

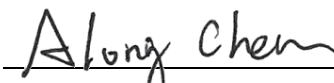
FCC C2PC Test Report

FCC ID : YQMLLS090
Equipment : Focus Premium ; Focus Core
(Refer to item 1.1.1 for more details.)
Model No. : Focus Premium ; Focus Core
(Refer to item 1.1.1 for more details.)
Brand Name : FARO
Applicant : FARO Technologies, Inc.
Address : 250 Technology Park, Lake Mary, Florida,
United States, 32746
Standard : 47 CFR FCC Part 15.209
Received Date : Aug. 10, 2022
Tested Date : Aug. 17, 2022

We, International Certification Corporation, would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:

Approved by:



Along Chen / Assistant Manager



Gary Chang / Manager

Table of Contents

1	GENERAL DESCRIPTION	5
1.1	Information.....	5
1.2	Local Support Equipment List	7
1.3	Test Setup Chart	7
1.4	The Equipment List	8
1.5	Test Standards	8
1.6	Deviation from Test Standard and Measurement Procedure.....	8
1.7	Measurement Uncertainty	8
2	TEST CONFIGURATION.....	8
2.1	Testing Facility	9
2.2	The Worst Test Modes and Channel Details	9
3	TRANSMITTER TEST RESULTS	10
3.1	Radiated Emissions.....	10
4	TEST LABORATORY INFORMATION	14

Release Record

Report No.	Version	Description	Issued Date
FR1D1602-02NF	Rev. 01	Initial issue	Sep. 27, 2022

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.209	Radiated Emissions	Meet the requirement of limit	Pass

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Information

This is a Class II Permissive Change report (C2PC).

This report is issued as a supplementary report to original report no. FR1D1602NF. The modification is adding one model **Focus Core**. Differences between two models are listed in 1.1.1.

1.1.1 Product Details

The following models are provided to this EUT. **(New addition is marked in boldface.)**

Model Name	Product Name	Description
Focus Premium	Focus Premium	Two model names with same hardware, RF function and user's manual. The difference is listed as below: 1. Focus Premium - The scanner is designed to scan objects at distances between 0.5 meters and approximately 70, 150, or 350 meters, depending on your license. Focus Core - The scanner is designed to scan objects at distances between 0.5 meters and approximately 70 meters. 2. Focus Premium - "Status indicator" is accessory Focus Core - "Status indicator" is not accessory, user needs to buy it from FARO company.
Focus Core	Focus Core	

1.1.2 Specification of the Equipment under Test (EUT)

RF General Information			
Frequency Range (MHz)	Modulation	Ch. Frequency (MHz)	Channel Number
13.553 – 13.567	NFC-ASK	13.56	1

1.1.3 Antenna Details

Ant. No.	Type	Gain (dBi)	Connector	Remark
1	PCB integrated Antenna	---	---	---

1.1.4 EUT Operational Condition

Supply Voltage	14.4Vdc from battery
-----------------------	----------------------

1.1.5 Accessories

Accessories		
No.	Equipment	Description
1	Battery	Brand: Akku Power GmbH Model: ACCS-PWR-0014 Power Rating: Nom. Voltage: 14.4V Capacity: 6.8Ah Watt Hour: 97.92Wh Serial Number: 01562
2	3D_AC_LS_SD Card Reader	Brand: Transcend Model: G23758
3	SD Card	Brand: SanDisk Extreme PRO (170MB/s) Capacity: 64GB
4	Status Indicator	Model: 900-000038-001

