



TESTING LABORATORY
CERTIFICATE #4820.01



FCC PART 15.407
RSS-GEN, ISSUE 5, FEBRUARY 2021 AMENDMENT 2
RSS-247, ISSUE 2, FEBRUARY 2017
TEST REPORT

For

Autel Robotics Co., Ltd.

9th Floor, Bldg.B1, Zhiyuan, 1001 Xueyuan Rd. Xili, Nanshan, Shenzhen, China

FCC ID: 2AGNTEF9RC2458A
IC: 20910-EF9RC2458A


Report Type: Original Report	Product Name: Autel Smart Controller
Report Number: <u>SZ1210507-15794E-00C</u>	
Report Date: <u>2021-05-26</u>	
Reviewed By:	Ivan Cao Assistant Manager 
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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

EUT Name:		Autel Smart Controller
EUT Model:		EF9 - 2
Operation Frequency:		5180-5240 MHz(802.11a/n ht20/ac vht20) 5190-5230 MHz(802.11n ht40/ac vht40) 5210 MHz(802.11ac vht80) 5745-5825 MHz(802.11a/n ht20/ac vht20) 5755-5795 MHz(802.11n ht40/ac vht40) 5775 MHz(802.11ac vht80)
Maximum Average Output Power (Conducted):		5150-5250 MHz: 13.95 dBm 5725-5850 MHz: 13.30 dBm
Modulation Type:		OFDM
Rated Input Voltage:		DC 11.55V from internal battery
Adapter Information:	Model:	GaN-001
	Input:	100-240VAC~50/60Hz 1.5A
	Output:	USB-C1/C2:5V=3A,9V=3A,12A=3A,15V=3A,20V=3.25A USB-A:3.4-5.5V=5A,5V=3A,9V=3A,12V=3A,20V=3A
Serial Number:		SZ1210507-15794E-RF -S_536
EUT Received Date:		2021.05.10
EUT Received Status:		Good

Objective

This type approval report is prepared on behalf of **Autel Robotics Co., Ltd.** in accordance with Part 2-Subpart J, Part 15-Subparts A, and E of the Federal Communications Commission's rules and RSS-247, Issue 2, February 2017, RSS-Gen Issue 5, February 2021 Amendment 2 of the Innovation, Science and Economic Development Canada.

The tests were performed in order to determine compliance with FCC Rules Part 15, Subpart E, section 15.203, 15.205, 15.207, 15.209 and 15.407 rules and RSS-247, Issue 2, February 2017, RSS-Gen Issue 5, February 2021 Amendment 2 of the Innovation, Science and Economic Development Canada.

This device modified base on the model: EF9-1, which was certified with FCC ID: 2AGNTEF9RC2409A, IC: 20910-EF9RC2409A, the changes below:

- 1.Changed the SRD module.
2. Removed the Wi-Fi Radio 1 and it's antennas.

The changes made to the device not affected the Wi-Fi Radio 0 RF characteristic. Therefore, all RF conducted Port data and above 1GHz radiation test data please refer to the report of model: EF9-1, report number: RSZ201027002-00C.

Related Submittal(s)/Grant(s)

FCC Part 15C DTS, 15E NII submissions with FCC ID: 2AGNTEF9RC2458A
Part of system with FCC ID: 2AGNTMCA2458A
RSS-247 DTSS, LE-LAN submissions with IC: 20910-EF9RC2458A
Part of system with IC: 20910-MCA2458A

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices. And KDB 789033 D02 General U-NII Test Procedures New Rules v02r01, and RSS-247, Issue 2, February 2017, RSS-Gen Issue 5, February 2021 Amendment 2 of the Innovation, Science and Economic Development Canada.

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

Measurement Uncertainty

Parameter	Measurement Uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±0.61dB
Power Spectral Density, conducted	±0.61 dB
Unwanted Emissions, radiated	30M~200MHz: 4.55 dB, 200M~1GHz: 5.92 dB, 1G~6GHz: 4.98 dB, 6G~18GHz: 5.89 dB, 18G~26.5G: 5.47 dB, 26.5G~40G: 5.63 dB
Unwanted Emissions, conducted	±1.5 dB
Temperature	±1 °C
Humidity	±5%
DC and low frequency voltages	±0.4%
Duty Cycle	1%
AC Power Lines Conducted Emission	3.12 dB (150 kHz to 30 MHz)

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.12, Pulong East 1st Road, Tangxia Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 897218, the FCC Designation No. : CN1220.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0022.

Declarations

BACL is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol “▲”. Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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This report may contain data that are not covered by the accreditation scope and shall be marked with an asterisk “★”.

