FCC RF TEST REPORT

For

Product: LiFePO4 Lithium Golf Cart Battery
Model:
GFA48V-105AH With Charger,GFA48V-100AH With Charger,GFS48V-105AH With Charger,GFS48V-60AH With Charger,GFA36V-105AH With Charger,GFS36V-105AH With Charger,GF36V-105AH With Charger,GFS36V-60AH With Charger
FCC ID: 2BR8S-GFA48V
Report No.: RKEYS250819026

Issued for

Shenzhen cloud new energy Co., Ltd.
Twelve Tree Manor q1-2, Sakata Street, Shenzhen ,518111,China

Issued by

Guangdong KEYS Testing Technology Co., Ltd.
Building 1, No.18, Shihuan Road, Dongcheng Subdistrict, Dongguan, Guangdong, China

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TABLE OF CONTENTS

1. TEST CERTIFICATION 3
2. TEST SUMMARY 4
3. TEST SITE 5
3.1. TEST FACILITY 5
3.2. MEASUREMENT UNCERTAINTY 5
3.3. Test Environment Condition 5
4. Test Equipment List 6
5. EUT DESCRIPTION 8
5.1. DESCRIPTION OF TEST CONFIGURATION 9
5.2. EQUIPMENT MODIFICATIONS 9
6. TEST METHODOLOGY 10
6.1. EUT SYSTEM OPERATION 10
6.2. CONFIGURATION AND MODE 10
7. SETUP OF EQUIPMENT UNDER TEST 11
7.1. DESCRIPTION OF SUPPORT UNITS 11
7.2. BLOCK DIAGRAM OF EUT CONFIGURATION 11
7.3. EUT EXERCISE SOFTWARE 11
8. TEST RESULTS AND MEASUREMENT DATA 13
8.1. ANTENNA REQUIREMENT 13
8.2. MAXIMUM CONDUCTED OUTPUT POWER 14
8.3. 6DB BANDWIDTH 15
8.4. POWER SPECTRAL DENSITY 16
8.5. OUT OF BAND CONDUCTED EMISSIONS 17
8.6. BAND EDGE 19
8.7. SPURIOUS RADIATED EMISSIONS 22
8.8. DUTY CYCLE 29
8.9. CONDUCTED EMISSION 30
9. PHOTOGRAPHS OF EUT SET-UP 32

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1. TEST CERTIFICATION

Product:	LiFePO4 Lithium Golf Cart Battery
Trade mark:	Cloudenergy
Model:	GFA48V-105AH With Charger
Model list:	GFA48V-100AH With Charger,GFS48V-105AH With Charger, GFS48V-60AH With Charger,GFA36V-105AH With Charger, GFS36V-105AH With Charger,GF36V-105AH With Charger, GFS36V-60AH With Charger
Applicant :	Shenzhen cloud new energy Co., Ltd.
Address:	Twelve Tree Manor q1-2, Sakata Street, Shenzhen ,518111,China
Manufacturer:	Shenzhen cloud new energy Co., Ltd.
Address:	Twelve Tree Manor q1-2, Sakata Street, Shenzhen ,518111,China
Sample Receive Date:	Aug. 19, 2025
Test Date:	Aug.20, 2025~Sep. 03, 2025
Applicable Standards:	FCC 47, CFR Part 15.247
Application Purpose	Original Grant

The above equipment has been tested by Guangdong KEYS Testing Technology Co., Ltd. and found compliance with the requirements in the technical standards mentioned above. The test results presented in this report only relate to the product/system tested. The other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Evan Fang

Prepared by: Evan Fang / Engineer

Bruce zhang

Approved by: Bruce Zhang / Manager

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2. TEST SUMMARY

FCC Part 15C	Description of Test	Result
15.247(b)(4)&15.203	Antenna Requirement	Pass
15.247(b)(3)	Maximum Conducted Output power	Pass
15.247(a)(2)	6 dB Bandwidth	Pass
15.247(e)	Power Spectral Density	Pass
15.247(d)	Out of Band Conducted Emission	Pass
15.247(d)&15.205&15.209	Band edge	Pass
15.247(d)&15.205&15.209	Spurious Radiated Emission	Pass
15.207	Conducted Emission on AC Mains	N/A

Note:N/A means not applicable.

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3. TEST SITE

3.1. TEST FACILITY

Guangdong KEYS Testing Technology Co., Ltd.
Address: Building 1, No.18, Shihuan Road, Dongcheng Subdistrict, Dongguan, Guangdong, China
A2LA Certificate Number.:7547.01
FCC Designation Number:CN1419
FCC Test Firm Registration Number:361541

3.2. MEASUREMENT UNCERTAINTY

Parameter	Uncertainty
Conducted Emission(150KHz-30MHz)	±3.2dB
Radiated Emission(30MHz-1GHz)	±4.7dB
Radiated Emission (1GHz-6GHz)	±5.1dB
Radiated Emission (6GHz-18GHz)	±5.1dB
Duty cycle	±0.11%
Occupied bandwidth	±1.9%
Power Spectral Density	±0.98dB
Out of Band Conducted Emission	9kHz-7GHz:±1.21dB 7GHz-40GHz: ±3.31dB

