



Test report No:
NIE: 64862REM.001

Test report

FCC Rules and Regulations CFR 47, Part 15,
Subpart B (10-1-19 Edition) & ICES-003 Issue 6
(January 2016, Updated April 2019)

(*) Identification of item tested	Bluetooth Connected Shaver
(*) Trademark	Philips
(*) Model and /or type reference	Series 7000 Tested model: S7783 Similar models not tested: S7731, S7732, S7735, S7782, S7786, S7787 & S7788.
Other identification of the product	HW version: 1.0 SW version: 1270 FCC ID: 2AICSS77 ISED IC: 21912-S77
(*) Features	Bluetooth 4.2
Manufacturer	PHILIPS Oliemolenstraat 5, 9203 ZN Drachten, the Netherlands.
Test method requested, standard	FCC CFR 47, Part 15, Subpart B (10-1-19 Edition) & ICES-003 (Updated 04-2019)
Summary	IN COMPLIANCE
Approved by (name / position & signature)	Rafael López Martín EMC Consumer & RF Lab. Manager
Date of issue	2020-06-19
Report template No	FDT08_22 (*) "Data provided by the client"

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Competences and guarantees

DEKRA Testing and Certification is a testing laboratory accredited by the National Accreditation Body (ENAC - Entidad Nacional de Acreditación), to perform the tests indicated in the Certificate No. 51/LE 147.

DEKRA Testing and Certification is a FCC recognized accredited testing laboratory with appropriate scope of accreditation that include testing performed in this test report, FCC designation number ES0004.

In order to assure the traceability to other national and international laboratories, DEKRA Testing and Certification has a calibration and maintenance program for its measurement equipment.

DEKRA Testing and Certification guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated on the report and, it is based on the knowledge and technical facilities available at DEKRA Testing and Certification at the time of performance of the test.

DEKRA Testing and Certification is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

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General conditions

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA Testing and Certification.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA Testing and Certification and the Accreditation Bodies.

Uncertainty

Uncertainty (factor $k=2$) was calculated according to the DEKRA Testing and Certification internal document PODT000.

The total uncertainty of the measurement system for the measured conducted disturbance characteristics of EUT from 150kHz to 30 MHz is $I = \pm 3,9$ dB for quasi-peak measurements, $I = \pm 3,2$ dB for average measurements ($k = 2$).

The total uncertainty of the measurement system for the measured radio disturbance characteristics of EUT from 30 MHz to 1000 MHz is $I = \pm 4,9$ dB for quasi-peak measurements, $I = \pm 4,6$ dB for peak measurements ($k = 2$).

The total uncertainty of the measurement system for the measured radio disturbance characteristics of EUT from 1000 MHz to 26 GHz is $I = \pm 2,6$ dB for peaks and average measurements ($k = 2$).

Data provided by the client

The following data has been provided by the client:

1. Information relating to the description of the sample ("Identification of the item tested", "Trademark", "Model and/or type reference tested").

The sample consists of a Bluetooth connected shaver (which can be connected to a mobile application/App) supporting Bluetooth 4.2.

2. Derived models not tested: S7731, S7732, S7735, S7782, S7786, S7787 & S7788.

These models have been declared by the supplier as equivalent, as shown in the following form:

PHILIPS

Drachten (the Netherlands), 18th of August 2020

DECLARATION of EQUIVALENCE

Regarding the upcoming product launch of our new shaver S7700 series in US (FCC ID **2AICSS77**) and Canada (ISED IC **21912-S77**) we state the following:

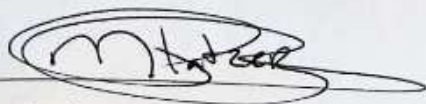
By means of this letter, we, Philips Consumer Lifestyle BV, declare that the following series of shavers are identical in electrical construction. These models have identical RF characteristics and specifications for Bluetooth Low Energy interface on the 2,4GHz band. Except for model name, type marking and cover edge/finishing of the outer body, which does not affect the Safety, EMC and Energy test results.

The devices with their differences are listed below:

Model	Differences
S7731	Colouring/finishing of the hardware/shaver body only
S7732	Colouring/finishing of the hardware/shaver body only
S7735	Colouring/finishing of the hardware/shaver body only
S7782	Colouring/finishing of the hardware/shaver body only
S7783	Colouring/finishing of the hardware/shaver body only
S7786	Colouring/finishing of the hardware/shaver body only
S7787	Colouring/finishing of the hardware/shaver body only
S7788	Colouring/finishing of the hardware/shaver body only

Please feel free to contact me in case you need any more information,

Yours sincerely,



Martijn Platzer

Quality Assurance Manager

Philips Consumer Lifestyle

Oliemolenstraat 5, 9203 ZN Drachten, The Netherlands

Email: Martijn.Platzer@philips.com



DEKRA declines any responsibility with respect to the information provided by the client and that may affect the validity of results.

Usage of samples

Samples under test have been selected by: The client.

