

FCC PART 15.247

TEST REPORT

For

SprintRay Inc

2710 Media Center Dr, Suite 100A, Los Angeles, California, 90065-1700, United States

FCC ID: 2A96L-SRP2504A

Report Type: Original Report	Product Name: SprintRay NanoWash
Report Number: <u>RKSA260622001-00B</u>	
Report Date: <u>2026-07-24</u>	
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REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	RKSA260622001-00B	R1V1	2026-07-24	Initial Release

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:	SprintRay Inc
Tested Model:	SRP2504A
Product Name:	SprintRay NanoWash
Power Supply:	DC 24V from Adapter
RF Function:	2.4G Wi-Fi, BLE
Operating Band/Frequency:	2.4G Wi-Fi: 2412~2462 MHz(802.11b/g/n20/ax20) BLE(1 Mbps): 2402-2480 MHz BLE(2 Mbps): 2402-2480 MHz
Maximum Peak Output Power:	2.4G Wi-Fi: 802.11b: 18.65 dBm 802.11g: 22.99 dBm 802.11n20: 25.65 dBm 802.11ax20: 25.47 dBm BLE: BLE(1 Mbps): 5.09 dBm BLE(2 Mbps): 5.26 dBm
Channel Number:	2.4G Wi-Fi: 11(802.11b/g/n20/ax20) BLE(1 Mbps/2 Mbps): 40
Channel Separation:	2.4G Wi-Fi: 5 MHz BLE: 2 MHz
Modulation Type:	2.4G Wi-Fi: DSSS, OFDM, OFDMA BLE: GFSK
★Maximum Antenna Gain:	2.4G Wi-Fi: Chain 0: 2.93 dBi; Chain 1: 2.93 dBi BLE: 2.93 dBi

Adapter Information:

Model: GSM90A24

Input: AC 100-240V, 50/60 Hz, 1.3-0.6A

Output: DC 24V, 3.75A, 90W MAX

Note: This EUT comes in two different configurations, differing only in the motor.

Based on the differences between configuration 1 and configuration 2, we measured all items for configuration 1, while configuration 2 was tested for ac line conducted emissions and spurious emissions below 1 GHz.

Motor Model	Configuration	Serial Number
PBL4611024-8109	configuration 1	RKSA260622001-1
AT2317	configuration 2	RKSA260622001-2

All measurement and tested data in this report was gathered from production sample serial number:

RKSA260622001-1 (configuration 1), RKSA260622001-2 (configuration 2) (Assigned by BACL (Kunshan). The EUT supplied by the applicant was received on 2026-06-22.)

Objective

This report is prepared for *SprintRay 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 ANSIC63.10-2020+Cor. 1-2023+C63.10a-2024+Errata to C63.10a-2024[▲], 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

The system was configured for testing in an engineering mode, which was provided by manufacturer.
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	/	/

For BLE (1 Mbps) mode, EUT was tested with channel 0, 19 and 39.
For BLE (2 Mbps) mode, 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, 802.11n-HT20 and 802.11ax-HE20 mode EUT was tested with Channel 1, 6 and 11.

Equipment Modifications

No modification was made to the EUT tested.

EUT Exercise Software

RF test software: adb

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

Mode	Data Rate	Channel	★Power Level	
			Chain 0	Chain 1
802.11b	1 Mbps	Low	13.0	16.0
		Middle	13.0	16.0
		High	13.0	16.0
802.11g	6 Mbps	Low	17.0	18.0
		Middle	17.0	18.0
		High	17.0	18.0
802.11n-HT20	MCS0	Low	16.0	16.0
		Middle	16.0	16.0
		High	16.0	16.0
802.11ax-HE20	MCS0	Low	17.0	17.0
		Middle	17.0	17.0
		High	17.0	17.0

Mode	Data Rate	Channel	★Power Level
BLE(1Mbps)	1Mbps	Low	Default
		Middle	Default
		High	Default
BLE(2Mbps)	2Mbps	Low	Default
		Middle	Default
		High	Default

Note:

1. The power level was declared by the applicant.
2. 802.11ax only support full RU.
3. 802.11b/g supports SISO mode, 802.11n20/ax20 supports SISO and MIMO mode.

Environmental Conditions & Test Information

Test Date:	2026-07-14	2026-07-15	2026-07-17
Temperature:	24.8 °C	24.6 °C	24.6 °C
Relative Humidity:	45 %	47 %	47 %
ATM Pressure:	100.4 kPa	100.6 kPa	100.6 kPa
Test Engineer:	Neil Zhou	Neil Zhou	Neil Zhou

2.4G WiFi

Mode	Antenna	Test Frequency (MHz)	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	10log(1/x) (dB)
802.11b	Chain 0	2437	8.395	8.497	98.80	/
	Chain 1	2437	8.391	8.493	98.80	/
802.11g	Chain 0	2437	1.385	1.486	93.20	0.31
	Chain 1	2437	1.385	1.486	93.20	0.31
802.11n20	Chain 0	2437	1.299	1.400	92.79	0.33
	Chain 1	2437	1.295	1.396	92.77	0.33
802.11ax20_RU_Full	Chain 0	2437	1.015	1.116	90.95	0.41
	Chain 1	2437	1.015	1.116	90.95	0.41

BLE

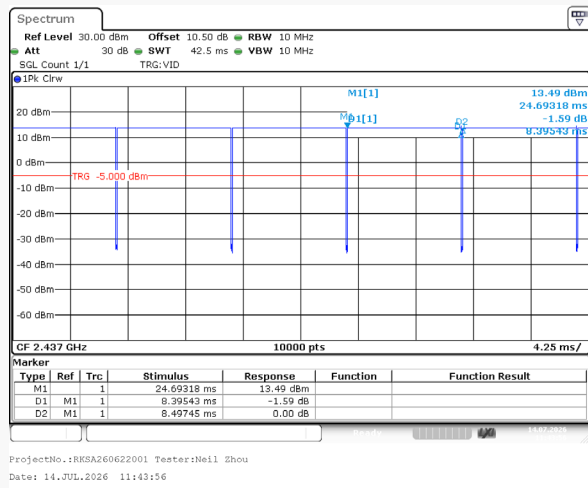
Mode	Duty Cycle (%)	Ton(ms)	Ton+Toff(ms)	10log(1/x) (dB)
BLE(1Mbps)	84.79	2.107	2.485	0.72
BLE(2Mbps)	56.79	1.062	1.870	2.46

Note:

1. “x” means the Duty Cycle.
2. Note: Offset (10.5dB) = Attenuator (10dB) + Cable Loss (0.5dB)