SUMMARY OF TEST RESULTS

Rules	Description of Test	Result
FCC §15.407 (f) & §1.1310 & §2.1093 RSS-102 Clause 4	RF Exposure	Compliance
FCC§15.203, RSS-Gen Clause 6.8	Antenna Requirement	Compliance*
FCC§15.407(b)(6)& §15.207(a), RSS-Gen Clause 8.8	Conducted Emissions	Compliance
FCC§15.205& §15.209 &§15.407(b), RSS-247 Clause 6.2	Undesirable Emission& Restricted Bands	Compliance
FCC§15.407(a) (e), RSS-247 Clause 6.2 RSS-Gen Clause 6.7	Emission Bandwidth	Compliance*
FCC§15.407(a) RSS-247 Clause 6.2	Conducted Transmitter Output Power	Compliance*
FCC§15.407 (a), RSS-247 Clause 6.2	Power Spectral Density	Compliance*
RSS-247 Clause 6.4	Additional requirements	Compliance*

Compliance*: Please refer to Wi-Fi Radio 0 results in report RSZ201027002-00C of FCC ID: 2AGNTEF9RC2409A and IC: 20910-EF9RC2409A.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in an engineering mode (which was selected by manufacturer).

For 5150~5250 MHz band, 7 channels are provided:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220
38	5190	46	5230
40	5200	48	5240
42	5210	/	/

For 802.11a, 802.11n ht20, 802.11ac vht20 channel 36, 40 and 48 was tested, for 802.11n ht40, 802.11ac vht40 channel 38, 46 were tested, for 802.11ac vht80, channel 42 was tested.

For 5725~5850MHz band, 8 channels are provided to testing:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	157	5785
151	5755	159	5795
153	5765	161	5805
155	5775	165	5825

For 802.11a, 802.11n ht20, 802.11ac vht20 channel 149, 157 and 165 was tested, for 802.11n ht40, 802.11ac vht40 channel 151, 159 were tested, for 802.11ac vht80, channel 155 was tested.

The worst-case data rates are determined to be as follows for each mode based upon investigations by measuring the average power and PSD across all data rates, bandwidths, and modulations. The device supports SISO and MIMO in 802.11n and ac modes, per pretest, MIMO mode was the worst mode and reported.

EUT Exercise Software

Software " ADB " was used during test, which was provided by manufacturer and the maximum power was configured as report number: RSZ201027002-00C.

Equipment Modifications

No modification was made to the EUT.

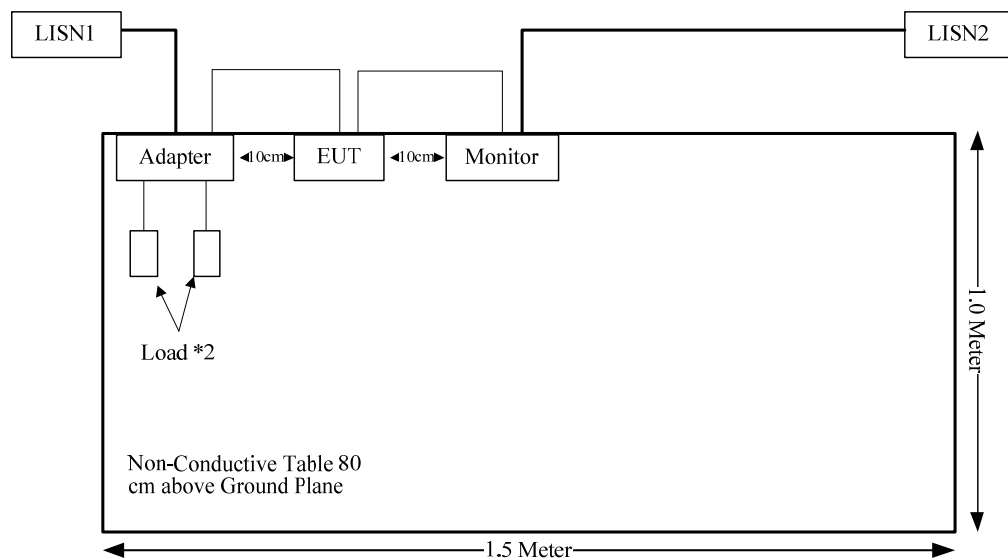
Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
DELL	Monitor	U3011t	CN-OPH5NY-74445-16T-290L
Unknown	Resistive load	1ohm	1ohm-1
Unknown	Resistive load	1ohm	1ohm-2

Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
USB-C Cable	Yes	No	1.2	Adapter	EUT
HDMI Cable	Yes	Yes	1.5	EUT	Monitor
USB-A Cable*2	Yes	No	0.2	Adapter	Resistive Load

Block Diagram of Test Setup



FCC §15.407 (f) & §1.1310 & §2.1093, RSS-102 CLAUSE 4- RF Exposure**Applicable Standard**

According to §15.407(f) and §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to RSS-102 Clause 4 Table 3, SAR limits for device used by the general public.

