

FCC Test Report

Product Name : TS Smart Mortise Lock
Trade Name : TownSteel
Model No. : e-Cronus 3200
FCC ID : 2ACEY-TSM-3200

Applicant : TownSteel Inc.
Address : 17901 Railroad Street, City of Industry,
California United States 91748

Date of Receipt : Jul. 19, 2021
Issued Date : Sep. 10, 2021
Report No. : 2170809R-RFUSOTHV06
Report Version : V1.0



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.


Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

The test report shall not be reproduced except in full without the written approval of DEKRA Testing and Certification Co., Ltd..

Test Report Certification



Product Name : TS Smart Mortise Lock
 Applicant : TownSteel Inc.
 Address : 17901 Railroad Street, City of Industry, California United States 91748
 Manufacturer : TownSteel Inc.
 Address : 17901 Railroad Street, City of Industry, California United States 91748
 Trade Name : TownSteel
 Model No. : e-Cronus 3200
 FCC ID : 2ACEY-TSM-3200
 EUT Voltage : DC 6V (AA battery*4)
 Testing Voltage : DC 6V
 Applicable Standard : FCC CFR Title 47 Part 15 Subpart C Section 15.249
 ANSI C63.10: 2013
 Laboratory Name : Hsin Chu Laboratory
 Address : No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 310, Taiwan, R.O.C.
 TEL: +886-3-582-8001 / FAX: +886-3-582-8958
 Test Result : Complied

Documented By : 

 (Carol Tsai / Senior Engineering Adm. Specialist)

Approved By : 

 (Louis Hsu / Deputy Manager)

The test results relate only to the samples tested.
 The test report shall not be reproduced except in full without the written approval of DEKRA Testing and Certification Co., Ltd.

Revision History

Version	Description	Issued Date
V1.0	Initial issue of report	Sep. 10, 2021

TABLE OF CONTENTS

Description	Page
1. General Information	5
1.1. EUT Description	5
1.2. Test Mode	6
1.3. Tested System Details	7
1.4. Configuration of tested System	7
1.5. Operation Descriptions	7
1.6. Comments and Remarks	7
1.7. Test Facility	8
1.8. List of Test Equipment	9
1.9. Uncertainty	9
1.10. Duty Cycle	10
2. Field Strength of Fundamental	11
2.1. Test Setup	11
2.2. Limits	11
2.3. Test Procedures	12
2.4. Test Specification	12
2.5. Test Result of Field Strength of Fundamental	13
3. Radiated Emission	17
3.1. Test Setup	17
3.2. Limits	18
3.3. Test Procedure	18
3.4. Test Specification	18
3.5. Test Result of Radiated Emissions (30MHz~1GHz)	19
3.6. Test Result of Radiated Emissions (1GHz~10 th Harmonic)	23
Appendix A	27
Test Setup Photograph	27

1. General Information

1.1. EUT Description

Product Name	TS Smart Mortise Lock
Trade Name	TownSteel
Model No.	e-Cronus 3200
Frequency Range	2FSK: 908.4MHz
	2GFSK: 916MHz
Channel Number	2FSK: 1 Channel
	2GFSK: 1 Channel
Type of Modulation	2FSK
	2GFSK
Data Rate	2FSK: 40kbps
	2GFSK: 100kbps

Antenna Information			
Brand	Model No.	Type	Gain (dBi)
TownSteel	ts3051zw	PCB	-10.4

For 2FSK:

Working Frequency of Each Channel	
Channel	Frequency
01	908.4 MHz

For 2GFSK:

Working Frequency of Each Channel	
Channel	Frequency
01	916 MHz

Note:

- The above EUT information is declared by the manufacturer.

1.2. Test Mode

DEKRA has verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Test Mode	Mode 1: Transmit
-----------	------------------

Test Items	Test Mode	Modulation	Frequency	Result
AC Power Line Conducted Emission	It was supplied power by DC-Powered for EUT. It's not necessary to apply to AC Power Line Conducted Emission test.			
Field Strength of Fundamental	Mode 1	2FSK	908.4 MHz	Complies
	Mode 1	2GFSK	916 MHz	Complies
Radiated Emission	Mode 1	2FSK	908.4 MHz	Complies
	Mode 1	2GFSK	916 MHz	Complies

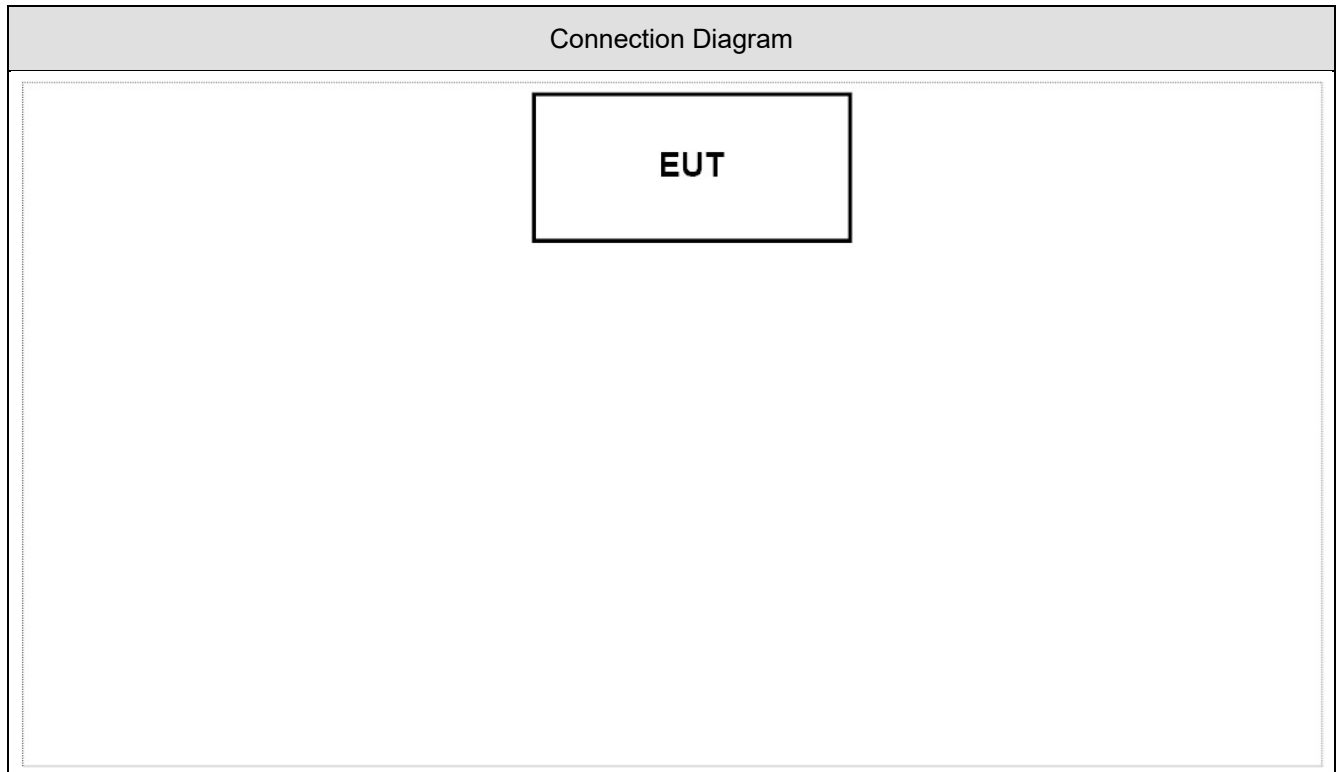
Note: Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

N/A

1.4. Configuration of tested System



1.5. Operation Descriptions

1	Set the EUT as shown.
2	Configure test mode, test channel.
3	Let the EUT start sending transmit continuously.
4	Verify that device is working properly.

