

APPLICATION CERTIFICATION FCC Part 15C
On Behalf of
Huzhou HAIDEMU Intelligent Technology Co., LTD.

Remote control

Model No.: HDM-H17

FCC ID: 2AVXD-HDM-H17

Prepared for : Huzhou HAIDEMU Intelligent Technology Co., LTD.
Address : North side of Huyan Road in Liubao Village Lianshi
Town, Nanxun District, Huzhou city, Zhejiang
Province, China.

Prepared by : Shenzhen Accurate Technology Co., Ltd.
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Report Number : ATE20200059
Date of Test : Feb. 17, 2020--Mar. 19, 2020
Date of Report : Mar. 20, 2020

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Test Report Certification

Applicant : Huzhou HAIDEMU Intelligent Technology Co., LTD.
Address : North side of Huyan Road in Liubao Village Lianshi Town, Nanxun District,
Huzhou city, Zhejiang Province, China
Manufacturer : Zhejiang Deqing Shenghong Electric Appliance CO., LTD.
Address : 28 Tianxin East Road, Xinshi Town, Deqing County, Huzhou City,
Zhejiang, Province, China
Product : Remote control
Model No. : HDM-H17
Trade name : 

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.249 ANSI C63.10: 2013

The EUT was tested according to FCC 47CFR 15.249 for compliance to FCC 47CFR 15.249 requirements

The device described above is tested by Shenzhen Accurate Technology Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C Section 15.249 limits. The measurement results are contained in this test report and Shenzhen Accurate Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Shenzhen Accurate Technology Co., Ltd.

Date of Test : Feb. 16, 2020--Mar. 19, 2020
Date of Report : March 20, 2020

Prepared by : 
(Tim Zhang, Engineer)

Approved & Authorized Signer : 
(Sean Liu, Manager)

1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT	:	Remote control
Model No.	:	HDM-H17
Power Supply	:	DC 4.5V(Powered by battery)
Operate Frequency	:	2403-2480MHz
Number of channel	:	39
Modulation mode	:	GFSK
Antenna Gain	:	2.28dBi
Antenna type	:	Integral Antenna
Applicant	:	Huzhou HAIDEMU Intelligent Technology Co., LTD.
Address	:	North side of Huyan Road in Liubao Village Lianshi Town, Nanxun District, Huzhou city, Zhejiang Province, China
Manufacturer	:	Zhejiang Deqing Shenghong Electric Appliance CO., LTD.
Address	:	28 Tianxin East Road, Xinshi Town, Deqing County, Huzhou City, Zhejiang, Province, China
Date of sample received	:	Feb. 16, 2020
Date of Test	:	Feb. 17, 2020--March 19, 2020
Sample No.	:	2000048

1.2.Special Accessory and Auxiliary Equipment

N/A

1.3.Description of Test Facility

EMC Lab	: Recognition of accreditation by Federal Communications Commission (FCC) The Designation Number is CN1189 The Registration Number is 708358
	Listed by Innovation, Science and Economic Development Canada (ISED) The Registration Number is 5077A-2
	Accredited by China National Accreditation Service for Conformity Assessment (CNAS) The Registration Number is CNAS L3193
	Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 4297.01
Name of Firm	: Shenzhen Accurate Technology Co., Ltd.
Site Location	: 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China

1.4.Measurement Uncertainty

Conducted Emission Expanded Uncertainty (Mains ports, 9kHz-30MHz)	= 2.72dB, k=2
Radiated emission expanded uncertainty (9kHz-30MHz)	= 2.66dB, k=2
Radiated emission expanded uncertainty (30MHz-1000MHz)	= 4.28dB, k=2
Radiated emission expanded uncertainty (1G-18GHz)	= 4.98dB, k=2
Radiated emission expanded uncertainty (18G-26.5GHz)	= 5.06dB, k=2

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated dates	Cal. Interval
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan.04, 2020	One Year
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan.04, 2020	One Year
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan.04, 2020	One Year
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan.04, 2020	One Year
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan.04, 2020	One Year
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan.04, 2020	One Year
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan.04, 2020	One Year
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1067	Jan.04, 2020	One Year
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan.04, 2020	One Year
LISN	Schwarzbeck	NSLK8126	8126431	Jan.04, 2020	One Year
Highpass Filter	Wainwright Instruments	WHKX3.6/18 G-10SS	N/A	Jan.04, 2020	One Year
Band Reject Filter	Wainwright Instruments	WRCG2400/2 485-2375/2510 -60/11SS	N/A	Jan.04, 2020	One Year
Conducted Emission Test Software	Rohde&Schwarz	ES-K1	V1.71	N/A	N/A
Radiated Emission Test Software	Farad	EZ-EMC	1.1.4.2	N/A	N/A

3. OPERATION OF EUT DURING TESTING

3.1.Operating Mode

The mode is used: **Transmitting mode**

Low Channel: 2403MHz

Middle Channel: 2442MHz

High Channel: 2480MHz

3.2.Configuration and peripherals

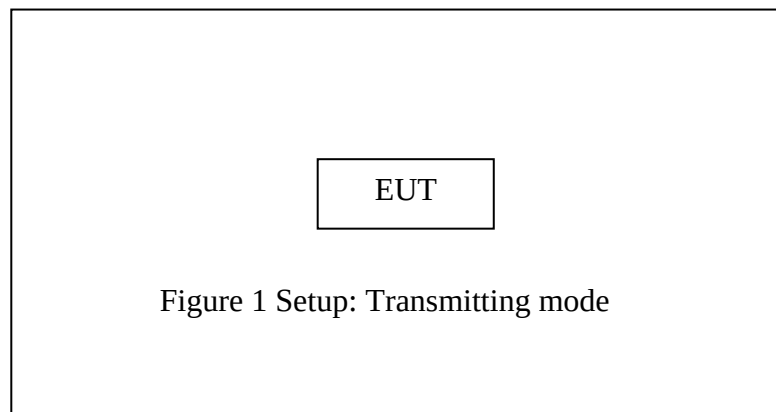


Figure 1 Setup: Transmitting mode

3.3.Carrier Frequency of Channels

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2403	11	2423	21	2444	31	2464
2	2405	12	2425	22	2446	32	2466
3	2407	13	2427	23	2448	33	2468
4	2409	14	2429	24	2450	34	2470
5	2411	15	2431	25	2452	35	2472
6	2413	16	2433	26	2454	36	2474
7	2415	17	2435	27	2456	37	2476
8	2417	18	2437	28	2458	38	2478
9	2419	19	2439	29	2460	39	2480
10	2421	20	2442	30	2462		

4. TEST PROCEDURES AND RESULTS

FCC Rules	Description of Test	Result
Section 15.215(c)	20dB Bandwidth	Compliant
Section 15.249(d)	Band Edge Compliance Test	Compliant
Section 15.205(a), Section 15.209(a), Section 15.249, Section 15.35	Radiated Spurious Emission Test	Compliant
Section 15.207	AC Power Line Conducted Emission Test	N/A
Section 15.203	Antenna Requirement	Compliant

Note: The power supply mode of the EUT is DC 4.5V, According to the FCC standard requirements, conducted emission is not applicable.

5. 20DB BANDWIDTH MEASUREMENT

5.1. Block Diagram of Test Setup



5.2. The Requirement For Section 15.215(c)

The bandwidth of a frequency hopping channel is the 20 dB emission bandwidth, measured with the hopping stopped. The system RF bandwidth is equal to the channel bandwidth multiplied by the number of channels in the hopset. The hopset shall be such that the near-term distribution of frequencies appears random, with sequential hops randomly distributed in both direction and magnitude of change in the hopset while the long-term distribution appears evenly distributed.

5.3. Operating Condition of EUT

5.3.1. Setup the EUT and simulator as shown as Section 5.1.

5.3.2. Turn on the power of all equipment.

5.3.3. Let the EUT work in TX modes measure it. The transmit frequency are 2403, 2442, 2480MHz.

5.4. Test Procedure

5.4.1. Place the EUT on the table and set it in transmitting mode.

5.4.2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

5.4.3. Set RBW of spectrum analyzer to 100 kHz and VBW to 300 kHz, Detector function=peak, Trace=max hold, Sweep=auto.

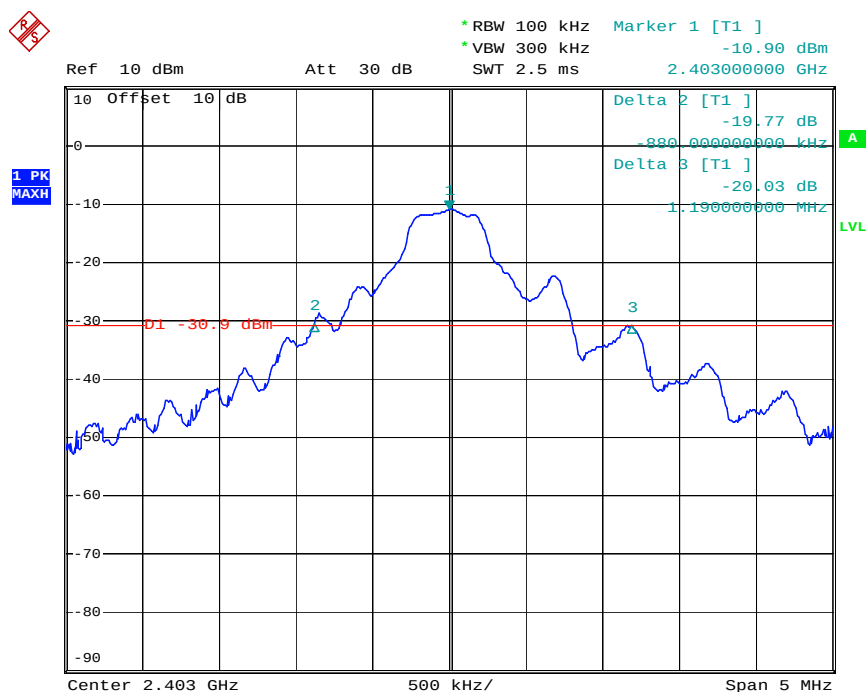
5.4.4. Set the measured low, middle and high frequency and test 20dB bandwidth with spectrum analyzer.

