FCC Test Report

Report No.: AGC10590230901FE02

FCC ID	:	2A4FBTD831
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	Two Way Radio
BRAND NAME	:	TIDRADIO
MODEL NAME	:	TD-H3, TD-H1, TD-H12, TD-H4, TD-H5, TD-H3 pro, TD-H3 mini, TD-H3 plus, TD-H3 max
APPLICANT	:	Guangzhou TID Electronic Technology Co., Ltd
DATE OF ISSUE	:	Oct. 19, 2023
STANDARD(S)	:	FCC Part 15 Subpart B
REPORT VERSION	:	V 1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd

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REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Oct. 19, 2023	Valid	Initial Release

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1. GENERAL INFORMATION

Applicant	Guangzhou TID Electronic Technology Co., Ltd
Address	Room 602,Kaixiang Electronic Commerce Building A, Juyuan Street, Baiyun District, Guangzhou,China
Manufacturer	Guangzhou TID Electronic Technology Co., Ltd
Address	Room 602,Kaixiang Electronic Commerce Building A, Juyuan Street, Baiyun District, Guangzhou,China
Factory	Guangzhou TID Electronic Technology Co., Ltd
Address	Room 602,Kaixiang Electronic Commerce Building A, Juyuan Street, Baiyun District, Guangzhou,China
Product Designation	Two Way Radio
Brand Name	TIDRADIO
Test Model	TD-H3
Series Model	TD-H1,TD-H12,TD-H4,TD-H5,TD-H3 pro,TD-H3 mini, TD-H3 plus, TD-H3 max
Declaration of Difference	Only the model name and the enclosure design & colour are different (enclosure colours can be ordered)
Date of receipt of test item	Sep. 13, 2023
Date of Test	Sep. 13, 2023~Oct. 19, 2023
Deviation from Standard	No any deviation from the test method
Condition of Test Sample	Normal
Test Result	Pass
Test Report Form No	AGCTR-ER-FCC-SDOC V1.0

The above equipment was tested by Attestation Of Global Compliance (Shenzhen) Co., Ltd. for compliance with the requirements set forth in the FCC Rules and Regulations Part 15, the measurement procedure according to ANSI C63.4:2014. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements. The test results of this report relate only to the tested sample identified in this report.

Prepared By	Bibo Zhang (Project Engineer)	Oct. 19, 2023
Reviewed By	Calvin Liu (Reviewer)	Oct. 19, 2023
Approved By	Max Zhang Authorized Officer	Oct. 19, 2023

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2. PRODUCT INFORMATION

2.1 PRODUCT TECHNICAL DESCRIPTION

Housing Type	Plastic and metal
RX Frequency Range	50MHz-76MHz, 76MHz-108MHz(FM Receiver), 108MHz-136MHz(AM Receiver)
Equipment Type	Table-Top
Hardware Version	LT-9910-TC3
Software Version	Ver 0.1
Power Supply	DC 7.4V by battery or DC 5V by adapter

I/O Port Information (☒Applicable ☐Not Applicable)

I/O Port of EUT			
I/O Port Type	Q'TY	Cable	Tested with
Antenna Port	1	N/A	1
Earphone Port	1	N/A	1
Type C Port	1	1.0m,unshielded	1

2.2 AUXILIARY SURROUNDING DESCRIPTION

The Following Peripheral Devices And Interface Cables Were Connected During The Measurement:
☒ Test Accessories Come From The Laboratory

Equipment	Manufacturer	Model Name	Specification	Data Cable	Power Cable
Adapter	Huawei	HW-200325CP0	Input: AC 100-240V 50/60Hz, 1.8A Output: DC 5V 2A	N/A	1.0m Unshielded

☒ Test Accessories Come From The Manufacturer

Equipment	Manufacturer	Model Name	Specification	Data Cable	Power Cable
Battery	N/A	BP-H3	DC 7.4V	N/A	N/A
Back Clip	N/A	N/A	N/A	N/A	N/A
Antenna	N/A	N/A	N/A	N/A	N/A
USB Cable	N/A	N/A	N/A	N/A	1.0m,unshielded

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2.3 TEST METHODOLOGY

The tests were performed according to following standards:

No.	Identity	Document Title
1	FCC 47 CFR Part 15	Radio Frequency Devices
2	ANSI C63.4-2014	American National Standard for Methods of Measurement of Radio Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

2.4 DEFINITION OF DEVICE CLASSIFICATION

Unintentional radiator:
A device which is not intended to emit RF energy by radiation or induction.

