



# RF TEST REPORT

Product Name: Wireless guitar system

Model Name: A8, MYS306W, WS-100, WS-101, WS-102, WS-103, WS-104, WS-105, WS-106, WS-107, WS-108, WS-109, WS-110, WS-111, WS-112, WS-113, WS-114, WS-115, WS-116, WS-117, WS-118, WS-119, WS-120, L6

FCC ID: 2BBZH-A8

Issued For : Guangzhou Caihui Technology Co., Ltd

Room 502, Building 1, No. 4 Shuiniu Road, Tan Village,  
Shijing Street, Baiyun District, Guangzhou, China

Issued By : Shenzhen LGT Test Service Co., Ltd.

Room 205, Building 13, Zone B, Chen Hsong Industrial Park,  
No.177 Renmin West Road, Jinsha Community, Kengzi  
Street, Pingshan New District, Shenzhen, China

Report Number: LGT23F098RF01

Sample Received Date: June 30, 2023

Date of Test: June 30, 2023 ~ July 21, 2023

Date of Issue: July 21, 2023

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## TEST REPORT CERTIFICATION

**Applicant:** Guangzhou Caihui Technology Co., Ltd  
**Address:** Room 502, Building 1, No. 4 Shuiniu Road, Tan Village, Shijing Street, Baiyun District, Guangzhou, China

**Manufacturer:** Guangzhou Caihui Technology Co., Ltd  
**Address:** Room 502, Building 1, No. 4 Shuiniu Road, Tan Village, Shijing Street, Baiyun District, Guangzhou, China

**Product Name:** Wireless guitar system

**Trademark:** LEKATO, Pogolab

**Model Name:** A8, MYS306W, WS-100, WS-101, WS-102, WS-103, WS-104, WS-105, WS-106, WS-107, WS-108, WS-109, WS-110, WS-111, WS-112, WS-113, WS-114, WS-115, WS-116, WS-117, WS-118, WS-119, WS-120, L6

**Sample Status:** Normal

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC Part 15.249, Subpart C ANSI C63.10-2013	PASS

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### Revision History

Rev.	Issue Date	Contents
00	July 21, 2023	Initial Issue



## 1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

<b>FCC Part 15.249, Subpart C</b>			
<b>Standard Section</b>	<b>Test Item</b>	<b>Judgment</b>	<b>Remark</b>
15.207	Conducted Emission	PASS	--
15.249	Radiated Spurious Emission	PASS	--
15.205	Restricted Band Edge Emission	PASS	--
15.249	20dB Bandwidth	Pass	--
15.203	Antenna Requirement	PASS	--

### NOTE:

- (1) 'N/A' denotes test is not applicable in this Test Report.
- (2) All tests are according to ANSI C63.10-2013.



## 1.1 TEST FACTORY

Company Name:	Shenzhen LGT Test Service Co., Ltd.
Address:	Room 205, Building 13, Zone B, Chen Hsong Industrial Park, No.177 Renmin West Road, Jinsha Community, Kengzi Street, Pingshan New District, Shenzhen, China
Accreditation Certificate	A2LA Certificate No.: 6727.01
	FCC Registration No.: 746540
	CAB ID: CN0136

## 1.2 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	RF output power, conducted	$\pm 0.68$ dB
2	Unwanted Emissions, conducted	$\pm 2.988$ dB
3	All emissions, radiated 9K-30MHz	$\pm 2.84$ dB
4	All emissions, radiated 30M-1GHz	$\pm 4.39$ dB
5	All emissions, radiated 1G-6GHz	$\pm 5.10$ dB
6	All emissions, radiated >6G	$\pm 5.48$ dB
7	Conducted Emission (9KHz-150KHz)	$\pm 2.79$ dB
8	Conducted Emission (150KHz-30MHz)	$\pm 2.80$ dB



## 2. GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF THE EUT

Product Name:	Wireless guitar system	
Trademark:	LEKATO, Pogolab	
Model Name:	A8	
Series Model:	MYS306W, WS-100, WS-101, WS-102, WS-103, WS-104, WS-105, WS-106, WS-107, WS-108, WS-109, WS-110, WS-111, WS-112, WS-113, WS-114, WS-115, WS-116, WS-117, WS-118, WS-119, WS-120, L6	
Model Difference:	They are difference are the model name and the trademark.	
Product Description:	The EUT is a Wireless guitar system	
	Operation Frequency:	2402~2480 MHz
	Modulation Type:	GFSK
	Number Of Channel:	79
	Antenna Type:	Spring Antenna
	Antenna Gain (dBi):	0.8
Channel List:	Please refer to the Note 3.	
Rating:	DC 5V	
Battery:	DC 3.7V	
Hardware Version:	VER1.0	
Software Version:	N/A	
Connecting I/O Port(s):	Please refer to the Note 1.	

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User Manual.
2. The antenna information refers to the manufacturer provide report, applicable only to the tested sample identified in the report. Due to the incorrect antenna information, a series of problems such as the accuracy of the test results will be borne by the customer.



3.

<b>Channel List</b>					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	27	2429	54	2456
01	2403	28	2430	55	2457
02	2404	29	2431	56	2458
03	2405	30	2432	57	2459
04	2406	31	2433	58	2460
05	2407	32	2434	59	2461
06	2408	33	2435	60	2462
07	2409	34	2436	61	2463
08	2410	35	2437	62	2464
09	2411	36	2438	63	2465
10	2412	37	2439	64	2466
11	2413	38	2440	65	2467
12	2414	39	2441	66	2468
13	2415	40	2442	67	2469
14	2416	41	2443	68	2470
15	2417	42	2444	69	2471
16	2418	43	2445	70	2472
17	2419	44	2446	71	2473
18	2420	45	2447	72	2474
19	2421	46	2448	73	2475
20	2422	47	2449	74	2476
21	2423	48	2450	75	2477
22	2424	49	2451	76	2478
23	2425	50	2452	77	2479
24	2426	51	2453	78	2480
25	2427	52	2454		
26	2428	53	2455		





## 2.2 DESCRIPTION OF THE TEST MODES

For conducted test items and radiated spurious emissions  
Each of these EUT operation mode(s) or test configuration mode(s) mentioned below was evaluated respectively.

Worst Mode	Description	Modulation
Mode 1	TX CH01(2402MHz)	GFSK
Mode 2	TX CH39(2440MHz)	GFSK
Mode 3	TX CH78(2480MHz)	GFSK

Note:

- (1) All above mode has been measurement, only worst data was reported.
- (2) We have be tested for all avaiable U.S. voltage and frequency (For 120V,50/60Hz and 240V, 50/60Hz) for which the device is capable of operation, and the worst case of 120V/60Hz is shown in the report.
- (3) The battery is fully-charged during the radited and RF conducted test.

For AC Conducted Emission

Test Case	
AC Conducted Emission	Mode 4: Keeping TX

## 2.3 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

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.

### Accessories Equipment

Description	Manufacturer	Model	S/N	Rating
N/A	N/A	N/A	N/A	N/A

### Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
Adapter	Tenpao	S005CAU05001 00	N/A	Input: 100-240V ~ 50/60Hz 0.2A Output: 5V, 1A
USB-A to Micro-USB Cable	UGREEN	10848	N/A	1m, shielded, without ferrite core

Note:

- (1) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (2) “YES” is means “with core”; “NO” is means “without core”.



