

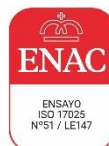
ISED CABid: ES1909

Test report No:
NIE: 69904REM.001A1

Test report

FCC Rules and Regulations CFR 47, Part 15, Subpart B and 15.207
Subpart C (01-10-20 Edition) & ICES-003 Issue 7 (October 2020)

(*) Identification of item tested	QP 4530
(*) Trademark	Philips OneBlade
(*) Model and /or type reference	OneBlade
Other identification of the product	FCC ID: 2AICSQP45 IC: 21912-QP45 HW version: 1.0 SW version: 327
(*) Features	Bluetooth 5.1
Manufacturer	Philips Consumer Lifestyle B.V. Tussendiepen 4 9206 AD Drachten, The Netherlands
Test method requested, standard	FCC Rules and Regulations CFR 47, Part 15, Subpart B and 15.207 Subpart C (01-10-20 Edition) & ICES-003 Issue 7 (October 2020)
Summary	IN COMPLIANCE
Approved by (name / position & signature)	Jose Manuel Gómez Galván EMC Consumer & RF Lab. manager
Date of issue	2024-02-14
Report template No	FDT08_23 (*) "Data provided by the client"



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Acronyms

Acronym ID		Acronym Description
Code		EMC Test Code
Freq Rng		Frequency Range
OM		Operation Mode
S/		Sample
V		Verdict

Competences and guarantees

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DEKRA Testing and Certification S.A.U. 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 S.A.U. at the time of performance of the test.

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

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Uncertainty

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

The total uncertainty of the measurement system for the measured conducted disturbance characteristics of EUT from 150 kHz to 30 MHz is $I = \pm 3,9$ dB for quasi-peak measurements, $I = \pm 3,2$ dB for peak 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 12.75 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 QP 4530, a Bluetooth connected grooming device.

DEKRA Testing and Certification S.A.U. 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 01: S/01

Control Number	Description	Model	Serial N°	Date of Reception	Application
69904B_1.1	Shaver machine	OneBlade	#823	2021-10-06	Element Under Test
69904B_4.1	Shaver machine head	--	--	2021-10-06	Element Under Test
69904B_8.1	USB cable	--	--	2021-10-06	Auxiliary Element

Sample 02: S/02

Control Number	Description	Model	Serial N°	Date of Reception	Application
69904B_1.1	Shaver machine	OneBlade	#823	2021-10-06	Element Under Test
69904B_4.1	Shaver machine head	--	--	2021-10-06	Element Under Test
69904B_8.1	USB cable	--	--	2021-10-06	Auxiliary Element
--	Samsung AC/DC adapter	EP-TA50EWE	R37N5RT0NP7DK3	--	Auxiliary Element

Note: The AC/DC adapter for charging is not provided with the product, so it is not considered as an element under test.

Test sample description

Ports..... :	Port name and description	Cable					
		Specified max length [m]	Attached during test	Shielded	Coupled to patient		
	USB charging port	<3m	[Y]	[Y]	[N]		
			[]	[]	[]		
Supplementary information to the ports..... :							
Rated power supply	Voltage and Frequency		Reference poles				
			L1	L2	L3	N	PE
	[]	AC:	[]	[]	[]	[]	[]
	[X]	DC: 5Vdc.					
Rated Power							
Clock frequencies.....							
Other parameters							
Software version	327						
Hardware version	1.0						
Dimensions in cm (W x H x D)							
Mounting position	[]	Table top equipment					
	[]	Wall/Ceiling mounted equipment					
	[]	Floor standing equipment					
	[X]	Hand-held equipment					
	[]	Other:					
Modules/parts..... :	Module/parts of test item		Type	Manufacturer			
							
Accessories (not part of the test item)	Description		Type	Manufacturer			
							
Documents as provided by the applicant	Description		File name	Issue date			
							

Identification of the client

Philips Consumer Lifestyle B.V.
Oliemolenstraat 5, 9203 ZN Drachten, The Netherlands

Testing period and place

Test Location	DEKRA Testing and Certification S.A.U.
Date (start)	2021-10-15
Date (finish)	2021-10-15

Document history

Report number	Date	Description
69904REM.001	2022-01-11	First release
69904REM.001A1	2024-02-14	First modification. Some typos are corrected: - In the header of the first page is added the reference to “FCC 15.207”. - In the Conducted Emission test case is explicitly added the reference to FCC 15.207. This report cancels and replaces the previous 69904REM.001

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. = 860mbar Max. = 1060mbar

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. = 860mbar Max. = 1060mbar

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. = 860mbar Max. = 1060mbar

Remarks and comments

The tests have been performed by the technical personnel: José Antonio Santiago Galván.

