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00983

TEST REPORT

Ref. n.	**FCCTR_186669-0**	Issue Date:	**30/10/2025**	Pages:	**18**

Test object	*Type test according to Standards* **FCC Cfr 47 part 15 - Subpart C - §15.207, §15.209**
Applicant	**DATALOGIC S.r.l.** Via S. Vitalino 13 - 40012 Lippo Di Calderara Di Reno - Bologna - Italy Phone. +39 051 3147196 Fax +39 051 3147561
Trade mark	DATALOGIC™
Manufacturer	DATALOGIC S.r.l.
Product	Base charger station
Model name	**WLC4690**
Type	**BK-BT**
FCC identification number	**U4F-WLC4600**
Date of test samples receipt	09/09/2025
No. of tested samples	1 – Sampled by the Manufacturer
Test date	16/10/2025
Testing site	PRSLAB S.r.l. Unipersonale - Via Campagna 92 - 22020 Faloppio - Como - Italy
FCC designation number	IT0012
Test results	**PASS**
Verifications carried out by	**Daniele Aosani** *Laboratory Engineer*
Approved by	**Luana Parisi** *Reviewer*

The test results reported in this test report shall refer only to the samples tested.
The sample has been provided by the customer and the results apply to the sample as received.
This report may not be partially reproduced, except with the prior written permission of the issuing Laboratory.
PRS refuses any responsibility about information provided by the customer contained in this test report.
Any not Accredited test methods are clearly identified in the test report.

TABLE OF CONTENTS

0. RELEASE CONTROL RECORD

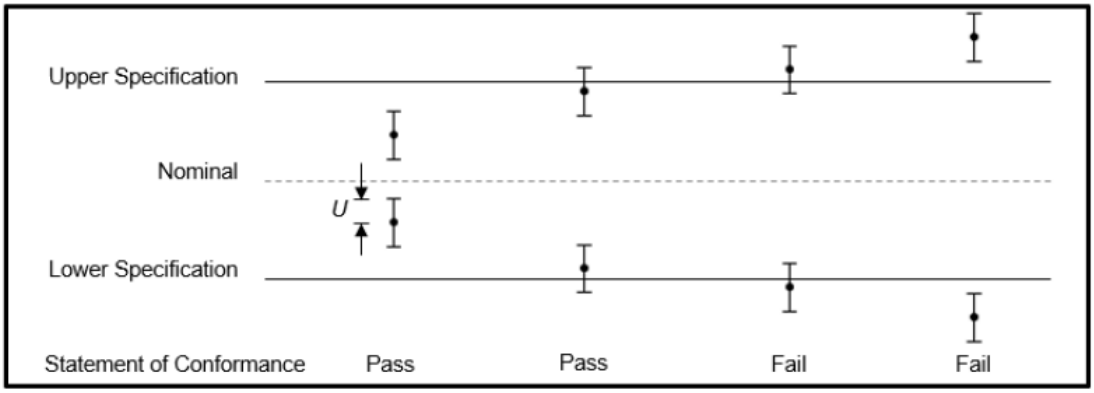
TEST REPORT NUMBER	REASON OF CHANGE	DATE OF ISSUE
FCCTR_186669-0	Original release	30/10/2025

This document is valid in last revision that deletes and replaces the previous one

1. DECISION RULE

PRS LAB specifies that, if the decision rules of conformity of the test results are not indicated in detail in the standard/s object of tests, it takes as a decision rule for the declaration of conformity the simple binary system (w = 0) stated in the ILAC-G8-09:2019 document.

The decision rule is applicable for all parts of standard



U = 95% expanded measurement uncertainty

Statements of conformity are reported as:

- Pass: the measured value is below the acceptance limit, $AL{=}TL$.
- Fail: the measured value is above the acceptance limit, $AL{=}TL$.

Definitions

- Guard Band (w): interval between a tolerance limit and a corresponding acceptance limit where length $w{=}|TL{-}AL|$.
- Tolerance Limit (TL) (Specification Limit): specified upper or lower bound of permissible values of a property.
- Acceptance Limit (AL): specified upper or lower bound of permissible measured quantity values.

