be reasonable and specified by the manufacturer in customer provided installation manuals.*

L P = 20logf + 20logd – 27.5

Where:

L P = basic free space path loss,

f = Center frequency,

d = 2 meters.

MSCL

Frequency (MHz)	MSCL (dB)
1850-1915	43.2
824-849	36.6

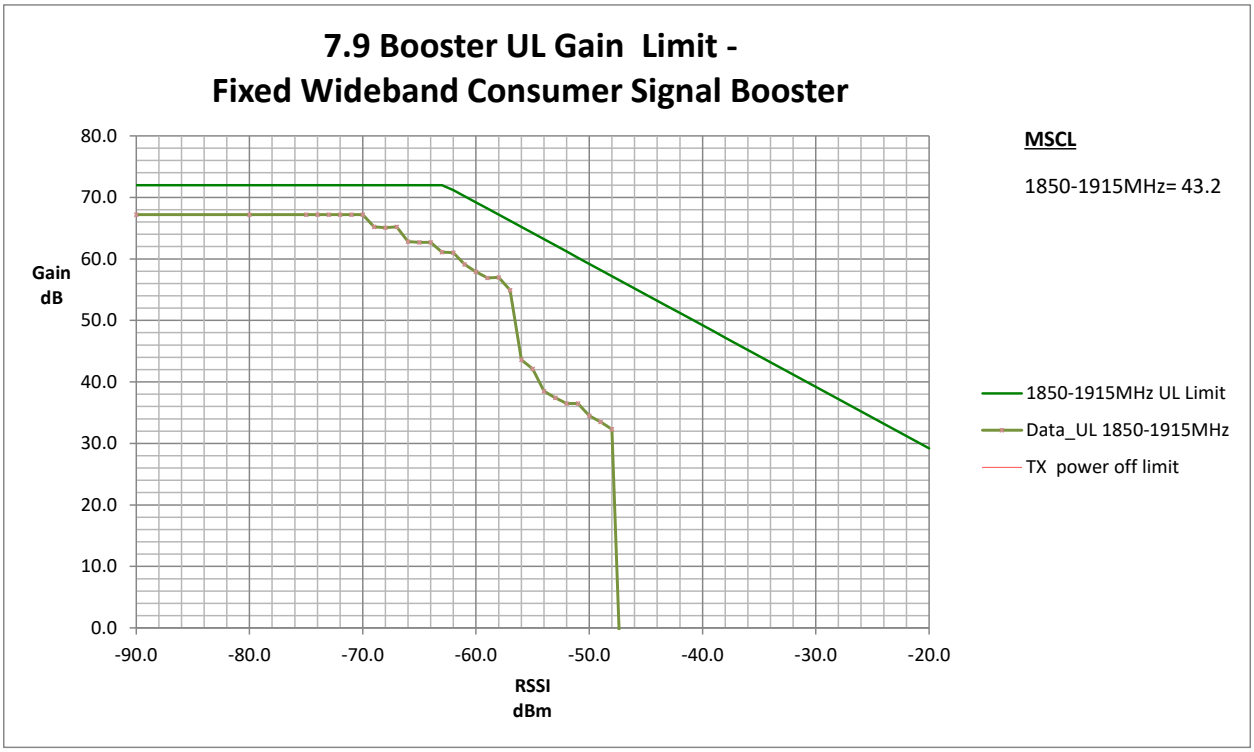
Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	ANP06709	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	ANP06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	ANP06138	Cable	32022-29094K-29094K-72TC	3/18/2015	3/18/2017
	AN03470	Spectrum Analyzer	E4440A	12/9/2015	12/9/2017
	ANP06239	Attenuator	54A-10	7/9/2014	7/9/2016
	ANC00082	RF Coupler	722-10-1.500V	8/26/2015	8/26/2017
	ANC00087	Combiner	44000	01/07/2016	01/07/2018

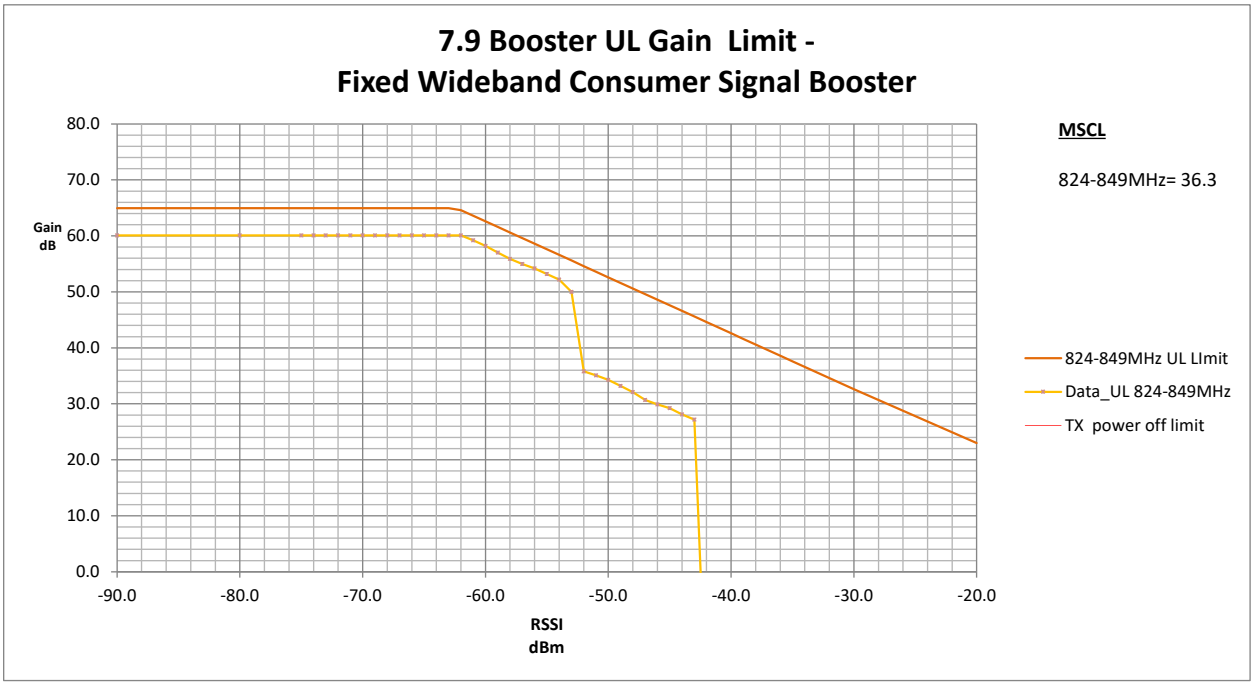
Summary of Results

Pass: As demonstrated, computed gains are within the gain limit. All maximum variable uplink gain timings are within 3 second limit.

7.9.1 Maximum gain



1850.0			1915.0 MHz				
				Limit			Margin
RSSI (dBm)	Input (dBm)	Measured Output (dBm)	Measured Gain (dBm)	RSSI Dependent	Fixed Booster Limit	TX off	
-75.0	-51	16.2	67.2		72.0		-4.8
-70.0	-51	16.2	67.2		72.0		-4.8
-62.0	-51	10	61.0	71.2			-10.2
-61.0	-51	8.1	59.1	70.2			-11.1
-58.0	-51	6	57.0	67.2			-10.2
-57.0	-51	3.9	54.9	66.2			-11.3



824.0			849.0 MHz				
				Limit			Margin
RSSI (dBm)	Input (dBm)	Measured Output (dBm)	Measured Gain (dBm)	RSSI Dependent	Fixed Booster Limit	TX off	
-74.0	-44.5	15.6	60.1		64.9		-4.8
-67.0	-44.5	15.6	60.1		64.9		-4.8
-61.0	-44.5	14.7	59.2	63.6			-4.4
-60.0	-44.5	13.7	58.2	62.6			-4.4
-56.0	-44.5	9.7	54.2	58.6			-4.4
-54.0	-44.5	7.7	52.2	56.6			-4.4

7.9.2 Variable uplink gain timing

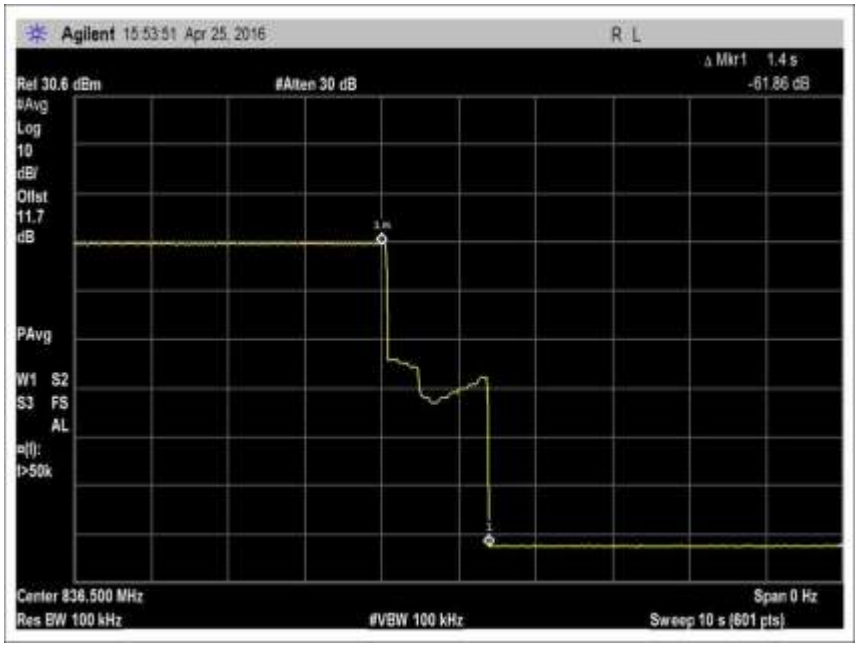
Uplink Gain Timing		
Frequency (MHz)	Measured (Sec)	Limit (Sec)
UL1850-1915	1.4	3
UL824-849	1.4	3

7.9.1 Maximum Gain

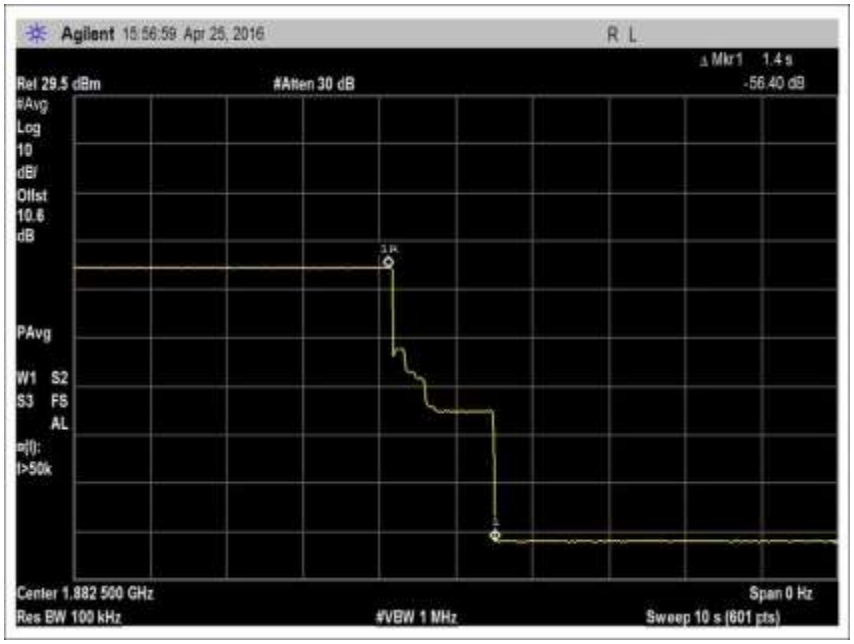
For this subsection, see summary of results of 7.9
7.9.1 Maximum gain

7.9.2 Variable uplink Gain Timing

Plots



7.9.2_VarULGainTiming_UL_824-849MHz



7.9.2_VarULGainTiming_UL_1850-1915MHz

7.11 Oscillation Detection

Test Conditions / Setup

Test Location:	CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170		
Customer:	Cellphone-Mate, Inc.		
Specification:	**7.11 Anti-Oscillation (Oscillation Restarts / Oscillation mitigation or shutdown)**		
Work Order #:	**98360**	Date:	04/25/2016
Test Type:	**Conducted Emissions**	Time:	16:41:48
Tested By:	Daniel Bertran	Sequence#:	1
Software:	EMITest 5.03.00		

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Configuration 1
The equipment under test (EUT) is a Fixed Wideband Consumer Booster.
The EUT is placed on the test bench. Evaluation performed at the Outside (Donor) and Inside (Server) antenna port.
The EUT Donor port is a type SMA connector and 50ohm impedance.
The EUT Server port is type F connector and 75ohm impedance.
During testing there is a 75 ohm to 50 ohm matching pad connected to the EUT type F connector.
This matching pad has a 5.8dB correction factor.

Part 22
UL: 824-849MHz
DL: 869-894MHz

Part 24
UL: 1850-1915MHz
DL: 1930-1995MHz

Test environment conditions: 20°C, 45% Relative Humidity,101.5kPa
Test procedure:
The test was performed in accordance with section 7.11 of the FCC document: 935210 D03 Wideband Consumer Signal Booster Measurement Guidance v04 Dated February 12, 2016

Firmware: V1.0
Note: UL1850-1915MHz -**AWGNL+5**:

- **AWGNL** denotes a 4.1MHz AWGN signal (99% occupied bandwidth) tuned to the frequency of 2.5 MHz above the lower edge of the operating band 1850-1915MHz
- **+5** denotes a variable attenuator adjusted such that the insertion loss for center of band under test (isolation) between the booster's donor and server ports is 5 dB greater than the maximum gain, as recorded in the maximum gain test procedure, for the band under test.