5.5.Test Result

Channel	Frequency(MHz)	20 dB Bandwidth(MHz)
Low	2403	2.07
Middle	2442	2.19
High	2480	2.21

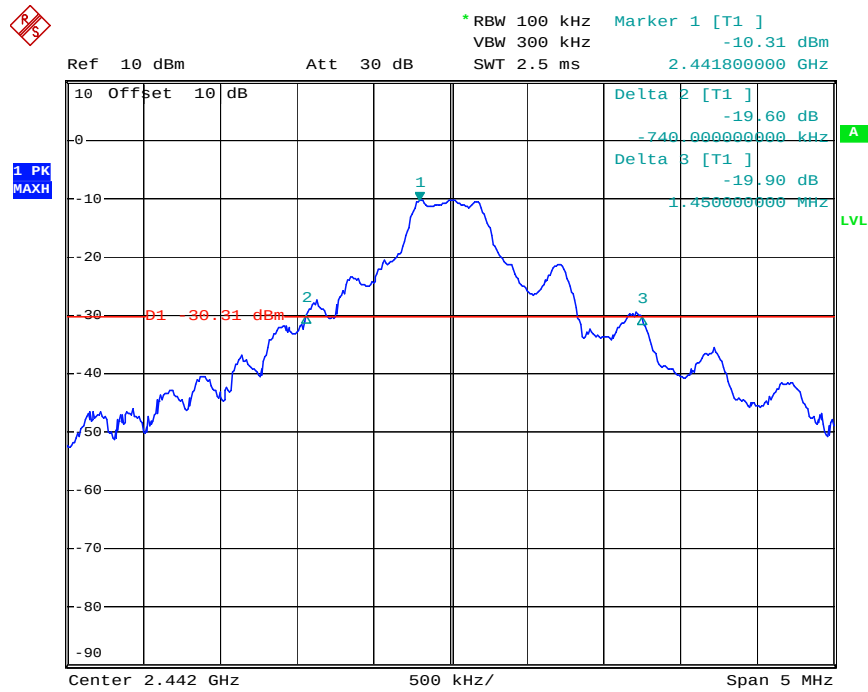
The spectrum analyzer plots are attached as below.

Low channel



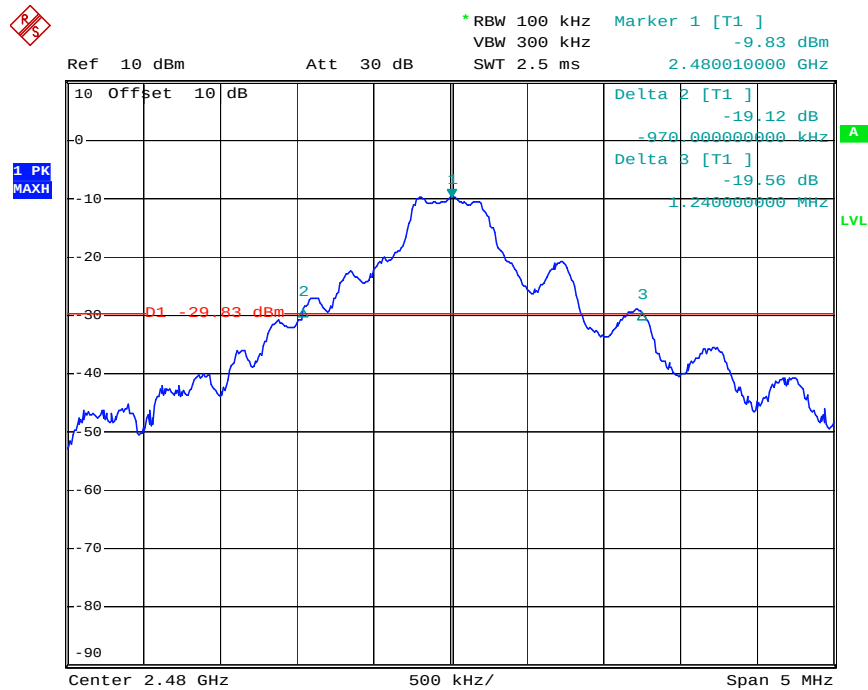
Date: 16.MAR.2020 08:36:51

Middle channel



Date: 16.MAR.2020 08:42:28

High channel

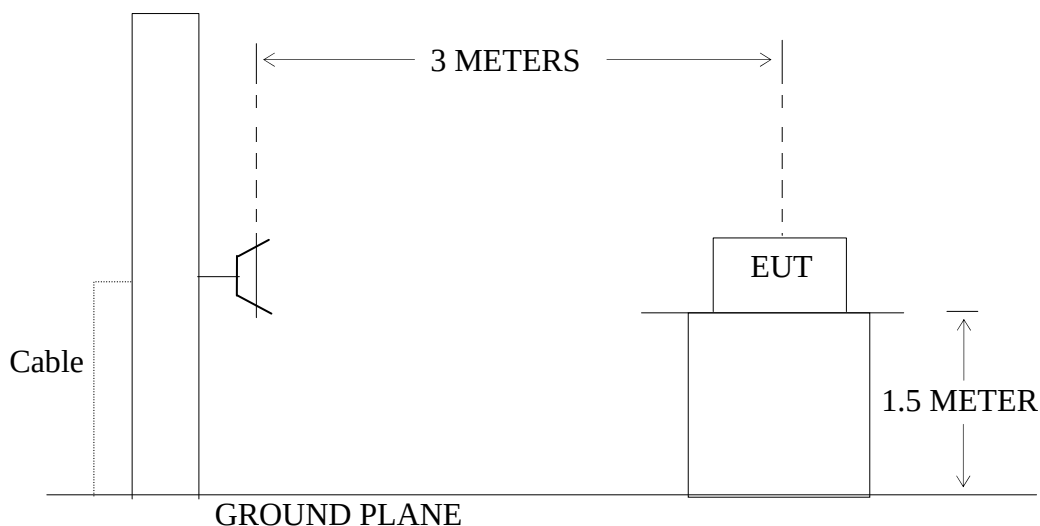


Date: 16.MAR.2020 08:43:56

6. BAND EDGE COMPLIANCE TEST

6.1. Block Diagram of Test Setup

ANTENNA ELEVATION VARIES FROM 1 TO 4 METERS



6.2. The Requirement For Section 15.249

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph A8.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

6.3. EUT Configuration on Measurement

The equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

6.4. Operating Condition of EUT

6.4.1. Setup the EUT and simulator as shown as Section 6.1.

6.4.2. Turn on the power of all equipment.

6.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2403, 2480MHz.

6.5. Test Procedure

Radiate Band Edge:

6.5.1. The EUT is placed on a turntable, which is 1.5m above the ground plane and worked at highest radiated power.

6.5.2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.

6.5.3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.

6.5.4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:

RBW=1MHz, VBW=1MHz

6.5.5. The band edges was measured and recorded.

6.6. Test Result

Job No.: 2020 #18

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Remote control

Mode: TX 2403MHz

Model: HDM-H17

Manufacturer: Huzhou HAIDEMU Intelligent Technology Co., Ltd.

Polarization: Horizontal

Power Source: DC 4.5V

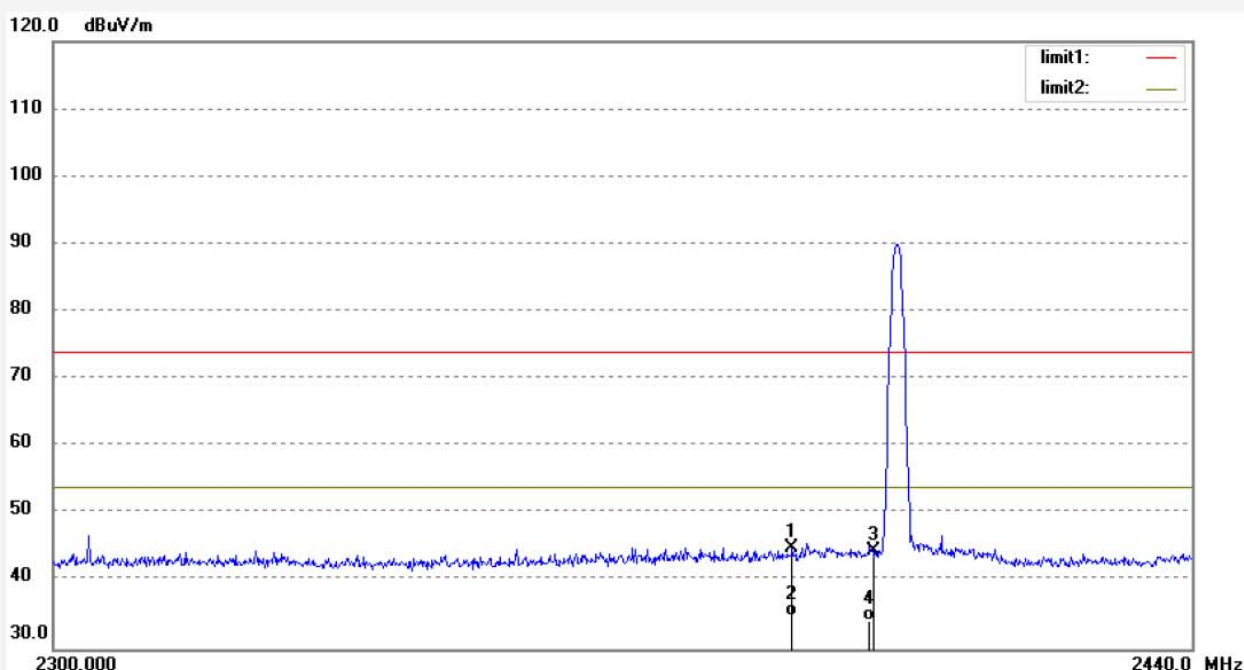
Date: 2020/02/17/

Time: 15/43/23

Engineer Signature: CHARLEY

Distance: 3m

Note: Report NO.:ATE20200059



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	44.13	0.79	44.92	74.00	-29.08	peak	200	106	
2	2390.000	34.12	0.79	34.91	54.00	-19.09	AVG	200	92	
3	2400.000	43.63	0.88	44.51	74.00	-29.49	peak	200	216	
4	2400.000	33.21	0.88	34.09	54.00	-19.91	AVG	200	321	

Job No.: 2020 #17

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Remote control

Mode: TX 2403MHz

Model: HDM-H17

Manufacturer: Huzhou HAIDEMU Intelligent Technology Co., Ltd.