## 2.4 EQUIPMENTS LIST

<b>Conducted Emission</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Cal. Date</b>	<b>Cal. Until</b>
EMI Test Receiver	R&S	ESU8	100372	2023.04.13	2024.04.12
LISN	COM-POWER	LI-115	02032	2023.04.07	2024.04.06
LISN	SCHWARZBECK	NNLK 8121	00847	2023.04.07	2024.04.06
LISN	SCHWARZBECK	NNLK 8122	00160	2023.04.07	2024.04.06
Transient Limiter	CYBERTEK	EM5010A	E2250100049	2023.04.07	2024.04.06
Temperature & Humidity	KTJ	TA218B	N.A	2023.04.24	2024.04.23
Testing Software	EMC-I_V1.4.0.3_SKET				

<b>Radiated Test equipment</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Cal. Date</b>	<b>Cal. Until</b>
EMI Test Receiver	R&S	ESU8	100372	2023.04.13	2024.04.12
Active loop Antenna	ETS	6502	00049544	2022.06.02	2025.06.01
Spectrum Analyzer	Keysight	N9010B	MY60242508	2023.04.10	2024.04.09
Bilog Antenna(30M-1G)	SCHWARZBECK	VULB 9168	01447	2022.06.05	2025.06.04
Horn Antenna(1-18G)	SCHWARZBECK	3115	10SL0060	2022.06.02	2025.06.01
Horn Antenna(18-40G)	A-INFO	LB-180400-KF	J211060273	2022.06.08	2025.06.07
Pre-amplifier(30M-1G)	EMtrace	RP01A	02019	2023.04.07	2024.04.06
Pre-amplifier(1-26.5G)	Agilent	8449B	3008A4722	2023.04.07	2024.04.06
Pre-amplifier(18-40G)	com-mw	LNPA_18-40-01	18050003	2023.04.07	2024.04.06
Wireless Communications Test Set	R&S	CMW 500	137737	2023.04.13	2024.04.12
Temperature & Humidity	KTJ	TA218B	N.A	2023.04.24	2024.04.23
Testing Software	EMC-I_V1.4.0.3_SKET				

<b>Conducted Test equipment</b>					
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Cal. Date</b>	<b>Cal. Until</b>
Signal Analyzer	Keysight	N9010B	MY60242508	2023.04.10	2024.04.09
Wireless Communications Test Set	R&S	CMW 500	137737	2023.04.13	2024.04.12
MXG Vector Signal Generator	Keysight	N5182B	MY59100717	2023.04.07	2024.04.06
Power Sensor	MW	MW100-RFCB	MW220324LG-33	2023.04.13	2024.04.12
Temperature & Humidity	KTJ	TA218B	N.A	2023.04.24	2024.04.23
Temperature & Humidity test chamber	AISRY	LX-1000L	171200018	2023.05.10	2024.05.09
Attenuator	eastsheep	90db	N.A	2023.04.10	2024.04.09
Testing Software	MTS8200_V2.0.0.0_MW				



### 3. EMC EMISSION TEST

#### 3.1 CONDUCTED EMISSION MEASUREMENT

##### 3.1.1 POWER LINE CONDUCTED EMISSION LIMITS

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.

FREQUENCY (MHz)	Conducted Emission limit (dBuV)	
	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of “ \* ” marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

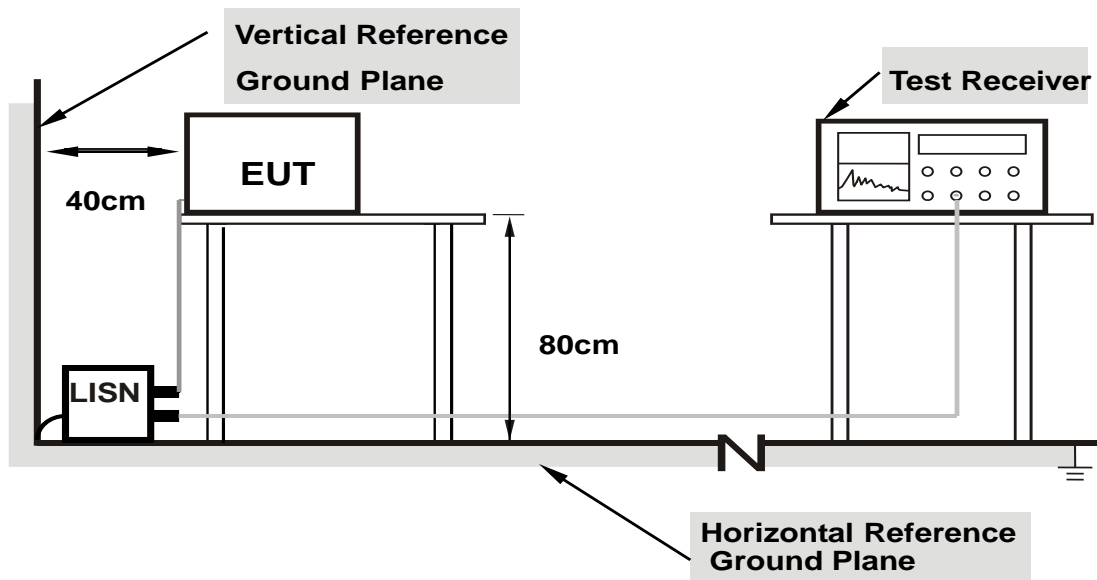
Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz



### 3.2 TEST PROCEDURE

- a. The EUT is 0.8 m from the horizontal ground plane and 0.4 m from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments are powered from additional LISN(s). The LISN provides 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN is at least 80 cm from the nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

### 3.3 TEST SETUP



**Note: 1. Support units were connected to second LISN.**

**2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes support units.**

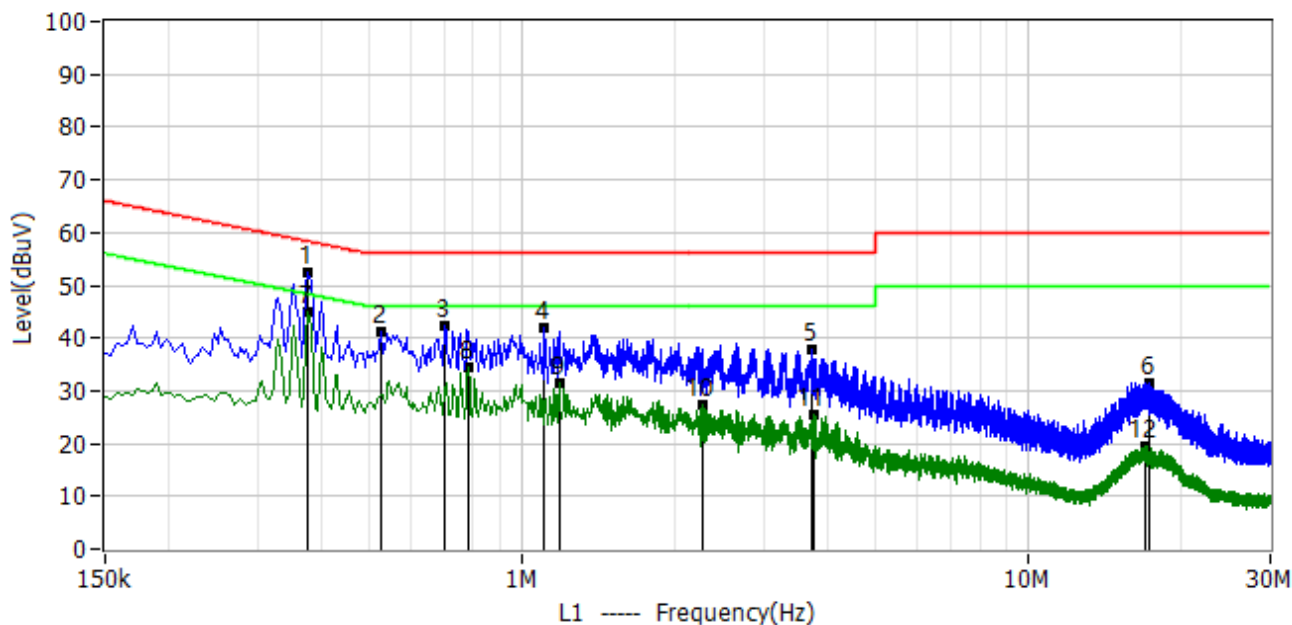
### 3.4 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



