

FCC PART 15.407

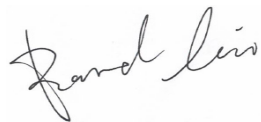
TEST REPORT

For

Neuracle Technology (Changzhou) Co., Ltd.

6-B602 R&D HUB Changzhou Science and Education Town No.18 Changwu RD, Wujin District,
Changzhou City, Jiangsu Province, China

FCC ID: 2BGXN-MTB02

Report Type: Original Report	Product Name: Triggerbox Pro
Report Number:	RSHA240124005-00B
Report Date:	2024-10-18
Reviewed By:	Bard Liu 
Approved By:	Kyle Xu 
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Kunshan) No.248 Chenghu Road, Kunshan, Jiangsu province, China Tel: +86-512-86175000 Fax: +86-512-88934268 www.baclcorp.com.cn

Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Kunshan). This report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, or any agency of the U.S.Government.

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REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	RSHA240124005-00B	R1 V1	2024-10-18	Initial Release

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:	Neuracle Technology (Changzhou) Co., Ltd.				
Product Name:	Triggerbox Pro				
Tested Model:	MTB1				
Power Supply:	DC 5V				
RF Function:	5G Wi-Fi				
Operating Frequency	5G Wi-Fi B1: 5150-5250 MHz, B2: 5250-5350 MHz, B3: 5470-5725 MHz, B4: 5725-5850 MHz				
Maximum Average Output Power	Mode:	5G Wi-Fi B1:	5G Wi-Fi B2:	5G Wi-Fi B3:	5G Wi-Fi B4:
	802.11a:	12.49dBm	12.43 dBm	11.39 dBm	11.59 dBm
	802.11n-HT20:	12.69 dBm	12.49 dBm	11.27 dBm	11.72 dBm
	802.11n-HT40:	12.67dBm	12.34 dBm	11.27 dBm	11.24 dBm
Channel Number	5G Wi-Fi B1: 6, B2: 6, B3: 16, B4: 7				
Channel Separation	5G Wi-Fi: a/n20: 20 MHz, n40: 40 MHz				
Modulation Type	OFDM				
Antenna Type	Rod antenna				
★Maximum Antenna Gain	2.7 dBi;				

Note: The maximum antenna gain was provided by the applicant.

All measurement and test data in this report was gathered from production sample serial number: RSHA240124005-1 (Assigned by the BACL (Kunshan). The EUT supplied by the applicant was received on 2024-01-24.)

Objective

This type approval report is prepared for *Neuracle Technology (Changzhou) Co., Ltd.* in accordance with Part 2-Subpart J, Part 15-Subparts A and E of the Federal Communication Commissions' rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart E, section 15.203, 15.205, 15.207, 15.209 and 15.407 rules.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

All emissions measurement was performed and Bay Area Compliance Laboratories Corp. (Kunshan).

Measurement Uncertainty

Item		Uncertainty
AC Power Lines Conducted Emissions		3.19 dB
RF conducted test with spectrum		0.9dB
RF Output Power with Power meter		0.5dB
Radiated emission	9 kHz~150 kHz	3.8dB
	150 kHz~30 MHz	3.4dB
	30MHz~1GHz	6.11dB
	1GHz~6GHz	4.45dB
	6GHz~18GHz	5.23dB
	18GHz~40GHz	5.65dB
Occupied Bandwidth		0.5kHz
Temperature		1.0°C
Humidity		6%

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the No.248 Chenghu Road, Kunshan, Jiangsu Province, China.

Bay Area Compliance Laboratories Corp. (Kunshan) is accredited in accordance with ISO/IEC 17025:2017 by NVLAP (Lab code: 600338-0), and the lab has been recognized as the FCC accredited lab under the KDB 974614 D01, the FCC Designation No. : CN5055.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The EUT was configured for testing in an engineering mode which was provided by the manufacturer.

For **5150~5250 MHz** band, test channel list is as below,

802.11a/n20 mode Channel 36, 40, 48 were tested.

802.11n40 mode Channel 38, 46 were tested.

Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220
38	5190	46	5230
40	5200	48	5240
/	/	/	/

For **5250~5350 MHz** band, test channel list is as below,

802.11a/n20 mode Channel 52, 56, 64 were tested.

802.11n40 mode Channel 54, 62 were tested.

Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	60	5300
54	5270	62	5310
56	5280	64	5320
/	/	/	/

For **5470~5725 MHz** band, test channel list is as below,

802.11a/n20 mode Channel 100, 116, 140 were tested.

802.11n40 mode Channel 102, 110, 134, were tested.

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	116	5580	132	5660
102	5510	118	5590	134	5670
104	5520	120	5600	136	5680
108	5540	124	5620	140	5700
110	5550	126	5630	/	/
112	5560	128	5640	/	/

For **5725~5850 MHz** band,

802.11a/n20 mode Channel 149, 157, 165 were tested.

802.11n40 mode Channel 151, 159 were tested.

Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	161	5805
151	5755	165	5825
153	5765	/	/
157	5785	/	/
159	5795	/	/

EUT Exercise Software

RF test tool: QRCT 4

The worst case was performed under:

U-NII	Mode	Data rate	★Power Level		
			Low Channel	Middle Channel	High Channel
5150~5250MHz	802.11a	6Mbps	11	15	15
	802.11n-HT20	MCS0	9	15	15
	802.11n-HT40	MCS0	7	/	15

U-NII	Mode	Data rate	★Power Level		
			Low Channel	Middle Channel	High Channel
5250~5350MHz	802.11a	6Mbps	15	15	11
	802.11n-HT20	MCS0	15	15	11
	802.11n-HT40	MCS0	15	/	8

U-NII	Mode	Data rate	★Power Level		
			Low Channel	Middle Channel	High Channel
5470~5725MHz	802.11a	6Mbps	14	14	14
	802.11n-HT20	MCS0	14	14	14
	802.11n-HT40	MCS0	11	14	14

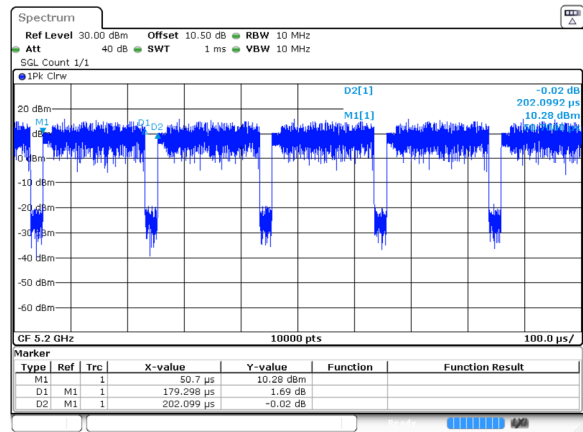
U-NII	Mode	Data rate	★Power Level		
			Low Channel	Middle Channel	High Channel
5725~5850MHz	802.11a	6Mbps	14	14	14
	802.11n-HT20	MCS0	14	14	14
	802.11n-HT40	MCS0	14	/	14

Note: The power level was declared by the applicant.

Duty Cycle

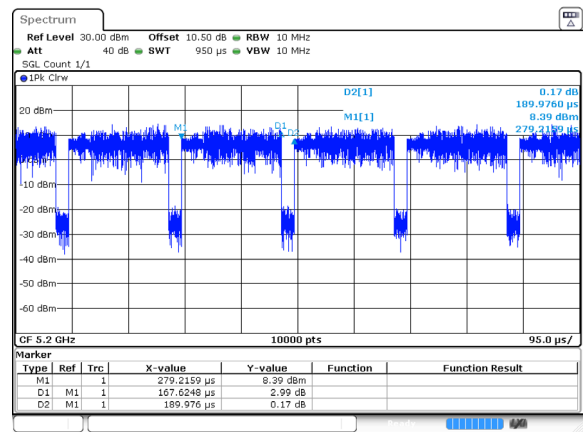
5150MHz-5250MHz Band:

802.11a mode



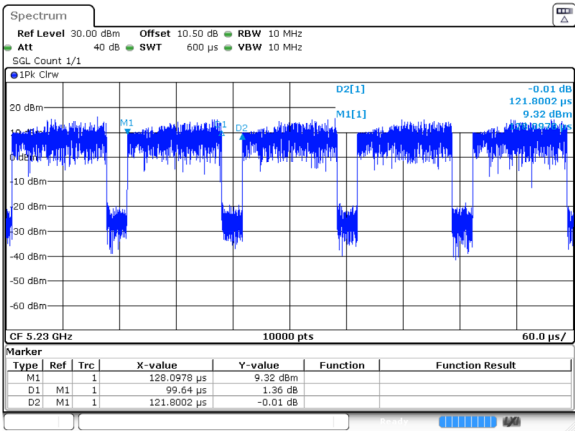
ProjectNo: RSHA240124005 Tester: Bard Liu
Date: 2 MAY 2024 10:31:42

802.11n-HT20 mode



ProjectNo: RSHA240124005 Tester: Bard Liu
Date: 2 MAY 2024 10:41:23

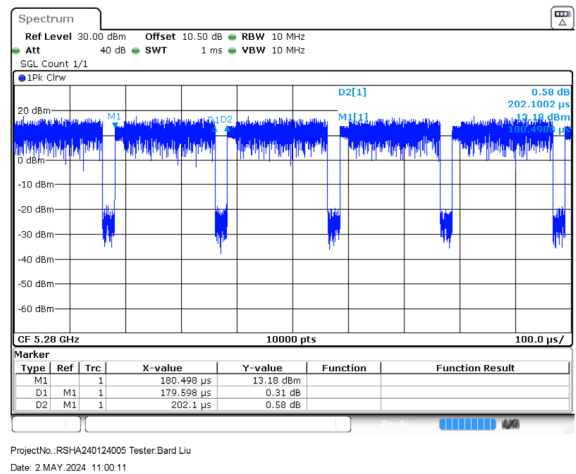
802.11n-HT40 mode



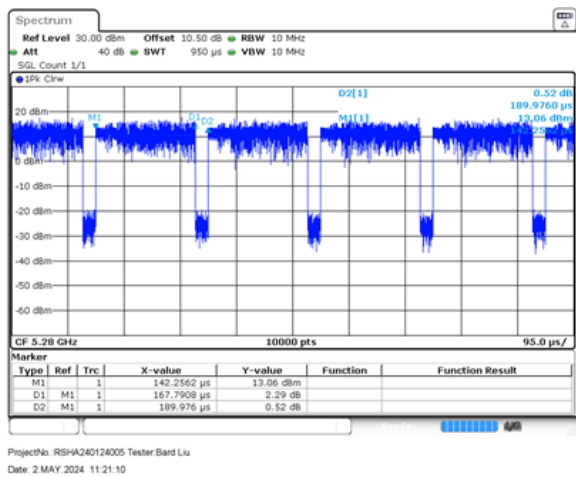
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5250MHz-5350MHz Band:

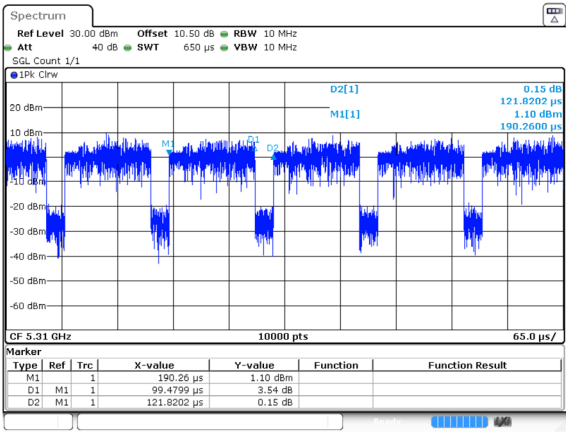
802.11a mode



802.11n-HT20 mode



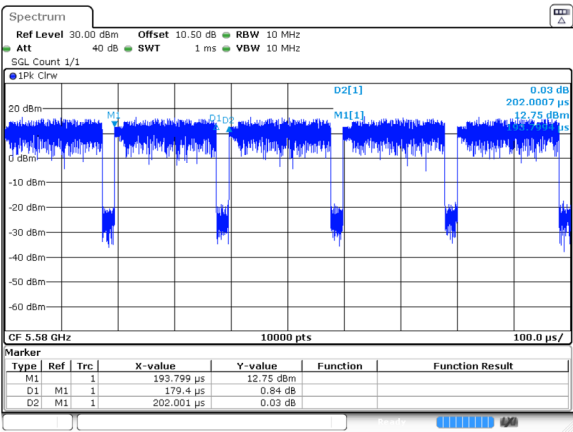
802.11n-HT40 mode



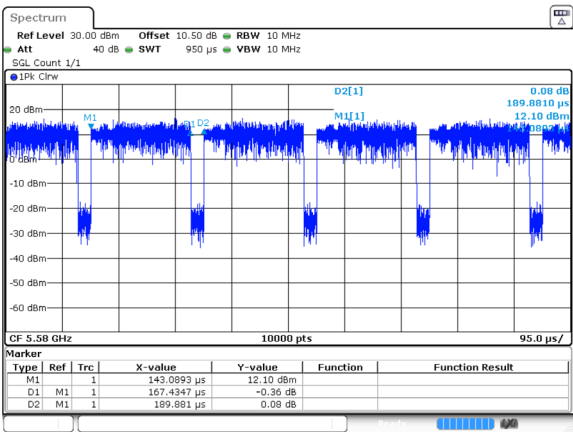
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Date: 2 MAY 2024 13:18:02

5470MHz-5725MHz Band:

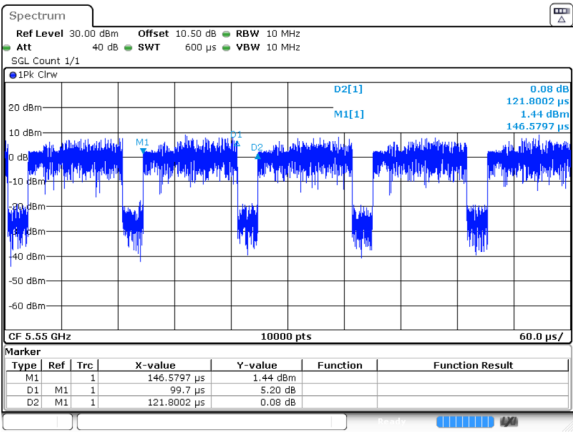
802.11a mode



802.11n-HT20 mode



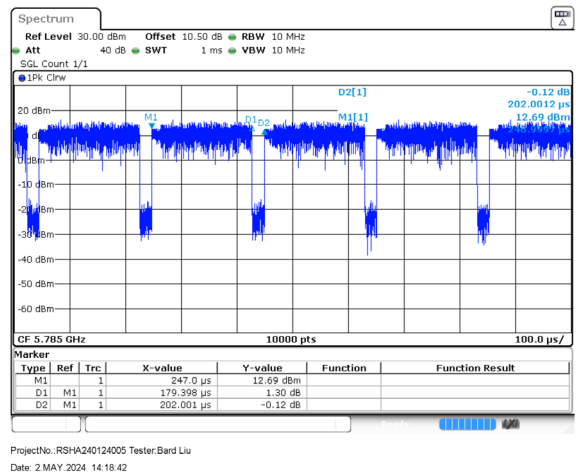
802.11n-HT40 mode



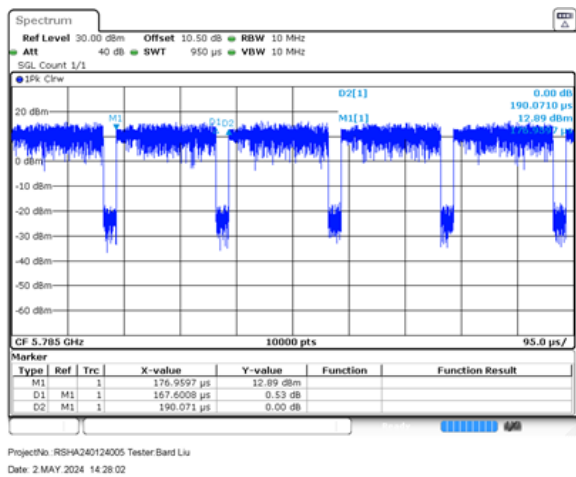
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Date: 2 MAY 2024 14:03:12

5725MHz-5850MHz Band:

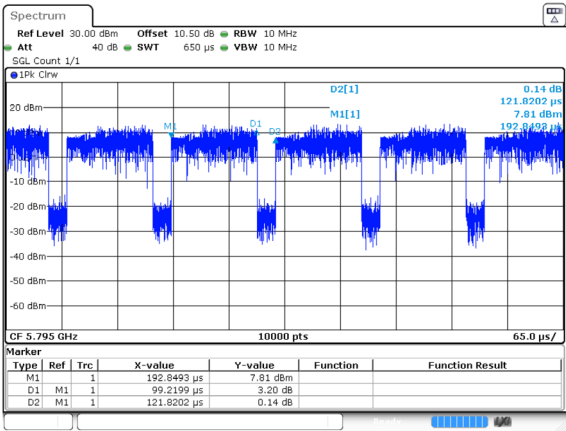
802.11a mode



802.11n-HT20 mode



802.11n-HT40 mode



ProjectNo.:RSHA240124005 Tester:Bard Liu
Date: 2 MAY 2024 14:38:51

5.2G

Mode	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	Duty Cycle Factor (dB)	1/Ton (Hz)
a_5200MHz_Chain 0	0.179	0.202	88.61	0.52	5587
n20_5200MHz_Chain 0	0.168	0.190	88.42	0.53	5988
n40_5230MHz_Chain 0	0.100	0.122	81.97	0.86	10000

5.3G

Mode	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	Duty Cycle Factor (dB)	1/Ton (Hz)
a_5280MHz_Chain 0	0.180	0.202	89.11	0.50	5556
n20_5280MHz_Chain 0	0.168	0.190	88.42	0.53	5952
n40_5310MHz_Chain 0	0.099	0.122	81.15	0.91	10101

5.6G

Mode	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	Duty Cycle Factor (dB)	1/Ton (Hz)
a_5580MHz_Chain 0	0.179	0.202	88.61	0.52	5587
n20_5580MHz_Chain 0	0.167	0.190	87.89	0.56	5988
n40_5550MHz_Chain 0	0.100	0.122	81.97	0.86	10000

5.8G

Mode	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	Duty Cycle Factor (dB)	1/Ton (Hz)
a_5785MHz_Chain 0	0.179	0.202	88.61	0.52	5587
n20_5785MHz_Chain 0	0.168	0.190	88.42	0.53	5952
n40_5795MHz_Chain 0	0.099	0.122	81.15	0.91	10101

Equipment Modifications

No modification was made to the EUT.

