RADIO REPORT

FCC 47 CFR Part 15C
ISED Canada RSS-247

Digital transmission systems operating within the 2400.0 MHz - 2483.5 MHz band

Report Reference No	G0M-2103-9658-TFC247BL-V01
Testing Laboratory	Eurofins Product Service GmbH
Address	Storkower Str. 38c 15526 Reichenwalde Germany
Accreditation	DAkkS - Registration number : D-PL-12092-01-03 (ISED) ISED Testing Laboratory site: 3470A DAkkS - Registration number : D-PL-12092-01-04 (FCC) FCC Filed Test Laboratory, Reg.-No.: 96970
Applicant	Philip Morris Products S.A.
Address	Quai Jeanrenaud 3 2000 Neuchâtel Switzerland
Test Specification	47 CFR Part 15C RSS-247, Issue 2, 2017-02 RSS-Gen, Issue 5, Amendment 1, 2019-03
Non-Standard Test Method	None
Equipment under Test (EUT):	
Product Description	Electronic Vaping System
Model(s)	B-1603
Additional Model(s)	None
Brand Name(s)	IQOS / VEEV
Hardware Version(s)	B-1603
Software Version(s)	STF0830
FCC ID	2AS66B-1603
IC	22416-B1603
Test Result	**PASSED**

Possible test case verdicts:	
Required by standard but not tested	N/T
Not required by standard	N/R
Not applicable to EUT	N/A
Test object does meet the requirement	P(PASS)
Test object does not meet the requirement	F(FAIL)
Testing:	
Test Lab Temperature	20 °C - 30 °C
Test Lab Humidity	25 % - 55 %
Date of receipt of test item	2021-03-17
Report:	
Compiled by	Florian Voigt
Tested by (+ signature) (Responsible for Test)	Florian Voigt
Approved by (+ signature) (Deputy Head of Lab)	Toralf Jahn
Date of Issue	2021-08-16
Total number of pages	131
General Remarks:	
The test results presented in this report relate only to the object tested. **The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.** This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.	
Additional Comments:	
The model B-1603 (Malaysia Production) is only partially tested. Only test cases "Transmitter radiated emissions", "Receiver radiated emissions" and "AC powerline conducted emissions" are conducted on model B-1603 (Malaysia Production).	

Possible test case verdicts:		
Required by standard but not tested	N/T	
Not required by standard	N/R	
Not applicable to EUT	N/A	
Test object does meet the requirement	P(PASS)	
Test object does not meet the requirement	F(FAIL)	
Testing:		
Test Lab Temperature	20 °C - 30 °C	
Test Lab Humidity	25 % - 55 %	
Date of receipt of test item	2021-03-17	
Report:		
Compiled by	Florian Voigt	
Tested by (+ signature) (Responsible for Test)	Florian Voigt	.....
Approved by (+ signature) (Deputy Head of Lab)	Toralf Jahn	.....
Date of Issue	2021-12-20	
Total number of pages	131	
General Remarks:		
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Additional Comments:		
The model B-1603 (Malaysia Production) is only partially tested. Only test cases “Transmitter radiated emissions”, “Receiver radiated emissions” and “AC powerline conducted emissions” are conducted on model B-1603 (Malaysia Production).		

VERSION HISTORY

Version History			
Version	Issue Date	Remarks	Revised By
01	2021-08-16	Initial Release	

ABBREVIATIONS AND ACRONYMS

Acronyms	
Acronym	Description
EUT	Equipment Under Test
FCC	Federal Communications Commission
ISED	Innovation, Science and Economic Development Canada
RBW	Resolution bandwidth
RMS	Root mean square
VBW	Video bandwidth
V_{NOM}	Nominal supply voltage

REPORT INDEX

1 Equipment (Test Item) Under Test

Description	Electronic Vaping System		
Model	B-1603		
Additional Model(s)	None		
Brand Name(s)	IQOS / VEEV		
Serial Number(s)	IQOS (B-1603 (China Production)): TQUS-8J8-5DL-X6JL VEEV (B-1603 (Malaysia Production)): T5MX-V2K-V9M-HBDS		
Test Sample Id(s)	IQOS (B-1603 (China Production)): 34118 VEEV (B-1603 (Malaysia Production)): 34112 Conducted sample: 34116		
Hardware Version(s)	B-1603		
Software Version(s)	STF0830		
PMN	B-1603		
HVIN	B-1603		
FVIN	n/a		
HMN	n/a		
FCC ID	2AS66B-1603		
IC	22416-B1603		
Equipment type	End Product		
Radio type	Transceiver		
Assigned frequency bands	2400.0 MHz - 2483.5 MHz		
Radio technology	Bluetooth LE 4.2		
Bluetooth Specification	LE 1M PHY		Yes
	LE 2M PHY		No
	LE Coded PHY S=8 (125 kbit)		No
	LE Coded PHY S=2 (500 kbit)		No
	Stable Modulation Index - Transmitter		No
	Stable Modulation Index - Receiver		No
Modulation	GFSK		
Number of antenna ports	1		
Antenna	Type	Integrated antenna	
	Model	2450AT42E0100E	
	Manufacturer	Johanson Technology Inc	
	Gain	-2.0 dBi	
Supply Voltage	V_{NOM}	5.0 VDC	
Operating Temperature	T_{NOM}	25 °C	
AC/DC-Adaptor	Model	S21A22	
	Vendor	Kuantech	
	Input	100 - 240 VAC	
	Output	5.0 VDC	
Manufacturer	Philip Morris Products S.A. Quai Jeanrenaud 3 2000 Neuchâtel Switzerland		
Factory (ies)	Luxshare Electronic Technology(Kunshan)Co.,Ltd No.158 ,Jinchang Road, Jinxi Town Kunshan City, Jiangsu China Technocom Systems Sdn.Bhd PL01, Jalan Firma 1, Kawasan Perindustrian Tebaru 1, 81100 Johor Bahru, Johor Malaysia		
Production country	China, Malaysia		

1.3 Support Equipment

Product Type	Device	Manufacturer	Model	Comment
AE	Laptop	Lenovo	T440	
AE	Laptop power supply	Lenovo	ADLX45NDC3A	
Description:				
AE	Auxiliary Equipment			
SIM	Simulator			
CBL	Connecting Cable			
SFT	Software			
Comment:				

1.4 Test Modes

Mode	Description
GFSK	Mode = Transmit Modulation = GFSK Spreading = None Duty cycle = 63%
Receive	Mode = Receive
Comment:	

1.5 Test Frequencies

Designator	Mode	Channel	Frequency [MHz]
F1	Tx / Rx	0	2402
F2	Tx / Rx	19	2440
F3	Tx / Rx	39	2480

1.6 Sample emission level calculation

The following is a description of terms and a sample calculation, as appears in the radiated emissions data table. The numbers used in the calculation are for example only. There is no direct correlation to the specific data taken for the product described in this document:

Reading:

This is the reading obtained on the spectrum analyzer in dBµV. Any external preamplifiers used are taken into account through internal analyzer settings.

A.F.:

This is the antenna factor for the receiving antenna. It is a conversion factor, which converts electric fields strengths to voltages, which can be measured directly on the spectrum analyzer. It is treated as a loss in dB. Cable losses have been included with the A.F. to simplify the calculations. The antenna factor is used in calculations as follows:

Reading on Analyzer (dBµV) + A.F. (dB/m) = Net field strength (dBµV/m)

Net:

This is the net field strength measurement (as shown above).

Limit:

This is the FCC Class B radiated emission limit (in units of dBµV/m). The FCC limits are given in units of µV/m. The following formula is used to convert the units of µV/m to dBµV/m:

Limit (dBµV/m) = 20*log (µV/m)

Margin:

This is the margin of compliance below the FCC limit. The units are given in dB. A negative margin indicates the emission was below the limit. A positive margin indicates that the emission exceeds the limit.

Example only:

Reading + AF	= Net Reading	:	Net reading - FCC limit	= Margin
+21.5 dBµV + 26 dB/m	= 47.5 dBµV/m	:	47.5 dBµV/m - 57.0 dBµV/m	= -9.5 dB

2 Result Summary

FCC 47 CFR Part 15C, ISED RSS-247				
Product Standard Reference	**Requirement**	**Reference Method**	**Result**	**Remarks**
ISED RSS-Gen, Issue 5 (section 6.7)	Occupied Bandwidth	ANSI C63.10-2013	N/R	Informational only
FCC § 15.247(a)(2) ISED RSS-247, Issue 2 (section 5.2)	6 dB Bandwidth	ANSI C63.10-2013	PASS	
FCC § 15.247(b) ISED RSS-247, Issue 2 (section 5.4)	Maximum peak conducted power	ANSI C63.10-2013	PASS	
FCC § 15.247(e) ISED RSS-247, Issue 2 (section 5.2)	Power spectral density	ANSI C63.10-2013	PASS	
FCC § 15.207 ISED RSS-247, Issue 2 (section 3.1)	AC power line conducted emissions	ANSI C63.10-2013	PASS	
FCC § 15.247(d) ISED RSS-247, Issue 2 (section 5.5)	Band edge compliance	ANSI C63.10-2013	PASS	
FCC § 15.247(d) ISED RSS-247, Issue 2 (section 5.5)	Conducted spurious emissions	ANSI C63.10-2013	PASS	
FCC § 15.247(d) FCC § 15.209 ISED RSS-Gen, Issue 5 (section 6.13)	Transmitter radiated spurious emissions	ANSI C63.10-2013	PASS	
ISED RSS-247, Issue 2 (section 3.1)	Receiver radiated spurious emissions	ANSI C63.4-2014	PASS	
Comment:				

Possible Test Case Verdicts	
PASS	Test object does meet the requirements
FAIL	Test object does not meet the requirements
N/T	Required by standard but not tested
N/R	Not required by standard for the test object

3 Test Conditions and Results

3.1 Test Conditions and Results - Occupied bandwidth

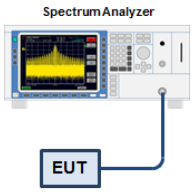
3.1.1 Information

Test Information	
Reference	ISED RSS-Gen, Issue 5 (section 6.7)
Measurement Method	ANSI C63.10 6.9.3
Measurement Uncertainty	± 1.26 %
Test Sample ID	34116
Operator	Florian Voigt
Date	2021-08-04

3.1.2 Limits

Limits
None (Informational only)

3.1.3 Setup

Test Setup


3.1.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyser	R&S	FSU 26	EF01709	2021-02	2022-02
Cable (diverse)	– (diverse)	– (diverse)	EF00779 CAABQ	2020-12	2021-12

3.1.5 Procedure

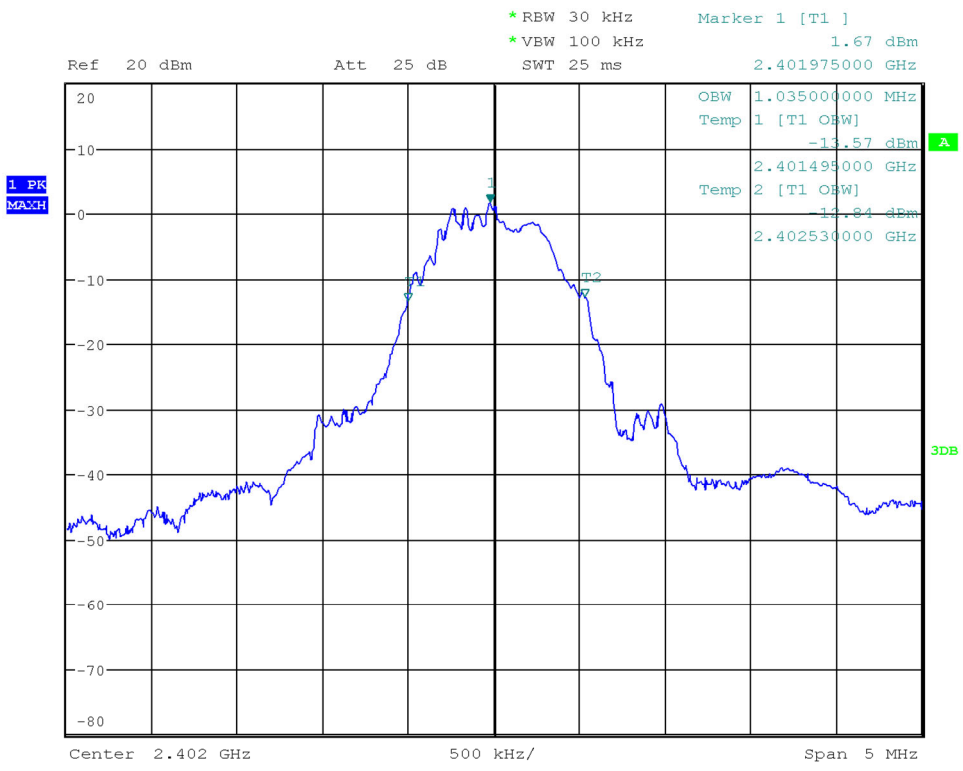
Test Procedure
1. EUT transmitter is activated in test mode under normal conditions 2. The spectrum analyzer is set to peak detection and maximum hold with a span twice the emission spectrum 3. The resolution bandwidth is set to the range of 1 % to 5 % of the occupied bandwidth 4. The occupied bandwidth is measured with the build-in analyzer function

3.1.6 Results

Test Results		
Mode	Frequency [MHz]	Bandwidth [MHz]
GFSK	2402	1.035
GFSK	2440	1.040
GFSK	2480	1.030

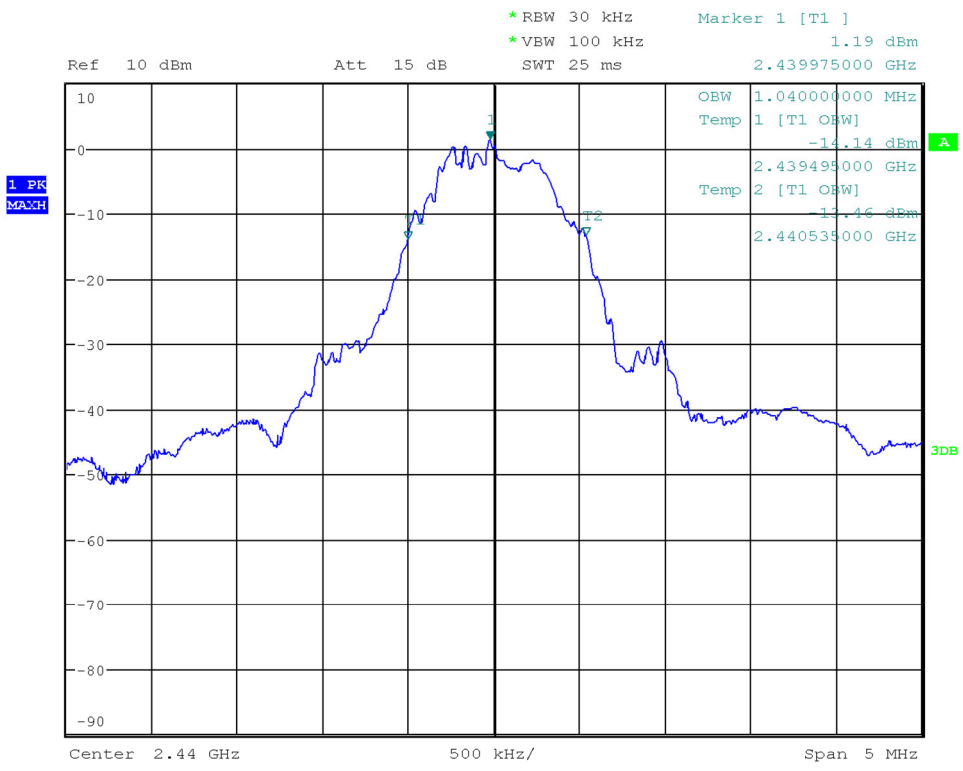
Occupied Bandwidth

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34116
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 6.9.3
Operational Mode:	GFSK, Channel: 0, 2402 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Florian Voigt
Test Site:	Eurofins Product Service GmbH
Test Date:	2021-08-04
Occupied Bandwidth [MHz]:	1.035



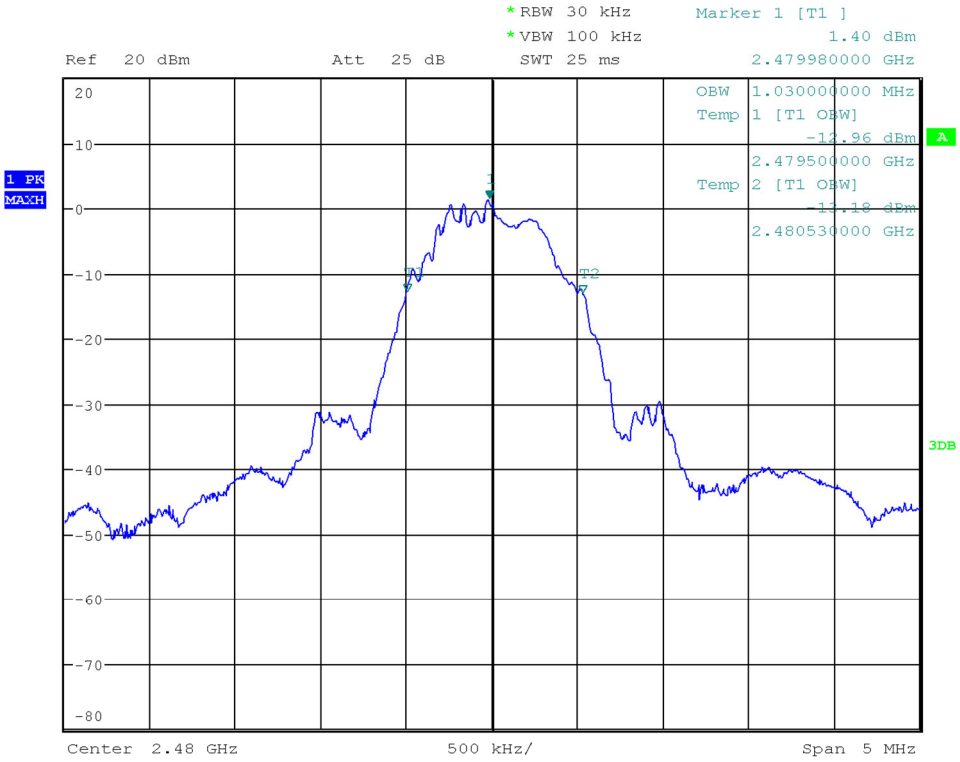
Occupied Bandwidth

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34116
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 6.9.3
Operational Mode:	GFSK, Channel: 19, 2440 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Florian Voigt
Test Site:	Eurofins Product Service GmbH
Test Date:	2021-08-04
Occupied Bandwidth [MHz]:	1.040



Occupied Bandwidth

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34116
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 6.9.3
Operational Mode:	GFSK, Channel: 39, 2480 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Florian Voigt
Test Site:	Eurofins Product Service GmbH
Test Date:	2021-08-04
Occupied Bandwidth [MHz]:	1.030



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3.2 Test Conditions and Results - 6 dB bandwidth

3.2.1 Information

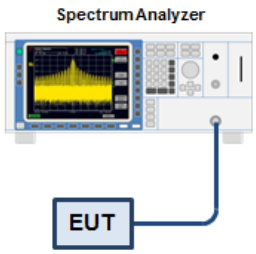
Test Information	
Reference	FCC § 15.247(a)(2); ISED RSS-247, Issue 2 (section 5.2)
Measurement Method	ANSI C63.10 11.8
Measurement Uncertainty	± 1.26 %
Operator	Florian Voigt
Date	2021-08-04

3.2.2 Limits

Limits
≥ 500kHz

3.2.3 Setup

Test Setup



3.2.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyser	R&S	FSU 26	EF01709	2021-02	2022-02
Cable (diverse)	– (diverse)	– (diverse)	EF00779 CAABQ	2020-12	2021-12

3.2.5 Procedure

Test Procedure

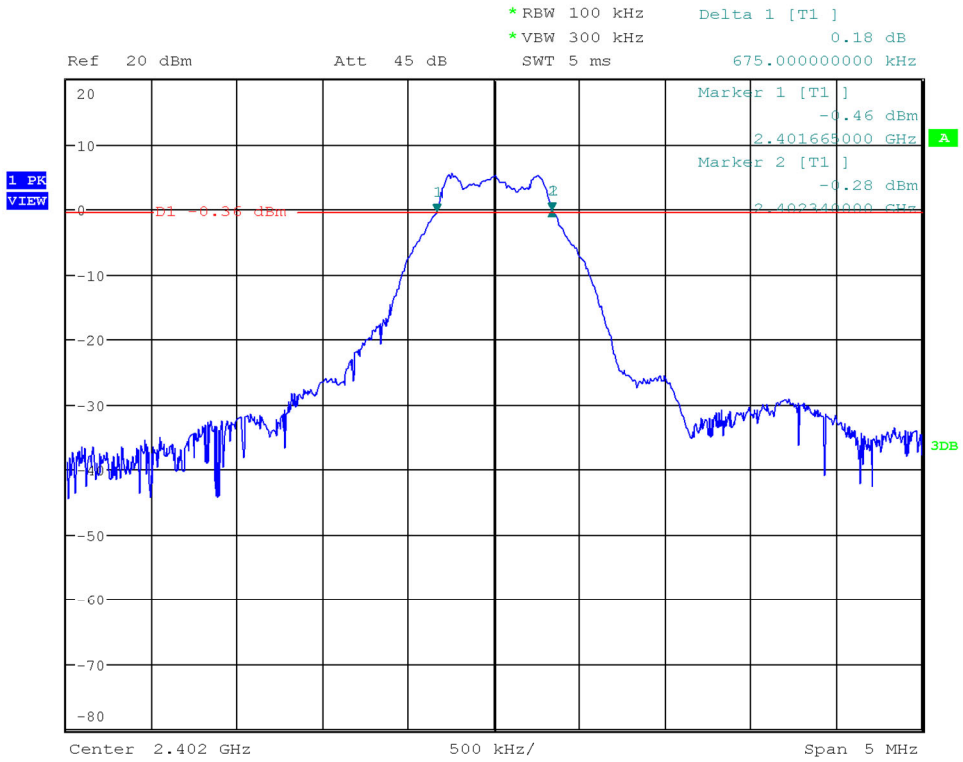
1. EUT set to test mode
2. Span set to at least twice the emission spectrum
3. Detector set to peak and max hold and RBW is set to 100 kHz
4. Envelope peak value of emission spectrum is selected
5. Marker on envelope of spectrum is set to level of -6 dB to the left of the peak
6. Marker on envelope of spectrum is set to level of -6 dB to the right of the peak
7. 6 dB Bandwidth is determined by marker frequency separation

3.2.6 Results

Test Results				
Mode	Frequency [MHz]	Bandwidth [kHz]	Limit [kHz]	Verdict
GFSK	2402	675	500	PASS
GFSK	2440	695	500	PASS
GFSK	2480	675	500	PASS

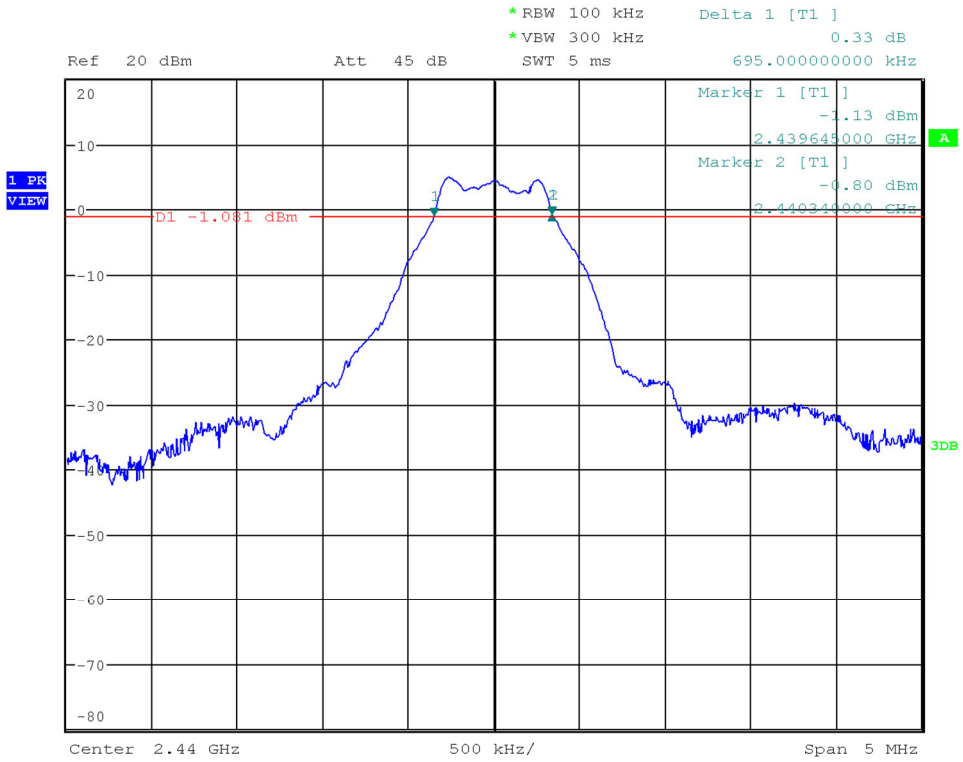
DTS (6 dB) Bandwidth

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34116
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.8.1 Option 1
Operational Mode:	GFSK, Channel: 0, 2402 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Florian Voigt
Test Site:	Eurofins Product Service GmbH
Test Date:	2021-08-04
Lower Frequency [MHz]:	2401.665
Upper Frequency [MHz]:	2402.340
6 dB Bandwidth [kHz]:	675



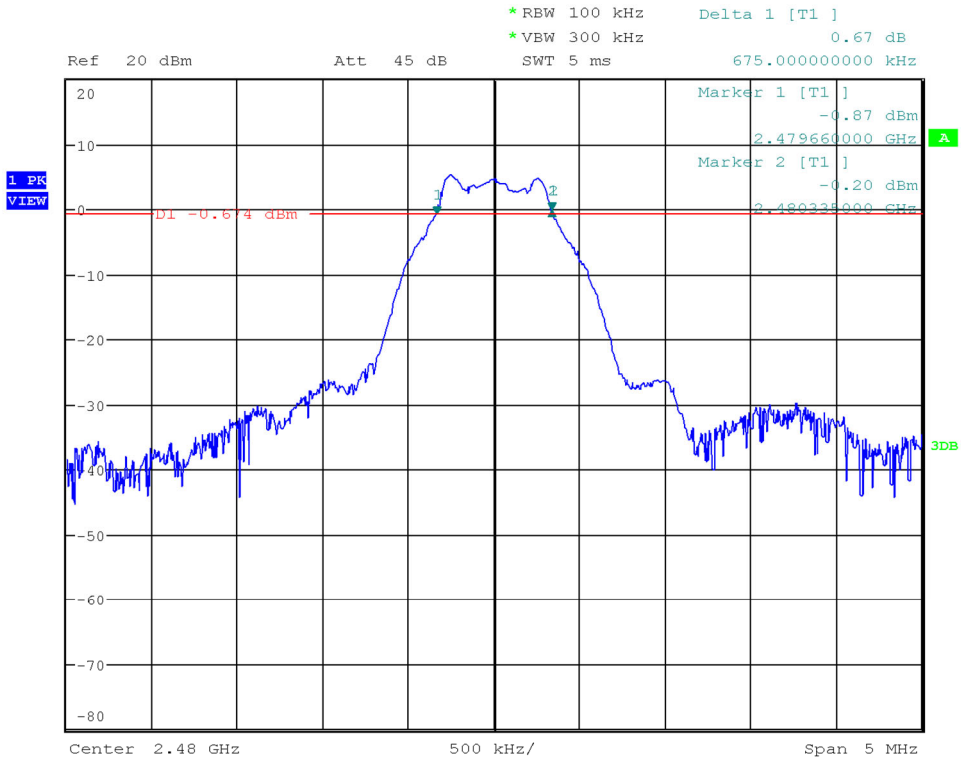
DTS (6 dB) Bandwidth

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34116
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.8.1 Option 1
Operational Mode:	GFSK, Channel: 19, 2440 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Florian Voigt
Test Site:	Eurofins Product Service GmbH
Test Date:	2021-08-04
Lower Frequency [MHz]:	2439.645
Upper Frequency [MHz]:	2440.340
6 dB Bandwidth [kHz]:	695



DTS (6 dB) Bandwidth

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34116
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.8.1 Option 1
Operational Mode:	GFSK, Channel: 39, 2480 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Florian Voigt
Test Site:	Eurofins Product Service GmbH
Test Date:	2021-08-04
Lower Frequency [MHz]:	2479.660
Upper Frequency [MHz]:	2480.335
6 dB Bandwidth [kHz]:	675



3.3 Test Conditions and Results - Maximum peak conducted output power

3.3.1 Information

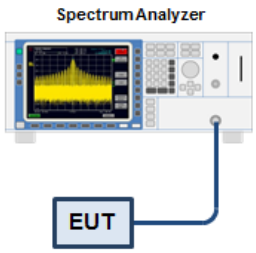
Test Information	
Reference	FCC § 15.247(b); ISED RSS-247, Issue 2 (section 5.4)
Measurement Method	ANSI C63.10 11.9.1
Measurement Uncertainty	± 2.86 dB
Operator	Florian Voigt
Date	2021-08-04

3.3.2 Limits

Limits
1 W (30 dBm)
The conducted output power limit specified above is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in the table, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.3 Setup

Test Setup



3.3.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyser	R&S	FSU 26	EF01709	2021-02	2022-02
Cable (diverse)	– (diverse)	– (diverse)	EF00779 CAABQ	2020-12	2021-12