### 3.5 TEST RESULTS

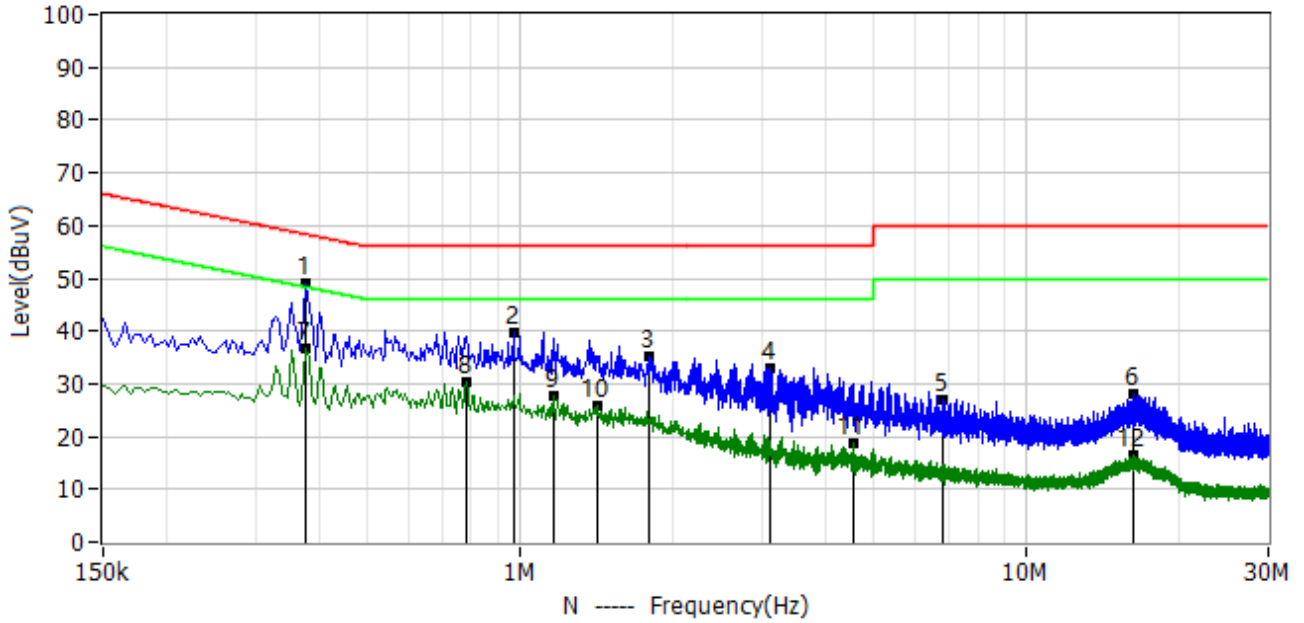
Project: LGT23F098	Test Engineer: LiuH
EUT: Wireless guitar system	Temperature: 26.9°C
M/N: A8	Humidity: 50%RH
Test Voltage: AC 120V/60Hz	Test Data: 2023-07-08
Test Mode: TX	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	0.378	41.86	10.59	52.45	58.32	-5.88	PK	L1
2*	0.526	30.64	10.58	41.22	56.00	-14.78	PK	L1
3*	0.702	31.91	10.58	42.49	56.00	-13.51	PK	L1
4*	1.106	31.27	10.60	41.87	56.00	-14.13	PK	L1
5*	3.722	27.08	10.72	37.80	56.00	-18.20	PK	L1
6*	17.374	20.26	11.20	31.46	60.00	-28.54	PK	L1
7*	0.378	34.41	10.59	45.00	48.32	-3.32	AV	L1
8*	0.782	24.00	10.58	34.58	46.00	-11.42	AV	L1
9*	1.182	21.01	10.62	31.63	46.00	-14.37	AV	L1
10*	2.266	16.66	10.74	27.40	46.00	-18.60	AV	L1
11*	3.750	14.60	10.72	25.32	46.00	-20.68	AV	L1
12*	16.966	8.19	11.18	19.37	50.00	-30.63	AV	L1



Project: LGT23F098	Test Engineer: LiuH
EUT: Wireless guitar system	Temperature: 26.9°C
M/N: A8	Humidity: 50%RH
Test Voltage: AC 120V/60Hz	Test Data: 2023-07-08
Test Mode: TX	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	0.378	38.53	10.58	49.11	58.32	-9.21	PK	N
2*	0.970	29.08	10.59	39.67	56.00	-16.33	PK	N
3*	1.790	24.66	10.72	35.38	56.00	-20.62	PK	N
4*	3.102	22.40	10.73	33.13	56.00	-22.87	PK	N
5*	6.850	16.24	10.76	27.00	60.00	-33.00	PK	N
6*	16.302	16.74	11.21	27.95	60.00	-32.05	PK	N
7*	0.378	25.98	10.58	36.56	48.32	-11.77	AV	N
8*	0.782	19.66	10.58	30.24	46.00	-15.76	AV	N
9*	1.162	17.05	10.61	27.66	46.00	-18.34	AV	N
10*	1.422	15.08	10.66	25.74	46.00	-20.26	AV	N
11*	4.538	7.85	10.71	18.56	46.00	-27.44	AV	N
12*	16.190	5.26	11.20	16.46	50.00	-33.54	AV	N



#### 4. RADIATED EMISSION MEASUREMENT

##### 4.1 RADIATED EMISSION LIMITS

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on Part 15.249, Part 15.209(a) limit in the table below has to be followed.