Support Equipment List and Details

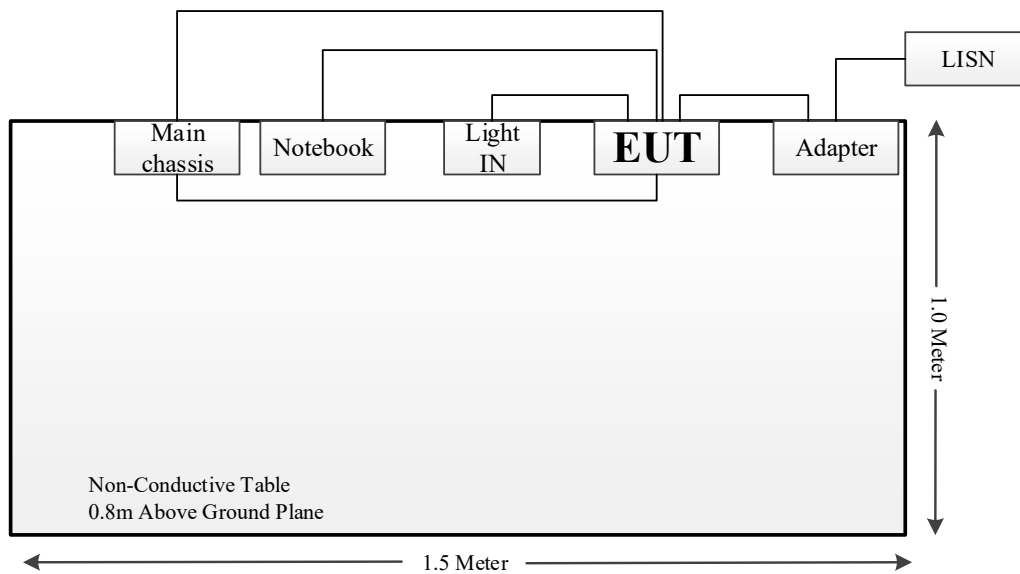
Manufacturer	Description	Model	Serial Number
Lenovo	Notebook	Thinkpad T470S	R9-0FYHD4 15/05
DELL	Main chassis	I7-3770/8G/240G	37742859757

External I/O Cable

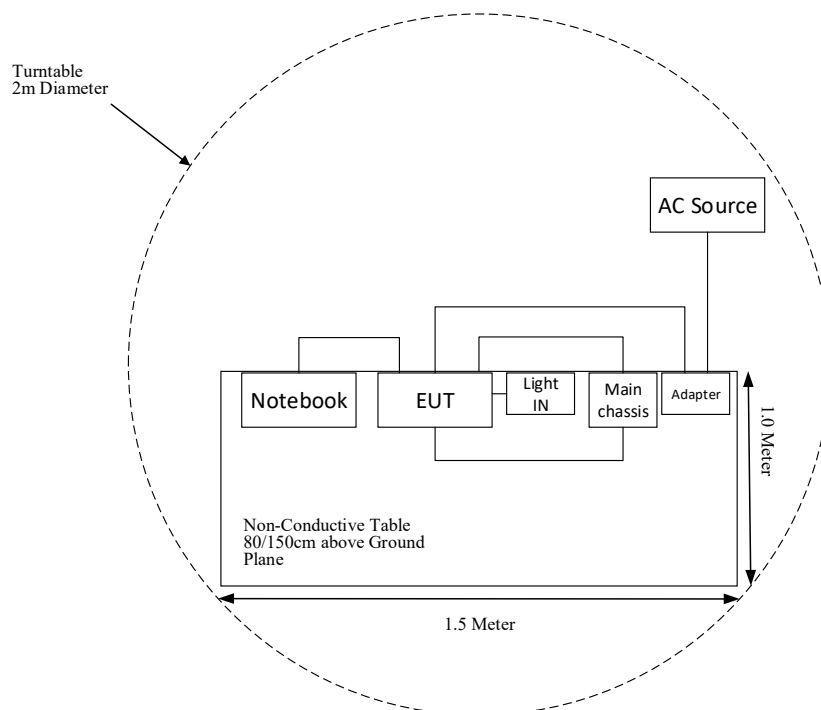
Cable Description	Length (m)	From Port	To
Power Cable	1.0	LISN	Adapter
Power Cable	0.2	Light IN	EUT
USB cable 1	1.0	Notebook	EUT
USB Cable 2	1.5	Adapter	EUT
DB 25 Pin cable	1.0	Main chassis	EUT
Audio cable	1.5	Main chassis	EUT

Block Diagram of Test Setup

For Conducted Emissions:



For Radiated Emissions (Below 1GHz & Above 1 GHz):



TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test (Chamber #1)					
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2024-04-23	2025-04-22
Sunol Sciences	Hybrid Antenna	JB3	A090314-1	2023-11-11	2024-11-10
ETS-LINDGREN	Loop Antenna	6512	108100	2023-11-09	2024-11-08
Sonoma Instrument	Amplifier	310N	171205	2024-04-23	2025-04-22
Rohde & Schwarz	Auto test Software	EMC32	100361	N/A	N/A
MICRO-COAX	Coaxial Cable	Cable-8	008	2024-04-25	2025-04-24
MICRO-COAX	Coaxial Cable	Cable-9	009	2024-04-23	2025-04-22
MICRO-COAX	Coaxial Cable	Cable-10	010	2024-04-23	2025-04-22
Narda	6dB Attenuator	773-6	10690812-2-1	2023-11-11	2024-11-10
Radiated Emission Test (Chamber #2)					
Rohde & Schwarz	EMI Test Receiver	ESU40	100207/040	2024-04-25	2025-04-24
ETS-LINDGREN	Horn Antenna	3115	9311-4159	2023-12-02	2024-12-01
ETS-LINDGREN	Horn Antenna	3116	84159	2023-12-07	2024-12-06
A.H.Systems,inc	Amplifier	PAM-0118P	512	2024-04-25	2025-04-24
EM Electronics Corporation	Amplifier	EM18G40G	060726	2024-04-23	2025-04-22
MICRO-TRONICS	Band Reject Filter	BRC50703	G094	2024-04-23	2025-04-22
MICRO-TRONICS	Band Reject Filter	BRC50704	84	2024-04-23	2025-04-22
MICRO-TRONICS	Band Reject Filter	BRC50705	G085	2024-04-23	2025-04-22
Narda	Attenuator	10dB	010	2024-04-23	2025-04-22
Narda	Attenuator	6dB	006	2024-04-23	2025-04-22
Rohde & Schwarz	Auto test Software	EMC32	100361	N/A	N/A
MICRO-COAX	Coaxial Cable	Cable-6	006	2024-04-23	2025-04-22
MICRO-COAX	Coaxial Cable	Cable-11	011	2024-04-25	2025-04-24
MICRO-COAX	Coaxial Cable	Cable-12	012	2024-04-25	2025-04-24
RF Conducted Test					
Rohde & Schwarz	Signal Analyzer	FSV40-N	103298	2024-04-24	2025-04-23
Rohde & Schwarz	Spectrum Analyzer	FSU26	200103	2024-04-24	2025-04-23
Anritsu	Power Sensor	MA24418A	12621	2024-04-23	2025-04-22
N/A	Attenuator	10 dB	N/A	2024-04-23	2025-04-22
XHFDZ	RG316 Coaxial Cable	SMA-316	XHF-1175	Each time	N/A
Conducted Emission Test					
Rohde & Schwarz	EMI Test Receiver	ESR	101746	2024-04-23	2025-04-22
Rohde & Schwarz	LISN	ENV216	101115	2024-04-23	2025-04-22
Audix	Test Software	e3	V9	N/A	N/A
Rohde & Schwarz	Pulse Limiter	ESH3-Z2	0357.8810.54	2024-04-23	2025-04-22
MICRO-COAX	Coaxial Cable	Cable-15	015	2024-04-23	2025-04-22

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

SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.203	Antenna Requirement	Compliant
§15.207 & §15.407(b) (9)	AC Power Line Conducted Emissions	Compliant
§ 15.205 & §15.209 & §15.407(b)	Undesirable Emission & Restricted Bands	Compliant
§§15.407(a) & §15.407(e)	Emission Bandwidth	Compliant
§15.407(a)	Conducted Transmitter Output Power	Compliant
§15.407(a)	Power Spectral Density	Compliant
§ 1.1307 (b) (3) & §2.1091	MAXIMUM PERMISSIBLE EXPOSURE (MPE)	Compliant

FCC §15.203 – ANTENNA REQUIREMENT

Applicable Standard

According to § 15.203, 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 user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

- a. Antenna must be permanently attached to the unit.
- b. Antenna must use a unique type of connector to attach to the EUT.
- c. Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.407, if the transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Antenna Connector Construction

Antenna use a unique type of connector to attach to the EUT. fulfill the requirement of this section. Please refer to the EUT photos.

Antenna Type	Frequency Range	Max. Antenna Gain	Input impedance
Rod	5150~5250 MHz	2.7 dBi	50Ω
	5250~5350 MHz	2.7 dBi	50Ω
	5470~5725 MHz	2.7 dBi	50Ω
	5725~5850 MHz	2.7 dBi	50Ω

Result: Compliant.

§1.1307 (b) (3) & §2.1091 –MAXIMUM PERMISSIBLE EXPOSURE (MPE)**Applicable Standard**

According to subpart 1.1310, 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz; * = Plane-wave equivalent power density

Calculated Formulary:

Predication of MPE limit at a given distance

$S = PG/4 \pi R^2$ = power density (in appropriate units, e.g. mW/cm²);

P = power input to the antenna (in appropriate units, e.g., mW);

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

Calculated Data:

Mode	Frequency Range (MHz)	Antenna Gain		Tune-up Output Power [*]		Evaluation Distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
		(dBi)	(numeric)	(dBm)	(mW)			
SRD	433.42	/	/	-26.0	0.003	20	<0.0001	0.3
5G Wi-Fi	5150-5250	2.7	1.86	13.0	19.95	20	0.0074	1.0
	5250-5350	2.7	1.86	13.0	19.95	20	0.0074	1.0
	5470-5725	2.7	1.86	12.0	15.85	20	0.0059	1.0
	5725-5850	2.7	1.86	12.0	15.85	20	0.0059	1.0

Note:

1. For the above tune up power were declared by the manufacturer.
2. The SRD EIRP = 68.93 dBμV/m -95.2 = -26.27dBm.
3. The worst condition of transmit simultaneously (WiFi&SRD) is as below:

$$\sum_i \frac{S_i}{S_{Limit,i}} = 0.0003 + 0.0074 = 0.0077 < 1.0$$

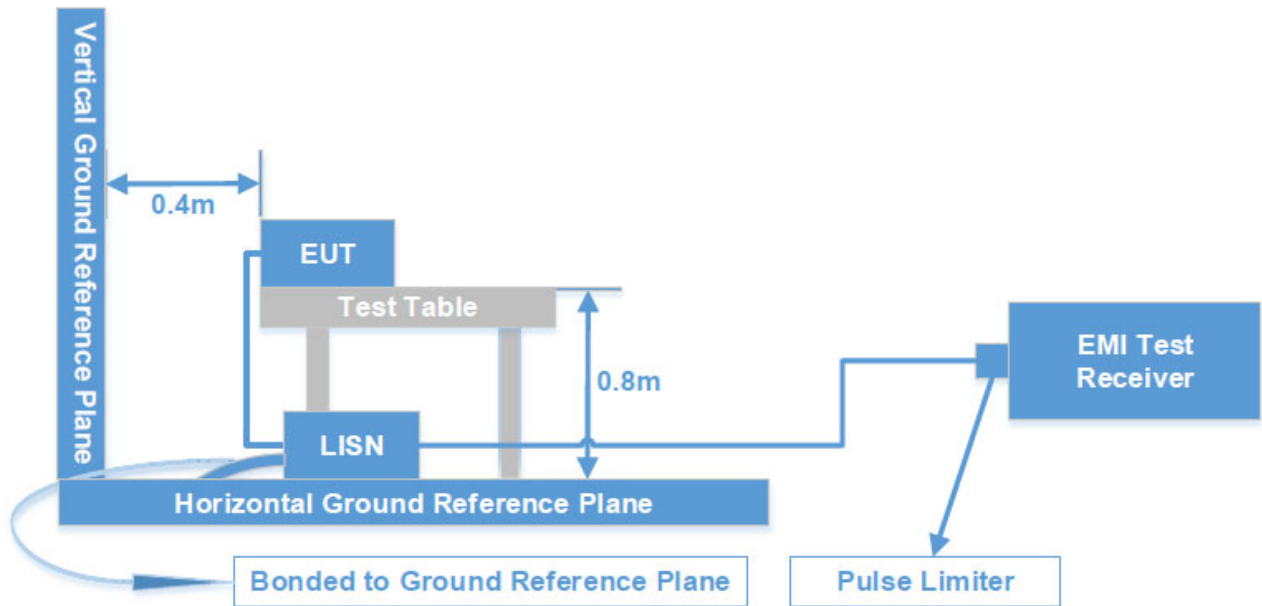
Conclusion: The device meets MPE at distance 20cm.

FCC §15.407 (b) (9) §15.207 (a) – AC POWER LINE CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207(a), §15.407(b) (9)

Test System Setup



The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	RBW	VBW
150 kHz - 30 MHz	9 kHz	30 kHz

Test Procedure

During the conducted emission test, the EUT was connected to the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

If the maximum peak value of the emissions is below the average limit, the QP value and average value measurement will not need to be performed and only record the maximum peak measured value to meet the requirements.

Level & Over Limit Calculation

The Level is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation from the Meter Reading. The basic equation is as follows:

$$\text{Factor (dB)} = \text{LISN VDF (dB)} + \text{Cable Loss (dB)} + \text{Transient Limiter Attenuation (dB)}$$
$$\text{Level (dB}\mu\text{V)} = \text{Read level (dB}\mu\text{V)} + \text{Factor (dB)}$$

The “**Over Limit**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit of 7 dB means the emission is 7 dB above the limit. The equation for Over Limit calculation is as follows:

$$\text{Over Limit (dB)} = \text{Level (dB}\mu\text{V)} - \text{Limit (dB}\mu\text{V)}$$

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.207.

Test Data: See Appendix

§15.205 & §15.209 & §15.407(B) – UNDESIRABLE EMISSION & RESTRICTED BANDS

Applicable Standard

FCC §15.407 (b); §15.209; §15.205;

(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:

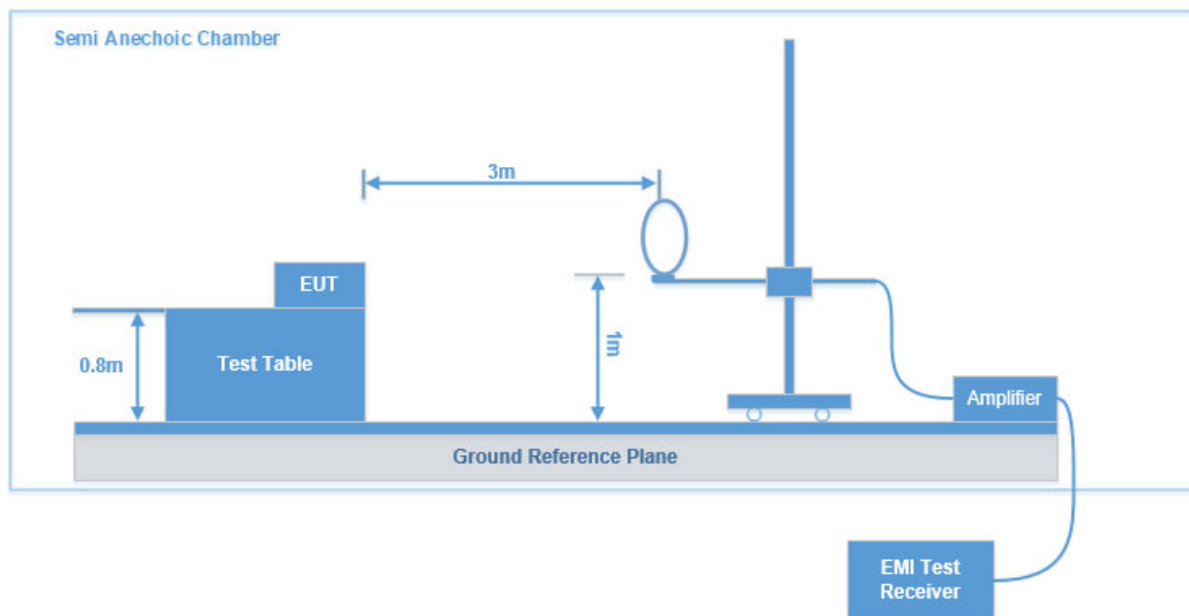
(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

As per FCC §15.35(d): Unless otherwise specified, on any frequency or frequencies above 1000MHz, the radiated emission limits are based on the use of measurement instrumentation employing an average detector function. Unless otherwise specified, measurements above 1000MHz shall be performed using a minimum resolution bandwidth of 1MHz.

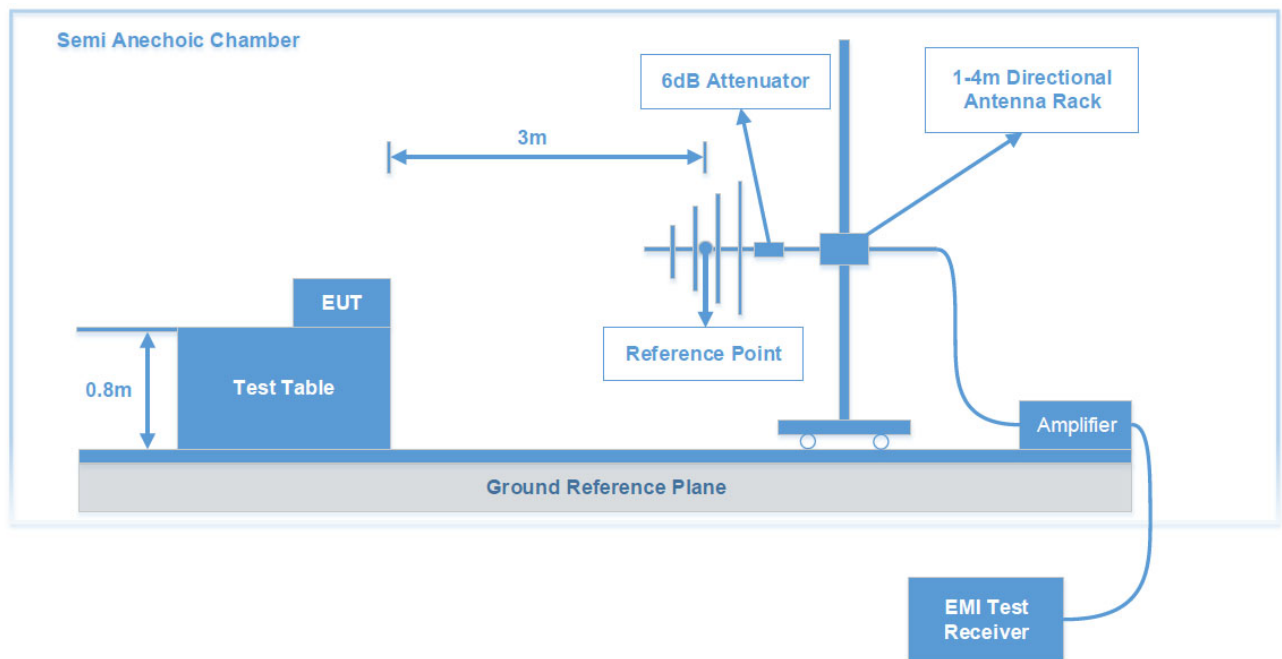
According to C63.10, emission shall be computed as: $E [dB\mu V/m] = EIRP [dBm] + 95.2$, for $d = 3$ meters.

Test System Setup

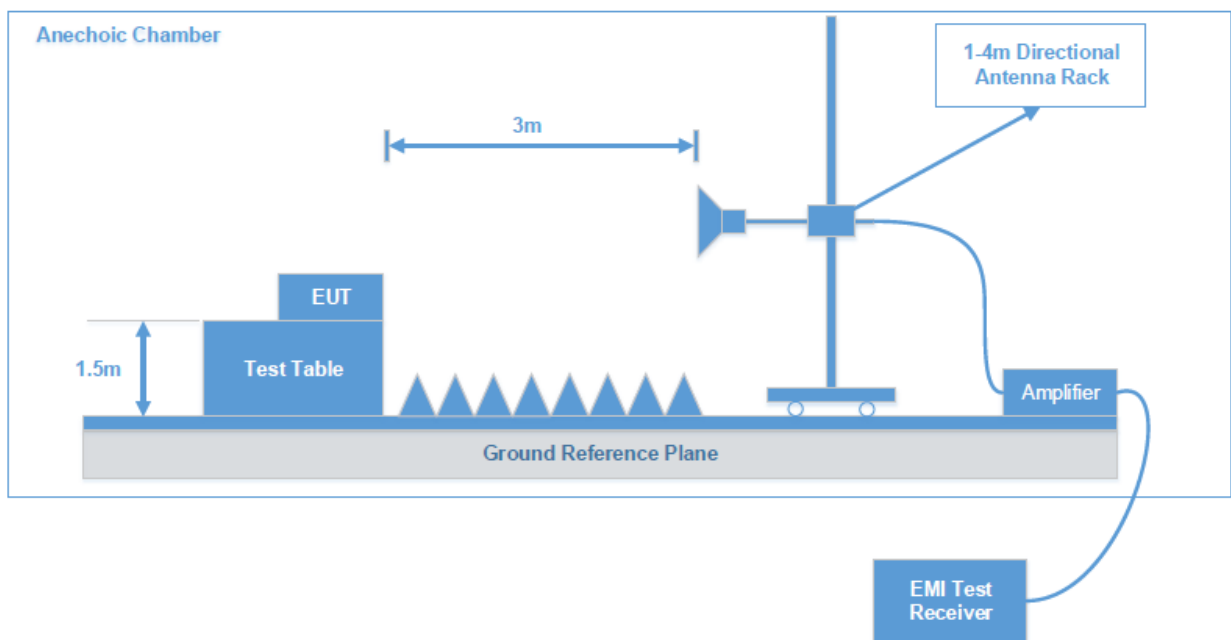
9 kHz–30 MHz:



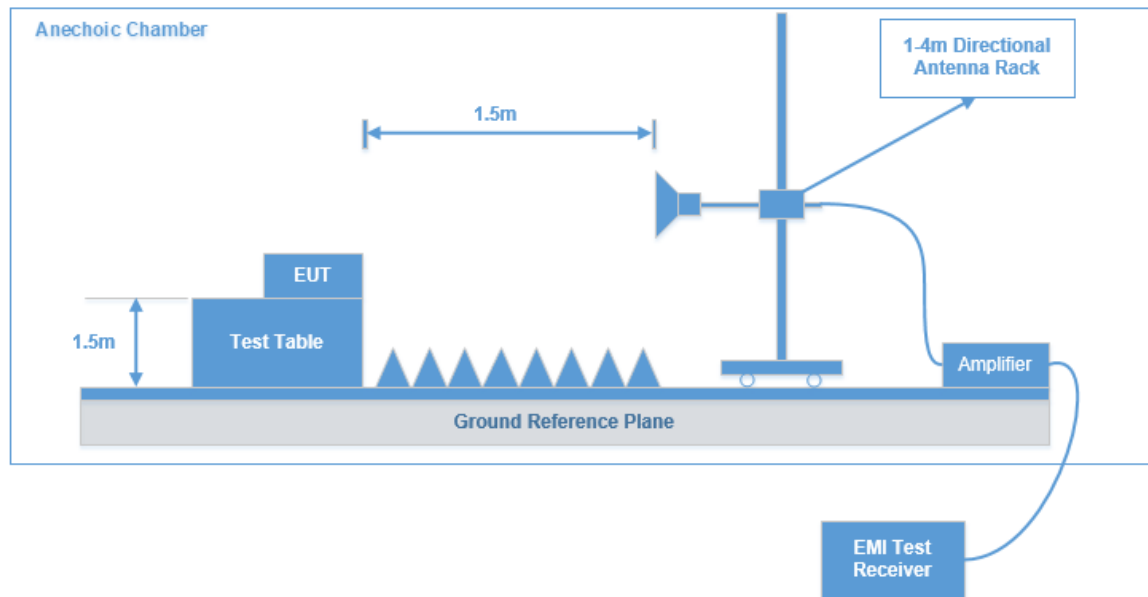
30MHz-1GHz:



1 GHz-18GHz:



18-40GHz:



The radiated emission tests were performed in the 3 meters test site for below 18GHz and 1.5m for 18-40 GHz, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209 and FCC 15.407 limits. The limit at 1.5m for 18-40 GHz is 80dB μ V/m (Peak) and 60dB μ V/m (Average)

The radiated emission tests were performed in the 3 meters test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209 and FCC 15.407 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9 kHz to 40 GHz.