3.3.5 Procedure

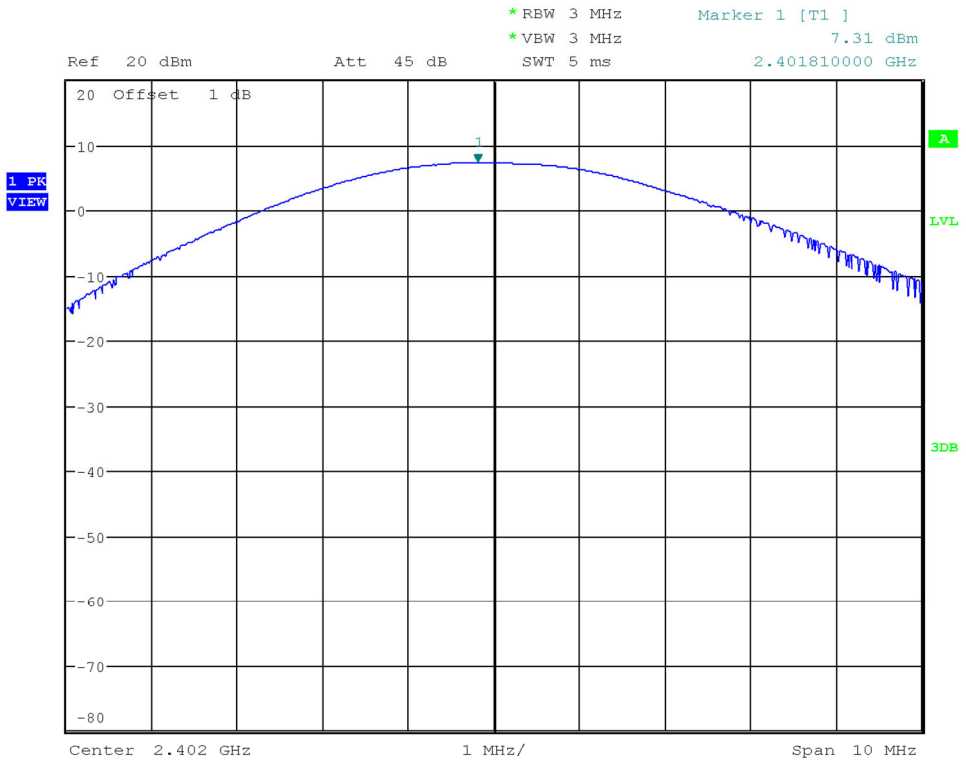
Test Procedure
1. EUT set to test mode (Communication tester is used if needed) 2. Analyzer resolution bandwidth is set ≥ DTS bandwidth 3. Detector set to peak and max hold 4. Sweep time is set to auto 5. After the trace has stabilized a marker is set to peak of envelope

3.3.6 Results

Test Results				
Channel [MHz]	Power [dBm]	Power [W]	Limit [W]	Verdict
2402	7.314	0.0054	1.0	PASS
2440	6.700	0.0047	1.0	PASS
2480	6.962	0.0050	1.0	PASS

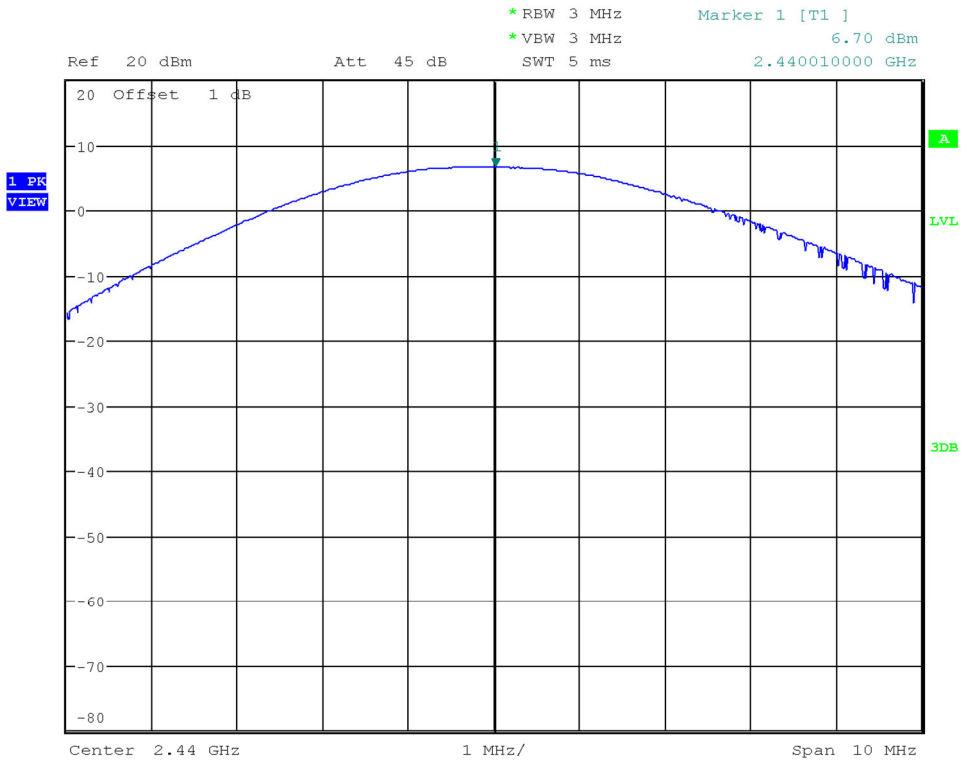
Peak Conducted Output Power

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34116
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.9.1.1
Operational Mode:	GFSK, Channel: 0, 2402 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Florian Voigt
Test Site:	Eurofins Product Service GmbH
Test Date:	2021-08-04
Peak Power [dBm]:	7.314
Peak Power [W]:	0.0054



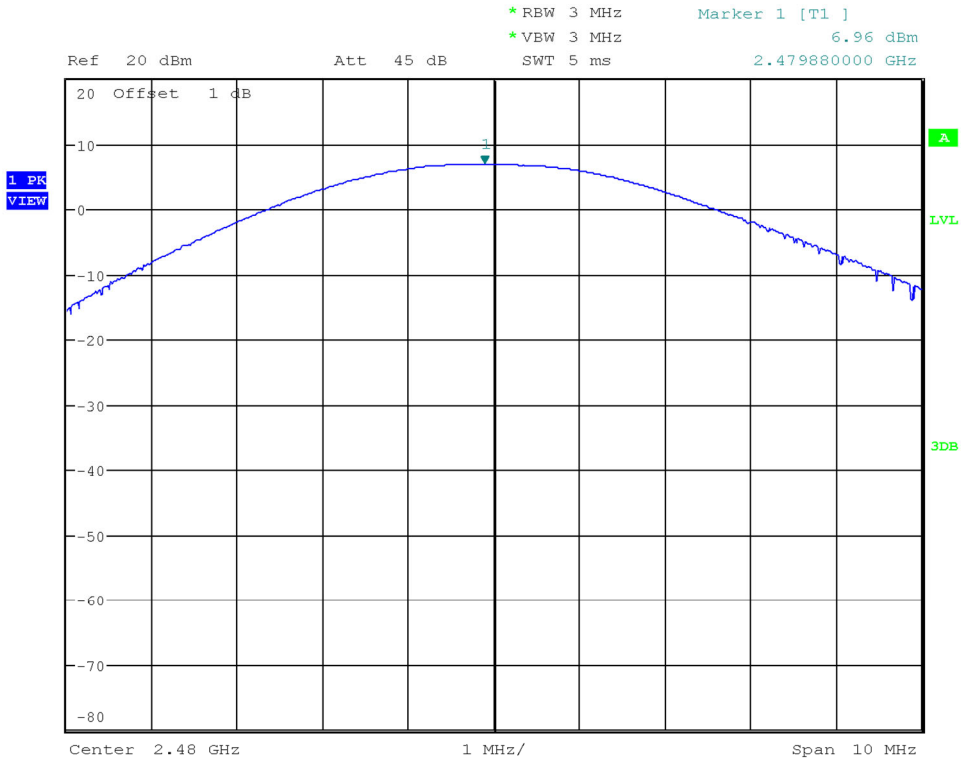
Peak Conducted Output Power

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34116
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.9.1.1
Operational Mode:	GFSK, Channel: 19, 2440 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Florian Voigt
Test Site:	Eurofins Product Service GmbH
Test Date:	2021-08-04
Peak Power [dBm]:	6.700
Peak Power [W]:	0.0047



Peak Conducted Output Power

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34116
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.9.1.1
Operational Mode:	GFSK, Channel: 39, 2480 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Florian Voigt
Test Site:	Eurofins Product Service GmbH
Test Date:	2021-08-04
Peak Power [dBm]:	6.962
Peak Power [W]:	0.0050



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3.4 Test Conditions and Results - Power spectral density

3.4.1 Information

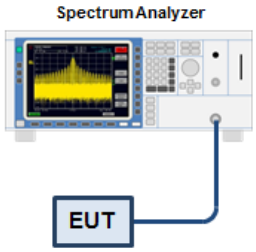
Test Information	
Reference	FCC § 15.247(e); ISED RSS-247, Issue 2 (section 5.2)
Measurement Method	ANSI C63.10 11.10.2, 14.3.2
Measurement Uncertainty	± 2.86 dB
Operator	Florian Voigt
Date	2021-08-04

3.4.2 Limits

Limits
8 dBm / 3 kHz

3.4.3 Setup

Test Setup



3.4.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyser	R&S	FSU 26	EF01709	2021-02	2022-02
Cable (diverse)	– (diverse)	– (diverse)	EF00779 CAABQ	2020-12	2021-12

3.4.5 Procedure

Test Procedure

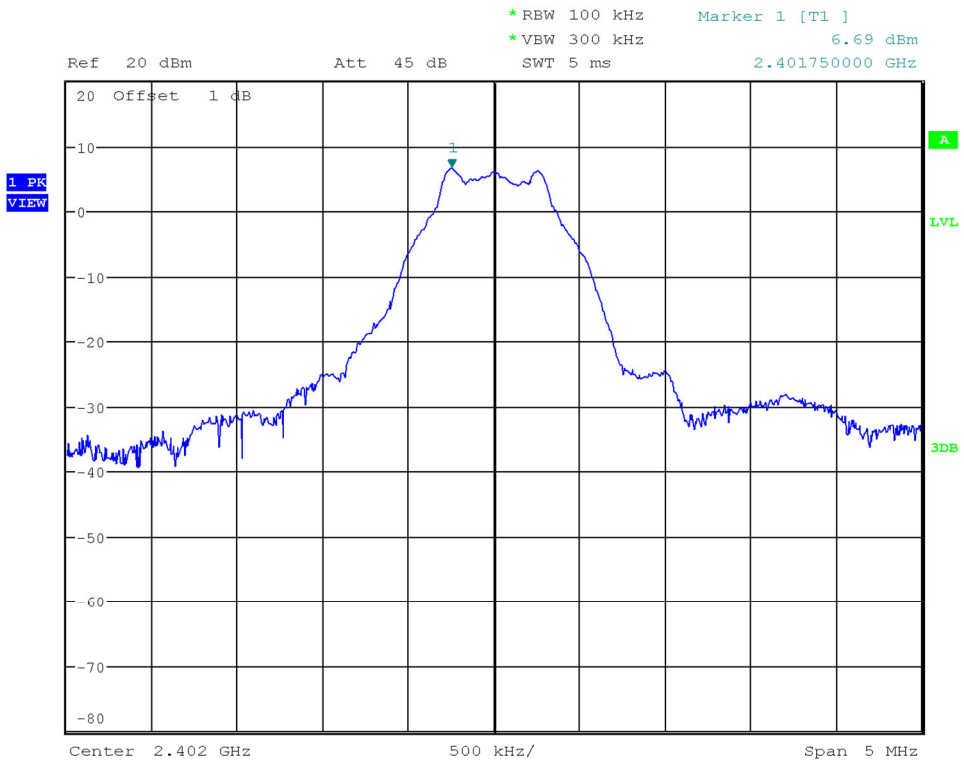
1. EUT set to test mode
2. The analyzer is set to DTS channel center frequency with a span of 1.5 times the DTS bandwidth
3. The RBW is set to 100 kHz with VBW ≥ RBW and the detector is set to peak with max hold
4. After the trace has stabilized a marker is set to the envelope maximum
5. If the power spectral density is above the limit the RBW is reduced (not lower than 3 kHz) and the measurement is repeated
6. If the EUT has more than one transmit chain the procedure is repeated for each transmit chain

3.4.6 Results

Test Results			
Channel [MHz]	PSD [dBm/RBW]	Limit [dBm/3kHz]	Verdict
2402	6.692	8.0	PASS
2440	5.961	8.0	PASS
2480	6.256	8.0	PASS
RBW = 100 kHz			

Peak Power Spectral Density

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34116
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.10.2
Operational Mode:	GFSK, Channel: 0, 2402 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Florian Voigt
Test Site:	Eurofins Product Service GmbH
Test Date:	2021-08-04
Peak Frequency [MHz]:	2401.750
Spectral Density [dBm/RBW]:	6.692
Resolution Bandwidth [kHz]:	100 kHz



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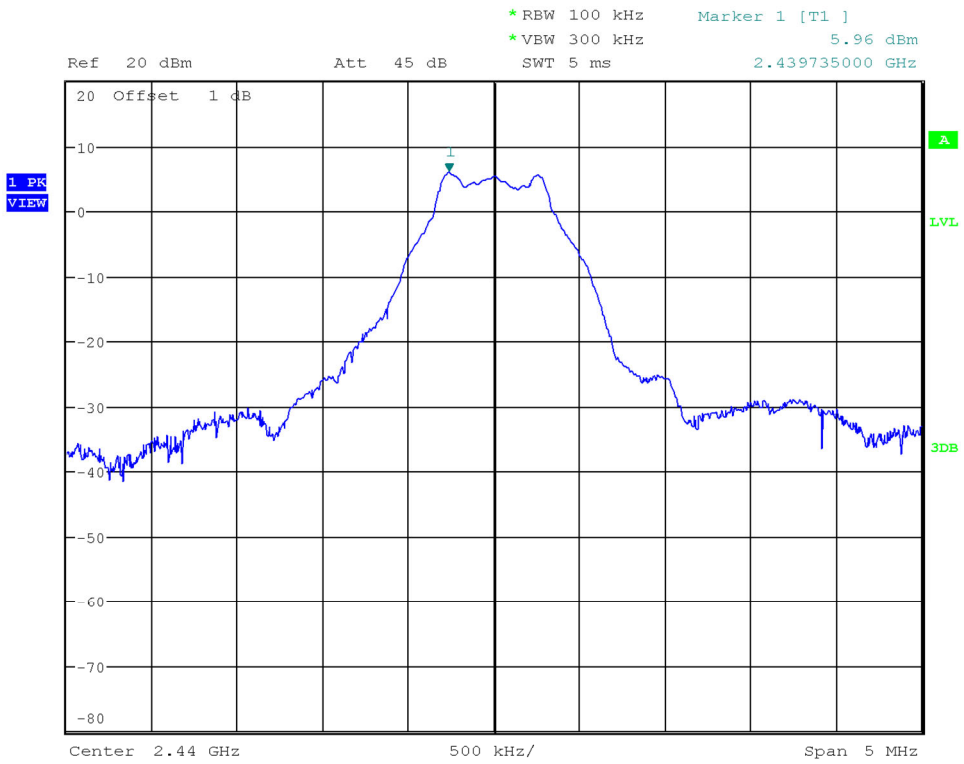
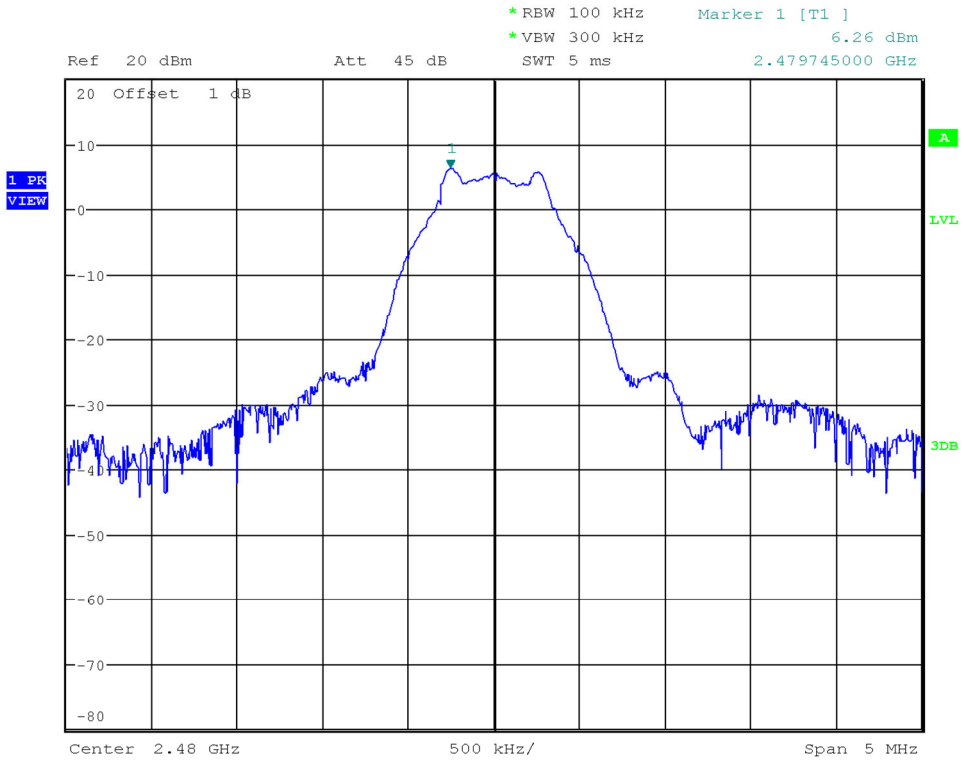
Peak Power Spectral Density

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34116
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.10.2
Operational Mode:	GFSK, Channel: 19, 2440 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Florian Voigt
Test Site:	Eurofins Product Service GmbH
Test Date:	2021-08-04
Peak Frequency [MHz]:	2439.735
Spectral Density [dBm/RBW]:	5.961
Resolution Bandwidth [kHz]:	100 kHz



Peak Power Spectral Density

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34116
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.10.2
Operational Mode:	GFSK, Channel: 39, 2480 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Florian Voigt
Test Site:	Eurofins Product Service GmbH
Test Date:	2021-08-04
Peak Frequency [MHz]:	2479.745
Spectral Density [dBm/RBW]:	6.256
Resolution Bandwidth [kHz]:	100 kHz



3.5 Test Conditions and Results - AC powerline conducted emissions with model B-1603

3.5.1 Information

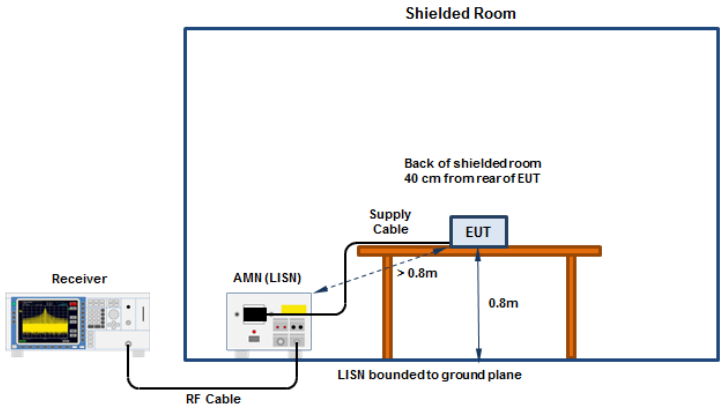
Test Information	
Reference	FCC § 15.207; ISED RSS-247, Issue 2 (section 3.1)
Measurement Method	ANSI C63.10 6.2
Measurement Uncertainty	± 3.82 dB
Operator	Florian Voigt
Date	2021-08-06

3.5.2 Limits

Limits		
Frequency [MHz]	Quasi-Peak [dBµV]	Average [dBµV]
0.15 - 0.5	66 - 56*	56 - 46*
0.5 - 5	56	46
5 - 30	60	50
* Limit decreases linearly with the logarithm of the frequency		

3.5.3 Setup

Test Setup



3.5.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2020.1.8

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
EMI Test Receiver	R&S	ESR7	EF00943	2021-08	2022-08
Pulse Limiter	R&S	ESH3-Z2	EF01222	2021-07	2022-07
LISN	Schwarzbeck	NSLK 8127 RC	EF01592	2021-07	2022-07

Conducted emissions at the mains power port according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Test Date:	2021-08-06
Operating Conditions:	ambient temperature: 22 °Celsius power input: 120V/60Hz converted to 5 VDC
LISN:	Schwarzbeck NSLK 8127 RC N
Operational Mode	BLE, TX, 2440MHz, 2-GFSK, 1MBit/s
Applied to Port:	Mains
Note 1:	

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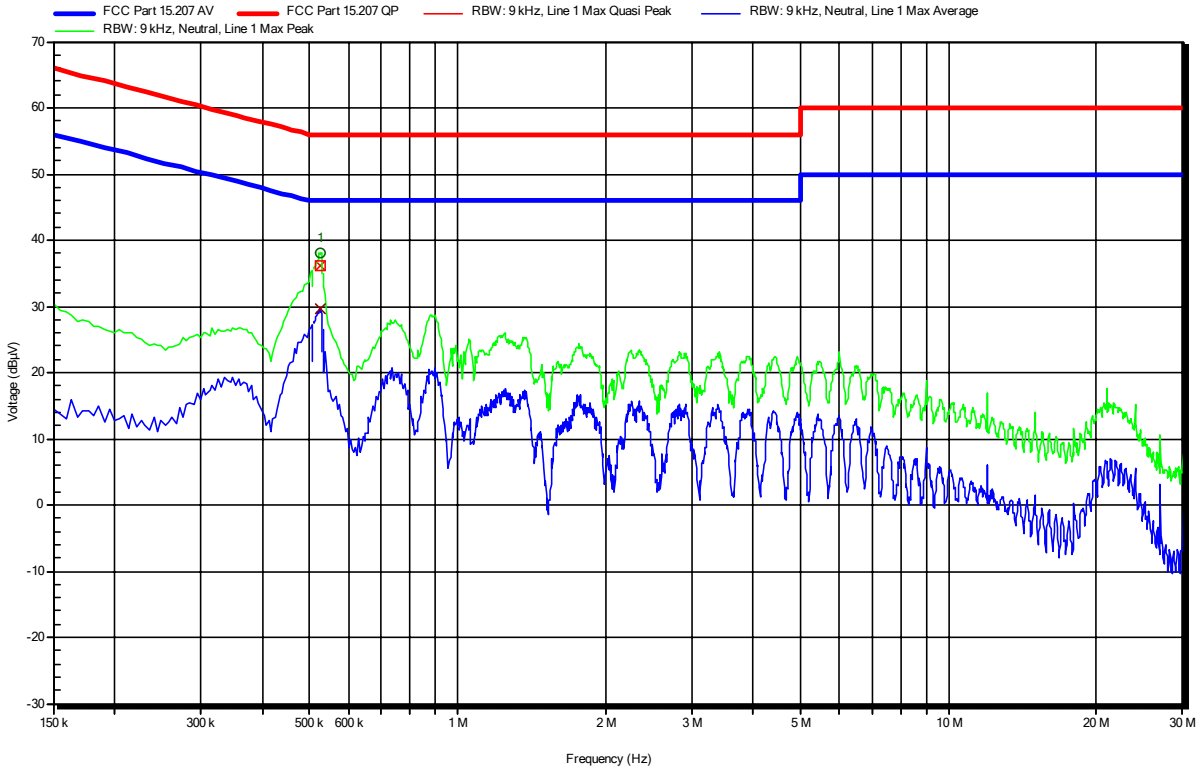
RadiMation



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	LISN
1	525.3 kHz	36.04 dBµV	56 dBµV	-19.96 dB	Pass	Line 1

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	LISN
1	525.3 kHz	29.56 dBµV	46 dBµV	-16.44 dB	Pass	Line 1

3.6 Test Conditions and Results - AC powerline conducted emissions with model B-1603 (Malaysia Production)

3.6.1 Information

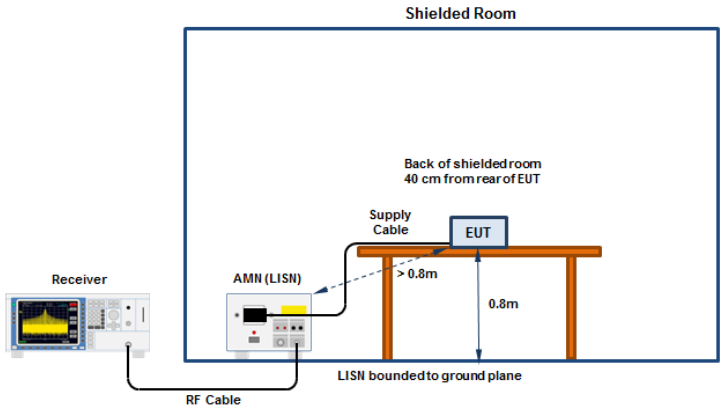
Test Information	
Reference	FCC § 15.207; ISED RSS-247, Issue 2 (section 3.1)
Measurement Method	ANSI C63.10 6.2
Measurement Uncertainty	± 3.82 dB
Operator	Florian Voigt
Date	2021-08-06

3.6.2 Limits

Limits		
Frequency [MHz]	Quasi-Peak [dBµV]	Average [dBµV]
0.15 - 0.5	66 - 56*	56 - 46*
0.5 - 5	56	46
5 - 30	60	50
* Limit decreases linearly with the logarithm of the frequency		

3.6.3 Setup

Test Setup



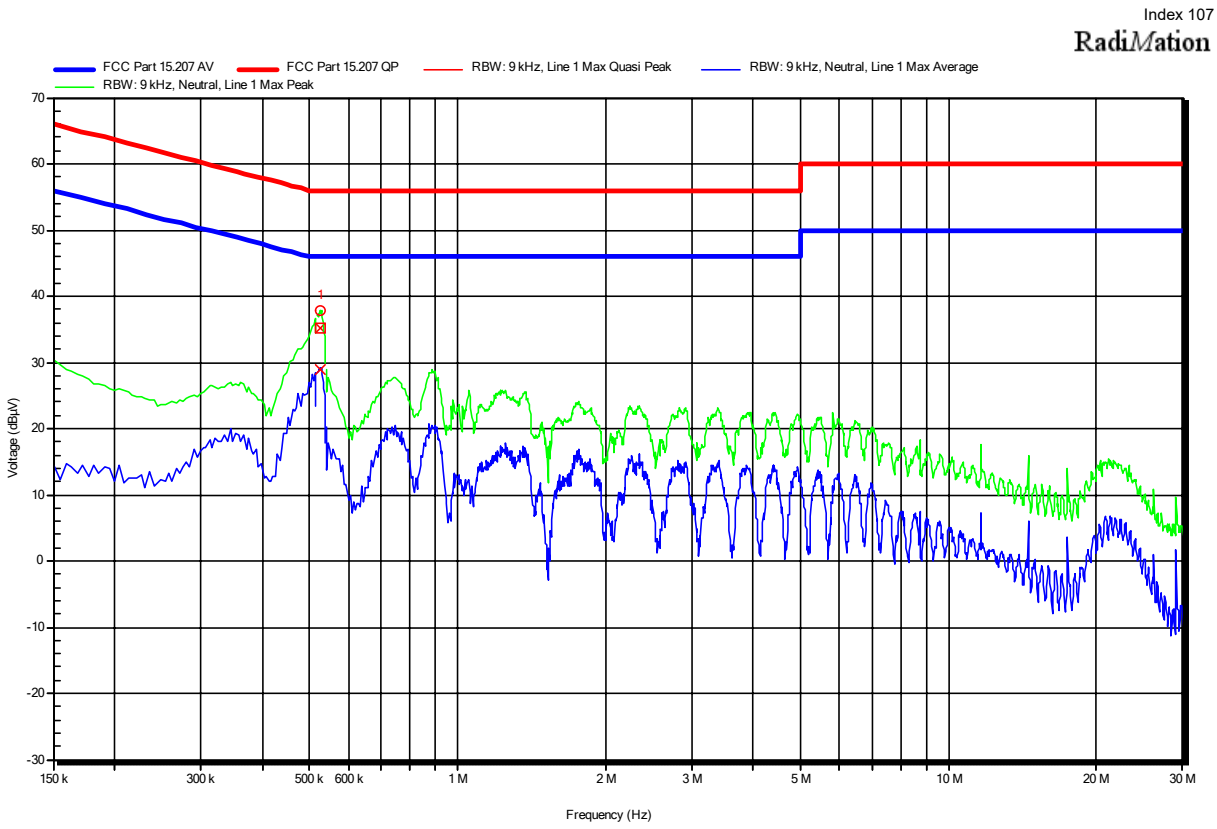
3.6.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2020.1.8

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
EMI Test Receiver	R&S	ESR7	EF00943	2021-08	2022-08
Pulse Limiter	R&S	ESH3-Z2	EF01222	2021-07	2022-07
LISN	Schwarzbeck	NSLK 8127 RC	EF01592	2021-07	2022-07

Conducted emissions at the mains power port according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603 (MALAYSIA PRODUCTION)
Test Sample ID:	34112
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Test Date:	2021-08-06
Operating Conditions:	ambient temperature: 22 °Celsius power input: 120V/60Hz converted to 5 VDC
LISN:	Schwarzbeck NSLK 8127 RC N
Operational Mode	BLE, TX, 2440MHz, 2-GFSK, 1MBit/s
Applied to Port:	Mains
Note 1:	



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	LISN
1	524.85 kHz	35.22 dBµV	56 dBµV	-20.78 dB	Pass	Line 1

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	LISN
1	524.85 kHz	28.91 dBµV	46 dBµV	-17.09 dB	Pass	Line 1

3.7 Test Conditions and Results - Band-edge compliance

3.7.1 Information

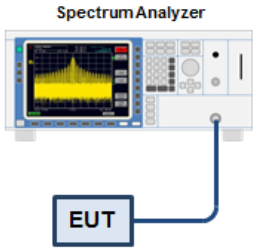
Test Information	
Reference	FCC § 15.247(d); ISED RSS-247, Issue 2 (section 5.5)
Measurement Uncertainty	± 3.64 dB
Measurement Method	ANSI C63.10 11.13
Operator	Florian Voigt
Date	2021-08-04

3.7.2 Limits

Limits	
Power Measurement	Out-of-band attenuation [dB]
Peak	20
RMS	30

3.7.3 Setup

Test Setup



3.7.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyser	R&S	FSU 26	EF01709	2021-02	2022-02
Cable (diverse)	– (diverse)	– (diverse)	EF00779 CAABQ	2020-12	2021-12