Standard FCC 15.209

Frequencies (MHz)	Field Strength (micovolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3
Above 1000	Other:74.0 dB( $\mu$ V)/m (Peak) 54.0 dB( $\mu$ V)/m (Average)	3

Standard FCC 15.249

Frequency of Emission (MHz)	Field Strength of fundamental (millivolts /meter)	Field Strength of Harmonics (microvolts/meter)
900~928	50	500
2400~2483.5	50	500
5725~5875	50	500
24000~242500	250	2500

Notes:

- (1) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

Spectrum Parameter	Setting
Detector	Peak/AV
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB (emission in restricted band)	>20BW
VB (emission in restricted band)	=3xRB



Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV
	90kHz~110kHz / RB 200Hz for QP
	110kHz~490kHz / RB 200Hz for PK & AV
	490kHz~30MHz / RB 9kHz for QP
	30MHz~1000MHz / RB 120kHz for QP

#### 4.2 TEST PROCEDURE

- a. The measuring distance at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.
- b. The EUT was placed on the top of a rotating table 0.8 m (above 1GHz is 1.5 m) above the ground at a 3 m anechoic chamber test site. The table was rotated 360 degree to determine the position of the highest radiation.
- c. The height of the equipment shall be 0.8 m(above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. Horizontal and vertical polarization of the antenna are set to make the measurement.
- d. 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 QuasiPeak detector mode will be re-measured.
- e. If the Peak Mode measured value is compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and no additional QP Mode measurement was performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

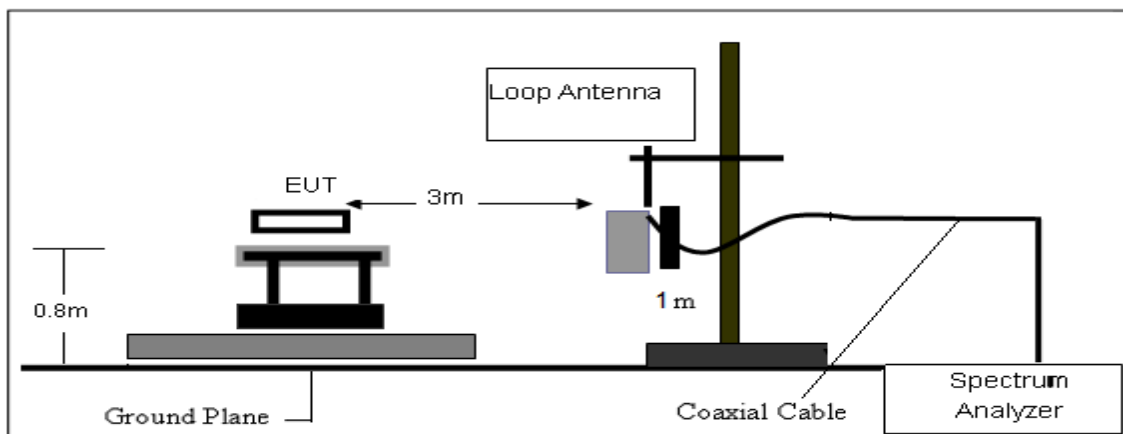
Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

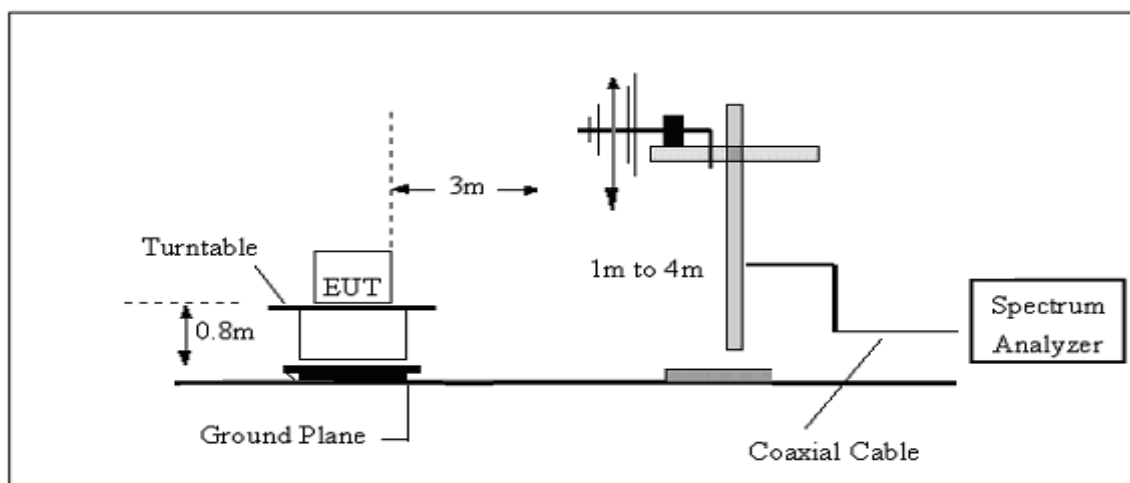


### 4.3 TEST SETUP

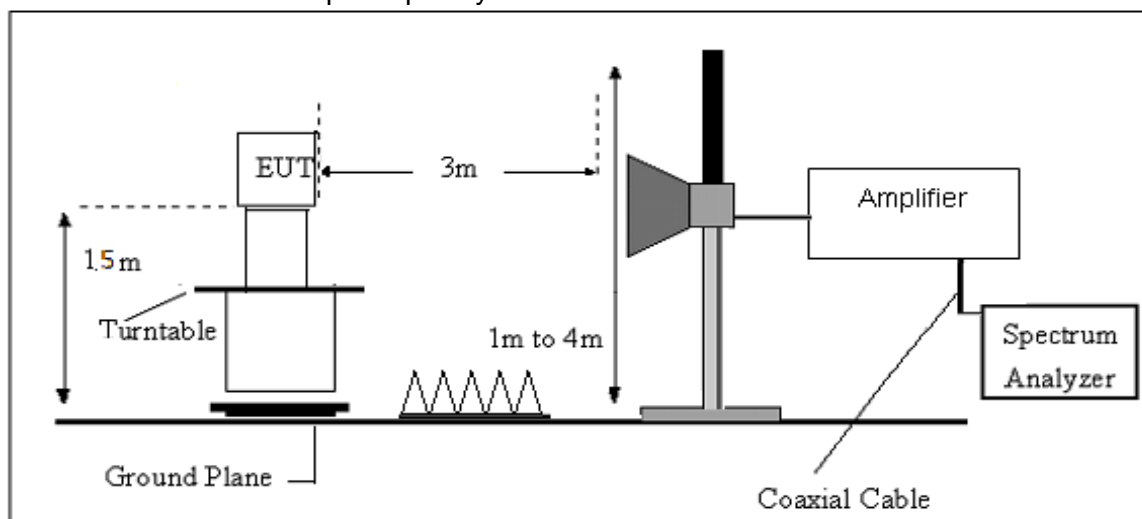
#### (A) Radiated Emission Test-Up Frequency Below 30MHz



#### (B) Radiated Emission Test-Up Frequency 30MHz~1GHz



#### (C) Radiated Emission Test-Up Frequency Above 1GHz



### 4.4 EUT OPERATING CONDITIONS

Please refer to section 3.4 of this report.



