



## Test Report

Date : 2023-04-18  
No. : HMD23040001

Page 1 of 40

**Applicant** : PIN Genie Inc, DBA LOCKLY.  
676 Transfer Rd., St. Paul, MN 55114

**Supplier / Manufacturer** : Smart Electronic Industrial (Dongguan) Co., Ltd  
Qing Long Road, Long Jian Tian Village, Huang Jiang Town, Dong  
Guan, Guang Dong, China

**Description of Sample(s)** : Submitted sample(s) said to be  
Product: Lockly Smart Safe  
Brand Name: LOCKLY  
Model No.: PGV528W  
FCC ID: 2ASIVPGV528WG30

**Date Samples Received** : 2023-04-04

**Date Tested** : 2023-04-04 to 2023-04-11

**Investigation Requested** : Perform ElectroMagnetic Interference measurement in accordance  
with FCC 47CFR [Codes of Federal Regulations] Part 15 and ANSI  
C63.10:2013 for FCC Certification.

**Conclusions** : The submitted product COMPLIED with the requirements of Federal  
Communications Commission [FCC] Rules and Regulations Part 15.  
The tests were performed in accordance with the standards described  
above and on Section 2.2 in this Test Report.

**Remarks** : Bluetooth DTS (GFSK)

  
Dr.CHAN Kwok Fung, Brian  
Authorized Signatory





## Test Report

Date : 2023-04-18  
No. : HMD23040001

Page 2 of 40

### CONTENT:

Cover	Page 1 of 40	
Content	Page 2 of 40	
<b><u>1.0</u></b>	<b><u>General Details</u></b>	
1.1	Test Laboratory	Page 3 of 40
1.2	Equipment Under Test [EUT] Description of EUT operation	Page 3 of 40
1.3	Date of Order	Page 3 of 40
1.4	Submitted Sample(s)	Page 3 of 40
1.5	Test Duration	Page 3 of 40
1.6	Country of Origin	Page 3 of 40
1.7	RF Module Details	Page 4 of 40
1.8	Antenna Details	Page 4 of 40
1.9	Channel List	Page 4 of 40
<b><u>2.0</u></b>	<b><u>Technical Details</u></b>	
2.1	Investigations Requested	Page 5 of 40
2.2	Test Standards and Results Summary	Page 6 of 40
<b><u>3.0</u></b>	<b><u>Test Results</u></b>	
3.1	Emission	Page 7-35 of 40
<b><u>Appendix A</u></b>		
List of Measurement Equipment		Page 36 of 40
<b><u>Appendix B</u></b>		
Photograph(s) of Product		Page 37-40 of 40



## Test Report

Date : 2023-04-18  
No. : HMD23040001

Page 3 of 40

### **1.0 General Details**

#### **1.1 Test Laboratory**

The Hong Kong Standards and Testing Centre Ltd.  
EMC Laboratory  
10 Dai Wang Street, Taipo Industrial Estate, New Territories, Hong Kong  
Telephone: 852 2666 1888  
Fax: 852 2664 4353

#### **1.2 Equipment Under Test [EUT]**

##### **Description of Sample(s)**

Product: Lockly Smart Safe  
Manufacturer: Smart Electronic Industrial (Dongguan) Co., Ltd  
Qing Long Road, Long Jian Tian Village, Huang Jiang Town,  
Dong Guan, Guang Dong, China  
Brand Name: LOCKLY  
Model Number: PGV528W  
Rating: 6Vd.c. ("AA" battery x4)  
5Vd.c. by adapter

The AC/DC adapter was provided by the applicant with following details:  
Brand name: LOCKLY; Model no.: 617058  
Input: 100-240Va.c. 50-60Hz 0.15A , Output:5Vd.c. 1A

#### **1.2.1 Description of EUT Operation**

The Equipment Under Test (EUT) is a Lockly Smart Safe. The transmission signal is digital modulated with channel frequency range 2402-2480MHz. The R.F. signal was modulated by IC; the type of modulation used was digital transmission Modulation.

#### **1.3 Date of Order**

2023-04-03

#### **1.4 Submitted Sample(s):**

1 Sample

#### **1.5 Test Duration**

2023-04-04 to 2023-04-11

#### **1.6 Country of Origin**

China

The Hong Kong Standards and Testing Centre Limited  
10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@stc.group Website: www.stc.group

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.



## Test Report

Date : 2023-04-18  
No. : HMD23040001

Page 4 of 40

### 1.7 RF Module Details

Module Model Number: N/A  
Module FCC ID: N/A  
Module Transmission Type: Bluetooth 5.0 BLE  
Modulation: GFSK  
Data Rates: 1Mbps  
Frequency Range: 2400-2483.5MHz  
Carrier Frequencies: 2402MHz – 2480MHz

Module Specification (specification provided by manufacturer)

### 1.8 Antenna Details

Antenna Type: FPC antenna  
Antenna Gain: 0.9dBi

### 1.9 Channel List

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

The Hong Kong Standards and Testing Centre Limited  
10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@stc.group Website: www.stc.group

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.

## Test Report

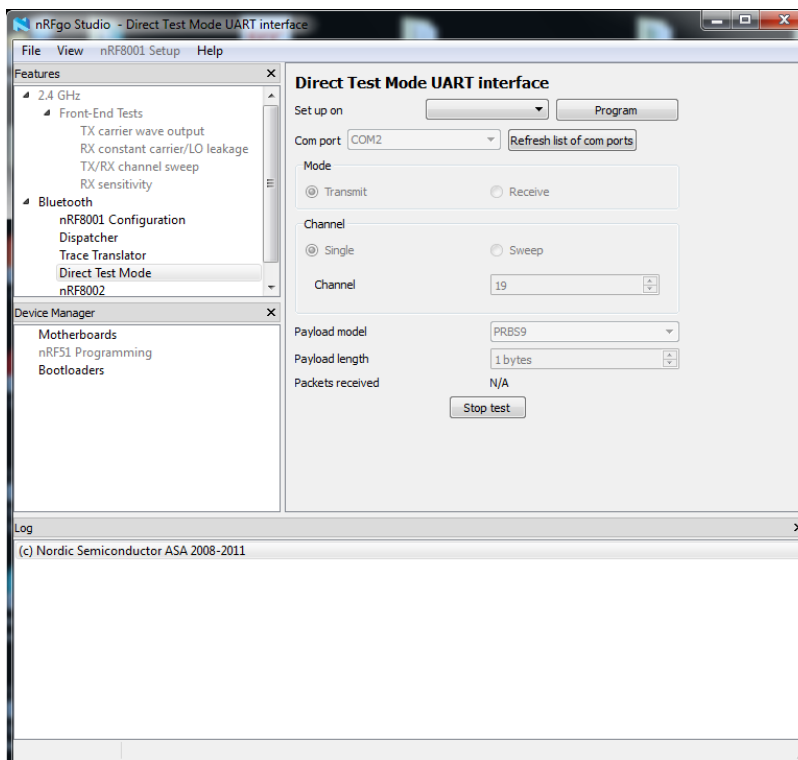
Date : 2023-04-18  
No. : HMD23040001

Page 5 of 40

### 2.0 Technical Details

#### **2.1 Investigations Requested**

Perform Electromagnetic Interference measurements in accordance with FCC 47CFR [Codes of Federal Regulations] Part 15: 2017 Regulations and ANSI C63.10:2013 for FCC Certification. The device was realized by test software, and there is no power set.





## Test Report

Date : 2023-04-18  
No. : HMD23040001

Page 6 of 40

### 2.2 Test Standards and Results Summary Tables

EMISSION Results Summary						
Test Condition	Test Requirement	Test Method	Class / Severity	Test Result		
				Pass	Failed	N/A
Maximum Peak Output Power	FCC 47CFR 15.247(b)(3)	ANSI C63.10: 2013	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Radiated Spurious Emissions	FCC 47CFR 15.209 FCC 47CFR 15.205	ANSI C63.10: 2013	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AC Mains Conducted Emissions	FCC 47CFR 15.207	ANSI C63.10: 2013	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conducted Spurious Emissions	FCC 47CFR 15.247(d)	ANSI C63.10: 2013	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Power Spectral Density	FCC 47CFR 15.247(e)	ANSI C63.10: 2013	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6dB Bandwidth	FCC 47CFR 15.247(a)(2)	ANSI C63.10: 2013	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Band Edge Emissions (Radiated)	FCC 47CFR 15.247(d)	ANSI C63.10: 2013	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Antenna requirement	FCC 47CFR 15.203	N/A	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note: N/A - Not Applicable

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@stc.group Website: www.stc.group

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.

## Test Report

Date : 2023-04-18  
No. : HMD23040001

Page 7 of 40

### 3.0 Test Results

#### **3.1 Emission**

##### **3.1.1 Maximum Peak Output Power**

Test Requirement:	FCC 47CFR 15.247(b)(3)
Test Method:	ANSI C63.10: 2013
Test Date:	2023-04-04
Mode of Operation:	Bluetooth DTS Tx mode

Ambient Temperature: 25°C      Relative Humidity: 51%      Atmospheric Pressure: 101 kPa

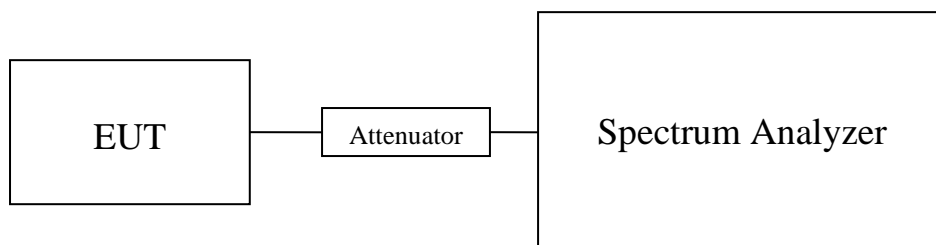
#### **Test Method:**

The RF output of the EUT was connected to the spectrum analyzer. All the attenuation or cable loss will be added to the measured maximum output power. The results are recorded in Watt.

#### **Spectrum Analyzer Setting:**

RBW = 2 MHz,  
VBW= 6MHz,  
Sweep = Auto,  
Span = 6MHz  
Detector = Peak,  
Trace = Max. hold

#### **Test Setup:**



Note: a temporary antenna connector was soldered to the RF output.