2. INFORMATION PROVIDED BY CUSTOMER

- None

3. GENERAL REMARKS

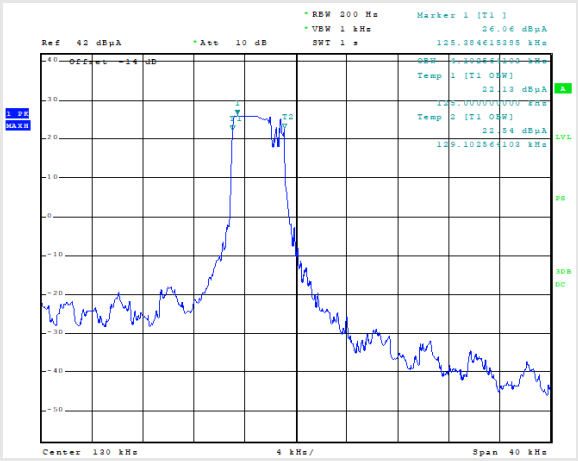
- None

4. TECHNICAL INFORMATION OF EQUIPMENT UNDER TEST (EUT)

4.1 EUT Identification

DESCRIPTION	Base Charger Station
MODEL NAME	WLC4690
TYPE	BK-BT
FCC ID	U4F-WLC4600
SERIAL NO.	P25P01059
PRS LAB INTERNAL REFERENCE	BC 205/2025 1/14
TRADEMARK	DATALOGIC™
MANUFACTURER	DATALOGIC S.r.l.
COUNTRY OF MANUFACTURER	Italy
SINGLE UNIT OR SYSTEM	Single
POWER SOURCE	DC power
POWER SUPPLY NOMINAL VOLTAGE	4.5 ÷ 14Vdc
MAX ABSORBED CURRENT OR MAX POWER	1A MAX
OPERATING TEMPERATURE	0°C ÷ +50°C
SOFTWARE VERSION (Information provided by Customer)	A
HARDWARE VERSION (Information provided by Customer)	A
DIMENSIONS	See photographic documentation
EUT STANDING	☒ WALL; ☐ CEILING; ☒ TABLE; ☐ FLOOR; ☐ RACK MOUNTED; ☐ BODY WORN; ☐ HANDELD; ☐ PORTABLE; ☐ MOBILE; ☐ VEHICLE
HIGHEST INTERNAL FREQUENCY (Information provided by Customer)	☐ <108MHz; ☐ 108MHz<F<500MHz; ☐ 500MHz<F<1GHz; ☒ F>1GHz

4.2 WPT module Technical data

CHIP MANUFACTURER	life.augmented
CHIP MODEL	**STWBC86JR**
ETS CATEGORY	Wireless Power Transmission (WPT)
FREQUENCY RANGE	120-150 kHz
TRANSMITTER MAX POWER	10W
TYPE OF MODULATION	FSK/ASK
ANTENNA TYPE (Information provided by Customer)	Internal loop coil
ANTENNA SPECS (Information provided by Customer)	Induct. TX coil: 6.3 uH ±10% @100kHz DC Res. TX Coil: 60 mOhm ±10% max
MEASURED 99% BW	 99%BW = 4.103kHz

4.3 Ports identification

	PORT	DESCRIPTION	CONNECTION	NOTES
☒	Enclosure port	Plastic	Screws	---
☒	AC mains power port	230V~50Hz	AC/DC adapter	<3m
☐	DC power port	Port not present	---	---
☐	Wired network port	Port not present	---	---
☒	Signal/control port	RS232 (cable model 90G000008 REV.X1) USB (cable model 90A052258 REV.B or cable model 90A052352 REV.B)	RJ45	<3m
☒	Antenna port	☒ Internal; ☐ External		
Note: During the tests all cables must be what provided the manufacturer or the same that used in the real employment of the EUT.				

4.4 Modifications incorporated in E.U.T.

The following items are the modifications introduced in the equipment under test:

- None

4.5 Auxiliary equipment

- AC/DC adapter model **PSAA18U-120,** with DC output 12V**,** manufactured by **PHIHONG Tecnology CO., LTD.**, was used to powered the EUT for all operative conditions.
- Auxiliary wireless barcode reader, model **GBT4600 Type BK-HP**, manufactured by **Datalogic S.r.l.,** was used as WPT client.

