

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

SZEMC-TRF-01 Rev. A/2

Report No.: SZCR260300101401

Page: 1 of 70

TEST REPORT

Application No.: SZCR2603001014MO

Applicant/ Manufacturer: INGENICO

Address of Applicant/ Manufacturer: 9 Avenue de la gare - Rovaltain TGV, BP25156, Valence Cedex 9 26958 France

Factory:

1. ZHANGZHOU WANLIDA TECHNOLOGY CO.,LTD.
2. Jabil Vietnam Co. Ltd.
3. Cal-Comp Electronics (Thailand) Public Co., Ltd.

Address of Factory:

1. Wanlida Industrial Zone, Jingcheng Town, Nanjing, Zhangzhou, Fujian, China
2. Lot I8-1, Saigon High Tech Park, Long Thanh My Ward, Thu Duc City, Ho Chi Minh City, Vietnam
3. 60 Moo 8, Sethakij Rd., Klong Maduea, 74110, Kratoom Bean, Samutsakorn Thailand

Equipment Under Test (EUT):

EUT Name: Smart Module

Model No.: ING-A01-1-AM

Trade Mark: ingenico

FCC ID: XKB-INGA01AM

Standard(s) : 47 CFR Part 15, Subpart C 15.247

Date of Receipt: 2026-03-16

Date of Test: 2026-03-17 to 2026-03-25

Date of Issue: 2026-03-26

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.



Keny Xu
EMC Laboratory Manager



SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch (EMC Laboratory)

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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2026-03-26		Original

Authorized for issue by:				
		Calvin Weng		
		Calvin Weng/Project Engineer		
		Eric Fu		
		Eric Fu/Reviewer		



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2 Test Summary

Radio Spectrum Matter Part				
Item	Standard	Method	Requirement	Result
Radiated Emissions which fall in the restricted bands	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2020) Section 6.10.5 & 11.12	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Radiated Spurious Emissions Above 1GHz		ANSI C63.10 (2020) Section 6.6 & 11.12	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Maximum Conducted Output Power		ANSI C63.10 (2020) Section 11.9.2	47 CFR Part 15, Subpart C 15.247(b)(3)	Pass
Power Spectral Density		ANSI C63.10 (2020) Section 11.10.3	47 CFR Part 15, Subpart C 15.247(e)	Pass
Conducted Band Edges Measurement		ANSI C63.10 (2020) Section 6.10.4	47 CFR Part 15, Subpart C 15.247(d)	Pass
Conducted Spurious Emissions		ANSI C63.10 (2020) Section 11.11	47 CFR Part 15, Subpart C 15.247(d)	Pass

Remark:

Model No.: ING-A01-1-AM

This test report (Ref. No.: SZCR260300101401) is only valid with the original test report (Ref. No.: SZCR250500180904).

According to the declaration from the applicant, the models in this report and models in original report were identical, the difference on reducing the Wi-Fi power via software.

Considering to the difference, pre-scan were performed on the sample in this report to find the items which can be influential to the result in the original test report for fully retest.

Therefore in this report the section 2 items were fully retested on model and shown the data in this report, other tests please refer to original report SZCR250500180904.



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4 General Information

4.1 Details of E.U.T.

Power supply:	DC3.9V
Cable Loss (for RF conducted test):	0.7dB
Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz; 802.11n(HT40): 2422MHz to 2452MHz
Modulation Type:	802.11b: DSSS (DBPSK, DQPSK, CCK); 802.11g/n: OFDM (BPSK, QPSK, 16QAM, 64QAM)
Number of Channels:	802.11b/g/n(HT20):11;802.11n(HT40):7
Channel Spacing:	5MHz
Antenna Type:	Dipole Antenna
Antenna Gain:	1.92dBi

Remark:The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Adapter	LITEON	PA-1041-81	/
Debug board	ingenico	ING-A01 Demo	/

4.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
Radiated Emissions which fall in the restricted bands	$\pm 6.0\text{dB}$ (Below 1GHz); $\pm 4.6\text{dB}$ (Above 1GHz)
Radiated Spurious Emissions Above 1GHz	$\pm 4.6\text{dB}$ (1-18GHz); $\pm 4.8\text{dB}$ (18-40GHz)
Maximum Conducted Output Power	$\pm 0.4\text{dB}$
Power Spectral Density	$\pm 0.4\text{dB}$
Conducted Band Edges Measurement	$\pm 2.7\text{dB}$
Conducted Spurious Emissions	$\pm 2.7\text{dB}$

Remark:

The U_{lab} (lab Uncertainty) is less than $U_{\text{CISPR/ETSI}}$ (CISPR/ETSI Uncertainty), so the test results
– compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
– non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

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4.4 Test Location

All tests were performed at:

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Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• VCCI (Member No. 1937)

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen EMC laboratory have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

• FCC –Designation Number: CN1336

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1336. Test Firm Registration Number: 787754.

• Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None



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5 Equipment List

Radiated Emissions which fall in the restricted bands					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Signal & Spectrum Analyzer	Rohde & Schwarz	FSV	SZ-WRG-M-048	2025-12-16	2026-12-15
Low Noise Amplifier 30M-8GHz	Tonscend	TAP30M8G30	SZ-WRG-M-050	2025-12-16	2026-12-15
Double Ridge Horn Antenna 1GHz-18GHz	SCHWARZBECK	BBHA 9120 D	SZ-WRG-M-055	2025-12-13	2026-12-12
RSE Test Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Chamber	CRTSGSSAC966	N/A	SZ-WRG-C-063	2025-01-06	2028-01-05
Humidity and Temperature Indicator	deli	8838	SEM002-46	2025-07-23	2026-07-22

Radiated Spurious Emissions Above 1GHz					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Signal & Spectrum Analyzer	Rohde & Schwarz	FSV	SZ-WRG-M-048	2025-12-16	2026-12-15
Low Noise Amplifier 1G-18GHz	Tonscend	TAP01018050	SZ-WRG-M-051	2025-12-16	2026-12-15
Low Noise Amplifier 18G-40GHz	Tonscend	TAP18040048	SZ-WRG-M-052	2025-12-16	2026-12-15
Double Ridge Horn Antenna 1GHz-18GHz	SCHWARZBECK	BBHA 9120 D	SZ-WRG-M-055	2025-12-13	2026-12-12
SHF-EHF Horn 15GHz-40GHz	SCHWARZBECK	BBHA 9170	SZ-WRG-M-056	2025-12-13	2026-12-12
RSE Test Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Chamber	CRTSGSSAC966	N/A	SZ-WRG-C-063	2025-01-06	2028-01-05
Humidity and Temperature Indicator	deli	8838	SEM002-46	2025-07-23	2026-07-22



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RF Conducted Test					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Power Sensor	TST PASS	TSPS2023R	SEM009-26	2026-02-04	2027-02-03
Power Sensor	KEYSIGHT	U2021XA	SEM009-16	2026-02-04	2027-02-03
DC Power Supply	Chroma	62012P-80-60	SEM011-11	2025-07-24	2026-07-23
MXA Signal Analyzer	KEYSIGHT	N9020A	SEM004-19	2026-02-03	2027-02-02
Measurement Software	TST PASS	TST PASS V2.0	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-01	2025-07-05	2026-07-04
Attenuator	Huber+Suhner	6620_SMA-50-1	SEM021-09	2026-02-02	2027-02-01

General used equipment					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	deli	8838	SEM002-32	2025-07-23	2026-07-22
Humidity/ Temperature Indicator	deli	8838	SEM002-33	2025-07-23	2026-07-22
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2026-02-14	2027-02-13



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6 Radio Spectrum Matter Test Results

6.1 Radiated Emissions which fall in the restricted bands

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209

Test Method: ANSI C63.10 (2020) Section 6.10.5 & 11.12

Measurement Distance: 3m

Test Engineer: Xing Guo

Limit:

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

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 21.0 °C

Humidity: 58.3 % RH

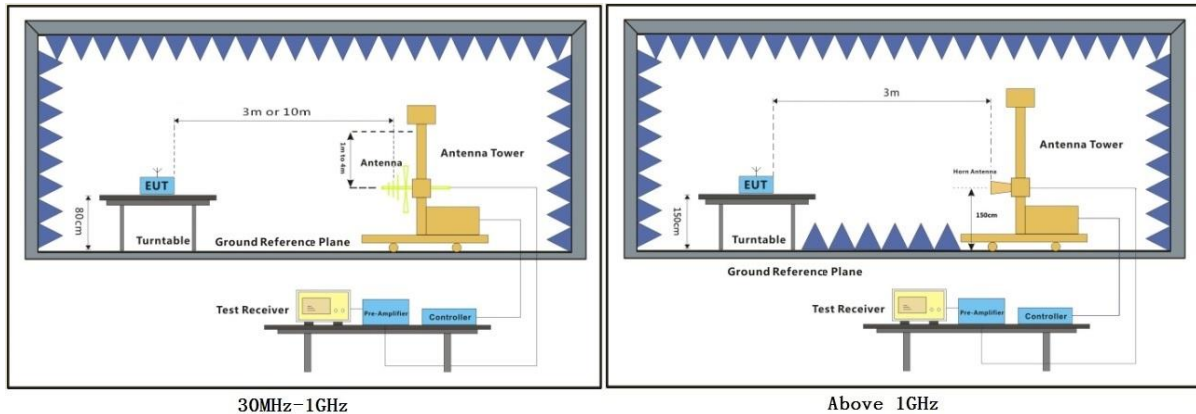
Atmospheric Pressure: 1020 mbar

6.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.



6.1.3 Test Setup Diagram



6.1.4 Measurement Procedure and Data

- For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- Test the EUT in the lowest channel, the middle channel, the Highest channel.
- The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- Repeat above procedures until all frequencies measured was complete.

Remark 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

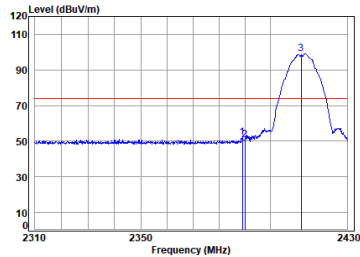
Remark 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.



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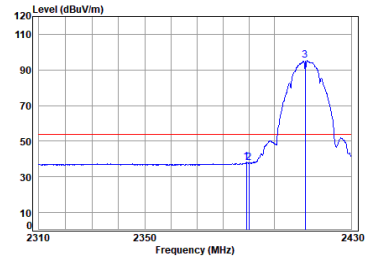
11b_TX_CH_01_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 01014M0/01015M0
Mode : 2412 Band edge
Cable : 2.46 Wl-F1 118

	Freq	Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark	Aux
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	2389.121	6.82	27.68	30.60	48.06	51.96	74.00	-22.04	Peak	0.00
2	2390.000	6.83	27.68	30.60	46.68	50.59	74.00	-23.41	Peak	0.00
3	2412.000	6.91	27.72	30.60	94.99	99.02	74.00	25.02	Peak	0.00

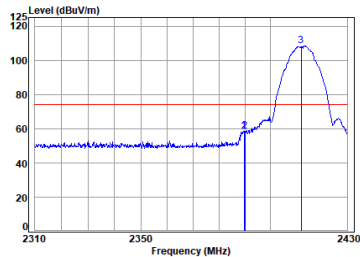
11b_TX_CH_01_Horizontal-Avg



Condition: 3m HORIZONTAL
Job No : 01014M0/01015M0
Mode : 2412 Band edge
Cable : 2.46 Wl-F1 118

	Freq	Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark	Aux
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	2389.121	6.82	27.68	30.60	34.34	38.24	54.00	-15.76	Average	0.00
2	2390.000	6.83	27.68	30.60	33.93	37.84	54.00	-16.16	Average	0.00
3	2412.000	6.91	27.72	30.60	91.14	95.17	54.00	41.17	Average	0.00

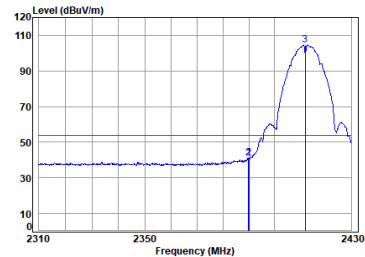
11b_TX_CH_01_Vertical-Peak



Condition: 3m VERTICAL
Job No : 01014M0/01015M0
Mode : 2412 Band edge
Cable : 2.46 Wl-F1 118

	Freq	Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark	Aux
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	2389.726	6.82	27.68	30.60	54.63	58.53	74.00	-15.47	Peak	0.00
2	2390.000	6.83	27.68	30.60	54.32	58.23	74.00	-15.77	Peak	0.00
3	2412.000	6.91	27.72	30.60	104.31	108.34	74.00	34.34	Peak	0.00

11b_TX_CH_01_Vertical-Avg

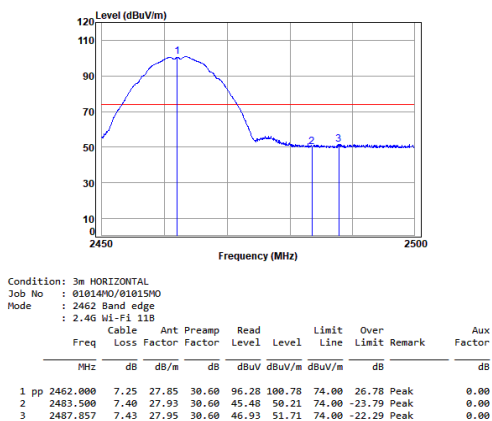


Condition: 3m VERTICAL
Job No : 01014M0/01015M0
Mode : 2412 Band edge
Cable : 2.46 Wl-F1 118

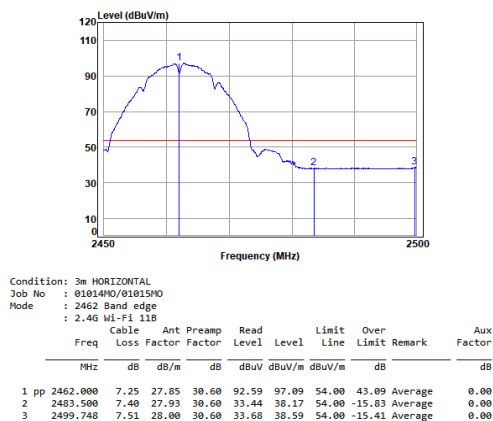
	Freq	Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark	Aux
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	2389.847	6.83	27.68	30.60	37.23	41.14	54.00	-12.86	Average	0.00
2	2390.000	6.83	27.68	30.60	37.21	41.12	54.00	-12.88	Average	0.00
3	2412.000	6.91	27.72	30.60	100.59	104.62	54.00	50.62	Average	0.00



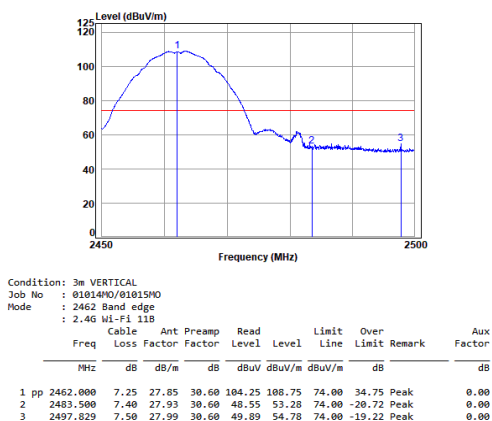
11b_TX_CH_11_Horizontal-Peak



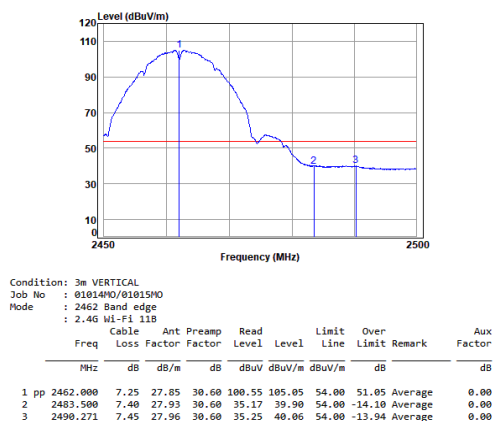
11b_TX_CH_11_Horizontal-Avg



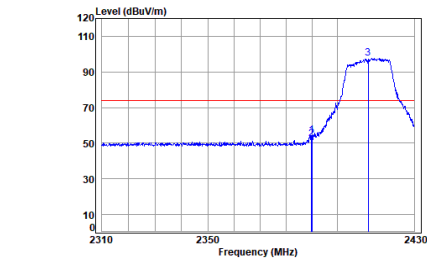
11b_TX_CH_11_Vertical-Peak



11b_TX_CH_11_Vertical-Avg



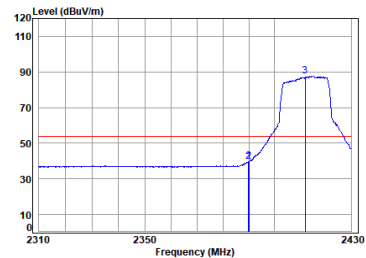
11n_HT(20M)_TX_CH_01_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 01014M0/01015M0
Mode : 2412 Band edge
: 2.4G Wi-Fi 11N20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB		dB
1	2389.847	6.83	27.68	30.60	50.35	54.26	74.00	-19.74 Peak	0.00
2	2390.000	6.83	27.68	30.60	48.55	52.46	74.00	-21.54 Peak	0.00
3 pp	2412.000	6.91	27.72	30.60	93.47	97.50	74.00	23.50 Peak	0.00

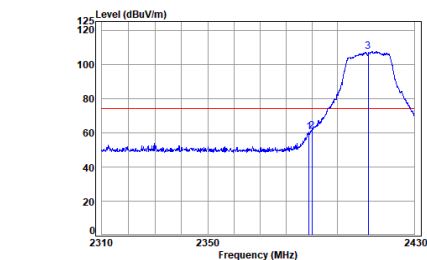
11n_HT(20M)_TX_CH_01_Horizontal-Avg



Condition: 3m HORIZONTAL
Job No : 01014M0/01015M0
Mode : 2412 Band edge
: 2.4G Wi-Fi 11N20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB		dB
1	2389.847	6.83	27.68	30.60	35.85	39.76	54.00	-14.24 Average	0.00
2	2390.000	6.83	27.68	30.60	35.58	39.49	54.00	-14.51 Average	0.00
3 pp	2412.000	6.91	27.72	30.60	83.71	87.74	54.00	33.74 Average	0.00

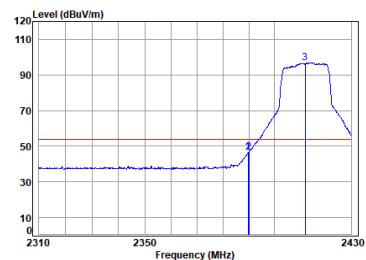
11n_HT(20M)_TX_CH_01_Vertical-Peak



Condition: 3m VERTICAL
Job No : 01014M0/01015M0
Mode : 2412 Band edge
: 2.4G Wi-Fi 11N20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB		dB
1	2388.879	6.82	27.68	30.60	56.34	60.24	74.00	-13.76 Peak	0.00
2	2390.000	6.83	27.68	30.60	57.00	60.91	74.00	-13.09 Peak	0.00
3 pp	2412.000	6.91	27.72	30.60	103.27	107.30	74.00	33.30 Peak	0.00

11n_HT(20M)_TX_CH_01_Vertical-Avg

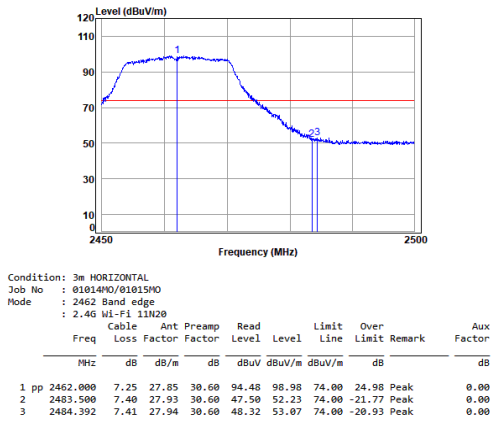


Condition: 3m VERTICAL
Job No : 01014M0/01015M0
Mode : 2412 Band edge
: 2.4G Wi-Fi 11N20

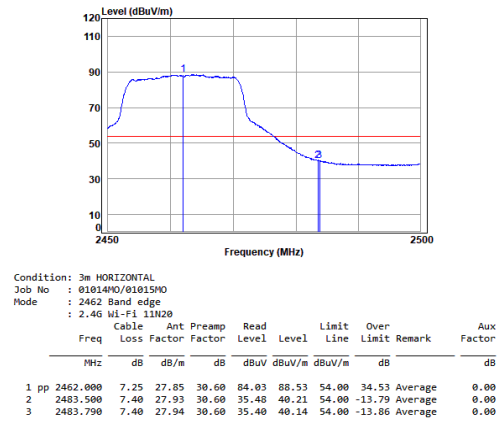
	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB		dB
1	2389.726	6.82	27.68	30.60	42.57	46.47	54.00	-7.53 Average	0.00
2	2390.000	6.83	27.68	30.60	42.86	46.77	54.00	-7.23 Average	0.00
3 pp	2412.000	6.91	27.72	30.60	92.90	96.93	54.00	42.93 Average	0.00



