中认信通
CHINA CERTIFICATION ICT CO.,LTD (DONGGUAN)

ACCREDITED
TESTING LABORATORY
CERTIFICATE # 6356.01

TEST REPORT

Applicant: **Autel Robotics Co., Ltd.**

Address: 18th Floor, Block C1, Nanshan iPark, No. 1001 Xueyuan Avenue, Nanshan District, Shenzhen, Guangdong, 518055, China

FCC ID: **2AGNTMDX240958A**
IC: **20910-MDX240958A**
HVIN: **MDX**
FVIN: **1.3.24.0**
Product Name: **EVO Max**

Standard(s): **47 CFR Part 15, Subpart C(15.249)**
RSS-210 Issue 10, December 2019, Amendment (April 2020)
RSS-Gen, Issue 5, February 2021 Amendment 2
ANSI C63.10-2013

The above equipment has been tested and found compliant with the requirement of the relative standards by China Certification ICT Co., Ltd (Dongguan)

Report Number: **CR221151897-00E**

Date Of Issue: **2023/2/16**

Reviewed By: **Sun Zhong**

Sun Zhong

Title: Manager

Test Laboratory: **China Certification ICT Co., Ltd (Dongguan)**
No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China
Tel: +86-769-82016888

Test Facility

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang 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. : 442868, the FCC Designation No. : CN1314.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0123.

Declarations

China Certification ICT Co., Ltd (Dongguan) 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.

This report cannot be reproduced except in full, without prior written approval of the Company.

This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

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

CONTENTS

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	CR221151897-00E	Original Report	2023/2/16

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

EUT Name:	EVO Max
EUT Model:	MDX
Operation Frequency Range:	24000-24250 MHz
Modulation Type:	FMCW
Rated Input Voltage:	DC 14.88V from Battery
Serial Number:	1QAT-13
EUT Received Date:	2022/11/09
EUT Received Status:	Good

Operation Frequency Detail:

Sweep Start Frequency (MHz)	Sweep Stop Frequency (MHz)
24026	24226
The below frequencies were performed the test as below:	
Test Frequency	**Frequency (MHz)**
Lowest	24026
Middle	24126
Highest	24226

Antenna Information Detail▲:

Antenna Type	input impedance (Ohm)	Frequency Range	Antenna Gain
Microstrip Array	50	24~24.25GHz	Unknown

The Method of §15.203 Compliance:

☒Antenna must be permanently attached to the unit.

☐Antenna must use a unique type of connector to attach to the EUT.

☐Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

Accessory Information:

Accessory Description	Manufacturer	Model
Adapter	Shenzhen Esun Power Technology Co.,Ltd	MDX120W

1.2 Description of Test Configuration

1.2.1 EUT Operation Condition:

EUT Operation Mode:	The system was configured for testing in Engineering Mode, which was provided by the manufacturer.
Equipment Modifications:	No
EUT Exercise Software:	No
Engineering Mode was provided by manufacturer▲. The maximum power was configured default setting.	

1.2.2 Support Equipment List and Details

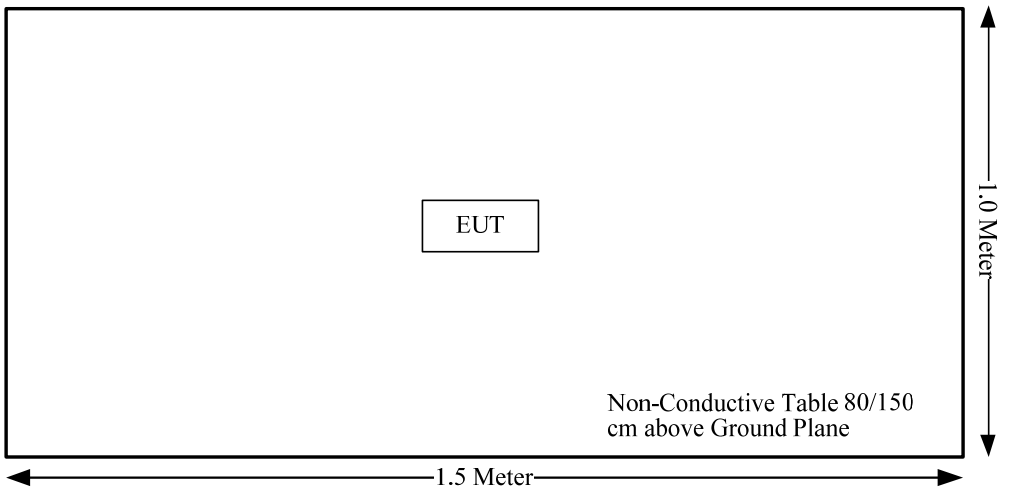
Manufacturer	Description	Model	Serial Number
/	/	/	/

1.2.3 Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
/	/	/	/	/	/

1.2.4 Block Diagram of Test Setup

Spurious Emissions:



1.3 Measurement Uncertainty

Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

Parameter	Measurement Uncertainty
Occupied Channel Bandwidth	±5 %
Unwanted Emissions, radiated	30M~200MHz: 4.15 dB,200M~1GHz: 5.61 dB,1G~6GHz: 5.14 dB, 6G~18GHz: 5.93 dB,18G~26.5G:5.47 dB,26.5G~40G:5.63 dB
Temperature	±1℃
Humidity	±5%
DC and low frequency voltages	±0.4%
Duty Cycle	1%
AC Power Lines Conducted Emission	2.8 dB (150 kHz to 30 MHz)

2. SUMMARY OF TEST RESULTS

Standard(s)/Rule(s)	Description of Test	Result
FCC §15.203 RSS-Gen Clause 6.8	Antenna Requirement	Compliant
FCC §15.207(a) RSS-Gen Clause 8.8	Conduction Emissions	Not Applicable
FCC §15.205, §15.209, §15.249 RSS-Gen Clause 8.10 RSS-210 Annex B, B.10	Radiated Emissions	Compliant
FCC §15.215 (c)	20 dB Bandwidth	Compliant
RSS-Gen Clause 6.7	99% Occupied Bandwidth	Compliant

3. REQUIREMENTS AND TEST PROCEDURES

3.1 AC Line Conducted Emissions

3.1.1 Applicable Standard

FCC§15.207(a).