3.7.5 Procedure

Test Procedure

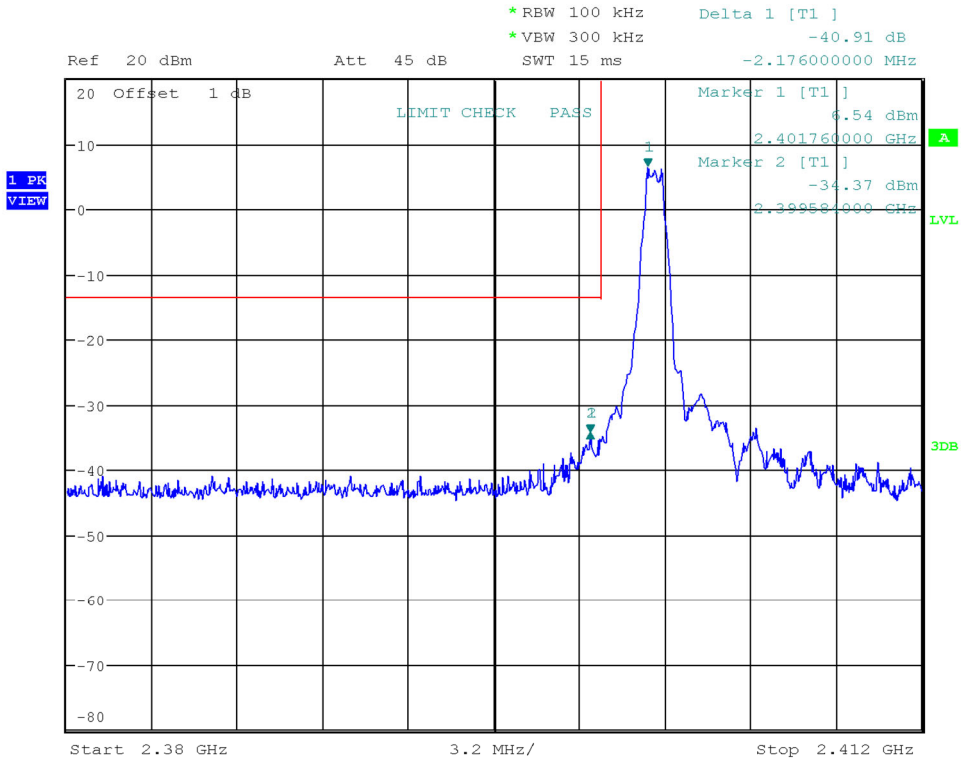
1. EUT set to test mode (Communication tester is used if needed)
2. Span set around lower band edge and detector is set to peak and max hold
3. Resolution bandwidth is set to 100 kHz
4. Markers are set to peak emission levels within frequency band and outside frequency band
5. Band edge attenuation is determined from level difference

3.7.6 Results

Test Results				
Mode	Channel [MHz]	Out-of-band Attenuation [dB]	Limit [dB]	Verdict
GFSK	2402	-40.91	-20	PASS
GFSK	2480	-40.74	-20	PASS

Emissions in nonrestricted frequency bands at the Band-edge

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34116
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 7.8.6, 6.10.4
Operating Conditions:	Tnom/Vnom
Operator:	Florian Voigt
Test Site:	Eurofins Product Service GmbH
Test Date:	2021-08-04
Band-edge	Lower
In-band Frequency [MHz]:	2401.76
Max. in-band Level [dBm/100 kHz]:	6.536
Out-of-band Frequency [MHz]:	2399.584
Max. out-of-band Level [dBm/100 kHz]:	-34.369
Attenuation [dB]:	-40.91



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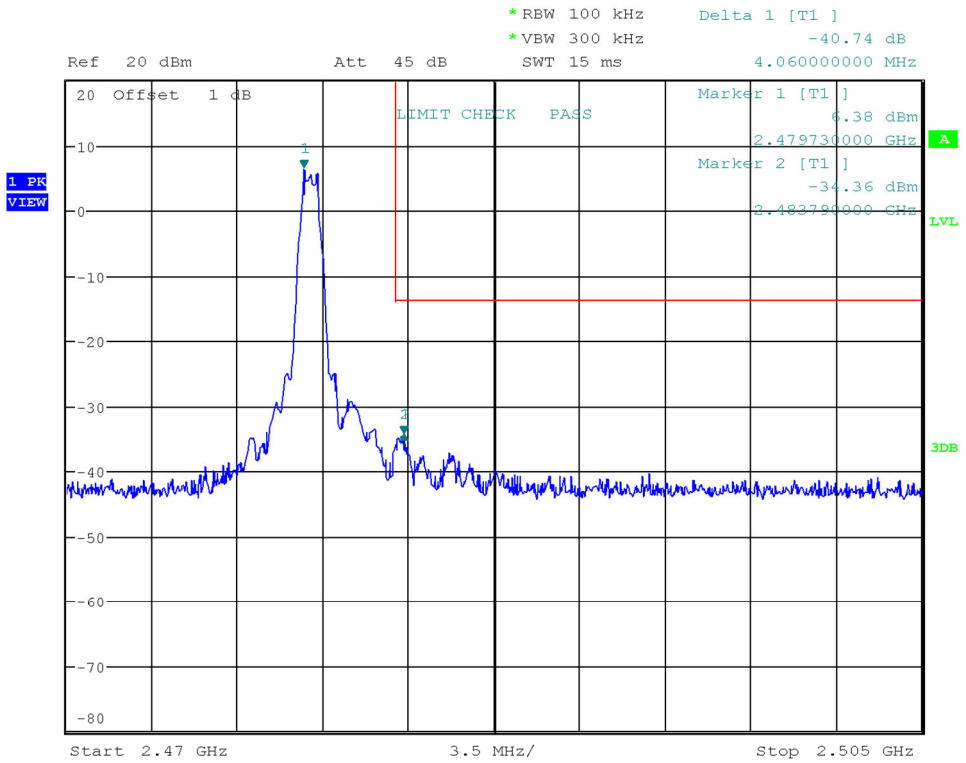
Emissions in nonrestricted frequency bands at the Band-edge

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34116
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 7.8.6, 6.10.4
Operating Conditions:	Tnom/Vnom
Operator:	Florian Voigt
Test Site:	Eurofins Product Service GmbH
Test Date:	2021-08-04
Band-edge	Upper
In-band Frequency [MHz]:	2479.73
Max. in-band Level [dBm/100 kHz]:	6.378
Out-of-band Frequency [MHz]:	2483.79
Max. out-of-band Level [dBm/100 kHz]:	-34.364
Attenuation [dB]:	-40.74



3.8 Test Conditions and Results - Conducted spurious emissions

3.8.1 Information

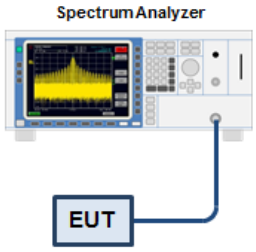
Test Information	
Reference	FCC § 15.247(d); ISED RSS-247, Issue 2 (section 5.5)
Measurement Uncertainty	± 4.25 dB
Measurement Method	ANSI C63.10 11.11
Operator	Florian Voigt
Date	2021-08-04

3.8.2 Limits

Limits	
Power Measurement	Out-of-band attenuation [dB]
Peak	20
RMS	30

3.8.3 Setup

Test Setup



3.8.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyser	R&S	FSU 26	EF01709	2021-02	2022-02
Cable (diverse)	– (diverse)	– (diverse)	EF00779 CAABQ	2020-12	2021-12

3.8.5 Procedure

Test Procedure

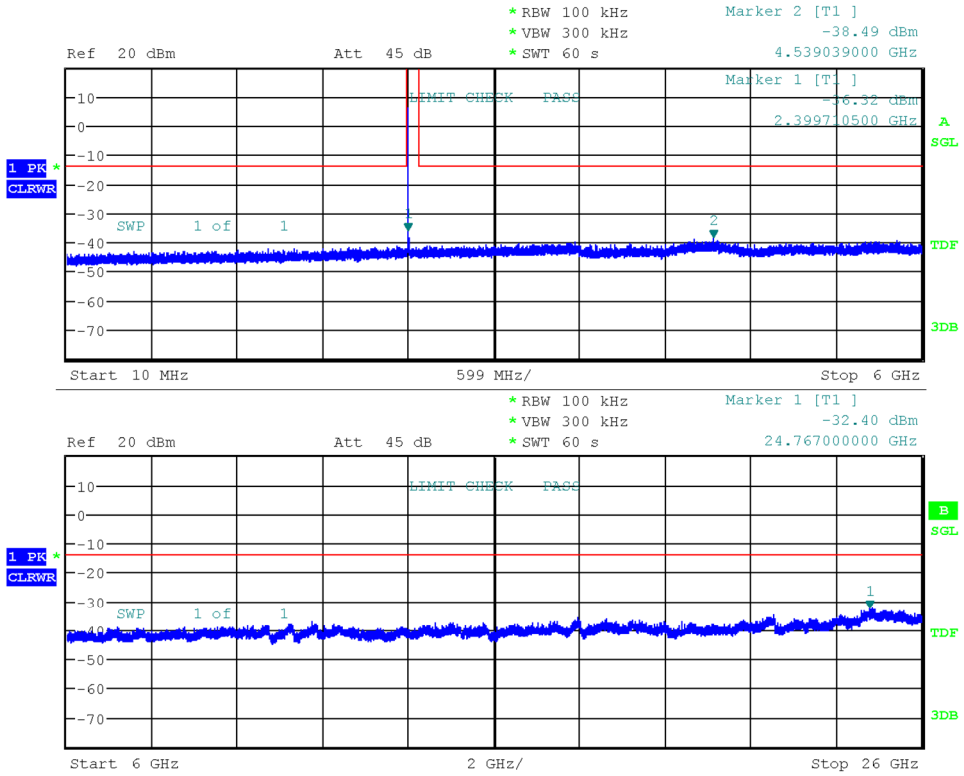
1. EUT set to test mode (Communication tester is used if needed)
2. Span set around lower band edge and detector is set to peak and max hold
3. Resolution bandwidth is set to 100 kHz
4. Markers are set to peak emission levels outside frequency band

3.8.6 Results

Test Results		
Mode	Channel [MHz]	Verdict
GFSK	2402	PASS
GFSK	2440	PASS
GFSK	2480	PASS

Conducted Spurious Emissions

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34116
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.11
Operational Mode:	GFSK, Channel: 0, 2402 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Florian Voigt
Test Site:	Eurofins Product Service GmbH
Test Date:	2021-08-04
Max. in-band Frequency [MHz]:	2401.8
Max. in-band Level [dBm/100 kHz]:	6.2
Out-of-band Limit [dBm/100 kHz]:	-13.8



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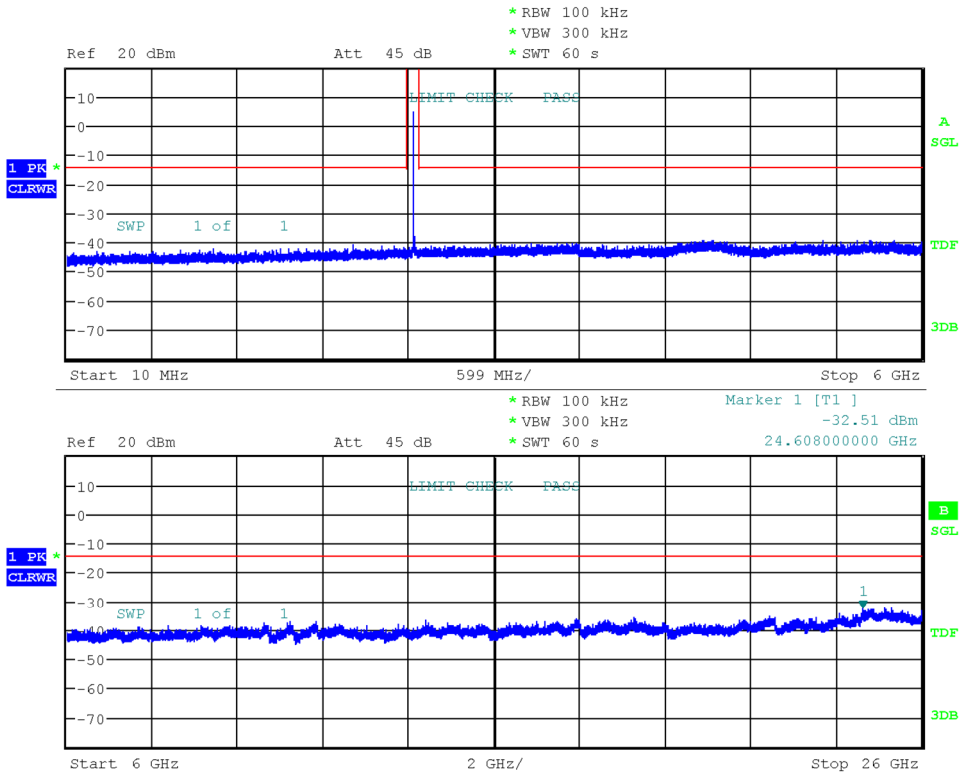
Conducted Spurious Emissions

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34116
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.11
Operational Mode:	GFSK, Channel: 19, 2440 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Florian Voigt
Test Site:	Eurofins Product Service GmbH
Test Date:	2021-08-04
Max. in-band Frequency [MHz]:	2439.7
Max. in-band Level [dBm/100 kHz]:	5.5
Out-of-band Limit [dBm/100 kHz]:	-14.5



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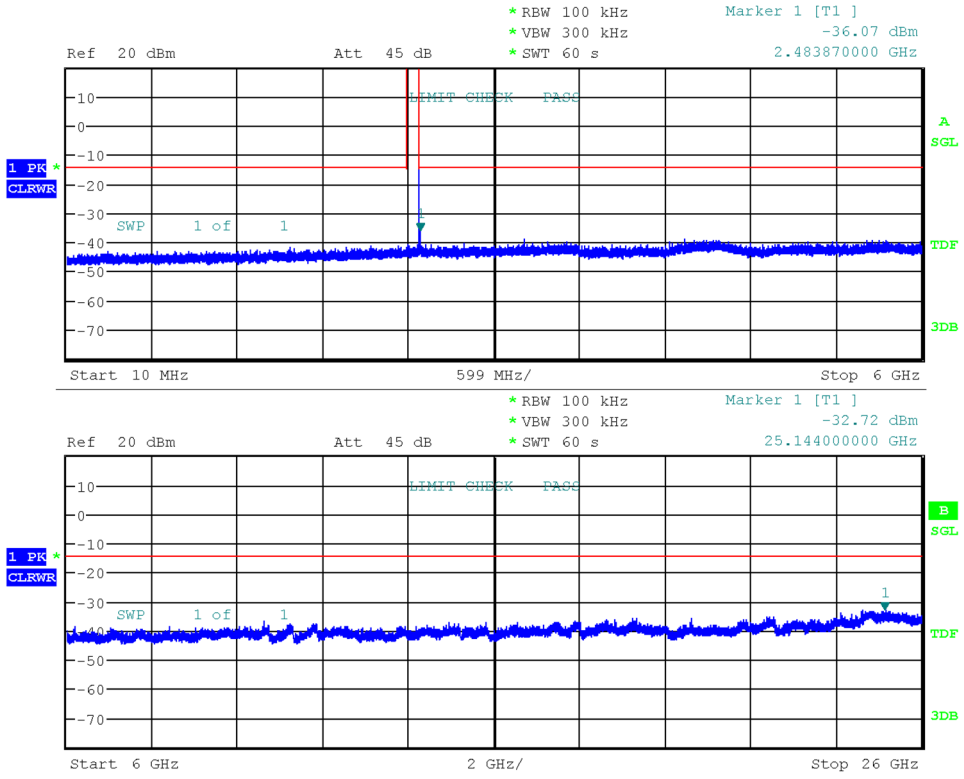
Conducted Spurious Emissions

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34116
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.11
Operational Mode:	GFSK, Channel: 39, 2480 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Florian Voigt
Test Site:	Eurofins Product Service GmbH
Test Date:	2021-08-04
Max. in-band Frequency [MHz]:	2479.8
Max. in-band Level [dBm/100 kHz]:	5.9
Out-of-band Limit [dBm/100 kHz]:	-14.1



3.9 Test Conditions and Results - Transmitter radiated emissions with model B-1603

3.9.1 Information

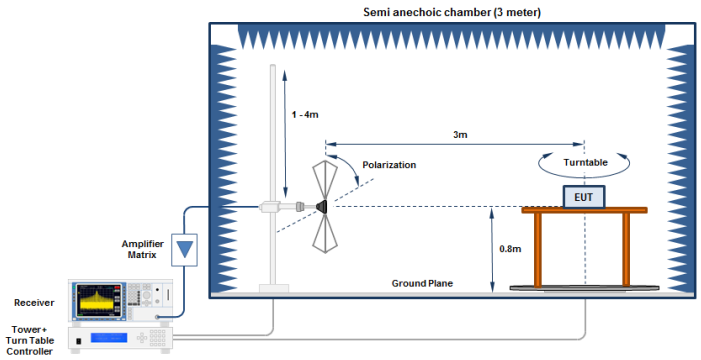
Test Information	
Reference	FCC § 15.247(d); FCC § 15.209; ISED RSS-Gen, Issue 5 (section 6.13)
Measurement Uncertainty	± 5.95 dB
Measurement Method	ANSI C63.10 6.4, 6.5, 6.6, 11.12
Operator	Florian Voigt
Date	2021-08-03 - 2021-08-06
Comment: Measurements above 1 GHz are premeasurements when level of detected emissions (Average/Peak) is 10dB or more below the corresponding limit lines. In case the level of detected emissions have less than 10dB margin to the corresponding limit lines, the EUT is rotated in 30-degree steps between 0 to 150 degree. Only the worst case result is included in this report.	

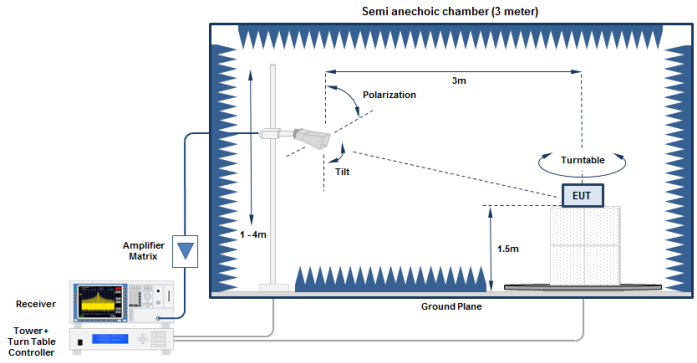
3.9.2 Limits

Limits			
Frequency range [MHz]	Detector	Field strength [µV/m]	Measurement distance [m]
0.009 - 0.09	Average	2400/F[kHz]	300
0.09 - 0.110	Quasi-Peak	2400/F[kHz]	300
0.110 - 0.490	Average	2400/F[kHz]	300
0.490 - 1.705	Quasi-Peak	24000/F[kHz]	30
1.705 - 30.0	Quasi-Peak	30	30
30 - 88	Quasi-Peak	100	3
88 - 216	Quasi-Peak	150	3
216 - 960	Quasi-Peak	200	3
960 - 1000	Quasi-Peak	500	3
>1000	Average	500	3

3.9.3 Setup

Test Setup 30 MHz - 1000 MHz



Test Setup > 1 GHz


3.9.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2020.1.8

Test Equipment 30 MHz - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2021-02	2024-02
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2021-07	2022-07
Antenna	R&S	HK 116	EF00030	2021-05	2024-05
Antenna	R&S	HL 223	EF00187	2019-05	2022-05

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic chamber	Frankonia	AC 2	EF01616	2021-05	2022-05
Horn antenna	Schwarzbeck	BBHA 9120B	EF01678	2021-03	2022-03
Horn Antenna	Schwarzbeck	HWRD 650	EF01679	2021-03	2022-03
Horn Antenna	Amplifier Research	AT4560	EF00302	2021-06	2023-06

3.9.5 Procedure

Test Procedure 30 MHz - 1000 MHz
1. EUT is placed on a non conducting support at the center of a turn table 0.8 m above the ground 2. EUT set to test mode 3. The receiver is set to peak detection with max hold 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m 5. All significant emissions are measured again using the corresponding final detector

Test Procedure > 1 GHz
1. EUT is placed on a non conducting support at the center of a turn table 1.5 m above the ground 2. EUT set to test mode 3. The receiver is set to peak detection with max hold 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m 5. All significant emissions are measured again using the corresponding final detector

3.9.6 Results

Test Results						
Channel [MHz]	Emission [MHz]	Level [dBµV/m]	Det.	Pol.	Limit [dBµV/m]	Margin [dB]
2402	149.9547	24.00	qpk	ver	43.50	-19.52
2402	149.9607	30.40	qpk	hor	43.50	-13.14
2402	1200.2	37.32	pk	ver	74.00	-36.68
2402	1200.2	31.68	avg	ver	54.00	-22.32
2402	1440.2	37.33	pk	ver	74.00	-36.67
2402	1440.2	32.43	avg	ver	54.00	-21.57
2402	2385.9	33.56	pk	hor	74.00	-40.44
2402	2385.9	24.25	avg	hor	54.00	-29.75
2402	2386	35.08	pk	ver	74.00	-38.92
2402	2386	22.38	avg	ver	54.00	-31.62
2402	4803.8	46.40	pk	hor	74.00	-27.60
2402	4803.8	41.66	avg	hor	54.00	-12.34
2402	4804.1	46.46	pk	ver	74.00	-27.54
2402	4804.1	41.76	avg	ver	54.00	-12.24
2402	12009	44.31	pk	hor	74.00	-29.69
2402	12009	37.04	avg	hor	54.00	-16.96
2402	12009	49.13	pk	ver	74.00	-24.87
2402	12009	42.96	avg	ver	54.00	-11.04
2402	19214	47.40	pk	hor	74.00	-26.60
2402	19214	41.89	avg	hor	54.00	-12.11
2402	19214	49.40	pk	ver	74.00	-24.60
2402	19214	43.11	avg	ver	54.00	-10.89
2440	149.9067	28.00	qpk	hor	43.50	-15.48
2440	4879.6	41.99	pk	hor	74.00	-32.01
2440	4879.6	37.09	avg	hor	54.00	-16.91
2440	4879.8	47.82	pk	ver	74.00	-26.18
2440	4879.8	43.60	avg	ver	54.00	-10.40
2440	7319.3	41.49	pk	hor	74.00	-32.51
2440	7319.3	35.40	avg	hor	54.00	-18.60
2440	7319.3	44.36	pk	ver	74.00	-29.64
2440	7319.3	36.86	avg	ver	54.00	-17.14
2440	12199	43.76	pk	hor	74.00	-30.24
2440	12199	37.13	avg	hor	54.00	-16.87
2440	12199	45.10	pk	ver	74.00	-28.90
2440	12199	38.58	avg	ver	54.00	-15.42
2440	19518	48.37	pk	hor	74.00	-25.63
2440	19518	42.38	avg	hor	54.00	-11.62
2440	19522	47.81	pk	ver	74.00	-26.19
2440	19522	40.15	avg	ver	54.00	-13.85

2480	150.0207	28.50	qpk	hor	43.50	-15.03
2480	1200	38.00	pk	ver	74.00	-36.00
2480	1200	32.58	avg	ver	54.00	-21.42
2480	1440	37.45	pk	ver	74.00	-36.55
2480	1440	32.74	avg	ver	54.00	-21.26
2480	2483.7	58.56	pk	hor	74.00	-15.44
2480	2483.7	29.15	avg	hor	54.00	-24.85
2480	2483.7	54.41	pk	ver	74.00	-19.59
2480	2483.7	25.83	avg	ver	54.00	-28.17
2480	4960	44.97	pk	ver	74.00	-29.03
2480	4960	38.92	avg	ver	54.00	-15.08
2480	7439	49.04	pk	hor	74.00	-24.96
2480	7439	42.31	avg	hor	54.00	-11.69
2480	7439	48.86	pk	ver	74.00	-25.14
2480	7439	43.13	avg	ver	54.00	-10.87
2480	12399	45.17	pk	hor	74.00	-28.83
2480	12399	36.94	avg	hor	54.00	-17.06
2480	12399	41.62	pk	ver	74.00	-32.38
2480	12399	35.01	avg	ver	54.00	-18.99
2480	19838	47.22	pk	hor	74.00	-26.78
2480	19838	39.96	avg	hor	54.00	-14.04
2480	19838	45.51	pk	ver	74.00	-28.49
2480	19838	38.30	avg	ver	54.00	-15.70

3.10 Test Conditions and Results - Transmitter radiated emissions with model B-1603 (Malaysia Production)

3.10.1 Information

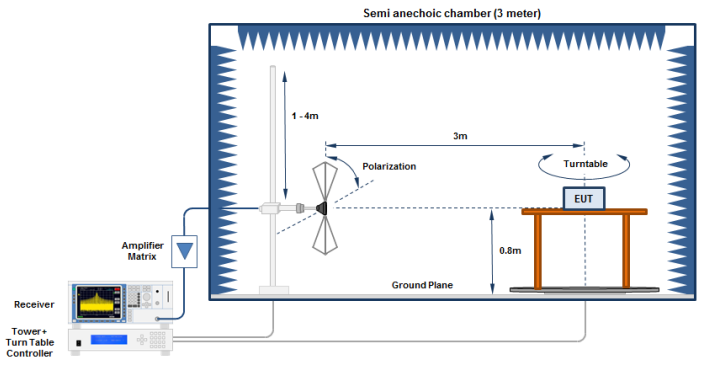
Test Information	
Reference	FCC § 15.247(d); FCC § 15.209; ISED RSS-Gen, Issue 5 (section 6.13)
Measurement Uncertainty	± 5.95 dB
Measurement Method	ANSI C63.10 6.4, 6.5, 6.6, 11.12
Operator	Florian Voigt
Date	2021-08-03 - 2021-08-09
Comment: Measurements above 1 GHz are pre-measurements when level of detected emissions (Average/Peak) is 10dB or more below the corresponding limit lines. In case the level of detected emissions have less than 10dB margin to the corresponding limit lines, the EUT is rotated in 30-degree steps between 0 to 150 degree. Only the worst case result is included in this report.	

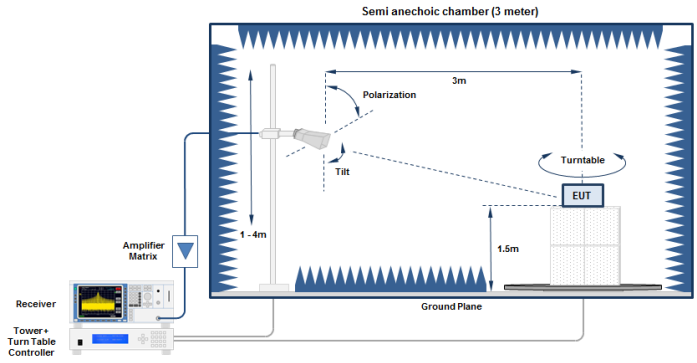
3.10.2 Limits

Limits			
Frequency range [MHz]	Detector	Field strength [µV/m]	Measurement distance [m]
0.009 - 0.09	Average	2400/F[kHz]	300
0.09 - 0.110	Quasi-Peak	2400/F[kHz]	300
0.110 - 0.490	Average	2400/F[kHz]	300
0.490 - 1.705	Quasi-Peak	24000/F[kHz]	30
1.705 - 30.0	Quasi-Peak	30	30
30 - 88	Quasi-Peak	100	3
88 - 216	Quasi-Peak	150	3
216 - 960	Quasi-Peak	200	3
960 - 1000	Quasi-Peak	500	3
>1000	Average	500	3

3.10.3 Setup

Test Setup 30 MHz - 1000 MHz



Test Setup > 1 GHz


3.10.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2020.1.8

Test Equipment 30 MHz - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2021-02	2024-02
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2021-07	2022-07
Antenna	R&S	HK 116	EF00030	2021-05	2024-05
Antenna	R&S	HL 223	EF00187	2019-05	2022-05

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic chamber	Frankonia	AC 2	EF01616	2021-05	2022-05
Horn antenna	Schwarzbeck	BBHA 9120B	EF01678	2021-03	2022-03
Horn Antenna	Schwarzbeck	HWRD 650	EF01679	2021-03	2022-03
Horn Antenna	Amplifier Research	AT4560	EF00302	2021-06	2023-06

3.10.5 Procedure

Test Procedure 30 MHz - 1000 MHz
1. EUT is placed on a non conducting support at the center of a turn table 0.8 m above the ground 2. EUT set to test mode 3. The receiver is set to peak detection with max hold 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m 5. All significant emissions are measured again using the corresponding final detector

Test Procedure > 1 GHz
1. EUT is placed on a non conducting support at the center of a turn table 1.5 m above the ground 2. EUT set to test mode 3. The receiver is set to peak detection with max hold 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m 5. All significant emissions are measured again using the corresponding final detector

3.10.6 Results

Test Results						
Channel [MHz]	Emission [MHz]	Level [dBµV/m]	Det.	Pol.	Limit [dBµV/m]	Margin [dB]
2402	149.9487	28.10	qpk	hor	43.50	-15.40
2402	2386	36.84	pk	hor	74.00	-37.16
2402	2386	23.88	avg	hor	54.00	-30.12
2402	2386	37.23	pk	ver	74.00	-36.77
2402	2386	23.97	avg	ver	54.00	-30.03
2402	4803.5	43.63	pk	hor	74.00	-30.37
2402	4803.5	37.57	avg	hor	54.00	-16.43
2402	4804	42.86	pk	ver	74.00	-31.14
2402	4804	38.28	avg	ver	54.00	-15.72
2402	12009	44.51	pk	hor	74.00	-29.49
2402	12009	39.19	avg	hor	54.00	-14.81
2402	12009	42.93	pk	ver	74.00	-31.07
2402	12009	36.20	avg	ver	54.00	-17.80
2402	19214	52.07	pk	ver	74.00	-21.93
2402	19214	45.34	avg	ver	54.00	-08.66
2402	19214	54.13	pk	hor	74.00	-19.87
2402	19214	47.66	avg	hor	54.00	-06.34
2440	149.9247	27.30	qpk	hor	43.50	-16.24
2440	4879.5	41.36	pk	hor	74.00	-32.64
2440	4879.5	35.52	avg	hor	54.00	-18.48
2440	4879.8	45.29	pk	ver	74.00	-28.71
2440	4879.8	40.12	avg	ver	54.00	-13.88
2440	7319.2	42.72	pk	hor	74.00	-31.28
2440	7319.2	35.54	avg	hor	54.00	-18.46
2440	7319.3	45.98	pk	ver	74.00	-28.02
2440	7319.3	40.35	avg	ver	54.00	-13.65
2440	12199	45.03	pk	hor	74.00	-28.97
2440	12199	40.00	avg	hor	54.00	-14.00
2440	12199	43.57	pk	ver	74.00	-30.43
2440	12199	34.97	avg	ver	54.00	-19.03
2440	19518	49.50	pk	hor	74.00	-24.50
2440	19518	42.23	avg	hor	54.00	-11.77
2440	19518	51.63	pk	ver	74.00	-22.37
2440	19518	43.74	avg	ver	54.00	-10.26