1.6. Comments and Remarks

The product specification and testing instructions for the EUT declared in the report are provided by the manufacturer who will take all responsibilities for the accuracy.

1.7. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Actually	Tested by	Test Date	Test Site
Temperature (°C)	Field Strength of Fundamental	24.7 ~ 25.6	Ling Chen	2021/7/23 ~ 2021/8/18	CB2-H
Humidity (%RH)		61.0 ~ 62.0			
Temperature (°C)	Radiated Emission	24.7 ~ 25.6	Ling Chen	2021/7/23 ~ 2021/8/18	CB2-H
Humidity (%RH)		61.0 ~ 62.0			

Note: Test site information refers to Laboratory Information.

Laboratory Information

USA : FCC Registration Number: TW3024
Canada : CAB identifier : TW3024

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our

Web site: <http://www.dekra.com.tw>

If you have any comments, please don't hesitate to contact us. Our test sites as below:

Test Laboratory	DEKRA Testing and Certification Co., Ltd.
Address	1. No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C. 2. No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C.
Phone number	1. +886-3-582-8001 2. +886-3-582-8001
Fax number	1. +886-3-582-8958 2. +886-3-582-8958
Email address	info.tw@dekra.com
Website	http://www.dekra.com.tw

Note: Test site number for address 1 includes SR2-H. Test site number for address 2 includes CB2-H, CB3-H, CB4-H, SR10-H and SR12-H.

1.8. List of Test Equipment

Field Strength of Fundamental ; Radiated Emission / CB2-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	2020/10/12	2021/10/11
Signal & Spectrum Analyzer	R&S	FSV40	101049	2021/03/31	2022/03/30
Signal Analyzer	R&S	FSVA40	101435	2021/06/04	2022/06/03
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2021/01/25	2022/01/24
Bilog Antenna	Teseq	CBL6112D	23191	2021/02/26	2022/02/25
Horn Antenna	Schwarzbeck	BBHA 9120D	639	2021/05/17	2022/05/16
Horn Antenna	Schwarzbeck	BBHA 9170	202	2020/12/16	2021/12/15
Pre-Amplifier	EMCI	EMC01820I	980365	2021/05/28	2022/05/27
Pre-Amplifier	EMEC	EM01G18GA	060741	2021/07/02	2022/07/01
Pre-Amplifier	DEKRA	AP-400C	201801231	2020/11/16	2021/11/15
Wideband Radio Communication Tester	R&S	CMW500	106071	2021/01/27	2022/01/26
Wireless Conn. Tseter	R&S	CMW500	157118	2021/07/06	2022/07/05
Coaxial Cable(13m)	Huber+Suhner	SF104	CB2-H	2020/07/25	2021/07/24
Coaxial Cable(13m)	Huber+Suhner	SF104	CB2-H	2021/07/25	2022/07/24
DEKRA Testing System	DEKRA	Version 2.0	CB2-H	NA	NA

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

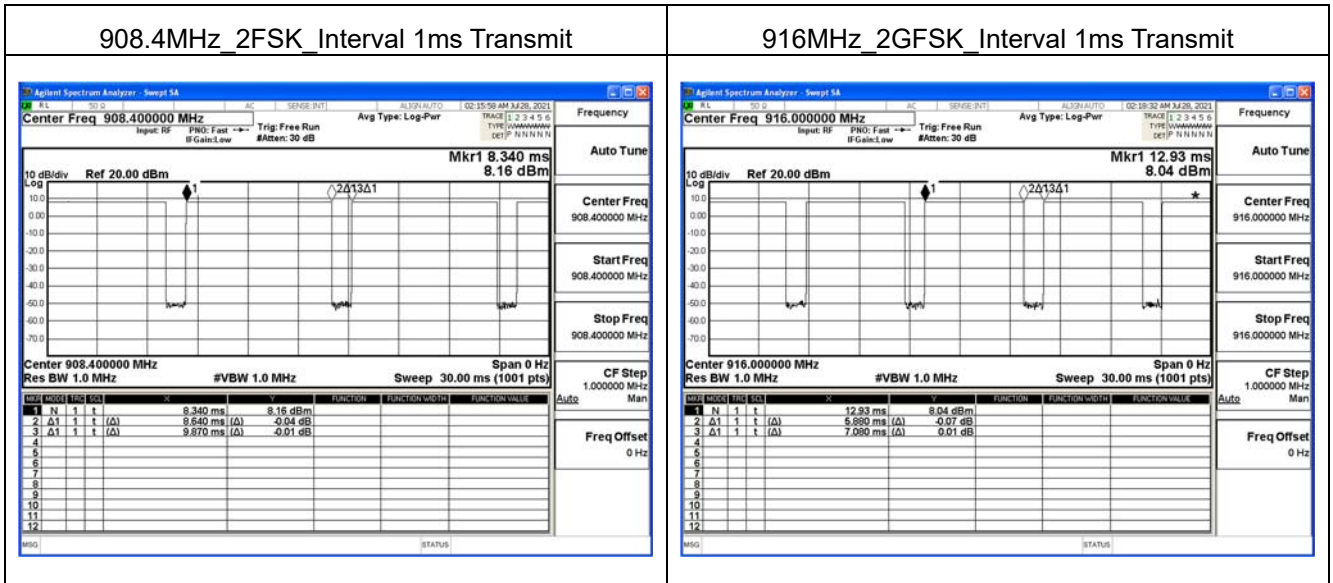
1.9. Uncertainty

Uncertainties have been calculated according to the DEKRA internal document with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)).

Test item	Uncertainty
Field Strength of Fundamental	30MHz~1GHz as ± 3.43 dB
Radiated Emission	30MHz~1GHz as ± 3.43 dB 1GHz~26.5GHz as ± 3.65 dB

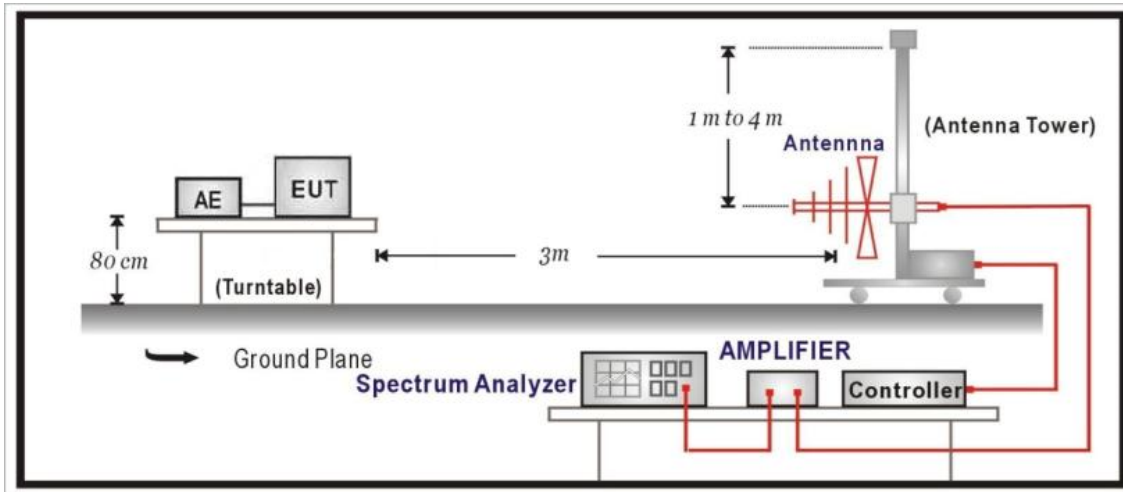
1.10. Duty Cycle

Modulation	Mode (MHz)	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
2FSK	908.4	8.640	9.870	87.54%	0.58	0.116
2GFSK	916.0	5.880	7.080	83.05%	0.81	0.170