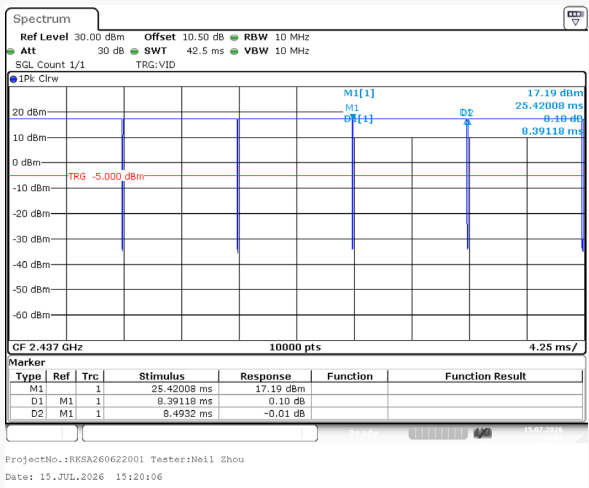
Duty Cycle:
2.4G WiFi
Chain 0

802.11b_2437MHz_Chain 0



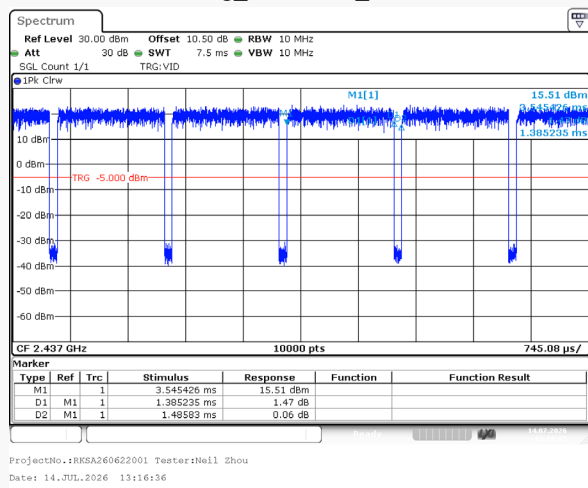
Chain 1

802.11b_2437MHz_Chain 1



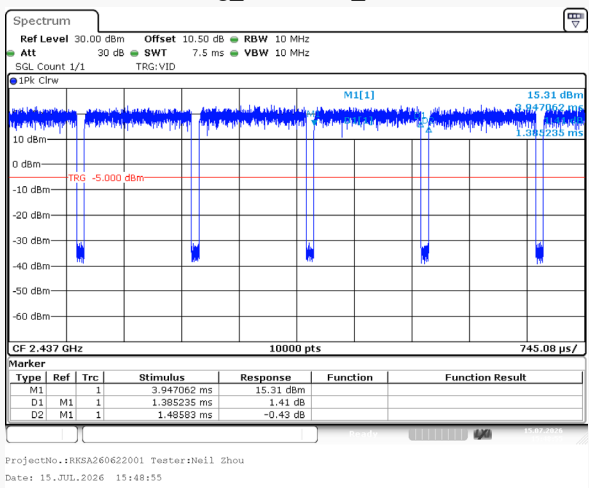
Chain 0

802.11g_2437MHz_Chain 0



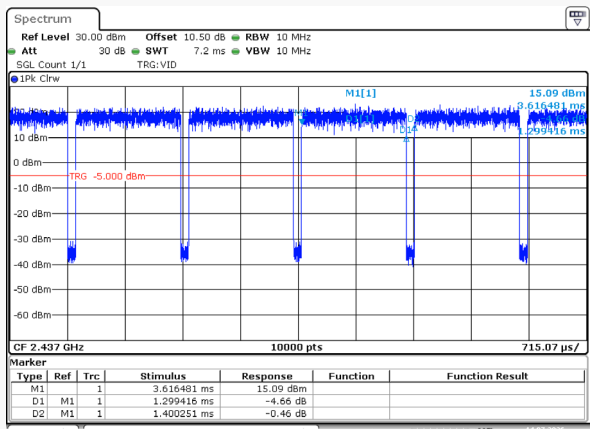
Chain 1

802.11g_2437MHz_Chain 1



Chain 0

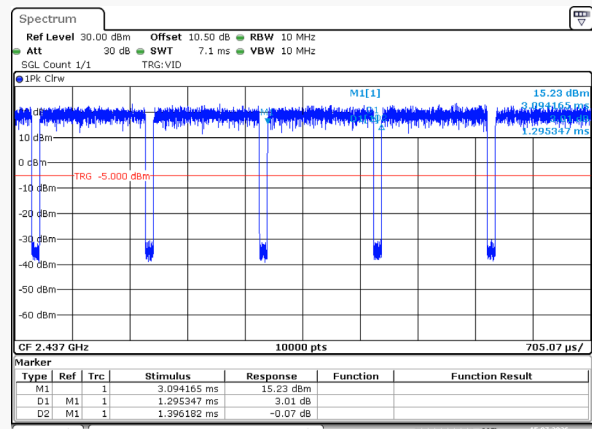
802.11n20_2437MHz_Chain 0



ProjectNo.:RKSA260622001 Tester:Neil Zhou
Date: 14.JUL.2026 16:26:29

Chain 1

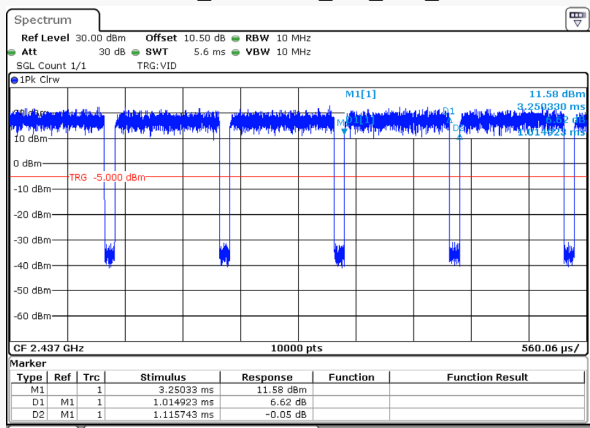
802.11n20_2437MHz_Chain 1



ProjectNo.:RKSA260622001 Tester:Neil Zhou
Date: 15.JUL.2026 16:09:30

Chain 0

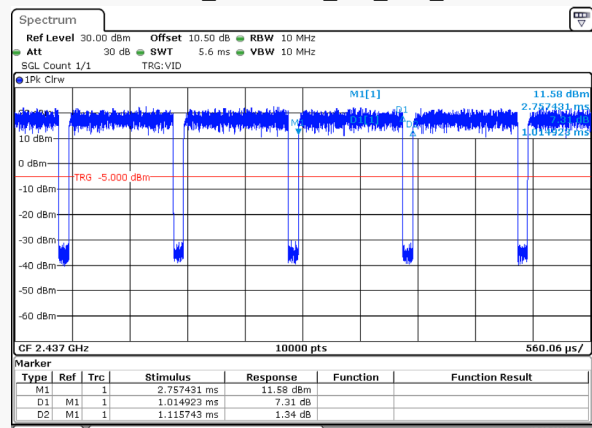
802.11ax20_2437MHz_RU_Full_Chain 0



ProjectNo.:RKSA260622001 Tester:Neil Zhou
Date: 14.JUL.2026 16:46:34

Chain 1

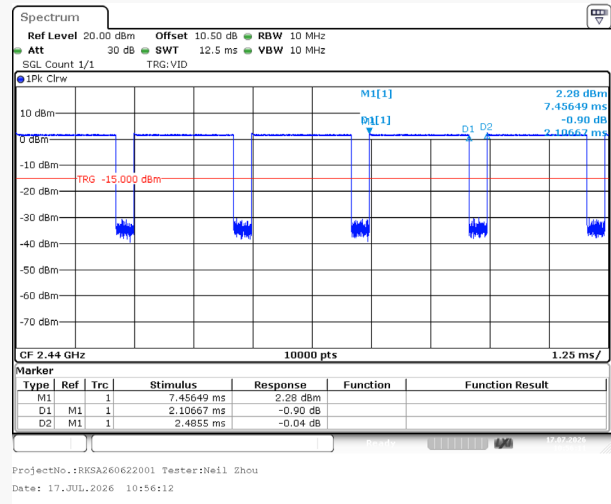
802.11ax20_2437MHz_RU_Full_Chain 1



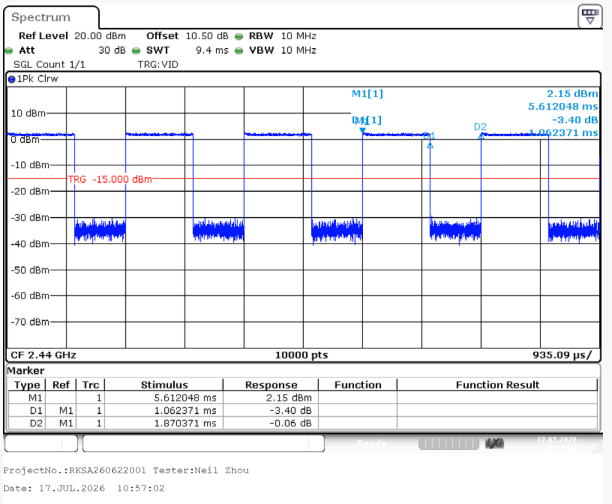
ProjectNo.:RKSA260622001 Tester:Neil Zhou
Date: 15.JUL.2026 16:39:10