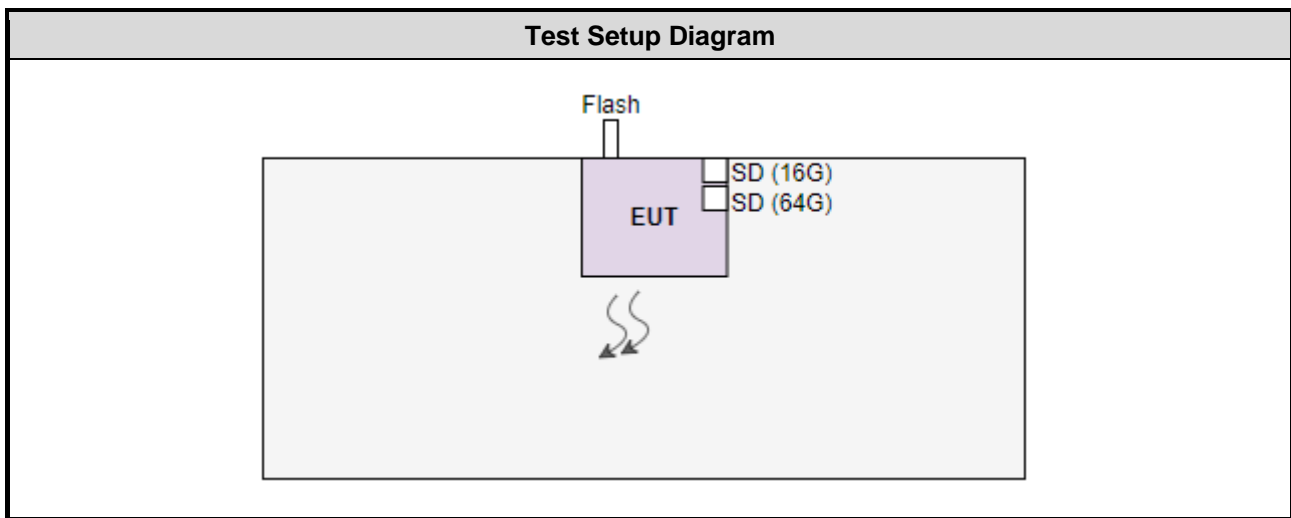
1.1.6 Test Sample Information

Serial Number of Test Sample	Radiated Emission: LLS092125034
-------------------------------------	---------------------------------

1.2 Local Support Equipment List

Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Remarks
1	USB 3.1 Flash	pqi	Connect 313/16GB	---	---
2	SD Card	SanDisk	16GB	---	Provided by applicant.

1.3 Test Setup Chart



1.4 The Equipment List

Test Item	Radiated Emission Below 1GHz				
Test Site	966 chamber3 / (03CH03-WS)				
Tested Date	Aug. 17, 2022				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101657	Mar. 15, 2022	Mar. 14, 2023
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 08, 2021	Nov. 07, 2022
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-685	Jun. 28, 2022	Jun. 27, 2023
Preamplifier	EMC	EMC02325	980187	Jul. 16, 2022	Jul. 15, 2023
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 05, 2021	Oct. 04, 2022
LF cable-0.8M	EMC	EMC8D-NM-NM-800	EMC8D-NM-NM-800-001	Sep. 24, 2021	Sep. 23, 2022
LF cable-3M	EMC	EMC8D-NM-NM-3000	131103	Sep. 24, 2021	Sep. 23, 2022
LF cable-13M	EMC	EMC8D-NM-NM-13000	131104	Sep. 24, 2021	Sep. 23, 2022
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Test Standards

47 CFR FCC Part 15.209
ANSI C63.10-2013

1.6 Deviation from Test Standard and Measurement Procedure

None

1.7 Measurement Uncertainty

The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)).

Measurement Uncertainty	
Parameters	Uncertainty
Radiated emission \leq 1GHz	\pm 3.96 dB

2 Test Configuration

2.1 Testing Facility

Test Laboratory	International Certification Corporation
Test Site	03CH03-WS
Address of Test Site	No.14-1, Lane 19, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 333, Taiwan (R.O.C.)

- FCC Designation No.: TW0009
- FCC site registration No.: 207696
- ISED#: 10807C
- CAB identifier: TW2732

2.2 The Worst Test Modes and Channel Details

Test item	Mode	Test Frequency (MHz)
Radiated Emissions	NFC	13.56

3 Transmitter Test Results

3.1 Radiated Emissions

3.1.1 Limit of Radiated Emissions

Restricted Band Emissions Limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29.54	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1:
Quasi-Peak value is measured for frequency below 1GHz except for 9–90 kHz, 110–490 kHz frequency band. Peak and average value are measured for frequency above 1GHz. The limit on average radio frequency emission is as above table. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit

Note 2:
Measurements may be performed at a distance other than what is specified provided. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor as below, Frequency at or above 30 MHz: 20 dB/decade Frequency below 30 MHz: 40 dB/decade.

