

FCC/ISED

RF

TEST REPORT

ISSUED BY
Shenzhen BALUN Technology Co., Ltd.



FOR
HUAWEI MateBook

ISSUED TO
Huawei Technologies Co., Ltd.

Administration Building, Headquarters of Huawei Technologies Co., Ltd.,
Bantian, Longgang District, Shenzhen, 518129, China



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Date: Nov. 05, 2018

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Date: Nov. 05, 2018

Report No.: BL-SZ1880358-603
EUT Name: HUAWEI MateBook
Model Name: WRT-W19, WRT-W29
Brand Name: HUAWEI
Test Standard: 47 CFR Part 15 Subpart C
RSS-Gen (Issue 4, November 2014)
RSS-247 (Issue 2, February 2017)
FCC ID: QISWRT-WX9
ISED Number: 6369A-WRTWX9
Test Conclusion: Pass
Test Date: Oct. 01, 2018 ~ Oct. 08, 2018
Date of Issue: Nov. 05, 2018

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Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Nov. 05, 2018</u>	<u>Initial Issue</u>

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1 ADMINISTRATIVE DATA (GENERAL INFORMATION)

1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100

1.2 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A-1. The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196. The laboratory is a testing organization accredited by American Association for Laboratory Accreditation(A2LA) according to ISO/IEC 17025.The accreditation certificate is 4344.01. The laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L6791.
Description	All measurement facilities used to collect the measurement data are located at Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China 518055

1.3 Laboratory Condition

Ambient Temperature	20°C to 25°C
Ambient Relative Humidity	45% to 55%
Ambient Pressure	100 kPa to 102 kPa

1.4 Announce

- (1) The test report reference to the report template version v6.2.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
- (5) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.
- (6) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Huawei Technologies Co., Ltd.
Address	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, China

2.2 Manufacturer Information

Manufacturer	Huawei Technologies Co., Ltd.
Address	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, China

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Type	HUAWEI MateBook
Model Name Under Test	WRT-W19, WRT-W29
Series Model Name	WRT-WXXXXXX (The "X" in model name can be 0 to 9, A to Z, a to z, "-" or blank, only differences are the appearance and model names for trading purpose)
Description of Model name differentiation	Refer section 2.5
Hardware Version	NX8309_PCB_MB_V5_HF
Software Version	1.4.0.11 (C001)
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.5 Differences Description

	WRT-W29 (with GPU version)	WRT-W19 (with GPU version)	WRT-W29 (without GPU version)	WRT-W19 (without GPU version)
Main board	The same	The same	Delete GPU chip and related components	Delete GPU chip and related components
Frequency bands	The same, support Wi-Fi 2.4G&5G support BT	The same, support Wi-Fi 2.4G&5G support BT	The same, support Wi-Fi 2.4G&5G support BT	The same, support Wi-Fi 2.4G&5G support BT
BT/ Wi-Fi module	The same	The same	The same	The same
BT/ Wi-Fi antenna	The same	The same	The same	The same
Appearance	The same	The same	The same	The same
Dimension	The same	The same	The same	The same
CPU	Intel i7-8565U, Support max4.6GHz	Intel i5-8265U, Support max3.9GHz	Intel i7-8565U, Support max4.6GHz	Intel i5-8265U, Support max3.9GHz
GPU	support	support	Not support	Not support
Memory	16/8G	8G	8G	8G
SSD	512G/256G	256G	512G	512G/256G
Rear camera	Not support	Not support	Not support	Not support
Front camera	The same	The same	The same	The same
Adapter	The same	The same	The same	The same
Battery	The same	The same	The same	The same
Accessories	The same, Docking Station	The same, Docking Station	The same, Docking Station	The same, Docking Station

2.6 Ancillary Equipment

Ancillary Equipment 1	Rechargeable Li-ion Polymer Battery	
	Brand Name	HUAWEI
	Model No.	HB4593J6ECW
	Serial No.	N/A
	Capacity	3660 mAh
	Rated Voltage	11.4 V
	Limit Charge Voltage	13.05 V
Ancillary Equipment 2	Adapter 1	
	Brand Name	HUAWEI
	Model No.	HW-200325BP0 (UK Plug)
	Serial No.	C978Y9J7F00037
	Rated Input	100-240 V~, 1.8 A, 50/60 Hz
	Rated Output	5 V= 2 A / 9 V= 2 A / 12 V= 2 A / 15 V= 3 A / 20 V= 3.25 A
	Manufacturer	Huawei Technologies Co.,Ltd.
Ancillary Equipment 3	Adapter 2	
	Brand Name	HUAWEI
	Model No.	HW-200325UP0 (US Plug)
	Serial No.	C976Y1J8P00106
	Rated Input	100-240 V~, 1.8 A, 50/60 Hz
	Rated Output	5 V= 2 A / 9 V= 2 A / 12 V= 2 A / 15 V= 3 A / 20 V= 3.25 A
	Manufacturer	Huawei Technologies Co.,Ltd.
Ancillary Equipment 4	Adapter 3	
	Brand Name	HUAWEI
	Model No.	HW-200325EP0 (EU Plug)
	Serial No.	C974Y1J8W01182
	Rated Input	100-240 V~, 1.8 A, 50/60 Hz
	Rated Output	5 V= 2 A / 9 V= 2 A / 12 V= 2 A / 15 V= 3 A / 20 V= 3.25 A
	Manufacturer	Huawei Technologies Co.,Ltd.
Ancillary Equipment 5	Adapter 4	
	Brand Name	HUAWEI
	Model No.	HW-200325CP0 (GB Plug)
	Serial No.	C973Y1J5S01577
	Rated Input	100-240 V~, 1.8 A, 50/60 Hz
	Rated Output	5 V= 2 A / 9 V= 2 A / 12 V= 2 A / 15 V= 3 A / 20 V= 3.25 A
	Manufacturer	Huawei Technologies Co.,Ltd.
Ancillary Equipment 6	USB-A to RJ45	
	Model No.	AD70
	Serial No.	48XJU17A18011914
	Manufacturer	Huawei Technologies Co.,Ltd.
Ancillary Equipment 7	Docking Station	
	Model No.	AD11

	Serial No.	N/A
	Manufacturer	Huawei Technologies Co.,Ltd.
Ancillary Equipment 8	USB Cable	
	Length (Approx.)	1.8 m
Ancillary Equipment 9	USB-C to USB-A	
Note: All adapter models only with different plug for marketing purpose. We select HW-200325UP0 (US Plug) during testing.		

2.7 Technical Information

Network and Wireless connectivity	Bluetooth 5.0 (BR+EDR+BLE) 2.4G WIFI: 802.11b, 802.11g, 802.11n(HT20/40) 5G WIFI:802.11a, 802.11n(HT20/40), 802.11ac(VHT20/40/80/160) 5.8G SRD
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The requirement for the following technical information of the EUT was tested in this report:

Frequency Range		802.11b/g/n(20 MHz): 2.412 GHz - 2.462 GHz $f_c = 2412 \text{ MHz} + (N-1)*5 \text{ MHz}$, where - f_c = "Operating Frequency" in MHz, - N = "Channel Number" with the range from 1 to 11. 802.11n(40 MHz): 2.422 GHz - 2.452 GHz $f_c = 2412 \text{ MHz} + (N-1)*5 \text{ MHz}$, where - f_c = "Operating Frequency" in MHz, - N = "Channel Number" with the range from 3 to 9.
Modulation Type		DSSS, OFDM
Product Type		☐ Mobile ☒ Portable ☐ Fix Location
Antenna System (eg., MIMO, Smart Antenna)		Cyclic Delay Diversity (CDD) for 802.11n Basic methodology with N_{ANT} transmit antennas, each with the same directional gain G_{ANT} dBi for 802.11b/g
Categorization as Correlated or Completely Uncorrelated		Categorization as Correlated
Antenna Type	Antenna 0 (ANT 0)	PIFA Antenna
	Antenna 1 (ANT 1)	
Antenna Gain	Antenna 0 (ANT 0)	1 dBi
	Antenna 1 (ANT 1)	1 dBi
Total directional gain for 802.11n	For power spectral density(PSD) measurements	4 dBi Formulas: Directional gain = $G_{ANT} + \text{Array Gain}$, $\text{Array Gain} = 10 \log(N_{ANT}/N_{SS}) \text{ dB}$. $N_{SS} = 1$, G_{ANT} set equal to the gain of the antenna having the highest gain.
	For power measurements	4 dBi Formulas: Directional gain = $G_{ANT} + \text{Array Gain}$, $\text{Array Gain} = 0$, G_{ANT} set equal to the gain of the antenna having the highest gain.
Total	For power spectral	0 dBi

directional gain for 802.11b/g	density(PSD) measurements	Formulas: Directional gain = $10 \log[(10G1 /20 + 10G2 /20 + \dots + 10GN /20)^2 /NANT]$ dBi
	For power measurements	0 dBi Formulas: Directional gain = $10 \log[(10G1 /20 + 10G2 /20 + \dots + 10GN /20)^2 /NANT]$ dBi
About the Product		Only the WIFI 802.11b, 802.11g and 802.11n (HT20/40) was tested in this report.

Mode	Antenna		
	Antenna 0	Antenna 1	Antenna 0 + Antenna1
802.11b	√	√	-
802.11g	√	√	-
802.11n20	√	√	√
802.11n40	√	√	√
Note: The Antenna 0 is the Aux antenna (DRTU Chain A).The Antenna 1 is the Main antenna (DRTU Chain B).			

Modulation technology	Modulation Type	Transfer Rate (Mbps)
DSSS (802.11b)	DBPSK	1
	DQPSK	2
	CCK	5.5/ 11
OFDM (802.11g)	BPSK	6 / 9
	QPSK	12 / 18
	16QAM	24 / 36
	64QAM	48 / 54
OFDM (802.11n-20MHz)	BPSK	6.5
	QPSK	13/19.5
	16QAM	26/39
	64QAM	52/58.5/65
OFDM (802.11n-40MHz)	BPSK	13.5
	QPSK	27/40.5
	16QAM	54/81/108
	64QAM	121.5/135

Note: Preliminary tests were performed in different data rate in above table to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

802.11b: 1Mbps

802.11g: 6Mbps

802.11n20 and 802. 11n40 (SISO): HT0

802.11n40 and 802. 11n40 (MIMO): HT8

Test Items	Mode	Data Rate	Channel	
Output Power	11b/11g/11n20/11n40	1/6/6.5/13.5 Mbps	1/6/11	3/6/9
6dB Bandwidth	11b/11g/11n20/11n40	1/6/6.5/13.5 Mbps	1/6/11	3/6/9
Conducted Spurious Emission	11b/11g/11n20/11n40	1/6/6.5/13.5 Mbps	1/6/11	3/6/9
Conducted Emission	11b/11g/11n20/11n40	1/6/6.5/13.5 Mbps	1/6/11	3/6/9
Radiated Spurious Emission	11b/11g/11n20/11n40	1/6/6.5/13.5 Mbps	1/6/11	3/6/9
Band Edge	11b/11g/11n20/11n40	1/6/6.5/13.5 Mbps	1/6/11	3/6/9
Power spectral density (PSD)	11b/11g/11n20/11n40	1/6/6.5/13.5 Mbps	1/6/11	3/6/9

Note: The above EUT information in section 2.4 and 2.6 was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

2.8 Additional Instructions

EUT Software Settings:

Mode	☒ Special software is used. The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.
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During testing, Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Power level setup in software		
Test Software Version	DRTU V11.1812.0-07288	
Mode	Channel	Soft Set
802.11 b SISO ANTA	1	17.5
	6	17
	11	17
802.11 b SISO ANTB	1	16
	6	16
	11	16.5
802.11 g SISO ANTA	1	17.5
	6	17
	11	16
802.11 g SISO ANTB	1	16
	6	16
	11	16.5
802.11 n20 SISO ANTA	1	17.5
	6	17
	11	17
802.11 n20 SISO ANTB	1	16
	6	16
	11	16.5
802.11 n40 SISO ANTA	3	16.5
	6	16
	9	16
802.11 n40 SISO ANTB	3	16.5
	6	16.5
	9	16.5
802.11 n20 MIMO ANTA	1	14
	6	14
	11	14
802.11 n20 MIMO ANTB	1	14
	6	14
	11	14.5
802.11 n40 MIMO ANTA	3	13.5
	6	13

	9	13
802.11 n40 MIMO ANTB	3	13
	6	13
	9	13.5

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15, Subpart C	Miscellaneous Wireless Communications Services
2	KDB Publication 558074 D01v05	GUIDANCE FOR COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEM, FREQUENCY HOPPING SPREAD SPECTRUM SYSTEM, AND HYBRID SYSTEM DEVICES OPERATING UNDER SECTION 15.247 OF THE FCC RULES
3	KDB Publication 662911 D01v02r01	Emissions Testing of Transmitters with Multiple Outputs in the Same Band (e.g., MIMO, Smart Antenna, etc)
4	RSS-Gen (Issue 5, Apr. 2018)	General Requirements for Compliance of Radio Apparatus
5	RSS-247 (Issue 2, February 2017)	Digital Transmission Systems (DTSS), Frequency Hopping Systems(FHSS) and Licence-Exempt Local Area Network (LE-LAN) Devices
6	ANSI C63.10-2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

3.2 Verdict

No.	Description	FCC PART No.	ISED Part No.	Test Result	Verdict
1	Antenna Requirement	15.203; 15.247(b)	RSS-247, 5.4 (6)	N/A	Pass ^{Note 1}
2	Output Power	15.247(b)	RSS-247, 5.4 (4)	ANNEX A.1	Pass
3	6dB Bandwidth	15.247(a)	RSS-GEN, 6.6; RSS-247, 5.2 (1)	ANNEX A.2	Pass
4	Conducted Spurious Emission	15.247(d)	RSS-247, 5.5	ANNEX A.3	Pass
5	Band Edge(Authorized-band band-edge)	15.209; 15.247(d)	RSS-GEN, 8.9; RSS-247, 5.5	ANNEX A.4	Pass
6	Conducted Emission	15.207	RSS-GEN, 8.8	ANNEX A.5	Pass
7	Radiated Spurious Emission	15.209; 15.247(d)	RSS-247, 5.5	ANNEX A.6	Pass
8	Band Edge(Restricted-band band-edge)	15.209; 15.247(d)	RSS-247, 5.5	ANNEX A.7	Pass
9	Power spectral density (PSD)	15.247(e)	RSS-247, 5.2 (2)	ANNEX A.8	Pass
10	Receiver Spurious Emissions	N/A	RSS-Gen, 7.1.2	N/A	N/A ^{Note 2}

Note 1: Please refer to section 5.1.

Note 2: Only radio communication receivers operating in stand-alone mode within the band 30-960 MHz, as well as scanner receivers, are subject to Industry Canada requirements, so this test is not applicable.

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

During the measurement, the normal environmental conditions were within the listed ranges:

Relative Humidity	45% - 55%	
Atmospheric Pressure	100 kPa - 102 kPa	
Temperature	NT (Normal Temperature)	+22°C to +25°C
Working Voltage of the EUT	NV (Normal Voltage)	11.4 V

4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	ROHDE&SCHWARZ	FSV-30	103118	2018.06.15	2019.06.14
Switch Unit with OSP-B157	ROHDE&SCHWARZ	OSP120	101270	2018.06.15	2019.06.14
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2017.11.08	2018.11.07
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2018.06.13	2019.06.12
LISN	SCHWARZBECK	NSLK 8127	8127-687	2018.06.13	2019.06.12
Power Splitter	KMW	DCPD-LDC	1305003215	--	--
Power Sensor	ROHDE&SCHWARZ	NRP-Z21	103971	2018.06.15	2019.06.14
Attenuator (20 dB)	KMW	ZA-S1-201	110617091	--	--
Attenuator (6 dB)	KMW	ZA-S1-61	1305003189	--	--
DC Power Supply	ROHDE&SCHWARZ	HMP2020	018141664	2018.06.14	2019.06.13
Temperature Chamber	ANGELANTIONI SCIENCE	NTH64-40A	1310	2018.06.26	2019.06.25
Test Antenna- Loop(9 kHz-30 MHz)	SCHWARZBECK	FMZB 1519	1519-037	2017.11.09	2019.11.08
Test Antenna- Bi-Log(30 MHz-3 GHz)	SCHWARZBECK	VULB 9163	9163-624	2017.07.22	2019.07.21
Test Antenna- Horn(1-18 GHz)	SCHWARZBECK	BBHA 9120D	9120D-1148	2018.07.11	2020.07.10
Test Antenna- Horn(15-26.5 GHz)	SCHWARZBECK	BBHA 9170	9170-305	2018.06.21	2019.06.20
Test Antenna- Horn (18-40 GHz)	A-INFO	LB-180400 KF	J211060273	2017.01.06	2019.01.05
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2017.02.21	2019.02.20
Anechoic Chamber	EMC Electronic Co., Ltd	20.10*11.60 *7.35m	N/A	2017.08.08	2019.08.07
Shielded Enclosure	ChangNing	CN-130701	130703	--	--
Power Amplifier	OPHIR RF	5225F	1037	2018.02.16	2019.02.15
Power Amplifier	OPHIR RF	5273F	1016	2018.02.16	2019.02.15
Directional Coupler	Werlantone	C5982-10	109275	N/A	N/A
Directional Coupler	Werlantone	CHP-273E	S00801z-01	N/A	N/A
Amplifier	COM-MW	KL_LNA_18 -40G-01	N/A	2018.06.26	2019.06.25

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
RF Cable 1	ROHDE&SCHWARZ	JUNFLON	APR0914004	2018.08.10	2019.11.09
RF Cable 2	Huber&suhner	RG_400_/U	N/A	2018.08.10	2019.11.09
RF Cable 3	Huber&suhner	RG_400_/U	N/A	2018.08.10	2019.11.09
RF Cable 4	Huber&suhner	SX_04172_ B-60	N/A	2018.08.10	2019.11.09
RF Cable 5	COM-MW	RFJA360-2. 92mm-J/J3 M	N/A	2018.08.10	2019.11.09

Note: The calibration period on the Cable is three month.

4.3 Measurement Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2.

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Measurement	Value
Occupied Channel Bandwidth	±4%
RF output power, conducted	±1.4 dB
Power Spectral Density, conducted	±2.5 dB
Unwanted Emissions, conducted	±2.8 dB
All emissions, radiated	±5.4 dB
Temperature	±1°C
Humidity	±4%

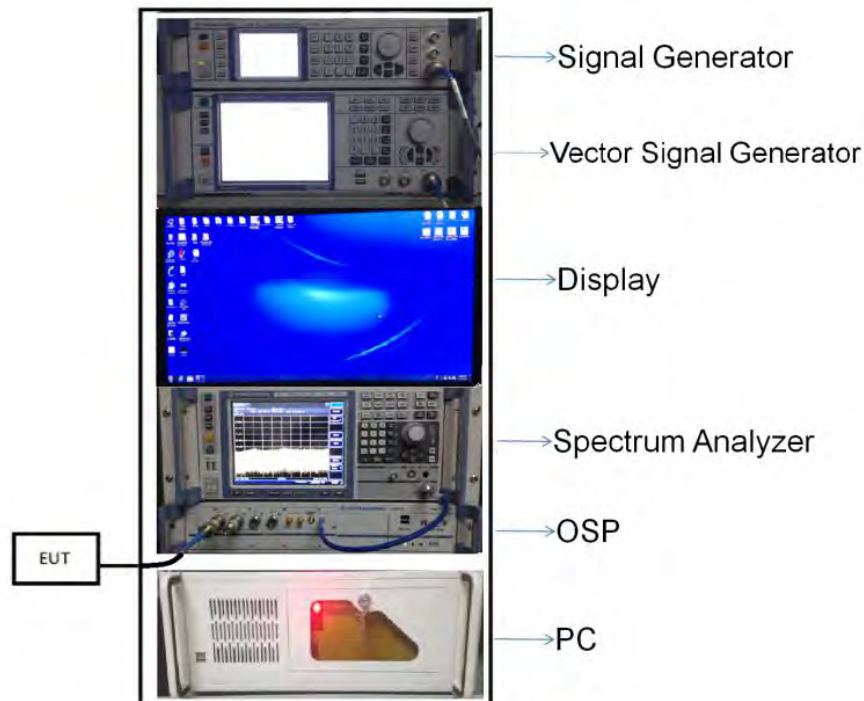
4.4 Description of Test Setup

4.4.1 For Antenna Port Test

Conducted value (dBm) = Measurement value (dBm) + cable loss (dB)

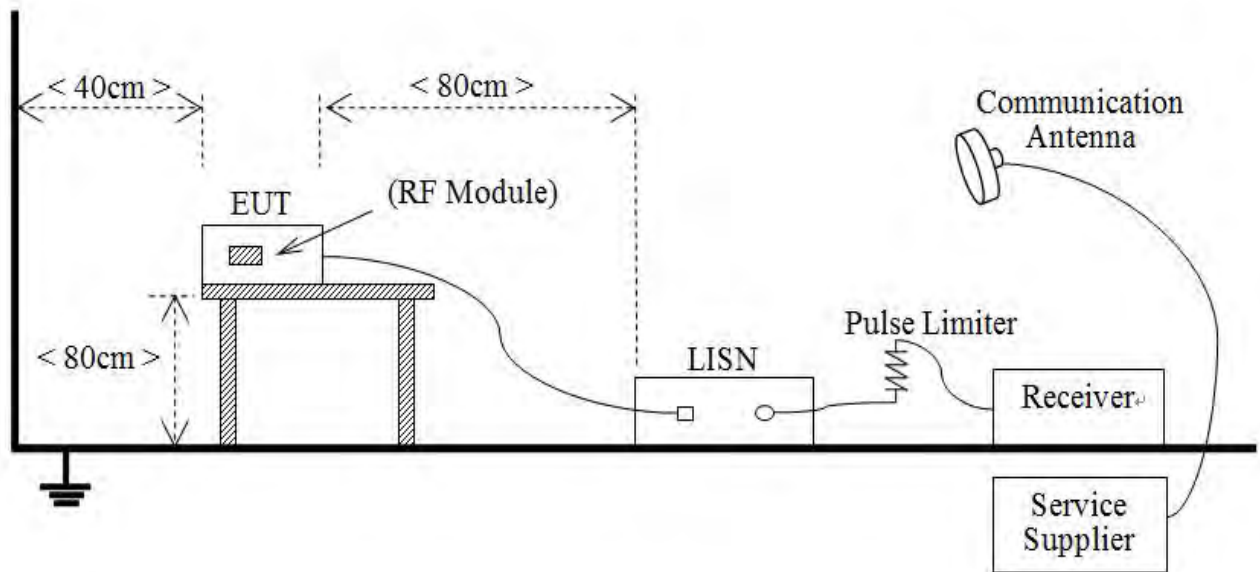
For example: the measurement value is 10 dBm and the cable 0.5dBm used, then the final result of EUT:

Conducted value (dBm) = 10 dBm + 0.5 dB = 10.5 dBm



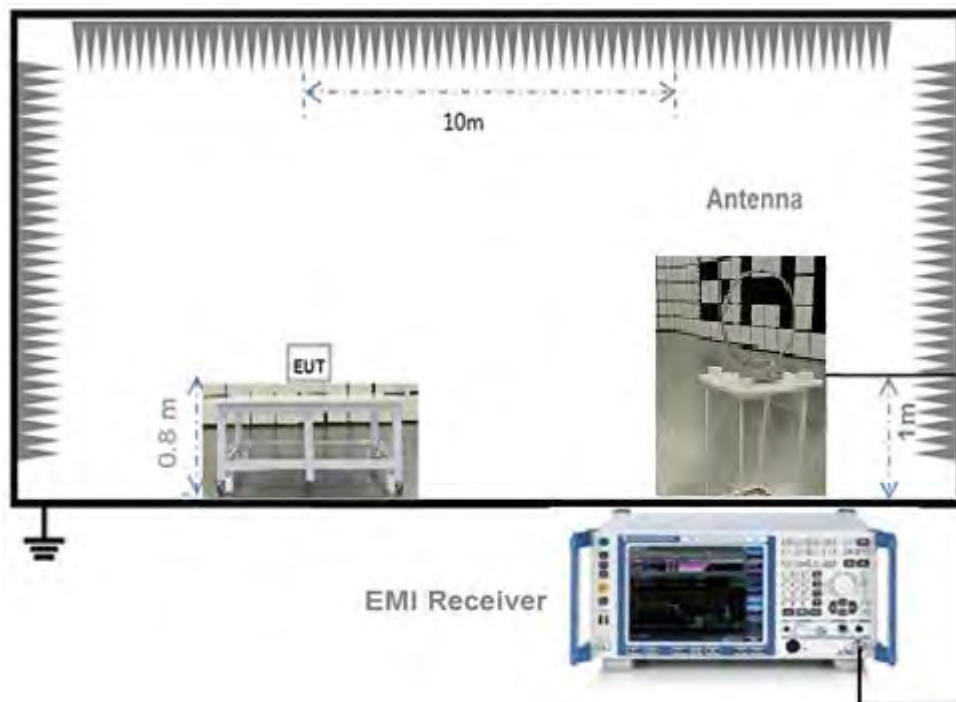
(Diagram 1)

4.4.2 For AC Power Supply Port Test



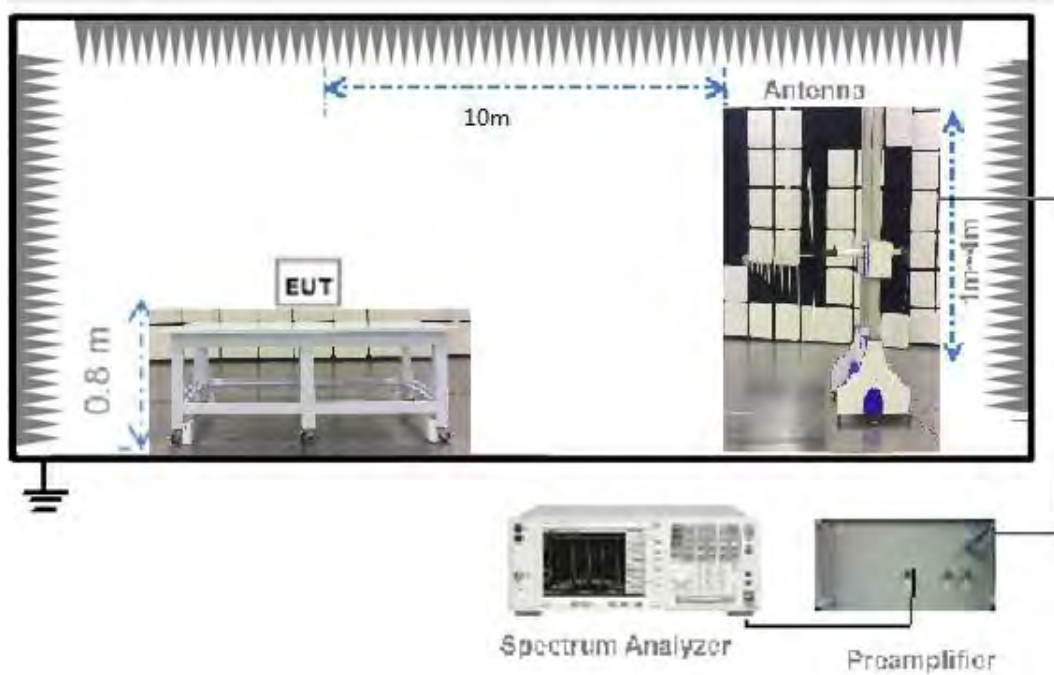
(Diagram 2)

4.4.3 For Radiated Test (Below 30 MHz)



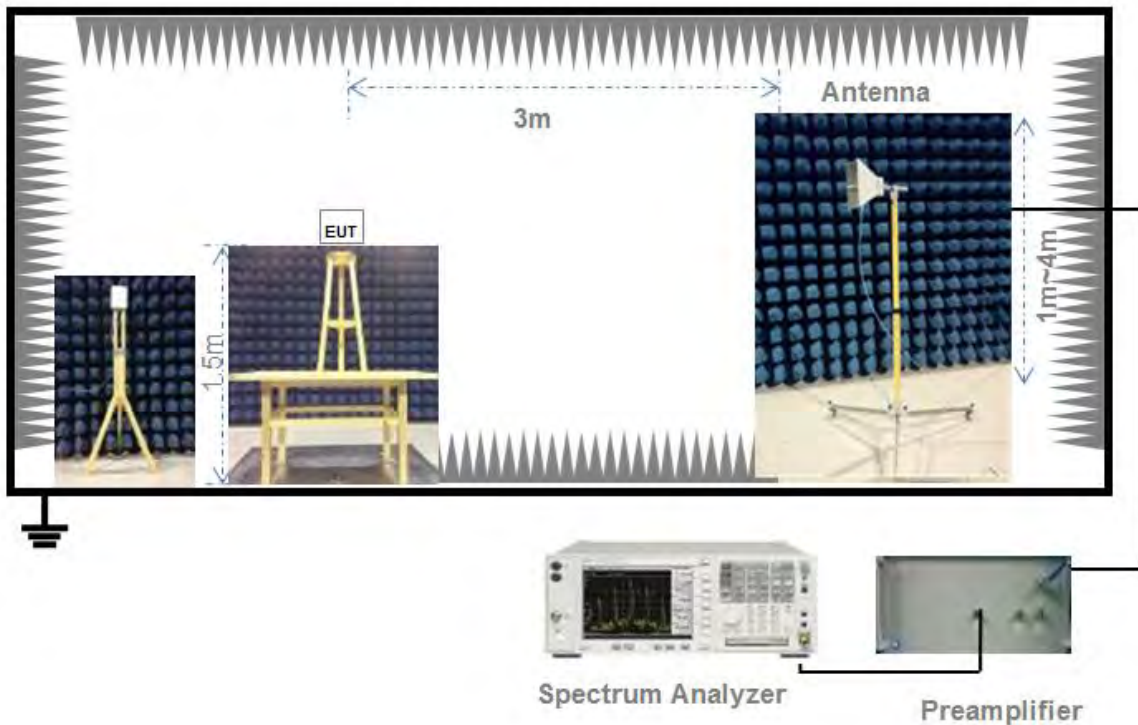
(Diagram 3)

4.4.4 For Radiated Test (30 MHz-1 GHz)



(Diagram 4)

4.4.5 For Radiated Test (Above 1 GHz)



(Diagram 5)

4.5 Measurement Results Explanation Example

4.5.1 For conducted test items:

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

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

Offset = RF cable loss + attenuator factor.

4.5.2 For radiated band edges and spurious emission test:

$$E = \text{EIRP} - 20\log D + 104.8$$

where:

E = electric field strength in dB μ V/m,

EIRP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

EIRP= Measure Conducted output power Value (dBm) + Maximum transmit antenna gain (dBi) + the appropriate maximum ground reflection factor (dB)

5 TEST ITEMS

5.1 Antenna Requirements

5.1.1 Relevant Standards

FCC §15.203 & 15.247(b); RSS-247, 5.4 (6)

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. 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 provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

If directional gain of transmitting antennas is greater than 6 dBi, the power shall be reduced by the same level in dB comparing to gain minus 6 dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. 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 FCC rule.

5.1.2 Antenna Anti-Replacement Construction

The Antenna Anti-Replacement as following method:

Protected Method	Description
The antenna is embedded in the product.	The antennas of the product are permanently attached. There are no provisions for connection to an external antenna.

Reference Documents	Item
Photo	Please refer to the EUT Photo documents.

5.1.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

5.2 Output Power

5.2.1 Test Limit

FCC § 15.247(b); RSS-247, 5.4 (4)

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements.

5.2.2 Test Setup

See section 4.4.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.2.3 Test Procedure

Maximum peak conducted output power

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall utilize a fast-responding diode detector.

Maximum conducted (average) output power (Reporting Only)

a) As an alternative to spectrum analyzer or EMI receiver measurements, measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the conditions listed below are satisfied.

- 1) The EUT is configured to transmit continuously, or to transmit with a constant duty factor.
- 2) At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.
- 3) The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.

b) If the transmitter does not transmit continuously, measure the duty cycle (x) of the transmitter output signal as described in Section 6.0.

c) Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.

d) Adjust the measurement in dBm by adding $10\log(1/x)$, where x is the duty cycle to the measurement result.

Measurements of duty cycle

The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on and off times of the transmitted signal.

Set the center frequency of the instrument to the center frequency of the transmission.

Set RBW $\geq$ OBW if possible; otherwise, set RBW to the largest available value.

Set VBW $\geq$ RBW. Set detector = peak or average.

The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$ and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring duty cycle shall not be used if $T \leq 16.7$ microseconds.)

5.2.4 Test Result

Please refer to ANNEX A.1.

5.3 6dB Bandwidth

5.3.1 Limit

FCC §15.247(a); RSS-GEN, 6.6

Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW. The 6 dB bandwidth must be greater than 500 kHz.

5.3.2 Test Setup

See section 4.4.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.3.3 Test Procedure

Use the following spectrum analyzer settings:

Set RBW = 100 kHz.

Set the video bandwidth (VBW) ≥ 3 RBW.

Detector = Peak.

Trace mode = max hold.

Sweep = auto couple.

Allow the trace to stabilize.

Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

5.3.4 Test Result

Please refer to ANNEX A.2.

5.4 Conducted Spurious Emission

5.4.1 Limit

FCC §15.247(d); RSS-247, 5.5

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

5.4.2 Test Setup

See section 4.4.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.4.3 Test Procedure

The DTS rules specify that in any 100 kHz bandwidth outside of the authorized frequency band, the power shall be attenuated according to the following conditions:

- a) If the maximum peak conducted output power procedure was used to demonstrate compliance as described in 9.1, then the peak output power 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 (i.e., 20 dBc).
- b) If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 30 dBc).
- c) In either case, attenuation to levels below the 15.209 general radiated emissions limits is not required.

The following procedures shall be used to demonstrate compliance to these limits. Note that these procedures can be used in either an antenna-port conducted or radiated test set-up. Radiated tests must conform to the test site requirements and utilize maximization procedures defined herein.

Reference level measurement

Establish a reference level by using the following procedure:

Set instrument center frequency to DTS channel center frequency.

Set the span to ≥ 1.5 times the DTS bandwidth.

Set the RBW = 100 kHz.

Set the VBW $\geq 3 \times$ RBW.

Detector = peak.

Sweep time = auto couple.

Trace mode = max hold.

Allow trace to fully stabilize.

Use the peak marker function to determine the maximum PSD level.

Emission level measurement

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.

Set the RBW = 100 kHz.

Set the VBW $\geq 3 \times$ RBW.

Detector = peak.

Sweep time = auto couple.

Trace mode = max hold.

Allow trace to fully stabilize.

Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) are attenuated by at least the minimum requirements specified in 11.1 a) or 11.1 b). Report the three highest emissions relative to the limit.

5.4.4 Test Result

Please refer to ANNEX A.3.

5.5 Band Edge (Authorized-band band-edge)

5.5.1 Limit

FCC §15.247(d); RSS-GEN, 8.9, RSS-247, 5.5

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

5.5.2 Test Setup

See section 4.4.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.5.3 Test Procedure

The following procedures may be used to determine the peak or average field strength or power of an unwanted emission that is within 2 MHz of the authorized band edge. If a peak detector is utilized, use the procedure described in 13.2.1. Use the procedure described in 13.2.2 when using an average detector and the EUT can be configured to transmit continuously (i.e., duty cycle $\geq 98\%$). Use the procedure described in 13.2.3 when using an average detector and the EUT cannot be configured to transmit continuously but the duty cycle is constant (i.e., duty cycle variations are less than ± 2 percent). Use the procedure described in 13.2.4 when using an average detector for those cases where the EUT cannot be configured to transmit continuously and the duty cycle is not constant (duty cycle variations equal or exceed 2 percent).

When using a peak detector to measure unwanted emissions at or near the band edge (within 2 MHz of the authorized band), the following integration procedure can be used.

Set instrument center frequency to the frequency of the emission to be measured (must be within 2 MHz of the authorized band edge).

Set span to 2 MHz

RBW = 100 kHz.

VBW $\geq 3 \times$ RBW.

Detector = peak.

Sweep time = auto.

Trace mode = max hold.

Allow sweep to continue until the trace stabilizes (required measurement time may increase for low duty cycle applications)

Compute the power by integrating the spectrum over 1 MHz using the analyzer's band power measurement function with band limits set equal to the emission frequency (femission) ± 0.5 MHz. If the instrument does not have a band power function, then sum the amplitude levels (in power units) at 100 kHz intervals extending across the 1 MHz spectrum defined by femission ± 0.5 MHz.

Standard method(The 99% OBW of the fundamental emission is without 2 MHz of the authorized band):

Span: Wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products that fall outside of the authorized band of operation.

Reference level: As required to keep the signal from exceeding the maximum instrument input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $[10 \log (OBW/RBW)]$ below the reference level. Specific guidance is given in 4.1.5.2.

Attenuation: Auto (at least 10 dB preferred).

Sweep time: Coupled.

Resolution bandwidth: 100 kHz.

Video bandwidth: 300 kHz.

Detector: Peak.

Trace: Max hold.

5.5.4 Test Result

Please refer to ANNEX A.4.

5.6 Conducted Emission

5.6.1 Limit

FCC §15.207; RSS-GEN, 8.8

For an intentional radiator 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 within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

5.6.2 Test Setup

See section 4.4.2 for test setup description for the AC power supply port. The photo of test setup please refer to ANNEX B.

5.6.3 Test Procedure

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

5.6.4 Test Result

Please refer to ANNEX A.5.

5.7 Radiated Spurious Emission

5.7.1 Limit

FCC §15.209&15.247(c); RSS-247, 5.5

Radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength ($\mu\text{V/m}$)	Measurement Distance (m)
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

Note:

1. For Above 1000 MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.
2. For above 1000 MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK).

5.7.2 Test Setup

See section 4.4.3 to 4.4.5 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.7.3 Test Procedure

Since the emission limits are specified in terms of radiated field strength levels, measurements performed to demonstrate compliance have traditionally relied on a radiated test configuration. Radiated measurements remain the principal method for demonstrating compliance to the specified limits; however antenna-port conducted measurements are also now acceptable to demonstrate compliance (see below for details). When radiated measurements are utilized, test site requirements and procedures for maximizing and measuring radiated emissions that are described in ANSI C63.10 shall be followed.

Antenna-port conducted measurements may also be used as an alternative to radiated measurements for demonstrating compliance in the restricted frequency bands. If conducted measurements are performed, then proper impedance matching must be ensured and an additional radiated test for cabinet/case spurious emissions is required.

General Procedure for conducted measurements in restricted bands

- a) Measure the conducted output power (in dBm) using the detector specified (see guidance regarding measurement procedures for determining quasi-peak, peak, and average conducted output power, respectively).
- b) Add the maximum transmit antenna gain (in dBi) to the measured output power level to determine the EIRP

level (see guidance on determining the applicable antenna gain)

c) Add the appropriate maximum ground reflection factor to the EIRP level (6 dB for frequencies ≤ 30 MHz, 4.7 dB for frequencies between 30 MHz and 1000 MHz, inclusive and 0 dB for frequencies > 1000 MHz).

d) For devices with multiple antenna-ports, measure the power of each individual chain and sum the EIRP of all chains in linear terms (e.g., Watts, mW).

e) Convert the resultant EIRP level to an equivalent electric field strength using the following relationship:

$$E = \text{EIRP} - 20 \log D + 104.8$$

where:

E = electric field strength in dB μ V/m,

EIRP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

f) Compare the resultant electric field strength level to the applicable limit.

g) Perform radiated spurious emission test.

Quasi-Peak measurement procedure

The specifications for measurements using the CISPR quasi-peak detector can be found in Publication 16 of the International Special Committee on Radio Frequency Interference (CISPR) of the International Electrotechnical Commission.

As an alternative to CISPR quasi-peak measurement, compliance can be demonstrated to the applicable emission limits using a peak detector.

Peak power measurement procedure

Peak emission levels are measured by setting the instrument as follows:

a) RBW = as specified in Table 1.

b) VBW $\geq 3 \times$ RBW.

c) Detector = Peak.

d) Sweep time = auto.

e) Trace mode = max hold.

f) Allow sweeps to continue until the trace stabilizes. (Note that the required measurement time may be longer for low duty cycle applications).

Table 1—RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

If the peak-detected amplitude can be shown to comply with the average limit, then it is not necessary to perform

a separate average measurement.

Trace averaging across on and off times of the EUT transmissions followed by duty cycle correction

If continuous transmission of the EUT (i.e., duty cycle ≥ 98 percent) cannot be achieved and the duty cycle is constant (i.e., duty cycle variations are less than ± 2 percent), then the following procedure shall be used:

- a) The EUT shall be configured to operate at the maximum achievable duty cycle.
- b) Measure the duty cycle, x , of the transmitter output signal as described in section 6.0.
- c) RBW = 1 MHz (unless otherwise specified).
- d) VBW $\geq 3 \times$ RBW.
- e) Detector = RMS, if $\text{span}/(\# \text{ of points in sweep}) \leq (\text{RBW}/2)$. Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If this condition cannot be satisfied, then the detector mode shall be set to peak.
- f) Averaging type = power (i.e., RMS).
 - 1) As an alternative, the detector and averaging type may be set for linear voltage averaging.
 - 2) Some instruments require linear display mode in order to use linear voltage averaging. Log or dB averaging shall not be used.
- g) Sweep time = auto.
- h) Perform a trace average of at least 100 traces.
- i) A correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 percent duty cycle. The correction factor is computed as follows:
 - 1) If power averaging (RMS) mode was used in step f), then the applicable correction factor is $10 \log(1/x)$, where x is the duty cycle.
 - 2) If linear voltage averaging mode was used in step f), then the applicable correction factor is $20 \log(1/x)$, where x is the duty cycle.
 - 3) If a specific emission is demonstrated to be continuous (≥ 98 percent duty cycle) rather than turning on and off with the transmit cycle, then no duty cycle correction is required for that emission.

NOTE: Reduction of the measured emission amplitude levels to account for operational duty factor is not permitted. Compliance is based on emission levels occurring during transmission - not on an average across on and off times of the transmitter.

Determining the applicable transmit antenna gain

A conducted power measurement will determine the maximum output power associated with a restricted band emission; however, in order to determine the associated EIRP level, the gain of the transmitting antenna (in dBi) must be added to the measured output power (in dBm).

Since the out-of-band characteristics of the EUT transmit antenna will often be unknown, the use of a conservative antenna gain value is necessary. Thus, when determining the EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the

maximum in-band gain of the antenna across all operating bands, or 2 dBi, whichever is greater. However, for devices that operate in multiple frequency bands while using the same transmit antenna, the highest gain of the antenna within the operating band nearest in frequency to the restricted band emission being measured may be used in lieu of the overall highest gain when the emission is at a frequency that is within 20 percent of the nearest band edge frequency, but in no case shall a value less than 2 dBi be used.

See KDB 662911 for guidance on calculating the additional array gain term when determining the effective antenna gain for a EUT with multiple outputs occupying the same or overlapping frequency ranges in the same band.

Radiated spurious emission test

An additional consideration when performing conducted measurements of restricted band emissions is that unwanted emissions radiating from the EUT cabinet, control circuits, power leads, or intermediate circuit elements will likely go undetected in a conducted measurement configuration. To address this concern, a radiated test shall be performed to ensure that emissions emanating from the EUT cabinet (rather than the antenna port) also comply with the applicable limits.

For these cabinet radiated spurious emission measurements the EUT transmit antenna may be replaced with a termination matching the nominal impedance of the antenna. Procedures for performing radiated measurements are specified in ANSI C63.10. All detected emissions shall comply with the applicable limits.

The measurement frequency range is from 30 MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

5.7.4 Test Result

Please refer to ANNEX A.6.

5.8 Band Edge (Restricted-band band-edge)

5.8.1 Limit

FCC §15.209&15.247(c); RSS-247, 5.5

Radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

5.8.2 Test Setup

See section 4.4.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.8.3 Test Procedure

The measurement frequency range is from 9 kHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported, Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

For transmitters operating above 1 GHz repeat the measurement with an average detector.

5.8.4 Test Result

Please refer to ANNEX A.7.

5.9 Power Spectral density (PSD)

5.9.1 Limit

FCC §15.247(d); RSS-247, 5.2 (2)

The same method of determining the conducted output power shall be used to determine the power spectral density. If a peak output power is measured, then a peak power spectral density measurement is required. If an average output power is measured, then an average power spectral density measurement should be used.

5.9.2 Test Setup

See section 4.4.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.9.3 Test Procedure

Set analyzer center frequency to DTS channel center frequency.

Set the span to 1.5 times the DTS bandwidth.

Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.

Set the VBW $\geq 3 \text{ RBW}$.

Detector = peak.

Sweep time = auto couple.

Trace mode = max hold.

Allow trace to fully stabilize.

Use the peak marker function to determine the maximum amplitude level within the RBW.

If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

5.9.4 Test Result

Please refer to ANNEX A.8.

