FCC AND ISED CERTIFICATION TEST REPORT

Applicant	:	Guangdong Times Sunshade Technology Co. , Ltd.
Address of Applicant	:	Floor 1-2, Plant L10, Tianan Zhigu Science and Technology Industrial Park,No. 18 Chuangxing Avenue, Qingyuan High-tech Industrial Development Zone
Manufacturer	:	Guangdong A-OK Technology Grand Development Co., Ltd.
Address of Manufacturer	:	Hexing Road South Side, Sanhe Economic Development, Zone, Huiyang, 516213 Huizhou, Guangdong, PEOPLE'S REPUBLIC OF CHINA
Equipment under Test	:	Remote
Model No.	:	YA2001-16
FCC	:	2BOBV-YA2001
IC	:	33711-YA2001
Test Standard(s)	:	FCC Rules and Regulations Part 15 Subpart C, RSS-210 Issue 11 June 2024, ANSI C63.10:2013, RSS-Gen Issue 5, Apr. 2018, Amendment 2 (February 2021)
Report No.	:	DDT-RE25030727-1E01
Issue Date	:	2025/03/27
Issue By	:	Guangdong Dongdian Testing Service Co., Ltd. Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808

REPORT

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Test Report Declare

Applicant	:	Guangdong Times Sunshade Technology Co. , Ltd.
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Test Standard Used:

FCC Rules and Regulations Part 15 Subpart C, RSS-210 Issue 11 June 2024,
ANSI C63.10:2013, RSS-Gen Issue 5, Apr. 2018, Amendment 2 (February 2021)

We Declare:

The equipment described above is tested by Guangdong Dongdian Testing Service Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Guangdong Dongdian Testing Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

Report No.:	DDT-RE25030727-1E01		
Date of Receipt:	2025/03/11	**Date of Test:**	2025/03/11~2025/03/27

Created: Tiger Mo	Reviewed: Ella Gong	Approved: Damon Hu
Tiger Mo	Ella Gong	GUANGDONG DONGDIAN TESTING SERVICE CO.,LTD. 广东东电检测技术有限公司 Certificate and Report Seal 检验检测专用章
2025/03/27	2025/03/27	2025/03/27

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Guangdong Dongdian Testing Service Co., Ltd.

Revision History

Version	Revision Content	Issue Date	Approved
---	Initial issue	2025/03/27	

1. Summary of Test Results

No.	Test Parameter	Clause No.	Condition	Result
1	On Time and Duty Cycle	FCC Rules and Regulations Part 15 Subpart C, RSS-210 Issue 11 June 2024	/	Pass
2	20dB Bandwidth and 99% Bandwidth	FCC Part 15: 15.215, ANSI C63.10:2013, RSS-210 Issue 11 June 2024	/	Pass
3	Stop Transmitting Time Test	FCC Part 15C: 15.231(a)(1), RSS-210 Issue 11 June 2024	/	Pass
4	Radiated Emission	FCC Part 15: 15.209, FCC Part 15: 15.231(b), ANSI C63.10:2013, RSS-210 Issue 11 June 2024, RSS-Gen Issue 5	/	Pass
5	Field Strength Of The Fundamental Signal	FCC Part 15: 15.209, FCC Part 15: 15.231(b), ANSI C63.10:2013, RSS-210 Issue 11 June 2024, RSS-Gen Issue 5	/	Pass
6	Power Line Conducted Emissions	FCC Part 15: 15.207, ANSI C63.10:2013, RSS-210 Issue 11 June 2024, RSS-Gen Issue 5	/	N/A
7	Antenna Requirement	FCC Part 15: 15.203, RSS-Gen Issue 5 clause 6.8	/	Pass
Note: N/A is an abbreviation for Not Applicable, and means this item is not applicable for this device or no need to test according to standard.				

2. General Test Information

2.1. Description of EUT

EUT Name	:	Remote
Model Number	:	YA2001-16
Difference of model number	:	/
EUT Function Description	:	Please reference user manual of this device
Power Supply	:	DC 3V
Hardware Version	:	V1
Software Version	:	24111900009

Radio Technology	:	SRD
Operation frequency	:	433.92 MHz
Modulation	:	ASK

Channel information	
Channel	Frequency (MHz)
1	433.92

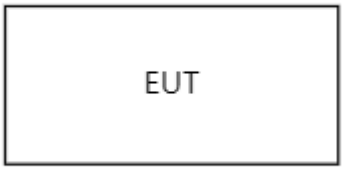
Note: The above EUT information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications or User's Manual. The above Antenna information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

"☒" means to be chosen or applicable; "□" means don't to be chosen or not applicable; This note applies to entire report.

2.2. Accessories of EUT

Accessories	Manufacturer	Model number	Description
/	/	/	/

2.3. Block diagram of EUT configuration for test



2.4. Deviations of test standard

No deviation.

2.5. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature range:	21-25 ℃
Humidity range:	40-75%
Pressure range:	86 kPa to106 kPa

Note: The specific temperature and humidity information of each test item refers to the temperature and humidity record in the corresponding test data.

2.6. Test laboratory

Guangdong Dongdian Testing Service Co., Ltd.

Add.: Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808.

Tel.: +86-0769-38826678, http://www.dgddt.com, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20240, G-20118

2.7. Measurement uncertainty

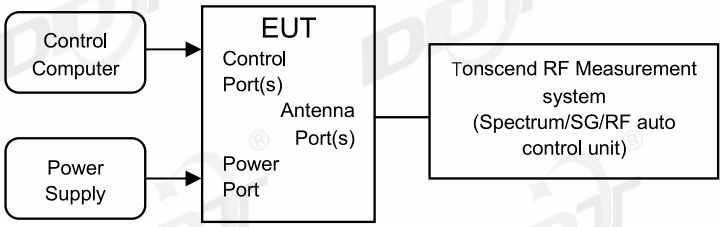
Test Item	Uncertainty
Bandwidth	1.1%
Peak Output Power (Conducted) (Spectrum analyzer)	0.86 dB (10 MHz ≤ f < 3.6 GHz);
	1.38 dB (3.6 GHz ≤ f < 8 GHz)
Peak Output Power (Conducted) (Power Sensor)	0.74 dB
Power Spectral Density	0.74 dB (10 MHz ≤ f < 3.6 GHz);
	1.38 dB (3.6 GHz ≤ f < 8 GHz)
Frequencies Stability	6.7×10^{-8} (Antenna couple method)
	5.5×10^{-8} (Conducted method)
Conducted spurious emissions	0.86 dB (10 MHz ≤ f < 3.6 GHz);
	1.40 dB (3.6 GHz ≤ f < 8 GHz)
	1.66 dB (8 GHz ≤ f < 26.5 GHz)
Uncertainty for radio frequency (RBW < 20 kHz)	3×10^{-8}
Temperature	0.4 ℃
Humidity	2 %
Uncertainty for Radiation Emission test (9 kHz – 30 MHz)	3.44 dB
Uncertainty for Radiation Emission test (30 MHz - 1 GHz)	4.70 dB (Antenna Polarize: V)
	4.84 dB (Antenna Polarize: H)
Uncertainty for Radiation Emission test (1 GHz - 40 GHz)	4.10 dB (1 - 6 GHz)
	4.40 dB (6 GHz - 18 GHz)
	3.54 dB (18 GHz - 26 GHz)
	4.30 dB (26 GHz - 40 GHz)
Uncertainty for Power line conduction emission test	3.34dB (150KHz-30MHz)
	3.72dB (9KHz-150KHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

3. On Time and Duty Cycle

3.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To
RF Control Unit	Tonscend	JS0806-2	DDT-ZC01449	2025/03/31
RF Test System 3# (Bluetooth, WIFI RF conduction automatic test software)	Toscend	JS1120-3	DDT-ZC01686	/
EXG Analog Signal Generator(9KHz-40GHz)	KEYSIGHT	N5173B	DDT-ZC02805	2025/07/08
TEMP&HUMI Programmable chamber	ZHIXIANG	ZXGDJS-150L	DDT-ZC00243	2025/04/22
MXG Vector Signal Generator	Agilent	N5182A	DDT-ZC01446	2025/03/31
Signal &Spectrum analyzer	R&S	FSV40	DDT-ZC02717	2025/07/08
WIDEBAND RADIO COMMUNICATION TESTER	R&S	CMW500	DDT-ZC00242	2025/03/31
Digital Multimeter	FLUKE	15B PRO	DDT-ZC02062	2025/08/25

3.2. Block diagram of test setup



3.3. Limits

Just for report.