2. Field Strength of Fundamental

2.1. Test Setup



2.2. Limits

The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental Frequency (MHz)	Field Strength of Fundamental (millivolts/meter)	Field Strength of Harmonics (microvolts/meter)
902 ~ 928	50	500
2400 ~ 2483.5	50	500
5725 ~ 5875	50	500
24000 ~ 24250	250	2500

Note :

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.
4. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

2.3. Test Procedures

The EUT was setup according to ANSI C63.10: 2013 for compliance to FCC 47CFR 15.249 requirements. The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The EUT was positioned such that the distance from antenna to the EUT was 3 meters. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

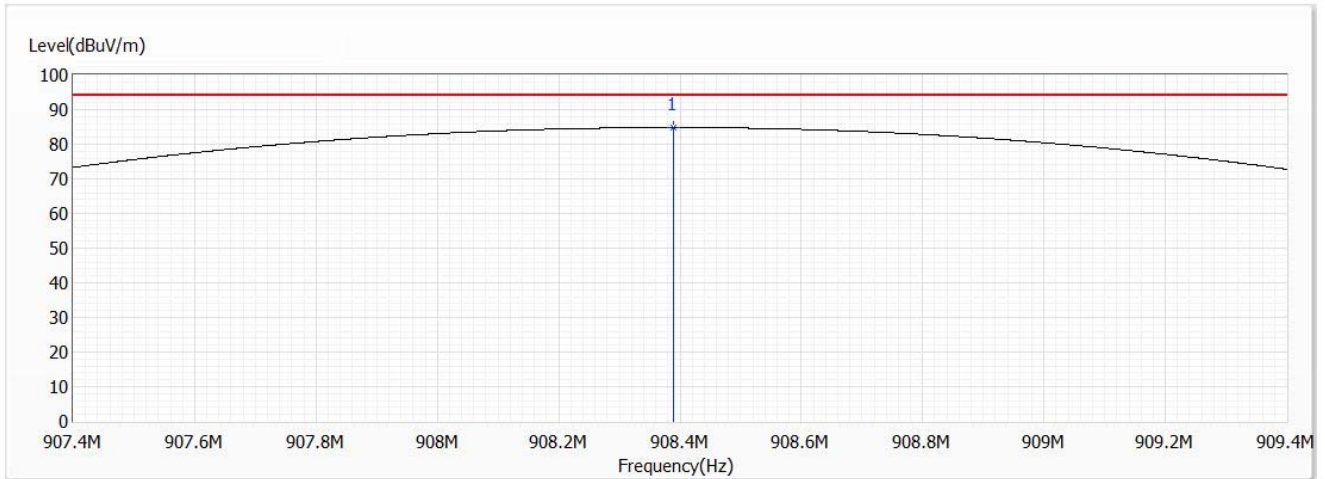
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated measurement.

2.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.249.

2.5. Test Result of Field Strength of Fundamental

Model No	e-Cronus 3200	Site	CB2-H
Test Voltage	DC 6V	Test Date	2021/8/18
Test Mode	Mode 1: Transmit	Engineer	Ling Chen
Polarity	Horizontal	Temperature (°C)	25.6
Test Condition	908.4MHz	Humidity (%RH)	62.0

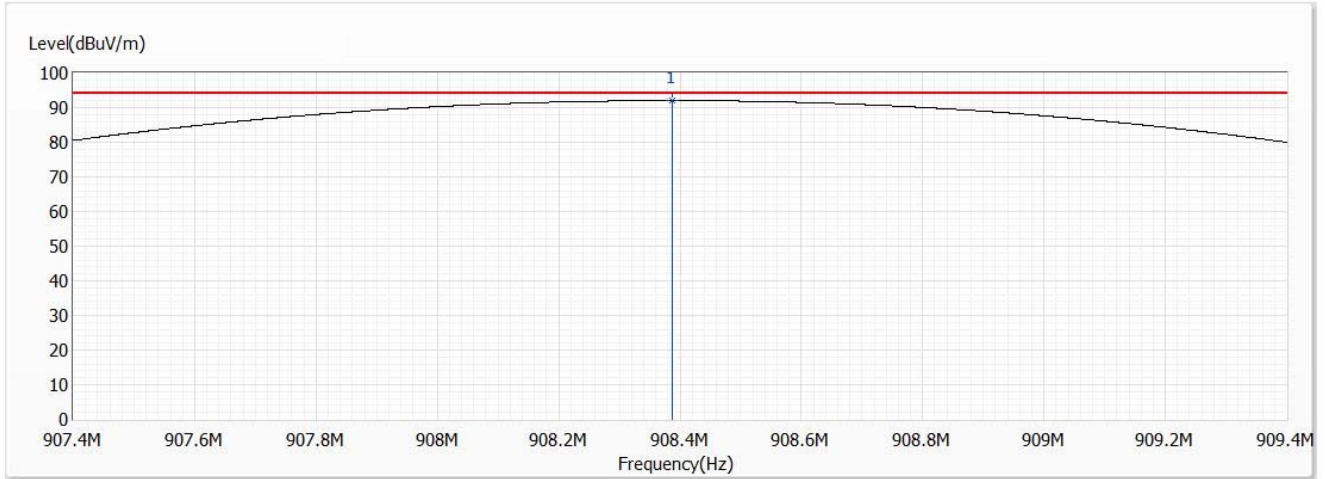


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	908.390	84.83	94.00	-9.17	76.89	7.94	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it's not restricted by unwanted emission limit.

Model No	e-Cronus 3200	Site	CB2-H
Test Voltage	DC 6V	Test Date	2021/8/18
Test Mode	Mode 1: Transmit	Engineer	Ling Chen
Polarity	Vertical	Temperature (°C)	25.6
Test Condition	908.4MHz	Humidity (%RH)	62.0