(a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

	Conducted limit (dBμV)	
Frequency of emission (MHz)	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

(b) The limit shown in paragraph (a) of this section shall not apply to carrier current systems operating as intentional radiators on frequencies below 30 MHz. In lieu thereof, these carrier current systems shall be subject to the following standards:

(1) For carrier current system containing their fundamental emission within the frequency band 535-1705 kHz and intended to be received using a standard AM broadcast receiver: no limit on conducted emissions.

(2) For all other carrier current systems: 1000 μV within the frequency band 535-1705 kHz, as measured using a 50 μH/50 ohms LISN.

(3) Carrier current systems operating below 30 MHz are also subject to the radiated emission limits in §15.205, §15.209, §15.221, §15.223, or §15.227, as appropriate.

(c) Measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines. Devices that include, or make provisions for, the use of battery chargers which permit operating while charging, AC adapters or battery eliminators or that connect to the AC power lines indirectly, obtainig their power through another device which is connected to the AC power lines, shall be tested to demonstrate compliance with the conducted limits.

RSS-Gen Clause 8.8

Unless stated otherwise in the applicable RSS, for radio apparatus that are designed to be connected to the public utility AC power network, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the range 150 kHz to 30 MHz shall not exceed the limits in table 4, as measured using a 50 μH / 50 Ω line impedance stabilization network. This requirement applies for the radio frequency voltage measured between each power line and the ground terminal of each AC power-line mains cable of the EUT.
For an EUT that connects to the AC power lines indirectly, through another device, the requirement for compliance with the limits in table 4 shall apply at the terminals of the AC power-line mains cable of a representative support device, while it provides power to the EUT. The lower limit applies at the boundary between the frequency ranges. The device used to power the EUT shall be representative of typical applications.

Table 4 – AC power-line conducted emissions limits

Frequency (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56[1]	56 to 46[1]
0.5 – 5	56	46
5 – 30	60	50

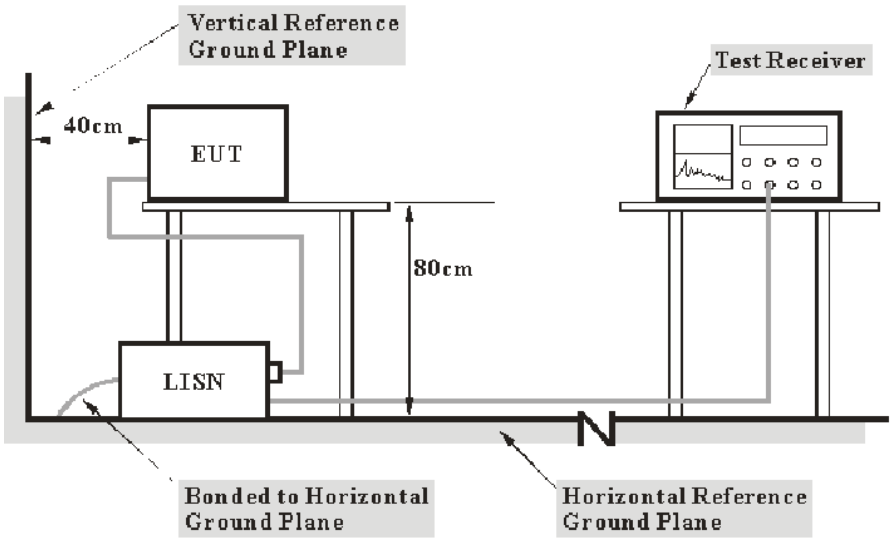
Note 1: The level decreases linearly with the logarithm of the frequency.

For an EUT with a permanent or detachable antenna operating between 150 kHz and 30 MHz, the AC power-line conducted emissions must be measured using the following configurations:

(a) Perform the AC power-line conducted emissions test with the antenna connected to determine compliance with the limits of table 4 outside the transmitter's fundamental emission band.

(b) Retest with a dummy load instead of the antenna to determine compliance with the limits of table 4 within the transmitter's fundamental emission band. For a detachable antenna, remove the antenna and connect a suitable dummy load to the antenna connector. For a permanent antenna, remove the antenna and terminate the RF output with a dummy load or network that simulates the antenna in the fundamental frequency band.

3.1.2 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, RSS-Gen limits.

The spacing between the peripherals was 10 cm.

3.1.3 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

3.1.4 Test Procedure

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

3.1.5 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor
Factor = attenuation caused by cable loss + voltage division factor of AMN

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

3.2 Radiated Emissions

3.2.1 Applicable Standard

As per FCC§15.249 (a), except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
902–928 MHz	50	500
2400–2483.5 MHz	50	500
5725–5875 MHz	50	500
24.0–24.25 GHz	250	2500

As per FCC§15.249 (c), Field strength limits are specified at a distance of 3 meters.

(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

RSS-210, Annex B, B.10

Devices shall comply with the following requirements:

(a) The field strength of fundamental and harmonic emissions measured at 3 m shall not exceed the limits in table B2.

Table B2 — Field strength limits at various frequencies

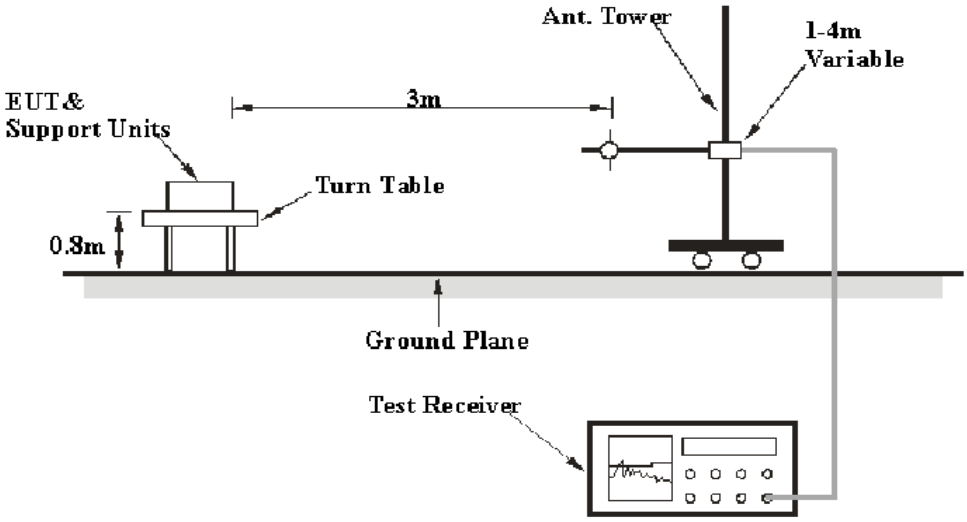
Frequency bands (MHz)	Field strength (mV/m)	
	Fundamental emissions	Harmonic emissions
902-928	50	0.5
2400-2483.5	50	0.5
5725-5875	50	0.5
24000-24250	250	2.5

