



FCC RF Test Report

APPLICANT : Sony Corporation
EQUIPMENT : IoT Product
BRAND NAME : Sony
MODEL NAME : AL001
FCC ID : AK8145899511
STANDARD : 47 CFR Part 2, 22(H), 24(E), 27
CLASSIFICATION : PCS Licensed Transmitter (PCB)

This is a partial report. The product was received on Dec, 05, 2017 and completely tested on Apr. 27, 2018. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA / EIA-603-E and the testing has shown the tested sample to be in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by: Joseph Lin / Supervisor

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TABLE OF CONTENTS

REVISION HISTORY..... 3

SUMMARY OF TEST RESULT 4

1 GENERAL DESCRIPTION 5

 1.1 Applicant 5

 1.2 Manufacturer 5

 1.3 Product Feature of Equipment Under Test 5

 1.4 Modification of EUT 5

 1.5 Emission Designator 6

 1.6 Testing Location 7

 1.7 Applicable Standards 7

2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST 8

 2.1 Test Mode 8

 2.2 Connection Diagram of Test System 10

 2.3 Support Unit used in test configuration and system 10

 2.4 Frequency List of Low/Middle/High Channels 11

3 CONDUCTED TEST ITEMS 13

 3.1 Measuring Instruments 13

 3.2 Conducted Output Power and ERP/EIRP 14

 3.3 Occupied Bandwidth 15

 3.4 Conducted Band Edge 16

 3.5 Conducted Spurious Emission 17

4 RADIATED TEST ITEMS 18

 4.1 Measuring Instruments 18

 4.2 Test Setup 18

 4.3 Test Result of Radiated Test 18

 4.4 Radiated Spurious Emission 19

5 LIST OF MEASURING EQUIPMENT 20

6 UNCERTAINTY OF EVALUATION 22

APPENDIX A. TEST RESULTS OF CONDUCTED TEST

APPENDIX B. TEST RESULTS OF RADIATED TEST

APPENDIX C. TEST SETUP PHOTOGRAPHS



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG7D0542	Rev. 01	Initial issue of report	Jan. 11, 2018
FG7D0542	Rev .02	<ol style="list-style-type: none"> 1. Revising the KDB 971168 version. 2. Revising the description of pre-scanned in section 2.1 3. Revising the measuring equipment in section 5. 4. Revising the LTE Band 2 for output power in appendix a and masimum EIRP value in section 1.5 and appendix b. 	Apr. 24, 2018
FG7D0542	Rev. 03	<p>Add conducted test data as below:</p> <ol style="list-style-type: none"> 1. LTE Band 2 BW: 1.4/3/15 MHz 2. LTE Band 4 BW: 1.4/3/15 MHz 3. LTE Band 5 BW: 1.4/3 MHz 	Apr. 27, 2018
FG7D0542	Rev. 04	<ol style="list-style-type: none"> 1. Revising test data in appendix a and section1.5. 2. Add the description in section 2.1. 	May 14, 2018



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.2	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§22.913(a)(2)	Effective Radiated Power (Band 5)	ERP < 7 Watt	PASS	-
	§27.50(c)(10)	Effective Radiated Power (Band 17)	ERP < 3 Watt		
	§24.232(c)	Equivalent Isotropic Radiated Power (Band 2)	EIRP < 2Watt		
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4)	EIRP < 1Watt		
3.3	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.4	§22.917(a) §24.238(a) §27.53(h)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5)	< 43+10log ₁₀ (P[Watts])	PASS	-
3.5	§22.917(a) §24.238(a)	Conducted Spurious Emission (Band 2) (Band 4) (Band 5)	< 43+10log ₁₀ (P[Watts])	PASS	-
4.4	§2.1053 §22.917(a) §24.238(a) §27.53(g) §27.53(h)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 17)	< 43+10log ₁₀ (P[Watts])	PASS	Under limit 25.00 dB at 3448.000 MHz



1 General Description

1.1 Applicant

Sony Corporation
1-7-1 Konan, Minato-ku, Tokyo, 108-0075, Japan

1.2 Manufacturer

Sony Corporation
1-7-1 Konan, Minato-ku, Tokyo, 108-0075, Japan

1.3 Product Feature of Equipment Under Test

LTE, Bluetooth, and DTS b/g/n.

Product Specification subjective to this standard	
Antenna Type	Monopole Antenna

EUT Information List		
HW Version	S/N	Performed Test Item
A	N/A	Conducted Measurement ERP/EIRP Test Radiated Spurious Emission

1.4 Modification of EUT

No modifications are made to the EUT during all test items.



1.5 Emission Designator

LTE Band 2		QPSK		16QAM	
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)
1.4	1850.7 ~ 1909.3	1M11G7D	0.0249	1M12W7D	0.0224
3	1851.5 ~ 1908.5	2M73G7D	0.0252	2M73W7D	0.0228
5	1852.5 ~ 1907.5	-	0.0268	-	0.0240
10	1855.0 ~ 1905.0	-	0.0287	-	0.0248
15	1857.5 ~ 1902.5	13M6G7D	0.0267	13M6W7D	0.0251
20	1860.0 ~ 1900.0	-	0.0282	-	0.0250
LTE Band 4		QPSK		16QAM	
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)
1.4	1710.7 ~ 1754.3	1M10G7D	0.0385	1M12W7D	0.0354
3	1711.5 ~ 1753.5	2M75G7D	0.0385	2M75W7D	0.0352
5	1712.5 ~ 1752.5	-	0.0381	-	0.0341
10	1715.0 ~ 1750.0	-	0.0387	-	0.0362
15	1717.5 ~ 1747.5	13M5G7D	0.0385	13M5W7D	0.0368
20	1720.0 ~ 1745.0	-	0.0387	-	0.0360
LTE Band 5		QPSK		16QAM	
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)
1.4	824.7 ~ 848.3	1M11G7D	0.0156	1M11W7D	0.0144
3	825.5 ~ 847.5	2M73G7D	0.0155	2M75W7D	0.0141
5	826.5 ~ 846.5	-	0.0155	-	0.0135
10	829.0 ~ 844.0	-	0.0156	-	0.0136
LTE Band 17		QPSK		16QAM	
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Maximum ERP(W)	Emission Designator (99%OBW)	Maximum ERP(W)
5	706.5 ~ 713.5	-	0.0147	-	0.0129
10	709.0 ~ 711.0	-	0.0139	-	0.0130



1.6 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1190 and TW0007 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No.
	TH05-HY

Test Site	SPORTON INTERNATIONAL INC.
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Test Site No.	Sporton Site No.
	03CH12-HY

1.7 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR Part 2, 22(H), 24(E), 27
- ♦ ANSI / TIA / EIA-603-E
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.



2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

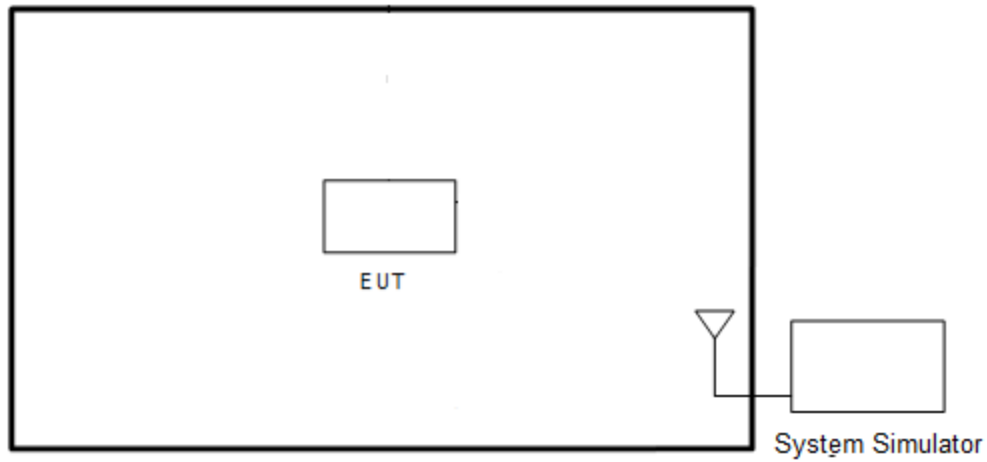
For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.

Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
Max. Output Power	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	5	✓	✓	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓	✓
	17	-	-	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓	✓
26dB and 99% Bandwidth	2	✓	✓			✓		✓	✓			✓	✓	✓	✓
	4	✓	✓			✓		✓	✓			✓	✓	✓	✓
	5	✓	✓			-	-	✓	✓			✓	✓	✓	✓
Conducted Band Edge	2	✓	✓			✓		✓	✓	✓		✓	✓		✓
	4	✓	✓			✓		✓	✓	✓		✓	✓		✓
	5	✓	✓			-	-	✓	✓	✓		✓	✓		✓
Conducted Spurious Emission	2	✓	✓			✓		✓	✓	✓			✓	✓	✓
	4	✓	✓			✓		✓	✓	✓			✓	✓	✓
	5	✓	✓			-	-	✓	✓	✓			✓	✓	✓



Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
E.R.P./ E.I.R.P.	2	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
	5	✓	✓	✓	✓	-	-	✓	✓	✓			✓	✓	✓
	17	-	-	✓	✓	-	-	✓	✓	✓			✓	✓	✓
Radiated Spurious Emission	2	✓	✓	✓	✓	✓	✓	✓		✓			✓	✓	✓
	4	✓	✓	✓	✓	✓	✓	✓		✓			✓	✓	✓
	5	✓	✓	✓	✓	-	-	✓		✓			✓	✓	✓
	17	-	-	✓	✓	-	-	✓		✓			✓	✓	✓
Note	<p>1. The mark “✓” means that this configuration is chosen for testing</p> <p>2. The mark “-” means that this bandwidth is not supported.</p> <p>3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.</p> <p>4. Additional conducted tests of bandwidth, emission, and band edges for some LTE Band 2/5/4 bandwidth configuration are performed for justify the compliance of these configurations that were not included in the original assessment.</p>														

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m



2.4 Frequency List of Low/Middle/High Channels

LTE Band 2 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	18700	18900	19100
	Frequency	1860	1880	1900
15	Channel	18675	18900	19125
	Frequency	1857.5	1880	1902.5
10	Channel	18650	18900	19150
	Frequency	1855	1880	1905
5	Channel	18625	18900	19175
	Frequency	1852.5	1880	1907.5
3	Channel	18615	18900	19185
	Frequency	1851.5	1880	1908.5
1.4	Channel	18607	18900	19193
	Frequency	1850.7	1880	1909.3

LTE Band 4 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	20050	20175	20300
	Frequency	1720	1732.5	1745
15	Channel	20025	20175	20325
	Frequency	1717.5	1732.5	1747.5
10	Channel	20000	20175	20350
	Frequency	1715	1732.5	1750
5	Channel	19975	20175	20375
	Frequency	1712.5	1732.5	1752.5
3	Channel	19965	20175	20385
	Frequency	1711.5	1732.5	1753.5
1.4	Channel	19957	20175	20393
	Frequency	1710.7	1732.5	1754.3



LTE Band 5 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	20450	20525	20600
	Frequency	829	836.5	844
5	Channel	20425	20525	20625
	Frequency	826.5	836.5	846.5
3	Channel	20415	20525	20635
	Frequency	825.5	836.5	847.5
1.4	Channel	20407	20525	20643
	Frequency	824.7	836.5	848.3

LTE Band 17 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	23780	23790	23800
	Frequency	709	710	711
5	Channel	23755	23790	23825
	Frequency	706.5	710	713.5

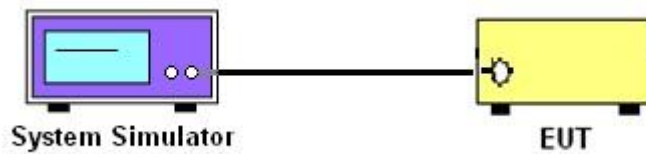
3 Conducted Test Items

3.1 Measuring Instruments

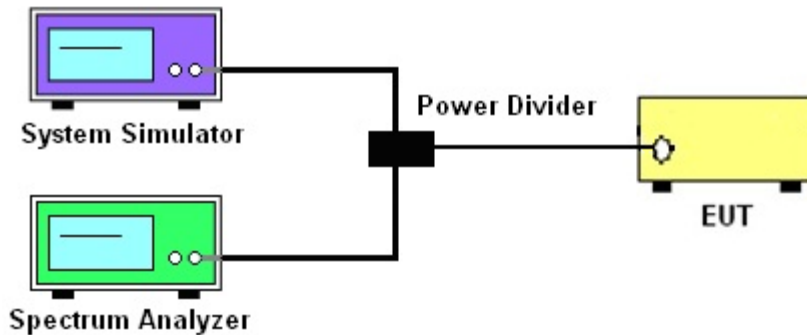
See list of measuring instruments of this test report.