BLE

BLE_1M_Middle_Channel



BLE_2M_Middle_Channel

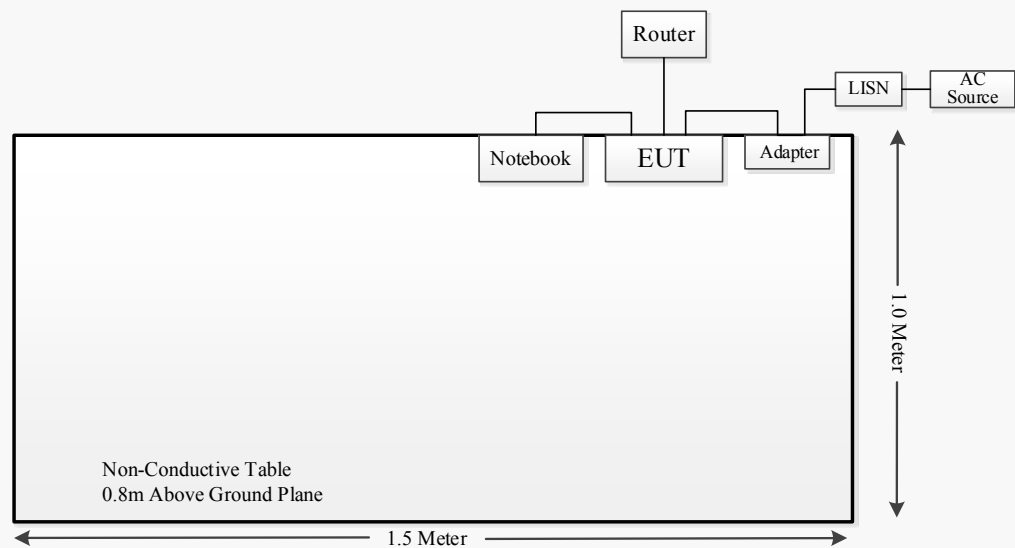


Support Equipment List and Details

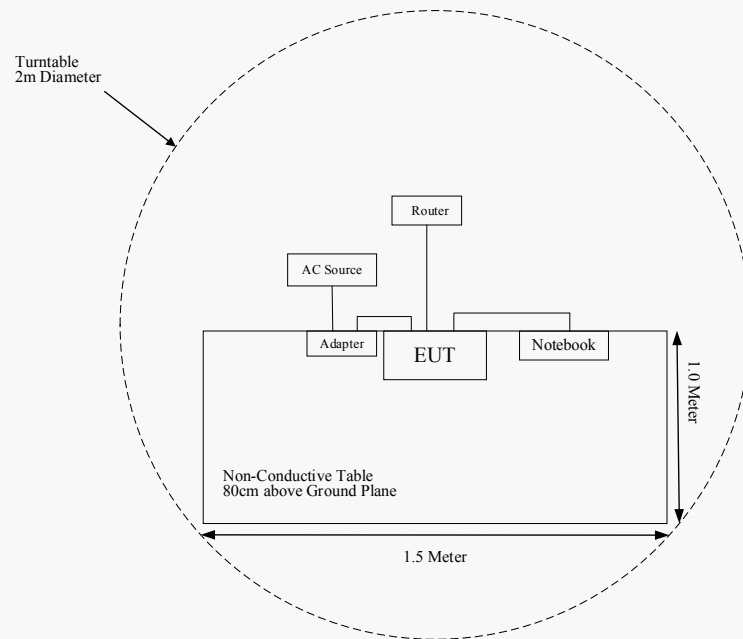
Manufacturer	Description	Model	Serial Number
Lenovo	Notebook	Y700P	PF2B7PL5
TP-LINK	Router	TL-XDR3010	/

External I/O Cable

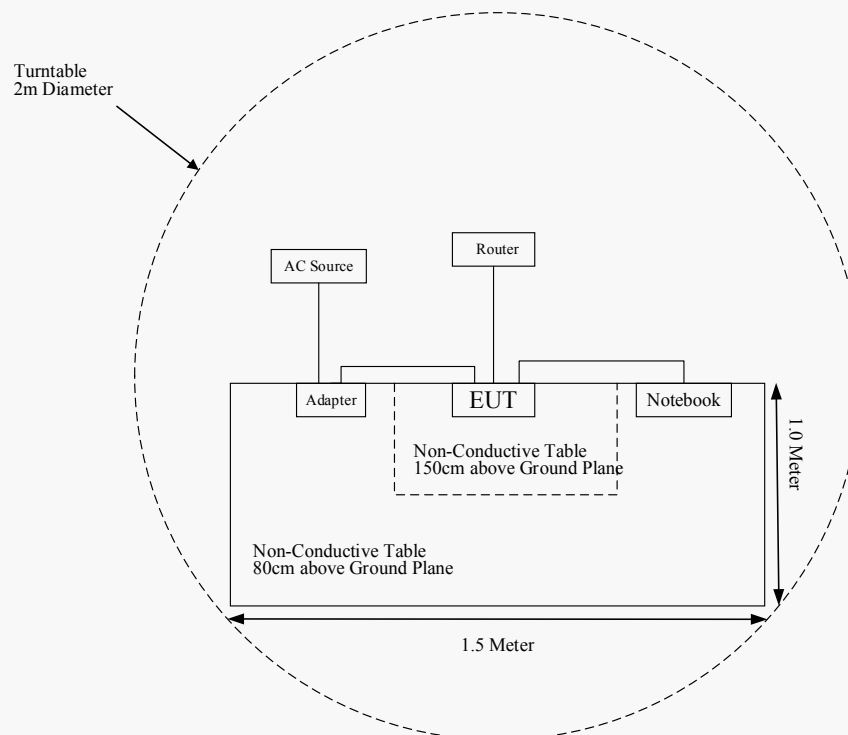
Cable Description	Length (m)	From Port	To Port
USB Cable	1.5	EUT	Notebook
Power Cable 1	1.0	EUT	Adapter
Power Cable 2	1.0	Adapter	AC Source/LISN
RJ45 Cable	5.0	EUT	Router

Block Diagram of Test Setup**For Conducted Emissions:**

For Radiated Emissions (Below 1GHz):



For Radiated Emissions (Above 1GHz):



