



FCC TEST REPORT

FCC ID: 2A2FT-LK-GT6M

On Behalf of

DongGuan RuiBo Electronic Technology Co., Ltd
Wireless Transmitter
Model No.: LK-GT6M

Prepared for : DongGuan RuiBo Electronic Technology Co., Ltd
Address : Office Building A, Building A, Beizha Oriental Commercial Building,
Humen Town, Dongguan City, Guangdong Province, 1602

Prepared By : Shenzhen Alpha Product Testing Co., Ltd.
Address : Building i, No.2, Lixin Road, Fuyong Street, Bao'an District, 518103,
Shenzhen, Guangdong, China

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Version Number : V0

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TEST REPORT DECLARATION

Applicant : DongGuan RuiBo Electronic Technology Co., Ltd
Address : Office Building A, Building A, Beizha Oriental Commercial Building, Humen Town,
Dongguan City, Guangdong Province, 1602
Manufacturer : DongGuan RuiBo Electronic Technology Co., Ltd
Address : Office Building A, Building A, Beizha Oriental Commercial Building, Humen Town,
Dongguan City, Guangdong Province, 1602
EUT Description : Wireless Transmitter
(A) Model No. : LK-GT6M
(B) Trademark : ANNNWZZD

Measurement Standard Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.236

ANSI C63.10-2013

The device described above is tested by Shenzhen Alpha Product Testing 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 limits both conducted and radiated emissions. The test results are contained in this test report and Shenzhen Alpha Product Testing Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

After the test, our opinion is that EUT compliance with the requirement of the above standards.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen Alpha Product Testing Co., Ltd.

Tested by (name + signature).....: Lucas Pang
Project Engineer



Approved by (name + signature).....: Simple Guan
Project Manager



Date of issue..... : July 13, 2021

Revision History

Revision	Issue Date	Revisions	Revised By
V0	July 13, 2021	Initial released Issue	Lucas Pang

1. Summary Of Standards And Results

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Test Item	Test Requirement	Standards Paragraph	Result
RF Power Output	FCC PART 15	15.236(d)(2)	P
Occupied Bandwidth	FCC PART 15	15.236(f)(2)	P
Emission Mask	FCC PART 15	15.236(g), 8.3 of ETSI EN 300 422-1 V1.4.2 (2011-08)	P
Radiated Spurious Emission	FCC PART 15	15.236(g), 8.4 of ETSI EN 300 422-1 V1.4.2 (2011-08)	P
Line Conducted Emissions	FCC PART 15	15.207	P
Frequency Stability vs. Temperature Frequency Stability vs. Voltage	FCC PART 15	15.236(f)(3)	P
Note: 1. P is an abbreviation for Pass. 2. F is an abbreviation for Fail. 3. N/A is an abbreviation for Not Applicable.			

2. General Information

2.1. Description of Device (EUT)

Description : Wireless Transmitter
Trademark : ANNNWZZD
Model Number : LK-GT6M
DIFF. : /
Test Voltage : DC 3.7V, DC 5V from USB

Digital systems

Operation frequency : 651-693MHz
Number of channels : 15 Channels
Modulation type : DQPSK
Antenna Type : Internal Antenna, Maximum Gain is 0dBi.

Software version : V1.0
Hardware version : V1.0

2.2.Accessories of Device (EUT)

Accessories1 : /
 Manufacturer : /
 Model : /
 Remark : /

2.3.Tested Supporting System Details

No.	Description	Manufacturer	Model	Serial Number	Certification or SDOC
1	Notebook	Thinakpad	L14	N/A	N/A

2.4.Block Diagram of connection between EUT and simulators



2.5.Test Mode Description

Tested mode, channel, and data rate information		
Mode	Channel	Frequency (MHz)
DQPSK	Low :CH1	651
	Middle: CH8	672
	High: CH16	693

Description Operation Frequency

Test Channel	Frequency(MHz)	Test Channel	Frequency(MHz)
1	651	9	675
2	654	10	678
3	657	11	681
4	660	12	684
5	663	13	687
6	666	14	690
7	669	15	693
8	672		

2.6.Test Conditions

Items	Required	Actual
Temperature range:	15-35℃	24℃
Humidity range:	25-75%	56%
Pressure range:	86-106kPa	980kPa

2.7.Test Facility

Shenzhen Alpha Product Testing Co., Ltd
Building i, No.2, Lixin Road, Fuyong Street, Bao'an District, 518103,
Shenzhen, Guangdong, China

June 21, 2018 File on Federal Communication Commission
Registration Number: 293961

July 15, 2019 Certificated by IC
Registration Number: CN0085

2.8.Measurement Uncertainty

(95% confidence levels, k=2)

Item	Uncertainty
Uncertainty for Power point Conducted Emissions Test	2.74dB
Uncertainty for Radiation Emission test in 3m chamber (below 30MHz)	2.13 dB(Polarize: V)
	2.57dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber (30MHz to 1GHz)	3.77dB(Polarize: V)
	3.80dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber (1GHz to 25GHz)	4.13dB(Polarize: H)
	4.16dB(Polarize: V)
Uncertainty for radio frequency	5.4×10^{-8}
Uncertainty for conducted RF Power	0.37dB
Uncertainty for temperature	0.2℃
Uncertainty for humidity	1%
Uncertainty for DC and low frequency voltages	0.06%

2.9.Test Equipment List

Equipment	Manufacture	Model No.	Serial No.	Last cal.	Cal Interval
9*6*6 anechoic chamber	CHENYU	9*6*6	N/A	2019.09.06	3Year
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	102137	2020.09.02	1Year
Spectrum analyzer	Agilent	N9020A	MY499100060	2020.09.02	1Year
Receiver	ROHDE&SCHWARZ	ESR	1316.3003K03-10208 2-Wa	2020.09.02	1Year
Receiver	R&S	ESCI	101165	2020.09.02	1Year
Bilog Antenna	Schwarzbeck	VULB 9168	VULB9168-438	2020.04.12	2Year
Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D(1201)	2020.04.12	2Year
Active Loop Antenna	SCHWARZBECK	FMZB 1519B	00059	2019.09.07	2Year
Cable	Resenberger	N/A	No.1	2020.09.02	1Year
Cable	Resenberger	N/A	No.2	2020.09.02	1Year
Cable	Resenberger	N/A	No.3	2020.09.02	1Year
Pre-amplifier	HP	HP8347A	2834A00455	2020.09.02	1Year
Pre-amplifier	Agilent	8449B	3008A02664	2020.09.02	1Year
L.I.S.N.#1	Schwarzbeck	NSLK8126	8126466	2020.09.02	1Year
L.I.S.N.#2	ROHDE&SCHWARZ	ENV216	101043	2020.09.02	1 Year
20db Attenuator	ICPROBING	IATS1	82347	2020.09.02	1 Year
Horn Antenna	SCHWARZBECK	BBHA9170	00946	2019.09.07	2 Year
Preamplifier	SKET	LNPA_1840-50	SK2018101801	2020.09.02	1 Year
Power Meter	Agilent	E9300A	MY41496625	2020.09.02	1 Year
Temp. & Humid. Chamber	Wei Huang	WHTH-1000-40-80	100631	2020.09.02	1 Year
Switching Mode Power Supply	JUNKE	JK12010S	20140927-6	2020.09.02	1 Year

3. Spurious Emission

3.1. Test Standard

FCC Part 15.236(g)

Requirement: ETSI EN 300 422-1 V1.4.2

(g) Emissions within the band from one megahertz below to one megahertz above the carrier frequency shall comply with the emission mask in §8.3 of ETSI EN 300 422-1 V1.4.2 (2011-08), *Electromagnetic compatibility and Radio spectrum Matters (ERM); Wireless microphones in the 25 MHz to 3 GHz frequency range; Part 1: Technical characteristics and methods of measurement*. Emissions outside of this band shall comply with the limits specified in section 8.4 of ETSI EN 300 422-1 V1.4.2 (2011-08).

3.2. Test Limits

State	Frequency		
	47 MHz to 74 MHz 87,5 MHz to 137 MHz 174 MHz to 230 MHz 470 MHz to 862 MHz	Other Frequencies below 1 000 MHz	Frequencies above 1 000 MHz
Operation	4 nW	250 nW	1 µW
Standby	2 nW	2 nW	20 nW

3.3. Test Procedure

The measuring distance of 3m shall be used for measurements at frequency up to 1GHz and above 1GHz, The EUT was placed on a rotating 0.8 m high above ground for below 1GHz and 1.5m high for above1GHz testing, The table was rotated 360 degrees to determine the position of the highest radiation

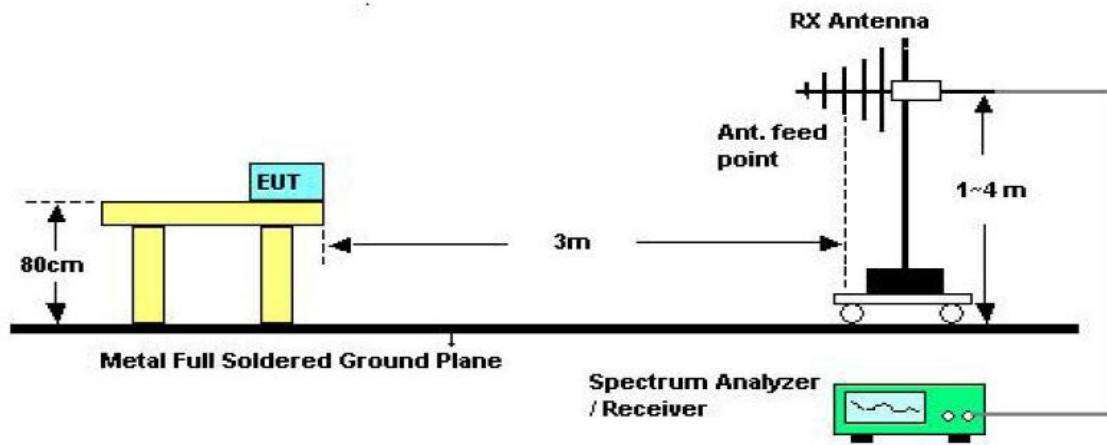
The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set of make measurement.