2480	149.9247	27.20	qpk	hor	43.50	-16.30
2480	2483.5	55.57	pk	hor	74.00	-18.43
2480	2483.5	27.45	avg	hor	54.00	-26.55
2480	2483.7	57.20	pk	ver	74.00	-16.80
2480	2483.7	28.26	avg	ver	54.00	-25.74
2480	4959	42.17	pk	hor	74.00	-31.83
2480	4959	37.08	avg	hor	54.00	-16.92
2480	4960	42.93	pk	ver	74.00	-31.07
2480	4960	39.13	avg	ver	54.00	-14.87
2480	7439	48.66	pk	hor	74.00	-25.34
2480	7439	42.50	avg	hor	54.00	-11.50
2480	7439	50.61	pk	ver	74.00	-23.39
2480	7439	43.92	avg	ver	54.00	-10.08
2480	12399	44.60	pk	hor	74.00	-29.40
2480	12399	38.14	avg	hor	54.00	-15.86
2480	12399	44.92	pk	ver	74.00	-29.08
2480	12399	39.32	avg	ver	54.00	-14.68
2480	19838	45.36	pk	hor	74.00	-28.64
2480	19838	38.76	avg	hor	54.00	-15.24
2480	19842	48.48	pk	ver	74.00	-25.52
2480	19842	40.71	avg	ver	54.00	-13.29

3.11 Test Conditions and Results - Receiver radiated emissions with model B-1603

3.11.1 Information

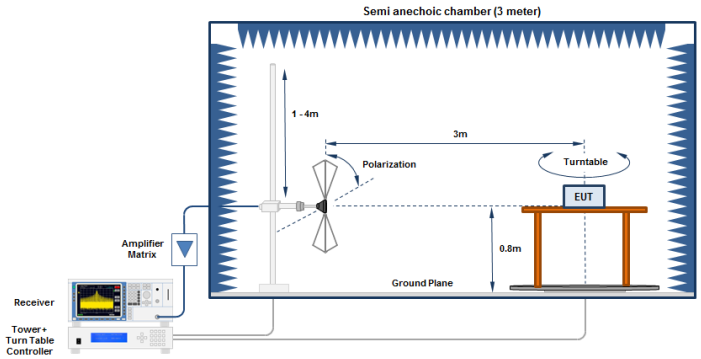
Test Information	
Reference	ISED RSS-247, Issue 2 (section 3.1)
Measurement Uncertainty	± 5.95 dB
Measurement Method	ANSI C63.4-2014 8.1-8.3
Operator	Florian Voigt
Date	2021-08-06

3.11.2 Limits

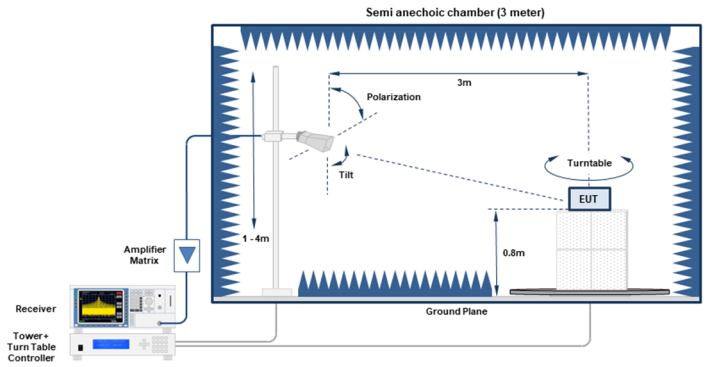
Limits			
Frequency range [MHz]	Detector	Field strength [µV/m]	Measurement distance [m]
30 - 88	Quasi-Peak	100	3
88 - 216	Quasi-Peak	150	3
216 - 960	Quasi-Peak	200	3
960 - 1000	Quasi-Peak	500	3
>1000	Average	500	3

3.11.3 Setup

Test Setup 30 MHz - 1000 MHz



Test Setup > 1 GHz



3.11.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2020.1.8

Test Equipment 30 MHz - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2021-02	2024-02
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2021-07	2022-07
Antenna	R&S	HK 116	EF00030	2021-05	2024-05
Antenna	R&S	HL 223	EF00187	2019-05	2022-05

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2021-02	2024-02
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2021-07	2022-07
Antenna	Schwarzbeck	BBHA 9120D	EF00018	2019-10	2022-10
Horn Antenna	Schwarzbeck	HWRD 650	EF01679	2021-03	2022-03

3.11.5 Procedure

Test Procedure 30 - 1000 MHz
1. EUT is placed on a non conducting support at the center of a turn table 0.8 m above the ground
2. EUT set to test mode
3. The receiver is set to peak detection with max hold
4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m
5. All significant emissions are measured again using the corresponding final detector

Test Procedure > 1 GHz
1. EUT is placed on a non conducting support at the center of a turn table 1.5 m above the ground
2. EUT set to test mode
3. The receiver is set to peak detection with max hold
4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m
5. All significant emissions are measured again using the corresponding final detector

3.11.6 Results

Test Results						
Channel [MHz]	Emission [MHz]	Level [dBµV/m]	Det.	Pol.	Limit [dBµV/m]	Margin [dB]
2440	97.5962	19.50	qpk	ver	43.50	-23.96
2440	4877	43.85	pk	ver	53.98	-10.13
2440	4877	39.27	avg	ver	53.98	-14.71

3.12 Test Conditions and Results - Receiver radiated emissions with model B-1603 (Malaysia Production)

3.12.1 Information

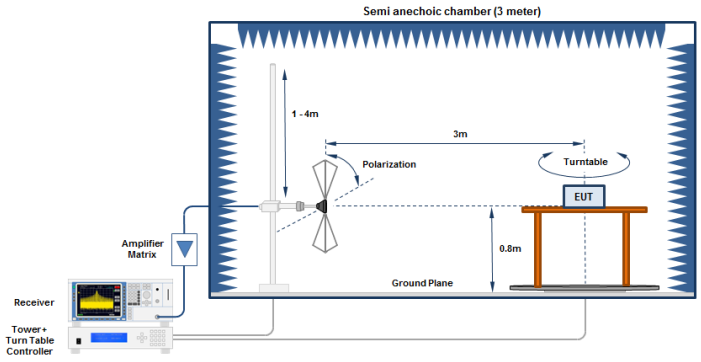
Test Information	
Reference	ISED RSS-247, Issue 2 (section 3.1)
Measurement Uncertainty	± 5.95 dB
Measurement Method	ANSI C63.4-2014 8.1-8.3
Operator	Florian Voigt
Date	2021-08-06

3.12.2 Limits

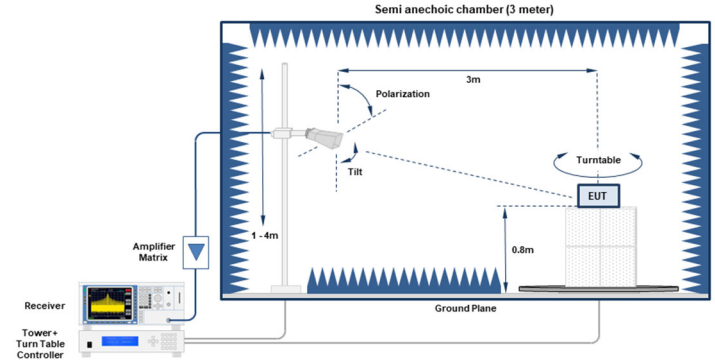
Limits			
Frequency range [MHz]	Detector	Field strength [µV/m]	Measurement distance [m]
30 - 88	Quasi-Peak	100	3
88 - 216	Quasi-Peak	150	3
216 - 960	Quasi-Peak	200	3
960 - 1000	Quasi-Peak	500	3
>1000	Average	500	3

3.12.3 Setup

Test Setup 30 MHz - 1000 MHz



Test Setup > 1 GHz



3.12.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2020.1.8

Test Equipment 30 MHz - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2021-02	2024-02
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2021-07	2022-07
Antenna	R&S	HK 116	EF00030	2021-05	2024-05
Antenna	R&S	HL 223	EF00187	2019-05	2022-05

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2021-02	2024-02
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2021-07	2022-07
Antenna	Schwarzbeck	BBHA 9120D	EF00018	2019-10	2022-10
Horn Antenna	Schwarzbeck	HWRD 650	EF01679	2021-03	2022-03

3.12.5 Procedure

Test Procedure 30 - 1000 MHz
1. EUT is placed on a non conducting support at the center of a turn table 0.8 m above the ground
2. EUT set to test mode
3. The receiver is set to peak detection with max hold
4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m
5. All significant emissions are measured again using the corresponding final detector

Test Procedure > 1 GHz
1. EUT is placed on a non conducting support at the center of a turn table 1.5 m above the ground
2. EUT set to test mode
3. The receiver is set to peak detection with max hold
4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m
5. All significant emissions are measured again using the corresponding final detector

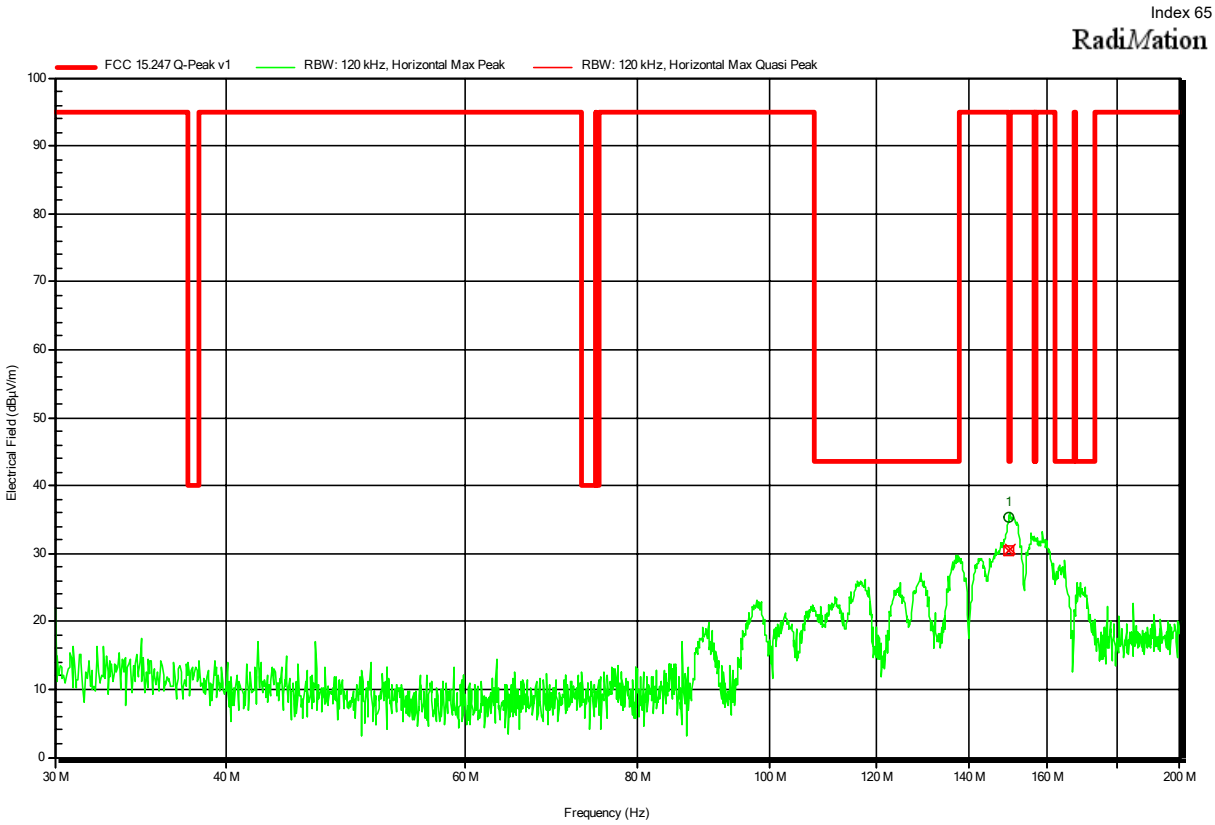
3.12.6 Results

Test Results						
Channel [MHz]	Emission [MHz]	Level [dBµV/m]	Det.	Pol.	Limit [dBµV/m]	Margin [dB]
2440	97.847	18.10	qpk	ver	43.50	-25.38

ANNEX A Transmitter spurious emissions

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

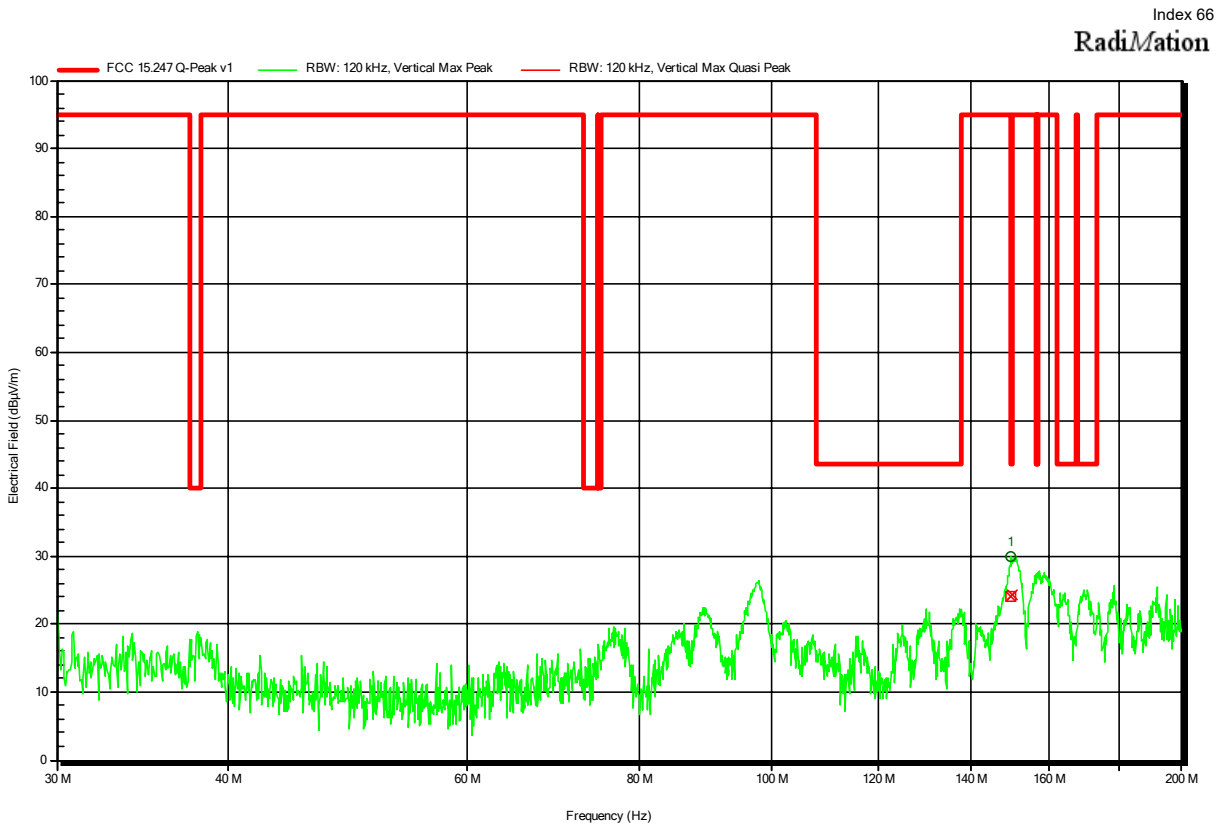
Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	Tx; BLE, 2402MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-06
Note:	



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
149.9607 MHz	30.4 dBµV/m	43.5 dBµV/m	-13.14 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

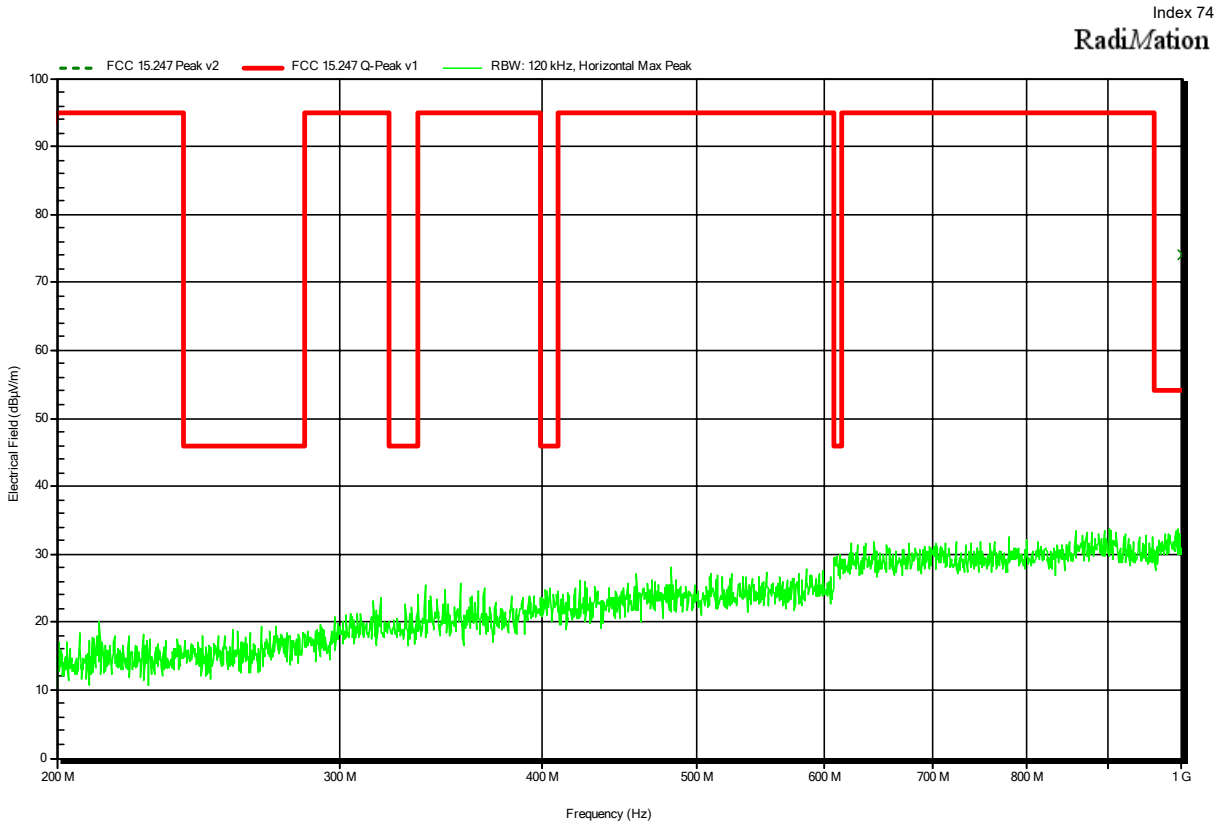
Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	Tx; BLE, 2402MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-06
Note:	



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
149.9547 MHz	24 dBµV/m	43.5 dBµV/m	-19.52 dB	Pass

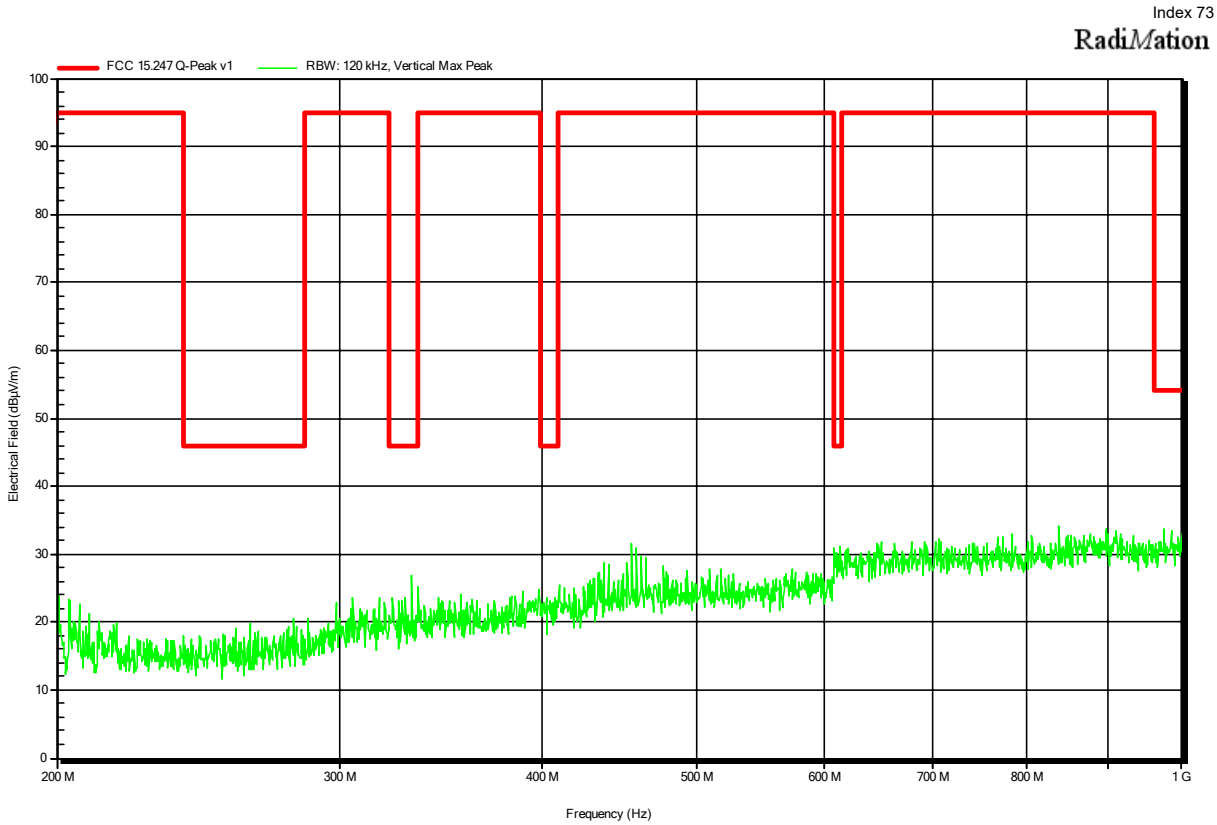
Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	Tx; BLE, 2402MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-06
Note:	



Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	Tx; BLE, 2402MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-06
Note:	



Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Schwarzbeck BBHA 9120B, Horizontal
Measurement distance:	3 m
Mode:	Tx; BLE, 2402MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-03
Note:	

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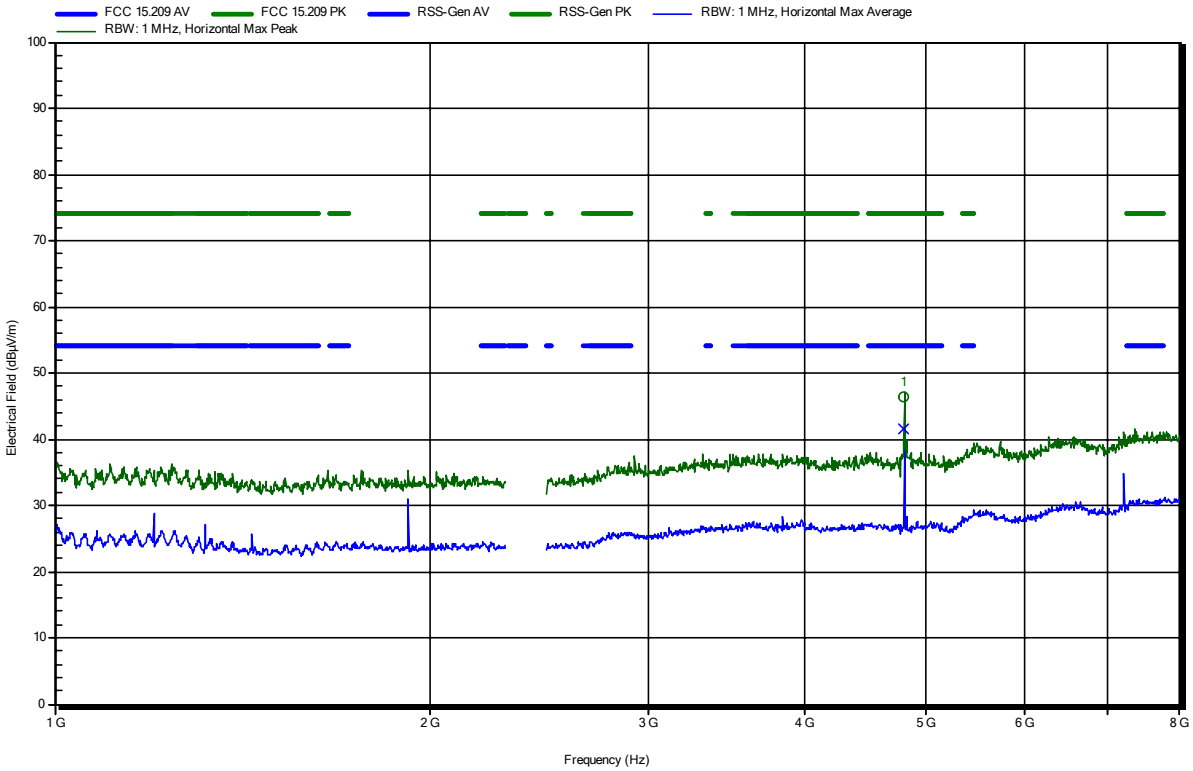
RadiMation

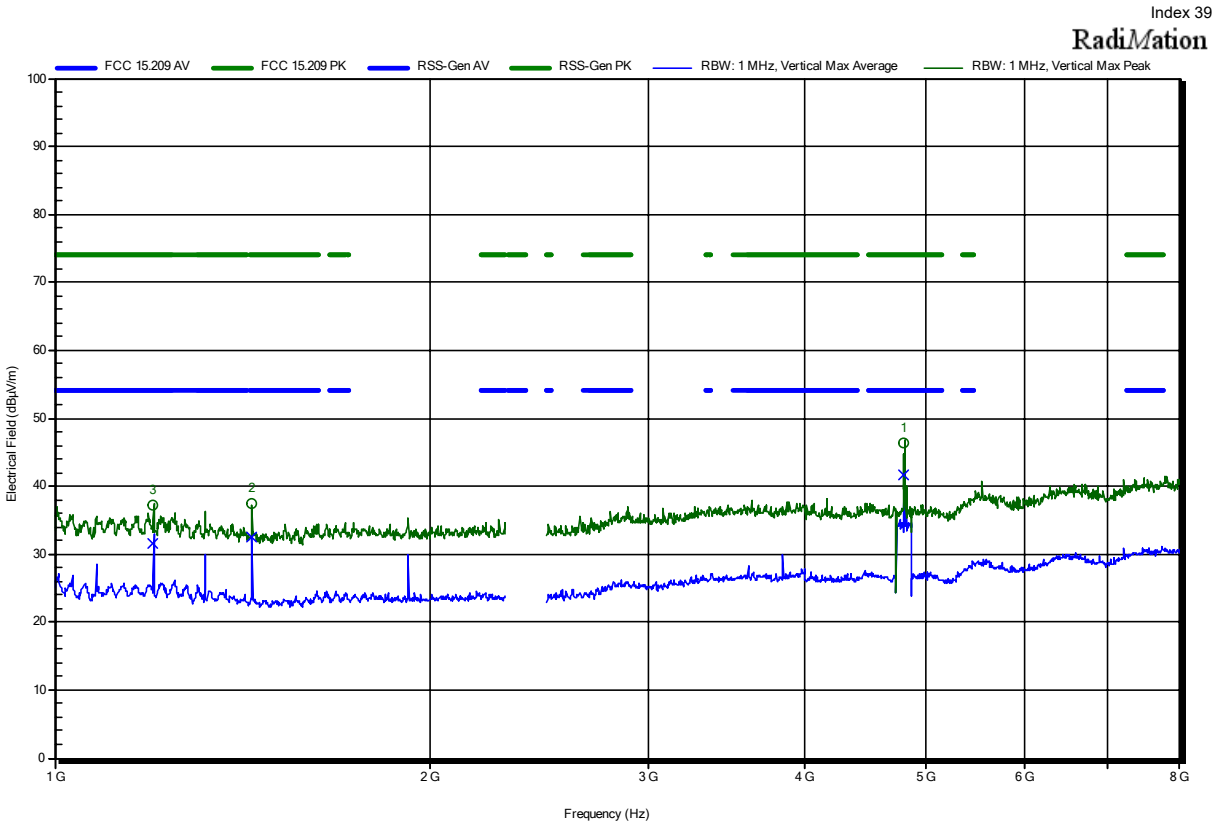


Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.8038 GHz	46.4 dBµV/m	74 dBµV/m	-27.6 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.8038 GHz	41.66 dBµV/m	54 dBµV/m	-12.34 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Schwarzbeck BBHA 9120B, Vertical
Measurement distance:	3 m
Mode:	Tx; BLE, 2402MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-03
Note:	