Sample S/01 is composed by the following elements:

Control Nº	Description	Model	Serial Nº	Date of reception
63398/003	Bluetooth Connected Shaver	S7783	520033-0007	2020-02-17
63398/013	AC/DC Adapter	HQ8505	---	2020-02-17

Sample S/02 is composed by the following elements:

Control Nº	Description	Model	Serial Nº	Date of reception
63398/003	Bluetooth Connected Shaver	S7783	520033-0007	2020-02-17

Test sample description

Ports..... :	Port name and description		Cable				
			Specified max length [m]	Attached during test	Shielded	Coupled to patient ⁽³⁾	
	N/A			☐	☐	☐	
				☐	☐	☐	
			☐	☐	☐		
Supplementary information to the ports..... :	N/A						
Rated power supply	Voltage and Frequency		Reference poles				
			L1	L2	L3	N	PE
	☒	AC: 230Vac, 50Hz.	☒	☐	☐	☒	☐
	☐	DC:					
Rated Power	Not provided data						
Clock frequencies.....	Not provided data						
Other parameters	Not provided data						
Software version	1270						
Hardware version	1.0						
Dimensions in cm (W x H x D) :	Not provided data						
Mounting position	☐	Table top equipment					
	☒	Wall/Ceiling mounted equipment					
	☐	Floor standing equipment					
	☐	Hand-held equipment					
	☐	Other					
Modules/parts..... :	Module/parts of test item			Type	Manufacturer		
	N/A						
Accessories (not part of the test item)..... :	Description			Type	Code		
	N/A						
Documents as provided by the applicant..... :	Description			File version	Issue date		
	N/A						

⁽³⁾ Only for Medical Equipment

Identification of the client

PHILIPS

Oliemolenstraat, 5, 9203 ZN Drachten, the Netherlands.

Testing period and place

Test Location	DEKRA Testing and Certification S.A.U.
Date (start)	2020-05-28
Date (finish)	2020-05-28

Document history

Report number	Date	Description
64862REM.001	2020-06-19	First release

List of equipment used during the test

Control Number	Description	Model	Manufacturer	Next Calibration
2942	EMI TEST RECEIVER 20Hz-40GHz	ESU40	ROHDE AND SCHWARZ	2021-09-17
4523	EMI TEST RECEIVER 20Hz-26.5GHz	ESU26	ROHDE AND SCHWARZ	2022-05-27
4612	HORN ANTENNA 1-18GHz	BBHA 9120 D	SCHWARZBECK MESS-ELEKTRONIK	2021-06-14
5152	TRANSIENT LIMITER 10DB N CONNECTOR	VTSD 9561-F	SCHWARZBECK	2022-05-13
5641	HYBRID BILOG ANTENNA 30MHz-6GHz	3142E	ETS LINDGREN	2021-07-31
6064	SEMIANECHOIC ABSORBER LINED CHAMBER	SAC-3	Frankonia	---
6126	ETHERNET TEMPERATURE AND HUMIDITY LOGGER	HWg-STE	HW GROUP	2021-04-17
6129	ETHERNET TEMPERATURE AND HUMIDITY LOGGER	HWg-STE	HW GROUP	2021-06-12
6132	ETHERNET TEMPERATURE AND HUMIDITY LOGGER	HWg-STE	HW GROUP	2021-04-20
6195	PRE-AMPLIFIER G>55dB 1-18GHz	AMF-7D-01001800-22-10P	NARDA	2021-05-19
6205	THREE-PHASE ARTIFICIAL NETWORK 32A	PMM L3-32	NARDA	2020-09-26
6329	SHIELDED ROOM	---	FRANKONIA	---

Environmental conditions

In the control chamber, the following limits were not exceeded during the test:

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 30 % Max. = 75 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar

In the semianechoic chamber, the following limits were not exceeded during the test.

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 30 % Max. = 75 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar

In the chamber for conducted measurements, the following limits were not exceeded during the test:

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 30 % Max. = 60 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar

Remarks and comments

The test have been performed by the technical personnel: Antonio Ruiz & Fco. Jesús Olmo.

Testing verdicts

Not applicable :	N/A
Pass :	P
Fail :	F
Not measured :	N/M

Summary

Emission Test		
Requirement – Test case	Verdict	Remark
Radiated emission. Electromagnetic field measure (30 MHz – 1000 MHz)	P	---
Radiated emission. Electromagnetic field measure (1 GHz – 12.75 GHz)	P	---
Radiated emission. Electromagnetic field measure (12.75 GHz – 26 GHz)	N/A	(1)
Continuous conducted emission (150 KHz – 30 MHz)	P	---
<u>Supplementary information and remarks:</u>		
(1) Range: Test required only up to the 5th harmonic of the maximum internal work frequency.		

Appendix A: Test results

Appendix A content

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DESCRIPTION OF THE OPERATION MODES

The operation modes described in this paragraph constitute a functionality of the sample under test for itself. The operation modes used by the samples to which the present report refers, are shown in the following table:

OPERATION MODE	DESCRIPTION
OM#01	EUT ON. Charging battery. Bluetooth ON (not paired). Power supply: 115Vac 60Hz.
OM#02	EUT ON. Shaver working continuously. Bluetooth ON (not paired). Power supply: Internal battery.

