

APPLICATION CERTIFICATION FCC Part 15C
On Behalf of
PIPO TECHNOLOGY CO., LIMITED

Media box
Model No.: X8

FCC ID: PT7-X9

Prepared for : PIPO TECHNOLOGY CO., LIMITED
Address : Area C, 3F, Bao Yun Da Logistics Centre, Warehouse Building,
Xi Xiang Avenue, Bao An District, Shenzhen, China.
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Report No. : ATE20161492
Date of Original : June 13-27, 2016
Test
Date of new : June 13-July 20, 2016
Test
Date of Report : June 28, 2016
REV.1
Date of Report : July 21, 2016
REV.2

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Test Report Certification

Applicant : PIPO TECHNOLOGY CO., LIMITED
Manufacturer : PIPO TECHNOLOGY CO., LIMITED
EUT Description : Media box
Model No. : X8
Trade Mark : N/A

Measurement Procedure Used:

**FCC Rules and Regulations Part 15 Subpart C Section 15.247: 2015
ANSI C63.10: 2013**

The EUT was tested according to DTS test procedure of Apr 08, 2016 KDB558074 D01 DTS Meas Guidance v03r05 for compliance to FCC 47CFR 15.247 requirements

The device described above is tested by 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 15.247 limits. The measurement results are contained in this test report and 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 ACCURATE TECHNOLOGY CO. LTD.

Date of Original Test :	June 13-27, 2016
Date of NEW Test :	June 13-July 20, 2016
Date of Report REV.1 :	June 28, 2016
Date of Report REV.2 :	July 21, 2016

Prepared by :



(Tim.zhang, Engineer)

Approved & Authorized Signer :



(Sean Liu, Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT	:	Media box
Model Number	:	X8
Bluetooth version	:	BT V4.0 Dual Mode This report is for BT V4.0 LE mode
Frequency Range	:	2402MHz-2480MHz
Number of Channels	:	40 for BT V4.0 LE 79 for BT classic mode
Antenna Gain	:	2dBi
Antenna type	:	External Antenna
Power Supply	:	AC 100-240V~50/60Hz
Adapter information	:	Model:KA1433-1202400JP Input: 100-240V~50/60Hz 1.0A Max Out: 12V/2400mA
Modulation mode	:	GFSK for BT V4.0 LE GFSK, $\pi/4$ DQPSK, 8DPSK for BT classic mode
Applicant	:	PIPO TECHNOLOGY CO., LIMITED
Address	:	Area C, 3F, Bao Yun Da Logistics Centre, Warehouse Building, Xi Xiang Avenue, Bao An District, Shenzhen, China.
Manufacturer	:	PIPO TECHNOLOGY CO., LIMITED
Address	:	Area C, 3F, Bao Yun Da Logistics Centre, Warehouse Building, Xi Xiang Avenue, Bao An District, Shenzhen, China.
Date of sample received	:	Jun 13, 2016
Date of Test	:	June 13-July 20, 2016

1.2.Carrier Frequency of Channels

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channe 1	Frequency (MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

1.3.Product differentiation Description



Note: Please refer to the above two pictures, in addition to the screen size of the product is not the same, the other circuit is exactly the same. After evaluation, We will test the the Conducted Emission and Radiated spurious emission(below 1GHz) for X8, Other projects refer to X9 test data, The original report number is ATE20161169.

1.4.Special Accessory and Auxiliary Equipment

N/A

1.5.Description of Test Facility

EMC Lab : Accredited by TUV Rheinland Shenzhen

Listed by FCC

The Registration Number is 752051

Listed by Industry Canada

The Registration Number is 5077A-2

Accredited by China National Accreditation Committee
for Laboratories

The Certificate Registration Number is L3193

Name of Firm : ACCURATE TECHNOLOGY CO. LTD

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

1.6.Measurement Uncertainty

Conducted Emission Expanded Uncertainty = 2.23dB, k=2

Radiated emission expanded uncertainty = 3.08dB, k=2
(9kHz-30MHz)

Radiated emission expanded uncertainty = 4.42dB, k=2
(30MHz-1000MHz)

Radiated emission expanded uncertainty = 4.06dB, k=2
(Above 1GHz)

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. 9, 2016	1 Year
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 9, 2016	1 Year
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 9, 2016	1 Year
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 9, 2016	1 Year
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 14, 2016	1 Year
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 14, 2016	1 Year
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 14, 2016	1 Year
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 14, 2016	1 Year
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 9, 2016	1 Year
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 9, 2016	1 Year
Highpass Filter	Wainwright Instruments	WHKX3.6/18 G-10SS	N/A	Jan. 9, 2016	1 Year
Band Reject Filter	Wainwright Instruments	WRCG2400/2 485-2375/2510 -60/11SS	N/A	Jan. 9, 2016	1 Year

3. OPERATION OF EUT DURING TESTING

3.1. Operating Mode

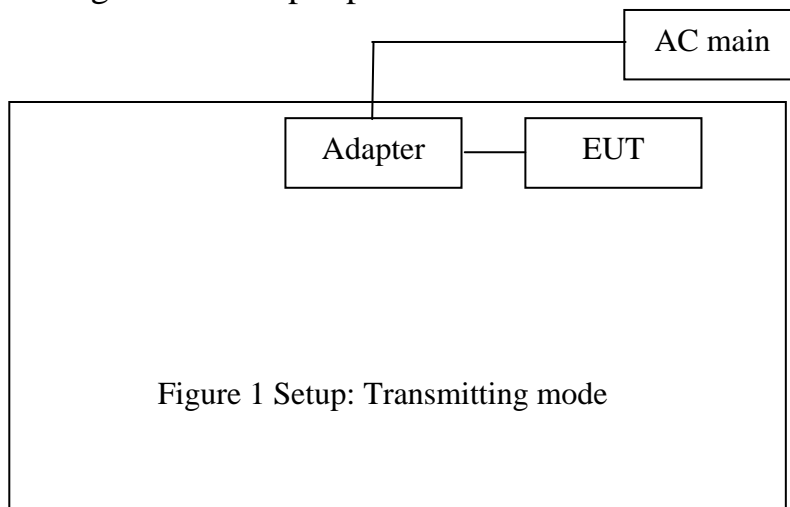
The mode is used: **BLE Transmitting mode**