Class A Digital Device:
A digital device which is marketed for use in commercial or business environment.

Class B Digital Device:
A digital device which is marketed for use by the general public or in a residential environment.

Note:
A manufacturer may also qualify a device intended to be marketed in a commercial, business or industrial environment as a Class B digital device, and in fact is encouraged to do so, provided the device complies with the technical specifications for a Class B Digital Device. In the event that a particular type of device has been found to repeatedly cause harmful interference to radio communications, the Commission may classify such a digital device as a Class B Digital Device, Regardless of its intended use.

2.5 DESCRIPTION OF TEST MODES

No.	Test Mode	Remark
1	FM Receiver at 50MHz-108MHz Mode	Worst
2	AM Receiver at 108MHz-136MHz mode	--

Note: Only the result of the worst case was recorded in the report.

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3. TEST ENVIRONMENT

3.1 ADDRESS OF THE TEST LABORATORY

Laboratory: Attestation of Global Compliance (Shenzhen) Co., Ltd.

Address: 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

3.2 TEST FACILITY

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L5488

Attestation of Global Compliance (Shenzhen) Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA-Lab Cert. No.: 5054.02

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 975832

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files with Registration 975832.

IC-Registration No.: 24842 (CAB identifier: CN0063)

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Certification and Engineering Bureau of Industry Canada. The acceptance letter from the IC is maintained in our files with Registration 24842.

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3.3 ENVIRONMENTAL CONDITIONS

	NORMAL CONDITIONS
Temperature range (℃)	15 - 35
Relative humidty range	20 % - 75 %
Pressure range (kPa)	86 - 106

3.4 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement y ±U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

Item	Measurement Uncertainty
Uncertainty of Conducted Emission	U_c = ±2.9 dB
Uncertainty of Radiated Emission below 1GHz	U_c = ±3.9 dB
Uncertainty of Radiated Emission above 1GHz	U_c = ±4.9 dB

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3.5 LIST OF EQUIPMENTS USED

● Radiated Emission

Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
☐	AGC-EM-E046	EMI Test Receiver	R&S	ESCI	10096	2023/02/18	2024/02/17
☒	AGC-EM-E116	EMI Test Receiver	R&S	ESCI	100034	2023/06/03	2024/06/02
☒	AGC-EM-E001	Wideband Antenna	SCHWARZBECK	VULB9168	D69250	2023/05/11	2025/05/10
☒	AGC-EM-E029	Horn Antenna	ETS	3117	00034609	2023/03/23	2024/03/22
☒	AGC-EM-E096	Pre-amplifier	ETS	3117-PA	00246148	2022/08/04	2024/08/03
☐	AGC-EM-S003	Test Software	FARA	V.RA-03A	N/A	N/A	N/A
☒	AGC-EM-S004	Test Software	Tonscend	4.0.0.0	N/A	N/A	N/A

● Conducted Emission

Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
☒	AGC-EM-E045	EMI Test Receiver	R&S	ESPI	101206	2023/06/03	2024/06/02
☒	AGC-EM-E023	AMN	R&S	100086	ESH2-Z5	2023/06/03	2024/06/02
☒	AGC-EM-S001	Test Software	R&S	ES-K1 (Ver.V1.71)	N/A	N/A	N/A

● RF Conducted Measurement

Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
☒	AGC-EM-E002	RF Communication Test Set	HP	8920B	US35010161	2023/06/02	2024/06/01
☒	AGC-ER-E086	Spectrum Analyzer	KEYSIGHT	N9020A	MY53300860	2023/06/01	2024/05/31
☒	AGC-EM-A007	30dB Attenuator	N/A	58-30-33	N/A	2023/06/01	2024/05/31

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4. SUMMARY OF TEST RESULTS

Item	FCC Rules	Description Of Test	Class/Severity	Result
1	Section 15.107	Radiated Emission	Class B	Pass
2	Section 15.109	Conducted Emission	Class B	Pass