5. REFERENCE STANDARDS

REFERENCE STANDARD	DESCRIPTION
Title 47 Part 15 Subpart C	Radio frequency devices - Intentional Radiators
Title 47 Part 15 Subpart C § 15.207	Radio frequency devices - Intentional Radiators Conducted Limits
Title 47 Part 15 Subpart C § 15.209	Radio frequency devices - Intentional Radiators Radiated emission limits; general requirements.
ANSI C63.4: 2014	American National Standard for Methods of Measuring of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz – 40 GHz
ANSI C63.10:2020	American National Standard for Testing Unlicensed Wireless Devices

6. OPERATING TEST MODES AND TEST CONDITIONS

In the following table there are the operating conditions adopted during tests identified by an indicator (#) at which has been referred the item "Operating condition of the equipment under test"

Operating Condition	Description
#1	EUT in maximum output power transfer mode, WPT battery initially discharged[1] Radiated measurements were performed with the reader placed above the base; it produced worst case emissions and output power; therefore, this alignment was used for all measurements.

Special Test Software: None

Special Hardware Used: None

Transmitter Test Antenna: The EUT was tested with one antenna mounted in a typical manner for its normal intended use as external antenna equipment.

7. UNITS OF MEASUREMENTS

Conducted EMI Data is in dBµV; dB referenced to one microvolt
Radiated EMI Data is in dBµV/m; dB/m referenced to one microvolt per meter

Sample Calculation:

RFS = Radiated Field Strength,
FSM = Field Strength Measured,
A.F. = Receive antenna factor,
Gain = amplification gains and/or cable losses.

RFS (dBµV/m @ 3m) = FSM (dBµV) + A.F. (dB/m) - Gain (dB)

8. SUMMARY OF TEST RESULTS

Port	Test	Reference Standard	Operating Condition[1]	Results
Enclosure	Radiated Emissions 9kHz – 30MHz	Title 47 Part 15 Subpart C § 15.209	#1	PASS
	Radiated Emissions 30MHz – 1GHz		#1	PASS
AC main	Conducted emission	Title 47 Part 15 Subpart C § 15.207	#1	PASS

[1] Ref. Tab. of Section 6

9. TEST RESULTS

TEST 1.	RADIATED EMISSIONS – 9KHZ TO 1GHZ
REFERENCE DOCUMENT	**FCC Cfr 47-part 15 Subpart C - $15.209**

• **TEST LOCATION**	Semi-Anechoic Chamber
• **DISTANCE OF MEASUREMENT**	3m
• **TYPE OF MEASUREMENT**	Radiated

• **TEST EQUIPMENT USED FOR TEST**

Instrument	Manufacturer	Model	Serial n°	Calibrated On	Due to
Stabilized Power Supply	Spitzenberger+ Spies	PAS5000	A154201/00595	04/2025	04/2027
MXE Emi Receiver	Keysight	N9038A	MY57290150	11/2024	11/2025
Semi-Anechoic Chamber	Siemens	B83117-D6019-T232	003-005-134/94C	02/2025	02/2026
Loop antenna	Rohde & Schwarz	HFH 2-Z2	841801/012	03/2023	03/2026
Bi-log antenna	Chase	CBL6111C	2717	06/2025	06/2028
Software EMC	Rohde & Schwarz	EMC32-E	V 8.40.0	N.A.	

• **TESTED PORT**	Enclosure
• **TEST METHOD**	ANSI C63.10:2020 section 6.4 and 6.5
• **FREQUENCY RANGE**	9kHz – 1GHz
• **LIMITS**	According to $15.209 (a)
• **UNCERTAINTY OF MEASURE**	Level of confidence = 95% (k=2) Expanded uncertainty 9kHz – 30MHz = 4,39dB Expanded uncertainty 30MHz – 1GHz = 5.94dB

TEST CONDITIONS	REQUIRED	MEASURED
Ambient temperature	**23°C ± 5°C**	23°C
Ambient humidity	**25 - 75%rH**	39%
Pressure	**86 - 106kPa (860mbar - 1060mbar)**	1012mbar

OPERATING CONDITION: **#1**

RESULT: **PASS**

MEASUREMENT PARAMETER		
Frequency Range:	**9kHz – 30MHz**	**30MHz – 1GHz**
Resolution bandwidth:	200Hz	100kHz
Video bandwidth:	1kHz	300kHz
Span:	See plots below	See plots below
Sweep time	Auto couple	Auto couple
Detector:	Peak	Peak
Trace-Mode:	Max. hold	Max. hold