3.1.1 Test Setup

3.1.2 Conducted Output Power



3.1.3 Occupied Bandwidth ,Conducted Band-Edge and Conducted Spurious Emission



3.1.4 Test Result of Conducted Test

Please refer to Appendix A.



3.2 Conducted Output Power and ERP/EIRP

3.2.1 Description of the Conducted Output Power Measurement and ERP/EIRP Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The ERP of mobile transmitters must not exceed 7 Watts for LTE Band 5.

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 17.

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 2.

The EIRP of mobile transmitters must not exceed 1 Watts for LTE Band 4.

According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T - L_C$, $ERP = EIRP - 2.15$, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

3.2.2 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.



3.3 Occupied Bandwidth

3.3.1 Description of Occupied Bandwidth Measurement

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

3.3.2 Test Procedures

1. The testing follows FCC KDB 971168 v03r01 Section 4.2.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
4. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
5. Set the detection mode to peak, and the trace mode to max hold.
6. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace.
(this is the reference value)
7. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
8. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “-X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.



3.4 Conducted Band Edge

3.4.1 Description of Conducted Band Edge Measurement

22.917(a)

For operations in the 824 – 849 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power P(Watts) in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

24.238 (a)

For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power P(Watts) in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53 (h)

For operations in the 1710 – 1755 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power P(Watts) in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

3.4.2 Test Procedures

1. The testing follows FCC KDB 971168 v03r01 Section 6.0.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW \geq 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)



3.5 Conducted Spurious Emission

3.5.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

3.5.2 Test Procedures

1. The testing follows FCC KDB 971168 v03r01 Section 6.0.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Taking the record of maximum spurious emission.
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
10. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

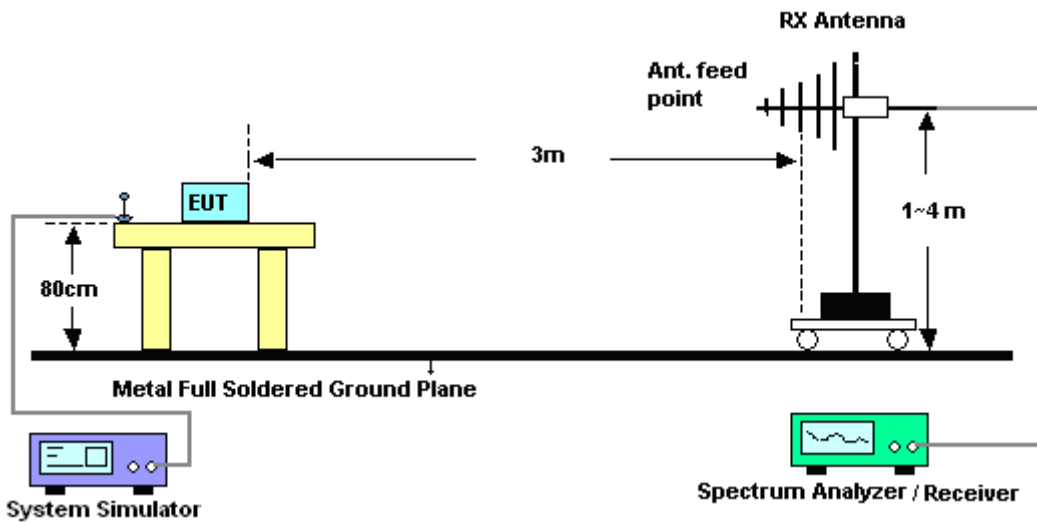
4 Radiated Test Items

4.1 Measuring Instruments

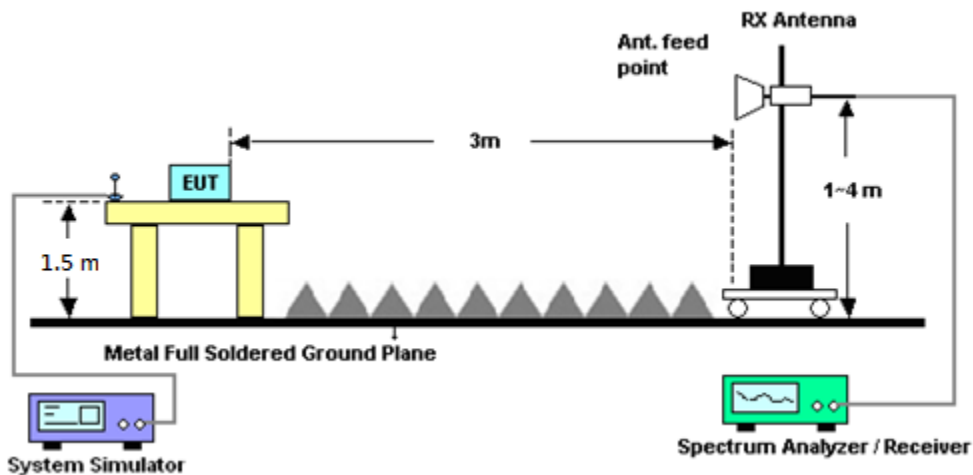
See list of measuring instruments of this test report.

4.2 Test Setup

4.2.1 For radiated test from 30MHz to 1GHz



4.2.2 For radiated test above 1GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.



4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI / TIA / EIA-603-E. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For LTE Band 17

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.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.4.2 Test Procedures

1. The testing follows FCC KDB 971168 v03r01 Section 5.8 and ANSI / TIA-603-D-2010 Section 2.2.12.
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	Testo	608-H2	41410069	N/A	Aug. 21, 2017	Jan. 03, 2017~ Apr. 27, 2018	Aug. 20, 2018	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101397	10Hz~40GHz	Nov. 07, 2017	Jan. 03, 2017~ Apr. 27, 2018	Nov. 06, 2018	Conducted (TH05-HY)
Temperature Chamber	ESPEC	SH-641	92013720	-30°C~70°C	Aug. 28, 2017	Jan. 03, 2017~ Apr. 27, 2018	Aug. 27, 2018	Conducted (TH05-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL890089	1V~20V 0.5A~5A	Jan. 12, 2017	Jan. 03, 2017	Jan. 11, 2018	Conducted (TH05-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL890089	1V~20V 0.5A~5A	Jan. 12, 2018	Apr. 27, 2018	Jan. 11, 2019	Conducted (TH05-HY)
LTE Base Station	Anritsu	MT8820C	6201432821	GSM/GPRS /WCDMA/LTE	Oct. 13, 2017	Jan. 03, 2017~ Apr. 27, 2018	Oct. 12, 2018	Conducted (TH05-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY84209521	1GHz~26GHz	Dec. 01, 2017	Jan. 03, 2017~ Apr. 27, 2018	Nov. 30, 2018	Conducted (TH05-HY)
Bilog Antenna	TESEQ	CBL 6111D&008	40103&04	30MHz to 1GHz	Jan. 07, 2017	Dec. 15, 2017~ Dec. 18, 2017	Jan. 06, 2018	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1328	1GHz ~ 18GHz	Oct. 20, 2017	Dec. 15, 2017~ Dec. 18, 2017	Oct. 19, 2018	Radiation (03CH12-HY)
Horn Antenna	ESCO	3117	00066584	1GHz~18GHz	Sep. 06, 2017	Dec. 15, 2017~ Dec. 18, 2017	Sep. 05, 2018	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz- 40GHz	Nov. 10, 2017	Dec. 15, 2017~ Dec. 18, 2017	Nov. 09, 2018	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Nov. 17, 2017	Dec. 15, 2017~ Dec. 18, 2017	Nov. 26, 2018	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103	161075	10MHz~1GHz	Mar. 23, 2017	Dec. 15, 2017~ Dec. 18, 2017	Mar. 22, 2018	Radiation (03CH12-HY)
Preamplifier	Keysight	83017A	MY53270148	1GHz~26.5GHz	Jan. 12, 2017	Dec. 15, 2017~ Dec. 18, 2017	Jan. 11, 2018	Radiation (03CH12-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 05, 2017	Dec. 15, 2017~ Dec. 18, 2017	Dec. 04, 2018	Radiation (03CH12-HY)
EMI Test Receiver	Rohde & Schwarz	ESU26	100390	20Hz~26.5GHz	Dec. 23, 2016	Dec. 15, 2017~ Dec. 18, 2017	Dec. 22, 2017	Radiation (03CH12-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Dec. 15, 2017~ Dec. 18, 2017	N/A	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-450 0-B	N/A	1m~4m	N/A	Dec. 15, 2017~ Dec. 18, 2017	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Dec. 15, 2017~ Dec. 18, 2017	N/A	Radiation (03CH12-HY)
Hygrometer	TECPEL	DTM-303B	TP140349	N/A	Nov. 12, 2017	Dec. 15, 2017~ Dec. 18, 2017	Nov. 11, 2018	Radiation (03CH12-HY)
Signal Generator	Anritsu	MG3694C	163401	0.1Hz~40GHz	Jan. 04, 2017	Dec. 15, 2017~ Dec. 18, 2017	Jan. 03, 2018	Radiation (03CH12-HY)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24958/4,M Y28653/4,MY9	26GHz~40GHz	Jan. 10, 2017	Dec. 15, 2017~ Dec. 18, 2017	Jan. 09, 2018	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24958/4,M Y28653/4,MY9	1GHz~26GHz	Jan. 10, 2017	Dec. 15, 2017~ Dec. 18, 2017	Jan. 09, 2018	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24958/4,M Y28653/4,MY9	30MHz~1GHz	Jan. 10, 2017	Dec. 15, 2017~ Dec. 18, 2017	Jan. 09, 2018	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-10 80-1200-150 00-60ST	SN1	1.2 GHz Highpas	Jul. 17, 2017	Dec. 15, 2017~ Dec. 18, 2017	Jul. 16, 2018	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-27 00-3000-180 00-60ST	SN2	3 GHz Highpass	Jul. 17, 2017	Dec. 15, 2017~ Dec. 18, 2017	Jul. 16, 2018	Radiation (03CH12-HY)
Filter	Wainwright	WLKS1200- 12SS	SN2	1.2G Low Pass	Mar. 24, 2017	Dec. 15, 2017~ Dec. 18, 2017	Mar. 23, 2018	Radiation (03CH12-HY)
Notch Filter	Wainwright	WRCT/800/ 960-0.2/40-8 SSK	SN11	GSM850	Sep. 19, 2017	Dec. 15, 2017~ Dec. 18, 2017	Sep. 18, 2018	Radiation (03CH12-HY)
Notch Filter	Wainwright	WRCD1700/ 2000-0.2/40- 10SSK	SN37	DCS 1900	Aug. 24, 2017	Dec. 15, 2017~ Dec. 18, 2017	Aug. 23, 2018	Radiation (03CH12-HY)
Notch Filter	Wainwright	WRCT2500/ 2570-10/40- 10SSK	SN1 R	LTE Band7	Aug. 24, 2017	Dec. 15, 2017~ Dec. 18, 2017	Aug. 23, 2018	Radiation (03CH12-HY)
Test Software	N/A	E3	6.2009-8-24	N/A	N/A	Dec. 15, 2017~ Dec. 18, 2017	N/A	Radiation (03CH12-HY)



6 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.36
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.70
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.98
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	23.47	23.33	23.51
20	1	49		22.86	22.90	23.21
20	1	99		22.63	22.95	22.96
20	50	0		22.53	22.50	22.96
20	50	24		22.19	22.26	22.62
20	50	50		22.03	22.30	22.54
20	100	0		22.26	22.42	22.75
20	1	0	16-QAM	22.98	22.81	22.98
20	1	49		22.40	22.39	22.71
20	1	99		22.38	22.43	22.50
20	50	0		21.47	21.50	21.97
20	50	24		21.23	21.27	21.61
20	50	50		21.15	21.31	21.51
20	100	0		21.20	21.41	21.74
15	1	0	QPSK	23.05	23.02	23.27
15	1	37		22.58	22.72	22.88
15	1	74		22.40	22.76	22.57
15	36	0		22.37	22.41	22.81
15	36	20		22.10	22.25	22.53
15	36	39		22.05	22.30	22.36
15	75	0		22.17	22.39	22.63
15	1	0	16-QAM	22.98	22.83	22.99
15	1	37		22.43	22.54	22.65
15	1	74		22.38	22.67	22.45
15	36	0		21.40	21.48	21.81
15	36	20		21.18	21.23	21.48
15	36	39		21.10	21.26	21.33
15	75	0		21.20	21.42	21.56