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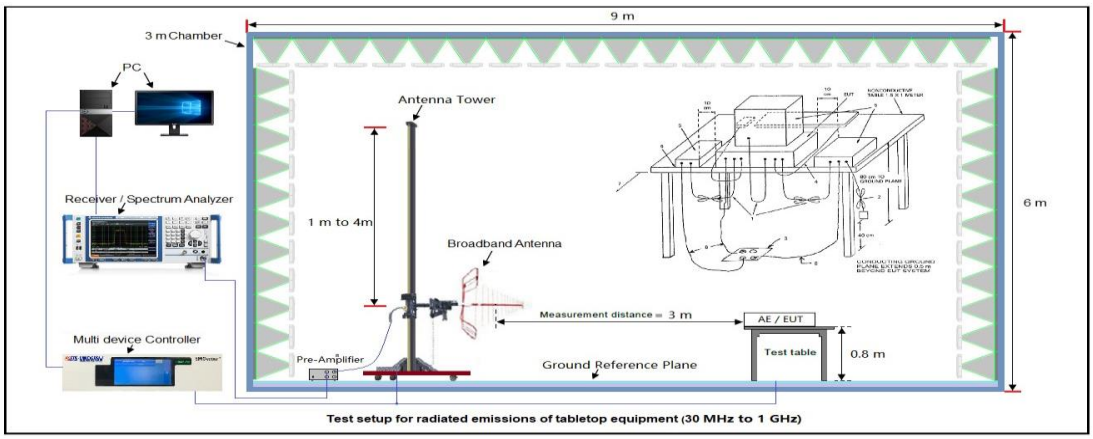
5. RADIATED EMISSION MEASUREMENTS

5.1 PROVISIONS APPLICABLE

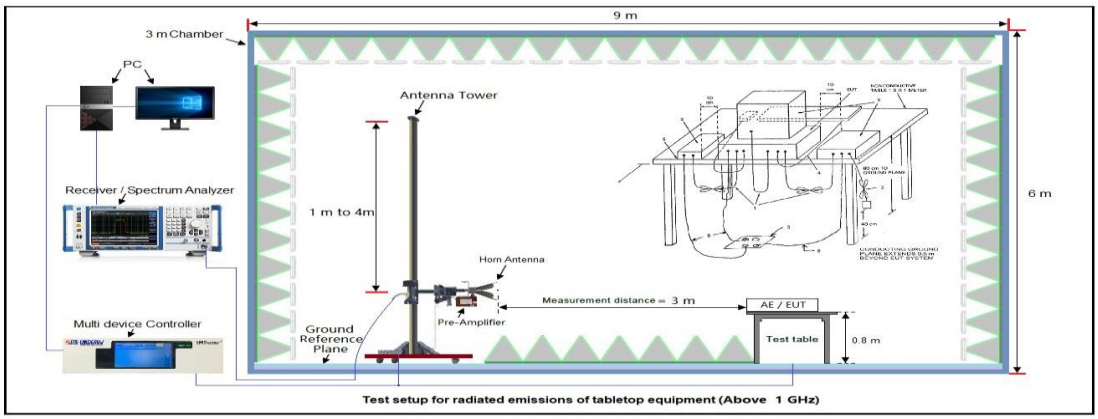
FCC CFR Title 47 Part 15 Subpart B Section 15.109:

Frequency Range	Class B Limit (dBuV/m @3m)	Class A Limit (dBuV/m @3m)	Value
30MHz-88MHz	40.00	50.00	Quasi-peak
88MHz-216MHz	43.50	53.50	Quasi-peak
216MHz-960MHz	46.00	56.00	Quasi-peak
960MHz-1GHz	54.00	64.00	Quasi-peak
Above 1GHz	54.00	60.00	Average
	74.00	80.00	Peak

5.2 MEASUREMENT SETUP



(Radiated Emission Measurements Test Setup for 30MHz to 1GHz)



(Radiated Emission Measurements Test Setup for above 1GHz)

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5.3 MEASUREMENT PROCEDURE

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
2. Support equipment, if needed, was placed as per ANSI C63.4.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
4. The EUT received power by AC 120V/60Hz.
5. The antenna was placed at 3 meter away from the EUT as stated in FCC Part 15. The antenna connected to the Analyzer via a cable and at times a pre-amplifier would be used.
6. The Analyzer / Receiver quickly scanned from 30MHz to 1000MHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
7. The test mode(s) were scanned during the test:
8. Recorded at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and Q.P./Peak reading is presented. For emissions below 1GHz, use 120KHz RBW and VBW>=3RBW for QP reading.
9. For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
10. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
11. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
12. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
13. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.
14. The test data of the worst case condition (mode 1) was reported on the following Data page.