Low Channel: 2402MHz

Middle Channel: 2440MHz

High Channel: 2480MHz

3.2. Configuration and peripherals

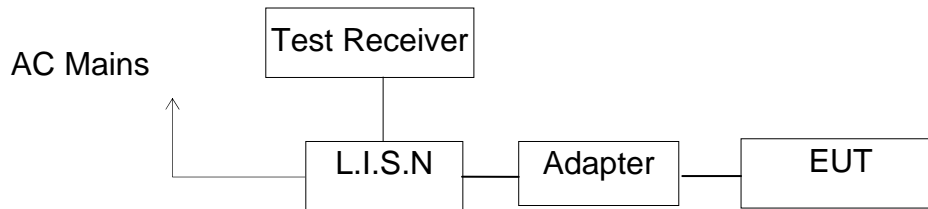


4. TEST PROCEDURES AND RESULTS

FCC Rules	Description of Test	Result
Section 15.247(d) Section 15.209	Radiated Spurious Emission Test	Compliant
Section 15.207	AC Power Line Conducted Emission Test	Compliant
Section 15.203	Antenna Requirement	Compliant

5. POWER LINE CONDUCTED MEASUREMENT

5.1. Block Diagram of Test Setup



(EUT: Media box)

5.2. Power Line Conducted Emission Measurement Limits

Frequency (MHz)	Limit dB(μ V)	
	Quasi-peak Level	Average Level
0.15 - 0.50	66.0 – 56.0 *	56.0 – 46.0 *
0.50 - 5.00	56.0	46.0
5.00 - 30.00	60.0	50.0

NOTE1: The lower limit shall apply at the transition frequencies.
 NOTE2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

5.3. Configuration of EUT on Measurement

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

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 test mode and measure it.

5.5. Test Procedure

The EUT is put on the plane 0.8 m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2013 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

5.6. Power Line Conducted Emission Measurement Results

PASS.

The frequency range from 150kHz to 30MHz is checked.

Test mode : BT communicating(AC 120V/60Hz)

EUT mode : X8

MEASUREMENT RESULT: "PIPO617005_fin"

6/17/2016 9:38AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.560000	43.00	10.7	56	13.0	QP	L1	GND
0.890000	26.90	10.8	56	29.1	QP	L1	GND
26.320000	38.50	11.5	60	21.5	QP	L1	GND

MEASUREMENT RESULT: "PIPO617005_fin2"

6/17/2016 9:38AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.555000	36.20	10.7	46	9.8	AV	L1	GND
1.275000	15.60	10.9	46	30.4	AV	L1	GND
26.050000	34.10	11.5	50	15.9	AV	L1	GND

MEASUREMENT RESULT: "PIPO617006_fin"

6/17/2016 9:42AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.555000	42.10	10.7	56	13.9	QP	N	GND
0.965000	27.90	10.8	56	28.1	QP	N	GND
26.110000	36.10	11.5	60	23.9	QP	N	GND

MEASUREMENT RESULT: "PIPO617006_fin2"

6/17/2016 9:42AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.560000	35.60	10.7	46	10.4	AV	N	GND
0.900000	21.20	10.8	46	24.8	AV	N	GND
26.200000	31.40	11.5	50	18.6	AV	N	GND

Test mode : BT communicating(AC 240V/60Hz) EUT mode : X8								
MEASUREMENT RESULT: "PIPO617004_fin"								
6/17/2016 9:34AM								
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE	
MHz	dBµV	dB	dBµV	dB				
0.585000	39.70	10.7	56	16.3	QP	L1	GND	
1.065000	30.20	10.9	56	25.8	QP	L1	GND	
26.785000	40.90	11.5	60	19.1	QP	L1	GND	
MEASUREMENT RESULT: "PIPO617004_fin2"								
6/17/2016 9:34AM								
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE	
MHz	dBµV	dB	dBµV	dB				
0.585000	32.90	10.7	46	13.1	AV	L1	GND	
1.075000	22.90	10.9	46	23.1	AV	L1	GND	
26.650000	37.10	11.5	50	12.9	AV	L1	GND	
MEASUREMENT RESULT: "PIPO617003_fin"								
6/17/2016 9:30AM								
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE	
MHz	dBµV	dB	dBµV	dB				
0.580000	38.30	10.7	56	17.7	QP	N	GND	
4.510000	27.20	11.1	56	28.8	QP	N	GND	
26.830000	38.60	11.5	60	21.4	QP	N	GND	
MEASUREMENT RESULT: "PIPO617003_fin2"								
6/17/2016 9:30AM								
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE	
MHz	dBµV	dB	dBµV	dB				
0.570000	32.20	10.7	46	13.8	AV	N	GND	
4.260000	24.50	11.1	46	21.5	AV	N	GND	
26.440000	34.40	11.5	50	15.6	AV	N	GND	

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

The spectral diagrams are attached as below.

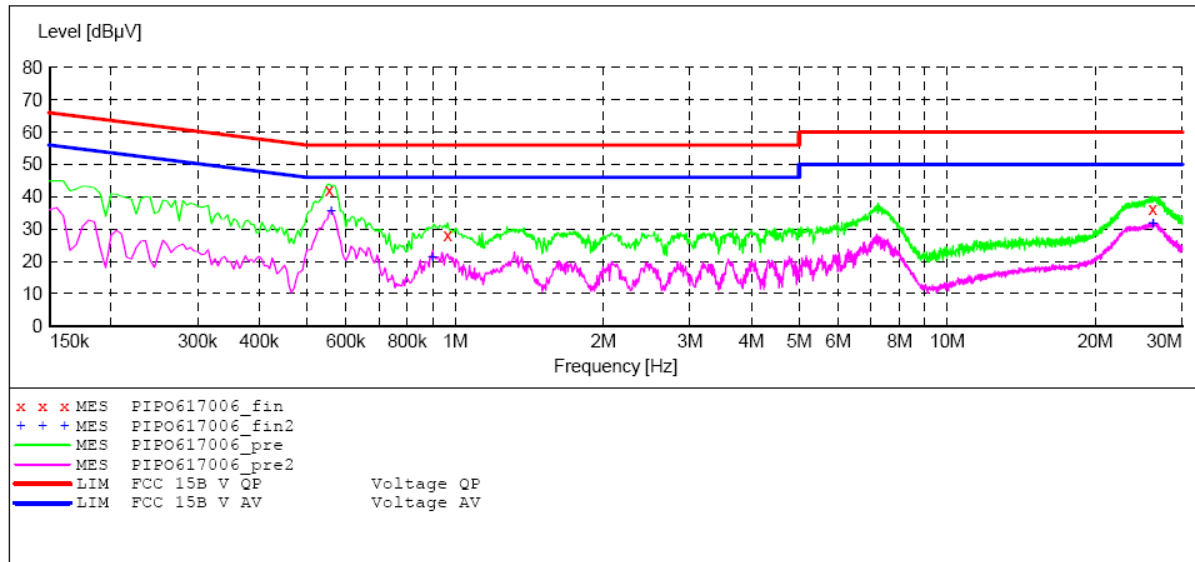
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Media box M/N:X8
 Manufacturer: Pipo
 Operating Condition: BT OPERATION
 Test Site: 1#Shielding Room
 Operator: STAR
 Test Specification: N 120V/60Hz
 Comment: Report No.:ATE20161492
 Start of Test: 6/17/2016 / 9:39:01AM