ANNEX A TEST RESULT

A.1 Output Power

Duty Cycle

Test Mode	Duty Cycle	T (ms)	1/T(kHz)
802.11b	1.00	8.383	0.119289037
802.11g	0.97	1.380	0.724637681
802.11n-20 MHz	0.97	1.287	0.777000777
802.11n-40 MHz	0.92	0.630	1.587301587

Average Power Test Data

SISO ANT 0

802.11b Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	16.9	48.98	30	1000	Pass
Middle	16.8	47.86			Pass
High	16.7	46.77			Pass

802.11g Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	16.8	47.86	30	1000	Pass
Middle	16.7	46.77			Pass
High	15.6	36.31			Pass

802.11n-20 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	16.7	46.77	30	1000	Pass
Middle	16.6	45.71			Pass
High	16.5	44.67			Pass

802.11n-40 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	15.9	38.90	30	1000	Pass
Middle	15.5	35.48			Pass
High	15.7	37.15			Pass

Average Power Test Data

SISO ANT 1

802.11b Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	15.7	37.15	30	1000	Pass
Middle	15.8	38.02			Pass
High	15.9	38.90			Pass

802.11g Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	15.5	35.48	30	1000	Pass
Middle	15.6	36.31			Pass
High	15.9	38.90			Pass

802.11n-20 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	15.5	35.48	30	1000	Pass
Middle	15.5	35.48			Pass
High	15.8	38.02			Pass

802.11n-40 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	15.9	38.90	30	1000	Pass
Middle	15.8	38.02			Pass
High	15.7	37.15			Pass

Average Power Test Data

MIMO

802.11n-20 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	16.6	45.71	30	1000	Pass
Middle	16.6	45.71			Pass
High	16.7	46.77			Pass

802.11n-40 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	15.7	37.15	30	1000	Pass
Middle	15.6	36.31			Pass
High	15.7	37.15			Pass

E.I.R.P Test Data (For ISED)

SISO ANT 0

802.11b Mode:

Channel	E.I.R.P		Limit		Verdict
	dBm	mW	dBm	W	
Low	17.9	61.66	36	4	Pass
Middle	17.8	60.26			Pass
High	17.7	58.88			Pass

802.11g Mode:

Channel	E.I.R.P		Limit		Verdict
	dBm	mW	dBm	W	
Low	17.8	60.26	36	4	Pass
Middle	17.7	58.88			Pass
High	16.6	45.71			Pass

802.11n-20 MHz Mode:

Channel	E.I.R.P		Limit		Verdict
	dBm	mW	dBm	W	
Low	17.7	58.88	36	4	Pass
Middle	17.6	57.54			Pass
High	17.5	56.23			Pass

802.11n-40 MHz Mode:

Channel	E.I.R.P		Limit		Verdict
	dBm	mW	dBm	W	
Low	16.9	48.98	36	4	Pass
Middle	16.5	44.67			Pass
High	16.7	46.77			Pass

E.I.R.P Test Data (For ISED)

SISO ANT 1

802.11b Mode:

Channel	E.I.R.P		Limit		Verdict
	dBm	mW	dBm	W	
Low	16.7	46.77	36	4	Pass
Middle	16.8	47.86			Pass
High	16.9	48.98			Pass

802.11g Mode:

Channel	E.I.R.P		Limit		Verdict
	dBm	mW	dBm	W	
Low	16.5	44.67	36	4	Pass
Middle	16.6	45.71			Pass
High	16.9	48.98			Pass

802.11n-20 MHz Mode:

Channel	E.I.R.P		Limit		Verdict
	dBm	mW	dBm	W	
Low	16.5	44.67	36	4	Pass
Middle	16.5	44.67			Pass
High	16.8	47.86			Pass

802.11n-40 MHz Mode:

Channel	E.I.R.P		Limit		Verdict
	dBm	mW	dBm	W	
Low	16.9	48.98	36	4	Pass
Middle	16.8	47.86			Pass
High	16.7	46.77			Pass

E.I.R.P Test Data (For ISED)

MIMO

802.11n-20 MHz Mode:

Channel	E.I.R.P		Limit		Verdict
	dBm	mW	dBm	W	
Low	20.6	114.82	36	4	Pass
Middle	20.6	114.82			Pass
High	20.7	117.49			Pass

802.11n-40 MHz Mode:

Channel	E.I.R.P		Limit		Verdict
	dBm	mW	dBm	W	
Low	19.7	93.33	36	4	Pass
Middle	19.6	91.20			Pass
High	19.7	93.33			Pass

PK Power Test Data

SISO ANT 0

802.11b Mode:

Channel	Measured Output PK Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	19.11	81.47	30	1000	Pass
Middle	19.55	90.16			Pass
High	19.51	89.33			Pass

802.11g Mode:

Channel	Measured Output PK Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	24.35	272.27	30	1000	Pass
Middle	24.73	297.17			Pass
High	23.76	237.68			Pass

802.11n-20 MHz Mode:

Channel	Measured Output PK Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	24.36	272.90	30	1000	Pass
Middle	24.66	292.42			Pass
High	24.66	292.42			Pass

802.11n-40 MHz Mode:

Channel	Measured Output PK Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	23.74	236.59	30	1000	Pass
Middle	23.79	239.33			Pass
High	23.87	243.78			Pass

PK Power Test Data

SISO ANT 1

802.11b Mode:

Channel	Measured Output PK Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	18.50	70.79	30	1000	Pass
Middle	18.68	73.79			Pass
High	18.53	71.29			Pass

802.11g Mode:

Channel	Measured Output PK Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	23.64	231.21	30	1000	Pass
Middle	23.71	234.96			Pass
High	23.63	230.67			Pass

802.11n-20 MHz Mode:

Channel	Measured Output PK Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	23.63	230.67	30	1000	Pass
Middle	23.69	233.88			Pass
High	23.60	229.09			Pass

802.11n-40 MHz Mode:

Channel	Measured Output PK Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	23.71	234.96	30	1000	Pass
Middle	23.75	237.14			Pass
High	23.76	237.68			Pass

PK Power Test Data

MIMO

802.11n-20 MHz Mode:

Channel	Measured Output PK Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	24.80	302.00	30	1000	Pass
Middle	25.41	347.54			Pass
High	25.33	341.19			Pass

802.11n-40 MHz Mode:

Channel	Measured Output PK Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	24.39	274.79	30	1000	Pass
Middle	24.42	276.69			Pass
High	24.43	277.33			Pass

E.I.R.P PK Test Data (For ISED)

SISO ANT 0

802.11b Mode:

Channel	E.I.R.P		Limit		Verdict
	dBm	mW	dBm	W	
Low	20.11	102.57	36	4	Pass
Middle	20.55	113.50			Pass
High	20.51	112.46			Pass

802.11g Mode:

Channel	E.I.R.P		Limit		Verdict
	dBm	mW	dBm	W	
Low	25.35	342.77	36	4	Pass
Middle	25.73	374.11			Pass
High	24.76	299.23			Pass

802.11n-20 MHz Mode:

Channel	E.I.R.P		Limit		Verdict
	dBm	mW	dBm	W	
Low	25.36	343.56	36	4	Pass
Middle	25.66	368.13			Pass
High	25.66	368.13			Pass

802.11n-40 MHz Mode:

Channel	E.I.R.P		Limit		Verdict
	dBm	mW	dBm	W	
Low	24.74	297.85	36	4	Pass
Middle	24.79	301.30			Pass
High	24.87	306.90			Pass

E.I.R.P PK Test Data (For ISED)

SISO ANT 1

802.11b Mode:

Channel	E.I.R.P		Limit		Verdict
	dBm	mW	dBm	W	
Low	19.50	89.13	36	4	Pass
Middle	19.68	92.90			Pass
High	19.53	89.74			Pass

802.11g Mode:

Channel	E.I.R.P		Limit		Verdict
	dBm	mW	dBm	W	
Low	24.64	291.07	36	4	Pass
Middle	24.71	295.80			Pass
High	24.63	290.40			Pass

802.11n-20 MHz Mode:

Channel	E.I.R.P		Limit		Verdict
	dBm	mW	dBm	W	
Low	24.63	290.40	36	4	Pass
Middle	24.69	294.44			Pass
High	24.60	288.40			Pass

802.11n-40 MHz Mode:

Channel	E.I.R.P		Limit		Verdict
	dBm	mW	dBm	W	
Low	24.71	295.80	36	4	Pass
Middle	24.75	298.54			Pass
High	24.76	299.23			Pass

E.I.R.P PK Test Data (For ISED)

MIMO

802.11n-20 MHz Mode:

Channel	E.I.R.P		Limit		Verdict
	dBm	mW	dBm	W	
Low	28.80	758.58	36	4	Pass
Middle	29.41	872.97			Pass
High	29.33	857.04			Pass

802.11n-40 MHz Mode:

Channel	E.I.R.P		Limit		Verdict
	dBm	mW	dBm	W	
Low	28.39	690.24	36	4	Pass
Middle	28.42	695.02			Pass
High	28.43	696.63			Pass

A.2 Bandwidth

Test Data

SISO ANT0

802.11b Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
Low	10.162598	13.429812	≥ 500
Middle	10.162598	13.429812	≥ 500
High	10.112549	13.429812	≥ 500

802.11g Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
Low	16.420654	17.713459	≥ 500
Middle	16.470703	17.945007	≥ 500
High	16.420654	17.771346	≥ 500

802.11n-20MHz Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
Low	17.671875	18.813314	≥ 500
Middle	17.671875	18.697540	≥ 500
High	17.671875	18.755427	≥ 500

802.11n-40MHz Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
Low	36.422607	36.6000	≥ 500
Middle	36.422607	36.5000	≥ 500
High	36.422607	36.5000	≥ 500

Test DataSISO ANT1

802.11b Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
Low	10.162598	13.429812	≥ 500
Middle	10.212646	13.429812	≥ 500
High	10.162598	13.487699	≥ 500

802.11g Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
Low	16.470703	17.887120	≥ 500
Middle	16.420654	17.655572	≥ 500
High	16.420654	17.713459	≥ 500

802.11n-20MHz Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
Low	17.671875	18.755427	≥ 500
Middle	17.671875	18.755427	≥ 500
High	17.671875	18.639653	≥ 500

802.11n-40MHz Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
Low	36.422607	36.5000	≥ 500
Middle	36.472656	36.5000	≥ 500
High	36.372559	36.5000	≥ 500

Test DataMIMO ANT0

802.11n-20MHz Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
Low	17.671875	18.69754	≥ 500
Middle	17.671875	18.639653	≥ 500
High	17.671875	18.69754	≥ 500

802.11n-40MHz Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
Low	36.422607	36.6000	≥ 500
Middle	36.422607	36.6000	≥ 500
High	36.372559	36.6000	≥ 500

MIMO ANT1

802.11n-20MHz Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
Low	17.671875	18.69754	≥ 500
Middle	17.671875	18.639653	≥ 500
High	17.671875	18.69754	≥ 500

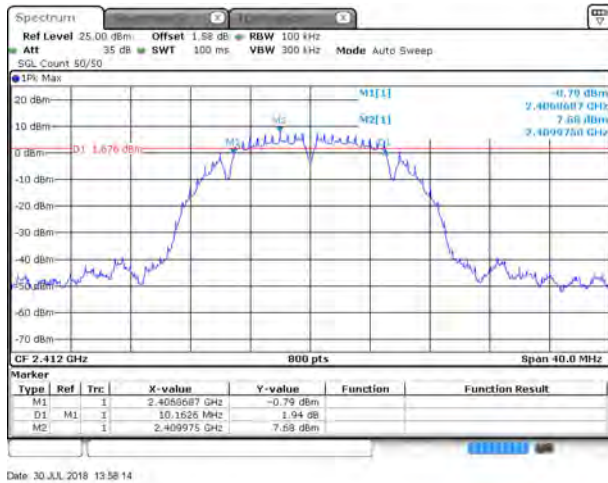
802.11n-40MHz Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
Low	36.422607	36.3000	≥ 500
Middle	36.472656	36.3000	≥ 500
High	36.472656	36.3000	≥ 500

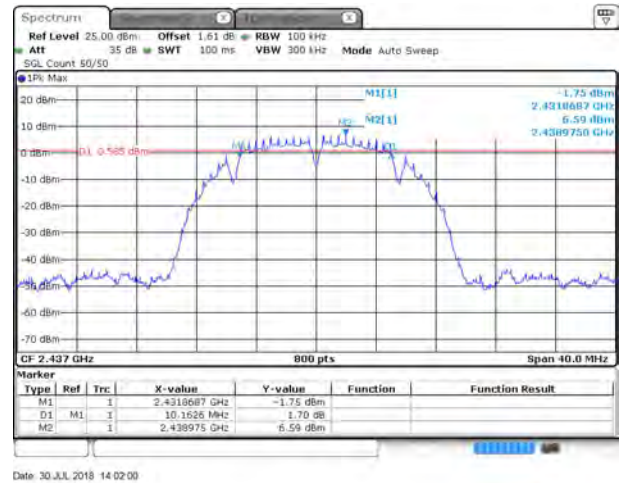
Test plots (6dB Bandwidth)

SISO ANT0

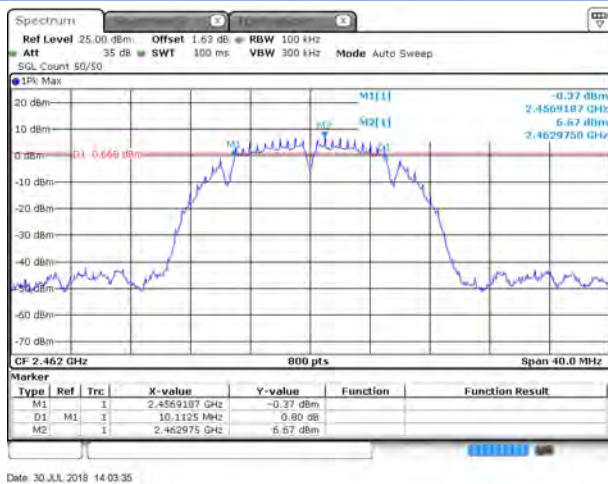
802.11b LOW CHANNEL



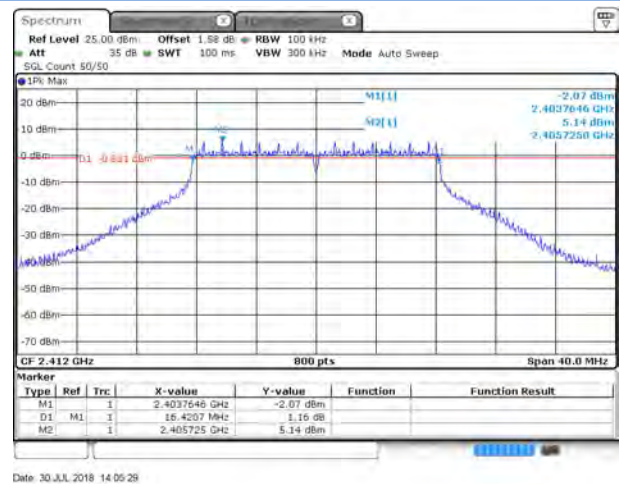
802.11b MIDDLE CHANNEL



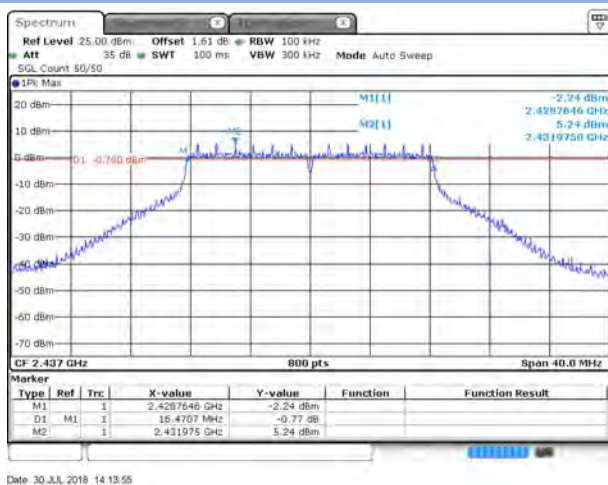
802.11b HIGH CHANNEL



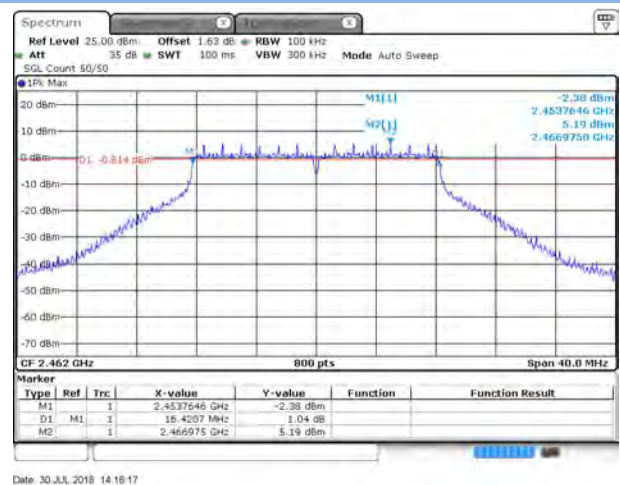
802.11g LOW CHANNEL



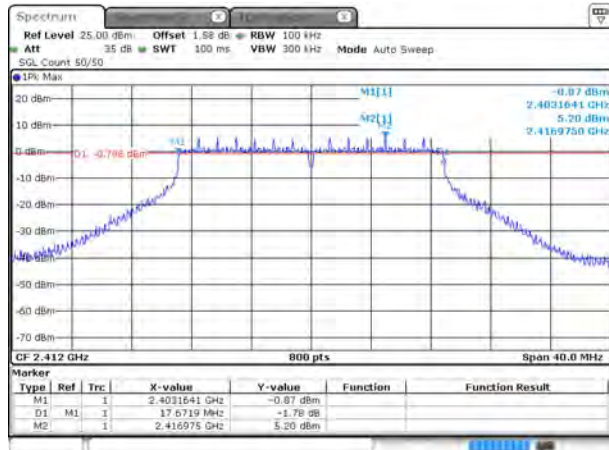
802.11g MIDDLE CHANNEL



802.11g HIGH CHANNEL

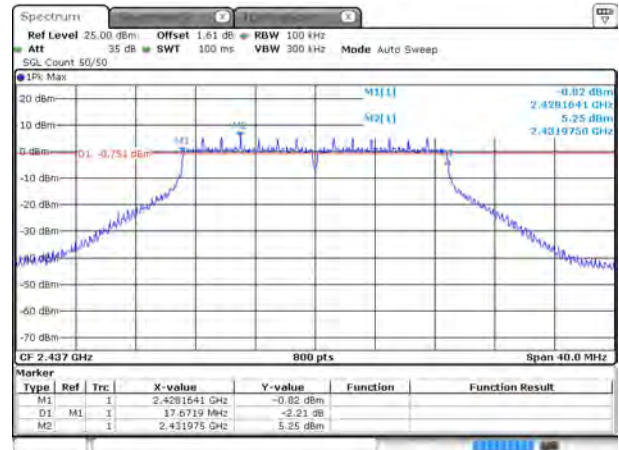


802.11n-20 MHz LOW CHANNEL



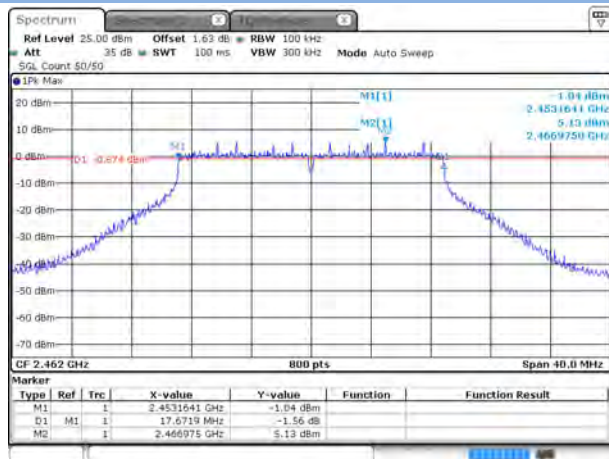
Date: 30 JUL 2018 14:18:42

802.11 n-20 MHz MIDDLE CHANNEL



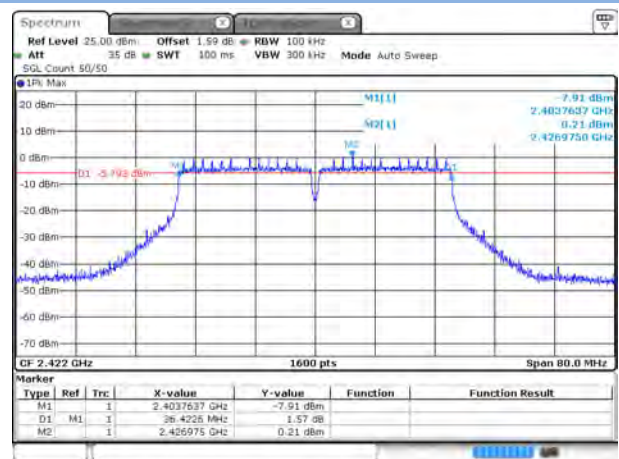
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802.11n-20 MHz HIGH CHANNEL



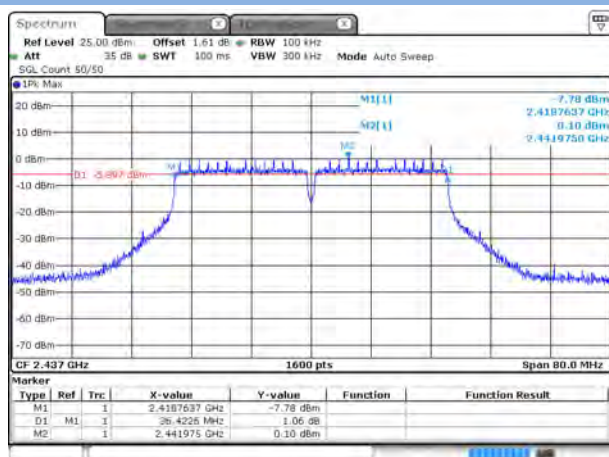
Date: 30 JUL 2018 14:22:00

802.11n-40 MHz LOW CHANNEL



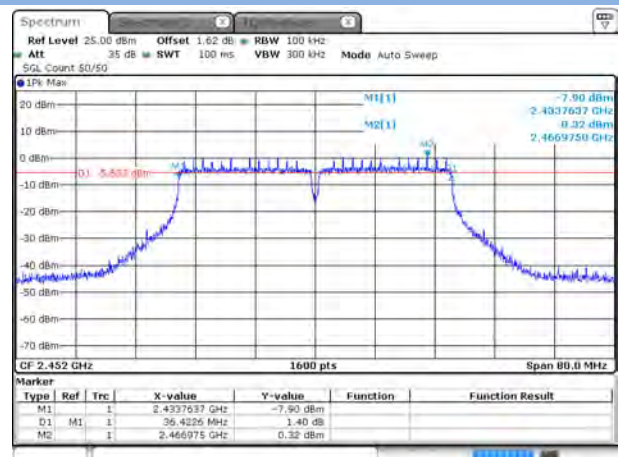
Date: 30 JUL 2018 14:24:00

802.11n-40 MHz MIDDLE CHANNEL



Date: 30 JUL 2018 14:25:36

802.11n-40 MHz HIGH CHANNEL

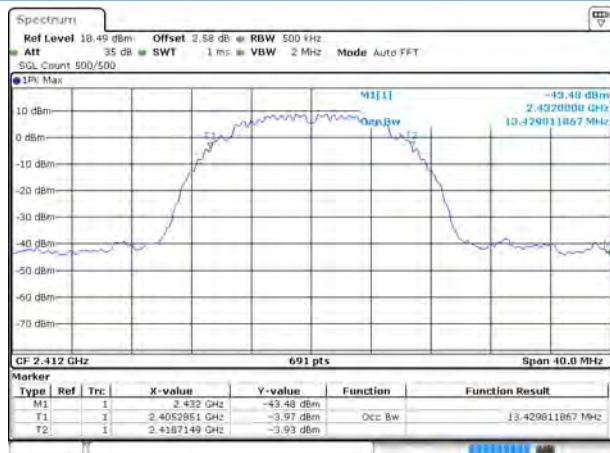


Date: 30 JUL 2018 14:26:56

Test plots (99% Bandwidth)

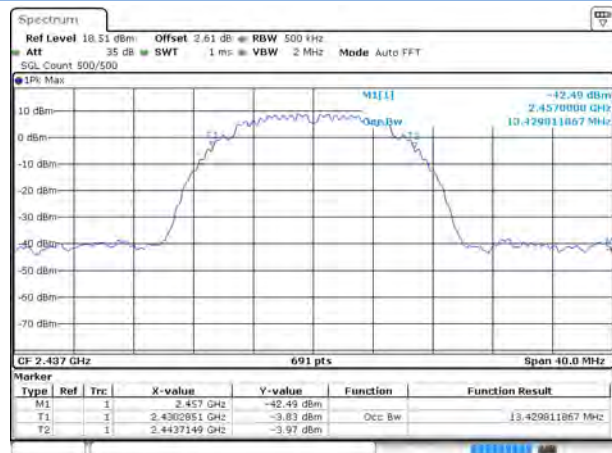
SISO ANT0

802.11b LOW CHANNEL



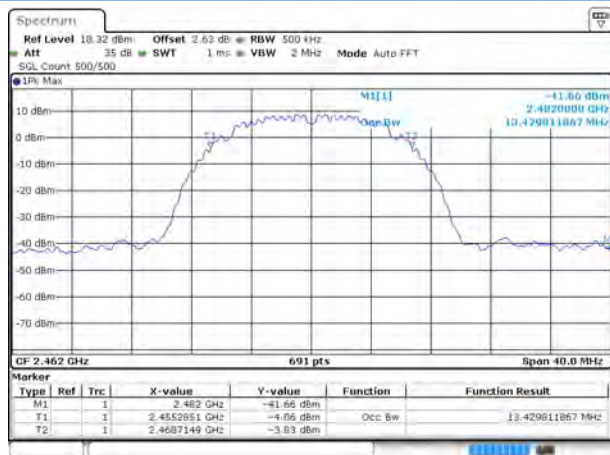
Date: 2 AUG 2018 12:29:50

802.11b MIDDLE CHANNEL



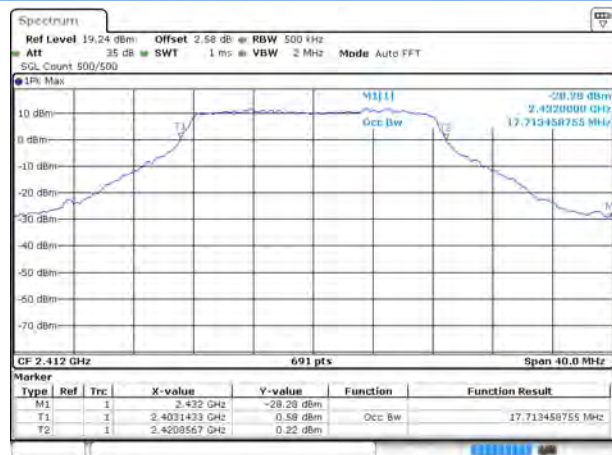
Date: 2 AUG 2018 12:31:32

802.11b HIGH CHANNEL



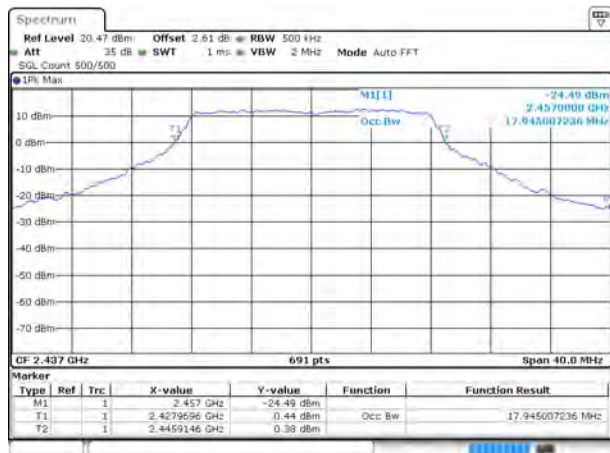
Date: 2 AUG 2018 12:33:01

802.11g LOW CHANNEL



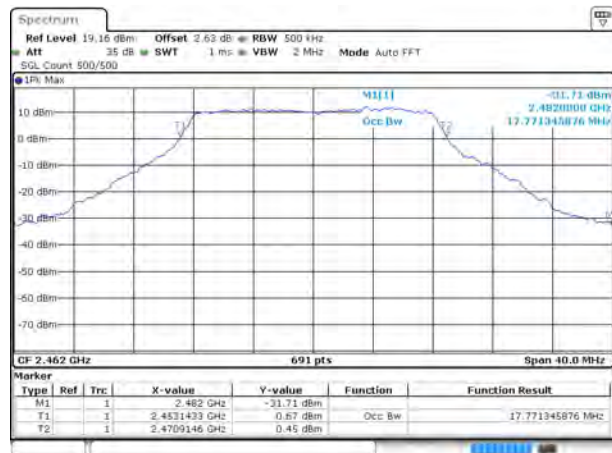
Date: 2 AUG 2018 12:34:37

802.11g MIDDLE CHANNEL



Date: 2 AUG 2018 12:36:01

802.11g HIGH CHANNEL



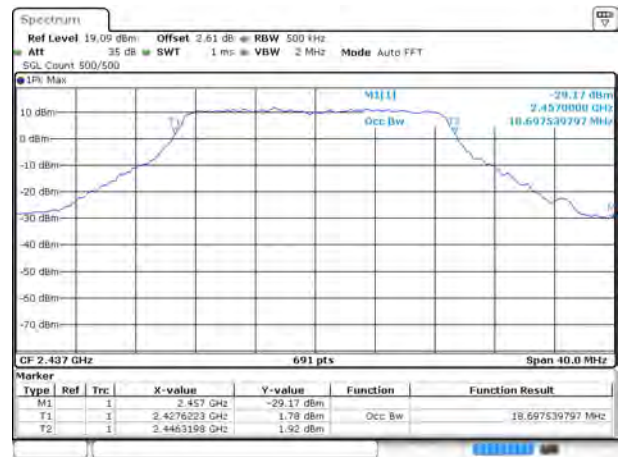
Date: 2 AUG 2018 12:37:27

802.11n-20 MHz LOW CHANNEL



Date: 2 AUG 2018 12:38:57

802.11 n-20 MHz MIDDLE CHANNEL



Date: 2 AUG 2018 12:40:28

802.11n-20 MHz HIGH CHANNEL



Date: 2 AUG 2018 12:41:40

802.11n-40 MHz LOW CHANNEL



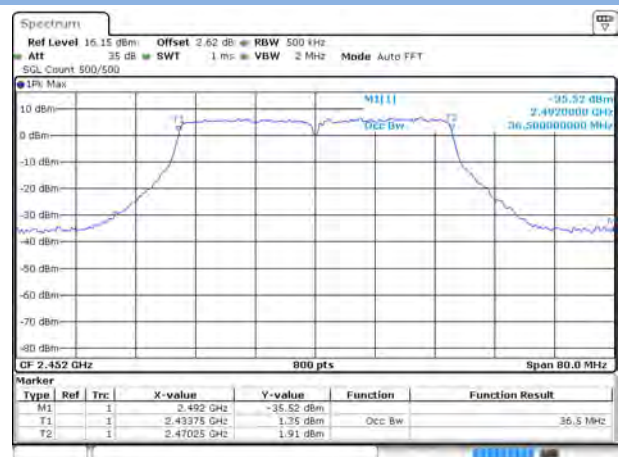
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802.11n-40 MHz MIDDLE CHANNEL



Date: 2 AUG 2018 12:45:34

802.11n-40 MHz HIGH CHANNEL

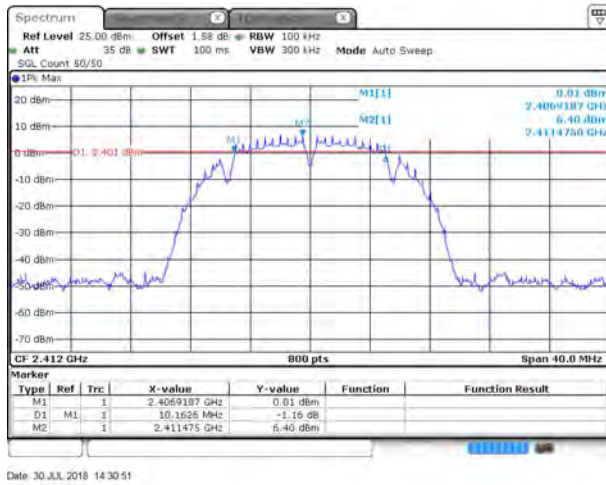


Date: 2 AUG 2018 12:46:58

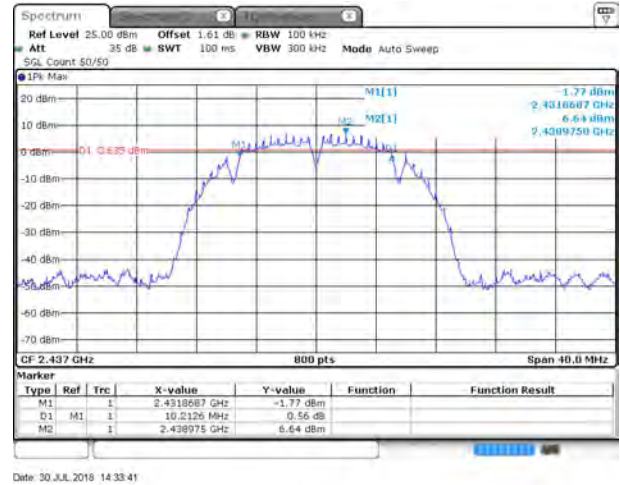
Test plots (6dB Bandwidth)

SISO ANT1

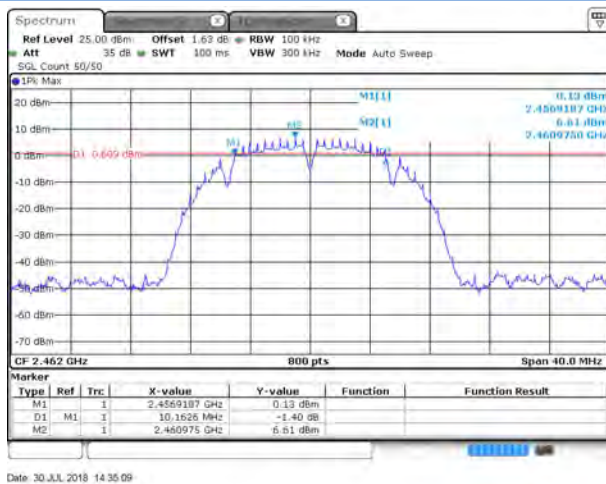
802.11b LOW CHANNEL



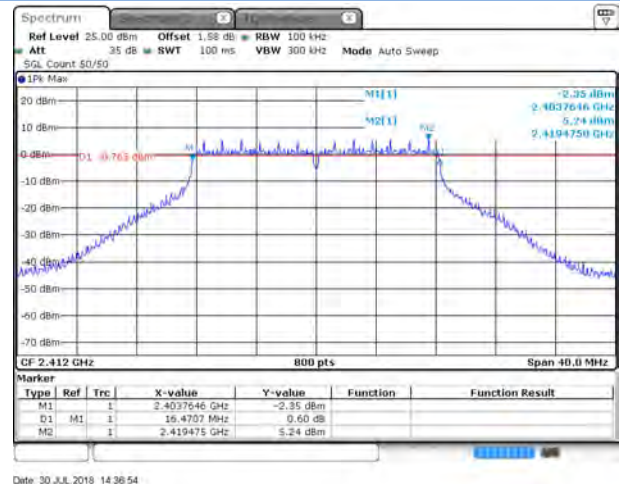
802.11b MIDDLE CHANNEL



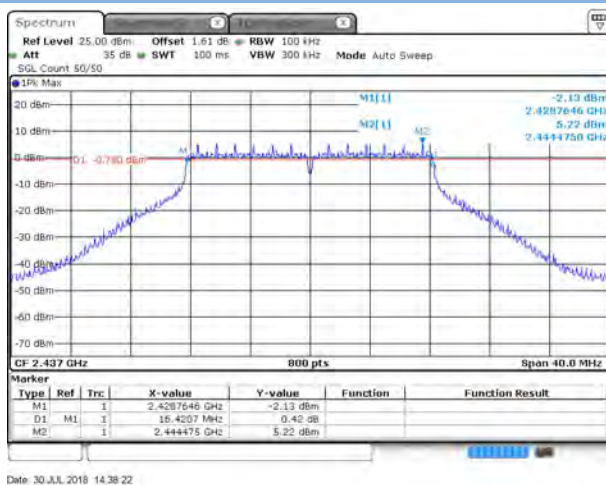
802.11b HIGH CHANNEL



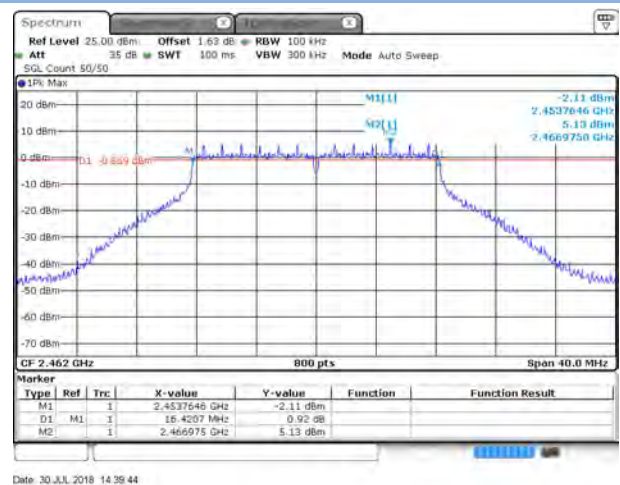
802.11g LOW CHANNEL



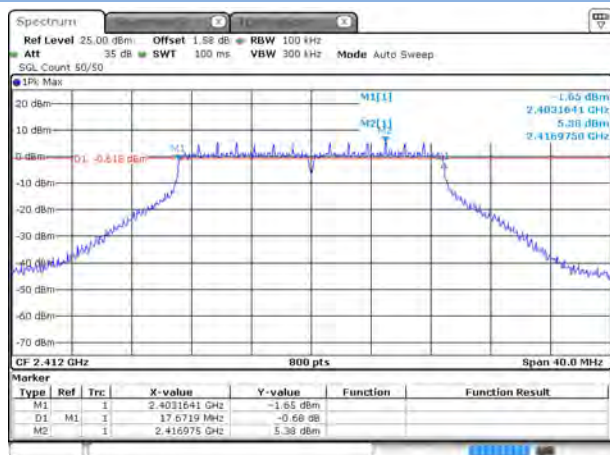
802.11g MIDDLE CHANNEL



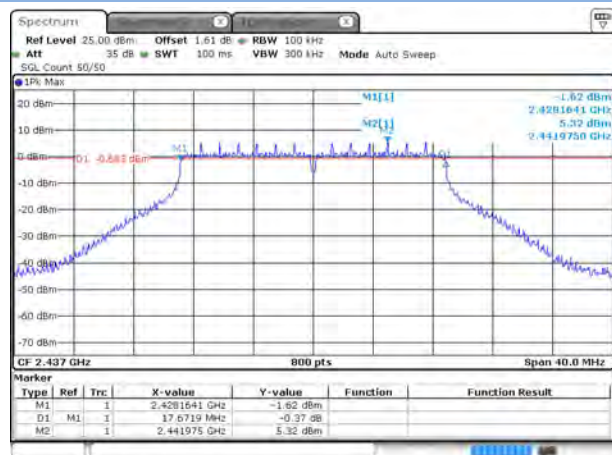
802.11g HIGH CHANNEL



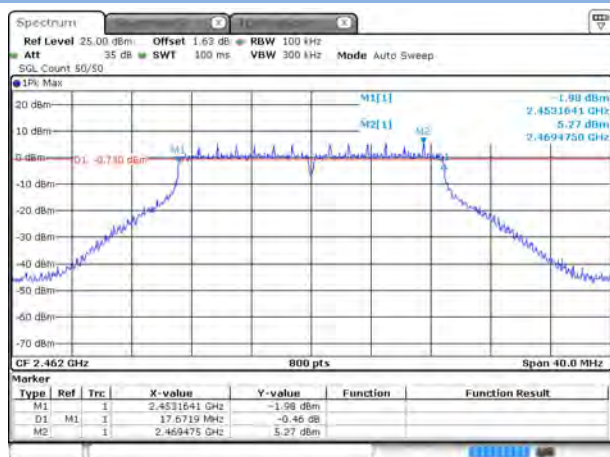
802.11n-20 MHz LOW CHANNEL



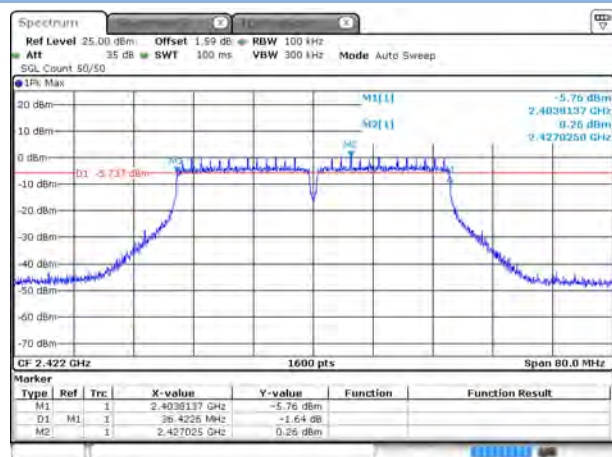
802.11 n-20 MHz MIDDLE CHANNEL



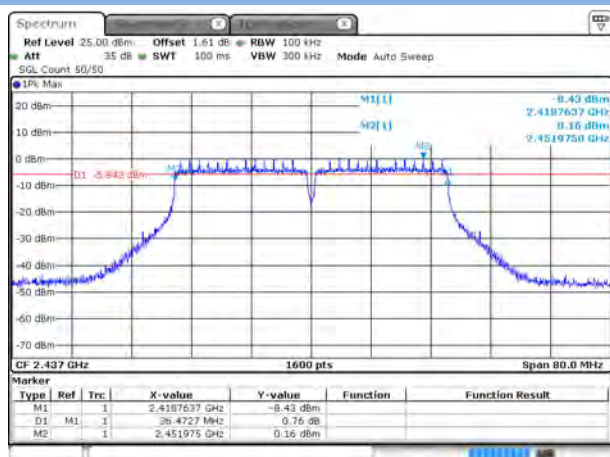
802.11n-20 MHz HIGH CHANNEL



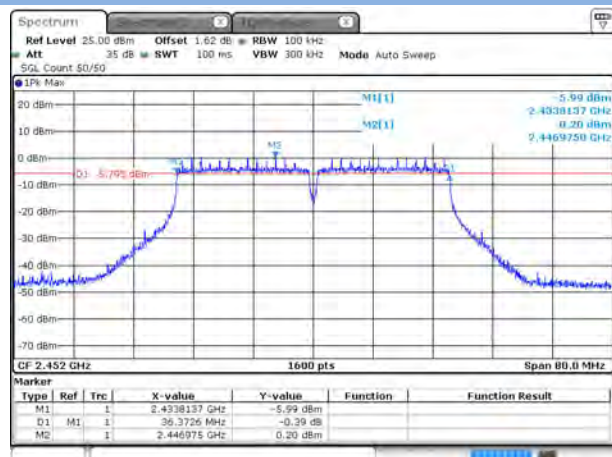
802.11n-40 MHz LOW CHANNEL



802.11n-40 MHz MIDDLE CHANNEL



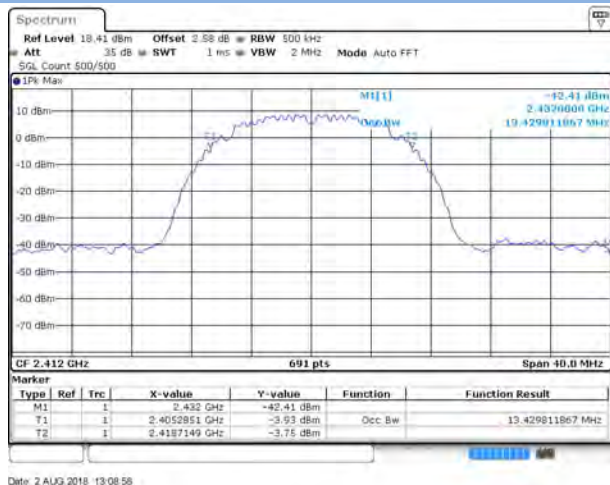
802.11n-40 MHz HIGH CHANNEL



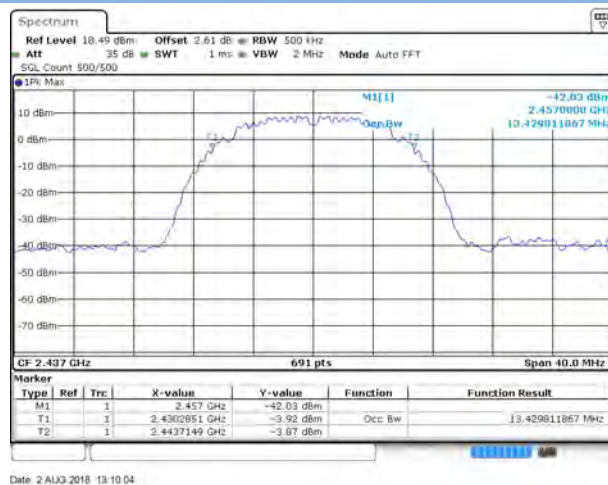
Test plots (99% Bandwidth)

SISO ANT1

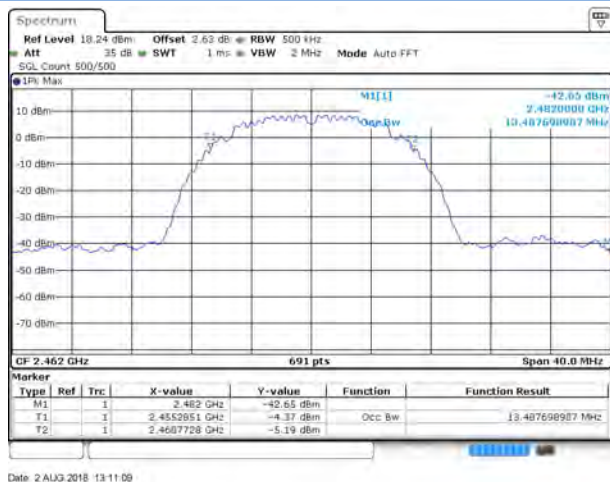
802.11b LOW CHANNEL



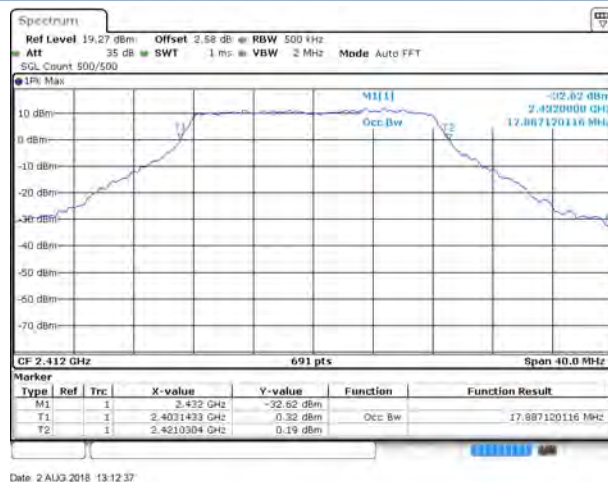
802.11b MIDDLE CHANNEL



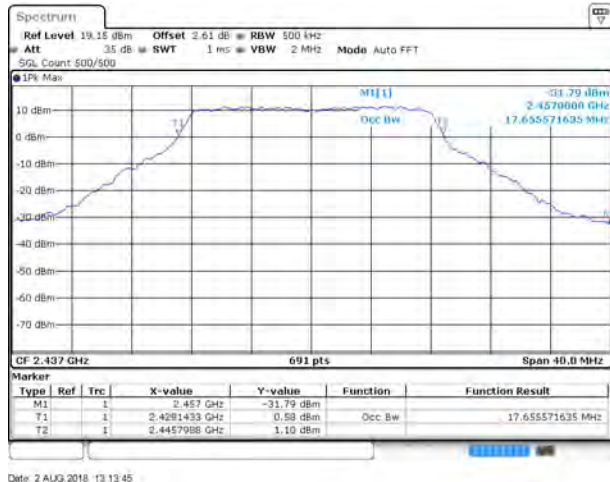
802.11b HIGH CHANNEL



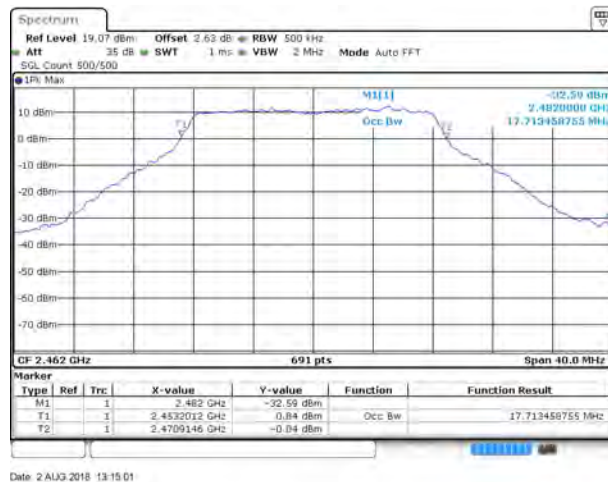
802.11g LOW CHANNEL



802.11g MIDDLE CHANNEL



802.11g HIGH CHANNEL

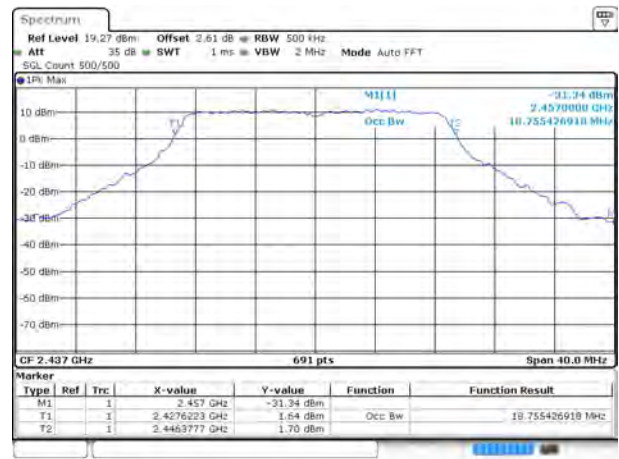


802.11n-20 MHz LOW CHANNEL



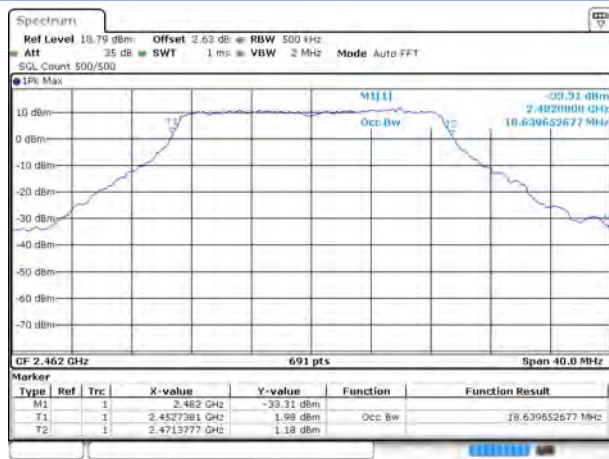
Date: 2 AUG 2018 13:16:19

802.11 n-20 MHz MIDDLE CHANNEL



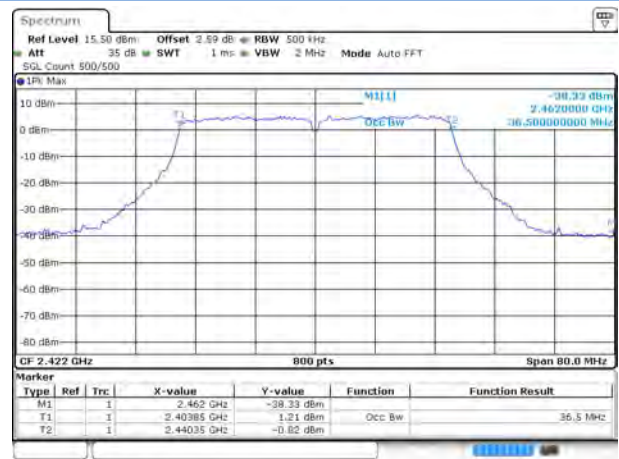
Date: 2 AUG 2018 13:17:28

802.11n-20 MHz HIGH CHANNEL



Date: 2 AUG 2018 13:18:43

802.11n-40 MHz LOW CHANNEL



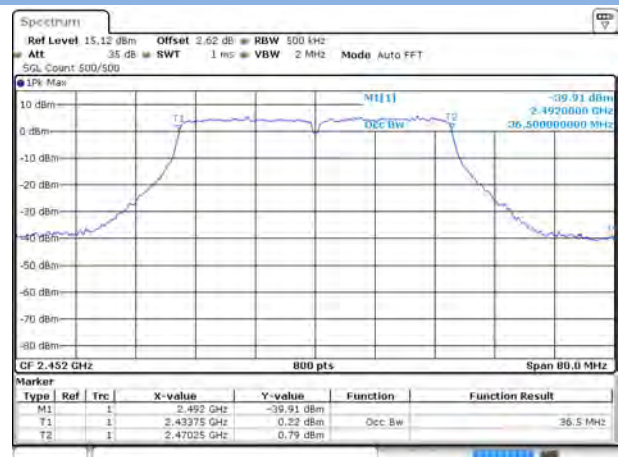
Date: 2 AUG 2018 13:19:58

802.11n-40 MHz MIDDLE CHANNEL



Date: 2 AUG 2018 13:21:13

802.11n-40 MHz HIGH CHANNEL

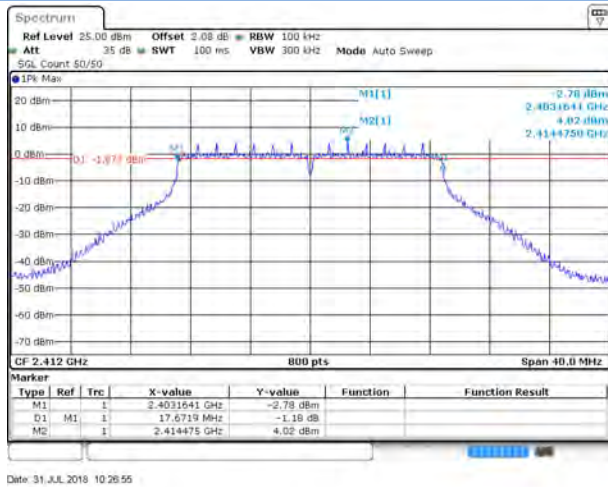


Date: 2 AUG 2018 13:22:39

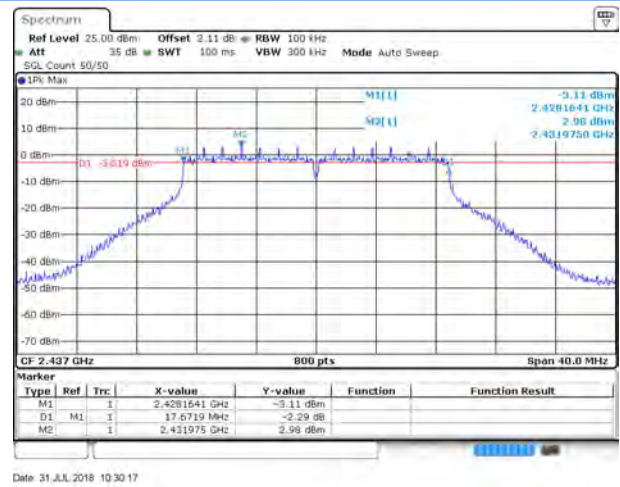
Test plots (6dB Bandwidth)

