



RF TEST REPORT

Product Name: Wireless guitar system

Model Name: M6, M66, M7, M9, M99

FCC ID: 2BCLB-M6

Issued For : Shenzhen Wonderful Music Equipment Co. , Ltd.

4/F, E building, Yongqi Science and Technology Park,
lezhujiao, Zhoushi Road, Baoan District, Shenzhen, 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: LGT23H047RF01

Sample Received Date: Aug. 18, 2023

Date of Test: Aug. 18, 2023 ~ Aug. 23, 2023

Date of Issue: Aug. 23, 2023

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TEST REPORT CERTIFICATION

Applicant: Shenzhen Wonderful Music Equipment Co. , Ltd.
Address: 4/F, E building, Yongqi Science and Technology Park,
lezhujiao, Zhoushi Road, Baoan District, Shenzhen, China

Manufacturer: Shenzhen Wonderful Music Equipment Co. , Ltd.
Address: 4/F, E building, Yongqi Science and Technology Park,
lezhujiao, Zhoushi Road, Baoan District, Shenzhen, China

Product Name: Wireless guitar system

Trademark: N/A

Model Name: M6, M66, M7, M9, M99

Sample Status: Normal

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

Prepared by:

Zane Shan

Zane Shan
Engineer

Approved by:

Vita Li

Vita Li
Technical Director





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Revision History

Rev.	Issue Date	Contents
00	Aug. 23, 2023	Initial Issue



1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part 15.249, Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	--
15.249	Radiated Spurious Emission	PASS	--
15.205	Restricted Band Edge Emission	PASS	--
15.215	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	± 0.68 dB
2	Unwanted Emissions, conducted	± 2.988 dB
3	All emissions, radiated 9K-30MHz	± 2.84 dB
4	All emissions, radiated 30M-1GHz	± 4.39 dB
5	All emissions, radiated 1G-6GHz	± 5.10 dB
6	All emissions, radiated >6G	± 5.48 dB
7	Conducted Emission (9KHz-150KHz)	± 2.79 dB
8	Conducted Emission (150KHz-30MHz)	± 2.80 dB



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name:	Wireless guitar system				
Trademark:	N/A				
Model Name:	M6				
Series Model:	M66, M7, M9, M99				
Model Difference:	Only the model color is different				
Product Description:	The EUT is a Wireless guitar system				
	Operation Frequency:	5731-5820 MHz			
	Modulation Type:	FSK			
	Number Of Channel:	25			
	Antenna Type:	PCB Antenna			
Antenna Gain (dBi):	1.17				
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:

- For a more detailed features description, please refer to the manufacturer's specifications or the User Manual.
- 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.

Channel List					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	5731	10	5761	19	5797
02	5733	11	5767	20	5801
03	5737	12	5771	21	5807
04	5739	13	5773	22	5811
05	5743	14	5777	23	5813
06	5747	15	5781	24	5817
07	5751	16	5787	25	5820
08	5753	17	5791	-	-
09	5757	18	5793	-	-



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(5731MHz)	FSK
Mode 2	TX CH13(5773MHz)	FSK
Mode 3	TX CH25(5820MHz)	FSK

Note:

- (1) All above mode has been measurement, only worst data was reported.
- (2) We have be tested for all available 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.

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
USB-A to USB-C or USB-C Cable	N/A	N/A	N/A	0.3m, unshielded, without ferrite core
USB-C to 3.5mm Cable	N/A	N/A	N/A	0.15m, unshielded, without ferrite core

Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
Adapter	Tenpao	S005CAU0500100	N/A	Input: 100-240V ~ 50/60Hz 0.2A Output: 5V, 1A

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

Conducted Emission					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
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				

Radiated Test equipment					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
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				

Conducted Test equipment					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
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

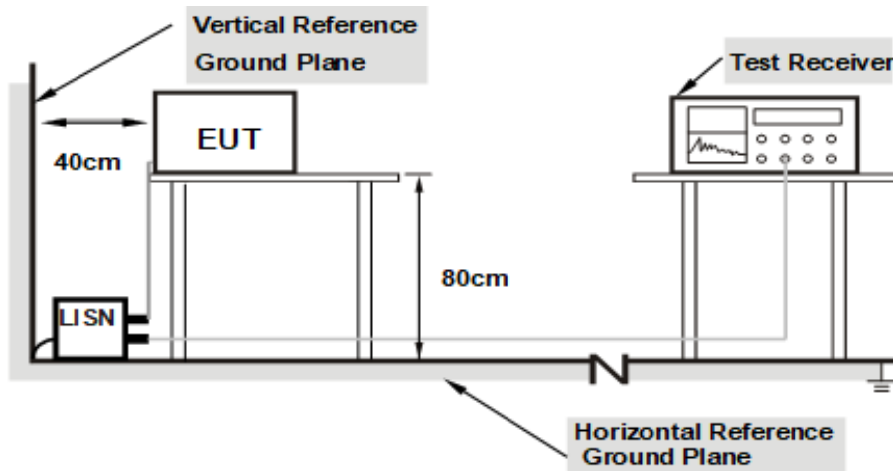
Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz



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.

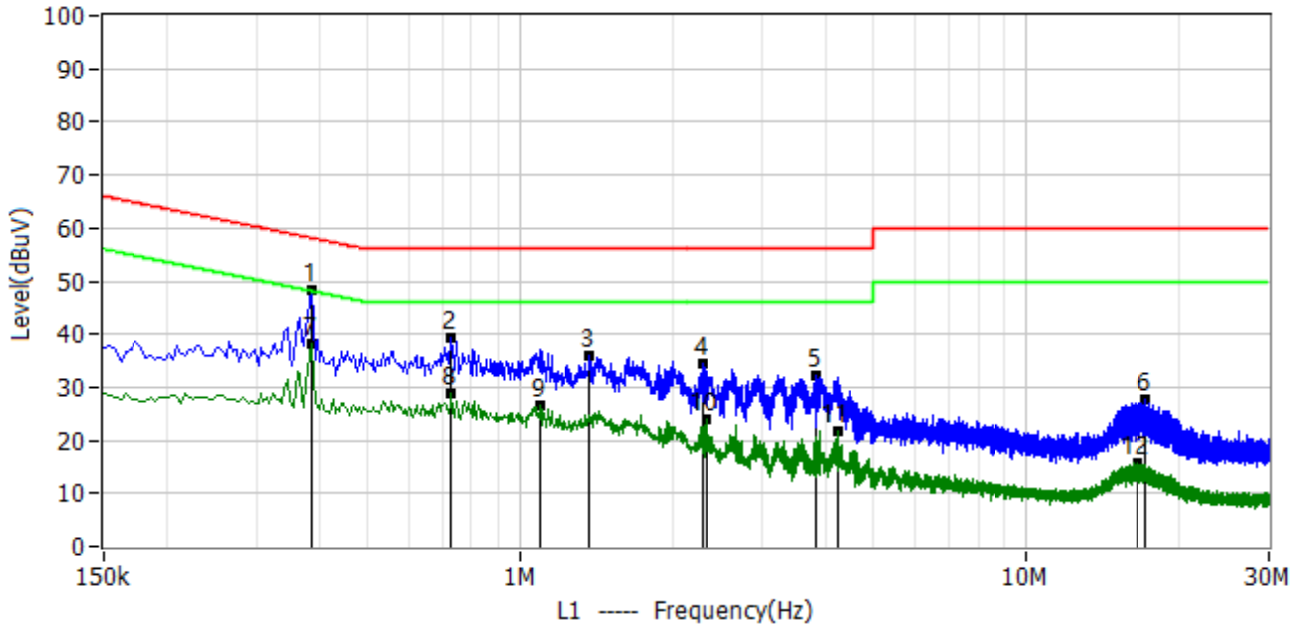
3.4 EUT OPERATING CONDITIONS

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

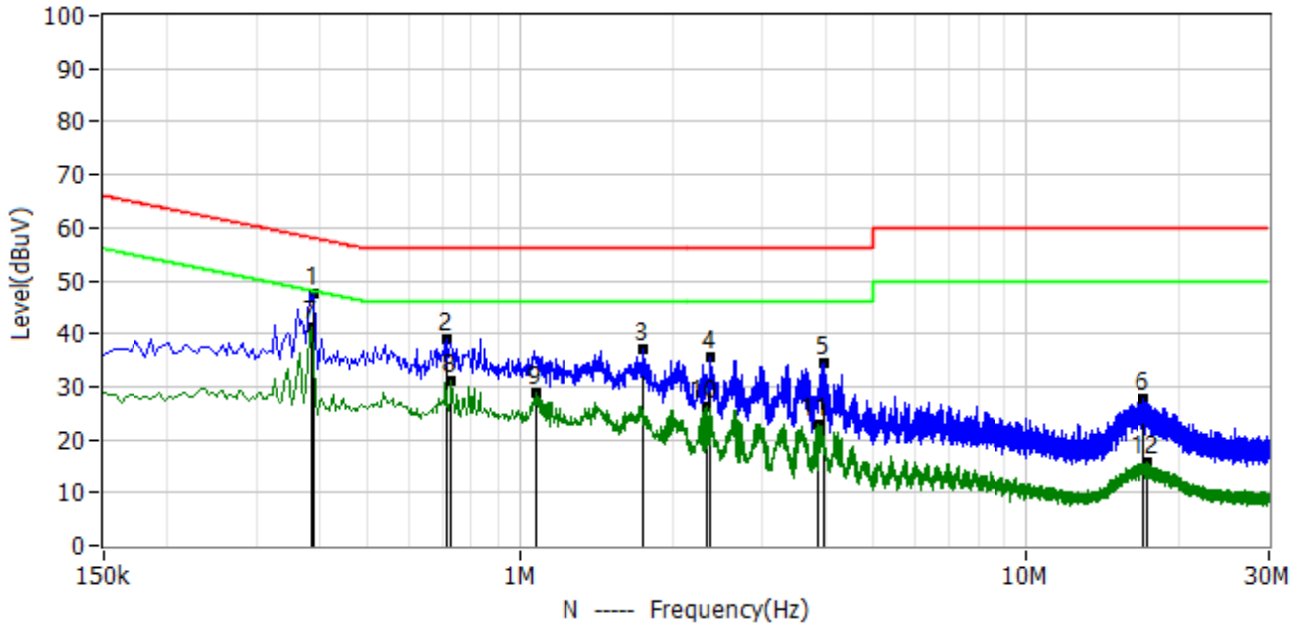
Project: LGT23H047	Test Engineer: LiuH
EUT: Wireless guitar system	Temperature: 26.2°C
M/N: M6	Humidity: 47%RH
Test Voltage: AC 120V/60Hz	Test Data: 2023-08-18
Test Mode: TX 5731MHz	
Note: Worst Case	



