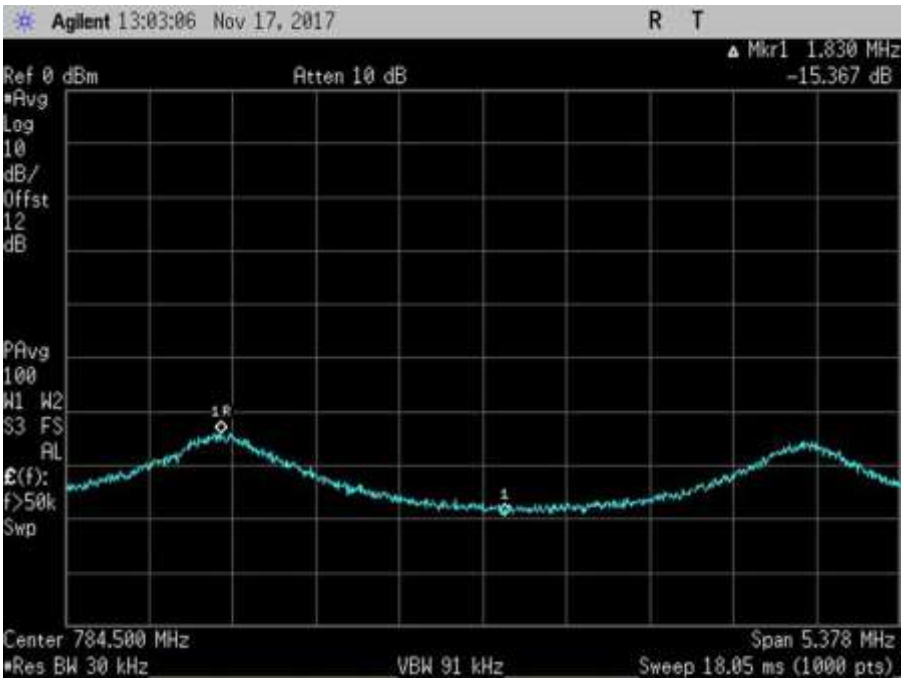
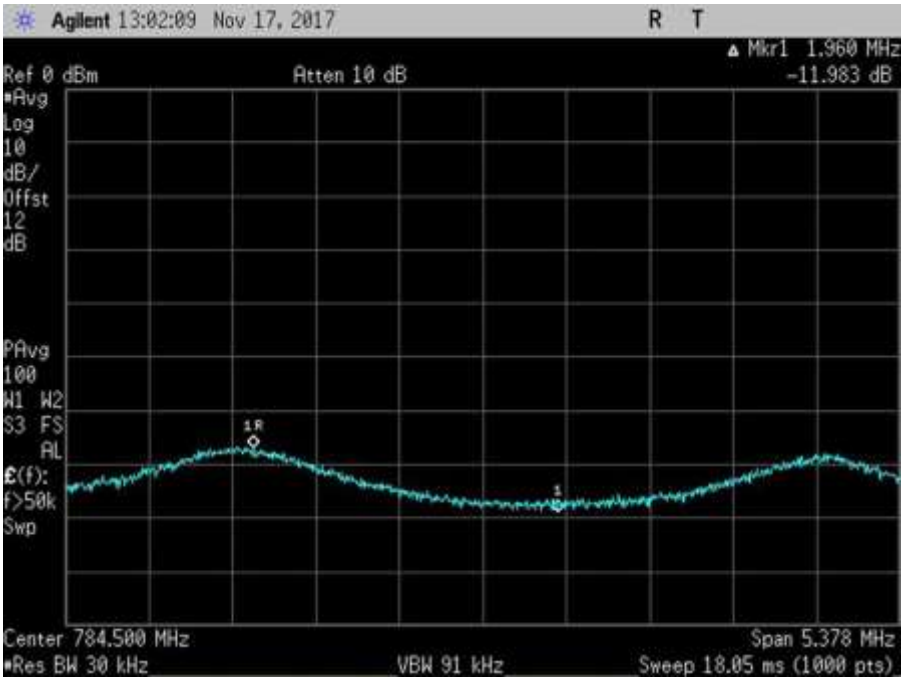
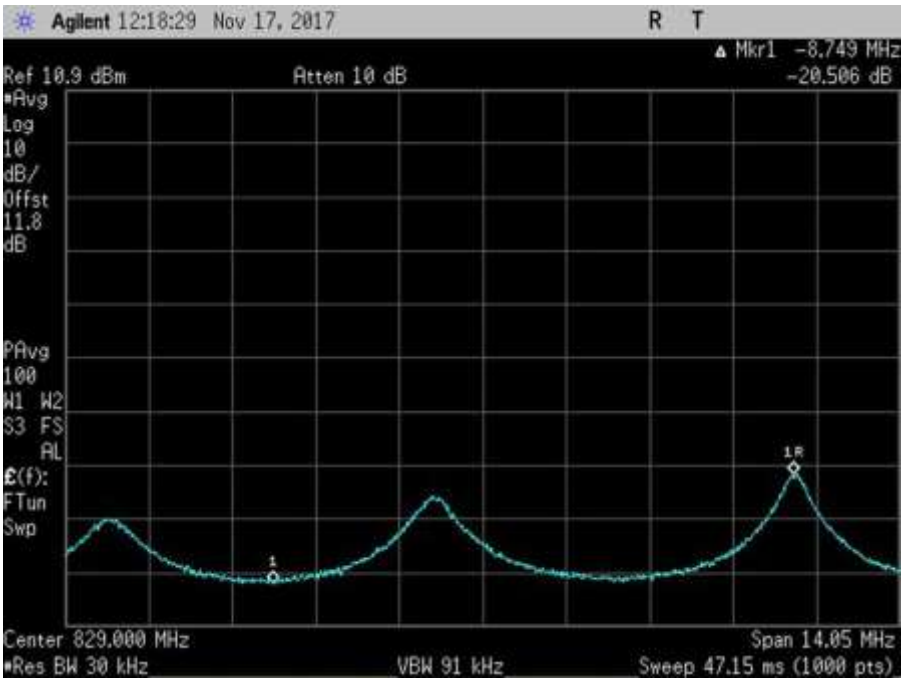


