

APPLICATION CERTIFICATION
On Behalf of
A&H Design Group, Ltd.

Wireless remote control vibrator

Model No.: PEG-001, PEG-002, PEG-003, PEG-004, PEG-005, PEG-006,
PEG-007, PEG-008, PEG-009, PEG-010, PEG-011, PEG-012

FCC ID: 2AG2K-PEG-001

Prepared for : A&H Design Group, Ltd.
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Report Number : ATE20190983
Date of Test : July 01, 2019-July 06, 2019
Date of Report : July 08, 2019

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Test Report Certification

Applicant : A&H Design Group, Ltd.
Address : Suite 608, Tower One, Harbour Centre 1 Hok Cheung Street, Hung Hom, Kowloon, Hong Kong
Manufacturer : TOPARC Technology (Shenzhen) Co., Ltd.
Address : 1/2F, 12 Building, Lianchuang Park, Bulan Road, Buji Town, Longgang District, Shenzhen City, Guangdong Province, P.R. China 518114
Product : Wireless remote control vibrator
Model No. : PEG-001, PEG-002, PEG-003, PEG-004, PEG-005, PEG-006, PEG-007, PEG-008, PEG-009, PEG-010, PEG-011, PEG-012
Trade name : 


Measurement Procedure Used:


FCC Rules and Regulations Part 15 Subpart C Section 15.231a ANSI C63.10-2013

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 15.231a. 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 : July 01, 2019-July 06, 2019
Date of Report: July 08, 2019

Prepared by : 
(Tim Zhang, Engineer)

Approved & Authorized Signer : 
(Sean Liu, Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT	: Wireless remote control vibrator
Model Number	: PEG-001, PEG-002, PEG-003, PEG-004, PEG-005, PEG-006, PEG-007, PEG-008, PEG-009, PEG-010, PEG-011, PEG-012
Power Supply	: DC 3V (powered by battery)
Modulation:	: ASK
Operation Frequency	: 433.92MHz
Antenna type	: PCB antenna
Antenna gain	: 0dBi
Applicant	: A&H Design Group, Ltd.
Address	: Suite 608, Tower One, Harbour Centre 1 Hok Cheung Street, Hung Hom, Kowloon, Hong Kong
Manufacturer	: TOPARC Technology (Shenzhen) Co., Ltd.
Address	: 1/2F, 12 Building, Lianchuang Park, Bulan Road, Buji Town, Longgang District, Shenzhen City, Guangdong Province, P.R. China 518114
Date of sample received	: July 01, 2019
Date of Test	: July 01, 2019-July 06, 2019

1.2. Model difference declaration

PEG-001, PEG-002, PEG-003, PEG-004, PEG-005, PEG-006, PEG-007, PEG-008, PEG-009, PEG-010, PEG-011, PEG-012 are identical in interior structure, electrical circuits and components, and just model number is different for the marketing requirement.

1.3. Accessory and Auxiliary Equipment

N/A

1.4. 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

1.5. 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

2.1. For Radiated Emission Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan.05, 2019	1 Year
2.	Spectrum Analyzer	Rohde&Schwarz	FSV40	101495	Jan.05, 2019	1 Year
3.	Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan.05, 2019	1 Year
4.	Test Receiver	Rohde& Schwarz	ESPI	100396/003	Jan.05, 2019	1 Year
5.	Test Receiver	Rohde& Schwarz	ESPI	101526/003	Jan.05, 2019	1 Year
6.	Test Receiver	Rohde& Schwarz	ESR	101817	Jan.05, 2019	1 Year
7.	Bilog Antenna	Schwarzbeck	VULB9163	9163-194	Jan.05, 2019	1 Year
8.	Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan.05, 2019	1 Year
9.	Log.-Per.Antenna	Schwarzbeck	VUSLP 9111B	9111B-074	Jan.05, 2019	1 Year
10.	Biconical Broad Band Antenna	Schwarzbeck	VHBB 9124+BBA 9106	9124-617	Jan.05, 2019	1 Year
11.	Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan.05, 2019	1 Year
12.	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan.05, 2019	1 Year
13.	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1067	Jan.05, 2019	1 Year
14.	Vertical Active Monopole Antenna	Schwarzbeck	VAMP 9243	9243-370	Jan.05, 2019	1 Year
15.	RF Switching Unit+PreAMP	Compliance Direction	RSU-M2	38322	Jan.05, 2019	1 Year
16.	Pre-Amplifier	Agilent	8447D	294A10619	Jan.05, 2019	1 Year
17.	Pre-Amplifier	Rohde&Schwarz	CBLU11835 40-01	3791	Jan.05, 2019	1 Year
18.	50 Coaxial Switch	Anritsu Corp	MP59B	6200237248	Jan.05, 2019	1 Year
19.	50 Coaxial Switch	Anritsu Corp	MP59B	6200506474	Jan.05, 2019	1 Year
20.	RF Coaxial Cable	Schwarzbeck	N-5m	No.1	Jan.05, 2019	1 Year
21.	RF Coaxial Cable	Schwarzbeck	N-1m	No.6	Jan.05, 2019	1 Year
22.	RF Coaxial Cable	Schwarzbeck	N-1m	No.7	Jan.05, 2019	1 Year
23.	RF Coaxial Cable	SUHNER	N-3m	No.8	Jan.05, 2019	1 Year
24.	RF Coaxial Cable	RESENBERGER	N-3.5m	No.9	Jan.05, 2019	1 Year
25.	RF Coaxial Cable	SUHNER	N-6m	No.10	Jan.05, 2019	1 Year
26.	RF Coaxial Cable	RESENBERGER	N-12m	No.11	Jan.05, 2019	1 Year
27.	RF Coaxial Cable	RESENBERGER	N-0.5m	No.12	Jan.05, 2019	1 Year
28.	RF Coaxial Cable	SUHNER	N-2m	No.13	Jan.05, 2019	1 Year
29.	RF Coaxial Cable	SUHNER	N-0.5m	No.15	Jan.05, 2019	1 Year
30.	RF Coaxial Cable	SUHNER	N-2m	No.16	Jan.05, 2019	1 Year
31.	RF Coaxial Cable	RESENBERGER	N-6m	No.17	Jan.05, 2019	1 Year

Radiated Emission Measurement Software: EZ EMC V1.1.4.2

3. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
Section 15.207	Conducted Emission	N/A
Section 15.231(b)	Radiated Emission	Compliant
Section 15.231(c)	20dB Bandwidth	Compliant
Section 15.231(a)(1)	Release Time Measurement	Compliant
Section 15.203	Antenna Requirement	Compliant

The product is a manually operated transmitter.
Section 15.231 (a) (2), (3), (4) and (5) are not applicable.