Note 1: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3.3. Test Environment Condition

Ambient Temperature:	24~25°C
Ambient Relative Humidity:	55~60 %

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4. Test Equipment List

Equipment	Manufacturer	Model	Equipment No.	Cal. Date	Cal. Interval
EMI Test Receiver	Rohde&Schwarz	ESCI	KEYS-EL-203	Mar. 03, 2025	1 Year
Pulse limiter	Rohde&Schwarz	ESH3-Z2	KEYS-EL-201	Mar. 03, 2025	1 Year
LISN	Rohde&Schwarz	ENV216	KEYS-EL-202	Mar. 03, 2025	1 Year
Shielding Room	Taihe Mao Rui Electronic Equipment Co., Ltd.	8m*4m*4m	KEYS-EL-230	Oct. 12, 2025	5 Year
EMI Test Receiver	Rohde&Schwarz	ESCI7	KEYS-EL-205	Mar. 03, 2025	1 Year
Logarithmic Periodic Broadband Antenna	SCHWARZBECK	VULB9168	KEYS-EL-209	Mar. 06, 2025	3 Year
Preamplifier	HP	8447F	KEYS-EL-210	Mar. 03, 2025	1 Year
Horn Antenna	SCHWARZBECK	BBHA 9120D	KEYS-EL-239	Mar. 06, 2025	3 Year
Preamplifier	/	1-18-53G22	KEYS-EL-240	Mar. 03, 2025	1 Year
Anechoic Chamber	Taihe Mao Rui Electronic Equipment Co., Ltd.	9m*6m*6m	KEYS-EL-230	Oct. 12, 2025	5 Year
Signal Analyzer	Keysight	N9020A	KEYS-EL-238	Mar. 03, 2025	1 Year
Spectrum Analyzer	Rohde&Schwarz	FSV-40N	KEYS-EL-269	Mar. 03, 2025	1 Year

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18-40GHz Antenna	COM-MW	ZLB7-18-40G-777	KEYS-EL-276	May 19, 2025	1 Year
18-40GHz Preamplifier	QUANJUDA	LNA-18004000-50G35	KEYS-EL-277	May 17, 2025	1 Year
Filter	WCS Technology	ZBSF6-C2400-2483.5-294	KEYS-EL-270	May 17, 2025	1 Year
RF Cable	Rosenberger	/	KEYS-EL-278	May 17, 2025	3 Year
RF Cable	COM-MW	DCA9-2.92M80002.92M3.6-1304	KEYS-EL-279	May 17, 2025	3 Year
DC Power	Agilent	E3632A	KEYS-EL-243	Mar. 03, 2025	1Year
Power Switch	WCS Technology	SMU-3002	KEYS-EL-247	Apr. 16, 2025	1 Year
RF Test Software	WCS Technology	WCN-Regulatory	Version 25.03.2901		
EMI Test Software	Tonscend	JS32-CE	Version 5.0.0		
EMI Test Software	Tonscend	JS32-RE	Version 5.0.0		

Note:The attenuator is integrated into the Power Switch Box and taken into consideration during testing.

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5. EUT DESCRIPTION

Product	LiFePO4 Lithium Golf Cart Battery
Test Model	GFA48V-105AH With Charger
Additional Model	GFA48V-100AH With Charger,GFS48V-105AH With Charger, GFS48V-60AH With Charger,GFA36V-105AH With Charger, GFS36V-105AH With Charger,GF36V-105AH With Charger, GFS36V-60AH With Charger
Rating	DC 51.2V
FCC ID	2BR8S-GFA48V
Antenna Type	PCB Antenna
Antenna Gain	2.5dBi
Operation Frequency	2402-2480MHz
Number of Channels:	40
Modulation Type	GFSK

Note:
1) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
2) Antenna gain was provided by the applicant/ manufacturer, and the applicant/ manufacturer is responsible for its validity.
3) The test results in the report only apply to the tested sample.
4) Models difference: All models are same as the samples except model name and capacity of battery,,they have the same structure/circuit.
5) The Antenna Gain is provided by the client and the client is responsible for the validity. Keys assumes no liability in this regard.

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5.1. DESCRIPTION OF TEST CONFIGURATION

Test channel list is as below:

0CH	2402 MHz	**20CH**	2442 MHz
1CH	2404 MHz	**21CH**	2444 MHz
2CH	2406 MHz	**22CH**	2446 MHz
3CH	2408 MHz	**23CH**	2448 MHz
4CH	2410 MHz	**24CH**	2450 MHz
5CH	2412 MHz	**25CH**	2452 MHz
6CH	2414 MHz	**26CH**	2454 MHz
7CH	2416 MHz	**27CH**	2456 MHz
8CH	2418 MHz	**28CH**	2458 MHz
9CH	2420 MHz	**29CH**	2460 MHz
10CH	2422 MHz	**30CH**	2462 MHz
11CH	2424 MHz	**31CH**	2464 MHz
12CH	2426 MHz	**32CH**	2466 MHz
13CH	2428 MHz	**33CH**	2468 MHz
14CH	2430 MHz	**34CH**	2470 MHz
15CH	2432 MHz	**35CH**	2472 MHz
16CH	2434 MHz	**36CH**	2474 MHz
17CH	2436 MHz	**37CH**	2476 MHz
18CH	2438 MHz	**38CH**	2478 MHz
19CH	2440 MHz	**39CH**	2480 MHz

Test Channel

- Low Channel:2402MHz
- Middle Channel: 2440MHz
- High Channel:2480MHz

5.2. EQUIPMENT MODIFICATIONS

Any modifications installed previous to testing by Shenzhen cloud new energy Co., Ltd. will be incorporated in each production model sold / leased in the United States.

