

Test report No:
2530770R.704

FCC TEST REPORT

Product Name	Smart Controller
Trademark	N/A
Model and /or type reference	GS-ONE-TS
FCC ID	2BP4Q-GS-ONE-TS
Applicant's name / address	Aerora North America, Inc. 2570 N. First St, Suite 200 San Jose, CA 95131
Test method requested, standard	47 CFR FCC Part 15 (Section 15.247) ANSI C63.10: 2020
Verdict Summary	IN COMPLIANCE
Documented by (name / position & signature)	Tim Cao / Project Manager 
Approved by (name / position & signature)	Frank He / Technical Manager 
Date of issue	2025-09-08
Report Version	V1.0
Report template No	Template_FCC Part 15C-RF-V1.0

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COMPETENCES AND GUARANTEES

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

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The results presented in this Test Report apply only to the particular item under test established in this document.

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GENERAL CONDITIONS

Test Location	No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
Date (receive sample)	Mar. 25, 2025
Date (start test)	Apr. 05, 2025
Date (finish test)	May. 30, 2025

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.

ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

Ambient temperature	15 °C – 35 °C
Relative Humidity air	30% - 60%

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

POSSIBLE TEST CASE VERDICTS

Test case does not apply to test object	N/A
Test object does meet requirement	P (Pass) / PASS
Test object does not meet requirement	F (Fail) / FAIL
Not measured	N/M

ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

EUT	: Equipment Under Test
QP	: Quasi-Peak
CAV	: CISPR Average
AV	: Average
CDN	: Coupling Decoupling Network
SAC	: Semi-Anechoic Chamber
OATS	: Open Area Test Site
BW	: Bandwidth
AM	: Amplitude Modulation
PM	: Pulse Modulation
HCP	: Horizontal Coupling Plane
VCP	: Vertical Coupling Plane
U_N	: Nominal voltage
Tx	: Transmitter
Rx	: Receiver
N/A	: Not Applicable
N/M	: Not Measured

DOCUMENT HISTORY

Report No.	Version	Description	Issued Date
2530770R.704	V1.0	Initial issue of report.	2025-09-08

REMARKS AND COMMENTS

1. The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).
2. This report is a limited report on the installation of a test module in a Smart Controller, and the customer declares that the RF parameters of the module installed in the host computer are exactly the same as those of the certified module. We verified the RF output power and radiated emissions of the equipment. For other test data, please refer to FCC ID: 2AQVB-DN2458A. These test results on a sample of the device are for the purpose of demonstrating Compliance with 47 CFR FCC Part 15 (Section 15.247).
3. The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to account the uncertainty associated with the measurement result.
4. The test results presented in this report relate only to the object tested.
5. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
6. This report will not be used for social proof function in China market.
7. DEKRA declines any responsibility with the following test data provided by customer that may affect the validity of result:

- Chapter 1 General Information;

USED EQUIPMENT

AC Power Line Conducted Emission / TR1

Instrument	Manufacturer	Model No.	Serial No.	Next Cal. Date
EMI Test Receiver	R&S	ESCI	100726	2026.05.17
Two-Line V-Network	R&S	ENV216	101044	2025.10.25
Current Probe	R&S	EZ-17	100678	2025.10.18
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	2026.03.15
50ohm Termination	Xinghu	N/A	N/A	2026.01.10
Temperature/Humidity Meter	RTS	RTS-1909	THM-012	2026.04.29
Coaxial Cable	Suhner	RG 223	TR1-C1	2026.03.15
Dekra test software	Dekra	N/A	N/A	N/A

Conducted Test / TR8

Instrument	Manufacturer	Model No.	Serial No.	Next Cal. Date
Wireless Connectivity Tester	R&S	CMW 270	102593	2026.05.09
Coaxial Cable	N/A	N/A	2477	2025.06.10
Coaxial Cable	N/A	N/A	2478	2025.06.10
High and low temperature and fast temperature change test box	ASTUOD	ASTD-FBT-225K	N/A	2026.03.14
Temperature/Humidity Meter	RTS	RTS-8S	N/A	2025.07.10
Power Meter	Anritsu	MA2411B	1339267	2025.08.23
MAX Signal Analyzer	Keysight	N9010A	THM-032	2025.10.25
RF Control Unit	Tonscend	JS0806-2	MY48030494	2026.01.25
MXG-B RF Vector Signal Generator	Keysight	N5182B	22G8060594	2026.03.22
Frequency extender for EXG or MXG	Keysight	N5182BX07	MY61252529	2026.03.22
EXG-B MW Analog Signal Generator	Keysight	N5173B	MY59362500	2025.07.05
Test Software	Tonscend	TS1120	MY61252566	N/A

Radiated Emission(9KHz-1GHz) / AC2

Instrument	Manufacturer	Model No.	Serial No.	Next Cal. Date
EMI Test Receiver	R&S	ESCI	100573	2026.01.10
Loop Antenna	R&S	HFH2-Z2E	101149	2026.04.15
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2026.03.23
Temperature/Humidity Meter	RTS	RTS-1909	THM-021	2026.04.29
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2026.03.15
Dekra test software	Dekra	N/A	N/A	N/A

Radiated Emission Band Edge / AC6

Instrument	Manufacturer	Model No.	Serial No.	Next Cal. Date
Anechoic chamber	Quietek	9m*5.5m*5.5m	AC6	2029.06.29
Signal Analyzer	Agilent	N9010A	MY55370495	2025.10.18

Loop Antenna	R&S	HFH2-Z2E	101149	2026.04.15
DRG Horn Antenna	RFSPIN	DRH18-E	CE2C07A18EN	2025.12.06
Broad-Band Horn Antenna	SCHWARZBECK	BBHA 9170	750	2025.11.23
Pre-Amplifier	Schwarzbeck	BBV 9721	'00114	2026.05.16
TRILOG Broadband Antenna	SCHWARZBECK	VULB 9168	1231	2026.05.27
Temperature/Humidity Meter	RTS	RTS-8S	RF07	2026.06.16
Temperature/Humidity Meter	RTS	RTS-8S	RF04	2026.06.16
Pre-amplifier	Tonscend	TAP01008028	806JSAP041204251019	2026.05.16
Pre-amplifier	Tonscend	TAP01018048S	806JSAP040204251009	2026.05.16
Wideband Radio Communication Tester	R&S	CMW 500	170870	2026.05.09
Test Software	Tonscend	JS36	JS36-RSE	N/A

AC Power Line Conducted Emission / TR1

Instrument	Manufacturer	Model No.	Serial No.	Firmware Version	Software version
EMI Test Receiver	R&S	ESCI	100726	4.42 SP3	N/A
Dekra test software	Dekra	N/A	N/A	N/A	3

Conducted Test / TR8

Instrument	Manufacturer	Model No.	Serial No.	Firmware Version	Software version
Wireless Connectivity Tester	R&S	CMW 270	102593	V 4.0.60	N/A
MAX Signal Analyzer	Keysight	N9010A	MY48030494	A.14.03	N/A
MXG-B RF Vector Signal Generator	Keysight	N5182B	MY61252529	B.01.96	N/A
EXG-B MW Analog Signal Generator	Keysight	N5173B	MY61252566	B.01.95	N/A
Test Software	Tonscend	TS1120	JS1120-3	N/A	V3.0.22

Radiated Emission(9KHz-1GHz) / AC2

Instrument	Manufacturer	Model No.	Serial No.	Firmware Version	Software version
EMI Test Receiver	R&S	ESCI	100573	4.42 SP2	N/A
Dekra test software	Dekra	N/A	N/A	N/A	3

Radiated Emission Band Edge / AC6

Instrument	Manufacturer	Model No.	Serial No.	Firmware Version	Software version
Signal Analyzer	Agilent	N9010A	MY55370495	A.18.17	N/A
Wideband Radio Communication Tester	R&S	CMW 500	170870	X 4.0.62.11	N/A
Dekra test software	Dekra	N/A	N/A	N/A	5.0.0

UNCERTAINTY

Uncertainties have been calculated according to the DEKRA internal document. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95% .

Test item Test Location	Uncertainty
AC Power Line Conducted Emission	9kHz~150kHz: 2.8 dB 150kHz~30MHz: 2.4 dB
Peak Power Output	± 1.3 dB
Radiated Emission(30MHz~1GHz)	Horizontal: 30MHz~300MHz: 3.5 dB, 300MHz~1GHz: 3.6 dB Vertical: 30MHz~300MHz: 3.6 dB, 300MHz~1GHz: 3.5 dB
Radiated Emission(1GHz~40GHz)	Horizontal: 1GHz~40GHz: 5.0 dB Vertical: 1GHz~40GHz: 4.8 dB
RF antenna conducted test	± 1.3 dB
Radiated Emission Band Edge	± 5.0 dB
DTS Bandwidth	± 1.0 kHz
Occupied Bandwidth	± 1.0 kHz
Power Density	± 1.3 dB

1 GENERAL INFORMATION

Product Name	Smart Controller
Trademark	N/A
Model No.	GS-ONE-TS
FCC ID.....	2BP4Q-GS-ONE-TS
Hardware Version.....	V1.3
Software Version	T05
Operating Temperature	-40°C ~ 70°C
Power Supply	DC 7.4 V, 3 A 22.2 W from internal rechargeable battery which can be charged by AC/DC adapter.
Manufacturer	Aerora North America, Inc.
Manufacturer address	2570 N. First St, Suite 200 San Jose, CA 95131
Factory.....	ROTOTEK VIETNAM CO., LTD
Factory address.....	House S4_2nd floor, Hap Linh Industrial Park, Bac Ninh City, Vietnam
Wireless specification.....	SRD 2.4G
Operating frequency range(s) :	2417~2477MHz
Type of Modulation	OFDM
Data Rate	2.08 Mbps ~ 6.57 Mbps
Number of channels	3
Antenna Type	Dipole
Antenna Gain	2.80 dBi

Remark:

As above information is provided and confirmed by the applicant. DEKRA is not liable to the accuracy, suitability, reliability or/and integrity of the information.

2 DESCRIPTION OF TEST SETUP

Auxiliary equipment	Type / Version	Manufacturer	Supplied by
(1) N/A	N/A	N/A	N/A
(2) N/A	N/A	N/A	N/A
(3) N/A	N/A	N/A	N/A
software	Type / Version	Manufacturer	Supplied by
QRCT	N/A	N/A	N/A

3 VERDICT SUMMARY SECTION

This chapter presents an overview of standards and results. Refer to the next chapters for details of measured test results and applied test levels.

3.1 Standards

Standard	Year	Description
CFR 47, FCC Part 15 C	2024	Operation within the bands 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz.
ANSI C63.10	2020	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

3.2 Deviation(s) from the Standard(s) / Test Specification(s)

The following deviation(s) was / were made from the published requirements of the listed standards: N/A.
(Please define the deviations from the standard(s) if applicable)

3.3 Overview of results

Test Item	FCC Rule No.	Test Method	Result
Antenna Requirement	15.203/15.247(b)	--	PASS ¹⁾
AC Power Line Conducted Emission	15.207	ANSI C63.10 2013 Section 6.2	PASS
Duty Cycle	--	--	PASS ¹⁾
Conducted Output Power	15.247 (b)(3)	ANSI C63.10 2013 Section 11.9.2.3	PASS
DTS (6 dB) Bandwidth	15.247 (a)(2)	ANSI C63.10 2013 Section 11.8	PASS ¹⁾
Power Spectral Density	15.247 (e)	ANSI C63.10 2013 Section 11.10.2	PASS ¹⁾
Band-Edge	15.247(d)	ANSI C63.10 2013 Section 11.11	PASS
RF Conducted Spurious Emissions	15.247(d)	ANSI C63.10 2013 Section 11.11	PASS ¹⁾
Radiated Spurious Emissions	15.247(d);15.205/15.209	ANSI C63.10 2013 Section 11.12	PASS
Restricted bands around fundamental frequency (Radiated Emission)	15.247(d);15.205/15.209	ANSI C63.10 2013 Section 11.12	PASS ¹⁾

Supplementary information:

- 1) Only the Conducted Output Power and Band-Edge and Radiated Spurious were fully tested. These items please refer to the Wi-Fi 2.4G Module report 2412TW0122-U1. The FCC ID is 2AQVB-DN2458A has been certified, and the test report issued by MRT Technology (Taiwan) Co., Ltd. on 01/21/2025.