The initial step in collecting conducted emission data is a spectrum analyzer Peak detector mode pre-scanning the measurement frequency range. Significant Peaks are then marked. and then Qusia Peak Detector mode premeasured

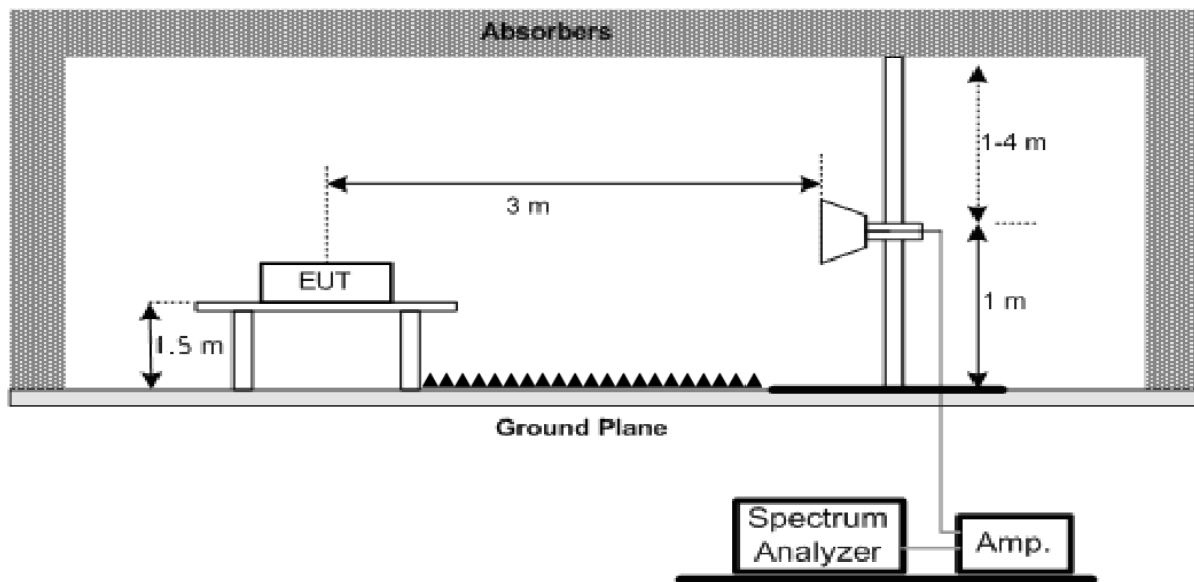
If Peak value comply with QP limit Below 1GHz.The EUT deemed to comply with QP limit. But the Peak value and average value both need to comply with applicable limit above 1GHz.

For the actual test configuration, please see the test setup photo.

3.4. Test Setup



Above 30MHz Test Setup



Above 1GHz Test Setup

3.5. Test Results

Test Condition

Continual Transmitting in maximum power.

30MHZ~1GHz	RBW120KHz	VBW 300KHz
Above1GHz	RBW1MHz	VBW 3MHz

We have scanned the 10th harmonic from 9KHz of the EUT.

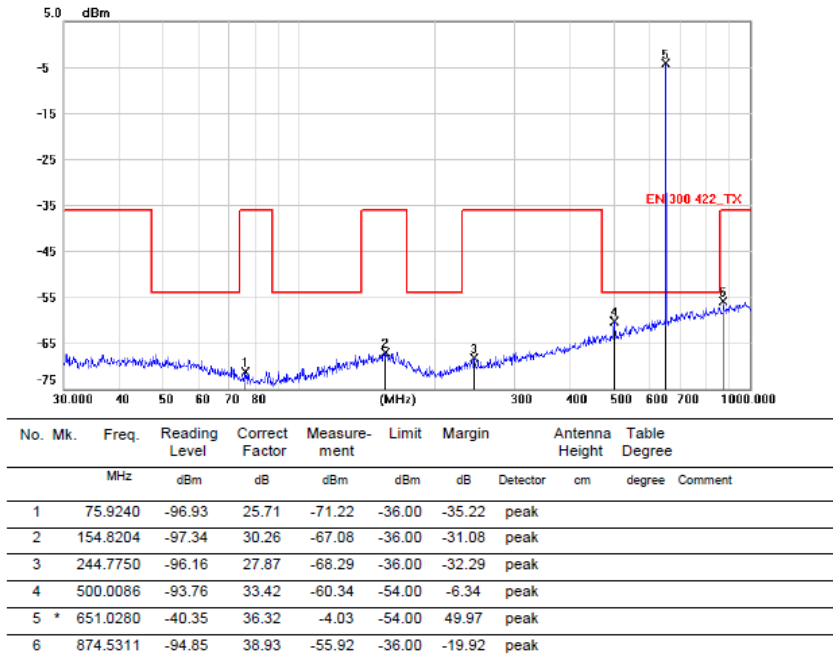
Detailed information please see the following page.

From 9KHz to 30MHz: Conclusion: PASS

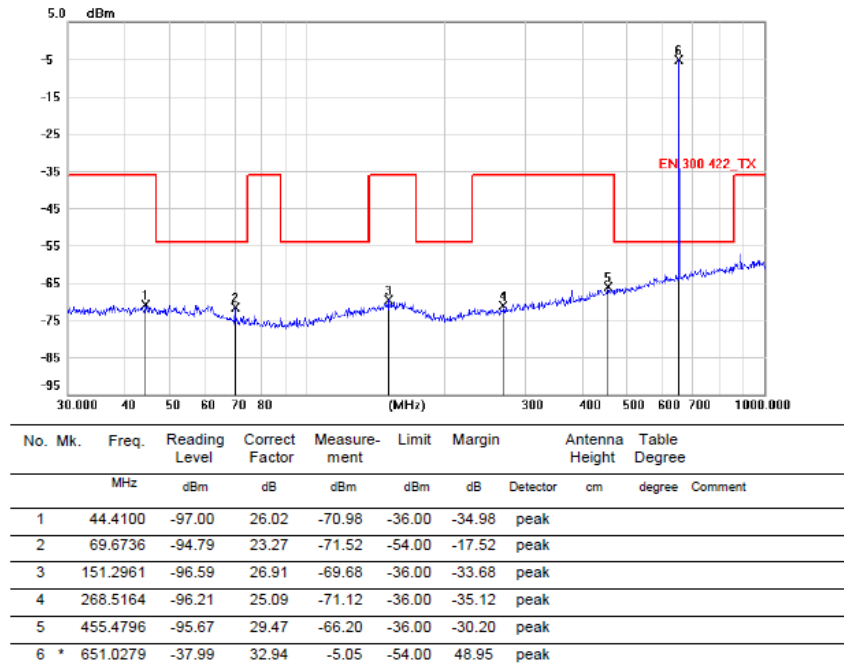
Note: The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

30MHz-1GHz

Temperature	24°C	Humidity	56%
Pol	Vertical	Test mode	651MHz
Test Voltage	DC 3.7V		

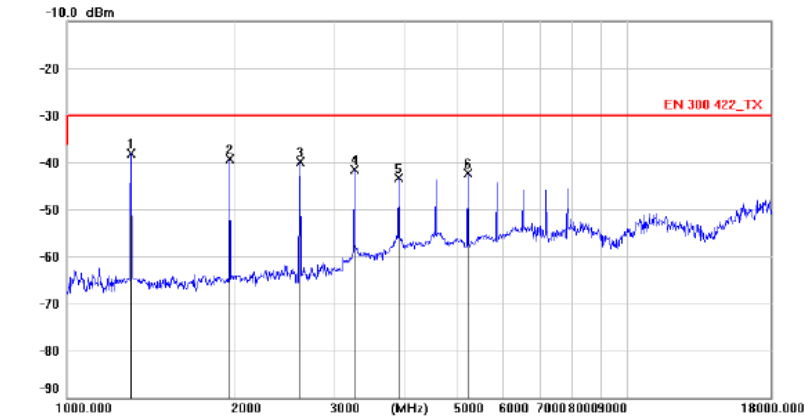
**Pol**

Horizontal



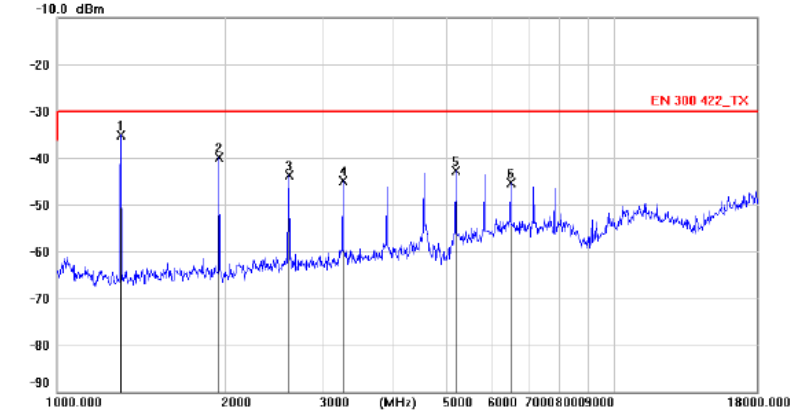
1GHz-18GHz

Temperature	24°C	Humidity	56%
Pol	Vertical	Test mode	651MHz
Test Voltage	DC 3.7V		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree		
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1301.861	-30.30	-7.88	-38.18	-30.00	-8.18	peak			
2		1952.897	-32.65	-6.65	-39.30	-30.00	-9.30	peak			
3		2603.878	-35.34	-4.61	-39.95	-30.00	-9.95	peak			
4		3254.512	-38.57	-2.90	-41.47	-30.00	-11.47	peak			
5		3906.029	-42.70	-0.54	-43.24	-30.00	-13.24	peak			
6		5208.071	-46.18	3.81	-42.37	-30.00	-12.37	peak			

