

TEST REPORT

APPLICANT

Proasia Design CO., Ltd.

MODEL NAME

LED Pressure Transmitter

FCC ID

2BX72-20PAH

REPORT NUMBER

HCTA-EM-2610-FC001

TEST REPORT

Date of Issue
October 16, 2026

Test Site
HCT America, Inc.

Applicant	Proasia Design CO., Ltd.
Applicant Address	No. 105, Xingde Rd., Sanchong Dist., New Taipei City, 24158 Taiwan (R.O.C).
Model Name	LED Pressure Transmitter
Date of Test	September 22, 2026 – October 13, 2026
Test Standard(s)	FCC CFR 47 Part 15 Subpart B ANSI C63.4-2014
Class Type	Class B
Equipment Code	JAB
Test Result	Refer to the present document.

The device bearing the trade name and model specified above, has been shown to comply with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.4-2014. (See Test Report if any modifications were made for compliance) The results of testing in this report apply only to the product which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

HCT America, Inc. certifies that no party to application has been denied the FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C 862

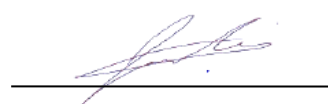
Tested By



Bao Nguyen

Test Engineer

Reviewed By



James Choi

Technical Manager

REVISION HISTORY

The revision history for this document is shown in table.

Test Report No.	Issue Date	Description
HCTA-EM-2610-FC001	10/16/2026	Original Issue

TABLE OF CONTENTS

Section	Page
1. Test Information of EUT	5
1.1. General Information of EUT	5
1.2. Product Specification	5
2. Configuration and Connections with the EUT	6
2.1. EUT and Ancillary Equipment	6
2.2. EUT Operating Mode(s)	6
2.3. Test Ports	7
2.4. Connection Diagram of the EUT and Ancillary Equipment	8
3. Test Facilities and Accreditations	9
3.1. Test Laboratory	9
3.2. Test Facility	9
3.3. Instrument Calibration	9
3.4. Accreditation Certificate	10
4. References of Test	11
4.1. Test Standard	11
4.2. Test Method	11
4.3. Additional Deviations and Exclusions from Standards	11
5. Test Rationale	12
5.1. Test Limits Guideline	12
5.2. Frequency Range of Radiated Measurements	13
5.3. Measurement Uncertainty	14
6. Test Summary	15
7. Test Equipment	16
8. EMC Test Results	17
8.1. Radiated Emission (30 MHz – 1 GHz)	17
8.2. Radiated Emission (1 GHz – 12.75 GHz)	20
9. ANNEX A. TEST SETUP PHOTOS	25

1. Test Information of EUT

1.1. General Information of EUT

Base Model Name	LED Pressure Transmitter
Manufacturer	Proasia Design CO., Ltd.
FCC ID	2BX72-20PAH
Firmware Version	1.0.0
Hardware Version	Rev D

1.2. Product Specification

Item	Specification	
Dimensions	Approx. 7.9 cm x 3.5 cm x 3.5 cm (L x W x H)	
Radio Technology	BLE	2 400 to 2 480 MHz
	Radio	38 kHz
Power Rating	3 VDC (Lithium Battery)	

2. Configuration and Connections with the EUT

2.1. EUT and Ancillary Equipment

Equipment Type	Model	Serial Number	Manufacturer
EUT	LED Pressure Transmitter	TX000053 (Sample 18) TX000039 (Sample 4)	Proasia Design CO., Ltd.
Scuba Tank	-	3AL3000P62469IUXFER02a92-S80	DACOR
1st Stage Diving Regulator	-	BX11258	Beuchat
2nd Stage Diving Regulator	-	91-03	Oceanic
Dive Computer	I77OR	FQ-000032	AQUE LUNG
Signal Analyzer	FSV40	101424	ROHDE & SCHWARZ
Horn Antenna	3115	9611-5037	EMCO

2.2. EUT Operating Mode(s)

Radio Mode –

Configuration 1

The EUT (Sample 18) was powered by its Lithium Battery and automatically powered when connected to the Scuba Tank regulator hoses connector. The 38 kHz Radio Frequency signal was preconfigured and enabled by the manufacturer. During testing, the EUT was connected to a Dive Computer via the 38 kHz radio frequency link for monitoring purposes.