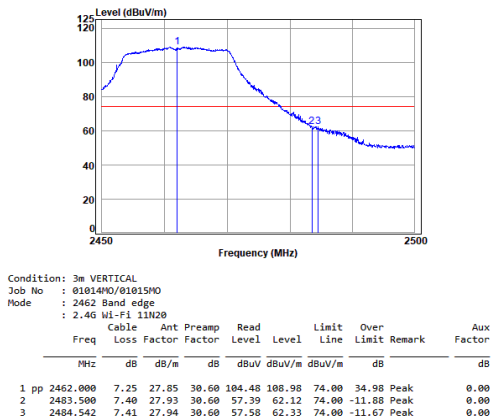
11n_HT(20M)_TX_CH_11_Horizontal-Peak



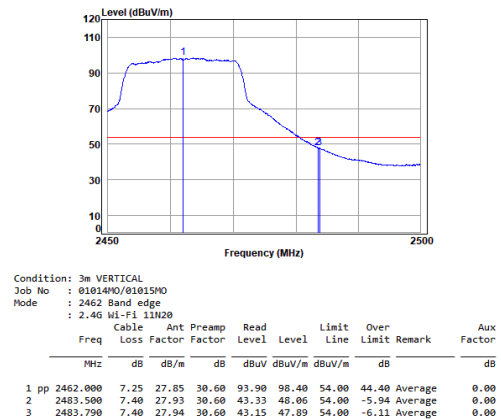
11n_HT(20M)_TX_CH_11_Horizontal-Avg



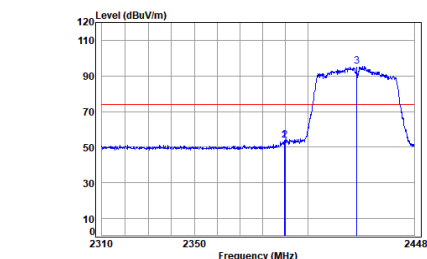
11n_HT(20M)_TX_CH_11_Vertical-Peak



11n_HT(20M)_TX_CH_11_Vertical-Avg



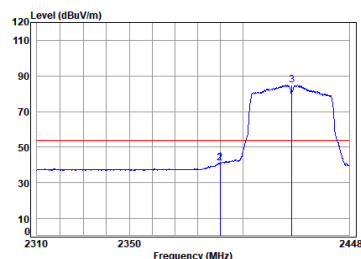
11n_HT(40M)_TX_CH_03_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 01014M0/01015M0
Mode : 2422 Band edge
: 2.4G Wi-Fi 11N40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB		dB
1	2389.618	6.82	27.68	30.60	50.13	54.03	74.00	-19.97 Peak	0.00
2	2390.000	6.83	27.68	30.60	49.74	53.65	74.00	-20.35 Peak	0.00
3 pp	2422.000	6.98	27.74	30.60	91.45	95.57	74.00	21.57 Peak	0.00

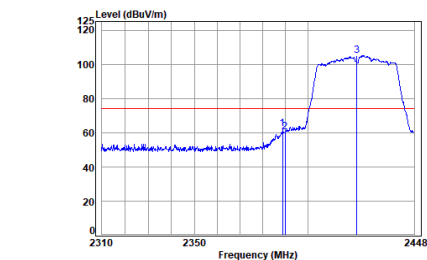
11n_HT(40M)_TX_CH_03_Horizontal-Avg



Condition: 3m HORIZONTAL
Job No : 01014M0/01015M0
Mode : 2422 Band edge
: 2.4G Wi-Fi 11N40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB		dB
1	2389.895	6.83	27.68	30.60	37.46	41.37	54.00	-12.63 Average	0.00
2	2390.000	6.83	27.68	30.60	37.34	41.25	54.00	-12.75 Average	0.00
3 pp	2422.000	6.98	27.74	30.60	80.66	84.78	54.00	30.78 Average	0.00

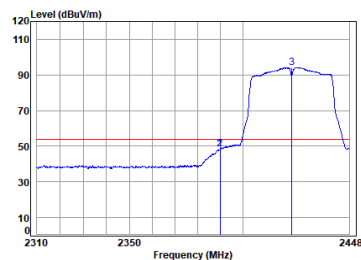
11n_HT(40M)_TX_CH_03_Vertical-Peak



Condition: 3m VERTICAL
Job No : 01014M0/01015M0
Mode : 2422 Band edge
: 2.4G Wi-Fi 11N40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB		dB
1	2388.925	6.82	27.68	30.60	58.21	62.11	74.00	-11.89 Peak	0.00
2	2390.000	6.83	27.68	30.60	56.57	60.48	74.00	-13.52 Peak	0.00
3 pp	2422.000	6.98	27.74	30.60	101.03	105.15	74.00	31.15 Peak	0.00

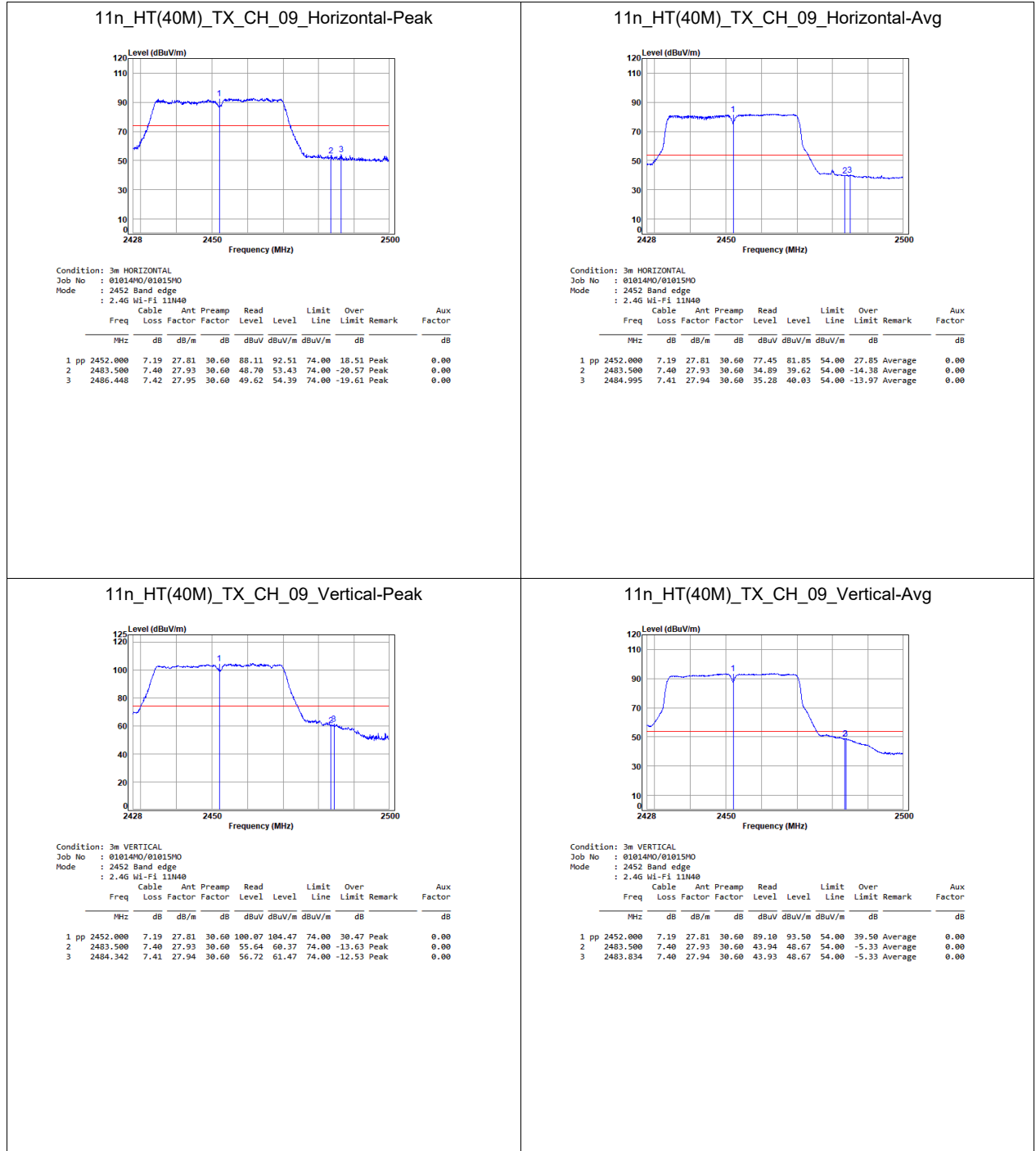
11n_HT(40M)_TX_CH_03_Vertical-Avg



Condition: 3m VERTICAL
Job No : 01014M0/01015M0
Mode : 2422 Band edge
: 2.4G Wi-Fi 11N40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB		dB
1	2389.895	6.83	27.68	30.60	44.31	48.22	54.00	-5.78 Average	0.00
2	2390.000	6.83	27.68	30.60	44.47	48.38	54.00	-5.62 Average	0.00
3 pp	2422.000	6.98	27.74	30.60	90.19	94.22	54.00	40.22 Average	0.00





6.2 Radiated Spurious Emissions Above 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209
 Test Method: ANSI C63.10 (2020) Section 6.6 & 11.12
 Measurement Distance: 3m
 Test Engineer: Xing Guo

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
Above 1000	500	3

Note:

At Above 18GHz, measurements may be performed at a distance shorter than that specified in the regulations

Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor+ Aux Factor (if applicable)

The aux factor needs to be added when measurements are performed at a distance other than the limit distance provided.

EX. Above 18GHz, Aux Factor = 20 dB/decade of distance, the aux factor is $20\log(1/3) = -9.54\text{dB}$ (for 1m test distance).

6.2.1 E.U.T. Operation

Operating Environment:

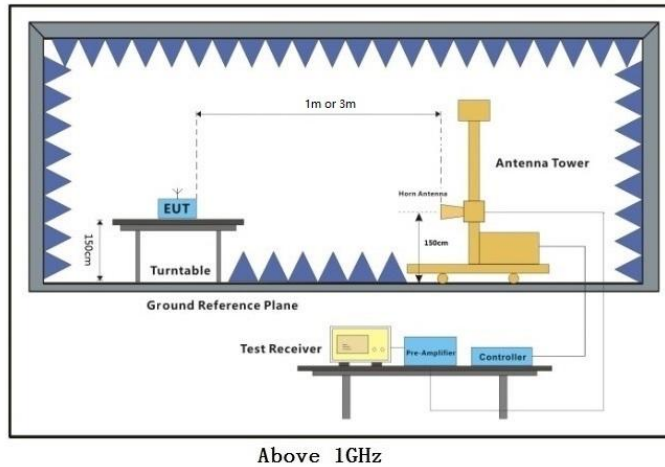
Temperature: 20.5 °C Humidity: 55.8 % RH Atmospheric Pressure: 1020 mbar

6.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.



6.2.3 Test Setup Diagram



6.2.4 Measurement Procedure and Data

- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5m above the ground at a 3m fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3m away from the interference-receiving antenna from 1GHz to 18GHz, and 1m away from the interference-receiving antenna above 18GHz.
- b. The interference-receiving antenna was mounted on the variable-height antenna tower, with its boresight facing the EUT throughout the test.
- c. The antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1m to 4m and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- g. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- h. Repeat above procedures until all frequencies measured was complete.

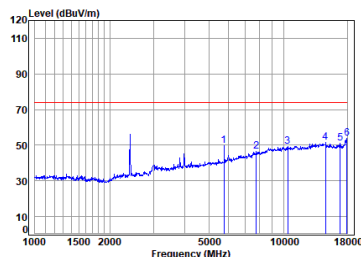
Remark:

1. Scan from 1GHz to 10th harmonic of the highest frequency or 40 GHz, whichever is lower.
2. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.
3. For the frequency above 18GHz, testing had been executed under all test modes, only the worst-case test curve is displayed in the report.
4. For devices with multiple operating modes, measurements on the middle channel is used to determine the worst-case mode(s). Only the worst-case mode with the highest output power and the mode with the highest output power spectral density for each modulation family (e.g., OFDM and direct sequence spread spectrum) is recorded in the test report.



Remark: the emission higher than the unwanted emission is the fundamental, which is exempted from the test.

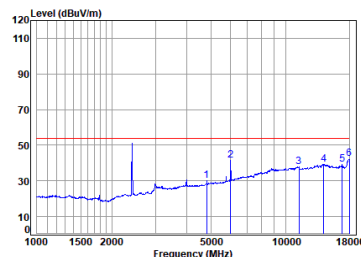
11b_TX_CH_01_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 01014M0/01015M0
Mode : 2412 TX RSE

Freq	Cable		Ant Factor	Preamp Factor	Read Level		Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB			dBuV	dBuV/m				
1	5763.617	9.99	33.85	56.49	62.42	49.77	74.00	-24.23	Peak	0.00
2	7762.260	11.22	37.00	56.04	54.15	46.33	74.00	-27.67	Peak	0.00
3	10393.710	13.50	39.20	53.56	50.31	49.45	74.00	-24.55	Peak	0.00
4	14745.470	16.32	40.15	54.10	48.49	51.46	74.00	-22.54	Peak	0.00
5	16891.040	19.64	38.60	53.88	46.65	51.01	74.00	-22.99	Peak	0.00
6	pp17948.050	18.75	42.29	54.28	47.20	53.96	74.00	-20.04	Peak	0.00

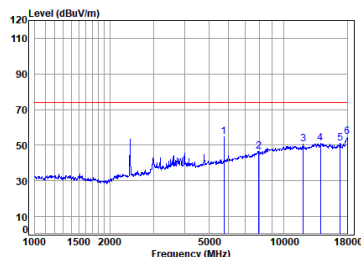
11b_TX_CH_01_Horizontal-Avg



Condition: 3m HORIZONTAL
Job No : 01014M0/01015M0
Mode : 2412 TX RSE

Freq	Cable		Ant Factor	Preamp Factor	Read Level		Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB			dBuV	dBuV/m				
1	4818.016	8.92	32.67	55.93	44.26	29.92	54.00	-24.08	Average	0.00
2	6001.626	10.05	34.40	56.60	53.78	41.63	54.00	-12.37	Average	0.00
3	11302.480	14.39	39.40	53.41	37.50	37.88	54.00	-16.12	Average	0.00
4	14242.000	16.33	40.46	54.18	36.06	39.25	54.00	-14.75	Average	0.00
5	16891.040	19.64	38.60	53.88	34.98	39.34	54.00	-14.66	Average	0.00
6	pp18000.000	18.64	42.60	54.30	35.45	42.39	54.00	-11.61	Average	0.00

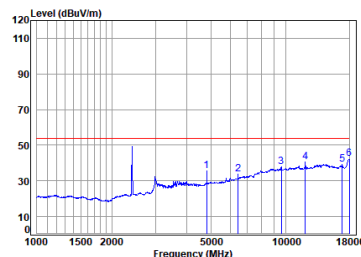
11b_TX_CH_01_Vertical-Peak



Condition: 3m VERTICAL
Job No : 01014M0/01015M0
Mode : 2412 TX RSE

Freq	Cable		Ant Factor	Preamp Factor	Read Level		Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB			dBuV	dBuV/m				
1	pp 5763.617	9.99	33.85	56.49	67.41	54.76	74.00	-19.24	Peak	0.00
2	7943.838	11.48	37.30	55.93	53.91	46.76	74.00	-27.24	Peak	0.00
3	12009.760	14.35	39.29	53.21	50.31	50.74	74.00	-23.26	Peak	0.00
4	14079.000	16.38	40.44	54.10	48.34	51.06	74.00	-22.94	Peak	0.00
5	16891.040	19.64	38.60	53.88	46.92	51.28	74.00	-22.72	Peak	0.00
6	18000.000	18.64	42.60	54.30	47.61	54.55	74.00	-19.45	Peak	0.00

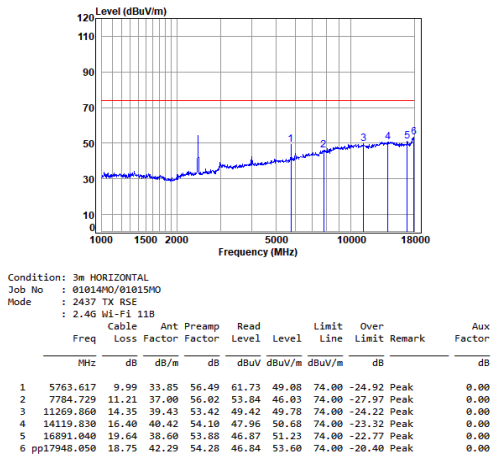
11b_TX_CH_01_Vertical-Avg



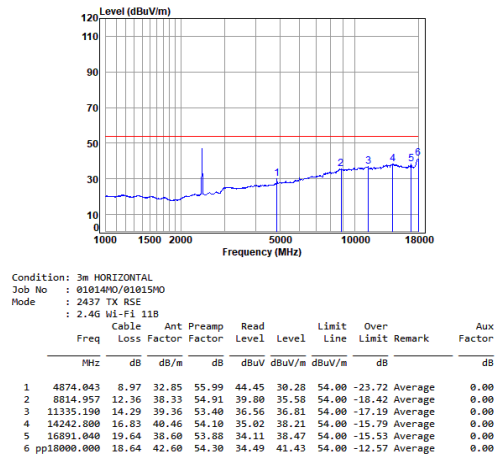
Condition: 3m VERTICAL
Job No : 01014M0/01015M0
Mode : 2412 TX RSE

Freq	Cable		Ant Factor	Preamp Factor	Read Level		Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB			dBuV	dBuV/m				
1	4818.016	8.92	32.67	55.93	50.07	35.73	54.00	-18.27	Average	0.00
2	6432.732	10.56	34.93	56.55	44.85	33.79	54.00	-20.21	Average	0.00
3	9613.430	12.40	38.75	54.01	40.57	37.71	54.00	-16.29	Average	0.00
4	12009.760	14.35	39.29	53.21	40.16	40.59	54.00	-13.41	Average	0.00
5	16891.040	19.64	38.60	53.88	35.06	39.42	54.00	-14.58	Average	0.00
6	pp18000.000	18.64	42.60	54.30	35.57	42.51	54.00	-11.49	Average	0.00

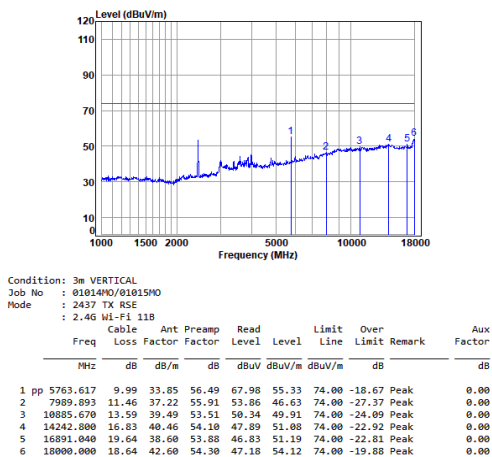
11b_TX_CH_06_Horizontal-Peak



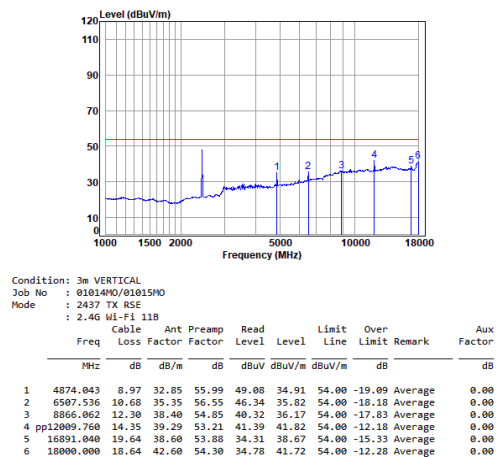
11b_TX_CH_06_Horizontal-Avg



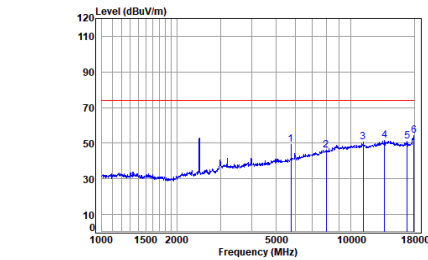
11b_TX_CH_06_Vertical-Peak



11b_TX_CH_06_Vertical-Avg



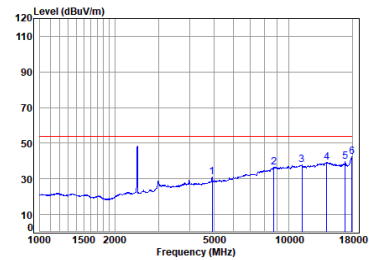
11b_TX_CH_11_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 01014M0/01015M0
Mode : 2462 TX RSE
: 2.4G Wi-Fi 11B

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	5763.617	9.99	33.85	56.49	61.75	49.10	74.00	-24.90	Peak	0.00
2	7966.832	11.47	37.27	55.92	53.39	46.21	74.00	-27.79	Peak	0.00
3	11237.330	14.30	39.46	53.43	50.21	50.54	74.00	-23.46	Peak	0.00
4	13677.970	16.04	40.32	54.01	49.38	51.73	74.00	-22.27	Peak	0.00
5	16891.040	19.64	38.60	53.88	46.92	51.28	74.00	-22.72	Peak	0.00
6	pp17948.050	18.75	42.29	54.28	47.43	54.19	74.00	-19.81	Peak	0.00

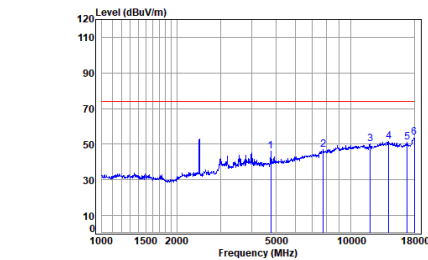
11b_TX_CH_11_Horizontal-Avg



Condition: 3m HORIZONTAL
Job No : 01014M0/01015M0
Mode : 2462 TX RSE
: 2.4G Wi-Fi 11B

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	4930.721	9.03	33.02	56.04	45.19	31.20	54.00	-22.80	Average	0.00
2	8713.630	12.01	38.30	55.03	41.13	36.41	54.00	-17.59	Average	0.00
3	11302.400	14.30	39.40	53.41	37.39	37.77	54.00	-16.23	Average	0.00
4	14242.800	16.83	40.46	54.10	35.97	39.16	54.00	-14.84	Average	0.00
5	16891.040	19.64	38.60	53.88	35.14	39.50	54.00	-14.50	Average	0.00
6	pp17948.050	18.75	42.29	54.28	35.63	42.39	54.00	-11.61	Average	0.00

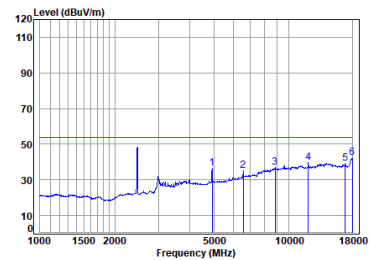
11b_TX_CH_11_Vertical-Peak



Condition: 3m VERTICAL
Job No : 01014M0/01015M0
Mode : 2462 TX RSE
: 2.4G Wi-Fi 11B

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	4776.419	8.87	32.51	55.89	60.42	45.91	74.00	-28.09	Peak	0.00
2	7762.260	11.22	37.00	56.04	54.72	46.90	74.00	-27.10	Peak	0.00
3	12009.760	14.35	39.29	53.21	49.89	50.32	74.00	-23.68	Peak	0.00
4	14242.800	16.83	40.46	54.10	48.30	51.49	74.00	-22.51	Peak	0.00
5	16891.040	19.64	38.60	53.88	46.57	50.93	74.00	-23.07	Peak	0.00
6	pp18000.000	18.64	42.60	54.30	46.90	53.84	74.00	-20.16	Peak	0.00