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1310 & §2.1091	MAXIMUM PERMISSIBLE EXPOSURE (MPE)	Compliant
§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(d)	Conducted Spurious Emission	Compliant
§15.247(e)	Power Spectral Density	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	2026-03-13	2027-03-12
Sunol Sciences	Hybrid 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	2025-08-10	2028-08-09
Sonoma Instrument	Amplifier	310N	171205	2026-03-13	2027-03-12
Rohde & Schwarz	Auto Test Software	EMC32	100361	N/A	N/A
MICRO-COAX	Coaxial Cable	Cable-7	007	2026-03-16	2027-03-15
MICRO-COAX	Coaxial Cable	Cable-8	008	2026-03-13	2027-03-12
MICRO-COAX	Coaxial Cable	Cable-9	009	2026-03-13	2027-03-12
MICRO-COAX	Coaxial Cable	Cable-10	010	2026-03-13	2027-03-12
Radiated Emission Test (Chamber #2)					
Rohde & Schwarz	EMI Test Receiver	ESU40	100207/040	2026-03-16	2027-03-15
EMCO	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	2026-03-16	2027-03-15
SELECTOR	Amplifier	EM18G40G	60726	2026-03-13	2027-03-12
MICRO-TRONICS	Band Reject Filter	BRM50702	G024	2026-03-13	2027-03-12
Narda	Attenuator	10dB	010	2026-03-13	2027-03-12
Rohde & Schwarz	Auto test Software	EMC32	100361	N/A	N/A
MICRO-COAX	Coaxial Cable	Cable-11	011	2026-03-16	2027-03-15
MICRO-COAX	Coaxial Cable	Cable-12	012	2026-03-16	2027-03-15
MICRO-COAX	Coaxial Cable	Cable-13	013	2026-03-16	2027-03-15
MICRO-COAX	Coaxial Cable	Cable-25	025	2026-03-12	2027-03-11

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
RF Conducted Test					
Rohde & Schwarz	Signal Analyzer	FSV40-N	103298	2026-03-13	2027-03-12
Narda	Attenuator	10dB	010	2026-03-13	2027-03-12
XHFDZ	RG316 Coaxial Cable	SMA-316	XHF-1175	Each time	N/A
Anritsu	Power Sensor	MA24418A	12621	2026-03-13	2027-03-12
Conducted Emission Test					
Rohde & Schwarz	EMI Test Receiver	ESR3	1316.3003K03-101746-zn	2026-03-13	2027-03-12
Rohde & Schwarz	LISN	ENV216	101115	2026-03-12	2027-03-11
Audix	Test Software	e3	V9	N/A	N/A
Rohde & Schwarz	Pulse limiter	ESH3-Z2	100552	2026-03-12	2027-03-11
MICRO-COAX	Coaxial Cable	Cable-15	015	2026-03-13	2027-03-12

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)

(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:

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

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)			
2.4G WiFi	2412-2462	2.93	1.96	26.0	398.11	20	0.1552	1.0
BLE	2402-2480	2.93	1.96	5.5	3.55	20	0.0014	1.0
BT	2402-2480	2.93	1.96	8.0	6.31	20	0.0025	1.0
5G WiFi	5150-5250	2.28	1.69	12.5	17.78	20	0.0060	1.0
	5250-5350	2.72	1.87	11	12.59	20	0.0047	1.0
	5470-5725	2.67	1.85	8.5	7.08	20	0.0026	1.0
	5725-5850	2.67	1.85	14.5	28.18	20	0.0104	1.0
NFC	13.56	/	/	-38.17	0.0002	20	<0.0001	0.98
NFC field strength is 57.03 dBμV/m = -38.17 dBm (0.0002mW) EIRP. That equal to antenna gain is 0 dBi and used the EIRP value as conducted power.								

Note:

1. For the above tune up power were declared by the manufacturer.
2. Note: E[dBμV/m] = EIRP[dBm] + 95.2 for d = 3 m.
3. The BT, BLE, Wi-Fi and NFC can be transmitting simultaneously, So

$$\sum_i \frac{S_i}{S_{Limit,i}} = 0.1552 + 0.0025 + 0.0001 = 0.1578 < 1.0$$

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

The EUT have two FPC antenna which permanently attached to the unit. fulfill the requirement of this section. Please refer to the EUT photos.

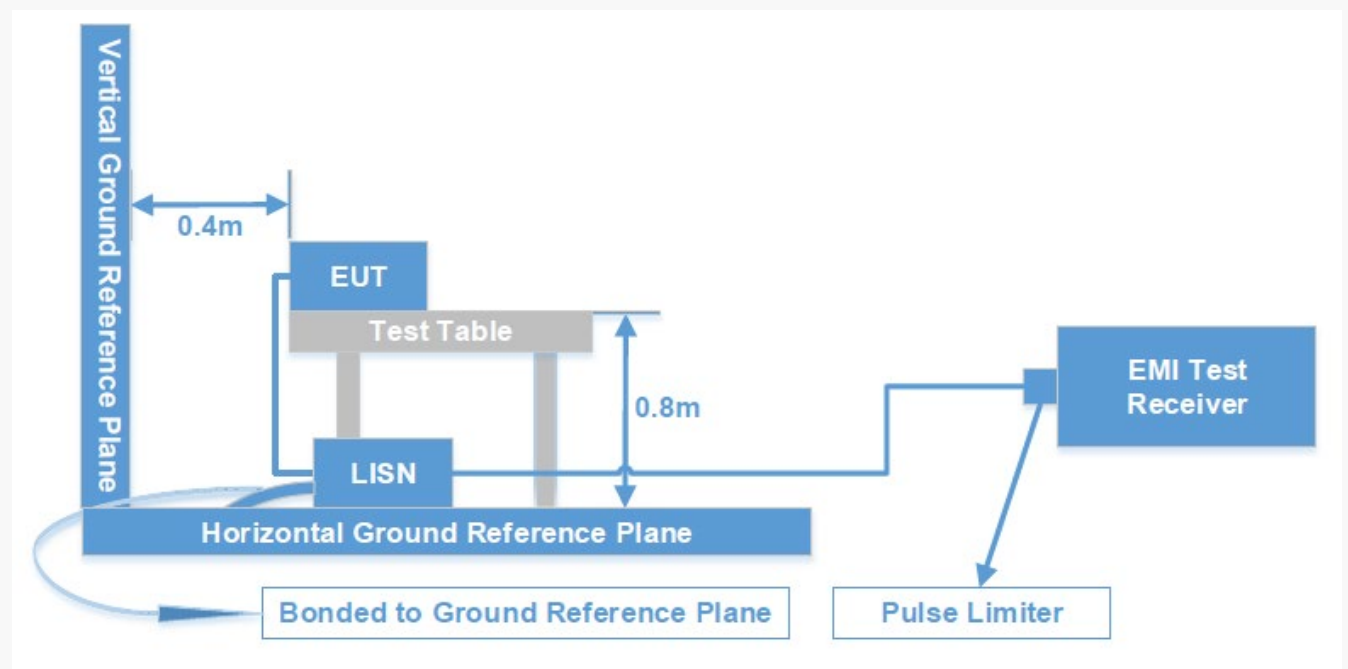
Result: Compliant.

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

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

Frequency Range	RBW
150 kHz - 30 MHz	9 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)