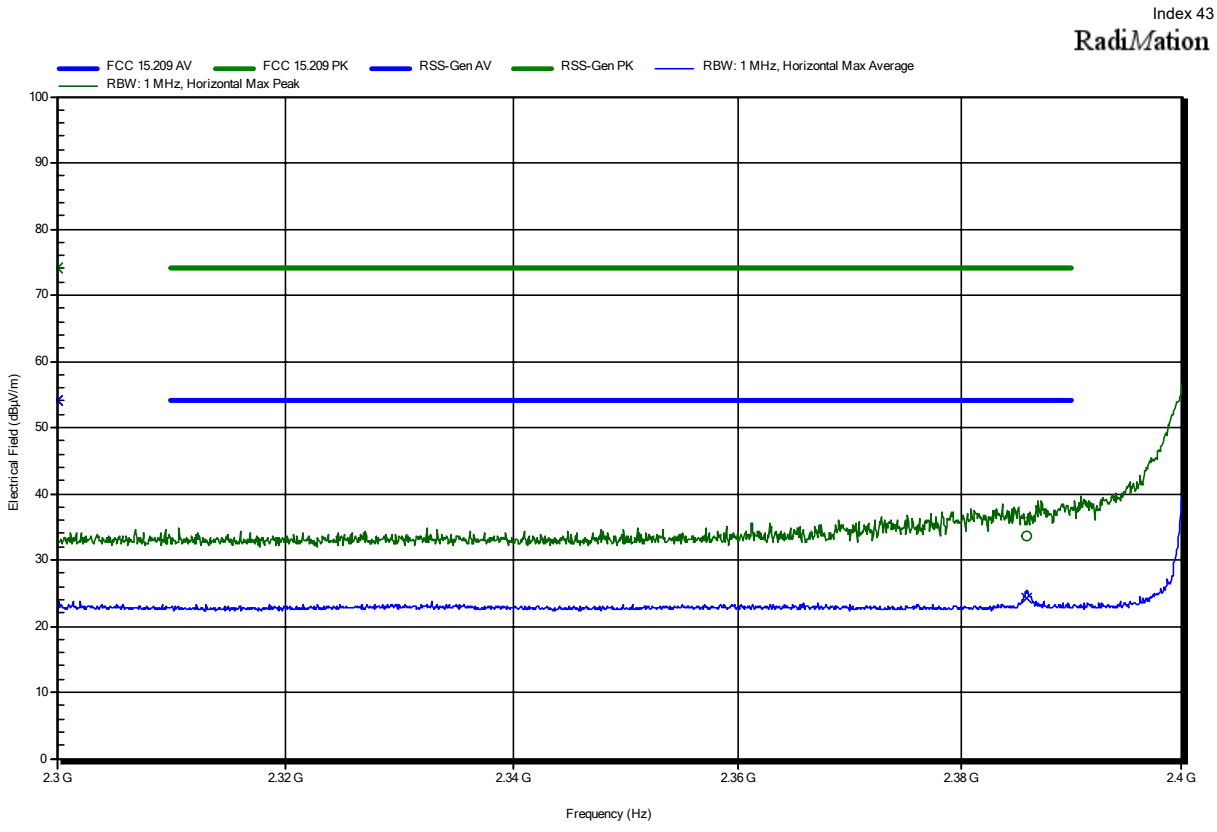


Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.2002 GHz	37.32 dBµV/m	74 dBµV/m	-36.68 dB	Pass
1.4402 GHz	37.33 dBµV/m	74 dBµV/m	-36.67 dB	Pass
4.8041 GHz	46.46 dBµV/m	74 dBµV/m	-27.54 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
1.2002 GHz	31.68 dBµV/m	54 dBµV/m	-22.32 dB	Pass
1.4402 GHz	32.43 dBµV/m	54 dBµV/m	-21.57 dB	Pass
4.8041 GHz	41.76 dBµV/m	54 dBµV/m	-12.24 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Schwarzbeck BBHA 9120B, Horizontal
Measurement distance:	3 m
Mode:	Tx; BLE, 2402MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-03
Note:	lower bandedge

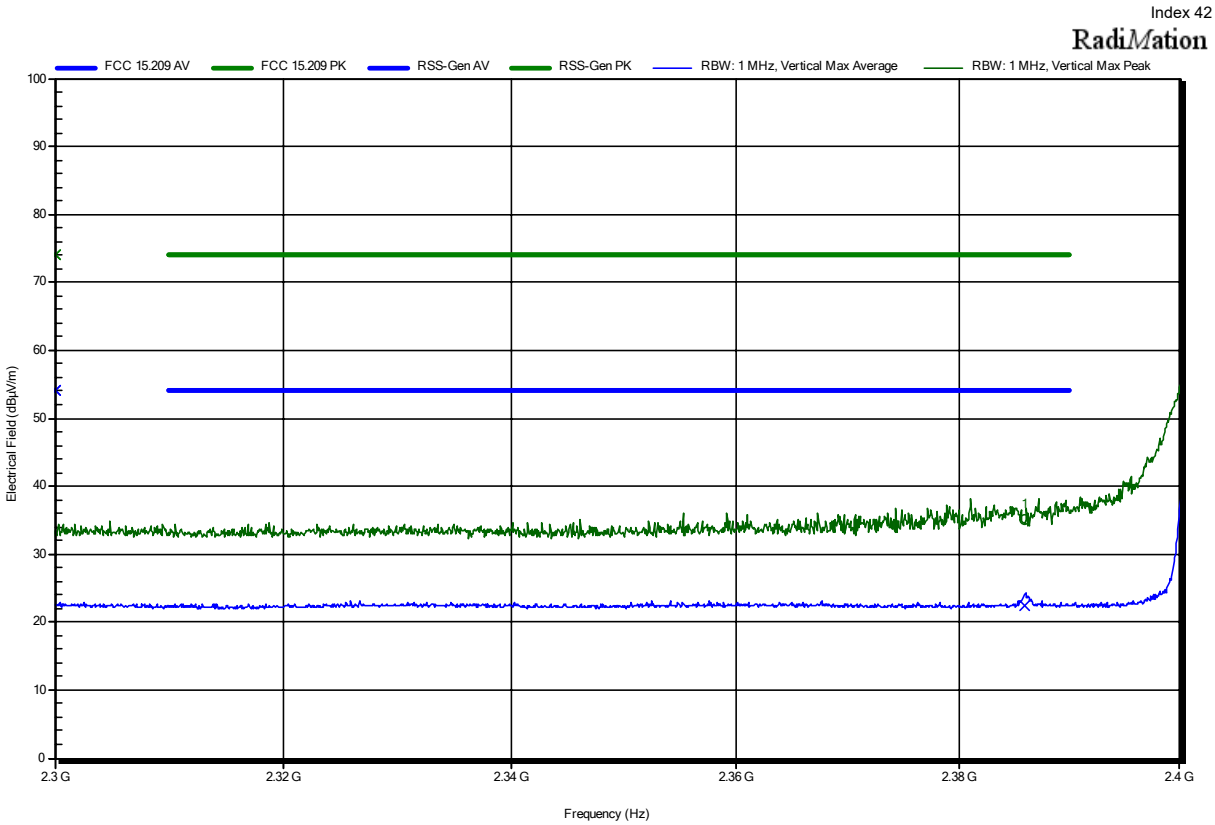


Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.3859 GHz	33.56 dBµV/m	74 dBµV/m	-40.44 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
2.3859 GHz	24.25 dBµV/m	54 dBµV/m	-29.75 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Schwarzbeck BBHA 9120B, Vertical
Measurement distance:	3 m
Mode:	Tx; BLE, 2402MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-03
Note:	lower bandedge

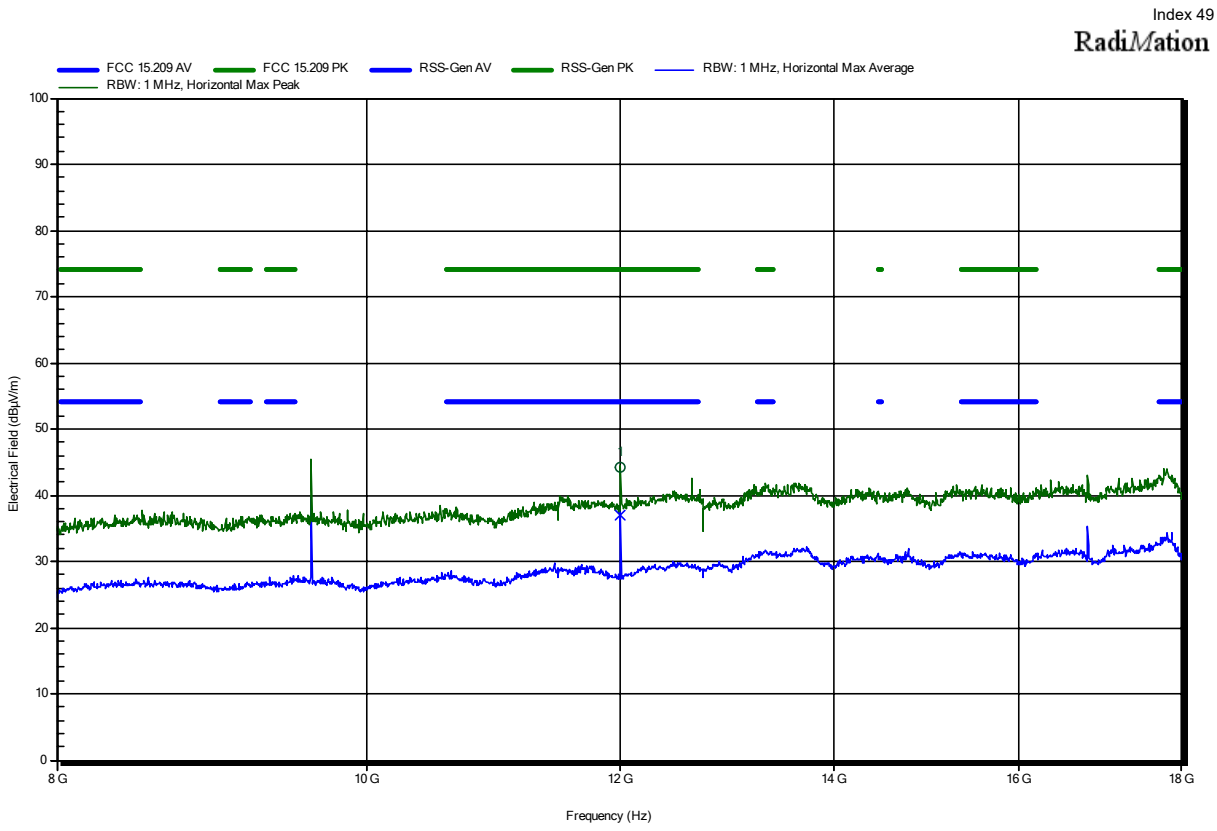


Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.386 GHz	35.08 dBµV/m	74 dBµV/m	-38.92 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
2.386 GHz	22.38 dBµV/m	54 dBµV/m	-31.62 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Schwarzbeck HWRD 650, Horizontal
Measurement distance:	3 m
Mode:	Tx; BLE, 2402MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-04
Note:	

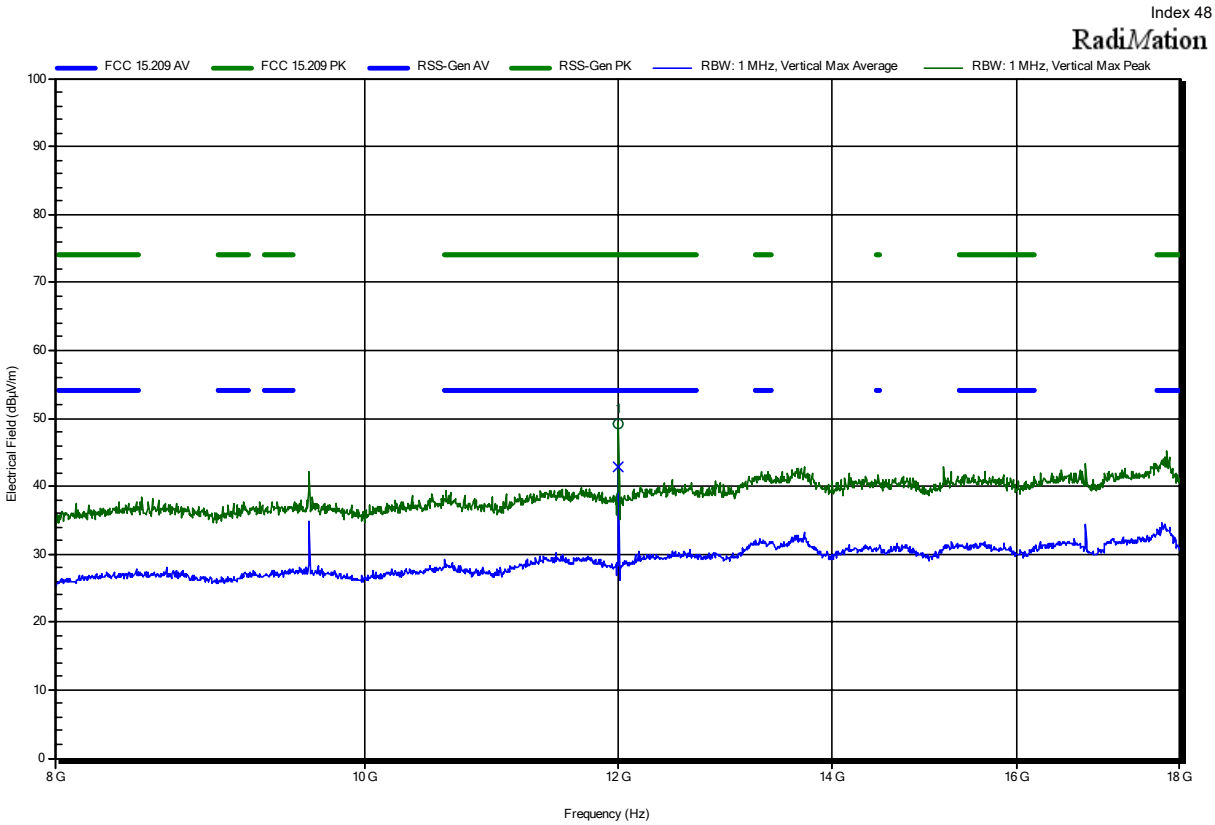


Frequency	Peak	Peak Limit	Peak Difference	Peak Status
12.009 GHz	44.31 dBµV/m	74 dBµV/m	-29.69 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
12.009 GHz	37.04 dBµV/m	54 dBµV/m	-16.96 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Schwarzbeck HWRD 650, Vertical
Measurement distance:	3 m
Mode:	Tx; BLE, 2402MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-03
Note:	



Frequency	Peak	Peak Limit	Peak Difference	Peak Status
12.009 GHz	49.13 dBµV/m	74 dBµV/m	-24.87 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
12.009 GHz	42.96 dBµV/m	54 dBµV/m	-11.04 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Amplifier Research ATH18G40, Horizontal
Measurement distance:	3 m
Mode:	Tx; BLE, 2402MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-04
Note:	

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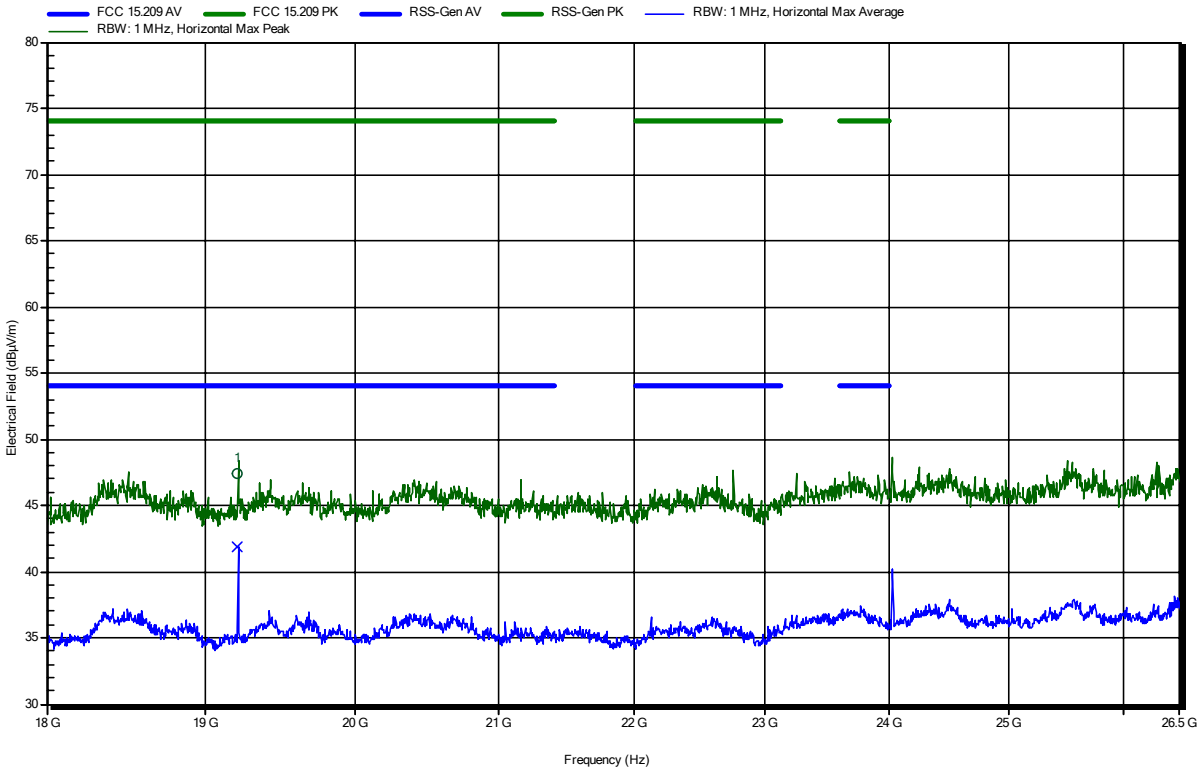
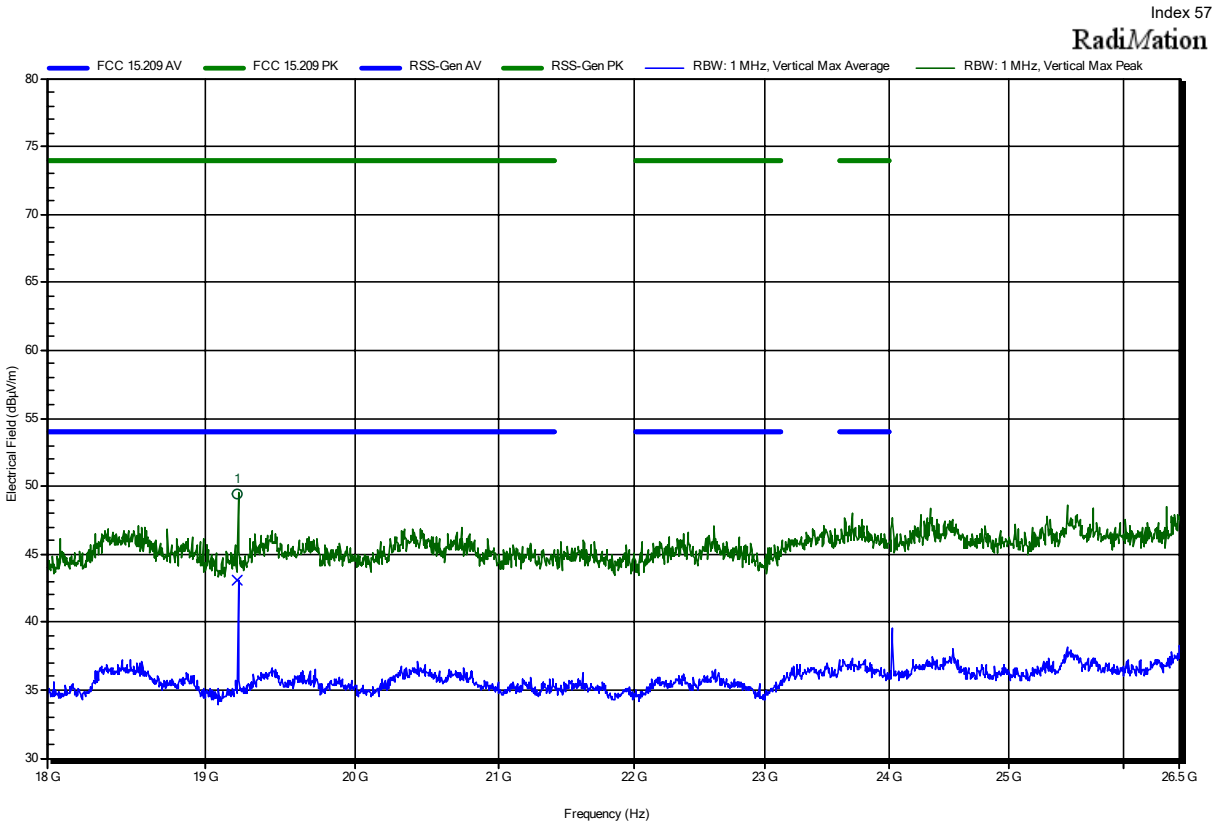


Frequency	Peak	Peak Limit	Peak Difference	Peak Status
19.214 GHz	47.4 dBµV/m	74 dBµV/m	-26.6 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
19.214 GHz	41.89 dBµV/m	54 dBµV/m	-12.11 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Amplifier Research ATH18G40, Vertical
Measurement distance:	3 m
Mode:	Tx; BLE, 2402MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-04
Note:	

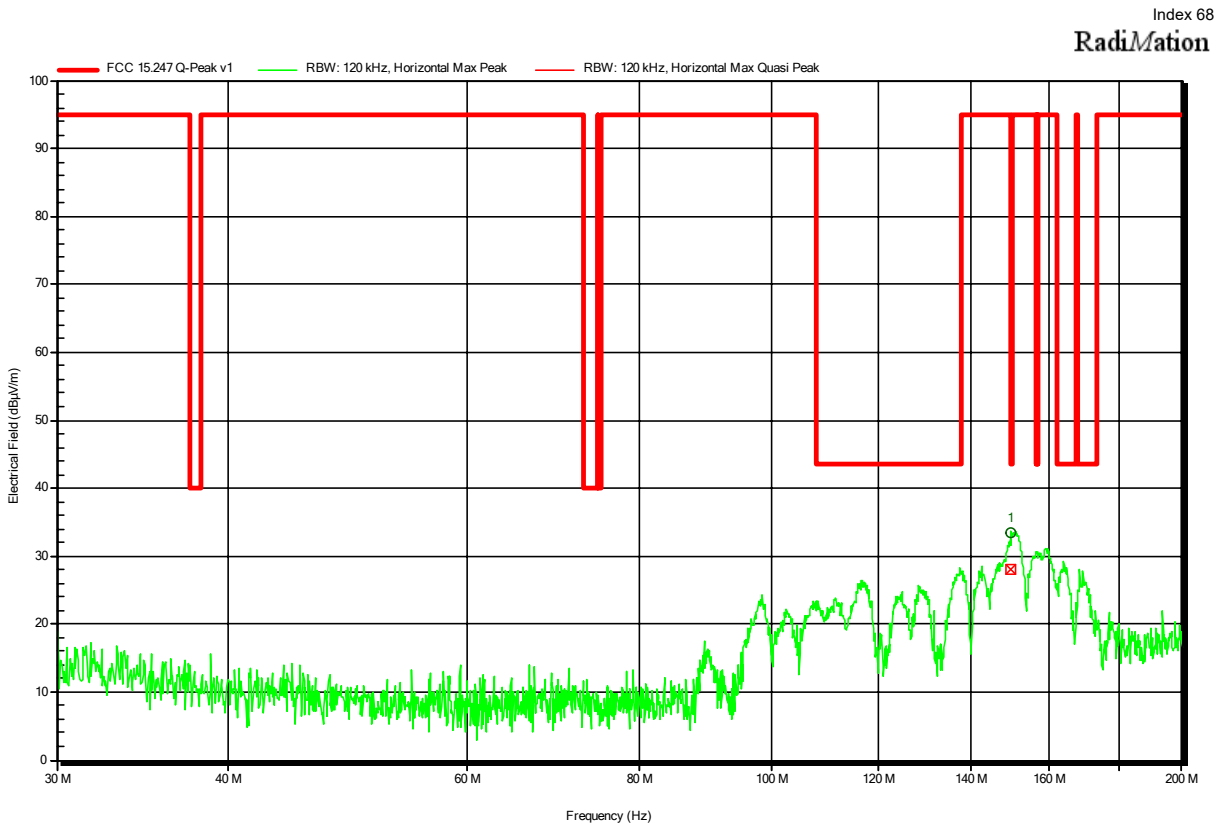


Frequency	Peak	Peak Limit	Peak Difference	Peak Status
19.214 GHz	49.4 dBµV/m	74 dBµV/m	-24.6 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
19.214 GHz	43.11 dBµV/m	54 dBµV/m	-10.89 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

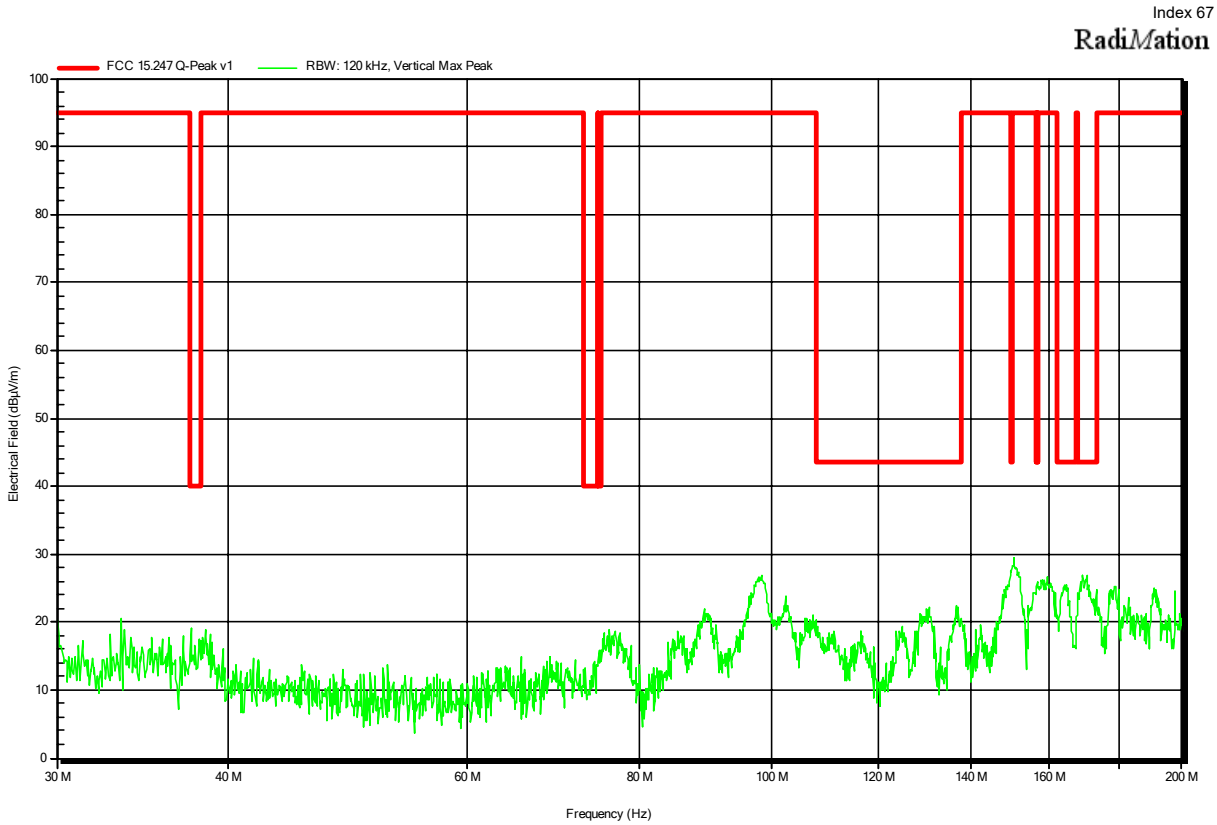
Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	Tx; BLE, 2440MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-06
Note:	



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
149.9067 MHz	28 dBµV/m	43.5 dBµV/m	-15.48 dB	Pass

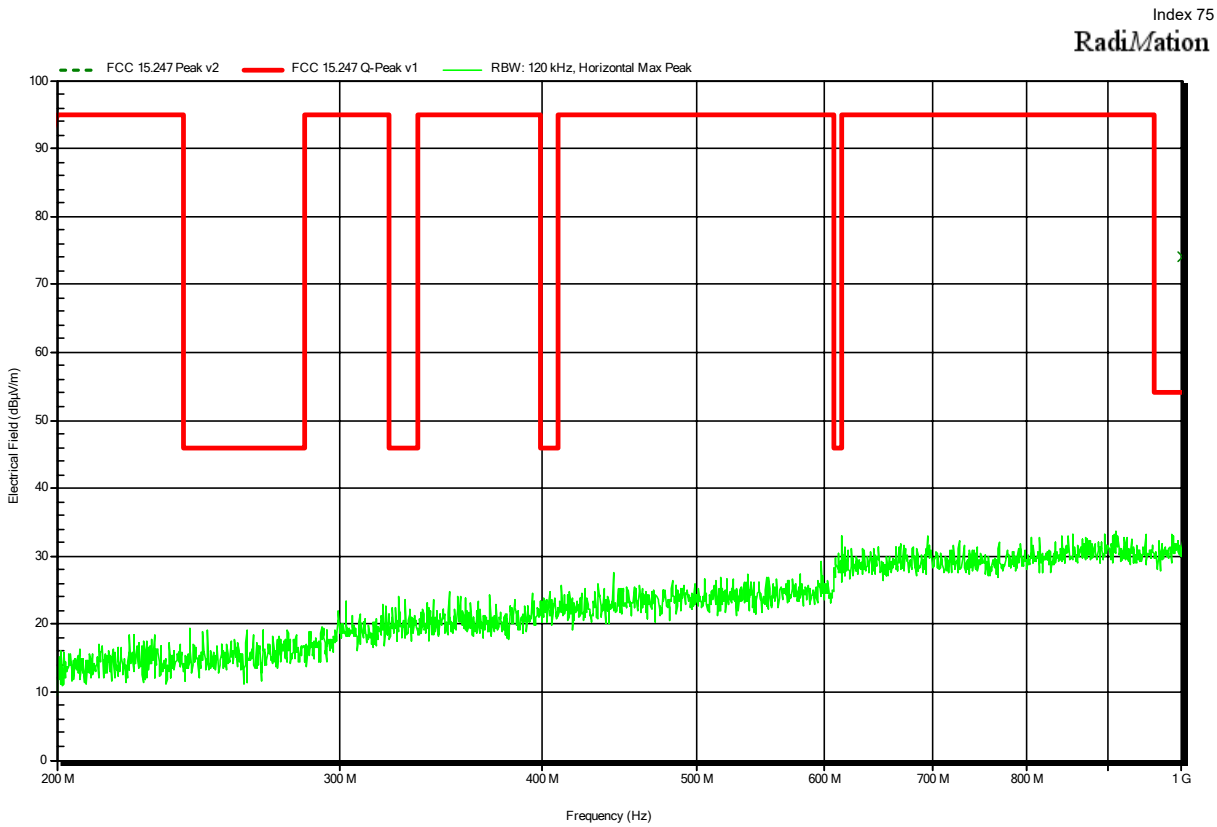
Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	Tx; BLE, 2440MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-06
Note:	



