

APPLICATION CERTIFICATION  
On Behalf of

Miotta Limited

Keypad

Model No.: KYP1300

FCC ID: 2ASKQ-KYP1300

Prepared for : Miotta Limited  
Address : 5/F, SPA Ctr, 53-55 Lockhart Road, Wanchai, Hong Kong.

Prepared by : Shenzhen Accurate Technology Co., Ltd.  
Address : 1/F., Building A, Changyuan New Material Port, Science &  
Industry Park, Nanshan District, Shenzhen, Guangdong,  
P.R. China.

Tel: (0755) 26503290  
Fax: (0755) 26503396

Report Number : ATE20190126  
Date of Test : Mar. 20, 2019-Mar. 30, 2019  
Date of Report : Mar. 31, 2019

## TABLE OF CONTENTS

Description	Page
Test Report Certification	
<b>1. GENERAL INFORMATION .....</b>	<b>4</b>
1.1. Description of Device (EUT).....	4
1.2. Description of Test Facility .....	5
1.3. Measurement Uncertainty .....	5
<b>2. MEASURING DEVICE AND TEST EQUIPMENT .....</b>	<b>6</b>
<b>3. SUMMARY OF TEST RESULTS.....</b>	<b>7</b>
<b>4. THE FIELD STRENGTH OF RADIATION EMISSION .....</b>	<b>8</b>
4.1. Block Diagram of Test Setup.....	8
4.2. The Field Strength of Radiation Emission Measurement Limits.....	10
4.3. Configuration of EUT on Measurement .....	10
4.4. Operating Condition of EUT .....	10
4.5. Test Procedure .....	11
4.6. DATA SAMPLE .....	11
4.7. The Field Strength of Radiation Emission Measurement Results .....	12
<b>5. -20DB BANDWIDTH .....</b>	<b>14</b>
5.1. Block Diagram of Test Setup.....	14
5.2. The Bandwidth of Emission Limit According To FCC Part 15 Section 15.231(c).....	14
5.3. EUT Configuration on Measurement .....	14
5.4. Operating Condition of EUT .....	14
5.5. Test Procedure .....	15
5.6. Measurement Result .....	15
<b>6. RELEASE TIME MEASUREMENT.....</b>	<b>16</b>
6.1. Block Diagram of Test Setup.....	16
6.2. Release Time Measurement According To FCC Part 15 Section 15.231(a) .....	16
6.3. EUT Configuration on Measurement .....	16
6.4. Operating Condition of EUT .....	17
6.5. Test Procedure .....	17
6.6. Measurement Result .....	17
<b>7. AVERAGE FACTOR MEASUREMENT .....</b>	<b>18</b>
7.1. Block Diagram of Test Setup.....	18
7.2. Average factor Measurement according to ANSI C63.10-2013.....	18
7.3. EUT Configuration on Measurement .....	18
7.4. Operating Condition of EUT .....	19
7.5. Test Procedure .....	19
7.6. Measurement Result .....	19
<b>8. ANTENNA REQUIREMENT.....</b>	<b>20</b>
8.1. The Requirement .....	20
8.2. Antenna Construction .....	20

## Test Report Certification

Applicant : Miotta Limited  
Address : 5/F, SPA Ctr, 53-55 Lockhart Road, Wanchai, Hong Kong.  
Manufacturer : Maxkin Mobile Technology Co., Ltd.  
Address : #301, 3F, NO.26 BLOCK 1, SHUIDOU LAOWEI YOUSONG  
COMMUNITY, LONGHUA DIST., SHENZHEN, CHINA.  
Product : Keypad  
Model No. : KYP1300  
Trade name : N/A

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 : Mar. 20, 2019-Mar. 30, 2019  
Date of Report: Mar. 31, 2019

Prepared by : \_\_\_\_\_  
(Tim Zhang, Engineer)

Approved & Authorized Signer : \_\_\_\_\_  
(Sean Liu, Manager)



## 1. GENERAL INFORMATION

### 1.1. Description of Device (EUT)

EUT	:	Keypad
Model Number	:	KYP1300
Power Supply	:	DC 4.5V (powered by battery)
Modulation:	:	ASK
Operation Frequency	:	433.92MHz
Antenna type	:	Integral antenna
Antenna gain	:	0dBi
Applicant	:	Miotta Limited
Address	:	5/F, SPA Ctr, 53-55 Lockhart Road, Wanchai, Hong Kong
Manufacturer	:	Maxkin Mobile Technology Co., Ltd.
Address	:	#301, 3F, NO.26 BLOCK 1, SHUIDOU LAOWEI YOUSONG COMMUNITY, LONGHUA DIST., SHENZHEN, CHINA.
Date of sample received	:	Mar. 01, 2019
Date of Test	:	Mar. 20, 2019--Mar. 30, 2019

