

FCC RADIO TEST REPORT

FCC ID : H8N-RTL0055VW
Equipment : EQUIPO 4G VOLTE
Brand Name : Movistar
Model Name : RTL0055VW-D112
Applicant : ASKEY COMPUTER CORPORATION
10F, No. 119, Jiankang Road, Zhonghe Dist., New
Taipei City, Taiwan
Manufacturer : ASKEY COMPUTER CORPORATION
10F, No. 119, Jiankang Road, Zhonghe Dist., New
Taipei City, Taiwan
Standard : FCC Part 15 Subpart C §15.247

The product was received on Sep. 18, 2018 and testing was started from Sep. 22, 2018 and completed on Oct. 06, 2018. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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



Approved by: Joseph Lin

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issued Date
FR891815	01	Initial issue of report	Oct. 22, 2018

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.247(a)(2)	6dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Reporting only	-
3.2	15.247(b)	Power Output Measurement	Pass	-
3.3	15.247(e)	Power Spectral Density	Pass	-
3.4	15.247(d)	Conducted Band Edges	Pass	-
		Conducted Spurious Emission	Pass	-
3.5	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	Pass	Under limit 1.02 dB at 2390.000 MHz
3.6	15.207	AC Conducted Emission	Pass	Under limit 15.50 dB at 0.382 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	Pass	-

Reviewed by: Wii Chang

Report Producer: Nancy Yang



1 General Description

1.1 Product Feature of Equipment Under Test

GSM/WCDMA/LTE and Wi-Fi 2.4GHz 802.11b/g/n

Product Specification subjective to this standard	
Antenna Type	WWAN: PIFA Antenna WLAN: PIFA Antenna

1.2 Modification of EUT

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

1.3 Testing Location

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

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	Sporton Site No.		
	TH05-HY	CO05-HY	03CH07-HY

Note: The test site complies with ANSI C63.4 2014 requirement.

1.4 Applicable Standards

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

- ♦ FCC Part 15 Subpart C §15.247
- ♦ FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v05
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ ANSI C63.10-2013

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).
- b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437		

2.2 Test Mode

Final test modes are considering the modulation and worse data rates as below table.

Single Antenna

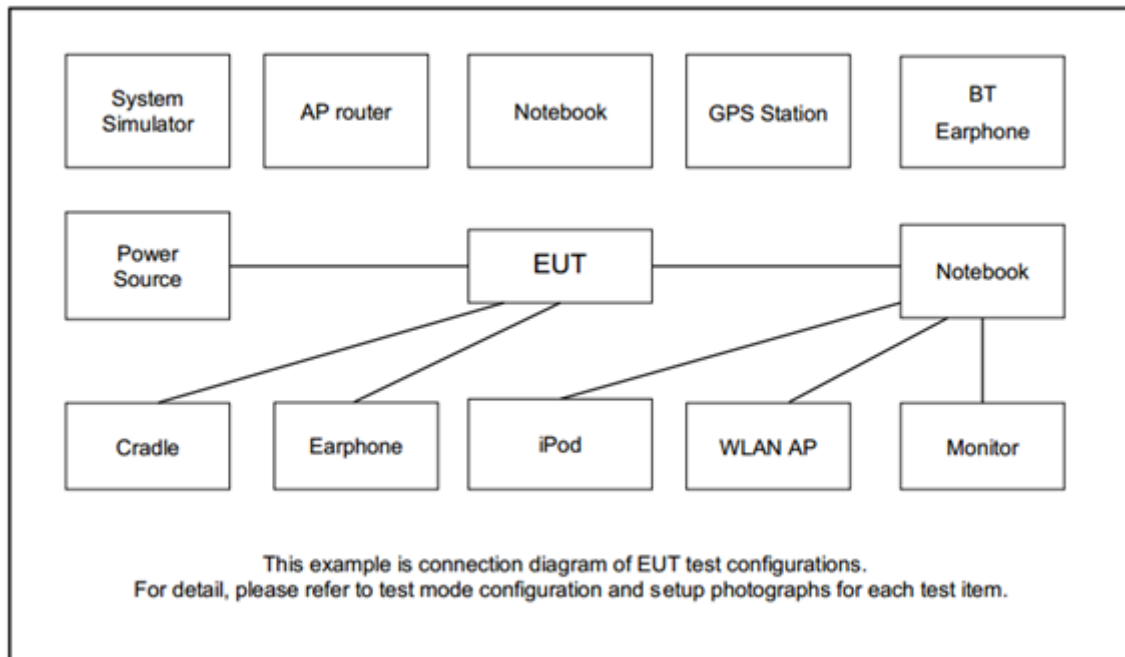
Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0

MIMO Antenna

Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0

Test Cases	
AC Conducted Emission	Mode 1: GSM850 Idle + WLAN Link + LAN Link with Notebook + RJ-11 Cable + Adapter 1 (US Plug)
Remark: For Radiated Test Cases, the tests were performed with Adapter 2 (US Plug).	

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	Notebook	DELL	P20G	FCC DoC/ Contains FCC ID: QDS-BRCM1051	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	Notebook	DELL	Latitude E6320	FCC DoC/ Contains FCC ID: QDS-BRCM1054	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	Phone	Wonder	WD-303	N/A	N/A	N/A
5.	RJ45-Load	N/A	N/A	N/A	N/A	N/A



2.5 EUT Operation Test Setup

The RF test items, utility “MP Test Tool” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 4.2 + 10 = 14.2 \text{ (dB)}\end{aligned}$$

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB and 99% Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

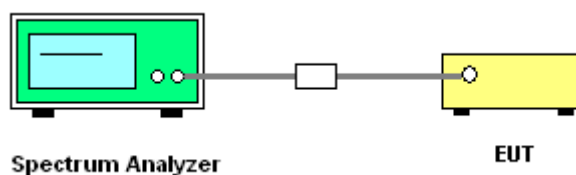
3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v05.
2. 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.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 kHz.
5. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW) $\geq 3 * RBW$.
6. Measure and record the results in the test report.

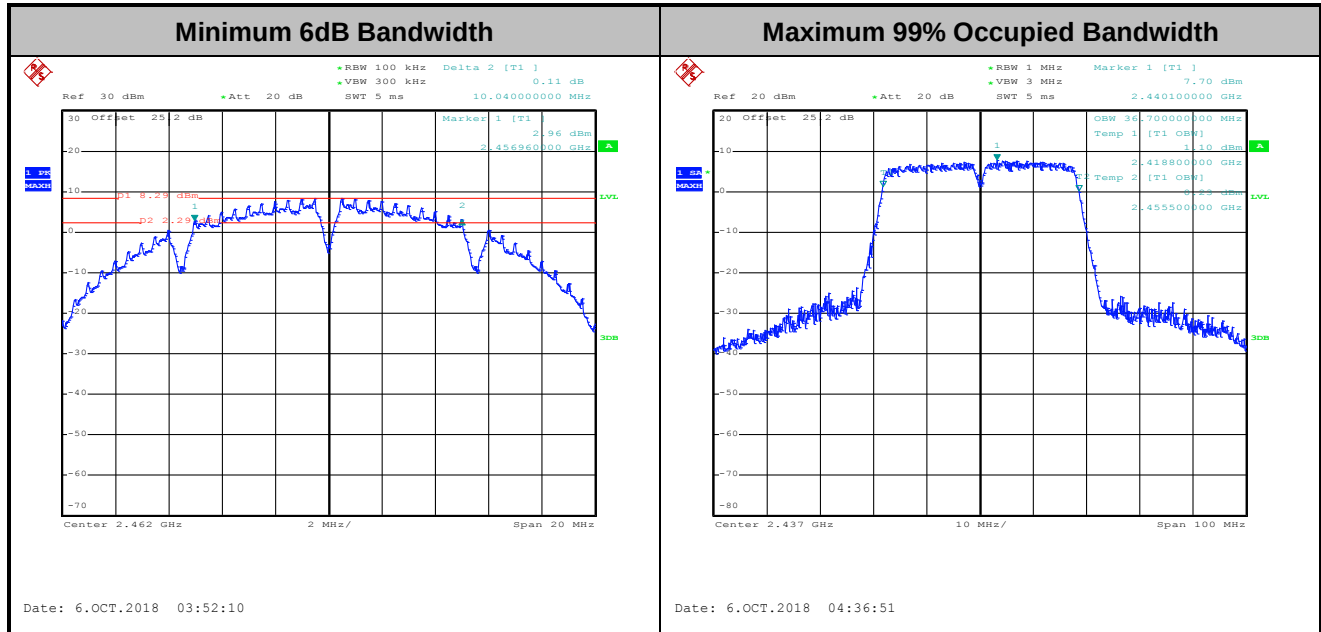
3.1.4 Test Setup





3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

Please refer to Appendix A.



Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

3.2 Output Power Measurement

3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. If transmitting antenna with directional gain greater than 6dBi is used, the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

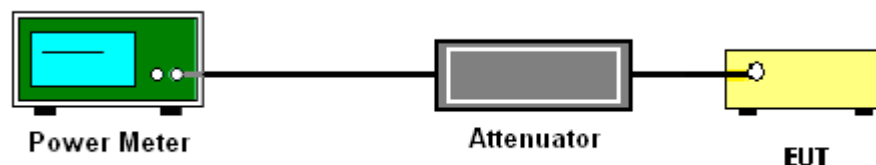
3.2.2 Measuring Instruments

See list of measuring equipment of this test report.

3.2.3 Test Procedures

1. For Peak Power, the testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas. Guidance v05 section 9.1.3 PKPM1 Peak power meter method.
2. For Average Power, the testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas. Guidance v05 section 9.2.3.1 Method AVGPM.
3. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. Set to the maximum power setting and enable the EUT transmit continuously.
5. Measure the conducted output power and record the results in the test report.
6. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

3.2.4 Test Setup



3.2.5 Test Result of Peak Output Power

Please refer to Appendix A.

3.2.6 Test Result of Average output Power (Reporting Only)

Please refer to Appendix A.



3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.

3.3.2 Measuring Instruments

See list of measuring equipment of this test report.

3.3.3 Test Procedures

1. The testing follows Measurement Procedure 10.2 Method PKPSD of FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v05
2. 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.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
6. Measure and record the results in the test report.
7. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

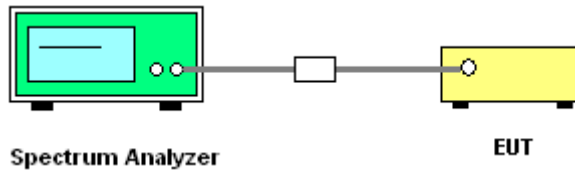
If measurements performed using method (2) plus $10 \log(N)$ exceeds the emission limit, the test should choose method (1) before declaring that the device fails the emission limit.

Method (1): Measure and sum the spectra across the outputs.

The total final Power Spectral Density is from a device with 2 transmitter outputs. The spectrum measurements of the individual outputs are all performed with the same span and number of points, the spectrum value in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 to obtain the value for the first frequency bin of the summed spectrum.

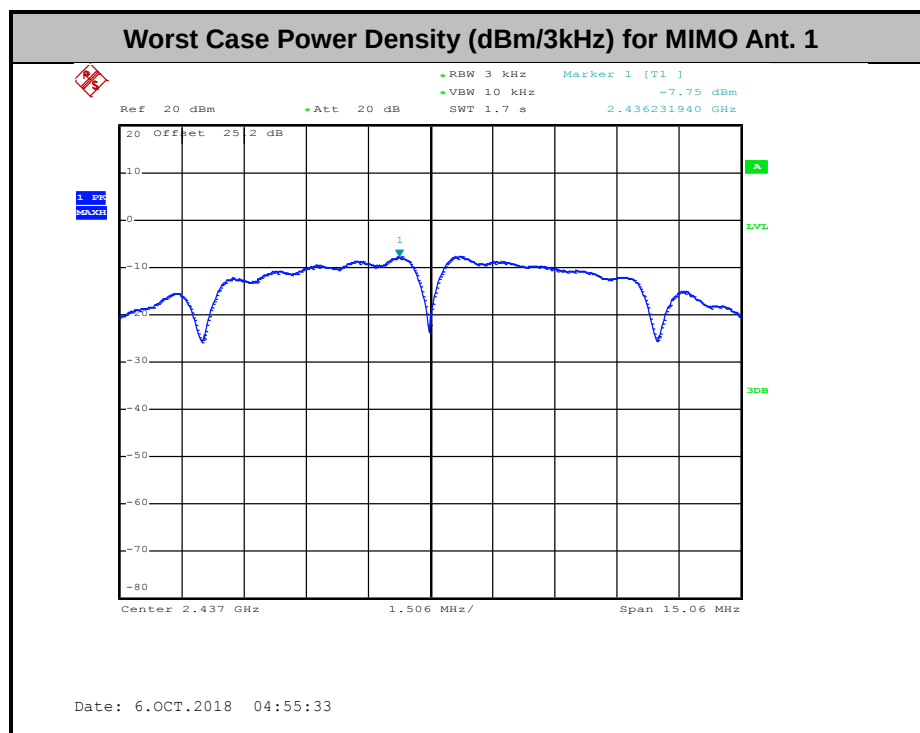
Method (2): Measure and add $10 \log(N)$ dB, where N is the number of outputs. (N=2)

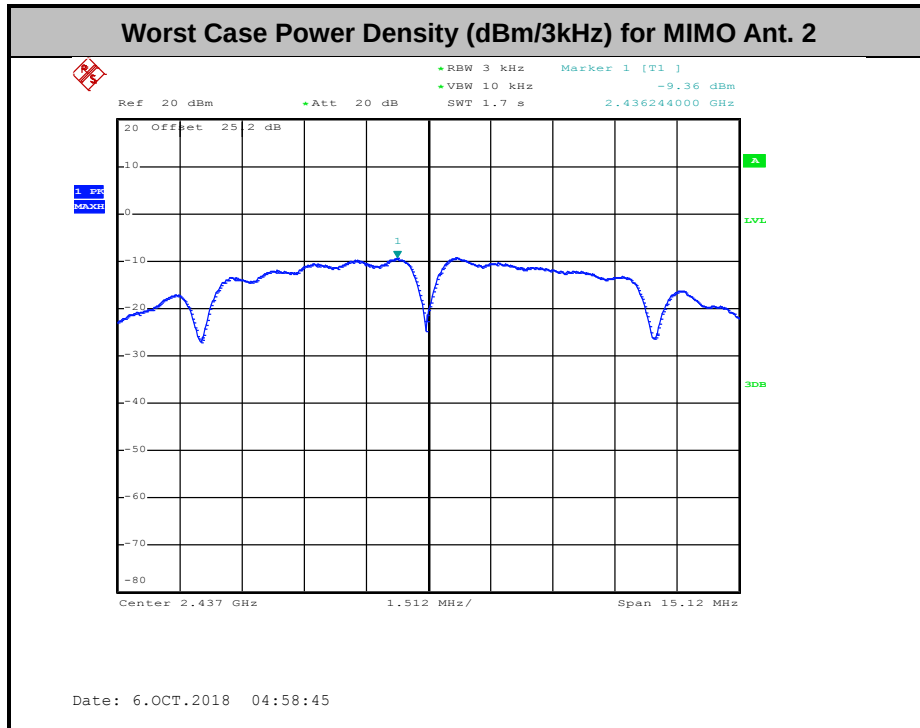
3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.





3.4 Conducted Band Edges and Spurious Emission Measurement

3.4.1 Limit of Conducted Band Edges and Spurious Emission Measurement

In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement.

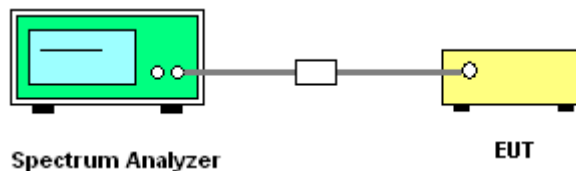
3.4.2 Measuring Instruments

See list of measuring equipment of this test report.

3.4.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v05.
2. 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.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d).
5. Measure and record the results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.4.4 Test Setup



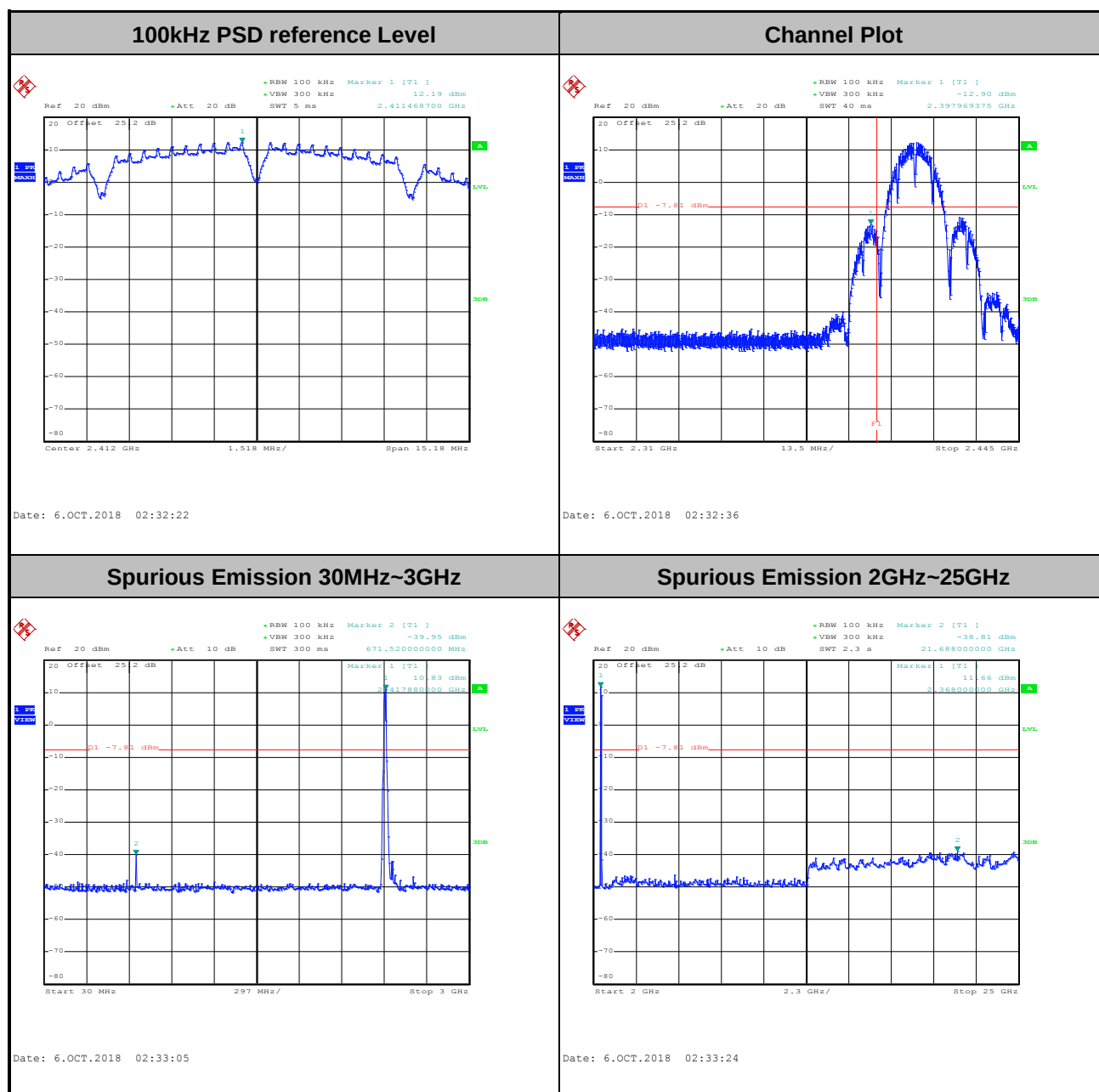


3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Test Engineer :	Shiang Wang	Temperature :	21~25°C
		Relative Humidity :	51~54%

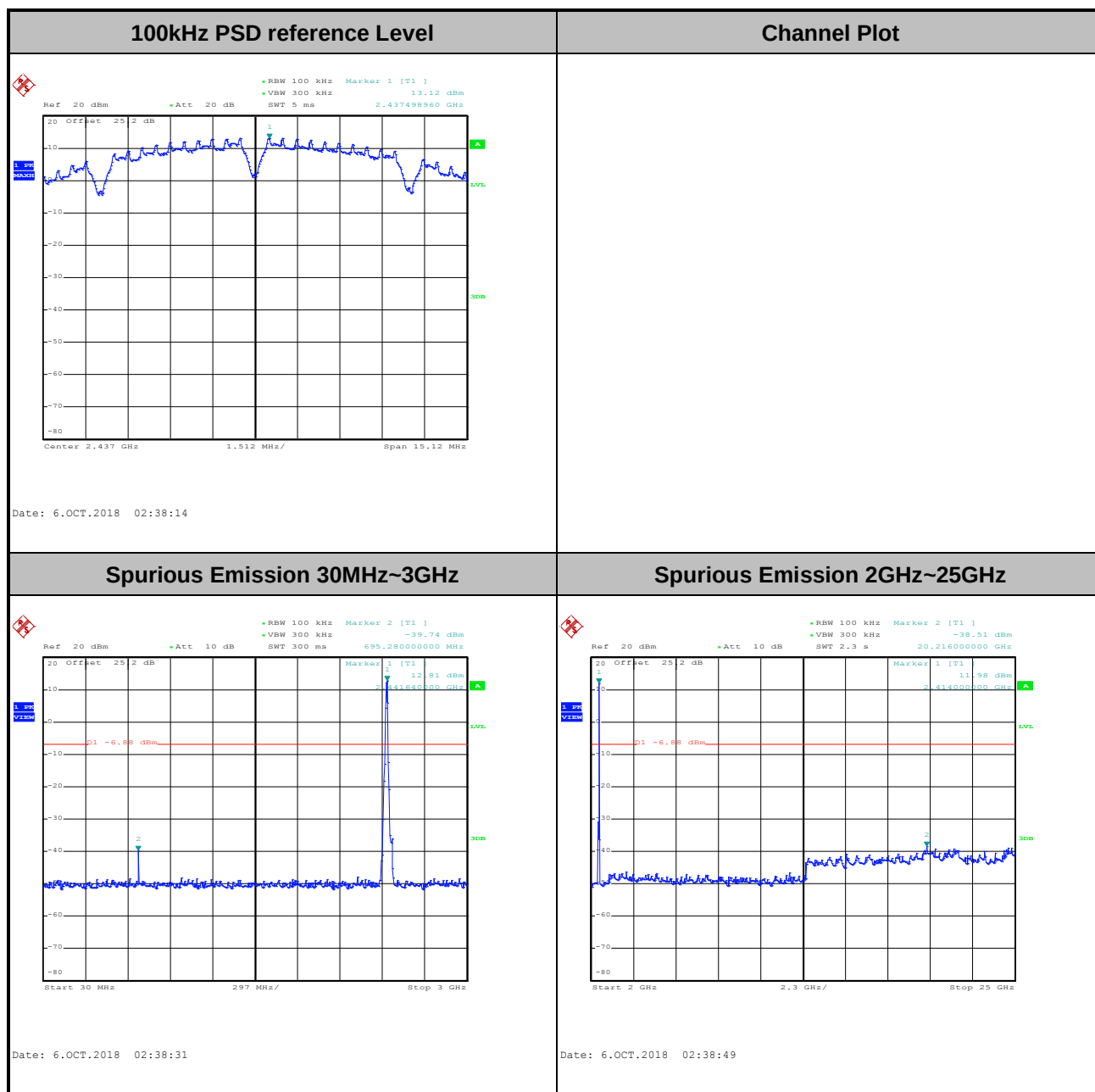
Number of TX = 1, Ant. 1 (Measured)

Test Mode :	802.11b	Test Channel :	01
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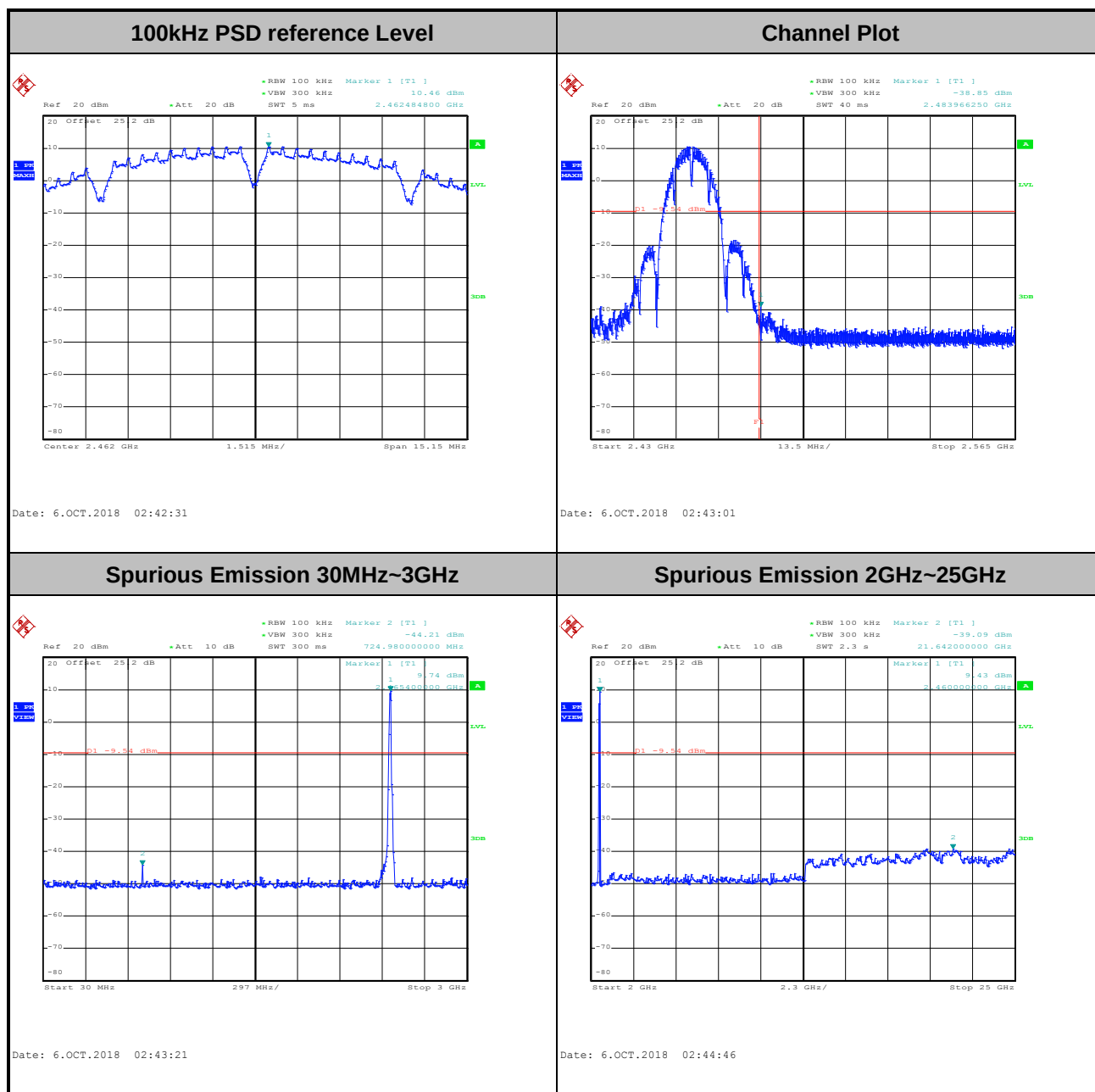


Test Mode :	802.11b	Test Channel :	06
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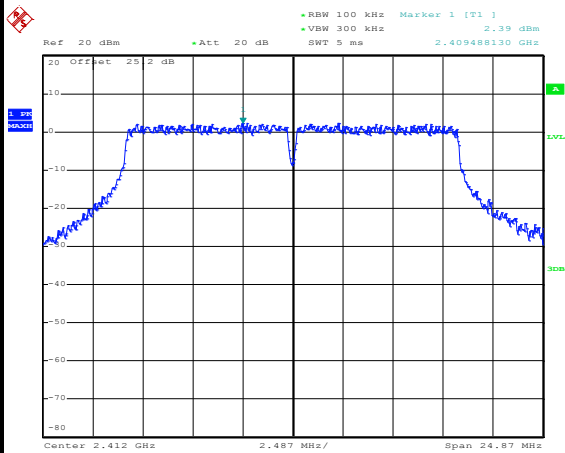
Test Mode :	802.11b	Test Channel :	11
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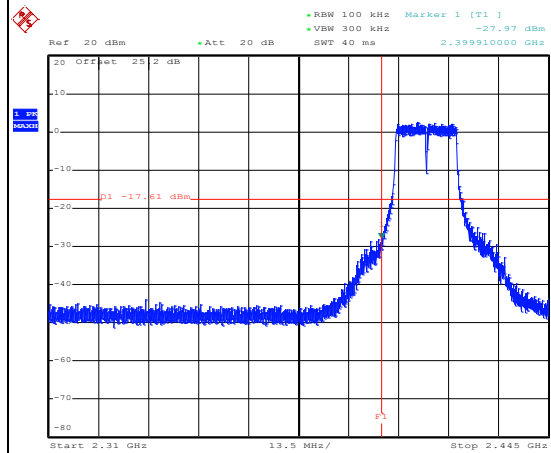
Test Mode :	802.11g	Test Channel :	01
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100kHz PSD reference Level



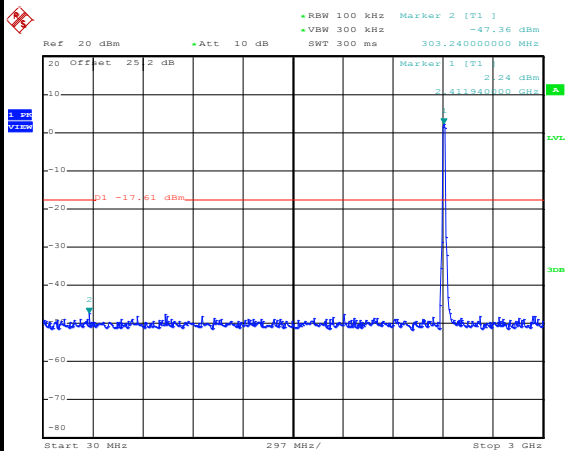
Date: 6.OCT.2018 03:02:00

Channel Plot



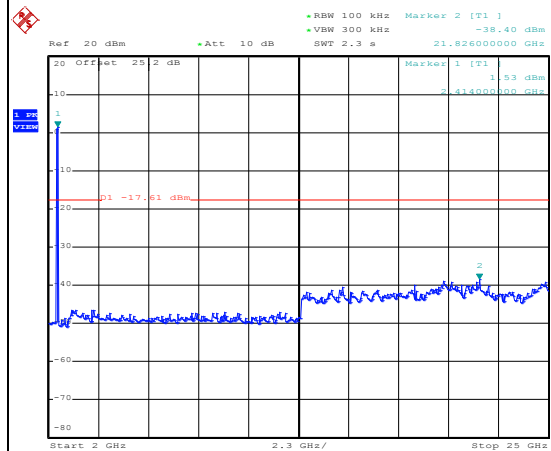
Date: 6.OCT.2018 03:02:47

Spurious Emission 30MHz~3GHz



Date: 6.OCT.2018 03:03:19

Spurious Emission 2GHz~25GHz

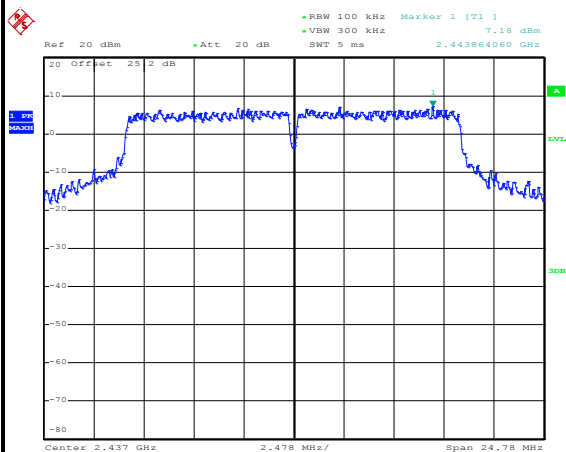


Date: 6.OCT.2018 03:03:41



Test Mode :	802.11g	Test Channel :	06
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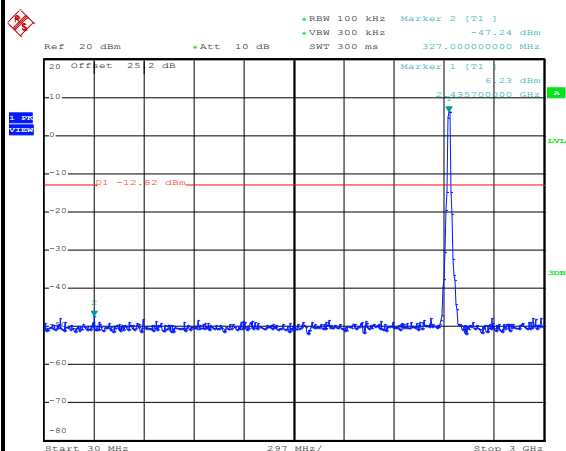
100kHz PSD reference Level



Date: 6.OCT.2018 03:06:05

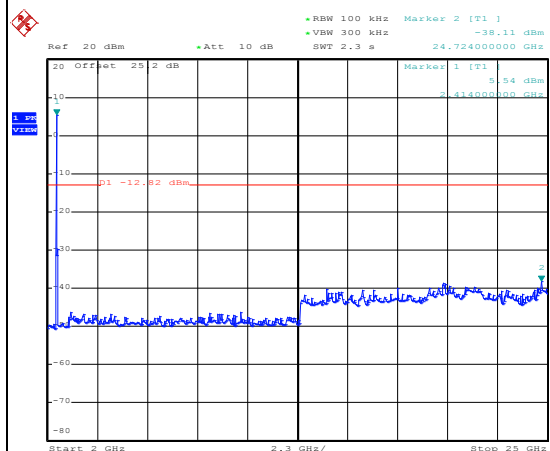
Channel Plot

Spurious Emission 30MHz~3GHz



Date: 6.OCT.2018 03:06:55

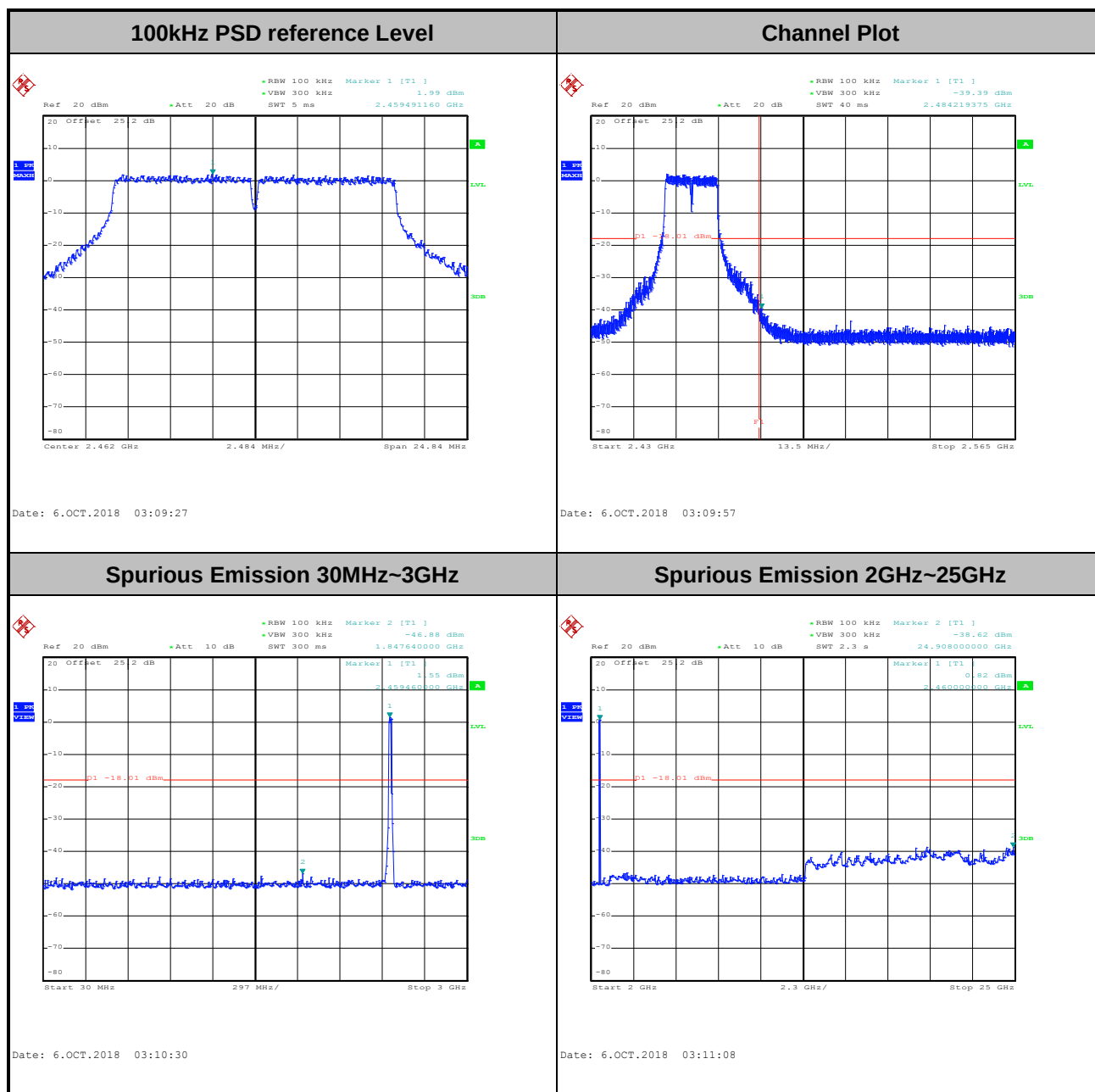
Spurious Emission 2GHz~25GHz



Date: 6.OCT.2018 03:07:15



Test Mode :	802.11g	Test Channel :	11
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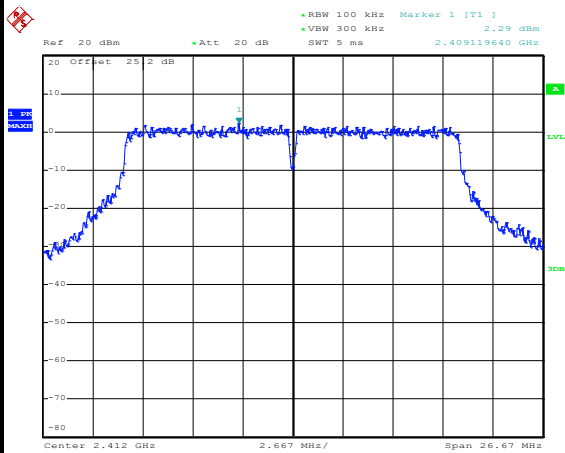