No.	Frequency MHz	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	0.386	37.77	10.59	48.36	58.15	-9.79	QP	L1
2*	0.726	28.78	10.58	39.36	56.00	-16.64	QP	L1
3*	1.374	25.44	10.65	36.09	56.00	-19.91	QP	L1
4*	2.286	23.57	10.74	34.31	56.00	-21.69	QP	L1
5*	3.842	21.63	10.72	32.35	56.00	-23.65	QP	L1
6*	17.214	16.64	11.19	27.83	60.00	-32.17	QP	L1
7*	0.386	27.67	10.59	38.26	48.15	-9.89	AV	L1
8*	0.730	18.36	10.58	28.94	46.00	-17.06	AV	L1
9*	1.094	16.16	10.60	26.76	46.00	-19.24	AV	L1
10*	2.326	13.36	10.74	24.10	46.00	-21.90	AV	L1
11*	4.230	11.15	10.71	21.86	46.00	-24.14	AV	L1
12*	16.482	4.73	11.16	15.89	50.00	-34.11	AV	L1



Project: LGT23H047	Test Engineer: LiuH
EUT: Wireless guitar system	Temperature: 26.2°C
M/N: M6	Humidity: 47%RH
Test Voltage: AC 120V/60Hz	Test Data: 2023-08-18
Test Mode: TX 5731MHz	
Note: Worst Case	



No.	Frequency MHz	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	0.390	37.10	10.58	47.68	58.06	-10.38	QP	N
2*	0.714	28.44	10.58	39.02	56.00	-16.98	QP	N
3*	1.742	26.40	10.71	37.11	56.00	-18.89	QP	N
4*	2.370	24.92	10.74	35.66	56.00	-20.34	QP	N
5*	3.962	23.60	10.72	34.32	56.00	-21.68	QP	N
6*	17.018	16.60	11.25	27.85	60.00	-32.15	QP	N
7*	0.386	30.72	10.58	41.30	48.15	-6.85	AV	N
8*	0.730	20.61	10.58	31.19	46.00	-14.81	AV	N
9*	1.074	18.37	10.60	28.97	46.00	-17.03	AV	N
10*	2.330	15.46	10.74	26.20	46.00	-19.80	AV	N
11*	3.870	12.30	10.72	23.02	46.00	-22.98	AV	N
12*	17.274	4.31	11.26	15.57	50.00	-34.43	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(μ V)/m (Peak) 54.0 dB(μ 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

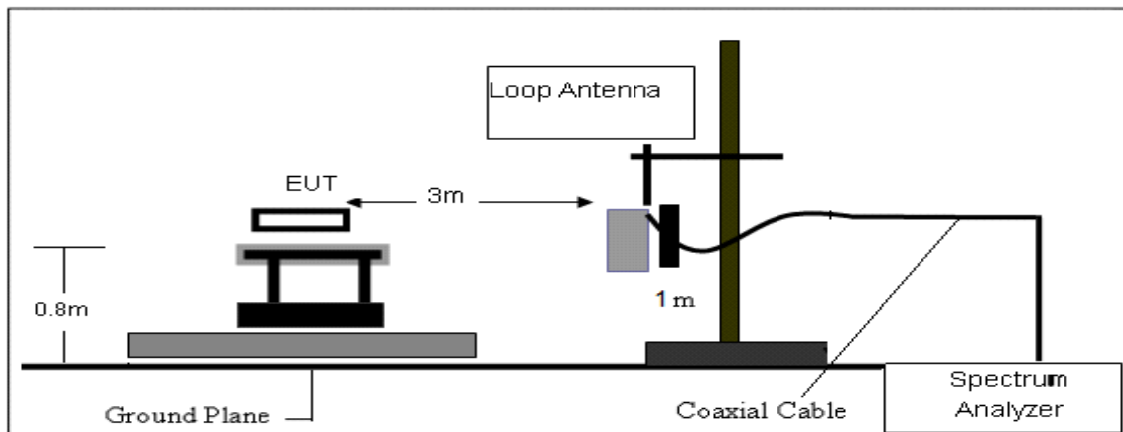
- a. The measuring distance at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.
- b. The EUT was placed on the top of a rotating table 0.8 m (above 1GHz is 1.5 m) above the ground at a 3 m anechoic chamber test site. The table was rotated 360 degree to determine the 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:

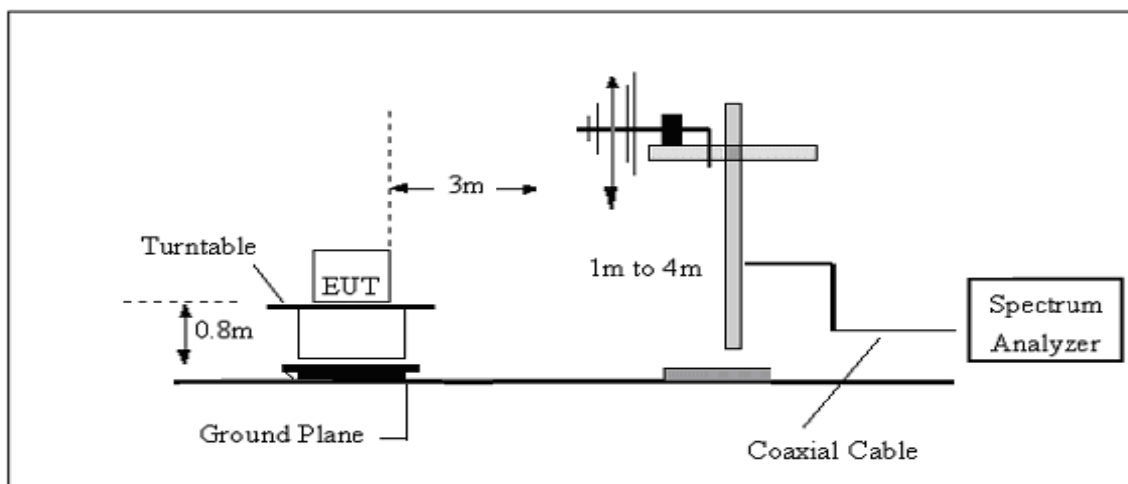
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

4.3 TEST SETUP

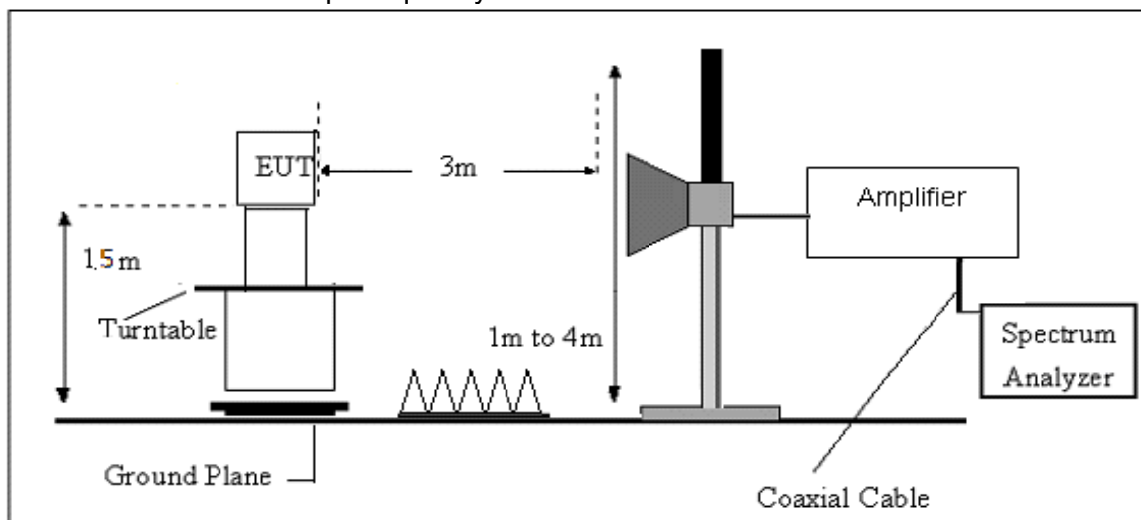
(A) Radiated Emission Test-Up Frequency Below 30MHz



(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

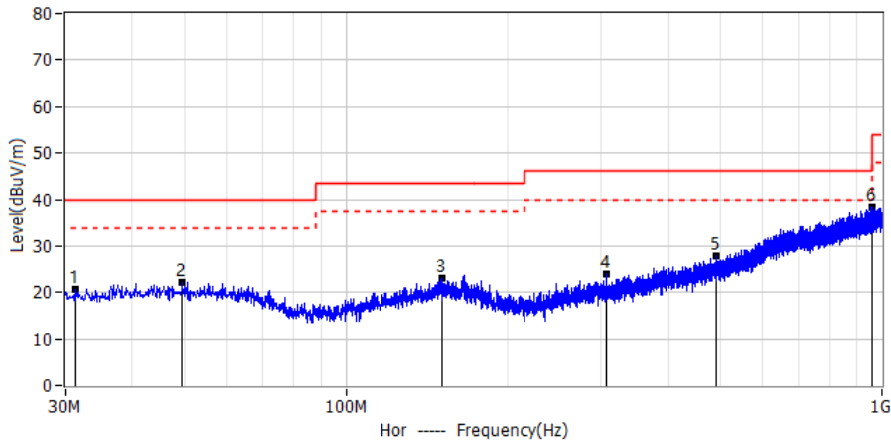
Frequency (MHz)	FS (dB μ V/m)	RA (dB μ V/m)	AF (dB)	CL (dB)	AG (dB)	Factor (dB)
300	40	58.1	12.2	1.6	31.9	-18.1

