

RF TEST REPORT	
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Report No.:20240717G12662X-W1Product Name:Universal Remote KeyModel No.:XKB5FCC ID:2AI4T-XKB5Applicant:Shenzhen Xhorse Electronics Co., Ltd.Address:Floor 28, Block A, Building NO.6, international innovation Valley,
Nanshan District, ShenzhenDates of Testing:07/11/2024–07/24/2024Issued by:CCIC Southern Testing Co., Ltd.Lab Location:Electronic Testing Building, No.43, Shahe Road, Xili Street,
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Test Report Product.....: Universal Remote Key Brand Name.....: Xhorse Trade Name: Xhorse Applicant.....: Shenzhen Xhorse Electronics Co., Ltd. Floor 28, Block A, Building NO.6, international innovation Applicant Address..... Valley, Nanshan District, Shenzhen Manufacturer..... Shenzhen Xhorse Electronics Co., Ltd. Floor 28, Block A, Building NO.6, international innovation Manufacturer Address.....: Valley, Nanshan District, Shenzhen 47 CFR Part 15 Subpart C 15.231 Test Standards.....: ANSI C63.10-2013 Test Result..... Pass hwanowy . Thank Tested by: 2024.07.24 Chuiwang Zhang, Test Engineer Reviewed by..... 2024.07.24 Sun Jiaohui, Senior Engineer Chris Approved by.....:: 2024.07.24 Chris You, Manager



TABLE OF CONTENTS

TABLE OF CONTENTS	
1. GENERAL INFORMATION	5
1.1. EUT Description	5
1.2. Test Standards and Results	6
1.3. Table for Supporting Units	6
1.4. EUT Operation Test Setup	6
1.5. Test environment and mode	6
1.6. Laboratory Facilities	7
2. TEST REQUIREMENTS	8
2.1. Antenna requirement	8
2.2. 20 dB Bandwidth	9
2.3. Duty Cycle Factor	11
2.4. Field Strength of Fundamental and Spurious emissions	
2.5. Duration Time	
3. LIST OF MEASURING EQUIPMENT	
4. UNCERTAINTY OF EVALUATION	



Change History				
Issue	Date	Reason for change		
1.0	2024.07.24	First edition		



1. General Information

1.1. EUT Description

Product Name	Universal Remote Key
Model No.	XKB5
Operation Frequency	315 MHz; 433.92 MHz
Modulation technology	ASK
Antenna Type	PCB Antenna
Antenna Gain	2.0 dBi
Power supply	DC 3 V (CR2032 battery)

Note 1: The information of antenna gain and cable loss is provided by the manufacturer and our lab is not responsible for the accuracy of the antenna gain and cable loss information.



1.2. Test Standards and Results

The purpose of the report is to conduct testing according to the following FCC certification standards:

No.	Identity	Document Title
1	47 CFR Part 15	Radio Frequency Devices
	Subpart C	American National Standard for Testing Unlicensed Wireless
2	ANSI C63.10-2013	Devices

Test detailed items/section required by FCC rules and results are as below:

No.	Section in CFR 47	Description	
1	§ 15.203	Antenna Requirement	PASS
2	§ 15.231(c)	20 dB Bandwidth PA	
3	§ 15.231(b)	Field Strength of Fundamental PA	
4	§ 15.231(b), § 15.209	Field Strength of Spurious Emissions P	
5	§15.231(a)(1)	Duration Time P	
6	§15.207	AC Power Line Conducted Emission	N/A ^{Note}

Note: N/A means not applicable, EUT Power By 3 V DC Battery.

1.3. Table for Supporting Units

No.	Equipment	Brand Name	Model Name	Manufacturer	Serial No.	FCC ID/DoC
1	N/A					

1.4. EUT Operation Test Setup

For RF test items, an engineering test program was provided and enable to make EUT transmitting.

1.5. Test environment and mode

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

Operating Environment			
Temperature	15°C to 35°C		
Humidity	30% to 60%		
Atmospheric Pressure 86 kPa to 106 kPa			
Test Mode:			
Transmitting mode	Keep the EUT in transmitting mode with modulation		

Note: The EUT was placed on three different polar directions tested: i.e. X axis, Y axis, Z axis, and found the test results are both the "worst case" and "worst setup": Z axis, so the report only reflects the test data of worst mode.



1.6. Laboratory Facilities

FCC-Registration No.: CN1283

CCIC Southern Testing Co., Ltd EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Designation Number: CN1283, valid time is until Jun. 30th, 2025.

ISED Registration: 11185A

CCIC Southern Testing Co., Ltd. EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 11185A on Aug. 04, 2016, valid time is until Jun. 30th, 2025. **CAB number: CN0064**

A2LA Code: 5721.01

CCIC-SET is a third party testing organization accredited by A2LA according to ISO/IEC 17025. The accreditation certificate number is 5721.01.



2. Test Requirements

2.1. Antenna requirement

2.1.1. Applicable Standard

According to FCC 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

2.1.2. Antenna Information

Antenna Category: PCB Antenna

The antenna of EUT is an Spring Antenna. See product internal photos for details.

Antenna General Information:

No.	EUT	Operating Frequency	Ant. Type	Ant. Gain
1	Universal Remote Key	315 MHz; 433.92 MHz	РСВ	2.0 dBi

2.1.3. Result: comply

The EUT has a permanently and irreplaceable PCB antenna. Please refer to the EUT internal photos.



2.2. 20 dB Bandwidth

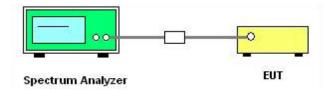
2.2.1. Limit of 20 dB Bandwidth

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.

2.2.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.2.3. Test Setup



2.2.4. Test Procedures

- 1. The testing follows the Measurement Procedure of ANSI C63.10-2013 Section 11.8.
- 2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
- 3. Set to the maximum power setting and enable the EUT transmit continuously.
- 4. Use the spectrum analyzer "Channel Bandwidth" function to easurement the 20 dB EBW.
- 5. For 20 dB EBW Use the following spectrum analyzer settings:

Set instrument center frequency to operation frequency, Set the Span = 100 kHz, Set the RBW = 1

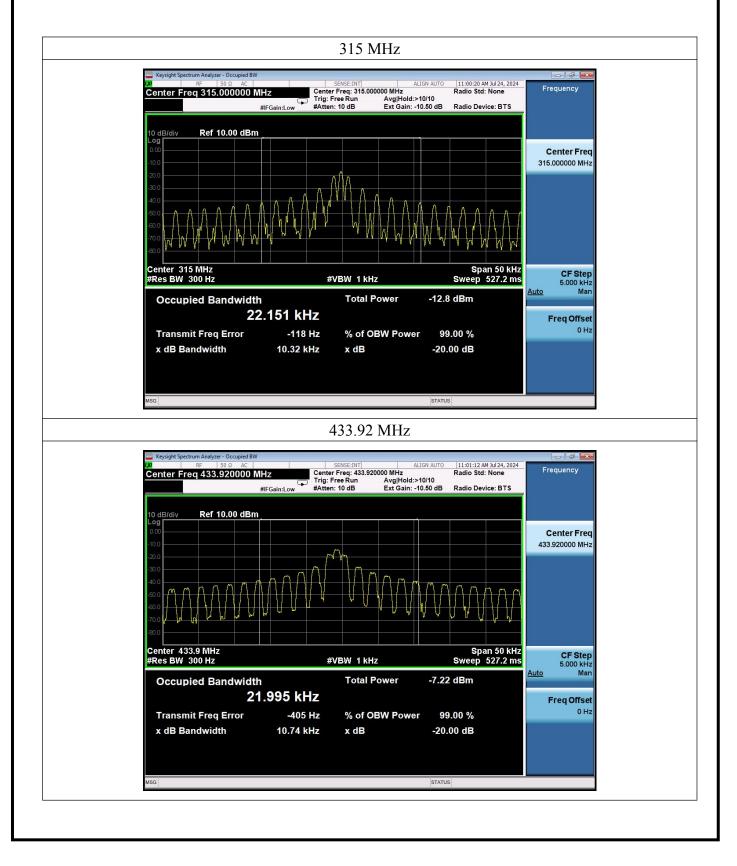
kHz, VBW = 3 kHz, Detector = Peak, Trace mode = Max hold, Sweep time = Auto couple, Allow trace to fully stabilize.