Body Region	Average SAR (W/Kg)	Averaging Time (minutes)	Mass Average (g)
Whole Body	0.08	6	Whole Body
Localized Head, Neck and Trunk	1.6	6	1
Localized Limbs	4	6	10

Test Result

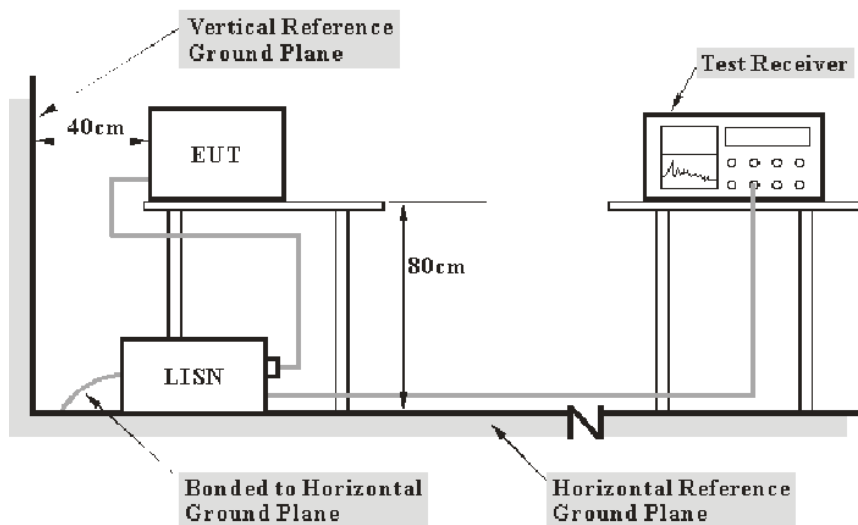
Compliance, Please refer to the SAR report: SZ1210507-15794E-20.

FCC §15.207 (a) & RSS-GEN CLAUSE 8.8– AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC§15.207(a), RSS-Gen§8.8.

EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

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

The spacing between the peripherals was 10 cm.

The adapter was connected to the main lisn with a 120 V/60 Hz AC power source.

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	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

During the conducted emission test, the adapter was connected to the first LISN.

During the conducted emission test, the adapter was connected to the first LISN.

The frequency and amplitude of the six highest ac power-line conducted emissions relative to the limit, measured over all the current-carrying conductors of the EUT power cords, and the operating frequency or frequency to which the EUT is tuned (if appropriate), should be reported, unless such emissions are more than 20 dB below the limit. AC power-line conducted emissions measurements are to be separately carried out only on each of the phase (“hot”) line(s) and (if used) on the neutral line(s), but not on the ground [protective earth] line(s). If less than six emission frequencies are within 20 dB of the limit, then the noise level of the measuring instrument at representative frequencies should be reported. The specific conductor of the power-line cord for each of the reported emissions should be identified. Measure the six highest emissions with respect to the limit on each current-carrying conductor of each power cord associated with the EUT (but not the power cords of associated or peripheral equipment that are part of the test configuration). Then, report the six highest emissions with respect to the limit from among all the measurements identifying the frequency and specific current-carrying conductor identified with the emission. The six highest emissions should be reported for each of the current-carrying conductors, or the six highest emissions may be reported over all the current-carrying conductors.

Corrected Amplitude & Margin Calculation

The basic equation is as follows:

$$V_C = V_R + A_C + VDF$$

$$C_f = A_C + VDF$$

Herein,

V_C (cord. Reading): corrected voltage amplitude

V_R : reading voltage amplitude

A_C : attenuation caused by cable loss

VDF : voltage division factor of AMN

C_f : Correction Factor

The “**Margin**” column of the following data tables indicates the degree of compliance within 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:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