SCAN TABLE: "V 9K-30MHZ fin"

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	NSLK8126 2008
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	NSLK8126 2008



MEASUREMENT RESULT: "PIPO617006_fin"

6/17/2016 9:42AM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.555000	42.10	10.7	56	13.9	QP	N	GND
0.965000	27.90	10.8	56	28.1	QP	N	GND
26.110000	36.10	11.5	60	23.9	QP	N	GND

MEASUREMENT RESULT: "PIPO617006_fin2"

6/17/2016 9:42AM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.560000	35.60	10.7	46	10.4	AV	N	GND
0.900000	21.20	10.8	46	24.8	AV	N	GND
26.200000	31.40	11.5	50	18.6	AV	N	GND

ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

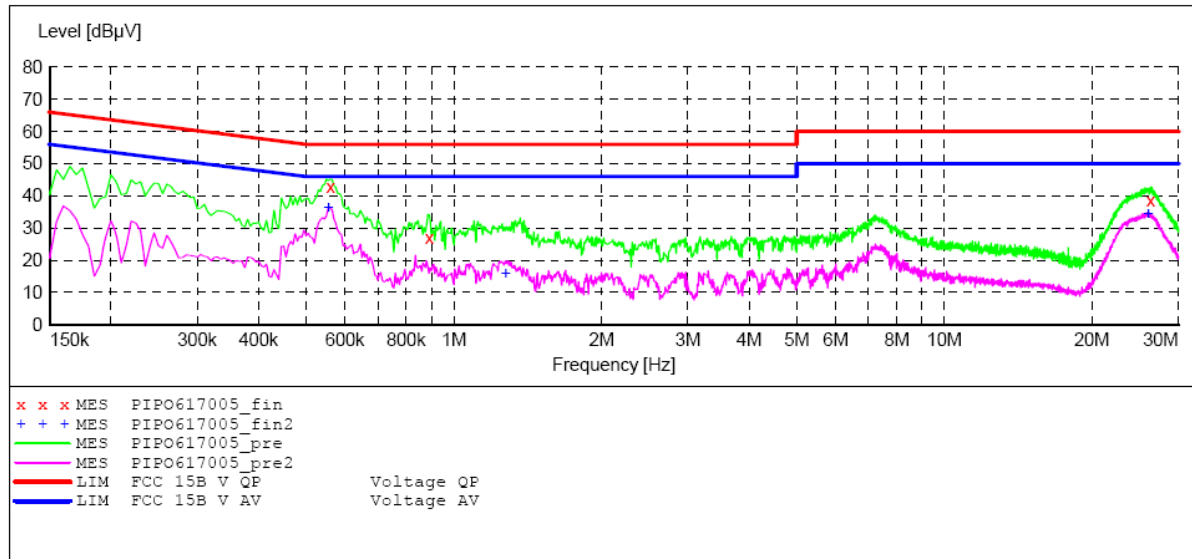
EUT: Media box M/N:X8
 Manufacturer: Pipo
 Operating Condition: BT OPERATION
 Test Site: 1#Shielding Room
 Operator: STAR
 Test Specification: L 120V/60Hz
 Comment: Report No.:ATE20161492
 Start of Test: 6/17/2016 / 9:35:27AM

SCAN TABLE: "V 9K-30MHz fin"

Short Description: _SUB_STD_VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	NSLK8126 2008
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	NSLK8126 2008

Average



MEASUREMENT RESULT: "PIPO617005_fin"

6/17/2016 9:38AM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.560000	43.00	10.7	56	13.0	QP	L1	GND
0.890000	26.90	10.8	56	29.1	QP	L1	GND
26.320000	38.50	11.5	60	21.5	QP	L1	GND

MEASUREMENT RESULT: "PIPO617005_fin2"

6/17/2016 9:38AM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.555000	36.20	10.7	46	9.8	AV	L1	GND
1.275000	15.60	10.9	46	30.4	AV	L1	GND
26.050000	34.10	11.5	50	15.9	AV	L1	GND

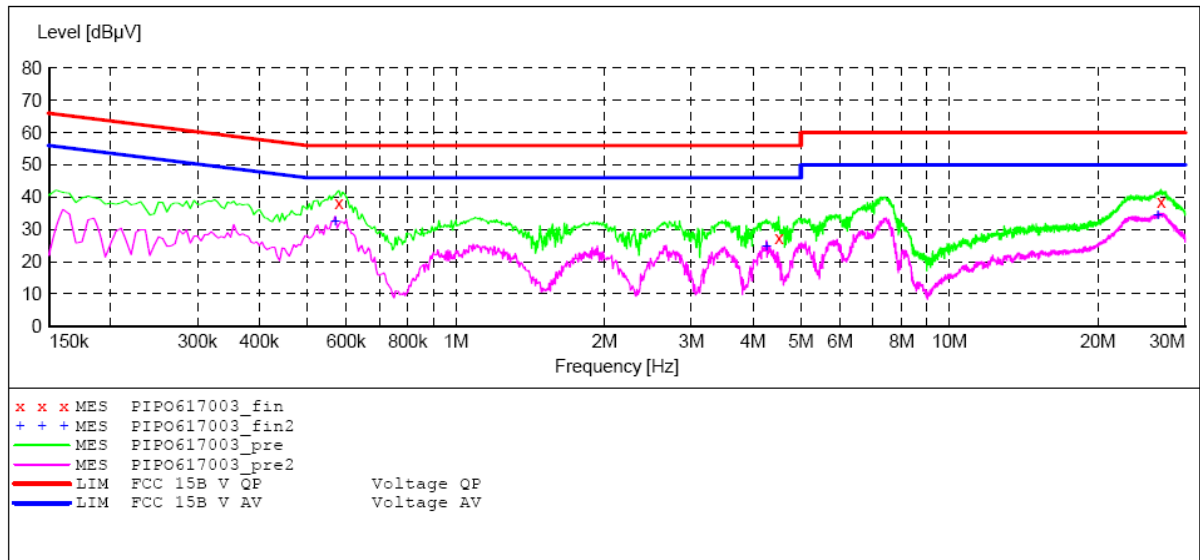
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Media box M/N:X8
 Manufacturer: Pipo
 Operating Condition: BT operation
 Test Site: 1#Shielding Room
 Operator: STAR
 Test Specification: N 240V/60Hz
 Comment: Report No.:ATE20161492
 Start of Test: 6/17/2016 / 9:26:58AM