## Test Report

Date : 2023-04-18  
No. : HMD23040001

Page 8 of 40

### Limits for Peak Output Power of Fundamental & Harmonics Emissions [FCC 47CFR 15.247]:

For Digital Transmission systems in 2400-2483.5 MHz Band: 1 Watt (30dBm)

Results of BT DTS Tx Mode (2402MHz to 2480MHz): Pass (TX Unit) (GFSK)					
Channel	Frequency (MHz)	Conducted power(dBm)	Antenna Gain(dBi)	E.I.R.P(dBm)	E.I.R.P (Watt)
0	2402	-10.098	0.9	-9.198	0.000120
19	2440	-9.511	0.9	-8.611	0.000138
39	2480	-9.123	0.9	-8.223	0.000151

Calculated measurement uncertainty : 30MHz to 1GHz 1.7dB  
1GHz to 26GHz 1.7dB

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@stc.group Website: www.stc.group

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.





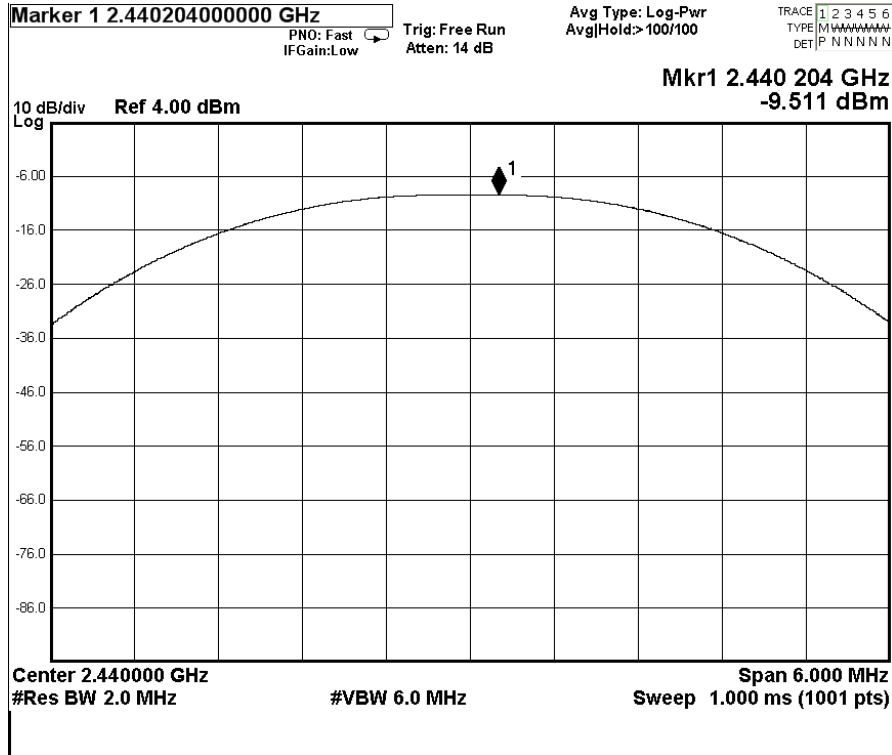


# Test Report

Date : 2023-04-18  
No. : HMD23040001

Page 10 of 40

Bluetooth Communication mode (BT DTS-GFSK, 2440MHz)







## Test Report

Date : 2023-04-18  
No. : HMD23040001

Page 12 of 40

### 3.1.2 Radiated Emissions

Test Requirement:	FCC 47CFR 15.209
Test Method:	ANSI C63.10:2013
Test Date:	2023-04-06
Mode of Operation:	Tx mode / Bluetooth Communication mode (GFSK)

Ambient Temperature: 25°C      Relative Humidity: 50%      Atmospheric Pressure: 101 kPa

#### **Test Method:**

For emission measurements at or below 1 GHz, the sample was placed 0.8m above the ground plane of semi-anechoic Chamber\*. For emission measurements above 1 GHz, the sample was placed 1.5m above the ground plane of semi-anechoic Chamber\*. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

\* Semi-Anechoic chamber located on the G/F of The Hong Kong Standards and Testing Centre Ltd. with Registration Number: HK0001  
Test Firm Registration Number: 367672

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@stc.group Website: www.stc.group

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.

## Test Report

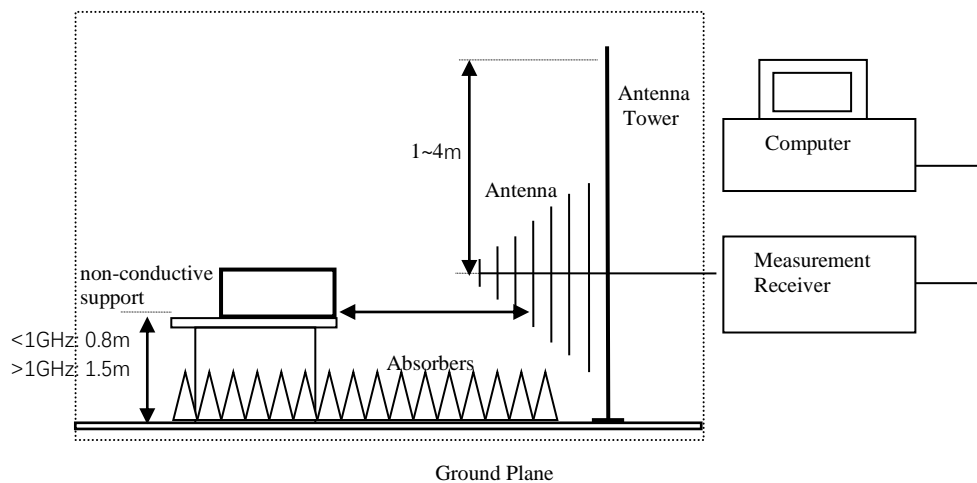
**Date : 2023-04-18**  
**No. : HMD23040001**

**Page 13 of 40**

**Spectrum Analyzer Setting:**

9KHz – 30MHz (Pk & Av)	RBW: 10kHz VBW: 30kHz Sweep: Auto Span: Fully capture the emissions being measured Trace: Max. hold
30MHz – 1GHz (QP)	RBW: 120kHz VBW: 120kHz Sweep: Auto Span: Fully capture the emissions being measured Trace: Max. hold
Above 1GHz (Pk)	RBW: 1MHz VBW: 1MHz Sweep: Auto Span: Fully capture the emissions being measured Trace: Max. hold
Above 1GHz (Av)	RBW: 1MHz VBW: 10Hz Sweep: Auto Span: Fully capture the emissions being measured Trace: Max. hold

**Test Setup:**



- Absorbers placed on top of the ground plane are for measurements above 1000MHz only.
- Measurements between 30MHz to 1000MHz made with Bi-log antennas, above 1000MHz horn antennas are used.



## Test Report

Date : 2023-04-18  
No. : HMD23040001

Page 14 of 40

### Limits for Radiated Emissions FCC 47 CFR 15.209]:

Frequency Range [MHz]	Quasi-Peak Limits [ $\mu$ V/m]
0.009-0.490	2400/F (kHz)
0.490-1.705	24000/F (kHz)
1.705-30	30
30-88	100
88-216	150
216-960	200
Above960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

#### Remarks:

No additional spurious emissions found between lowest internal used/generated frequency and 30 MHz

\* Denotes restricted band of operation.

Measurements were made using a peak detector. Any emission less than 1000MHz and falling within the restricted bands of FCC Rules Part 15 Section 15.205 and the limits of FCC Rules Part 15 Section 15.209 were applied.

Correction Factor included Antenna Factor and Cable Attenuation.

Calculated measurement uncertainty (9kHz-30MHz): 2.0dB  
(30MHz -1GHz): 4.9dB  
(1GHz -6GHz): 4.02dB  
(6GHz -26.5GHz): 4.03dB

Emissions in the vertical and horizontal polarizations have been investigated and the worst-case test results are recorded in this report.

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@stc.group Website: www.stc.group

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.



## Test Report

Date : 2023-04-18  
 No. : HMD23040001

Page 15 of 40

**Result of Tx mode (2402.0 MHz) (GFSK) (9kHz – 30MHz): Pass**

<b>Field Strength of Spurious Emissions Peak Value</b>						
Frequency MHz	Measured Level dB $\mu$ V	Correction Factor dB/m	Field Strength dB $\mu$ V/m	Field Strength uV/m	Limit uV/m	E-Field Polarity
<b>Emissions detected are more than 20 dB below the FCC Limits</b>						

**Result of Tx mode (2402.0 MHz) (GFSK) (Above 1GHz): Pass**

<b>Field Strength of Spurious Emissions Peak Value</b>						
Frequency MHz	Measured Level @3m dB $\mu$ V	Correction Factor dB/m	Field Strength dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB	E-Field Polarity
4804.0	54.6	0.8	55.4	74.0	18.6	Vertical
4804.0	54.0	0.5	54.5	74.0	19.5	Horizontal
7206.0	47.5	7.0	54.5	74.0	19.5	Vertical
7206.0	48.0	6.5	54.5	74.0	19.5	Horizontal
9608.0	47.1	8.5	55.6	74.0	18.4	Vertical
9608.0	47.2	8.3	55.5	74.0	18.5	Horizontal
12010.0	45.2	10.9	56.1	74.0	17.9	Vertical
12010.0	45.0	10.8	55.8	74.0	18.2	Horizontal

<b>Field Strength of Spurious Emissions Average Value</b>						
Frequency MHz	Measured Level @3m dB $\mu$ V	Correction Factor dB/m	Field Strength dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB	E-Field Polarity
4804.0	39.9	0.8	40.7	54.0	13.3	Vertical
4804.0	39.3	0.5	39.8	54.0	14.2	Horizontal
7206.0	33.1	7.0	40.1	54.0	13.9	Vertical
7206.0	32.5	6.5	39.0	54.0	15.0	Horizontal
9608.0	32.4	8.5	40.9	54.0	13.1	Vertical
9608.0	31.7	8.3	40.0	54.0	14.0	Horizontal
12010.0	30.6	10.9	41.5	54.0	12.5	Vertical
12010.0	30.0	10.8	40.8	54.0	13.2	Horizontal



## Test Report

Date : 2023-04-18

Page 16 of 40

No. : HMD23040001

**Result of Tx mode (2440.0 MHz) (GFSK) (9kHz – 30MHz): Pass**

<b>Field Strength of Spurious Emissions Peak Value</b>						
Frequency MHz	Measured Level dBuV	Correction Factor dB/m	Field Strength dBuV/m	Field Strength uV/m	Limit uV/m	E-Field Polarity
<b>Emissions detected are more than 20 dB below the FCC Limits</b>						