Requirement – Test Item	Remark
Conducted Output Power	Test data please refer to Appendix A
Band edge measurements	Test data please refer to Appendix B
Emissions in Restricted Bands	Test data please refer to Appendix C
AC Power Line Conducted Emission	Test data please refer to Appendix D

3.4 Test Facility

Tset Location : FCC Designation Number: CN1199

4 TEST ITEMS OF LIMIT/SETUP/PROCEDURE

4.1 Conducted Output Power

VERDICT: PASS

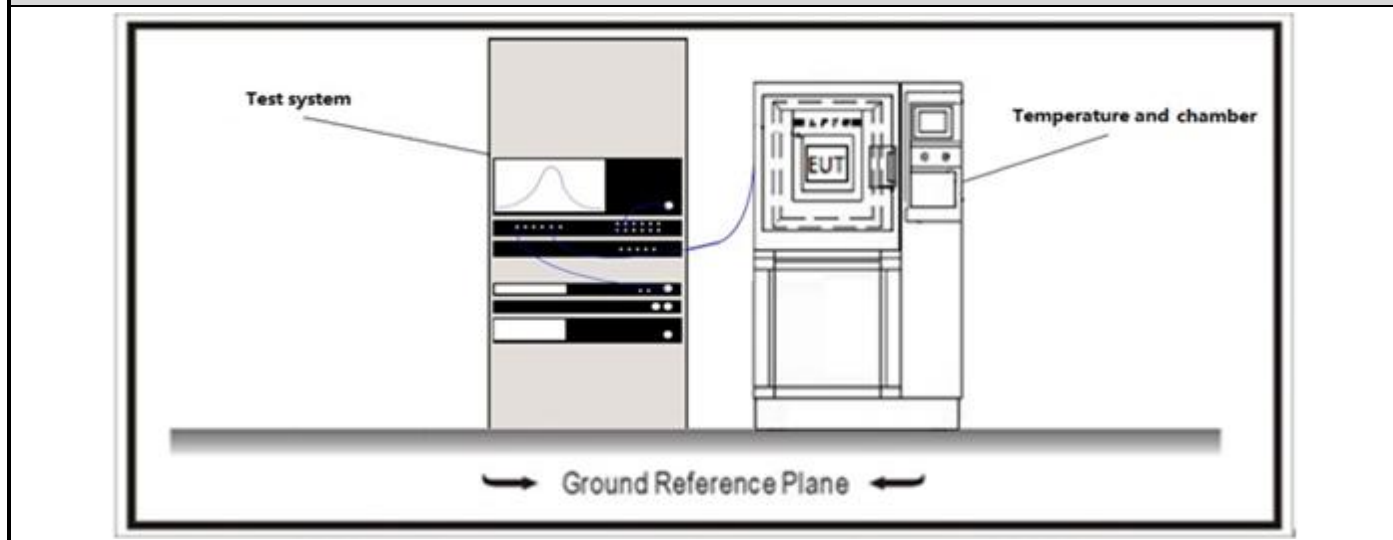
4.1.1 Limit

Standard		FCC Part 15 Subpart C Paragraph 15.247 (b)(3);
☒	GTX <6dBi	Pout≤30dBm
☐	GTX >6dBi	
☐	Non-Fix point-point	Pout≤30-(GTX -6)
☐	Fix point-point	Pout≤30-[(GTX-6)]/3
☐	Point-to-multipoint	Pout≤30-(GTX-6)
☐	Overlap Beams	Pout≤30-[(GTX-6)]/3
☐	Aggregate power transmitted simultaneously on all beams	Pout≤30-[(GTX-6)]/3
☐	single directional beam	Pout≤30-[(GTX-6)]/3+8dB

Note 1 : GTX directional gain of transmitting antennas.

Note 2 : Pout is maximum peak conducted output power .

4.1.2 Test Setup



4.1.3 Test Procedure

	References Rule			Chapter	Description		
☒	ANSI C63.10			11.9	Fundamental emission output power		
	☐	ANSI C63.10			11.9.1	Maximum peak conducted output power	
		☐	ANSI C63.10	11.9.1.1	RBW ≥ DTS bandwidth		
		☐	ANSI C63.10	11.9.1.2	Integrated band power method		
		☐	ANSI C63.10	11.9.1.3	PKPM1 Peak power meter method		
	☒	ANSI C63.10			11.9.2	Maximum conducted (average) output power	
		☐	ANSI C63.10			11.9.2.2	Measurement using a spectrum analyzer (SA)
			☐	ANSI C63.10	11.9.2.2.2	Method AVGSA-1(Duty cycle ≥98%)	
			☐	ANSI C63.10	11.9.2.2.3	Method AVGSA-1A(Duty cycle ≥98%)	
			☐	ANSI C63.10	11.9.2.2.4	Method AVGSA-2(Duty cycle ≤98%)	
			☐	ANSI C63.10	11.9.2.2.5	Method AVGSA-2A(Duty cycle ≤98%)	
			☐	ANSI C63.10	11.9.2.2.4	Method AVGSA-3	
			☐	ANSI C63.10	11.9.2.2.5	Method AVGSA-3A	
		☒	ANSI C63.10			11.9.2.3	Measurement using a power meter (PM)
			☒	ANSI C63.10	11.9.2.3.1	Method AVGPM	
			☐	ANSI C63.10	11.9.2.3.2	Method AVGPM-G	

4.2 Band Edge Measurements

VERDICT: PASS

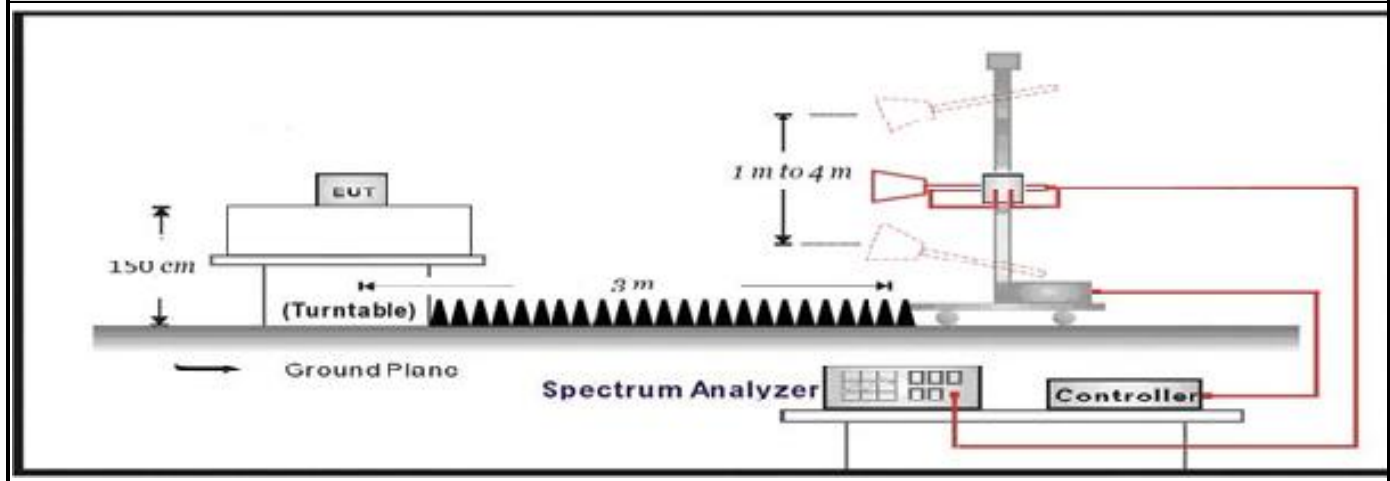
4.2.1 Limit

Standard		FCC Part 15 Subpart C Paragraph 15.247(d) , 15.209;		
Frequency bands (MHz)	Detector	Limit (dB μ V/m)	RBW (MHz)	Distance (m)
2310-2390	PK	74	1	3
2483.5-2500	AV	54	1	3

Note: The field strength of emissions appearing within these frequency bands shall not exceed the limits.

4.2.2 Test Setup

Above 1GHz Test Setup:



4.2.3 Test Procedure

	References Rule	Chapter	Description
☒	ANSI C63.10	6.10	Band-edge testing
	☒ ANSI C63.10	6.10.5	Restricted-band band-edge measurements
	☐ ANSI C63.10	6.10.6	Marker-delta method
☒	ANSI C63.10	11.12	Emissions in restricted frequency bands
	☒ ANSI C63.10	11.12.1	Radiated emission measurements
	☒ ANSI C63.10	11.12.2.7	Radiated spurious emission test
☐	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
☐	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
☒	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

4.3 Emissions in Restricted Bands**VERDICT: PASS****4.3.1 Limit****Standard** FCC Part 15 Subpart C Paragraph 15.205

Restricted Bands of operation

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
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
4.17725 – 4.17775	37.5 – 38.25	1435 – 1626.5	9.0 – 9.2
4.20725 – 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
8.81425 – 8.81475	162.0125 – 167.17	3260 – 3267	23.6 – 24.0
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	
13.36 – 13.41			

Restricted Band Emissions Limit

FCC Part 15 Subpart C Paragraph 15.209

Frequency (MHz)	Field strength (μV/m)	Field strength (dBμV/m)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 – 13.8	300 _(Note 1)
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30 _(Note 1)
1.705 - 30	30	29.5	30 _(Note 1)
30 - 88	100	40	3 _(Note 2)
88 - 216	150	43.5	3 _(Note 2)
216 - 960	200	46	3 _(Note 2)
Above 960	500	54	3 _(Note 2)

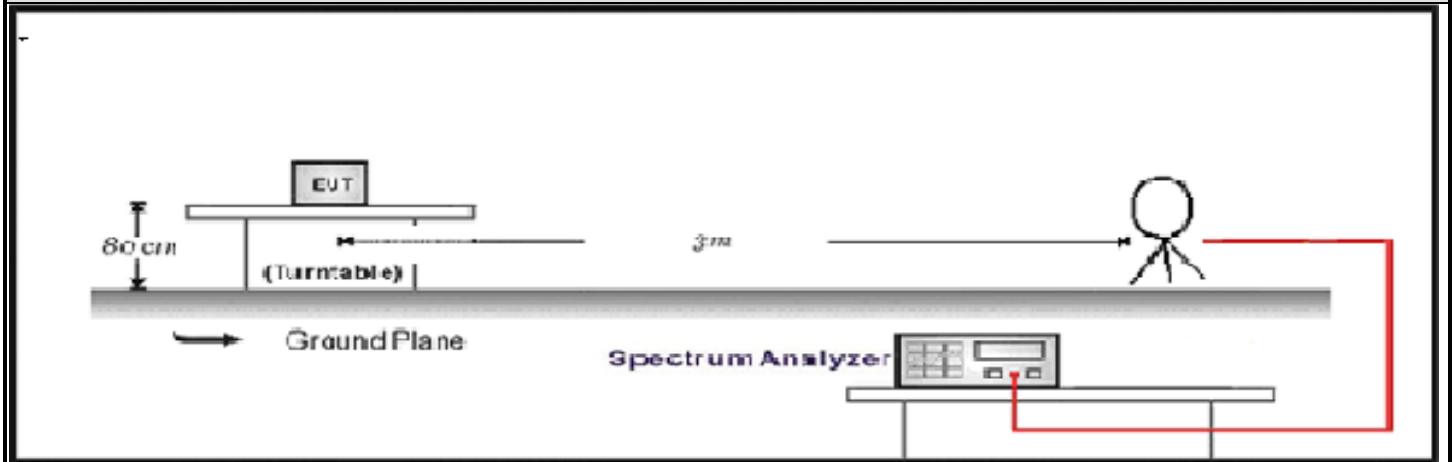
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment.