TEST DESCRIPTION

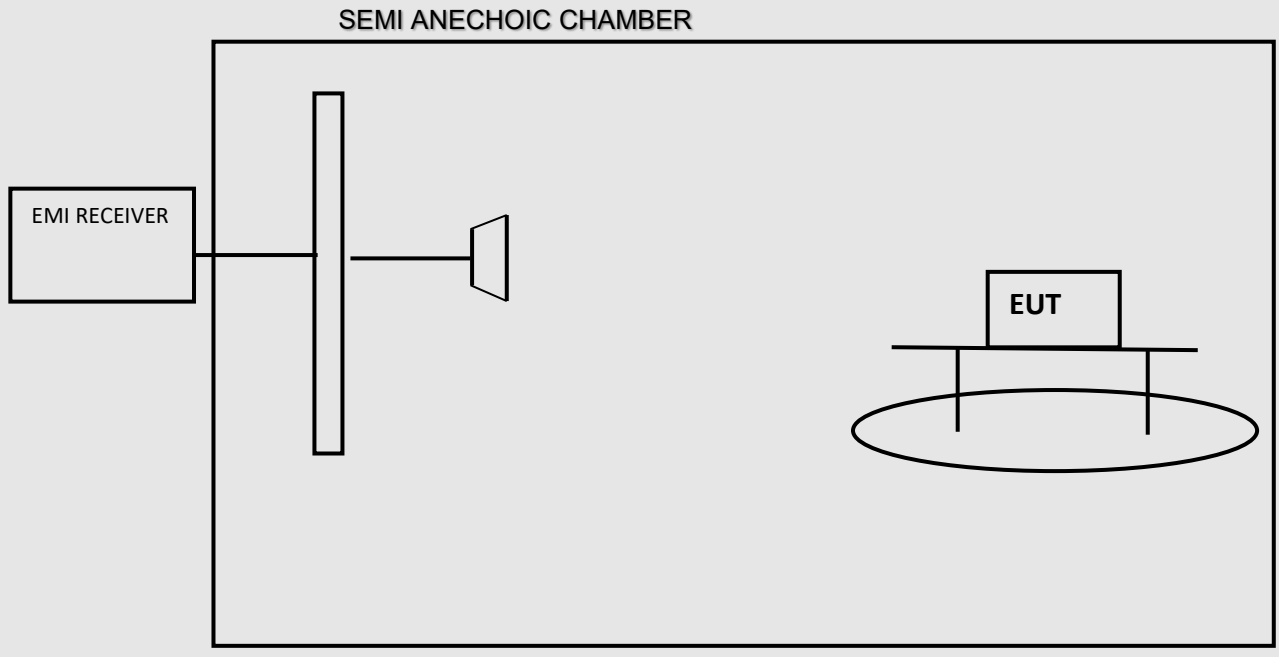
Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously - rotating, remotely - controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency.

The EUT is placed at test table height is 80 cm above the reference ground plane.

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 3m.