**Result of Tx mode (2440.0 MHz) (GFSK) (Above 1GHz): Pass**

<b>Field Strength of Spurious Emissions Peak Value</b>						
Frequency MHz	Measured Level @3m dBuV	Correction Factor dB/m	Field Strength dBuV/m	Limit @3m dBuV/m	Margin dB	E-Field Polarity
4880.0	54.1	0.8	54.9	74.0	19.1	Vertical
4880.0	53.9	0.5	54.4	74.0	19.6	Horizontal
7320.0	47.5	7.0	54.5	74.0	19.5	Vertical
7320.0	47.7	6.5	54.2	74.0	19.8	Horizontal
9760.0	45.2	8.5	53.7	74.0	20.3	Vertical
9760.0	45.9	8.3	54.2	74.0	19.8	Horizontal
12200.0	44.3	10.9	55.2	74.0	18.8	Vertical
12200.0	44.1	10.8	54.9	74.0	19.1	Horizontal

<b>Field Strength of Spurious Emissions Average Value</b>						
Frequency MHz	Measured Level @3m dBuV	Correction Factor dB/m	Field Strength dBuV/m	Limit @3m dBuV/m	Margin dB	E-Field Polarity
4880.0	39.2	0.8	40.0	54.0	14.0	Vertical
4880.0	38.9	0.5	39.4	54.0	14.6	Horizontal
7320.0	32.6	7.0	39.6	54.0	14.4	Vertical
7320.0	32.9	6.5	39.4	54.0	14.6	Horizontal
9760.0	31.8	8.5	40.3	54.0	13.7	Vertical
9760.0	31.5	8.3	39.8	54.0	14.2	Horizontal
12200.0	29.8	10.9	40.7	54.0	13.3	Vertical
12200.0	28.9	10.8	39.7	54.0	14.3	Horizontal

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@stc.group Website: www.stc.group

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.





## Test Report

Date : 2023-04-18  
 No. : HMD23040001

Page 17 of 40

**Result of Tx mode (2480.0 MHz) (GFSK) (9kHz – 30MHz): Pass**

<b>Field Strength of Spurious Emissions Peak Value</b>						
Frequency MHz	Measured Level dBuV	Correction Factor dB/m	Field Strength dBuV/m	Field Strength uV/m	Limit uV/m	E-Field Polarity
<b>Emissions detected are more than 20 dB below the FCC Limits</b>						

**Result of Tx mode (2480.0 MHz) (GFSK) (Above 1GHz): Pass**

<b>Field Strength of Spurious Emissions Peak Value</b>						
Frequency MHz	Measured Level @3m dBuV	Correction Factor dB/m	Field Strength dBuV/m	Limit @3m dBuV/m	Margin dB	E-Field Polarity
4960.0	53.2	0.8	54.0	74.0	20.0	Vertical
4960.0	53.6	0.5	54.1	74.0	19.9	Horizontal
7440.0	47.5	7.0	54.5	74.0	19.5	Vertical
7440.0	46.8	6.5	53.3	74.0	20.7	Horizontal
9920.0	46.2	8.5	54.7	74.0	19.3	Vertical
9920.0	45.8	8.3	54.1	74.0	19.9	Horizontal
12400.0	44.6	10.9	55.5	74.0	18.5	Vertical
12400.0	45.0	10.8	55.8	74.0	18.2	Horizontal

<b>Field Strength of Spurious Emissions Average Value</b>						
Frequency MHz	Measured Level @3m dBuV	Correction Factor dB/m	Field Strength dBuV/m	Limit @3m dBuV/m	Margin dB	E-Field Polarity
4960.0	38.6	0.8	39.4	54.0	14.6	Vertical
4960.0	38.7	0.5	39.2	54.0	14.8	Horizontal
7440.0	32.1	7.0	39.1	54.0	14.9	Vertical
7440.0	31.9	6.5	38.4	54.0	15.6	Horizontal
9920.0	30.9	8.5	39.4	54.0	14.6	Vertical
9920.0	30.8	8.3	39.1	54.0	14.9	Horizontal
12400.0	28.9	10.9	39.8	54.0	14.2	Vertical
12400.0	28.5	10.8	39.3	54.0	14.7	Horizontal



## Test Report

Date : 2023-04-18  
 No. : HMD23040001

Page 18 of 40

**Radiated Emissions Measurement:**

**Limit :**

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 either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 5.205(c)).

**Result: RF Radiated Emissions (Lowest)-GFSK**

<b>Field Strength of Band-edge Compliance</b>						
<b>Peak Value</b>						
Frequency MHz	Measured Level @3m dB $\mu$ V	Correction Factor dB/m	Field Strength dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB	E-Field Polarity
2390.0	45.1	-4.8	40.3	74.0	33.7	Vertical
2390.0	44.1	-4.7	39.4	74.0	34.7	Horizontal

<b>Field Strength of Band-edge Compliance</b>						
<b>Average Value</b>						
Frequency MHz	Measured Level @3m dB $\mu$ V	Correction Factor dB/m	Field Strength dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB	E-Field Polarity
2390.0	39.6	-4.8	34.8	54.0	19.2	Vertical
2390.0	38.7	-4.7	34.0	54.0	20.0	Horizontal

**Result: RF Radiated Emissions (Highest) -GFSK**

<b>Field Strength of Band-edge Compliance</b>						
<b>Peak Value</b>						
Frequency MHz	Measured Level @3m dB $\mu$ V	Correction Factor dB/m	Field Strength dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB	E-Field Polarity
2483.5	46.5	-4.8	41.7	74.0	32.3	Vertical
2483.5	45.7	-4.7	41.0	74.0	33.0	Horizontal

<b>Field Strength of Band-edge Compliance</b>						
<b>Average Value</b>						
Frequency MHz	Measured Level @3m dB $\mu$ V	Correction Factor dB/m	Field Strength dB $\mu$ V/m	Limit @3m dB $\mu$ V/m	Margin dB	E-Field Polarity
2483.5	41.4	-4.8	36.6	54.0	17.4	Vertical
2483.5	41.5	-4.7	36.8	54.0	17.2	Horizontal



## Test Report

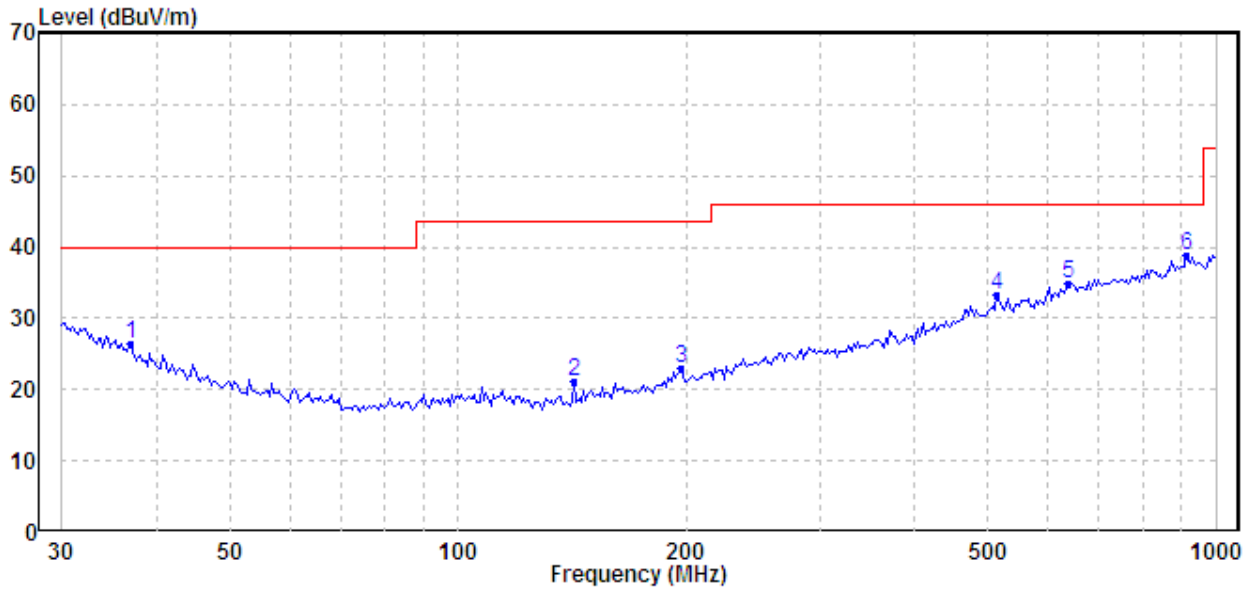
Date : 2023-04-18  
 No. : HMD23040001

Page 19 of 40

**Results of Bluetooth Communication mode (2402.0 MHz) (30MHz – 1GHz): Pass**

Please refer to the following table for result details(The data is the worst cases)

Horizontal



Ambient Temperature: 22.3C

Relative Humidity : 50.2%

	Freq	Level	Limit	Over	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB		
1	37.025	26.43	40.00	-13.57	QP	Horizontal
2	142.324	21.09	43.50	-22.41	QP	Horizontal
3	196.510	23.00	43.50	-20.50	QP	Horizontal
4	513.633	33.16	46.00	-12.84	QP	Horizontal
5	638.369	34.96	46.00	-11.04	QP	Horizontal
6	912.862	38.72	46.00	-7.28	QP	Horizontal

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@stc.group Website: www.stc.group

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.