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	ANP06902	Cable	32022-29094K-29094K-36TC	12/30/2015	12/30/2017
	ANP06903	Cable	32022-29094K-29094K-36TC	12/30/2015	12/30/2017
	ANP06899	Cable	32022-29094K-29094K-72TC	12/30/2015	12/30/2017
	ANP06709	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	ANP06710	Cable	32026-29094K-29094K-72TC	9/18/2014	9/18/2016
	AN03470	Spectrum Analyzer	E4440A	12/9/2015	12/9/2017
	AN03412	Band Pass Filter	PE8705	8/12/2015	8/12/2017
	AN03413	Band Pass Filter	PE8706	8/12/2015	8/12/2017
	AN03414	Band Pass Filter	PE8707	8/12/2015	8/12/2017
	AN03415	Band Pass Filter	PE8708	8/12/2015	8/12/2017
	AN03447	Band Pass Filter	PE8710	8/12/2015	8/12/2017
	AN03448	Band Pass Filter	PE8711	8/12/2015	8/12/2017
	AN03446	Band Pass Filter	4FV50-707/H18-O/O	1/04/2016	1/04/2018
	AN03467	Band Pass Filter	4FV50-731/H30-O/O	1/04/2016	1/04/2018
	AN03468	Band Pass Filter	4CS10-781.5/E12.2-O/O	1/04/2016	1/04/2018
	AN03469	Band Pass Filter	4CS10-751.5/E12-O/O	1/04/2016	1/04/2018
	AN02475	1 dB step Attenuator	8494B	6/29/2015	6/29/2017
	AN03429	10dB step Attenuator	8496B	8/27/2015	8/27/2017
	ANP06467	Attenuator	PE7014-10	5/13/2015	5/13/2017
	ANP06239	Attenuator	54A-10	7/9/2014	7/9/2016
	ANC00082	RF Coupler	722-10-1.500V	8/26/2015	8/26/2017
	ANC00087	Combiner	44000	1/07/2016	1/07/2018

Summary of Results

Pass: All oscillations detections and mitigations occur within 0.3 seconds in uplink bands, within 1 second in the downlink bands and the noise level is below the -70dBm/MHz limit.

7.11.2 Oscillation restart tests

Oscillation detection				Time Between restart		Number of restart	
Freq	Measured	Limit	Peak Level	Measured	Limit	Measured	Limit
MHz	Sec	Sec	dBm	Sec	At least sec		
UL1850-1915	0.18	0.30	26.6	94	60	3	5
UL824-849	0.10	0.30	24.9	92	60	3	5
DL1930-1995	0.20	1.00	20.1	94	60	3	5
DL869-894	0.42	1.00	9.8	92	60	3	5

The booster continues to mitigate at least 1 minute before restarting. The plots demonstrate after 3 restarts (the limit is 5 restart), the booster does not resume operation until manually reset.

7.11.3 Test procedure for measuring oscillation mitigation or shutdown

()*

UL 824-849 MHz				
Max Gain Isolation dB	Peak dBm	Min dBm	Diff dB	Limit dB
+5dB	-59.6	-65.6	6.0	12.0
+4dB	-58.6	-66.0	7.4	12.0
+3dB	-58.1	-66.5	8.3	12.0
+2dB	-57.4	-66.7	9.3	12.0
+1dB	-56.0	-67.1	11.2	12.0
0dB	-54.0	-67.6	(13.6)*	12.0
-1dB	-52.3	-67.8	15.5)*	12.0
-2dB	-43.4	-68.7	(25.2)*	12.0
-3dB	9.6	-69.8	(79.4)*	12.0
-4dB	**	**	0.0	12.0
-5dB	**	**	0.0	12.0

UL1850-1915 MHz				
Max Gain Isolation dB	Peak dBm	Min dBm	Diff dB	Limit dB
+5dB	-54.3	-60.5	6.2	12.0
+4dB	-53.6	-60.1	6.5	12.0
+3dB	-53.7	-60.6	6.9	12.0
+2dB	-53.2	-60.8	7.7	12.0
+1dB	-52.2	-60.9	(8.7)*	12.0
0dB	**	**	0.0	12.0
-1dB	**	**	0.0	12.0
-2dB	**	**	0.0	12.0
-3dB	**	**	0.0	12.0
-4dB	**	**	0.0	12.0
-5dB	**	**	0.0	12.0

DL 869-894 MHz				
Max Gain Isolation dB	Peak dBm	Min dBm	Diff dB	Limit dB
+5dB	-65.0	-69.9	4.8	12.0
+4dB	-64.2	-70.0	5.8	12.0
+3dB	-63.2	-70.8	7.6	12.0
+2dB	-63.0	-70.7	7.7	12.0
+1dB	-61.9	-71.2	9.3	12.0
0dB	-59.1	-71.7	(12.6)*	12.0
-1dB	-56.7	-72.1	(15.4)*	12.0
-2dB	-53.0	-72.7	(19.7)*	12.0
-3dB	-42.2	-72.9	(30.7)*	12.0
-4dB	**	**	0.0	12.0
-5dB	**	**	0.0	12.0

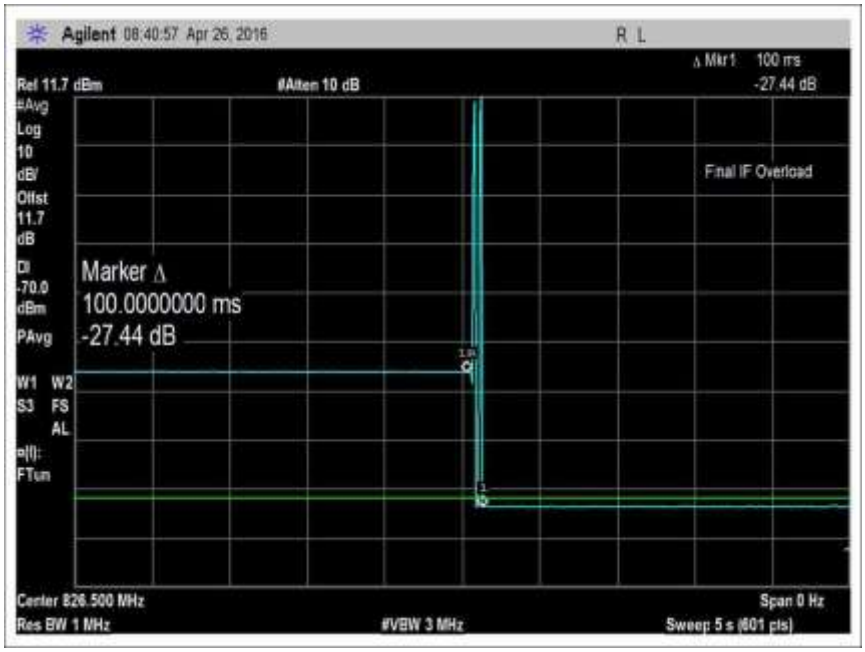
DL 1930-1995 MHz				
Max Gain Isolation dB	Peak dBm	Min dBm	Diff dB	Limit dB
+5dB	-58.3	-66.3	8.0	12.0
+4dB	-58.1	-66.5	8.5	12.0
+3dB	-57.4	-66.5	9.1	12.0
+2dB	-56.5	-66.8	10.3	12.0
+1dB	-55.3	-67.4	(12.1)*	12.0
0dB	-53.9	-67.4	(13.4)*	12.0
-1dB	-52.2	-67.5	(15.3)*	12.0
-2dB	-49.6	-67.6	(18.0)*	12.0
-3dB	-48.2	-68.0	(19.9)*	12.0
-4dB	-5.3	-69.0	(63.7)*	12.0
-5dB	**	**	0.0	12.0

Note: The measured difference exceeds the limit for a period of less than 300 second before device mitigates and shuts down. The maximum recorded time prior to shutdown was 75 seconds for the Uplink bands and 85 seconds for the Downlink bands.

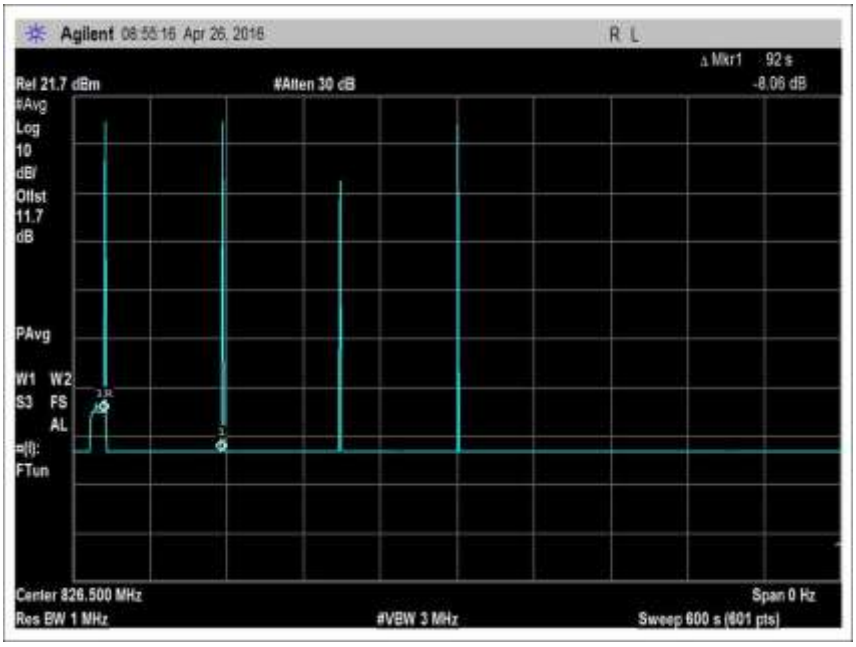
** The device shuts down immediately.