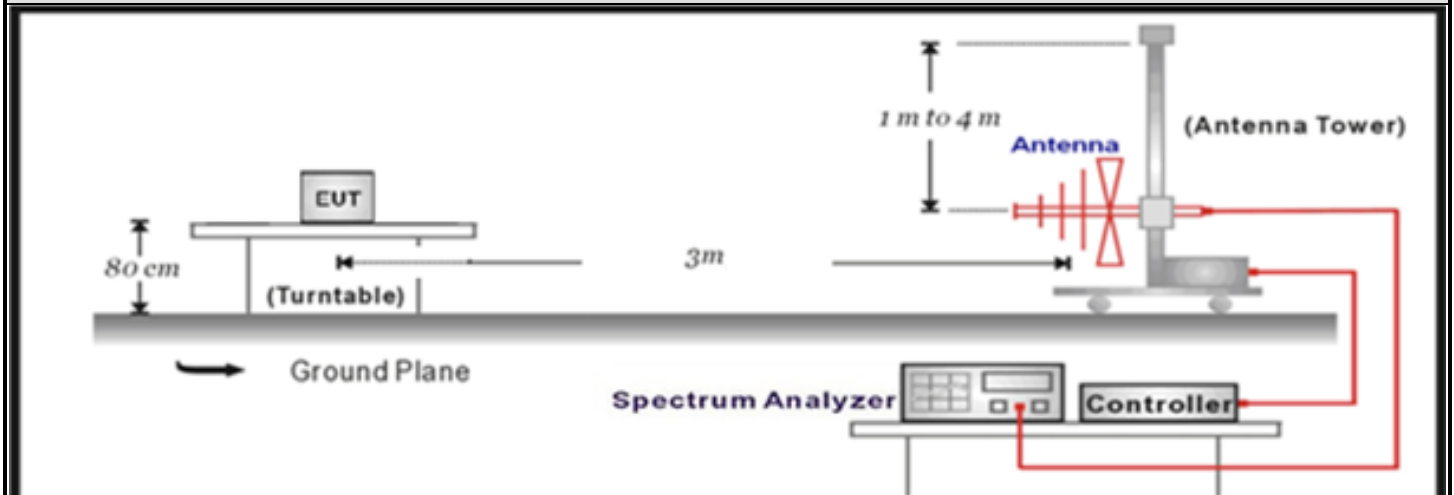
Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

4.3.2 Test Setup

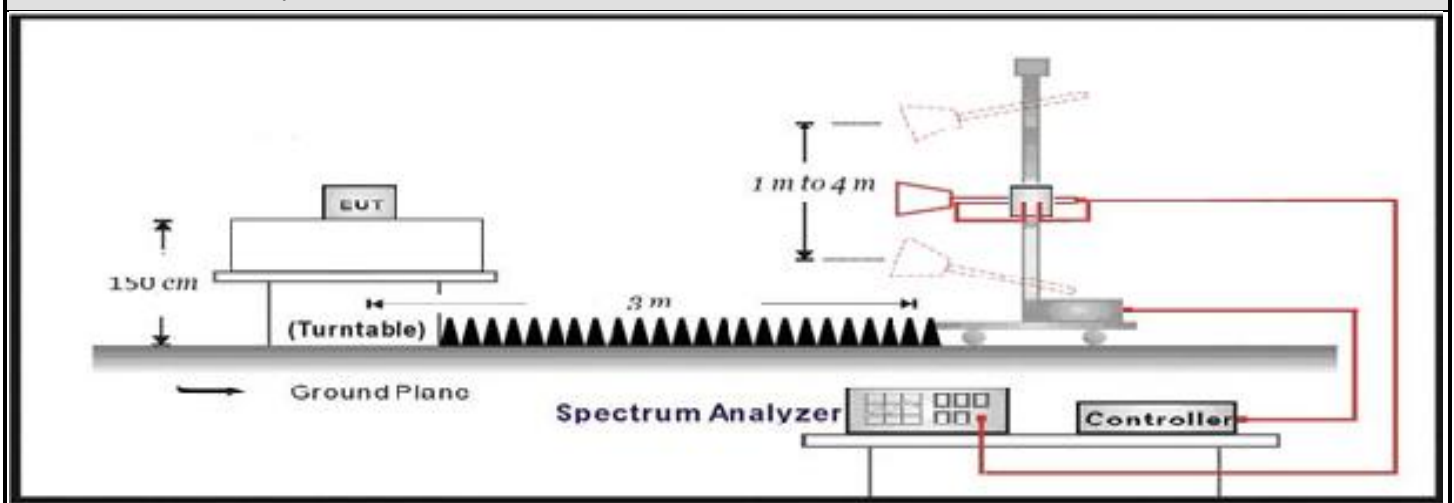
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



4.3.3 Test Procedure

	References Rule		Chapter	Description
☒	ANSI C63.10		11.12	Emissions in restricted frequency bands
	☒	ANSI C63.10	11.12.1	Radiated emission measurements
	☒	ANSI C63.10	11.12.2.7	Radiated spurious emission test
	☒	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
	☒	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
	☒	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

4.4 AC Power Line Conducted Emission

VERDICT: PASS

4.4.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.207 ;	
Frequency range [MHz]	Limit: QP [dB(μV) ¹⁾]	Limit: AV [dB(μV) ¹⁾]
0,15 - 0,50	66 – 56 ²⁾	56 - 46 ²⁾
0,50 - 5,0	56	46
5,0 - 30	60	50

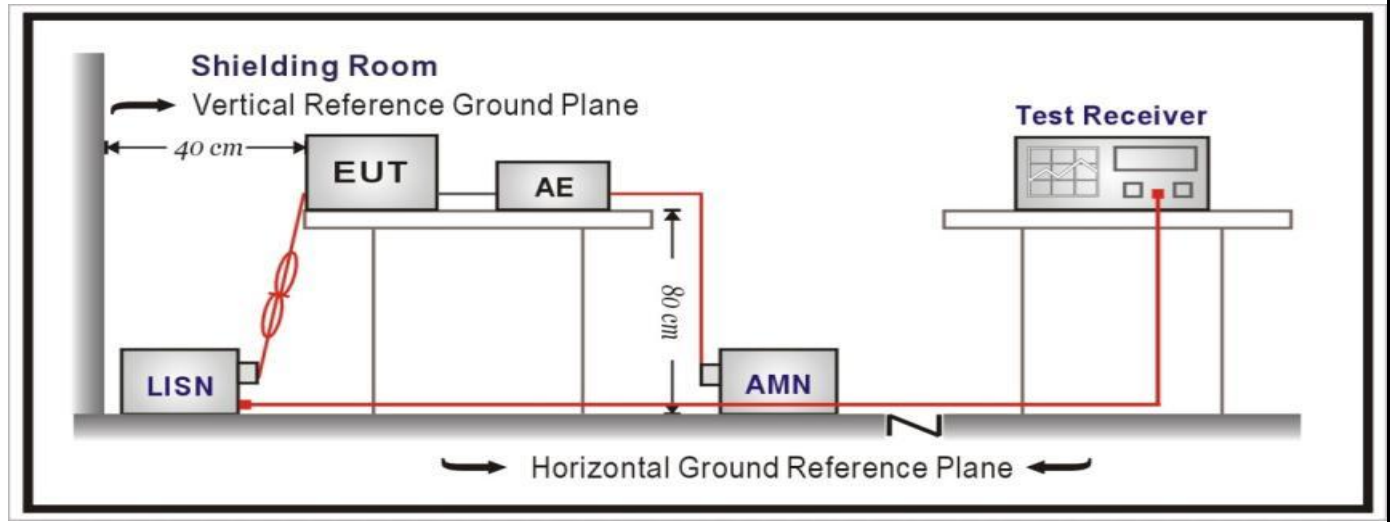
¹⁾ At the transition frequency, the lower limit applies.

²⁾ The limit decreases linearly with the logarithm of the frequency.

NOTE 1: The exclusion band for transmitters shall be considered for transmitters operating at frequencies below 30 MHz.

NOTE 2: Where the AC output port is directly connected (or via a circuit breaker) to the AC power input port of the EUT the AC power output port need not to be tested.

4.4.2 Test Setup



4.4.3 Test Procedure

	References Rule	Chapter	Item
☒	ANSI C63.10	6.2	Standard test method for ac power-line conducted emissions from unlicensed wireless devices

5 TEST SETUP PHOTO AND EUT PHOTO

Remark: The test setup photo and EUT Photo please see appendix.

6 TEST RESULT

Appendix A: Conducted output power

Test Mode	Frequency (MHz)	Average Power (dBm)		Limit [dBm]	Verdict
		Ant 1	Ant 2		
SRD 2.4G	2412	24.76	24.26	≤ 30	PASS
	2444	24.98	24.32	≤ 30	PASS
	2470	20.01	19.66	≤ 30	PASS

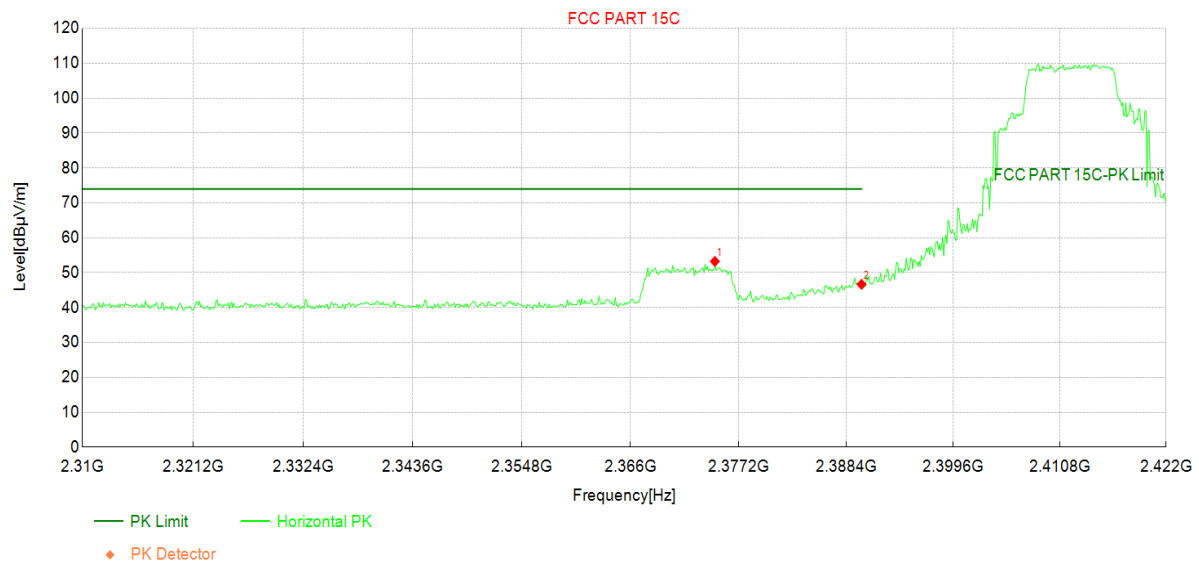
Appendix B: Band edge measurements

Test Report

Project Information

Profile:	2530770R	EUT:	Smart Controller
Mode:	Mode1:Transmit at 2412MHz by SRD	Voltage:	120 Vac / 60 Hz
Environment:	Temp: 25℃; Humi:60%	Engineer	Reyn Chen
Test Standard:	FCC PART 15C		