SCAN TABLE: "V 9K-30MHz fin"

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	NSLK8126 2008
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	NSLK8126 2008



MEASUREMENT RESULT: "PIPO617003_fin"

6/17/2016 9:30AM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.580000	38.30	10.7	56	17.7	QP	N	GND
4.510000	27.20	11.1	56	28.8	QP	N	GND
26.830000	38.60	11.5	60	21.4	QP	N	GND

MEASUREMENT RESULT: "PIPO617003_fin2"

6/17/2016 9:30AM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.570000	32.20	10.7	46	13.8	AV	N	GND
4.260000	24.50	11.1	46	21.5	AV	N	GND
26.440000	34.40	11.5	50	15.6	AV	N	GND

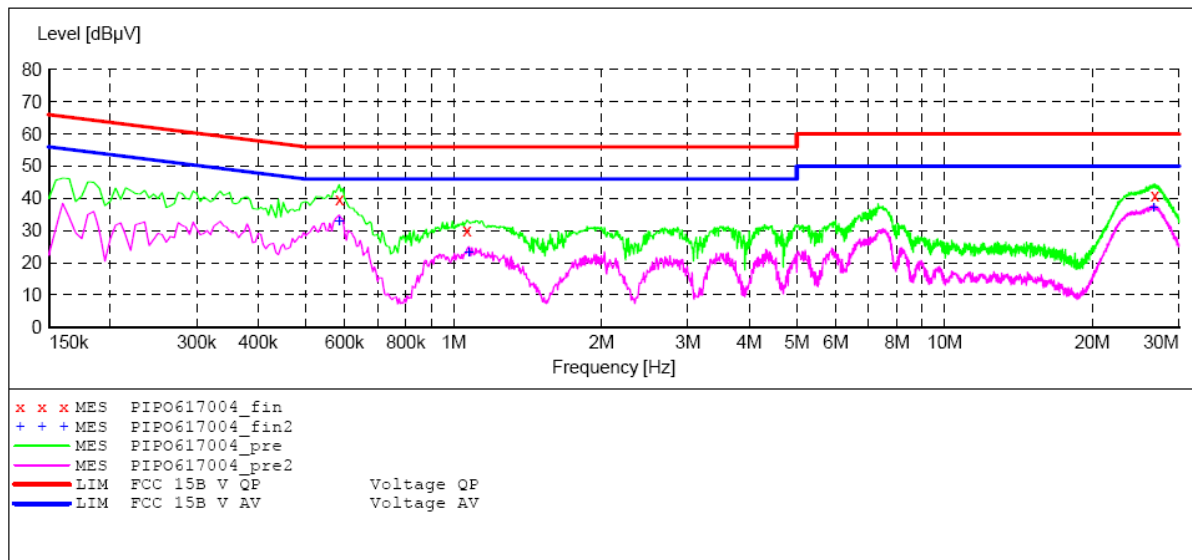
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Media box M/N:X8
 Manufacturer: Pipo
 Operating Condition: BT OPERATION
 Test Site: 1#Shielding Room
 Operator: STAR
 Test Specification: L 240V/60Hz
 Comment: Report No.:ATE20161492
 Start of Test: 6/17/2016 / 9:30:39AM

SCAN TABLE: "V 9K-30MHz fin"

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	NSLK8126 2008
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	NSLK8126 2008



MEASUREMENT RESULT: "PIPO617004_fin"

6/17/2016 9:34AM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.585000	39.70	10.7	56	16.3	QP	L1	GND
1.065000	30.20	10.9	56	25.8	QP	L1	GND
26.785000	40.90	11.5	60	19.1	QP	L1	GND

MEASUREMENT RESULT: "PIPO617004_fin2"

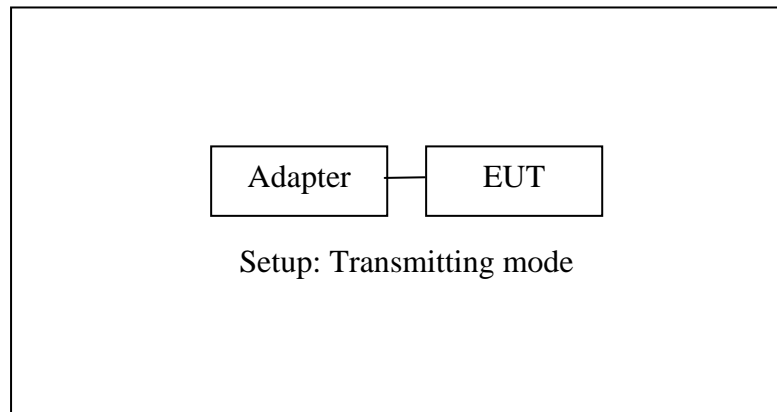
6/17/2016 9:34AM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.585000	32.90	10.7	46	13.1	AV	L1	GND
1.075000	22.90	10.9	46	23.1	AV	L1	GND
26.650000	37.10	11.5	50	12.9	AV	L1	GND