3.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

3.5. Test procedure

Set the Centre frequency of the spectrum analyzer to the transmitting frequency;

Set the span=0MHz, RBW=3MHz, VBW=3MHz, Sweep time=100ms;

Trace mode = Single hold.

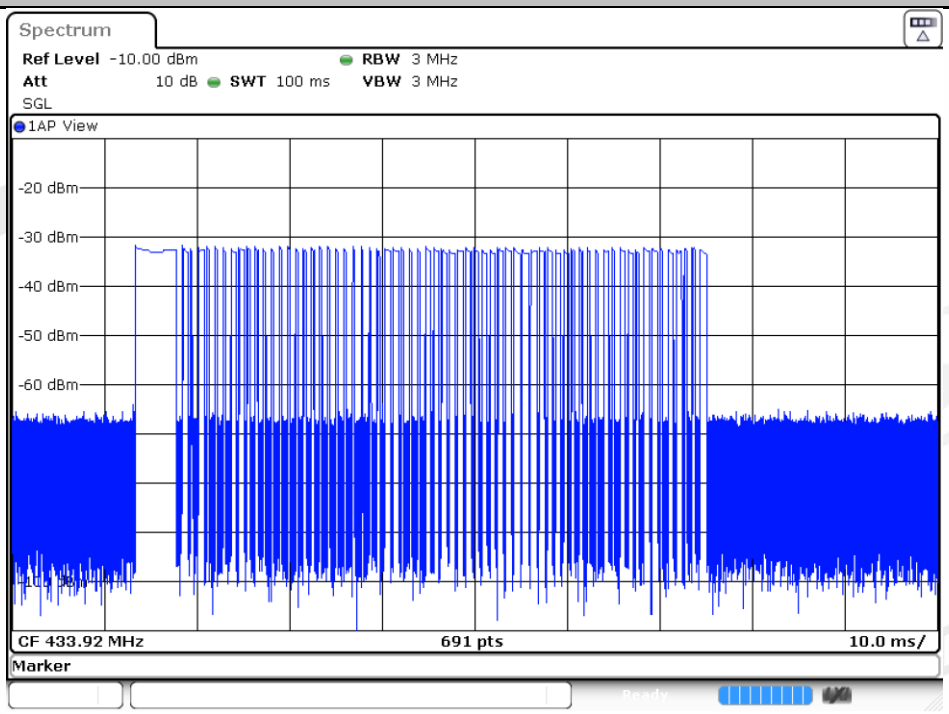
3.6. Test result

Test Channel	Duty Cycle[%]	20 log(duty cycle)
433.92	32.58	-9.74

Note 1: The transmitter duty cycle was measured using a spectrum analyser in the time domain and calculated by below Equation:
δ(dB) = 20log(Δ)= 20 log[4.4638+(0.5797*32+0.2899*33)/100]= -9.74dB
δ is the duty cycle correction factor (dB)
Δ is the duty cycle (dimensionless)
Note 2: In cases where the pulse train exceeds 0.1 s, the measured field strength shall be determined during a 0.1 s interval

3.7. Test data

Duty Cycle



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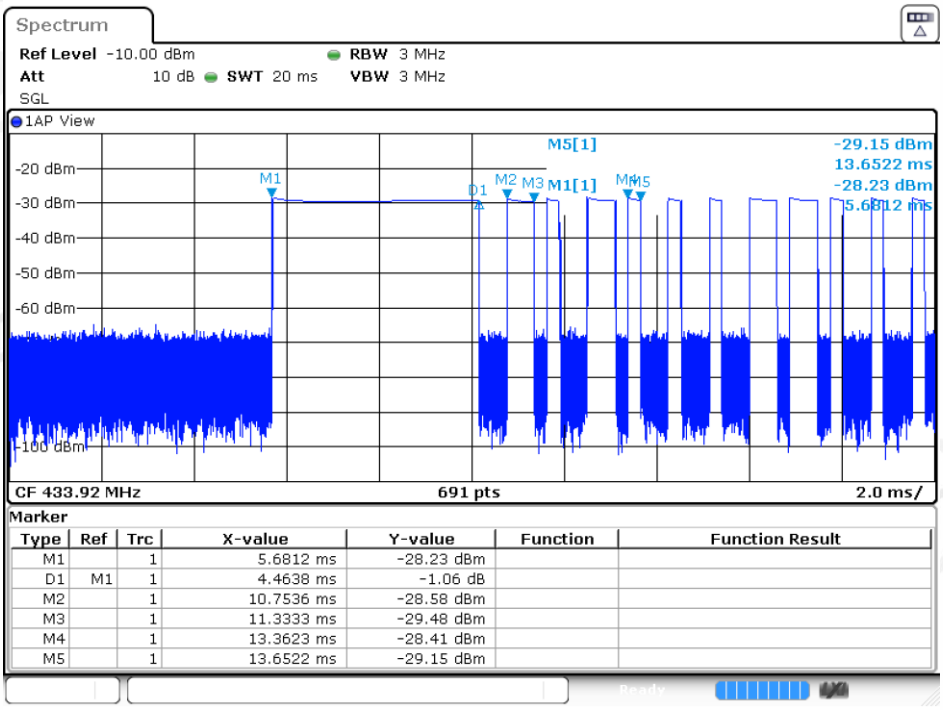


Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.6812 ms	-28.23 dBm		
D1	M1	1	4.4638 ms	-1.06 dB		
M2		1	10.7536 ms	-28.58 dBm		
M3		1	11.3333 ms	-29.48 dBm		
M4		1	13.3623 ms	-28.41 dBm		
M5		1	13.6522 ms	-29.15 dBm		

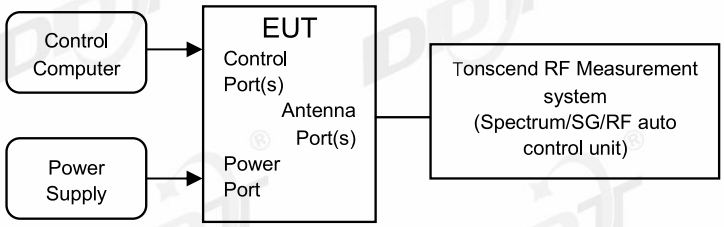
Date: 13.MAR.2025 13:49:36

4. 20dB Bandwidth and 99% Bandwidth

4.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To
EXG Analog Signal Generator(9KHz-40GHz)	KEYSIGHT	N5173B	DDT-ZC02805	2025/07/08
TEMP&HUMI Programmable chamber	ZHIXIANG	ZXGDJS-150L	DDT-ZC00243	2025/04/22
RF Control Unit	Tonscend	JS0806-2	DDT-ZC01449	2025/03/31
Signal &Spectrum analyzer	R&S	FSV40	DDT-ZC02717	2025/07/08
Digital Multimeter	FLUKE	15B PRO	DDT-ZC02062	2025/08/25
RF Test System 3# (Bluetooth, WIFI RF conduction automatic test software)	Toscend	JS1120-3	DDT-ZC01686	/
MXG Vector Signal Generator	Agilent	N5182A	DDT-ZC01446	2025/03/31
WIDEBAND RADIO COMMUNICATION TESTER	R&S	CMW500	DDT-ZC00242	2025/03/31

4.2. Block diagram of test setup



4.3. Limits

The bandwidth of the emission shall be no wider than 0.25% of the center frequency of devices operation above 70MHz and below 900MHz.

