

FCC PART 15.247

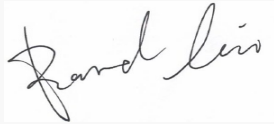
TEST REPORT

For

Tersus GNSS Inc.

Rm 601, Bldg E2, No. 88, Jinjihu Ave, Suzhou, China

FCC ID: 2AMDJ-TREK

Report Type: Original Report	Product Name: GNSS Receiver
Report Number: RSHA241101001-00D	
Report Date: 2025-09-05	
Reviewed By:	 Bard Liu
Approved By:	 Kyle Xu
Prepared By:	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.

TABLE OF CONTENTS

REPORT REVISION HISTORY	4
GENERAL INFORMATION	5
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	5
OBJECTIVE	5
TEST METHODOLOGY	6
MEASUREMENT UNCERTAINTY	6
TEST FACILITY	6
SYSTEM TEST CONFIGURATION	7
DESCRIPTION OF TEST CONFIGURATION	7
EQUIPMENT MODIFICATIONS	7
EUT EXERCISE SOFTWARE	8
SUPPORT EQUIPMENT LIST AND DETAILS	11
EXTERNAL I/O CABLE	11
BLOCK DIAGRAM OF TEST SETUP	12
SUMMARY OF TEST RESULTS	14
TEST EQUIPMENT LIST	15
FCC §1.1310 & §2.1091 - MAXIMUM PERMISSIBLE EXPOSURE (MPE)	17
FCC §15.203 - ANTENNA REQUIREMENT	19
APPLICABLE STANDARD	19
ANTENNA CONNECTOR CONSTRUCTION	19
FCC §15.207 (a) - AC LINE CONDUCTED EMISSIONS	20
APPLICABLE STANDARD	20
TEST SYSTEM SETUP	20
EMI TEST RECEIVER SETUP	20
TEST PROCEDURE	21
TEST RESULTS SUMMARY	21
TEST DATA: SEE APPENDIX	21
FCC §15.209, §15.205 & §15.247(d) - SPURIOUS EMISSIONS	22
APPLICABLE STANDARD	22
TEST SYSTEM SETUP	22
EMI TEST RECEIVER SETUP	24
TEST PROCEDURE	24
TEST RESULTS SUMMARY	24
TEST DATA: SEE APPENDIX	24
FCC §15.247(A) (2) - 6 DB EMISSION BANDWIDTH	25
APPLICABLE STANDARD	25
TEST PROCEDURE	25
TEST DATA: SEE APPENDIX	25
FCC §15.247(B) (3) - MAXIMUM CONDUCTED OUTPUT POWER	26
APPLICABLE STANDARD	26
TEST PROCEDURE	26
TEST DATA: SEE APPENDIX	26
FCC §15.247(D) – 100 KHZ BANDWIDTH OF FREQUENCY BAND EDGE	27
APPLICABLE STANDARD	27
TEST PROCEDURE	27
TEST DATA: SEE APPENDIX	27

FCC §15.247(E) - POWER SPECTRAL DENSITY	28
APPLICABLE STANDARD.....	28
TEST PROCEDURE	28
TEST DATA: SEE APPENDIX	28
Appendix - TEST DATA.....	29
AC LINE CONDUCTED EMISSIONS.....	29
SPURIOUS EMISSIONS	36
6 dB EMISSION BANDWIDTH	75
OCCUPIED BANDWIDTH	80
POWER SPECTRAL DENSITY	85
TRANSMITTER OUTPUT POWER MEASUREMENT	90
EUT PHOTOGRAPHS.....	96
TEST SETUP PHOTOGRAPHS.....	97

REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	RSHA241101001-00D	R1V1	2025-09-05	Initial Release

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant	Tersus GNSS Inc.
Product Name	GNSS Receiver
Tested Model	Oscar Trek
Power Supply	DC 9-28 V charging by adapter or DC 7.4V powered by battery
RF Function:	2.4G Wi-Fi; BLE
Operating Band/Frequency:	2.4G Wi-Fi: 2412~2462 MHz(802.11b/g/n20), 2422~2452 MHz(802.11n40) BLE(1Mbps/2Mbps): 2402-2480 MHz
Maximum Peak Output Power:	2.4G Wi-Fi: 802.11b: 18.69dBm 802.11g: 17.17dBm 802.11n20: 15.82dBm 802.11n40: 11.76dBm BLE(1Mbps): 2.62dBm BLE(2Mbps): 2.72dBm
Channel Number:	2.4G Wi-Fi: 11(802.11b/g/n20), 7(802.11n40) BLE: 40
Channel Separation:	2.4G Wi-Fi: 5 MHz BLE: 2 MHz
Modulation Type:	2.4G Wi-Fi: DSSS, OFDM BLE: GFSK
Antenna Type:	2.4G Wi-Fi /BLE: Patch antenna
★Maximum Antenna Gain:	2.4G Wi-Fi: -0.26 dBi BLE: 4.41 dBi

Adapter Information:

Model: NT-120300D1

Input: 100-240V 50/60Hz 1.6A Max

Output: 12V, 3.0A

Note: The maximum antenna gain was declared by the manufacturer.

All measurement and test data in this report was gathered from production sample serial number: RSHA241101001-1 (Assigned by the BACL (Kunshan). The EUT supplied by the applicant was received on 2024-11-01.)

Objective

This report is prepared for *Tersus GNSS Inc.* in accordance with Part 2-Subpart J, Part 15-Subparts A and C of the Federal Communication Commissions' rules.

The tests were performed in order to determine Compliant with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.247 rules.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10:2020, American National Standard of Procedures for Compliant Testing of Unlicensed Wireless Devices and FCC 558074 D01 15.247 Meas Guidance v05r02.

Measurement Uncertainty

Item		Uncertainty
AC Power Lines Conducted Emissions		3.19dB
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

Channel List for BLE mode:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	14	2430	28	2458
1	2404	15	2432	29	2460
2	2406	16	2434	30	2462
3	2408	17	2436	31	2464
4	2410	18	2438	32	2466
5	2412	19	2440	33	2468
6	2414	20	2442	34	2470
7	2416	21	2444	35	2472
8	2418	22	2446	36	2474
9	2420	23	2448	37	2476
10	2422	24	2450	38	2478
11	2424	25	2452	39	2480
12	2426	26	2454	/	/
13	2428	27	2456	/	/

EUT was tested with channel 0, 19 and 39.

Channel List for Wi-Fi Mode:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	7	2442
2	2417	8	2447
3	2422	9	2452
4	2427	10	2457
5	2432	11	2462
6	2437	/	/

For 802.11b, 802.11g and 802.11n-HT20 mode, EUT was tested with Channel 1, 6 and 11.
For 802.11n-HT40 mode, EUT was tested with Channel 3, 6 and 9.

Equipment Modifications

No modification was made to the EUT tested.

EUT Exercise Software

RF test software: secureCrt

Pre-scan with all the data rates, and the worst case was performed as below:

Mode	Data rate	Power Level*		
		Low Channel	Middle Channel	High Channel
802.11b	1Mbps	16	16	16
802.11g	6Mbps	14	14	14
802.11n-HT20	MCS0	13	13	13
802.11n-HT40	MCS0	12	12	12
BLE(1Mbps)	1 Mbps	2	2	2
BLE(2Mbps)	2 Mbps	2	2	2

Note: The power level was declared by the applicant.

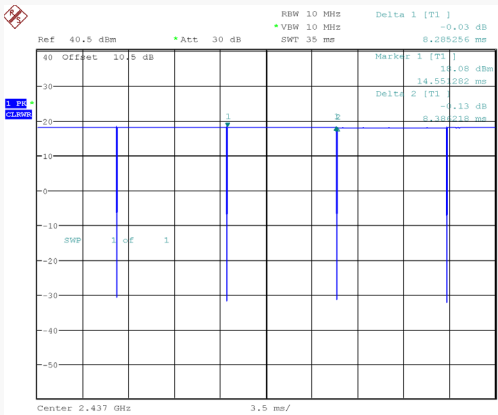
Duty Cycle:

Environmental Conditions & Test Information

Test Date:	2025-01-17	2025-02-17
Temperature:	23.4 °C	24.0 °C
Relative Humidity:	55 %	52 %
ATM Pressure:	101.1 kPa	101.0 kPa
Test Result:	Pass	Pass
Test Engineer:	Neil Zhou	Neil Zhou

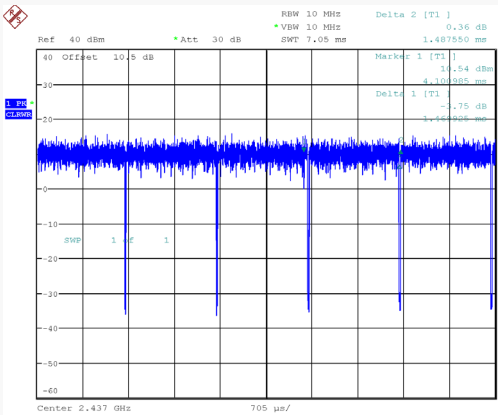
2.4G Wi-Fi

802.11b Mode Middle Channel



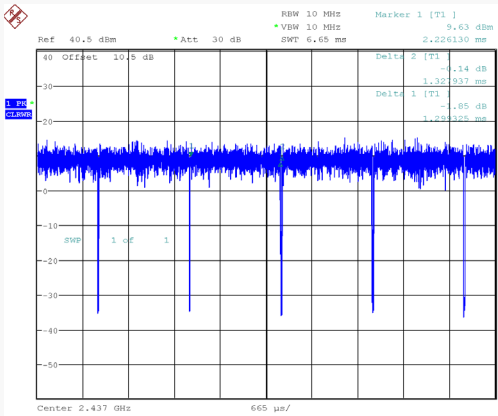
ProjectNo.:RSHA241101001 Tester:Neil Zhou
Date: 17.FEB.2025 09:17:152

802.11g Mode Middle Channel



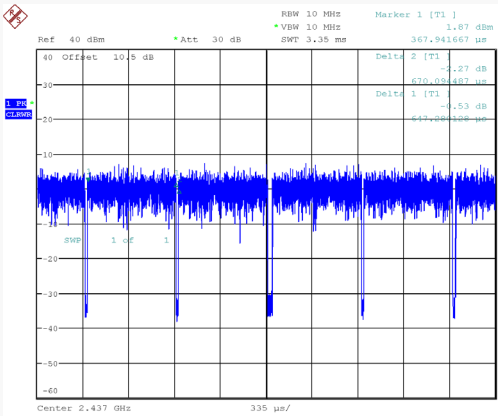
ProjectNo.:RSHA241101001 Tester:Neil Zhou
Date: 17.FEB.2025 09:59:03

802.11n-HT20 Mode Middle Channel



ProjectNo.:RSHA241101001 Tester:Neil Zhou
Date: 17.FEB.2025 10:00:16

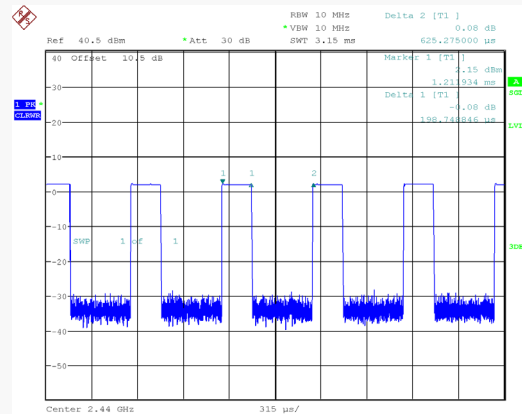
802.11n-HT40 Mode Middle Channel



ProjectNo.:RSHA241101001 Tester:Neil Zhou
Date: 17.FEB.2025 10:01:36

BLE(2Mbps) Mode

Middle Channel



ProjectNo.:RSHA241101001 Tester:Neil Zhou
Date: 17.JAN.2025 16:41:24

Mode	Duty Cycle (%)	Ton(ms)	Ton+off(ms)
802.11b	98.80	8.285	8.386
802.11g	98.79	1.470	1.488
802.11n-HT20	97.82	1.299	1.328
802.11n-HT40	96.57	0.647	0.670
BLE(1Mbps)	60.00	0.372	0.620
BLE(2Mbps)	31.84	0.199	0.625

Page 10 of 98

Support Equipment List and Details

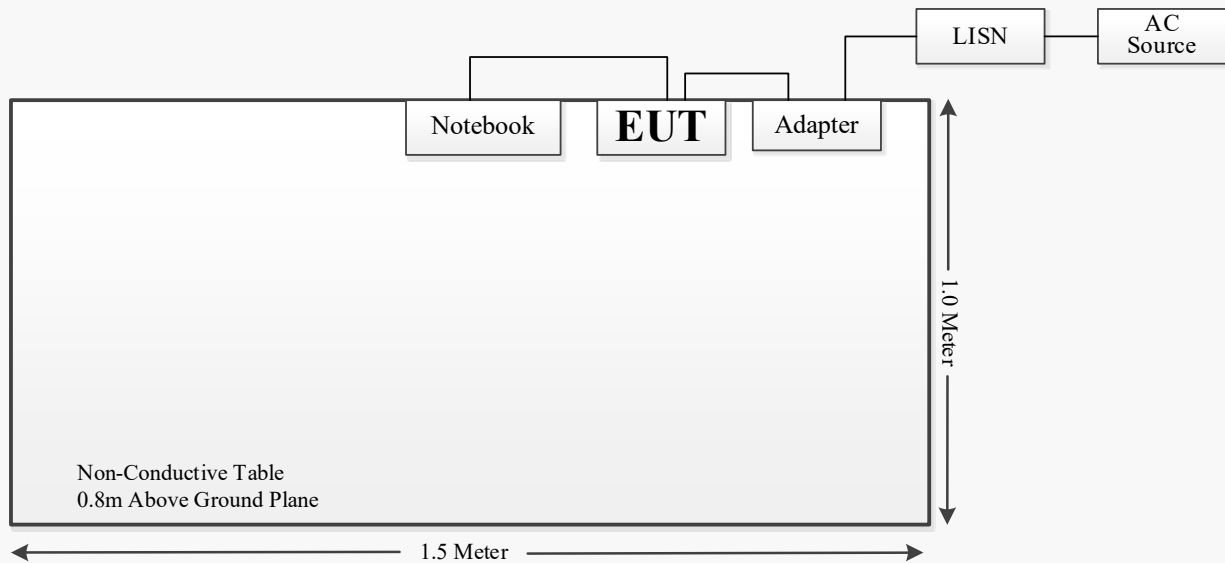
Manufacturer	Description	Model	Serial Number
Lenovo	Notebook	Y7000P2020H	Unknown

External I/O Cable

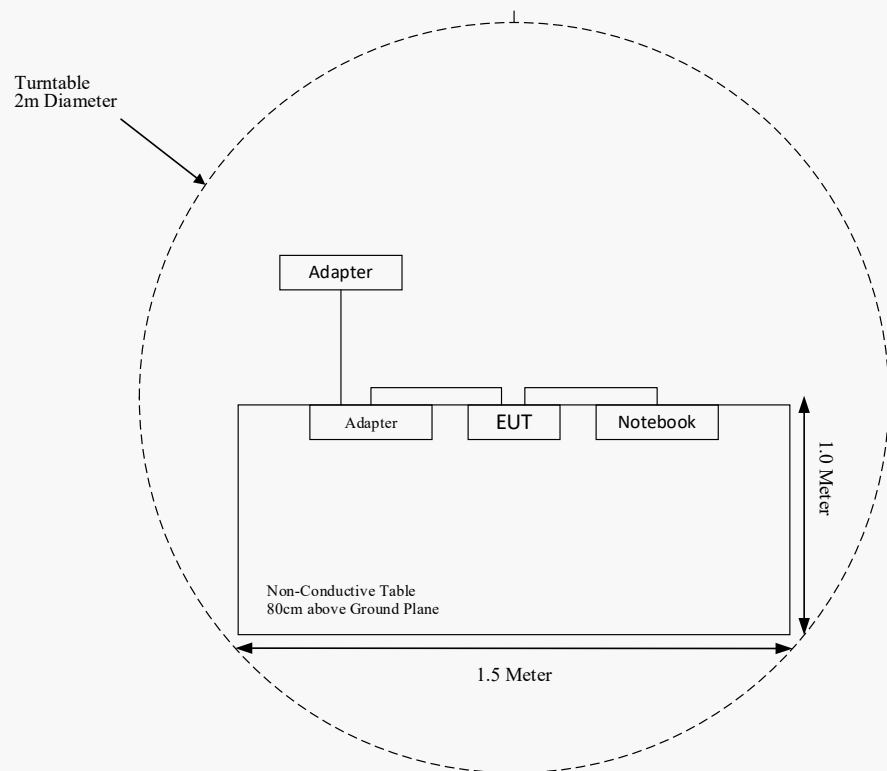
Cable Description	Length (m)	From Port	To Port
Power Cable 1	1.5	EUT	Adapter
Power Cable 2	1.0	Adapter	AC Source
USB Cable	1.5	Notebook	EUT

Block Diagram of Test Setup

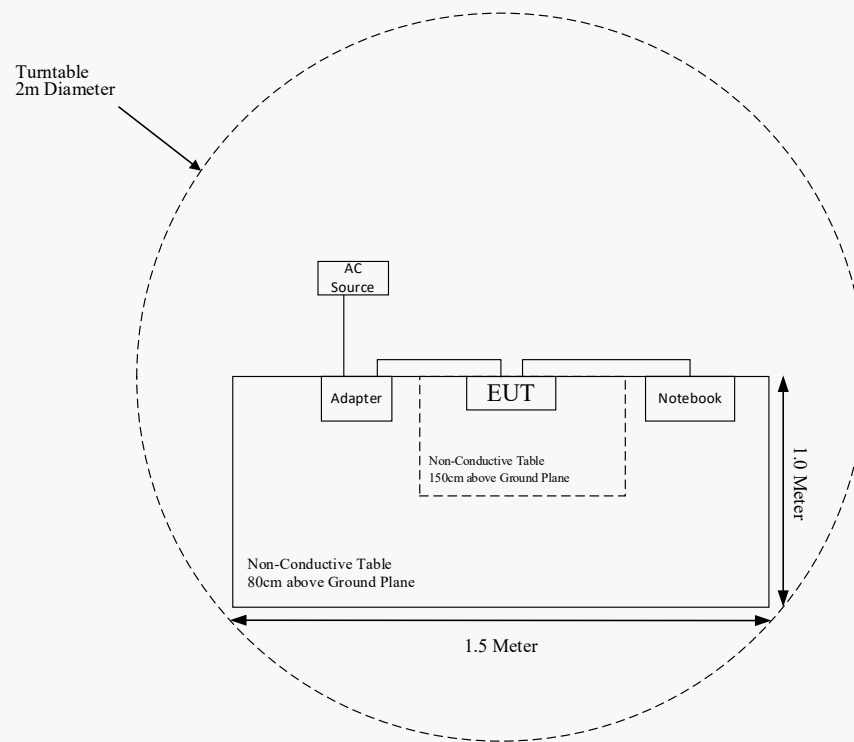
For Conducted Emissions:



For Radiated Emissions (Below 1GHz):



For Radiated Emissions (1GHz - 25GHz):



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.203	Antenna Requirement	Compliant
§15.207 (a)	AC Line Conducted Emissions	Compliant
§15.205, §15.209, §15.247(d)	Spurious Emissions	Compliant
§15.247 (a)(2)	6 dB Emission Bandwidth	Compliant
§15.247(b)(3)	Maximum Conducted Output Power	Compliant
§15.247(d)	100 kHz Bandwidth of Frequency Band Edge	Compliant
§15.247(e)	Power Spectral Density	Compliant
§1.1310 & §2.1091	Maximum Permissible Exposure (MPE)	Compliant

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	Broadband Antenna	JB3	A090314-1	2024-11-08	2027-11-07
Narda	6dB Attenuator	773-6	10690812-2-1	2024-11-08	2027-11-07
BACL	Active Loop Antenna	1313-1A	4041511	2024-11-22	2027-11-21
Sonoma Instrument	Pre-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	2024-04-23	2025-04-22
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
Radiated Emission Test (Chamber #2)					
Rohde & Schwarz	EMI Test Receiver	ESU40	100207/040	2024-04-25	2025-04-24
Rohde & Schwarz	EMI Test Receiver	ESU40	100207/040	2025-04-09	2026-04-08
ETS-LINDGREN	Horn Antenna	3115	9207-3900	2024-11-03	2027-11-02
ETS-LINDGREN	Horn Antenna	3116	2516	2024-12-12	2027-12-11
A.H.Systems, inc	Amplifier	PAM-0118P	512	2024-04-25	2025-04-24
A.H.Systems, inc	Amplifier	PAM-0118P	512	2025-04-09	2026-04-08
SELECTOR	Amplifier	EM18G40G	060726	2024-04-25	2025-04-24
MICRO-TRONICS	Band Reject Filter	BRM50702	G024	2024-08-05	2025-08-04
Narda	Attenuator	10dB	010	2024-08-15	2025-08-14
Rohde & Schwarz	Auto test Software	EMC32	100361	N/A	N/A
MICRO-COAX	Coaxial Cable	Cable-6	006	2024-04-25	2025-04-24
MICRO-COAX	Coaxial Cable	Cable-6	006	2025-04-09	2026-04-08
MICRO-COAX	Coaxial Cable	Cable-11	011	2024-04-25	2025-04-24
MICRO-COAX	Coaxial Cable	Cable-11	011	2025-04-09	2026-04-08
MICRO-COAX	Coaxial Cable	Cable-12	012	2024-04-25	2025-04-24
MICRO-COAX	Coaxial Cable	Cable-12	012	2025-04-09	2026-04-08
MICRO-COAX	Coaxial Cable	Cable-13	013	2024-04-25	2025-04-24
MICRO-COAX	Coaxial Cable	Cable-13	013	2025-04-09	2026-04-08
RF Conducted Test					
Rohde & Schwarz	Spectrum Analyzer	FSU26	200103	2024-04-25	2025-04-24
Rohde & Schwarz	Spectrum Analyzer	FSU26	200103	2025-04-09	2026-04-08
Rohde & Schwarz	Signal Analyzer	FSV40	101116	2025-04-09	2026-04-08
Narda	Attenuator	10dB	010	2024-08-15	2025-08-14
Anritsu	Power Sensor	MA24418A	12621	2024-04-25	2025-04-24
XHFDZ	RG316 Coaxial Cable	SMA-316	XHF-1175	Each time	N/A

Conducted Emission Test					
Rohde & Schwarz	EMI Test Receiver	ESR	101746	2025-04-08	2026-04-07
Rohde & Schwarz	LISN	ENV216	101115	2025-04-08	2026-04-07
Audix	Test Software	e3	V9	N/A	N/A
Rohde & Schwarz	Pulse Limiter	ESH3-Z2	0357.8810.54	2025-02-20	2026-02-19
MICRO-COAX	Coaxial Cable	Cable-15	015	2025-04-08	2026-04-07

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).