6. RADIATED SPURIOUS EMISSION TEST

6.1. Block Diagram of Test Setup

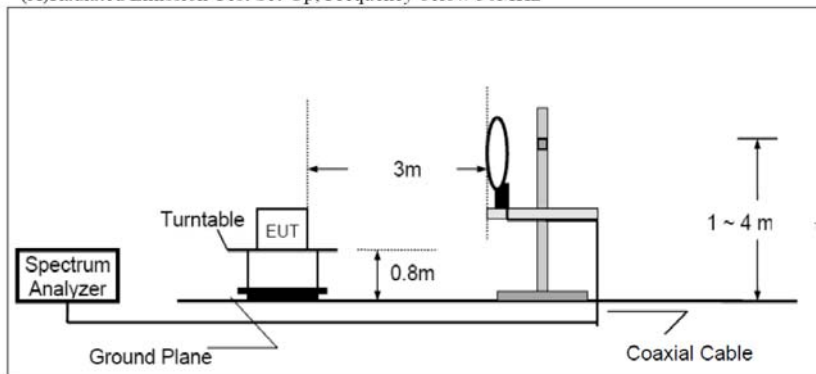
6.1.1. Block diagram of connection between the EUT and peripherals



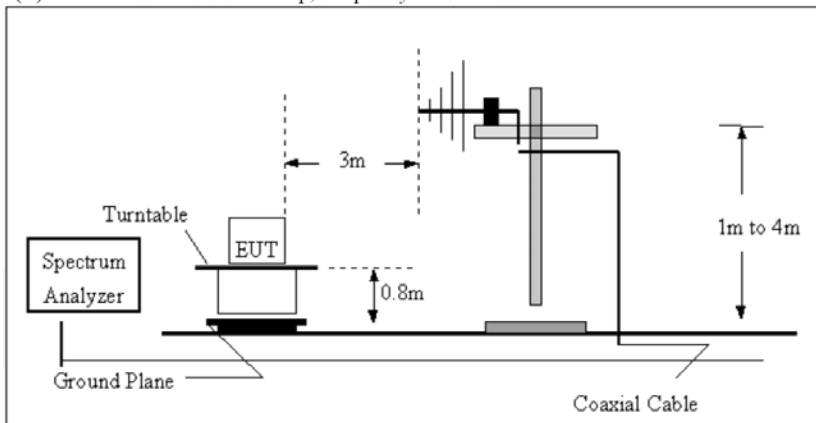
(EUT: Media box)

6.1.2. Semi-Anechoic Chamber Test Setup Diagram

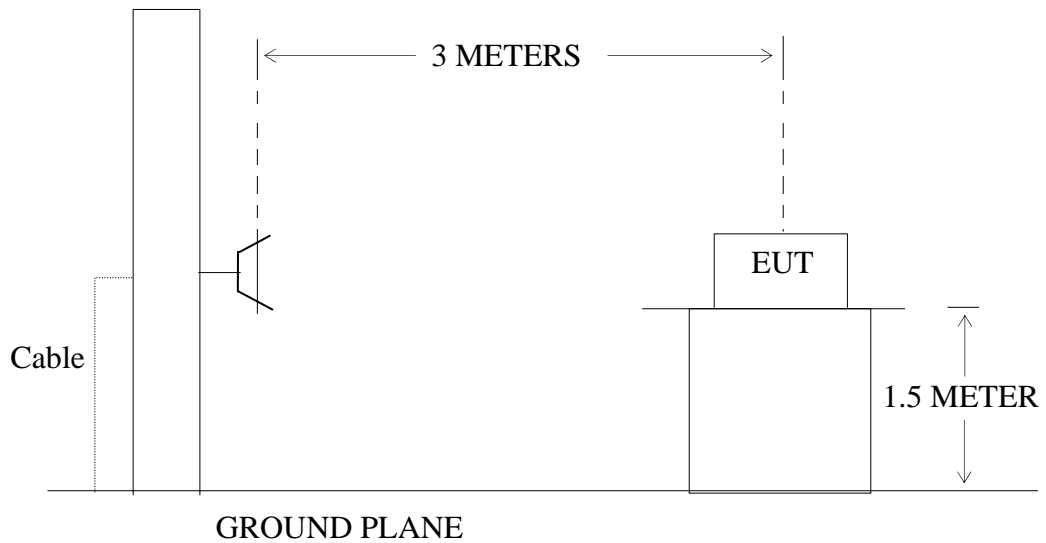
(A) Radiated Emission Test Set-Up, Frequency below 30MHz



(B) Radiated Emission Test Set-Up, Frequency 30-1000MHz



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



6.2. The Limit For Section 15.247(d)

Section 15.247(d): 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 (b)(3) of this section, 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).

6.3.Restricted bands of operation

6.3.1.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.

6.4.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.

6.5. Operating Condition of EUT

6.5.1. Setup the EUT and simulator as shown as Section 10.1.

6.5.2. Turn on the power of all equipment.

6.5.3. Let the EUT work in TX modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2440MHz, and 2480MHz TX frequency to transmit.

6.6. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.1 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 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.

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

6.7. 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 radiation emissions from 18-25GHz are not reported, because the test values lower than the limits of 20dB.

Below 1GHz(X8)



ACCURATE TECHNOLOGY CO., LTD.