11b_TX_CH_11_Vertical-Avg

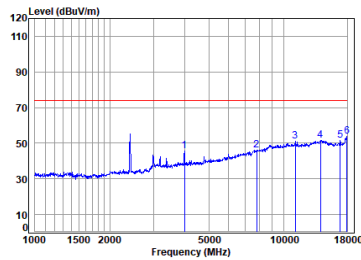


Condition: 3m VERTICAL
Job No : 01014M0/01015M0
Mode : 2462 TX RSE
: 2.4G Wi-Fi 11B

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	4930.721	9.03	33.02	56.04	50.44	36.45	54.00	-17.55	Average	0.00
2	6564.200	10.80	35.63	56.54	45.17	35.06	54.00	-18.94	Average	0.00
3	8814.957	12.36	38.33	54.91	41.05	36.83	54.00	-17.17	Average	0.00
4	12009.760	14.35	39.29	53.21	39.46	39.89	54.00	-14.11	Average	0.00
5	16891.040	19.64	38.60	53.88	35.06	39.42	54.00	-14.58	Average	0.00
6	pp18000.000	18.64	42.60	54.30	35.50	42.44	54.00	-11.56	Average	0.00



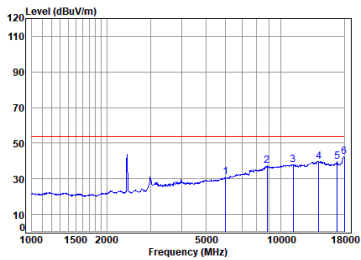
11n_20M_TX_CH_01_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 01014M0/01015M0
Mode : 2412 TX RSE
: 2.4G Wi-Fi 11N20

Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark	Aux Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 3992.781	8.12	31.07	55.10	61.52	45.61	74.00	-28.39	Peak	0.00
2 7784.729	11.21	37.00	56.02	54.11	46.30	74.00	-27.70	Peak	0.00
3 11400.310	14.17	39.38	53.46	58.95	51.04	74.00	-22.96	Peak	0.00
4 14038.450	16.47	40.52	54.10	48.81	51.70	74.00	-22.30	Peak	0.00
5 16891.040	19.64	38.60	53.88	47.29	51.65	74.00	-22.35	Peak	0.00
6 pp17948.050	18.75	42.29	54.28	46.93	53.69	74.00	-20.31	Peak	0.00

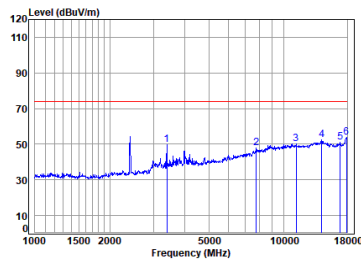
11n_20M_TX_CH_01_Horizontal-Avg



Condition: 3m HORIZONTAL
Job No : 01014M0/01015M0
Mode : 2412 TX RSE
: 2.4G Wi-Fi 11N20

Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark	Aux Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 6001.626	10.05	34.40	56.60	43.31	31.16	54.00	-22.84	Average	0.00
2 8814.957	12.36	38.33	54.91	41.49	37.27	54.00	-16.73	Average	0.00
3 11204.900	14.25	39.50	53.44	37.64	37.95	54.00	-16.05	Average	0.00
4 14242.800	16.83	40.46	54.10	36.72	39.91	54.00	-14.09	Average	0.00
5 16891.040	19.64	38.60	53.88	35.46	39.82	54.00	-14.18	Average	0.00
6 pp18000.000	18.64	42.60	54.30	35.70	42.64	54.00	-11.36	Average	0.00

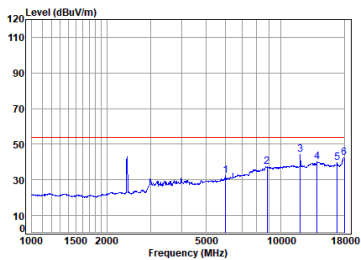
11n_20M_TX_CH_01_Vertical-Peak



Condition: 3m VERTICAL
Job No : 01014M0/01015M0
Mode : 2412 TX RSE
: 2.4G Wi-Fi 11N20

Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark	Aux Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 3396.098	7.65	29.69	54.82	67.15	49.67	74.00	-24.33	Peak	0.00
2 7762.260	11.22	37.00	56.04	55.95	48.13	74.00	-25.87	Peak	0.00
3 11204.900	14.25	39.50	53.44	50.06	50.37	74.00	-23.63	Peak	0.00
4 14201.690	16.67	40.50	54.10	49.25	52.32	74.00	-21.68	Peak	0.00
5 16891.040	19.64	38.60	53.88	46.72	51.08	74.00	-22.92	Peak	0.00
6 pp17896.250	18.87	41.97	54.26	47.30	53.88	74.00	-20.12	Peak	0.00

11n_20M_TX_CH_01_Vertical-Avg

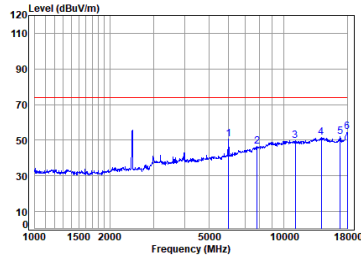


Condition: 3m VERTICAL
Job No : 01014M0/01015M0
Mode : 2412 TX RSE
: 2.4G Wi-Fi 11N20

Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark	Aux Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 6001.626	10.05	34.40	56.60	44.76	32.61	54.00	-21.39	Average	0.00
2 8814.957	12.36	38.33	54.91	41.51	37.29	54.00	-16.71	Average	0.00
3 pp12009.760	14.35	39.29	53.21	44.01	44.44	54.00	-9.56	Average	0.00
4 13997.930	16.53	40.59	54.10	36.94	39.96	54.00	-14.04	Average	0.00
5 16891.040	19.64	38.60	53.88	35.49	39.85	54.00	-14.15	Average	0.00
6 18000.000	18.64	42.60	54.30	35.67	42.61	54.00	-11.39	Average	0.00



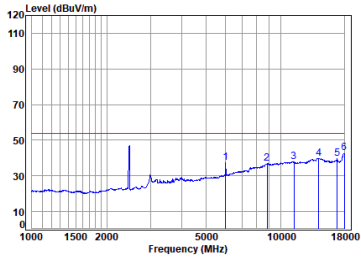
11n_20M_TX_CH_11_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No.: 01014M0/01015M0
Mode: 2462 TX RSE
2.4G Wi-Fi 11N20

Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark	Aux Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 6001.626	10.05	34.40	56.60	62.69	50.54	74.00	-23.46	Peak	0.00
2 7807.262	11.23	37.01	56.01	54.53	46.76	74.00	-27.24	Peak	0.00
3 11140.310	14.17	39.38	53.46	49.67	49.76	74.00	-24.24	Peak	0.00
4 14160.710	16.53	40.46	54.10	48.65	51.54	74.00	-22.46	Peak	0.00
5 16891.040	19.64	38.60	53.88	47.81	52.17	74.00	-21.83	Peak	0.00
6 pp18000.000	18.64	42.60	54.30	47.64	54.58	74.00	-19.42	Peak	0.00

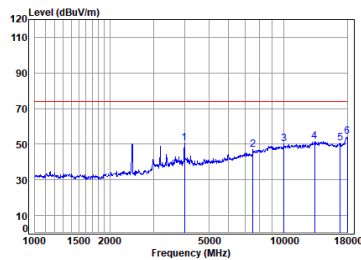
11n_20M_TX_CH_11_Horizontal-Avg



Condition: 3m HORIZONTAL
Job No.: 01014M0/01015M0
Mode: 2462 TX RSE
2.4G Wi-Fi 11N20

Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark	Aux Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 6001.626	10.05	34.40	56.60	49.53	37.38	54.00	-16.62	Average	0.00
2 8814.957	12.36	38.33	54.91	41.24	37.82	54.00	-16.98	Average	0.00
3 11302.400	14.30	39.40	53.41	37.64	38.82	54.00	-15.98	Average	0.00
4 14201.690	16.67	40.50	54.10	36.81	39.88	54.00	-14.12	Average	0.00
5 16891.040	19.64	38.60	53.88	35.56	39.92	54.00	-14.08	Average	0.00
6 pp18000.000	18.64	42.60	54.30	35.80	42.74	54.00	-11.26	Average	0.00

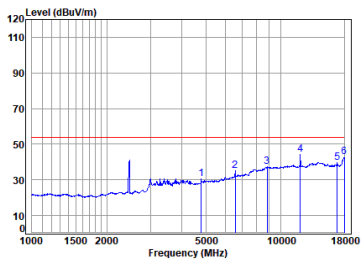
11n_20M_TX_CH_11_Vertical-Peak



Condition: 3m VERTICAL
Job No.: 01014M0/01015M0
Mode: 2462 TX RSE
2.4G Wi-Fi 11N20

Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark	Aux Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 3992.781	8.12	31.07	55.10	66.44	50.53	74.00	-23.47	Peak	0.00
2 7519.349	10.92	36.72	56.18	55.34	46.80	74.00	-27.20	Peak	0.00
3 10010.420	12.90	38.90	53.60	51.92	50.12	74.00	-23.88	Peak	0.00
4 13326.750	15.92	40.28	53.90	49.38	51.68	74.00	-22.32	Peak	0.00
5 16891.040	19.64	38.60	53.88	46.45	50.81	74.00	-23.19	Peak	0.00
6 pp18000.000	18.64	42.60	54.30	47.28	54.22	74.00	-19.78	Peak	0.00

11n_20M_TX_CH_11_Vertical-Avg

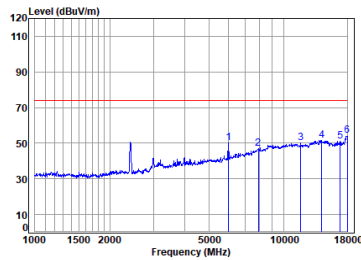


Condition: 3m VERTICAL
Job No.: 01014M0/01015M0
Mode: 2462 TX RSE
2.4G Wi-Fi 11N20

Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark	Aux Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 4790.245	8.09	32.56	55.91	44.99	30.53	54.00	-23.47	Average	0.00
2 6564.209	10.80	35.63	56.54	45.00	34.97	54.00	-19.03	Average	0.00
3 8814.957	12.36	38.33	54.91	41.43	37.21	54.00	-16.79	Average	0.00
4 pp12009.760	14.35	39.29	53.21	43.71	44.14	54.00	-9.86	Average	0.00
5 16891.040	19.64	38.60	53.88	35.48	39.84	54.00	-14.16	Average	0.00
6 18000.000	18.64	42.60	54.30	35.79	42.73	54.00	-11.27	Average	0.00



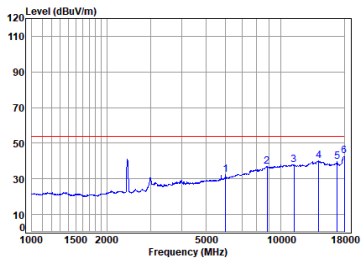
11n_40M_TX_CH_03_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 01014M0/01015M0
Mode : 2422 TX RSE
: 2.4G Wi-Fi 11N40

Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Aux
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	Limit	Factor
1	6001.626	10.05	34.40	56.60	62.22	50.07	74.00	-23.93 Peak
2	7920.911	11.48	37.30	55.94	54.35	47.19	74.00	-26.81 Peak
3	11755.250	14.46	39.10	53.08	50.01	50.29	74.00	-23.71 Peak
4	14242.800	16.83	40.46	54.10	48.43	51.62	74.00	-22.38 Peak
5	16891.040	19.64	38.60	53.88	46.89	51.25	74.00	-22.75 Peak
6	pp18000.000	18.64	42.60	54.30	47.22	54.16	74.00	-19.84 Peak

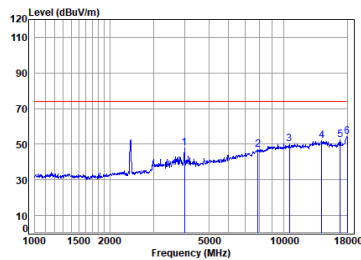
11n_40M_TX_CH_03_Horizontal-Avg



Condition: 3m HORIZONTAL
Job No : 01014M0/01015M0
Mode : 2422 TX RSE
: 2.4G Wi-Fi 11N40

Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Aux
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	Limit	Factor
1	6001.626	10.05	34.40	56.60	44.51	32.36	54.00	-21.64 Average
2	8814.957	12.36	38.33	54.91	41.27	37.05	54.00	-16.95 Average
3	11302.400	14.30	39.40	53.41	37.64	38.02	54.00	-15.38 Average
4	14242.800	16.83	40.46	54.10	36.75	39.94	54.00	-14.06 Average
5	16891.040	19.64	38.60	53.88	35.50	39.86	54.00	-14.14 Average
6	pp18000.000	18.64	42.60	54.30	35.79	42.73	54.00	-11.27 Average

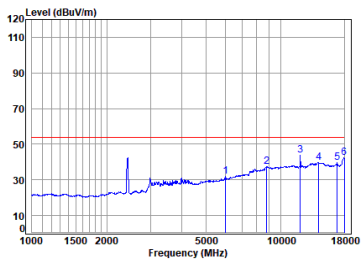
11n_40M_TX_CH_03_Vertical-Peak



Condition: 3m VERTICAL
Job No : 01014M0/01015M0
Mode : 2422 TX RSE
: 2.4G Wi-Fi 11N40

Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Aux
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	Limit	Factor
1	3992.781	8.12	31.07	55.10	63.77	47.06	74.00	-26.14 Peak
2	7875.254	11.42	37.20	55.97	54.24	46.89	74.00	-27.11 Peak
3	10545.010	13.33	39.30	53.54	51.26	50.35	74.00	-23.65 Peak
4	14242.800	16.83	40.46	54.10	48.79	51.98	74.00	-22.02 Peak
5	16891.040	19.64	38.60	53.88	47.98	52.34	74.00	-21.66 Peak
6	pp18000.000	18.64	42.60	54.30	47.48	54.42	74.00	-19.58 Peak

11n_40M_TX_CH_03_Vertical-Avg



Condition: 3m VERTICAL
Job No : 01014M0/01015M0
Mode : 2422 TX RSE
: 2.4G Wi-Fi 11N40

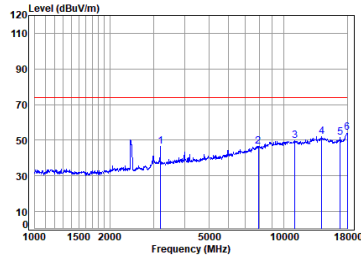
Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Aux
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	Limit	Factor
1	6001.626	10.05	34.40	56.60	43.90	31.75	54.00	-22.25 Average
2	8789.516	12.33	38.30	54.94	41.67	37.36	54.00	-16.64 Average
3	pp12009.760	14.35	39.29	53.21	43.53	43.96	54.00	-10.04 Average
4	14242.800	16.83	40.46	54.10	36.65	39.84	54.00	-14.16 Average
5	16891.040	19.64	38.60	53.88	35.54	39.90	54.00	-14.10 Average
6	18000.000	18.64	42.60	54.30	35.64	42.58	54.00	-11.42 Average



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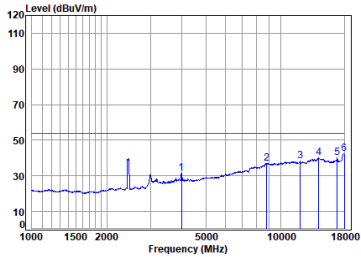
11n_40M_TX_CH_06_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 01014M0/01015M0
Mode : 2437 TX RSE
: 2.4G Wi-Fi 11N40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1	3196.094	7.70	29.91	54.71	63.66	46.56	74.00	-27.44	Peak	0.00
2	7898.049	11.48	37.29	55.96	63.62	46.63	74.00	-27.37	Peak	0.00
3	11186.168	14.13	39.32	53.47	49.81	49.79	74.00	-24.21	Peak	0.00
4	14242.800	16.83	40.46	54.10	48.98	52.17	74.00	-21.83	Peak	0.00
5	16891.040	19.64	38.60	53.88	47.14	51.50	74.00	-22.50	Peak	0.00
6	pp18000.000	18.64	42.60	54.30	47.24	54.22	74.00	-19.78	Peak	0.00

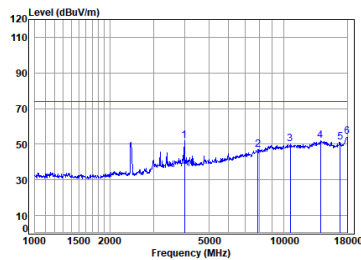
11n_40M_TX_CH_06_Horizontal-Avg



Condition: 3m HORIZONTAL
Job No : 01014M0/01015M0
Mode : 2437 TX RSE
: 2.4G Wi-Fi 11N40

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	Level	Line	Limit	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	dB
1	3992.781	8.12	31.07	55.10	47.18	31.27	54.00	-22.73 Average
2	8789.516	12.33	38.30	54.94	41.34	37.03	54.00	-16.97 Average
3	12809.760	14.35	39.29	53.21	37.80	38.23	54.00	-15.77 Average
4	14201.690	16.67	40.50	54.10	37.00	40.07	54.00	-13.93 Average
5	16891.040	19.64	38.60	53.88	35.63	39.99	54.00	-14.01 Average
6	pp18000.000	18.64	42.60	54.30	35.68	42.62	54.00	-11.38 Average

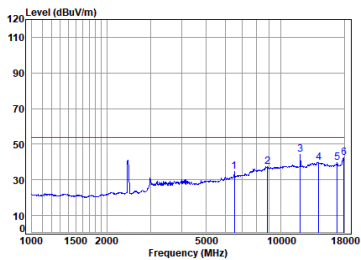
11n_40M_TX_CH_06_Vertical-Peak



Condition: 3m VERTICAL
Job No : 01014M0/01015M0
Mode : 2437 TX RSE
: 2.4G Wi-Fi 11N40

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	Level	Line	Limit	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	dB
1	3992.781	8.12	31.07	55.10	67.74	51.83	74.00	-22.17 Peak
2	7875.254	11.42	37.20	55.97	54.54	47.19	74.00	-26.81 Peak
3	10636.850	13.44	39.30	53.54	50.88	50.08	74.00	-23.92 Peak
4	14079.080	16.38	40.44	54.10	49.09	51.81	74.00	-22.19 Peak
5	16891.040	19.64	38.60	53.88	46.97	51.33	74.00	-22.67 Peak
6	pp18000.000	18.64	42.60	54.30	47.15	54.09	74.00	-19.91 Peak

11n_40M_TX_CH_06_Vertical-Avg



Condition: 3m VERTICAL
Job No : 01014M0/01015M0
Mode : 2437 TX RSE
: 2.4G Wi-Fi 11N40

Freq	Cable	Ant	Preamp	Read	Level	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	Level	Line	Limit	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	dB
1	6507.536	10.68	35.35	56.55	45.33	34.81	54.00	-19.19 Average
2	8840.473	12.33	38.30	54.88	41.40	37.23	54.00	-16.77 Average
3	pp12009.760	14.35	39.29	53.21	43.79	44.22	54.00	-9.78 Average
4	14242.800	16.83	40.46	54.10	36.70	39.89	54.00	-14.11 Average
5	16891.040	19.64	38.60	53.88	35.40	39.76	54.00	-14.24 Average
6	17948.050	18.75	42.29	54.28	35.87	42.63	54.00	-11.37 Average



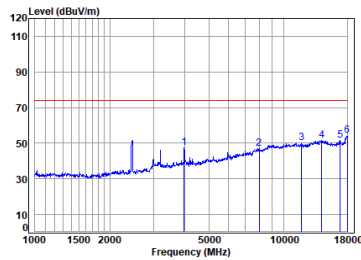
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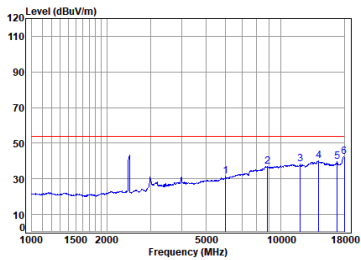
11n_40M_TX_CH_09_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 01014M0/01015M0
Mode : 2452 TX RSE
: 2.4G Wi-Fi 11N40

Freq	Cable	Ant	Preamp	Read	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	Line	Limit	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dB	dB
1	3981.257	8.11	31.03	55.09	63.40	47.45	74.00 -26.55 Peak 0.00
2	7966.832	11.47	37.27	55.92	54.26	47.00	74.00 -26.92 Peak 0.00
3	11065.200	14.60	39.10	53.26	49.77	50.21	74.00 -23.79 Peak 0.00
4	14242.800	16.83	40.46	54.10	48.39	51.58	74.00 -22.42 Peak 0.00
5	16891.040	19.64	38.60	53.88	47.35	51.71	74.00 -22.29 Peak 0.00
6	pp18000.000	18.64	42.60	54.30	47.47	54.41	74.00 -19.59 Peak 0.00

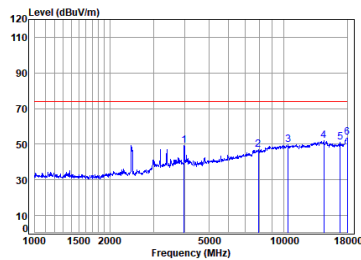
11n_40M_TX_CH_09_Horizontal-Avg



Condition: 3m HORIZONTAL
Job No : 01014M0/01015M0
Mode : 2452 TX RSE
: 2.4G Wi-Fi 11N40

Freq	Cable	Ant	Preamp	Read	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	Line	Limit	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dB	dB
1	6001.626	10.05	34.40	56.60	43.79	31.64	54.00 -22.36 Average 0.00
2	8840.473	12.33	38.30	54.88	41.22	37.05	54.00 -16.95 Average 0.00
3	12009.760	14.35	39.29	53.21	37.80	36.23	54.00 -15.77 Average 0.00
4	14242.800	16.83	40.46	54.10	36.75	39.94	54.00 -14.06 Average 0.00
5	16891.040	19.64	38.60	53.88	35.44	39.76	54.00 -14.24 Average 0.00
6	pp18000.000	18.64	42.60	54.30	35.61	42.55	54.00 -11.45 Average 0.00

