



TEST REPORT

FCC ID:2A7PO-WTRCCC01

Report Number : ZKT-220714133E

Date of Test Jul.01-Aug.05,2022

Date of issue..... Aug.05,2022

Total number of pages 29

Test Result PASS

Testing Laboratory : **Shenzhen ZKT Technology Co., Ltd.**

Address 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

Applicant's name : **Dongguan Black Box Technology Co., Ltd**

Address Room 505, building 3, No. 139, Taibao Road, Humen Town, Dongguan City, Guangdong Province

Manufacturer's name : **Dongguan Black Box Technology Co., Ltd**

Address Room 505, building 3, No. 139, Taibao Road, Humen Town, Dongguan City, Guangdong Province

Test specification:

Standard : FCC CFR Title 47 Part 15 Subpart C Section 15.247

Test procedure : /

Non-standard test method : N/A

Test Report Form No...... : TRF-EL-110_V0

Test Report Form(s) Originator.... : ZKT Testing

Master TRF : Dated: 2020-01-06

This device described above has been tested by ZKT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Product name..... : **Wireless guitar transmitter receiver**

Trademark : N/A

Model/Type reference : WTRCCC01,WTRCCC02,WTRCCC03,WTRCCC06,WTRCCC08,
WTRCCC10,WTRSIC01,WTRSIC02,WTRSIC03,WTRSIC06,
WTRSIC08,WTRSIC10

Ratings : DC 3.7V



Testing procedure and testing location:

Testing Laboratory.....: **Shenzhen ZKT Technology Co., Ltd.**

Address.....: 1/F, No. 101, Building B, No. 6, Tangwei Community
Industrial Avenue, Fuhai Street, Bao'an District,
Shenzhen, China

Tested by (name + signature).....: **Jim Liu**

Reviewer (name + signature).....: **Tom Zou**

Approved (name + signature): **Lake Xie**



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1.Version

Report No.	Version	Description	Approved
ZKT-220714133E	Rev.01	Initial issue of report	Aug.05,2022



2. Test Summary

Test Item	Section in CFR 47	Result
Antenna Requirement	15.203/15.247 (c)	Pass
AC Power Line Conducted Emission	15.207	N/A
Conducted Peak Output Power	15.247 (b)(1)	Pass
-6dB Occupied Bandwidth	15.247 (a)(1)	Pass
Radiated Emission	15.205/15.209	Pass
Band Edge	15.247(d)	Pass
Power Spectral Density	15.247 (e)	Pass

NOTE:

(1) "N/A" denotes test is not applicable in this Test Report



2.1 TEST FACILITY

Shenzhen ZKT Technology Co., Ltd.

Add. : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street,
Bao'an District, Shenzhen, China

FCC Test Firm Registration Number: 692225

Designation Number: CN1299

IC Registered No.: 27033

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	3m chamber Radiated spurious emission(9KHz-30MHz)	U=4.5dB
2	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.8dB
3	3m chamber Radiated spurious emission(1GHz-6GHz)	U=4.9dB
4	3m chamber Radiated spurious emission(6GHz-40GHz)	U=5.0dB
5	Conducted disturbance	U=3.2dB
6	RF Band Edge	U=1.68dB
7	RF power conducted	U=1.86dB
8	RF conducted Spurious Emission	U=2.2dB
9	RF Occupied Bandwidth	U=1.8dB
10	RF Power Spectral Density	U=1.75dB
11	humidity uncertainty	U=5.3%
12	Temperature uncertainty	U=0.59°C



3. General Information

3.1 General Description of EUT

Product Name:	Wireless guitar transmitter receiver
Model No.:	WTRCCC01,WTRCCC02,WTRCCC03,WTRCCC06,WTRCCC08, WTRCCC10,WTRSIC01,WTRSIC02,WTRSIC03,WTRSIC06, WTRSIC08,WTRSIC10
Test sample(s) ID:	ZKT-220714133E
Sample(s) Status:	Engineer sample
Serial No.:	N/A
Hardware Version:	N/A
Software Version:	N/A
Operation Frequency:	908.7MHz~925.5MHz
Channel numbers:	13
Channel separation:	1.4M
Modulation type:	GFSK
Antenna Type:	PCB antenna
Antenna gain:	2dBi
Power supply:	DC 3.7V ,700mA



600KHz for DTS:

Operation Frequency each of channel					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	908.70	6	915.70	11	922.70
2	910.10	7	917.10	12	924.10
3	911.50	8	918.50	13	925.5
4	912.90	9	919.90		
5	914.30	10	921.30		

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency
The lowest channel	908.70MHz
The middle channel	917.10MHz
The Highest channel	925.50MHz



3.2 Test mode

Transmitting mode	Keep the EUT in continuously transmitting mode.
<i>Remark: During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.</i>	

3.3 Test Setup Configuration

Conducted Emission

EUT

Radiated Emission

EUT

Conducted Spurious

EUT

3.4 Support Equipment

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Wireless guitar transmitter receiver	N/A	WTRCCC01	N/A	EUT
A-1					

Item	Shielded Type	Ferrite Core	Length	Note

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.