No modifications were installed by KEYS Testing Technology Co., Ltd.

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6. TEST METHODOLOGY

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.10-2020 and KDB 558074 D01 v05r02.

6.1. EUT SYSTEM OPERATION

For emissions testing, the equipment under test (EUT) setup to transmit continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, all cables were manipulated to produce worst case emissions. The EUT was powered by 120V/50Hz during the test.

6.2. CONFIGURATION AND MODE

Mode	Data rate
GFSK	BLE 1M

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7. SETUP OF EQUIPMENT UNDER TEST

7.1. DESCRIPTION OF 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.

Support Equipment

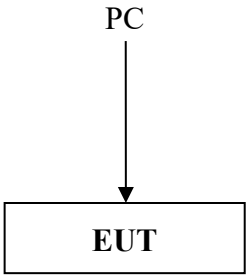
No.	Equipment	Model	Serial No.	Manufacturer
1	Notebook	Lenovo Rescuer 15ISK	PF0GS9S1	Lenovo
2	/	/	/	/

Support Cable

No.	Description	Shield	Length	Manufacturer
1	/	/	/	/
2	/	/	/	/

Note: 1) All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2) Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

7.2. BLOCK DIAGRAM OF EUT CONFIGURATION



(EUT: LiFePO4 Lithium Golf Cart Battery)

7.3. EUT EXERCISE SOFTWARE

Test software:EMI_TEST_v1.9

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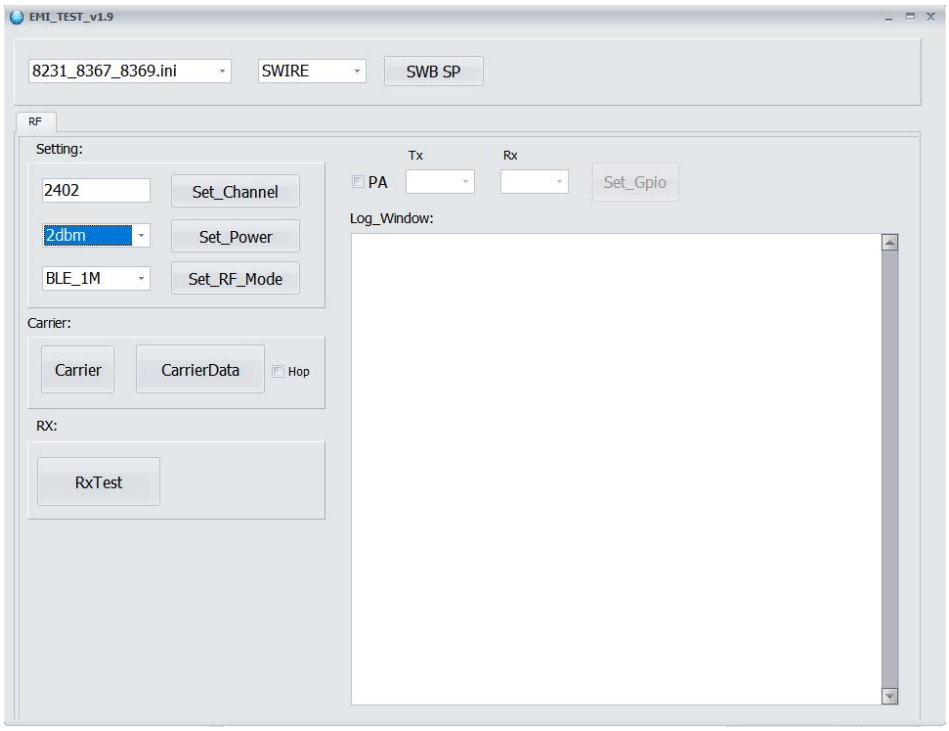
Mode	Frequency	Power setting	Transmitting type
BLE 1M	2402	2	data pack TX
BLE 1M	2440	2	data pack TX
BLE 1M	2480	2	data pack TX



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8. TEST RESULTS AND MEASUREMENT DATA

8.1. ANTENNA REQUIREMENT

Test Requirement:	FCC Part Part 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. FCC Part 15.247(b) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi.if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.
Test Result:	According to the manufacturer declared, the EUT has a PCB antenna, the Maximum directional gain of antenna is 2.5dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision. Refer to EUT Photo for further details.