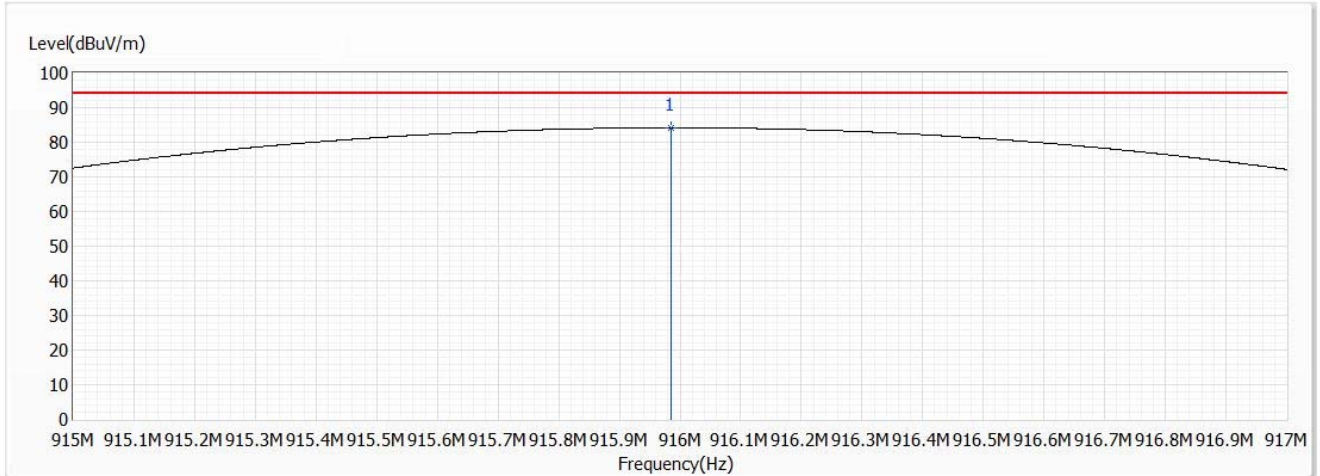


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	908.387	92.04	94.00	-1.96	84.10	7.94	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it's not restricted by unwanted emission limit.

Model No	e-Cronus 3200	Site	CB2-H
Test Voltage	DC 6V	Test Date	2021/8/18
Test Mode	Mode 1: Transmit	Engineer	Ling Chen
Polarity	Horizontal	Temperature (°C)	25.6
Test Condition	916MHz	Humidity (%RH)	62.0

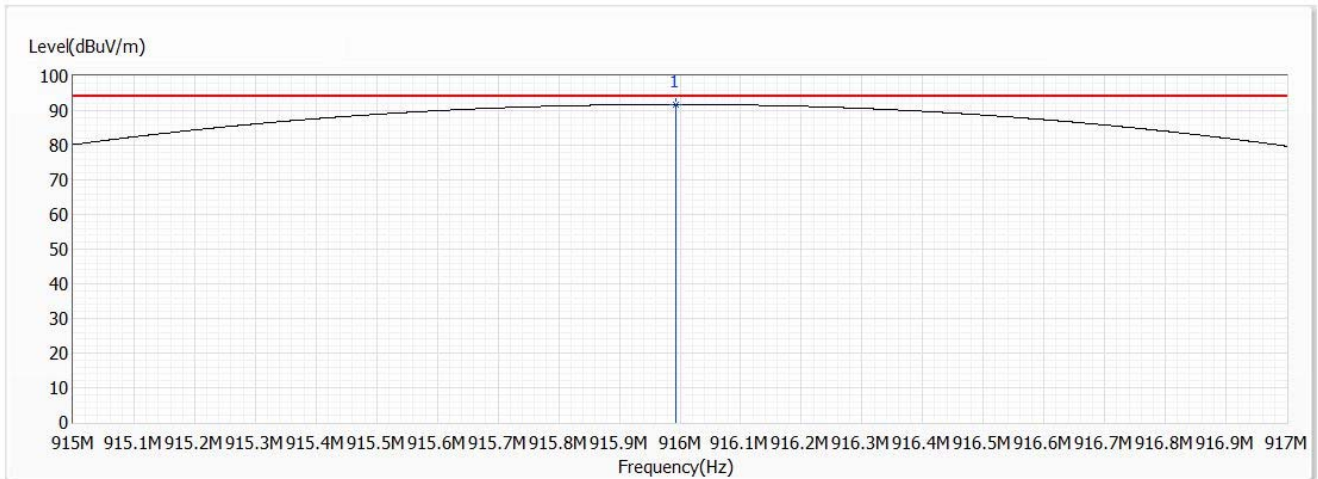


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	915.986	84.18	94.00	-9.82	76.25	7.93	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it's not restricted by unwanted emission limit.

Model No	e-Cronus 3200	Site	CB2-H
Test Voltage	DC 6V	Test Date	2021/8/18
Test Mode	Mode 1: Transmit	Engineer	Ling Chen
Polarity	Vertical	Temperature (°C)	25.6
Test Condition	916MHz	Humidity (%RH)	62.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	915.994	91.78	94.00	-2.22	83.85	7.93	PK

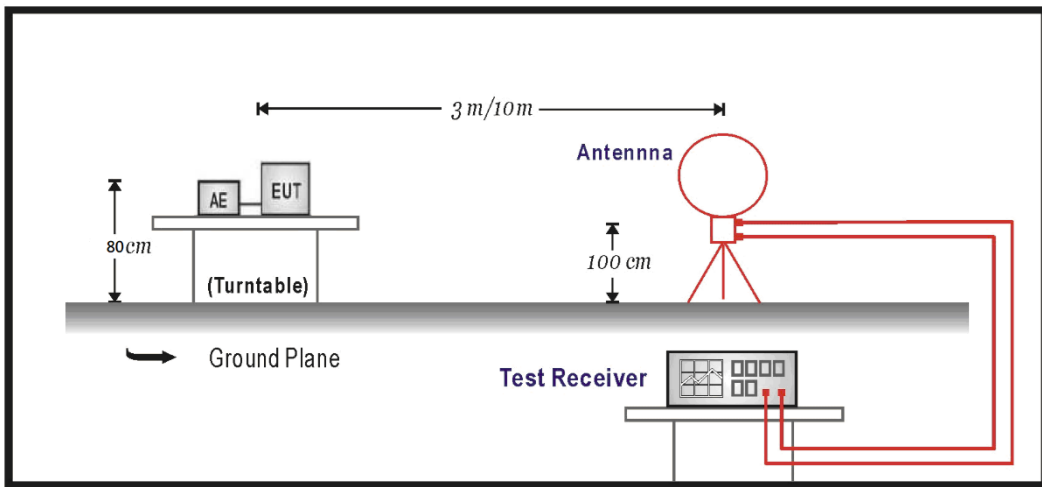
Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. The fundamental for reference only, it's not restricted by unwanted emission limit.

