FCC TEST REPORT

Report No.:	AB25120045FW01
FCC ID.:	**2ABOGCMS50D-BT-A**
Applicant.:	Contec Medical Systems Co., Ltd.
Address.:	No.112 Qinhuang West Street, Economic &Technical Development Zone, Qinhuangdao, Hebei Province, PEOPLE`S REPUBLIC OF CHINA
Manufacturer.:	Contec Medical Systems Co., Ltd.
Address.:	No.112 Qinhuang West Street, Economic &Technical Development Zone, Qinhuangdao, Hebei Province, PEOPLE`S REPUBLIC OF CHINA
Product Name.:	Pulse Oximeter
Trade Mark.:	CONTEC
Test Model.:	CMS50D-BT
Additional Model(s).:	/
Standard.:	FCC 47 CFR Part 15 Subpart C (Part 15.247)
Date of Receipt.:	2025.12.04
Date of Test Date.:	2025.12.04-2025.12.05
Date of Issue.:	2025.12.05
Test Result.:	Pass

Compiled by: (Printed Name + Signature)	Huaijie Li	Huaijie Li
Supervised by: (Printed Name + Signature)	David Huang	David Huang
Approved by: (Printed Name + Signature)	Jay Liu	Jay Liu

Testing Laboratory Name.:	Aibo Standard Technology (Shenzhen) Co., Ltd.
Address.:	101, Building B, Tuori New Energy Industrial Park, High-tech Park, Tianliao Community, Yutang Street, Guangming District, Shenzhen City, Guangdong Province, China

FCC TEST REPORT

EUT.....	: Pulse Oximeter
Test Model.....	: CMS50D-BT
Applicant.....	**: Contec Medical Systems Co., Ltd.**
Address.....	: No.112 Qinhuang West Street, Economic &Technical Development Zone, Qinhuangdao, Hebei Province, PEOPLE`S REPUBLIC OF CHINA
Manufacturer.....	**: Contec Medical Systems Co., Ltd.**
Address.....	: No.112 Qinhuang West Street, Economic &Technical Development Zone, Qinhuangdao, Hebei Province, PEOPLE`S REPUBLIC OF CHINA

Test Result	**Positive**

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

REPORT VERSION

Version No.	Issue Date	Description
01	2025.12.05	Initial Issue

TABLE OF CONTENTS

1. GENERAL INFORMATION

1.1. GENERAL DESCRIPTION OF EUT

Product Name:	Pulse Oximeter
Trade Mark:	CONTEC
Test Model:	CMS50D-BT
Additional Model(s):	/
Model Difference:	/
Hardware Version:	CMS7.820.404(BT.USB)/1.2
Software Version:	V2.0
Power Supply:	1.5V (AAA size) alkaline batteries × 2
EUT Supports Function: (Provided by the customer)	2.4GHz ISM Bands:
Test Sample(s) Number:	AB25120045-01 (Engineer Sample) AB25120045-02 (Normal Sample)
Radio Specification Subject to this Report	
Bluetooth Version:	Bluetooth LE
Frequency Range:	2402MHz~2480MHz
Modulation Type:	GFSK
Channel Spacing:	2MHz
Channel Number(s):	40
Antenna Type:	Integral Antenna
Antenna Gain:	-0.15dBi

1.2. DESCRIPTION OF SUPPORT EQUIPMENT

Description	Manufacturer	Model	Serial Number	Supplied by
Notebook	Lenovo	B470	WB05067151	Applicant

1.3. DESCRIPTION OF EXTERNAL I/O

I/O Port Description	Quantity	Cable
USB Type-C Interface	1	0.8m, unshielded
/	/	/

1.4. GENERAL DESCRIPTION OF APPLIED STANDARDS

The tests were performed according to following standards:

FCC Rules Part 15.247 - Frequency Hopping, Direct Spread Spectrum and Hybrid Systems that are in operation within the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz.

IEEE/ANSI/USEMCSC C63.10-2020 - American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

KDB 558074 D01 15.247 Meas Guidance v05r02 - Guidance for Compliance Measurements on Digital Transmission System, Frequency Hopping Spread Spectrum System, and Hybrid System Devices operating under Section 15.247 Of the FCC Rules.

1.5. DESCRIPTION OF TEST FACILITY

Test Lab: Aibo Standard Technology (Shenzhen) Co., Ltd.

Address: 101, Building B, Tuori New Energy Industrial Park, High-tech Park, Tianliao Community, Yutang Street, Guangming District, Shenzhen City, Guangdong Province, China

Tel.: +86 755 85250797

E-mail: aibo@aibonorm.com

Website: www.aibonorm.com

The test facility is recognized, certified, or accredited by the following organizations:

A2LA-Lab Certificate No.: 7514.01

Aibo Standard Technology (Shenzhen) Co., Ltd. has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC Accredited Lab.

