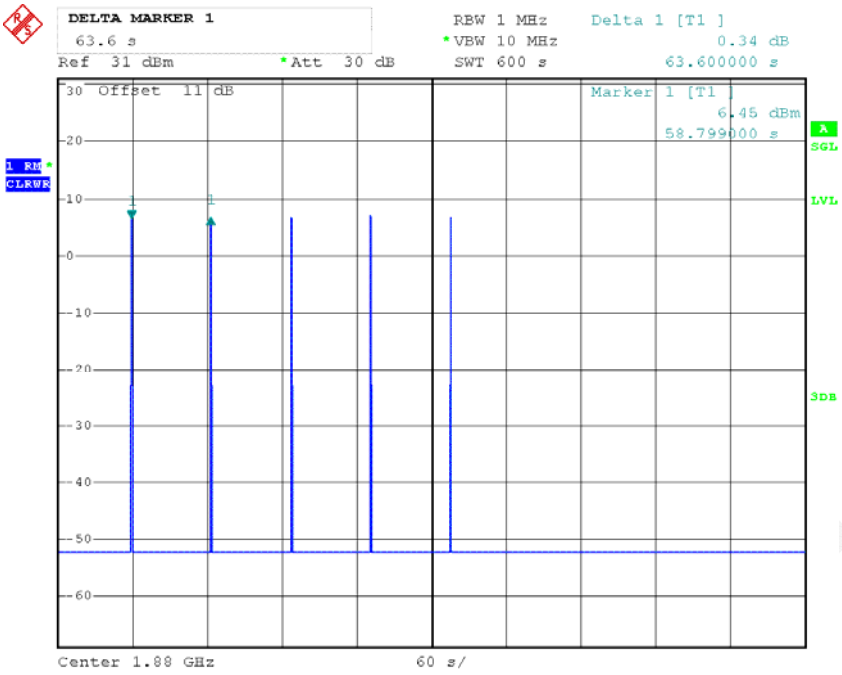
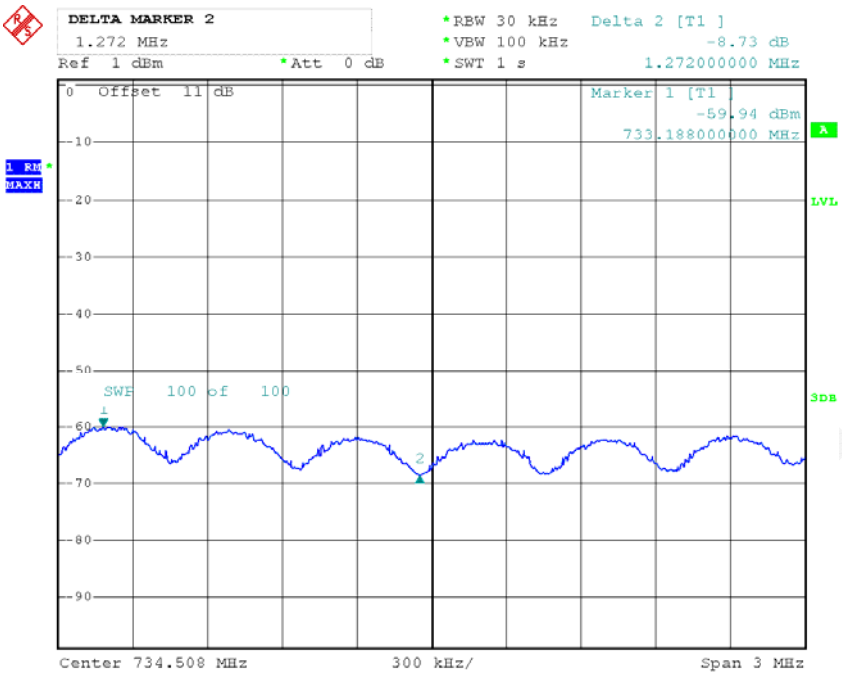


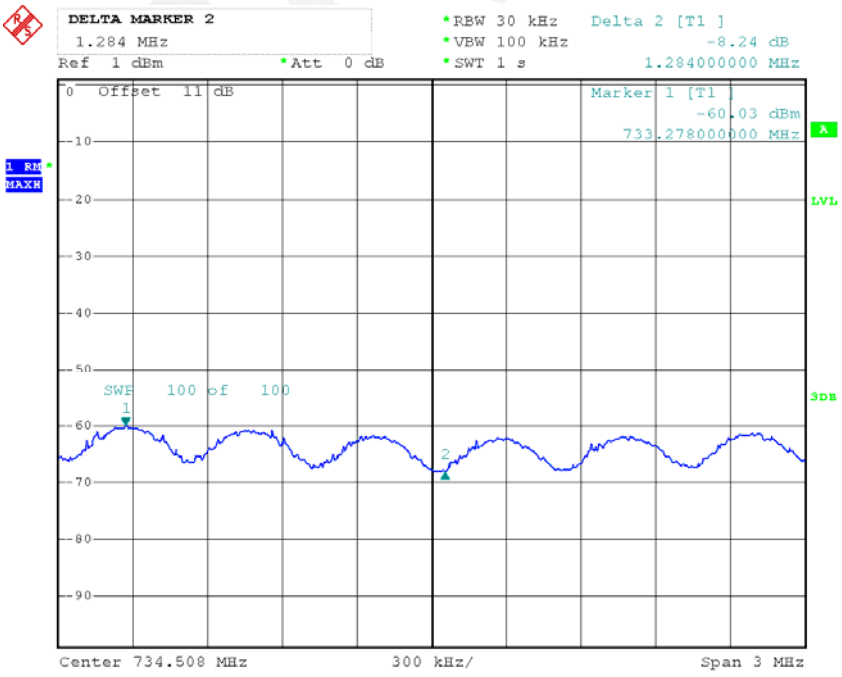
Date: 22.NOV.2015 11:36:19

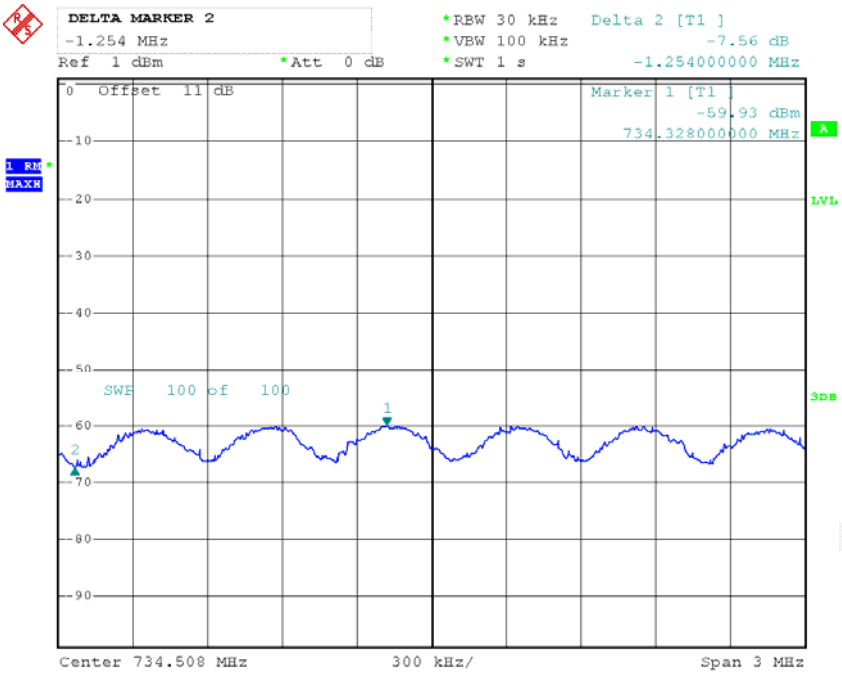
Oscillation mitigation or shutdown:

Downlink:

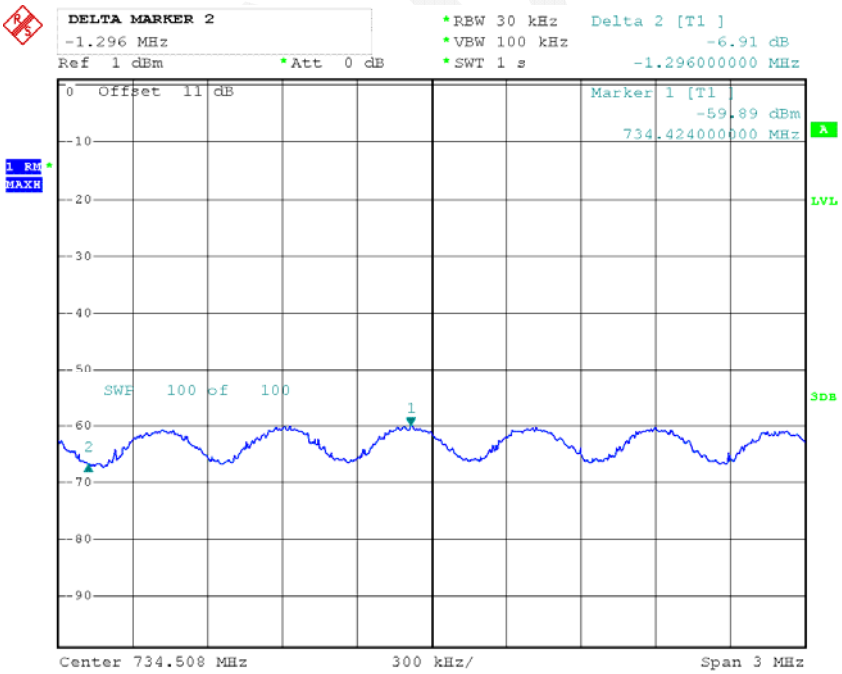
Lower 700 Band



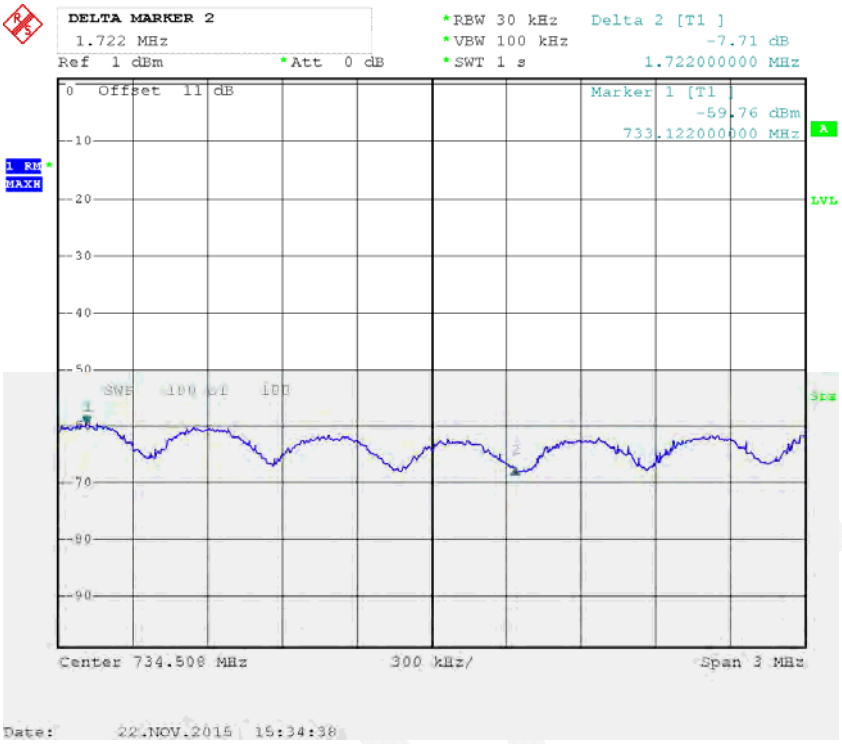


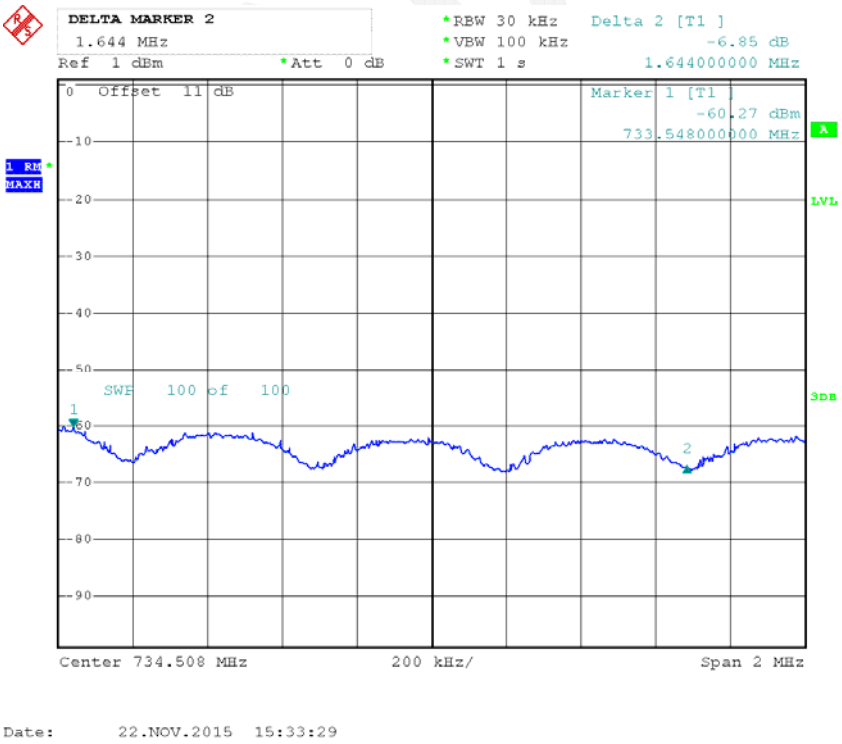


Date: 22.NOV.2015 15:37:59

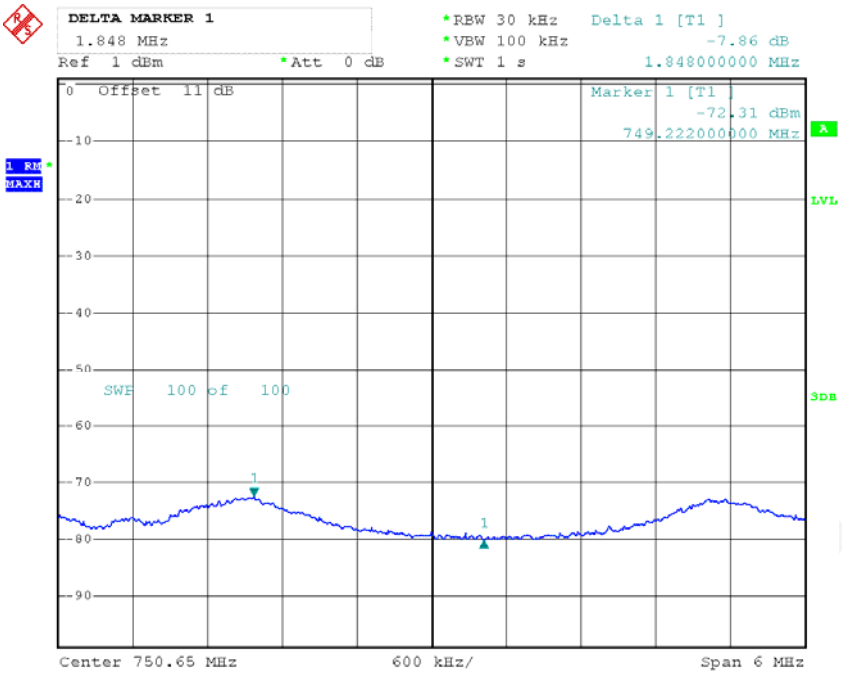


Date: 22.NOV.2015 15:38:22

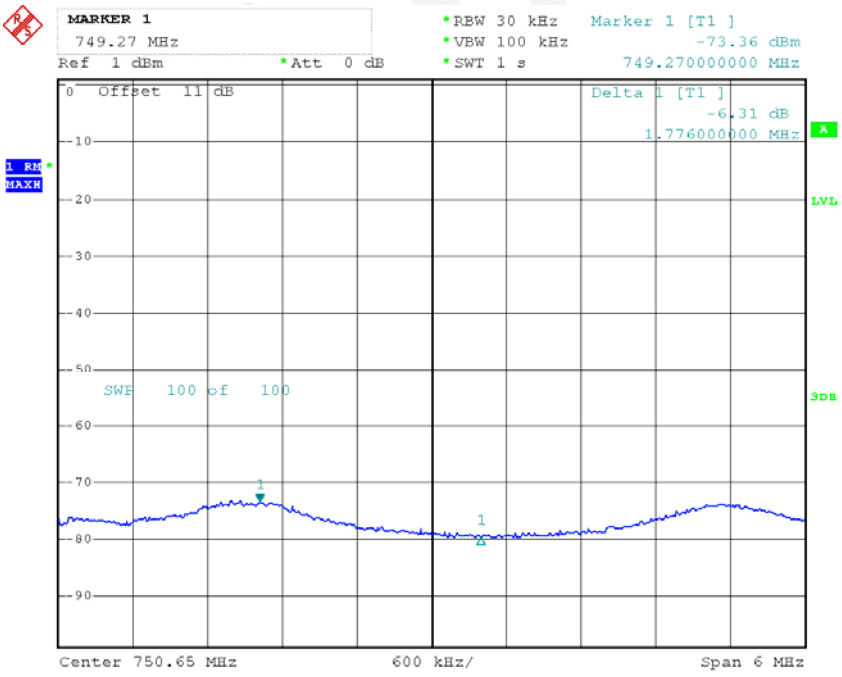

DELTA MARKER 2
1.722 MHz
*RBW 30 kHz
*VBW 100 kHz
*SWT 1 s
Delta 2 [T1]
-7.71 dB
1.722000000 MHz
Ref 1 dBm
*Att 0 dB
Offset 11 dB
Marker 1 [T1]
-59.76 dBm
733.122000000 MHz
1 RM MAXH
SWP 100 of 100
Center 734.500 MHz
300 kHz/
Span 3 MHz
Date: 22.NOV.2015 15:34:38


DELTA MARKER 2
1.644 MHz
*RBW 30 kHz
*VBW 100 kHz
*SWT 1 s
Delta 2 [T1]
-6.85 dB
1.644000000 MHz
Ref 1 dBm
*Att 0 dB
Offset 11 dB
Marker 1 [T1]
-60.27 dBm
733.548000000 MHz
1 RM MAXH
SWP 100 of 100
Center 734.500 MHz
200 kHz/
Span 2 MHz
Date: 22.NOV.2015 15:33:29

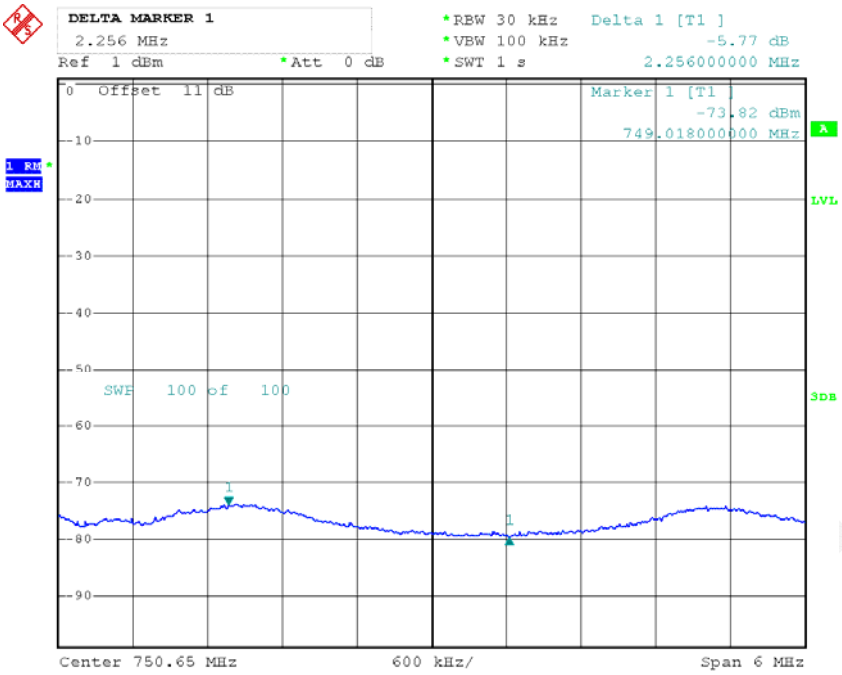
Upper 700 Band



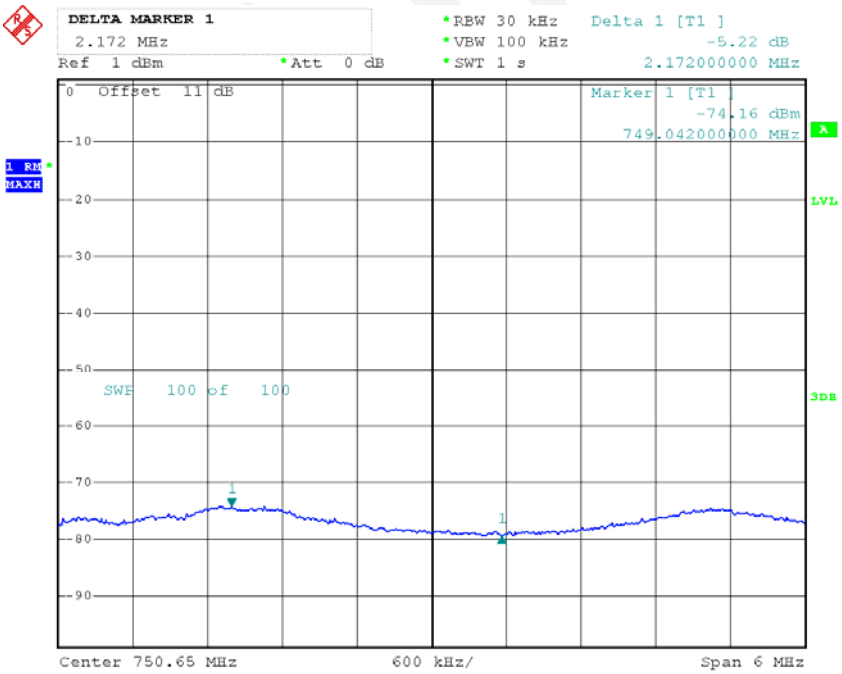
Date: 25.NOV.2015 21:38:37



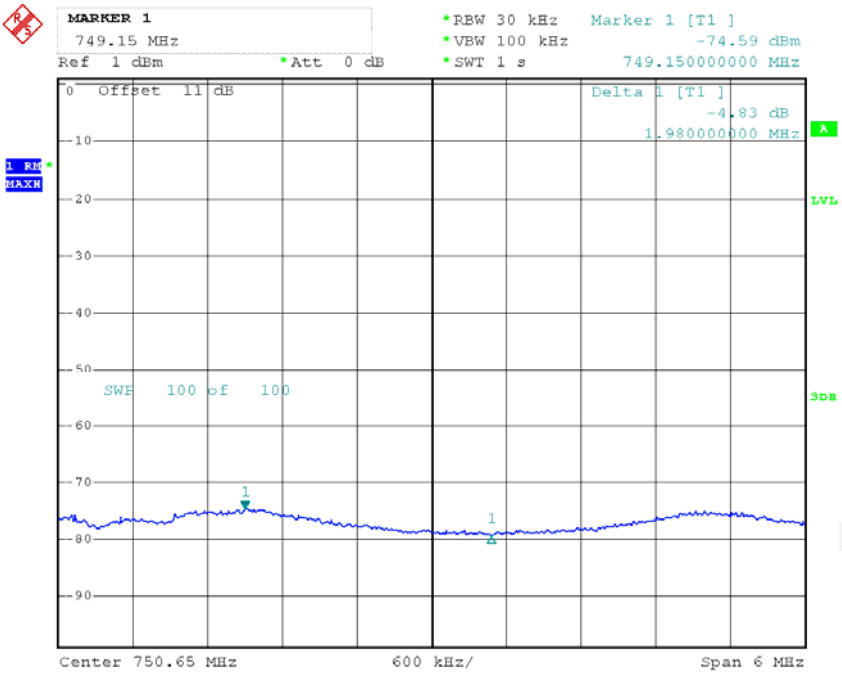
Date: 25.NOV.2015 21:38:09



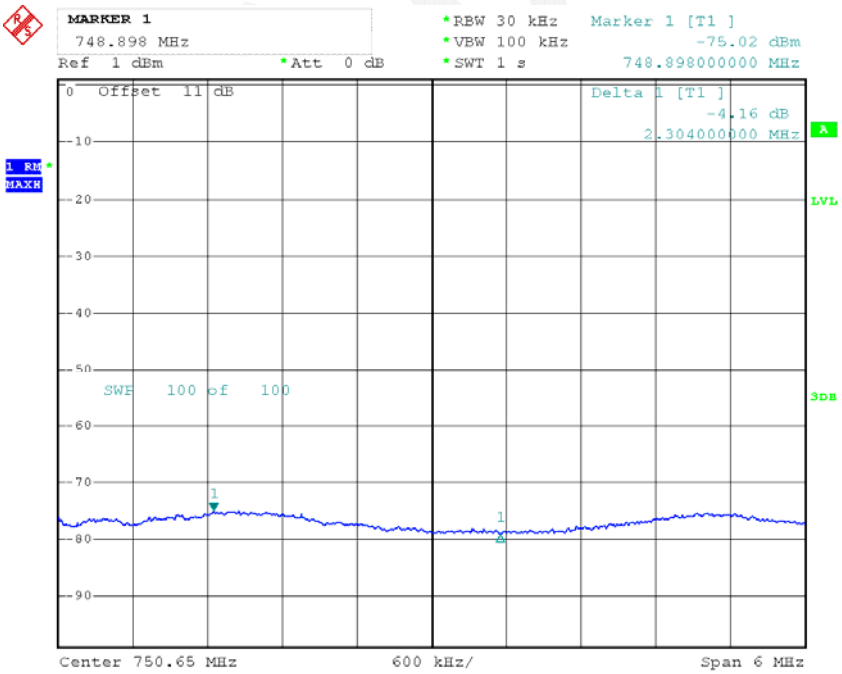
Date: 25.NOV.2015 21:39:56



Date: 25.NOV.2015 21:40:54

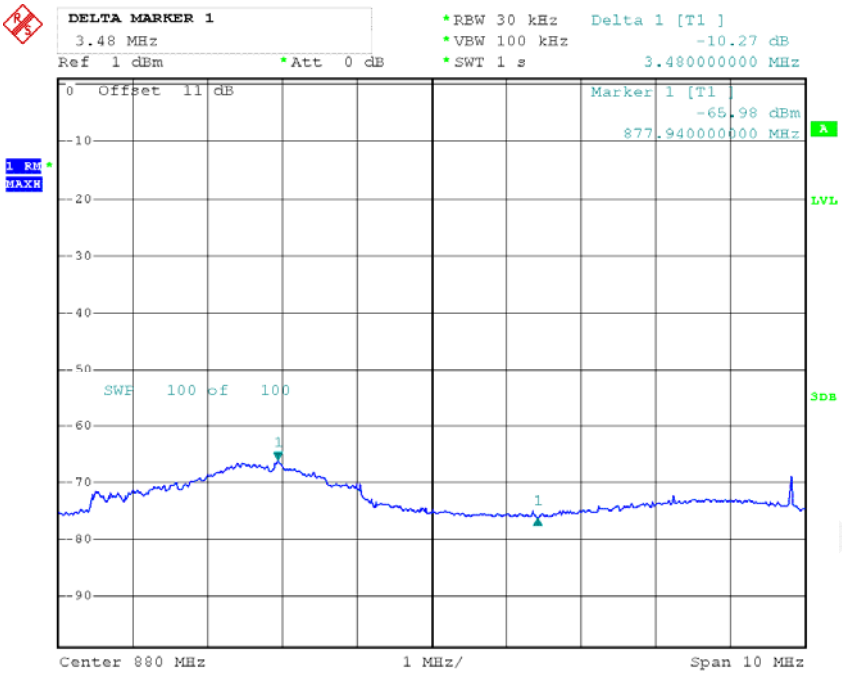


Date: 25.NOV.2015 21:41:44

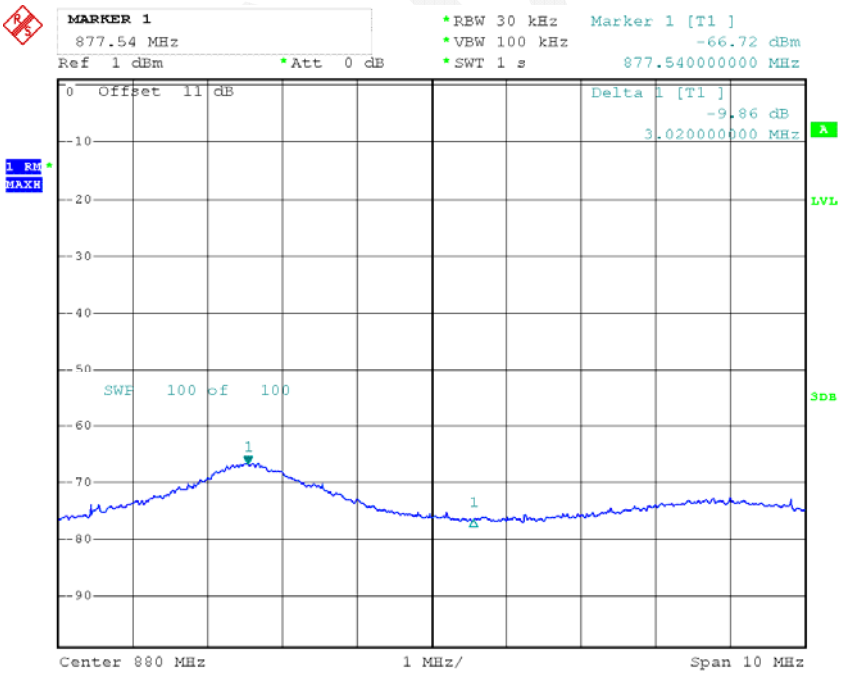


Date: 25.NOV.2015 21:42:44

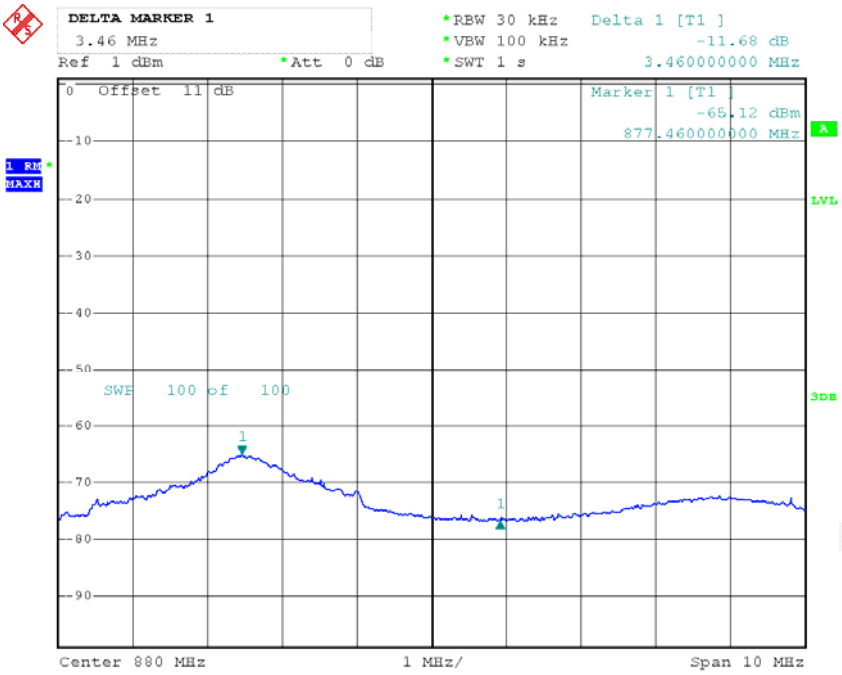
Cellular Band



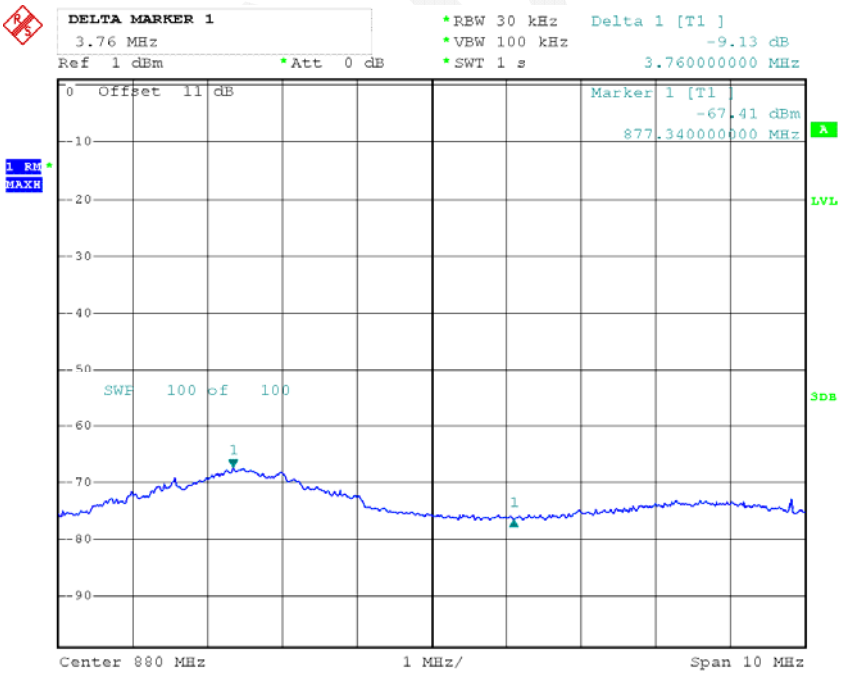
Date: 25.NOV.2015 21:44:11



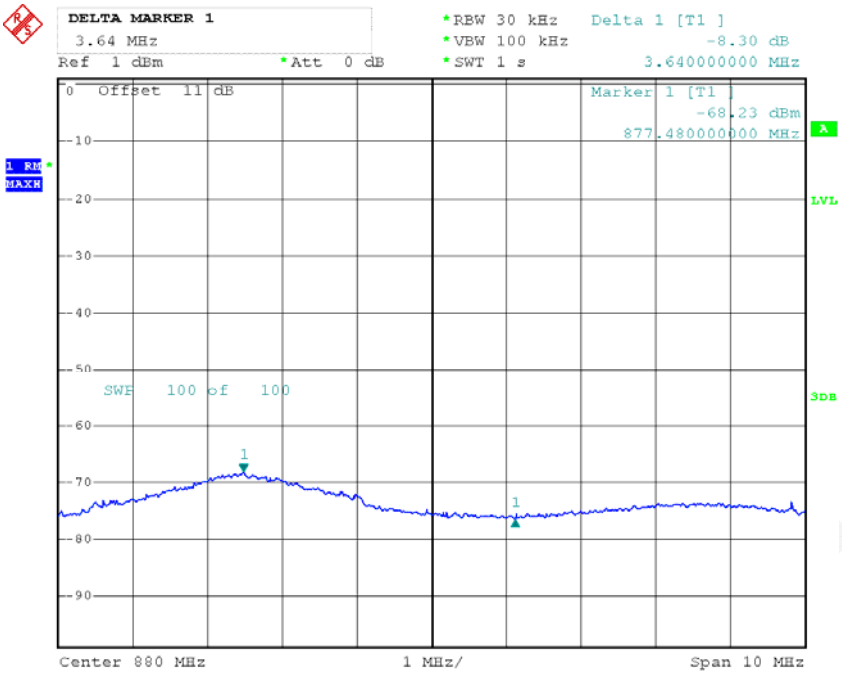
Date: 25.NOV.2015 21:44:37



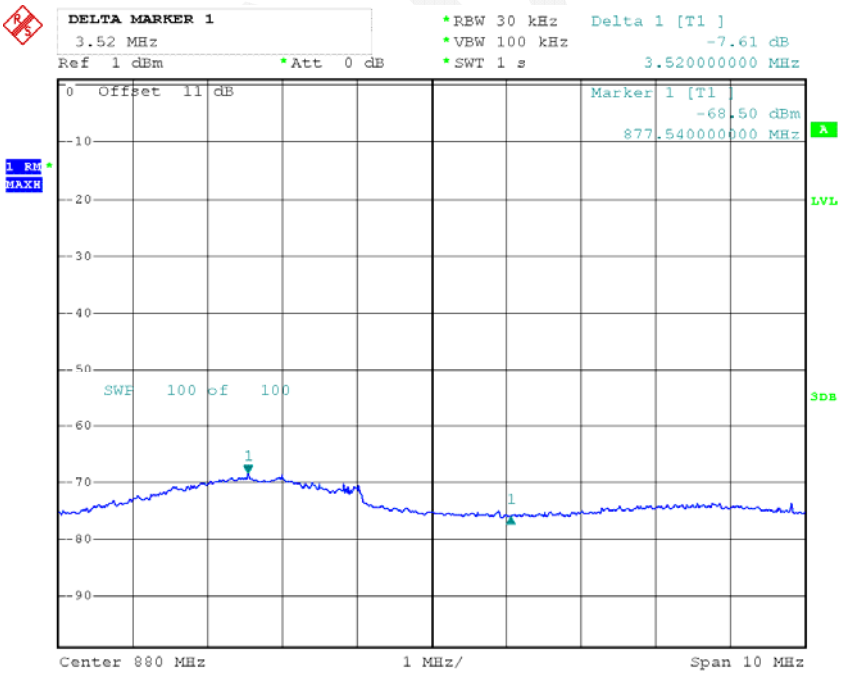
Date: 25.NOV.2015 21:45:25



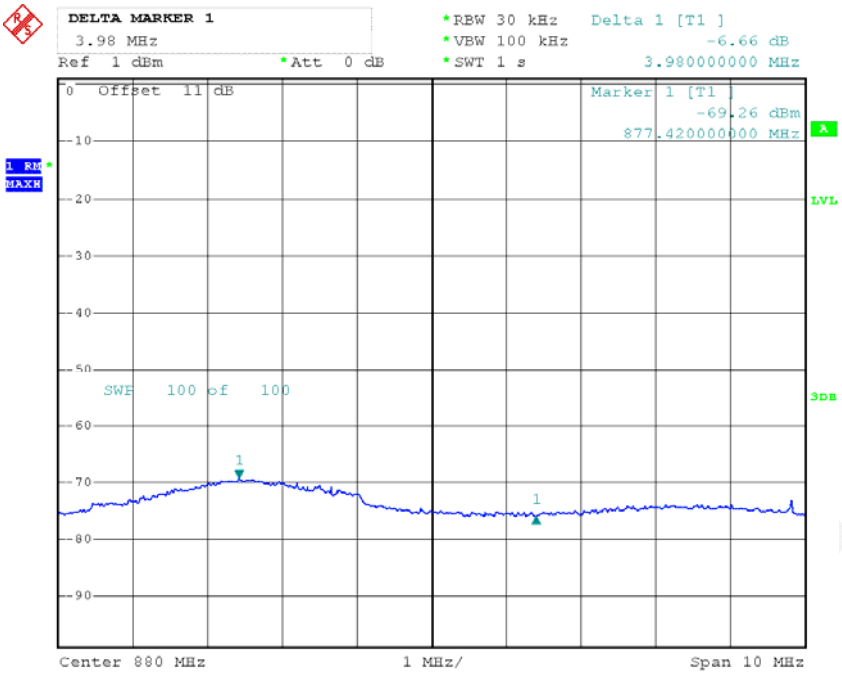
Date: 25.NOV.2015 21:46:53



Date: 25.NOV.2015 21:47:27

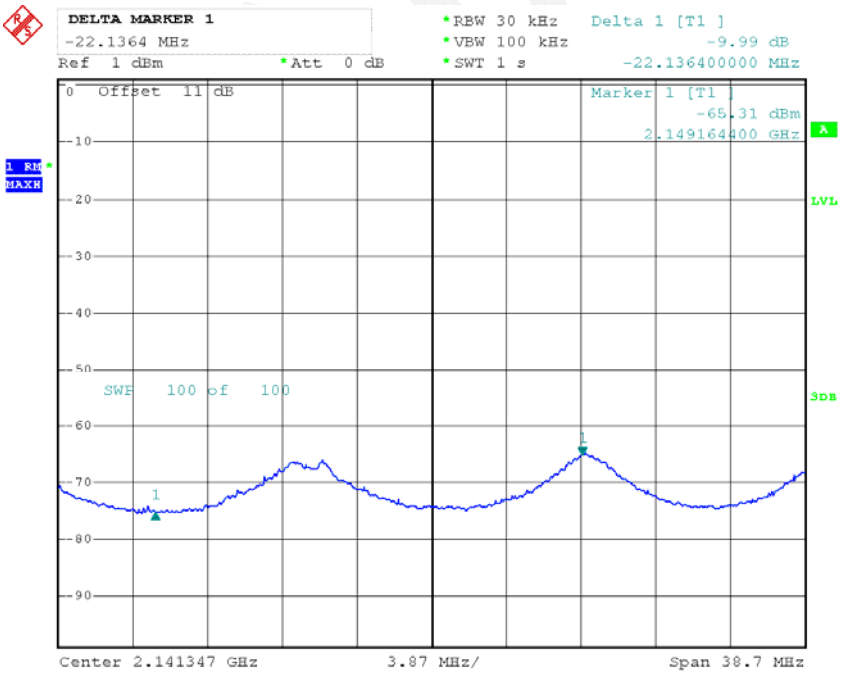


Date: 25.NOV.2015 21:48:12

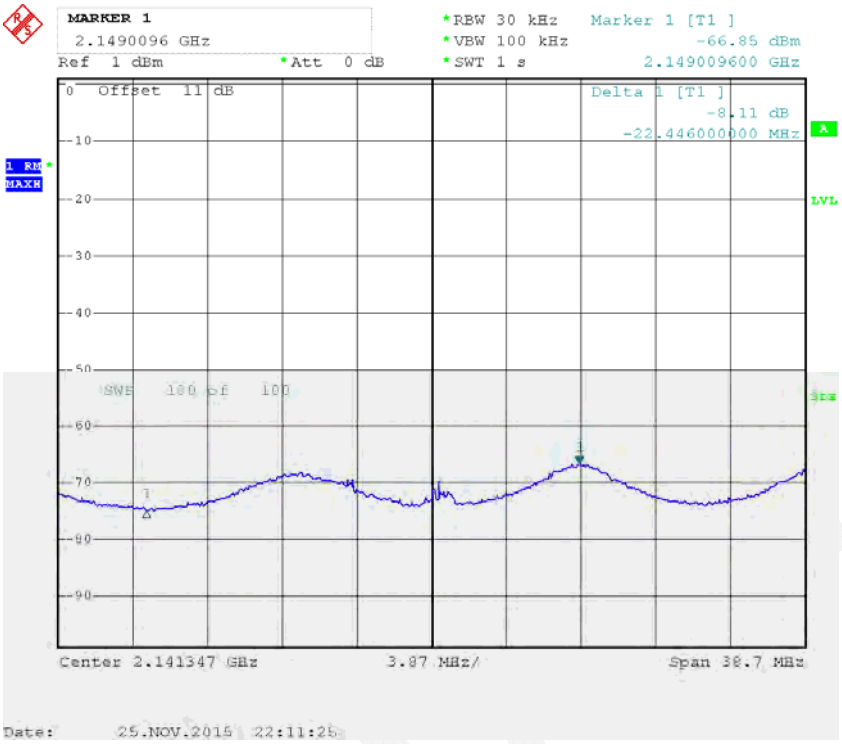


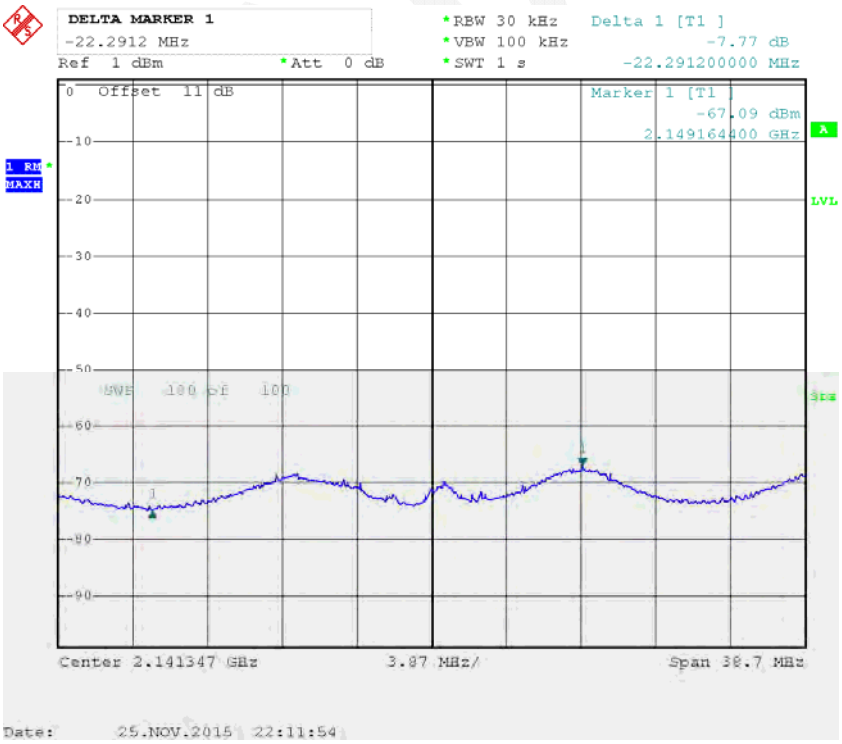
Date: 25.NOV.2015 21:48:53

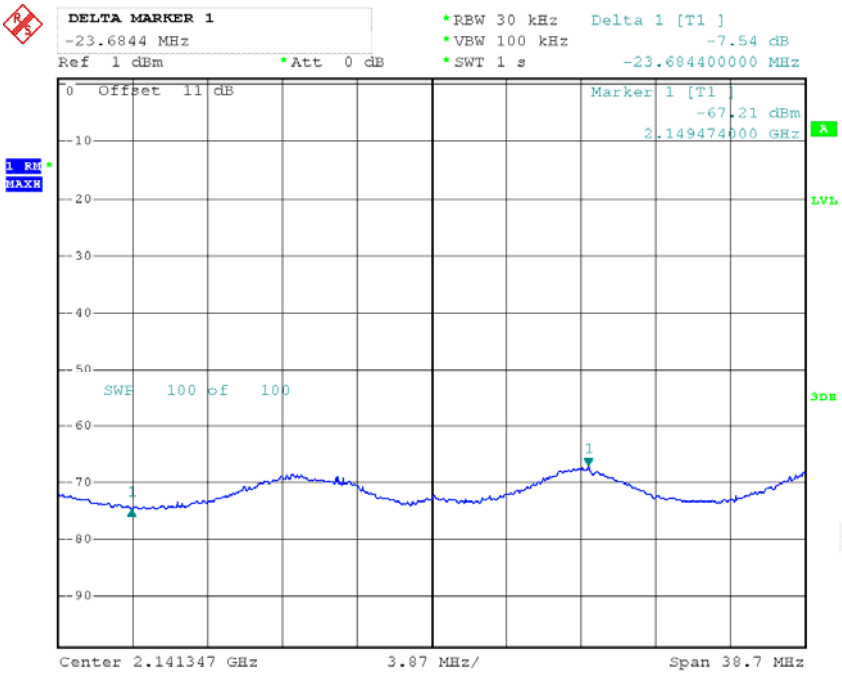
AWS Band



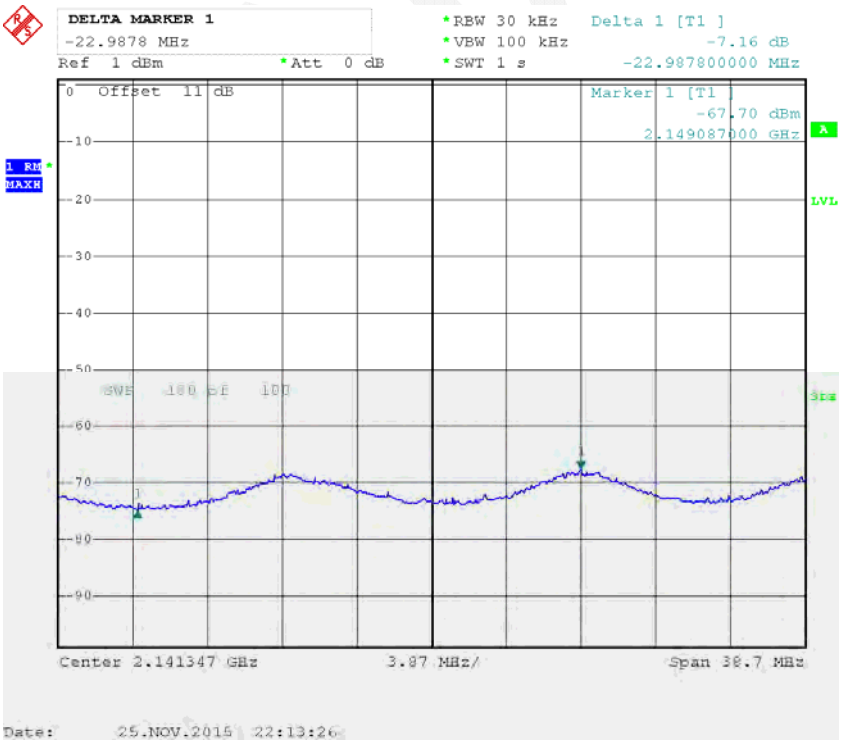
Date: 25.NOV.2015 22:03:46


MARKER 1
2.1490096 GHz
Ref 1 dBm
*Att 0 dB
*RBW 30 kHz
*VBW 100 kHz
*SWT 1 s
Marker 1 [T1]
-66.85 dBm
2.149009600 GHz
Delta 1 [T1]
-8.11 dB
-22.446000000 MHz
0 Offset 11 dB
1 RM
MAXH
A
LVL
SWE 100 pt 100
Center 2.141347 GHz
3.87 MHz/
Span 38.7 MHz
Date: 25.NOV.2015 22:11:25


DELTA MARKER 1
-22.2912 MHz
Ref 1 dBm
*Att 0 dB
*RBW 30 kHz
*VBW 100 kHz
*SWT 1 s
Delta 1 [T1]
-7.77 dB
-22.291200000 MHz
Marker 1 [T1]
-67.09 dBm
2.149164400 GHz
0 Offset 11 dB
1 RM
MAXH
A
LVL
SWE 100 pt 100
Center 2.141347 GHz
3.87 MHz/
Span 38.7 MHz
Date: 25.NOV.2015 22:11:54

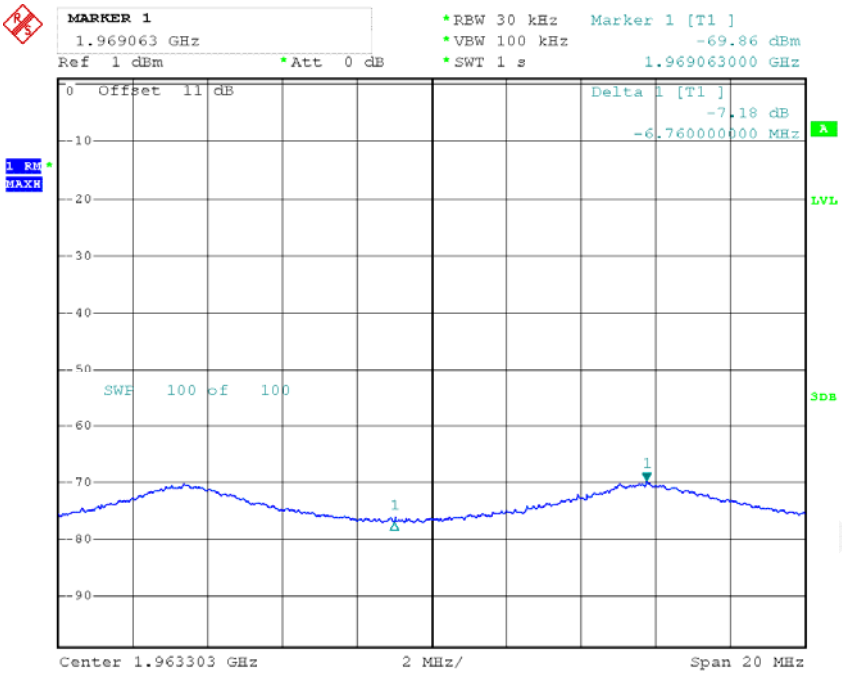


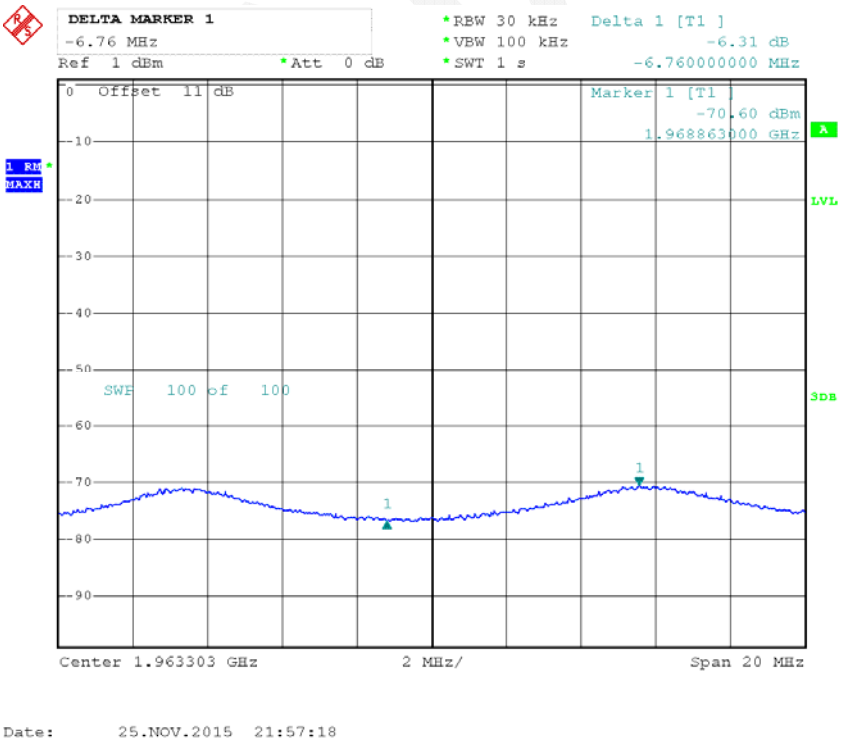
Date: 25.NOV.2015 22:12:27

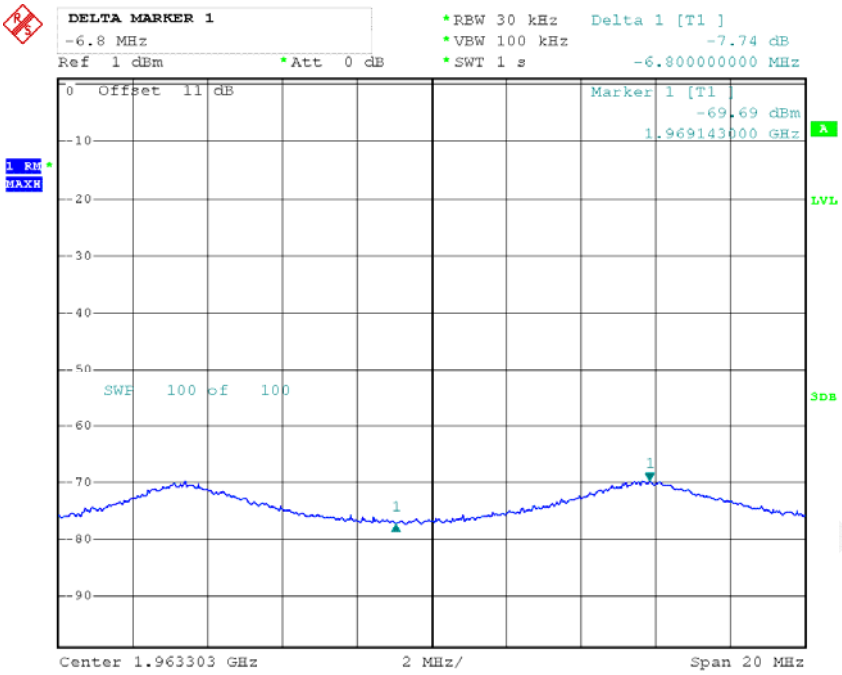


Date: 25.NOV.2015 22:13:26

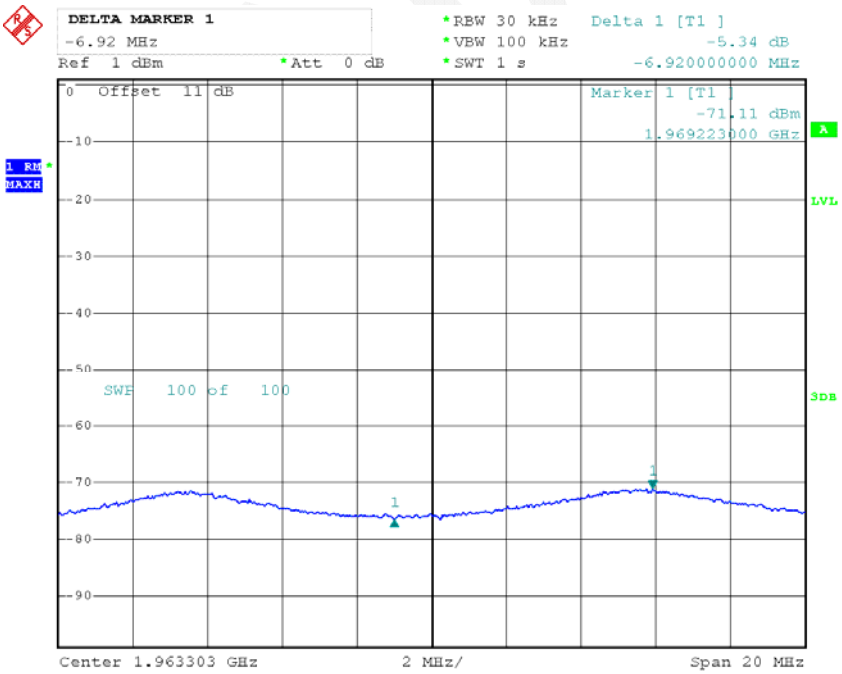
PCS Band


MARKER 1
1.969063 GHz
Ref 1 dBm
*Att 0 dB
*RBW 30 kHz
*VBW 100 kHz
*SWT 1 s
Marker 1 [T1]
-69.86 dBm
1.969063000 GHz
Delta 1 [T1]
-7.18 dB
-6.760000000 MHz
0 Offset 11 dB
SWP 100 of 100
Center 1.963303 GHz
2 MHz/
Span 20 MHz
Date: 25.NOV.2015 21:57:57

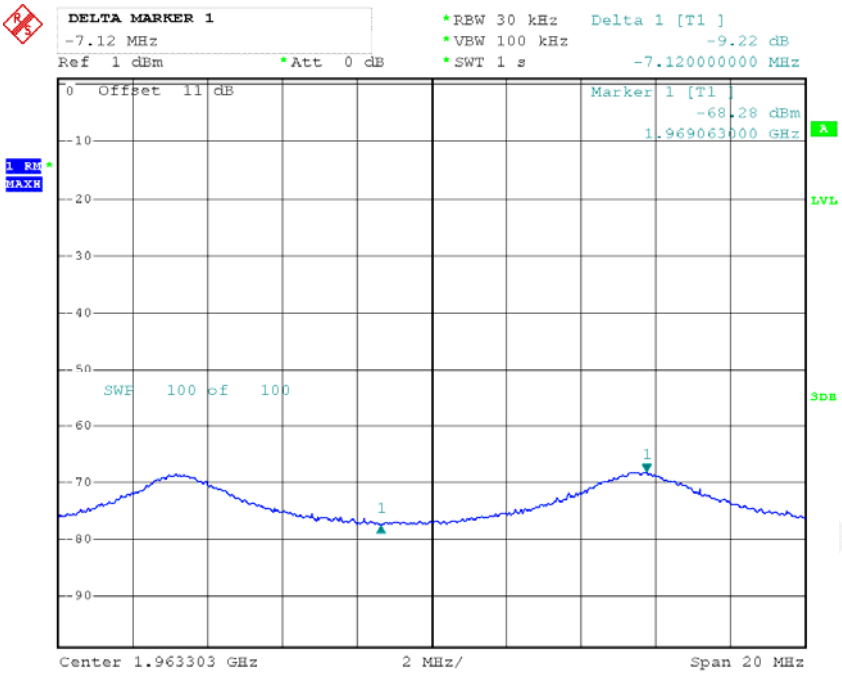

DELTA MARKER 1
-6.76 MHz
Ref 1 dBm
*Att 0 dB
*RBW 30 kHz
*VBW 100 kHz
*SWT 1 s
Delta 1 [T1]
-6.31 dB
-6.760000000 MHz
Marker 1 [T1]
-70.60 dBm
1.968863000 GHz
0 Offset 11 dB
SWP 100 of 100
Center 1.963303 GHz
2 MHz/
Span 20 MHz
Date: 25.NOV.2015 21:57:18



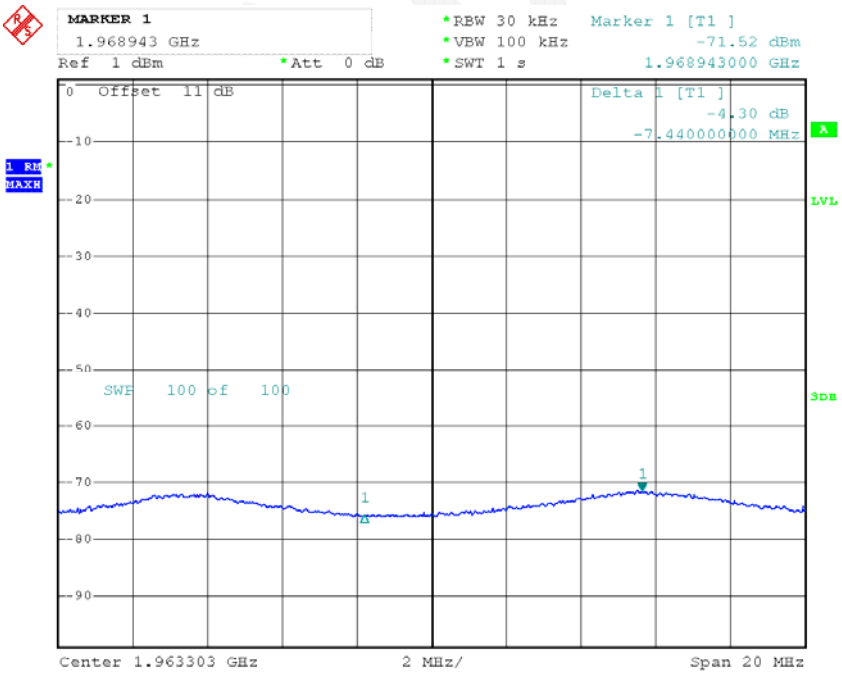
Date: 25.NOV.2015 21:58:37



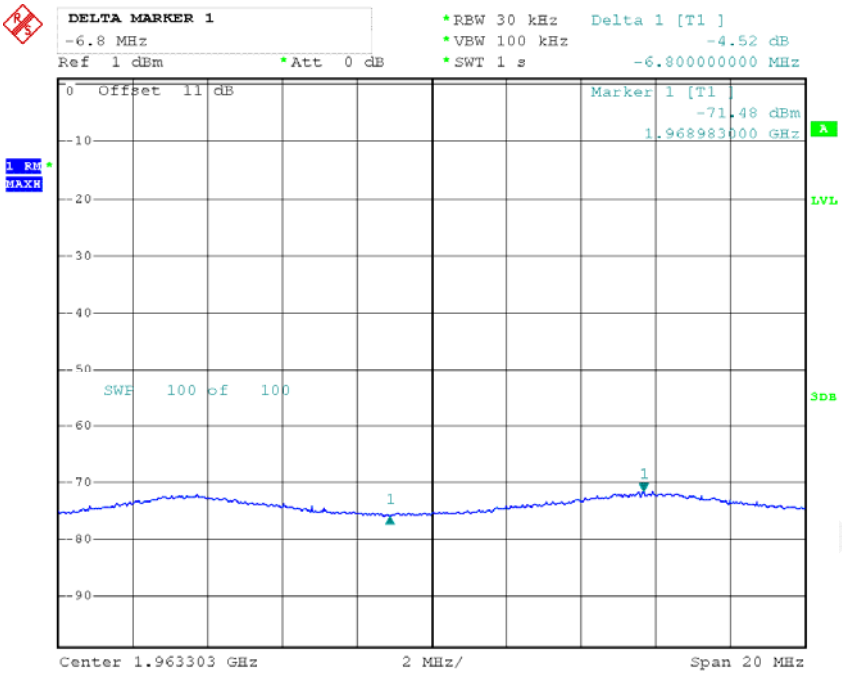
Date: 25.NOV.2015 21:56:24



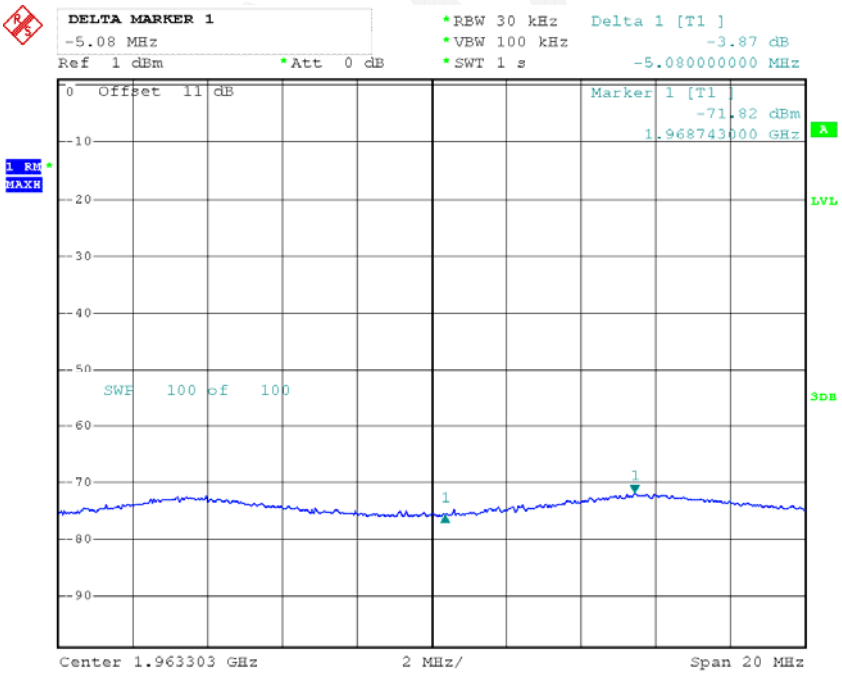
Date: 25.NOV.2015 21:59:29



Date: 25.NOV.2015 21:55:33



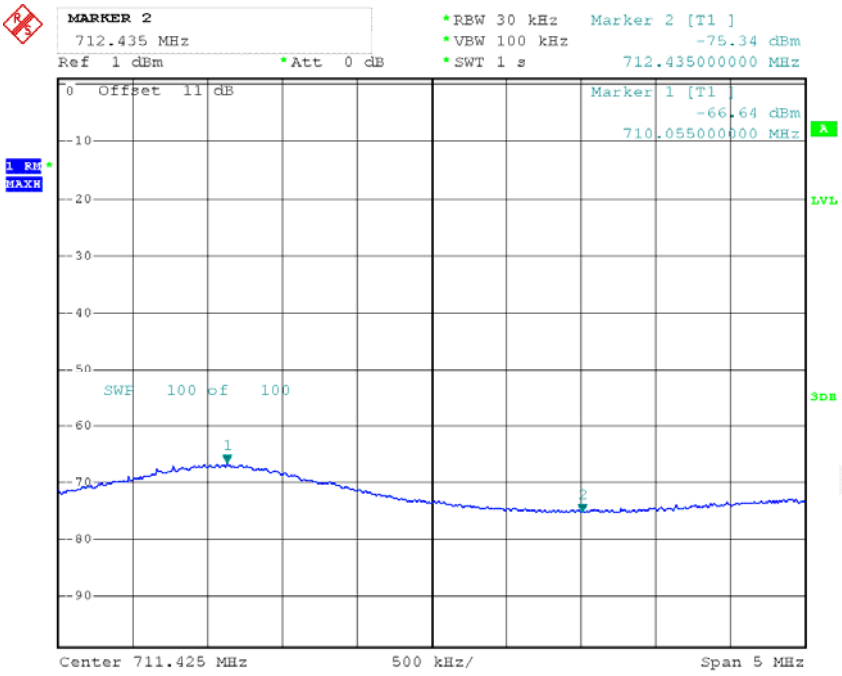
Date: 25.NOV.2015 21:54:47

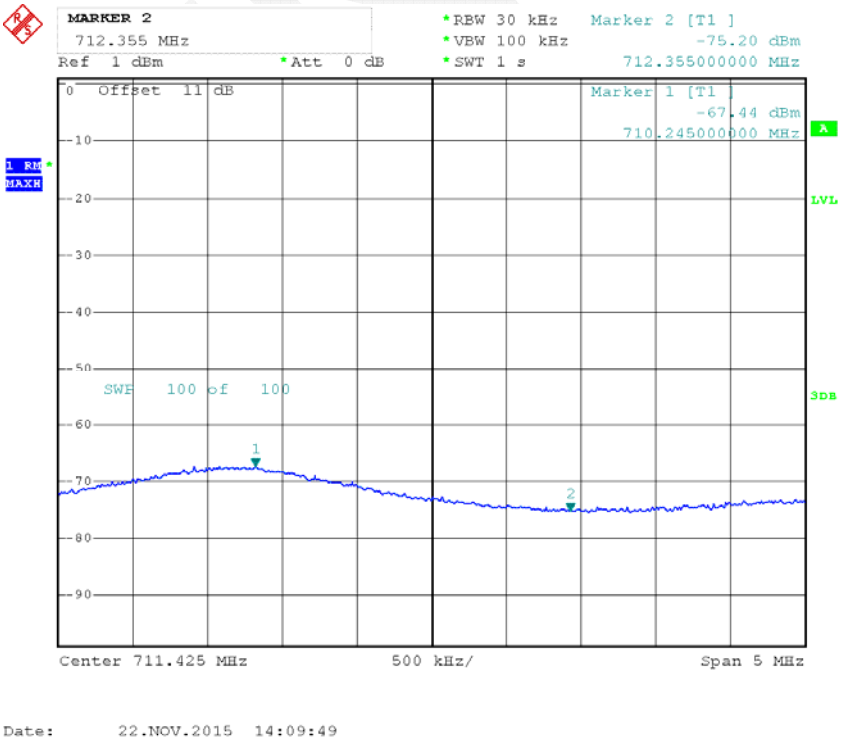


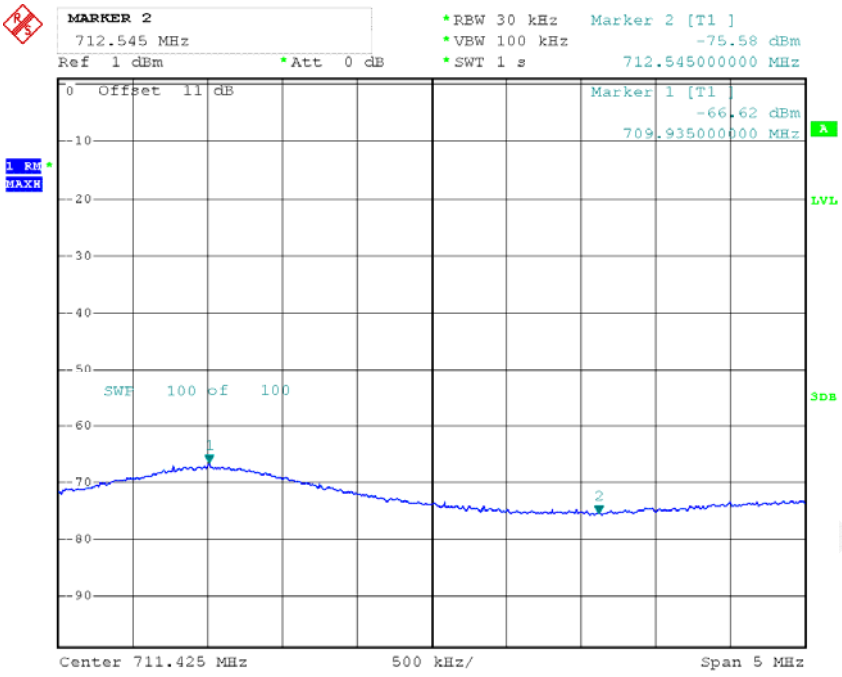
Date: 25.NOV.2015 21:51:12

Uplink:

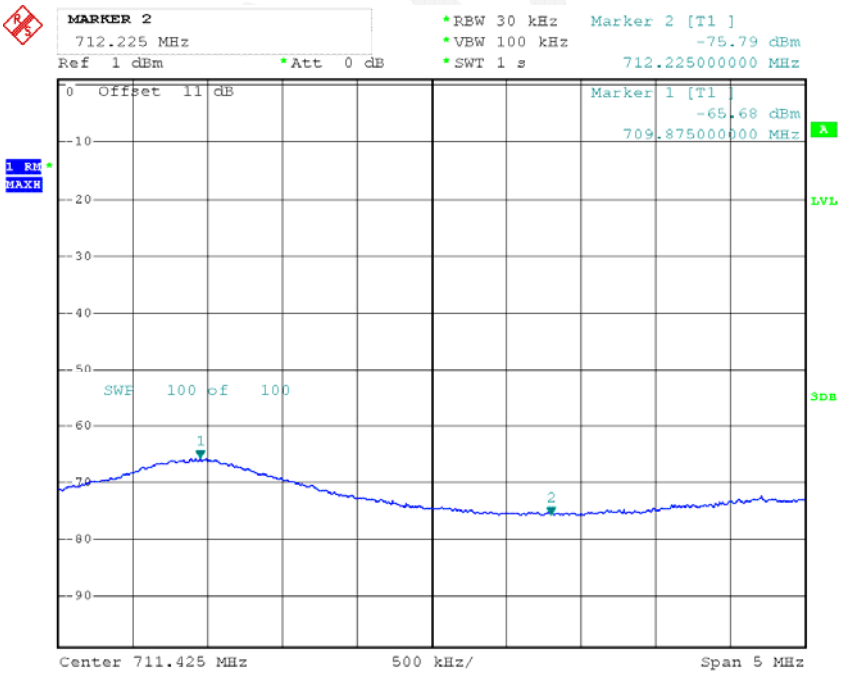
Lower 700 Band



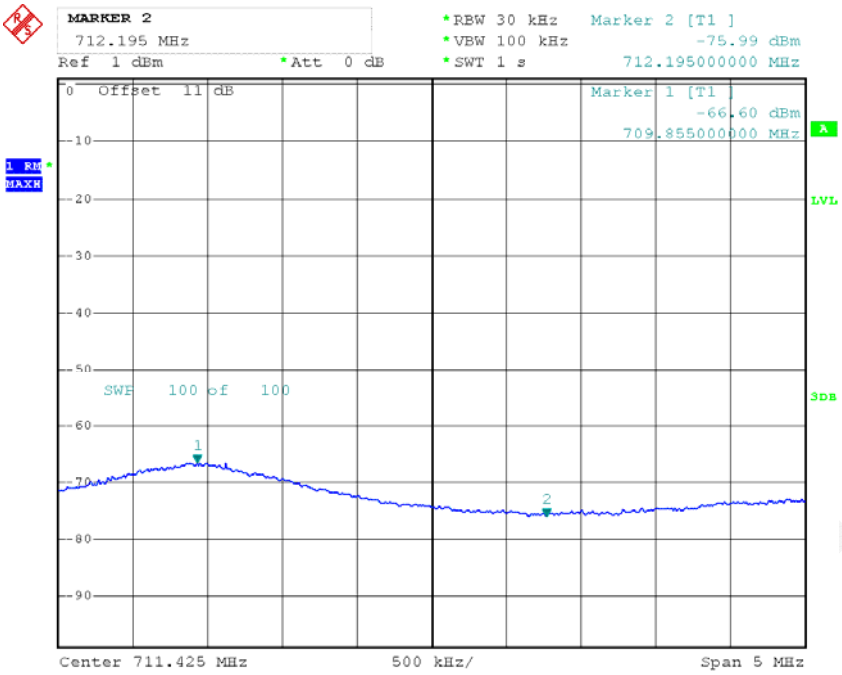




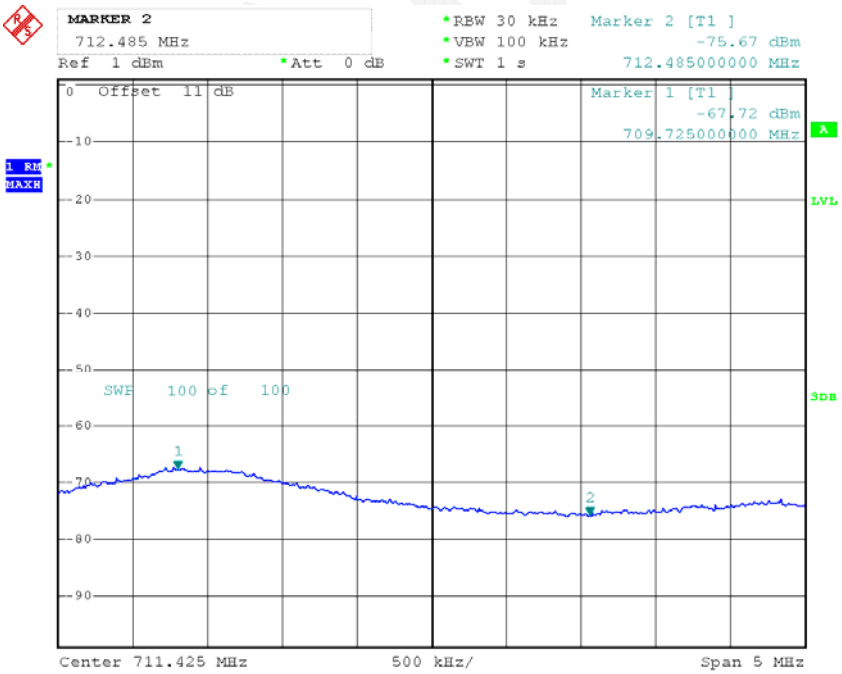
Date: 22.NOV.2015 14:14:27



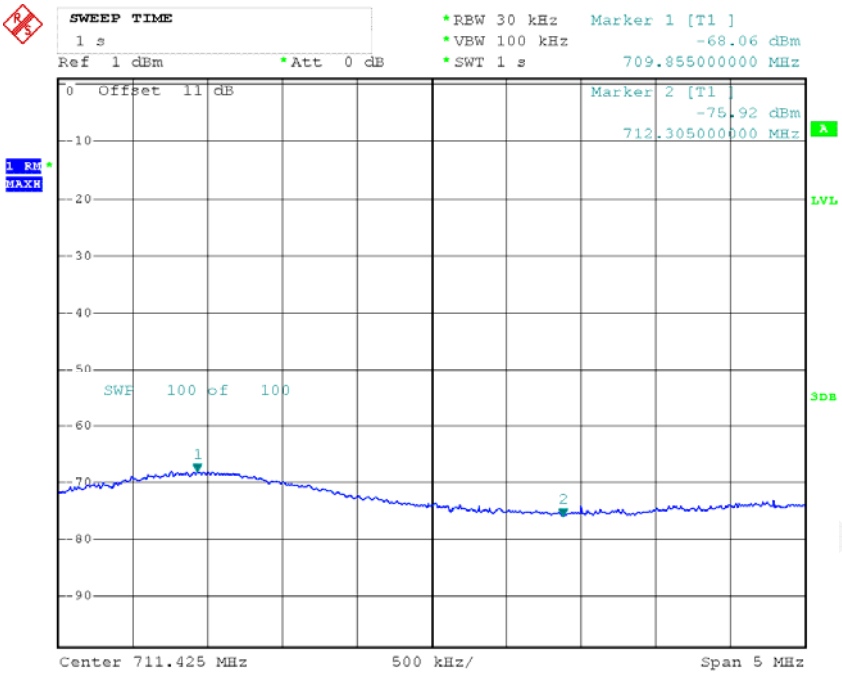
Date: 22.NOV.2015 13:51:48



Date: 22.NOV.2015 13:49:11

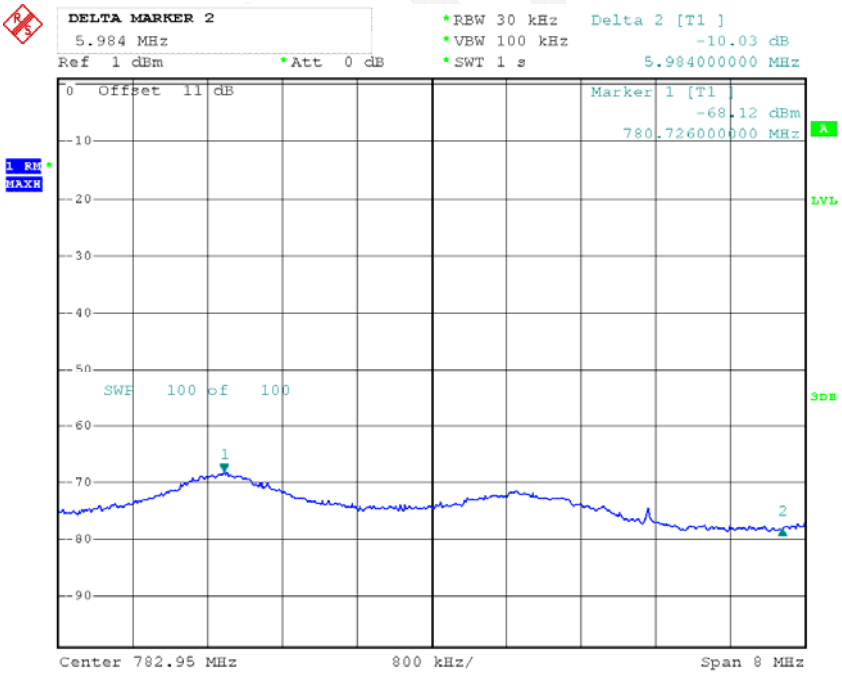


Date: 22.NOV.2015 13:46:58

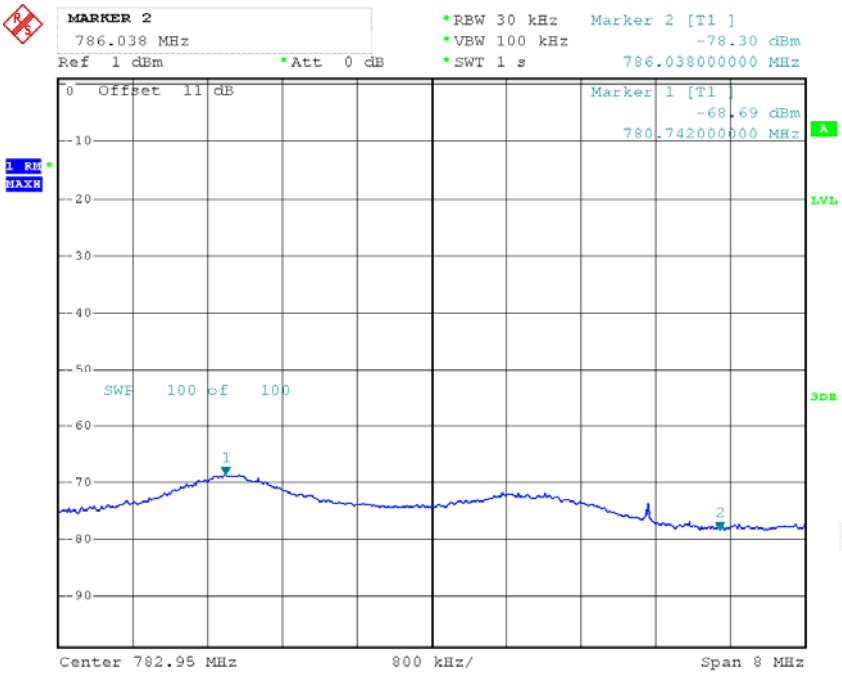


Date: 22.NOV.2015 13:42:21

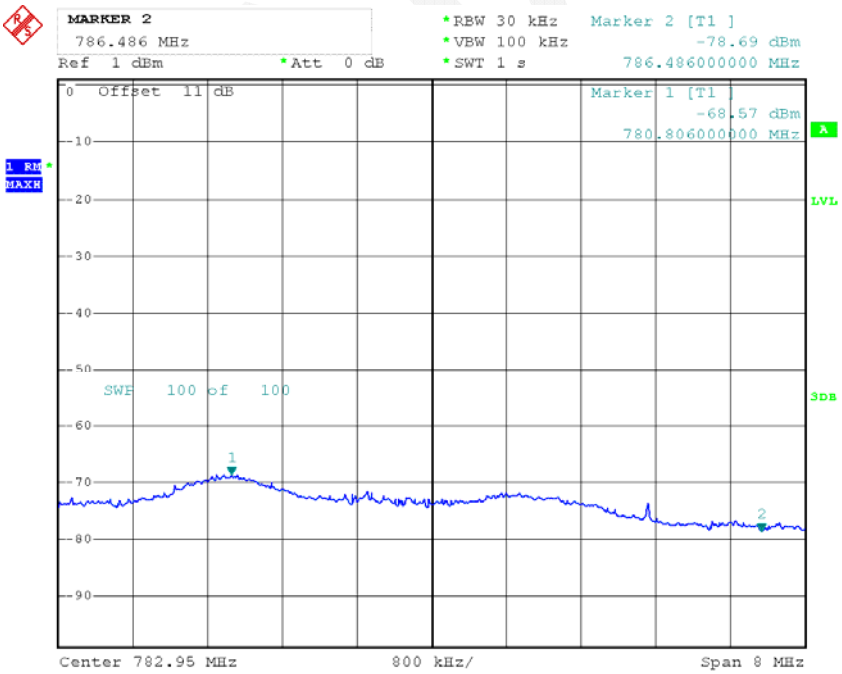
Upper 700 Band



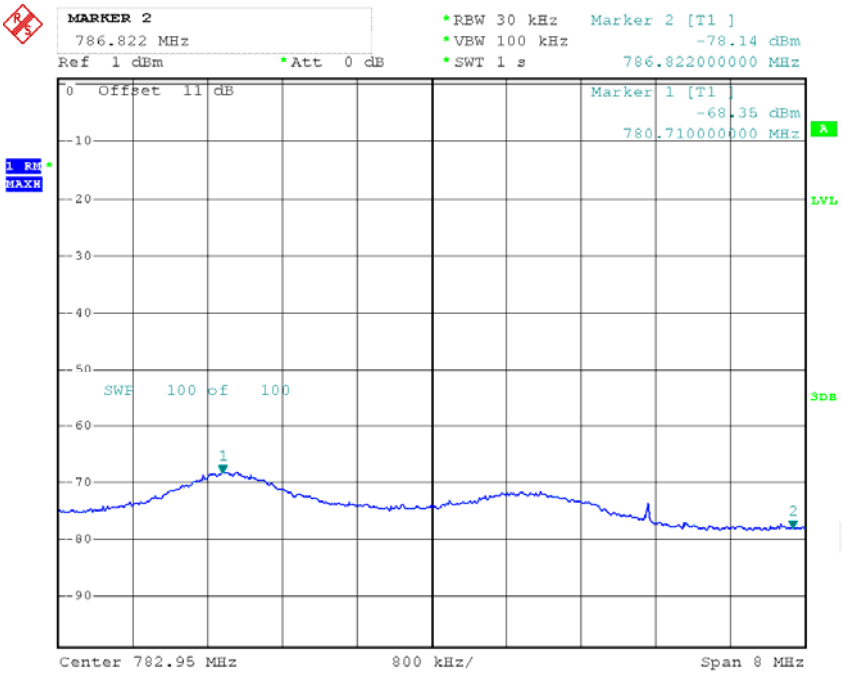
Date: 22.NOV.2015 14:54:01



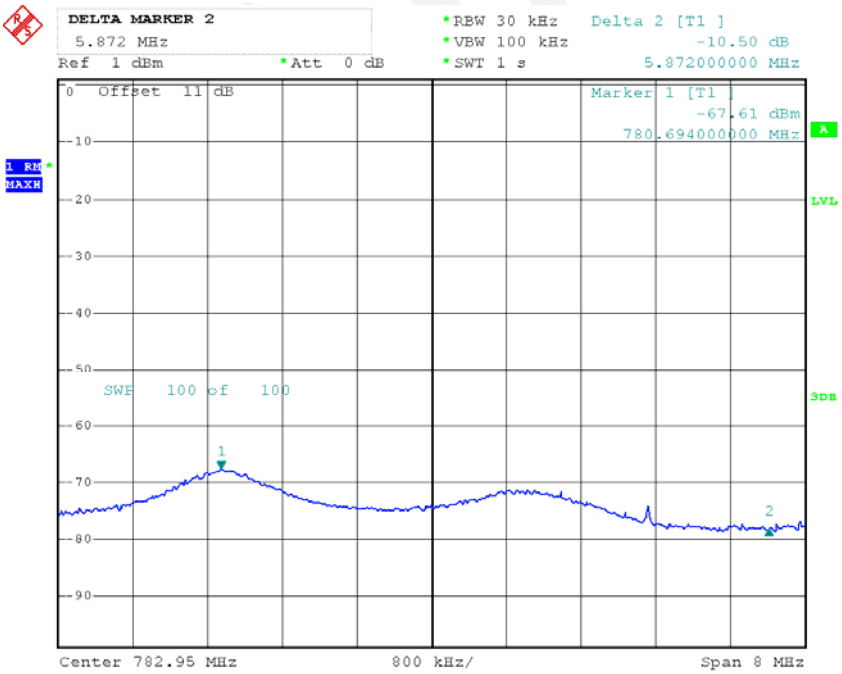
Date: 22.NOV.2015 14:24:36



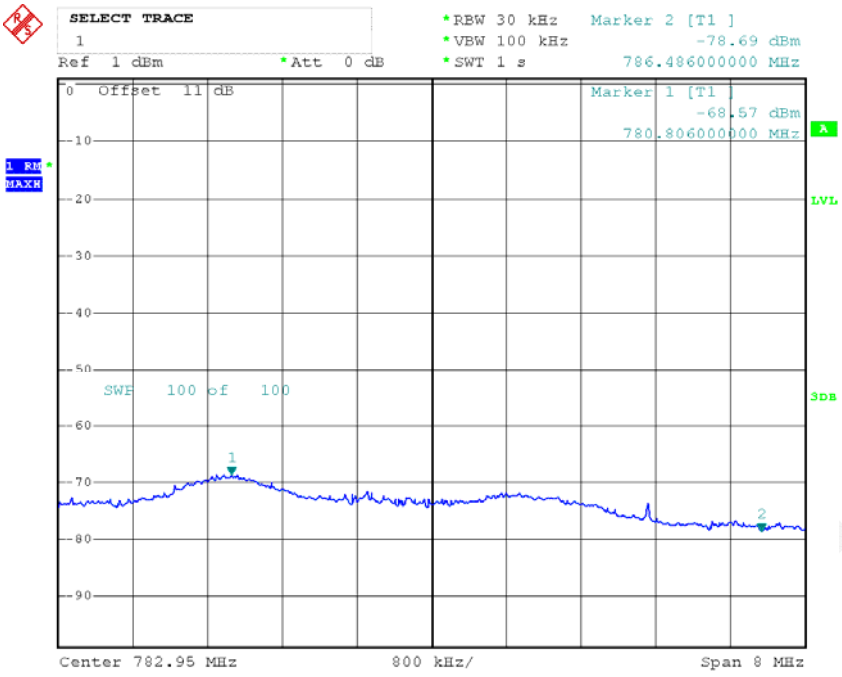
Date: 22.NOV.2015 14:25:39



Date: 22.NOV.2015 14:23:59

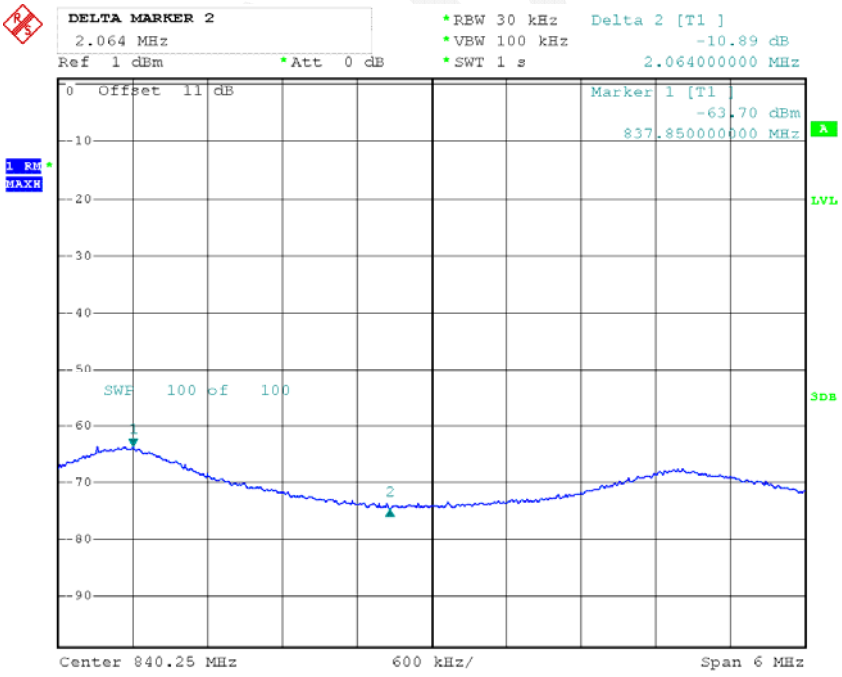


Date: 22.NOV.2015 14:53:39

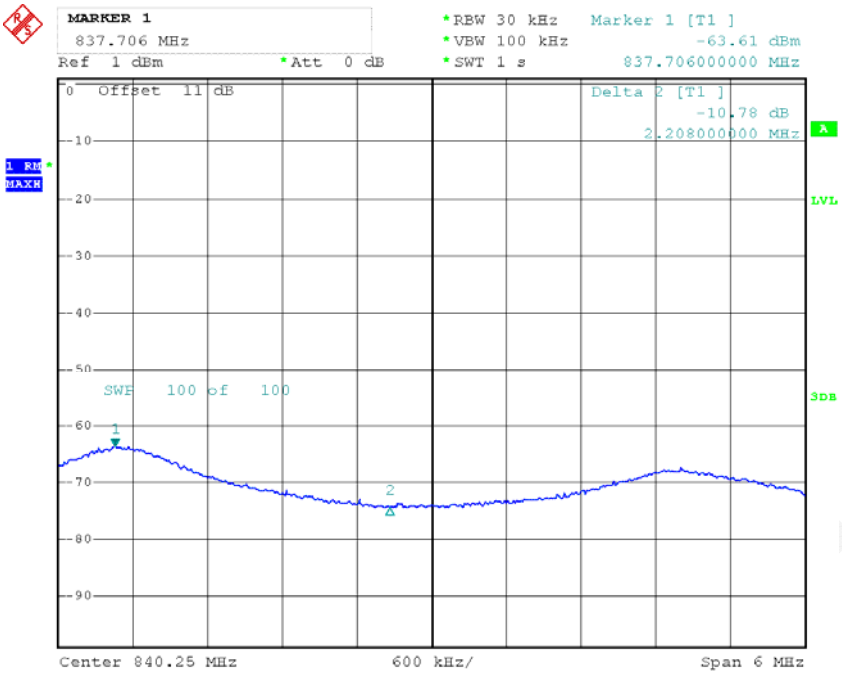


Date: 22.NOV.2015 14:26:09

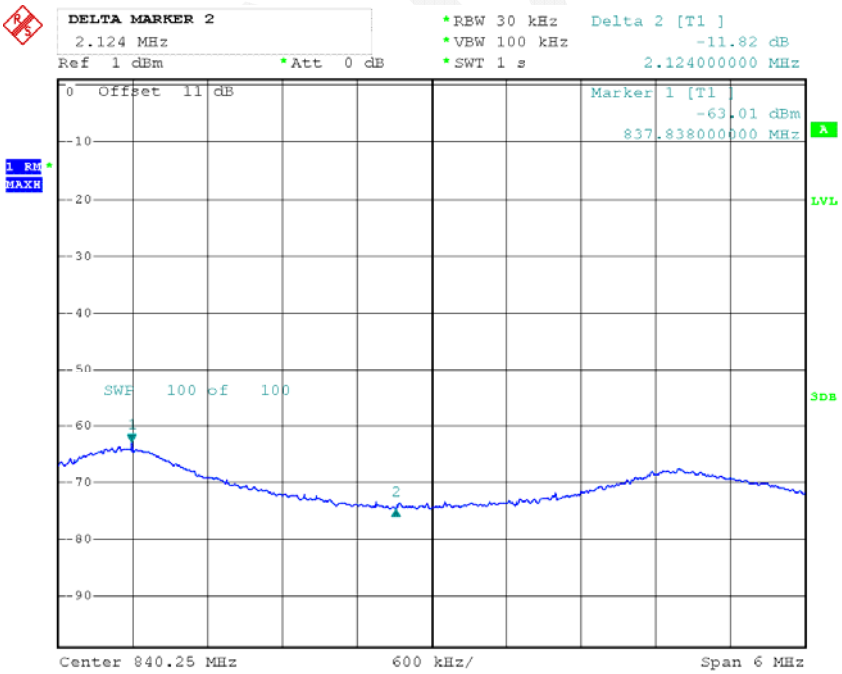
Cellular Band



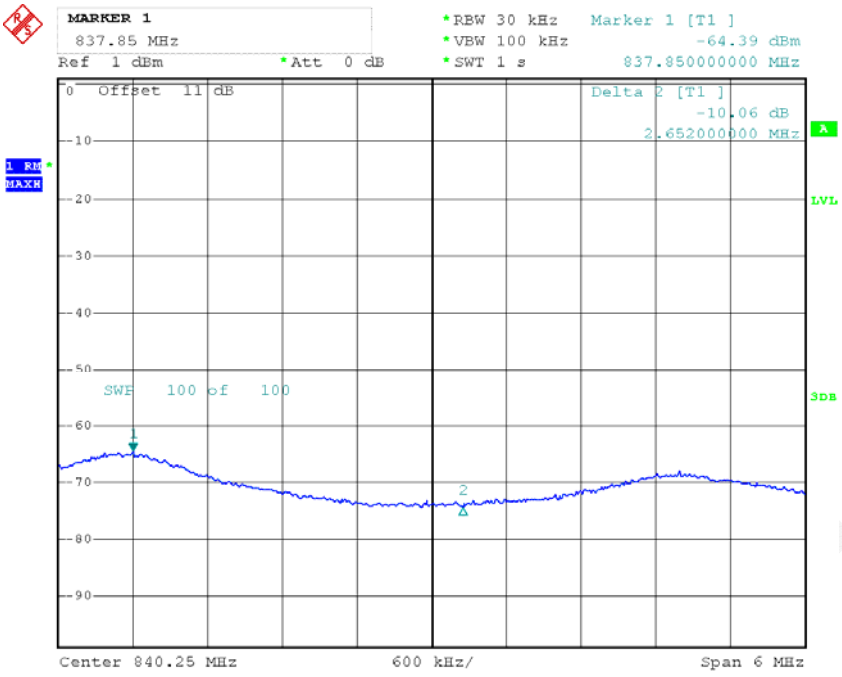
Date: 22.NOV.2015 15:01:55



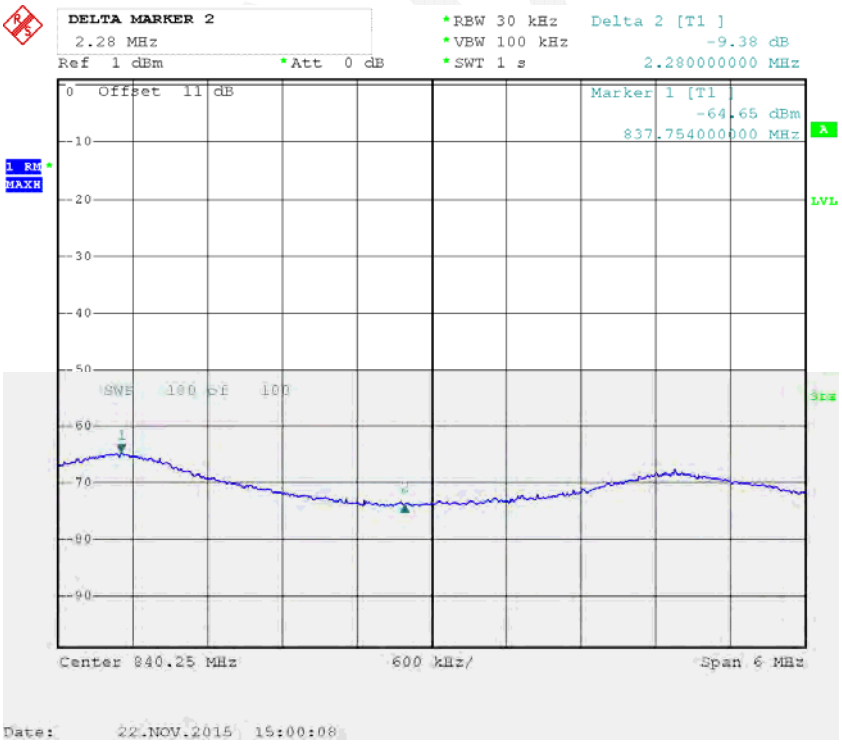
Date: 22.NOV.2015 14:58:33



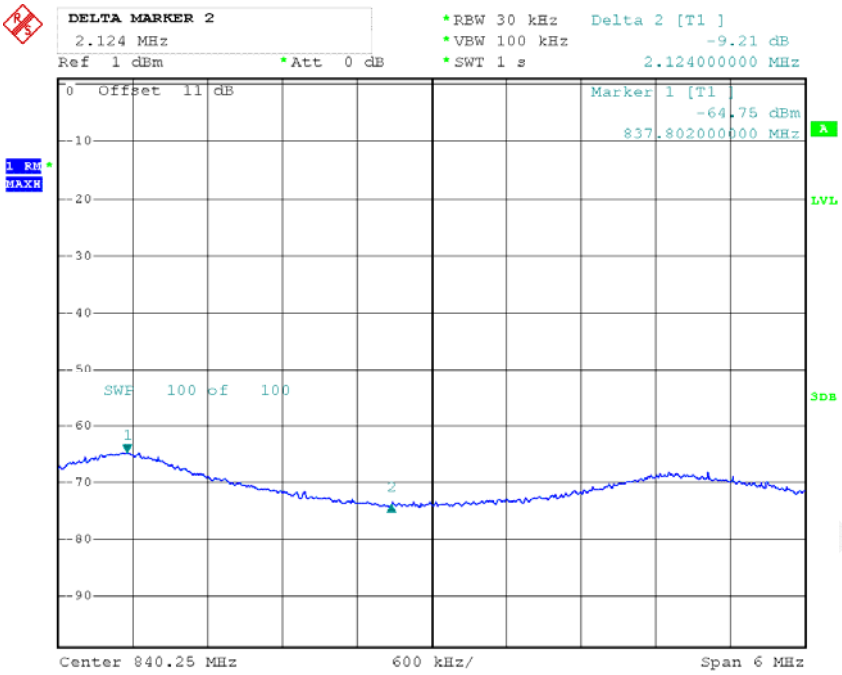
Date: 22.NOV.2015 14:56:50



Date: 22.NOV.2015 14:57:20



Date: 22.NOV.2015 15:00:08



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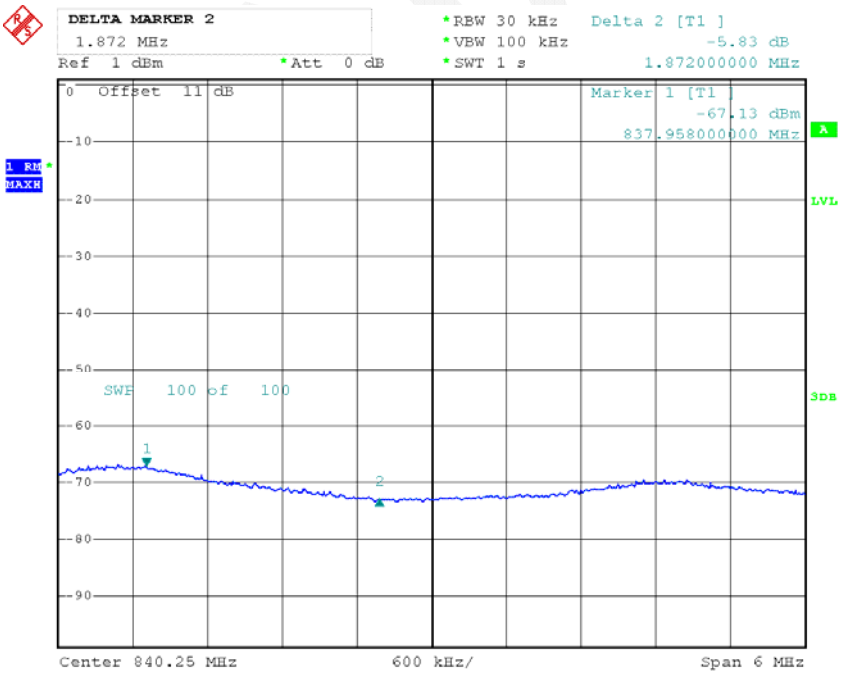
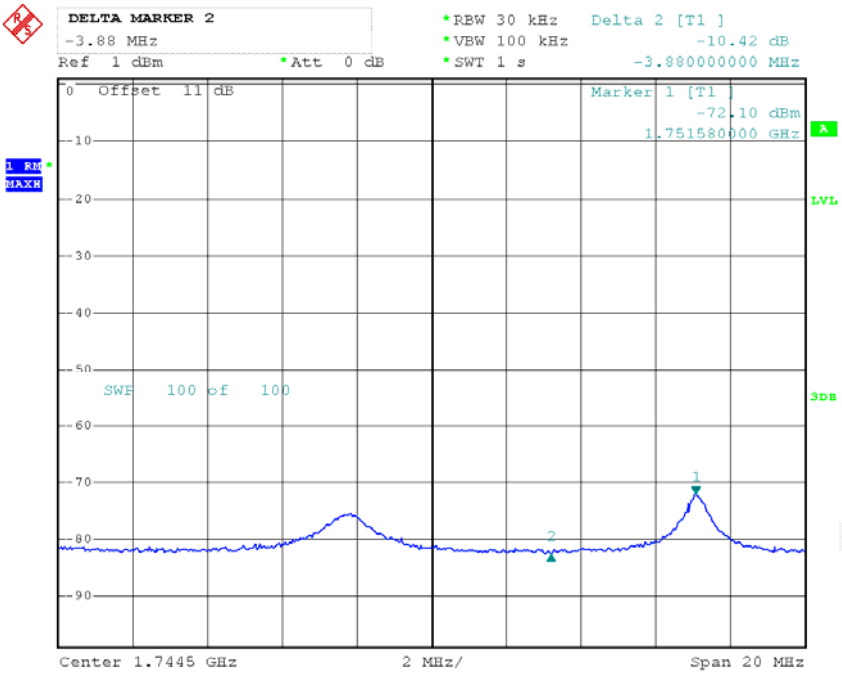


Date: 22.NOV.2015 15:01:06

AWS Band



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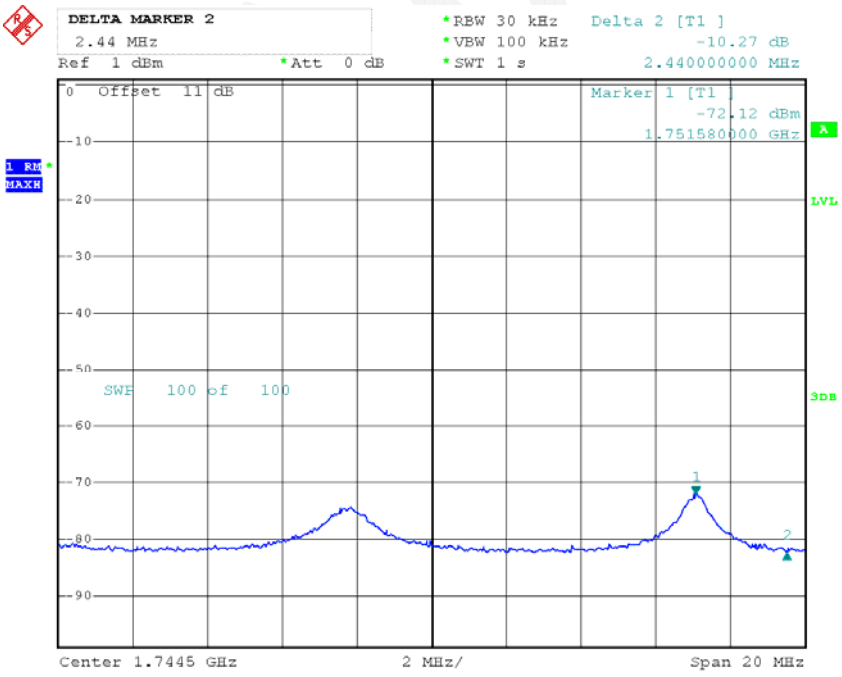
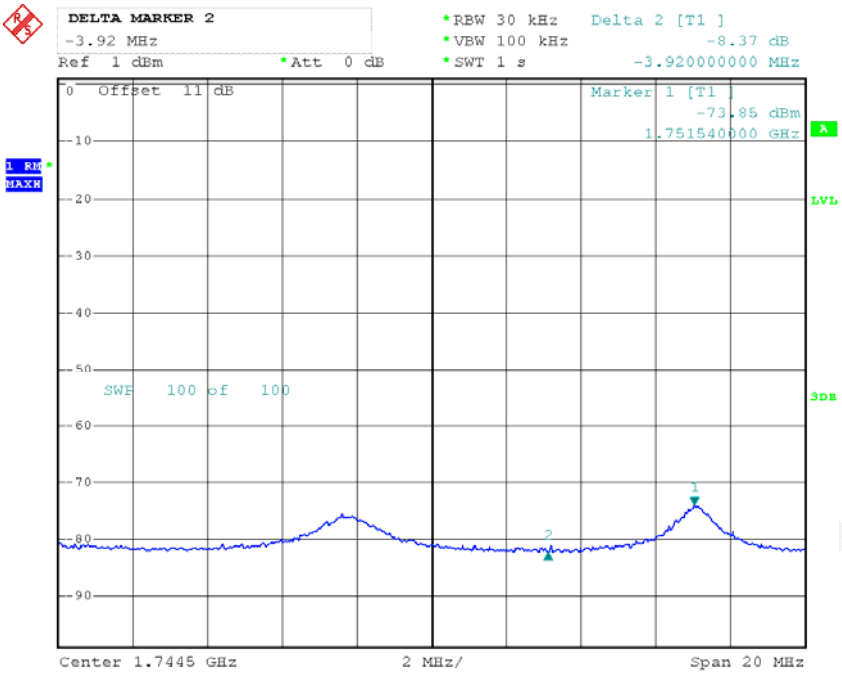


Date: 22.NOV.2015 15:06:51



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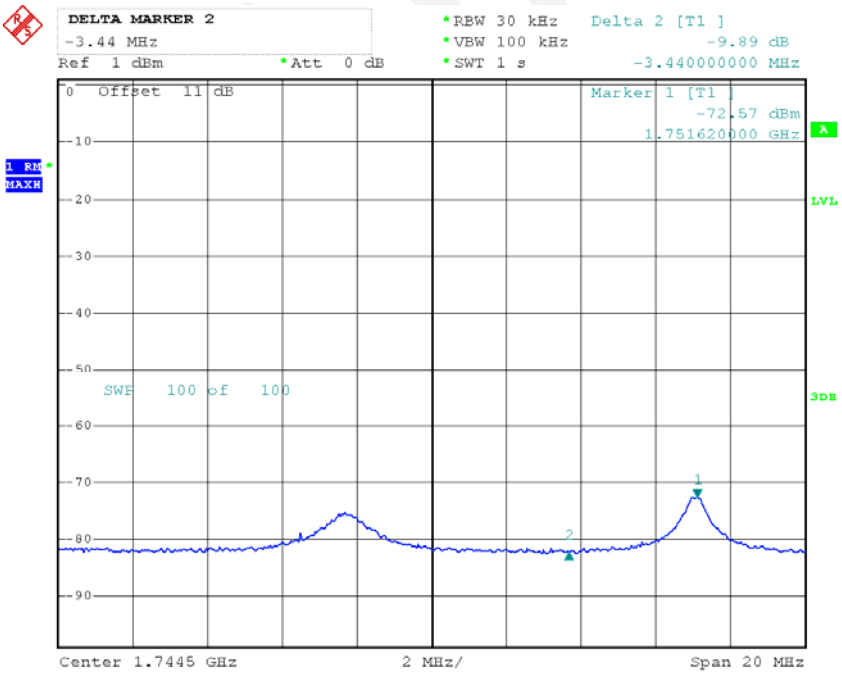

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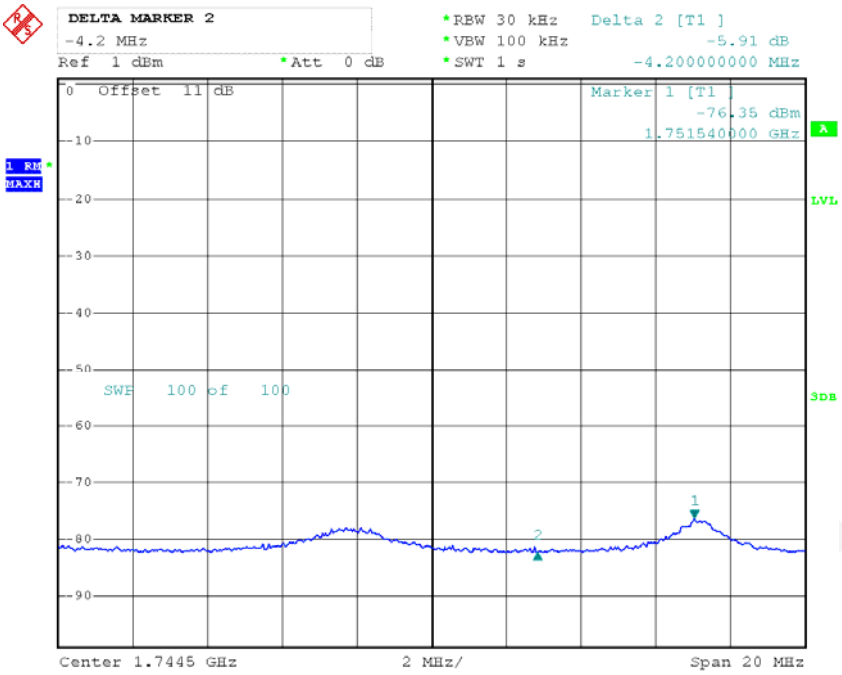
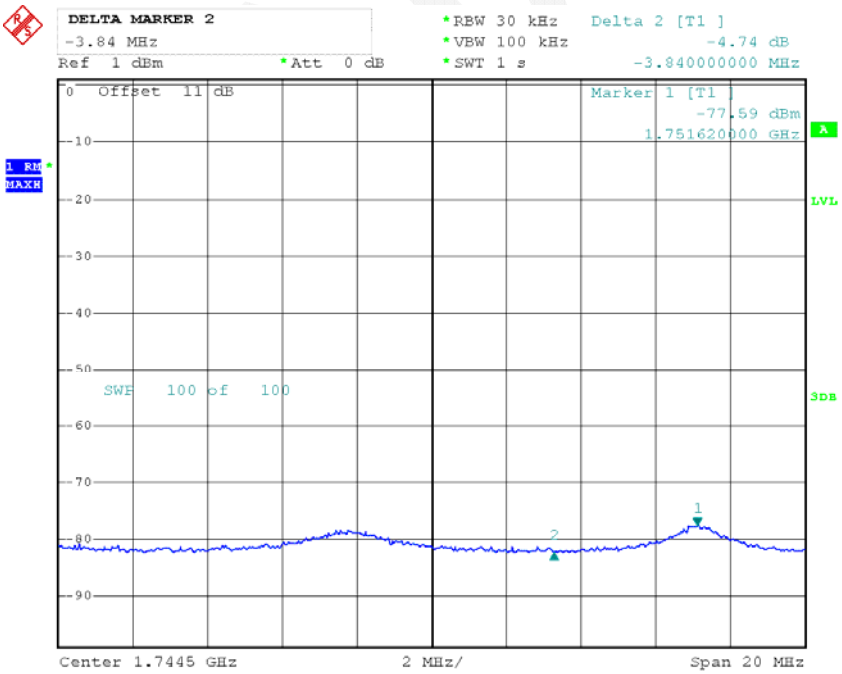
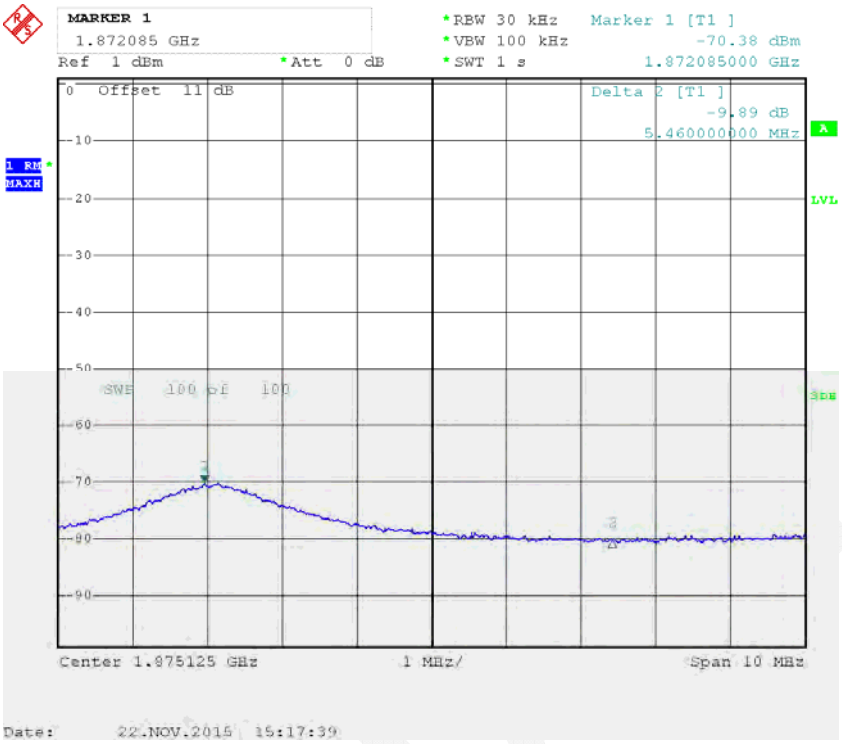


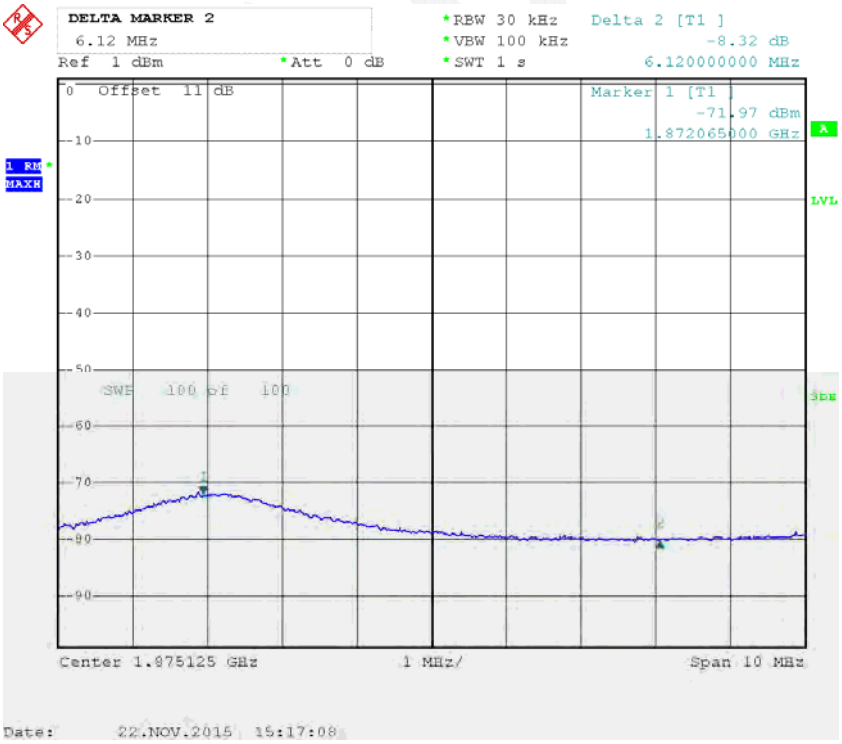
Date: 22.NOV.2015 15:10:06

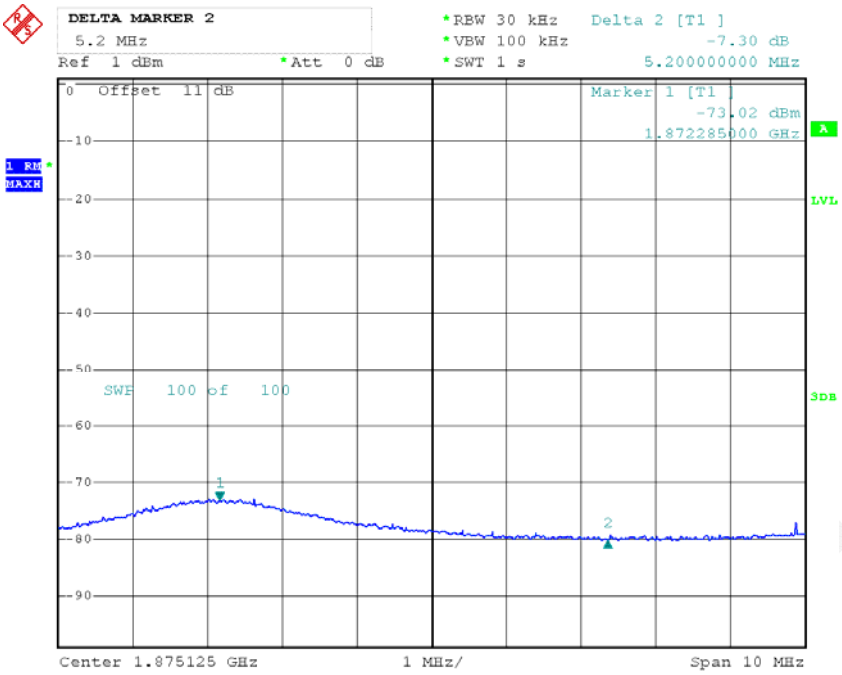


Date: 22.NOV.2015 15:08:06

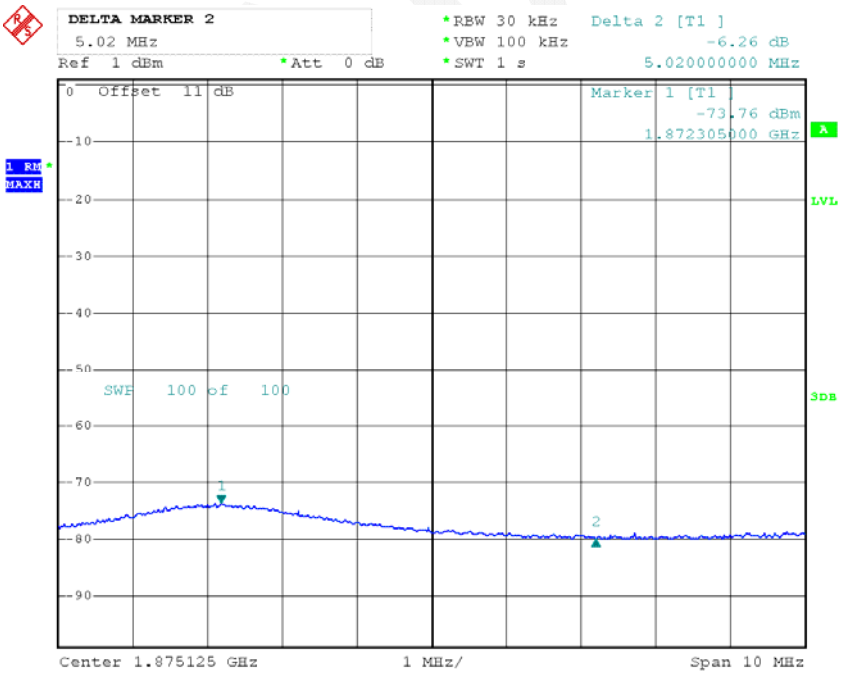
PCS Band


MARKER 1
1.872085 GHz
Ref 1 dBm
*Att 0 dB
*RBW 30 kHz
*VBW 100 kHz
*SWT 1 s
Marker 1 [T1]
-70.38 dBm
1.872085000 GHz
Delta 2 [T1]
-9.89 dB
5.460000000 MHz
Offset 11 dB
1 RM MAXH
LVL
Center 1.875125 GHz
1 MHz/
Span 10 MHz
Date: 22.NOV.2015 15:17:39


DELTA MARKER 2
6.12 MHz
Ref 1 dBm
*Att 0 dB
*RBW 30 kHz
*VBW 100 kHz
*SWT 1 s
Delta 2 [T1]
-8.32 dB
6.120000000 MHz
Marker 1 [T1]
-71.97 dBm
1.872065000 GHz
Offset 11 dB
1 RM MAXH
LVL
Center 1.875125 GHz
1 MHz/
Span 10 MHz
Date: 22.NOV.2015 15:17:08



Date: 22.NOV.2015 15:16:37



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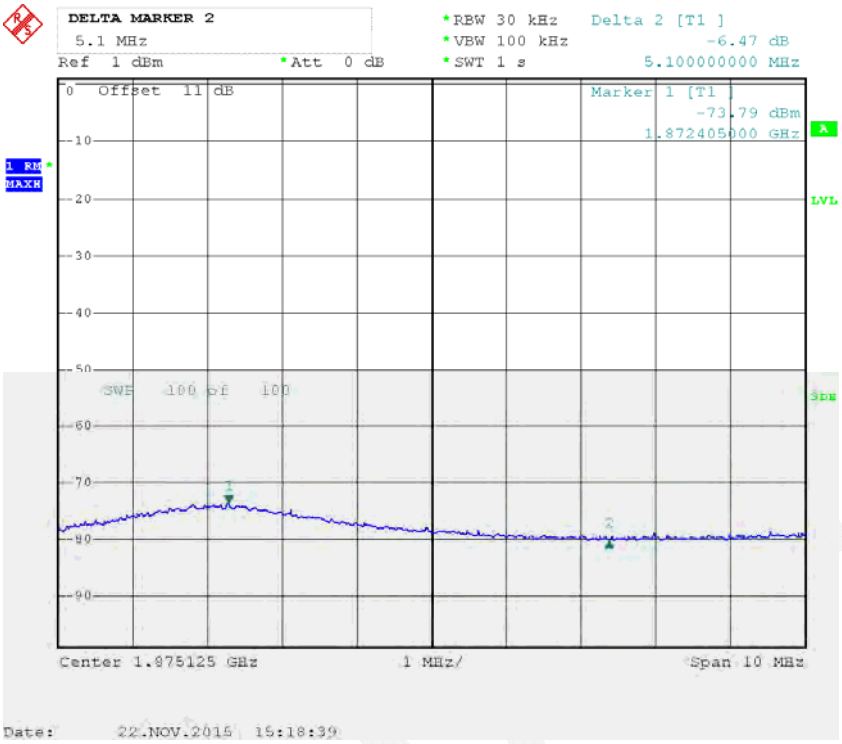
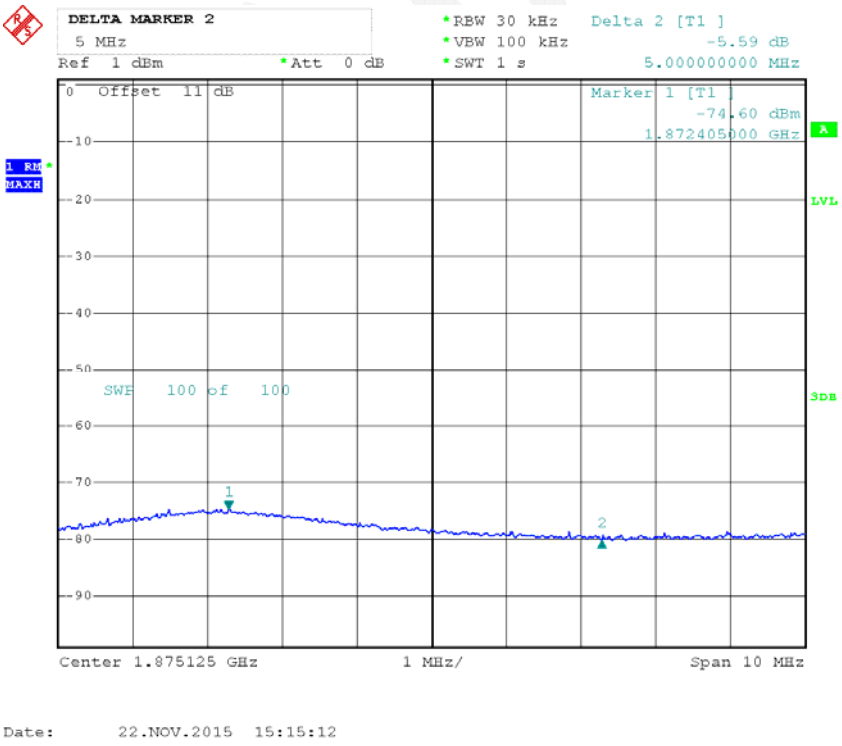

DELTA MARKER 2
5.1 MHz
*RBW 30 kHz
*VBW 100 kHz
*SWT 1 s
Delta 2 [T1]
-6.47 dB
5.100000000 MHz
Ref 1 dBm
*Att 0 dB
Offset 11 dB
Marker 1 [T1]
-73.79 dBm
1.872405000 GHz
1 RM MAXH
SWP 100 of 100
Center 1.875125 GHz
1 MHz/
Span 10 MHz
Date: 22.NOV.2015 15:18:39


DELTA MARKER 2
5 MHz
*RBW 30 kHz
*VBW 100 kHz
*SWT 1 s
Delta 2 [T1]
-5.59 dB
5.000000000 MHz
Ref 1 dBm
*Att 0 dB
Offset 11 dB
Marker 1 [T1]
-74.60 dBm
1.872405000 GHz
1 RM MAXH
SWP 100 of 100
Center 1.875125 GHz
1 MHz/
Span 10 MHz
Date: 22.NOV.2015 15:15:12

§2.1051- SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Applicable Standards

FCC §2.1051 *Measurements required: Spurious emissions at antenna terminals.*

§20.21(e)(8)(i)(E): Booster out of band emissions (OOBE) shall be at least 6 dB below the FCC's mobile emission limits for the supported bands of operation. Compliance to OOBE limits will utilize high peak-to-average CMRS signal types.