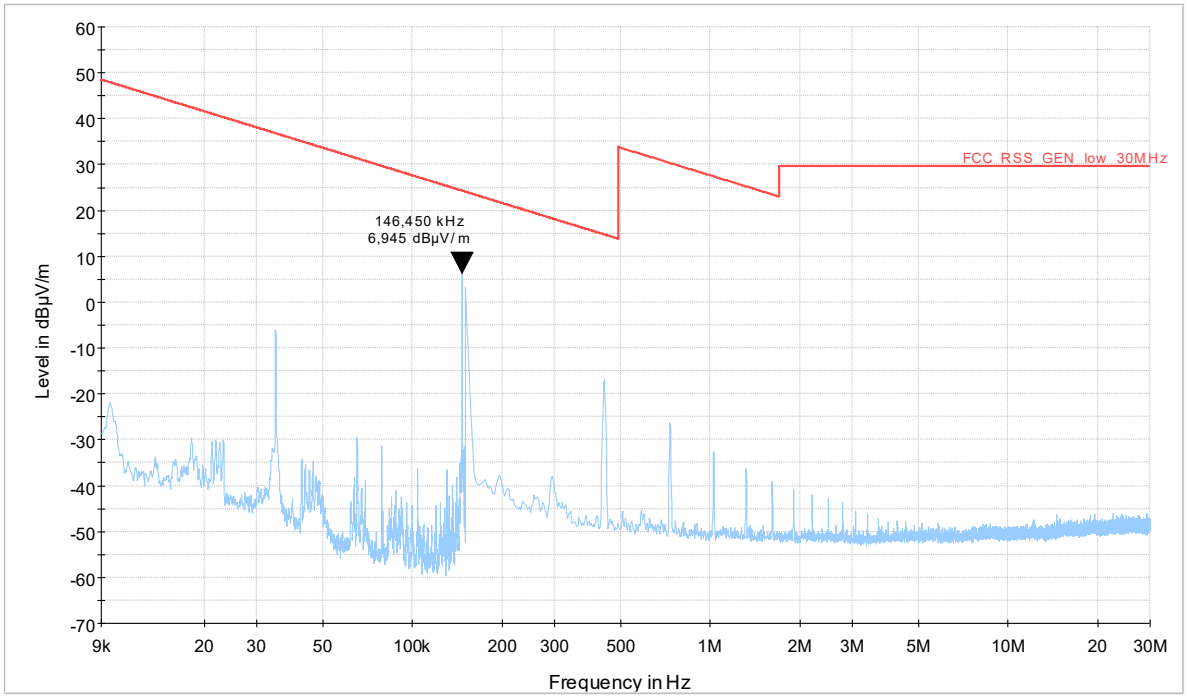
This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

TEST SETUP BLOCK DIAGRAM



TEST RESULTS

RX Antenna Polarization: ---	Frequency Range: 9kHz – 30MHz



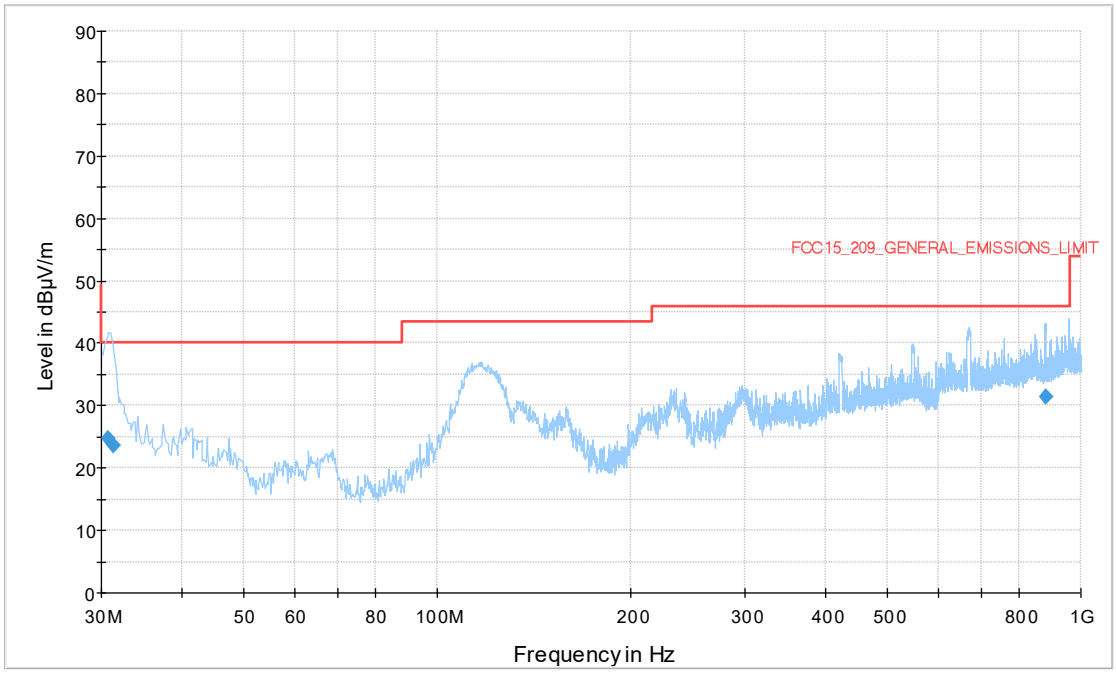
Final Result:

NOTE: Blue line is Peak detector.