6. Record the measurement results in the test report.



2.2.5. Test Results of 20 dB Bandwidth

Frequency (MHz)	20 dB Bandwidth (kHz)	Limit (kHz)	Result
315	10.32	787.5	PASS
433.92	10.74	1084.8	PASS





2.3. Duty Cycle Factor

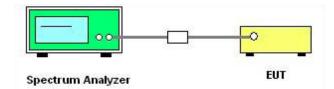
2.3.1. Limit of Duty Cycle Factor

For reporting purposes only.

2.3.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.3.3. Test Setup



2.3.4. Test Procedures

- 1. The testing follows the Measurement Procedure of ANSI C63.10-2013 Section 7.4.
- 2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
- 3. Set to the maximum power setting and enable the EUT transmit continuously.
- 4. Use the following spectrum analyzer settings:

Set instrument center frequency to operation frequency, Set the Span = 0 Hz, Set the RBW = 1

MHz, VBW = 3 MHz, Detector = Normal, Trace mode = Clear Write, Set sweep time greater than

the specified time for periodic operation.

- 5. Calculation of duty cycle factor according to ANSI C63.10-2013 Section 7.6.3.
- 6. Record the measurement results in the test report.



2.3.5. Test Results of Duty cycle factor

Frequency (MHz)	Total On Time (ms)	Period Time (ms)	Duty Cycle (%)	Duty Cycle Factor (dB)
315	0.5	1.0	50	-6.02
433.92	0.5	1.0	50	-6.02

Note 1: According to ANSI C63.10-2013 section 7.6.3:

$$\begin{split} T_{\text{Total On Time}} &= T_{\text{On 1}} \times N_{\text{Burst 1}} + T_{\text{On 2}} \times N_{\text{Burst 2}} + \cdots T_{\text{On n}} \times N_{\text{Burst n}}.\\ N_{\text{Burst n}} \text{ is the number of Burst n in one period.}\\ T_{\text{On n}} \text{ is the pulse width of Burst n.} \end{split}$$

For fundamental frequency 315 MHz:

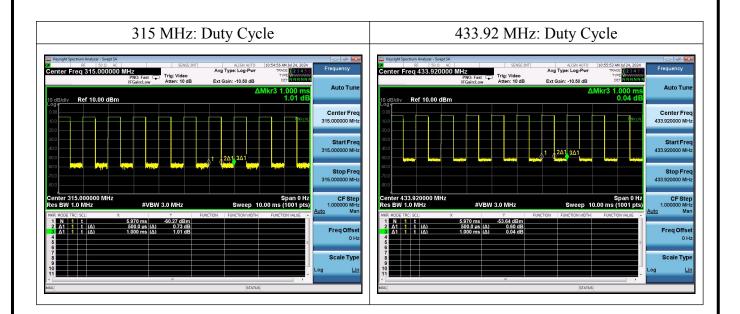
 $T_{\text{Total On Time}} = 0.5 \text{ ms.}$

Duty Cycle = (Total On Time / Period Time) * 100% = (0.5 / 1.0) * 100% = 50%. Duty Cycle Factor = $20 \times \log(\text{Duty Cycle}) = 20 \times \log(50\%) = -6.02$.

For fundamental frequency 433.92 MHz:

 $T_{\text{Total On Time}} = 0.5 \text{ ms.}$

Duty Cycle = (Total On Time / Period Time) * 100% = (0.5 / 1.0) * 100% = 50%. Duty Cycle Factor = $20 \times \log(\text{Duty Cycle}) = 20 \times \log(50\%) = -6.02$.





2.4. Field Strength of Fundamental and Spurious emissions

2.4.1. Limit of Field Strength of Fundamental and Spurious emissions

According to §15.231(b), In addition to the provisions of § 15.205, the field strength of emissions from intentional radiators operated under this section shall not exceed the following:

Fundamental frequency	Field strength of fundamental	Field strength of spurious emissions		
(MHz)	(microvolts/meter)	(microvolts/meter)		
40.66-40.70	2250	225		
70–130	1250	125		
130–174	¹ 1250 to 3750	¹ 125 to 375		
174–260	3750	375		
260-470	¹ 3750 to 12500	¹ 375 to 1250		
Above 470	12500	1250		
Note: ¹ Linear interpolations.				

- (1) The above field strength limits are specified at a distance of 3 meters. The tighter limits apply at the band edges.
- (2) Intentional radiators operating under the provisions of this section shall demonstrate compliance with the limits on the field strength of emissions, as shown in the above table, based on the average value of the measured emissions. As an alternative, compliance with the limits in the above table may be based on the use of measurement instrumentation with a CISPR quasi-peak detector. The specific method of measurement employed shall be specified in the application for equipment authorization. If average emission measurements are employed, the provisions in § 15.35 for averaging pulsed emissions and for limiting peak emissions apply. Further, compliance with the provisions of § 15.205 shall be demonstrated using the measurement instrumentation specified in that section.
- (3) The limits on the field strength of the spurious emissions in the above table are based on the fundamental frequency of the intentional radiator. Spurious emissions shall be attenuated to the average (or, alternatively, CISPR quasi-peak) limits shown in this table or to the general limits shown in § 15.209, whichever limit permits a higher field strength.

According to § 15.209(a), the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (µV/m)	Measurement Distance (m)	Limit (dBµV/m)@3 m
0.009-0.490	2400/F (kHz)	300	128.52–104.84
0.490-1.705	24000/F (kHz)	30	73.80-62.97
1.705-30.0	30	30	69.54
30-88	100	3	40.0
88–216	150	3	43.5
216–960	200	3	46.0
Above 960	500	3	54.0



Fundamental Frequency	Field Strength	of Fundamental
(MHz)	Peak Limit (dBµV/m)@3 m	Average Limit (dBµV/m)@3 m
315	95.62	75.62
433.92	100.83	80.83
Fundamental Frequency	Field Strength of S	Spurious emissions
(MHz)	Peak Limit (dBµV/m)@3 m	Average Limit (dBµV/m)@3 m
315	75.62	55.62
433.92	80.83	60.83

Note 1: According to ANSI C63.10:2013 section 7.6.2, the effective limit at the frequency of interest is found by linearly interpolating using the familiar slope-intercept formula, y = mx + b, rewritten as in Equation:

 $\text{Limit}[\mu V/m] = \text{Lim}_{\text{lower}} + \Delta F[(\text{Lim}_{\text{upper}} - \text{Lim}_{\text{lower}}) / (f_{\text{upper}} - f_{\text{lower}})]$

For fundamental frequency 315 MHz:

Average Limit $(\mu V/m) = 3750 + (315 - 260) * [(12500 - 3750) / (470 - 260)] = 6041.666667$. Average Limit $(dB\mu V/m) = 20log[Average Limit (\mu V/m)] = 20log(6041.666667) = 75.62$.

Note 2: According to § 15.35(b):

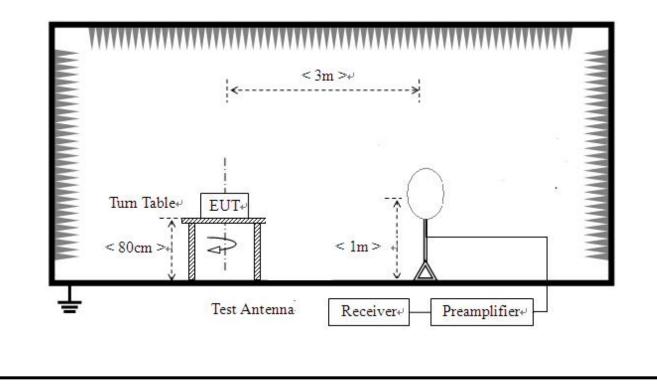
Peak Limit $(dB\mu V/m) =$ Average Limit $(dB\mu V/m) + 20 dB = 75.62 + 20 = 95.62$.