## Test Report

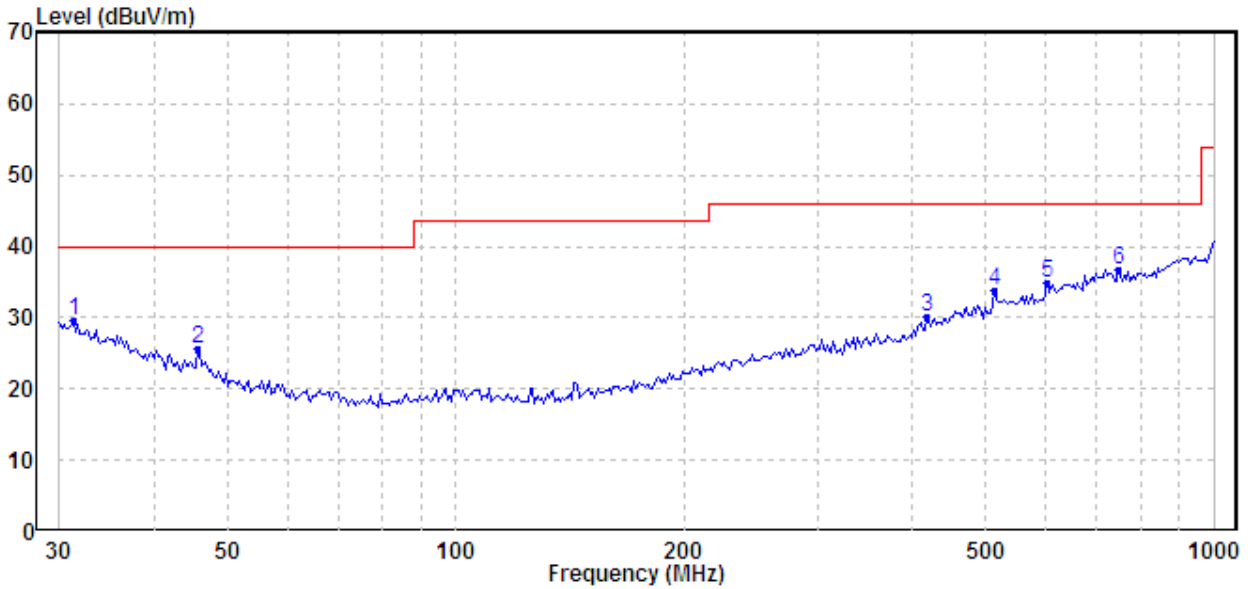
Date : 2023-04-18  
 No. : HMD23040001

Page 20 of 40

**Results of Bluetooth Communication mode (2402.0 MHz) (30MHz – 1GHz): Pass**

Please refer to the following table for result details(The data is the worst cases)

Vertical



Ambient Temperature: 22.3C  
 Relative Humidity : 50.2%

	Freq	Level	Limit	Over	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB		
1	31.289	29.46	40.00	-10.54	QP	Vertical
2	45.695	25.71	40.00	-14.29	QP	Vertical
3	419.108	30.24	46.00	-15.76	QP	Vertical
4	513.633	33.72	46.00	-12.28	QP	Vertical
5	603.539	34.95	46.00	-11.05	QP	Vertical
6	750.108	36.70	46.00	-9.30	QP	Vertical

## Test Report

**Date : 2023-04-18**  
**No. : HMD23040001**

**Page 21 of 40**

### 3.1.3 AC Mains Conducted Emissions (0.15MHz to 30MHz)

Test Requirement:	FCC 47CFR 15.207
Test Method:	ANSI C63.10:2013
Test Date:	2023-04-06
Mode of Operation:	Bluetooth Communication mode
Test Voltage:	120Va.c. 60Hz

Ambient Temperature: 25°C      Relative Humidity: 51%      Atmospheric Pressure: 101 kPa

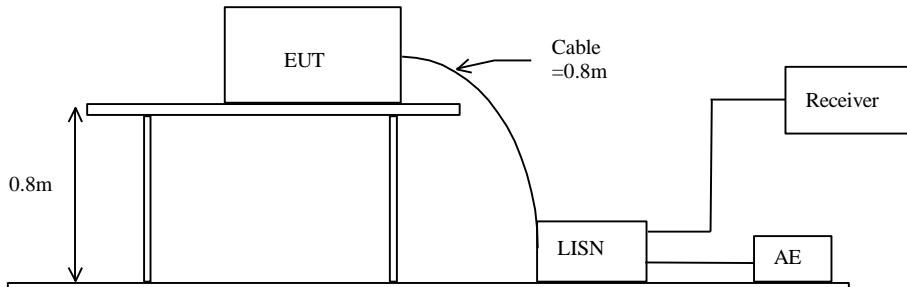
#### Test Method:

The test was performed in accordance with ANSI C63.10:2013, with the following: an initial measurement was performed in peak and average detection mode on the live line, any emissions recorded within 30dB of the relevant limit line were re-measured using quasi-peak and average detection on the live and neutral lines with the worst case recorded in the table of results.

#### Receiver Setting:

Bandw. = 9 kHz, Meas. Time= 10.0 ms, Step Width = 5.0kHz  
 Detector = MaxPeak and CISPR AV

#### Test Setup:



#### Limits for Conducted Emissions (FCC 47 CFR 15.207):

Frequency Range [MHz]	Quasi-Peak Limits [dBμV]	Average [dBμV]
0.15-0.5	66 to 56*	56 to 46*
0.5-5.0	56	46
5.0-30.0	60	50

\* Decreases with the logarithm of the frequency.

#### Remarks:

Calculated measurement uncertainty (0.15MHz – 30MHz): 3.25dB

-\*- Emission(s) that is far below the corresponding limit line.

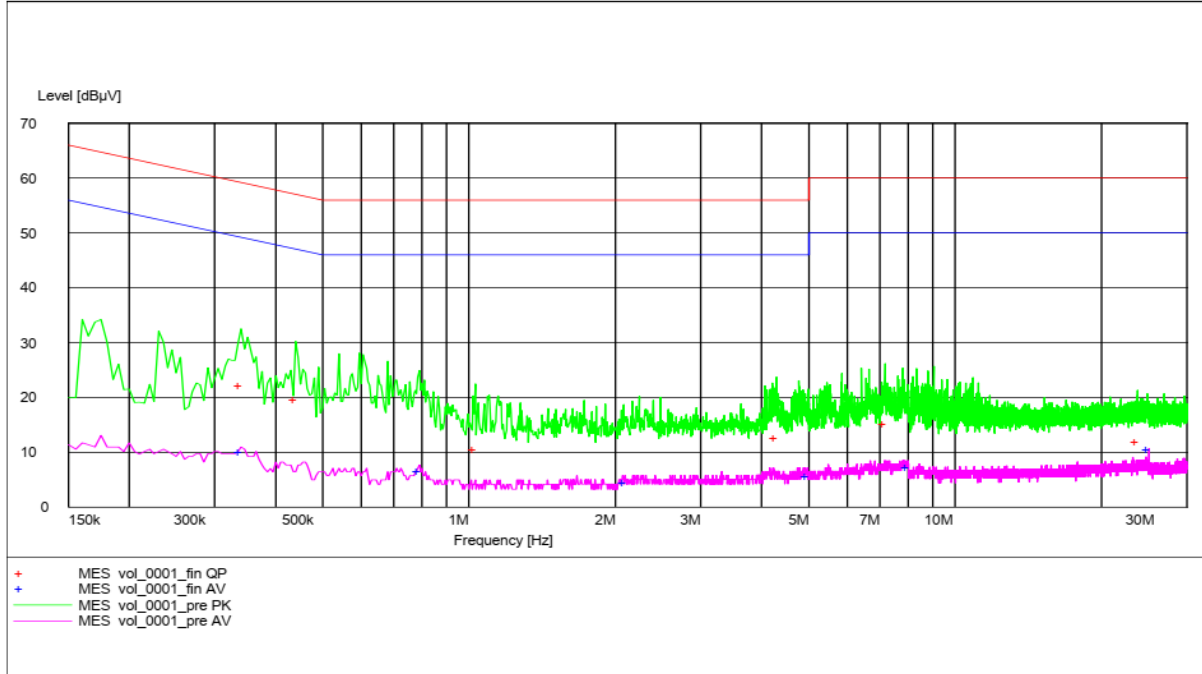
## Test Report

Date : 2023-04-18  
 No. : HMD23040001

Page 22 of 40

**Results of Bluetooth Communication mode (connect to adapter) (L): PASS**

Please refer to the following diagram for individual results.



**MEASUREMENT RESULT: "vol\_0001\_fin QP"**

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.340000	22.30	9.7	59	36.9	L1	GND
0.440000	19.70	9.7	57	37.3	L1	GND
1.030000	10.60	9.7	56	45.4	L1	GND
4.290000	12.60	9.8	56	43.4	L1	GND
7.175000	15.20	9.9	60	44.8	L1	GND
23.735000	11.90	10.6	60	48.1	L1	GND

**MEASUREMENT RESULT: "vol\_0001\_fin AV"**

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.340000	10.10	9.7	49	39.1	L1	GND
0.790000	6.60	9.7	46	39.4	L1	GND
2.095000	4.50	9.8	46	41.5	L1	GND
4.975000	5.60	9.8	46	40.4	L1	GND
8.010000	7.40	9.9	50	42.6	L1	GND
25.060000	10.60	10.7	50	39.4	L1	GND

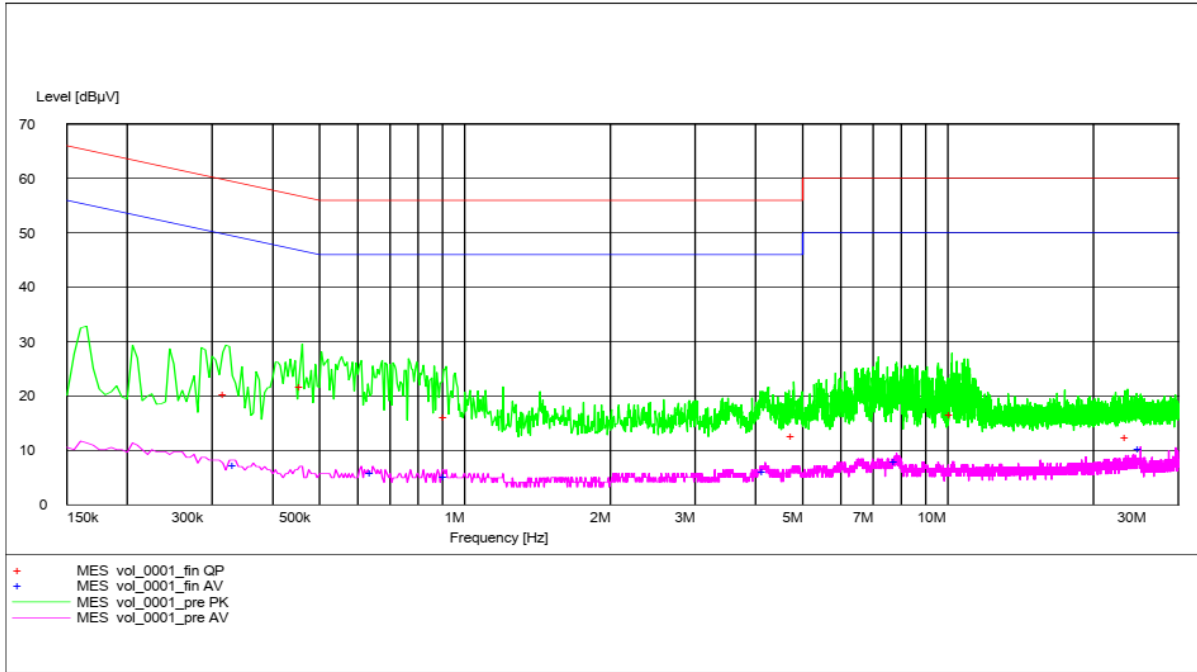
## Test Report

Date : 2023-04-18  
 No. : HMD23040001

Page 23 of 40

**Results of Bluetooth Communication mode (connect to adapter) (N): PASS**

Please refer to the following diagram for individual results.