## 1.2. 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

## 1.3. Measurement Uncertainty

- Conducted Emission Expanded Uncertainty = 2.23dB, k=2
- Radiated emission expanded uncertainty (9kHz-30MHz) = 3.08dB, k=2
- Radiated emission expanded uncertainty (30MHz-1000MHz) = 4.42dB, k=2
- Radiated emission expanded uncertainty (Above 1GHz) = 4.06dB, 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	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 05, 2019	1 Year
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 05, 2019	1 Year
Spectrum Analyzer	Rohde&Schwarz	FSV-40	101495	Jan. 05, 2019	1 Year
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 05, 2019	1 Year
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 05, 2019	1 Year
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 05, 2019	1 Year
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 05, 2019	1 Year
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 05, 2019	1 Year
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 05, 2019	1 Year
Open Switch and Control Unit	Rohde&Schwarz	OSP120 + OSP-B157	101244 + 100866	Jan. 05, 2019	1 Year
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 05, 2019	1 Year
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 05, 2019	1 Year
Highpass Filter	Wainwright Instruments	WHKX3.6/18 G-10SS	N/A	Jan. 05, 2019	1 Year
Band Reject Filter	Wainwright Instruments	WRCG2400/2 485-2375/2510 -60/11SS	N/A	Jan. 05, 2019	1 Year
RF Coaxial Cable (Conducted Emission)	SUHNER	N-2m	No.2	Jan. 05, 2019	1 Year
RF Coaxial Cable (Radiated Emission)	SUHNER	N-5m	NO.3	Jan. 05, 2019	1 Year
RF Coaxial Cable (Radiated Emission)	SUHNER	N-5m	NO.4	Jan. 05, 2019	1 Year
RF Coaxial Cable (Radiated Emission)	SUHNER	N-1m	NO.5	Jan. 05, 2019	1 Year
RF Coaxial Cable (Radiated Emission)	SUHNER	N-1m	NO.6	Jan. 05, 2019	1 Year
Conducted Emission Measurement Software: ES-K1 V1.71					
Radiated Emission Measurement Software: EZ_EMV V1.1.4.2					

### 3. SUMMARY OF TEST RESULTS

<b>FCC Rules</b>	<b>Description of Test</b>	<b>Result</b>
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 4.5V, 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

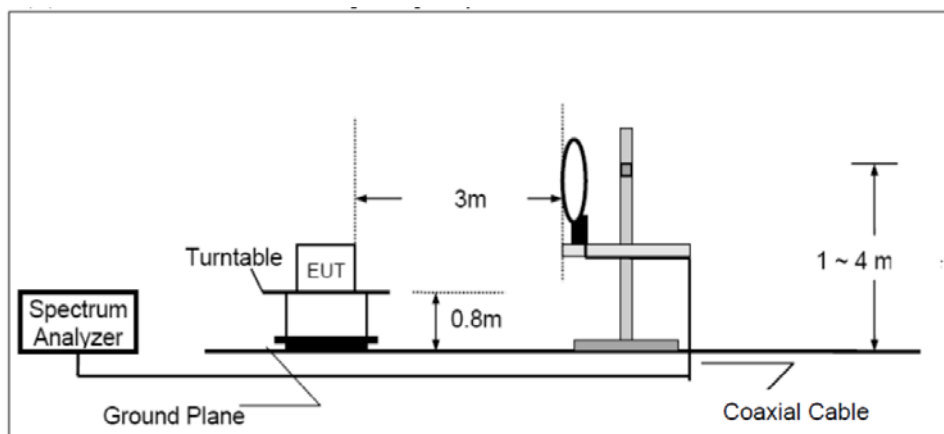
#### 4.1.1. Block diagram of connection between the EUT and simulators



(EUT: Keypad)

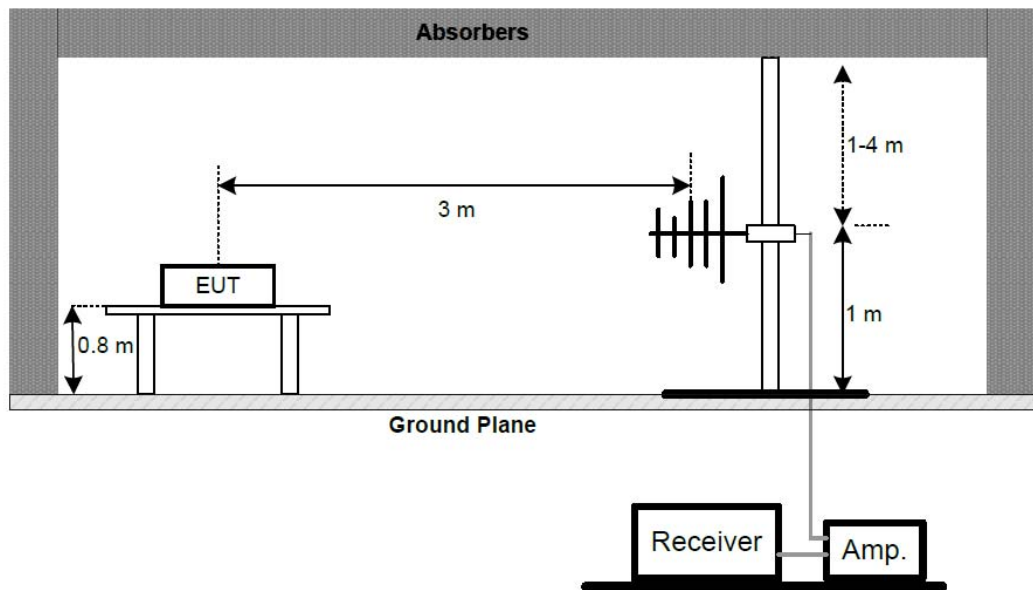
#### 4.1.2. Semi-Anechoic Chamber Test Setup Diagram