2.4.2. Measuring Instruments

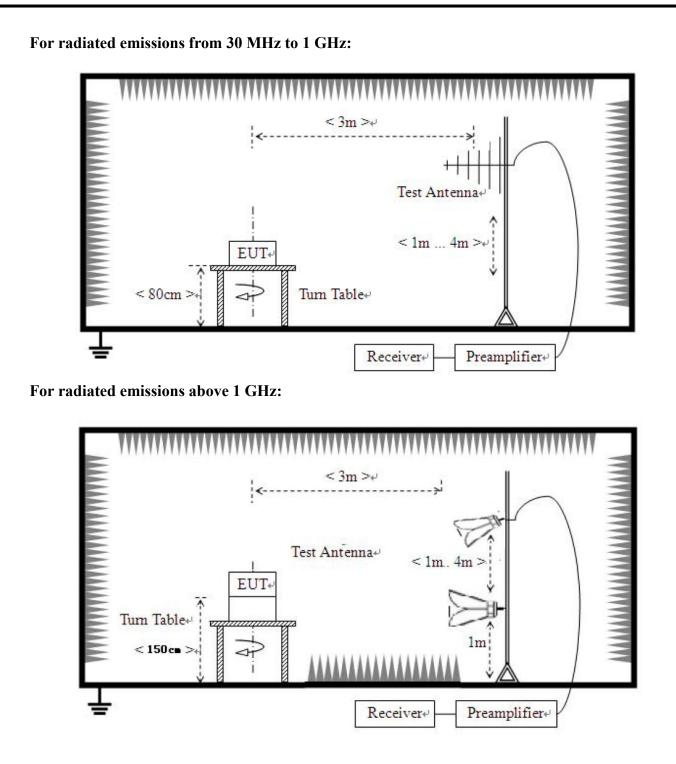
The measuring equipment is listed in the section 3 of this test report.

2.4.3. Test Setup

For radiated emissions from 9 kHz to 30 MHz:







2.4.4. Test Procedures

- The EUT was placed on the top of a rotating table 0.8 m (below 1 GHz)/1.5 m (above 1 GHz) above the ground at a 3 meters chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- 2. The EUT was set 3 meters from the receiving antenna, which was mounted on thetop of a variable height antenna tower.



- 3. Height of receiving antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- 5. The measurement receivers was set to peak detect Function and maximum hold trace mode.
- 6. For the radiated emission test above 1 GHz:

Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.

- 7. Repeat above procedures until the measurements for all frequencies are complete, record the results in the test report.
- Note 1: All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.
- Note 2: For 9 kHz to 30 MHz, The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Spectrum Analyzer Setting:

SA Parameters	9 kHz–150 kHz	150 kHz–30 MHz	30 MHz–1 GHz	1 GHz–5 GMz
RBW	200 Hz	9 kHz	120 kHz	1 MHz
VBW	620 Hz	30 kHz	300 kHz	3 MHz
Sweep Time	Auto	Auto	Auto	Auto
Detector	Peak/QP	Peak/QP	Peak/QP	Peak
Trace Mode	Max Hold	Max Hold	Max Hold	Max Hold



NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dBµV/m]	Trace	Height [cm]	Angle [°]	Polarity
1	315.0	72.22	13.47	95.62	23.40	РК	100	101	Horizontal
2	315.0	52.09	13.47	95.62	43.53	РК	100	160	Vertical
3	433.92	71.14	17.64	100.83	29.69	РК	100	244	Horizontal
4	433.92	64.98	17.64	100.83	35.85	РК	100	51	Vertical
NO.	Freq. [MHz]	Level [dBµV/m]	DC Factor [dB]	Limit [dBµV/m]	Margin [dBµV/m]	Trace	Height [cm]	Angle [°]	Polarity
1	315.0	66.20	-6.02	75.62	9.42	AV	100	101	Horizontal
2	315.0	46.07	-6.02	75.62	29.55	AV	100	160	Vertical
3	433.92	65.12	-6.02	80.83	15.71	AV	100	244	Horizontal
4	433.92	58.96	-6.02	80.83	21.87	AV	100	51	Vertical

2.4.5. Test Results of Field Strength of Fundamental

Remark:

1. Level = Raw Value + Factor (Antenna Factor + Cable Loss - Preamplifier Factor).

2. Margin = Limit - Level.

3. Average value = Peak value + Duty Cycle Factor (Please to clause 2.3).

4. Only the antenna height (from 1 m to 4 m) at maximum reading are recorded.



2.4.6. Test Results of Field Strength of Spurious emissions

For 30 MHz to 1 GHz:

					vironment:		Temp: 23°C; Humi: 48%; 101 kF 2024.07.17		
Op	perator:	Chui	wang Zhang	g T	est Date:		202	24.07.17	
Tes	st Mode:	315	MHz_TX	Те	st Result:			Pass	
Level(dBµVm)	150 140 130 120 110 90 80 70 60 50 40					Ĵ.			
	-50 L 30M QP Lin • QP Del		100M		iency[Hz]				1G
NO.	30M QP Lin				ency[Hz] Margin [dBμV/m]	Trace	Height [cm]	Angle [°]	Polarity
NO.	30M QP Lin • QP Del Freq.	Level	Factor	Frequ Limit	Margin	Trace		-	Polarity
	GP Lin • QP Lin • QP Del Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Frequ Limit [dBµV/m]	Margin [dBµV/m]		[cm]	[°]	Polarity Horizontal
1	30M — QP Lin • QP Del Freq. [MHz] 53.09	Level [dBµV/m] 21.12	Factor [dB] 9.10	Frequ Limit [dBµV/m] 40.00	Margin [dBμV/m] 18.88	РК	[cm] 100	[°] 308	Polarity Horizontal Horizontal
1 2	30M QP Lin • QP Del Freq. [MHz] 53.09 90.53	Level [dBμV/m] 21.12 29.52	Factor [dB] 9.10 10.64	Frequ Limit [dBµV/m] 40.00 43.50	Margin [dBµV/m] 18.88 13.98	PK PK	[cm] 100 100	[°] 308 278	Polarity Horizonta Horizonta Horizonta
1 2 3	30M 	Level [dBμV/m] 21.12 29.52 28.48	Factor [dB] 9.10 10.64 10.85	Frequ Limit [dBµV/m] 40.00 43.50 43.50	Margin [dBµV/m] 18.88 13.98 15.02	РК РК РК	[cm] 100 100 100	[°] 308 278 335	Polarity Horizontal Horizontal Horizontal
1 2 3 4	30M 	Level [dBµV/m] 21.12 29.52 28.48 71.76	Factor [dB] 9.10 10.64 10.85 13.47	Frequ Limit [dBµV/m] 40.00 43.50 43.50 95.62	Margin [dBµV/m] 18.88 13.98 15.02 23.86	РК РК РК РК	[cm] 100 100 100 100	[°] 308 278 335 103	Polarity Horizontal Horizontal Horizontal Horizontal
1 2 3 4 5	30M QP Lin QP Del Freq. [MHz] 53.09 90.53 129.24 315.00 630.00	Level [dBμV/m] 21.12 29.52 28.48 71.76 26.20	Factor [dB] 9.10 10.64 10.85 13.47 21.21 10.21	Frequ Limit [dBµV/m] 40.00 43.50 43.50 95.62 75.62	Margin [dBµV/m] 18.88 13.98 15.02 23.86 49.42	РК РК РК РК РК	[cm] 100 100 100 100 100	[°] 308 278 335 103 87	
1 2 3 4 5 6	зом — OP Lin • OP Del Freq. [MHz] 53.09 90.53 129.24 315.00 630.00 945.00 Freq.	Level [dBμV/m] 21.12 29.52 28.48 71.76 26.20 44.05 Level	Factor [dB] 9.10 10.64 10.85 13.47 21.21 25.20 DC Factor	Frequ Limit [dBµV/m] 40.00 43.50 43.50 95.62 75.62 75.62 Limit	Margin [dBµV/m] 18.88 13.98 15.02 23.86 49.42 31.57 Margin	РК РК РК РК РК РК	[cm] 100 100 100 100 100 100 Height	[°] 308 278 335 103 87 223 Angle	Polarity Horizontal Horizontal Horizontal Horizontal Horizontal
1 2 3 4 5 6 NO.	30M 	Level [dBµV/m] 21.12 29.52 28.48 71.76 26.20 44.05 Level [dBµV/m]	Factor [dB] 9.10 10.64 10.85 13.47 21.21 25.20 DC Factor [dB]	Frequ Limit [dBµV/m] 40.00 43.50 43.50 95.62 75.62 75.62 Limit [dBµV/m]	Margin [dBμV/m] 18.88 13.98 15.02 23.86 49.42 31.57 Margin [dBμV/m]	PK PK PK PK PK PK Trace	[cm] 100 100 100 100 100 100 Height [cm]	[°] 308 278 335 103 87 223 Angle [°]	Polarity Horizontal Horizontal Horizontal Horizontal Horizontal Polarity

- 1. Level = Raw Value + Factor (Antenna Factor + Cable Loss Preamplifier Factor).
- 2. Margin = Limit Level.
- 3. Average value = Peak value + Duty Cycle Factor (Please to clause 2.3).
- 4. Only the antenna height (from 1 m to 4 m) at maximum reading are recorded.