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

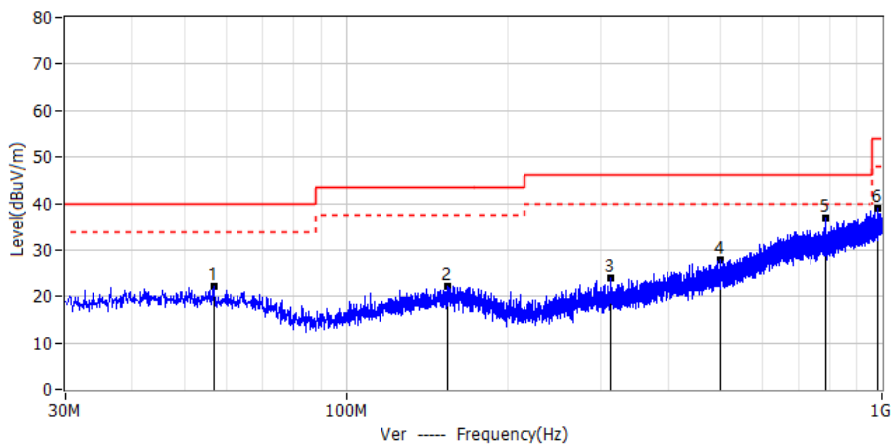


4.6 TEST RESULTS

Project: LGT23H047	Test Engineer: Xiangdong Ma
EUT: Wireless guitar system	Temperature: 27.2°C
M/N: M6	Humidity: 55%RH
Test Voltage: Battery	Test Data: 2023-08-21
Test Mode: TX 5731MHz	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	31.213MHz	2.36	18.28	20.64	40.00	-19.36	QP	Hor
2*	49.643MHz	2.83	19.35	22.18	40.00	-17.82	QP	Hor
3*	151.856MHz	3.05	19.96	23.01	43.50	-20.49	QP	Hor
4*	306.935MHz	3.97	20.13	24.10	46.00	-21.90	QP	Hor
5*	489.901MHz	3.14	24.70	27.84	46.00	-18.16	QP	Hor
6*	960.958MHz	4.12	34.17	38.29	54.00	-15.71	QP	Hor

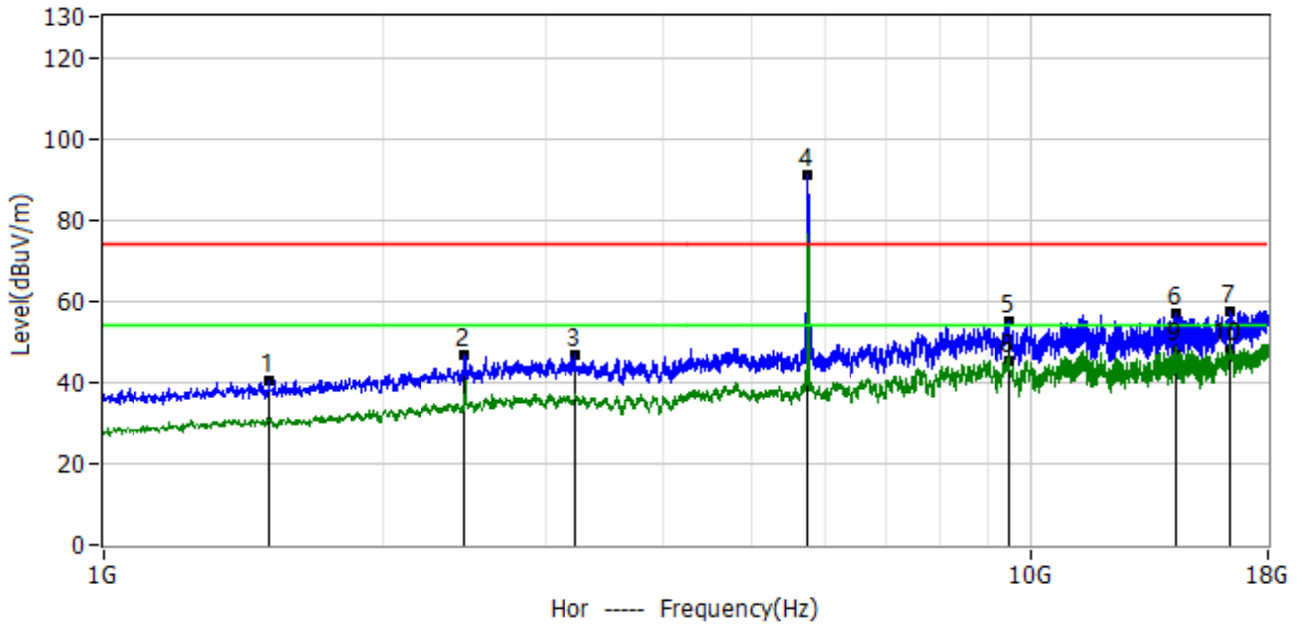


No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	56.918MHz	3.36	18.86	22.22	40.00	-17.78	QP	Ver
2*	155.130MHz	2.32	19.91	22.23	43.50	-21.27	QP	Ver
3*	312.270MHz	3.57	20.30	23.87	46.00	-22.13	QP	Ver
4*	500.450MHz	3.05	24.86	27.91	46.00	-18.09	QP	Ver
5*	785.994MHz	5.86	30.96	36.82	46.00	-9.18	QP	Ver
6*	984.116MHz	4.60	34.50	39.10	54.00	-14.90	QP	Ver



Above 1G Radiation Spurious

Project: LGT23H047	Test Engineer: Xiangdong Ma
EUT: Wireless guitar system	Temperature: 26°C
M/N: M6	Humidity: 46%RH
Test Voltage: Battery	Test Data: 2023-08-22
Test Mode: 5731	
Note:	



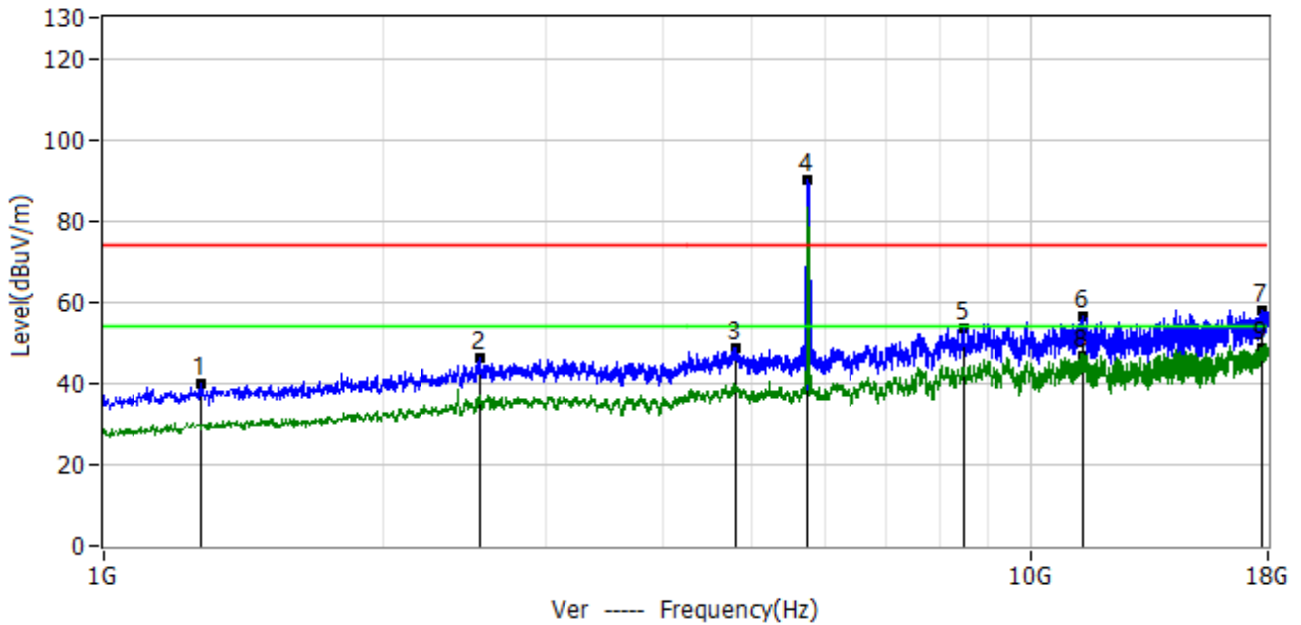
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1.5036GHz	61.08	-20.82	40.26	74.00	-33.70	PK	Hor
2*	2.4556GHz	57.95	-11.45	46.50	74.00	-27.50	PK	Hor
3*	3.2291GHz	55.33	-8.42	46.91	74.00	-27.10	PK	Hor
5*	9.4766GHz	56.25	-1.17	55.08	74.00	-18.90	PK	Hor
6*	14.3620GHz	51.12	5.90	57.02	74.00	-17.00	PK	Hor
7*	16.3850GHz	50.58	6.86	57.44	74.00	-16.60	PK	Hor
8*	9.4766GHz	46.57	-1.17	45.40	54.00	-8.60	AV	Hor
9*	14.3620GHz	42.10	5.90	48.00	54.00	-6.00	AV	Hor
10*	16.3850GHz	41.44	6.86	48.30	54.00	-5.70	AV	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
!4*	5.7366GHz	98.68	-7.65	--	91.03	114	-22.97	PK	Hor
!4*	5.7366GHz	98.68	-7.65	-3.66	87.37	94	-6.63	AV	Hor



Project: LGT23H047	Test Engineer: Xiangdong Ma
EUT: Wireless guitar system	Temperature: 26°C
M/N: M6	Humidity: 46%RH
Test Voltage: Battery	Test Data: 2023-08-22
Test Mode: 5731	
Note:	