The measurement from 9 kHz to 490 kHz was performed at a distance of 3m and reported at 300m using the square of an inverse linear distance extrapolation factor (40 dB/decade), as described in FCC Cfr 47 part 15 - Subpart A - §15.31 (f) (2). Extrapolation factor from 300m to 3m = 80dB

The measurement from 490 kHz to 30 MHz was performed at a distance of 3m and reported at 30m using the square of an inverse linear distance extrapolation factor (40 dB/decade), as described in FCC Cfr 47 part 15 - Subpart A - §15.31 (f) (2). Extrapolation factor from 30m to 3m = 40dB

RX Antenna Polarization: Vertical	Frequency Range: 30MHz – 1GHz

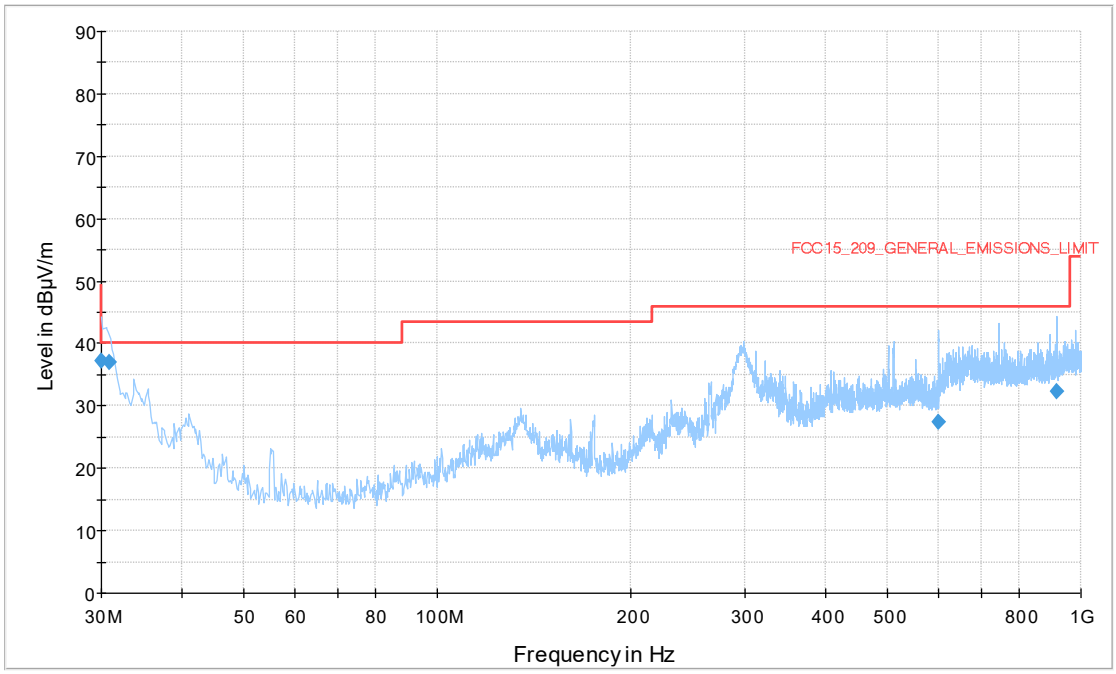


Final Result:

Frequency (MHz)	QuasiPeak (dBµV/m)	Height (cm)	Azimuth (deg)	Margin (dB)	Limit (dBµV/m)
30.780000	24.7	126.7	7.0	15.30	40.00
31.380000	23.7	99.9	7.0	16.30	40.00
880.770000	31.5	99.9	187.0	14.60	46.00

NOTE: Blue line is Peak detector.

RX Antenna Polarization: Horizontal	Frequency Range: 30MHz – 1GHz



Final Result:

Frequency (MHz)	QuasiPeak (dBµV/m)	Height (cm)	Azimuth (deg)	Margin (dB)	Limit (dBµV/m)
30.030000	37.3	99.8	92.0	2.70	40.00
30.870000	37.1	125.8	97.0	2.90	40.00
601.260000	27.3	149.9	91.0	18.70	46.00
916.470000	32.3	207.0	187.0	13.70	46.00

NOTE: Blue line is Peak detector.

