

ISED CABid: ES1909
Lab. Company Number: 4621A

Test Report No:
79798RRF008

Partial Test Report

USA FCC 15.31(h), 15.209, 15.247, 24, 27
CANADA RSS-130, RSS-133, RSS-247, RSS-Gen

(*) Identification of item tested	Non-invasive ventilation (NIV) device
(*) Trademark	ResMed
(*) Model and /or type reference	AIR11M1TA
Other identification of the product	FCC ID: 2ACHL-AIR11M1TA IC: 9103A-AIR11M1TA
(*) Features	LTE Cat-M1, BLE HW version: R510-718 SW version: SW04600
Applicant	ResMed Pty Ltd 1 Elizabeth Macarthur Drive, Bella Vista, NSW, 2153, Australia
Test method requested, standard	USA FCC Part 15.31(h) (10-1-23 Edition): Measurement standard. USA FCC Part 15.209 (10-1-23 Edition): Radiated emission limits; general requirements. USA FCC Part 15.247 (10-1-23 Edition): Operation within the bands 902 - 928 MHz, 2400 -2483.5 MHz, and 5725 - 5850 MHz. USA FCC Part 24 (10-1-23 Edition): Personal Communications Services. USA FCC Part 27 (10-1-23 Edition): Miscellaneous Wireless Communications Services. CANADA RSS-130 Issue 2, February 2019. CANADA RSS-133 Issue 7, July 2024. CANADA RSS-247 Issue 4, July 2025. CANADA RSS-Gen Issue 5, Amendment 2, February. 2021. Guidance for Performing Compliance Measurements on Digital Transmission System, Frequency Hopping Spread Spectrum: System, and Hybrid Systems Devices Operating Under Section 15.247 of the FCC Rules. 558074 D01 Meas Guidance v05r02 dated April 2, 2019. Measurement Guidance for Certification of Licensed Digital Transmitters. 971168 D01 Power Meas License Digital Systems v03r01 dated April 9, 2018. ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Errata to C63.10a-2024: American National Standard for Testing Unlicensed Wireless Devices.

	ANSI C63.26-2015 IEEE/ANSI Standard for Testing of Transmitters Used in Licensed Radio Services.	
Approved by (name / position & signature)	José Manuel Gómez Galván EMC Consumer & RF Lab. Manager	 Firmado digitalmente por 53680346W JOSE MANUEL GOMEZ (C:A29507456)
Date of issue	2026-02-20	
Report template No.	FDT08_25 (*) "Data provided by the client"	

Index

Competences and guarantees4

General conditions4

Uncertainty.....4

Data provided by the client.....5

Usage of samples5

Test sample description5

Identification of the client.....7

Testing period and place7

Document history7

Environmental conditions7

Remarks and comments8

Testing verdicts.....9

Summary9

Appendix A: Test results10

Competences and guarantees

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DEKRA Testing and Certification is an FCC-recognized accredited testing laboratory with appropriate scope of accreditation that covers the performed tests in this report.

DEKRA Testing and Certification is an ISED-recognized accredited testing laboratory, CABid: ES1909, Company Number: 4621A, with the appropriate scope of accreditation that covers the performed tests in this report.

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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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General conditions

1. This report is only referred to the item that has undergone the test.
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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 radiated emissions of the EUT from 30 MHz to 1 GHz is:
Measurement uncertainty $\leq \pm 5.35$ dB (with factor $k=2$).

The total uncertainty of the measurement system for the radiated emissions of the EUT from 1 to 17 GHz is:
Measurement uncertainty $\leq \pm 4.32$ dB (with factor $k=2$).

The total uncertainty of the measurement system for the radiated emissions of the EUT from 17 to 40 GHz is:
Measurement uncertainty $\leq \pm 5.51$ dB (with factor $k=2$).

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").
2. The sample model AIR11M1TA is a NIV Device with Integrated Cellular and Bluetooth Connectivity.

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. The laboratory is not responsible for such information and it is not covered by accreditation.

Usage of samples

Samples undergoing test have been selected by: The client.

Id	Control Number	Description	Model	Serial N°	Date of Reception	Application
S/01	79798_38.1	Non-invasive ventilation (NIV) device	AIR11M1TA	22242275641	2025-04-02	Element Under Test
S/01	79798_51.1	Humidifier	--	--	2025-04-02	Element Under Test
S/01	79798_52.1	Power cord	--	--	2025-04-02	Element Under Test
S/01	79798_53.1	AC/DC adapter	390001	23022280303	2025-04-02	Element Under Test
S/01	79798_55.1	Climate tube	--	--	2025-04-02	Element Under Test

Notes referenced to samples during the project:

Id	Type
S/01	Sample used for radiated tests

Test sample description

Ports.....:	Port name and description	Cable					
		Specified max length [m]	Attached during test	Shielded			
	Power	-	☒	☒			
Supplementary information to the ports.....:	-						
Rated power supply..... :	Voltage and Frequency		Reference poles				
			L1	L2	L3	N	PE
	☐	AC: 100-240V~50-60 Hz 1.0-1.5A	☒	☐	☐	☒	☐
	☒	AC: 115V~400Hz 1.5A	☒	☐	☐	☒	☐
	☐	DC: 12V (DC-DC for Vehicle Use)					
	☐	DC: 24V (DC-DC for Vehicle Use)					
Rated Power	24 VDC, 3.75A						
Clock frequencies..... :	N/A						
Other parameters	390001 (PSU model number)						
Software version	SW04600						
Hardware version	R510-718						
Dimensions in cm (W x H x D) ... :	140 mm x 280 mm x 94.5 mm						
Mounting position	☒	Table top equipment					
	☐	Wall/Ceiling mounted equipment					
	☐	Floor standing equipment					
	☐	Hand-held equipment					
	☐	Other:					
Modules/parts	Module/parts of test item		Type	Manufacturer			
	Cellular		EXS62-W	Telit			
	Bluetooth SoC		EFR32BG22	SiLabs			
Accessories (not part of the test item)..... :	Description		Type	Manufacturer			
	Power Supply Unit 390001		N/A	ResMed			
	Power Supply Unit R390-7330		N/A	ResMed			
Documents as provided by the applicant	Description		File name	Issue date			
	-		-	-			

Identification of the client

ResMed Pty Ltd
1 Elizabeth Macarthur Drive, Bella Vista, NSW, 2153, Australia

Testing period and place

Test Location	DEKRA Testing and Certification S.A.U.
Date (start)	2025-07-30
Date (finish)	2025-07-31

Document history

Report number	Date	Description
79798RRF008	2026-02-20	First release.

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. = 20 % Max. = 75 %

In the semi-anechoic chamber, the following limits were not exceeded during the test.

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 20 % Max. = 75 %

Remarks and comments

The tests have been performed by the technical personnel: Sergio Carrasco.

Used instrumentation:

Control No.	Equipment	Model	Manufacturer	Next Calibration
06132	ETHERNET TEMPERATURE AND HUMIDITY LOGGER	HWg-STE	HW GROUP	2026-04-28
06126	ETHERNET TEMPERATURE AND HUMIDITY LOGGER	HWg-STE	HW GROUP	2026-04-22
04612	HORN ANTENNA 1-18GHz	BBHA 9120 D	SCHWARZBECK MESS-ELEKTRONIK	2027-10-15
05641	HYBRID BILOG ANTENNA 30MHz-6GHz	3142E	ETS LINDGREN	2027-10-23
09360	PRE-AMPLIFIER G>40dB 1-18 GHz	BLMA 0118-1M	BONN ELEKTRONIK	2025-08-05
07414	PREAMPLIFIER BOX	-	INTERNO	2026-01-13
06064	SEMIANECHOIC ABSORBER LINED CHAMBER	SAC-3	Frankonia	--
06329	SHIELDED ROOM	--	FRANKONIA	--
04848	SOFTWARE FOR EMC/RF TESTING	EMC32	ROHDE AND SCHWARZ	--

Testing verdicts

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

Summary

FCC 15, 24, 27 / CANADA RSS-130, RSS-133, RSS-247, RSS-Gen PARAGRAPH			
Requirement – Test case		Verdict	Remark
FCC 15.31 (h), 15.209 (a), 15.247 (d), 24.238 (a) (b), 27.53 (g) / RSS-130 4.7.1, RSS-133 5.6, RSS-247 5.5, RSS-Gen 8.9	Emission limitations radiated (Transmitter)	P	(1)
<u>Supplementary information and remarks:</u> (1) Only simultaneous transmission radiated spurious emission test was requested.			

Appendix A: Test results

INDEX

TEST CONDITIONS 12

SAMPLE CALCULATION13

FCC 15.31 (h), 15.209 (a), 15.247 (d), 24.238 (a) (b), 27.53 (g) / RSS-130 4.7.1, RSS-133 5.6, RSS-247 5.5, RSS-Gen 8.9 Emission limitations radiated (Transmitter) 14

TEST CONDITIONS

(*): Data provided by the Applicant.

POWER SUPPLY (*):

Vnominal: 115 Vac.
Type of Power Supply: Mains Supply.