Test Mode : 802.11n HT20

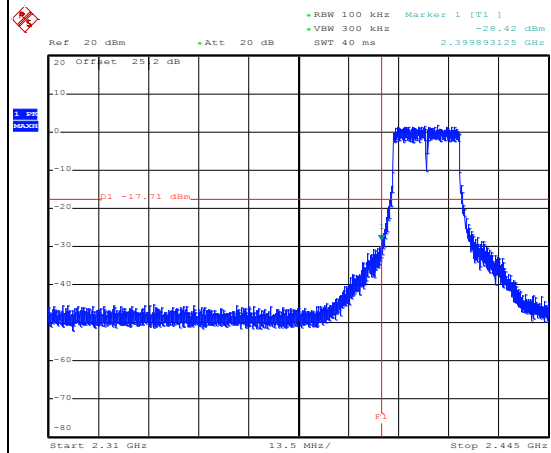
Test Channel : 01

100kHz PSD reference Level



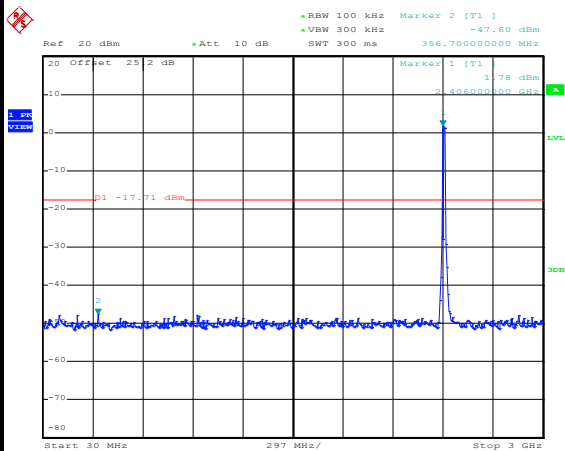
Date: 6.OCT.2018 03:14:10

Channel Plot



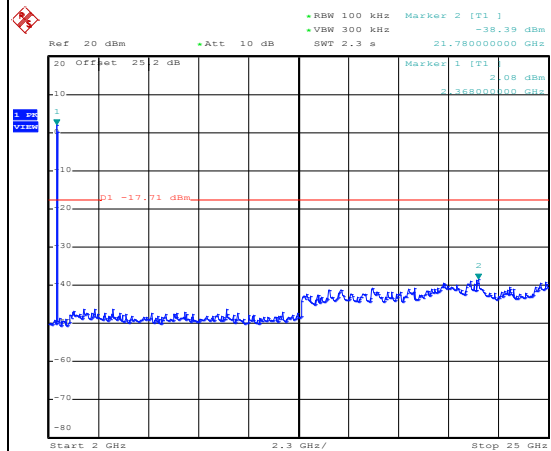
Date: 6.OCT.2018 03:15:29

Spurious Emission 30MHz~3GHz



Date: 6.OCT.2018 03:16:12

Spurious Emission 2GHz~25GHz

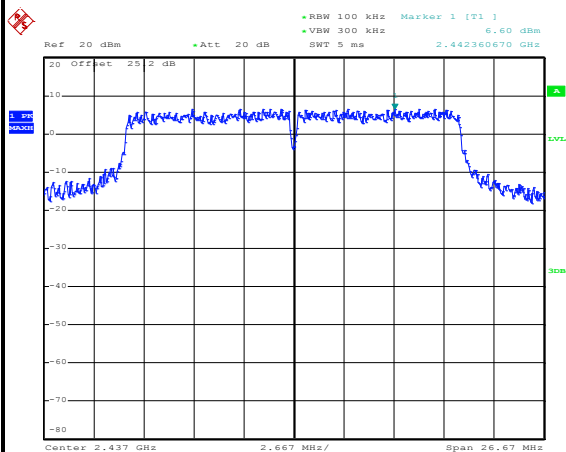


Date: 6.OCT.2018 03:16:29



Test Mode :	802.11n HT20	Test Channel :	06
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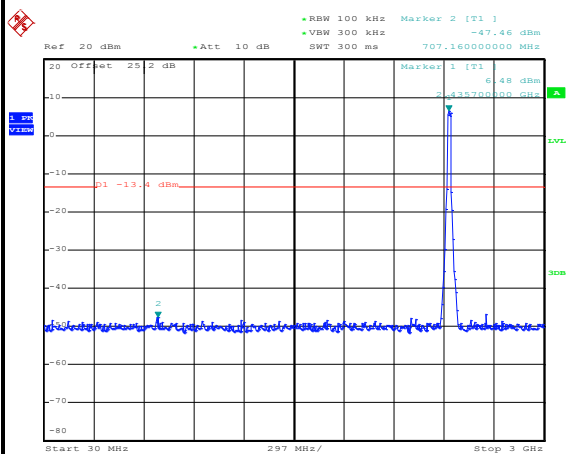
100kHz PSD reference Level



Date: 6.OCT.2018 03:19:22

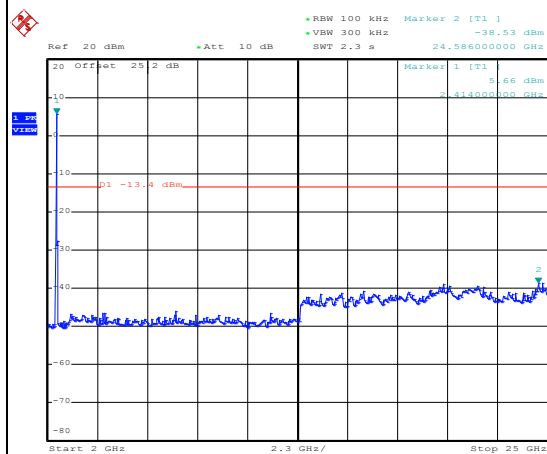
Channel Plot

Spurious Emission 30MHz~3GHz



Date: 6.OCT.2018 03:19:50

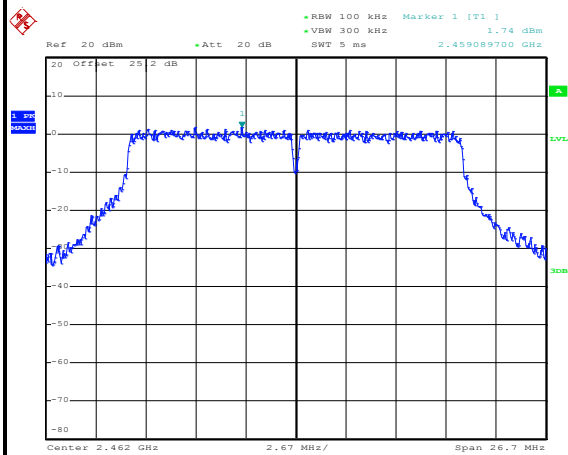
Spurious Emission 2GHz~25GHz



Date: 6.OCT.2018 03:20:09

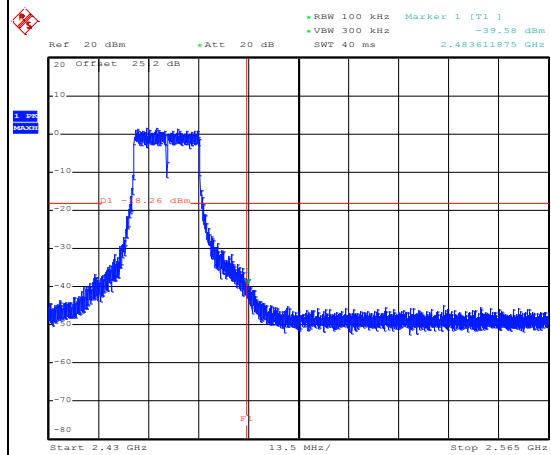
Test Mode :	802.11n HT20	Test Channel :	11
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100kHz PSD reference Level



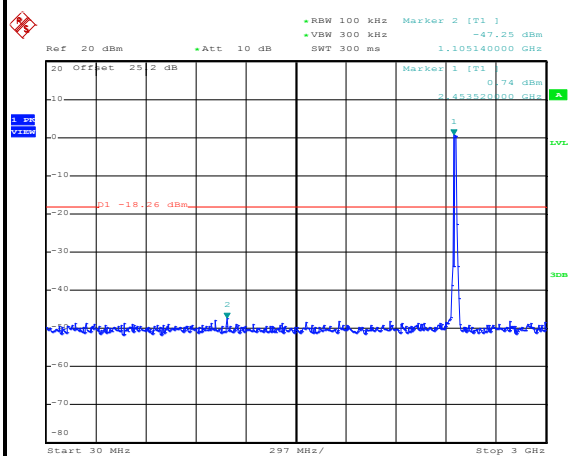
Date: 6.OCT.2018 03:22:34

Channel Plot



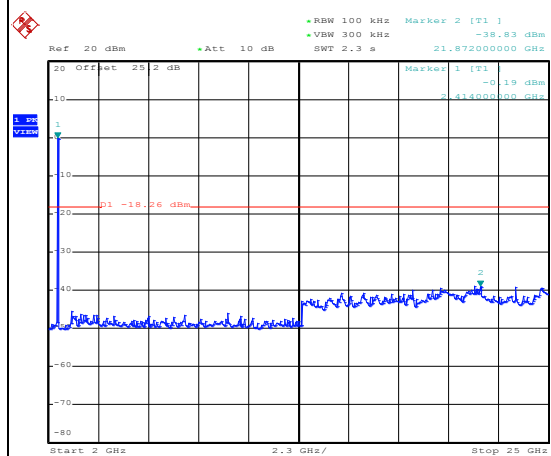
Date: 6.OCT.2018 03:23:13

Spurious Emission 30MHz~3GHz



Date: 6.OCT.2018 03:24:13

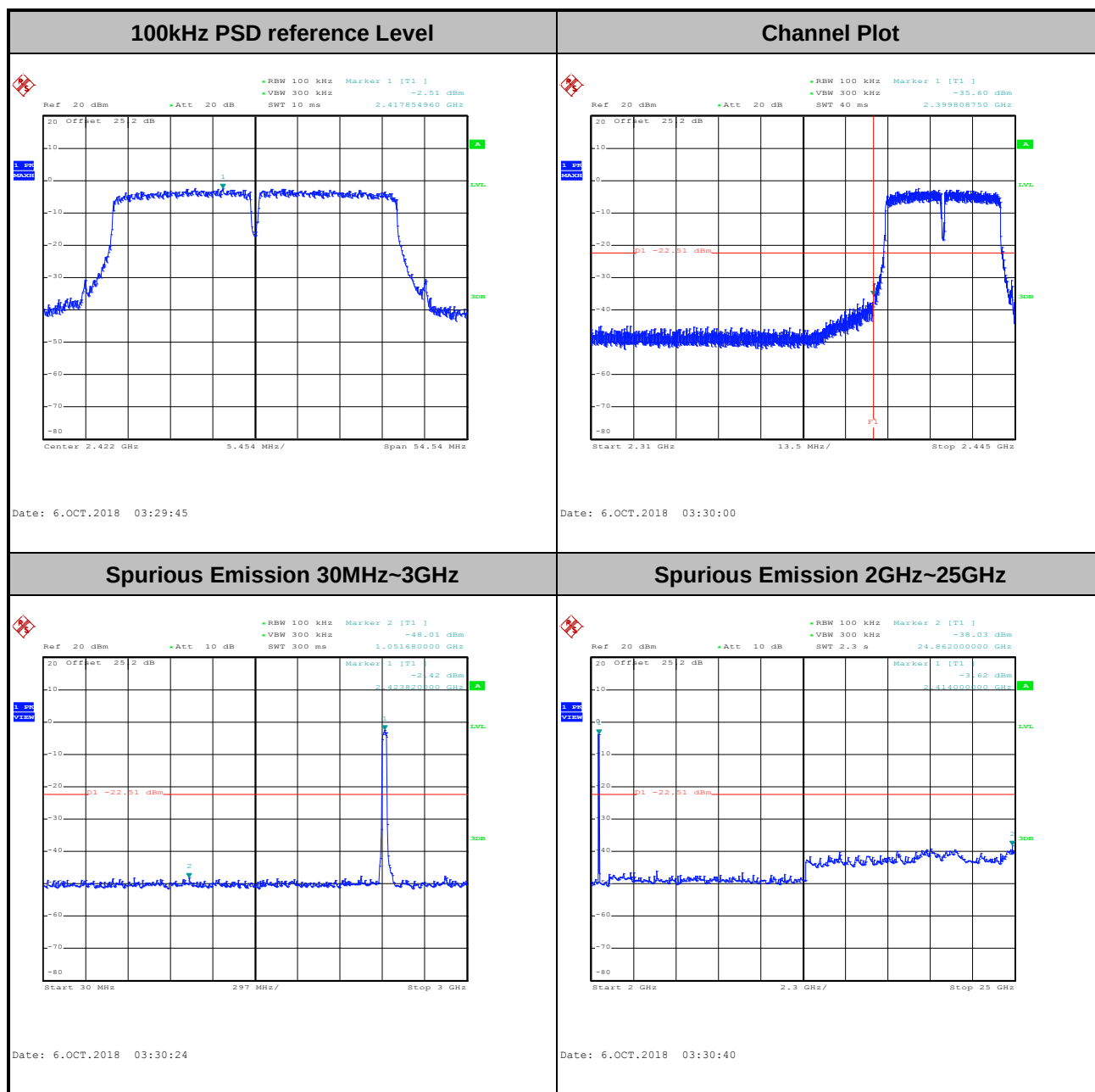
Spurious Emission 2GHz~25GHz



Date: 6.OCT.2018 03:24:47

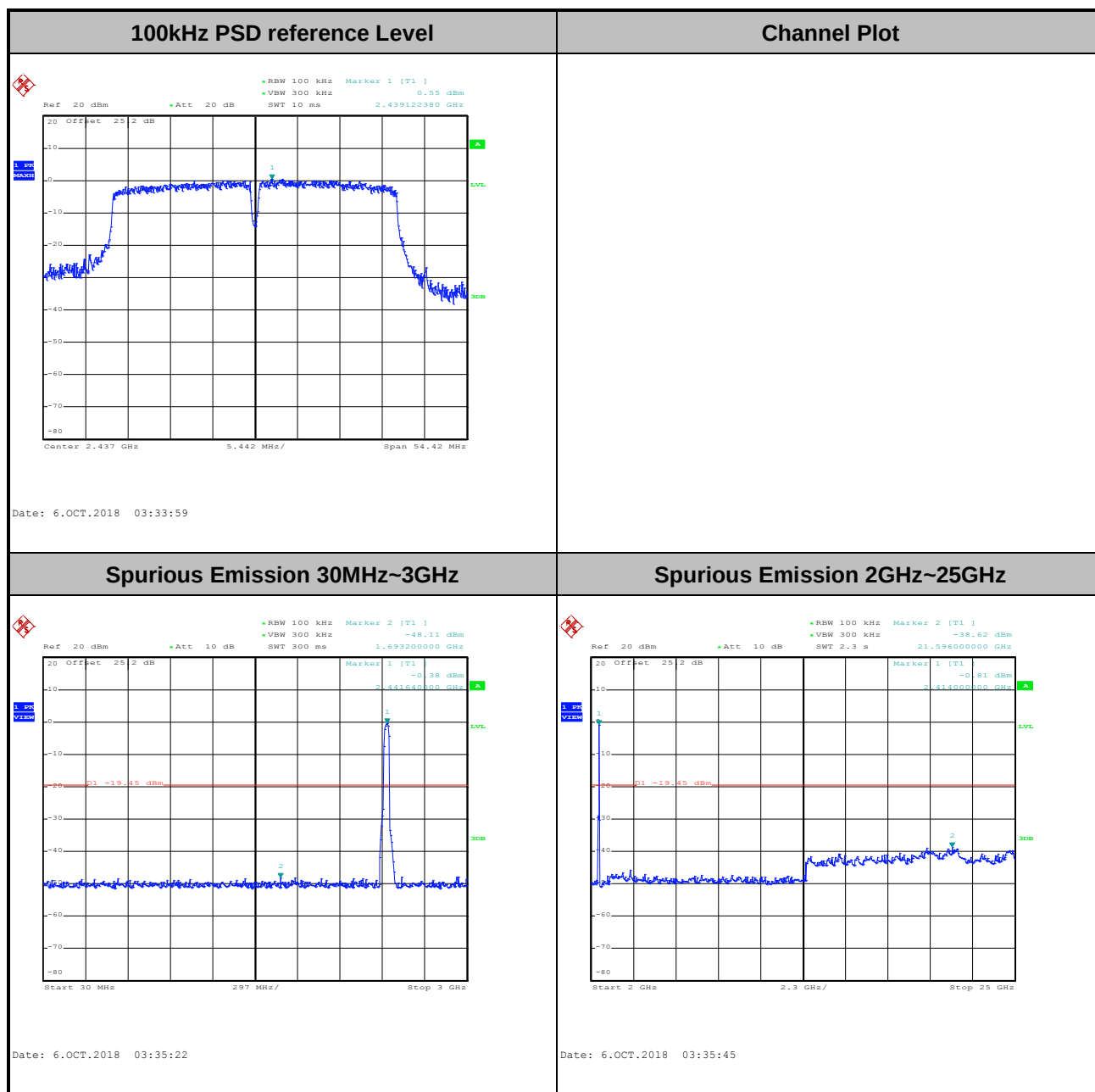


Test Mode :	802.11n HT40	Test Channel :	03
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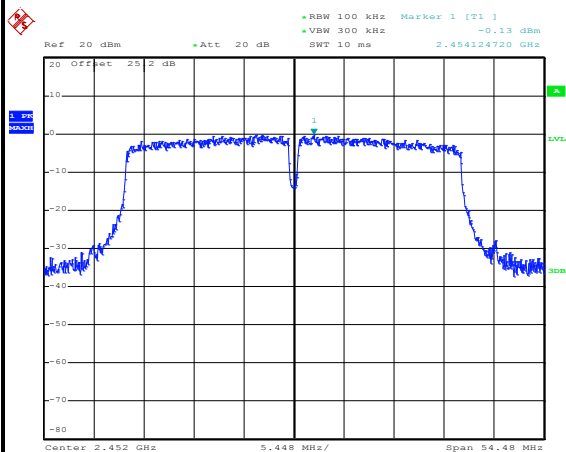
Test Mode :	802.11n HT40	Test Channel :	06
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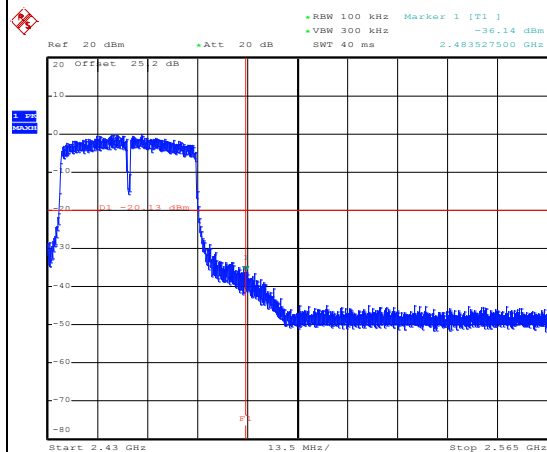


Test Mode :	802.11n HT40	Test Channel :	09
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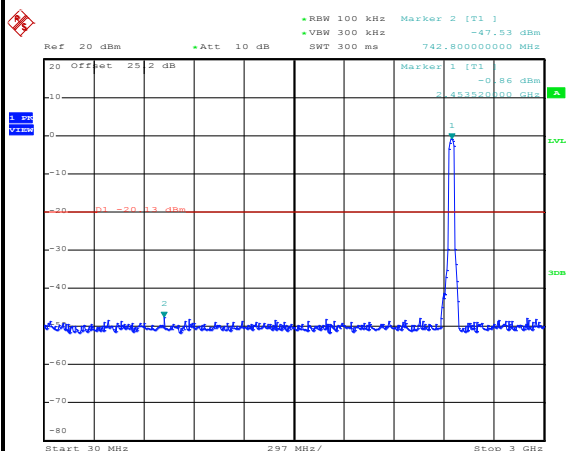
100kHz PSD reference Level



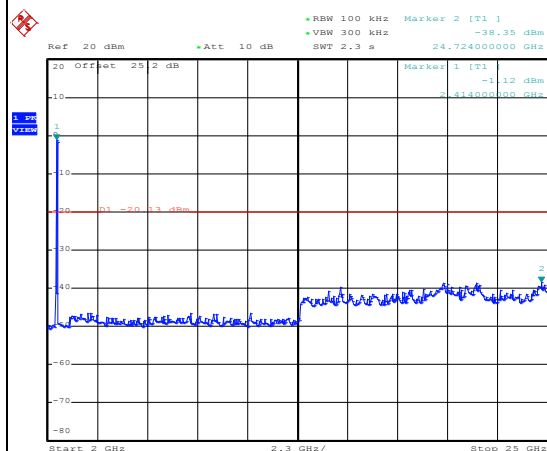
Channel Plot



Spurious Emission 30MHz~3GHz



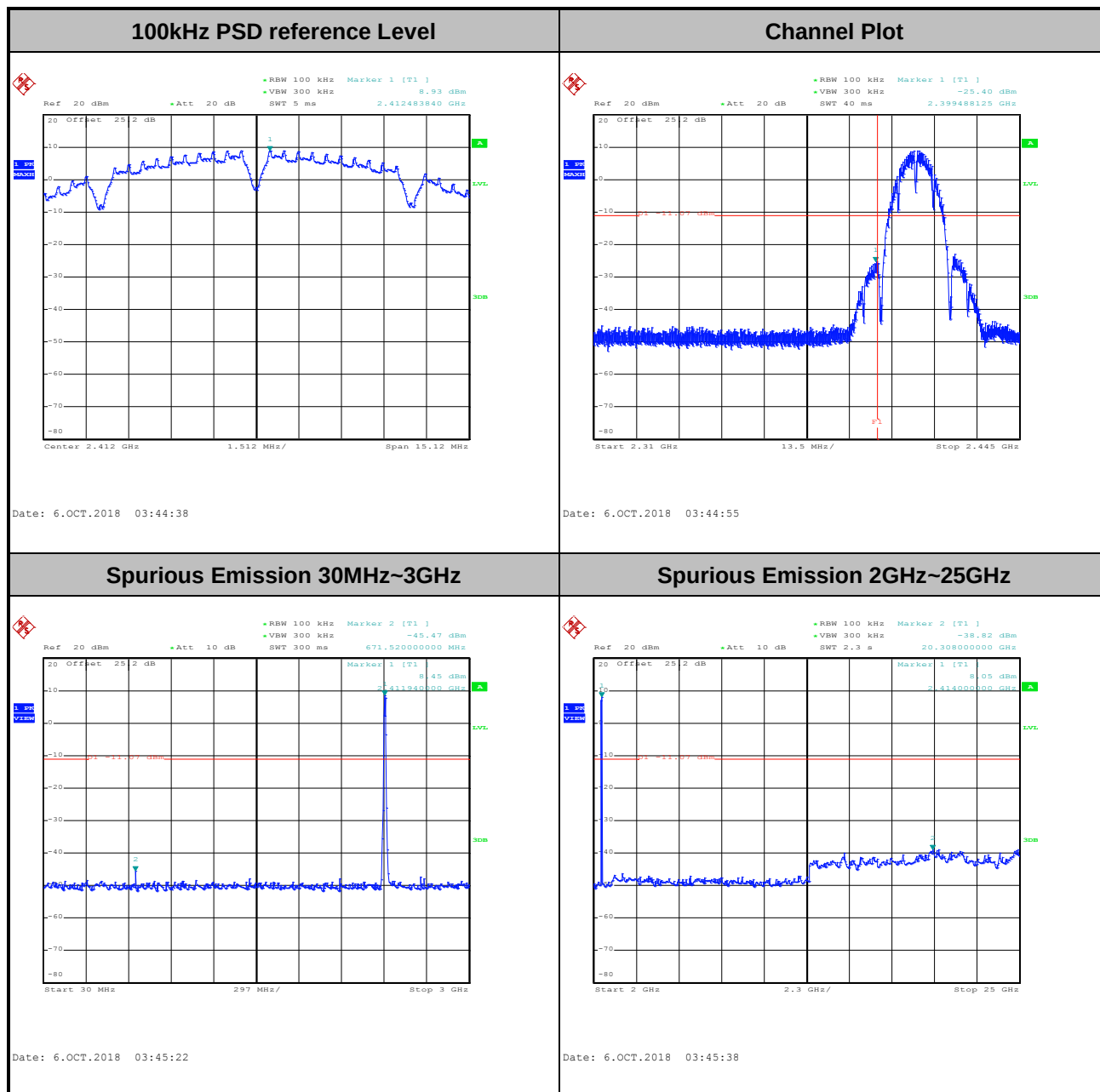
Spurious Emission 2GHz~25GHz





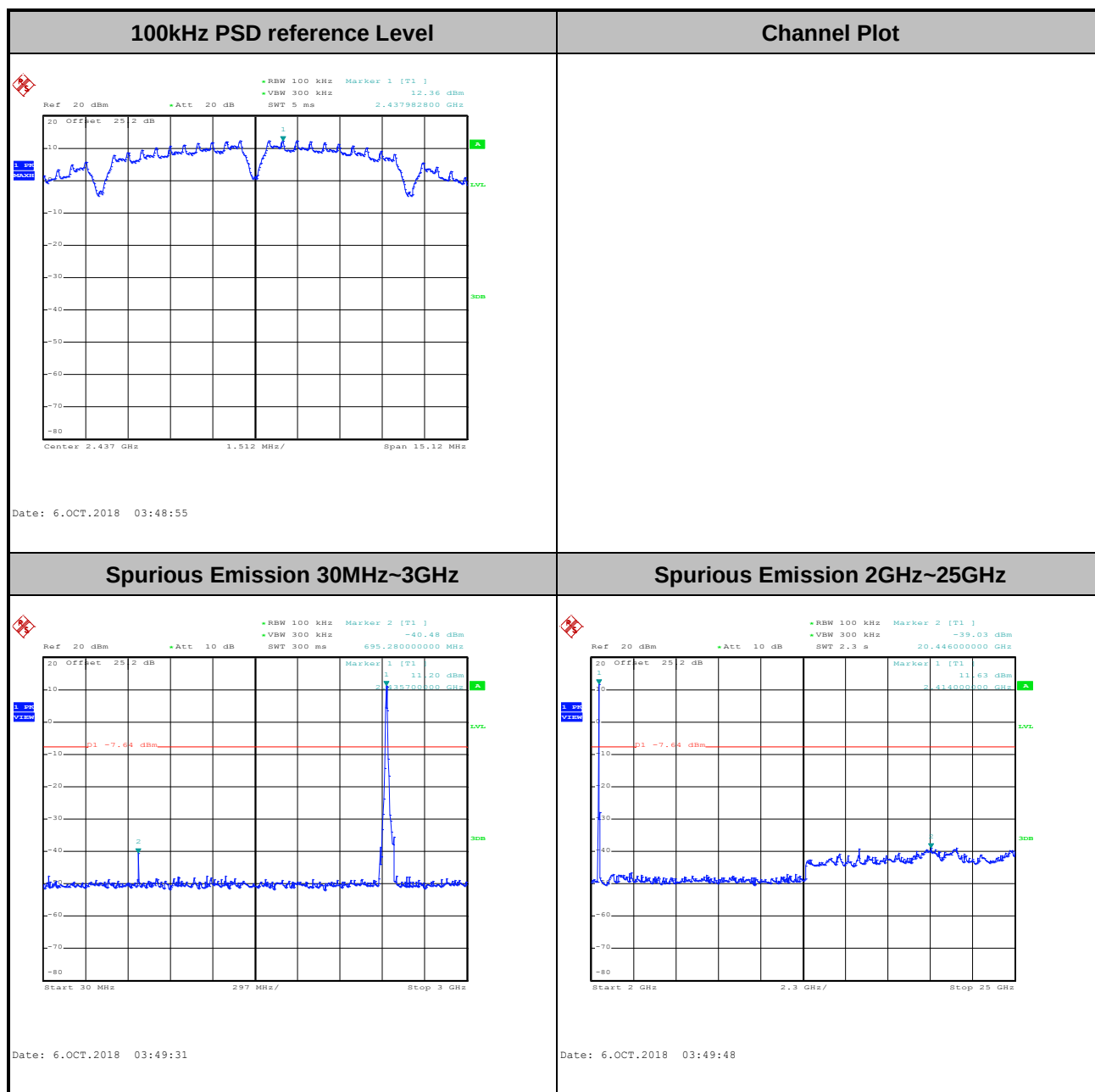
Number of TX = 1, Ant. 2 (Measured)

Test Mode :	802.11b	Test Channel :	01
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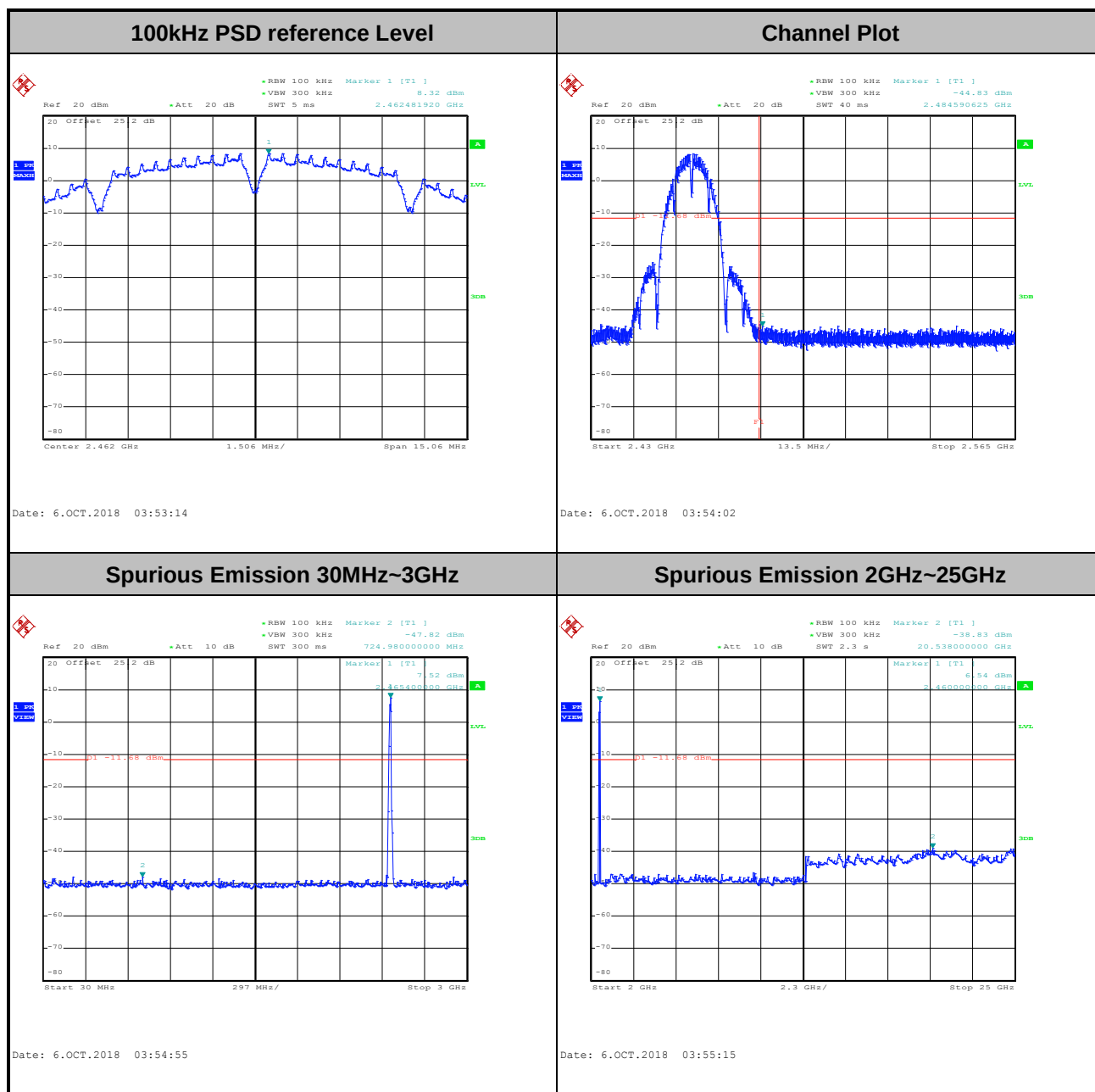


Test Mode :	802.11b	Test Channel :	06
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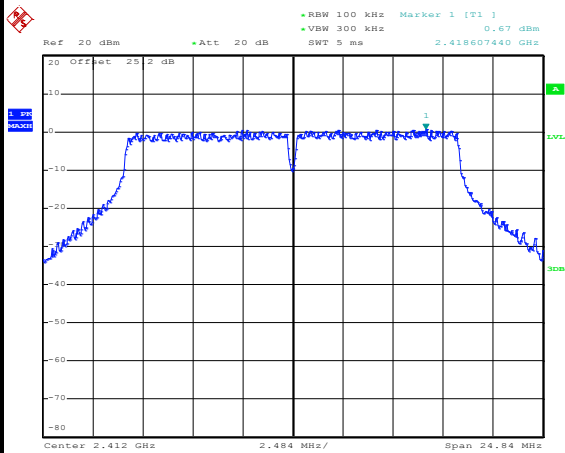
Test Mode :	802.11b	Test Channel :	11
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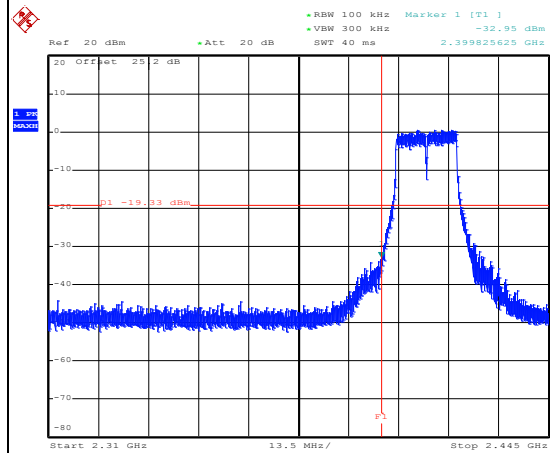
Test Mode :	802.11g	Test Channel :	01
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100kHz PSD reference Level