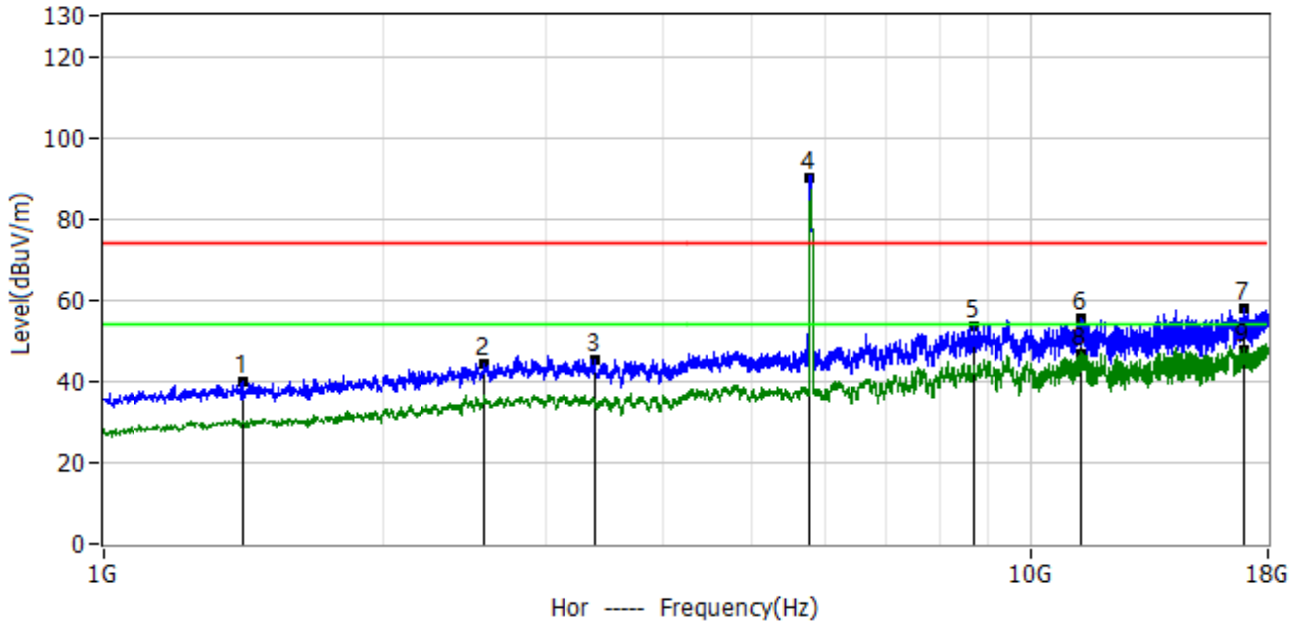
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1.2741GHz	62.32	-22.38	39.94	74.00	-34.06	PK	Ver
2*	2.5491GHz	57.11	-10.73	46.38	74.00	-27.62	PK	Ver
3*	4.8037GHz	54.88	-5.99	48.89	74.00	-25.11	PK	Ver
5*	8.4694GHz	56.19	-2.67	53.52	74.00	-20.50	PK	Ver
6*	11.3742GHz	54.52	1.85	56.37	74.00	-17.60	PK	Ver
7*	17.7195GHz	49.69	8.32	58.01	74.00	-16.00	PK	Ver
8*	11.3742GHz	44.65	1.85	46.50	54.00	-7.50	AV	Ver
9*	17.7195GHz	40.48	8.32	48.80	54.00	-5.20	AV	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
14*	5.7387GHz	97.78	-7.64	--	90.14	114	-23.86	PK	Hor
14*	5.7387GHz	97.78	-7.64	-3.66	86.48	94	-7.52	AV	Hor



Project: LGT23H047	Test Engineer: Xiangdong Ma
EUT: Wireless guitar system	Temperature: 26°C
M/N: M6	Humidity: 46%RH
Test Voltage: Battery	Test Data: 2023-08-22
Test Mode: 5773	
Note:	



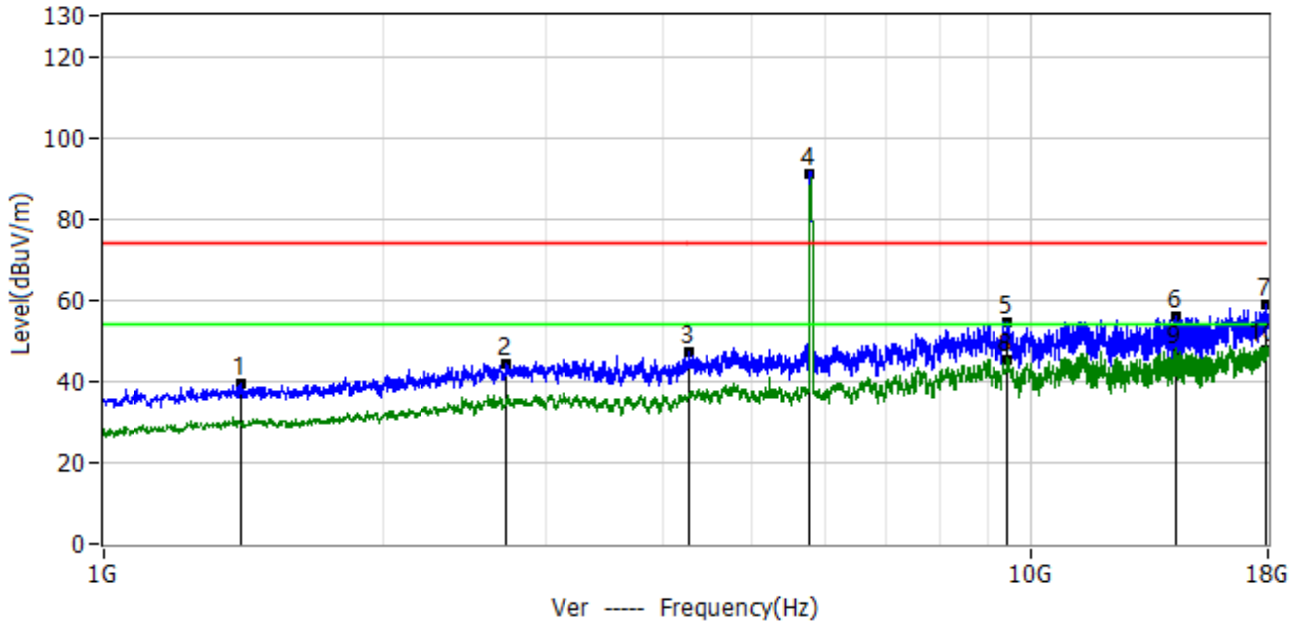
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1.4122GHz	61.14	-21.32	39.82	74.00	-34.20	PK	Hor
2*	2.5746GHz	55.03	-10.59	44.44	74.00	-29.60	PK	Hor
3*	3.3864GHz	53.93	-8.47	45.46	74.00	-28.50	PK	Hor
5*	8.6882GHz	55.51	-2.05	53.46	74.00	-20.50	PK	Hor
6*	11.3551GHz	53.59	1.84	55.43	74.00	-18.60	PK	Hor
7*	16.9396GHz	50.20	7.73	57.93	74.00	-16.10	PK	Hor
8*	11.3551GHz	44.86	1.84	46.70	54.00	-7.30	AV	Hor
9*	16.9396GHz	40.07	7.73	47.80	54.00	-6.20	AV	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
14*	5.7790GHz	97.93	-7.63	--	90.30	114	-23.70	PK	Hor
14*	5.7790GHz	97.93	-7.63	-3.66	86.64	94	-7.36	AV	Hor



Project: LGT23H047	Test Engineer: Xiangdong Ma
EUT: Wireless guitar system	Temperature: 26°C
M/N: M6	Humidity: 46%RH
Test Voltage: Battery	Test Data: 2023-08-22
Test Mode: 5773	
Note:	



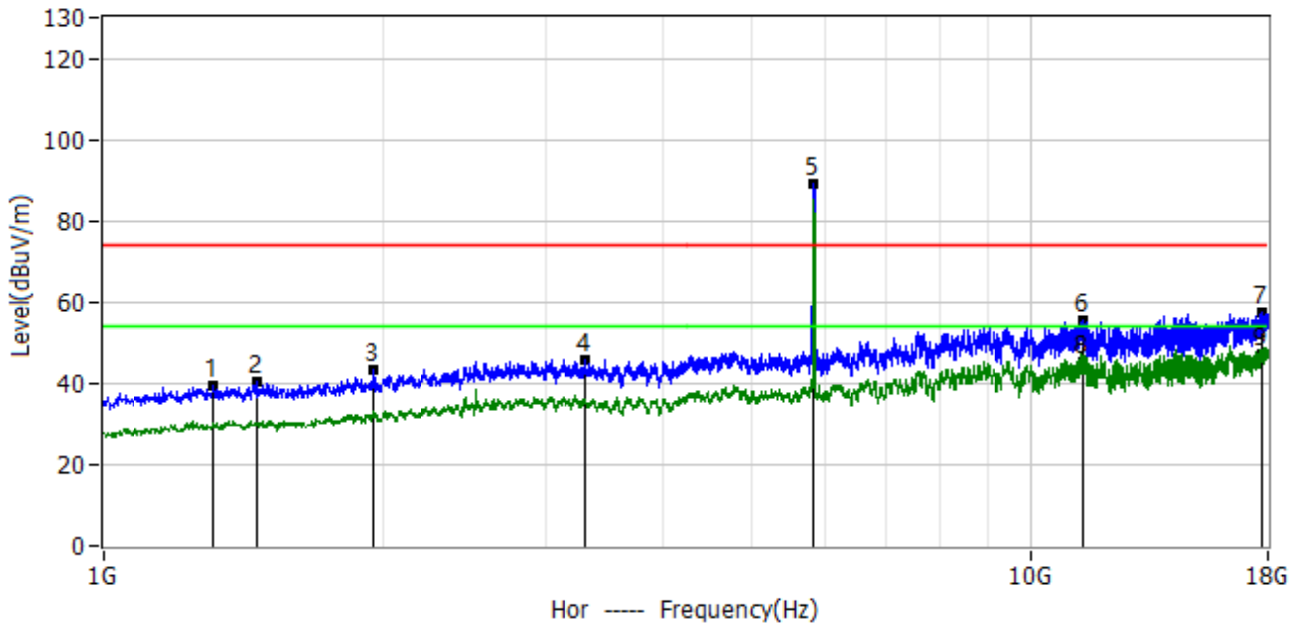
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1.4080GHz	60.87	-21.34	39.53	74.00	-34.47	PK	Ver
2*	2.7234GHz	54.14	-9.80	44.34	74.00	-29.66	PK	Ver
3*	4.2746GHz	53.78	-6.71	47.07	74.00	-26.93	PK	Ver
5*	9.4617GHz	55.48	-1.17	54.31	74.00	-19.69	PK	Ver
6*	14.3684GHz	50.10	5.90	56.00	74.00	-18.00	PK	Ver
7*	17.9362GHz	50.43	8.48	58.91	74.00	-15.09	PK	Ver
8*	9.4617GHz	46.67	-1.17	45.50	54.00	-8.50	AV	Ver
9*	14.3684GHz	41.40	5.90	47.30	54.00	-6.70	AV	Ver
10*	17.9362GHz	39.12	8.48	47.60	54.00	-6.40	AV	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
14*	5.7780GHz	98.63	-7.63	--	91.00	114	-23.00	PK	Hor
14*	5.7780GHz	98.63	-7.63	-3.66	87.34	94	-6.66	AV	Hor



Project: LGT23H047	Test Engineer: Xiangdong Ma
EUT: Wireless guitar system	Temperature: 26°C
M/N: M6	Humidity: 46%RH
Test Voltage: Battery	Test Data: 2023-08-22
Test Mode: 5820	
Note:	



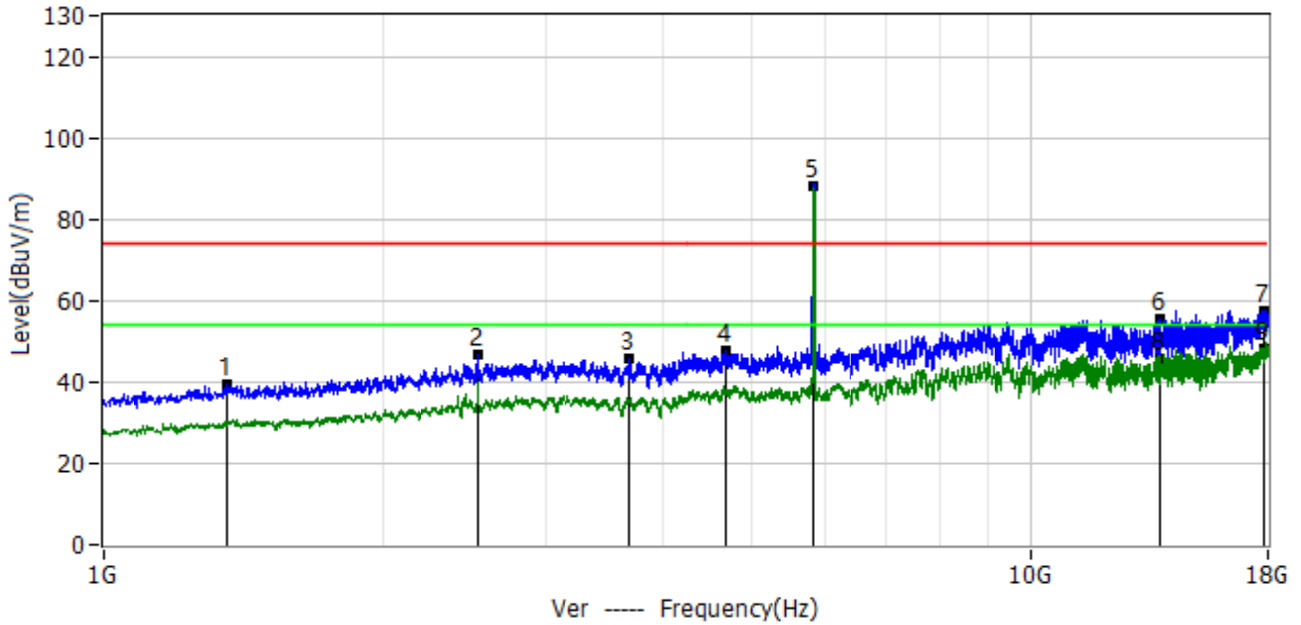
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1.3124GHz	61.49	-22.08	39.41	74.00	-34.59	PK	Hor
2*	1.4590GHz	61.43	-21.06	40.37	74.00	-33.63	PK	Hor
3*	1.9562GHz	60.02	-16.67	43.35	74.00	-30.65	PK	Hor
4*	3.3056GHz	54.32	-8.44	45.88	74.00	-28.12	PK	Hor
6*	11.3785GHz	53.63	1.85	55.48	74.00	-18.52	PK	Hor
7*	17.7641GHz	48.96	8.35	57.31	74.00	-16.69	PK	Hor
8*	11.3785GHz	43.55	1.85	45.40	54.00	-8.60	AV	Hor
9*	17.7641GHz	38.75	8.35	47.10	54.00	-6.90	AV	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
!5*	5.8237GHz	96.86	-7.61	--	89.25	114	-24.75	PK	Hor
!5*	5.8237GHz	96.86	-7.61	-3.66	85.59	94	-8.41	AV	Hor



Project: LGT23H047	Test Engineer: Xiangdong Ma
EUT: Wireless guitar system	Temperature: 26°C
M/N: M6	Humidity: 46%RH
Test Voltage: Battery	Test Data: 2023-08-22
Test Mode: 5820	
Note:	



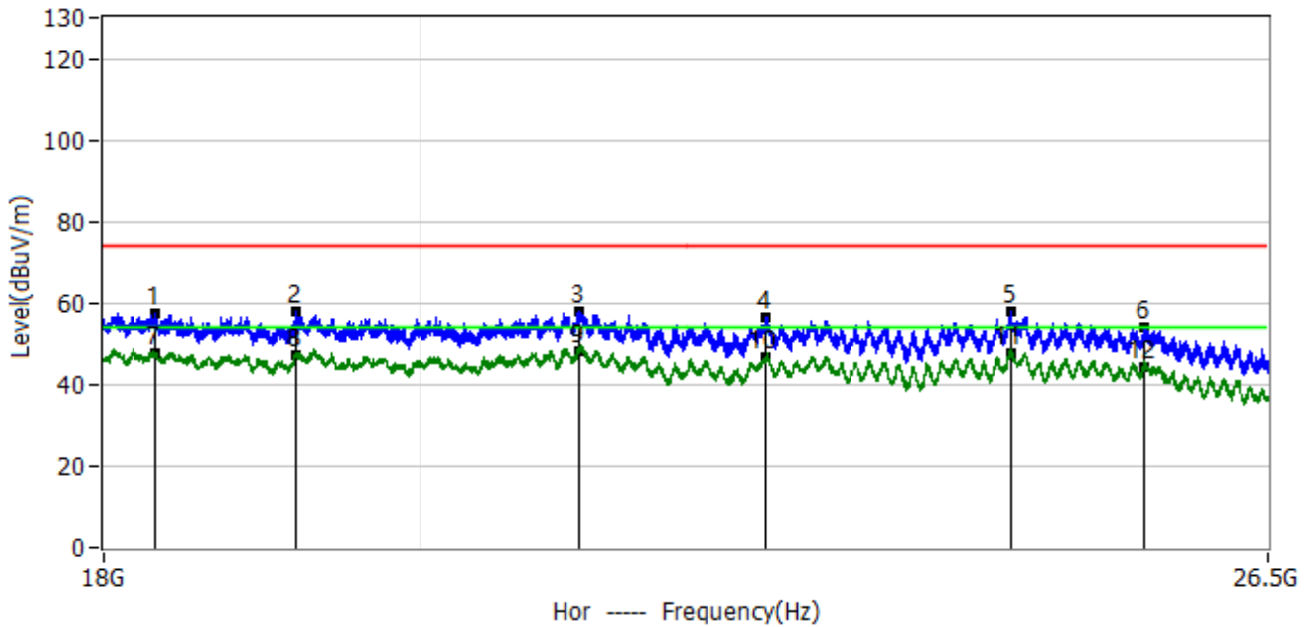
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	1.3549GHz	61.00	-21.74	39.26	74.00	-34.74	PK	Ver
2*	2.5342GHz	57.49	-10.80	46.69	74.00	-27.31	PK	Ver
3*	3.6902GHz	54.03	-8.26	45.77	74.00	-28.23	PK	Ver
4*	4.6996GHz	53.86	-5.91	47.95	74.00	-26.05	PK	Ver
!5*	5.8216GHz	95.97	-7.61	88.36	--	--	PK	Ver
6*	13.8180GHz	50.03	5.24	55.27	74.00	-18.73	PK	Ver
7*	17.8364GHz	49.03	8.41	57.44	74.00	-16.56	PK	Ver
8*	13.8180GHz	40.36	5.24	45.60	54.00	-8.40	AV	Ver
9*	17.8364GHz	39.59	8.41	48.00	54.00	-6.00	AV	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
!5*	5.8216GHz	95.97	-7.61	--	88.36	114	-25.64	PK	Hor
!5*	5.8216GHz	95.97	-7.61	-3.66	84.70	94	-9.30	AV	Hor



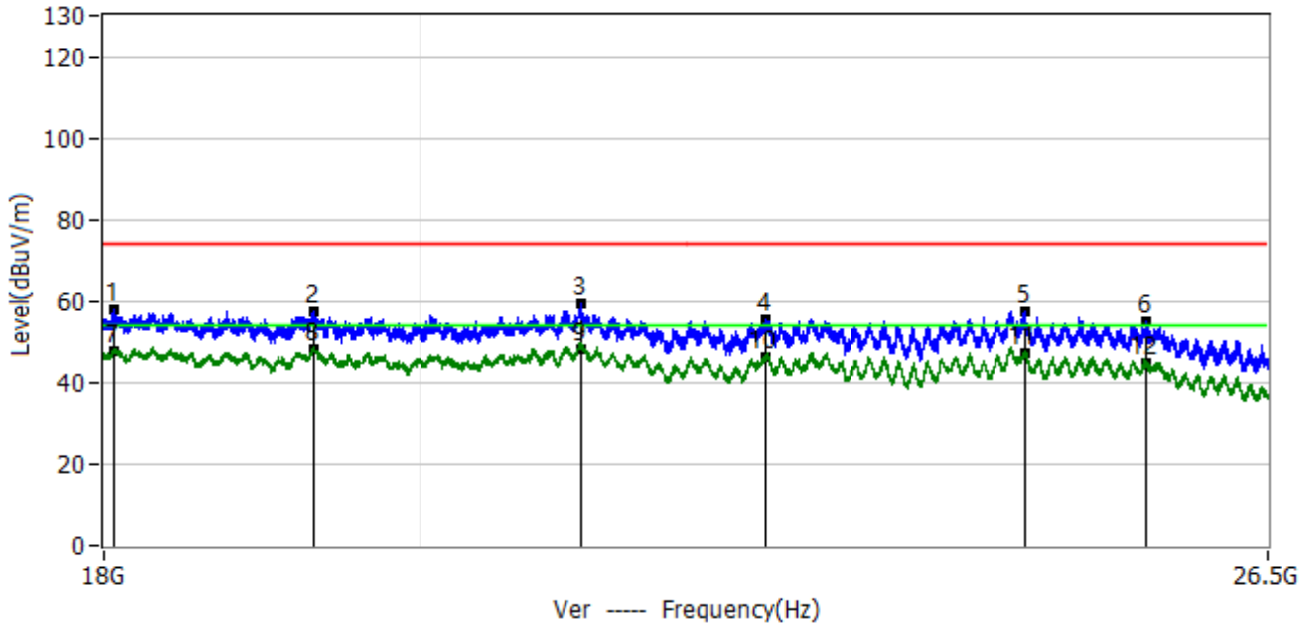
Project: LGT23H047	Test Engineer: Xiangdong Ma
EUT: Wireless guitar system	Temperature: 29.4°C
M/N: M6	Humidity: 43%RH
Test Voltage: Battery	Test Data: 2023-08-19
Test Mode: 5731	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	18.3081GHz	49.09	8.22	57.31	74.00	-16.69	PK	Hor
2*	19.1889GHz	50.72	7.35	58.07	74.00	-15.93	PK	Hor
3*	21.0855GHz	52.18	5.79	57.97	74.00	-16.03	PK	Hor
4*	22.4306GHz	51.19	5.38	56.57	74.00	-17.43	PK	Hor
5*	24.3357GHz	52.15	5.66	57.81	74.00	-16.19	PK	Hor
6*	25.4386GHz	50.50	3.73	54.23	74.00	-19.77	PK	Hor
7*	18.3081GHz	39.38	8.22	47.60	54.00	-6.40	AV	Hor
8*	19.1889GHz	39.85	7.35	47.20	54.00	-6.80	AV	Hor
9*	21.0855GHz	42.31	5.79	48.10	54.00	-5.90	AV	Hor
10*	22.4306GHz	41.22	5.38	46.60	54.00	-7.40	AV	Hor
11*	24.3357GHz	42.04	5.66	47.70	54.00	-6.30	AV	Hor
12*	25.4386GHz	40.57	3.73	44.30	54.00	-9.70	AV	Hor