MIMO ANT0

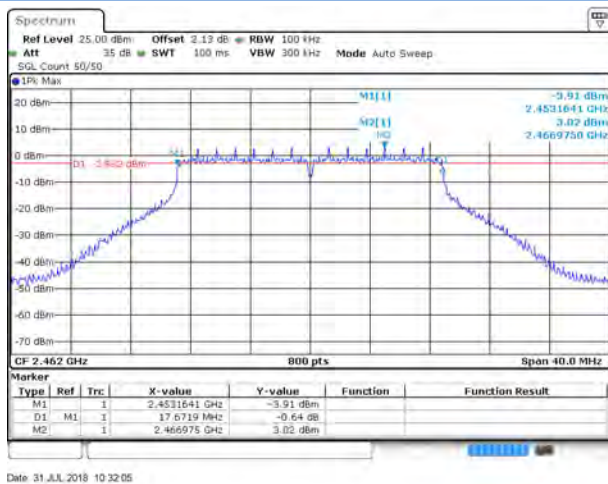
802.11n-20 MHz LOW CHANNEL



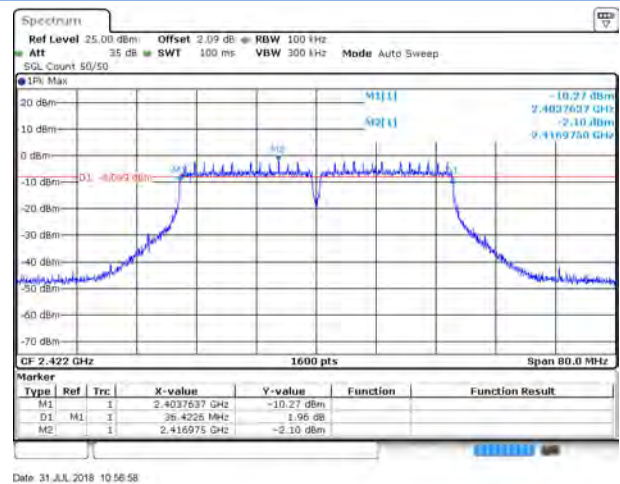
802.11 n-20 MHz MIDDLE CHANNEL



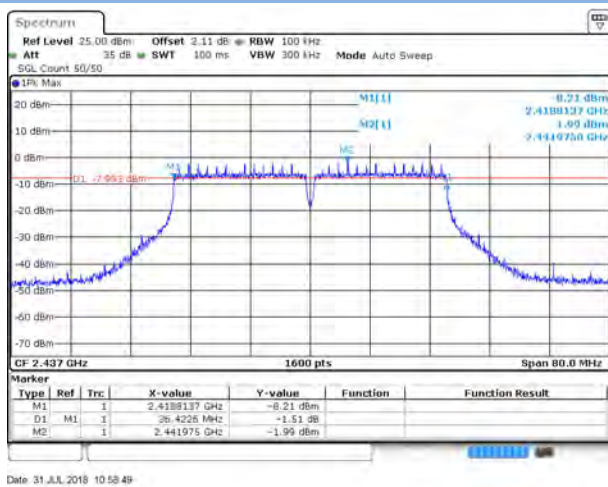
802.11n-20 MHz HIGH CHANNEL



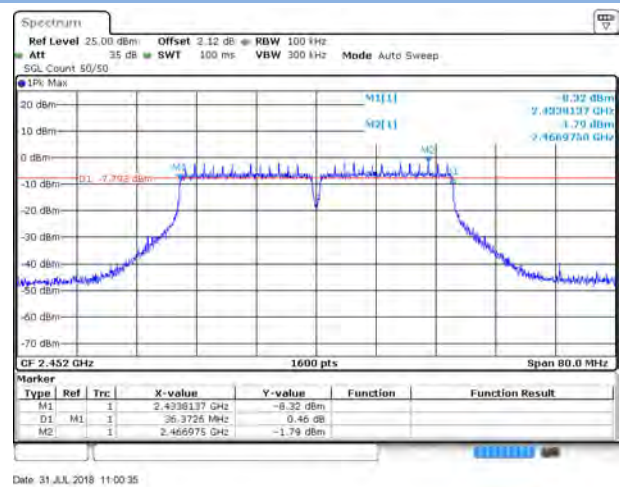
802.11n-40 MHz LOW CHANNEL



802.11n-40 MHz MIDDLE CHANNEL



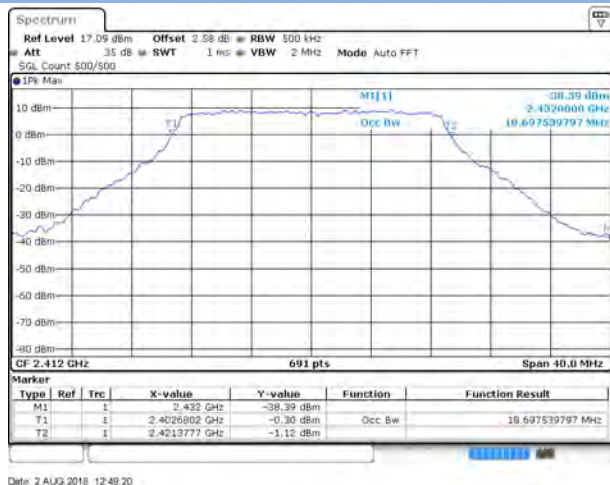
802.11n-40 MHz HIGH CHANNEL



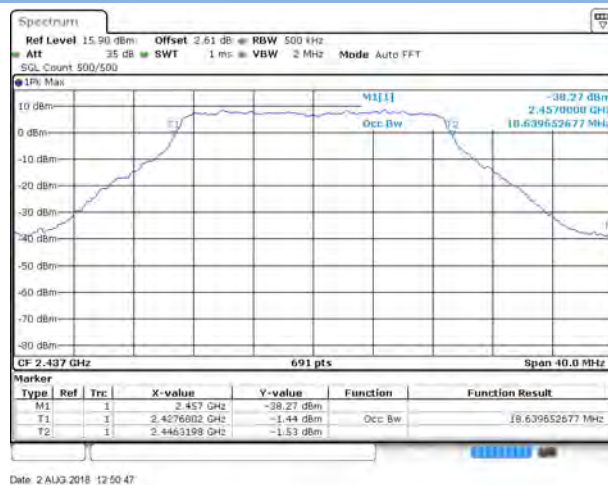
Test plots (99% Bandwidth)

MIMO ANTO

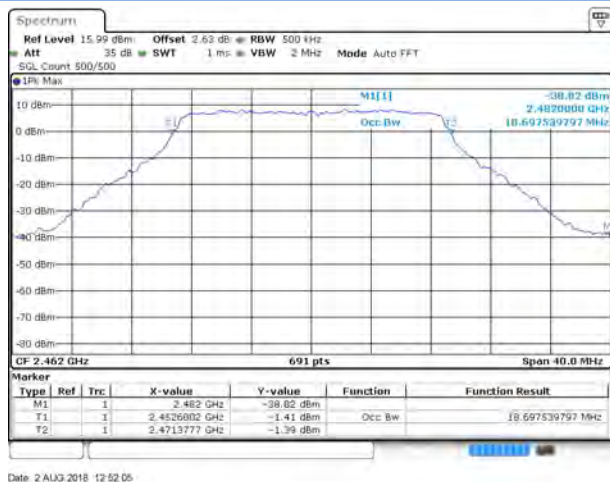
802.11n-20 MHz LOW CHANNEL



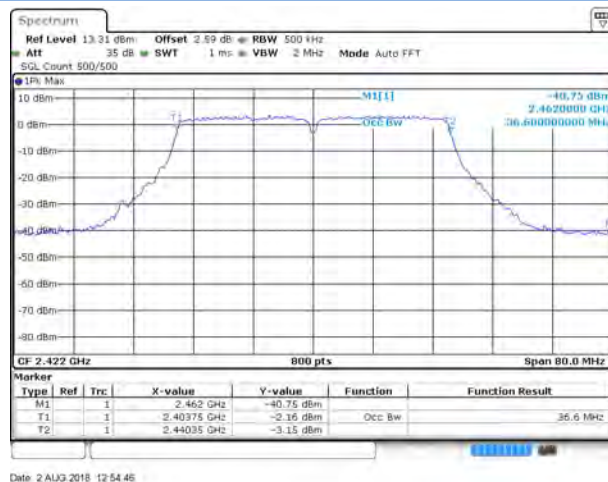
802.11 n-20 MHz MIDDLE CHANNEL



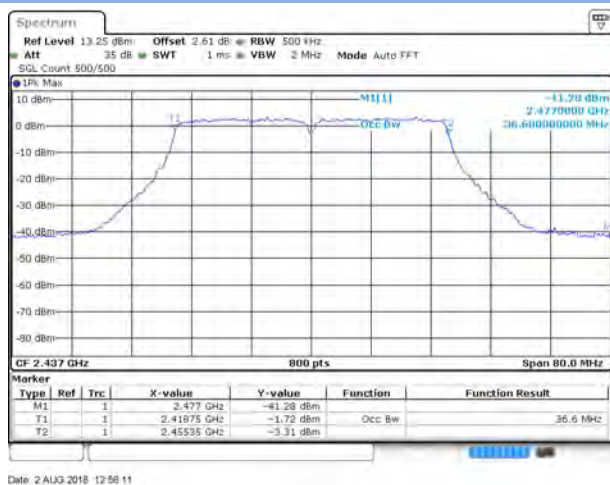
802.11n-20 MHz HIGH CHANNEL



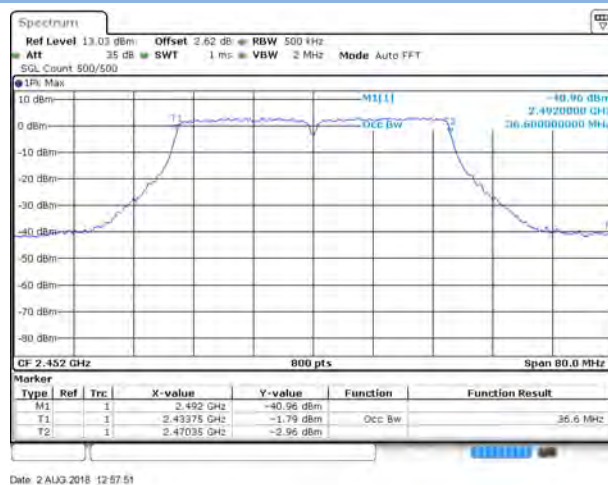
802.11n-40 MHz LOW CHANNEL



802.11n-40 MHz MIDDLE CHANNEL



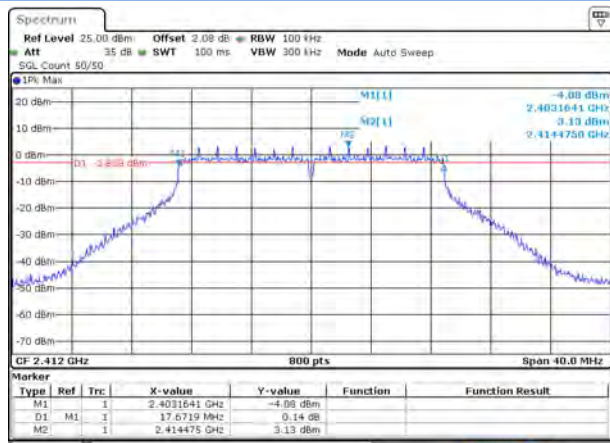
802.11n-40 MHz HIGH CHANNEL



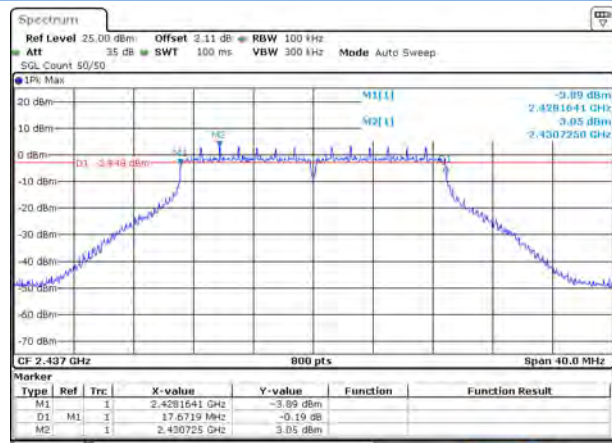
Test plots (6dB Bandwidth)

MIMO ANT1

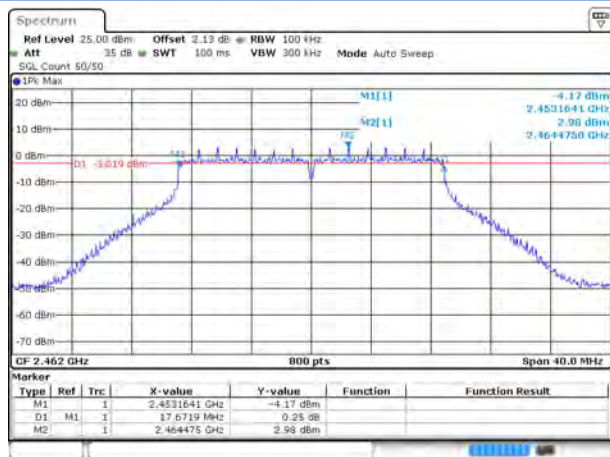
802.11n-20 MHz LOW CHANNEL



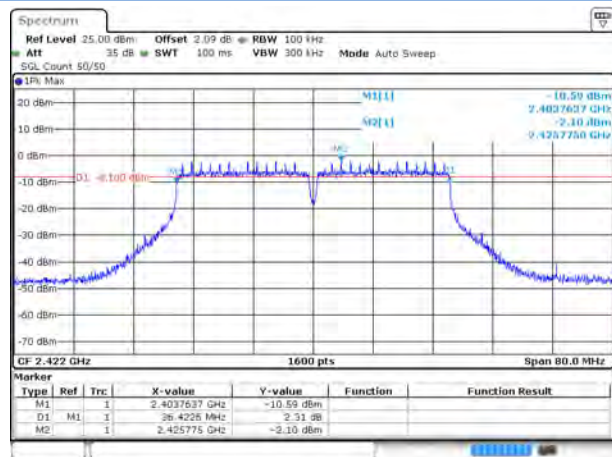
802.11 n-20 MHz MIDDLE CHANNEL



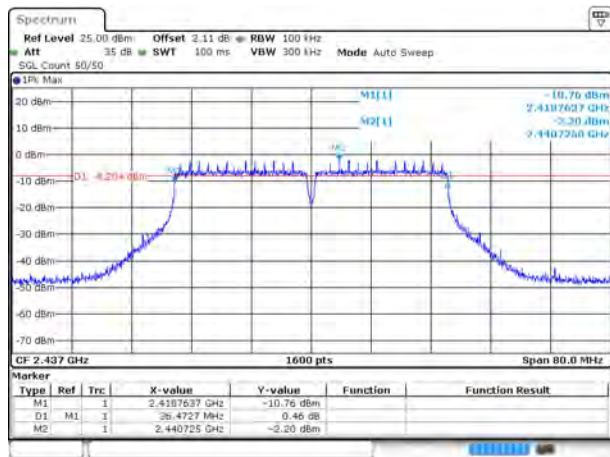
802.11n-20 MHz HIGH CHANNEL



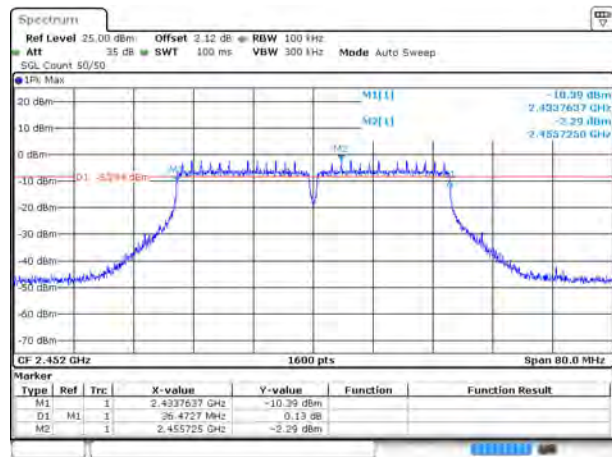
802.11n-40 MHz LOW CHANNEL



802.11n-40 MHz MIDDLE CHANNEL



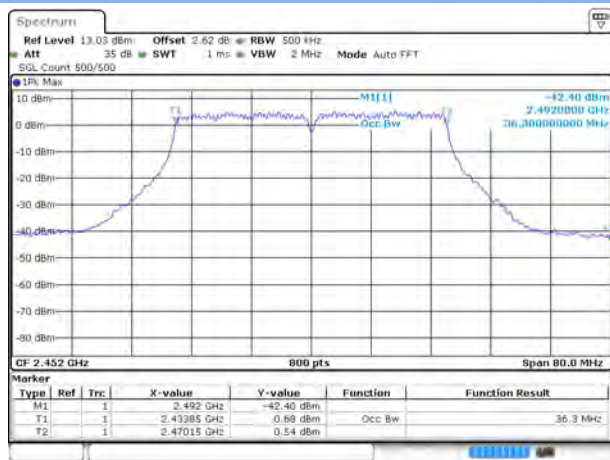
802.11n-40 MHz HIGH CHANNEL



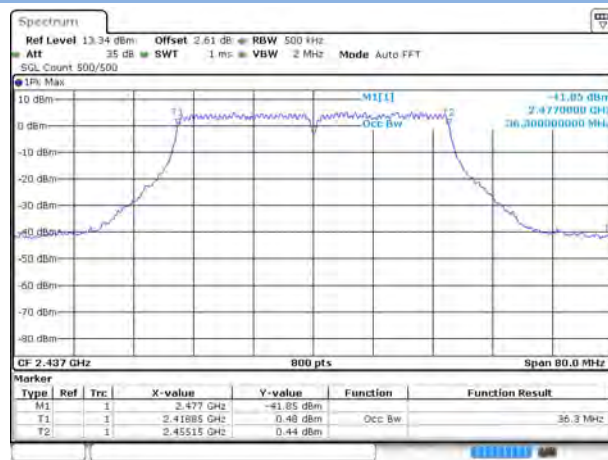
Test plots (99% Bandwidth)

MIMO ANT1

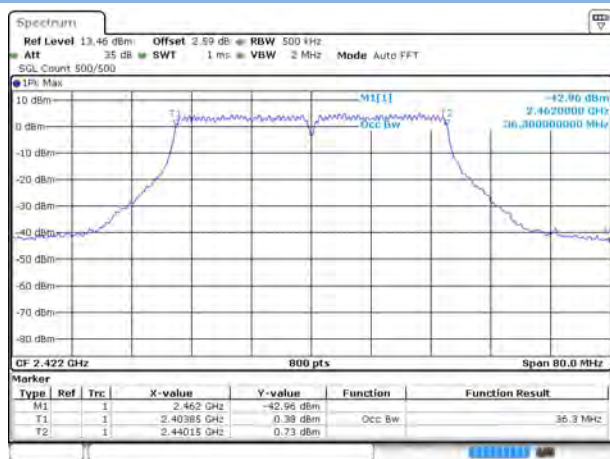
802.11n-20 MHz LOW CHANNEL



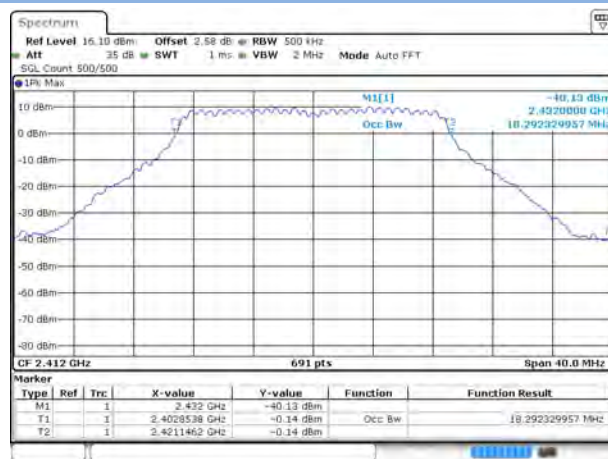
802.11 n-20 MHz MIDDLE CHANNEL



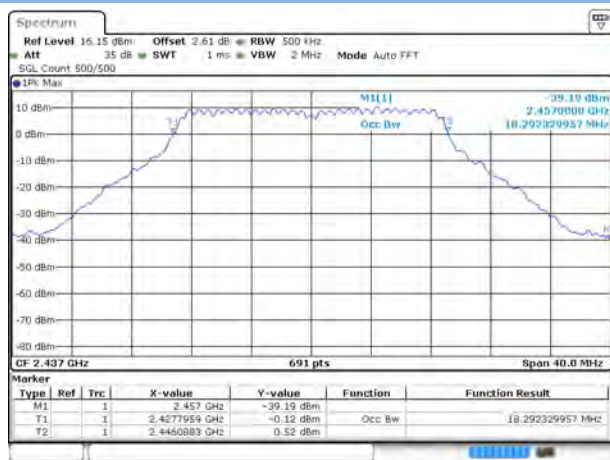
802.11n-20 MHz HIGH CHANNEL



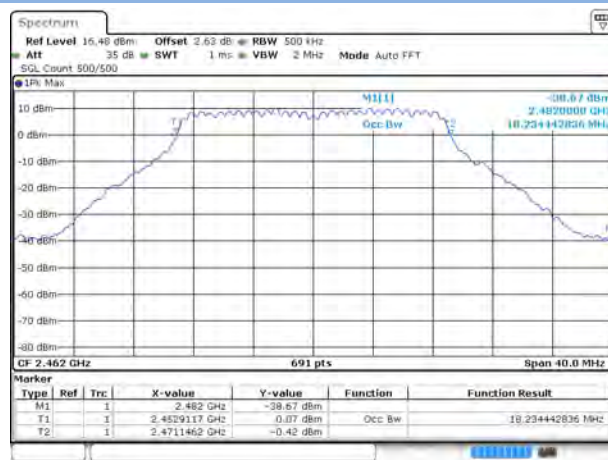
802.11n-40 MHz LOW CHANNEL



802.11n-40 MHz MIDDLE CHANNEL



802.11n-40 MHz HIGH CHANNEL



A.3 Conducted Spurious Emissions

Test Data

SISO ANT0

802.11b Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-48.89	6.82	-13.18	Pass
Middle	-47.41	7.09	-12.91	Pass
High	-47.20	7.16	-12.84	Pass

802.11g Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-50.61	5.29	-14.71	Pass
Middle	-55.77	5.47	-14.53	Pass
High	-50.35	4.57	-15.43	Pass

802.11n-20MHz Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-50.34	4.95	-15.05	Pass
Middle	-50.04	5.19	-14.81	Pass
High	-51.34	5.75	-14.25	Pass

802.11n-40MHz Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-50.55	1.00	-19.00	Pass
Middle	-49.79	1.40	-18.60	Pass
High	-50.49	1.61	-18.39	Pass

Test Data

SISO ANT1

802.11b Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-45.76	6.20	-13.80	Pass
Middle	-48.22	6.32	-13.68	Pass
High	-48.19	5.55	-14.45	Pass

802.11g Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-49.83	4.11	-15.89	Pass
Middle	-50.30	4.64	-15.36	Pass
High	-49.88	4.19	-15.81	Pass

802.11n-20MHz Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-50.49	4.57	-15.43	Pass
Middle	-50.73	4.66	-15.34	Pass
High	-50.84	4.43	-15.57	Pass

802.11n-40MHz Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-49.90	1.39	-18.61	Pass
Middle	-50.85	1.29	-18.71	Pass
High	-50.09	1.27	-18.73	Pass

Test Data
MIMO ANT0

802.11n-20MHz Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-50.49	1.43	-18.57	Pass
Middle	-50.58	2.81	-17.19	Pass
High	-50.36	2.69	-17.31	Pass

802.11n-40MHz Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-49.76	-1.58	-21.58	Pass
Middle	-49.94	-1.84	-21.84	Pass
High	-49.99	-1.24	-21.24	Pass

MIMO ANT1

802.11n-20MHz Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-49.81	2.71	-17.29	Pass
Middle	-49.95	2.84	-17.16	Pass
High	-50.54	2.65	-17.35	Pass

802.11n-40MHz Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-51.32	-1.55	-21.55	Pass
Middle	-50.63	-1.48	-21.48	Pass
High	-49.45	-1.49	-21.49	Pass

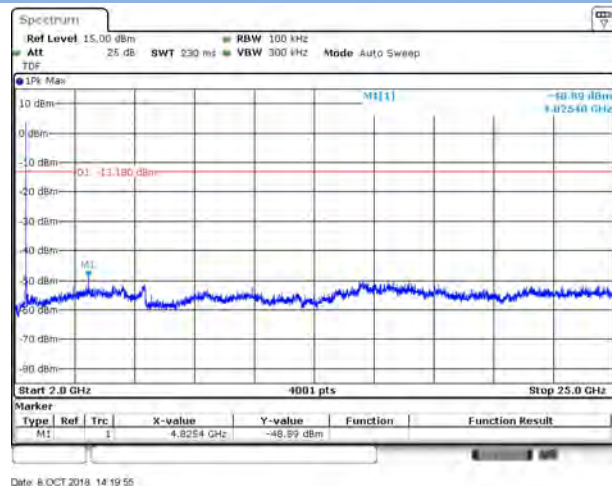
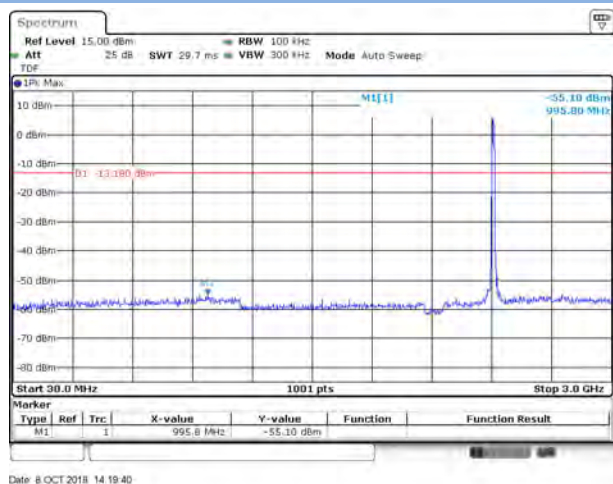
Test Plots

SISO ANT0

802.11b LOW CHANNEL CARRIER LEVEL



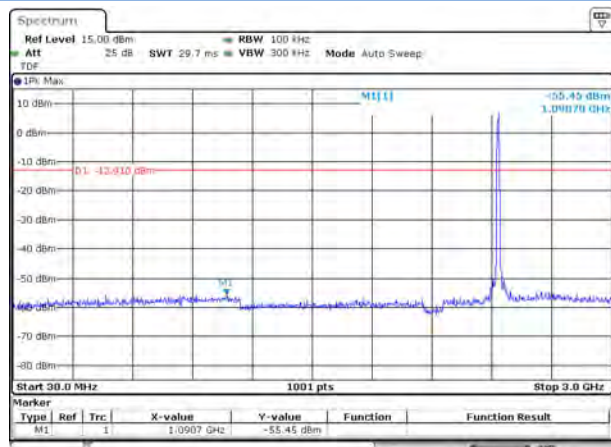
802.11b LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz 802.11b LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



802.11b MIDDLE CHANNEL CARRIER LEVEL

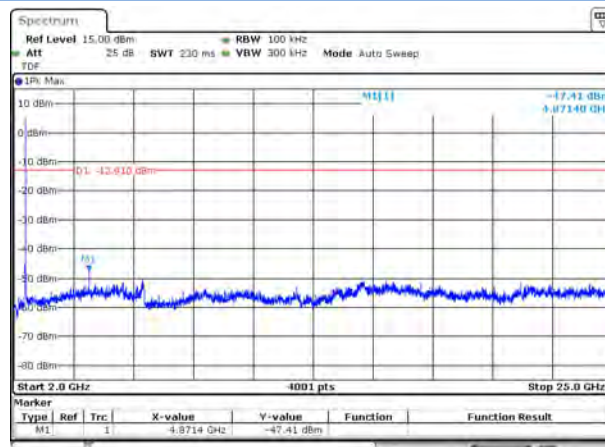


802.11b MIDDLE CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



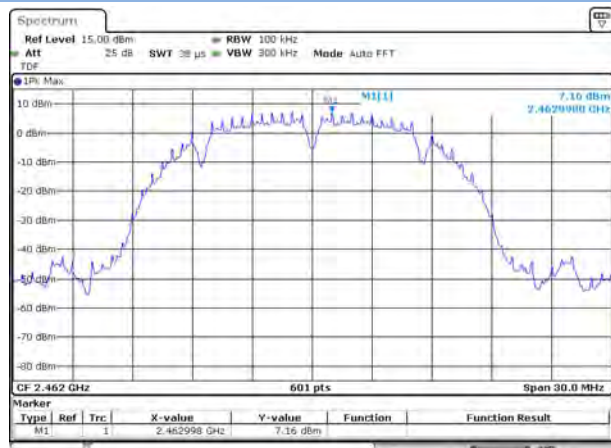
Date 8 OCT 2018 14:22:32

802.11b MIDDLE CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



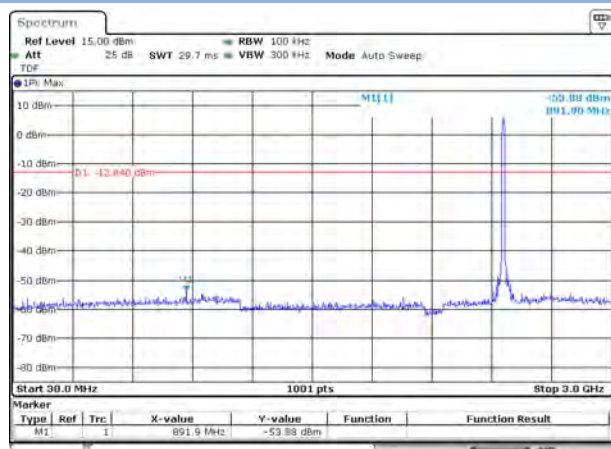
Date 8 OCT 2018 14:22:40

802.11b HIGH CHANNEL CARRIER LEVEL



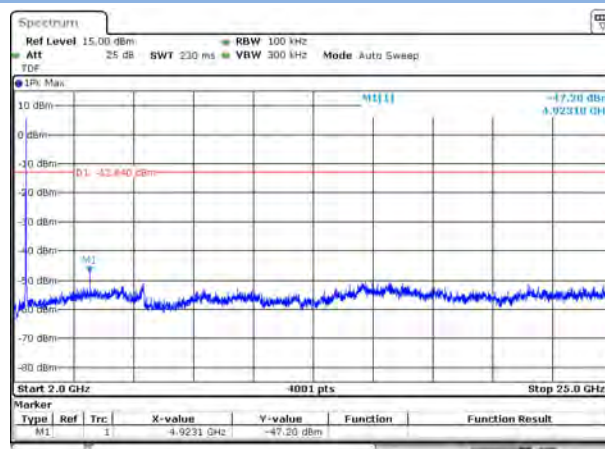
Date 8 OCT 2018 14:23:42

802.11b HIGH CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



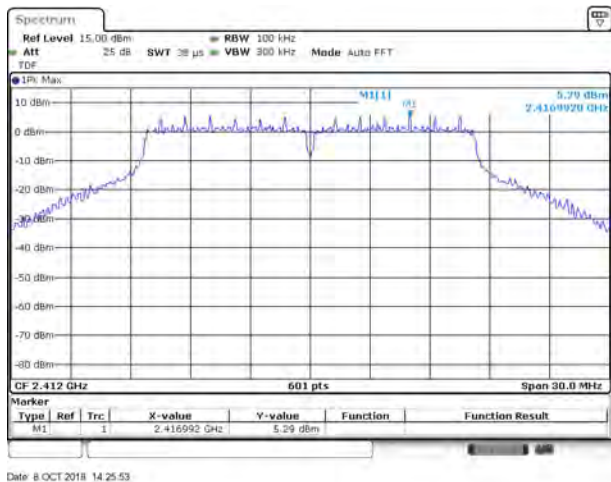
Date 8 OCT 2018 14:24:21

802.11b HIGH CHANNEL, SPURIOUS 2 GHz ~ 25 GHz

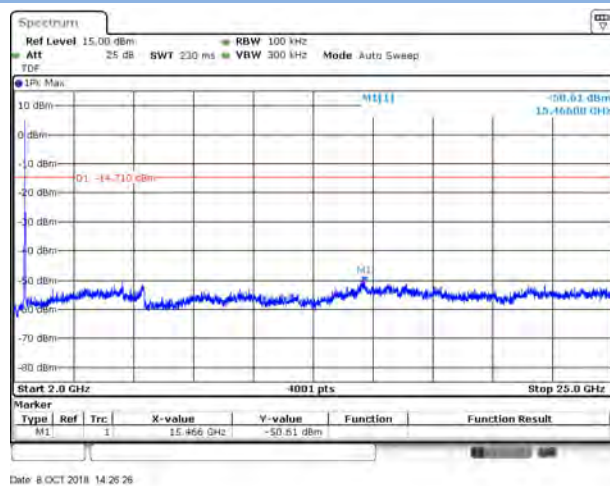
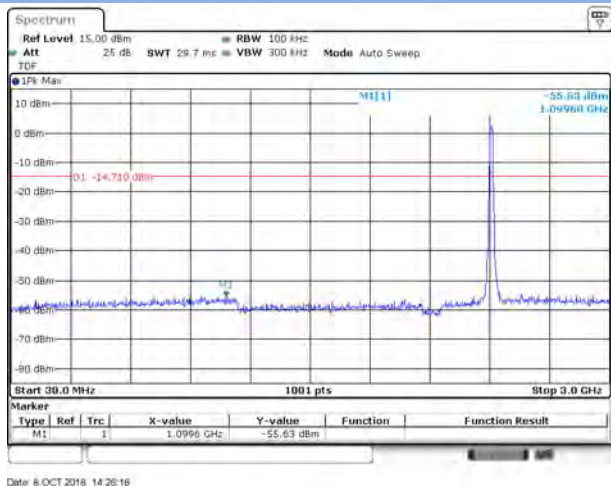


Date 8 OCT 2018 14:24:31

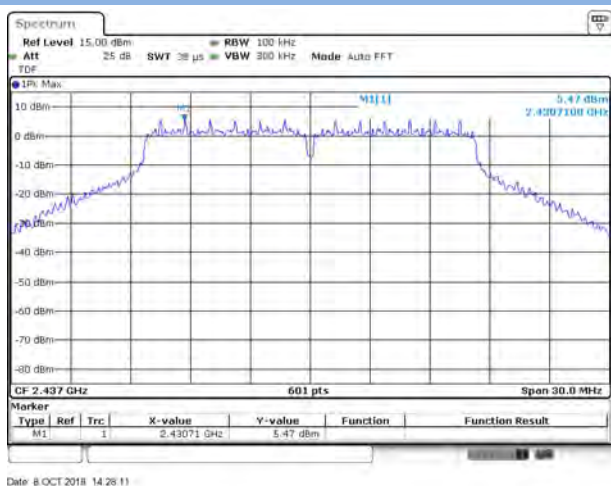
802.11g LOW CHANNEL CARRIER LEVEL



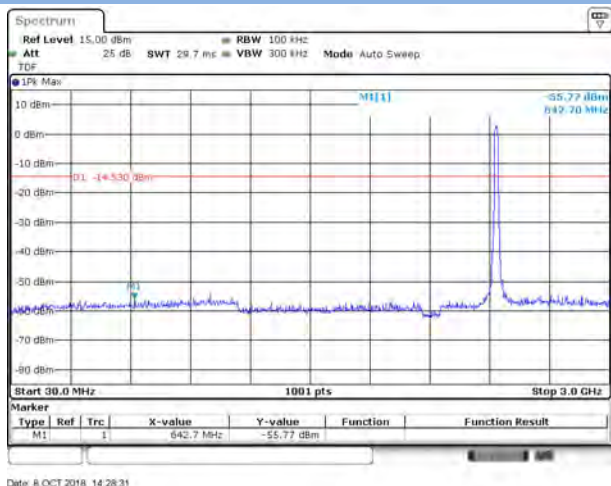
802.11g LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz 802.11g LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



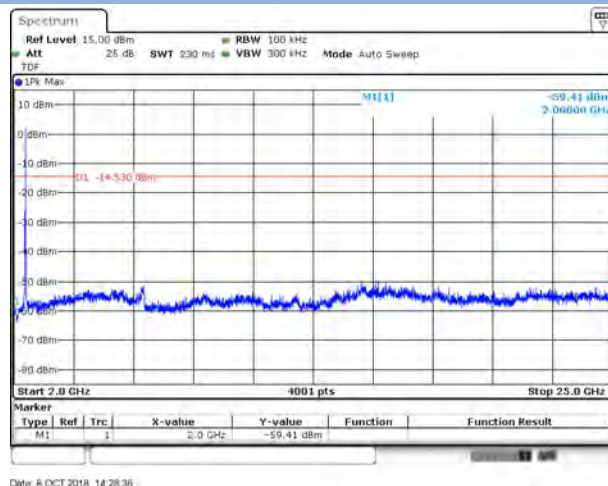
802.11g MIDDLE CHANNEL CARRIER LEVEL



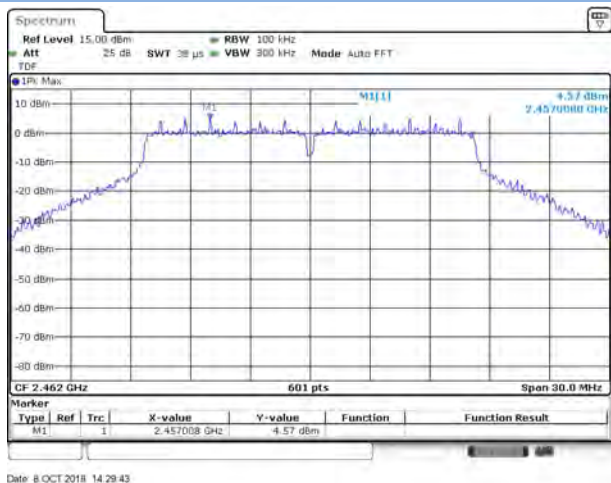
802.11g MIDDLE CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



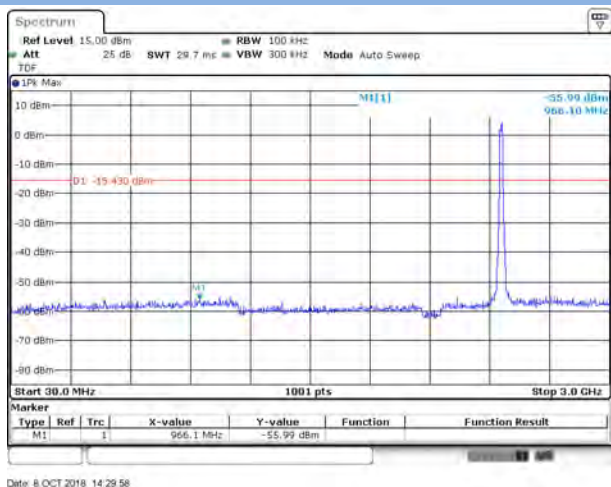
802.11g MIDDLE CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



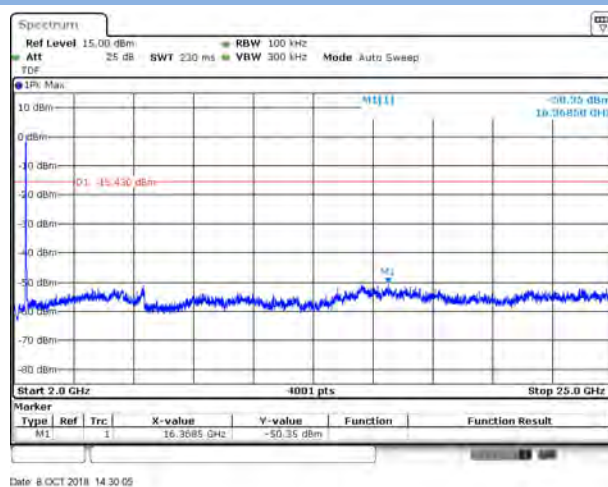
802.11g HIGH CHANNEL CARRIER LEVEL



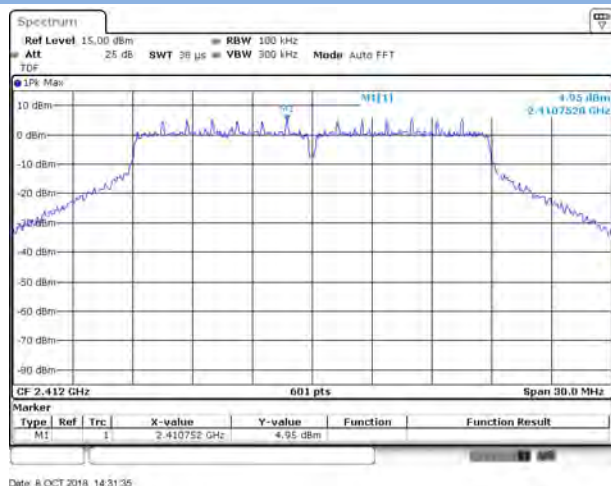
802.11g HIGH CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



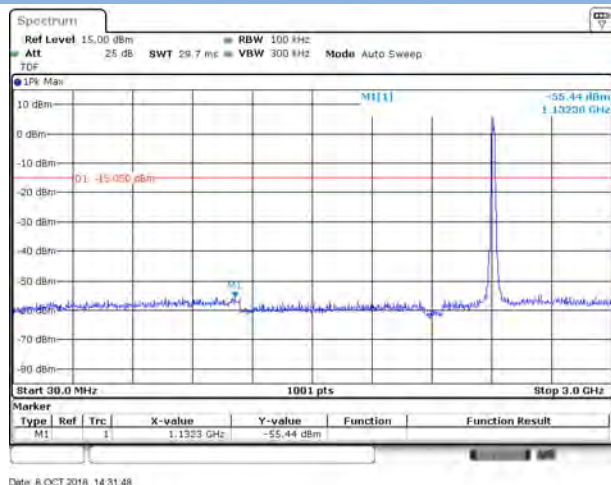
802.11g HIGH CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



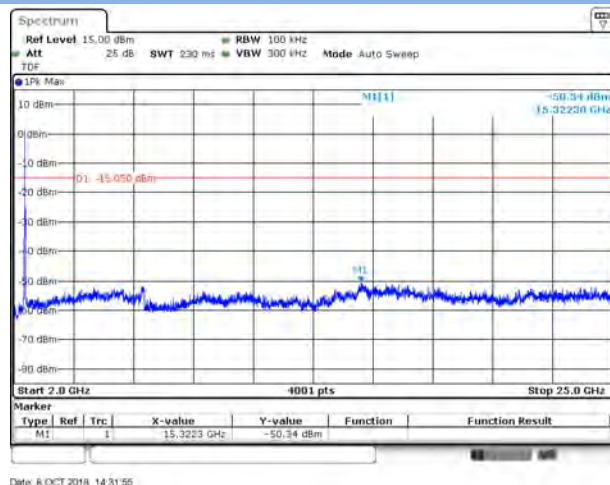
802.11n-20 LOW CHANNEL CARRIER LEVEL



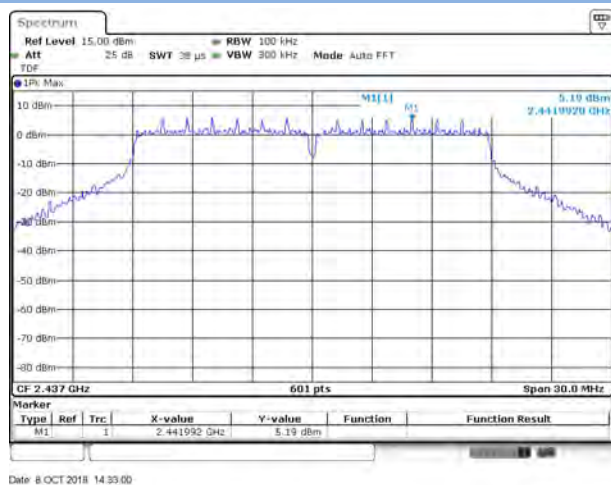
802.11n-20 LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



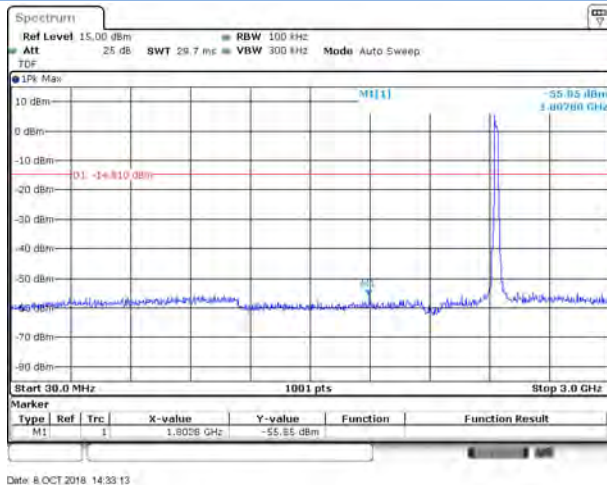
802.11n-20 LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



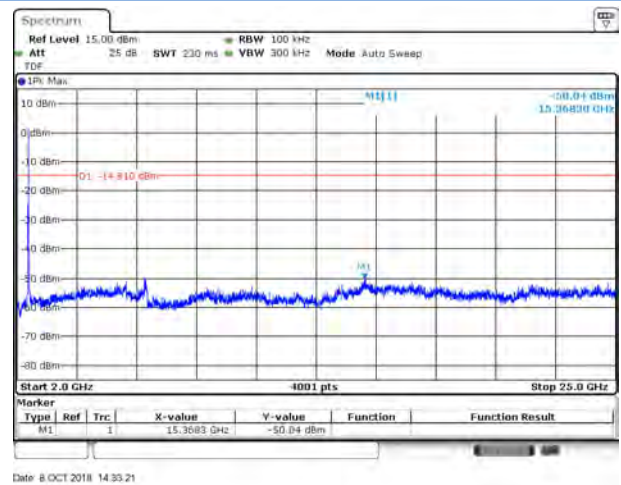
802.11n-20 MIDDLE CHANNEL CARRIER LEVEL



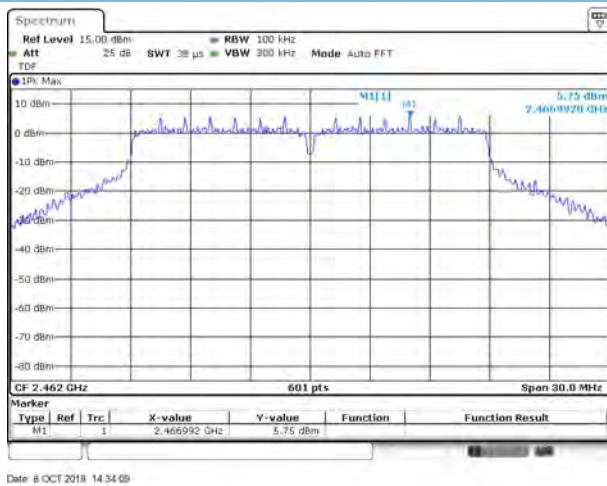
802.11n-20 MIDDLE CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



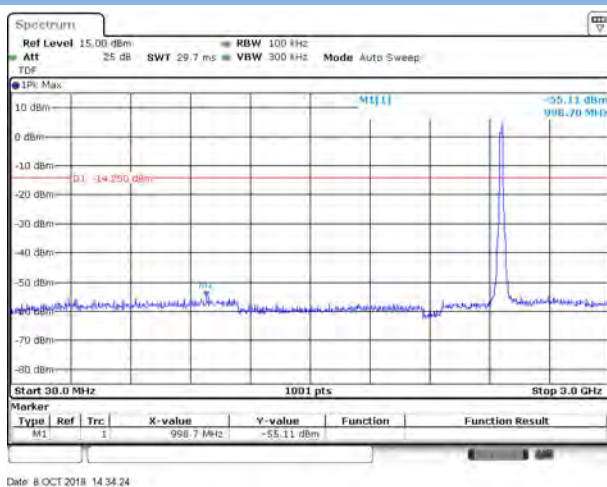
802.11n-20 MIDDLE CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



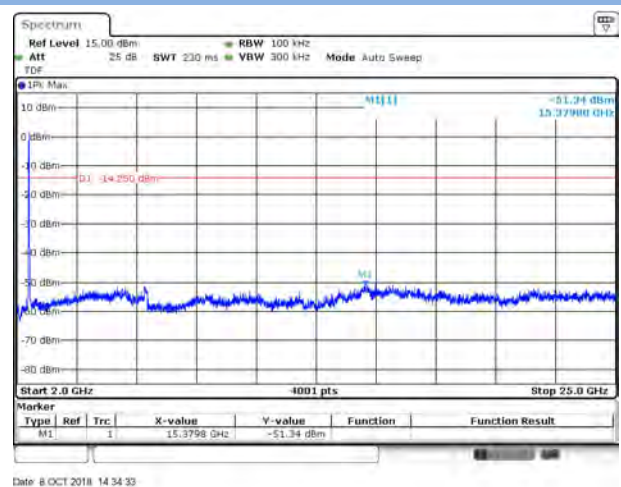
802.11n-20 HIGH CHANNEL CARRIER LEVEL



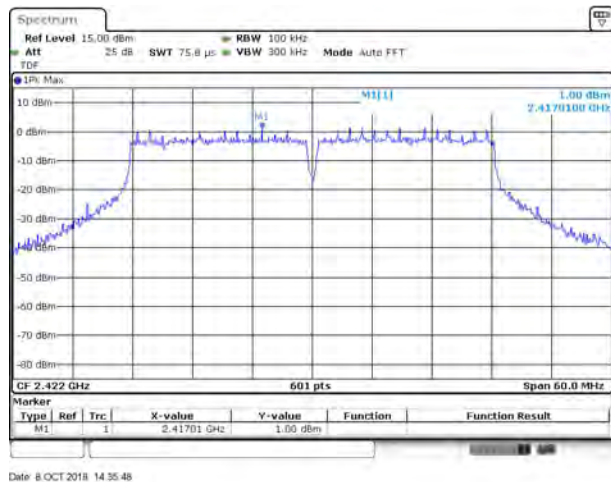
802.11n-20 HIGH CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



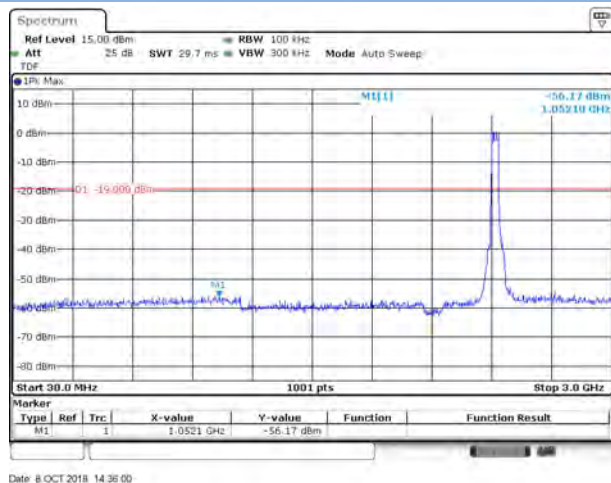
802.11n-20 HIGH CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



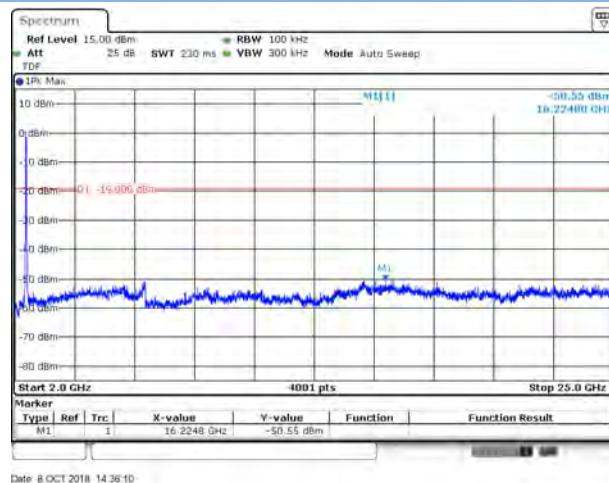
802.11n-40 LOW CHANNEL CARRIER LEVEL



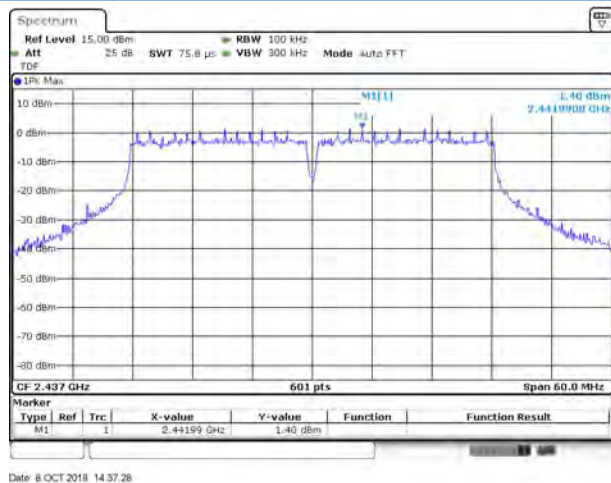
802.11n-40 LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