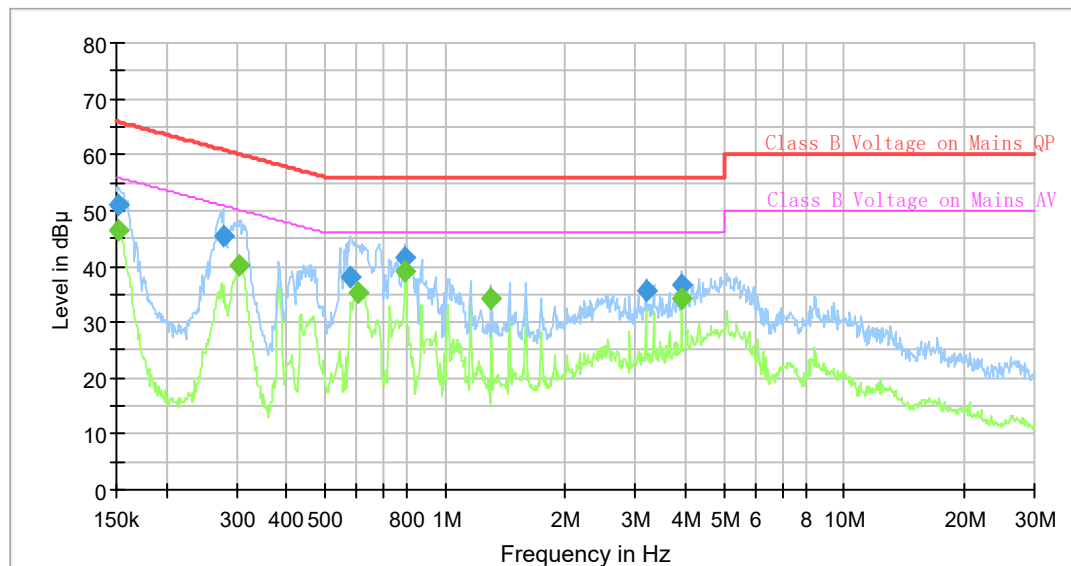
Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	LISN	ENV 216	101614	2020-09-12	2021-09-12
R&S	EMI Test Receiver	ESCI	101121	2020-07-07	2021-07-07
MICRO-COAX	Coaxial Cable	C-NJNJ-50	C-0200-01	2020-09-05	2021-09-05
R&S	Test Software	EMC32	Version 9.10.00	N/A	N/A

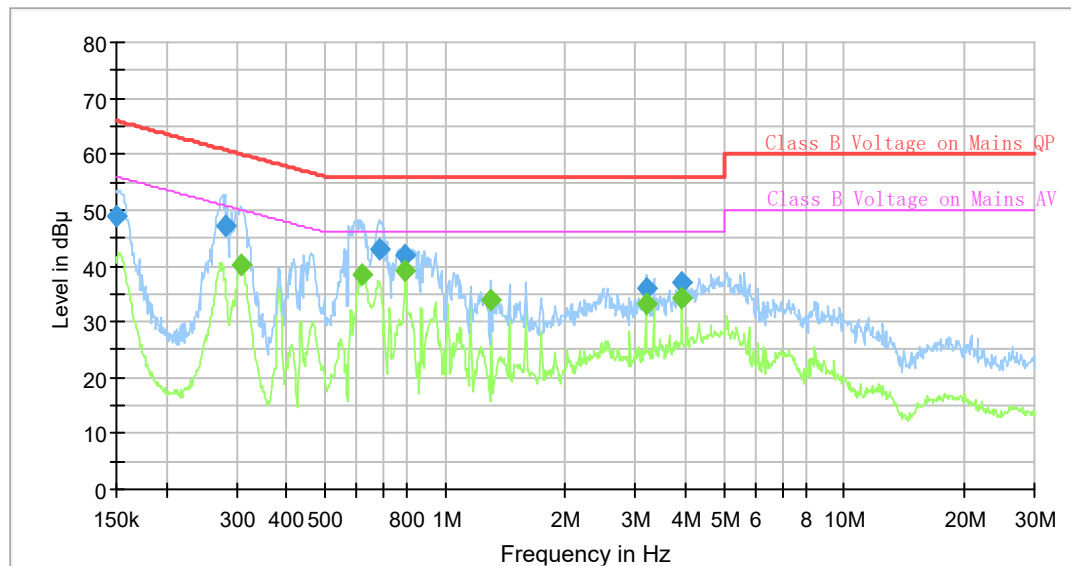
* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data**Environmental Conditions**

Temperature:	25.7°C
Relative Humidity:	57%
ATM Pressure:	100.4kPa
Test by:	Walker Chen
Test Date:	2021-05-17