#### 4.5 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where

FS = Field Strength

CL = Cable Attenuation Factor (Cable Loss)

RA = Reading Amplitude

AG = Amplifier Gain

AF = Antenna Factor

For example

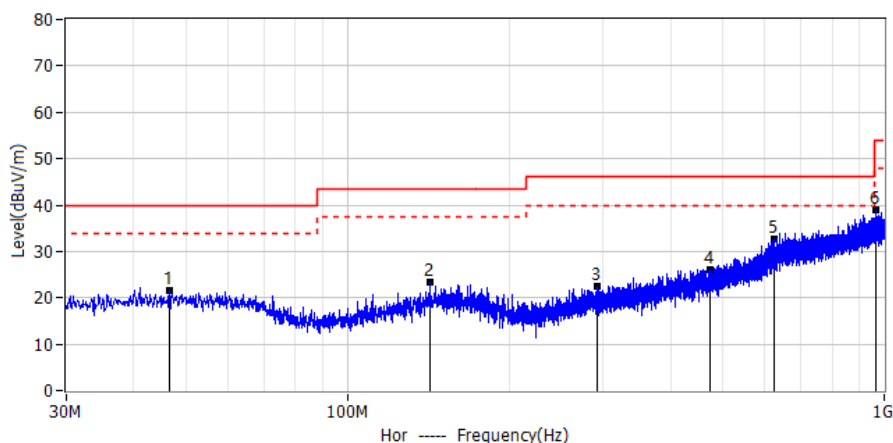
Frequency (MHz)	FS (dB $\mu$ V/m)	RA (dB $\mu$ V/m)	AF (dB)	CL (dB)	AG (dB)	Factor (dB)
300	40	58.1	12.2	1.6	31.9	-18.1

$$\text{Factor} = \text{AF} + \text{CL} - \text{AG}$$

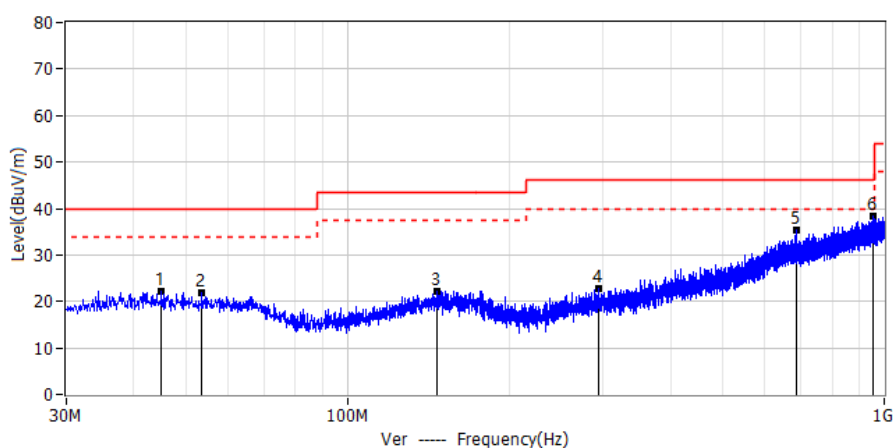


## 4.6 TEST RESULTS

Project: LGT23F098	Test Engineer: LiuH
EUT: Wireless guitar system	Temperature: 26.1°C
M/N: A8	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-07-21
Test Mode: TX	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	46.611MHz	2.29	19.27	21.56	40.00	-18.44	PK	Hor
2*	142.641MHz	4.20	19.30	23.50	43.50	-20.00	PK	Hor
3*	292.749MHz	2.83	19.77	22.60	46.00	-23.40	PK	Hor
4*	472.805MHz	1.76	24.41	26.17	46.00	-19.83	PK	Hor
5*	624.853MHz	3.95	28.58	32.53	46.00	-13.47	PK	Hor
6*	963.261MHz	4.81	34.22	39.03	54.00	-14.97	PK	Hor



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	45.156MHz	2.92	19.22	22.14	40.00	-17.86	PK	Ver
2*	53.644MHz	2.72	19.10	21.82	40.00	-18.18	PK	Ver
3*	147.128MHz	2.53	19.72	22.25	43.50	-21.25	PK	Ver
4*	294.204MHz	2.98	19.80	22.78	46.00	-23.22	PK	Ver
5*	687.539MHz	5.61	29.69	35.30	46.00	-10.70	PK	Ver
6*	954.895MHz	4.34	34.05	38.39	46.00	-7.61	PK	Ver



Above 1G Radiation Spurious

Low

Frequency	Meter Reading	Detector	Amplifier	Loss	Antenna Factor	Corrected Factor	Corrected Amplitude	Limit	Margin	RX Antenna
										Polar
(MHz)	(dBμV/m)	(PK/QP/AV)	(dB)	(dB)	(dB/m)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(H/V)
4804.16	67.38	PK	45.10	4.91	25.00	-15.19	52.19	74	-21.81	H
4804.16	64.80	PK	45.10	4.91	25.00	-15.19	49.61	74	-24.39	V
7206.02	63.93	PK	44.10	5.03	25.80	-13.27	50.66	74	-23.34	H
7206.02	60.08	PK	44.10	5.03	25.80	-13.27	46.81	74	-27.19	V
9608.06	57.12	PK	43.80	6.72	33.40	-3.68	53.44	74	-20.56	H
9608.06	56.73	PK	43.80	6.72	33.40	-3.68	53.05	74	-20.95	V

Frequency	PK Reading	Duty cycle factor	AV Reading	Corrected Factor	Corrected Amplitude	Limit	Margin	RX Antenna
								Polar
(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(H/V)
4804.16	67.38	-2.27	65.11	-15.19	49.92	54.00	-4.08	H
4804.16	64.80	-2.27	62.53	-15.19	47.34	54.00	-6.66	V
7206.02	63.93	-2.27	61.66	-13.27	48.39	54.00	-5.61	H
7206.02	60.08	-2.27	57.81	-13.27	44.54	54.00	-9.46	V
9608.06	57.12	-2.27	54.85	-3.68	51.17	54.00	-2.83	H
9608.06	56.73	-2.27	54.46	-3.68	50.78	54.00	-3.22	V



Mid

Frequency	Meter Reading	Detector	Amplifier	Loss	Antenna Factor	Corrected Factor	Corrected Amplitude	Limit	Margin	RX Antenna
										Polar
(MHz)	(dBμV/m)	(PK/QP/AV)	(dB)	(dB)	(dB/m)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(H/V)
4881.91	65.42	PK	50.33	8.84	31.22	-10.27	55.15	74	-18.85	H
4881.91	64.38	PK	50.33	8.84	31.22	-10.27	54.11	74	-19.89	V
7322.95	63.84	PK	55.48	9.31	34.05	-12.12	51.72	74	-22.28	H
7322.95	60.30	PK	55.48	9.31	34.05	-12.12	48.18	74	-25.82	V
9763.88	57.11	PK	59.13	9.89	36.99	-12.25	44.86	74	-29.14	H
9763.88	56.99	PK	59.13	9.89	36.99	-12.25	44.74	74	-29.26	V

Frequency	PK Reading	Duty cycle factor	AV Reading	Corrected Factor	Corrected Amplitude	Limit	Margin	RX Antenna
								Polar
(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(H/V)
4881.91	65.42	-2.27	63.15	-10.27	52.88	54.00	-1.12	H
4881.91	64.38	-2.27	62.11	-10.27	51.84	54.00	-2.16	V
7322.95	63.84	-2.27	61.57	-12.12	49.45	54.00	-4.55	H
7322.95	60.30	-2.27	58.03	-12.12	45.91	54.00	-8.09	V
9763.88	57.11	-2.27	54.84	-12.25	42.59	54.00	-11.41	H
9763.88	56.99	-2.27	54.72	-12.25	42.47	54.00	-11.53	V