4.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

4.5. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

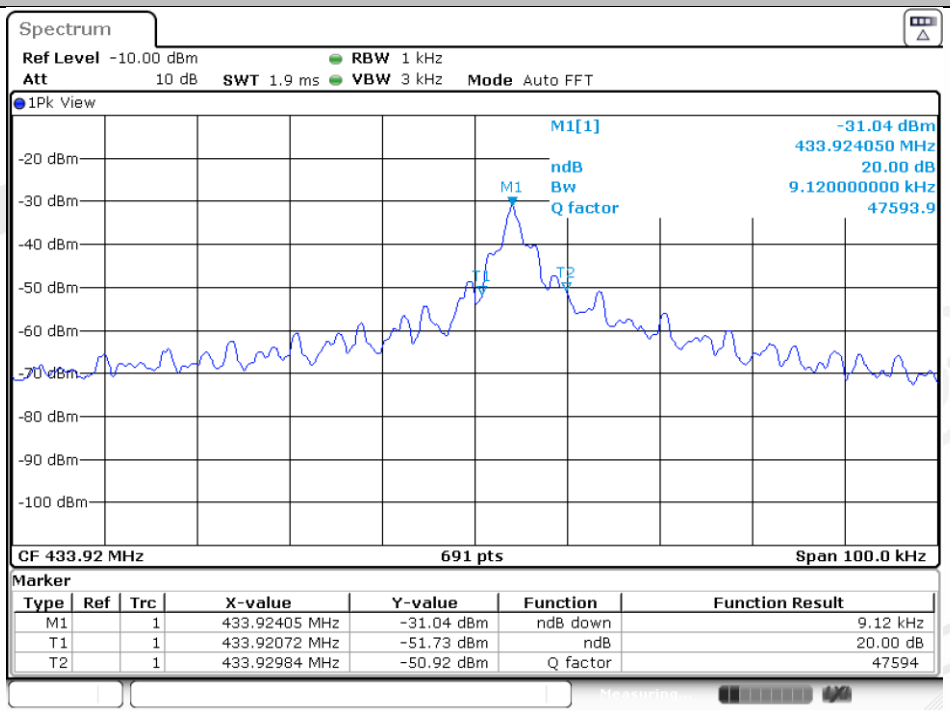
(2) The bandwidth of the fundamental frequency was measured by spectrum analyzer with 1kHz RBW and 3kHz VBW. Use the 99% bandwidth function of the spectrum analyzer to measure the occupied bandwidth of the EUT.

4.6. Test result

Frequency (MHz)	20 dB Bandwidth (kHz)	99% Bandwidth (kHz)	Limit (kHz)	Conclusion
433.92	9.12	38.929	1084.8	PASS

4.7. Test data

20 dB Bandwidth



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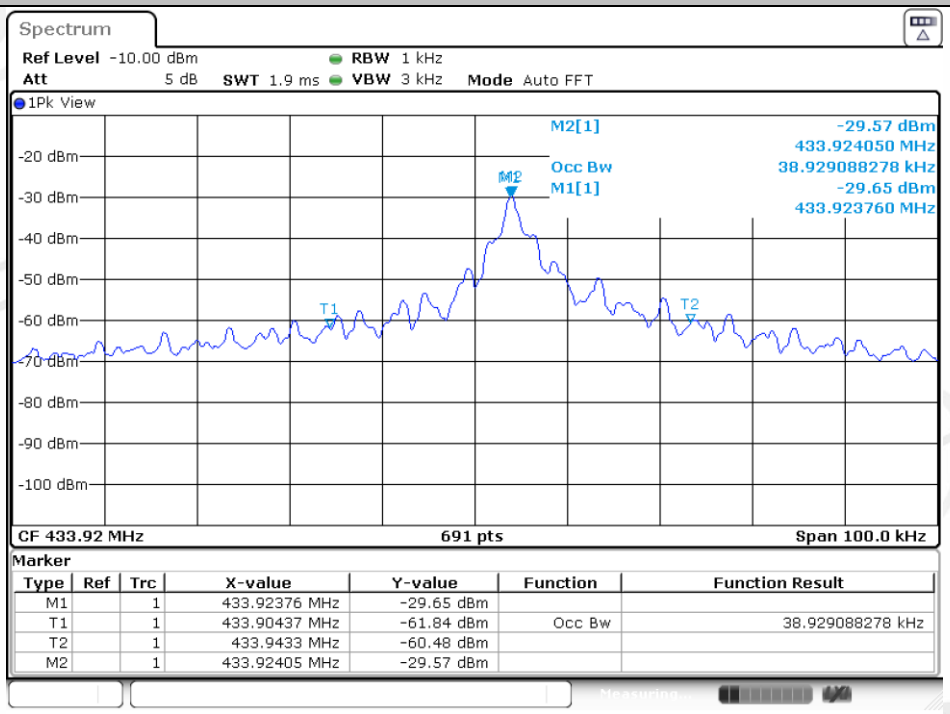
99% Bandwidth



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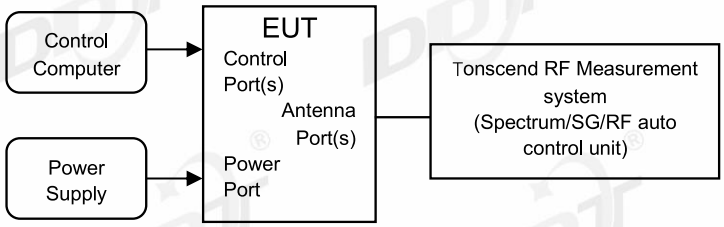
5. Stop Transmitting Time Test

5.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To
WIDEBAND RADIO COMMUNICATION TESTER	R&S	CMW500	DDT-ZC00242	2025/03/31
RF Control Unit	Tonscend	JS0806-2	DDT-ZC01449	2025/03/31
RF Test System 3# (Bluetooth, WIFI RF conduction automatic test software)	Toscend	JS1120-3	DDT-ZC01686	/
Digital Multimeter	FLUKE	15B PRO	DDT-ZC02062	2025/08/25
MXG Vector Signal Generator	Agilent	N5182A	DDT-ZC01446	2025/03/31
EXG Analog Signal Generator(9KHz-40GHz)	KEYSIGHT	N5173B	DDT-ZC02805	2025/07/08
TEMP&HUMI Programmable chamber	ZHIXIANG	ZXGDJS-150L	DDT-ZC00243	2025/04/22
Signal &Spectrum analyzer	R&S	FSV40	DDT-ZC02717	2025/07/08

5.2. Block diagram of test setup



5.3. Limits

(a) The provisions of this section are restricted to periodic operation within the band 40.66-40.70 MHz and above 70 MHz. Except as shown in paragraph (e) of this section, the intentional radiator is restricted to the transmission of a control signal such as those used with alarm systems, door openers, remote switches, etc. Continuous transmissions, voice, video and the radio control of toys are not permitted. Data is permitted to be sent with a control signal. The following conditions shall be met to comply with the provisions for this periodic operation:

(1) A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

(2) A transmitter activated automatically shall cease transmission within 5 seconds after activation.

(3) Periodic transmissions at regular predetermined intervals are not permitted. However, polling or supervision transmissions, including data, to determine system integrity of transmitters used in security or safety applications are allowed if the total duration of transmissions does not exceed

more than two seconds per hour for each transmitter. There is no limit on the number of individual transmissions, provided the total transmission time does not exceed two seconds per hour.

5.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

5.5. Test procedure

(1) The EUT's RF signal was coupled to spectrum analyzer by antenna connected to spectrum analyzer.

(2) Set the spectrum to zero span mode, and centered of EUT frequency.

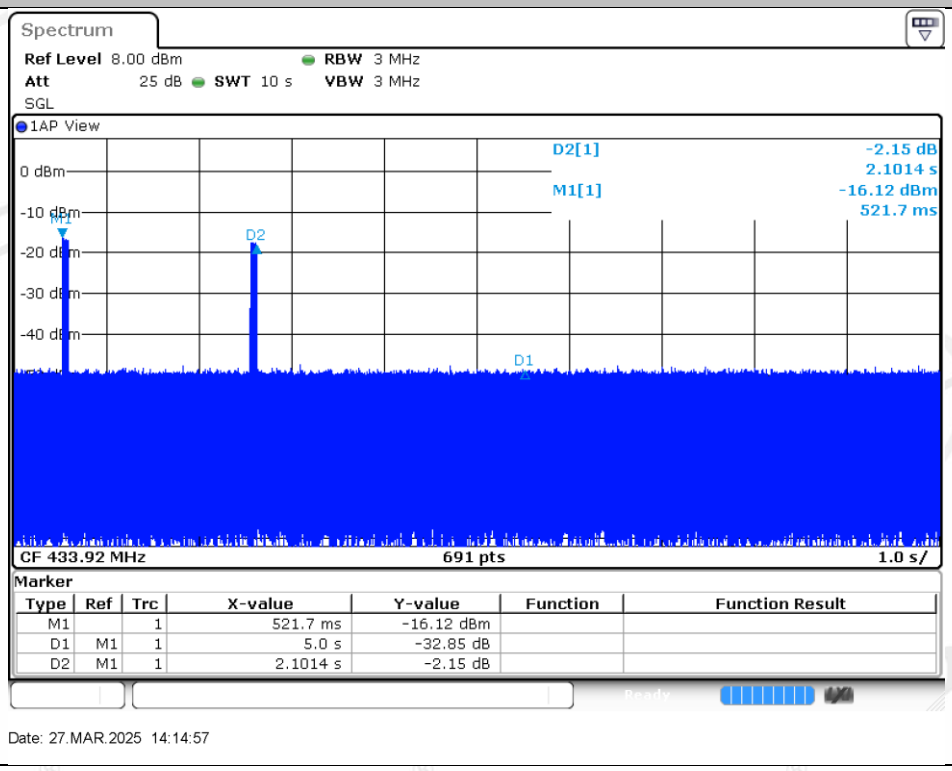
(3) Measure the stop transmitting time after release EUT button.

