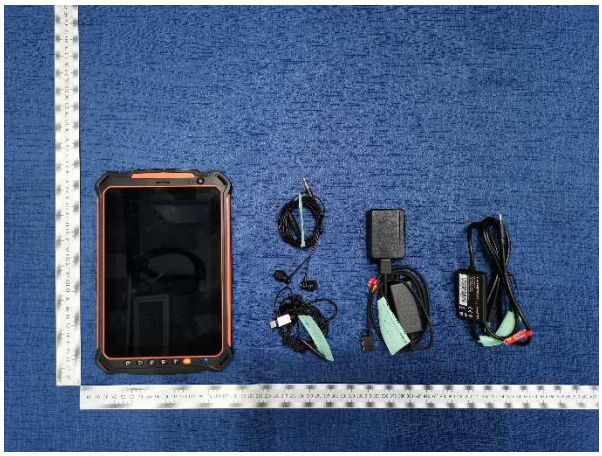
Prüfbericht-Nr.: *Test report no.:*	**60374756 002**	**Auftrags-Nr.:** *Order no.*:	**168264720**	Seite 1 von 28 *Page 1 of 28*
Kunden-Referenz-Nr.: *Client reference no.:*	**N/A**	**Auftragsdatum:** *Order date:*	2020-05-13	
Auftraggeber: *Client:*	i.safe MOBILE GmbH i_Park Tauberfranken 10, 97922 Lauda-Koenigshofen, Germany			
Prüfgegenstand: *Test item:*	Rugged tablet computer			
Bezeichnung / Typ-Nr.: *Identification / Type no.:*	M93A01			
Auftrags-Inhalt: *Order content*:	Test Report			
Prüfgrundlage: *Test specification:*	CFR47 FCC Part 15: Subpart C Section 15.247 CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209		RSS-247 Issue 2 RSS-Gen Issue 5	

Wareneingangsdatum: *Date of sample receipt:*	2020-05-13
Prüfmuster-Nr.: *Test sample no:*	A002024323-004 A002024323-005
Prüfzeitraum: *Testing period:*	2020-05-24 – 2020-06-10
Ort der Prüfung: *Place of testing:*	TÜV Rheinland (Shenzhen) Co., Ltd.
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland (Shenzhen) Co., Ltd.
Prüfergebnis*: *Test result*:*	Pass



geprüft von:
tested by:Lin Lin

Datum:
Date: 2020-10-09

Stellung / *Position:* Senior Project Manager

genehmigt von:
authorized by:Winnie Hou

Ausstellungsdatum:
Issue date: 2020-10-09

Stellung / *Position:* Technical Certifier

Sonstiges / *Other:*

FCC ID: 2AACZ-M93A01
IC: 11122A-M93A01
HVIN: M93A01

Zustand des Prüfgegenstandes bei Anlieferung:
Condition of the test item at delivery:
Prüfmuster vollständig und unbeschädigt
Test item complete and undamaged

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
** Legend:*	*1 = very good*	*2 = good*	*3 = satisfactory*	*4 = sufficient*	*5 = poor*
	P(ass) = passed a.m. test specification(s)		*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

TÜV Rheinland (Shenzhen) Co., Ltd. 1601 R&D Room, 1602-1604, 17-18F, Building 7 Site C, Vanke Cloud City Phase I, Xingke First Street, Xili Street, Xili Community, Nanshan District, Shenzhen 518052, P.R. China
Mail: service@de.tuv.com · Web: www.tuv.com