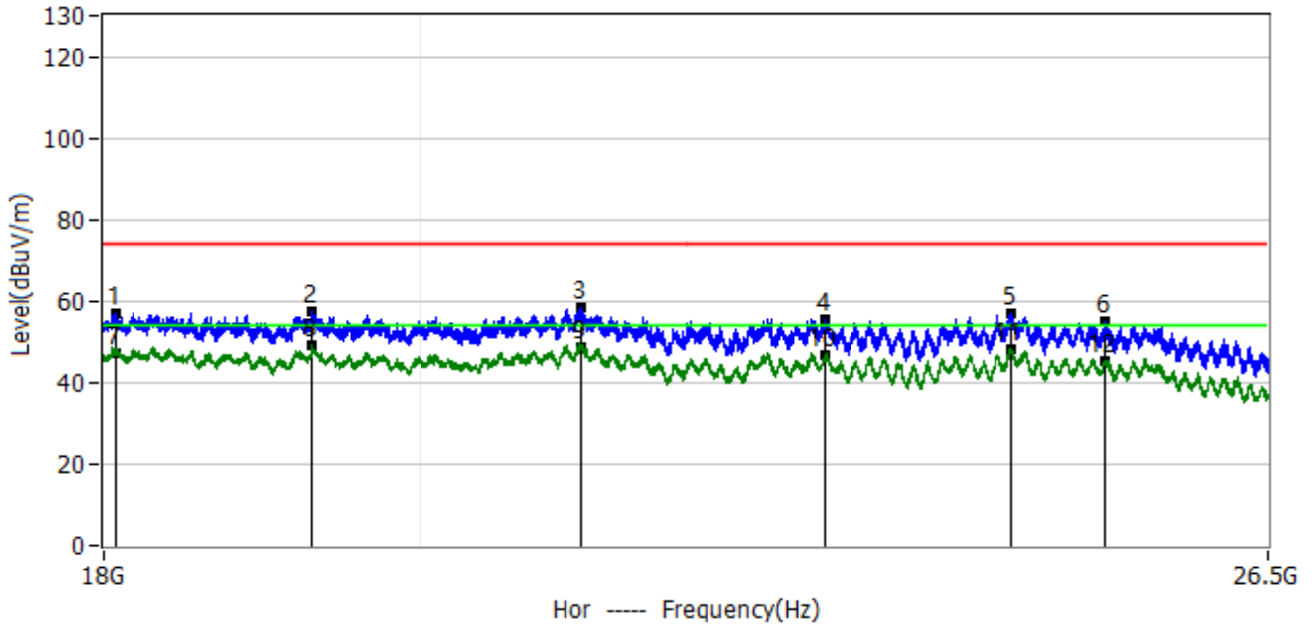
Project: LGT23H047	Test Engineer: Xiangdong Ma
EUT: Wireless guitar system	Temperature: 29.4°C
M/N: M6	Humidity: 43%RH
Test Voltage: Battery	Test Data: 2023-08-19
Test Mode: 5731	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	18.0574GHz	49.55	8.46	58.01	74.00	-15.99	PK	Ver
2*	19.2984GHz	50.12	7.24	57.36	74.00	-16.64	PK	Ver
3*	21.1025GHz	53.67	5.77	59.44	74.00	-14.56	PK	Ver
4*	22.4370GHz	50.23	5.38	55.61	74.00	-18.39	PK	Ver
5*	24.4494GHz	51.79	5.46	57.25	74.00	-16.75	PK	Ver
6*	25.4587GHz	51.20	3.69	54.89	74.00	-19.11	PK	Ver
7*	18.0574GHz	39.14	8.46	47.60	54.00	-6.40	AV	Ver
8*	19.2984GHz	40.76	7.24	48.00	54.00	-6.00	AV	Ver
9*	21.1025GHz	42.53	5.77	48.30	54.00	-5.70	AV	Ver
10*	22.4370GHz	40.82	5.38	46.20	54.00	-7.80	AV	Ver
11*	24.4494GHz	41.84	5.46	47.30	54.00	-6.70	AV	Ver
12*	25.4587GHz	40.91	3.69	44.60	54.00	-9.40	AV	Ver



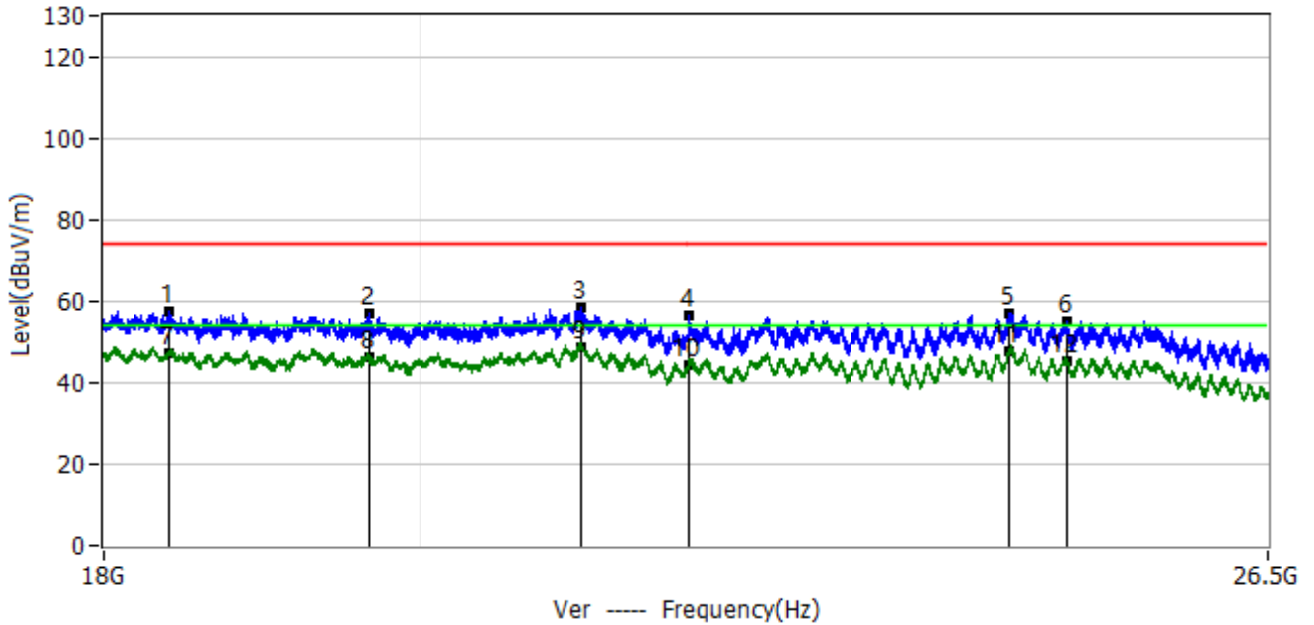
Project: LGT23H047	Test Engineer: Xiangdong Ma
EUT: Wireless guitar system	Temperature: 29.4°C
M/N: M6	Humidity: 43%RH
Test Voltage: Battery	Test Data: 2023-08-19
Test Mode: 5773	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	18.0754GHz	48.69	8.45	57.14	74.00	-16.86	PK	Hor
2*	19.2888GHz	50.05	7.25	57.30	74.00	-16.70	PK	Hor
3*	21.1025GHz	52.44	5.77	58.21	74.00	-15.79	PK	Hor
4*	22.8822GHz	50.04	5.62	55.66	74.00	-18.34	PK	Hor
5*	24.3336GHz	51.35	5.66	57.01	74.00	-16.99	PK	Hor
6*	25.1081GHz	50.71	4.32	55.03	74.00	-18.97	PK	Hor
7*	18.0754GHz	38.55	8.45	47.00	54.00	-7.00	AV	Hor
8*	19.2888GHz	41.75	7.25	49.00	54.00	-5.00	AV	Hor
9*	21.1025GHz	42.73	5.77	48.50	54.00	-5.50	AV	Hor
10*	22.8822GHz	40.88	5.62	46.50	54.00	-7.50	AV	Hor
11*	24.3336GHz	42.34	5.66	48.00	54.00	-6.00	AV	Hor
12*	25.1081GHz	40.98	4.32	45.30	54.00	-8.70	AV	Hor