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

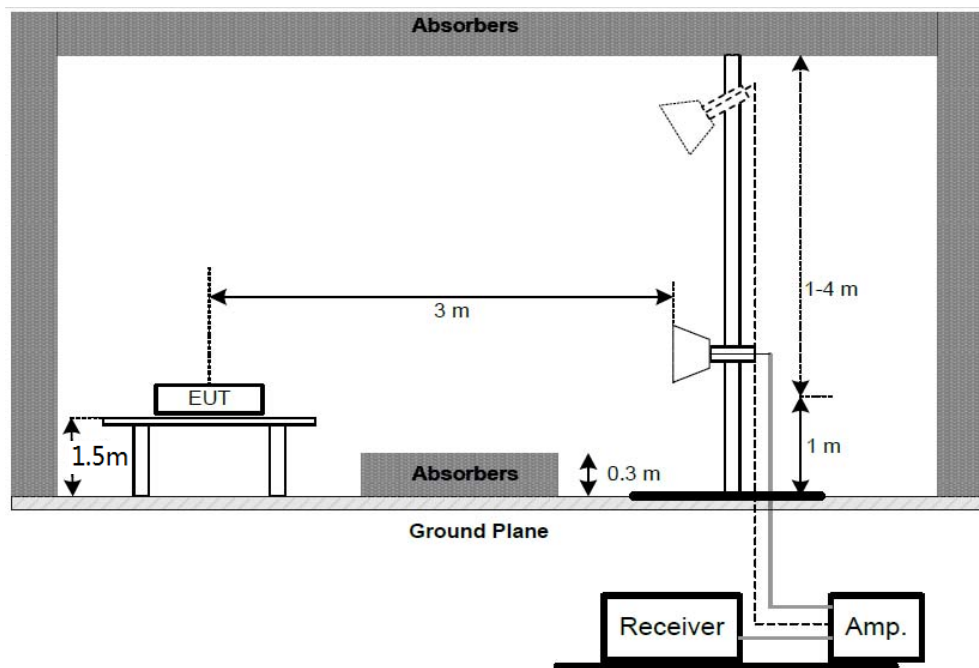




(B) Radiated Emission Test Set-Up, Frequency below 1GHz



(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] [ $\mu\text{V}/\text{m}$ ]	Field Strength of Spurious Emission [Average] [ $\mu\text{V}/\text{m}$ ]
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,  $\mu\text{V}/\text{m}$  at 3 meters =  $56.81818(F) - 6136.3636$ ; for the band 260-470 MHz,  $\mu\text{V}/\text{m}$  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. Keypad (EUT)

Model Number : KYP1300  
Serial Number : 1900106  
Manufacturer : Maxkin Mobile Technology 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 $\mu$ v)	Factor (dB/m)	Result (dB $\mu$ v/m)	Limit (dB $\mu$ 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 $\mu$ v) = Uncorrected Analyzer/Receiver reading

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

Result(dB $\mu$ v/m) = Reading + Factor

Limit (dB $\mu$ v/m)= Limit stated in standard

Margin (dB) = Result(dB $\mu$ v/m) - Limit (dB $\mu$ v/m)

Calculation Formula:

Margin(dB) = Result (dB $\mu$ v/m)–Limit(dB $\mu$ v/m)

Result(dB $\mu$ v/m)= Reading(dB $\mu$ 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>Keypad</u>		Power Supply:	<u>DC 4.5V</u>
Model No.:	<u>KYP1300</u>		Test Engineer:	<u>Frank</u>
Test Mode:	<u>433.92MHz TX</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		
<b>433.92</b>	<b>89.68</b>	<b>-5.53</b>	<b>-8.76</b>	<b>75.39</b>	<b>84.15</b>	<b>80.83</b>	<b>100.83</b>	<b>-5.44</b>	<b>-16.68</b>	Horizontal
216.78	53.36	-11.62	/	41.74(QP)		46		-4.26		
867.84	40.28	1.90	-8.76	33.42	42.18	60.83	80.83	-27.41	-38.65	
1301.76	17.13	32.73	-8.76	41.10	49.86	60.83	80.83	-19.73	-30.97	
1735.68	14.48	35.14	-8.76	40.86	49.62	60.83	80.83	-19.97	-31.21	
<b>433.92</b>	<b>85.66</b>	<b>-5.53</b>	<b>-8.76</b>	<b>71.37</b>	<b>80.13</b>	<b>80.83</b>	<b>100.83</b>	<b>-9.46</b>	<b>-20.70</b>	Vertical
216.78	49.03	-11.62	/	37.41(QP)		46		-8.59		
867.84	37.93	1.90	-8.76	31.07	39.83	60.83	80.83	-29.76	-41.00	
1301.76	16.91	32.73	-8.76	40.88	49.64	60.83	80.83	-19.95	-31.19	
1735.68	15.29	35.14	-8.76	41.67	50.43	60.83	80.83	-19.16	-30.40	

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) = 0.38ms

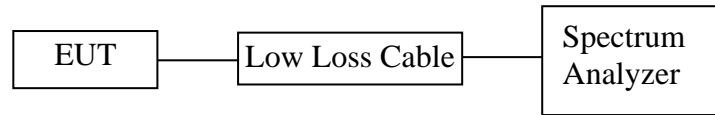
$2/PW = 2/0.38\text{ms} = 5.26\text{kHz}$

RBW (100 kHz) > 2/PW (5.26kHz)

Therefore PDCF is not needed

## 5. -20DB BANDWIDTH

### 5.1. Block Diagram of Test Setup



(EUT: Keypad)

### 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. Keypad (EUT)

Model Number	:	KYP1300
Serial Number	:	1900106
Manufacturer	:	Maxkin Mobile Technology 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 = 30 kHz, VBW = 100 kHz, Span = 500kHz.