Test Summary

5.1.1 Antenna Requirement

RESULT: *Pass*

5.1.2 Maximum Peak Conducted Output Power

RESULT: *Pass*

5.1.3 Conducted Power Spectral Density

RESULT: *Pass*

5.1.4 6dB Bandwidth

RESULT: *Pass*

5.1.5 99% Bandwidth

RESULT: *Pass*

5.1.6 Conducted Spurious Emissions Measured in 100 kHz Bandwidth

RESULT: *Pass*

5.1.7 Radiated Spurious Emission

RESULT: *Pass*

5.1.8 20dB Bandwidth

RESULT: *Pass*

5.1.9 Carrier Frequency Separation

RESULT: *Pass*

5.1.10 Number of Hopping Frequency

RESULT: *Pass*

5.1.11 Time of Occupancy

RESULT: *Pass*

5.1.12 Conducted Emission on AC Mains

RESULT: *Pass*

Contents

1 General Remarks 5

1.1 Complementary Materials 5

2 Test Sites 6

2.1 Test Facilities 6

2.2 List of Test and Measurement Instruments 6

2.3 Traceability 7

2.4 Calibration 7

2.5 Measurement Uncertainty 7

2.6 Location of Original Data 7

2.7 Status of Facility Used for Testing 8

3 General Product Information 9

3.1 Product Function and Intended Use 9

3.2 Ratings and System Details 9

3.3 Independent Operation Modes 11

3.4 Noise Generating and Noise Suppressing Parts 11

3.5 Submitted Documents 11

4 Test Set-up and Operation Modes 12

4.1 Principle of Configuration Selection 12

4.2 Test Operation and Test Software 12

4.3 Special Accessories and Auxiliary Equipment 12

4.4 Countermeasures to Achieve EMC Compliance 12

4.5 Test Setup Diagram 13

5 Test Results 15

5.1 Transmitter Requirement & Test Suites 15

5.1.1 *Antenna Requirement* *15*
5.1.2 *Maximum Peak Conducted Output Power* *16*
5.1.3 *Conducted Power Spectral Density* *18*
5.1.4 *6dB Bandwidth* *19*
5.1.5 *99% Bandwidth* *20*
5.1.6 *Conducted Spurious Emissions Measured in 100 kHz Bandwidth* *21*
5.1.7 *Radiated Spurious Emission* *22*
5.1.8 *20dB Bandwidth* *23*
5.1.9 *Carrier Frequency Separation* *24*
5.1.10 *Number of Hopping Frequency* *25*

5.1.11 *Time of Occupancy 26*
5.1.12 *Conducted Emission on AC Mains 27*

6 Photographs of the Test Set-Up 28

7 List of Tables 28

1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Photographs of the Test Set-up

Appendix B: Test Results of BDR/EDR mode

Appendix C: Test Results of BLE

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

362 Huanguan Road Middle Longhua District, Shenzhen 518110 People's Republic of China

FCC Registration No.: 694916

ISED wireless device testing laboratory: 25069

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

TÜV Rheinland (Shenzhen) Co., Ltd.

Radio Spectrum Testing (TS8997)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Cal. until**
Signal Analyzer	R&S	FSV 40	101441	20.08.2020
OSP	R&S	OSP 150	101017	17.12.2020
Control PC	DELL	OptiPlex 7050	FTJZ9P2	N/A
Test Software	R&S	WMS32 (V11.00.00)	N/A	N/A
Power Meter	R&S	NRP2	107105	17.12.2020
Wideband Power Sensor	R&S	NRP-Z81	105350	17.12.2020
Shielding Room 8#	Albatross	SR8	APC17151-SR8	23.07.2020
Unwanted Emission Testing (TS9975)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Cal. until**
EMI Test Receiver	R&S	ESR 7	102021	19.08.2020
Signal Analyzer	R&S	FSV 40	101439	21.08.2020
System Controller Interface	R&S	SCI-100	S10010038	N/A
Filterbank	R&S	Wlan	100759	21.08.2020
OSP	R&S	OSP 120	102040	N/A
Pre-amplifier	R&S	SCU08F1	08320031	20.08.2020
Amplifier	R&S	SCU-18F	180070	20.08.2020
Amplifier	R&S	SCU40A	100475	20.09.2020
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	02.09.2020
Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	02.09.2020
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	02.09.2020
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	01.09.2020
Wideband Ridged Horn Antenna (12-18 GHz)	Steatite	QMS-00208	18313	02.09.2020
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A
3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	06.07.2020

Conducted Emission on AC Mains				
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cali. until**
EMI Test Receiver	R&S	ESR3	102428	03.09.2020
Artificial Mains Network	R&S	ENV216	102333	19.08.2020
Artificial Mains Network	R&S	ENV432	101411	19.08.2020
Attenuator	R&S	ESH2Z31	100300	19.08.2020
EMC32 test software	R&S	EMC32(Ver.10.50.01)	N/A	N/A

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basics using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table.