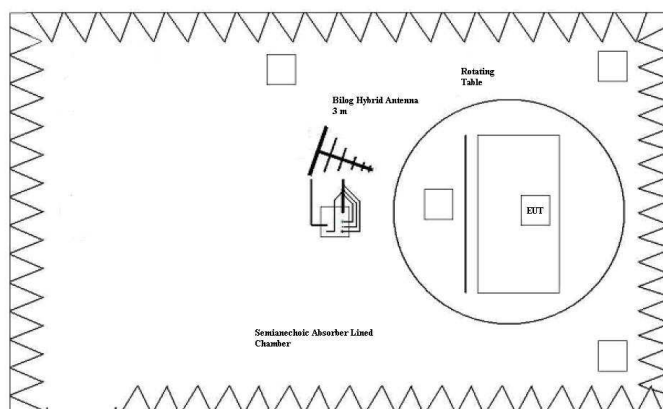
RADIATED EMISSION. ELECTROMAGNETIC FIELD MEASURE

LIMITS:	Product standard:	FCC CFR 47, Part 15, Subpart B (10-1-19 Edition), Secs. 15.109; ICES-003 (January 2016, updated April 2019)
	Test standard:	FCC CFR 47, Part 15, Subpart B (10-1-19 Edition), Secs. 15.109; ICES-003 (January 2016, updated April 2019)

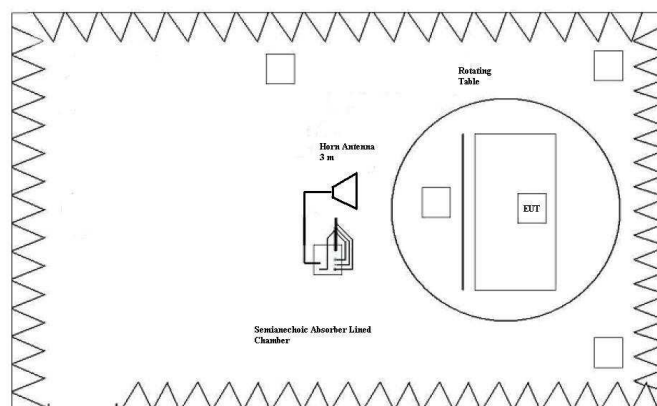
Limits of interference Class B

The applied limit for radiated emissions, 3 m distance, according with the requirements of FCC Rules and Regulations 47 CFR Part 15, Subpart B (10-1-19 Edition), Secs. 15.109 & ICES-003 Issue 6 (Updated 04-2019)

Frequency of emission (MHz)	Field strength (microvolt/meter)
30-88	100
88-216	150
21-960	200
Above 960	500



Setup for measurements < 1GHz.



Setup for measurements > 1GHz.

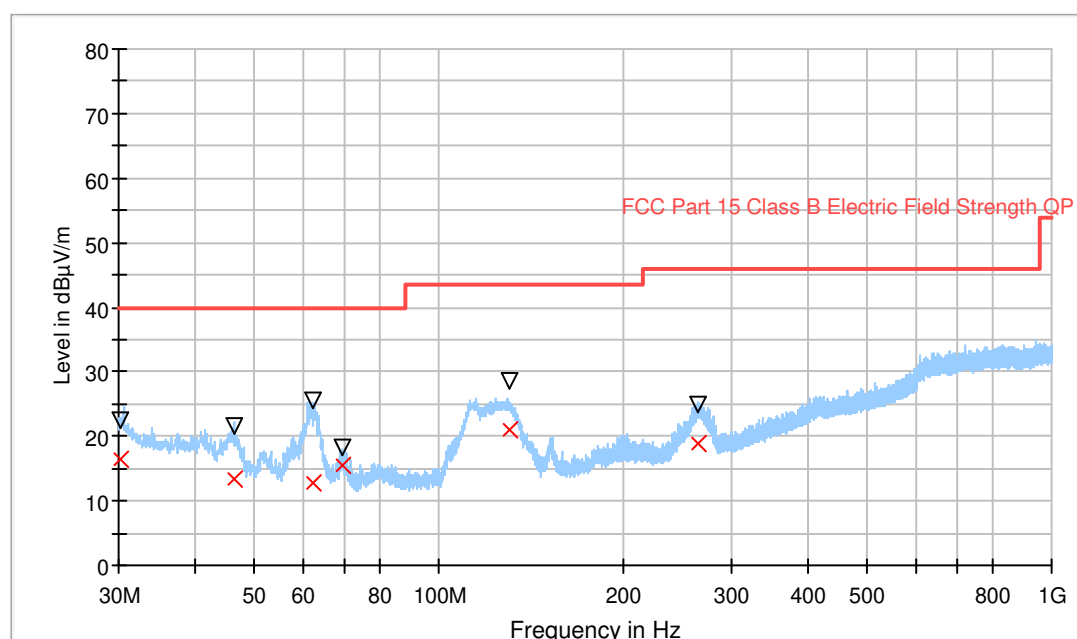
TESTED SAMPLE:	S/01 & S/02
TESTED OPERATION MODES:	OM#01 & OM#02
TEST RESULTS:	CRmmnnRRPP: CR, Radiated Condition; mm: Sample number; nn: Operation mode; RR: Range; PP: Polarization.