5.6. Test result

Frequency (MHz)	Burst Duration[s]	Limit [s]	Verdict
433.92	2.1014	≤5	PASS

5.7. Test data

Graphs

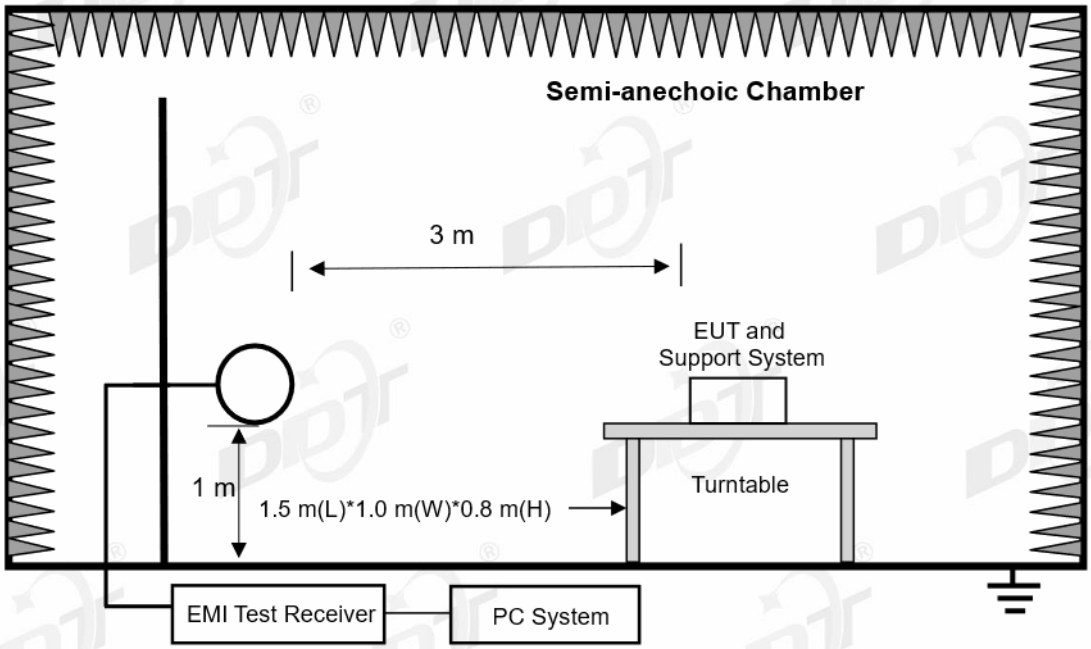


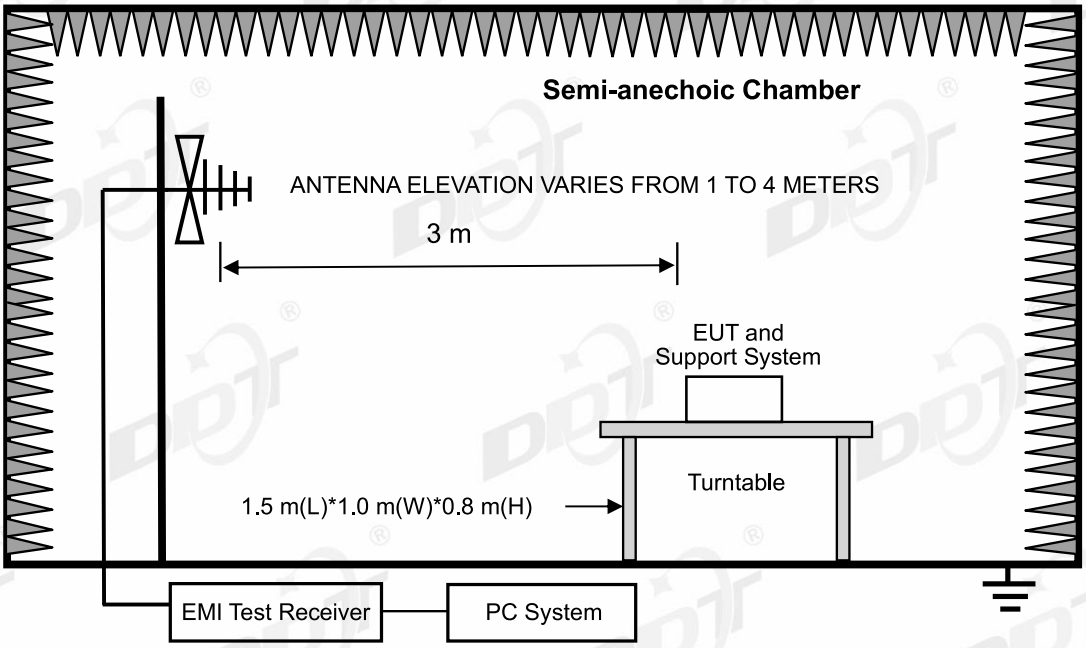
6. Radiated Emission

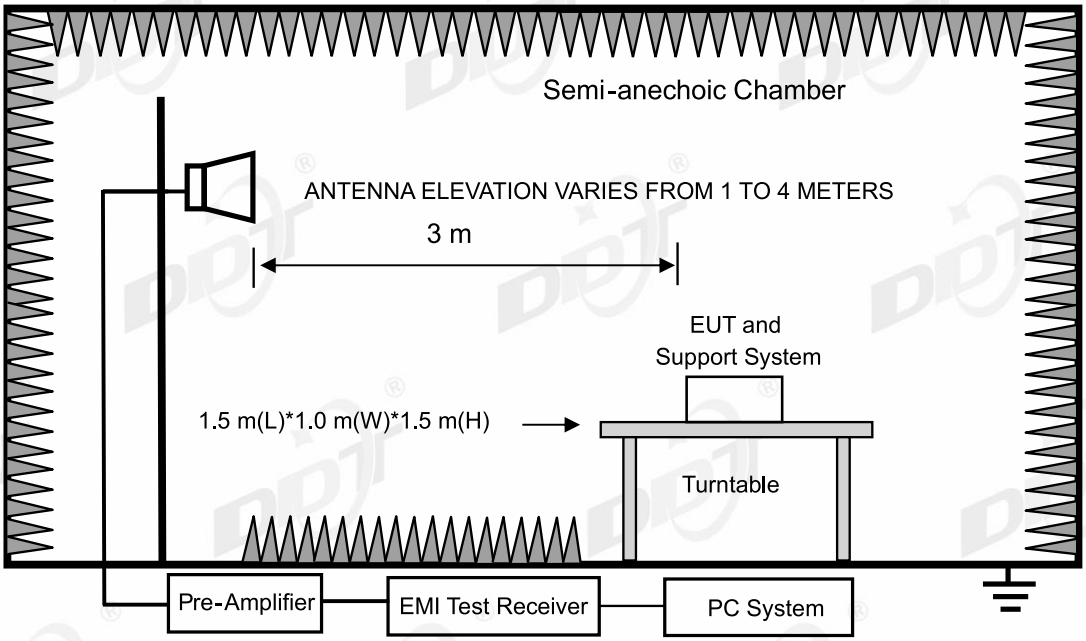
6.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To
RF cable	Zhongke Junchuang	JCT26S-NJ-NJ-1.5M	DDT-ZC02762	2025/03/31
EMI TEST RECEIVER	R&S	ESU26	DDT-ZC01909	2025/03/31
High Pass filter	Xi'an Xingbo	XBLBQ-GTA67	DDT-ZC02179	2025/04/22
Active Loop Antenna	Schwarzbeck	FMZB1519	DDT-ZC00524	2025/09/11
Hochgewinn-Hornantenne	SCHWARZBECK	BBHA 9120 D	DDT-ZC02129	2025/09/18
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	DDT-ZC02050	2025/07/11
RF cable	Yuhu Technology	JCTB810-NJ-NJ-9M	DDT-ZC02538	2025/03/31
Micro-Tronics filters	REBES	BRM50716	DDT-ZC03240	/
RF Cable	N/A	W13.02 AP1-X2	DDT-ZC04023	2025/03/31
PSA Series Spectrum Analyzer	Agilent	E4447A	DDT-ZC00517	2025/03/31
RF Cable	N/A	W24.02 HL-562	DDT-ZC04022	2025/03/31
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	DDT-ZC00506	2025/04/26
High pass filter	Micro-Tronics	HPM50102	DDT-ZC00561	2025/04/22
Pre-amplifier	COM-POWER	PAM-840A	DDT-ZC01693	2025/03/31
Micro-Tronics filters	REBES	BRM50702	DDT-ZC03242	/
RF cable	Yuhu Technology	ZT26S-SMAJ-SMAJ-1M	DDT-ZC02037	2025/03/31
Pre-amplifier	COM-POWER	PAM-118A	DDT-ZC01293	2025/08/25
High pass filter	Micro-Tronics	HPM50108	DDT-ZC00560	2025/04/22