*Test Mode: Transmitting***AC120 V, 60 Hz, Line:****Final Result**

Frequency (MHz)	QuasiPeak (dB μ V)	Average (dB μ V)	Limit (dB μ V)	Margin (dB)	Bandwidth (kHz)	Line	Corr. (dB)
0.151504	51.06	---	65.92	14.86	9.000	L1	9.6
0.152261	---	46.30	55.88	9.58	9.000	L1	9.6
0.277024	45.53	---	60.90	15.37	9.000	L1	9.6
0.304559	---	40.28	50.12	9.84	9.000	L1	9.6
0.576671	37.98	---	56.00	18.02	9.000	L1	9.6
0.606162	---	35.32	46.00	10.68	9.000	L1	9.6
0.793516	41.49	---	56.00	14.51	9.000	L1	9.7
0.793516	---	39.23	46.00	6.77	9.000	L1	9.7
1.306658	---	34.11	46.00	11.89	9.000	L1	9.7
3.190708	35.48	---	56.00	20.52	9.000	L1	9.7
3.914674	---	34.23	46.00	11.77	9.000	L1	9.7
3.914674	36.78	---	56.00	19.22	9.000	L1	9.7

AC120 V, 60 Hz, Neutral:**Final Result**

Frequency (MHz)	QuasiPeak (dB μ V)	Average (dB μ V)	Limit (dB μ V)	Margin (dB)	Bandwidth (kHz)	Line	Corr. (dB)
0.150750	48.93	---	65.96	17.03	9.000	N	9.6
0.281200	47.13	---	60.78	13.65	9.000	N	9.6
0.307613	---	40.27	50.03	9.76	9.000	N	9.6
0.618376	---	38.47	46.00	7.53	9.000	N	9.6
0.683241	43.00	---	56.00	13.00	9.000	N	9.6
0.793516	---	39.12	46.00	6.88	9.000	N	9.6
0.793516	41.77	---	56.00	14.23	9.000	N	9.6
1.306658	---	33.89	46.00	12.11	9.000	N	9.6
3.190708	35.82	---	56.00	20.18	9.000	N	9.6
3.190708	---	33.15	46.00	12.85	9.000	N	9.6
3.914674	---	34.31	46.00	11.69	9.000	N	9.6
3.914674	36.88	---	56.00	19.12	9.000	N	9.6

**FCC §15.209, §15.205 , §15.407(b) &RSS-247 CLAUSE 6.2, RSS-GEN
CLAUSE 8.10 –UNWANTED EMISSION**

Applicable Standard

FCC §15.407; §15.209; §15.205;

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

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

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

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

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

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

(ii) Devices certified before March 2, 2017 with antenna gain greater than 10 dBi may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease by March 2, 2018. Devices certified before March 2, 2018 with antenna gain of 10 dBi or less may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease before March 2, 2020.

(5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

(7) The provisions of §15.205 apply to intentional radiators operating under this section.

According to RSS-247 Clause 6.2

Frequency band 5150-5250 MHz

6.2.1.2 Unwanted emission limits

For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. Any unwanted emissions that fall into the band 5250-5350 MHz shall be attenuated below the channel power by at least 26 dB, when measured using a resolution bandwidth between 1 and 5% of the occupied bandwidth (i.e. 99% bandwidth), above 5250 MHz. The 26 dB bandwidth may fall into the 5250-5350 MHz band; however, if the occupied bandwidth also falls within the 5250-5350 MHz band, the transmission is considered as intentional and the devices shall comply with all requirements in the band 5250-5350 MHz including implementing dynamic frequency selection (DFS) and TPC, on the portion of the emission that resides in the 5250-5350 MHz band.

Frequency band 5250-5350 MHz

6.2.2.2 Unwanted emission limits

Devices shall comply with the following:

- a) All emissions outside the band 5250-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p.; or
- b) All emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. and its power shall comply with the spectral power density for operation within the band 5150-5250 MHz. The device, except devices installed in vehicles, shall be labelled or include in the user manual the following text “for indoor use only.”

Frequency bands 5470-5600 MHz and 5650-5725 MHz:

6.2.3.2 Unwanted emission limits

Emissions outside the band 5470-5600 MHz and 5650-5725 MHz shall not exceed -27 dBm/MHz e.i.r.p. However, devices with bandwidth overlapping the band edge of 5725 MHz can meet the emission limit of -27 dBm/MHz e.i.r.p. at 5850 MHz instead of 5725 MHz.

Frequency band 5725-5850 MHz

6.2.4.2 Unwanted emission limits

Devices operating in the band 5725-5850 MHz with antenna gain greater than 10 dBi can have unwanted emissions that comply with either the limits in this section or in section 5.5 until six (6) months after the publication date of this standard for certification. Certified devices that do not comply with emission limits in this section shall not be manufactured, imported, distributed, leased, offered for sale or sold after April 1, 2018.