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	23.16	23.14	23.58
10	1	25		22.76	22.69	22.82
10	1	49		22.72	22.93	22.71
10	25	0		22.28	22.38	22.64
10	25	12		22.10	22.21	22.36
10	25	25		22.06	22.27	22.24
10	50	0		22.20	22.31	22.39
10	1	0	16-QAM	22.85	22.77	22.95
10	1	25		22.40	22.46	22.54
10	1	49		22.41	22.68	22.44
10	25	0		21.37	21.41	21.64
10	25	12		21.15	21.27	21.37
10	25	25		21.15	21.30	21.27
10	50	0		21.23	21.36	21.46
5	1	0	QPSK	23.12	23.05	23.28
5	1	12		22.93	23.01	22.68
5	1	24		22.92	22.87	22.64
5	12	0		22.31	22.26	22.41
5	12	7		22.15	22.22	22.30
5	12	13		22.14	22.22	22.22
5	25	0		22.18	22.23	22.27
5	1	0	16-QAM	22.79	22.58	22.80
5	1	12		22.46	22.54	22.56
5	1	24		22.39	22.45	22.33
5	12	0		21.34	21.35	21.44
5	12	7		21.23	21.27	21.31
5	12	13		21.16	21.27	21.25
5	25	0		21.21	21.30	21.34



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	23.01	22.79	22.78
3	1	8		22.97	22.71	22.64
3	1	14		22.92	22.70	22.52
3	8	0		22.25	22.26	22.26
3	8	4		22.23	22.26	22.27
3	8	7		22.20	22.24	22.18
3	15	0		22.20	22.25	22.26
3	1	0	16-QAM	22.44	22.53	22.57
3	1	8		22.41	22.52	22.44
3	1	14		22.38	22.47	22.29
3	8	0		21.32	21.28	21.34
3	8	4		21.23	21.25	21.24
3	8	7		21.23	21.28	21.23
3	15	0		21.31	21.33	21.29
1.4	1	0	QPSK	22.96	22.72	22.64
1.4	1	3		22.91	22.71	22.56
1.4	1	5		22.78	22.70	22.55
1.4	3	0		22.69	22.78	22.67
1.4	3	1		22.68	22.76	22.64
1.4	3	3		22.70	22.74	22.62
1.4	6	0		22.12	22.16	22.14
1.4	1	0	16-QAM	22.46	22.49	22.42
1.4	1	3		22.50	22.51	22.39
1.4	1	5		22.41	22.47	22.30
1.4	3	0		22.29	22.32	22.20
1.4	3	1		22.24	22.33	22.16
1.4	3	3		22.20	22.33	22.15
1.4	6	0		21.23	21.28	21.21



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	23.25	23.10	23.28
20	1	49		22.72	22.77	22.99
20	1	99		22.72	22.66	23.06
20	50	0		22.59	22.40	22.79
20	50	24		22.19	22.13	22.46
20	50	50		22.23	22.14	22.57
20	100	0		22.39	22.30	22.66
20	1	0	16-QAM	22.96	22.64	22.95
20	1	49		22.49	22.41	22.67
20	1	99		22.45	22.33	22.73
20	50	0		21.68	21.49	21.85
20	50	24		21.26	21.24	21.53
20	50	50		21.31	21.21	21.62
20	100	0		21.42	21.32	21.73
15	1	0	QPSK	23.21	23.18	23.26
15	1	37		22.87	22.83	23.16
15	1	74		22.69	22.90	23.07
15	36	0		22.42	22.46	22.68
15	36	20		22.16	22.27	22.52
15	36	39		22.09	22.29	22.51
15	75	0		22.22	22.38	22.63
15	1	0	16-QAM	23.00	22.93	23.06
15	1	37		22.52	22.47	22.83
15	1	74		22.35	22.56	22.76
15	36	0		21.55	21.57	21.80
15	36	20		21.28	21.34	21.63
15	36	39		21.22	21.34	21.63
15	75	0		21.32	21.42	21.68



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.95	22.97	23.28
10	1	25		22.63	22.70	23.18
10	1	49		22.57	22.99	23.24
10	25	0		22.30	22.40	22.72
10	25	12		22.16	22.20	22.56
10	25	25		22.12	22.23	22.60
10	50	0		22.21	22.28	22.66
10	1	0	16-QAM	22.80	22.79	22.99
10	1	25		22.46	22.43	22.72
10	1	49		22.39	22.56	22.79
10	25	0		21.43	21.48	21.83
10	25	12		21.29	21.32	21.68
10	25	25		21.23	21.33	21.70
10	50	0		21.31	21.38	21.76
5	1	0	QPSK	23.02	22.93	23.12
5	1	12		22.85	22.80	23.21
5	1	24		22.81	22.85	23.15
5	12	0		22.27	22.29	22.66
5	12	7		22.18	22.21	22.57
5	12	13		22.16	22.21	22.53
5	25	0		22.19	22.21	22.55
5	1	0	16-QAM	22.60	22.43	22.73
5	1	12		22.38	22.35	22.72
5	1	24		22.34	22.33	22.67
5	12	0		21.33	21.33	21.69
5	12	7		21.24	21.22	21.62
5	12	13		21.19	21.20	21.54
5	25	0		21.22	21.24	21.56



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.75	22.60	23.25
3	1	8		22.66	22.54	23.21
3	1	14		22.59	22.53	23.19
3	8	0		22.20	22.16	22.59
3	8	4		22.16	22.18	22.58
3	8	7		22.14	22.16	22.56
3	15	0		22.17	22.14	22.57
3	1	0	16-QAM	22.51	22.38	22.86
3	1	8		22.45	22.34	22.77
3	1	14		22.37	22.31	22.73
3	8	0		21.29	21.32	21.70
3	8	4		21.21	21.27	21.65
3	8	7		21.26	21.27	21.68
3	15	0		21.34	21.27	21.72
1.4	1	0	QPSK	22.97	22.86	23.23
1.4	1	3		22.94	22.85	23.21
1.4	1	5		22.90	22.85	23.23
1.4	3	0		22.96	22.90	23.24
1.4	3	1		22.95	22.92	23.22
1.4	3	3		22.91	22.93	23.25
1.4	6	0		22.24	22.20	22.55
1.4	1	0	16-QAM	22.59	22.44	22.89
1.4	1	3		22.57	22.51	22.83
1.4	1	5		22.51	22.46	22.80
1.4	3	0		22.31	22.28	22.66
1.4	3	1		22.31	22.31	22.66
1.4	3	3		22.32	22.30	22.65
1.4	6	0		21.39	21.35	21.73



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.78	22.98	22.77
10	1	25		22.56	22.78	22.64
10	1	49		22.58	22.70	22.45
10	25	0		22.24	22.18	22.01
10	25	12		22.12	22.08	21.93
10	25	25		22.13	22.05	21.85
10	50	0		22.19	22.12	21.95
10	1	0	16-QAM	22.38	22.31	22.20
10	1	25		22.22	22.07	22.11
10	1	49		22.12	22.02	21.88
10	25	0		21.09	21.00	20.93
10	25	12		20.98	20.88	20.86
10	25	25		20.96	20.85	20.78
10	50	0		21.01	20.90	20.85
5	1	0	QPSK	22.80	22.95	22.83
5	1	12		22.72	22.89	22.80
5	1	24		22.65	22.82	22.69
5	12	0		22.32	22.29	22.16
5	12	7		22.29	22.22	22.08
5	12	13		22.26	22.20	22.06
5	25	0		22.28	22.25	22.11
5	1	0	16-QAM	22.30	22.26	22.15
5	1	12		22.35	22.18	22.12
5	1	24		22.23	22.11	22.00
5	12	0		21.17	21.05	20.95
5	12	7		21.16	20.97	20.91
5	12	13		21.11	21.00	20.86
5	25	0		21.10	21.02	20.93



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.75	22.94	22.77
3	1	8		22.73	22.90	22.73
3	1	14		22.72	22.86	22.71
3	8	0		22.29	22.20	22.05
3	8	4		22.27	22.19	22.04
3	8	7		22.26	22.16	22.02
3	15	0		22.27	22.18	22.03
3	1	0	16-QAM	22.50	22.47	22.31
3	1	8		22.55	22.46	22.30
3	1	14		22.46	22.37	22.20
3	8	0		21.40	21.33	21.15
3	8	4		21.40	21.28	21.12
3	8	7		21.45	21.28	21.13
3	15	0		21.49	21.32	21.17
1.4	1	0	QPSK	22.81	22.66	22.80
1.4	1	3		22.79	22.70	22.80
1.4	1	5		22.81	22.89	22.81
1.4	3	0		22.79	22.97	22.80
1.4	3	1		22.79	22.95	22.80
1.4	3	3		22.81	22.95	22.81
1.4	6	0		22.28	22.21	22.07
1.4	1	0	16-QAM	22.61	22.52	22.42
1.4	1	3		22.63	22.51	22.41
1.4	1	5		22.63	22.47	22.38
1.4	3	0		22.41	22.33	22.17
1.4	3	1		22.44	22.34	22.17
1.4	3	3		22.39	22.30	22.17
1.4	6	0		21.41	21.34	21.17



LTE Band 17 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.48	22.49	22.57
10	1	25		22.54	22.50	22.49
10	1	49		22.39	22.39	22.50
10	25	0		22.03	22.02	22.08
10	25	12		22.02	22.03	22.06
10	25	25		22.04	22.02	22.07
10	50	0		22.00	22.05	22.07
10	1	0	16-QAM	22.16	22.09	22.29
10	1	25		22.23	21.96	22.16
10	1	49		22.02	21.90	22.10
10	25	0		20.99	20.81	21.01
10	25	12		20.97	20.79	20.99
10	25	25		20.98	20.77	20.97
10	50	0		20.94	20.78	20.98
5	1	0	QPSK	22.74	22.73	22.82
5	1	12		22.74	22.78	22.73
5	1	24		22.73	22.75	22.67
5	12	0		22.09	22.14	22.11
5	12	7		22.08	22.10	22.06
5	12	13		22.09	22.09	22.06
5	25	0		22.03	22.11	22.12
5	1	0	16-QAM	22.13	22.23	22.21
5	1	12		22.19	22.24	22.11
5	1	24		22.12	22.16	21.99
5	12	0		21.02	21.02	20.93
5	12	7		21.02	21.00	20.88
5	12	13		21.01	20.99	20.88
5	25	0		20.99	21.01	20.92



LTE Band 2

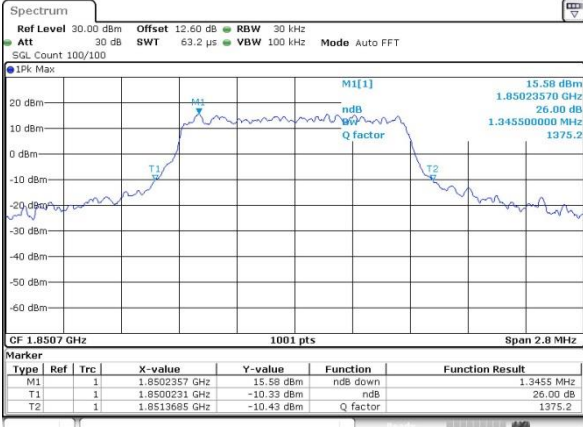
26dB Bandwidth

Mode	LTE Band 2 : 26dB BW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW												
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.35	1.38	2.99	3.09	-	-	-	-	14.75	14.75	-	-
Middle CH	1.32	1.33	3.03	3.03	-	-	-	-	15.32	16.57	-	-
Highest CH	1.32	1.32	3.03	3.34	-	-	-	-	15.08	15.23	-	-



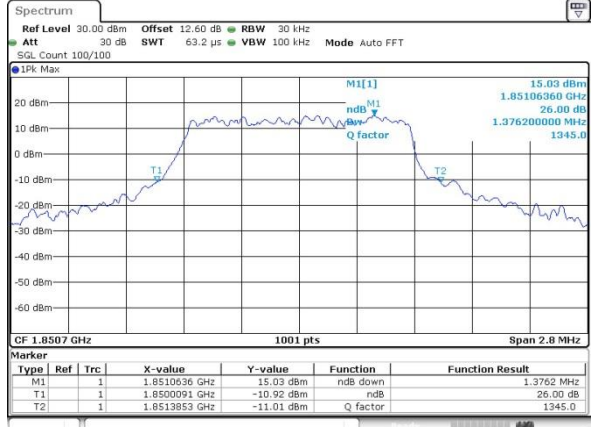
LTE Band 2

Lowest Channel / 1.4MHz / QPSK



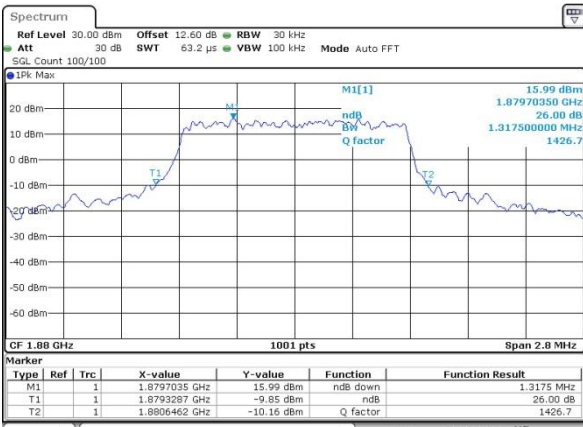
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Lowest Channel / 1.4MHz / 16QAM