7.11.2 Oscillation Restart Tests

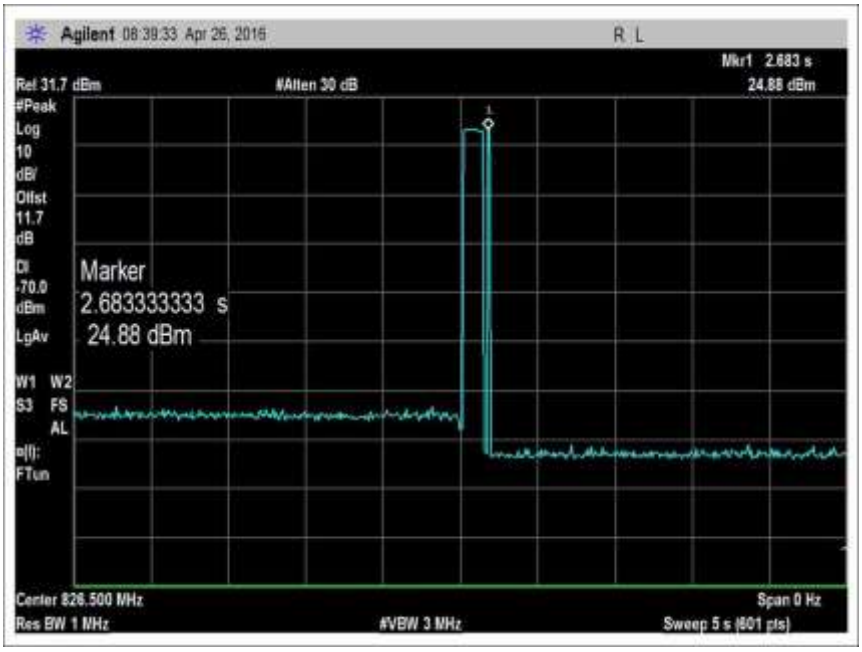
Plots



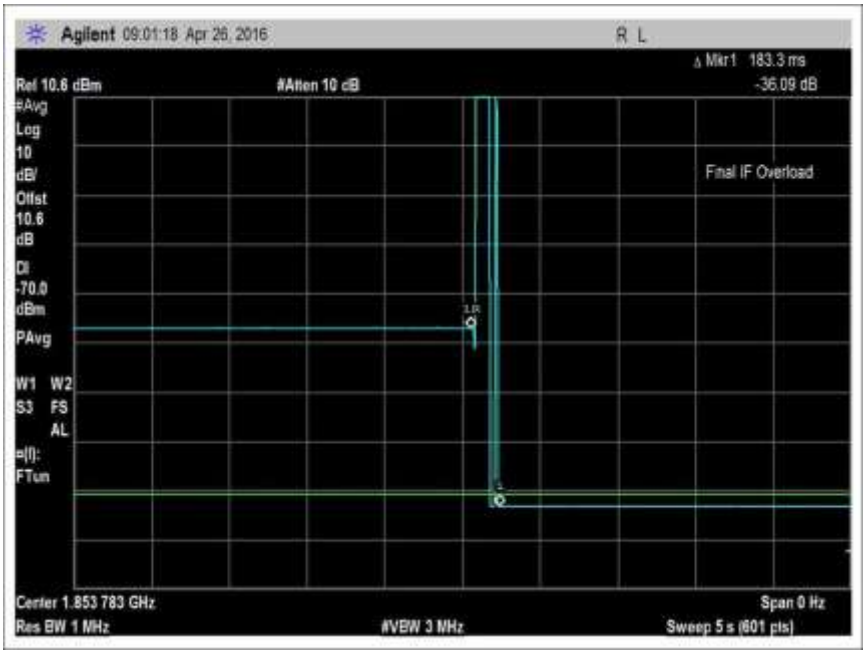
7.11_osc_UL_824-849MHz



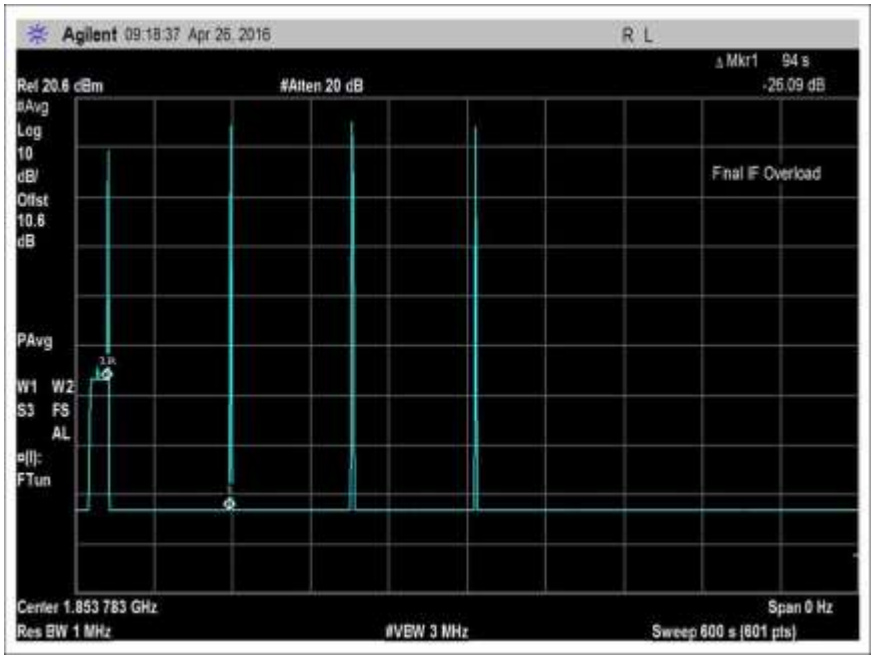
7.11_osc_UL_824-849MHz - 600sec



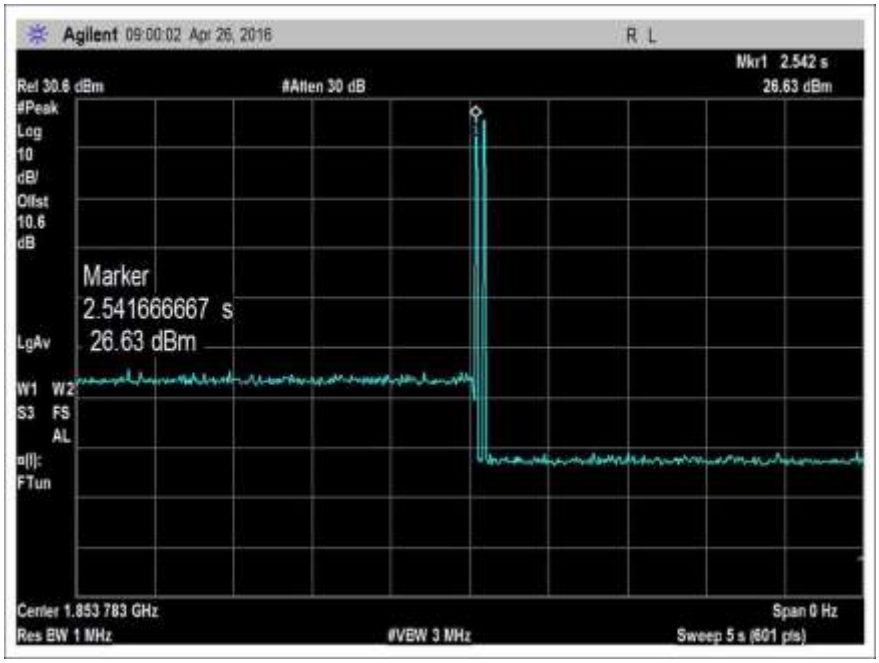
7.11_osc_UL_824-849MHz -Pk



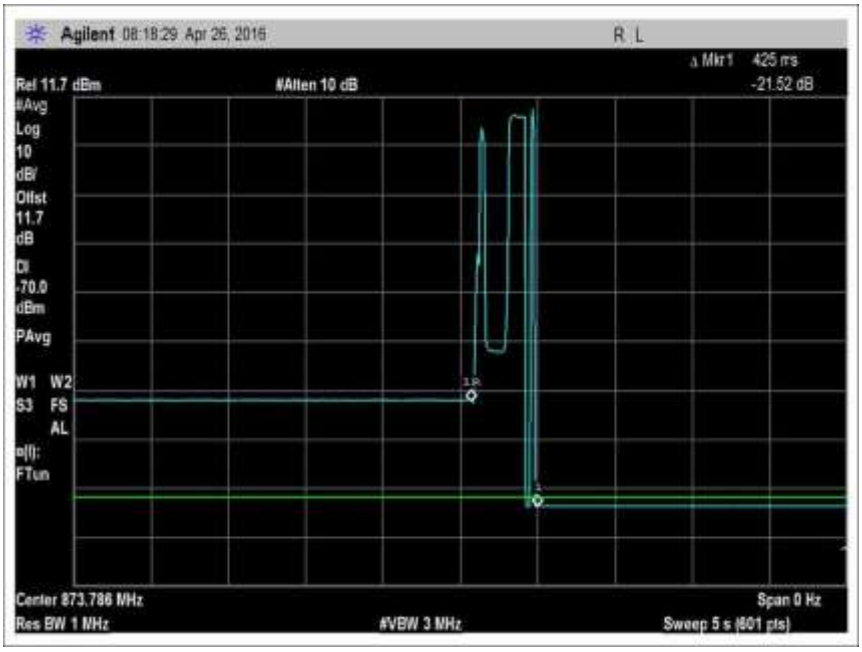
7.11_osc_UL_1850-1915MHz



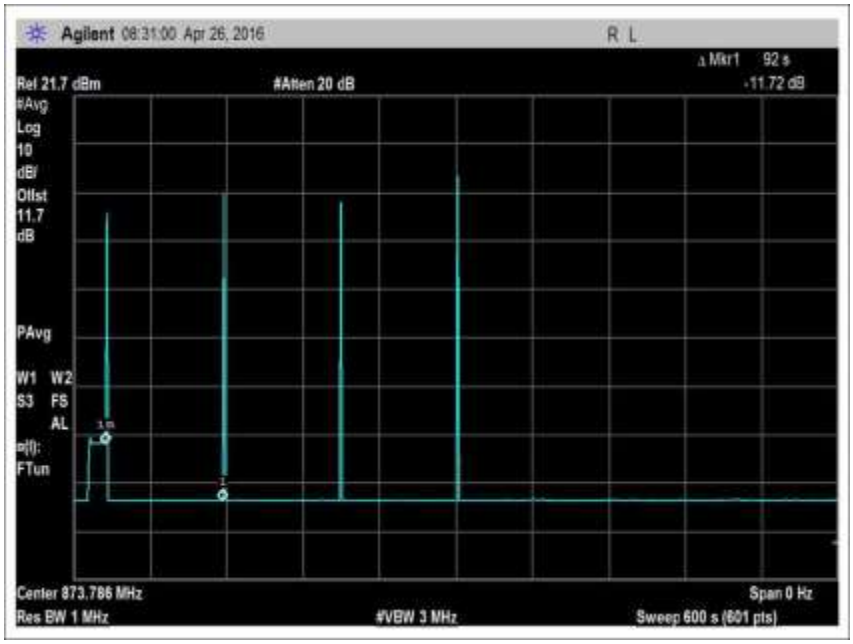
7.11_osc_UL_1850-1915MHz_600sec.



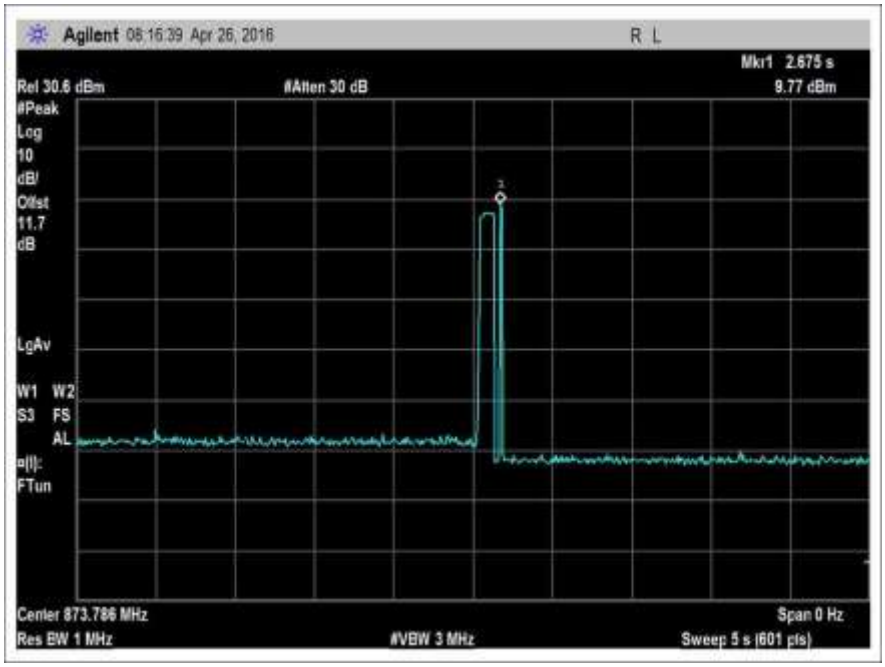
7.11_osc_UL_1850-1915MHz-Pk



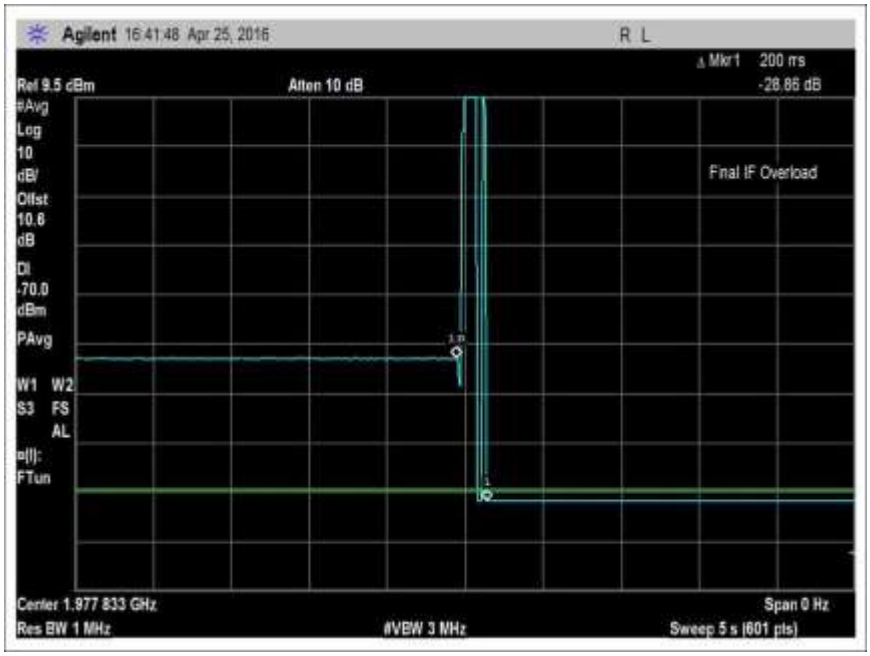
7.11_osc_DL_869-894MHz



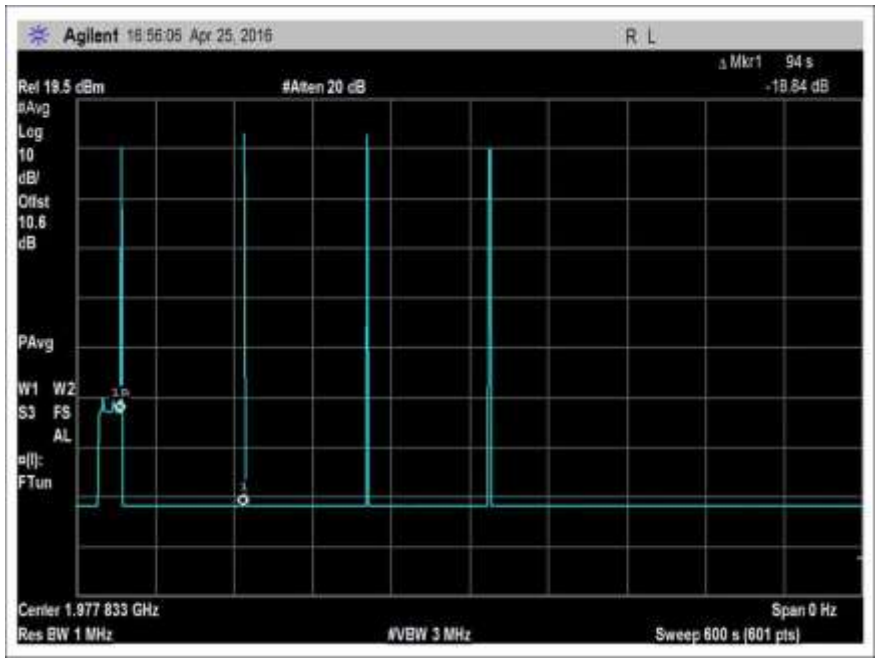
7.11_osc_DL_869-894MHz - 600sec.