Note: The power supply mode of the EUT is DC 3V, According to the FCC standard requirements, conducted emission is not applicable

All normal using modes of the normal function were tested but only the worst test data of the worst mode is recorded by this report.

4. THE FIELD STRENGTH OF RADIATION EMISSION

4.1. Block Diagram of Test Setup

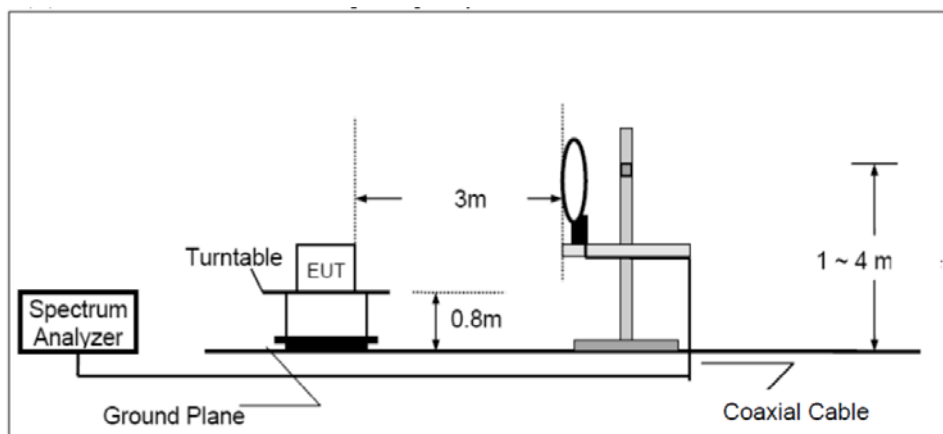
4.1.1. Block diagram of connection between the EUT and simulators



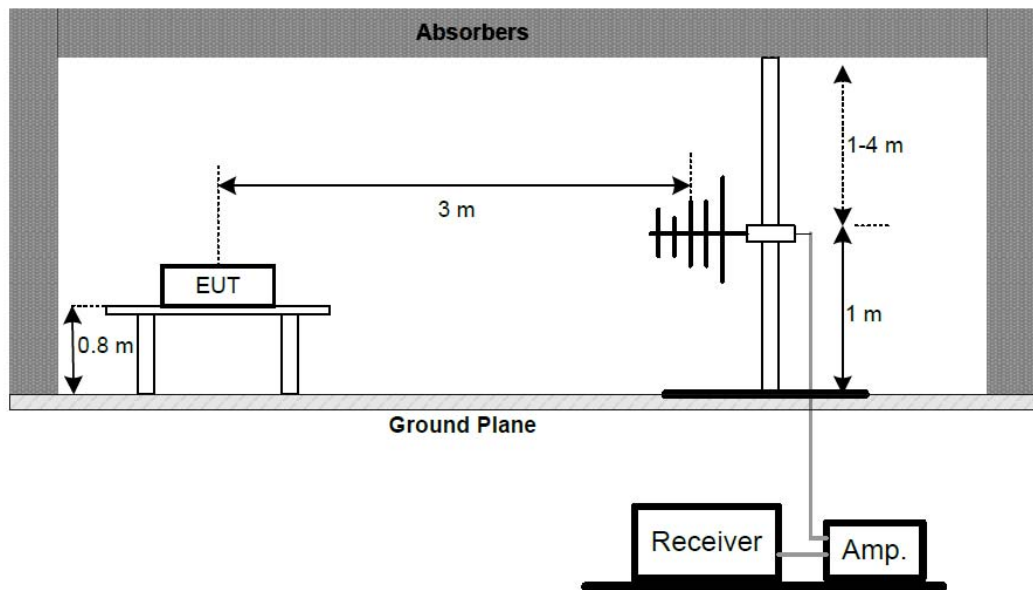
(EUT: Wireless remote control vibrator)

4.1.2. Semi-Anechoic Chamber Test Setup Diagram

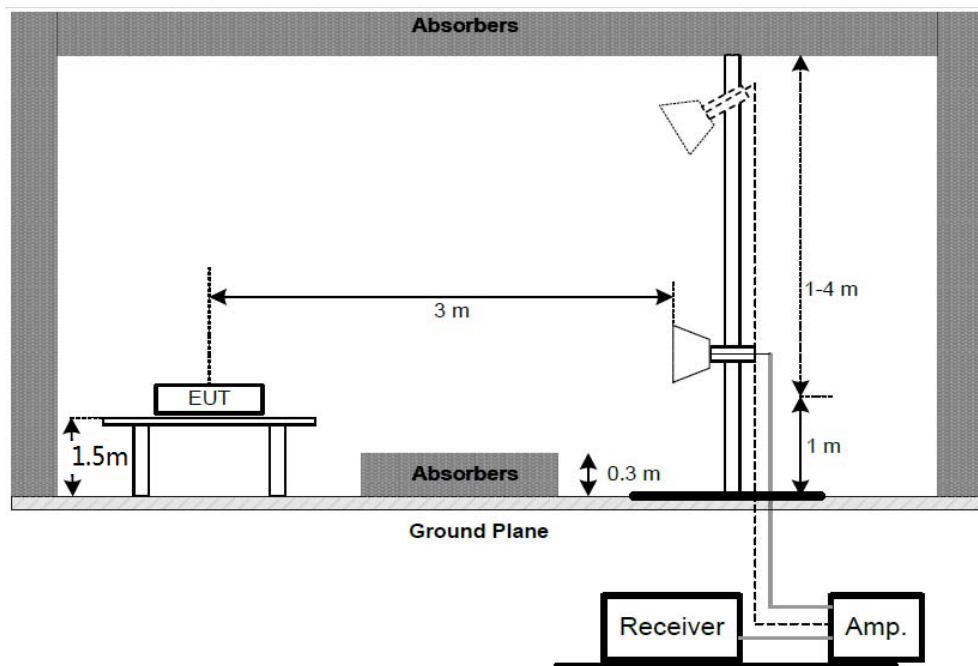
(A) Radiated Emission Test Set-Up, Frequency below 30MHz