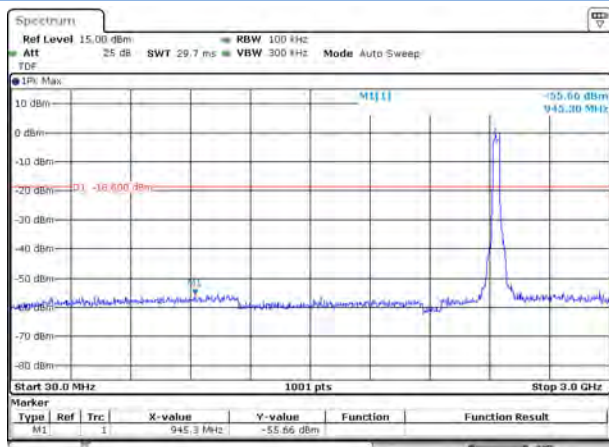
802.11n-40 LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



802.11n-40 MIDDLE CHANNEL CARRIER LEVEL

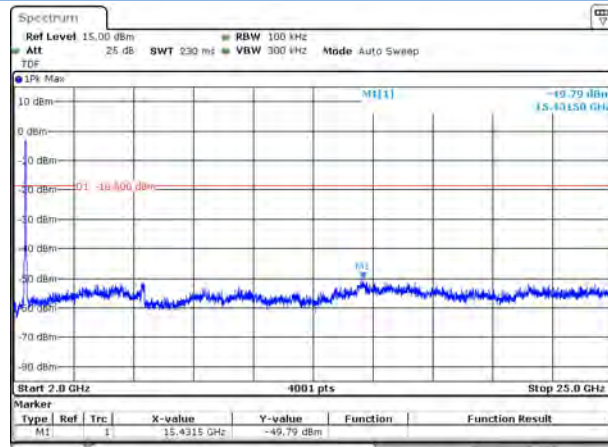


802.11n-40 MIDDLE CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



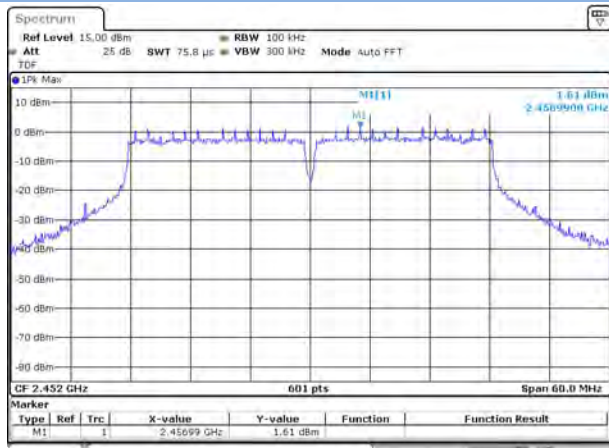
Date: 8.OCT.2018 14:37:56

802.11n-40 MIDDLE CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



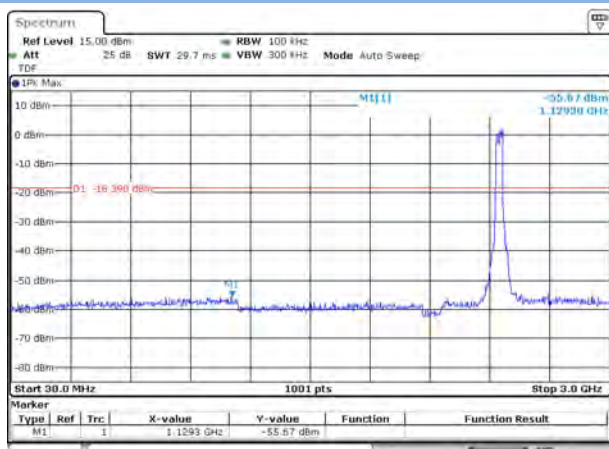
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802.11n-40 HIGH CHANNEL CARRIER LEVEL



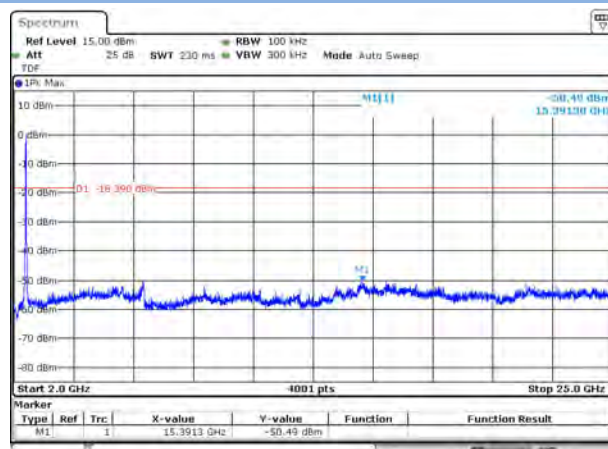
Date: 8.OCT.2018 14:39:01

802.11n-40 HIGH CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



Date: 8.OCT.2018 14:39:15

802.11n-40 HIGH CHANNEL, SPURIOUS 2 GHz ~ 25 GHz

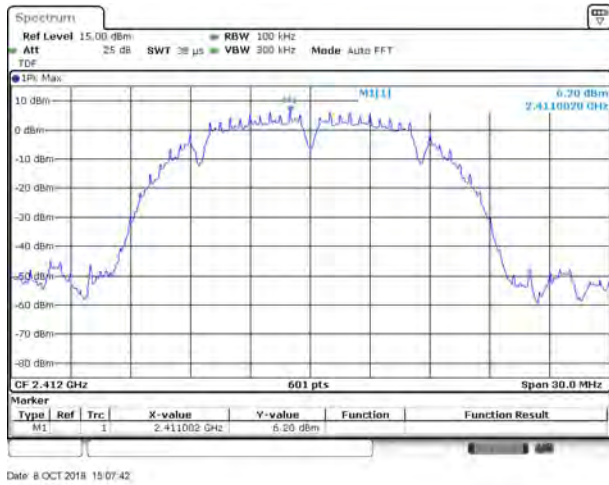


Date: 8.OCT.2018 14:39:25

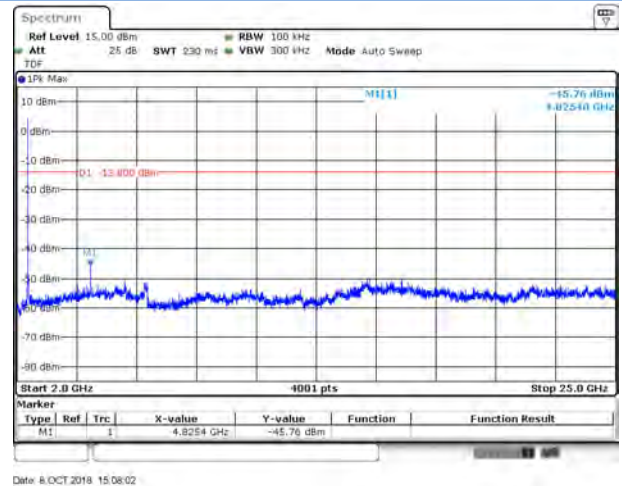
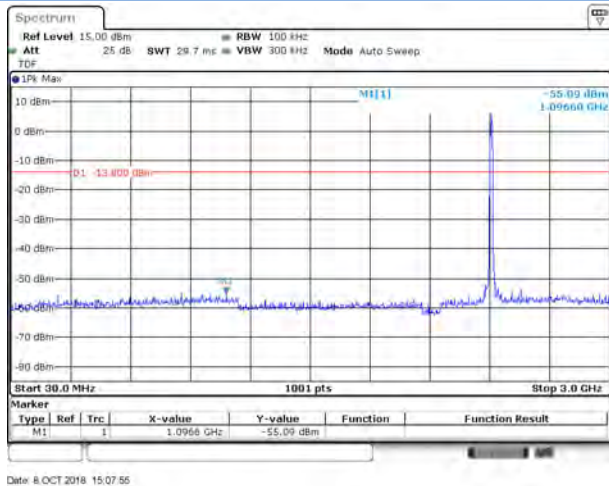
Test Plots

SISO ANT1

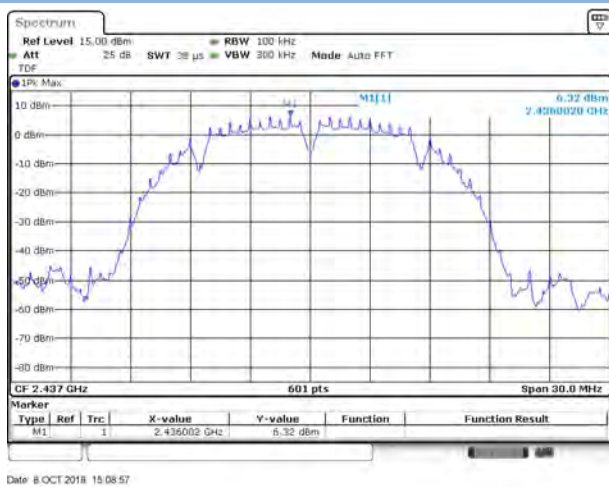
802.11b LOW CHANNEL CARRIER LEVEL



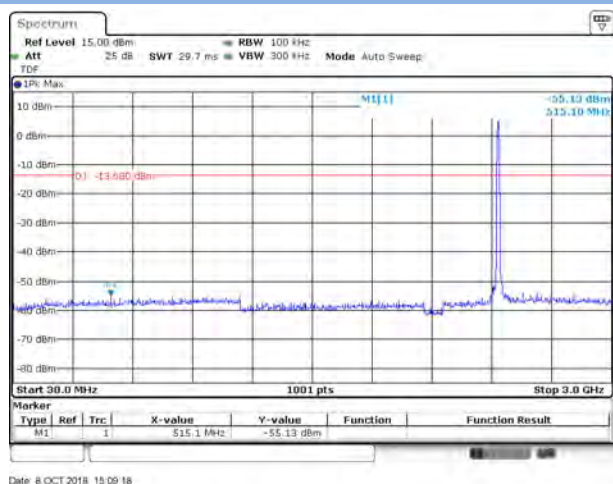
802.11b LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz 802.11b LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



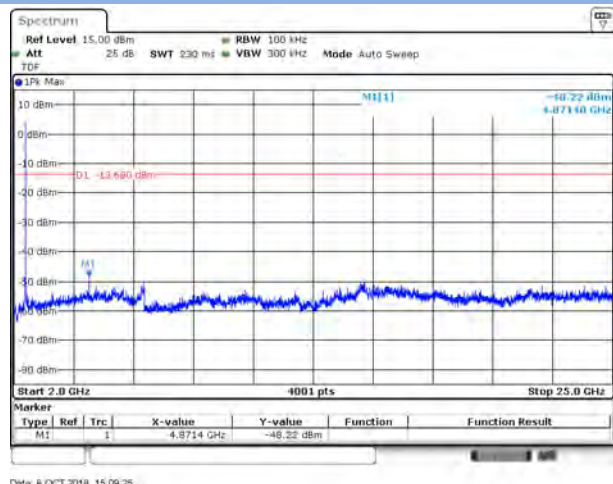
802.11b MIDDLE CHANNEL CARRIER LEVEL



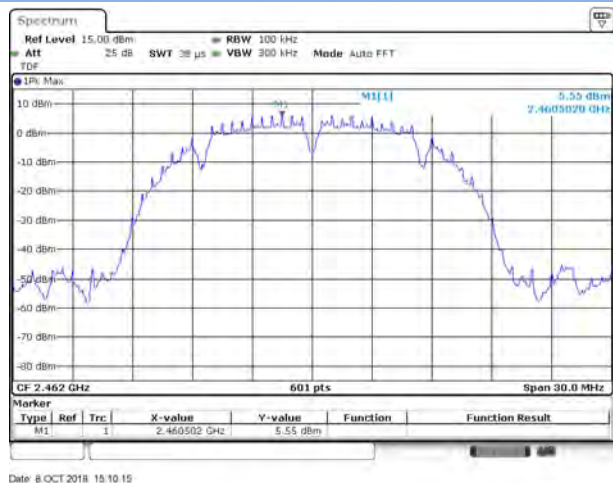
802.11b MIDDLE CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



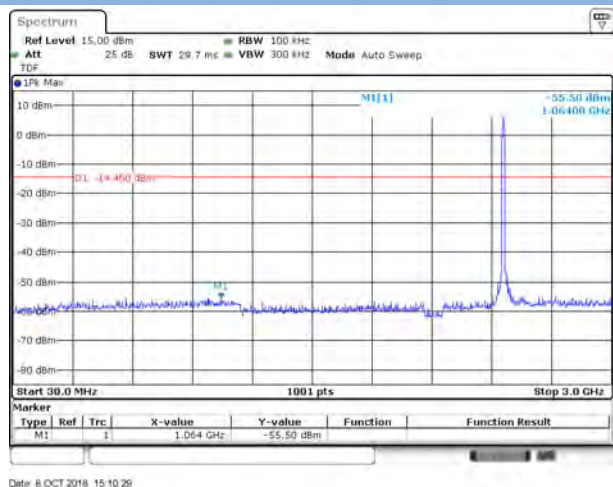
802.11b MIDDLE CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



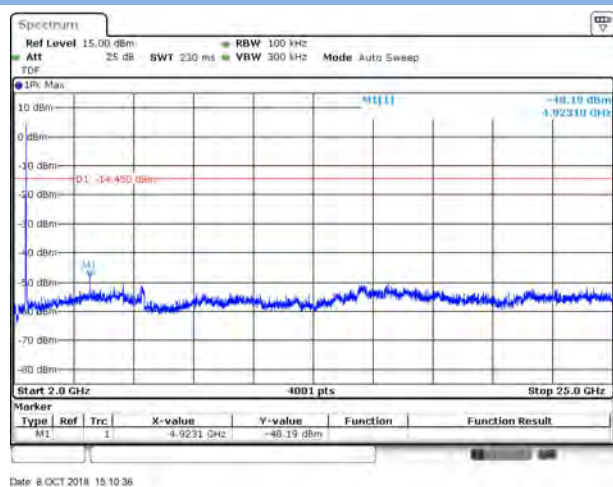
802.11b HIGH CHANNEL CARRIER LEVEL



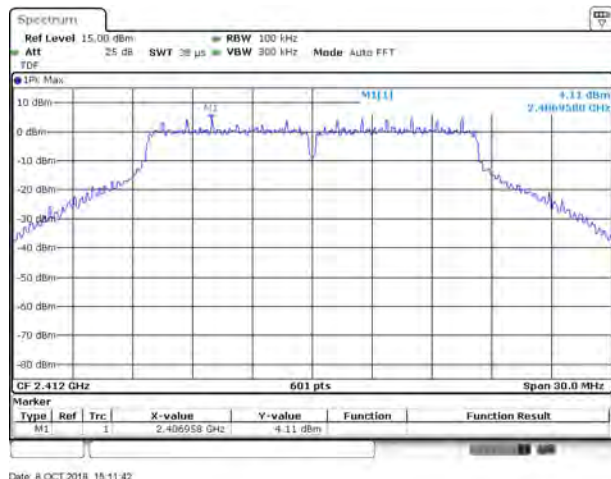
802.11b HIGH CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



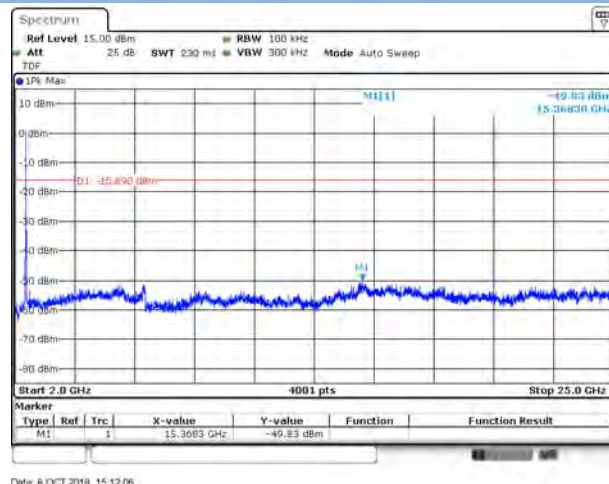
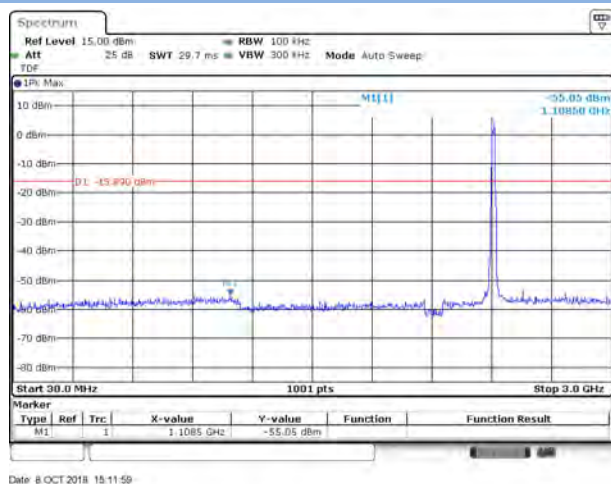
802.11b HIGH CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



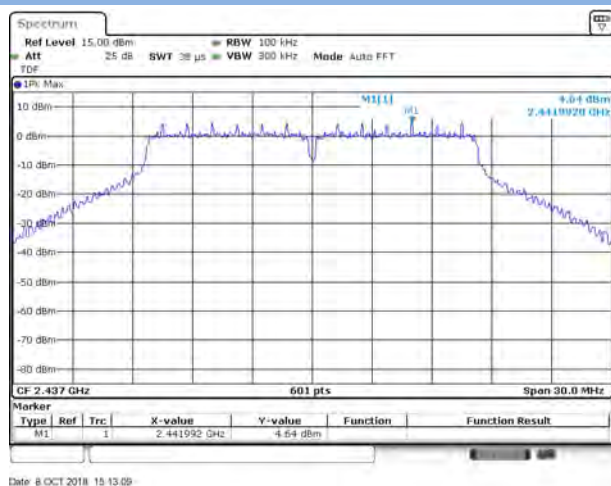
802.11g LOW CHANNEL CARRIER LEVEL



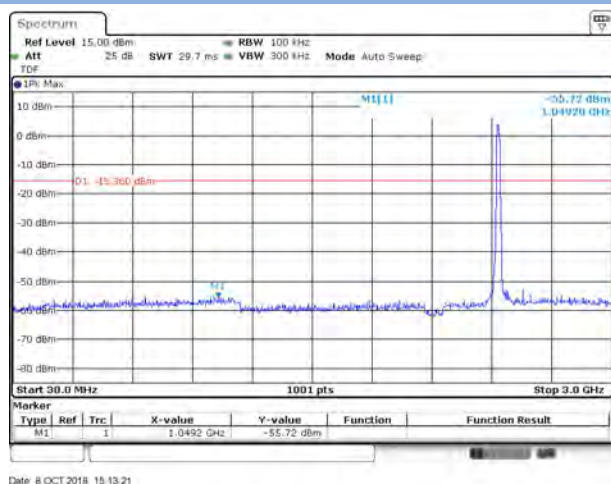
802.11g LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz 802.11g LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



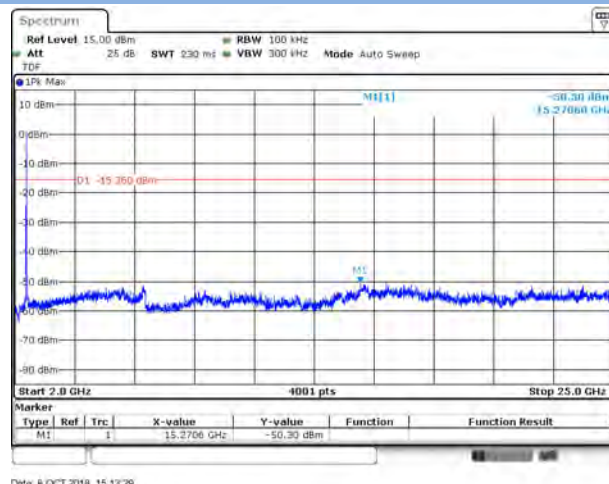
802.11g MIDDLE CHANNEL CARRIER LEVEL



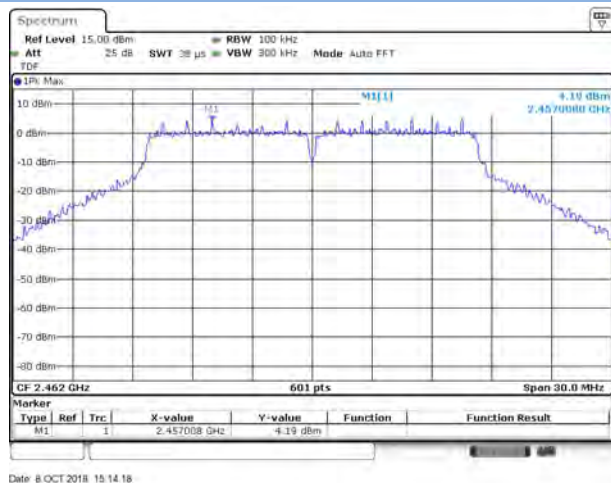
802.11g MIDDLE CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



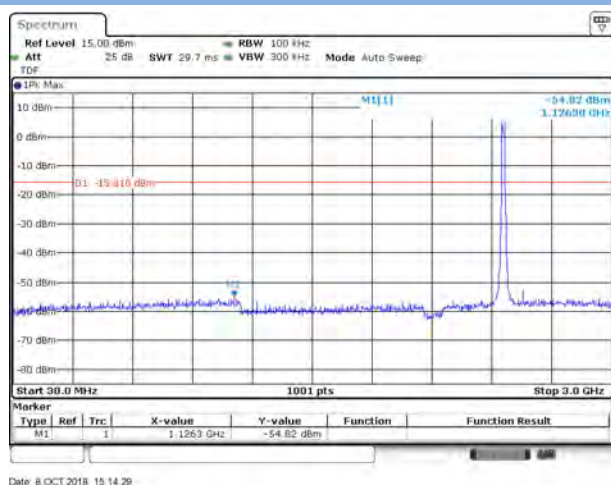
802.11g MIDDLE CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



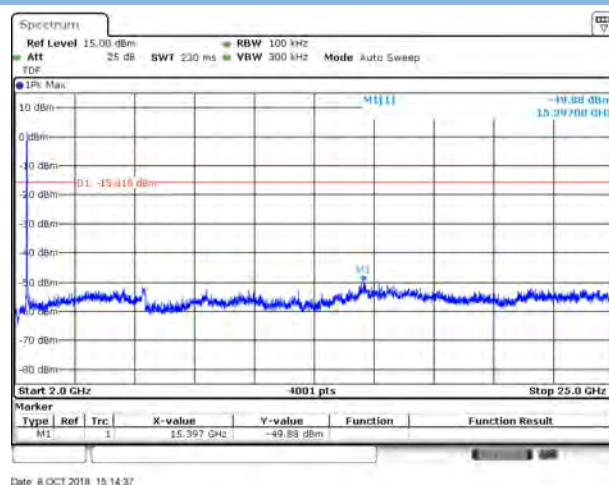
802.11g HIGH CHANNEL CARRIER LEVEL



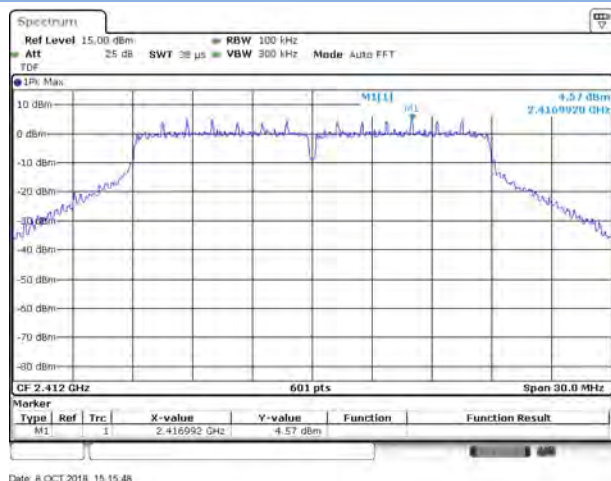
802.11g HIGH CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



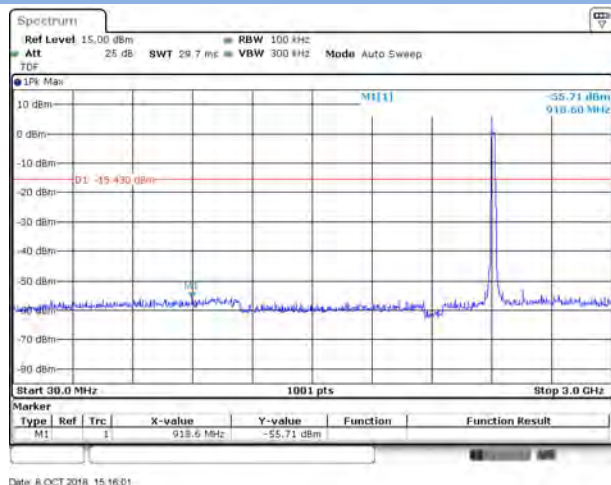
802.11g HIGH CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



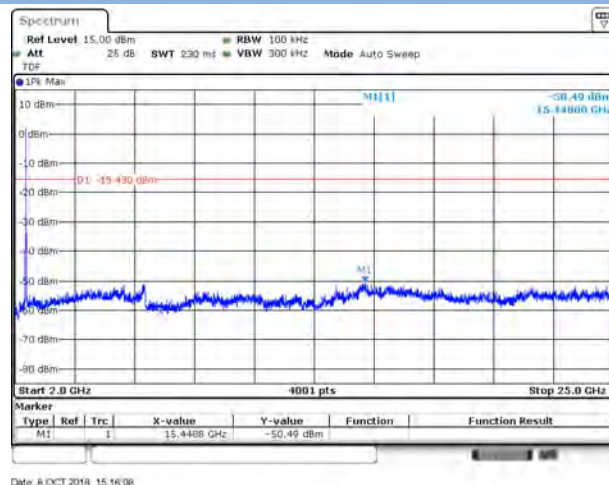
802.11n-20 LOW CHANNEL CARRIER LEVEL



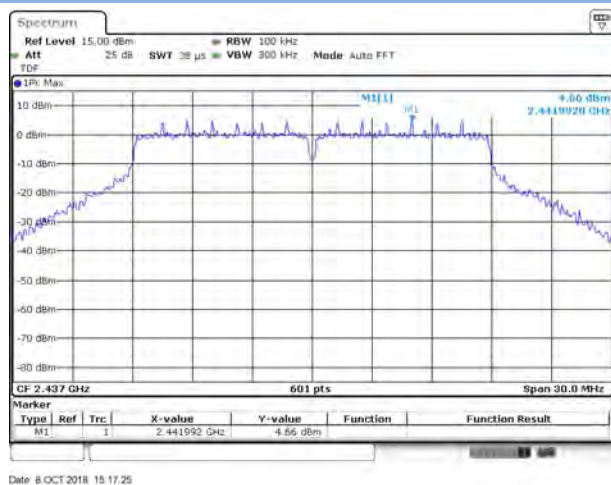
802.11n-20 LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz

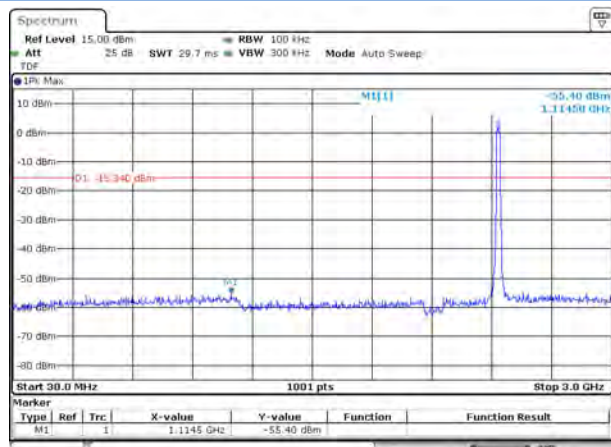


802.11n-20 LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz

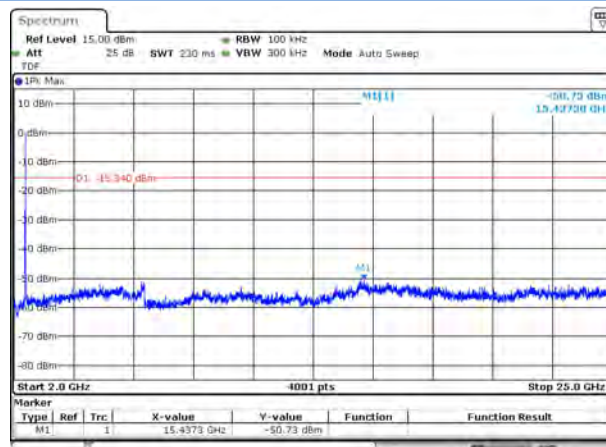


802.11n-20 MIDDLE CHANNEL CARRIER LEVEL



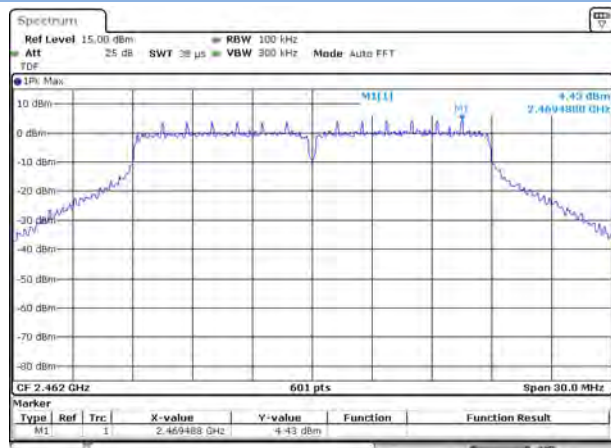
802.11n-20 MIDDLE CHANNEL, SPURIOUS
30 MHz ~ 3 GHz


Date: 8 OCT 2018 15:17:35

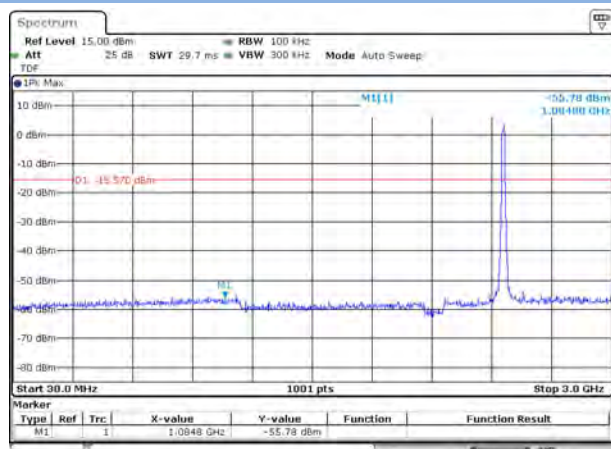
802.11n-20 MIDDLE CHANNEL, SPURIOUS
2 GHz ~ 25 GHz


Date: 8 OCT 2018 15:17:45

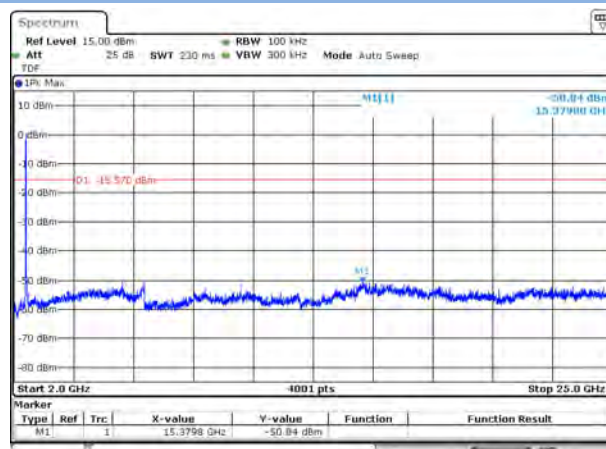
802.11n-20 HIGH CHANNEL CARRIER LEVEL



Date: 8 OCT 2018 15:18:40

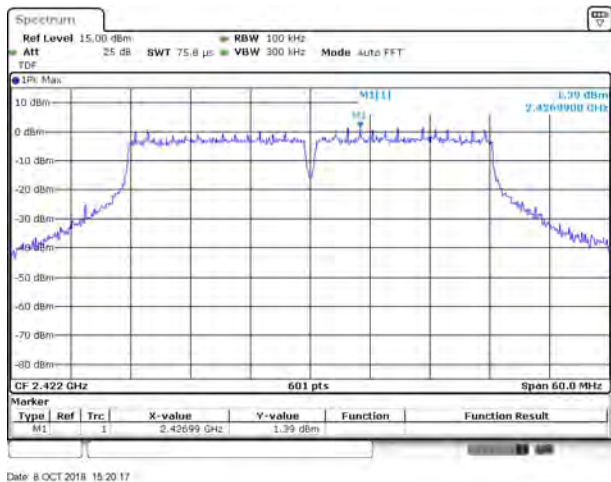
802.11n-20 HIGH CHANNEL, SPURIOUS
30 MHz ~ 3 GHz


Date: 8 OCT 2018 15:19:02

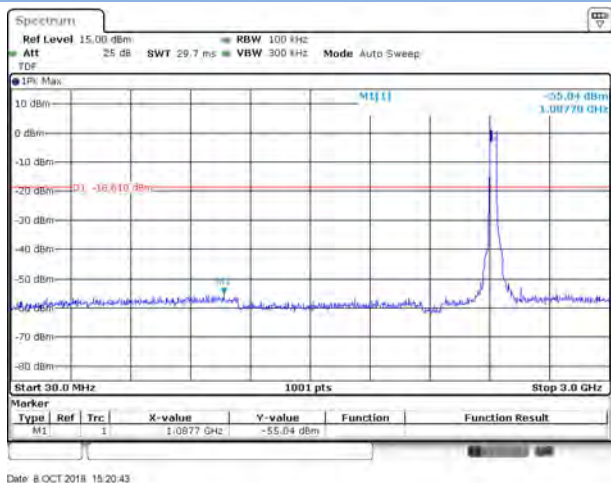
802.11n-20 HIGH CHANNEL, SPURIOUS
2 GHz ~ 25 GHz


Date: 8 OCT 2018 15:19:09

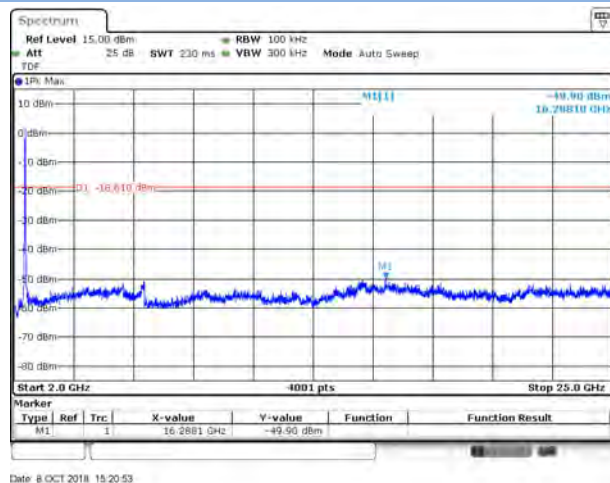
802.11n-40 LOW CHANNEL CARRIER LEVEL



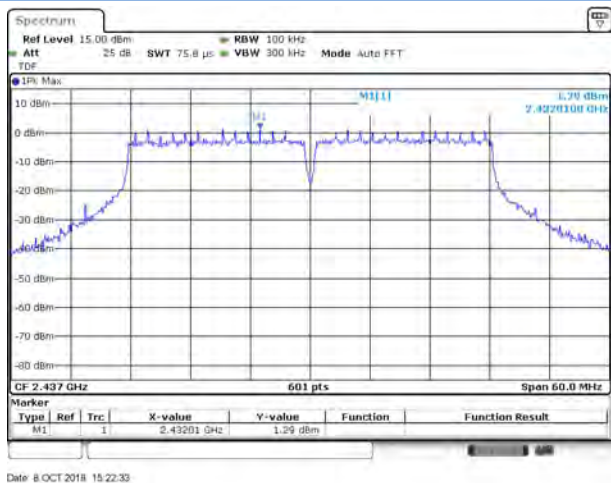
802.11n-40 LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



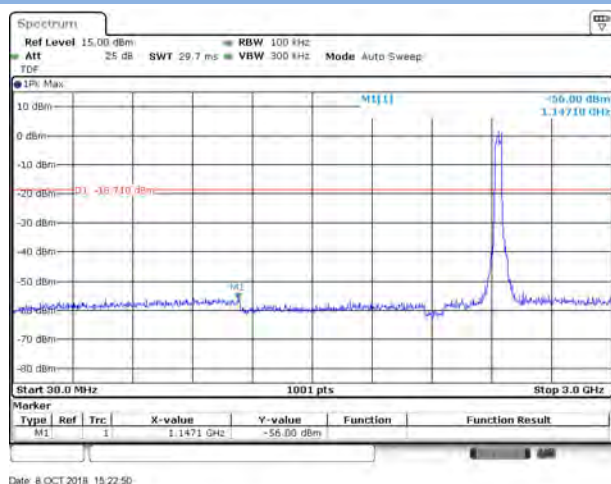
802.11n-40 LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



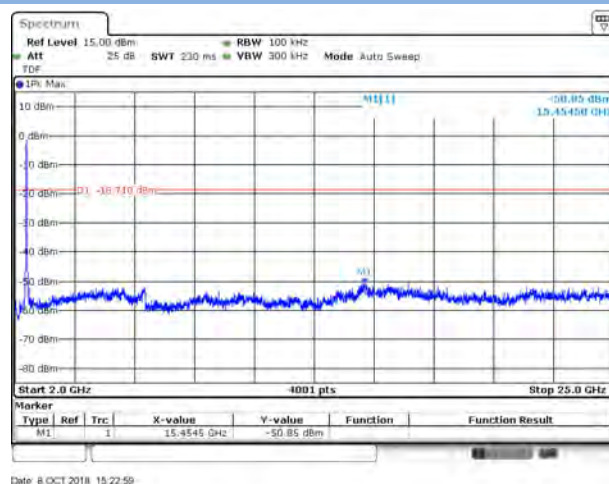
802.11n-40 MIDDLE CHANNEL CARRIER LEVEL



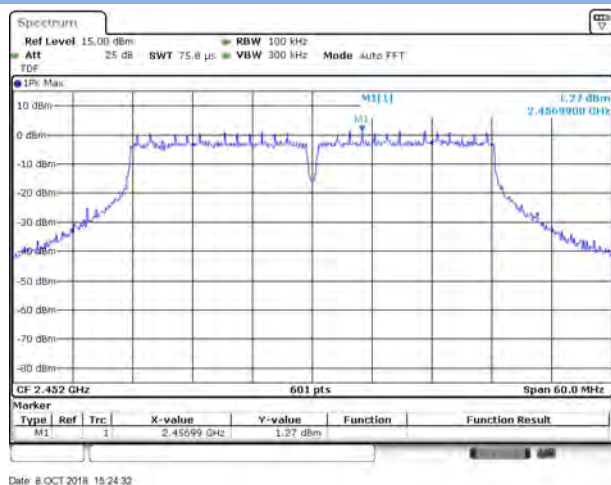
802.11n-40 MIDDLE CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



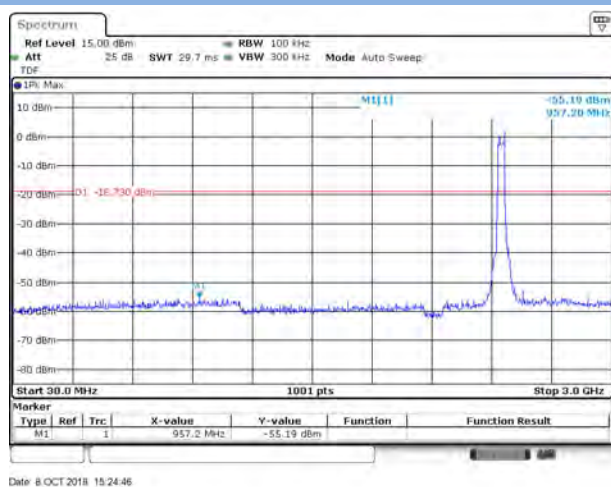
802.11n-40 MIDDLE CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



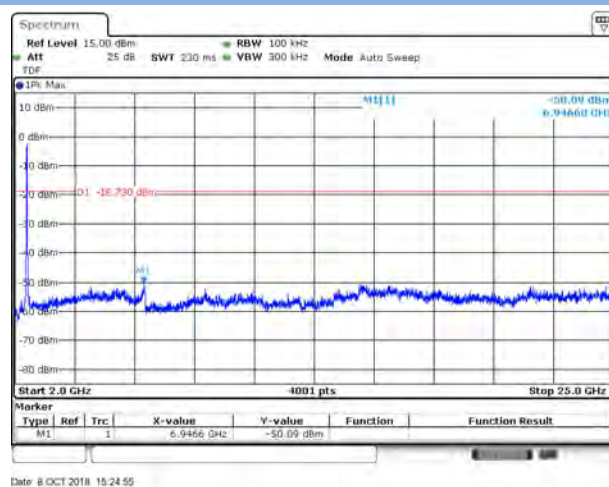
802.11n-40 HIGH CHANNEL CARRIER LEVEL



802.11n-40 HIGH CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



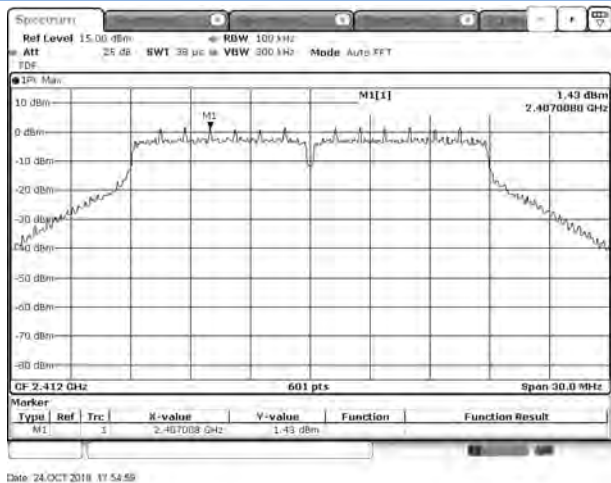
802.11n-40 HIGH CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



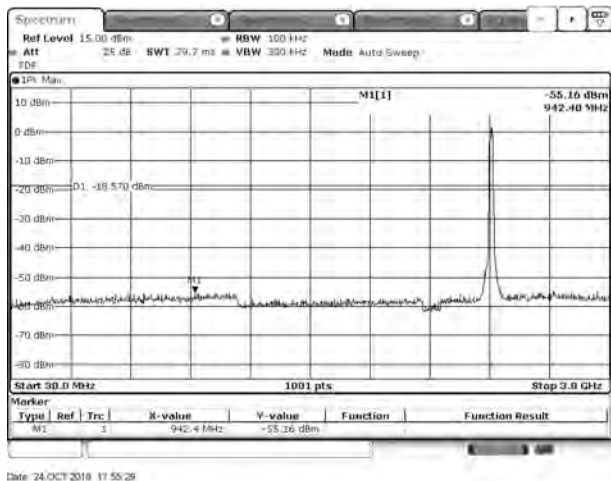
Test Plots

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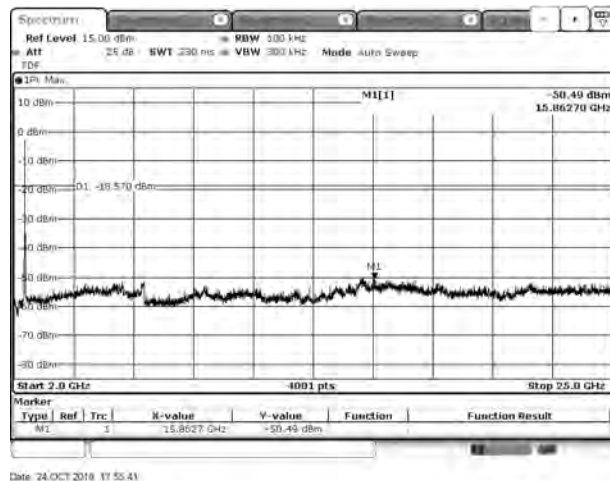
802.11n-20 LOW CHANNEL CARRIER LEVEL



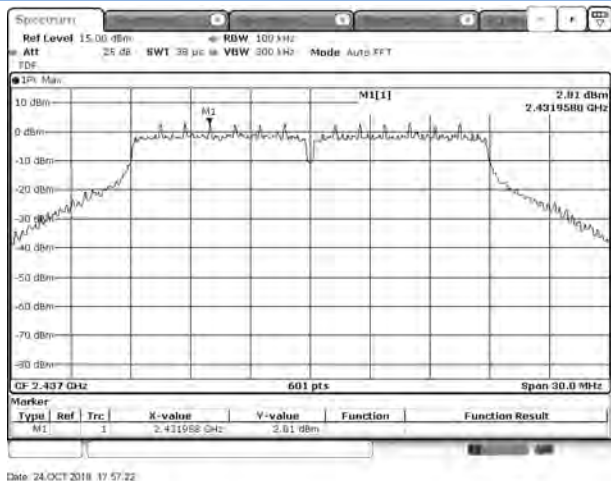
802.11n-20 LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



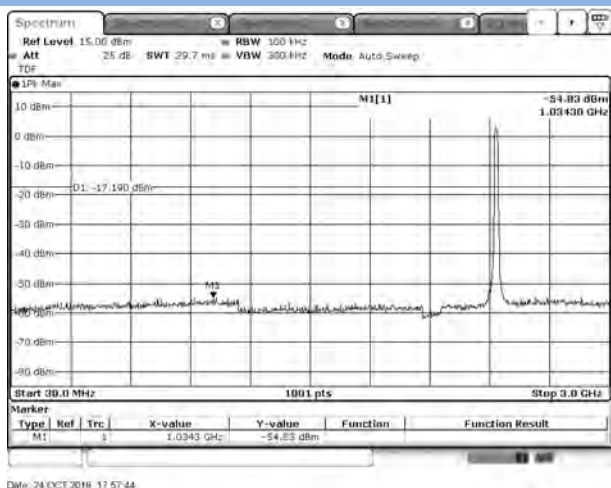
802.11n-20 LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



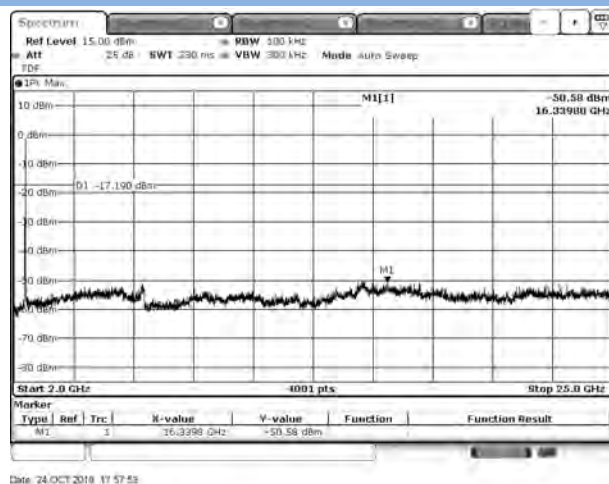
802.11n-20 MIDDLE CHANNEL CARRIER LEVEL



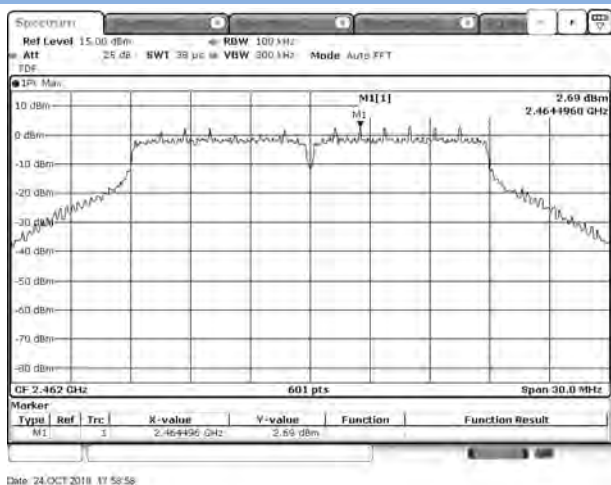
802.11n-20 MIDDLE CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



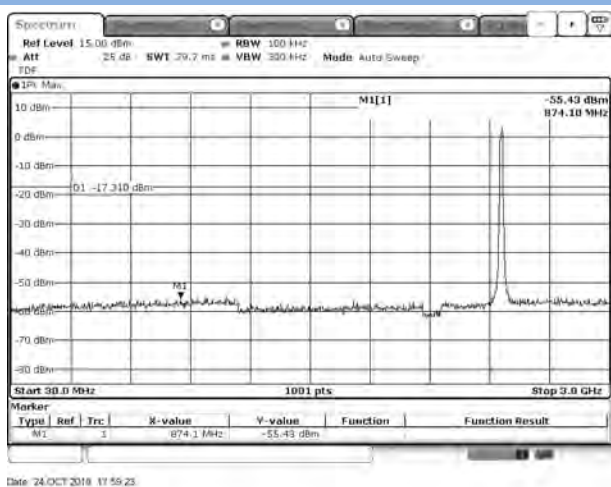
802.11n-20 MIDDLE CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



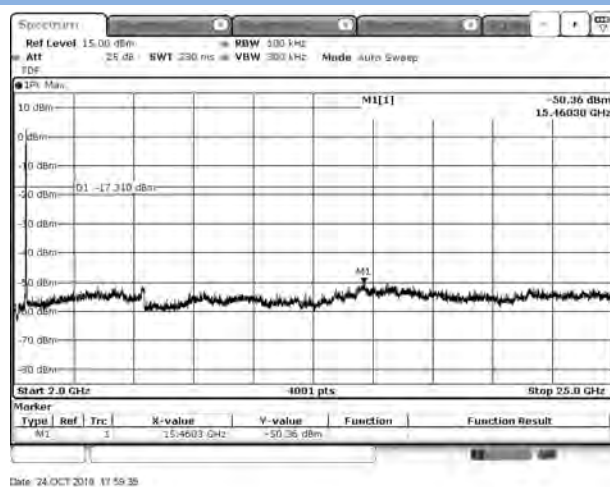
802.11n-20 HIGH CHANNEL CARRIER LEVEL



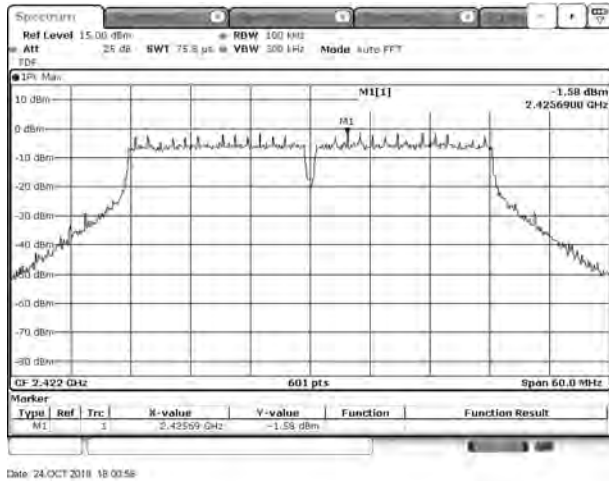
802.11n-20 HIGH CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