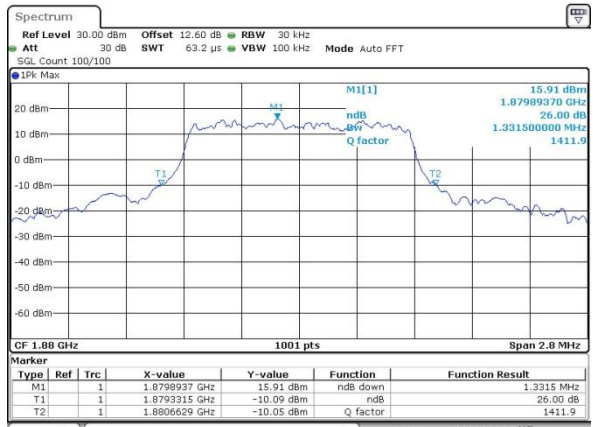
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Middle Channel / 1.4MHz / QPSK



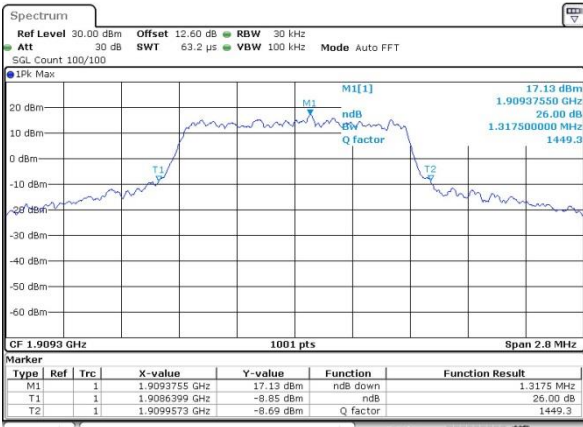
Date: 26.APR.2018 19:32:39

Middle Channel / 1.4MHz / 16QAM



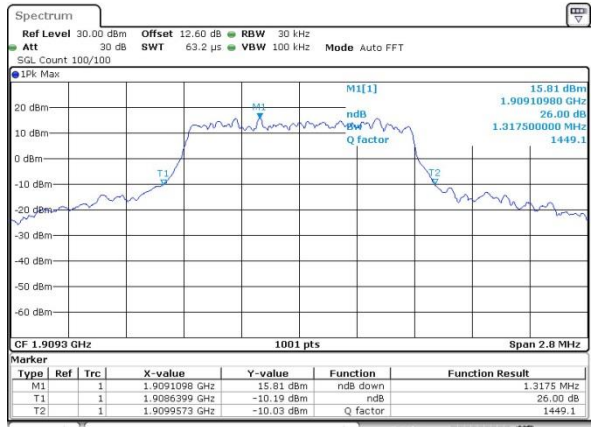
Date: 26.APR.2018 19:32:50

Highest Channel / 1.4MHz / QPSK



Date: 26.APR.2018 19:35:22

Highest Channel / 1.4MHz / 16QAM

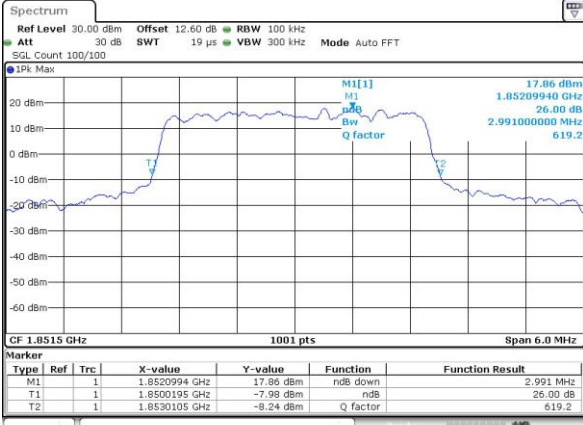


Date: 26.APR.2018 19:35:33



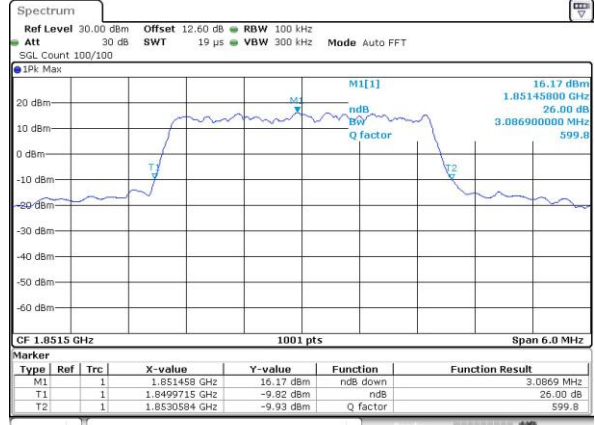
LTE Band 2

Lowest Channel / 3MHz / QPSK



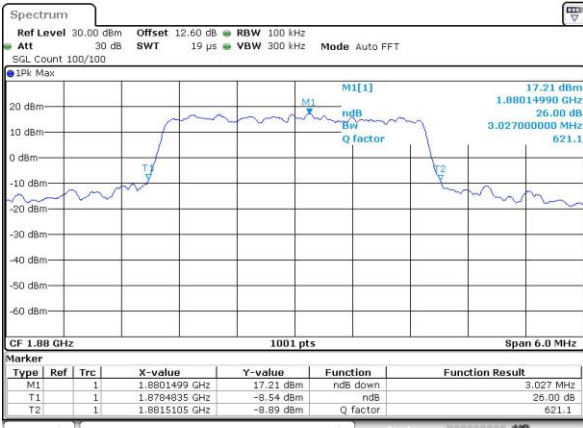
Date: 26.APR.2018 19:47:30

Lowest Channel / 3MHz / 16QAM



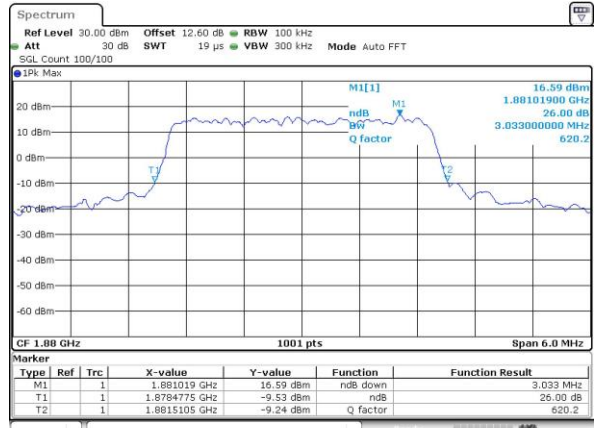
Date: 26.APR.2018 19:47:41

Middle Channel / 3MHz / QPSK



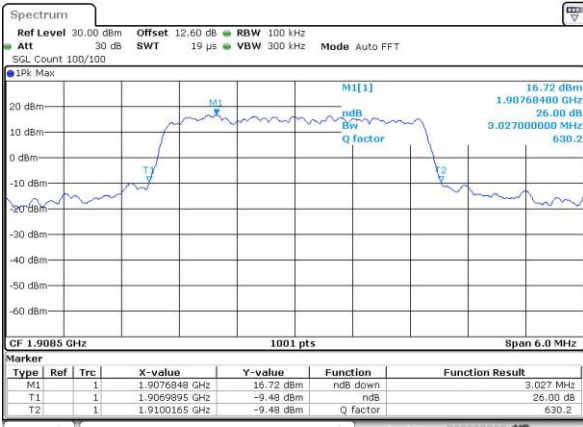
Date: 26.APR.2018 19:54:53

Middle Channel / 3MHz / 16QAM



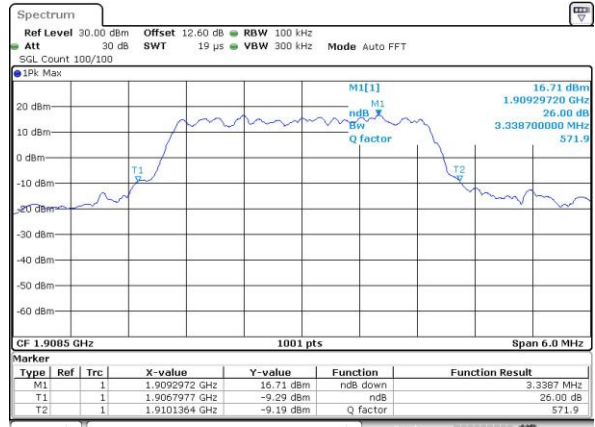
Date: 26.APR.2018 19:55:05

Highest Channel / 3MHz / QPSK



Date: 26.APR.2018 19:57:37

Highest Channel / 3MHz / 16QAM

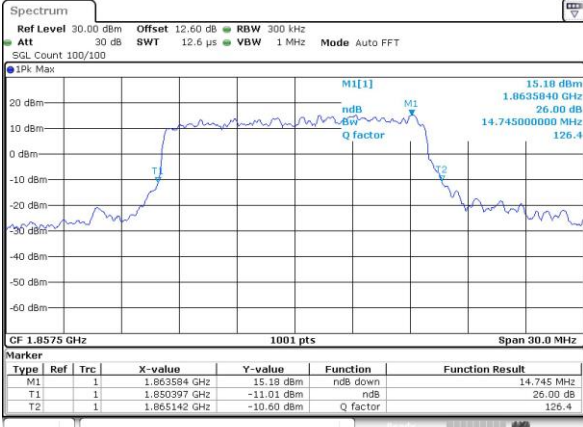


Date: 26.APR.2018 19:57:49



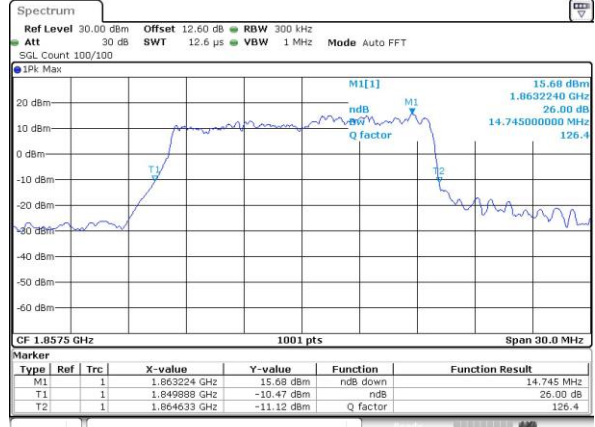
LTE Band 2

Lowest Channel / 15MHz / QPSK



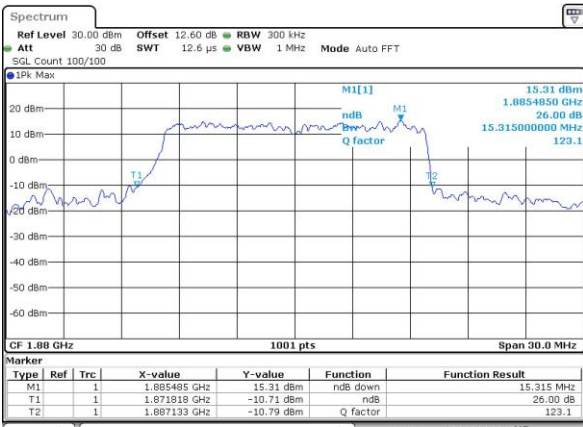
Date: 26.APR.2018 20:07:40

Lowest Channel / 15MHz / 16QAM



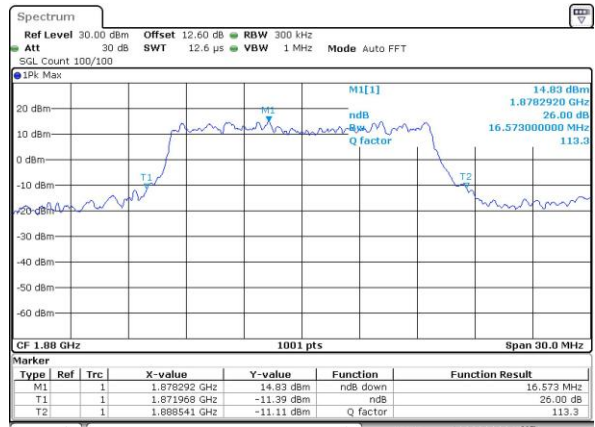
Date: 26.APR.2018 20:08:00

Middle Channel / 15MHz / QPSK



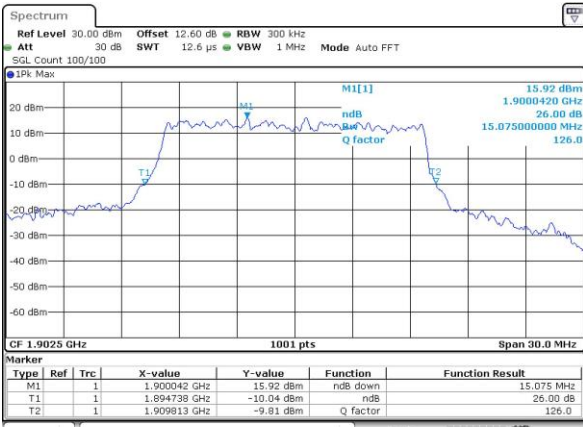
Date: 26.APR.2018 20:15:11

Middle Channel / 15MHz / 16QAM



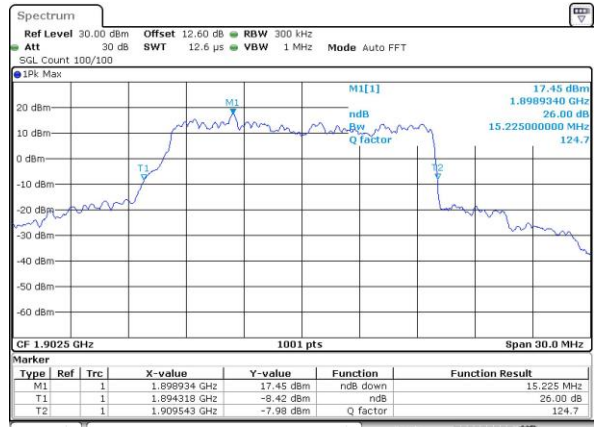
Date: 26.APR.2018 20:15:23

Highest Channel / 15MHz / QPSK



Date: 26.APR.2018 20:17:56

Highest Channel / 15MHz / 16QAM



Date: 26.APR.2018 20:18:07



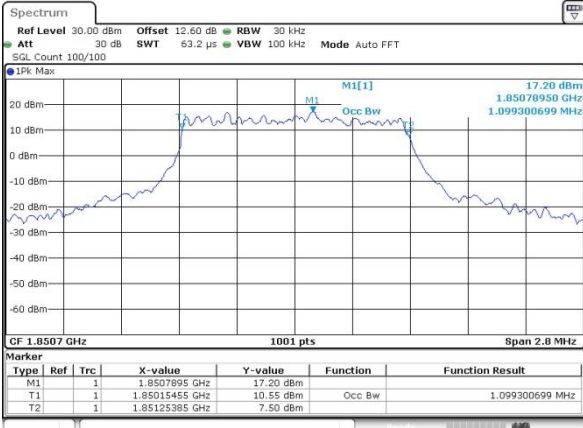
Occupied Bandwidth

Mode	LTE Band 2 : 99%OBW(MHz)											
	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
BW	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.1	1.11	2.71	2.73	-	-	-	-	13.46	13.43	-	-
Middle CH	1.1	1.1	2.73	2.73	-	-	-	-	13.58	13.55	-	-
Highest CH	1.11	1.12	2.73	2.73	-	-	-	-	13.49	13.49	-	-