Parameter	Uncertainty
Radio Frequency	±1 x 10-7
RF Power (conducted)	±2.5 dB
Radiated Emission of Transmitter, valid up to 26.5 GHz	±6 dB
Radiated Emission of Receiver, valid up to 26.5 GHz	±6 dB
Conducted Emission, (9kHz to 150kHz)/(150kHz to 30MHz)	± 3.70 dB / ± 3.30 dB
Radiated Emission (3m SAC), 30MHz to 1000MHz	± 4.52 dB
Radiated Emission (3m SAC), above 1000MHz	± 4.37 dB
Temperature	±1 °C
Humidity	±5 %
Voltage (DC)	±1 %
Voltage (AC, <10kHz)	±2 %

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix B & C of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) Co., Ltd. file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at 362 Huanguan Road Middle Longhua District, Shenzhen 518110 People's Republic of China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3 General Product Information

3.1 Product Function and Intended Use

The EUT is a tablet which supports Bluetooth, 2.4G Wi-Fi 802.11 b/g/n, 5G Wi-Fi 802.11a/n/ac, NFC and GSM/WCDMA/LTE wireless technology. This report is for Bluetooth function.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment	Rugged tablet computer
Type Designation	M93A01
Trade Mark	i.safe MOBILE
FCC ID	2AACZ-M93A01
IC	11122A-M93A01
HVIN	M93A01
Operating Voltage:	DC 5V@2A input via power adapter
Testing Voltage	Fully charged li-ion battery charged by power adapter (Adapter input AC 120V@60Hz)
Antenna Type	Integral Antenna
Antenna Gain	Bluetooth: 1.2dBi max.
Power Adapter	Model: ICP12-050-2000B Input: AC 100-240V~50/60Hz, 0.3A Output: DC5V@2A
Other accessories	USB Cable Magnetic absorption charging cable 3.5mm Earphone
Technical Specification of BDR/EDR	
Operating Frequency	2402 MHz to 2480 MHz
Type of Modulation	GFSK(BDR), π/4-DQPSK(EDR), 8DPSK(EDR)
Channel Number	79 channels
Channel Separation	1MHz
Technical Specification of BLE	
Frequency Range	2402 MHz to 2480 MHz
Type of Modulation	GFSK(BT_LE)
Channel Number	40 channels
Data Rate	1 Mbps, 2Mbps
Channel Separation	2 MHz

Table 3: RF Channel and Frequency of BDR/EDR

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
0	**2402.00**	20	2422.00	40	2442.00	60	2462.00
1	2403.00	21	2423.00	41	2443.00	61	2463.00
2	2404.00	22	2424.00	42	2444.00	62	2464.00
3	2405.00	23	2425.00	43	2445.00	63	2465.00
4	2406.00	24	2426.00	44	2446.00	64	2466.00
5	2407.00	25	2427.00	45	2447.00	65	2467.00
6	2408.00	26	2428.00	46	2448.00	66	2468.00
7	2409.00	27	2429.00	47	2449.00	67	2469.00
8	2410.00	28	2430.00	48	2450.00	68	2470.00
9	2411.00	29	2431.00	49	2451.00	69	2471.00
10	2412.00	30	2432.00	50	2452.00	70	2472.00
11	2413.00	31	2433.00	51	2453.00	71	2473.00
12	2414.00	32	2434.00	52	2454.00	72	2474.00
13	2415.00	33	2435.00	53	2455.00	73	2475.00
14	2416.00	34	2436.00	54	2456.00	74	2476.00
15	2417.00	35	2437.00	55	2457.00	75	2477.00
16	2418.00	36	2438.00	56	2458.00	76	2478.00
17	2419.00	37	2439.00	57	2459.00	77	2479.00
18	2420.00	38	2440.00	58	2460.00	78	**2480.00**
19	2421.00	39	**2441.00**	59	2461.00		

Test frequencies are lowest channel: 2402 MHz, middle channel: 2441 MHz and highest channel: 2480 MHz for General 2.4GHz

Table 4: RF Channel and Frequency of BLE

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

Test frequencies are lowest channel: 2402 MHz, middle channel: 2440 MHz and highest channel: 2480 MHz for BLE

3.3 Independent Operation Modes

The basic operation modes are:

A. On, Bluetooth transmitting mode (BDR & EDR mode)
    1) Low Channel
    2) Middle Channel
    3) High Channel

B. On, Bluetooth transmitting mode (BLE)
    1) Low Channel
    2) Middle Channel
    3) High Channel

C. On, Transmitting on Hopping channel

D. On, Normal operation with Bluetooth mode

E. On, Standby mode

F. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- Application Form

-

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All tests were performed according to the procedures in ANSI C63.10: 2013 and ANSI C63.4: 2014.