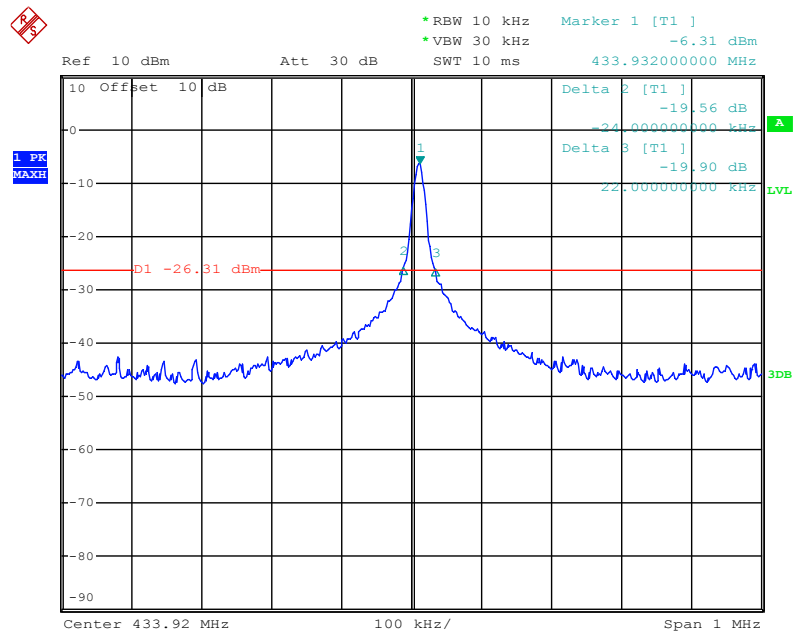
5.5.2. Set SPA Max hold, Mark peak, -20 dB.

### 5.6. Measurement Result

**The EUT does meet the FCC requirement.**

-20 dB bandwidth = 46 kHz < 1084.8 kHz.

The test chart of -20 dB bandwidth:



Date: 20.MAR.2019 08:45:31

## 6. RELEASE TIME MEASUREMENT

### 6.1. Block Diagram of Test Setup



(EUT: Keypad)

### 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. Keypad (EUT)

Model Number : KYP1300  
Serial Number : 1900106  
Manufacturer : Maxkin Mobile Technology 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 = 100 kHz, VBW = 300 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

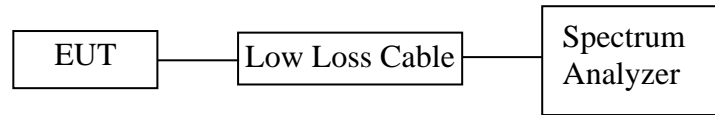
**The release time less than 5 seconds.**

Release Time = 2.9s

The spectral diagrams in appendix I.

## 7. AVERAGE FACTOR MEASUREMENT

### 7.1. Block Diagram of Test Setup



(EUT: Keypad)

### 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.<sup>64</sup> 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. Keypad

Model Number : KYP1300  
Serial Number : 1900106  
Manufacturer : Maxkin Mobile Technology 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 = 1000 kHz, VBW = 3000 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 =  $(0.38 \times 44) + (1.04 \times 19)$ ms = 36.48 ms

DC =  $36.48\text{ms} / 100.0\text{ms} = 0.3648$

**Therefore, the average factor is found by  $20\log 0.3648 = -8.76\text{dB}$**

The spectral diagrams in appendix I.

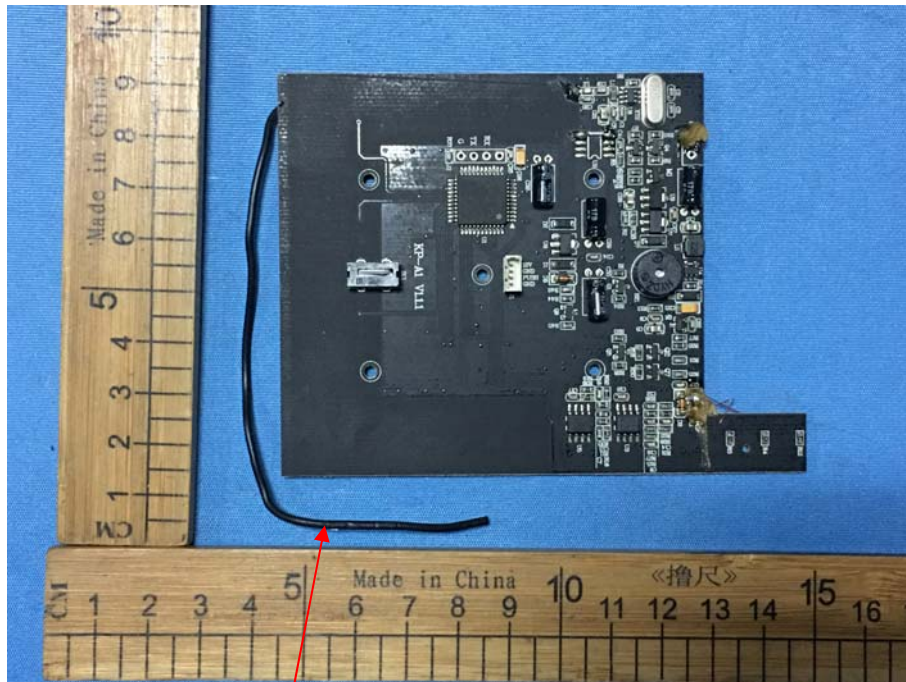
## 8. ANTENNA REQUIREMENT

### 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)



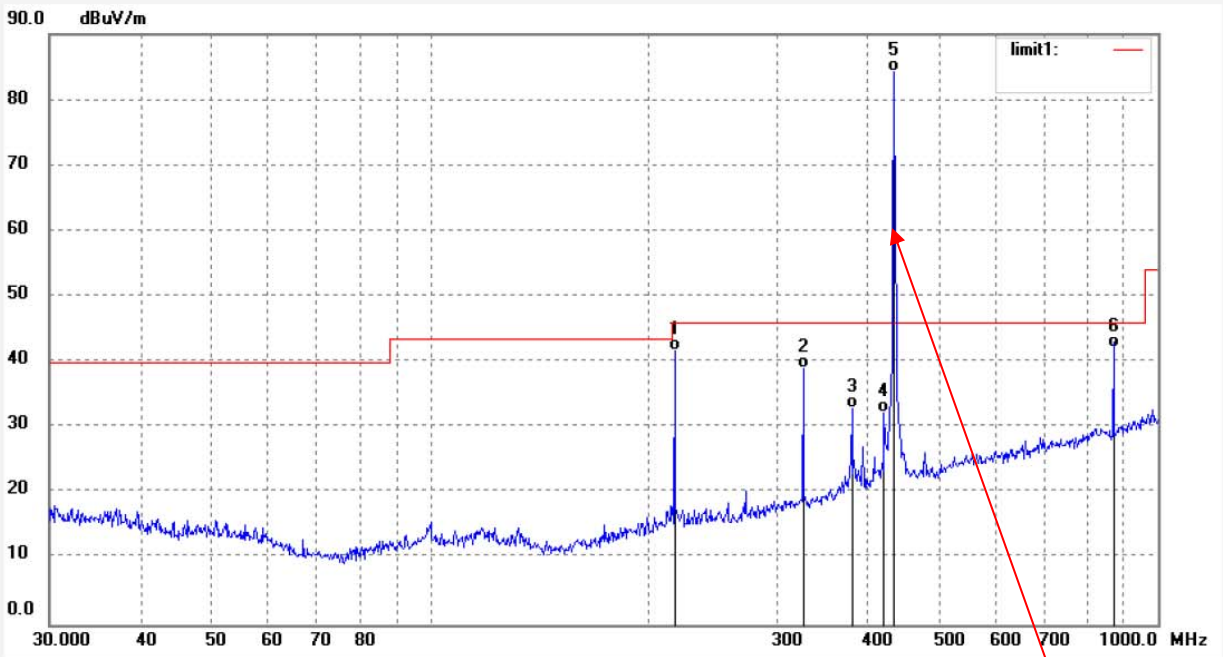
**ACCURATE TECHNOLOGY CO., LTD.**

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

Site: 2# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: FRANK2019 #20	Polarization: Horizontal
Standard: FCC 15.231a 3M Radiated	Power Source: DC 4.5V
Test item: Radiation Test	Date: 19/03/19/
Temp.( C)/Hum.(%) 23 C / 48 %	Time: 9/00/45
EUT: Keypad	Engineer Signature:
Mode: TX 433.92MHz	Distance: 3m
Model: KYP1300	
Manufacturer: Maxkin Mobile Technology Co.,Ltd	

Note: Report NO.:ATE20190126



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	216.7828	53.36	-11.62	41.74	46.00	-4.26	QP	200	103	
2	325.5957	47.27	-8.21	39.06	46.00	-6.94	QP	200	92	
3	379.9141	39.84	-6.98	32.86	46.00	-13.14	QP	200	116	
4	420.5803	38.13	-5.75	32.38	46.00	-13.62	QP	200	62	
5	433.9250	89.68	-5.53	84.15	100.83	-16.68	Peak	200	49	
6	867.8401	40.28	1.90	42.18	80.83	-38.65	Peak	200	21	