3.5 Test Instruments list

Radiation Test equipment



Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Spectrum Analyzer	KEYSIGHT	9020A	MY55370835	Oct. 18, 2021	Oct. 17, 2022
	(9kHz-26.5GHz)					
2	Spectrum Analyzer	R&S	FSQ	100363	Oct. 17, 2021	Oct. 16, 2022
	(1GHz-40GHz)					
3	EMI Test Receiver	R&S	ESC17	101169	Oct. 18, 2021	Oct. 17, 2022
	(9kHz-7GHz)					
4	Bilog Antenna	Schwarzbeck	VULB9168	N/A	Oct. 17, 2021	Oct. 16, 2022
	(30MHz-1500MHz)					
5	Horn Antenna	Agilent	AH-118	071145	Oct. 17, 2021	Oct. 16, 2022
	(1GHz-18GHz)					
6	Loop Antenna	TESEQ	HLA6121	58357	Oct. 17, 2021	Oct. 16, 2022
7	Amplifier	EM Electronics	EM330 Amplifier	060747	Oct. 18, 2021	Oct. 17, 2022
	(30-1000MHz)					
8	Amplifier (1GHz-26.5GHz)	Agilent	8449B	3008A00315	Oct. 18, 2021	Oct. 17, 2022
9	RF cables1	N/A	9kHz-30MHz	N/A	Oct. 18, 2021	Oct. 17, 2022
	(9kHz-30MHz)					
10	RF cables2	N/A	30MHz-1GHz	N/A	Oct. 18, 2021	Oct. 17, 2022
	(30MHz-1GHz)					
11	RF cables3	N/A	1GHz-40GHz	N/A	Oct. 18, 2021	Oct. 17, 2022
	(1GHz-40GHz)					
12	ESG Signal Generator	Agilent	E4421B	N/A	Oct. 22, 2021	Oct. 21, 2022
13	Signal Generator	Agilent	N5182A	N/A	Oct. 22, 2021	Oct. 21, 2022
14	Magnetic Field Probe Tester	Narda	ELT-400	0-0344	Oct. 17, 2021	Oct. 16, 2022
15	MWRF Power Meter Test system	MW	MW100-RPCB	N/A	Oct. 22, 2021	Oct. 21, 2022
16	D.C. Power Supply	LongWei	TPR-6405D	N/A	\	\
17	EMC Software	Frad	EZ-EMC	Ver.EMC-CON 3A1.1	\	\
18	RF Software	MW	MTS8310	V2.0.0.0	\	\
19	Turntable	MF	MF-7802BS	N/A	\	\
20	Antenna tower	MF	MF-7802BS	N/A	\	\



Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	LISN	R&S	ENV216	101471	Oct. 22, 2021	Oct. 21, 2022
2	LISN	CYBERTEK	EM5040A	E1850400149	Oct. 22, 2021	Oct. 21, 2022
3	Test Cable	N/A	C01	N/A	Oct. 18, 2021	Oct. 17, 2022
4	Test Cable	N/A	C02	N/A	Oct. 18, 2021	Oct. 17, 2022
5	EMI Test Receiver	R&S	ESCI3	101393	Oct. 17, 2021	Oct. 16, 2022
6	EMC Software	Frad	EZ-EMC	Ver.EMC-CON 3A1.1	\	\

4 Test Items for DTS

4.1 Conducted Peak Output Power

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	ANSI C63.10:2013 and KDB558074 D01 DTS Meas Guidance v05r02
Limit:	30dBm
Test setup:	<p>The diagram shows a Spectrum Analyzer on the left, connected by a red cable to an E.U.T. (Equipment Under Test) on the right. Both are placed on a 'Non-Conducted Table'. Below the table is a 'Ground Reference Plane'.</p>
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

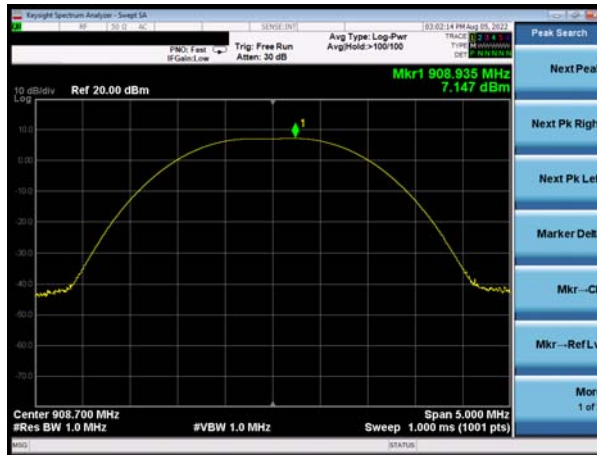
Measurement Data

600KHz Bandwidth:

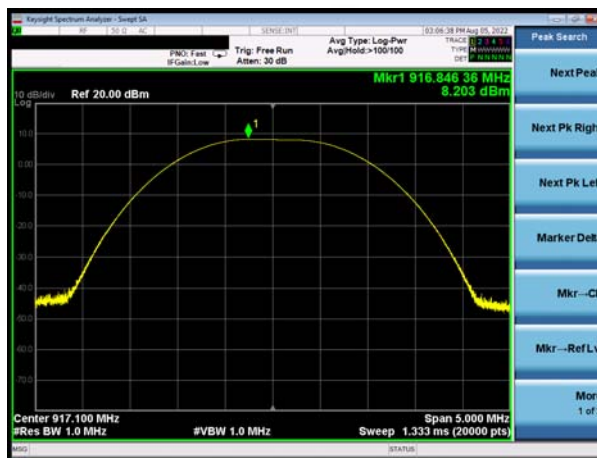
Test channel	Peak Output Power (dBm)	Limit(dBm)	Result
Lowest	7.147	30.00	Pass
Middle	8.203		
Highest	8.243		



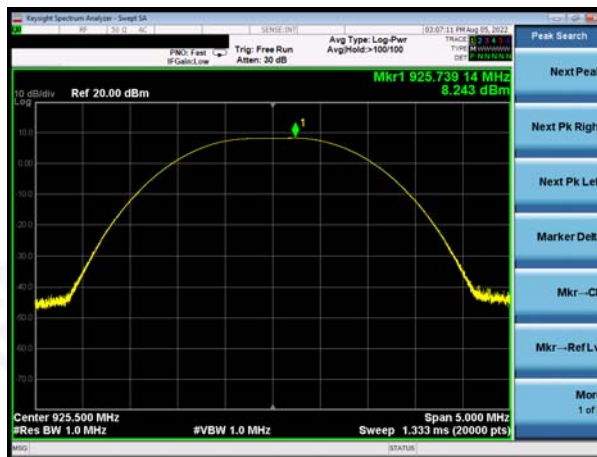
Test plot as follows:



Lowest channel



Middle channel



Highest channel



4.2 Channel Bandwidth

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	ANSI C63.10:2013 and KDB558074 D01 DTS Meas Guidance v05r02
Limit:	>500KHz
Test setup:	<p>The diagram illustrates the test setup. A Spectrum Analyzer is connected via a red cable to an E.U.T. (Equipment Under Test). Both are placed on a Non-Conducted Table. Below the table is a Ground Reference Plane.</p>
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Measurement Data

Test channel	Channel Bandwidth (KHz)	Limit(KHz)	Result
Lowest	631.4	>500	Pass
Meddle	628.5		
Highest	628.4		



Test plot as follows:



Lowest channel



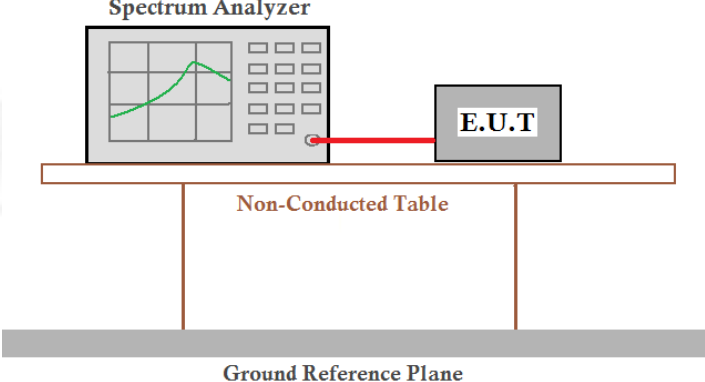
Meddle channel



Highest channel



4.3 Power Spectral Density

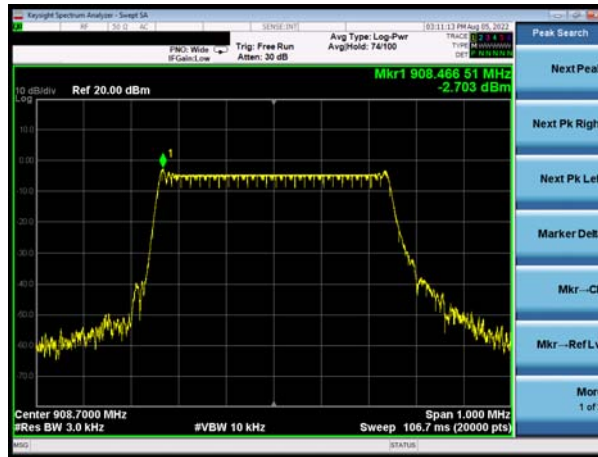
Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	ANSI C63.10:2013 and KDB558074 D01 DTS Meas Guidance v05r02
Limit:	8dBm/3kHz
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Measurement Data