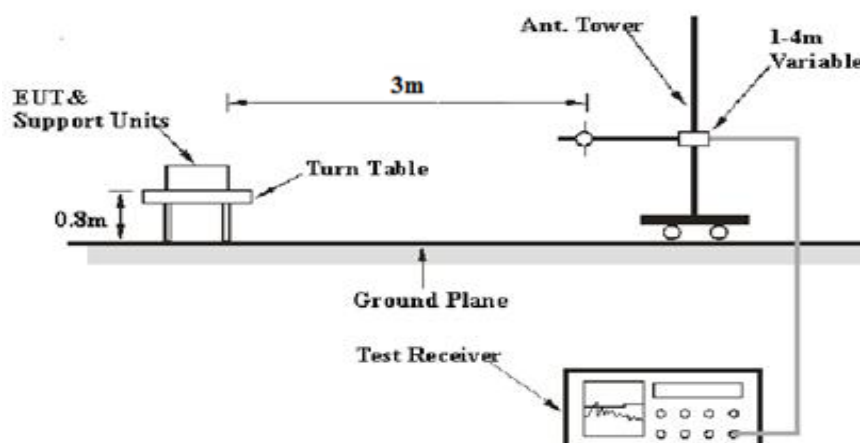
Devices operating in the band 5725-5850 MHz with antenna gain of 10 dBi or less can have unwanted emissions that comply with either the limits in this section or in section 5.5 until April 1, 2018 for certification. Certified devices that do not comply with emission limits in this section shall not be manufactured, imported, distributed, leased, offered for sale or sold after April 1, 2020.

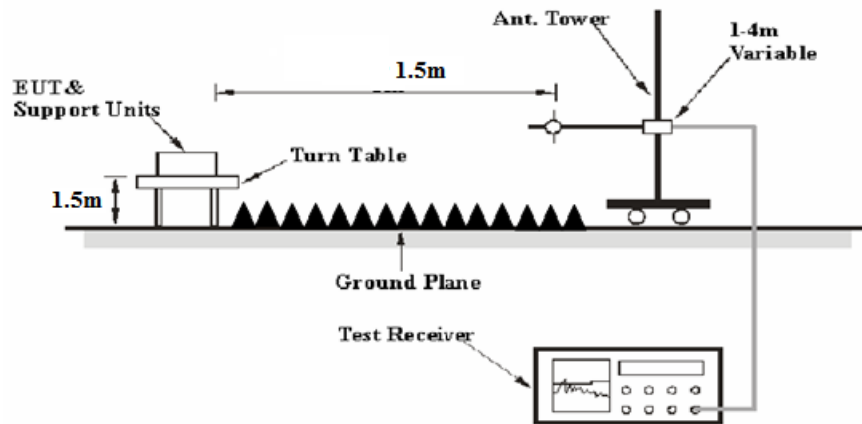
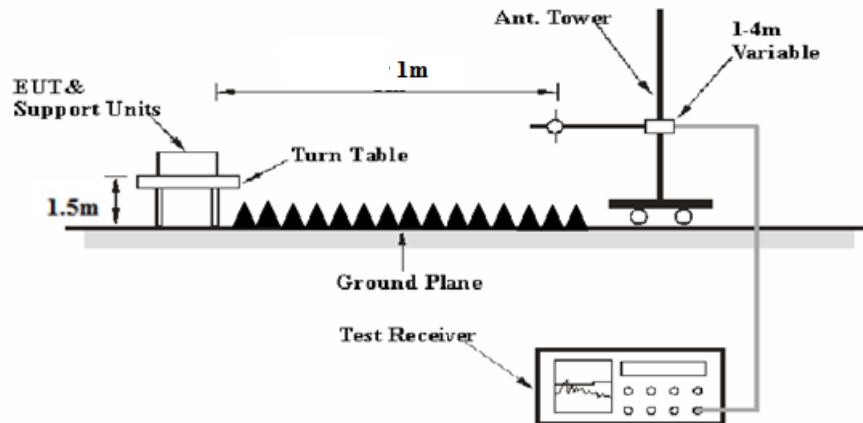
Devices operating in the band 5725-5850 MHz shall have e.i.r.p. of unwanted emissions comply with the following:

- 27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges;
- 15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges;
- 10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges; and
- 27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.

EUT Setup

Below 1 GHz:



1-26.5 GHz:**26.5-40 GHz:**

The radiated emission Below 1GHz tests were performed in the 10 meters chamber test site , above 1GHz tests were performed in the 3 meters chamber test site B, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209, and FCC 15.407 limits and RSS-247, RSS-Gen limits.

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

The spacing between the peripherals was 10 cm.