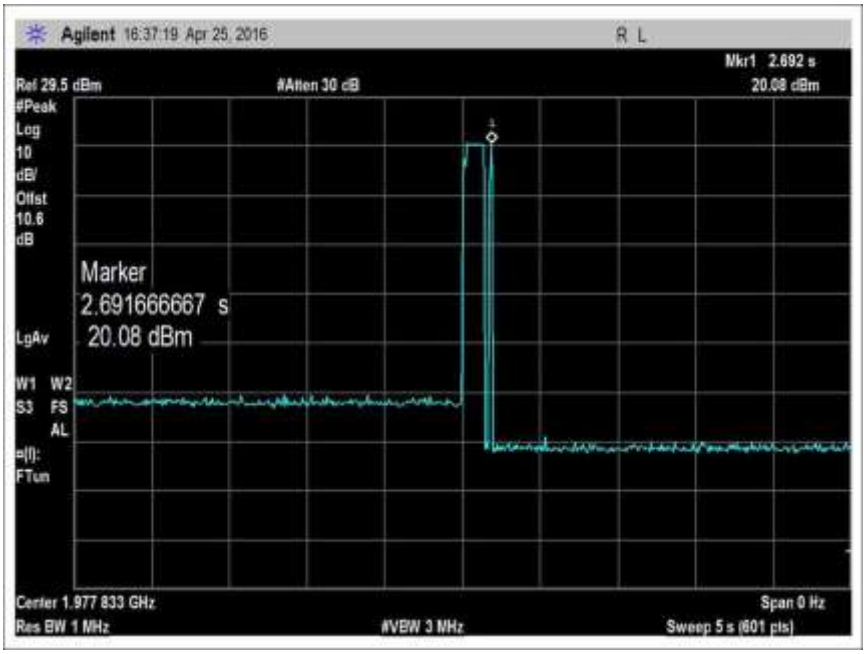
7.11_osc_DL_869-894MHz-Pk



7.11_osc_DL_1930-1995MHz



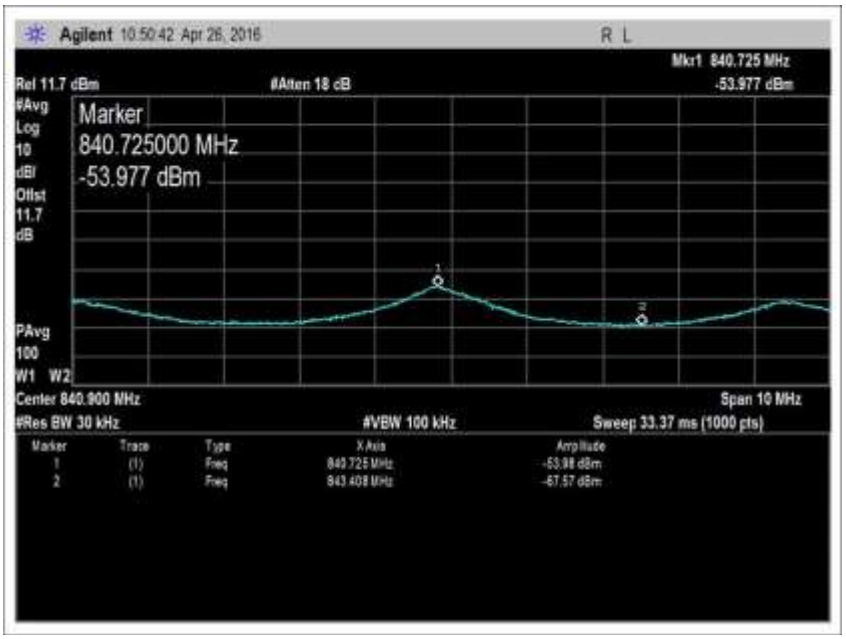
7.11_osc_DL_1930-1995MHz-600sec.



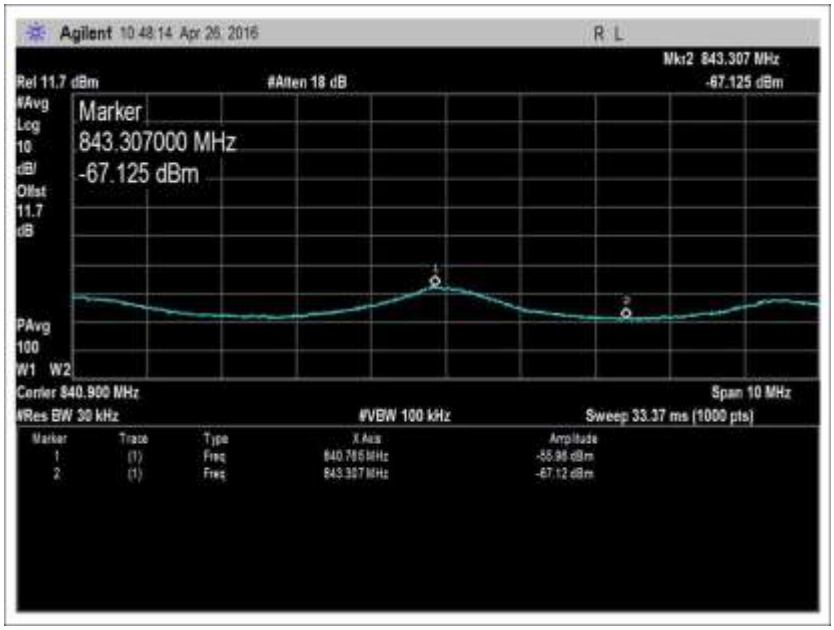
7.11_osc_DL_1930-1995MHz-Pk

7.11.3 Measuring Oscillation Mitigation or Shutdown

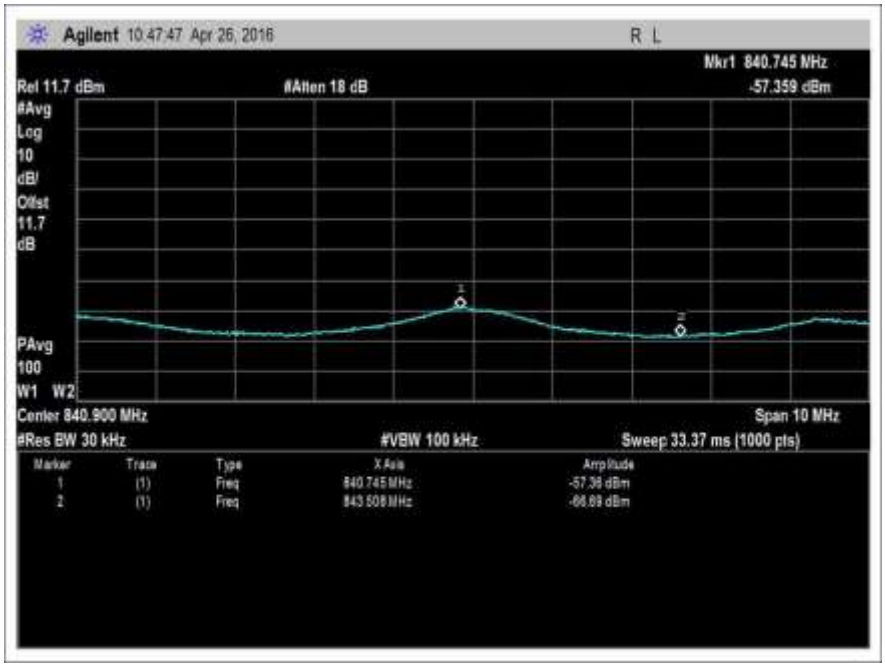
Plots



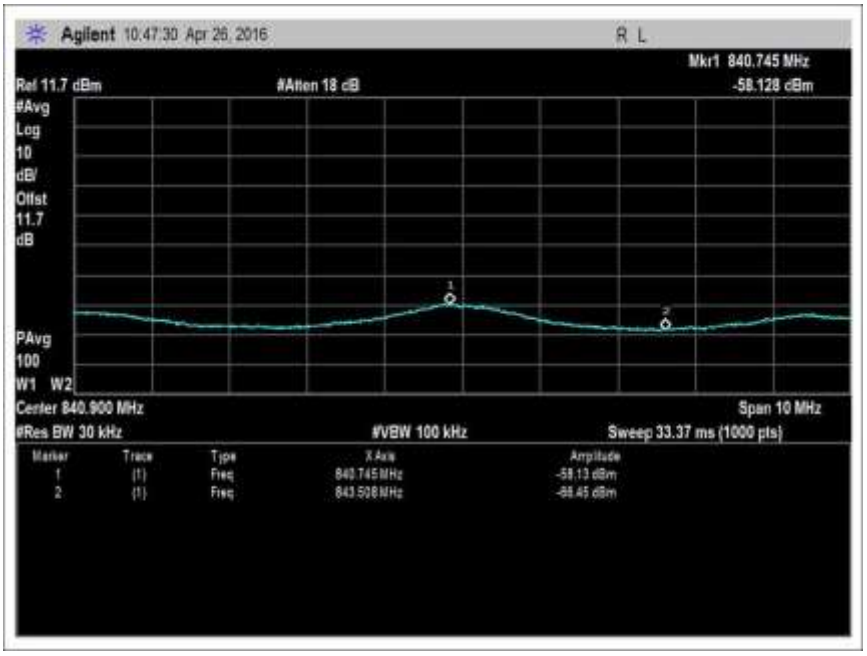
7.11.3_UL_824-849-AWGNL+0



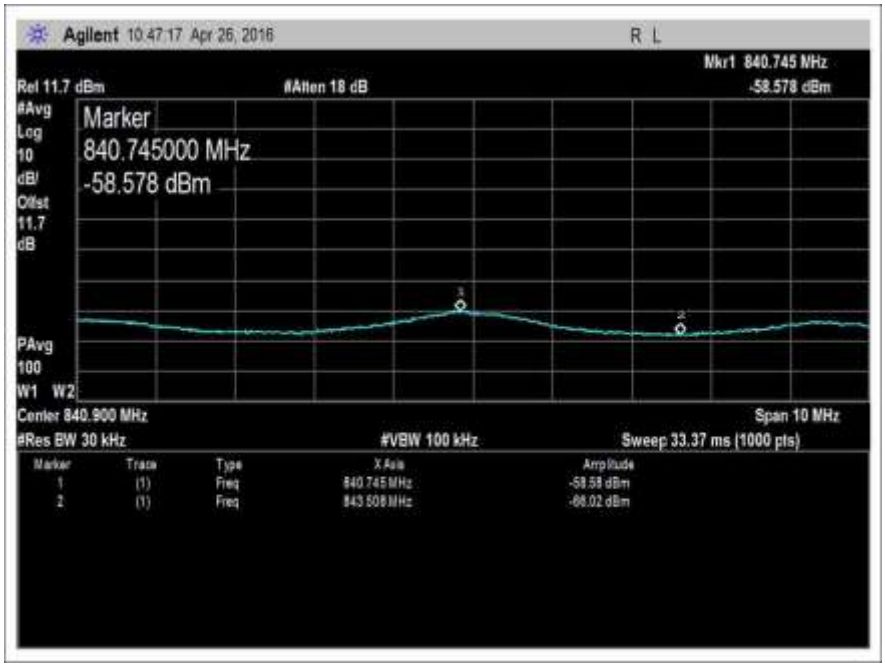
7.11.3_UL_824-849-AWGNL+1



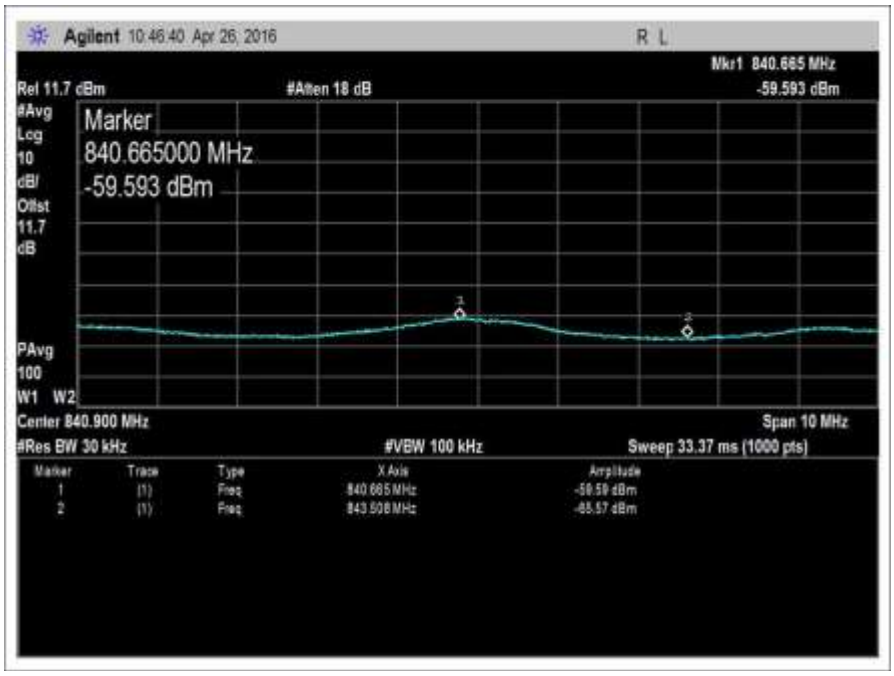
7.11.3_UL_824-849-AWGNL+2



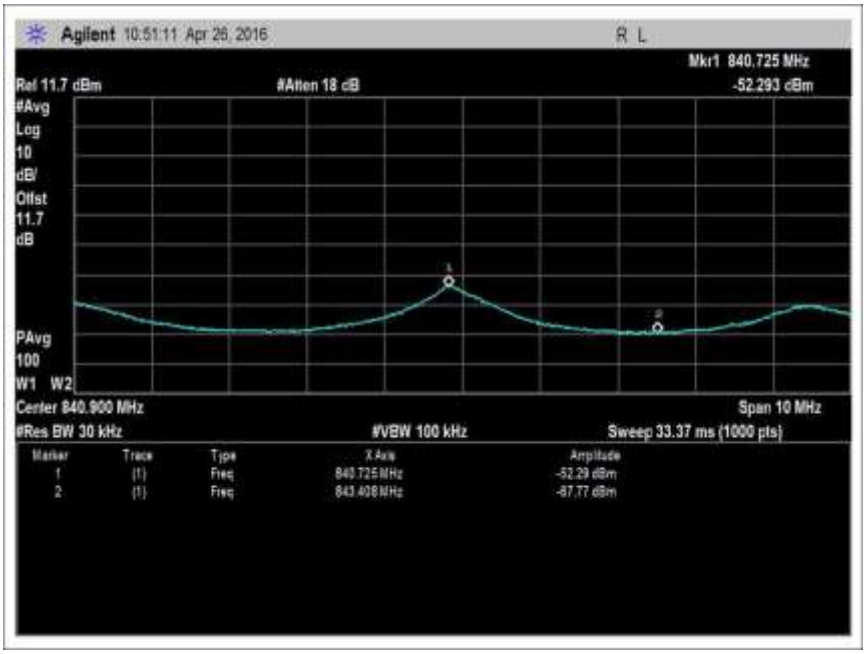
7.11.3_UL_824-849-AWGNL+3



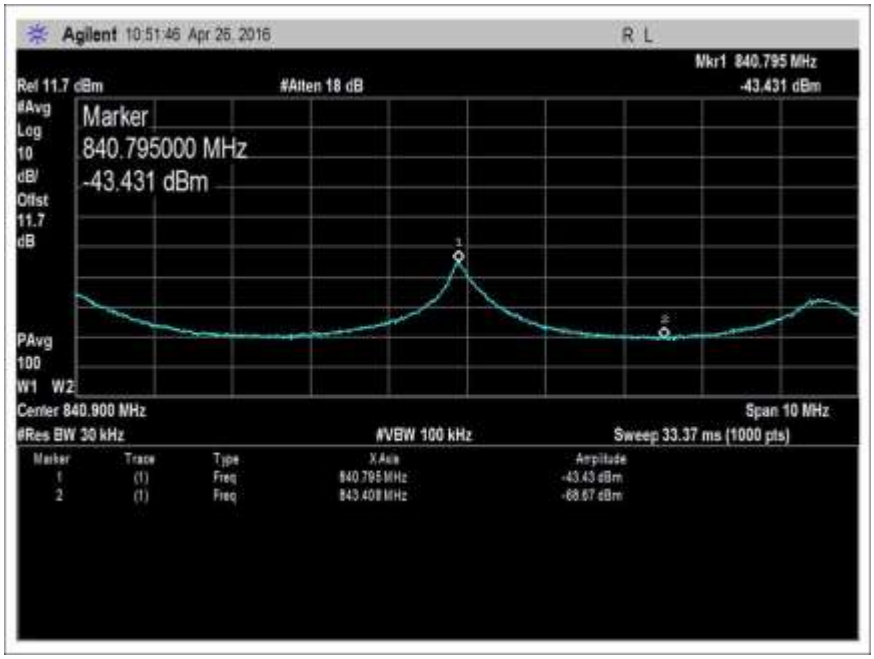
7.11.3_UL_824-849-AWGNL+4



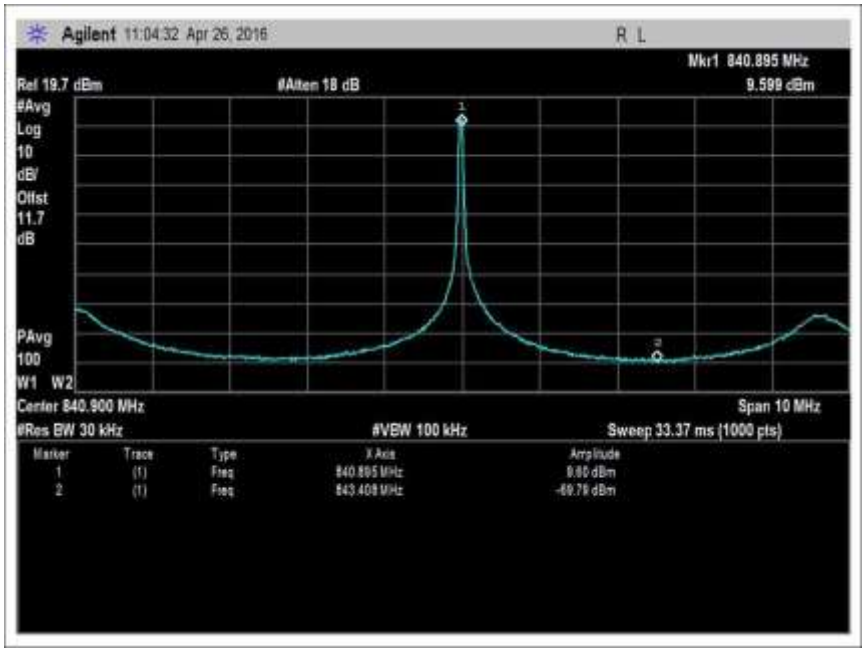
7.11.3_UL_824-849-AWGNL+5



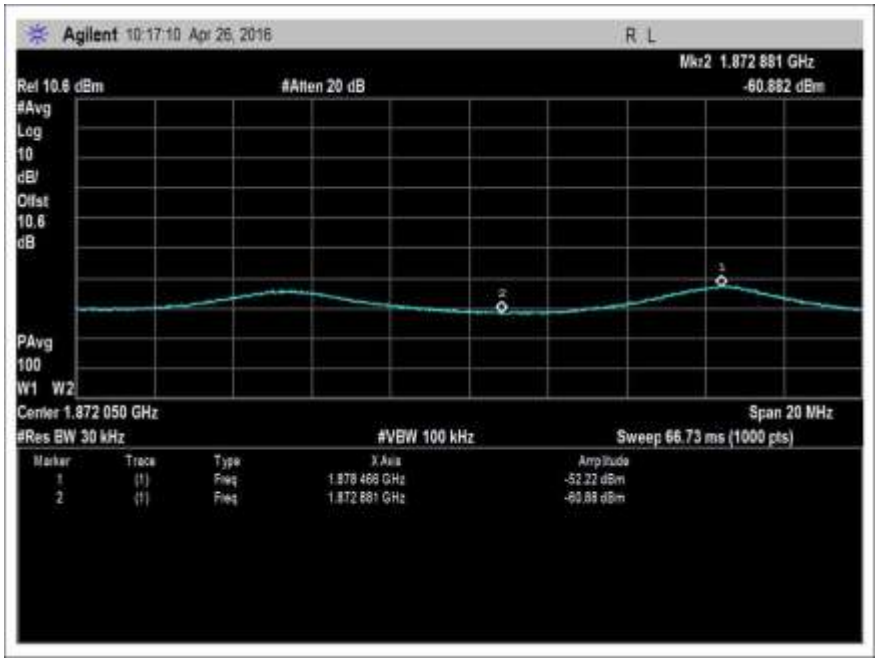
7.11.3_UL_824-849-AWGNL-1



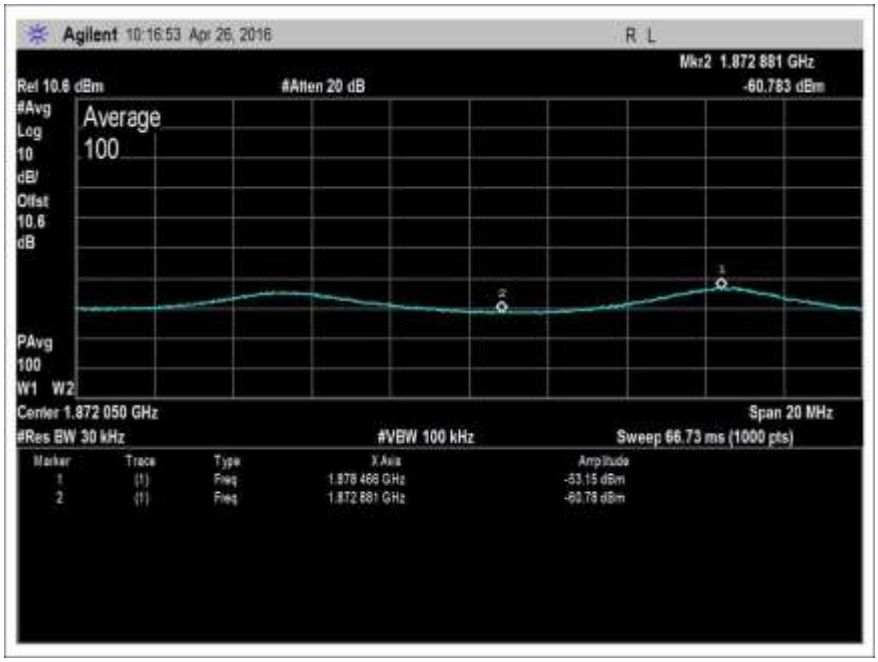
7.11.3_UL_824-849-AWGNL-2



7.11.3_UL_824-849-AWGNL-3



7.11.3_UL_1850-1915-AWGNR+1



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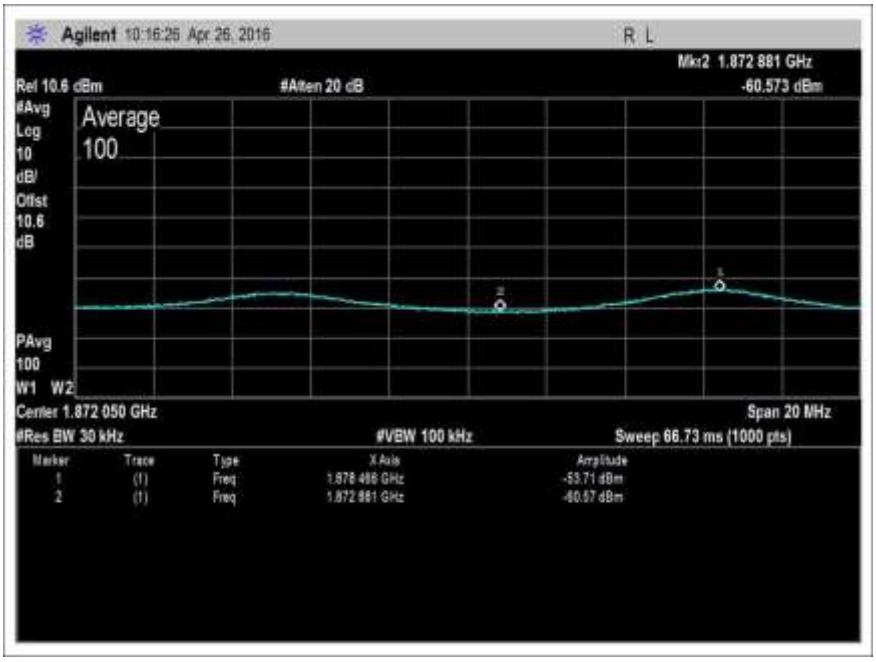

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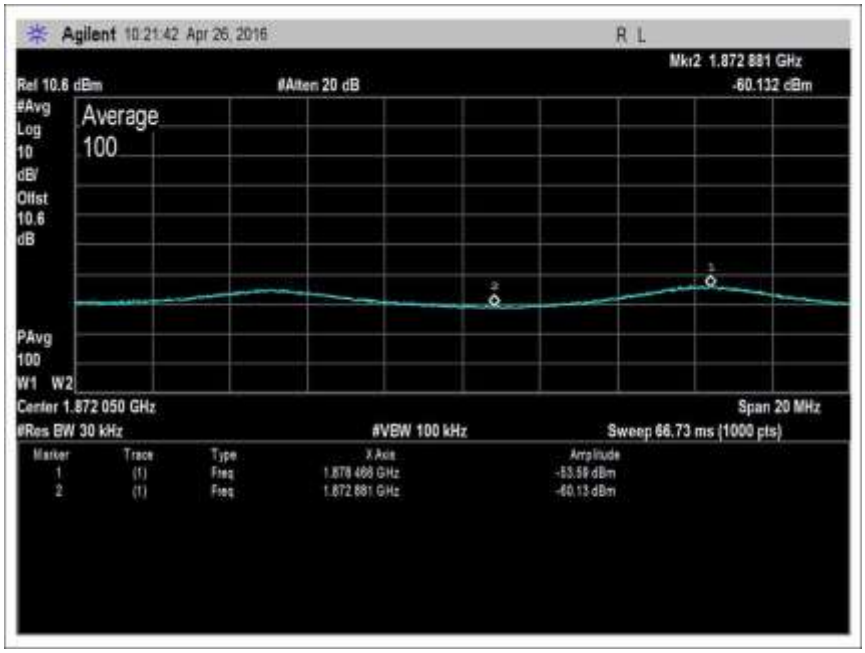
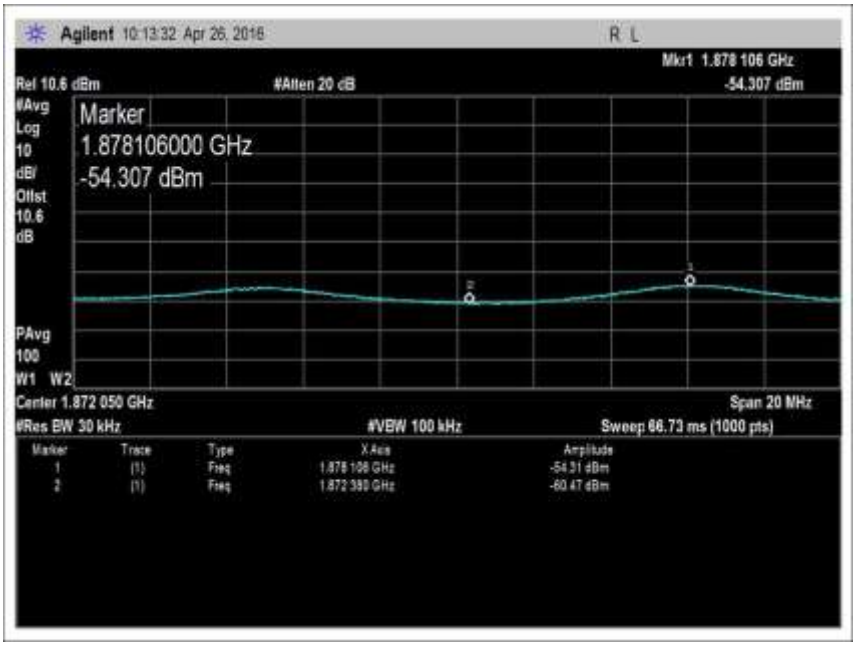
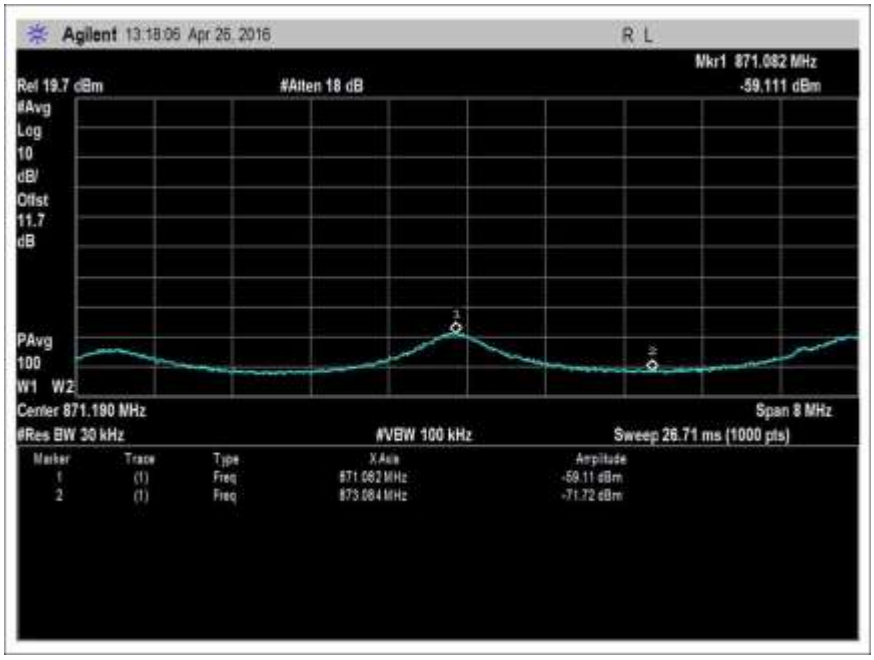