**MEASUREMENT RESULT: "vol\_0001\_fin QP"**

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.320000	20.30	9.7	60	39.4	N	GND
0.460000	21.80	9.7	57	34.9	N	GND
0.915000	16.20	9.7	56	39.8	N	GND
4.800000	12.60	9.8	56	43.4	N	GND
10.200000	16.70	10.0	60	43.3	N	GND
23.520000	12.30	10.6	60	47.7	N	GND

**MEASUREMENT RESULT: "vol\_0001\_fin AV"**

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.335000	7.40	9.7	49	41.9	N	GND
0.645000	5.80	9.7	46	40.2	N	GND
0.915000	5.10	9.7	46	40.9	N	GND
4.185000	6.20	9.8	46	39.8	N	GND
7.835000	8.10	9.9	50	41.9	N	GND
25.060000	10.20	10.7	50	39.8	N	GND



## Test Report

Date : 2023-04-18  
No. : HMD23040001

Page 24 of 40

### 3.1.4 Power Spectral Density

Test Requirement: FCC 47CFR 15.247(e)  
Test Method: ANSI C63.10:2013  
Test Date: 2023-04-04  
Mode of Operation: Tx mode

Ambient Temperature: 25°C      Relative Humidity: 51%      Atmospheric Pressure: 101 kPa

#### Test Method:

The RF output of the EUT was connected to the spectrum analyzer. Set the fundamental frequency as the center frequency of the spectral analyzer. Use RBW=3kHz, VBW= 10KHz, Set the span to 1.5 times the DTS channel bandwidth. Detector = peak, Sweep time = auto couple, Trace mode = max hold. Measure the Power Spectral Density (PSD) and record the results in dBm.

#### Test Setup:

As Test Setup of clause 3.1.1 in this test report.

#### Test Limit:

The maximum power spectral density (PSD) shall not exceeded 8dBm in any 3kHz band.

**Results of Tx Mode GFSK (Tx:2402MHz to 2480MHz) : Pass (Tx Unit)**  
**Maximum power spectral density**

Transmitter Frequency (MHz)	Maximum Power spectral density level / 3kHz band (dBm)	Maximum Power spectral density / 3kHz band limit
2402.0	-26.966	8dBm
2440.0	-26.046	8dBm
2480.0	-25.865	8dBm

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@stc.group Website: www.stc.group

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.



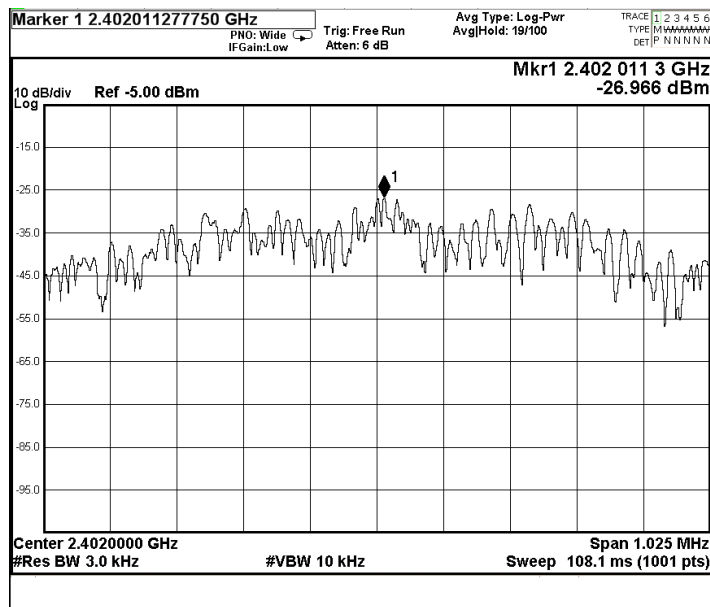


## Test Report

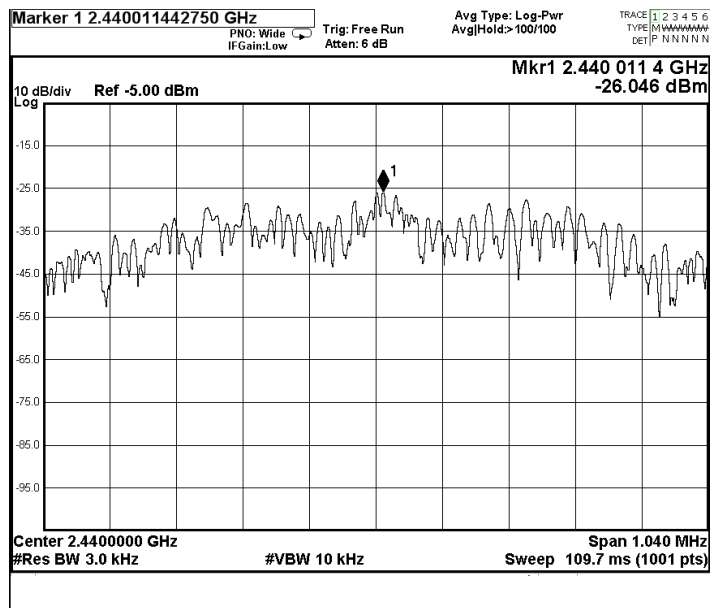
Date : 2023-04-18  
No. : HMD23040001

Page 25 of 40

Tx mode GFSK (Tx: 2402MHz to 2480MHz)  
CH 0 (2402.0 MHz)



CH 19 (2440.0 MHz)



The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@stc.group Website: www.stc.group

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.

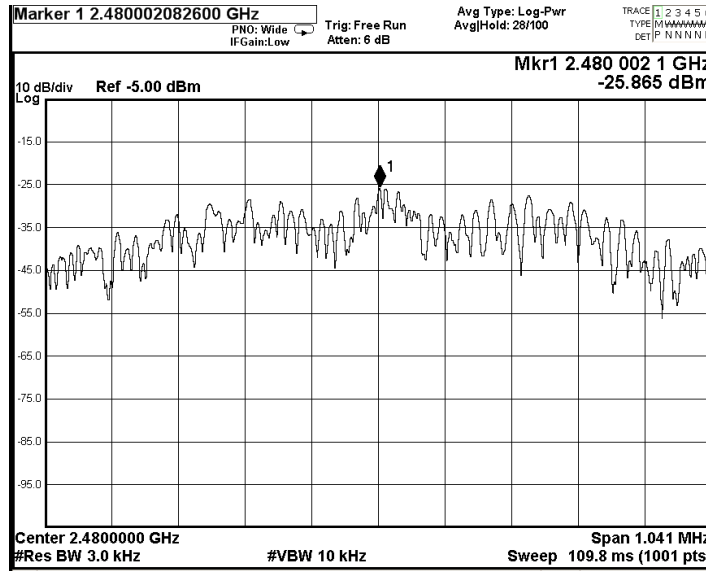


# Test Report

Date : 2023-04-18  
No. : HMD23040001

Page 26 of 40

CH 39 (2480.0 MHz)





## Test Report

Date : 2023-04-18  
No. : HMD23040001

Page 27 of 40

### 3.1.5 6dB Spectrum Bandwidth Measurement

Test Requirement: FCC 47CFR 15.247(a)(2)  
Test Method: ANSI C63.10:2013  
Test Date: 2023-04-06  
Mode of Operation: Tx mode

Ambient Temperature: 25°C      Relative Humidity: 51%      Atmospheric Pressure: 101 kPa

#### **Test Method:**

The bandwidth is measured at an amplitude level reduced from the reference level by a specified ratio. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.

#### **Test Setup:**

As Test Setup of clause 3.1.1 in this test report.

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@stc.group Website: www.stc.group

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.