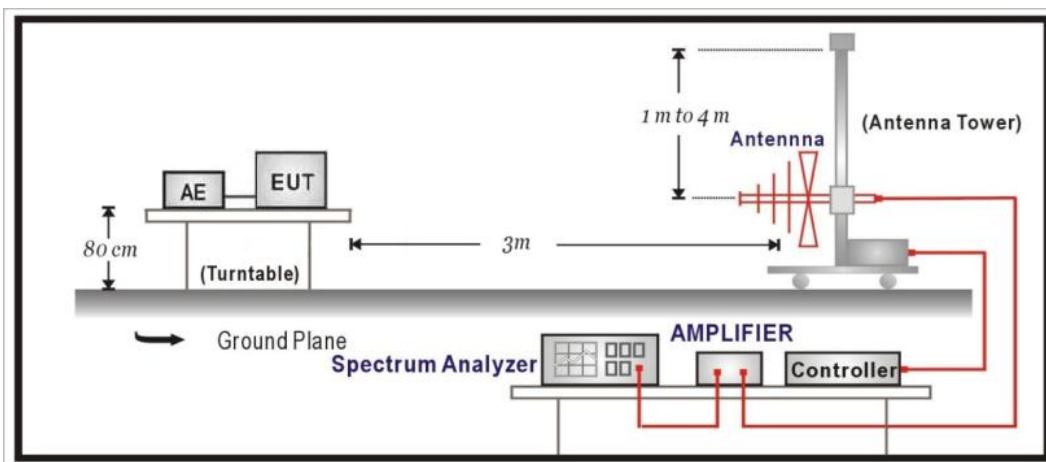
3. Radiated Emission

3.1. Test Setup

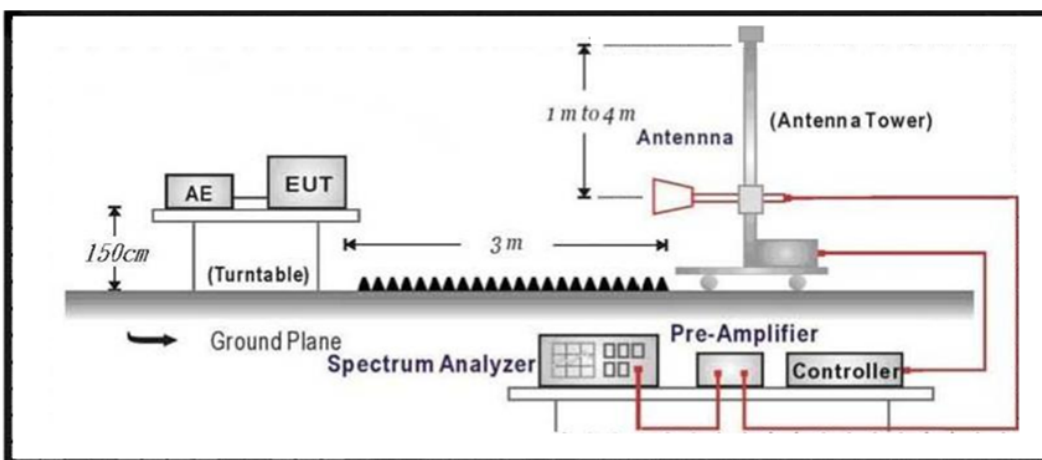
9kHz~30MHz



30MHz~1GHz



Above 1GHz



3.2. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209 Limits		
Frequency (MHz)	uV/m	dBuV/m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Remarks: 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)

2. In the Above Table, the tighter limit applies at the band edges.

3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

3.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 for compliance to FCC 47CFR 15.247 requirements.

The EUT and its simulators are placed on a turn table which is 0.8 or 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated measurement.

On any frequency or frequencies from 9kHz(include The the lowest oscillator frequency generated within the device up to the 10th harmonic) to 1000 MHz, the limits shown are based on measuring equipment employing a quasi-peak detector function and on any frequency or frequencies above 1000 MHz the radiated limits shown are based upon the use of measurement instrumentation employing an average detector function. When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.

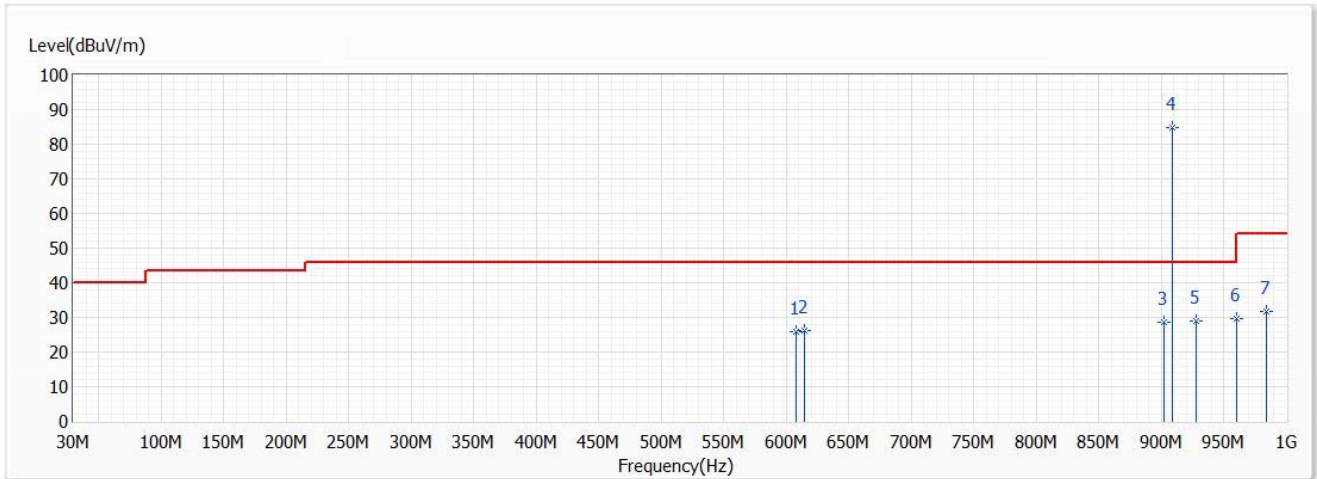
The bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

3.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.249.

3.5. Test Result of Radiated Emissions (30MHz~1GHz)

Model No	e-Cronus 3200	Site	CB2-H
Test Voltage	DC 6V	Test Date	2021/8/18
Test Mode	Mode 1: Transmit	Engineer	Ling Chen
Polarity	Horizontal	Temperature (°C)	25.6
Test Condition	908.4MHz	Humidity (%RH)	62.0

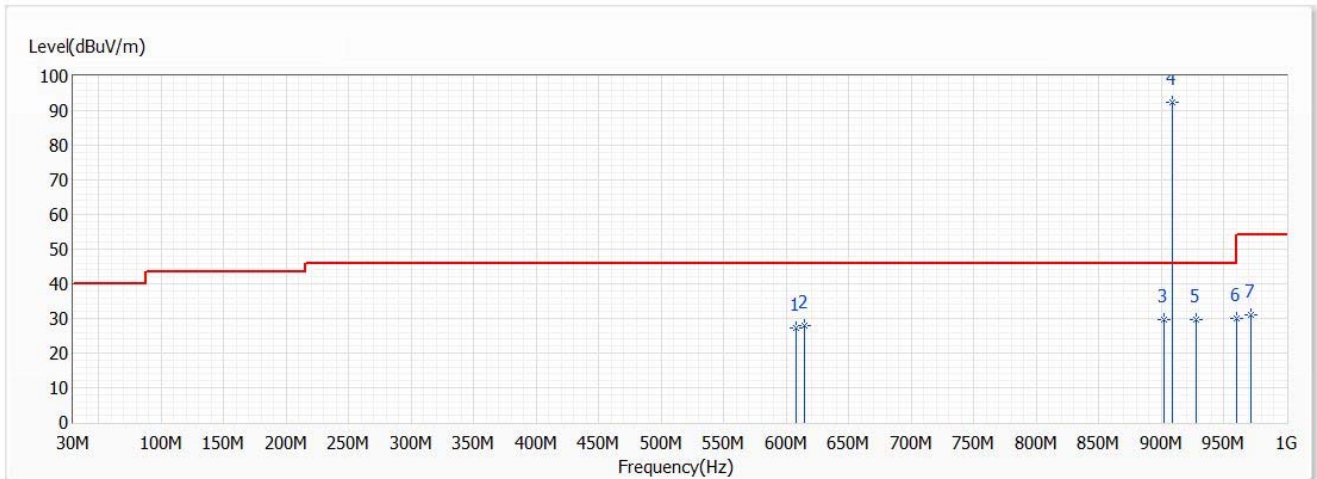


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	608.000	26.03	46.00	-19.97	21.11	4.92	QP
2	614.000	26.36	46.00	-19.64	21.41	4.95	QP
3	902.000	28.47	46.00	-17.53	20.56	7.91	QP
! 4	908.820	84.86	46.00	38.86	76.93	7.93	QP
5	928.000	28.83	46.00	-17.17	20.78	8.05	QP
6	960.000	29.75	46.00	-16.25	21.24	8.51	QP
7	983.995	31.56	54.00	-22.44	22.85	8.71	QP

Note:

1. All reading levels is Quasi-Peak value.
2. “!”,The fundamental for reference only, it’s not restricted by unwanted emission limit.
3. Emission Level = Reading Level + Correct Factor
4. The emission under 30MHz were not included is because their levels are lower than 20dB from limit.