The field strength shall be measured using an average detector, except for the fundamental emission in the frequency band 902-928 MHz, which is based on measurements using an International Special Committee on Radio Interference (CISPR) quasi-peak detector.

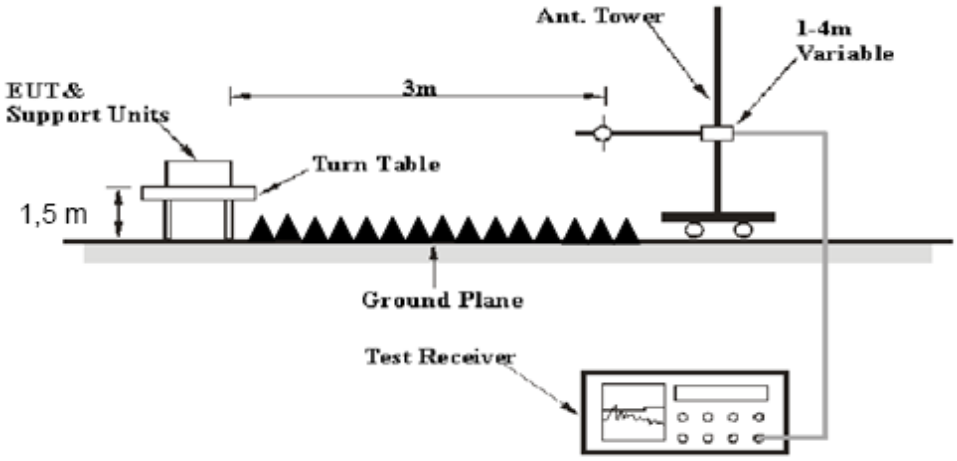
(b) Emissions radiated outside of the specified frequency bands, except for harmonic emissions, shall be attenuated by at least 50 dB below the level of the fundamental emissions or to the general field strength limits listed in RSS-Gen, whichever is less stringent

3.2.2 EUT Setup

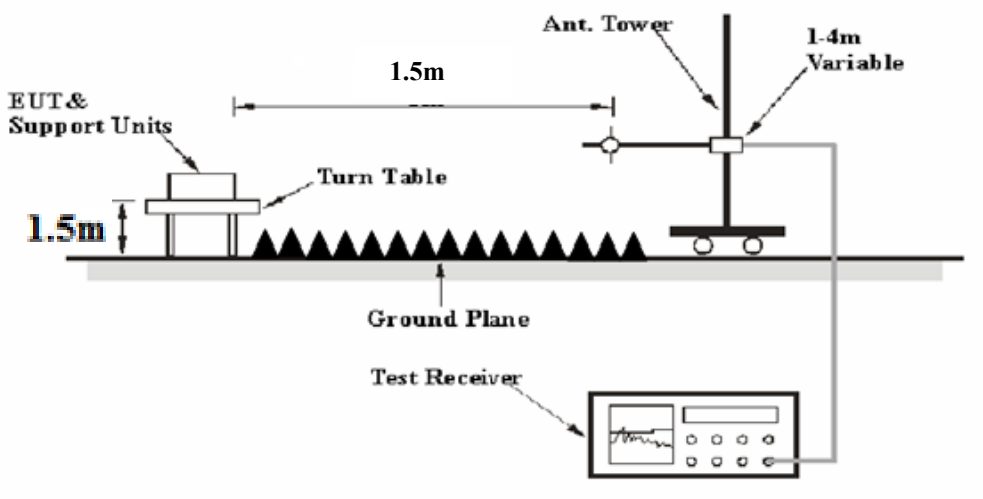
Below 1GHz:



1-26.5 GHz:



26.5-40 GHz:



Above 40GHz:

The antenna is scanned around the entire perimeter surface of the EUT, in both horizontal and vertical polarizations, at the distance of 1.0 m from 40 GHz to 90 GHz, and 0.5 m from 90 GHz to 100 GHz.

The radiated emissions were performed in the 3 meters distance, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209, FCC 15.249 and RSS-Gen limits.

3.2.3 EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 100 GHz.

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

Frequency Range	RBW	Video B/W	IF B/W	Measurement
30 MHz – 1000 MHz	120 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1MHz	3 MHz	/	PK
	1MHz	10 Hz	/	AV

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.

3.2.4 Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

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

According to C63.10, the 26.5-40GHz test result shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade from 3m to 1.5m.

Distance extrapolation factor =20 log (specific distance [3m]/test distance [1.5m]) dB= 6.02 dB.

The 40-90GHz test result shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade from 3m to 1m.

Distance extrapolation factor =20 log (specific distance [3m]/test distance [1m]) dB= 9.54 dB.

The 90-100GHz test result shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade from 3m to 0.5m.

Distance extrapolation factor =20 log (specific distance [3m]/test distance [0.5m]) dB=15.56 dB.