CRmmnnRRPP	Description	Result
CR0101LR	Range: 30 MHz - 1000 MHz.	P
CR0101HR_PH	Range: 1 GHz – 12.75 GHz. Horizontal polarization.	P
CR0101HR_PV	Range: 1 GHz – 12.75 GHz. Vertical polarization.	P
CR0202LR	Range: 30 MHz - 1000 MHz.	P
CR0202HR_PH	Range: 1 GHz – 12.75 GHz. Horizontal polarization.	P
CR0202HR_PV	Range: 1 GHz – 12.75 GHz. Vertical polarization.	P

Radiated Emission. CR0101LR

Project: 64862REM.001
Company: PHILIPS CONSUMER LIFESTYLE B.V.
Sample: S/01
Operation mode: OM#01
Description: EUT ON. Charging battery. Bluetooth ON (not paired). Power supply: 115Vac.

Full Spectrum



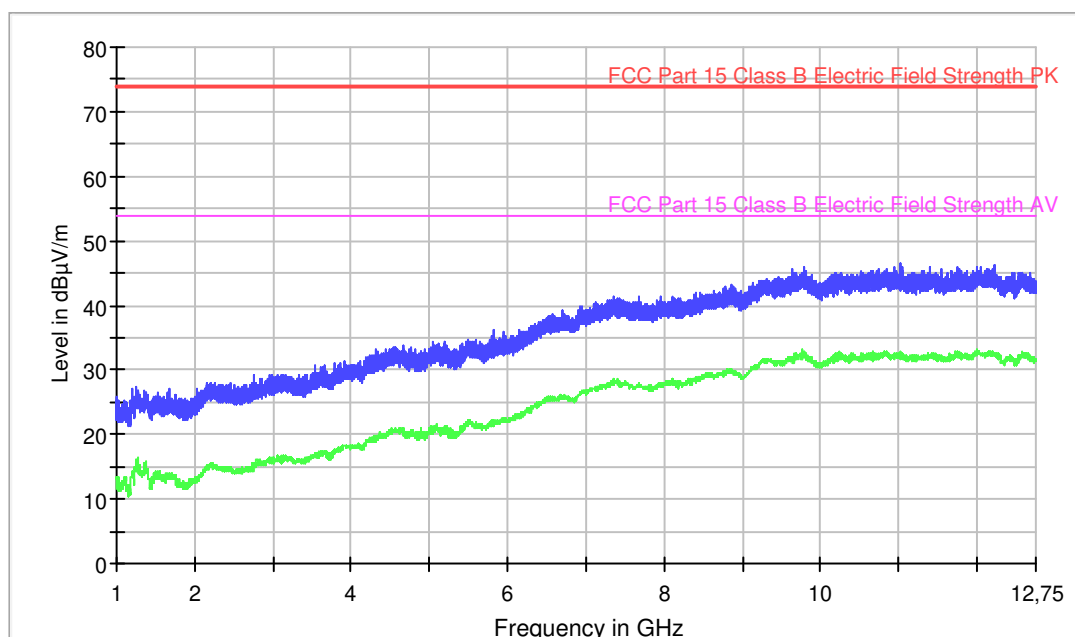
Maximizadas

Frequency (MHz)	QuasiPeak (dBμV/m)	MaxPeak (dBμV/m)	Pol	Azimuth (deg)
30.279000	16.30	22.45	V	168.0
46.256000	13.38	21.46	V	9.0
62.242000	12.75	25.56	V	129.0
69.762000	15.50	18.34	V	129.0
130.501000	20.99	28.60	V	17.0
264.884000	18.90	24.97	H	10.0

Radiated Emission. CR0101HR_PH

Project: 64862REM.001
Company: PHILIPS CONSUMER LIFESTYLE B.V.
Sample: S/01
Operation mode: OM#01
Description: EUT ON. Charging battery. Bluetooth ON (not paired). Power supply: 115Vac. Horizontal polarization.