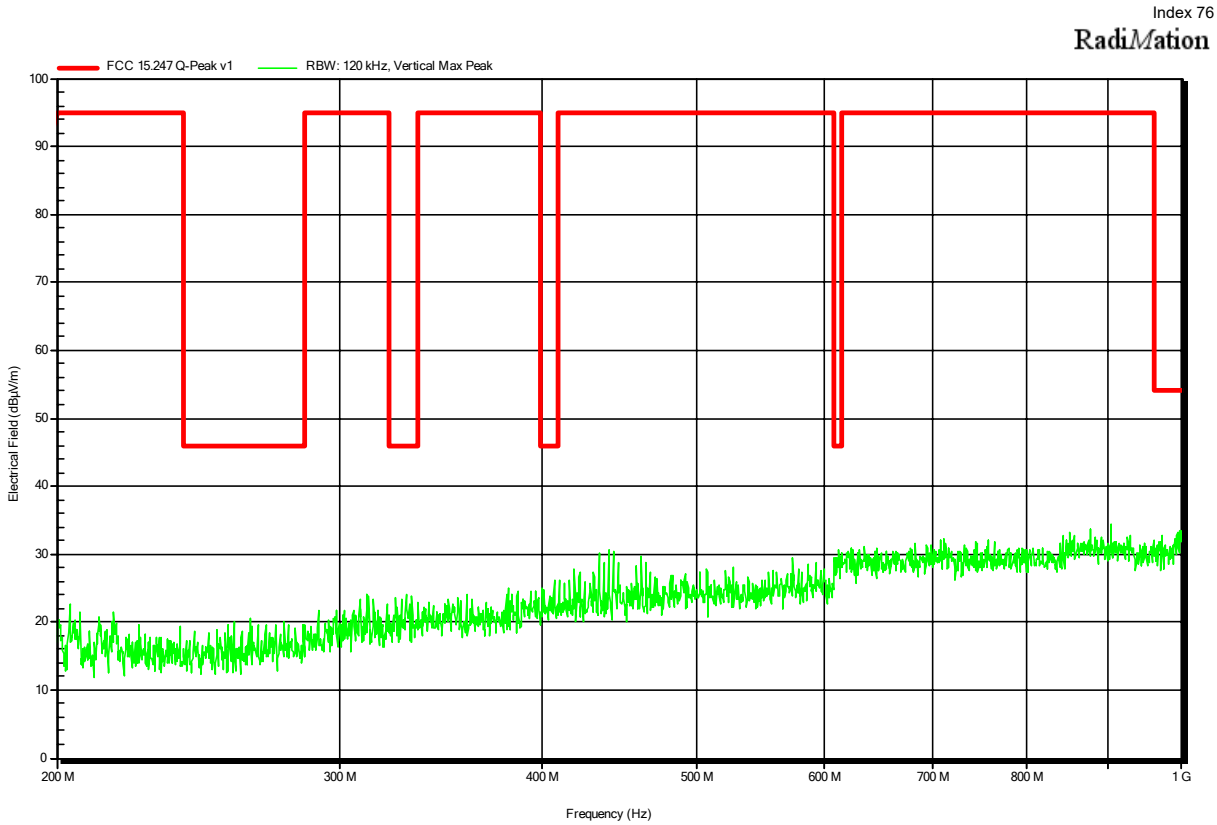
Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	Tx; BLE, 2440MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-06
Note:	



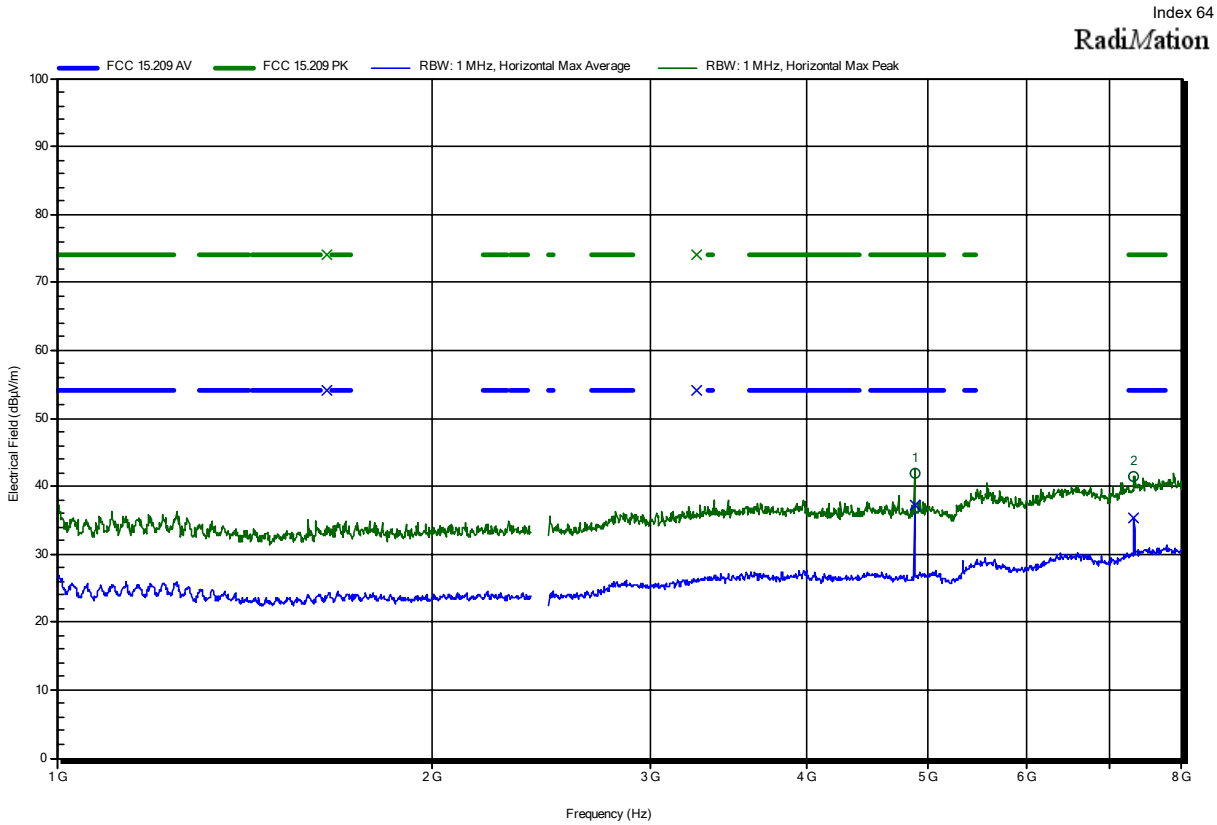
Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	Tx; BLE, 2440MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-06
Note:	



Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Schwarzbeck BBHA 9120B, Horizontal
Measurement distance:	3 m
Mode:	Tx; BLE, 2440MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-05
Note:	

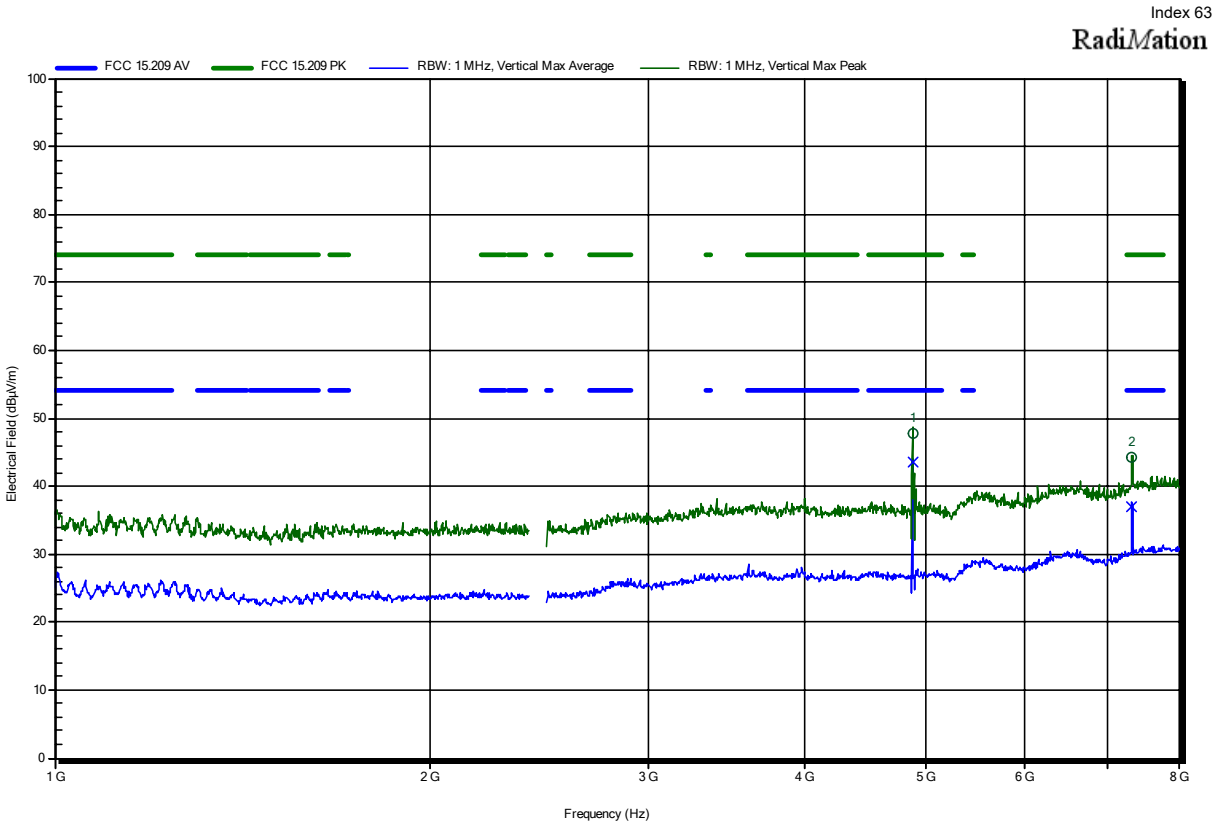


Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.8796 GHz	41.99 dBµV/m	74 dBµV/m	-32.01 dB	Pass
7.3193 GHz	41.49 dBµV/m	74 dBµV/m	-32.51 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.8796 GHz	37.09 dBµV/m	54 dBµV/m	-16.91 dB	Pass
7.3193 GHz	35.4 dBµV/m	54 dBµV/m	-18.6 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Schwarzbeck BBHA 9120B, Vertical
Measurement distance:	3 m
Mode:	Tx; BLE, 2440MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-05
Note:	



Frequency	Peak	Peak Limit	Peak Difference	Peak Status
4.8798 GHz	47.82 dBµV/m	74 dBµV/m	-26.18 dB	Pass
7.3193 GHz	44.36 dBµV/m	74 dBµV/m	-29.64 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
4.8798 GHz	43.6 dBµV/m	54 dBµV/m	-10.4 dB	Pass
7.3193 GHz	36.86 dBµV/m	54 dBµV/m	-17.14 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Schwarzbeck HWRD 650, Horizontal
Measurement distance:	3 m
Mode:	Tx; BLE, 2440MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-04
Note:	

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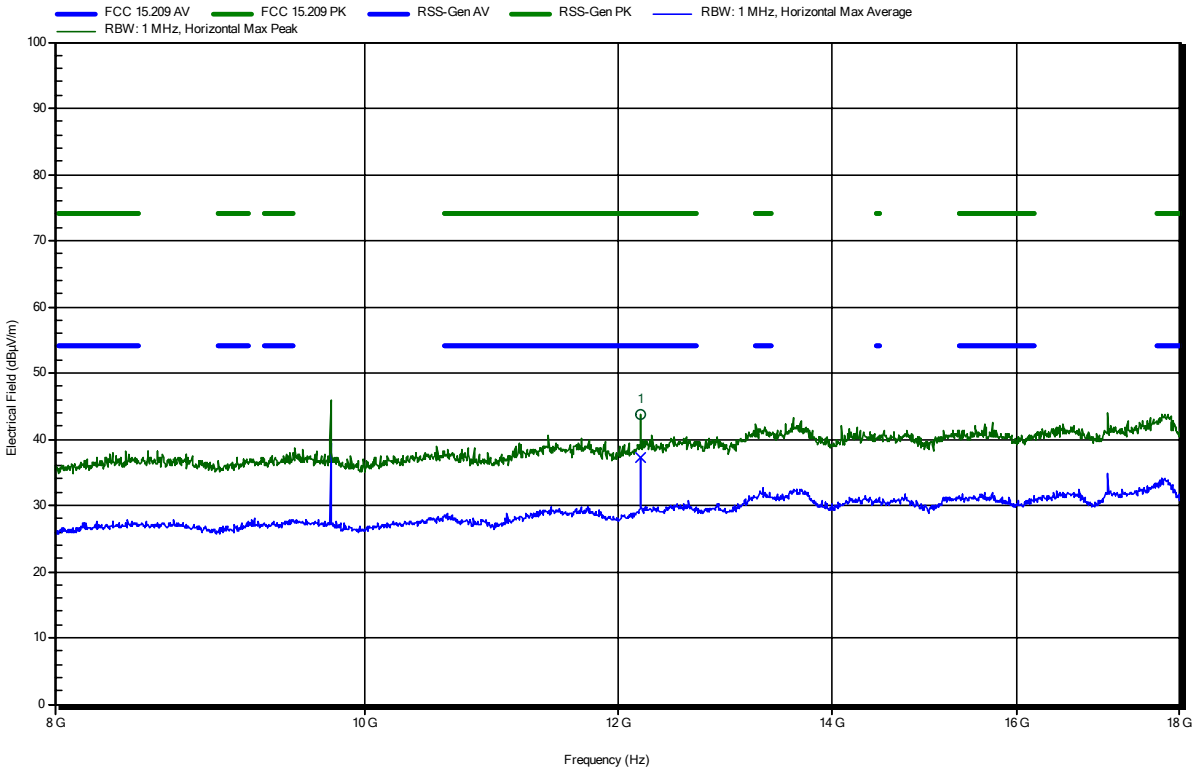
RadiMation

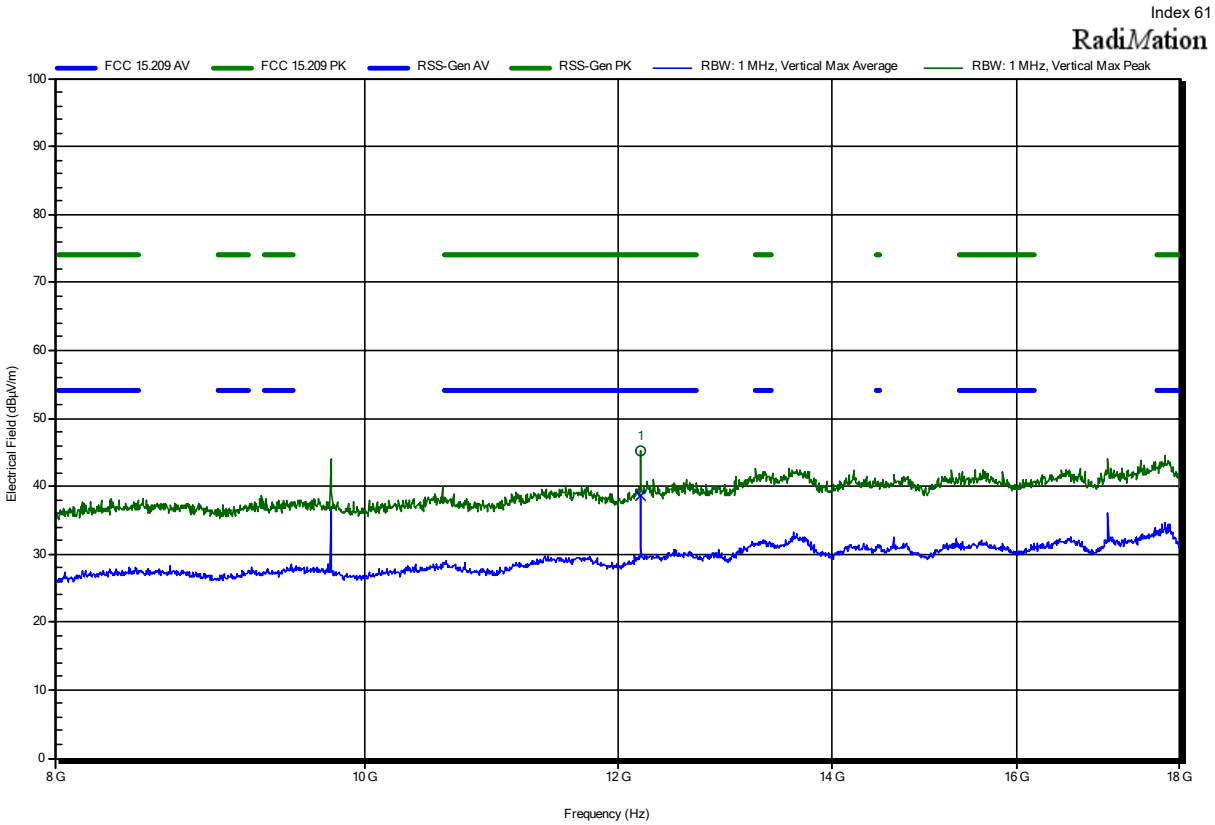


Frequency	Peak	Peak Limit	Peak Difference	Peak Status
12.199 GHz	43.76 dBµV/m	74 dBµV/m	-30.24 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
12.199 GHz	37.13 dBµV/m	54 dBµV/m	-16.87 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Schwarzbeck HWRD 650, Vertical
Measurement distance:	3 m
Mode:	Tx; BLE, 2440MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-04
Note:	



Frequency	Peak	Peak Limit	Peak Difference	Peak Status
12.199 GHz	45.1 dBµV/m	74 dBµV/m	-28.9 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
12.199 GHz	38.58 dBµV/m	54 dBµV/m	-15.42 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Amplifier Research ATH18G40, Horizontal
Measurement distance:	3 m
Mode:	Tx; BLE, 2440MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-04
Note:	

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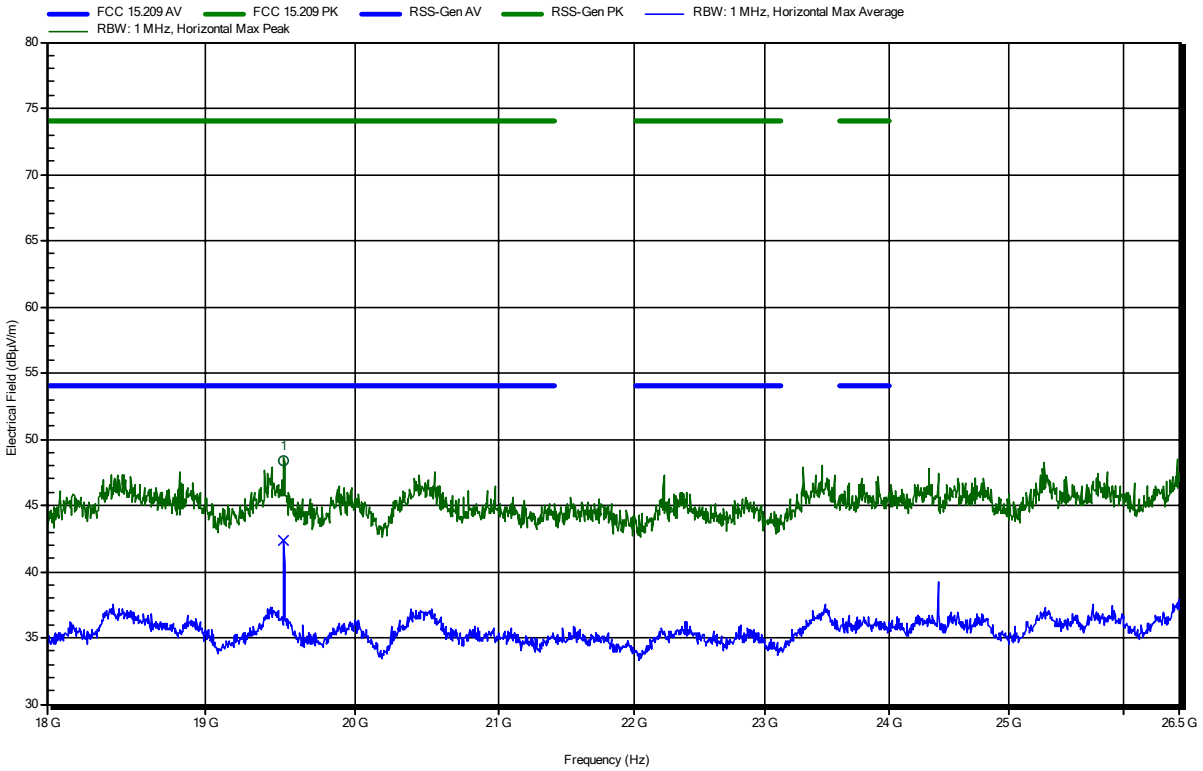
RadiMation

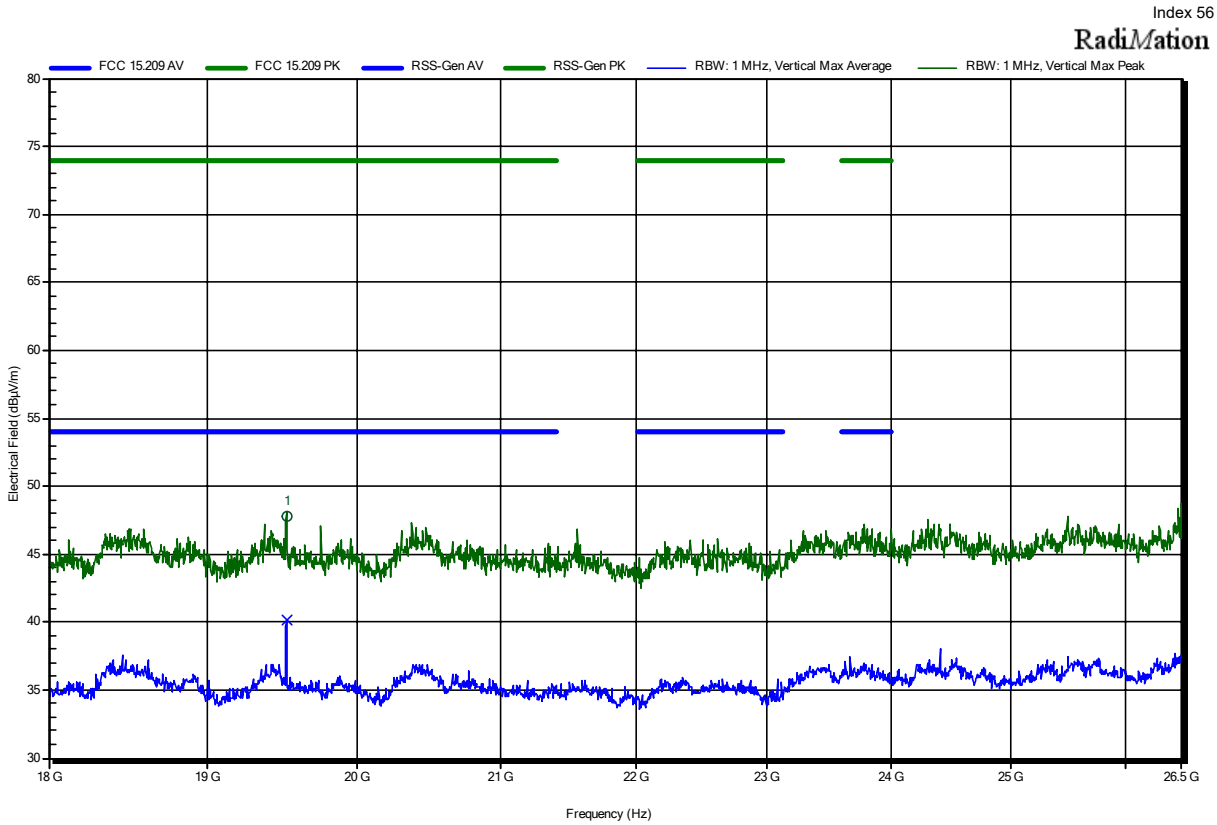


Frequency	Peak	Peak Limit	Peak Difference	Peak Status
19.518 GHz	48.37 dBµV/m	74 dBµV/m	-25.63 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
19.518 GHz	42.38 dBµV/m	54 dBµV/m	-11.62 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Amplifier Research ATH18G40, Vertical
Measurement distance:	3 m
Mode:	Tx; BLE, 2440MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-04
Note:	

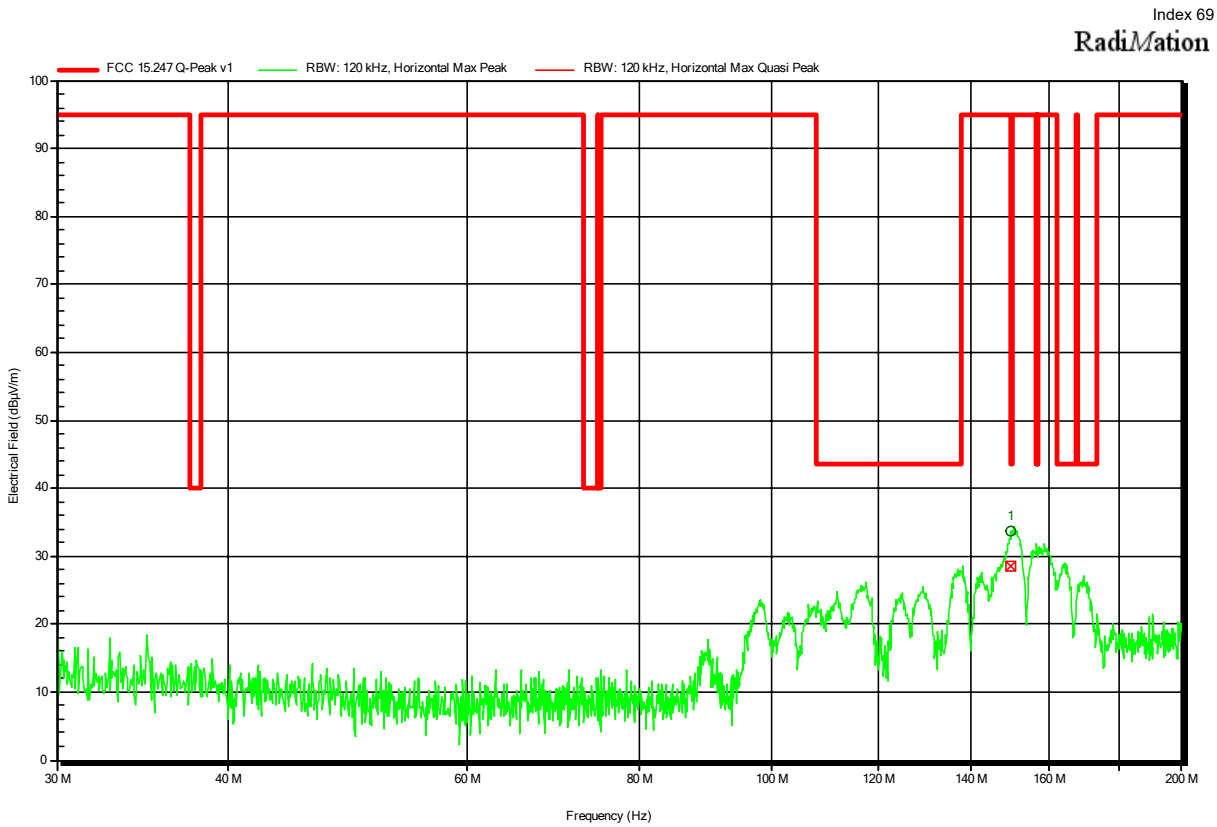


Frequency	Peak	Peak Limit	Peak Difference	Peak Status
19.522 GHz	47.81 dBµV/m	74 dBµV/m	-26.19 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
19.522 GHz	40.15 dBµV/m	54 dBµV/m	-13.85 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

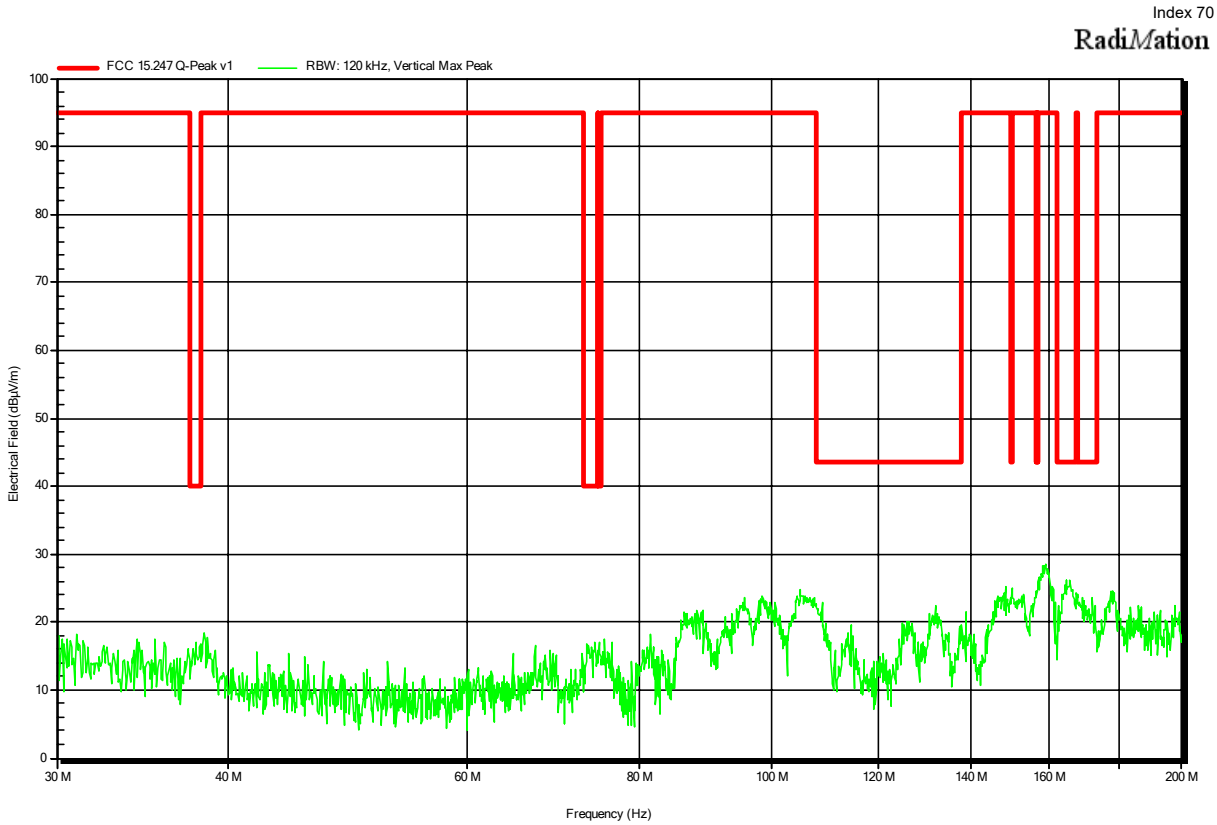
Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Rohde & Schwarz HK 116, Horizontal
Measurement distance:	3 m
Mode:	Tx; BLE, 2480MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-06
Note:	