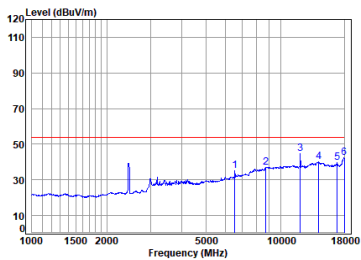
11n_40M_TX_CH_09_Vertical-Peak



Condition: 3m VERTICAL
Job No : 01014M0/01015M0
Mode : 2452 TX RSE
: 2.4G Wi-Fi 11N40

Freq	Cable	Ant	Preamp	Read	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	Line	Limit	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dB	dB
1	3981.257	8.11	31.03	55.09	65.29	49.34	74.00 -24.66 Peak 0.00
2	7920.911	11.40	37.30	55.94	54.05	46.89	74.00 -27.11 Peak 0.00
3	10423.800	13.45	39.22	53.56	50.57	49.68	74.00 -24.32 Peak 0.00
4	14491.960	16.34	40.22	54.10	49.53	51.99	74.00 -22.01 Peak 0.00
5	16891.040	19.64	38.60	53.88	46.69	51.05	74.00 -22.95 Peak 0.00
6	pp18000.000	18.64	42.60	54.30	46.75	53.69	74.00 -28.31 Peak 0.00

11n_40M_TX_CH_09_Vertical-Avg

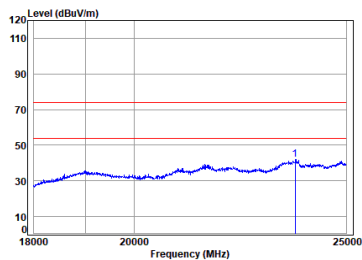


Condition: 3m VERTICAL
Job No : 01014M0/01015M0
Mode : 2452 TX RSE
: 2.4G Wi-Fi 11N40

Freq	Cable	Ant	Preamp	Read	Limit	Over	Aux
MHz	Loss	Factor	Factor	Level	Line	Limit	Factor
	dB	dB/m	dB	dBuV	dBuV/m	dB	dB
1	6545.263	10.76	35.57	56.54	45.15	34.94	54.00 -19.06 Average 0.00
2	8713.630	12.01	38.30	55.03	41.90	37.18	54.00 -16.82 Average 0.00
3	pp12009.760	14.35	39.29	53.21	44.10	44.53	54.00 -9.47 Average 0.00
4	14242.800	16.83	40.46	54.10	36.86	40.05	54.00 -13.95 Average 0.00
5	16891.040	19.64	38.60	53.88	35.44	39.80	54.00 -14.20 Average 0.00
6	18000.000	18.64	42.60	54.30	35.59	42.53	54.00 -11.47 Average 0.00



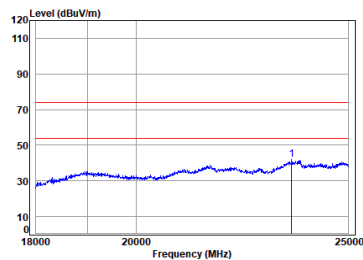
11n_40M_TX_CH_09_Horizontal



Condition: 3m HORIZONTAL
Job No : 01014M0/01015M0
Mode : 2452 TX RSE

Freq	Cable Loss	Ant Factor	Preamp	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 pp23696.550	6.77	38.69	50.34	56.32	41.90	74.00	-32.10	Peak	-9.54

11n_40M_TX_CH_09_Vertical



Condition: 3m VERTICAL
Job No : 01014M0/01015M0
Mode : 2452 TX RSE

Freq	Cable Loss	Ant Factor	Preamp	Read Level	Level	Limit Line	Over Limit	Remark	Aux Factor
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		dB
1 pp23556.850	6.76	38.41	50.31	56.76	42.08	74.00	-31.92	Peak	-9.54



6.3 Maximum Conducted Output Power

Test Requirement 47 CFR Part 15, Subpart C 15.247(b)(3)

Test Method: ANSI C63.10 (2020) Section 11.9.2

Test Engineer: Mingli Hu

Limit:

Frequency range(MHz)	Output power of the intentional radiator(watt)
902-928	1 for ≥ 50 hopping channels
	0.25 for $25 \leq$ hopping channels < 50
	1 for digital modulation
2400-2483.5	1 for ≥ 75 non-overlapping hopping channels
	0.125 for all other frequency hopping systems
	1 for digital modulation
5725-5850	1 for frequency hopping systems and digital modulation

6.3.1 E.U.T. Operation

Operating Environment:

Temperature: 24.3 °C

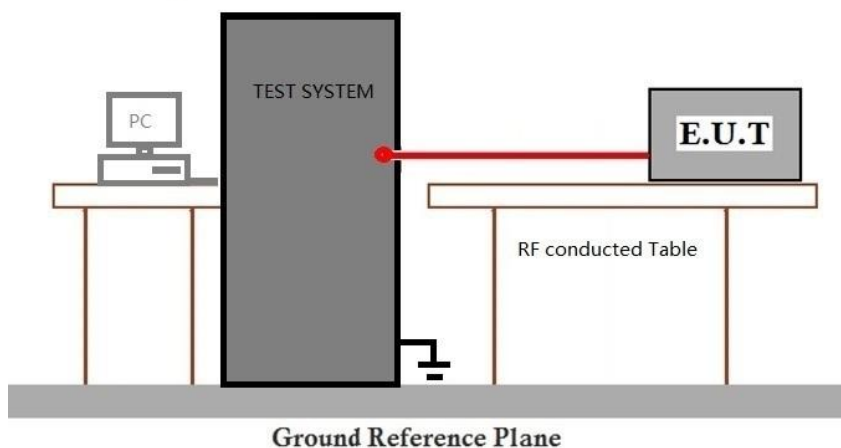
Humidity: 64.7 % RH

Atmospheric Pressure: 1010 mbar

6.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.

6.3.3 Test Setup Diagram





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6.3.4 Measurement Procedure and Data

Please Refer to Appendix for Details



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Shenzhen Branch (SZEMC) Laboratory

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6.4 Power Spectral Density

Test Requirement 47 CFR Part 15, Subpart C 15.247(e)
 Test Method: ANSI C63.10 (2020) Section 11.10.3
 Test Engineer: Mingli Hu

Limit:

≤8dBm in any 3 kHz band during any time interval of continuous transmission

6.4.1 E.U.T. Operation

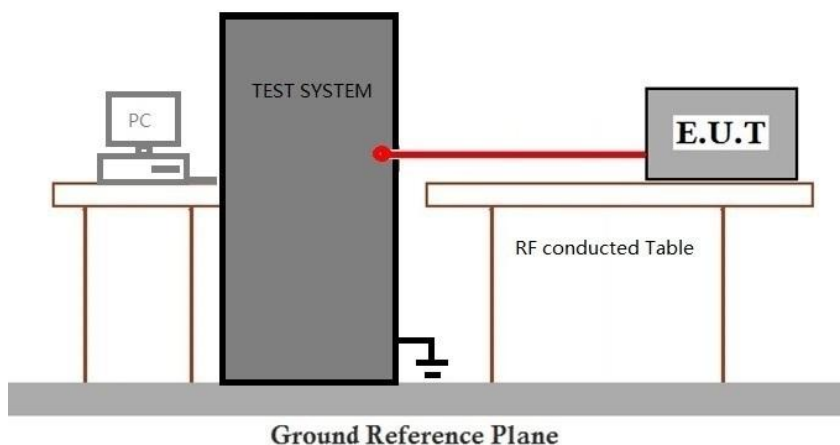
Operating Environment:

Temperature: 24.3 °C Humidity: 64.7 % RH Atmospheric Pressure: 1010 mbar

6.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.

6.4.3 Test Setup Diagram



6.4.4 Measurement Procedure and Data

Please Refer to Appendix for Details



6.5 Conducted Band Edges Measurement

Test Requirement 47 CFR Part 15, Subpart C 15.247(d)
 Test Method: ANSI C63.10 (2020) Section 6.10.4
 Test Engineer: Mingli Hu

Limit:

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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

6.5.1 E.U.T. Operation

Operating Environment:

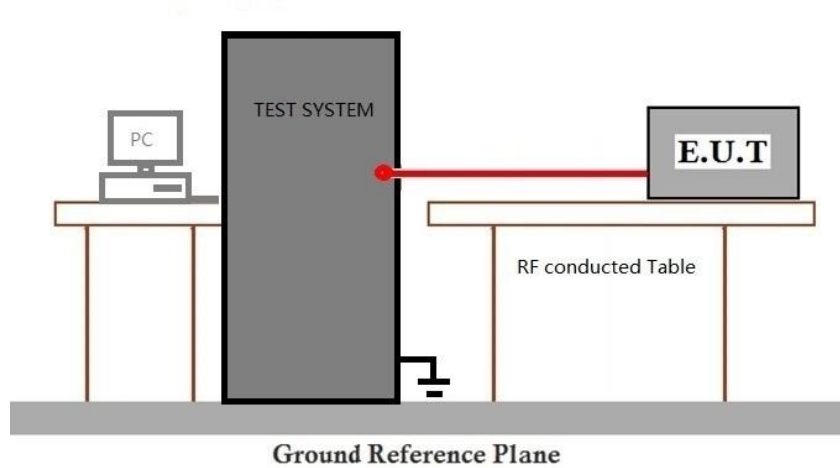
Temperature: 24.3 °C Humidity: 64.7 % RH Atmospheric Pressure: 1010 mbar

6.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.



6.5.3 Test Setup Diagram



6.5.4 Measurement Procedure and Data

Please Refer to Appendix for Details

6.6 Conducted Spurious Emissions

Test Requirement: 47 CFR Part 15, Subpart C 15.247(d)
 Test Method: ANSI C63.10 (2020) Section 11.11
 Test Engineer: Mingli Hu

Limit:

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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

6.6.1 E.U.T. Operation

Operating Environment:

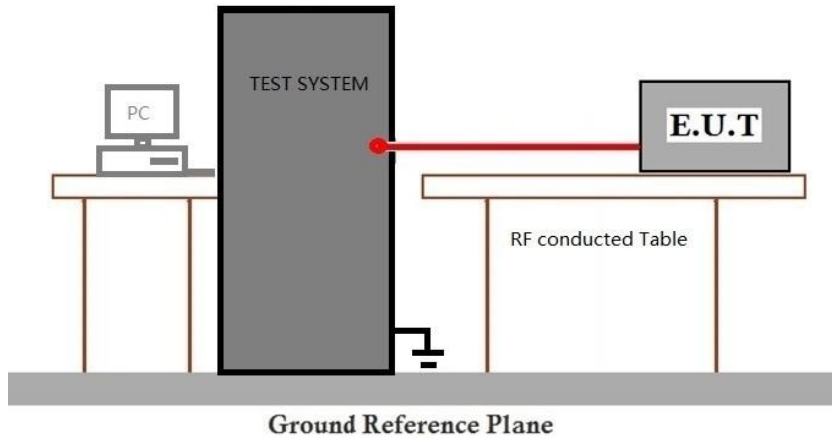
Temperature: 24.3 °C Humidity: 64.7 % RH Atmospheric Pressure: 1010 mbar

6.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.



6.6.3 Test Setup Diagram



6.6.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7 Test Setup Photo

Refer to Appendix - Test Setup Photo for SZCR2603001014MO

8 EUT Constructional Details (EUT Photos)

Refer to External and Internal Photos for SZCR2603001014MO

9 Appendix

1. Duty Cycle

1.1 Test Result

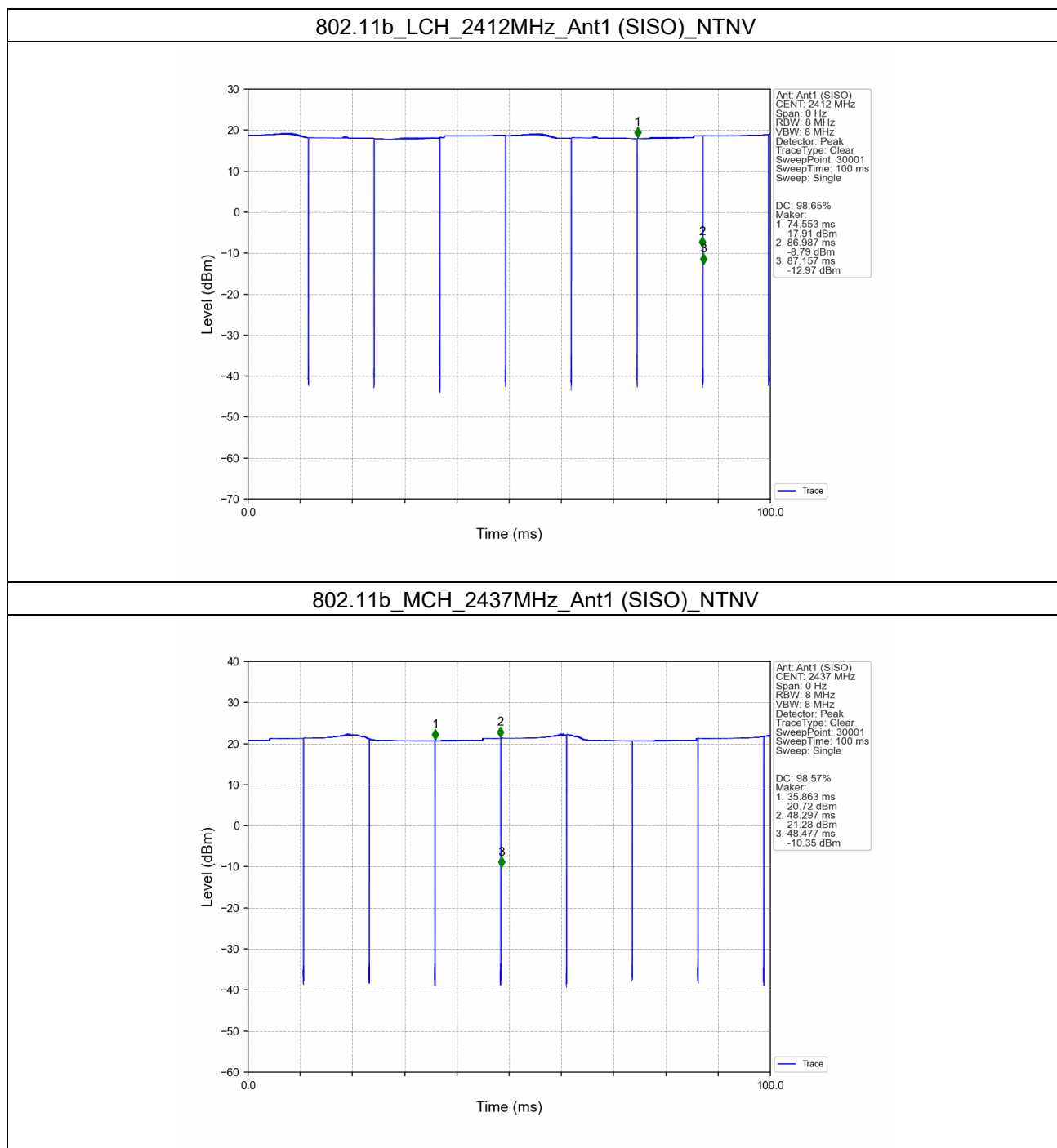
1.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	12.434	12.604	98.65	0.06	0.18
		2437	12.434	12.614	98.57	0.06	0.29
		2462	12.437	12.593	98.76	0.05	0.08
802.11g	SISO	2412	2.066	2.101	98.33	0.07	0.07
		2437	2.067	2.101	98.38	0.07	0.00
		2462	2.066	2.101	98.33	0.07	0.00
802.11n (HT20)	SISO	2412	1.926	1.961	98.22	0.08	0.03
		2437	1.926	1.961	98.22	0.08	0.03
		2462	1.926	1.961	98.22	0.08	0.03
802.11n (HT40)	SISO	2422	0.950	0.999	95.10	0.22	0.00
		2437	0.949	0.999	94.99	0.22	0.03
		2452	0.949	0.999	94.99	0.22	0.00

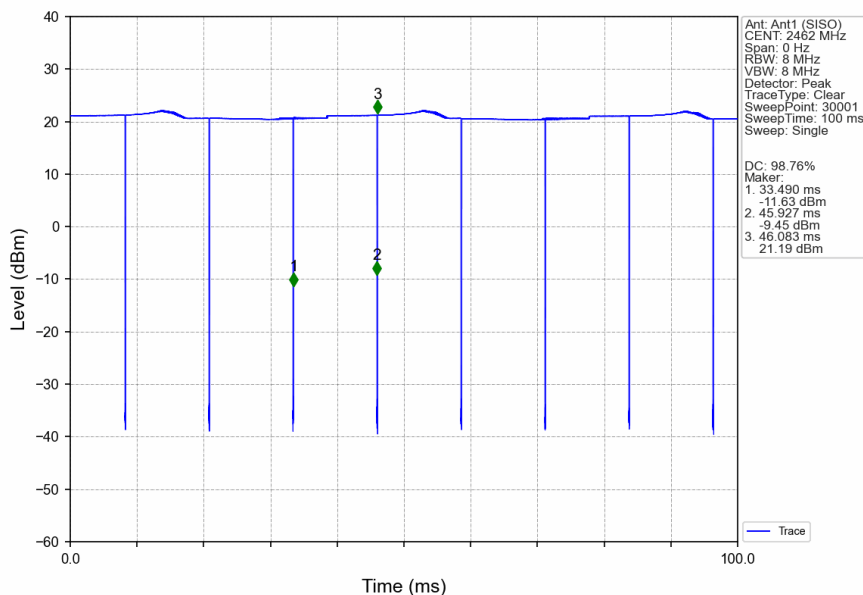


1.2 Test Graph

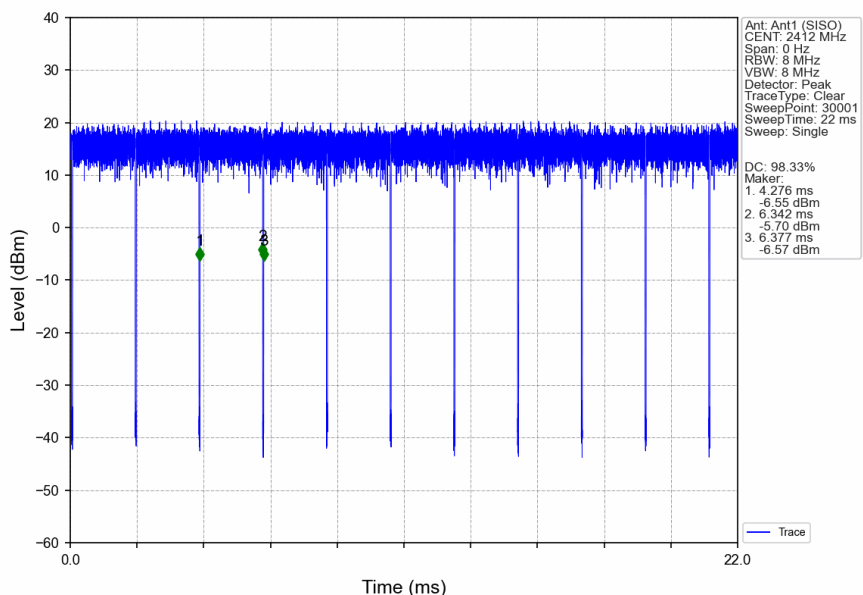
1.2.1 Ant1



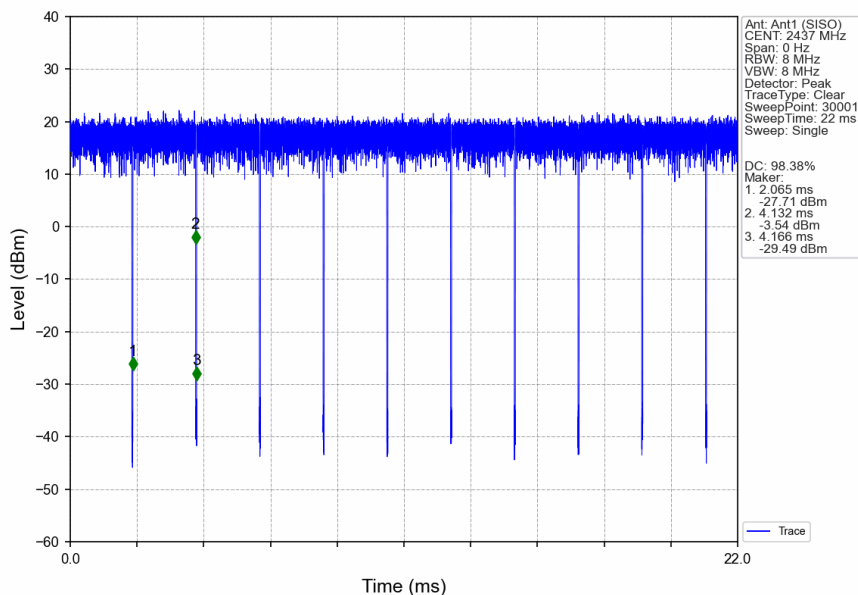
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



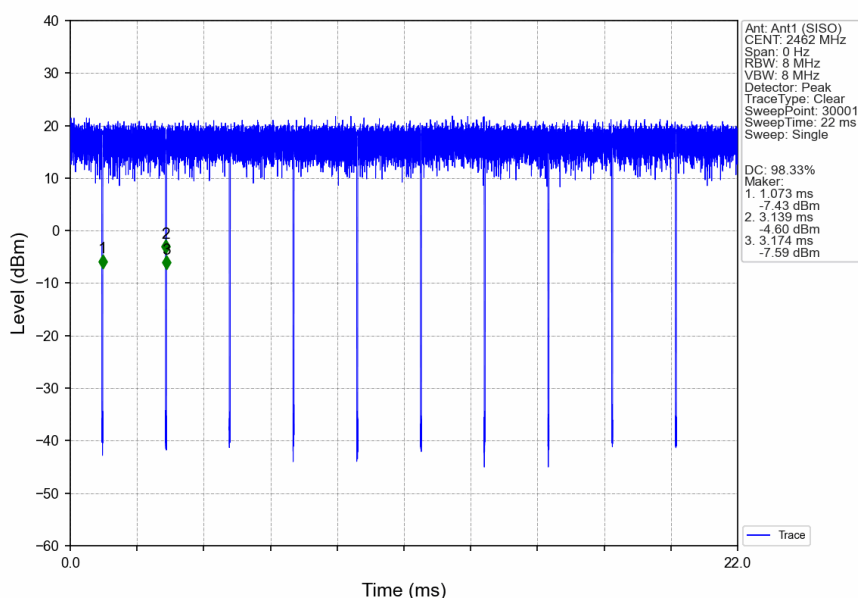
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