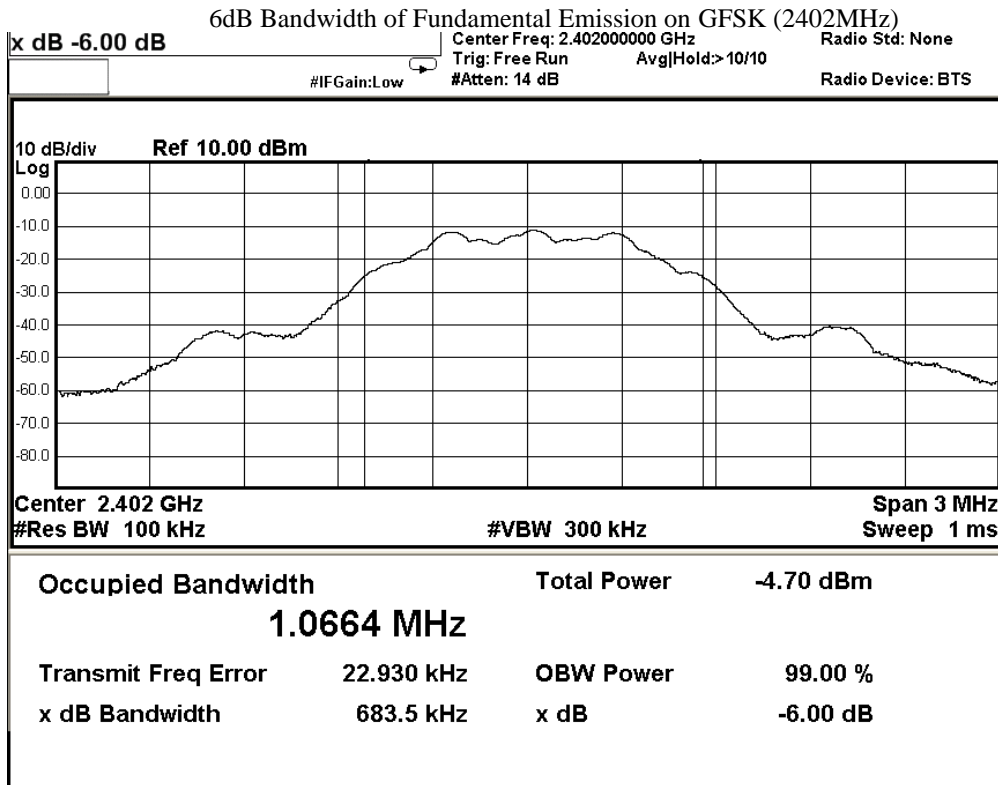
## Test Report

Date : 2023-04-18  
 No. : HMD23040001

Page 28 of 40

**Limits for 6dB Spectrum Bandwidth Measurement:**

Center Frequency [MHz]	6dB Bandwidth [KHz]	FCC Limits [kHz]
2402.0	683.5	> 500





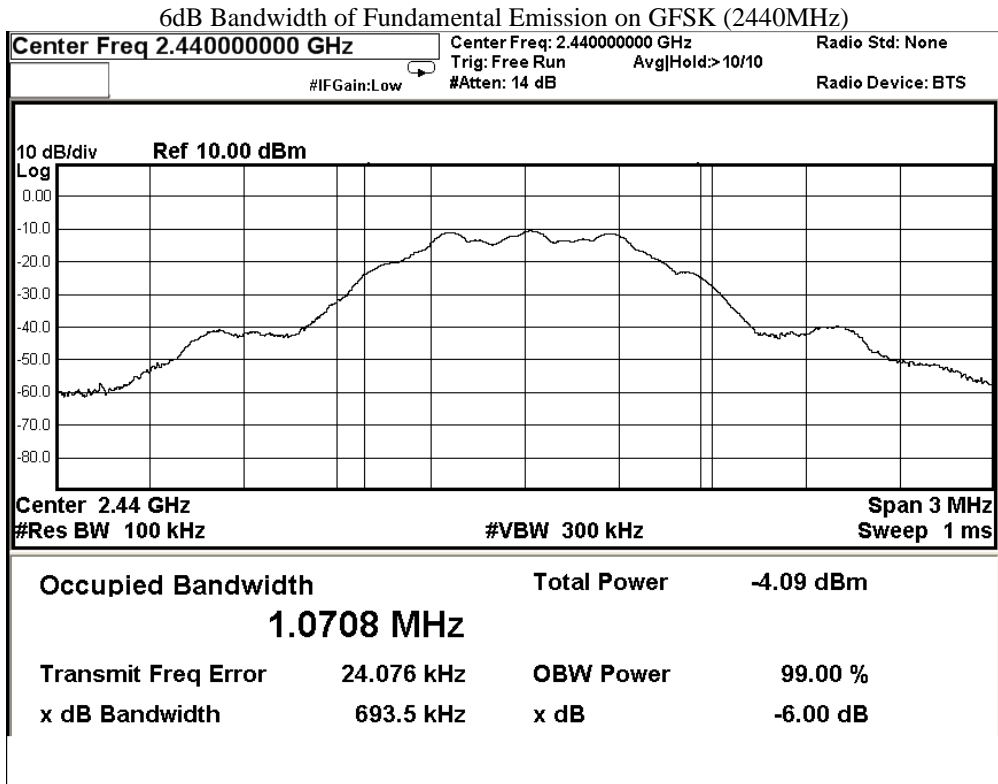
## Test Report

Date : 2023-04-18  
 No. : HMD23040001

Page 29 of 40

**Limits for 6dB Spectrum Bandwidth Measurement:**

Frequency Range [MHz]	6dB Bandwidth [KHz]	FCC Limits [kHz]
2440.0	693.5	> 500





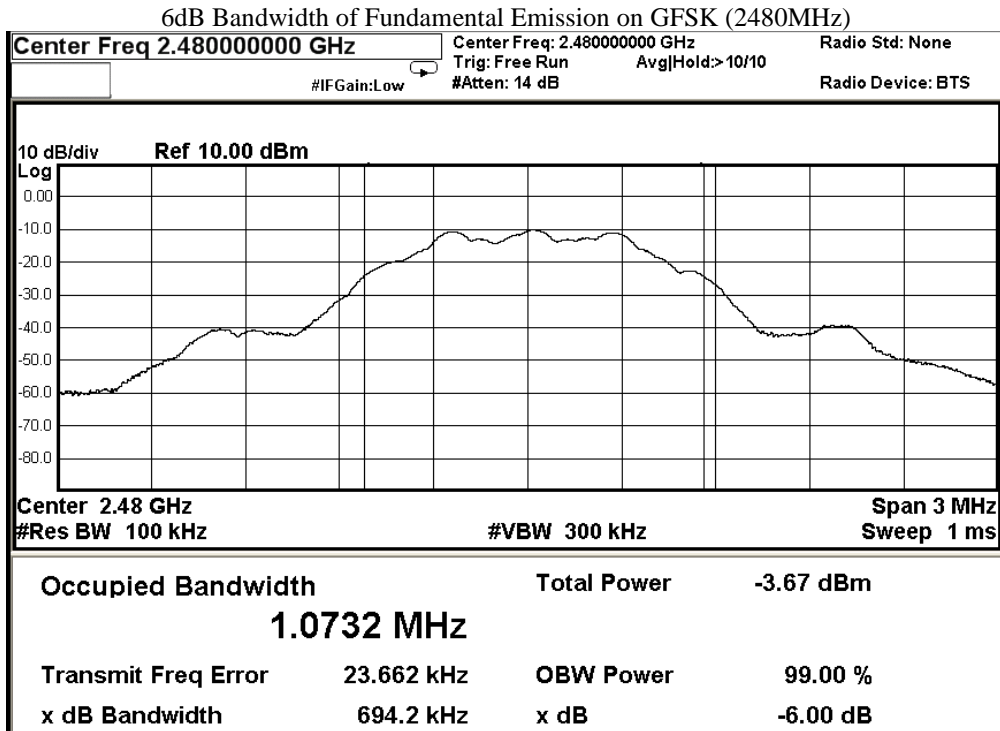
## Test Report

Date : 2023-04-18  
 No. : HMD23040001

Page 30 of 40

**Limits for 6dB Spectrum Bandwidth Measurement:**

Frequency Range [MHz]	6dB Bandwidth [KHz]	FCC Limits [kHz]
2480.0	694.2	> 500





## Test Report

Date : 2023-04-18  
No. : HMD23040001

Page 31 of 40

### 3.1.6 Band Edges Measurement

Test Requirement: FCC 47CFR 15.247  
Test Method: ANSI C63.10:2013  
Test Date: 2023-04-06  
Mode of Operation: Tx mode

Ambient Temperature: 25°C      Relative Humidity: 51%      Atmospheric Pressure: 101 kPa

#### Test Method:

The band edge is measured at an amplitude level reduced from the reference level by a specified ratio. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. The RBW are set to 100kHz and VBW are set to 300kHz for this measurement.

#### Test Setup:

As Test Setup of clause 3.1.2 in this test report.

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@stc.group Website: www.stc.group

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.



## Test Report

Date : 2023-04-18  
 No. : HMD23040001

Page 32 of 40

**Band-edge Compliance of RF Conducted Emissions Measurement:**

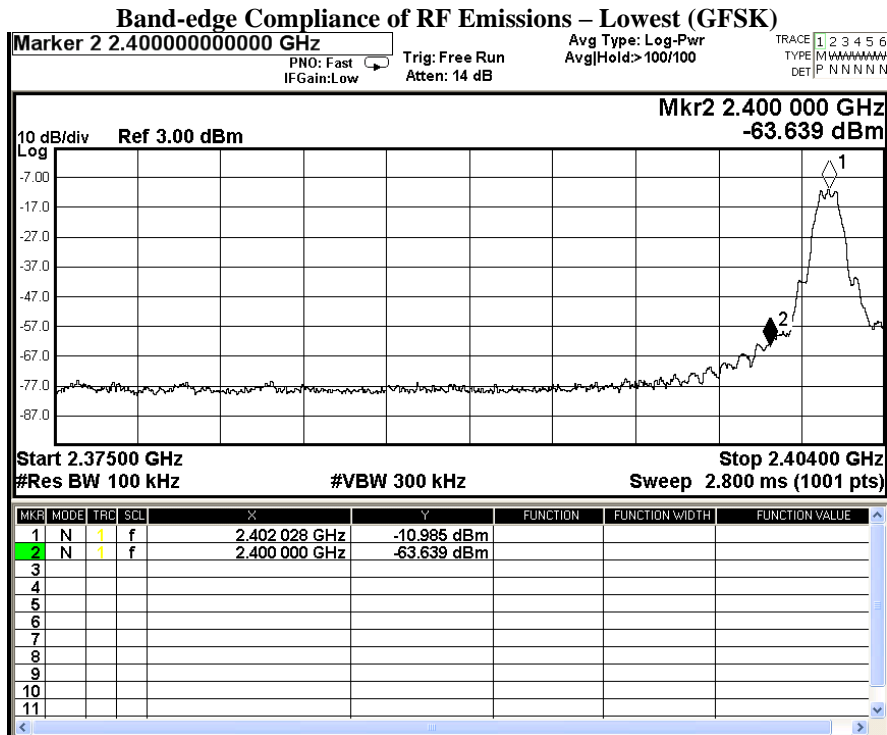
**Limit :**

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 either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required.

Remark: Emissions under the fixed frequency mode and hopping mode have been investigated, the worst-case measurement results were recorded in the test report

**Band-edge Compliance of RF Conducted Emissions Measurement:**

Frequency Range	Reference level	Limit	The highest conducted band edge emission	Result
[MHz]	[dBm]	[dBm]	[dBm]	
2400 – Lowest Fundamental (2402)	-10.985	-30.985	-63.639	PASS







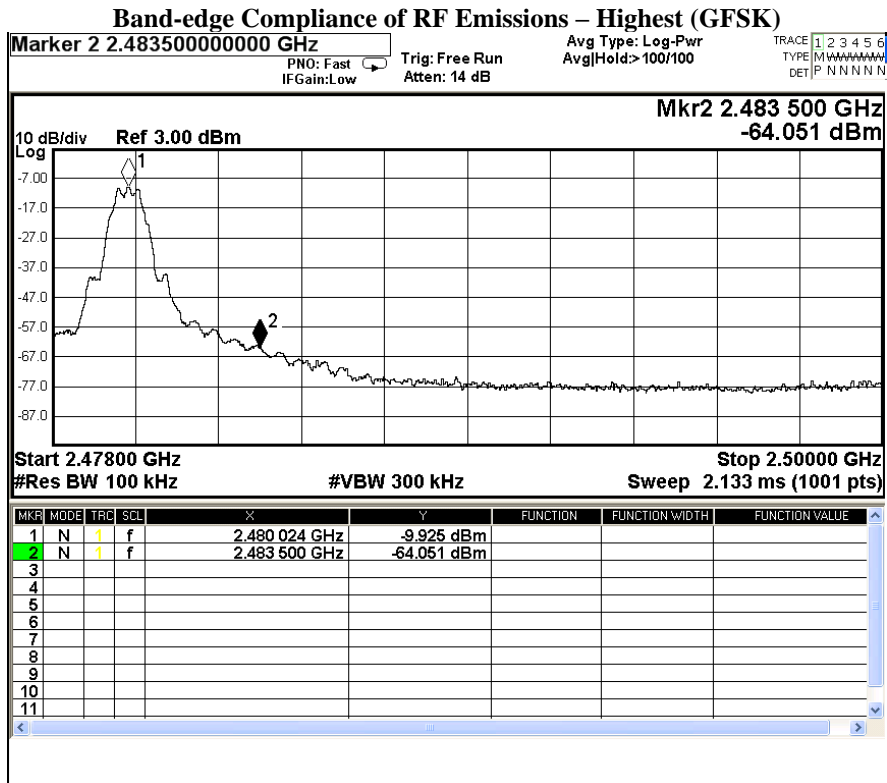
## Test Report

Date : 2023-04-18  
 No. : HMD23040001

Page 33 of 40

**Band-edge Compliance of RF Conducted Emissions Measurement:**

Frequency Range [MHz]	Reference level [dBm]	Limit [dBm]	The highest conducted band edge emission [dBm]	Result
2483.5 - Highest Fundamental (2480)	-9.925	-29.925	-64.051	PASS