Model No	e-Cronus 3200	Site	CB2-H
Test Voltage	DC 6V	Test Date	2021/8/18
Test Mode	Mode 1: Transmit	Engineer	Ling Chen
Polarity	Vertical	Temperature (°C)	25.6
Test Condition	908.4MHz	Humidity (%RH)	62.0

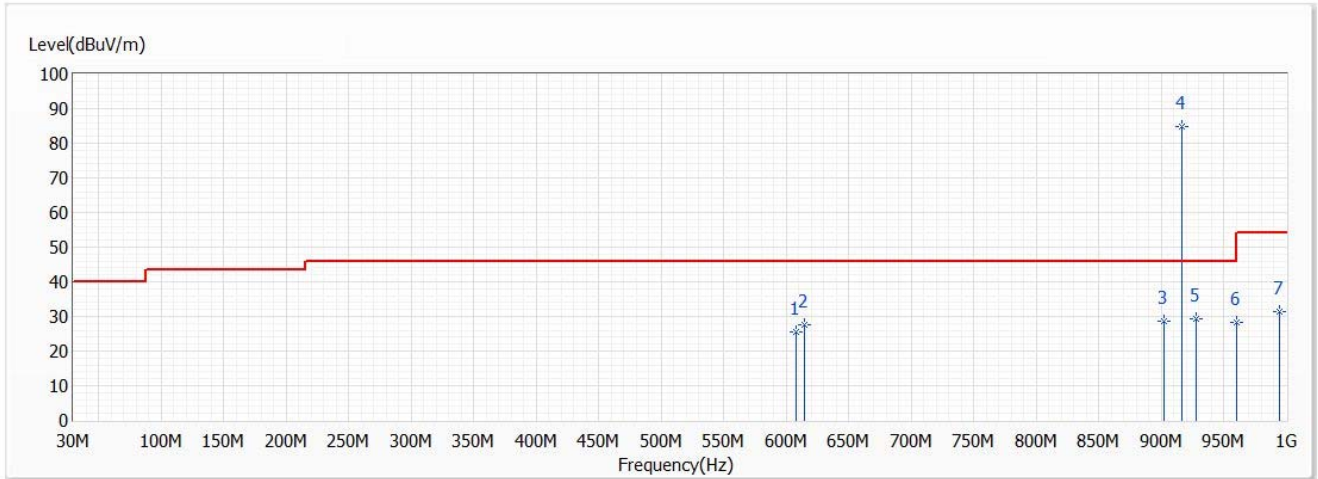


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	608.000	27.34	46.00	-18.66	22.42	4.92	QP
2	614.000	27.77	46.00	-18.23	22.82	4.95	QP
3	902.000	29.55	46.00	-16.45	21.64	7.91	QP
! 4	908.820	92.52	46.00	46.52	84.59	7.93	QP
5	928.000	29.58	46.00	-16.42	21.53	8.05	QP
6	960.000	29.87	46.00	-16.13	21.36	8.51	QP
7	971.870	31.06	54.00	-22.94	22.47	8.59	QP

Note:

1. All reading levels is Quasi-Peak value.
2. " ! ",The fundamental for reference only, it's not restricted by unwanted emission limit.
3. Emission Level = Reading Level + Correct Factor
4. The emission under 30MHz were not included is because their levels are lower than 20dB from limit.

Model No	e-Cronus 3200	Site	CB2-H
Test Voltage	DC 6V	Test Date	2021/8/18
Test Mode	Mode 1: Transmit	Engineer	Ling Chen
Polarity	Horizontal	Temperature (°C)	25.6
Test Condition	916MHz	Humidity (%RH)	62.0

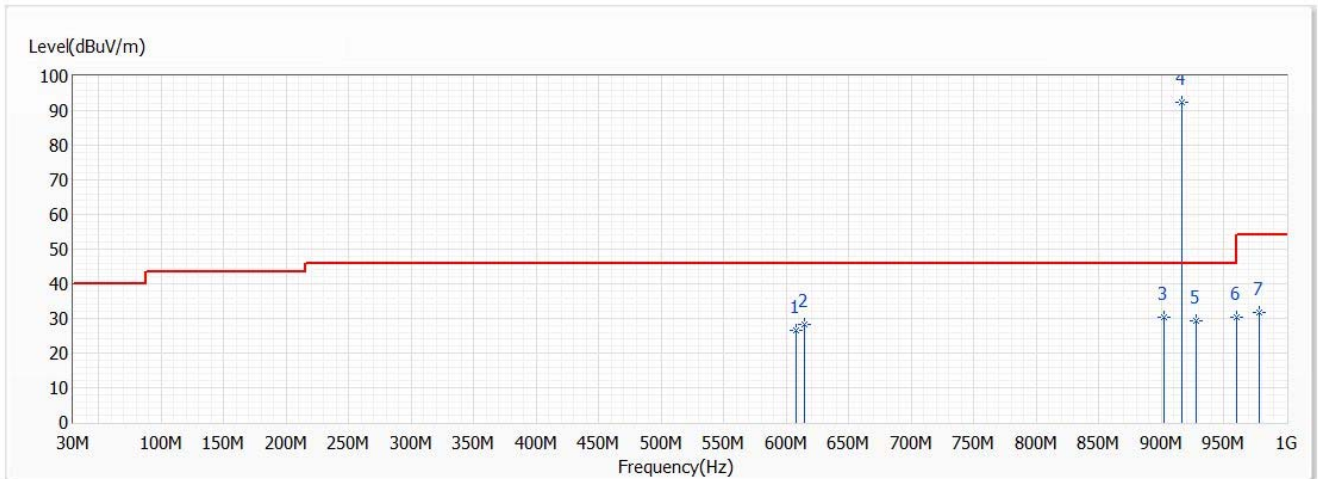


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	608.000	25.61	46.00	-20.39	20.69	4.92	QP
2	614.000	27.74	46.00	-18.26	22.79	4.95	QP
3	902.000	28.74	46.00	-17.26	20.83	7.91	QP
! 4	916.095	84.87	46.00	38.87	76.94	7.93	QP
5	928.000	29.43	46.00	-16.57	21.38	8.05	QP
6	960.000	28.39	46.00	-17.61	19.88	8.51	QP
7	994.665	31.30	54.00	-22.70	22.45	8.85	QP

Note:

1. All reading levels is Quasi-Peak value.
2. " ! ",The fundamental for reference only, it's not restricted by unwanted emission limit.
3. Emission Level = Reading Level + Correct Factor
4. The emission under 30MHz were not included is because their levels are lower than 20dB from limit.

Model No	e-Cronus 3200	Site	CB2-H
Test Voltage	DC 6V	Test Date	2021/8/18
Test Mode	Mode 1: Transmit	Engineer	Ling Chen
Polarity	Vertical	Temperature (°C)	25.6
Test Condition	916MHz	Humidity (%RH)	62.0



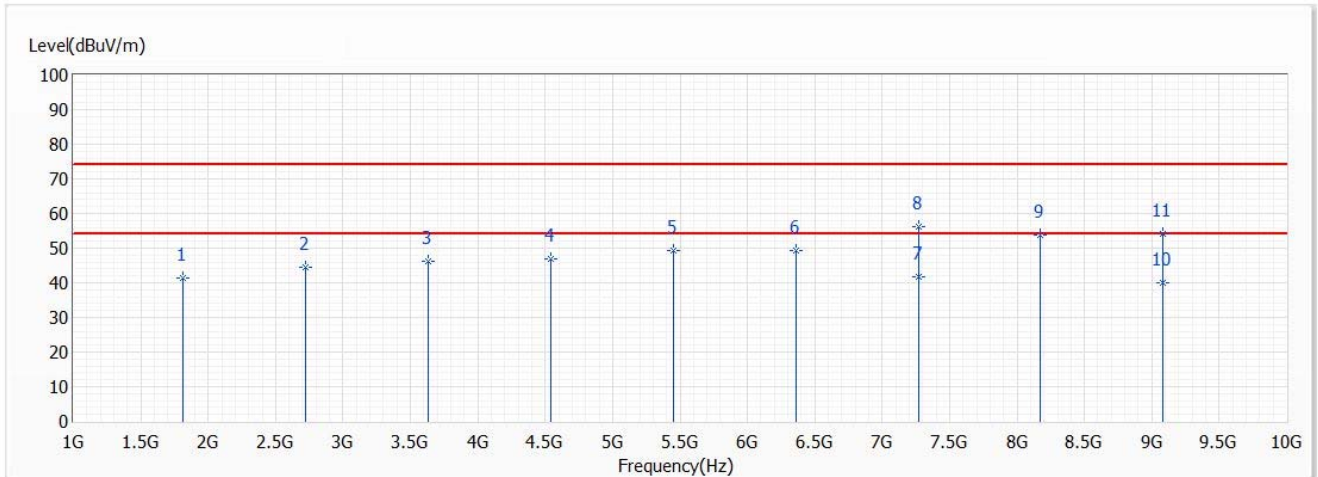
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	608.000	26.66	46.00	-19.34	21.74	4.92	QP
2	614.000	28.19	46.00	-17.81	23.24	4.95	QP
3	902.000	30.42	46.00	-15.58	22.51	7.91	QP
! 4	916.095	92.40	46.00	46.40	84.47	7.93	QP
5	928.000	29.33	46.00	-16.67	21.28	8.05	QP
6	960.000	30.42	46.00	-15.58	21.91	8.51	QP
7	977.690	31.62	54.00	-22.38	22.93	8.69	QP

Note:

1. All reading levels is Quasi-Peak value.
2. “ ! ”,The fundamental for reference only, it’s not restricted by unwanted emission limit.
3. Emission Level = Reading Level + Correct Factor
4. The emission under 30MHz were not included is because their levels are lower than 20dB from limit.

3.6. Test Result of Radiated Emissions (1GHz~10th Harmonic)

Model No	e-Cronus 3200	Site	CB2-H
Test Voltage	DC 6V	Test Date	2021/8/18
Test Mode	Mode 1: Transmit	Engineer	Ling Chen
Polarity	Horizontal	Temperature (°C)	25.6
Test Condition	908.4MHz	Humidity (%RH)	62.0

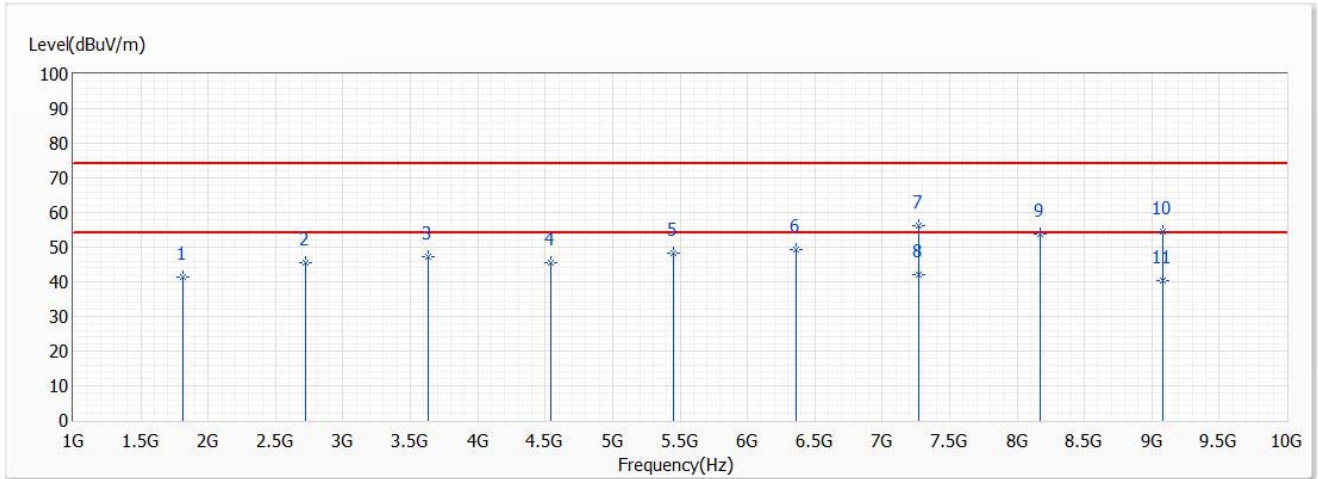


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1816.800	41.52	74.00	-32.48	65.53	-24.01	PK
2	2725.200	44.63	74.00	-29.37	64.79	-20.16	PK
3	3633.600	46.04	74.00	-27.96	63.88	-17.84	PK
4	4542.000	47.03	74.00	-26.97	61.89	-14.86	PK
5	5450.400	49.24	74.00	-24.76	60.94	-11.70	PK
6	6358.800	49.27	74.00	-24.73	57.21	-7.94	PK
* 7	7267.200	41.82	54.00	-12.18	46.48	-4.66	AV
8	7267.200	56.16	74.00	-17.84	60.82	-4.66	PK
9	8175.600	53.76	74.00	-20.24	58.44	-4.68	PK
10	9084.000	40.02	54.00	-13.98	43.00	-2.98	AV
11	9084.000	54.28	74.00	-19.72	57.26	-2.98	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	e-Cronus 3200	Site	CB2-H
Test Voltage	DC 6V	Test Date	2021/8/18
Test Mode	Mode 1: Transmit	Engineer	Ling Chen
Polarity	Vertical	Temperature (°C)	25.6
Test Condition	908.4MHz	Humidity (%RH)	62.0

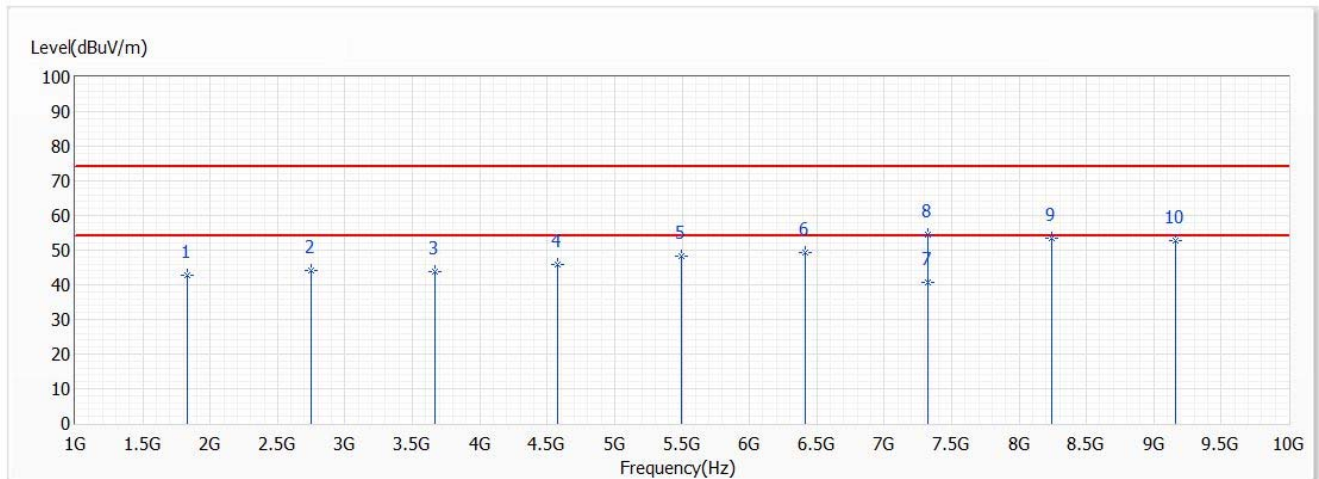


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1816.800	41.41	74.00	-32.59	65.42	-24.01	PK
2	2725.200	45.36	74.00	-28.64	65.52	-20.16	PK
3	3633.600	47.07	74.00	-26.93	64.91	-17.84	PK
4	4542.000	45.63	74.00	-28.37	60.49	-14.86	PK
5	5450.400	48.38	74.00	-25.62	60.08	-11.70	PK
6	6358.800	49.36	74.00	-24.64	57.30	-7.94	PK
7	7267.200	56.27	74.00	-17.73	60.93	-4.66	PK
* 8	7267.200	42.16	54.00	-11.84	46.82	-4.66	AV
9	8175.600	53.89	74.00	-20.11	58.57	-4.68	PK
10	9084.000	54.34	74.00	-19.66	57.32	-2.98	PK
11	9084.000	40.39	54.00	-13.61	43.37	-2.98	AV

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	e-Cronus 3200	Site	CB2-H
Test Voltage	DC 6V	Test Date	2021/8/18
Test Mode	Mode 1: Transmit	Engineer	Ling Chen
Polarity	Horizontal	Temperature (°C)	25.6
Test Condition	916MHz	Humidity (%RH)	62.0

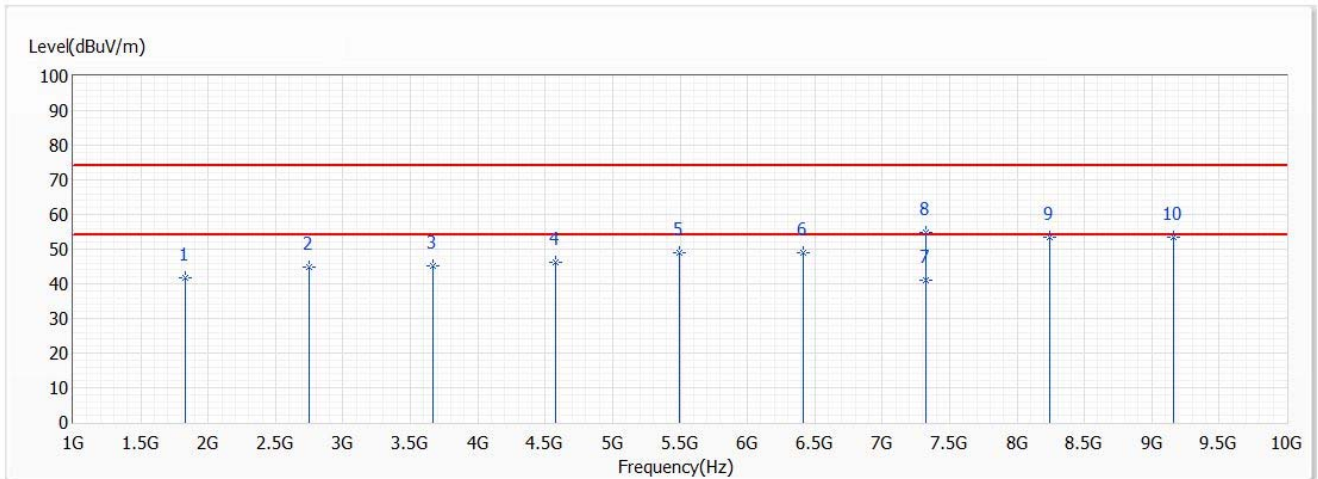


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1832.000	42.90	74.00	-31.10	66.85	-23.95	PK
2	2748.000	44.21	74.00	-29.79	64.26	-20.05	PK
3	3664.000	43.79	74.00	-30.21	61.52	-17.73	PK
4	4580.000	45.89	74.00	-28.11	60.61	-14.72	PK
5	5496.000	48.43	74.00	-25.57	59.99	-11.56	PK
6	6412.000	49.39	74.00	-24.61	57.18	-7.79	PK
* 7	7328.000	40.59	54.00	-13.41	45.17	-4.58	AV
8	7328.000	54.38	74.00	-19.62	58.96	-4.58	PK
9	8244.000	53.58	74.00	-20.42	58.05	-4.47	PK
10	9160.000	52.85	74.00	-21.15	55.77	-2.92	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission above 13GHz were not included is because their levels are lower than 20dB form limit.

Model No	e-Cronus 3200	Site	CB2-H
Test Voltage	DC 6V	Test Date	2021/8/18
Test Mode	Mode 1: Transmit	Engineer	Ling Chen
Polarity	Vertical	Temperature (°C)	25.6
Test Condition	916MHz	Humidity (%RH)	62.0



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	1832.000	41.78	74.00	-32.22	65.73	-23.95	PK
2	2748.000	44.90	74.00	-29.10	64.95	-20.05	PK
3	3664.000	45.33	74.00	-28.67	63.06	-17.73	PK
4	4580.000	46.16	74.00	-27.84	60.88	-14.72	PK
5	5496.000	49.13	74.00	-24.87	60.69	-11.56	PK
6	6412.000	48.93	74.00	-25.07	56.72	-7.79	PK
* 7	7328.000	41.16	54.00	-12.84	45.74	-4.58	AV
8	7328.000	54.76	74.00	-19.24	59.34	-4.58	PK
9	8244.000	53.49	74.00	-20.51	57.96	-4.47	PK
10	9160.000	53.34	74.00	-20.66	56.26	-2.92	PK

Note:

1. All reading above 1GHz is performed with peak and/or average measurements as necessary.
2. “ * ”, means this data is the worst value.
3. Emission Level = Reading Level + Correct Factor.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission above 13GHz were not included is because their levels are lower than 20dB form limit.