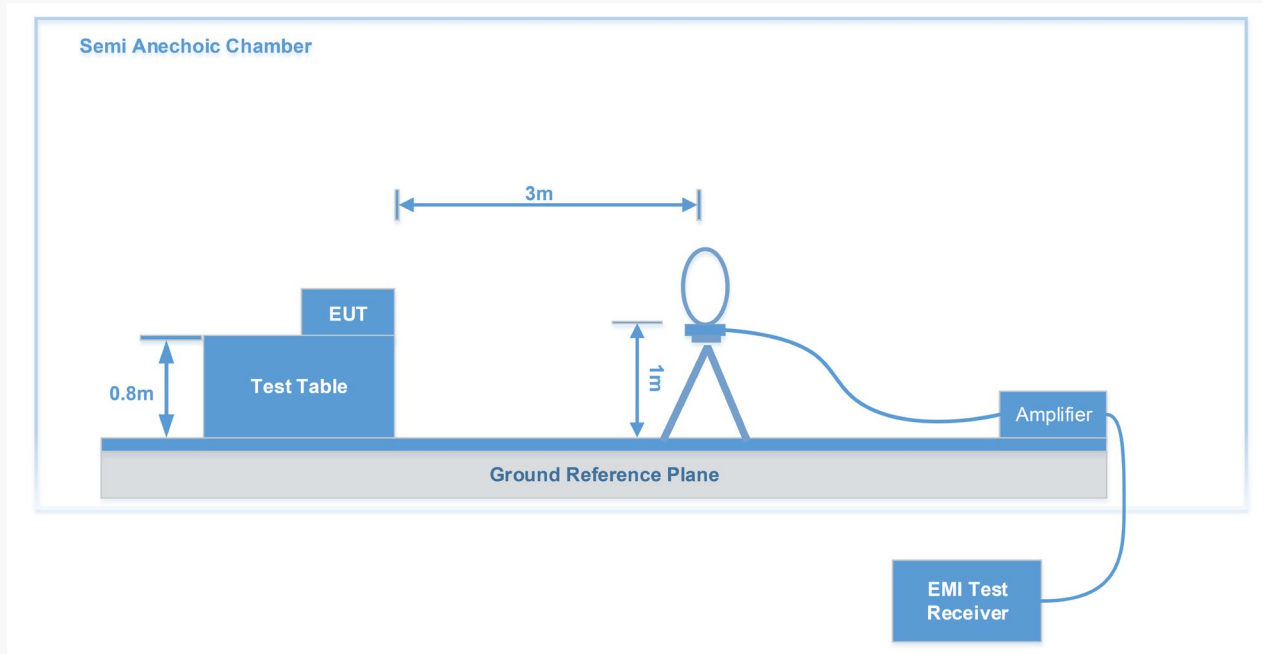
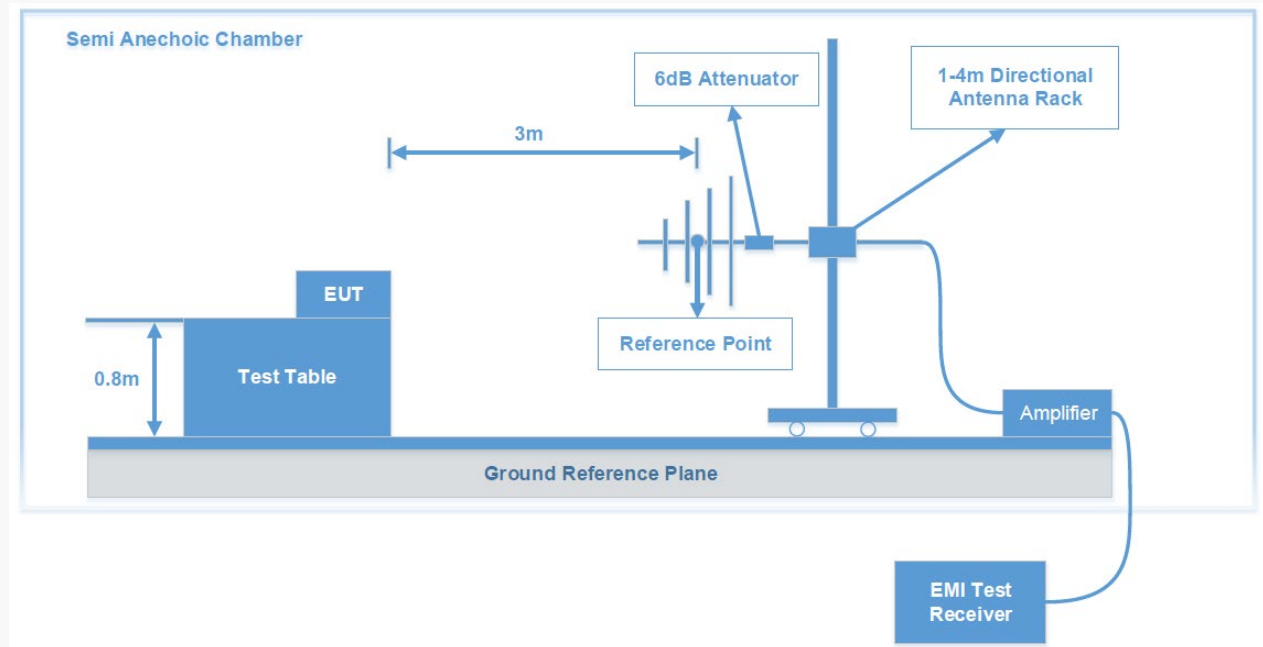
Test Results Summary

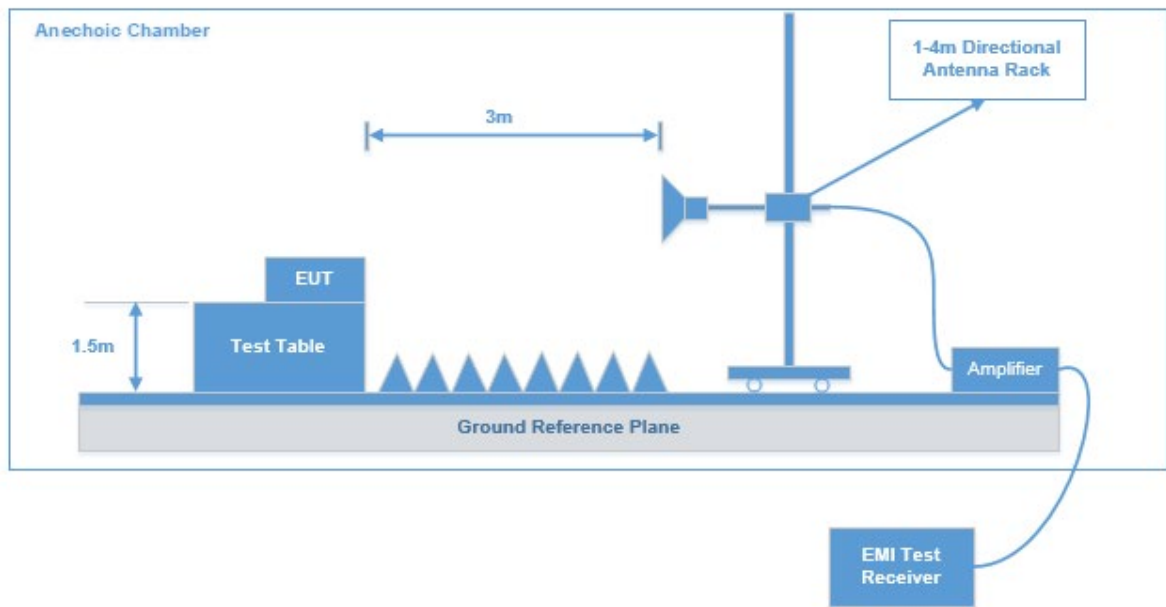
According to the recorded data in following table, the EUT complied with the FCC Part 15.207.

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-30 MHz:****30 MHz-1 GHz:**

Above 1 GHz:

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

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	Peak/QP
150 kHz – 30 MHz	9 kHz	30 kHz	9 kHz	Peak/QP	Peak/QP
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.

Data was recorded in Quasi-peak detection mode for frequency range of 9 kHz -1 GHz, except 9-90 kHz, 110-490 kHz, employing an average detector, peak and Average detection modes for frequencies above 1 GHz.

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) + 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)

Note: The QuasiPeak (dB μ V/m), MaxPeak (dB μ V/m), Average (dB μ V/m) which shown in the data table are all Corrected Amplitude.