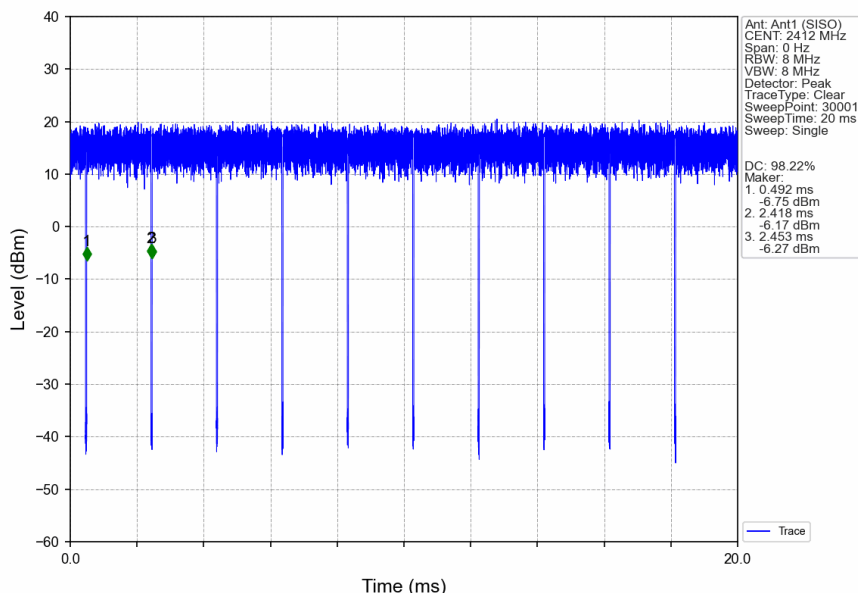
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



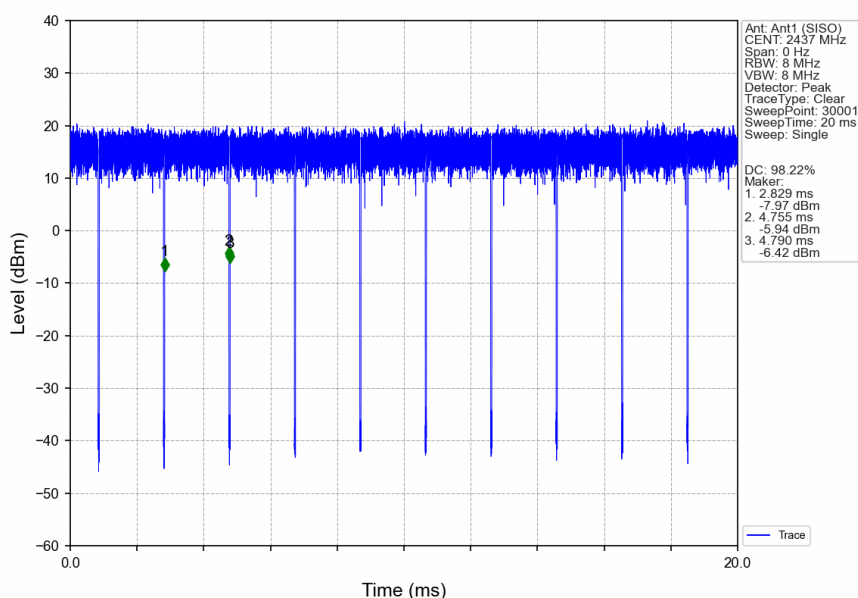
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



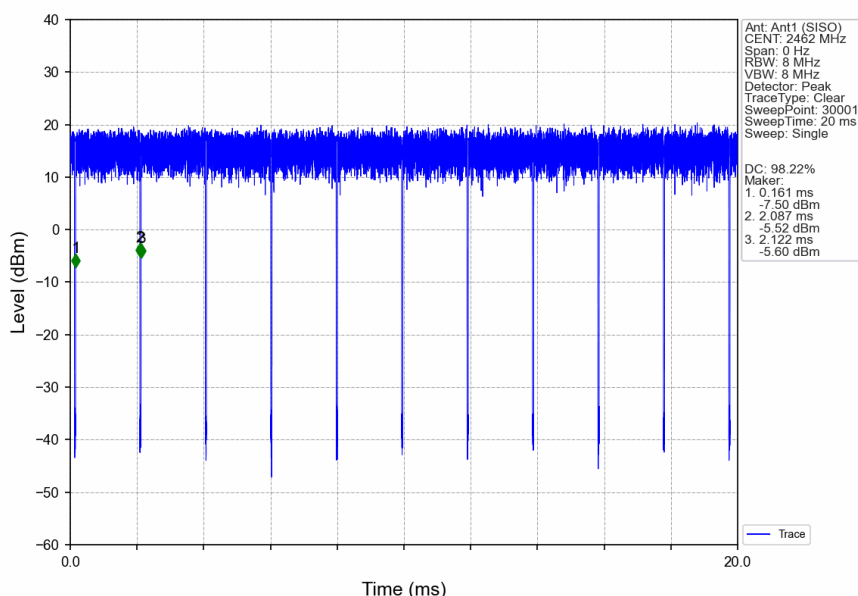
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



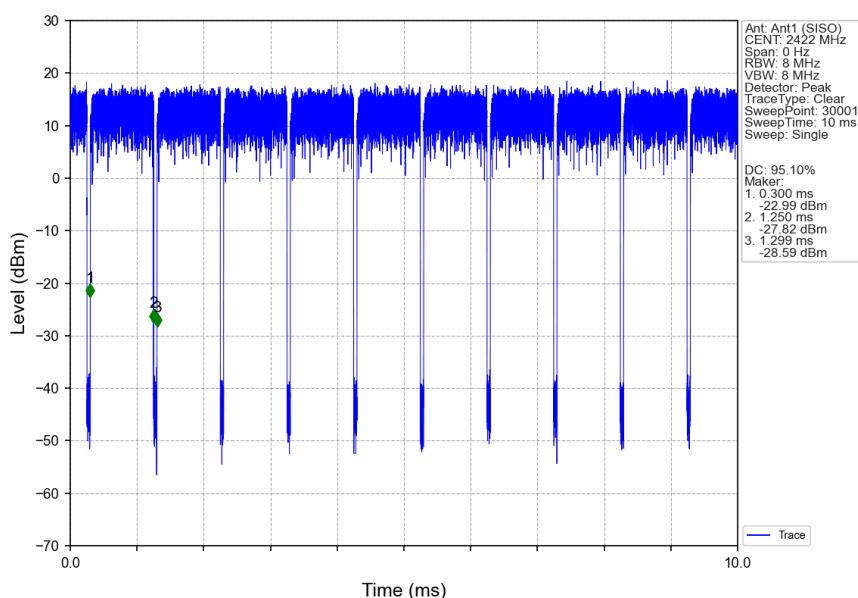
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



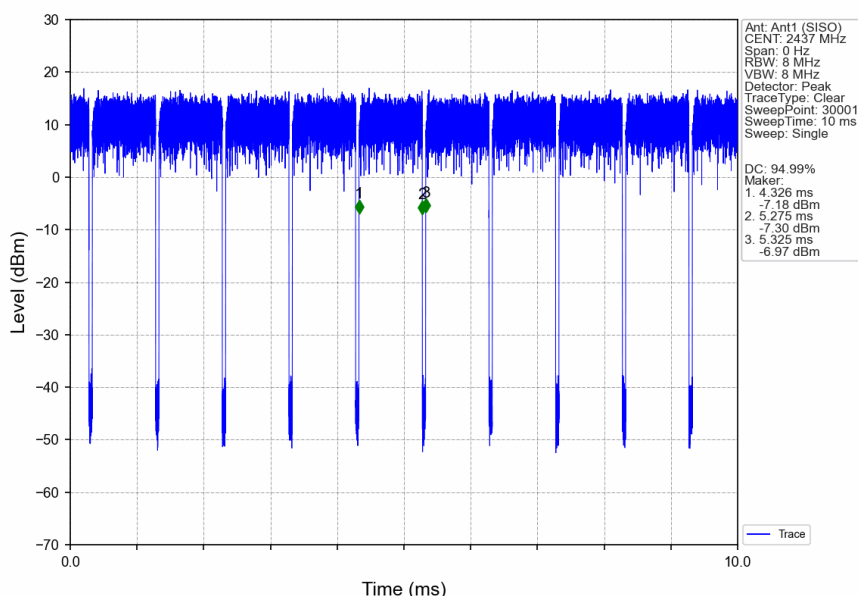
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



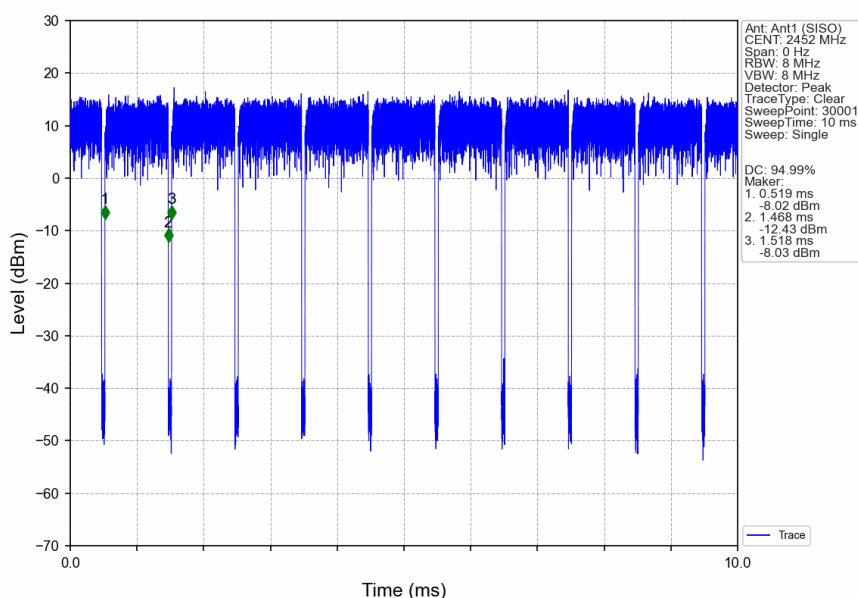
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



2. Maximum Conducted Output Power

2.1 Test Result

2.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	13.16	<=30	Pass
		2437	13.91	<=30	Pass
		2462	13.35	<=30	Pass
802.11g	SISO	2412	11.62	<=30	Pass
		2437	12.24	<=30	Pass
		2462	12.23	<=30	Pass
802.11n (HT20)	SISO	2412	10.81	<=30	Pass
		2437	11.80	<=30	Pass
		2462	11.56	<=30	Pass
802.11n (HT40)	SISO	2422	12.35	<=30	Pass
		2437	12.74	<=30	Pass
		2452	12.30	<=30	Pass

Note1: Antenna Gain: Ant1: 1.92dBi;



3. Maximum Power Spectral Density

3.1 Test Result

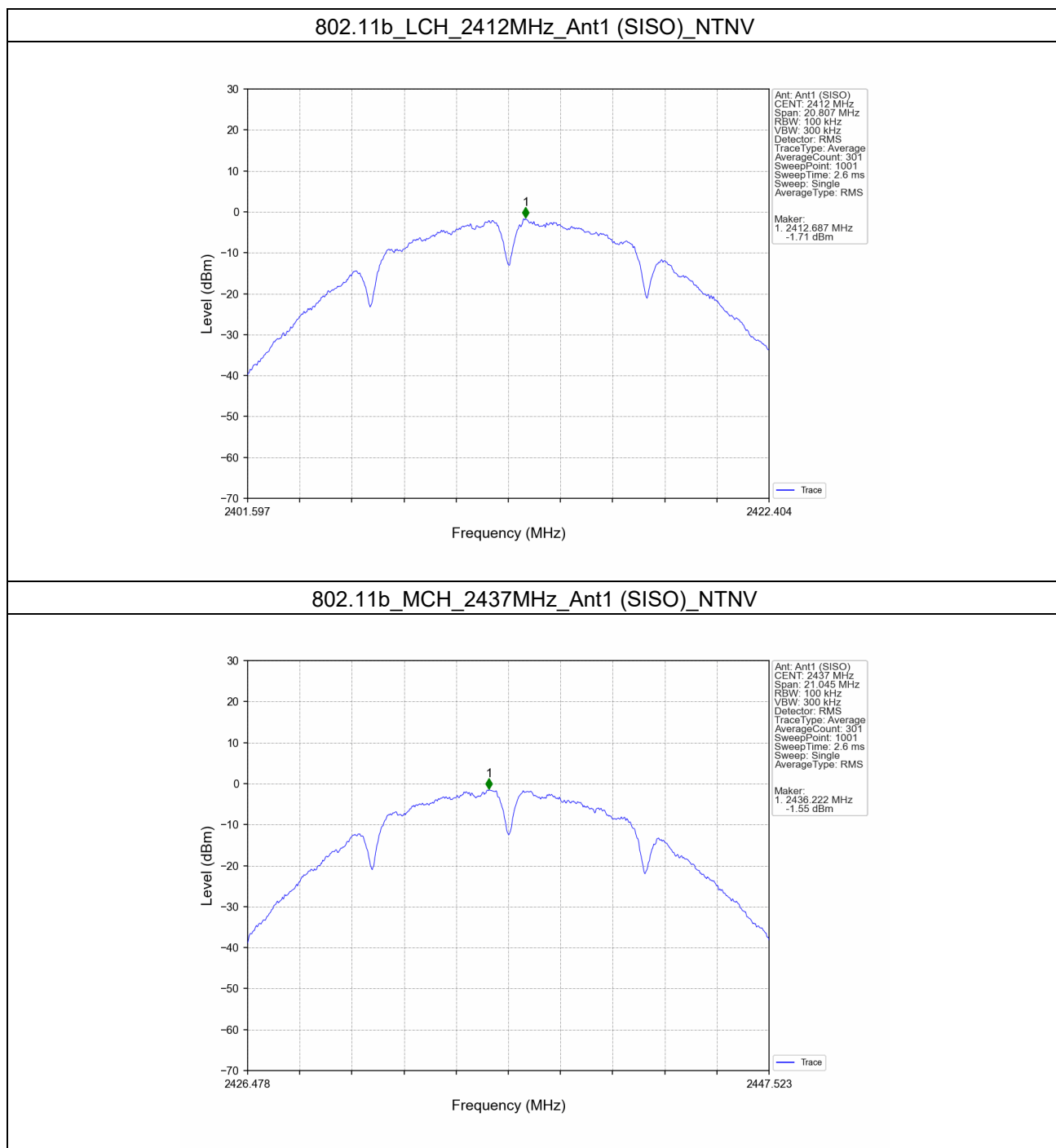
3.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	-1.71	<=8	Pass
		2437	-1.55	<=8	Pass
		2462	-0.99	<=8	Pass
802.11g	SISO	2412	-5.85	<=8	Pass
		2437	-5.81	<=8	Pass
		2462	-5.49	<=8	Pass
802.11n (HT20)	SISO	2412	-8.13	<=8	Pass
		2437	-6.75	<=8	Pass
		2462	-6.42	<=8	Pass
802.11n (HT40)	SISO	2422	-7.98	<=8	Pass
		2437	-9.20	<=8	Pass
		2452	-9.21	<=8	Pass

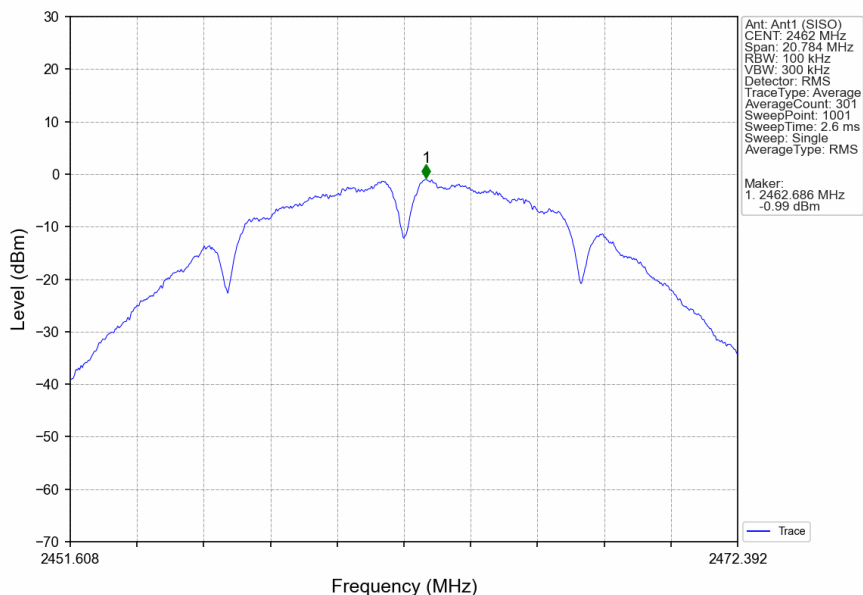
Note1: Antenna Gain: Ant1: 1.92dBi;

3.2 Test Graph

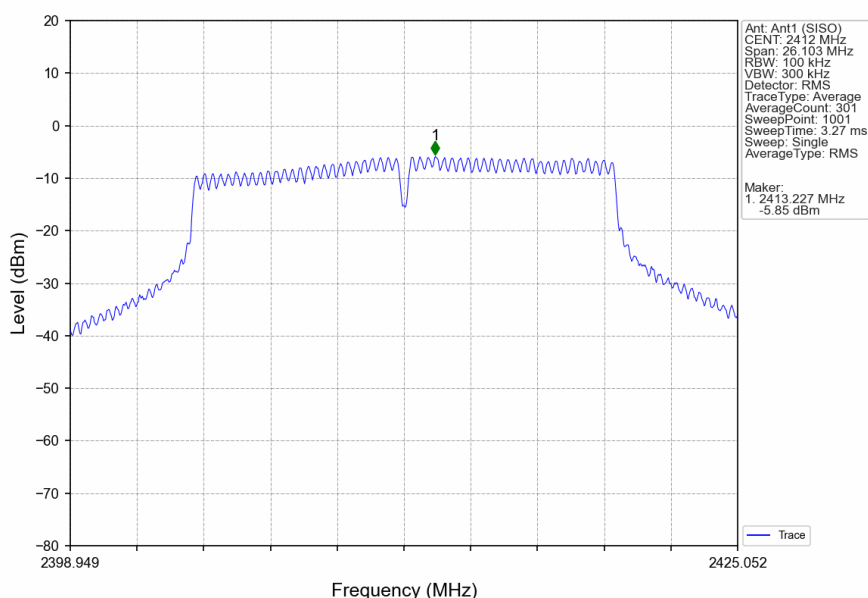
3.2.1 PSD



802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



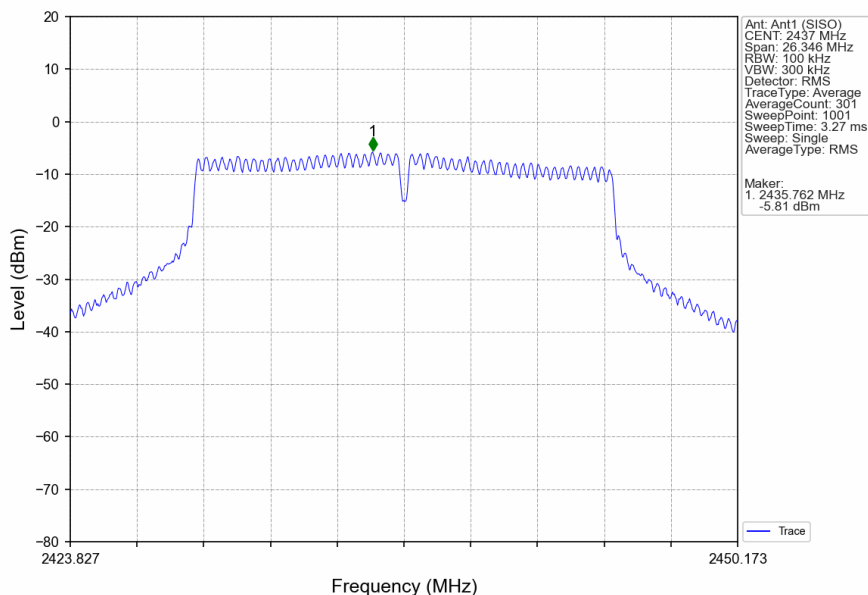
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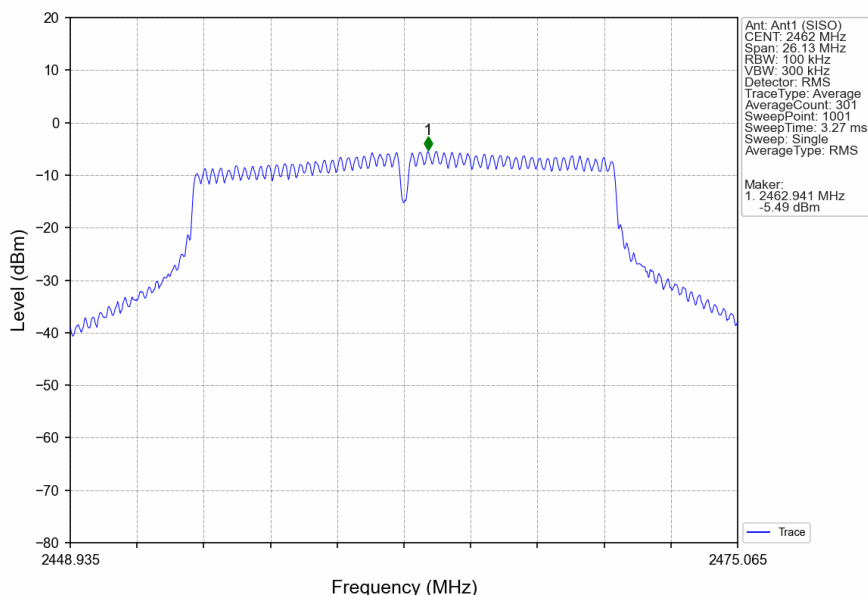
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802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