## Test Report

Date : 2023-04-18  
 No. : HMD23040001

Page 34 of 40

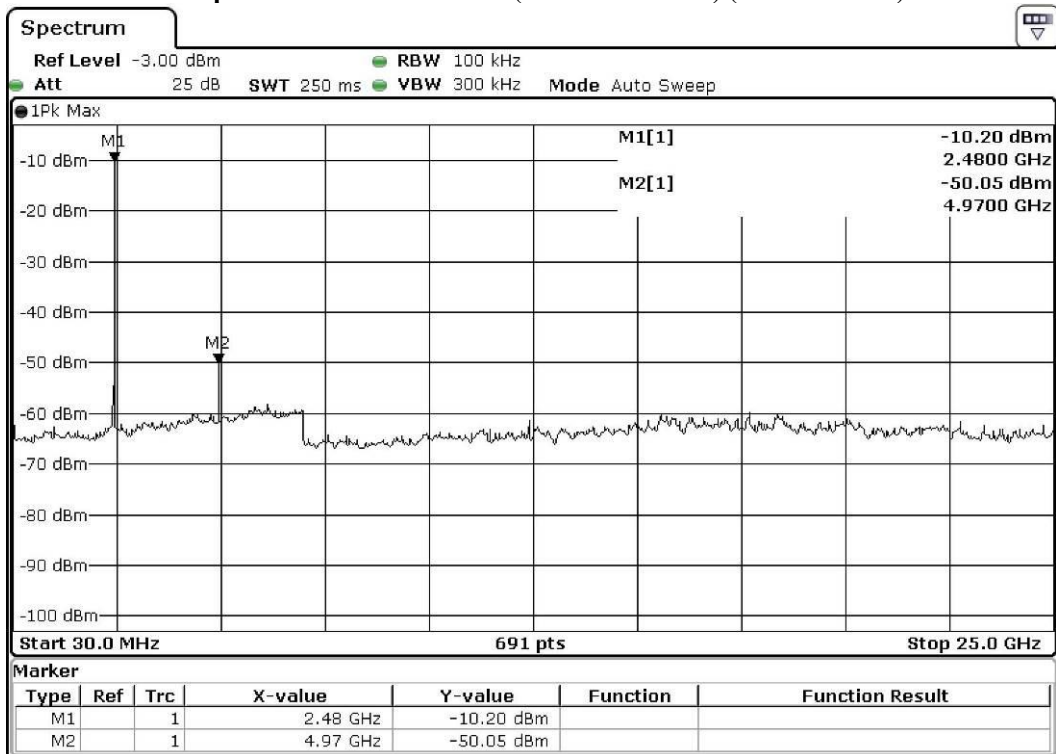
**Compliance of RF Emissions Measurement:**

**Limit :**

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 either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required.

Remark: Emissions under the fixed frequency mode and hopping mode have been investigated, the worst-case measurement results were recorded in the test report

**Compliance of RF Emissions – (GFSK 2480MHz) (the worst case)**



The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@stc.group Website: www.stc.group

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.



## Test Report

Date : 2023-04-18  
No. : HMD23040001

Page 35 of 40

### 3.1.7 Antenna Requirement

Ambient Temperature: 25°C

Relative Humidity: 51%

Atmospheric Pressure: 101 kPa

### Test Requirements: § 15.203

#### Test Specification:

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. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

#### Test Results:

This is FPC antenna. There is no external antenna, the antenna gain =0.9dBi. User is unable to remove or changed the Antenna.

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@stc.group Website: www.stc.group

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.



## Test Report

Date : 2023-04-18  
No. : HMD23040001

Page 36 of 40

### Appendix A

#### List of Measurement Equipment

##### Radiated Emission

EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CAL	DUE CAL
EM215	MULTIDEVICE CONTROLLER	EMCO	2090	00024676	N/A	N/A
EM217	ELECTRIC POWERED TURNTABLE	EMCO	2088	00029144	N/A	N/A
EM218	ANECHOIC CHAMBER	ETS-LINDGREN	FACT-3	--	2019/04/16	2024/04/16
EM356	ANTENNA POSITIONING TOWER	ETS-LINDGREN	2171B	00150346	N/A	N/A
EM293	SPECTRUM ANALYZER	AGILENT TECHNOLOGIES	N9020A	MY50510152	2022/11/25	2024/11/25
EM299	BROADBAND HORN ANTENNA	ETS-LINDGREN	3115	00114120	2022/11/24	2024/11/24
EM300	PYRAMIDAL STANDARD GAIN HORN ANTENNA	ETS-LINDGREN	3160-09	00130130	2022/11/25	2024/11/25
EM301	PYRAMIDAL STANDARD GAIN HORN ANTENNA	ETS-LINDGREN	3160-10	00130988	2022/11/25	2024/11/25
EM353	LOOP ANTENNA	ETS_LINDGREN	6502	00206533	2022/06/10	2024/09/10
EM355	Biconilog Antenna	ETS-Lindgren	3143B	00094856	2022/06/17	2024/09/17
EM200	DUAL CHANNEL POWER METER	R & S	NRVD	100592	2022/10/11	2025/10/11
EM012	PRE-AMPLIFIER	HP	HP8448B	3008A00262	2022/11/08	2025/11/08
EM215	MULTIDEVICE CONTROLLER	EMCO	2090	00024676	N/A	N/A

##### Line Conducted

EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CAL	DUE CAL
EM232	LISN	SCHAFFNER	NNB41	04/100082	2022/07/20	2023/07/20
EM181	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESIB7	100072	2022/05/30	2023/05/30
EM179	PULSE LIMITER	ROHDE & SCHWARZ	ESH3-Z2	357.8810.52/54	2023/03/17	2025/03/17
EM154	SHIELDING ROOM	SIEMENS MATSUSHITA COMPONENTS	N/A	803-740-057-99A	2022/02/02	2027/02/02
N/A	MEASUREMENT AND EVALUATION SOFTWARE	ROHDE & SCHWARZ	BSIB-K1	V1.20	N/A	N/A

Remarks:-

CM Corrective Maintenance  
N/A Not Applicable  
TBD To Be Determined

The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Taipo Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@stc.group Website: www.stc.group

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.