Testing verdicts

Fail	F
Inconclusive	I
Not applicable	N/A
Not measured	N/M
Pass	P

List of equipment used during the test

Control No.	Equipment	Model	Manufacturer	Next Calibration
6666	EMI TEST RECEIVER 2Hz-44GHz	ESW44	ROHDE AND SCHWARZ	2022-02-05
7743	HORN ANTENNA 0,75-18GHz	3115	ETS LINDGREN	2023-08-24
7746	HYBRID BILOG ANTENNA 30MHz-6GHz	3142E	ETS LINDGREN	2023-07-23
4659	PRE-AMPLIFIER G>28dB 1-18GHz	BBV 9718	SCHWARZBECK	2022-07-09
7853	EMI RECEIVER 10Hz-30MHz	PMM 9010F	NARDA	2021-10-30
7859	THREE-PHASE ARTIFICIAL NETWORK 32A	PMM L3-32	NARDA	2021-11-20

Summary

Test Specification.	Requirement – Test case	Verdict	Remark
FCC Rules and Regulations CFR 47, Part 15, Subpart B and 15.207 Subpart C (01-10-20 Edition) & ICES-003 Issue 7 (October 2020)	RE Radiated emission. (15.109)	Pass	
	CE Conducted emission. (15.107) (15.207)	Pass	
<u>Supplementary information and remarks:</u> None			

Appendix A: Test results

Appendix A content

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CE Continuous conducted emission18

Description of the operation modes

The operation modes described in this paragraph constitute a functionality of the sample under test for itself. Every operation mode takes a failure criteria for the immunity test that they were applying to it and a monitoring to guarantee performance of the same ones.

The operation modes used by the samples to which the present report refers, are shown in the following table:

Id	Description
OM/01	EUT ON. Charging battery. Bluetooth ON without communication established. Power supply: 5 Vdc.
OM/02	EUT ON. Charging battery. Bluetooth ON with communication established. Power supply: 5 Vdc.
OM/03	EUT ON. Shaver working continuously. Power supply: 5Vdc

Test standards version applied

The product standards and test standards applied for each test cases are shown in the following table:

Product Test Standard	Test standard	Requirement – Test case
FCC Rules and Regulations CFR 47, Part 15, Subpart B and 15.207 Subpart C (01-10-20 Edition) & ICES-003 Issue 7 (October 2020)	ANSI C63.4 (2014)	RE Radiated emission.
	ANSI C63.4 (2014)	CE Continuous conducted emission

Test Cases Details

RE Radiated emission. Electromagnetic field measure

Limits

Limits of interference Class B
The applied limit for radiated emissions, 3 m distance, according to the requirements of FCC Rules and Regulations 47 CFR Part 15, Subpart B (01-10-20 Edition), Secs. 15.109 & ICES-003 Issue 7 (October 2020)

Frequency range (MHz)	FCC Part 15B		ICES-003 Issue 7		FCC Part 15B & ICES-003 Issue 7	
	QP Limit for 3 m		QP Limit for 3 m		PK Limit for 3 m	AVG Limit for 3 m
	(µV/m)	(dBµV/m)	(µV/m)	(dBµV/m)	(dBµV/m)	(dBµV/m)
30 to 88	100	40	100	40	---	---
88 to 216	150	43.5	150	43.5	---	---
216 to 230	200	46	200	46	---	---
230 to 960	200	46	224	47		
960 to 1000	500	54	500	54	---	---
Above 1000	---	---	---	---	74	54

NOTE: FCC QP and AVG detectors and limits are in concordance with RSS-Gen Issue 5 (March 2019), Secs. 7.1 and 7.3.