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 40 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

30-1000MHz:

Measurement	RBW	Video B/W	IF B/W
QP	120 kHz	300 kHz	120kHz

1GHz- 40GHz:

Measurement	Duty cycle	RBW	Video B/W
PK	Any	1MHz	3 MHz
Ave.	>98%	1MHz	10 Hz
	<98%	1MHz	1/T

If the maximized peak measured value complies with under the QP/Average limit more than 6dB, then it is unnecessary to perform an QP/Average measurement.

Test Procedure

During the radiated emission test, the adapter was connected to the first AC floor outlet.

Data was recorded in Quasi-peak detection mode for frequency range of 30 MHz-1GHz, peak and Average detection modes for frequencies above 1GHz.

According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, emission shall be computed as: $E [dB\mu V/m] = EIRP[dBm] + 95.2$, for $d = 3$ meters.

According to C63.10, the above 1G test result shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade from 3m to 1.5m or 1m

Distance extrapolation factor = $20 \log (\text{specific distance } [3m]/\text{test distance } [1.5m])$ dB= 6.02 dB

or

Distance extrapolation factor = $20 \log (\text{specific distance } [3m]/\text{test distance } [1m])$ dB= 9.54 dB

All emissions under the average limit and under the noise floor have not recorded in the report.

Corrected Amplitude & Margin Calculation

For the range 30MHz-1GHz, 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:

$$\text{Corrected Amplitude} = \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

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:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

For the range 1GHz-40GHz, Test performed at 1.5m or 1m, the Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading and the Distance extrapolation factor. The basic equation is as follows:

Corrected Amplitude

= Meter Reading + Antenna Factor + Cable Loss - Amplifier Gain-Distance extrapolation factor

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:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiation Below 1GHz					
Sunol Sciences	Antenna	JB3	A060611-2	2020-08-25	2023-08-25
R&S	EMI Test Receiver	ESCI	100224	2020-09-12	2021-09-12
Unknown	Coaxial Cable	C-NJNJ-50	C-1000-01	2020-09-05	2021-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-02	2020-09-05	2021-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-0530-01	2020-09-24	2021-09-24
Sonoma	Amplifier	310N	185914	2020-10-13	2021-10-13
Farad	Test Software	EZ-EMC	V1.1.4.2	N/A	N/A

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

Test Data

Environmental Conditions

Test Items	Radiation Below 1GHz	Radiation Above 1GHz
Temperature:	24.9°C	27.3°C
Relative Humidity:	50%	52%
ATM Pressure:	101.3kPa	101.2 kPa
Tester:	Burt Hu	Jeremy Liang
Test Date:	2021-05-13	2021-05-14

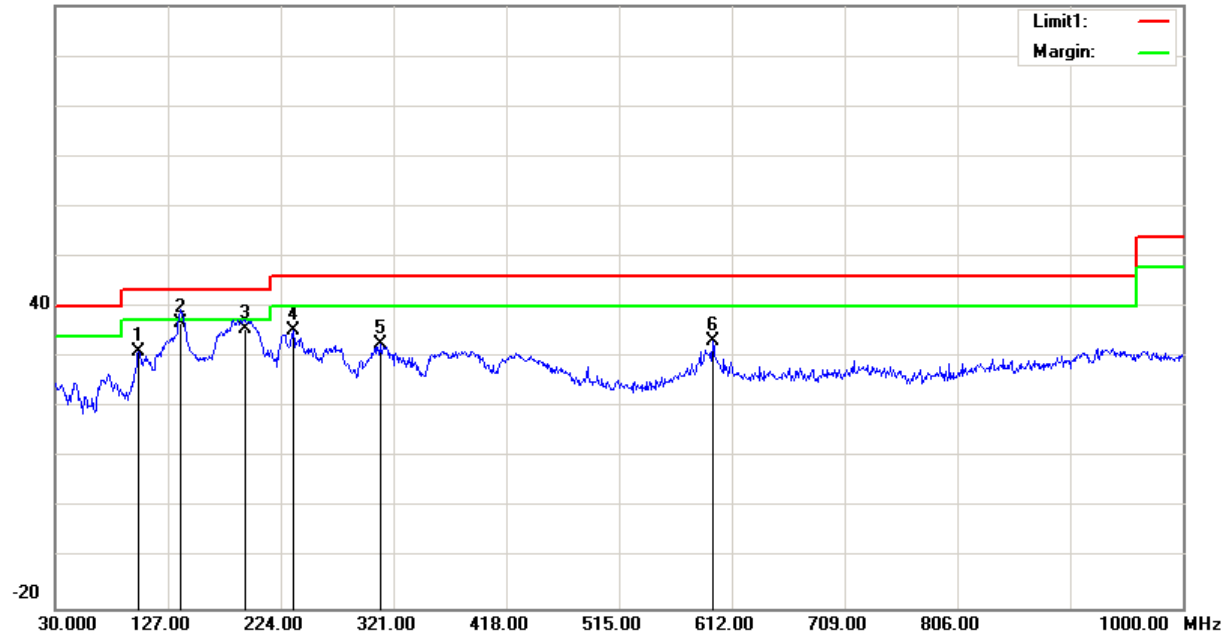
Test Result: **Compliance**, the changes not affect the radiation above 1GHz test, please Refer to the following data for below 1GHz, and the Wi-Fi Radio 0 above 1GHz data in the report No.RSZ201027002-00C