FCC §1.1310 & §2.1091 - MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to subpart §2.1091 and subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time [E], [H] or S (minutes)
0.3- 3.0	614	1.63	(100)*	6
3.0 - 30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6

(B) 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;

According to §1.1310 and §2.1091 RF exposure is calculated.

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:

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

Calculation Data:**General Population/Uncontrolled**

Mode	Frequency Range (MHz)	Antenna Gain		Tune-up Output Power*		Evaluation Distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)	MPE ratio
		(dBi)	(numeric)	(dBm)	(mW)				
2.4G Wi-Fi	2412-2462	-0.26	0.94	19.0	79.43	20	0.0149	1.00	0.0149
BLE	2402-2480	4.41	2.76	3.0	2.00	20	0.0011	1.00	0.0011
BT	2402-2480	4.41	2.76	2.5	1.78	20	0.0010	1.00	0.0010
5G Wi-Fi	5150-5250	2.18	1.65	13.5	22.39	20	0.0073	1.00	0.0073
	5725-5850	-1.37	0.73	11.0	12.59	20	0.0018	1.00	0.0018
GSM 850	824-849	-0.14	0.97	25.81	381.07	20	0.0734	0.55	0.1336
PCS 1900	1850-1910	1.62	1.45	22.81	190.99	20	0.0551	1.0	0.0551
WCDMA Band 2	1850-1910	1.62	1.45	25.00	316.23	20	0.0912	1.0	0.0912
WCDMA Band 4	1710-1755	0.32	1.08	25.00	316.23	20	0.0679	1.0	0.0679
WCDMA Band 5	824-849	-0.14	0.97	25.00	316.23	20	0.0609	0.55	0.1109
LTE Band 2	1850-1910	1.62	1.45	25.00	316.23	20	0.0912	1.0	0.0912
LTE Band 4	1710-1755	0.32	1.08	25.00	316.23	20	0.0679	1.0	0.0679
LTE Band 5	824-849	-0.14	0.97	25.00	316.23	20	0.0609	0.55	0.1109
LTE Band 7	2500-2570	3.78	2.39	25.00	316.23	20	0.1503	1.0	0.1503
LTE Band 12	699-716	-0.14	0.97	25.00	316.23	20	0.0609	0.47	0.1307
LTE Band 13	777-787	-0.14	0.97	25.00	316.23	20	0.0609	0.52	0.1176
LTE Band 25	1850-1915	1.62	1.45	25.00	316.23	20	0.0912	1.0	0.0912
LTE Band 26	814-849	-0.14	0.97	25.00	316.23	20	0.0609	0.54	0.1122
LTE Band 38	2570-2620	3.78	2.39	25.00	316.23	20	0.1503	1.0	0.1503
LTE Band 41	2496-2690	3.78	2.39	25.00	316.23	20	0.1503	1.0	0.1503

Occupational/Controlled

Mode	Frequency Range (MHz)	Antenna Gain		★Tune-up Output Power		Evaluation Distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)	MPE ratio
		(dBi)	(numeric)	(dBm)	(mW)				
UHF	410-470	2.0	1.58	33.5	2238.72	20	0.7058	1.3667	0.5164

Note:

1. The target output powers are all declared by the Manufacturer.
2. The WWAN module FCC ID: XMR201903EG25G (Grant on: 03/29/2019).
3. Wi-Fi, BLE/BT, WWAN and UHF can transmit simultaneously, the worst condition is as below:

$$\sum_i \frac{S_i}{S_{Limit,i}} = 0.0149 + 0.0011 + 0.1503 + 0.5164 = 0.6827 < 1.0$$

Result: The device meet FCC MPE at 20 cm distance.

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 Compliant 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 15.247 (b), 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 permanently attached to the unit. fulfill the requirement of this section. Please refer to the EUT photos.

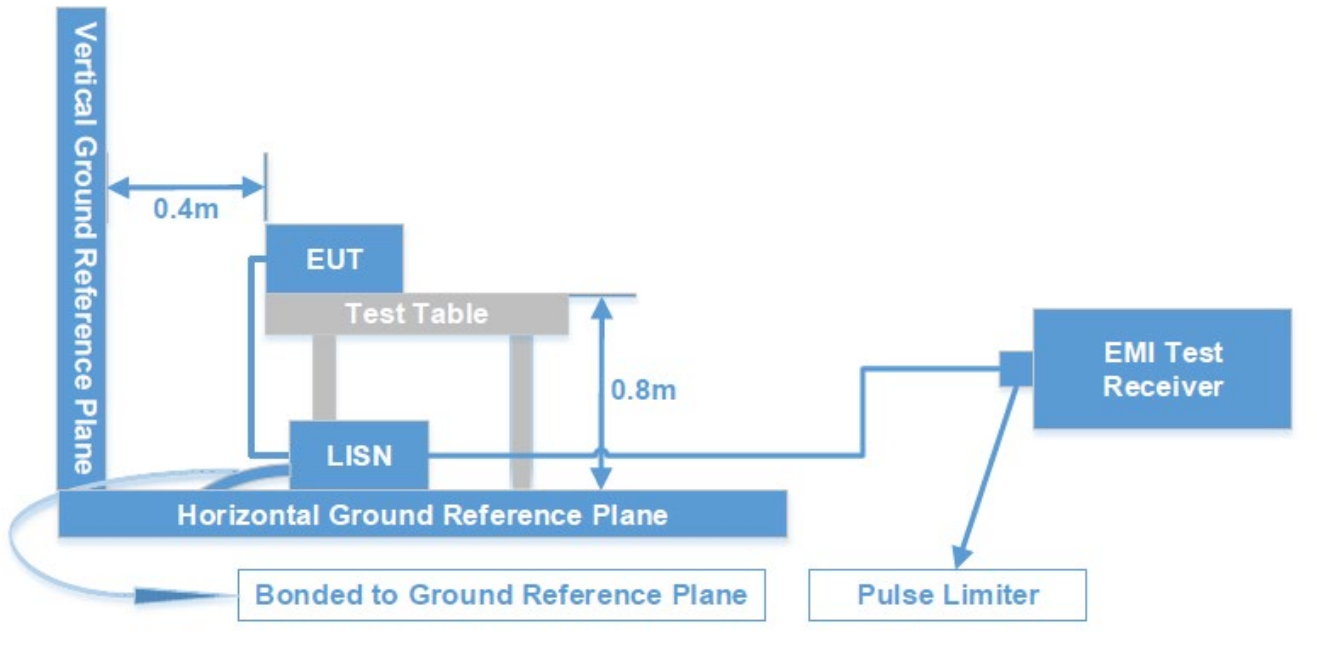
Result: Compliant.

FCC §15.207 (a) - AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207(a)

Test System Setup



The measurement procedure of EUT setup is according with ANSI C63.10:2020. The related limit was specified in FCC Part 15.207.

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

ANSI C63.10:2020 clause 6.2

During the conducted emission test, the EUT was connected to the outlet of 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:

Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)

Level (dBμV) = Read level (dBμV) + 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:

Over Limit (dB) = Level (dBμV) - Limit (dBμV)

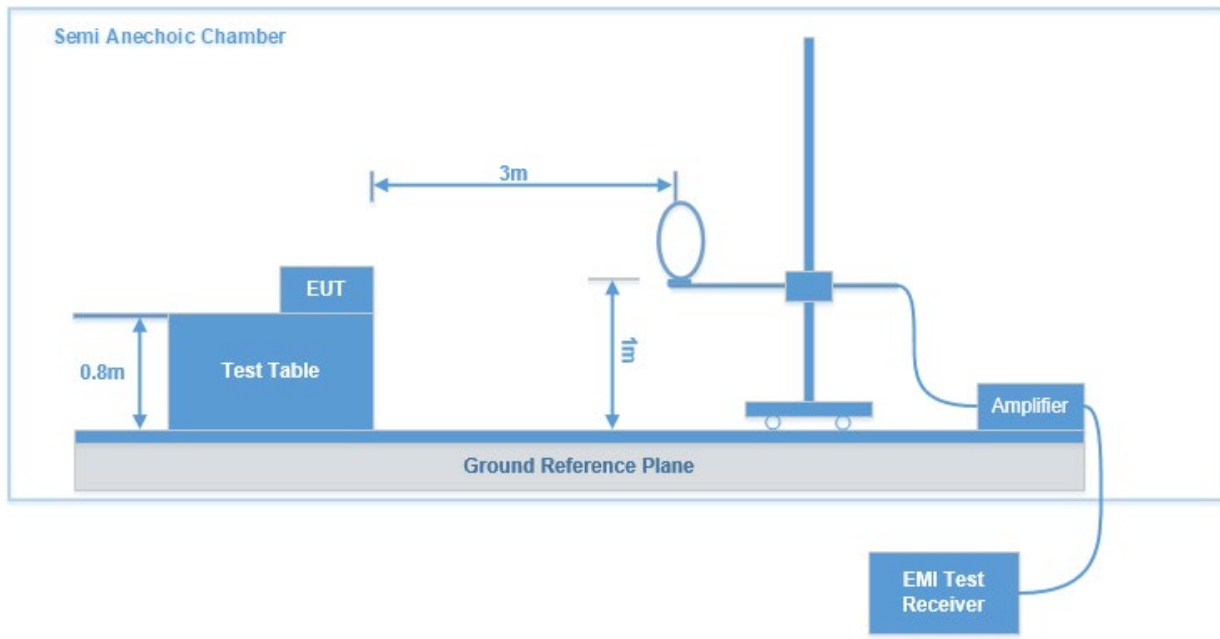
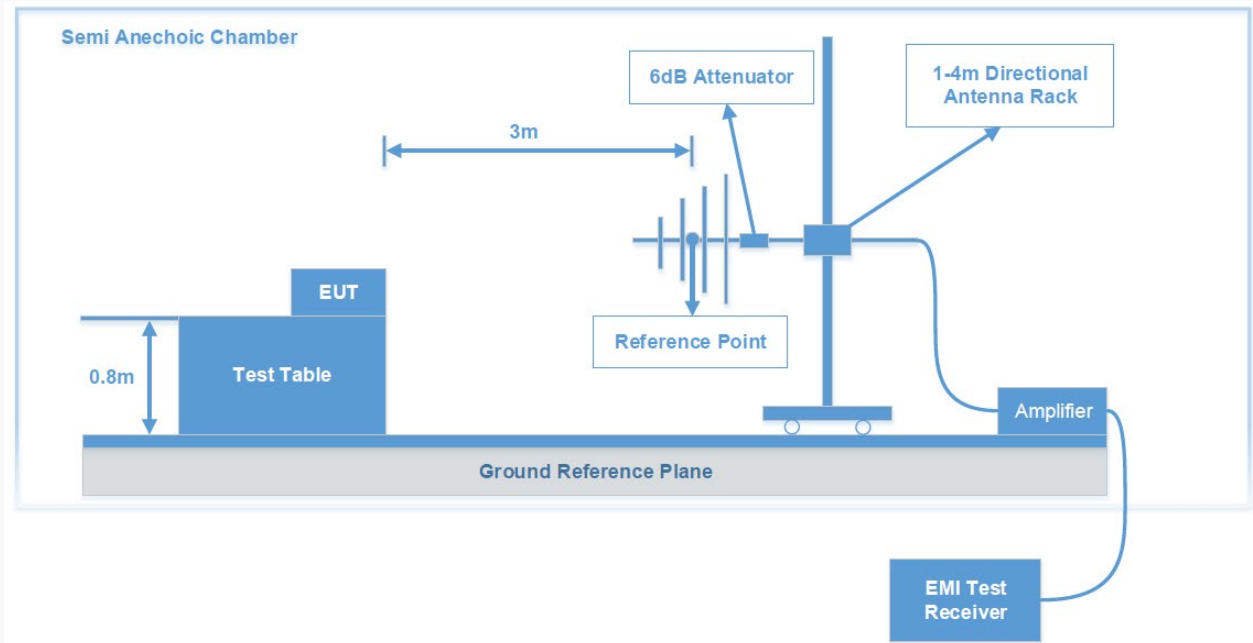
Test Results Summary

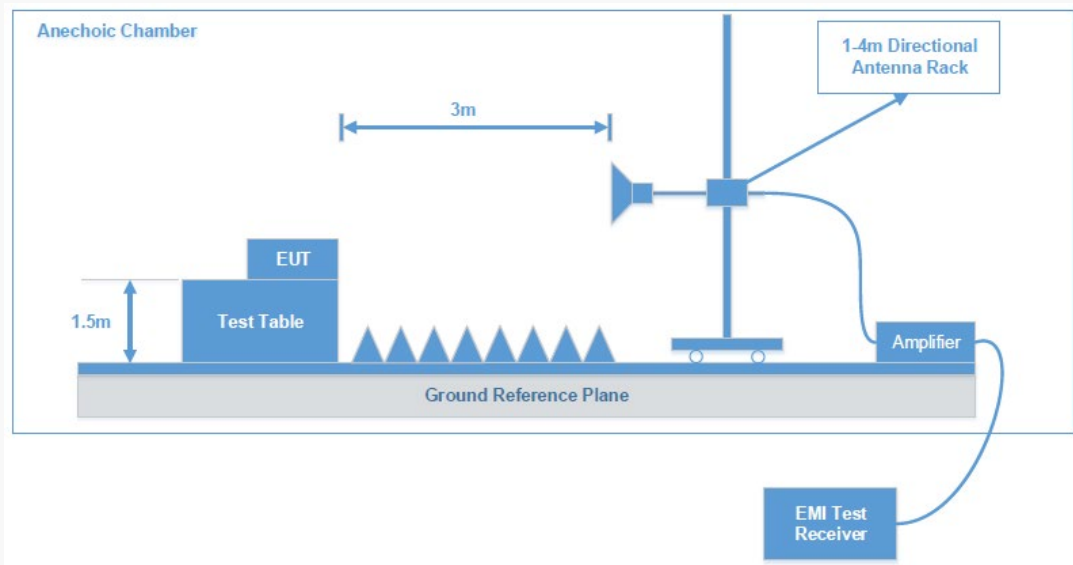
According to the recorded data in following table, the EUT complied with the FCC Part 15.207.

Test Data: See Appendix

FCC §15.209, §15.205 & §15.247(d) - SPURIOUS EMISSIONS**Applicable Standard**

FCC §15.247 (d); §15.209; §15.205;

Test System Setup**9 kHz-30MHz:****30MHz-1GHz:**

Above 1GHz:

The radiated emission tests were performed in the 3 meters test site, using the setup accordance with the ANSI C63.10:2020. The specification used was the FCC 15.209, and FCC 15.247 limits.

EMI Test Receiver Setup

The system was investigated from 9 kHz to 25 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	Detector
9 kHz – 150 kHz	200 Hz	1 kHz	200 Hz	Peak/QP/Average	Peak/QP/Average
150 kHz – 30 MHz	9 kHz	30 kHz	9 kHz	Peak/QP/Average	Peak/QP/Average
30 MHz – 1000 MHz	100 kHz	300 kHz	/	Peak	Peak
	/	/	120 kHz	QP	QP
Above 1GHz	1MHz	3 MHz	/	Peak	Peak
	1MHz	3 MHz	/	Average	Average

Test Procedure

According to ANSI C63.10:2020 clause 6.4, 6.5 and 6.6.

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.

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.

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 (dBμV/m) = Meter Reading (dBμV) + 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 (dBμV/m) – Corrected Amplitude (dBμV/m)

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Title 47, Part 15, and Subpart C, section 15.205, 15.209 and 15.247.

Test Data: See Appendix

FCC §15.247(A) (2) - 6 DB EMISSION BANDWIDTH

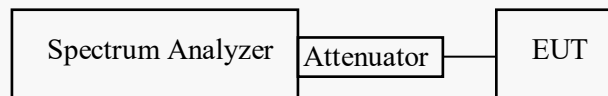
Applicable Standard

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

Test Procedure

According to ANSI C63.10:2020 sub-clause 11.8.1

- a) Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.
- b) Set the VBW $\geq [3 \times \text{RBW}]$.
- c) Detector = peak.
- d) Trace mode = max-hold.
- e) Sweep = No faster than coupled (auto) time.
- f) Allow the trace to stabilize.
- g) Measure the maximum width of the emission by placing two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the “–6 dB down amplitude”. If a marker is below this “–6 dB down amplitude” value, then it shall be as close as possible to this value.



Note: Offset (10.5dB) = Attenuator (10dB) + Cable Loss (0.5dB)

Test Data: See Appendix

FCC §15.247(B) (3) - MAXIMUM CONDUCTED OUTPUT POWER

Applicable Standard

According to FCC §15.247(b) (3), for systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, Compliant with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

Test Procedure

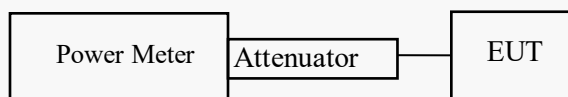
For 2.4G Wi-Fi:

According to ANSI C63.10:2020 sub-clause 11.9.1.2

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

11.9.2.3.2 Method AVGPM-G

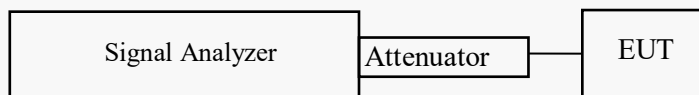
Method AVGPM-G is a measurement using a gated RF average power meter. Alternatively, measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Because the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.



For BLE:

According to ANSI C63.10:2020 sub-clause 11.9.1.1

- Set the RBW $\geq$ DTS bandwidth.
- Set VBW $\geq [3 \times \text{RBW}]$.
- Set span $\geq [3 \times \text{RBW}]$.
- Sweep time = No faster than coupled (auto) time.
- Detector = peak.
- Trace mode = max-hold.
- Allow trace to fully stabilize.
- Use peak marker function to determine the peak amplitude level.



Note: Offset (10.5dB) = Attenuator (10dB) + Cable Loss (0.5dB)

Test Data: See Appendix

FCC §15.247(D) – 100 KHZ BANDWIDTH OF FREQUENCY BAND EDGE

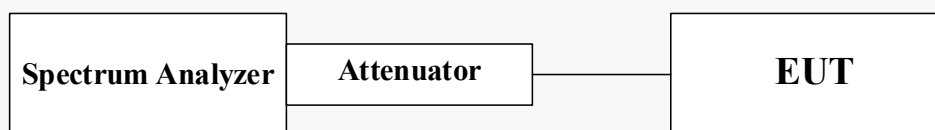
Applicable Standard

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 Compliant 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)).

Test Procedure

According to ANSI C63.10:2020 sub-clause 6.10.

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.



Note: Offset (10.5dB) = Attenuator (10dB) + Cable Loss (0.5dB)

Test Data: See Appendix

FCC §15.247(E) - POWER SPECTRAL DENSITY

Applicable Standard

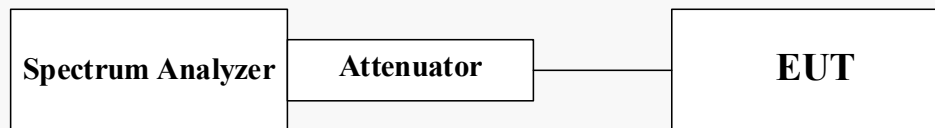
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

Test Procedure

According to ANSI C63.10:2020 sub-clause 11.10.2

The following procedure shall be used if maximum peak conducted output power was used to determine Compliant, and it is optional if the maximum conducted (average) output power was used to determine Compliant:

- a) Set analyzer center frequency to DTS channel center frequency.
- b) Set the span > 1.5 times the DTS bandwidth.
- c) Set the RBW to $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- d) Set the VBW $\geq [3 \times \text{RBW}]$.
- e) Detector = peak.
- f) Sweep time = No faster than coupled (auto) time.
- g) Trace mode = max-hold.
- h) Allow trace to fully stabilize.
- i) Use the peak marker function to determine the maximum amplitude level within the RBW.
- j) If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.