Polarization: Vertical

Power Source: DC 4.5V

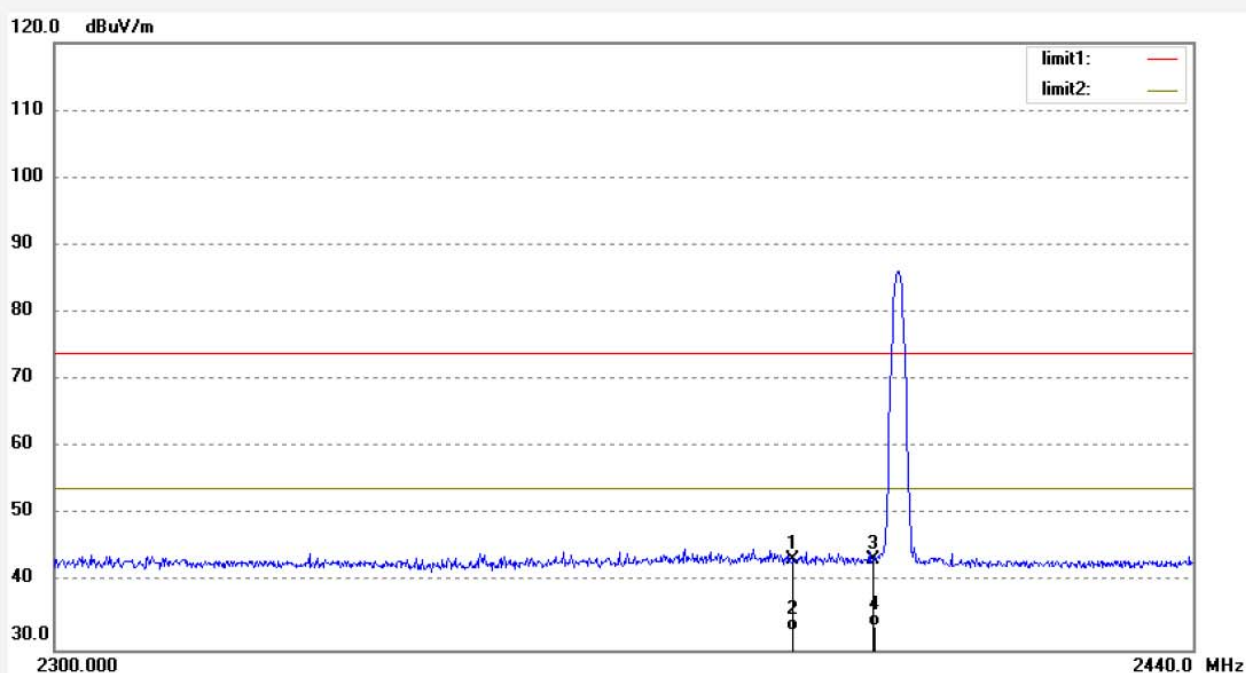
Date: 2020/02/17/

Time: 15/41/19

Engineer Signature: CHARLEY

Distance: 3m

Note: Report NO.:ATE20200059



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	42.70	0.79	43.49	74.00	-30.51	peak	150	31	
2	2390.000	32.05	0.79	32.84	54.00	-21.16	AVG	150	121	
3	2400.000	42.54	0.88	43.42	74.00	-30.58	peak	150	93	
4	2400.000	32.62	0.88	33.50	54.00	-20.50	AVG	150	189	

Job No.: 2020 #15

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Remote control

Mode: TX 2480MHz

Model: HDM-H17

Manufacturer: Huzhou HAIDEMU Intelligent Technology Co., Ltd.

Polarization: Horizontal

Power Source: DC 4.5V

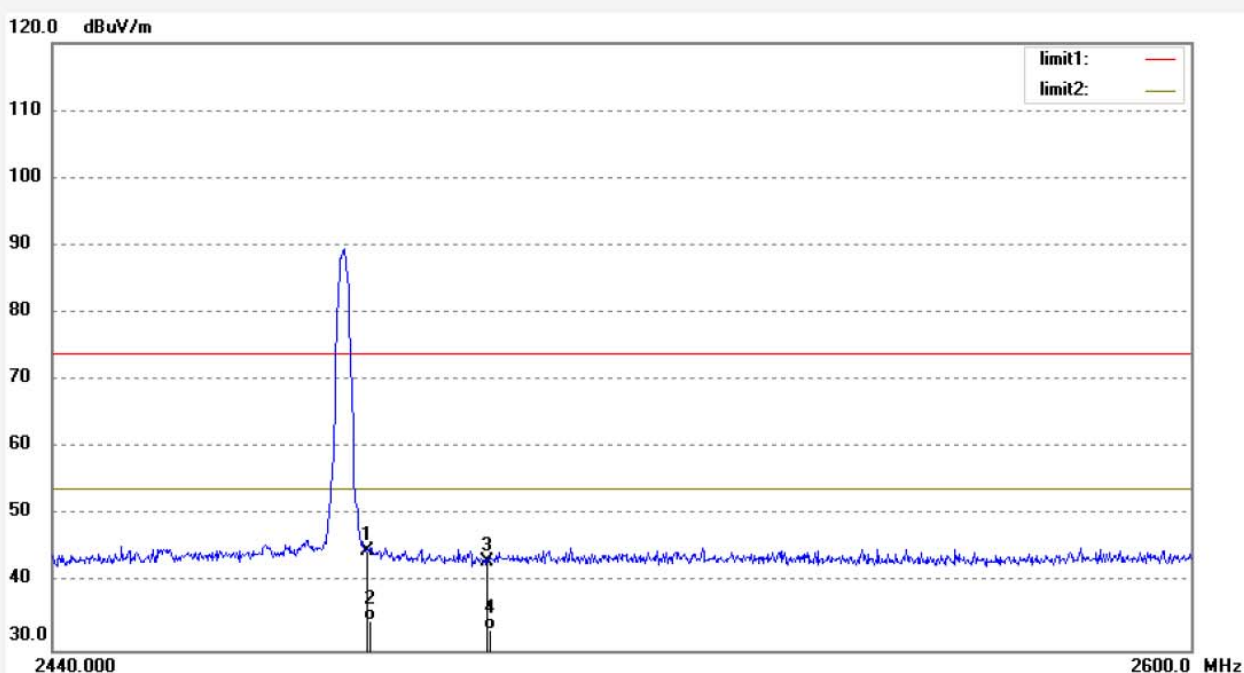
Date: 2020/02/17/

Time: 15/37/06

Engineer Signature: CHARLEY

Distance: 3m

Note: Report NO.:ATE20200059



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	43.67	1.10	44.77	74.00	-29.23	peak	200	211	
2	2483.500	33.26	1.10	34.36	54.00	-19.64	AVG	200	115	
3	2500.000	42.16	1.10	43.26	74.00	-30.74	peak	200	93	
4	2500.000	32.04	1.10	33.14	54.00	-20.86	AVG	200	178	

Job No.: 2020 #16

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Remote control

Mode: TX 2480MHz

Model: HDM-H17

Manufacturer: Huzhou HAIDEMU Intelligent Technology Co., Ltd.

Polarization: Vertical

Power Source: DC 4.5V

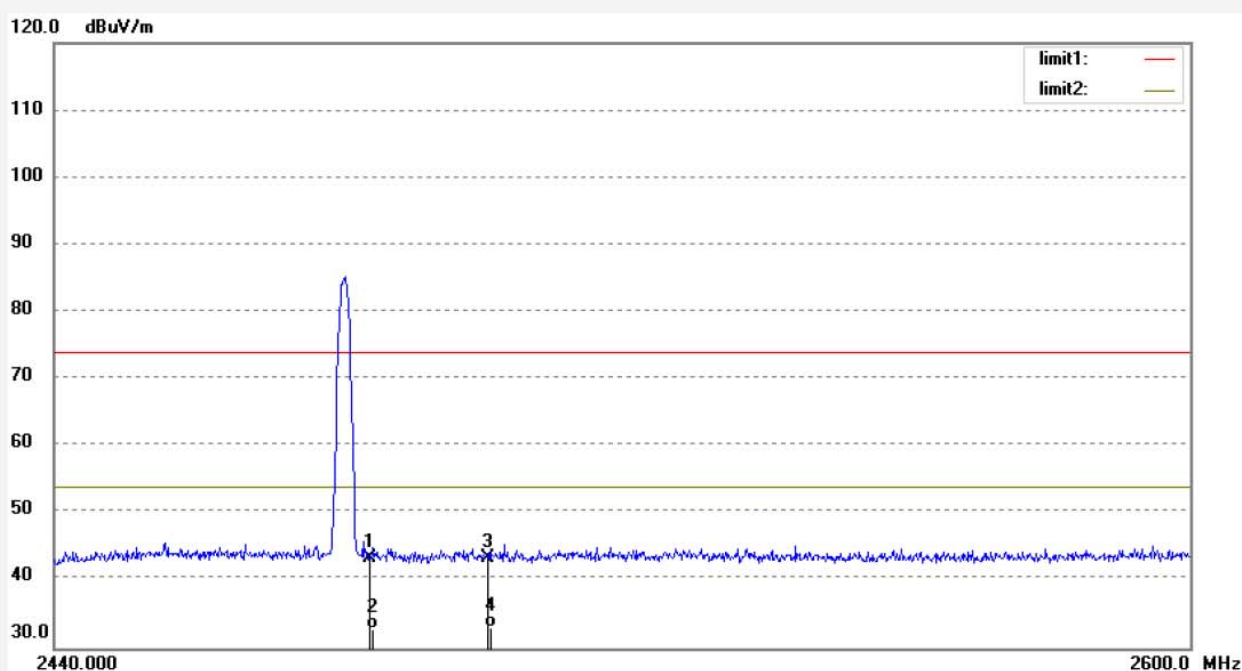
Date: 2020/02/17/

Time: 15/38/31

Engineer Signature: CHARLEY

Distance: 3m

Note: Report NO.:ATE20200059



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	42.37	1.10	43.47	74.00	-30.53	peak	150	108	
2	2483.500	31.82	1.10	32.92	54.00	-21.08	AVG	150	93	
3	2500.000	42.40	1.10	43.50	74.00	-30.50	peak	150	115	
4	2500.000	32.05	1.10	33.15	54.00	-20.85	AVG	150	321	

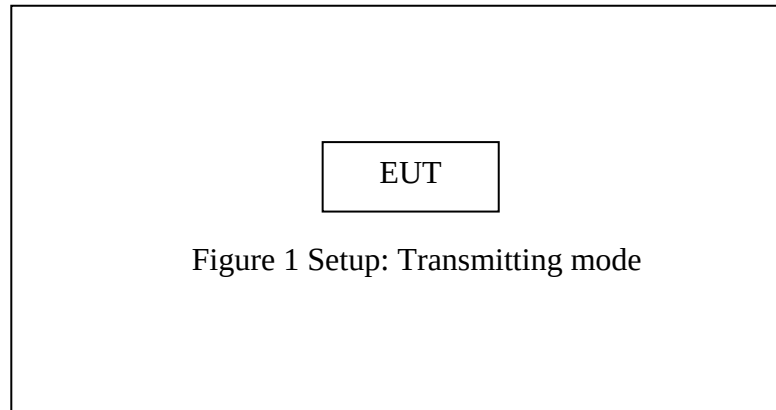
Note:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:
Result = Reading + Corrected Factor
3. Display the measurement of peak values.
4. The average measurement was not performed when peak measured data under the limit of average detection.