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



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



4.2. The Field Strength of Radiation Emission Measurement Limits

4.2.1. Radiation Emission Measurement Limits According to FCC Part 15 Section 15.231(b)

Frequency Range of Fundamental [MHz]	Field Strength of Fundamental Emission [Average] [$\mu\text{V/m}$]	Field Strength of Spurious Emission [Average] [$\mu\text{V/m}$]
40.66-40.70	2250	225
70-130	1250	125
130-174	1250-3750	125-375
174-260	3750	375
260-470	3750-12500	375-1250
Above 470	12500	1250

Where F is the frequency in MHz, the formulas for calculating the maximum permitted fundamental field strengths are as follows: for the band 130-174 MHz, $\mu\text{V/m}$ at 3 meters = $56.81818(F) - 6136.3636$; for the band 260-470 MHz, $\mu\text{V/m}$ at 3 meters = $41.6667(F) - 7083.3333$. The maximum permitted unwanted emission level is 20 dB below the maximum permitted fundamental level.

4.2.2. Restricted Band Radiation Emission Measurement Limits According to FCC part 15 Section 15.205 and Section 15.209.

4.3. Configuration of EUT on Measurement

The following equipment is 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.

4.3.1. Wireless remote control vibrator (EUT)

Model Number : PEG-001
Serial Number : 1900780
Manufacturer : TOPARC Technology(Shenzhen) Co., Ltd.

4.4. Operating Condition of EUT

4.4.1. Setup the EUT and simulator as shown as Section 4.1.

4.4.2. Turn on the power of all equipment.

4.4.3. Let the EUT work in TX mode measure it.

4.5. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground(Below 1GHz). The EUT and its simulators are placed on a turntable, which is 1.5 meter high above ground(Above 1GHz). 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 bi-log 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 EUT location 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 120 kHz in 30-1000 MHz, and 1 MHz in 1000-5000 MHz.

The frequency range from 9kHz to 5000MHz is checked.

4.6. 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.

4.7. The Field Strength of Radiation Emission Measurement Results

PASS.

Note: The radiation emissions from 9KHz-30MHz are not reported, because the test values lower than the limits of 20dB.

EUT:	<u>Wireless remote control vibrator</u>		
Model No.:	<u>PEG-001</u>	Power Supply:	<u>DC 3V</u>
Test Mode:	<u>433.92MHz TX</u>	Test Engineer:	<u>Frank</u>

Frequency (MHz)	Reading (dBμV/m)	Factor Corr. (dB)	Average Factor (dB)	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	PEAK			AV	PEAK	AV	PEAK	AV	PEAK	
433.92	104.71	-17.78	-8.02	78.91	86.93	80.83	100.83	-1.92	-13.90	Horizontal
749.676	43.84	-10.34	/	33.50(QP)		46.00		-12.50		
867.85	70.02	-7.98	-8.02	54.02	62.04	60.83	80.83	-6.81	-18.79	
1301.76	54.92	-1.55	-8.02	45.35	53.37	60.83	80.83	-15.48	-27.46	
2169.647	54.04	1.78	-8.02	47.80	55.82	60.83	80.83	-13.03	-25.01	
433.92	101.28	-17.78	-8.02	75.48	83.50	80.83	100.83	-5.35	-17.33	Vertical
749.676	44.05	-10.34	/	33.71(QP)		46.00		-12.29		
867.85	65.37	-7.98	-8.02	49.37	57.39	60.83	80.83	-11.46	-23.44	
1301.76	55.17	-1.55	-8.02	45.60	53.62	60.83	80.83	-15.23	-27.21	
2169.647	51.67	1.78	-8.02	45.43	53.45	60.83	80.83	-15.40	-27.38	

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
Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain
3. FCC Limit for Average Measurement = 41.6667(433.92)-7083.3333 = 10996.681164 μV/m =80.83 μV/m
4. The spectral diagrams in appendix I display the measurement of peak values.
5. Average value= PK value + Average Factor (duty factor)
6. If the peak-detected amplitude can be shown to comply with the average limit, then it is not necessary to perform a separate average measurement.
7. The EUT is tested radiation emission in three axes(X,Y,Z). The worst emissions are reported in three axes.

8. Pulse Desensitization Correction Factor

Pulse Width (PW) = 1.587ms

$2/PW = 2/1.26\text{ms} = 1.587\text{kHz}$

RBW (100 kHz) > 2/PW (1.587kHz)

Therefore PDCF is not needed

5. -20DB BANDWIDTH

5.1. Block Diagram of Test Setup



(EUT: Wireless remote control vibrator)

5.2. The Bandwidth of Emission Limit According To FCC Part 15 Section

15.231(c)

The bandwidth of emission shall be no wider than 0.25% of the center frequency. Therefore, the bandwidth of the emission limit is $433.92 \text{ MHz} \times 0.25\% = 1084.8 \text{ kHz}$. Bandwidth is determined at the two points 20 dB down from the top of modulated carrier.

5.3. EUT Configuration on Measurement

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

5.3.1. Wireless remote control vibrator (EUT)

Model Number : PEG-001
Serial Number : 1900780
Manufacturer : TOPARC Technology(Shenzhen) Co., Ltd.