§22.917 (a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

§24.238 (a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

§27.53: the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;

Test Procedure

The following procedures shall be used to demonstrate compliance to the applicable conducted spurious emissions limits as per § 2.1051.

Note: *For frequencies below 1 GHz, an RBW of 1 MHz may be used in a preliminary measurement. If non-compliant emissions are detected, a final measurement shall be made with a 100 kHz RBW. Additionally, a peak detector may also be used for the preliminary measurement. If non-compliant emissions are detected then a final measurement of these emissions shall be made with the power averaging (RMS) detector.*

a) Connect the EUT to the test equipment as shown in **Figure 1**. Begin with the uplink output connected to the spectrum analyzer.
b) Configure the signal generator for AWGN with a 99% occupied bandwidth of 4.1 MHz with a center frequency corresponding to the center of the CMRS band under test.
c) Set the signal generator amplitude to the level determined in the power measurement procedure in 7.2.
d) Turn on the signal generator RF output and measure the spurious emission power levels with an appropriate measurement instrument as follows.
1) Set RBW = measurement bandwidth specified in the applicable rule section for the operational frequency band under consideration (see Annex A for relevant cross-references). Note that many of the individual rule sections permit the use of a narrower RBW (typically ≥ 1% of the emission bandwidth) to enhance measurement accuracy, but the result must then be integrated over the specified measurement bandwidth.
2) Set VBW = 3 × RBW.
3) Select the power averaging (RMS) detector. (See above note regarding the use of a peak detector for preliminary measurements.)
4) Sweep time = auto-couple.
5) Set the analyzer start frequency to the lowest radio frequency signal generated in the equipment, without going below 9 kHz, and the stop frequency to the lower band/block edge frequency minus 100 kHz or 1 MHz, as specified in the applicable rule part. Note that the number of measurement points in each sweep

must be ≥ (2 × span/RBW) which may require that the measurement range defined by the start and stop frequencies above be subdivided, depending on the available number of measurement points provided by the spectrum analyzer. Trace average at least 10 traces in power averaging (i.e., RMS) mode.
6) Use the peak marker function to identify the highest amplitude level over each measured frequency range. Record the frequency and amplitude and capture a plot for inclusion in the test report.
7) Reset the analyzer start frequency to the upper band/block edge frequency plus 100 kHz or 1 MHz, as specified in the applicable rule part, and the analyzer stop frequency to 10 × the highest frequency of the fundamental emission. Note that the number of measurement points in each sweep must be ≥ (2 × span/RBW) which may require that the measurement range defined by the start and stop frequencies above be subdivided, depending on the available number of measurement points provided by the spectrum analyzer.
8) Use the peak marker function to identify the highest amplitude level over each of the measured frequency ranges. Record the frequency and amplitude and capture a plot for inclusion in the test report.
e) Repeat 7.6b) through 7.6d) for each supported frequency band of operation.

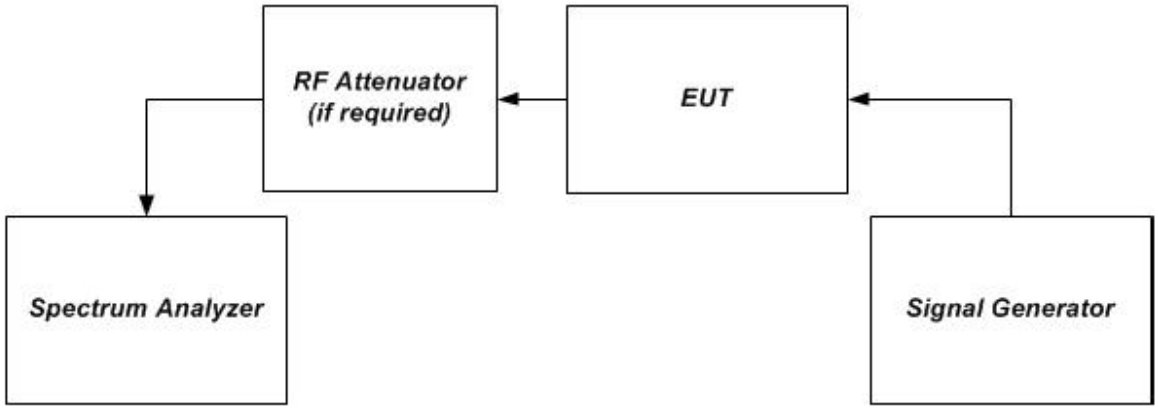


Figure 1 – Band verification test instrumentation setup

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSP 38	100478	2015-05-09	2016-05-09
R & S	Wideband Radio Communication Tester	CMW500	1201.002K50-146520-wh	2014-12-19	2015-12-19
Agilent	MXG Vector Signal Generator	N5182B	MY51350142	2015-03-30	2016-03-29

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

Temperature:	25.2℃
Relative Humidity:	43 %
ATM Pressure:	101.8 kPa

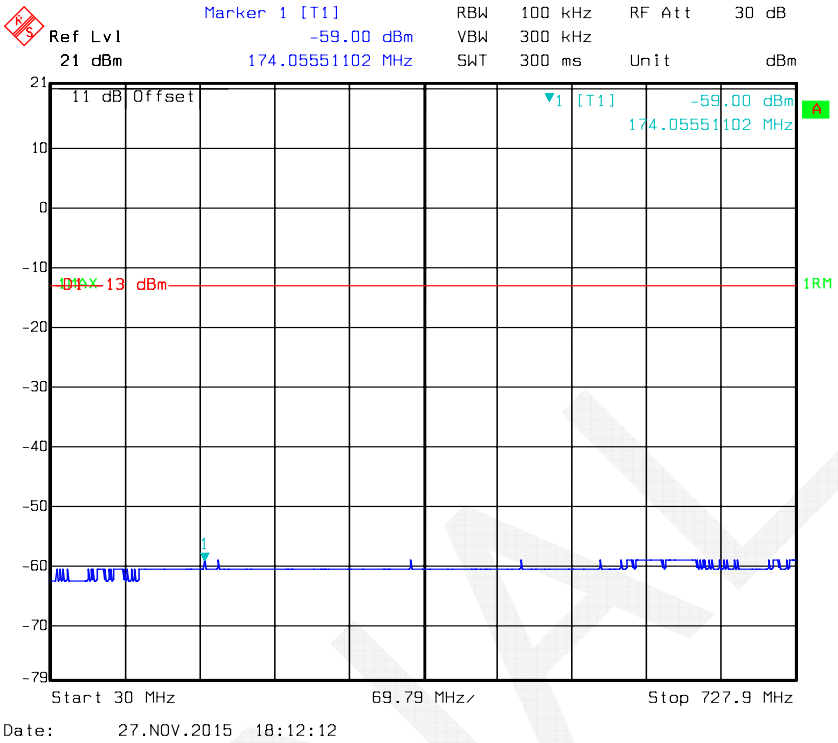
The testing was performed by Dean Liu on 2015-11-27.

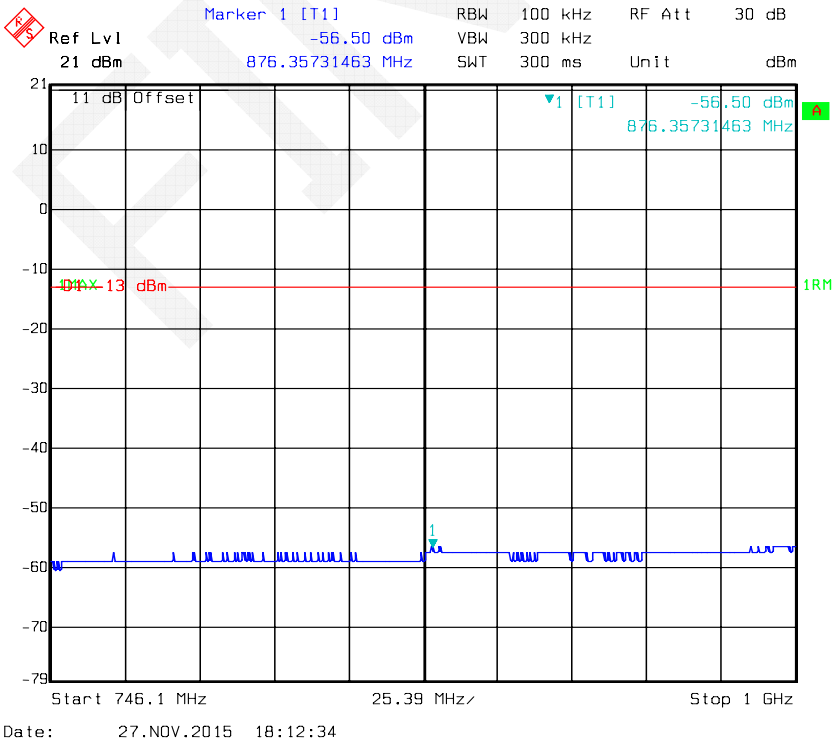
Test Result: Compliance.

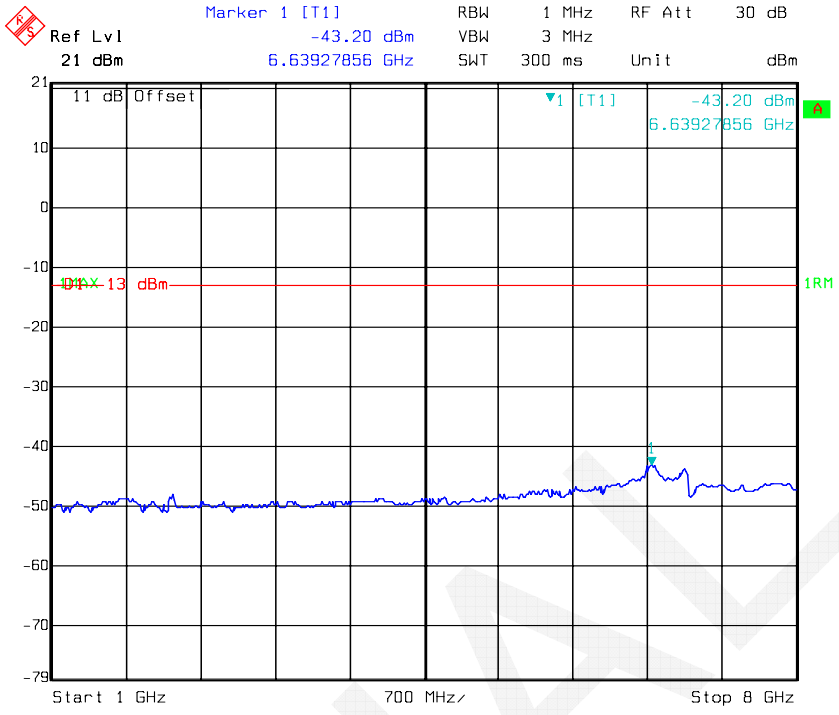
Note: mobile emission limits for the supported bands of operation is 43 + 10 log(P) dB=-13dBm, the out of band emissions (OOBE) shall be at least 6 dB below the FCC's mobile emission limits(-19dBm), the emissions compliance the emission limits ***-19dBm****, Please refer to the following plots.*

Downlink:

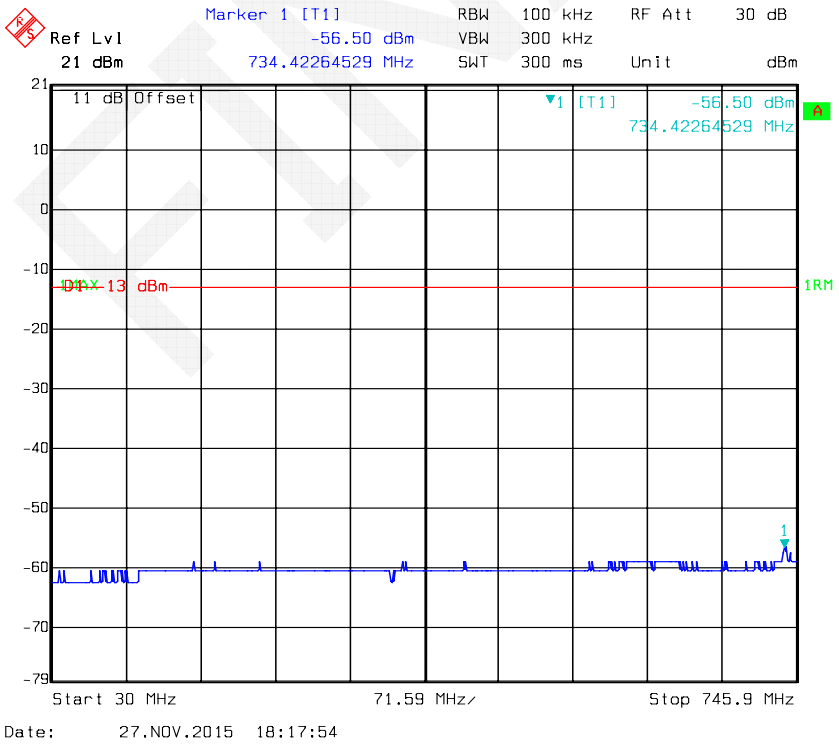
Lower 700 Band

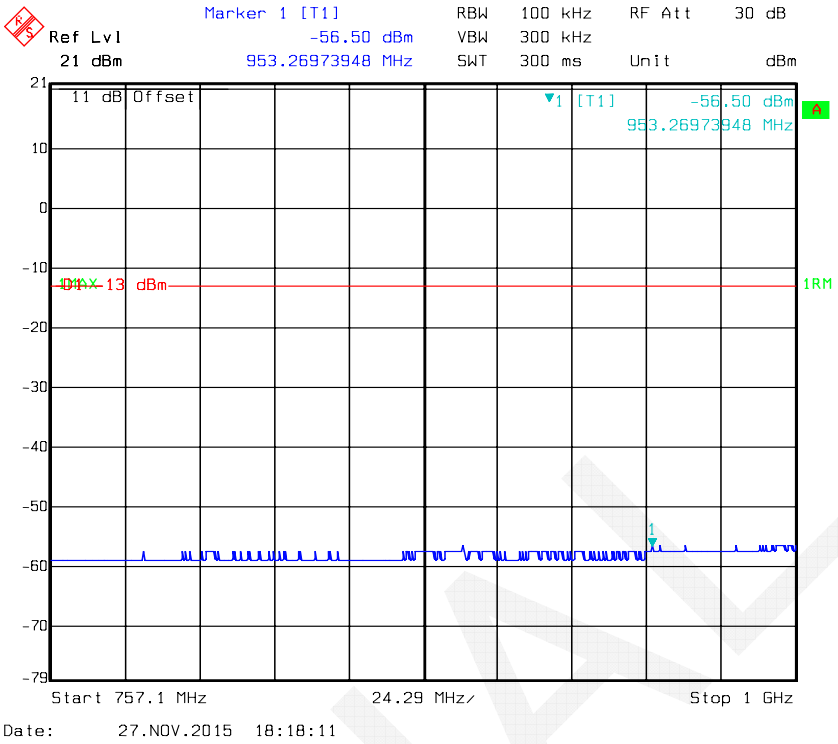


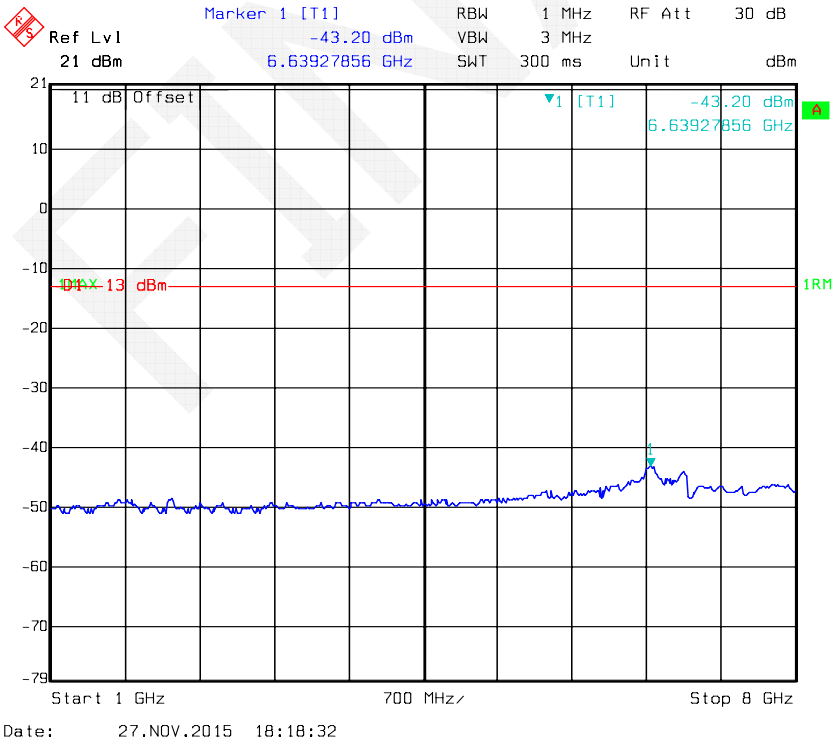




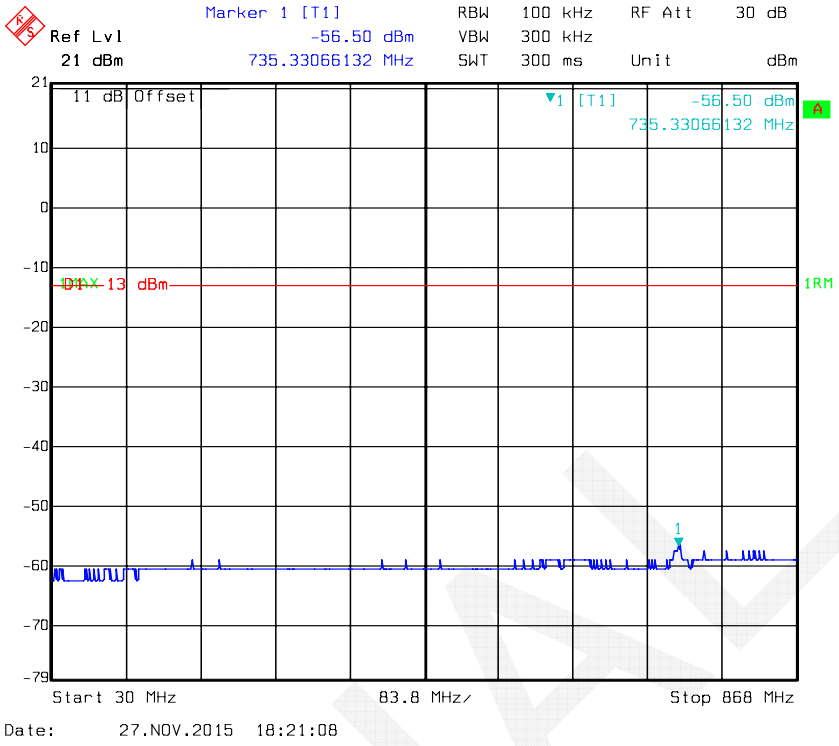
Upper 700 Band

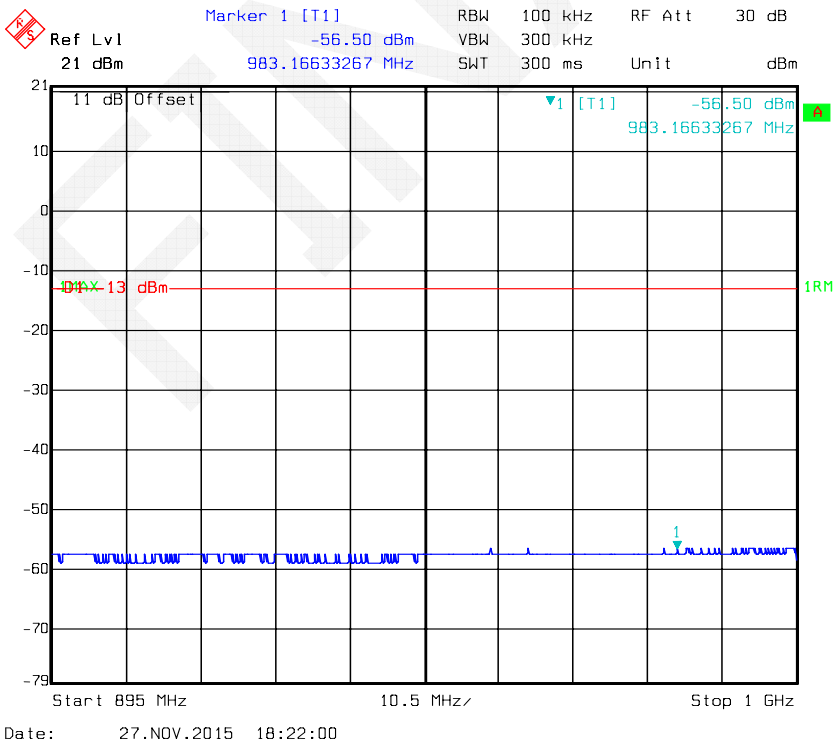


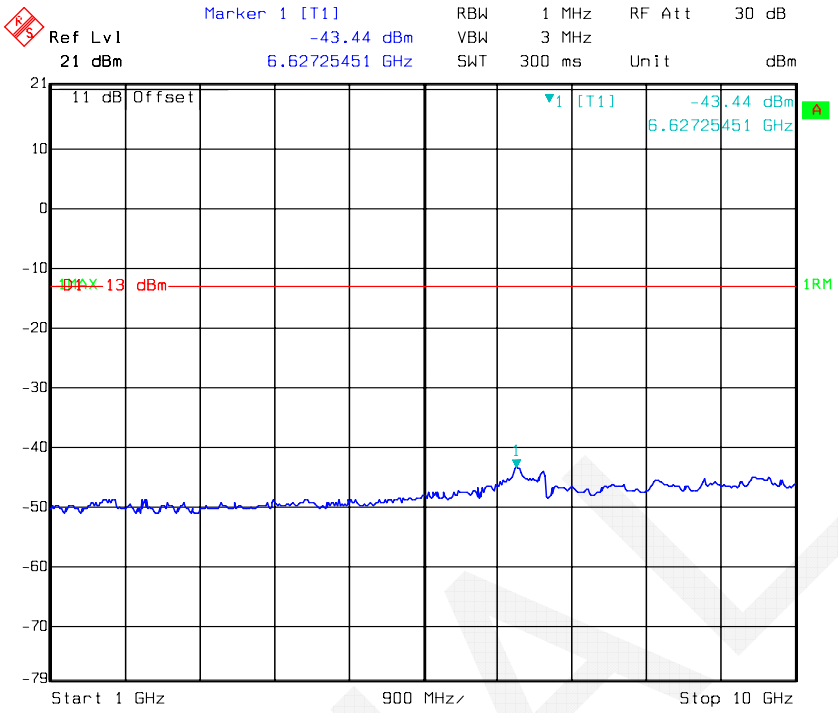

Marker 1 [T1]
-56.50 dBm
953.26973948 MHz
RBW 100 kHz
VBW 300 kHz
SWT 300 ms
RF Att 30 dB
Unit dBm
Ref Lvl
21 dBm
11 dB Offset
1 [T1]
-56.50 dBm
953.26973948 MHz
MAX 13 dBm
1RM
Start 757.1 MHz
24.29 MHz/
Stop 1 GHz
Date: 27.NOV.2015 18:18:11


Marker 1 [T1]
-43.20 dBm
6.63927856 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
RF Att 30 dB
Unit dBm
Ref Lvl
21 dBm
11 dB Offset
1 [T1]
-43.20 dBm
6.63927856 GHz
MAX 13 dBm
1RM
Start 1 GHz
700 MHz/
Stop 8 GHz
Date: 27.NOV.2015 18:18:32