3.1.2 Test Procedures

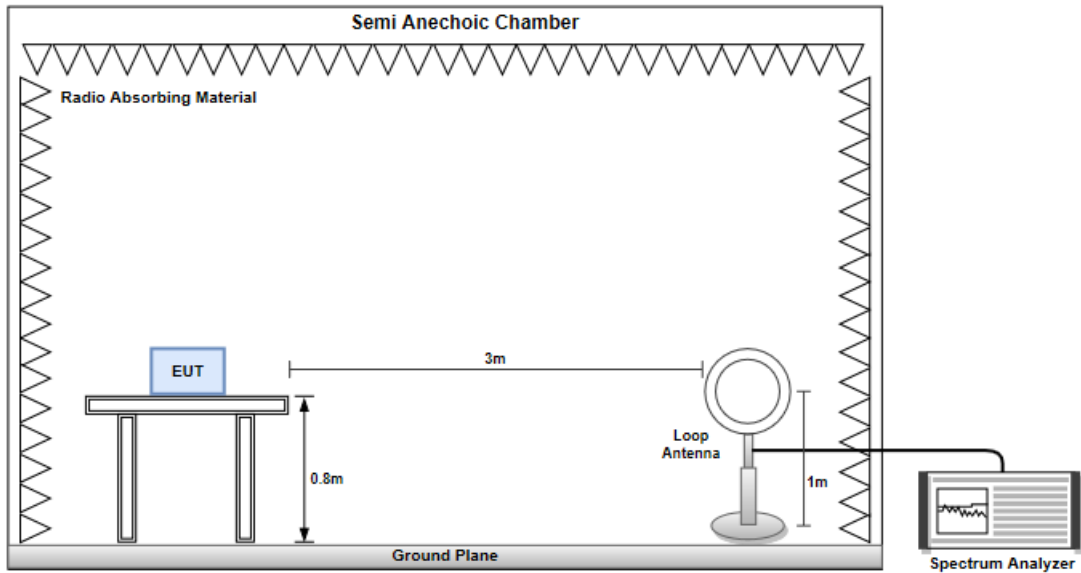
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at a height of 0.8 m test table above the ground plane.
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

Note:

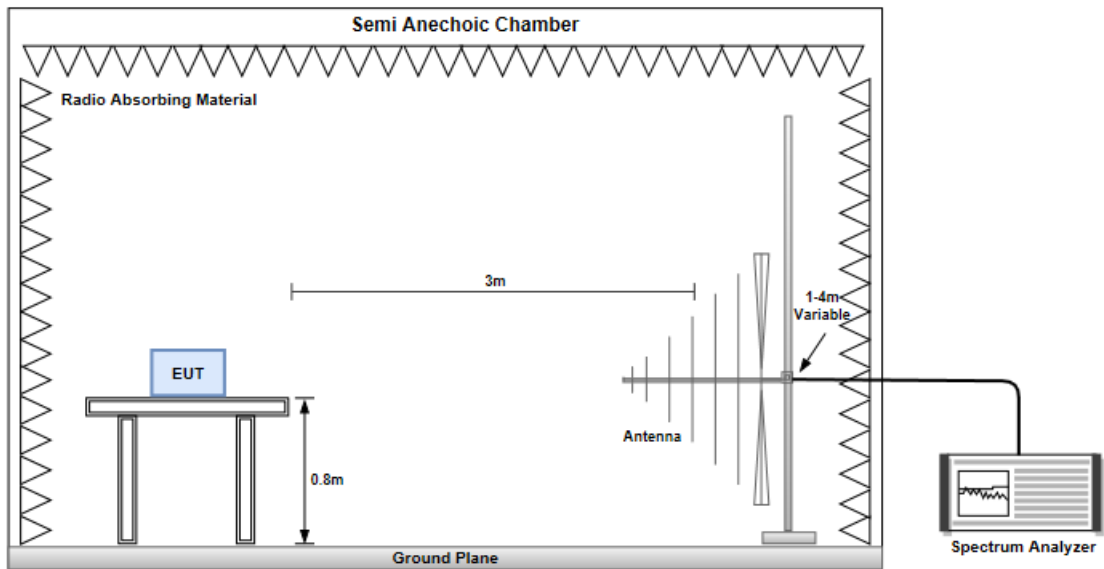
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.