Pol	Horizontal
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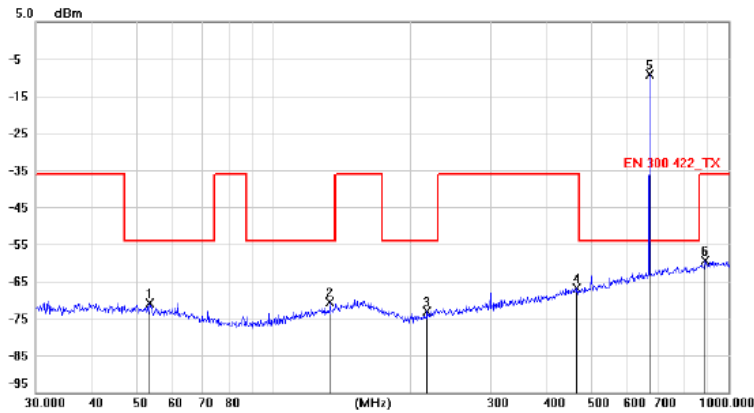


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree		
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1301.986	-27.19	-7.88	-35.07	-30.00	-5.07	peak			
2		1952.897	-33.32	-6.65	-39.97	-30.00	-9.97	peak			
3		2603.878	-39.17	-4.61	-43.78	-30.00	-13.78	peak			
4		3254.826	-42.07	-2.90	-44.97	-30.00	-14.97	peak			
5		5207.569	-46.50	3.81	-42.69	-30.00	-12.69	peak			
6		6510.044	-53.29	8.04	-45.25	-30.00	-15.25	peak			

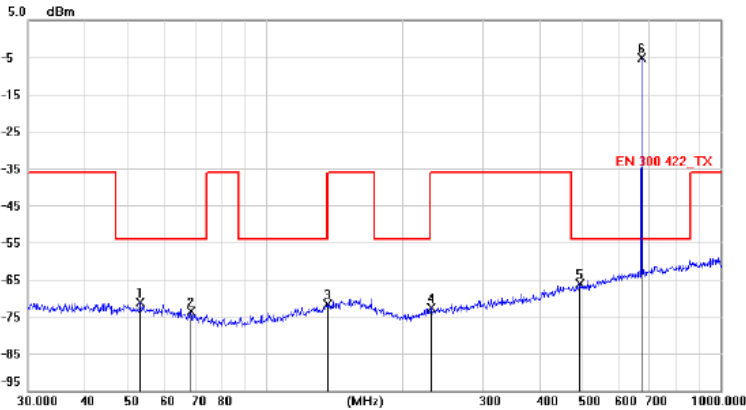
Note: The radiation data above 18GHz is more than 10dBm lower than the limit, so it is not reflected.

30MHz-1GHz

Temperature	24°C	Humidity	56%
Pol	Vertical	Test mode	672MHz
Test Voltage	DC 3.7V		



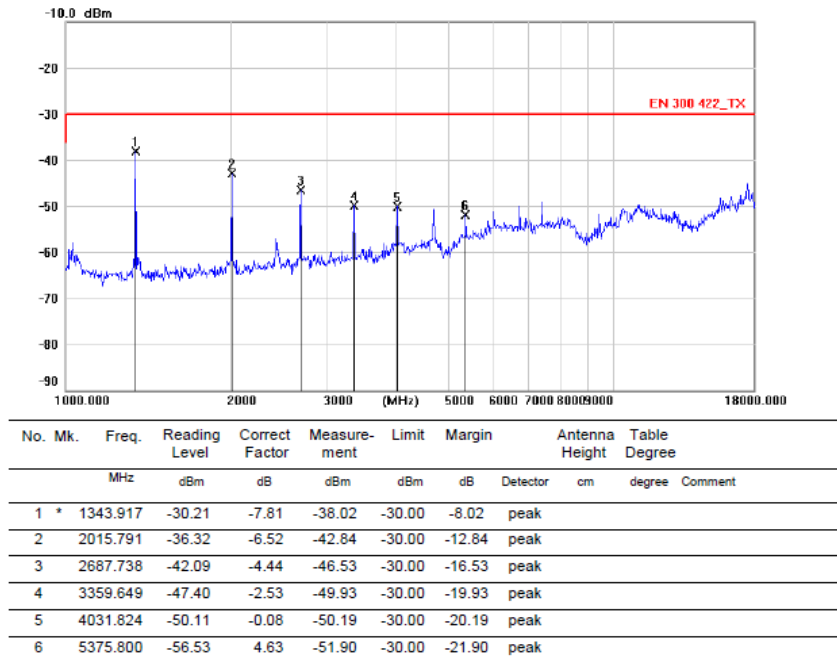
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree		
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1		53.6493	-96.43	25.57	-70.86	-54.00	-16.86	peak			
2		133.2601	-96.37	25.67	-70.70	-54.00	-16.70	peak			
3		217.7987	-96.49	23.44	-73.05	-54.00	-19.05	peak			
4		465.0555	-96.44	29.56	-66.88	-36.00	-30.88	peak			
5	*	671.9799	-42.32	33.19	-9.13	-54.00	44.87	peak			
6		890.7278	-95.15	35.76	-59.39	-36.00	-23.39	peak			

Pol Horizontal

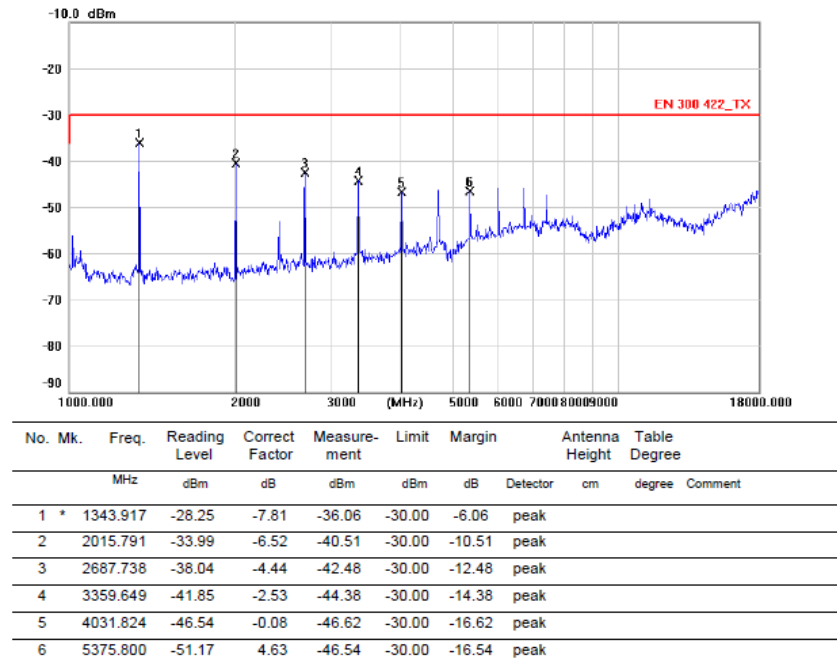
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1		53.0258	-96.72	25.57	-71.15	-54.00	-17.15	peak		
2		68.3908	-97.00	23.49	-73.51	-54.00	-19.51	peak		
3		136.8272	-97.52	25.93	-71.59	-54.00	-17.59	peak		
4		231.1768	-96.69	24.19	-72.50	-36.00	-36.50	peak		
5		491.8933	-96.13	29.95	-66.18	-54.00	-12.18	peak		
6	*	671.9799	-38.35	33.19	-5.16	-54.00	48.84	peak		

1GHz-18GHz

Temperature	24°C	Humidity	56%
Pol	Vertical	Test mode	672MHz
Test Voltage	DC 3.7V		



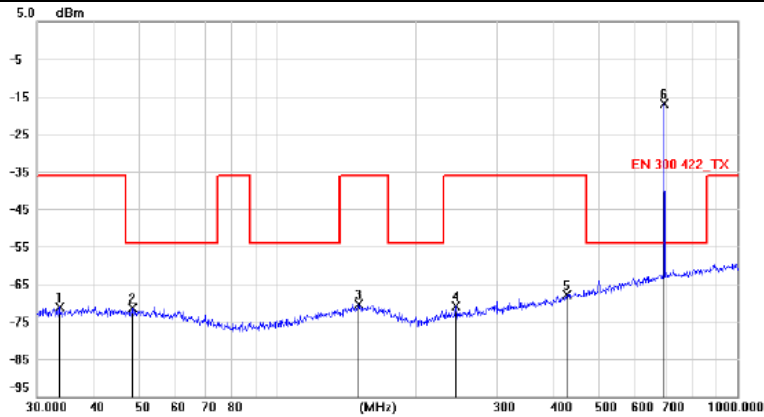
Pol	Horizontal
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Note: The radiation data above 18GHz is more than 10dBm lower than the limit, so it is not reflected.