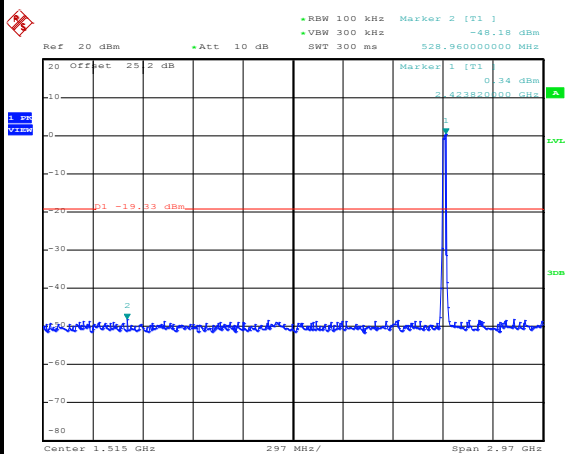
Date: 6.OCT.2018 03:59:19

Channel Plot



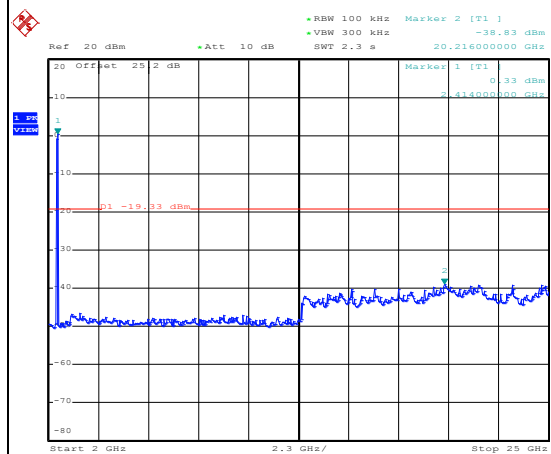
Date: 6.OCT.2018 03:59:32

Spurious Emission 30MHz~3GHz



Date: 6.OCT.2018 04:00:15

Spurious Emission 2GHz~25GHz

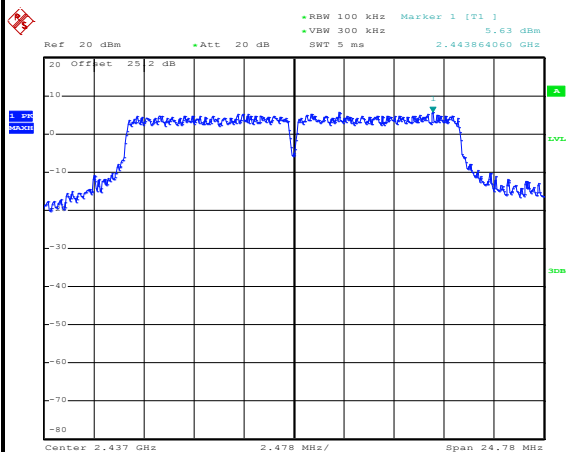


Date: 6.OCT.2018 04:00:37



Test Mode :	802.11g	Test Channel :	06
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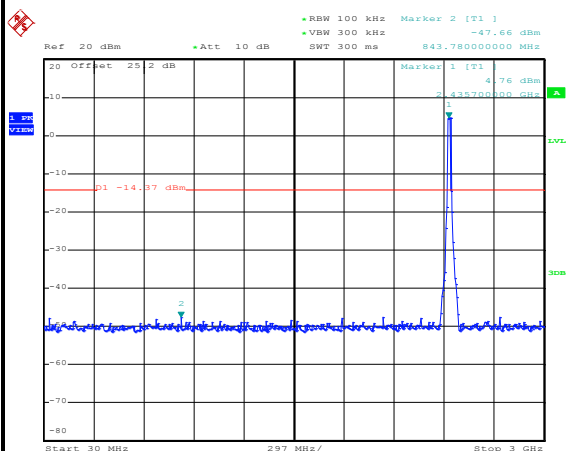
100kHz PSD reference Level



Date: 6.OCT.2018 04:03:11

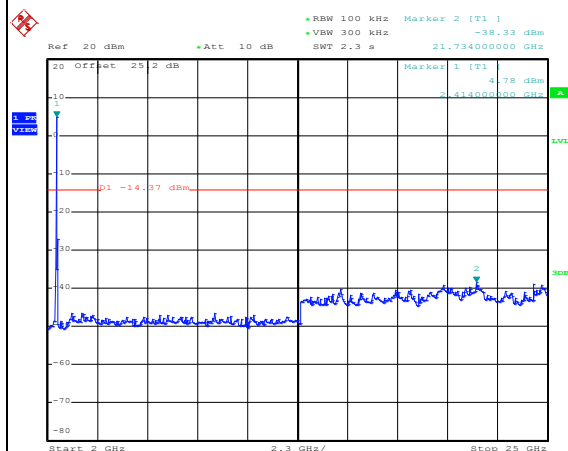
Channel Plot

Spurious Emission 30MHz~3GHz



Date: 6.OCT.2018 04:03:36

Spurious Emission 2GHz~25GHz

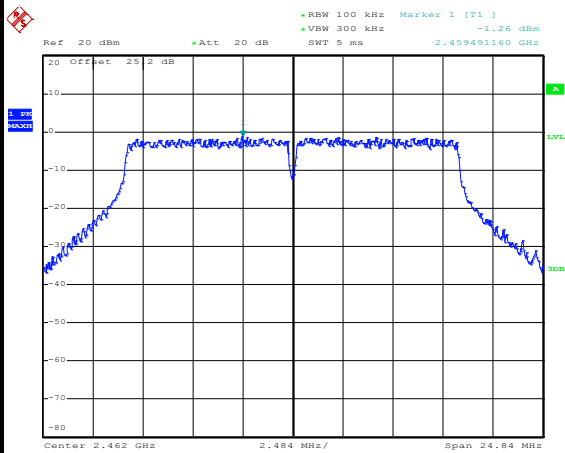


Date: 6.OCT.2018 04:03:55



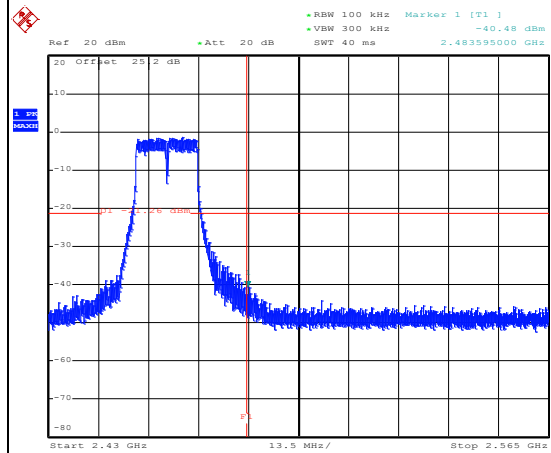
Test Mode :	802.11g	Test Channel :	11
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100kHz PSD reference Level



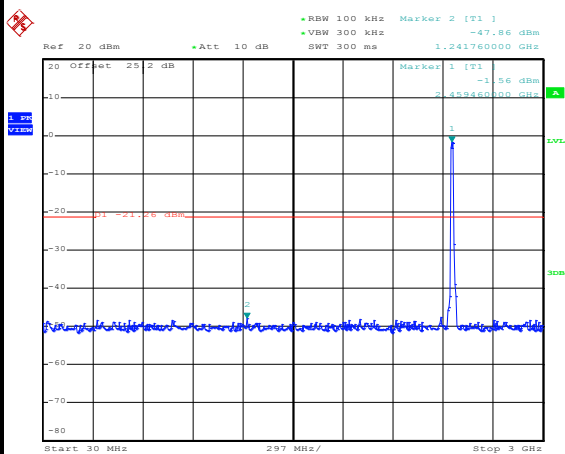
Date: 6.OCT.2018 04:07:18

Channel Plot



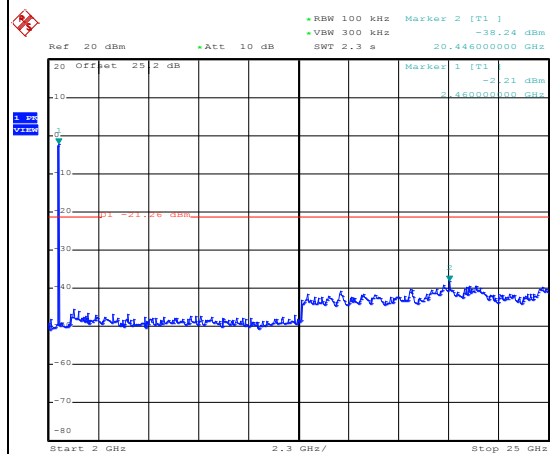
Date: 6.OCT.2018 04:07:33

Spurious Emission 30MHz~3GHz



Date: 6.OCT.2018 04:08:06

Spurious Emission 2GHz~25GHz



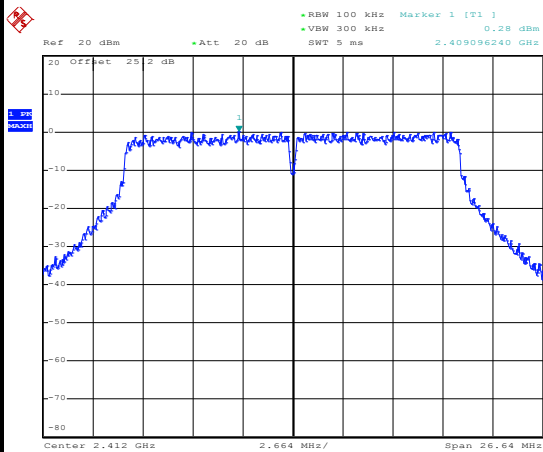
Date: 6.OCT.2018 04:08:22



Test Mode : 802.11n HT20

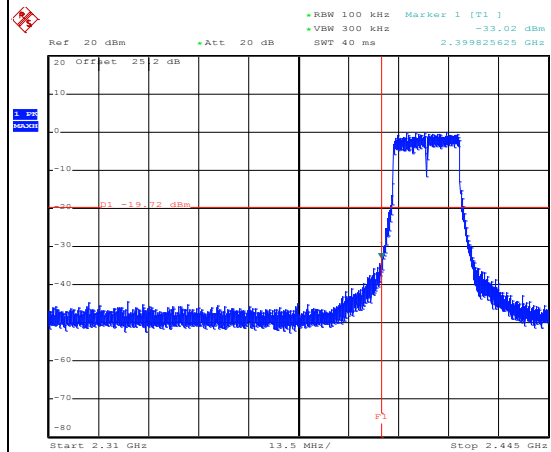
Test Channel : 01

100kHz PSD reference Level



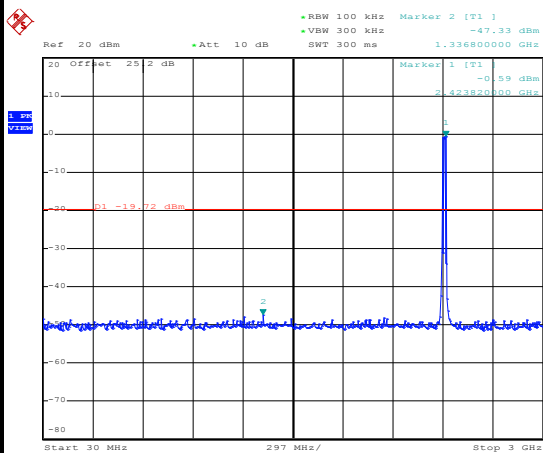
Date: 6.OCT.2018 04:14:30

Channel Plot



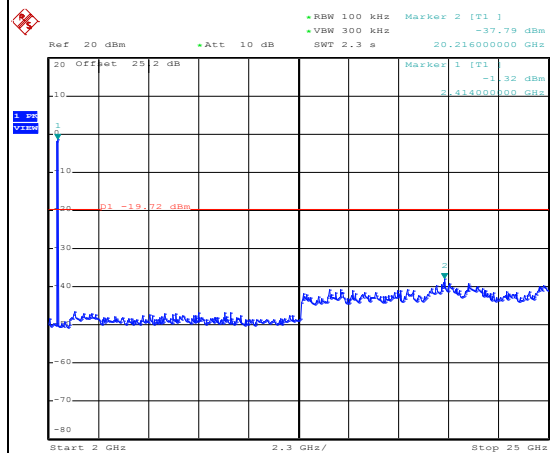
Date: 6.OCT.2018 04:14:46

Spurious Emission 30MHz~3GHz



Date: 6.OCT.2018 04:15:31

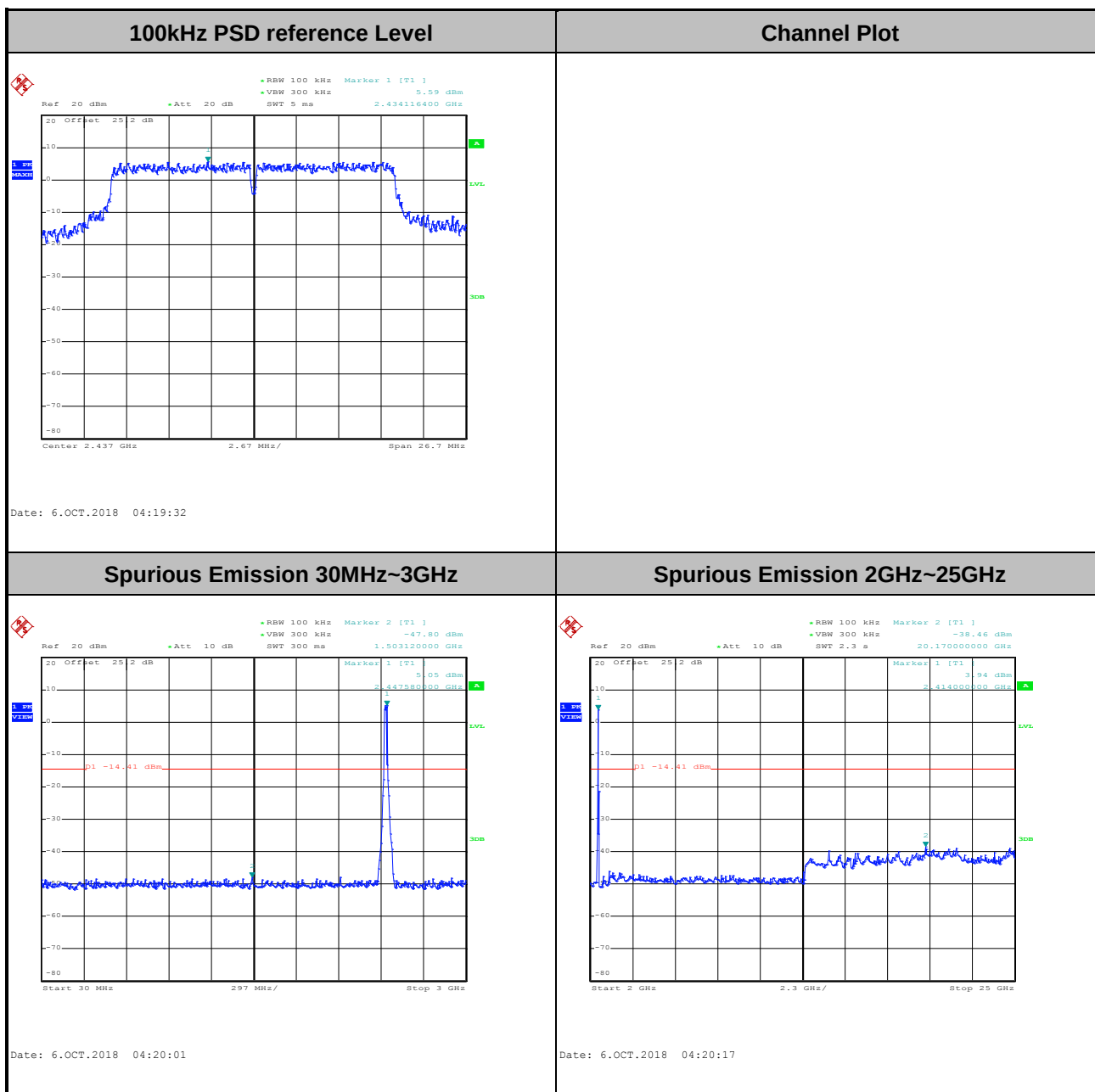
Spurious Emission 2GHz~25GHz



Date: 6.OCT.2018 04:15:50



Test Mode :	802.11n HT20	Test Channel :	06
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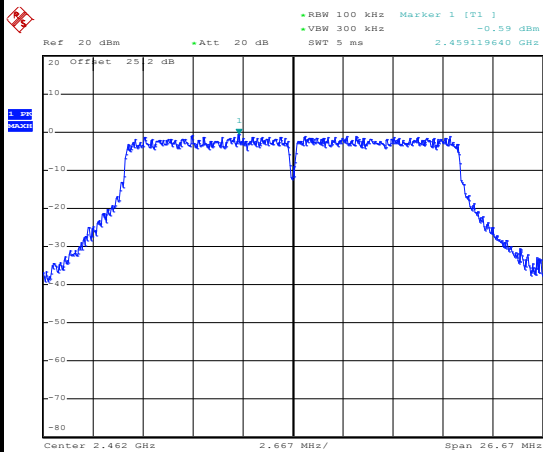




Test Mode : 802.11n HT20

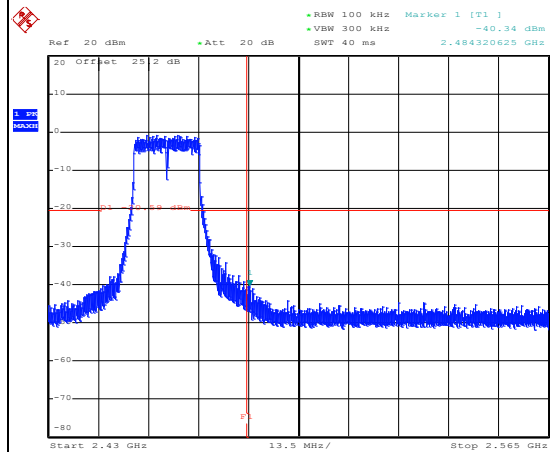
Test Channel : 11

100kHz PSD reference Level



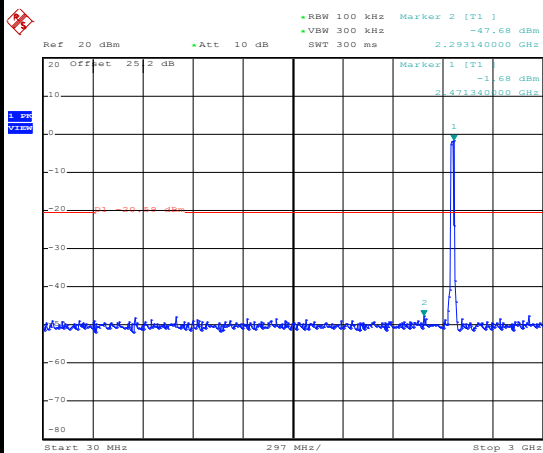
Date: 6.OCT.2018 04:24:34

Channel Plot



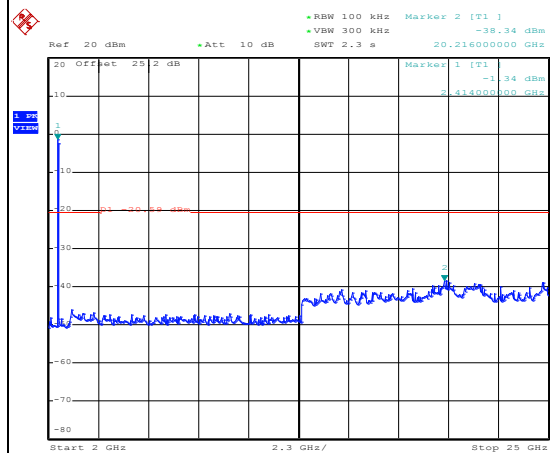
Date: 6.OCT.2018 04:25:31

Spurious Emission 30MHz~3GHz



Date: 6.OCT.2018 04:26:08

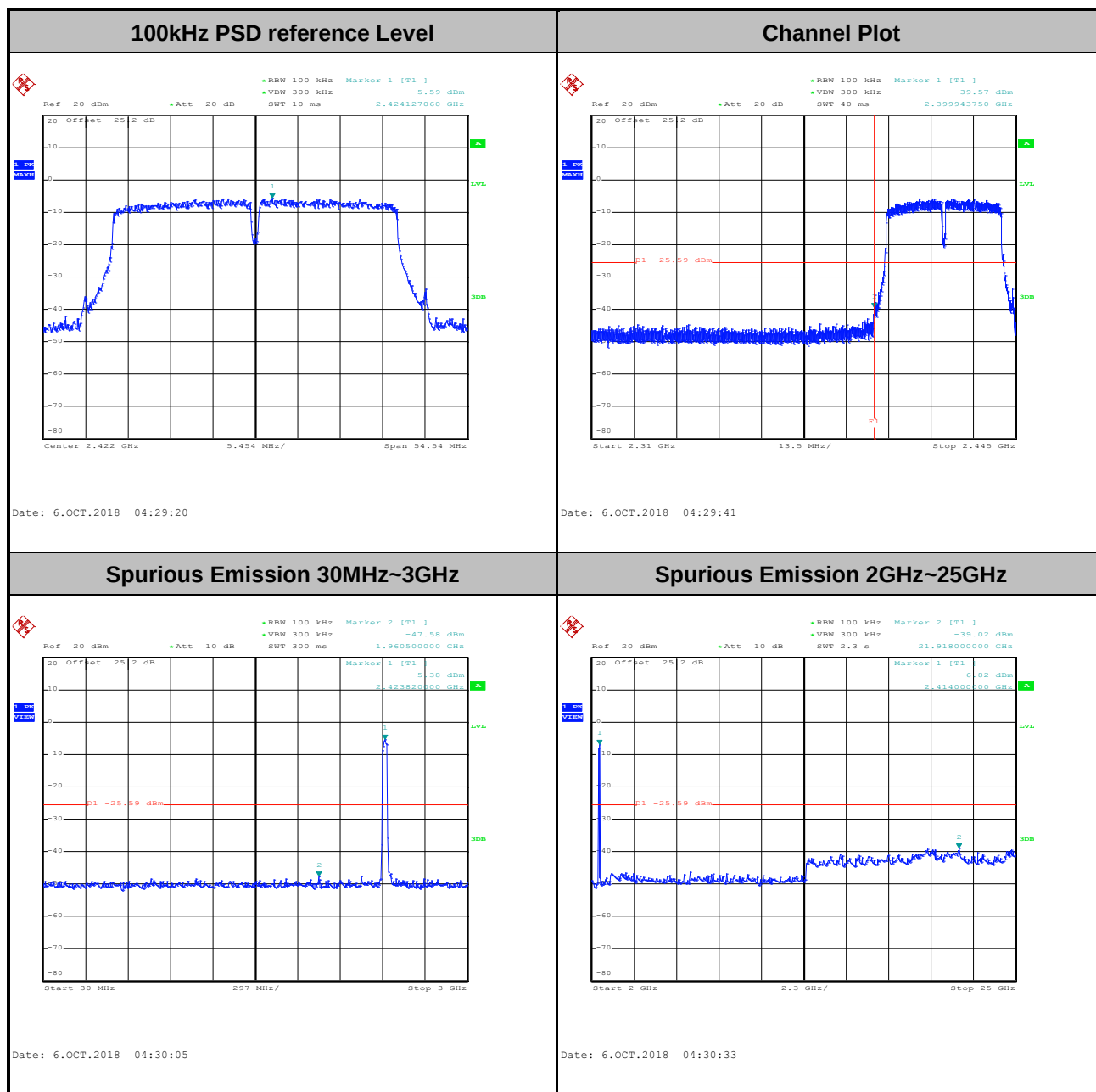
Spurious Emission 2GHz~25GHz



Date: 6.OCT.2018 04:26:23

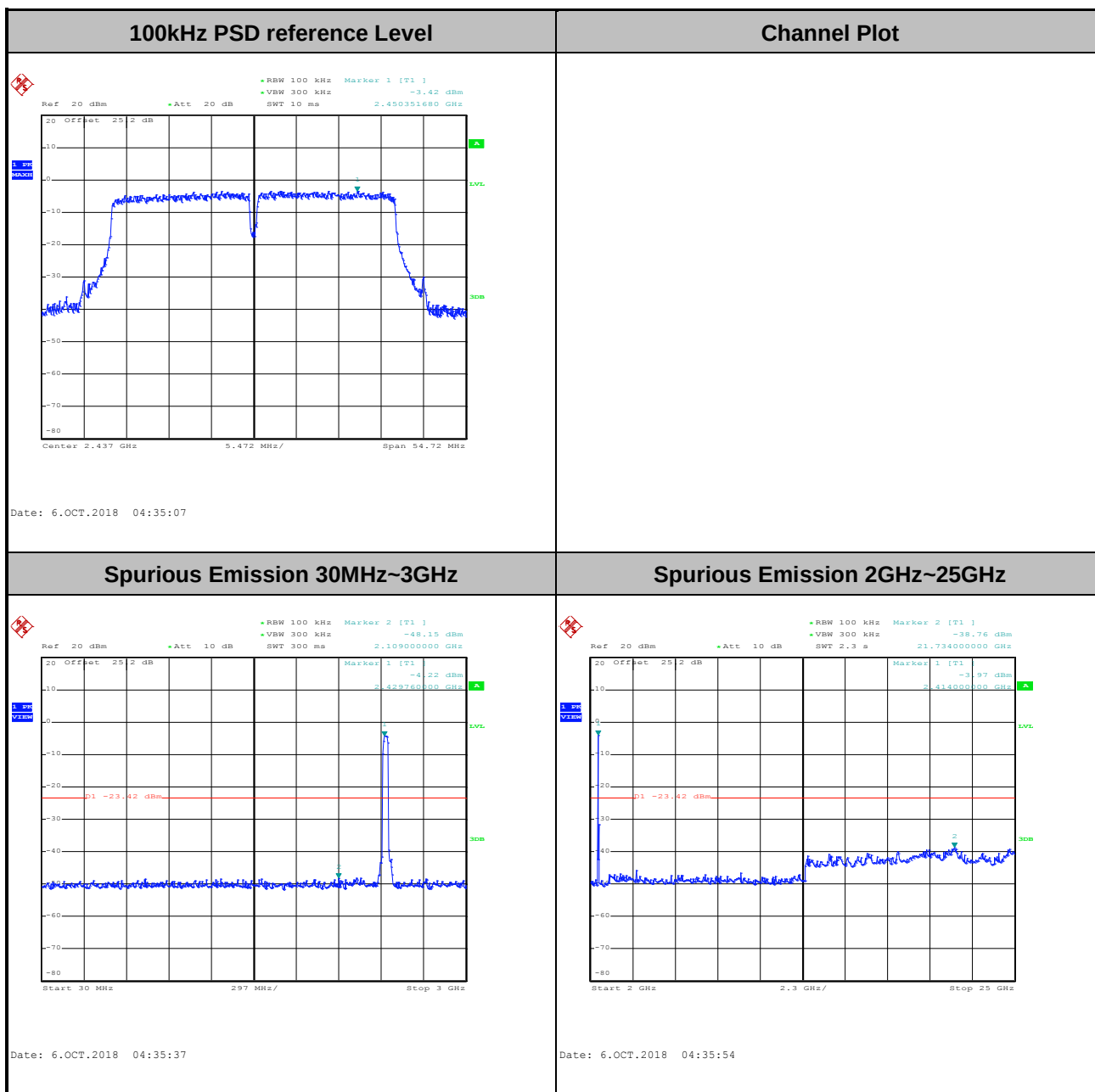


Test Mode :	802.11n HT40	Test Channel :	03
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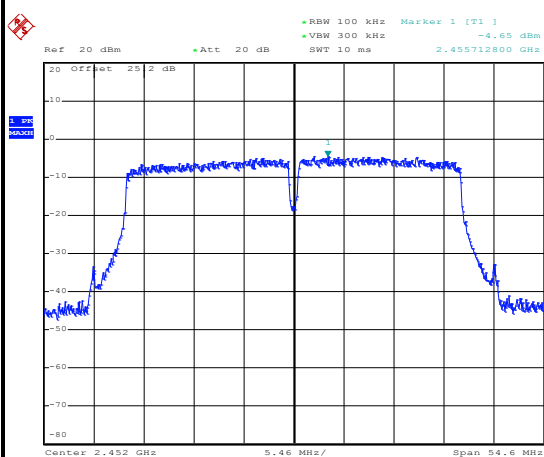
Test Mode :	802.11n HT40	Test Channel :	06
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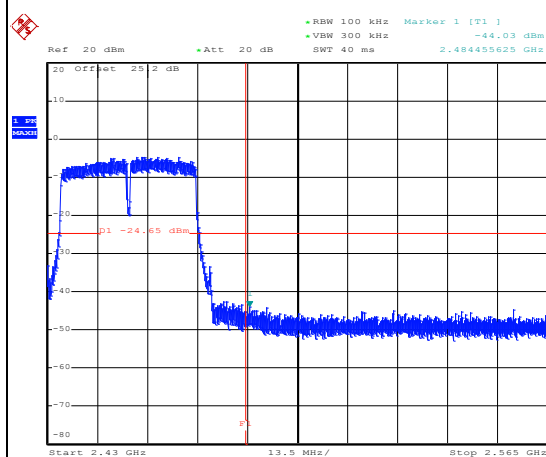
Test Mode :	802.11n HT40	Test Channel :	09
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100kHz PSD reference Level



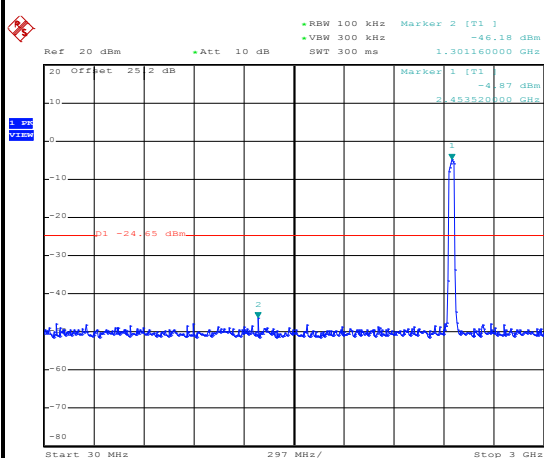
Date: 6.OCT.2018 04:39:30

Channel Plot



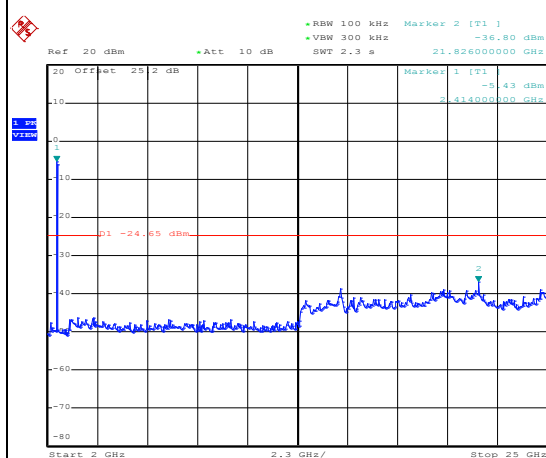
Date: 6.OCT.2018 04:39:43

Spurious Emission 30MHz~3GHz



Date: 6.OCT.2018 04:40:03

Spurious Emission 2GHz~25GHz

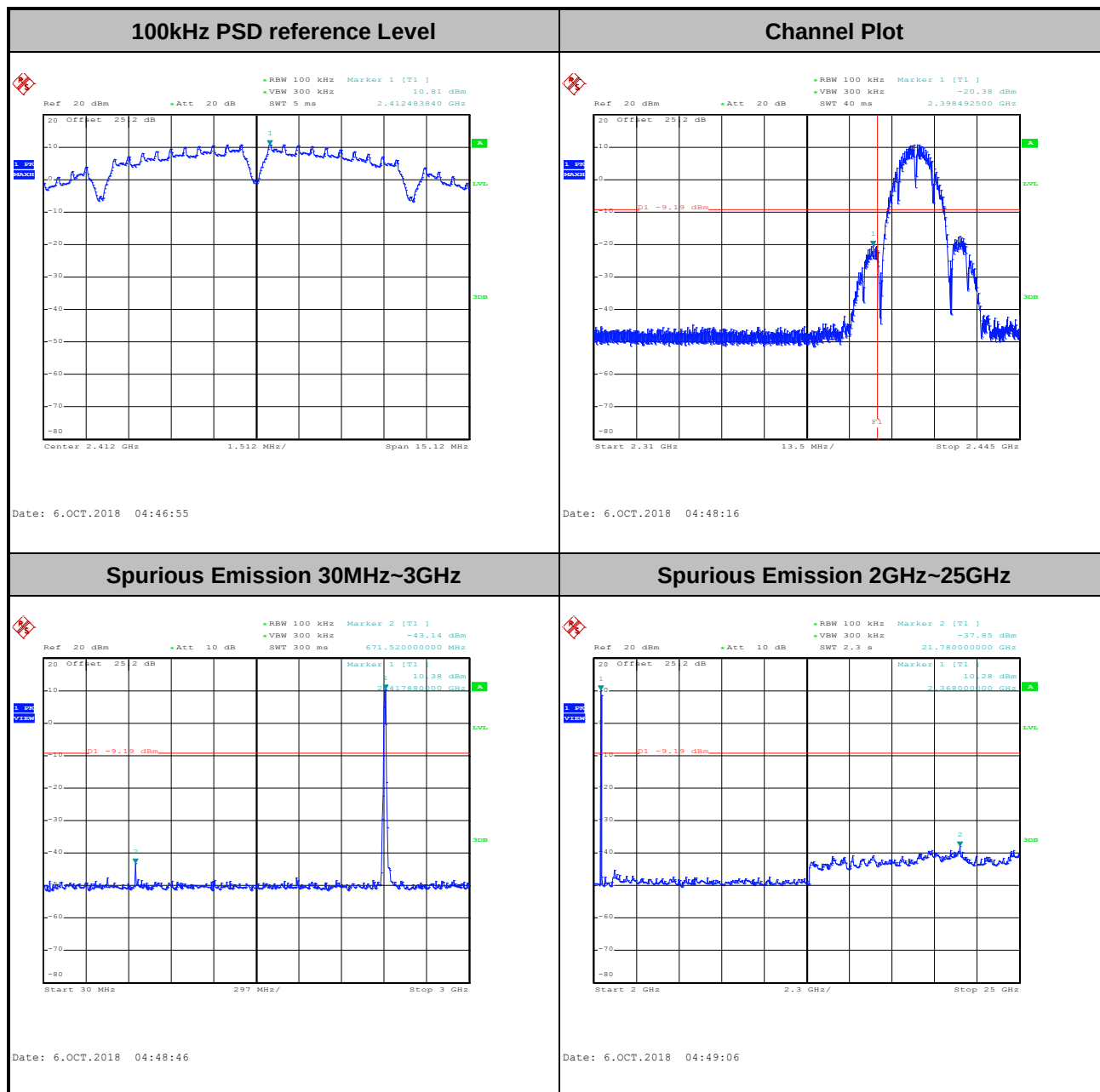


Date: 6.OCT.2018 04:40:20



Number of TX = 2, Ant. 1 (Measured)

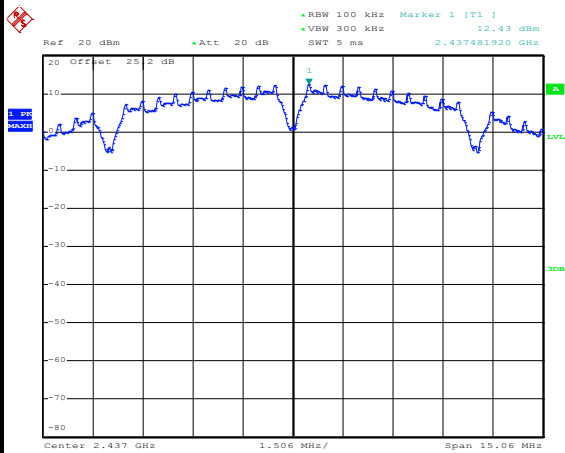
Test Mode :	802.11b	Test Channel :	01
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Test Mode :	802.11b	Test Channel :	06
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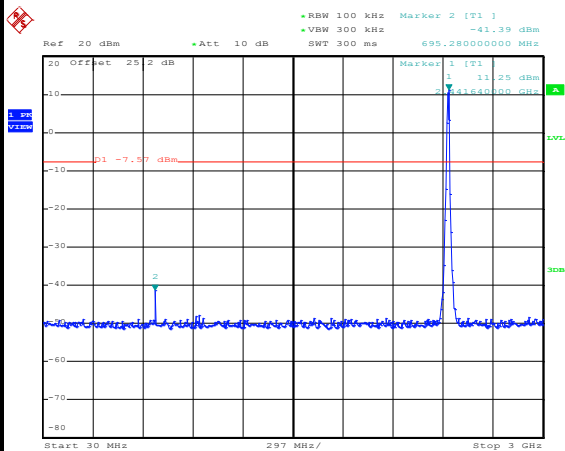
100kHz PSD reference Level