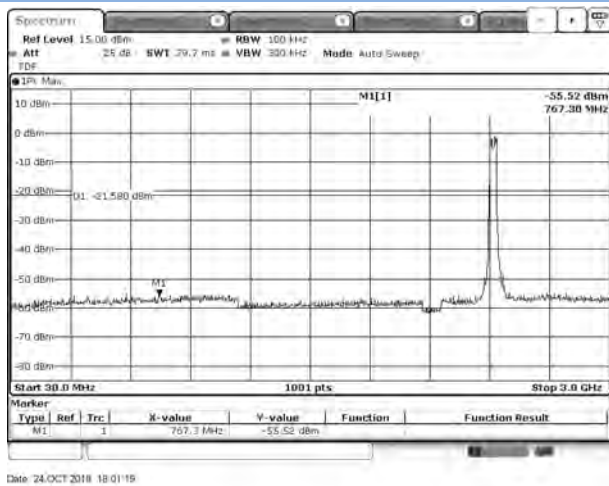
802.11n-20 HIGH CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



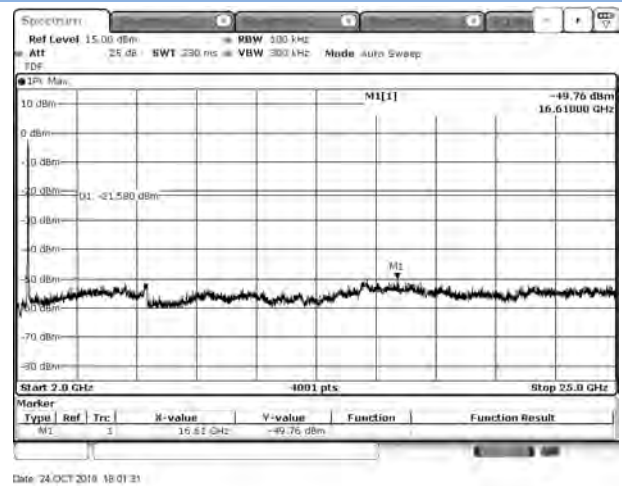
802.11n-40 LOW CHANNEL CARRIER LEVEL



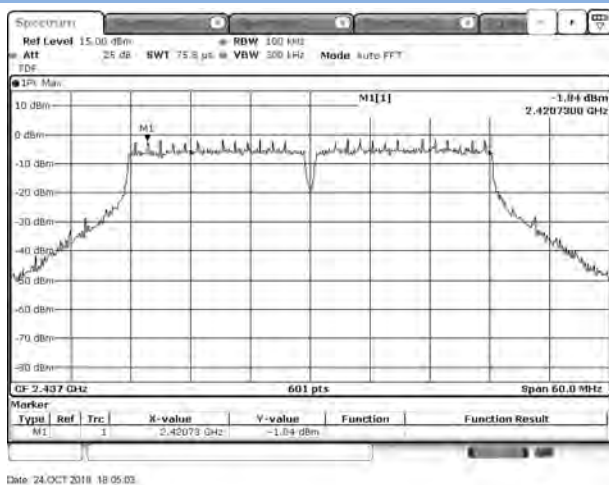
802.11n-40 LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



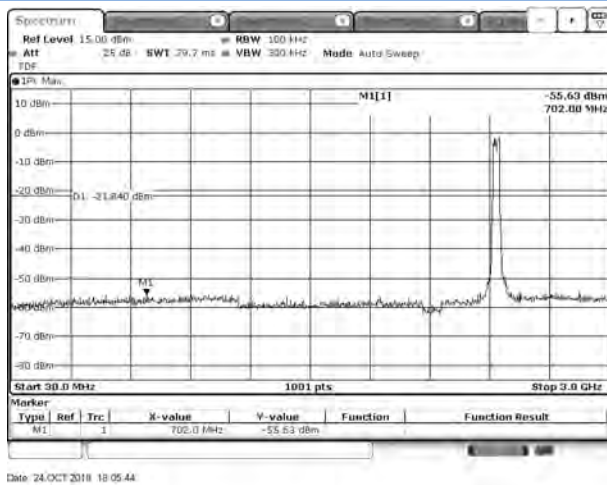
802.11n-40 LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



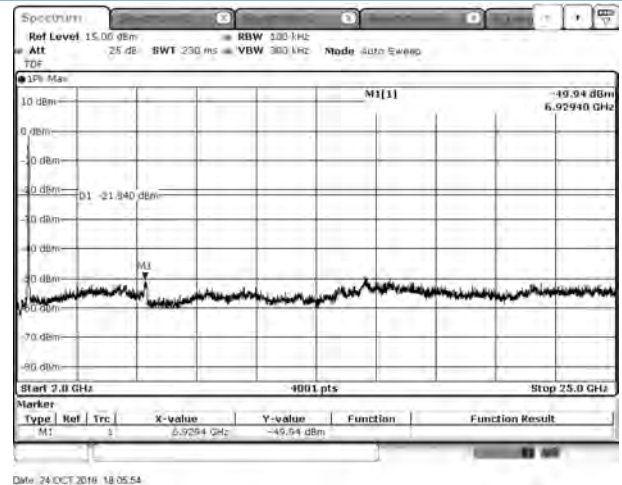
802.11n-40 MIDDLE CHANNEL CARRIER LEVEL



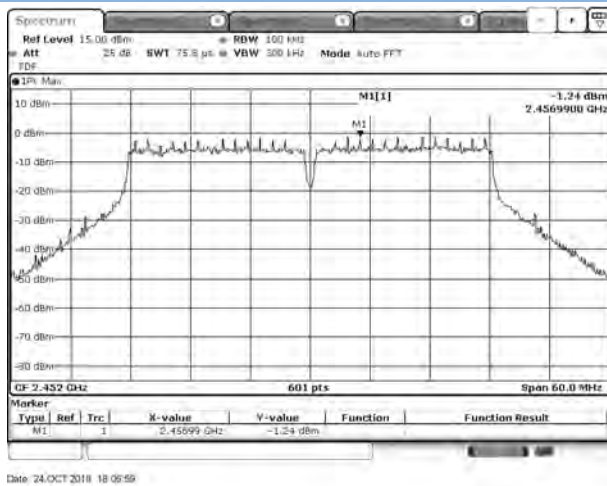
802.11n-40 MIDDLE CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



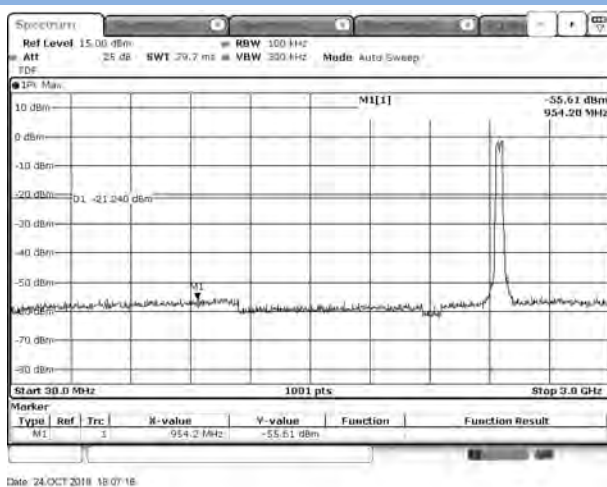
802.11n-40 MIDDLE CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



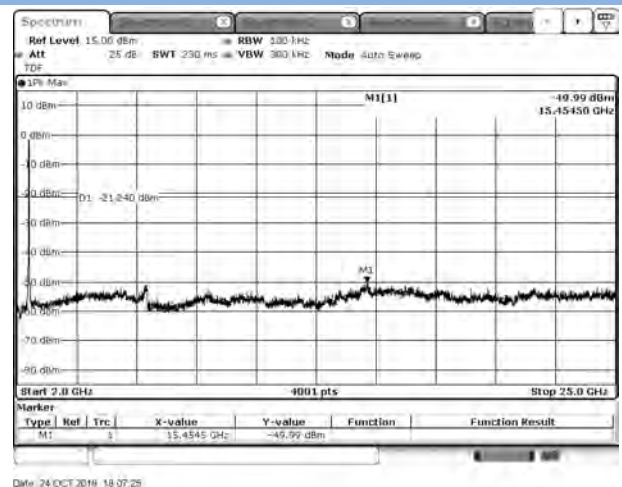
802.11n-40 HIGH CHANNEL CARRIER LEVEL



802.11n-40 HIGH CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



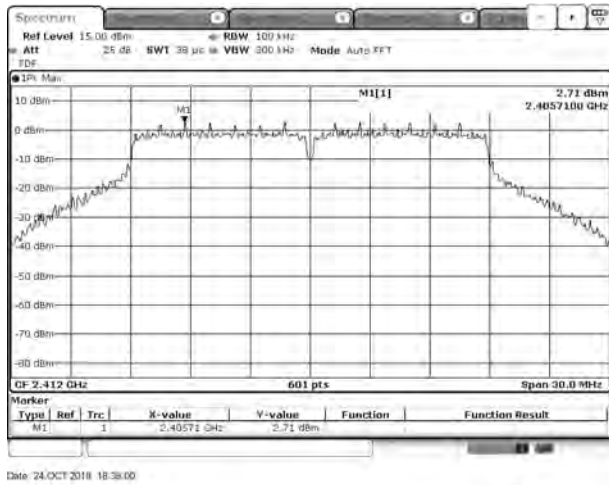
802.11n-40 HIGH CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



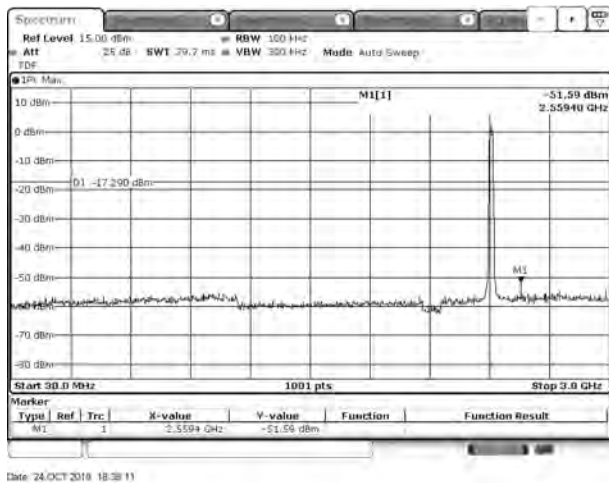
Test Plots

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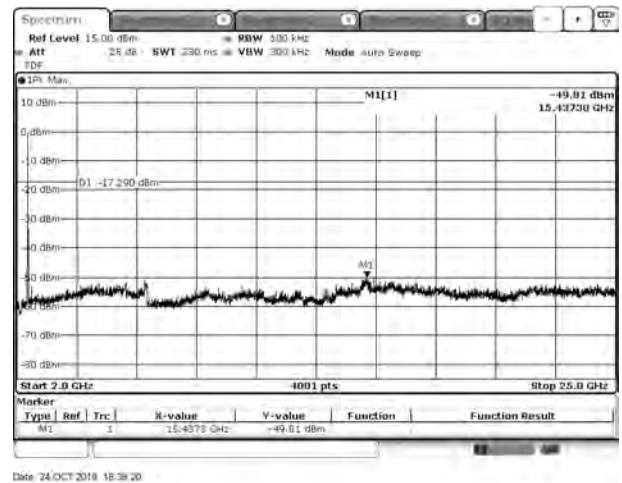
802.11n-20 LOW CHANNEL CARRIER LEVEL



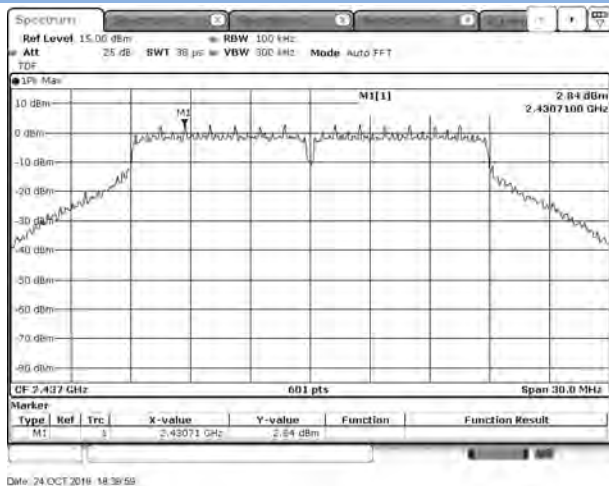
802.11n-20 LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz

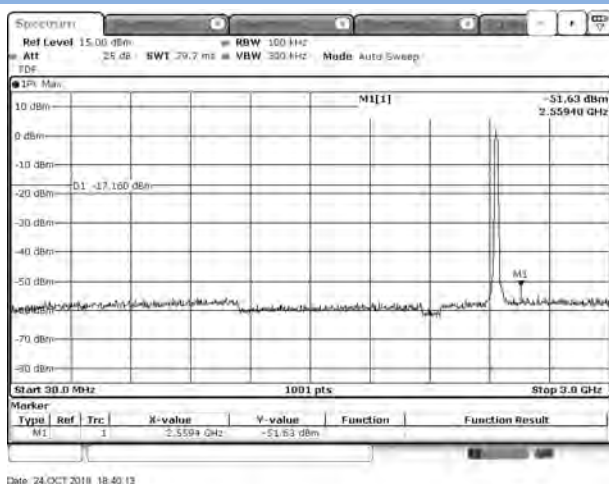
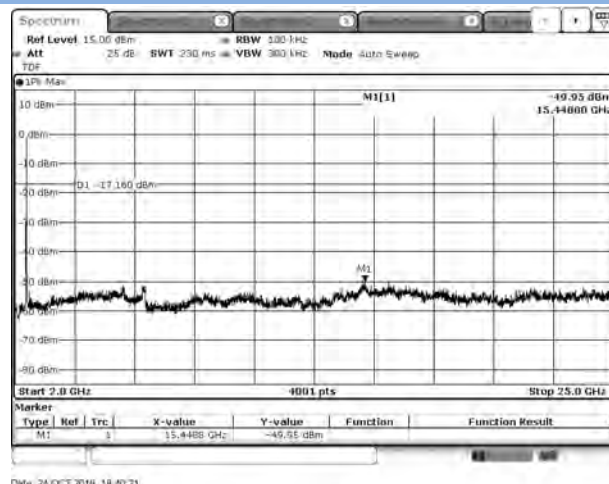


802.11n-20 LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz

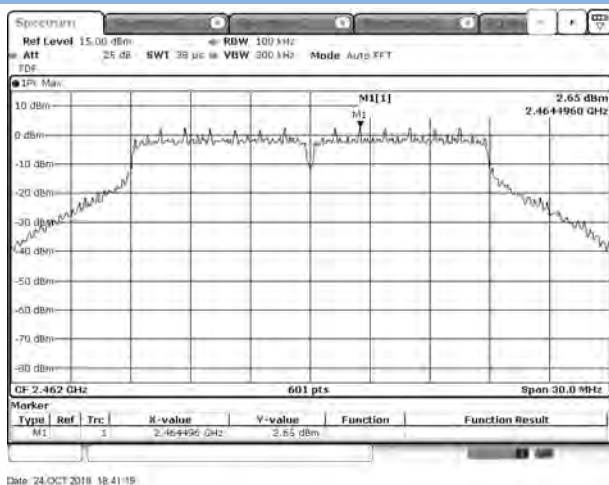
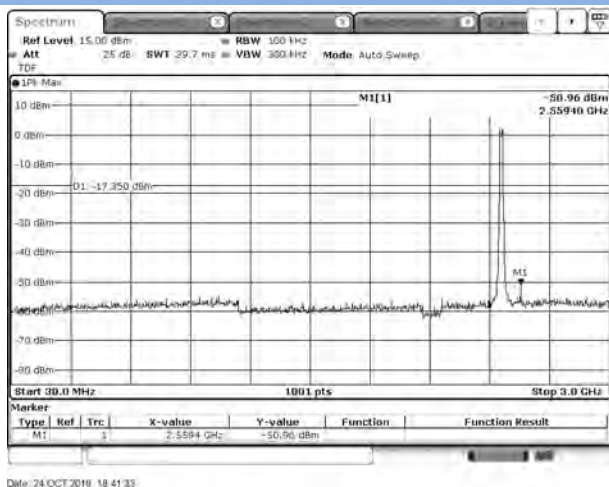
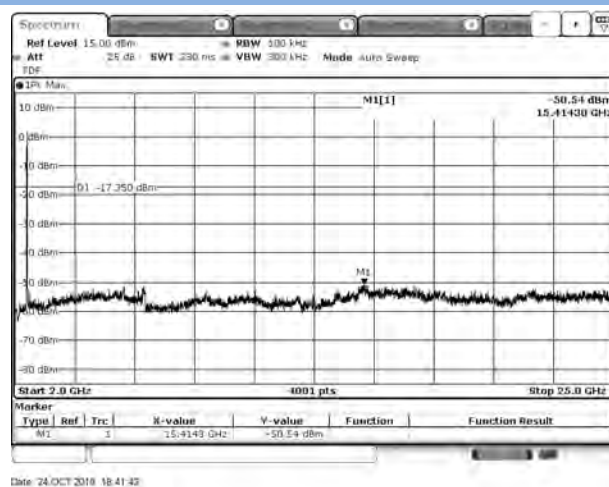


802.11n-20 MIDDLE CHANNEL CARRIER LEVEL

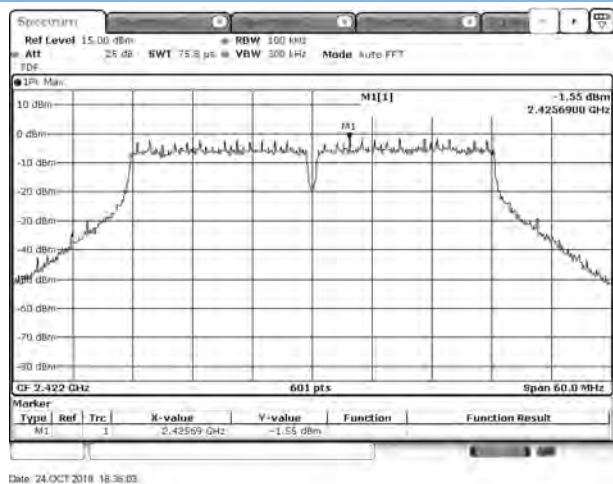


802.11n-20 MIDDLE CHANNEL, SPURIOUS
30 MHz ~ 3 GHz

802.11n-20 MIDDLE CHANNEL, SPURIOUS
2 GHz ~ 25 GHz


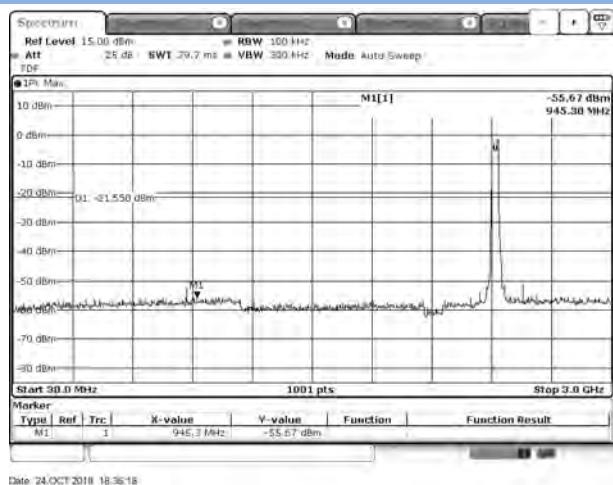
802.11n-20 HIGH CHANNEL CARRIER LEVEL


802.11n-20 HIGH CHANNEL, SPURIOUS
30 MHz ~ 3 GHz

802.11n-20 HIGH CHANNEL, SPURIOUS
2 GHz ~ 25 GHz


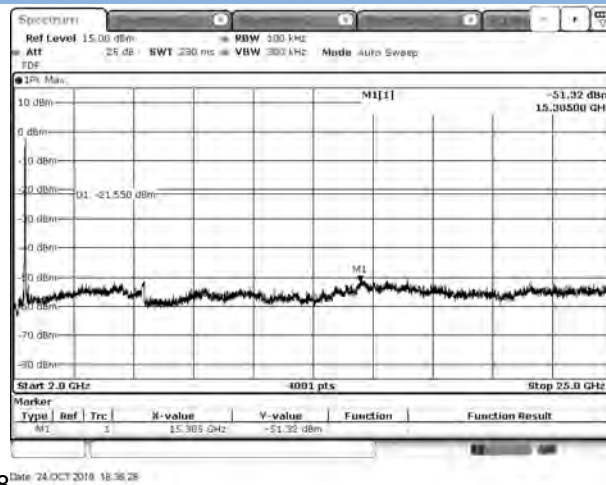
802.11n-40 LOW CHANNEL CARRIER LEVEL



802.11n-40 LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz

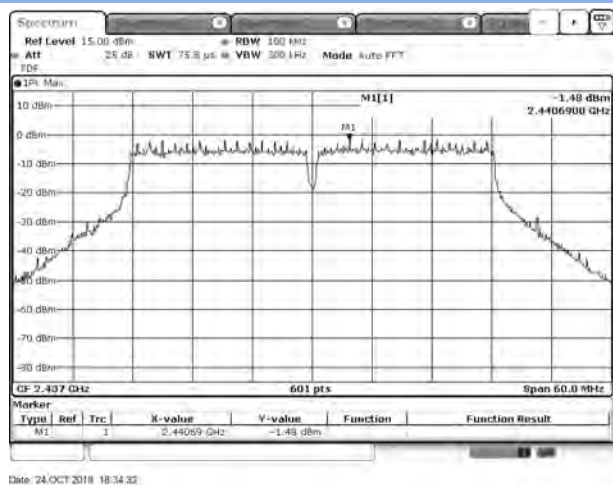


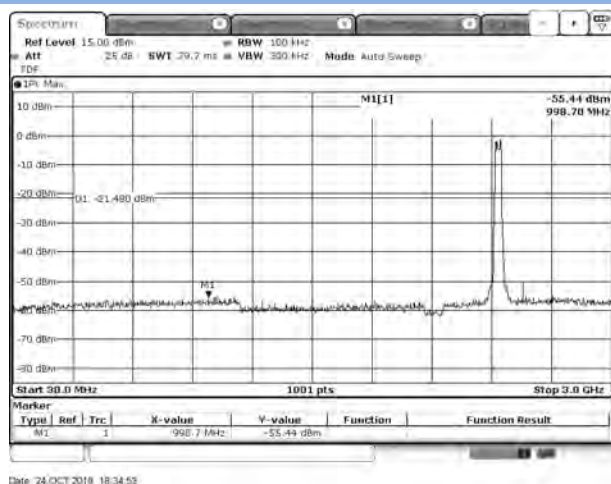
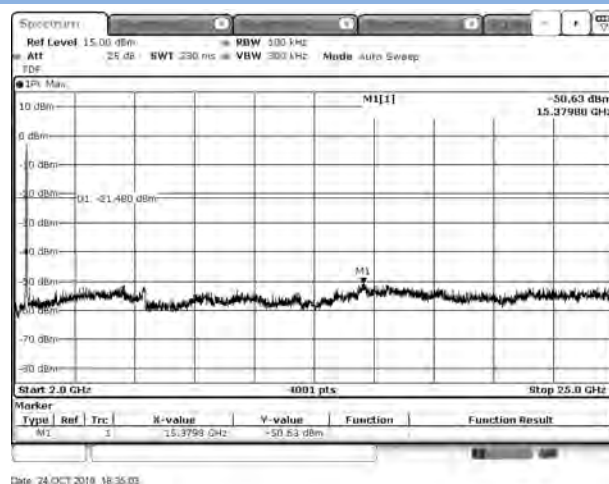
802.11n-40 LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



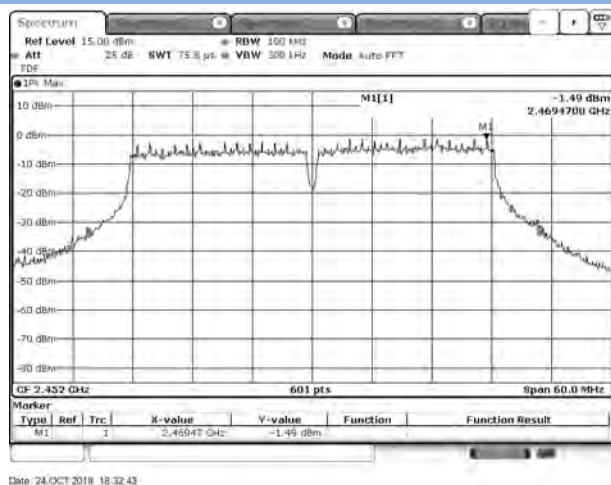
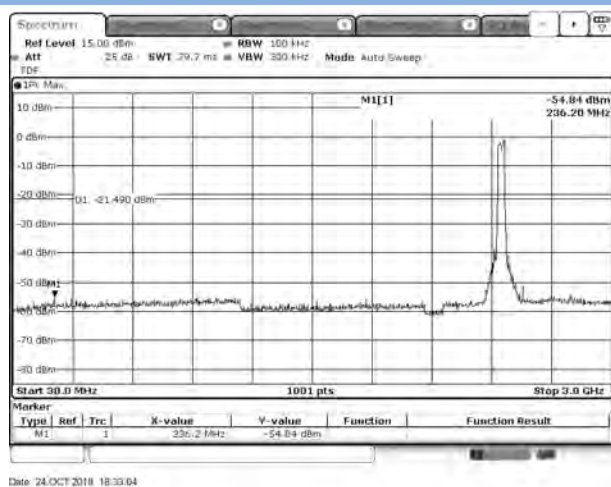
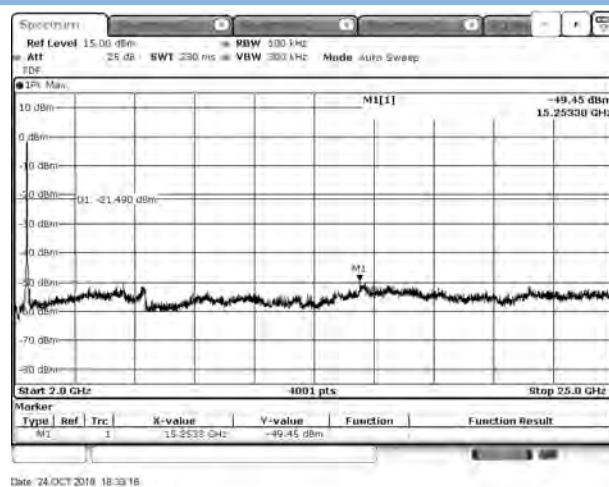
8

802.11n-40 MIDDLE CHANNEL CARRIER LEVEL



802.11n-40 MIDDLE CHANNEL, SPURIOUS
30 MHz ~ 3 GHz

802.11n-40 MIDDLE CHANNEL, SPURIOUS
2 GHz ~ 25 GHz


802.11n-40 HIGH CHANNEL CARRIER LEVEL


802.11n-40 HIGH CHANNEL, SPURIOUS
30 MHz ~ 3 GHz

802.11n-40 HIGH CHANNEL, SPURIOUS
2 GHz ~ 25 GHz


A.4 Band Edge (Authorized-band band-edge)

Test Data

Note: The 99% OBW of the fundamental emission is without 2 MHz of the authorized band.

SISIA NT0

802.11b Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-44.82	6.82	-13.18	Pass
High Channel	-49.22	7.16	-12.84	Pass

802.11g Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-23.05	5.29	-14.71	Pass
High Channel	-43.26	4.57	-15.43	Pass

802.11n-20 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-22.95	4.95	-15.05	Pass
High Channel	-36.45	5.75	-14.25	Pass

802.11n-40 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-24.77	1.00	-19.00	Pass
High Channel	-38.06	1.61	-18.39	Pass

SISI ANT1

802.11b Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-45.20	6.20	-13.80	Pass
High Channel	-50.11	5.55	-14.45	Pass

802.11g Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-23.89	4.11	-15.89	Pass
High Channel	-47.52	4.19	-15.81	Pass

802.11n-20 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-24.04	4.57	-15.43	Pass
High Channel	-46.21	4.43	-15.57	Pass

802.11n-40 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-24.95	1.39	-18.61	Pass
High Channel	-39.38	1.27	-18.73	Pass

MIMO ANT0

802.11n-20 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-27.27	1.43	-18.57	Pass
High Channel	-45.39	2.69	-17.31	Pass

802.11n-40 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-31.77	-1.58	-21.58	Pass
High Channel	-45.89	-1.24	-21.24	Pass

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802.11n-20 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-32.06	2.71	-17.29	Pass
High Channel	-44.13	2.65	-17.35	Pass

802.11n-40 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-26.87	-1.55	-21.55	Pass
High Channel	-47.15	-1.49	-21.49	Pass

Test Plots

SISO ANT0

802.11b LOW CHANNEL, Carrier level



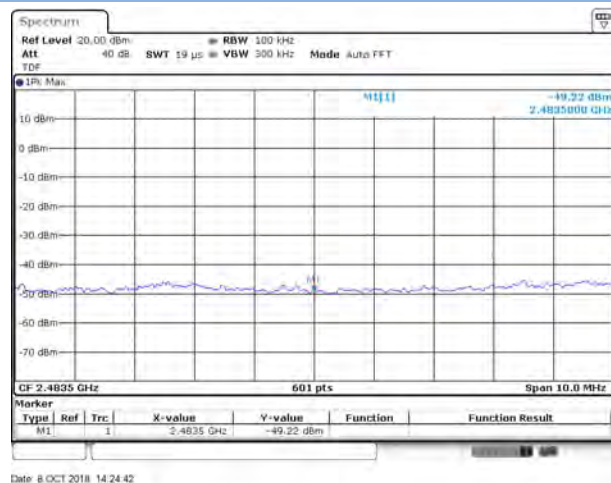
802.11b LOW CHANNEL, Reference level



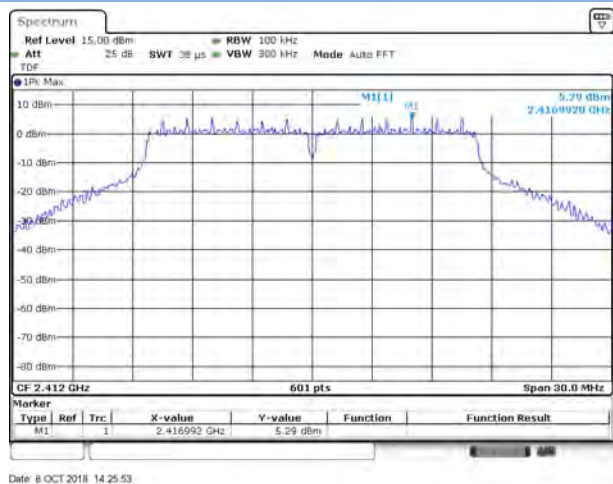
802.11b HIGH CHANNEL, Carrier level



802.11b HIGH CHANNEL, Reference level



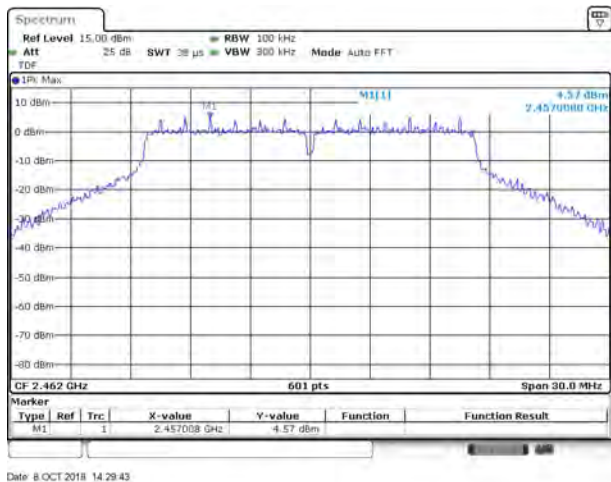
802.11g LOW CHANNEL, Carrier level



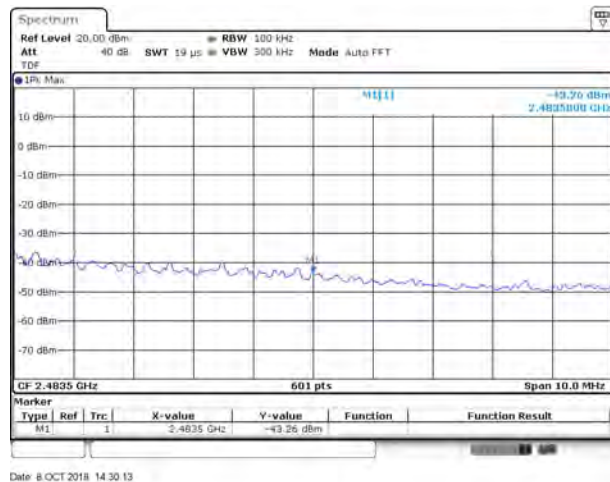
802.11g LOW CHANNEL, Reference level



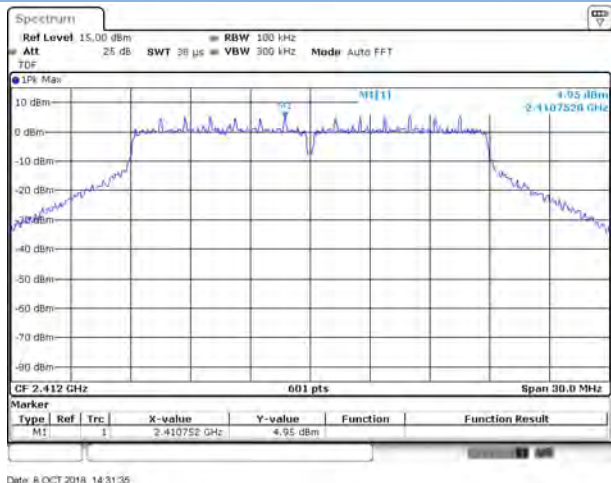
802.11g HIGH CHANNEL, Carrier level



802.11g HIGH CHANNEL, Reference level



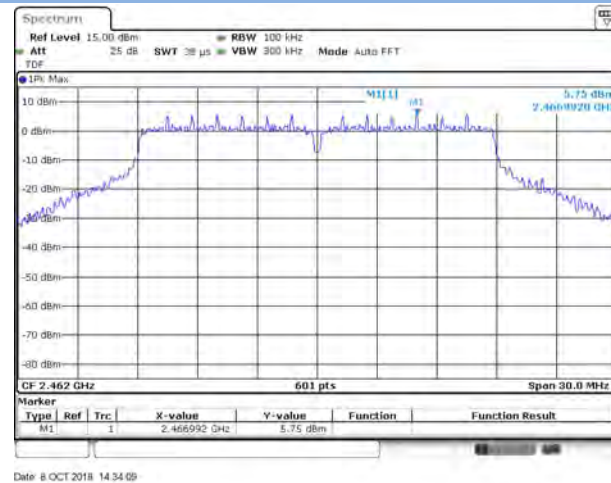
802.11n-20 MHz LOW CHANNEL, Carrier level



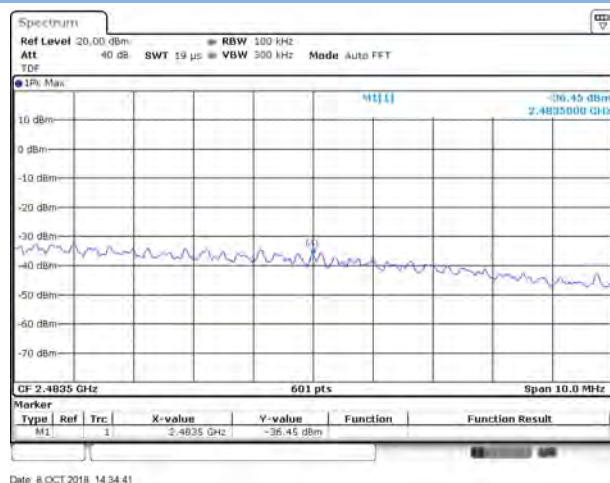
802.11n-20 MHz LOW CHANNEL, Reference level



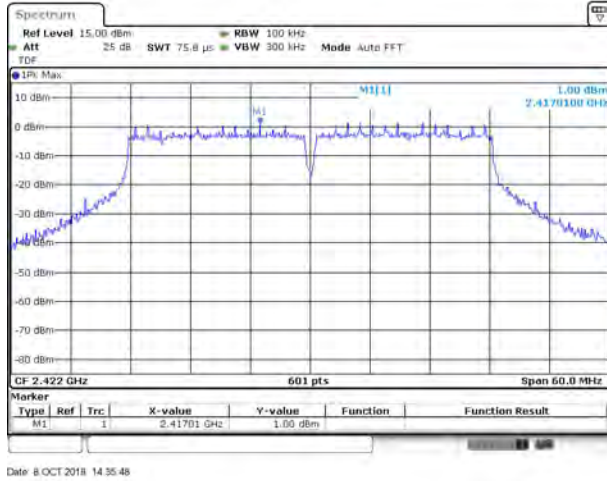
802.11n-20 MHz HIGH CHANNEL, Carrier level



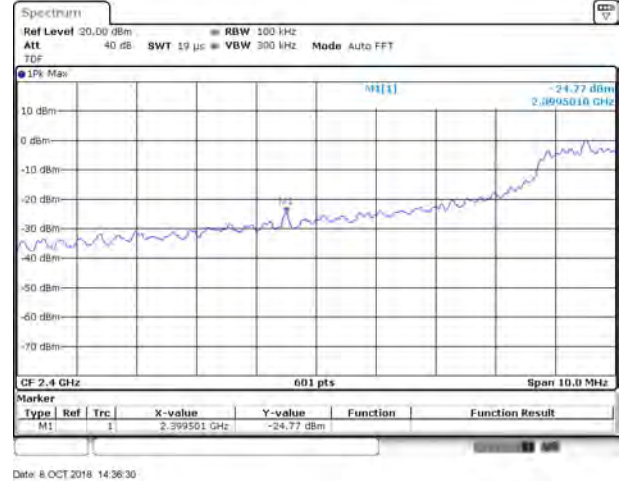
802.11n-20 MHz HIGH CHANNEL, Reference level



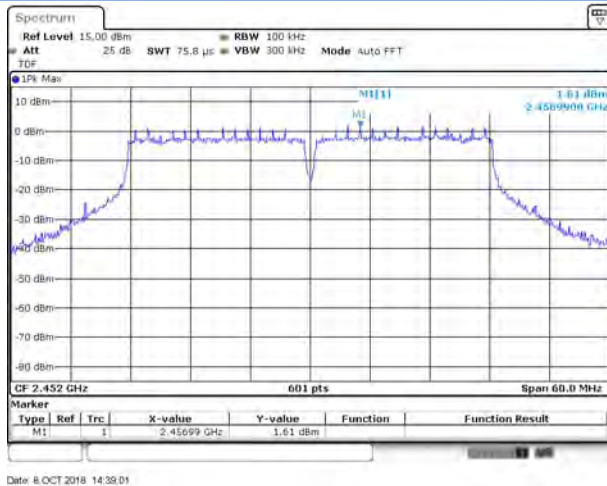
802.11n-40 MHz LOW CHANNEL, Carrier level



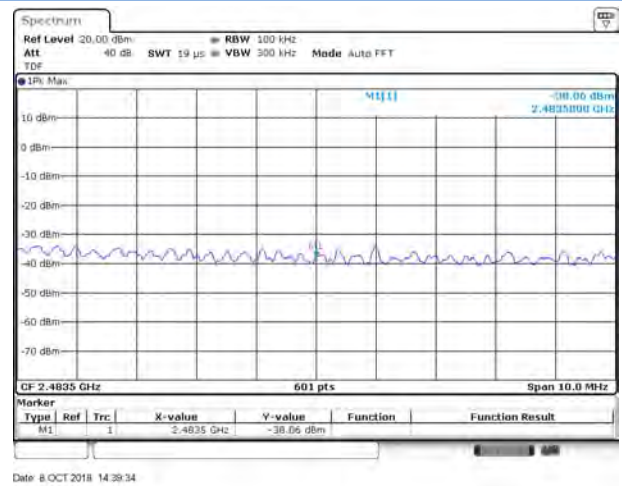
802.11n-40 MHz LOW CHANNEL, Reference level



802.11n-40 MHz HIGH CHANNEL, Carrier level



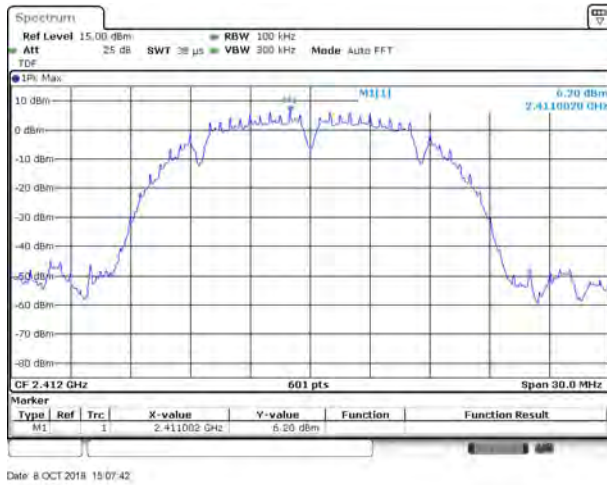
802.11n-40 MHz HIGH CHANNEL, Reference level



Test Plots

SISO ANT1

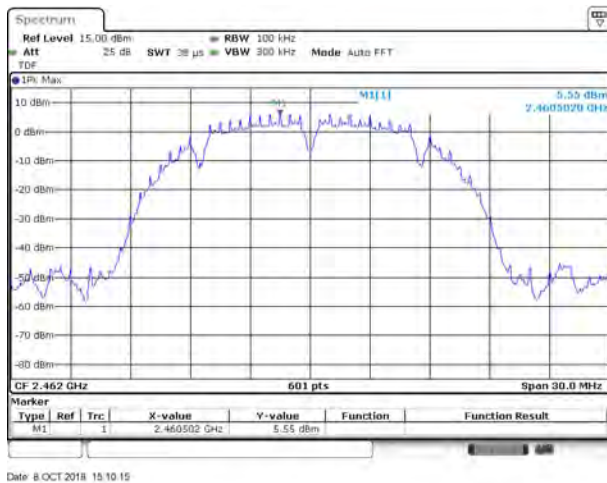
802.11b LOW CHANNEL, Carrier level



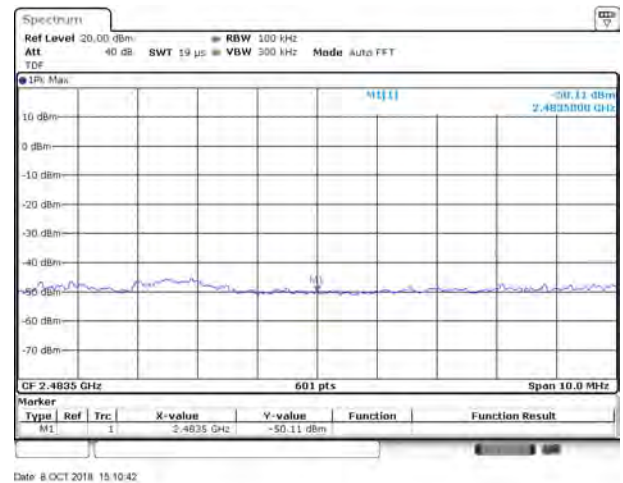
802.11b LOW CHANNEL, Reference level



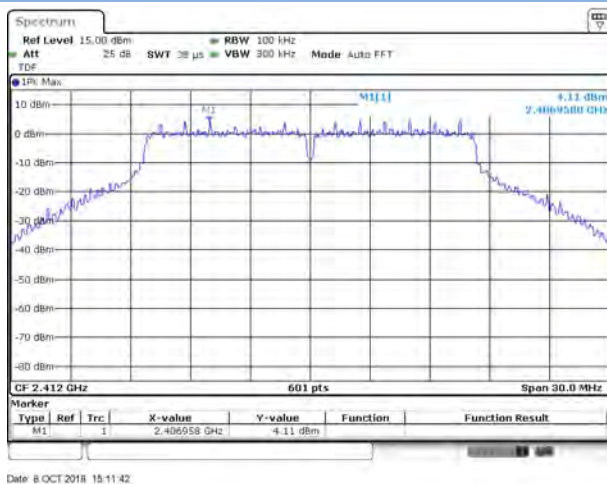
802.11b HIGH CHANNEL, Carrier level



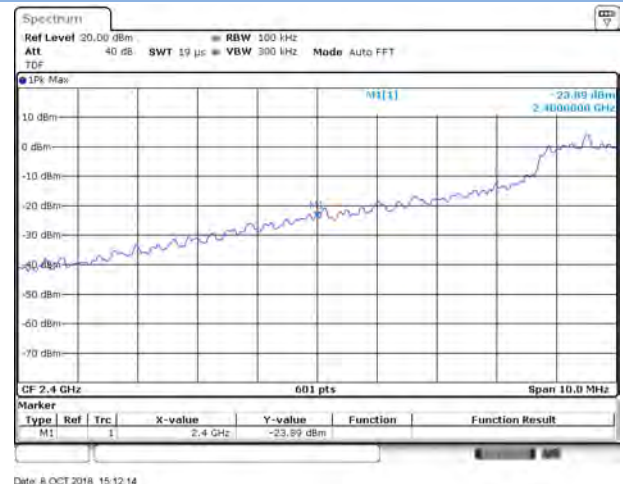
802.11b HIGH CHANNEL, Reference level



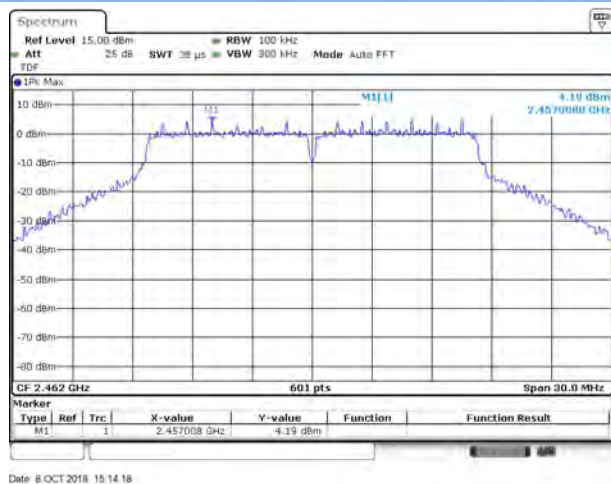
802.11g LOW CHANNEL, Carrier level



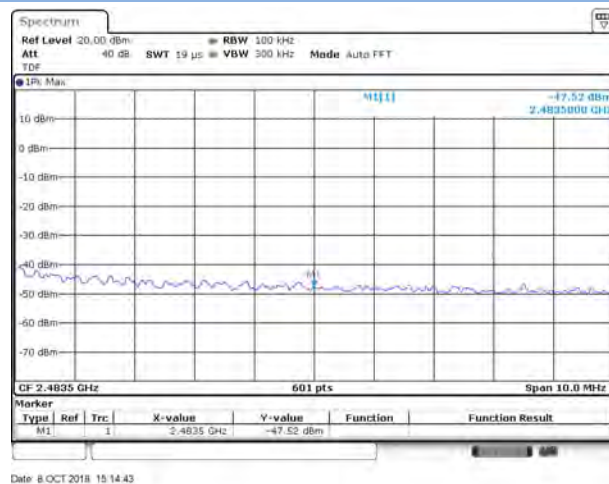
802.11g LOW CHANNEL, Reference level



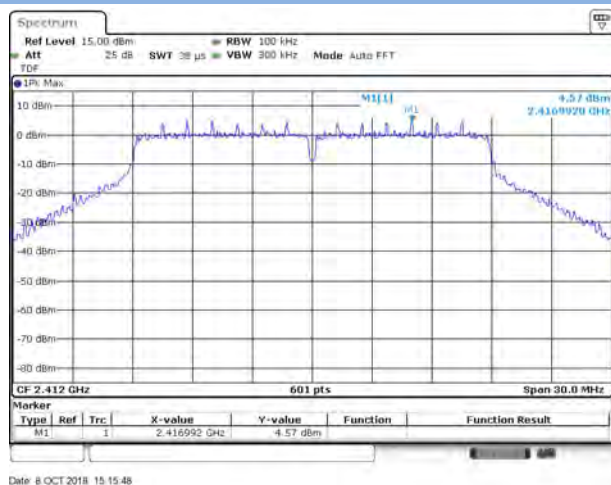
802.11g HIGH CHANNEL, Carrier level



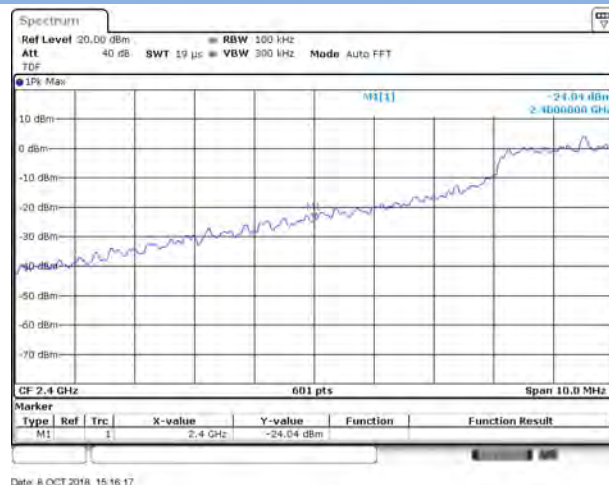
802.11g HIGH CHANNEL, Reference level



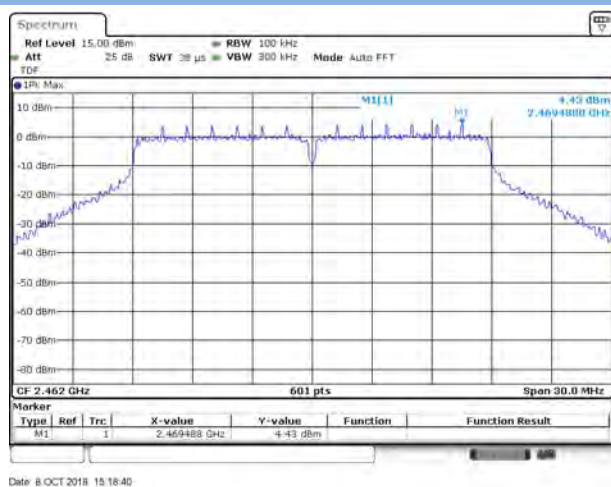
802.11n-20 MHz LOW CHANNEL, Carrier level



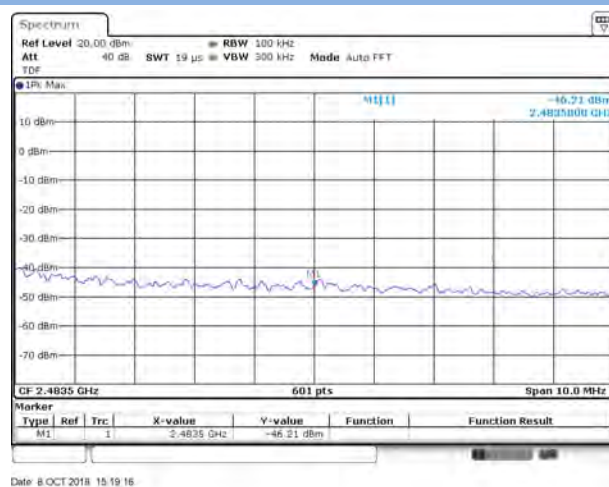
802.11n-20 MHz LOW CHANNEL, Reference level