ANTENNA (*):

Technologies	Antenna Gain (dBi)	Type of Antenna
Bluetooth Low Energy	+2.48	Internal
LTE Cat-M1 4	+2.50	Internal
LTE Cat-M1 12	+2.00	Internal

TEST FREQUENCIES:

Frequency range	Technologies	Modulations	Worst case
$f < 1 \text{ GHz}$	LTE Cat-M1 12	QPSK, 16QAM	Middle Channel (707.5 MHz)
$1 \text{ GHz} < f < 2 \text{ GHz}$	LTE Cat-M1 4	QPSK, 16QAM	Middle Channel (1732.5 MHz)
$f > 2 \text{ GHz}$	Bluetooth Low Energy	GFSK	High Channel (2480 MHz) (1M)

The test set-up was made according to the general provisions of FCC 558074 D01 15.247 Meas Guidance v05r02 dated April 2, 2019.

TEST FREQUENCIES FOR SIMULTANEOUS TRANSMISSION MODE RADIATED TESTS:

The EUT was configured to simultaneously transmit the following signals at maximum output power:

- Operation Mode 1**

Simultaneous transmission mode LTE Cat-M1 12, BLE (1M):

LTE Cat-M1 12: Mid Channel (707.5 MHz).QPSK.
Bluetooth Low Energy: High Channel (2480 MHz). GFSK. (1M).

- Operation Mode 2**

Simultaneous transmission mode LTE Cat-M1 4, BLE (1M):

LTE Cat-M1 4: Mid Channel (1732.5 MHz).QPSK.
Bluetooth Low Energy: High Channel (2480 MHz). GFSK. (1M).

SAMPLE CALCULATION

For radiated measurements:

Values measures by the test receiver / analyzer are converted to field strength, in dBuV/m, at the regulatory distance using the following calculation:

$$\text{Unwanted Lvl (dBuV/m)} = \text{Raw Rec (dBuV)} + \text{Preamp (dB)} + \text{Trd Corre. (dB/m)} + \text{SigPath (dB)}$$

Where,

Raw Rec (dBuV): Measured voltage in the receiver / spectrum analyzer in dBuV

Preamp (dB): Path loses due to preamplifier

Trd Corr. (dB/m): Antenna factor in dB/m

SigPath (dB) = Cable loss (dB) – External Gain amplifier (dB) – Distance factor (dB)

Cable loss (dB): Cable loss

External Gain amplifier (dB): Gain from external amplifier (when used)

Distance factor (dB): Distance factor in dB. When measurement distance is different to limit distance

The field strength, calculated by this way is compared with the regulatory limit.

FCC 15.31 (h), 15.209 (a), 15.247 (d), 24.238 (a) (b), 27.53 (g) / RSS-130 4.7.1, RSS-133 5.6, RSS-247 5.5, RSS-Gen 8.9 Emission limitations radiated (Transmitter)

Limits:

1. Bluetooth Low Energy:

Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c) / RSS-Gen):

Frequency Range (MHz)	Field strength (µV/m)	Field strength (dBµV/m)	Measurement distance (m)
0.009-0.490	2400/F(kHz)	-	300
0.490-1.705	24000/F(kHz)	-	30
1.705 - 30.0	30	-	30
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
960 - 25000	500	54	3

The emission limits shown in the above table are based on measurements employing CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

For average radiated emission measurements above 1000 MHz, there is also a limit specified when measuring with peak detector function corresponding to 20 dB above the indicated values in the table above.

RSS-247. Attenuation below the general field strength limits specified in RSS-Gen is not required.

2. LTE Cat-M1 Band 12. FCC §2.1053 & §27.53 (g) / RSS-130 4.7.1.

FCC §27.53 (g):

(g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

RSS-130 4.7.1:

4.7.1. The unwanted emissions in any 100 kHz bandwidth on any frequency outside the low frequency edge and the high frequency edge of each frequency block range(s), shall be attenuated below the transmitter power, P (dBW), by at least $43 + 10 \log_{10} p$ (watts), dB. However, in the 100 kHz band immediately outside of the equipment's frequency block range, a resolution bandwidth of 30 kHz may be employed.

3. LTE Cat-M1 Band 4. FCC §2.1053 & §27.53 (h) / RSS-139 Issue 4 Clause 5.6.

FCC §27.53 (h):

(h) For operations in the 1695-1710 MHz. 1710-1755 MHz. 1755-1780 MHz. 1915-1920 MHz. 1995-2000 MHz. 2000-2020 MHz. 2110-2155 MHz. 2155-2180 MHz. and 2180-2200 bands. the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB.

RSS-139 Issue 4 Clause 5.6:

Unwanted emissions shall be measured in terms of average value.
Equipment shall have the TRP or conducted power (all antenna connectors). of unwanted emissions outside the frequency block or frequency block group not exceeding the limits shown in the next table:

Offset from the edge of the frequency block or frequency block group	Unwanted emission limits
≤ 1 MHz	-13 dBm/(1% of OB)
> 1 MHz	-13 dBm/MHz

Where OB is the occupied bandwidth.