4.3 Special Accessories and Auxiliary Equipment

Table 5: Auxiliary Equipment Used during Test

Description	Manufacturer	Model	S/N	Rating
--	--	--	--	--

4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

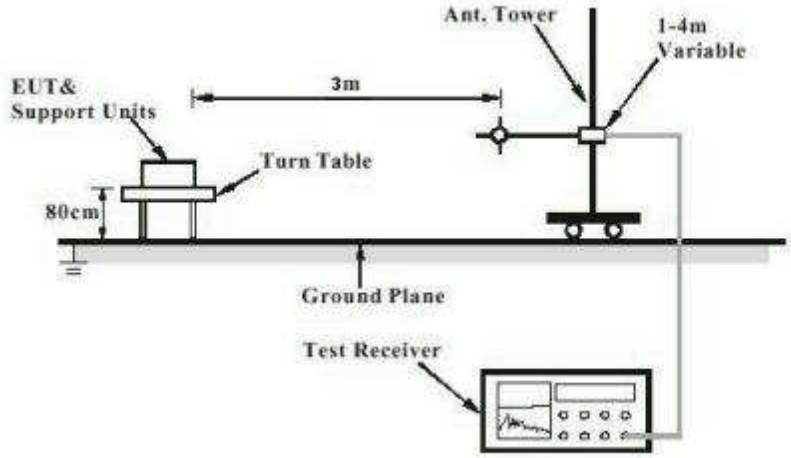


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

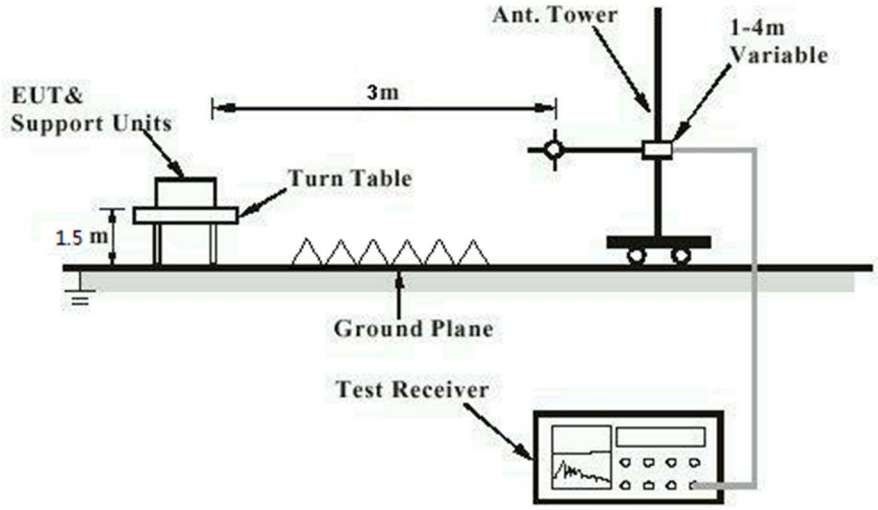


Diagram of Measurement Configuration for Mains Conduction Measurement

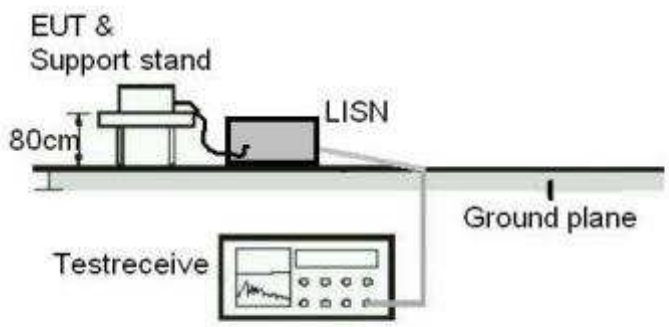
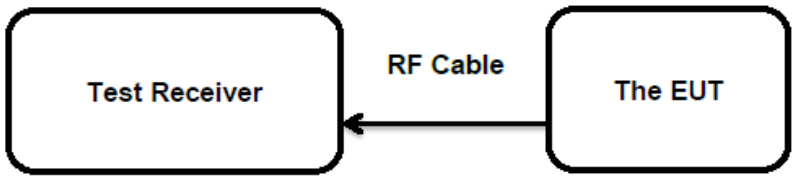


Diagram of Measurement Configuration for Conducted Transmitter Measurement



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: **Pass**

Test Specification

Test standard : FCC Part 15.247(b)(4) and Part 15.203

According to the manufacturer declared, the EUT has an internal antenna, the max. directional gain of antenna is 1.2dBi, 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.

Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

5.1.2 Maximum Peak Conducted Output Power

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(b)(1)&(3) RSS-247 Clause 5.4(b)&(d)
Basic standard	:	ANSI C63.10: 2013
Limits	:	FHSS < 0.125 Watts, DSSS < 1.0 Watts
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2020-05-24 – 2020-06-10
Input voltage	:	Fully charged li-ion battery charged by power adapter (Adapter input AC 120V@60Hz)
Operation mode	:	A, B
Test channel	:	Low / Middle / High
Ambient temperature	:	25 ℃
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

Table 6: Test Result of Maximum Peak Conducted Output Power, BDR & EDR

Test Mode	Test Channel (MHz)	Measured Peak Power		Limit (W)
		(dBm)	(W)	
GFSK (BDR)	2402.0	10.45	0.0111	< 0.125
	2441.0	9.71	0.0094	
	2480.0	10.21	0.0105	
Maximum Measured Value		**10.45**	**0.0111**	

Test Mode	Test Channel (MHz)	Measured Peak Power		Limit (W)
		(dBm)	(W)	
8DPSK (EDR)	2402.0	9.79	0.0095	< 0.125
	2441.0	8.96	0.0079	
	2480.0	9.38	0.0087	
Maximum Measured Value		**9.79**	**0.0095**	

Table 7: Test Result of Maximum Peak Conducted Output Power, BLE

Test Mode	Data Rate	Test Channel (MHz)	Measured Peak Power		Limit (W)
			(dBm)	(W)	
GFSK (BLE)	1 Mbps	2402	-0.58	0.0009	< 1.0
		2440	-0.75	0.0008	
		2480	0.10	0.0010	
Maximum Measured Value			**0.10**	**0.0010**	

Test Mode	Data Rate	Test Channel (MHz)	Measured Peak Power		Limit (W)
			(dBm)	(W)	
GFSK (BLE)	2 Mbps	2402	0.50	0.0011	< 1.0
		2440	0.42	0.0011	
		2480	1.22	0.0013	
Maximum Measured Value			**1.22**	**0.0013**	

Note:
1) The cable loss is taken into account in results.
2) Antenna gain(G) of Bluetooth: 1.2dBi
e.i.r.p.=$P_{(Peak\ power)}$+ G, which is far below the 4 W

5.1.3 Conducted Power Spectral Density

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(e)
		RSS-247 Clause 5.2(b)
Basic standard	:	ANSI C63.10: 2013
Limits	:	< 8 dBm / 3kHz
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2020-05-24 – 2020-06-10
Input voltage	:	Fully charged li-ion battery charged by power adapter (Adapter input AC 120V@60Hz)
Operation mode	:	B
Test channel	:	Low / Middle / High
Ambient temperature	:	25 ℃
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix C.

5.1.4 6dB Bandwidth

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(a)(2)
		RSS-247 Clause 5.2(a)
Basic standard	:	ANSI C63.10: 2013
Limits	:	> 500 KHz
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2020-05-24 – 2020-06-10
Input voltage	:	Fully charged li-ion battery charged by power adapter (Adapter input AC 120V@60Hz)
Operation mode	:	B
Test channel	:	Low / Middle / High
Ambient temperature	:	25 ℃
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix C.

5.1.5 99% Bandwidth

RESULT: **Pass**

Test Specification

Test standard	:	RSS-Gen Clause 6.6
Basic standard	:	ANSI C63.10: 2013
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2020-05-24 – 2020-06-10
Input voltage	:	Fully charged li-ion battery charged by power adapter (Adapter input AC 120V@60Hz)
Operation mode	:	A, B
Test channel	:	Low / Middle / High
Ambient temperature	:	25 ℃
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B & C.