Note: Offset (10.5dB) = Attenuator (10dB) + Cable Loss (0.5dB)

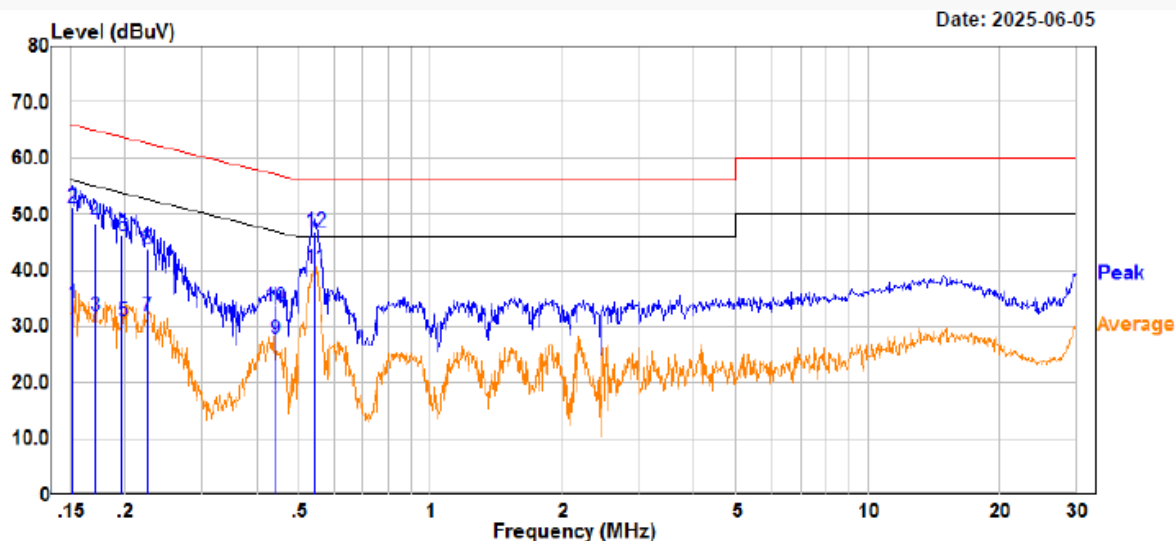
Test Data: See Appendix

Appendix - TEST DATA

AC LINE CONDUCTED EMISSIONS

Environmental Conditions & Test Information

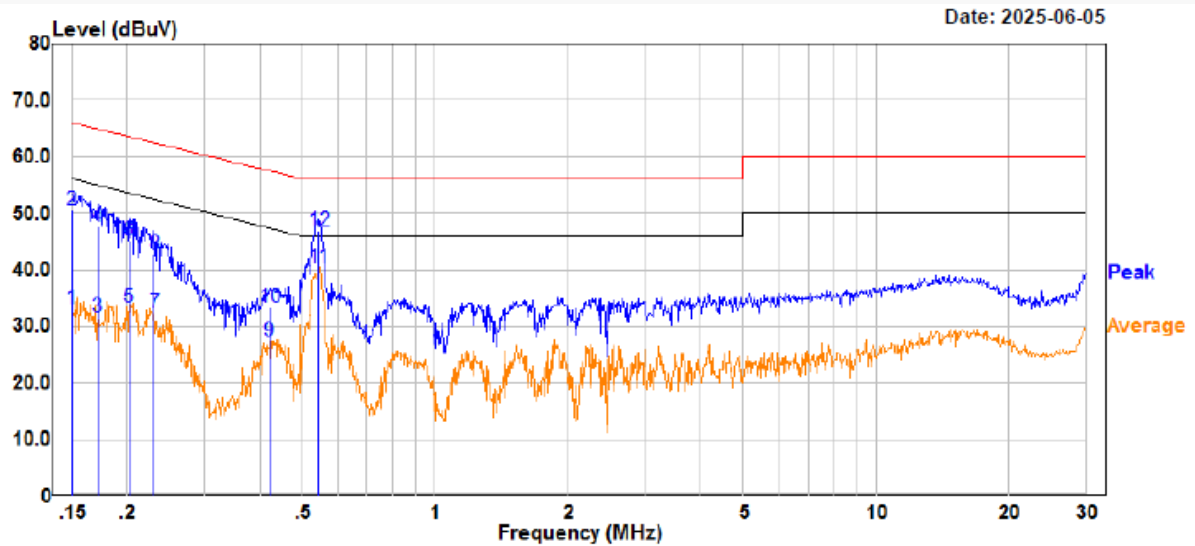
Test Date:	2025-06-05
Temperature:	24.5 °C
Relative Humidity:	51 %
ATM Pressure:	101.1 kPa
Test Result:	Pass
Test Engineer:	Link Xia

For Wi-Fi Mode:*EUT operation mode: Transmitting in maximum output power mode 802.11b mode high channel***Line:**

Trace: 1

Site : CE
 Condition : limit\FCC PART 15.207
 : DET:Peak
 Project No. : RSHA241101001
 Model : Oscar Trek
 Phase : L
 Voltage : 120V/60Hz
 Mode : 2.4G WIFI
 Test Equipment : ENV216,ESR3
 Receiver Setting : RBW: 9 kHz, Sweep Time: Auto
 Temperature : 24.5℃
 Humidity : 51%
 Atmospheric pressure: 101.1KPa
 Test Engineer : Link Xia

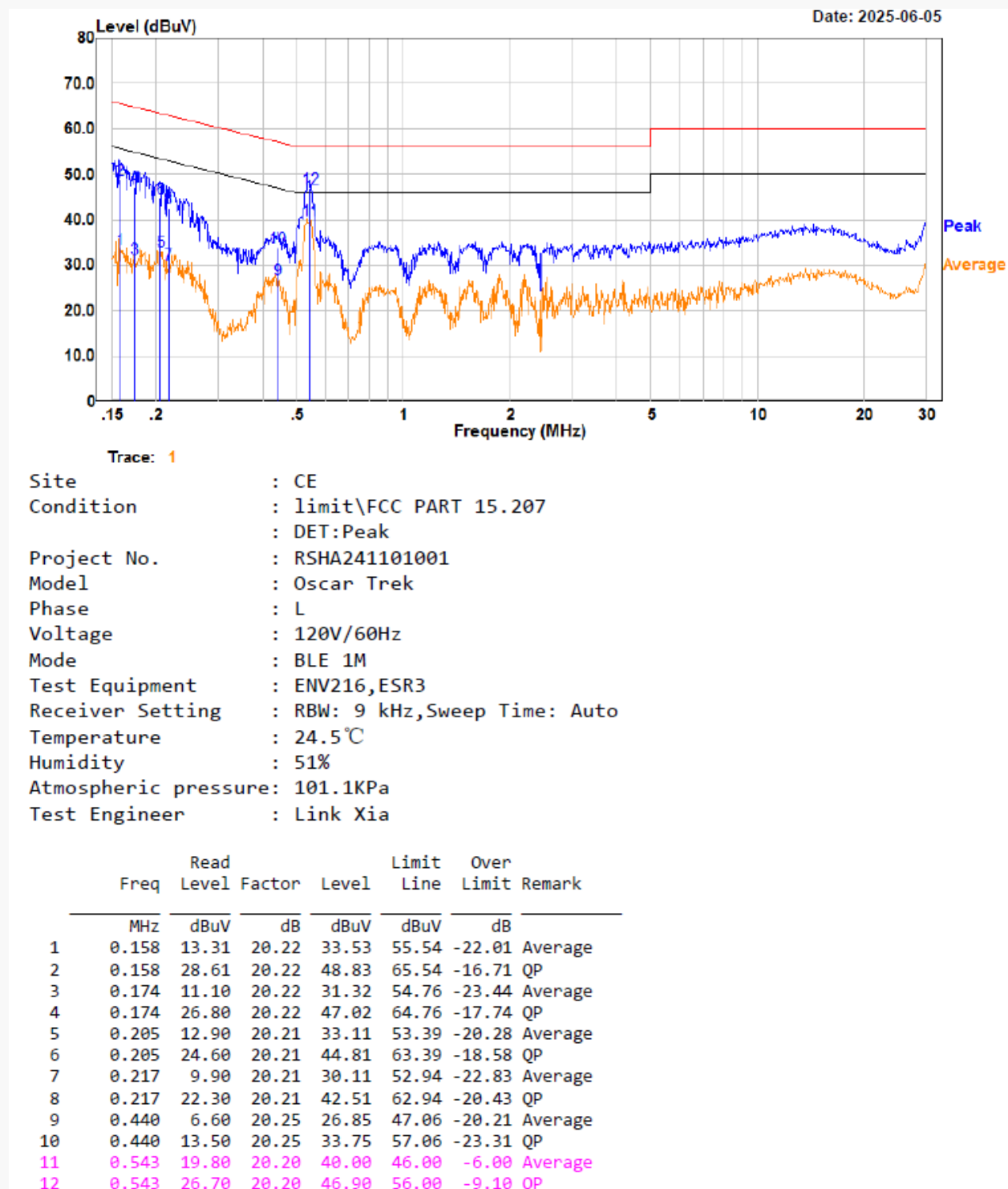
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.152	13.80	20.23	34.03	55.92	-21.89	Average
2	0.152	31.00	20.23	51.23	65.92	-14.69	QP
3	0.171	11.80	20.22	32.02	54.92	-22.90	Average
4	0.171	28.10	20.22	48.32	64.92	-16.60	QP
5	0.197	10.74	20.21	30.95	53.72	-22.77	Average
6	0.197	25.90	20.21	46.11	63.72	-17.61	QP
7	0.225	11.70	20.21	31.91	52.65	-20.74	Average
8	0.225	23.60	20.21	43.81	62.65	-18.84	QP
9	0.440	7.50	20.25	27.75	47.06	-19.31	Average
10	0.440	13.40	20.25	33.65	57.06	-23.41	QP
11	0.543	20.10	20.20	40.30	46.00	-5.70	Average
12	0.543	26.80	20.20	47.00	56.00	-9.00	QP

Neutral:

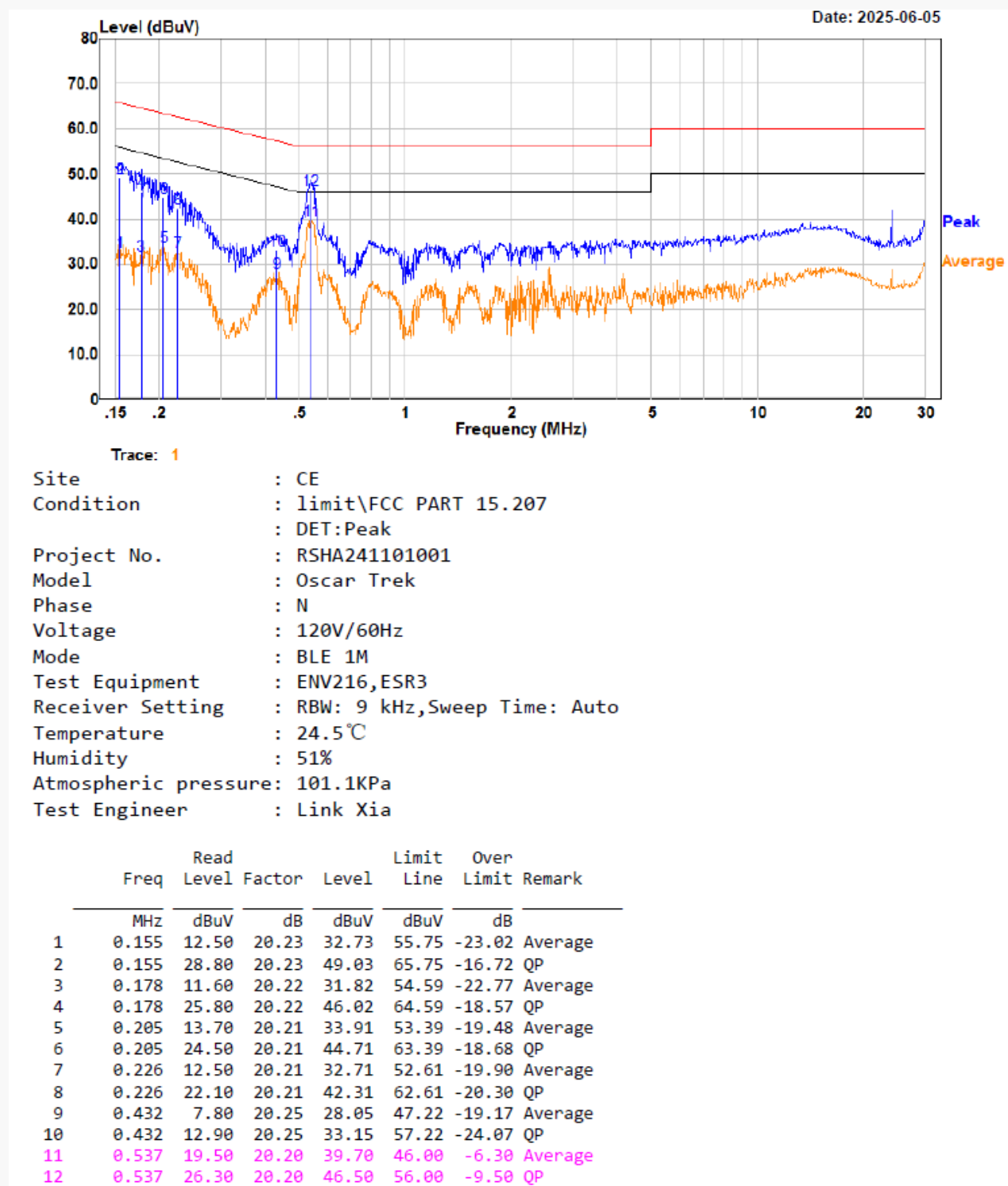
Trace: 1

Site : CE
 Condition : limit\FCC PART 15.207
 : DET:Peak
 Project No. : RSHA241101001
 Model : Oscar Trek
 Phase : N
 Voltage : 120V/60Hz
 Mode : 2.4G WIFI
 Test Equipment : ENV216,ESR3
 Receiver Setting : RBW: 9 kHz,Sweep Time: Auto
 Temperature : 24.5℃
 Humidity : 51%
 Atmospheric pressure: 101.1KPa
 Test Engineer : Link Xia

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.150	12.90	20.23	33.13	56.00	-22.87	Average
2	0.150	30.40	20.23	50.63	66.00	-15.37	QP
3	0.172	11.50	20.22	31.72	54.88	-23.16	Average
4	0.172	27.50	20.22	47.72	64.88	-17.16	QP
5	0.202	13.20	20.21	33.41	53.52	-20.11	Average
6	0.202	25.10	20.21	45.31	63.52	-18.21	QP
7	0.230	12.20	20.21	32.41	52.44	-20.03	Average
8	0.230	22.60	20.21	42.81	62.44	-19.63	QP
9	0.421	7.00	20.24	27.24	47.43	-20.19	Average
10	0.421	13.20	20.24	33.44	57.43	-23.99	QP
11	0.543	20.10	20.20	40.30	46.00	-5.70	Average
12	0.543	26.80	20.20	47.00	56.00	-9.00	QP

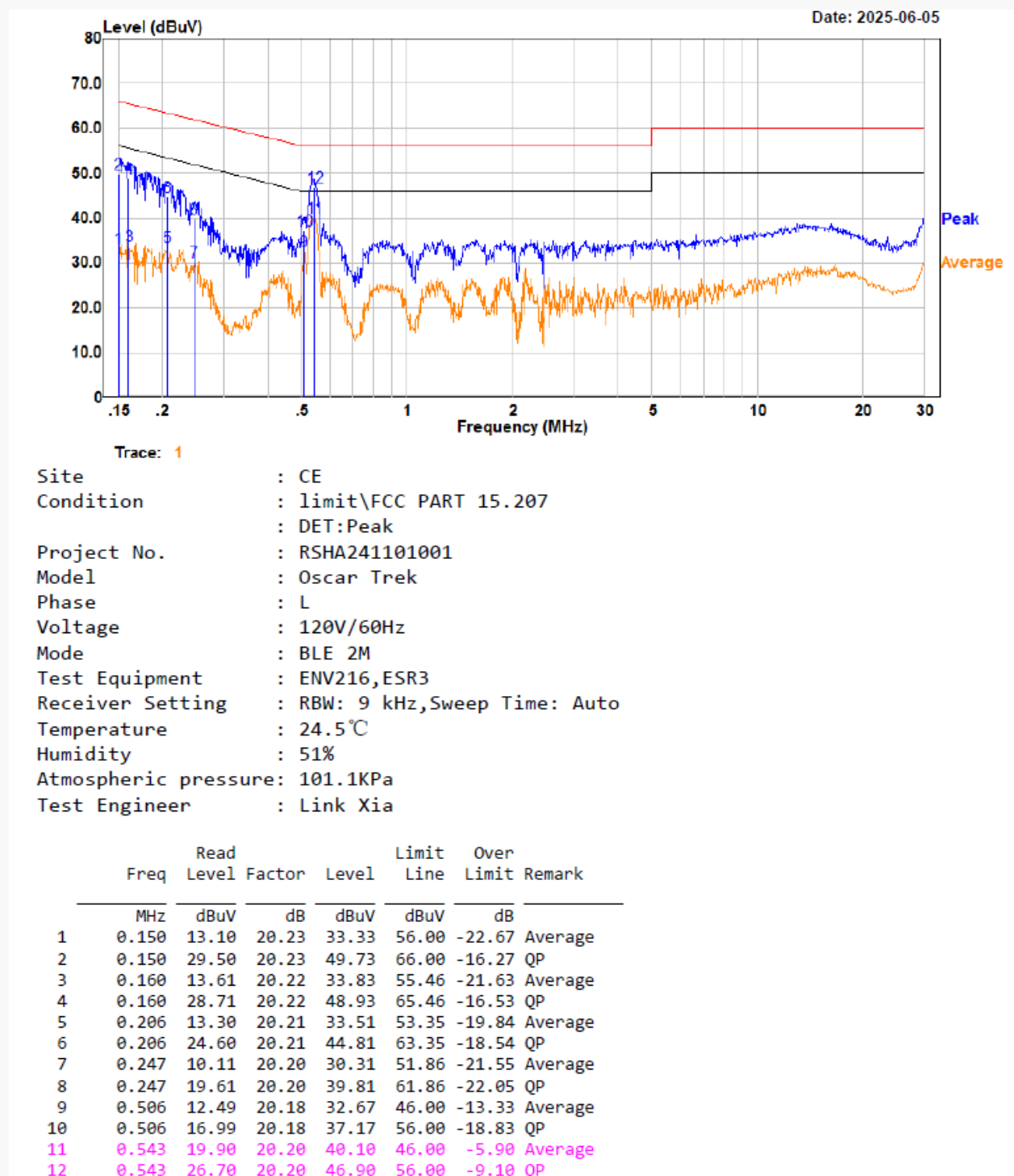
For BLE (1 Mbps) Mode:*EUT operation mode: Transmitting in maximum output power BLE (1 Mbps) mode high channel***Line**

Neutral

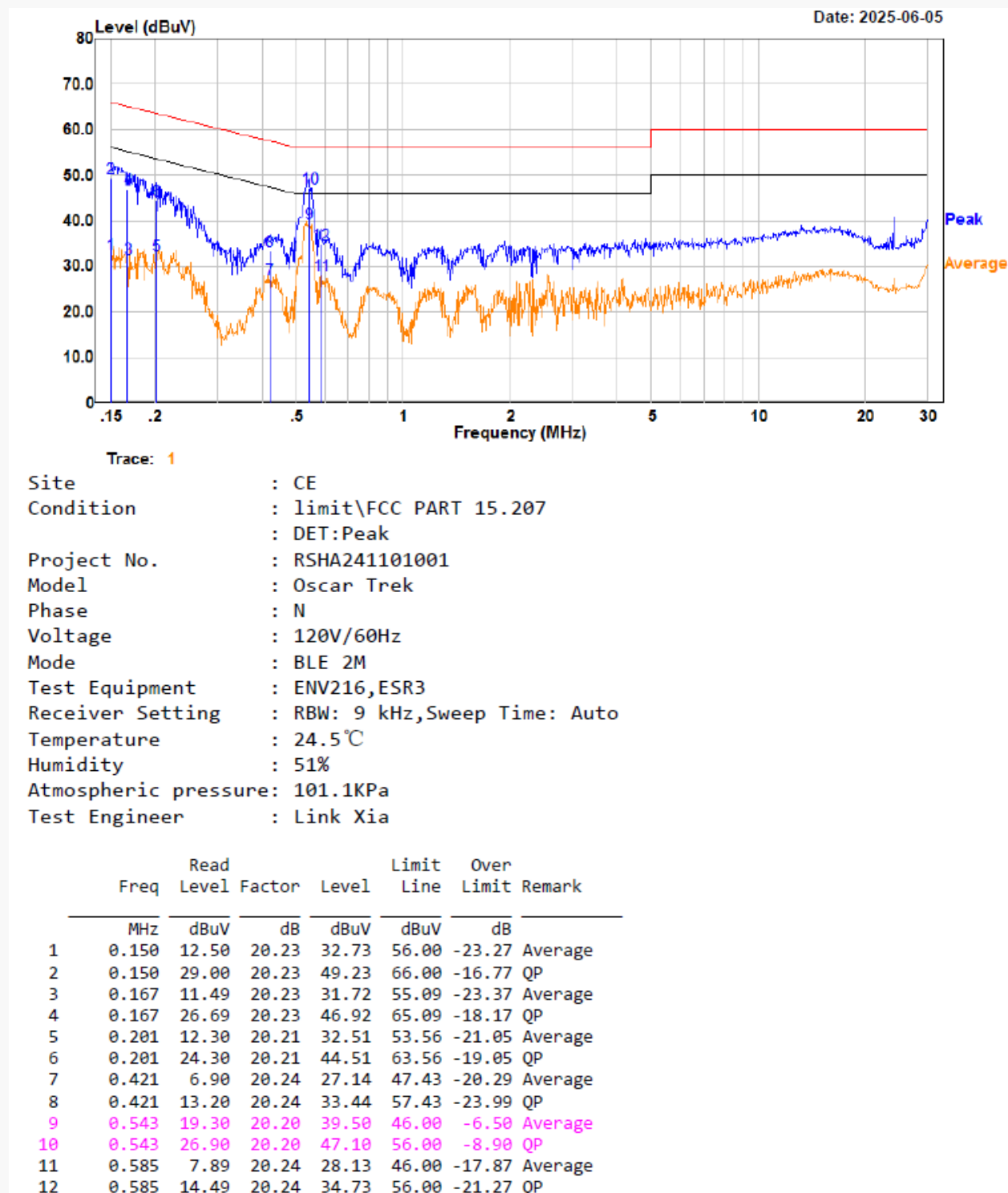


For BLE (2 Mbps) Mode:

EUT operation mode: Transmitting in maximum output BLE (2 Mbps) power mode High channel

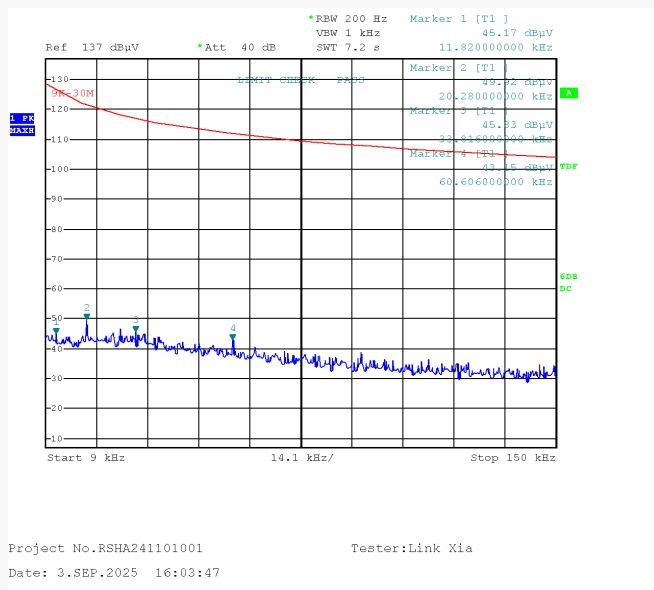
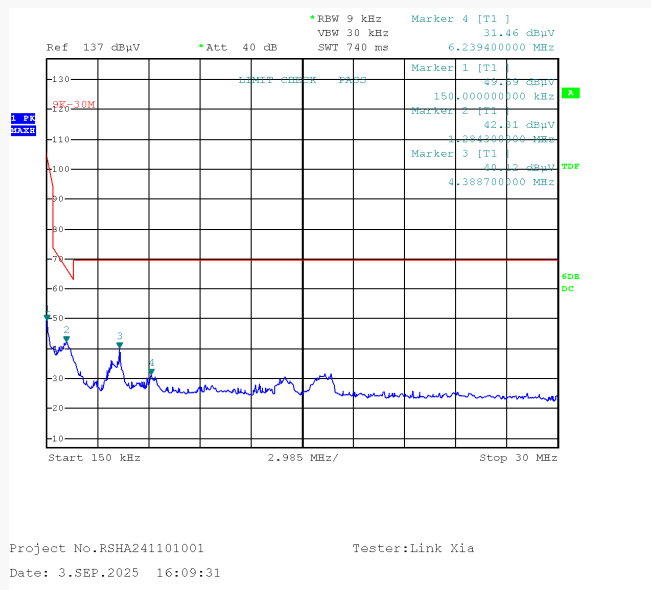
Line

Neutral



SPURIOUS EMISSIONS**Environmental Conditions & Test Information**

Frequency Range:	9kHz - 1GHz		1 GHz - 18 GHz	18 GHz – 25 GHz
Test Date:	2025-09-03	2025-02-10	2024-12-12 to 2025-06-21	2025-02-19
Temperature:	26.1 °C	21.3 °C	24.1-26.7 °C	23.6 °C
Relative Humidity:	53 %	60 %	46-53 %	56 %
ATM Pressure:	100.8 kPa	101.6 kPa	100.6-100.9 kPa	102.3 kPa
Test Result:	Pass	Pass	Pass	Pass
Test Engineer:	Link Xia	Jerry Yan	Klein Zhu & Danny Zhu & Destine Hu	Hugh Wu

For Wi-Fi Mode:**Test Result:** Compliant*EUT operation mode: Transmitting**After pre-scan in the X, Y and Z axes of orientation, the worst case is below:***9 kHz-30MHz:** (Transmitting in 802.11b mode high channel (maximum output power mode))**Parallel(worst case)****9kHz-150kHz****150kHz-30MHz****9 kHz-150 kHz**

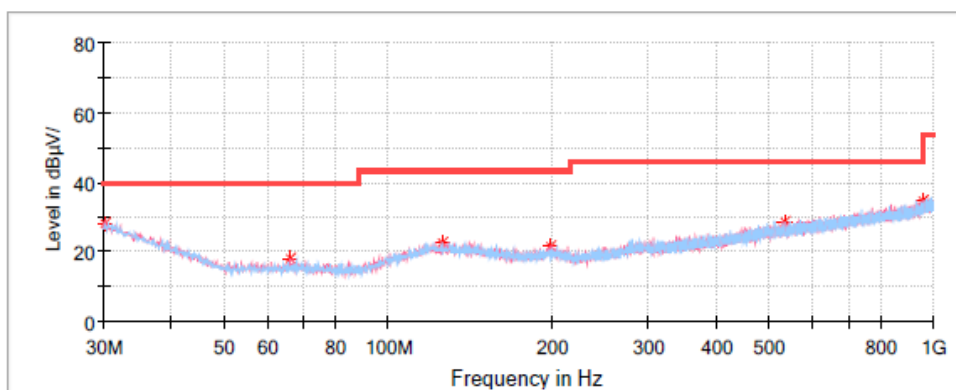
Frequency (MHz)	Corrected Amplitude (dBμV/m) @3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dBμV/m) @3m	Margin (dB)
0.011820	45.17	PK	-0.52	126.15	80.98
0.020280	49.92	PK	-0.56	121.46	71.54
0.033816	45.83	PK	-1.22	117.02	71.19
0.060606	43.15	PK	-5.05	111.95	68.80

150 kHz-30 MHz

Frequency (MHz)	Corrected Amplitude (dBμV/m) @3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dBμV/m) @3m	Margin (dB)
0.15000	49.59	PK	-11.34	104.08	54.49
1.28430	42.31	PK	-28.55	65.43	23.12
4.38870	40.12	PK	-31.97	69.54	29.42
6.23940	31.46	PK	-32.25	69.54	38.08

30MHz-1GHz (Transmitting in maximum output power mode 802.11b mode high channel):**High channel: 2462MHz****Common Information**

Project No:	RSHA241101001
EUT Model:	Oscar Trek
Test Mode:	Transmitting in 802.11b mode high channel
Standard:	FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.247
Test Equipment:	ESCI, JB3, 310N
Receiver Setting:	RBW: 100 kHz, VBW: 300 kHz, Sweep Time: Auto
Temperature:	20.3°C
Humidity:	66%
Barometric Pressure:	101.5kPa
Test Engineer:	Jerry Yan
Test Date:	2024/11/16

**Critical_Freqs**

Frequency (MHz)	MaxPeak (dBμ V/m)	Limit (dBμ V/m)	Margin (dB)	Pol	Corr. (dB/m)
533.915000	28.55	46.00	17.45	H	-4.9
125.181250	22.64	43.50	20.86	H	-11.0
199.265000	21.72	43.50	21.78	V	-12.1
65.890000	17.87	40.00	22.13	V	-16.8
30.121250	28.17	40.00	11.83	V	-4.8
954.895000	34.58	46.00	11.42	V	1.5

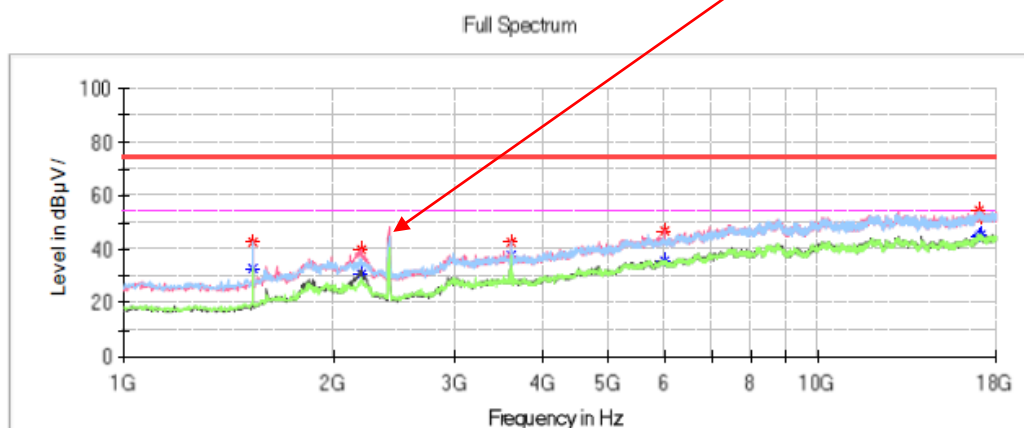
1GHz-18GHz:
802.11b Mode:

Low Channel: 2412MHz

Common Information

Project No.: RSHA241101001
EUT Model: Oscar Trek
Test Mode: 2.4G WIFI 802.11b mode Low Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 24.9°C
Humidity: 50%
Atmospheric Pressure: 100.6kPa
Test Engineer: Danny Zhu
Test Date: 2025/6/21

Fundamental Test with
Band Reject Filter



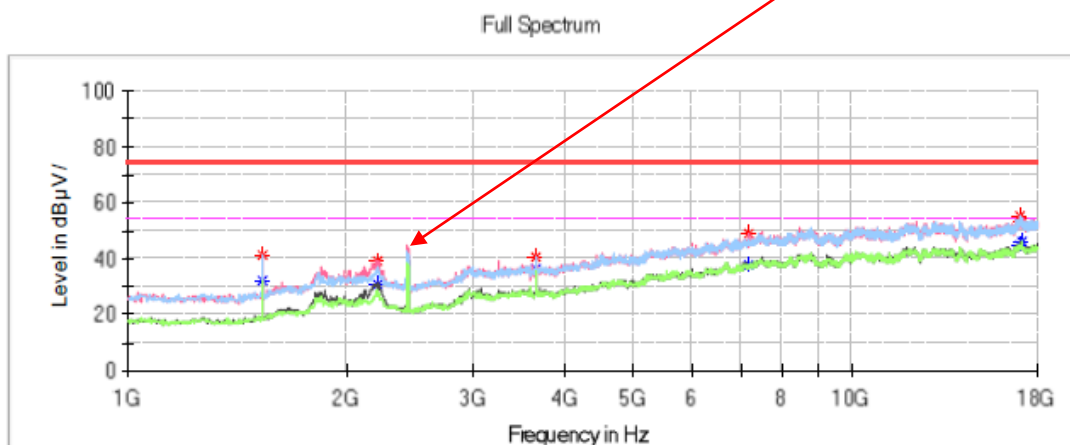
Critical Freqs

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	42.39	---	74.00	31.61	H	-14.4
1533.800000	---	33.21	54.00	20.79	H	-14.4
2196.800000	---	30.95	54.00	23.05	V	-10.4
2196.800000	39.90	---	74.00	34.10	V	-10.4
3618.000000	42.79	---	74.00	31.21	H	-7.1
3618.000000	---	37.72	54.00	16.28	H	-7.1
5998.000000	---	35.90	54.00	18.10	V	-1.1
5998.000000	46.71	---	74.00	27.29	V	-1.1
17024.200000	54.51	---	74.00	19.49	V	11.2
17024.200000	---	44.59	54.00	9.41	V	11.2
17153.400000	52.08	---	74.00	21.92	H	11.0
17153.400000	---	45.55	54.00	8.45	H	11.0

Middle Channel: 2437MHz**Common Information**

Project No.: RSHA241101001
EUT Model: Oscar Trek
Test Mode: 2.4G WIFI 802.11b mode Middle Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 24.9℃
Humidity: 50%
Atmospheric Pressure: 100.6kPa
Test Engineer: Danny Zhu
Test Date: 2025/6/21

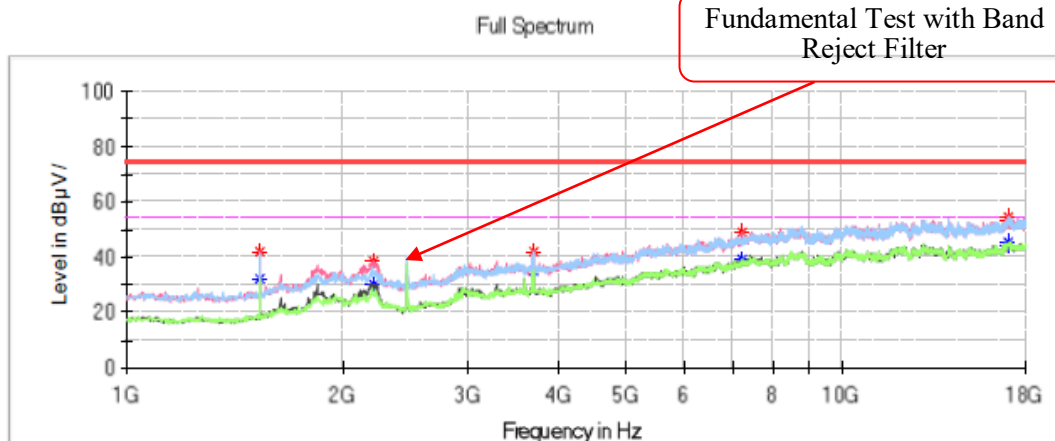
Fundamental Test with
Band Reject Filter

**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	41.42	---	74.00	32.58	H	-14.4
1533.800000	---	32.06	54.00	21.94	H	-14.4
2207.000000	---	31.08	54.00	22.92	V	-10.3
2207.000000	39.44	---	74.00	34.56	V	-10.3
3655.400000	---	36.02	54.00	17.98	V	-7.0
3655.400000	40.79	---	74.00	33.21	V	-7.0
7208.400000	---	37.90	54.00	16.10	V	2.2
7208.400000	49.12	---	74.00	24.88	V	2.2
17037.800000	---	44.54	54.00	9.46	V	11.2
17037.800000	55.07	---	74.00	18.93	V	11.2
17095.600000	---	46.44	54.00	7.56	H	11.1
17095.600000	53.20	---	74.00	20.80	H	11.1

High Channel: 2462MHz**Common Information**

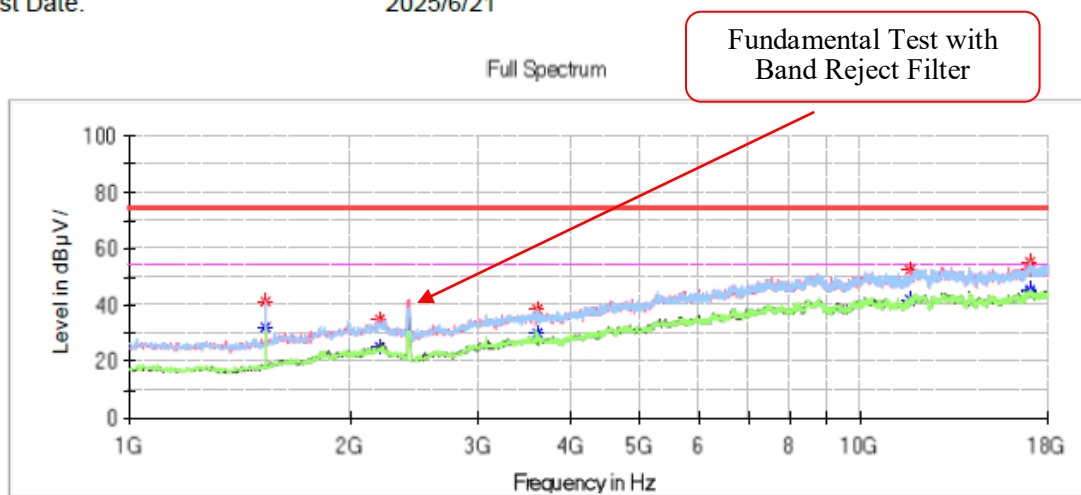
Project No.: RSHA241101001
 EUT Model: Oscar Trek
 Test Mode: 2.4G WIFI 802.11b mode High Channel
 Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
 Test Equipment: ESU40,3115,PAM-0118P
 Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
 Temperature: 24.9℃
 Humidity: 50%
 Atmospheric Pressure: 100.6kPa
 Test Engineer: Danny Zhu
 Test Date: 2025/6/21

**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	---	32.28	54.00	21.72	V	-14.4
1533.800000	41.70	---	74.00	32.30	V	-14.4
2213.800000	---	29.93	54.00	24.07	V	-10.3
2213.800000	38.62	---	74.00	35.38	V	-10.3
3692.800000	---	35.11	54.00	18.89	H	-7.0
3692.800000	42.25	---	74.00	31.75	H	-7.0
7239.000000	---	38.83	54.00	15.17	H	2.3
7239.000000	48.92	---	74.00	25.08	H	2.3
17041.200000	---	44.31	54.00	9.69	H	11.2
17041.200000	54.45	---	74.00	19.55	H	11.2
17075.200000	---	45.56	54.00	8.44	V	11.1
17075.200000	52.82	---	74.00	21.18	V	11.1

802.11g Mode:**Low Channel: 2412MHz****Common Information**

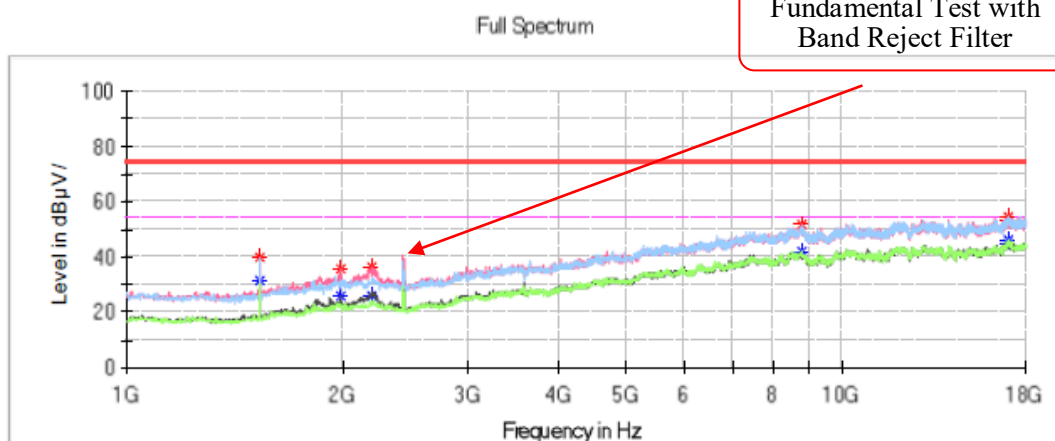
Project No.: RSHA241101001
 EUT Model: Oscar Trek
 Test Mode: 2.4G WIFI 802.11g mode Low Channel
 Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
 Test Equipment: ESU40,3115,PAM-0118P
 Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
 Temperature: 24.9℃
 Humidity: 50%
 Atmospheric Pressure: 100.6kPa
 Test Engineer: Danny Zhu
 Test Date: 2025/6/21

**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	41.34	---	74.00	32.66	H	-14.4
1533.800000	---	31.91	54.00	22.09	H	-14.4
2193.400000	---	24.93	54.00	29.07	V	-10.4
2193.400000	34.83	---	74.00	39.17	V	-10.4
3614.600000	38.61	---	74.00	35.39	V	-7.1
3614.600000	---	30.00	54.00	24.00	V	-7.1
11676.000000	---	42.26	54.00	11.74	V	7.9
11676.000000	52.76	---	74.00	21.24	V	7.9
16993.600000	54.96	---	74.00	19.04	H	11.2
16993.600000	---	44.72	54.00	9.28	H	11.2
17051.400000	52.50	---	74.00	21.50	V	11.2
17051.400000	---	45.22	54.00	8.78	V	11.2

Middle Channel: 2437MHz**Common Information**

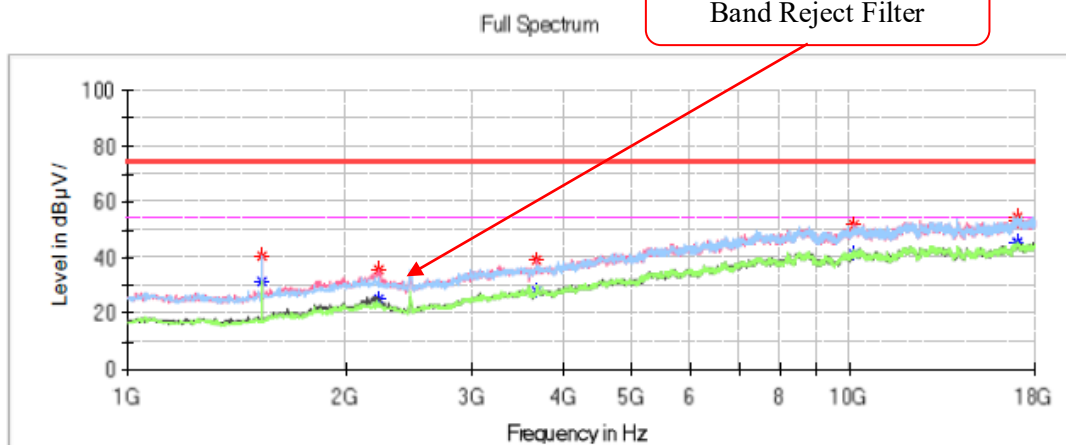
Project No.: RSHA241101001
EUT Model: Oscar Trek
Test Mode: 2.4G WIFI 802.11g mode Middle Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 24.9°C
Humidity: 50%
Atmospheric Pressure: 100.6kPa
Test Engineer: Danny Zhu
Test Date: 2025/6/21

**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	---	31.14	54.00	22.86	V	-14.4
1533.800000	40.15	---	74.00	33.85	V	-14.4
1992.800000	---	25.84	54.00	28.16	V	-10.6
1992.800000	35.55	---	74.00	38.45	V	-10.6
2203.600000	---	25.99	54.00	28.01	V	-10.4
2203.600000	36.09	---	74.00	37.91	V	-10.4
8765.600000	---	41.77	54.00	12.23	H	4.4
8765.600000	51.70	---	74.00	22.30	H	4.4
17000.400000	---	44.61	54.00	9.39	H	11.3
17000.400000	54.25	---	74.00	19.75	H	11.3
17031.000000	53.14	---	74.00	20.86	H	11.2
17031.000000	---	45.83	54.00	8.17	H	11.2