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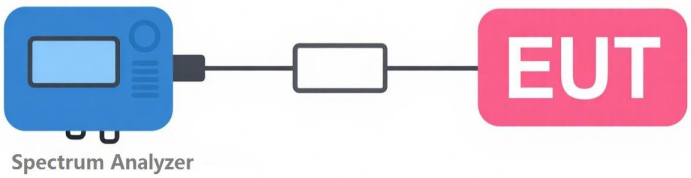
8.2. MAXIMUM CONDUCTED OUTPUT POWER

Test Requirement:	FCC Part 15.247 (b)(3)
Test Mode:	Transmitting mode with modulation
Limit:	For antennas with gains of 6 dBi or less, maximum allowed Transmitter output is 1 watt (+30 dBm).
Test Procedure:	Set spectrum analyzer as following: Set the RBW⩾DTS bandwidth. Set VBW⩾3 x RBW. Set span⩾3 x RBW Sweep time = auto couple. Detector = peak. Trace mode = max hold. Allow trace to fully stabilize. Use peak marker function to determine the peak amplitude level.
Test Result:	PASS

8.2.1.Test Setup:



8.2.2. Test Result

Please refer to Appendix A:Test Results of Bluetooth BLE.

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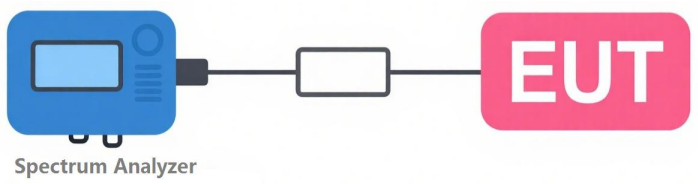
8.3. 6DB BANDWIDTH

Test Requirement:	FCC Part 15.247 (a)(2)
Test Mode:	Transmitting mode with modulation
Limit:	The 6 dB Bandwidth is at least 500 kHz.
Test Procedure:	Set spectrum analyzer as following: Set RBW= 100kHz. Set VBW= 300kHz. Detector =Peak. Trace mode = max hold. Sweep= auto couple. Allow the trace to stabilize. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points(upper and lower) that are attenuated by 6dB relative to the maximum level measured in the fundamental emission
Test Result:	PASS

8.3.1.Test Setup:



8.3.2.Test Result

Please refer to Appendix A:Test Results of Bluetooth BLE.

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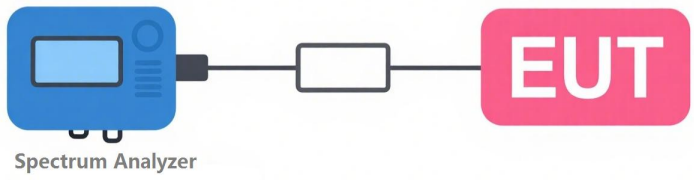
8.4. POWER SPECTRAL DENSITY

Test Requirement:	FCC Part 15.247 (e)
Test Mode:	Transmitting mode with modulation
Limit:	The Power Density does not exceed 8dBm/3 kHz.
Test Procedure:	Set spectrum analyzer as following: Set RBW⩾3kHz. Set VBW⩾3 x RBW. Set span to 1.5 times the DTS bandwidth Sweep time = auto couple. Detector = peak. Trace mode = max hold. Allow trace to fully stabilize. Use peak marker function to determine the peak amplitude level.
Test Result:	PASS

8.4.1.Test Setup:



8.4.2. Test Result

Please refer to Appendix A:Test Results of Bluetooth BLE.

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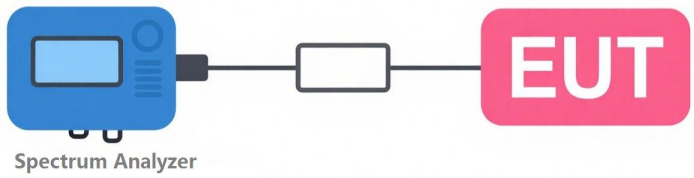
8.5. OUT OF BAND CONDUCTED EMISSIONS

Test Requirement:	FCC Part15.247 (d)
Test Mode:	Transmitting mode with modulation
Limit:	At least 20 dB below the highest level of the desired power in the pass band. In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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 an RF conducted.
Test Procedure:	Measurement Procedure -Reference Level Set the RBW = 100 kHz.a. Set the VBW ≥ 300 kHz. Detector = peak. Sweep time = auto couple Trace mode = max hold.。 Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW. Measurement Procedure -Unwanted Emission Level Set RBW = 100 kHz. Set VBW ≥ 300 kHz. Set span to encompass the spectrum to be examined. Detector = peak. Trace Mode = max hold.2 Sweep = auto couple.
Test Result:	PASS

8.5.1.Test Setup:



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8.5.2.Test Result

Please refer to Appendix A:Test Results of Bluetooth BLE.

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8.6. BAND EDGE

<table>
<tr><td>Test Requirement:</td><td colspan="3">FCC Part15 C 15.247(d), 15.205, 15.209</td></tr>
<tr><td>Test Mode:</td><td colspan="3">Transmitting mode with modulation</td></tr>
<tr><td>Limit:</td><td colspan="3"><table>
<tr><td>Frequency Range</td><td>Field Strength Limit (μV/m) at 3 m</td><td>Measurement Distance(meters)</td></tr>
<tr><td>0.009~0.490</td><td>2400/F(kHz)</td><td>300</td></tr>
<tr><td>0.490~1.705</td><td>24000/F(kHz)</td><td>30</td></tr>
<tr><td>1.705~30.0</td><td>30</td><td>30</td></tr>
<tr><td>30-88</td><td>100</td><td>3</td></tr>
<tr><td>88-216</td><td>150</td><td>3</td></tr>
<tr><td>216-960</td><td>200</td><td>3</td></tr>
<tr><td>Above 960</td><td>500</td><td>3</td></tr>
</table></td></tr>
<tr><td>Test Procedure:</td><td colspan="3">1. The EUT was placed on a turntable with 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
Set to the maximum power setting and enable the EUT transmit continuously.</td></tr>
<tr><td>Test Result:</td><td colspan="3">Pass</td></tr>
</table>

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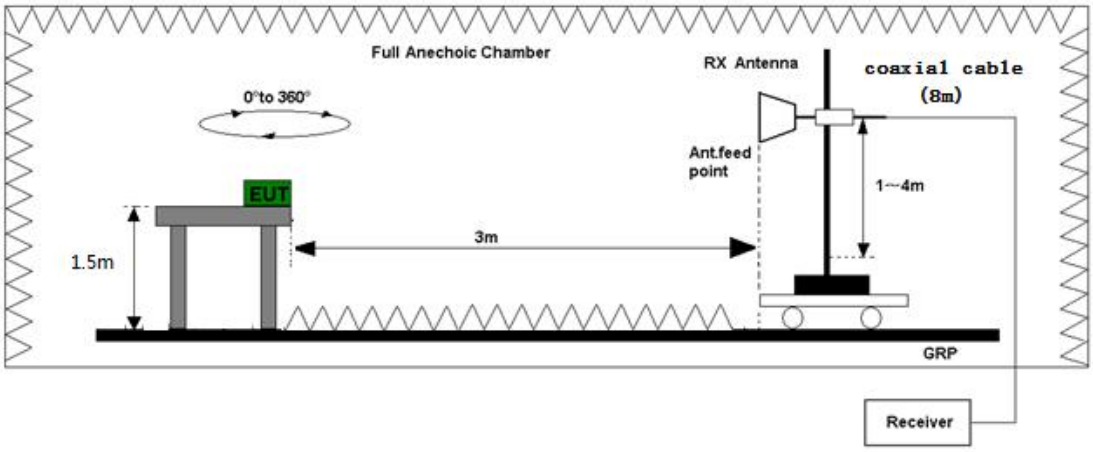
8.6.1.Test Setup:



8.6.2.Test Result

Test Voltage	DC 51.2V

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GFSK-2402MHz:

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Cable Loss（dB）	Emission Level (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)	Detector Type
Horizontal	2390.00	79.2	55.6	28.2	4.6	56.4	74.0	-17.6	PK
Horizontal	2390.00	60.2	55.6	28.2	4.6	37.4	54.0	-16.6	AV

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Cable Loss（dB）	Emission Level (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)	Detector Type
Vertical	2390.00	81.1	55.6	28.2	4.6	58.3	74.0	-15.7	PK
Vertical	2390.00	60.2	55.6	28.2	4.6	37.4	54.0	-16.6	AV

GFSK-2480MHz:

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Cable Loss（dB）	Emission Level (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)	Detector Type
Horizontal	2483.50	80.1	55.9	28.9	5.2	58.3	74.0	-15.7	PK
Horizontal	2483.50	59.2	55.9	28.9	5.2	37.4	54.0	-16.6	AV

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Cable Loss（dB）	Emission Level (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)	Detector Type
Vertical	2483.50	78.9	55.9	28.9	5.2	57.1	74.0	-16.9	PK
Vertical	2483.50	69.3	55.9	28.9	5.2	47.5	54.0	-6.5	AV

Note:(1)Emission Level=Reading-Pre-Amp.Gain+Antenna+Cable loss

(2)Margin=Level-limit

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8.7. SPURIOUS RADIATED EMISSIONS

Test Requirement:	FCC Part15 C 15.247(d), 15.205, 15.209
Test Mode:	Transmitting mode with modulation
Limit:	

Frequency Range	Field Strength Limit (μV/m) at 3 m	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
Above 960	500	3

Test Procedure:	4. The EUT was placed on a turntable with 1.5 meter for frequency above 1GHz respectively above ground. 5. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower. 6. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines. Set to the maximum power setting and enable the EUT transmit continuously.
Test Result:	Pass