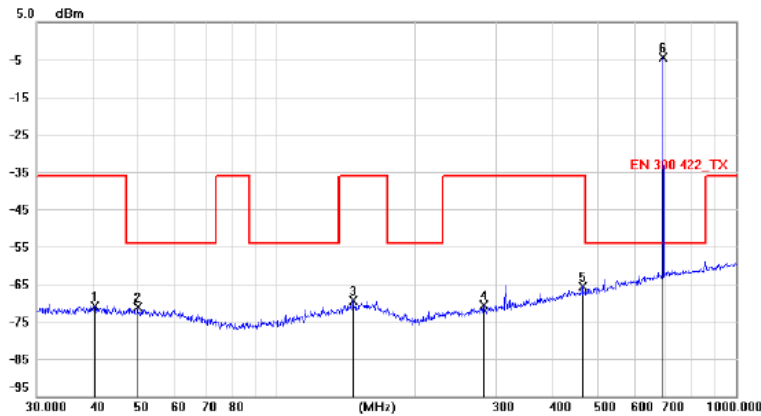
30MHz-1GHz

Temperature	24°C	Humidity	56%
Pol	Vertical	Test mode	693MHz
Test Voltage	DC 3.7V		



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin	Antenna	Table
		MHz	dBm	Factor	ment			Height	Degree
								cm	degree
							Detector		Comment
1		33.5938	-96.64	25.52	-71.12	-36.00	-35.12	peak	
2		48.3657	-97.16	25.91	-71.25	-54.00	-17.25	peak	
3		150.5202	-97.28	26.91	-70.37	-36.00	-34.37	peak	
4		244.7751	-95.45	24.51	-70.94	-36.00	-34.94	peak	
5		427.7692	-96.78	28.85	-67.93	-36.00	-31.93	peak	
6 *		693.0390	-50.42	33.44	-16.98	-54.00	37.02	peak	

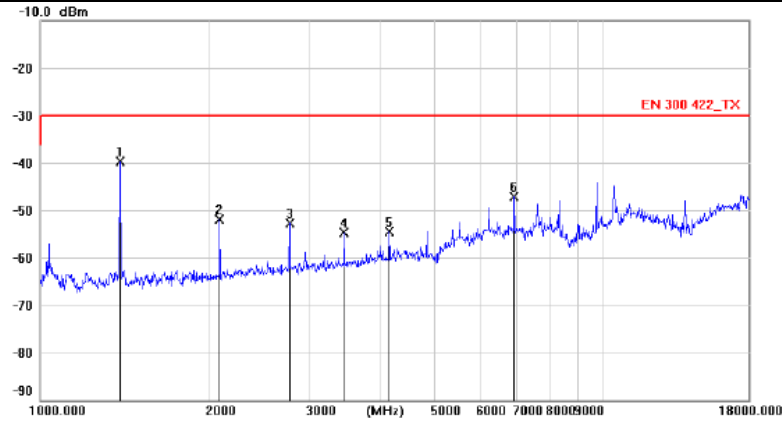
Pol	Horizontal
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No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin	Antenna	Table
		MHz	dBm	Factor	ment			Height	Degree
								cm	degree
							Detector		Comment
1		40.2757	-97.24	26.28	-70.96	-36.00	-34.96	peak	
2		49.8522	-97.07	25.89	-71.18	-54.00	-17.18	peak	
3		146.8705	-96.11	26.68	-69.43	-36.00	-33.43	peak	
4		282.8859	-96.08	25.51	-70.57	-36.00	-34.57	peak	
5		462.3996	-95.13	29.53	-65.60	-36.00	-29.60	peak	
6 *		693.0390	-37.85	33.44	-4.41	-54.00	49.59	peak	

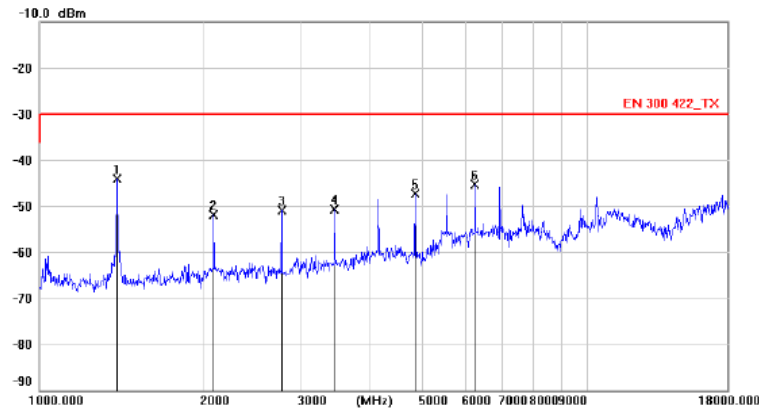
1GHz-18GHz

Temperature	24°C	Humidity	56%
Pol	Vertical	Test mode	693MHz
Test Voltage	DC 3.7V		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree		
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1385.863	-31.99	-7.74	-39.73	-30.00	-9.73	peak			
2		2078.907	-45.62	-6.29	-51.91	-30.00	-21.91	peak			
3		2771.893	-48.53	-4.26	-52.79	-30.00	-22.79	peak			
4		3464.842	-52.49	-2.16	-54.65	-30.00	-24.65	peak			
5		4158.064	-54.89	0.36	-54.53	-30.00	-24.53	peak			
6		6930.103	-55.85	8.75	-47.10	-30.00	-17.10	peak			

Pol	Horizontal
------------	------------



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Antenna Height	Table Degree		
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1385.863	-36.37	-7.74	-44.11	-30.00	-14.11	peak			
2		2078.907	-45.58	-6.29	-51.87	-30.00	-21.87	peak			
3		2771.893	-46.68	-4.26	-50.94	-30.00	-20.94	peak			
4		3464.842	-48.46	-2.16	-50.62	-30.00	-20.62	peak			
5		4851.087	-49.65	2.43	-47.22	-30.00	-17.22	peak			
6		6236.832	-52.85	7.48	-45.37	-30.00	-15.37	peak			

Note: The radiation data above 18GHz is more than 10dBm lower than the limit, so it is not reflected.

4. Power Line Conducted Emission

4.1. Test Standard

FCC Part 15.207

4.2. Test Limits

Frequency MHz	Limits dB(μ V)	
	Quasi-peak Level	Average Level
0.15 -0.50	66 -56*	56 - 46*
0.50 -5.00	56	46
5.00 -30.00	60	50

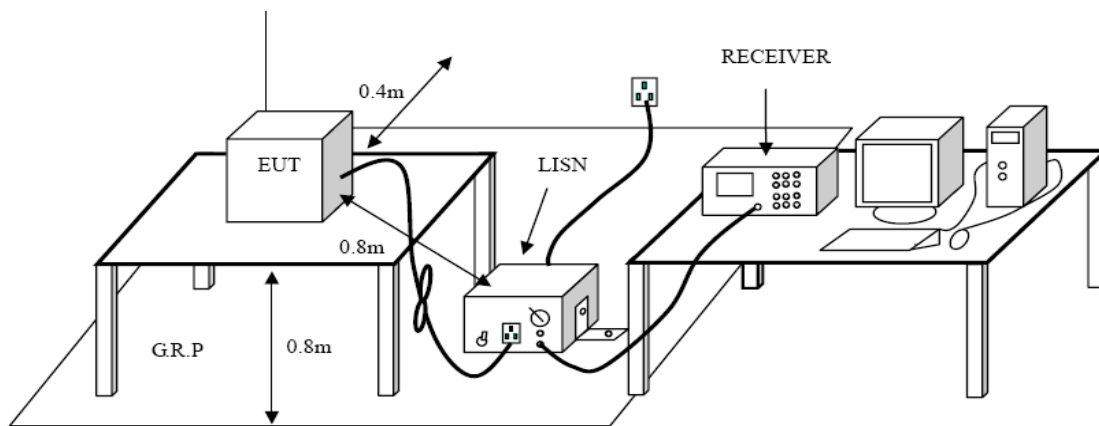
- Notes: 1. *Decreasing linearly with logarithm of frequency.
 2. The lower limit shall apply at the transition frequencies.
 3. The limit decreases in line with the logarithm of the frequency in rang of 0.15 to 0.50 MHz.

4.3. Test Procedure

The EUT is put on the plane 0.8m 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.

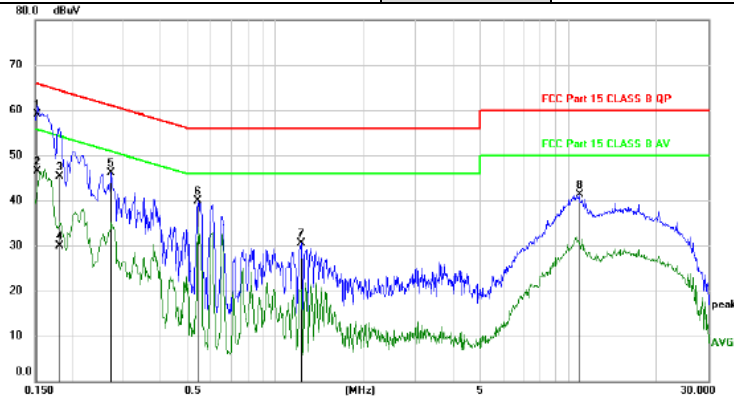
The bandwidth of test receiver is set at 9 kHz.