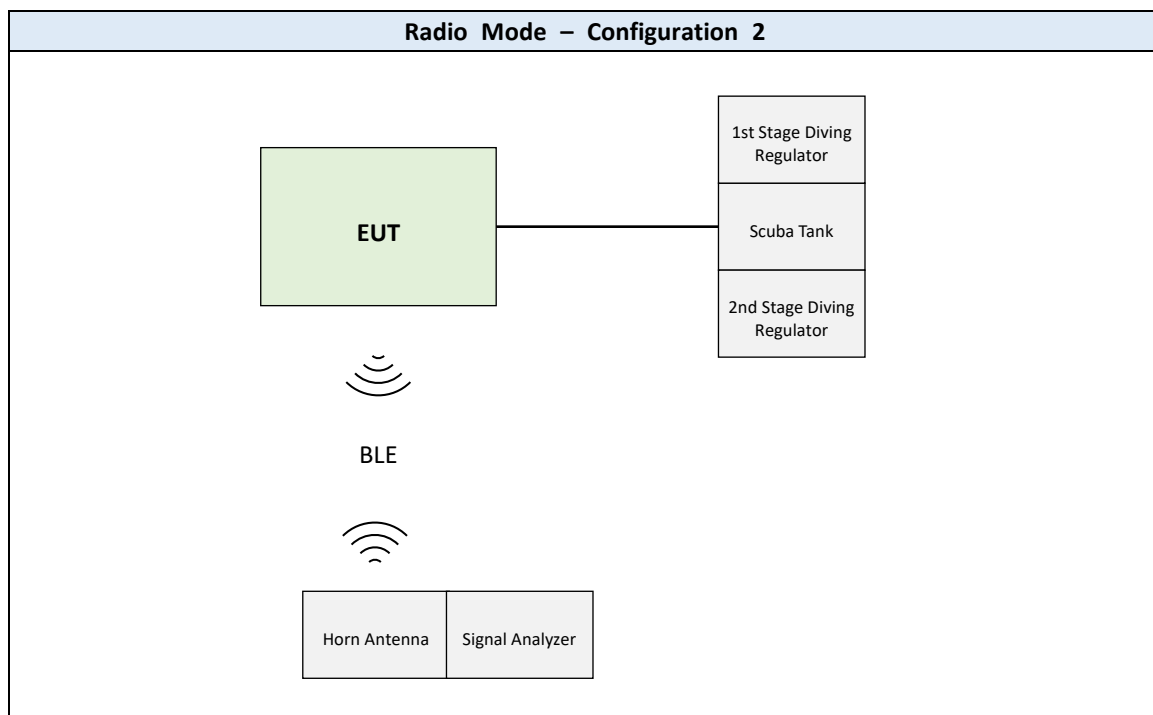
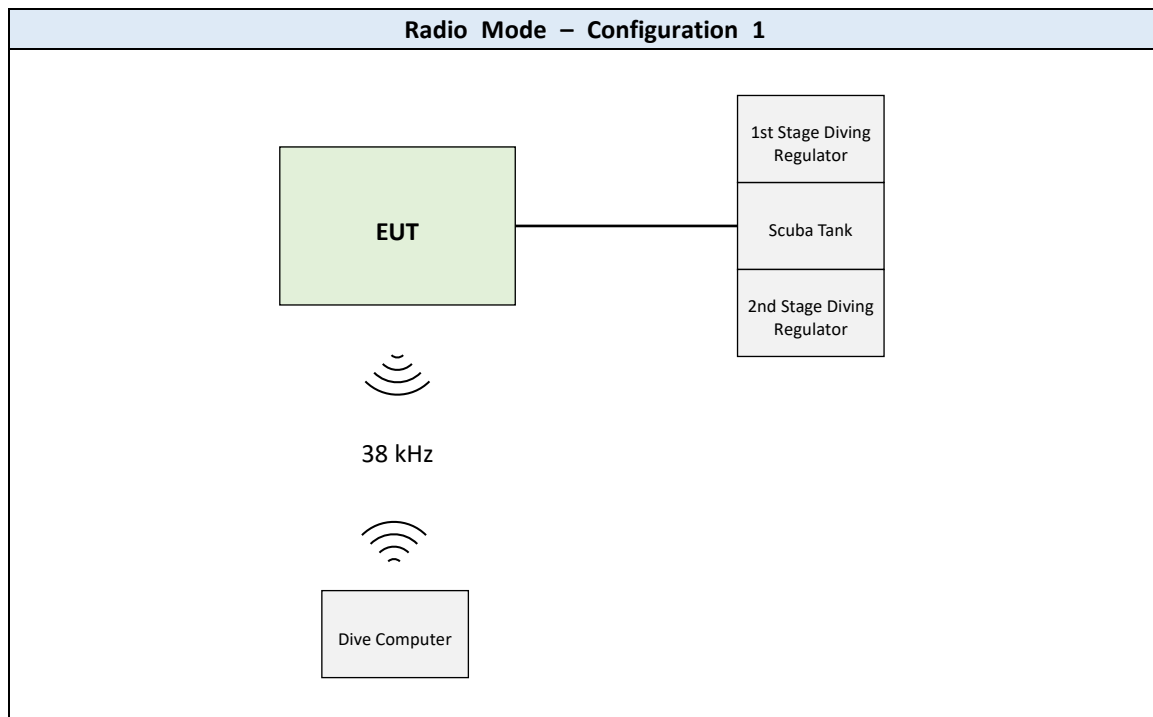
Configuration 2

The EUT (Sample 4) was powered by its Lithium Battery and automatically powered when connected to the Scuba Tank regulator hoses connector. The BLE signal was preconfigured and enabled by the manufacturer. During testing, an Signal Analyzer and Horn Antenna were used to monitor the BLE signal.