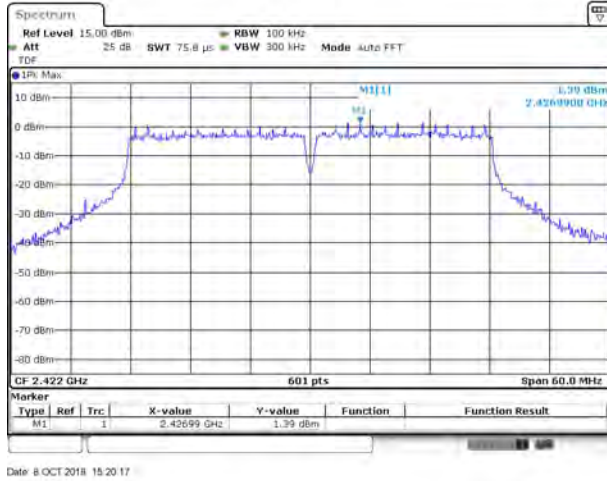
802.11n-20 MHz HIGH CHANNEL, Carrier level



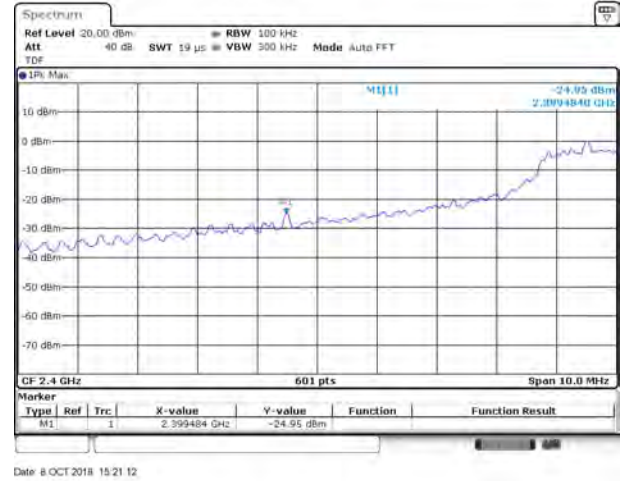
802.11n-20 MHz HIGH CHANNEL, Reference level



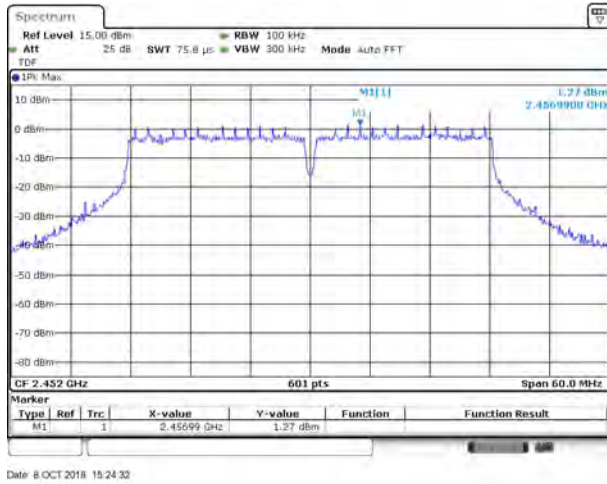
802.11n-40 MHz LOW CHANNEL, Carrier level



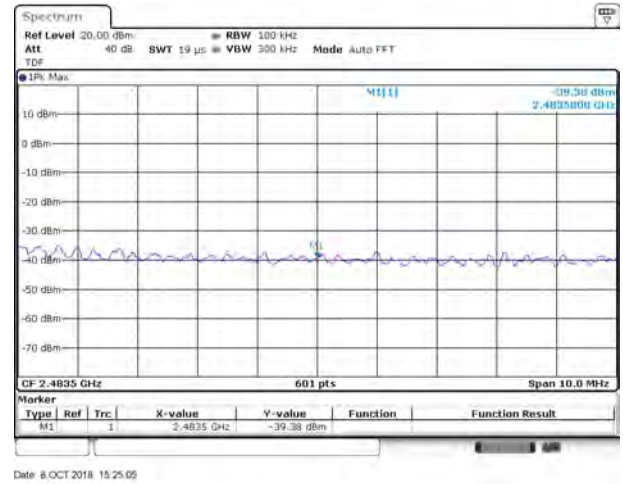
802.11n-40 MHz LOW CHANNEL, Reference level



802.11n-40 MHz HIGH CHANNEL, Carrier level



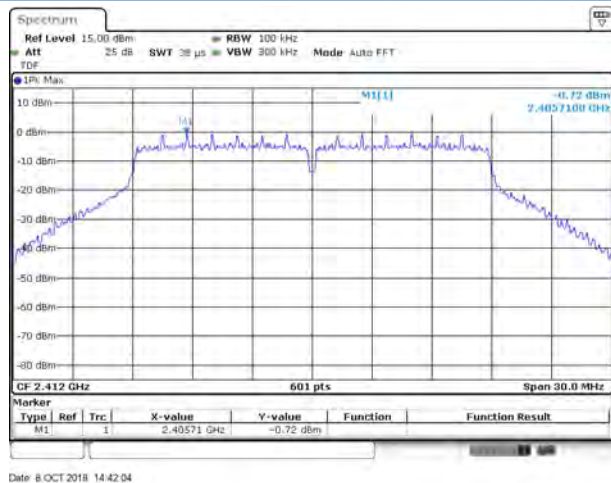
802.11n-40 MHz HIGH CHANNEL, Reference level



Test Plots

MIMO ANTO

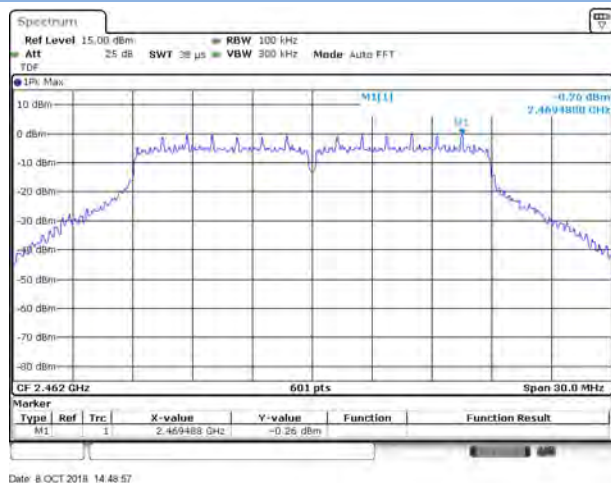
802.11n-20 MHz LOW CHANNEL, Carrier level



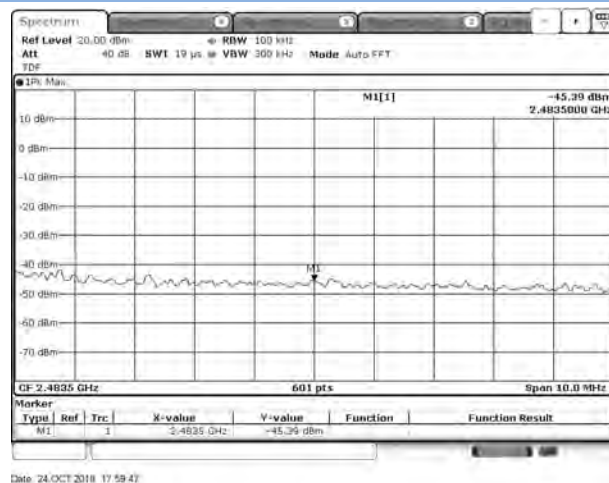
802.11n-20 MHz LOW CHANNEL, Reference level



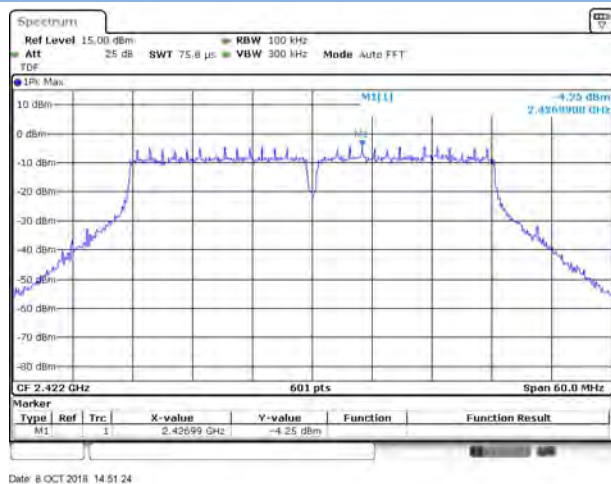
802.11n-20 MHz HIGH CHANNEL, Carrier level



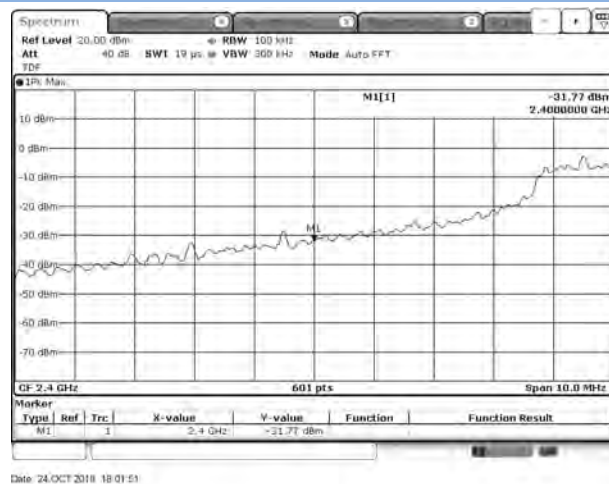
802.11n-20 MHz HIGH CHANNEL, Reference level



802.11n-40 MHz LOW CHANNEL, Carrier level

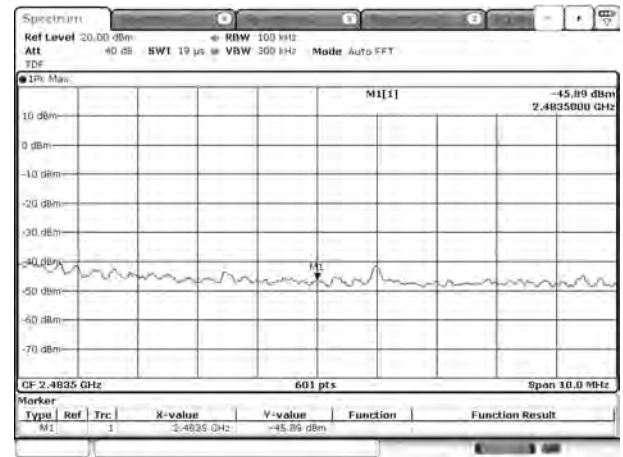
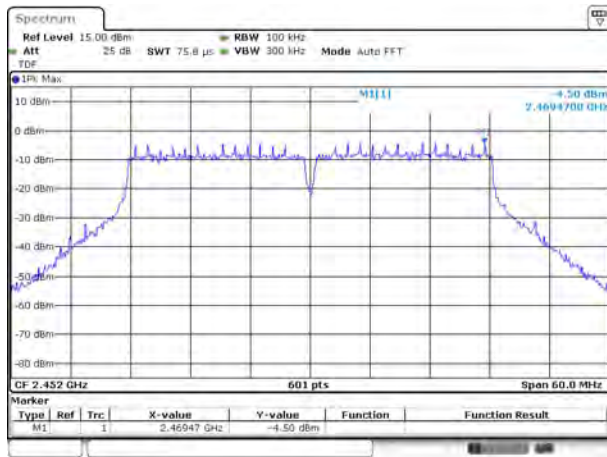


802.11n-40 MHz LOW CHANNEL, Reference level



802.11n-40 MHz HIGH CHANNEL, Carrier level

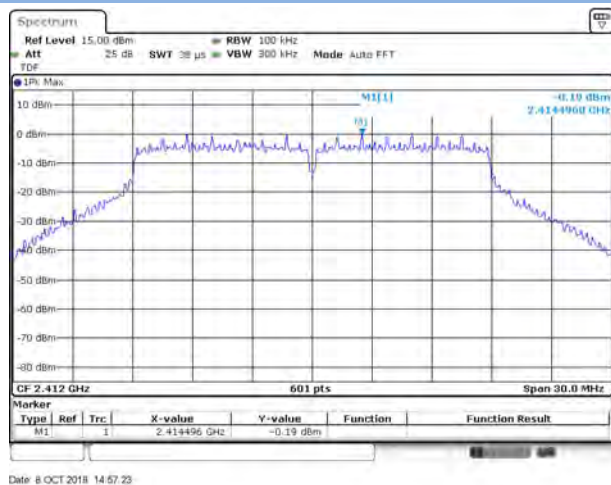
802.11n-40 MHz HIGH CHANNEL, Reference level



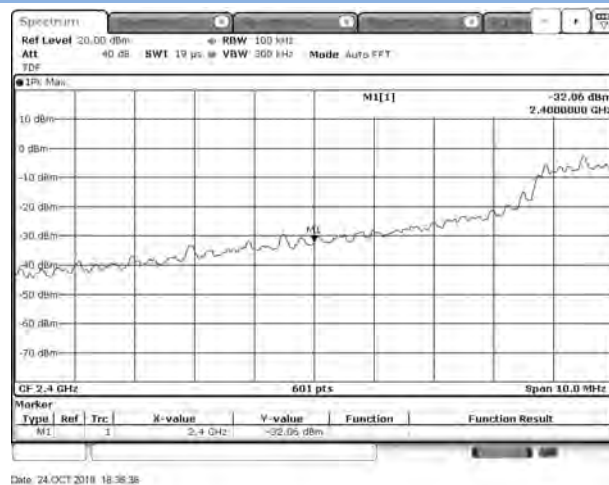
Test Plots

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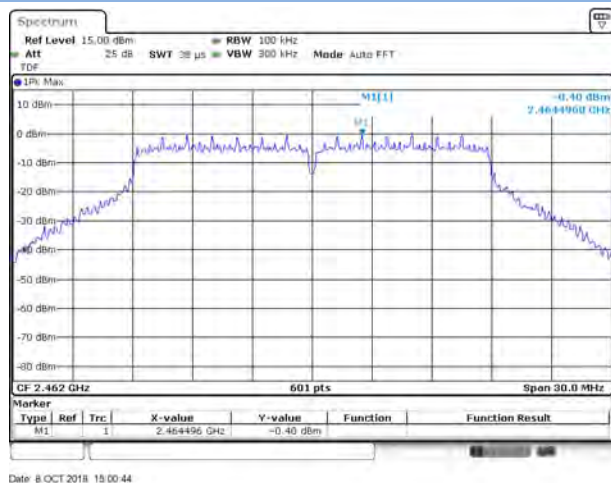
802.11n-20 MHz LOW CHANNEL, Carrier level



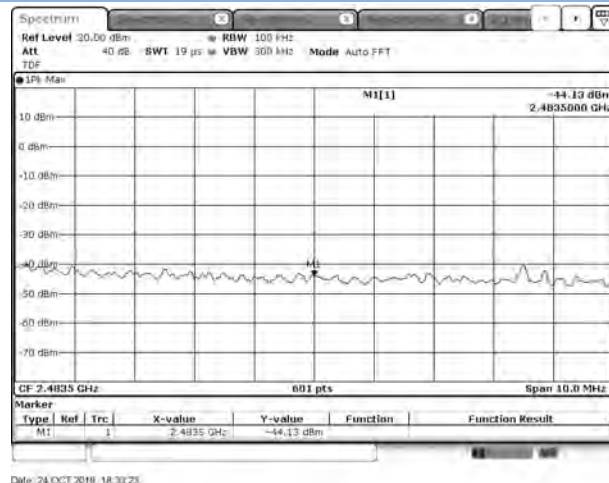
802.11n-20 MHz LOW CHANNEL, Reference level



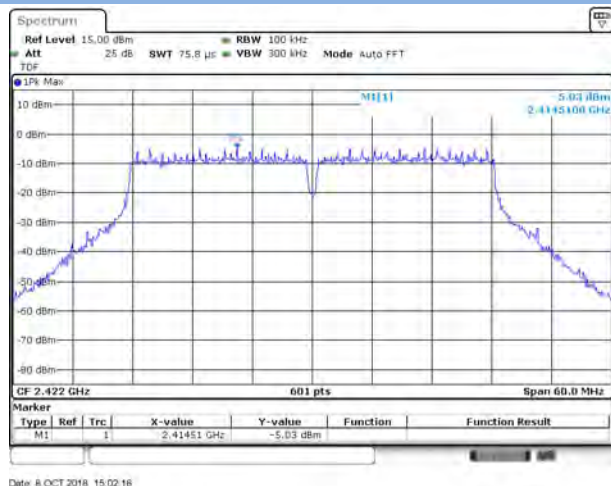
802.11n-20 MHz HIGH CHANNEL, Carrier level



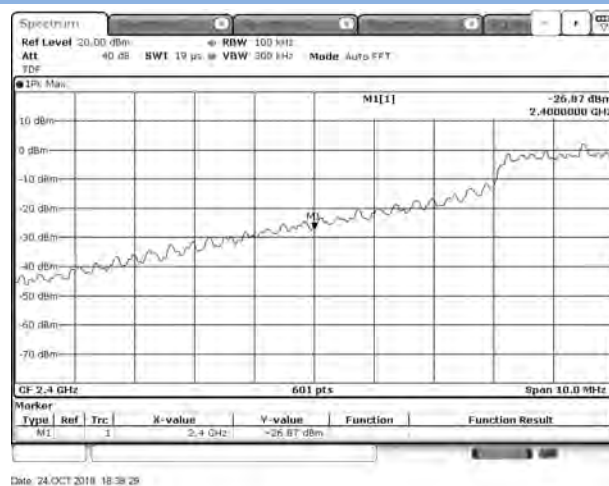
802.11n-20 MHz HIGH CHANNEL, Reference level



802.11n-40 MHz LOW CHANNEL, Carrier level

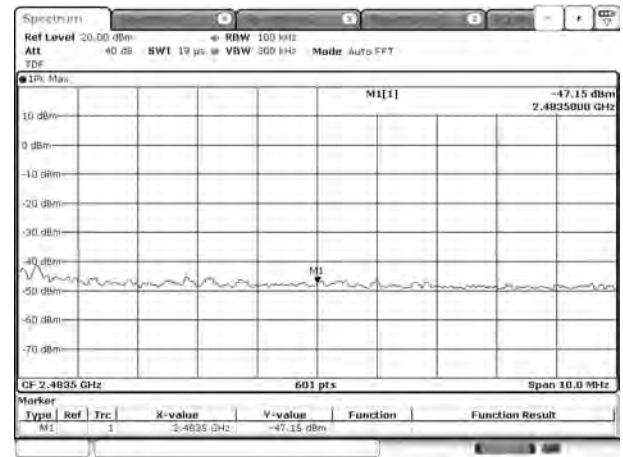
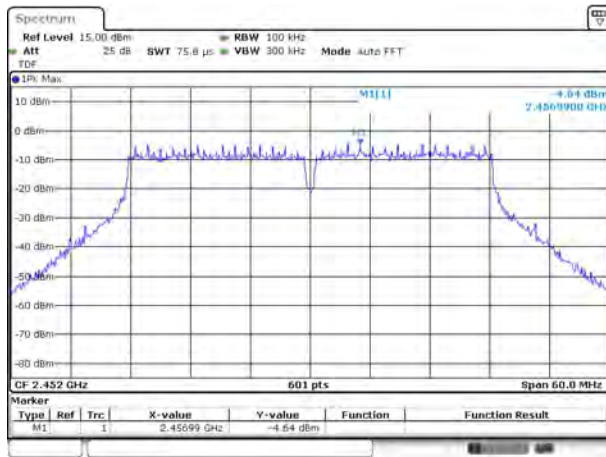


802.11n-40 MHz LOW CHANNEL, Reference level



802.11n-40 MHz HIGH CHANNEL, Carrier level

802.11n-40 MHz HIGH CHANNEL, Reference level

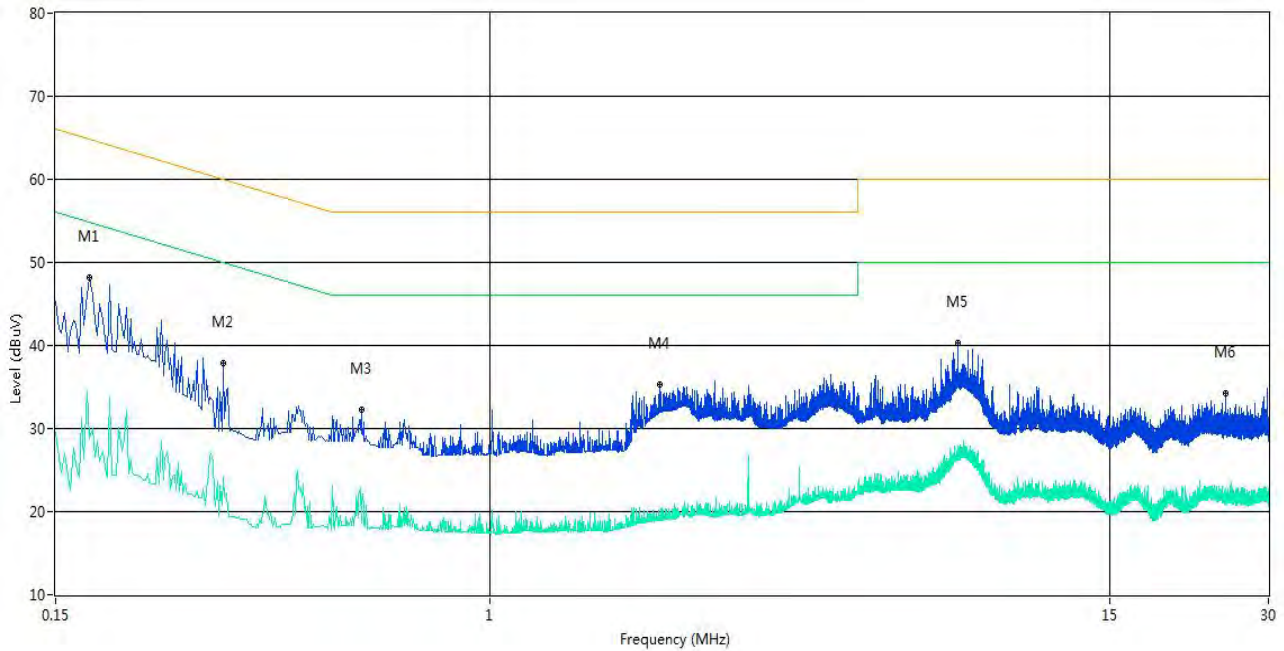


A.5 Conducted Emissions

Note ¹: The EUT is working in the Normal link mode.

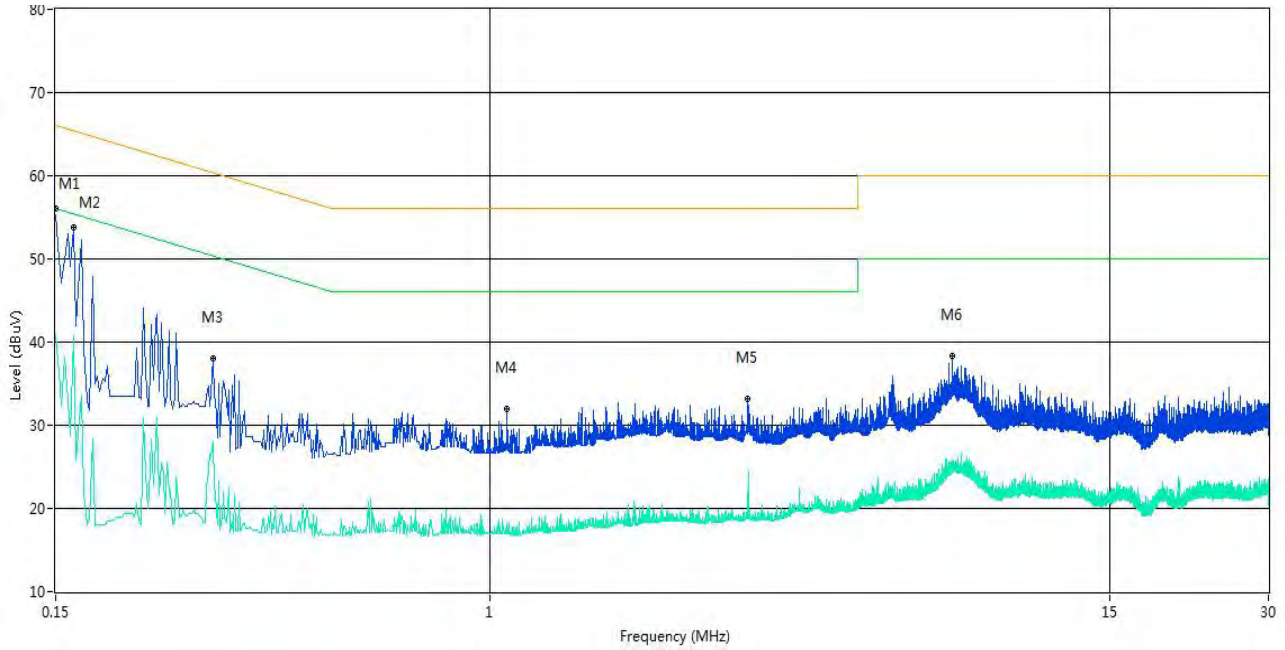
Test Data and Plots

PHASE L



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.174	48.2	10.04	64.8	-16.60	Peak	L Line	Pass
1**	0.174	28.9	10.04	54.8	-25.90	AV	L Line	Pass
2	0.312	37.8	10.04	59.9	-22.10	Peak	L Line	Pass
2**	0.312	24.2	10.04	49.9	-25.70	AV	L Line	Pass
3	0.570	32.3	10.05	56.0	-23.70	Peak	L Line	Pass
3**	0.570	18.7	10.05	46.0	-27.30	AV	L Line	Pass
4	2.102	35.4	10.09	56.0	-20.60	Peak	L Line	Pass
4**	2.102	19.6	10.09	46.0	-26.40	AV	L Line	Pass
5	7.714	40.3	10.25	60.0	-19.70	Peak	L Line	Pass
5**	7.714	27.0	10.25	50.0	-23.00	AV	L Line	Pass
6	24.918	34.3	10.73	60.0	-25.70	Peak	L Line	Pass
6**	24.918	22.3	10.73	50.0	-27.70	AV	L Line	Pass

PHASE N



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.150	55.3	10.04	66.0	-10.70	Peak	N Line	Pass
1**	0.150	40.9	10.04	56.0	-15.10	AV	N Line	Pass
2	0.162	53.7	10.04	65.4	-11.70	Peak	N Line	Pass
2**	0.162	40.8	10.04	55.4	-14.60	AV	N Line	Pass
3	0.298	38.1	10.04	60.3	-22.20	Peak	N Line	Pass
3**	0.298	28.0	10.04	50.3	-22.30	AV	N Line	Pass
4	1.078	31.9	10.06	56.0	-24.10	Peak	N Line	Pass
4**	1.078	17.3	10.06	46.0	-28.70	AV	N Line	Pass
5	3.088	33.1	10.12	56.0	-22.90	Peak	N Line	Pass
5**	3.088	21.4	10.12	46.0	-24.60	AV	N Line	Pass
6	7.526	38.3	10.24	60.0	-21.70	Peak	N Line	Pass
6**	7.526	25.4	10.24	50.0	-24.60	AV	N Line	Pass

A.6 Radiated Emission

Note¹: The symbol of “--” in the table which means not application.

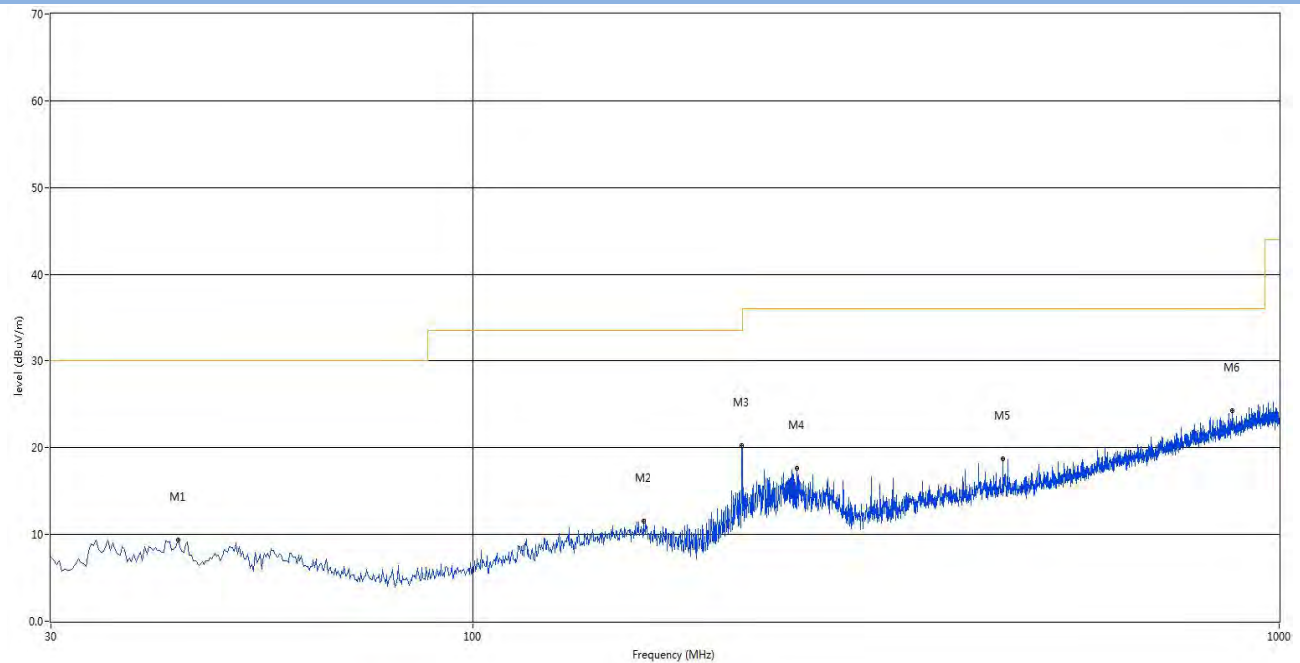
Note²: For the test data above 1 GHz, According the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note³: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

Note⁴: The EUT is working in the Normal link mode below 1 GHz.

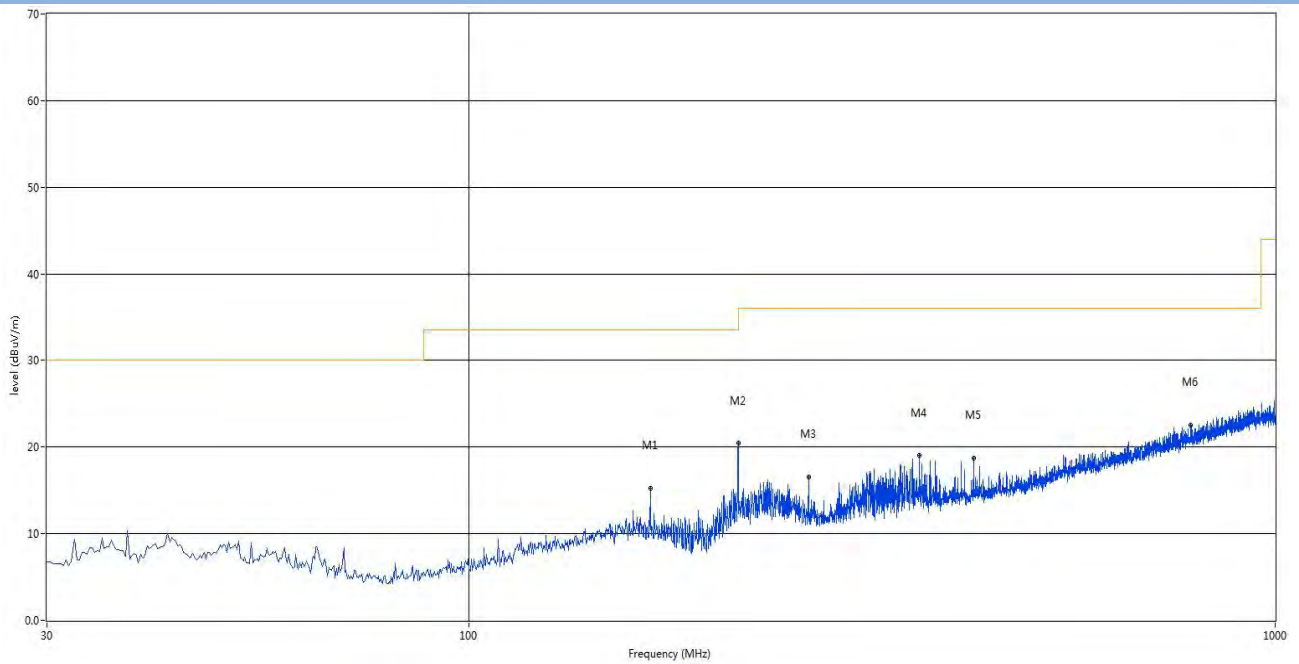
Test Data and Plots

30 MHz to 1 GHz, ANT H



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	43.095	9.40	-26.79	30.0	-20.60	Peak	268.00	100	Horizontal	Pass
2	162.890	11.51	-26.04	33.5	-21.99	Peak	300.00	400	Horizontal	Pass
3	215.755	20.28	-28.87	33.5	-13.22	Peak	237.00	400	Horizontal	Pass
4	252.615	17.60	-27.26	36.0	-18.40	Peak	268.00	400	Horizontal	Pass
5	454.133	18.75	-21.49	36.0	-17.25	Peak	92.00	200	Horizontal	Pass
6	875.355	24.27	-12.67	36.0	-11.73	Peak	48.00	100	Horizontal	Pass

30 MHz to 1 GHz, ANT V



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	167.982	15.22	-26.51	33.5	-18.28	Peak	85.00	100	V	Pass
2	215.998	20.42	-28.82	33.5	-13.08	Peak	293.00	100	V	Pass
3	264.013	16.51	-27.10	36.0	-19.49	Peak	360.00	200	V	Pass
4	362.225	19.00	-24.11	36.0	-17.00	Peak	186.00	100	V	Pass
5	422.608	18.75	-22.25	36.0	-17.25	Peak	180.00	400	V	Pass
6	785.873	22.52	-14.24	36.0	-13.48	Peak	161.00	200	V	Pass

Note 1: The marked spikes near 2400 MHz with circle should be ignored because they are Fundamental signal.

Note 2: The spurious from 12.75G-25G is noise only, do not show on the report.

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1 GHz to 12.75 GHz, ANT H 802.11b Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1423.500	25.34	-15.14	54.0	-28.66	AV	0.00	150	H	Pass
1	1423.500	36.41	-15.14	74.0	-37.59	Peak	0.00	150	H	Pass
2**	2415.000	89.95	-10.61	54.0	35.95	AV	78.00	150	H	N/A
2	2415.000	94.13	-10.61	74.0	20.13	Peak	78.00	150	H	N/A
3**	4040.000	34.72	-4.67	54.0	-19.28	AV	293.00	150	H	Pass
3	4040.000	45.22	-4.67	74.0	-28.78	Peak	293.00	150	H	Pass
4**	5687.000	38.74	0.05	54.0	-15.26	AV	88.00	150	H	Pass
4	5687.000	49.76	0.05	74.0	-24.24	Peak	88.00	150	H	Pass
5**	7461.437	40.77	17.06	54.0	-13.23	AV	62.00	150	H	Pass
5	7461.437	52.12	17.06	74.0	-21.88	Peak	62.00	150	H	Pass
6**	12458.188	45.68	20.89	54.0	-8.32	AV	352.00	150	H	Pass
6	12458.188	56.30	20.89	74.0	-17.70	Peak	352.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11b Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1314.000	25.62	-14.85	54.0	-28.38	AV	302.00	150	V	Pass
1	1314.000	36.91	-14.85	74.0	-37.09	Peak	302.00	150	V	Pass
2**	2415.000	90.17	-10.61	54.0	36.17	AV	34.00	150	V	N/A
2	2415.000	94.51	-10.61	74.0	20.51	Peak	34.00	150	V	N/A
3**	3565.000	34.36	-5.45	54.0	-19.64	AV	0.00	150	V	Pass
3	3565.000	44.27	-5.45	74.0	-29.73	Peak	0.00	150	V	Pass
4**	4824.000	37.87	-1.40	54.0	-16.13	AV	32.00	150	V	Pass
4	4824.000	48.55	-1.40	74.0	-25.45	Peak	32.00	150	V	Pass
5**	8053.687	41.66	18.28	54.0	-12.34	AV	171.00	150	V	Pass
5	8053.687	52.63	18.28	74.0	-21.37	Peak	171.00	150	V	Pass
6**	12445.250	45.63	20.99	54.0	-8.37	AV	207.00	150	V	Pass
6	12445.250	56.78	20.99	74.0	-17.22	Peak	207.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11b Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1335.500	25.70	-15.02	54.0	-28.30	AV	0.00	150	H	Pass
1	1335.500	36.27	-15.02	74.0	-37.73	Peak	0.00	150	H	Pass
2**	2440.000	89.81	-10.97	54.0	35.81	AV	75.00	150	H	N/A
2	2440.000	93.79	-10.97	74.0	19.79	Peak	75.00	150	H	N/A
3**	3817.000	33.81	-5.52	54.0	-20.19	AV	359.00	150	H	Pass
3	3817.000	44.79	-5.52	74.0	-29.21	Peak	359.00	150	H	Pass
4**	5532.000	37.89	-0.08	54.0	-16.11	AV	74.00	150	H	Pass
4	5532.000	49.18	-0.08	74.0	-24.82	Peak	74.00	150	H	Pass
5**	7610.937	41.27	17.47	54.0	-12.73	AV	96.00	150	H	Pass
5	7610.937	51.67	17.47	74.0	-22.33	Peak	96.00	150	H	Pass
6**	12558.812	46.74	21.89	54.0	-7.26	AV	1.00	150	H	Pass
6	12558.812	57.23	21.89	74.0	-16.77	Peak	1.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11b Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1500.000	25.78	-15.36	54.0	-28.22	AV	0.00	150	V	Pass
1	1500.000	37.34	-15.36	74.0	-36.66	Peak	0.00	150	V	Pass
2**	2440.000	90.04	-10.97	54.0	36.04	AV	31.00	150	V	N/A
2	2440.000	94.01	-10.97	74.0	20.01	Peak	31.00	150	V	N/A
3**	3237.000	33.34	-6.37	54.0	-20.66	AV	1.00	150	V	Pass
3	3237.000	43.96	-6.37	74.0	-30.04	Peak	1.00	150	V	Pass
4**	4874.000	37.17	-1.52	54.0	-16.83	AV	1.00	150	V	Pass
4	4874.000	48.28	-1.52	74.0	-25.72	Peak	1.00	150	V	Pass
5**	6480.000	40.80	3.39	54.0	-13.20	AV	195.00	150	V	Pass
5	6480.000	51.94	3.39	74.0	-22.06	Peak	195.00	150	V	Pass
6**	12499.875	45.62	20.75	54.0	-8.38	AV	197.00	150	V	Pass
6	12499.875	56.62	20.75	74.0	-17.38	Peak	197.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11b High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1171.500	25.07	-15.08	54.0	-28.93	AV	196.00	150	H	Pass
1	1171.500	36.35	-15.08	74.0	-37.65	Peak	196.00	150	H	Pass
2**	2464.500	89.75	-10.54	54.0	35.75	AV	85.00	150	H	N/A
2	2464.500	93.94	-10.54	74.0	19.94	Peak	85.00	150	H	N/A
3**	3222.000	33.95	-6.43	54.0	-20.05	AV	162.00	150	H	Pass
3	3222.000	44.05	-6.43	74.0	-29.95	Peak	162.00	150	H	Pass
4**	4244.000	35.13	-4.14	54.0	-18.87	AV	239.00	150	H	Pass
4	4244.000	46.18	-4.14	74.0	-27.82	Peak	239.00	150	H	Pass
5**	7273.125	41.10	16.84	54.0	-12.90	AV	76.00	150	H	Pass
5	7273.125	51.58	16.84	74.0	-22.42	Peak	76.00	150	H	Pass
6**	12581.812	45.84	21.61	54.0	-8.16	AV	310.00	150	H	Pass
6	12581.812	56.38	21.61	74.0	-17.62	Peak	310.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11b High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1454.000	25.74	-14.94	54.0	-28.26	AV	349.00	150	V	Pass
1	1454.000	36.53	-14.94	74.0	-37.47	Peak	349.00	150	V	Pass
2**	2000.000	30.39	-13.60	54.0	-23.61	AV	85.00	150	V	Pass
2	2000.000	39.64	-13.60	74.0	-34.36	Peak	85.00	150	V	Pass
3**	2465.000	90.10	-10.56	54.0	36.10	AV	8.00	150	V	N/A
3	2465.000	93.98	-10.56	74.0	19.98	Peak	8.00	150	V	N/A
4**	3188.000	33.41	-6.26	54.0	-20.59	AV	359.00	150	V	Pass
4	3188.000	44.03	-6.26	74.0	-29.97	Peak	359.00	150	V	Pass
5**	6225.000	39.42	2.12	54.0	-14.58	AV	275.00	150	V	Pass
5	6225.000	50.95	2.12	74.0	-23.05	Peak	275.00	150	V	Pass
6**	11811.313	44.02	19.79	54.0	-9.98	AV	360.00	150	V	Pass
6	11811.313	55.18	19.79	74.0	-18.82	Peak	360.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11g Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1455.000	25.66	-15.02	54.0	-28.34	AV	293.00	150	H	Pass
1	1455.000	36.37	-15.02	74.0	-37.63	Peak	293.00	150	H	Pass
2**	2406.500	89.50	-10.56	54.0	35.50	AV	70.00	150	H	N/A
2	2406.500	97.41	-10.56	74.0	23.41	Peak	70.00	150	H	N/A
3**	4017.000	34.57	-4.75	54.0	-19.43	AV	121.00	150	H	Pass
3	4017.000	46.67	-4.75	74.0	-27.33	Peak	121.00	150	H	Pass
4**	5700.000	38.88	-0.61	54.0	-15.12	AV	148.00	150	H	Pass
4	5700.000	49.31	-0.61	74.0	-24.69	Peak	148.00	150	H	Pass
5**	7504.563	40.59	16.89	54.0	-13.41	AV	231.00	150	H	Pass
5	7504.563	51.90	16.89	74.0	-22.10	Peak	231.00	150	H	Pass
6**	12573.187	46.33	21.69	54.0	-7.67	AV	217.00	150	H	Pass
6	12573.187	57.65	21.69	74.0	-16.35	Peak	217.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11g Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1241.500	25.48	-14.86	54.0	-28.52	AV	225.00	150	V	Pass
1	1241.500	36.27	-14.86	74.0	-37.73	Peak	225.00	150	V	Pass
2**	2000.000	30.50	-13.60	54.0	-23.50	AV	288.00	150	V	Pass
2	2000.000	39.24	-13.60	74.0	-34.76	Peak	288.00	150	V	Pass
3**	2405.000	90.76	-10.60	54.0	36.76	AV	352.00	150	V	N/A
3	2405.000	98.00	-10.60	74.0	24.00	Peak	352.00	150	V	N/A
4**	5153.000	38.00	-0.65	54.0	-16.00	AV	118.00	150	V	Pass
4	5153.000	49.33	-0.65	74.0	-24.67	Peak	118.00	150	V	Pass
5**	7198.375	40.20	16.71	54.0	-13.80	AV	40.00	150	V	Pass
5	7198.375	51.72	16.71	74.0	-22.28	Peak	40.00	150	V	Pass
6**	12606.250	46.26	22.09	54.0	-7.74	AV	0.00	150	V	Pass
6	12606.250	57.68	22.09	74.0	-16.32	Peak	0.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11g Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1308.000	25.99	-14.88	54.0	-28.01	AV	174.00	150	H	Pass
1	1308.000	36.33	-14.88	74.0	-37.67	Peak	174.00	150	H	Pass
2**	2443.500	88.52	-11.04	54.0	34.52	AV	82.00	150	H	N/A
2	2443.500	96.42	-11.04	74.0	22.42	Peak	82.00	150	H	N/A
3**	3634.000	34.18	-4.98	54.0	-19.82	AV	11.00	150	H	Pass
3	3634.000	44.97	-4.98	74.0	-29.03	Peak	11.00	150	H	Pass
4**	5944.000	39.12	1.37	54.0	-14.88	AV	0.00	150	H	Pass
4	5944.000	50.14	1.37	74.0	-23.86	Peak	0.00	150	H	Pass
5**	6968.000	40.48	4.50	54.0	-13.52	AV	110.00	150	H	Pass
5	6968.000	51.60	4.50	74.0	-22.40	Peak	110.00	150	H	Pass
6**	12627.812	46.40	22.15	54.0	-7.60	AV	140.00	150	H	Pass
6	12627.812	57.02	22.15	74.0	-16.98	Peak	140.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11g Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1212.500	25.03	-15.20	54.0	-28.97	AV	291.00	150	V	Pass
1	1212.500	36.21	-15.20	74.0	-37.79	Peak	291.00	150	V	Pass
2**	2431.000	89.12	-10.82	54.0	35.12	AV	13.00	150	V	N/A
2	2431.000	97.11	-10.82	74.0	23.11	Peak	13.00	150	V	N/A
3**	3064.000	32.87	-7.36	54.0	-21.13	AV	233.00	150	V	Pass
3	3064.000	43.31	-7.36	74.0	-30.69	Peak	233.00	150	V	Pass
4**	4286.000	35.68	-3.61	54.0	-18.32	AV	204.00	150	V	Pass
4	4286.000	46.67	-3.61	74.0	-27.33	Peak	204.00	150	V	Pass
5**	6478.000	40.77	3.45	54.0	-13.23	AV	277.00	150	V	Pass
5	6478.000	50.97	3.45	74.0	-23.03	Peak	277.00	150	V	Pass
6**	10418.375	41.25	17.79	54.0	-12.75	AV	162.00	150	V	Pass
6	10418.375	53.30	17.79	74.0	-20.70	Peak	162.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11g High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1264.500	25.34	-14.93	54.0	-28.66	AV	115.00	150	H	Pass
1	1264.500	36.68	-14.93	74.0	-37.32	Peak	115.00	150	H	Pass
2**	2469.500	89.25	-10.58	54.0	35.25	AV	87.00	150	H	N/A
2	2469.500	96.89	-10.58	74.0	22.89	Peak	87.00	150	H	N/A
3**	4097.000	34.88	-4.42	54.0	-19.12	AV	213.00	150	H	Pass
3	4097.000	46.04	-4.42	74.0	-27.96	Peak	213.00	150	H	Pass
4**	5032.000	37.47	-0.99	54.0	-16.53	AV	346.00	150	H	Pass
4	5032.000	49.10	-0.99	74.0	-24.90	Peak	346.00	150	H	Pass
5**	7322.000	40.91	17.12	54.0	-13.09	AV	242.00	150	H	Pass
5	7322.000	51.94	17.12	74.0	-22.06	Peak	242.00	150	H	Pass
6**	12544.437	46.76	21.74	54.0	-7.24	AV	28.00	150	H	Pass
6	12544.437	56.93	21.74	74.0	-17.07	Peak	28.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11g High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1331.500	25.94	-14.89	54.0	-28.06	AV	192.00	150	V	Pass
1	1331.500	36.54	-14.89	74.0	-37.46	Peak	192.00	150	V	Pass
2**	2467.500	89.12	-10.62	54.0	35.12	AV	26.00	150	V	N/A
2	2467.500	97.05	-10.62	74.0	23.05	Peak	26.00	150	V	N/A
3**	3432.000	32.52	-7.17	54.0	-21.48	AV	3.00	150	V	Pass
3	3432.000	43.89	-7.17	74.0	-30.11	Peak	3.00	150	V	Pass
4**	5766.000	38.45	-0.26	54.0	-15.55	AV	47.00	150	V	Pass
4	5766.000	49.58	-0.26	74.0	-24.42	Peak	47.00	150	V	Pass
5**	7001.438	40.86	17.02	54.0	-13.14	AV	217.00	150	V	Pass
5	7001.438	51.94	17.02	74.0	-22.06	Peak	217.00	150	V	Pass
6**	12351.813	45.58	21.26	54.0	-8.42	AV	84.00	150	V	Pass
6	12351.813	55.92	21.26	74.0	-18.08	Peak	84.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1333.500	26.28	-14.90	54.0	-27.72	AV	286.00	150	H	Pass
1	1333.500	36.61	-14.90	74.0	-37.39	Peak	286.00	150	H	Pass
2**	2404.000	89.48	-10.64	54.0	35.48	AV	70.00	150	H	N/A
2	2404.000	96.89	-10.64	74.0	22.89	Peak	70.00	150	H	N/A
3**	3634.000	34.23	-4.98	54.0	-19.77	AV	307.00	150	H	Pass
3	3634.000	44.53	-4.98	74.0	-29.47	Peak	307.00	150	H	Pass
4**	5069.000	37.89	-0.84	54.0	-16.11	AV	32.00	150	H	Pass
4	5069.000	49.05	-0.84	74.0	-24.95	Peak	32.00	150	H	Pass
5**	8128.437	40.56	17.51	54.0	-13.44	AV	66.00	150	H	Pass
5	8128.437	52.39	17.51	74.0	-21.61	Peak	66.00	150	H	Pass
6**	12610.562	47.62	22.15	54.0	-6.38	AV	223.00	150	H	Pass
6	12610.562	57.03	22.15	74.0	-16.97	Peak	223.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1266.000	25.56	-14.91	54.0	-28.44	AV	125.00	150	V	Pass
1	1266.000	36.40	-14.91	74.0	-37.60	Peak	125.00	150	V	Pass
2**	2407.000	89.64	-10.56	54.0	35.64	AV	33.00	150	V	N/A
2	2407.000	97.83	-10.56	74.0	23.83	Peak	33.00	150	V	N/A
3**	3081.000	33.05	-6.26	54.0	-20.95	AV	0.00	150	V	Pass
3	3081.000	43.74	-6.26	74.0	-30.26	Peak	0.00	150	V	Pass
4**	5269.000	37.97	-0.94	54.0	-16.03	AV	93.00	150	V	Pass
4	5269.000	48.96	-0.94	74.0	-25.04	Peak	93.00	150	V	Pass
5**	9854.875	40.90	17.05	54.0	-13.10	AV	285.00	150	V	Pass
5	9854.875	53.09	17.05	74.0	-20.91	Peak	285.00	150	V	Pass
6**	12555.938	46.55	21.85	54.0	-7.45	AV	360.00	150	V	Pass
6	12555.938	56.54	21.85	74.0	-17.46	Peak	360.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11n20 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1350.500	25.55	-14.98	54.0	-28.45	AV	25.00	150	H	Pass
1	1350.500	36.75	-14.98	74.0	-37.25	Peak	25.00	150	H	Pass
2**	2436.000	87.62	-11.06	54.0	33.62	AV	70.00	150	H	N/A
2	2436.000	96.22	-11.06	74.0	22.22	Peak	70.00	150	H	N/A
3**	3359.000	32.46	-7.51	54.0	-21.54	AV	168.00	150	H	Pass
3	3359.000	43.71	-7.51	74.0	-30.29	Peak	168.00	150	H	Pass
4**	5182.000	37.45	-1.00	54.0	-16.55	AV	37.00	150	H	Pass
4	5182.000	48.63	-1.00	74.0	-25.37	Peak	37.00	150	H	Pass
5**	7470.063	41.28	17.13	54.0	-12.72	AV	116.00	150	H	Pass
5	7470.063	51.40	17.13	74.0	-22.60	Peak	116.00	150	H	Pass
6**	10734.625	41.35	17.92	54.0	-12.65	AV	0.00	150	H	Pass
6	10734.625	53.08	17.92	74.0	-20.92	Peak	0.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11n20 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2000.000	29.74	-13.60	54.0	-24.26	AV	32.00	150	V	Pass
1	2000.000	39.29	-13.60	74.0	-34.71	Peak	32.00	150	V	Pass
2**	2445.500	89.34	-11.11	54.0	35.34	AV	32.00	150	V	N/A
2	2445.500	97.19	-11.11	74.0	23.19	Peak	32.00	150	V	N/A
3**	3650.000	34.95	-4.75	54.0	-19.05	AV	95.00	150	V	Pass
3	3650.000	45.15	-4.75	74.0	-28.85	Peak	95.00	150	V	Pass
4**	5543.000	38.10	-0.28	54.0	-15.90	AV	294.00	150	V	Pass
4	5543.000	49.73	-0.28	74.0	-24.27	Peak	294.00	150	V	Pass
5**	7327.750	40.97	17.14	54.0	-13.03	AV	252.00	150	V	Pass
5	7327.750	51.72	17.14	74.0	-22.28	Peak	252.00	150	V	Pass
6**	12624.938	46.60	22.21	54.0	-7.40	AV	342.00	150	V	Pass
6	12624.938	56.89	22.21	74.0	-17.11	Peak	342.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1298.500	25.65	-15.00	54.0	-28.35	AV	231.00	150	H	Pass
1	1298.500	36.33	-15.00	74.0	-37.67	Peak	231.00	150	H	Pass
2**	2468.500	88.84	-10.60	54.0	34.84	AV	98.00	150	H	N/A
2	2468.500	95.91	-10.60	74.0	21.91	Peak	98.00	150	H	N/A
3**	3645.000	34.90	-5.04	54.0	-19.10	AV	1.00	150	H	Pass
3	3645.000	45.36	-5.04	74.0	-28.64	Peak	1.00	150	H	Pass
4**	5465.000	38.09	-0.09	54.0	-15.91	AV	322.00	150	H	Pass
4	5465.000	48.71	-0.09	74.0	-25.29	Peak	322.00	150	H	Pass
5**	6963.000	40.72	4.13	54.0	-13.28	AV	340.00	150	H	Pass
5	6963.000	51.87	4.13	74.0	-22.13	Peak	340.00	150	H	Pass
6**	12196.563	44.70	21.53	54.0	-9.30	AV	150.00	150	H	Pass
6	12196.563	56.09	21.53	74.0	-17.91	Peak	150.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1161.500	24.87	-15.05	54.0	-29.13	AV	22.00	150	V	Pass
1	1161.500	35.86	-15.05	74.0	-38.14	Peak	22.00	150	V	Pass
2**	2470.000	89.49	-10.58	54.0	35.49	AV	22.00	150	V	N/A
2	2470.000	96.60	-10.58	74.0	22.60	Peak	22.00	150	V	N/A
3**	3092.000	32.70	-6.82	54.0	-21.30	AV	295.00	150	V	Pass
3	3092.000	43.43	-6.82	74.0	-30.57	Peak	295.00	150	V	Pass
4**	4385.000	35.58	-3.64	54.0	-18.42	AV	281.00	150	V	Pass
4	4385.000	46.56	-3.64	74.0	-27.44	Peak	281.00	150	V	Pass
5**	8045.063	41.61	18.25	54.0	-12.39	AV	137.00	150	V	Pass
5	8045.063	52.13	18.25	74.0	-21.87	Peak	137.00	150	V	Pass
6**	12422.250	45.67	20.89	54.0	-8.33	AV	218.00	150	V	Pass
6	12422.250	56.14	20.89	74.0	-17.86	Peak	218.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1613.500	25.58	-15.47	54.0	-28.42	AV	19.00	150	H	Pass
1	1613.500	37.43	-15.47	74.0	-36.57	Peak	19.00	150	H	Pass
2**	2411.500	86.69	-10.59	54.0	32.69	AV	85.00	150	H	N/A
2	2411.500	94.47	-10.59	74.0	20.47	Peak	85.00	150	H	N/A
3**	2833.000	31.30	-8.49	54.0	-22.70	AV	150.00	150	H	Pass
3	2833.000	42.82	-8.49	74.0	-31.18	Peak	150.00	150	H	Pass
4**	4584.000	36.16	-2.50	54.0	-17.84	AV	8.00	150	H	Pass
4	4584.000	47.72	-2.50	74.0	-26.28	Peak	8.00	150	H	Pass
5**	7467.188	40.41	17.08	54.0	-13.59	AV	102.00	150	H	Pass
5	7467.188	51.11	17.08	74.0	-22.89	Peak	102.00	150	H	Pass
6**	12614.875	46.63	22.22	54.0	-7.37	AV	150.00	150	H	Pass
6	12614.875	57.23	22.22	74.0	-16.77	Peak	150.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1261.500	25.48	-14.94	54.0	-28.52	AV	360.00	150	V	Pass
1	1261.500	36.30	-14.94	74.0	-37.70	Peak	360.00	150	V	Pass
2**	2413.000	87.94	-10.59	54.0	33.94	AV	16.00	150	V	N/A
2	2413.000	95.81	-10.59	74.0	21.81	Peak	16.00	150	V	N/A
3**	3190.000	32.47	-6.45	54.0	-21.53	AV	225.00	150	V	Pass
3	3190.000	44.08	-6.45	74.0	-29.92	Peak	225.00	150	V	Pass
4**	5747.000	38.38	-0.18	54.0	-15.62	AV	77.00	150	V	Pass
4	5747.000	50.16	-0.18	74.0	-23.84	Peak	77.00	150	V	Pass
5**	8010.563	41.11	17.85	54.0	-12.89	AV	155.00	150	V	Pass
5	8010.563	52.02	17.85	74.0	-21.98	Peak	155.00	150	V	Pass
6**	11782.563	44.13	20.27	54.0	-9.87	AV	313.00	150	V	Pass
6	11782.563	54.50	20.27	74.0	-19.50	Peak	313.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11n40 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1454.000	26.11	-14.94	54.0	-27.89	AV	151.00	150	H	Pass
1	1454.000	36.78	-14.94	74.0	-37.22	Peak	151.00	150	H	Pass
2**	2422.000	86.29	-10.54	54.0	32.29	AV	68.00	150	H	N/A
2	2422.000	93.74	-10.54	74.0	19.74	Peak	68.00	150	H	N/A
3**	3178.000	32.84	-6.39	54.0	-21.16	AV	335.00	150	H	Pass
3	3178.000	43.66	-6.39	74.0	-30.34	Peak	335.00	150	H	Pass
4**	4299.000	36.13	-3.63	54.0	-17.87	AV	133.00	150	H	Pass
4	4299.000	46.72	-3.63	74.0	-27.28	Peak	133.00	150	H	Pass
5**	7064.688	40.66	16.96	54.0	-13.34	AV	358.00	150	H	Pass
5	7064.688	51.36	16.96	74.0	-22.64	Peak	358.00	150	H	Pass
6**	12537.250	46.46	21.61	54.0	-7.54	AV	313.00	150	H	Pass
6	12537.250	56.99	21.61	74.0	-17.01	Peak	313.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11n40 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1943.000	27.61	-13.23	54.0	-26.39	AV	176.00	150	V	Pass
1	1943.000	38.37	-13.23	74.0	-35.63	Peak	176.00	150	V	Pass
2**	2441.500	86.68	-10.91	54.0	32.68	AV	19.00	150	V	N/A
2	2441.500	95.21	-10.91	74.0	21.21	Peak	19.00	150	V	N/A
3**	3658.000	34.28	-4.68	54.0	-19.72	AV	192.00	150	V	Pass
3	3658.000	44.96	-4.68	74.0	-29.04	Peak	192.00	150	V	Pass
4**	6019.000	39.63	2.32	54.0	-14.37	AV	126.00	150	V	Pass
4	6019.000	51.65	2.32	74.0	-22.35	Peak	126.00	150	V	Pass
5**	9143.312	41.78	18.58	54.0	-12.22	AV	145.00	150	V	Pass
5	9143.312	52.56	18.58	74.0	-21.44	Peak	145.00	150	V	Pass
6**	12258.375	45.23	22.08	54.0	-8.77	AV	111.00	150	V	Pass
6	12258.375	55.89	22.08	74.0	-18.11	Peak	111.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1818.500	26.60	-14.69	54.0	-27.40	AV	228.00	150	H	Pass
1	1818.500	38.61	-14.69	74.0	-35.39	Peak	228.00	150	H	Pass
2**	2467.500	86.17	-10.62	54.0	32.17	AV	104.00	150	H	N/A
2	2467.500	93.77	-10.62	74.0	19.77	Peak	104.00	150	H	N/A
3**	3657.000	34.64	-4.65	54.0	-19.36	AV	224.00	150	H	Pass
3	3657.000	45.00	-4.65	74.0	-29.00	Peak	224.00	150	H	Pass
4**	5266.000	37.71	-0.81	54.0	-16.29	AV	0.00	150	H	Pass
4	5266.000	49.26	-0.81	74.0	-24.74	Peak	0.00	150	H	Pass
5**	6972.000	41.27	4.47	54.0	-12.73	AV	11.00	150	H	Pass
5	6972.000	52.01	4.47	74.0	-21.99	Peak	11.00	150	H	Pass
6**	12497.000	46.29	20.78	54.0	-7.71	AV	150.00	150	H	Pass
6	12497.000	56.86	20.78	74.0	-17.14	Peak	150.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1313.500	25.63	-14.86	54.0	-28.37	AV	251.00	150	V	Pass
1	1313.500	36.67	-14.86	74.0	-37.33	Peak	251.00	150	V	Pass
2**	2439.000	86.21	-10.99	54.0	32.21	AV	5.00	150	V	N/A
2	2439.000	94.07	-10.99	74.0	20.07	Peak	5.00	150	V	N/A
3**	3652.000	34.63	-4.68	54.0	-19.37	AV	3.00	150	V	Pass
3	3652.000	45.15	-4.68	74.0	-28.85	Peak	3.00	150	V	Pass
4**	5389.000	37.86	-0.77	54.0	-16.14	AV	207.00	150	V	Pass
4	5389.000	49.39	-0.77	74.0	-24.61	Peak	207.00	150	V	Pass
5**	6656.000	40.35	4.12	54.0	-13.65	AV	77.00	150	V	Pass
5	6656.000	51.54	4.12	74.0	-22.46	Peak	77.00	150	V	Pass
6**	11980.937	44.43	20.72	54.0	-9.57	AV	39.00	150	V	Pass
6	11980.937	55.32	20.72	74.0	-18.68	Peak	39.00	150	V	Pass