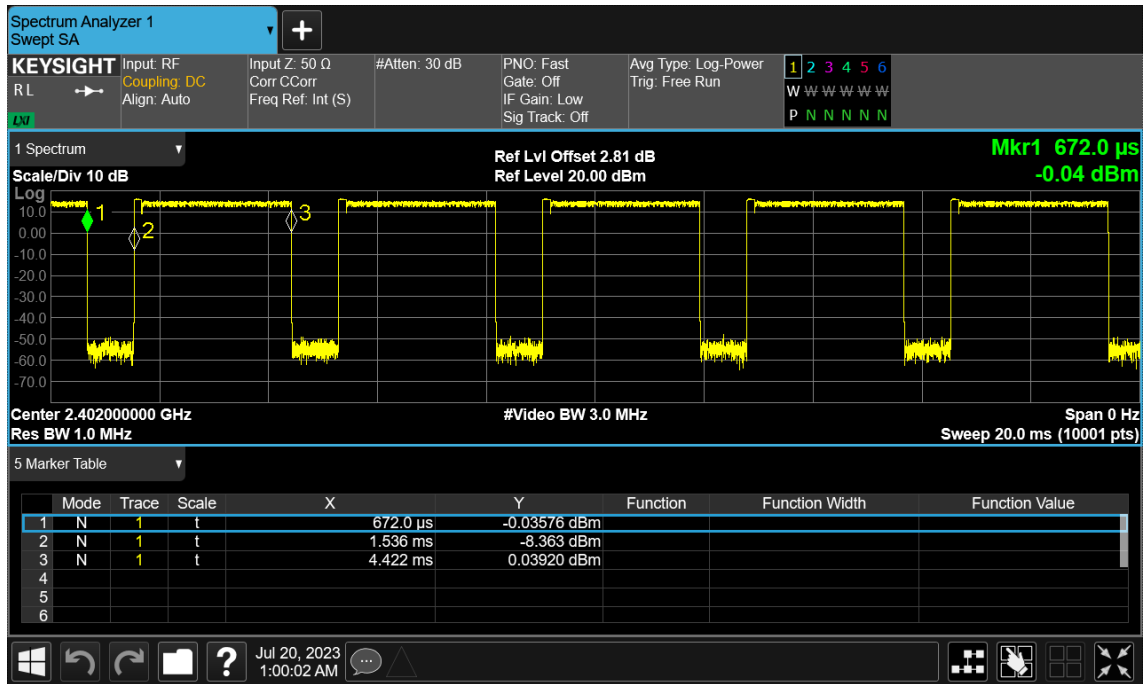
High

Frequency	Meter Reading	Detector	Amplifier	Loss	Antenna Factor	Corrected Factor	Corrected Amplitude	Limit	Margin	RX Antenna
										Polar
(MHz)	(dBμV/m)	(PK/QP/AV)	(dB)	(dB)	(dB/m)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(H/V)
4960.00	65.42	PK	50.33	8.84	31.22	-10.27	55.15	74	-18.85	H
4960.00	64.62	PK	50.33	8.84	31.22	-10.27	54.35	74	-19.65	V
7440.11	64.11	PK	55.48	9.31	34.05	-12.12	51.99	74	-22.01	H
7440.11	60.38	PK	55.48	9.31	34.05	-12.12	48.26	74	-25.74	V
9920.04	56.83	PK	59.13	9.89	36.99	-12.25	44.58	74	-29.42	H
9920.04	56.96	PK	59.13	9.89	36.99	-12.25	44.71	74	-29.29	V

Frequency	PK Reading	Duty cycle factor	AV Reading	Corrected Factor	Corrected Amplitude	Limit	Margin	RX Antenna
								Polar
(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	(H/V)
4960.00	65.42	-2.27	63.15	-10.27	52.88	54.00	-1.12	H
4960.00	64.62	-2.27	62.35	-10.27	52.08	54.00	-1.92	V
7440.11	64.11	-2.27	61.84	-12.12	49.72	54.00	-4.28	H
7440.11	60.38	-2.27	58.11	-12.12	45.99	54.00	-8.01	V
9920.04	56.83	-2.27	54.56	-12.25	42.31	54.00	-11.69	H
9920.04	56.96	-2.27	54.69	-12.25	42.44	54.00	-11.56	V



## Duty cycle



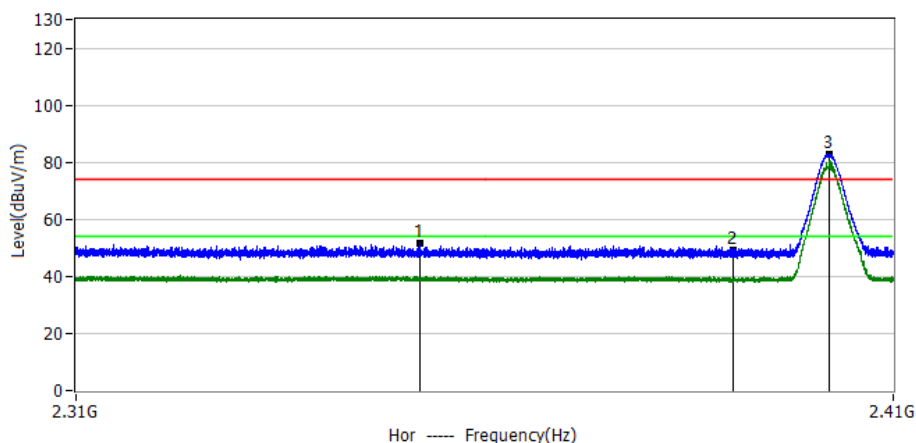
Ton (ms)	Tp (ms)	Duty Factor
2.886	3.750	-2.27

Note: Duty Factor=20\*LOG(Ton/Tp)



#### 4.7 TEST RESULTS (BAND EDGE REQUIREMENTS)

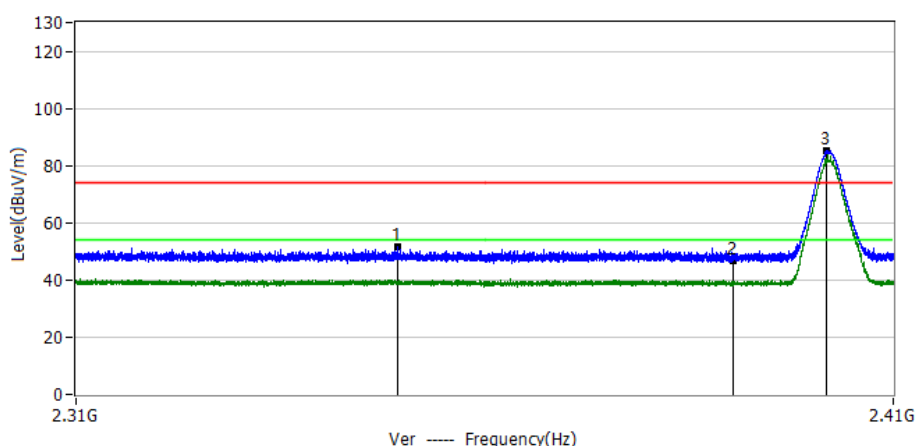
Project: LGT23F098	Test Engineer: Xiangdong Ma
EUT: Wireless guitar system	Temperature: 28.8°C
M/N: A8	Humidity: 58%RH
Test Voltage: Battery	Test Data: 2023-07-21
Test Mode: 2402	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.3515GHz	17.44	34.04	51.48	74.00	-22.52	PK	Hor
2*	2.3900GHz	15.05	33.95	49.00	74.00	-25.00	PK	Hor