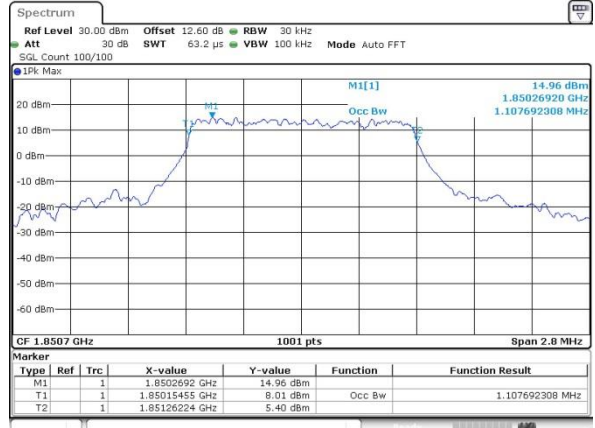
LTE Band 2

Lowest Channel / 1.4MHz / QPSK



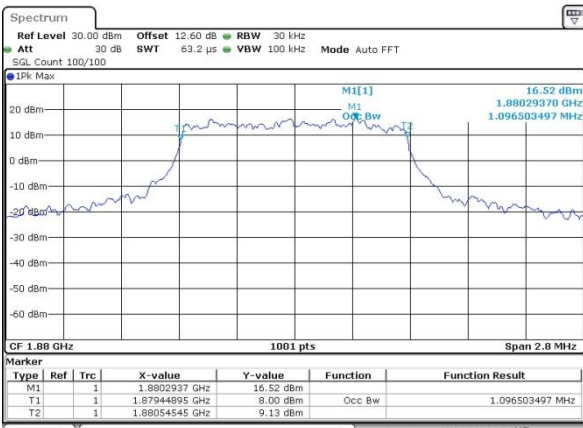
Date: 26.APR.2018 19:24:51

Lowest Channel / 1.4MHz / 16QAM



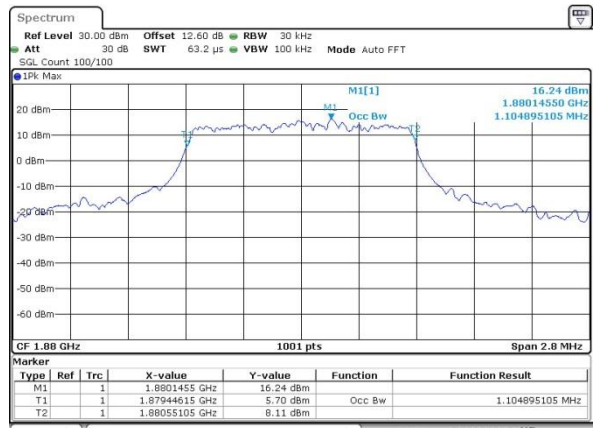
Date: 26.APR.2018 19:25:03

Middle Channel / 1.4MHz / QPSK



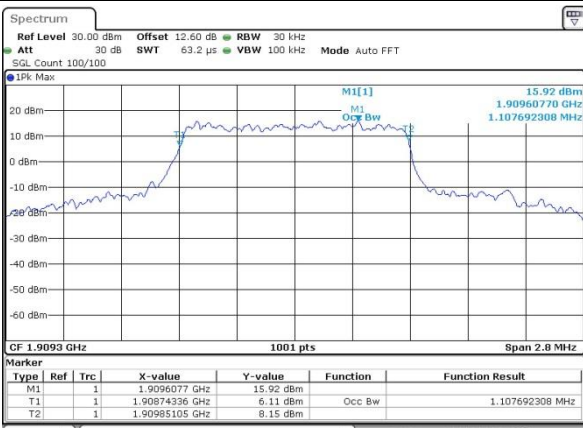
Date: 26.APR.2018 19:32:15

Middle Channel / 1.4MHz / 16QAM



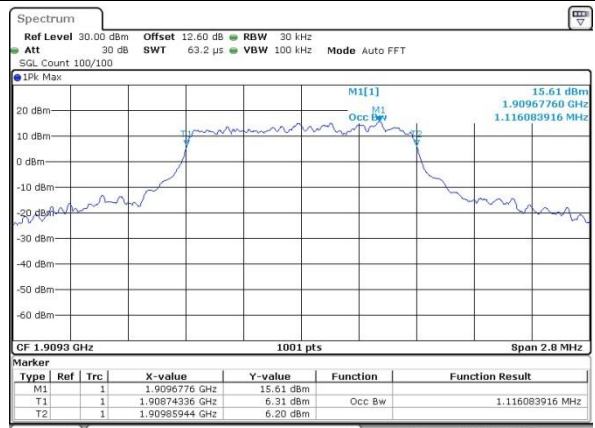
Date: 26.APR.2018 19:32:27

Highest Channel / 1.4MHz / QPSK



Date: 26.APR.2018 19:34:50

Highest Channel / 1.4MHz / 16QAM

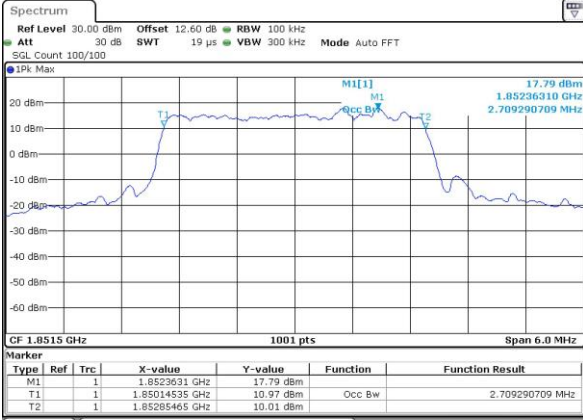


Date: 26.APR.2018 19:35:10



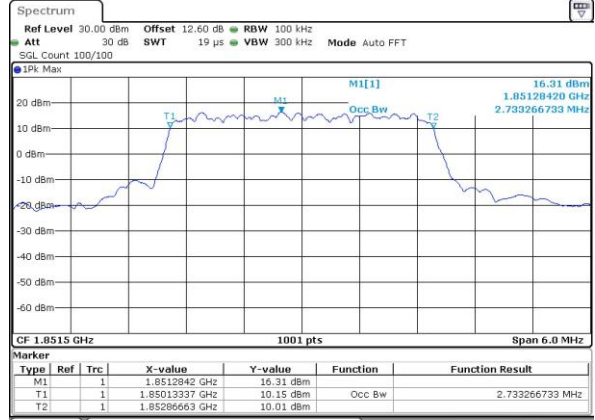
LTE Band 2

Lowest Channel / 3MHz / QPSK



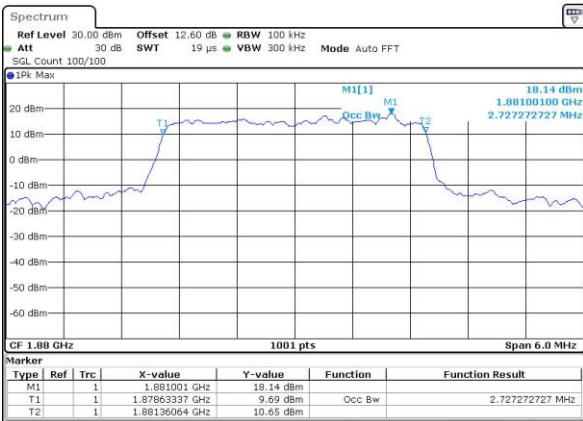
Date: 26.APR.2018 19:47:06

Lowest Channel / 3MHz / 16QAM



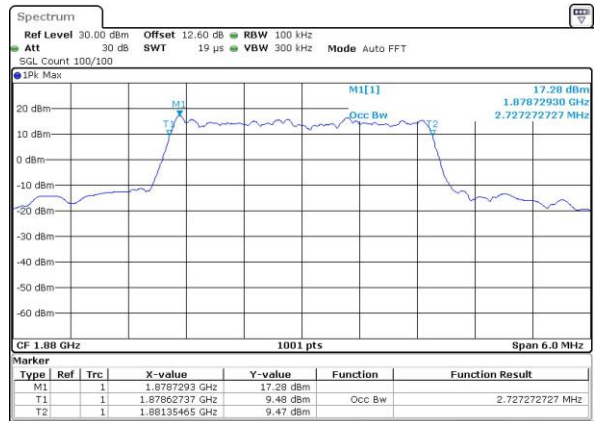
Date: 26.APR.2018 19:47:18

Middle Channel / 3MHz / QPSK



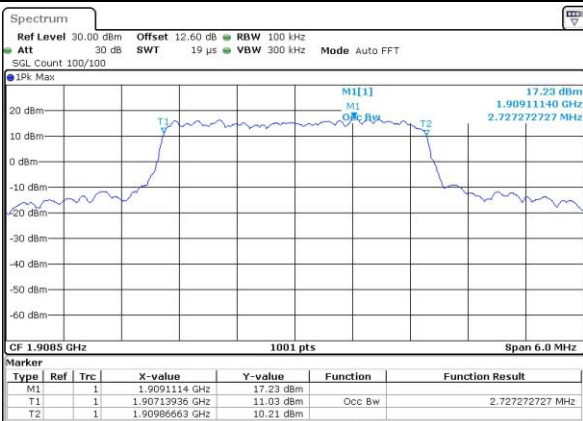
Date: 26.APR.2018 19:54:30

Middle Channel / 3MHz / 16QAM



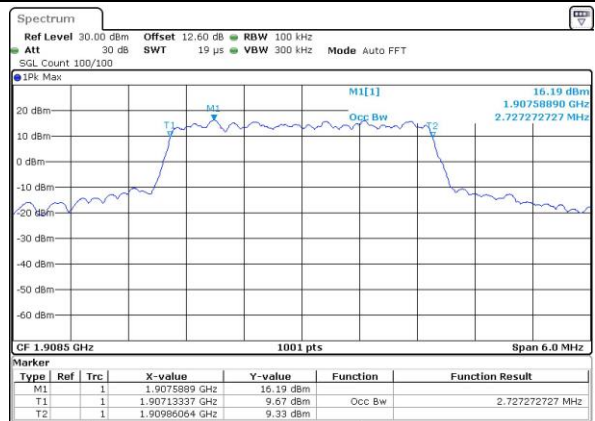
Date: 26.APR.2018 19:54:41