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

Fundamental frequency





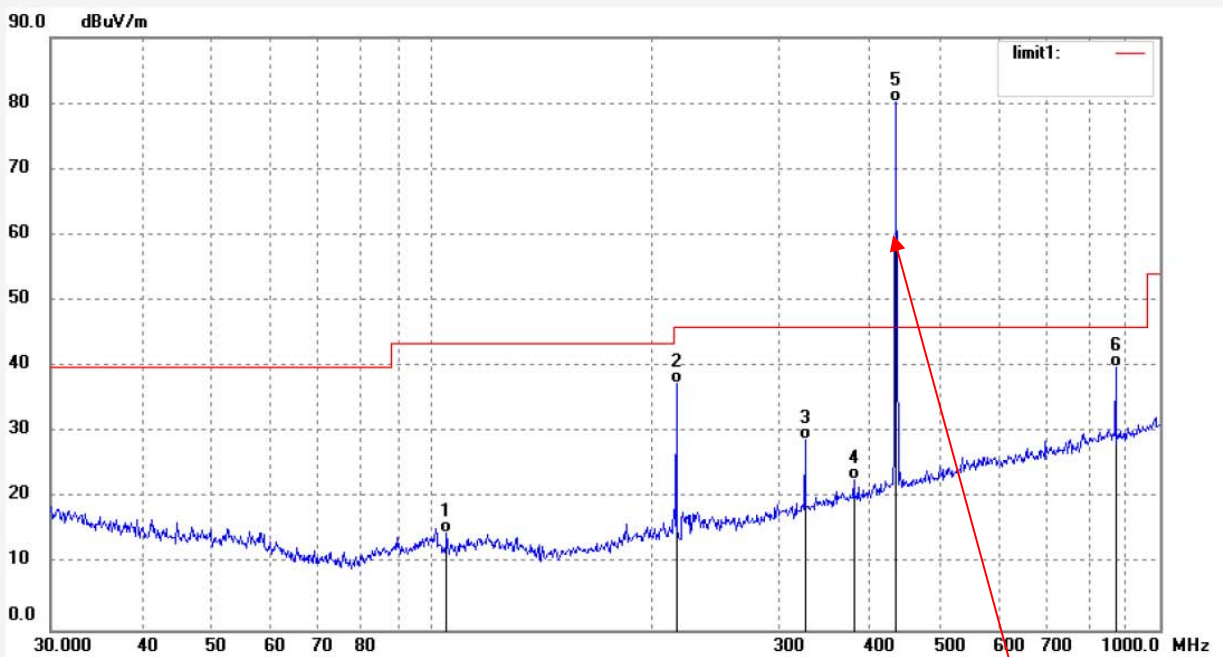
**ACCURATE TECHNOLOGY CO., LTD.**

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

Site: 2# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: FRANK2019 #21	Polarization: Vertical
Standard: FCC 15.231a 3M Radiated	Power Source: DC 4.5V
Test item: Radiation Test	Date: 19/03/19/
Temp.( C)/Hum.(%) 23 C / 48 %	Time: 9/01/32
EUT: Keypad	Engineer Signature:
Mode: TX 433.92MHz	Distance: 3m
Model: KYP1300	
Manufacturer: Maxkin Mobile Technology Co.,Ltd	

Note: Report NO.:ATE20190126



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	104.9033	28.68	-13.85	14.83	43.50	-28.67	QP	100	196	
2	216.7828	49.03	-11.62	37.41	46.00	-8.59	QP	100	34	
3	325.5957	37.14	-8.21	28.93	46.00	-17.07	QP	100	116	
4	379.9141	29.76	-6.98	22.78	46.00	-23.22	QP	100	84	
5	433.9249	85.66	-5.53	80.13	100.83	-20.70	Peak	100	331	
6	867.8400	37.93	1.90	39.83	80.83	-41.00	Peak	100	50	

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

Fundamental frequency



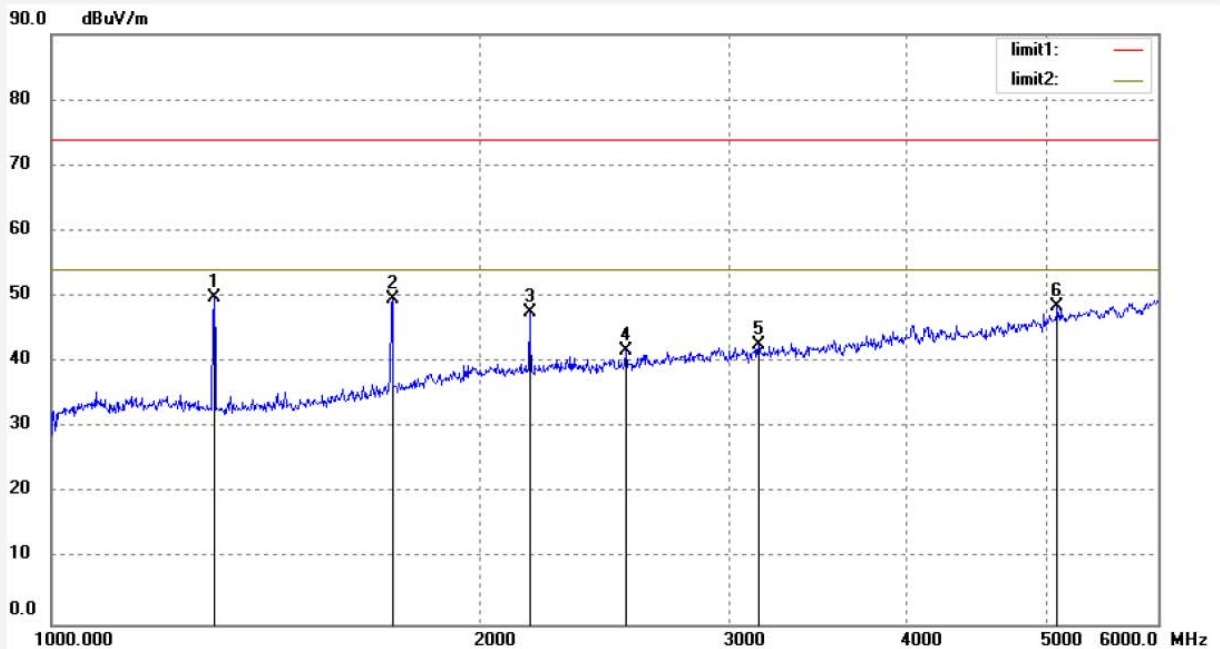
**ACCURATE TECHNOLOGY CO., LTD.**

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

Site: 2# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: FRANK2019 #23	Polarization: Horizontal
Standard: FCC PK	Power Source: DC 4.5V
Test item: Radiation Test	Date: 19/03/19/
Temp.( C)/Hum.(%) 23 C / 48 %	Time: 9/04/40
EUT: Keypad	Engineer Signature:
Mode: TX 433.92MHz	Distance: 3m
Model: KYP1300	
Manufacturer: Maxkin Mobile Technology Co.,Ltd	

Note: Report NO.:ATE20190126



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	17.13	32.73	49.86	74.00	-24.14	peak	200	163	
2	1735.683	14.48	35.14	49.62	74.00	-24.38	peak	200	210	
3	2169.610	9.19	38.31	47.50	74.00	-26.50	peak	200	331	
4	2534.314	2.05	39.72	41.77	74.00	-32.23	peak	250	84	
5	3142.235	2.58	40.16	42.74	74.00	-31.26	peak	200	156	
6	5097.292	2.95	45.46	48.41	74.00	-25.59	peak	250	210	





