RF TEST REPORT

Report No.: 16021565-FCC-R1
Supersede Report No.: N/A

Applicant	Shenzhen PAKITE Technology Co.,Ltd.
Product Name	RCA AV Sender & IR Remote Extender
Main Model	PAT-220
Serial Model	PAT-240, PAT-260, PAT-280, PAT-330, PAT-350, PAT-360, PAT-370, PAT-380
Test Standard	FCC Part 15.231: 2016, ANSI C63.10: 2013
Test Date	January 06 to January 10, 2017
Issue Date	January 11, 2017
Test Result	☒ **Pass** ☐ **Fail**
Equipment complied with the specification	☒
Equipment did not comply with the specification	☐

Amos. Xia	Miro Bao	
Amos Xia **Test Engineer**	**Miro Bao** **Checked By**	

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Test result presented in this test report is applicable to the tested sample only

Issued by:
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Laboratories Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.

In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

Accreditations for Conformity Assessment

Country/Region	Scope
USA	EMC , RF/Wireless , Telecom
Canada	EMC, RF/Wireless , Telecom
Taiwan	EMC, RF, Telecom , Safety
Hong Kong	RF/Wireless ,Telecom
Australia	EMC, RF, Telecom , Safety
Korea	EMI, EMS, RF , Telecom, Safety
Japan	EMI, RF/Wireless, Telecom
Singapore	EMC , RF , Telecom
Europe	EMC, RF, Telecom , Safety

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1. Report Revision History

Report No.	Report Version	Description	Issue Date
16021565-FCC-R1	NONE	Original	January 11, 2017

2. Customer information

Applicant Name	Shenzhen PAKITE Technology Co.,Ltd.
Applicant Add	12 Floor, 6 Building, 2 Reservoir Avenue, Nankeng Community, Bantian Street, Longgang District, Shenzhen
Manufacturer Name	Shenzhen PAKITE Technology Co.,Ltd.
Manufacturer Add	12 Floor, 6 Building, 2 Reservoir Avenue, Nankeng Community, Bantian Street, Longgang District, Shenzhen

3. Test site information

Lab performing tests	SIEMIC (Nanjing-China) Laboratories
Lab Add	2-1 Longcang Avenue Yuhua Economic and Technology Development Park, Nanjing, China
FCC Test Site No.	986914
IC Test Site No.	4842B-1
Test Software	EZ_EMC

4. Equipment Under Test (EUT) Information

Description of EUT:	RCA AV Sender & IR Remote Extender
Main Model:	PAT-220
Serial Model:	PAT-240, PAT-260, PAT-280, PAT-330, PAT-350, PAT-360, PAT-370, PAT-380
Date EUT received:	December 16, 2016
Test Date(s):	January 06 to January 10, 2017
Antenna Gain:	2 dBi
Type of Modulation:	ASK
RF Operating Frequency (ies):	Tx:433.92MHz
Number of Channels:	1 CH
Port:	Composite video connector Port
Power:	Adapter: Model: SJ-0510-U INPUT: 100-240V~50/60Hz OUTPUT: 5Vdc 1000mA
Trade Name :	PAKITE
FCC ID:	2ABU5-433IRREMOTE

Note: the difference between these models please refers to Annex E. DECLARATION OF SIMILARITY in this reprot.

5. Test Summary

The product was tested in accordance with the following specifications.
All testing has been performed according to below product classification:

FCC Rules	Description of Test	Result
§15.203	Antenna Requirement	Compliance
§15.207	Conducted Emissions Voltage	Compliance
§15.231(b)	Fundamental & Radiated Spurious Emission	Compliance
§15.231(c)	20dB Bandwidth	Compliance
§15.231(a)(1)	Deactivation	Compliance

Note: Preliminary radiated emission testing has been performed on X, Y, Z axis, only worst case test result is presented in this test report.

Measurement Uncertainty

Emissions		
Test Item	**Description**	**Uncertainty**
Conducted Emissions & Radiated Spurious Emissions	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m)	1.634dB / 3.952dB

6. Measurements, Examination And Derived Results

6.1 Antenna Requirement

Applicable Standard

Requirement(s): 47 CFR §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.

Antenna requirement must meet at least one of the following:

a) Antenna must be permanently attached to the device.

b) Antenna must use a unique type of connector to attach to the device.

c) Device must be professionally installed. Installer shall be responsible for ensuring that the correct antenna is employed with the device.

The antenna is permanently attached to the device which meets the requirement.

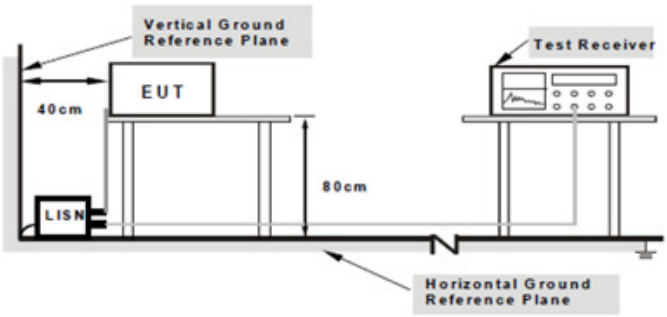
Result: Compliance.

6.2 AC Conducted Emissions Voltage

Temperature	25°C
Relative Humidity	50%
Atmospheric Pressure	1019mbar
Test date :	January 10, 2017
Tested By :	Amos Xia

Conducted Emission Limit

Frequency ranges (MHz)	Limit (dBμV)	
	QP	Average
0.15 ~ 0.5	66 – 56	56 – 46
0.5 ~ 5	56	46
5 ~ 30	60	50

Spec	Item	Requirement	Applicable
47CFR§15.207, RSS210 (A8.1)	a)	For Low-power radio-frequency devices that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 [mu]H/50 ohms line impedance stabilization network (LISN). The lower limit applies at the boundary between the frequency ranges.	☒
Test Setup	 Note: 1.Support units were connected to second LISN. 2.Both of LISNs (AMN) are 80cm from EUT and at least 80cm from other units and other metal planes support units.		
Procedure	- The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table, as shown in Annex B. - The power supply for the EUT was fed through a 50W/50mH EUT LISN, connected to filtered mains. - The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable. - All other supporting equipment were powered separately from another main supply.		
Remark			
Result	☒ Pass ☐ Fail		

Test Data ☒Yes ☐N/A

Test Plot ☒Yes (See below) ☐N/A

Data sample

No.	Frequency	Reading	Detector	Lisn/Isn	Ps_Lmt	Cab_L	Result	Limit	Margin
	(MHz)	(dBμV)		(dB}	(dB)	(dB)	(dBμV)	(dBμV)	(dB)

Frequency (MHz) = Emission frequency in MHz

Reading (dBμV) = Receiver Reading Value

Detector=Quasi Peak Detector or Average Detector

Lisn/ISN= Insertion loss of LISN

Ps_Lmt= Insertion loss of transient limiter (The transient limiter included 10dB attenuation)

Cab_L= cable loss

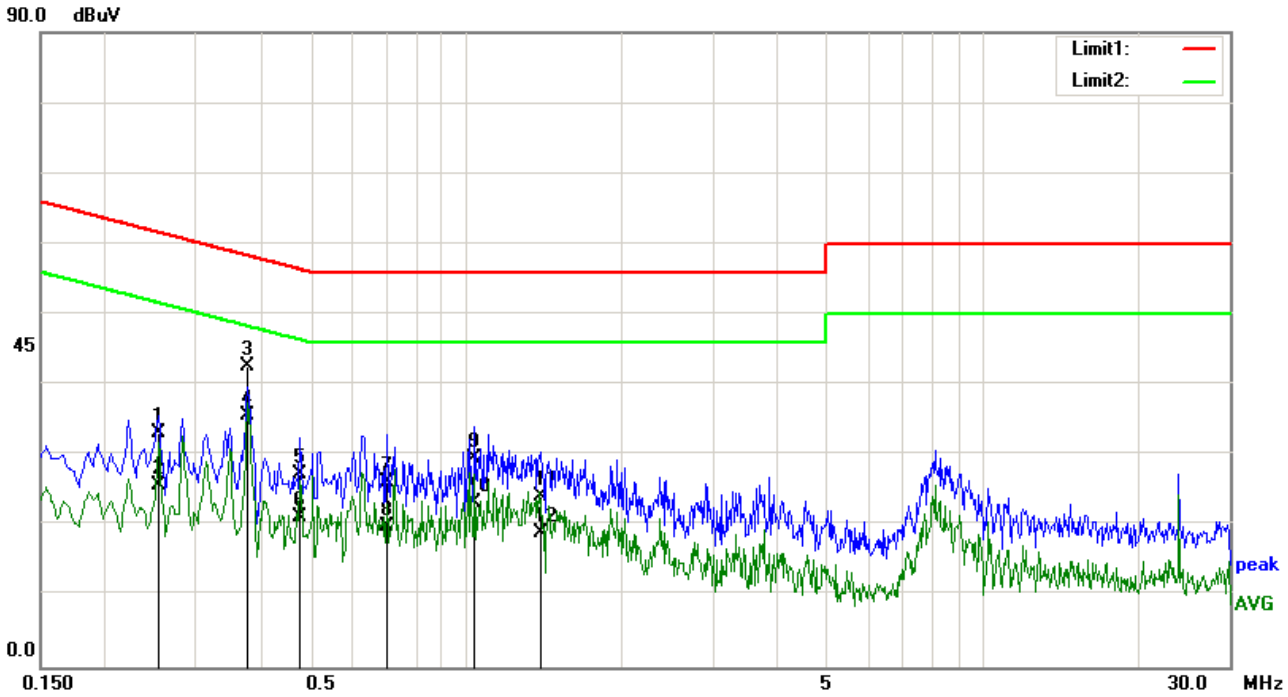
Result (dBμV) = Reading Value + Corrected Value

Limit (dBμV) = Limit stated in standard

Calculation Formula:

Margin (dB) = Result (dBμV) – limit (dBμV)