Test Graph



Suspected Data List

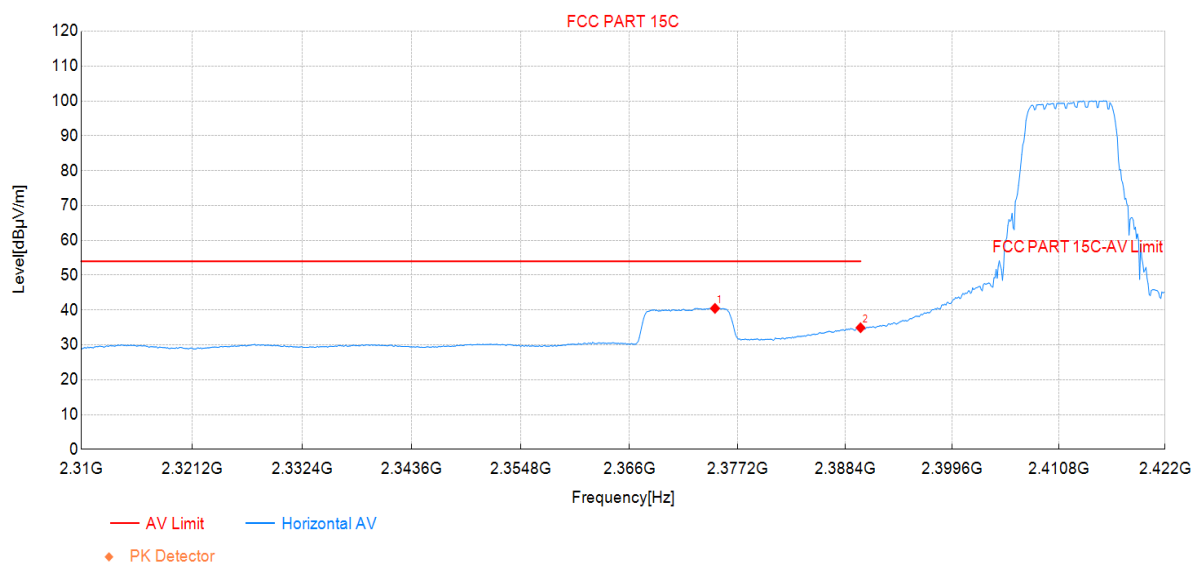
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	2374.74	49.65	53.23	3.58	74.00	20.77	PK	Horizo	PASS
2	2390.00	43.01	46.66	3.65	74.00	27.34	PK	Horizo	PASS

Test Report

Project Information

Profile:	2530770R	EUT:	Smart Controller
Mode:	Mode1:Transmit at 2412MHz by SRD	Voltage:	120 Vac / 60 Hz
Environment:	Temp: 25℃; Humi:60%	Engineer	Reyn Chen
Test Standard:	FCC PART 15C		

Test Graph



Suspected Data List

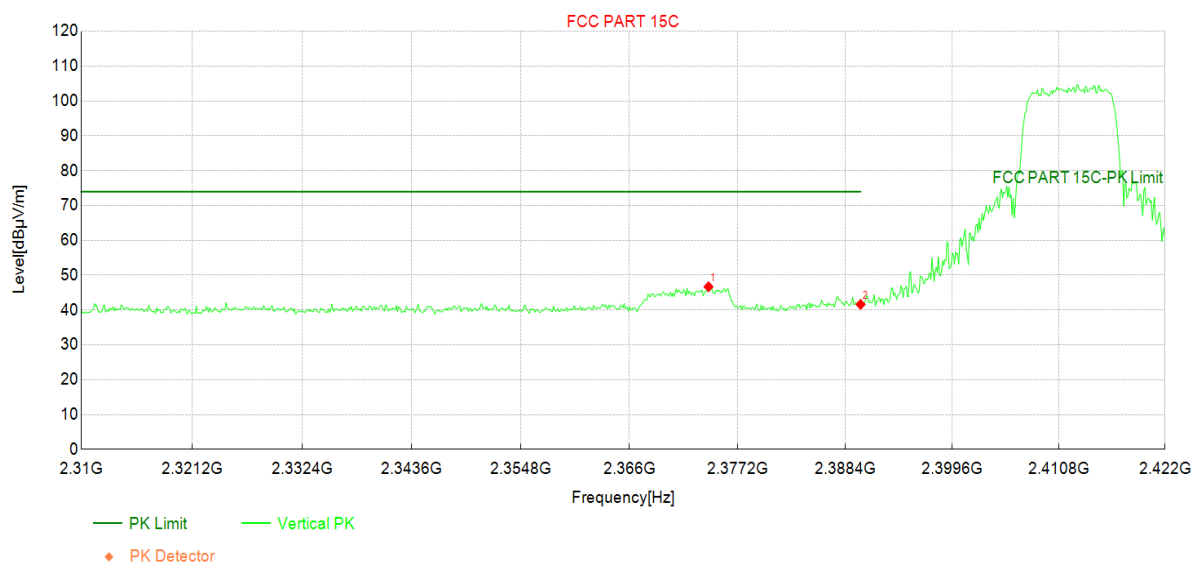
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	2374.85	36.89	40.47	3.58	54.00	13.53	AV	Horizo	PASS
2	2390.00	31.26	34.91	3.65	54.00	19.09	AV	Horizo	PASS

Test Report

Project Information

Profile:	2530770R	EUT:	Smart Controller
Mode:	Mode1:Transmit at 2412MHz by SRD	Voltage:	120 Vac / 60 Hz
Environment:	Temp: 25°C ; Humi:60%	Enginee	Reyn Chen
Test Standard:	FCC PART 15C		

Test Graph



Suspected Data List

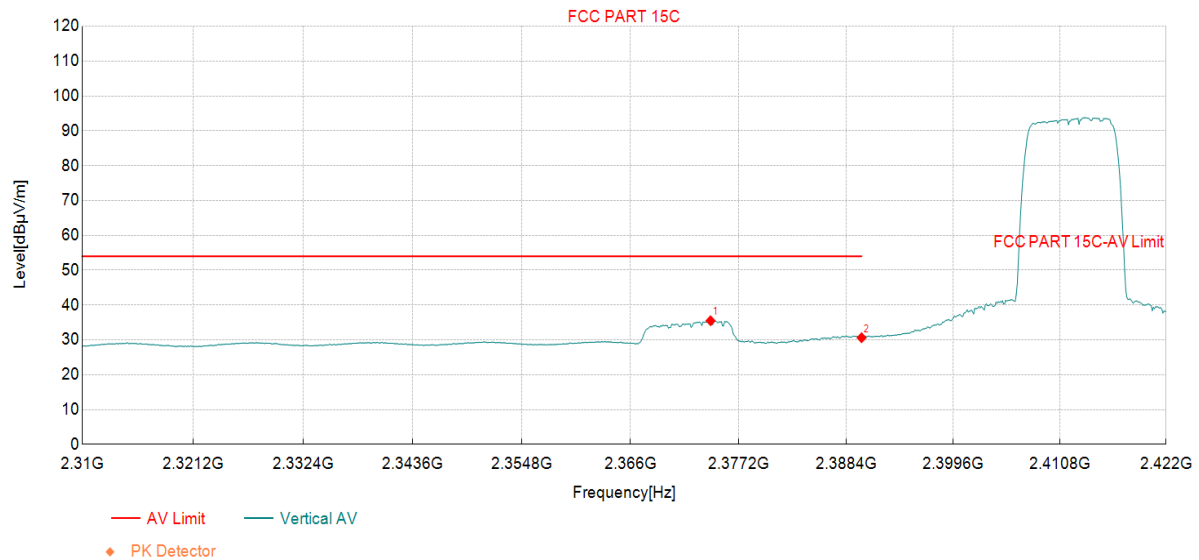
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	2374.18	43.12	46.69	3.57	74.00	27.31	PK	Vertic	PASS
2	2390.00	37.96	41.61	3.65	74.00	32.39	PK	Vertic	PASS

Test Report

Project Information

Profile:	2530770R	EUT:	Smart Controller
Mode:	Mode1:Transmit at 2412MHz by SRD	Voltage:	120 Vac / 60 Hz
Environment:	Temp: 25°C ; Humi:60%	Engineer	Reyn Chen
Test Standard:	FCC PART 15C		

Test Graph



Suspected Data List

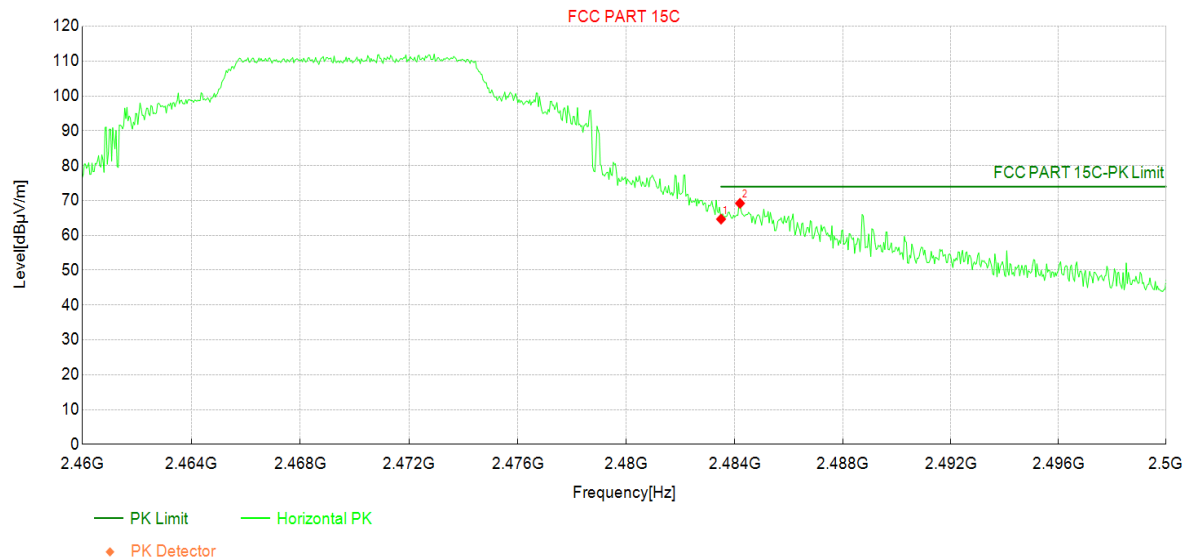
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	2374.29	31.92	35.49	3.57	54.00	18.51	AV	Vertic	PASS
2	2390.00	26.97	30.62	3.65	54.00	23.38	AV	Vertic	PASS