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

3.2.5 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Factor = Antenna Factor + Cable Loss- Amplifier Gain

For 30MHz-26.5GHz:
Result = Reading + Factor

For 26.5GHz-100GHz
Result = Reading + Factor-Distance extrapolation Factor

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

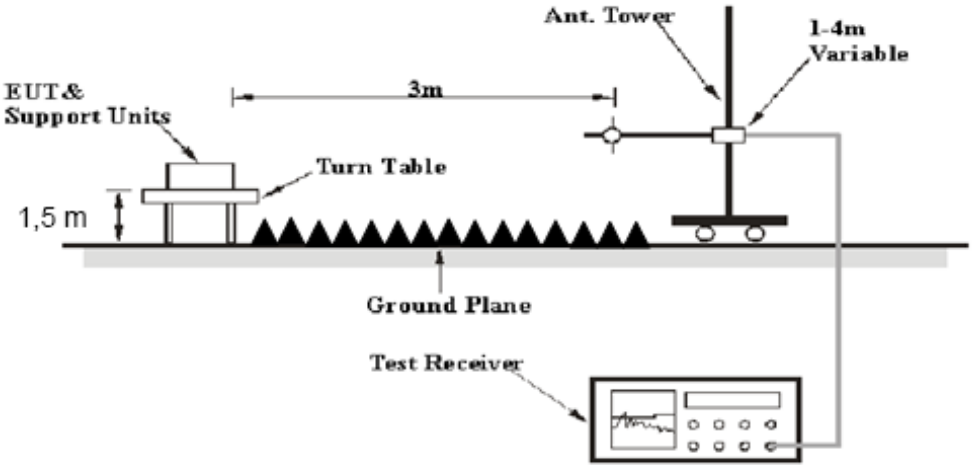
3.3 20 dB Emission Bandwidth:

3.3.1 Applicable Standard

FCC §15.215

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

3.3.2 EUT Setup



3.3.3Test Procedure

1. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.
2. Repeat above procedures until all frequencies measured were complete.

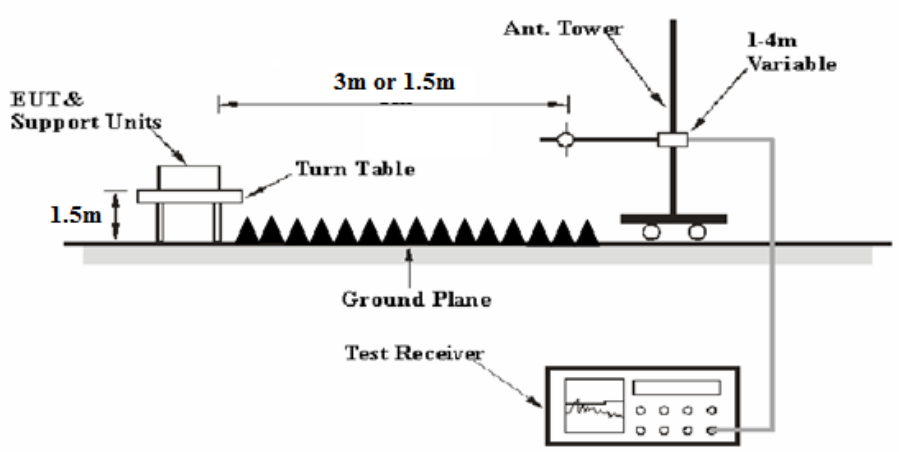
3.4 99% Occupied Bandwidth:

3.4.1 Applicable Standard

RSS-Gen Clause 6.7

The occupied bandwidth or the "99% emission bandwidth" is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs.

3.4.2 EUT Setup



3.4.3 Test Procedure

According to ANSI C63.10-2013 Section 6.9.3
The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission.
The following procedure shall be used for measuring 99% power bandwidth:
a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.
c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.
d) Step a) through step c) might require iteration to adjust within the specified range.
e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.
g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.
h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

3.5 Antenna Requirement

3.5.1 Applicable Standard

FCC §15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

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

RSS-GEN Clause 6.8

The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

For expediting the testing, measurements may be performed using only the antenna with highest gain of each combination of transmitter and antenna type, with the transmitter output power set at the maximum level. However, the transmitter shall comply with the applicable requirements under all operational conditions and when in combination with any type of antenna from the list provided in the test report (and in the notice to be included in the user manual, provided below).
When measurements at the antenna port are used to determine the RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna's manufacturer.
The test report shall state the RF power, output power setting and spurious emission measurements with each antenna type that is used with the transmitter being tested.
For licence-exempt equipment with detachable antennas, the user manual shall also contain the following notice in a conspicuous location:
This radio transmitter [enter the device's ISED certification number] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Immediately following the above notice, the manufacturer shall provide a list of all antenna types which can be used with the transmitter, indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna type.

3.5.2 Judgment

Please refer to the Antenna Information detail in Section 1.

4. Test DATA AND RESULTS

4.1 AC Line Conducted Emissions

Not Applicable, the device was powered by battery when operating.

4.2 Radiation Spurious Emissions

Serial Number:	1QAT-13	Test Date:	2023/01/13~2023/1/31
Test Site:	966-2,966-1	Test Mode:	Transmitting
Tester:	Carl Xue,Mack Huang	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	19.5~23.9	Relative Humidity: (%)	40~63	ATM Pressure: (kPa)	100.5~101.3