Date: 6.OCT.2018 04:56:03

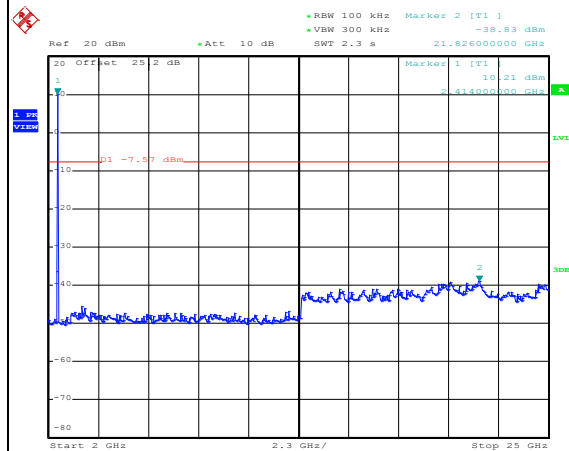
Channel Plot

Spurious Emission 30MHz~3GHz

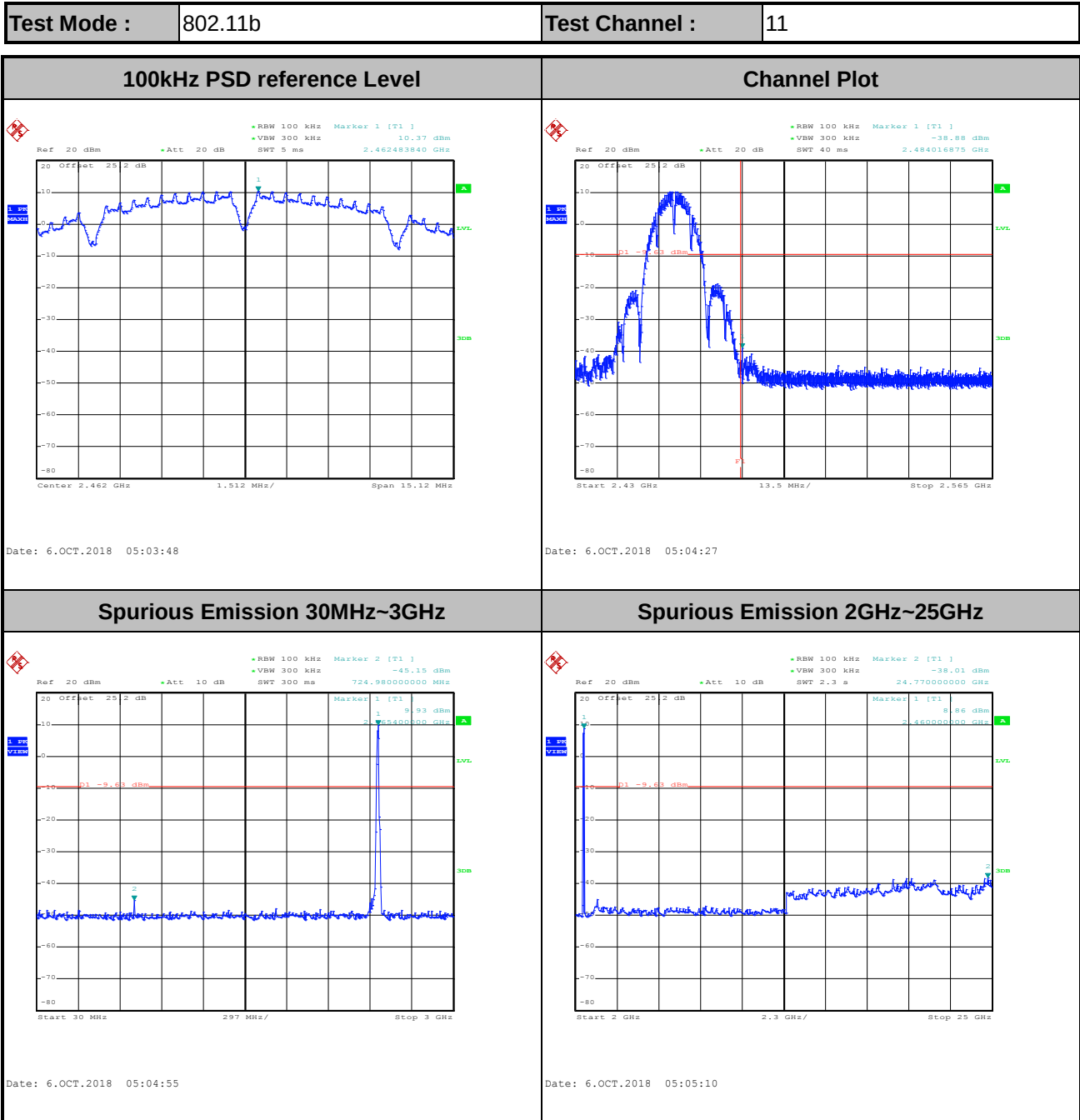


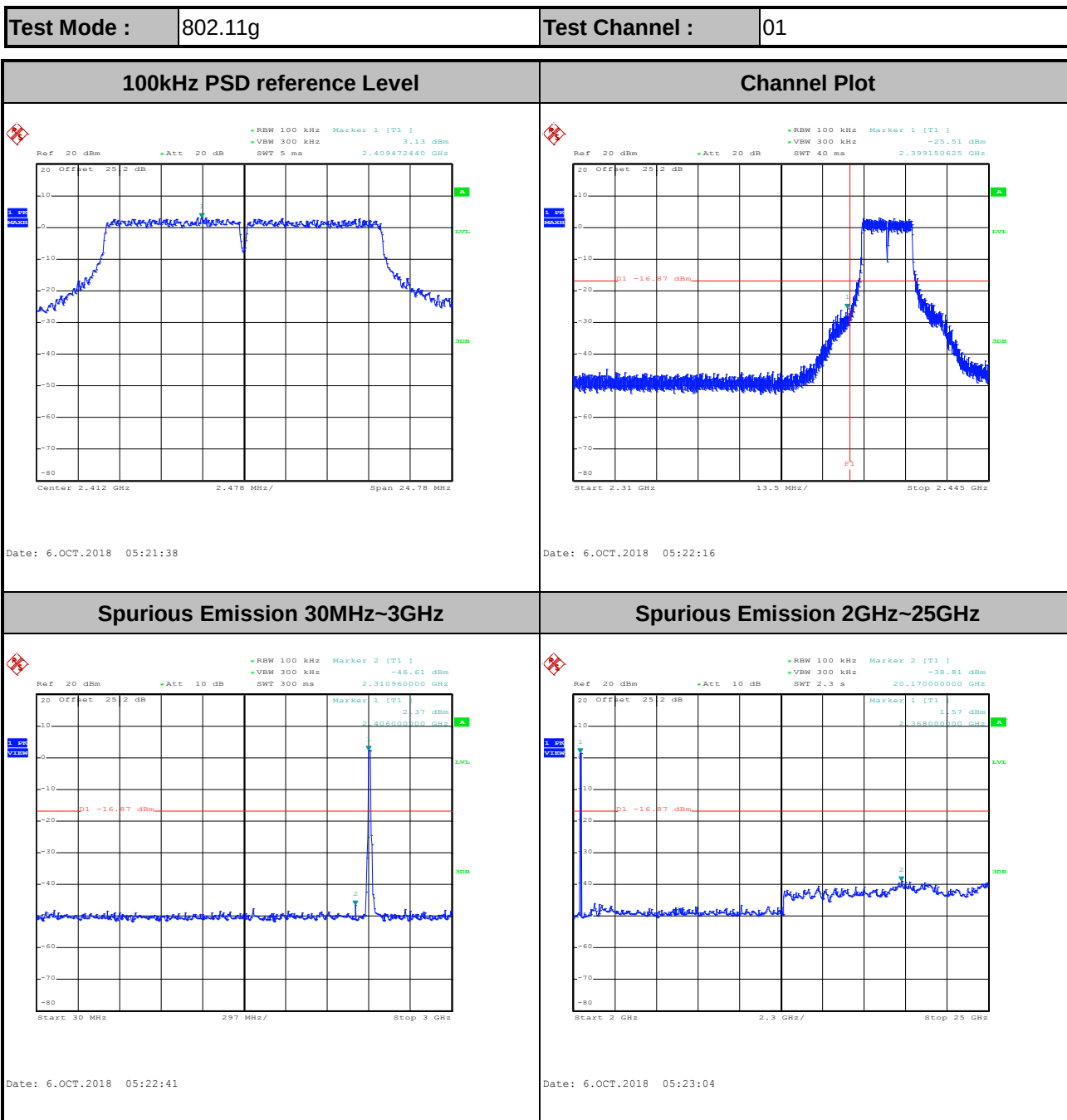
Date: 6.OCT.2018 04:56:44

Spurious Emission 2GHz~25GHz



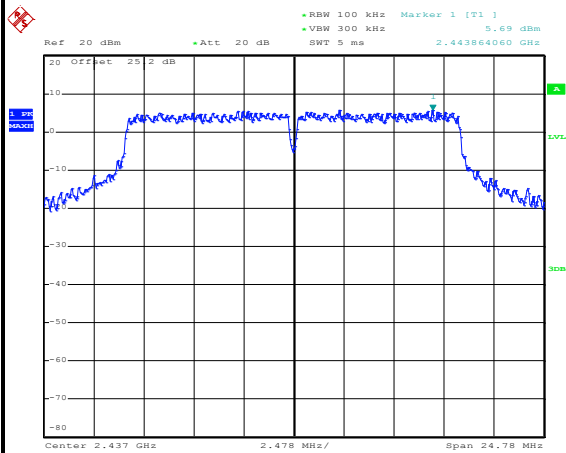
Date: 6.OCT.2018 04:56:59





Test Mode :	802.11g	Test Channel :	06
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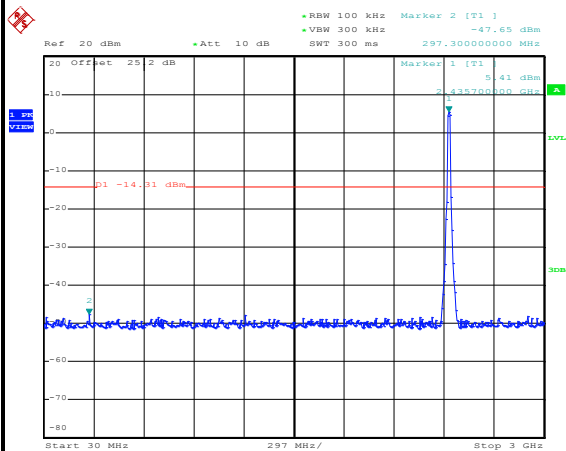
100kHz PSD reference Level



Date: 6.OCT.2018 05:46:46

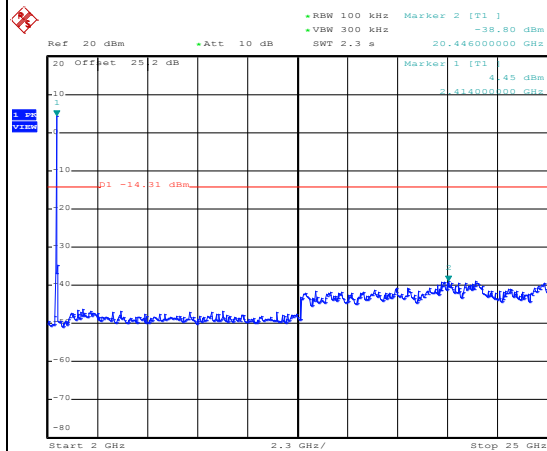
Channel Plot

Spurious Emission 30MHz~3GHz



Date: 6.OCT.2018 05:47:17

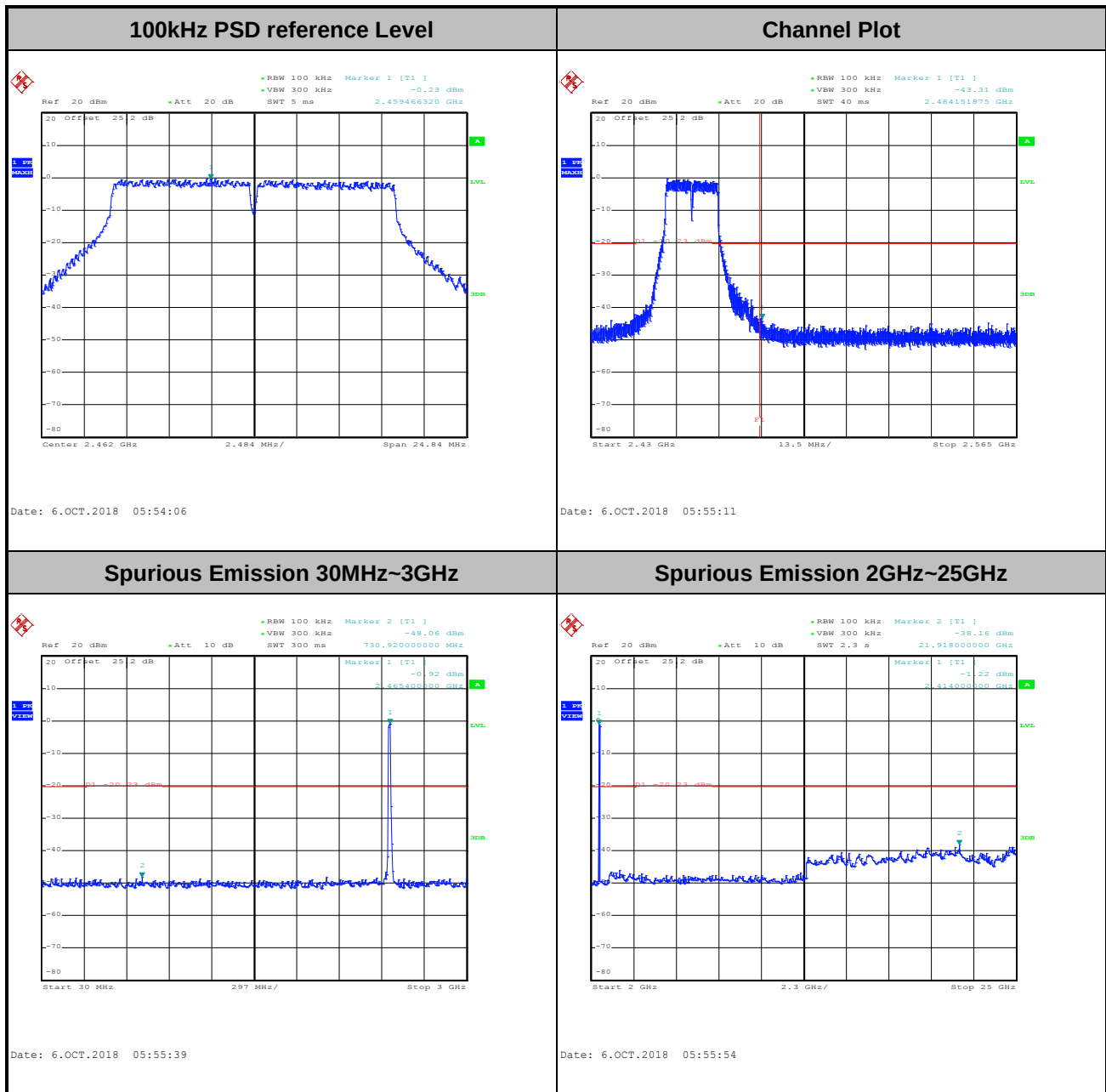
Spurious Emission 2GHz~25GHz

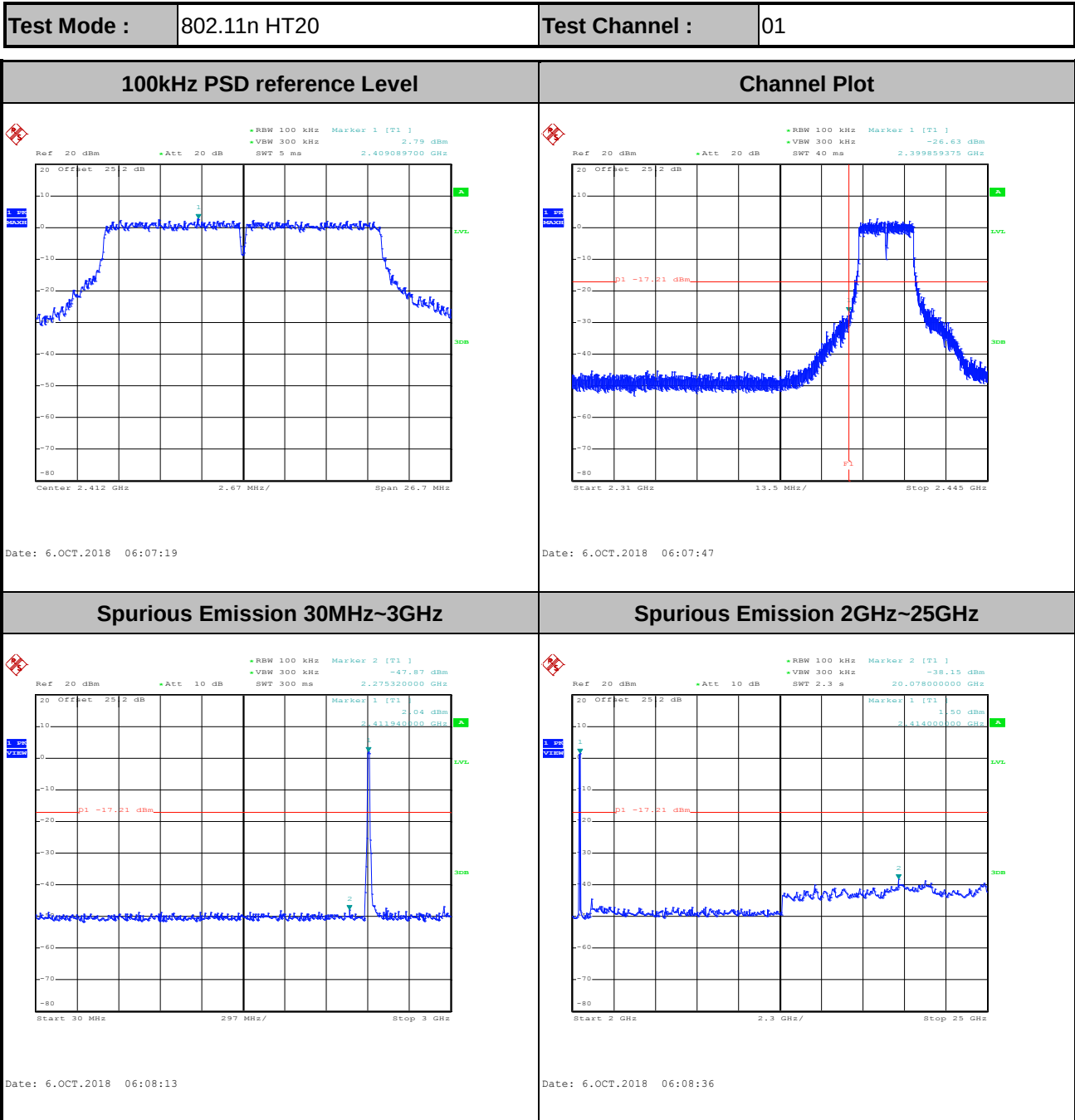


Date: 6.OCT.2018 05:47:32



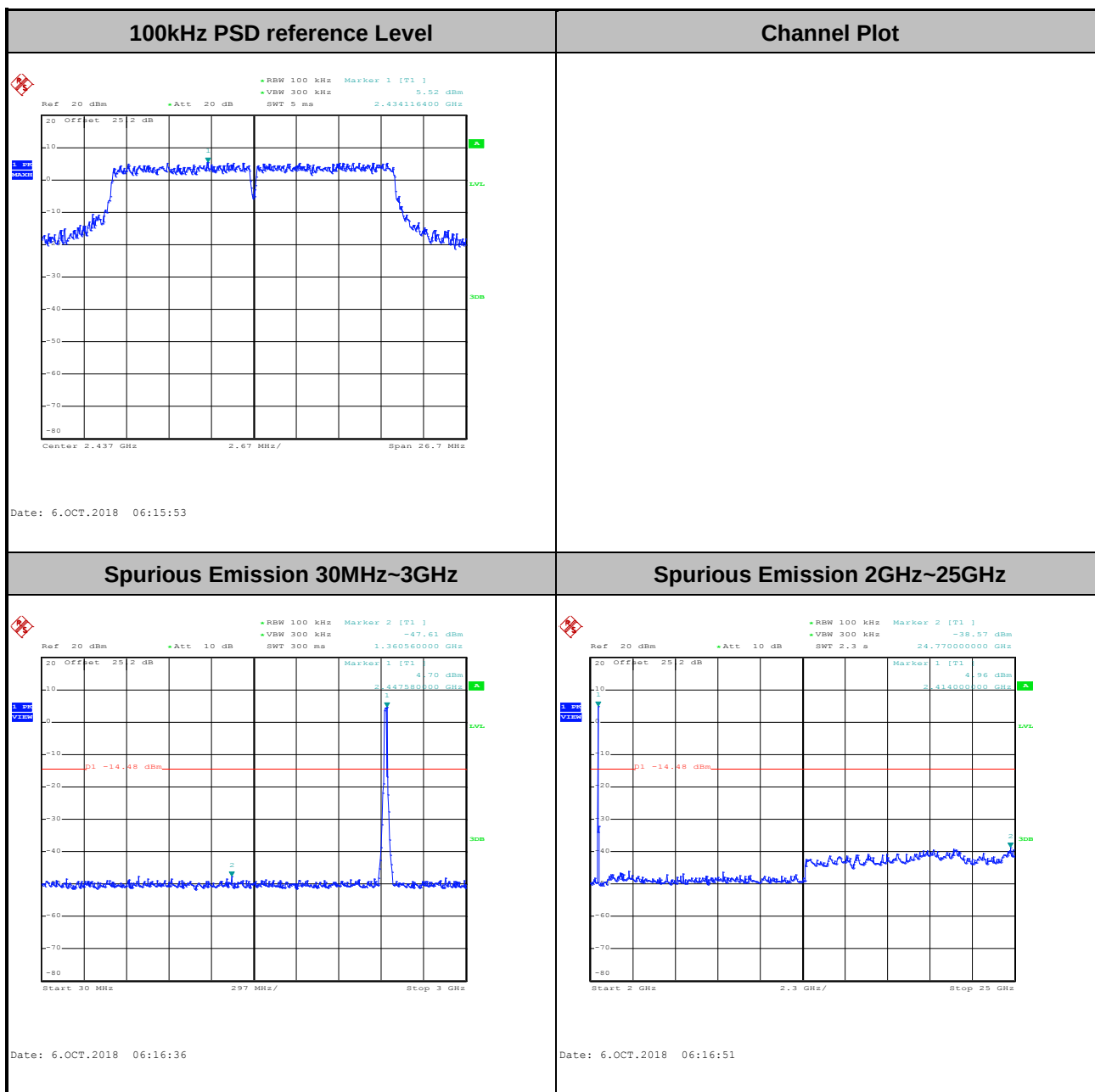
Test Mode :	802.11g	Test Channel :	11
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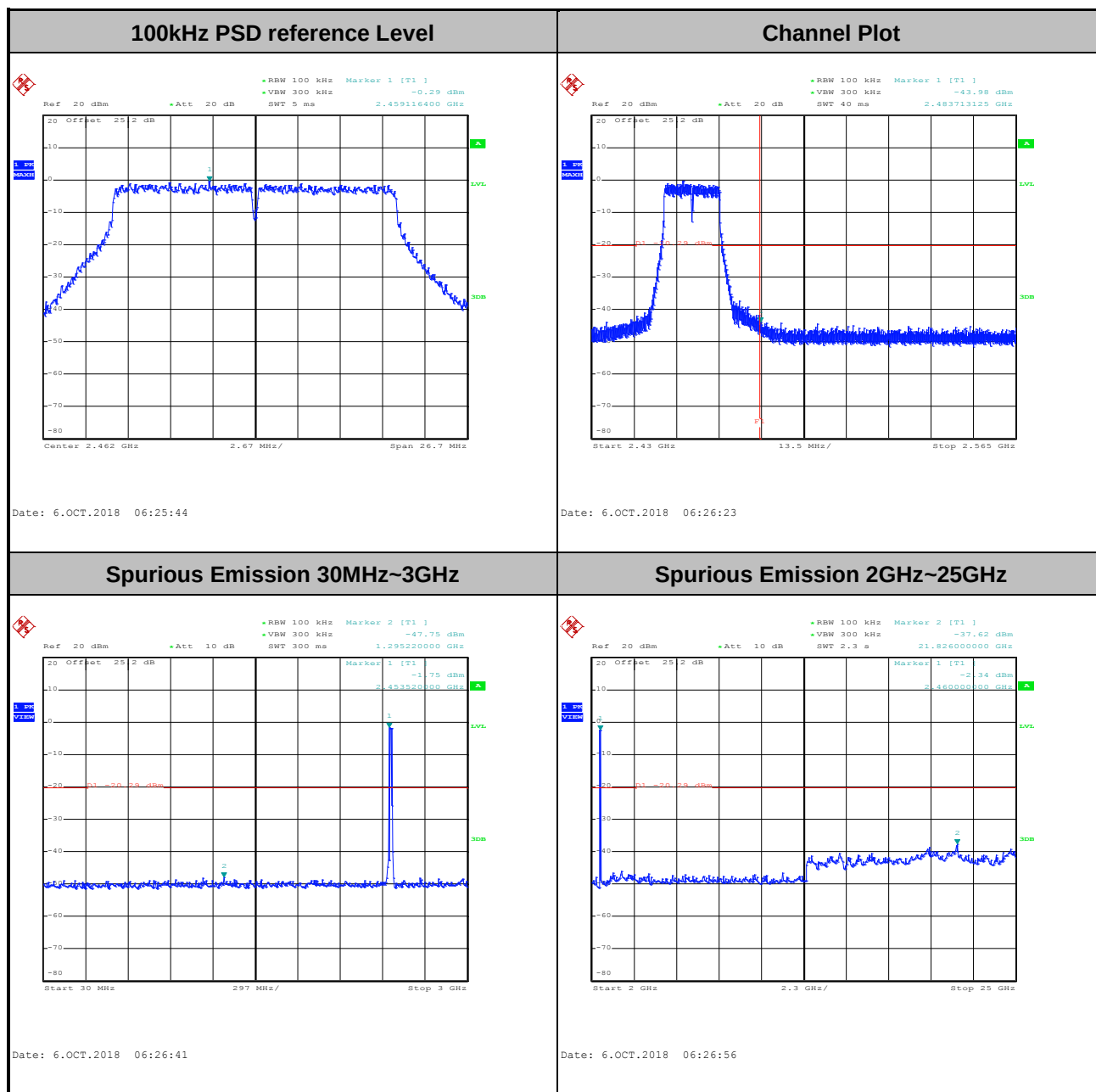


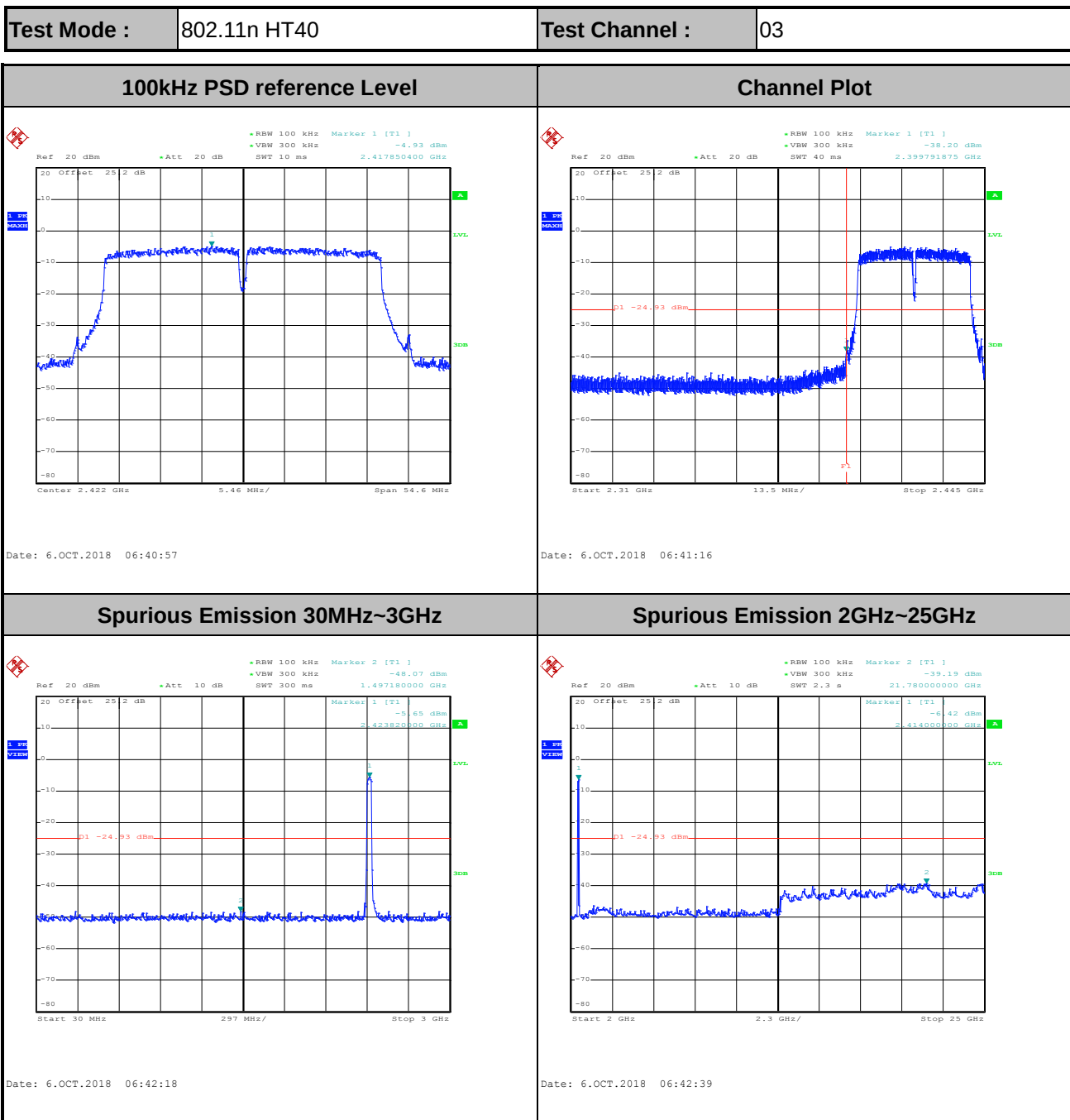
Test Mode :	802.11n HT20	Test Channel :	06
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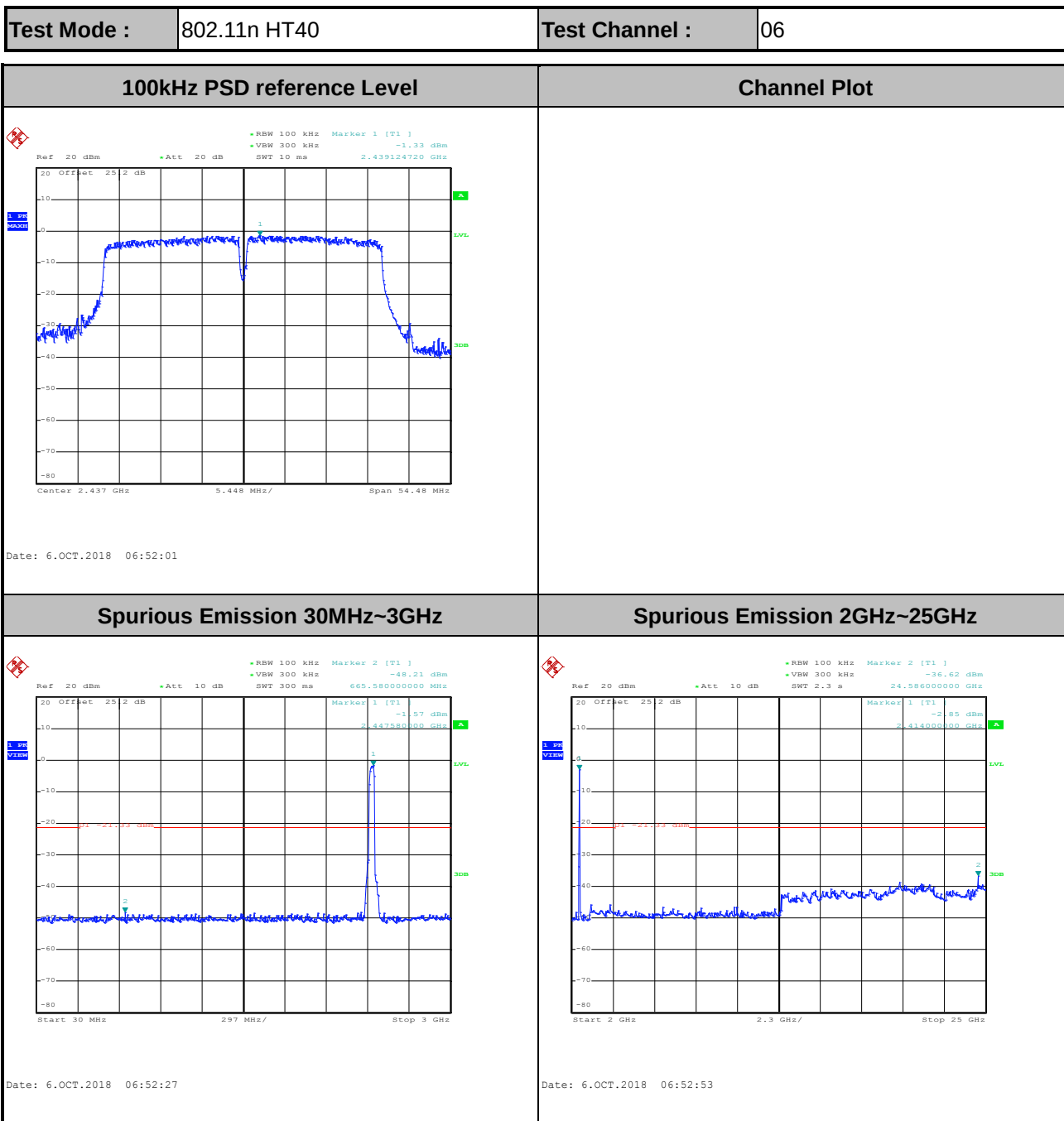