Cellular Band

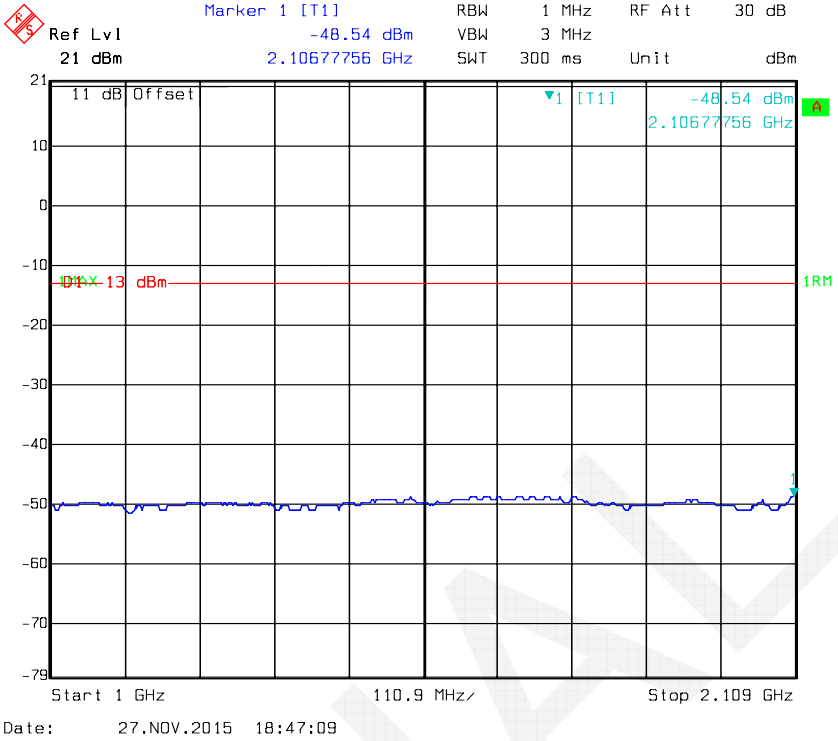


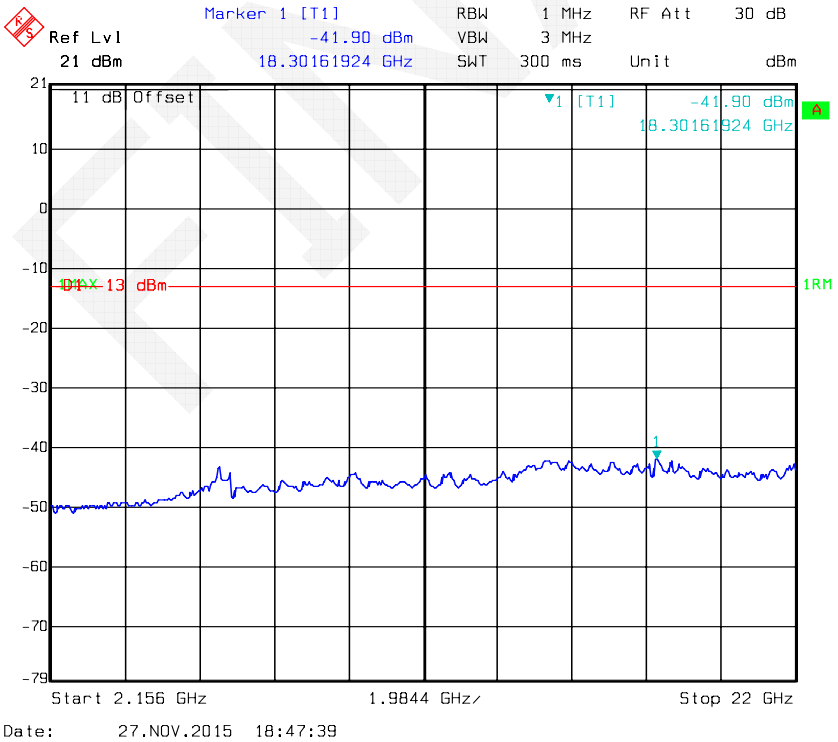



Marker 1 [T1]
-43.44 dBm
6.62725451 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
RF Att 30 dB
Unit dBm
Ref Lvl
21 dBm
11 dB Offset
1 [T1]
-43.44 dBm
6.62725451 GHz
DMAX 13 dBm
1RM
Start 1 GHz
900 MHz/
Stop 10 GHz
Date: 27.NOV.2015 18:19:48

AWS Band

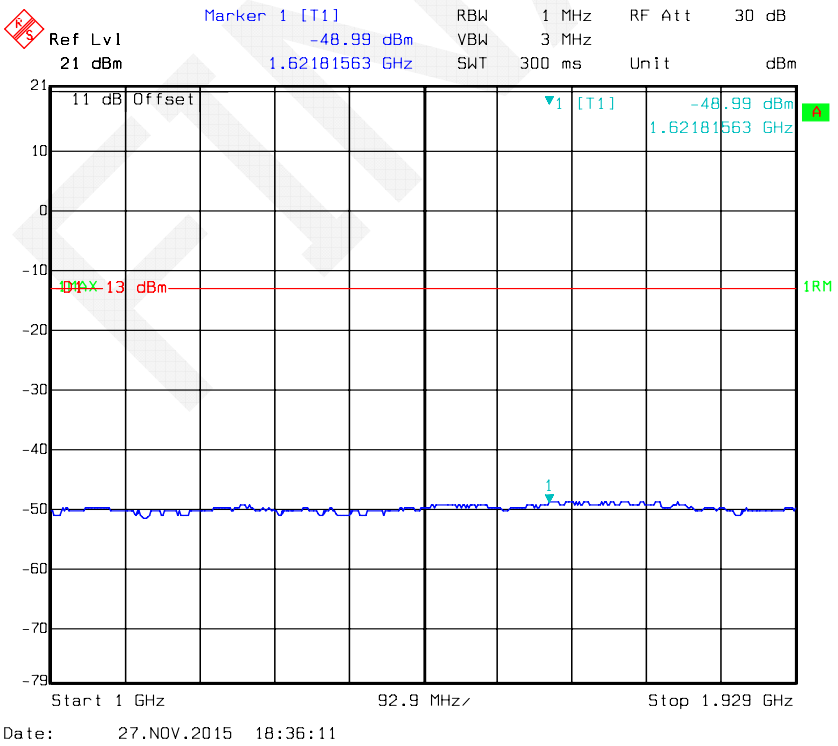

Marker 1 [T1]
-56.50 dBm
733.68737475 MHz
RBW 100 kHz
VBW 300 kHz
SWT 300 ms
RF Att 30 dB
Unit dBm
Ref Lvl
21 dBm
11 dB Offset
1 [T1]
-56.50 dBm
733.68737475 MHz
DMAX 13 dBm
1RM
Start 30 MHz
97 MHz/
Stop 1 GHz
Date: 27.NOV.2015 18:46:37

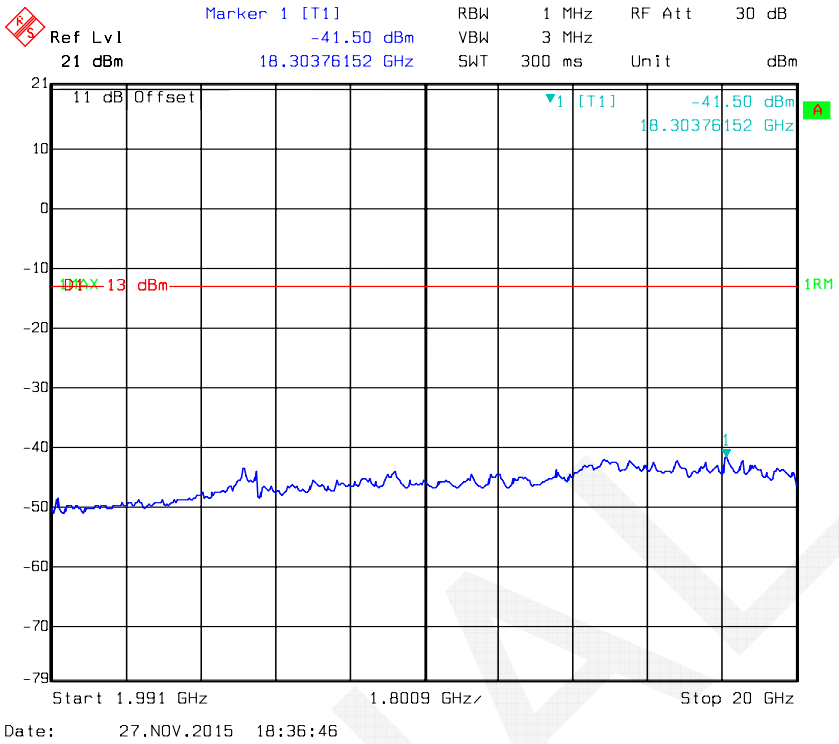

Marker 1 [T1]
-48.54 dBm
2.10677756 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
RF Att 30 dB
Unit dBm
Ref Lvl
21 dBm
11 dB Offset
1 [T1]
-48.54 dBm
2.10677756 GHz
DMAX 13 dBm
1RM
Start 1 GHz
110.9 MHz/
Stop 2.109 GHz
Date: 27.NOV.2015 18:47:09


Marker 1 [T1]
-41.90 dBm
18.30161924 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
RF Att 30 dB
Unit dBm
Ref Lvl
21 dBm
11 dB Offset
1 [T1]
-41.90 dBm
18.30161924 GHz
DMAX 13 dBm
1RM
Start 2.156 GHz
1.9844 GHz/
Stop 22 GHz
Date: 27.NOV.2015 18:47:39

PCS Band

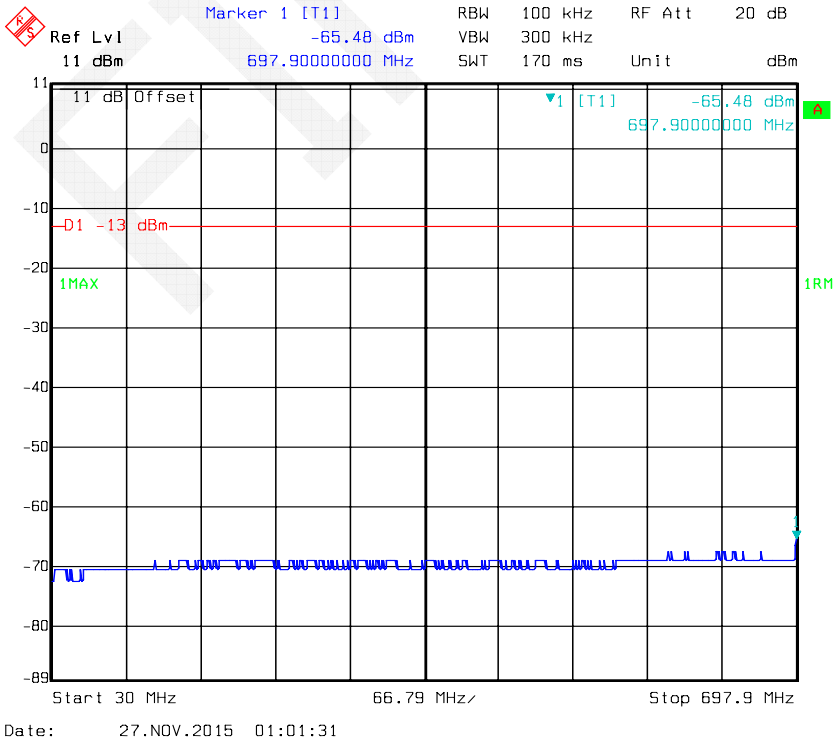

Marker 1 [T1]
RBW 100 kHz
RF Att 30 dB
Ref Lvl
-56.50 dBm
VBW 300 kHz
21 dBm
733.68737475 MHz
SWT 300 ms
Unit dBm
11 dB Offset
1 [T1] -56.50 dBm
733.68737475 MHz
MAX 13 dBm
1RM
Start 30 MHz
97 MHz/
Stop 1 GHz
Date: 27.NOV.2015 18:34:30

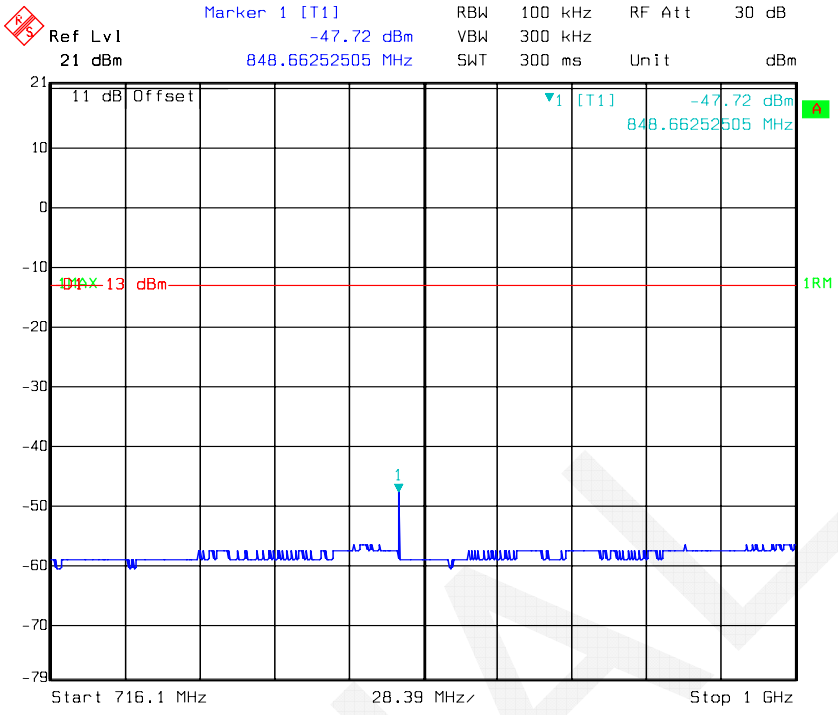

Marker 1 [T1]
RBW 1 MHz
RF Att 30 dB
Ref Lvl
-48.99 dBm
VBW 3 MHz
21 dBm
1.62181563 GHz
SWT 300 ms
Unit dBm
11 dB Offset
1 [T1] -48.99 dBm
1.62181563 GHz
MAX 13 dBm
1RM
Start 1 GHz
92.9 MHz/
Stop 1.929 GHz
Date: 27.NOV.2015 18:36:11

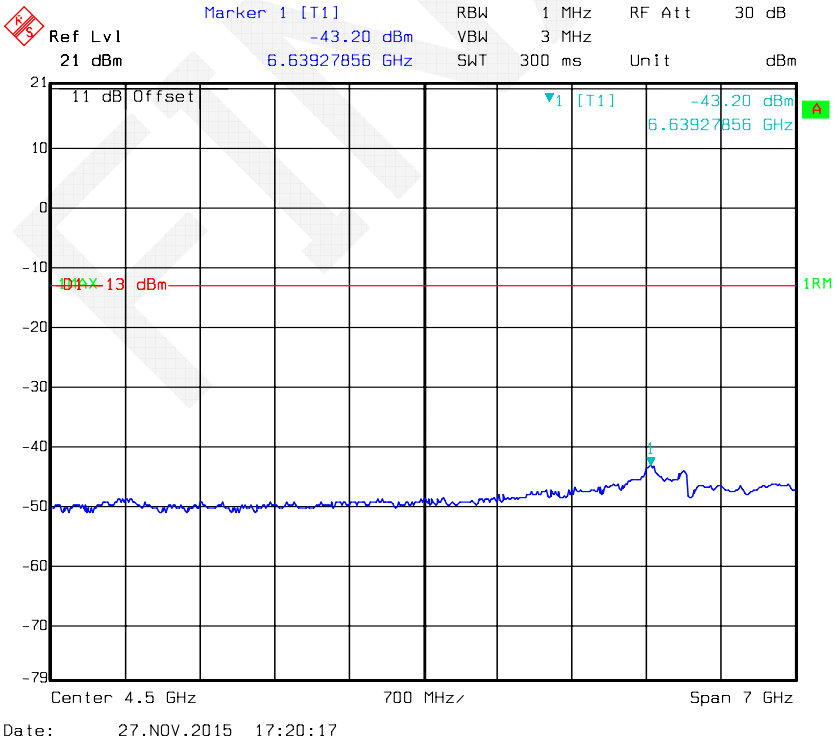


Uplink:

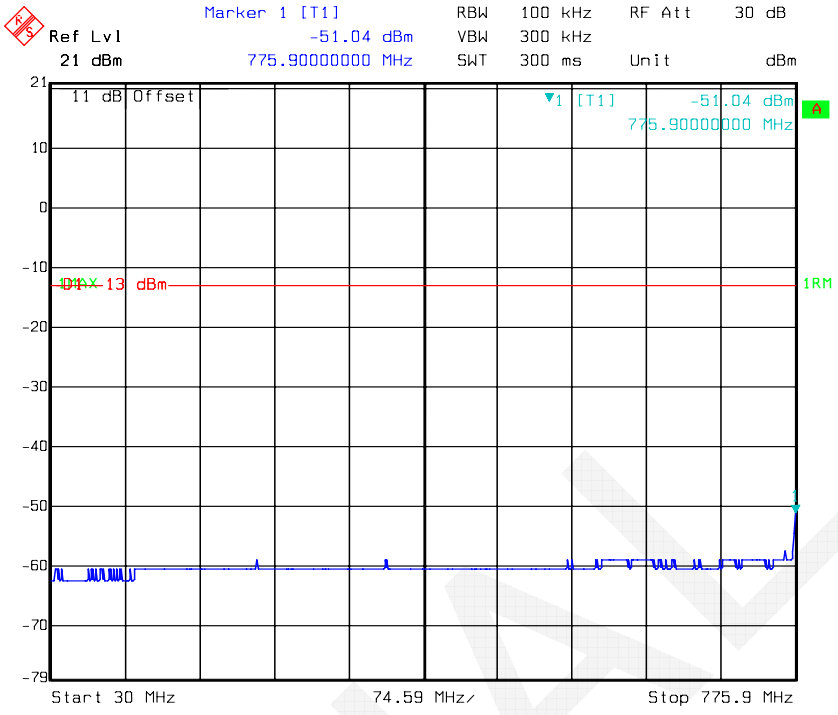
Lower 700 Band

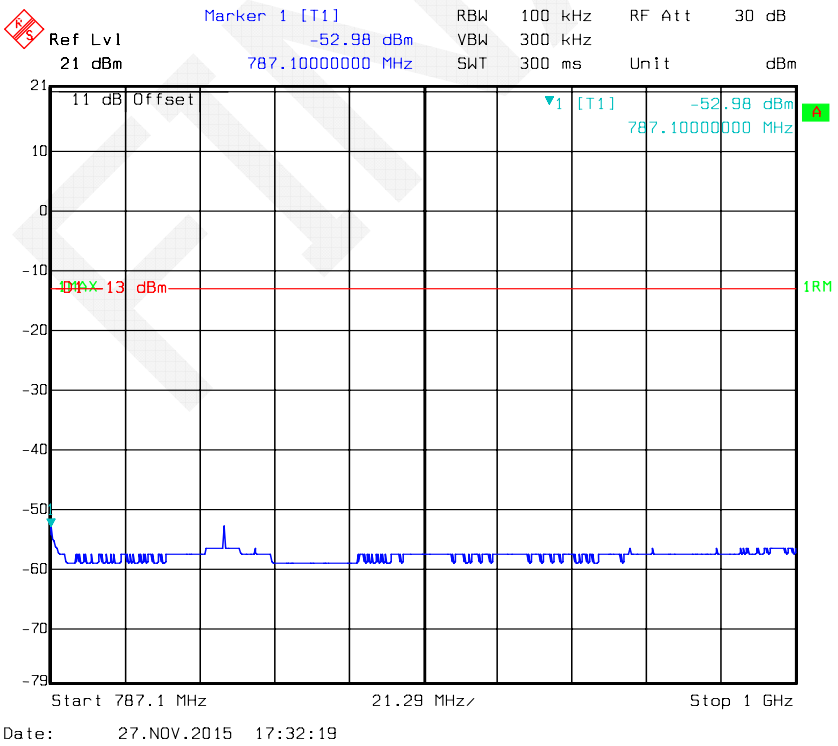


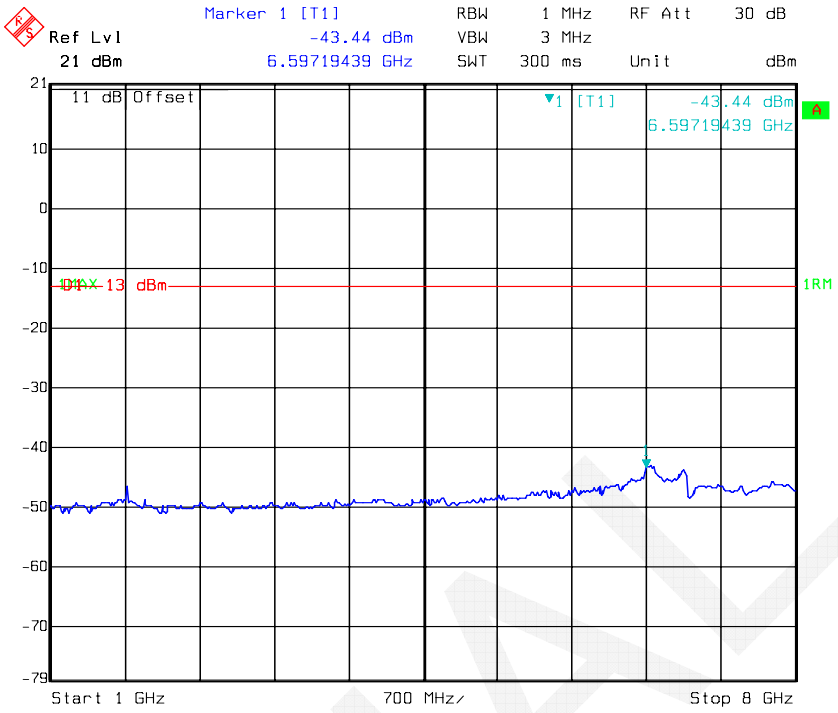

Marker 1 [T1]
Ref Lvl
21 dBm
-47.72 dBm
848.66252505 MHz
RBW 100 kHz
VBW 300 kHz
SWT 300 ms
RF Att 30 dB
Unit dBm
11 dB Offset
1 [T1] -47.72 dBm
848.66252505 MHz
DMAX -13 dBm
1RM
Start 716.1 MHz
28.39 MHz/
Stop 1 GHz
Date: 27.NOV.2015 17:19:44


Marker 1 [T1]
Ref Lvl
21 dBm
-43.20 dBm
6.63927856 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
RF Att 30 dB
Unit dBm
11 dB Offset
1 [T1] -43.20 dBm
6.63927856 GHz
DMAX -13 dBm
1RM
Center 4.5 GHz
700 MHz/
Span 7 GHz
Date: 27.NOV.2015 17:20:17