4.4. Test Setup



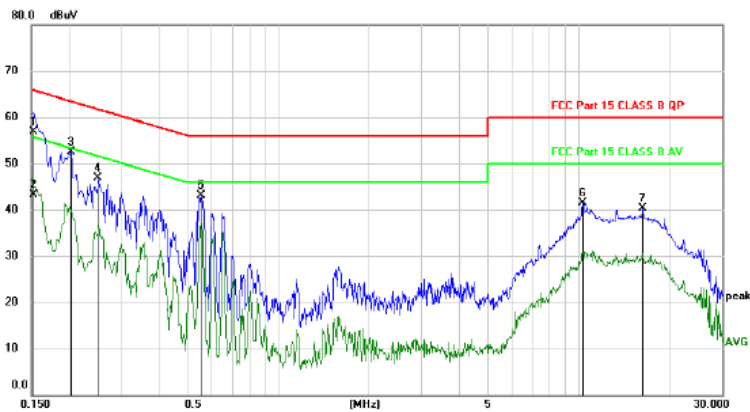
4.5. Test Results

Temperature	24°C	Humidity	56%
Pol	Line	Test mode	Charging
Test Voltage	DC 5V		



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV	dB	dBuV	dBuV	dB		
1 *	0.1530	49.10	9.94	59.04	65.84	-6.80	QP	
2	0.1530	36.55	9.94	46.49	55.84	-9.35	AVG	
3	0.1830	35.42	9.93	45.35	64.35	-19.00	QP	
4	0.1830	19.98	9.93	29.91	54.35	-24.44	AVG	
5	0.2730	36.14	9.95	46.09	61.03	-14.94	peak	
6	0.5429	29.90	9.94	39.84	56.00	-16.16	peak	
7	1.2180	20.65	9.89	30.54	56.00	-25.46	peak	
8	10.8780	31.06	10.23	41.29	60.00	-18.71	peak	

Pol	Neutral
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No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV	dB	dBuV	dBuV	dB		
1 *	0.1530	46.90	9.94	56.84	65.84	-9.00	QP	
2	0.1530	33.39	9.94	43.33	55.84	-12.51	AVG	
3	0.2040	42.68	9.92	52.60	63.45	-10.85	peak	
4	0.2519	36.98	9.97	46.95	61.69	-14.74	peak	
5	0.5550	33.15	9.94	43.09	56.00	-12.91	peak	
6	10.3110	31.25	10.22	41.47	60.00	-18.53	peak	
7	16.3290	29.88	10.37	40.25	60.00	-19.75	peak	

Note: 1. *:Maximum data; x:Over limit; !:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

5. RF Power Output Test

5.1. Test Standard

FCC Part 15.236(d)(2)

5.2. Test Limit

§15.236 Operation of wireless microphones in the bands 54-72 MHz, 76-88 MHz, 174-216 MHz, 470-608 MHz and 614-698 MHz.

(d) The maximum radiated power shall not exceed the following values:

(2) In the 600 MHz guard band and the 600 MHz duplex gap: 20 mW EIRP.

Procedure: KDB 971168 D01 Average Power Measurements section 5.2.1

Power Limit 20mW= 13dBm.

5.3. Test Procedure

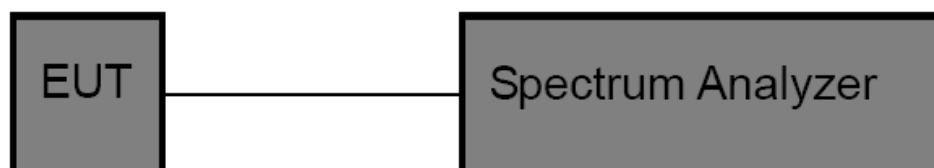
The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above.

- (1) Set the $RBW \geq \text{Bandwidth}$
- (2) Set $VBW \geq 3 * RBW$
- (3) Set $\text{Span} \geq 3 * RBW$
- (4) Sweep time=auto
- (5) Measurement points $\geq 2 \text{ span} / RBW$
- (6) Detector=Average
- (7) Trace mode= max hold.

Allow trace to fully stabilize, and then use peak marker function to determine the Average amplitude level.

- (8) Radiated RF power= Conduction measurement Level + Ant. Gain

5.4. Test Setup



5.5.Test Results

Channel	Frequency (MHz)	Conduction measurement Level (dBm)	Ant. Gain(dBi)	Radiated RF power(dBm)	Limit (dBm)	Results
CH1	651	-4.03	0	-4.03	13	Pass
CH8	672	-5.16	0	-5.16	13	Pass
CH15	693	-4.41	0	-4.41	13	Pass

6. EMISSION MASK Test

6.1. Test Standard

(g) Emissions within the band from one megahertz below to one megahertz above the carrier frequency shall comply with the emission mask in §8.3 of ETSI EN 300 422-1 V1.4.2 (2011-08), *Electromagnetic compatibility and Radio spectrum Matters (ERM); Wireless microphones in the 25 MHz to 3 GHz frequency range; Part 1: Technical characteristics and methods of measurement*. Emissions outside of this band shall comply with the limits specified in section 8.4 of ETSI EN 300 422-1 V1.4.2 (2011-08).

6.2. Test limits

The transmitter output spectrum shall be within the mask defined in figure 4. This mask may also be used for analogue.



Figure 4: Spectrum mask for digital systems below 1 GHz

6.3. Test Procedure

Measure the "Maximum Relative Level (dBc) at Specified Carrier Offsets" with the following spectrum analyser setup:

Centre Frequency = f_c

Span $\geq 5 \times B$

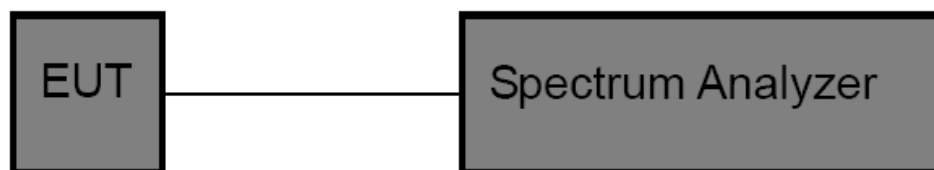
Detector = RMS

Trace Mode = Peak Hold

RBW&VBW = 1 kHz

Sweep time ≥ 2 s

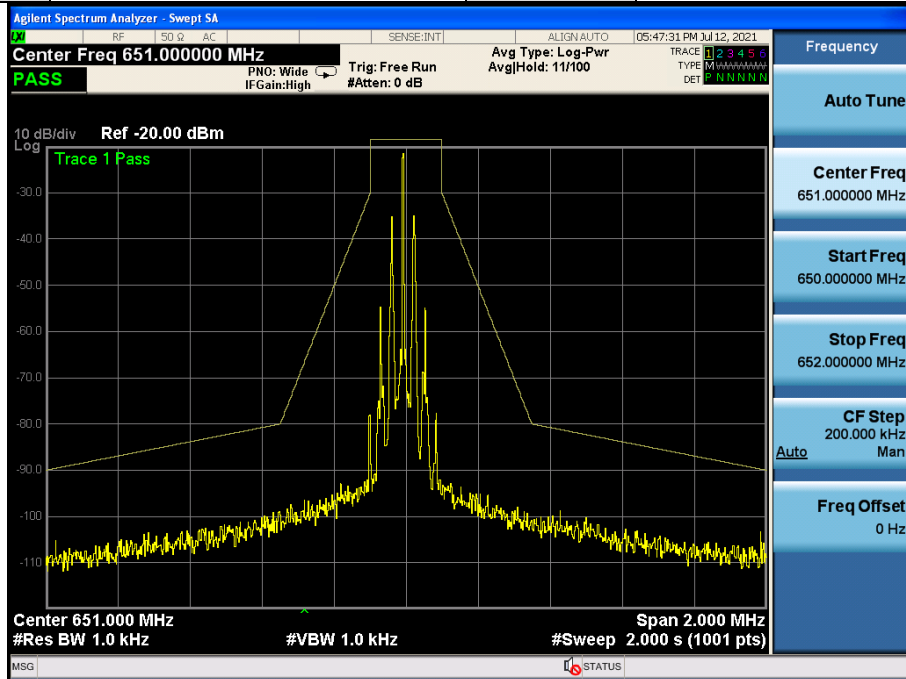
6.4. Test Setup



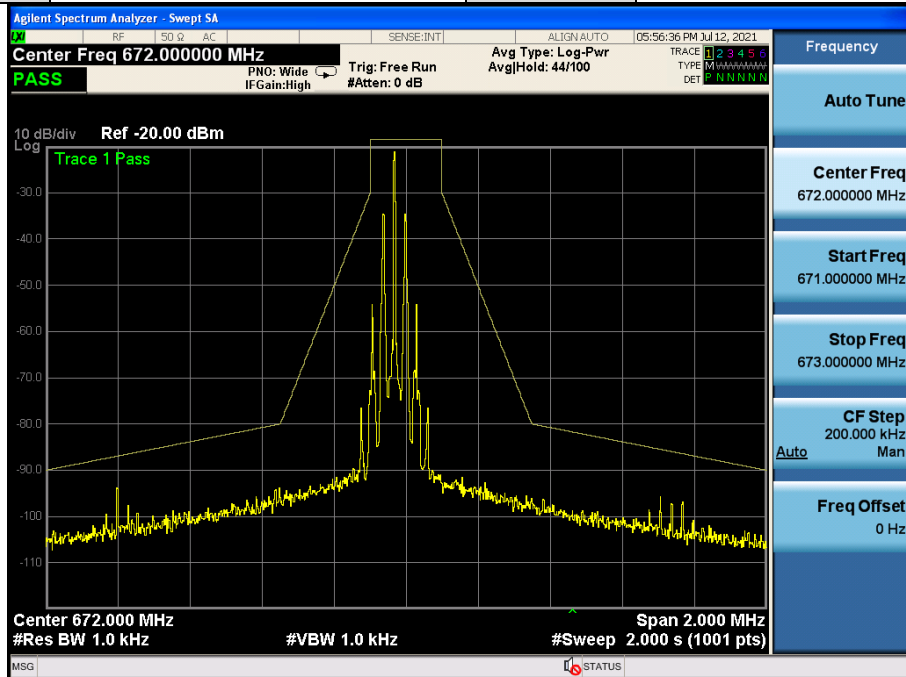
6.5. Test Results

Detailed information please see the following page.