6.2. Block diagram of test setup







6.3. Limits

(1) FCC 15.205 Restricted frequency band

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.1772&4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.2072&4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.G
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

RSS-Gen section 8.10 Restricted frequency bands*

MHz	MHz	MHz	GHz
0.090-0.110	12.51975-12.52025	240-285	3.5-4.4
0.495-0.505	12.57675-12.57725	322-335.4	4.5-5.15
2.1735-2.1905	13.36-13.41	399.9-410	5.35-5.46

3.020-3.026	16.42-16.423	608-614	7.25-7.75
4.125-4.128	16.69475-16.69525	960-1427	8.025-8.5
4.1772&4.17775	16.80425-16.80475	1435-1626.5	9.0-9.2
4.2072&4.20775	25.5-25.67	1645.5-1646.5	9.3-9.5
5.677-5.683	37.5-38.25	1660-1710	10.6-12.7
6.215-6.218	73-74.6	1718.8-1722.2	13.25-13.4
6.26775-6.26825	74.8-75.2	2200-2300	14.47-14.5
6.31175-6.31225	108-138	2310-2390	15.35-16.2
8.291-8.294	149.9-150.05	2483.5-2500	17.7-21.4
8.362-8.366	156.52475-156.52525	2655-2900	22.01-23.12
8.37625-8.38675	156.7-156.9	3260-3267	23.6-24.0
8.41425-8.41475	162.0125-167.17	3332-3339	31.2-31.8
12.29-12.293	167.72-173.2	3345.8-3358	36.43-36.5
			Above 38.6

* Certain frequency bands listed in table and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.

(2) FCC 15.209 Limit.

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		uV/m	dB(uV)/m
0.009 ~ 0.490	300	2400/F(kHz)	67.6-20log(F)
0.490 ~ 1.705	30	24000/F(kHz)	87.6-20log(F)
1.705 ~ 30.0	30	30	29.54
30~88	3	100	40.0
88~216	3	150	43.5
216~960	3	200	46.0
960~1000	3	500	54.0
Above 1000	3	74.0 dB(uV)/m (Peak) 54.0 dB(uV)/m (Average)	

Note:

(1) The emission limits shown in the above table are based on measurements employing a CISPR QP detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000MHz.Radiated emissions limits in these three bands are based on measurements employing an average detector.

(2) At frequencies below 30MHz, measurement may be performed at a distance closer then that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$Limit_{3m}(dBuV/m) = Limit_{300m}(dBuV/m) + 40Log(300m/3m) = Limit_{300m}(dBuV/m) + 80$

$Limit_{3m}(dBuV/m) = Limit_{30m}(dBuV/m) + 40Log(30m/3m) = Limit_{30m}(dBuV/m) + 40$

(3) Limit for this EUT

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions include fundamental emission shall not exceed FCC 15.231 section (e) limit of comply with FCC 15.209 limit which permit higher emission level.

RSS-210 Issue 9 Annex D
(b)exceed 11,000 μV/m measured at 3 m with an average detector. The peak level of any emission within this specified frequency band shall not exceed 55,000 μV/m measured at 3 m; and
(c)The field strength of emissions on any frequencies outside this specified band shall not exceed the general field strength limits specified in RSS-Gen.

6.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

6.5. Test procedure

(1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber.
(2) Test antenna was located 3m from the EUT on an adjustable mast, and the antenna used as below table.

Test frequency range	Test antenna used	Test antenna distance
30MHz-1GHz	Trilog Broadband Antenna	3m

The Trilog Broadband Antenna or Horn Antenna was located 3m from EUT, Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

(3) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions:

(a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degree, the antenna height was varied from 1m to 4m(Except loop antenna, it's fixed 1m above ground.)

(b) Change work frequency or channel of device if practicable.

(c) Change modulation type of device if practicable.

(d) Change power supply range from 85% to 115% of the rated supply voltage

(e) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions.

(4) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10 2013 on Radiated Emission test.

(5) The emissions from 9kHz to 1GHz were measured based on CISPR QP detector except for the frequency bands 9-90kHz, 110-490kHz, for emissions from 9kHz-90kHz,110kHz-490kHz and above 1GHz were measured based on average detector, for emissions above 1GHz, peak emissions also be measured and need comply with Peak limit.

(6) The emissions from 9kHz to 1GHz, QP or average values were measured with EMI receiver with below RBW.

Frequency band	RBW
30MHz-1GHz	120kHz

(7) X axis, Y axis, Z axis are tested, and worse setup X axis is reported

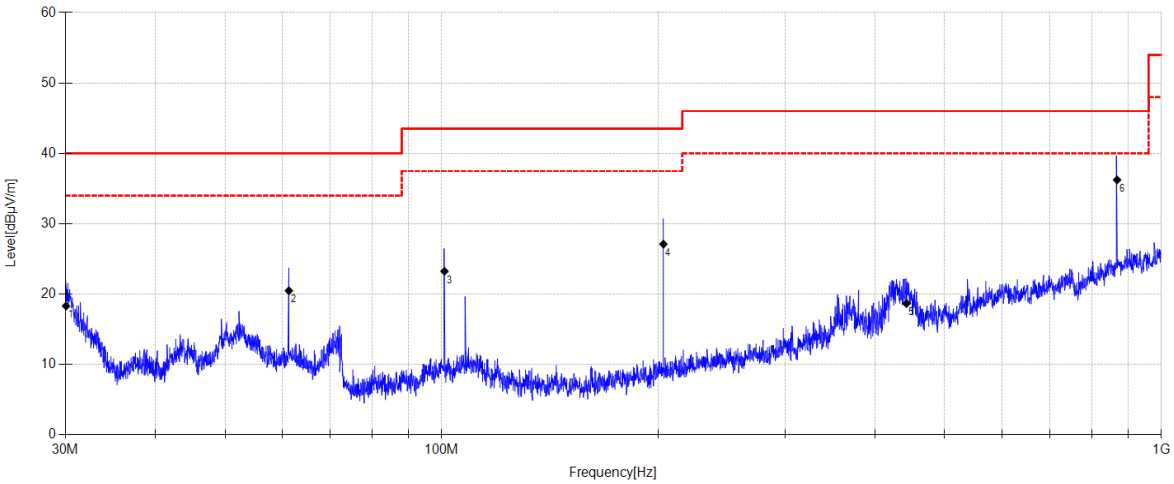
6.6. Test result

PASS. (See below detailed test result)

6.7. Test data

TR-4-E-009 Radiated Emission Test Result

Test Date:	2025-03-19	**Tested By**:	Nan Zhong
EUT:	Remote	**Model Number**:	YA2001-16
Test Mode:	TX Mode	**Power Supply**:	Battery
Condition:	Temp:24.8°C;Humi:47.2%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2025 report date\Q25030729-1E\433.92MHz\20250319-144443_H		
Memo:			