Test Mode:	Transmitting Mode

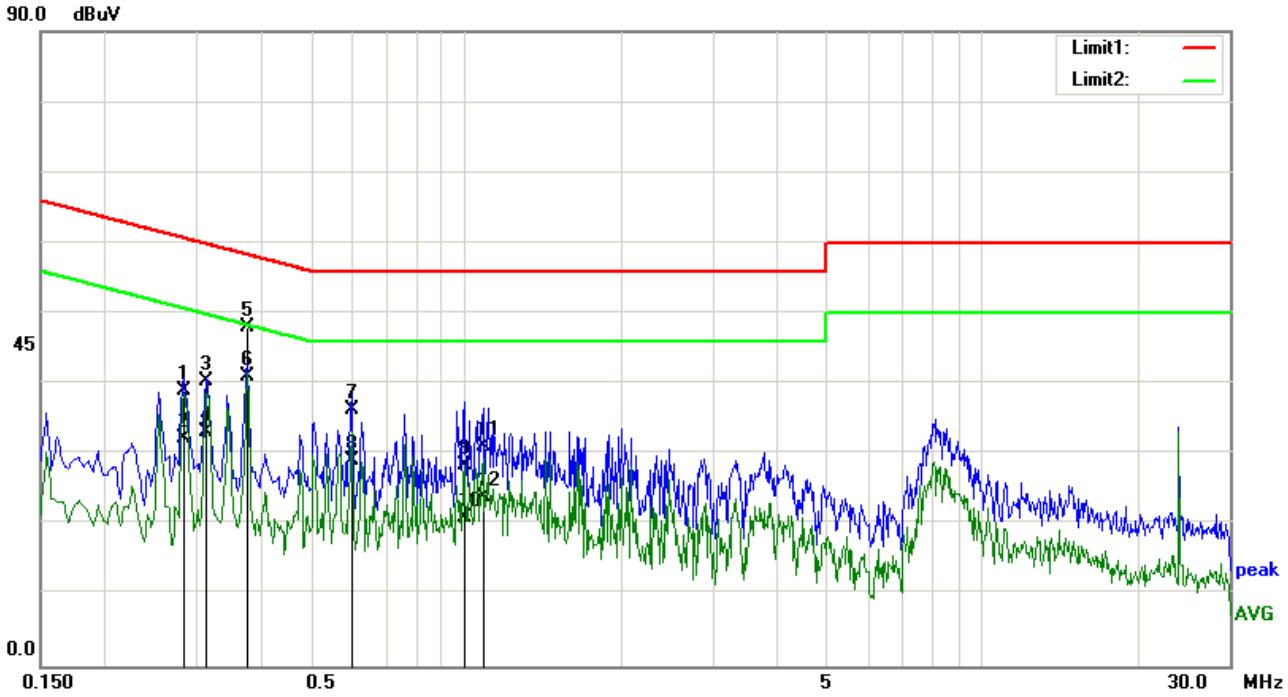


Test Data

Phase Line Plot at 120Vac, 60Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/lsn (dB}	Ps_Lmt (dB)	Cab_L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.2540	22.82	QP	0.10	-10.00	0.20	33.12	61.63	-28.51
2	0.2540	15.49	AVG	0.10	-10.00	0.20	25.79	51.63	-25.84
3	0.3780	32.28	QP	0.11	-10.00	0.21	42.60	58.32	-15.72
4	0.3780	25.45	AVG	0.11	-10.00	0.21	35.77	48.32	-12.55
5	0.4780	17.07	QP	0.12	-10.00	0.21	27.40	56.37	-28.97
6	0.4780	10.86	AVG	0.12	-10.00	0.21	21.19	46.37	-25.18
7	0.7020	15.84	QP	0.13	-10.00	0.20	26.17	56.00	-29.83
8	0.7020	9.66	AVG	0.13	-10.00	0.20	19.99	46.00	-26.01
9	1.0420	19.21	QP	0.14	-10.00	0.19	29.54	56.00	-26.46
10	1.0420	12.85	AVG	0.14	-10.00	0.19	23.18	46.00	-22.82
11	1.3980	13.93	QP	0.15	-10.00	0.20	24.28	56.00	-31.72
12	1.3980	8.64	AVG	0.15	-10.00	0.20	18.99	46.00	-27.01

Test Mode:	Transmitting Mode

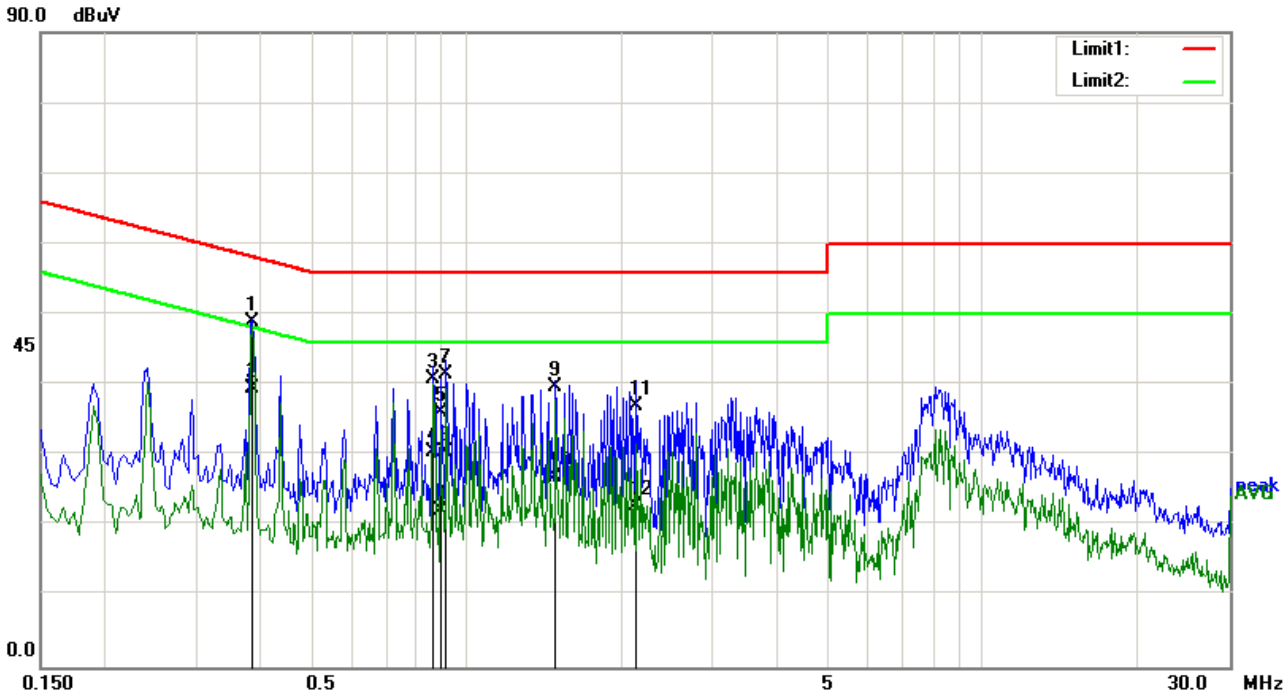


Test Data

Phase Neutral Plot at 120Vac, 60Hz

No.	Frequency (MHz)	Reading (dBµV)	Detector	Lisn/lsn (dB}	Ps_Lmt (dB)	Cab_L (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)
1	0.2860	28.66	QP	0.10	-10.00	0.20	38.96	60.64	-21.68
2	0.2860	22.09	AVG	0.10	-10.00	0.20	32.39	50.64	-18.25
3	0.3140	30.01	QP	0.10	-10.00	0.20	40.31	59.86	-19.55
4	0.3140	22.88	AVG	0.10	-10.00	0.20	33.18	49.86	-16.68
5	0.3780	37.66	QP	0.11	-10.00	0.21	47.98	58.32	-10.34
6	0.3780	30.65	AVG	0.11	-10.00	0.21	40.97	48.32	-7.35
7	0.6020	25.94	QP	0.12	-10.00	0.21	36.27	56.00	-19.73
8	0.6020	18.83	AVG	0.12	-10.00	0.21	29.16	46.00	-16.84
9	0.9900	18.17	QP	0.13	-10.00	0.19	28.49	56.00	-27.51
10	0.9900	10.61	AVG	0.13	-10.00	0.19	20.93	46.00	-25.07
11	1.0780	20.85	QP	0.13	-10.00	0.20	31.18	56.00	-24.82
12	1.0780	13.54	AVG	0.13	-10.00	0.20	23.87	46.00	-22.13

Test Mode:	Transmitting Mode

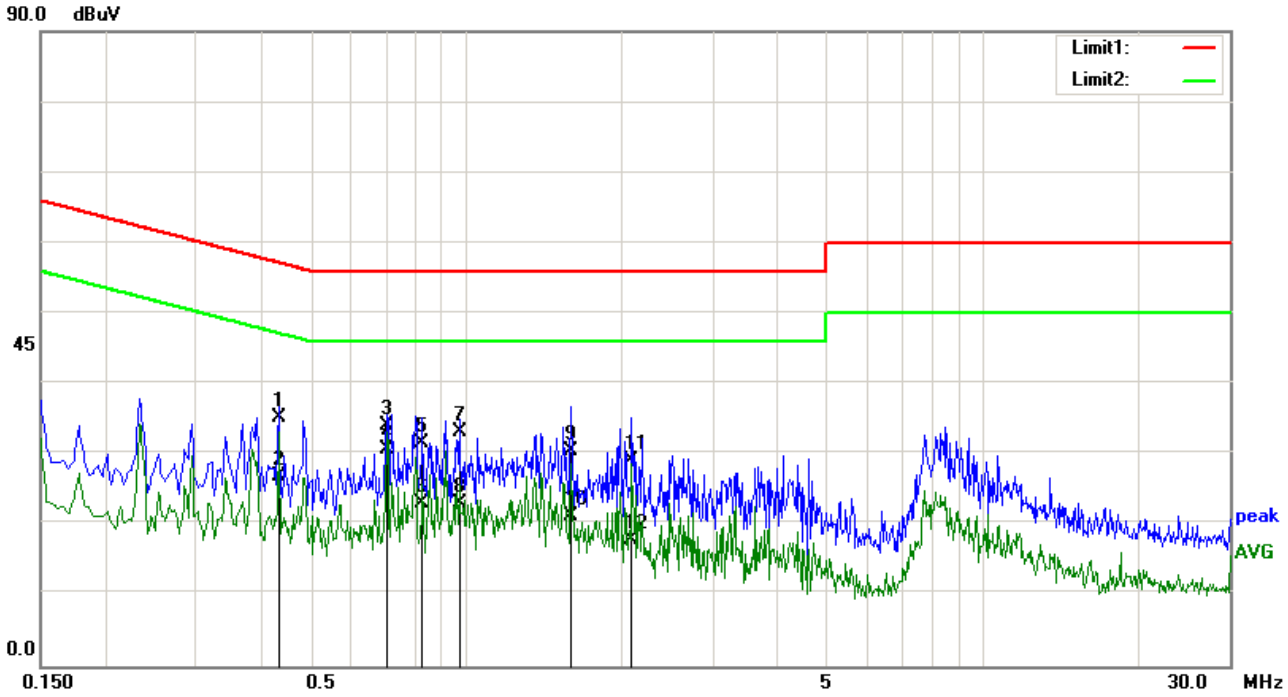


Test Data

Phase Line Plot at 240Vac, 50Hz

No.	Frequency (MHz)	Reading (dBµV)	Detector	Lisn/Isn (dB}	Ps_Lmt (dB)	Cab_L (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)
1	0.3860	38.66	QP	0.11	-10.00	0.21	48.98	58.15	-9.17
2	0.3860	29.26	AVG	0.11	-10.00	0.21	39.58	48.15	-8.57
3	0.8660	30.55	QP	0.14	-10.00	0.20	40.89	56.00	-15.11
4	0.8660	20.25	AVG	0.14	-10.00	0.20	30.59	46.00	-15.41
5	0.8940	25.85	QP	0.14	-10.00	0.19	36.18	56.00	-19.82
6	0.8940	11.84	AVG	0.14	-10.00	0.19	22.17	46.00	-23.83
7	0.9180	31.08	QP	0.14	-10.00	0.19	41.41	56.00	-14.59
8	0.9180	20.13	AVG	0.14	-10.00	0.19	30.46	46.00	-15.54
9	1.4940	29.35	QP	0.15	-10.00	0.20	39.70	56.00	-16.30
10	1.4940	16.58	AVG	0.15	-10.00	0.20	26.93	46.00	-19.07
11	2.1220	26.56	QP	0.16	-10.00	0.20	36.92	56.00	-19.08
12	2.1220	12.53	AVG	0.16	-10.00	0.20	22.89	46.00	-23.11