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

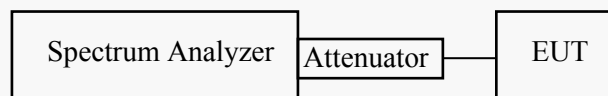
Applicable Standard

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

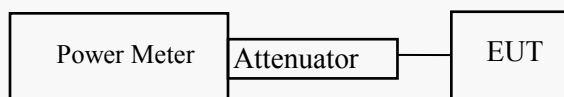
For 2.4G Wi-Fi:

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

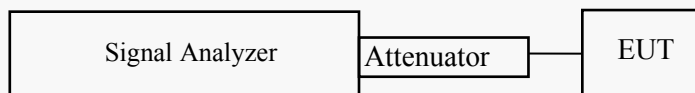
Method AVGPM-G is a measurement using a gated RF average power meter. Alternatively, measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. 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

- a) Set the RBW $\geq$ DTS bandwidth.
- b) Set VBW $\geq [3 \times \text{RBW}]$.
- c) Set span $\geq [3 \times \text{RBW}]$.
- d) Sweep time = No faster than coupled (auto) time.
- e) Detector = peak.
- f) Trace mode = max-hold.
- g) Allow trace to fully stabilize.
- h) 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 & CONDUCTED SPURIOUS EMISSION

Band Edges

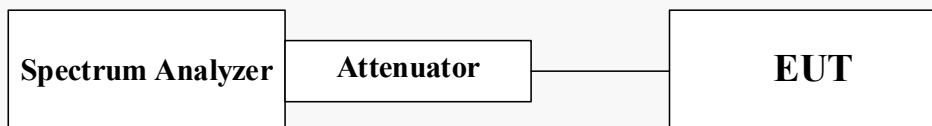
Applicable Standard

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 Section 11.11

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)

Conducted Spurious Emission

Applicable Standard

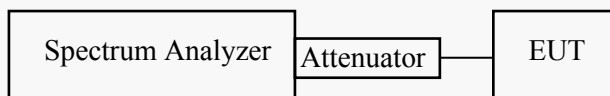
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

Test Procedure

According to ANSI C63.10-2020 Section 11.11

- a) Set the center frequency and span to encompass frequency range to be measured
- b) Set the RBW = 100 kHz.
- c) Set the VBW $\geq [3 \times \text{RBW}]$.
- d) Detector = peak.
- e) Sweep time = No faster than coupled (auto) time.
- f) Trace mode = max hold.
- g) Allow trace to fully stabilize.
- h) Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.



Note: Offset (13dB) = Attenuator (10dB) + Cable Loss (3dB)

Test Data: See Appendix

FCC §15.247(E) - POWER SPECTRAL DENSITY

Applicable Standard

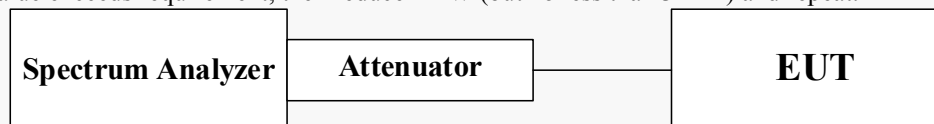
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of 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**

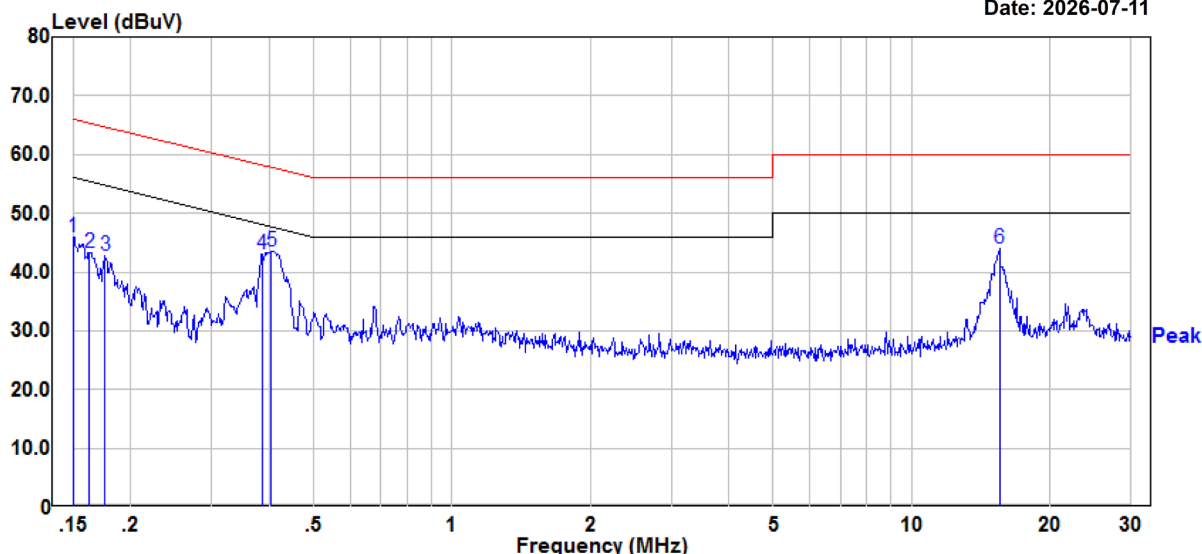
Test Date:	2026-07-11
Temperature:	25.4 °C
Relative Humidity:	52 %
ATM Pressure:	100.9 kPa
Test Result:	Pass
Test Engineer:	Aiden Feng

Configuration 1

Wi-Fi Mode:

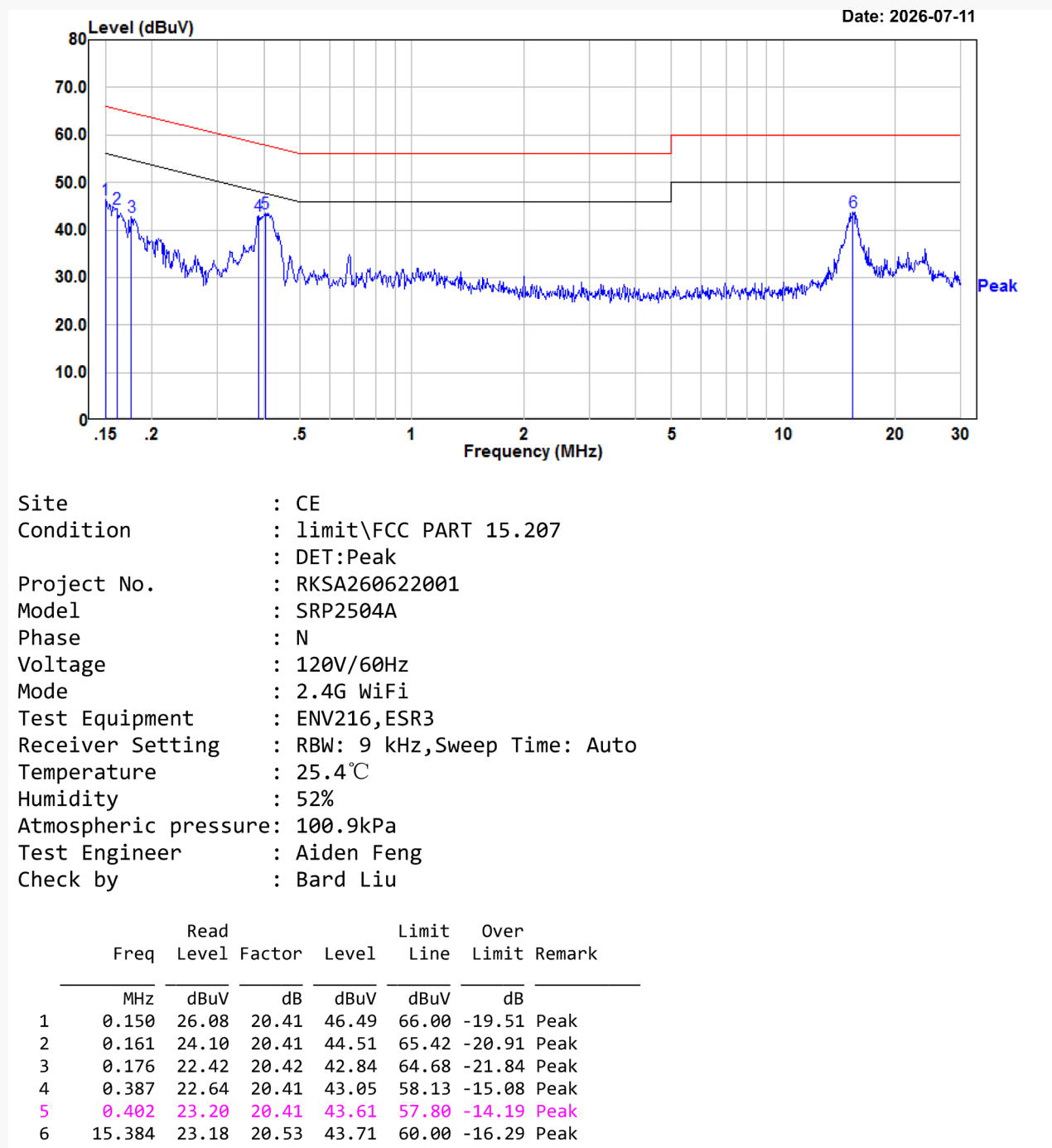
EUT operation mode: Transmitting in maximum output power 802.11n20 mode low channel (chain 0 + chain 1)