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EMI TEST RECEIVER SETUP:

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

Frequency Range	RBW	Video B/W	IF B/W	Measurment
30 MHz – 1000 MHz	100 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1MHz	3 MHz	/	PK
	1MHz	10 Hz	/	Ave.

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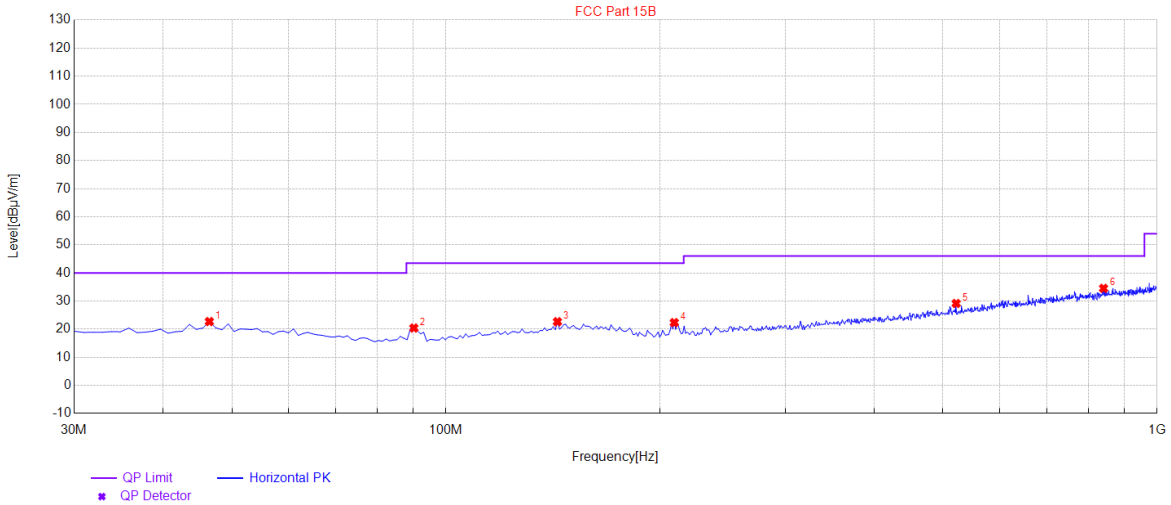
5.4 MEASUREMENT RESULT

Radiated Emission 30MHz-1GHz Test Result			
Test Mode	Mode 1	Polarity:	Horizontal



Final Data List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	46.49	22.71	14.96	40.00	17.29	100	72	Horizontal
2	90.14	20.41	11.25	43.50	23.09	100	206	Horizontal
3	143.49	22.66	15.55	43.50	20.84	100	143	Horizontal
4	209.45	22.34	13.77	43.50	21.16	100	312	Horizontal
5	521.79	29.15	22.30	46.00	16.85	100	261	Horizontal
6	840.92	34.53	28.27	46.00	11.47	100	55	Horizontal