Test Mode:	Transmitting Mode



Test Data

Phase Neutral Plot at 240Vac, 50Hz

No.	Frequency (MHz)	Reading (dBµV)	Detector	Lisn/Isn (dB}	Ps_Lmt (dB)	Cab_L (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)
1	0.4340	24.89	QP	0.11	-10.00	0.21	35.21	57.18	-21.97
2	0.4340	16.66	AVG	0.11	-10.00	0.21	26.98	47.18	-20.20
3	0.7020	23.72	QP	0.12	-10.00	0.20	34.04	56.00	-21.96
4	0.7020	20.50	AVG	0.12	-10.00	0.20	30.82	46.00	-15.18
5	0.8260	21.25	QP	0.12	-10.00	0.20	31.57	56.00	-24.43
6	0.8260	12.84	AVG	0.12	-10.00	0.20	23.16	46.00	-22.84
7	0.9700	22.80	QP	0.13	-10.00	0.19	33.12	56.00	-22.88
8	0.9700	12.66	AVG	0.13	-10.00	0.19	22.98	46.00	-23.02
9	1.5980	20.07	QP	0.15	-10.00	0.20	30.42	56.00	-25.58
10	1.5980	10.90	AVG	0.15	-10.00	0.20	21.25	46.00	-24.75
11	2.0900	18.69	QP	0.17	-10.00	0.19	29.05	56.00	-26.95
12	2.0900	7.63	AVG	0.17	-10.00	0.19	17.99	46.00	-28.01

6.3 20dB Occupied Bandwidth

Temperature	25°C
Relative Humidity	50%
Atmospheric Pressure	1019mbar
Test date :	January 06, 2017
Tested By :	Amos Xia

Requirement(s):

Spec	Item	Requirement	Applicable
§15.231(c)	a)	The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz.	☒
	b)	For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency.	☐
Test Setup	Spectrum Analyzer — EUT		
Test Procedure	20dB Emission bandwidth measurement procedure - Set RBW = 100 kHz. - Set the video bandwidth (VBW) ≥3*RBW. - Detector = Peak. - Trace mode = max hold. - Sweep = auto couple. - Allow the trace to stabilize. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.		
Remark			
Result	☒Pass ☐Fail		

Test Data ☒Yes ☐N/A

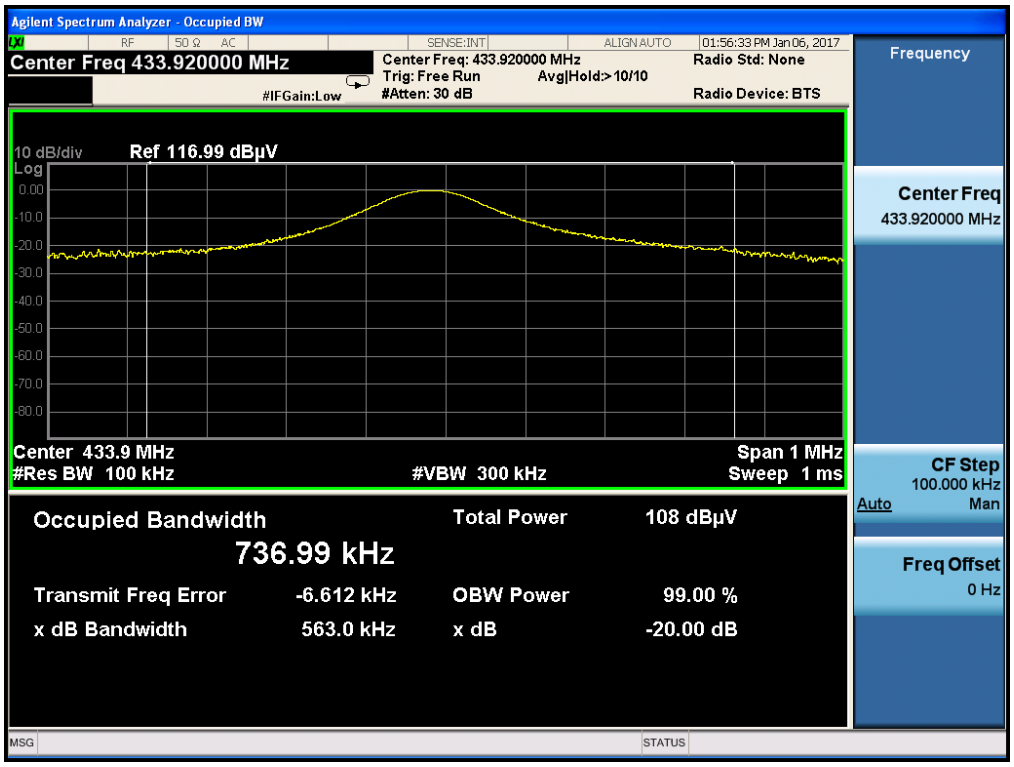
Test Plot ☒Yes ☐N/A

20dB Bandwidth measurement result

Type	Freq (MHz)	CH	Measured 20dB Bandwidth (kHz)	Limit (kHz)	Result
20dB BW	433.92	1 CH	563	1084.8	Pass

Test Plots

20dB Bandwidth measurement result

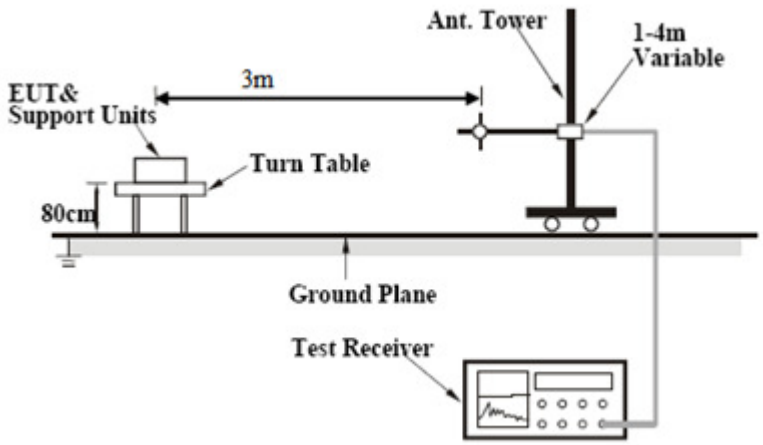


20dB Bandwidth

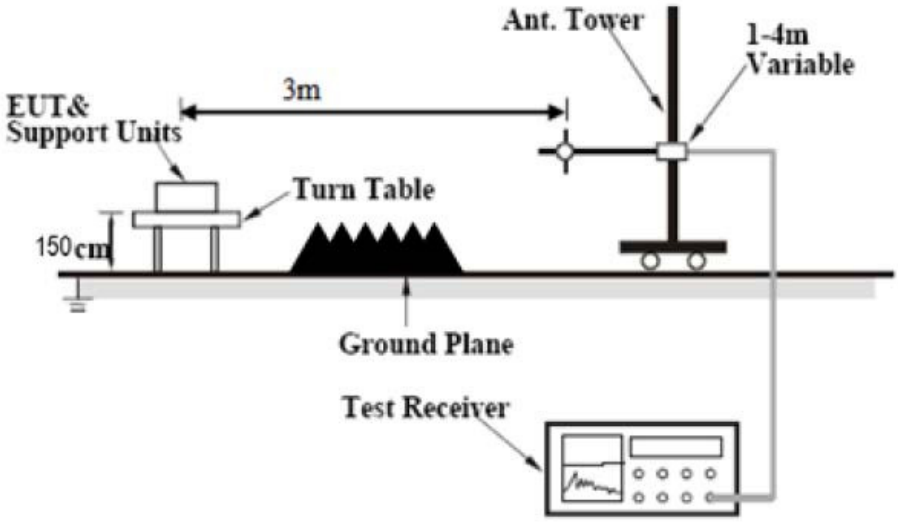
6.4 Radiated Fundamental and Spurious Emission

Temperature	25°C
Relative Humidity	50%
Atmospheric Pressure	1019mbar
Test date :	January 06, 2017
Tested By :	Amos Xia

Requirement(s):

<table>
<tr><th>Spec</th><th>Item</th><th>Requirement</th><th>Applicable</th></tr>
<tr><td>§15.231(b)</td><td>a)</td><td>Except higher limit as specified elsewhere in other section, the emissions from the low-power radio-frequency devices shall not exceed the field strength levels specified in the following table and the level of any unwanted emissions shall not exceed the level of the fundamental emission. The tighter limit applies at the band edges
<table>
<tr><th>Fundamental frequency (MHz)</th><th>Field strength of fundamental (microvolts/meter)</th><th>Field strength of spurious emissions (microvolts/meter)</th></tr>
<tr><td>40.66-40.70</td><td>2250</td><td>225</td></tr>
<tr><td>70-130</td><td>1250</td><td>125</td></tr>
<tr><td>130-174</td><td>1250 to 3750</td><td>125 to 375</td></tr>
<tr><td>174-260</td><td>3750</td><td>375</td></tr>
<tr><td>260-470</td><td>3750-12500</td><td>375 to 1250</td></tr>
<tr><td>Above 470</td><td>12500</td><td>1250</td></tr>
<tr><td colspan="3">Note: All 3 axes have been investigated. Only worst case is presented in the test report.</td></tr>
</table></td><td>☒</td></tr>
<tr><td>Test Setup</td><td colspan="3">A: < 1GHz
 

B: >1GHz</td></tr>
</table>



Procedure	1. The EUT was switched on and allowed to warm up to its normal operating condition. 2. The test was carried out at the selected frequency points obtained from the EUT characterisation. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner: a. Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen. b. The EUT was then rotated to the direction that gave the maximum emission. c. Finally, the antenna height was adjusted to the height that gave the maximum emission. 3. A Quasi-peak measurement was then made for that frequency point. 4. Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.
Remark	
Result	☒ Pass ☐ Fail

Test Data ☒Yes ☐N/A

Test Plot ☒Yes (See below) ☐N/A

Data sample

No.	Frequency	Reading	Detector	Ant_F	PA_G	Cab_L	Result	Limit	Margin	Height	Degree
	(MHz)	(dBμV/m)		(dB/m)	(dB)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(cm)	(°)

Frequency (MHz) = Emission frequency in MHz

Reading (dBμV/m) = Receiver Reading Value

Detector= Peak Detector or Quasi Peak Detector

Ant_F=Antenna Factor

PA_G=Pre-Amplifier Gain

Cab_L=Cable Loss

Result (dBμV/m) = Read ing Value + Corrected Value

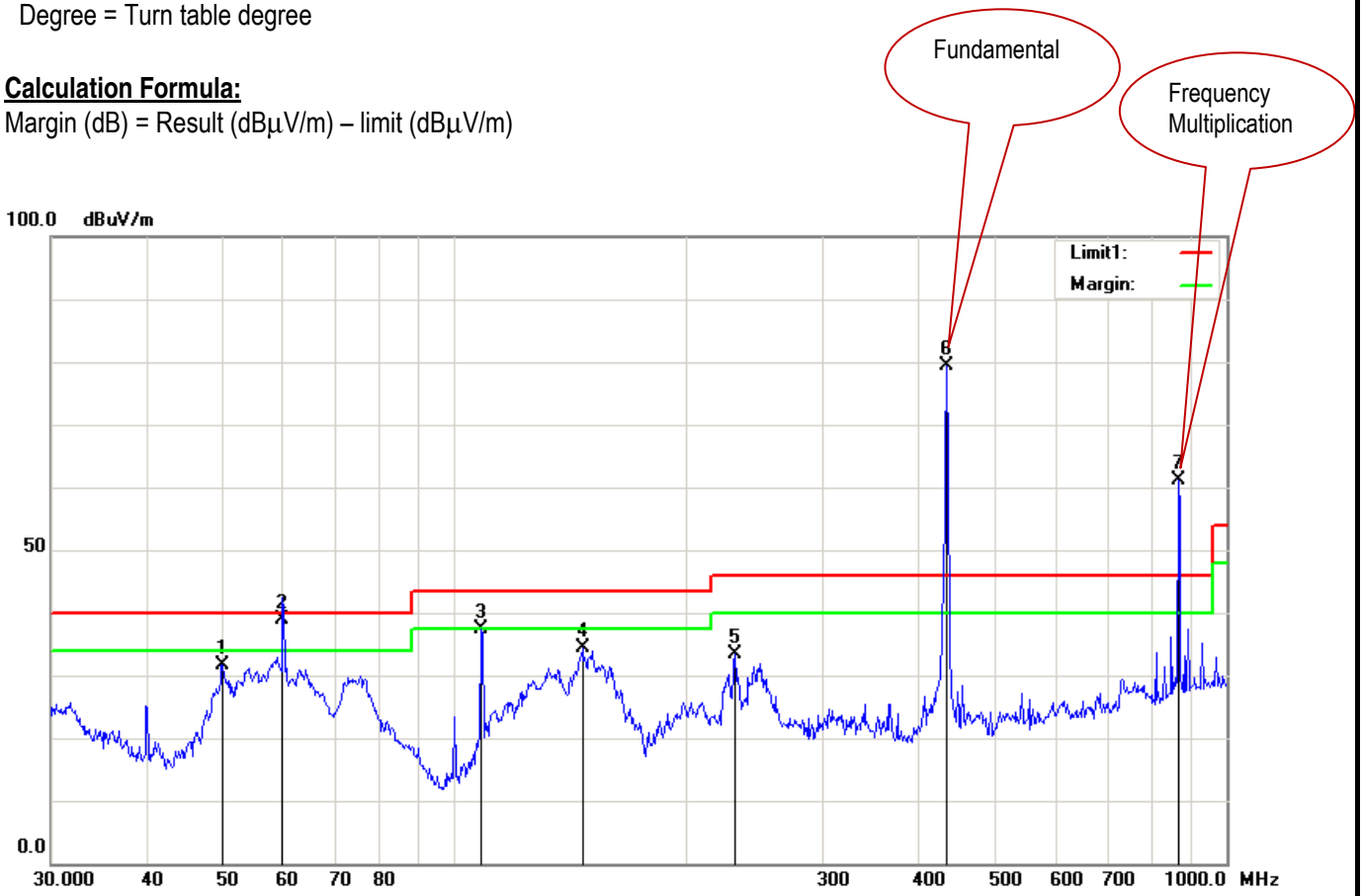
Limit (dBμV/m) = Limit stated in standard

Height (cm) = Height of Receiver antenna

Degree = Turn table degree

Calculation Formula:

Margin (dB) = Result (dBμV/m) – limit (dBμV/m)



Vertical Polarity Plot @3m

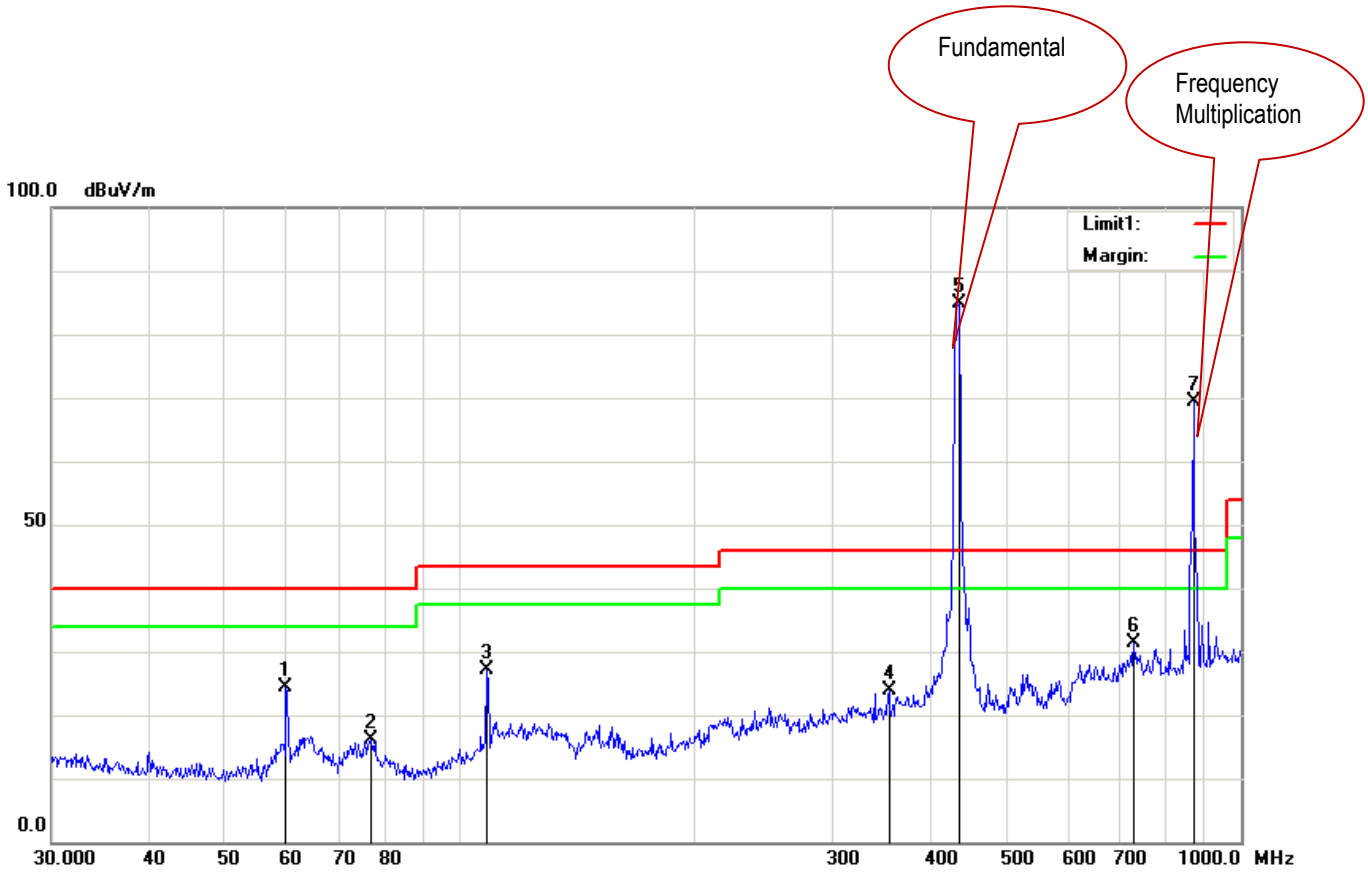
Field strength of fundamental Result

No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
6	433.92	108.70	Pk	16.43	49.13	3.35	79.35	100.8	-21.45	100	116
6	433.92	-	Ave	-	-	-	70.71	80.8	-10.09	-	-

Field strength of spurious emissions Result

No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
7	867.84	79.71	peak	22.95	46.19	4.75	61.22	80.8	-19.58	100	266
7	867.84	-	Ave	-	-	-	52.58	60.8	-8.22	-	-

Notes: Duty cycle is 37%, 20log (duty cycle) = -8.64dB correction was used to determine the average level from the peak reading.
Average = peak reading + 20log (duty cycle), Final Average= peak reading -8.64dB



Horizontal Polarity Plot @3m

Field strength of fundamental Result

No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
5	433.92	114.74	Pk	16.00	49.14	3.35	84.95	100.8	-15.85	200	115
5	433.92	-	Ave	-	-	-	76.31	80.8	-4.49	-	-

Field strength of spurious emissions Result

No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
7	867.84	87.94	Pk	22.79	46.12	4.76	69.07	80.8	-11.73	200	161
7	867.84	-	Ave	-	-	-	60.43	60.8	-0.37	-	-

Notes: Duty cycle is 37%, 20log (duty cycle) = -8.64dB correction was used to determine the average level from the peak reading.
Average = peak reading + 20log (duty cycle), Final Average= peak reading -8.64dB

Spurious Emissions (< 1GHz) Measurement Result

Vertical Polarity Plot @3m

No.	Frequency	Reading	Detector	Ant_F	PA_G	Cab_L	Result	Limit	Margin	Height	Degree
	(MHz)	(dBµV/m)		(dB/m)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	(cm)	(°)
1	50.0566	67.82	peak	9.04	46.45	1.25	31.66	40.00	-8.34	100	102
2	59.8588	77.00	QP	7.86	47.26	1.30	38.90	40.00	-1.10	100	140
3	108.2667	68.49	peak	13.40	46.29	1.68	37.28	43.50	-6.22	100	163
4	146.3735	66.80	peak	13.42	47.98	2.06	34.30	43.50	-9.20	100	102
5	230.9068	63.66	peak	14.88	47.55	2.42	33.41	46.00	-12.59	100	151

Horizontal Polarity Plot @3m

No.	Frequency	Reading	Detector	Ant_F	PA_G	Cab_L	Result	Limit	Margin	Height	Degree
	(MHz)	(dBµV/m)		(dB/m)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	(cm)	(°)
1	59.8588	60.82	peak	9.49	47.26	1.30	24.35	40.00	-15.65	200	351
2	77.0505	52.70	peak	9.88	47.88	1.44	16.14	40.00	-23.86	200	360
3	108.2667	57.13	peak	14.50	46.29	1.68	27.02	43.50	-16.48	200	225
4	354.1831	53.13	peak	16.41	48.80	3.02	23.76	46.00	-22.24	200	137
6	729.3583	49.89	peak	22.58	45.46	4.34	31.35	46.00	-14.65	200	224

Notes:

1. Duty cycle is 37%, 20log (duty cycle) = -8.64dB correction was used to determine the average level from the peak reading. Average = peak reading + 20log (duty cycle), Final Average= peak reading -8.64dB

2. All the data measurement of peak values.

3. FCC Limit for Average Measurement=41.67* (433.92MHz)-7083.3333=10998.1131µV/m=80.8dBµV/m

4. Average pulsed signal over one complete pulse train or 100 ms time frame if pulse train exceeds 100 ms

5. Maximum average in 100 ms

6. Calculate duty cycle for pulse train or 100 ms

7. Duty cycle = (t1 + t2 + t3+…tn)/T where tn = pulse width, T = pulse train length or 100 ms

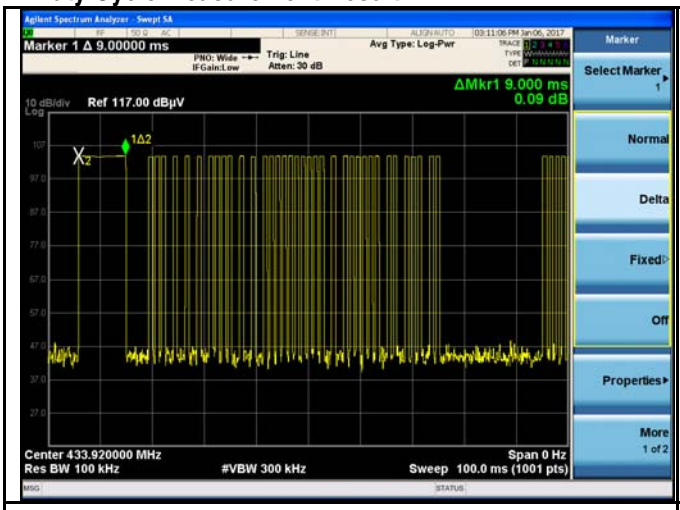
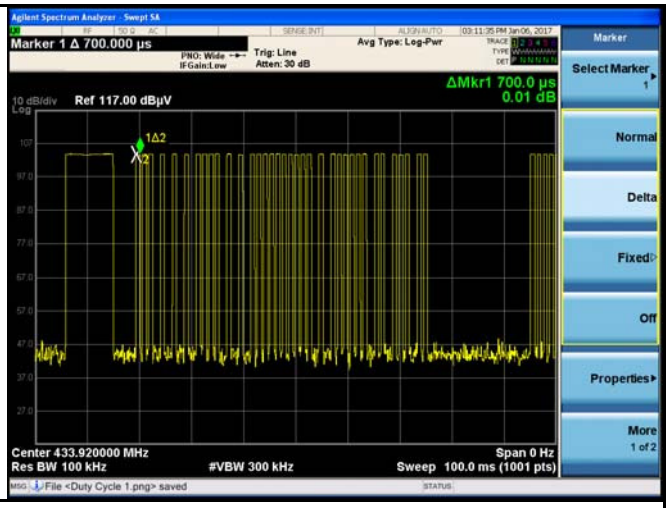
Spurious Emissions (> 1GHz) Measurement Result

Frequency GHz	Reading (dBµV/m)	Direction Degree	Height Meter	Polar H/V	Ant_F (dB/M)	PA_G (dB)	Cab_L (dB)	correct (dBµV/m)	FCC 15.231 Limit (dBµV/m)	Margin	Comments
1.300	76.88	154.00	2.00	H	24.64	51.58	2.84	52.78	74.0	-21.22	Peak
1.300	-	-	-	H	-	-	-	44.14	54.0	-9.86	Ave
1.735	72.82	245.00	2.00	H	25.99	50.98	3.99	51.82	80.8	-28.98	Peak
1.735	-	-	-	H	-	-	-	43.18	60.8	-17.62	Ave
1.885	70.95	68.00	2.00	H	26.62	51.69	3.99	49.87	80.8	-30.93	Peak
1.885	-	-	-	H	-	-	-	41.23	60.8	-19.57	Ave
2.170	69.51	235.00	2.00	H	27.85	52.38	4.17	49.15	80.8	-31.65	Peak
2.170	-	-	-	H	-	-	-	40.51	60.8	-20.29	Ave
2.605	70.29	93.00	2.00	H	29.26	52.68	4.13	51.00	80.8	-29.80	Peak
2.605	-	-	-	H	-	-	-	42.36	60.8	-18.44	Ave
3.470	67.62	168.00	2.00	H	32.01	52.88	4.91	51.66	80.8	-29.14	Peak
3.470	-	-	-	H	-	-	-	43.02	60.8	-17.78	Ave
1.300	76.88	310.00	1.00	V	24.64	51.58	2.84	52.78	74.0	-21.22	Peak
1.300	-	-	-	V	-	-	-	44.14	54.0	-9.86	Ave
1.735	72.82	122.00	1.00	V	25.99	50.98	3.99	51.82	80.8	-28.98	Peak
1.735	-	-	-	V	-	-	-	43.18	60.8	-17.62	Ave
2.170	70.83	221.00	1.00	V	27.85	52.38	4.17	50.47	80.8	-30.33	Peak
2.170	-	-	-	V	-	-	-	41.83	60.8	-18.97	Ave
2.435	70.40	68.00	1.00	V	29.01	52.59	4.03	50.85	80.8	-29.95	Peak
2.435	-	-	-	V	-	-	-	42.21	60.8	-18.59	Ave
2.605	66.53	41.00	1.00	V	29.26	52.68	4.13	47.24	80.8	-33.56	Peak
2.605	-	-	-	V	-	-	-	38.60	60.8	-22.20	Ave
3.470	65.80	324.00	1.00	V	32.01	52.88	4.91	49.84	80.8	-30.96	Peak
3.470	-	-	-	V	-	-	-	41.20	60.8	-19.60	Ave

Note: Duty cycle is 37%, 20log (duty cycle) = -8.64dB correction was used to determine the average level from the peak reading.
Average = peak reading + 20log (duty cycle), final Average= peak reading -8.64dB

Note:
Narrow Pulse: 0.7ms
2/NP = 2/0.7ms =2.86 kHz
RBW > 2/NP (2.86 kHz)
Therefore PDCF is not needed.

Duty Cycle Measurement Result

	
Duty Cycle 1#	**Duty Cycle 2#**
Wide Pulse: 9ms Narrow Pulse: 0.7ms Duty cycle= (9+0.7*40)/100 =37% Average Duty Factor: 20*log (Duty Cycle) = -8.64dB	
Pulse Duty Cycle	

6.5 Deactivation

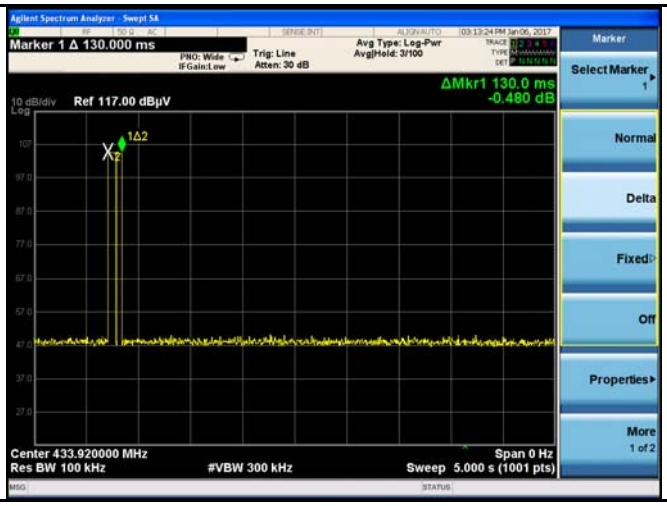
Temperature	25°C
Relative Humidity	50%
Atmospheric Pressure	1019mbar
Test date :	January 06, 2017
Tested By :	Amos Xia

Requirement(s):

Spec	Item	Requirement	Applicable
§15.231 (a)(1)	a)	A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.	☒
Test Setup	Spectrum Analyzer — EUT		
Test Procedure	measurement procedure - Set analyzer center frequency to channel center frequency. - Set the span to 0Hz. - Set the VBW ≥ 3 ´ RBW. - Detector = peak. - Sweep time = auto couple. - Trace mode = max hold. - Allow trace to fully stabilize.		
Remark			
Result	☒ Pass ☐Fail		

Test Data ☐Yes ☒N/A
Test Plot ☒Yes (See below) ☐N/A

Test Plots
Deactivation Measurement Result



< 5 seconds

Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Due	In use
AC Line Conducted Emissions					
R&S EMI Test Receiver	ESPI3	101216	03/31/2016	03/31/2017	☒
V-LISN	ESH3-Z5	838979/005	03/31/2016	03/31/2017	☒
SIEMIC EZ_EMC software Conducted Emissions	Ver.ICP-03A1	N/A	N/A	N/A	☒
RF conducted test					
R&S EMI Receiver	ESPI3	101216	03/31/2016	03/31/2017	☒
Radiated Emissions					
Agilent Technologies Spectrum Analyzer	N9010A	MY47191130	03/11/2016	03/10/2017	☒
R&S EMI Receiver	ESPI3	101216	03/31/2016	03/31/2017	☒
Antenna (30MHz~6GHz)	JB6	A121411	10/31/2016	10/31/2017	☒
EMCO Horn Antenna (1 ~18GHz)	3115	N/A	10/09/2016	10/08/2017	☒
Hp Agilent Pre-Amplifier	8447F	1937A01160	10/27/2016	10/26/2017	☒
Pre-Amplifier	8449B	3008A02224	10/30/2016	10/30/2017	☒
SIEMIC EZ_EMC software Radiated Emissions	Ver.ICP-03A1	N/A	N/A	N/A	☒

Annex B. EUT And Test Setup Photographs

Annex B.i. Photograph: EUT External Photos

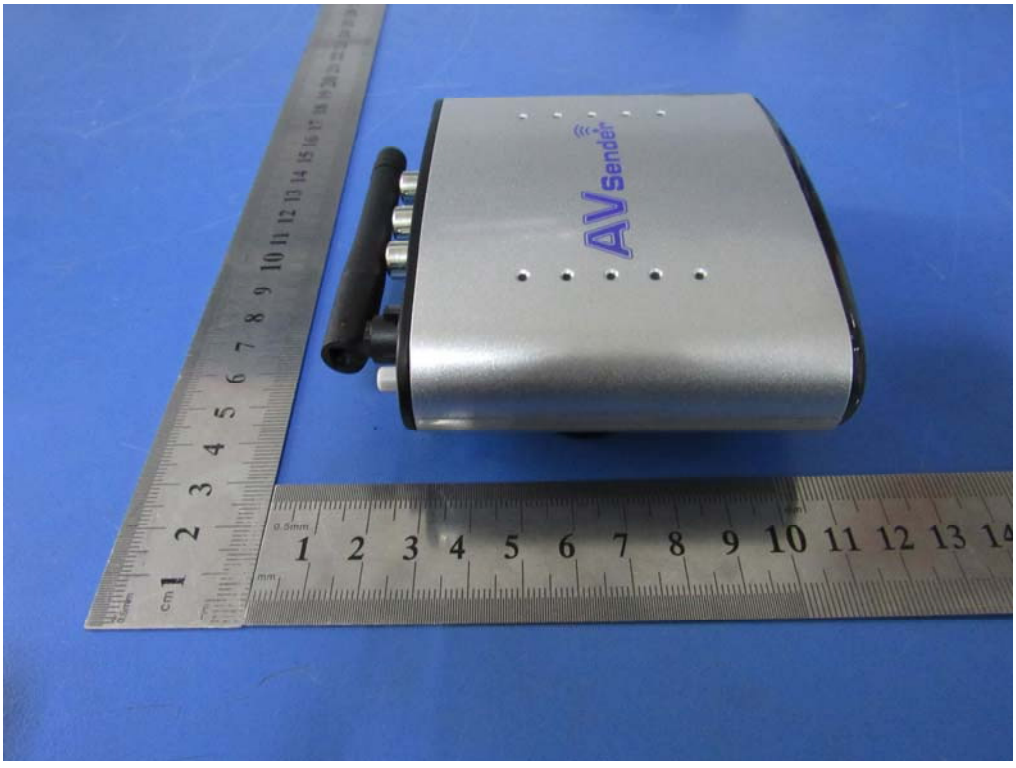
All Packages Front View

Top View of EUT

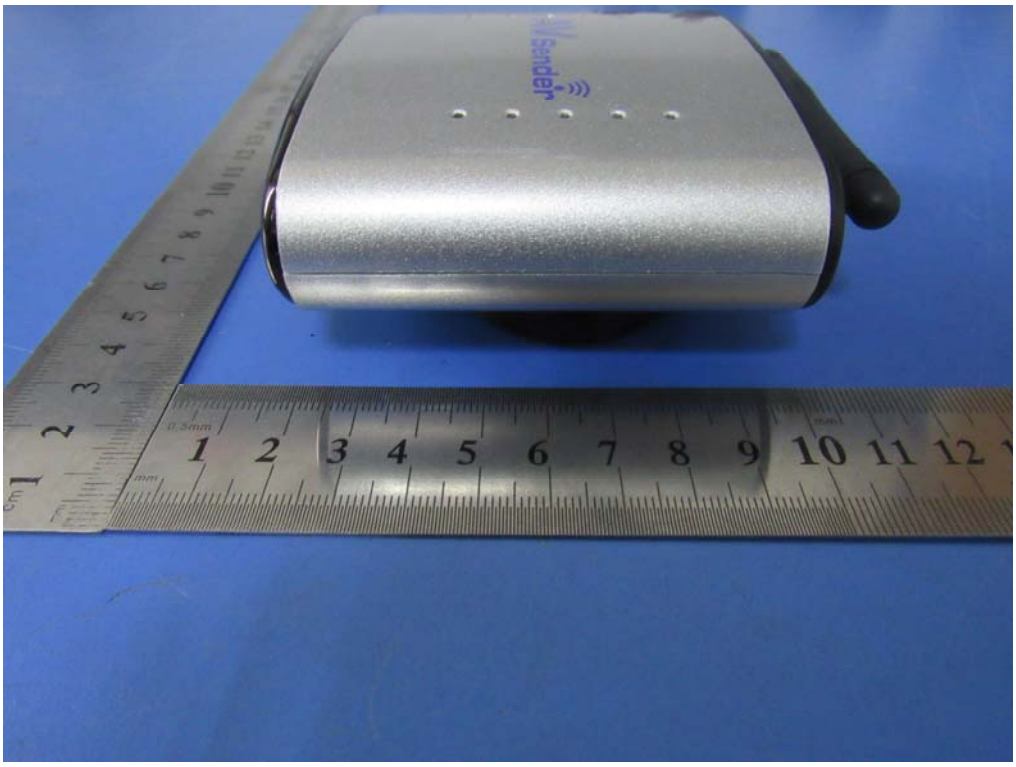
Bottom View of EUT

Front View of EUT

Rear View of EUT

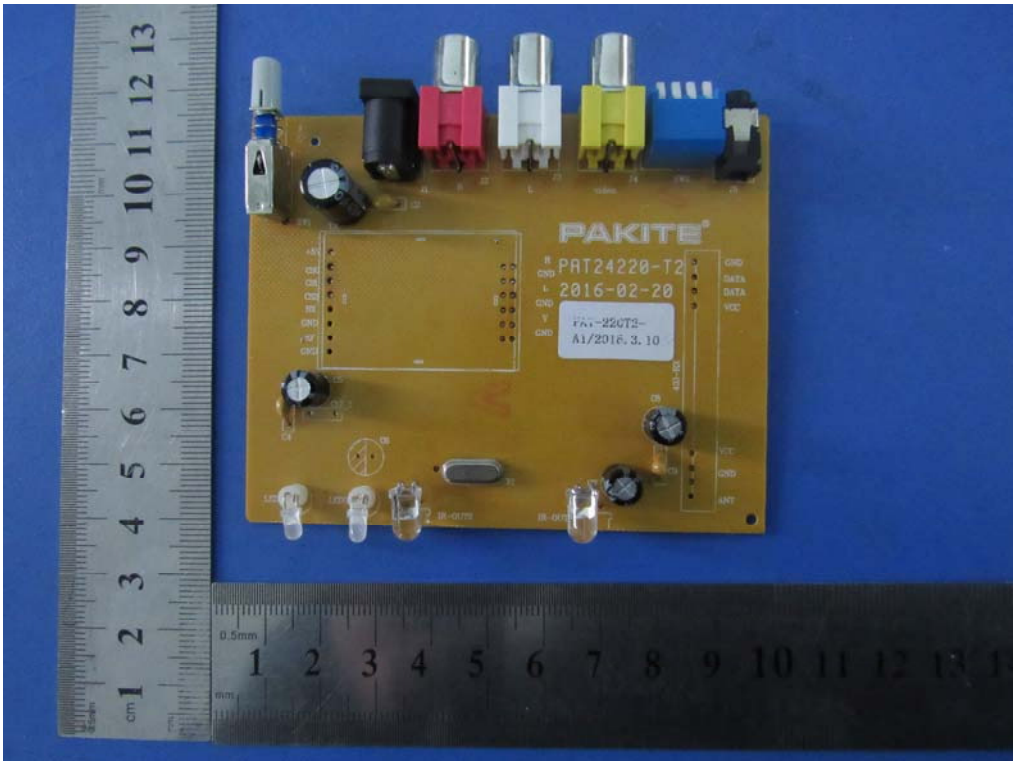


Left View of EUT

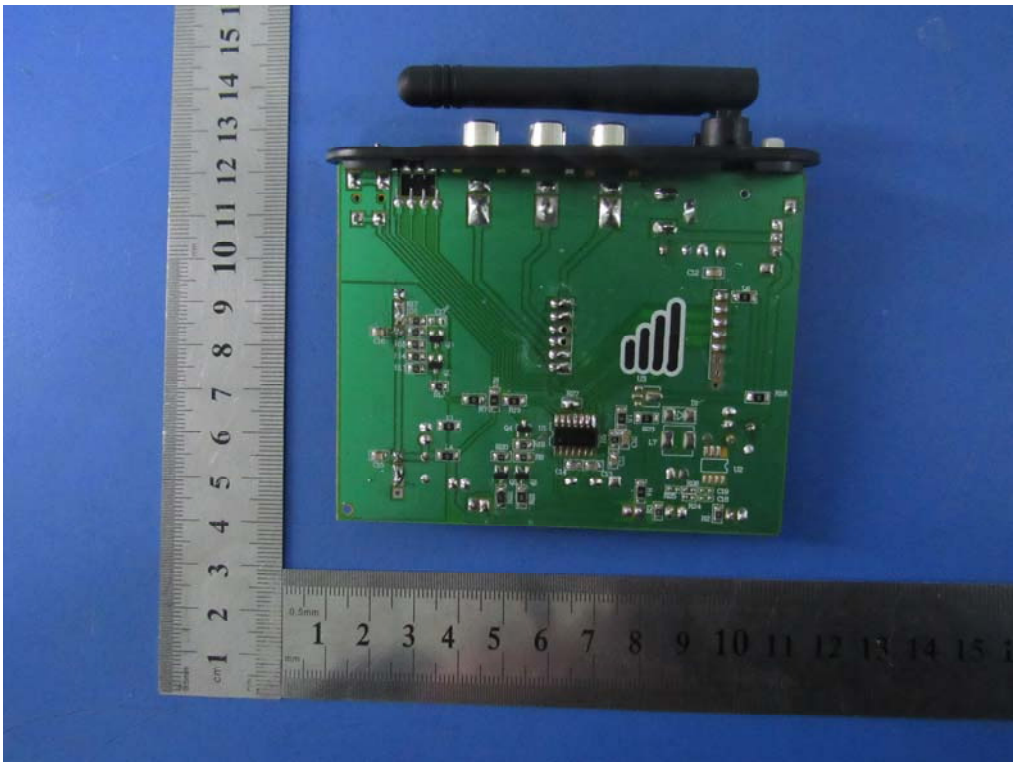


Right View of EUT

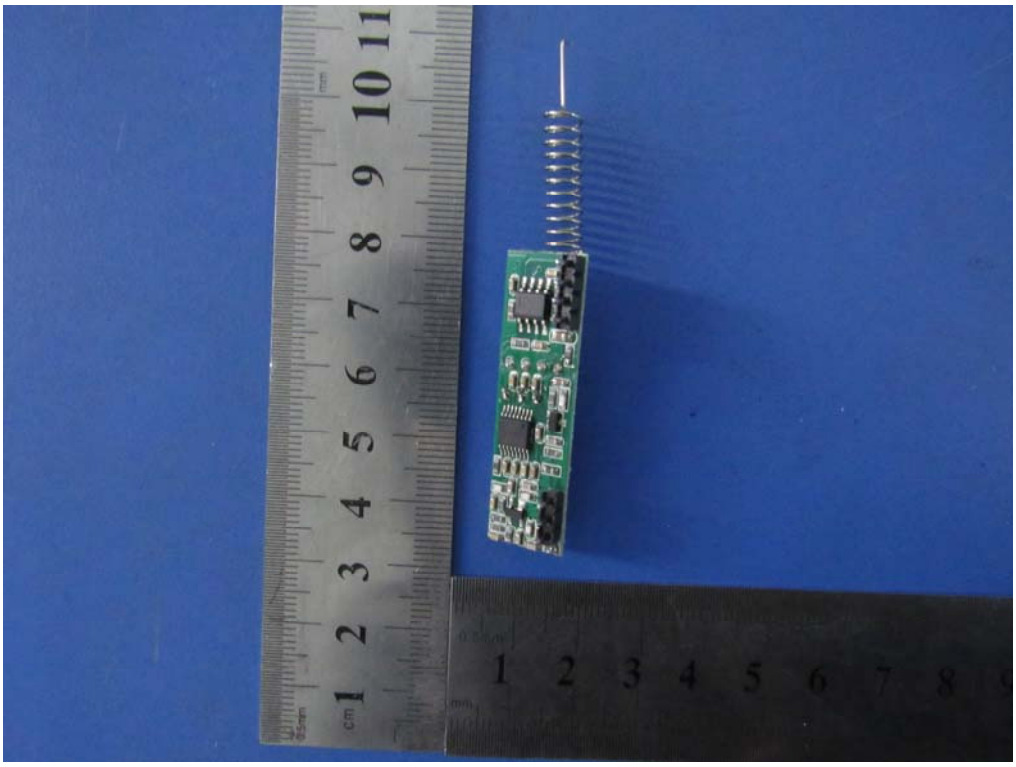
Annex B.ii. Photograph EUT Internal Photos



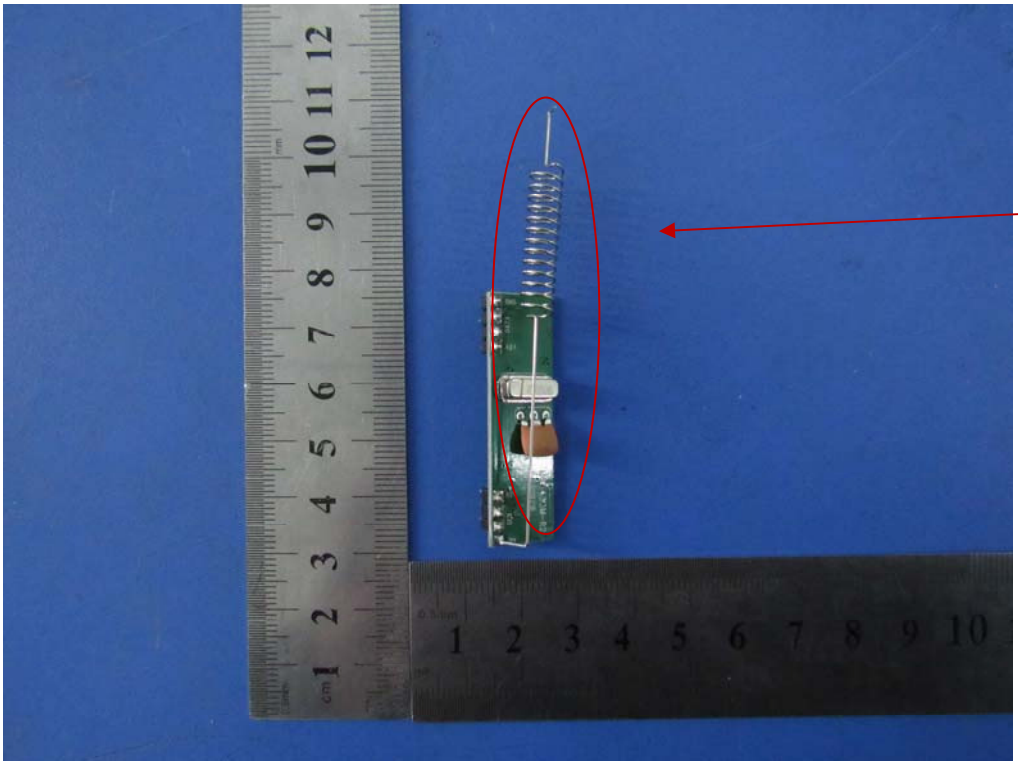
EUT PCBA 1 – Front View



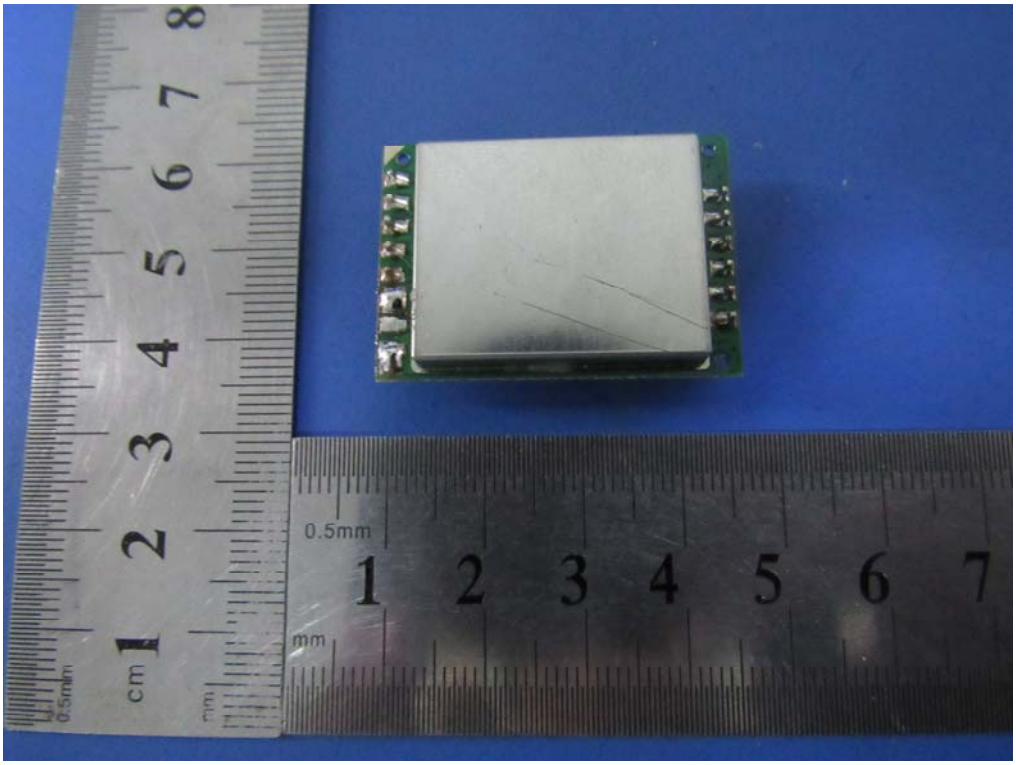
EUT PCBA 1 – Rear View



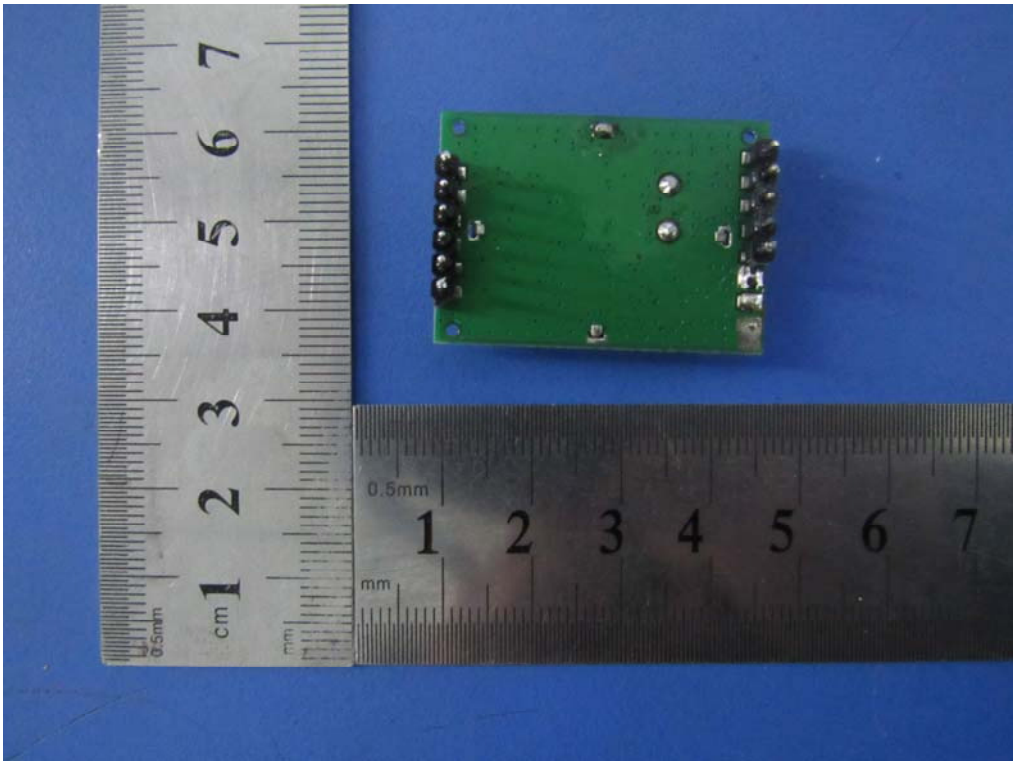
EUT PCBA 2 – Front View



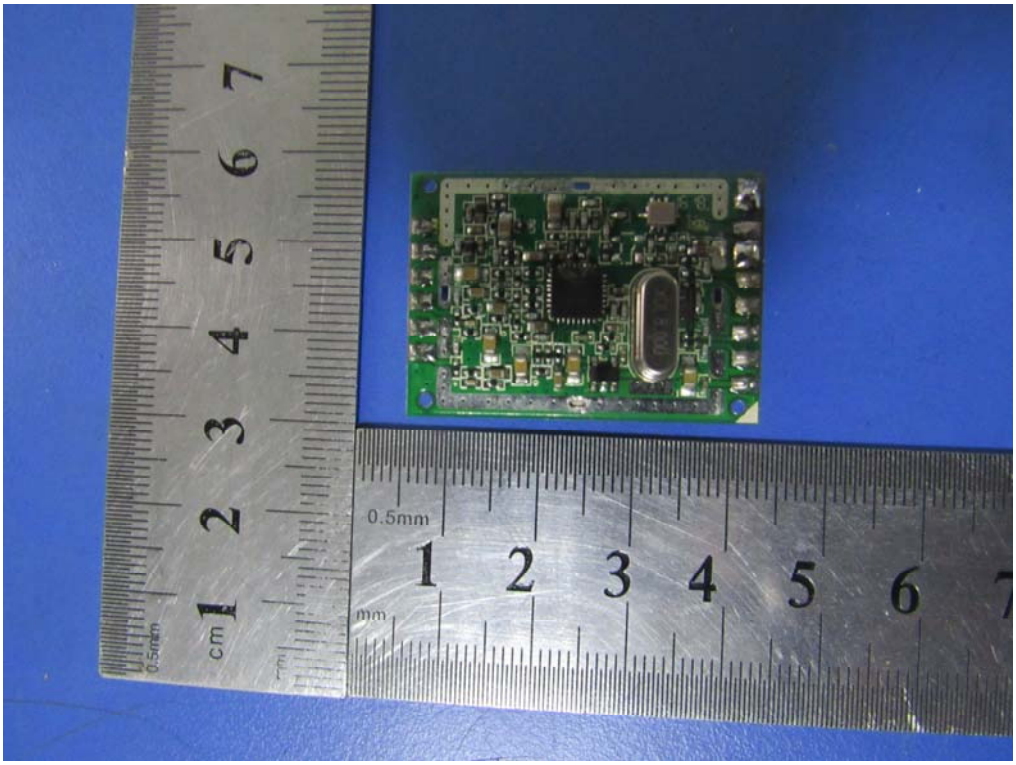
EUT PCBA 2 – Rear View



2.4G Module Front View



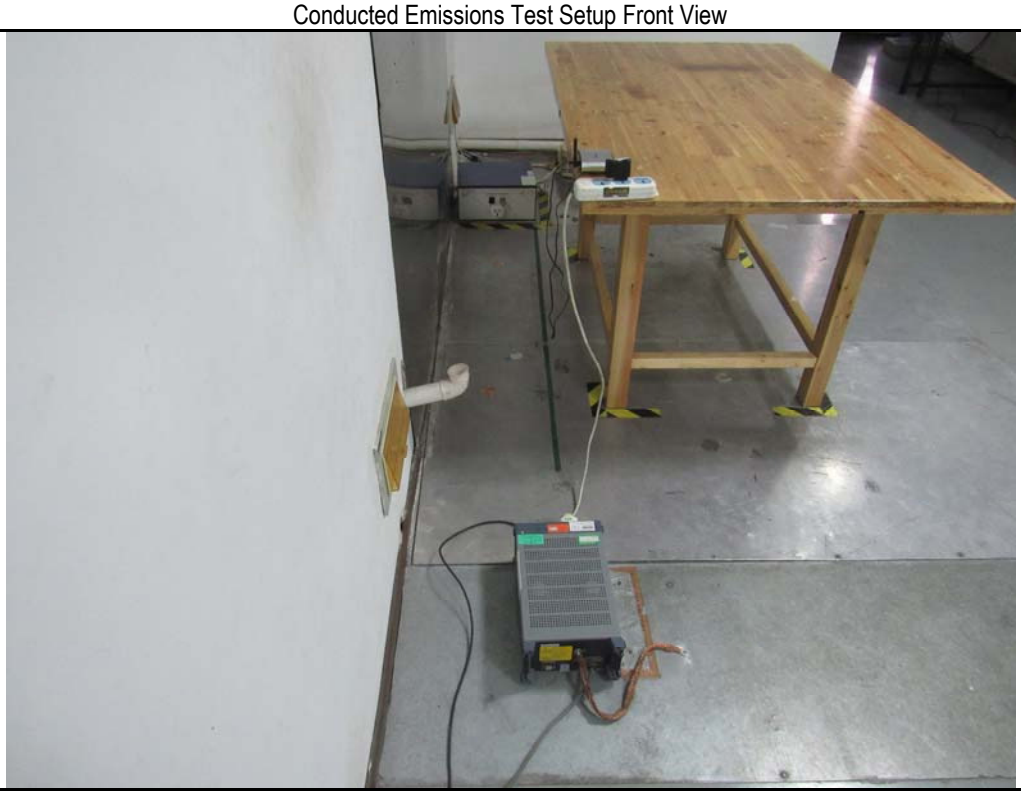
2.4G Module Rear View



2.4G Module Shielding off Front View

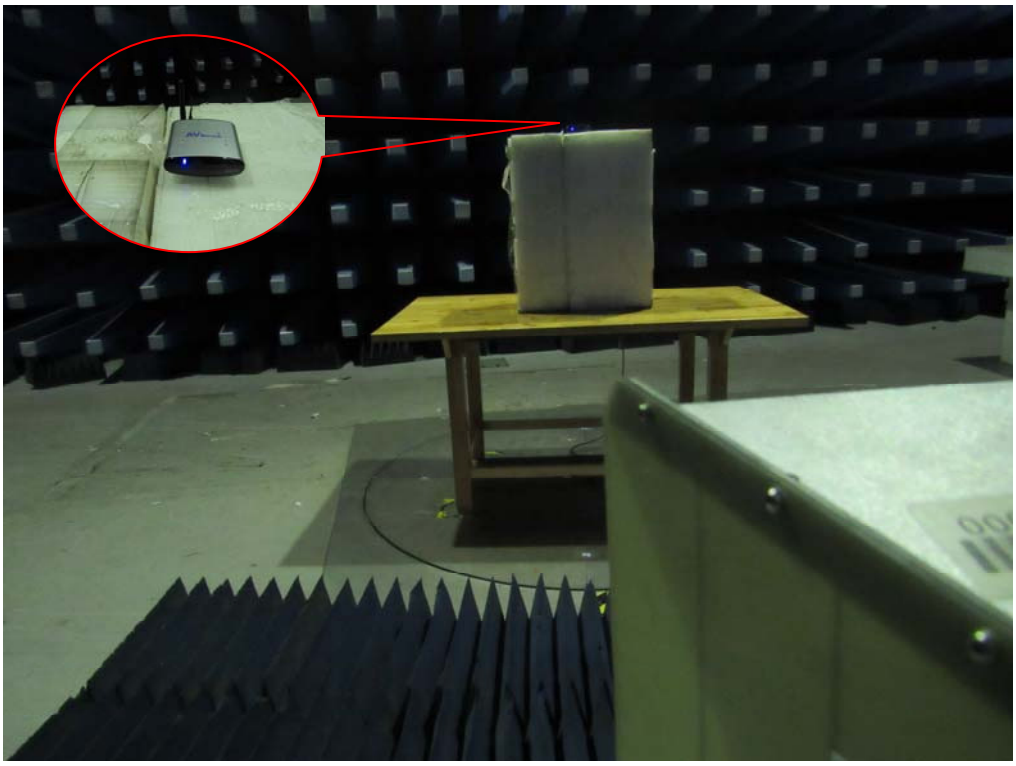
Annex B.iii. Photograph: Test Setup Photo

Conducted Emissions Test Setup Front View



Conducted Emissions Test Setup Side View

Radiated Spurious Emissions Test Setup Below 1GHz

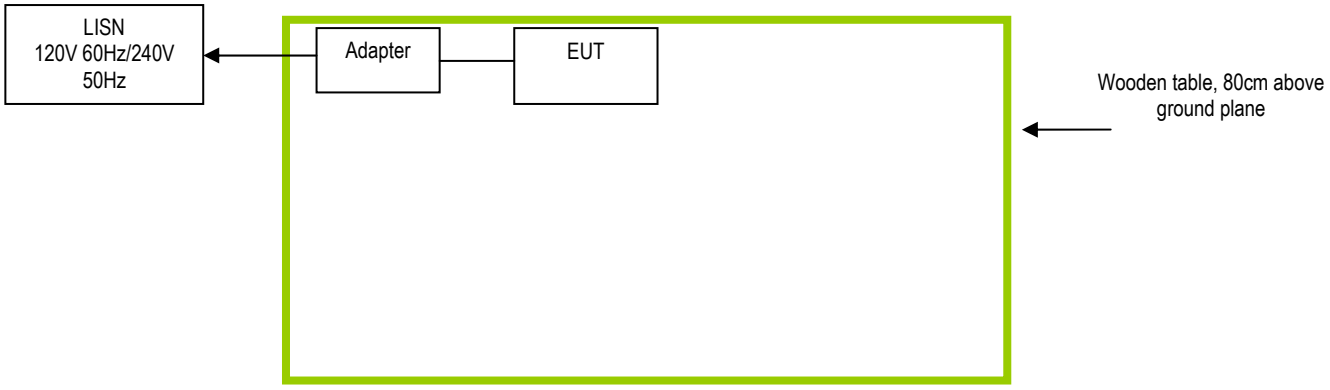


Radiated Spurious Emissions Test Setup Above 1GHz

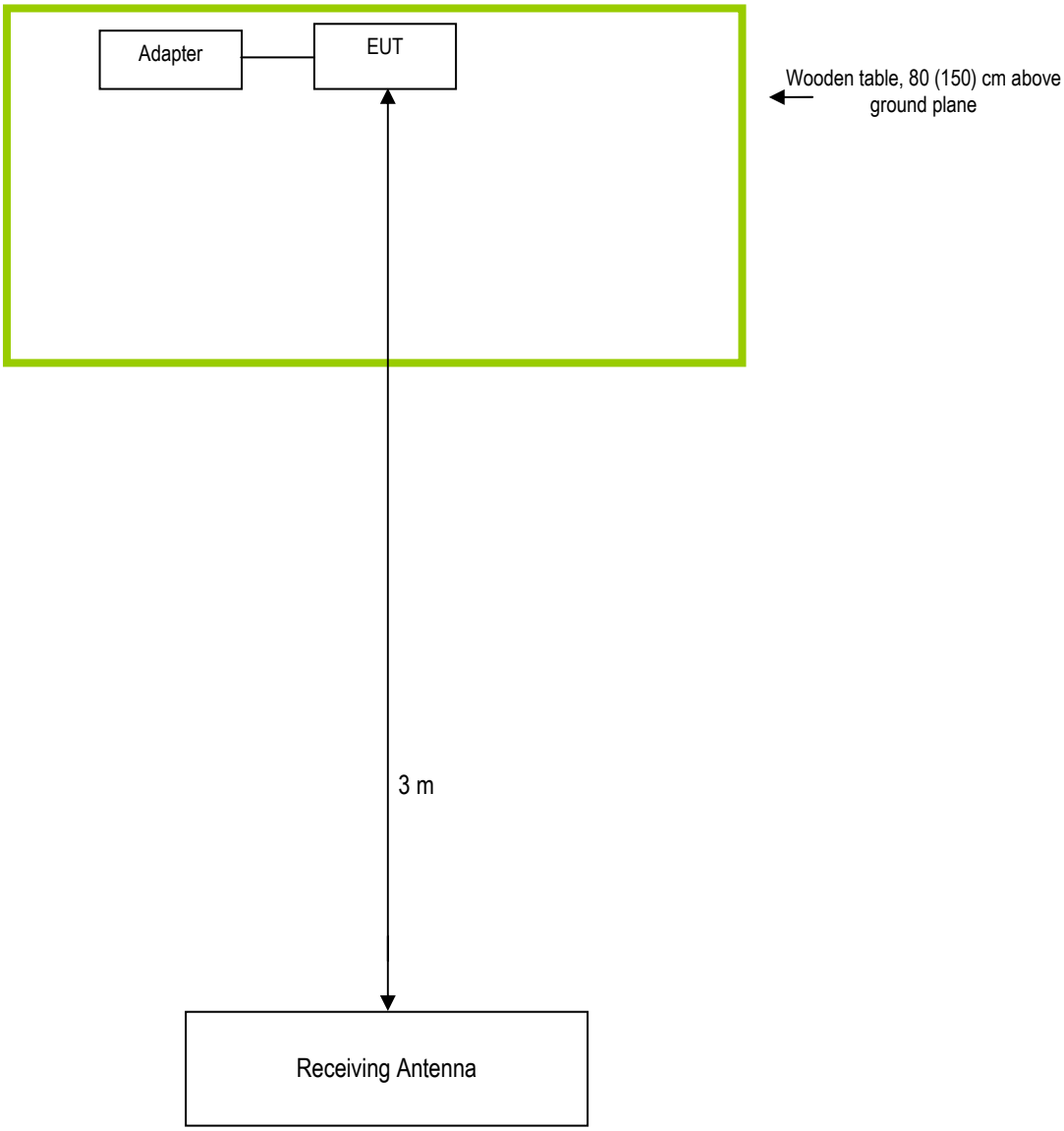
Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

Annex C.ii. TEST SET UP BLOCK

Block Configuration Diagram for AC Line Conducted Emissions



Block Configuration Diagram for Radiated Emissions



Annex C. ii. SUPPORTING EQUIPMENT DESCRIPTION

The following is a description of supporting equipment and details of cables used with the EUT.

Manufacturer	Equipment Description	Model
N/A	N/A	N/A

Supporting Cable:

Cable type	Shield Type	Ferrite Core	Length	Serial No
Power Cable	Un-shielding	No	0.8m	N/A

Annex D. User Manual / Block Diagram / Schematics / Partlist

Please see attachment

Annex E. DECLARATION OF SIMILARITY