5.4. Operating Condition of EUT

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

5.4.2. Turn on the power of all equipment.

5.4.3. Let the EUT work in TX mode measure it.

5.5. Test Procedure

5.5.1. Set SPA Center Frequency = Fundamental frequency, RBW = 10 kHz, VBW = 30 kHz, Span = 500kHz.

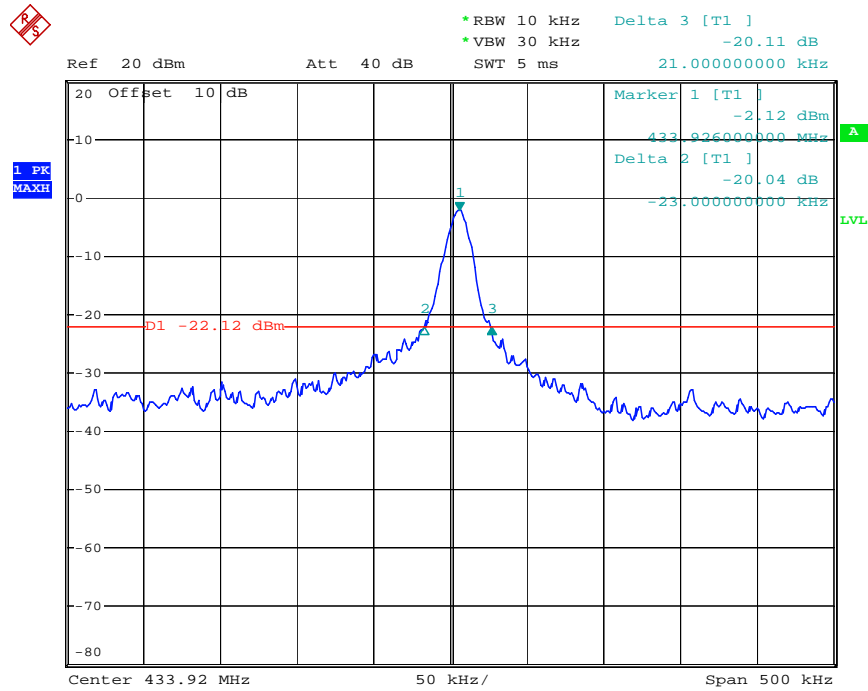
5.5.2. Set SPA Max hold, Mark peak, -20 dB.

5.6. Measurement Result

The EUT does meet the FCC requirement.

-20 dB bandwidth = 44 kHz < 1084.8 kHz.

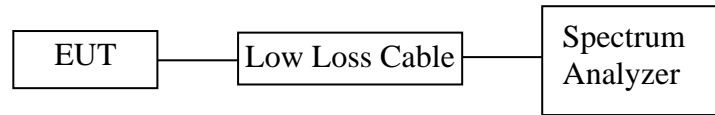
The test chart of -20 dB bandwidth:



Date: 5.JUL.2019 18:12:27

6. RELEASE TIME MEASUREMENT

6.1. Block Diagram of Test Setup



(EUT: Wireless remote control vibrator)

6.2. Release Time Measurement According To FCC Part 15 Section 15.231(a)

Section 15.231(a) (1) A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

6.3. EUT Configuration on Measurement

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

6.3.1. Wireless remote control vibrator (EUT)

Model Number : PEG-001
Serial Number : 1900780
Manufacturer : TOPARC Technology(Shenzhen) Co., Ltd.

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 mode measure it.

6.5. Test Procedure

6.5.1. Set SPA Center Frequency = Fundamental frequency, RBW = 1000 kHz, VBW = 3000 kHz, Span = 0 Hz. Sweep time = 10 s.

6.5.2. Set EUT as normal operation and press Transmitter button.

6.5.3. Set SPA View. Delta Mark time.

6.6. Measurement Result

The release time less than 5 seconds.

Release Time = 0.66s

The spectral diagrams in appendix I.

7. AVERAGE FACTOR MEASUREMENT

7.1. Block Diagram of Test Setup



(EUT: Wireless remote control vibrator)

7.2. Average factor Measurement according to ANSI C63.10-2013

ANSI C63.10-2013 Section 7.5 Unless otherwise specified, when the radiated emission limits are expressed in terms of the average value of the emission, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 s (100 ms). In cases where the pulse train exceeds 0.1 s, the measured field strength shall be determined during a 0.1 s interval.⁶⁴ The following procedure is an example of how the average value may be determined. The average field strength may be found by measuring the peak pulse amplitude (in log equivalent units) and determining the duty cycle correction factor (in dB) associated with the pulse modulation as shown in Equation (10):

Average factor in dB = 20 log (duty cycle)

7.3. EUT Configuration on Measurement

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

7.3.1. Wireless remote control vibrator

Model Number : PEG-001
Serial Number : 1900780
Manufacturer : TOPARC Technology(Shenzhen) Co., Ltd.

7.4. Operating Condition of EUT

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

7.4.2. Turn on the power of all equipment.

7.4.3. Let the EUT work in TX mode measure it.

7.5. Test Procedure

7.5.1. The time period over which the duty cycle is measured is 100 milliseconds, or the repetition cycle, whichever is a shorter time frame. The worst case (highest percentage on) duty cycle is used for the calculation.

7.5.2. Set SPA Center Frequency = Fundamental frequency, RBW = 100 kHz, VBW = 300 kHz, Span = 0 Hz.

7.5.3. Set EUT as normal operation.

7.5.4. Set SPA View. Delta Mark time.

7.6. Measurement Result

The duty cycle is simply the on time divided by the period:

The duration of one cycle = 100.0ms

Effective period of the cycle = $(1.24 \times 24) + (4.96 \times 2)$ ms = 39.68 ms

DC = $39.68\text{ms} / 100.0\text{ms} = 0.3968$

Therefore, the average factor is found by $20\log 0.3968 = -8.03\text{dB}$

The spectral diagrams in appendix I.