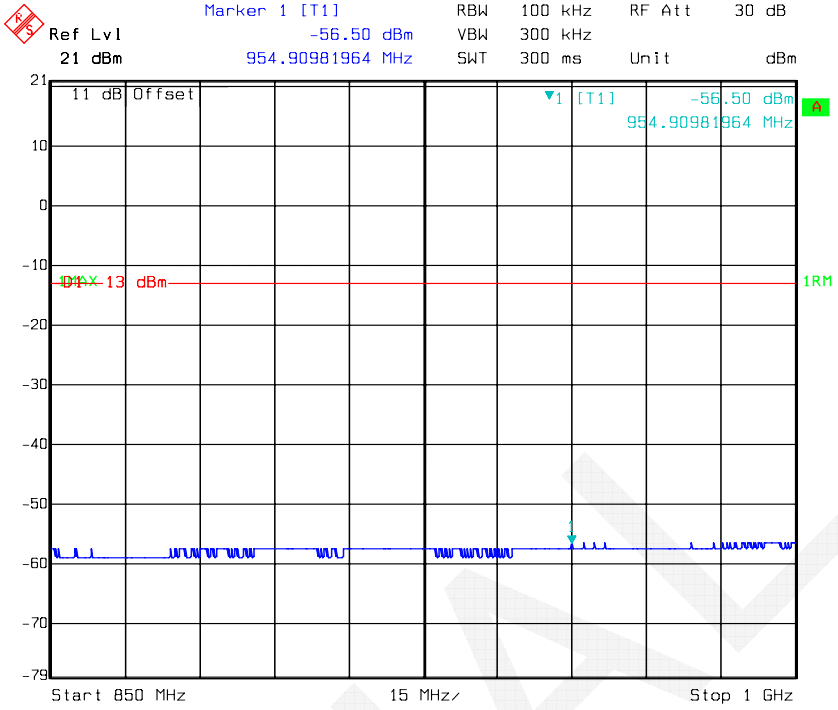
Upper 700 Band

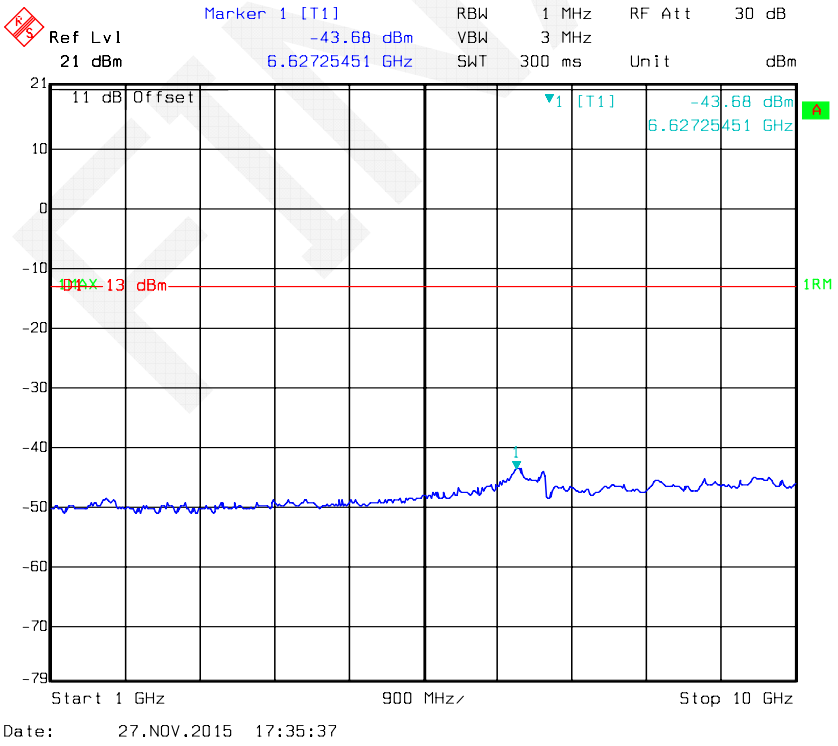




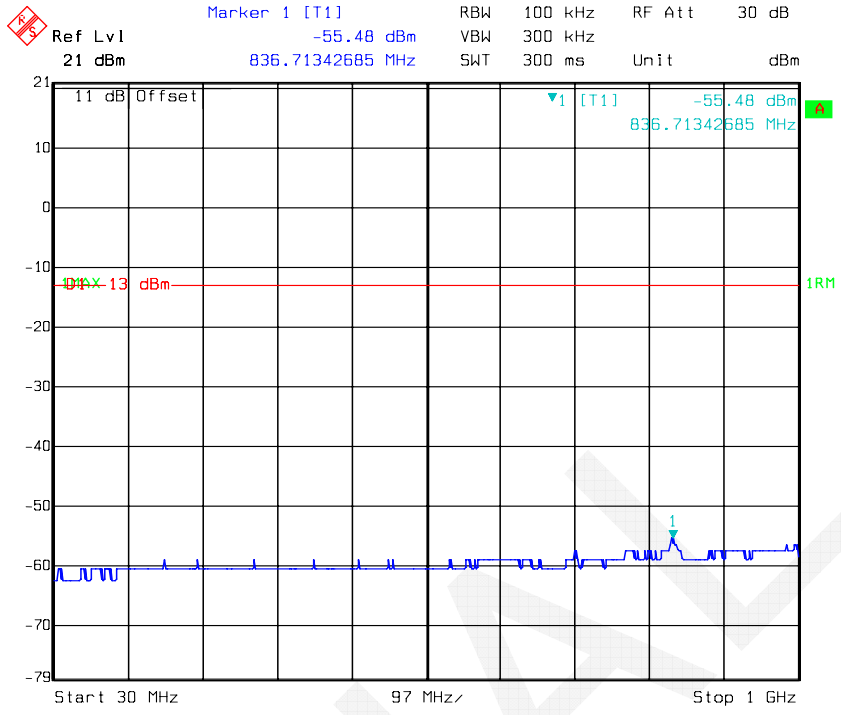


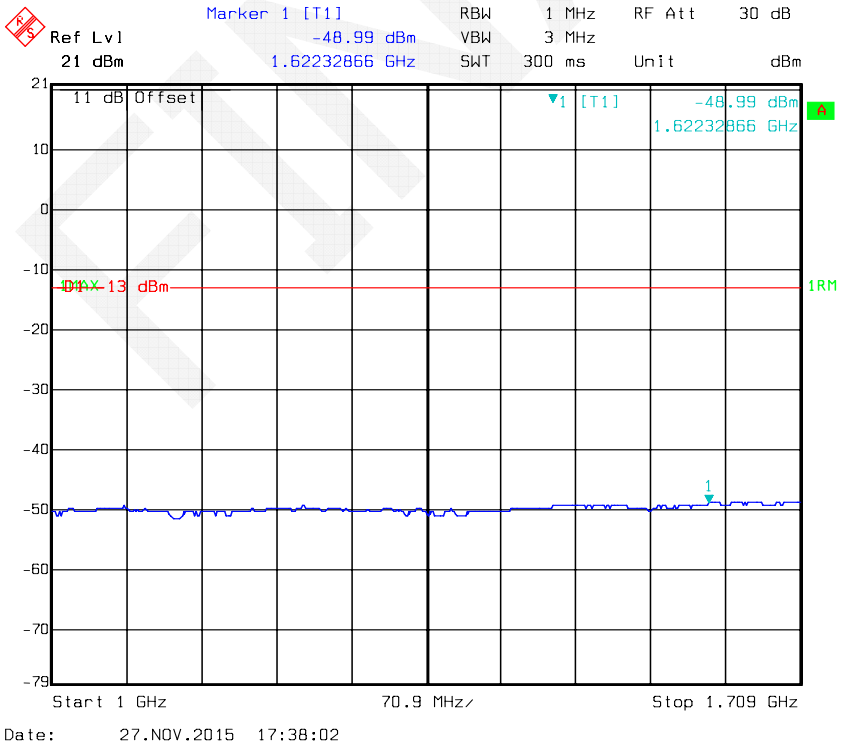
Cellular Band

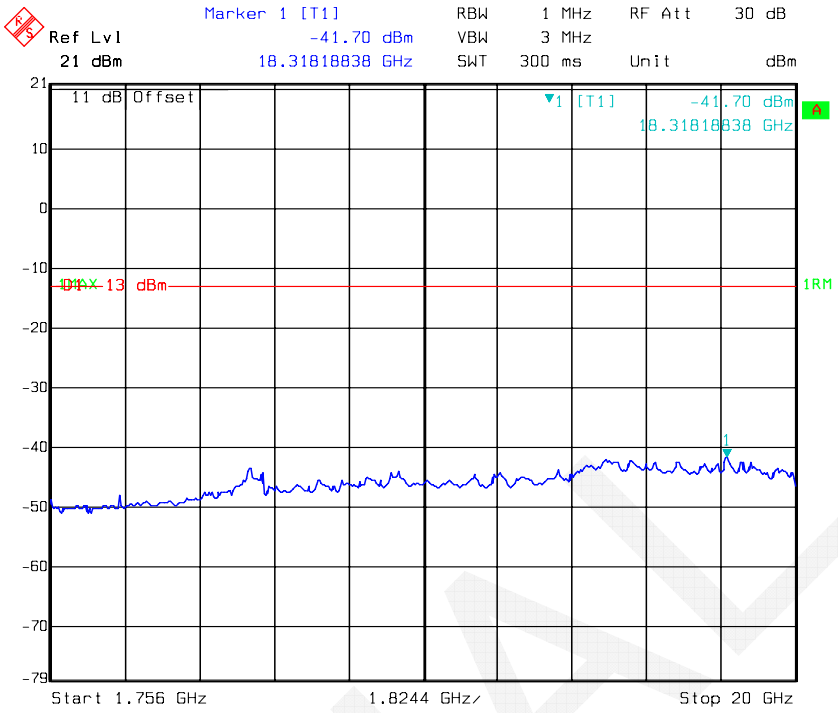

Marker 1 [T1]
-56.50 dBm
954.90981964 MHz
RBW 100 kHz
VBW 300 kHz
SWT 300 ms
RF Att 30 dB
Unit dBm
Ref Lvl
21 dBm
11 dB Offset
1 [T1]
-56.50 dBm
954.90981964 MHz
MAX 13 dBm
1RM
Start 850 MHz
15 MHz/
Stop 1 GHz
Date: 27.NOV.2015 17:35:15


Marker 1 [T1]
-43.68 dBm
6.62725451 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
RF Att 30 dB
Unit dBm
Ref Lvl
21 dBm
11 dB Offset
1 [T1]
-43.68 dBm
6.62725451 GHz
MAX 13 dBm
1RM
Start 1 GHz
900 MHz/
Stop 10 GHz
Date: 27.NOV.2015 17:35:37

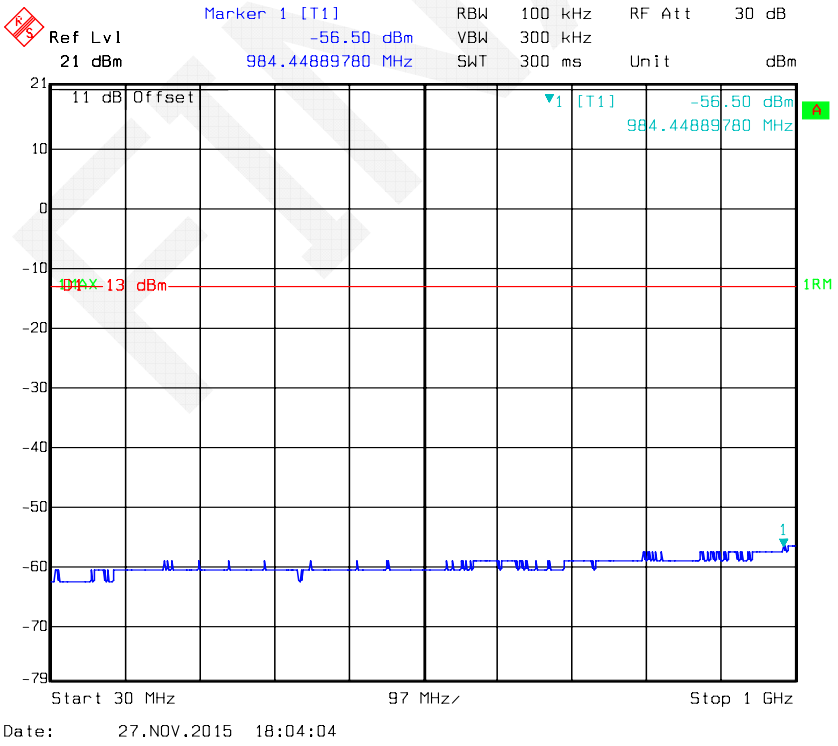
AWS Band

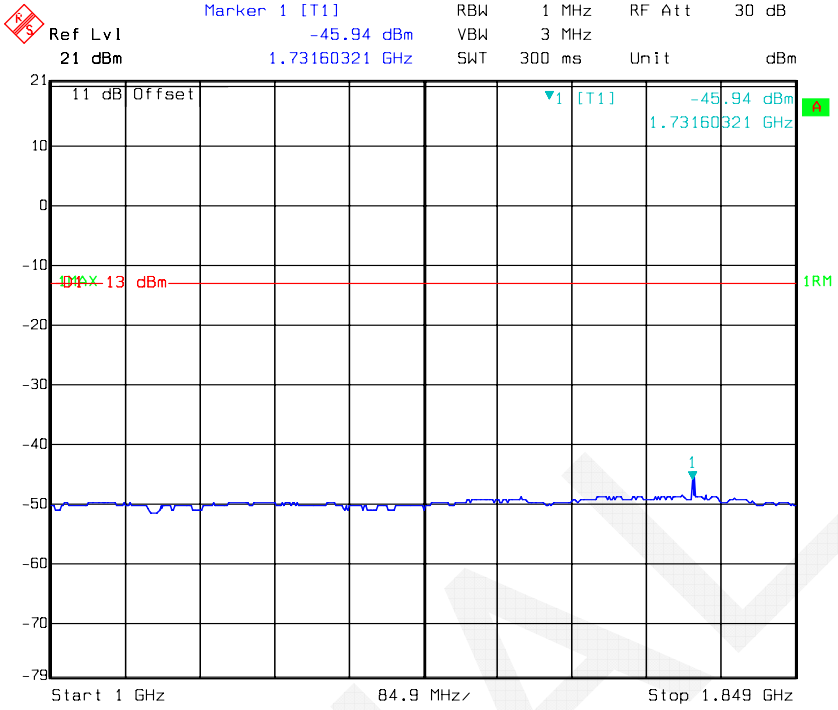

Marker 1 [T1]
RBW 100 kHz
RF Att 30 dB
Ref Lvl
-55.48 dBm
VBW 300 kHz
21 dBm
836.71342685 MHz
SWT 300 ms
Unit dBm
11 dB Offset
1 [T1]
-55.48 dBm
836.71342685 MHz
A
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
DMAX -13 dBm
1RM
Start 30 MHz
97 MHz/
Stop 1 GHz
Date: 27.NOV.2015 17:37:28

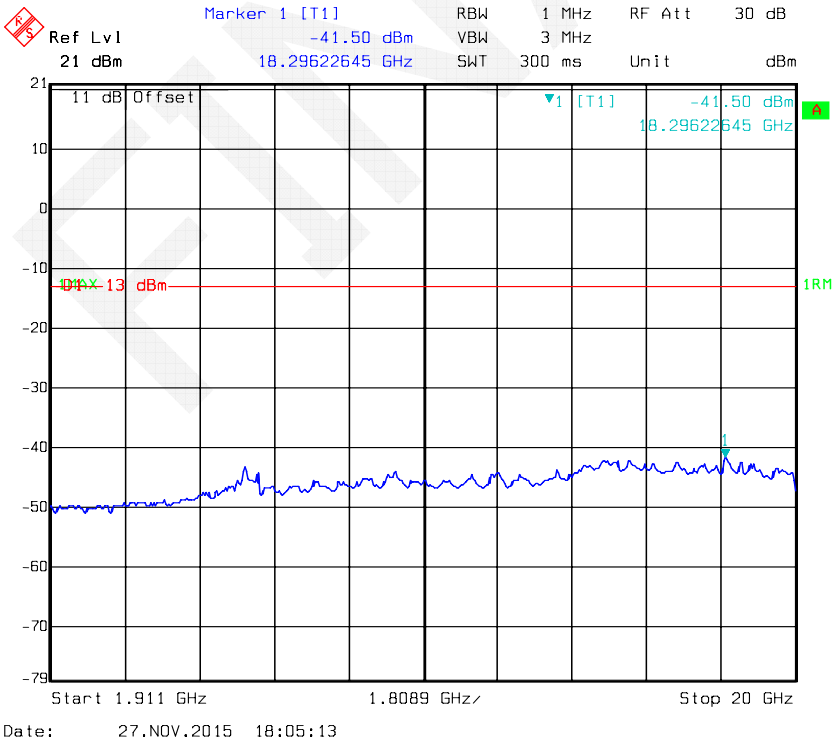

Marker 1 [T1]
RBW 1 MHz
RF Att 30 dB
Ref Lvl
-48.99 dBm
VBW 3 MHz
21 dBm
1.62232866 GHz
SWT 300 ms
Unit dBm
11 dB Offset
1 [T1]
-48.99 dBm
1.62232866 GHz
A
21
10
0
-10
-20
-30
-40
-50
-60
-70
-79
DMAX -13 dBm
1RM
Start 1 GHz
70.9 MHz/
Stop 1.709 GHz
Date: 27.NOV.2015 17:38:02


Marker 1 [T1]
-41.70 dBm
18.31818838 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
RF Att 30 dB
Unit dBm
Ref Lvl
21 dBm
11 dB Offset
1 [T1] -41.70 dBm
18.31818838 GHz
DMAX 13 dBm
1RM
Start 1.756 GHz
1.8244 GHz/
Stop 20 GHz
Date: 27.NOV.2015 17:38:25

PCS Band


Marker 1 [T1]
-56.50 dBm
984.44889780 MHz
RBW 100 kHz
VBW 300 kHz
SWT 300 ms
RF Att 30 dB
Unit dBm
Ref Lvl
21 dBm
11 dB Offset
1 [T1] -56.50 dBm
984.44889780 MHz
DMAX 13 dBm
1RM
Start 30 MHz
97 MHz/
Stop 1 GHz
Date: 27.NOV.2015 18:04:04


Marker 1 [T1]
-45.94 dBm
1.73160321 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
RF Att 30 dB
Unit dBm
Ref Lvl
21 dBm
11 dB Offset
1 [T1]
-45.94 dBm
1.73160321 GHz
MAX 13 dBm
1RM
Start 1 GHz
84.9 MHz/
Stop 1.849 GHz
Date: 27.NOV.2015 18:04:50


Marker 1 [T1]
-41.50 dBm
18.29622645 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
RF Att 30 dB
Unit dBm
Ref Lvl
21 dBm
11 dB Offset
1 [T1]
-41.50 dBm
18.29622645 GHz
MAX 13 dBm
1RM
Start 1.911 GHz
1.8089 GHz/
Stop 20 GHz
Date: 27.NOV.2015 18:05:13

§ 2.1053 - RADIATED SPURIOUS EMISSIONS

Applicable Standards

§ 2.1053 *Measurements required: Field strength of spurious radiation.*

Test Procedure

This procedure is intended to satisfy the requirements specified in § 2.1053. The applicable limits are those specified for mobile emissions in the rule part appropriate to the band of operation (see Annex A).

a) Place the EUT on an OATS or semi-anechoic chamber turntable 3 m from the receiving antenna. [12]
b) Connect the EUT to the test equipment as shown in **Figure 10** beginning with the uplink output.
c) Set the signal generator to produce a CW signal with the frequency set to the center of the operational band under test and the power level set at P_{IN} as determined from 7.2.
d) Measure the radiated spurious emissions from the EUT from lowest to the highest frequencies as specified in § 2.1057. Maximize the radiated emissions by utilizing the procedures described in Clause 8 of ANSI C63.4-2009.
e) Capture the peak emissions plots using a peak detector with Max-Hold for inclusion in the test report. Tabular data is acceptable in lieu of spectrum analyzer plots.
f) Repeat 7.12c) through 7.12e) for all operational bands.

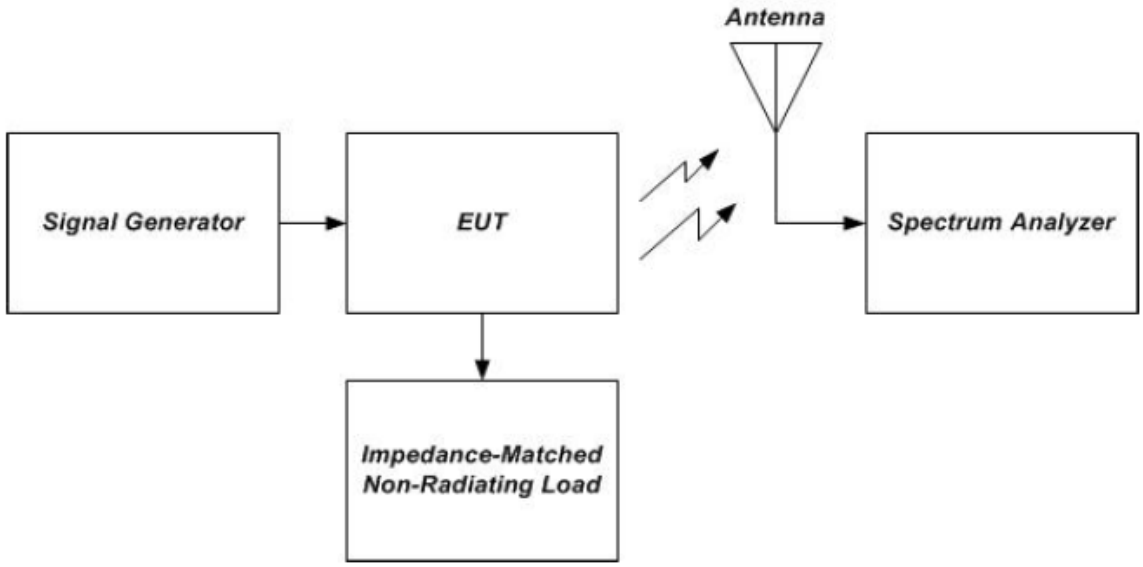


Figure 10 – Radiated spurious emissions test instrumentation setup

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCI	100224	2015-08-03	2016-08-02
Sunol Sciences	Antenna	JB3	A060611-3	2014-11-06	2017-11-05
HP	Amplifier	8447E	2434A02181	2015-09-01	2016-09-01
Agilent	Spectrum Analyzer	E4440A	SG43360054	2015-11-23	2016-11-22
ETS-Lindgren	Horn Antenna	3115	9808-5557	2015-09-06	2018-09-06
Mini-Circuit	Amplifier	ZVA-213-S+	054201245	2015-02-19	2016-02-19
R&S	Spectrum Analyzer	FSP 38	100478	2015-11-23	2016-11-22
Ducommun Technolagies	Horn Antenna	ARH-4223-02	1007726-01 1304	2014-06-16	2017-06-15
Quinstar	Amplifier	QLW-18405536-JO	15964001001	2015-09-06	2016-09-06

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

Temperature:	24.1 ℃
Relative Humidity:	69 %
ATM Pressure:	101.1 kPa

The testing was performed by Dean Liu on 2015-11-25.

Test mode: Transmitting

Uplink:

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
Lower 700, Test Frequency 707MHz								
1476.000	H	36.82	-64.5	9.4	1.3	-56.4	-19.0	37.4
1444.000	V	37.16	-63.8	9.2	1.4	-56.0	-19.0	37.0
1519.000	H	36.77	-64.7	9.6	1.2	-56.3	-19.0	37.3
1490.000	V	36.68	-65	9.5	1.3	-56.8	-19.0	37.8
291.900	H	49.65	-54.9	0.0	0.5	-55.4	-19.0	36.4
315.180	V	44.78	-60.7	0.0	0.5	-61.2	-19.0	42.2
Upper 700, Test Frequency 781.5MHz								
1547.000	H	37.10	-64.3	9.8	1.2	-55.7	-19.0	36.7
1476.000	V	36.49	-65	9.4	1.3	-56.9	-19.0	37.9
1827.000	H	36.39	-63.5	11.3	1.3	-53.5	-19.0	34.5
1533.000	V	36.61	-65.3	9.7	1.2	-56.8	-19.0	37.8
291.900	H	49.59	-55	0.0	0.5	-55.5	-19.0	36.5
315.180	V	44.77	-60.7	0.0	0.5	-61.2	-19.0	42.2
Cellular Band, Test Frequency 836.5MHz								
1392.000	H	36.53	-64.1	8.9	1.5	-56.7	-19.0	37.7
1350.000	V	36.53	-63.8	8.6	1.4	-56.6	-19.0	37.6
1462.000	H	36.35	-64.8	9.3	1.3	-56.8	-19.0	37.8
1519.000	V	37.35	-64.5	9.6	1.2	-56.1	-19.0	37.1
291.900	H	49.65	-54.9	0.0	0.5	-55.4	-19.0	36.4
315.180	V	44.78	-60.7	0.0	0.5	-61.2	-19.0	42.2
AWS Band, Test Frequency 1732.5MHz								
1288.000	H	36.19	-63.7	8.1	1.3	-56.9	-19.0	37.9
1406.000	V	36.57	-63.9	9.0	1.5	-56.4	-19.0	37.4
1352.000	H	36.25	-64	8.6	1.4	-56.8	-19.0	37.8
1490.000	V	36.79	-64.9	9.5	1.3	-56.7	-19.0	37.7
291.900	H	49.47	-55.1	0.0	0.5	-55.6	-19.0	36.6
315.180	V	44.64	-60.9	0.0	0.5	-61.4	-19.0	42.4
PCS Band, Test Frequency 1880MHz								
1252.000	H	37.21	-63	7.8	1.3	-56.5	-19.0	37.5
1360.000	V	36.50	-63.8	8.7	1.4	-56.5	-19.0	37.5
1324.000	H	36.28	-63.7	8.4	1.4	-56.7	-19.0	37.7
1505.000	V	36.14	-65.7	9.6	1.2	-57.3	-19.0	38.3
291.900	H	49.32	-55.2	0.0	0.5	-55.7	-19.0	36.7
315.180	V	44.51	-61	0.0	0.5	-61.5	-19.0	42.5

Downlink:

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
Lower 700, Test Frequency 737MHz								
1462.000	H	36.54	-64.7	9.3	1.3	-56.7	-19.0	37.7
1476.000	V	36.67	-64.8	9.4	1.3	-56.7	-19.0	37.7
1575.000	H	36.72	-64.6	10.0	1.2	-55.8	-19.0	36.8
1547.000	V	36.22	-65.7	9.8	1.2	-57.1	-19.0	38.1
291.900	H	49.63	-54.9	0.0	0.5	-55.4	-19.0	36.4
315.180	V	44.70	-60.8	0.0	0.5	-61.3	-19.0	42.3
Upper 700, Test Frequency 751.5MHz								
1505.000	H	36.15	-65.3	9.6	1.2	-56.9	-19.0	37.9
1476.000	V	36.09	-65.4	9.4	1.3	-57.3	-19.0	38.3
1841.000	H	36.29	-63.5	11.4	1.3	-53.4	-19.0	34.4
1547.000	V	36.80	-65.1	9.8	1.2	-56.5	-19.0	37.5
291.900	H	48.96	-55.6	0.0	0.5	-56.1	-19.0	37.1
315.180	V	46.02	-59.5	0.0	0.5	-60.0	-19.0	41.0
Cellular Band, Test Frequency 881.5MHz								
1496.000	H	36.46	-65	9.5	1.2	-56.7	-19.0	37.7
1336.000	V	36.33	-64	8.5	1.4	-56.9	-19.0	37.9
1561.000	H	36.66	-64.7	9.9	1.2	-56.0	-19.0	37.0
1689.000	V	36.84	-64.4	10.7	1.4	-55.1	-19.0	36.1
291.900	H	50.28	-54.3	0.0	0.5	-54.8	-19.0	35.8
315.180	V	45.33	-60.2	0.0	0.5	-60.7	-19.0	41.7
AWS Band, Test Frequency 1960MHz								
1456.000	H	36.28	-64.9	9.3	1.3	-56.9	-19.0	37.9
1364.000	V	36.15	-64.2	8.7	1.4	-56.9	-19.0	37.9
1685.000	H	36.42	-64.6	10.7	1.4	-55.3	-19.0	36.3
1743.000	V	36.60	-64.3	10.9	1.4	-54.8	-19.0	35.8
291.900	H	49.35	-55.2	0.0	0.5	-55.7	-19.0	36.7
315.180	V	47.62	-57.9	0.0	0.5	-58.4	-19.0	39.4
PCS Band, Test Frequency 2132.5MHz								
1266.000	H	36.52	-63.6	7.9	1.3	-57.0	-19.0	38.0
1304.000	V	36.27	-64.1	8.3	1.3	-57.1	-19.0	38.1
1494.000	H	36.40	-65	9.5	1.3	-56.8	-19.0	37.8
1418.000	V	35.98	-64.6	9.1	1.4	-56.9	-19.0	37.9
291.900	H	50.11	-54.4	0.0	0.5	-54.9	-19.0	35.9
315.180	V	48.02	-57.5	0.0	0.5	-58.0	-19.0	39.0

Note:
1) Absolute Level = SG Level - Cable loss + Antenna Gain
2) Margin = Limit- Absolute Level

DECLARATIION LETTER

JDTECK INC.
www.jdteck.com

Product Similarity Declaration

To Whom It May Concern,

We, ***JDTECK INC***, hereby declare that our Wireless Cellular Repeater, Model Number: JDCR-LCPA-17, JDCR-LCPA-15, and JDCR-LCPA-10 are electrically identical with the Model JDCR-LCPA-17 series that was certified by ***Bay Area Compliance Laboratories Corporation***. They named differently just due to different gains achieved by adjusting the potentiometers inside or DIP switches outside. However they have the same design, PCB board and work diagrams.

The JDCR-LCPA-17 repeater has a factory preset maximum output power of UL 18dBm/ DL -10dBm and maximum gain of UL 48dB/ DL 48dB. However, some users maybe want to use lower power due to different coverage. When the output power is preset at UL 18dBm / -10dBm and maximum gain of UL 45dB/ DL 48dB, then the model should be JDCR-LCPA-15; When the output power is preset at UL 18dBm / DL -10dBm and maximum gain of UL 45dB/ DL 45dB, then the model should be JDCR-LCPA-10.

We have summarized the differences in below table for your better understanding:

Item	Model Number	Max. Power UL/DL	Max. Gain UL/DL	Size(mm)
1	JDCR-LCPA-17	18dBm/-10dBm	48dB/48dB	250*250*52mm
2	JDCR-LCPA-15	18dBm/-10dBm	45dB/48dB	
3	JDCR-LCPA-10	18dBm/-10dBm	45dB/45dB	

Please contact me if there is any question.

Signature:

Dennison Jurawan
Title: Sales Manager
Date: 2015-10-23

215 Celebration Place, Suite 180, 190 Kissimmee FL 34747 ~ Ph: 321-939-3816 | Fax: 321-939-3819

******* END OF REPORT *******