Designation Number: CN1411

Test Firm Registration Number: 567066

ISED Wireless Device Testing Laboratories

Company Number: 33924

CAB identifier: CN0185

1.6. MEASUREMENT UNCERTAINTY

The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Items	Measurement Uncertainty
Power Line Conducted Emission (9kHz~150kHz)	±3.62dB
Power Line Conducted Emission (150kHz~30MHz)	±3.38dB
Radiated Emission (9kHz~30MHz)	±3.10dB
Radiated Emission (30MHz~1GHz)	±4.90dB
Radiated Emission (1GHz~18GHz)	±3.88dB
Radiated Emission (8GHz~40GHz)	±5.32dB
RF Conducted Power	±0.57dB
Conducted Spurious Emissions	±1.60dB
RF Frequency	$\pm 6.0 \times 10^{-7}$
Occupied Channel Bandwidth	±28.87KHz
Maximum Power Spectral Density Level	±0.59dB

Note: All measurement uncertainty values are shown with a coverage factor of k = 2 to indicate a 95 % level of confidence.

1.7. ENVIRONMENTAL CONDITIONS

During the measurement the environmental conditions were within the listed ranges:

Normal Temperature:	+15°C ~ +35°C
Lative Humidity	20 % ~ 75 %
Air Pressure	98KPa ~ 101KPa

1.8. DESCRIPTION OF TEST MODES

Operation Frequency List	
Channel Number	Frequency (MHz)
00	**2402**
01	2404
⋮	⋮
19	**2440**
20	2442
21	2444
⋮	⋮
38	2478
39	**2480**

For portable device, radiated emission was verified over X, Y, Z Axis, and shown the worst case in this report. The following operating modes were applied for the related test items. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data packets and antenna ports (if EUT with antenna diversity architecture), only the result of the worst case was recorded in the report.

List of Test Modes	
Test Mode(s)	Description
TM1	Keep the EUT works in continuously transmitting mode (BLE 1M)

Power setting during the test:

During testing, Channel & Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Frequency	2402MHz	2440MHz	2480MHz
RF Power Parameter(s)	Default	Default	Default

2. SUMMARY OF TEST RESULT

FCC 47 CFR Part 15 Subpart C Test Cases			
FCC Rule	**Description of Test Item(s)**	**Result**	**Test Engineer**
Part 15.203	Antenna Requirement	Pass	Jacey Fu
Part 15.247(b)(3)	Maximum Peak Conducted Output Power	Pass	Jacey Fu
Part 15.247(a)(2)	6dB Bandwidth	Pass	Jacey Fu
Part 15.247(e)	Power Spectral Density	Pass	Jacey Fu
Part 15.247(d)	Conducted Spurious Emissions and Conducted Band Edges Measurement	Pass	Jacey Fu
Part 15.205, 15.209, 15.247(d)	Radiated Emissions and Radiated Band Edges Measurement	Pass	He Chen
Part 15.207	Power Line Conducted Emissions	Note	/
Part 15.247(i)	RF Exposure (see the RF Exposure Report)	Pass	Jacey Fu

Note : This product Pulse Oximeter, model CMS50D-BT, is powered by battery. So it is no need to test against it.

3. MEASUREMENT INSTRUMENTS LIST

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
1	Loop Antenna	Schwarzbeck	FMZB 1519	1519-025	02/19/2025	02/18/2026
2	ESCI EMI TEST RECEIVER	ROHDE & SCHWARZ	ESPI 7	/	01/20/2025	01/19/2026
3	Power Amplifier	HZEMC	HPA-9K0133	HYPA23029	02/19/2025	02/18/2026
4	Broadband Antenna	Schwarzbeck	VULB 9168	01763	02/19/2025	02/18/2026
5	Attenuator	PRM	ATT50-6-3	ATT50-6-3	01/20/2025	01/19/2026
6	Spectrum Analyzer	R&S	FSV40-N	101365	01/20/2025	01/19/2026
7	Horn Antenna	Schwarzbeck	BBHA 9120 D	02786	02/19/2025	02/18/2026
8	Horn Antenna	Schwarzbeck	ZLB7-18-40G-77	072410839	02/19/2025	02/18/2026
9	Power Amplifier	HZEMC	PA0118-43	HYPA23030	02/19/2025	02/18/2026
10	Power Amplifier	HZEMC	PA01840-45	HYPA23031	02/19/2025	02/18/2026
11	EMI Test Receiver	R&S	ESCI	101196	01/20/2025	01/19/2026
12	LISN	R&S	ENV216	102374	01/20/2025	01/19/2026
13	Pulse Limiter	Schwarzbeck	ESH3-Z2	0357.8810.54	01/20/2025	01/19/2026
14	MXA Signal Analyzer	Keysight	N9020A	MY52091389	01/20/2025	01/19/2026
15	Power Sensor	Agilent	U2021XA	MY54110007	01/31/2025	01/30/2026
16	Power Sensor	Agilent	U2021XA	MY54110009	01/31/2025	01/30/2026
17	MXG Vector Signal Generator	Agilent	N5182A	MY47070153	01/20/2025	01/19/2026
18	Analog Signal Source	Keysight	N5173B	MY60403029	01/20/2025	01/19/2026
19	Vector Signal Generator	R&S	SMCV100B	106103	01/20/2025	01/19/2026
20	WIDEBAND RADIO COMMUNICATION TESTER	R&S	CMW500	118780	01/20/2025	01/19/2026
21	DC POWER SUPPLY	MAISHENG	MT-305DS	2021040016	02/28/2025	02/27/2026
22	Const Temp. & Humidity Chamber	GRT	GR-HWX-150L	GR25010601	01/20/2025	01/19/2026

Test Software		
Software name	Model	Version
Conducted Emission Measurement Software	FASLAB	V4.1
Radiated Emission Measurement Software	FASLAB	V4.1
Bluetooth and WIFI Test System	MTS 8310	V3.0.0.0

4. ANTENNA REQUIREMENT

1) Standard Requirement

15.203 requirement:

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, 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.