TEST **2.**	**CONDUCTED EMISSIONS**
REFERENCE DOCUMENT	**FCC Cfr 47-part 15 Subpart C - $15.207**

• **TEST SETUP**	Acc. To ref. Std.					
• **TEST LOCATION**	Shielded room					
• **TYPE OF MEASUREMENT**	Conducted					
• **TEST EQUIPMENT USED FOR TEST**	**Instrument**	**Manufacturer**	**Model**	**Serial n°**	**Calibrated On**	**Due to**
	Stabilized Power Supply	Spitzenberger+ Spies	PAS5000	A154201/00595	04/2025	04/2027
	MXE Emi Receiver	Keysight	N9038A	MY57290150	11/2024	11/2025
	Artificial Mains Network	Rohde & Schwarz	ESH3-Z5	838576/009	04/2024	04/2026
	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100837	05/2025	05/2027
	Software EMC	Rohde & Schwarz	EMC32-E	V 8.40.0	N.A.	
• **TESTED PORT**	AC mains power port					
• **TEST METHOD**	ANSI C63.10:2020 section 6.2					
• **FREQUENCY RANGE**	150kHz – 30MHz					
• **LIMITS**	According to §15.207 (a)					
• **UNCERTAINTY OF MEASURE**	Level of confidence = 95% (k=2) Expanded uncertainty 150kHz – 30MHz = 3.26dB					

TEST CONDITIONS	REQUIRED	MEASURED
Ambient temperature	**23°C ± 5°C**	23°C
Ambient humidity	**25 - 75%rH**	39%
Pressure	**86 - 106kPa (860mbar - 1060mbar)**	1012mbar
Voltage		115V ~ 60Hz

OPERATING CONDITION: **#1**

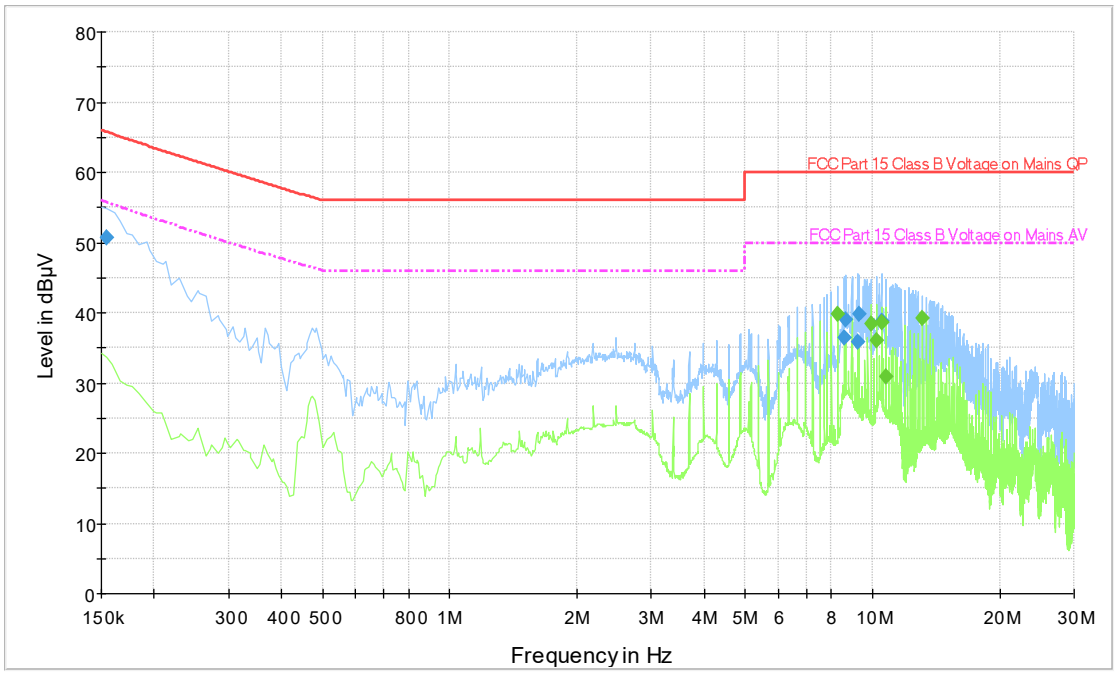
RESULT: **PASS**

MEASUREMENT PARAMETER – 150kHz – 30MHz	
Resolution bandwidth	9kHz
Video bandwidth	30kHz
Span	29.850MHz
Sweep time	Auto couple
Detector	Quasi Peak - Average
Trace-Mode	Max. hold

TEST RESULTS

Operating condition: EUT in Wireless Power Transfer mode

Line: L	**Frequency Range: 150MHz – 30MHz**



Final Result:

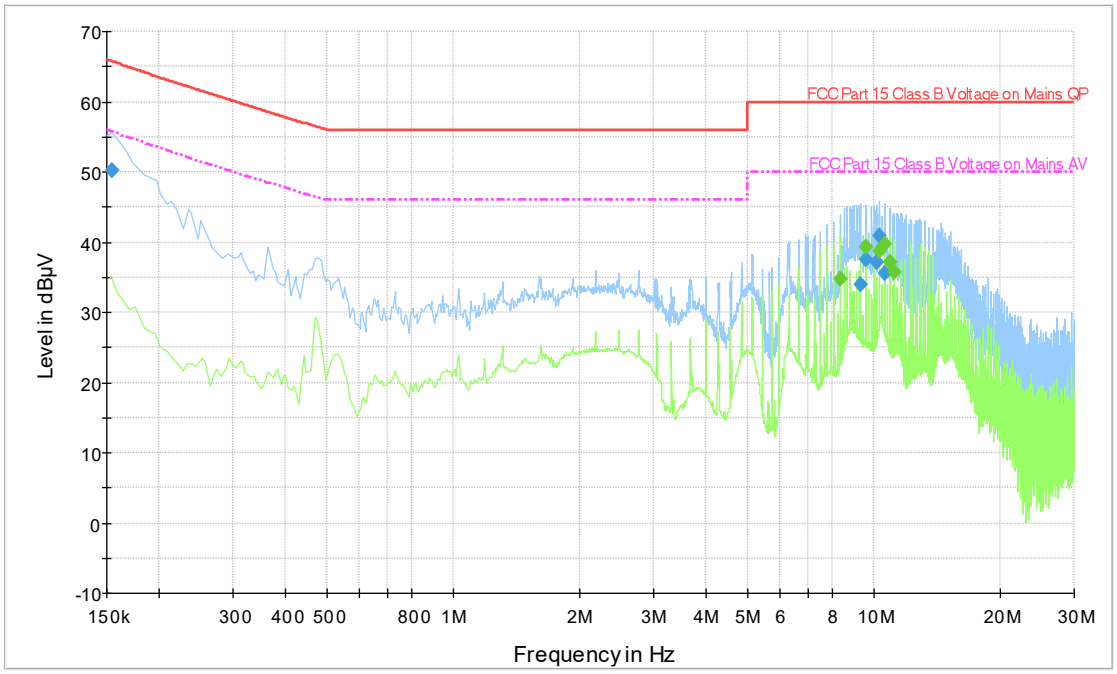
Frequency (MHz)	QuasiPeak (dBµV)	Margin (dB)	Limit (dBµV)
0.154500	50.7	15.0	65.7
8.603250	36.5	23.5	60.0
8.646000	39.1	20.9	60.0
9.251250	35.8	24.2	60.0
9.316500	39.7	20.3	60.0
10.500000	38.8	21.2	60.0

Frequency (MHz)	Average (dBµV)	Margin (dB)	Limit (dBµV)
8.292750	39.7	10.3	50.0
9.926250	38.4	11.6	50.0
10.214250	36.1	13.9	50.0
10.502250	38.7	11.3	50.0
10.788000	31.0	19.0	50.0
13.089750	39.1	10.9	50.0

NOTE: Blue line is Peak detector, Green line is Average detector.

Operating condition: EUT in Wireless Power Transfer mode

Line: N	**Frequency Range: 150MHz – 30MHz**



Final Result:

Frequency (MHz)	QuasiPeak (dBµV)	Margin (dB)	Limit (dBµV)
0.154500	50.3	15.4	65.7
9.289500	33.9	26.1	60.0
9.609000	37.5	22.5	60.0
10.200750	37.1	22.9	60.0
10.347000	40.9	19.1	60.0
10.637250	35.6	24.4	60.0

Frequency (MHz)	Average (dBµV)	Margin (dB)	Limit (dBµV)
8.346750	34.7	15.3	50.0
9.609000	39.3	10.7	50.0
10.347000	38.8	11.2	50.0
10.639500	39.6	10.4	50.0
10.932000	37.2	12.8	50.0
11.222250	35.8	14.2	50.0

NOTE: Blue line is Peak detector, Green line is Average detector.

END OF TEST REPORT