Data List									
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable Loss [dB]**	**Result [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	30.063	35.33	10.31	3.76	18.30	40.00	21.70	QP	Horizontal
2	61.338	35.06	12.54	3.97	20.47	40.00	19.53	QP	Horizontal
3	100.909	39.61	10.51	4.22	23.24	43.50	20.26	QP	Horizontal
4	203.302	42.86	10.67	4.78	27.10	43.50	16.40	QP	Horizontal
5	442.435	28.4	15.95	5.78	18.66	46.00	27.34	QP	Horizontal
6	867.937	38.6	21.23	7.12	36.23	80.82	44.59	PK	Horizontal

Data List									
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable Loss [dB]**	**Result [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
6	867.937	38.6	21.23	7.12	26.49	60.82	34.33	AV	Horizontal

Note:
1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2025-03-19	**Tested By**:	Nan Zhong
EUT:	Remote	**Model Number**:	YA2001-16
Test Mode:	TX Mode	**Power Supply**:	Battery
Condition:	Temp:24.8°C;Humi:47.2%	**Test Site**:	DDT 3# Chamber
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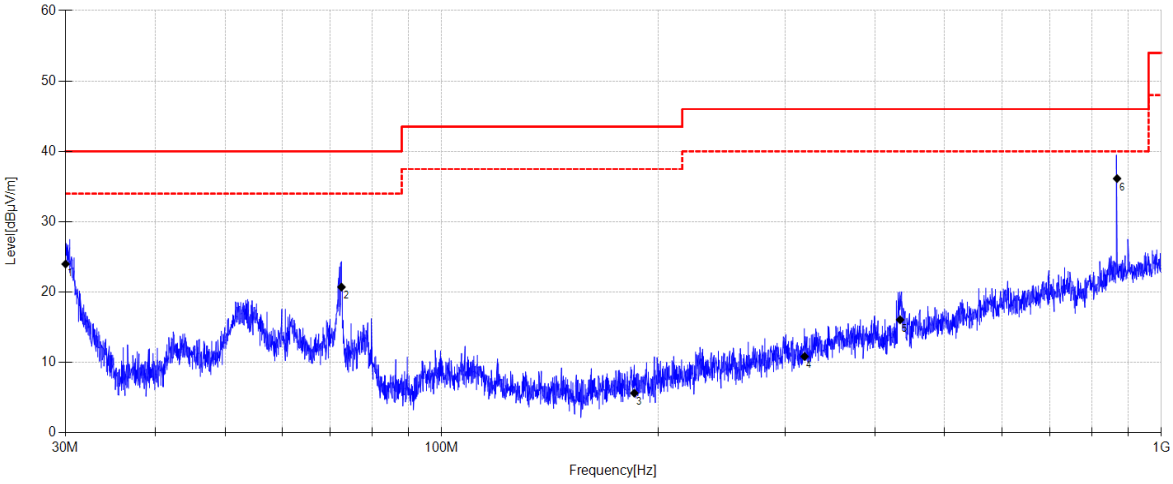
Memo:			



Data List									
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable Loss [dB]**	**Result [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	30.021	41.02	10.30	3.76	23.98	40.00	16.02	QP	Vertical
2	72.579	38.4	9.37	4.04	20.71	40.00	19.29	QP	Vertical
3	185.200	22.24	9.90	4.68	5.63	43.50	37.87	QP	Vertical
4	319.337	23.02	13.93	5.30	10.84	46.00	35.16	QP	Vertical
5	433.529	25.91	15.88	5.75	16.07	46.00	29.93	QP	Vertical
6	867.937	38.5	21.23	7.12	36.13	80.82	44.69	PK	Vertical

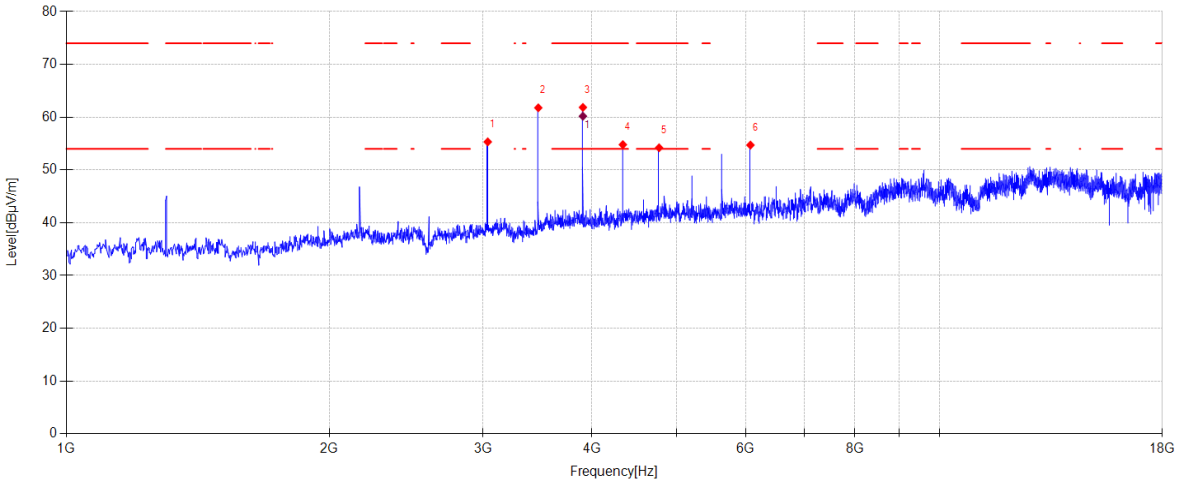
Data List									
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable Loss [dB]**	**Result [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
6	867.937	38.5	21.23	7.12	26.39	60.82	34.43	AV	Vertical

Note:
1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2025-03-19	**Tested By**:	Nan Zhong
EUT:	Remote	**Model Number**:	YA2001-16
Test Mode:	TX Mode	**Power Supply**:	Battery
Condition:	Temp:24.8°C;Humi:47.2%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2025 report date\Q25030729-1E\433.92MHz\13		
Memo:			

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3038.300	60.71	28.85	5.21	-39.45	55.32	80.82	25.5	PK	Horizontal
2	3471.800	66.63	29.56	5.14	-39.55	61.78	80.82	19.04	PK	Horizontal
3	3905.300	65.26	31.19	5.07	-39.66	61.86	80.82	18.96	PK	Horizontal
4	4338.800	57.60	31.60	5.25	-39.65	54.80	80.82	26.02	PK	Horizontal
5	4774.000	55.92	32.40	5.51	-39.62	54.21	80.82	26.61	PK	Horizontal
6	6074.500	53.97	34.25	6.20	-39.70	54.72	80.82	26.1	PK	Horizontal

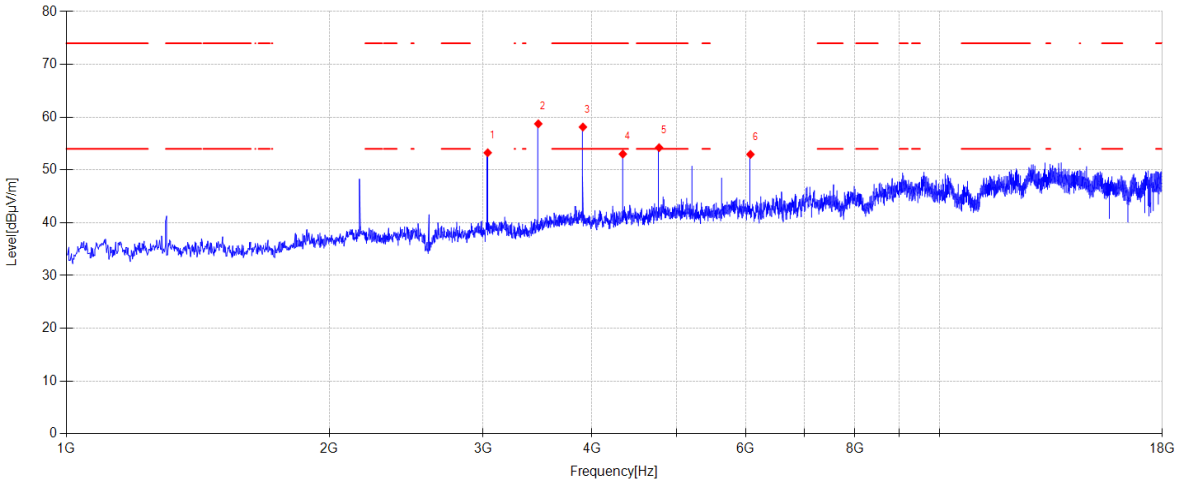
Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	3038.300	60.71	28.85	5.21	-39.45	45.58	60.82	15.24	AV	Horizontal
2	3471.800	66.63	29.56	5.14	-39.55	52.04	60.82	8.78	AV	Horizontal
3	3905.300	65.26	31.19	5.07	-39.66	52.12	60.82	8.70	AV	Horizontal
4	4338.800	57.60	31.60	5.25	-39.65	45.06	60.82	15.76	AV	Horizontal
5	4774.000	55.92	32.40	5.51	-39.62	44.47	60.82	16.35	AV	Horizontal
6	6074.500	53.97	34.25	6.20	-39.70	44.98	60.82	15.84	AV	Horizontal

Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2025-03-19	**Tested By**:	Nan Zhong
EUT:	Remote	**Model Number**:	YA2001-16
Test Mode:	TX Mode	**Power Supply**:	Battery
Condition:	Temp:24.8°C;Humi:47.2%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2025 report date\Q25030729-1E\433.92MHz\14		
Memo:			

Test Graph



Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable loss [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	3038.300	58.65	28.85	5.21	-39.45	53.26	80.82	27.56	PK	Vertical
2	3471.800	63.59	29.56	5.14	-39.55	58.74	80.82	22.08	PK	Vertical
3	3905.300	61.54	31.19	5.07	-39.66	58.14	80.82	22.68	PK	Vertical
4	4338.800	55.82	31.60	5.25	-39.65	53.02	80.82	27.80	PK	Vertical
5	4774.000	55.94	32.40	5.51	-39.62	54.23	80.82	26.59	PK	Vertical
6	6074.500	52.20	34.25	6.20	-39.70	52.95	80.82	27.87	PK	Vertical

Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable loss [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	3038.300	58.65	28.85	5.21	-39.45	43.52	60.82	17.30	AV	Vertical
2	3471.800	63.59	29.56	5.14	-39.55	49.00	60.82	11.82	AV	Vertical
3	3905.300	61.54	31.19	5.07	-39.66	48.40	60.82	12.42	AV	Vertical
4	4338.800	55.82	31.60	5.25	-39.65	43.28	60.82	17.54	AV	Vertical
5	4774.000	55.94	32.40	5.51	-39.62	44.49	60.82	16.33	AV	Vertical
6	6074.500	52.20	34.25	6.20	-39.70	43.21	60.82	17.61	AV	Vertical

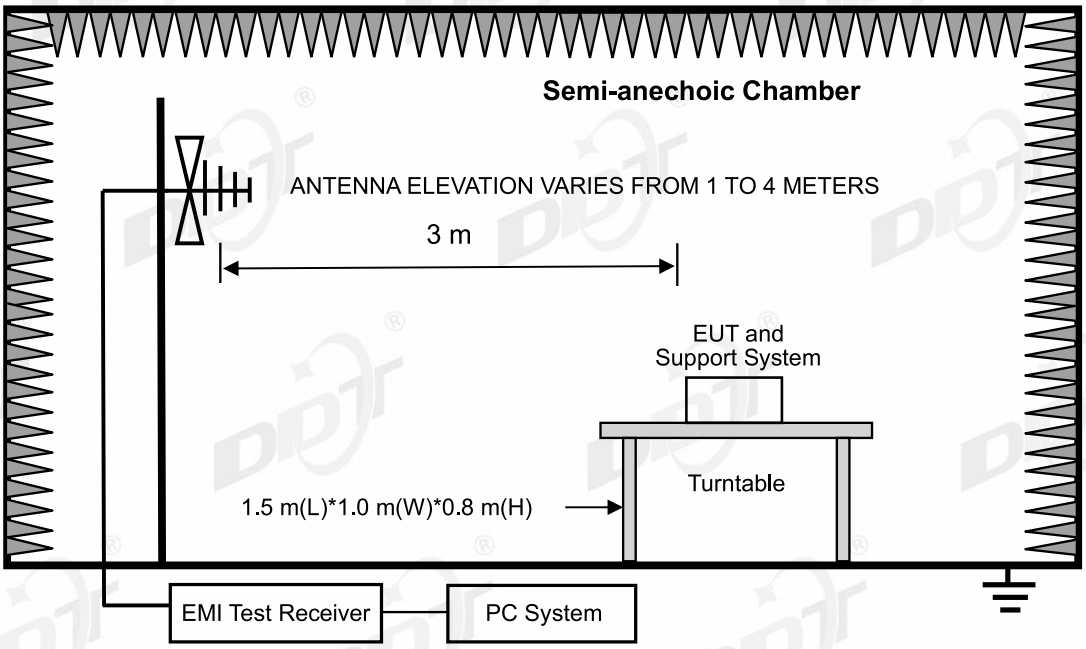
Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

7. Field Strength Of The Fundamental Signal

7.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To
RF cable	Zhongke Junchuang	JCT26S-NJ-NJ-1.5M	DDT-ZC02762	2025/03/31
EMI TEST RECEIVER	R&S	ESU26	DDT-ZC01909	2025/03/31
High Pass filter	Xi'an Xingbo	XBLBQ-GTA67	DDT-ZC02179	2025/04/22
Active Loop Antenna	Schwarzbeck	FMZB1519	DDT-ZC00524	2025/09/11
Hochgewinn-Hornantenne	SCHWARZBECK	BBHA 9120 D	DDT-ZC02129	2025/09/18
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	DDT-ZC02050	2025/07/11
RF cable	Yuhu Technology	JCTB810-NJ-NJ-9M	DDT-ZC02538	2025/03/31
Micro-Tronics filters	REBES	BRM50716	DDT-ZC03240	/
RF Cable	N/A	W13.02 AP1-X2	DDT-ZC04023	2025/03/31
PSA Series Spectrum Analyzer	Agilent	E4447A	DDT-ZC00517	2025/03/31
RF Cable	N/A	W24.02 HL-562	DDT-ZC04022	2025/03/31
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	DDT-ZC00506	2025/04/26
High pass filter	Micro-Tronics	HPM50102	DDT-ZC00561	2025/04/22
Pre-amplifier	COM-POWER	PAM-840A	DDT-ZC01693	2025/03/31
Micro-Tronics filters	REBES	BRM50702	DDT-ZC03242	/
RF cable	Yuhu Technology	ZT26S-SMAJ-SMAJ-1M	DDT-ZC02037	2025/03/31
Pre-amplifier	COM-POWER	PAM-118A	DDT-ZC01293	2025/08/25
High pass filter	Micro-Tronics	HPM50108	DDT-ZC00560	2025/04/22

7.2. Block diagram of test setup



7.3. Limits

(3) FCC 15.231 section (a) limit

Fundamental Frequency (MHz)	Field Strength of Fundamental
433.92	AV: 80.83 dBuV/m @3m PK: 100.83dBuV/m @3m

7.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

7.5. Test procedure

(1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber.

(2) Test antenna was located 3m from the EUT on an adjustable mast, and the antenna used as below table.

Test frequency range	Test antenna used	Test antenna distance
30MHz-1GHz	Trilog Broadband Antenna	3m

The Trilog Broadband Antenna or Horn Antenna was located 3m from EUT, Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

(3) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions:

(a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degree, the antenna height was varied from 1m to 4m(Except loop antenna, it's fixed 1m above ground.)

(b) Change work frequency or channel of device if practicable.

(c) Change modulation type of device if practicable.

(d) Change power supply range from 85% to 115% of the rated supply voltage

(e) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions.

(4) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10 2013 on Radiated Emission test.

(5) The emissions from 9kHz to 1GHz were measured based on CISPR QP detector except for the frequency bands 9-90kHz, 110-490kHz, for emissions from 9kHz-90kHz,110kHz-490kHz and above 1GHz were measured based on average detector, for emissions above 1GHz, peak emissions also be measured and need comply with Peak limit.

(6) The emissions from 9kHz to 1GHz, QP or average values were measured with EMI receiver with below RBW.