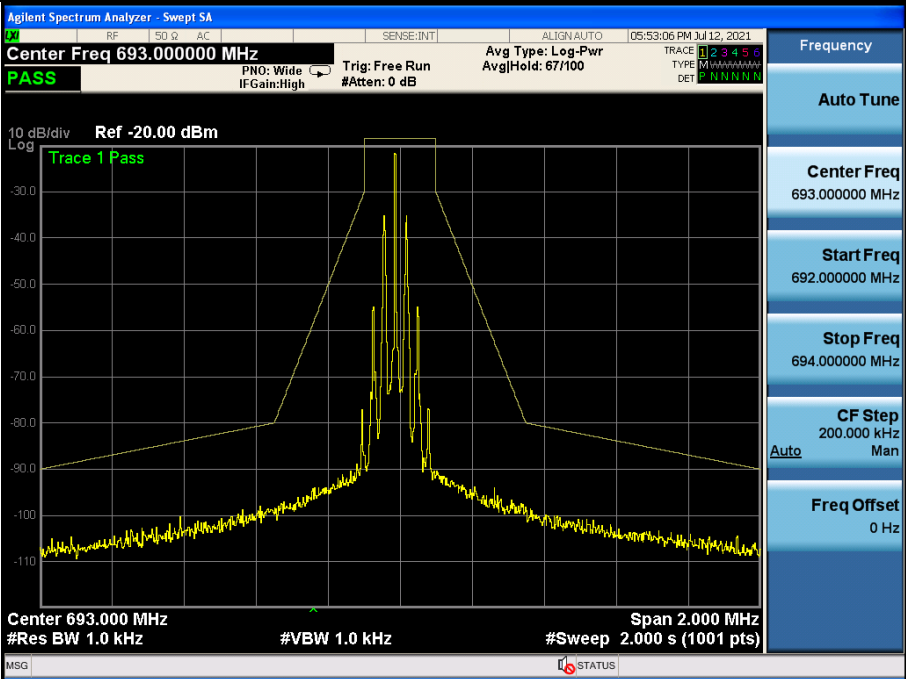
Temperature	24°C	Humidity	56%
Pressure	1010hPa	Test mode	TX 651MHz
Test Voltage	DC 3.7V	Result	Pass



Temperature	24°C	Humidity	56%
Pressure	1010hPa	Test mode	TX 672MHz
Test Voltage	DC 3.7V	Result	Pass



Temperature	24°C	Humidity	56%
Pressure	1010hPa	Test mode	TX 693MHz
Test Voltage	DC 3.7V	Result	Pass



7. Bandwidth

7.1. Test Standard

Test Standard: FCC Part 15.236(f)(2)

7.2. Test limits

One or more adjacent 25 kHz segments within the assignable frequencies may be combined to form a channel whose maximum bandwidth shall not exceed 200 kHz. The operating bandwidth shall not exceed 200 kHz.

7.3. Test Procedure

(1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.

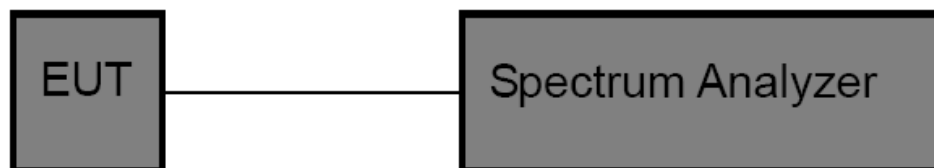
(2) Spectrum Setting:

Bandwidth: RBW=10 kHz, VBW=30kHz.

(3) The bandwidth is measured at an amplitude level reduced 20dB from the reference level.

The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst –case (i.e the widest) bandwidth.

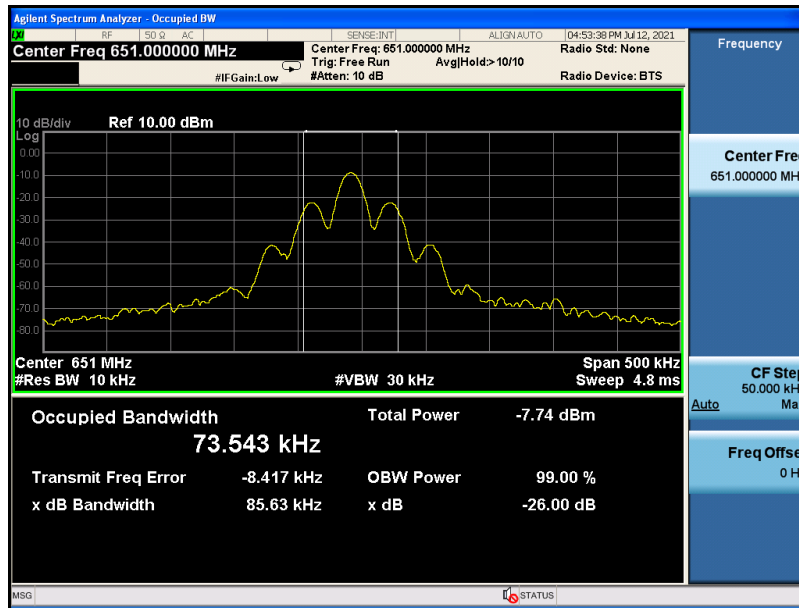
7.4. Test Setup



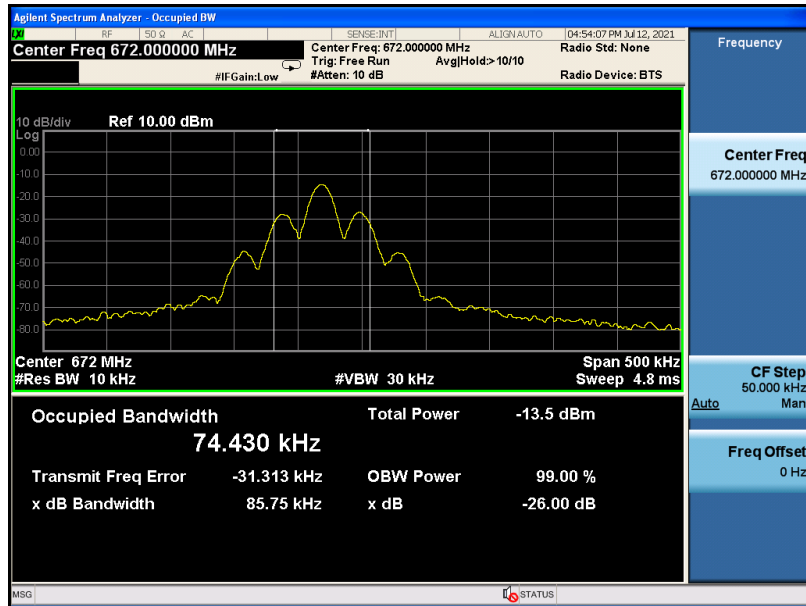
7.5. Test Results

Channel	Frequency (MHz)	99% Bandwidth (KHz)	26dB Bandwidth (KHz)	Limit (KHz)	Results
CH1	651	73.543	85.63	200	Pass
CH8	672	74.430	85.75	200	Pass
CH15	693	75.343	87.01	200	Pass

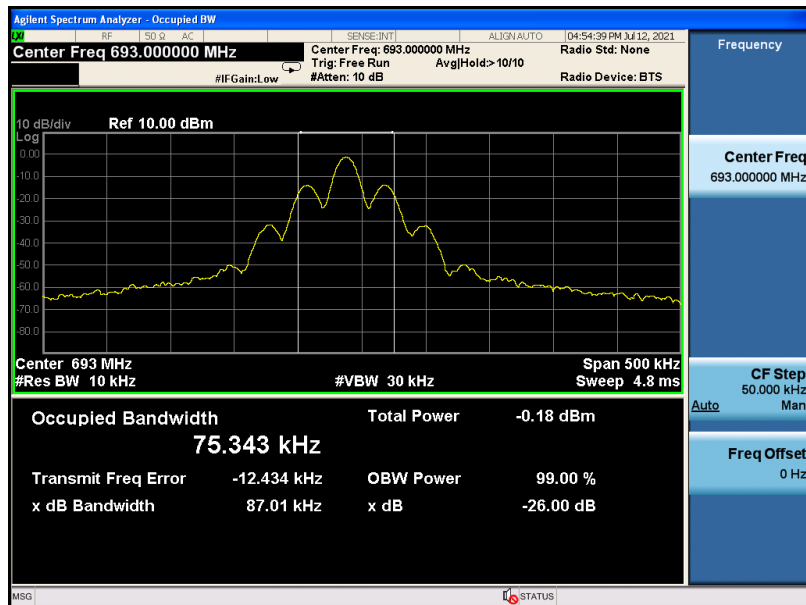
Temperature	24°C	Humidity	56%
Test Voltage	DC 3.7V	Test mode	TX 651MHz



Temperature	24°C	Humidity	56%
Test Voltage	DC 3.7V	Test mode	TX 672MHz



Temperature	24°C	Humidity	56%
Test Voltage	DC 3.7V	Test mode	TX 693MHz



8. Frequency stability

8.1. Test Standard and Limit

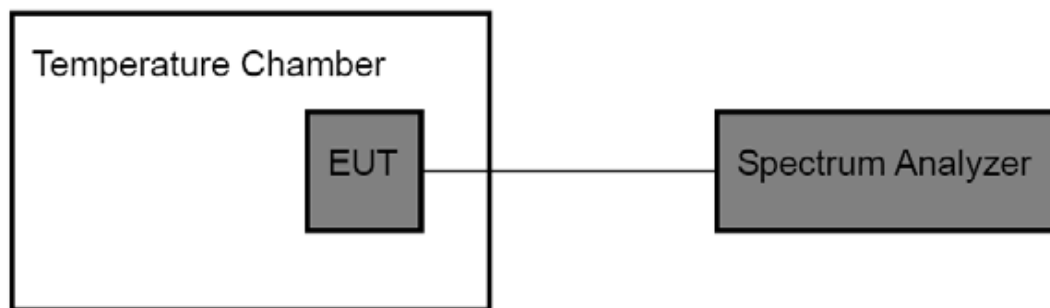
Test Standard: FCC 15.236(f)(3)

Test Limit: The frequency tolerance of the carrier signal shall be maintained within $\pm 0.005\%$ of the operating frequency over a temperature variation of -20 degrees to $+50$ degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. Battery operated equipment shall be tested using a new battery.