During the radiated emission test, the EMI test receiver Setup was set with the following configurations:

Frequency Range	RBW	VBW	IF B/W	Measurement
9 kHz - 150 kHz	200 Hz	1 kHz	200 Hz	QP/Average
150 kHz - 30 MHz	9 kHz	30 kHz	9 kHz	QP/ Average
30 MHz - 1000 MHz	100 kHz	300 kHz	/	Peak
	/	/	120 kHz	QP
Above 1GHz	1MHz	3 MHz	/	Peak
	1MHz	3 MHz	/	Average

For 9 kHz-30MHz test, the lowest height of the magnetic antenna shall be 1 m above the ground and three antenna orientations (parallel, perpendicular, and ground-parallel) shall be measured.

Test Procedure

During the radiated emission test, the adapter was connected to AC floor outlet. Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

If the measured peak level of the emissions that the measuring receiver reading level plus corrected factor is at least 6 dB below the QP emission limit, there's no need to record the measured QP level of the emissions in the report.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

Corrected Amplitude (dB μ V/m) = Meter Reading (dB μ V) + Corrected factor (dB/m)

Corrected factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - Amplifier Gain (dB)

The "Margin" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin (dB) = Limit (dB μ V/m) – Corrected Amplitude (dB μ V/m)

Test Data: See Appendix

FCC §15.407(a) & §15.407(e)–EMISSION BANDWIDTH

Applicable Standard

The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full reference bandwidth.

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Test Procedure

1. Emission Bandwidth (EBW)

- a) Set RBW = approximately 1% of the emission bandwidth.
- b) Set the VBW > RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

2. Minimum Emission Bandwidth for the band 5.725-5.85 GHz

Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.725-5.85 GHz. The following procedure shall be used for measuring this bandwidth:

- a) Set RBW = 100 kHz.
- b) Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Sweep = auto couple.
- f) Allow the trace to stabilize.
- g) 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.

3. Occupied bandwidth

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:

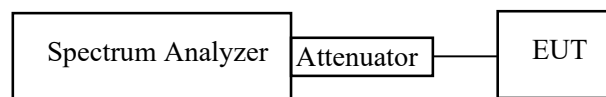
- a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.
- c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $[10 \log (\text{OBW/RBW})]$ below the reference level. Specific guidance is given in 4.1.5.2.
- d) Step a) through step c) might require iteration to adjust within the specified range.

e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.

f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.

g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.

h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).



FCC §15.407(a) – CONDUCTED TRANSMITTER OUTPUT POWER

Applicable Standard

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

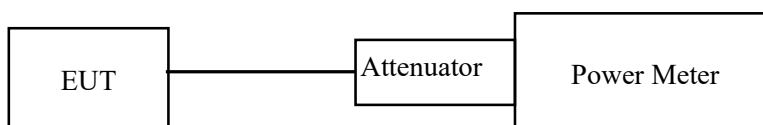
For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Test Procedure

According to C63.10:2013 clause 12.3.3.1 Measurement using an RF average power meter.

1. Place the EUT on a bench and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to one test equipment.
3. Add a correction factor to the display.



FCC §15.407(a) - POWER SPECTRAL DENSITY

Applicable Standard

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Test Procedure

The measurements are based on C63.10:2013 Clause 12.5: method SA-2 used

EUT PHOTOGRAPHS

Please refer to the attachment EXHIBIT A - EUT EXTERNAL PHOTOGRAPHS and EXHIBIT B - EUT INTERNAL PHOTOGRAPHS.

TEST SETUP PHOTOGRAPHS

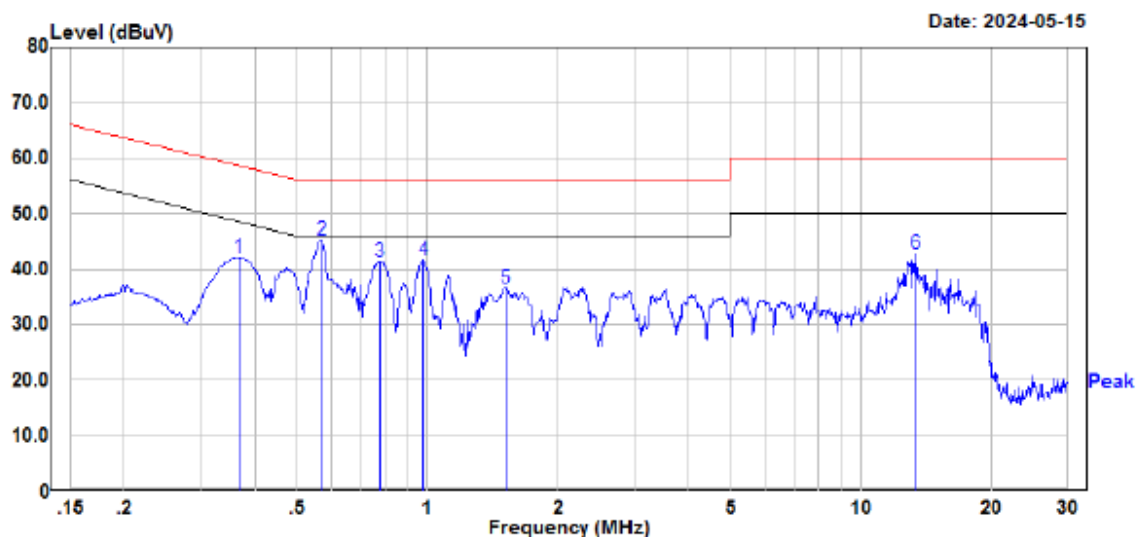
Please refer to the attachment EXHIBIT C - TEST SETUP PHOTOGRAPHS.

APPENDIX - TEST DATA

Environmental Conditions & Test Information

Test Item:	AC power-line conducted emissions limits	UNWANTED EMISSIONS & BAND EDGE EMISSIONS		
		9 kHz - 1GHz	1 GHz - 18 GHz	18 GHz - 40 GHz
Test Date:	2024-05-15	2024-05-08	2024-05-06~2024-05-08	2024-05-06
Temperature:	23.5 °C	21.9 °C	22.1 °C~24.1°C	24.1°C
Relative Humidity:	46 %	61 %	53 %~58 %	53 %
ATM Pressure:	101.6 kPa	101.8 kPa	101.8 kPa ~100.9 kPa	100.9 kPa
Test Result:	Pass	Pass	Pass	Pass
Test Engineer:	Frank Liu	Leah Li	Peter Wang	Peter Wang

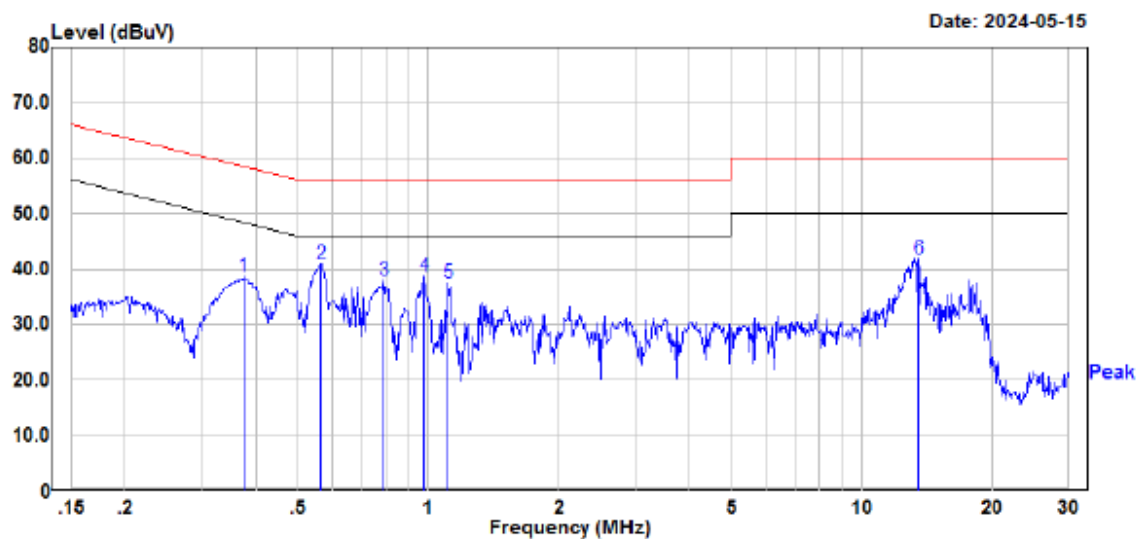
Test Item:	Emission Bandwidth	Conducted Transmitter Output Power	Power Spectral Density	Duty Cycle
Test Date:	2024-05-01 to 2024-05-02	2024-05-01 to 2024-05-02	2024-05-02	2024-05-02
Temperature:	21.3-22.3 °C	21.3-22.3 °C	22.3°C	22.3°C
Relative Humidity:	41-48 %	41-48 %	48 %	48 %
ATM Pressure:	101.0-101.9kPa	101.0-101.9kPa	101.9 kPa	101.9 kPa
Test Result:	Pass	Pass	Pass	/
Test Engineer:	Bard Liu	Bard Liu	Bard Liu	Bard Liu

AC POWER LINE CONDUCTED EMISSIONS*EUT operation mode: Transmitting in 802.11n-HT20 mode high channel of 5150~5250MHz (maximum output power)***AC 120V/60 Hz, Line**

Site : CE
Condition : PART 15.207
: DET:Peak
Project No. : RSHA240124005
Model : MTB1
Phase : L
Voltage : 120V/60Hz
Mode : 5G WIFI
Test Equipment : ENV216,ESR
Temperature : 23.5℃
Humidity : 46%
Atmospheric pressure: 101.6kPa
Test Engineer : Frank Liu

		Read			Limit	Over	
	Freq	Level	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.368	22.08	20.05	42.13	58.55	-16.42	Peak
2	0.570	25.01	20.10	45.11	56.00	-10.89	Peak
3	0.777	21.44	19.97	41.41	56.00	-14.59	Peak
4	0.977	21.82	19.77	41.59	56.00	-14.41	Peak
5	1.515	16.59	20.02	36.61	56.00	-19.39	Peak
6	13.380	23.00	19.87	42.87	60.00	-17.13	Peak

AC 120V/60 Hz, Neutral



Site : CE
Condition : PART 15.207
: DET:Peak
Project No. : RSHA240124005
Model : MTB1
Phase : N
Voltage : 120V/60Hz
Mode : 5G WIFI
Test Equipment : ENV216,ESR
Temperature : 23.5℃
Humidity : 46%
Atmospheric pressure: 101.6kPa
Test Engineer : Frank Liu

		Read			Limit	Over	
	Freq	Level	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.375	18.51	20.06	38.57	58.38	-19.81	Peak
2	0.565	20.71	20.10	40.81	56.00	-15.19	Peak
3	0.789	17.91	19.96	37.87	56.00	-18.13	Peak
4	0.977	18.99	19.77	38.76	56.00	-17.24	Peak
5	1.112	17.55	19.81	37.36	56.00	-18.64	Peak
6	13.514	21.99	19.86	41.85	60.00	-18.15	Peak

Transmitter Unwanted Emissions & Restricted frequency bands

After pre-scan in the X, Y and Z axes of orientation, the worst case in the Y axes of orientation is below:

9 kHz-30 MHz: (Maximum output power mode and channel)

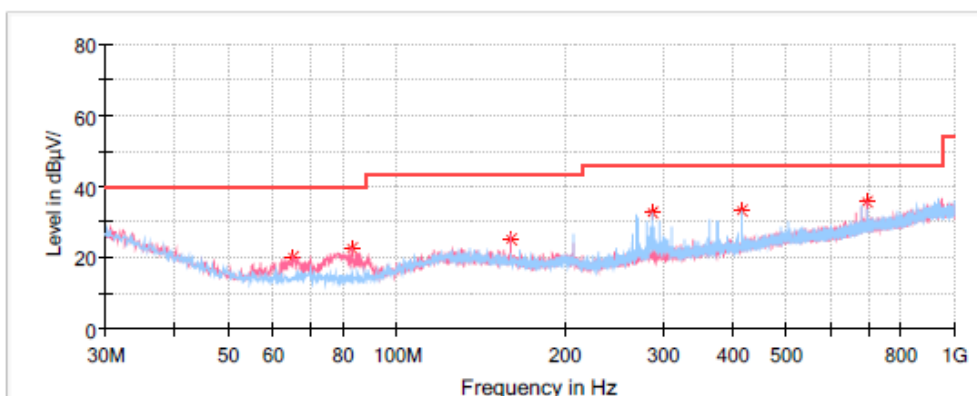
The amplitude of spurious emissions attenuated more than 20 dB below the limit was not be recorded.

30MHz-1GHz(5150-5250MHz Band): Transmitting in maximum output power 802.11n-HT20 mode high channel

High Channel: 5240 MHz

Common Information

Project No:	RSHA240124005
EUT Model:	MTB1
Test Mode:	5G WIFI
Standard:	FCC Part 15.407
Test Equipment:	ESCI, JB3, 310N
Temperature:	21.9°C
Humidity:	61%
Barometric Pressure:	101.8kPa
Test Engineer:	Leah Li
Test Date:	2024/5/8

**Critical Freqs**

Frequency (MHz)	MaxPeak (dBμ V/m)	Limit (dBμ V/m)	Margin (dB)	Pol	Corr. (dB/m)
65.283750	20.21	40.00	19.79	V	-17.1
82.865000	22.67	40.00	17.33	V	-17.4
159.858750	25.06	43.50	18.44	V	-12.6
288.020000	32.86	46.00	13.14	H	-11.0
415.938750	33.01	46.00	12.99	H	-8.1
696.026250	35.48	46.00	10.52	V	-2.5

30MHz-1GHz(5250-5350MHz Band): Transmitting in maximum output power 802.11n-HT20 mode low channel

Low Channel: 5260 MHz

Common Information

Project No:

EUT Model:

Test Mode:

Standard:

Test Equipment:

Temperature:

Humidity:

Barometric Pressure:

Test Engineer:

Test Date:

RSHA240124005

MTB1

5G WIFI

FCC Part 15.407

ESCI, JB3, 310N

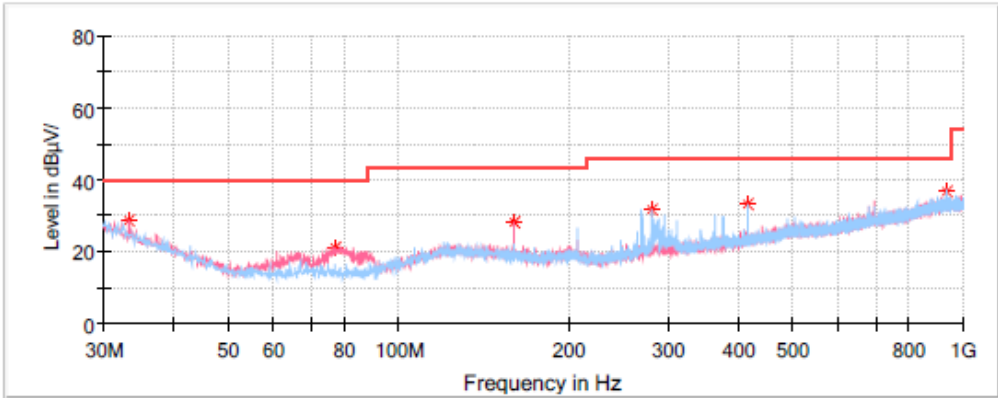
21.9℃

61%

101.8kPa

Leah Li

2024/5/8



Critical Freqs

Frequency (MHz)	MaxPeak (dBμ V/m)	Limit (dBμ V/m)	Margin (dB)	Pol	Corr. (dB/m)
33.273750	28.75	40.00	11.25	V	-6.7
77.287500	21.23	40.00	18.77	V	-17.4
159.980000	27.93	43.50	15.57	V	-12.6
280.017500	31.85	46.00	14.15	H	-11.1
415.938750	33.27	46.00	12.73	H	-8.1
935.980000	36.87	46.00	9.13	H	1.4

30MHz-1GHz(5470-5725MHz Band): Transmitting in maximum output power 802.11a mode low channel

Low Channel: 5500 MHz

Common Information

Project No:

EUT Model:

Test Mode:

Standard:

Test Equipment:

Temperature:

Humidity:

Barometric Pressure:

Test Engineer:

Test Date:

RSHA240124005

MTB1

5G WIFI

FCC Part 15.407

ESCI, JB3, 310N

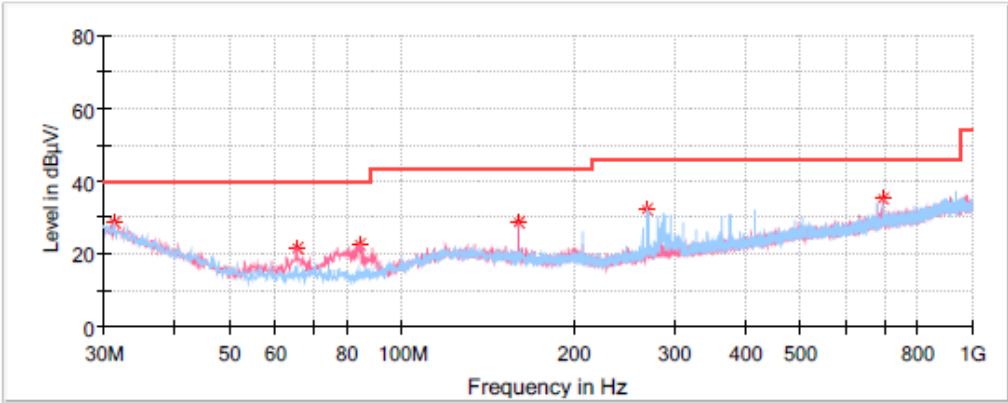
21.9°C

61%

101.8kPa

Leah Li

2024/5/8



Critical Freqs

Frequency (MHz)	MaxPeak (dBμ V/m)	Limit (dBμ V/m)	Margin (dB)	Pol	Corr. (dB/m)
31.333750	28.78	40.00	11.22	H	-5.3
65.647500	21.64	40.00	18.36	V	-17.1
84.198750	22.42	40.00	17.58	V	-17.4
159.980000	28.90	43.50	14.60	V	-12.6
269.711250	32.26	46.00	13.74	H	-11.7
696.026250	35.41	46.00	10.59	V	-2.5

30MHz-1GHz(5725-5850MHz Band): Transmitting in maximum output power 802.11n-HT20 mode low channel

Low Channel: 5745 MHz

Common Information

Project No:

EUT Model:

Test Mode:

Standard:

Test Equipment:

Temperature:

Humidity:

Barometric Pressure:

Test Engineer:

Test Date:

RSHA240124005

MTB1

5G WIFI

FCC Part 15.407

ESCI, JB3, 310N

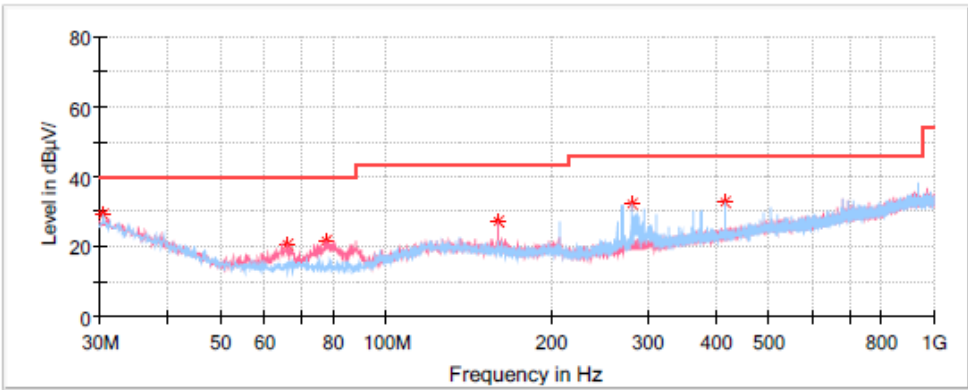
21.9℃

61%

101.8kPa

Leah Li

2024/5/8

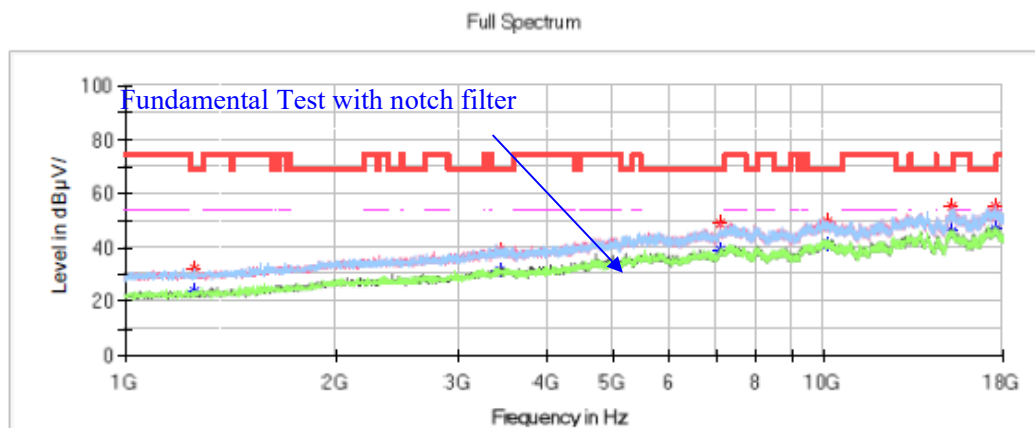


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμ V/m)	Limit (dBμ V/m)	Margin (dB)	Pol	Corr. (dB/m)
30.485000	29.27	40.00	10.73	H	-4.8
66.011250	20.75	40.00	19.25	V	-17.1
77.893750	21.49	40.00	18.51	V	-17.4
159.980000	27.04	43.50	16.46	V	-12.6
280.017500	32.07	46.00	13.93	H	-11.1
415.938750	32.80	46.00	13.20	H	-8.1

1GHz-18GHz(5150-5250MHz Band):**802.11a Mode:****Low Channel: 5180MHz****Common Information**

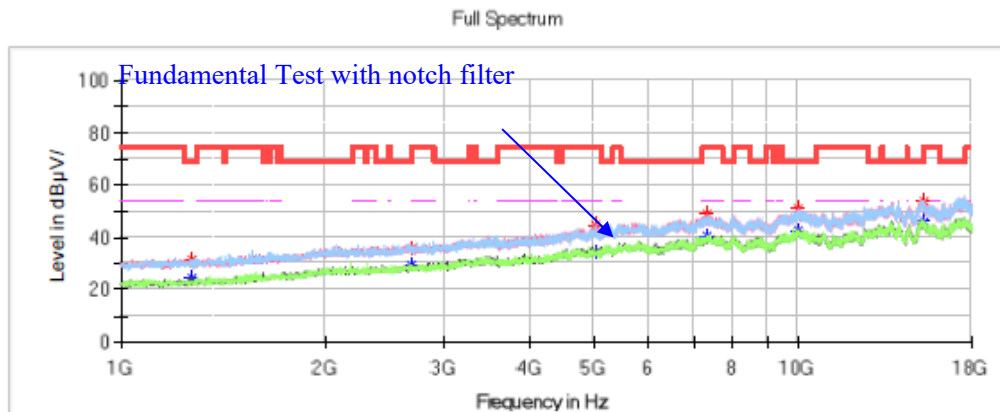
Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Peter Wang

**Critical Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1255.000000	---	23.73	---	---	H	-14.7
1255.000000	32.00	---	68.20	36.20	H	-14.7
3441.200000	---	31.53	---	---	H	-6.3
3441.200000	38.90	---	68.20	29.30	H	-6.3
7091.100000	---	39.41	---	---	V	3.9
7091.100000	49.14	---	68.20	19.06	V	3.9
10132.400000	---	41.56	---	---	H	7.7
10132.400000	49.39	---	68.20	18.81	H	7.7
15198.400000	---	45.99	---	---	H	10.8
15198.400000	55.27	---	68.20	12.93	H	10.8
17566.500000	---	46.58	---	---	H	13.3
17566.500000	55.06	---	68.20	13.14	H	13.3

Middle Channel: 5200MHz**Common Information**

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Peter Wang

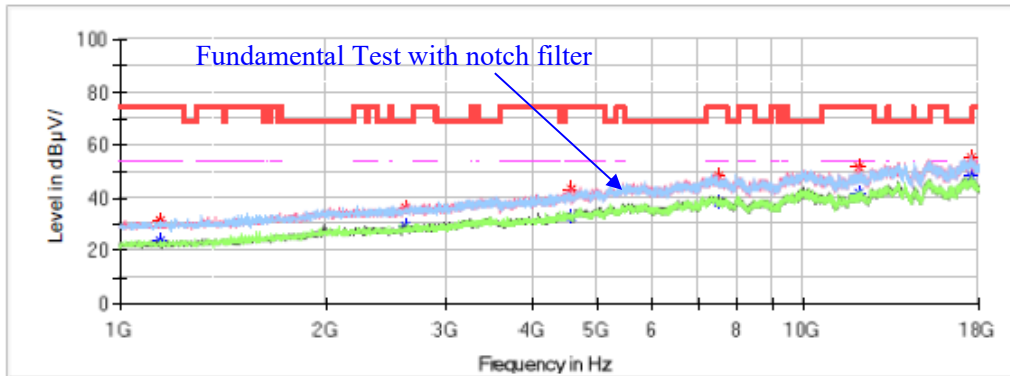
**Critical_Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1270.300000	---	24.14	---	---	V	-14.7
1270.300000	31.63	---	68.20	36.57	V	-14.7
2683.000000	---	29.54	---	---	V	-9.1
2683.000000	35.75	---	68.20	32.45	V	-9.1
5005.200000	---	34.32	54.00	19.68	V	-1.2
5005.200000	45.10	---	74.00	28.90	V	-1.2
7337.600000	---	40.64	54.00	13.36	V	4.1
7337.600000	48.85	---	74.00	25.15	V	4.1
10015.100000	---	42.74	---	---	V	7.8
10015.100000	51.21	---	68.20	16.99	V	7.8
15295.300000	---	46.18	---	---	H	11.1
15295.300000	53.95	---	68.20	14.25	H	11.1

High Channel: 5240MHz**Common Information**

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Peter Wang

Full Spectrum

**Critical Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1146.200000	31.58	---	74.00	42.42	V	-15.1
1146.200000	---	23.79	54.00	30.21	V	-15.1
2621.800000	---	29.14	---	---	H	-9.3
2621.800000	36.08	---	68.20	32.12	H	-9.3
4568.300000	---	33.17	54.00	20.83	V	-3.4
4568.300000	43.05	---	74.00	30.95	V	-3.4
7492.300000	---	38.78	54.00	15.22	V	4.2
7492.300000	48.59	---	74.00	25.41	V	4.2
12063.600000	---	42.22	54.00	11.78	V	7.0
12063.600000	51.85	---	74.00	22.15	V	7.0
17564.800000	---	48.18	---	---	V	13.3
17564.800000	55.23	---	68.20	12.97	V	13.3

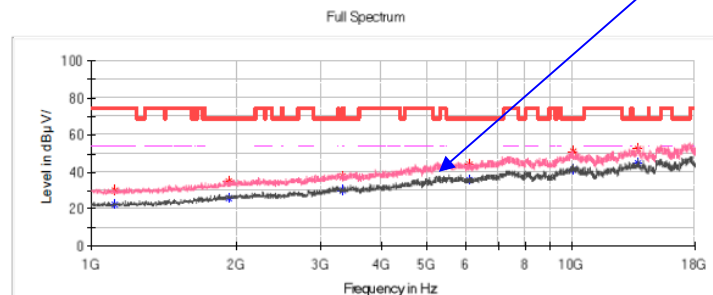
802.11n-HT20 Mode:

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
Low Channel: 5180MHz						
1117.300000	---	22.04	54.00	31.96	H	-15.1
1117.300000	29.98	---	74.00	44.02	H	-15.1
1935.000000	34.80	---	68.20	33.40	V	-11.0
3325.600000	37.68	---	68.20	30.52	V	-6.8
6105.100000	44.03	---	68.20	24.17	H	0.3
10057.600000	50.84	---	68.20	17.36	V	7.7
13707.500000	52.11	---	68.20	16.09	V	10.8

Middle Channel: 5200MHz**Common Information**

Project No.: RSHA240124005
 Test Mode: 5G Wi-Fi
 Standard: FCC Part 15.407
 Test Engineer: Peter Wang

Fundamental Test with notch filter



1304.300000	---	22.26	54.00	31.74	H	-14.6
1304.300000	29.23	---	74.00	44.77	H	-14.6
2625.200000	34.42	---	68.20	33.78	V	-9.3
4801.200000	---	34.40	54.00	19.60	V	-2.2
4801.200000	40.90	---	74.00	33.10	V	-2.2
8894.800000	42.64	---	68.20	25.56	H	3.7
13639.500000	49.17	---	68.20	19.03	V	10.9
17576.700000	53.65	---	68.20	14.55	V	13.3

High Channel: 5240MHz

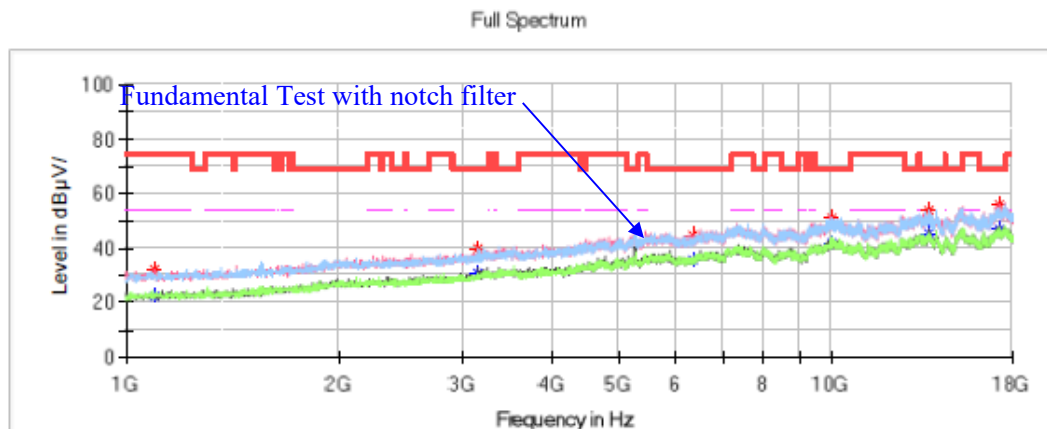
1311.100000	---	24.35	54.00	29.65	H	-14.5
1311.100000	32.02	---	74.00	41.98	H	-14.5
2827.500000	---	30.14	54.00	23.86	V	-8.6
2827.500000	36.39	---	74.00	37.61	V	-8.6
5455.700000	---	36.55	54.00	17.45	V	0.7
5455.700000	45.22	---	74.00	28.78	V	0.7
9914.800000	48.76	---	68.20	19.44	H	7.5
12915.300000	49.74	---	68.20	18.46	V	8.9
16390.100000	51.49	---	68.20	16.71	V	10.0

802.11n-HT40 Mode:

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
Low Channel: 5190MHz						
Common Information Project No.: RSHA240124005 Test Mode: 5G Wi-Fi Standard: FCC Part 15.407 Test Engineer: Peter Wang Fundamental Test with notch filter						
1399.500000	30.68	---	74.00	43.32	V	-14.2
1399.500000	---	23.19	54.00	30.81	V	-14.2
2853.000000	---	29.38	54.00	24.62	V	-8.5
2853.000000	35.41	---	74.00	38.59	V	-8.5
4765.500000	---	33.15	54.00	20.85	V	-2.4
4765.500000	43.83	---	74.00	30.17	V	-2.4
8503.800000	45.19	---	68.20	23.01	V	3.9
13343.700000	---	43.28	54.00	10.72	V	10.4
13343.700000	51.08	---	74.00	22.92	V	10.4
17549.500000	55.22	---	68.20	12.98	V	13.4
13343.700000	---	41.50	54.00	12.50	H	10.4
13343.700000	50.50	---	74.00	23.50	H	10.4
High Channel: 5230MHz						
1419.900000	---	23.18	54.00	30.82	V	-14.2
1419.900000	29.78	---	74.00	44.22	V	-14.2
2820.700000	---	28.37	54.00	25.63	V	-8.6
2820.700000	34.97	---	74.00	39.03	V	-8.6
4462.900000	39.09	---	68.20	29.11	V	-3.9
8432.400000	---	39.19	54.00	14.81	V	3.9
8432.400000	44.86	---	74.00	29.14	V	3.9
12563.400000	---	41.87	54.00	12.13	V	8.5
12563.400000	48.82	---	74.00	25.18	V	8.5
17007.200000	51.18	---	68.20	17.02	V	12.4

1GHz-18GHz(5250-5350MHz Band):**802.11a Mode:****Low Channel: 5260MHz****Common Information**

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Peter Wang

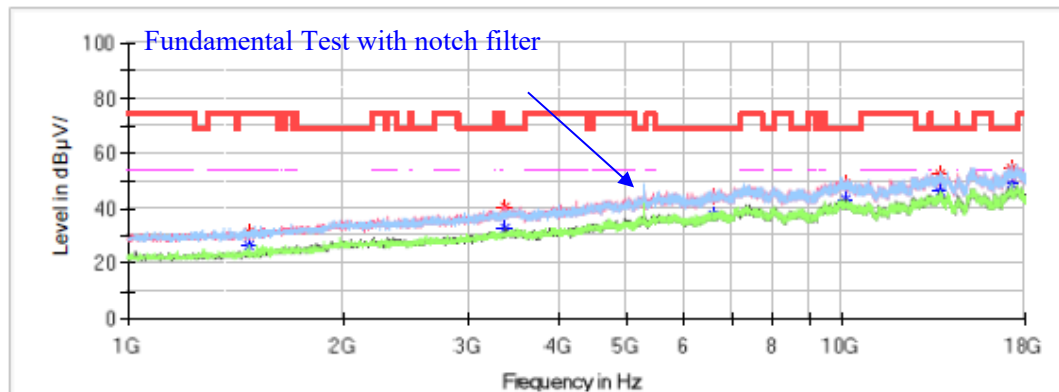
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1098.600000	---	22.69	54.00	31.31	V	-15.2
1098.600000	32.31	---	74.00	41.69	V	-15.2
3159.000000	---	30.49	---	---	H	-7.4
3159.000000	39.66	---	68.20	28.54	H	-7.4
6332.900000	---	35.51	---	---	V	0.6
6332.900000	44.69	---	68.20	23.51	V	0.6
10003.200000	---	42.23	---	---	H	7.8
10003.200000	51.31	---	68.20	16.89	H	7.8
13685.400000	---	45.54	---	---	H	10.8
13685.400000	54.12	---	68.20	14.08	H	10.8
17209.500000	---	46.70	---	---	V	12.9
17209.500000	55.75	---	68.20	12.45	V	12.9

Middle Channel: 5280MHz**Common Information**

Project No.: RSHA240124005
 Test Mode: 5G Wi-Fi
 Standard: FCC Part 15.407
 Test Engineer: Peter Wang

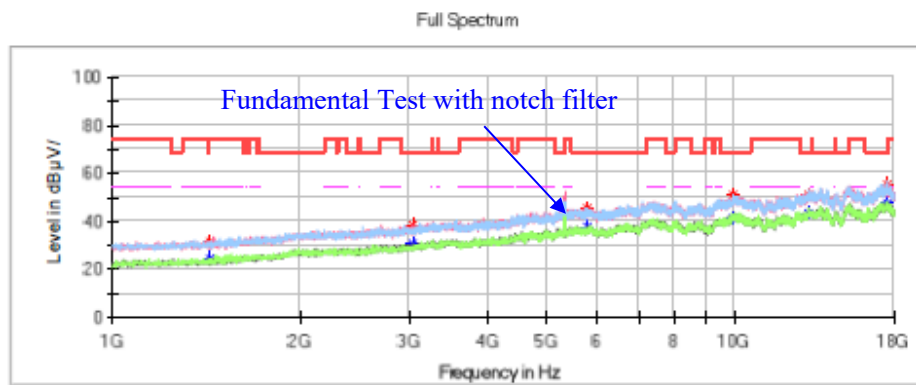
Full Spectrum

**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1479.400000	---	26.39	54.00	27.61	H	-14.0
1479.400000	31.53	---	74.00	42.47	H	-14.0
3369.800000	---	32.57	---	---	V	-6.6
3369.800000	40.39	---	68.20	27.81	V	-6.6
6593.000000	---	37.79	---	---	H	1.4
6593.000000	44.23	---	68.20	23.97	H	1.4
10120.500000	---	43.33	---	---	V	7.7
10120.500000	48.95	---	68.20	19.25	V	7.7
13685.400000	---	46.35	---	---	H	10.8
13685.400000	52.32	---	68.20	15.88	H	10.8
17231.600000	---	48.90	---	---	V	12.9
17231.600000	54.34	---	68.20	13.86	V	12.9

High Channel: 5320MHz**Common Information**

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Peter Wang

**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1430.100000	—	24.37	—	—	V	-14.2
1430.100000	31.79	—	68.20	36.41	V	-14.2
3034.900000	—	30.47	—	—	V	-7.9
3034.900000	38.24	—	68.20	29.96	V	-7.9
5785.500000	—	37.49	—	—	V	0.5
5785.500000	45.80	—	68.20	22.40	V	0.5
9950.500000	—	41.52	—	—	V	7.7
9950.500000	50.82	—	68.20	17.38	V	7.7
13115.900000	—	43.49	—	—	H	9.5
13115.900000	51.17	—	68.20	17.03	H	9.5
17532.500000	—	47.82	—	—	V	13.5
17532.500000	54.93	—	68.20	13.27	V	13.5

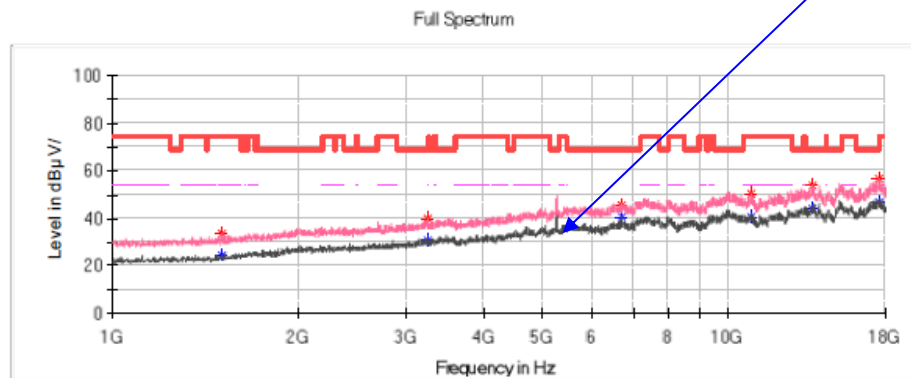
802.11n-HT20 Mode:

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
Low Channel: 5260MHz						
1314.500000	---	24.21	54.00	29.79	V	-14.5
1314.500000	30.03	---	74.00	43.97	V	-14.5
2421.200000	37.87	---	68.20	30.33	V	-9.9
4503.700000	---	33.73	54.00	20.27	V	-3.8
4503.700000	42.81	---	74.00	31.19	V	-3.8
7341.000000	---	39.99	54.00	14.01	V	4.1
7341.000000	48.44	---	74.00	25.56	V	4.1
13760.200000	53.39	---	68.20	14.81	V	10.8
17544.400000	54.37	---	68.20	13.83	V	13.4
Middle Channel: 5280MHz						
1634.100000	34.05	---	68.20	34.15	V	-13.0
3344.300000	38.57	---	68.20	29.63	V	-6.7
6667.800000	44.69	---	68.20	23.51	V	1.8
9981.100000	51.05	---	68.20	17.15	V	7.8
13685.400000	52.98	---	68.20	15.22	V	10.8
17549.500000	56.12	---	68.20	12.08	V	13.4
High Channel: 5320MHz						

Common Information

Project No.: RSHA240124005
 Test Mode: 5G Wi-Fi
 Standard: FCC Part 15.407
 Test Engineer: Peter Wang

Fundamental Test with notch filter



1503.200000	---	24.15	54.00	29.85	V	-13.9
1503.200000	33.24	---	74.00	40.76	V	-13.9
3242.300000	39.81	---	68.20	28.39	V	-7.1
6706.900000	45.53	---	68.20	22.67	V	2.1
10863.400000	---	40.56	54.00	13.44	V	6.6
10863.400000	50.07	---	74.00	23.93	V	6.6
13727.900000	53.51	---	68.20	14.69	V	10.8
17556.300000	56.41	---	68.20	11.79	V	13.4
13727.900000	52.51	---	68.20	15.69	H	10.8
17556.300000	54.41	---	68.20	13.79	H	13.4

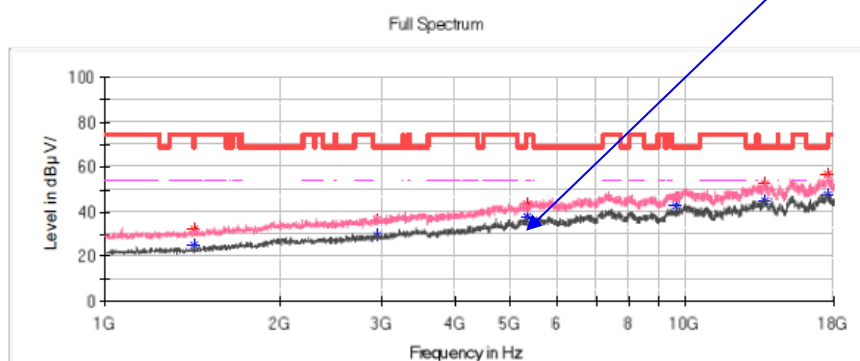
802.11n-HT40 Mode:

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
Low Channel: 5270MHz						
1190.400000	---	22.70	54.00	31.30	V	-14.9
1190.400000	32.52	---	74.00	41.48	V	-14.9
2592.900000	36.59	---	68.20	31.61	V	-9.4
4683.900000	---	35.83	54.00	18.17	V	-2.8
4683.900000	42.43	---	74.00	31.57	V	-2.8
8718.000000	48.03	---	68.20	20.17	V	3.8
13088.700000	51.67	---	68.20	16.53	V	9.4
15225.600000	53.33	---	68.20	14.87	V	10.9

High Channel: 5310MHz**Common Information**

Project No.: RSHA240124005
 Test Mode: 5G Wi-Fi
 Standard: FCC Part 15.407
 Test Engineer: Peter Wang

Fundamental Test with notch filter

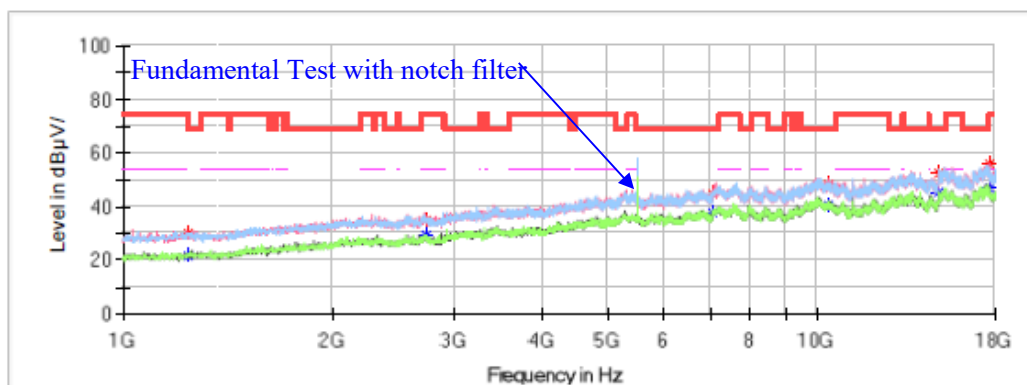


1423.300000	---	25.00	54.00	29.00	V	-14.2
1423.300000	31.87	---	74.00	42.13	V	-14.2
2941.400000	36.40	---	68.20	31.80	V	-8.2
5326.500000	43.16	---	68.20	25.04	V	0.1
9627.500000	45.90	---	68.20	22.30	V	6.6
13688.800000	52.32	---	68.20	15.88	V	10.8
17552.900000	56.33	---	68.20	11.87	V	13.4
13688.800000	54.32	---	68.20	13.88	H	10.8
17552.900000	59.33	---	68.20	14.87	H	13.4

1GHz-18GHz(5470-5725MHz Band):**802.11a Mode:****Low Channel: 5500MHz****Common Information**

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Peter Wang

Full Spectrum

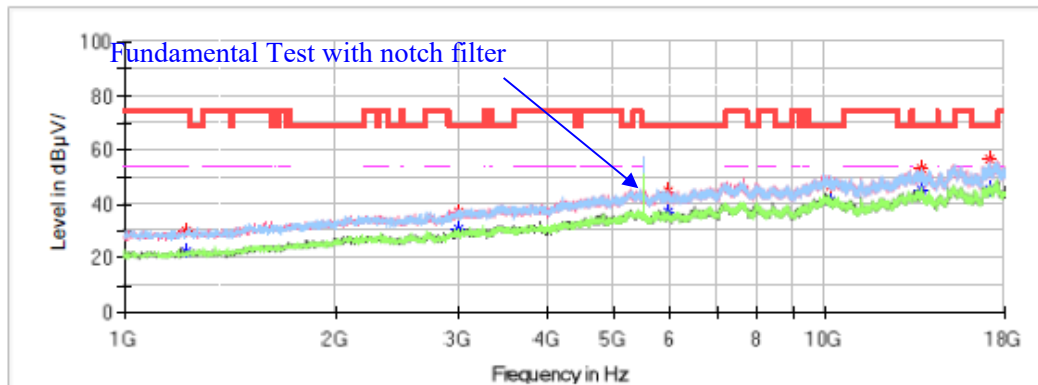
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1244.800000	---	21.85	---	---	H	-14.7
1244.800000	30.17	---	68.20	38.03	H	-14.7
2727.200000	---	29.39	54.00	24.61	H	-9.0
2727.200000	34.94	---	74.00	39.06	H	-9.0
7070.700000	---	37.96	---	---	V	3.8
7070.700000	44.66	---	68.20	23.54	V	3.8
10336.400000	---	40.78	---	---	V	7.4
10336.400000	48.01	---	68.20	20.19	V	7.4
14929.800000	---	45.27	---	---	H	9.9
14929.800000	52.44	---	68.20	15.76	H	9.9
17615.800000	---	46.75	---	---	H	13.1
17615.800000	55.77	---	68.20	12.43	H	13.1

Middle Channel: 5580MHz**Common Information**

Project No.: RSHA240124005
 Test Mode: 5G Wi-Fi
 Standard: FCC Part 15.407
 Test Engineer: Peter Wang

Full Spectrum

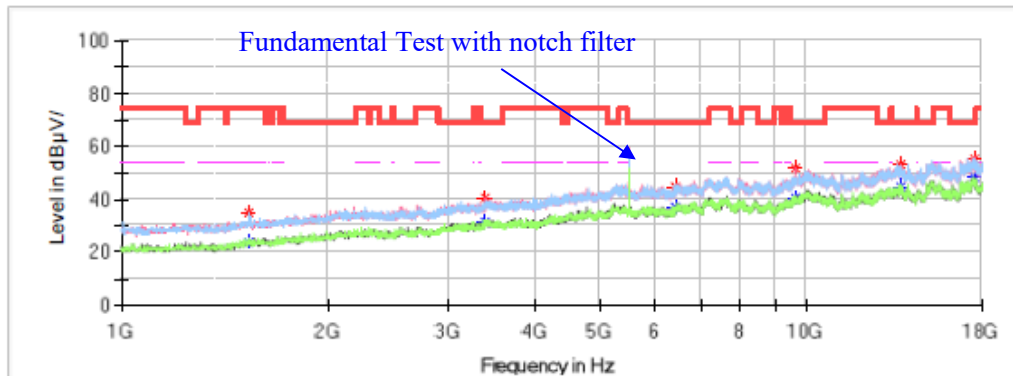
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1227.800000	---	22.55	54.00	31.45	H	-14.8
1227.800000	30.39	---	74.00	43.61	H	-14.8
3000.900000	---	30.98	---	---	V	-8.0
3000.900000	36.81	---	68.20	31.39	V	-8.0
5960.600000	---	36.90	---	---	H	0.2
5960.600000	44.86	---	68.20	23.34	H	0.2
10144.300000	---	41.30	---	---	V	7.7
10144.300000	46.98	---	68.20	21.22	V	7.7
13680.300000	---	45.13	---	---	H	10.8
13680.300000	53.13	---	68.20	15.07	H	10.8
17117.700000	---	45.57	---	---	V	12.6
17117.700000	56.78	---	68.20	11.42	V	12.6

High Channel: 5700MHz**Common Information**

Project No.: RSHA240124005
 Test Mode: 5G Wi-Fi
 Standard: FCC Part 15.407
 Test Engineer: Peter Wang

Full Spectrum

**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1533.800000	---	24.10	54.00	29.90	V	-13.7
1533.800000	35.03	---	74.00	38.97	V	-13.7
3397.000000	---	31.31	---	---	V	-6.5
3397.000000	40.71	---	68.20	27.49	V	-6.5
6443.400000	---	37.33	---	---	V	0.8
6443.400000	44.73	---	68.20	23.47	V	0.8
9632.600000	---	40.23	---	---	V	6.6
9632.600000	51.79	---	68.20	16.41	V	6.6
13705.800000	---	44.57	---	---	V	10.8
13705.800000	52.82	---	68.20	15.38	V	10.8
17588.600000	---	48.04	---	---	H	13.2
17588.600000	55.55	---	68.20	12.65	H	13.2

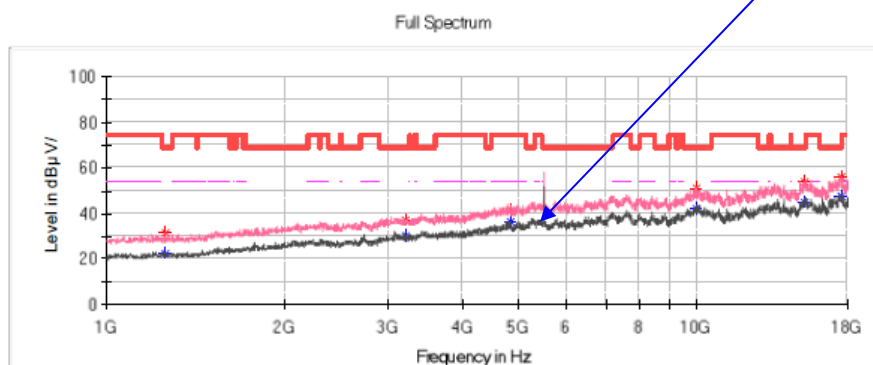
802.11n-HT20 Mode:

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
Low Channel: 5500MHz						
1181.900000	---	22.39	54.00	31.61	V	-14.9
1181.900000	31.62	---	74.00	42.38	V	-14.9
3225.300000	36.92	---	68.20	31.28	V	-7.2
5227.900000	44.41	---	68.20	23.79	V	-0.3
9991.300000	51.02	---	68.20	17.18	V	7.8
13676.900000	54.03	---	68.20	14.17	V	10.8
17585.200000	55.79	---	68.20	12.41	V	13.3
Middle Channel: 5580MHz						
1477.700000	---	25.08	54.00	28.92	V	-14.0
1477.700000	30.31	---	74.00	43.69	V	-14.0
3147.100000	37.43	---	68.20	30.77	V	-7.5
5183.700000	45.92	---	68.20	22.28	V	-0.5
10015.100000	48.87	---	68.20	19.33	V	7.8
14016.900000	51.13	---	68.20	17.07	V	10.4
17382.900000	55.66	---	68.20	12.54	V	13.3

High Channel: 5700MHz**Common Information**

Project No.: RSHA240124005
 Test Mode: 5G Wi-Fi
 Standard: FCC Part 15.407
 Test Engineer: Peter Wang

Fundamental Test with notch filter



1258.400000	31.20	---	68.20	37.00	V	-14.7
3199.800000	36.93	---	68.20	31.27	V	-7.3
4836.900000	---	36.29	54.00	17.71	V	-2.1
4836.900000	41.31	---	74.00	32.69	V	-2.1
9994.700000	50.82	---	68.20	17.38	V	7.8
15269.800000	53.83	---	68.20	14.37	V	11.0
17569.900000	55.85	---	68.20	12.35	V	13.3
15269.800000	55.83	---	68.20	16.37	H	11.0
17569.900000	57.85	---	68.20	14.35	H	13.3

802.11n-HT40 Mode:

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
Low Channel: 5510MHz						
1164.900000	28.46	---	74.00	45.54	V	-15.0
1164.900000	---	22.65	54.00	31.35	V	-15.0
3233.800000	39.33	---	68.20	28.87	V	-7.1
5248.300000	44.42	---	68.20	23.78	V	-0.2
7689.500000	---	39.09	54.00	14.91	V	4.0
7689.500000	48.68	---	74.00	25.32	V	4.0
12796.300000	51.71	---	68.20	16.49	V	8.8
16798.100000	54.25	---	68.20	13.95	V	11.5
Middle Channel: 5550MHz						
1375.700000	30.66	---	74.00	43.34	V	-14.9
1375.700000	---	21.91	54.00	32.09	V	-14.9
2249.500000	34.99	---	74.00	39.01	V	-11.0
2249.500000	---	25.70	54.00	28.30	V	-11.0
4736.600000	---	34.82	54.00	19.18	H	-3.4
4736.600000	42.10	---	74.00	31.90	H	-3.4
7589.200000	48.68	---	74.00	25.32	H	3.9
7589.200000	---	38.63	54.00	15.37	H	3.9
12529.400000	49.37	---	74.00	24.63	V	9.7
12529.400000	---	45.56	54.00	8.44	V	9.7
15881.800000	---	42.94	54.00	11.06	V	9.5
15881.800000	52.33	---	74.00	21.67	V	9.5
High Channel: 5670MHz						

Common Information

Project No.:

RSHA240124005

Test Mode:

5G Wi-Fi

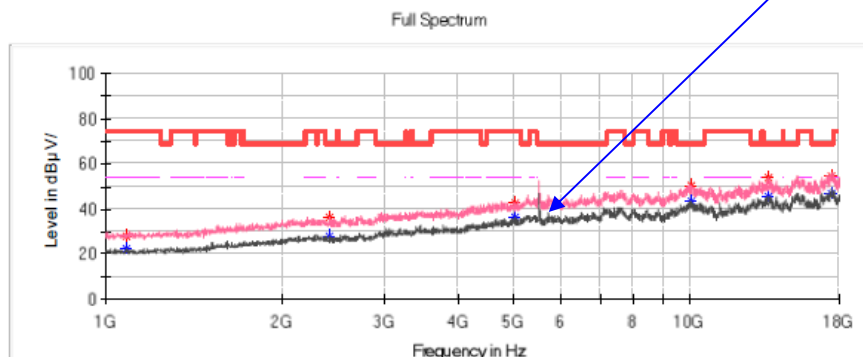
Standard:

FCC Part 15.407

Test Engineer:

Peter Wang

Fundamental Test with notch filter

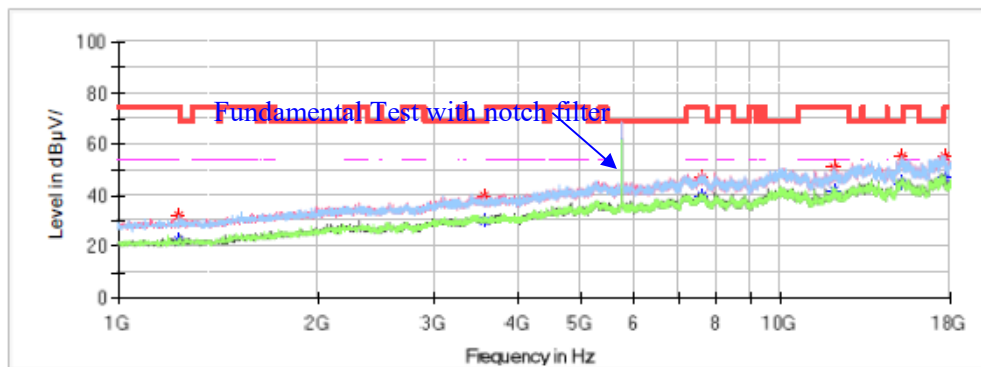


1086.700000	---	22.56	54.00	31.44	V	-15.2
1086.700000	28.03	---	74.00	45.97	V	-15.2
2409.300000	36.28	---	68.20	31.92	V	-9.9
5022.200000	---	36.30	54.00	17.70	V	-1.1
5022.200000	42.67	---	74.00	31.33	V	-1.1
10033.800000	50.33	---	68.20	17.87	V	7.8
13649.700000	54.12	---	68.20	14.08	V	10.9
17479.800000	54.31	---	68.20	13.89	V	13.6
13649.700000	56.12	---	68.20	16.08	H	10.9
17479.800000	56.31	---	68.20	15.89	H	13.6

1GHz-18GHz(5725-5850MHz Band):**802.11a Mode:****Low Channel: 5745MHz****Common Information**

Project No.: RSHA240124005
 Test Mode: 5G Wi-Fi
 Standard: FCC Part 15.407
 Test Engineer: Peter Wang

Full Spectrum

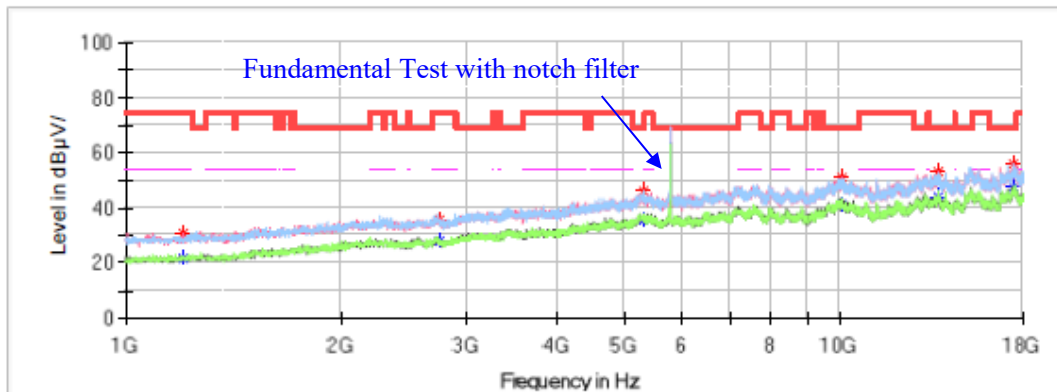
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1238.000000	---	22.57	54.00	31.43	H	-14.8
1238.000000	32.14	---	74.00	41.86	H	-14.8
3558.500000	---	30.41	---	---	V	-6.0
3558.500000	39.84	---	68.20	28.36	V	-6.0
7609.600000	---	40.20	54.00	13.80	V	4.1
7609.600000	46.92	---	74.00	27.08	V	4.1
12061.900000	---	42.28	54.00	11.72	H	7.0
12061.900000	50.93	---	74.00	23.07	H	7.0
15254.500000	---	44.97	---	---	V	11.0
15254.500000	54.99	---	68.20	13.21	V	11.0
17649.800000	---	46.64	---	---	V	13.0
17649.800000	55.36	---	68.20	12.84	V	13.0