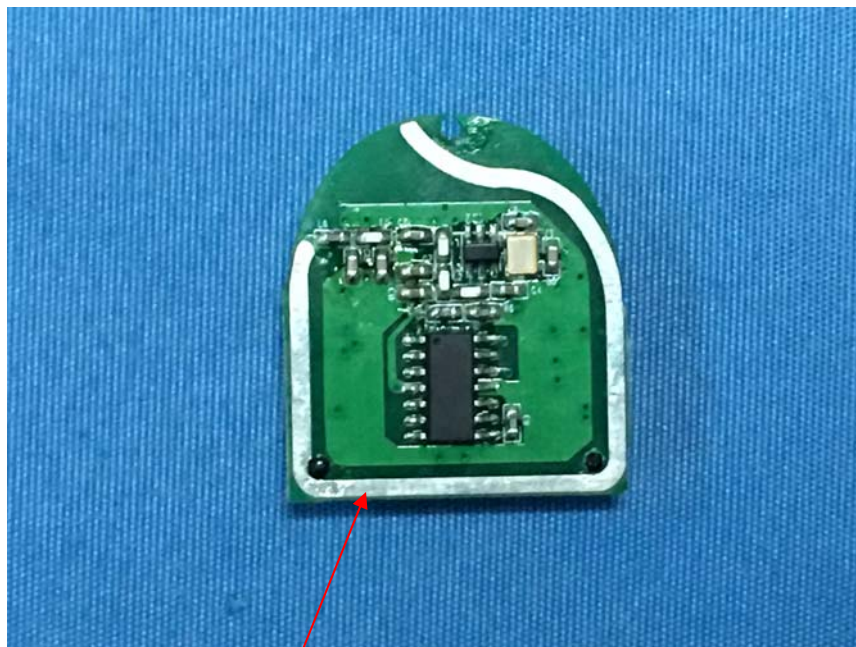
8. ANTENNA REQUIREMENT

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 0dBi. Therefore, the equipment complies with the antenna requirement of Section 15.203.



Antenna

APPENDIX I (Test Curves)



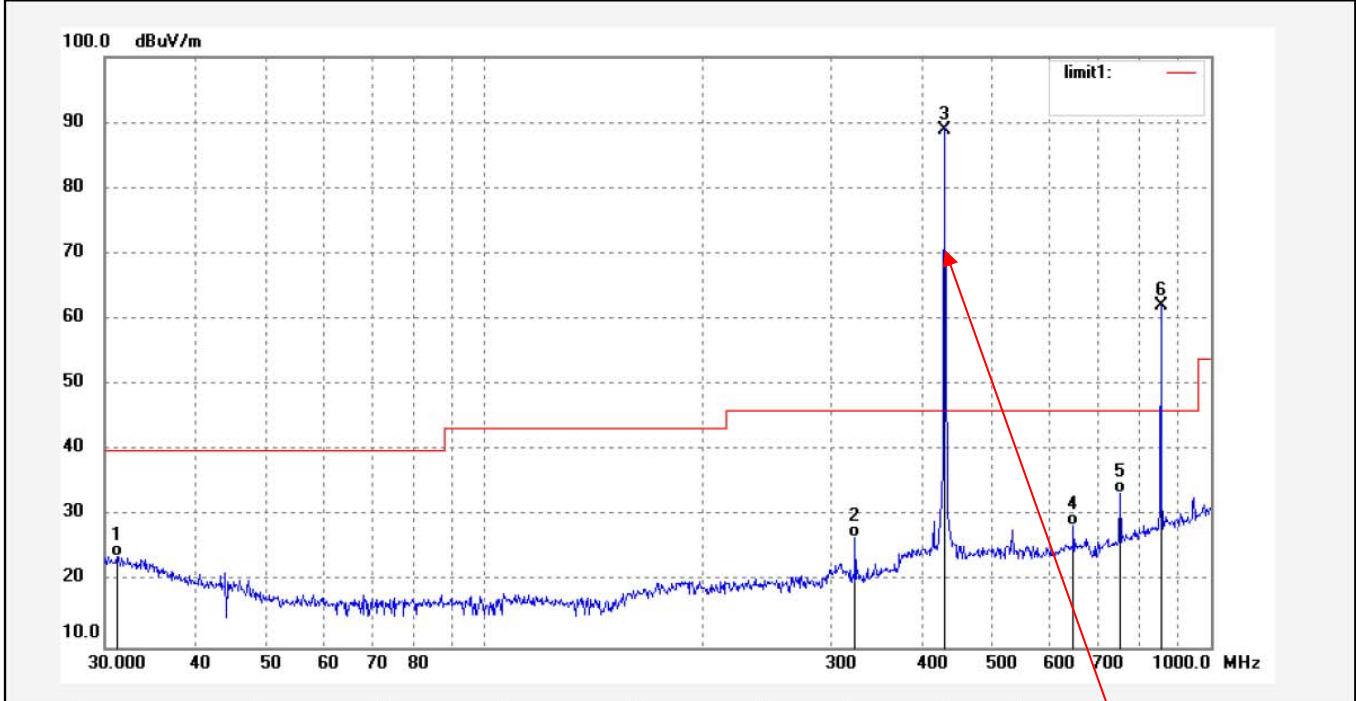
ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: FRANK2019 #1218	Polarization: Horizontal
Standard: FCC 15.231a 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 19/07/04/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 11/48/58
EUT: Wireless remote control vibrator	Engineer Signature:
Mode: 433.92MHz TX	Distance: 3m
Model: PEG-001	
Manufacturer: TOPARC TECHNOLOGY(SHENZHEN) CO.,LTD.	

Note: Report NO.:ATE20190983



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.1822	44.44	-20.49	23.95	40.00	-16.05	QP	200	201	
2	323.7250	47.31	-20.45	26.86	46.00	-19.14	QP	200	123	
3	433.9212	104.71	-17.78	86.93	100.83	-13.90	peak	200	33	
4	646.8215	41.33	-12.70	28.63	46.00	-17.37	QP	200	96	
5	749.6761	43.84	-10.34	33.50	46.00	-12.50	QP	200	22	
6	867.8545	70.02	-7.98	62.04	80.83	-18.79	peak	200	103	

Note: the peak limit for fundamental frequency is 100.83 dBuV/m.