Method:

The measurement was performed with the EUT inside a semi-anechoic chamber.

The spectrum was scanned from 30 MHz to at least the 10th harmonic of the highest frequency of the co-located radios up to 40 GHz.

The EUT was placed on a non-conductive stand at a 3-meter distance from the measuring antenna for measurements up to 17 GHz and at 1.5-meter distance for measurements above 17 GHz.

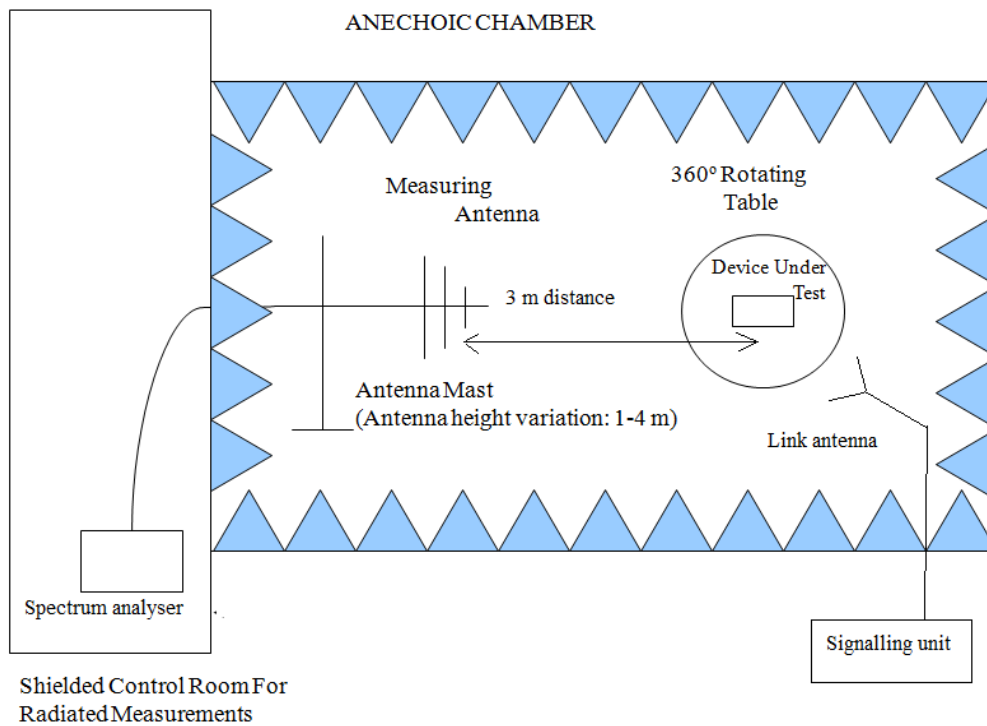
Detected emissions were maximized at each frequency by rotating the EUT and adjusting the measuring antenna height and polarization. The maximum meter reading was recorded. Measurements were made in both horizontal and vertical planes of polarization.

The field strength is calculated by adding correction factor to the measured level from the spectrum analyzer. This correction factor includes antenna factor, cable loss and pre-amplifiers gain.

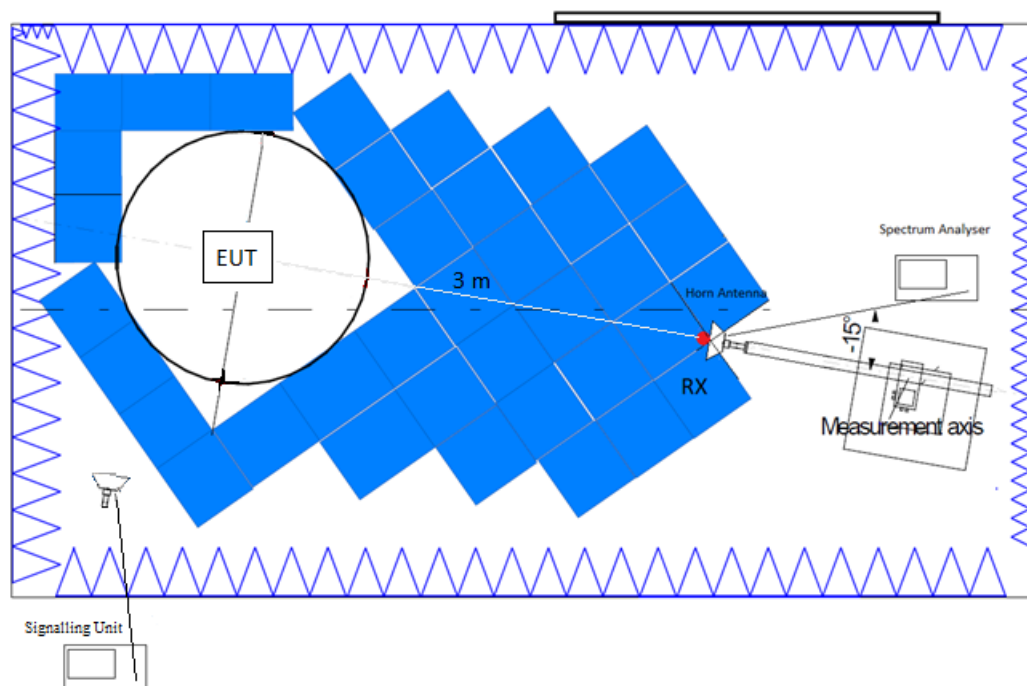
For radiated measurements above 17 GHz performed at a distance closer than the distance specified in standard, an inverse proportionality factor of 20 dB per decade is used to normalize the measured data for determining compliance.