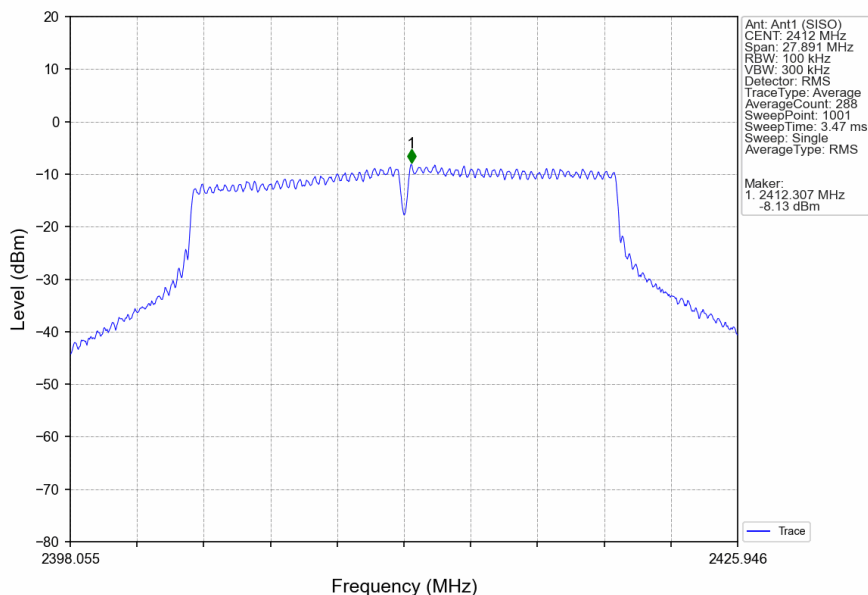
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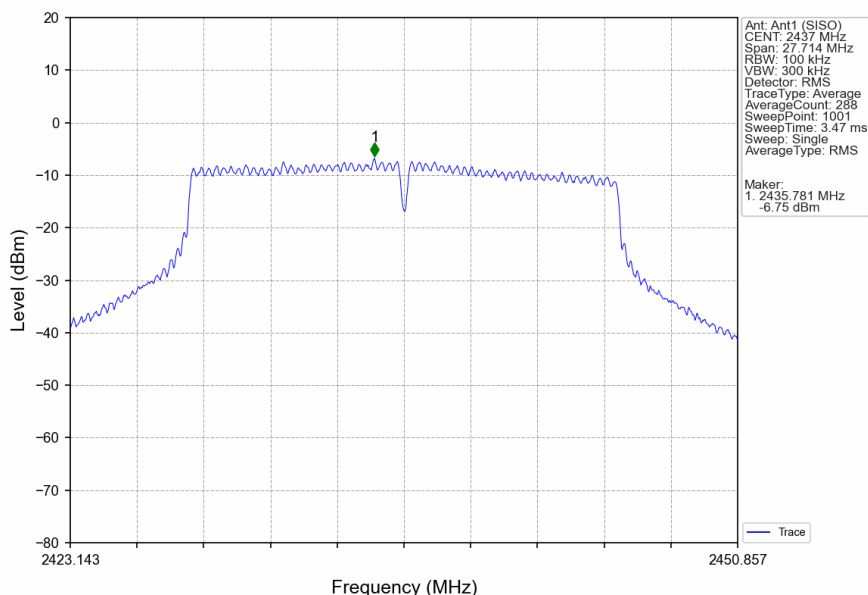
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802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



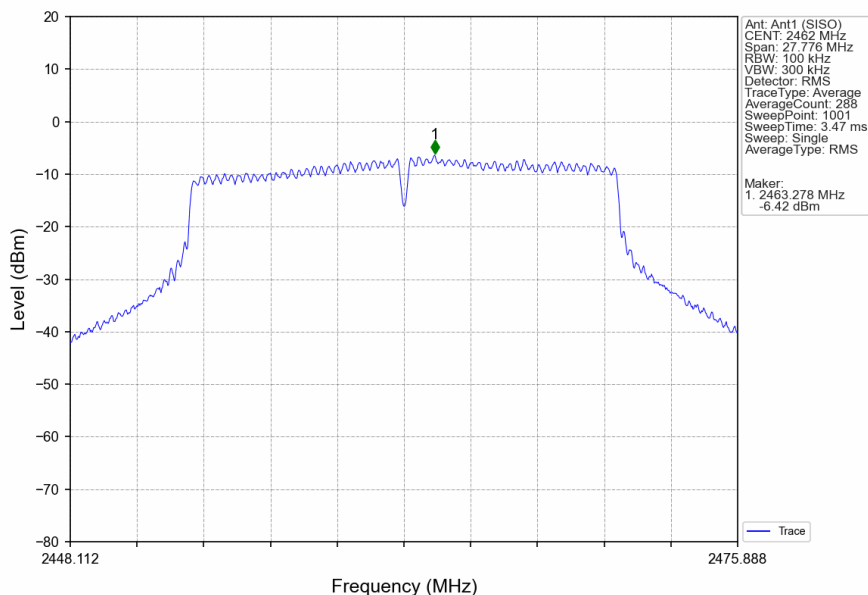
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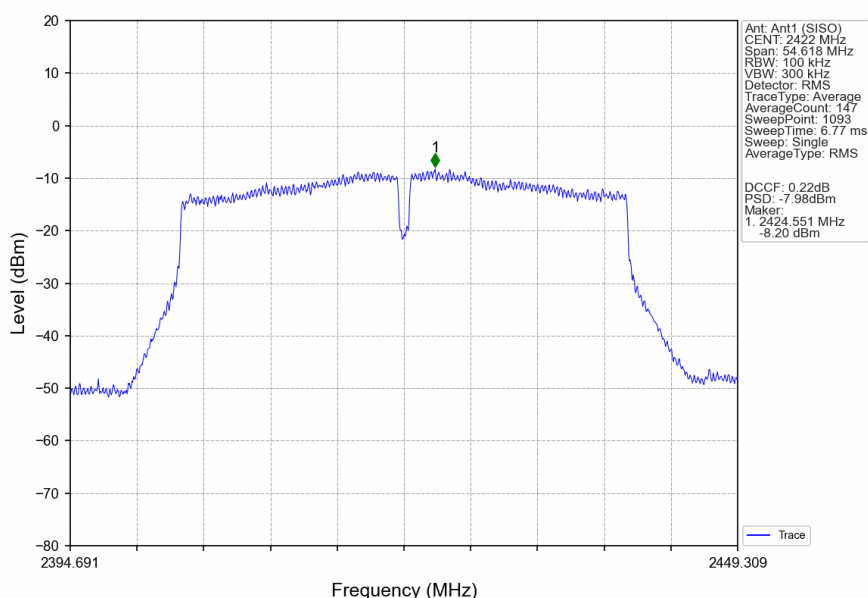
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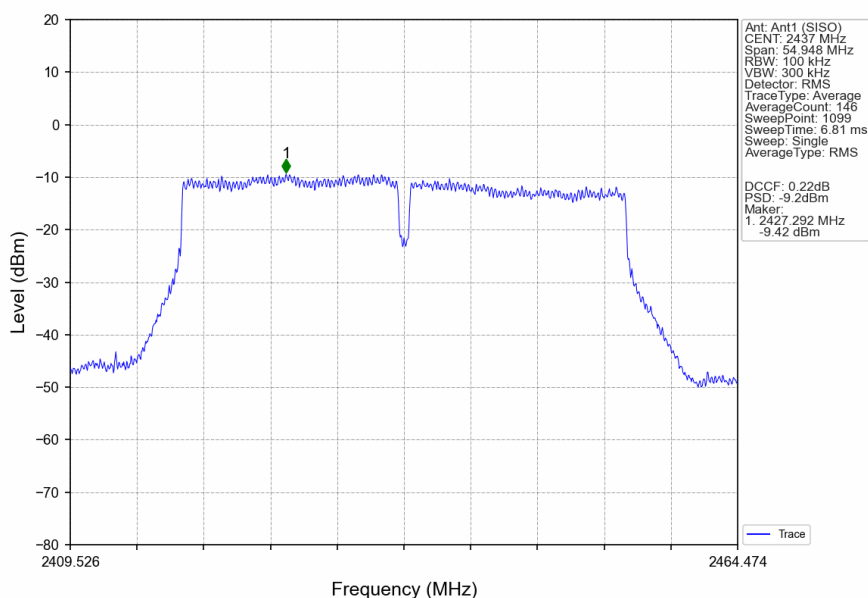
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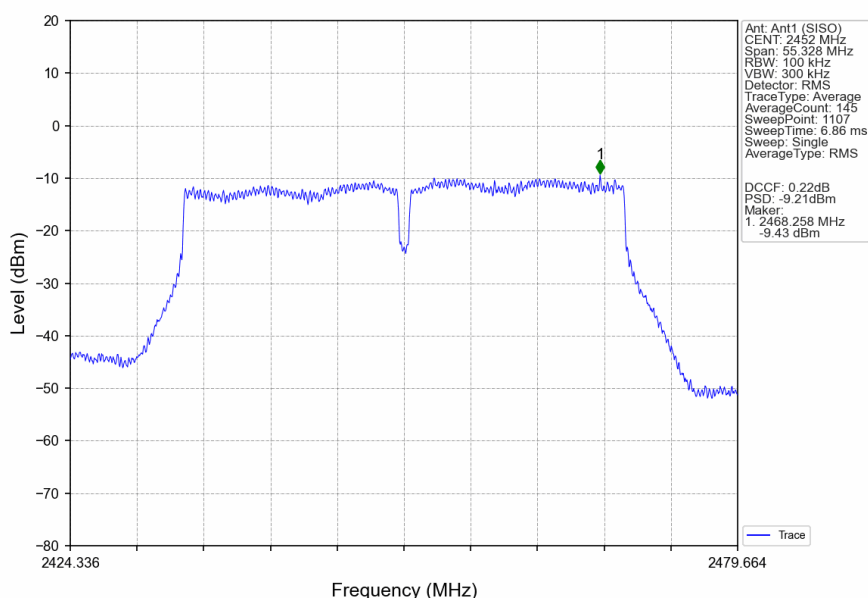
802.11n(HT40)_LCH_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



4. Unwanted Emissions In Non-restricted Frequency Bands

4.1 Test Result

4.1.1 Ref

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
802.11b	SISO	2412	1	5.22
		2437	1	5.98
		2462	1	5.28
802.11g	SISO	2412	1	2.58
		2437	1	3.13
		2462	1	2.61
802.11n (HT20)	SISO	2412	1	0.93
		2437	1	2.68
		2462	1	2.77
802.11n (HT40)	SISO	2422	1	0.26
		2437	1	0.22
		2452	1	-0.99

4.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	5.98	-24.02	Pass
		2437	1	5.98	-24.02	Pass
		2462	1	5.98	-24.02	Pass
802.11g	SISO	2412	1	3.13	-26.87	Pass
		2437	1	3.13	-26.87	Pass
		2462	1	3.13	-26.87	Pass
802.11n (HT20)	SISO	2412	1	2.77	-27.23	Pass
		2437	1	2.77	-27.23	Pass
		2462	1	2.77	-27.23	Pass
802.11n (HT40)	SISO	2422	1	0.26	-29.74	Pass
		2437	1	0.26	-29.74	Pass
		2452	1	0.26	-29.74	Pass



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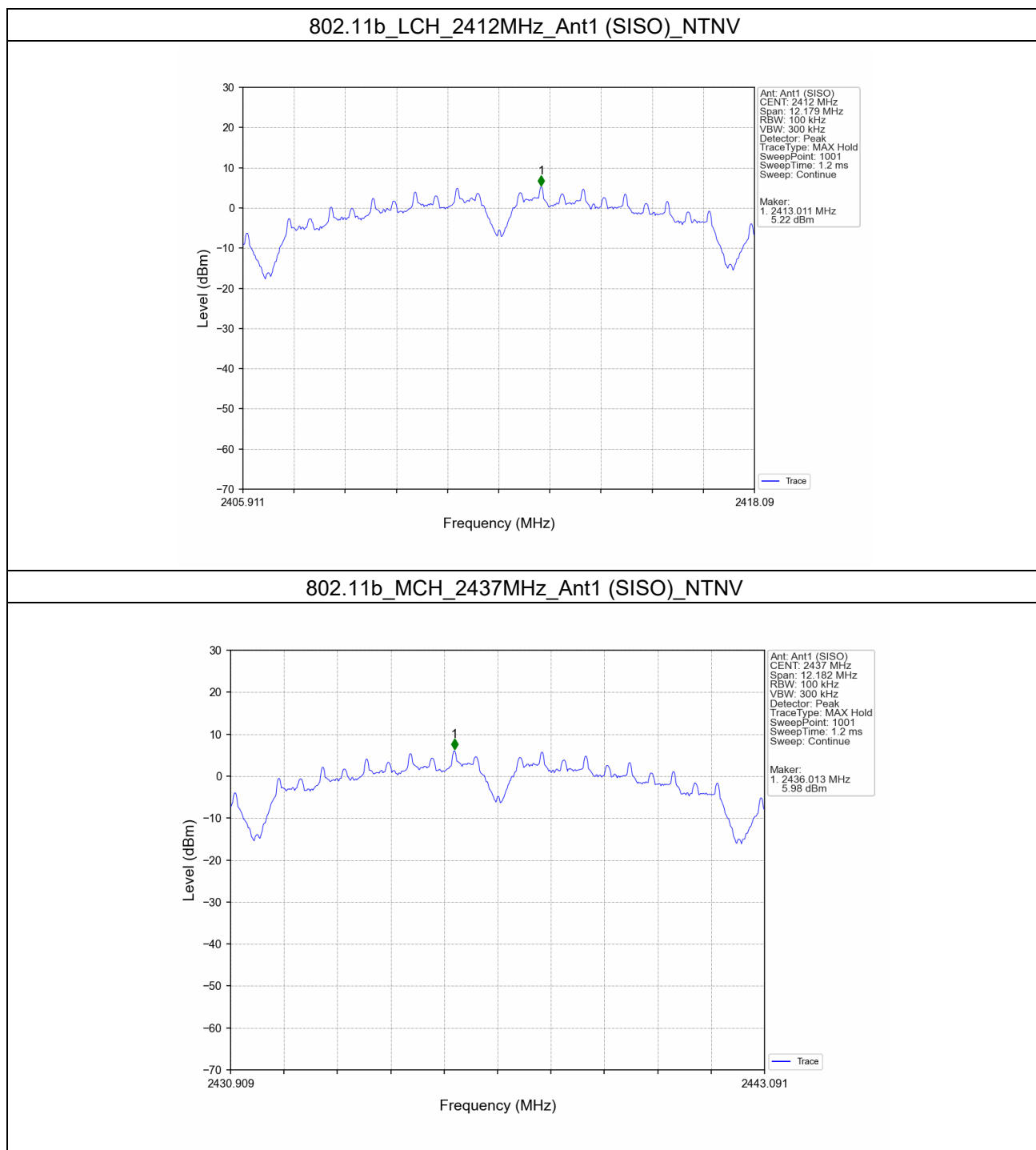
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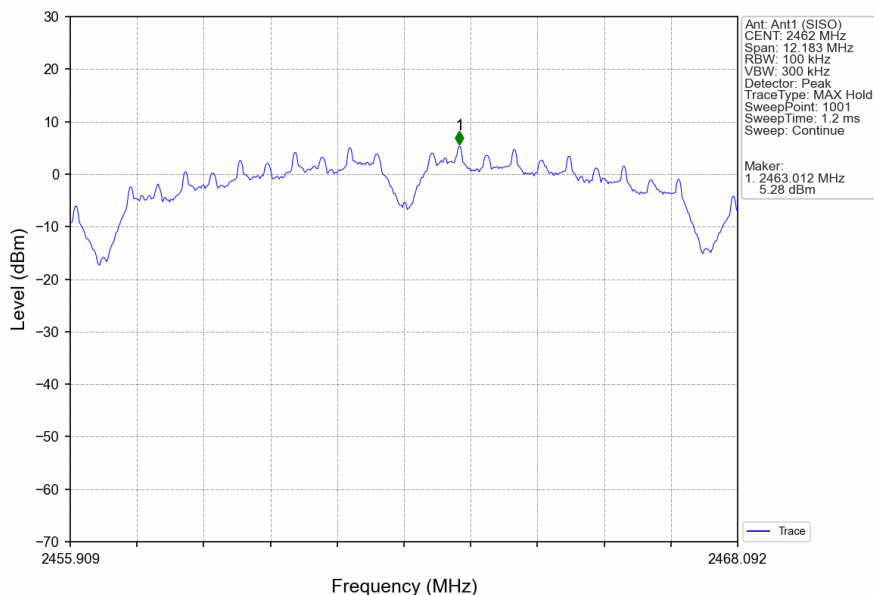
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4.2 Test Graph