Test Mode :	802.11n HT20	Test Channel :	11
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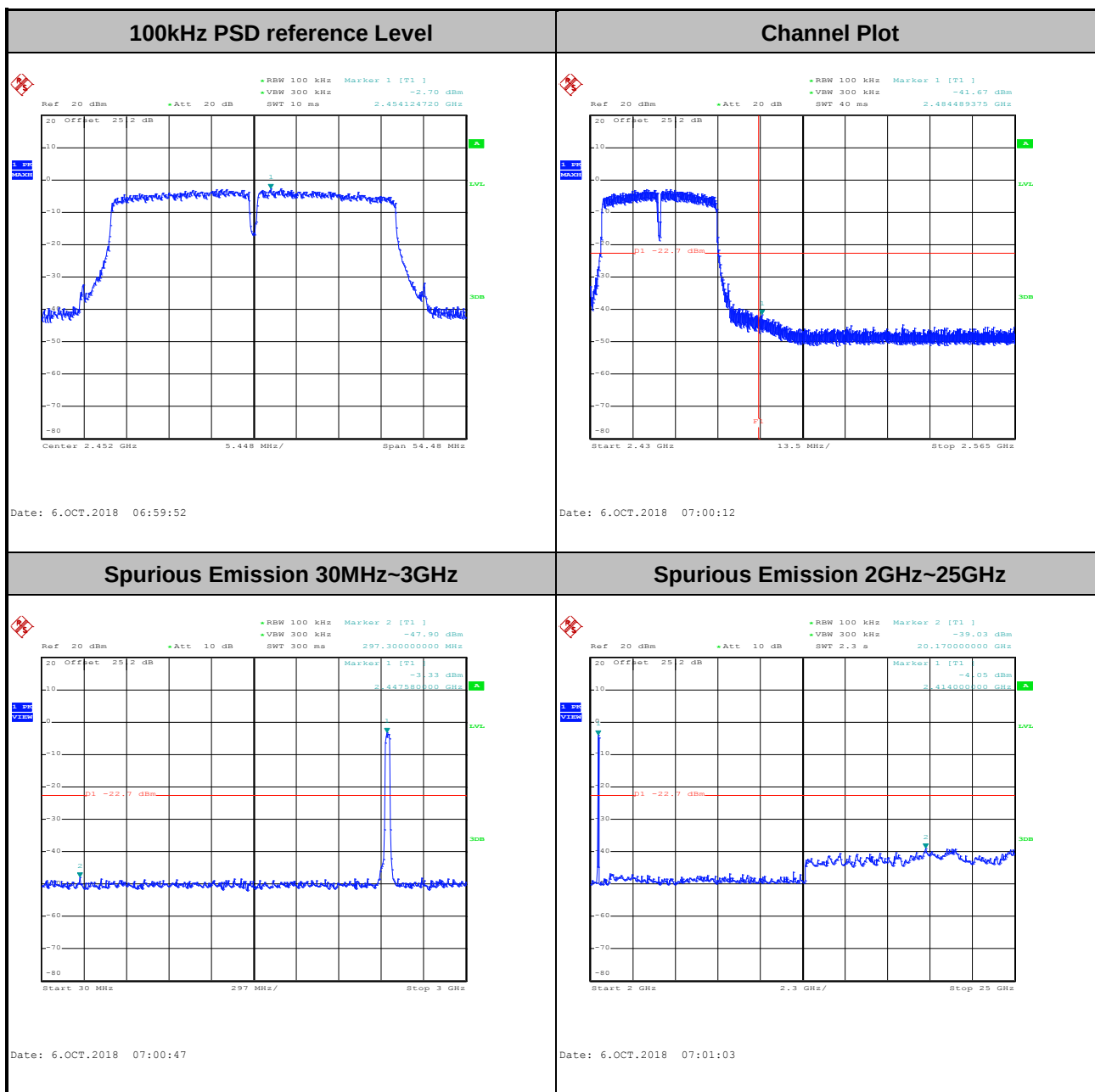








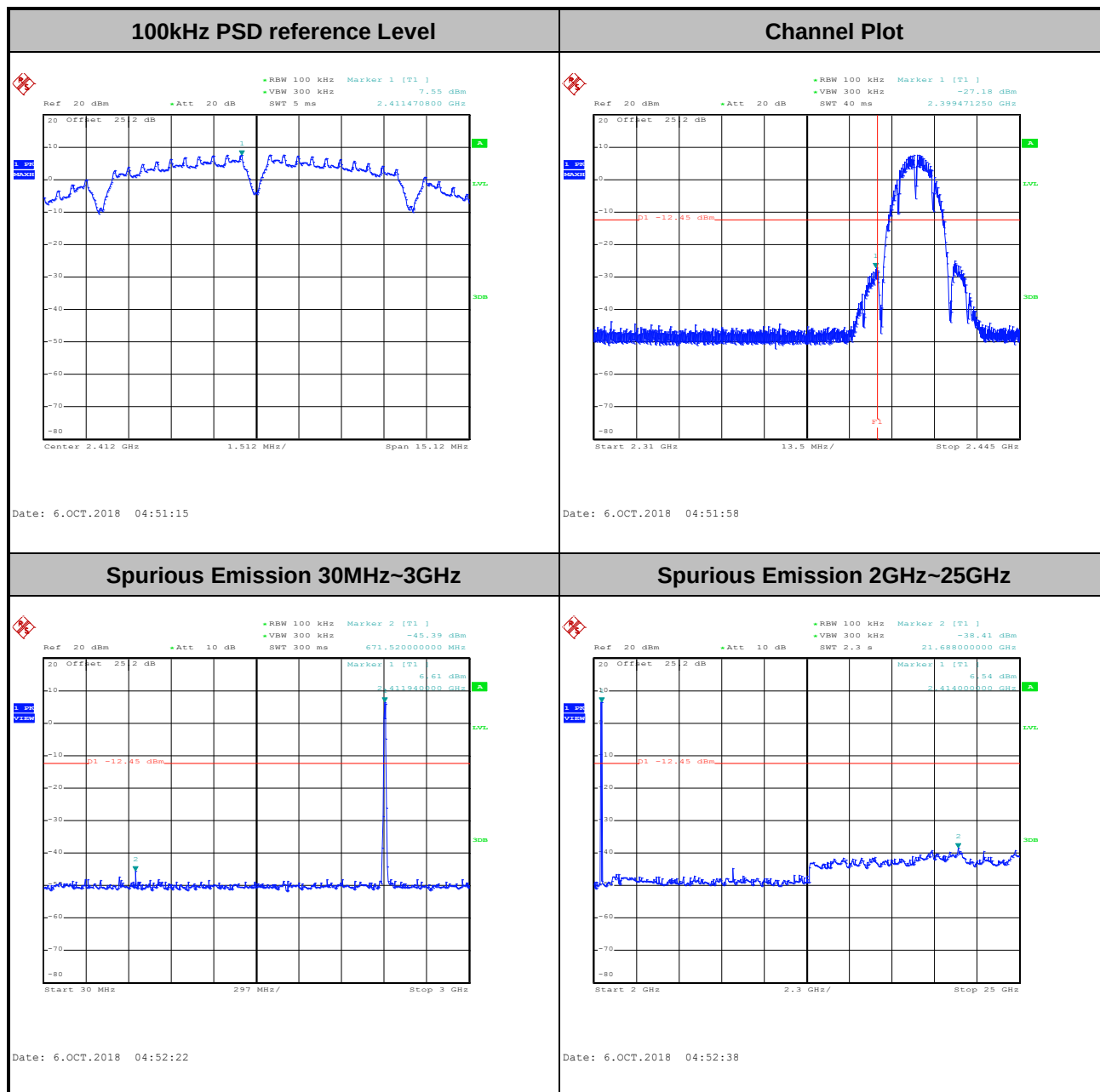
Test Mode :	802.11n HT40	Test Channel :	09
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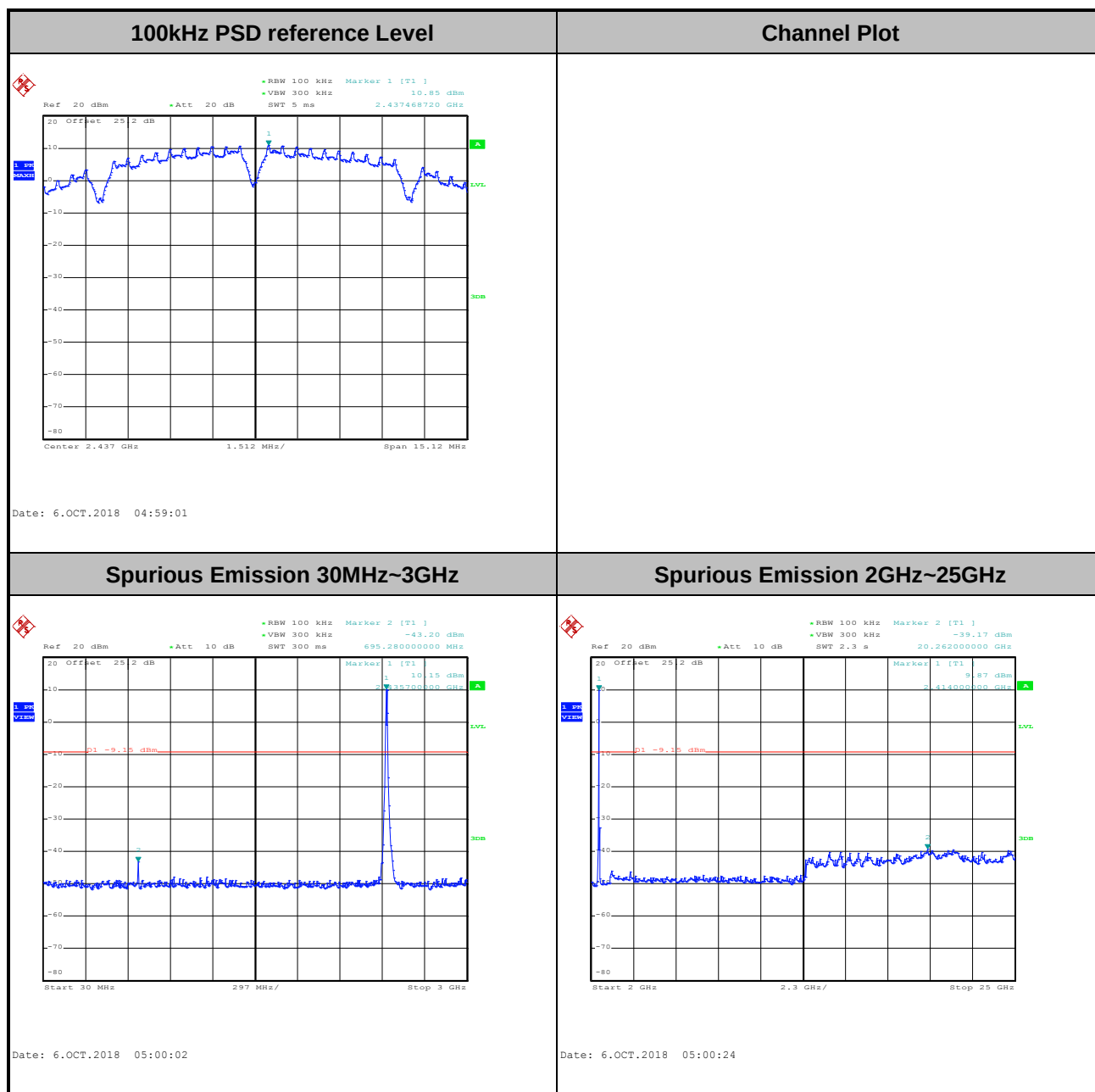
Number of TX = 2, Ant. 2 (Measured)

Test Mode :	802.11b	Test Channel :	01
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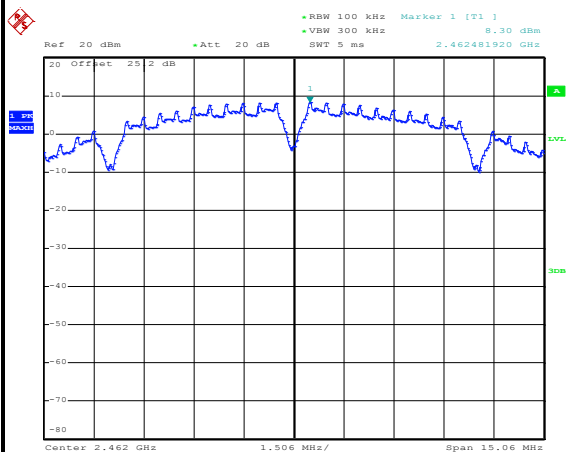
Test Mode :	802.11b	Test Channel :	06
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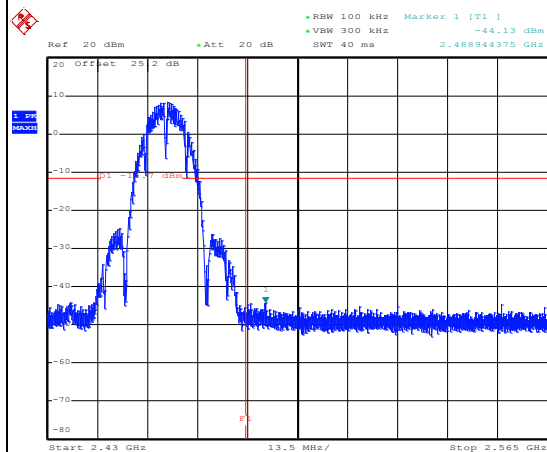
Test Mode :	802.11b	Test Channel :	11
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100kHz PSD reference Level



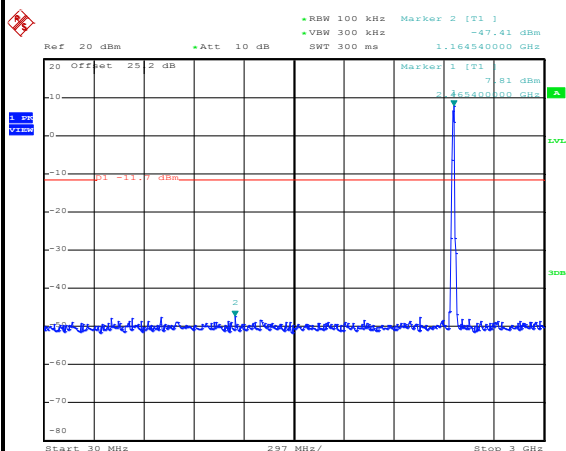
Date: 6.OCT.2018 05:09:46

Channel Plot



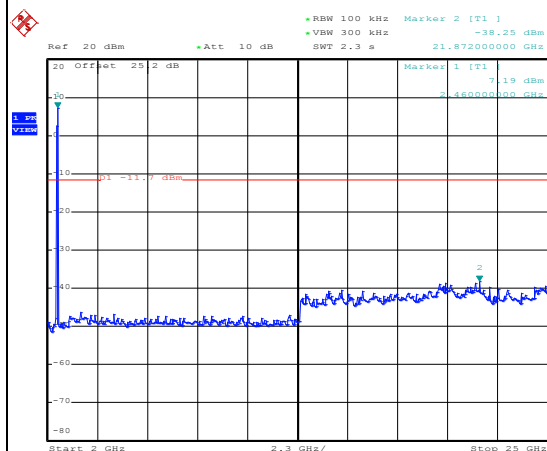
Date: 6.OCT.2018 05:09:59

Spurious Emission 30MHz~3GHz



Date: 6.OCT.2018 05:10:17

Spurious Emission 2GHz~25GHz

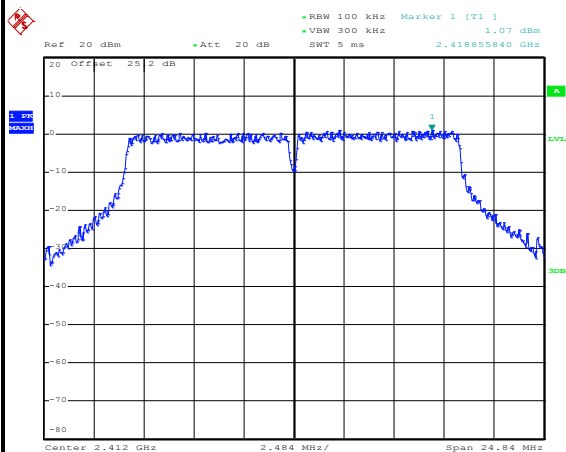


Date: 6.OCT.2018 05:10:33



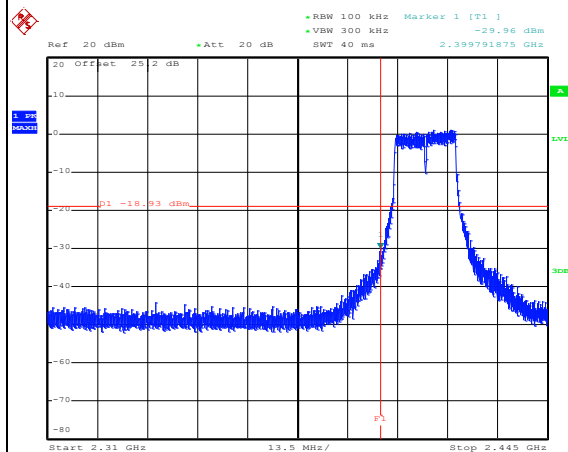
Test Mode :	802.11g	Test Channel :	01
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100kHz PSD reference Level



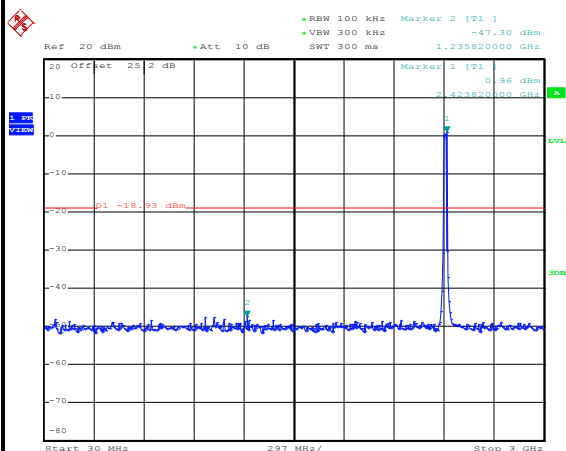
Date: 6.OCT.2018 05:42:19

Channel Plot



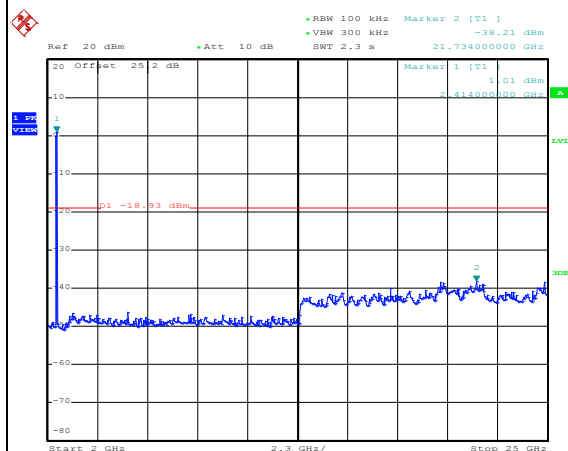
Date: 6.OCT.2018 05:42:33

Spurious Emission 30MHz~3GHz



Date: 6.OCT.2018 05:43:02

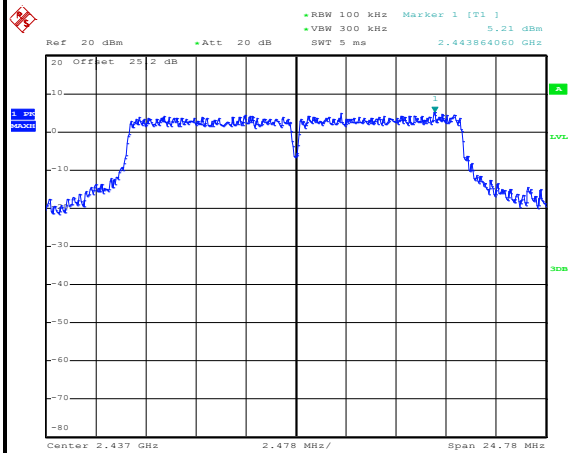
Spurious Emission 2GHz~25GHz



Date: 6.OCT.2018 05:43:18

Test Mode :	802.11g	Test Channel :	06
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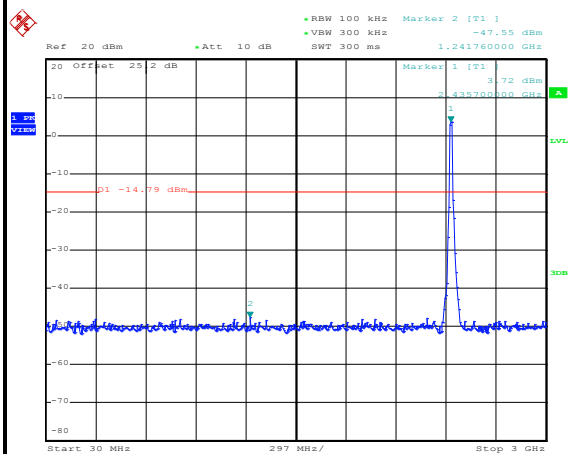
100kHz PSD reference Level



Date: 6.OCT.2018 05:49:37

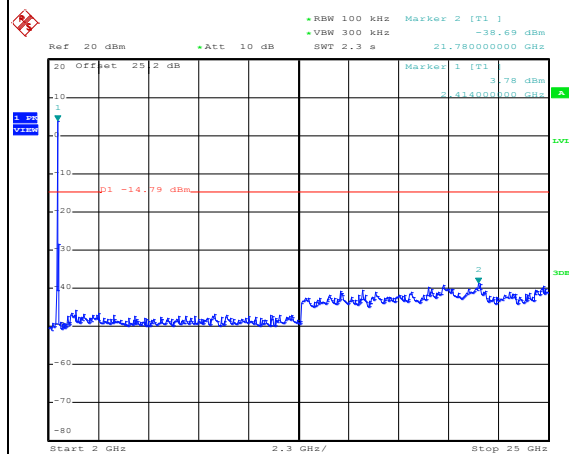
Channel Plot

Spurious Emission 30MHz~3GHz



Date: 6.OCT.2018 05:50:29

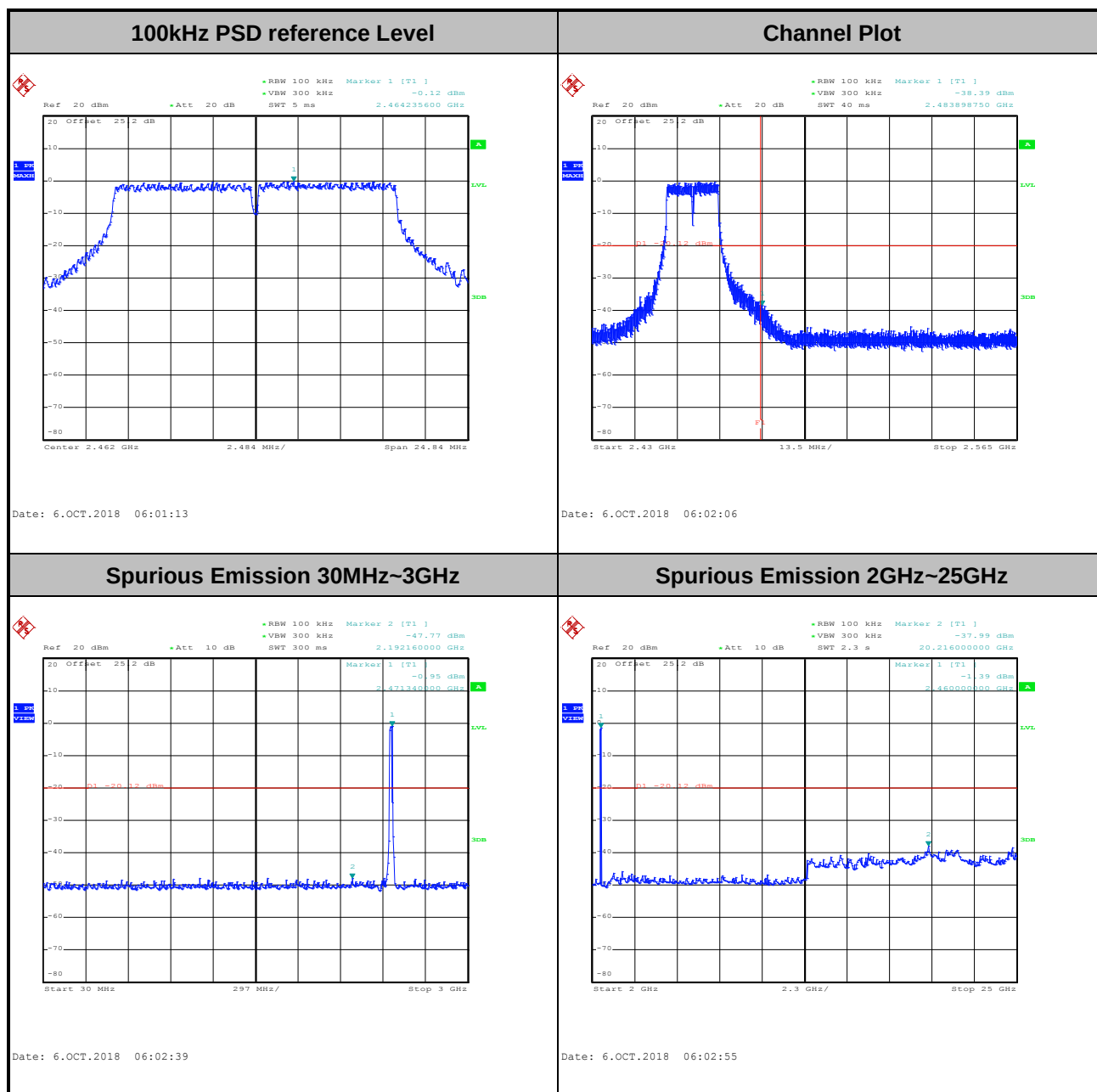
Spurious Emission 2GHz~25GHz

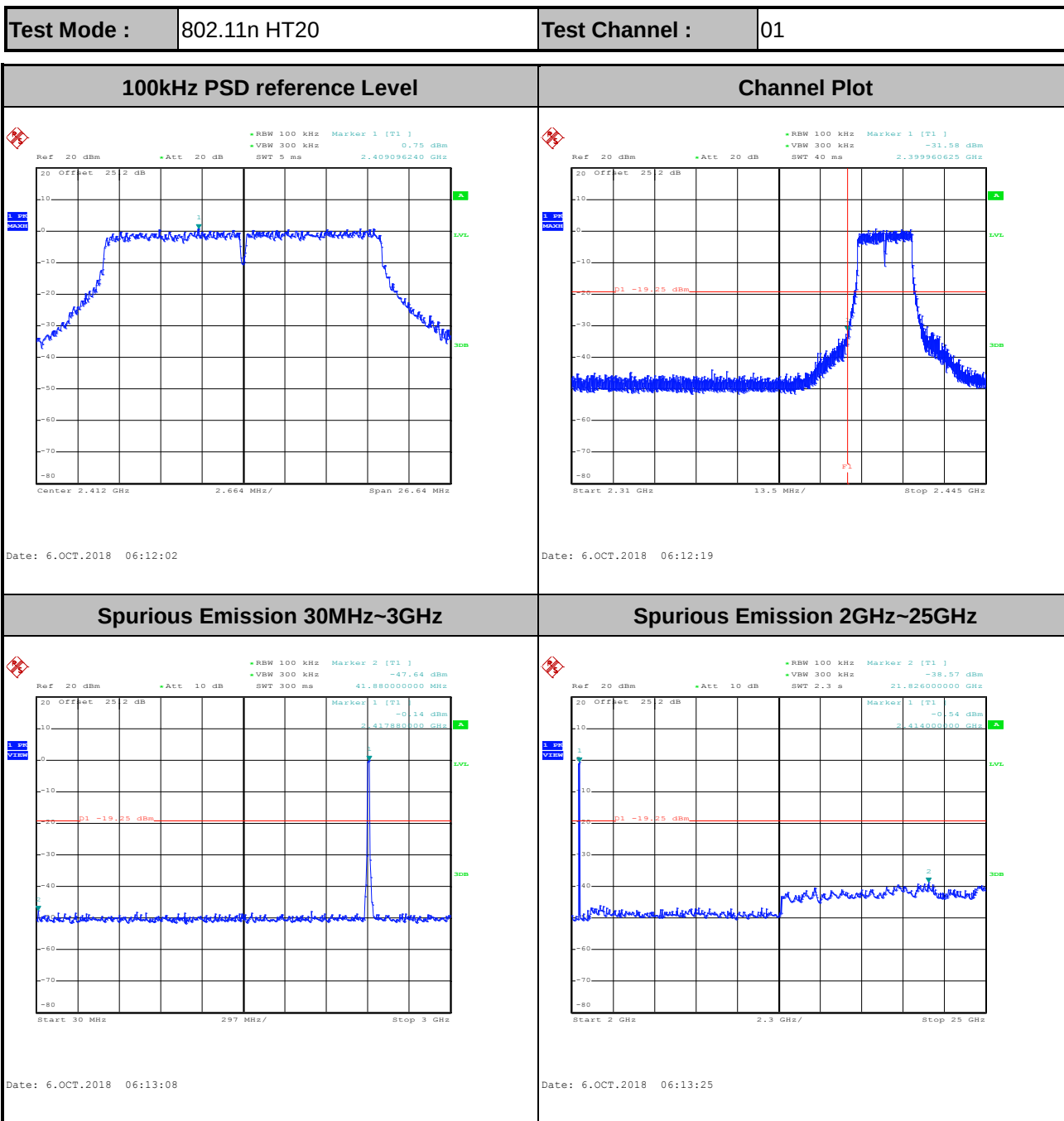


Date: 6.OCT.2018 05:50:53

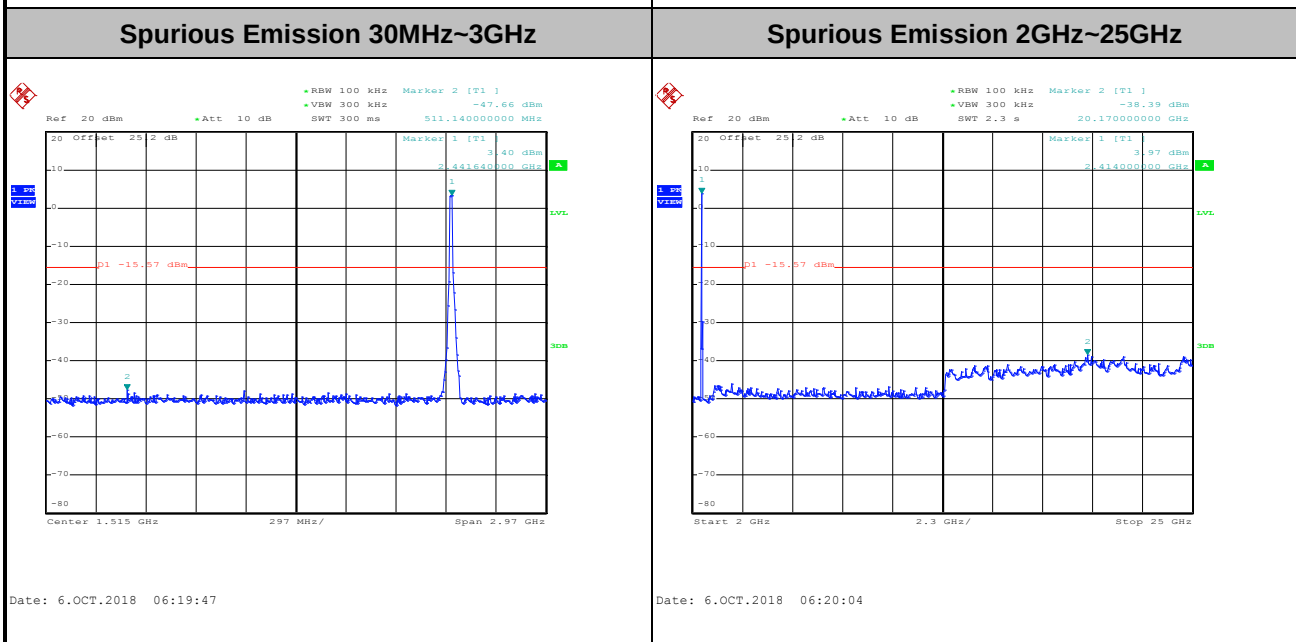
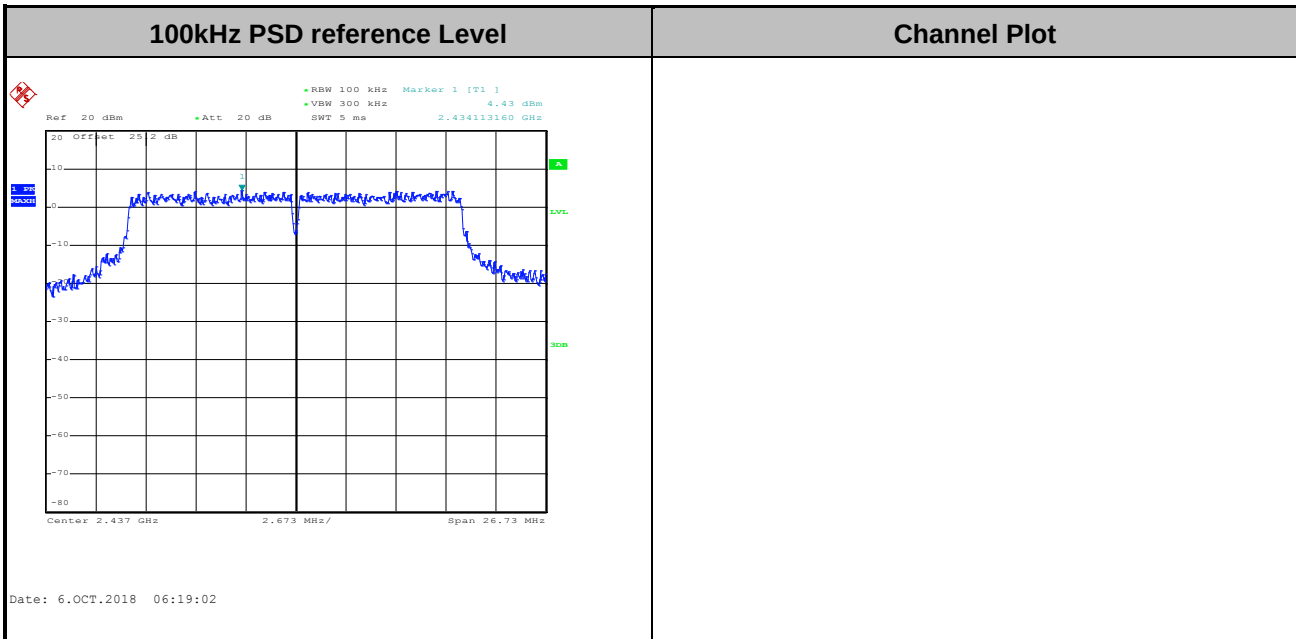