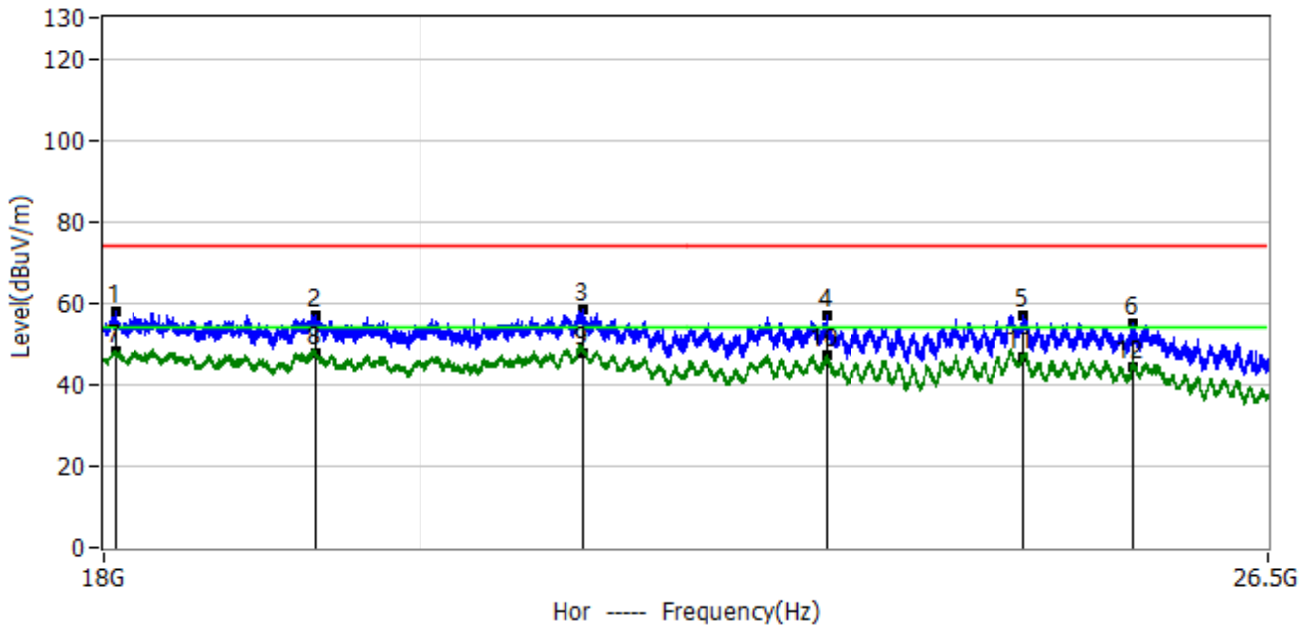
Project: LGT23H047	Test Engineer: Xiangdong Ma
EUT: Wireless guitar system	Temperature: 29.4°C
M/N: M6	Humidity: 43%RH
Test Voltage: Battery	Test Data: 2023-08-19
Test Mode: 5773	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	18.3952GHz	49.33	8.13	57.46	74.00	-16.54	PK	Ver
2*	19.6596GHz	50.06	6.89	56.95	74.00	-17.05	PK	Ver
3*	21.0982GHz	52.54	5.78	58.32	74.00	-15.68	PK	Ver
4*	21.8643GHz	51.11	5.24	56.35	74.00	-17.65	PK	Ver
5*	24.3293GHz	51.32	5.67	56.99	74.00	-17.01	PK	Ver
6*	24.7904GHz	50.27	4.87	55.14	74.00	-18.86	PK	Ver
7*	18.3952GHz	38.87	8.13	47.00	54.00	-7.00	AV	Ver
8*	19.6596GHz	39.21	6.89	46.10	54.00	-7.90	AV	Ver
9*	21.0982GHz	43.12	5.78	48.90	54.00	-5.10	AV	Ver
10*	21.8643GHz	39.16	5.24	44.40	54.00	-9.60	AV	Ver
11*	24.3293GHz	42.03	5.67	47.70	54.00	-6.30	AV	Ver
12*	24.7904GHz	40.43	4.87	45.30	54.00	-8.70	AV	Ver



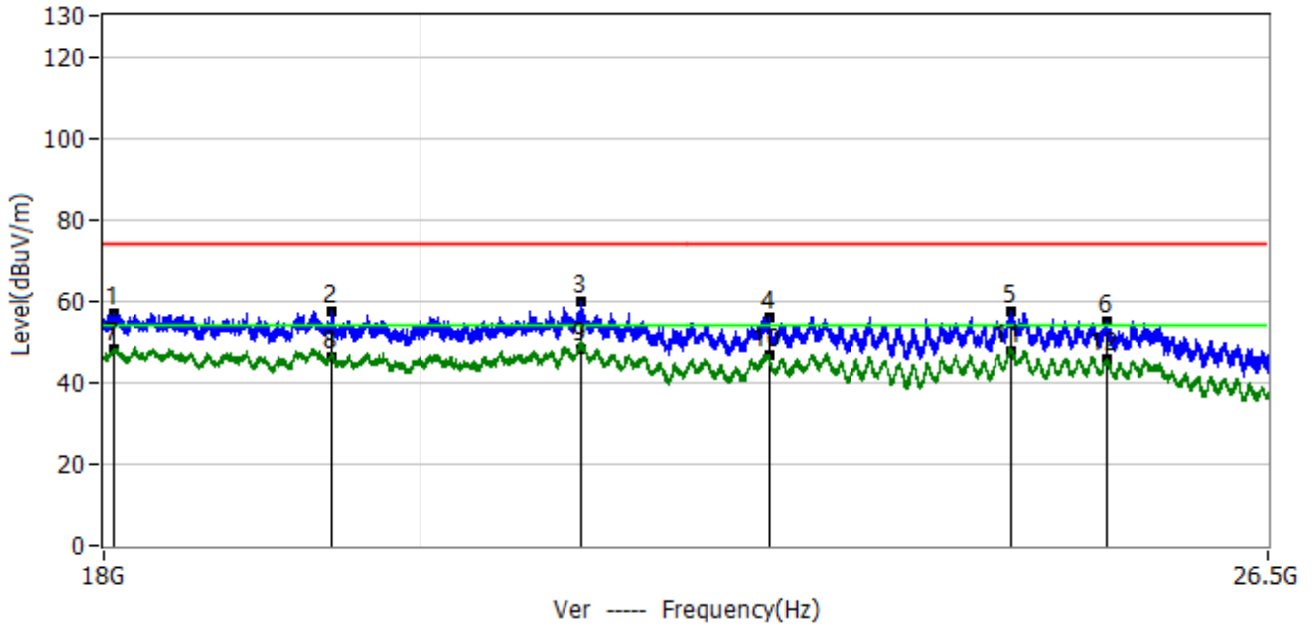
Project: LGT23H047	Test Engineer: Xiangdong Ma
EUT: Wireless guitar system	Temperature: 29.4°C
M/N: M6	Humidity: 43%RH
Test Voltage: Battery	Test Data: 2023-08-19
Test Mode: 5820	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	18.0691GHz	49.59	8.45	58.04	74.00	-15.96	PK	Hor
2*	19.3122GHz	49.93	7.23	57.16	74.00	-16.84	PK	Hor
3*	21.1142GHz	52.79	5.77	58.56	74.00	-15.44	PK	Hor
4*	22.8928GHz	51.33	5.63	56.96	74.00	-17.04	PK	Hor
5*	24.4387GHz	51.53	5.48	57.01	74.00	-16.99	PK	Hor
6*	25.3461GHz	51.34	3.89	55.23	74.00	-18.77	PK	Hor
7*	18.0691GHz	39.65	8.45	48.10	54.00	-5.90	AV	Hor
8*	19.3122GHz	40.57	7.23	47.80	54.00	-6.20	AV	Hor
9*	21.1142GHz	42.13	5.77	47.90	54.00	-6.10	AV	Hor
10*	22.8928GHz	41.37	5.63	47.00	54.00	-7.00	AV	Hor
11*	24.4387GHz	41.32	5.48	46.80	54.00	-7.20	AV	Hor
12*	25.3461GHz	40.61	3.89	44.50	54.00	-9.50	AV	Hor



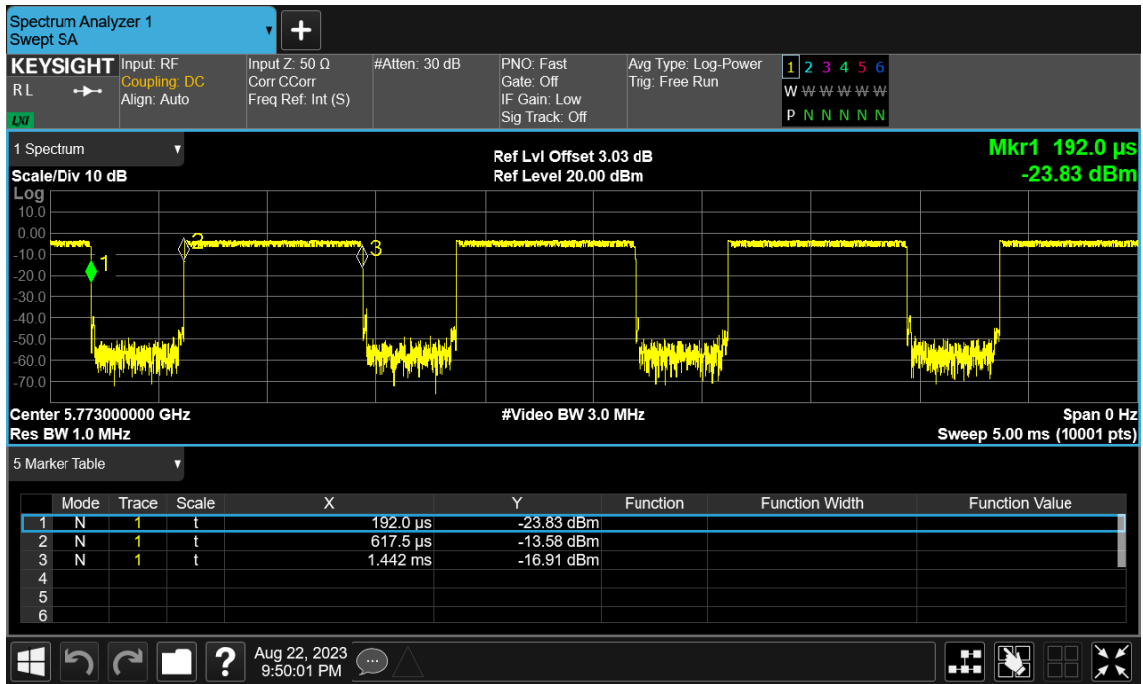
Project: LGT23H047	Test Engineer: Xiangdong Ma
EUT: Wireless guitar system	Temperature: 29.4°C
M/N: M6	Humidity: 43%RH
Test Voltage: Battery	Test Data: 2023-08-19
Test Mode: 5820	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	18.0648GHz	48.70	8.46	57.16	74.00	-16.84	PK	Ver
2*	19.4163GHz	50.43	7.12	57.55	74.00	-16.45	PK	Ver
3*	21.1046GHz	54.12	5.77	59.89	74.00	-14.11	PK	Ver
4*	22.4551GHz	50.77	5.39	56.16	74.00	-17.84	PK	Ver
5*	24.3357GHz	51.56	5.66	57.22	74.00	-16.78	PK	Ver
6*	25.1241GHz	50.73	4.29	55.02	74.00	-18.98	PK	Ver
7*	18.0648GHz	39.54	8.46	48.00	54.00	-6.00	AV	Ver
8*	19.4163GHz	39.08	7.12	46.20	54.00	-7.80	AV	Ver
9*	21.1046GHz	42.43	5.77	48.20	54.00	-5.80	AV	Ver
10*	22.4551GHz	41.11	5.39	46.50	54.00	-7.50	AV	Ver
11*	24.3357GHz	41.94	5.66	47.60	54.00	-6.40	AV	Ver
12*	25.1241GHz	41.51	4.29	45.80	54.00	-8.20	AV	Ver