15.247(b) (4) requirement:

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 6dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6dBi.

2) Conclusion

Antenna in the interior of the equipment and no consideration of replacement. The gain of the antenna is -0.15dBi (Max.). It complies with the standard requirement.

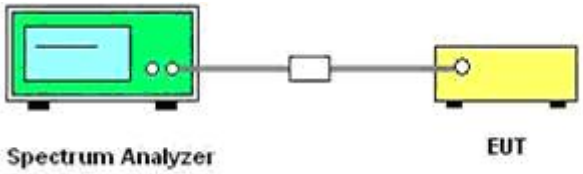
5. CONDUCTED OUTPUT POWER

5.1. LIMIT

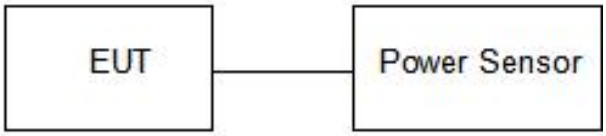
According to 15.247(b)(3). For systems using digital modulation in the 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the 1 Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

5.2. TEST SETUP

☒ **Using a Spectrum Analyzer for Testing:**



☐ **Using a Broadband Power Meter for Testing:**



5.3. TEST PROCEDURE

☒ **Using a Spectrum Analyzer for Testing:**

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

a) Use the following spectrum analyzer settings:

1) Set the RBW ≥ DTS bandwidth, centered on the test channel.

2) Set VBW ≥ 3 x RBW.

3) Set Span ≥ 3 x RBW.

4) Sweep: Auto.

5) Detector function: Peak.

6) Trace: Max hold.

b) Allow trace to stabilize.

c) Use the marker-to-peak function to set the marker to the peak of the emission.

d) The indicated level is the peak output power, after any corrections for external attenuators and cables.

e) A plot of the test results and setup description shall be included in the test report.

☐ **Using a Broadband Power Meter for Testing:**

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the broadband power meter.

5.4. TEST RESULT

Pass.

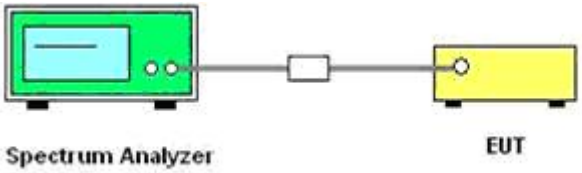
Please refer to the Appendix A BLE RF Test Data.
Note: The test results including the cable lose.

6. 6DB BANDWIDTH AND OCCUPIED BANDWIDTH

6.1. LIMIT

According to 15.247(a)(2), Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

6.2. TEST SETUP



6.3. TEST PROCEDURE

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

Use the following spectrum analyzer settings:

For 6dB Bandwidth Measurement:

a) Span = approximately 1.5 to 5 times the OBW, centered on the test channel.

b) Set RBW= shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.

c) VBW ≥ 3 x RBW

d) Sweep = auto;

e) Detector function = peak

f) Trace = max hold

g) All the trace to stabilize, use the marker-to-peak function to set the marker to the peak of the emission, use the marker-delta function to measure and record the 6dB down bandwidth of the emission.

For 99% Occupied Bandwidth Measurement:

a) Span = approximately 1.5 to 5 times the OBW, centered on the test channel.

b) Set RBW= shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.

c) VBW ≥ 3 x RBW

d) Sweep = auto;

e) Detector function = peak

f) Trace = max hold

g) Use the 99% power bandwidth function of the instrument to measure the Occupied Bandwidth and recoded.

6.4. TEST RESULT

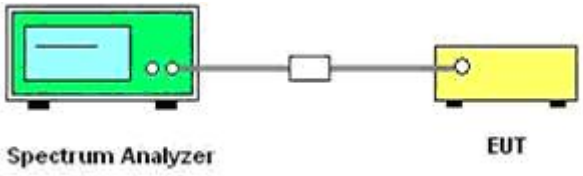
Please refer to the Appendix A BLE RF Test Data..

7. POWER SPECTRAL DENSITY

7.1. LIMIT

According to 15.247(e), For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

7.2. TEST SETUP



7.3. TEST PROCEDURE

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

Use the following spectrum analyzer settings:

a) Set analyzer center frequency to DTS channel center frequency.

b) Set the span to 1.5 times the DTS bandwidth.

c) Set the RBW to: 3KHz ≤ RBW ≤ 100KHz.

d) Set the VBW ≥ 3 x RBW.

e) Detector = peak.

f) Sweep time = auto couple.

g) Trace mode = max hold.

h) Allow trace to fully stabilize.

i) Use the peak marker function to determine the maximum amplitude level within the RBW.

j) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

7.4. TEST RESULT

Pass.