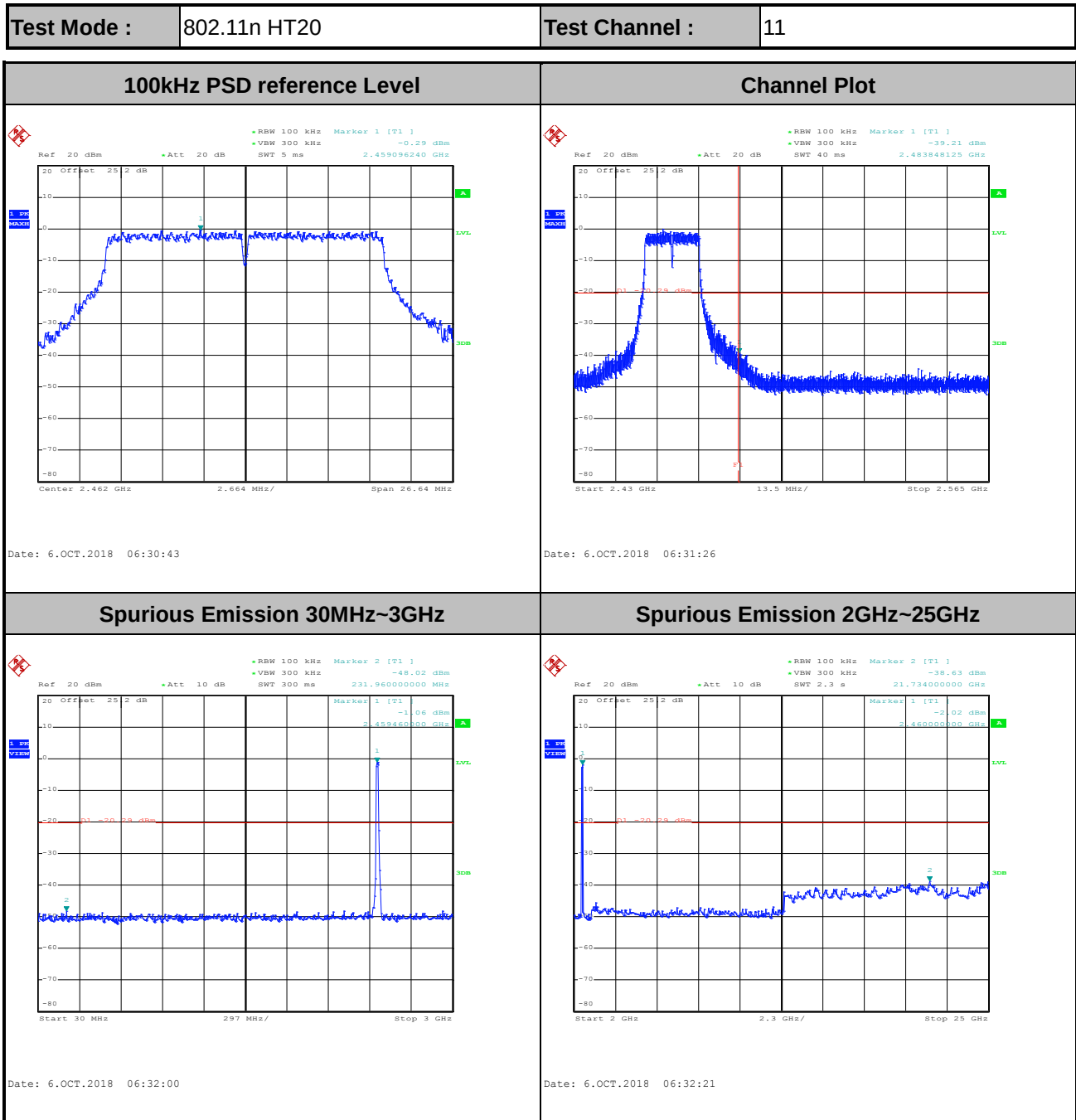
Test Mode :	802.11g	Test Channel :	11
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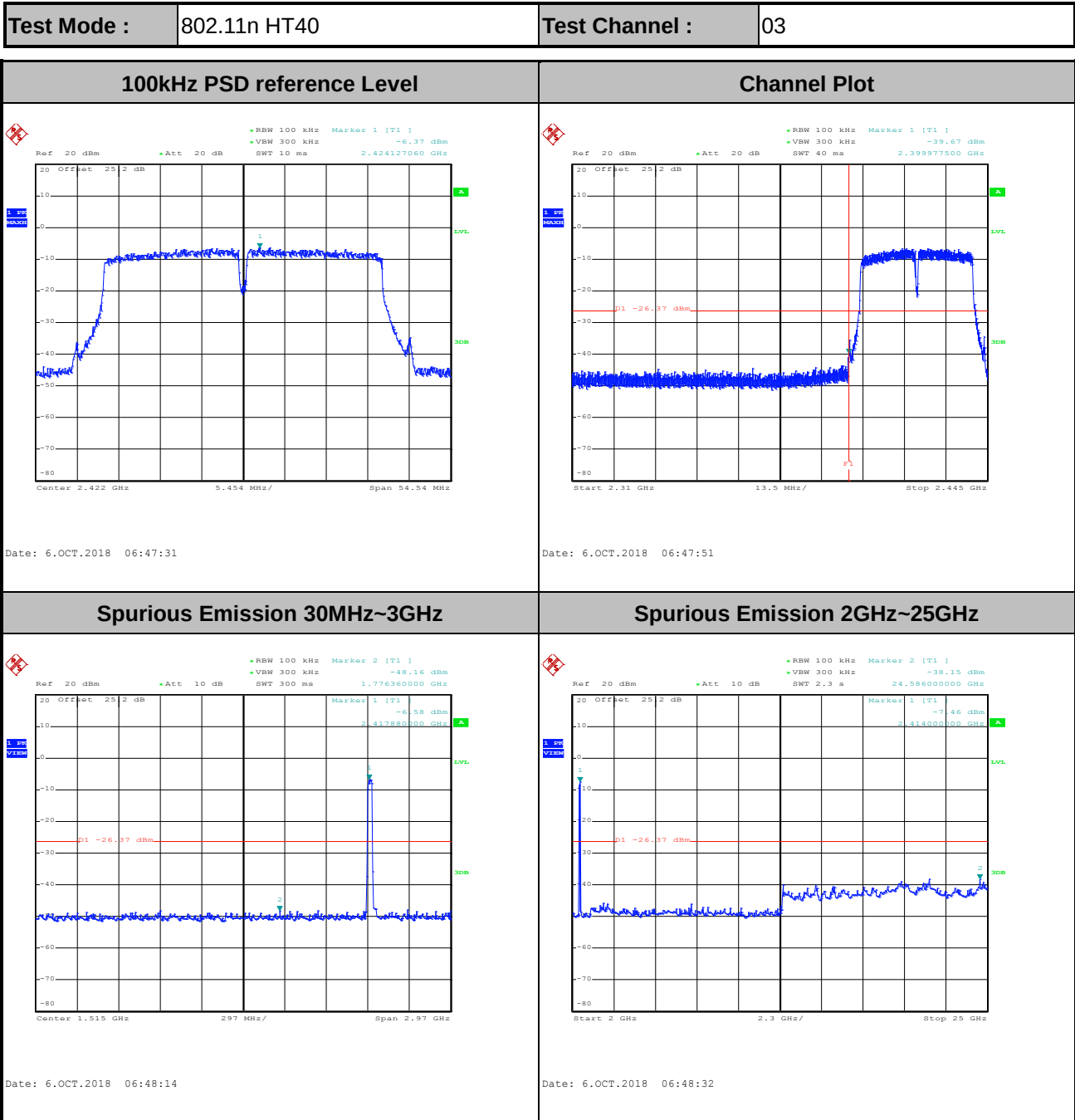




Test Mode :	802.11n HT20	Test Channel :	06
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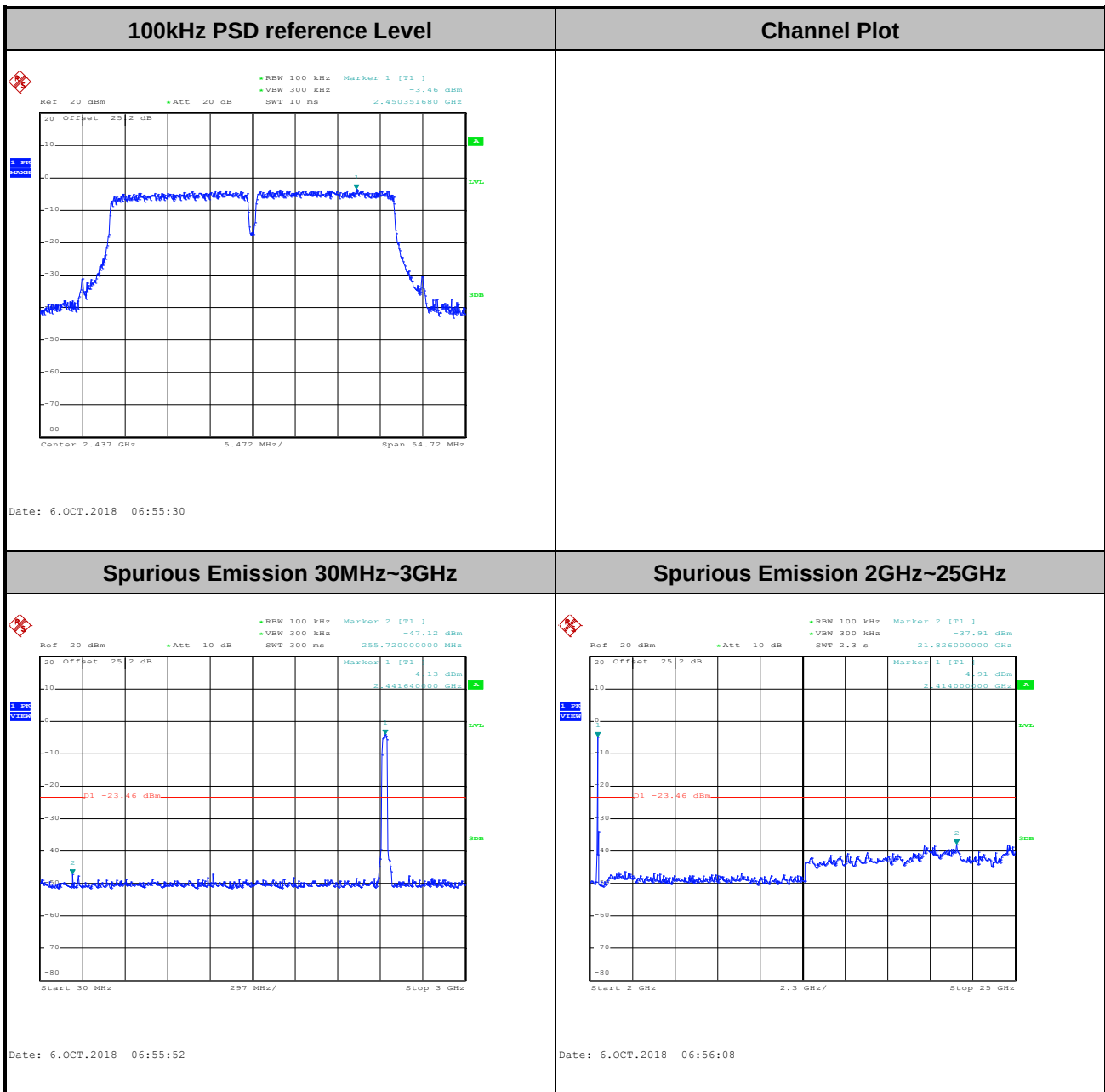


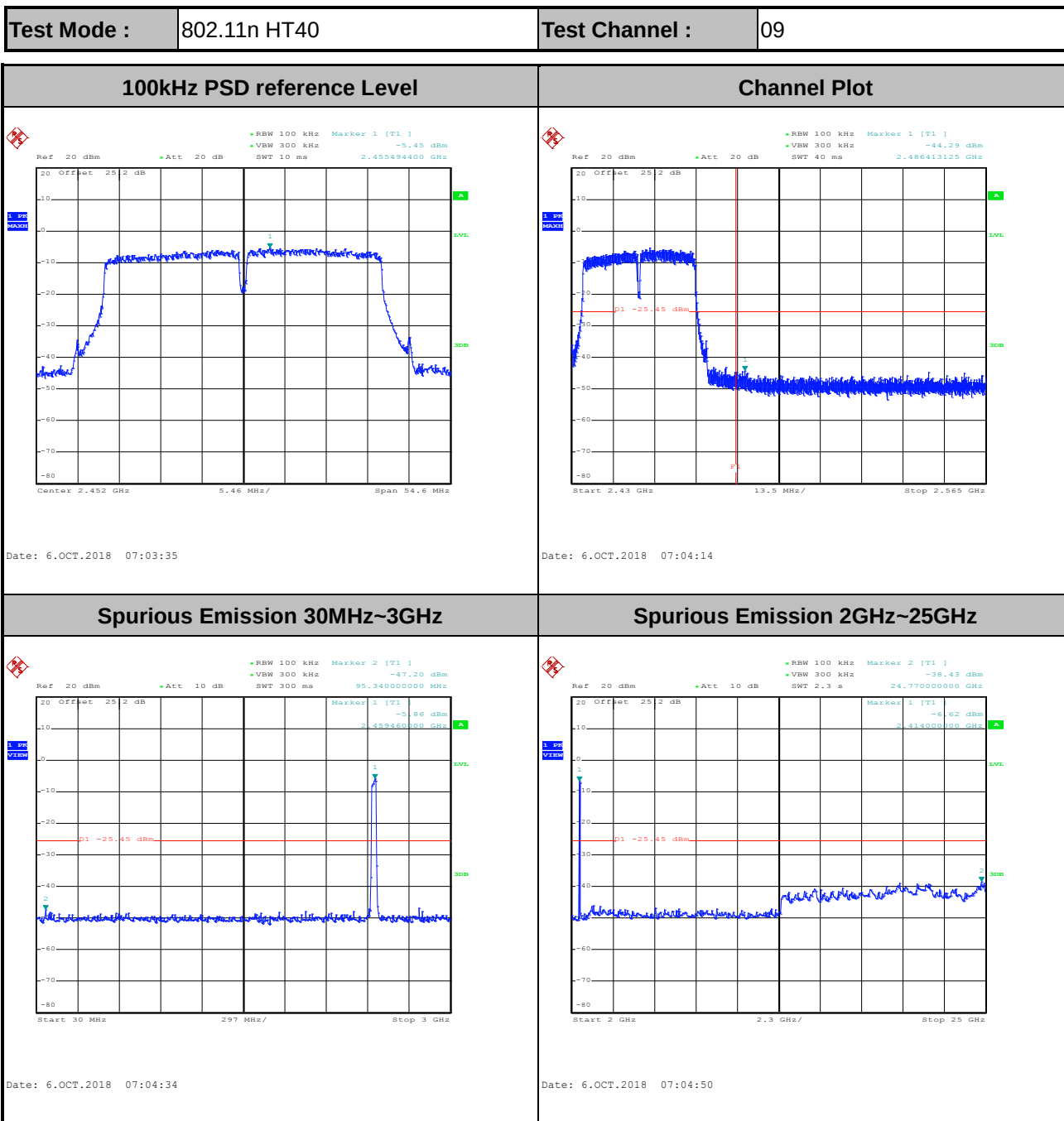






Test Mode :	802.11n HT40	Test Channel :	06
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3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the limits as below.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.5.2 Measuring Instruments

See list of measuring equipment of this test report.

3.5.3 Test Procedures

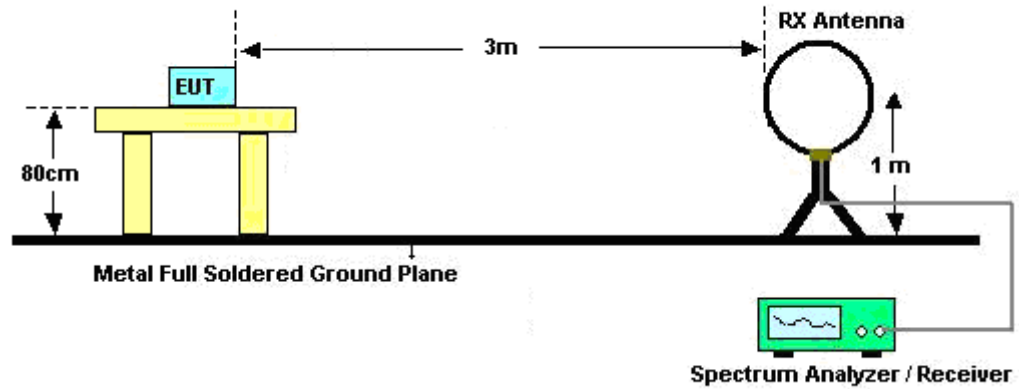
1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v05.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. 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.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
8. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW=100 kHz for $f < 1$ GHz; VBW $\geq$ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement.

For average measurement:

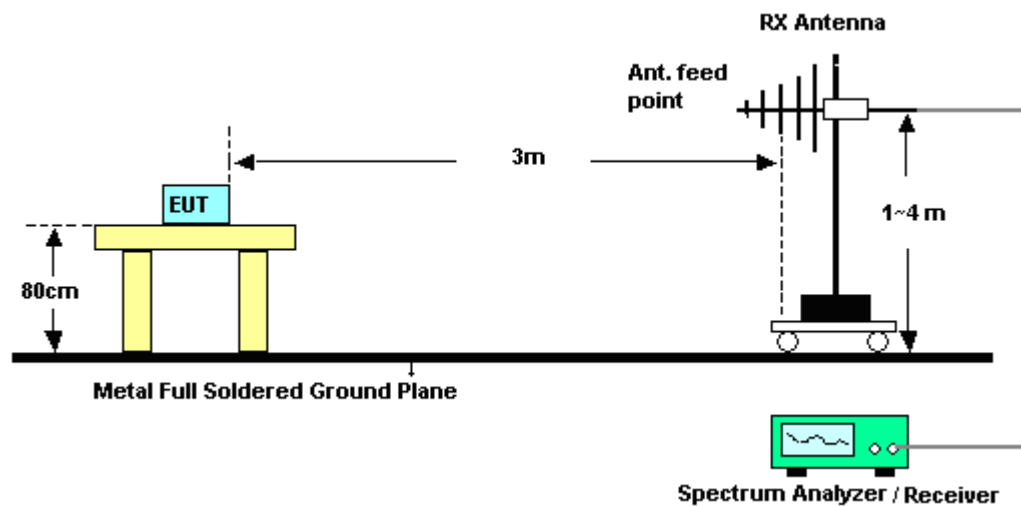
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.5.4 Test Setup

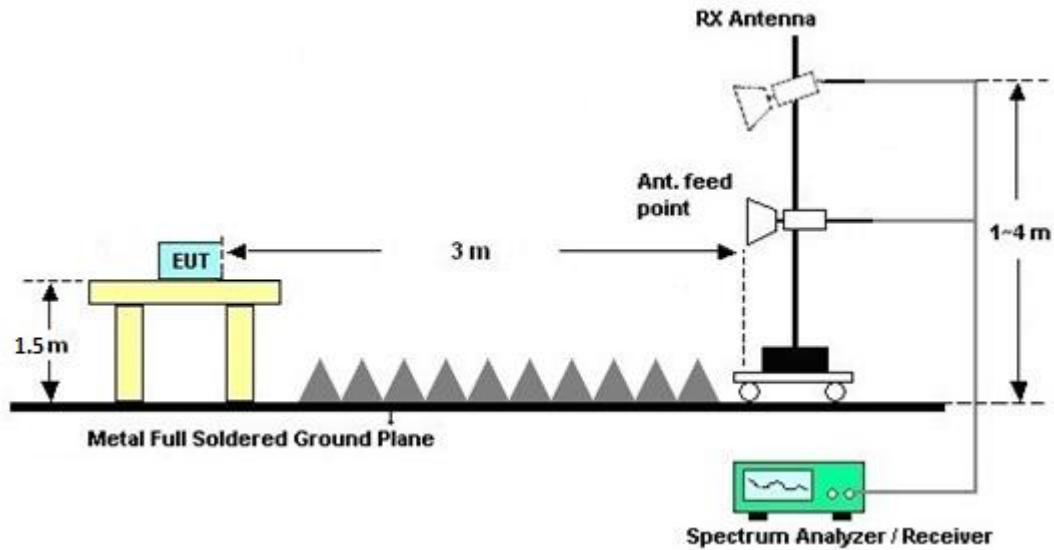
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.5.5 Test Results of Radiated Spurious Emissions (9kHz ~ 30MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C and D.

3.5.7 Duty Cycle

Please refer to Appendix E.

3.5.8 Test Result of Radiated Spurious Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix C and D.

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of Emission (MHz)	Conducted Limit (dB μ V)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

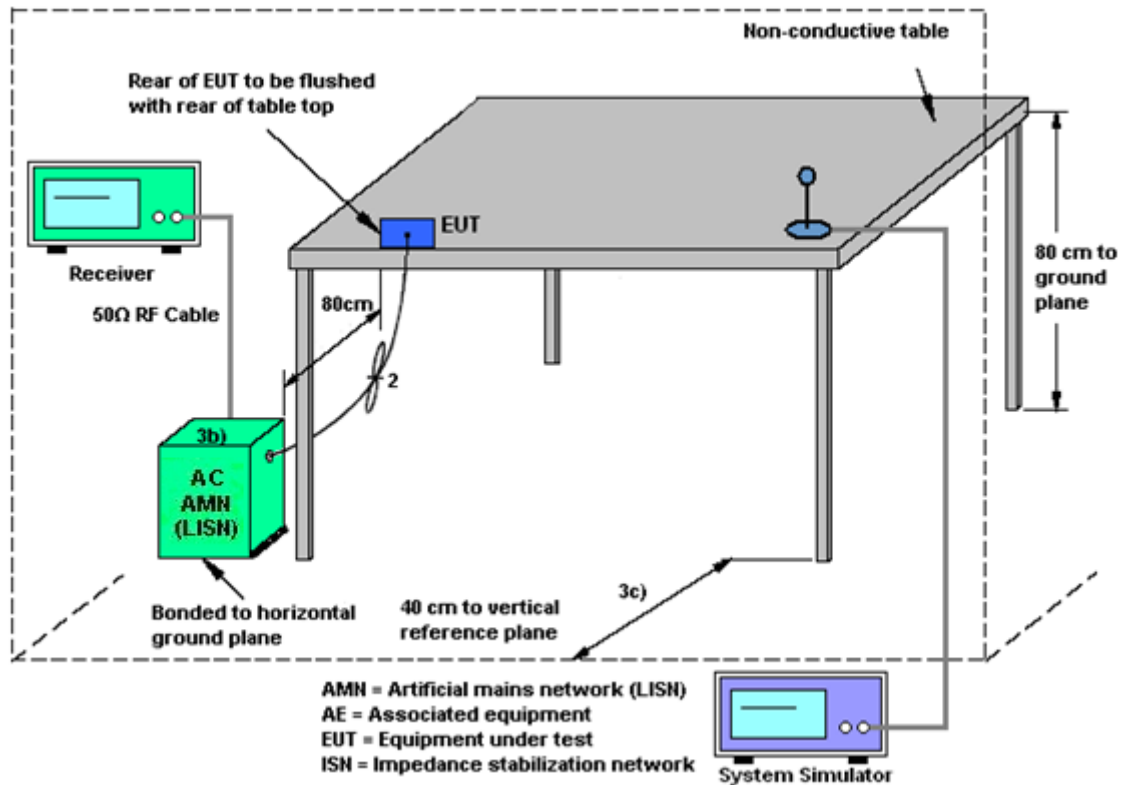
3.6.2 Measuring Instruments

See list of measuring equipment of this test report.

3.6.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF bandwidth = 9kHz) with Maximum Hold Mode.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.7 Antenna Requirements

3.7.1 Standard Applicable

If directional gain of transmitting Antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. The use of a permanently attached Antenna or of an Antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

<CDD Modes >

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows.

For power spectral density (PSD) measurements on all devices,

Array Gain = $10 \log(N_{ANT}/N_{SS}=1)$ dB.

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$.

Directional gain may be calculated by using the formulas applicable to equal gain antennas with G_{ANT} set equal to the gain of the antenna having the highest gain;

The EUT supports CDD mode.

For power, the directional gain G_{ANT} is set equal to the antenna having the highest gain, i.e., F)2)f)i).

For PSD, the directional gain calculation is following F)2)f)ii) of KDB 662911 D01 v02r01.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

The directional gain "DG" is calculated as following table.

<CDD Modes>						
			DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
	Ant. 1 (dBi)	Ant. 2 (dBi)				
2.4 GHz	2.90	2.60	2.90	5.76	0.00	0.00

Power Limit Reduction = DG(Power) – 6dBi, (min = 0)

PSD Limit Reduction = DG(PSD) – 6dBi, (min = 0)



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Power Meter	Anritsu	ML2495A	1132003	N/A	Aug. 16, 2018	Sep. 22, 2018~ Oct. 06, 2018	Aug. 15, 2019	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	1126017	300MHz~ 40GHz	Aug. 16, 2018	Sep. 22, 2018~ Oct. 06, 2018	Aug. 15, 2019	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz-40GHz	Nov. 21, 2017	Sep. 22, 2018~ Oct. 06, 2018	Nov. 20, 2018	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101397	10Hz-40GHz	Nov. 07, 2017	Sep. 22, 2018~ Oct. 06, 2018	Nov. 06, 2018	Conducted (TH05-HY)
Switch Box & RF Cable	Burgeon	ETF-058	EC1300484	N/A	Mar. 01, 2018	Sep. 22, 2018~ Oct. 06, 2018	Feb. 28, 2019	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Oct. 02, 2018	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9KHz~3.6GHz	Dec. 08, 2017	Oct. 02, 2018	Dec. 07, 2018	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 30, 2017	Oct. 02, 2018	Nov. 29, 2018	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Oct. 02, 2018	N/A	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 03, 2018	Oct. 02, 2018	Jan. 02, 2019	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Jan. 03, 2018	Oct. 02, 2018	Jan. 02, 2019	Conduction (CO05-HY)
Bilog Antenna	TESEQ	CBL 6111D &00800N1D 01N-06	35419&03	30MHz to 1GHz	Dec. 18, 2017	Oct. 02, 2018~ Oct. 04, 2018	Dec. 17, 2018	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Nov. 10, 2017	Oct. 02, 2018~ Oct. 04, 2018	Nov. 09, 2018	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-001 01800-30-10 P	1590075	1GHz ~ 18GHz	Apr. 25, 2018	Oct. 02, 2018~ Oct. 04, 2018	Apr. 24, 2019	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10MHz-1GHz	May 21, 2018	Oct. 02, 2018~ Oct. 04, 2018	May 20, 2019	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~ 26.5GHz	Oct. 30, 2017	Oct. 02, 2018~ Oct. 04, 2018	Oct. 29, 2018	Radiation (03CH07-HY)
Spectrum Analyzer	Agilent	N9010A	MY53470118	10Hz~44GHz	Apr. 17, 2018	Oct. 02, 2018~ Oct. 04, 2018	Apr. 16, 2019	Radiation (03CH07-HY)
Antenna Mast	Max-Full	MFA520BS	N/A	1m~4m	N/A	Oct. 02, 2018~ Oct. 04, 2018	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	Oct. 02, 2018~ Oct. 04, 2018	N/A	Radiation (03CH07-HY)
Amplifier	MITEQ	TTA1840-35- HG	1871923	18GHz~40GHz, VSWR : 2.5:1 max	Jul. 16, 2018	Oct. 02, 2018~ Oct. 04, 2018	Jul. 15, 2019	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	BBHA91702 51	18GHz- 40GHz	Nov. 10, 2017	Oct. 02, 2018~ Oct. 04, 2018	Nov. 09, 2018	Radiation (03CH07-HY)
Horn Antenna	ESCO	3117	00211469	1GHz~18GHz	Aug. 06, 2018	Oct. 02, 2018~ Oct. 04, 2018	Aug. 05, 2019	Radiation (03CH07-HY)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24971/4, MY28655/4	9KHz~30MHz	Jan. 02, 2018	Oct. 02, 2018~ Oct. 04, 2018	Jan. 01, 2019	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/4, MY24971/4, MY15682/4	30MHz~1GHz	Feb. 27, 2018	Oct. 02, 2018~ Oct. 04, 2018	Feb. 26, 2019	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/4, MY24971/4, MY15682/4	1GHz~18GHz	Feb. 27, 2018	Oct. 02, 2018~ Oct. 04, 2018	Feb. 26, 2019	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2858/2	18GHz~40GHz	Feb. 27, 2018	Oct. 02, 2018~ Oct. 04, 2018	Feb. 26, 2019	Radiation (03CH07-HY)
Software	Audix	E3 6.2009-8-24	8050400465 6H	N/A	N/A	Oct. 02, 2018~ Oct. 04, 2018	N/A	Radiation (03CH07-HY)
EMI Test Receiver	Agilent	N9038A (MXE)	MY53290053	20Hz to 26.5GHz	Jan. 16, 2018	Oct. 02, 2018~ Oct. 04, 2018	Jan. 15, 2019	Radiation (03CH07-HY)

5 Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.2
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.7
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.5
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.2
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Shiang Wang	Temperature:	21~25	°C
Test Date:	2018/9/22~2018/10/06	Relative Humidity:	51~54	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band										
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2		
11b	1Mbps	1	1	2412	17.00	15.40	10.12	10.08	0.50	Pass
11b	1Mbps	1	6	2437	16.85	17.05	10.08	10.08	0.50	Pass
11b	1Mbps	1	11	2462	16.05	15.20	10.10	10.04	0.50	Pass
11g	6Mbps	1	1	2412	16.90	17.00	16.58	16.56	0.50	Pass
11g	6Mbps	1	6	2437	19.15	20.50	16.52	16.52	0.50	Pass
11g	6Mbps	1	11	2462	17.05	17.00	16.56	16.56	0.50	Pass
HT20	MCS0	1	1	2412	18.05	18.05	17.78	17.76	0.50	Pass
HT20	MCS0	1	6	2437	20.45	22.70	17.78	17.80	0.50	Pass
HT20	MCS0	1	11	2462	18.15	18.05	17.80	17.78	0.50	Pass
HT40	MCS0	1	3	2422	36.50	36.60	36.36	36.36	0.50	Pass
HT40	MCS0	1	6	2437	36.60	36.70	36.28	36.48	0.50	Pass
HT40	MCS0	1	9	2452	36.40	36.40	36.32	36.40	0.50	Pass
11b	1Mbps	2	1	2412	15.95	15.30	10.08	10.08	0.50	Pass
11b	1Mbps	2	6	2437	16.15	15.80	10.04	10.08	0.50	Pass
11b	1Mbps	2	11	2462	16.00	15.25	10.08	10.04	0.50	Pass
11g	6Mbps	2	1	2412	17.05	17.00	16.52	16.56	0.50	Pass
11g	6Mbps	2	6	2437	17.75	18.20	16.52	16.52	0.50	Pass
11g	6Mbps	2	11	2462	17.00	16.90	16.56	16.56	0.50	Pass
HT20	MCS0	2	1	2412	18.05	18.05	17.80	17.76	0.50	Pass
HT20	MCS0	2	6	2437	18.80	19.25	17.80	17.82	0.50	Pass
HT20	MCS0	2	11	2462	18.05	18.05	17.80	17.76	0.50	Pass
HT40	MCS0	2	3	2422	36.50	36.40	36.40	36.36	0.50	Pass
HT40	MCS0	2	6	2437	36.60	36.70	36.32	36.48	0.50	Pass
HT40	MCS0	2	9	2452	36.40	36.50	36.32	36.40	0.50	Pass

TEST RESULTS DATA
Peak Output Power

2.4GHz Band																
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Peak Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11b	1Mbps	1	1	2412	23.56	21.15	-	30.00	30.00	2.90	2.60	26.46	23.75	36.00	36.00	Pass
11b	1Mbps	1	6	2437	25.26	24.18	-	30.00	30.00	2.90	2.60	28.16	26.78	36.00	36.00	Pass
11b	1Mbps	1	11	2462	22.96	20.70	-	30.00	30.00	2.90	2.60	25.86	23.30	36.00	36.00	Pass
11g	6Mbps	1	1	2412	24.03	23.34	-	30.00	30.00	2.90	2.60	26.93	25.94	36.00	36.00	Pass
11g	6Mbps	1	6	2437	25.86	24.63	-	30.00	30.00	2.90	2.60	28.76	27.23	36.00	36.00	Pass
11g	6Mbps	1	11	2462	23.78	21.63	-	30.00	30.00	2.90	2.60	26.68	24.23	36.00	36.00	Pass
HT20	MCS0	1	1	2412	23.64	23.19	-	30.00	30.00	2.90	2.60	26.54	25.79	36.00	36.00	Pass
HT20	MCS0	1	6	2437	25.75	24.90	-	30.00	30.00	2.90	2.60	28.65	27.50	36.00	36.00	Pass
HT20	MCS0	1	11	2462	23.45	22.06	-	30.00	30.00	2.90	2.60	26.35	24.66	36.00	36.00	Pass
HT40	MCS0	1	3	2422	23.09	20.77	-	30.00	30.00	2.90	2.60	25.99	23.37	36.00	36.00	Pass
HT40	MCS0	1	6	2437	24.66	22.45	-	30.00	30.00	2.90	2.60	27.56	25.05	36.00	36.00	Pass
HT40	MCS0	1	9	2452	24.72	21.46	-	30.00	30.00	2.90	2.60	27.62	24.06	36.00	36.00	Pass
11b	1Mbps	2	1	2412	23.05	20.24	24.88	30.00		2.90		27.78		36.00		Pass
11b	1Mbps	2	6	2437	24.34	23.11	26.78	30.00		2.90		29.68		36.00		Pass
11b	1Mbps	2	11	2462	22.71	20.65	24.81	30.00		2.90		27.71		36.00		Pass
11g	6Mbps	2	1	2412	24.10	23.62	26.88	30.00		2.90		29.78		36.00		Pass
11g	6Mbps	2	6	2437	25.15	24.21	27.72	30.00		2.90		30.62		36.00		Pass
11g	6Mbps	2	11	2462	22.75	22.31	25.55	30.00		2.90		28.45		36.00		Pass
HT20	MCS0	2	1	2412	23.73	23.58	26.67	30.00		2.90		29.57		36.00		Pass
HT20	MCS0	2	6	2437	25.44	24.28	27.91	30.00		2.90		30.81		36.00		Pass
HT20	MCS0	2	11	2462	22.30	22.43	25.38	30.00		2.90		28.28		36.00		Pass
HT40	MCS0	2	3	2422	21.59	20.62	24.14	30.00		2.90		27.04		36.00		Pass
HT40	MCS0	2	6	2437	23.96	22.90	26.47	30.00		2.90		29.37		36.00		Pass
HT40	MCS0	2	9	2452	23.22	21.14	25.31	30.00		2.90		28.21		36.00		Pass

Note: Measured power (dBm) has offset with cable loss.

TEST RESULTS DATA
Average Output Power

2.4GHz Band									
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)		
					Ant 1	Ant 2	Ant 1	Ant 2	SUM
11b	1Mbps	1	1	2412	0.00	0.00	22.10	19.24	-
11b	1Mbps	1	6	2437	0.00	0.00	24.11	23.10	
11b	1Mbps	1	11	2462	0.00	0.00	21.17	18.74	
11g	6Mbps	1	1	2412	0.00	0.00	16.87	15.25	
11g	6Mbps	1	6	2437	0.00	0.00	21.69	20.33	
11g	6Mbps	1	11	2462	0.00	0.00	16.51	13.63	
HT20	MCS0	1	1	2412	0.00	0.00	16.45	14.96	
HT20	MCS0	1	6	2437	0.00	0.00	21.68	20.43	
HT20	MCS0	1	11	2462	0.00	0.00	16.08	14.07	
HT40	MCS0	1	3	2422	0.00	0.00	14.79	12.09	
HT40	MCS0	1	6	2437	0.00	0.00	17.87	14.55	
HT40	MCS0	1	9	2452	0.00	0.00	17.17	12.90	
11b	1Mbps	2	1	2412	0.00	0.00	21.42	18.39	23.17
11b	1Mbps	2	6	2437	0.00	0.00	22.96	21.65	25.36
11b	1Mbps	2	11	2462	0.00	0.00	21.00	18.71	23.01
11g	6Mbps	2	1	2412	0.00	0.00	17.50	15.83	19.76
11g	6Mbps	2	6	2437	0.00	0.00	20.77	19.26	23.09
11g	6Mbps	2	11	2462	0.00	0.00	14.39	14.29	17.35
HT20	MCS0	2	1	2412	0.00	0.00	17.16	15.70	19.50
HT20	MCS0	2	6	2437	0.00	0.00	20.79	19.21	23.08
HT20	MCS0	2	11	2462	0.00	0.00	14.07	14.53	17.32
HT40	MCS0	2	3	2422	0.00	0.00	12.73	11.67	15.24
HT40	MCS0	2	6	2437	0.00	0.00	16.86	14.82	18.97
HT40	MCS0	2	9	2452	0.00	0.00	14.63	12.53	16.72

Note: Measured power (dBm) has offset with cable loss.

TEST RESULTS DATA
Peak Power Spectral Density

2.4GHz Band												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
					Ant 1	Ant 2	Worse + 3.01	Ant 1	Ant 2	Ant 1	Ant 2	
11b	1Mbps	1	1	2412	-7.88	-11.13	-	2.90	2.60	8.00	8.00	Pass
11b	1Mbps	1	6	2437	-6.93	-7.70	-	2.90	2.60	8.00	8.00	Pass
11b	1Mbps	1	11	2462	-9.45	-11.66	-	2.90	2.60	8.00	8.00	Pass
11g	6Mbps	1	1	2412	-12.15	-13.54	-	2.90	2.60	8.00	8.00	Pass
11g	6Mbps	1	6	2437	-7.60	-9.01	-	2.90	2.60	8.00	8.00	Pass
11g	6Mbps	1	11	2462	-12.27	-15.20	-	2.90	2.60	8.00	8.00	Pass
HT20	MCS0	1	1	2412	-11.42	-13.77	-	2.90	2.60	8.00	8.00	Pass
HT20	MCS0	1	6	2437	-7.32	-7.88	-	2.90	2.60	8.00	8.00	Pass
HT20	MCS0	1	11	2462	-11.79	-14.37	-	2.90	2.60	8.00	8.00	Pass
HT40	MCS0	1	3	2422	-14.13	-19.26	-	2.90	2.60	8.00	8.00	Pass
HT40	MCS0	1	6	2437	-12.51	-14.48	-	2.90	2.60	8.00	8.00	Pass
HT40	MCS0	1	9	2452	-12.78	-17.63	-	2.90	2.60	8.00	8.00	Pass
11b	1Mbps	2	1	2412	-9.19	-12.48	-6.18	5.76		8.00		Pass
11b	1Mbps	2	6	2437	-7.75	-9.36	-4.74	5.76		8.00		Pass
11b	1Mbps	2	11	2462	-9.71	-11.82	-6.70	5.76		8.00		Pass
11g	6Mbps	2	1	2412	-11.27	-12.62	-8.26	5.76		8.00		Pass
11g	6Mbps	2	6	2437	-8.82	-9.12	-5.81	5.76		8.00		Pass
11g	6Mbps	2	11	2462	-14.59	-14.09	-11.08	5.76		8.00		Pass
HT20	MCS0	2	1	2412	-10.94	-13.35	-7.93	5.76		8.00		Pass
HT20	MCS0	2	6	2437	-8.62	-9.79	-5.61	5.76		8.00		Pass
HT20	MCS0	2	11	2462	-14.04	-14.07	-11.03	5.76		8.00		Pass
HT40	MCS0	2	3	2422	-17.76	-19.01	-14.75	5.76		8.00		Pass
HT40	MCS0	2	6	2437	-14.94	-15.63	-11.93	5.76		8.00		Pass
HT40	MCS0	2	9	2452	-13.66	-17.95	-10.65	5.76		8.00		Pass

Measured power density (dBm) has offset with cable loss.