Highest Channel / 3MHz / QPSK



Date: 26.APR.2018 19:57:13

Highest Channel / 3MHz / 16QAM

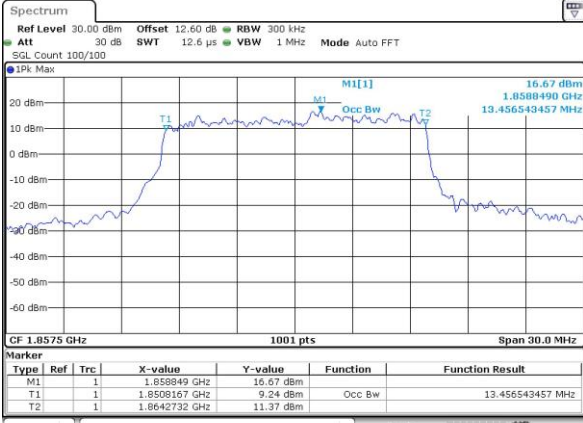


Date: 26.APR.2018 19:57:25



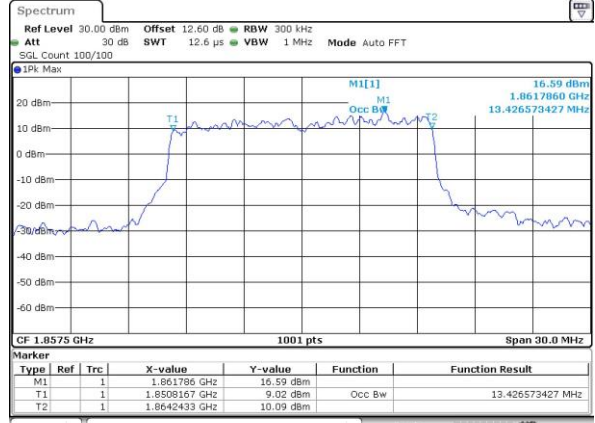
LTE Band 2

Lowest Channel / 15MHz / QPSK



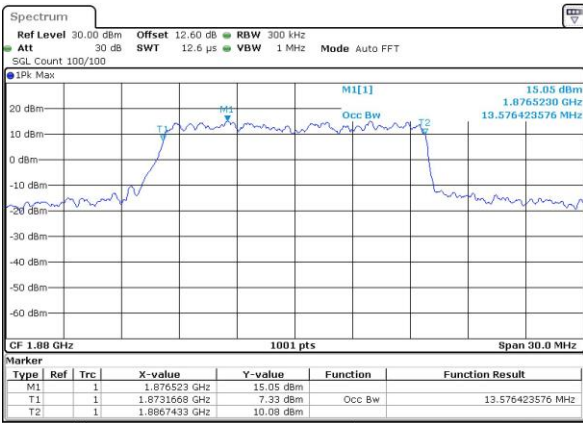
Date: 26.APR.2018 20:07:25

Lowest Channel / 15MHz / 16QAM



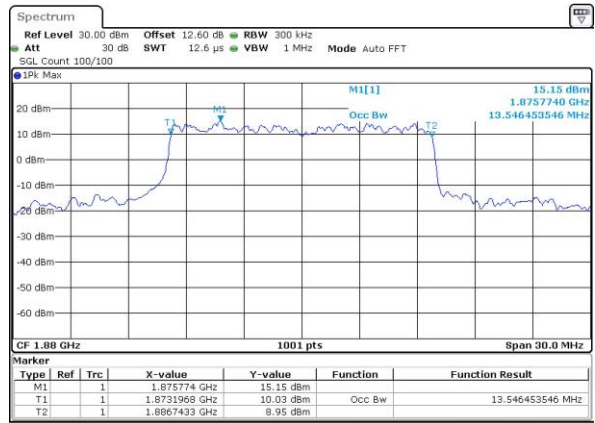
Date: 26.APR.2018 20:07:36

Middle Channel / 15MHz / QPSK



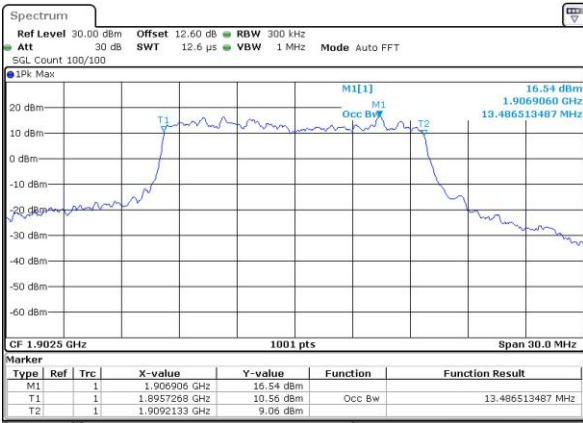
Date: 26.APR.2018 20:14:48

Middle Channel / 15MHz / 16QAM



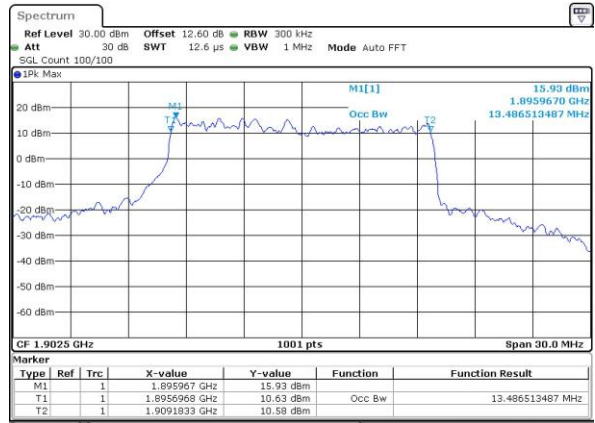
Date: 26.APR.2018 20:15:00

Highest Channel / 15MHz / QPSK



Date: 26.APR.2018 20:17:32

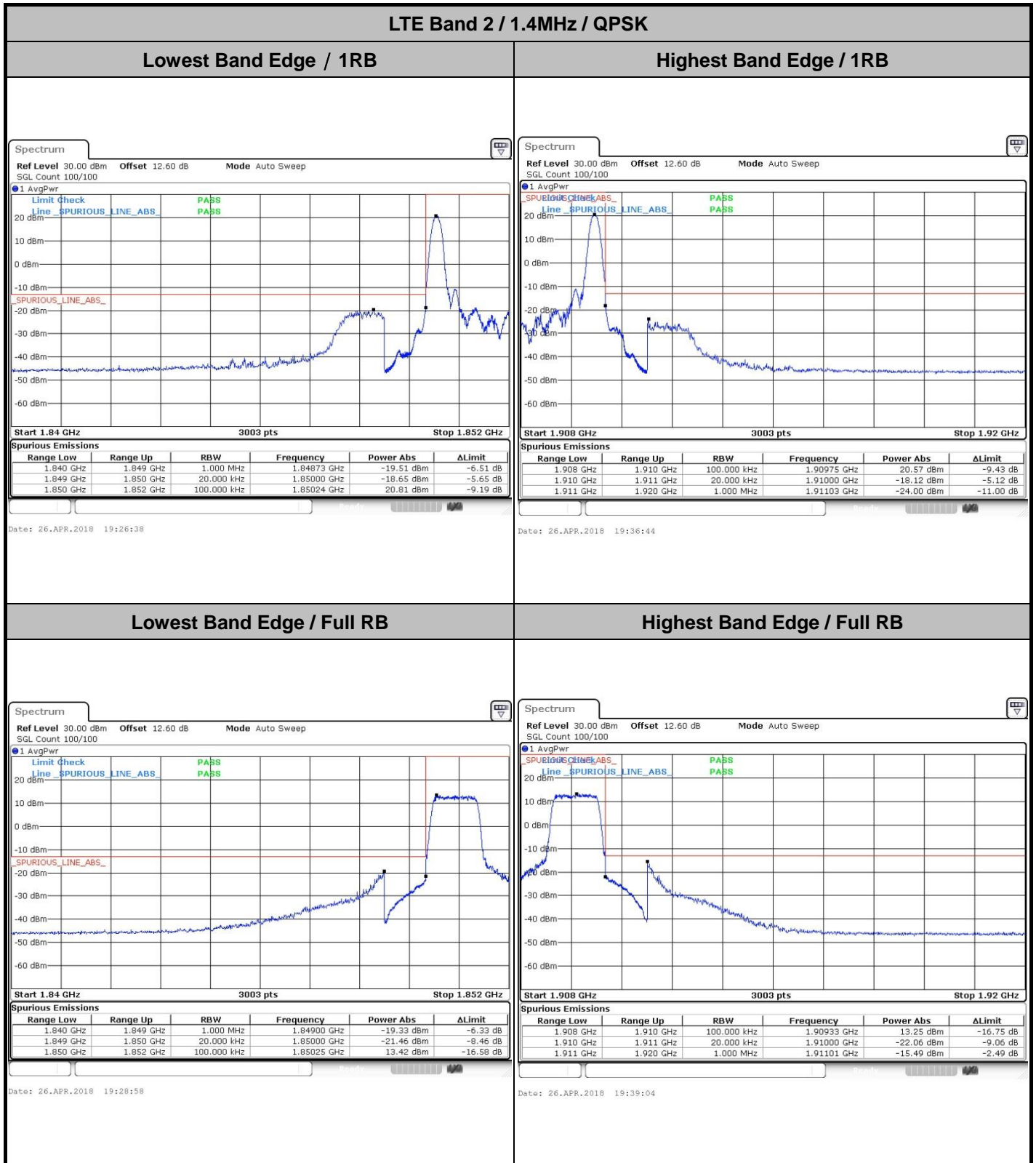
Highest Channel / 15MHz / 16QAM



Date: 26.APR.2018 20:17:44



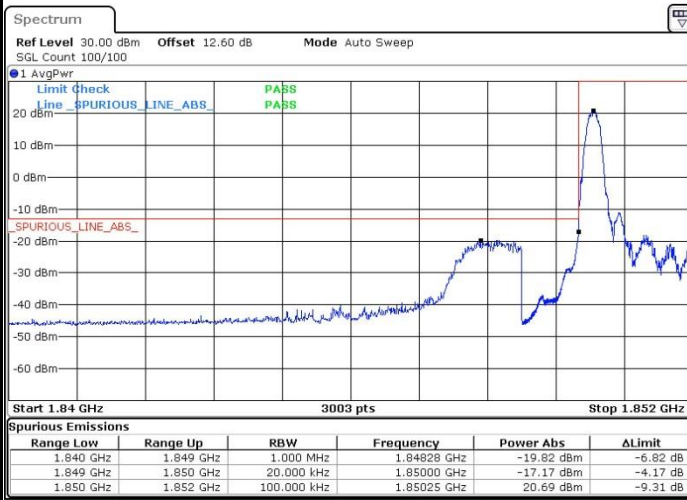
Conducted Band Edge





LTE Band 2 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB



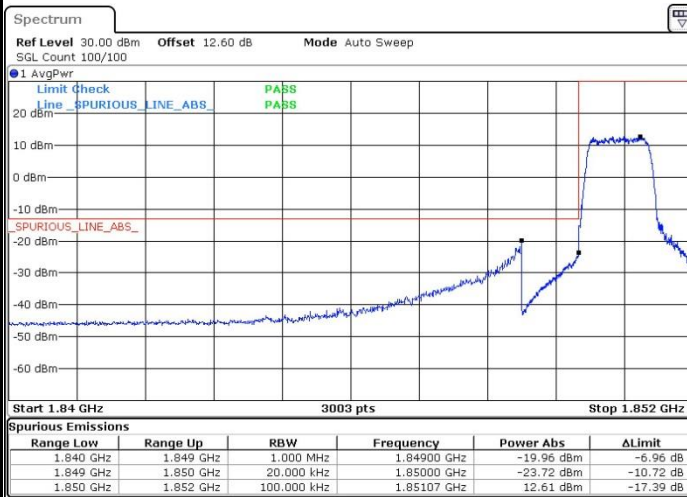
Date: 26.APR.2018 19:27:48

Highest Band Edge / 1 RB



Date: 26.APR.2018 19:37:54

Lowest Band Edge / Full RB



Date: 26.APR.2018 19:30:08