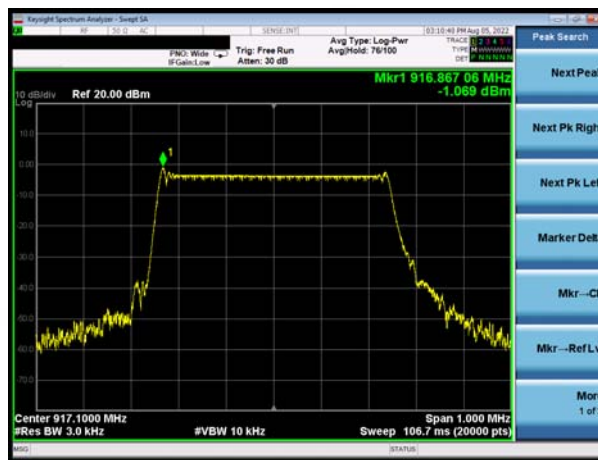
Test channel	Power Spectral Density (dBm/3kHz)	Limit(dBm/3kHz)	Result
Lowest	-2.703	8.00	Pass
Middle	-1.069		
Highest	-1.349		



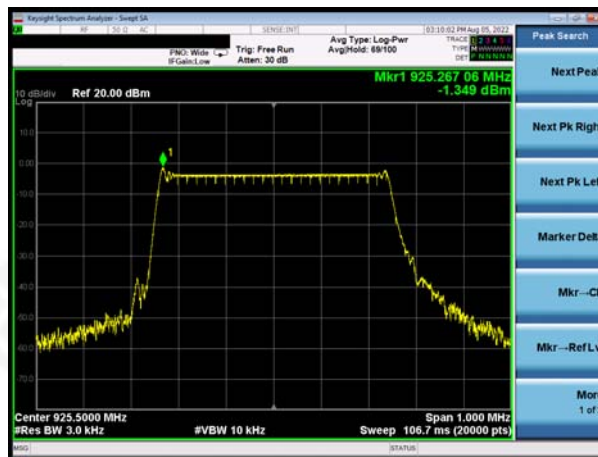
Test plot as follows:



Lowest channel



Medlle channel



Highest channel

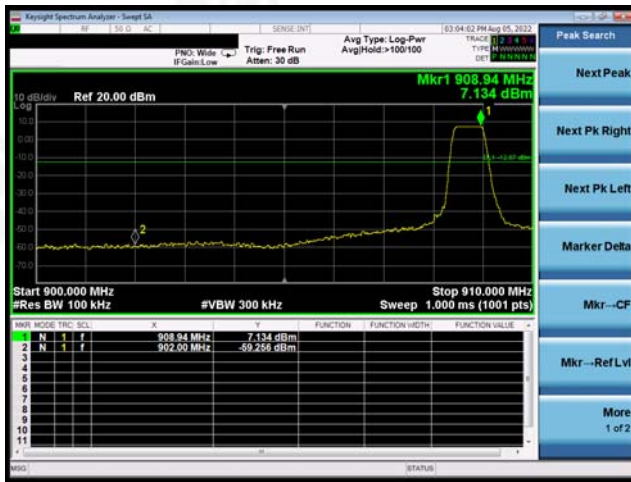


4.4 Band edges

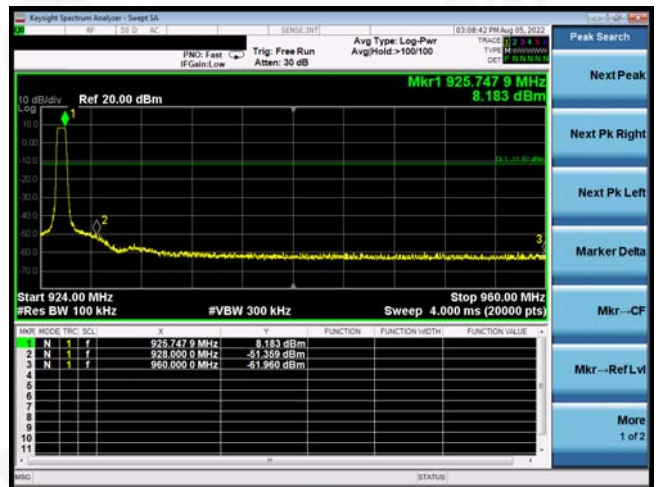
Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.10:2013 and KDB558074 D01 DTS Meas Guidance v05r02
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional 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.
Test setup:	<p>The diagram illustrates the test setup. A Spectrum Analyzer is connected via a red cable to an E.U.T. (Equipment Under Test). Both are placed on a Non-Conducted Table. Below the table is a Ground Reference Plane.</p>
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass



Test plot as follows:



Lowest Channel

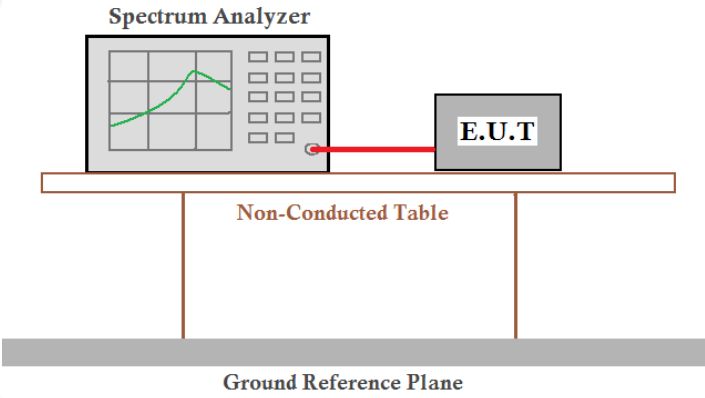


Highest Channel



4.5 Spurious Emission

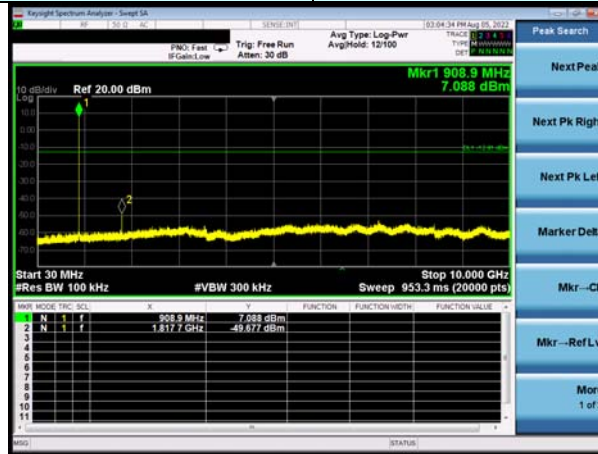
Conducted Emission Method

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.10:2013 and KDB558074 D01 DTS Meas Guidance v05r02
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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.
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which sits on a Ground Reference Plane.</p>
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass



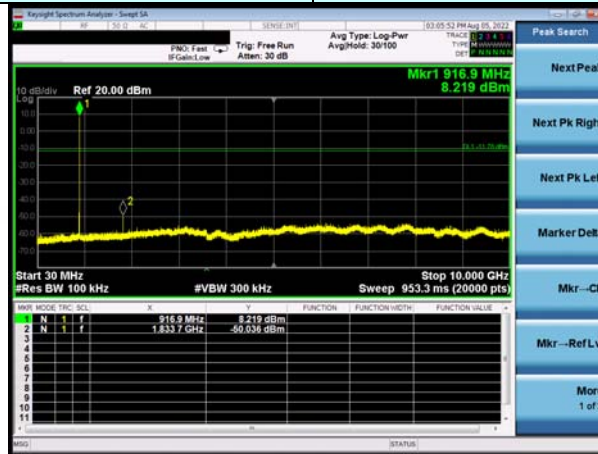
Test plot as follows:

Test channel: Lowest channel



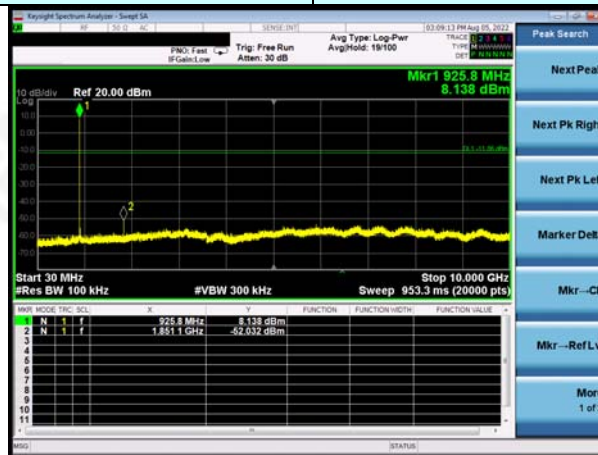
30MHz~10GHz

Test channel: Middle channel



30MHz~10GHz

Test channel: Highest channel



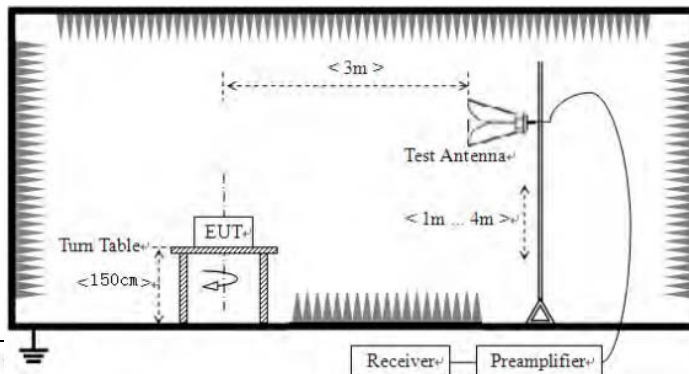
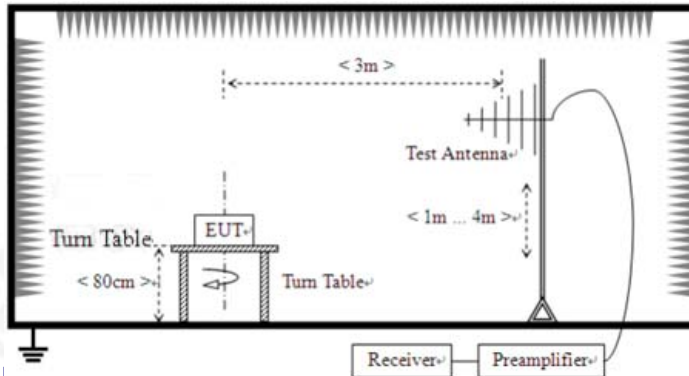


Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209				
Test Method:	ANSI C63.10:2013				
Test Frequency Range:	9kHz to 25GHz				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Value
	9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
	150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
Peak		1MHz	10Hz	Average	
Limit:	Frequency	Limit (uV/m)	Value	Measurement Distance	
	0.009MHz-0.490MHz	2400/F(KHz)	QP	300m	
	0.490MHz-1.705MHz	24000/F(KHz)	QP	30m	
	1.705MHz-30MHz	30	QP	30m	
	30MHz-88MHz	100	QP	3m	
	88MHz-216MHz	150	QP		
	216MHz-960MHz	200	QP		
	960MHz-1GHz	500	QP		
	Above 1GHz	500	Average		
5000		Peak			
Test setup:	For radiated emissions from 9kHz to 30MHz				
<p>The diagram illustrates the test setup for radiated emissions. An Equipment Under Test (EUT) is placed on a turn table. A test antenna is positioned at a distance of 3m from the EUT. The antenna is connected to a receiver. The receiver is positioned at a distance of 1m from the antenna. The turn table is also labeled with a distance of <80cm> from the EUT. The entire setup is enclosed in a shielded enclosure.</p>					



For radiated emissions from 30MHz to1GHz



Test Procedure:

1. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
2. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
3. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
4. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Test Instruments:	Refer to section 6.0 for details					
Test mode:	Refer to section 5.2 for details					
Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1012mbar
Test voltage:	DC 3.7V					
Test results:	Pass					



Measurement data:

Remark:

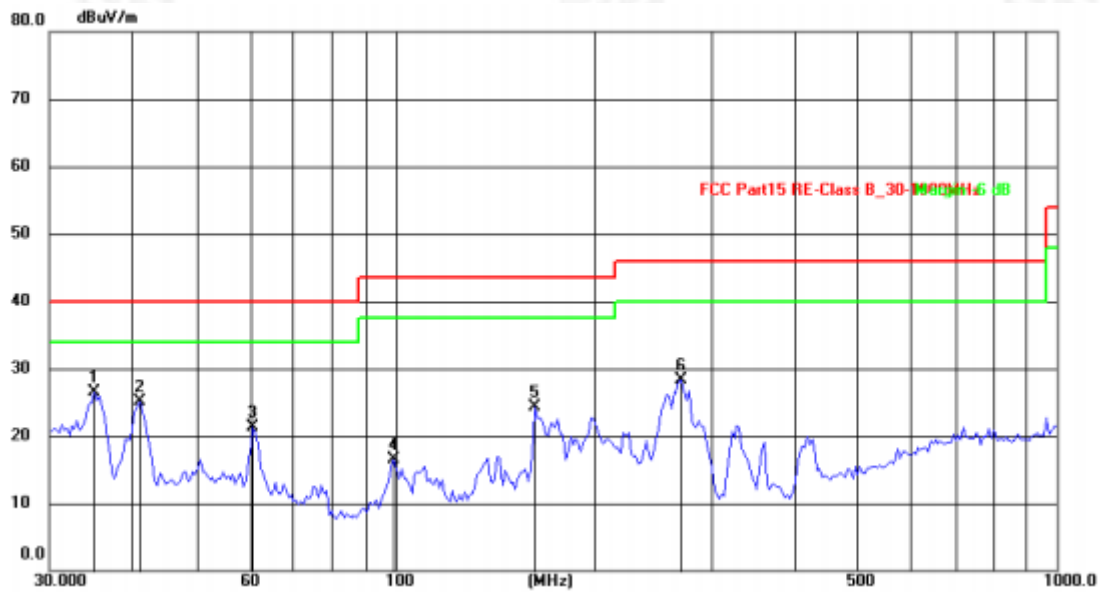
Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis which it is worse case.

■ **9kHz~30MHz**

The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.



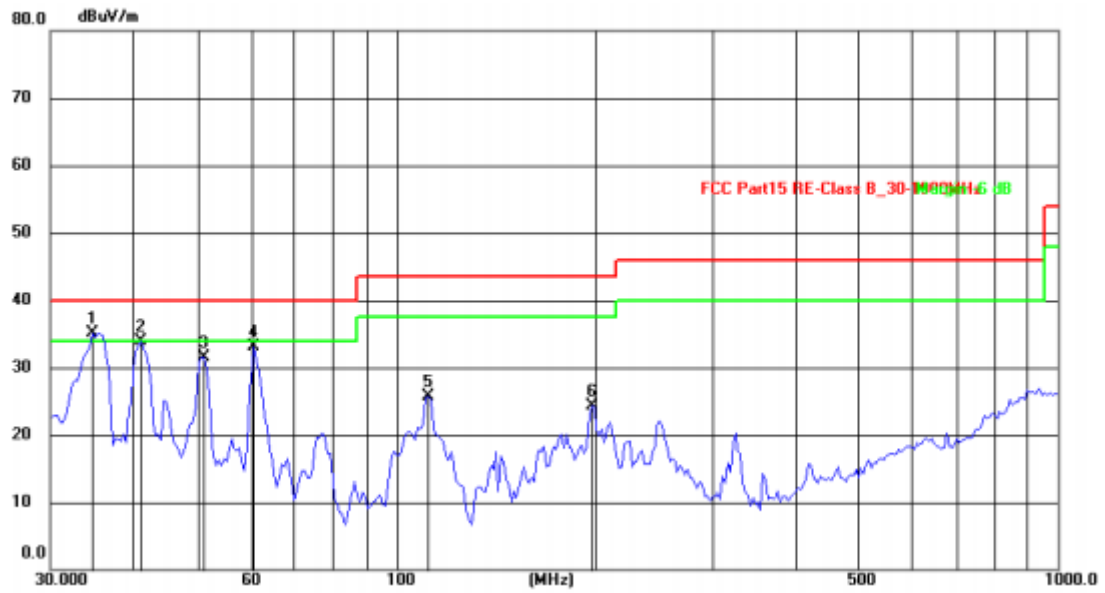
■ Below 1GHz
Horizontal:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	35.1276	41.47	-15.02	26.45	40.00	-13.55	QP
2	41.1319	39.23	-14.12	25.11	40.00	-14.89	QP
3	61.0243	35.81	-14.51	21.30	40.00	-18.70	QP
4	99.7026	36.31	-19.83	16.48	43.50	-27.02	QP
5	162.8959	41.34	-17.05	24.29	43.50	-19.21	QP
6	270.8491	44.87	-16.60	28.27	46.00	-17.73	QP



Vertical:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	34.8211	52.80	-17.64	35.16	40.00	-4.84	QP
2	41.1319	50.89	-16.91	33.98	40.00	-6.02	QP
3	51.2105	48.99	-17.41	31.58	40.00	-8.42	QP
4	61.0242	51.43	-18.42	33.01	40.00	-6.99	QP
5	111.7377	47.06	-21.43	25.63	43.50	-17.87	QP
6	197.5459	45.90	-21.56	24.34	43.50	-19.16	QP



■ Above 1GHz

Test channel:	Lowest channel
---------------	----------------

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
1815.31	30.24	25.25	4.85	34.08	26.26	74.00	-47.74	Vertical
2721.00	28.55	28.12	5.66	33.68	28.65	74.00	-45.35	Vertical
3626.00	23.15	29.19	7.25	37.37	22.22	74.00	-51.78	Vertical
4518.00	*					74.00		Vertical
5427.00	*					74.00		Vertical
6325.00	*					74.00		Vertical
1812.21	25.65	25.25	4.85	34.08	26.26	74.00	-52.33	Horizontal
2721.00	26.87	28.12	5.66	33.68	28.65	74.00	-47.03	Horizontal
3626.00	23.34	29.19	7.25	37.37	22.22	74.00	-51.59	Horizontal
4518.00	*					74.00		Horizontal
5427.00	*					74.00		Horizontal
6325.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
1812.21	22.43	25.25	4.85	34.08	18.45	54.00	-35.55	Vertical
2721.00	20.21	28.12	5.66	33.68	20.31	54.00	-33.69	Vertical
3626.00	21.43	29.19	7.25	37.37	20.50	54.00	-33.50	Vertical
4518.00	*					54.00		Vertical
5427.00	*					54.00		Vertical
6325.00	*					54.00		Vertical
1812.21	20.32	25.25	4.85	34.08	16.34	54.00	-37.66	Horizontal
2721.00	20.16	28.12	5.66	33.68	20.26	54.00	-33.74	Horizontal
3626.00	21.02	29.19	7.25	37.37	20.09	54.00	-33.91	Horizontal
4518.00	*					54.00		Horizontal
5427.00	*					54.00		Horizontal
6325.00	*					54.00		Horizontal