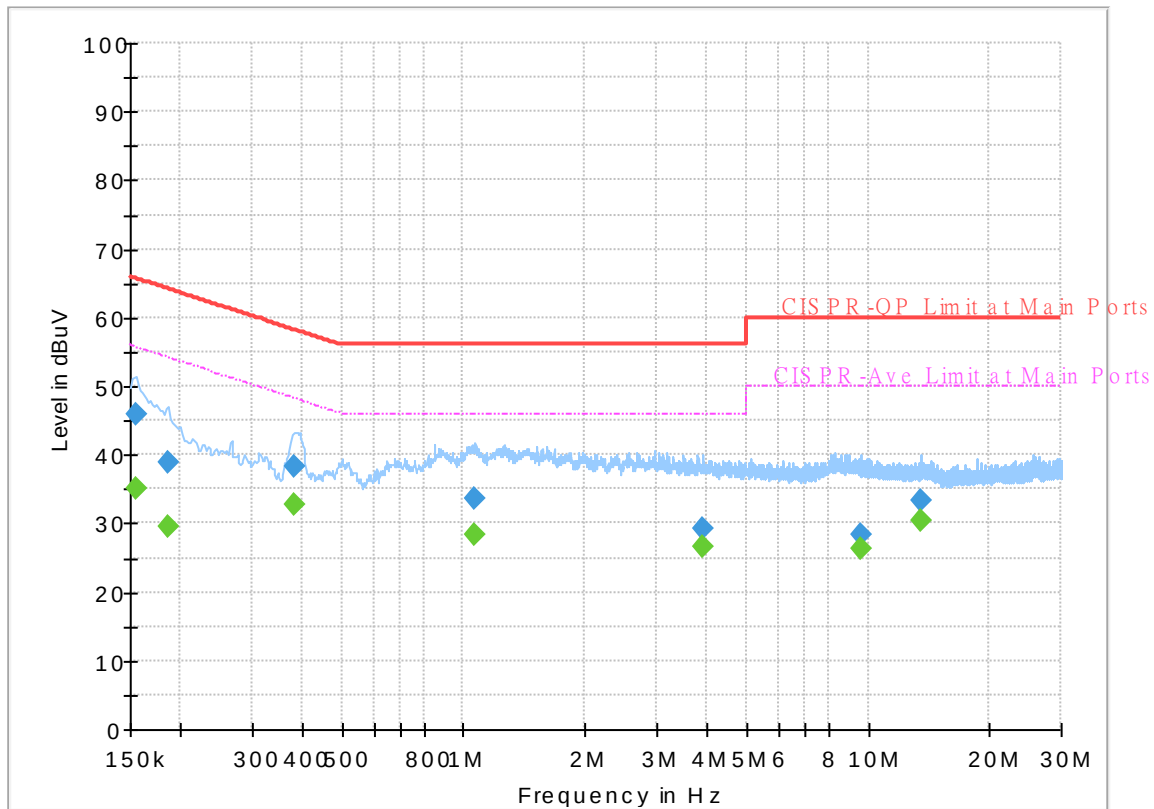
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Jimmy Chang	Temperature :	24~26℃
		Relative Humidity :	51~53%

EUT Information

Report NO : 891815
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Line

Full Spectrum



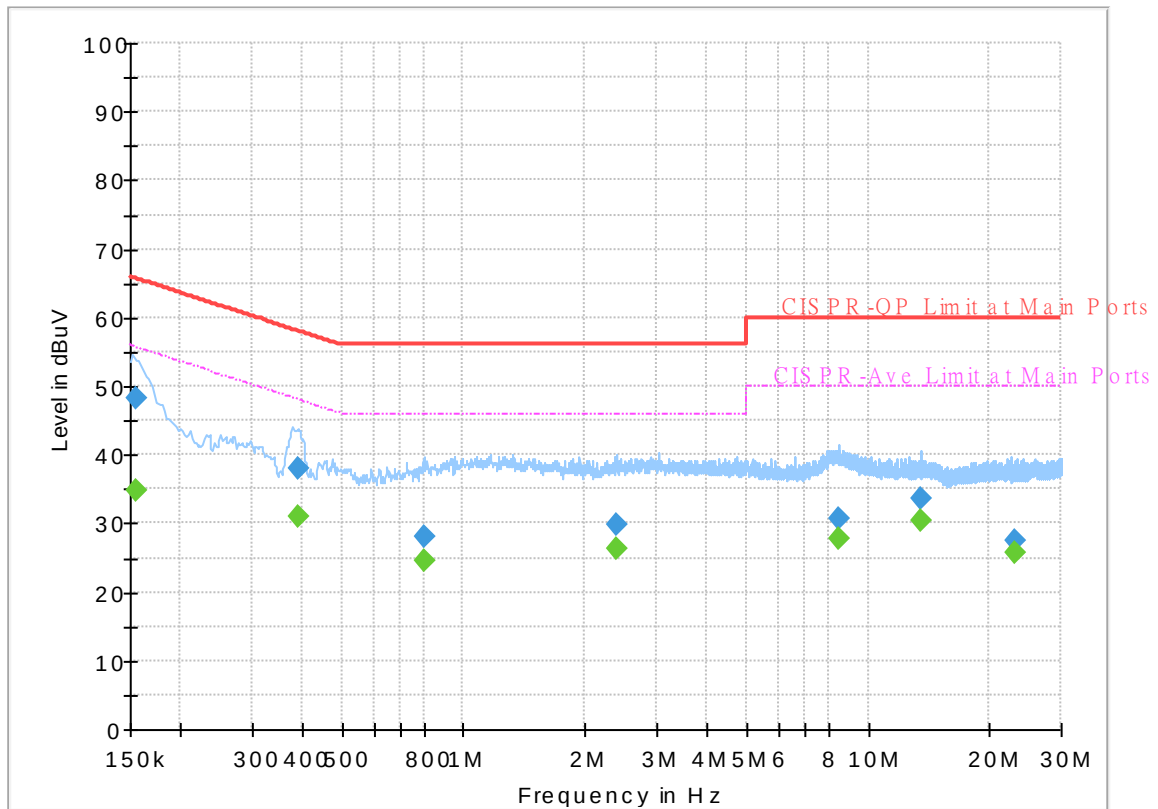
Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.154500	---	35.12	55.75	20.63	L1	OFF	19.5
0.154500	45.83	---	65.75	19.92	L1	OFF	19.5
0.186000	---	29.47	54.21	24.74	L1	OFF	19.5
0.186000	38.82	---	64.21	25.39	L1	OFF	19.5
0.381750	---	32.74	48.24	15.50	L1	OFF	19.5
0.381750	38.25	---	58.24	19.99	L1	OFF	19.5
1.070250	---	28.49	46.00	17.51	L1	OFF	19.6
1.070250	33.59	---	56.00	22.41	L1	OFF	19.6
3.903000	---	26.56	46.00	19.44	L1	OFF	19.7
3.903000	29.21	---	56.00	26.79	L1	OFF	19.7
9.570750	---	26.45	50.00	23.55	L1	OFF	19.9
9.570750	28.48	---	60.00	31.52	L1	OFF	19.9
13.560000	---	30.46	50.00	19.54	L1	OFF	20.0
13.560000	33.26	---	60.00	26.74	L1	OFF	20.0

EUT Information

Report NO : 891815
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Neutral

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.154500	48.10	---	65.75	17.65	N	OFF	19.5
0.154500	---	34.92	55.75	20.83	N	OFF	19.5
0.388500	38.13	---	58.10	19.97	N	OFF	19.5
0.388500	---	31.01	48.10	17.09	N	OFF	19.5
0.798000	28.04	---	56.00	27.96	N	OFF	19.6
0.798000	---	24.64	46.00	21.36	N	OFF	19.6
2.379750	29.82	---	56.00	26.18	N	OFF	19.5
2.379750	---	26.17	46.00	19.83	N	OFF	19.5
8.468250	30.68	---	60.00	29.32	N	OFF	19.9
8.468250	---	27.78	50.00	22.22	N	OFF	19.9
13.560000	33.69	---	60.00	26.31	N	OFF	20.1
13.560000	---	30.53	50.00	19.47	N	OFF	20.1
22.998750	27.44	---	60.00	32.56	N	OFF	20.4
22.998750	---	25.77	50.00	24.23	N	OFF	20.4



Appendix C. Radiated Spurious Emission

Test Engineer :	Jesse Wang, Stan Hsieh, and Nick Yu	Temperature :	24~26°C
		Relative Humidity :	50~51%

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2388.96	56.84	-17.16	74	42.45	32	17.43	35.04	378	34	P	H
		2389.065	49.81	-4.19	54	35.42	32	17.43	35.04	378	34	A	H
	*	2412	108.92	-	-	94.47	32.07	17.43	35.05	378	34	P	H
	*	2412	105.72	-	-	91.27	32.07	17.43	35.05	378	34	A	H
													H
													H
		2389.065	58.62	-15.38	74	44.23	32	17.43	35.04	353	315	P	V
		2389.065	52.82	-1.18	54	38.43	32	17.43	35.04	353	315	A	V
	*	2412	115.09	-	-	100.64	32.07	17.43	35.05	353	315	P	V
	*	2412	111.76	-	-	97.31	32.07	17.43	35.05	353	315	A	V
													V
													V
802.11b CH 06 2437MHz		2387.7	54.98	-19.02	74	40.59	32	17.43	35.04	400	46	P	H
		2389.66	44.52	-9.48	54	30.13	32	17.43	35.04	400	46	A	H
	*	2437	111.17	-	-	96.54	32.2	17.49	35.06	400	46	P	H
	*	2437	107.92	-	-	93.29	32.2	17.49	35.06	400	46	A	H
		2485.09	55.11	-18.89	74	40.36	32.27	17.55	35.07	400	46	P	H
		2483.69	44.66	-9.34	54	29.91	32.27	17.55	35.07	400	46	A	H
		2388.4	57.29	-16.71	74	42.9	32	17.43	35.04	304	300	P	V
		2389.66	48.58	-5.42	54	34.19	32	17.43	35.04	304	300	A	V
	*	2437	115.42	-	-	100.79	32.2	17.49	35.06	304	300	P	V
	*	2437	112.29	-	-	97.66	32.2	17.49	35.06	304	300	A	V
		2493.42	55.94	-18.06	74	41.17	32.3	17.55	35.08	304	300	P	V
		2483.76	45.69	-8.31	54	30.94	32.27	17.55	35.07	304	300	A	V



802.11b CH 11 2462MHz	*	2462	107.38	-	-	92.66	32.23	17.55	35.06	400	30	P	H
	*	2462	104.03	-	-	89.31	32.23	17.55	35.06	400	30	A	H
		2483.56	57.98	-16.02	74	43.23	32.27	17.55	35.07	400	30	P	H
		2483.52	50.32	-3.68	54	35.57	32.27	17.55	35.07	400	30	A	H
													H
													H
	*	2462	113.01	-	-	98.29	32.23	17.55	35.06	345	280	P	V
	*	2462	109.72	-	-	95	32.23	17.55	35.06	345	280	A	V
		2483.64	59.33	-14.67	74	44.58	32.27	17.55	35.07	345	280	P	V
		2483.52	52.55	-1.45	54	37.8	32.27	17.55	35.07	345	280	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 01 2412MHz		4824	54.14	-19.86	74	68.55	33.95	10.98	59.34	228	23	P	H
		4824	51.81	-2.19	54	66.22	33.95	10.98	59.34	228	23	A	H
													H
													H
		4824	54.37	-19.63	74	68.78	33.95	10.98	59.34	100	321	P	V
		4824	52.19	-1.81	54	66.6	33.95	10.98	59.34	100	321	A	V
													V
													V
802.11b CH 06 2437MHz		4874	42.49	-31.51	74	56.7	34	11.03	59.24	100	0	P	H
		7311	56.22	-17.78	74	64.99	35.7	13.66	58.13	199	62	P	H
		7311	52.1	-1.9	54	60.87	35.7	13.66	58.13	199	62	A	H
													H
		4874	42.09	-31.91	74	56.3	34	11.03	59.24	100	0	P	V
		7311	52.32	-21.68	74	61.09	35.7	13.66	58.13	395	329	P	V
		7311	47.16	-6.84	54	55.93	35.7	13.66	58.13	395	329	A	V
													V
802.11b CH 11 2462MHz		4924	49.68	-24.32	74	63.66	34.07	11.09	59.14	100	0	P	H
		7386	49.17	-24.83	74	57.87	35.8	13.76	58.26	100	0	P	H
													H
													H
		4924	52.47	-21.53	74	66.45	34.07	11.09	59.14	100	333	P	V
		4924	49.11	-4.89	54	63.09	34.07	11.09	59.14	100	333	A	V
		7386	46.43	-27.57	74	55.13	35.8	13.76	58.26	100	0	P	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11g (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		2389.59	62.75	-11.25	74	48.36	32	17.43	35.04	375	31	P	H
		2390	49.95	-4.05	54	35.57	32	17.43	35.05	375	31	A	H
	*	2412	105.24	-	-	90.79	32.07	17.43	35.05	375	31	P	H
	*	2412	97.84	-	-	83.39	32.07	17.43	35.05	375	31	A	H
													H
													H
		2389.59	65.8	-8.2	74	51.41	32	17.43	35.04	352	316	P	V
		2390	52.4	-1.6	54	38.02	32	17.43	35.05	352	316	A	V
	*	2412	111.26	-	-	96.81	32.07	17.43	35.05	352	316	P	V
	*	2412	103.32	-	-	88.87	32.07	17.43	35.05	352	316	A	V
													V
													V
802.11g CH 06 2437MHz		2328.2	54.94	-19.06	74	40.85	31.8	17.31	35.02	400	48	P	H
		2389.52	44.06	-9.94	54	29.67	32	17.43	35.04	400	48	A	H
	*	2437	110.26	-	-	95.63	32.2	17.49	35.06	400	48	P	H
	*	2437	102.75	-	-	88.12	32.2	17.49	35.06	400	48	A	H
		2485.79	55.96	-18.04	74	41.21	32.27	17.55	35.07	400	48	P	H
		2483.52	45.5	-8.5	54	30.75	32.27	17.55	35.07	400	48	A	H
		2389.66	56.68	-17.32	74	42.29	32	17.43	35.04	304	300	P	V
		2389.94	46.44	-7.56	54	32.06	32	17.43	35.05	304	300	A	V
	*	2437	115.22	-	-	100.59	32.2	17.49	35.06	304	300	P	V
	*	2437	107.1	-	-	92.47	32.2	17.49	35.06	304	300	A	V
		2483.62	59.64	-14.36	74	44.89	32.27	17.55	35.07	304	300	P	V
		2483.52	47.83	-6.17	54	33.08	32.27	17.55	35.07	304	300	A	V



802.11g CH 11 2462MHz	*	2462	104.98	-	-	90.26	32.23	17.55	35.06	354	145	P	H
	*	2462	97.23	-	-	82.51	32.23	17.55	35.06	354	145	A	H
		2483.6	62.61	-11.39	74	47.86	32.27	17.55	35.07	354	145	P	H
		2483.52	51.36	-2.64	54	36.61	32.27	17.55	35.07	354	145	A	H
													H
													H
	*	2462	110.52	-	-	95.8	32.23	17.55	35.06	344	261	P	V
	*	2462	102.89	-	-	88.17	32.23	17.55	35.06	344	261	A	V
		2483.56	65.2	-8.8	74	50.45	32.27	17.55	35.07	344	261	P	V
		2483.52	52.67	-1.33	54	37.92	32.27	17.55	35.07	344	261	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		4824	43.3	-30.7	74	57.71	33.95	10.98	59.34	100	0	P	H
													H
													H
													H
		4824	41.86	-32.14	74	56.27	33.95	10.98	59.34	100	0	P	V
													V
													V
													V
802.11g CH 06 2437MHz		4874	42.35	-31.65	74	56.56	34	11.03	59.24	100	0	P	H
		7311	45.59	-28.41	74	54.36	35.7	13.66	58.13	100	0	P	H
													H
													H
		4874	42.53	-31.47	74	56.74	34	11.03	59.24	100	0	P	V
		7311	44	-30	74	52.77	35.7	13.66	58.13	100	0	P	V
													V
													V
802.11g CH 11 2462MHz		4924	43.54	-30.46	74	57.52	34.07	11.09	59.14	100	0	P	H
		7386	45.31	-28.69	74	54.01	35.8	13.76	58.26	100	0	P	H
													H
													H
		4924	42.03	-31.97	74	56.01	34.07	11.09	59.14	100	0	P	V
		7386	44.5	-29.5	74	53.2	35.8	13.76	58.26	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		2389.59	66.79	-7.21	74	52.4	32	17.43	35.04	376	32	P	H
		2390	50.72	-3.28	54	36.34	32	17.43	35.05	376	32	A	H
	*	2412	105.03	-	-	90.58	32.07	17.43	35.05	376	32	P	H
	*	2412	97.19	-	-	82.74	32.07	17.43	35.05	376	32	A	H
													H
													H
		2389.905	70.21	-3.79	74	55.83	32	17.43	35.05	354	322	P	V
		2390	52.98	-1.02	54	38.6	32	17.43	35.05	354	322	A	V
	*	2412	110.51	-	-	96.06	32.07	17.43	35.05	354	322	P	V
	*	2412	102.7	-	-	88.25	32.07	17.43	35.05	354	322	A	V
													V
													V
802.11n HT20 CH 06 2437MHz		2364.18	54.92	-19.08	74	40.65	31.93	17.37	35.03	400	48	P	H
		2389.66	44.29	-9.71	54	29.9	32	17.43	35.04	400	48	A	H
	*	2437	110.17	-	-	95.54	32.2	17.49	35.06	400	48	P	H
	*	2437	102.6	-	-	87.97	32.2	17.49	35.06	400	48	A	H
		2485.02	59.48	-14.52	74	44.73	32.27	17.55	35.07	400	48	P	H
		2483.52	46.18	-7.82	54	31.43	32.27	17.55	35.07	400	48	A	H
		2389.66	62.53	-11.47	74	48.14	32	17.43	35.04	307	327	P	V
		2389.94	47.37	-6.63	54	32.99	32	17.43	35.05	307	327	A	V
	*	2437	114.55	-	-	99.92	32.2	17.49	35.06	307	327	P	V
	*	2437	106.88	-	-	92.25	32.2	17.49	35.06	307	327	A	V
		2485.02	63.24	-10.76	74	48.49	32.27	17.55	35.07	307	327	P	V
		2483.52	48.92	-5.08	54	34.17	32.27	17.55	35.07	307	327	A	V



802.11n HT20 CH 11 2462MHz	*	2462	104.72	-	-	90	32.23	17.55	35.06	399	150	P	H
	*	2462	97.31	-	-	82.59	32.23	17.55	35.06	399	150	A	H
		2483.56	66.47	-7.53	74	51.72	32.27	17.55	35.07	399	150	P	H
		2483.5	52.32	-1.68	54	37.57	32.27	17.55	35.07	399	150	P	H
													H
													H
	*	2462	109.73	-	-	95.01	32.23	17.55	35.06	342	278	P	V
	*	2462	102.41	-	-	87.69	32.23	17.55	35.06	342	278	A	V
		2483.8	66.05	-7.95	74	51.3	32.27	17.55	35.07	342	278	P	V
		2483.52	52.52	-1.48	54	37.77	32.27	17.55	35.07	342	278	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		4824	41.79	-32.21	74	56.2	33.95	10.98	59.34	100	0	P	H
													H
													H
													H
		4824	42.38	-31.62	74	56.79	33.95	10.98	59.34	100	0	P	V
													V
													V
													V
802.11n HT20 CH 06 2437MHz		4874	42.33	-31.67	74	56.54	34	11.03	59.24	100	0	P	H
		7311	45.72	-28.28	74	54.49	35.7	13.66	58.13	100	0	P	H
													H
													H
		4874	42.15	-31.85	74	56.36	34	11.03	59.24	100	0	P	V
		7311	44.07	-29.93	74	52.84	35.7	13.66	58.13	100	0	P	V
													V
													V
802.11n HT20 CH 11 2462MHz		4924	42.25	-31.75	74	56.23	34.07	11.09	59.14	100	0	P	H
		7386	45.8	-28.2	74	54.5	35.8	13.76	58.26	100	0	P	H
													H
													H
		4924	41.84	-32.16	74	55.82	34.07	11.09	59.14	100	0	P	V
		7386	44.71	-29.29	74	53.41	35.8	13.76	58.26	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 03 2422MHz		2386.02	62.32	-11.68	74	47.93	32	17.43	35.04	375	28	P	H
		2389.94	50.68	-3.32	54	36.3	32	17.43	35.05	375	28	A	H
	*	2422	99.89	-	-	85.33	32.13	17.49	35.06	375	28	P	H
	*	2422	91.95	-	-	77.39	32.13	17.49	35.06	375	28	A	H
		2490.55	55.07	-18.93	74	40.29	32.3	17.55	35.07	375	28	P	H
		2483.9	44.48	-9.52	54	29.73	32.27	17.55	35.07	375	28	A	H
		2385.6	63.35	-10.65	74	48.96	32	17.43	35.04	356	316	P	V
		2389.94	52	-2	54	37.62	32	17.43	35.05	356	316	A	V
	*	2422	105.39	-	-	90.83	32.13	17.49	35.06	356	316	P	V
	*	2422	97.56	-	-	83	32.13	17.49	35.06	356	316	A	V
		2483.97	55.67	-18.33	74	40.92	32.27	17.55	35.07	356	316	P	V
		2484.11	45.28	-8.72	54	30.53	32.27	17.55	35.07	356	316	A	V
802.11n HT40 CH 06 2437MHz		2387	55.38	-18.62	74	40.99	32	17.43	35.04	400	41	P	H
		2389.94	45.21	-8.79	54	30.83	32	17.43	35.05	400	41	A	H
	*	2437	104.09	-	-	89.46	32.2	17.49	35.06	400	41	P	H
	*	2437	96.25	-	-	81.62	32.2	17.49	35.06	400	41	A	H
		2483.62	58.06	-15.94	74	43.31	32.27	17.55	35.07	400	41	P	H
		2483.5	47.4	-6.6	54	32.65	32.27	17.55	35.07	400	41	A	H
		2389.1	64.92	-9.08	74	50.53	32	17.43	35.04	355	324	P	V
		2389.94	52.61	-1.39	54	38.23	32	17.43	35.05	355	324	A	V
	*	2437	107.69	-	-	93.06	32.2	17.49	35.06	355	324	P	V
	*	2437	99.82	-	-	85.19	32.2	17.49	35.06	355	324	A	V
		2485.51	61.35	-12.65	74	46.6	32.27	17.55	35.07	355	324	P	V
		2483.5	51.48	-2.52	54	36.73	32.27	17.55	35.07	355	324	A	V



802.11n HT40 CH 09 2452MHz		2389.8	56.01	-17.99	74	41.63	32	17.43	35.05	366	140	P	H
		2389.8	45.47	-8.53	54	31.09	32	17.43	35.05	366	140	A	H
	*	2452	102.09	-	-	87.46	32.2	17.49	35.06	366	140	P	H
	*	2452	94.54	-	-	79.91	32.2	17.49	35.06	366	140	A	H
		2483.9	62.44	-11.56	74	47.69	32.27	17.55	35.07	366	140	P	H
		2483.5	50.48	-3.52	54	35.73	32.27	17.55	35.07	366	140	A	H
		2389.8	56.15	-17.85	74	41.77	32	17.43	35.05	343	266	P	V
		2389.52	46.14	-7.86	54	31.75	32	17.43	35.04	343	266	A	V
	*	2452	107.5	-	-	92.87	32.2	17.49	35.06	343	266	P	V
	*	2452	99.85	-	-	85.22	32.2	17.49	35.06	343	266	A	V
		2484.11	64.82	-9.18	74	50.07	32.27	17.55	35.07	343	266	P	V
		2483.5	52.43	-1.57	54	37.68	32.27	17.55	35.07	343	266	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 03 2422MHz		4844	42.61	-31.39	74	56.94	34	10.98	59.31	100	0	P	H
		7266	43.53	-30.47	74	52.3	35.7	13.62	58.09	100	0	P	H
													H
													H
		4844	41.75	-32.25	74	56.08	34	10.98	59.31	100	0	P	V
		7266	43	-31	74	51.77	35.7	13.62	58.09	100	0	P	V
													V
													V
802.11n HT40 CH 06 2437MHz		4874	42.31	-31.69	74	56.52	34	11.03	59.24	100	0	P	H
		7311	42.99	-31.01	74	51.76	35.7	13.66	58.13	100	0	P	H
													H
													H
		4874	41.33	-32.67	74	55.54	34	11.03	59.24	100	0	P	V
		7311	43.6	-30.4	74	52.37	35.7	13.66	58.13	100	0	P	V
													V
													V
802.11n HT40 CH 09 2452MHz		4904	42.33	-31.67	74	56.38	34.03	11.09	59.17	100	0	P	H
		7356	43.96	-30.04	74	52.76	35.7	13.71	58.21	100	0	P	H
													H
													H
		4904	42.4	-31.6	74	56.45	34.03	11.09	59.17	100	0	P	V
		7356	44.3	-29.7	74	53.1	35.7	13.71	58.21	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

2.4GHz WIFI 802.11n HT20 (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11n HT20 LF		30	29.25	-10.75	40	34.67	24.6	1.33	31.35	100	0	P	H
		41.34	24.47	-15.53	40	36.36	18.28	1.34	31.51	-	-	P	H
		59.97	23.96	-16.04	40	42.32	11.89	1.35	31.6	-	-	P	H
		793.5	34.69	-11.31	46	32.72	27.97	4.6	30.6	-	-	P	H
		831.3	32.5	-13.5	46	30.13	28.2	4.74	30.57	-	-	P	H
		948.9	32.1	-13.9	46	27.29	30.28	5.05	30.52	-	-	P	H
													H
													H
													H
													H
													H
													H
		30	33.76	-6.24	40	39.18	24.6	1.33	31.35	100	0	P	V
		41.88	28.86	-11.14	40	40.75	18.28	1.34	31.51	-	-	P	V
		56.73	28.46	-11.54	40	46.59	12.12	1.35	31.6	-	-	P	V
		793.5	30.33	-15.67	46	28.36	27.97	4.6	30.6	-	-	P	V
		881	32.26	-13.74	46	29.01	28.89	4.89	30.53	-	-	P	V
		946.1	31.94	-14.06	46	27.28	30.13	5.05	30.52	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2386.44	58.45	-15.55	74	44.06	32	17.43	35.04	272	342	P	H
		2386.23	52.46	-1.54	54	38.07	32	17.43	35.04	272	342	A	H
	*	2412	114.08	-	-	99.63	32.07	17.43	35.05	272	342	P	H
	*	2412	110.64	-	-	96.19	32.07	17.43	35.05	272	342	A	H
													H
													H
		2382.45	55.95	-18.05	74	41.59	31.97	17.43	35.04	220	275	P	V
		2386.335	48.76	-5.24	54	34.37	32	17.43	35.04	220	275	A	V
	*	2412	110.89	-	-	96.44	32.07	17.43	35.05	220	275	P	V
	*	2412	107.9	-	-	93.45	32.07	17.43	35.05	220	275	A	V
													V
													V
802.11b CH 06 2437MHz		2389.1	56.69	-17.31	74	42.3	32	17.43	35.04	308	344	P	H
		2389.24	49.05	-4.95	54	34.66	32	17.43	35.04	308	344	A	H
	*	2437	115.52	-	-	100.89	32.2	17.49	35.06	308	344	P	H
	*	2437	112.34	-	-	97.71	32.2	17.49	35.06	308	344	A	H
		2484.6	59.01	-14.99	74	44.26	32.27	17.55	35.07	308	344	P	H
		2484.81	52.18	-1.82	54	37.43	32.27	17.55	35.07	308	344	A	H
		2387.84	56.15	-17.85	74	41.76	32	17.43	35.04	243	271	P	V
		2389.8	47.14	-6.86	54	32.76	32	17.43	35.05	243	271	A	V
	*	2437	112.85	-	-	98.22	32.2	17.49	35.06	243	271	P	V
	*	2437	109.69	-	-	95.06	32.2	17.49	35.06	243	271	A	V
		2485.37	57.65	-16.35	74	42.9	32.27	17.55	35.07	243	271	P	V
		2484.81	49.24	-4.76	54	34.49	32.27	17.55	35.07	243	271	A	V



802.11b CH 11 2462MHz	*	2462	112.38	-	-	97.66	32.23	17.55	35.06	250	339	P	H
	*	2462	109.22	-	-	94.5	32.23	17.55	35.06	250	339	A	H
		2486.24	59.28	-14.72	74	44.53	32.27	17.55	35.07	250	339	P	H
		2487.32	51.65	-2.35	54	36.9	32.27	17.55	35.07	250	339	A	H
													H
													H
	*	2462	109.54	-	-	94.82	32.23	17.55	35.06	237	272	P	V
	*	2462	106.04	-	-	91.32	32.23	17.55	35.06	237	272	A	V
		2487.76	57.59	-16.41	74	42.81	32.3	17.55	35.07	237	272	P	V
		2486.88	49.53	-4.47	54	34.78	32.27	17.55	35.07	237	272	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 01 2412MHz		4824	42.8	-31.2	74	57.21	33.95	10.98	59.34	100	0	P	H
													H
													H
													H
		4824	42.18	-31.82	74	56.59	33.95	10.98	59.34	100	0	P	V
													V
													V
													V
802.11b CH 06 2437MHz		4874	46.14	-27.86	74	60.35	34	11.03	59.24	100	0	P	H
		7311	45.92	-28.08	74	54.69	35.7	13.66	58.13	100	0	P	H
													H
													H
		4874	45.24	-28.76	74	59.45	34	11.03	59.24	100	0	P	V
		7311	47	-27	74	55.77	35.7	13.66	58.13	100	0	P	V
													V
													V
802.11b CH 11 2462MHz		4924	42.11	-31.89	74	56.09	34.07	11.09	59.14	100	0	P	H
		7386	44.41	-29.59	74	53.11	35.8	13.76	58.26	100	0	P	H
													H
													H
		4924	43.65	-30.35	74	57.63	34.07	11.09	59.14	100	0	P	V
		7386	44.33	-29.67	74	53.03	35.8	13.76	58.26	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11g (Band Edge @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		2389.38	63.74	-10.26	74	49.35	32	17.43	35.04	275	343	P	H
		2390	52.76	-1.24	54	38.38	32	17.43	35.05	275	343	A	H
	*	2412	111.88	-	-	97.43	32.07	17.43	35.05	275	343	P	H
	*	2412	104.07	-	-	89.62	32.07	17.43	35.05	275	343	A	H
													H
													H
		2388.96	59.52	-14.48	74	45.13	32	17.43	35.04	221	274	P	V
		2390	48.18	-5.82	54	33.8	32	17.43	35.05	221	274	A	V
	*	2412	109.91	-	-	95.46	32.07	17.43	35.05	221	274	P	V
	*	2412	102.1	-	-	87.65	32.07	17.43	35.05	221	274	A	V
													V
													V
802.11g CH 06 2437MHz		2388.26	59.36	-14.64	74	44.97	32	17.43	35.04	307	341	P	H
		2389.94	48.45	-5.55	54	34.07	32	17.43	35.05	307	341	A	H
	*	2437	114.92	-	-	100.29	32.2	17.49	35.06	307	341	P	H
	*	2437	107.09	-	-	92.46	32.2	17.49	35.06	307	341	A	H
		2484.18	65.05	-8.95	74	50.3	32.27	17.55	35.07	307	341	P	H
		2483.5	51.1	-2.9	54	36.35	32.27	17.55	35.07	307	341	A	H
		2389.24	57.73	-16.27	74	43.34	32	17.43	35.04	242	274	P	V
		2389.94	46.38	-7.62	54	32	32	17.43	35.05	242	274	A	V
	*	2437	112.32	-	-	97.69	32.2	17.49	35.06	242	274	P	V
	*	2437	104.84	-	-	90.21	32.2	17.49	35.06	242	274	A	V
		2484.18	62.35	-11.65	74	47.6	32.27	17.55	35.07	242	274	P	V
		2483.5	48.54	-5.46	54	33.79	32.27	17.55	35.07	242	274	A	V



802.11g CH 11 2462MHz	*	2462	109.56	-	-	94.84	32.23	17.55	35.06	250	337	P	H
	*	2462	101.67	-	-	86.95	32.23	17.55	35.06	250	337	A	H
		2483.64	66.39	-7.61	74	51.64	32.27	17.55	35.07	250	337	P	H
		2483.52	51.43	-2.57	54	36.68	32.27	17.55	35.07	250	337	A	H
													H
													H
	*	2462	106.12	-	-	91.4	32.23	17.55	35.06	237	272	P	V
	*	2462	98.46	-	-	83.74	32.23	17.55	35.06	237	272	A	V
		2485	62.9	-11.1	74	48.15	32.27	17.55	35.07	237	272	P	V
		2483.52	49.13	-4.87	54	34.38	32.27	17.55	35.07	237	272	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		4824	42.31	-31.69	74	56.72	33.95	10.98	59.34	100	0	P	H
													H
													H
													H
		4824	43.02	-30.98	74	57.43	33.95	10.98	59.34	100	0	P	V
													V
													V
													V
802.11g CH 06 2437MHz		4874	41.86	-32.14	74	56.07	34	11.03	59.24	100	0	P	H
		7311	42.84	-31.16	74	51.61	35.7	13.66	58.13	100	0	P	H
													H
													H
		4874	41.8	-32.2	74	56.01	34	11.03	59.24	100	0	P	V
		7311	43.15	-30.85	74	51.92	35.7	13.66	58.13	100	0	P	V
													V
													V
802.11g CH 11 2462MHz		4924	42.09	-31.91	74	56.07	34.07	11.09	59.14	100	0	P	H
		7386	44.14	-29.86	74	52.84	35.8	13.76	58.26	100	0	P	H
													H
													H
		4924	42.03	-31.97	74	56.01	34.07	11.09	59.14	100	0	P	V
		7386	45.09	-28.91	74	53.79	35.8	13.76	58.26	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		2389.8	65.98	-8.02	74	51.6	32	17.43	35.05	274	344	P	H
		2390	52.03	-1.97	54	37.65	32	17.43	35.05	274	344	A	H
	*	2412	110.73	-	-	96.28	32.07	17.43	35.05	274	344	P	H
	*	2412	103.12	-	-	88.67	32.07	17.43	35.05	274	344	A	H
													H
													H
		2389.275	59.24	-14.76	74	44.85	32	17.43	35.04	222	276	P	V
		2389.905	48	-6	54	33.62	32	17.43	35.05	222	276	A	V
	*	2412	108.73	-	-	94.28	32.07	17.43	35.05	222	276	P	V
	*	2412	101.35	-	-	86.9	32.07	17.43	35.05	222	276	A	V
													V
													V
802.11n HT20 CH 06 2437MHz		2389.1	64.53	-9.47	74	50.14	32	17.43	35.04	309	343	P	H
		2389.94	49.81	-4.19	54	35.43	32	17.43	35.05	309	343	A	H
	*	2437	114.38	-	-	99.75	32.2	17.49	35.06	309	343	P	H
	*	2437	106.76	-	-	92.13	32.2	17.49	35.06	309	343	A	H
		2483.76	68.34	-5.66	74	53.59	32.27	17.55	35.07	309	343	P	H
		2483.5	52.44	-1.56	54	37.69	32.27	17.55	35.07	309	343	A	H
		2388.96	60.13	-13.87	74	45.74	32	17.43	35.04	244	274	P	V
		2389.94	47.21	-6.79	54	32.83	32	17.43	35.05	244	274	A	V
	*	2437	111.93	-	-	97.3	32.2	17.49	35.06	244	274	P	V
	*	2437	104.46	-	-	89.83	32.2	17.49	35.06	244	274	A	V
		2483.76	65.1	-8.9	74	50.35	32.27	17.55	35.07	244	274	P	V
		2483.5	49.33	-4.67	54	34.58	32.27	17.55	35.07	244	274	A	V