RESULT: PASS

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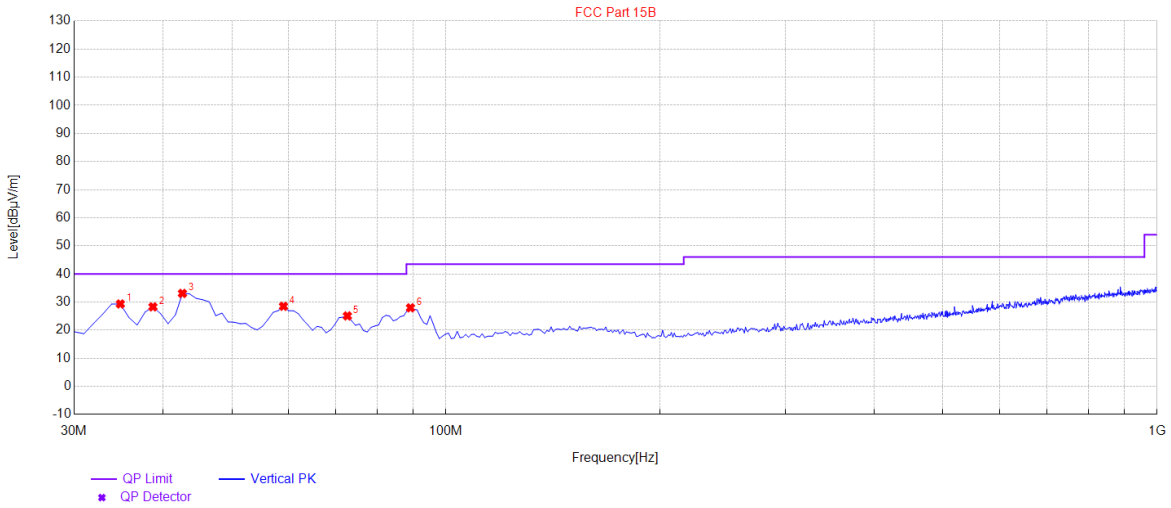
Radiated Emission 30MHz-1GHz Test Result			
Test Mode	Mode 1	Polarity:	Vertical



Final Data List

NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1277.1777	38.06	-16.91	74.00	35.94	100	160	Vertical
2	2359.4359	43.50	-10.31	74.00	30.50	100	170	Vertical
3	2935.6436	43.58	-9.38	74.00	30.42	100	90	Vertical
4	4343.3843	45.40	-5.61	74.00	28.60	100	220	Vertical
5	5805.1805	45.04	-4.31	74.00	28.96	100	160	Vertical
6	8940.3940	45.87	1.20	74.00	28.13	100	140	Vertical

RESULT: PASS

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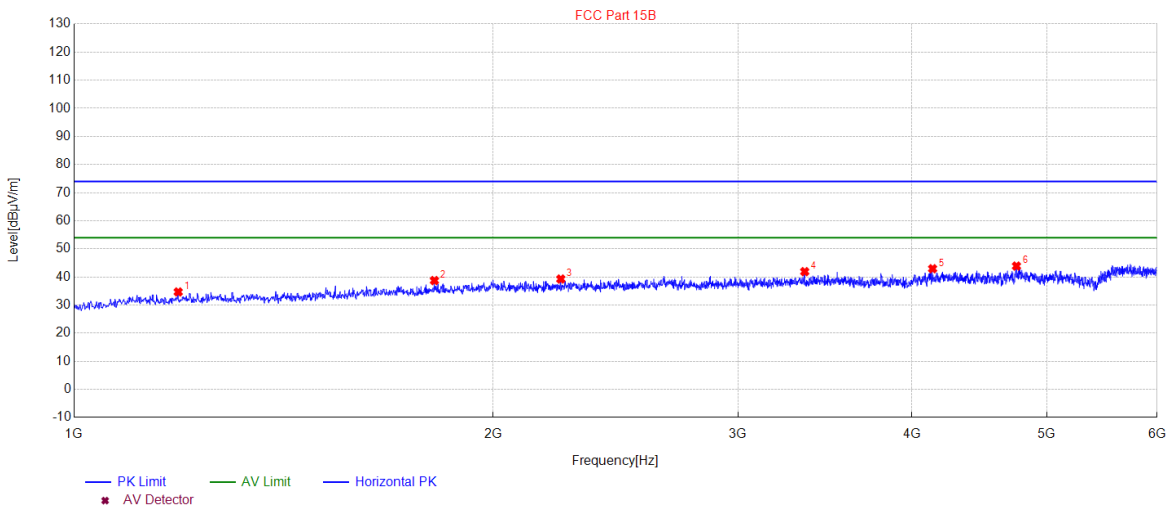
Radiated Emission Above1GHz Test Result			
Test Mode	Mode 1	Polarity:	Horizontal



Final Data List

NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1188.0376	34.67	-17.94	74.00	39.33	100	230	Horizontal
2	1815.163	38.72	-14.88	74.00	35.28	100	50	Horizontal
3	2237.2474	39.27	-13.03	74.00	34.73	100	30	Horizontal
4	3349.4699	41.90	-11.21	74.00	32.10	100	330	Horizontal
5	4138.6277	42.94	-9.31	74.00	31.06	100	130	Horizontal
6	4754.751	43.88	-7.91	74.00	30.12	100	190	Horizontal