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1 GHz to 12.75 GHz, ANT H 802.11b Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1331.500	24.94	-14.89	54.0	-29.06	AV	120.00	150	H	Pass
1	1331.500	36.59	-14.89	74.0	-37.41	Peak	120.00	150	H	Pass
2**	2415.000	89.68	-10.61	54.0	35.68	AV	348.00	150	H	N/A
2	2415.000	93.19	-10.61	74.0	19.19	Peak	348.00	150	H	N/A
3**	3170.000	32.43	-7.06	54.0	-21.57	AV	297.00	150	H	Pass
3	3170.000	43.52	-7.06	74.0	-30.48	Peak	297.00	150	H	Pass
4**	4304.000	35.48	-3.64	54.0	-18.52	AV	106.00	150	H	Pass
4	4304.000	46.44	-3.64	74.0	-27.56	Peak	106.00	150	H	Pass
5**	6646.000	39.15	3.55	54.0	-14.85	AV	185.00	150	H	Pass
5	6646.000	50.28	3.55	74.0	-23.72	Peak	185.00	150	H	Pass
6**	9103.062	35.10	18.74	54.0	-18.90	AV	56.00	150	H	Pass
6	9103.062	51.13	18.74	74.0	-22.87	Peak	56.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11b Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2000.500	37.19	-13.56	54.0	-16.81	AV	101.00	150	V	Pass
1	2000.500	40.61	-13.56	74.0	-33.39	Peak	101.00	150	V	Pass
2**	2415.000	90.51	-10.61	54.0	36.51	AV	6.00	150	V	N/A
2	2415.000	95.13	-10.61	74.0	21.13	Peak	6.00	150	V	N/A
3**	3186.000	32.56	-6.19	54.0	-21.44	AV	346.00	150	V	Pass
3	3186.000	43.37	-6.19	74.0	-30.63	Peak	346.00	150	V	Pass
4**	4597.000	35.91	-2.55	54.0	-18.09	AV	0.00	150	V	Pass
4	4597.000	47.47	-2.55	74.0	-26.53	Peak	0.00	150	V	Pass
5**	6418.000	39.49	2.88	54.0	-14.51	AV	119.00	150	V	Pass
5	6418.000	51.12	2.88	74.0	-22.88	Peak	119.00	150	V	Pass
6**	9222.375	34.50	17.49	54.0	-19.50	AV	357.00	150	V	Pass
6	9222.375	50.66	17.49	74.0	-23.34	Peak	357.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11b Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1416.000	26.00	-15.16	54.0	-28.00	AV	258.00	150	H	Pass
1	1416.000	36.48	-15.16	74.0	-37.52	Peak	258.00	150	H	Pass
2**	2440.000	89.79	-10.97	54.0	35.79	AV	301.00	150	H	N/A
2	2440.000	93.93	-10.97	74.0	19.93	Peak	301.00	150	H	N/A
3**	3094.000	32.56	-7.09	54.0	-21.44	AV	32.00	150	H	Pass
3	3094.000	43.98	-7.09	74.0	-30.02	Peak	32.00	150	H	Pass
4**	5086.000	37.71	-0.23	54.0	-16.29	AV	186.00	150	H	Pass
4	5086.000	48.59	-0.23	74.0	-25.41	Peak	186.00	150	H	Pass
5**	7395.313	39.79	16.83	54.0	-14.21	AV	13.00	150	H	Pass
5	7395.313	51.17	16.83	74.0	-22.83	Peak	13.00	150	H	Pass
6**	10644.062	42.41	18.20	54.0	-11.59	AV	42.00	150	H	Pass
6	10644.062	52.81	18.20	74.0	-21.19	Peak	42.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11b Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2000.000	33.06	-13.60	54.0	-20.94	AV	104.00	150	V	Pass
1	2000.000	40.75	-13.60	74.0	-33.25	Peak	104.00	150	V	Pass
2**	2441.000	91.15	-10.93	54.0	37.15	AV	9.00	150	V	N/A
2	2441.000	94.72	-10.93	74.0	20.72	Peak	9.00	150	V	N/A
3**	3644.000	34.65	-5.07	54.0	-19.35	AV	6.00	150	V	Pass
3	3644.000	45.09	-5.07	74.0	-28.91	Peak	6.00	150	V	Pass
4**	5704.000	38.53	-0.72	54.0	-15.47	AV	143.00	150	V	Pass
4	5704.000	49.52	-0.72	74.0	-24.48	Peak	143.00	150	V	Pass
5**	7277.437	40.47	16.88	54.0	-13.53	AV	0.00	150	V	Pass
5	7277.437	51.81	16.88	74.0	-22.19	Peak	0.00	150	V	Pass
6**	10184.063	41.97	17.82	54.0	-12.03	AV	0.00	150	V	Pass
6	10184.063	52.41	17.82	74.0	-21.59	Peak	0.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11b High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1991.000	27.47	-13.69	54.0	-26.53	AV	196.00	150	H	Pass
1	1991.000	38.07	-13.69	74.0	-35.93	Peak	196.00	150	H	Pass
2**	2465.000	89.96	-10.56	54.0	35.96	AV	296.00	150	H	N/A
2	2465.000	93.86	-10.56	74.0	19.86	Peak	296.00	150	H	N/A
3**	3083.000	32.89	-6.42	54.0	-21.11	AV	57.00	150	H	Pass
3	3083.000	42.96	-6.42	74.0	-31.04	Peak	57.00	150	H	Pass
4**	4387.000	35.85	-3.55	54.0	-18.15	AV	248.00	150	H	Pass
4	4387.000	46.74	-3.55	74.0	-27.26	Peak	248.00	150	H	Pass
5**	7100.625	40.86	16.84	54.0	-13.14	AV	19.00	150	H	Pass
5	7100.625	51.96	16.84	74.0	-22.04	Peak	19.00	150	H	Pass
6**	9899.437	42.48	18.59	54.0	-11.52	AV	169.00	150	H	Pass
6	9899.437	52.26	18.59	74.0	-21.74	Peak	169.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11b High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1999.500	28.11	-13.60	54.0	-25.89	AV	10.00	150	V	Pass
1	1999.500	38.93	-13.60	74.0	-35.07	Peak	10.00	150	V	Pass
2**	2465.000	90.45	-10.56	54.0	36.45	AV	360.00	150	V	N/A
2	2465.000	94.81	-10.56	74.0	20.81	Peak	360.00	150	V	N/A
3**	3236.000	33.25	-6.34	54.0	-20.75	AV	260.00	150	V	Pass
3	3236.000	43.37	-6.34	74.0	-30.63	Peak	260.00	150	V	Pass
4**	4588.000	36.21	-2.43	54.0	-17.79	AV	314.00	150	V	Pass
4	4588.000	47.39	-2.43	74.0	-26.61	Peak	314.00	150	V	Pass
5**	6641.000	40.00	2.92	54.0	-14.00	AV	85.00	150	V	Pass
5	6641.000	50.83	2.92	74.0	-23.17	Peak	85.00	150	V	Pass
6**	9302.875	41.37	17.55	54.0	-12.63	AV	2.00	150	V	Pass
6	9302.875	51.79	17.55	74.0	-22.21	Peak	2.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11g Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1518.500	26.03	-15.09	54.0	-27.97	AV	0.00	150	H	Pass
1	1518.500	37.33	-15.09	74.0	-36.67	Peak	0.00	150	H	Pass
2**	2418.000	89.00	-10.60	54.0	35.00	AV	304.00	150	H	N/A
2	2418.000	96.46	-10.60	74.0	22.46	Peak	304.00	150	H	N/A
3**	3220.000	32.77	-6.66	54.0	-21.23	AV	296.00	150	H	Pass
3	3220.000	43.56	-6.66	74.0	-30.44	Peak	296.00	150	H	Pass
4**	5188.000	37.63	-1.12	54.0	-16.37	AV	344.00	150	H	Pass
4	5188.000	48.35	-1.12	74.0	-25.65	Peak	344.00	150	H	Pass
5**	6775.000	40.03	3.24	54.0	-13.97	AV	187.00	150	H	Pass
5	6775.000	50.74	3.24	74.0	-23.26	Peak	187.00	150	H	Pass
6**	9896.563	42.39	18.42	54.0	-11.61	AV	0.00	150	H	Pass
6	9896.563	52.60	18.42	74.0	-21.40	Peak	0.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11g Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2000.000	33.14	-13.60	54.0	-20.86	AV	277.00	150	V	Pass
1	2000.000	39.73	-13.60	74.0	-34.27	Peak	277.00	150	V	Pass
2**	2420.000	90.61	-10.53	54.0	36.61	AV	1.00	150	V	N/A
2	2420.000	98.12	-10.53	74.0	24.12	Peak	1.00	150	V	N/A
3**	3634.000	34.14	-4.98	54.0	-19.86	AV	61.00	150	V	Pass
3	3634.000	46.13	-4.98	74.0	-27.87	Peak	61.00	150	V	Pass
4**	5191.000	37.32	-1.10	54.0	-16.68	AV	270.00	150	V	Pass
4	5191.000	48.40	-1.10	74.0	-25.60	Peak	270.00	150	V	Pass
5**	8065.187	41.37	18.28	54.0	-12.63	AV	132.00	150	V	Pass
5	8065.187	51.55	18.28	74.0	-22.45	Peak	132.00	150	V	Pass
6**	10878.375	41.80	18.24	54.0	-12.20	AV	-3.00	150	V	Pass
6	10878.375	52.69	18.24	74.0	-21.31	Peak	-3.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11g Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1238.000	24.76	-14.83	54.0	-29.24	AV	132.00	150	H	Pass
1	1238.000	37.83	-14.83	74.0	-36.17	Peak	132.00	150	H	Pass
2**	2431.000	89.10	-10.82	54.0	35.10	AV	299.00	150	H	N/A
2	2431.000	96.18	-10.82	74.0	22.18	Peak	299.00	150	H	N/A
3**	3171.000	33.05	-6.98	54.0	-20.95	AV	2.00	150	H	Pass
3	3171.000	44.17	-6.98	74.0	-29.83	Peak	2.00	150	H	Pass
4**	4956.000	37.61	-1.60	54.0	-16.39	AV	363.00	150	H	Pass
4	4956.000	48.04	-1.60	74.0	-25.96	Peak	363.00	150	H	Pass
5**	7056.062	40.64	16.92	54.0	-13.36	AV	360.00	150	H	Pass
5	7056.062	51.16	16.92	74.0	-22.84	Peak	360.00	150	H	Pass
6**	9902.312	42.58	18.51	54.0	-11.42	AV	128.00	150	H	Pass
6	9902.312	51.67	18.51	74.0	-22.33	Peak	128.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11g Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2000.000	30.57	-13.60	54.0	-23.43	AV	293.00	150	V	Pass
1	2000.000	38.90	-13.60	74.0	-35.10	Peak	293.00	150	V	Pass
2**	2443.000	89.69	-11.00	54.0	35.69	AV	360.00	150	V	N/A
2	2443.000	98.05	-11.00	74.0	24.05	Peak	360.00	150	V	N/A
3**	3633.000	34.08	-5.11	54.0	-19.92	AV	238.00	150	V	Pass
3	3633.000	44.59	-5.11	74.0	-29.41	Peak	238.00	150	V	Pass
4**	5829.000	38.79	0.52	54.0	-15.21	AV	329.00	150	V	Pass
4	5829.000	50.98	0.52	74.0	-23.02	Peak	329.00	150	V	Pass
5**	7602.313	40.70	17.53	54.0	-13.30	AV	94.00	150	V	Pass
5	7602.313	51.59	17.53	74.0	-22.41	Peak	94.00	150	V	Pass
6**	10636.875	42.02	18.24	54.0	-11.98	AV	185.00	150	V	Pass
6	10636.875	53.46	18.24	74.0	-20.54	Peak	185.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11g High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1508.000	25.69	-15.29	54.0	-28.31	AV	360.00	150	H	Pass
1	1508.000	37.13	-15.29	74.0	-36.87	Peak	360.00	150	H	Pass
2**	2467.000	87.91	-10.61	54.0	33.91	AV	302.00	150	H	N/A
2	2467.000	96.54	-10.61	74.0	22.54	Peak	302.00	150	H	N/A
3**	3650.000	34.70	-4.75	54.0	-19.30	AV	292.00	150	H	Pass
3	3650.000	44.70	-4.75	74.0	-29.30	Peak	292.00	150	H	Pass
4**	5787.000	38.48	0.40	54.0	-15.52	AV	176.00	150	H	Pass
4	5787.000	49.57	0.40	74.0	-24.43	Peak	176.00	150	H	Pass
5**	7681.375	40.22	16.72	54.0	-13.78	AV	153.00	150	H	Pass
5	7681.375	51.10	16.72	74.0	-22.90	Peak	153.00	150	H	Pass
6**	10513.250	41.88	17.98	54.0	-12.12	AV	30.00	150	H	Pass
6	10513.250	52.35	17.98	74.0	-21.65	Peak	30.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11g High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2000.000	32.14	-13.60	54.0	-21.86	AV	18.00	150	V	Pass
1	2000.000	38.28	-13.60	74.0	-35.72	Peak	18.00	150	V	Pass
2**	2454.000	86.39	-10.77	54.0	32.39	AV	43.00	150	V	N/A
2	2454.000	98.03	-10.77	74.0	24.03	Peak	43.00	150	V	N/A
3**	3669.000	34.12	-4.87	54.0	-19.88	AV	79.00	150	V	Pass
3	3669.000	45.16	-4.87	74.0	-28.84	Peak	79.00	150	V	Pass
4**	5769.000	38.80	-0.17	54.0	-15.20	AV	123.00	150	V	Pass
4	5769.000	50.12	-0.17	74.0	-23.88	Peak	123.00	150	V	Pass
5**	7560.625	40.80	16.92	54.0	-13.20	AV	121.00	150	V	Pass
5	7560.625	51.67	16.92	74.0	-22.33	Peak	121.00	150	V	Pass
6**	9895.125	42.02	18.34	54.0	-11.98	AV	167.00	150	V	Pass
6	9895.125	52.03	18.34	74.0	-21.97	Peak	167.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1737.500	25.95	-15.23	54.0	-28.05	AV	250.00	150	H	Pass
1	1737.500	37.40	-15.23	74.0	-36.60	Peak	250.00	150	H	Pass
2**	2420.000	89.32	-10.53	54.0	35.32	AV	290.00	150	H	N/A
2	2420.000	96.62	-10.53	74.0	22.62	Peak	290.00	150	H	N/A
3**	4200.000	34.88	-4.30	54.0	-19.12	AV	349.00	150	H	Pass
3	4200.000	46.41	-4.30	74.0	-27.59	Peak	349.00	150	H	Pass
4**	6491.000	39.89	2.55	54.0	-14.11	AV	148.00	150	H	Pass
4	6491.000	50.93	2.55	74.0	-23.07	Peak	148.00	150	H	Pass
5**	8036.438	41.27	17.95	54.0	-12.73	AV	269.00	150	H	Pass
5	8036.438	51.31	17.95	74.0	-22.69	Peak	269.00	150	H	Pass
6**	10628.250	42.10	18.20	54.0	-11.90	AV	269.00	150	H	Pass
6	10628.250	52.79	18.20	74.0	-21.21	Peak	269.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2000.000	33.56	-13.60	54.0	-20.44	AV	123.00	150	V	Pass
1	2000.000	40.69	-13.60	74.0	-33.31	Peak	123.00	150	V	Pass
2**	2404.500	90.36	-10.62	54.0	36.36	AV	0.00	150	V	N/A
2	2404.500	98.70	-10.62	74.0	24.70	Peak	0.00	150	V	N/A
3**	3929.000	33.94	-5.33	54.0	-20.06	AV	339.00	150	V	Pass
3	3929.000	45.32	-5.33	74.0	-28.68	Peak	339.00	150	V	Pass
4**	6018.000	39.51	2.32	54.0	-14.49	AV	1.00	150	V	Pass
4	6018.000	49.80	2.32	74.0	-24.20	Peak	1.00	150	V	Pass
5**	8012.000	40.82	17.83	54.0	-13.18	AV	0.00	150	V	Pass
5	8012.000	51.98	17.83	74.0	-22.02	Peak	0.00	150	V	Pass
6**	11000.563	42.32	18.89	54.0	-11.68	AV	30.00	150	V	Pass
6	11000.563	52.87	18.89	74.0	-21.13	Peak	30.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11n20 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1302.500	25.73	-14.81	54.0	-28.27	AV	359.00	150	H	Pass
1	1302.500	36.65	-14.81	74.0	-37.35	Peak	359.00	150	H	Pass
2**	2429.000	89.02	-10.76	54.0	35.02	AV	312.00	150	H	N/A
2	2429.000	96.91	-10.76	74.0	22.91	Peak	312.00	150	H	N/A
3**	3362.000	32.27	-7.55	54.0	-21.73	AV	322.00	150	H	Pass
3	3362.000	43.90	-7.55	74.0	-30.10	Peak	322.00	150	H	Pass
4**	4764.000	37.09	-2.05	54.0	-16.91	AV	0.00	150	H	Pass
4	4764.000	47.96	-2.05	74.0	-26.04	Peak	0.00	150	H	Pass
5**	6431.000	39.79	2.96	54.0	-14.21	AV	229.00	150	H	Pass
5	6431.000	50.47	2.96	74.0	-23.53	Peak	229.00	150	H	Pass
6**	8832.812	40.14	17.20	54.0	-13.86	AV	6.00	150	H	Pass
6	8832.812	51.51	17.20	74.0	-22.49	Peak	6.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11n20 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1999.500	28.25	-13.60	54.0	-25.75	AV	286.00	150	V	Pass
1	1999.500	40.40	-13.60	74.0	-33.60	Peak	286.00	150	V	Pass
2**	2444.500	89.73	-11.09	54.0	35.73	AV	360.00	150	V	N/A
2	2444.500	97.40	-11.09	74.0	23.40	Peak	360.00	150	V	N/A
3**	3653.000	35.35	-4.64	54.0	-18.65	AV	359.00	150	V	Pass
3	3653.000	45.04	-4.64	74.0	-28.96	Peak	359.00	150	V	Pass
4**	5021.000	37.44	-1.34	54.0	-16.56	AV	359.00	150	V	Pass
4	5021.000	48.63	-1.34	74.0	-25.37	Peak	359.00	150	V	Pass
5**	7050.313	40.58	16.87	54.0	-13.42	AV	251.00	150	V	Pass
5	7050.313	51.01	16.87	74.0	-22.99	Peak	251.00	150	V	Pass
6**	10503.187	42.26	17.86	54.0	-11.74	AV	251.00	150	V	Pass
6	10503.187	52.26	17.86	74.0	-21.74	Peak	251.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1907.000	26.79	-14.08	54.0	-27.21	AV	245.00	150	H	Pass
1	1907.000	37.80	-14.08	74.0	-36.20	Peak	245.00	150	H	Pass
2**	2470.500	89.41	-10.58	54.0	35.41	AV	304.00	150	H	N/A
2	2470.500	97.48	-10.58	74.0	23.48	Peak	304.00	150	H	N/A
3**	3558.000	34.38	-6.02	54.0	-19.62	AV	110.00	150	H	Pass
3	3558.000	44.48	-6.02	74.0	-29.52	Peak	110.00	150	H	Pass
4**	5100.000	37.41	-0.23	54.0	-16.59	AV	0.00	150	H	Pass
4	5100.000	48.78	-0.23	74.0	-25.22	Peak	0.00	150	H	Pass
5**	7117.875	41.19	16.77	54.0	-12.81	AV	231.00	150	H	Pass
5	7117.875	51.43	16.77	74.0	-22.57	Peak	231.00	150	H	Pass
6**	9900.875	42.55	18.58	54.0	-11.45	AV	0.00	150	H	Pass
6	9900.875	52.51	18.58	74.0	-21.49	Peak	0.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2000.000	30.67	-13.60	54.0	-23.33	AV	294.00	150	V	Pass
1	2000.000	39.27	-13.60	74.0	-34.73	Peak	294.00	150	V	Pass
2**	2469.000	89.82	-10.59	54.0	35.82	AV	6.00	150	V	N/A
2	2469.000	98.34	-10.59	74.0	24.34	Peak	6.00	150	V	N/A
3**	3673.000	33.59	-5.15	54.0	-20.41	AV	7.00	150	V	Pass
3	3673.000	45.47	-5.15	74.0	-28.53	Peak	7.00	150	V	Pass
4**	5943.000	38.90	1.26	54.0	-15.10	AV	138.00	150	V	Pass
4	5943.000	50.13	1.26	74.0	-23.87	Peak	138.00	150	V	Pass
5**	7639.688	40.66	16.58	54.0	-13.34	AV	351.00	150	V	Pass
5	7639.688	51.24	16.58	74.0	-22.76	Peak	351.00	150	V	Pass
6**	10442.812	41.56	17.92	54.0	-12.44	AV	100.00	150	V	Pass
6	10442.812	52.54	17.92	74.0	-21.46	Peak	100.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1556.500	25.51	-15.33	54.0	-28.49	AV	284.00	150	H	Pass
1	1556.500	37.09	-15.33	74.0	-36.91	Peak	284.00	150	H	Pass
2**	2429.000	86.23	-10.76	54.0	32.23	AV	331.00	150	H	Fail
2	2429.000	94.75	-10.76	74.0	20.75	Peak	331.00	150	H	N/A
3**	3572.000	34.41	-5.73	54.0	-19.59	AV	258.00	150	H	Pass
3	3572.000	44.88	-5.73	74.0	-29.12	Peak	258.00	150	H	Pass
4**	5000.000	37.87	-0.95	54.0	-16.13	AV	343.00	150	H	Pass
4	5000.000	48.59	-0.95	74.0	-25.41	Peak	343.00	150	H	Pass
5**	6977.000	41.03	4.05	54.0	-12.97	AV	90.00	150	H	Pass
5	6977.000	51.84	4.05	74.0	-22.16	Peak	90.00	150	H	Pass
6**	10497.438	42.20	17.84	54.0	-11.80	AV	73.00	150	H	Pass
6	10497.438	52.74	17.84	74.0	-21.26	Peak	73.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2000.000	34.90	-13.60	54.0	-19.10	AV	305.00	150	V	Pass
1	2000.000	41.83	-13.60	74.0	-32.17	Peak	305.00	150	V	Pass
2**	2438.500	88.58	-11.01	54.0	34.58	AV	2.00	150	V	N/A
2	2438.500	96.81	-11.01	74.0	22.81	Peak	2.00	150	V	N/A
3**	3228.000	32.96	-6.40	54.0	-21.04	AV	193.00	150	V	Pass
3	3228.000	43.55	-6.40	74.0	-30.45	Peak	193.00	150	V	Pass
4**	4673.000	37.05	-2.21	54.0	-16.95	AV	326.00	150	V	Pass
4	4673.000	47.53	-2.21	74.0	-26.47	Peak	326.00	150	V	Pass
5**	8046.500	42.46	18.31	54.0	-11.54	AV	3.00	150	V	Pass
5	8046.500	51.93	18.31	74.0	-22.07	Peak	3.00	150	V	Pass
6**	11014.938	42.66	18.80	54.0	-11.34	AV	207.00	150	V	Pass
6	11014.938	53.33	18.80	74.0	-20.67	Peak	207.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11n40 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2021.000	27.75	-13.39	54.0	-26.25	AV	242.00	150	H	Pass
1	2021.000	38.89	-13.39	74.0	-35.11	Peak	242.00	150	H	Pass
2**	2422.000	86.57	-10.54	54.0	32.57	AV	303.00	150	H	N/A
2	2422.000	94.36	-10.54	74.0	20.36	Peak	303.00	150	H	N/A
3**	3225.000	33.00	-6.44	54.0	-21.00	AV	0.00	150	H	Pass
3	3225.000	43.96	-6.44	74.0	-30.04	Peak	0.00	150	H	Pass
4**	5084.000	38.04	-0.27	54.0	-15.96	AV	197.00	150	H	Pass
4	5084.000	48.58	-0.27	74.0	-25.42	Peak	197.00	150	H	Pass
5**	6975.000	40.33	4.22	54.0	-13.67	AV	0.00	150	H	Pass
5	6975.000	51.12	4.22	74.0	-22.88	Peak	0.00	150	H	Pass
6**	9898.000	42.59	18.51	54.0	-11.41	AV	316.00	150	H	Pass
6	9898.000	52.26	18.51	74.0	-21.74	Peak	316.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11n40 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2000.000	31.24	-13.60	54.0	-22.76	AV	363.00	150	V	Pass
1	2000.000	39.25	-13.60	74.0	-34.75	Peak	363.00	150	V	Pass
2**	2420.000	88.92	-10.53	54.0	34.92	AV	363.00	150	V	N/A
2	2420.000	96.45	-10.53	74.0	22.45	Peak	363.00	150	V	N/A
3**	3554.000	33.79	-6.27	54.0	-20.21	AV	354.00	150	V	Pass
3	3554.000	44.95	-6.27	74.0	-29.05	Peak	354.00	150	V	Pass
4**	5664.000	38.35	-0.66	54.0	-15.65	AV	0.00	150	V	Pass
4	5664.000	49.35	-0.66	74.0	-24.65	Peak	0.00	150	V	Pass
5**	7613.813	41.19	17.48	54.0	-12.81	AV	252.00	150	V	Pass
5	7613.813	51.32	17.48	74.0	-22.68	Peak	252.00	150	V	Pass
6**	10813.688	42.01	18.20	54.0	-11.99	AV	0.00	150	V	Pass
6	10813.688	52.71	18.20	74.0	-21.29	Peak	0.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1980.000	27.73	-13.55	54.0	-26.27	AV	123.00	150	H	Pass
1	1980.000	38.27	-13.55	74.0	-35.73	Peak	123.00	150	H	Pass
2**	2441.000	86.04	-10.93	54.0	32.04	AV	306.00	150	H	N/A
2	2441.000	93.68	-10.93	74.0	19.68	Peak	306.00	150	H	N/A
3**	3472.000	33.26	-7.12	54.0	-20.74	AV	352.00	150	H	Pass
3	3472.000	43.80	-7.12	74.0	-30.20	Peak	352.00	150	H	Pass
4**	5045.000	37.77	-0.91	54.0	-16.23	AV	52.00	150	H	Pass
4	5045.000	48.71	-0.91	74.0	-25.29	Peak	52.00	150	H	Pass
5**	6953.000	40.38	3.79	54.0	-13.62	AV	228.00	150	H	Pass
5	6953.000	51.72	3.79	74.0	-22.28	Peak	228.00	150	H	Pass
6**	10809.375	42.16	18.19	54.0	-11.84	AV	322.00	150	H	Pass
6	10809.375	53.02	18.19	74.0	-20.98	Peak	322.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2000.000	33.19	-13.60	54.0	-20.81	AV	88.00	150	V	Pass
1	2000.000	40.35	-13.60	74.0	-33.65	Peak	88.00	150	V	Pass
2**	2468.500	89.18	-10.60	54.0	35.18	AV	1.00	150	V	N/A
2	2468.500	97.02	-10.60	74.0	23.02	Peak	1.00	150	V	N/A
3**	3654.000	34.62	-4.63	54.0	-19.38	AV	170.00	150	V	Pass
3	3654.000	45.02	-4.63	74.0	-28.98	Peak	170.00	150	V	Pass
4**	5913.000	38.71	1.14	54.0	-15.29	AV	206.00	150	V	Pass
4	5913.000	50.16	1.14	74.0	-23.84	Peak	206.00	150	V	Pass
5**	7544.813	40.74	17.10	54.0	-13.26	AV	250.00	150	V	Pass
5	7544.813	51.72	17.10	74.0	-22.28	Peak	250.00	150	V	Pass
6**	9875.000	41.13	17.38	54.0	-12.87	AV	53.00	150	V	Pass
6	9875.000	51.72	17.38	74.0	-22.28	Peak	53.00	150	V	Pass

MIMO

1 GHz to 12.75 GHz, ANT H 802.11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1537.000	25.85	-15.12	54.0	-28.15	AV	339.00	150	H	Pass
1	1537.000	37.33	-15.12	74.0	-36.67	Peak	339.00	150	H	Pass
2**	2406.000	89.22	-10.56	54.0	35.22	AV	265.00	150	H	N/A
2	2406.000	98.52	-10.56	74.0	24.52	Peak	265.00	150	H	N/A
3**	3663.000	33.97	-4.77	54.0	-20.03	AV	55.00	150	H	Pass
3	3663.000	45.20	-4.77	74.0	-28.80	Peak	55.00	150	H	Pass
4**	5369.000	38.09	-0.13	54.0	-15.91	AV	140.00	150	H	Pass
4	5369.000	49.00	-0.13	74.0	-25.00	Peak	140.00	150	H	Pass
5**	7152.375	34.40	17.36	54.0	-19.60	AV	247.00	150	H	Pass
5	7152.375	51.16	17.36	74.0	-22.84	Peak	247.00	150	H	Pass
6**	9892.250	35.76	18.16	54.0	-18.24	AV	64.00	150	H	Pass
6	9892.250	51.95	18.16	74.0	-22.05	Peak	64.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1364.000	25.76	-15.01	54.0	-28.24	AV	275.00	150	V	Pass
1	1364.000	36.10	-15.01	74.0	-37.90	Peak	275.00	150	V	Pass
2**	2420.000	89.70	-10.53	54.0	35.70	AV	185.00	150	V	N/A
2	2420.000	98.94	-10.53	74.0	24.94	Peak	185.00	150	V	N/A
3**	3643.000	35.34	-5.06	54.0	-18.66	AV	328.00	150	V	Pass
3	3643.000	45.14	-5.06	74.0	-28.86	Peak	328.00	150	V	Pass
4**	5839.000	38.57	1.03	54.0	-15.43	AV	26.00	150	V	Pass
4	5839.000	49.46	1.03	74.0	-24.54	Peak	26.00	150	V	Pass
5**	8060.875	34.94	18.30	54.0	-19.06	AV	36.00	150	V	Pass
5	8060.875	51.31	18.30	74.0	-22.69	Peak	36.00	150	V	Pass
6**	9886.500	35.35	17.82	54.0	-18.65	AV	0.00	150	V	Pass
6	9886.500	51.91	17.82	74.0	-22.09	Peak	0.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11n20 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1845.000	26.99	-14.29	54.0	-27.01	AV	147.00	150	H	Pass
1	1845.000	38.20	-14.29	74.0	-35.80	Peak	147.00	150	H	Pass
2**	2435.500	88.45	-11.08	54.0	34.45	AV	271.00	150	H	N/A
2	2435.500	96.69	-11.08	74.0	22.69	Peak	271.00	150	H	N/A
3**	3459.000	33.27	-6.33	54.0	-20.73	AV	25.00	150	H	Pass
3	3459.000	44.79	-6.33	74.0	-29.21	Peak	25.00	150	H	Pass
4**	5687.000	38.59	0.05	54.0	-15.41	AV	0.00	150	H	Pass
4	5687.000	50.08	0.05	74.0	-23.92	Peak	0.00	150	H	Pass
5**	7437.000	34.17	16.97	54.0	-19.83	AV	169.00	150	H	Pass
5	7437.000	50.39	16.97	74.0	-23.61	Peak	169.00	150	H	Pass
6**	9889.375	35.55	17.99	54.0	-18.45	AV	41.00	150	H	Pass
6	9889.375	52.29	17.99	74.0	-21.71	Peak	41.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11n20 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1964.500	26.78	-13.81	54.0	-27.22	AV	15.00	150	V	Pass
1	1964.500	38.79	-13.81	74.0	-35.21	Peak	15.00	150	V	Pass
2**	2440.500	88.40	-10.95	54.0	34.40	AV	258.00	150	V	N/A
2	2440.500	97.61	-10.95	74.0	23.61	Peak	258.00	150	V	N/A
3**	3952.000	34.31	-5.11	54.0	-19.69	AV	33.00	150	V	Pass
3	3952.000	45.61	-5.11	74.0	-28.39	Peak	33.00	150	V	Pass
4**	6160.000	38.57	2.37	54.0	-15.43	AV	60.00	150	V	Pass
4	6160.000	50.33	2.37	74.0	-23.67	Peak	60.00	150	V	Pass
5**	7963.125	34.07	17.26	54.0	-19.93	AV	94.00	150	V	Pass
5	7963.125	50.48	17.26	74.0	-23.52	Peak	94.00	150	V	Pass
6**	11047.999	35.52	18.67	54.0	-18.48	AV	83.00	150	V	Pass
6	11047.999	51.72	18.67	74.0	-22.28	Peak	83.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1480.500	25.70	-15.30	54.0	-28.30	AV	89.00	150	H	Pass
1	1480.500	37.06	-15.30	74.0	-36.94	Peak	89.00	150	H	Pass
2**	2469.500	88.51	-10.58	54.0	34.51	AV	259.00	150	H	N/A
2	2469.500	96.49	-10.58	74.0	22.49	Peak	259.00	150	H	N/A
3**	3631.000	34.43	-5.27	54.0	-19.57	AV	48.00	150	H	Pass
3	3631.000	44.83	-5.27	74.0	-29.17	Peak	48.00	150	H	Pass
4**	5112.000	37.47	-0.50	54.0	-16.53	AV	254.00	150	H	Pass
4	5112.000	48.70	-0.50	74.0	-25.30	Peak	254.00	150	H	Pass
5**	6972.000	40.18	4.47	54.0	-13.82	AV	360.00	150	H	Pass
5	6972.000	50.83	4.47	74.0	-23.17	Peak	360.00	150	H	Pass
6**	10507.500	35.74	17.91	54.0	-18.26	AV	221.00	150	H	Pass
6	10507.500	51.86	17.91	74.0	-22.14	Peak	221.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	2000.000	30.37	-13.60	54.0	-23.63	AV	193.00	150	V	Pass
1	2000.000	39.07	-13.60	74.0	-34.93	Peak	193.00	150	V	Pass
2**	2466.000	89.09	-10.59	54.0	35.09	AV	163.00	150	V	N/A
2	2466.000	98.06	-10.59	74.0	24.06	Peak	163.00	150	V	N/A
3**	3656.000	35.16	-4.63	54.0	-18.84	AV	5.00	150	V	Pass
3	3656.000	45.35	-4.63	74.0	-28.65	Peak	5.00	150	V	Pass
4**	5607.000	38.17	-0.39	54.0	-15.83	AV	360.00	150	V	Pass
4	5607.000	49.54	-0.39	74.0	-24.46	Peak	360.00	150	V	Pass
5**	8042.187	35.24	18.14	54.0	-18.76	AV	291.00	150	V	Pass
5	8042.187	51.29	18.14	74.0	-22.71	Peak	291.00	150	V	Pass
6**	10481.625	35.87	17.94	54.0	-18.13	AV	4.00	150	V	Pass
6	10481.625	51.90	17.94	74.0	-22.10	Peak	4.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1450.500	26.00	-15.00	54.0	-28.00	AV	320.00	150	H	Pass
1	1450.500	37.12	-15.00	74.0	-36.88	Peak	320.00	150	H	Pass
2**	2417.500	85.26	-10.60	54.0	31.26	AV	136.00	150	H	N/A
2	2417.500	94.36	-10.60	74.0	20.36	Peak	136.00	150	H	N/A
3**	3684.000	33.94	-5.25	54.0	-20.06	AV	260.00	150	H	Pass
3	3684.000	44.91	-5.25	74.0	-29.09	Peak	260.00	150	H	Pass
4**	5547.000	37.80	-0.26	54.0	-16.20	AV	229.00	150	H	Pass
4	5547.000	49.28	-0.26	74.0	-24.72	Peak	229.00	150	H	Pass
5**	7491.625	34.22	17.08	54.0	-19.78	AV	0.00	150	H	Pass
5	7491.625	50.36	17.08	74.0	-23.64	Peak	0.00	150	H	Pass
6**	10853.937	35.32	18.31	54.0	-18.68	AV	175.00	150	H	Pass
6	10853.937	51.53	18.31	74.0	-22.47	Peak	175.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1945.500	27.24	-13.18	54.0	-26.76	AV	213.00	150	V	Pass
1	1945.500	38.48	-13.18	74.0	-35.52	Peak	213.00	150	V	Pass
2**	2407.500	89.43	-10.56	54.0	35.43	AV	184.00	150	V	N/A
2	2407.500	97.73	-10.56	74.0	23.73	Peak	184.00	150	V	N/A
3**	3666.000	34.21	-4.77	54.0	-19.79	AV	27.00	150	V	Pass
3	3666.000	45.20	-4.77	74.0	-28.80	Peak	27.00	150	V	Pass
4**	6023.000	39.38	2.27	54.0	-14.62	AV	262.00	150	V	Pass
4	6023.000	50.26	2.27	74.0	-23.74	Peak	262.00	150	V	Pass
5**	8052.250	35.34	18.28	54.0	-18.66	AV	240.00	150	V	Pass
5	8052.250	50.15	18.28	74.0	-23.85	Peak	240.00	150	V	Pass
6**	11308.188	36.28	18.34	54.0	-17.72	AV	260.00	150	V	Pass
6	11308.188	52.87	18.34	74.0	-21.13	Peak	260.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11n40 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1521.000	25.96	-15.02	54.0	-28.04	AV	240.00	150	H	Pass
1	1521.000	36.78	-15.02	74.0	-37.22	Peak	240.00	150	H	Pass
2**	2446.000	84.75	-11.12	54.0	30.75	AV	272.00	150	H	N/A
2	2446.000	94.09	-11.12	74.0	20.09	Peak	272.00	150	H	N/A
3**	3722.000	34.87	-4.83	54.0	-19.13	AV	19.00	150	H	Pass
3	3722.000	45.29	-4.83	74.0	-28.71	Peak	19.00	150	H	Pass
4**	5071.000	37.73	-0.77	54.0	-16.27	AV	74.00	150	H	Pass
4	5071.000	49.20	-0.77	74.0	-24.80	Peak	74.00	150	H	Pass
5**	7478.688	40.88	17.03	54.0	-13.12	AV	211.00	150	H	Pass
5	7478.688	52.59	17.03	74.0	-21.41	Peak	211.00	150	H	Pass
6**	10611.000	42.40	18.21	54.0	-11.60	AV	183.00	150	H	Pass
6	10611.000	52.85	18.21	74.0	-21.15	Peak	183.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11n40 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1466.500	26.00	-15.08	54.0	-28.00	AV	352.00	150	V	Pass
1	1466.500	36.95	-15.08	74.0	-37.05	Peak	352.00	150	V	Pass
2**	2449.500	86.31	-10.96	54.0	32.31	AV	206.00	150	V	N/A
2	2449.500	96.16	-10.96	74.0	22.16	Peak	206.00	150	V	N/A
3**	3653.000	35.06	-4.64	54.0	-18.94	AV	0.00	150	V	Pass
3	3653.000	45.48	-4.64	74.0	-28.52	Peak	0.00	150	V	Pass
4**	5076.000	38.70	-0.57	54.0	-15.30	AV	54.00	150	V	Pass
4	5076.000	49.50	-0.57	74.0	-24.50	Peak	54.00	150	V	Pass
5**	7024.437	40.92	16.99	54.0	-13.08	AV	241.00	150	V	Pass
5	7024.437	51.48	16.99	74.0	-22.52	Peak	241.00	150	V	Pass
6**	9909.500	42.41	18.15	54.0	-11.59	AV	178.00	150	V	Pass
6	9909.500	52.51	18.15	74.0	-21.49	Peak	178.00	150	V	Pass

1 GHz to 12.75 GHz, ANT H 802.11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1391.000	25.67	-15.13	54.0	-28.33	AV	133.00	150	H	Pass
1	1391.000	36.73	-15.13	74.0	-37.27	Peak	133.00	150	H	Pass
2**	2443.000	84.68	-11.00	54.0	30.68	AV	122.00	150	H	N/A
2	2443.000	93.86	-11.00	74.0	19.86	Peak	122.00	150	H	N/A
3**	3619.000	34.21	-5.36	54.0	-19.79	AV	223.00	150	H	Pass
3	3619.000	44.51	-5.36	74.0	-29.49	Peak	223.00	150	H	Pass
4**	5839.000	39.36	1.03	54.0	-14.64	AV	303.00	150	H	Pass
4	5839.000	50.46	1.03	74.0	-23.54	Peak	303.00	150	H	Pass
5**	7971.750	40.89	17.29	54.0	-13.11	AV	324.00	150	H	Pass
5	7971.750	52.00	17.29	74.0	-22.00	Peak	324.00	150	H	Pass
6**	9892.250	42.57	18.16	54.0	-11.43	AV	182.00	150	H	Pass
6	9892.250	53.18	18.16	74.0	-20.82	Peak	182.00	150	H	Pass

1 GHz to 12.75 GHz, ANT V 802.11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1289.500	25.35	-15.08	54.0	-28.65	AV	234.00	150	V	Pass
1	1289.500	36.09	-15.08	74.0	-37.91	Peak	234.00	150	V	Pass
2**	2468.500	88.20	-10.60	54.0	34.20	AV	221.00	150	V	N/A
2	2468.500	97.00	-10.60	74.0	23.00	Peak	221.00	150	V	N/A
3**	3656.000	35.19	-4.63	54.0	-18.81	AV	237.00	150	V	Pass
3	3656.000	45.98	-4.63	74.0	-28.02	Peak	237.00	150	V	Pass
4**	4939.000	37.63	-1.62	54.0	-16.37	AV	272.00	150	V	Pass
4	4939.000	48.93	-1.62	74.0	-25.07	Peak	272.00	150	V	Pass
5**	7155.250	40.92	17.24	54.0	-13.08	AV	174.00	150	V	Pass
5	7155.250	52.28	17.24	74.0	-21.72	Peak	174.00	150	V	Pass
6**	9084.375	41.95	18.71	54.0	-12.05	AV	169.00	150	V	Pass
6	9084.375	53.55	18.71	74.0	-20.45	Peak	169.00	150	V	Pass

A.7 Band Edge (Restricted-band band-edge)

Test Data

Note ¹: The lowest and highest channels are tested to verify the band edge emissions. Please refer to the following the plots for emissions values.