Fundamental frequency



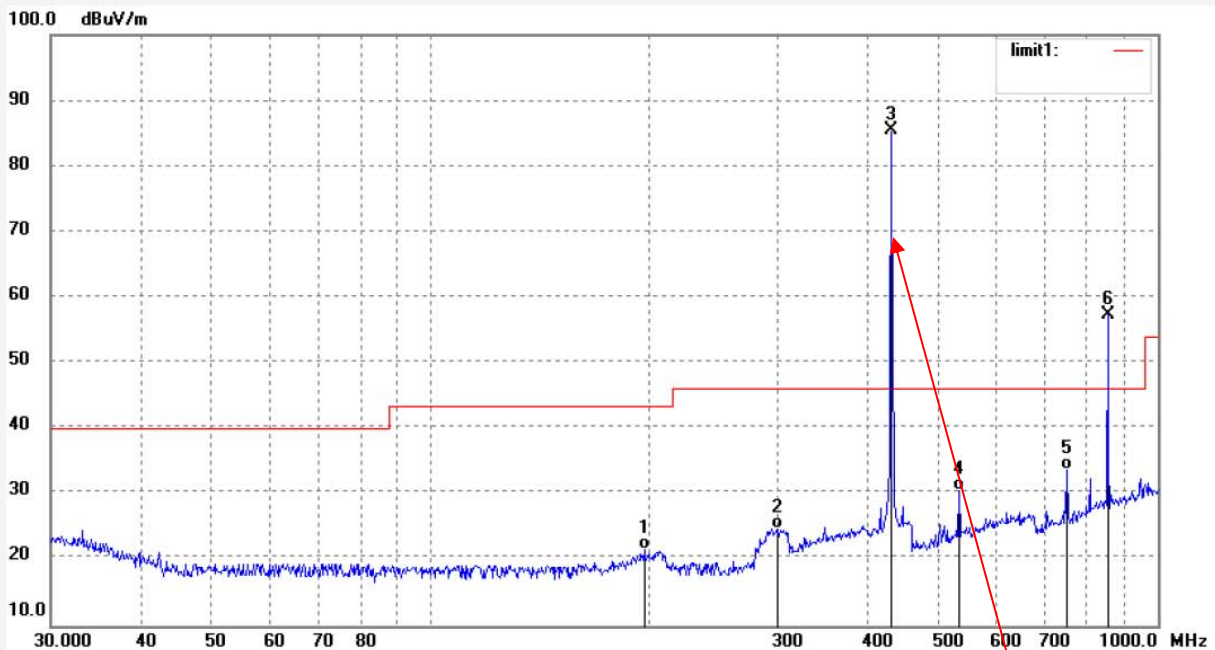
ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: FRANK2019 #1219	Polarization: Vertical
Standard: FCC 15.231a 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 19/07/04/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 11/49/48
EUT: Wireless remote control vibrator	Engineer Signature:
Mode: 433.92MHz TX	Distance: 3m
Model: PEG-001	
Manufacturer: TOPARC TECHNOLOGY(SHENZHEN) CO.,LTD.	

Note: Report NO.:ATE20190983



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	196.5595	46.04	-24.56	21.48	43.50	-22.02	QP	100	103	
2	299.6440	45.91	-21.23	24.68	46.00	-21.32	QP	100	93	
3	433.9212	101.28	-17.78	83.50	100.83	-17.33	peak	100	201	
4	533.1611	45.90	-15.29	30.61	46.00	-15.39	QP	100	213	
5	749.6761	44.05	-10.34	33.71	46.00	-12.29	QP	100	166	
6	867.8545	65.37	-7.98	57.39	80.83	-23.44	peak	100	96	

Note: the peak limit for fundamental frequency is 100.83 dBuV/m.

Fundamental frequency



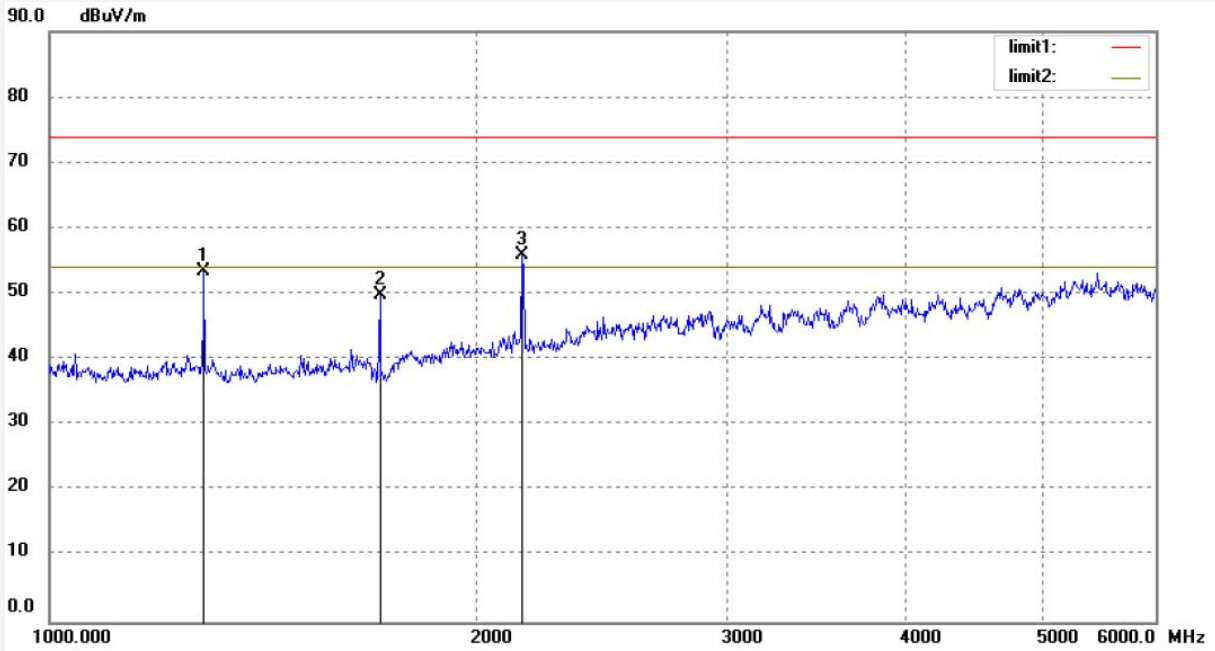
ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: FRANK2019 #1234	Polarization: Horizontal
Standard: FCC 15.231a	Power Source: DC 3V
Test item: Radiation Test	Date: 19/07/05/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 13/49/16
EUT: Wireless remote control vibrator	Engineer Signature:
Mode: 433.92MHz TX	Distance: 3m
Model: PEG-001	
Manufacturer: TOPARC TECHNOLOGY(SHENZHEN) CO.,LTD.	