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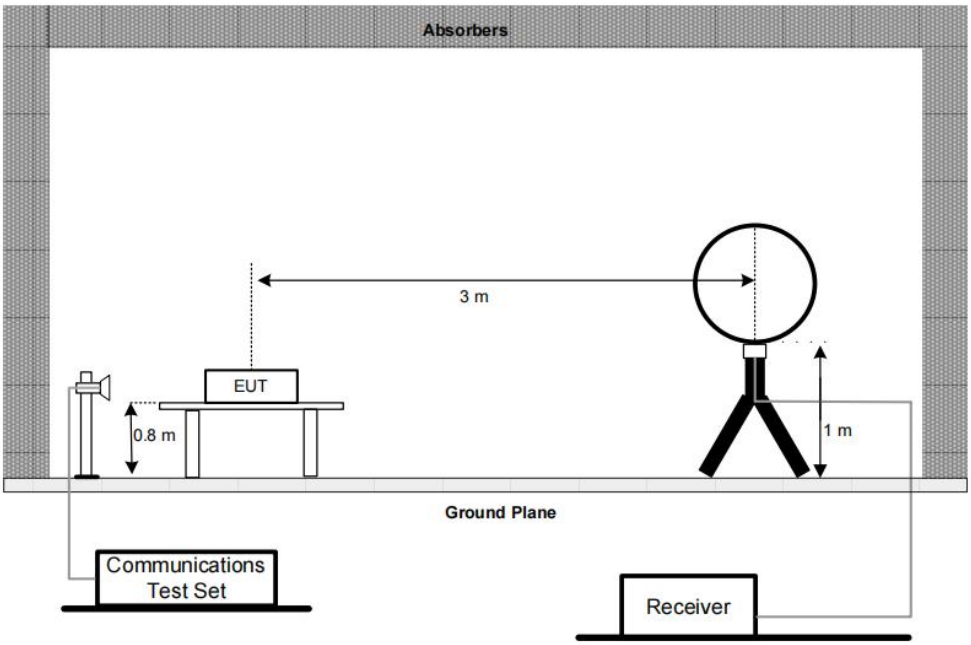
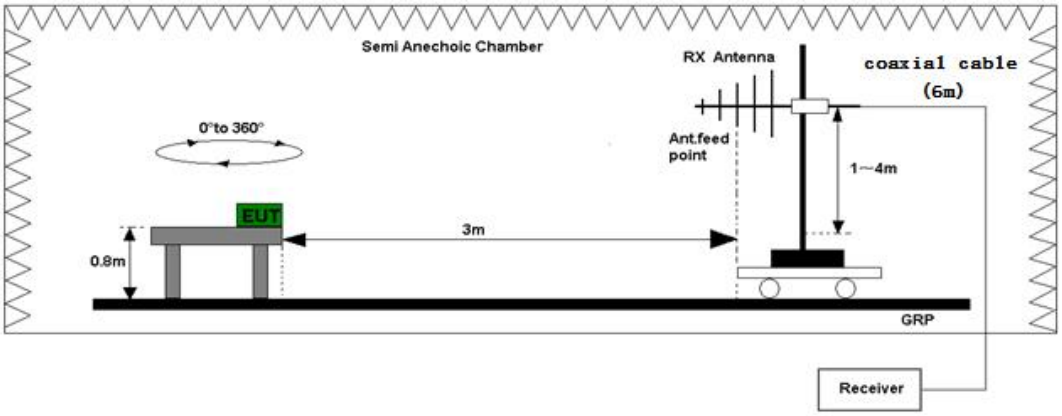
8.7.1.Test Setup:



Test set-up of radiated disturbance (Up to 30MHz)



Test set-up of radiated disturbance (30MHz to 1GHz)

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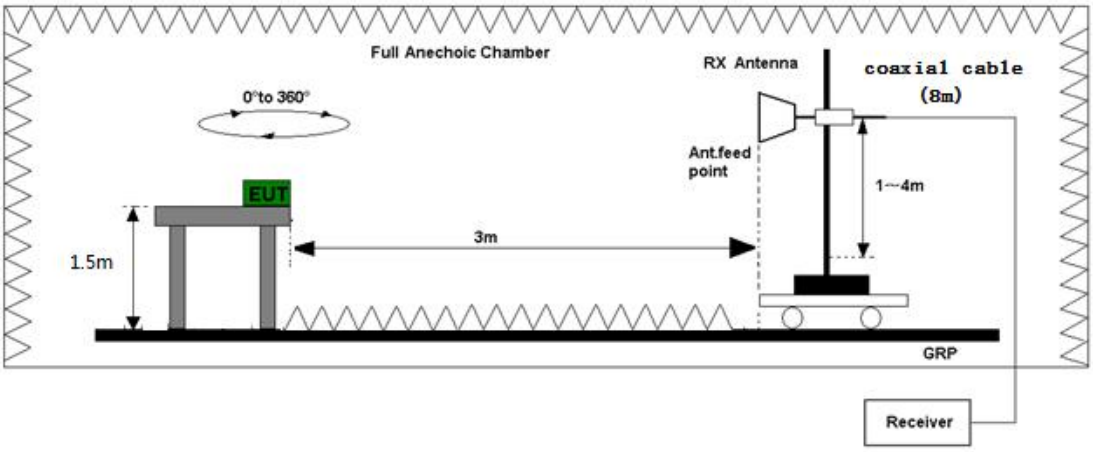

Test set-up of radiated disturbance (Above 1GHz)