7. RADIATED SPURIOUS EMISSION TEST

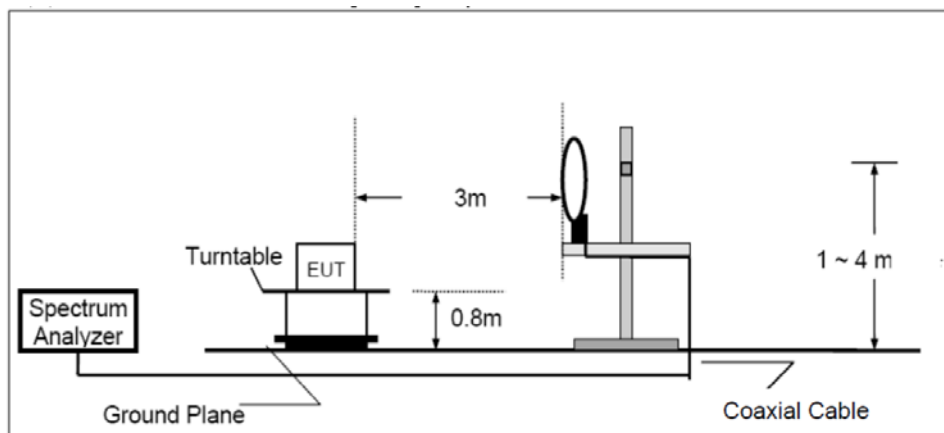
7.1. Block Diagram of Test Setup

7.1.1. Block diagram of connection between the EUT and peripherals

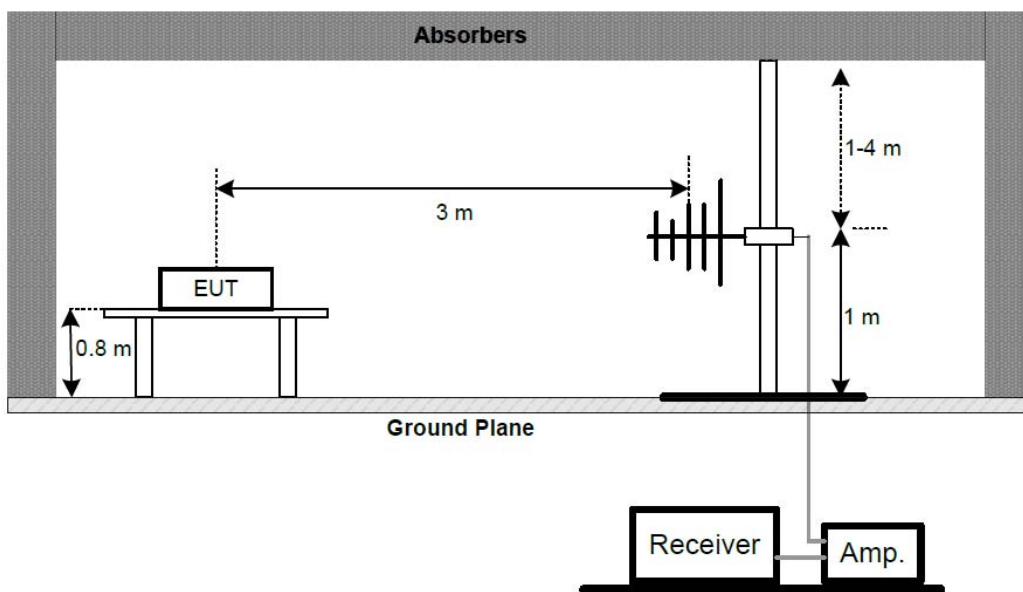


7.1.2. Semi-Anechoic Chamber Test Setup Diagram

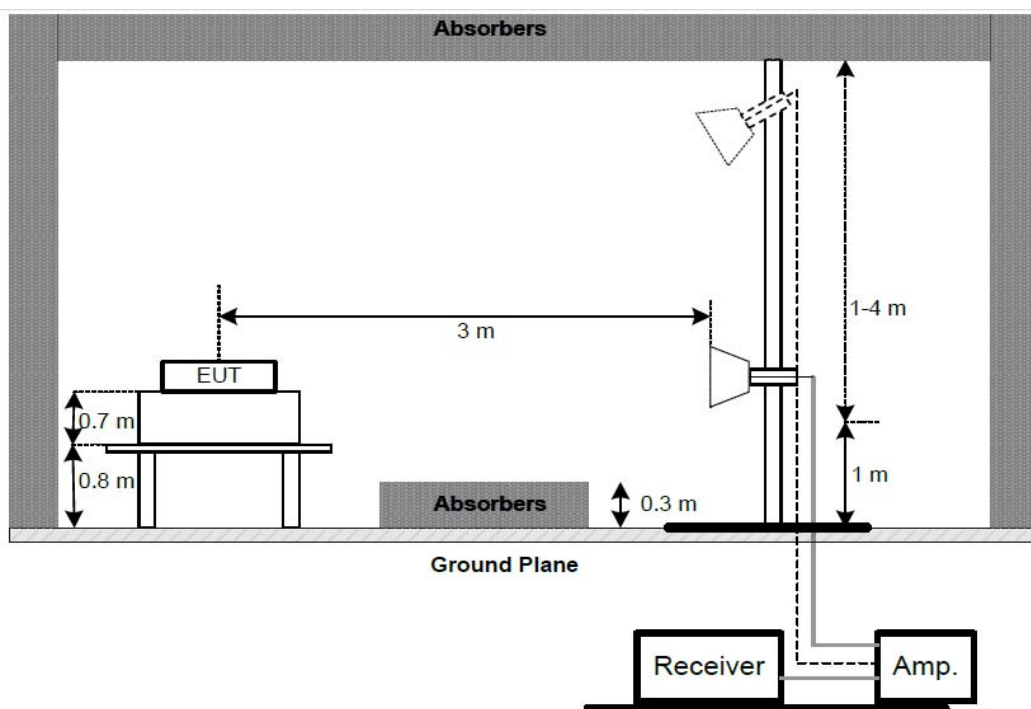
(A) Radiated Emission Test Set-Up, Frequency below 30MHz



(B) Radiated Emission Test Set-Up, Frequency below 1GHz



(C) Radiated Emission Test Set-Up, Frequency above 1GHz



7.2.The Limit For Section 15.249

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph A8.4(4), the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

7.3.Restricted bands of operation

7.3.1.FCC Part 15.205 Restricted bands of operation

(a) Except as shown in paragraph (d) of this section, Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	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
8.41425-8.41475	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	(²)
13.36-13.41			

¹Until February 1, 1999, this restricted band shall be 0.490-0.510

²Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emission appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000MHz, Compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

7.4.Configuration of EUT on Measurement

The equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

7.5.Operating Condition of EUT

7.5.1.Setup the EUT and simulator as shown as Section 7.1.

7.5.2.Turn on the power of all equipment.

7.5.3.Let the EUT work in TX modes and measure it. The transmit frequency are 2403, 2442, 2480MHz.

7.6.Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter(Below 1GHz) and 1.5m(above 1GHz) high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

The bandwidth of test receiver is set at 9 kHz in below 30MHz. and set at 120 kHz in 30-1000MHz, and 1MHz in above 1000MHz.

The frequency range from 9 kHz to 25GHz is checked.

The final measurement in band 9-90 kHz, 110-490 kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.

RBW (120 kHz), VBW (300 kHz) for QP detector below 1GHz

Peak detector above 1GHz

RBW (1 MHz), VBW (3MHz) for Peak measurement

RBW (1 MHz), VBW (10Hz) for AV measurement

The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Where Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

7.7.DATA SAMPLE

Frequency (MHz)	Reading (dB μ v)	Factor (dB/m)	Result (dB μ v/m)	Limit (dB μ v/m)	Margin (dB)	Remark
X.XX	49.83	-22.03	27.80	43.50	-15.70	QP

Frequency(MHz) = Emission frequency in MHz

Reading(dB μ v) = Uncorrected Analyzer/Receiver reading

Factor (dB/m)= Antenna factor + Cable Loss – Amplifier gain

Result(dB μ v/m) = Reading + Factor

Limit (dB μ v/m)= Limit stated in standard

Margin (dB) = Result(dB μ v/m) - Limit (dB μ v/m)

Calculation Formula:

Margin(dB) = Result (dB μ v/m)–Limit(dB μ v/m)

Result(dB μ v/m)= Reading(dB μ v)+ Factor(dB/m)

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the limit.

7.8.The Field Strength of Radiation Emission Measurement Results

PASS.

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.

2. *: Denotes restricted band of operation.

3. The EUT is tested radiation emission in three axes. The worst emissions are reported in all channels.

4. The radiation emissions from 9KHz-30MHz and 18GHz-25GHz are not reported, because the test values lower than the limits of 20dB.

5. The average measurement was not performed when peak measured data under the limit of average detection.

30MHz-1GHz



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Job No.: 2020 #121

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Remote control

Mode: TX 2403MHz

Model: HDM-H17

Manufacturer: Huzhou HAIDEMU Intelligent Technology Co., Ltd.

Polarization: Horizontal

Power Source: DC 4.5V

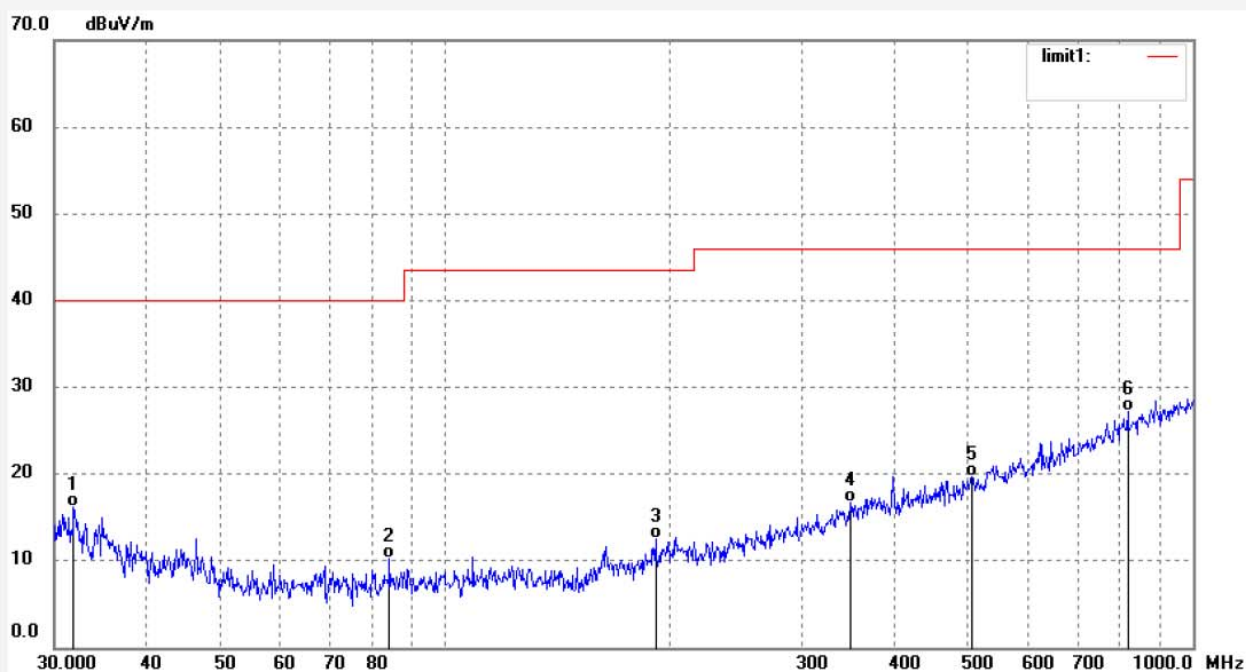
Date: 2020/03/16/

Time: 10/15/46

Engineer Signature: CHARLEY

Distance: 3m

Note: Report NO.:ATE20200059



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.8464	36.89	-20.66	16.23	40.00	-23.77	QP	200	106	
2	84.2839	37.60	-27.44	10.16	40.00	-29.84	QP	200	210	
3	191.1114	37.50	-25.01	12.49	43.50	-31.01	QP	200	246	
4	348.5144	36.16	-19.37	16.79	46.00	-29.21	QP	200	63	
5	505.7891	35.85	-16.13	19.72	46.00	-26.28	QP	200	211	
6	818.5062	35.85	-8.61	27.24	46.00	-18.76	QP	200	201	

Job No.: 2020 #120

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Remote control

Mode: TX 2403MHz

Model: HDM-H17

Manufacturer: Huzhou HAIDEMU Intelligent Technology Co., Ltd.

Polarization: Vertical

Power Source: DC 4.5V

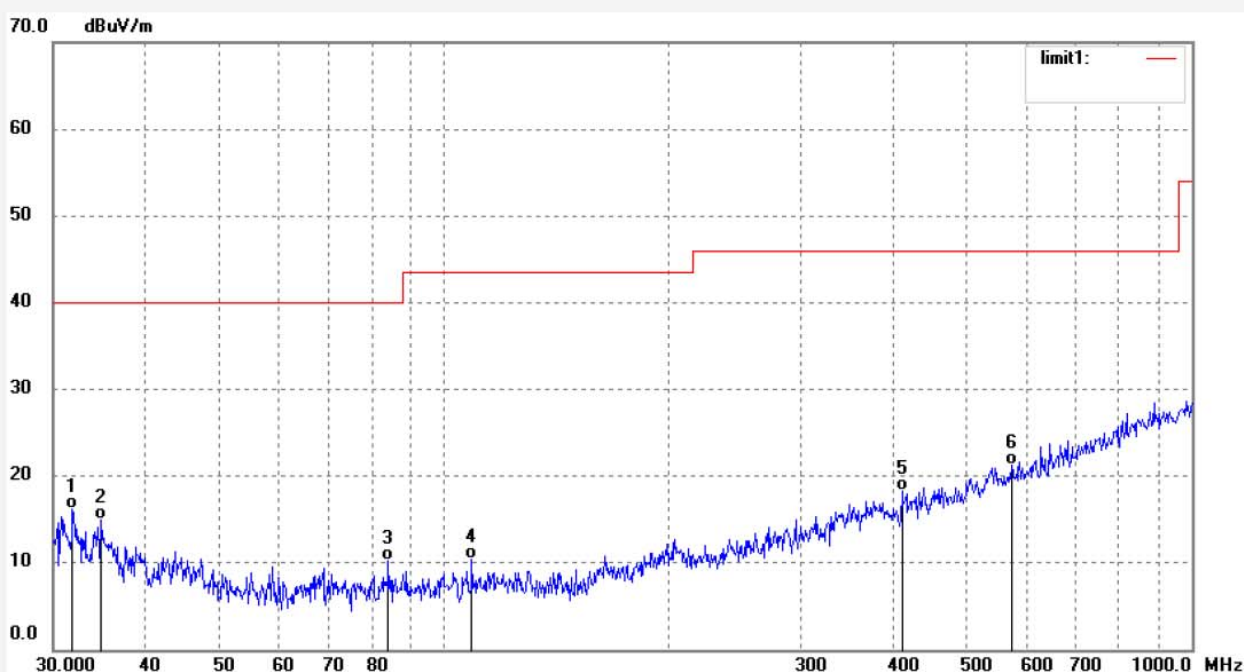
Date: 2020/03/16/

Time: 10/15/41

Engineer Signature: CHARLEY

Distance: 3m

Note: Report NO.:ATE20200059



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.8464	36.89	-20.66	16.23	40.00	-23.77	QP	100	136	
2	34.7704	36.32	-21.39	14.93	40.00	-25.07	QP	100	21	
3	84.2839	37.60	-27.44	10.16	40.00	-29.84	QP	100	51	
4	108.9275	37.79	-27.46	10.33	43.50	-33.17	QP	100	116	
5	409.6505	36.34	-18.12	18.22	46.00	-27.78	QP	100	41	
6	573.9882	35.54	-14.26	21.28	46.00	-24.72	QP	100	219	

Job No.: 2020 #122

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Remote control

Mode: TX 2442MHz

Model: HDM-H17

Manufacturer: Huzhou HAIDEMU Intelligent Technology Co., Ltd.

Polarization: Horizontal

Power Source: DC 4.5V

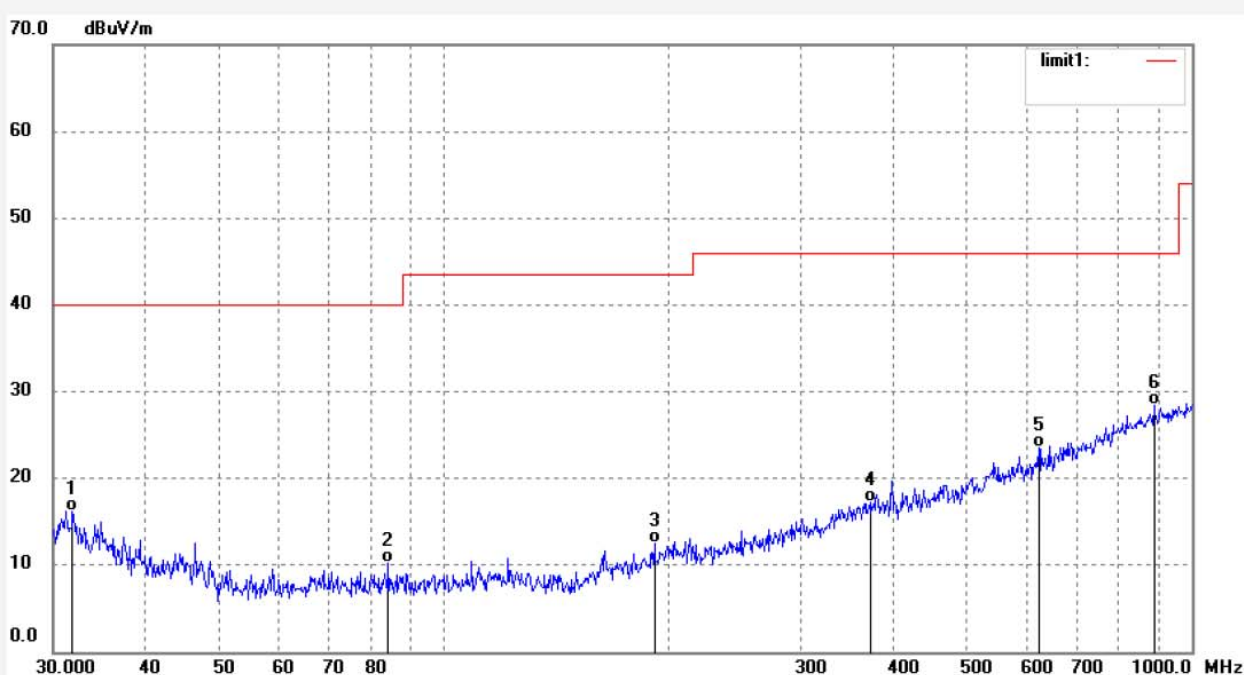
Date: 2020/03/16/

Time: 10/15/55

Engineer Signature: CHARLEY

Distance: 3m

Note: Report NO.:ATE20200059



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.8464	36.89	-20.66	16.23	40.00	-23.77	QP	200	210	
2	84.2839	37.60	-27.44	10.16	40.00	-29.84	QP	200	55	
3	191.1114	37.50	-25.01	12.49	43.50	-31.01	QP	200	112	
4	371.2679	35.93	-18.75	17.18	46.00	-28.82	QP	200	96	
5	624.4896	36.67	-13.17	23.50	46.00	-22.50	QP	200	246	
6	890.5212	35.75	-7.35	28.40	46.00	-17.60	QP	200	103	

Job No.: 2020 #123

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Remote control

Mode: TX 2442MHz

Model: HDM-H17

Manufacturer: Huzhou HAIDEMU Intelligent Technology Co., Ltd.

Polarization: Vertical

Power Source: DC 4.5V

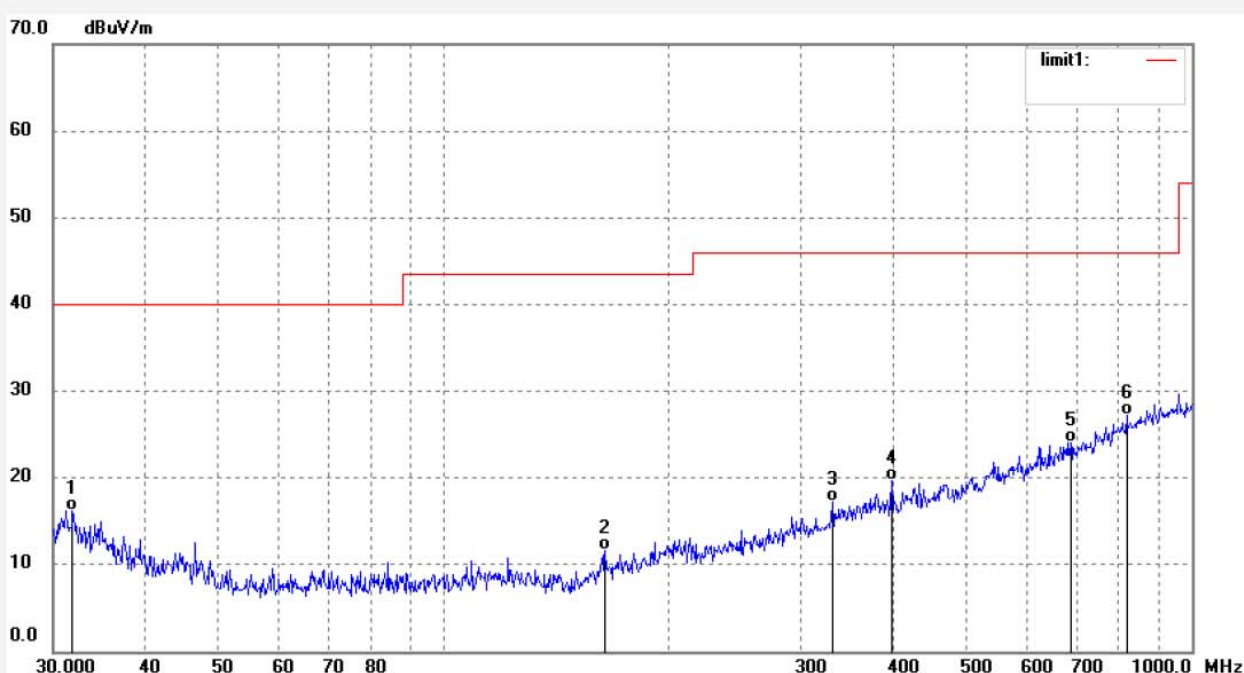
Date: 2020/03/16/

Time: 10/15/58

Engineer Signature: CHARLEY

Distance: 3m

Note: Report NO.:ATE20200059



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.8464	36.89	-20.66	16.23	40.00	-23.77	QP	100	218	
2	164.3129	38.21	-26.61	11.60	43.50	-31.90	QP	100	212	
3	330.6220	37.33	-20.13	17.20	46.00	-28.80	QP	100	331	
4	396.8992	38.01	-18.36	19.65	46.00	-26.35	QP	100	96	
5	689.0510	35.84	-11.72	24.12	46.00	-21.88	QP	100	215	
6	818.5062	35.85	-8.61	27.24	46.00	-18.76	QP	100	103	

Job No.: 2020 #125

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Remote control

Mode: TX 2480MHz

Model: HDM-H17

Manufacturer: Huzhou HAIDEMU Intelligent Technology Co., Ltd.

Polarization: Horizontal

Power Source: DC 4.5V

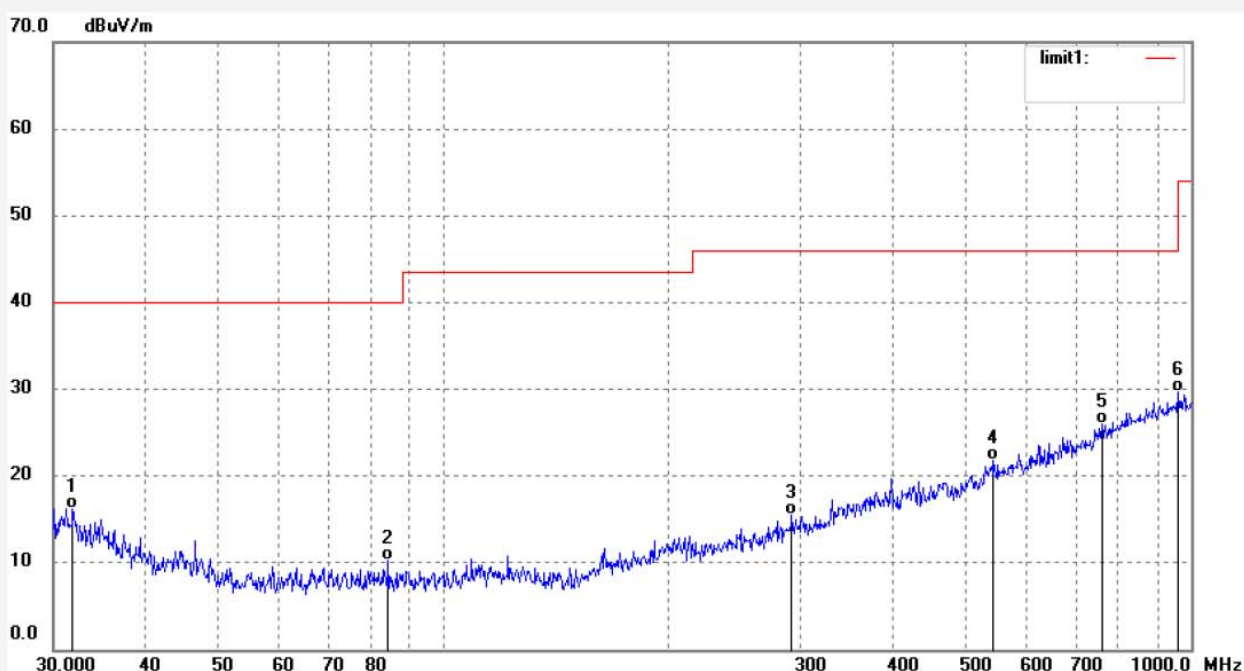
Date: 2020/03/16/

Time: 10/16/07

Engineer Signature: CHARLEY

Distance: 3m

Note: Report NO.:ATE20200059



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.8465	36.89	-20.66	16.23	40.00	-23.77	QP	200	16	
2	84.2839	37.60	-27.44	10.16	40.00	-29.84	QP	200	321	
3	292.3643	37.03	-21.56	15.47	46.00	-30.53	QP	200	20	
4	544.5202	36.74	-14.97	21.77	46.00	-24.23	QP	200	85	
5	760.2867	36.09	-10.04	26.05	46.00	-19.95	QP	200	126	
6	962.0879	35.64	-6.01	29.63	54.00	-24.37	QP	200	210	

Job No.: 2020 #124

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: Remote control

Mode: TX 2480MHz

Model: HDM-H17

Manufacturer: Huzhou HAIDEMU Intelligent Technology Co., Ltd.

Polarization: Vertical

Power Source: DC 4.5V

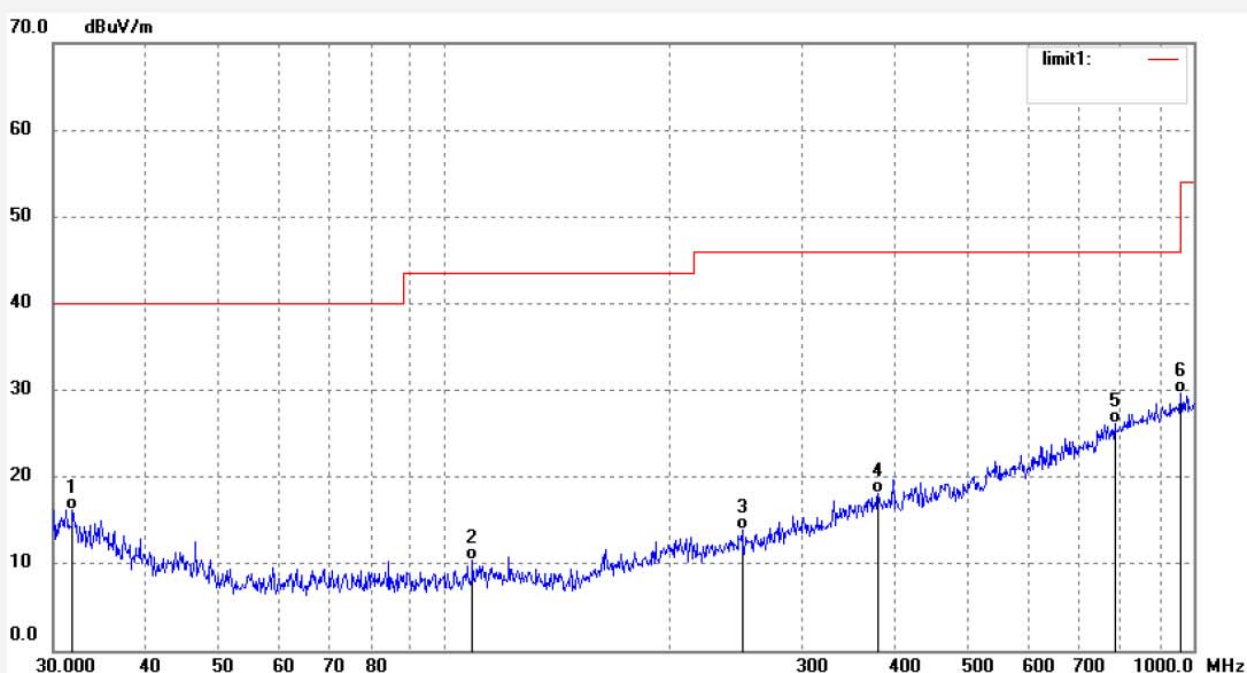
Date: 2020/03/16/

Time: 10/16/04

Engineer Signature: CHARLEY

Distance: 3m

Note: Report NO.:ATE20200059



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.8464	36.89	-20.66	16.23	40.00	-23.77	QP	100	63	
2	108.9275	37.79	-27.46	10.33	43.50	-33.17	QP	100	112	
3	249.6074	37.50	-23.63	13.87	46.00	-32.13	QP	100	92	
4	379.1779	36.84	-18.64	18.20	46.00	-27.80	QP	100	115	
5	784.7128	35.49	-9.40	26.09	46.00	-19.91	QP	100	62	
6	962.0878	35.64	-6.01	29.63	54.00	-24.37	QP	100	103	

1GHz-18GHz



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Job No.: 2020 #9

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Remote control

Mode: TX 2403MHz

Model: HDM-H17

Manufacturer: Huzhou HAIDEMU Intelligent Technology Co., Ltd.

Polarization: Horizontal

Power Source: DC 4.5V

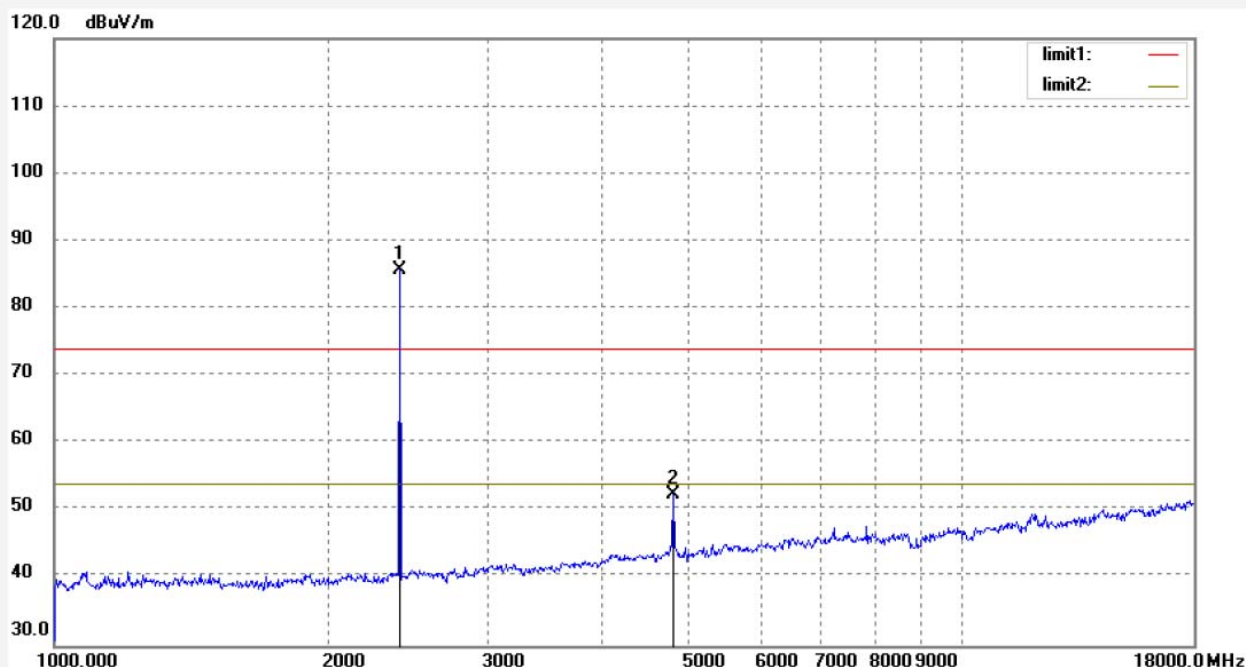
Date: 2020/02/17/

Time: 14/14/09

Engineer Signature: CHARLEY

Distance: 3m

Note: Report NO.:ATE20200059



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2403.153	84.92	0.88	85.80	114.00	-28.20	peak	200	93	
2	4806.210	44.99	7.40	52.39	74.00	-21.61	peak	200	149	

Job No.: 2020 #8

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Remote control

Mode: TX 2403MHz

Model: HDM-H17

Manufacturer: Huzhou HAIDEMU Intelligent Technology Co., Ltd.

Polarization: Vertical

Power Source: DC 4.5V

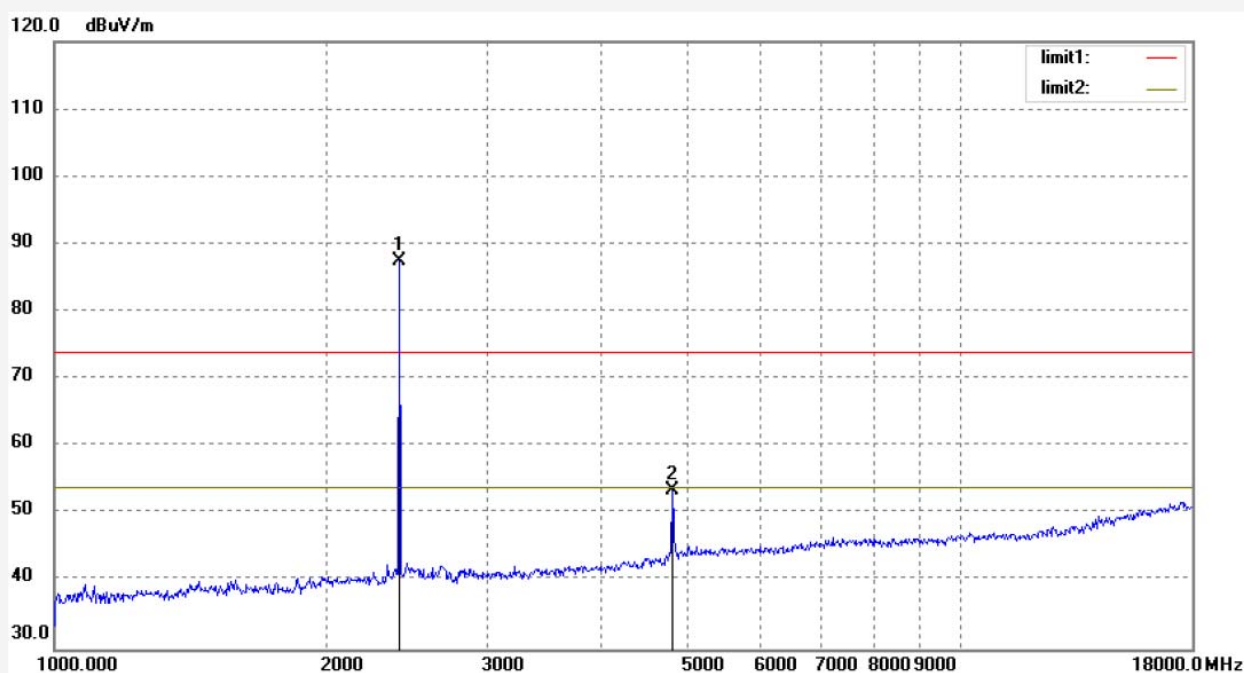
Date: 2020/02/17/

Time: 14/11/53

Engineer Signature: CHARLEY

Distance: 3m

Note: Report NO.:ATE20200059



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2403.153	86.58	0.88	87.46	114.00	-26.54	peak	150	106	
2	4806.210	46.13	7.40	53.53	74.00	-20.47	peak	150	48	

Job No.: 2020 #11

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Remote control

Mode: TX 2442MHz

Model: HDM-H17

Manufacturer: Huzhou HAIDEMU Intelligent Technology Co., Ltd.

Polarization: Horizontal

Power Source: DC 4.5V

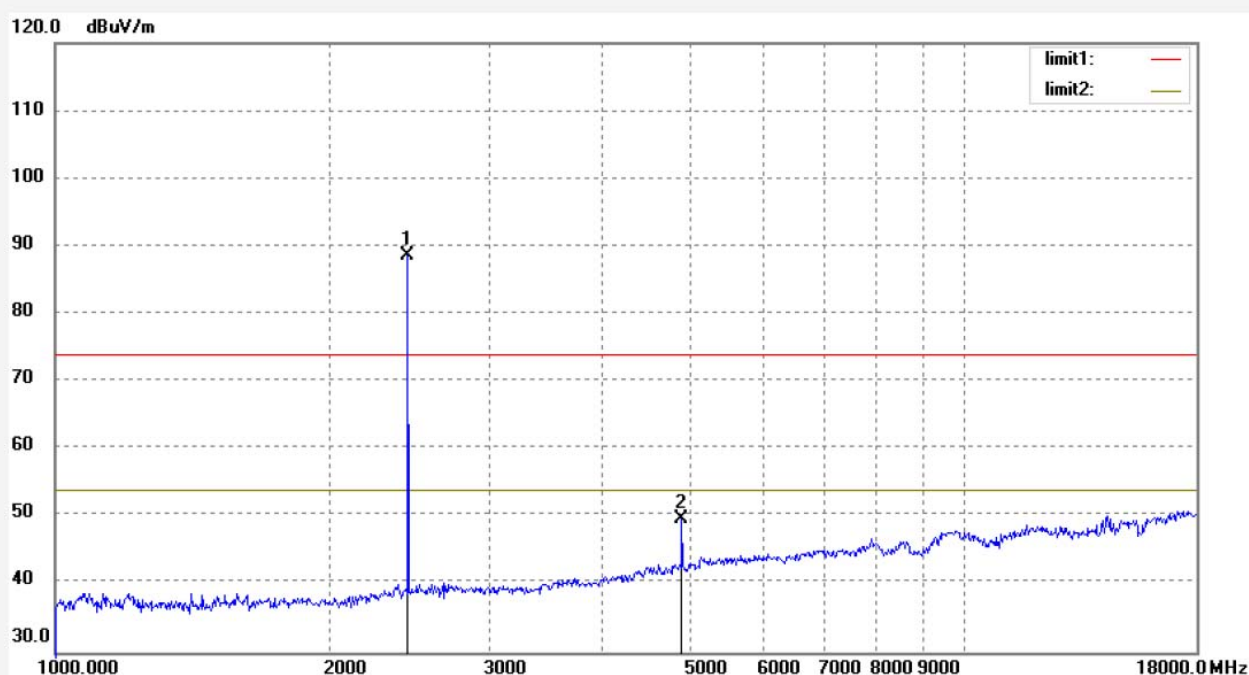
Date: 2020/02/17/

Time: 15/23/42

Engineer Signature: CHARLEY

Distance: 3m

Note: Report NO.:ATE20200059



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2442.151	87.59	1.06	88.65	114.00	-25.35	peak	200	82	
2	4884.251	41.41	8.17	49.58	74.00	-24.42	peak	200	104	

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Job No.: 2020 #12

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Remote control

Mode: TX 2442MHz

Model: HDM-H17

Manufacturer: Huzhou HAIDEMU Intelligent Technology Co., Ltd.

Polarization: Vertical

Power Source: DC 4.5V

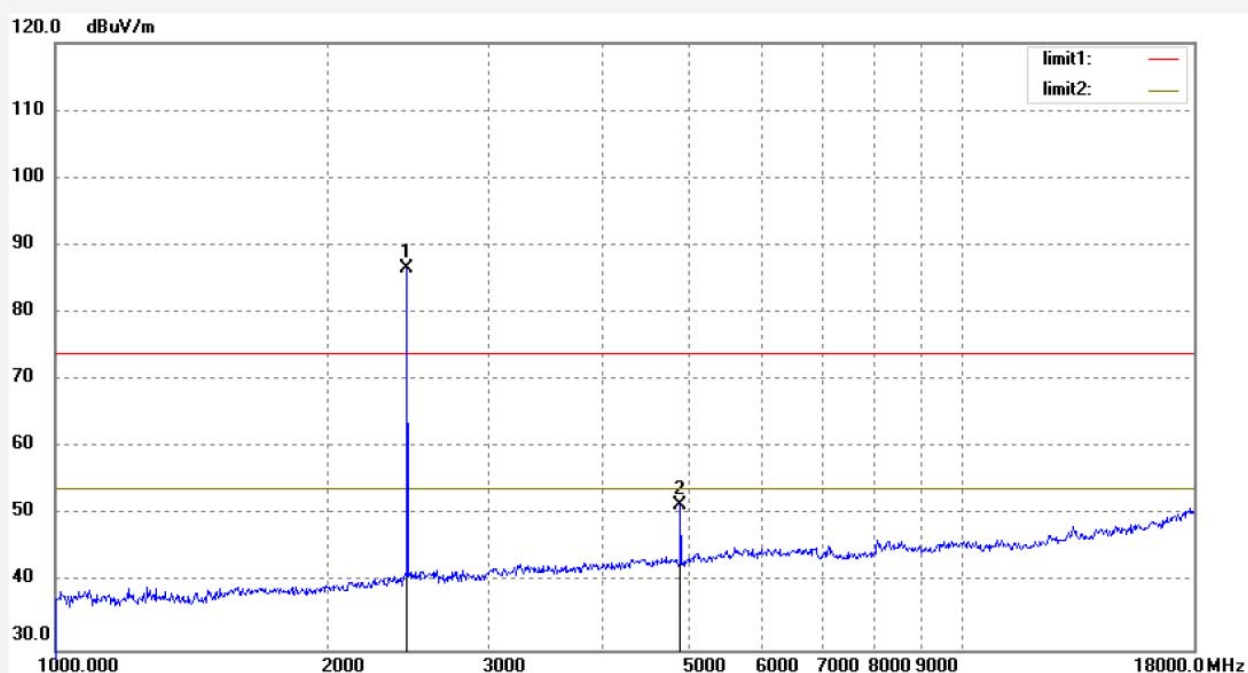
Date: 2020/02/17/

Time: 15/26/18

Engineer Signature: CHARLEY

Distance: 3m

Note: Report NO.:ATE20200059



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2442.151	85.49	1.06	86.55	114.00	-27.45	peak	150	321	
2	4884.251	43.23	8.17	51.40	74.00	-22.60	peak	150	106	

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Job No.: 2020 #14

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Remote control

Mode: TX 2480MHz

Model: HDM-H17

Manufacturer: Huzhou HAIDEMU Intelligent Technology Co., Ltd.

Polarization: Horizontal

Power Source: DC 4.5V

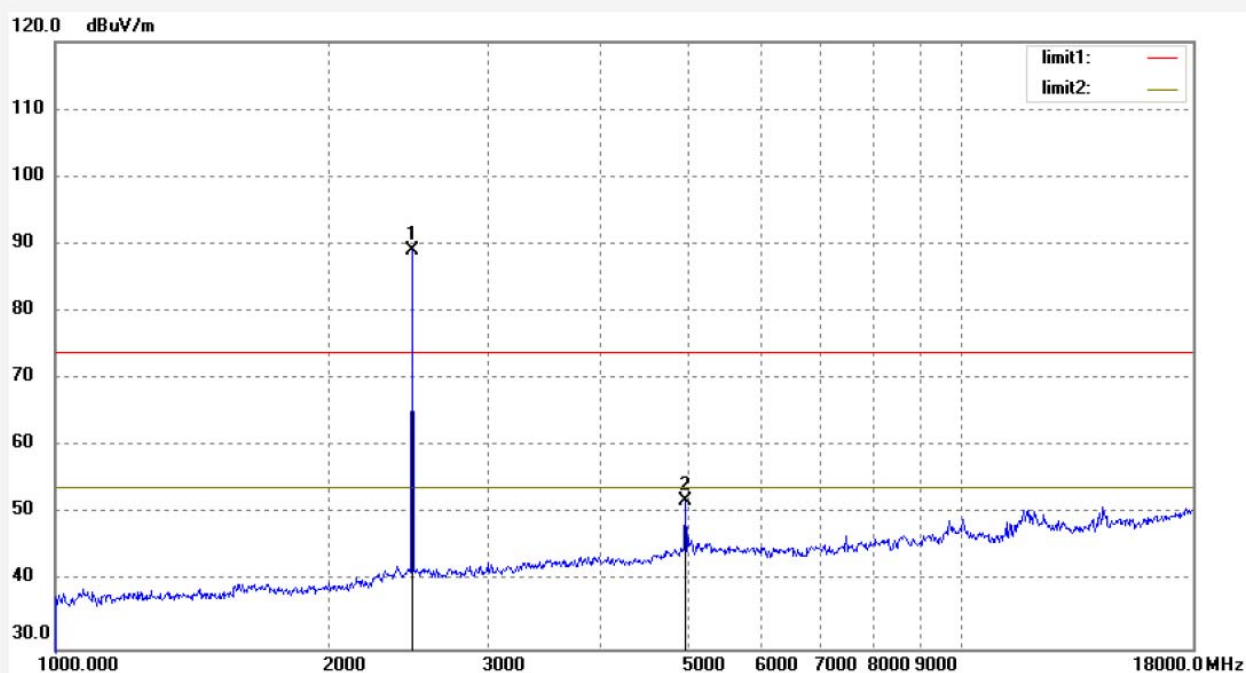
Date: 2020/02/17/

Time: 15/34/06

Engineer Signature: CHARLEY

Distance: 3m

Note: Report NO.:ATE20200059



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.110	87.98	1.09	89.07	114.00	-24.93	peak	200	96	
2	4960.307	43.34	8.58	51.92	74.00	-22.08	peak	200	104	



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Report No.: ATE20200059

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Job No.: 2020 #13

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Remote control

Mode: TX 2480MHz

Model: HDM-H17

Manufacturer: Huzhou HAIDEMU Intelligent Technology Co., Ltd.

Polarization: Vertical

Power Source: DC 4.5V

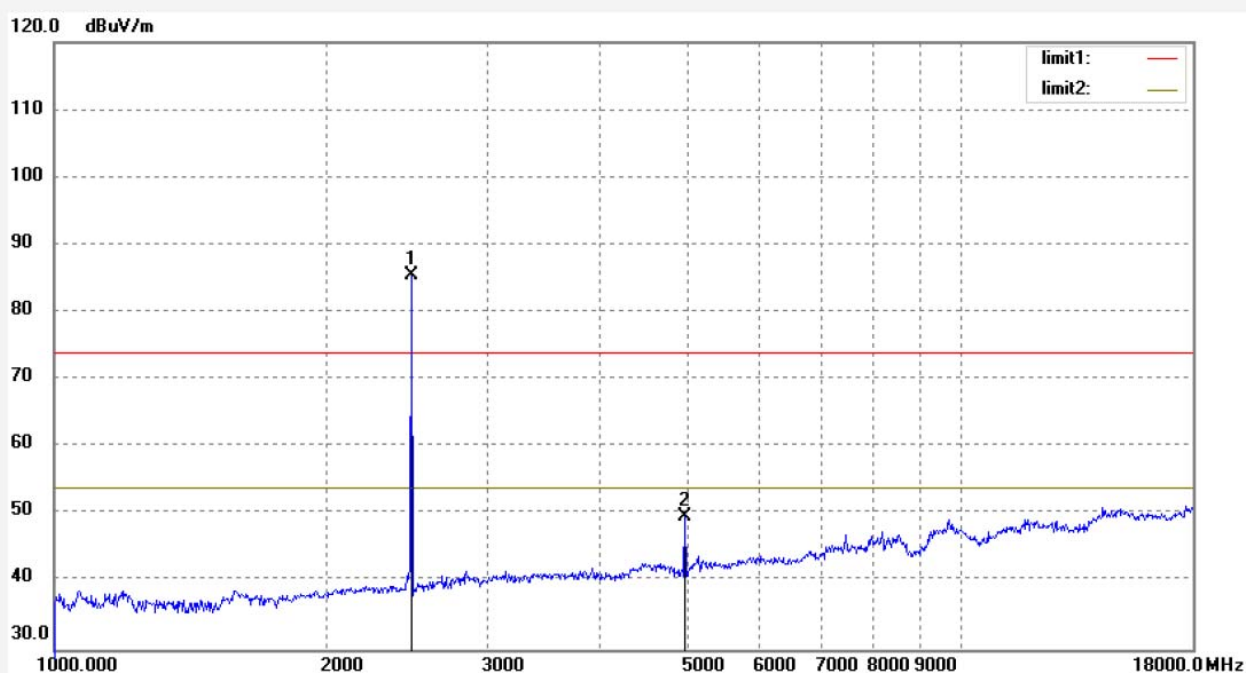
Date: 2020/02/17/

Time: 15/31/50

Engineer Signature: CHARLEY

Distance: 3m

Note: Report NO.:ATE20200059



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.110	84.48	1.09	85.57	114.00	-28.43	peak	150	51	
2	4960.307	41.08	8.58	49.66	74.00	-24.34	peak	150	118	

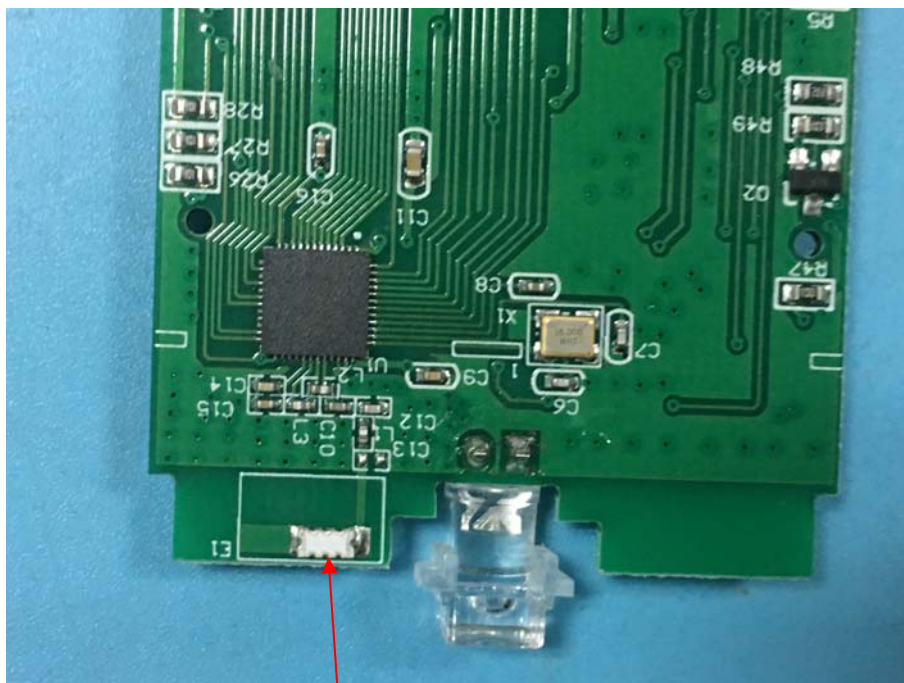
8. ANTENNA REQUIREMENT

8.1.The Requirement

According to Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

8.2.Antenna Construction

Device is equipped with permanent attached antenna, which isn't displaced by other antenna. The Antenna gain of EUT is 2.28dBi. Therefore, the equipment complies with the antenna requirement of Section 15.203.



Antenna