RE FCC Part 15 ClassB 1-12,75 GHz



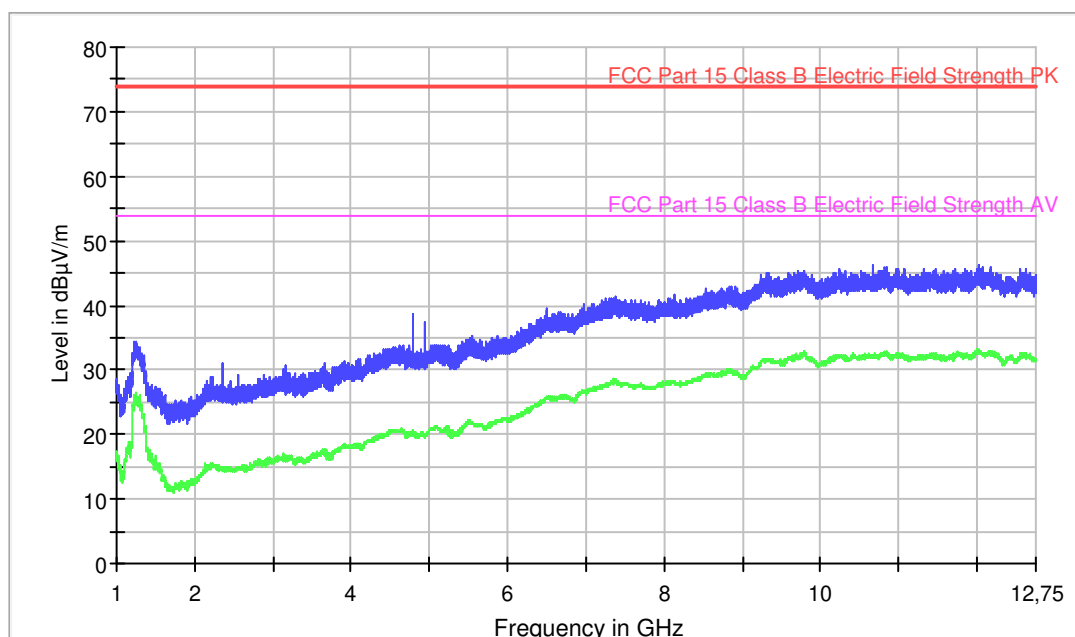
Subrange Maxima

Frequency (MHz)	PK+ CLRWR (dBμV/m)	AVG CLRWR (dBμV/m)
2162.000000	27.8	14.9
2764.400000	29.3	15.3
4522.400000	33.3	20.7
5598.000000	34.7	21.8
6710.000000	39.4	25.8
7676.800000	41.5	27.8
9216.000000	43.8	30.7
9790.400000	45.8	32.8
11010.000000	46.4	32.6
12222.000000	46.3	32.4

Radiated Emission. CR0101HR_PV

Project: 64862REM.001
Company: PHILIPS CONSUMER LIFESTYLE B.V.
Sample: S/01
Operation mode: OM#01
Description: EUT ON. Bluetooth OFF. MS in traffic mode. LTE Band 4 FDD.
Power supply: 115Vdc. Vertical polarization.

RE FCC Part 15 ClassB 1-12,75 GHz



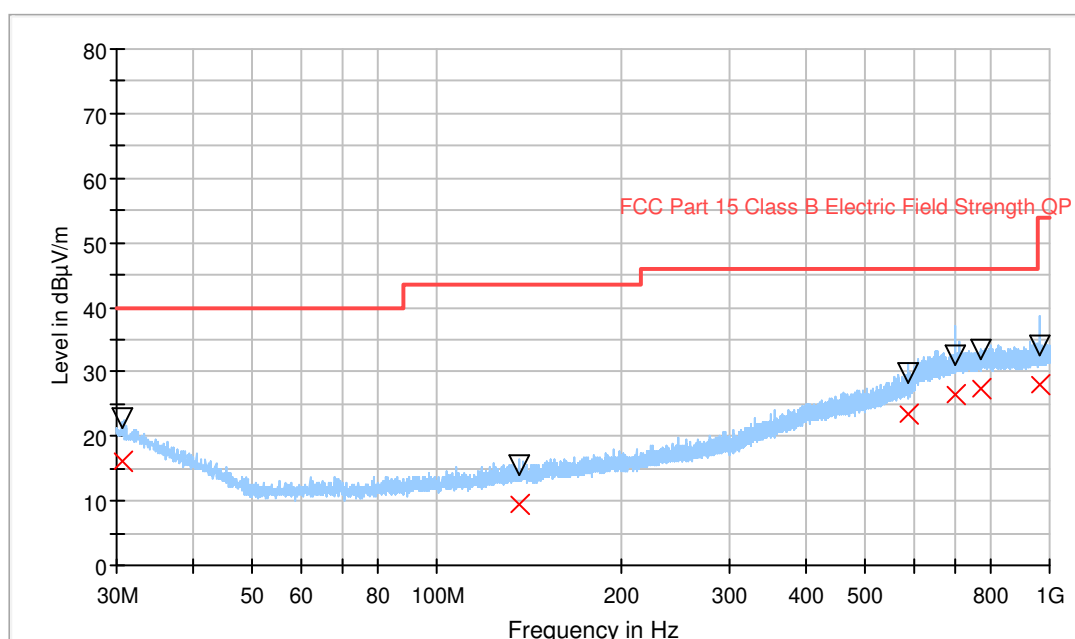
Subrange Maxima

Frequency (MHz)	PK+ CLRWR (dBμV/m)	AVG CLRWR (dBμV/m)
1234.400000	34.3	26.0
2366.000000	30.9	14.5
4416.400000	33.1	20.1
4798.000000	38.6	20.1
6505.200000	39.5	25.6
7369.600000	41.2	28.2
9192.000000	43.3	30.2
10245.600000	45.6	32.0
10676.000000	46.2	32.2
12022.000000	46.3	32.8

Radiated Emission. CR0202LR

Project: 64862REM.001
Company: PHILIPS CONSUMER LIFESTYLE B.V.
Sample: S/02
Operation mode: OM#02
Description: EUT ON. Shaver working continuously. Bluetooth ON (not paired).
Power supply: internal battery.