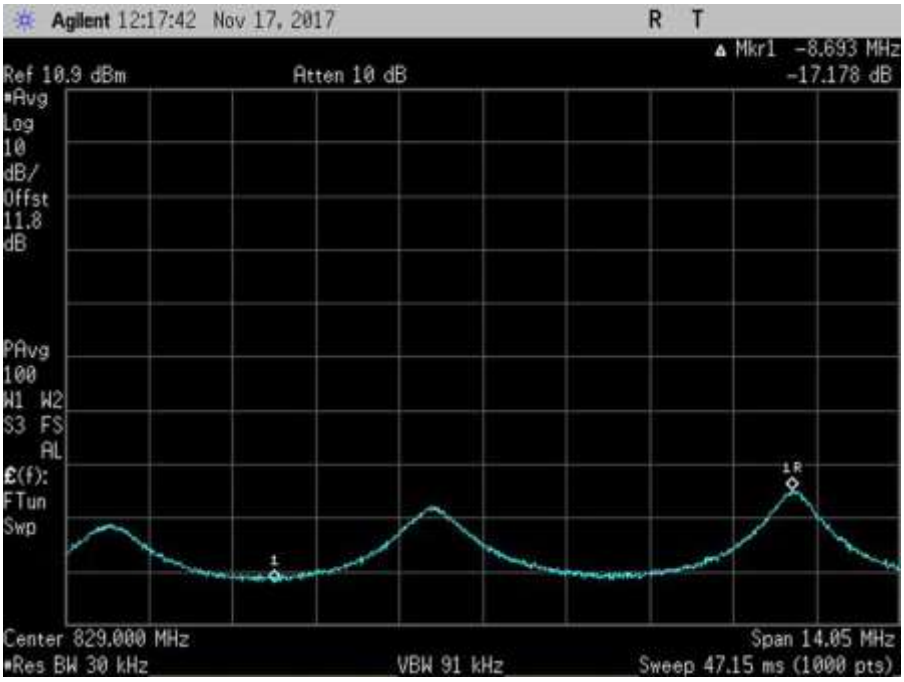
7.11.3_Osc_UL_776-787MHz+4_AWGNL



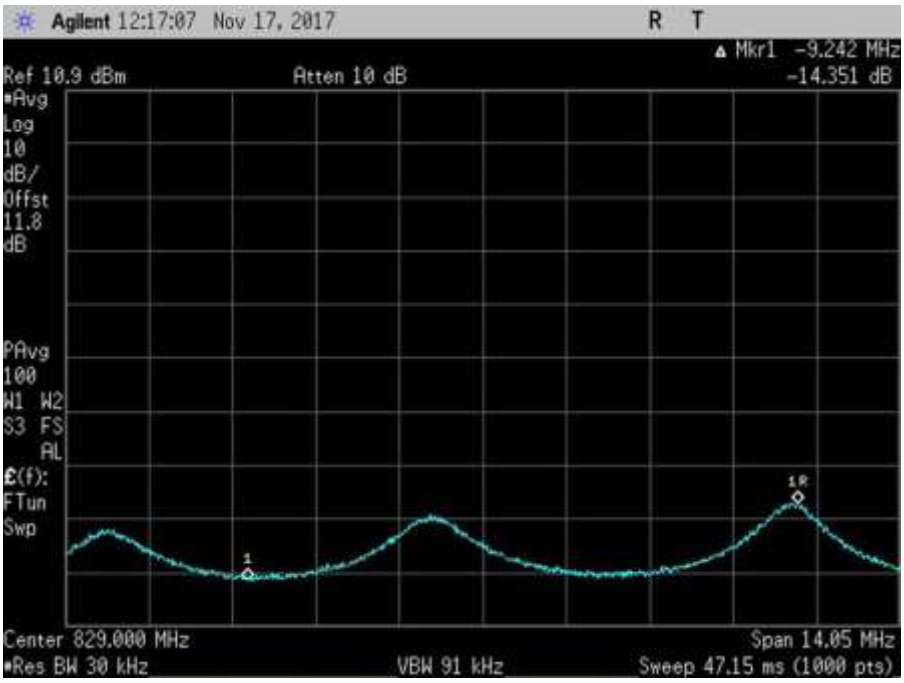
7.11.3_Osc_UL_776-787MHz+5_AWGNL



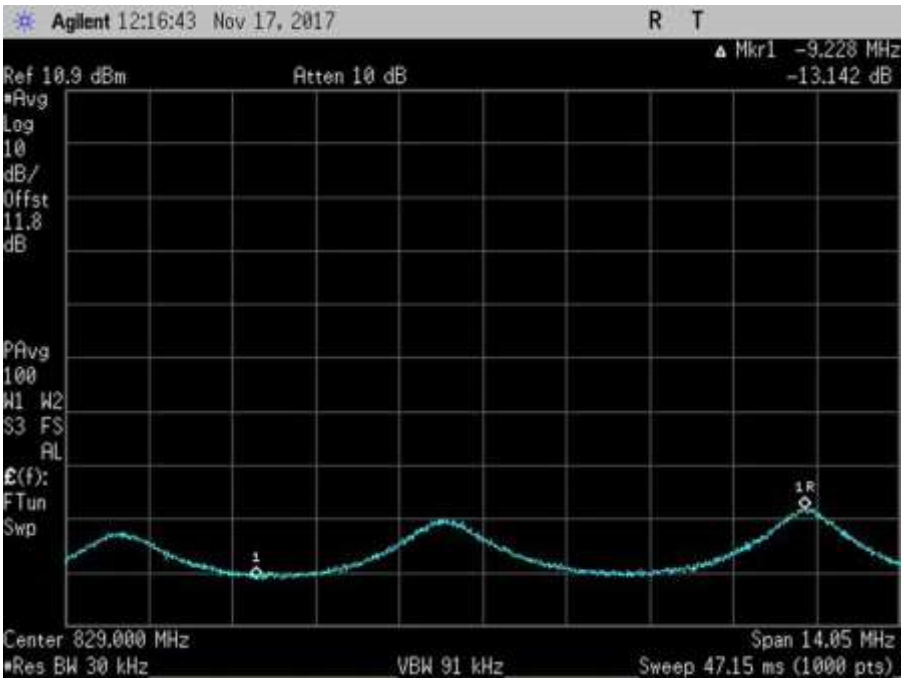
7.11.3_Osc_UL_824-849MHz+0_AWGNR



7.11.3_Osc_UL_824-849MHz+1_AWGNR



7.11.3_Osc_UL_824-849MHz+2_AWGNR



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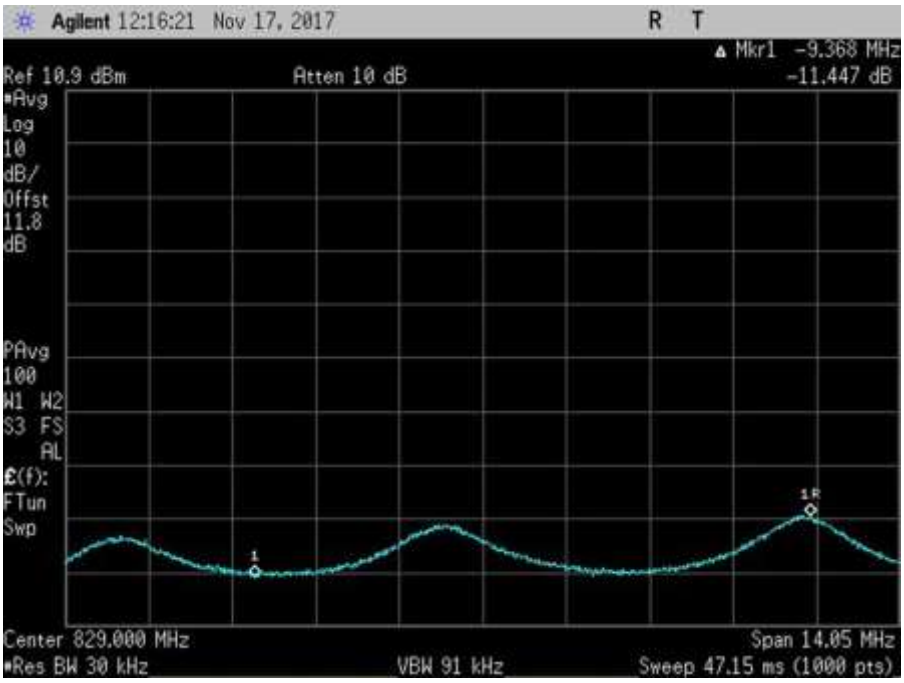
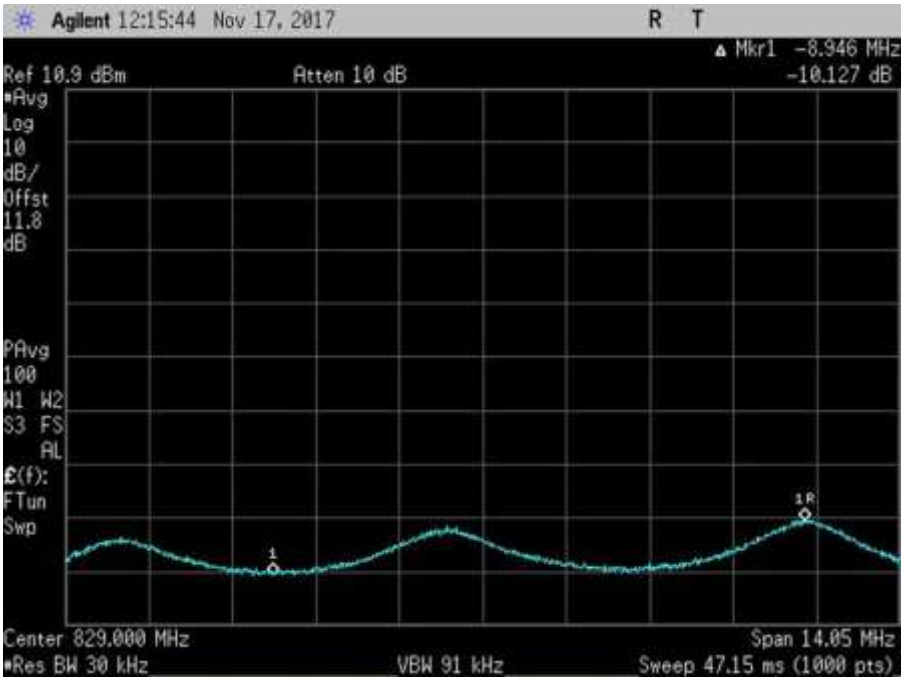
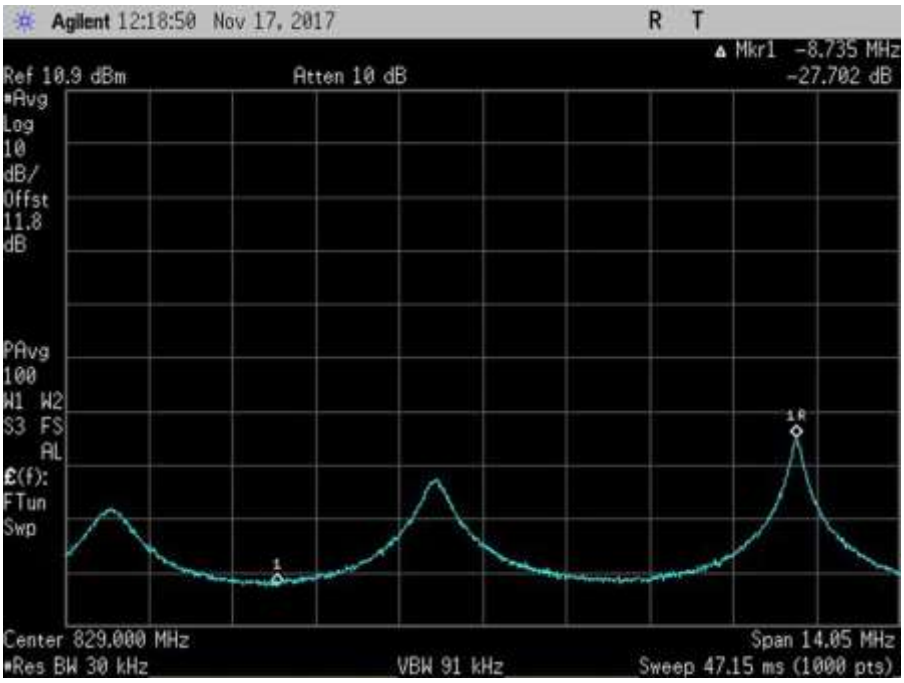


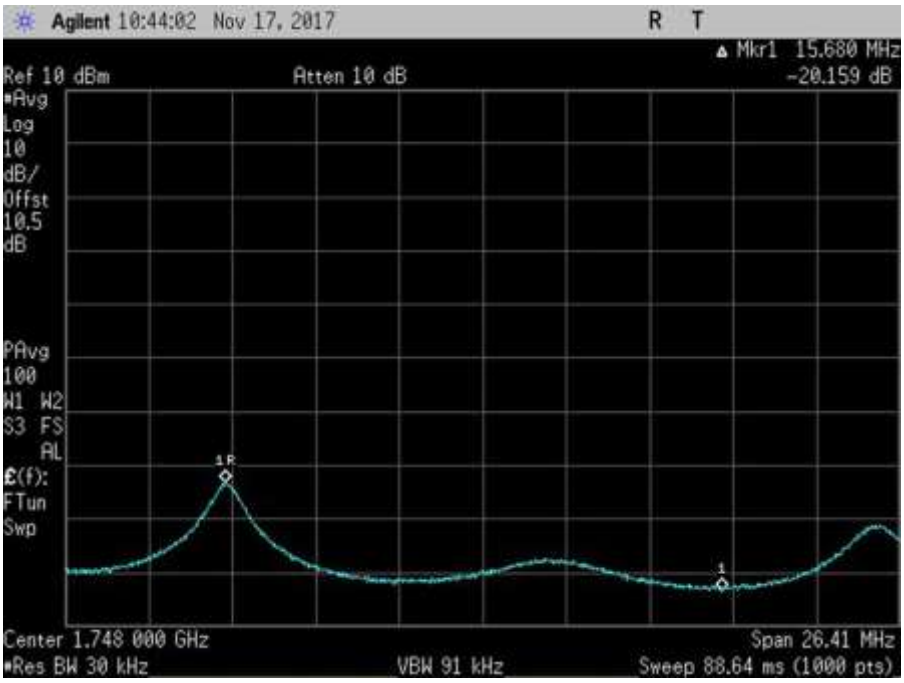
7.11.3_Osc_UL_824-849MHz+4_AWGNR



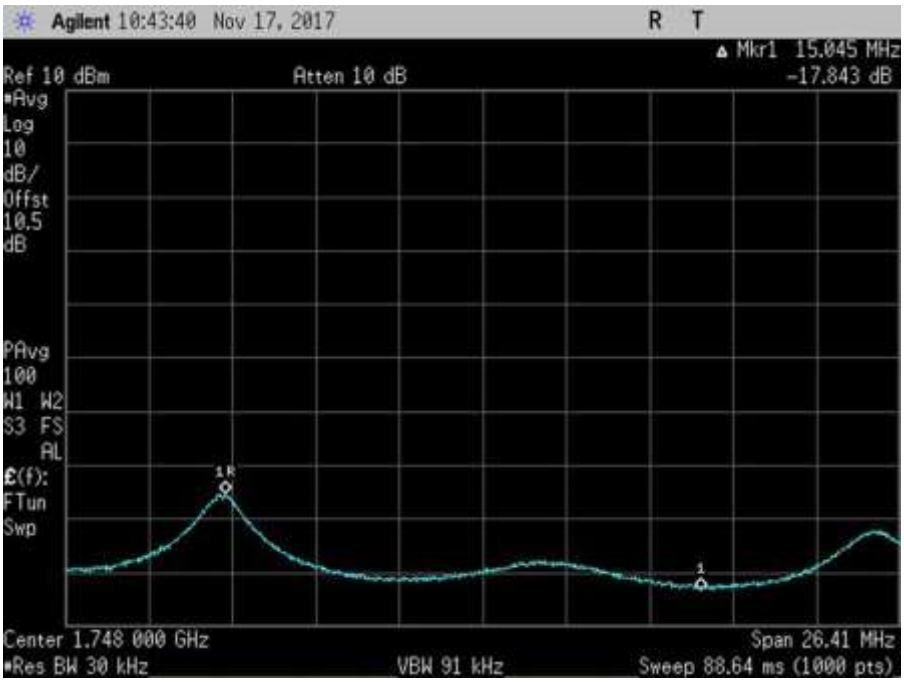
7.11.3_Osc_UL_824-849MHz+5_AWGNR



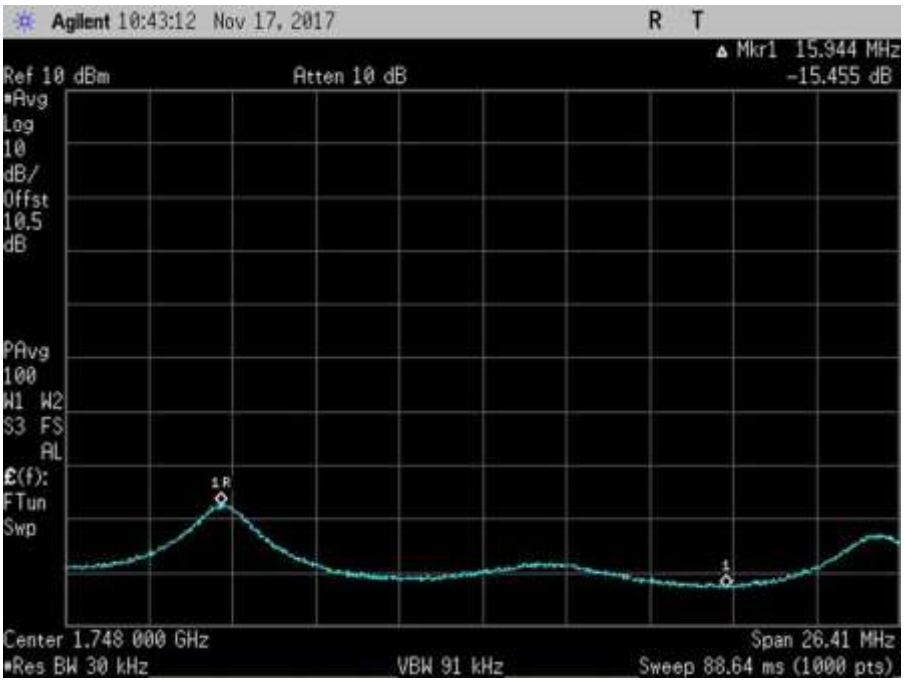
7.11.3_Osc_UL_824-849MHz-1_AWGNR



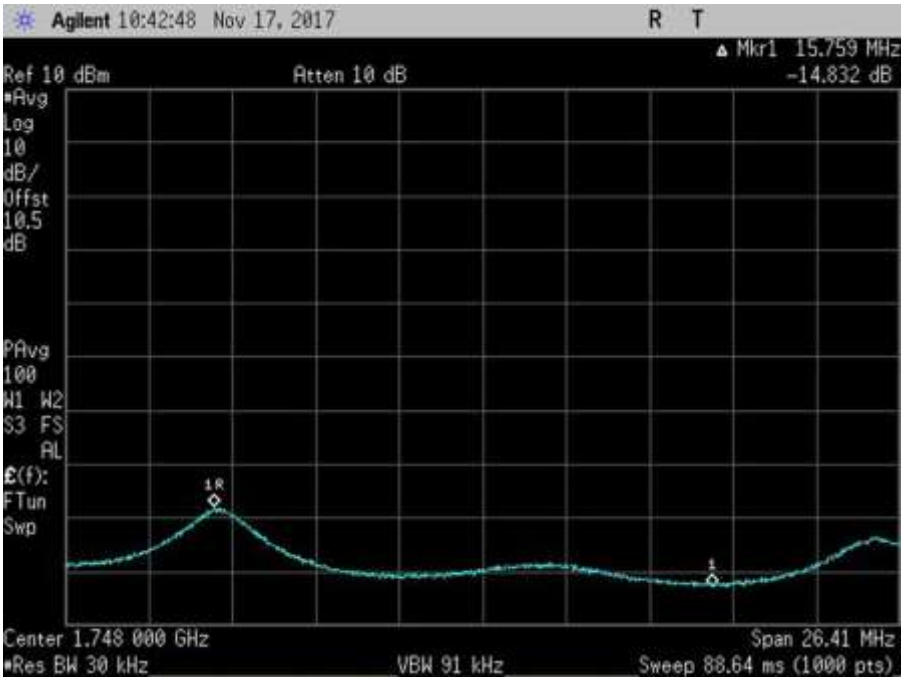
7.11.3_Osc_UL_1710-1755MHz+0_AWGNL



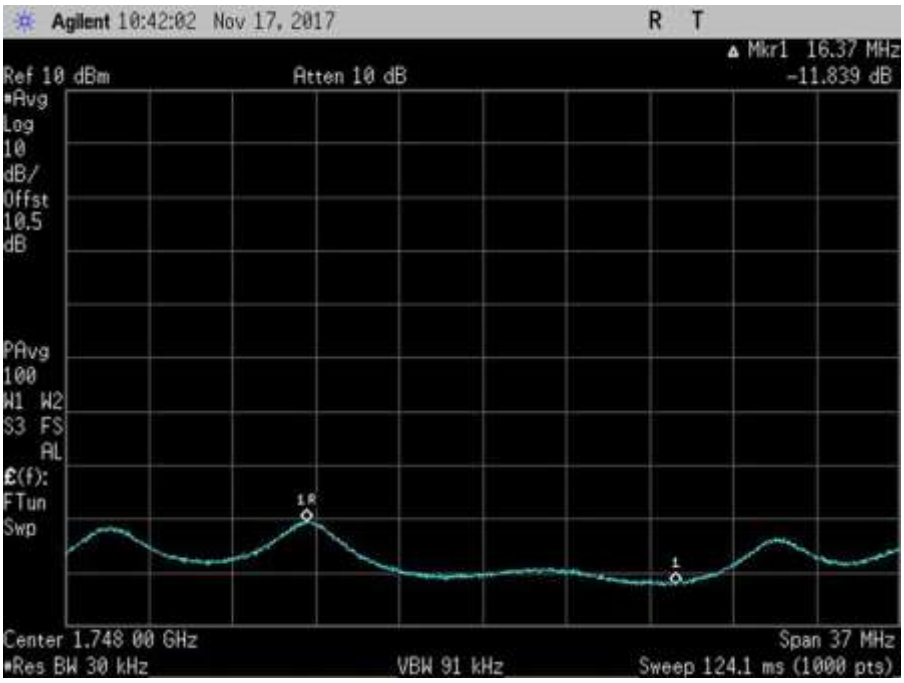
7.11.3_Osc_UL_1710-1755MHz+1_AWGNL



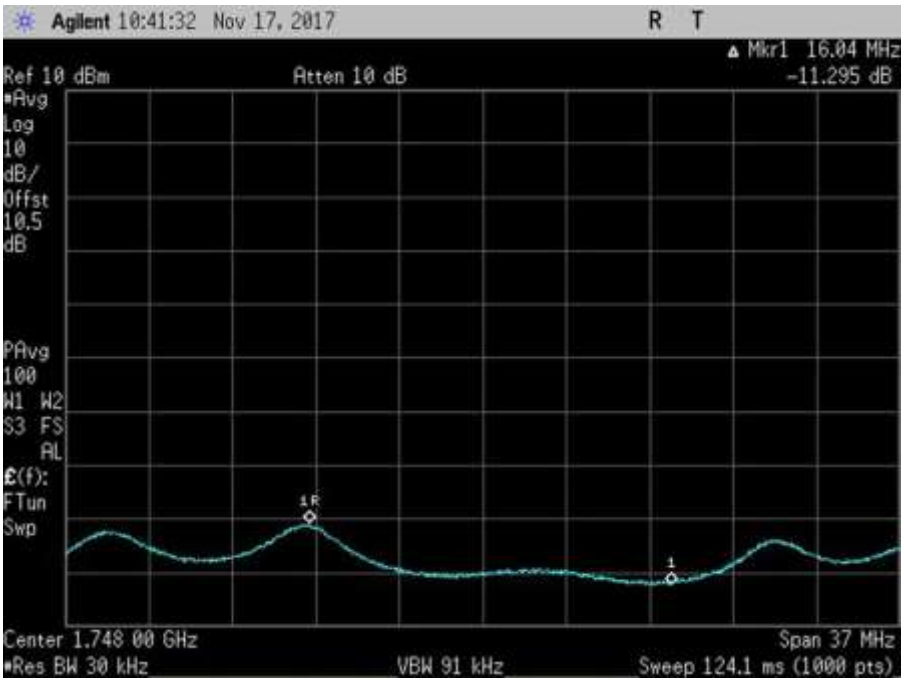
7.11.3_Osc_UL_1710-1755MHz+2_AWGNL



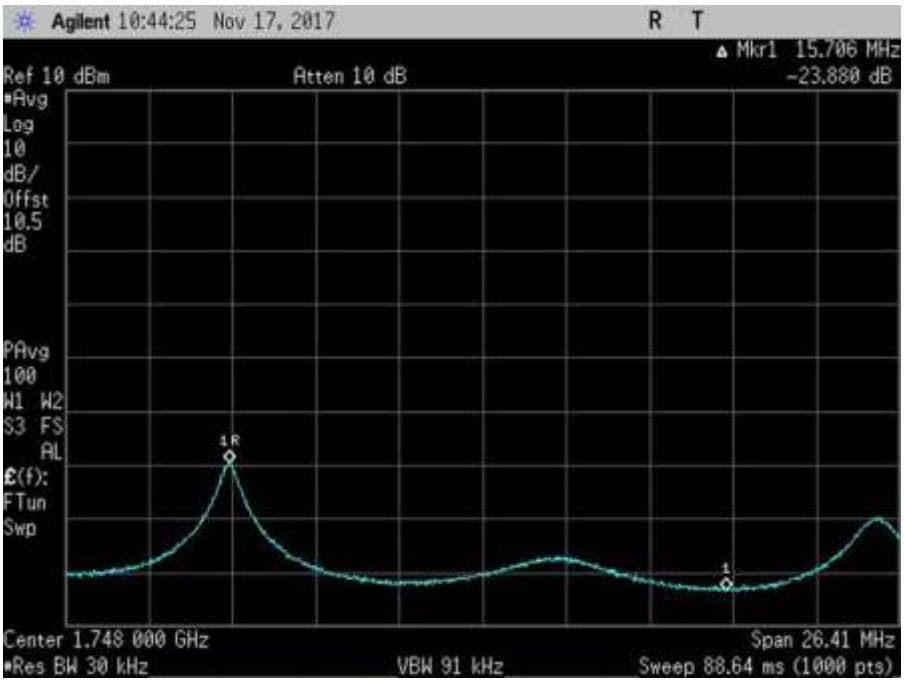
7.11.3_Osc_UL_1710-1755MHz+3_AWGNL



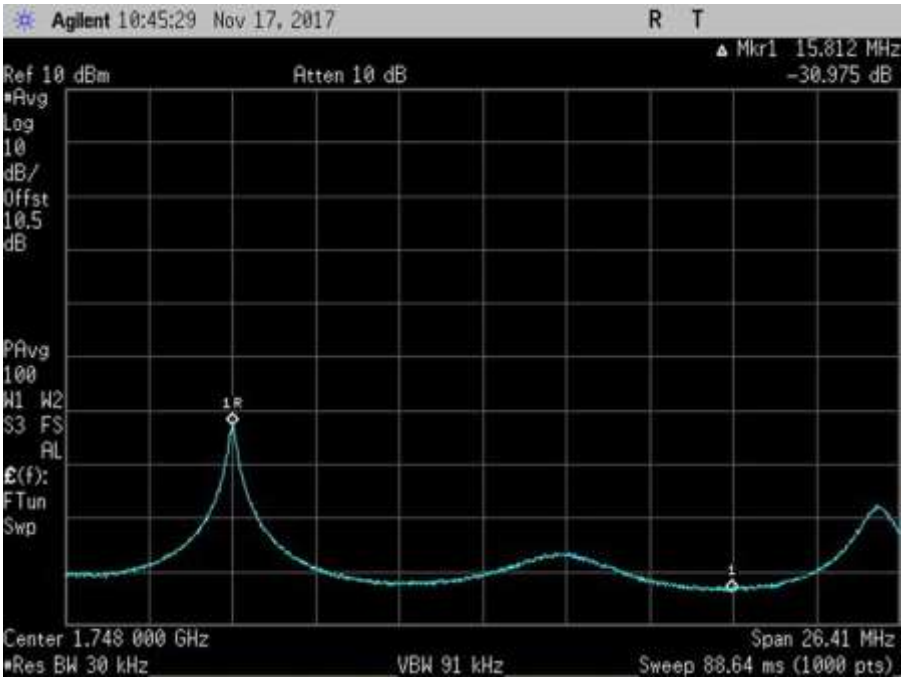
7.11.3_Osc_UL_1710-1755MHz+4_AWGNL