Test Report

Project Information

Profile:	2530770R	EUT:	Smart Controller
Mode:	Mode1:Transmit at 2470MHz by SRD	Voltage:	120 Vac / 60 Hz
Environment:	Temp: 25°C ; Humi:60%	Engineer	Reyn Chen
Test Standard:	FCC PART 15C		

Test Graph



Suspected Data List

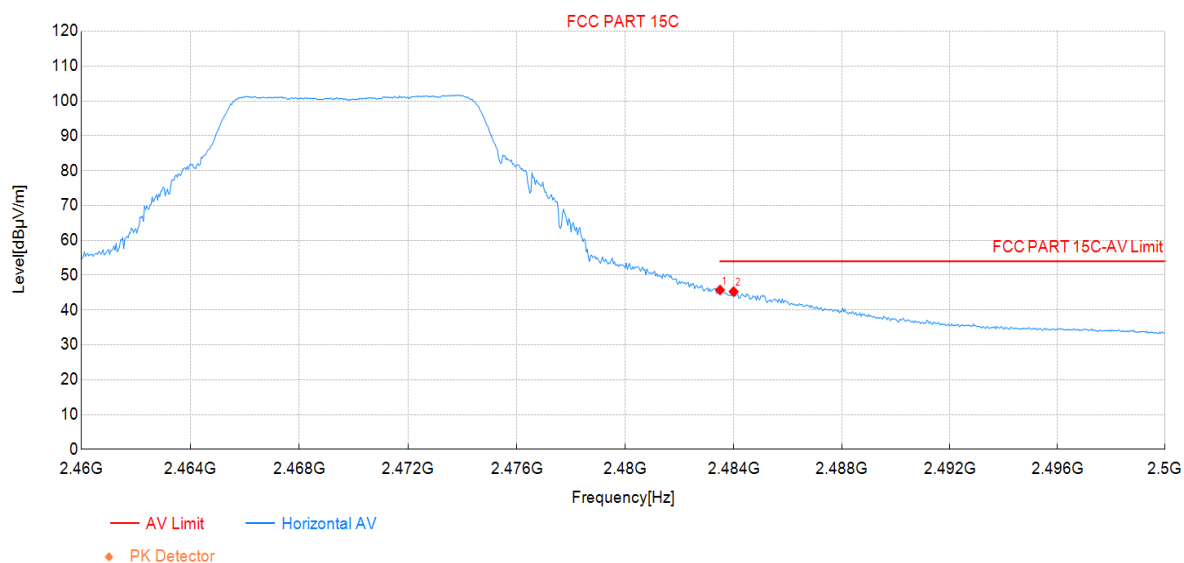
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	2483.50	60.56	64.65	4.09	74.00	9.35	PK	Horizo	PASS
2	2484.20	65.08	69.19	4.11	74.00	4.81	PK	Horizo	PASS

Test Report

Project Information

Profile:	2530770R	EUT:	Smart Controller
Mode:	Mode1:Transmit at 2470MHz by SRD	Voltage:	120 Vac / 60 Hz
Environment:	Temp: 25°C ; Humi:60%	Engineer	Reyn Chen
Test Standard:	FCC PART 15C		

Test Graph



Suspected Data List

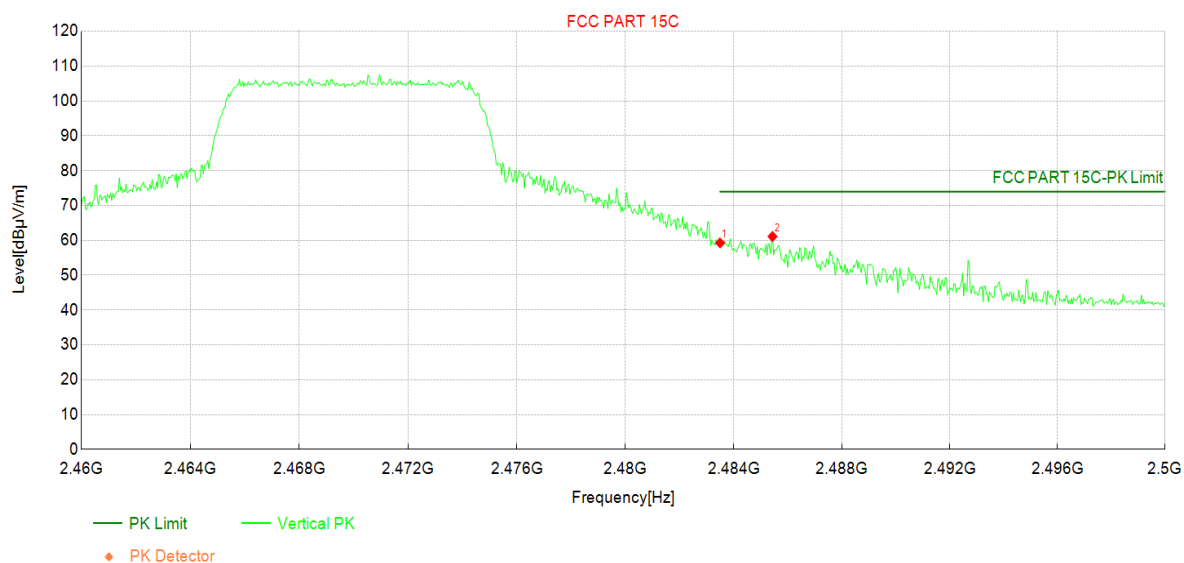
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	2483.50	41.65	45.74	4.09	54.00	8.26	AV	Horizo	PASS
2	2484.00	41.19	45.30	4.11	54.00	8.70	AV	Horizo	PASS

Test Report

Project Information

Profile:	2530770R	EUT:	Smart Controller
Mode:	Mode1:Transmit at 2470MHz by SRD	Voltage:	120 Vac / 60 Hz
Environment:	Temp: 25°C ; Humi:60%	Engineer	Reyn Chen
Test Standard:	FCC PART 15C		

Test Graph



Suspected Data List

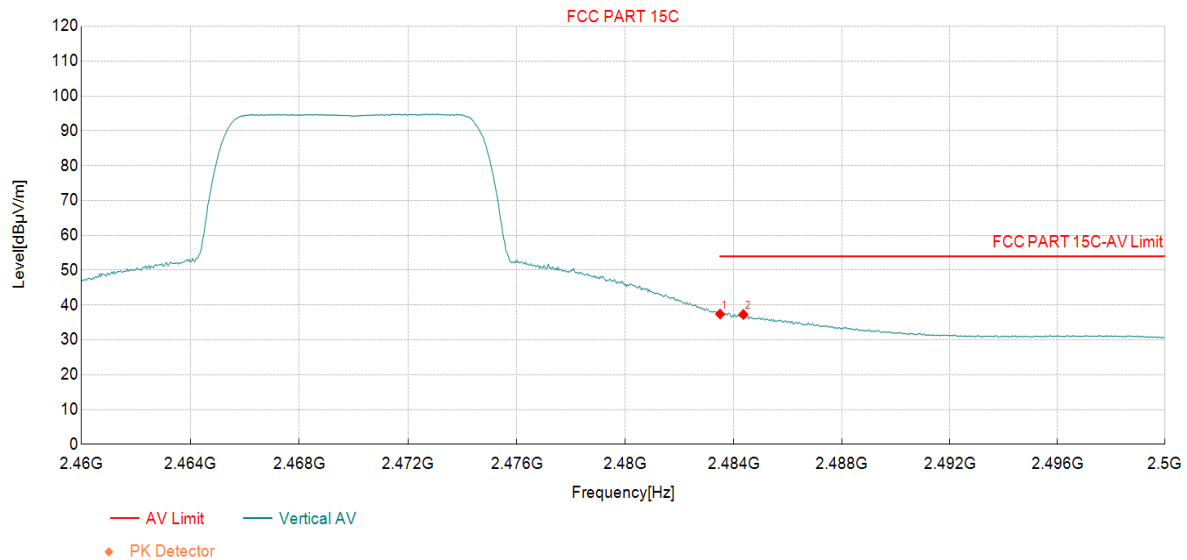
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	2483.50	55.17	59.26	4.09	74.00	14.74	PK	Vertic	PASS
2	2485.44	57.00	61.11	4.11	74.00	12.89	PK	Vertic	PASS

Test Report

Project Information

Profile:	2530770R	EUT:	Smart Controller
Mode:	Mode1:Transmit at 2470MHz by SRD	Voltage:	120 Vac / 60 Hz
Environment:	Temp: 25°C ; Humi:60%	Engineer	Reyn Chen
Test Standard:	FCC PART 15C		

Test Graph



Suspected Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	2483.50	33.32	37.41	4.09	54.00	16.59	AV	Vertic	PASS
2	2484.36	33.19	37.30	4.11	54.00	16.70	AV	Vertic	PASS

Note:

1. Level = Reading + Factor .

2. Margin = Limit - Level.

3. We have evaluated antenna 1 mode and antenna 2 mode, shown in report is the worst data.

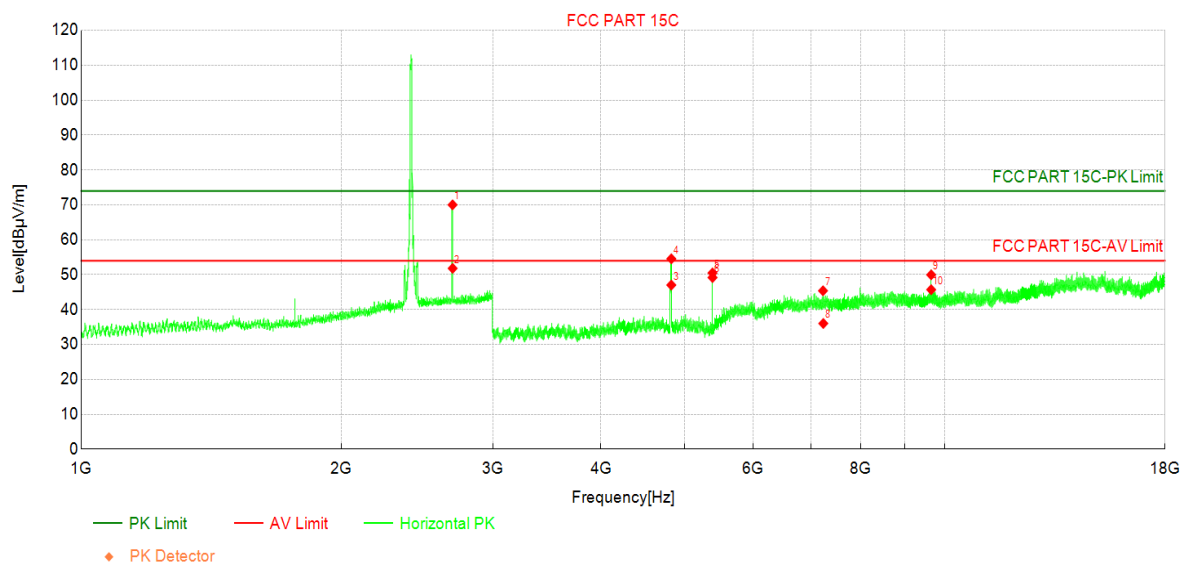
Appendix C: Emissions in Restricted Bands