RESULT: PASS

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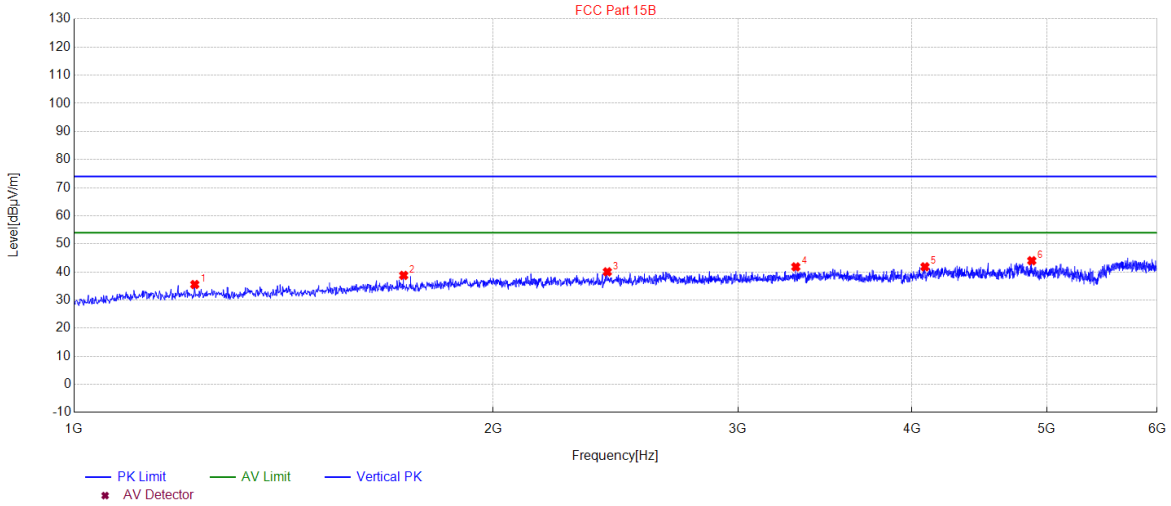
Radiated Emission Above1GHz Test Result			
Test Mode	Mode 1	Polarity:	Vertical



Final Data List

NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1221.0442	35.54	-17.85	74.00	38.46	100	30	Vertical
2	1725.145	38.78	-15.52	74.00	35.22	100	0	Vertical
3	2416.2833	40.05	-12.62	74.00	33.95	100	10	Vertical
4	3300.4601	41.81	-11.33	74.00	32.19	100	350	Vertical
5	4086.6173	41.84	-9.51	74.00	32.16	100	350	Vertical
6	4876.7754	44.00	-7.89	74.00	30.00	100	90	Vertical

RESULT: PASS

Note:

1. Factor=Antenna Factor + Cable loss - Amplifier gain, Margin= Limit- Measurement.
2. The “Factor” value can be calculated automatically by software of measurement system.

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6. CONDUCTED EMISSION MEASUREMENTS