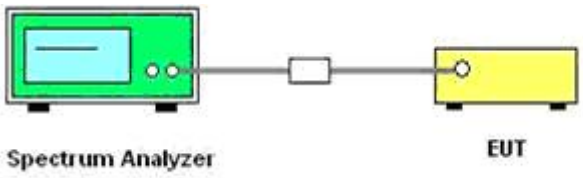
Please refer to the Appendix A BLE RF Test Data.

8. CONDUCTED SPURIOUS EMISSIONS AND CONDUCTED BAND EDGES MEASUREMENT

8.1. LIMIT

According to §15.247(d), In any 100kHz 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 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30dB instead of 20dB. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

8.2. TEST SETUP



8.3. TEST PROCEDURE

a) Remove the antenna from the EUT and connect to the spectrum analyzer via a low loss RF cable.

b) Set the spectrum analyzer to any one measured frequency within its operating range.

c) Set RBW = 100kHz, VBW = 300kHz, Sweep = Auto, Detector = Peak.

d) Measure the highest amplitude appearing on spectral display and set it as a reference level.

e) Set a convenient frequency span including 100 kHz bandwidth from band edge. Measure the emission and marking the edge frequency.

f) Measure the spurious emissions with frequency range from 9kHz to 26.5GHz.

8.4. TEST RESULT

Pass.

Please refer to the Appendix A BLE RF Test Data.

9. RADIATED EMISSIONS AND RADIATED BAND EDGES MEASUREMENT

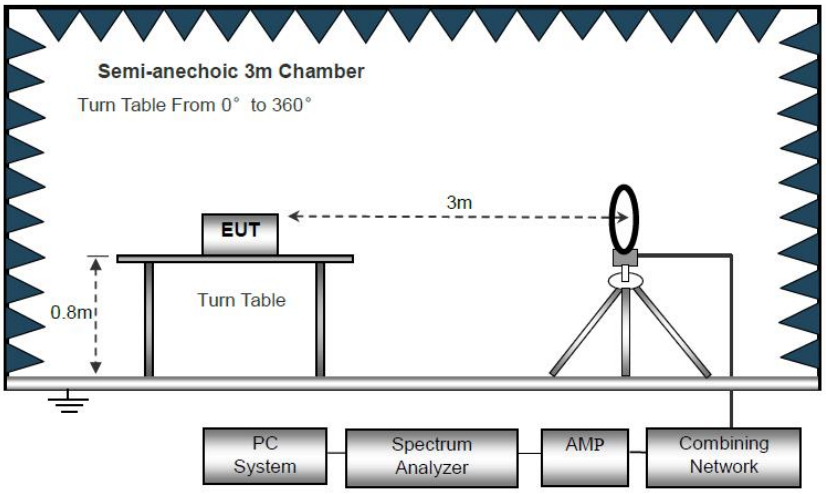
9.1. LIMIT

According to §15.247(d), radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

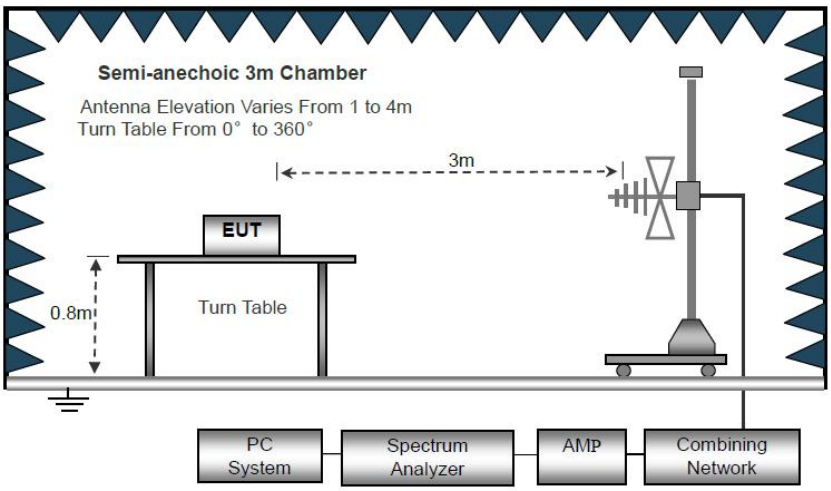
Limits of Spurious Emissions				
Frequency	Field strength (microvolt/meter)	Limit (dBμV/m)	Remark	Measurement distance (m)
0.009MHz~0.490MHz	2400/F(kHz)	---	---	300
0.490MHz~1.705MHz	24000/F(kHz)	---	---	30
1.705MHz~30MHz	30	---	---	30
30MHz~88MHz	100	40.0	Quasi-peak	3
88MHz~216MHz	150	43.5	Quasi-peak	3
216MHz~960MHz	200	46.0	Quasi-peak	3
960MHz~1GHz	500	54.0	Quasi-peak	3
Above 1GHz	500	54.0	Average	3

Remark:
a) The lower limit shall apply at the transition frequencies.
b) Emission level (dBuV/m) = 20*log Emission level (uV/m).
c) For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.
d) Spurious Radiated Emissions measurements starting below or at the lowest crystal frequency.