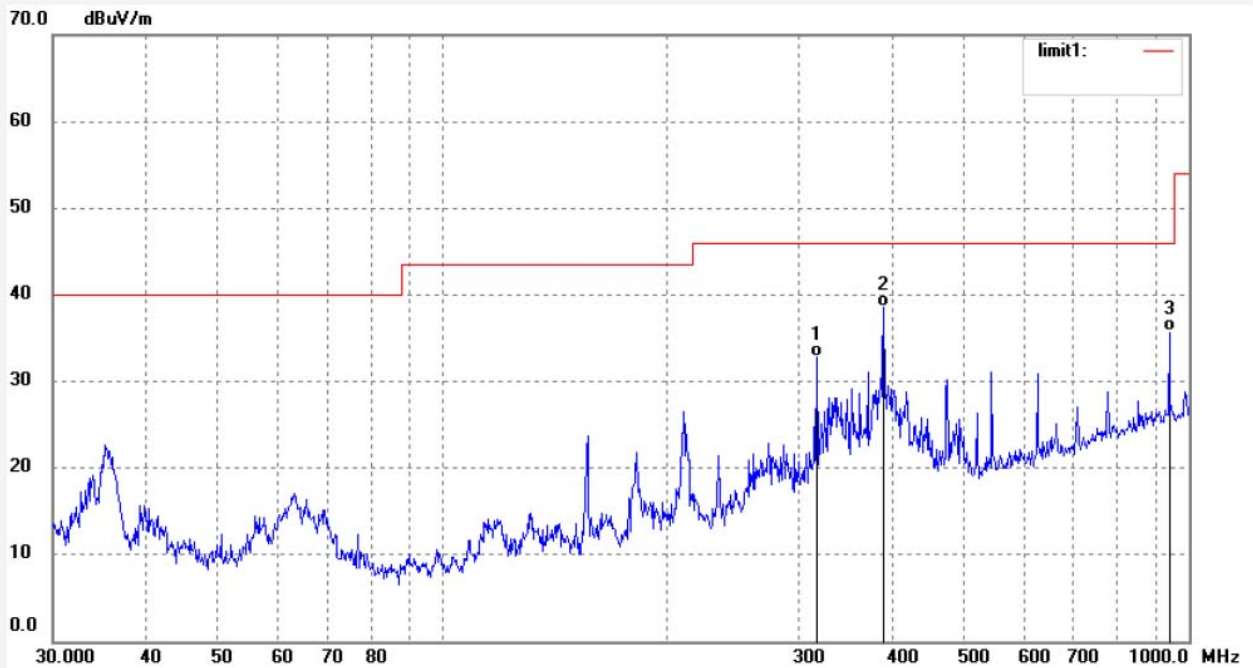
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

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

Job No.: STAR2016 #1186
Standard: FCC PART 15 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Media box
Mode: TX 2402MHz
Model: X8
Manufacturer: PIPO TECHNOLOGY CO., LIMITED

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 16/06/15/
Time: 10/39/26
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20161492



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	316.9717	48.76	-15.88	32.88	46.00	-13.12	QP			
2	389.9873	52.61	-14.09	38.52	46.00	-7.48	QP			
3	942.0180	39.24	-3.54	35.70	46.00	-10.30	QP			

Job No.: STAR2016 #1187

Standard: FCC PART 15 3M Radiated

Test item: Radiation Test

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

EUT: Media box

Mode: TX 2402MHz

Model: X8

Manufacturer: PIPO TECHNOLOGY CO., LIMITED

Polarization: Vertical

Power Source: AC 120V/60Hz

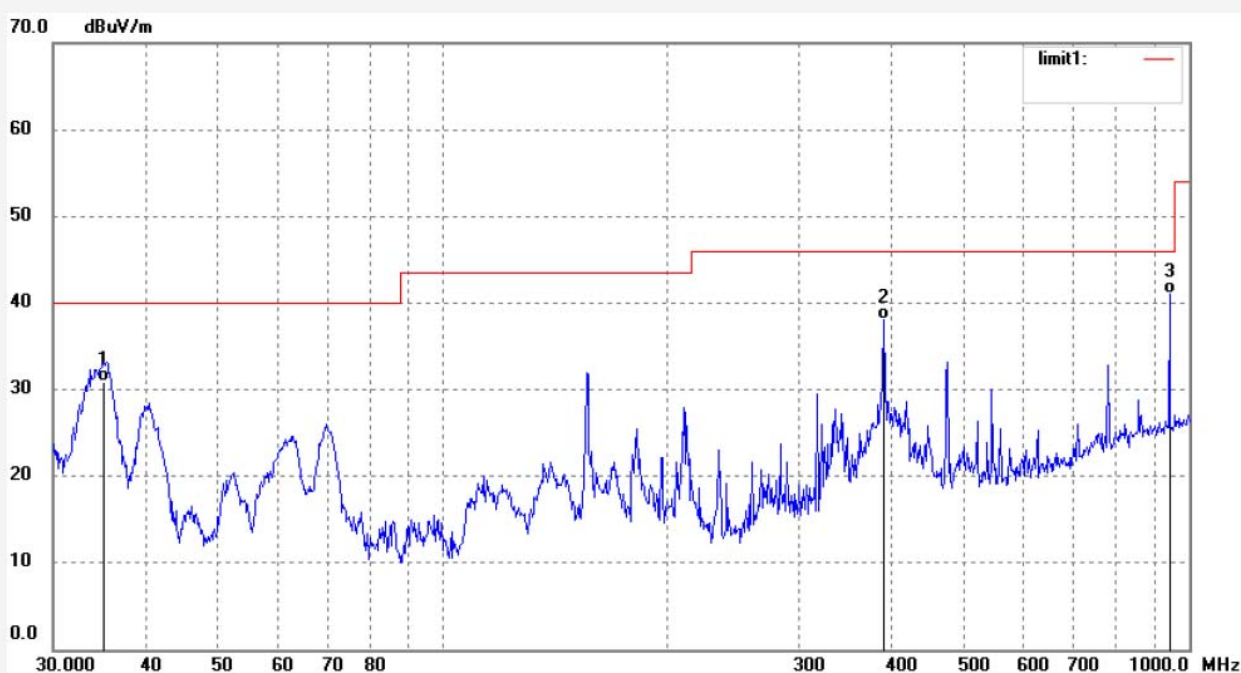
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Time: 10/40/34