Note: Report NO.:ATE20190983



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1301.762	54.92	-1.55	53.37	80.83	-27.46	peak	200	153	
2	1735.681	48.15	1.79	49.94	80.83	-30.89	peak	200	103	
3	2169.647	54.04	1.78	55.82	80.83	-25.01	peak	200	315	



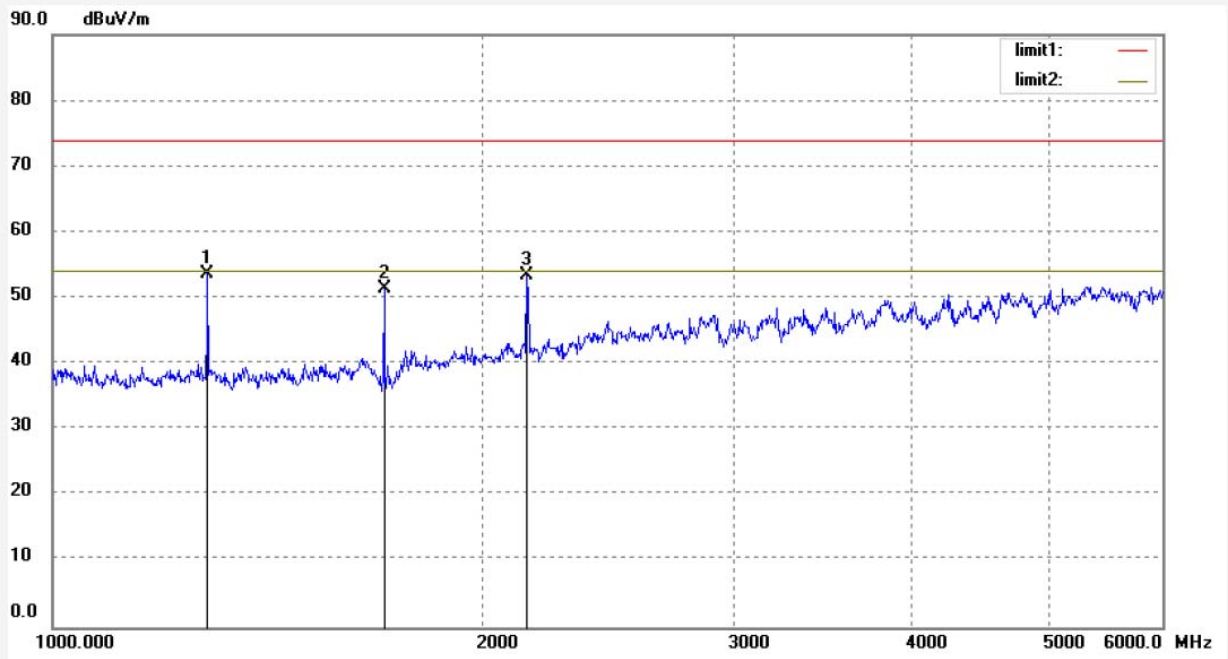
ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

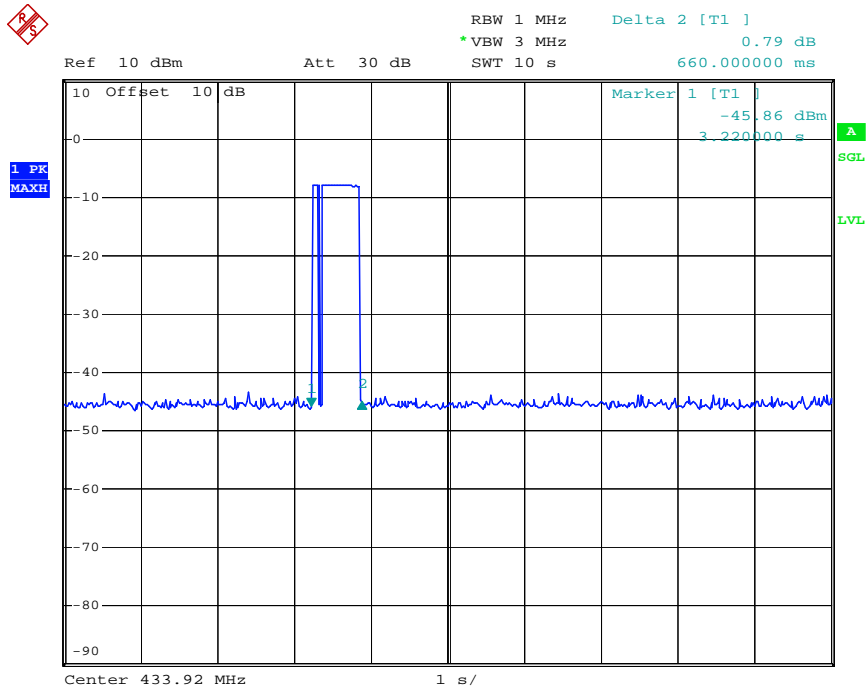
Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: FRANK2019 #1235	Polarization: Vertical
Standard: FCC 15.231a	Power Source: DC 3V
Test item: Radiation Test	Date: 19/07/05/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 13/50/20
EUT: Wireless remote control vibrator	Engineer Signature:
Mode: 433.92MHz TX	Distance: 3m
Model: PEG-001	
Manufacturer: TOPARC TECHNOLOGY(SHENZHEN) CO.,LTD.	