High Channel: 2462MHz**Common Information**

Project No.: RSHA241101001
EUT Model: Oscar Trek
Test Mode: 2.4G WIFI 802.11g mode High Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 24.9℃
Humidity: 50%
Atmospheric Pressure: 100.6kPa
Test Engineer: Danny Zhu
Test Date: 2025/6/21

**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	---	31.39	54.00	22.61	H	-14.4
1533.800000	40.25	---	74.00	33.75	H	-14.4
2227.400000	---	24.95	54.00	29.05	V	-10.3
2227.400000	35.75	---	74.00	38.25	V	-10.3
3675.800000	---	27.65	54.00	26.35	H	-7.0
3675.800000	39.01	---	74.00	34.99	H	-7.0
10129.000000	---	41.47	54.00	12.53	V	6.1
10129.000000	52.00	---	74.00	22.00	V	6.1
17020.800000	54.47	---	74.00	19.53	H	11.2
17020.800000	---	45.60	54.00	8.40	H	11.2
17037.800000	53.21	---	74.00	20.79	H	11.2
17037.800000	---	45.63	54.00	8.37	H	11.2

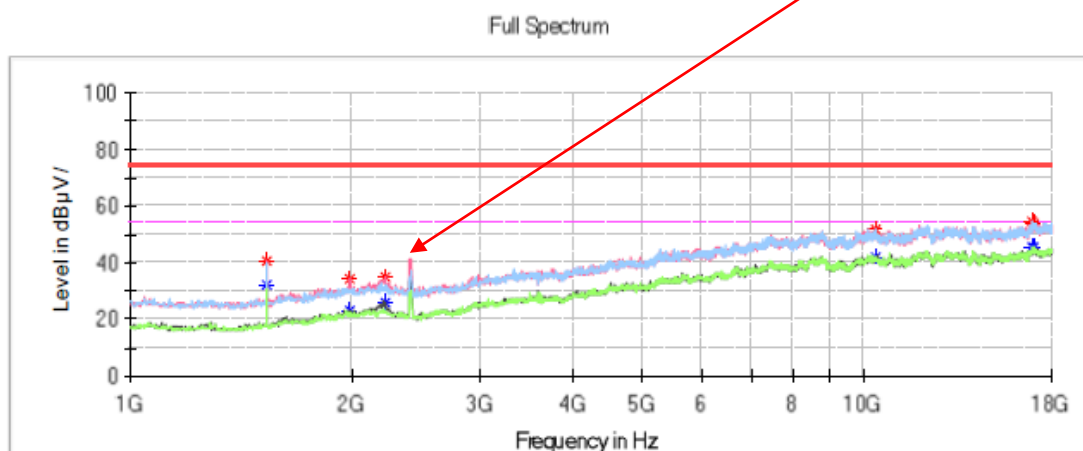
802.11n-HT20 Mode :

Low Channel: 2412MHz

Common Information

Project No.: RSHA241101001
EUT Model: Oscar Trek
Test Mode: 2.4G WIFI 802.11n20 mode Low Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 24.9℃
Humidity: 50%
Atmospheric Pressure: 100.6kPa
Test Engineer: Danny Zhu
Test Date: 2025/6/21

Fundamental Test with
Band Reject Filter



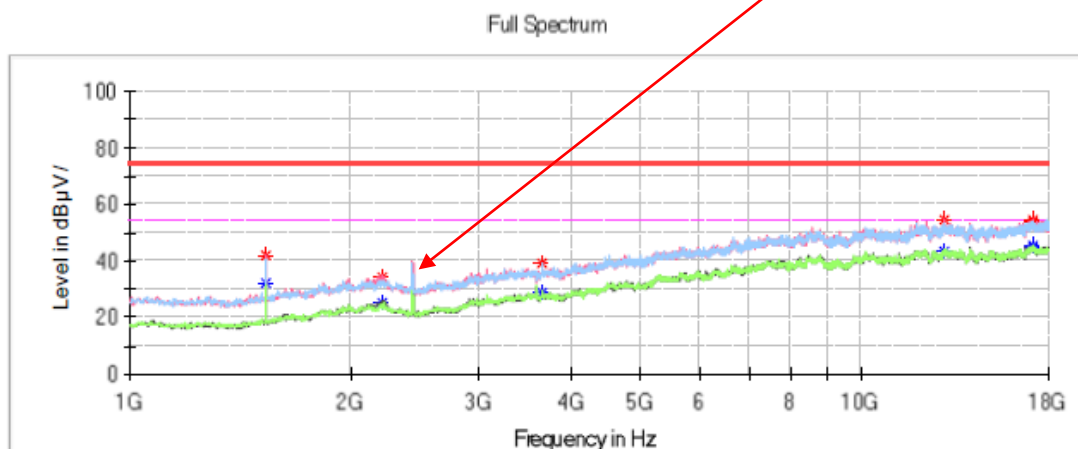
Critical Freqs

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	---	32.09	54.00	21.91	V	-14.4
1533.800000	40.80	---	74.00	33.20	V	-14.4
1996.200000	---	23.20	54.00	30.80	V	-10.5
1996.200000	34.37	---	74.00	39.63	V	-10.5
2224.000000	---	25.62	54.00	28.38	V	-10.3
2224.000000	35.16	---	74.00	38.84	V	-10.3
10367.000000	---	41.94	54.00	12.06	V	6.1
10367.000000	52.04	---	74.00	21.96	V	6.1
16966.400000	---	45.17	54.00	8.83	H	11.2
16966.400000	54.59	---	74.00	19.41	H	11.2
17065.000000	53.77	---	74.00	20.23	V	11.2
17065.000000	---	45.56	54.00	8.44	V	11.2

Middle Channel: 2437MHz**Common Information**

Project No.: RSHA241101001
EUT Model: Oscar Trek
Test Mode: 2.4G WIFI 802.11n20 mode Middle Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 24.9℃
Humidity: 50%
Atmospheric Pressure: 100.6kPa
Test Engineer: Danny Zhu
Test Date: 2025/6/21

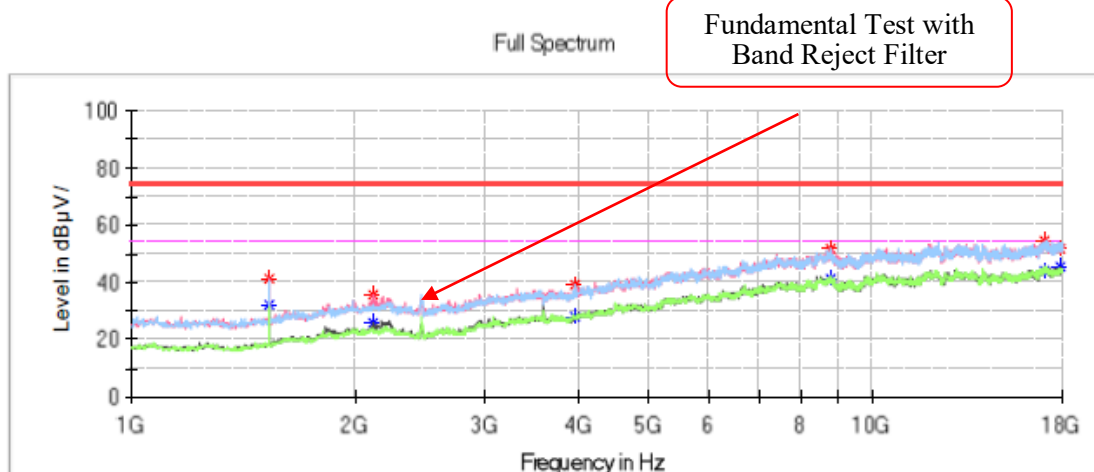
Fundamental Test with
Band Reject Filter

**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	---	32.35	54.00	21.65	V	-14.4
1533.800000	41.81	---	74.00	32.19	V	-14.4
2213.800000	34.48	---	74.00	39.52	V	-10.3
2213.800000	---	25.31	54.00	28.69	V	-10.3
3655.400000	39.16	---	74.00	34.84	H	-7.0
3655.400000	---	28.96	54.00	25.04	H	-7.0
12964.600000	---	43.57	54.00	10.43	H	8.7
12964.600000	54.33	---	74.00	19.67	H	8.7
17088.800000	54.51	---	74.00	19.49	V	11.1
17088.800000	---	44.88	54.00	9.12	V	11.1
17109.200000	53.51	---	74.00	20.49	H	11.1
17109.200000	---	45.68	54.00	8.32	H	11.1

High Channel: 2462MHz**Common Information**

Project No.: RSHA241101001
 EUT Model: Oscar Trek
 Test Mode: 2.4G WIFI 802.11n20 mode High Channel
 Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
 Test Equipment: ESU40,3115,PAM-0118P
 Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
 Temperature: 24.9℃
 Humidity: 50%
 Atmospheric Pressure: 100.6kPa
 Test Engineer: Danny Zhu
 Test Date: 2025/6/21

**Critical Freqs**

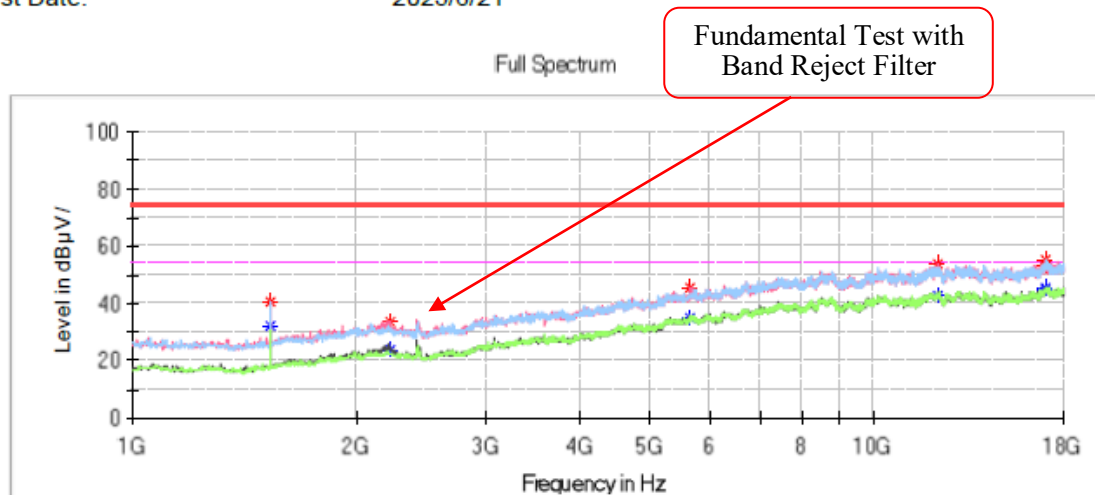
Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1533.800000	---	31.96	54.00	22.04	V	-14.4
1533.800000	41.36	---	74.00	32.64	V	-14.4
2122.000000	---	25.54	54.00	28.46	V	-10.4
2122.000000	35.53	---	74.00	38.47	V	-10.4
3975.000000	---	27.88	54.00	26.12	H	-6.5
3975.000000	39.20	---	74.00	34.80	H	-6.5
8769.000000	---	41.13	54.00	12.87	H	4.4
8769.000000	51.74	---	74.00	22.26	H	4.4
17065.000000	54.59	---	74.00	19.41	V	11.2
17065.000000	---	44.35	54.00	9.65	V	11.2
17925.200000	51.63	---	74.00	22.37	H	11.6
17925.200000	---	45.66	54.00	8.34	H	11.6

802.11n-HT40 Mode :

Low Channel: 2422MHz

Common Information

Project No.: RSHA241101001
 EUT Model: Oscar Trek
 Test Mode: 2.4G WIFI 802.11n40 mode Low Channel
 Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
 Test Equipment: ESU40,3115,PAM-0118P
 Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
 Temperature: 24.9°C
 Humidity: 50%
 Atmospheric Pressure: 100.6kPa
 Test Engineer: Danny Zhu
 Test Date: 2025/6/21

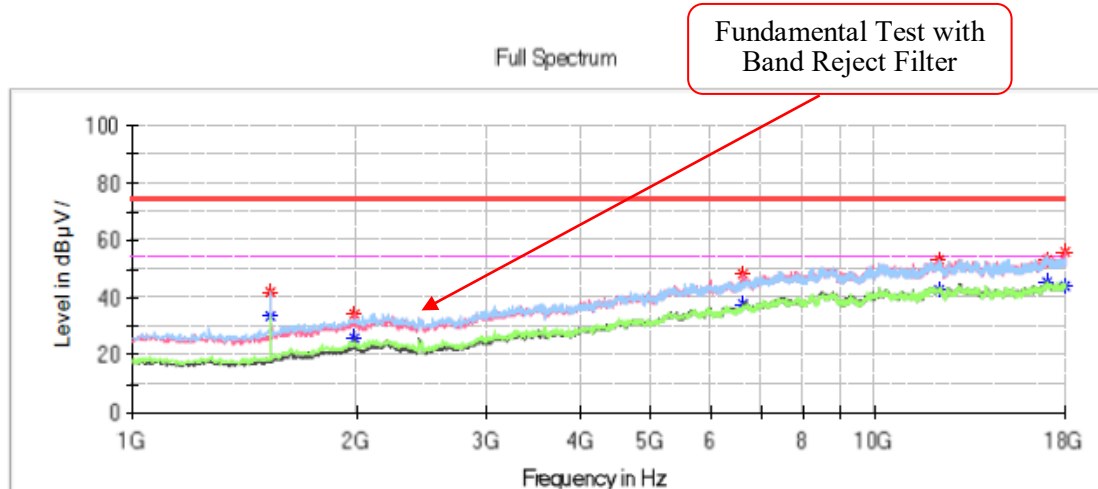


Critical Freqs

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	40.82	---	74.00	33.18	V	-14.4
1533.800000	---	31.92	54.00	22.08	V	-14.4
2220.600000	---	23.69	54.00	30.31	V	-10.3
2220.600000	33.85	---	74.00	40.15	V	-10.3
5658.000000	---	35.24	54.00	18.76	H	-1.4
5658.000000	45.55	---	74.00	28.45	H	-1.4
12169.000000	---	42.62	54.00	11.38	H	8.2
12169.000000	53.69	---	74.00	20.31	H	8.2
16990.200000	---	44.57	54.00	9.43	H	11.2
16990.200000	54.98	---	74.00	19.02	H	11.2
17014.000000	---	45.77	54.00	8.23	V	11.2
17014.000000	53.06	---	74.00	20.94	V	11.2

Middle Channel: 2437MHz**Common Information**

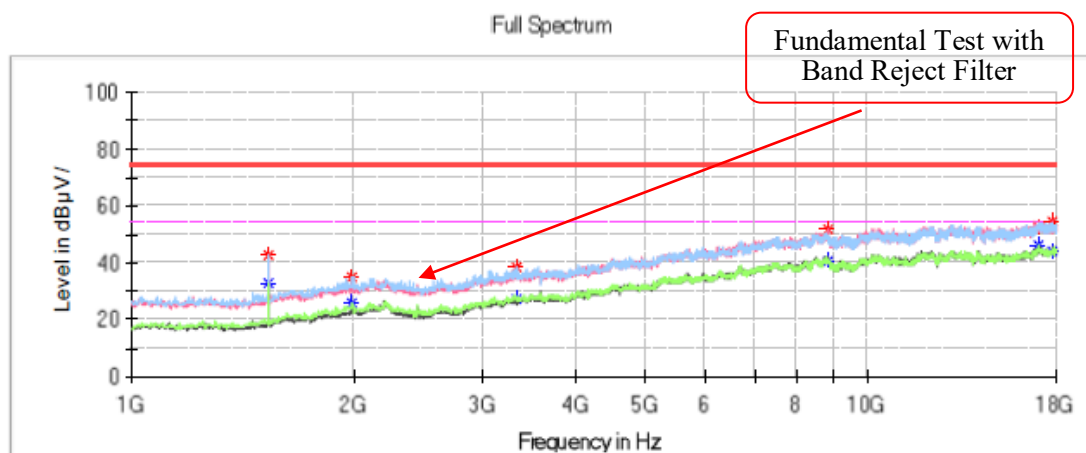
Project No.: RSHA241101001
EUT Model: Oscar Trek
Test Mode: 2.4G WIFI 802.11n40 mode Middle Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 24.9°C
Humidity: 50%
Atmospheric Pressure: 100.6kPa
Test Engineer: Danny Zhu
Test Date: 2025/6/21

**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	42.24	---	74.00	31.76	H	-14.4
1533.800000	---	33.51	54.00	20.49	H	-14.4
1996.200000	---	25.55	54.00	28.45	V	-10.5
1996.200000	34.43	---	74.00	39.57	V	-10.5
6640.600000	---	37.56	54.00	16.44	V	0.1
6640.600000	48.28	---	74.00	25.72	V	0.1
12192.800000	---	42.65	54.00	11.35	H	8.2
12192.800000	53.06	---	74.00	20.94	H	8.2
17017.400000	52.84	---	74.00	21.16	V	11.2
17017.400000	---	45.59	54.00	8.41	V	11.2
17976.200000	55.74	---	74.00	18.26	V	11.7
17976.200000	---	44.13	54.00	9.87	V	11.7

High Channel: 2452MHz**Common Information**

Project No.: RSHA241101001
 EUT Model: Oscar Trek
 Test Mode: 2.4G WIFI 802.11n40 mode High Channel
 Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
 Test Equipment: ESU40,3115,PAM-0118P
 Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
 Temperature: 24.9℃
 Humidity: 50%
 Atmospheric Pressure: 100.6kPa
 Test Engineer: Danny Zhu
 Test Date: 2025/6/21

**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	---	33.12	54.00	20.88	H	-14.4
1533.800000	42.40	---	74.00	31.60	H	-14.4
1996.200000	---	25.75	54.00	28.25	H	-10.5
1996.200000	34.85	---	74.00	39.15	H	-10.5
3339.200000	---	26.96	54.00	27.04	H	-7.9
3339.200000	38.25	---	74.00	35.75	H	-7.9
8837.000000	---	40.90	54.00	13.10	V	4.4
8837.000000	51.62	---	74.00	22.38	V	4.4
17031.000000	---	45.84	54.00	8.16	H	11.2
17031.000000	52.66	---	74.00	21.34	H	11.2
17823.200000	---	43.80	54.00	10.20	V	11.3
17823.200000	54.40	---	74.00	19.60	V	11.3

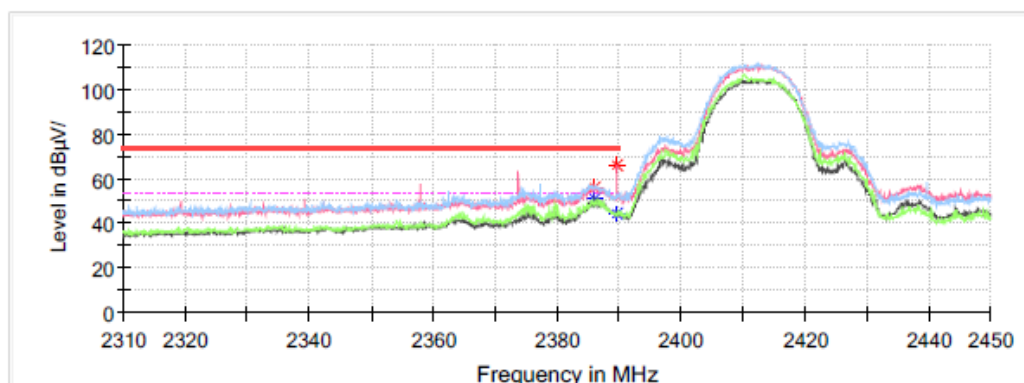
Band Edge:
802.11b Mode:

Low Channel

Common Information

Project No.: RSHA241101001
EUT Model: Oscar Trek
Test Mode: 2.4G WIFI 802.11b mode Low Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 25.9°C
Humidity: 53%
Atmospheric Pressure: 100.8kPa
Test Engineer: Destine Hu
Test Date: 2025/2/11

Full Spectrum



Critical_Freqs

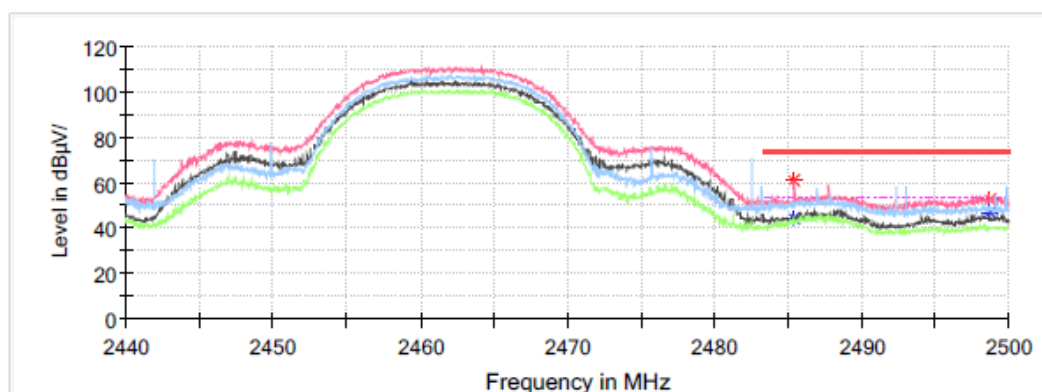
Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2386.160000	---	50.81	54.00	3.19	V	-0.6
2386.160000	56.46	---	74.00	17.54	V	-0.6
2389.632000	---	44.32	54.00	9.68	H	-0.6
2389.632000	66.64	---	74.00	7.36	H	-0.6

High Channel

Common Information

Project No.: RSHA241101001
EUT Model: Oscar Trek
Test Mode: 2.4G WIFI 802.11b mode High Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 25.9℃
Humidity: 53%
Atmospheric Pressure: 100.8kPa
Test Engineer: Destine Hu
Test Date: 2025/2/11