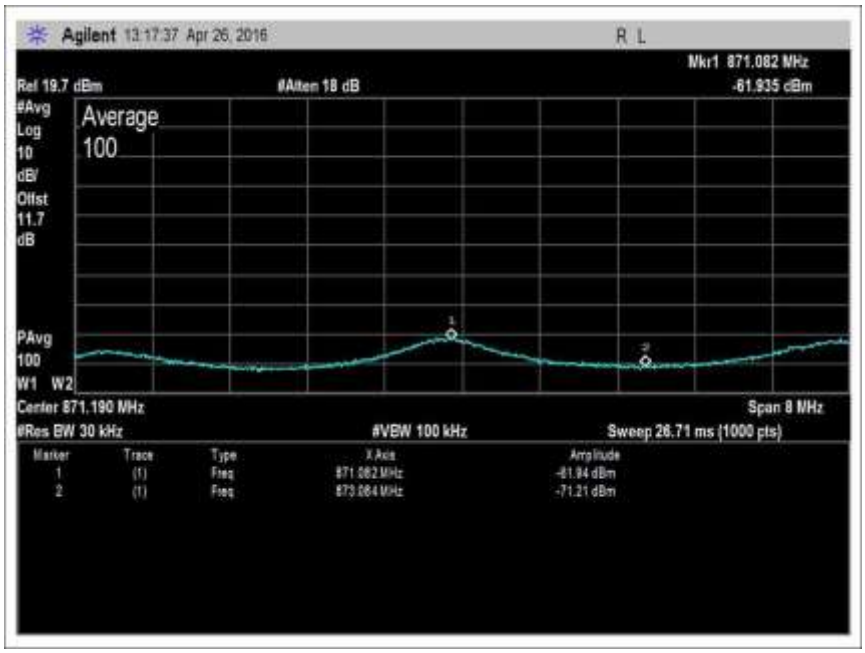
7.11.3_UL_1850-1915-AWGNR+4



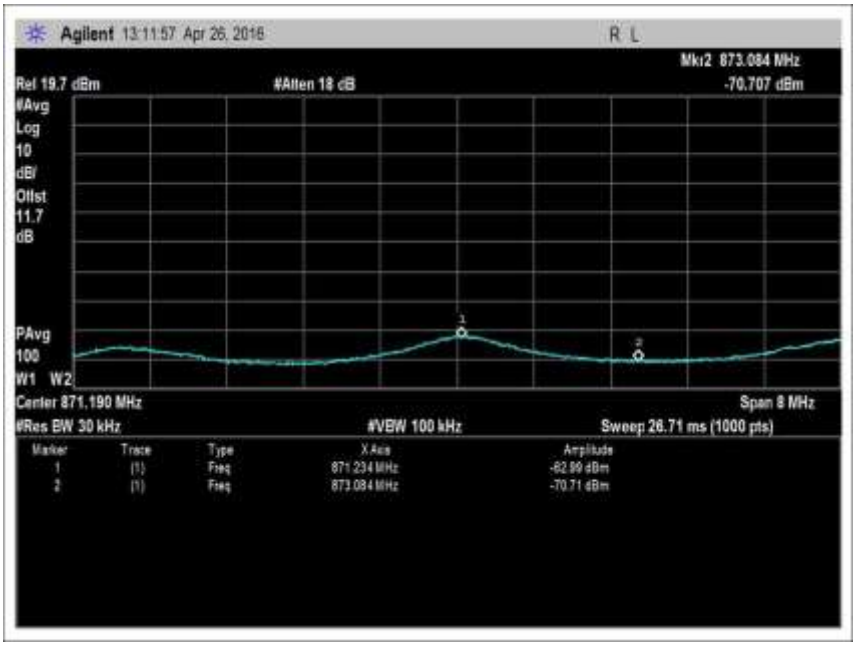
7.11.3_UL_1850-1915-AWGNR+5



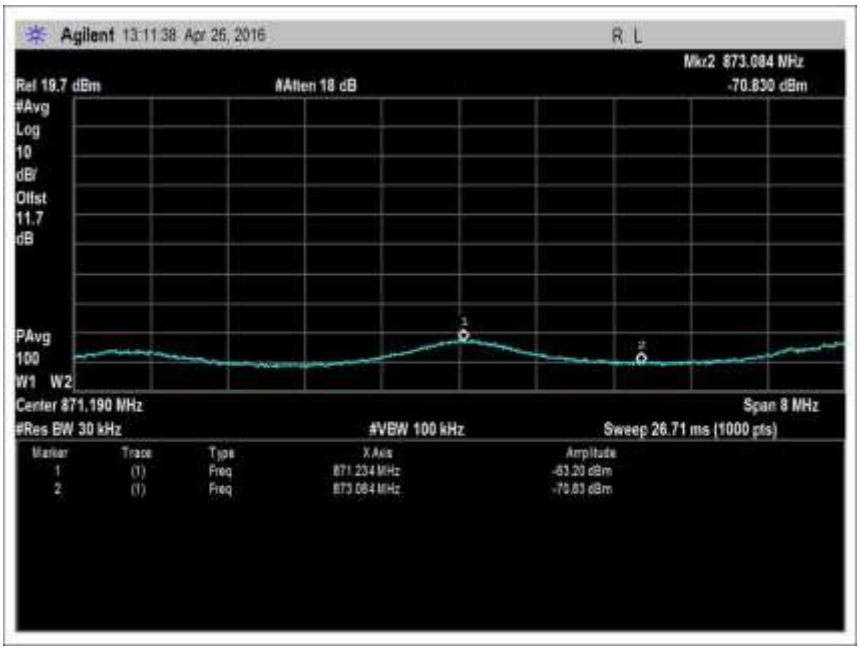
7.11.3_DL_869-894-AWGNR+0



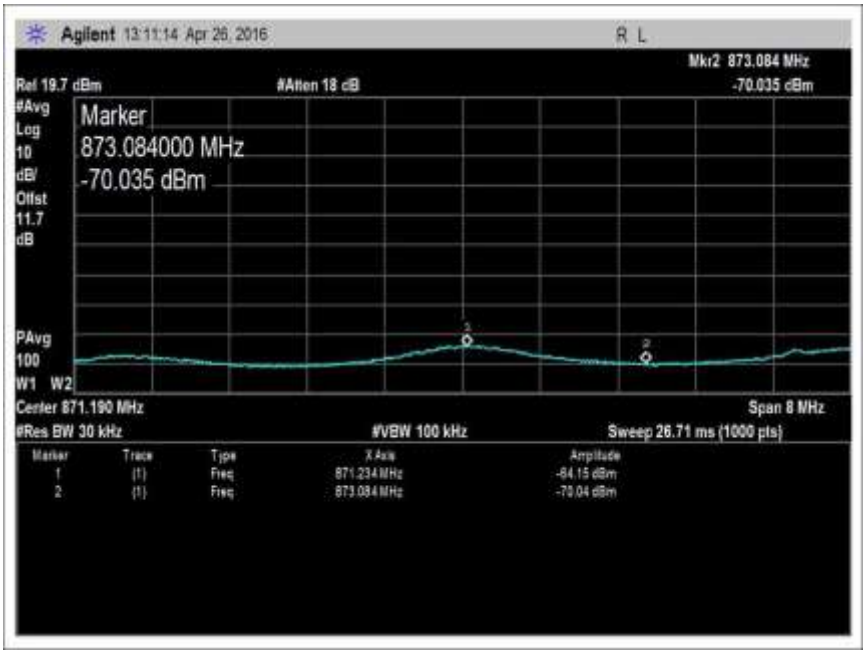
7.11.3_DL_869-894-AWGNR+1



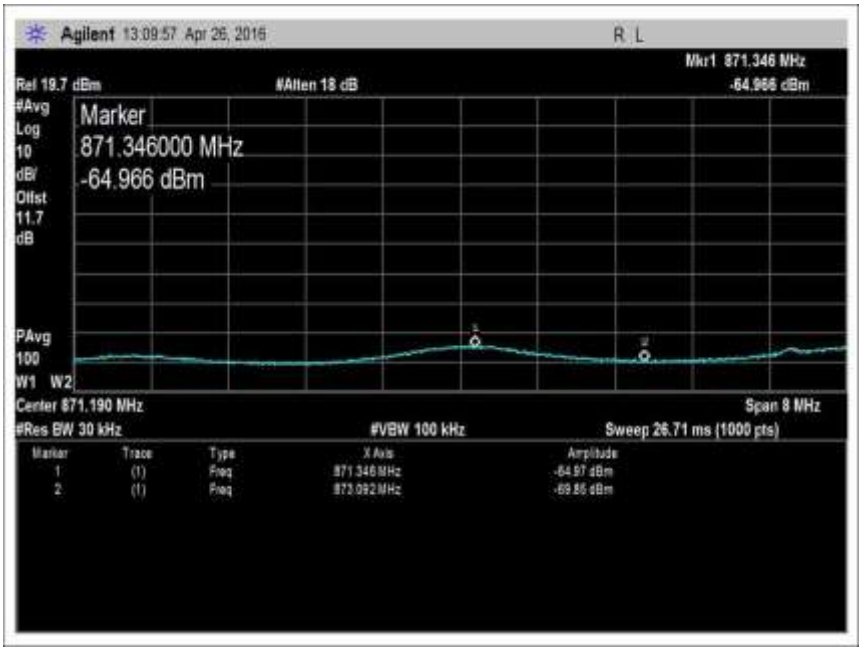
7.11.3_DL_869-894-AWGNR+2



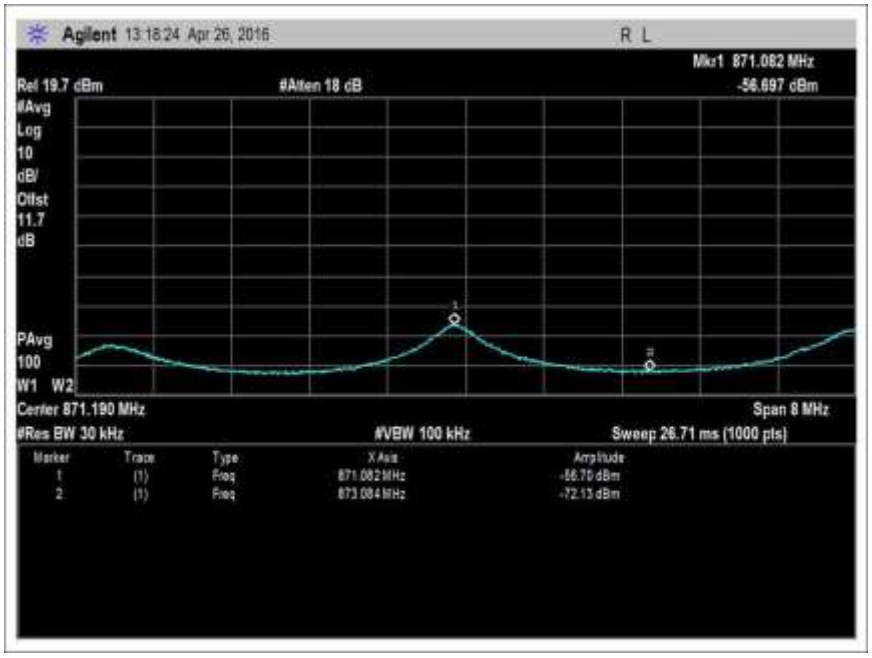
7.11.3_DL_869-894-AWGNR+3



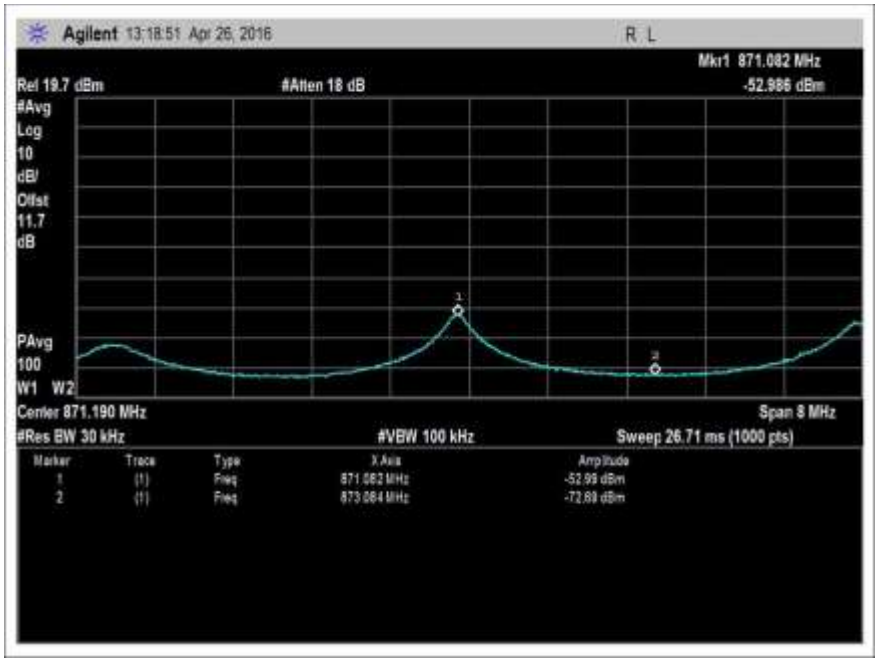
7.11.3_DL_869-894-AWGNR+4



7.11.3_DL_869-894-AWGNR+5



7.11.3_DL_869-894-AWGNR-1



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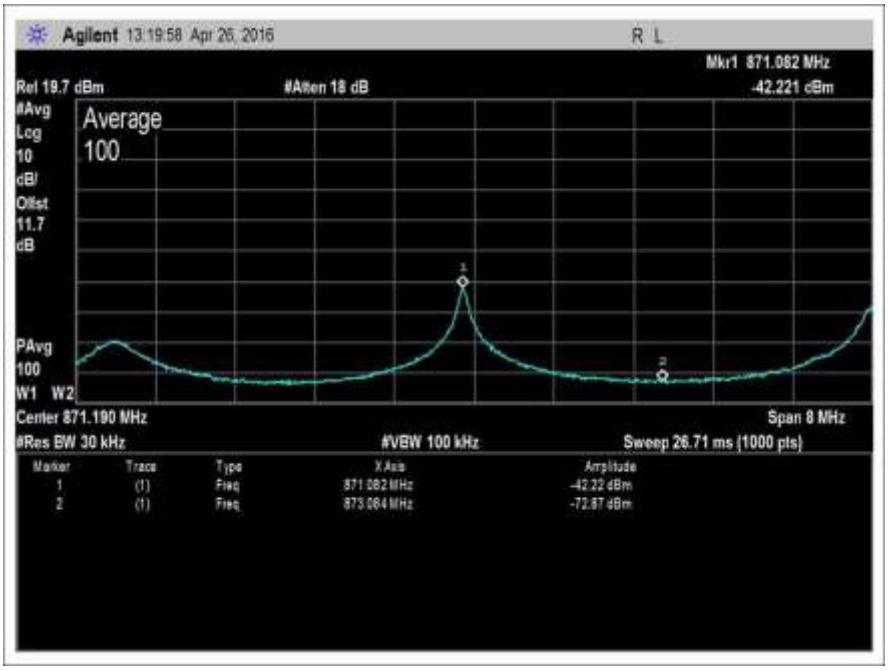