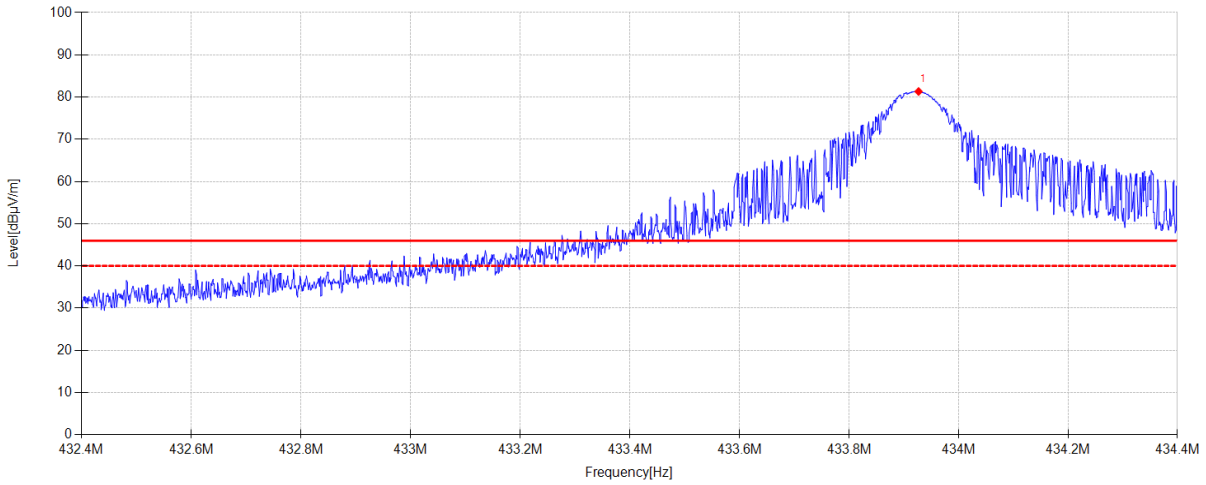
Frequency band	RBW
30MHz-1GHz	120kHz

(7) X axis, Y axis, Z axis are tested, and worse setup X axis is reported.

7.6. Test result

TR-4-E-009 Radiated Emission Test Result

Test Date:	2025-03-19	**Tested By**:	Nan Zhong
EUT:	Remote	**Model Number**:	YA2001-16
Test Mode:	TX Mode	**Power Supply**:	Battery
Condition:	Temp:24.8°C;Humi:47.2%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2025 report date\Q25030729-1E\433.92MHz\20250319-144623_H		
Memo:			



Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable loss [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	433.927	91.13	15.91	5.75	-31.47	81.32	100.82	19.5	PK	Horizontal
1	433.927	91.13	15.91	5.75	-31.47	71.58	80.82	9.24	AV	Horizontal

Note:
1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2025-03-19	**Tested By**:	Nan Zhong
EUT:	Remote	**Model Number**:	YA2001-16
Test Mode:	TX Mode	**Power Supply**:	Battery
Condition:	Temp:24.8°C;Humi:47.2%	**Test Site**:	DDT 3# Chamber
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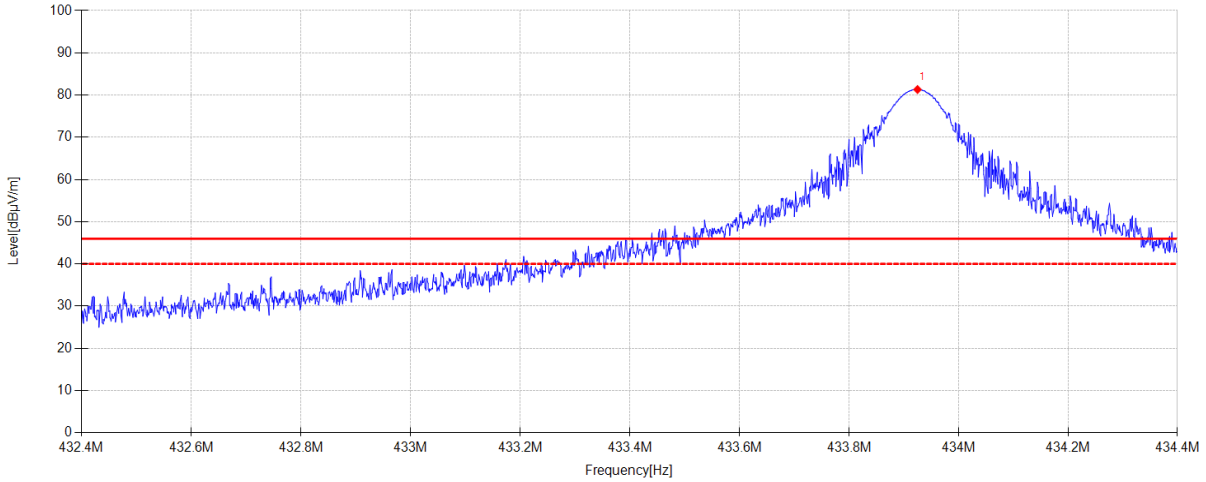


Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable loss [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	433.925	91.13	15.91	5.75	-31.47	81.32	100.82	19.5	PK	Vertical
1	433.925	91.13	15.91	5.75	-31.47	71.58	80.82	9.24	AV	Vertical

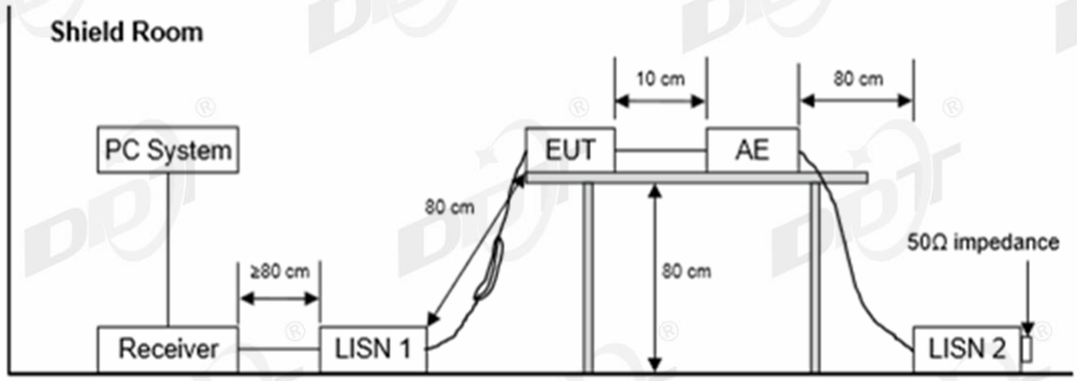
Note:
1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

8. Power Line Conducted Emissions

8.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To
RF Cable	Yuhu Technology	Z806-NJ-NJ-6M	DDT-ZC02004	2025/07/08
Δ-shaped artificial power network	SCHWARZBECK	PVDC 8301	DDT-ZC03939	2025/03/31
Two Line V-Network	R&S	ENV216	DDT-ZC02059	2025/07/08
Condected Radiated Software	Audix	E3	DDT-ZC00562	/
Three-phase artificial power network	SCHWARZBECK	NSLK 8163	DDT-ZC01572	2025/07/08
Two Line V-Network	R&S	ENV216	DDT-ZC02056	2025/07/08
EMI Test Receiver	R&S	ESCI/E3	DDT-ZC01297	2025/07/08
Pulse Limiter	SCHWARZBECK	VTSD 9561	DDT-ZC02128	2025/07/08

8.2. Block diagram of test setup



8.3. Limits

Frequency	Quasi-Peak Level dB(uV)	Average Level dB(uV)
150 kHz~500 kHz	66 ~ 56*	56 ~ 46*
500 kHz~5 MHz	56	46
5 MHz~30 MHz	60	50

Note 1: * Decreasing linearly with logarithm of frequency.

Note 2: The lower limit shall apply at the transition frequencies.

8.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

8.5. Test procedure

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80cm above the ground plane.

All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30 MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

The test mode(s) described in clause 2.4 were scanned during the preliminary test.

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.

A scan was taken on both power lines, Neutral and Line, recording at least the six highest emissions.

Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

The test data of the worst-case condition(s) was recorded.
The bandwidth of test receiver is set at 9 kHz.

8.6. Test result

N/A

Measurements to demonstrate compliance with the conducted limits are not required for devices which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines.

9. Antenna Requirement

9.1. Limit

For intentional device, according to FCC 47 CFR Section 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. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For intentional device, according to RSS-Gen issue 5 section 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.

9.2. Result

The antenna used for this product as Antenna information described in section 2.1 of the report, and there is no other antenna than that furnished by the responsible party shall be used with the device.

11. Photos of the EUT

Please refer to DDT-Q25030727-1E appendix I

----------End Report----------