8.2. Test Procedure

The test was conducted as follows: The transmitter was placed in the temperature chamber at 25°C and allowed to stabilize for one hour. The transmitter was keyed ON for one minute during which four frequency readings were recorded at 15-second intervals. The worst case number used in the table below. The assigned channel frequency was considered to be the reference frequency. The temperature was then reduced to -20°C after which the transmitter was again allowed to stabilize for one hour. The transmitter was keyed ON for one minute, and again frequency readings were noted at 15-second intervals. The worst-case number was again used in the table below. This procedure was repeated in 10-degree increments up to $+50^{\circ}\text{C}$.

8.3. Test Setup



8.4. Test Results

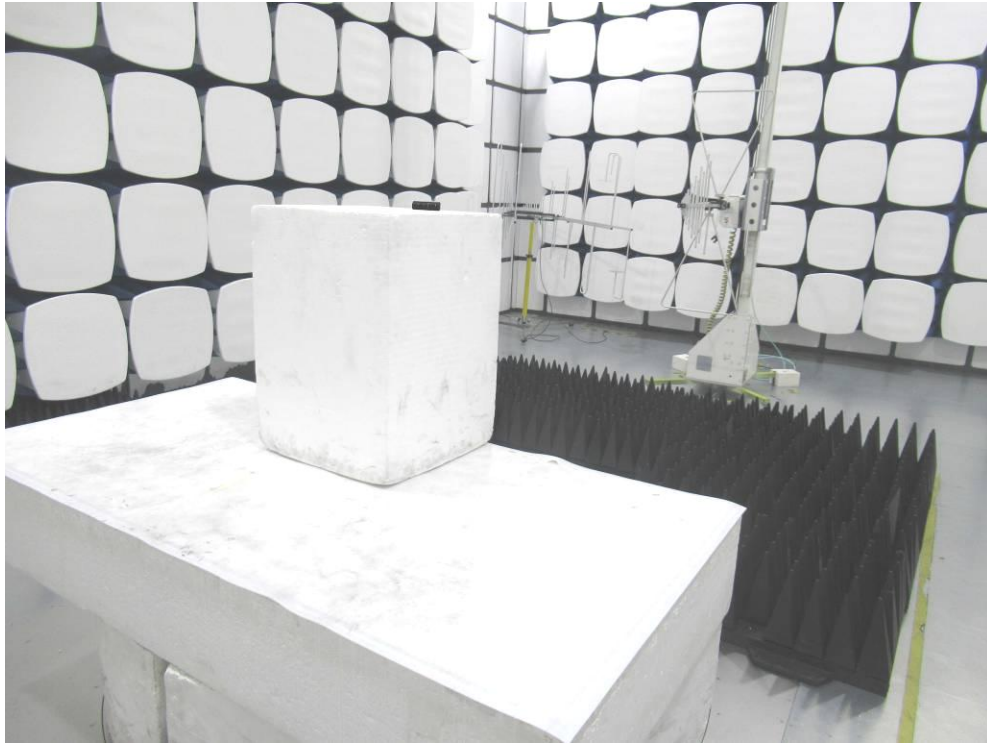
Pass

The results are shown on the next page.

Pressure:	1010 hPa	Test Voltage :	DC 3.7V (Normal)
Test Mode :	TX 651MHz (Modulation)		
Remark:	All channels were tested and only the worst channels were shown in the report.		
Test Conditions	Measurement Frequency(MHz)	Test Voltage	Measurement Frequency(MHz)
-30 ℃	651.00	85%	651.00
-20 ℃	651.00	90%	651.00
-10 ℃	651.00	95%	651.00
0 ℃	651.00	100%	651.00
10 ℃	651.00	105%	651.00
20 ℃	651.00	110%	651.00
30 ℃	651.00	115%	651.00
40 ℃	651.00	--	--
50 ℃	651.00	--	--
Max. Deviation Frequency			0.000
Max. Frequency Error (ppm)			0.000
Limits			±0.005%
Result			Pass

9. Test Setup Photo

9.1. Photos of Radiated emission

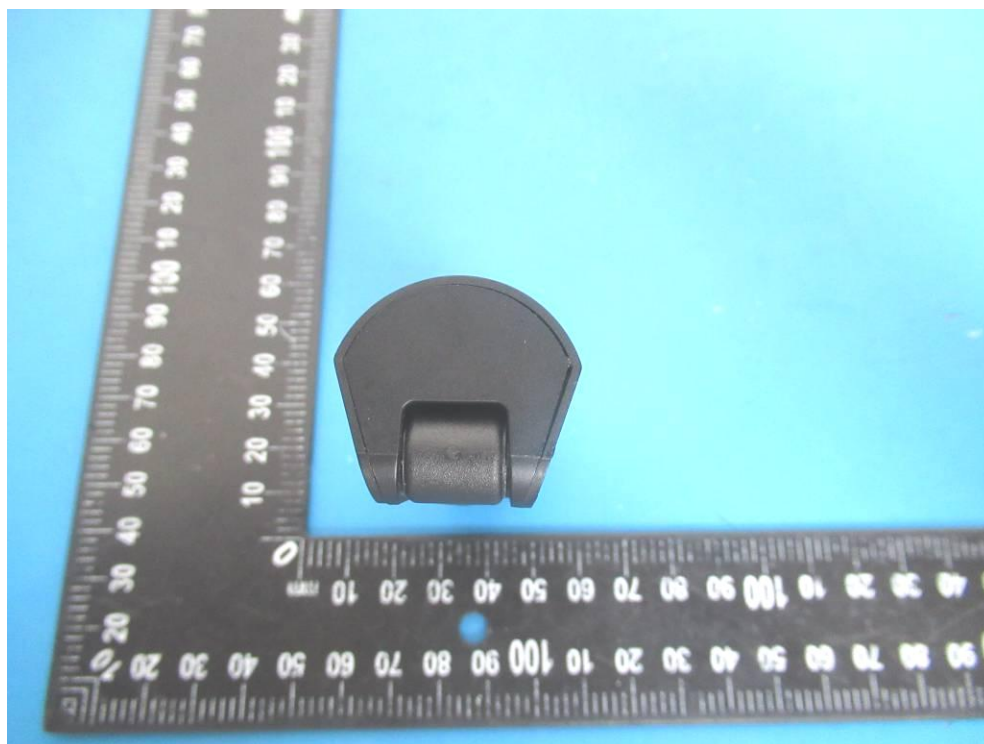


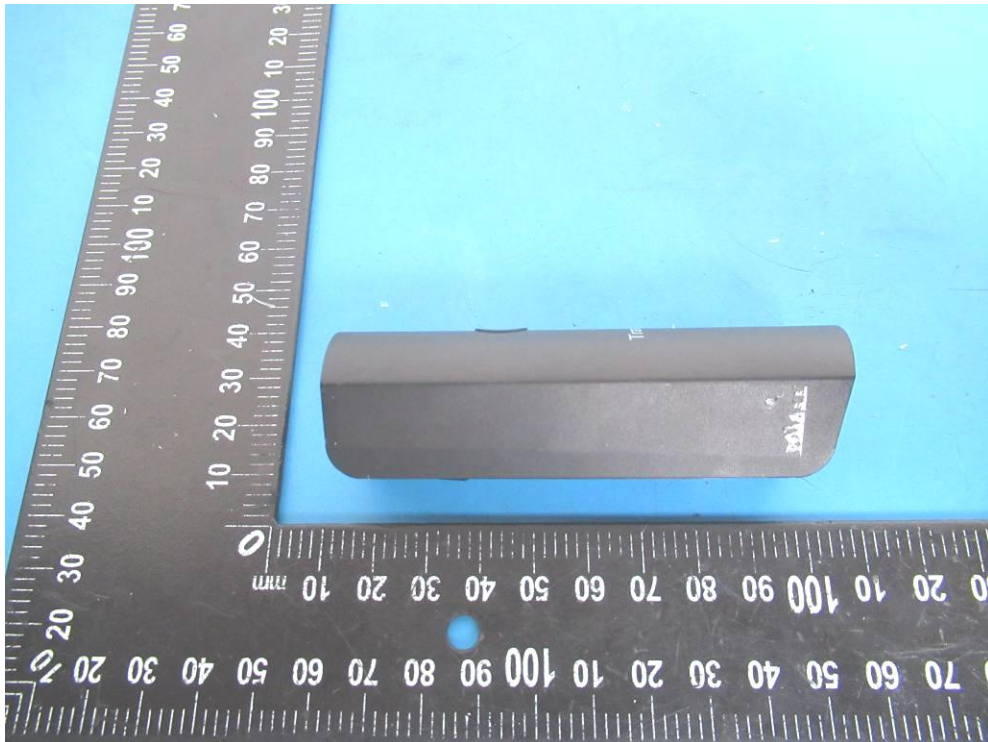
9.2.Photos of Conducted Emission test

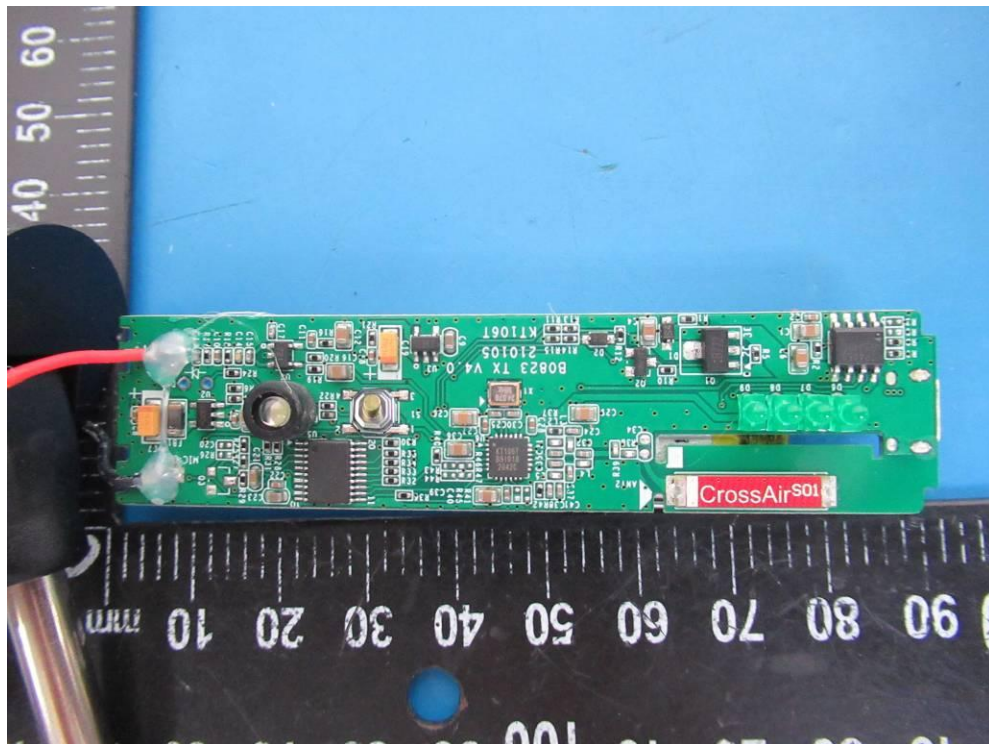


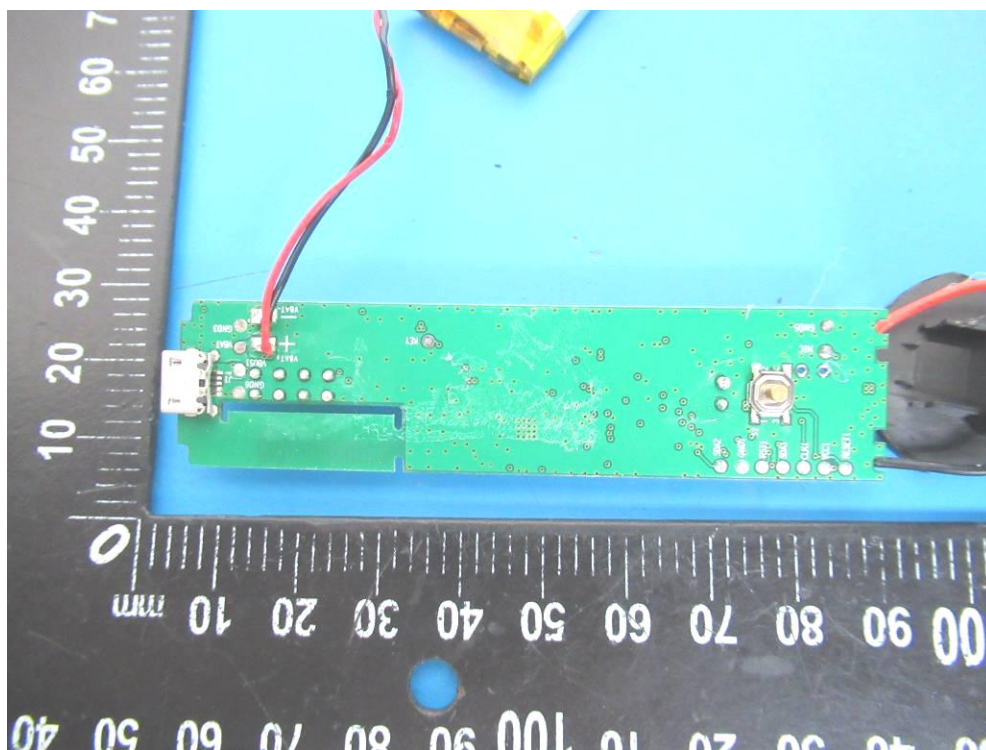
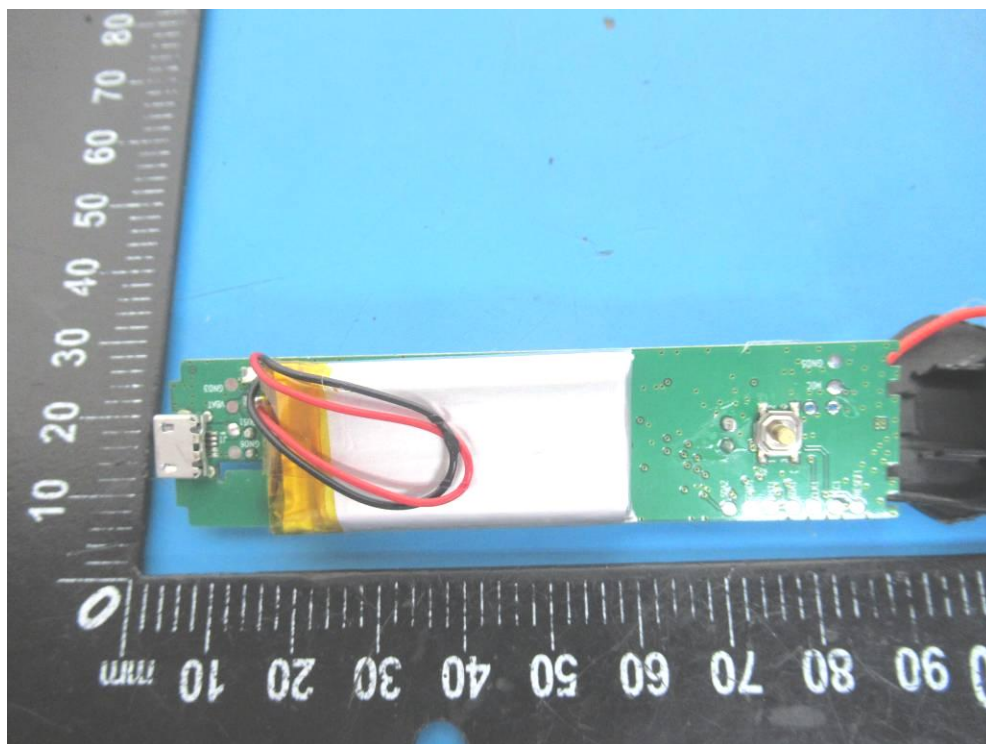
10.EUT PHOTO

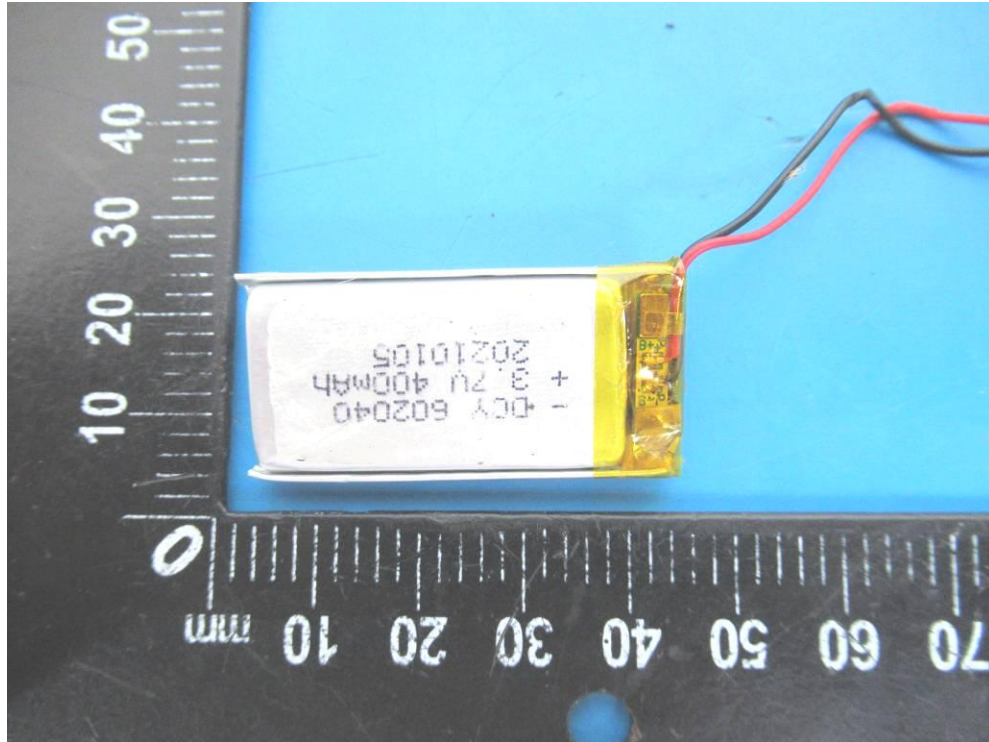












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