Date:2016-12-20

To: SIEMIC, INC.
775 Montague Expressway,
Milpitas, CA 95035
USA

Statement

FCC ID：2ABU5-433IRREMOTE
Model number: PAT-220、PAT-240、PAT-260、PAT-280、PAT-330、
PAT-350、PAT-360、PAT-370、PAT-380、

We hereby state that these models are identical in , electrical circuits and components, and just model names and appearance of the product shell color, antenna appearance, are different for the marketing requirement.

The following model is the "wireless av sender with IR remote control "

PAT-220, silver shell , dual antenna gain 2dB

PAT-240, black shell , dual antenna gain 2dB

AT-260, black shell , dual antenna gain 2dB

AT-280, bright black shell , dual antenna gain 2dB

The following model is the "wireless av sender without IR remote control "

PAT-330, silver shell , dual antenna gain 2dB

PAT-350, black shell , dual antenna gain 2dB

PAT-360, black shell , dual antenna gain 2dB

PAT-370, black shell , dual antenna gain 2dB

PAT-380, black shell , dual antenna gain 2dB

Your assistance on this matter is highly appreciated.

Sincerely,

Signature: PEIZHEN WU

Name : _PEIZHEN WU____

Title: _General Manager_

Company Name: SHENZHEN PAKITE TECHNOLOGY CO.,LTD.

Address: 12 Floor,Building,2 Reservoir Avenue,Nankeng Community, Bantian Street Longgang Distrct ,Shenzhen, China.

Telephone: +86-755-83366901

Fax No.: +86-755-83366910