T	est site:	5 M ane	choic chan		Environment: Test Date:		Temp: 23°C; Humi: 48%; 101 2024.07.17			
0	perator:	Chui	wang Zhan	ig T	Test Date: Test Result:					
Te	st Mode:	315	MHz_TX	Te	est Result:			Pass		
لمحاورطهایلاسا	150 140 130 120 110 100 90 80 70 50 40 30 -10 -20 -30 -40 -50	-								
	30M QP Lim • QP Det		100		iency[Hz]				1G	
NO.	30M QP Lim				Margin [dBµV/m]	Trace	Height [cm]	Angle [°]	16 Polarity	
NO.	30M — QP Lim • QP Det	Level	Factor	Frequ Limit	Margin	Trace PK	•	-		
	30M — QP Lim • QP Det Freq. [MHz]	Level [dBµV/m] 31.57 30.47	Factor [dB]	Frequ Limit [dBµV/m]	Margin [dBµV/m]		[cm]	[°]	Polarity	
1	30M — QP Lim • QP Det Freq. [MHz] 41.74	Level [dBµV/m] 31.57	Factor [dB] 14.16	Frequ Limit [dBµV/m] 40.00	Margin [dBµV/m] 8.43	PK	[cm] 100	[°] 175	Polarity Vertical	
1 2	30M QP Lim • QP Det Freq. [MHz] 41.74 90.44	Level [dBµV/m] 31.57 30.47	Factor [dB] 14.16 10.63	Frequ Limit [dBµV/m] 40.00 43.50	Margin [dBµV/m] 8.43 13.03	PK PK	[cm] 100 100	[°] 175 252	Polarity Vertical Vertical	
1 2 3	30M 	Level [dBµV/m] 31.57 30.47 33.30	Factor [dB] 14.16 10.63 11.03	Frequ Limit [dBµV/m] 40.00 43.50 43.50	Margin [dBµV/m] 8.43 13.03 10.20	PK PK PK	[cm] 100 100 100	[°] 175 252 128	Polarity Vertical Vertical Vertical	
1 2 3 4	30M QP Lim • QP Det Freq. [MHz] 41.74 90.44 104.31 315.00	Level [dBµV/m] 31.57 30.47 33.30 48.58	Factor [dB] 14.16 10.63 11.03 13.47	Frequ Limit [dBµV/m] 40.00 43.50 43.50 95.62	Margin [dBµV/m] 8.43 13.03 10.20 47.04	РК РК РК РК	[cm] 100 100 100 100	[°] 175 252 128 41	Polarity Vertical Vertical Vertical Vertical	
1 2 3 4 5 6	30M 	Level [dBµV/m] 31.57 30.47 33.30 48.58 22.78	Factor [dB] 14.16 10.63 11.03 13.47 21.21	Frequ Limit [dBµV/m] 40.00 43.50 43.50 95.62 75.62	Margin [dBµV/m] 8.43 13.03 10.20 47.04 52.84	PK PK PK PK PK	[cm] 100 100 100 100 100	[°] 175 252 128 41 18	Polarity Vertical Vertical Vertical Vertical Vertical	
1 2 3 4 5 6	30M 	Level [dBµV/m] 31.57 30.47 33.30 48.58 22.78 37.65 Level	Factor [dB] 14.16 10.63 11.03 13.47 21.21 25.20 DC Factor	Frequ Limit [dBµV/m] 40.00 43.50 43.50 95.62 75.62 75.62 75.62 Limit	Margin [dBμV/m] 8.43 13.03 10.20 47.04 52.84 37.97 Margin	РК РК РК РК РК РК	[cm] 100 100 100 100 100 100 Height	[°] 175 252 128 41 18 1 Angle	Polarity Vertical Vertical Vertical Vertical Vertical Vertical	
1 2 3 4 5 6 NO.	30M 	Level [dBµV/m] 31.57 30.47 33.30 48.58 22.78 37.65 Level [dBµV/m]	Factor [dB] 14.16 10.63 11.03 13.47 21.21 25.20 DC Factor [dB]	Frequ Limit [dBµV/m] 40.00 43.50 43.50 95.62 75.62 75.62 75.62 Limit [dBµV/m]	Margin [dBµV/m] 8.43 13.03 10.20 47.04 52.84 37.97 Margin [dBµV/m]	PK PK PK PK PK Trace	[cm] 100 100 100 100 100 100 Height [cm]	[°] 175 252 128 41 18 1 Angle [°]	Polarity Vertical Vertical Vertical Vertical Vertical Vertical Polarity	

- 1. Level = Raw Value + Factor (Antenna Factor + Cable Loss Preamplifier Factor).
- 2. Margin = Limit Level.
- **3**. Average value = Peak value + Duty Cycle Factor (Please to clause 2.3).
- 4. Only the antenna height (from 1 m to 4 m) at maximum reading are recorded.



Т	est site:	5 M and	echoic cham	iber En	vironment:	Iem	1p. 25 C, 11	uiiii. 40	%; 101 kPa
0	perator:	Chui	wang Zhang	g T	est Date:		2024.07.17 Pass		
Te	st Mode:	433.	92 MHz_TX	K Te	st Result:			Pass	
Leve[dBµV/m]	150 140 130 120 110 100 90 80 70 60 50 40 30 20 -10 -20 -30	ule un Marca		<u> </u>					
	-40 -50 30M 		100M		ency[Hz]				16
NO.	-50 30M QP Lin				ency[Hz] Margin [dBμV/m]	Trace	Height [cm]	Angle [°]	Polarity
NO.	-50 30M - QP Lin • QP Del	Level	Factor	Frequ Limit	Margin	Trace	-	Angle [°] 121	
	-50 30M - QP Lin • QP Det Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Frequ Limit [dBµV/m]	Margin [dBµV/m]		[cm]	[°]	Polarity
1	-50 30M - QP Len • QP Den Freq. [MHz] 43.29	Level [dBµV/m] 22.54	Factor [dB] 13.47	Frequ Limit [dBµV/m] 40.00	Margin [dBµV/m] 17.46	PK	[cm] 100	[°] 121	Polarity Horizontal
1 2	-50 30M - QP Lin • QP Del Freq. [MHz] 43.29 90.53	Level [dBµV/m] 22.54 28.28	Factor [dB] 13.47 10.64	Frequ Limit [dBµV/m] 40.00 43.50	Margin [dBµV/m] 17.46 15.22	PK PK	[cm] 100 100	[°] 121 24	Polarity Horizontal Horizontal
1 2 3	-50 30M - QP Lin • QP Dec Freq. [MHz] 43.29 90.53 104.31	Level [dBμV/m] 22.54 28.28 25.71	Factor [dB] 13.47 10.64 11.03 10.03	Frequ Limit [dBµV/m] 40.00 43.50 43.50	Margin [dBμV/m] 17.46 15.22 17.79	PK PK PK	[cm] 100 100 100	[°] 121 24 284	Polarity Horizontal Horizontal Horizontal
1 2 3 4	-50 30M - QP Lin - QP Del Freq. [MHz] 43.29 90.53 104.31 129.14	Level [dBµV/m] 22.54 28.28 25.71 29.23	Factor [dB] 13.47 10.64 11.03 10.85	Frequ Limit [dBµV/m] 40.00 43.50 43.50 43.50	Margin [dBµV/m] 17.46 15.22 17.79 14.27	РК РК РК РК	[cm] 100 100 100 100	[°] 121 24 284 160	Polarity Horizontal Horizontal Horizontal Horizontal
1 2 3 4 5	-50 30M - QP Lin + QP Del Freq. [MHz] 43.29 90.53 104.31 129.14 433.92	Level [dBμV/m] 22.54 28.28 25.71 29.23 71.97	Factor [dB] 13.47 10.64 11.03 10.85 17.64 17.64	Frequ Limit [dBµV/m] 40.00 43.50 43.50 43.50 100.83	Margin [dBµV/m] 17.46 15.22 17.79 14.27 28.86	РК РК РК РК РК	[cm] 100 100 100 100 100	[°] 121 24 284 160 105	Polarity Horizontal Horizontal Horizontal Horizontal Horizontal
1 2 3 4 5 6	-50 30M - QP Lin • QP Del Freq. [MHz] 43.29 90.53 104.31 129.14 433.92 867.84 Freq.	Level [dBμV/m] 22.54 28.28 25.71 29.23 71.97 42.31 Level	Factor [dB] 13.47 10.64 11.03 10.85 17.64 24.29 DC Factor Factor Factor	Freque Limit [dBµV/m] 40.00 43.50 43.50 43.50 100.83 80.83 Limit	Margin [dBµV/m] 17.46 15.22 17.79 14.27 28.86 38.52 Margin	РК РК РК РК РК РК	[cm] 100 100 100 100 100 100 Height	[°] 121 24 284 160 105 105 Angle	Polarity Horizontal Horizontal Horizontal Horizontal Horizontal