Test Report

Project Information

Profile:	2530770R	EUT:	Smart Controller
Mode:	Mode1:Transmit at 2412MHz by SRD	Voltage:	120 Vac / 60 Hz
Environment:	Temp: 25℃; Humi:60%	Engineer	Reyn Chen
Test Standard:	FCC PART 15C		

Test Graph



Suspected Data List

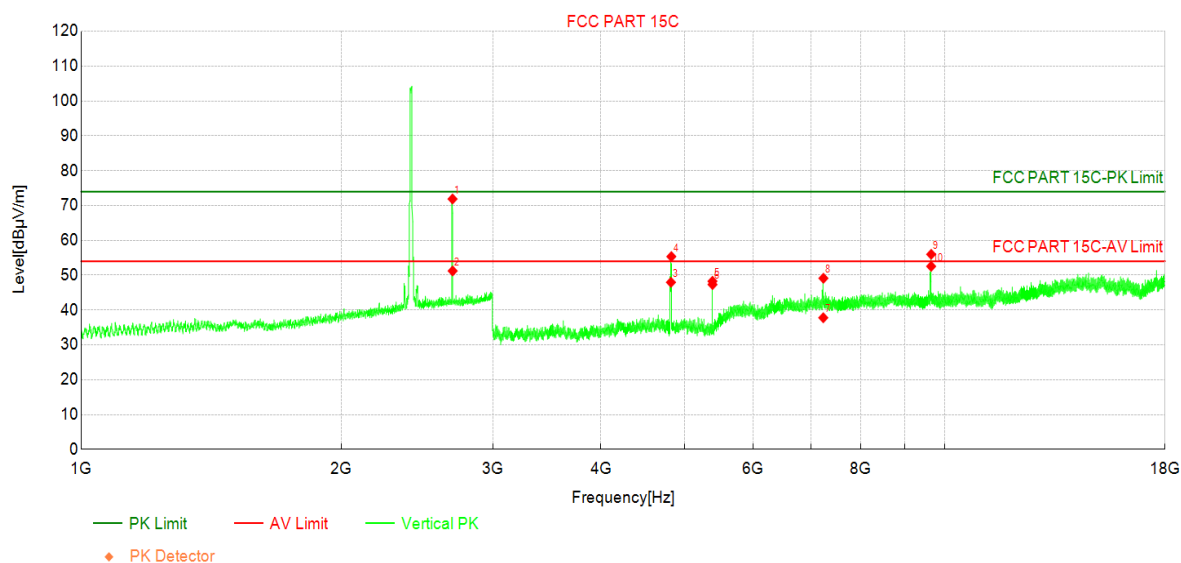
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	2692.50	65.08	70.01	4.93	74.00	3.99	PK	Horizo	PASS
2	2693.00	46.87	51.80	4.93	54.00	2.20	AV	Horizo	PASS
3	4824.75	53.06	47.02	-6.04	54.00	6.98	AV	Horizo	PASS
4	4825.13	60.58	54.54	-6.04	74.00	19.46	PK	Horizo	PASS
5	5385.00	54.16	50.49	-3.67	74.00	23.51	PK	Horizo	PASS
6	5385.38	52.84	49.17	-3.67	54.00	4.83	AV	Horizo	PASS
7	7230.38	42.41	45.38	2.97	74.00	28.62	PK	Horizo	PASS
8	7236.00	33.04	36.01	2.97	54.00	17.99	AV	Horizo	PASS
9	9648.00	43.87	49.95	6.08	74.00	24.05	PK	Horizo	PASS
10	9648.00	39.61	45.69	6.08	54.00	8.31	AV	Horizo	PASS

Test Report

Project Information

Profile:	2530770R	EUT:	Smart Controller
Mode:	Mode1:Transmit at 2412MHz by SRD	Voltage:	120 Vac / 60 Hz
Environment:	Temp: 25°C ; Humi:60%	Engineer	Reyn Chen
Test Standard:	FCC PART 15C		

Test Graph



Suspected Data List

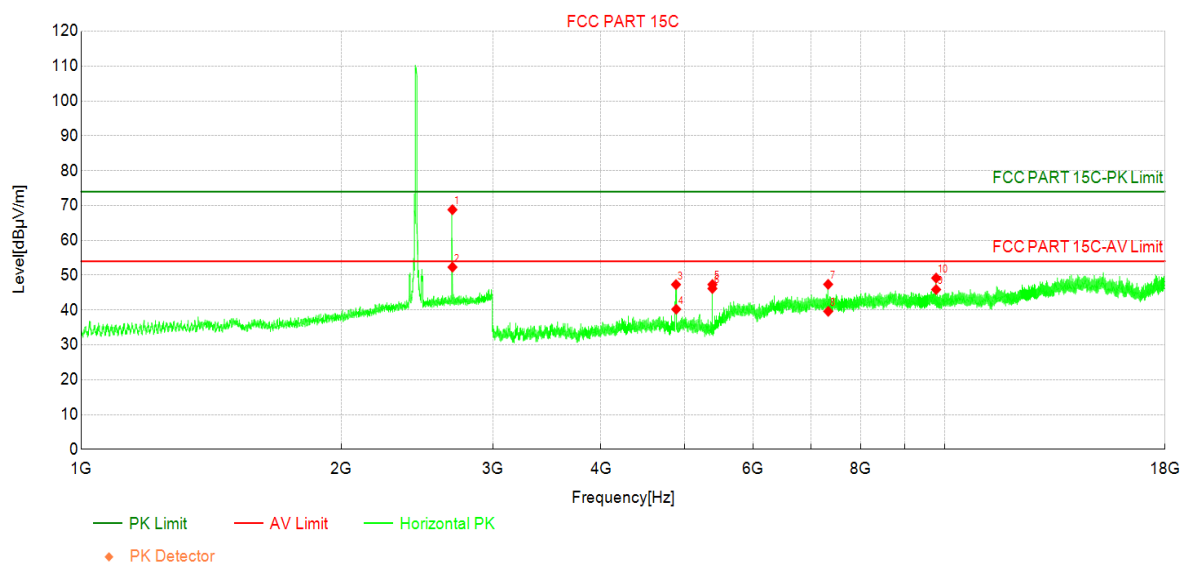
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	2692.50	66.94	71.87	4.93	74.00	2.13	PK	Vertic	PASS
2	2693.00	46.29	51.22	4.93	54.00	2.78	AV	Vertic	PASS
3	4820.63	53.99	47.95	-6.04	54.00	6.05	AV	Vertic	PASS
4	4825.13	61.38	55.34	-6.04	74.00	18.66	PK	Vertic	PASS
5	5384.63	51.93	48.26	-3.67	74.00	25.74	PK	Vertic	PASS
6	5385.00	50.98	47.31	-3.67	54.00	6.69	AV	Vertic	PASS
7	7236.00	34.81	37.78	2.97	54.00	16.22	AV	Vertic	PASS
8	7238.63	46.14	49.11	2.97	74.00	24.89	PK	Vertic	PASS
9	9648.00	49.91	55.99	6.08	74.00	18.01	PK	Vertic	PASS
10	9648.38	46.45	52.54	6.09	54.00	1.46	AV	Vertic	PASS

Test Report

Project Information

Profile:	2530770R	EUT:	Smart Controller
Mode:	Mode1:Transmit at 2444MHz by SRD	Voltage:	120 Vac / 60 Hz
Environment:	Temp: 25°C ; Humi:60%	Engineer	Reyn Chen
Test Standard:	FCC PART 15C		

Test Graph



Suspected Data List

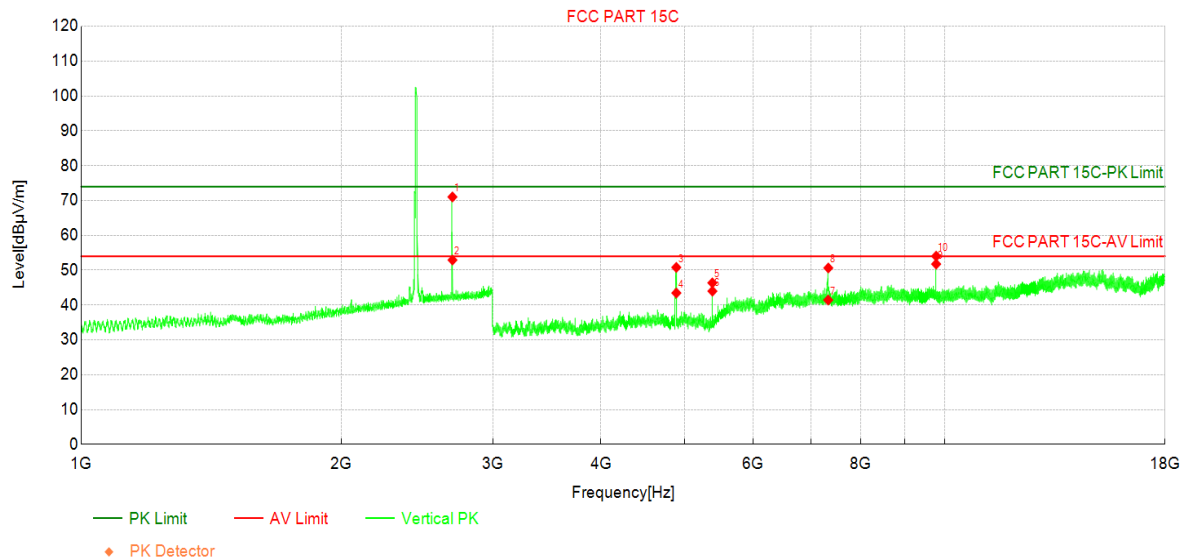
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	2691.50	63.86	68.79	4.93	74.00	5.21	PK	Horizo	PASS
2	2692.00	47.38	52.31	4.93	54.00	1.69	AV	Horizo	PASS
3	4885.50	53.39	47.30	-6.09	74.00	26.70	PK	Horizo	PASS
4	4888.50	46.31	40.22	-6.09	54.00	13.78	AV	Horizo	PASS
5	5383.50	51.00	47.32	-3.68	74.00	26.68	PK	Horizo	PASS
6	5383.88	49.85	46.17	-3.68	54.00	7.83	AV	Horizo	PASS
7	7330.50	44.64	47.37	2.73	74.00	26.63	PK	Horizo	PASS
8	7330.88	36.89	39.62	2.73	54.00	14.38	AV	Horizo	PASS
9	9776.25	39.79	45.88	6.09	54.00	8.12	AV	Horizo	PASS
10	9776.25	43.09	49.18	6.09	74.00	24.82	PK	Horizo	PASS

Test Report

Project Information

Profile:	2530770R	EUT:	Smart Controller
Mode:	Mode1:Transmit at 2444MHz by SRD	Voltage:	120 Vac / 60 Hz
Environment:	Temp: 25°C ; Humi:60%	Enginee	Reyn Chen
Test Standard:	FCC PART 15C		