Test setup:

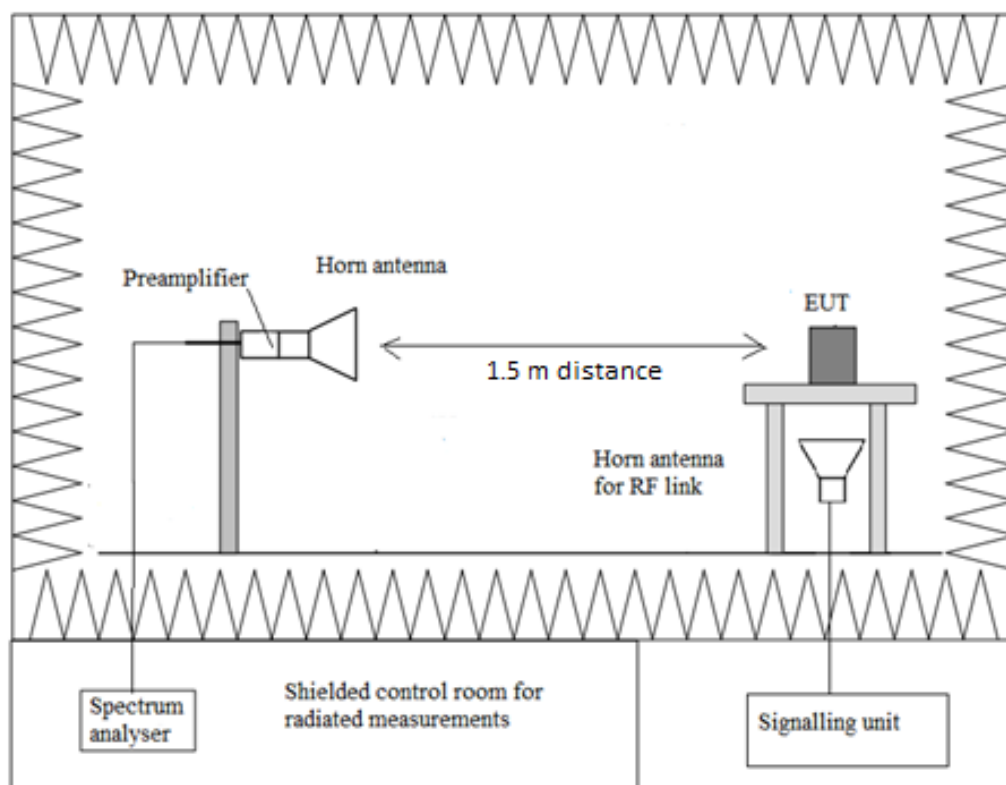
Radiated measurements below 1 GHz:



Radiated measurements between 1 GHz and 17 GHz:



Radiated measurements above 17 GHz:



Results:

- **Operation Mode 1**

Frequency range 30 MHz - 1 GHz:

No spurious frequencies at less than 20 dB below the limit.

Frequency range 1 - 26 GHz:

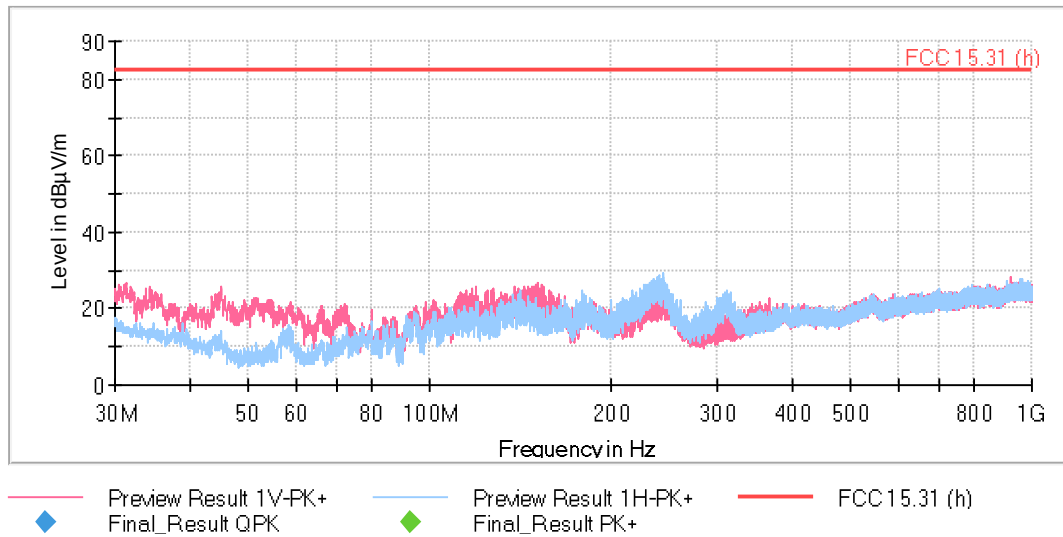
No spurious frequencies at less than 20 dB below the limit.