Full Spectrum



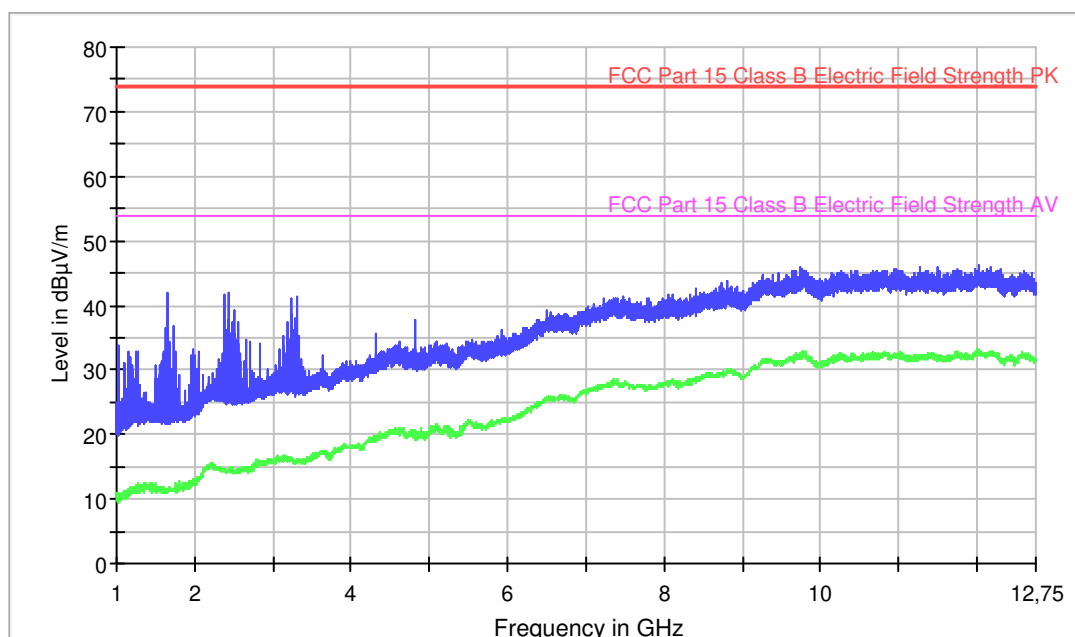
Maximizations

Frequency (MHz)	QuasiPeak (dBµV/m)	MaxPeak (dBµV/m)	Height (cm)	Pol	Azimuth (deg)
30.742000	16.15	22.71	224.0	V	119.0
136.450000	9.55	15.44	320.0	V	156.0
588.740000	23.30	29.83	345.0	H	-44.0
701.697000	26.54	32.68	157.0	H	15.0
772.189000	27.30	33.55	113.0	V	69.0
966.121000	27.87	34.17	400.0	H	-28.0

Radiated Emission. CR0202HR_PH

Project: 64862REM.001
Company: PHILIPS CONSUMER LIFESTYLE B.V.
Sample: S/02
Operation mode: OM#02
Description: EUT ON. Shaver working continuously. Bluetooth ON (not paired).
Power supply: internal battery. Horizontal polarization.

RE FCC Part 15 ClassB 1-12,75 GHz



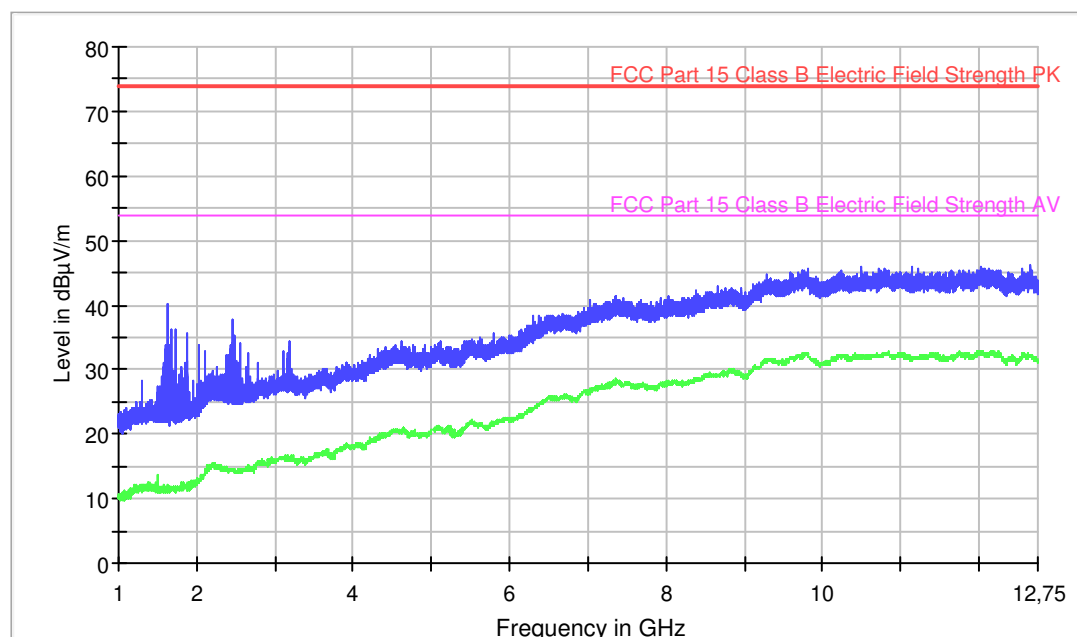
Subrange Maxima

Frequency (MHz)	PK+ CLRWR (dBμV/m)	AVG CLRWR (dBμV/m)
1640.800000	41.9	11.5
2433.600000	41.9	14.4
4320.000000	35.5	19.5
4826.400000	37.6	20.6
6498.000000	39.3	25.5
7488.800000	41.3	27.8
8803.600000	43.8	29.6
9731.200000	45.9	32.4
11277.600000	45.8	32.0
12012.400000	46.1	32.5