Test Graph



Suspected Data List

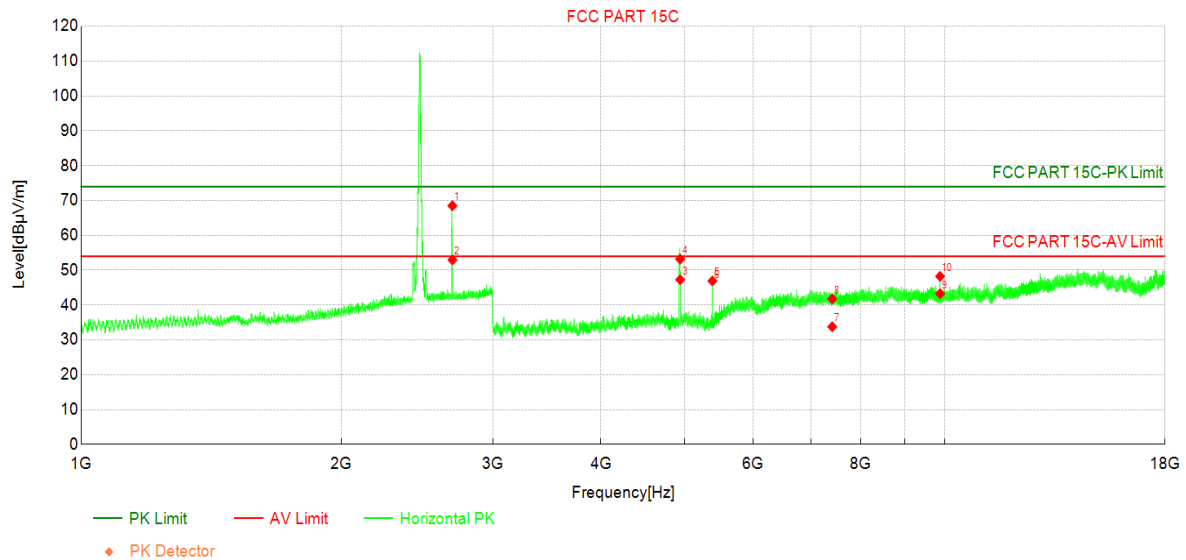
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	2691.50	66.09	71.02	4.93	74.00	2.98	PK	Vertic	PASS
2	2692.00	47.99	52.92	4.93	54.00	1.08	AV	Vertic	PASS
3	4889.25	56.89	50.80	-6.09	74.00	23.20	PK	Vertic	PASS
4	4890.00	49.55	43.46	-6.09	54.00	10.54	AV	Vertic	PASS
5	5383.13	50.03	46.35	-3.68	74.00	27.65	PK	Vertic	PASS
6	5383.50	47.66	43.98	-3.68	54.00	10.02	AV	Vertic	PASS
7	7330.50	38.69	41.42	2.73	54.00	12.58	AV	Vertic	PASS
8	7333.50	47.93	50.64	2.71	74.00	23.36	PK	Vertic	PASS
9	9776.25	45.66	51.75	6.09	54.00	2.25	AV	Vertic	PASS
10	9776.25	47.93	54.02	6.09	74.00	19.98	PK	Vertic	PASS

Test Report

Project Information

Profile:	2530770R	EUT:	Smart Controller
Mode:	Mode1:Transmit at 2470MHz by SRD	Voltage:	120 Vac / 60 Hz
Environment:	Temp: 25°C ; Humi:60%	Engineer	Reyn Chen
Test Standard:	FCC PART 15C		

Test Graph



Suspected Data List

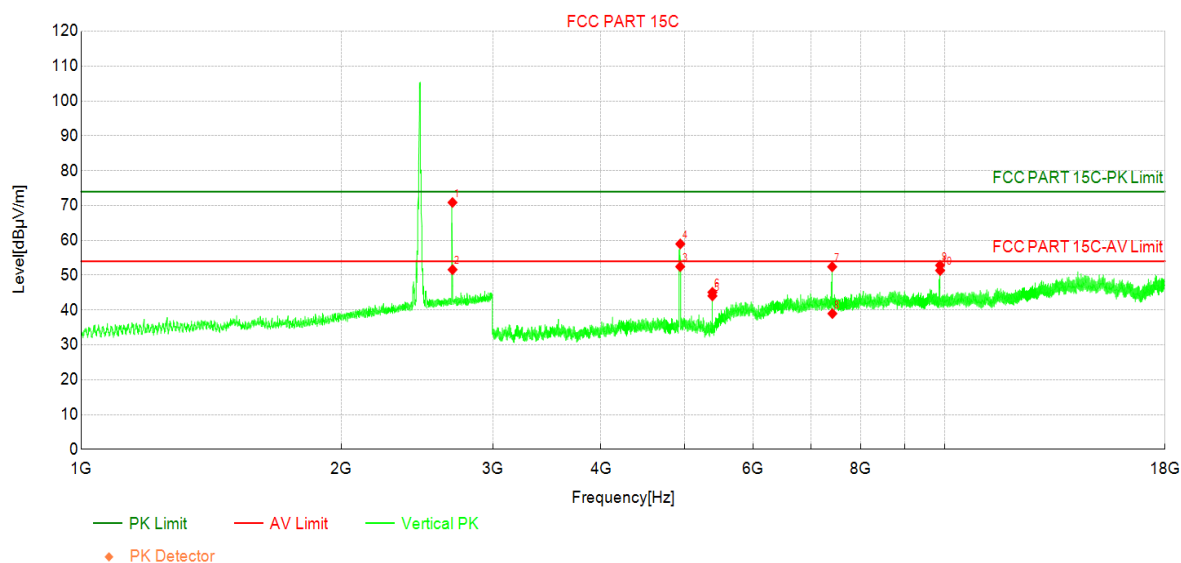
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	2691.50	63.56	68.49	4.93	74.00	5.51	PK	Horizo	PASS
2	2692.00	48.04	52.97	4.93	54.00	1.03	AV	Horizo	PASS
3	4940.00	52.80	47.26	-5.54	54.00	6.74	AV	Horizo	PASS
4	4940.00	58.72	53.18	-5.54	74.00	20.82	PK	Horizo	PASS
5	5383.50	50.60	46.92	-3.68	74.00	27.08	PK	Horizo	PASS
6	5383.88	49.94	46.26	-3.68	54.00	7.74	AV	Horizo	PASS
7	7410.00	31.49	33.77	2.28	54.00	20.23	AV	Horizo	PASS
8	7410.00	39.46	41.74	2.28	74.00	32.26	PK	Horizo	PASS
9	9880.00	37.60	43.26	5.66	54.00	10.74	AV	Horizo	PASS
10	9880.00	42.56	48.22	5.66	74.00	25.78	PK	Horizo	PASS

Test Report

Project Information

Profile:	2530770R	EUT:	Smart Controller
Mode:	Mode1:Transmit at 2470MHz by SRD	Voltage:	120 Vac / 60 Hz
Environment:	Temp: 25°C ; Humi:60%	Enginee	Reyn Chen
Test Standard:	FCC PART 15C		

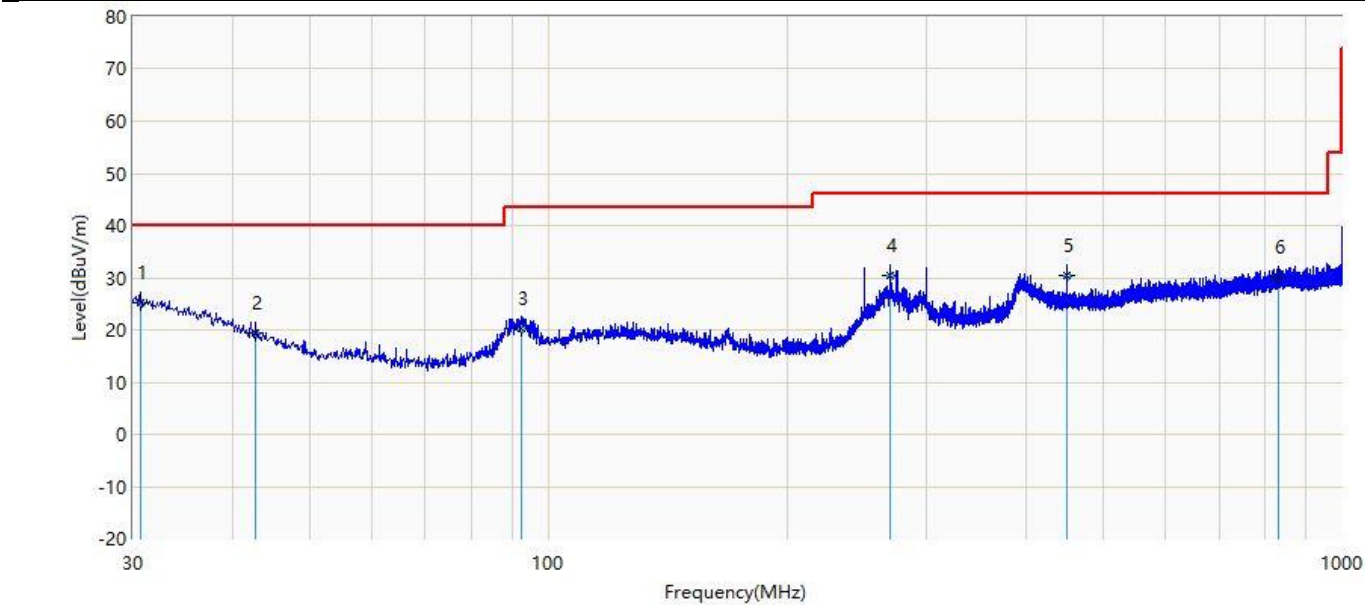
Test Graph



Suspected Data List

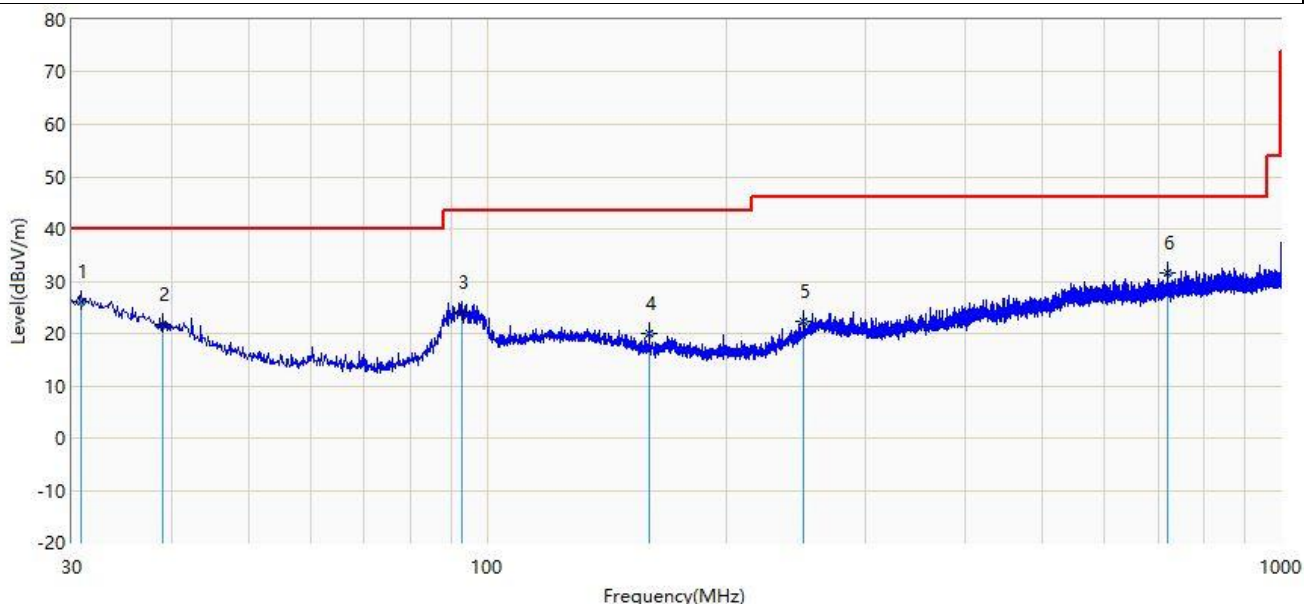
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	2692.00	65.93	70.86	4.93	74.00	3.14	PK	Vertic	PASS
2	2692.50	46.66	51.59	4.93	54.00	2.41	AV	Vertic	PASS
3	4940.63	57.98	52.45	-5.53	54.00	1.55	AV	Vertic	PASS
4	4941.75	64.49	58.97	-5.52	74.00	15.03	PK	Vertic	PASS
5	5383.88	47.72	44.04	-3.68	54.00	9.96	AV	Vertic	PASS
6	5383.88	48.76	45.08	-3.68	74.00	28.92	PK	Vertic	PASS
7	7409.25	50.14	52.41	2.27	74.00	21.59	PK	Vertic	PASS
8	7413.75	36.65	38.97	2.32	54.00	15.03	AV	Vertic	PASS
9	9879.75	47.16	52.82	5.66	74.00	21.18	PK	Vertic	PASS
10	9880.50	45.70	51.35	5.65	54.00	2.65	AV	Vertic	PASS