6.1 PROVISIONS APPLICABLE

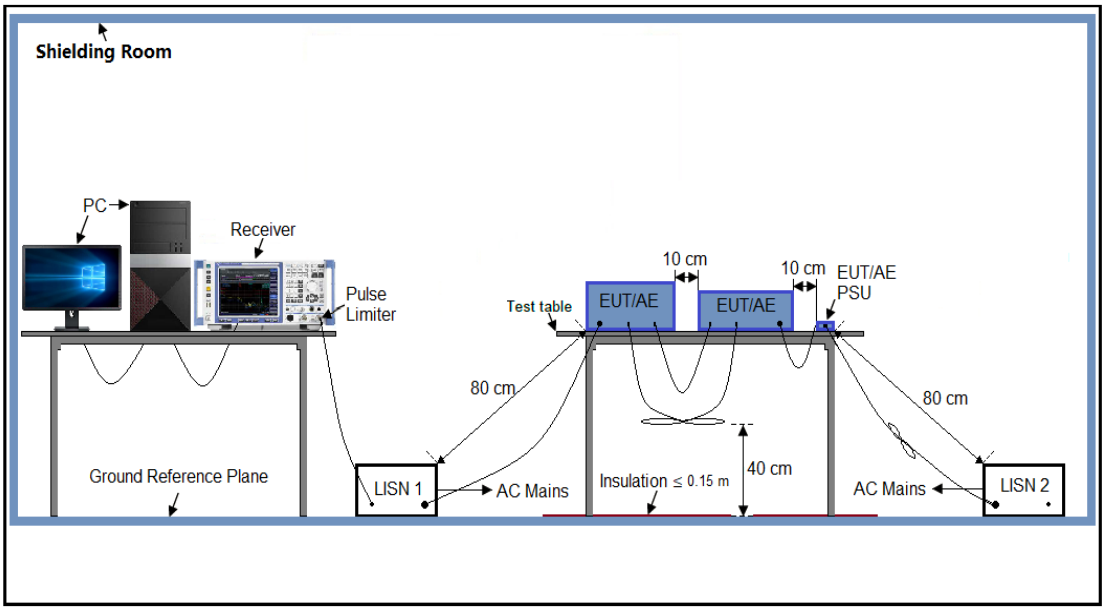
FCC CFR Title 47 Part 15 Subpart B Section 15.107:
For Class B Limits:

Frequency	Maximum RF Line Voltage	
	Q.P. (dBμV)	Average (dBμV)
150kHz~500kHz	66-56	56-46
500kHz~5MHz	56	46
5MHz~30MHz	60	50

For Class A Limits:

Frequency	Maximum RF Line Voltage	
	Q.P. (dBμV)	Average (dBμV)
150kHz~500kHz	79	66
500kHz~30MHz	73	60

6.2 MEASUREMENT SETUP



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6.3 MEASUREMENT PROCEDURE

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
2. Support equipment, if needed, was placed as per ANSI C63.4.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
4. The EUT received AC 120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5. All support equipments received AC power from a second LISN, if any.
6. The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
8. During the above scans, the emissions were maximized by cable manipulation.
9. The test data of the worst case condition (Mode 1) was reported on the following Data page.

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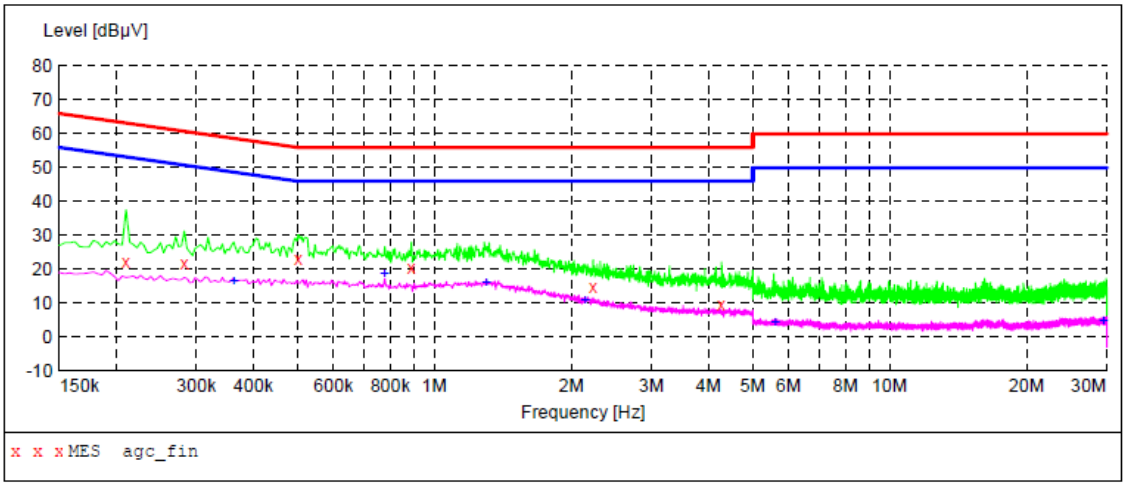
6.4 MEASUREMENT RESULT

AC POWER LINE CONDUCTED EMISSION TEST			
Test Mode	Mode 1	LISN line	Hot Side



MEASUREMENT RESULT: "agc_fin"