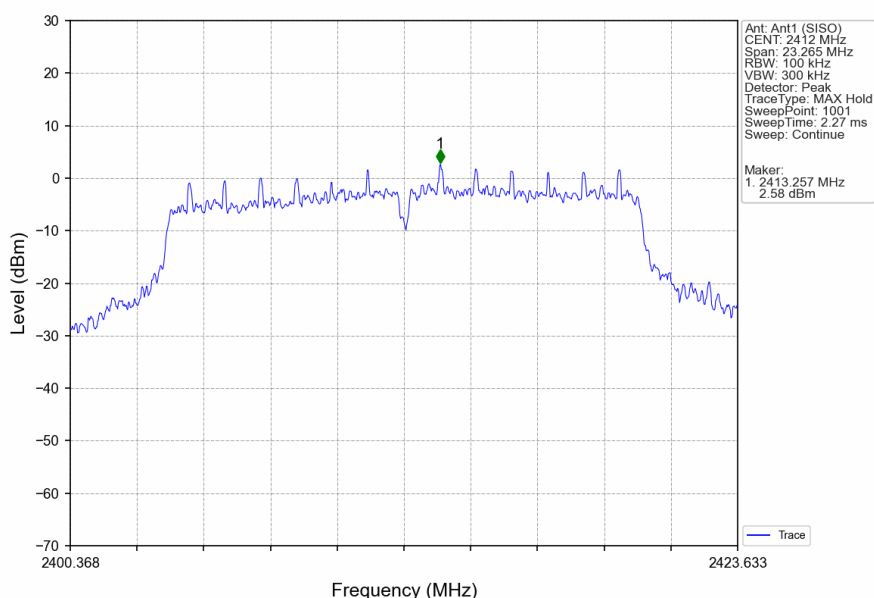
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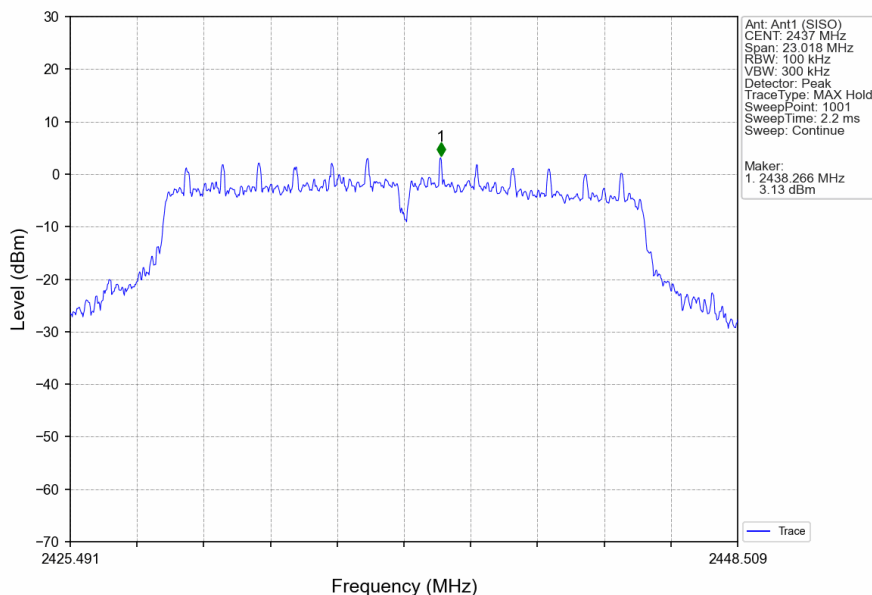
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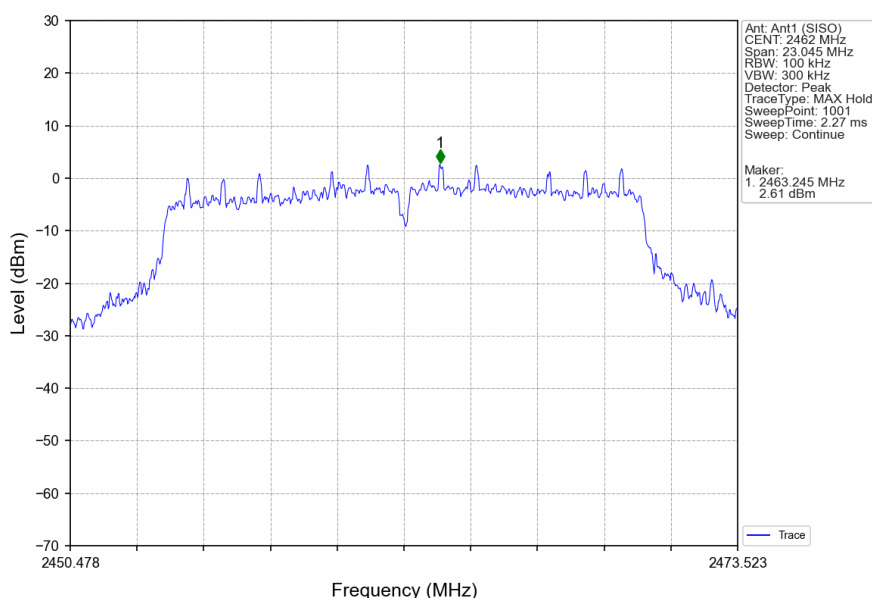
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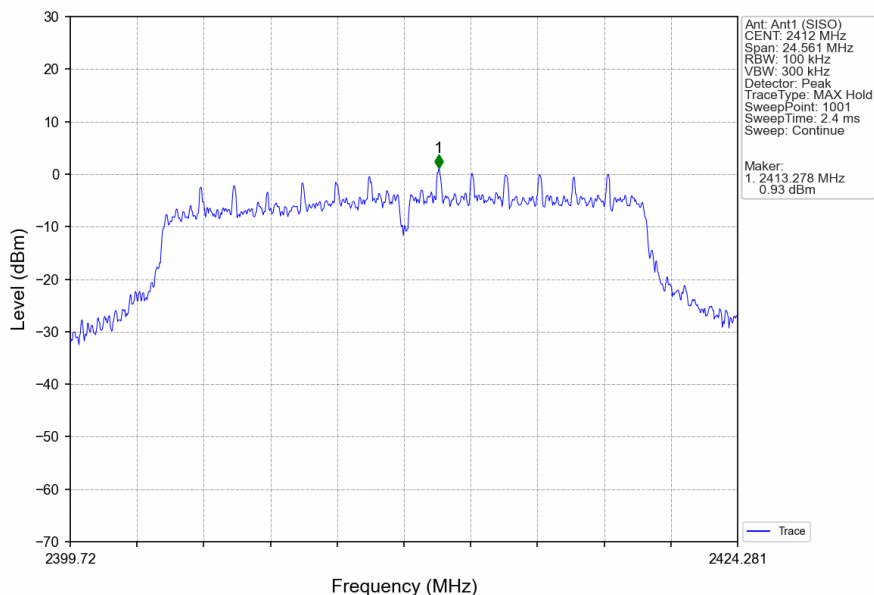
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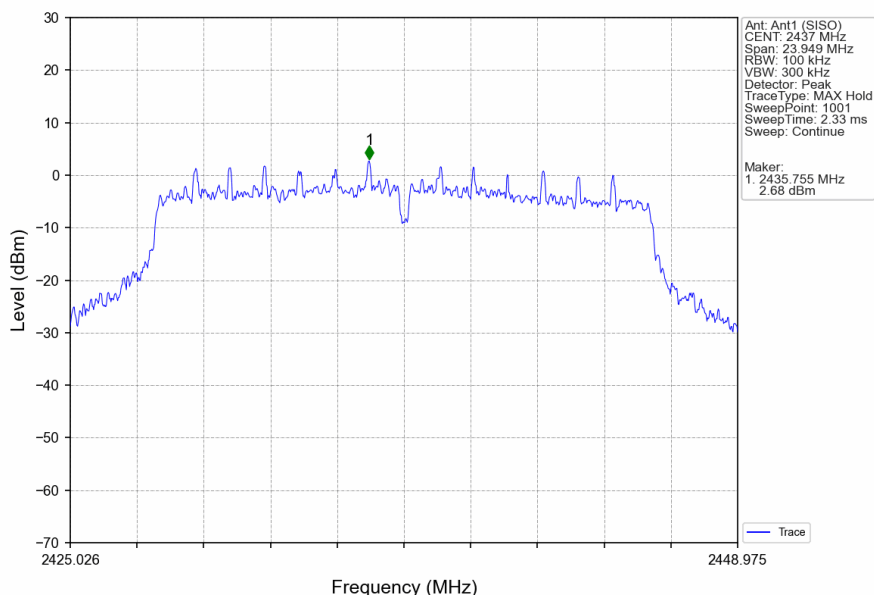
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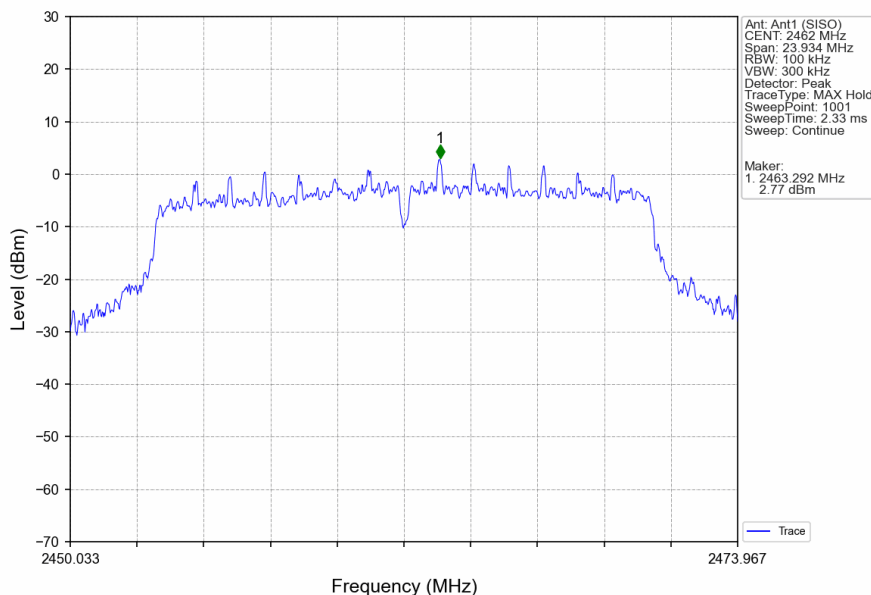
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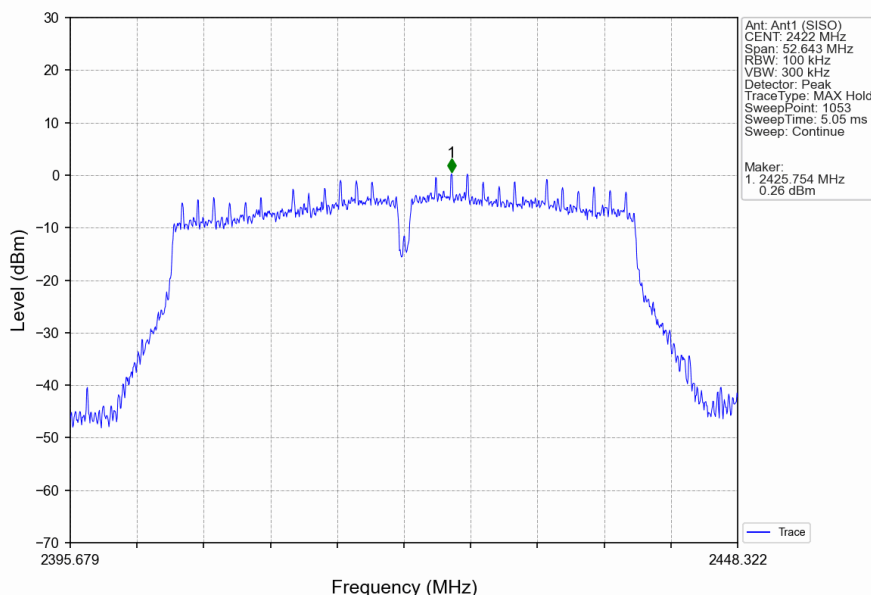
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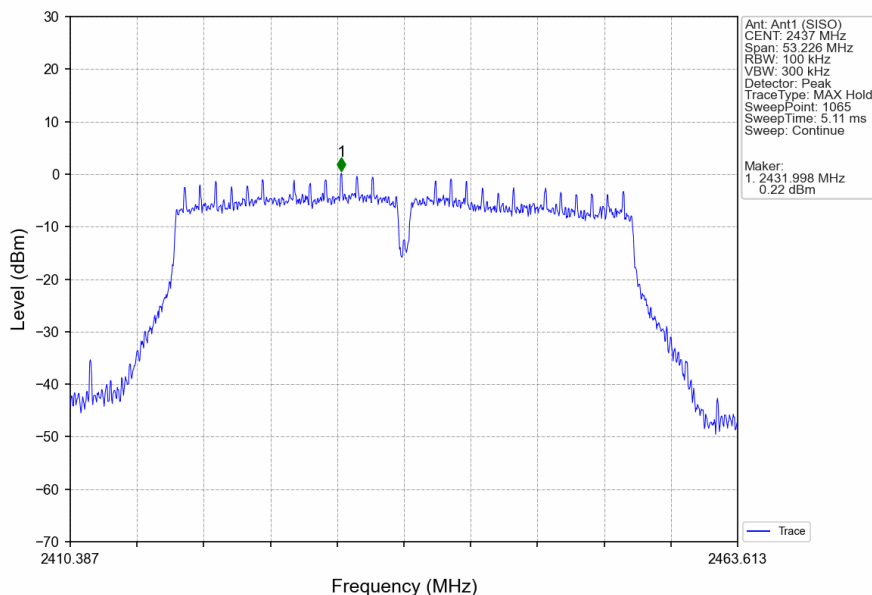
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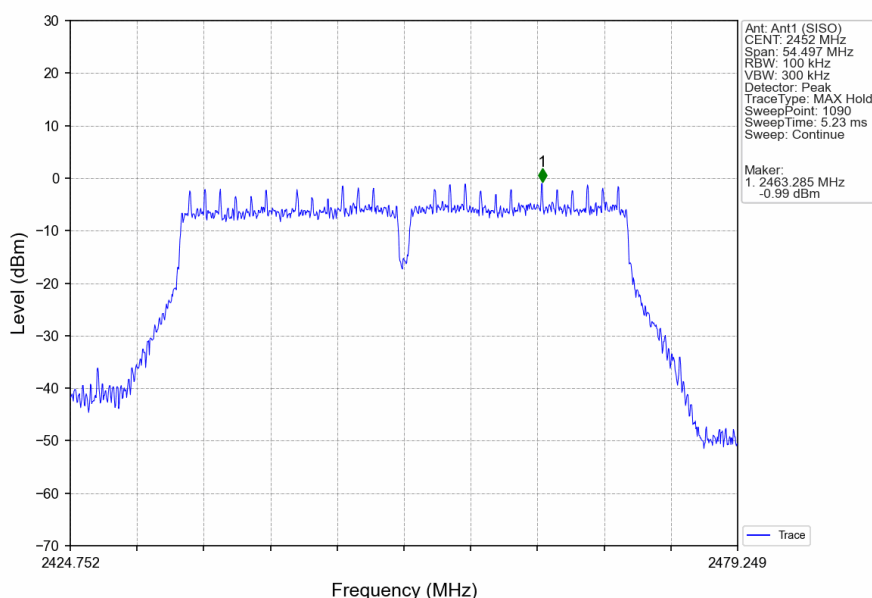
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802.11n(HT40)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