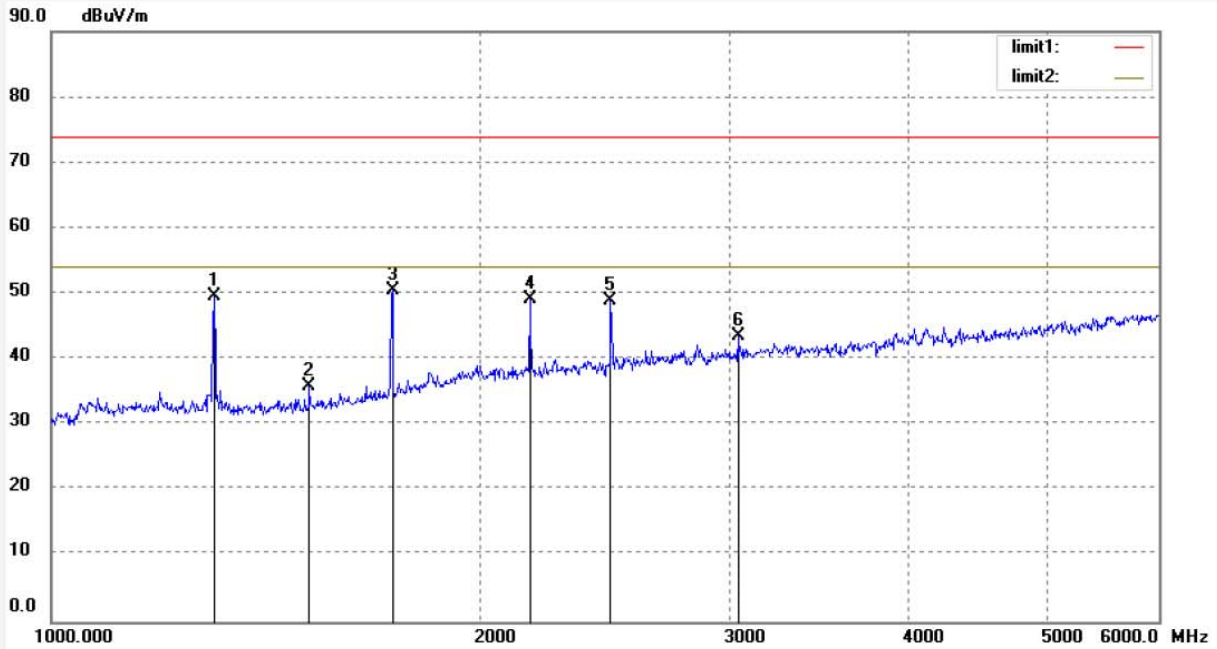
**ACCURATE TECHNOLOGY CO., LTD.**

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

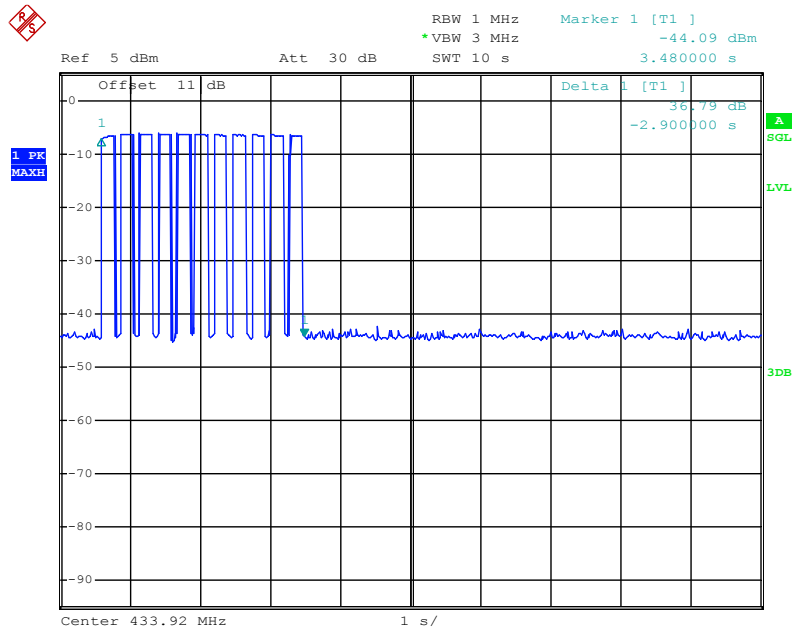
Site: 2# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: FRANK2019 #22	Polarization: Vertical
Standard: FCC PK	Power Source: DC 4.5V
Test item: Radiation Test	Date: 19/03/19/
Temp.( C)/Hum.(%) 23 C / 48 %	Time: 9/04/19
EUT: Keypad	Engineer Signature:
Mode: TX 433.92MHz	Distance: 3m
Model: KYP1300	
Manufacturer: Maxkin Mobile Technology Co.,Ltd	