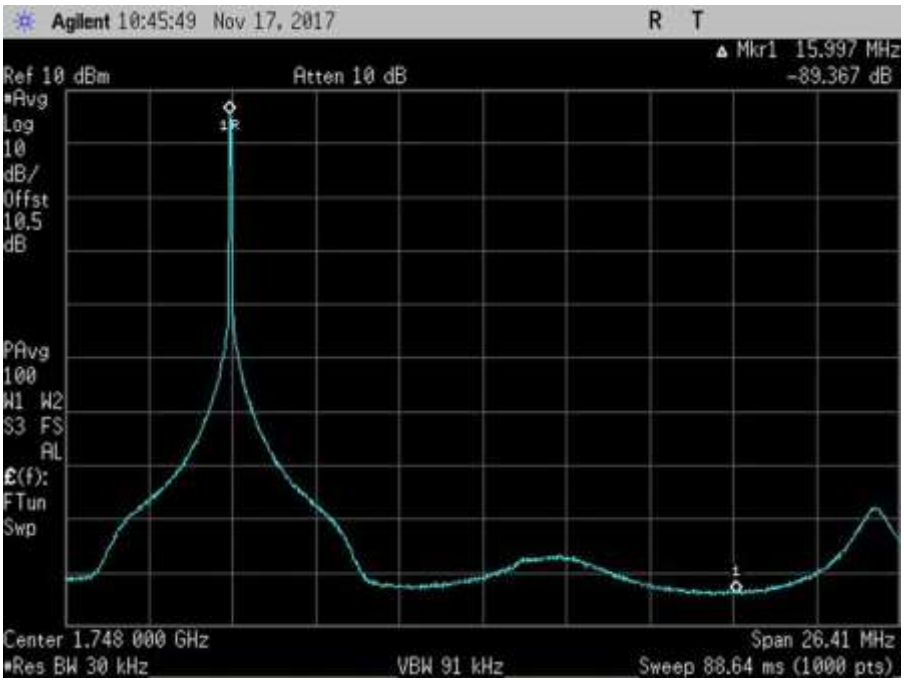
7.11.3_Osc_UL_1710-1755MHz+5_AWGNL



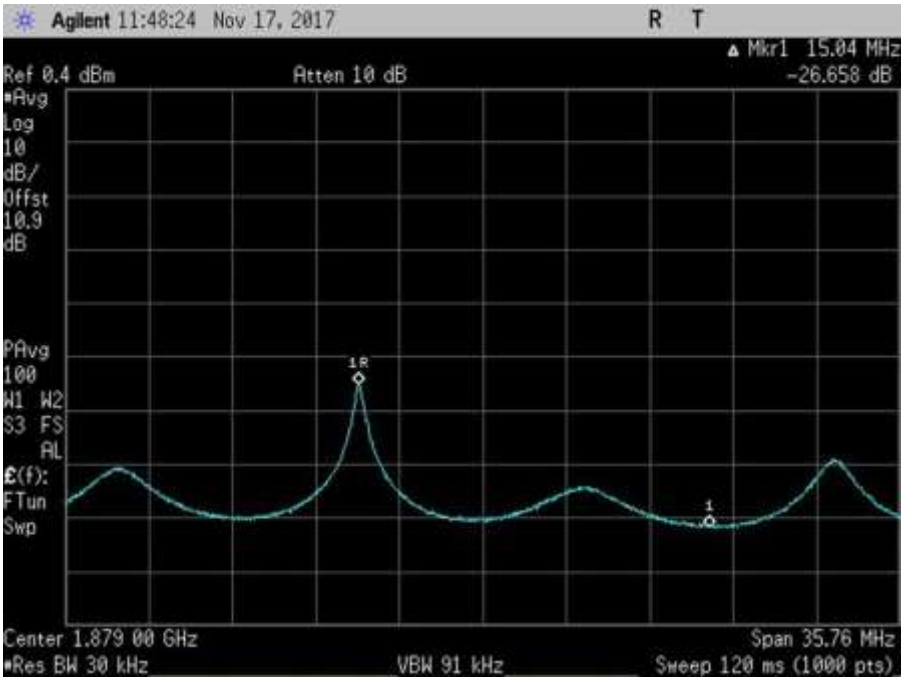
7.11.3_Osc_UL_1710-1755MHz-1_AWGNL



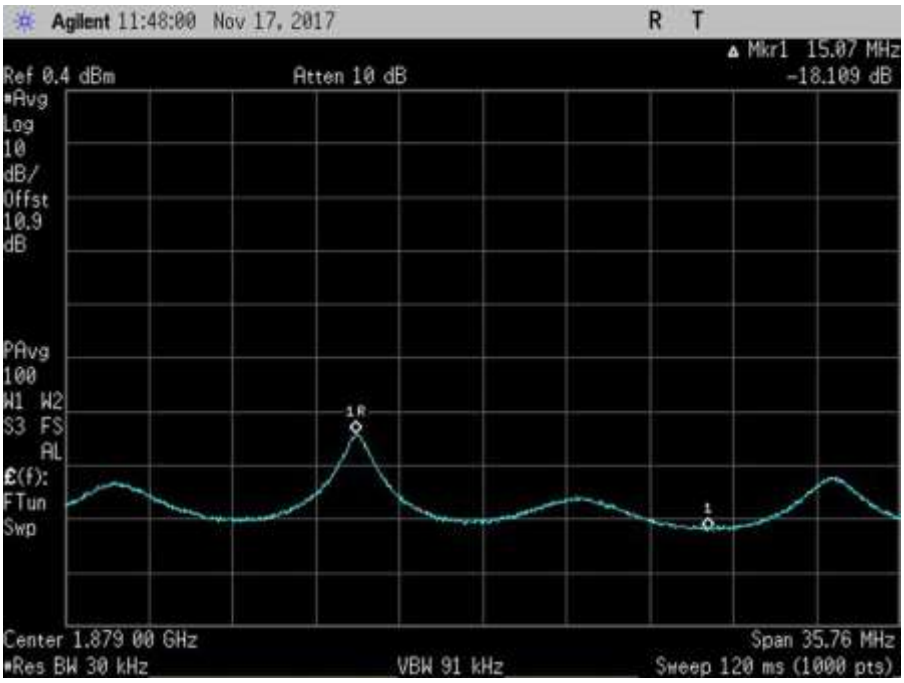
7.11.3_Osc_UL_1710-1755MHz-2_AWGNL



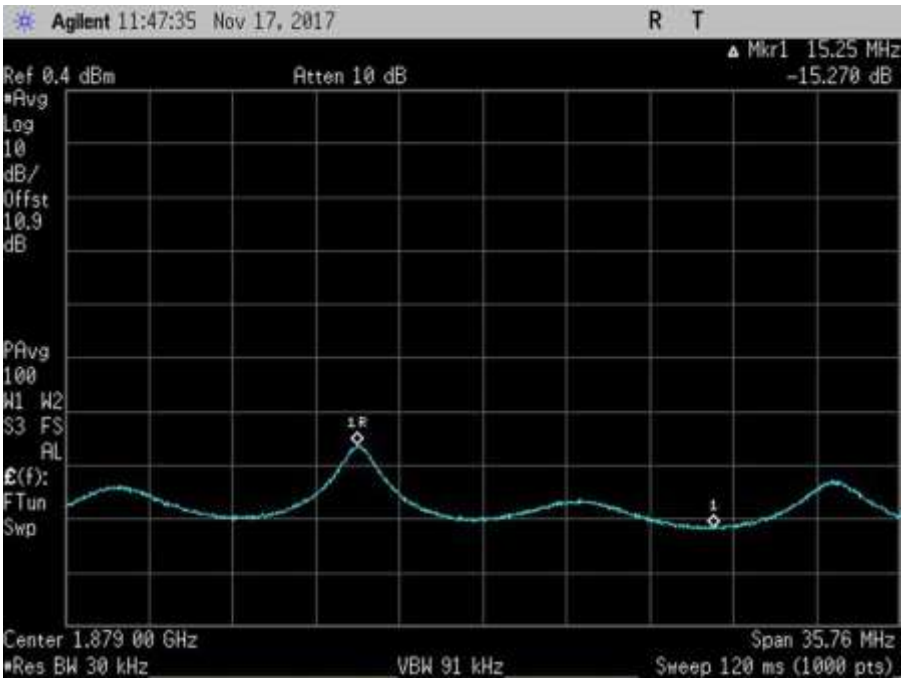
7.11.3_Osc_UL_1710-1755MHz-3_AWGNL



7.11.3_Osc_UL_1850-1915MHz+0_AWGNR



7.11.3_Osc_UL_1850-1915MHz+1_AWGNR



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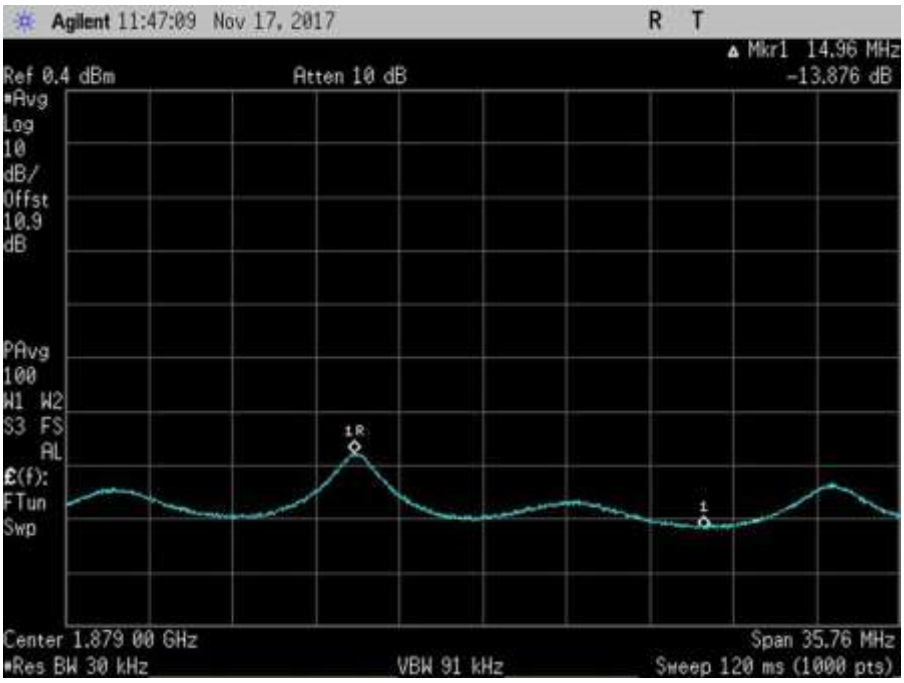
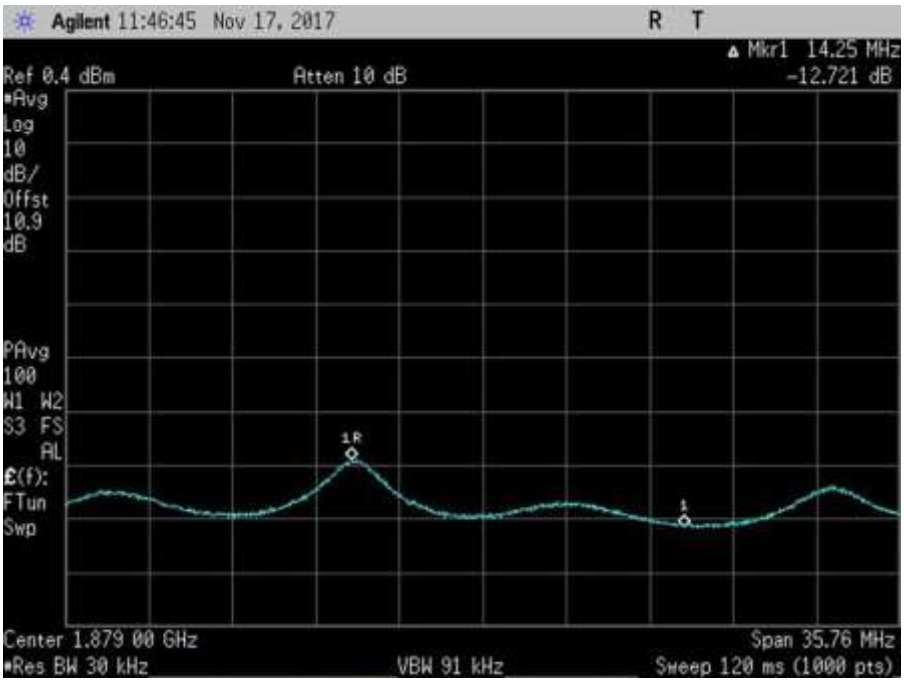
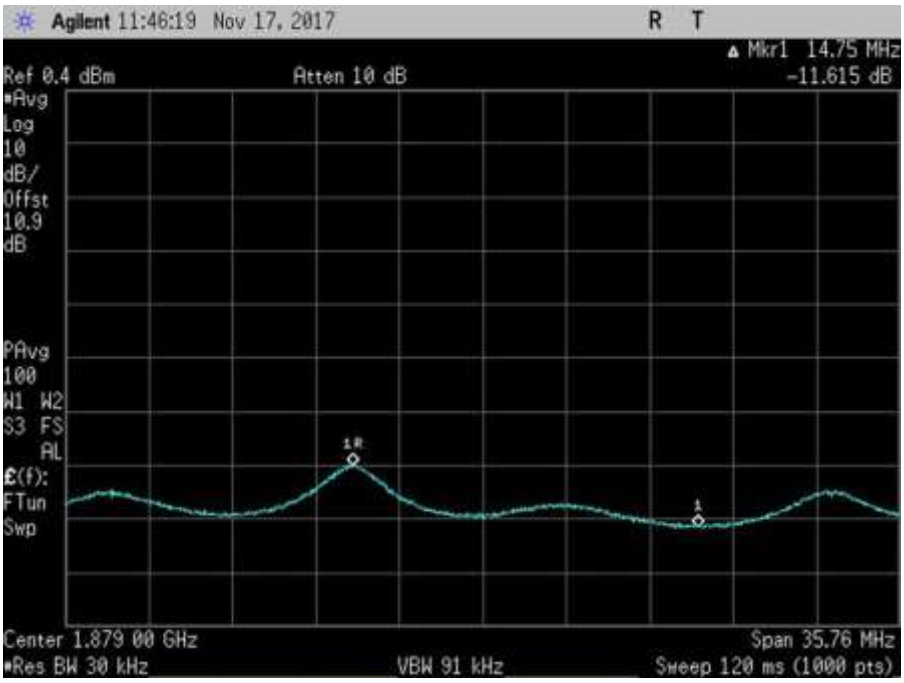


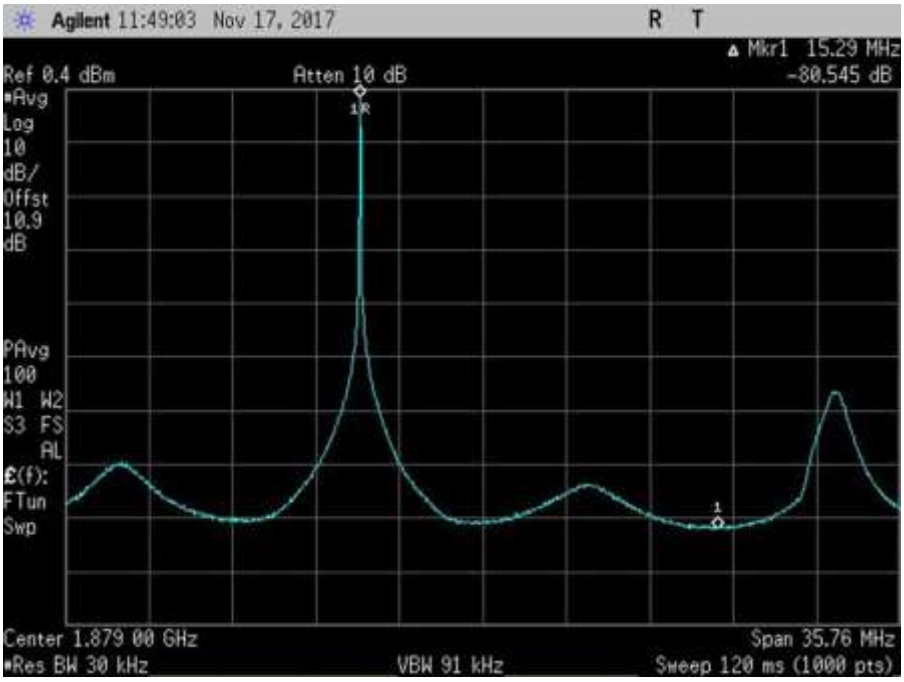
7.11.3_Osc_UL_1850-1915MHz+3_AWGNR