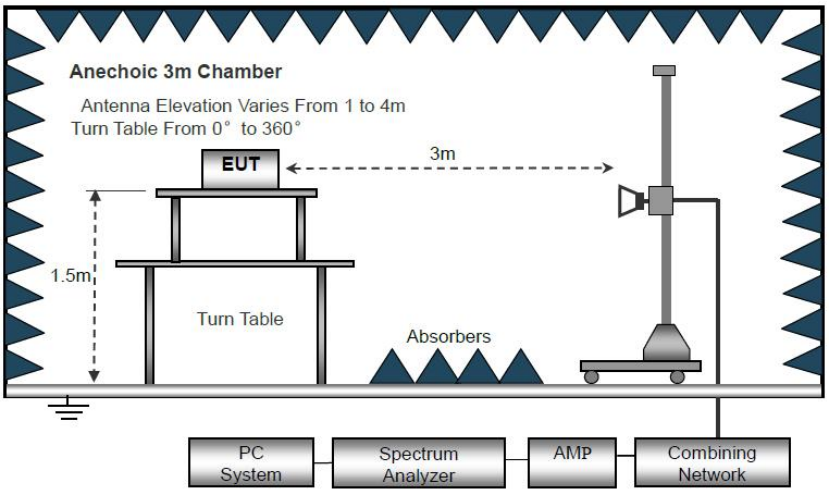
9.2. TEST SETUP



Block Diagram of Radiated Emission Below 30MHz



Block Diagram of Radiated Emission From 30MHz to 1GHz



Block Diagram of Radiated Emission Above 1GHz

9.3. TEST PROCEDURE

a) Below 1GHz measurement the EUT is placed on a turntable which is 0.8m above ground plane, and above 1GHz measurement EUT was placed on a low permittivity and low loss tangent turn table which is 1.5m above ground plane.

b) Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0 degree to 360 degree to acquire the highest emissions from EUT.

c) And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

d) Repeat above procedures until all frequency measurements have been completed.

e) Radiated emission test frequency band from 9KHz to 25GHz.

f) The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and record the worst case in this report.

g) The distance between test antenna and EUT as following table states:

Test Frequency range	Test Antenna Type	Test Distance
9KHz~30MHz	Active Loop Antenna	3
30MHz~1GHz	Bilog Antenna	3
1GHz~18GHz	Horn Antenna	3
18GHz~25GHz	Horn Anternna	1

h) Setting test receiver/spectrum as following table states:

Test Frequency range	Test Receiver/Spectrum Setting	Detector	
9KHz~150KHz	RBW=200Hz/VBW=3KHz, Sweep time=Auto	QP	
150KHz~30MHz	RBW=9KHz/VBW=100KHz, Sweep time=Auto	QP	
30MHz~1GHz	RBW=120KHz/VBW=1000KHz, Sweep time=Auto	QP	
1GHz~40GHz	Peak Value: RBW=1MHz/VBW=3MHz, Sweep time=Auto Average Value: RBW=1MHz/ VBW=10Hz,when duty cycle is no less than 98 percent. VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation. Sweep time=Auto	Peak	

9.4. TEST RESULT

Pass.

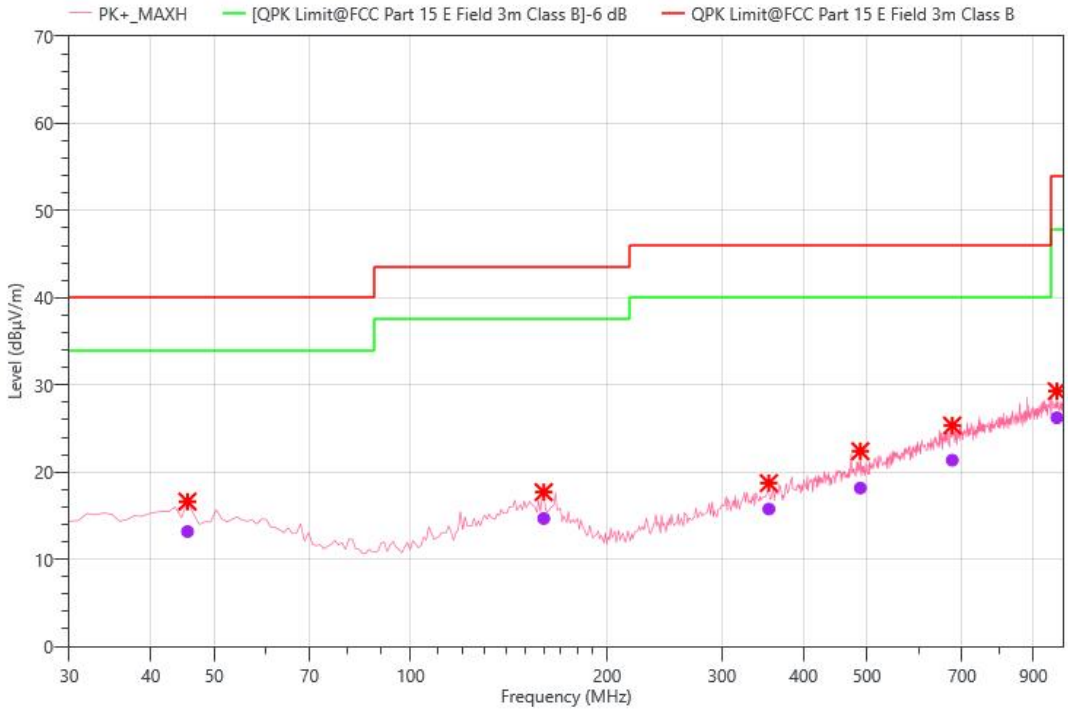
Remark:

a) Pre-scan all modes and recorded the worst case in this report.

b) Radiated emission test from 9KHz to 10th harmonic of fundamental was verified, and the emission levels from 9kHz to 30MHz are attenuated 20dB below the limit and not recorded in report.

For Radiated Spurious Emissions 9kHz~1GHz, the worst case BLE 1MHz mode and lowest channel in the Radiated Spurious Emissions above 1GHz was tested.

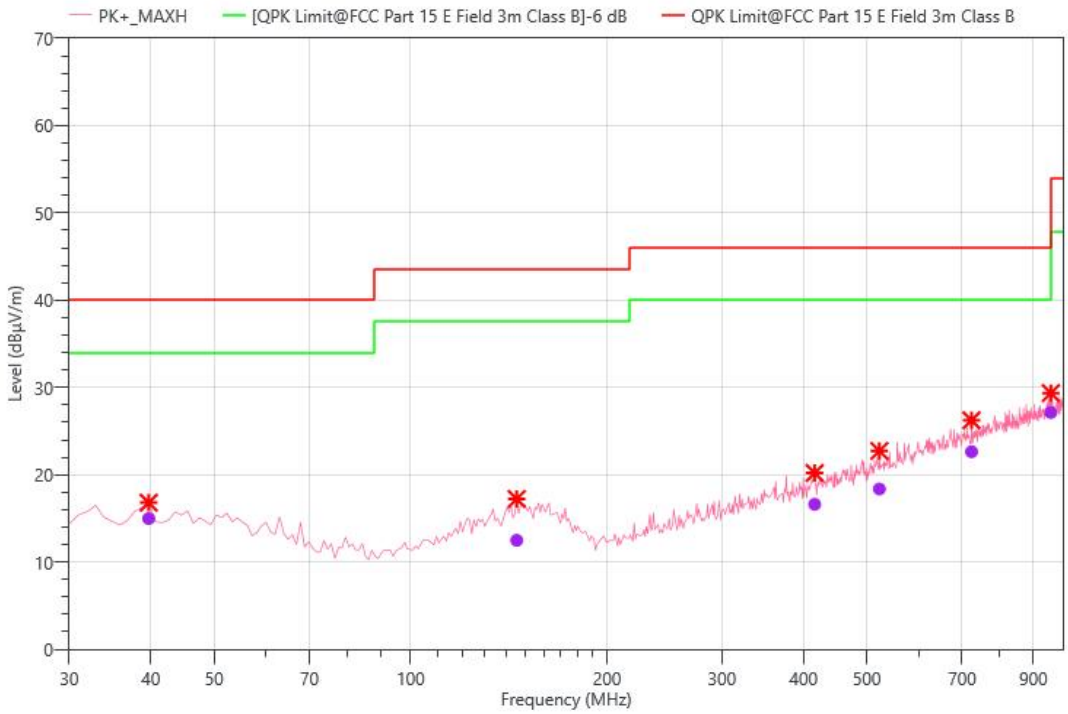
Radiated Emission Test Data (30MHz to 1GHz) Lowest Channel			
Environmental Conditions	24.6℃, 53.4% RH	Test Engineer	He Chen
Worst Test Mode:	TM1(BLE 1M)	Polarity:	Horizontal



No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Height (cm)	Pol.	Azimuth (deg)	Verdict
1	45.520	26.42	-13.24	13.18	40.00	26.82	QPK	100	H	360.0	PASS
2	159.980	26.77	-12.1	14.67	43.50	28.83	QPK	100	H	225.5	PASS
3	353.980	26.66	-10.9	15.76	46.00	30.24	QPK	100	H	0.0	PASS
4	488.810	25.99	-7.82	18.17	46.00	27.83	QPK	100	H	0.0	PASS
5	676.020	25.53	-4.17	21.36	46.00	24.64	QPK	100	H	0.8	PASS
6	977.690	26.67	-0.44	26.23	53.90	27.67	QPK	100	H	0.4	PASS

Remark:
Emission Level = Reading + Factor;
Factor = Antenna Factor + Cable Loss – Pre-amplifier;
Margin=Limit - Emission Level.