2.3. Test Ports

Radio Mode – Configuration 1 & 2						
Start Connection		End Connection		Cable		Quantity
Equipment	I/O Port	Equipment	I/O Port	Length (m)	Shielding Condition	
EUT	Regulator Hose	Scuba Tank	Regulator Hose	2.0	-	1
Scuba Tank	Regulator Hose	1st Stage Diving Regulator	Regulator Hose	1.0	-	1
	Regulator Hose	2st Stage Diving Regulator	Regulator Hose	1.0	-	1

2.4. Connection Diagram of the EUT and Ancillary Equipment



3. Test Facilities and Accreditations

3.1. Test Laboratory

Company Name	HCT America, Inc.
CEO	Sunwoo Kim
Address	840 Yosemite Way, Milpitas, CA 95035 USA
Telephone	+1 408-649-3494

3.2. Test Facility

3 m Semi-Anechoic Chamber Main Address	840 Yosemite Way, Milpitas, CA 95035 USA
10 m Open Site Satellite Address	1177 Comstock Road, Hollister, CA 95023 USA

Measurement facilities are constructed in conformance with the requirements of ANSI C63.4-2014. The normalized site attenuations (30 MHz to 1 GHz) and site validation (1 GHz to 18 GHz) were performed in accordance with the standard in ANSI C63.4-2014.

Measurement Facilities	Test Facility	
Radiated Field Strength Measurement Facility 3 m Semi-Anechoic Chamber	Chamber A	Chamber B
	Chamber C	Chamber D
Radiated Field Strength Measurement Facility 10 m Open Site	OATS	

3.3. Instrument Calibration

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturers recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

All antenna for measurement is calibrated in accordance with the requirements of ANSI C63.5-2017.

3.4. Accreditation Certificate



A2LA has accredited

HCT AMERICA, INC.

Milpitas, CA

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This laboratory also meets the A2LA – R256 – Specific Requirements. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 22nd day of September 2025.



Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 4201.01
Valid to July 31, 2027

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

4. References of Test

4.1. Test Standard

FCC CFR 47 Part 15 Subpart B

4.2. Test Method

FCC CFR 47 Part 15 Subpart B
ANSI C63.4-2014

4.3. Additional Deviations and Exclusions from Standards

No additions, deviations, or exclusions have been made from standards and/or accreditations.

5. Test Rationale

5.1. Test Limits Guideline

5.1.1. FCC CFR 47 Part 15 Subpart B

Conducted Emissions Limits AC Mains Power Port				
Frequency Range (MHz)	Class A		Class B	
	Average (dBμV)	Quasi-Peak (dBμV)	Average (dBμV)	Quasi-Peak (dBμV)
0.15 – 0.5	66	79	56 to 46 ¹	66 to 56 ¹
0.5 – 5	60	73	46	56
5 – 30	60	73	50	60

Note 1: The limit level in dBμV decreases linearly with the logarithm of the frequency.

Radiated Emissions Limits 30 MHz to 1 GHz					
Frequency Range (MHz)	Measurement Distance (m)	Class A		Class B	
		Quasi-Peak		Quasi-Peak	
		μV/m	dBμV/m	μV/m	dBμV/m
30 – 88	3	300	49.5	100	40
88 – 216		500	54	150	43.5
216 – 960		700	56.9	200	46
960 – 1 000		1 000	60	500	54
30 – 88	10	90	39	30	29.5
88 – 216		150	43.5	45	33
216 – 960		210	46.4	60	35.5
960 – 1 000		300	49.5	150	43.5

Radiated Emissions Limits 1 GHz to 40 GHz							
Frequency Range (MHz)	Measurement Distance (m)	Class A			Class B		
		Average		Peak	Average		Peak
		μV/m	dBμV/m	dBμV/m	μV/m	dBμV/m	dBμV/m
1 000 – 40 000	3	1 000	60	80	500	54	74

5.2. Frequency Range of Radiated Measurements

For an unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a Radiated Emission limit is specified, up to the frequency shown in the following table. F_x is the highest fundamental frequency generated and/or used in the ITE or digital apparatus under test.