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)
2485.432000	60.98	---	74.00	13.02	V	-0.2
2485.432000	---	44.54	54.00	9.46	V	-0.2
2498.704000	53.13	---	74.00	20.87	V	-0.2
2498.704000	---	46.82	54.00	7.18	V	-0.2

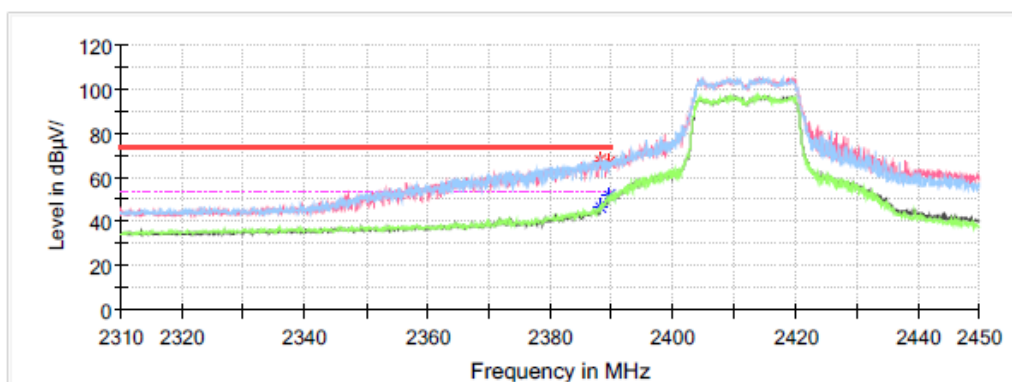
802.11g Mode :

Low Channel

Common Information

Project No.: RSHA241101001
EUT Model: Oscar Trek
Test Mode: 2.4G WIFI 802.11g mode Low Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 25.9℃
Humidity: 53%
Atmospheric Pressure: 100.8kPa
Test Engineer: Destine Hu
Test Date: 2025/2/11

Full Spectrum



Critical_Freqs

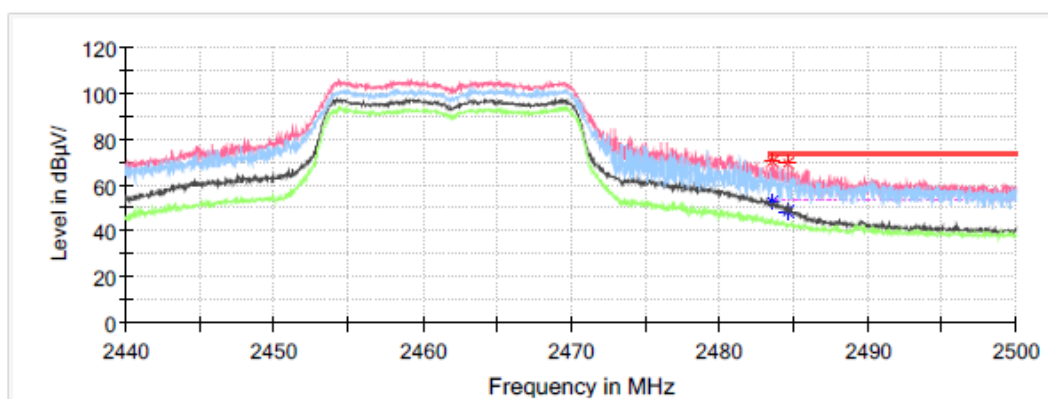
Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2388.008000	68.16	---	74.00	5.84	H	-0.6
2388.008000	---	46.80	54.00	7.20	H	-0.6
2389.744000	67.17	---	74.00	6.83	H	-0.6
2389.744000	---	51.99	54.00	2.01	H	-0.6

High Channel

Common Information

Project No.: RSHA241101001
EUT Model: Oscar Trek
Test Mode: 2.4G WIFI 802.11g mode High Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 25.9°C
Humidity: 53%
Atmospheric Pressure: 100.8kPa
Test Engineer: Destine Hu
Test Date: 2025/2/11

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)
2483.608000	---	52.56	54.00	1.44	V	-0.3
2483.608000	70.85	---	74.00	3.15	V	-0.3
2484.664000	---	48.48	54.00	5.52	V	-0.3
2484.664000	69.96	---	74.00	4.04	V	-0.3

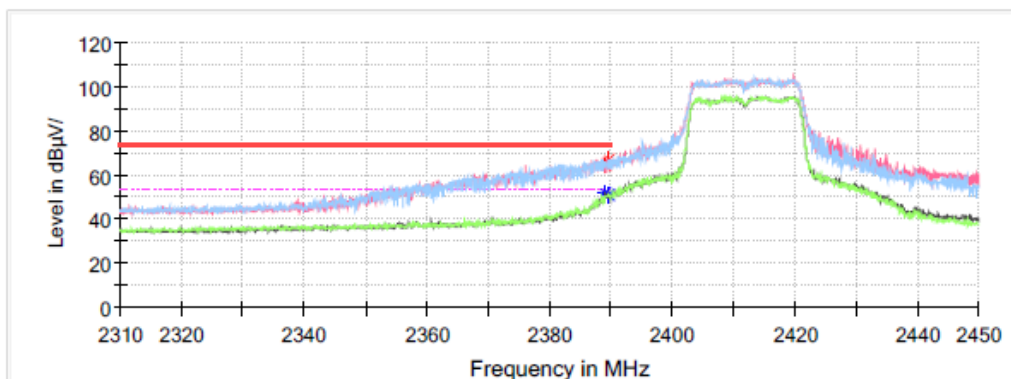
802.11n-HT20 Mode:

Low Channel

Common Information

Project No.: RSHA241101001
EUT Model: Oscar Trek
Test Mode: 2.4G WIFI 802.11n20 mode Low Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 25.9°C
Humidity: 53%
Atmospheric Pressure: 100.8kPa
Test Engineer: Destine Hu
Test Date: 2025/2/11

Full Spectrum



Critical_Freqs

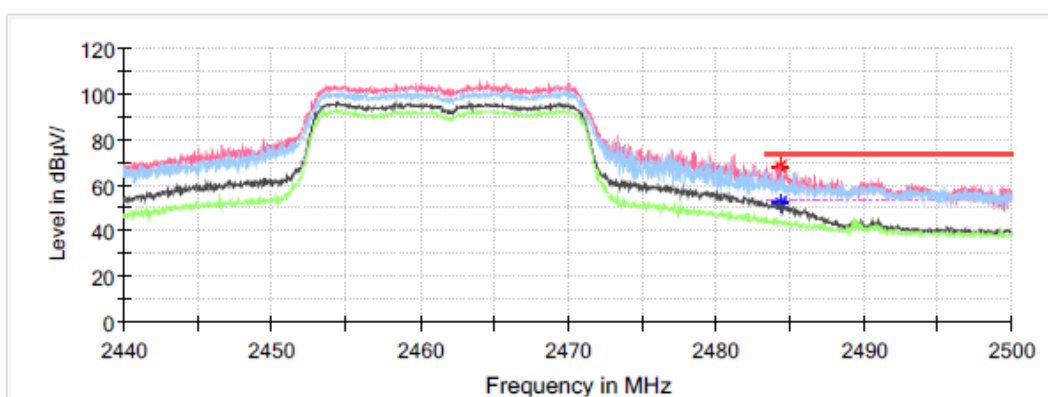
Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2389.184000	---	52.11	54.00	1.89	V	-0.6
2389.184000	64.61	---	74.00	9.39	V	-0.6
2389.800000	---	51.59	54.00	2.41	H	-0.6
2389.800000	67.03	---	74.00	6.97	H	-0.6

High Channel

Common Information

Project No.:	RSHA241101001
EUT Model:	Oscar Trek
Test Mode:	2.4G WIFI 802.11n20 mode High Channel
Standard:	FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment:	ESU40,3115,PAM-0118P
Receiver Setting:	RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature:	25.9℃
Humidity:	53%
Atmospheric Pressure:	100.8kPa
Test Engineer:	Destine Hu
Test Date:	2025/2/11

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)
2484.328000	---	52.91	54.00	1.09	V	-0.3
2484.328000	68.13	---	74.00	5.87	V	-0.3
2484.352000	---	52.10	54.00	1.90	V	-0.3
2484.352000	68.62	---	74.00	5.38	V	-0.3

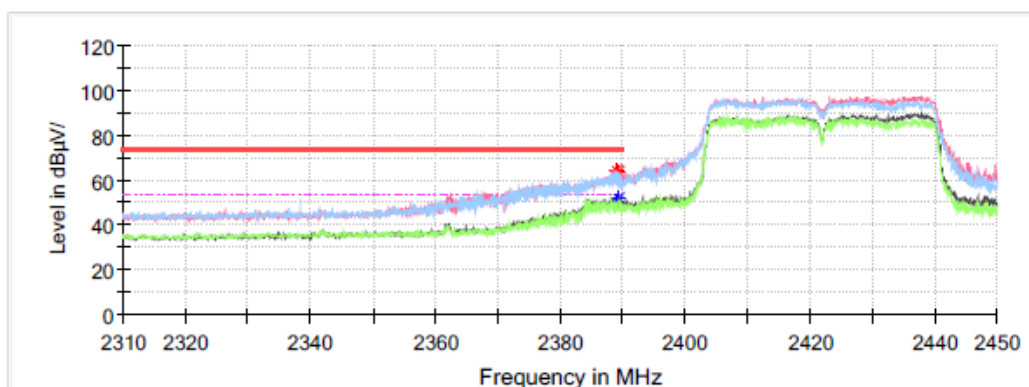
802.11n-HT40 Mode:

Low Channel

Common Information

Project No.: RSHA241101001
EUT Model: Oscar Trek
Test Mode: 2.4G WIFI 802.11n40 mode Low Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 25.9°C
Humidity: 53%
Atmospheric Pressure: 100.8kPa
Test Engineer: Destine Hu
Test Date: 2025/2/11

Full Spectrum



Critical Freqs

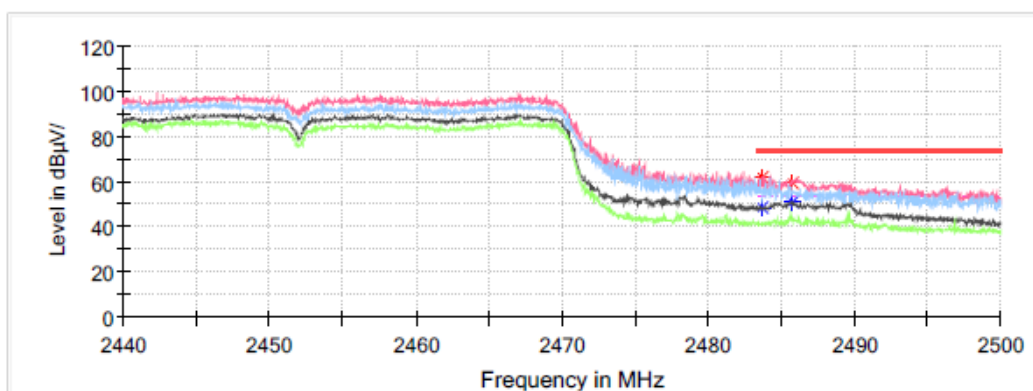
Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2389.128000	64.50	---	74.00	9.50	V	-0.6
2389.128000	---	50.77	54.00	3.23	V	-0.6
2389.296000	64.03	---	74.00	9.97	V	-0.6
2389.296000	---	52.00	54.00	2.00	V	-0.6

High Channel

Common Information

Project No.: RSHA241101001
EUT Model: Oscar Trek
Test Mode: 2.4G WIFI 802.11n40 mode High Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 25.9℃
Humidity: 53%
Atmospheric Pressure: 100.8kPa
Test Engineer: Destine Hu
Test Date: 2025/2/11

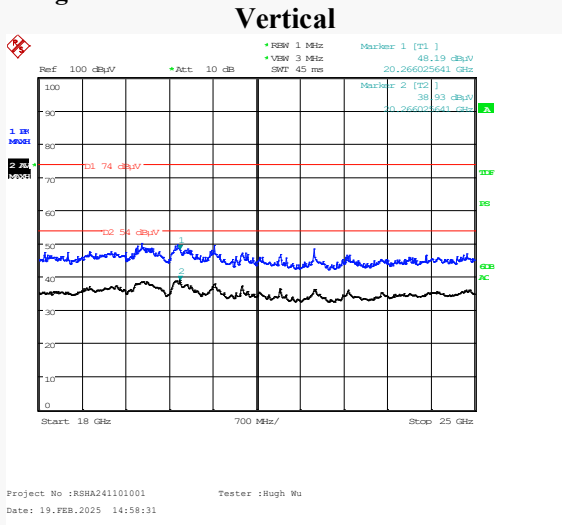
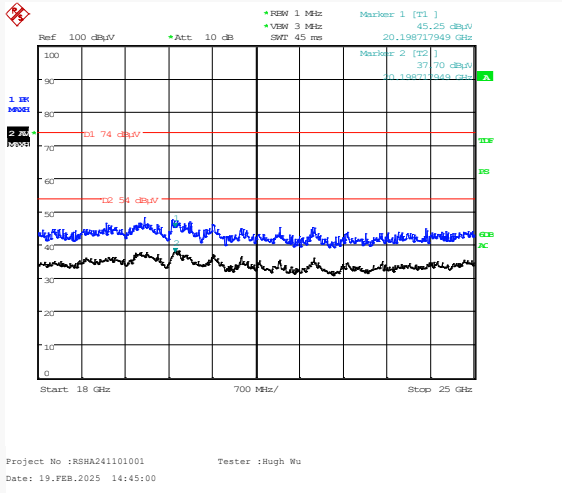
Full Spectrum



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)
2483.752000	62.44	---	74.00	11.56	V	-0.3
2483.752000	---	48.58	54.00	5.42	V	-0.3
2485.816000	59.57	---	74.00	14.43	V	-0.2
2485.816000	---	51.57	54.00	2.43	V	-0.2

18GHz-25GHz:
Transmitting in maximum output power mode 802.11b mode high channel



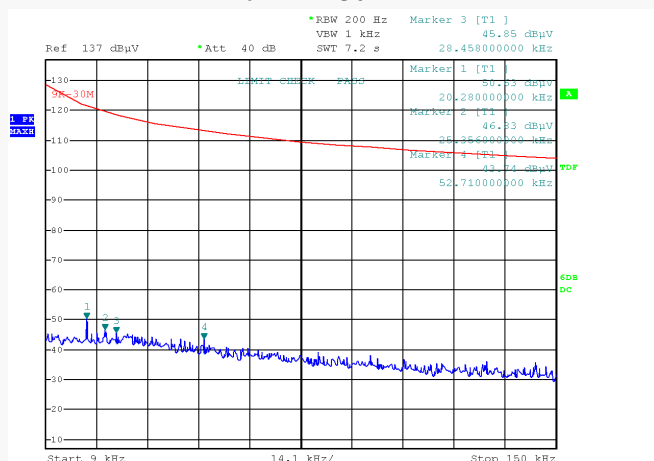
Frequency (GHz)	Max Peak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
20.27	---	38.93	54	15.07	V	12.52
20.27	48.19	---	74	25.81	V	12.52
20.20	---	37.70	54	16.3	H	12.46
20.20	45.25	---	74	28.75	H	12.46

Note: The test distance is 3m. The limit is 74dBμV/m(Peak) and 54dBμV/m(Average).

For BLE Mode:

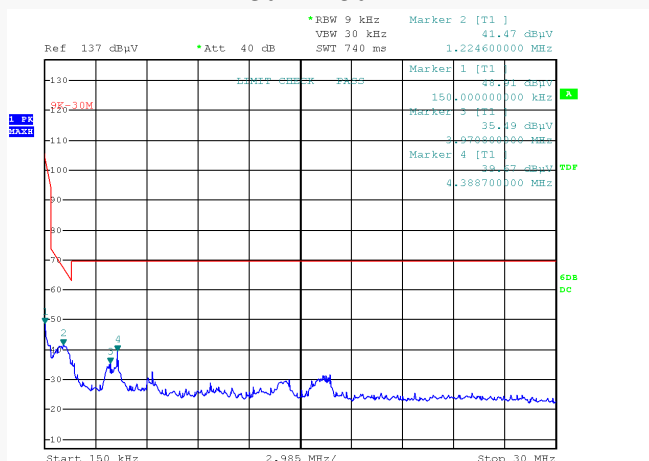
After pre-scan in the X, Y and Z axes of orientation, the worst case is below:

9 kHz-30MHz: Transmitting in maximum output power mode BLE (2 Mbps) high channel Parallel(worst case)

9kHz-150kHz

Project No. RSHA241101001
 Date: 3.SEP.2025 16:26:37

Tester: Link Xia

150kHz-30MHz

Project No. RSHA241101001
 Date: 3.SEP.2025 16:31:53

Tester: Link Xia

9 kHz-150 kHz

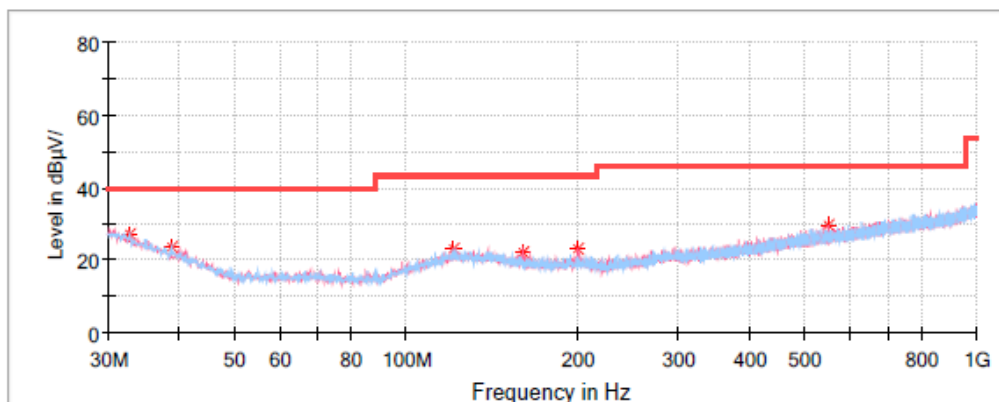
Frequency (MHz)	Corrected Amplitude (dBμV/m) @3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dBμV/m) @3m	Margin (dB)
0.020280	50.63	PK	-0.56	121.46	70.83
0.025356	46.83	PK	-0.59	119.52	72.69
0.028458	45.85	PK	-0.60	118.52	72.67
0.052710	43.74	PK	-4.13	113.17	69.43

150 kHz-30 MHz

Frequency (MHz)	Corrected Amplitude (dBμV/m) @3m	Detector PK/QP/Ave.	Corrected Factor (dB/m)	Limit (dBμV/m) @3m	Margin (dB)
0.15000	48.91	PK	-11.34	104.08	55.17
1.22460	41.47	PK	-28.35	65.84	24.37
3.97080	35.49	PK	-31.90	69.54	34.05
4.38870	39.67	PK	-31.97	69.54	29.87

For BLE (1 Mbps)**30 MHz - 1 GHz (Transmitting in maximum output power BLE (1 Mbps) mode high channel):****High Channel: 2480 MHz****Common Information**

Project No:	RSHA241101001
EUT Model:	Oscar Trek
Test Mode:	Transmitting in BLE-1M mode
Standard:	FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.247
Test Equipment:	ESCI, JB3, 310N
Receiver Setting:	RBW: 100 kHz, VBW: 300 kHz, Sweep Time: Auto
Temperature:	20.3°C
Humidity:	66%
Barometric Pressure:	101.5kPa
Test Engineer:	Jerry Yan
Test Date:	2024/11/16

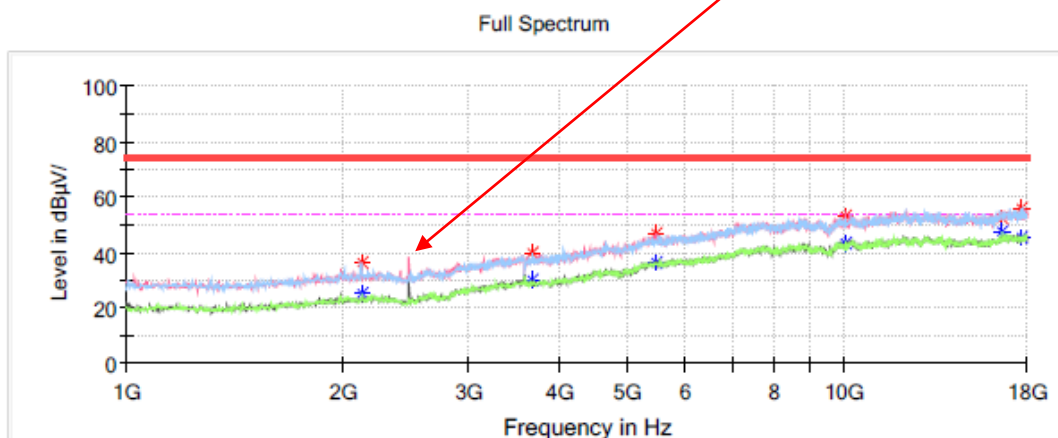
**Critical_Freqs**

Frequency (MHz)	MaxPeak (dBμ V/m)	Limit (dBμ V/m)	Margin (dB)	Pol	Corr. (dB/m)
32.667500	27.36	40.00	12.64	H	-6.5
38.730000	23.59	40.00	16.41	H	-10.5
121.058750	22.94	43.50	20.56	H	-10.9
159.737500	22.06	43.50	21.44	V	-12.1
200.598750	22.99	43.50	20.51	V	-12.1
550.768750	29.66	46.00	16.34	V	-4.6

1 GHz-18 GHz:**Low Channel: 2402 MHz****Common Information**

Project No.: RSHA241101001
EUT Model: Oscar Trek
Test Mode: Transmitting in BLE-1M Low Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 26.7°C
Humidity: 50%
Atmospheric Pressure: 100.8kPa
Test Engineer: Klein Zhu
Test Date: 2024/12/12

Fundamental Test with
Band Reject Filter

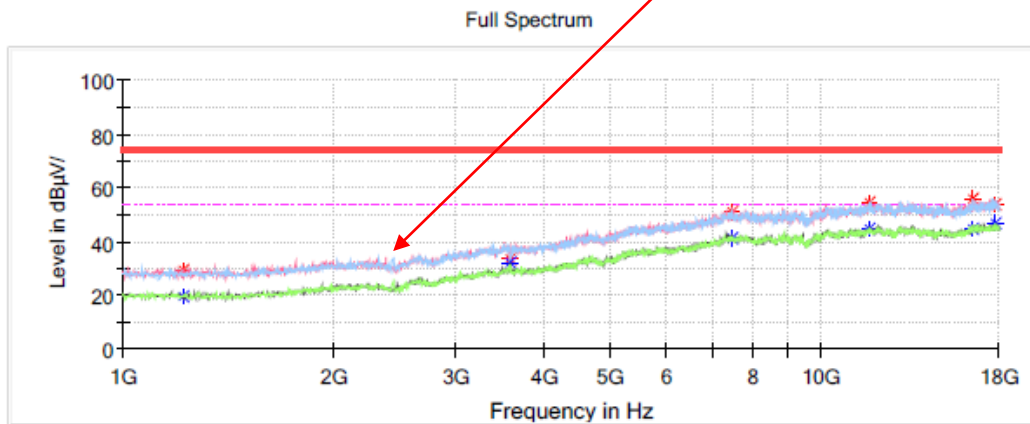
**Critical_Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2128.800000	---	25.33	54.00	28.67	H	-11.3
2128.800000	36.11	---	74.00	37.89	H	-11.3
3679.200000	---	29.94	54.00	24.06	V	-6.2
3679.200000	39.87	---	74.00	34.13	V	-6.2
5488.000000	---	36.62	54.00	17.38	V	-0.4
5488.000000	46.55	---	74.00	27.45	V	-0.4
10016.800000	---	43.35	54.00	10.65	V	7.2
10016.800000	52.97	---	74.00	21.03	V	7.2
16568.600000	---	47.33	54.00	6.67	V	11.0
16568.600000	52.58	---	74.00	21.42	V	11.0
17632.800000	---	45.22	54.00	8.78	V	11.6
17632.800000	56.11	---	74.00	17.89	V	11.6

Middle Channel: 2440 MHz**Common Information**

Project No.: RSHA241101001
EUT Model: Oscar Trek
Test Mode: Transmitting in BLE-1M Middle Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 26.7°C
Humidity: 50%
Atmospheric Pressure: 100.8kPa
Test Engineer: Klein Zhu
Test Date: 2024/12/12

Fundamental Test with
Band Reject Filter

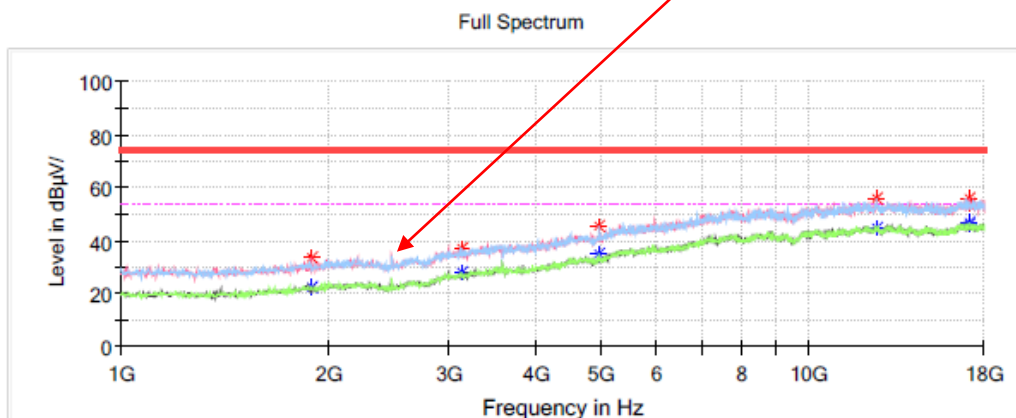
**Critical_Freqs**

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1221.000000	---	19.72	54.00	34.28	H	-15.1
1221.000000	29.39	---	74.00	44.61	H	-15.1
3597.600000	33.90	---	74.00	40.10	V	-6.3
3597.600000	---	32.46	54.00	21.54	V	-6.3
7439.600000	---	41.29	54.00	12.71	V	3.7
7439.600000	51.39	---	74.00	22.61	V	3.7
11744.000000	---	45.07	54.00	8.93	H	8.9
11744.000000	54.87	---	74.00	19.13	H	8.9
16541.400000	---	45.07	54.00	8.93	V	10.9
16541.400000	56.10	---	74.00	17.90	V	10.9
17806.200000	53.78	---	74.00	20.22	H	11.8
17806.200000	---	46.59	54.00	7.41	H	11.8

High Channel: 2480 MHz**Common Information**

Project No.: RSHA241101001
EUT Model: Oscar Trek
Test Mode: Transmitting in BLE-1M High Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 26.7°C
Humidity: 50%
Atmospheric Pressure: 100.8kPa
Test Engineer: Klein Zhu
Test Date: 2024/12/12

Fundamental Test with
Band Reject Filter

**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)
1894.200000	---	22.15	54.00	31.85	H	-12.4
1894.200000	33.36	---	74.00	40.64	H	-12.4
3131.800000	---	27.66	54.00	26.34	H	-7.9
3131.800000	37.00	---	74.00	37.00	H	-7.9
4957.600000	---	34.99	54.00	19.01	H	-2.6
4957.600000	45.11	---	74.00	28.89	H	-2.6
12570.200000	---	44.72	54.00	9.28	H	9.7
12570.200000	56.15	---	74.00	17.85	H	9.7
17088.800000	56.27	---	74.00	17.73	V	12.1
17088.800000	---	45.92	54.00	8.08	V	12.1
17109.200000	53.99	---	74.00	20.01	H	12.1
17109.200000	---	46.56	54.00	7.44	H	12.1

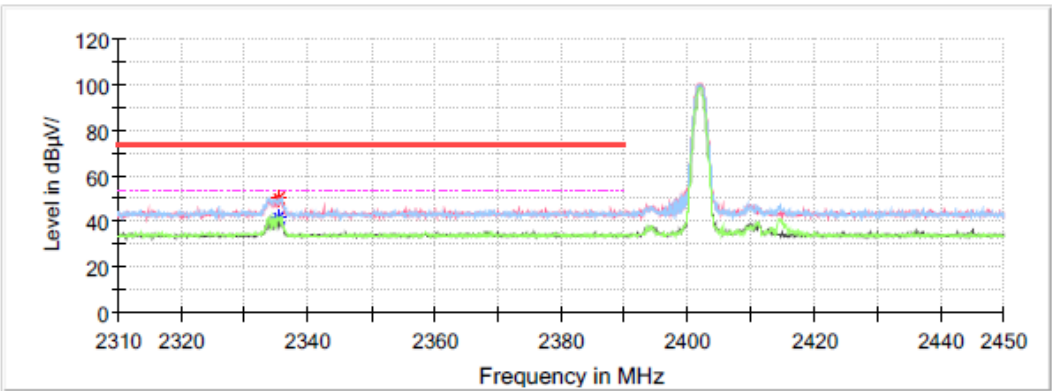
RESTRICTED BANDS EMISSION:

Left Side

Common Information

Project No.:	RSHA241101001
EUT Model:	Oscar Trek
Test Mode:	Transmitting in BLE-1M Low Channel
Standard:	FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment:	ESU40,3115,PAM-0118P
Receiver Setting:	RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature:	26.7°C
Humidity:	50%
Atmospheric Pressure:	100.8kPa
Test Engineer:	Klein Zhu
Test Date:	2024/12/12

Full Spectrum



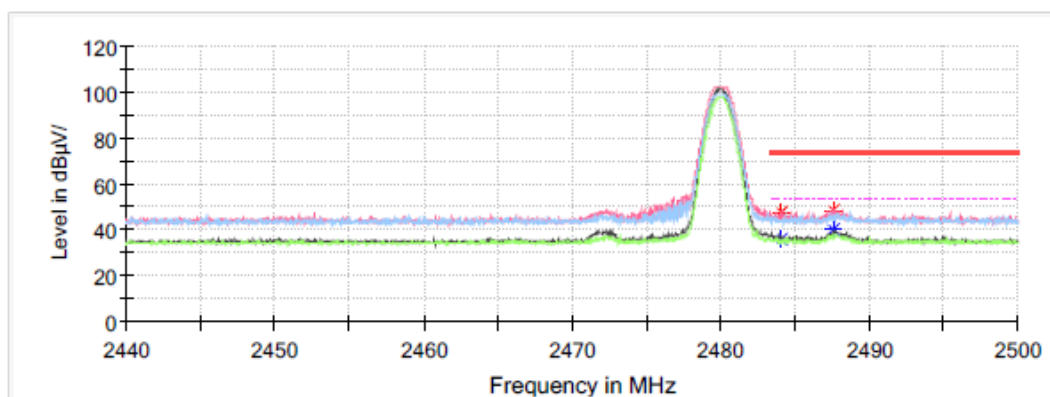
Critical_Freqs

Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2335.312000	---	41.68	54.00	12.32	H	-0.8
2335.312000	50.52	---	74.00	23.48	H	-0.8
2335.368000	---	42.21	54.00	11.79	H	-0.8
2335.368000	50.31	---	74.00	23.69	H	-0.8

Right Side**Common Information**

Project No.: RSHA241101001
EUT Model: Oscar Trek
Test Mode: Transmitting in BLE-1M High Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 26.7°C
Humidity: 50%
Atmospheric Pressure: 100.8kPa
Test Engineer: Klein Zhu
Test Date: 2024/12/12

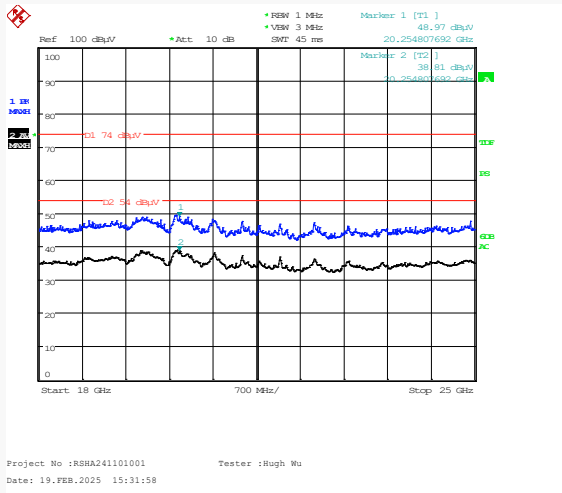
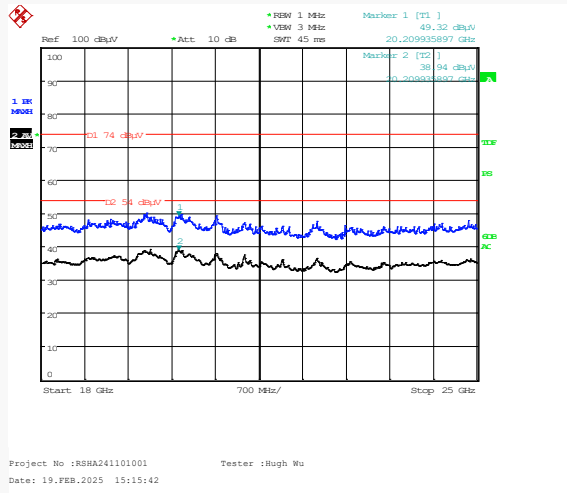
Full Spectrum

**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)
2484.040000	---	36.17	54.00	17.83	V	-0.3
2484.040000	47.85	---	74.00	26.15	V	-0.3
2487.592000	---	40.06	54.00	13.94	V	-0.2
2487.592000	48.79	---	74.00	25.21	V	-0.2

18 GHz - 25 GHz :

Transmitting in maximum output power mode BLE (1 Mbps) mode high channel

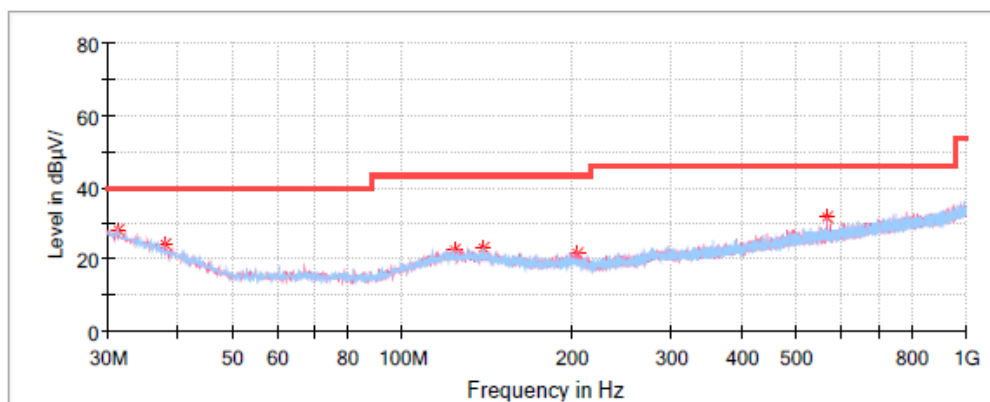


Frequency (GHz)	Max Peak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
20.25	---	38.81	54	15.19	V	12.51
20.25	48.97	---	74	25.03	V	12.51
20.21	---	38.94	54	15.06	H	12.47
20.21	49.32	---	74	24.68	H	12.47

Note: The test distance is 3m. The limit is 74dBμV/m(Peak) and 54dBμV/m(Average).

For BLE (2 Mbps)**30 MHz - 1 GHz (Transmitting in maximum output power BLE (2 Mbps) mode high channel):****High Channel: 2480 MHz****Common Information**

Project No: RSHA241101001
EUT Model: Oscar Trek
Test Mode: Transmitting in BLE-2M mode
Standard: FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.247
Test Equipment: ESCI, JB3, 310N
Receiver Setting: RBW: 100 kHz, VBW: 300 kHz, Sweep Time: Auto
Temperature: 20.3°C
Humidity: 66%
Barometric Pressure: 101.5kPa
Test Engineer: Jerry Yan
Test Date: 2024/11/16

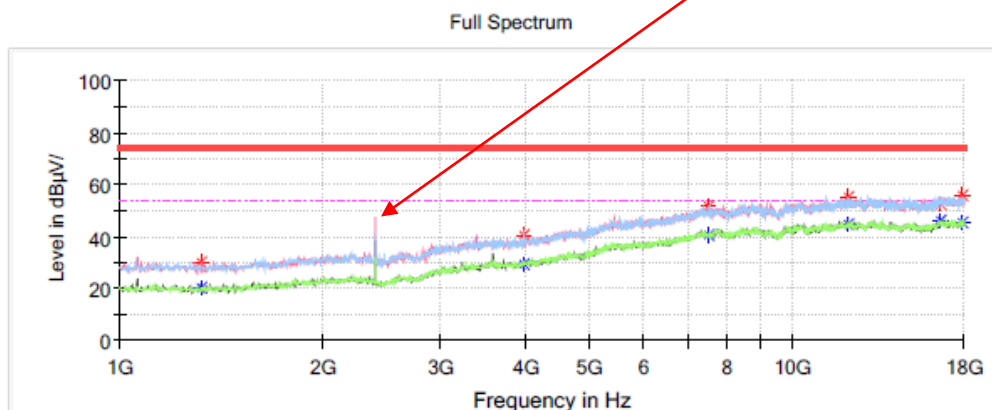
**Critical_Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB)
31.333750	28.10	40.00	11.90	H	-5.6
37.881250	24.13	40.00	15.87	V	-9.9
123.968750	22.87	43.50	20.63	H	-10.9
139.610000	23.34	43.50	20.16	H	-11.2
203.993750	21.71	43.50	21.79	V	-12.3
567.016250	31.83	46.00	14.17	V	-4.4

1 GHz-18 GHz:**Low Channel: 2402 MHz****Common Information**

Project No.: RSHA241101001
EUT Model: Oscar Trek
Test Mode: Transmitting in BLE-2M Low Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 26.7°C
Humidity: 50%
Atmospheric Pressure: 100.8kPa
Test Engineer: Klein Zhu
Test Date: 2024/12/12

Fundamental Test with
Band Reject Filter

**Critical_Freqs**

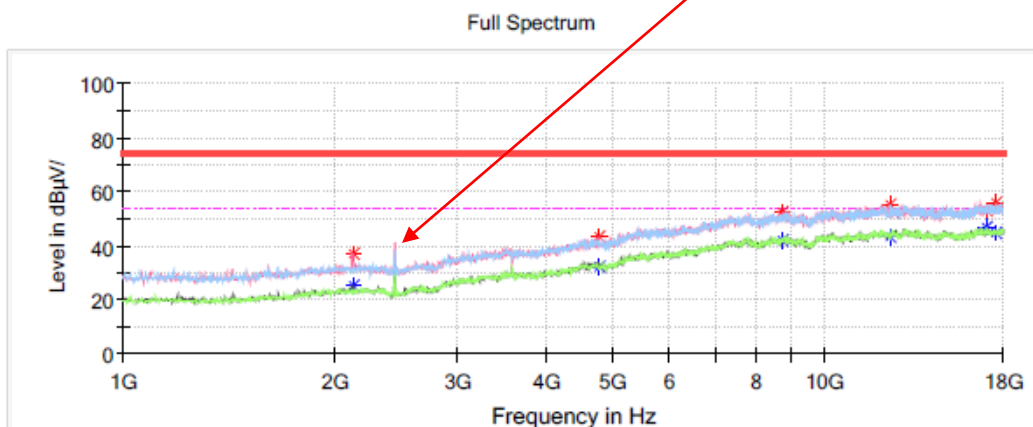
Frequency (MHz)	MaxPeak (dB µ V/m)	Average (dB µ V/m)	Limit (dB µ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1323.000000	---	20.20	54.00	33.80	V	-15.0
1323.000000	30.18	---	74.00	43.82	V	-15.0
3998.800000	---	29.39	54.00	24.61	H	-5.9
3998.800000	40.80	---	74.00	33.20	H	-5.9
7500.800000	---	40.56	54.00	13.44	H	3.9
7500.800000	52.02	---	74.00	21.98	H	3.9
12114.600000	---	44.60	54.00	9.40	V	9.1
12114.600000	55.08	---	74.00	18.92	V	9.1
16616.200000	---	46.40	54.00	7.60	H	11.1
16616.200000	52.42	---	74.00	21.58	H	11.1
17898.000000	---	45.15	54.00	8.85	V	11.9
17898.000000	55.70	---	74.00	18.30	V	11.9

Middle Channel: 2440 MHz

Common Information

Project No.: RSHA241101001
EUT Model: Oscar Trek
Test Mode: Transmitting in BLE-2M Middle Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 26.7°C
Humidity: 50%
Atmospheric Pressure: 100.8kPa
Test Engineer: Klein Zhu
Test Date: 2024/12/12

Fundamental Test with
Band Reject Filter



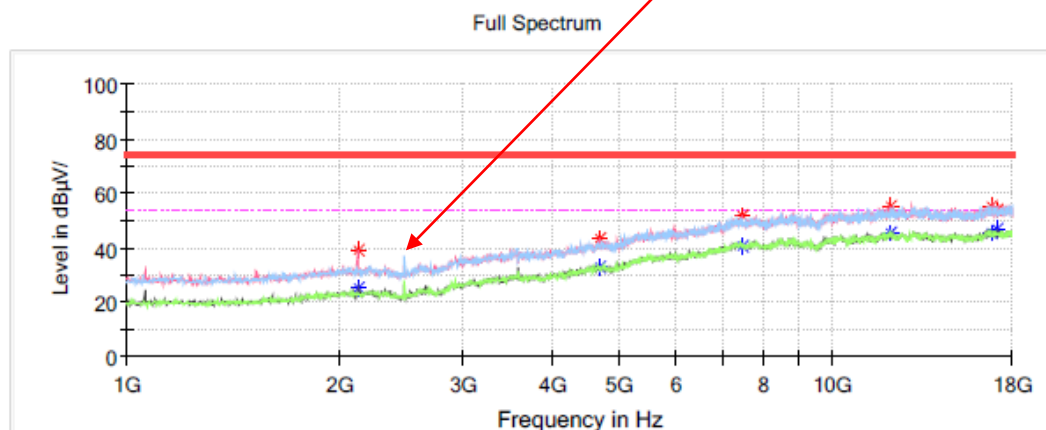
Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2128.800000	---	25.26	54.00	28.74	V	-11.3
2128.800000	37.40	---	74.00	36.60	V	-11.3
4774.000000	---	32.34	54.00	21.66	H	-3.3
4774.000000	43.03	---	74.00	30.97	H	-3.3
8694.200000	---	42.01	54.00	11.99	V	5.4
8694.200000	52.78	---	74.00	21.22	V	5.4
12430.800000	---	43.58	54.00	10.42	H	9.6
12430.800000	55.29	---	74.00	18.71	H	9.6
17031.000000	---	46.97	54.00	7.03	H	12.2
17031.000000	53.48	---	74.00	20.52	H	12.2
17517.200000	---	44.59	54.00	9.41	V	11.5
17517.200000	55.73	---	74.00	18.27	V	11.5

High Channel: 2480 MHz**Common Information**

Project No.: RSHA241101001
EUT Model: Oscar Trek
Test Mode: Transmitting in BLE-2M High Channel
Standard: FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 26.7°C
Humidity: 50%
Atmospheric Pressure: 100.8kPa
Test Engineer: Klein Zhu
Test Date: 2024/12/12