Middle Channel: 5785MHz**Common Information**

Project No.: RSHA240124005
 Test Mode: 5G Wi-Fi
 Standard: FCC Part 15.407
 Test Engineer: Peter Wang

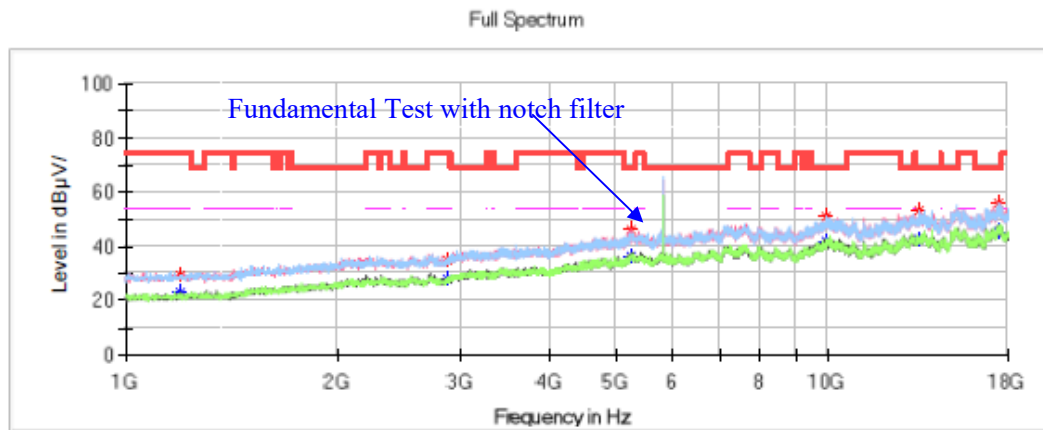
Full Spectrum

**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1204.000000	---	21.35	54.00	32.65	V	-14.9
1204.000000	30.64	---	74.00	43.36	V	-14.9
2745.900000	---	27.85	54.00	26.15	V	-8.9
2745.900000	35.49	---	74.00	38.51	V	-8.9
5294.200000	---	36.01	---	---	V	0.0
5294.200000	46.20	---	68.20	22.00	V	0.0
10025.300000	---	41.45	---	---	V	7.8
10025.300000	50.88	---	68.20	17.32	V	7.8
13683.700000	---	44.37	---	---	V	10.8
13683.700000	52.96	---	68.20	15.24	V	10.8
17439.000000	---	47.77	---	---	H	13.5
17439.000000	55.84	---	68.20	12.36	H	13.5

High Channel: 5825MHz**Common Information**

Project No.: RSHA240124005
 Test Mode: 5G Wi-Fi
 Standard: FCC Part 15.407
 Test Engineer: Peter Wang

**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1200.600000	---	23.40	54.00	30.60	V	-14.9
1200.600000	29.31	---	74.00	44.69	V	-14.9
2871.700000	---	27.86	54.00	26.14	V	-8.5
2871.700000	34.82	---	74.00	39.18	V	-8.5
5251.700000	---	36.36	---	---	V	-0.2
5251.700000	46.27	---	68.20	21.93	V	-0.2
9940.300000	---	41.79	---	---	V	7.6
9940.300000	50.90	---	68.20	17.30	V	7.6
13472.900000	---	42.41	---	---	V	10.9
13472.900000	53.41	---	68.20	14.79	V	10.9
17467.900000	---	45.46	---	---	H	13.5
17467.900000	55.88	---	68.20	12.32	H	13.5

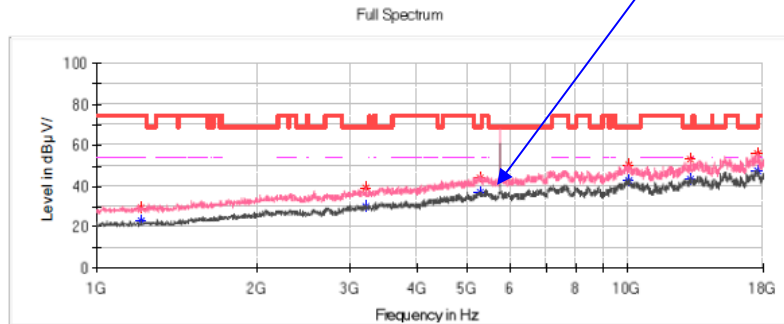
802.11n-HT20 Mode:

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
Low Channel: 5745MHz						
1328.100000	---	23.47	54.00	30.53	V	-14.5
1328.100000	29.97	---	74.00	44.03	V	-14.5
3041.700000	36.74	---	68.20	31.46	V	-7.9
4845.400000	---	35.75	54.00	18.25	V	-2.0
4845.400000	40.89	---	74.00	33.11	V	-2.0
8801.300000	48.31	---	68.20	19.89	V	3.7
13505.200000	53.40	---	68.20	14.80	V	11.0
17442.400000	55.52	---	68.20	12.68	V	13.5

Middle Channel: 5785MHz**Common Information**

Project No.: RSHA240124005
 Test Mode: 5G Wi-Fi
 Standard: FCC Part 15.407
 Test Engineer: Peter Wang

Fundamental Test with notch filter



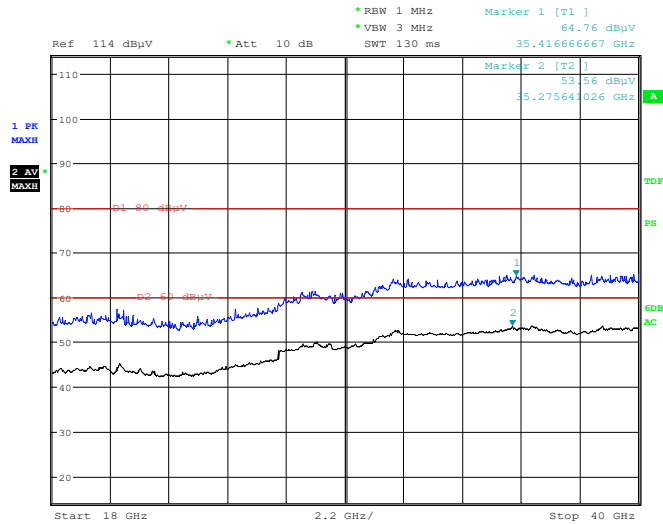
1212.500000	---	22.80	54.00	31.20	V	-14.8
1212.500000	29.40	---	74.00	44.60	V	-14.8
3211.700000	39.34	---	68.20	28.86	V	-7.2
5275.500000	44.18	---	68.20	24.02	V	-0.1
10045.700000	50.59	---	68.20	17.61	V	7.8
13143.100000	52.89	---	68.20	15.31	V	9.6
17569.900000	55.70	---	68.20	12.50	V	13.3
13143.100000	54.89	---	68.20	17.31	H	9.6
17569.900000	57.70	---	68.20	14.50	H	13.3
High Channel: 5825MHz						
1533.800000	30.60	---	74.00	43.40	V	-13.7
1533.800000	---	25.64	54.00	28.36	V	-13.7
2968.600000	35.62	---	68.20	32.58	V	-8.1
5273.800000	45.27	---	68.20	22.93	V	-0.1
9936.900000	49.69	---	68.20	18.51	V	7.6
13687.100000	54.09	---	68.20	14.11	V	10.8
17585.200000	54.17	---	68.20	14.03	V	13.3

802.11n-HT40 Mode:

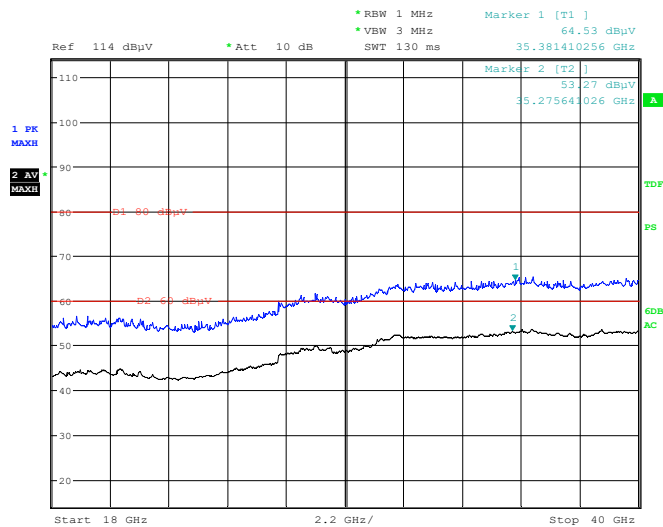
Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
Low Channel: 5755MHz						
Common Information Project No.: RSHA240124005 Test Mode: 5G Wi-Fi Standard: FCC Part 15.407 Test Engineer: Peter Wang Fundamental Test with notch filter 						
1110.500000	---	22.29	54.00	31.71	V	-15.2
1110.500000	29.12	---	74.00	44.88	V	-15.2
2858.100000	---	29.38	54.00	24.62	V	-8.5
2858.100000	34.95	---	74.00	39.05	V	-8.5
5267.000000	44.50	---	68.20	23.70	V	-0.1
8400.100000	47.23	---	74.00	26.77	V	3.9
8400.100000	---	38.70	54.00	15.30	V	3.9
13132.900000	52.19	---	68.20	16.01	V	9.6
17418.600000	55.11	---	68.20	13.09	V	13.4
13132.900000	54.19	---	68.20	18.01	H	9.6
17418.600000	57.11	---	68.20	15.09	H	13.4
High Channel: 5795MHz						
1088.400000	---	22.41	54.00	31.59	V	-15.2
1088.400000	29.58	---	74.00	44.42	V	-15.2
2230.800000	---	26.98	54.00	27.02	V	-10.2
2230.800000	35.11	---	74.00	38.89	V	-10.2
3570.400000	40.56	---	68.20	27.64	V	-6.0
6528.400000	43.26	---	68.20	24.94	V	1.0
9993.000000	51.73	---	68.20	16.47	V	7.8
12854.100000	53.36	---	68.20	14.84	V	8.9

18GHz-40GHz:

Pre-scan with 802.11a, 802.11n-HT20, 802.11n-HT40 modes of operation in the X,Y and Z axes of orientation, the worst case **802.11n-HT40 mode (5230MHz)** was recorded

Horizontal

Project No.RSHA240124005 Tester: Peter Wang
Date: 6.MAY.2024 19:37:55

Vertical

Project No.RSHA240124005 Tester: Peter Wang
Date: 6.MAY.2024 19:51:38

Note: The test distance is 1.5m. The limit is 80dBμV/m(Peak) and 60dBμV/m(Average).

Band Edge Emissions (5150-5250MHz Band):

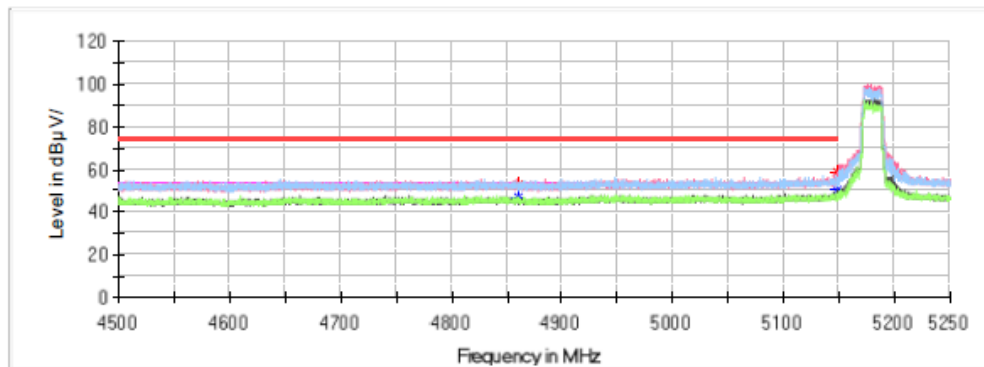
Note:

1. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
2. Corrected Amplitude = Corrected Factor + Reading
3. Margin = Limit - Corrected. Amplitude

802.11a Mode:**Common Information**

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum

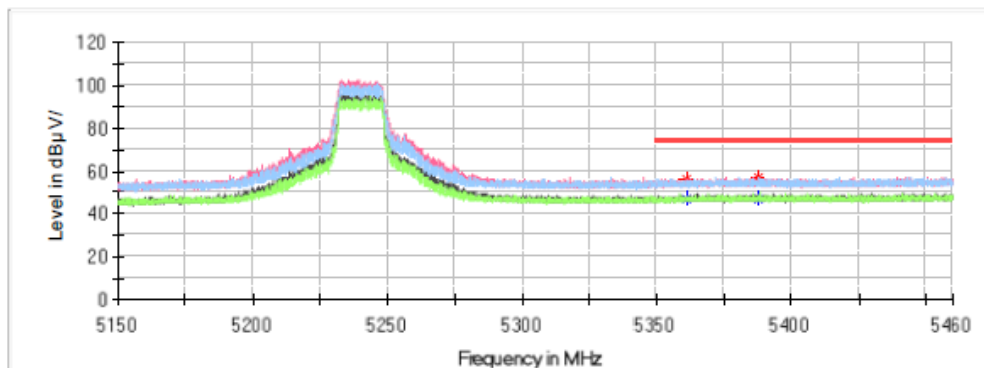
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
4860.375000	53.06	---	74.00	20.94	H	7.3
4860.375000	---	47.39	54.00	6.61	H	7.3
5148.150000	59.02	---	74.00	14.98	V	8.2
5148.150000	---	50.07	54.00	3.93	V	8.2

Common Information

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum



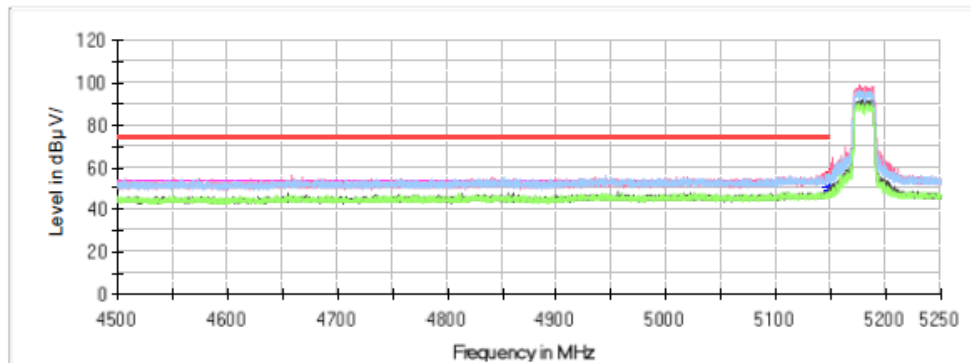
Critical Freqs

Frequency (MHz)	MaxPeak (dB µV/m)	Average (dB µV/m)	Limit (dB µV/m)	Margin (dB)	Pol	Corr. (dB/m)
5361.420000	---	47.25	54.00	6.75	V	8.8
5361.420000	56.53	---	74.00	17.47	V	8.8
5388.080000	---	47.35	54.00	6.65	H	8.8
5388.080000	57.22	---	74.00	16.78	H	8.8

802.11n-HT20 Mode:**Common Information**

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum

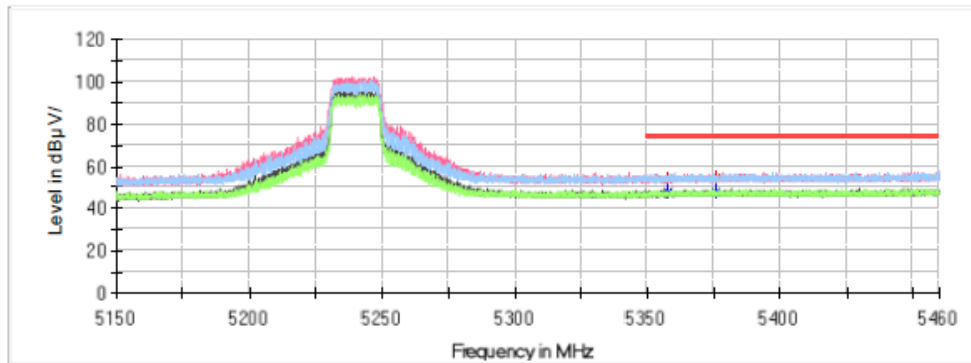
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB µV/m)	Average (dB µV/m)	Limit (dB µV/m)	Margin (dB)	Pol	Corr. (dB/m)
5148.300000	56.49	---	74.00	17.51	V	8.2
5148.300000	---	50.02	54.00	3.98	V	8.2
5149.725000	56.20	---	74.00	17.80	V	8.2
5149.725000	---	49.67	54.00	4.33	V	8.2

Common Information

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum



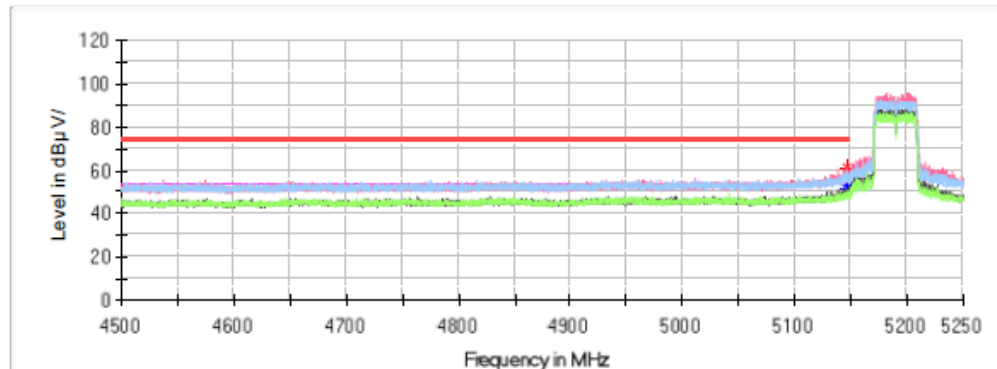
Critical Freqs

Frequency (MHz)	MaxPeak (dB µV/m)	Average (dB µV/m)	Limit (dB µV/m)	Margin (dB)	Pol	Corr. (dB/m)
5357.762000	53.98	---	74.00	20.02	V	8.8
5357.762000	---	47.62	54.00	6.38	V	8.8
5376.021000	54.92	---	74.00	19.08	H	8.8
5376.021000	---	47.70	54.00	6.30	H	8.8

802.11n-HT40 Mode:**Common Information**

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum

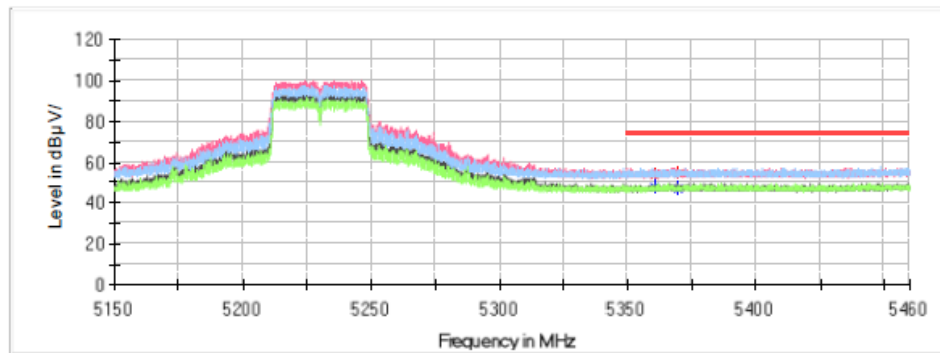
**Critical_Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
5145.900000	61.13	---	74.00	12.87	V	8.2
5145.900000	---	51.47	54.00	2.53	V	8.2
5147.850000	57.99	---	74.00	16.01	V	8.2
5147.850000	---	52.56	54.00	1.44	V	8.2

Common Information

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum



Critical Freqs

Frequency (MHz)	MaxPeak (dB µV/m)	Average (dB µV/m)	Limit (dB µV/m)	Margin (dB)	Pol	Corr. (dB/m)
5360.552000	53.85	---	74.00	20.15	V	8.8
5360.552000	---	47.83	54.00	6.17	V	8.8
5369.666000	54.62	---	74.00	19.38	H	8.8
5369.666000	---	47.32	54.00	6.68	H	8.8

Band Edge Emissions (5250-5350MHz Band):