Verdict

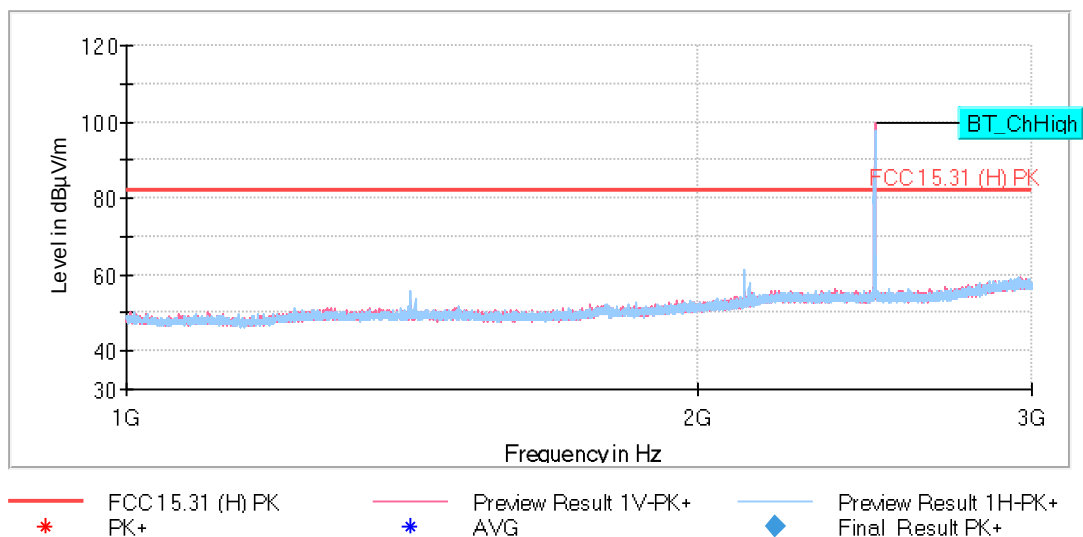
Pass

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	30.312 kHz	PK+	100 kHz	1 s	0 dB
1 GHz - 3 GHz	30.769 kHz	PK+ ; AVG	1 MHz	1 s	0 dB
3 GHz - 17 GHz	140 kHz	PK+ ; AVG	1 MHz	1 s	30 dB
17 GHz - 26 GHz	300 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

FREQUENCY RANGE 30 MHz - 1 GHz

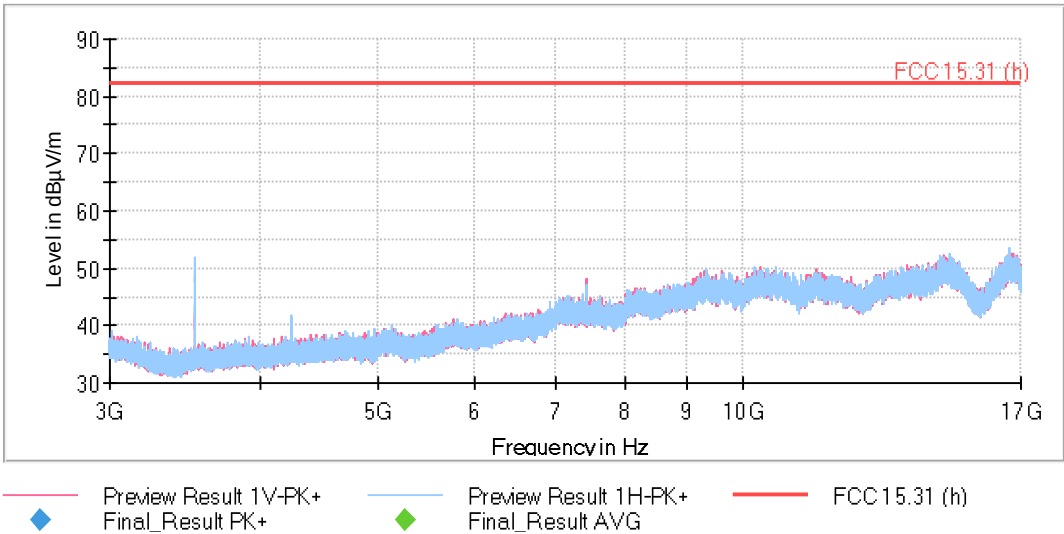


FREQUENCY RANGE 1 - 3 GHz

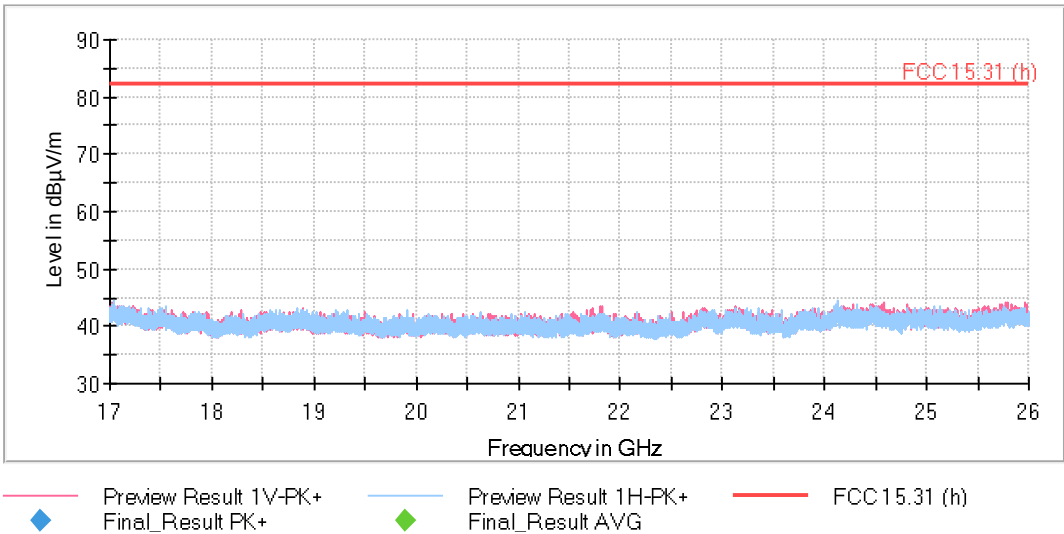


The peak above the limit on the right is the Bluetooth Low Energy (1M) carrier frequency (2480 MHz).

FREQUENCY RANGE 3 - 17 GHz



FREQUENCY RANGE 17 - 26 GHz



- **Operation Mode 2**

Frequency range 30 MHz - 1 GHz:

No spurious frequencies at less than 20 dB below the limit.

Frequency range 1 - 26 GHz:

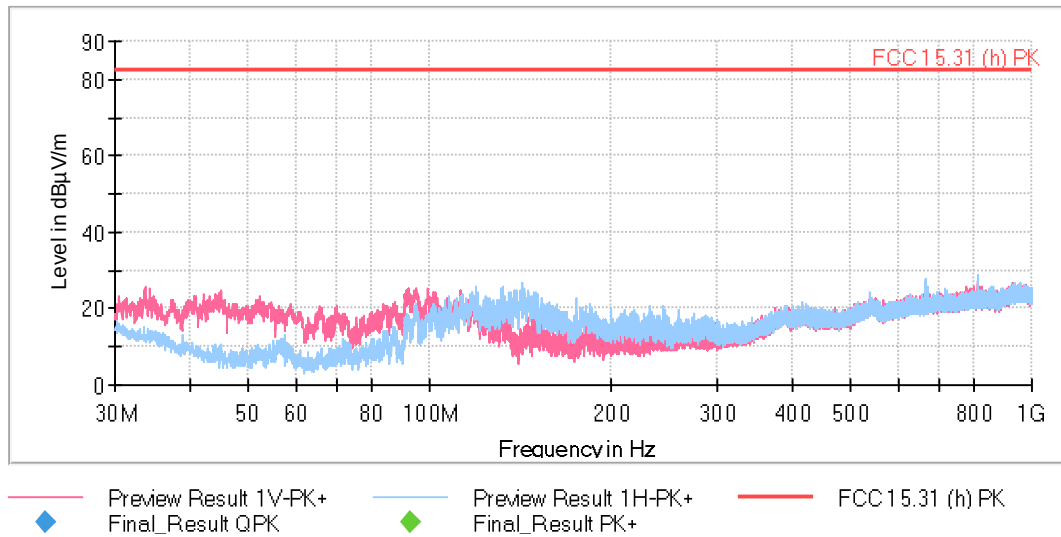
No spurious frequencies at less than 20 dB below the limit.

Verdict

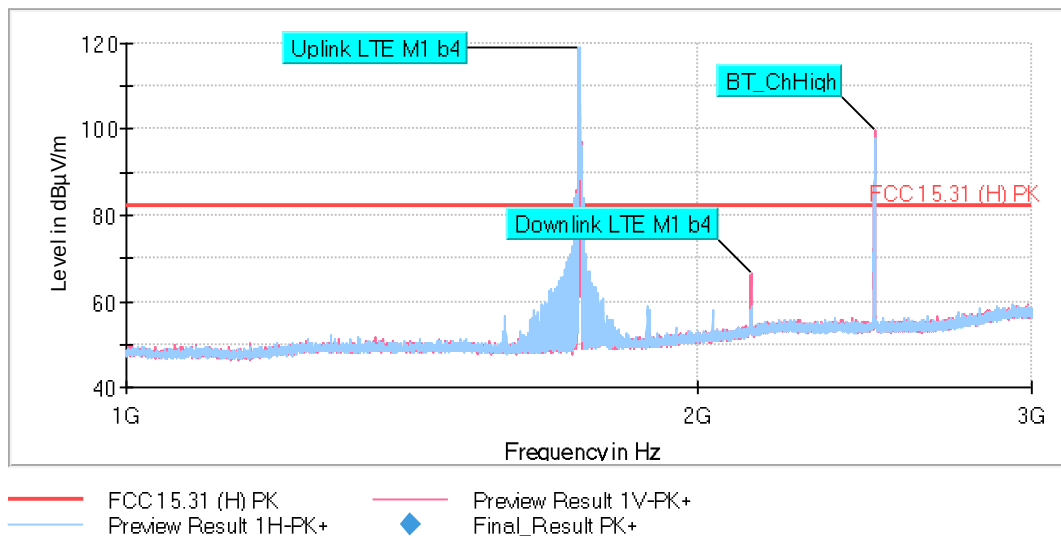
Pass

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	30.312 kHz	PK+	100 kHz	1 s	0 dB
1 GHz - 3 GHz	30.769 kHz	PK+ ; AVG	1 MHz	1 s	0 dB
3 GHz - 17 GHz	140 kHz	PK+ ; AVG	1 MHz	1 s	30 dB
17 GHz - 26 GHz	300 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

FREQUENCY RANGE 30 MHz - 1 GHz



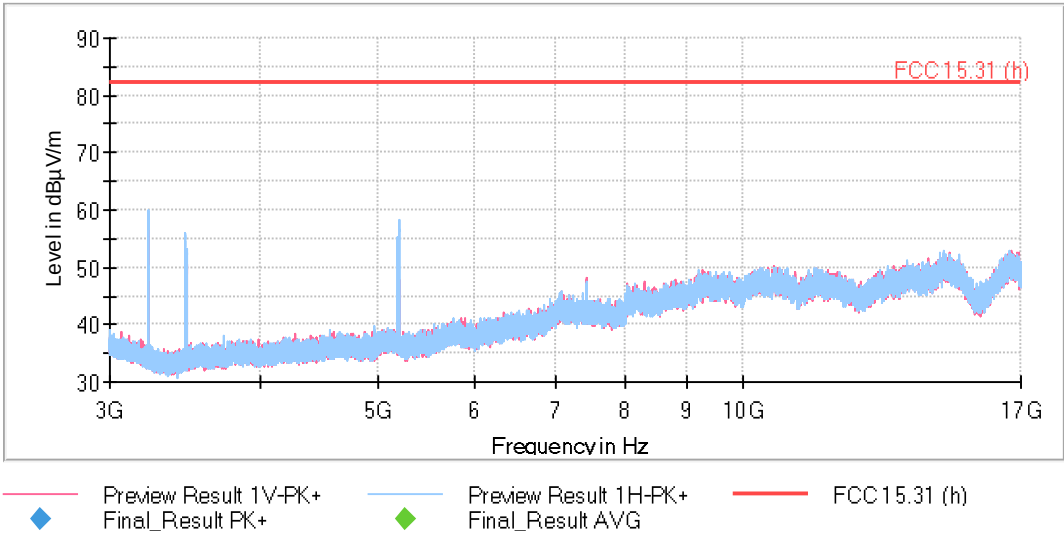
FREQUENCY RANGE 1 - 3 GHz



The peak above the limit on the left is the LTE Cat-M1 Band 4 carrier frequency (1732.5 MHz).

The peak above the limit on the right is the Bluetooth Low Energy (1M) carrier frequency (2480 MHz).

FREQUENCY RANGE 3 - 17 GHz



FREQUENCY RANGE 17 - 26 GHz