7.11.3_Osc_UL_1850-1915MHz+4_AWGNR



7.11.3_Osc_UL_1850-1915MHz+5_AWGNR



7.11.3_Osc_UL_1850-1915MHz-1_AWGNR

7.12 Radiated Spurious Emissions

Test Conditions / Setup

Test Location:	CKC Laboratories, Inc • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170
Customer:	Cellphone-Mate, Inc
Specification:	**7.12 Radiated Spurious Emissions / 2.1053 Radiated Spurious Emissions** **47 CFR §22.917(a) Radiated Spurious Emissions** **47 CFR §24.238(a) Radiated Spurious Emissions** **47 CFR §27.53(c), (f), (g) and (h) Spurious Emissions**

Work Order #:	**100637**	Date:	11/22/2017
Test Type:	**Radiated Emissions**	Time:	8:05:00 AM
Tested By:	**Daniel Bertran**	Sequence#:	1
Software:	EMITest 5.03.11		

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N

Test Conditions / Notes:

Test environment conditions: 21.5°C, 58% Relative Humidity,101.9 kPa

The equipment under test (EUT) is a Mobile CMRS Wideband Consumer Booster.
During testing, the (EUT) is placed on the Styrofoam table top.
Five different CW signals (one per each band) are injected sequentially to the input port of EUT using a signal generator. The signal generator is set to produce a CW signal with the frequency set to the center of each operational band under test and the power level is set at Pin as determined from 7.2 section of the test procedure indicated further below.
Evaluation of DL path was performed with signals fed into the Outside antenna port while Inside antenna port was terminated with equivalent 50 Ohm Pasternack load (MN: PE6187 / SN: 1443).
Evaluation of UL path was performed with signal fed into the Inside antenna port while Outside antenna port was terminated with the same above 50 Ohm load.
Part 22
UL: 824-849MHz
DL: 869-894MHz
Part 24
UL: 1850-1915MHz
DL: 1930-1995MHz
Part 27
UL: 1710-1755MHz, 698-716MHz, 776-787MHz
DL: 2110-2155MHz, 728-746MHz, 746-757MHz