Fundamental Test with
Band Reject Filter

**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)
2125.400000	---	25.35	54.00	28.65	V	-11.3
2125.400000	39.24	---	74.00	34.76	V	-11.3
4682.200000	---	32.68	54.00	21.32	V	-3.6
4682.200000	43.06	---	74.00	30.94	V	-3.6
7470.200000	---	40.63	54.00	13.37	H	3.8
7470.200000	51.64	---	74.00	22.36	H	3.8
12087.400000	---	45.32	54.00	8.68	V	9.1
12087.400000	55.23	---	74.00	18.77	V	9.1
16813.400000	---	45.30	54.00	8.70	H	11.7
16813.400000	55.43	---	74.00	18.57	H	11.7
17088.800000	53.68	---	74.00	20.32	V	12.1
17088.800000	---	46.62	54.00	7.38	V	12.1

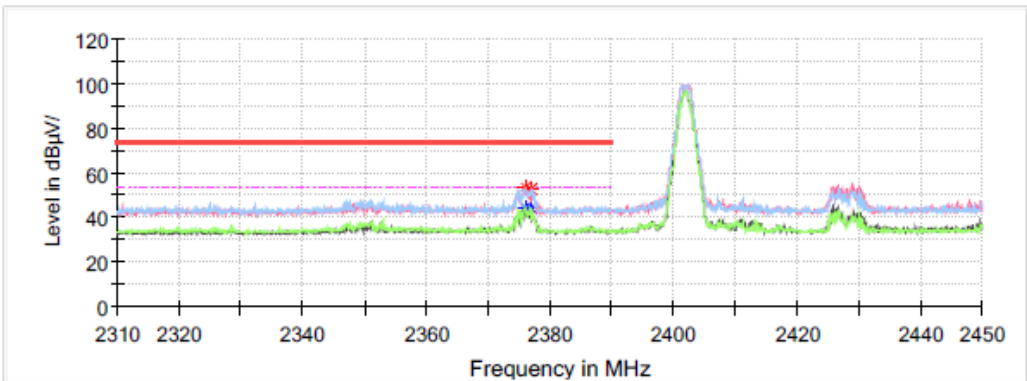
RESTRICTED BANDS EMISSION:

Left Side

Common Information

Project No.:	RSHA241101001
EUT Model:	Oscar Trek
Test Mode:	Transmitting in BLE-2M Low Channel
Standard:	FCC Part 15.247& FCC Part 15.205& FCC Part 15.209
Test Equipment:	ESU40,3115,PAM-0118P
Receiver Setting:	RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature:	26.7℃
Humidity:	50%
Atmospheric Pressure:	100.8kPa
Test Engineer:	Klein Zhu
Test Date:	2024/12/12

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)
2376.080000	53.50	---	74.00	20.50	H	-0.6
2376.080000	---	44.43	54.00	9.57	H	-0.6
2377.088000	52.50	---	74.00	21.50	H	-0.6
2377.088000	---	44.85	54.00	9.15	H	-0.6

Right Side

Common Information

Project No.:RSHA241101001

EUT Model:Oscar Trek

Test Mode:Transmitting in BLE-2M High Channel

Standard:FCC Part 15.247& FCC Part 15.205& FCC Part 15.209

Test Equipment:ESU40,3115,PAM-0118P

Receiver Setting:RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto

Temperature:26.7℃

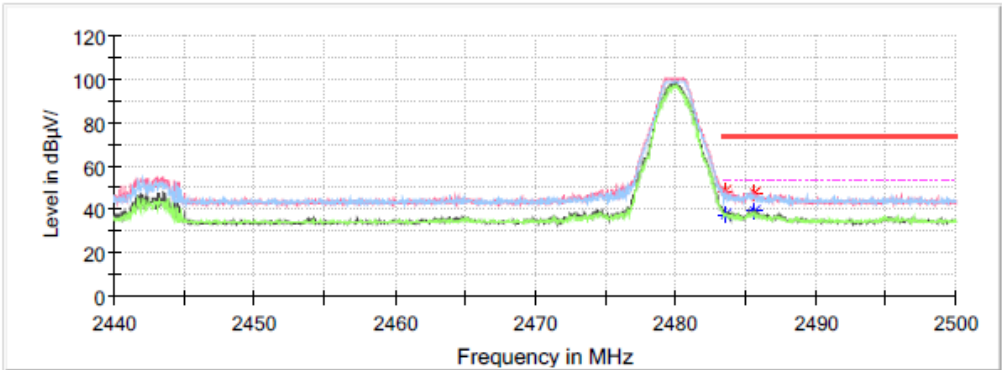
Humidity:50%

Atmospheric Pressure:100.8kPa

Test Engineer:Klein Zhu

Test Date:2024/12/12

Full Spectrum



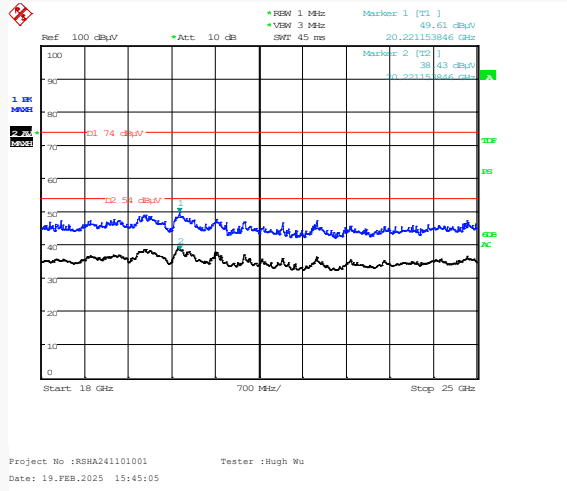
Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2483.608000	48.96	---	74.00	25.04	V	-0.3
2483.608000	---	37.75	54.00	16.25	V	-0.3
2485.648000	47.53	---	74.00	26.47	V	-0.2
2485.648000	---	39.59	54.00	14.41	V	-0.2

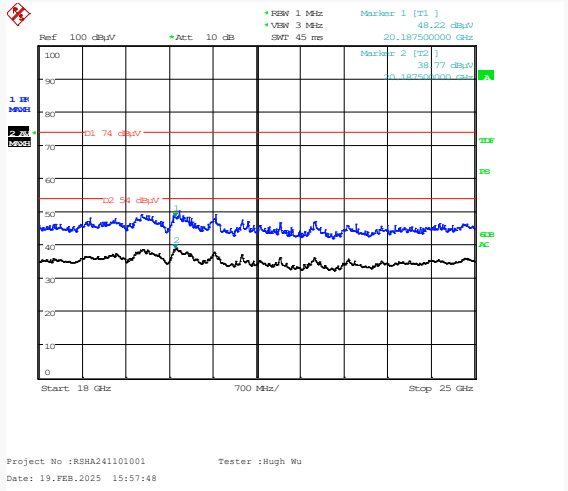
18 GHz - 25 GHz :

Transmitting in maximum output power mode BLE (2 Mbps) mode high channel

Horizontal



Vertical



Frequency (GHz)	Max Peak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)
20.19	---	38.77	54	15.23	V	12.45
20.19	48.22	---	74	25.78	V	12.45
20.22	---	38.43	54	15.57	H	12.48
20.22	49.61	---	74	24.39	H	12.48

Note: The test distance is 3m. The limit is 74dBμV/m(Peak) and 54dBμV/m(Average).

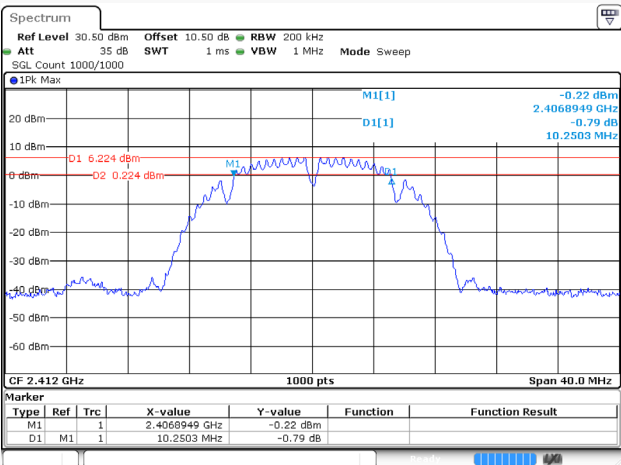
6 dB EMISSION BANDWIDTH**Environmental Conditions & Test Information**

Test Date:	2025-01-17	2025-06-24
Temperature:	23.4 °C	24.2 °C
Relative Humidity:	55 %	52 %
ATM Pressure:	101.1 kPa	101.2 kPa
Test Result:	Pass	Pass
Test Engineer:	Neil Zhou	Neil Zhou

Test Result: Compliant.*EUT operation mode: Transmitting***For Wi-Fi Mode:**

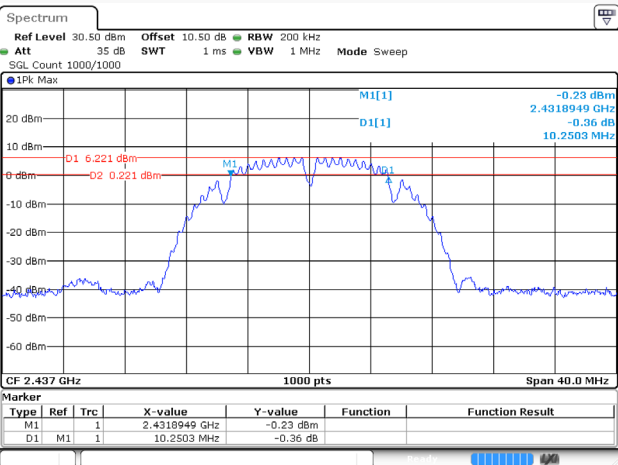
Channel	Frequency (MHz)	6 dB Emission Bandwidth (MHz)	Limit (MHz)
802.11b Mode			
Low	2412	10.250	≥0.5
Middle	2437	10.250	≥0.5
High	2462	10.250	≥0.5
802.11g Mode			
Low	2412	16.657	≥0.5
Middle	2437	16.657	≥0.5
High	2462	16.657	≥0.5
802.11n-HT20 Mode			
Low	2412	17.698	≥0.5
Middle	2437	17.778	≥0.5
High	2462	17.738	≥0.5
802.11n-HT40 Mode			
Low	2422	36.356	≥0.5
Middle	2437	36.356	≥0.5
High	2452	36.356	≥0.5

802.11b_2412MHz



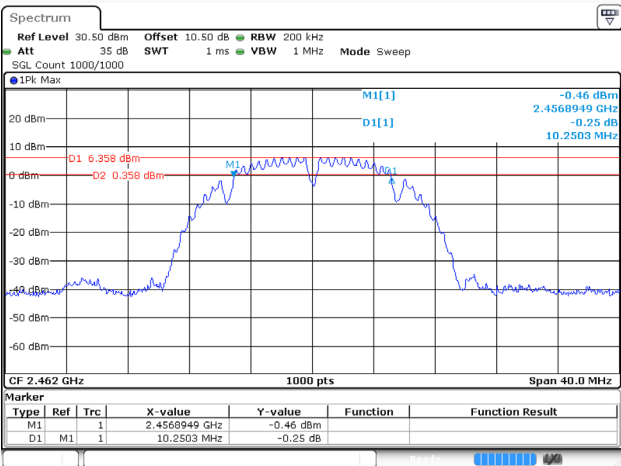
ProjectNo.:RSHA241101001 Tester:Neil Zhou
Date: 24 JUN 2025 13:52:06

802.11b_2437MHz



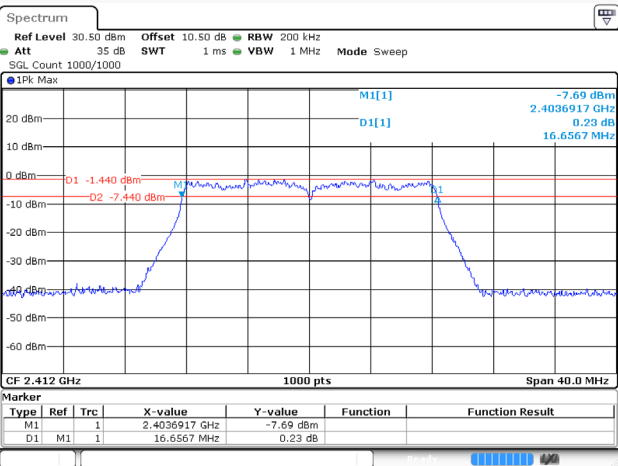
ProjectNo.:RSHA241101001 Tester:Neil Zhou
Date: 24 JUN 2025 13:53:15

802.11b_2462MHz



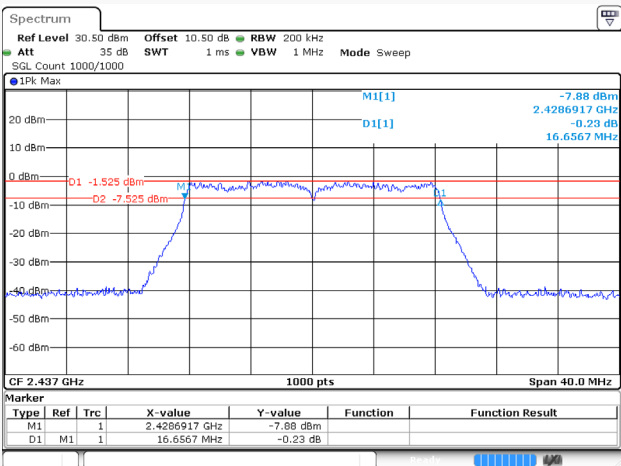
ProjectNo.:RSHA241101001 Tester:Neil Zhou
Date: 24 JUN 2025 13:54:14

802.11g_2412MHz



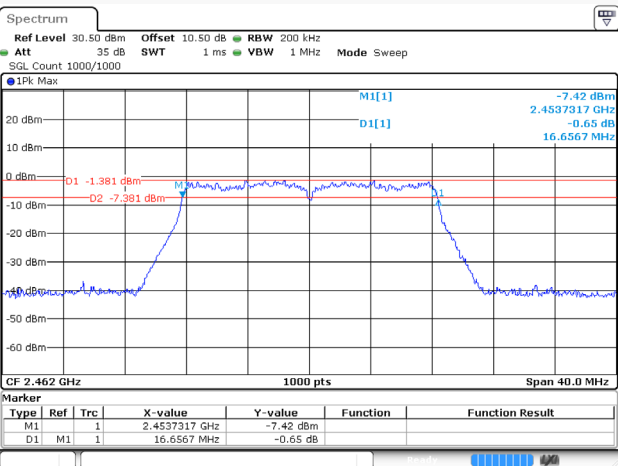
ProjectNo.:RSHA241101001 Tester:Neil Zhou
Date: 24 JUN 2025 13:55:44

802.11g_2437MHz



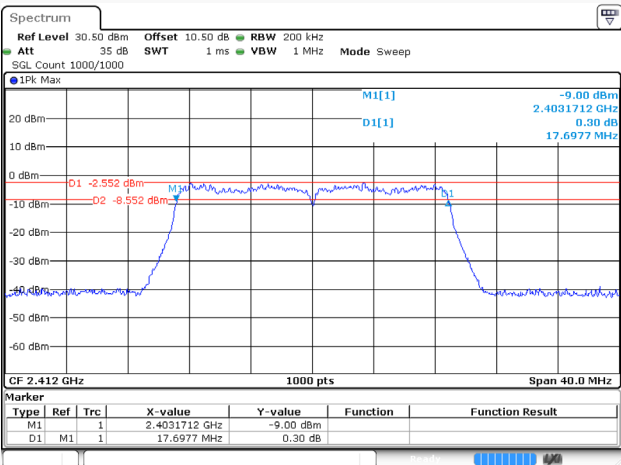
ProjectNo.:RSHA241101001 Tester:Neil Zhou
Date: 24 JUN 2025 13:56:27

802.11g_2462MHz



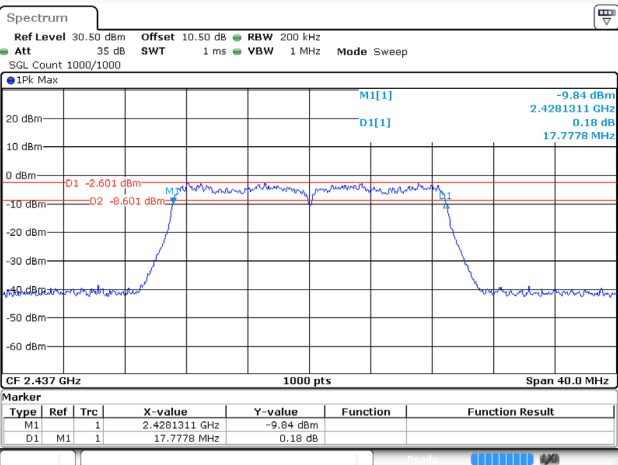
ProjectNo.:RSHA241101001 Tester:Neil Zhou
Date: 24 JUN 2025 13:57:17

802.11n20_2412MHz



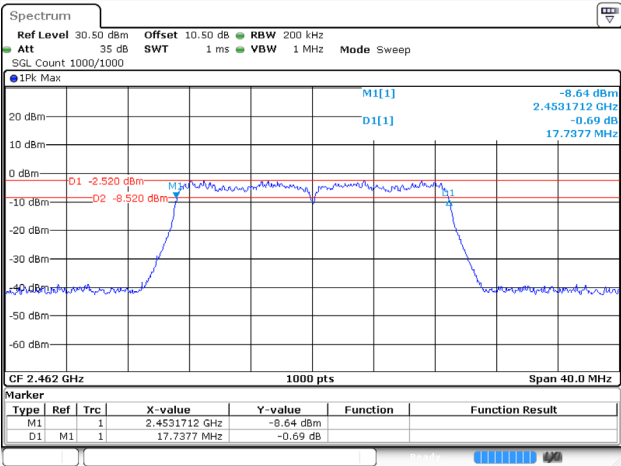
ProjectNo.:RSHA241101001 Tester:Neil Zhou
Date: 24 JUN 2025 13:59:38

802.11n20_2437MHz



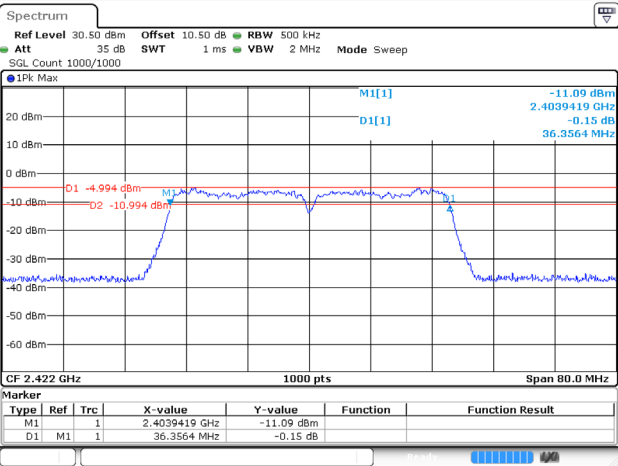
ProjectNo.:RSHA241101001 Tester:Neil Zhou
Date: 24 JUN 2025 14:00:32

802.11n20_2462MHz



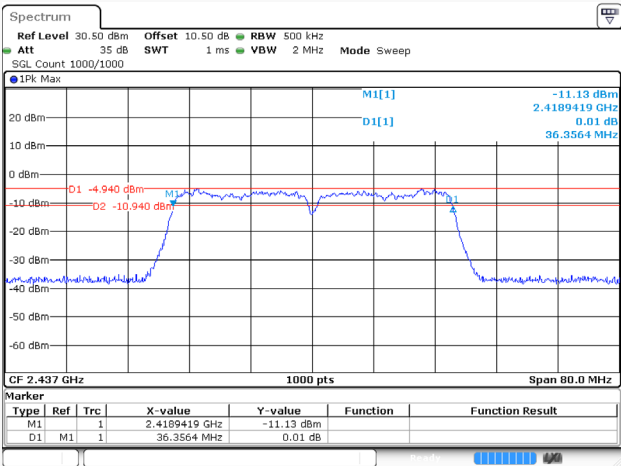
ProjectNo.:RSHA241101001 Tester:Neil Zhou
Date: 24 JUN 2025 14:01:28

802.11n40_2422MHz



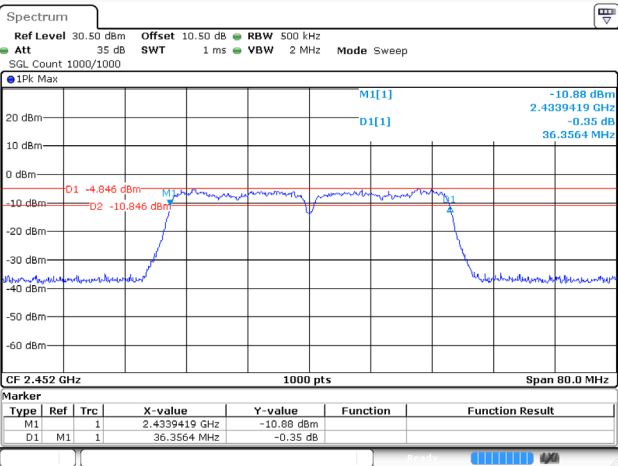
ProjectNo.:RSHA241101001 Tester:Neil Zhou
Date: 24 JUN 2025 14:04:39

802.11n40_2437MHz



ProjectNo.:RSHA241101001 Tester:Neil Zhou
Date: 24 JUN 2025 14:06:23

802.11n40_2452MHz



ProjectNo.:RSHA241101001 Tester:Neil Zhou
Date: 24 JUN 2025 14:07:22

For BLE Mode:

Mode	Channel	Frequency (MHz)	6 dB Emission Bandwidth (MHz)	Limit (MHz)
BLE (1 Mbps)	Low	2402	0.716	≥ 0.5
	Middle	2440	0.716	≥ 0.5
	High	2480	0.720	≥ 0.5
BLE (2 Mbps)	Low	2402	1.170	≥ 0.5
	Middle	2440	1.176	≥ 0.5
	High	2480	1.170	≥ 0.5