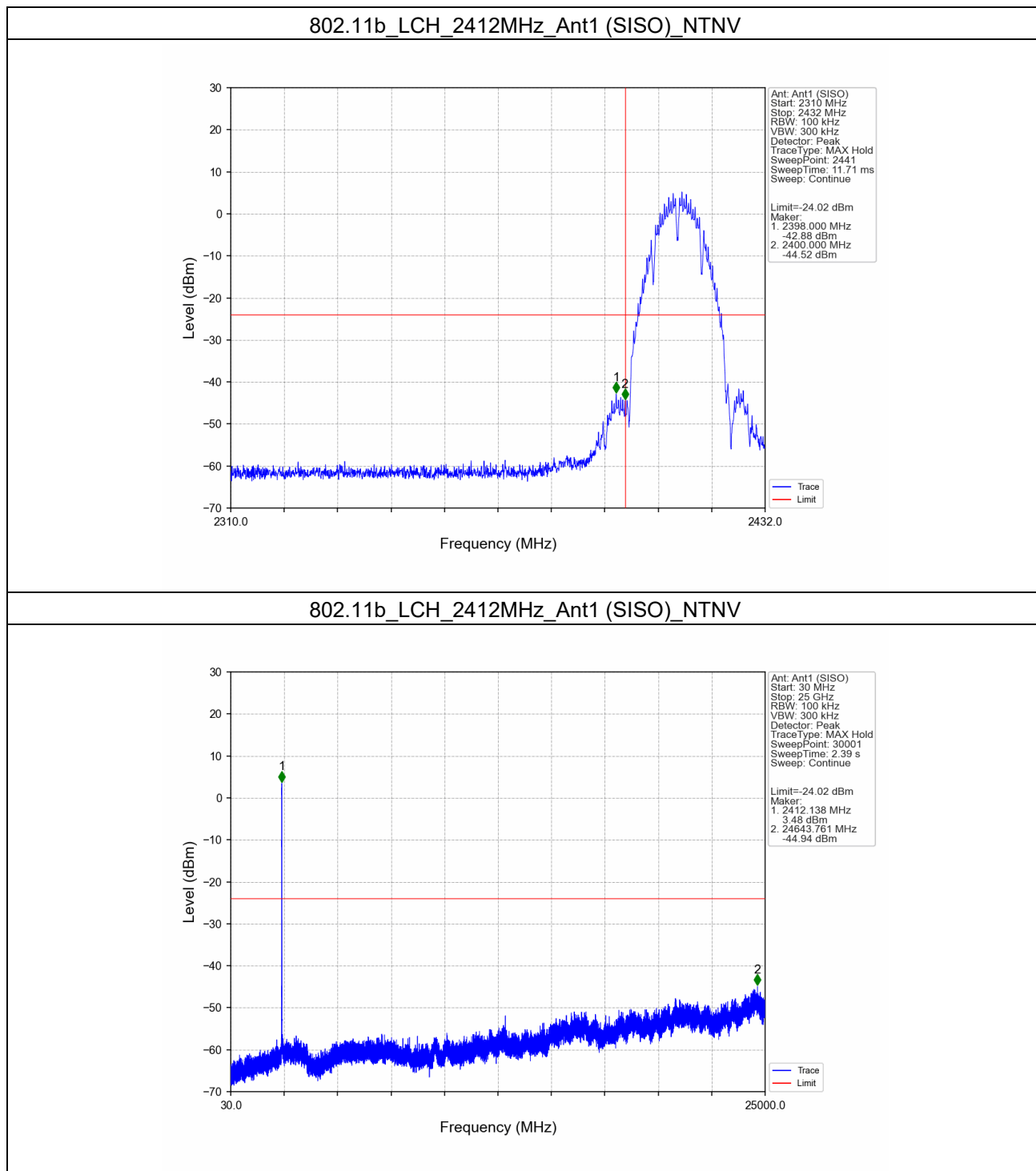
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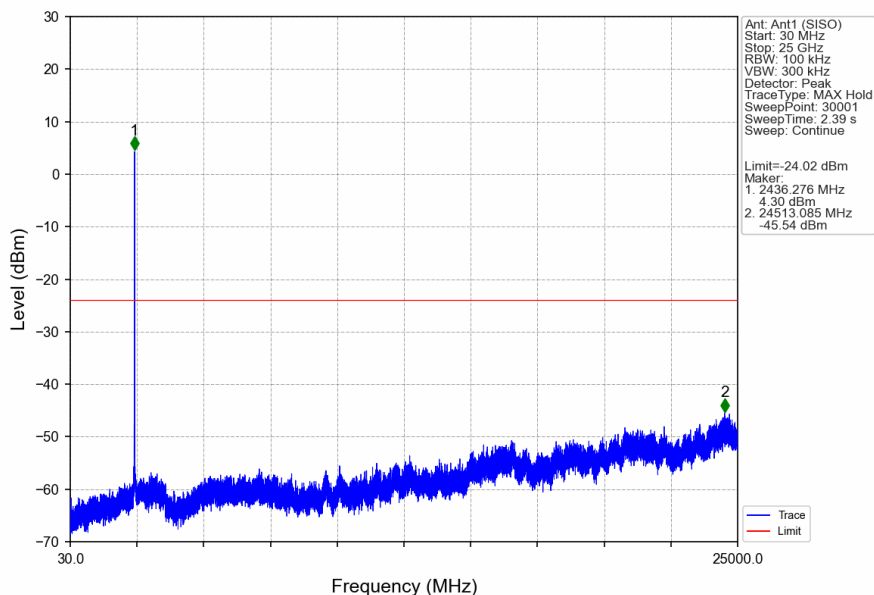
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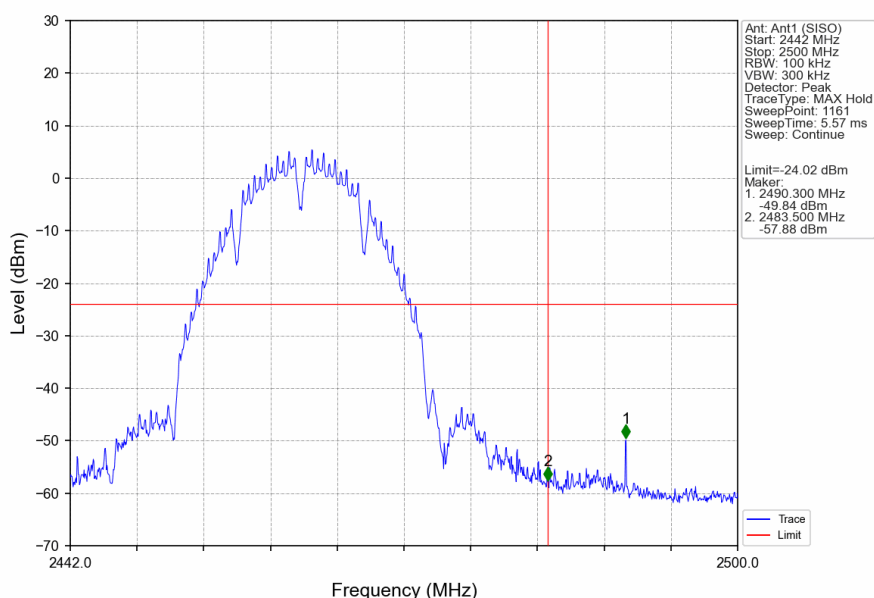
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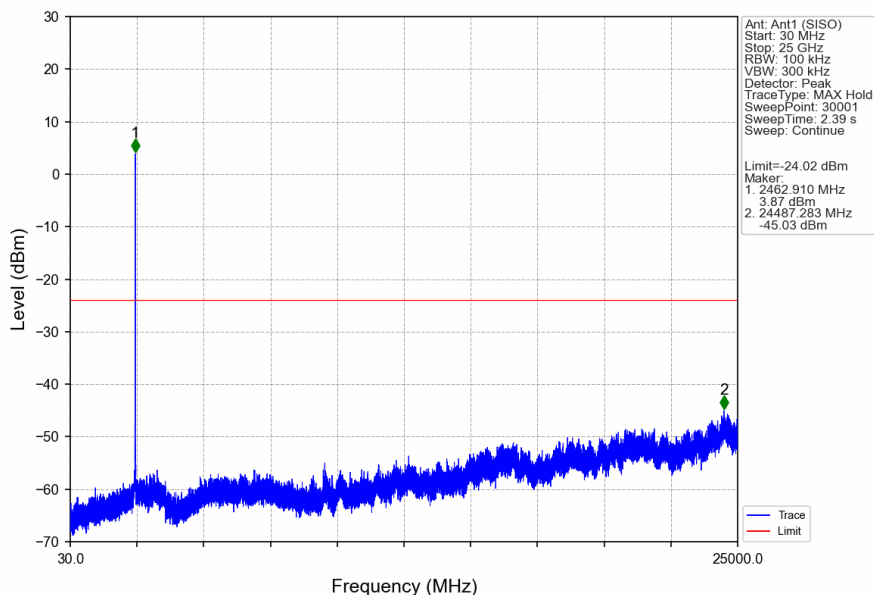
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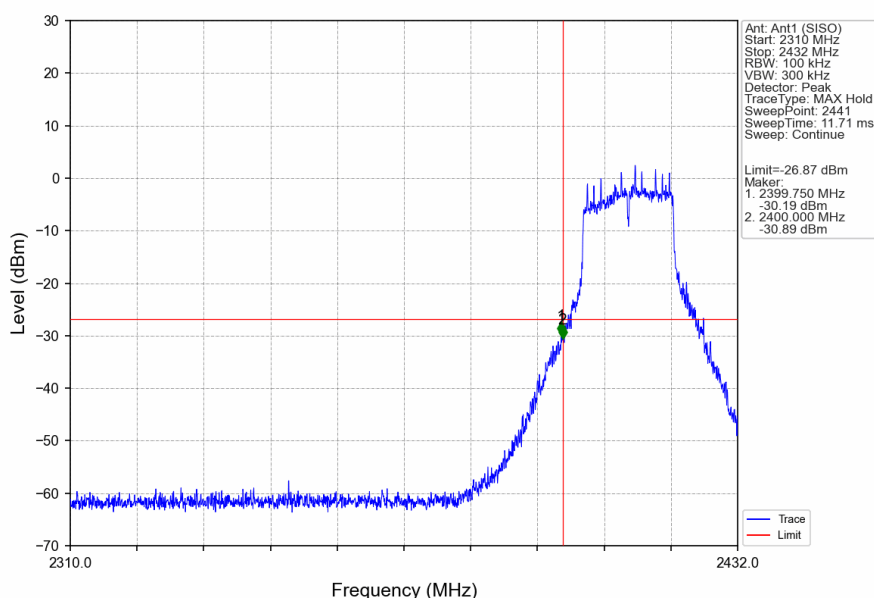
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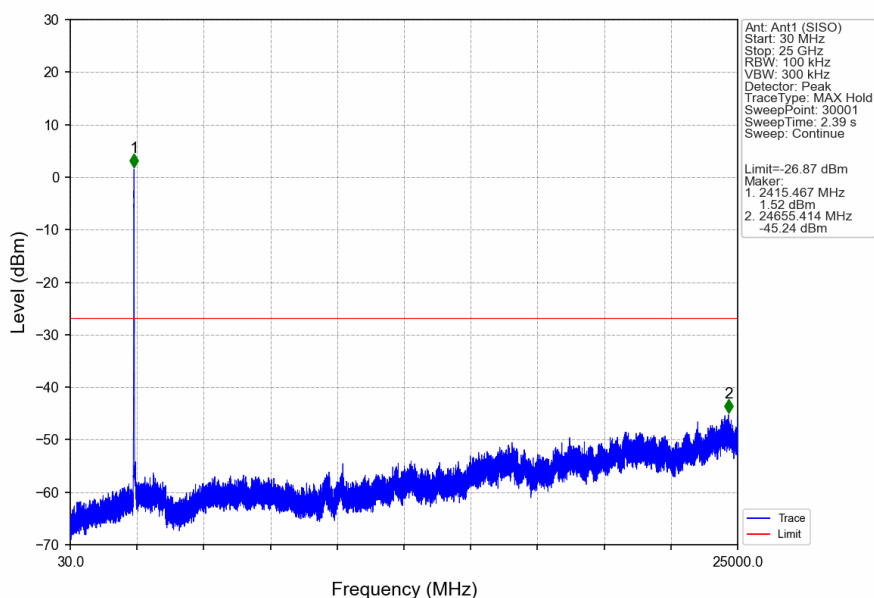
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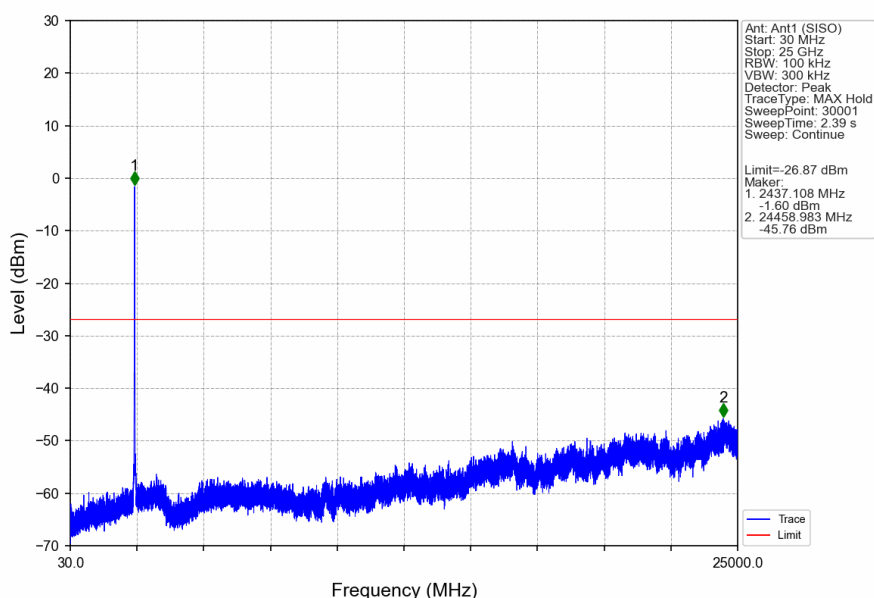
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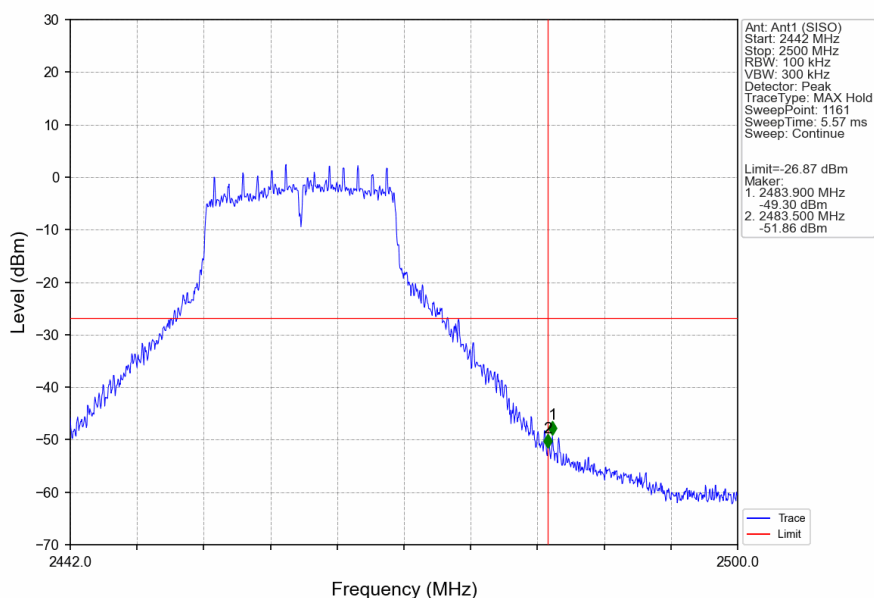
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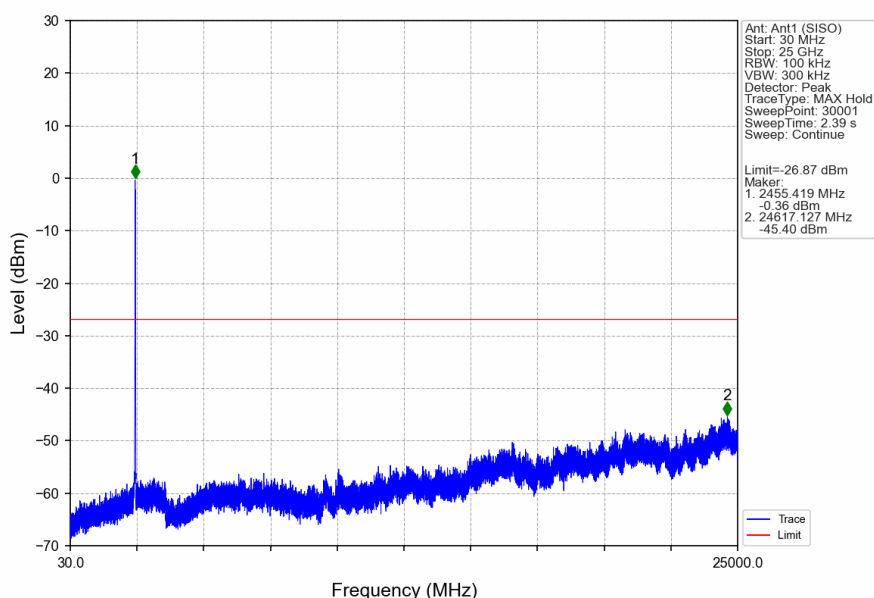
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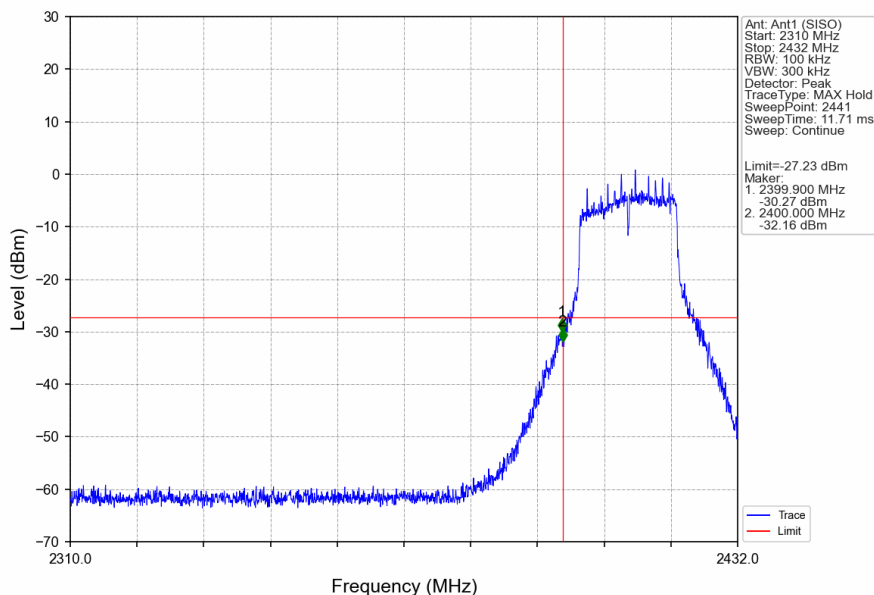
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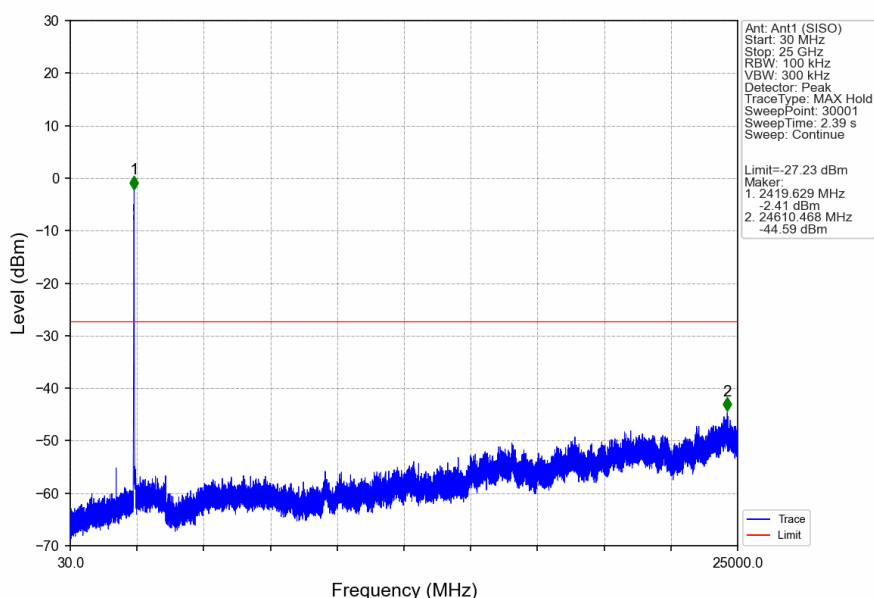
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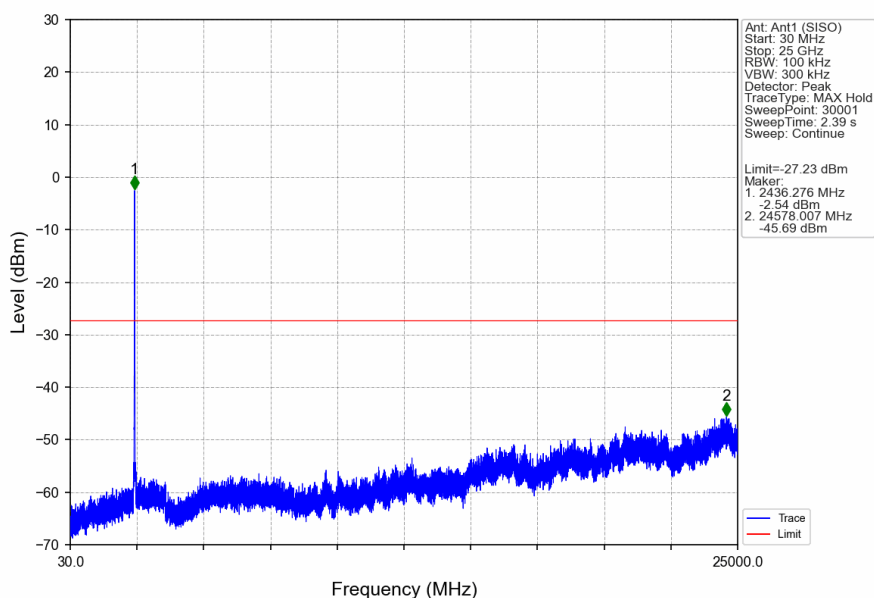
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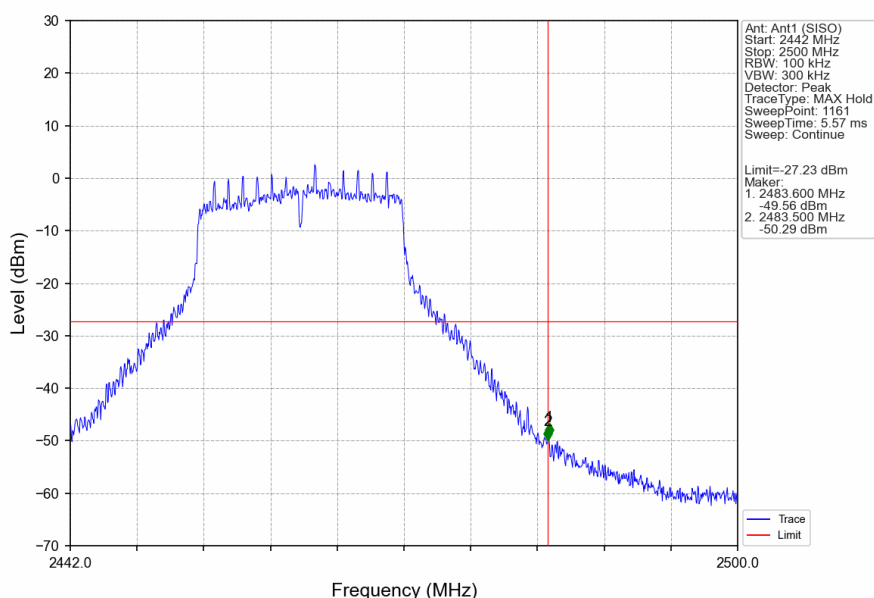
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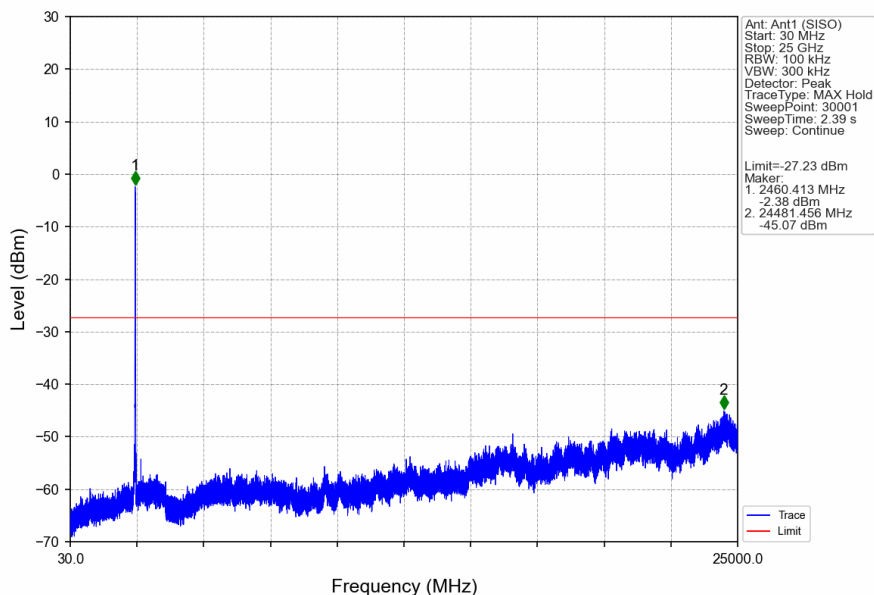
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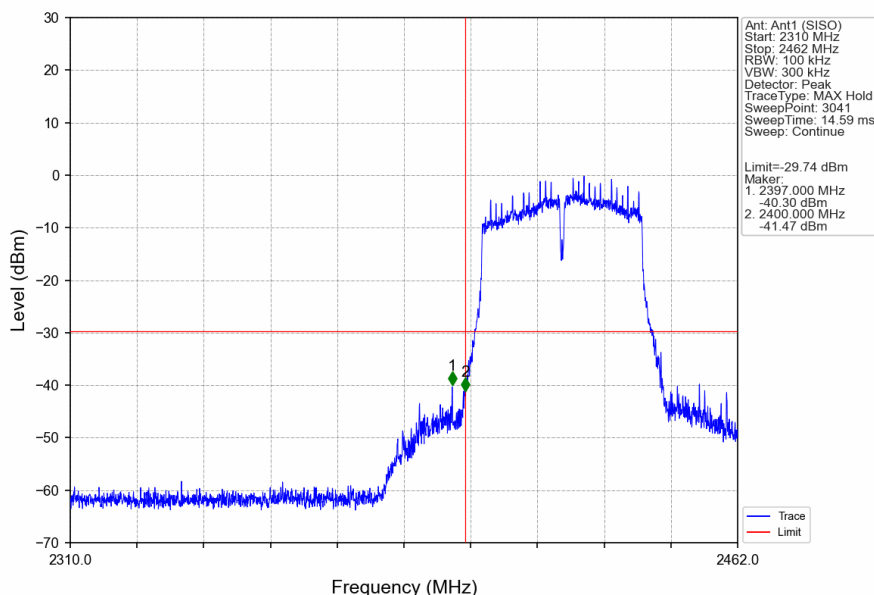
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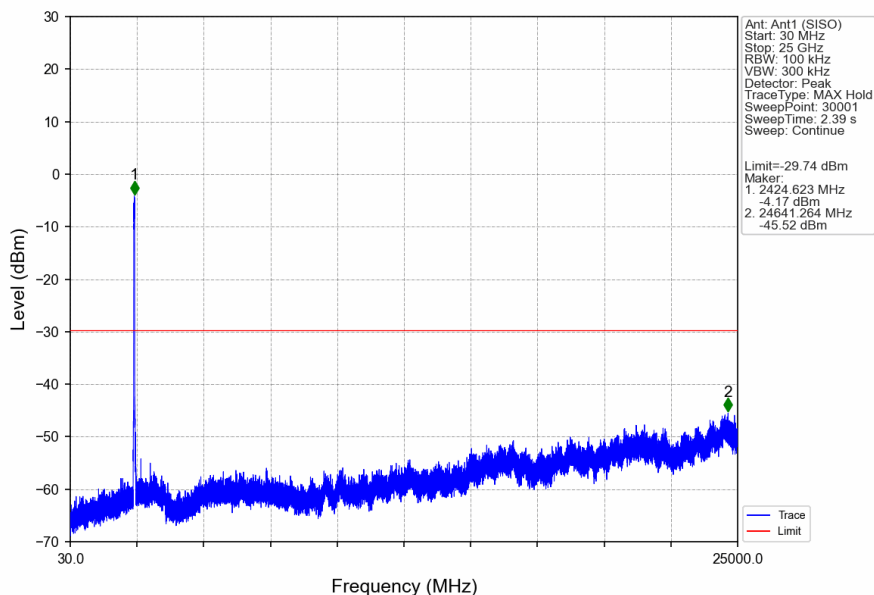
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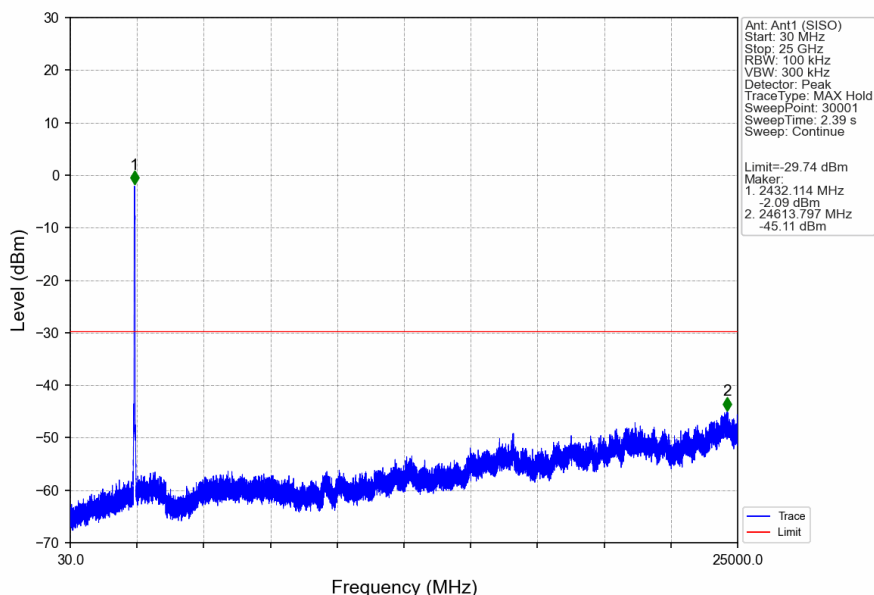
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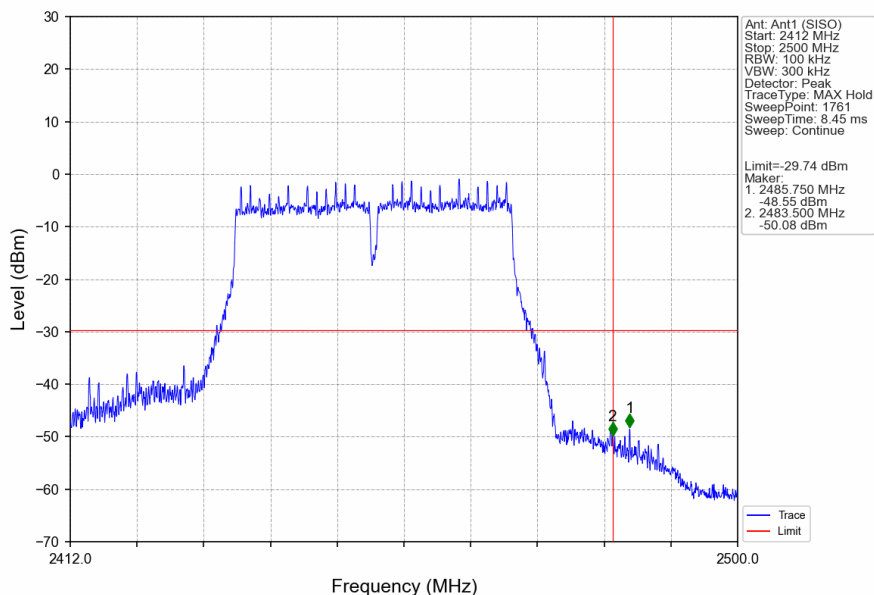
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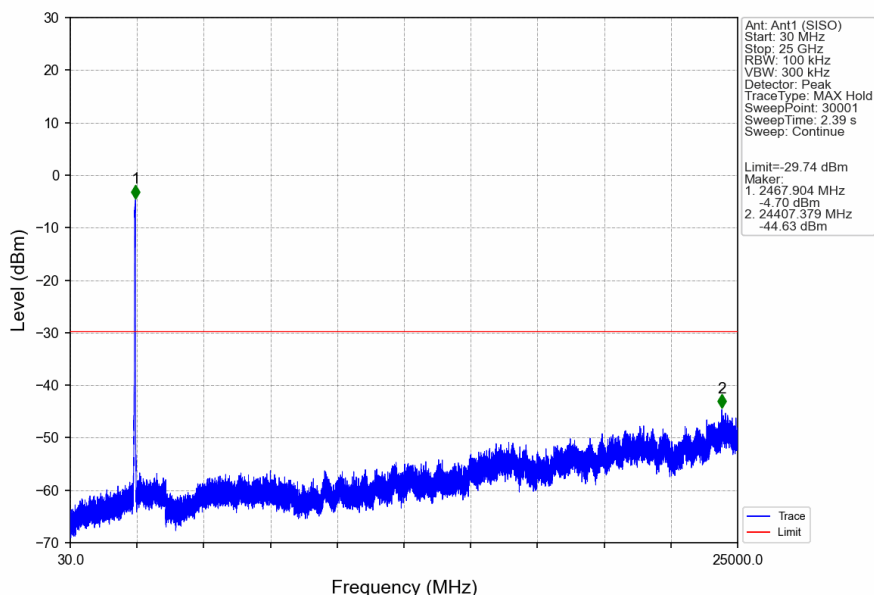
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802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_HCH_2452MHz_Ant1 (SISO)_NTNV



- End of the Report -