Profile: 2530770R	Page No.: 7
Engineer: Yu Liu	
Site: AC2	Time: 2025/05/28 - 21:44
Limit: FCC_Part 15.209	Margin: 0
Probe: CBL6112B_2933(30-1000MHz)-2024	Polarity: Horizontal
EUT: Smart Controller	Power: 230 Vac / 50 Hz
Note: Transmit by SRD 2.4G	



N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	30.606	25.274	0.504	-14.726	40.000	24.770	QP
2		42.853	19.506	1.039	-20.494	40.000	18.467	QP
3		92.444	20.402	4.003	-23.098	43.500	16.399	QP
4		269.954	30.359	9.354	-15.641	46.000	21.005	QP
5		450.010	30.448	5.853	-15.552	46.000	24.595	QP
6		830.735	30.056	0.988	-15.944	46.000	29.067	QP

Profile: 2530770R	Page No.: 8
Engineer: Yu Liu	
Site: AC2	Time: 2025/05/28 - 21:46
Limit: FCC_Part 15.209	Margin: 0
Probe: CBL6112B_2933(30-1000MHz)-2024	Polarity: Vertical
EUT: Smart Controller	Power: 230 Vac / 50 Hz
Note: Transmit by SRD 2.4G	



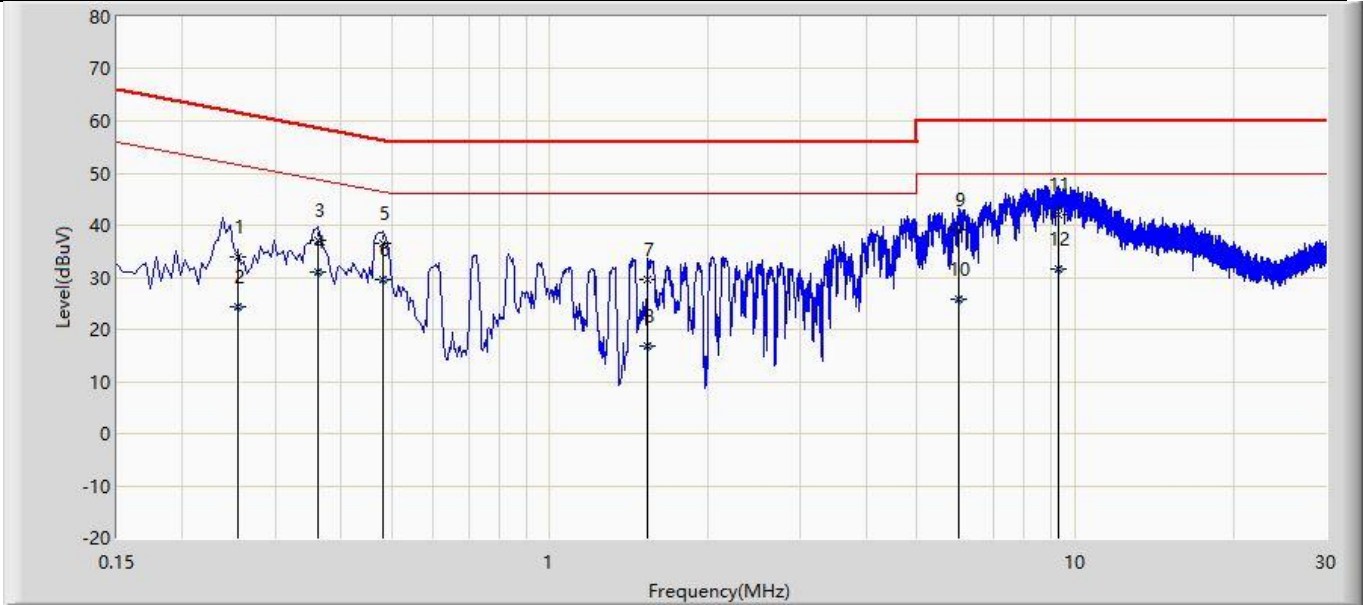
N o	Mar k	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	30.849	26.014	1.348	-13.986	40.000	24.666	QP
2		38.972	21.876	1.291	-18.124	40.000	20.584	QP
3		92.929	24.024	7.554	-19.476	43.500	16.470	QP
4		159.980	19.979	2.730	-23.521	43.500	17.249	QP
5		250.069	22.383	2.119	-23.617	46.000	20.265	QP
6		720.034	31.729	3.914	-14.271	46.000	27.815	QP

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp)
3. The test frequency range, 9kHz~30MHz, worst case are at least 20dB below the limits, therefore no data appear in the report.
4. If the test result on peak is lower than average limit, then average measurement needn't be performed.
5. All test data above 18GHz are noise base, so no data shown in this report.
6. In the report, below 1G, only the verification test is carried out for the worst channel of 1~18G worst mode.
7. The below 1G test data was measured on the worst-case configuration selected from each transmission mode on the low and high channel.
8. We have evaluated antenna 1 mode and antenna 2 mode, shown in report is the worst data.

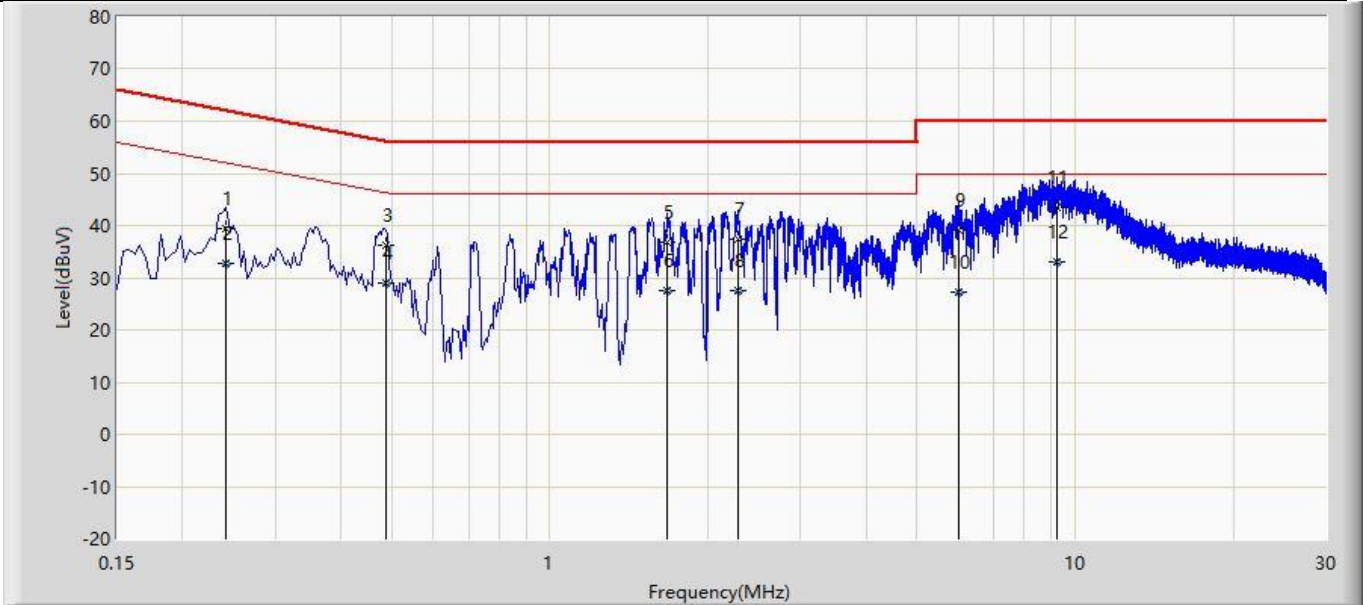
Appendix D: AC Power Line Conducted Emission

Profile: 2530770R	Page No.: 1
Site: TR1	Time: 2025/05/28 - 21:13
Limit: FCC_Part 15.207	Margin: 0
Probe: ENV216_101189(0.009-30MHz)	Polarity: Line
EUT: Smart Controller	Power: 230 Vac / 50 Hz
Note: Transmit by SRD 2.4G	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		0.255	33.808	24.105	-27.785	61.592	9.703	QP
2		0.255	24.268	14.565	-27.324	51.592	9.703	AV
3		0.362	37.103	27.380	-21.580	58.682	9.722	QP
4		0.362	30.933	21.211	-17.749	48.682	9.722	AV
5		0.482	36.615	26.872	-19.689	56.305	9.743	QP
6	*	0.482	29.459	19.715	-16.846	46.305	9.743	AV
7		1.538	29.561	19.782	-26.439	56.000	9.779	QP
8		1.538	16.727	6.948	-29.273	46.000	9.779	AV
9		5.986	38.999	29.121	-21.001	60.000	9.878	QP
10		5.986	25.812	15.934	-24.188	50.000	9.878	AV
11		9.298	41.932	31.939	-18.068	60.000	9.993	QP
12		9.298	31.543	21.550	-18.457	50.000	9.993	AV

Profile: 2530770R	Page No.: 2
Site: TR1	Time: 2025/05/28 - 21:22
Limit: FCC_Part 15.207	Margin: 0
Probe: ENV216_101189(0.009-30MHz)	Polarity: Neutral
EUT: Smart Controller	Power: 230 Vac / 50 Hz
Note: Transmit by SRD 2.4G	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		0.242	39.286	29.610	-22.742	62.027	9.675	QP
2		0.242	32.632	22.956	-19.395	52.027	9.675	AV
3		0.486	36.120	26.482	-20.116	56.236	9.639	QP
4		0.486	29.025	19.387	-17.211	46.236	9.639	AV
5		1.674	36.688	26.955	-19.312	56.000	9.733	QP
6		1.674	27.603	17.869	-18.397	46.000	9.733	AV
7		2.278	37.264	27.517	-18.736	56.000	9.747	QP
8		2.278	27.445	17.698	-18.555	46.000	9.747	AV
9		6.002	38.992	29.099	-21.008	60.000	9.893	QP
10		6.002	27.103	17.210	-22.897	50.000	9.893	AV
11	*	9.214	43.376	33.361	-16.624	60.000	10.015	QP
12		9.214	33.139	23.125	-16.861	50.000	10.015	AV

Note:

1. " * ", means this data is the worst emission level.

2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

The End