Note: Report NO.:ATE20190126



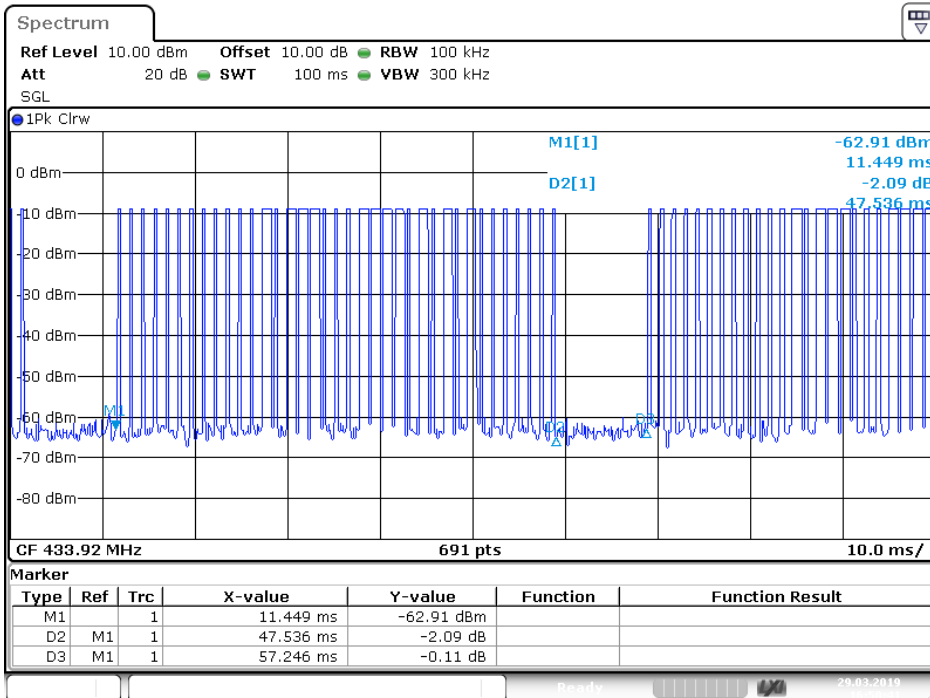
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1301.762	16.91	32.73	49.64	74.00	-24.36	peak	150	192	
2	1518.131	2.72	33.11	35.83	74.00	-38.17	peak	150	223	
3	1735.683	15.29	35.14	50.43	74.00	-23.57	peak	150	201	
4	2169.610	10.75	38.31	49.06	74.00	-24.94	peak	150	100	
5	2603.523	9.30	39.58	48.88	74.00	-25.12	peak	150	97	
6	3037.063	3.58	39.97	43.55	74.00	-30.45	peak	150	321	



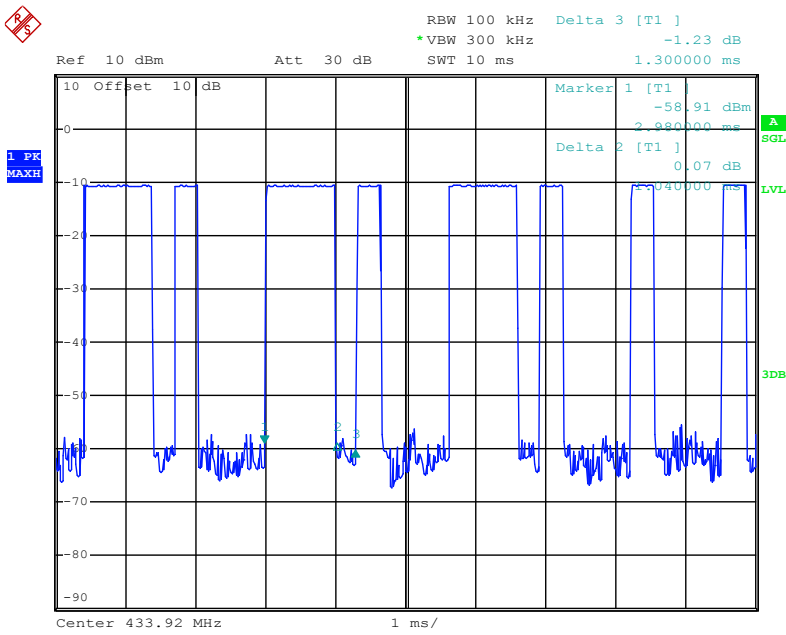
Date: 23.MAR.2019 15:02:14

Release Time = 2.9s

The graph shows the pattern of coding during the signal transmission.  
The duration of time is 100ms.

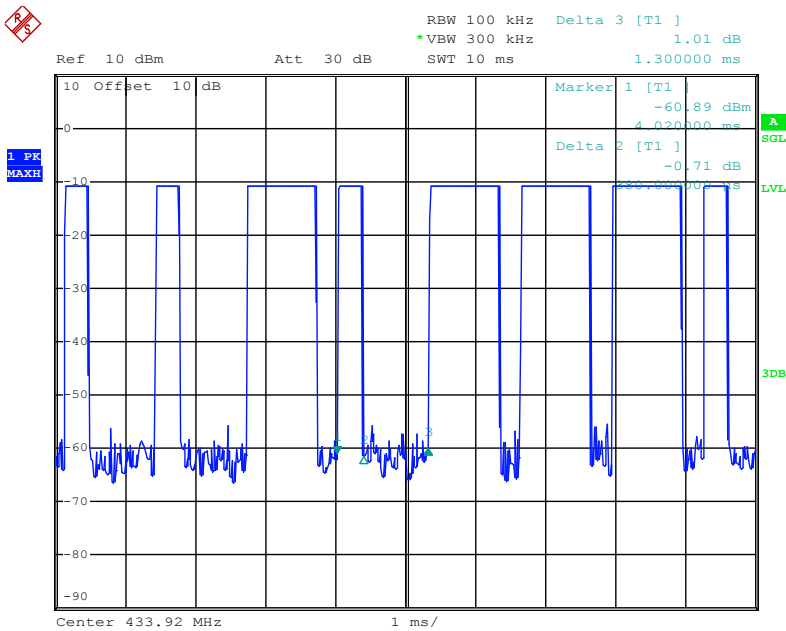


Date: 29.MAR.2019 16:50:41



Date: 20.MAR.2019 08:58:58

The graph shows the duration of 'on' signal. From marker 1 to delta 1, duration is 1.04ms.



Date: 20.MAR.2019 09:00:37

The graph shows the duration of 'on' signal. From marker 1 to delta 1, duration is 0.38ms.