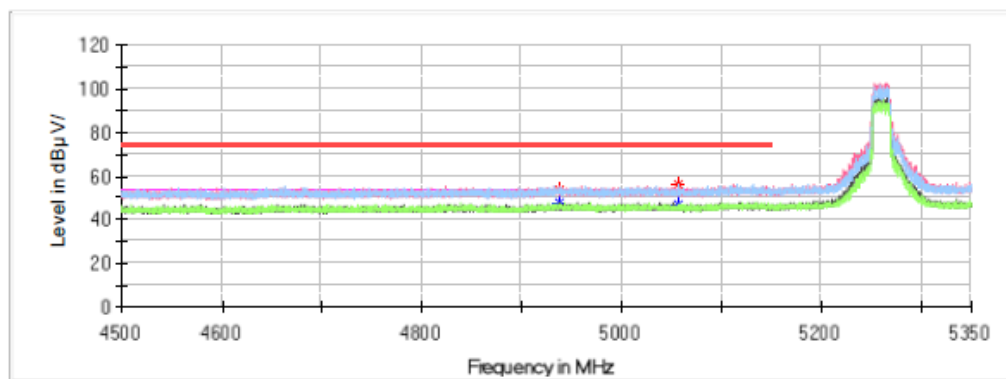
Note:

1. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
2. Corrected Amplitude = Corrected Factor + Reading
3. Margin = Limit - Corrected. Amplitude

802.11a Mode:**Common Information**

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum

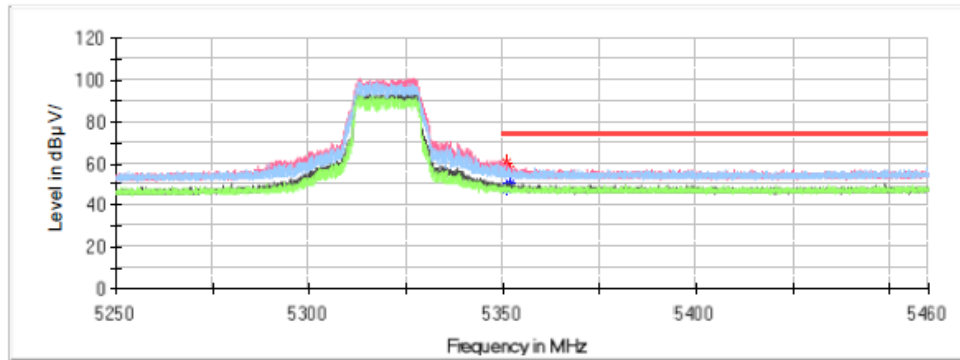
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
4937.835000	---	47.70	54.00	6.30	V	7.6
4937.835000	54.02	---	74.00	19.98	V	7.6
5056.325000	---	47.30	54.00	6.70	H	8.0
5056.325000	56.37	---	74.00	17.63	H	8.0

Common Information

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum



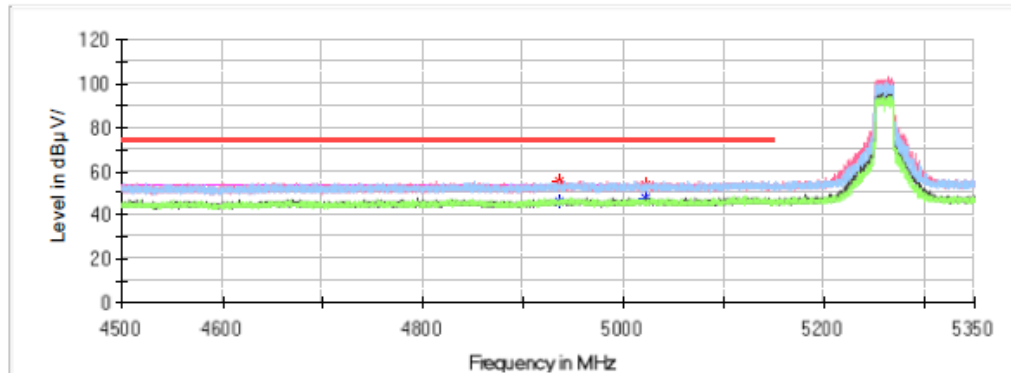
Critical_Freqs

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
5350.800000	60.14	---	74.00	13.86	V	8.7
5350.800000	---	47.74	54.00	6.26	V	8.7
5351.850000	57.35	---	74.00	16.65	H	8.7
5351.850000	---	50.24	54.00	3.76	H	8.7

802.11n-HT20 Mode:**Common Information**

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum

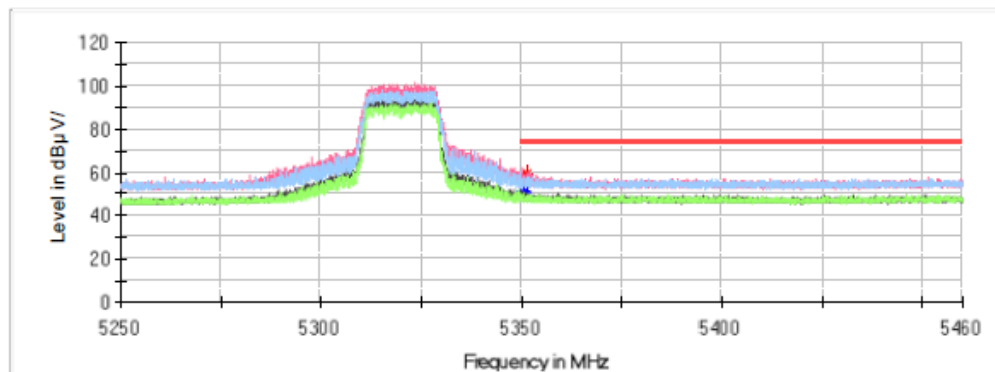
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB µV/m)	Average (dB µV/m)	Limit (dB µV/m)	Margin (dB)	Pol	Corr. (dB/m)
4935.965000	55.75	---	74.00	18.25	H	7.6
4935.965000	---	45.86	54.00	8.14	H	7.6
5022.410000	---	47.96	54.00	6.04	V	7.9
5022.410000	53.74	---	74.00	20.26	V	7.9

Common Information

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum



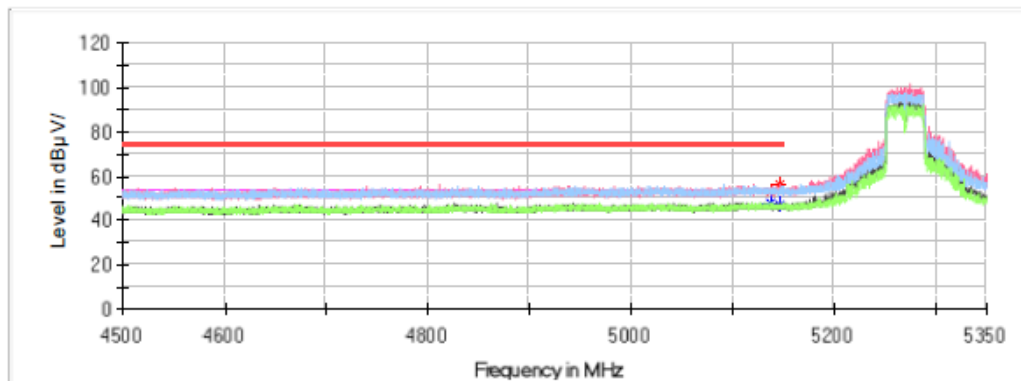
Critical Freqs

Frequency (MHz)	MaxPeak (dB μV/m)	Average (dB μV/m)	Limit (dB μV/m)	Margin (dB)	Pol	Corr. (dB/m)
5350.275000	---	51.24	54.00	2.76	V	8.7
5350.275000	57.11	---	74.00	16.89	V	8.7
5351.178000	---	49.91	54.00	4.09	H	8.7
5351.178000	59.74	---	74.00	14.26	H	8.7

802.11n-HT40 Mode:**Common Information**

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum

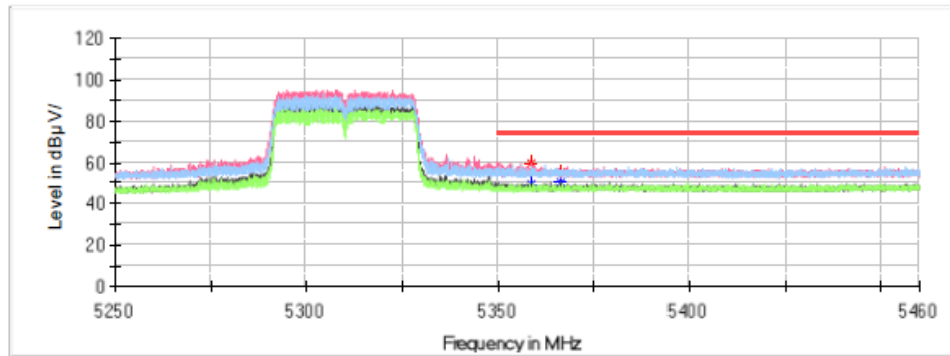
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
5138.010000	53.04	---	74.00	20.96	H	8.2
5138.010000	---	47.90	54.00	6.10	H	8.2
5147.445000	---	47.30	54.00	6.70	V	8.2
5147.445000	56.14	---	74.00	17.86	V	8.2

Common Information

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum



Critical Freqs

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
5358.843000	59.60	---	74.00	14.40	V	8.8
5358.843000	---	49.61	54.00	4.39	V	8.8
5366.214000	55.70	---	74.00	18.30	H	8.8
5366.214000	---	50.11	54.00	3.89	H	8.8

Band Edge Emissions (5470-5725MHz Band):

Note:

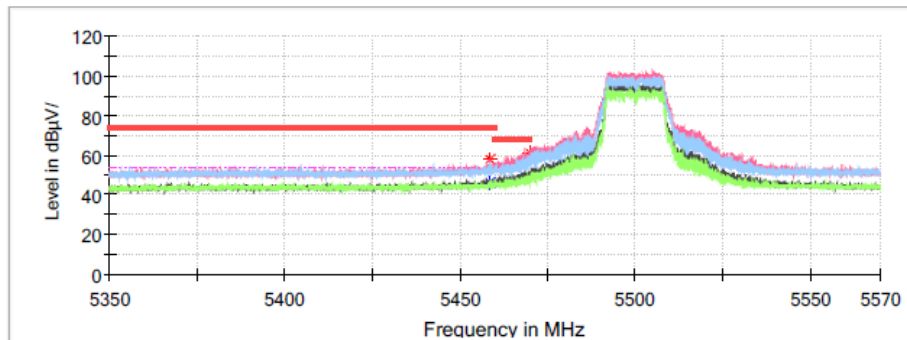
1. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
2. Corrected Amplitude = Corrected Factor + Reading
3. Margin = Limit - Corrected. Amplitude

802.11a Mode:

Common Information

Project No.:	RSHA240124005
Test Mode:	5G Wi-Fi
Standard:	FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.407
Test Engineer:	Destine Hu

Full Spectrum

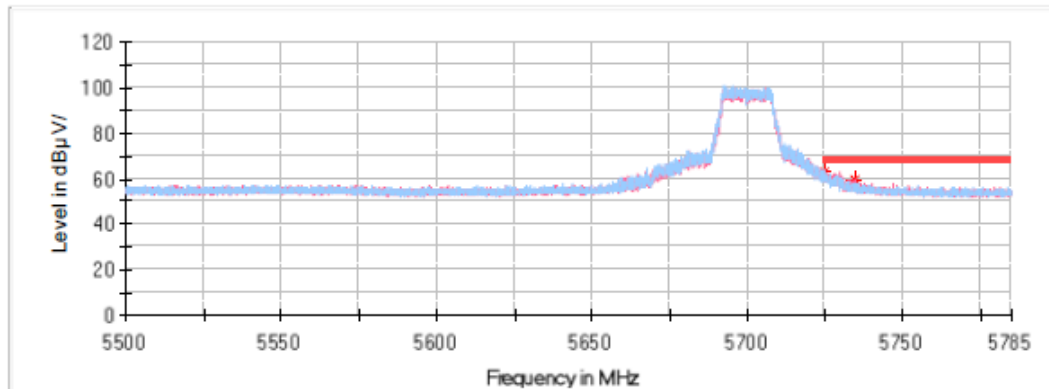
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
5458.592000	57.49	---	74.00	16.51	H	5.0
5458.592000	---	46.45	54.00	7.55	H	5.0
5469.988000	60.97	---	68.20	7.23	V	5.0

Common Information

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum



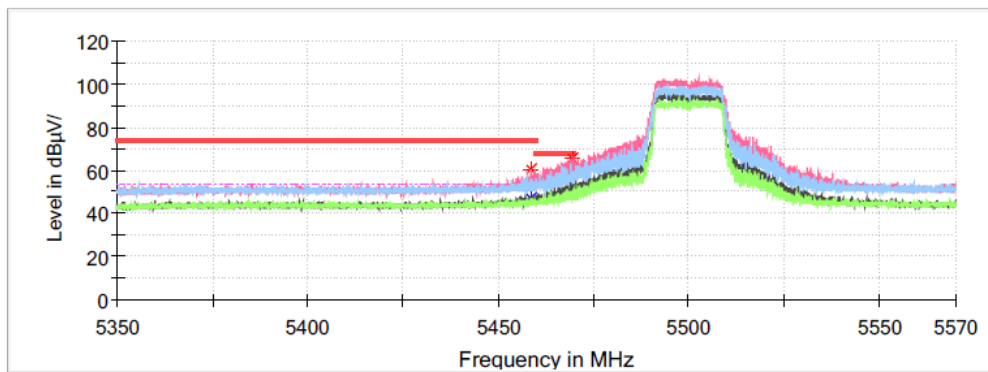
Critical Freqs

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
5725.093000	63.09	---	68.20	5.11	V	8.9
5734.811500	59.97	---	68.20	8.23	V	8.9

802.11n-HT20 Mode:**Common Information**

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum

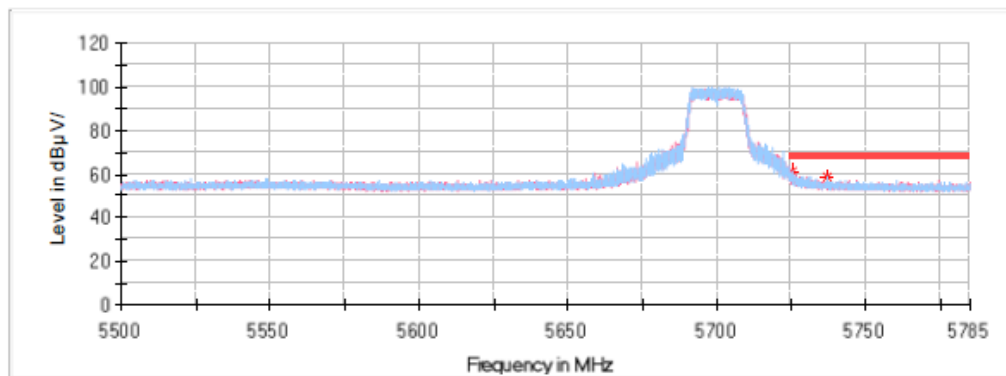
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
5458.548000	60.57	---	74.00	13.43	V	5.0
5458.548000	---	47.39	54.00	6.61	V	5.0
5469.504000	65.09	---	68.20	3.11	V	5.0

Common Information

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum



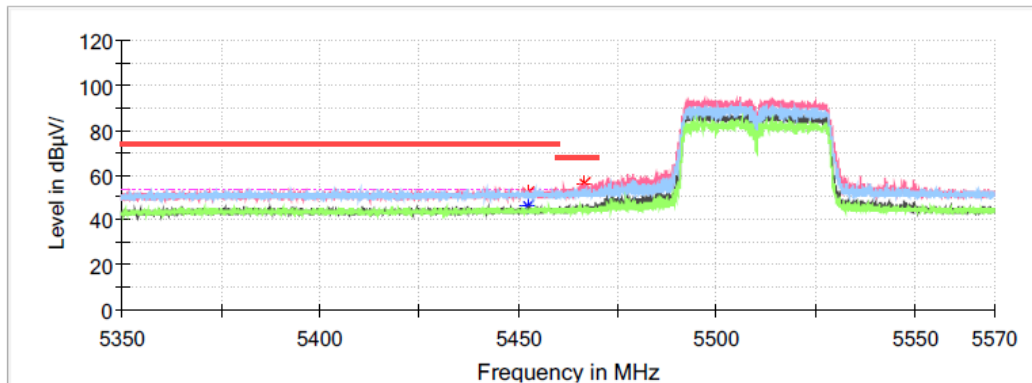
Critical Freqs

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
5725.435000	61.64	---	68.20	6.56	H	8.9
5737.262500	58.71	---	68.20	9.49	H	8.9

802.11n-HT40 Mode:**Common Information**

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum

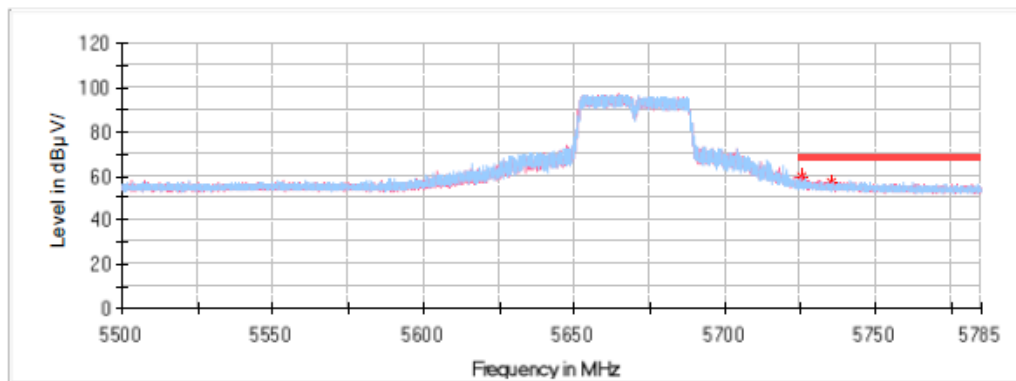
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
5452.410000	---	46.26	54.00	7.74	H	5.0
5452.410000	51.69	---	74.00	22.31	H	5.0
5466.842000	56.56	---	68.20	11.64	V	5.0

Common Information

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum



Critical Freqs

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
5725.150000	59.75	---	68.20	8.45	V	8.9
5735.296000	57.35	---	68.20	10.85	V	8.9

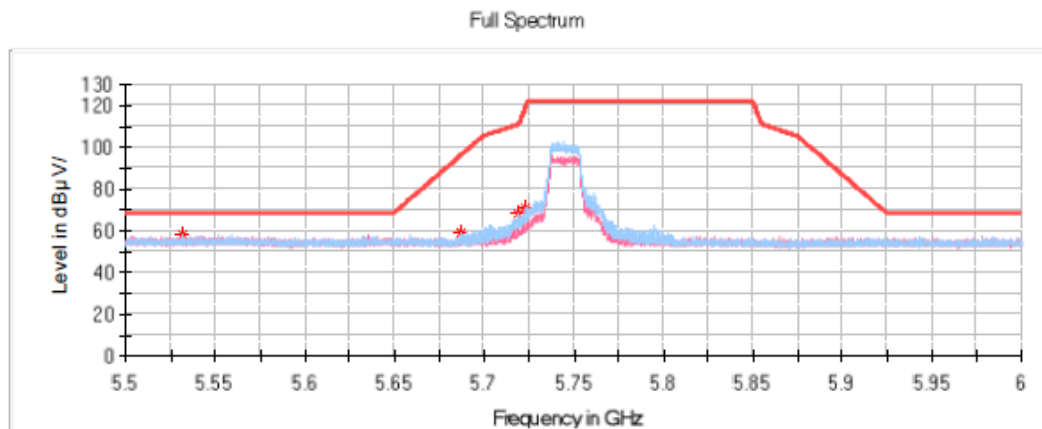
Bandedge Emissions Test (5725-5850MHz Band):

Note:

1. Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
2. Corrected Amplitude = Corrected Factor + Reading
3. Margin = Limit - Corrected. Amplitude

802.11a Mode:**Common Information**

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Destine Hu

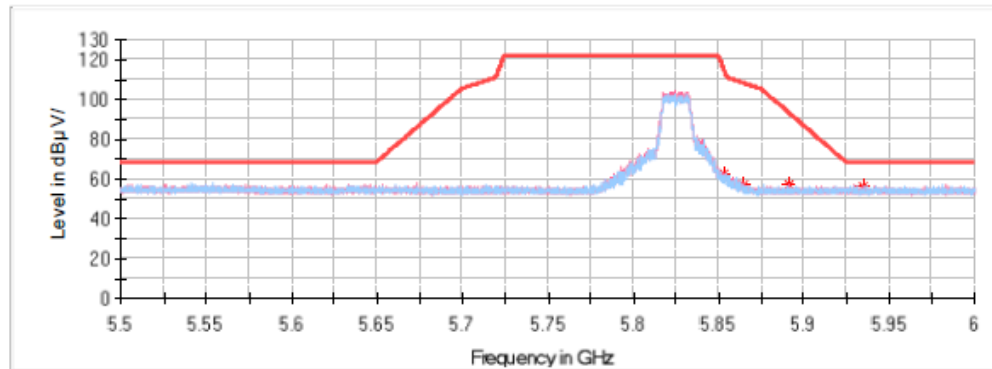
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB µV/m)	Average (dB µV/m)	Limit (dB µV/m)	Margin (dB)	Pol	Corr. (dB/m)
5532.100000	58.08	---	68.20	10.12	H	9.1
5687.150000	59.32	---	95.69	36.37	H	8.9
5718.850000	67.86	---	110.48	42.61	H	8.9
5723.300000	70.68	---	118.32	47.64	H	8.9