Radiated Emission Test Data (30MHz to 1GHz)Lowest Channel			
Environmental Conditions	24.6℃, 53.4% RH	Test Engineer	He Chen
Worst Test Mode:	TM1(BLE 1M)	Polarity:	Vertical



No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Height (cm)	Pol.	Azimuth (deg)	Verdict
1	39.700	27.81	-12.83	14.98	40.00	25.02	QPK	100	V	290.0	PASS
2	145.430	24.66	-12.17	12.49	43.50	31.01	QPK	100	V	204.7	PASS
3	416.060	26.05	-9.44	16.61	46.00	29.39	QPK	100	V	342.7	PASS
4	522.760	25.46	-7.09	18.37	46.00	27.63	QPK	100	V	182.9	PASS
5	723.550	26.01	-3.37	22.64	46.00	23.36	QPK	100	V	49.7	PASS
6	957.320	27.50	-0.37	27.13	46.00	18.87	QPK	100	V	138.5	PASS

Remark:
Emission Level = Reading + Factor;
Factor = Antenna Factor + Cable Loss – Pre-amplifier;
Margin=Limit - Emission Level.

Radiated Emission Test Data (Above 1GHz)			
Environmental Conditions	24.6℃, 53.4% RH	Test Engineer	He Chen

Lowest Channel (Worst Case: BLE 1M)

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector (PEAK/AVG)	Polar (H/V)
1768.000	52.68	-10.93	41.75	74.00	32.25	PK+	H
1768.000	46.41	-10.93	35.48	54.00	18.52	AVG	H
2390.000	57.92	-8.68	49.24	74.00	24.76	PK+	H
2390.000	54.47	-8.68	45.79	54.00	8.21	AVG	H
4800.000	60.47	-14.06	46.41	74.00	27.59	PK+	H
4800.000	45.52	-14.06	31.46	54.00	22.54	AVG	H
7200.000	54.61	-6.58	48.03	74.00	25.97	PK+	H
7200.000	40.29	-6.58	33.71	54.00	20.29	AVG	H
9600.000	36.56	-3.48	33.08	54.00	20.92	AVG	H
9615.000	54.47	-3.39	51.08	74.00	22.92	PK+	H
17985.000	40.90	11.29	52.19	74.00	21.81	PK+	H
18000.000	30.51	11.5	42.01	54.00	11.99	AVG	H
1196.000	45.04	-11.74	33.30	54.00	20.70	AVG	V
1224.000	51.28	-11.6	39.68	74.00	34.32	PK+	V
1954.000	53.02	-10.09	42.93	74.00	31.07	PK+	V
1954.000	49.26	-10.09	39.17	54.00	14.83	AVG	V
2392.000	52.99	-8.68	44.31	74.00	29.69	PK+	V
2392.000	49.87	-8.68	41.19	54.00	12.81	AVG	V
4785.000	48.90	-14.24	34.66	54.00	19.34	AVG	V
4800.000	63.21	-14.06	49.15	74.00	24.85	PK+	V
7200.000	57.74	-6.58	51.16	74.00	22.84	PK+	V
7200.000	41.13	-6.58	34.55	54.00	19.45	AVG	V
12015.000	54.85	-0.79	54.06	74.00	19.94	PK+	V
12015.000	40.00	-0.79	39.21	54.00	14.79	AVG	V

Middle Channel (Worst Case: BLE 1M)

Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector (PEAK/AVG)	Polar (H/V)
1196.000	54.85	-11.74	43.11	74.00	30.89	PK+	H
1196.000	48.34	-11.74	36.60	54.00	17.40	AVG	H
2392.000	55.87	-8.68	47.19	74.00	26.81	PK+	H
2392.000	51.48	-8.68	42.80	54.00	11.20	AVG	H
4785.000	44.17	-14.24	29.93	54.00	24.07	AVG	H
4875.000	58.54	-13.48	45.06	74.00	28.94	PK+	H
7320.000	55.59	-6.42	49.17	74.00	24.83	PK+	H
7320.000	40.38	-6.42	33.96	54.00	20.04	AVG	H
9765.000	58.71	-2.87	55.84	74.00	18.16	PK+	H
9765.000	43.73	-2.87	40.86	54.00	13.14	AVG	H
12195.000	50.40	-1.37	49.03	74.00	24.97	PK+	H
14550.000	32.31	3.29	35.60	54.00	18.40	AVG	H
1954.000	52.59	-10.09	42.50	74.00	31.50	PK+	V
1954.000	48.61	-10.09	38.52	54.00	15.48	AVG	V
2392.000	55.02	-8.68	46.34	74.00	27.66	PK+	V
2392.000	52.85	-8.68	44.17	54.00	9.83	AVG	V
4875.000	61.69	-13.48	48.21	74.00	25.79	PK+	V
4875.000	45.55	-13.48	32.07	54.00	21.93	AVG	V
7320.000	57.95	-6.42	51.53	74.00	22.47	PK+	V
7320.000	42.16	-6.42	35.74	54.00	18.26	AVG	V
9765.000	57.07	-2.87	54.20	74.00	19.80	PK+	V
9765.000	41.79	-2.87	38.92	54.00	15.08	AVG	V
12195.000	51.54	-1.37	50.17	74.00	23.83	PK+	V
12195.000	36.00	-1.37	34.63	54.00	19.37	AVG	V