Limits according to FCC Part 15B, are equal or more stringent than those of ICES-003 Issue 7.

Results

SI	OM	Code	Freq Rng (MHz)	Comments	V
01	OM/01	RE0101LR	[30, 1000]	Note 1	P
01	OM/01	RE0101HR	[1000, 12750]	Note 1	P

Note 1: After a preview of the radiated emissions from charging battery (OM/01) vs shaving (OM/03), the worst-case operation mode was OM/01, so this one has been selected for the complete measurement.

Verdict

Pass

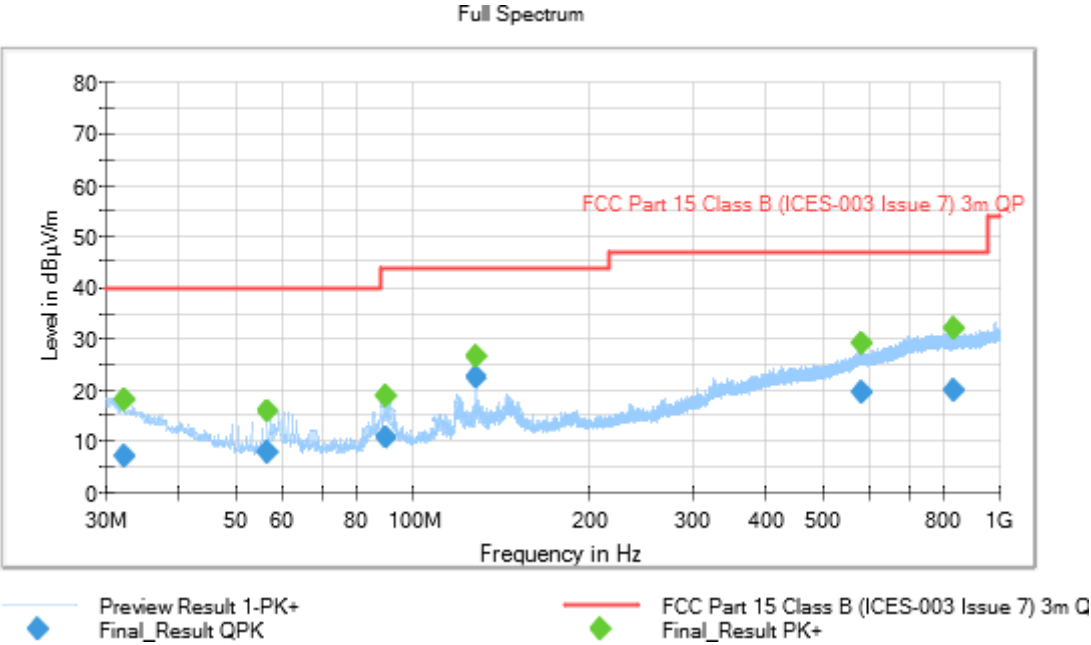
Attachments

EMC Test Code = RE0101LR, Frequency Range MHz = [30, 1000]

Sample ID: S/01

Operation Mode: OM/01. EUT ON. Charging battery. Bluetooth ON without communication established. Power supply:5 Vdc..

Images:



Documents:

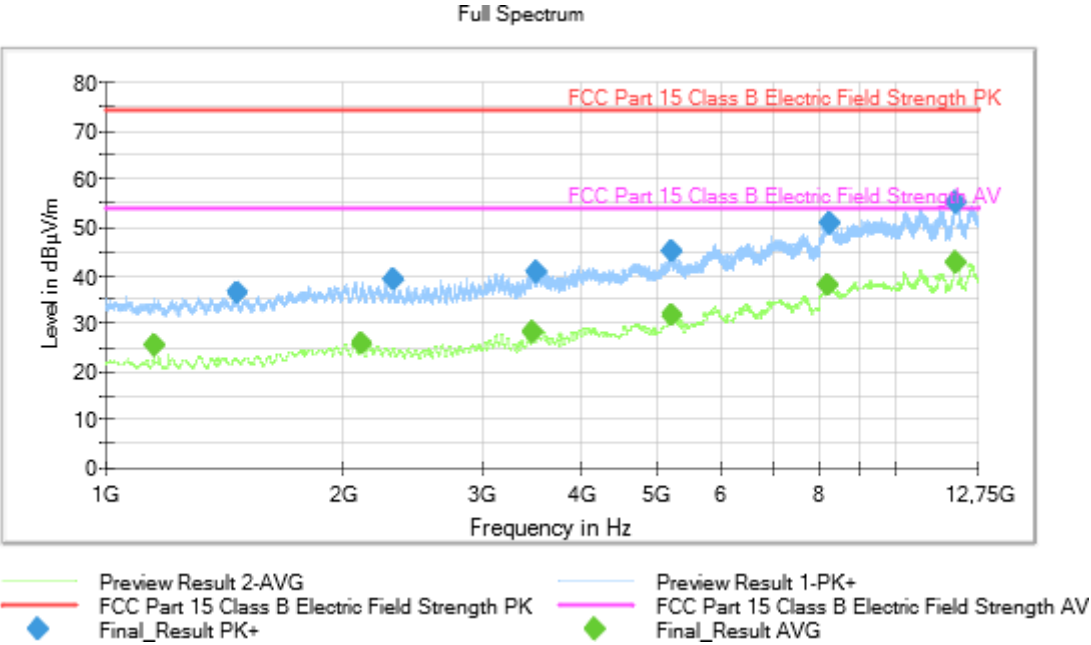
Frequency(MHz)	QuasiPeak(dBµV/m)	MaxPeak(dBµV/m)	Limit(dBµV/m)	Margin(dB)	Height(cm)	PoI	Azimuth(deg)
32.253000	---	17.90	---	---	173.0	V	192.0
32.253000	7.07	---	40.00	32.93	173.0	V	192.0
56.591000	---	15.82	---	---	319.0	V	155.0
56.591000	7.71	---	40.00	40.71	319.0	V	155.0
90.075000	---	18.88	---	---	238.0	V	96.0
90.075000	10.82	---	43.52	38.70	238.0	V	96.0
128.018000	---	26.53	---	---	111.0	V	31.0
128.018000	22.51	---	43.52	21.01	111.0	V	31.0
583.956000	19.27	---	47.00	27.73	176.0	H	135.0
583.956000	---	28.93	---	---	176.0	H	135.0
838.938000	19.73	---	47.00	27.27	100.0	H	351.0
838.938000	---	31.75	---	---	100.0	H	351.0

EMC Test Code = RE0101HR, Frequency Range MHz = [1000, 12750]

Sample ID: S/01

Operation Mode: OM/01. EUT ON. Charging battery. Bluetooth ON without communication established. Power supply:5 Vdc..

Images:



Documents:

Frequency(MHz)	MaxPeak(dBµV/m)	Average(dBµV/m)	Limit(dBµV/m)	Margin(dB)
1154.800000	---	25.30	53.97	28.67
1466.000000	36.29	---	73.97	37.68
2111.200000	---	25.84	53.97	28.13
2310.800000	38.88	---	73.97	35.09
3474.800000	---	28.08	53.97	25.89
3517.600000	40.59	---	73.97	33.38
5217.200000	44.76	---	73.97	29.21
5218.400000	---	31.66	53.97	22.31
8242.000000	---	37.86	53.97	16.11
8247.600000	50.91	---	73.97	23.06
11914.000000	---	42.47	53.97	11.50
11914.800000	55.00	---	73.97	18.97

CE Continuous conducted emission

Limits of interference Class B

The applied limit for continuous conducted emissions in power leads, according with the requirements of ICES-003 Issue 7 (October 2020) & FCC Rules and Regulations 47 CFR Part 15, Subpart B (01-10-20 Edition), Secs. 15.107 and Subpart C Secs. 15.207, in the frequency range 0,15 to 30 MHz, for Class B equipment was:

Frequency range (MHz)	Limit (dBµV)	
	Quasi-Peak	Average
0,15 to 0,5	66 - 56	56 - 46
0,5 to 5	56	46
5 to 30	60	50

RESULTS

SI	OM	Parameters				V
SI	OM	Code	Freq Rng (MHz)	Line	Single measured points	V
02	02	CE02020N	[0.15, 30]	N	10	P
02	02	CE0202L1	[0.15, 30]	L1	10	P

Note 1: After a preview of the conducted emissions from the AC port, for Bluetooth idle (OM/01) vs Bluetooth in communication (OM/02), the worst-case operation mode was OM/02, so this one has been selected for the complete measurement.