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
150.0207 MHz	28.5 dBµV/m	43.5 dBµV/m	-15.03 dB	Pass

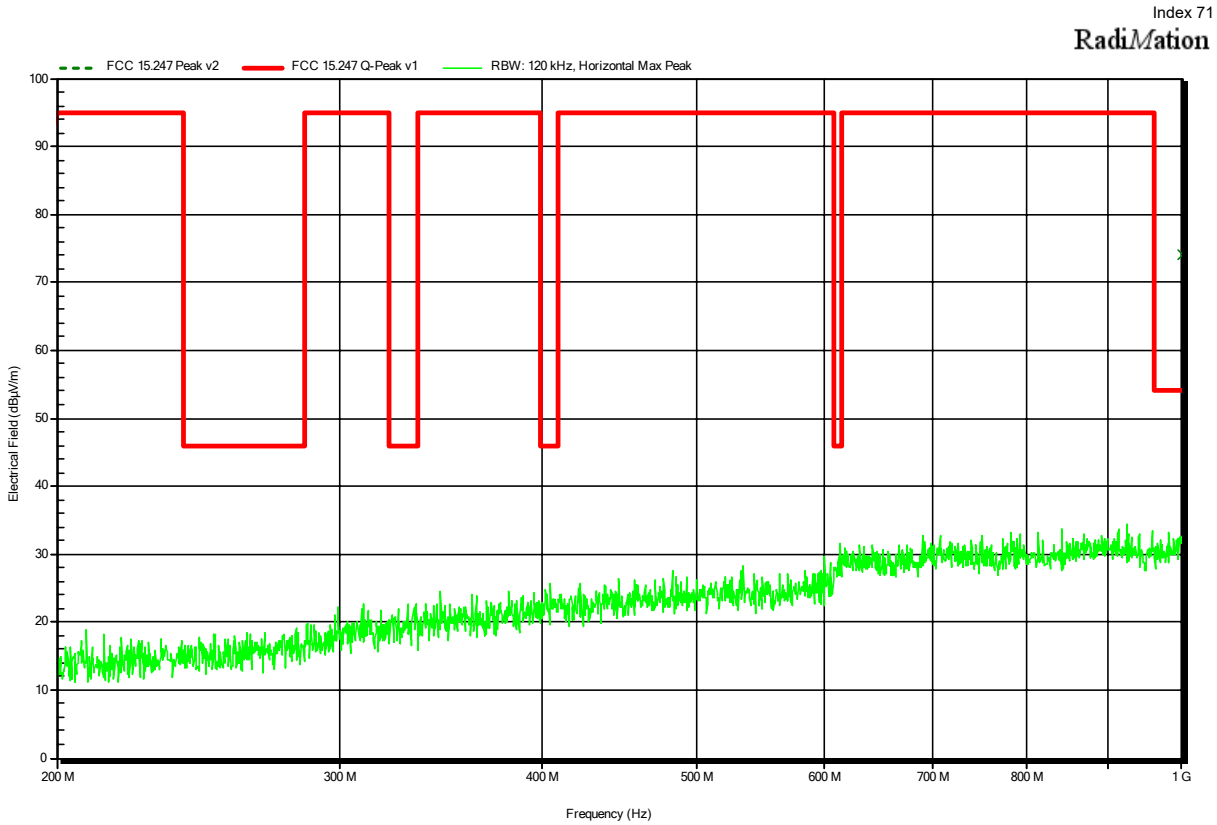
Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Rohde & Schwarz HK 116, Vertical
Measurement distance:	3 m
Mode:	Tx; BLE, 2480MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-06
Note:	



Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	Tx; BLE, 2480MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-06
Note:	



Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
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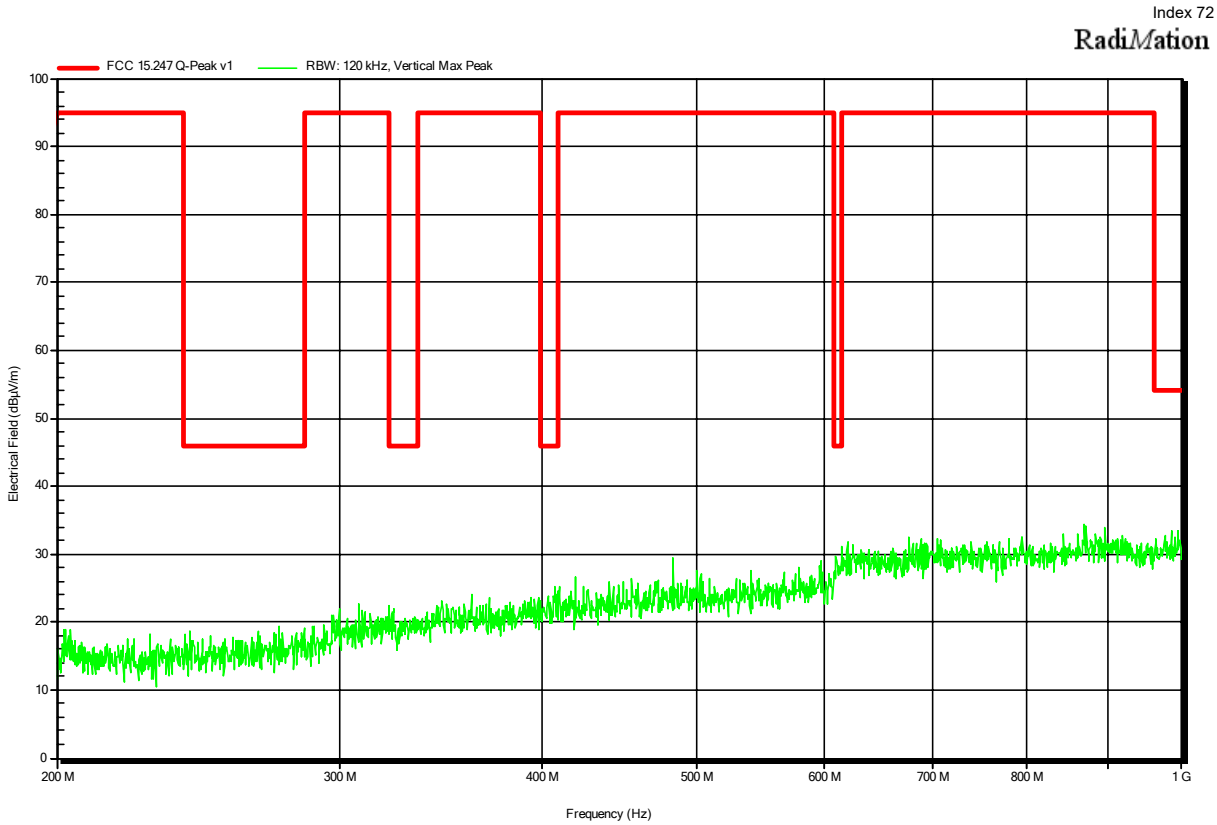
Measurement distance:	3 m
Mode:	Tx; BLE, 2480MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-06
Note:	



Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
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Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Schwarzbeck BBHA 9120B, Horizontal
Measurement distance:	3 m
Mode:	Tx; BLE, 2480MHz, 2-GFSK, 1Mbps
Test Date:	Tuesday, August 3, 2021
Note:	

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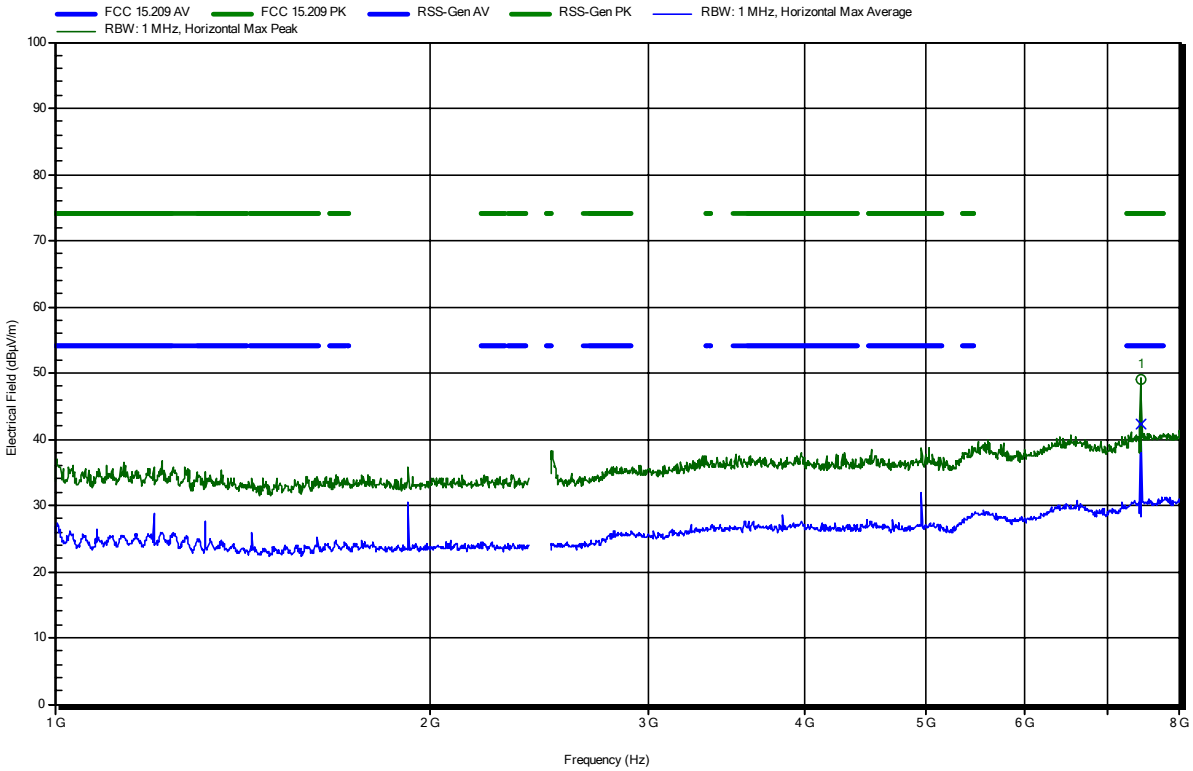
RadiMation

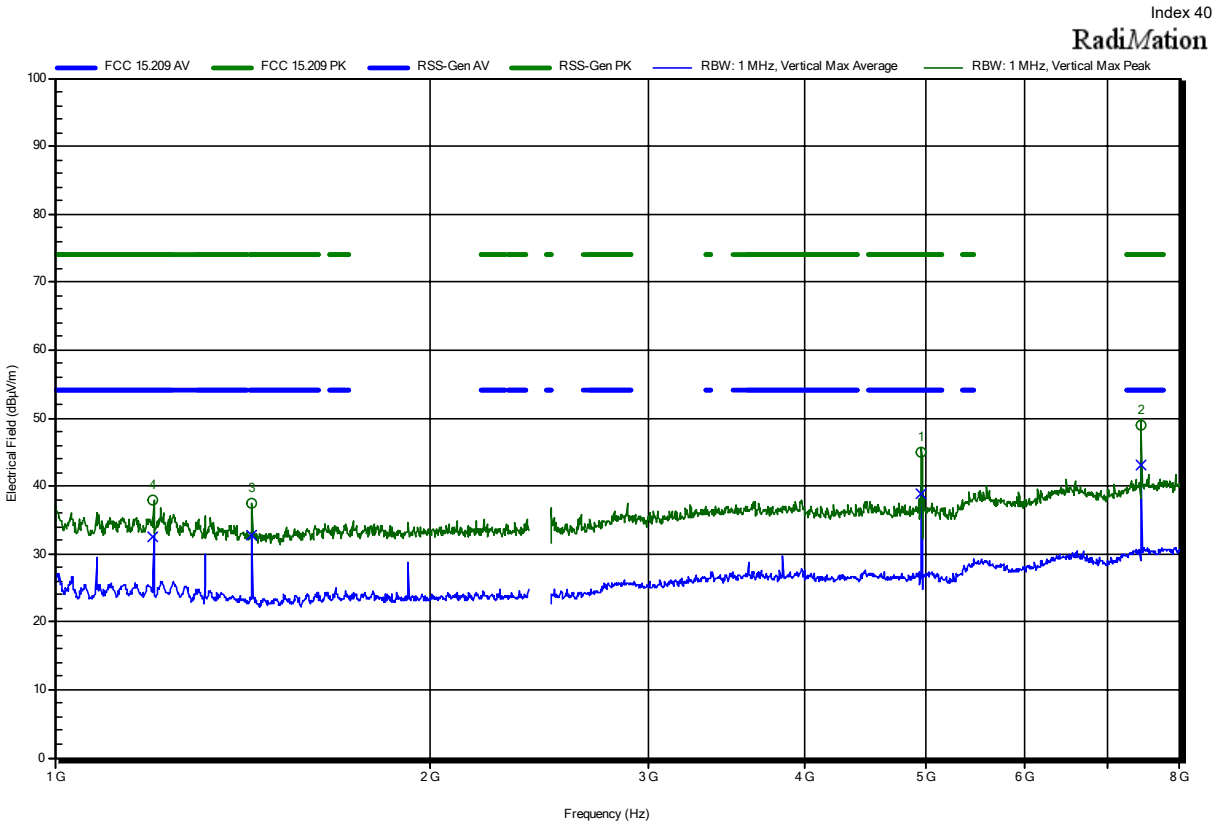


Frequency	Peak	Peak Limit	Peak Difference	Peak Status
7.439 GHz	49.04 dBµV/m	74 dBµV/m	-24.96 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
7.439 GHz	42.31 dBµV/m	54 dBµV/m	-11.69 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Schwarzbeck BBHA 9120B, Vertical
Measurement distance:	3 m
Mode:	Tx; BLE, 2480MHz, 2-GFSK, 1Mbps
Test Date:	Tuesday, August 3, 2021

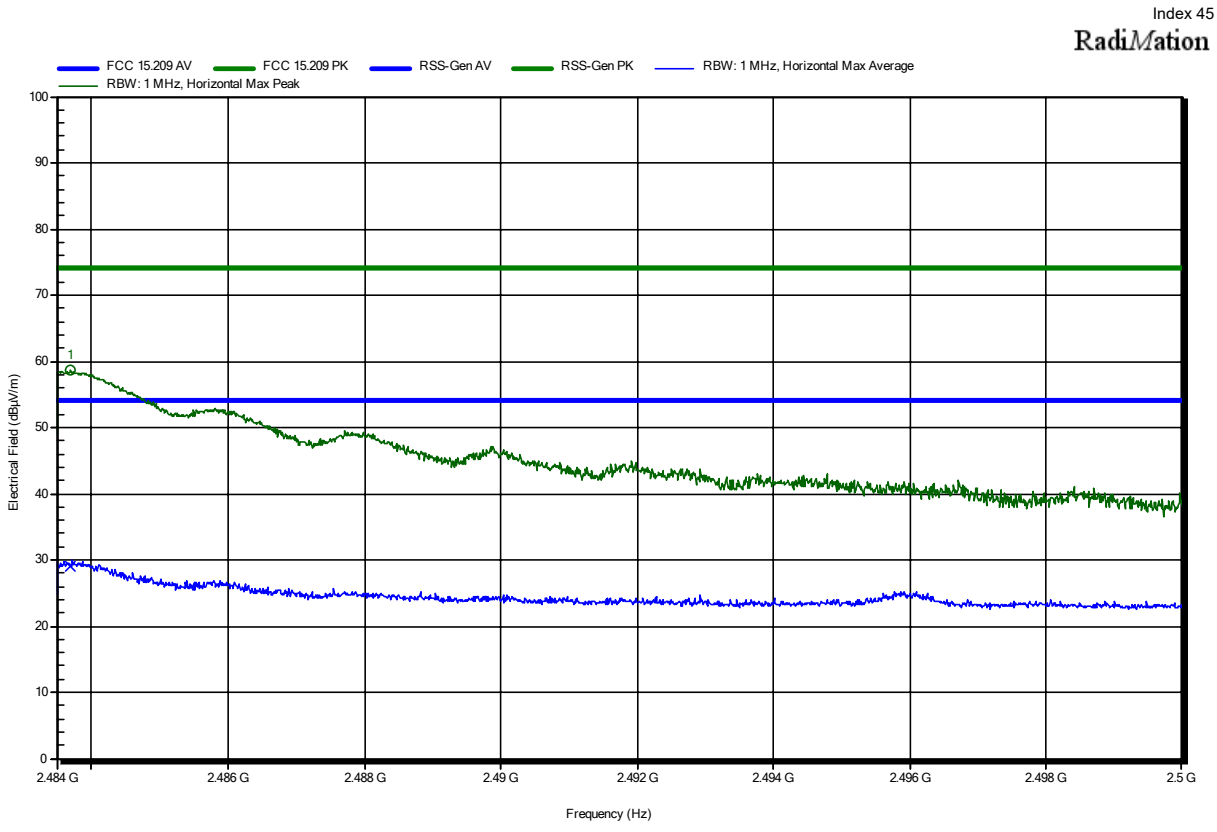


Frequency	Peak	Peak Limit	Peak Difference	Peak Status
1.2 GHz	38 dBµV/m	74 dBµV/m	-36 dB	Pass
1.44 GHz	37.45 dBµV/m	74 dBµV/m	-36.55 dB	Pass
4.96 GHz	44.97 dBµV/m	74 dBµV/m	-29.03 dB	Pass
7.439 GHz	48.86 dBµV/m	74 dBµV/m	-25.14 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
1.2 GHz	32.58 dBµV/m	54 dBµV/m	-21.42 dB	Pass
1.44 GHz	32.74 dBµV/m	54 dBµV/m	-21.26 dB	Pass
4.96 GHz	38.92 dBµV/m	54 dBµV/m	-15.08 dB	Pass
7.439 GHz	43.13 dBµV/m	54 dBµV/m	-10.87 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Schwarzbeck BBHA 9120B, Horizontal
Measurement distance:	3 m
Mode:	Tx; BLE, 2480MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-03
Note:	upper bandedge

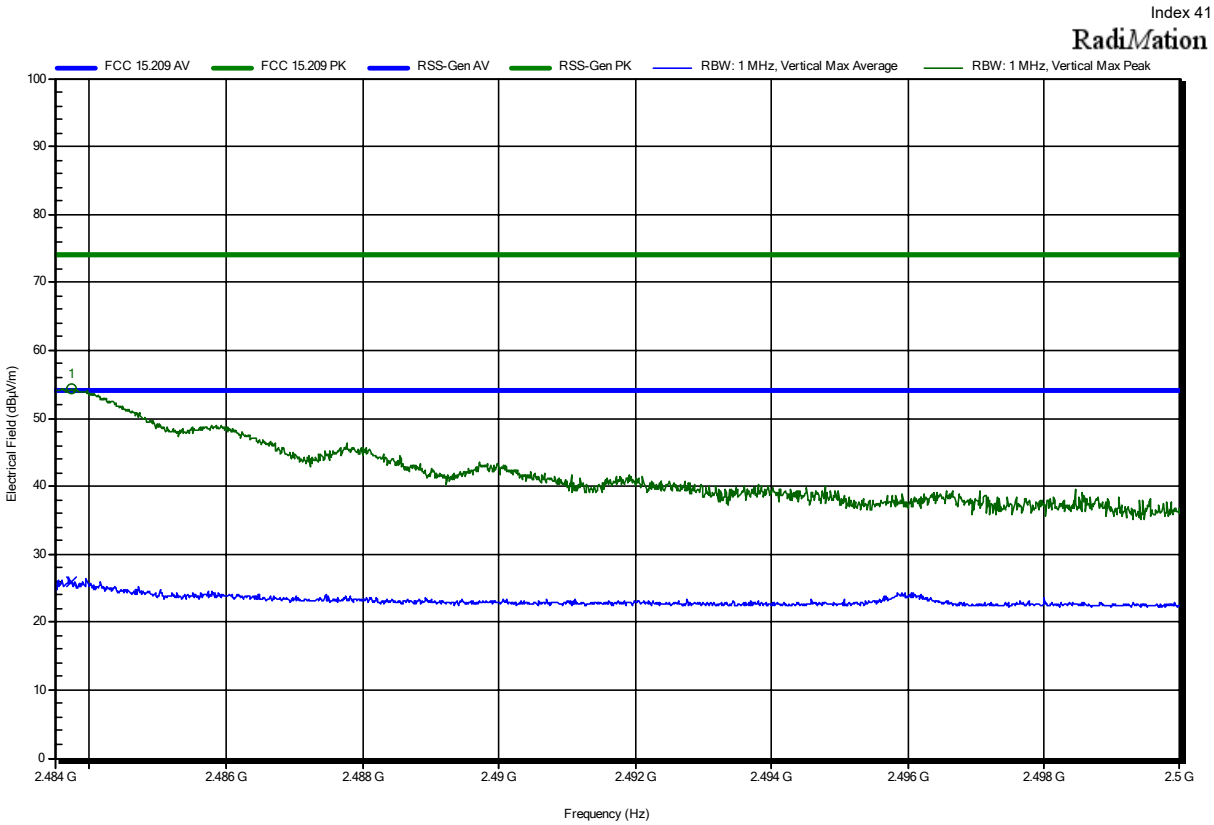


Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.4837 GHz	58.56 dBµV/m	74 dBµV/m	-15.44 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
2.4837 GHz	29.15 dBµV/m	54 dBµV/m	-24.85 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Schwarzbeck BBHA 9120B, Vertical
Measurement distance:	3 m
Mode:	Tx; BLE, 2480MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-03
Note:	upper bandedge

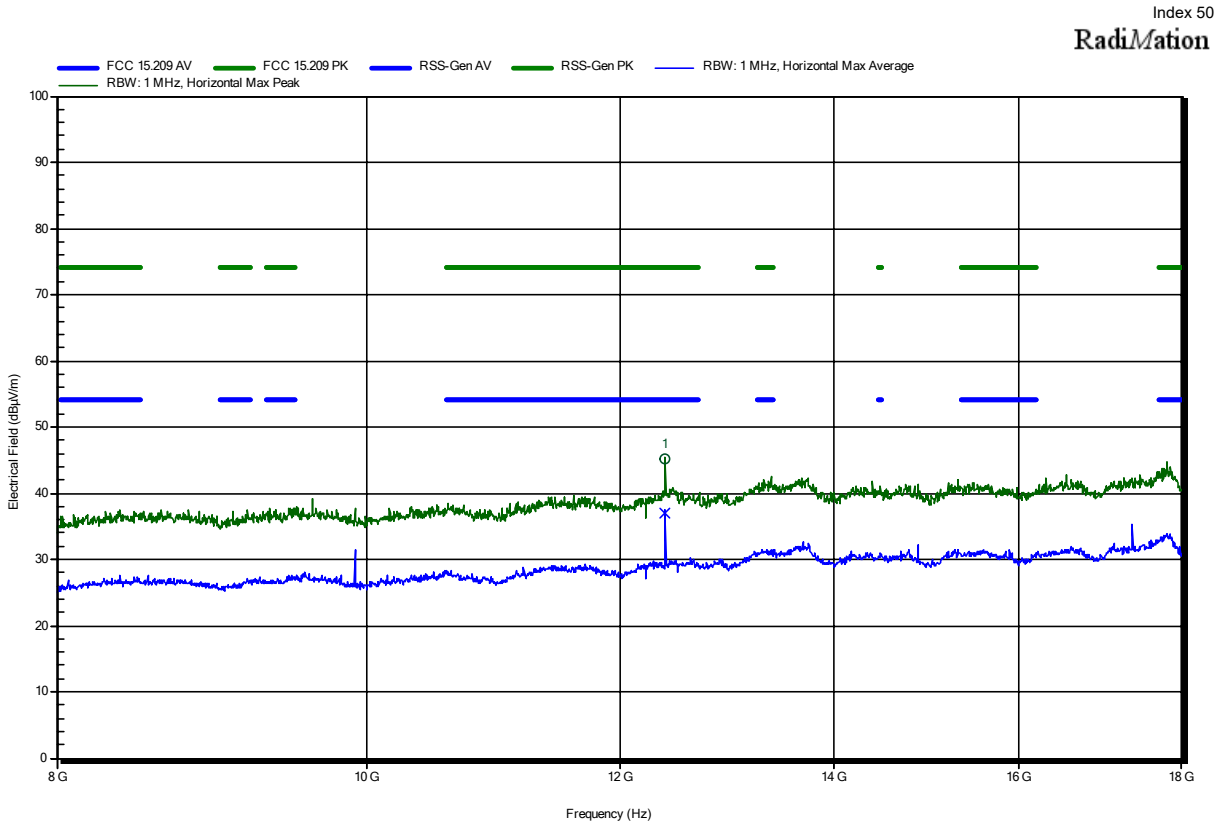


Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.4837 GHz	54.41 dBµV/m	74 dBµV/m	-19.59 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
2.4837 GHz	25.83 dBµV/m	54 dBµV/m	-28.17 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Schwarzbeck HWRD 650, Horizontal
Measurement distance:	3 m
Mode:	Tx; BLE, 2480MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-04
Note:	

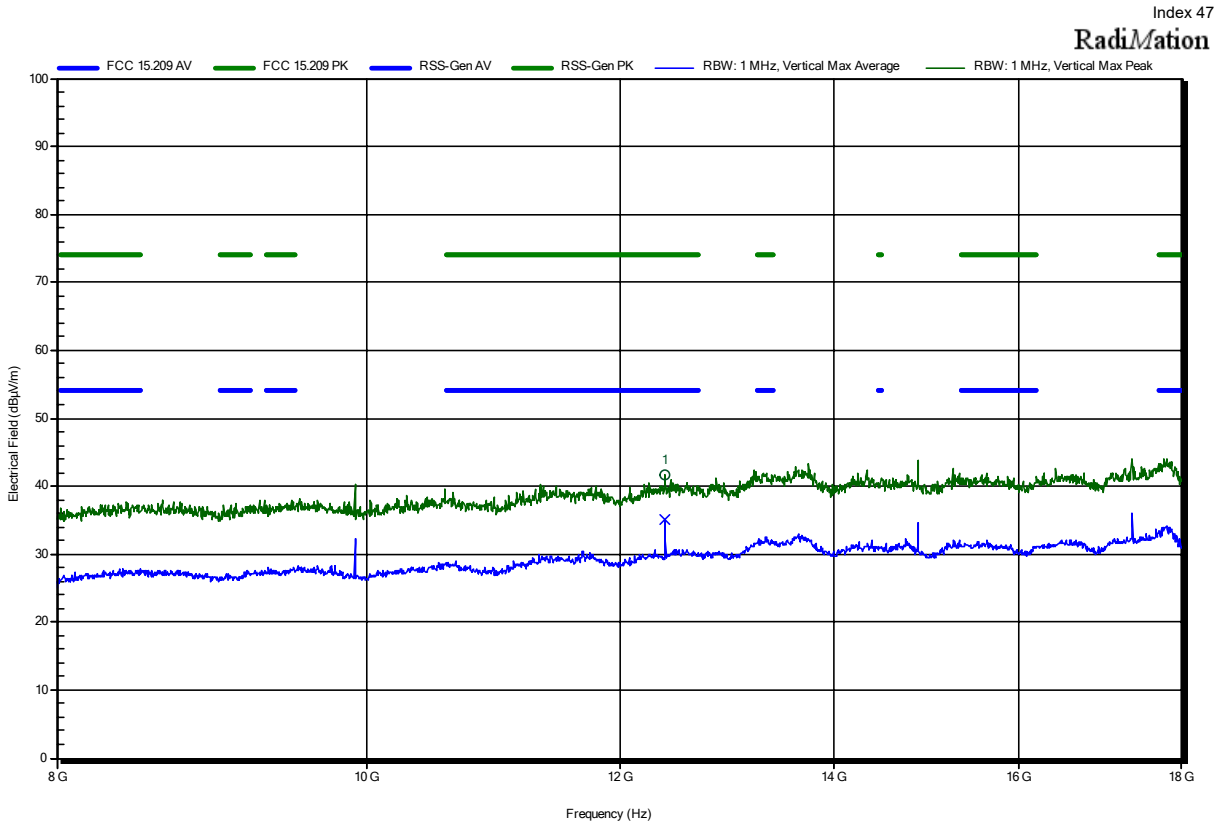


Frequency	Peak	Peak Limit	Peak Difference	Peak Status
12.399 GHz	45.17 dBµV/m	74 dBµV/m	-28.83 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
12.399 GHz	36.94 dBµV/m	54 dBµV/m	-17.06 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Schwarzbeck HWRD 650, Vertical
Measurement distance:	3 m
Mode:	Tx; BLE, 2480MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-03
Note:	



Frequency	Peak	Peak Limit	Peak Difference	Peak Status
12.399 GHz	41.62 dBµV/m	74 dBµV/m	-32.38 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
12.399 GHz	35.01 dBµV/m	54 dBµV/m	-18.99 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Amplifier Research ATH18G40, Horizontal
Measurement distance:	3 m
Mode:	Tx; BLE, 2480MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-04
Note:	