3.1.3 Test Setup

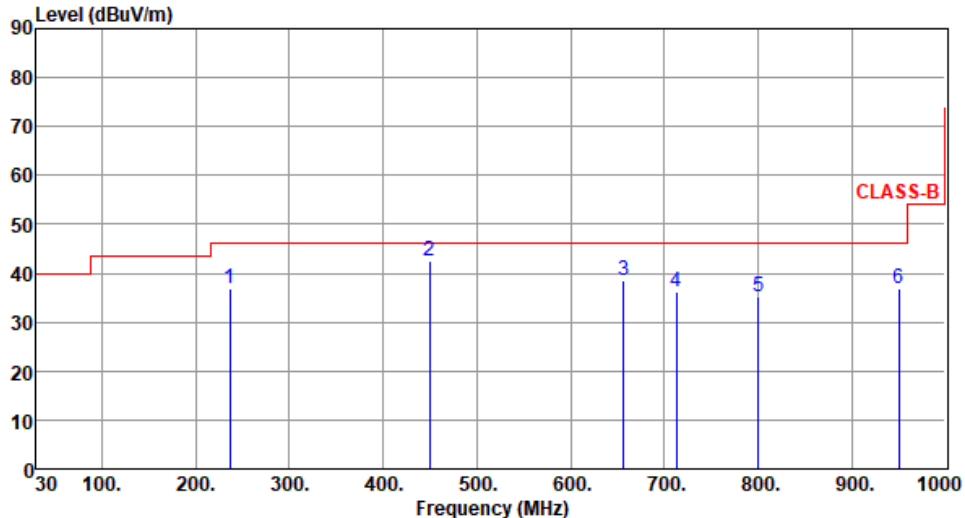
Radiated Emissions below 30MHz



Radiated Emissions below 1 GHz

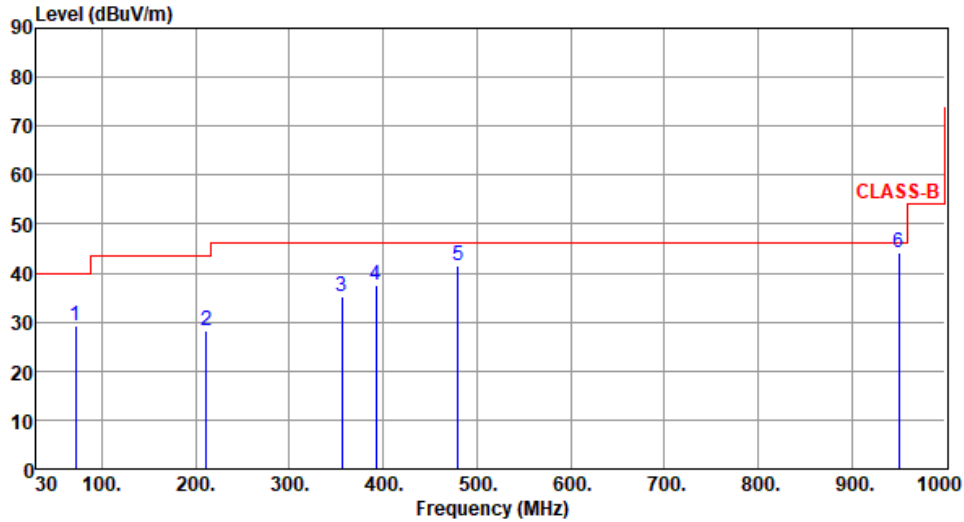


3.1.4 Transmitter Radiated Unwanted Emissions (30M ~ 1GHz)

Polarization	Horizontal	Test Freq. (MHz)	13.56																																																																				
Test Mode	NFC																																																																						
<p>Test By :Brad Wu Temperature(°C):26 Humidity(%):63</p>																																																																							
																																																																							