2023/9/18 18:52

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line
0.210000	22.40	6.1	63	40.8	QP	L1
0.282000	21.70	6.1	61	39.1	QP	L1
0.502000	23.00	6.2	56	33.0	QP	L1
0.890000	20.40	6.2	56	35.6	QP	L1
2.230000	15.00	6.3	56	41.0	QP	L1
4.274000	9.70	6.3	56	46.3	QP	L1

MEASUREMENT RESULT: "agc_fin2"

2023/9/18 18:52

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line
0.362000	16.50	6.1	49	32.2	AV	L1
0.778000	18.90	6.2	46	27.1	AV	L1
1.298000	16.00	6.2	46	30.0	AV	L1
2.142000	10.90	6.2	46	35.1	AV	L1
5.610000	4.30	6.4	50	45.7	AV	L1
29.482000	4.90	8.3	50	45.1	AV	L1

RESULT: PASS

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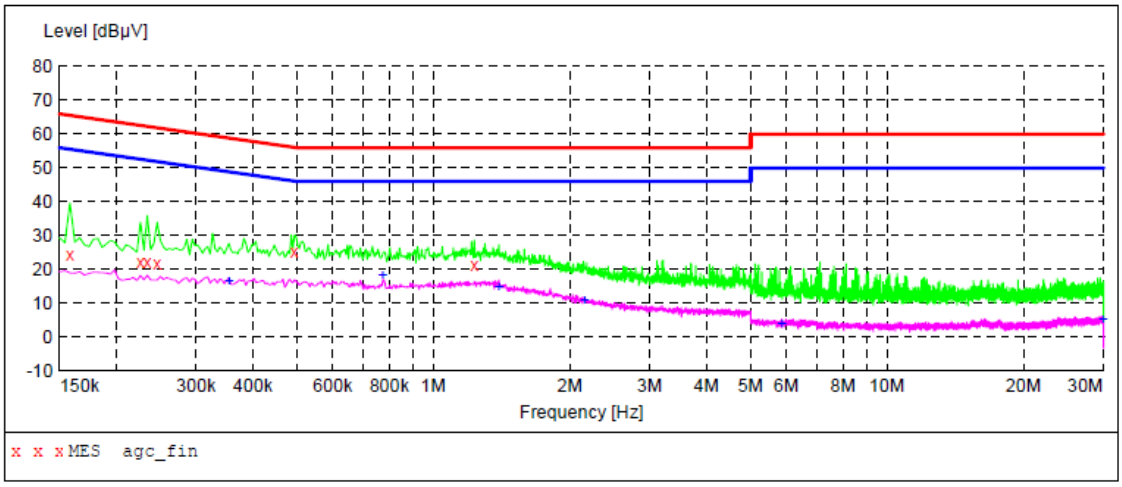
AC POWER LINE CONDUCTED EMISSION TEST			
Test Mode	Mode 1	LISN line	Neutral Side



MEASUREMENT RESULT: "agc_fin"

2023/9/18 19:06

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line
0.158000	24.60	6.1	66	41.0	QP	N
0.226000	22.30	6.1	63	40.3	QP	N
0.234000	22.30	6.1	62	40.0	QP	N
0.246000	21.80	6.1	62	40.1	QP	N
0.494000	25.40	6.1	56	30.7	QP	N
1.230000	21.20	6.2	56	34.8	QP	N

MEASUREMENT RESULT: "agc_fin2"

2023/9/18 19:06

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line
0.354000	16.50	6.1	49	32.4	AV	N
0.774000	18.30	6.2	46	27.7	AV	N
1.394000	15.00	6.2	46	31.0	AV	N
2.154000	10.90	6.2	46	35.1	AV	N
5.862000	4.00	6.4	50	46.0	AV	N
29.870000	5.40	8.3	50	44.6	AV	N

RESULT: PASS

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APPENDIX I: PHOTOGRAPHS OF TEST SETUP

Refer to the Report No.: AGC10590230901AP04

APPENDIX II: PHOTOGRAPHS OF TEST EUT

Refer to the Report No.: AGC10590230901AP02

-----END OF REPORT-----

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Conditions of Issuance of Test Reports

1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the "Clients").

2. Any report issued by Company as a result of this application for testing services (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.

3.The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.

4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.

5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.

6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.

7.Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.

8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.

9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

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