## Test Report

Date : 2023-04-18  
No. : HMD23040001

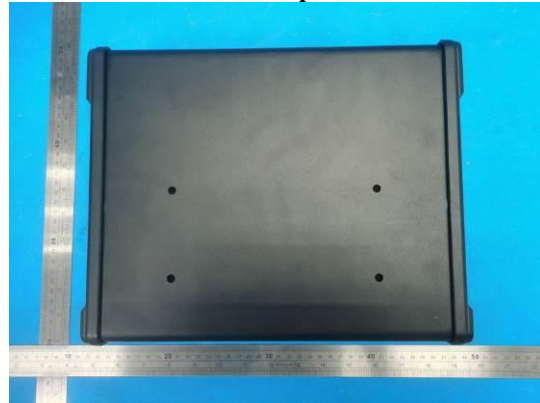
Page 37 of 40

### Appendix B Photographs of EUT

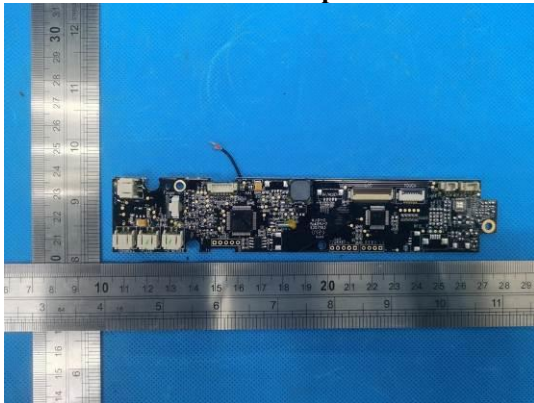
**View of the product**



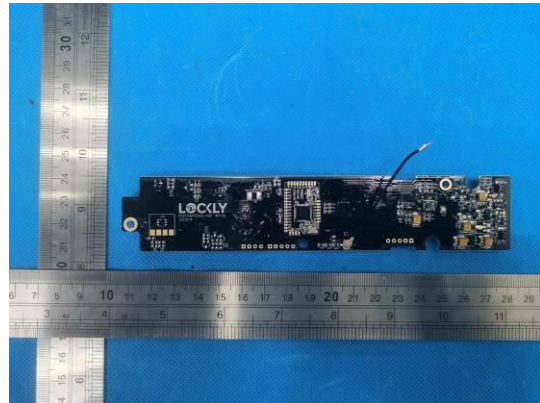
**View of the product**



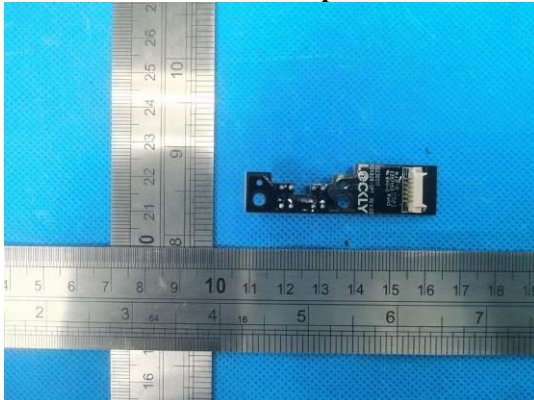
**Inner circuit top view**



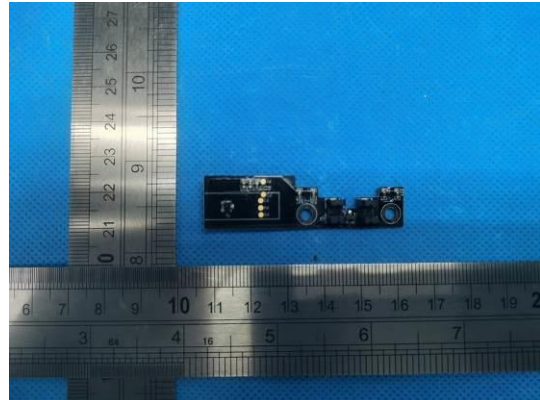
**Inner circuit bottom view**



**Inner circuit top view**



**Inner circuit bottom view**



## Test Report

Date : 2023-04-18  
No. : HMD23040001

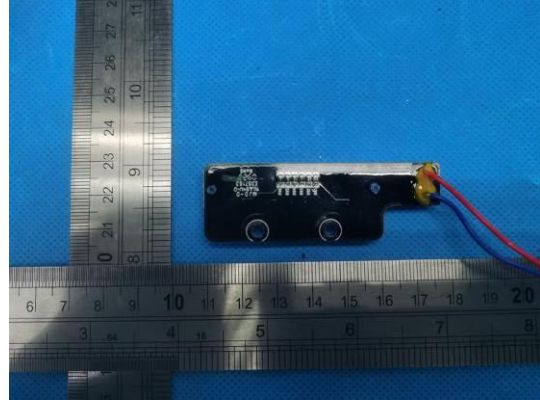
Page 38 of 40

### Photographs of EUT

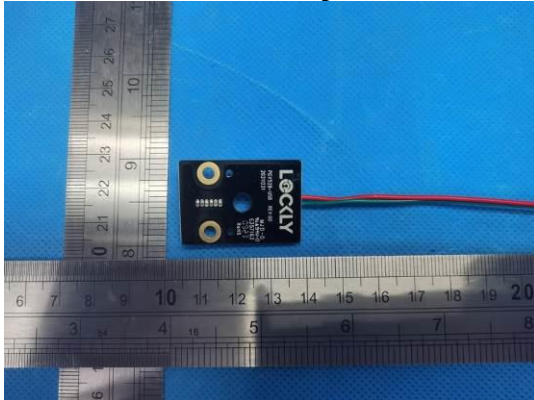
**Inner circuit top view**



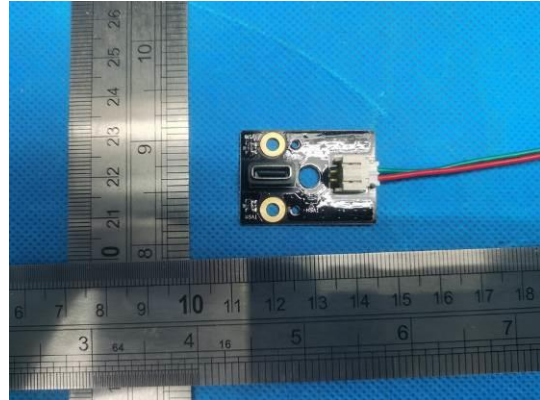
**Inner circuit bottom view**



**Inner circuit top view**



**Inner circuit bottom view**



**View of adapter**



**View of battery**



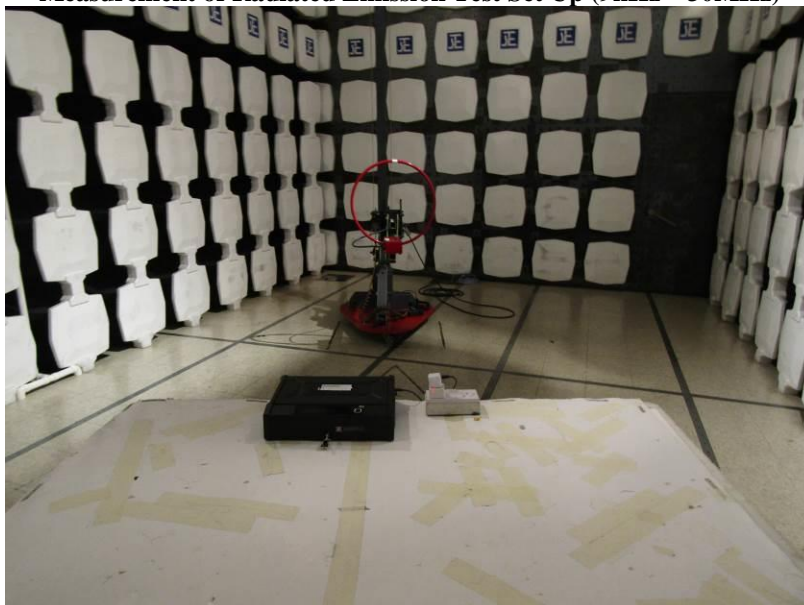
## Test Report

Date : 2023-04-18  
No. : HMD23040001

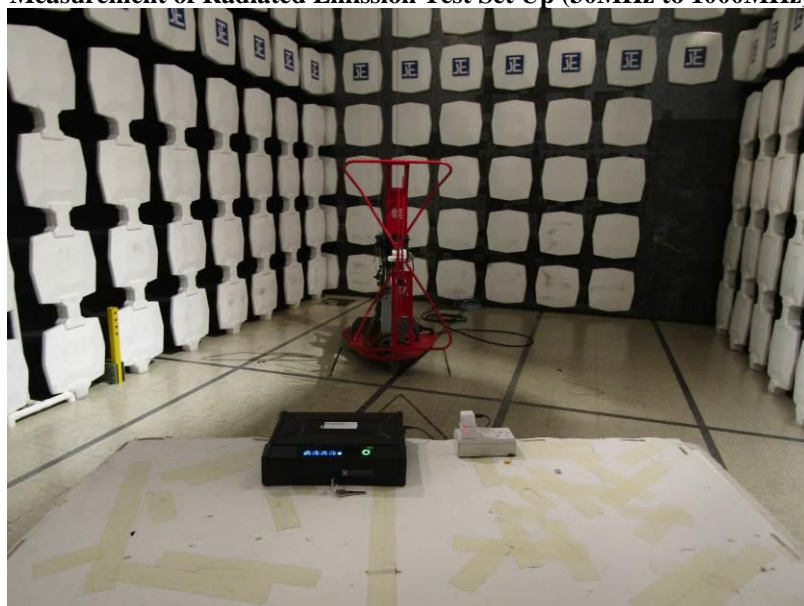
Page 39 of 40

### Photographs of EUT

**Measurement of Radiated Emission Test Set Up (9kHz – 30MHz)**



**Measurement of Radiated Emission Test Set Up (30MHz to 1000MHz)**



The Hong Kong Standards and Testing Centre Limited

10 Dai Wang Street, Tai Po Industrial Estate, Tai Po, N.T., Hong Kong

Tel: +852 2666 1888 Fax: +852 2664 4353 Email: [hkstc@stc.group](mailto:hkstc@stc.group) Website: [www.stc.group](http://www.stc.group)

This report shall not be reproduced unless with prior written approval from The Hong Kong Standards and Testing Centre Limited.

For Conditions of Issuance of this test report, please refer to "Conditions of Issuance of Test Reports" section or Website.

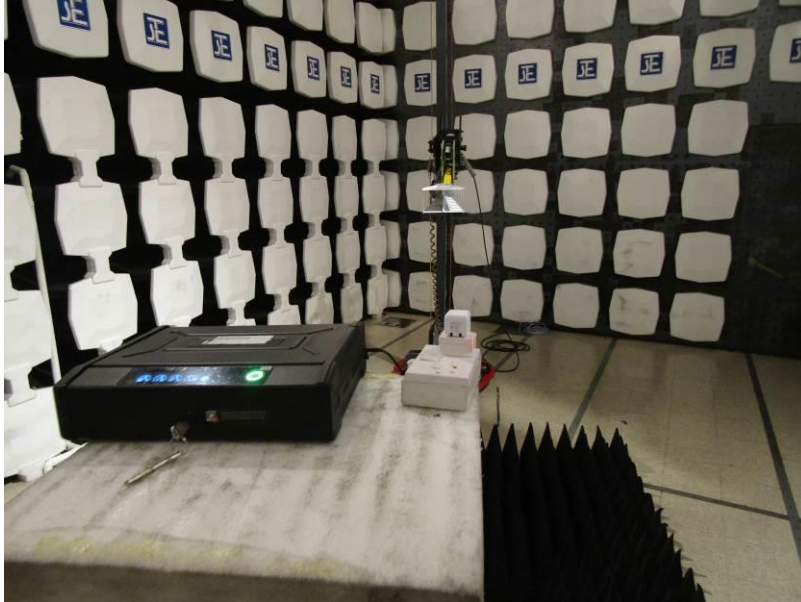
## Test Report

Date : 2023-04-18  
No. : HMD23040001

Page 40 of 40

### Photographs of EUT

**Measurement of Radiated Emission Test Set Up (Above 1000MHz)**



**Measurement of Conducted Emission Test Set Up**



\*\*\*\*\* End of Test Report \*\*\*\*\*



## Conditions of Issuance of Test Reports

1. All samples and goods are accepted by The Hong Kong Standards & Testing Centre Limited (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The Company provides its services on the basis that such terms and conditions constitute express agreement between the Company and any person, firm or company requesting its services (the "Clients").
2. Any report issued by the Company as a result of this application for testing service (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to his customer, supplier or other persons directly concerned. Subject to clause 3, the Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
3. The Company shall be at liberty to disclose the testing-related documents and/or files anytime to any third-party accreditation and/or recognition bodies for audit or other related purposes. No liabilities whatsoever shall attach to the Company's act of disclosure.
4. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
5. The results in Report apply only to the sample as received and do not apply to the bulk, unless the sampling has been carried out by the Company and is stated as such in the Report.
6. When a statement of conformity to a specification or standard is provided, the ILAC-G8 Guidance document (and/or IEC Guide 115 in the electrotechnical sector) will be adopted as a decision rule for the determination of conformity unless it is inherent in the requested specification or standard, or otherwise specified in the Report.
7. In the event of the improper use the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
8. Sample submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
9. The Company will not be liable for or accept responsibility for any loss or damage howsoever arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
10. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
11. Subject to the variable length of retention time for test data and report stored hereinto as to otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of this test report for a period of three years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after the retention period. Under no circumstances shall we be liable for damages of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.
12. Issuance records of the Report are available on the internet at [www.stc.group](http://www.stc.group). Further enquiry of validity or verification of the Reports should be addressed to the Company.