	<table border="1"> <thead> <tr> <th></th> <th>Freq. MHz</th> <th>Emission level dBuV/m</th> <th>Limit dBuV/m</th> <th>Margin dB</th> <th>SA reading dBuV</th> <th>Factor dB/m</th> <th>Remark</th> <th>ANT High cm</th> <th>Turn Table deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>236.61</td> <td>36.85</td> <td>46.00</td> <td>-9.15</td> <td>47.09</td> <td>-10.24</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>2</td> <td>450.01</td> <td>42.65</td> <td>46.00</td> <td>-3.35</td> <td>46.21</td> <td>-3.56</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>3</td> <td>656.62</td> <td>38.44</td> <td>46.00</td> <td>-7.56</td> <td>37.64</td> <td>0.80</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>4</td> <td>712.88</td> <td>36.29</td> <td>46.00</td> <td>-9.71</td> <td>34.43</td> <td>1.86</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>5</td> <td>800.18</td> <td>35.14</td> <td>46.00</td> <td>-10.86</td> <td>31.51</td> <td>3.63</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>6</td> <td>950.53</td> <td>36.84</td> <td>46.00</td> <td>-9.16</td> <td>30.54</td> <td>6.30</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> </tbody> </table>		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg	1	236.61	36.85	46.00	-9.15	47.09	-10.24	Peak	---	---	2	450.01	42.65	46.00	-3.35	46.21	-3.56	Peak	---	---	3	656.62	38.44	46.00	-7.56	37.64	0.80	Peak	---	---	4	712.88	36.29	46.00	-9.71	34.43	1.86	Peak	---	---	5	800.18	35.14	46.00	-10.86	31.51	3.63	Peak	---	---	6	950.53	36.84	46.00	-9.16	30.54	6.30	Peak	---	---
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg																																																														
1	236.61	36.85	46.00	-9.15	47.09	-10.24	Peak	---	---																																																														
2	450.01	42.65	46.00	-3.35	46.21	-3.56	Peak	---	---																																																														
3	656.62	38.44	46.00	-7.56	37.64	0.80	Peak	---	---																																																														
4	712.88	36.29	46.00	-9.71	34.43	1.86	Peak	---	---																																																														
5	800.18	35.14	46.00	-10.86	31.51	3.63	Peak	---	---																																																														
6	950.53	36.84	46.00	-9.16	30.54	6.30	Peak	---	---																																																														
<p>Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB) *Factor includes antenna factor , cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m)</p>																																																																							

Polarization	Vertical	Test Freq. (MHz)	13.56
Test Mode	NFC		

Test By :Brad Wu Temperature(°C):26 Humidity(%):63



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	71.71	29.11	40.00	-10.89	40.29	-11.18	Peak	---	---
2	211.39	28.26	43.50	-15.24	40.00	-11.74	Peak	---	---
3	355.92	35.20	46.00	-10.80	41.98	-6.78	Peak	---	---
4	392.78	37.61	46.00	-8.39	42.92	-5.31	Peak	---	---
5	480.08	41.56	46.00	-4.44	44.62	-3.06	Peak	---	---
6	949.99	44.17	46.00	-1.83	37.87	6.30	QP	100	271

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m)

4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corporation (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website <http://www.icertifi.com.tw>.

Linkou

Tel: 886-2-2601-1640

No.30-2, Ding Fwu Tsuen, Lin Kou
District, New Taipei City, Taiwan
(R.O.C.)

Kwei Shan

Tel: 886-3-271-8666

No.3-1, Lane 6, Wen San 3rd
St., Kwei Shan Dist., Tao Yuan
City 33381, Taiwan (R.O.C.)
No.2-1, Lane 6, Wen San 3rd
St., Kwei Shan Dist., Tao Yuan
City 33381, Taiwan (R.O.C.)

Kwei Shan Site II

Tel: 886-3-271-8640

No.14-1, Lane 19, Wen San 3rd
St., Kwei Shan Dist., Tao Yuan
City 333, Taiwan (R.O.C.)

If you have any suggestion, please feel free to contact us as below information.

Tel: 886-3-271-8666

Fax: 886-3-318-0345

Email: ICC_Service@icertifi.com.tw

==END==