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20161492

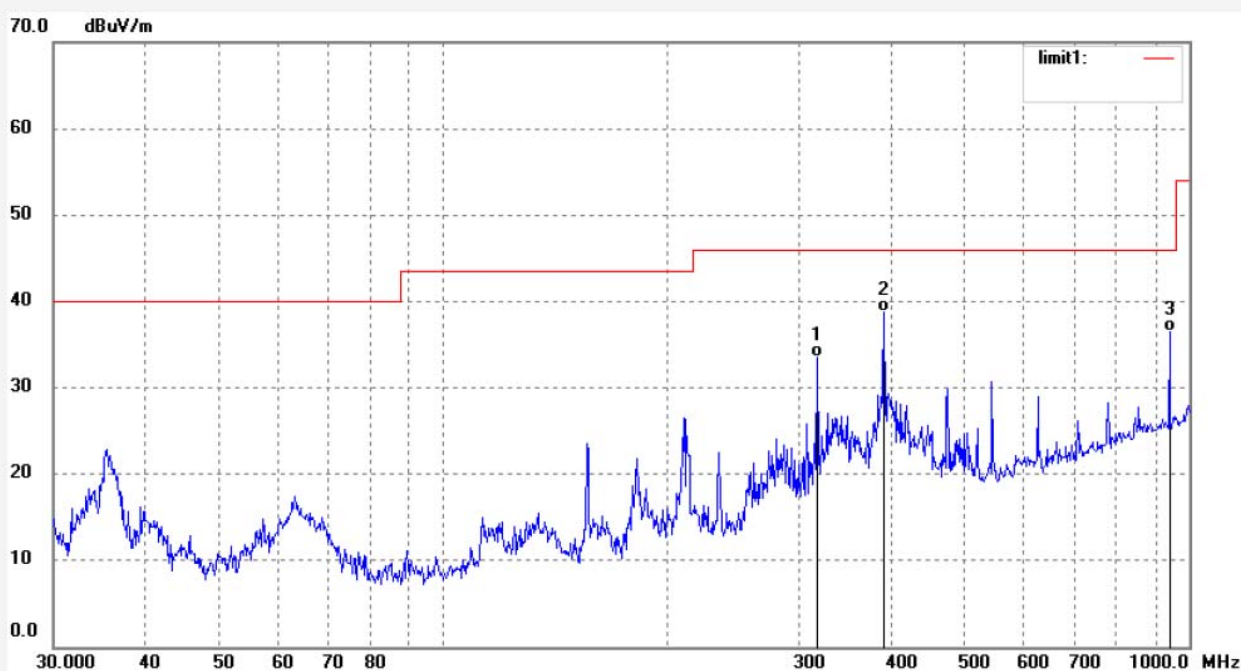


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	35.0157	48.41	-17.51	30.90	40.00	-9.10	QP			
2	389.9874	52.20	-14.09	38.11	46.00	-7.89	QP			
3	942.0180	44.56	-3.55	41.01	46.00	-4.99	QP			

Job No.: STAR2016 #1189
 Standard: FCC PART 15 3M Radiated
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 25 C / 55 %
 EUT: Media box
 Mode: TX 2440MHz
 Model: X8
 Manufacturer: PIPO TECHNOLOGY CO., LIMITED

Polarization: Horizontal
 Power Source: AC 120V/60Hz
 Date: 16/06/15/
 Time: 10/42/30
 Engineer Signature: star
 Distance: 3m

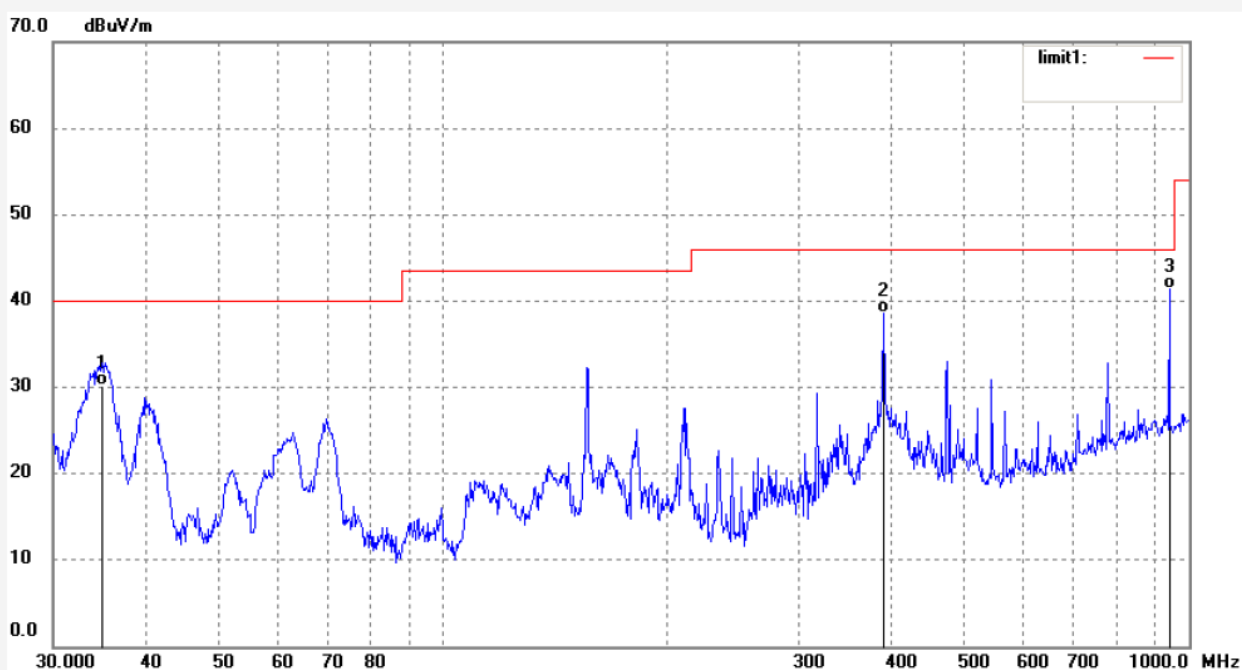
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No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	316.9718	49.36	-15.88	33.48	46.00	-12.52	QP			
2	389.9874	52.83	-14.09	38.74	46.00	-7.26	QP			
3	942.0180	39.99	-3.55	36.44	46.00	-9.56	QP			

Job No.: STAR2016 #1188	Polarization: Vertical
Standard: FCC PART 15 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 16/06/15/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 10/41/08
EUT: Media box	Engineer Signature: star
Mode: TX 2440MHz	Distance: 3m
Model: X8	
Manufacturer: PIPO TECHNOLOGY CO., LIMITED	

Note: Report No.:ATE20161492



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	34.8928	47.76	-17.49	30.27	40.00	-9.73	QP			
2	389.9874	52.61	-14.09	38.52	46.00	-7.48	QP			
3	942.0180	44.96	-3.55	41.41	46.00	-4.59	QP			