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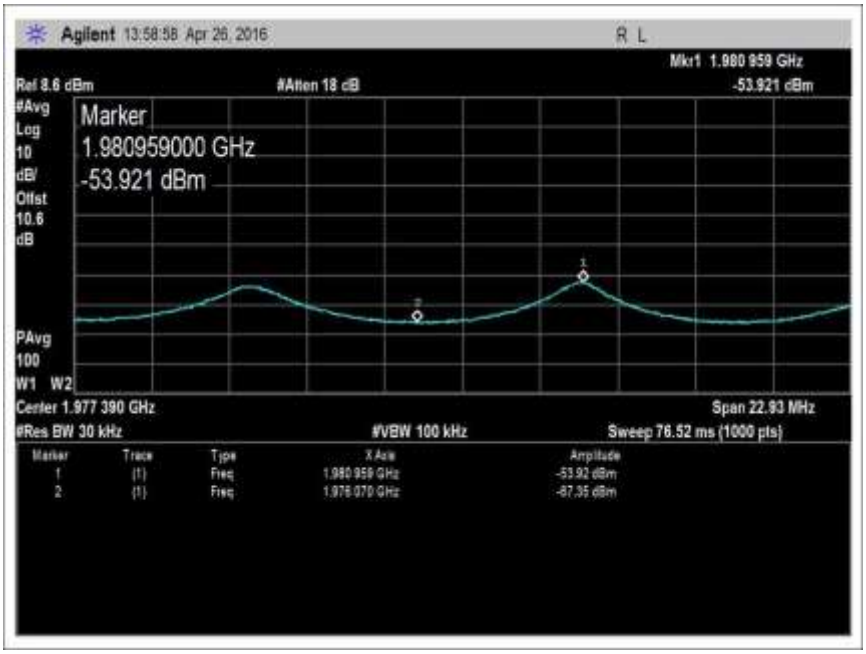
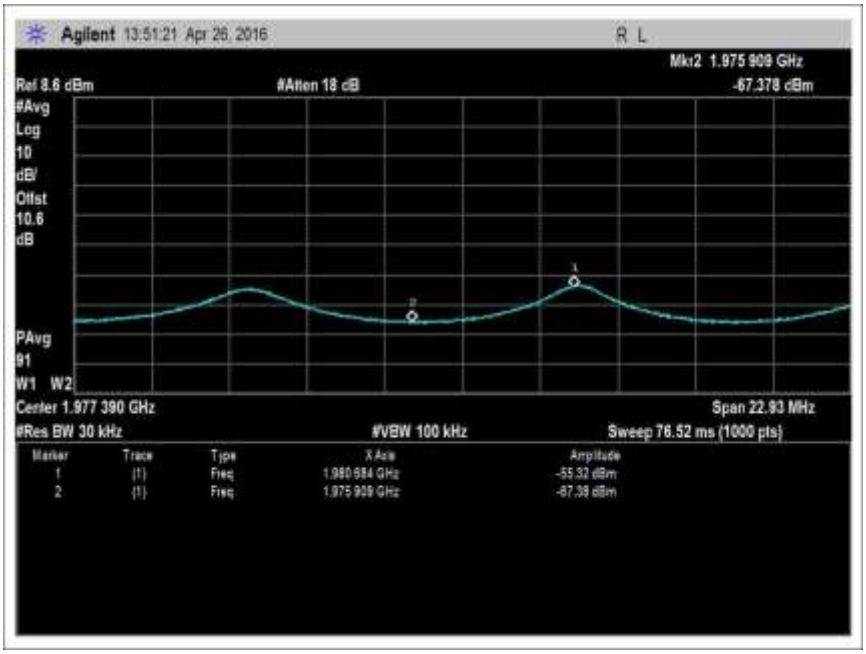
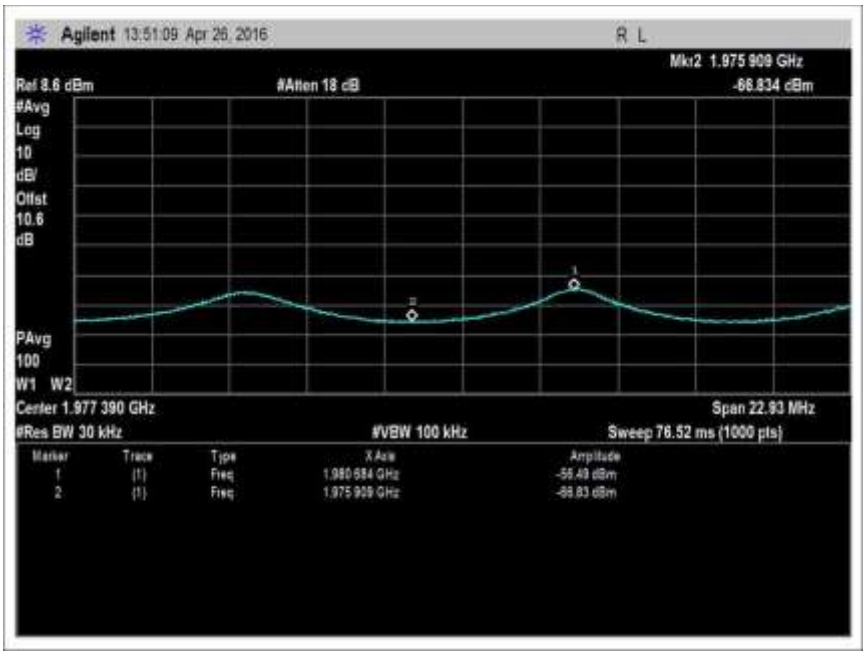


7.11.3_DL_1930-1995-AWGNL+0



7.11.3_DL_1930-1995-AWGNL+1



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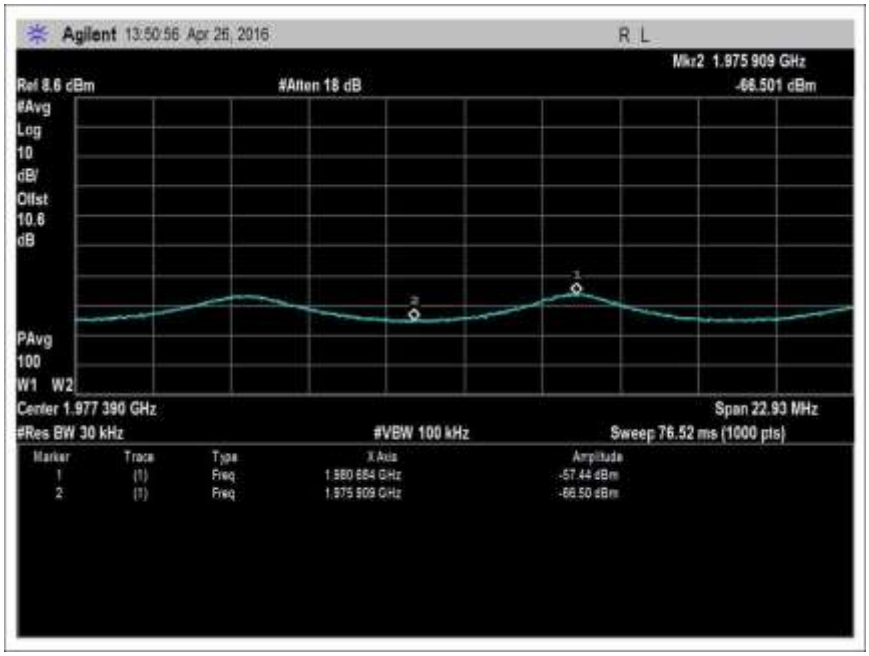
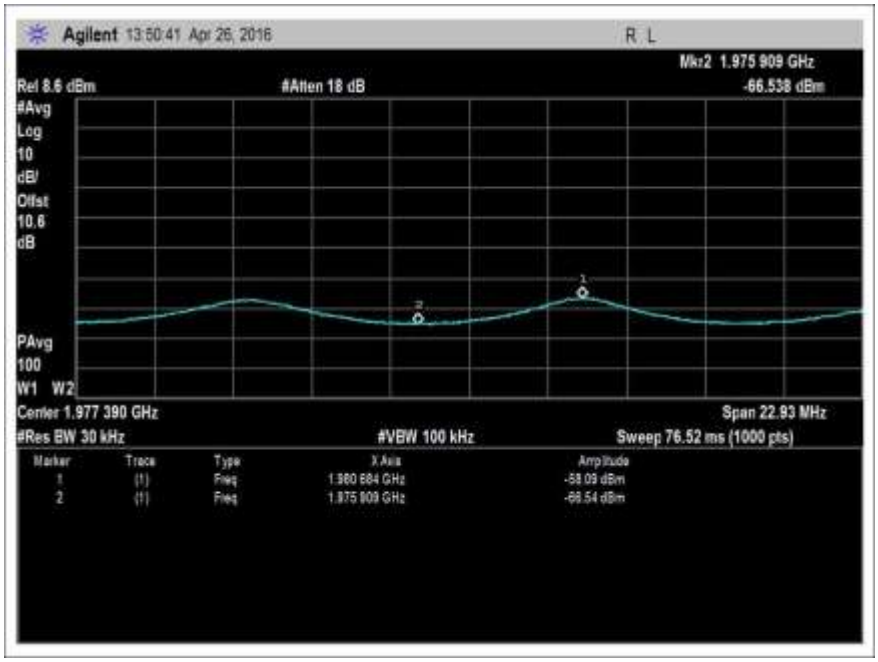
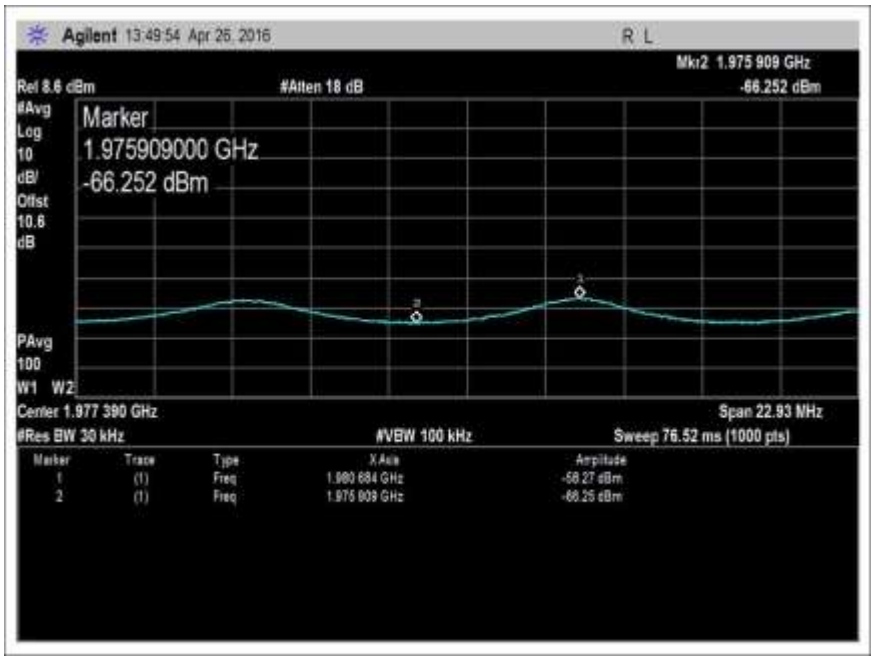