8.7.2. Test Result

Test Voltage	DC 51.2V

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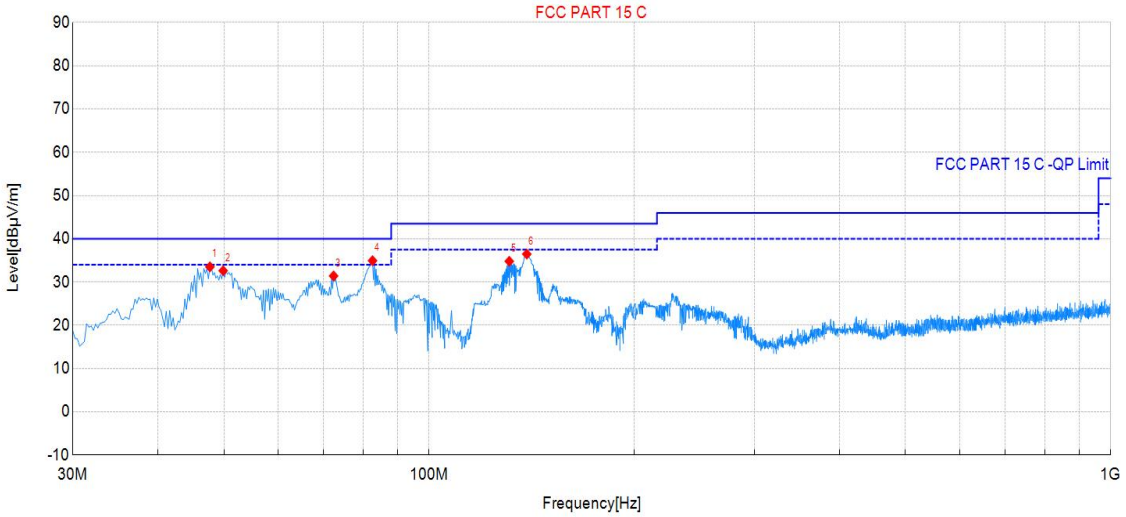
Worst-case Spurious Emission below 1GHz

GFSK:2402MHz

Please refer to the following diagram:

Vertical:



Suspected Data List											
NO.	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	47.70	50.69	33.52	-17.17	40.00	6.48	100	204	QP	Vert	PASS
2	49.89	49.85	32.63	-17.22	40.00	7.37	100	223	QP	Vert	PASS
3	72.44	51.24	31.41	-19.83	40.00	8.59	100	110	QP	Vert	PASS
4	82.62	55.58	34.94	-20.64	40.00	5.06	100	165	QP	Vert	PASS
5	131.12	51.81	34.81	-17.00	43.50	8.69	100	73	QP	Vert	PASS
6	139.13	52.90	36.47	-16.43	43.50	7.03	100	91	QP	Vert	PASS

Note:(1)Level=Reading+Factor

(2)Margin=Limit-Level

(3)Factor=Antenna Factor+ Cable Loss - Amplifier Factor

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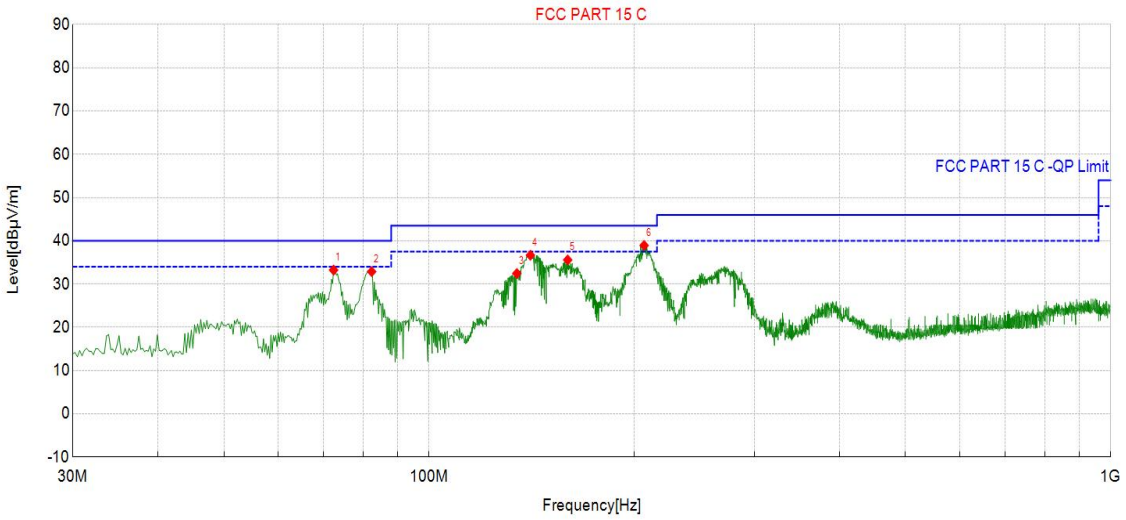
Horizontal:



Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	72.44	53.07	33.24	-19.83	40.00	6.76	100	2	QP	Hori	PASS
2	82.38	53.51	32.88	-20.63	40.00	7.12	100	345	QP	Hori	PASS
3	134.52	49.21	32.45	-16.76	43.50	11.05	100	359	QP	Hori	PASS
4	140.82	53.01	36.66	-16.35	43.50	6.84	100	1	QP	Hori	PASS
5	159.74	51.60	35.58	-16.02	43.50	7.92	100	119	QP	Hori	PASS
6	206.78	58.64	38.93	-19.71	43.50	4.57	100	316	QP	Hori	PASS