Highest Band Edge / Full RB

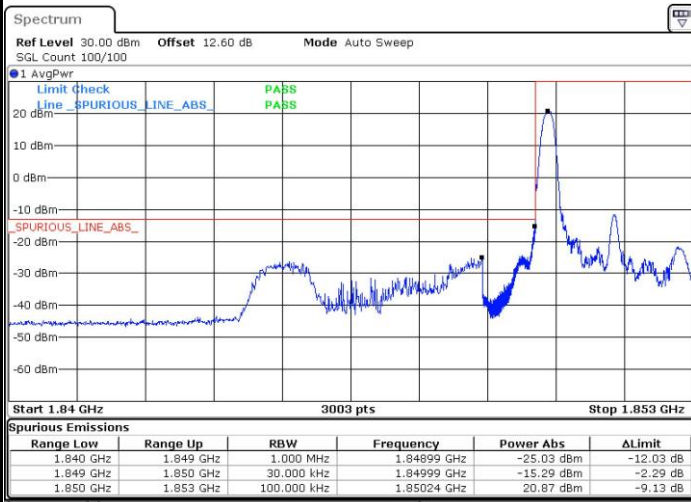


Date: 26.APR.2018 19:40:14



LTE Band 2 / 3MHz / QPSK

Lowest Band Edge / 1RB



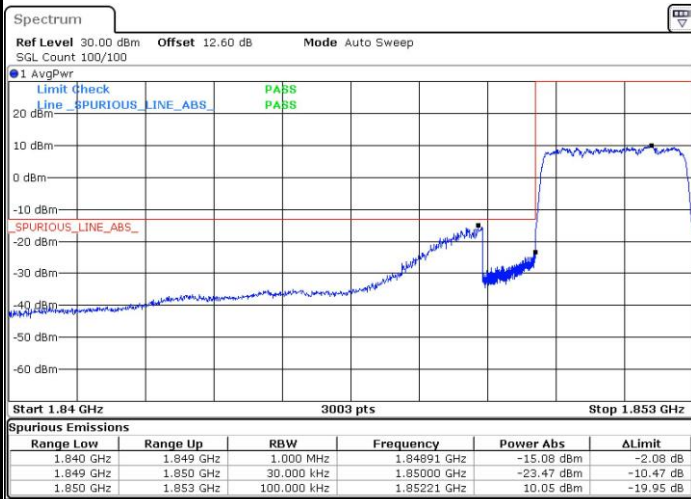
Date: 26.APR.2018 19:48:52

Highest Band Edge / 1 RB



Date: 26.APR.2018 19:58:59

Lowest Band Edge / Full RB



Date: 26.APR.2018 19:51:11

Highest Band Edge / Full RB

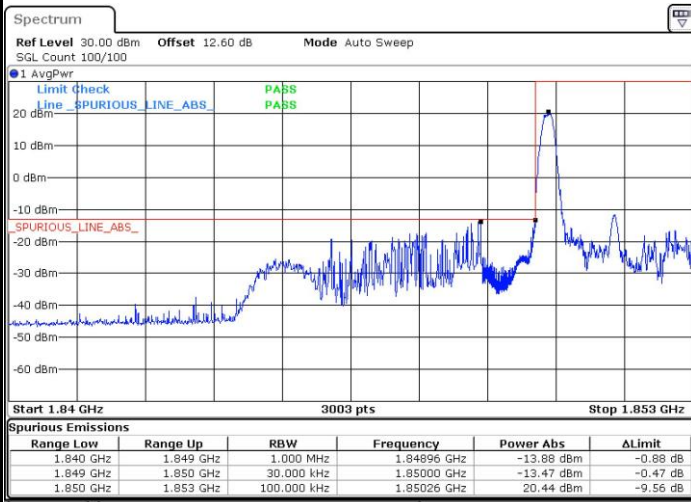


Date: 26.APR.2018 20:01:18



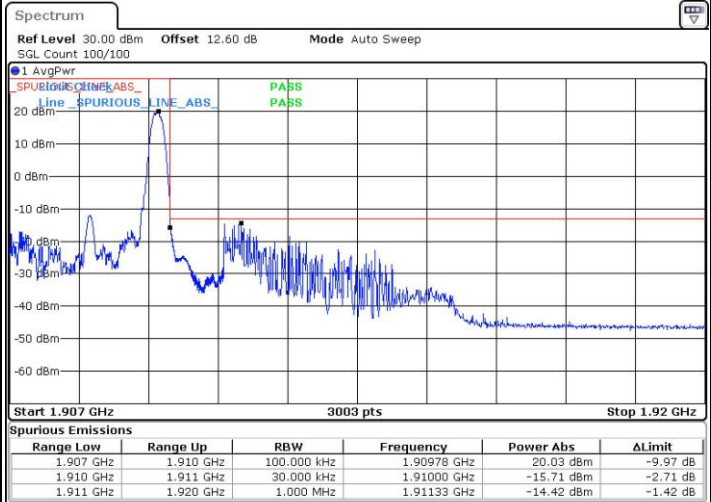
LTE Band 2 / 3MHz / 16QAM

Lowest Band Edge / 1 RB



Date: 26.APR.2018 19:50:02

Highest Band Edge / 1 RB



Date: 26.APR.2018 20:00:09

Lowest Band Edge / Full RB



Date: 26.APR.2018 19:52:21

Highest Band Edge / Full RB

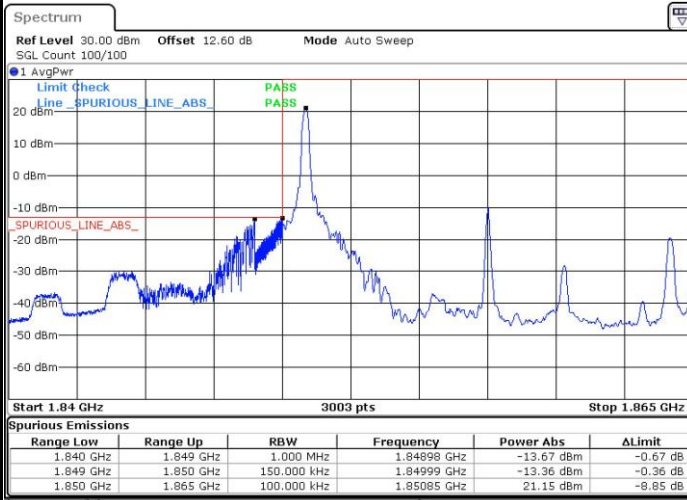


Date: 26.APR.2018 20:02:28



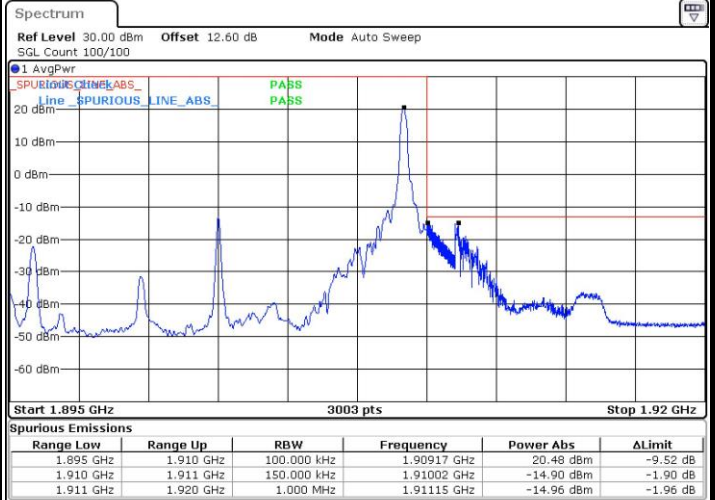
LTE Band 2 / 15MHz / QPSK

Lowest Band Edge / 1 RB



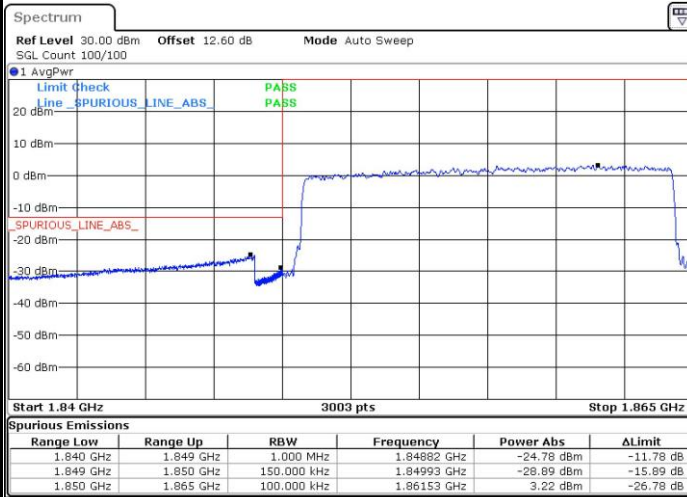
Date: 26.APR.2018 20:28:01

Highest Band Edge / 1 RB



Date: 26.APR.2018 20:19:17

Lowest Band Edge / Full RB



Date: 26.APR.2018 20:11:29

Highest Band Edge / Full RB

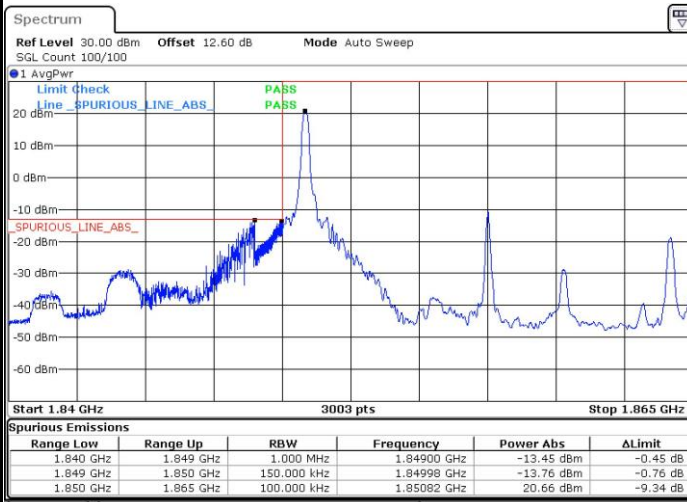