Highest Internal Frequency, F_x (MHz)	Upper Frequency of Measurement Range (MHz)
$F_x \leq 108$	1 000
$108 < F_x \leq 500$	2 000
$500 < F_x \leq 1\,000$	5 000
$F_x > 1\,000$	$5 \times F_x$ or 40 GHz, whichever is lower

5.3. Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4-2014.

All measurement uncertainty values are shown with a coverage factor of $k = 2$ to indicate a 95 % level of confidence. The measurement data shown herein meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded Uncertainty (dB)
Conducted Emission (0.15 MHz to 30 MHz)	2.55 dB ($k = 2$)
Radiated Emissions (30 MHz to 1 GHz)	4.73 dB ($k = 2$)
Radiated Emissions (1 GHz to 18 GHz)	5.21 dB ($k = 2$)
Radiated Emissions (18 GHz to 40 GHz)	5.18 dB ($k = 2$)

6. Test Summary

The results in this report apply only to sample tested:

Test Date	Phenomena	Limit Value / Performance Criteria	Test Result	Test Method
09/22/2026	Radiated Emission (30 MHz to 1 GHz)	See test data	Pass	ANSI C63.4-2014
10/13/2026	Radiated Emission (1 GHz to 12.75 GHz)	See test data	Pass	ANSI C63.4-2014

7. Test Equipment

Radiated Emissions (30 MHz to 1 GHz)					
Type	Manufacturer	Model	Serial #	Cal Cycle	Cal Due Date
EMI Test Receiver	Rohde & Schwarz	ESW44	103177	1 year	03/10/2027
Hybrid Antenna	Sunol	JB1	A061416	2 years	05/07/2027
Antenna Mast	Incco System	MA4640-XP-ET	10130124	-	-
Turn Table	Incco System	-	5951023	-	-
Antenna Mast Controller	Incco System	CO3000	CO3000/1573/ 58720124/P	-	-
Turn Table Controller	Incco System	CO3000	CO3000/1573/ 58720124/P	-	-
Software	Rohde & Schwarz	ELEKTRA Version 5.11.1	-	-	-

Radiated Emissions (1 GHz to 12.75 GHz)					
Type	Manufacturer	Model	Serial #	Cal Cycle	Cal Due Date
EMI Test Receiver	Rohde & Schwarz	ESW44	103176	1 year	08/07/2027
RF Switch Matrix System	HCT Ltd.	HRSMS-VL	2-51-001	1 year	01/02/2027
Horn Antenna	Schwarzbeck	BBHA 9120 D	03023	2 years	07/15/2027
Antenna Mast	Incco System	MA4640-XP-ET	105612034	-	-
Turn Table	Incco System	-	5951023	-	-
Antenna Mast Controller	Incco System	CO3000	CO3000/1573/ 58720124/P	-	-
Turn Table Controller	Incco System	CO3000	CO3000/1573/ 58720124/P	-	-
Software	Rohde & Schwarz	ELEKTRA Version 5.11.1	-	-	-

8. EMC Test Results

8.1. Radiated Emission (30 MHz – 1 GHz)

8.1.1. Test Environment

Test Site					
Chamber A ☐	Chamber B ☐	Chamber C ☐	Chamber D ☒	OATS ☐	CE Stage ☐
Harmonic/Flicker Stage ☐	Immunity Stage A ☐		Immunity Stage B ☐		Immunity Stage C ☐
Date	Temperature		Relative Humidity		Pressure
09/22/2026	24.2 °C		41.0 % R.H.		101.1 kPa

8.1.2. Test Condition

Operating Mode(s)	Power Supply	Applicable Port
Radio Mode – Configuration 1	Internal Battery	Enclosure Port
Radio Mode – Configuration 2	Internal Battery	Enclosure Port

8.1.3. Test Method and Levels

The test method shall be in accordance with ANSI C63.4-2014.

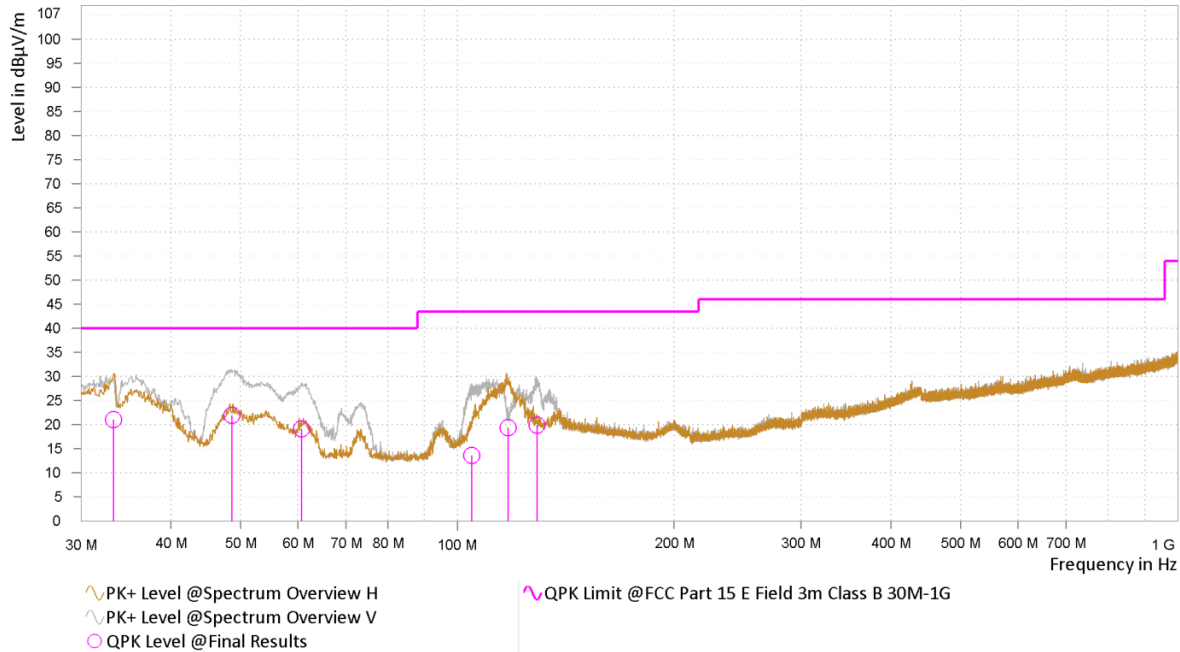
The equipment shall meet the Class B limits given in FCC CFR 47 Part 15 Subpart B.

Obtained the max. emission point by optimizing the antenna height, antenna polarization, and turntable azimuth.

Frequency Range	30 MHz to 1 000 MHz
Measurement Detector Type	Quasi-Peak
Measurement Bandwidth (IF BW)	120 kHz
Measurement Distance	3 m

8.1.4. Test Data

Operating Mode: Radio Mode – Configuration 1
Power Supply: Internal Battery
Frequency Range: 30 MHz – 1 000 MHz
Test Limit: FCC Part 15 Subpart B Class B

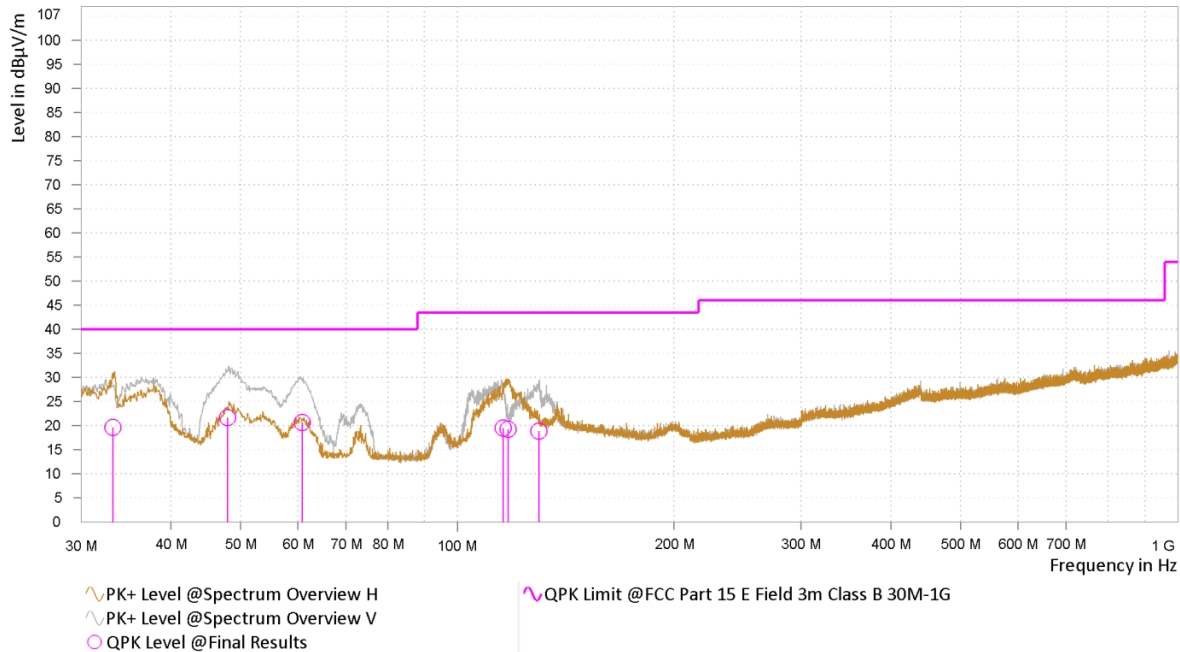


Frequency MHz	Polarization	Reading dB(uV)	Corr. dB(1/m)	Level dB(uV/m)	Limit dB(uV/m)	Margin dB	Height cm	Angle deg
		QP		QP	QP	QP		
33.330	H	-4.3	25.3	21.0	40.0	19.0	111.0	101.4
48.630	V	7.0	15.0	22.0	40.0	18.0	100.0	226.0
60.750	V	4.8	14.3	19.0	40.0	21.0	150.0	273.0
104.700	V	-4.8	18.4	13.5	43.5	30.0	150.0	229.2
117.570	H	-1.2	20.6	19.4	43.5	24.1	182.0	19.0
129.030	V	-1.0	20.9	19.8	43.5	23.7	103.0	22.3

Calculation Formula:

1. Polarization: H = Horizontal, V = Vertical
2. Corr. (Correction Factor) = Antenna Factor + Cable Loss + LNA
3. QuasiPeak Level = Reading (Receiver Reading) + Corr.
4. Margin = Limit - QuasiPeak Level

Operating Mode: Radio Mode – Configuration 2
Power Supply: Internal Battery
Frequency Range: 30 MHz – 1 000 MHz
Test Limit: FCC Part 15 Subpart B Class B



Frequency MHz	Polarization	Reading dB(uV)	Corr. dB(1/m)	Level dB(uV/m)	Limit dB(uV/m)	Margin dB	Height cm	Angle deg
		QP		QP	QP	QP		
33.270	H	-5.7	25.3	19.7	40.0	20.4	121.0	64.1
48.000	V	6.4	15.3	21.6	40.0	18.4	136.0	199.7
60.870	V	6.3	14.3	20.6	40.0	19.4	121.0	197.5
115.650	V	-0.9	20.4	19.5	43.5	24.0	102.0	108.9
117.570	H	-1.4	20.6	19.2	43.5	24.3	191.0	292.5
129.840	V	-2.0	20.8	18.9	43.5	24.6	112.0	15.9

Calculation Formula:

1. Polarization: H = Horizontal, V = Vertical
2. Corr. (Correction Factor) = Antenna Factor + Cable Loss + LNA
3. QuasiPeak Level = Reading (Receiver Reading) + Corr.
4. Margin = Limit - QuasiPeak Level

8.2. Radiated Emission (1 GHz – 12.75 GHz)

8.2.1. Test Environment

Test Site					
Chamber A ☐	Chamber B ☐	Chamber C ☒	Chamber D ☐	OATS ☐	CE Stage ☐
Harmonic/Flicker Stage ☐	Immunity Stage A ☐	Immunity Stage B ☐	Immunity Stage C ☐		
Date	Temperature	Relative Humidity	Pressure		
10/13/2026	22.5 °C	42.0 % R.H.	101.3 kPa		

8.2.2. Test Condition

Operating Mode(s)	Power Supply	Applicable Port
Radio Mode – Configuration 1	Internal Battery	Enclosure Port
Radio Mode – Configuration 2	Internal Battery	Enclosure Port

8.2.3. Test Method and Levels

The test method shall be in accordance with ANSI C63.4-2014.

The equipment shall meet the Class B limits given in FCC CFR 47 Part 15 Subpart B.

Obtained the max. emission point by optimizing the antenna height, antenna polarization, and turntable azimuth.

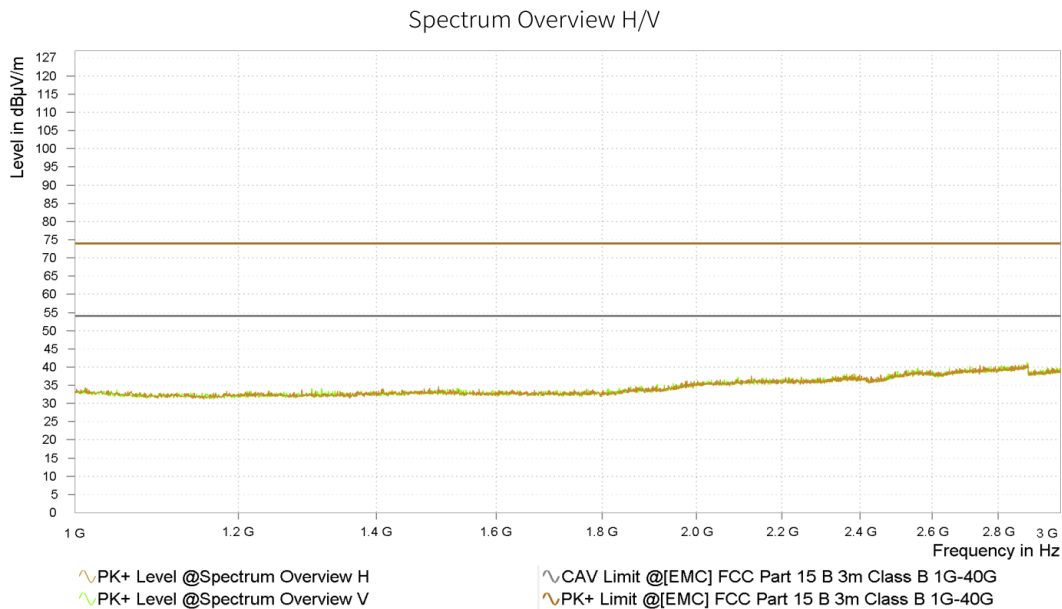
Frequency Range	1 000 MHz to 12 750 MHz
Measurement Detector Type	Peak / Average
Measurement Bandwidth (IF BW)	1 MHz
Measurement Distance	3 m

8.2.4. Test Data

Operating Mode: Radio Mode – Configuration 1

Power Supply: Internal Battery

Frequency Range: 1 000 MHz – 3 000MHz



Note: All emissions were more than 10 dB below the limit.

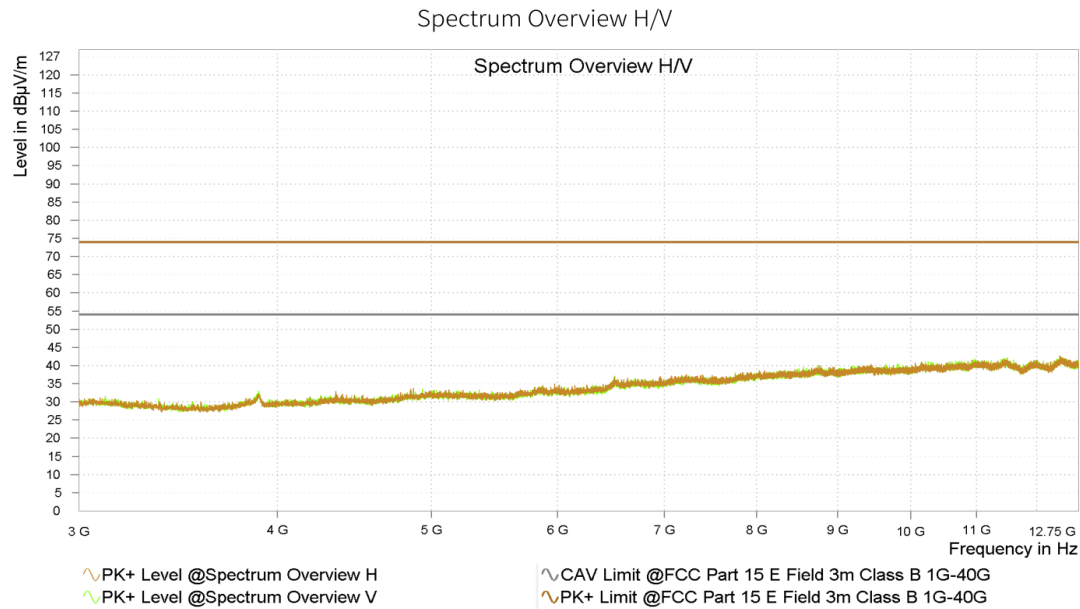
Calculation Formula:

1. Polarization: H = Horizontal, V = Vertical
2. Corr. (Correction Factor) = Antenna Factor + Cable Loss + LNA
3. CAverage or Peak Level = Reading (Receiver Reading) + Corr.
4. Margin = Limit – CAverage or Peak Level

Operating Mode: Radio Mode – Configuration 1

Power Supply: Internal Battery

Frequency Range: 3 000 MHz – 12 750MHz



Note: All emissions were more than 10 dB below the limit. A 3 GHz high-pass filter was used for measurements from 3 GHz to 12.75 GHz.

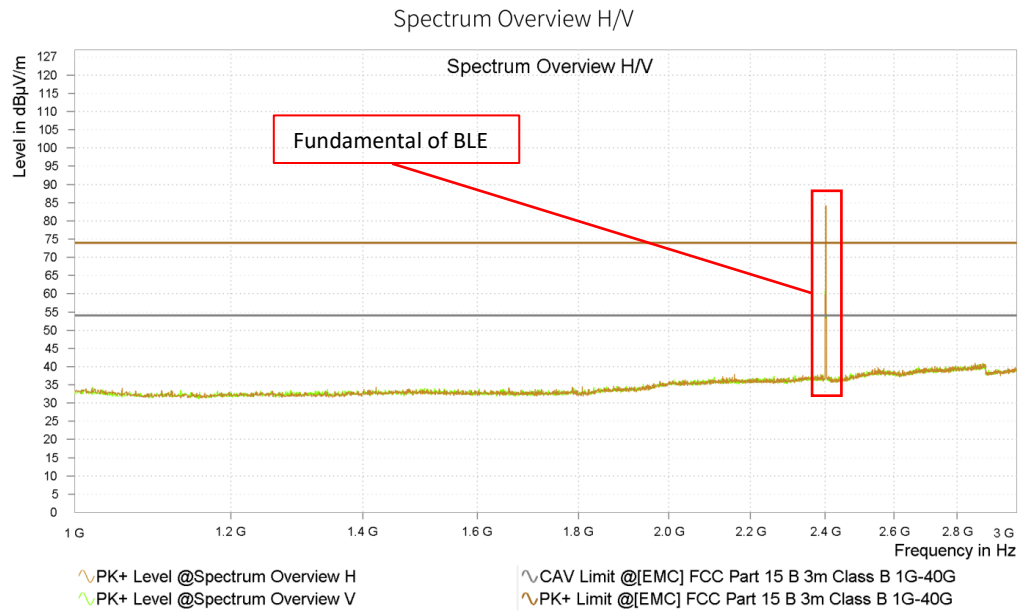
Calculation Formula:

1. Polarization: H = Horizontal, V = Vertical
2. Corr. (Correction Factor) = Antenna Factor + Cable Loss + LNA
3. CAverage or Peak Level = Reading (Receiver Reading) + Corr.
4. Margin = Limit – CAverage or Peak Level

Operating Mode: Radio Mode – Configuration 2

Power Supply: Internal Battery

Frequency Range: 1 000 MHz – 3 000MHz

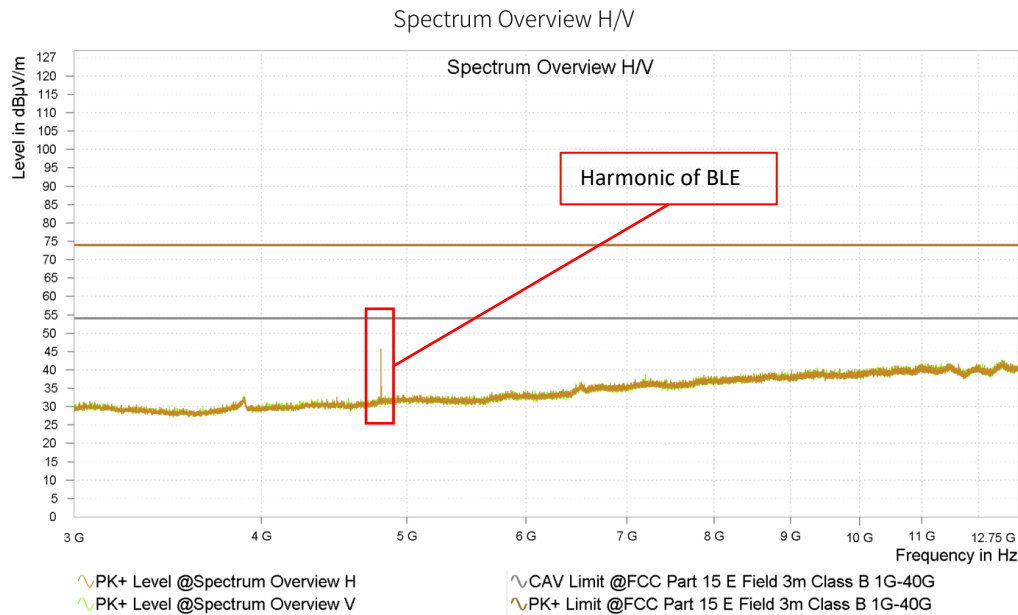


Note: All emissions were more than 10 dB below the limit.

Calculation Formula:

1. Polarization: H = Horizontal, V = Vertical
2. Corr. (Correction Factor) = Antenna Factor + Cable Loss + LNA
3. CAverage or Peak Level = Reading (Receiver Reading) + Corr.
4. Margin = Limit – CAverage or Peak Level

Operating Mode: Radio Mode – Configuration 2
Power Supply: Internal Battery
Frequency Range: 3 000 MHz – 12 750MHz



Note: All emissions were more than 10 dB below the limit. A 3 GHz high-pass filter was used for measurements from 3 GHz to 12.75 GHz.

Calculation Formula:

1. Polarization: H = Horizontal, V = Vertical
2. Corr. (Correction Factor) = Antenna Factor + Cable Loss + LNA
3. CAverage or Peak Level = Reading (Receiver Reading) + Corr.
4. Margin = Limit – CAverage or Peak Level

9. ANNEX A. TEST SETUP PHOTOS

The setup photos are provided as a separate document.

END OF TEST REPORT