Common Information

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum



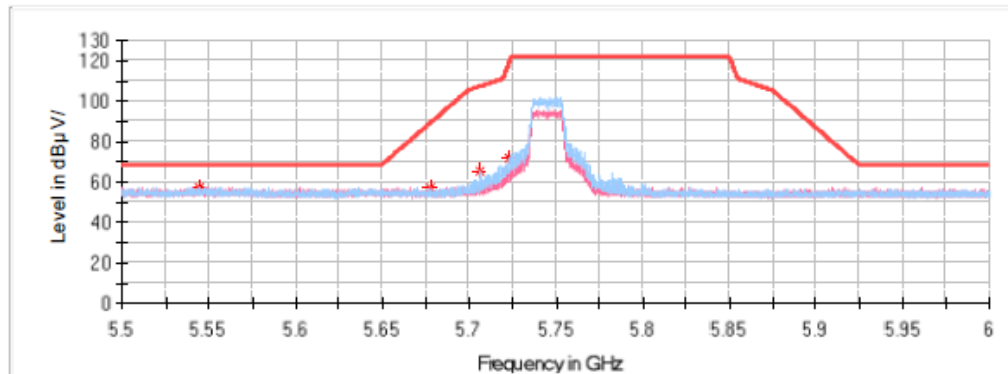
Critical Freqs

Frequency (MHz)	MaxPeak (dB µV/m)	Average (dB µV/m)	Limit (dB µV/m)	Margin (dB)	Pol	Corr. (dB/m)
5853.000000	62.76	---	115.36	52.60	V	8.7
5864.600000	57.61	---	108.11	50.50	V	8.7
5890.850000	57.64	---	93.47	35.83	V	8.7
5934.900000	56.42	---	68.20	11.78	V	8.6

802.11n-HT20 Mode:**Common Information**

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum

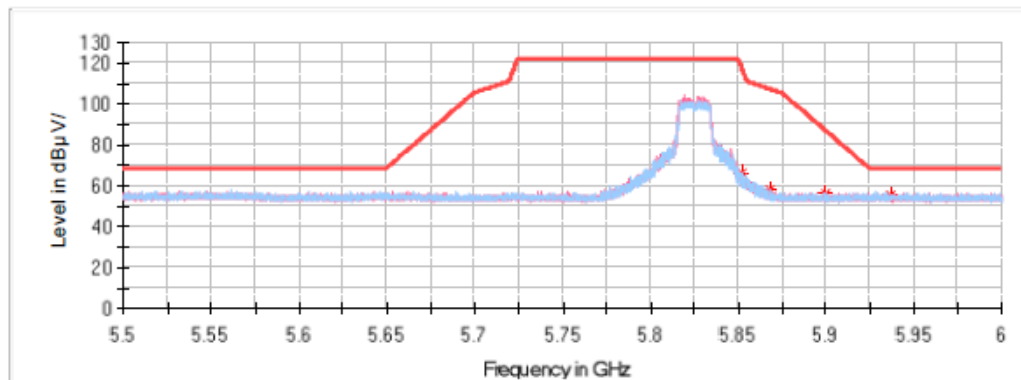
**Critical_Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
5544.450000	57.61	---	68.20	10.59	H	9.1
5677.500000	57.18	---	88.55	31.37	V	8.9
5706.650000	65.68	---	107.06	41.38	H	8.9
5723.100000	72.07	---	117.87	45.79	H	8.9

Common Information

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum



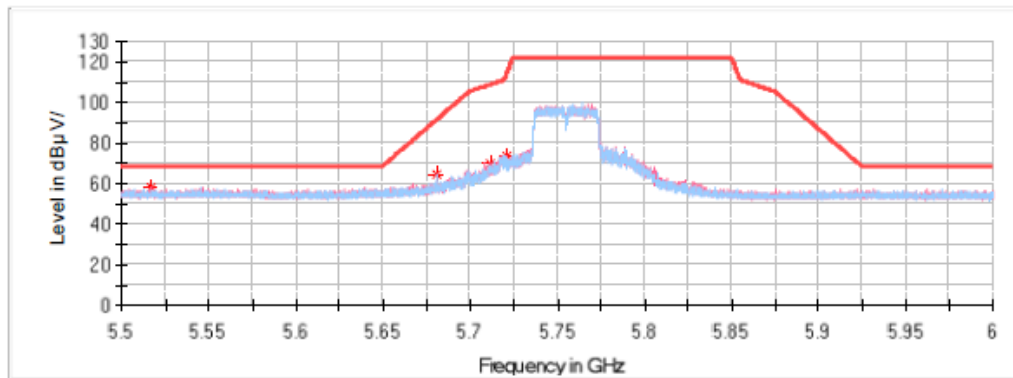
Critical Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
5852.500000	65.92	---	116.50	50.58	H	8.7
5867.750000	58.32	---	107.23	48.91	H	8.7
5899.650000	56.07	---	86.96	30.89	V	8.7
5936.700000	55.77	---	68.20	12.43	V	8.6

802.11n-HT40 Mode:**Common Information**

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum

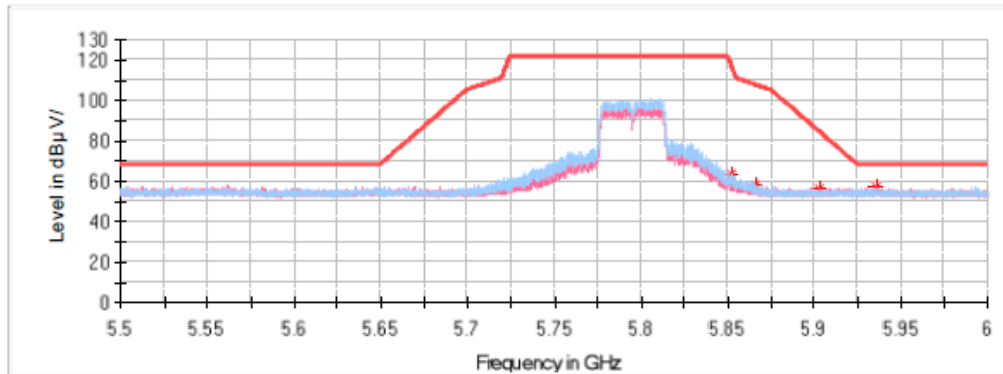
**Critical Freqs**

Frequency (MHz)	MaxPeak (dB μV/m)	Average (dB μV/m)	Limit (dB μV/m)	Margin (dB)	Pol	Corr. (dB/m)
5516.750000	58.05	---	68.20	10.15	H	9.1
5680.300000	64.55	---	90.62	26.08	H	8.9
5711.400000	70.36	---	108.39	38.04	V	8.9
5720.750000	73.32	---	112.51	39.19	V	8.9

Common Information

Project No.: RSHA240124005
Test Mode: 5G Wi-Fi
Standard: FCC Part 15.407
Test Engineer: Destine Hu

Full Spectrum



Critical Freqs

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
5852.350000	63.21	---	116.84	53.64	H	8.7
5865.900000	58.23	---	107.75	49.52	H	8.7
5902.400000	56.20	---	84.92	28.73	V	8.7
5935.600000	57.19	---	68.20	11.01	V	8.6

EMISSION BANDWIDTH**Test Result:** Compliant*5150-5250 MHz:*

Test mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
802.11 a	Low	5180	21.571	16.560
	Middle	5200	21.569	16.600
	High	5240	23.374	16.700
802.11 n20	Low	5180	21.658	17.800
	Middle	5200	21.917	17.850
	High	5240	24.426	17.950
802.11 n40	Low	5190	40.200	36.500
	High	5230	66.440	36.700

Note: the 99% Occupied Bandwidth have not fall into the band 5250-5350MHz.

5250-5350 MHz:

Test mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
802.11 a	Low	5260	23.941	16.750
	Middle	5280	23.389	16.700
	High	5320	21.564	16.600
802.11 n20	Low	5260	28.291	18.050
	Middle	5280	29.341	17.950
	High	5320	22.119	17.900
802.11 n40	Low	5270	71.295	36.800
	High	5310	40.300	36.500

5470-5725 MHz:

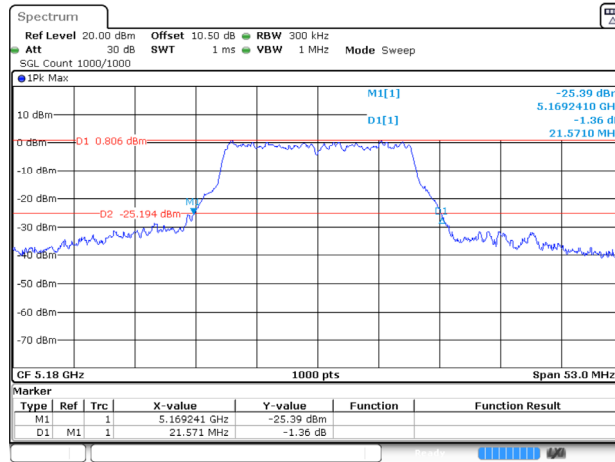
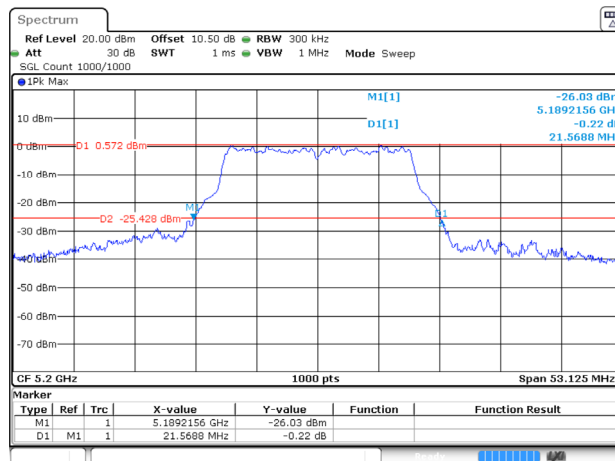
Test mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
802.11 a	Low	5500	24.102	16.650
	Middle	5580	24.747	16.650
	High	5700	21.975	16.600
802.11 n20	Low	5500	26.413	18.000
	Middle	5580	26.507	18.000
	High	5700	23.948	17.900
802.11 n40	Low	5510	40.200	36.500
	Middle	5550	40.300	36.500
	High	5670	61.560	36.700

5725-5850MHz:

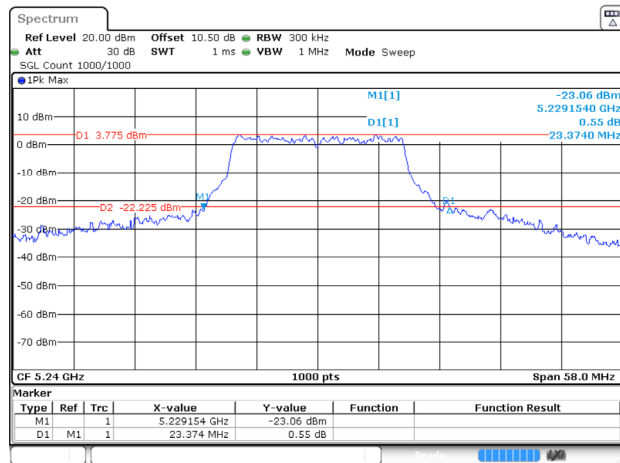
Test mode	Channel	Frequency (MHz)	99% Bandwidth (MHz)
802.11 a	Low	5745	16.700
	Middle	5785	16.650
	High	5825	16.700
802.11 n20	Low	5745	18.050
	Middle	5785	17.950
	High	5825	18.000
802.11 n40	Low	5755	36.800
	High	5795	36.800

Note: the 99% Occupied Bandwidth have not fall into the band 5470-5725MHz.

Test mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
802.11 a	Low	5745	16.450	0.5
	Middle	5785	16.450	
	High	5825	16.450	
802.11 n20	Low	5745	17.850	
	Middle	5785	17.850	
	High	5825	17.800	
802.11 n40	Low	5755	36.700	
	High	5795	36.800	

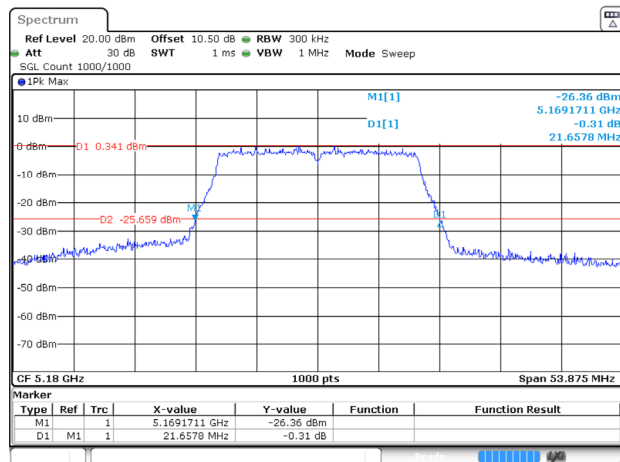
26dB Bandwidth**5150-5250 MHz Band:****802.11a mode, 5180MHz****802.11a mode, 5200MHz**

802.11a mode, 5240MHz



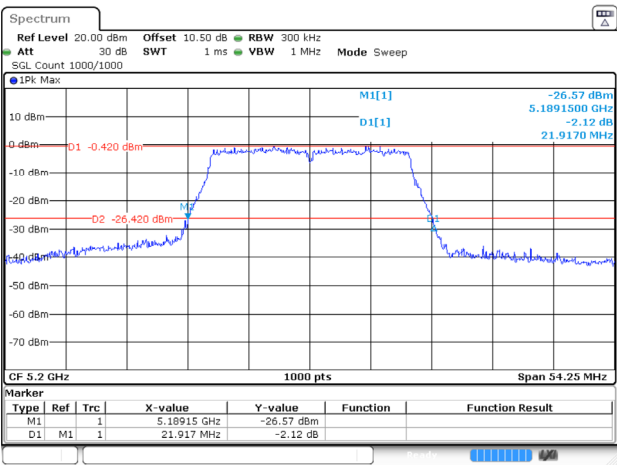
ProjectNo.: RSHA240124005 Tester: Bard Liu
Date: 2 MAY 2024 10:35:09

802.11n-HT20 mode, 5180MHz



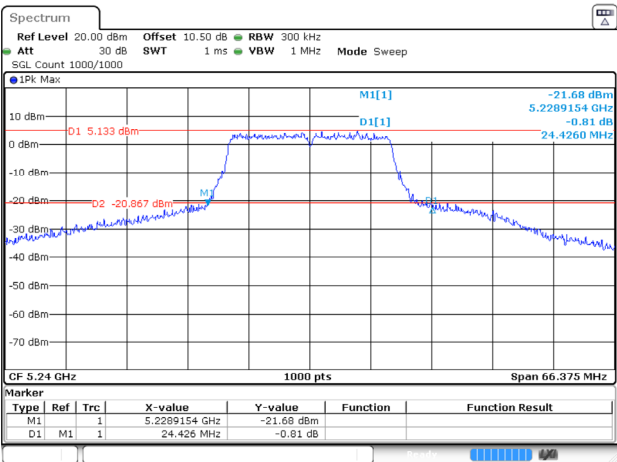
ProjectNo.: RSHA240124005 Tester: Bard Liu
Date: 2 MAY 2024 10:38:42

802.11n-HT20 mode, 5200MHz



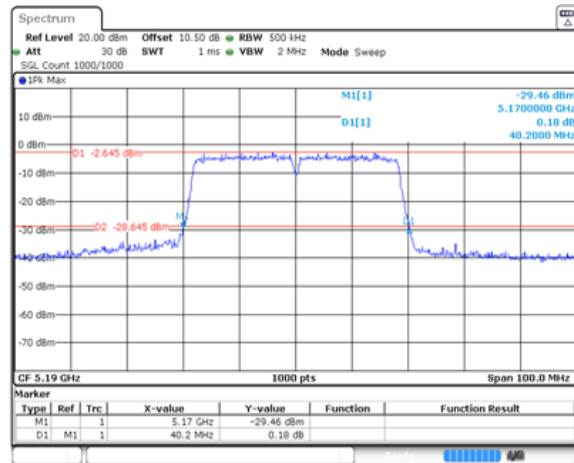
ProjectNo.: RSHA240124005 Tester: Bard Liu
Date: 2 MAY 2024 10:41:53

802.11n-HT20 mode, 5240MHz



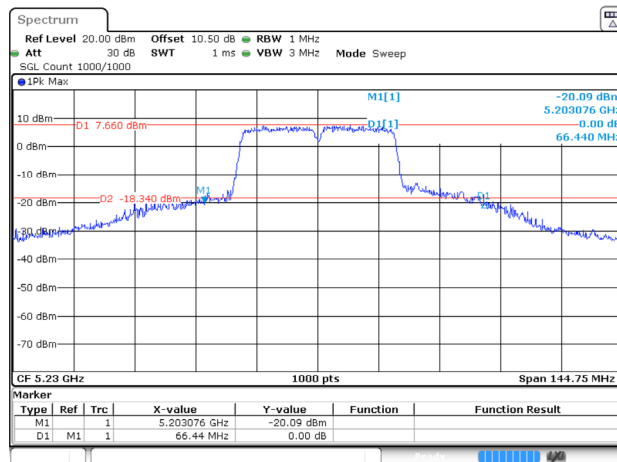
ProjectNo.: RSHA240124005 Tester: Bard Liu
Date: 2 MAY 2024 10:45:08

802.11n-HT40 mode, 5190MHz



ProjectNo.: RSHA240124005 Tester: Bard Liu
Date: 2 MAY 2024 10:48:04

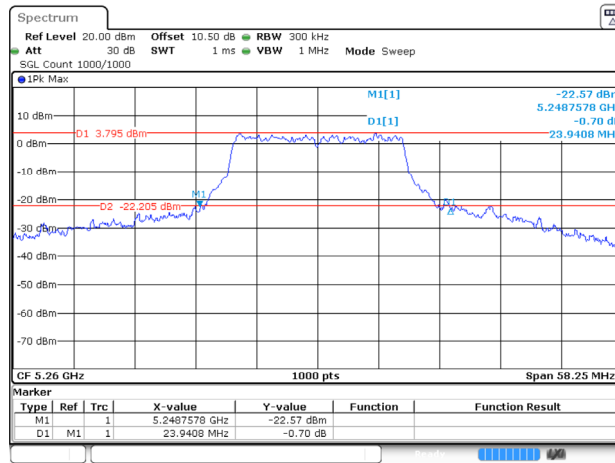
802.11n-HT40 mode, 5230MHz



ProjectNo.: RSHA240124005 Tester: Bard Liu
Date: 2 MAY 2024 10:50:56

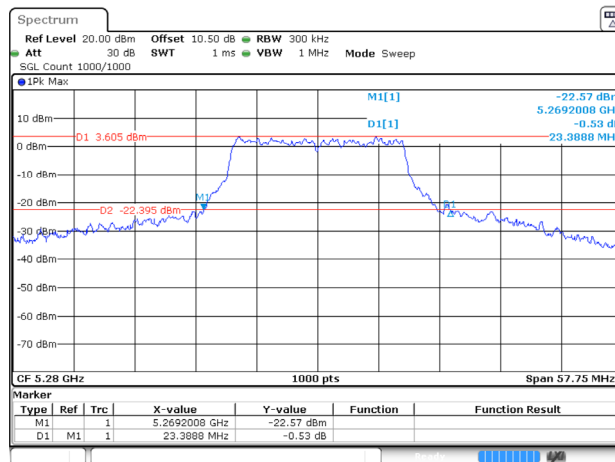
5250-5350 MHz Band:

802.11a mode, 5260MHz



ProjectNo.: RSHA240124005 Tester: Bard Liu
Date: 2 MAY 2024 10:54:52

802.11a mode, 5280MHz



ProjectNo.: RSHA240124005 Tester: Bard Liu
Date: 2 MAY 2024 11:00:41