Date: 2026-07-11



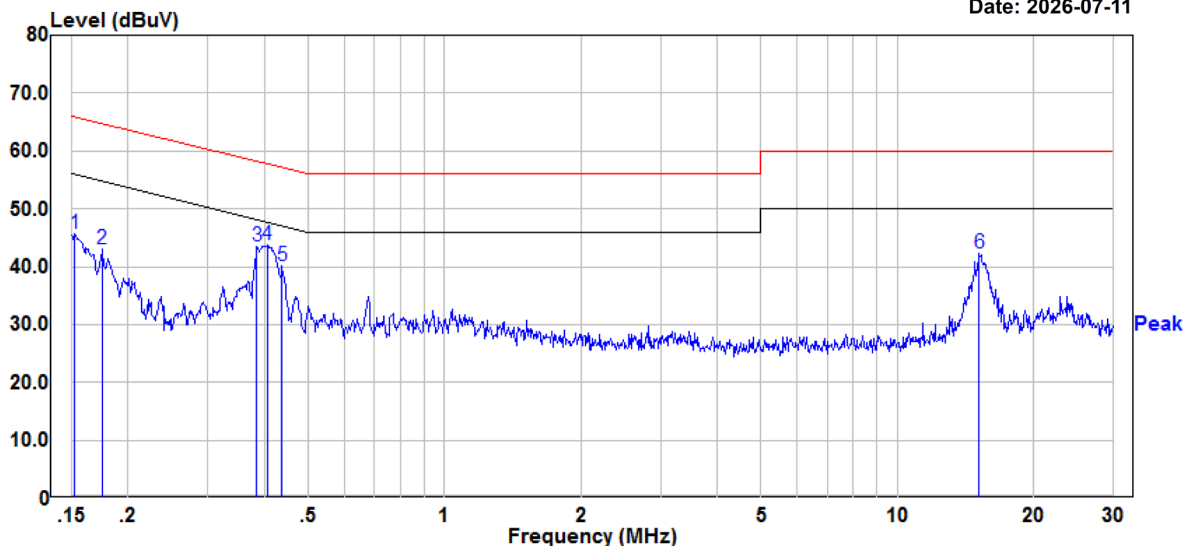
Site : CE
 Condition : limit\FCC PART 15.207
 : DET:Peak
 Project No. : RKSA260622001
 Model : SRP2504A
 Phase : L
 Voltage : 120V/60Hz
 Mode : 2.4G WiFi
 Test Equipment : ENV216, ESR3
 Receiver Setting : RBW: 9 kHz, Sweep Time: Auto
 Temperature : 25.4°C
 Humidity : 52%
 Atmospheric pressure: 100.9kPa
 Test Engineer : Aiden Feng
 Check by : Bard Liu

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.150	25.49	20.39	45.88	66.00	-20.12	Peak
2	0.162	22.91	20.39	43.30	65.34	-22.04	Peak
3	0.176	22.47	20.41	42.88	64.68	-21.80	Peak
4	0.387	22.69	20.40	43.09	58.13	-15.04	Peak
5	0.404	23.23	20.40	43.63	57.76	-14.13	Peak
6	15.538	23.41	20.52	43.93	60.00	-16.07	Peak



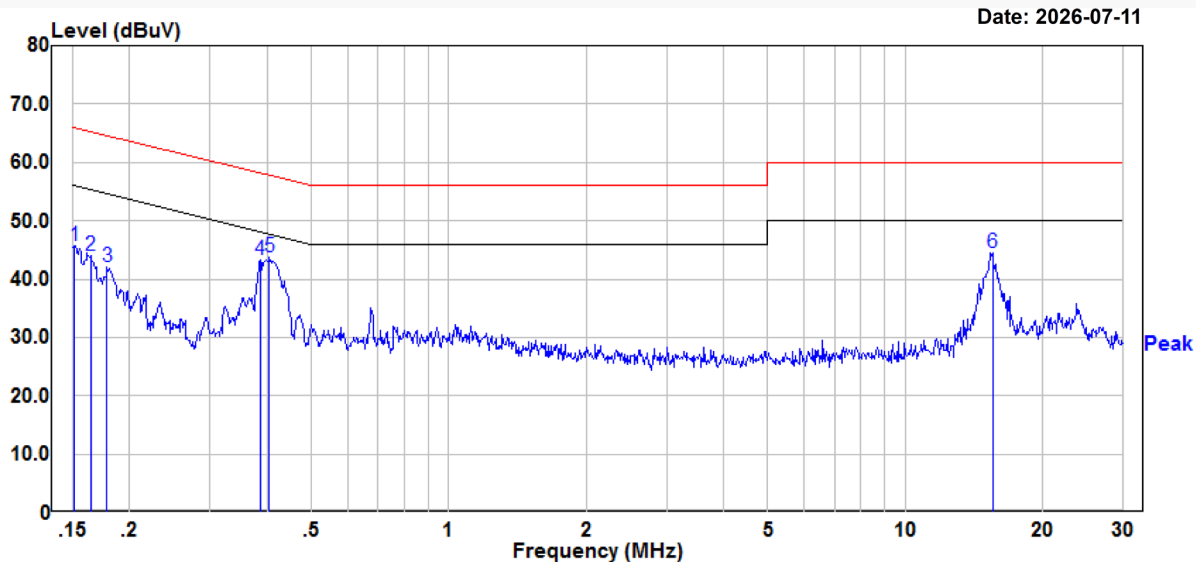
BLE Mode:*EUT operation mode: Transmitting in maximum output power BLE (1 Mbps) high channel*

Date: 2026-07-11



Site : CE
Condition : limit\FCC PART 15.207
Project No. : RKSA260622001
Model : SRP2504A
Phase : L
Voltage : 120V/60Hz
Mode : BLE 1M
Test Equipment : ENV216,ESR3
Receiver Setting : RBW: 9 kHz,Sweep Time: Auto
Temperature : 25.4°C
Humidity : 52%
Atmospheric pressure: 100.9kPa
Test Engineer : Aiden Feng
Check by : Bard Liu