- 1. Level = Raw Value + Factor (Antenna Factor + Cable Loss Preamplifier Factor).
- 2. Margin = Limit Level.
- **3**. Average value = Peak value + Duty Cycle Factor (Please to clause 2.3).
- 4. Only the antenna height (from 1 m to 4 m) at maximum reading are recorded.



Т	est site:	5 M and	5 M anechoic chamber		vironment:	Tem	p:23℃;H	umi: 48	%; 101 kP
0	perator:	Chui			2024.07.17 Pass				
Te	st Mode:	433.9	92 MHz_T	X Te	est Result:			Pass	
Leve[[dBµV/m]	150 140 130 120 10 10 90 80 70 60 50 40 20 10 0 10 10 0 20 20 30 40 		10		Jency[Hz]				16
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dBµV/m]	Trace	Height [cm]	Angle [°]	Polarity
NO. 1	-				-	Trace PK	-	-	Polarity Vertical
	[MHz]	$[dB\mu V/m]$	[dB]	[dBµV/m]	[dBµV/m]		[cm]	[°]	
1	[MHz] 41.74	[dBµV/m] 31.25	[dB] 14.16	[dBµV/m] 40.00	[dBµV/m] 8.75	PK	[cm] 100	[°] 72	Vertical
1 2	[MHz] 41.74 90.53	[dBµV/m] 31.25 30.65	[dB] 14.16 10.64	[dBµV/m] 40.00 43.50	[dBµV/m] 8.75 12.85	PK PK	[cm] 100 100	[°] 72 240	Vertical Vertical
1 2 3	[MHz] 41.74 90.53 104.31	[dBµV/m] 31.25 30.65 32.90	[dB] 14.16 10.64 11.03	[dBµV/m] 40.00 43.50 43.50	[dBµV/m] 8.75 12.85 10.60	PK PK PK	[cm] 100 100 100	[°] 72 240 159	Vertical Vertical Vertical
1 2 3 4	[MHz] 41.74 90.53 104.31 129.24	[dBµV/m] 31.25 30.65 32.90 27.81	[dB] 14.16 10.64 11.03 10.85	[dBµV/m] 40.00 43.50 43.50 43.50	[dBµV/m] 8.75 12.85 10.60 15.69	РК РК РК РК	[cm] 100 100 100 100	[°] 72 240 159 352	Vertical Vertical Vertical Vertical
1 2 3 4 5	[MHz] 41.74 90.53 104.31 129.24 433.92	[dBµV/m] 31.25 30.65 32.90 27.81 66.04	[dB] 14.16 10.64 11.03 10.85 17.64	[dBμV/m] 40.00 43.50 43.50 43.50 100.83	[dBµV/m] 8.75 12.85 10.60 15.69 34.79	РК РК РК РК РК	[cm] 100 100 100 100 100	[°] 72 240 159 352 283	Vertical Vertical Vertical Vertical Vertical
1 2 3 4 5 6	[MHz] 41.74 90.53 104.31 129.24 433.92 867.84 Freq.	[dBµV/m] 31.25 30.65 32.90 27.81 66.04 40.90 Level	[dB] 14.16 10.64 11.03 10.85 17.64 24.29 DC Factor	[dBμV/m] 40.00 43.50 43.50 43.50 100.83 80.83 Limit	[dBµV/m] 8.75 12.85 10.60 15.69 34.79 39.93 Margin	РК РК РК РК РК РК	[cm] 100 100 100 100 100 100 Height	[°] 72 240 159 352 283 56 Angle	Vertical Vertical Vertical Vertical Vertical Vertical

2

1. Level = Raw Value + Factor (Antenna Factor + Cable Loss - Preamplifier Factor).

60.83

25.95

AV

100

56

Vertical

2. Margin = Limit - Level.

867.84

34.88

3. Average value = Peak value + Duty Cycle Factor (Please to clause 2.3).

-6.02

4. Only the antenna height (from 1 m to 4 m) at maximum reading are recorded.

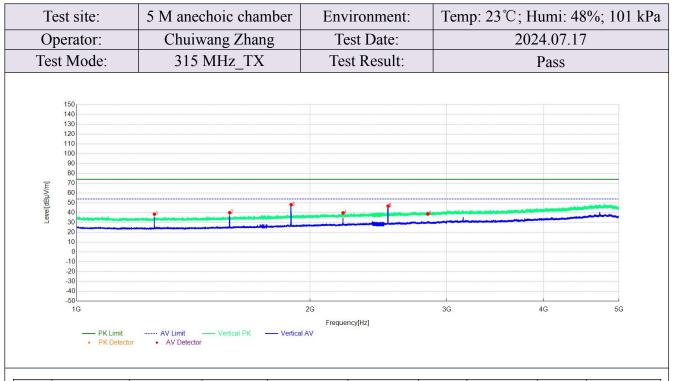


For 1 GHz to 5 GHz:

Test site: Operator:	5 M anec			ironment:		p ,		%; 101 kP	
0	perator:	Chuiw	<u> </u>		est Date:		202	24.07.17	
Tes	st Mode:	315	MHz_TX	Tes	st Result:			Pass	
لالمالالمالي	150 140 130 120 110 100 90 80 70 60 50 40 30 -10 -20 -30 40 -50 1G			26	f	36		46	5G
	PK Limit PK Detect	• AV Limit • AV Detector	- Horizontal PK	Freque — Horizontal AV	ncy[Hz]				
NO.	• PK Detect	• AV Detector	Factor	— Horizontal AV	Margin	Trace	Height	Angle	Polarity
	Freq.	Level [dBµV/m]	Factor [dB]	— Horizontal AV Limit [dBµV/m]	Margin [dBµV/m]		[cm]	[°]	
1	• PK Detect Freq. [MHz] 1260.00	AV Detector Level [dBμV/m] 37.13	Factor [dB] -13.16	— Horizontal AV Limit [dBμV/m] 75.62	Margin [dBμV/m] 38.49	PK	[cm] 150	[°] 71	Horizontal
1 2	 PK Detect Freq. [MHz] 1260.00 1575.00 	Level [dBµV/m] 37.13 38.95	Factor [dB] -13.16 -12.26	— Horizontal AV Limit [dBμV/m] 75.62 74.00	Margin [dBµV/m] 38.49 35.05	PK PK	[cm] 150 150	[°] 71 166	Horizontal Horizontal
1 2 3	 PK Detect Freq. [MHz] 1260.00 1575.00 1890.00 	Level [dBµV/m] 37.13 38.95 43.30	Factor [dB] -13.16 -12.26 -11.16	— Horizontal AV Limit [dBμV/m] 75.62 74.00 75.62	Margin [dBμV/m] 38.49 35.05 32.32	РК РК РК	[cm] 150 150 150	[°] 71 166 71	Horizontal Horizontal Horizontal
1 2 3 4	 PK Detect Freq. [MHz] 1260.00 1575.00 1890.00 2205.00 	Level [dBμV/m] 37.13 38.95 43.30 37.44	Factor [dB] -13.16 -12.26 -11.16 -10.02	— Horizontal AV Limit [dBμV/m] 75.62 74.00 75.62 74.00	Margin [dBμV/m] 38.49 35.05 32.32 36.56	РК РК РК РК	[cm] 150 150 150 150	[°] 71 166 71 260	Horizontal Horizontal Horizontal Horizontal
1 2 3	 PK Detect Freq. [MHz] 1260.00 1575.00 1890.00 2205.00 2520.00 	Level [dBµV/m] 37.13 38.95 43.30 37.44 44.45	Factor [dB] -13.16 -12.26 -11.16 -10.02 -8.79	— Horizontal AV Limit [dBμV/m] 75.62 74.00 75.62 74.00 75.62	Margin [dBμV/m] 38.49 35.05 32.32	РК РК РК	[cm] 150 150 150 150 150 150	[°] 71 166 71 260 260	Horizontal Horizontal Horizontal Horizontal Horizontal
1 2 3 4 5 6	 PK Detect Freq. [MHz] 1260.00 1575.00 1890.00 2205.00 	Level [dBμV/m] 37.13 38.95 43.30 37.44	Factor [dB] -13.16 -12.26 -11.16 -10.02	— Horizontal AV Limit [dBμV/m] 75.62 74.00 75.62 74.00	Margin [dBμV/m] 38.49 35.05 32.32 36.56 31.17	РК РК РК РК РК	[cm] 150 150 150 150	[°] 71 166 71 260	Horizontal Horizontal Horizontal
1 2 3 4 5 6	 PK Detect Freq. [MHz] 1260.00 1575.00 1890.00 2205.00 2520.00 2520.00 2835.00 Freq. 	Level [dBµV/m] 37.13 38.95 43.30 37.44 44.45 38.57 Level	Factor [dB] -13.16 -12.26 -11.16 -10.02 -8.79 -7.64 DC Factor	 Horizontal AV Limit [dBμV/m] 75.62 74.00 75.62 74.00 75.62 74.00 75.62 74.00 Limit 	Margin [dBμV/m] 38.49 35.05 32.32 36.56 31.17 35.43 Margin	РК РК РК РК РК РК	[cm] 150 150 150 150 150 150 150 150 Height	[°] 71 166 71 260 260 360 Angle	Horizontal Horizontal Horizontal Horizontal Horizontal Polarity
1 2 3 4 5 6 NO.	 PK Detect Freq. [MHz] 1260.00 1575.00 1890.00 2205.00 2520.00 2835.00 Freq. [MHz] 	Level [dBµV/m] 37.13 38.95 43.30 37.44 44.45 38.57 Level [dBµV/m]	Factor [dB] -13.16 -12.26 -11.16 -10.02 -8.79 -7.64 DC Factor [dB]	— Horizontal AV Limit [dBμV/m] 75.62 74.00 75.62 74.00 75.62 74.00 15.62 74.00 Limit [dBμV/m]	Margin [dBμV/m] 38.49 35.05 32.32 36.56 31.17 35.43 Margin [dBμV/m]	PK PK PK PK PK PK Trace	[cm] 150 150 150 150 150 150 150 Height [cm]	[°] 71 166 71 260 260 360 Angle [°]	Horizontal Horizontal Horizontal Horizontal Horizontal Polarity Horizontal
1 2 3 4 5 6 NO.	 PK Detect Freq. [MHz] 1260.00 1575.00 1890.00 2205.00 2520.00 2835.00 Freq. [MHz] 1260.00 	Level [dBµV/m] 37.13 38.95 43.30 37.44 44.45 38.57 Level [dBµV/m] 31.11 31.11	Factor [dB] -13.16 -12.26 -11.16 -10.02 -8.79 -7.64 DC Factor [dB] -6.02	 Horizontal AV Limit [dBμV/m] 75.62 74.00 75.62 74.00 75.62 74.00 15.62 74.00 Limit [dBμV/m] 55.62 	Margin [dBµV/m] 38.49 35.05 32.32 36.56 31.17 35.43 Margin [dBµV/m] 24.51	PK PK PK PK PK PK Trace	[cm] 150 150 150 150 150 150 Height [cm] 150	[°] 71 166 71 260 260 360 Angle [°] 71	Horizontal Horizontal Horizontal Horizontal Horizontal
2 3 4 5 6 NO. 1 2	 PK Detect Freq. [MHz] 1260.00 1575.00 1890.00 2205.00 2520.00 2520.00 2835.00 Freq. [MHz] 1260.00 1575.00 	Level [dBµV/m] 37.13 38.95 43.30 37.44 44.45 38.57 Level [dBµV/m] 31.11 32.93	Factor [dB] -13.16 -12.26 -11.16 -10.02 -8.79 -7.64 DC Factor [dB] -6.02 -6.02	 Horizontal AV Limit [dBμV/m] 75.62 74.00 75.62 74.00 75.62 74.00 15.62 74.00 15.62 56.2 55.62 54.00 	Margin [dBµV/m] 38.49 35.05 32.32 36.56 31.17 35.43 Margin [dBµV/m] 24.51 21.07	PK PK PK PK PK Trace AV AV	[cm] 150 150 150 150 150 150 Height [cm] 150 150 150	[°] 71 166 71 260 260 360 Angle [°] 71 166	Horizontal Horizontal Horizontal Horizontal Horizontal Polarity Horizontal Horizontal
1 2 3 4 5 6 NO. 1 2 3	 PK Detect Freq. [MHz] 1260.00 1575.00 1890.00 2205.00 2520.00 2835.00 Freq. [MHz] 1260.00 1575.00 1890.00 	Level [dBμV/m] 37.13 38.95 43.30 37.44 44.45 38.57 Level [dBμV/m] 31.11 32.93 37.28 37.28	Factor [dB] -13.16 -12.26 -11.16 -10.02 -8.79 -7.64 DC Factor [dB] -6.02 -6.02 -6.02	 Horizontal AV Limit [dBμV/m] 75.62 74.00 75.62 74.00 75.62 74.00 75.62 74.00 15.62 54.00 55.62 54.00 55.62 	Margin [dBμV/m] 38.49 35.05 32.32 36.56 31.17 35.43 Margin [dBμV/m] 24.51 21.07 18.34	PK PK PK PK PK Trace AV AV AV	[cm] 150 150 150 150 150 150 Height [cm] 150 150 150 150	[°] 71 166 71 260 260 360 Angle [°] 71 166 71	Horizontal Horizontal Horizontal Horizontal Horizontal Polarity Horizontal Horizontal Horizontal

- 1. Level = Raw Value + Factor (Antenna Factor + Cable Loss Preamplifier Factor).
- 2. Margin = Limit Level.
- **3**. Average value = Peak value + Duty Cycle Factor (Please to clause 2.3).
- 4. Only the antenna height (from 1 m to 4 m) at maximum reading are recorded.





NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dBµV/m]	Trace	Height [cm]	Angle [°]	Polarity
1	1260.00	38.57	-13.16	75.62	37.05	РК	150	282	Vertical
2	1575.00	40.03	-12.26	74.00	33.97	РК	150	266	Vertical
3	1890.00	48.18	-11.16	75.62	27.44	РК	150	249	Vertical
4	2205.00	39.79	-10.02	74.00	34.21	РК	150	290	Vertical
5	2520.00	46.72	-8.79	75.62	28.90	РК	150	80	Vertical
6	2835.00	38.64	-7.64	74.00	35.36	РК	150	314	Vertical
NO.	Freq. [MHz]	Level [dBµV/m]	DC Factor [dB]	Limit [dBµV/m]	Margin [dBµV/m]	Trace	Height [cm]	Angle [°]	Polarity
1	1260.00	32.55	-6.02	55.62	23.07	AV	150	282	Vertical
2	1575.00	34.01	-6.02	54.00	19.99	AV	150	266	Vertical
3	1890.00	42.16	-6.02	55.62	13.46	AV	150	249	Vertical
4	2205.00	33.77	-6.02	54.00	20.23	AV	150	290	Vertical
5	2520.00	40.70	-6.02	55.62	14.92	AV	150	80	Vertical
6	2835.00	32.62	-6.02	54.00	21.38	AV	150	314	Vertical

1. Level = Raw Value + Factor (Antenna Factor + Cable Loss - Preamplifier Factor).

- 2. Margin = Limit Level.
- **3**. Average value = Peak value + Duty Cycle Factor (Please to clause 2.3).
- 4. Only the antenna height (from 1 m to 4 m) at maximum reading are recorded.



	Test site: 5 M anechoic chamber		nber Env	vironment:	Tem	Temp: 23°C; Humi: 48%; 101 kPa 2024.07.17							
0	perator:	Chuiw	8 8		est Date:					2024.07.17 Pass			
Tes	st Mode:	433.92	2 MHz_TZ	X Te	st Result:			Pass					
Leve[dBµV/m]	150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 10 -0 -10 -0 -0 -10 -0 -10 -0 -10 -0 -0 -0 -0 -0 -0 -0 -0 -0 -	AV Limit	- Horizontal PK	2G Freque — Horizontal AV	ency[Hz]	36		46	56				
	 PK Detect 	 AV Detector 											
NO.	• PK Detec Freq. [MHz]	Level	Factor [dB]	Limit [dBuV/m]	Margin [dBuV/m]	Trace	Height [cm]	Angle [°]	Polarity				
	Freq. [MHz]	Level [dBµV/m]	[dB]	[dBµV/m]	[dBµV/m]		[cm]	[°]					
NO.	Freq.	Level [dBµV/m] 43.58	[dB] -13.16		[dBµV/m] 30.42	Trace PK PK	-	-					
1	Freq. [MHz] 1301.76	Level [dBµV/m]	[dB]	[dBµV/m] 74.00	[dBµV/m]	PK	[cm] 150	[°] 276	Horizontal Horizontal				
1 2	Freq. [MHz] 1301.76 1735.68	Level [dBµV/m] 43.58 44.10	[dB] -13.16 -11.73	[dBµV/m] 74.00 80.83	[dBµV/m] 30.42 36.73	PK PK	[cm] 150 150	[°] 276 276	Horizontal				
1 2 3	Freq. [MHz] 1301.76 1735.68 2169.60	Level [dBµV/m] 43.58 44.10 43.03	[dB] -13.16 -11.73 -10.11	[dBµV/m] 74.00 80.83 80.83	[dBµV/m] 30.42 36.73 37.80	PK PK PK	[cm] 150 150 150	[°] 276 276 300	Horizontal Horizontal Horizontal				
1 2 3 4	Freq. [MHz] 1301.76 1735.68 2169.60 2603.52	Level [dBµV/m] 43.58 44.10 43.03 46.10	[dB] -13.16 -11.73 -10.11 -8.69	[dBµV/m] 74.00 80.83 80.83 80.83	[dBµV/m] 30.42 36.73 37.80 34.73	PK PK PK PK	[cm] 150 150 150 150	[°] 276 276 300 174	Horizontal Horizontal Horizontal Horizontal				
1 2 3 4 5 6	Freq. [MHz] 1301.76 1735.68 2169.60 2603.52 3037.44	Level [dBµV/m] 43.58 44.10 43.03 46.10 43.99	[dB] -13.16 -11.73 -10.11 -8.69 -6.23	[dBµV/m] 74.00 80.83 80.83 80.83 80.83 80.83	[dBµV/m] 30.42 36.73 37.80 34.73 36.84	PK PK PK PK PK	[cm] 150 150 150 150 150 150	[°] 276 276 300 174 319	Horizontal Horizontal Horizontal Horizontal Horizontal				
1 2 3 4 5 6	Freq. [MHz] 1301.76 1735.68 2169.60 2603.52 3037.44 3471.36 Freq.	Level [dBµV/m] 43.58 44.10 43.03 46.10 43.99 44.38 Level	[dB] -13.16 -11.73 -10.11 -8.69 -6.23 -5.72 DC Factor	[dBμV/m] 74.00 80.83 80.83 80.83 80.83 80.83 80.83 Limit	[dBµV/m] 30.42 36.73 37.80 34.73 36.84 36.45 Margin	РК РК РК РК РК РК	[cm] 150 150 150 150 150 150 150 Height	[°] 276 276 300 174 319 61 Angle	Horizontal Horizontal Horizontal Horizontal Horizontal Polarity				
1 2 3 4 5 6 NO.	Freq. [MHz] 1301.76 1735.68 2169.60 2603.52 3037.44 3471.36 Freq. [MHz]	Level [dBµV/m] 43.58 44.10 43.03 46.10 43.99 44.38 Level [dBµV/m]	[dB] -13.16 -11.73 -10.11 -8.69 -6.23 -5.72 DC Factor [dB]	[dBµV/m] 74.00 80.83 80.83 80.83 80.83 80.83 Limit [dBµV/m]	[dBµV/m] 30.42 36.73 37.80 34.73 36.84 36.45 Margin [dBµV/m]	PK PK PK PK PK Trace	[cm] 150 150 150 150 150 150 Height [cm]	[°] 276 276 300 174 319 61 Angle [°]	Horizontal Horizontal Horizontal Horizontal Horizontal Polarity Horizontal				
1 2 3 4 5 6 NO.	Freq. [MHz] 1301.76 1735.68 2169.60 2603.52 3037.44 3471.36 Freq. [MHz] 1301.76	Level [dBµV/m] 43.58 44.10 43.03 46.10 43.99 44.38 Level [dBµV/m] 37.56	[dB] -13.16 -11.73 -10.11 -8.69 -6.23 -5.72 DC Factor [dB] -6.02	[dBµV/m] 74.00 80.83 80.83 80.83 80.83 80.83 Limit [dBµV/m] 54.00	[dBμV/m] 30.42 36.73 37.80 34.73 36.84 36.45 Margin [dBμV/m] 16.44	PK PK PK PK PK Trace	[cm] 150 150 150 150 150 150 Height [cm] 150	[°] 276 276 300 174 319 61 Angle [°] 276	Horizontal Horizontal Horizontal Horizontal Horizontal Polarity Horizontal Horizontal				
2 3 4 5 6 NO. 1 2	Freq. [MHz] 1301.76 1735.68 2169.60 2603.52 3037.44 3471.36 Freq. [MHz] 1301.76 1735.68	Level [dBµV/m] 43.58 44.10 43.03 46.10 43.99 44.38 Level [dBµV/m] 37.56 38.08	[dB] -13.16 -11.73 -10.11 -8.69 -6.23 -5.72 DC Factor [dB] -6.02 -6.02	[dBμV/m] 74.00 80.83 80.83 80.83 80.83 80.83 Limit [dBμV/m] 54.00 60.83	[dBμV/m] 30.42 36.73 37.80 34.73 36.84 36.45 Margin [dBμV/m] 16.44 22.75	PK PK PK PK PK PK Trace	[cm] 150 150 150 150 150 150 Height [cm] 150 150 150	[°] 276 276 300 174 319 61 Angle [°] 276 276	Horizontal Horizontal Horizontal Horizontal Horizontal				
1 2 3 4 5 6 NO. 1 2 3	Freq. [MHz] 1301.76 1735.68 2169.60 2603.52 3037.44 3471.36 Freq. [MHz] 1301.76 1735.68 2169.60	Level [dBµV/m] 43.58 44.10 43.03 46.10 43.99 44.38 Level [dBµV/m] 37.56 38.08 37.01	[dB] -13.16 -11.73 -10.11 -8.69 -6.23 -5.72 DC Factor [dB] -6.02 -6.02 -6.02	[dBμV/m] 74.00 80.83 80.83 80.83 80.83 80.83 Limit [dBμV/m] 54.00 60.83 60.83	[dBμV/m] 30.42 36.73 37.80 34.73 36.84 36.45 Margin [dBμV/m] 16.44 22.75 23.82	PK PK PK PK PK Trace AV AV	[cm] 150 150 150 150 150 150 Height [cm] 150 150 150 150	[°] 276 276 300 174 319 61 Angle [°] 276 276 276 300	Horizontal Horizontal Horizontal Horizontal Horizontal Polarity Horizontal Horizontal Horizontal				

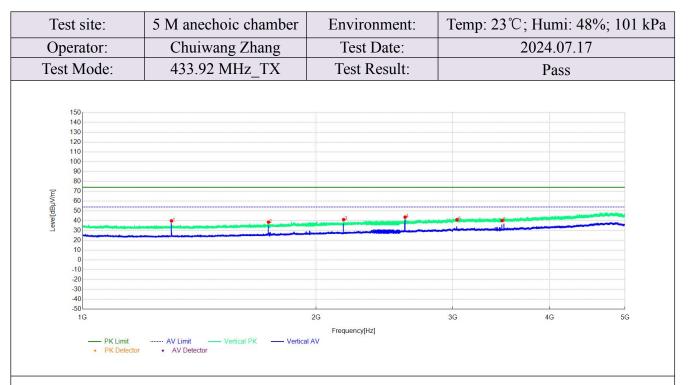
1. Level = Raw Value + Factor (Antenna Factor + Cable Loss - Preamplifier Factor).