Date: 26.APR.2018 20:21:37



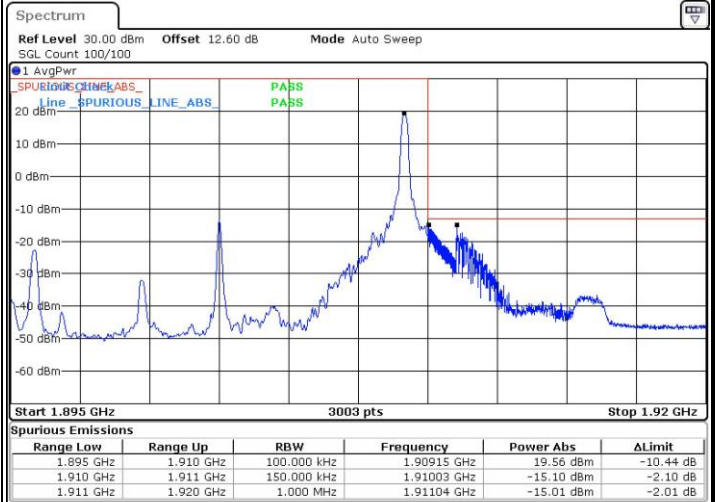
LTE Band 2 / 15MHz / 16QAM

Lowest Band Edge / 1 RB



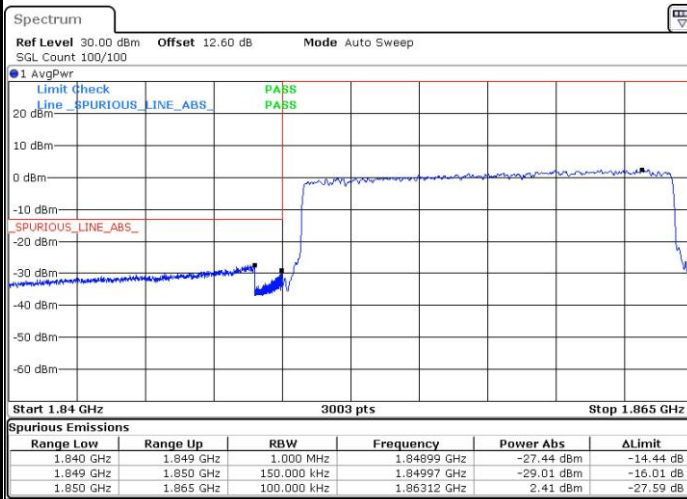
Date: 26.APR.2018 20:28:23

Highest Band Edge / 1 RB



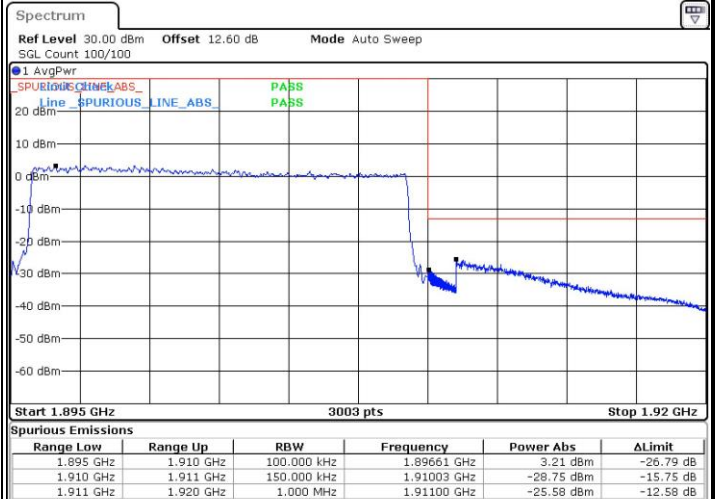
Date: 26.APR.2018 20:20:27

Lowest Band Edge / Full RB



Date: 26.APR.2018 20:12:39

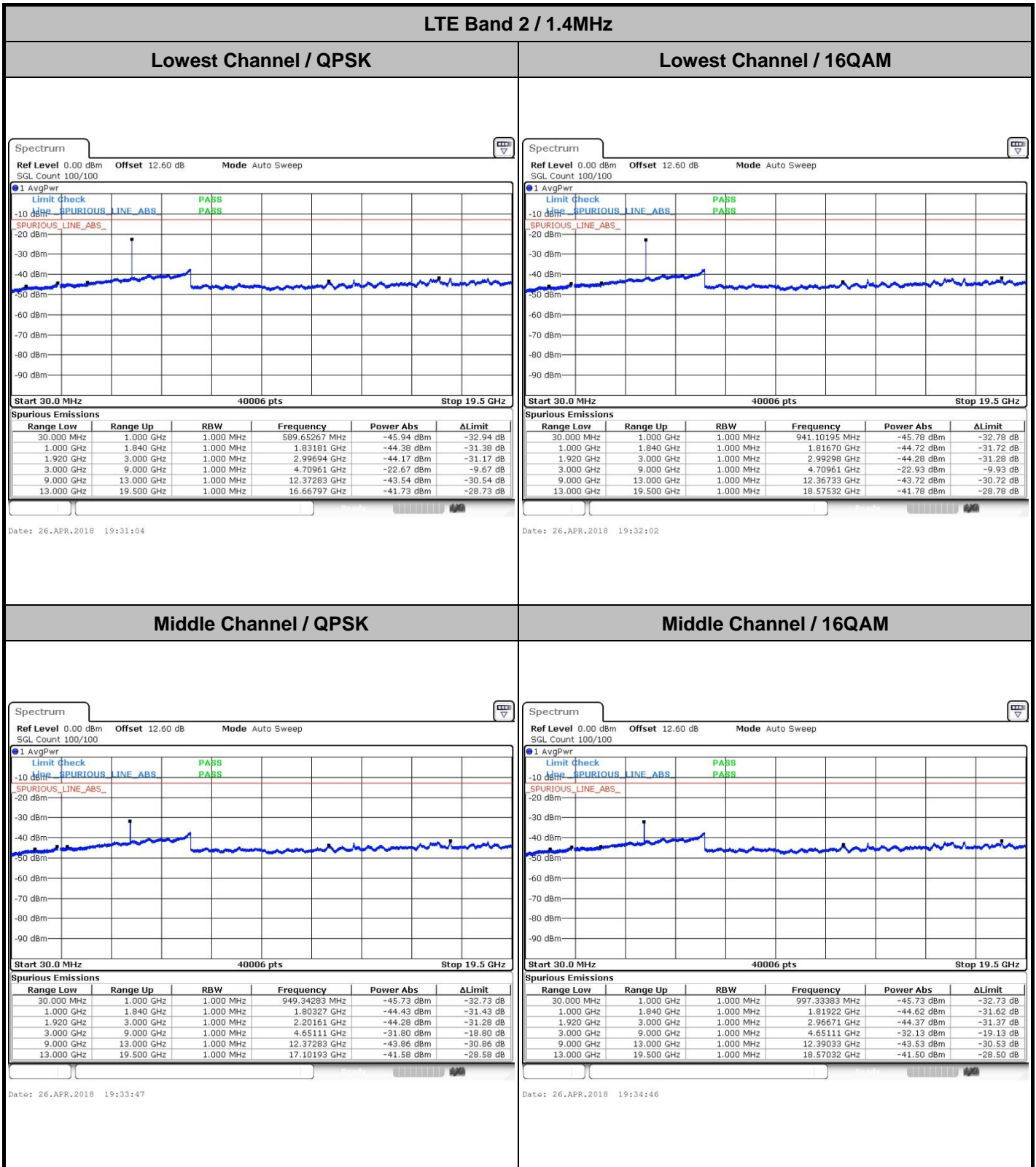
Highest Band Edge / Full RB



Date: 26.APR.2018 20:24:52



Conducted Spurious Emission

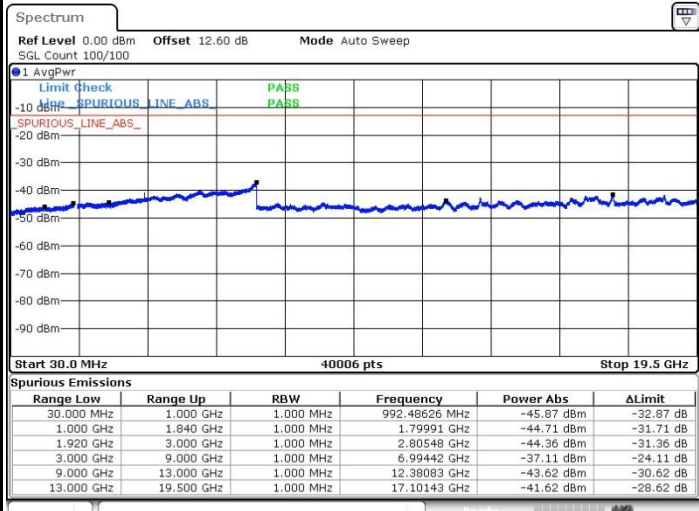




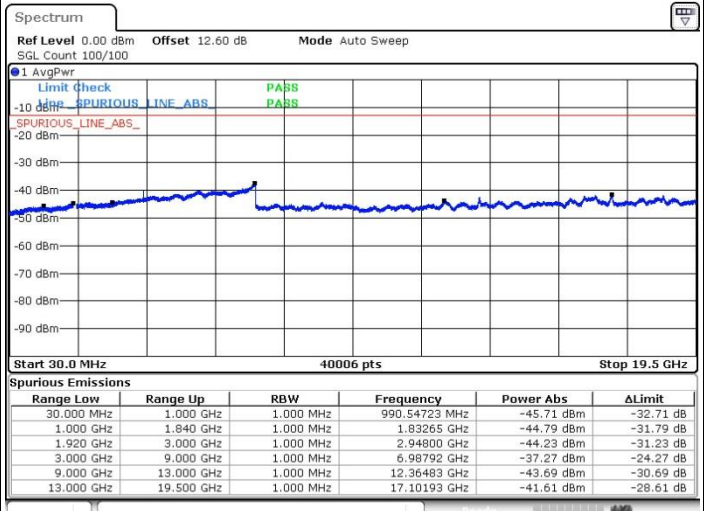
LTE Band 2 / 1.4MHz

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 26.APR.2018 19:41:11



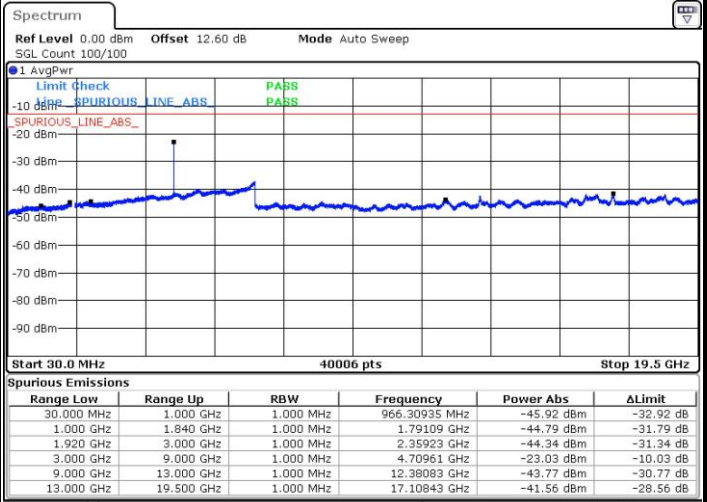
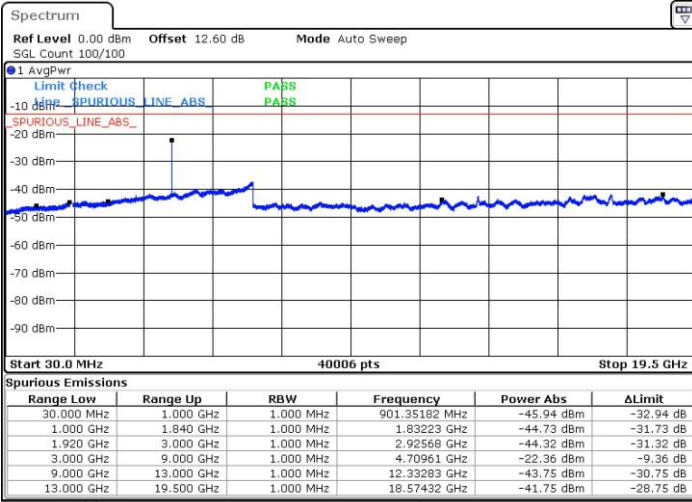
Date: 26.APR.2018 19:42:09



LTE Band 2 / 3MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

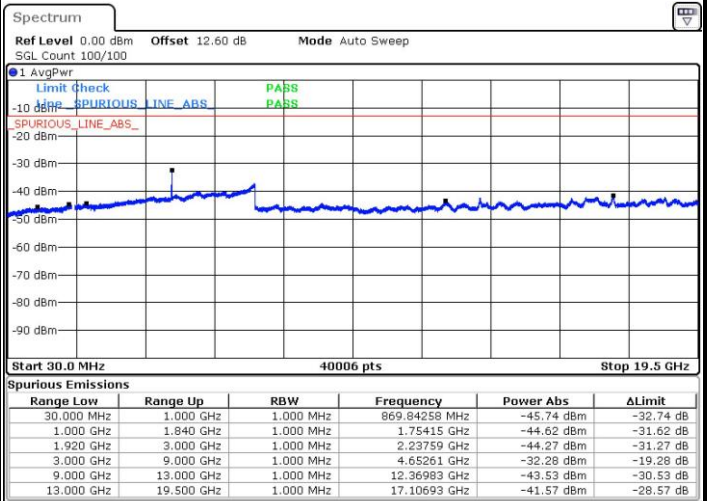
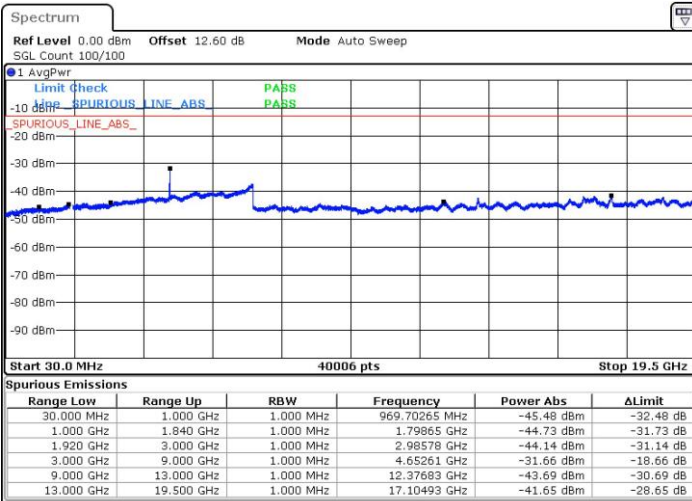


Date: 26.APR.2018 19:53:18

Date: 26.APR.2018 19:54:17

Middle Channel / QPSK

Middle Channel / 16QAM



Date: 26.APR.2018 19:56:02

Date: 26.APR.2018 19:57:01