Radiated Emission. CR0202HR_PV

Project: 64862REM.001
Company: PHILIPS CONSUMER LIFESTYLE B.V.
Sample: S/02
Operation mode: OM#02
Description: EUT ON. Shaver working continuously. Bluetooth ON (not paired).
Power supply: internal battery. Vertical polarization.

RE FCC Part 15 ClassB 1-12,75 GHz



Subrange Maxima

Frequency (MHz)	PK+ CLRWR (dBμV/m)	AVG CLRWR (dBμV/m)
1638.000000	40.3	11.6
2466.000000	37.7	14.6
4510.000000	33.4	20.6
5620.400000	34.9	21.4
6868.400000	38.9	25.4
7358.400000	41.4	28.4
9174.000000	43.4	30.3
9815.600000	45.5	32.1
11135.600000	46.0	31.9
12662.000000	46.2	32.0

CONTINUOUS CONDUCTED EMISSION

LIMITS:	Product standard :	FCC CFR 47, Part 15, Subpart B (10-1-19 Edition), Secs. 15.107; ICES-003 Issue 6 (January 2016, updated April 2019)
	Test standard :	FCC CFR 47, Part 15, Subpart B (10-1-19 Edition), Secs. 15.107; ICES-003 Issue 6 (January 2016, updated April 2019)

CLASS B

The applied limit for continuous conducted emissions in power leads, according with the requirements of FCC Rules and Regulations 47 CFR Part 15, Subpart B (10-1-19 Edition), Secs. 15.107 & ICES-003 Issue 6 (January 2019), in the frequency range 0,15 to 30 MHz, for Class A equipment was:

Frequency range (MHz)	Limit (dB μ V)	
	Quasi-peak	Average
0,15 to 0,5	66 - 56	56 - 46
0,5 to 5	56	46
5 to 30	60	50

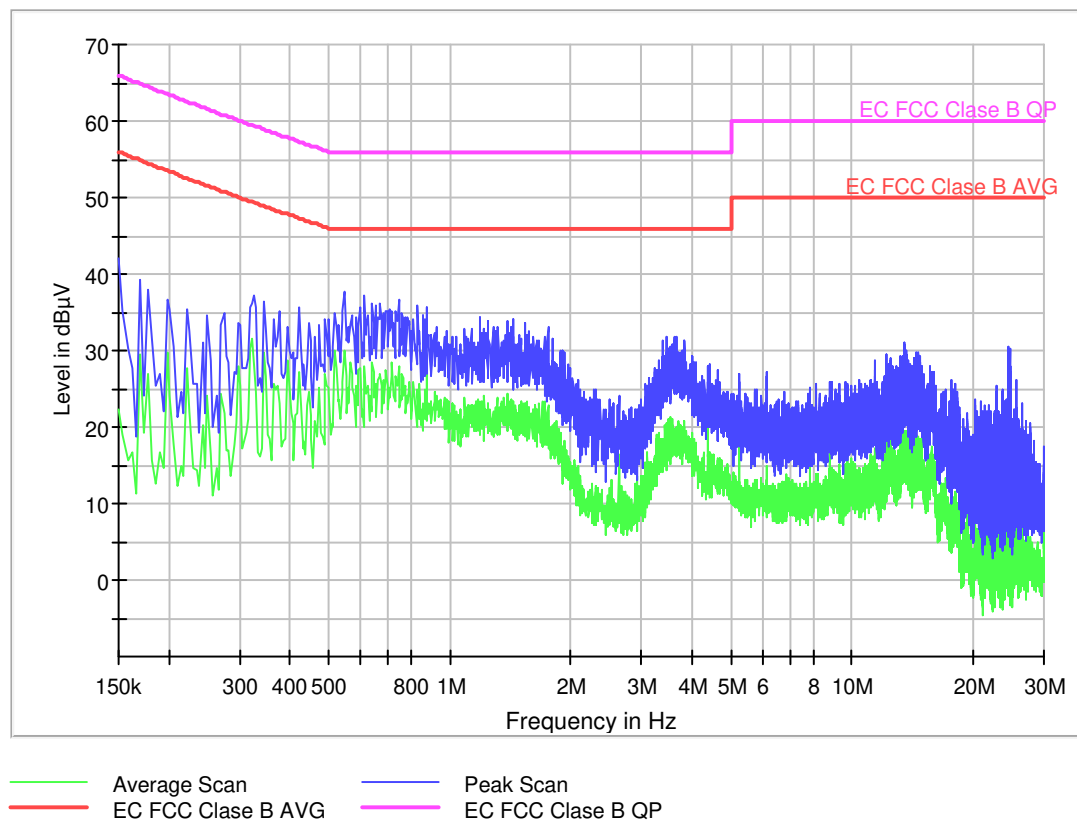
TESTED SAMPLES:	S/01
TESTED OPERATION MODES:	OM#01
TEST RESULTS:	CCmmnnhh: CC, Conducted Condition; mm: Sample number; nn: Operation mode; hh: wire

CCmmnnhh	DESCRIPTION	RESULT
CC01010N	Range: 150kHz – 30MHz. Neutral wire noise.	P
CC0101L1	Range: 150kHz – 30MHz. Phase wire noise.	P

Conducted Emission. CC01010N

Project: 64862REM.001
Company: PHILIPS CONSUMER LIFESTYLE B.V.
Sample: S/01
Operation mode: OM#01
Description: EUT ON. Charging battery. Bluetooth ON (not paired). Power supply: 115Vac. Neutral wire noise.

EC FCC Class B ESPI CC



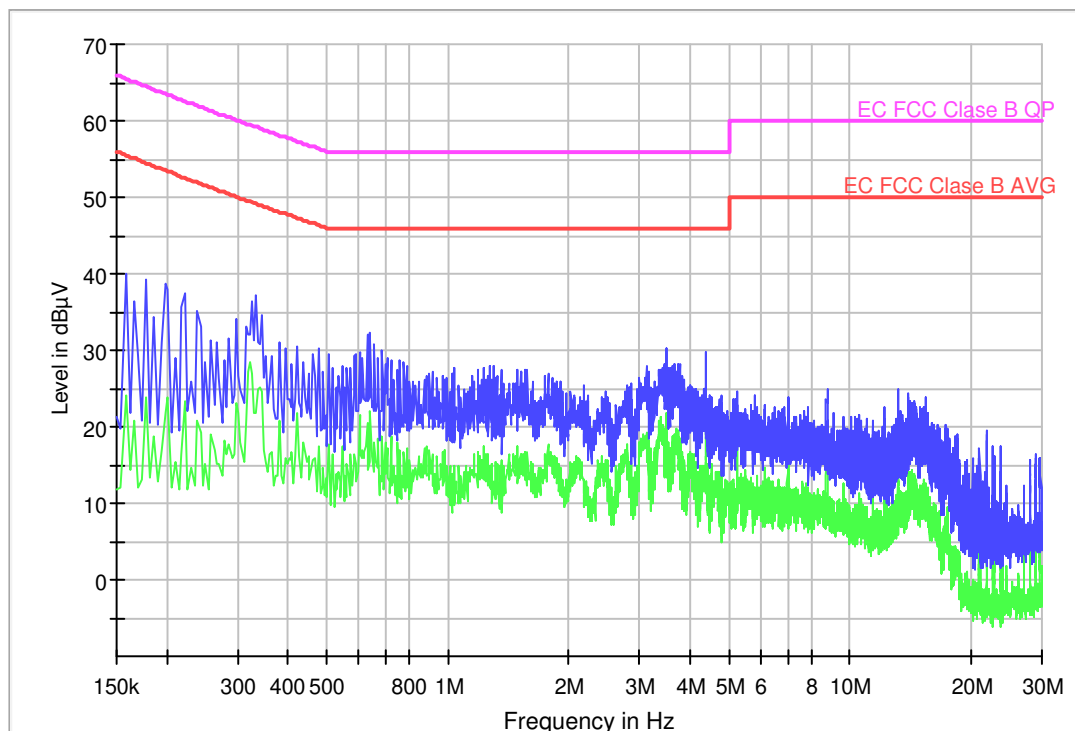
Subrange Maxima

Frequency (MHz)	PK+ CLRWR (dBµV)	AVG CLRWR (dBµV)
0.150000	42.0	22.3
0.326000	37.1	28.3
0.546000	37.6	30.1
0.746000	36.8	28.0
1.442000	34.0	23.4
3.602000	31.9	17.6
3.670000	31.8	20.0
6.142000	27.1	14.7
13.446000	30.9	17.9
24.634000	30.5	9.6

Conducted Emission. CC0101L1

Project: 64862REM.001
Company: PHILIPS CONSUMER LIFESTYLE B.V.
Sample: S/01
Operation mode: OM#01
Description: EUT ON. Charging battery. Bluetooth ON (not paired). Power supply: 115Vac. Phase wire noise.

EC FCC Class B ESPI CC



— Average Scan — Peak Scan
— EC FCC Class B AVG — EC FCC Class B QP

Subrange Maxima

Frequency (MHz)	PK+ CLRWR (dBµV)	AVG CLRWR (dBµV)
0.158000	40.0	24.0
0.334000	37.3	21.7
0.642000	32.4	22.0
0.762000	28.8	16.8
1.274000	27.9	14.8
3.506000	30.2	21.0
4.378000	29.6	21.4
8.758000	24.8	18.0
13.138000	24.9	15.5
21.886000	19.4	6.2