2. Margin = Limit - Level.

3. Average value = Peak value + Duty Cycle Factor (Please to clause 2.3).

4. Only the antenna height (from 1 m to 4 m) at maximum reading are recorded.





NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dBµV/m]	Trace	Height [cm]	Angle [°]	Polarity
1	1301.76	39.84	-13.16	74.00	34.16	PK	150	38	Vertical
2	1735.68	38.54	-11.73	80.83	42.29	РК	150	189	Vertical
3	2169.60	41.17	-10.11	80.83	39.66	РК	150	315	Vertical
4	2603.52	43.64	-8.69	80.83	37.19	РК	150	356	Vertical
5	3037.44	41.00	-6.23	80.83	39.83	РК	150	1	Vertical
6	3471.36	40.15	-5.72	80.83	40.68	РК	150	2	Vertical
NO.	Freq. [MHz]	Level [dBµV/m]	DC Factor [dB]	Limit [dBµV/m]	Margin [dBµV/m]	Trace	Height [cm]	Angle [°]	Polarity
1	1301.76	33.82	-6.02	54.00	20.18	AV	150	38	Vertical
2	1735.68	32.52	-6.02	60.83	28.31	AV	150	189	Vertical
3	2169.60	35.15	-6.02	60.83	25.68	AV	150	315	Vertical
4	2603.52	37.62	-6.02	60.83	23.21	AV	150	356	Vertical
5	3037.44	34.98	-6.02	60.83	25.85	AV	150	1	Vertical
6	3471.36	34.13	-6.02	60.83	26.70	AV	150	2	Vertical

1. Level = Raw Value + Factor (Antenna Factor + Cable Loss - Preamplifier Factor).

- 2. Margin = Limit Level.
- **3**. Average value = Peak value + Duty Cycle Factor (Please to clause 2.3).
- 4. Only the antenna height (from 1 m to 4 m) at maximum reading are recorded.



2.5. Duration Time

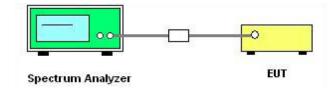
2.5.1. Limit of Duration Time

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

2.5.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.5.3. Test Setup



2.5.4. Test Procedures

- 1. The testing follows the Measurement Procedure of ANSI C63.10-2013 Section 7.4.
- 2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
- 3. Set to the maximum power setting and enable the EUT transmit continuously.
- 4. Use the following spectrum analyzer settings:

Set instrument center frequency to operation frequency, Set the Span = 0 Hz, Set the RBW = 1

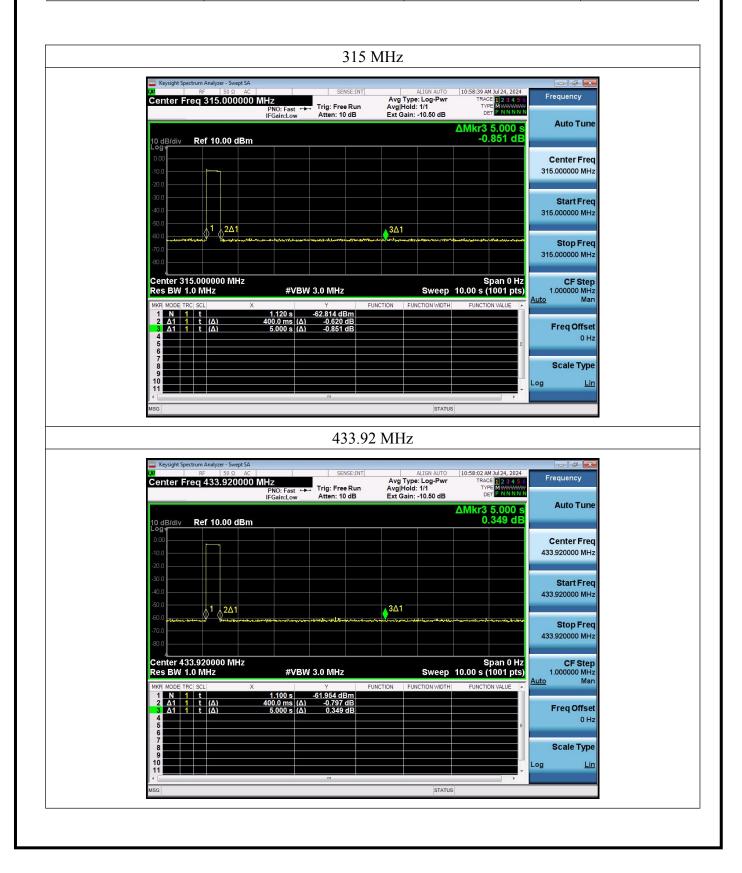
MHz, VBW = 3 MHz, Detector = Peak, Trace mode = Max hold, Sweep time = 10 s.

5. Record the measurement results in the test report.



2.5.5. Test Results of Duration Time

Frequency (MHz)	Pulse On Time (s)	Limit (s)	Result
315	0.4	5	PASS
433.92	0.4	5	PASS





3. List of measuring equipment

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	5 M Anechoic Chamber	Albatross	SAC-5MAC 12.8×6.8×6.4m	A0304210	2022.06.09	2026.06.08
2	EMI Test Receiver	ROHDE&SCHWARZ	ESW26	A180502935	2024.05.23	2025.05.22
3	Loop Antenna	Schwarz beck	HFH2-Z2	A0304220	2022.05.02	2025.05.01
4	Broadband antenna (30 MHz–1 GHz)	R&S	HL562	A0304224	2023.06.08	2026.06.07
5	EMI Horn Ant. (1 GHz–18 GHz)	ETC	MCTD-1209	A150402241	2023.05.16	2026.05.15
6	Spectrum Analyzer	KEYSIGHT	N9030A	A160702554	2024.01.18	2025.01.17



4. Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2013. All the measurement uncertainty value were shown with a coverage K = 2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of AC Power Line Conducted Emission Measurement (150 kHz–30 MHz)

Measuring Uncertainty for a level of	2.8 dB
confidence of 95% ($U = 2Uc(y)$)	2.8 dB

Uncertainty of Radiated Emission Measurement (9 kHz-30 MHz)

Measuring Uncertainty for a level of	2.5 JD
confidence of 95% ($U = 2Uc(y)$)	3.5 dB

Uncertainty of Radiated Emission Measurement (30 MHz–1 GHz)

Measuring Uncertainty for a level of	3.91 dB
confidence of 95% ($U = 2Uc(y)$)	5.91 UB

Uncertainty of Radiated Emission Measurement (1 GHz-18 GHz)

Measuring Uncertainty for a level of	4.5 dD
confidence of 95% ($U = 2Uc(y)$)	4.5 dB

Uncertainty of Radiated Emission Measurement (18 GHz–40 GHz)

Measuring Uncertainty for a level of	4.0.dD
confidence of 95% ($U = 2Uc(y)$)	4.9 dB

Uncertainty of RF Conducted Measurement (9 kHz–40 GHz)

Measuring Uncertainty for a level of	1 2 dD
confidence of 95% ($U = 2Uc(y)$)	1.5 dB

END OF REPORT