Note ²: The test data all are tested in the vertical and horizontal antenna which the trace is max hold. So these plots have shown the worst case.

Note ³: According the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

SISO ANT0

Test Mode	Test Channel	Frequency (MHz)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Remark	Verdict
802.11b	Low	2390	45.85	74	28.15	PEAK	Pass
		2390	N/A	54	N/A	AVERAGE	N/A
	HIGH	2483.5	46.72	74	27.28	PEAK	Pass
		2483.5	N/A	54	N/A	AVERAGE	N/A
802.11g	Low	2390	61.81	74	12.19	PEAK	Pass
		2390	46.72	54	7.28	AVERAGE	Pass
	HIGH	2483.5	60.94	74	13.06	PEAK	Pass
		2483.5	46.50	54	7.50	AVERAGE	Pass
802.11n20	Low	2390	54.76	74	19.24	PEAK	Pass
		2390	43.88	54	10.12	AVERAGE	Pass
	HIGH	2483.5	59.01	74	14.99	PEAK	Pass
		2483.5	45.35	54	8.65	AVERAGE	Pass
802.11n40	Low	2390	55.93	74	18.07	PEAK	Pass
		2390	45.40	54	8.60	AVERAGE	Pass
	HIGH	2483.5	57.12	74	16.88	PEAK	Pass
		2483.5	46.17	54	7.83	AVERAGE	Pass

SISO ANT1

Test Mode	Test Channel	Frequency (MHz)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Remark	Verdict
802.11b	Low	2390	49.45	74	24.55	PEAK	Pass
		2390	N/A	54	N/A	AVERAGE	N/A
	HIGH	2483.5	47.75	74	26.25	PEAK	Pass
		2483.5	N/A	54	N/A	AVERAGE	N/A
802.11g	Low	2390	60.56	74	13.44	PEAK	Pass
		2390	45.98	54	8.02	AVERAGE	Pass
	HIGH	2483.5	53.99	74	20.01	PEAK	Pass
		2483.5	N/A	54	N/A	AVERAGE	N/A
802.11n20	Low	2390	62.51	74	11.49	PEAK	Pass
		2390	47.26	54	6.74	AVERAGE	Pass
	HIGH	2483.5	55.11	74	18.89	PEAK	Pass
		2483.5	42.56	54	11.44	AVERAGE	Pass
802.11n40	Low	2390	58.01	74	15.99	PEAK	Pass
		2390	46.28	54	7.72	AVERAGE	Pass
	HIGH	2483.5	56.78	74	17.22	PEAK	Pass
		2483.5	47.86	54	6.14	AVERAGE	Pass

MIMO

Test Mode	Test Channel	Frequency (MHz)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Remark	Verdict
802.11n20	Low	2390	58.70	74	15.30	PEAK	Pass
		2390	46.97	54	7.03	AVERAGE	Pass
	HIGH	2483.5	55.52	74	18.48	PEAK	Pass
		2483.5	45.58	54	8.42	AVERAGE	Pass
802.11n40	Low	2390	57.00	74	17.00	PEAK	Pass
		2390	46.78	54	7.22	AVERAGE	Pass
	HIGH	2483.5	58.38	74	15.62	PEAK	Pass
		2483.5	45.66	54	8.34	AVERAGE	Pass

SISO ANT0

802.11b Mode:

LOW CHANNEL, PEAK



HIGH CHANNEL, PEAK



802.11g Mode:

LOW CHANNEL, PEAK



LOW CHANNEL, AV



HIGH CHANNEL, PEAK

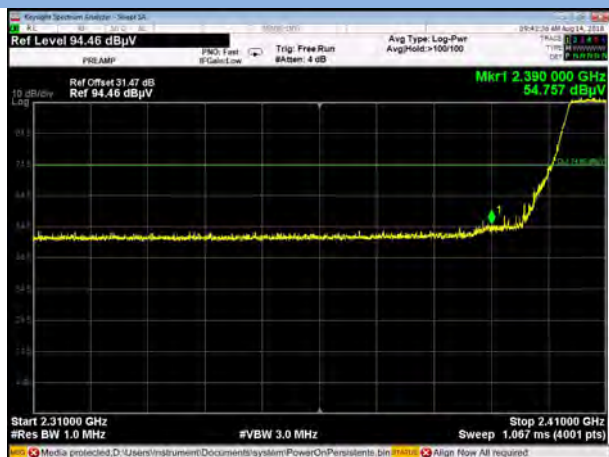


HIGH CHANNEL, AV



802.11n-20 MHz Mode:

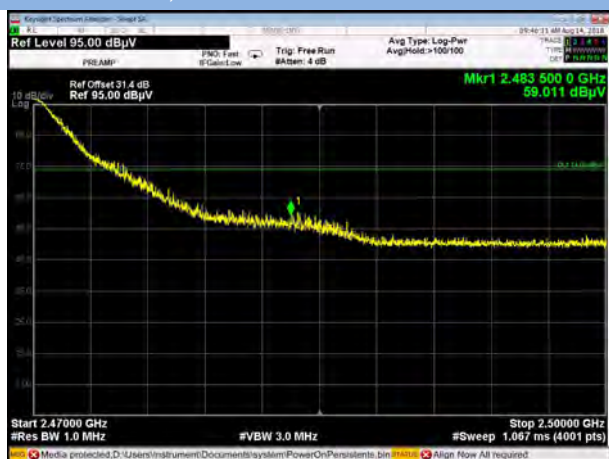
LOW CHANNEL, PEAK



LOW CHANNEL, AV



HIGH CHANNEL, PEAK

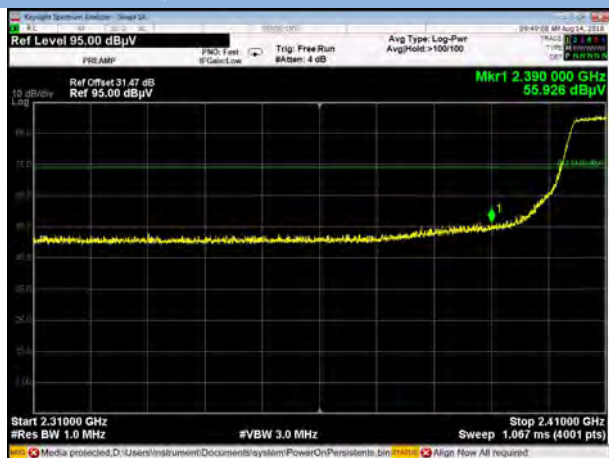


HIGH CHANNEL, AV



802.11n-40 MHz Mode:

LOW CHANNEL, PEAK



LOW CHANNEL, AV



HIGH CHANNEL, PEAK



HIGH CHANNEL, AV



SISO ANT1

802.11b Mode:

LOW CHANNEL, PEAK

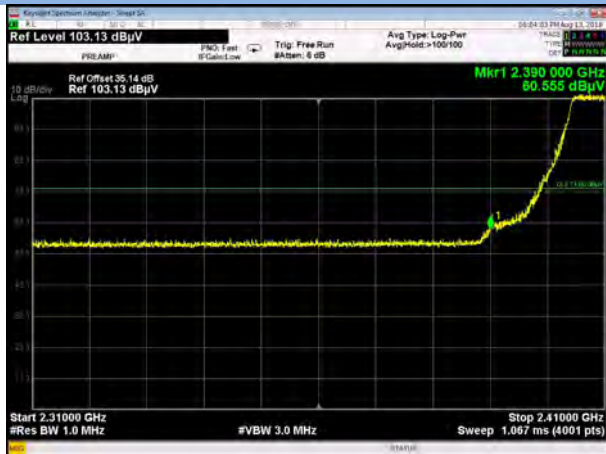


HIGH CHANNEL, PEAK



802.11g Mode:

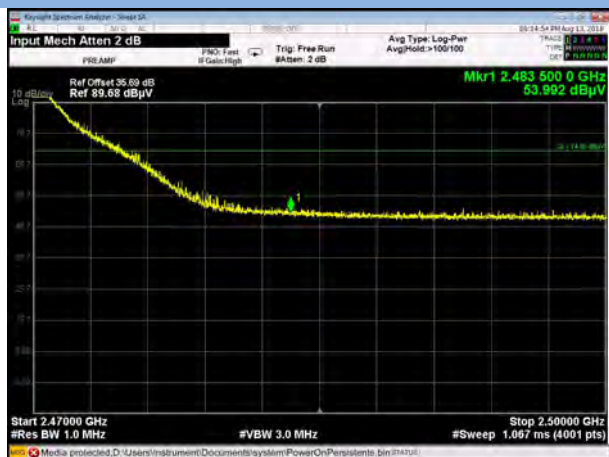
LOW CHANNEL, PEAK



LOW CHANNEL, AV



HIGH CHANNEL, PEAK

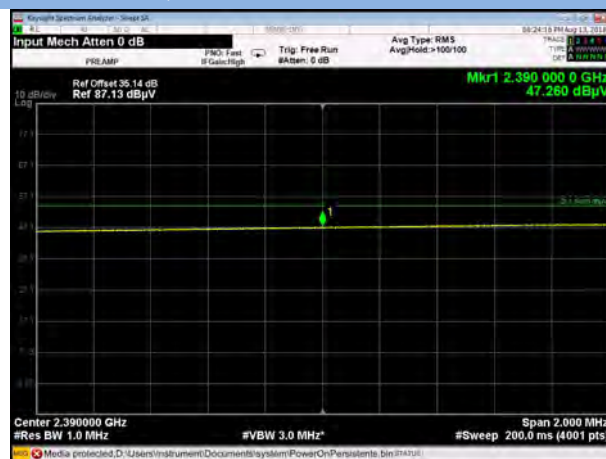


802.11n-20 MHz Mode:

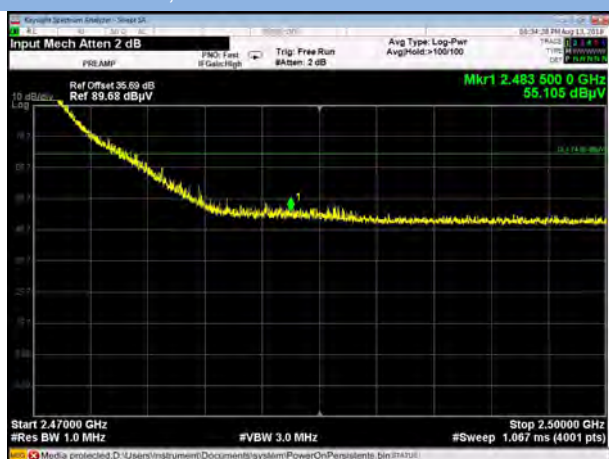
LOW CHANNEL, PEAK



LOW CHANNEL, AV



HIGH CHANNEL, PEAK

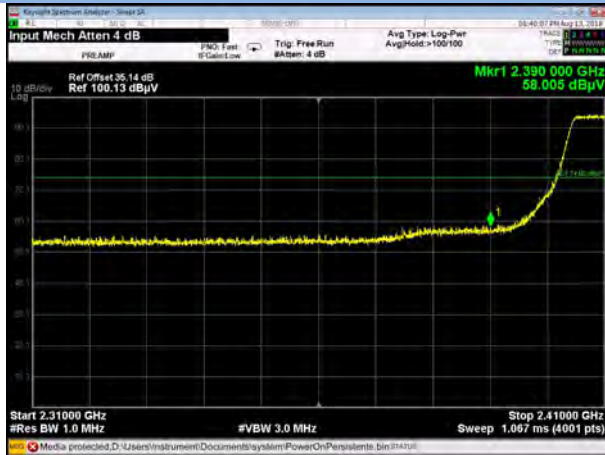


HIGH CHANNEL, AV

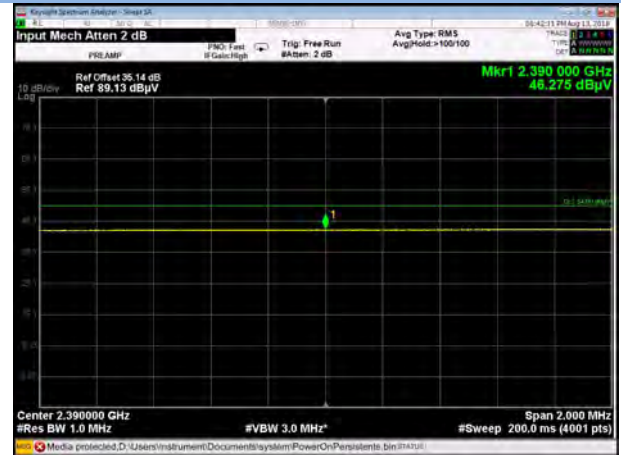


802.11n-40 MHz Mode:

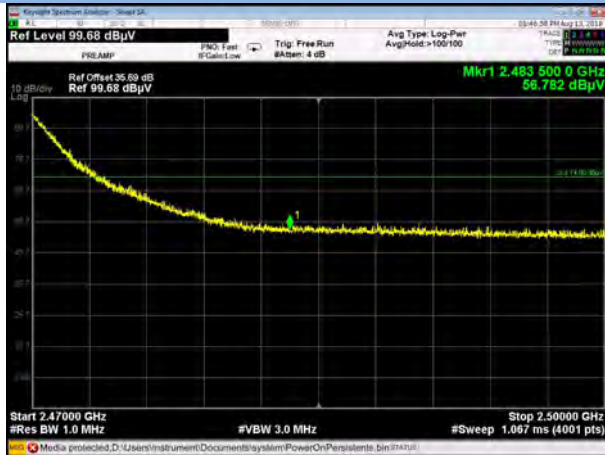
LOW CHANNEL, PEAK



LOW CHANNEL, AV



HIGH CHANNEL, PEAK



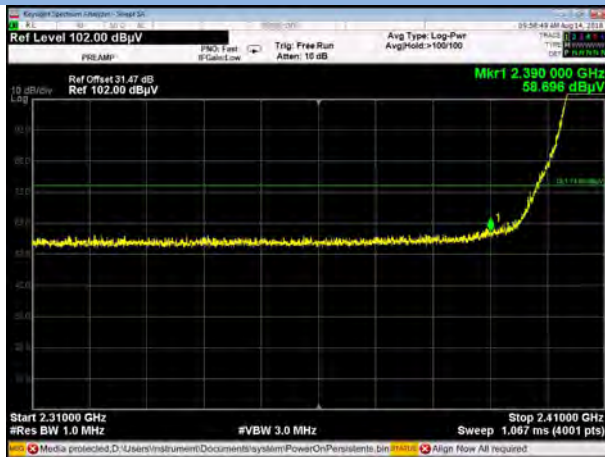
HIGH CHANNEL, AV



MIMO

802.11n-20 MHz Mode:

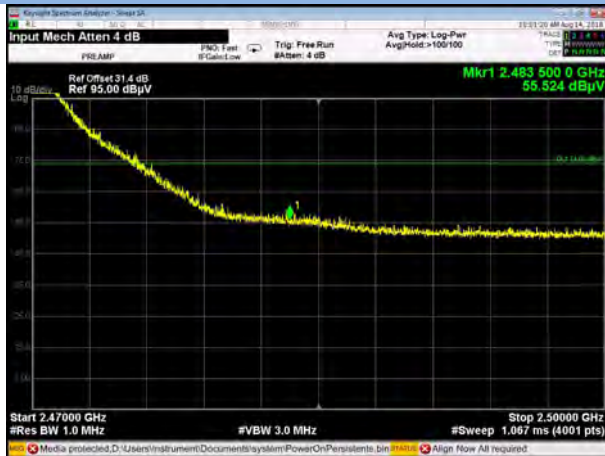
LOW CHANNEL, PEAK



LOW CHANNEL, AV



HIGH CHANNEL, PEAK

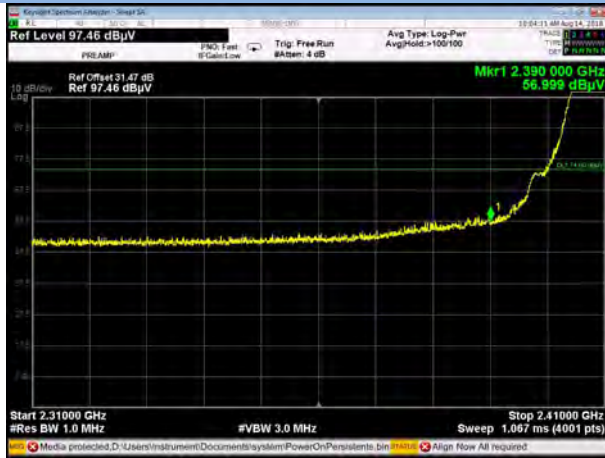


HIGH CHANNEL, AV



802.11n-40 MHz Mode:

LOW CHANNEL, PEAK



LOW CHANNEL, AV



HIGH CHANNEL, PEAK



HIGH CHANNEL, AV



A.8 Power Spectral Density (PSD)

Test Data

SISO ANT 0

802.11b Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-17.57	8
Middle	-18.75	8
High	-17.03	8

802.11g Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-19.90	8
Middle	-19.27	8
High	-20.35	8

802.11n-20 MHz Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-19.95	8
Middle	-19.66	8
High	-19.73	8

802.11n-40 MHz Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-23.66	8
Middle	-23.46	8
High	-23.31	8

Test DataSISO ANT 1

802.11b Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-18.20	8
Middle	-18.15	8
High	-18.32	8

802.11g Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-20.15	8
Middle	-20.52	8
High	-22.80	8

802.11n-20 MHz Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-20.57	8
Middle	-20.49	8
High	-20.53	8

802.11n-40 MHz Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-23.31	8
Middle	-23.73	8
High	-23.37	8

Test DataMIMO

802.11n-20 MHz Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-21.04	8
Middle	-20.72	8
High	-19.30	8

802.11n-40 MHz Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
Low	-22.75	8
Middle	-23.72	8
High	-24.08	8

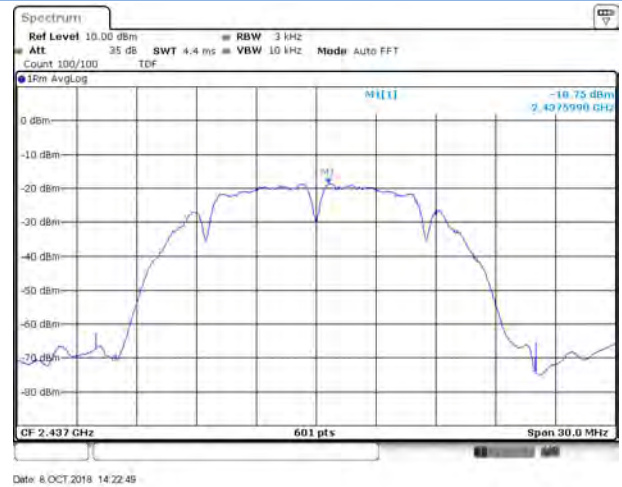
Test plots

SISO ANT0

802.11b LOW CHANNEL



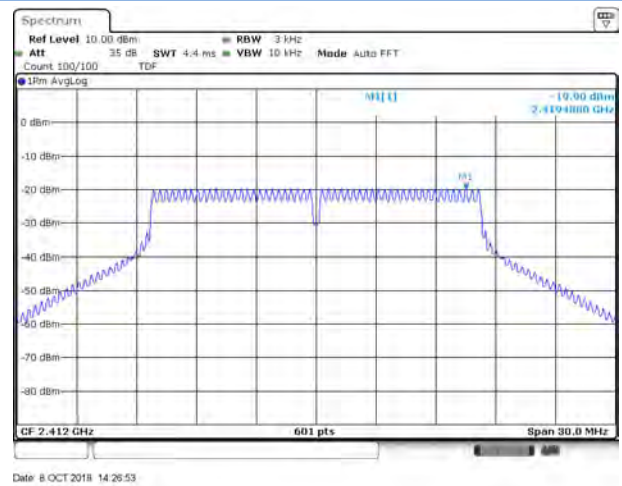
802.11b MIDDLE CHANNEL



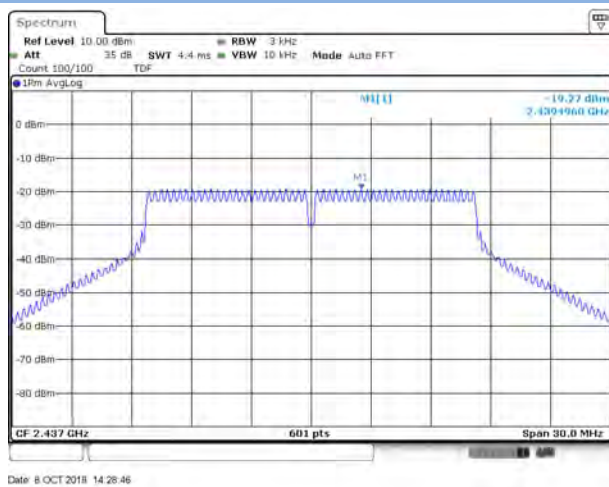
802.11b HIGH CHANNEL



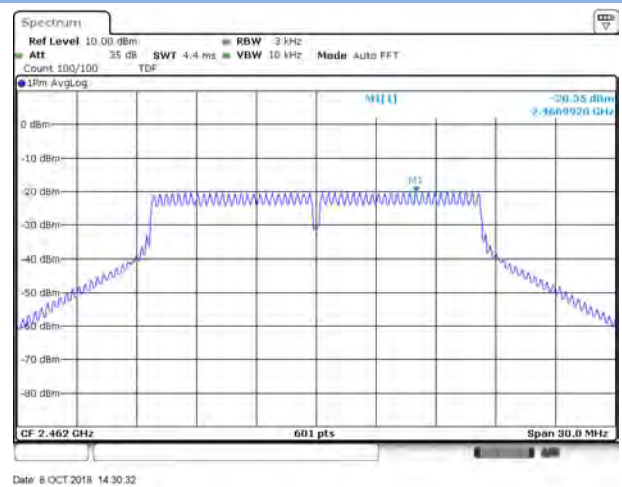
802.11g LOW CHANNEL



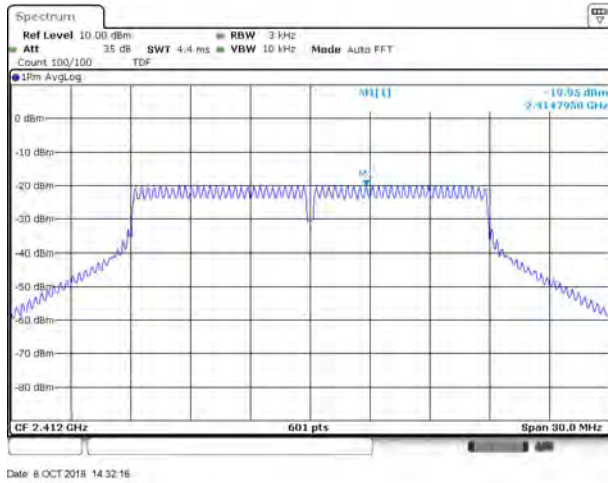
802.11g MIDDLE CHANNEL



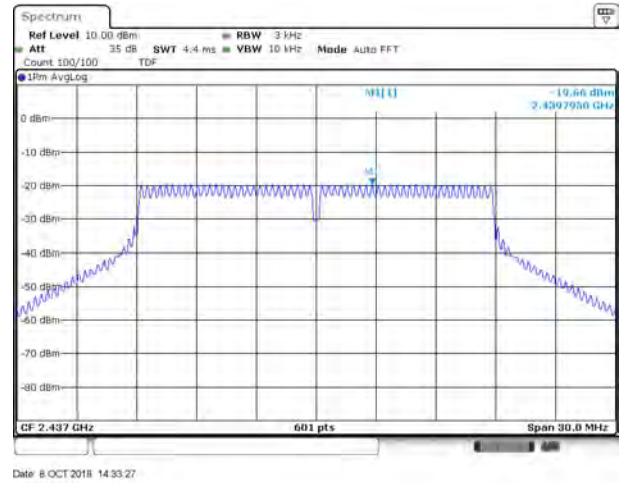
802.11g HIGH CHANNEL



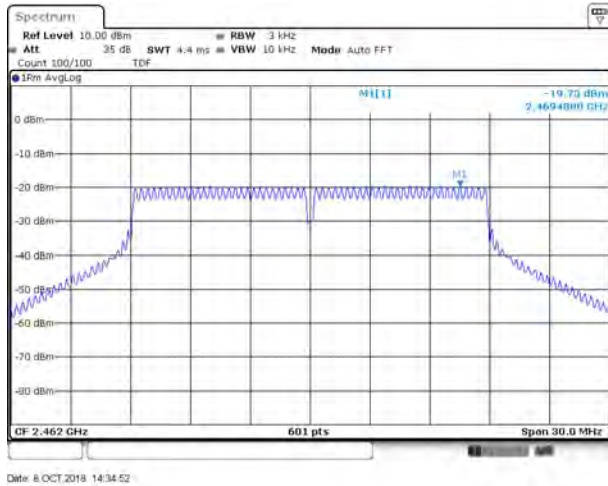
802.11n-20 MHz LOW CHANNEL



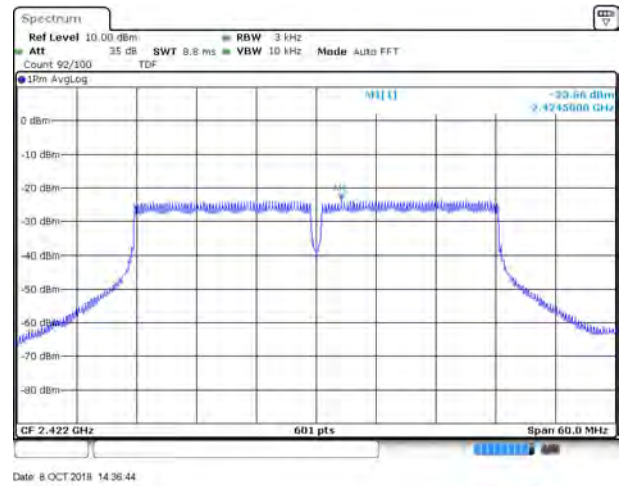
802.11 n-20 MHz MIDDLE CHANNEL



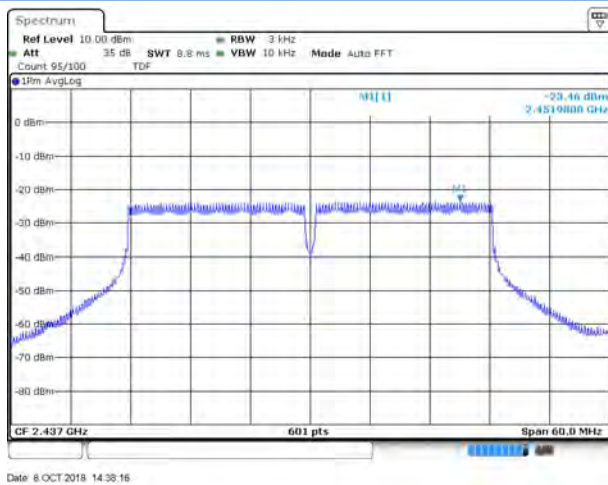
802.11n-20 MHz HIGH CHANNEL



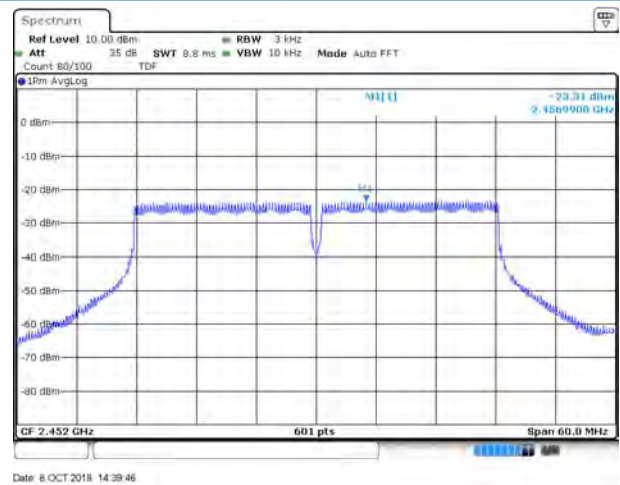
802.11n-40 MHz LOW CHANNEL



802.11n-40 MHz MIDDLE CHANNEL



802.11n-40 MHz HIGH CHANNEL



Test plots

SISO ANT1

802.11b LOW CHANNEL



Date: 8 OCT 2018 15:08:21

802.11b MIDDLE CHANNEL



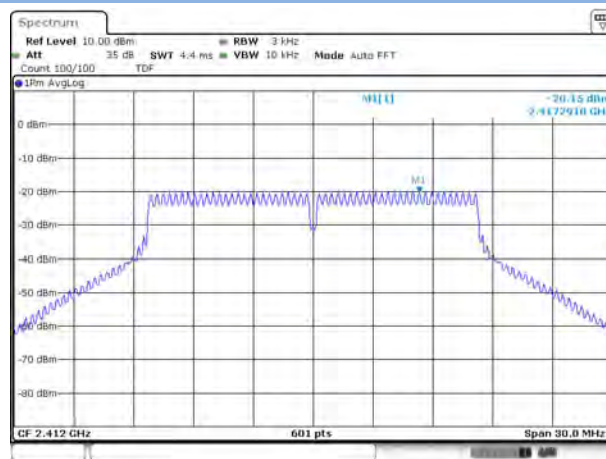
Date: 8 OCT 2018 15:09:32

802.11b HIGH CHANNEL



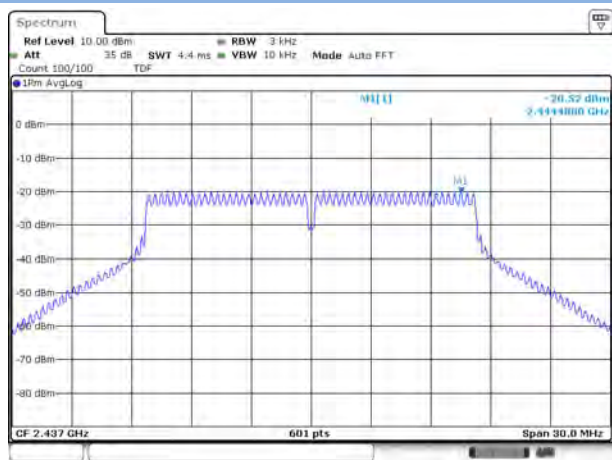
Date: 8 OCT 2018 15:10:59

802.11g LOW CHANNEL



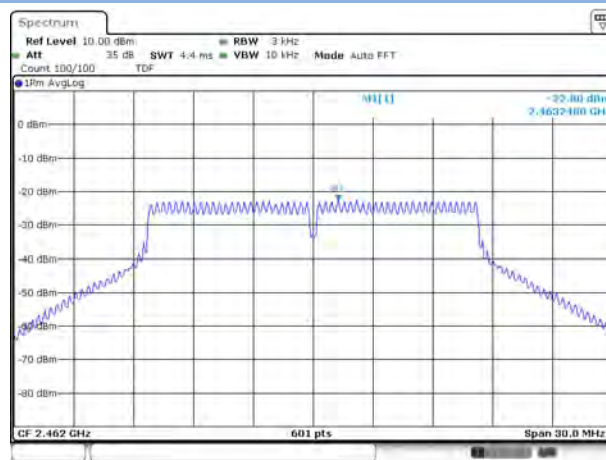
Date: 8 OCT 2018 15:12:26

802.11g MIDDLE CHANNEL



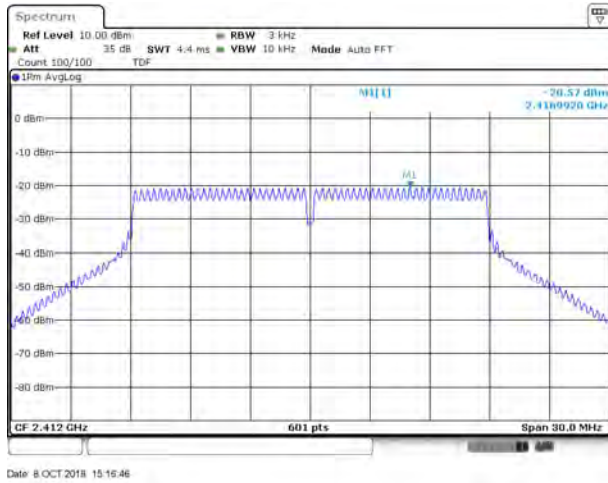
Date: 8 OCT 2018 15:13:36

802.11g HIGH CHANNEL

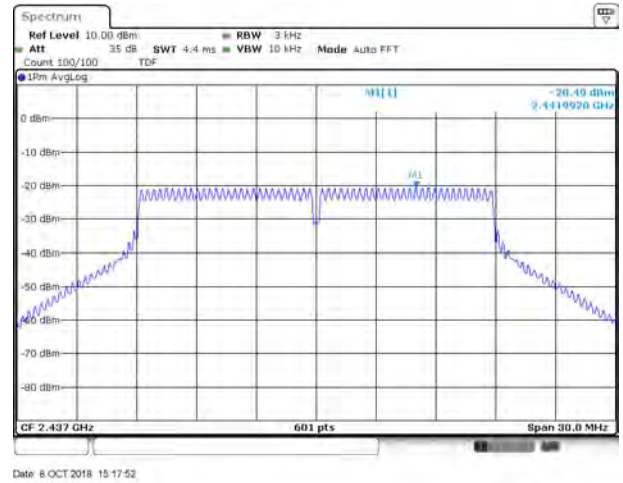


Date: 8 OCT 2018 15:14:56

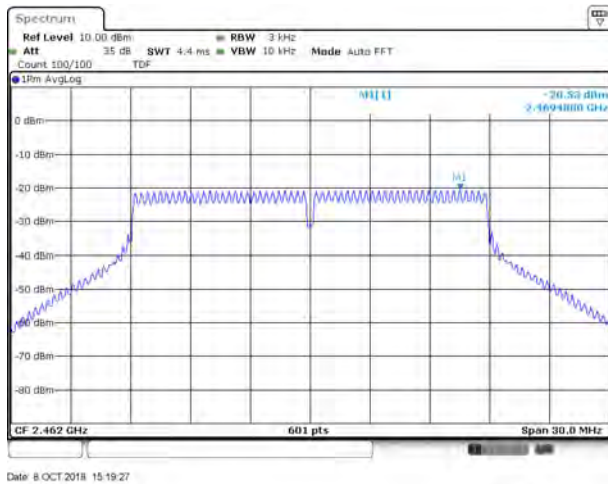
802.11n-20 MHz LOW CHANNEL



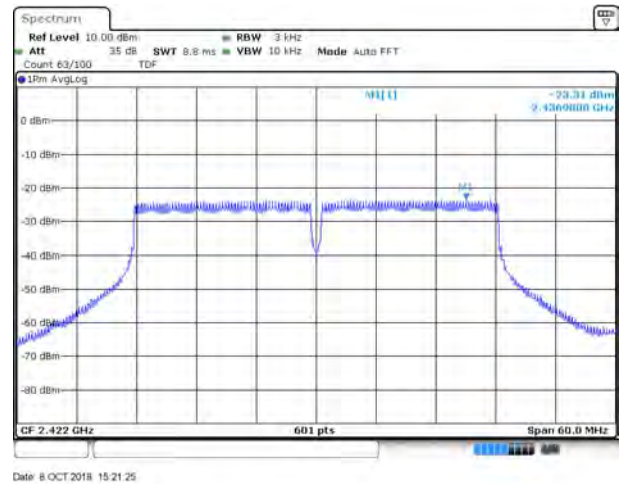
802.11 n-20 MHz MIDDLE CHANNEL



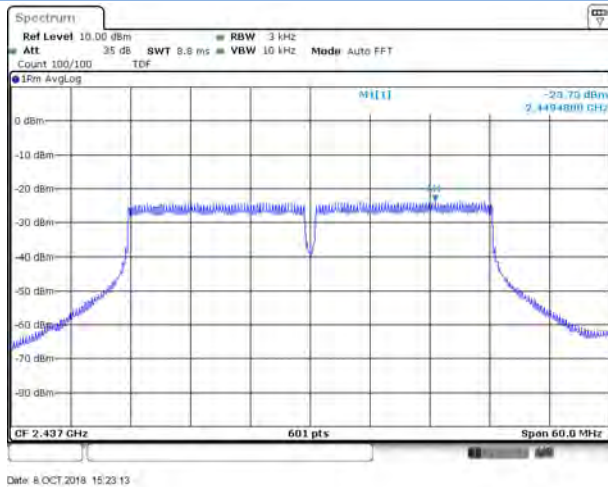
802.11n-20 MHz HIGH CHANNEL



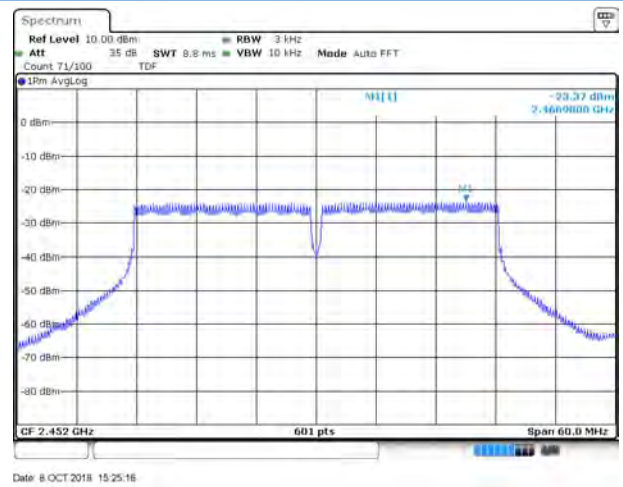
802.11n-40 MHz LOW CHANNEL



802.11n-40 MHz MIDDLE CHANNEL



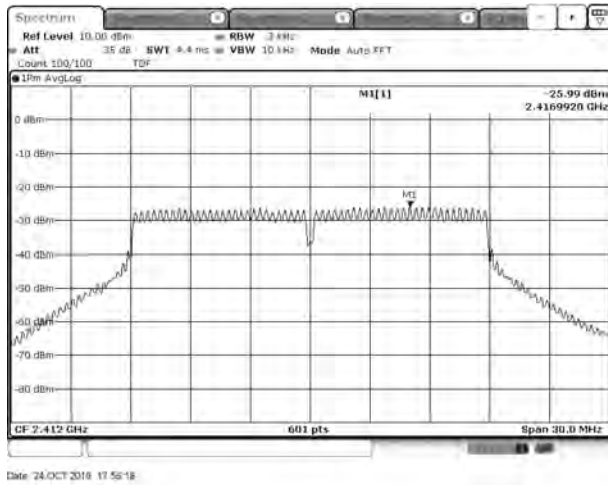
802.11n-40 MHz HIGH CHANNEL



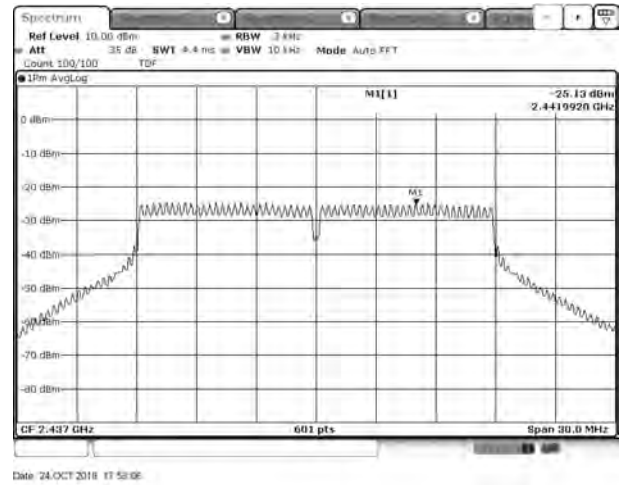
Test plots

MIMO ANTO

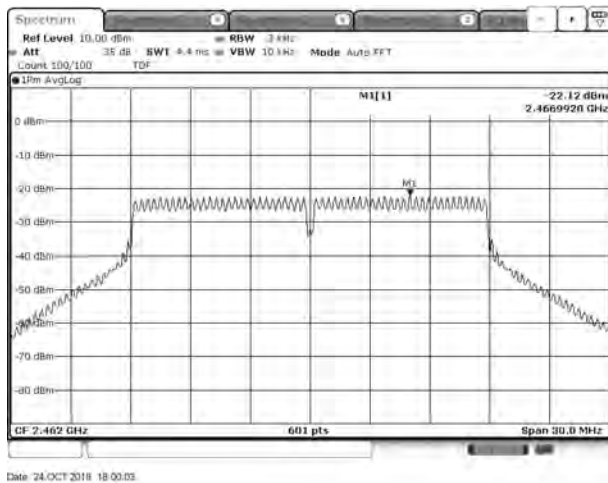
802.11n-20 MHz LOW CHANNEL



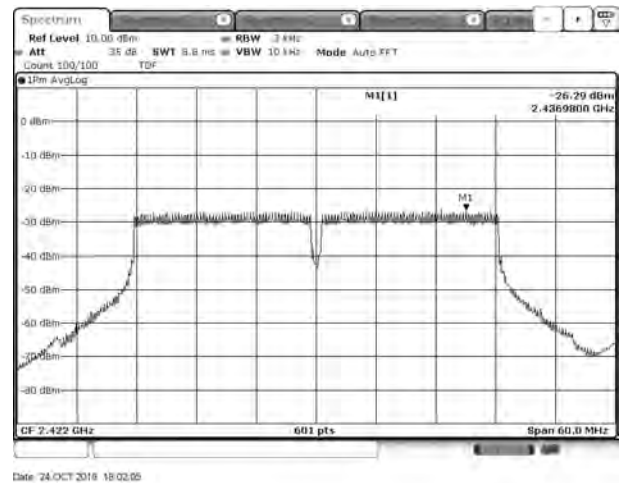
802.11 n-20 MHz MIDDLE CHANNEL



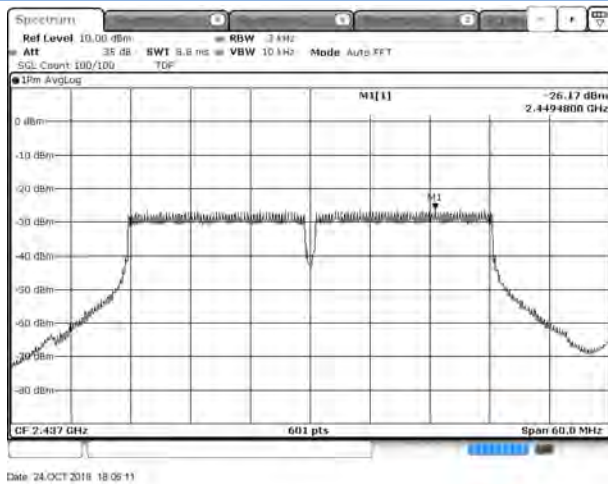
802.11n-20 MHz HIGH CHANNEL



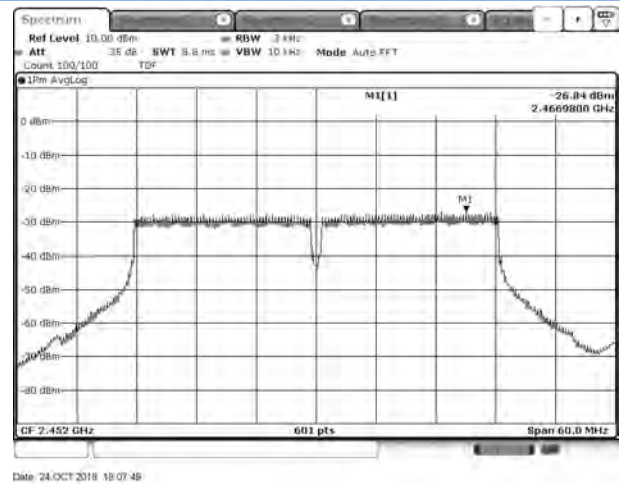
802.11n-40 MHz LOW CHANNEL



802.11n-40 MHz MIDDLE CHANNEL



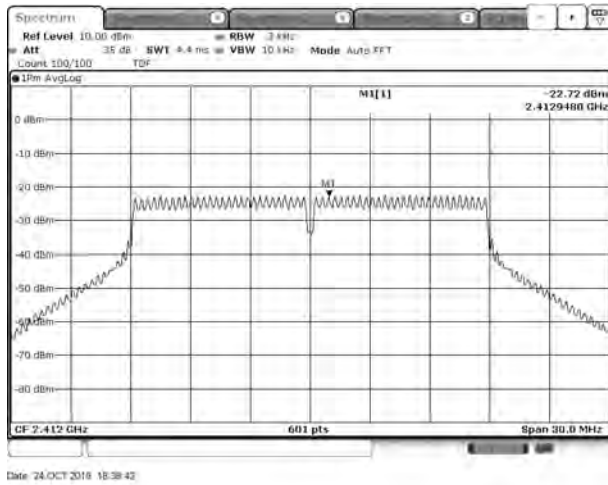
802.11n-40 MHz HIGH CHANNEL



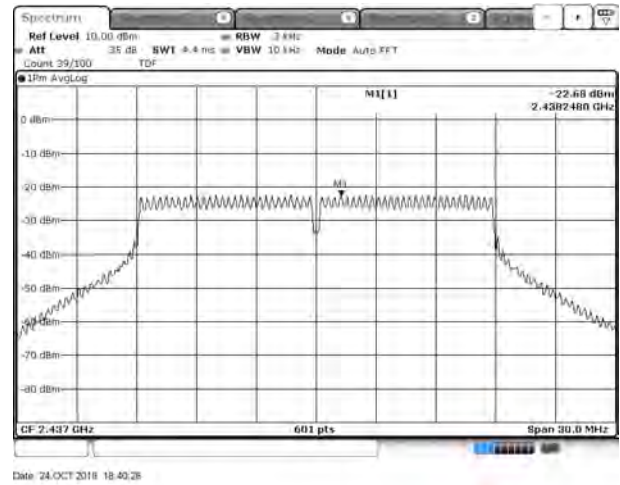
Test plots

MIMO ANT1

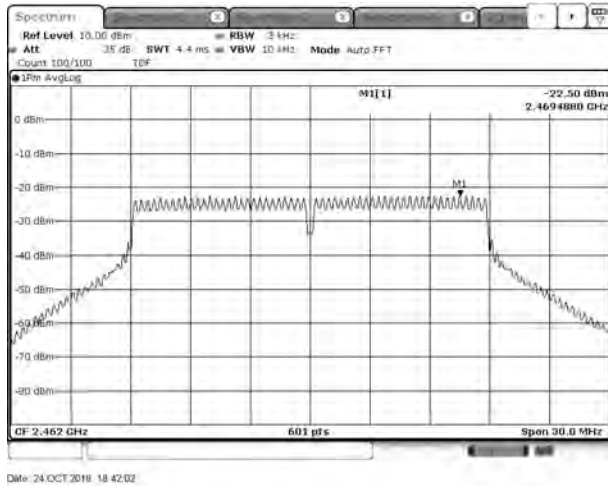
802.11n-20 MHz LOW CHANNEL



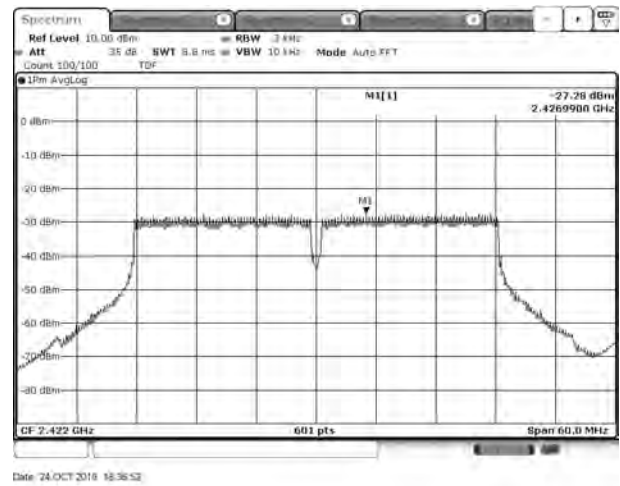
802.11 n-20 MHz MIDDLE CHANNEL



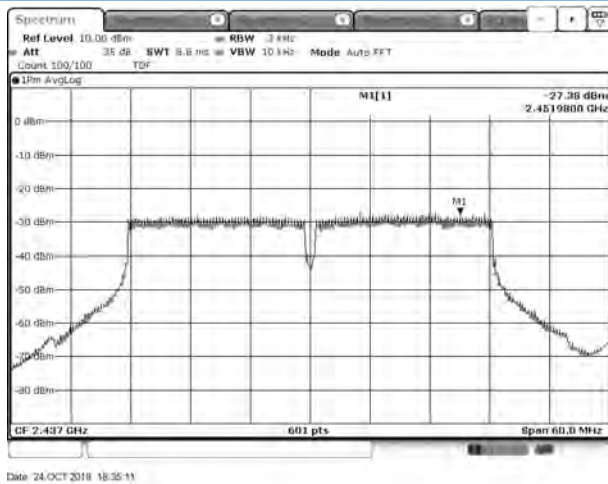
802.11n-20 MHz HIGH CHANNEL



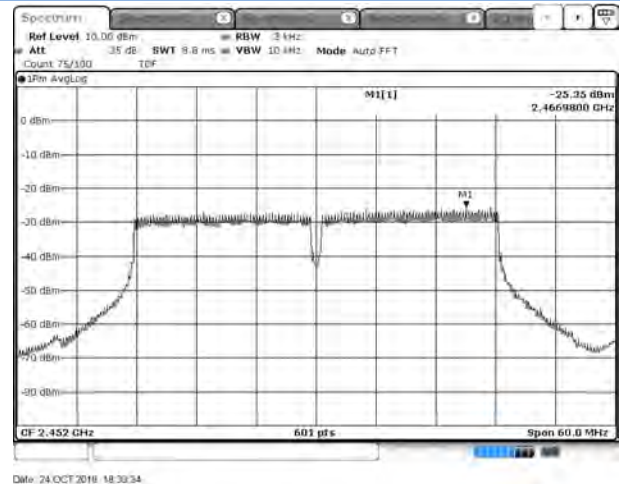
802.11n-40 MHz LOW CHANNEL



802.11n-40 MHz MIDDLE CHANNEL



802.11n-40 MHz HIGH CHANNEL



ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ1880358-AR.pdf”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ1880358-AW.pdf”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ1880358-AI.pdf”.

--END OF REPORT--