Duty cycle



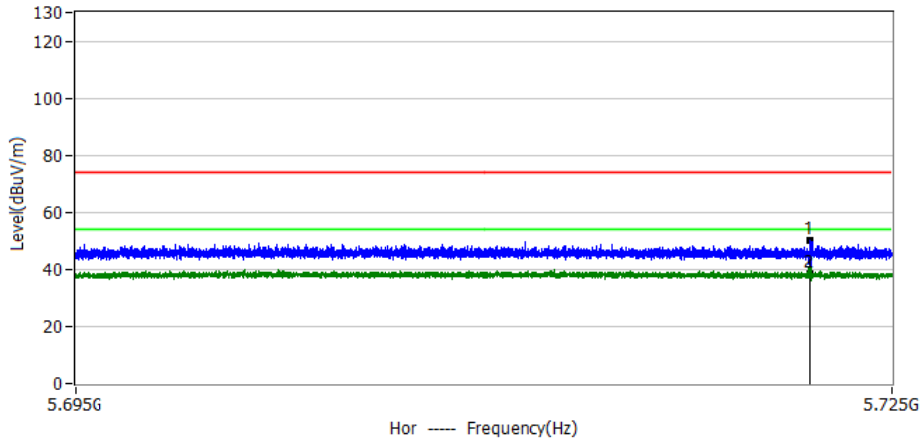
Ton (ms)	Tp (ms)	Duty Factor
0.820	1.250	-3.36

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

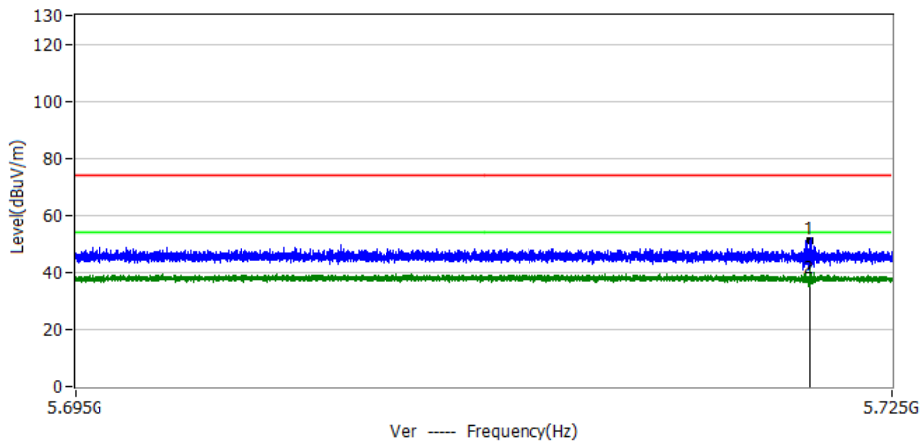


4.7 TEST RESULTS (BAND EDGE REQUIREMENTS)

Project: LGT23H047	Test Engineer: Xiangdong Ma
EUT: Wireless guitar system	Temperature: 29.4°C
M/N: M6	Humidity: 43%RH
Test Voltage: Battery	Test Data: 2023-08-19
Test Mode: 5731	
Note:	



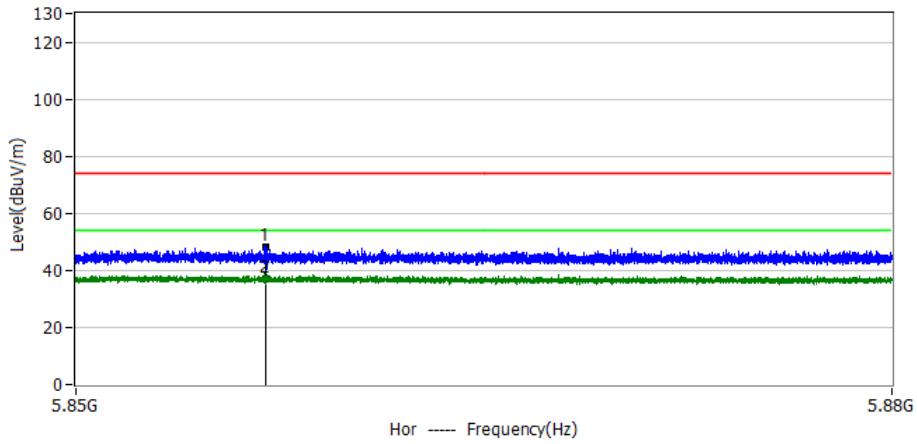
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.7220GHz	57.71	-7.65	50.06	74.00	-23.94	PK	Hor
2*	5.7220GHz	46.35	-7.65	38.70	54.00	-15.30	AV	Hor



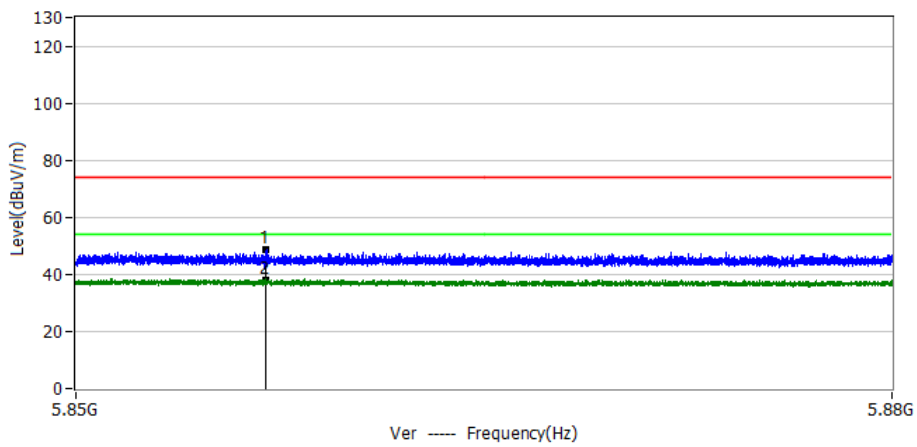
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.7220GHz	58.60	-7.65	50.95	74.00	-23.05	PK	Ver
2*	5.7220GHz	45.05	-7.65	37.40	54.00	-16.60	AV	Ver



Project: LGT23H047	Test Engineer: Xiangdong Ma
EUT: Wireless guitar system	Temperature: 29.4°C
M/N: M6	Humidity: 43%RH
Test Voltage: Battery	Test Data: 2023-08-19
Test Mode: 5820	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.8570GHz	55.90	-7.60	48.30	74.00	-25.70	PK	Hor
2*	5.8570GHz	44.60	-7.60	37.00	54.00	-17.00	AV	Hor



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.8570GHz	56.37	-7.60	48.77	74.00	-25.23	PK	Ver
2*	5.8570GHz	45.40	-7.60	37.80	54.00	-16.20	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

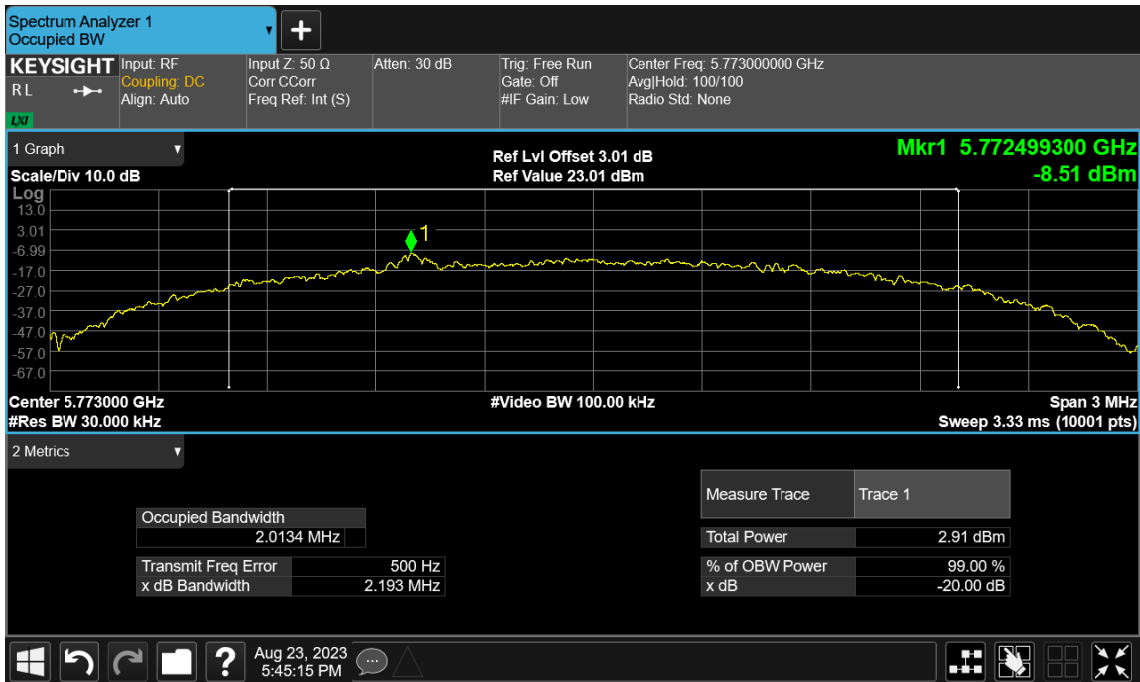
Test Channel	Frequency (MHz)	20 dB Bandwidth (MHz)	99% Bandwidth (MHz)
CH01	5731	2.245	2.0147
CH13	5773	2.193	2.0134
CH25	5820	2.164	2.0113

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 PCB Antenna. It comply with the standard requirement.

※※※※※END OF THE REPORT※※※※※