Remarks:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.
3. “*”, means this data is the too weak instrument of signal is unable to test.



Test channel:	Middle channel
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
1835.34	30.21	25.43	4.89	34.12	26.41	74.00	-47.59	Vertical
2752.12	32.14	28.34	5.68	33.57	32.59	74.00	-41.41	Vertical
3664.57	26.43	29.42	7.29	37.66	25.48	74.00	-48.52	Vertical
4567.45	*					74.00		Vertical
5485.53	*					74.00		Vertical
6412.35	*					74.00		Vertical
1835.34	34.76	25.43	4.89	34.12	30.96	74.00	-43.04	Horizontal
2752.12	28.43	28.34	5.68	33.57	28.88	74.00	-45.12	Horizontal
3664.57	36.86	29.42	7.29	37.66	35.91	74.00	-38.09	Horizontal
4567.45	*					74.00		Horizontal
5485.53	*					74.00		Horizontal
6412.35	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
1826.42	22.34	25.43	4.89	34.12	18.54	54.00	-35.46	Vertical
2762.47	20.01	28.34	5.68	33.57	20.46	54.00	-33.54	Vertical
3658.27	20.13	29.42	7.29	37.66	19.18	54.00	-34.82	Vertical
4582.48	*					54.00		Vertical
5485.58	*					54.00		Vertical
6403.57	*					54.00		Vertical
1826.42	22.43	25.43	4.89	34.12	18.63	54.00	-35.37	Horizontal
2762.47	21.45	28.34	5.68	33.57	21.9	54.00	-32.1	Horizontal
3658.27	20.98	29.42	7.29	37.66	20.03	54.00	-33.97	Horizontal
4582.48	*					54.00		Horizontal
5485.58	*					54.00		Horizontal
6403.57	*					54.00		Horizontal



Test channel:	Highest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
1824.43	32.21	25.43	4.89	34.12	28.41	74.00	-45.59	Vertical
2753.40	30.52	28.34	5.68	33.57	30.97	74.00	-43.03	Vertical
3653.34	31.02	29.42	7.29	37.66	30.07	74.00	-43.93	Vertical
4564.14	*					74.00		Vertical
5487.67	*					74.00		Vertical
6413.58	*					74.00		Vertical
1824.43	30.21	25.43	4.89	34.12	26.41	74.00	-47.59	Horizontal
2753.40	28.43	28.34	5.68	33.57	28.88	74.00	-45.12	Horizontal
3653.34	28.42	29.42	7.29	37.66	27.47	74.00	-46.53	Horizontal
4564.14	*					74.00		Horizontal
5487.67	*					74.00		Horizontal
6413.58	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
1824.43	22.31	25.43	4.89	34.12	18.51	54.00	-35.49	Vertical
2753.40	22.14	28.34	5.68	33.57	22.59	54.00	-31.41	Vertical
3653.34	21.02	29.42	7.29	37.66	20.07	54.00	-33.93	Vertical
4564.14	*					54.00		Vertical
5487.67	*					54.00		Vertical
6413.58	*					54.00		Vertical
1824.43	24.35	25.43	4.89	34.12	20.55	54.00	-33.45	Horizontal
2753.40	20.14	28.34	5.68	33.57	20.59	54.00	-33.41	Horizontal
3653.34	21.73	29.42	7.29	37.66	20.78	54.00	-33.22	Horizontal
4564.14	*					54.00		Horizontal
5487.67	*					54.00		Horizontal
6413.58	*					54.00		Horizontal

Remarks:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.
3. “*”, means this data is the too weak instrument of signal is unable to test.



5. Antenna Requirement

Standard requirement:	FCC Part15 C Section 15.203 /247(c)
15.203 requirement: 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.	
15.247(c) (1)(i) requirement: (i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.	
EUT Antenna:	
The antenna is PCB antenna, the best case gain of the antennas is 2dBi, reference to the appendix II for details	



6. Test Setup Photo

Reference to the appendix I for details.

7. EUT Constructional Details

Reference to the appendix II for details.

***** END OF REPORT *****