802.11n HT20 CH 11 2462MHz	*	2462	109.08	-	-	94.36	32.23	17.55	35.06	250	340	P	H
	*	2462	101.31	-	-	86.59	32.23	17.55	35.06	250	340	A	H
		2485.72	67.82	-6.18	74	53.07	32.27	17.55	35.07	250	340	P	H
		2483.52	52.24	-1.76	54	37.49	32.27	17.55	35.07	250	340	A	H
													H
													H
	*	2462	105.54	-	-	90.82	32.23	17.55	35.06	238	273	P	V
	*	2462	97.99	-	-	83.27	32.23	17.55	35.06	238	273	A	V
		2485.08	64.34	-9.66	74	49.59	32.27	17.55	35.07	238	273	P	V
		2483.52	49.59	-4.41	54	34.84	32.27	17.55	35.07	238	273	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		4824	42.8	-31.2	74	57.21	33.95	10.98	59.34	100	0	P	H
													H
													H
													H
		4824	42.69	-31.31	74	57.1	33.95	10.98	59.34	100	0	P	V
													V
													V
													V
802.11n HT20 CH 06 2437MHz		4874	41.33	-32.67	74	55.54	34	11.03	59.24	100	0	P	H
		7311	43.48	-30.52	74	52.25	35.7	13.66	58.13	100	0	P	H
													H
													H
		4874	42.25	-31.75	74	56.46	34	11.03	59.24	100	0	P	V
		7311	44.16	-29.84	74	52.93	35.7	13.66	58.13	100	0	P	V
													V
													V
802.11n HT20 CH 11 2462MHz		4924	42.48	-31.52	74	56.46	34.07	11.09	59.14	100	0	P	H
		7386	44.12	-29.88	74	52.82	35.8	13.76	58.26	100	0	P	H
													H
													H
		4924	42.28	-31.72	74	56.26	34.07	11.09	59.14	100	0	P	V
		7386	45.39	-28.61	74	54.09	35.8	13.76	58.26	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 03 2422MHz		2389.1	62.63	-11.37	74	48.24	32	17.43	35.04	275	344	P	H
		2389.94	52.47	-1.53	54	38.09	32	17.43	35.05	275	344	A	H
	*	2422	105.22	-	-	90.66	32.13	17.49	35.06	275	344	P	H
	*	2422	97.43	-	-	82.87	32.13	17.49	35.06	275	344	A	H
		2486.7	56.07	-17.93	74	41.32	32.27	17.55	35.07	275	344	P	H
		2484.11	45.63	-8.37	54	30.88	32.27	17.55	35.07	275	344	A	H
		2388.4	57.03	-16.97	74	42.64	32	17.43	35.04	221	276	P	V
		2389.8	47.61	-6.39	54	33.23	32	17.43	35.05	221	276	A	V
	*	2422	103.41	-	-	88.85	32.13	17.49	35.06	221	276	P	V
	*	2422	95.72	-	-	81.16	32.13	17.49	35.06	221	276	A	V
		2489.08	54.95	-19.05	74	40.17	32.3	17.55	35.07	221	276	P	V
		2484.25	44.56	-9.44	54	29.81	32.27	17.55	35.07	221	276	A	V
802.11n HT40 CH 06 2437MHz		2389.52	62.59	-11.41	74	48.2	32	17.43	35.04	306	341	P	H
		2389.94	51.41	-2.59	54	37.03	32	17.43	35.05	306	341	A	H
	*	2437	106.8	-	-	92.17	32.2	17.49	35.06	306	341	P	H
	*	2437	99.02	-	-	84.39	32.2	17.49	35.06	306	341	A	H
		2483.55	63.03	-10.97	74	48.28	32.27	17.55	35.07	306	341	P	H
		2483.5	52.09	-1.91	54	37.34	32.27	17.55	35.07	306	341	A	H
		2389.24	58.7	-15.3	74	44.31	32	17.43	35.04	242	271	P	V
		2389.94	48.44	-5.56	54	34.06	32	17.43	35.05	242	271	A	V
	*	2437	104.69	-	-	90.06	32.2	17.49	35.06	242	271	P	V
	*	2437	96.86	-	-	82.23	32.2	17.49	35.06	242	271	A	V
		2485.37	60.09	-13.91	74	45.34	32.27	17.55	35.07	242	271	P	V
		2483.5	49.14	-4.86	54	34.39	32.27	17.55	35.07	242	271	A	V



802.11n HT40 CH 09 2452MHz		2387	55.5	-18.5	74	41.11	32	17.43	35.04	250	340	P	H
		2389.8	45.18	-8.82	54	30.8	32	17.43	35.05	250	340	A	H
	*	2452	105.13	-	-	90.5	32.2	17.49	35.06	250	340	P	H
	*	2452	97.67	-	-	83.04	32.2	17.49	35.06	250	340	A	H
		2483.69	63.44	-10.56	74	48.69	32.27	17.55	35.07	250	340	P	H
		2484.04	52.8	-1.2	54	38.05	32.27	17.55	35.07	250	340	A	H
		2320.78	55.14	-18.86	74	41.05	31.8	17.31	35.02	236	273	P	V
		2389.24	44.06	-9.94	54	29.67	32	17.43	35.04	236	273	A	V
	*	2452	102.16	-	-	87.53	32.2	17.49	35.06	236	273	P	V
	*	2452	94.49	-	-	79.86	32.2	17.49	35.06	236	273	A	V
		2483.62	60.28	-13.72	74	45.53	32.27	17.55	35.07	236	273	P	V
		2484.18	50.69	-3.31	54	35.94	32.27	17.55	35.07	236	273	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 03 2422MHz		4844	41.83	-32.17	74	56.16	34	10.98	59.31	100	0	P	H
		7266	43.92	-30.08	74	52.69	35.7	13.62	58.09	100	0	P	H
													H
													H
		4844	41.85	-32.15	74	56.18	34	10.98	59.31	100	0	P	V
		7266	43.56	-30.44	74	52.33	35.7	13.62	58.09	100	0	P	V
													V
													V
802.11n HT40 CH 06 2437MHz		4874	42.82	-31.18	74	57.03	34	11.03	59.24	100	0	P	H
		7311	44.06	-29.94	74	52.83	35.7	13.66	58.13	100	0	P	H
													H
													H
		4874	42.19	-31.81	74	56.4	34	11.03	59.24	100	0	P	V
		7311	44.14	-29.86	74	52.91	35.7	13.66	58.13	100	0	P	V
													V
													V
802.11n HT40 CH 09 2452MHz		4904	41.89	-32.11	74	55.94	34.03	11.09	59.17	100	0	P	H
		7356	43.52	-30.48	74	52.32	35.7	13.71	58.21	100	0	P	H
													H
													H
		4904	43.29	-30.71	74	57.34	34.03	11.09	59.17	100	0	P	V
		7356	44.08	-29.92	74	52.88	35.7	13.71	58.21	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

2.4GHz WIFI 802.11n HT40 (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11n HT40 LF		32.43	22.88	-17.12	40	29.86	23.08	1.33	31.39	-	-	P	H
		57.27	20.49	-19.51	40	38.62	12.12	1.35	31.6	-	-	P	H
		74.01	19.24	-20.76	40	36.45	12.67	1.71	31.59	-	-	P	H
		793.5	32.63	-13.37	46	30.66	27.97	4.6	30.6	100	0	P	H
		831.3	32.1	-13.9	46	29.73	28.2	4.74	30.57	-	-	P	H
		957.3	32.12	-13.88	46	26.83	30.75	5.05	30.51	-	-	P	H
													H
													H
													H
													H
													H
													H
		30	33.4	-6.6	40	38.82	24.6	1.33	31.35	100	0	P	V
		36.48	30.88	-9.12	40	40.02	20.97	1.33	31.44	-	-	P	V
		57.27	27.72	-12.28	40	45.85	12.12	1.35	31.6	-	-	P	V
		637.4	30.45	-15.55	46	30.95	26.13	4.14	30.77	-	-	P	V
		871.2	31.11	-14.89	46	27.81	28.96	4.88	30.54	-	-	P	V
		953.1	32	-14	46	26.92	30.54	5.05	30.51	-	-	P	V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2386.02	58.51	-15.49	74	44.12	32	17.43	35.04	215	336	P	H
		2386.125	51.58	-2.42	54	37.19	32	17.43	35.04	215	336	A	H
	*	2412	112.88	-	-	98.43	32.07	17.43	35.05	215	336	P	H
	*	2412	110.05	-	-	95.6	32.07	17.43	35.05	215	336	A	H
													H
													H
		2383.815	58.94	-15.06	74	44.58	31.97	17.43	35.04	310	265	P	V
		2383.395	52.63	-1.37	54	38.27	31.97	17.43	35.04	310	265	A	V
	*	2412	115.64	-	-	101.19	32.07	17.43	35.05	310	265	P	V
	*	2412	112.35	-	-	97.9	32.07	17.43	35.05	310	265	A	V
													V
													V
802.11b CH 06 2437MHz		2386.72	54.89	-19.11	74	40.5	32	17.43	35.04	236	336	P	H
		2389.94	45.06	-8.94	54	30.68	32	17.43	35.05	236	336	A	H
	*	2437	114.86	-	-	100.23	32.2	17.49	35.06	236	336	P	H
	*	2437	111.98	-	-	97.35	32.2	17.49	35.06	236	336	A	H
		2483.9	55.8	-18.2	74	41.05	32.27	17.55	35.07	236	336	P	H
		2484.81	47.01	-6.99	54	32.26	32.27	17.55	35.07	236	336	A	H
		2386.72	54.74	-19.26	74	40.35	32	17.43	35.04	302	284	P	V
		2388.4	44.63	-9.37	54	30.24	32	17.43	35.04	302	284	A	V
	*	2437	116.99	-	-	102.36	32.2	17.49	35.06	302	284	P	V
	*	2437	113.92	-	-	99.29	32.2	17.49	35.06	302	284	A	V
		2484.46	56.5	-17.5	74	41.75	32.27	17.55	35.07	302	284	P	V
		2485.02	45.96	-8.04	54	31.21	32.27	17.55	35.07	302	284	A	V



802.11b CH 11 2462MHz	*	2462	112.19	-	-	97.47	32.23	17.55	35.06	265	327	P	H
	*	2462	109.38	-	-	94.66	32.23	17.55	35.06	265	327	A	H
		2484.32	58.35	-15.65	74	43.6	32.27	17.55	35.07	265	327	P	H
		2484.84	49.07	-4.93	54	34.32	32.27	17.55	35.07	265	327	A	H
													H
													H
	*	2462	112.68	-	-	97.96	32.23	17.55	35.06	264	327	P	V
	*	2462	109.76	-	-	95.04	32.23	17.55	35.06	264	327	A	V
		2483.92	60.07	-13.93	74	45.32	32.27	17.55	35.07	264	327	P	V
		2483.76	52.15	-1.85	54	37.4	32.27	17.55	35.07	264	327	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 01 2412MHz		4824	49.17	-24.83	74	63.58	33.95	10.98	59.34	100	0	P	H
													H
													H
													H
		4824	49.96	-24.04	74	64.37	33.95	10.98	59.34	100	0	P	V
													V
													V
													V
802.11b CH 06 2437MHz		4874	46.93	-27.07	74	61.14	34	11.03	59.24	100	0	P	H
		7311	46.46	-27.54	74	55.23	35.7	13.66	58.13	100	0	P	H
													H
													H
		4874	45.48	-28.52	74	59.69	34	11.03	59.24	100	0	P	V
		7311	47.92	-26.08	74	56.69	35.7	13.66	58.13	100	0	P	V
													V
													V
802.11b CH 11 2462MHz		4924	52.46	-21.54	74	66.44	34.07	11.09	59.14	295	9	P	H
		4924	49.41	-4.59	54	63.39	34.07	11.09	59.14	295	9	A	H
		7386	53.21	-20.79	74	61.91	35.8	13.76	58.26	201	61	P	H
		7386	48.29	-5.71	54	56.99	35.8	13.76	58.26	201	61	A	H
		4924	53.27	-20.73	74	67.25	34.07	11.09	59.14	100	329	P	V
		4924	50.3	-3.7	54	64.28	34.07	11.09	59.14	100	329	A	V
		7386	47.66	-26.34	74	56.36	35.8	13.76	58.26	100	0	P	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11g (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		2388.54	64.96	-9.04	74	50.57	32	17.43	35.04	277	344	P	H
		2390	52.75	-1.25	54	38.37	32	17.43	35.05	277	344	A	H
	*	2412	111.85	-	-	97.4	32.07	17.43	35.05	277	344	P	H
	*	2412	104.21	-	-	89.76	32.07	17.43	35.05	277	344	A	H
													H
													H
		2389.485	66.82	-7.18	74	52.43	32	17.43	35.04	358	346	P	V
		2390	52.52	-1.48	54	38.14	32	17.43	35.05	358	346	A	V
	*	2412	110.49	-	-	96.04	32.07	17.43	35.05	358	346	P	V
	*	2412	103.15	-	-	88.7	32.07	17.43	35.05	358	346	A	V
													V
													V
802.11g CH 06 2437MHz		2389.94	59.13	-14.87	74	44.75	32	17.43	35.05	308	339	P	H
		2389.94	47.26	-6.74	54	32.88	32	17.43	35.05	308	339	A	H
	*	2437	115.56	-	-	100.93	32.2	17.49	35.06	308	339	P	H
	*	2437	108.15	-	-	93.52	32.2	17.49	35.06	308	339	A	H
		2483.76	62.43	-11.57	74	47.68	32.27	17.55	35.07	308	339	P	H
		2483.55	48.33	-5.67	54	33.58	32.27	17.55	35.07	308	339	A	H
		2389.94	55.37	-18.63	74	40.99	32	17.43	35.05	342	268	P	V
		2389.94	45.47	-8.53	54	31.09	32	17.43	35.05	342	268	A	V
	*	2437	116.65	-	-	102.02	32.2	17.49	35.06	342	268	P	V
	*	2437	109.04	-	-	94.41	32.2	17.49	35.06	342	268	A	V
		2483.9	58.19	-15.81	74	43.44	32.27	17.55	35.07	342	268	P	V
		2483.5	47.34	-6.66	54	32.59	32.27	17.55	35.07	342	268	A	V



802.11g CH 11 2462MHz	*	2462	109.69	-	-	94.97	32.23	17.55	35.06	245	338	P	H
	*	2462	102.04	-	-	87.32	32.23	17.55	35.06	245	338	A	H
		2485.04	66.59	-7.41	74	51.84	32.27	17.55	35.07	245	338	P	H
		2483.52	52.56	-1.44	54	37.81	32.27	17.55	35.07	245	338	A	H
													H
													H
	*	2462	112.08	-	-	97.36	32.23	17.55	35.06	296	260	P	V
	*	2462	104.32	-	-	89.6	32.23	17.55	35.06	296	260	A	V
		2483.56	65.05	-8.95	74	50.3	32.27	17.55	35.07	296	260	P	V
		2483.52	52.59	-1.41	54	37.84	32.27	17.55	35.07	296	260	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		4824	43.71	-30.29	74	58.12	33.95	10.98	59.34	100	0	P	H
													H
													H
													H
		4824	43.56	-30.44	74	57.97	33.95	10.98	59.34	100	0	P	V
													V
													V
													V
802.11g CH 06 2437MHz		4874	44.39	-29.61	74	58.6	34	11.03	59.24	100	0	P	H
		7311	52.42	-21.58	74	61.19	35.7	13.66	58.13	133	49	P	H
		7311	42.17	-11.83	54	50.94	35.7	13.66	58.13	133	49	A	H
													H
		4874	43.42	-30.58	74	57.63	34	11.03	59.24	100	0	P	V
		7311	49.21	-24.79	74	57.98	35.7	13.66	58.13	100	0	P	V
													V
													V
802.11g CH 11 2462MHz		4924	42.8	-31.2	74	56.78	34.07	11.09	59.14	100	0	P	H
		7386	45.44	-28.56	74	54.14	35.8	13.76	58.26	100	0	P	H
													H
													H
		4924	42.42	-31.58	74	56.4	34.07	11.09	59.14	100	0	P	V
		7386	44.77	-29.23	74	53.47	35.8	13.76	58.26	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		2388.855	63.37	-10.63	74	48.98	32	17.43	35.04	269	347	P	H
		2390	52.36	-1.64	54	37.98	32	17.43	35.05	269	347	A	H
	*	2412	109.46	-	-	95.01	32.07	17.43	35.05	269	347	P	H
	*	2412	101.72	-	-	87.27	32.07	17.43	35.05	269	347	A	H
													H
													H
		2389.695	70.16	-3.84	74	55.77	32	17.43	35.04	323	359	P	V
		2390	52.89	-1.11	54	38.51	32	17.43	35.05	323	359	A	V
	*	2412	109.3	-	-	94.85	32.07	17.43	35.05	323	359	P	V
	*	2412	101.57	-	-	87.12	32.07	17.43	35.05	323	359	A	V
													V
													V
802.11n HT20 CH 06 2437MHz		2389.66	63.56	-10.44	74	49.17	32	17.43	35.04	299	345	P	H
		2389.94	49.62	-4.38	54	35.24	32	17.43	35.05	299	345	A	H
	*	2437	115.07	-	-	100.44	32.2	17.49	35.06	299	345	P	H
	*	2437	107.44	-	-	92.81	32.2	17.49	35.06	299	345	A	H
		2483.5	68.4	-5.6	74	53.65	32.27	17.55	35.07	299	345	P	H
		2483.5	52.31	-1.69	54	37.56	32.27	17.55	35.07	299	345	A	H
		2389.8	61.6	-12.4	74	47.22	32	17.43	35.05	341	269	P	V
		2389.94	47.59	-6.41	54	33.21	32	17.43	35.05	341	269	A	V
	*	2437	117.18	-	-	102.55	32.2	17.49	35.06	341	269	P	V
	*	2437	109.7	-	-	95.07	32.2	17.49	35.06	341	269	A	V
		2483.97	65.71	-8.29	74	50.96	32.27	17.55	35.07	341	269	P	V
		2483.5	49.71	-4.29	54	34.96	32.27	17.55	35.07	341	269	A	V



802.11n HT20 CH 11 2462MHz	*	2462	107.25	-	-	92.53	32.23	17.55	35.06	268	339	P	H
	*	2462	99.61	-	-	84.89	32.23	17.55	35.06	268	339	A	H
		2485.48	66.8	-7.2	74	52.05	32.27	17.55	35.07	268	339	P	H
		2483.52	51.95	-2.05	54	37.2	32.27	17.55	35.07	268	339	A	H
													H
													H
	*	2462	111.31	-	-	96.59	32.23	17.55	35.06	344	275	P	V
	*	2462	103.47	-	-	88.75	32.23	17.55	35.06	344	275	A	V
		2483.68	67.93	-6.07	74	53.18	32.27	17.55	35.07	344	275	P	V
		2483.52	52.7	-1.3	54	37.95	32.27	17.55	35.07	344	275	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		4824	43.97	-30.03	74	58.38	33.95	10.98	59.34	100	0	P	H
													H
													H
													H
		4824	42.96	-31.04	74	57.37	33.95	10.98	59.34	100	0	P	V
													V
													V
													V
802.11n HT20 CH 06 2437MHz		4874	44.33	-29.67	74	58.54	34	11.03	59.24	100	0	P	H
		7311	49.83	-24.17	74	58.6	35.7	13.66	58.13	100	0	P	H
													H
													H
		4874	41.73	-32.27	74	55.94	34	11.03	59.24	100	0	P	V
		7311	45.02	-28.98	74	53.79	35.7	13.66	58.13	100	0	P	V
													V
													V
802.11n HT20 CH 11 2462MHz		4924	42.45	-31.55	74	56.43	34.07	11.09	59.14	100	0	P	H
		7386	44.68	-29.32	74	53.38	35.8	13.76	58.26	100	0	P	H
													H
													H
		4924	42.13	-31.87	74	56.11	34.07	11.09	59.14	100	0	P	V
		7386	44.75	-29.25	74	53.45	35.8	13.76	58.26	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 03 2422MHz		2389.38	59.65	-14.35	74	45.26	32	17.43	35.04	288	351	P	H
		2389.94	49.27	-4.73	54	34.89	32	17.43	35.05	288	351	A	H
	*	2422	102.51	-	-	87.95	32.13	17.49	35.06	288	351	P	H
	*	2422	94.85	-	-	80.29	32.13	17.49	35.06	288	351	A	H
		2484.74	56.14	-17.86	74	41.39	32.27	17.55	35.07	288	351	P	H
		2483.9	44.97	-9.03	54	30.22	32.27	17.55	35.07	288	351	A	H
		2388.68	62.48	-11.52	74	48.09	32	17.43	35.04	352	298	P	V
		2389.94	52.7	-1.3	54	38.32	32	17.43	35.05	352	298	A	V
	*	2422	106.3	-	-	91.74	32.13	17.49	35.06	352	298	P	V
	*	2422	98.46	-	-	83.9	32.13	17.49	35.06	352	298	A	V
		2485.16	55.55	-18.45	74	40.8	32.27	17.55	35.07	352	298	P	V
		2484.18	45.8	-8.2	54	31.05	32.27	17.55	35.07	352	298	A	V
802.11n HT40 CH 06 2437MHz		2388.54	59.22	-14.78	74	44.83	32	17.43	35.04	296	347	P	H
		2389.94	48.77	-5.23	54	34.39	32	17.43	35.05	296	347	A	H
	*	2437	103.6	-	-	88.97	32.2	17.49	35.06	296	347	P	H
	*	2437	95.77	-	-	81.14	32.2	17.49	35.06	296	347	A	H
		2485.3	61.51	-12.49	74	46.76	32.27	17.55	35.07	296	347	P	H
		2483.5	50.54	-3.46	54	35.79	32.27	17.55	35.07	296	347	A	H
		2388.68	63.3	-10.7	74	48.91	32	17.43	35.04	342	269	P	V
		2389.94	51.9	-2.1	54	37.52	32	17.43	35.05	342	269	A	V
	*	2437	110.32	-	-	95.69	32.2	17.49	35.06	342	269	P	V
	*	2437	102.51	-	-	87.88	32.2	17.49	35.06	342	269	A	V
		2483.55	64.27	-9.73	74	49.52	32.27	17.55	35.07	342	269	P	V
		2483.5	52.48	-1.52	54	37.73	32.27	17.55	35.07	342	269	A	V



802.11n HT40 CH 09 2452MHz		2389.24	56.05	-17.95	74	41.66	32	17.43	35.04	263	331	P	H
		2389.8	44.25	-9.75	54	29.87	32	17.43	35.05	263	331	A	H
	*	2452	102.01	-	-	87.38	32.2	17.49	35.06	263	331	P	H
	*	2452	94.49	-	-	79.86	32.2	17.49	35.06	263	331	A	H
		2485.58	61.98	-12.02	74	47.23	32.27	17.55	35.07	263	331	P	H
		2483.5	52.96	-1.04	54	38.21	32.27	17.55	35.07	263	331	A	H
		2389.66	55.68	-18.32	74	41.29	32	17.43	35.04	341	270	P	V
		2389.66	45.77	-8.23	54	31.38	32	17.43	35.04	341	270	A	V
	*	2452	108.22	-	-	93.59	32.2	17.49	35.06	341	270	P	V
	*	2452	100.45	-	-	85.82	32.2	17.49	35.06	341	270	A	V
		2484.74	62.83	-11.17	74	48.08	32.27	17.55	35.07	341	270	P	V
		2483.5	51.26	-2.74	54	36.51	32.27	17.55	35.07	341	270	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 03 2422MHz		4844	42.99	-31.01	74	57.32	34	10.98	59.31	100	0	P	H
		7266	45.77	-28.23	74	54.54	35.7	13.62	58.09	100	0	P	H
													H
													H
		4844	42.35	-31.65	74	56.68	34	10.98	59.31	100	0	P	V
		7266	43.87	-30.13	74	52.64	35.7	13.62	58.09	100	0	P	V
													V
													V
802.11n HT40 CH 06 2437MHz		4874	42.5	-31.5	74	56.71	34	11.03	59.24	100	0	P	H
		7311	44.61	-29.39	74	53.38	35.7	13.66	58.13	100	0	P	H
													H
													H
		4874	42.15	-31.85	74	56.36	34	11.03	59.24	100	0	P	V
		7311	43.28	-30.72	74	52.05	35.7	13.66	58.13	100	0	P	V
													V
													V
802.11n HT40 CH 09 2452MHz		4904	42.09	-31.91	74	56.14	34.03	11.09	59.17	100	0	P	H
		7356	43.51	-30.49	74	52.31	35.7	13.71	58.21	100	0	P	H
													H
													H
		4904	41.73	-32.27	74	55.78	34.03	11.09	59.17	100	0	P	V
		7356	42.72	-31.28	74	51.52	35.7	13.71	58.21	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

2.4GHz WIFI 802.11n HT40 (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11n HT40 LF		31.89	25.08	-14.92	40	31.55	23.58	1.33	31.38	-	-	P	H
		41.34	23.14	-16.86	40	35.03	18.28	1.34	31.51	-	-	P	H
		59.7	26.75	-13.25	40	45.11	11.89	1.35	31.6	-	-	P	H
		756.4	30.9	-15.1	46	29.26	27.81	4.46	30.63	-	-	P	H
		806.1	32.81	-13.19	46	30.89	27.91	4.6	30.59	-	-	P	H
		916	35.36	-10.64	46	31.85	29.06	4.97	30.52	100	0	P	H
													H
													H
													H
													H
													H
													H
		30	34.2	-5.8	40	39.62	24.6	1.33	31.35	100	0	P	V
		36.21	31.06	-8.94	40	39.65	21.51	1.33	31.43	-	-	P	V
		57.54	28.49	-11.51	40	46.62	12.12	1.35	31.6	-	-	P	V
		846	30.39	-15.61	46	27.55	28.66	4.74	30.56	-	-	P	V
		892.2	31.26	-14.74	46	28.1	28.79	4.9	30.53	-	-	P	V
		952.4	32.38	-13.62	46	27.35	30.49	5.05	30.51	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Note symbol

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is over limit line.
P/A	Peak or Average
H/V	Horizontal or Vertical

A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) =
Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
3. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)
= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)
= 55.45 (dBμV/m)
2. Over Limit(dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 55.45(dBμV/m) – 74(dBμV/m)
= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)
= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)
= 43.54 (dBμV/m)
2. Over Limit(dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 43.54(dBμV/m) – 54(dBμV/m)
= -10.46(dB)

Both peak and average measured complies with the limit line, so test result is “PASS”.



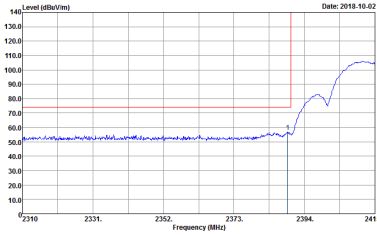
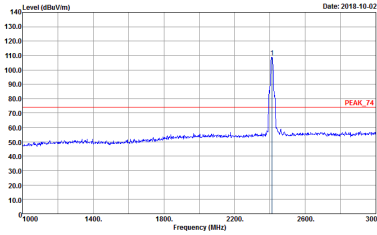
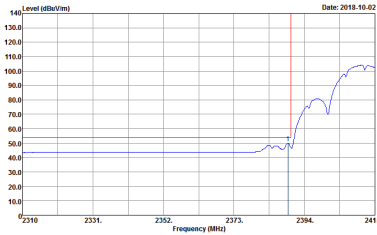
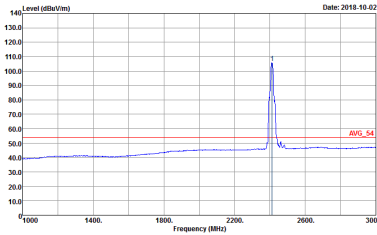
Appendix D. Radiated Spurious Emission Plots

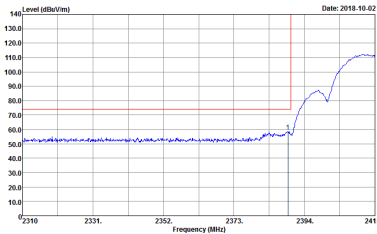
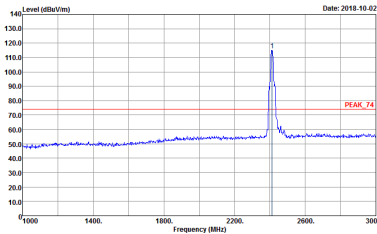
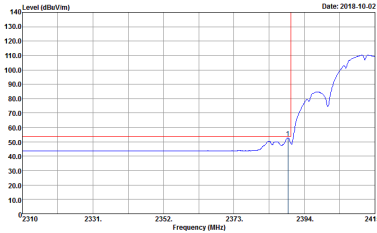
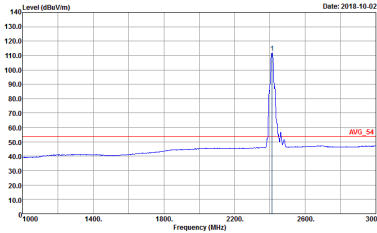
Test Engineer :	Jesse Wang, Stan Hsieh, and Nick Yu	Temperature :	24~26°C
		Relative Humidity :	50~51%

Note symbol

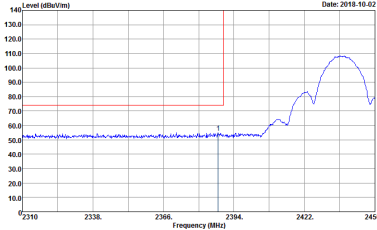
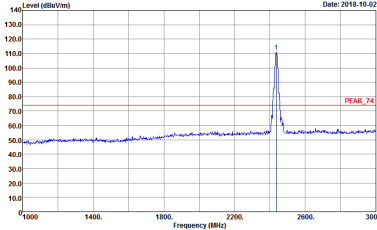
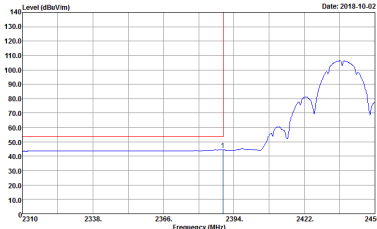
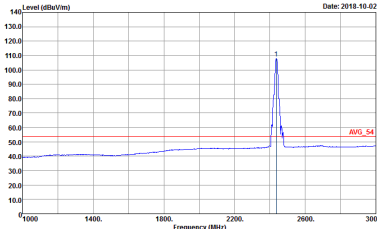
-L	Low channel location
-R	High channel location

2.4GHz 2400~2483.5MHz
WIFI 802.11b (Band Edge @ 3m)

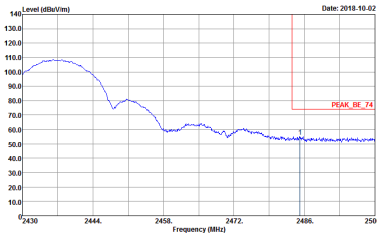
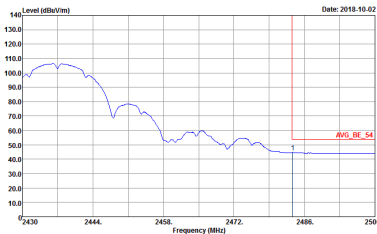
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00211469 HORIZONTAL Detector : Peak Project : 891815 Mode : 1	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00211469 HORIZONTAL Detector : Peak Project : 891815 Mode : 1
	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00211469 HORIZONTAL Detector : Peak Project : 891815 Mode : 1	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00211469 HORIZONTAL Detector : Peak Project : 891815 Mode : 1

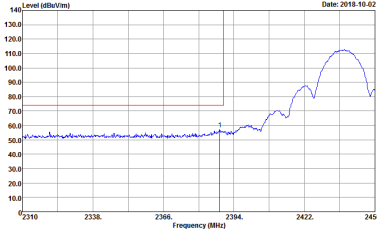
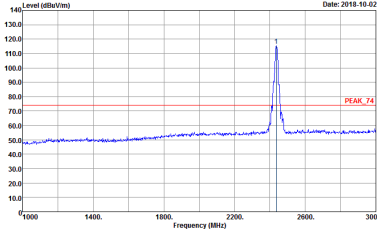
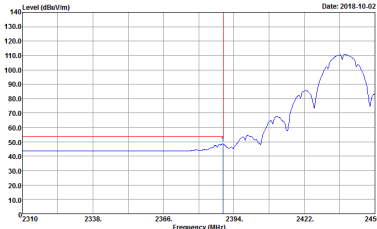
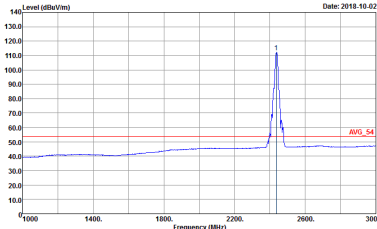
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74_3m HF_ANT_00211469 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SMT:Auto Detector : Peak Project : 891815 Mode : 1	 Site : 03CH07-HY Condition : PEAK_74_3m HF_ANT_00211469 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SMT:Auto Detector : Peak Project : 891815 Mode : 1
	 Site : 03CH07-HY Condition : AVG_BE_54_3m HF_ANT_00211469 VERTICAL RBW:1000.000kHz VBW:0.0100kHz SMT:Auto Detector : Peak Project : 891815 Mode : 1	 Site : 03CH07-HY Condition : AVG_54_3m HF_ANT_00211469 VERTICAL RBW:1000.000kHz VBW:0.0100kHz SMT:Auto Detector : Peak Project : 891815 Mode : 1



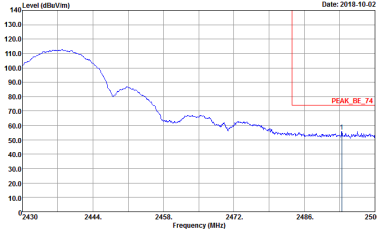
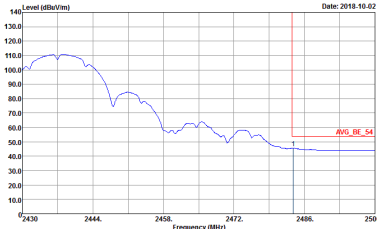
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74_3m HF_ANT_00211469 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SMT:Auto Detector : Peak Project : 891815 Mode : 2	 Site : 03CH07-HY Condition : PEAK_74_3m HF_ANT_00211469 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SMT:Auto Detector : Peak Project : 891815 Mode : 2
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54_3m HF_ANT_00211469 HORIZONTAL RBW:1000.000kHz VBW:0.0100kHz SMT:Auto Detector : Peak Project : 891815 Mode : 2	 Site : 03CH07-HY Condition : AVG_54_3m HF_ANT_00211469 HORIZONTAL RBW:1000.000kHz VBW:0.0100kHz SMT:Auto Detector : Peak Project : 891815 Mode : 2



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	 Date: 2018-10-02 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00211469 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SMT:Auto Project : 891815 Mode : 2	Left blank
Avg.	 Date: 2018-10-02 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00211469 HORIZONTAL Detector : RBW:1000.000kHz VBW:0.0100kHz SMT:Auto Project : 891815 Mode : 2	Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74_3m HF_ANT_00211469 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SMT:Auto Detector : Peak Project : 891815 Mode : 2	 Site : 03CH07-HY Condition : PEAK_74_3m HF_ANT_00211469 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SMT:Auto Detector : Peak Project : 891815 Mode : 2
	 Site : 03CH07-HY Condition : AVG_BE_54_3m HF_ANT_00211469 VERTICAL RBW:1000.000kHz VBW:0.0100kHz SMT:Auto Detector : Peak Project : 891815 Mode : 2	 Site : 03CH07-HY Condition : AVG_54_3m HF_ANT_00211469 VERTICAL RBW:1000.000kHz VBW:0.0100kHz SMT:Auto Detector : Peak Project : 891815 Mode : 2



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00211469 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SMT:Auto Project : 891815 Mode : 2	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00211469 VERTICAL Detector : RBW:1000.000kHz VBW:0.0100kHz SMT:Auto Project : 891815 Mode : 2	Left blank