Highest Channel (Worst Case: BLE 1M)							
Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector (PEAK/AVG)	Polar (H/V)
1198.000	54.30	-11.72	42.58	74.00	31.42	PK+	H
1198.000	51.34	-11.72	39.62	54.00	14.38	AVG	H
2392.000	50.92	-8.68	42.24	54.00	11.76	AVG	H
2392.000	55.33	-8.68	46.65	74.00	27.35	PK+	H
2492.000	59.12	-8.44	50.68	74.00	23.32	PK+	H
2492.000	49.84	-8.44	41.40	54.00	12.60	AVG	H
4950.000	60.82	-13	47.82	74.00	26.18	PK+	H
4950.000	44.29	-13	31.29	54.00	22.71	AVG	H
7440.000	56.62	-5.96	50.66	74.00	23.34	PK+	H
7440.000	41.18	-5.96	35.22	54.00	18.78	AVG	H
9915.000	60.73	-2.88	57.85	74.00	16.15	PK+	H
9915.000	41.93	-2.88	39.05	54.00	14.95	AVG	H
1778.000	53.03	-10.89	42.14	74.00	31.86	PK+	V
1926.000	47.65	-10.31	37.34	54.00	16.66	AVG	V
2392.000	50.56	-8.68	41.88	54.00	12.12	AVG	V
2392.000	55.43	-8.68	46.75	74.00	27.25	PK+	V
2494.000	56.05	-8.43	47.62	74.00	26.38	PK+	V
2548.000	49.51	-8.63	40.88	54.00	13.12	AVG	V
4785.000	45.64	-14.24	31.40	54.00	22.60	AVG	V
4950.000	59.19	-13	46.19	74.00	27.81	PK+	V
7440.000	58.69	-5.96	52.73	74.00	21.27	PK+	V
7440.000	42.12	-5.96	36.16	54.00	17.84	AVG	V
9915.000	57.01	-2.88	54.13	74.00	19.87	PK+	V
9915.000	41.01	-2.88	38.13	54.00	15.87	AVG	V

Remark:

Emission Level = Reading + Factor;

Factor = Antenna Factor + Cable Loss – Pre-amplifier;

Margin=Limit - Emission Level .

Testing is carried out with frequency rang 9kHz to the tenth harmonics. The emission levels of other frequencies are attenuated 20dB below the limit and not recorded in report.

Radiated Band Edges Test Data							
Environmental Conditions	24.6℃, 53.4% RH			Test Engineer		He Chen	
Lowest Channel (Worst Case: BLE 1M_2402MHz)							
Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector (PEAK/AVG)	Polar (H/V)
2310	57.52	-13.61	52.15	74	-21.85	PEAK	H
2310	43.4	-13.61	40.42	54	-13.58	AVG	H
2390	59.63	-13.48	49.42	74	-24.58	PEAK	H
2390	42.65	-13.48	25.66	54	-28.34	AVG	H
2400	64.77	-13.4	46.49	74	-27.51	PEAK	H
2400	50.83	-13.4	39.58	54	-14.42	AVG	H
2310	57.1	-13.61	45.79	74	-28.21	PEAK	V
2310	45.76	-13.61	41.52	54	-12.48	AVG	V
2390	63.44	-13.48	57.92	74	-16.08	PEAK	V
2390	38.44	-13.48	20.54	54	-33.46	AVG	V
2400	60.22	-13.4	46.04	74	-27.96	PEAK	V
2400	44.91	-13.4	22.74	54	-31.26	AVG	V
Highest Channel (Worst Case: BLE 1M_2480MHz)							
Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector (PEAK/AVG)	Polar (H/V)
2483.5	68.6	-13.36	49.16	74	-24.84	PEAK	H
2483.5	46.74	-13.36	28.62	54	-25.38	AVG	H
2500	59.31	-12.45	42.29	74	-31.71	PEAK	H
2500	42.82	-12.45	41.95	54	-12.05	AVG	H
2483.5	63.47	-13.36	52.92	74	-21.08	PEAK	V
2483.5	50.29	-13.36	36.83	54	-17.17	AVG	V
2500	59.18	-12.45	37.88	74	-36.12	PEAK	V
2500	41.31	-12.45	27.59	54	-26.41	AVG	V

Remark:

Emission Level = Reading + Factor;

Factor = Antenna Factor + Cable Loss – Pre-amplifier;

Margin= Emission Level - Limit.

10. PHOTOGRAPHS OF TEST SETUP

Please refer to AB25120045_Appendix B_Test Photos for Test Setup Photos of the EUT.

11. EXTERNAL PHOTOGRAPHS OF THE EUT

Please refer to AB25120045_Appendix C_EUT External Photos for External Photos of the EUT.

12. INTERNAL PHOTOGRAPHS OF THE EUT

Please refer to AB25120045_Appendix D Internal Photos for Internal Photos of the EUT.

**********THE END**********