#### Fundamental Frequency

No.	Frequency	Reading dBuV	Factor dB/m	Duty cycle Factor (dB/m)	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
3*	2.4020GHz	48.80	33.93	-	82.73	114	-31.27	PK	Hor
4*	2.4020GHz	48.80	33.93	-2.27	80.46	94	-13.54	AV	Hor



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.3488GHz	17.61	34.05	51.66	74.00	-22.34	PK	Ver
2*	2.3900GHz	12.65	33.95	46.60	74.00	-27.40	PK	Ver

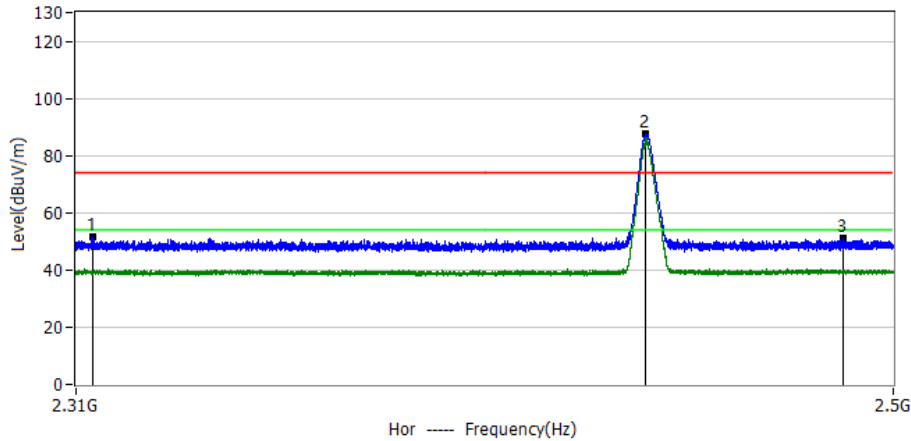
#### Fundamental Frequency

No.	Frequency	Reading dBuV	Factor dB/m	Duty cycle Factor (dB/m)	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
3*	2.4017GHz	51.11	33.93	-	85.04	114	-28.96	PK	Ver
4*	2.4017GHz	51.11	33.93	-2.27	82.77	94	-11.23	AV	Ver





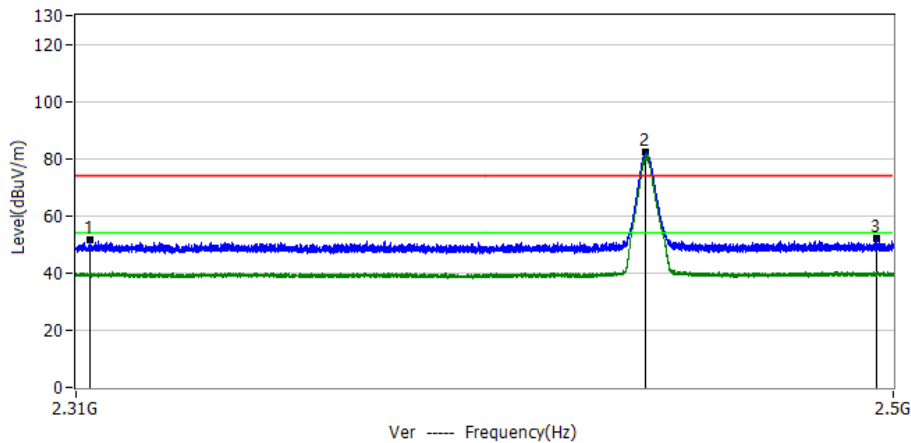
Project: LGT23F098	Test Engineer: Xiangdong Ma
EUT: Wireless guitar system	Temperature: 28.8°C
M/N: A8	Humidity: 58%RH
Test Voltage: Battery	Test Data: 2023-07-21
Test Mode: 2440	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.3138GHz	17.26	34.13	51.39	74.00	-22.61	PK	Hor
3*	2.4880GHz	17.09	34.14	51.23	74.00	-22.77	PK	Hor

#### Fundamental Frequency

No.	Frequency	Reading dBuV	Factor dB/m	Duty cycle Factor(dB/m)	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
2*	2.4409GHz	53.54	34.03	-	87.57	114	-26.43	PK	Hor
4*	2.4409GHz	53.54	34.03	-2.27	85.30	94	-8.70	AV	Hor



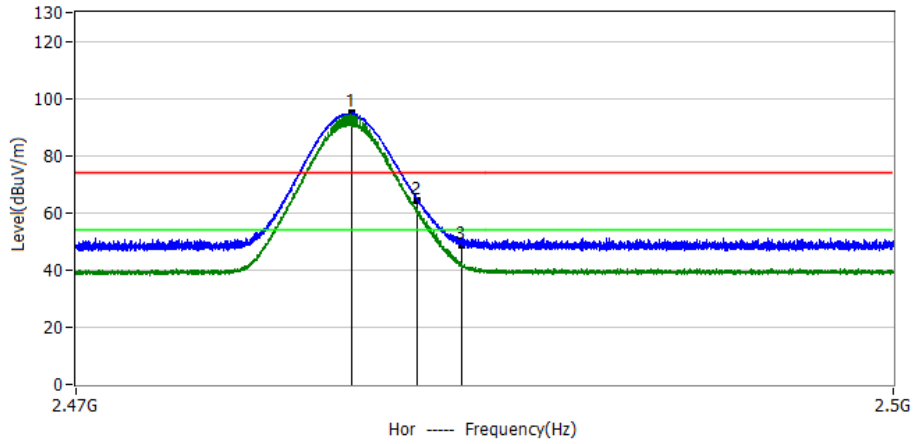
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.3130GHz	17.37	34.13	51.50	74.00	-22.50	PK	Ver
3*	2.4961GHz	17.84	34.16	52.00	74.00	-22.00	PK	Ver

#### Fundamental Frequency

No.	Frequency	Reading dBuV	Factor dB/m	Duty cycle Factor(dB/m)	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
2*	2.4408GHz	48.15	34.03	-	82.18	114	-31.82	PK	Ver
4*	2.4408GHz	48.15	34.03	-2.27	79.91	94	-14.09	AV	Ver



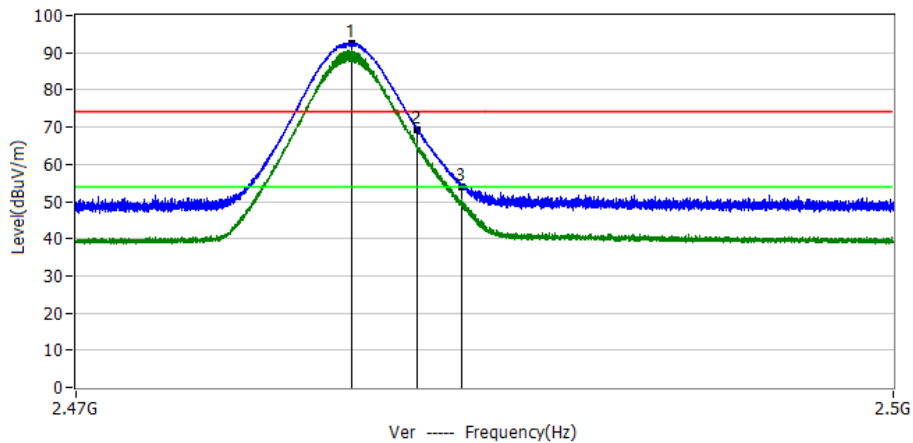
Project: LGT23F098	Test Engineer: Xiangdong Ma
EUT: Wireless guitar system	Temperature: 28.8°C
M/N: A8	Humidity: 58%RH
Test Voltage: Battery	Test Data: 2023-07-21
Test Mode: 2480	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
2*	2.4825GHz	30.18	34.12	64.30	74.00	-9.70	PK	Hor
3*	2.4841GHz	14.67	34.13	48.80	74.00	-25.20	PK	Hor