Note: Report NO.:ATE20190983



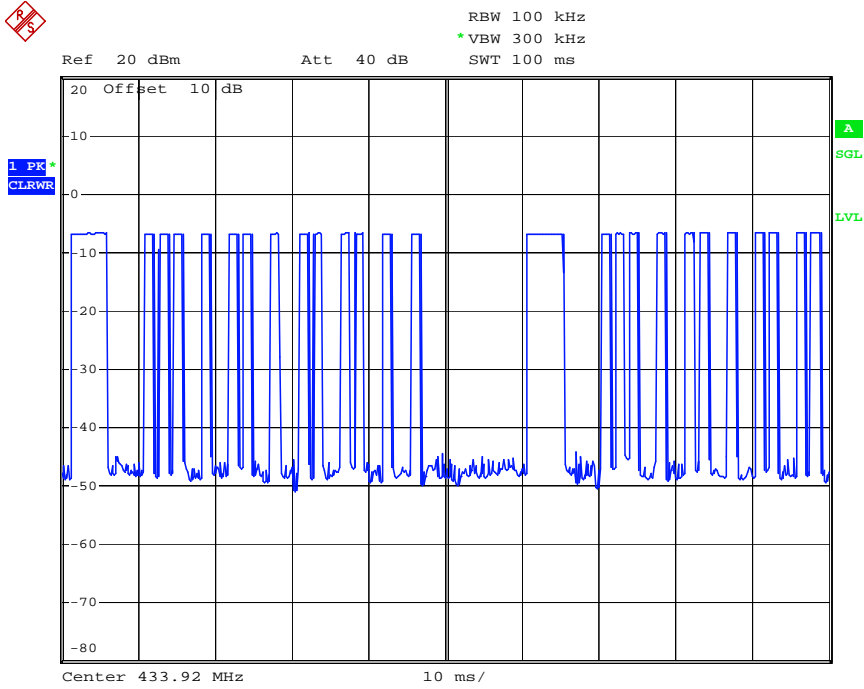
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1301.762	55.17	-1.55	53.62	80.83	-27.21	peak	150	103	
2	1735.681	49.68	1.79	51.47	80.83	-29.36	peak	150	93	
3	2169.647	51.67	1.78	53.45	80.83	-27.38	peak	150	197	



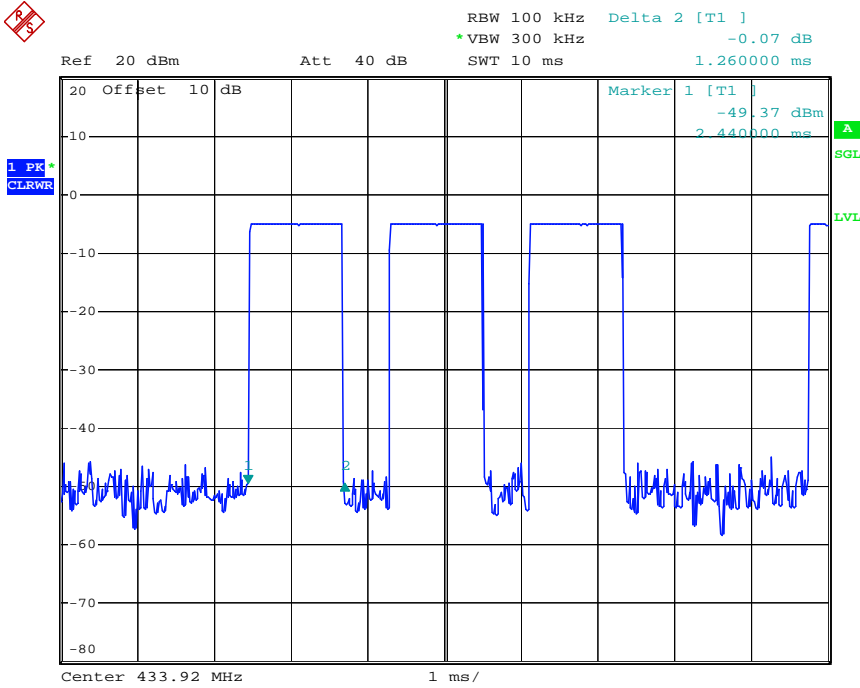
Date: 6.JUL.2019 13:17:41

Release Time = 0.66s

The graph shows the pattern of coding during the signal transmission.
The duration of one cycle = 100.0ms.

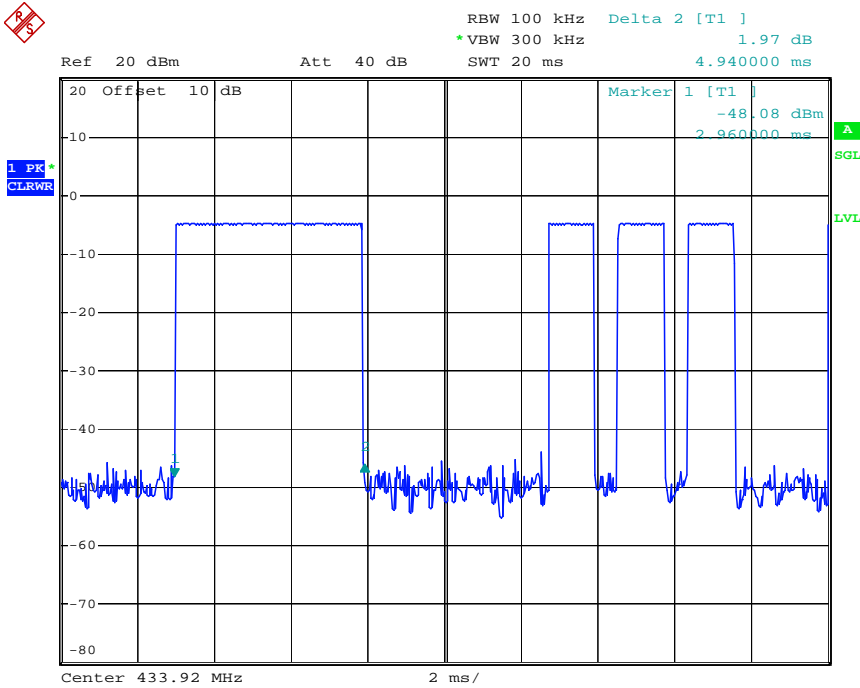


Date: 5.JUL.2019 18:29:48



Date: 5.JUL.2019 18:30:27

The graph shows the duration of 'on' signal. From marker 1 to delta 1, duration is 1.26ms.



Date: 5.JUL.2019 18:31:11

The graph shows the duration of 'on' signal. From marker 1 to delta 1, duration is 4.94ms.