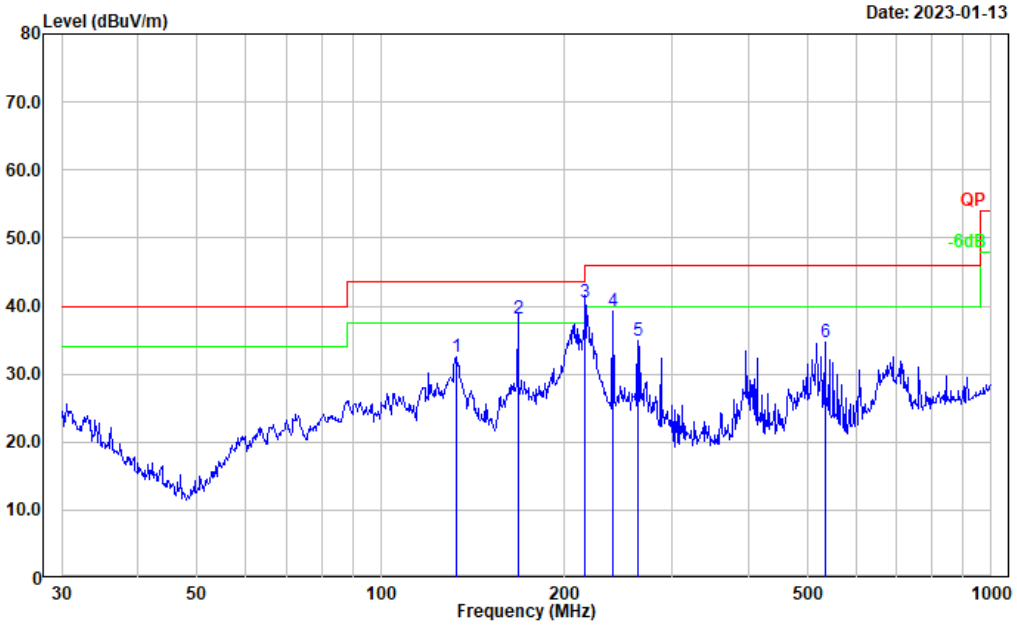
Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sunol Sciences	Antenna	JB6	A082520-5	2020/10/19	2023/10/18
R&S	EMI Test Receiver	ESR3	102724	2022/07/15	2023/07/14
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0470-02	2022/07/17	2023/07/16
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0780-01	2022/07/17	2023/07/16
Sonoma	Amplifier	310N	186165	2022/07/17	2023/07/16
Audix	Test Software	E3	201021 (V9)	N/A	N/A
ETS-Lindgren	Horn Antenna	3115	9912-5985	2020/10/13	2023/10/12
R&S	Spectrum Analyzer	FSV40	101591	2022/07/15	2023/07/14
MICRO-COAX	Coaxial Cable	UFA210A-1-1200-70U300	217423-008	2022/08/07	2023/08/06
MICRO-COAX	Coaxial Cable	UFA210A-1-2362-300300	235780-001	2022/08/07	2023/08/06
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2022/11/09	2023/11/08
PASTERNACK	Horn Antenna	PE9852/2F-20	112002	2021/02/05	2024/02/04
AH	Preamplifier	PAM-1840VH	190	2022/11/09	2023/11/08
MICRO-COAX	Coaxial Cable	UFB142A-1-2362-200200	235772-001	2022/08/07	2023/08/06
PASTERNACK	Horn Antenna	PE9850/2F-20	072001	2021/02/05	2024/02/04
OML	Harmonic Mixer	WR19/M19HWD	U60314-1	2020/10/16	2023/10/15
OML	Horn Antenna	M19RH	11648-03	2020/10/16	2023/10/15
OML	Harmonic Mixer	WR12/M12HWD	E60119-1	2020/10/17	2023/10/16
OML	Horn Antenna	M12RH	E60119-2	2020/10/18	2023/10/17
OML	Harmonic Mixer	WR08/M08HWD	F60315-1	2020/10/22	2023/10/21
OML	Horn Antenna	M08RH	F60315-2	2020/10/24	2023/10/23

** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

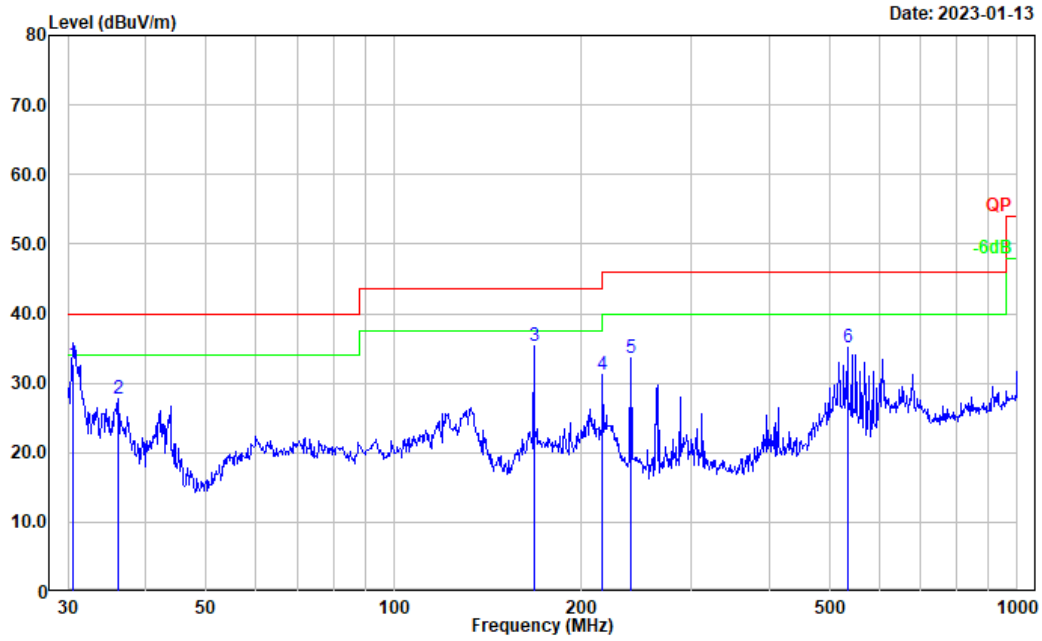
1) 30MHz-1GHz(Middle channel was the worst):

Test Mode: Transmitting
Polarization: horizontal
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	133.151	44.14	-11.52	32.62	43.50	10.88	Peak
2	167.824	50.93	-12.73	38.20	43.50	5.30	QP
3	216.024	53.30	-12.65	40.65	46.00	5.35	QP
4	239.987	52.20	-13.02	39.18	46.00	6.82	Peak
5	263.819	47.30	-12.31	34.99	46.00	11.01	Peak
6	533.832	40.71	-6.00	34.71	46.00	11.29	Peak

Test Mode: Transmitting
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	30.638	36.81	-4.09	32.72	40.00	7.28	QP
2	36.127	36.07	-8.34	27.73	40.00	12.27	Peak
3	167.824	48.07	-12.73	35.34	43.50	8.16	Peak
4	216.024	43.83	-12.65	31.18	46.00	14.82	Peak
5	239.987	46.55	-13.02	33.53	46.00	12.47	Peak
6	533.832	41.08	-6.00	35.08	46.00	10.92	Peak

2) 1GHz-40GHz:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 24026 MHz							
24026.000	98.07	PK	V	5.55	103.62	127.96	24.34
24026.000	79.48	AV	V	5.55	85.03	107.96	22.93
24000.000	51.20	PK	V	5.52	56.72	74.00	17.28
24000.000	40.36	AV	V	5.52	45.88	54.00	8.12
2403.08	45.24	PK	V	3.54	48.78	74.00	25.22
2403.08	33.12	AV	V	3.54	36.66	54.00	17.34
25881.08	51.61	PK	V	6.85	58.46	74.00	15.54
25881.08	39.31	AV	V	6.85	46.16	54.00	7.84
37990.80	52.10	PK	V	16.38	62.46	74.00	11.54
37990.80	40.05	AV	V	16.38	50.41	54.00	3.59
Middle Channel: 24126 MHz							
24126.000	97.25	PK	V	5.66	102.91	127.96	25.05
24126.000	79.08	AV	V	5.66	84.74	107.96	23.22
2403.80	45.85	PK	V	3.54	49.39	74.00	24.61
2403.80	30.12	AV	V	3.54	33.66	54.00	20.34
25194.14	51.78	PK	V	7.32	59.10	74.00	14.90
25194.14	39.39	AV	V	7.32	46.71	54.00	7.29
35995.10	53.92	PK	V	12.78	60.68	74.00	13.32
35995.10	41.46	AV	V	12.78	48.22	54.00	5.78
High Channel: 24226 MHz							
24226.000	96.69	PK	V	5.77	102.46	127.96	25.50
24226.000	77.33	AV	V	5.77	83.10	107.96	24.86
24250.000	50.89	PK	V	5.80	56.69	74.00	17.31
24250.000	41.36	AV	V	5.80	47.16	54.00	6.84
1710.74	42.85	PK	V	0.77	43.62	74.00	30.38
1710.74	30.43	AV	V	0.77	31.20	54.00	22.80
26238.15	52.71	PK	V	7.06	59.77	74.00	14.23
26238.15	40.36	AV	V	7.06	47.42	54.00	6.58
34879.78	52.61	PK	V	12.96	59.55	74.00	14.45
34879.78	40.31	AV	V	12.96	47.25	54.00	6.75
Sweep Mode							
24126.000	96.39	PK	V	5.66	102.05	127.96	25.91
24126.000	78.94	AV	V	5.66	84.60	107.96	23.36
2403.80	44.29	PK	V	3.54	47.83	74.00	26.17
2403.80	30.28	AV	V	3.54	33.82	54.00	20.18
25194.14	50.98	PK	V	7.32	58.30	74.00	15.70
25194.14	38.78	AV	V	7.32	46.10	54.00	7.90
35995.10	52.98	PK	V	12.78	59.74	74.00	14.26
35995.10	40.99	AV	V	12.78	47.75	54.00	6.25

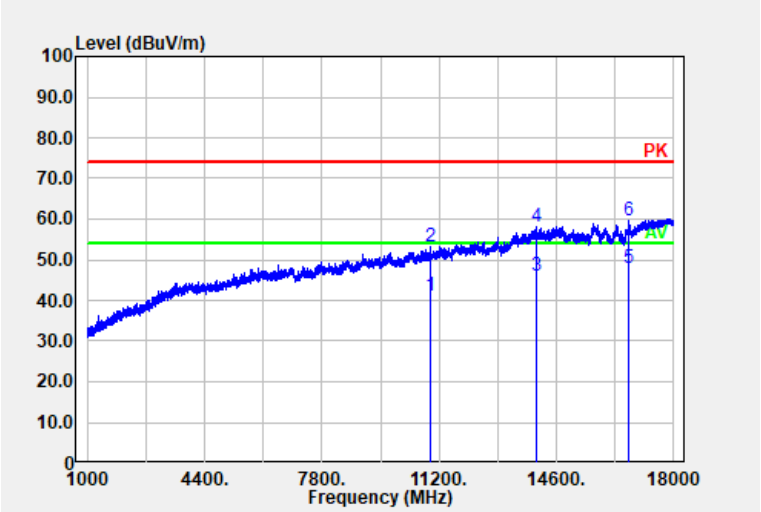
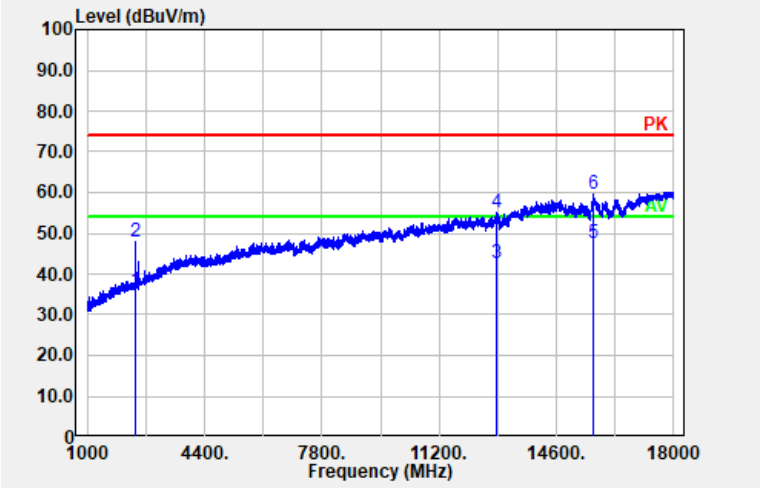
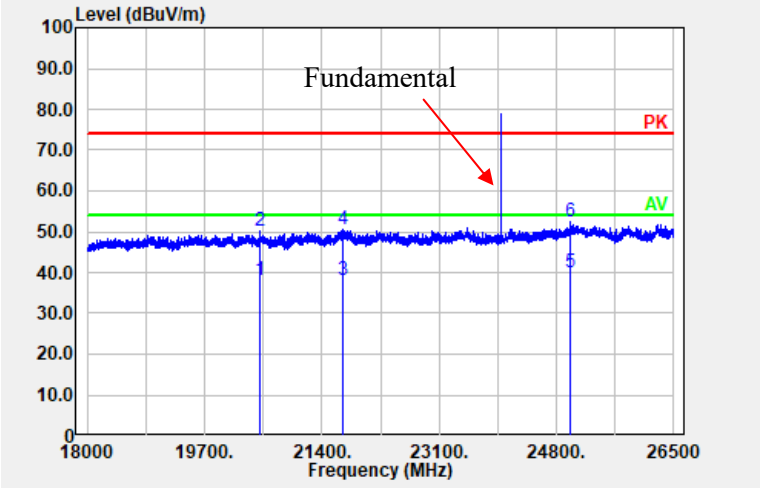
Result = Reading + Factor- Distance extrapolation Factor
For 1-26.5GHz:
Distance extrapolation Factor =20 log (specific distance [3m]/test distance [3m]) dB= 0 dB
For 26.5-40GHz:
Distance extrapolation Factor =20 log (specific distance [3m]/test distance [1.5m]) dB= 6.02 dB

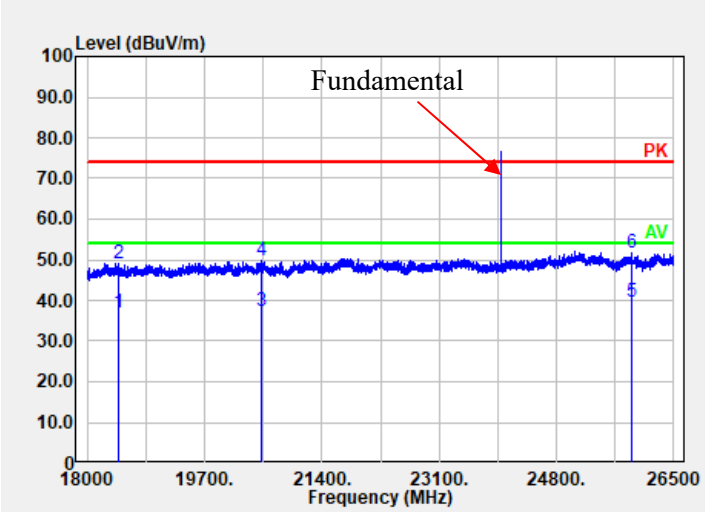
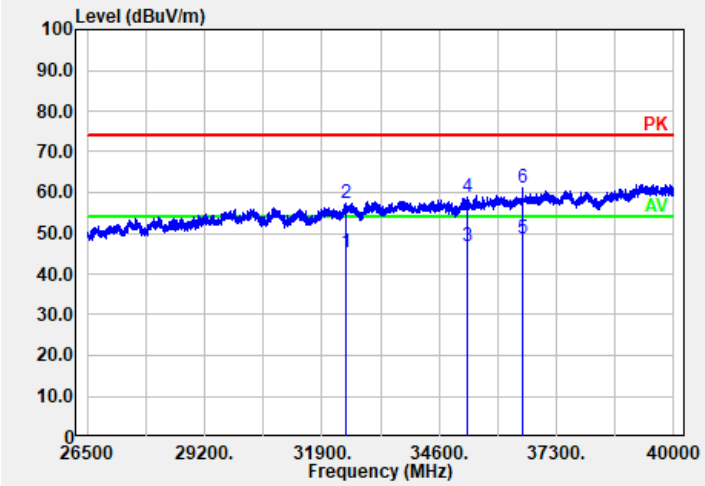
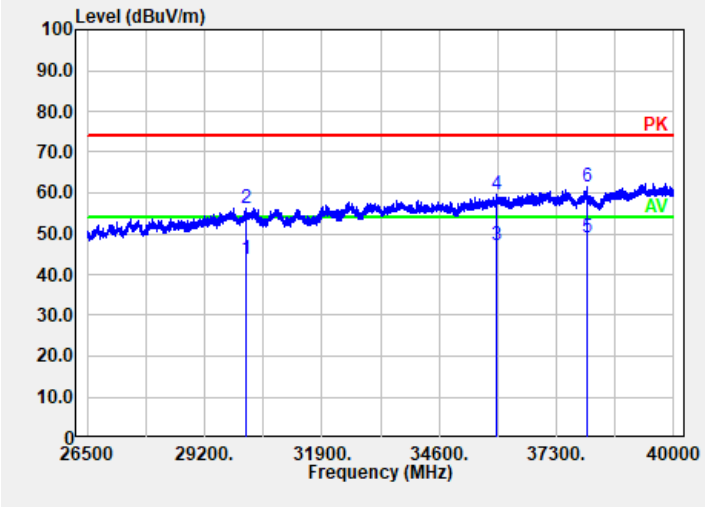
3) 40GHz-100GHz:

Frequency (GHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 24026 MHz							
48.052	38.69	PK	H	40.05	69.20	87.96	18.76
48.052	25.73	AV	H	40.05	56.24	67.96	11.72
48.052	39.24	PK	V	40.05	69.75	87.96	18.21
48.052	26.57	AV	V	40.05	57.08	67.96	10.88
72.078	44.34	PK	H	43.79	78.59	87.96	9.37
72.078	31.42	AV	H	43.79	65.67	67.96	2.29
72.078	43.39	PK	V	43.79	77.64	87.96	10.32
72.078	30.45	AV	V	43.79	64.70	67.96	3.26
96.104	44.09	PK	H	45.86	74.39	87.96	13.57
96.104	31.12	AV	H	45.86	61.42	67.96	6.54
96.104	44.43	PK	V	45.86	74.73	87.96	13.23
96.104	31.35	AV	V	45.86	61.65	67.96	6.31
Middle Channel: 24126 MHz							
48.252	38.13	PK	H	40.08	68.67	87.96	19.29
48.252	25.22	AV	H	40.08	55.76	67.96	12.20
48.252	37.49	PK	V	40.08	68.03	87.96	19.93
48.252	24.64	AV	V	40.08	55.18	67.96	12.78
72.378	44.65	PK	H	43.84	78.95	87.96	9.01
72.378	31.74	AV	H	43.84	66.04	67.96	1.92
72.378	42.93	PK	V	43.84	77.23	87.96	10.73
72.378	30.01	AV	V	43.84	64.31	67.96	3.65
96.504	44.99	PK	H	45.91	75.34	87.96	12.62
96.504	32.03	AV	H	45.91	62.38	67.96	5.58
96.504	44.41	PK	V	45.91	74.76	87.96	13.20
96.504	31.52	AV	V	45.91	61.87	67.96	6.09
High Channel: 24226 MHz							
48.452	35.44	PK	H	40.11	66.01	87.96	21.95
48.452	22.39	AV	H	40.11	52.96	67.96	15.00
48.452	38.97	PK	V	40.11	69.54	87.96	18.42
48.452	25.64	AV	V	40.11	56.21	67.96	11.75
72.678	44.65	PK	H	43.89	79.00	87.96	8.96
72.678	21.64	AV	H	43.89	55.99	67.96	11.97
72.678	42.93	PK	V	43.89	77.28	87.96	10.68
72.678	30.02	AV	V	43.89	64.37	67.96	3.59
96.904	44.81	PK	H	45.96	75.21	87.96	12.75
96.904	31.91	AV	H	45.96	62.31	67.96	5.65
96.904	44.52	PK	V	45.96	74.92	87.96	13.04
96.904	31.67	AV	V	45.96	62.07	67.96	5.89

Sweep Mode							
48.252	37.85	PK	H	40.08	68.39	87.96	19.57
48.252	24.02	AV	H	40.08	54.56	67.96	13.40
48.252	37.93	PK	V	40.08	68.47	87.96	19.49
48.252	23.69	AV	V	40.08	54.23	67.96	13.73
72.378	43.69	PK	H	43.84	77.99	87.96	9.97
72.378	30.26	AV	H	43.84	64.56	67.96	3.40
72.378	41.22	PK	V	43.84	75.52	87.96	12.44
72.378	29.87	AV	V	43.84	64.17	67.96	3.79
96.504	43.69	PK	H	45.91	74.04	87.96	13.92
96.504	30.21	AV	H	45.91	60.56	67.96	7.40
96.504	42.69	PK	V	45.91	73.04	87.96	14.92
96.504	30.36	AV	V	45.91	60.71	67.96	7.25

Result = Reading + Factor- Distance extrapolation Factor
For 40-90GHz:
Distance extrapolation Factor =20 log (specific distance [3m]/test distance [1m]) dB= 9.54 dB
For 90-100GHz:
Distance extrapolation Factor =20 log (specific distance [3m]/test distance [0.5m]) dB= 15.56 dB

Test Plots(Worst for High Channel)	
1GHz-18GHz Horizontal	
1GHz-18GHz Vertical	
18GHz-26.5GHz Horizontal	

18GHz-26.5GHz Vertical	
26.5GHz-40GHz Horizontal	
26.5GHz-40GHz Vertical	

4.3 20 dB Emission Bandwidth&99% Occupied Bandwidth:

Serial Number:	1QAT-13	Test Date:	2023/02/07
Test Site:	966-1	Test Mode:	Transmitting
Tester:	Mack Huang	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	18.5	Relative Humidity: (%)	40	ATM Pressure: (kPa)	101.3

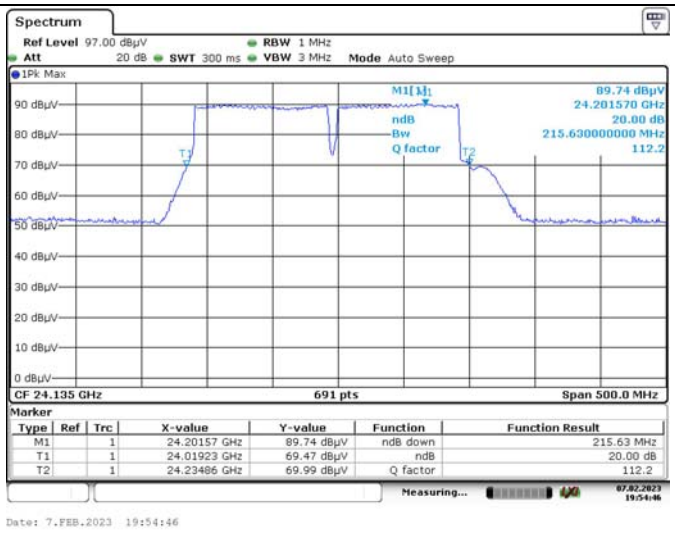
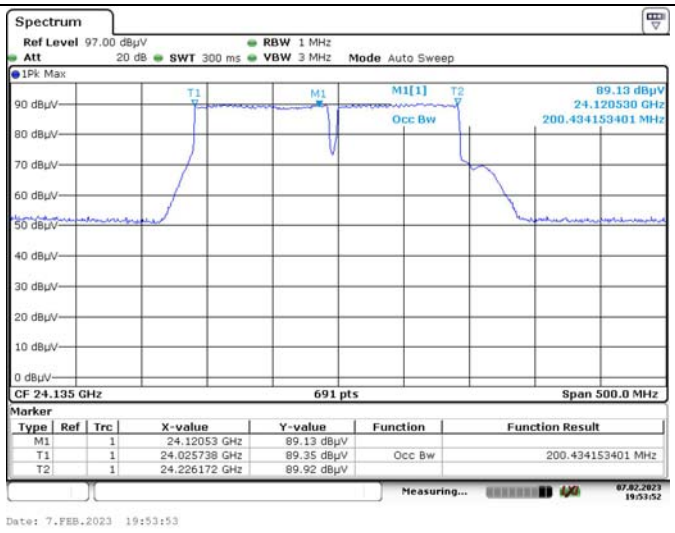
Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101591	2022/07/15	2023/07/14
PASTERNACK	Horn Antenna	PE9852/2F-20	112002	2021/02/05	2024/02/04
AH	Preamplifier	PAM-1840VH	190	2022/11/09	2023/11/08
MICRO-COAX	Coaxial Cable	UFB142A-1-2362-200200	235772-001	2022/08/07	2023/08/06

**** Statement of Traceability:*** *China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

Test Mode	20 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Sweep Mode	215.630	200.434

Bandwidth	
20dB Emission Bandwidth	
99% Occupied Bandwidth	

===== END OF REPORT =====