Test procedure:
The test was performed in accordance with section 7.12 of the FCC document: 935210 D03 Wideband Consumer Signal Booster Measurement Guidance v04r01 Dated October 27, 2017.
Firmware: V 3.2

TX Freq = > Center frequency of above listed bands.
Modulation=> CW
Frequency range of measurement = 9 kHz- 22 GHz.
9 kHz - 150 kHz -> RBW=200 Hz VBW=200 Hz
150 kHz - 30 MHz -> RBW=9 kHz VBW=9 kHz
30 MHz - 1000MHz -> RBW=120 kHz VBW=120 kHz
1000 MHz-22000MHz -> RBW=1 MHz VBW=1 MHz

Note:
No spurious emissions were found within 20dB of the limit line.
Emissions in the band 1559-1610 MHz were investigated and these were not found within 20dB of the limit line.

27.53(f) For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN03418	Signal Generator	E4438C	6/19/2017	6/19/2019
	ANP06239	Attenuator	54A-10	8/8/2016	8/8/2018
	ANP06897	Cable	32022-29094K-29094K-48TC	12/30/2015	12/30/2017
	ANP06898	Cable	32022-29094K-29094K-48TC	12/30/2015	12/30/2017
	ANP05411	Attenuator	54A-10	1/18/2016	1/18/2018
	AN03471	Spectrum Analyzer	E4440A	12/9/2015	12/9/2017
	AN01996	Biconilog Antenna	CBL6111C	11/1/2016	11/1/2018
	ANP06049	Attenuator	PE7002-6	5/9/2016	5/9/2018
	ANP00880	Cable	RG214U	5/10/2016	5/10/2018
	ANP06691	Cable	PE3062-180	6/23/2016	6/23/2018
	AN00971A	Preamp	8447D	2/5/2016	2/5/2018
	ANP01187	Cable	CNT-195	8/8/2016	8/8/2018
	AN03470	Spectrum Analyzer	E4440A	12/9/2015	12/9/2017
	AN02113	Horn Antenna-ANSI C63.5	3115	2/6/2017	2/6/2019
	ANP06900	Cable	32022-29094K-29094K-36TC	12/30/2015	12/30/2017
	AN02810	Preamp	83051A	2/26/2016	2/26/2018
	ANP01210	Cable	FSJ1P-50A-4A	1/16/2017	1/16/2019
	AN03302	Cable	32026-29094K-29094K-72TC	1/29/2016	1/29/2018
	AN03143	Cable	32022-29094K-144TC	3/27/2017	3/27/2019
	AN02741	Active Horn Antenna	AMFW-5F-12001800-20-10P	3/30/2017	3/30/2019
	ANP00928	Cable	various	1/25/2016	1/25/2018
	AN02742	Active Horn Antenna	AMFW-5F-18002650-20-10P	10/7/2016	10/7/2018
	ANP00929	Cable	various	1/25/2016	1/25/2018
	AN00432	Loop Antenna	6502	5/30/2017	5/30/2019

Summary of Results

Pass: All Radiated Spurious Emissions were found with more than 20dB margin of the limit line.

Frequency Range of measurement 9kHz –> 22GHz

LIMIT LINE FOR SPURIOUS RADIATED EMISSION

REQUIRED ATTENUATION = 43+10 LOG P (DB)

For radiated spurious emission measured at 3 meter test distance,

Required attenuation = 43+10 Log $P_{t\ at\ 3\ meter}$ dB
Limit line (dBuV) = E_{dBuv} - Attenuation

E_{dBuv} = Measured field strength at 3 meter in dBuV/m

Power Density (Isotropic)

$$P_D = \frac{P_t}{4\pi r^2}$$

P_D = Power Density in Watts /m^2
Pt = Average Transmit Power
r = Test distance

Field Intensity E (V/m)

$$E = \sqrt{P_D \times 377}$$

$$E = \frac{\sqrt{P_t \times 377}}{4\pi r^2}$$

$$E = \sqrt{\frac{P_t \times 30}{r^2}}$$

$$P_t = \left(\frac{E^2 \text{ x } r^2}{30} \right)$$

10 Log P_t = 10 Log E^2 (V/m)+ 10 Log r^2 – 10 Log 30

10 Log P_t = 20 Log E (V/m) + 20 Log r – 10 Log 30

At 3 meter, r = 3 m

10 Log P_t = 20 Log E (V/m) + 20 Log 3 – 10 Log 30

10 Log P_t = 20 Log E (V/m) + 9.54 – 14.77

10 Log P_t = 20 Log E (V/m) - 5.23

Since 20 Log E (V/m) = 20 Log E (uV/m) –120

10 Log P_t = 20 Log E (uV/m) - 120 - 5.23

10 Log P_t = 20 Log E (uV/m) –125.23

Limit line (dBuV) at 3 meter = E_{dBuv} – Attenuation

= E_{dBuv} - (43+10 Log $P_{t \text{ at 3 meter}}$)

= E_{dBuv} - 43 - 10 Log $P_{t \text{ at 3 meter}}$

= E_{dBuv} - 43 – (20 Log E (uV/m) –125.23)

= E_{dBuv} - 43 - 20 Log E (uV/m) + 125.23

= E_{dBuv} - 20 Log E (uV/m) + 82.23

Since 20 Log E (uV/m) = E in dBuV/m

= ~~E_{dBuv}~~ - ~~E_{dBuv}~~ + 82.23

Radiated Emission limit 3 meter = 82.23 dBuV at any power level measured in dBuV

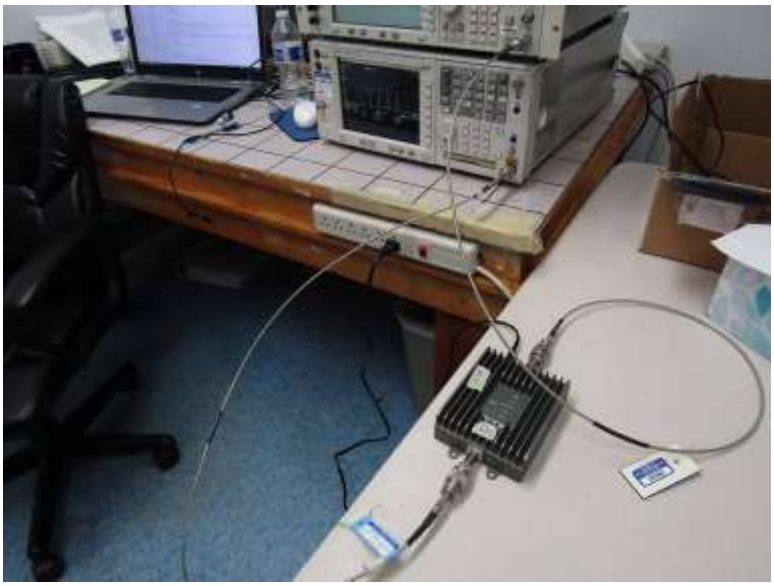
7.13 Spectrum Block Filter

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

EXHIBIT A: TEST SETUP PHOTOS

Sections 7.1, 7.2, 7.3, 7.5, 7.6 Test Setup

Section 7.4 Test Setup



Section 7.7. Test Setup

Section 7.8 Test Setup

Section 7.9 Test Setup

Section 7.10 Test Setup

Section 7.11 Test Setup, View 1

Section 7.11 Test Setup, View 2

Section 7.12 Test Setup, View 1

Section 7.12 Test Setup, View 2