Note:(1)Level=Reading+Factor

(2)Margin=Limit-Level

(3)Factor=Antenna Factor+ Cable Loss - Amplifier Factor

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Radiated Emissions (above 1GHz)

GFSK-2402MHz:

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Cable Loss（dB）	Emission Level (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)	Detector Type
Horizontal	4804.00	72.1	56.6	32.1	6.6	54.2	74.0	-19.8	PK
Horizontal	4804.00	58.2	56.6	32.1	6.6	40.3	54.0	-13.7	AV

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Cable Loss（dB）	Emission Level (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)	Detector Type
Vertical	4804.00	71.3	56.6	32.1	6.6	53.4	74.0	-20.6	PK
Vertical	4804.00	57.1	56.6	32.1	6.6	39.2	54.0	-14.8	AV

GFSK-2440MHz:

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Cable Loss（dB）	Emission Level (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)	Detector Type
Horizontal	4882.00	73.2	56.7	32.2	6.7	55.4	74.0	-18.6	PK
Horizontal	4882.00	59.3	56.7	32.2	6.7	41.5	54.0	-12.5	AV

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Cable Loss（dB）	Emission Level (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)	Detector Type
Vertical	4882.00	74.3	56.7	32.2	6.7	56.5	74.0	-17.5	PK
Vertical	4882.00	60.2	56.7	32.2	6.7	42.4	54.0	-11.6	AV

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GFSK-2480MHz:

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Cable Loss（dB）	Emission Level (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)	Detector Type
Horizontal	4960.00	72.1	56.8	33.3	6.8	55.4	74.0	-18.6	PK
Horizontal	4960.00	57.3	56.8	33.3	6.8	40.6	54.0	-13.4	AV

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Cable Loss（dB）	Emission Level (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)	Detector Type
Vertical	4960.00	73.2	56.8	33.3	6.8	56.5	74.0	-17.5	PK
Vertical	4960.00	58.2	56.8	33.3	6.8	41.5	54.0	-12.5	AV

Note:(1)Emission Level=Reading-Pre-Amp.Gain+Antenna+Cable loss

(2)Margin=Level-limit

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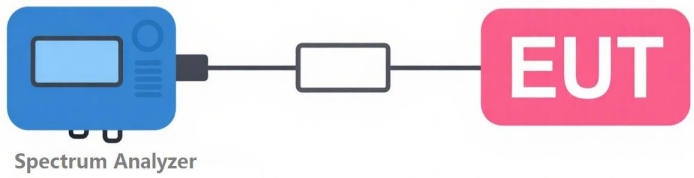
8.8. DUTY CYCLE

Test Procedure:	The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings: Span=0Hz Set the RBW =8MHz Set the VBW⩾RBW Detector = Average. Sweep time = auto couple Trace mode = Clear write Use the marker-delta function to determine the Tx On and Tx off..

8.8.1.Test Setup:



8.8.2.Test Result

Please refer to Appendix A:Test Results of Bluetooth BLE.

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8.9. CONDUCTED EMISSION

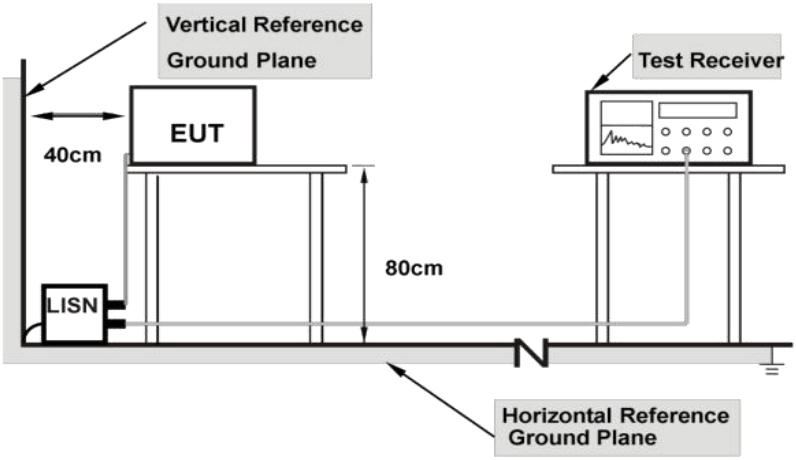
Test Requirement:	FCC Part15 15.207
Test Mode:	Transmitting mode with modulation
Limit:	

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

Test Procedure:	For tabletop equipment, the EUT along with its peripherals were placed on a 1.0m(W)×1.5m(L) and 0.8m in height wooden table. The EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane. The EUT was connected to power mains through a line impedance stabilization network (LISN), which provided 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room. The excess power cable between the EUT and the LISN was bundled.
Test Result:	Pass

8.9.1.Test Setup:



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8.9.2.Test Result

N/A.The EUT is only powered by DC Power.

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9. PHOTOGRAPHS OF EUT SET-UP

For photographs of the test set-up, refer to the appendix B.

**** End of Report ****

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