Job No.: STAR2016 #1190

Standard: FCC PART 15 3M Radiated

Test item: Radiation Test

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

EUT: Media box

Mode: TX 2480MHz

Model: X8

Manufacturer: PIPO TECHNOLOGY CO., LIMITED

Polarization: Horizontal

Power Source: AC 120V/60Hz

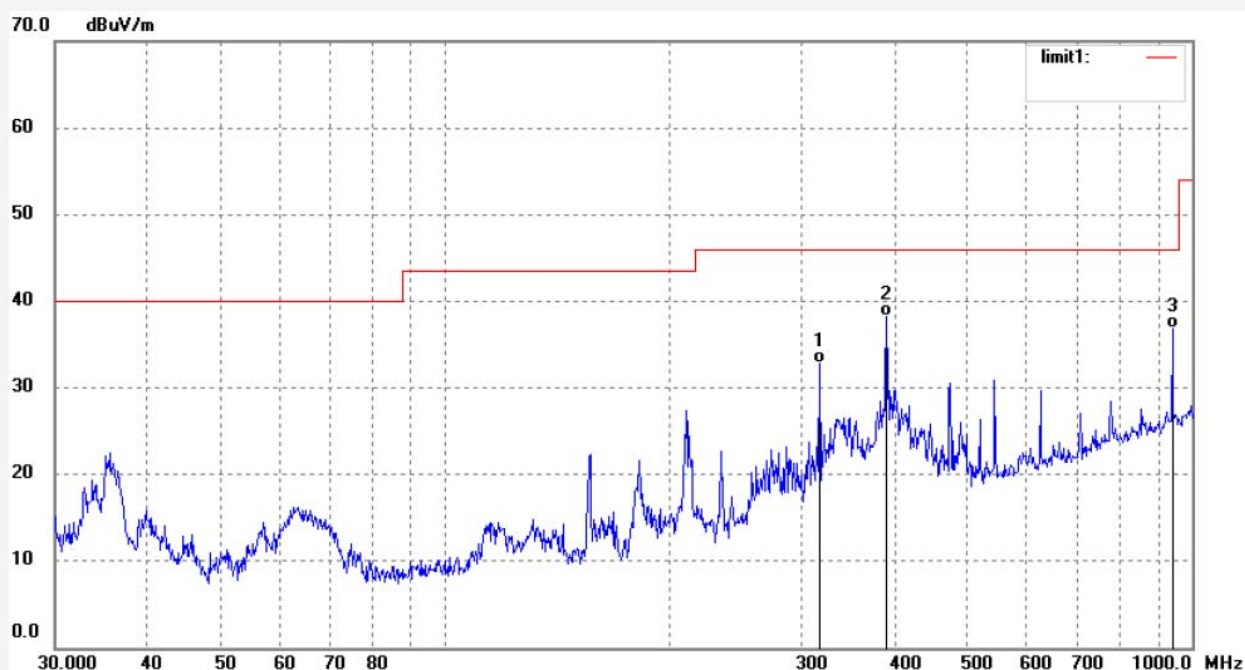
Date: 16/06/15/

Time: 10/44/01

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20161492



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	316.9717	48.74	-15.88	32.86	46.00	-13.14	QP			
2	389.9873	52.26	-14.09	38.17	46.00	-7.83	QP			
3	942.0180	40.31	-3.54	36.77	46.00	-9.23	QP			

Job No.: STAR2016 #1191

Standard: FCC PART 15 3M Radiated

Test item: Radiation Test

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

EUT: Media box

Mode: TX 2480MHz

Model: X8

Manufacturer: PIPO TECHNOLOGY CO., LIMITED

Polarization: Vertical

Power Source: AC 120V/60Hz

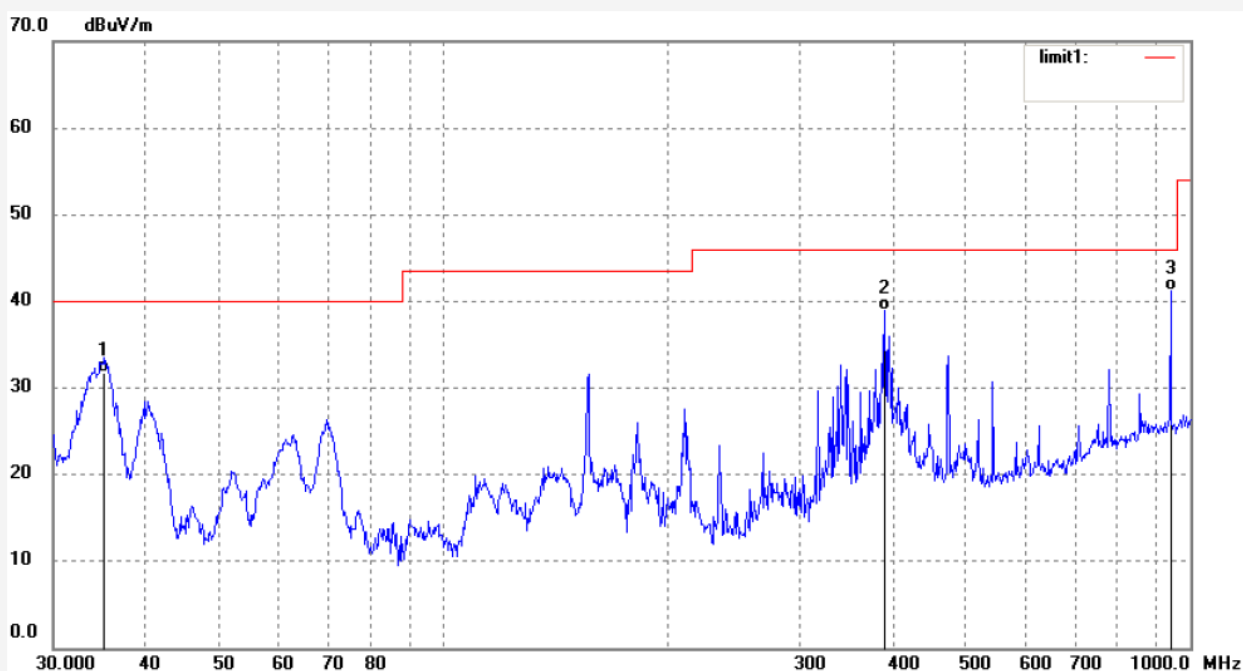
Date: 16/06/15/

Time: 10/44/50

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20161492



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	35.1389	49.34	-17.54	31.80	40.00	-8.20	QP			
2	389.9874	52.98	-14.09	38.89	46.00	-7.11	QP			
3	942.0180	44.78	-3.55	41.23	46.00	-4.77	QP			

7. ANTENNA REQUIREMENT

7.1.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.

7.2.Antenna Construction

Device is equipped with external Antenna, which isn't displaced by other antenna. The Antenna gain of EUT is 2dBi. Therefore, the equipment complies with the antenna requirement of Section 15.203.



Antenna