#### Fundamental Frequency

No.	Frequency	Reading dBuV	Factor dB/m	Duty cycle Factor(dB/m)	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.4801GHz	60.61	34.12	-	94.73	114	-19.27	PK	Hor
4*	2.4801GHz	60.61	34.12	-2.27	92.46	94	-1.54	AV	Hor



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
2*	2.4825GHz	35.18	34.12	69.30	74.00	-4.70	PK	Ver
3*	2.4841GHz	19.97	34.13	54.10	74.00	-19.90	PK	Ver

#### Fundamental Frequency

No.	Frequency	Reading dBuV	Factor dB/m	Duty cycle Factor(dB/m)	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.4801GHz	58.51	34.12	-	92.63	114	-21.37	PK	Ver
4*	2.4801GHz	58.51	34.12	-2.27	90.36	94	-33.64	AV	Ver



## 5. BANDWIDTH TEST

### 5.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting : RBW= 30KHz, VBW $\geq$ RBW, Sweep time = Auto.

### 5.2 TEST SETUP



### 5.3 EUT OPERATION CONDITIONS

TX mode.

### 5.4 TEST RESULTS

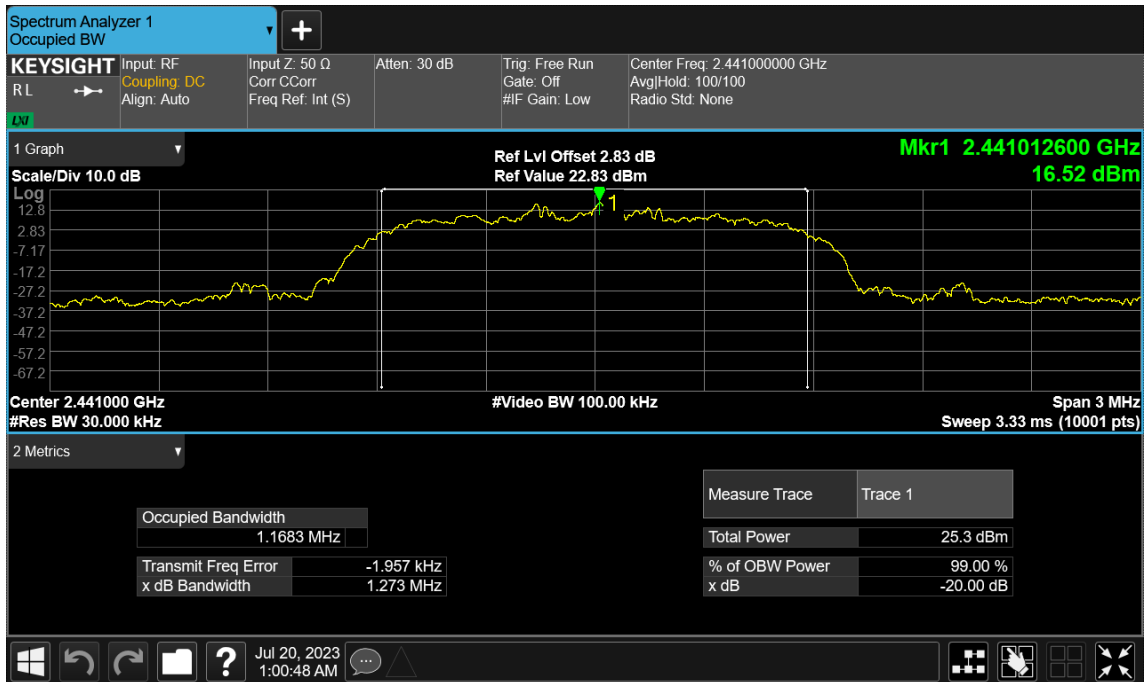
Test Channel	Frequency (MHz)	20 dB Bandwidth (MHz)	99% Bandwidth (MHz)
CH00	2402	1.261	1.165
CH39	2441	1.273	1.168
CH78	2480	1.271	1.165

#### Lowest Channel

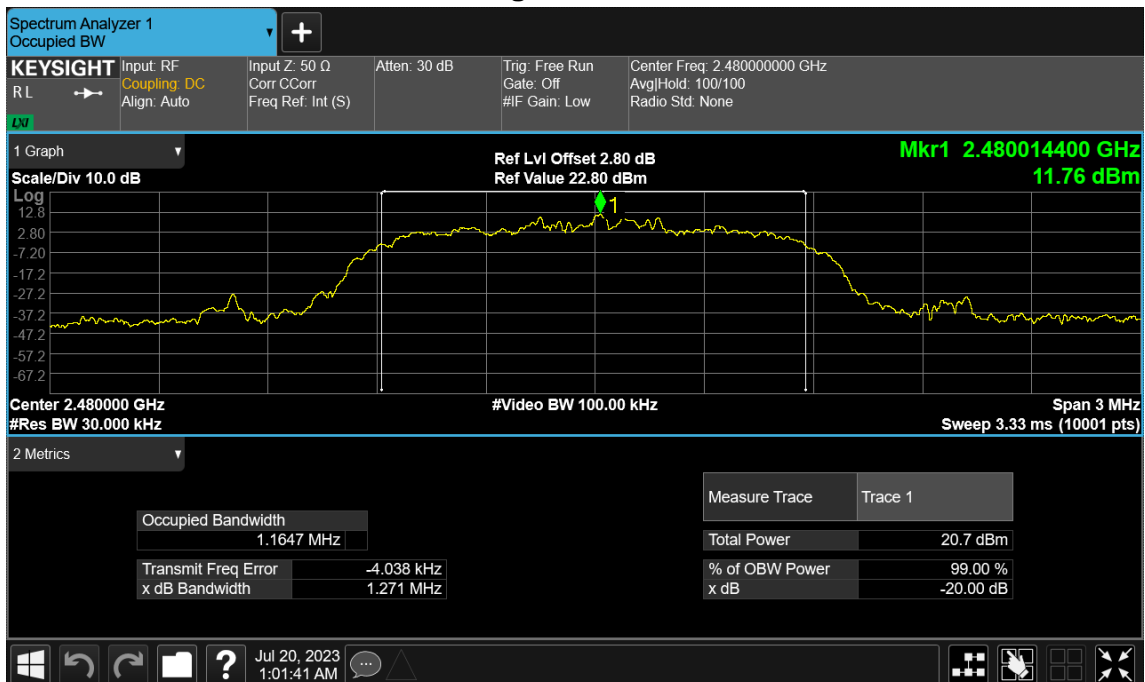




### Middle Channel



### High Channel





## 6. ANTENNA REQUIREMENT

### 6.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 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.

### 6.2 EUT ANTENNA

The EUT antenna is Spring Antenna. It comply with the standard requirement.

※※※※※END OF THE REPORT※※※※※