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.152	25.28	20.39	45.67	65.88	-20.21	Peak
2	0.175	22.54	20.41	42.95	64.72	-21.77	Peak
3	0.385	23.03	20.40	43.43	58.18	-14.75	Peak
4	0.406	23.35	20.40	43.75	57.72	-13.97	Peak
5	0.438	19.80	20.41	40.21	57.10	-16.89	Peak
6	15.155	21.85	20.52	42.37	60.00	-17.63	Peak

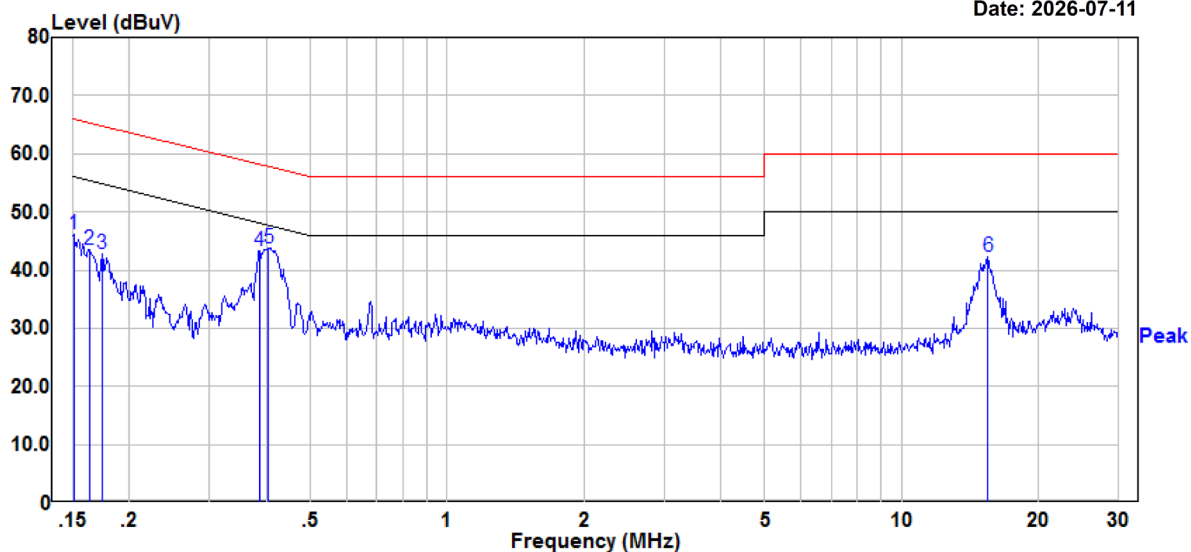


Site : CE
Condition : limit\FCC PART 15.207
: DET:Peak
Project No. : RKSA260622001
Model : SRP2504A
Phase : N
Voltage : 120V/60Hz
Mode : BLE 1M
Test Equipment : ENV216,ESR3
Receiver Setting : RBW: 9 kHz,Sweep Time: Auto
Temperature : 25.4℃
Humidity : 52%
Atmospheric pressure: 100.9kPa
Test Engineer : Aiden Feng
Check by : Bard Liu

		Read		Limit	Over	
	Freq	Level	Factor	Level	Line	Limit Remark
	MHz	dBuV	dB	dBuV	dBuV	dB
1	0.152	25.33	20.41	45.74	65.92	-20.18 Peak
2	0.164	23.67	20.41	44.08	65.25	-21.17 Peak
3	0.179	21.74	20.42	42.16	64.55	-22.39 Peak
4	0.387	22.82	20.41	43.23	58.13	-14.90 Peak
5	0.404	23.24	20.41	43.65	57.76	-14.11 Peak
6	15.538	24.00	20.53	44.53	60.00	-15.47 Peak

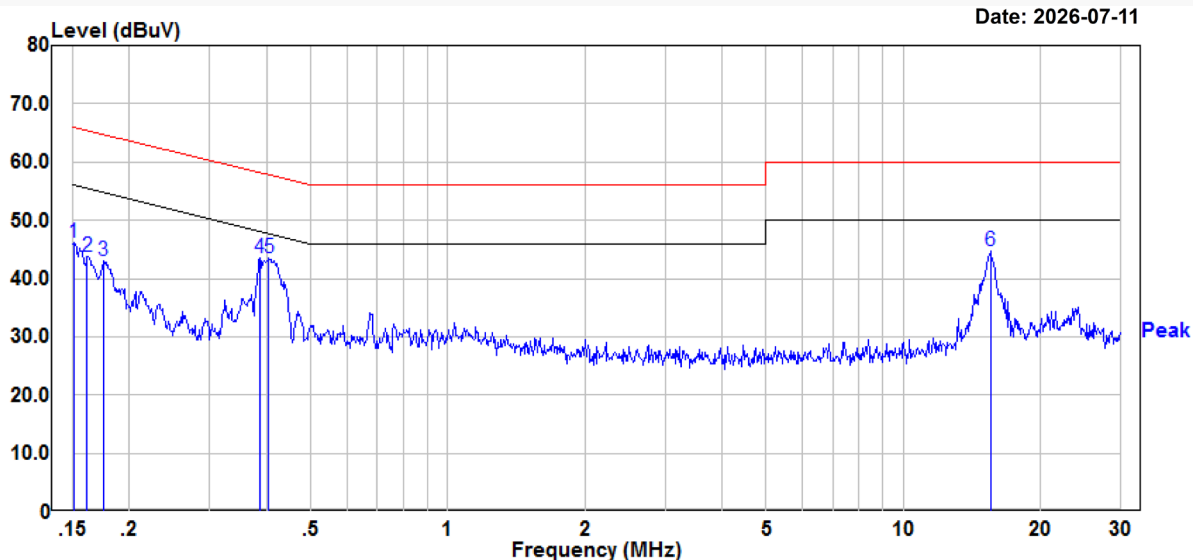
EUT operation mode: Transmitting in maximum output power BLE (2 Mbps) high channel

Date: 2026-07-11



Site : CE
Condition : limit\FCC PART 15.207
: DET:Peak
Project No. : RKSA260622001
Model : SRP2504A
Phase : L
Voltage : 120V/60Hz
Mode : BLE 2M
Test Equipment : ENV216, ESR3
Receiver Setting : RBW: 9 kHz, Sweep Time: Auto
Temperature : 25.4°C
Humidity : 52%
Atmospheric pressure: 100.9kPa
Test Engineer : Aiden Feng
Check by : Bard Liu

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.151	25.69	20.39	46.08	65.96	-19.88	Peak
2	0.163	23.22	20.39	43.61	65.30	-21.69	Peak
3	0.174	22.35	20.40	42.75	64.76	-22.01	Peak
4	0.387	22.91	20.40	43.31	58.13	-14.82	Peak
5	0.404	23.42	20.40	43.82	57.76	-13.94	Peak
6	15.460	21.68	20.52	42.20	60.00	-17.80	Peak



Site : CE
Condition : limit\FCC PART 15.207
: DET:Peak
Project No. : RKSA260622001
Model : SRP2504A
Phase : N
Voltage : 120V/60Hz
Mode : BLE 2M
Test Equipment : ENV216,ESR3
Receiver Setting : RBW: 9 kHz,Sweep Time: Auto
Temperature : 25.4℃
Humidity : 52%
Atmospheric pressure: 100.9kPa
Test Engineer : Aiden Feng
Check by : Bard Liu

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.151	25.66	20.41	46.07	65.96	-19.89	Peak
2	0.162	23.43	20.41	43.84	65.38	-21.54	Peak
3	0.175	22.56	20.42	42.98	64.72	-21.74	Peak
4	0.387	23.05	20.41	43.46	58.13	-14.67	Peak
5	0.404	23.09	20.41	43.50	57.76	-14.26	Peak
6	15.538	24.21	20.53	44.74	60.00	-15.26	Peak