5.1.6 Conducted Spurious Emissions Measured in 100 kHz Bandwidth

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(d) RSS-247 Clause 5.5
Basic standard	:	ANSI C63.10: 2013
Limits	:	20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power); In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2020-05-24 – 2020-06-10
Input voltage	:	Fully charged li-ion battery charged by power adapter (Adapter input AC 120V@60Hz)
Operation mode	:	A, B
Test channel	:	Low / Middle / High
Ambient temperature	:	25 ℃
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

Test results of 100kHz Bandwidth of Frequency Band Edge by Conducted method refer to test plots, and compliance is achieved as well.

For the measurement records, refer to the appendix B & C.

5.1.7 Radiated Spurious Emission

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(d) & FCC Part 15.205 RSS-247 Clause 3.3
Basic standard	:	ANSI C63.10: 2013
Limits	:	Refer to 15.209(a) of FCC part 15.247(d)
Kind of test site	:	3m Semi-anechoic Chamber

Test Setup

Date of testing	:	2020-05-24 – 2020-06-10
Input voltage	:	Fully charged li-ion battery charged by power adapter (Adapter input AC 120V@60Hz)
Operation mode	:	A, B
Test channel	:	Low / Middle / High
Ambient temperature	:	Refer to test result
Relative humidity	:	Refer to test result
Atmospheric pressure	:	101 kPa

Remark:
Testing was carried out within frequency range 9kHz to the tenth harmonics. Only the worst case spurious emissions configuration of the each mode were reported.

For the measurement records, refer to the appendix B & C.

5.1.8 20dB Bandwidth

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(a)(1)
		RSS-247 Clause 5.1(a)
Basic standard	:	ANSI C63.10: 2013
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2020-05-24 – 2020-06-10
Input voltage	:	Fully charged li-ion battery charged by power adapter (Adapter input AC 120V@60Hz)
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	25 ℃
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B.

5.1.9 Carrier Frequency Separation

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(a)(1)
		RSS-247 Clause 5.1(b)
Basic standard	:	ANSI C63.10: 2013
Limits	:	≥ 25kHz or 2/3 of 20dB bandwidth, whichever is greater
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2020-05-24 – 2020-06-10
Input voltage	:	Fully charged li-ion battery charged by power adapter (Adapter input AC 120V@60Hz)
Operation mode	:	C
Test channel	:	Low / Middle / High
Ambient temperature	:	25 ℃
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B.

5.1.10 Number of Hopping Frequency

RESULT: **Pass**

Test Specification

Test standard	:	FCC part 15.247(a)(1)(iii) RSS-247 Clause 5.1(d)
Basic standard	:	ANSI C63.10: 2013
Limits	:	≥ 15 non-overlapping channels
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2020-05-24 – 2020-06-10
Input voltage	:	Fully charged li-ion battery charged by power adapter (Adapter input AC 120V@60Hz)
Operation mode	:	C
Ambient temperature	:	25 ℃
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B.

5.1.11 Time of Occupancy

RESULT: **Pass**

Test Specification

Test standard	:	FCC part 15.247(a)(1)(iii) RSS-247 Clause 5.1(d)
Basic standard	:	ANSI C63.10: 2013
Limits	:	< 0.4s
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2020-05-24 – 2020-06-10
Input voltage	:	Fully charged li-ion battery charged by power adapter (Adapter input AC 120V@60Hz)
Operation mode	:	C
Test channel	:	Low / Middle / High
Ambient temperature	:	25 ℃
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B.

5.1.12 Conducted Emission on AC Mains

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.207(a) RSS-Gen Clause 8.8
Basic standard	:	ANSI C63.10: 2013
Frequency range	:	0.15 – 30MHz
Limits	:	FCC Part 15.207(a) RSS-Gen Table 3
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2020-05-24 – 2020-06-10
Input voltage	:	Fully charged li-ion battery charged by power adapter (Adapter input AC 120V@60Hz)
Operation mode	:	D
Earthing	:	Not connected
Ambient temperature	:	22 ℃
Relative humidity	:	64 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix B.

6 Photographs of the Test Set-Up

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

7 List of Tables

Table 1: List of Test and Measurement Equipment 6
Table 2: Technical Specification of EUT 9
Table 3: RF Channel and Frequency of BDR/EDR 10
Table 4: RF Channel and Frequency of BLE 10
Table 5: Auxiliary Equipment Used during Test 12
Table 6: Test Result of Maximum Peak Conducted Output Power, BDR & EDR 16
Table 7: Test Result of Maximum Peak Conducted Output Power, BLE 17