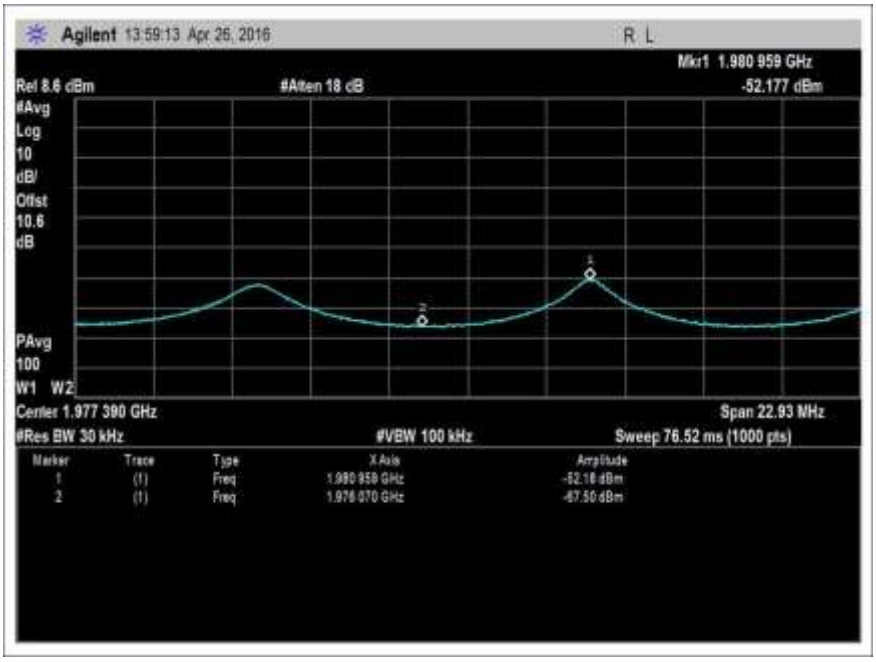
7.11.3_DL_1930-1995-AWGNL+3



7.11.3_DL_1930-1995-AWGNL+4



7.11.3_DL_1930-1995-AWGNL+5



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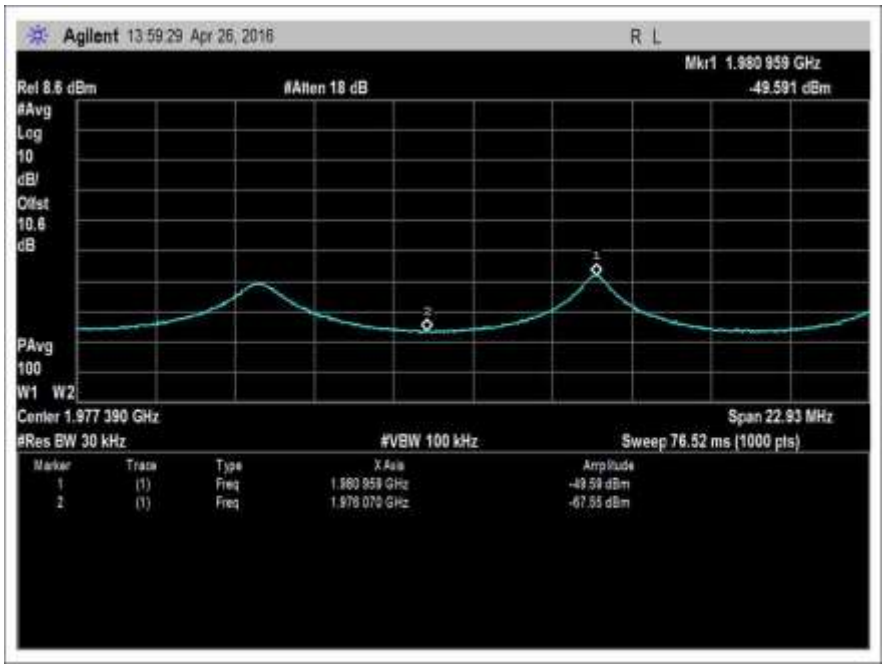
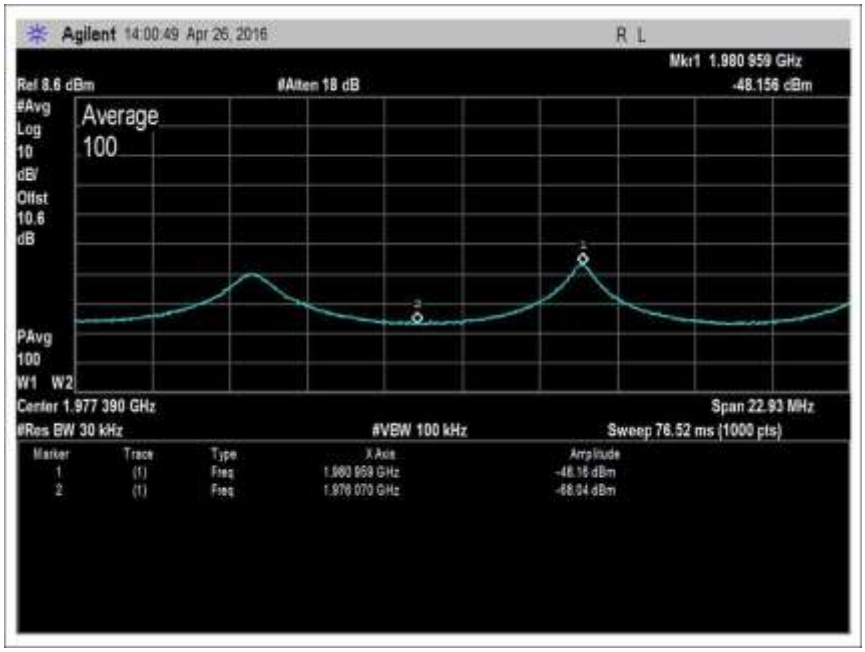
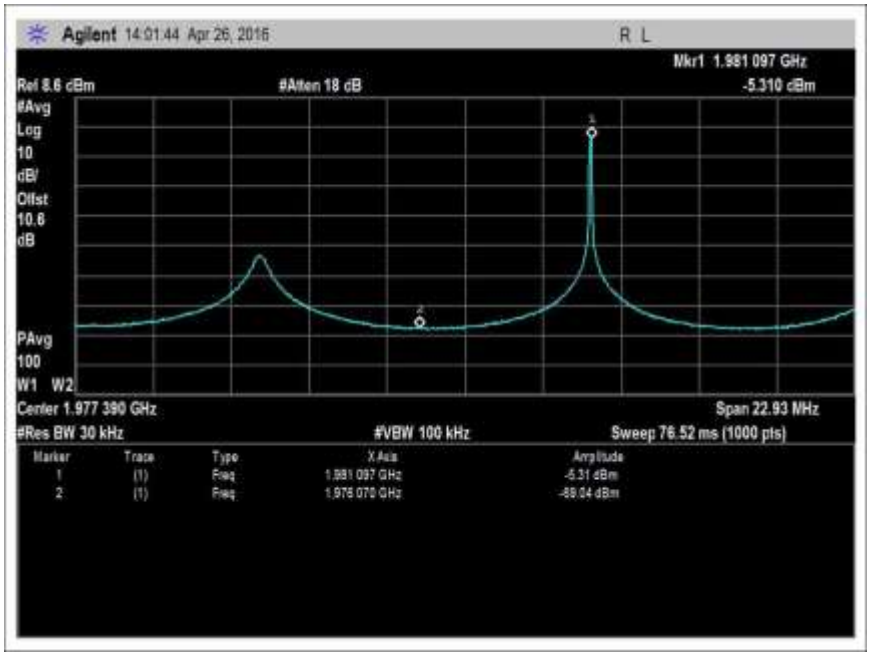


7.11.3_DL_1930-1995-AWGNL-2



7.11.3_DL_1930-1995-AWGNL-3

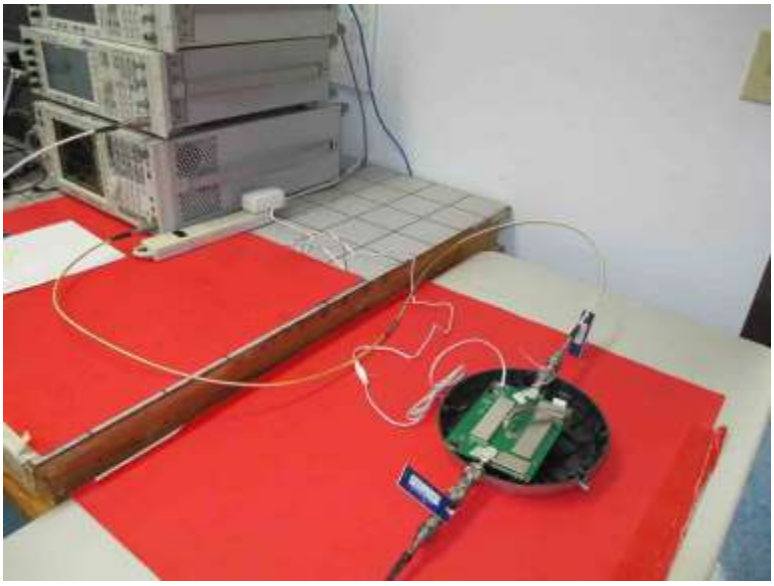


7.11.3_DL_1930-1995-AWGNL-4

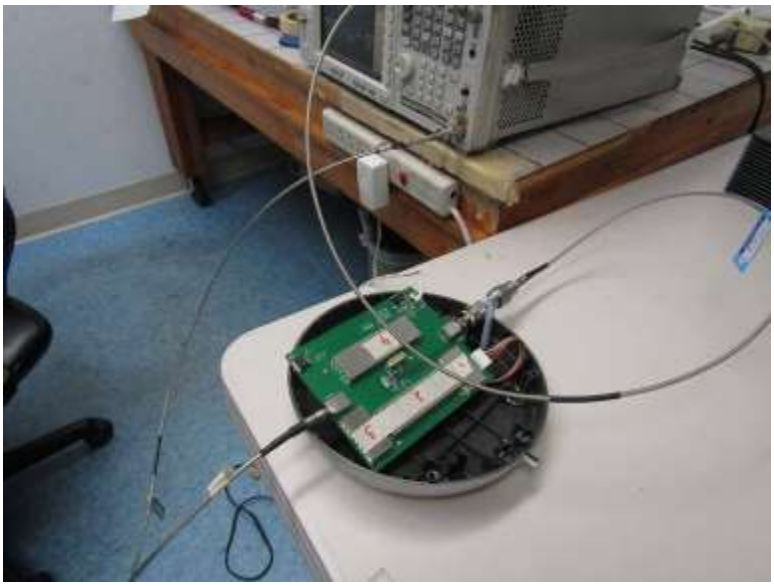
7.13 Spectrum Block Filter

Section 7.13 not applicable because the EUT does not utilize spectrum block filtering.

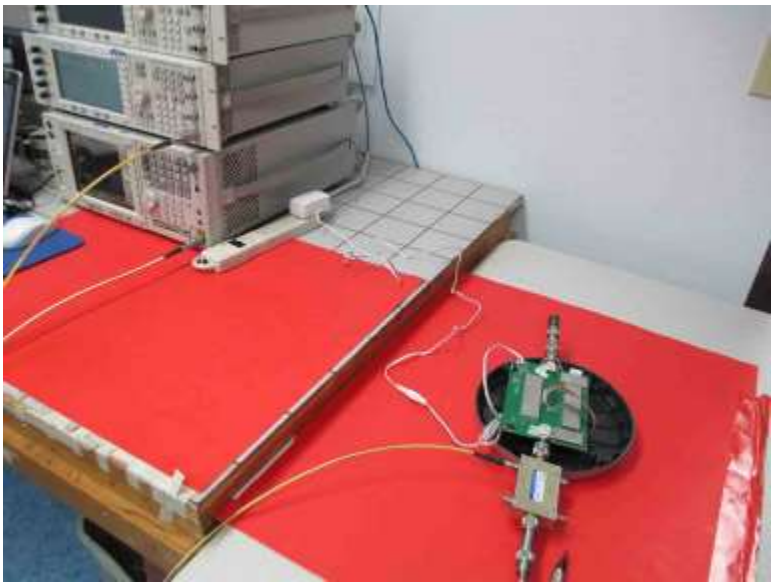
EXHIBIT A: TEST SETUP PHOTOS



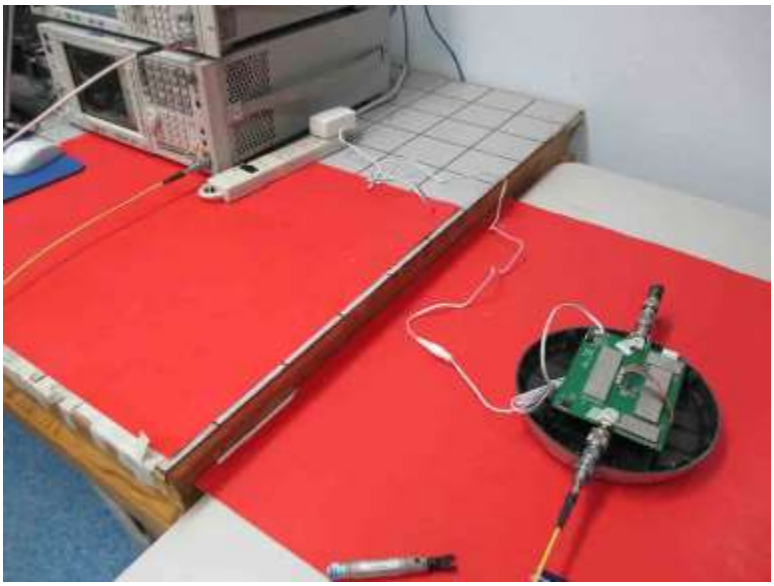
7.1, 7.2, 7.3 and 7.5 Test Setup



7.4 Test Setup

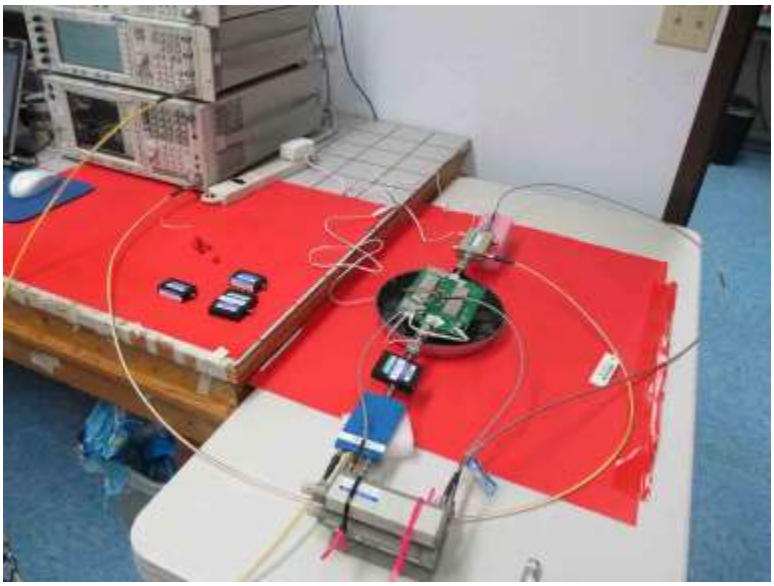


7.7 Noise Fig Setup



7.8 Uplink Setup

7.11.2 Setup



7.11.3 Setup

SUPPLEMENTAL INFORMATION

Measurement Uncertainty

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

Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k=2.