VERDICT

Pass

ATTACHMENTS

Project:69904REM.001

Company:PHILIPS CONSUMER LIFESTYLE

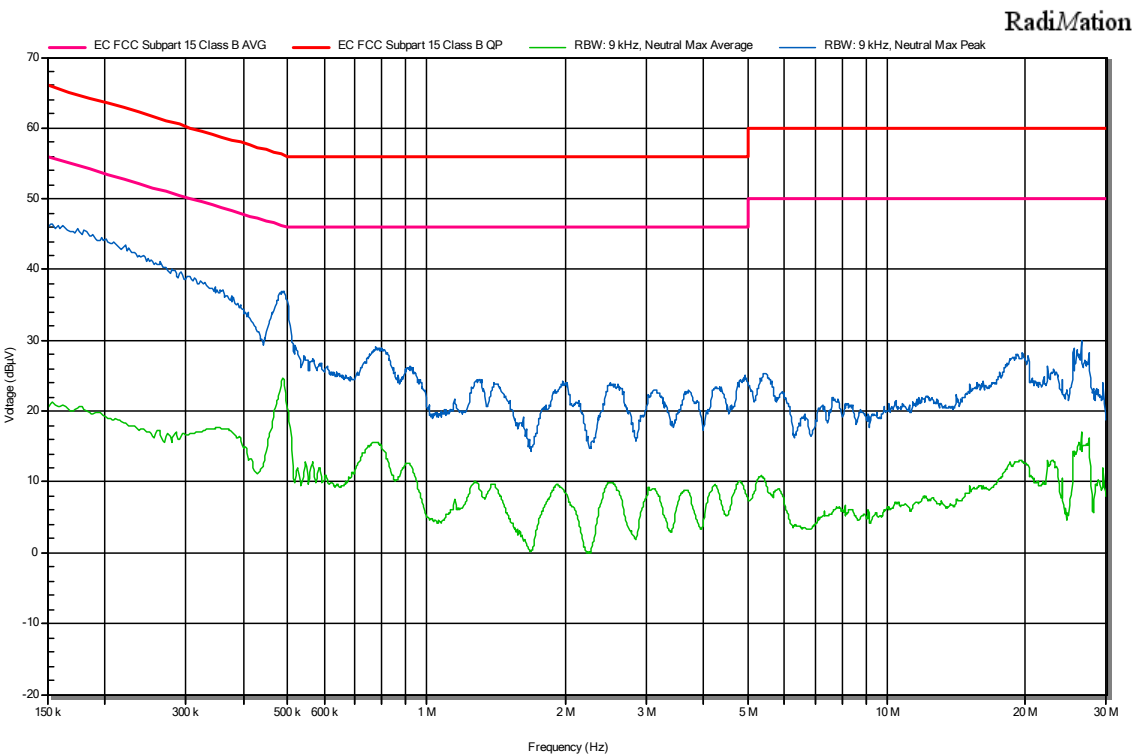
Sample:S/02

Operation mode:OM/02

Graphical code:CE0202N

Description:

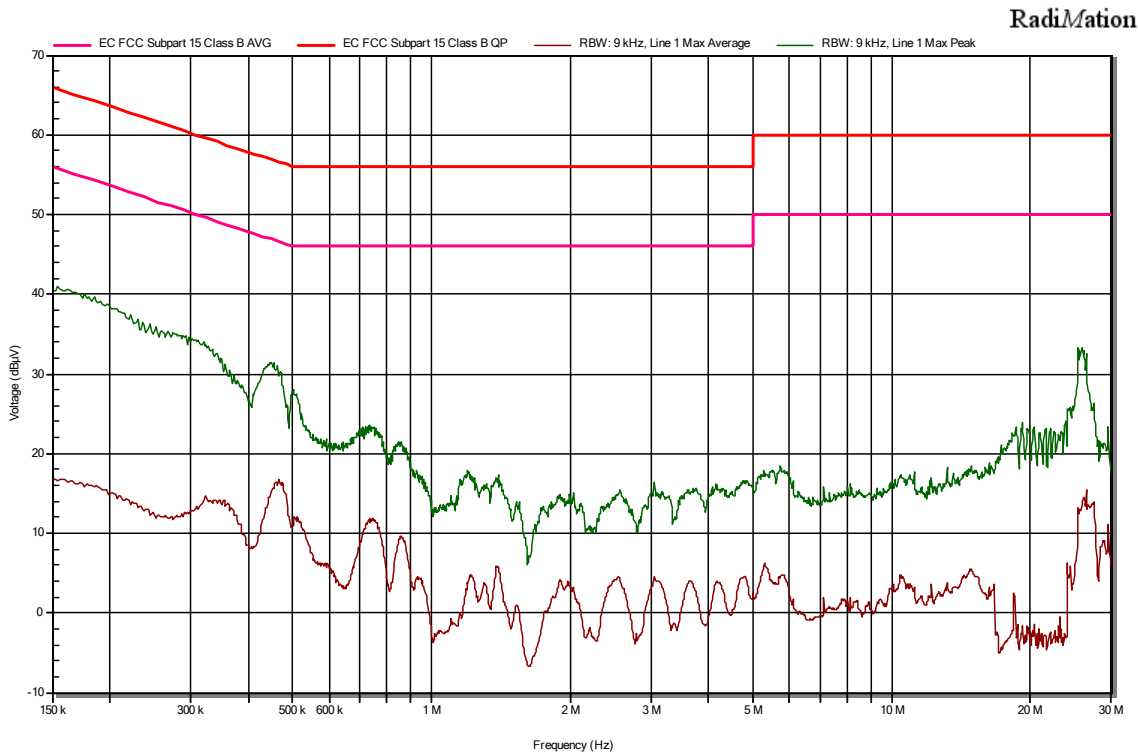
Verdict:Passed



Final Result

Frequency (MHz)	Average (dBµV)	Peak (dBµV)	Line
0,154 MHz	21,2 dBµV	46,4 dBµV	N
0,485 MHz	24,6 dBµV	36,8 dBµV	N
0,78 MHz	15,6 dBµV	28,9 dBµV	N
0,907 MHz	12,5 dBµV	25,8 dBµV	N
1,299 MHz	9,1 dBµV	24,4 dBµV	N
1,978 MHz	9 dBµV	24,3 dBµV	N
2,497 MHz	9,9 dBµV	24 dBµV	N
4,912 MHz	8,7 dBµV	25,1 dBµV	N
26,393 MHz	17 dBµV	29,9 dBµV	N
27,406 MHz	15,9 dBµV	28,2 dBµV	N

Project: 69904REM.001
Company: PHILIPS CONSUMER LIFESTYLE
Sample: S/02
Operation mode: OM/02
Graphical code: CE0202L1
Description:
Verdict: Passed



Final Result

Frequency (MHz)	Average (dBµV)	Peak (dBµV)	Line
0,154 MHz	16,5 dBµV	41 dBµV	L1
0,324 MHz	14,7 dBµV	33,7 dBµV	L1
0,446 MHz	14,6 dBµV	31,3 dBµV	L1
0,502 MHz	11,6 dBµV	27,7 dBµV	L1
0,733 MHz	11,3 dBµV	23,5 dBµV	L1
0,853 MHz	9 dBµV	21,5 dBµV	L1
19,206 MHz	-1,8 dBµV	23,9 dBµV	L1
19,689 MHz	-1,6 dBµV	23,2 dBµV	L1
24,21 MHz	3,6 dBµV	25,5 dBµV	L1
25,858 MHz	13,5 dBµV	33,1 dBµV	L1