Test Mode: Transmitting

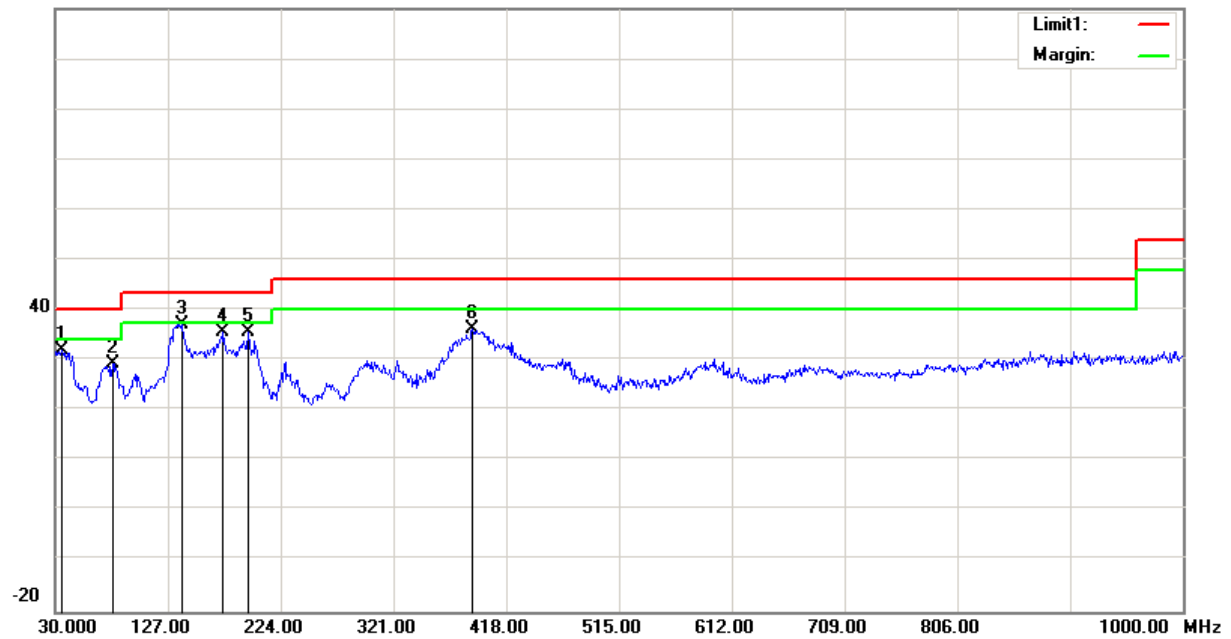
1) Below 1GHz(802.11a mode 5745 MHz was the worst):

Horizontal:

100.0 dBuV/m



Frequency (MHz)	Receiver Reading (dBuV)	Detector	Correction Factor (dB/m)	Cord. Amp. (dBuV/m)	Limit (dBuV/m)	Margin (dB)
101.7800	44.99	peak	-13.83	31.16	43.50	12.34
137.6700	46.03	QP	-9.23	36.80	43.50	6.70
193.9300	45.82	QP	-10.12	35.70	43.50	7.80
234.6700	45.41	peak	-10.19	35.22	46.00	10.78
309.3600	39.52	peak	-6.97	32.55	46.00	13.45
595.5100	34.78	peak	-1.49	33.29	46.00	12.71

Vertical:100.0 dB μ V/m

Frequency (MHz)	Receiver Reading (dB μ V)	Detector	Correction Factor (dB/m)	Cord. Amp. (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
35.8200	39.12	peak	-7.15	31.97	40.00	8.03
79.4700	45.32	peak	-15.90	29.42	40.00	10.58
138.6400	46.44	peak	-9.22	37.22	43.50	6.28
174.5300	45.30	peak	-9.74	35.56	43.50	7.94
195.8700	45.32	peak	-9.73	35.59	43.50	7.91
388.9000	41.81	peak	-5.57	36.24	46.00	9.76

***** END OF REPORT *****