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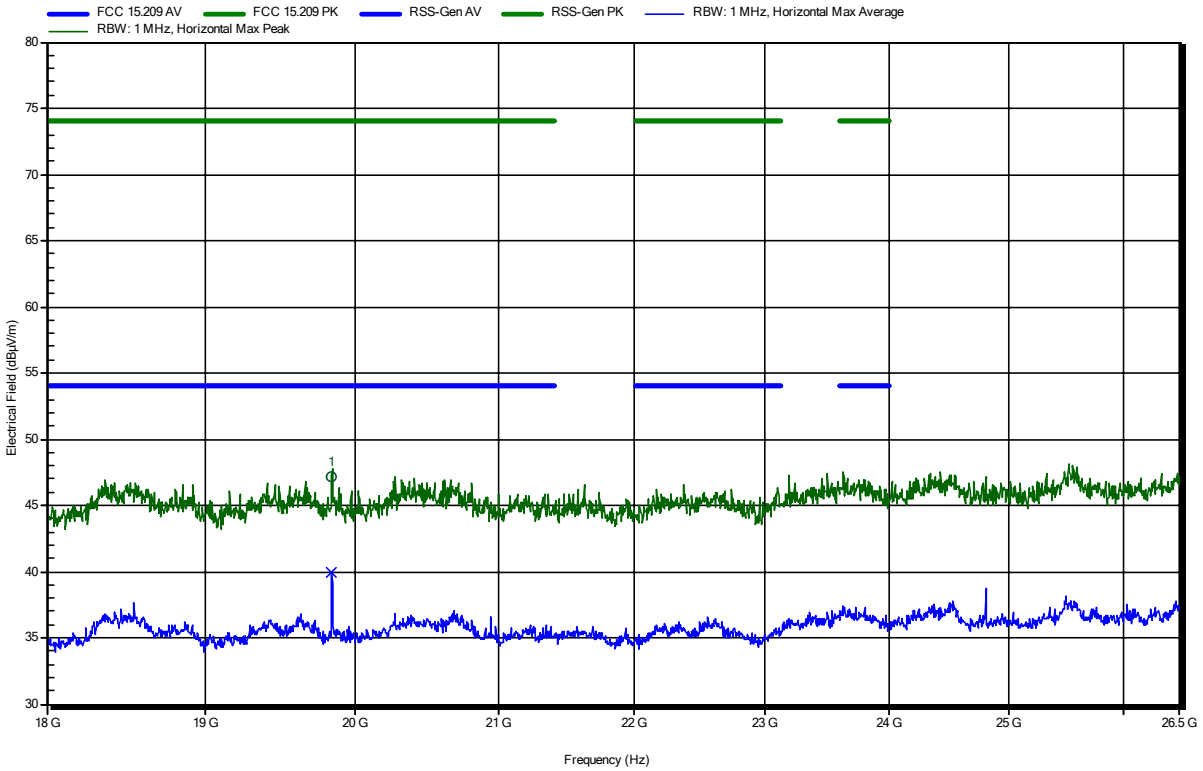
RadiMation

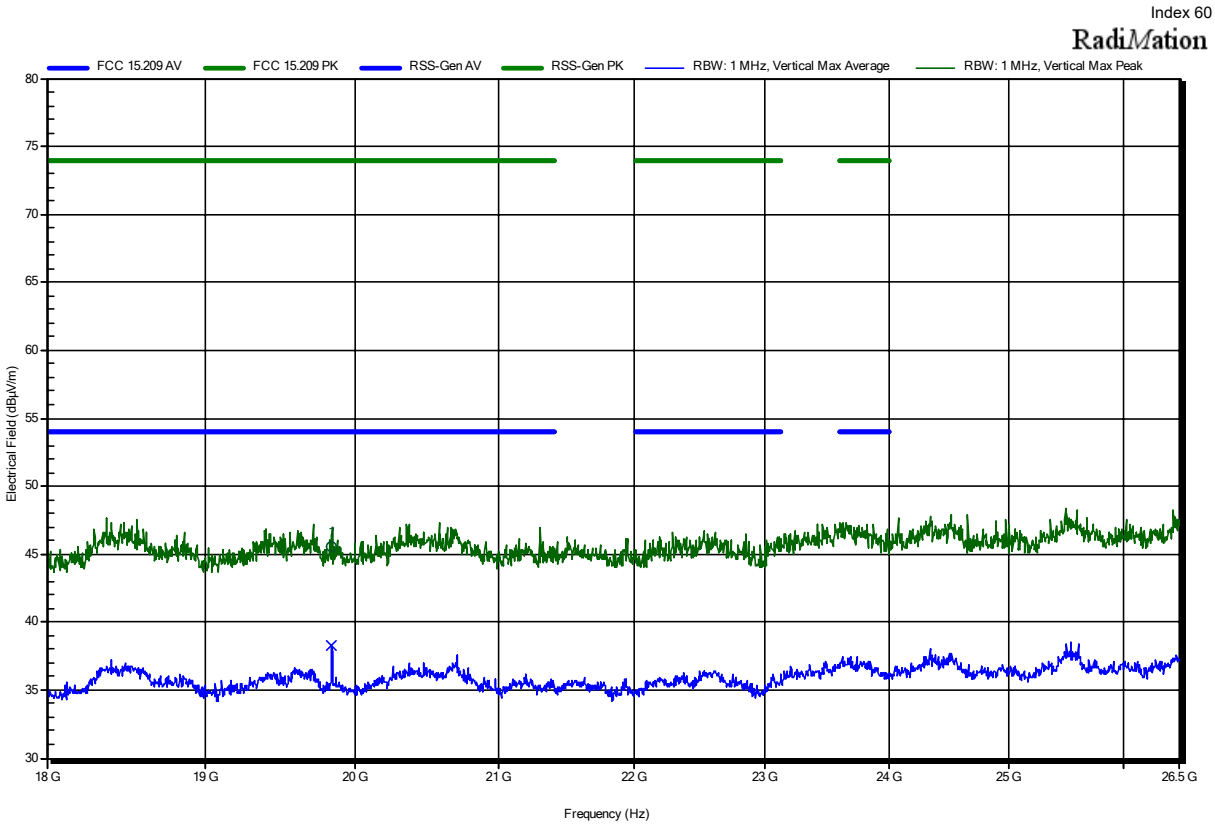


Frequency	Peak	Peak Limit	Peak Difference	Peak Status
19.838 GHz	47.22 dBµV/m	74 dBµV/m	-26.78 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
19.838 GHz	39.96 dBµV/m	54 dBµV/m	-14.04 dB	Pass

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Amplifier Research ATH18G40, Vertical
Measurement distance:	3 m
Mode:	Tx; BLE, 2480MHz, 2-GFSK, 1Mbps
Test Date:	2021-08-04
Note:	



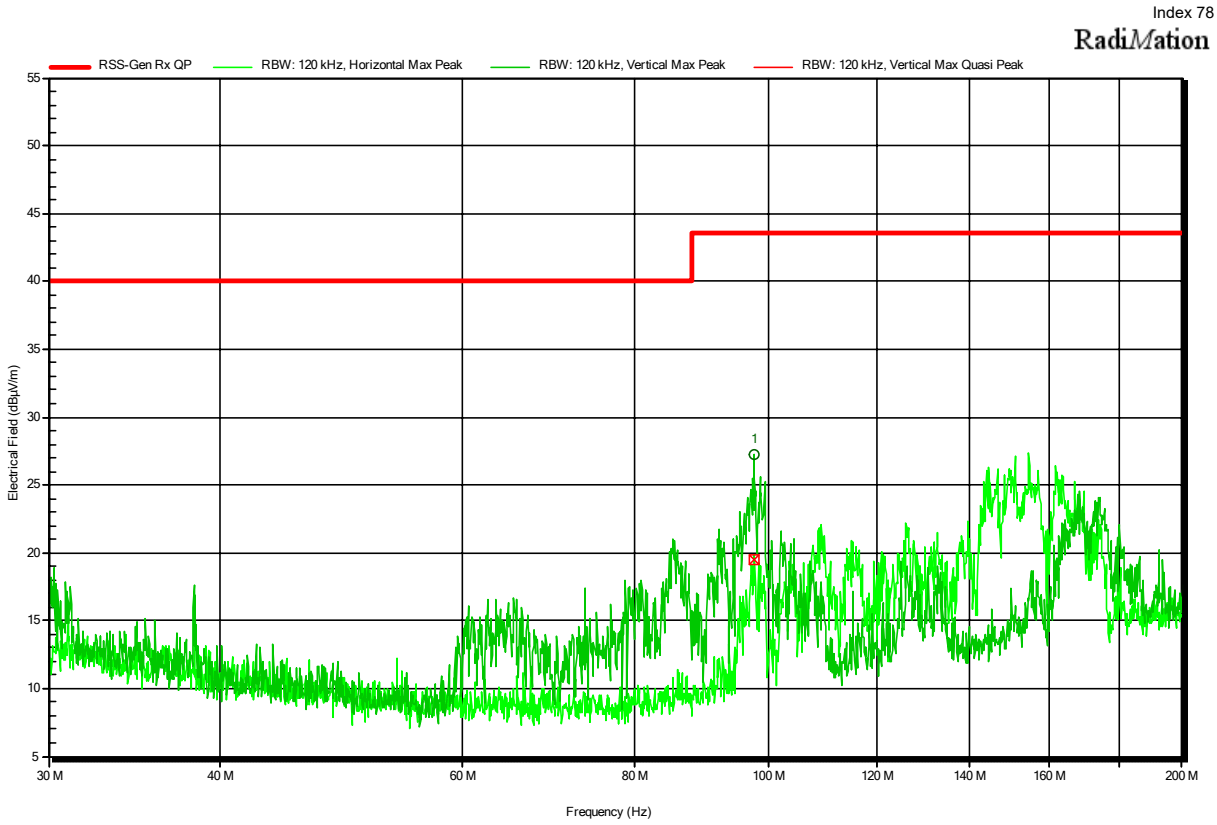
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
19.838 GHz	45.51 dBµV/m	74 dBµV/m	-28.49 dB	Pass

Frequency	Average	Average Limit	Average Difference	Average Status
19.838 GHz	38.3 dBµV/m	54 dBµV/m	-15.7 dB	Pass

ANNEX B Receiver spurious emissions

Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

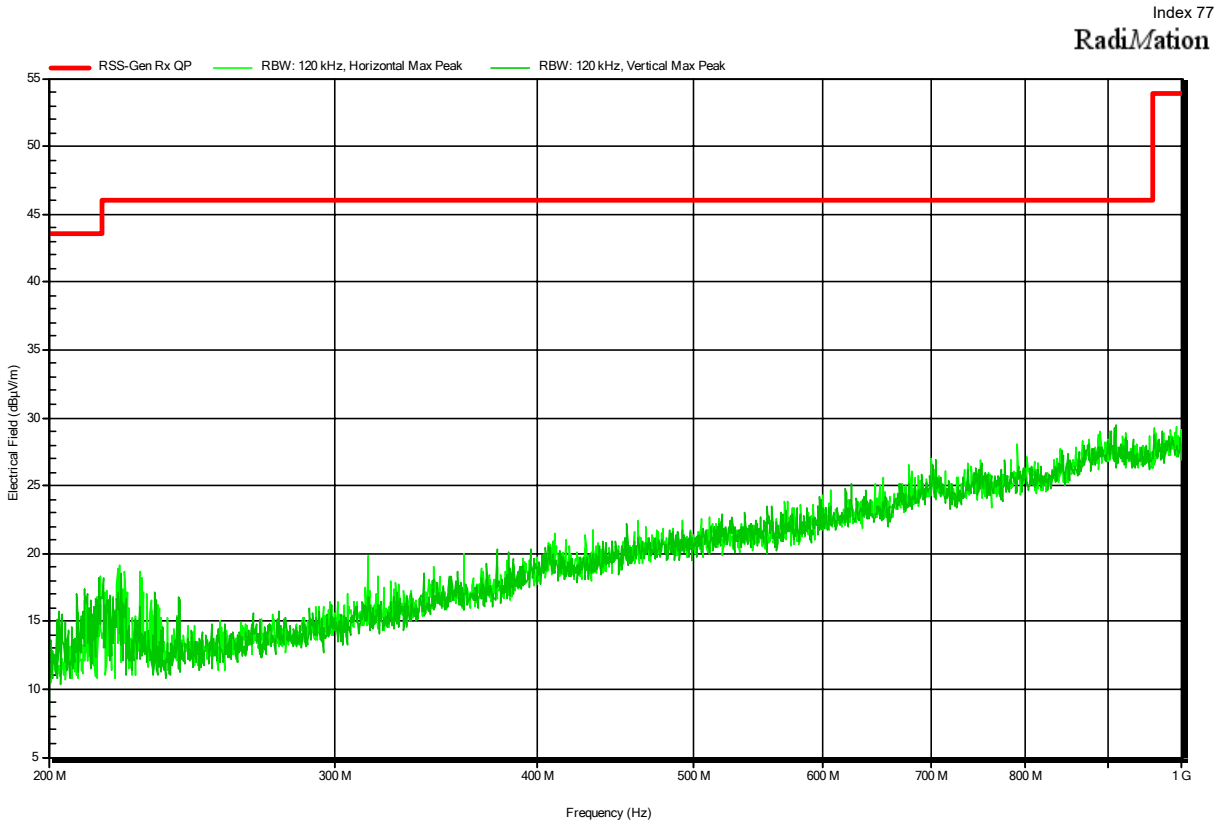
Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Rohde & Schwarz HK 116
Measurement distance:	3 m
Mode:	Rx; BLE, 2440MHz
Test Date:	2021-08-06
Note:	



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Polarization
97.5962 MHz	19.5 dBµV/m	43.5 dBµV/m	-23.96 dB	Pass	Vertical

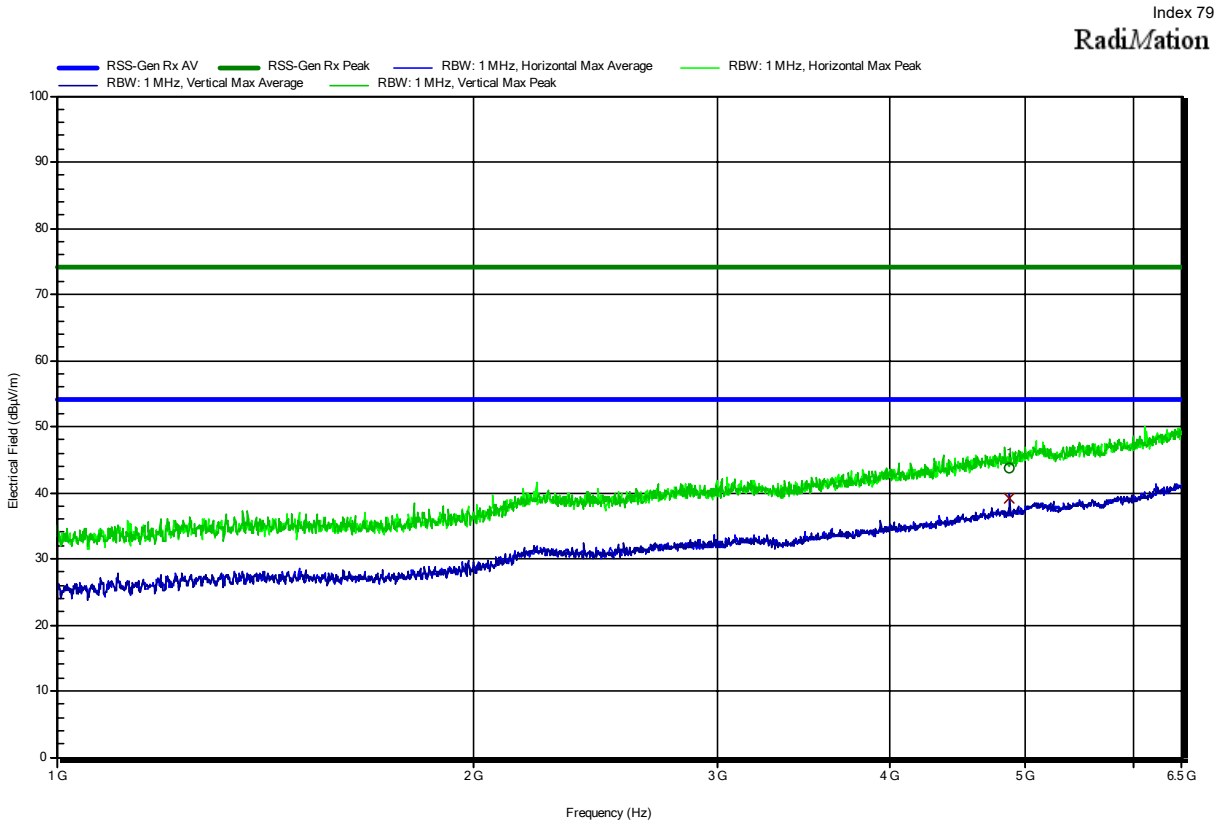
Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Rohde & Schwarz HL 223
Measurement distance:	3 m
Mode:	Rx; BLE, 2440MHz
Test Date:	2021-08-06
Note:	



Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Schwarzbeck BBHA 9120D
Measurement distance:	3 m
Mode:	Rx; BLE, 2440MHz
Test Date:	2021-08-06
Note:	

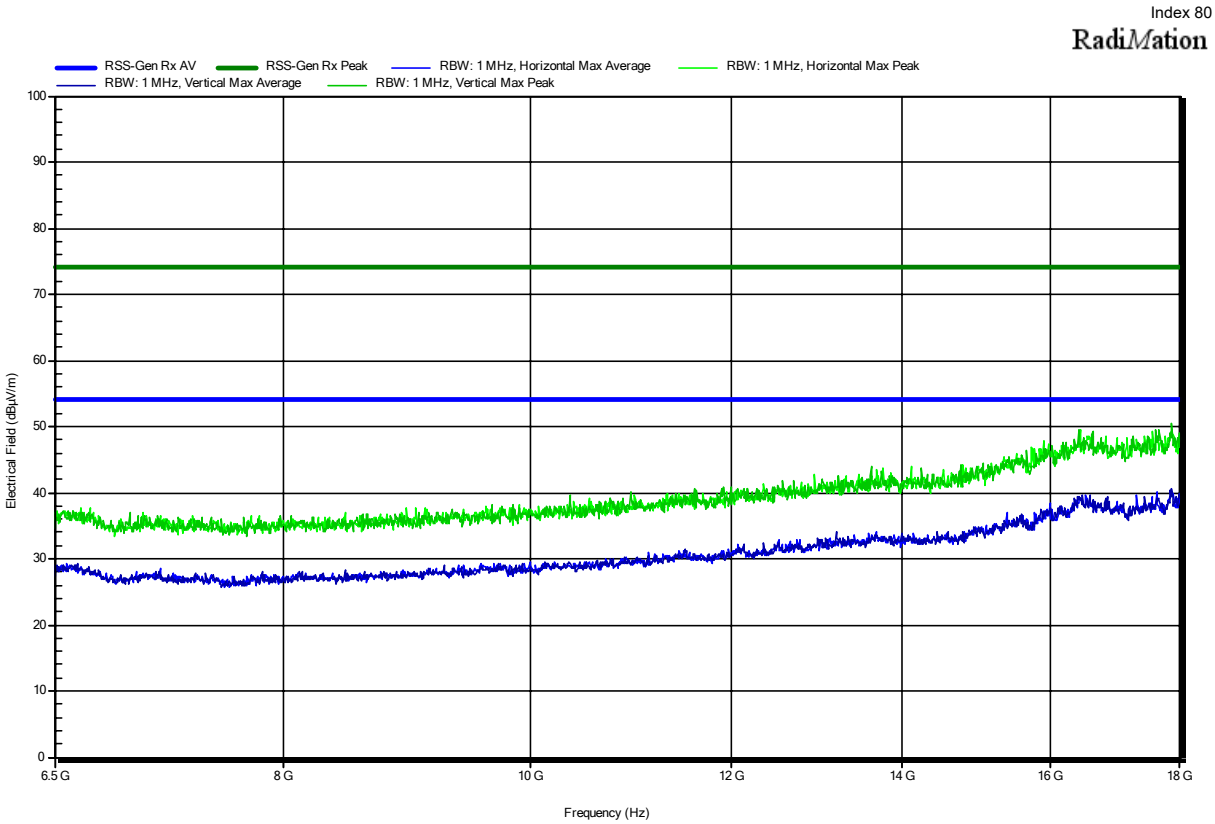


Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
4.877 GHz	43.85 dBµV/m	53.98 dBµV/m	-10.13 dB	Pass	Vertical

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
4.877 GHz	39.27 dBµV/m	53.98 dBµV/m	-14.71 dB	Pass	Vertical

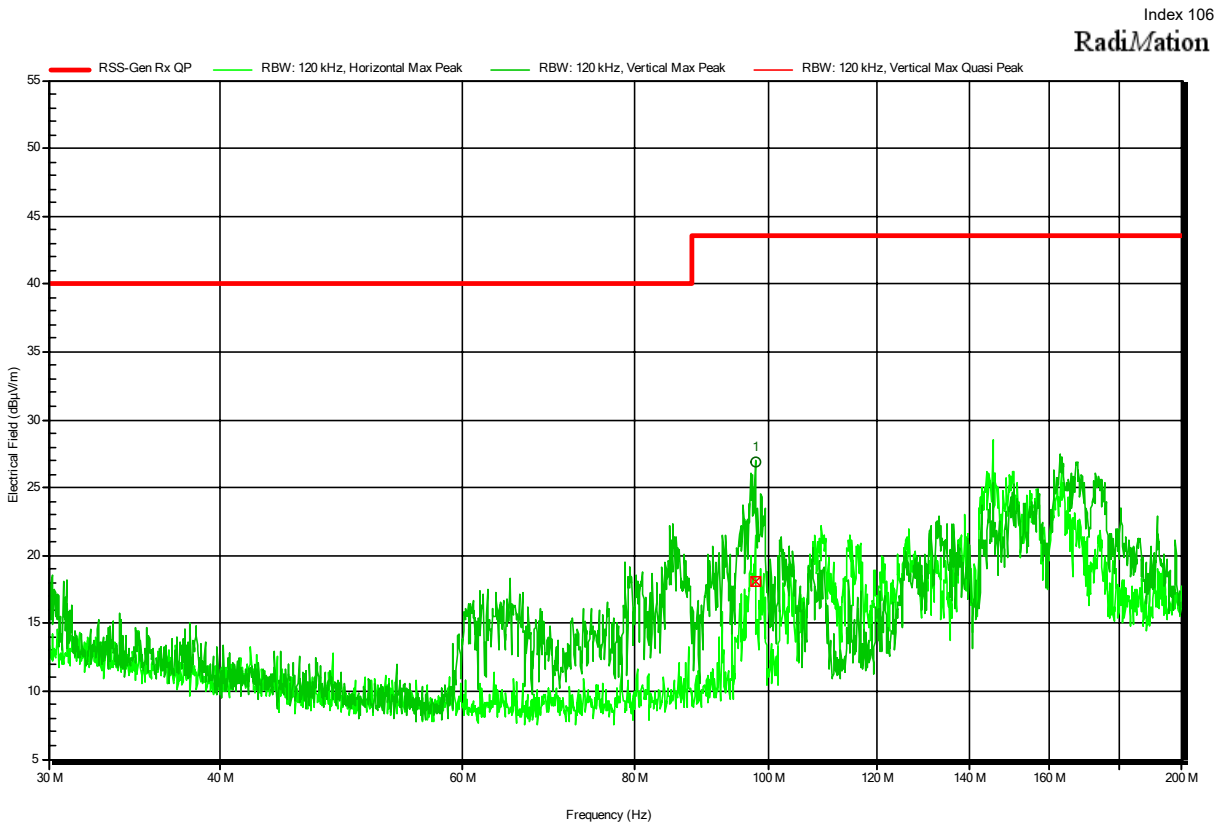
Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603
Test Sample ID:	34118
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Schwarzbeck Schwarzbeck HWRD 650
Measurement distance:	3 m
Mode:	Rx; BLE, 2440MHz
Test Date:	2021-08-06
Note:	



Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

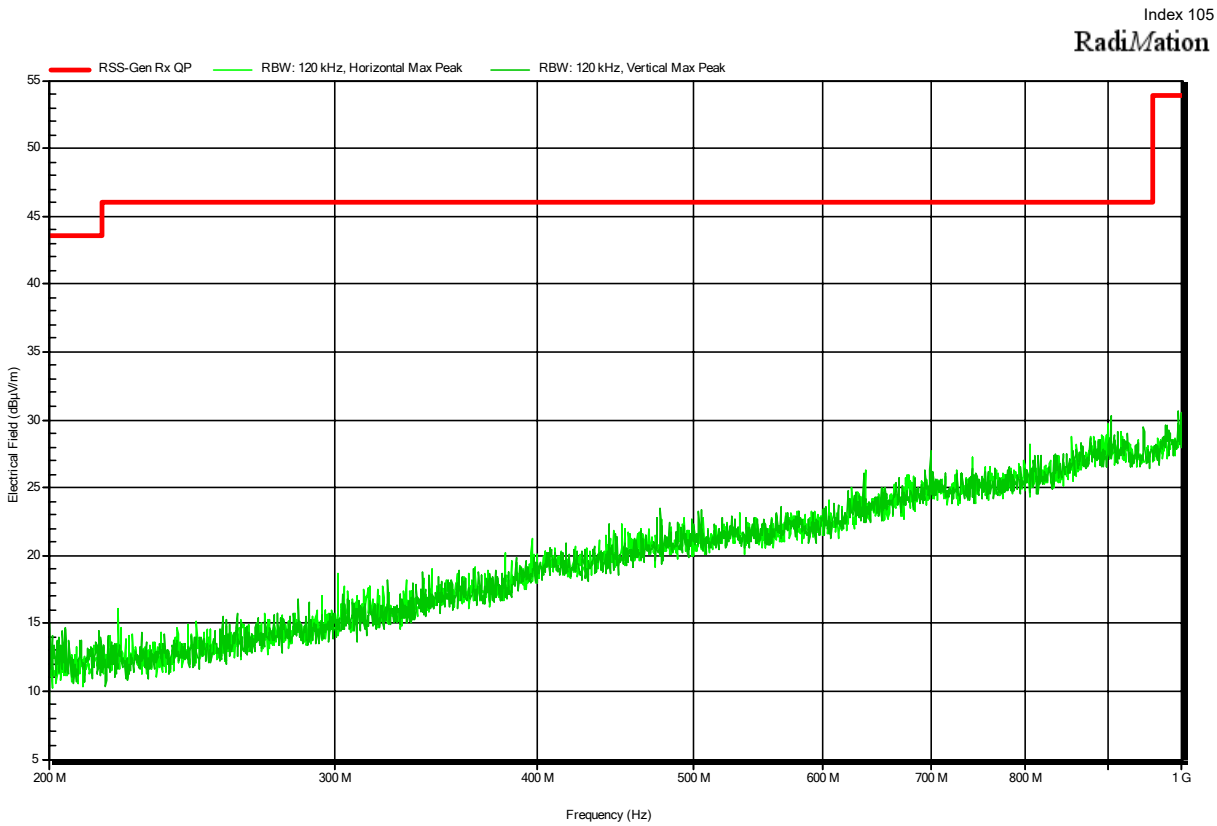
Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603 (MALAYSIA PRODUCTION)
Test Sample ID:	34112
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Rohde & Schwarz HK 116
Measurement distance:	3 m
Mode:	Rx; BLE, 2440MHz
Test Date:	2021-08-06
Note:	



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Polarization
97.847 MHz	18.1 dBµV/m	43.5 dBµV/m	-25.38 dB	Pass	Vertical

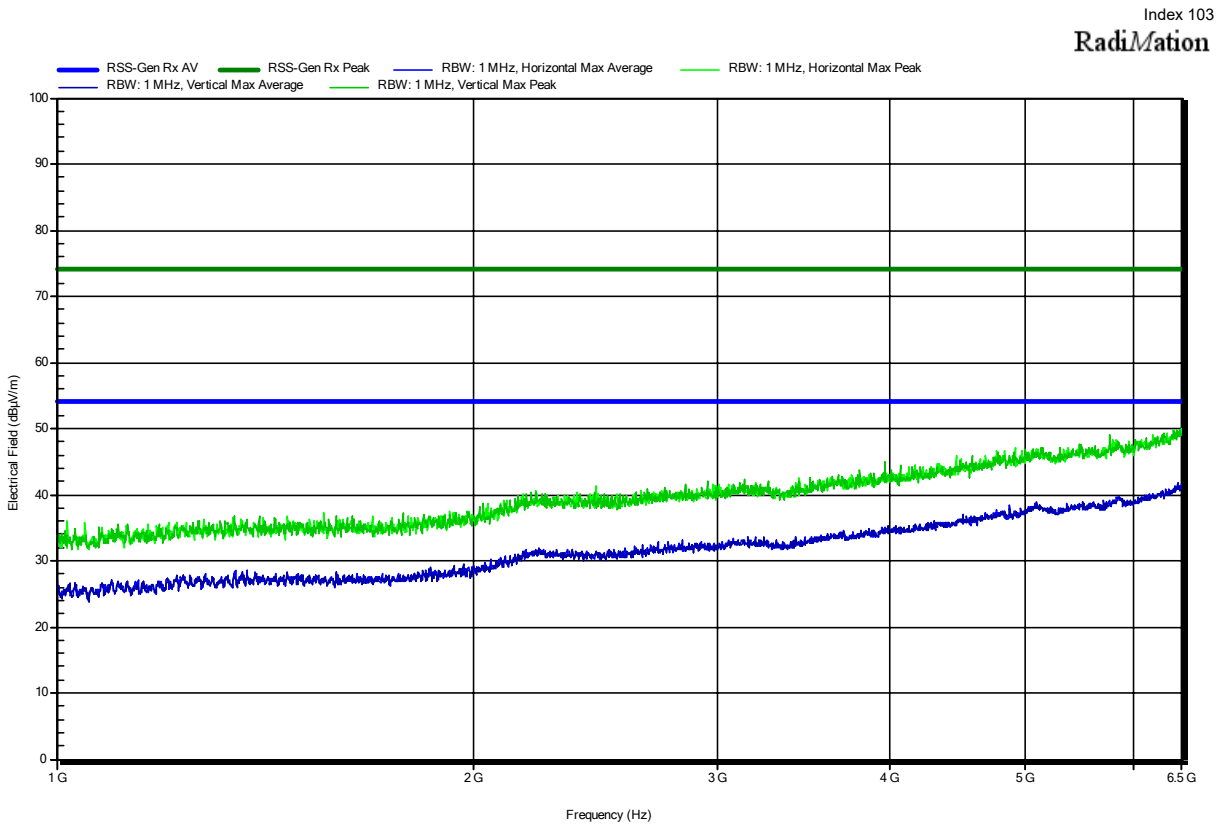
Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603 (MALAYSIA PRODUCTION)
Test Sample ID:	34112
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Rohde & Schwarz HL 223
Measurement distance:	3 m
Mode:	Rx; BLE, 2440MHz
Test Date:	2021-08-06
Note:	



Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603 (MALAYSIA PRODUCTION)
Test Sample ID:	34112
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Schwarzbeck BBHA 9120D
Measurement distance:	3 m
Mode:	Rx; BLE, 2440MHz
Test Date:	2021-08-06
Note:	



Radiated Spurious Emissions according to RSS-247, 47 CFR Part 15.247

Project Number:	G0M-2103-9658
Applicant:	Philip Morris Products S.A.
Model Description:	Electronic Vaping System
Model:	B-1603 (MALAYSIA PRODUCTION)
Test Sample ID:	34112
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Voigt
Measurement software:	RadiMation, version 2020.1.8
Test Conditions:	Tnom: 22 °Celsius, Vnom: 120V/60Hz converted to 5 VDC
Antenna:	Schwarzbeck Schwarzbeck HWRD 650
Measurement distance:	3 m
Mode:	Rx; BLE, 2440MHz
Test Date:	2021-08-06
Note: