

Test Report No:
79798RRF.006A1

Partial Test Report

USA FCC Part 90

(*) 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 90 (10-1-22 Edition). ANSI C63.26-2015. KDB 971168 D01 Power Meas License Digital Systems v03r01, April. 2018.
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	2026-04-06
Report template No	FDT08_25 (*) "Data provided by the client"

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Competences and guarantees

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Uncertainty

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

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	HW Version	Serial N°	Date Reception	of Application
S/01							Element Under Test
S/01							Auxiliary Element
S/01							Auxiliary Element
S/02	79798/038	Non-invasive ventilation (NIV) device	AIR11M1TA	R510-718	22242275641	2025-04-02	Element Under Test
S/02	79798/036	DC/DC	-	-	000X2003	2025-04-02	Auxiliary Element
S/02	79798/039	Water Deposit	-	-	-	2025-04-02	Auxiliary Element
S/02	79798/043	Tube	-	-	-	2025-04-02	Auxiliary Element

Notes referenced to samples during the project:

Id	Type
S/01	Conducted tests.
S/02	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)	2025-05-16
Date (finish)	2025-05-22

Document history

Report number	Date	Description
79798RRF.006	2026-02-20	First release.
79798RRF.006A1	2026-04-06	First revision. The antenna gain values are updated with the correct values provided by the client. This report cancels and replaces the previous report 79798RRF.006.

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 %

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

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

Remarks and comments

The tests have been performed by the technical personnel: Miguel Manuel López.

Used instrumentation:

Control No.	Equipment	Model	Manufacturer	Next Calibration
8866	EMI TEST RECEIVER 2 Hz-44 GHz	ESW44	ROHDE AND SCHWARZ	2026-06-12
5641	HYBRID BILOG ANTENNA 30 MHz - 6 GHz	3142E	ETS LINDGREN	2027-10-23
9360	PRE-AMPLIFIER G>40dB 1-18 GHz	BLMA 0118-1M	BONN ELEKTRONIK	2025-08-05
4612	HORN ANTENNA 1-18 GHz	BBHA 9120 D	SCHWARZBECK MESS- ELEKTRONIK	2027-10-15
6158	SIGNAL AND SPECTRUM ANALYZER 10 Hz - 40 GHz	FSV40	ROHDE AND SCHWARZ	2026-02-05
4657	HORN ANTENNA 18-40 GHz	BBHA 9170	SCHWARZBECK MESS-ELEKTRONIK	2026-06-12
4848	SOFTWARE FOR EMC/RF TESTING	EMC32	ROHDE AND SCHWARZ	N/A

Testing verdicts

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

Summary

Appendix A: LTE Cat-M1 Band 26.

FCC PART 90		
Requirement – Test case	Verdict	Remark
FCC 90.635 (b): RF output power	P	
FCC 2.1047: Modulation characteristics	N/M	(1)
FCC 90.213: Frequency stability	N/M	(1)
FCC 2.1049: Occupied Bandwidth	N/M	(1)
FCC 90.691: Spurious emissions at antenna terminals	N/M	(1)
FCC 90.691: Spurious emissions at antenna terminals (Emission mask requirements for EA-based systems)	N/M	(1)
FCC 90.691: Radiated emissions	P	
<u>Supplementary information and remarks:</u>		
(1) Test not requested.		

Appendix A: Test results for FCC 90: LTE Cat-M1 Band 26

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TEST CONDITIONS

(*): Declared by the Applicant.

POWER SUPPLY (*):

Vnormal: 230 Vac

Type of Power Supply: AC-DC adapter.

Testing was performed using 230Vac, identified as worst case of power supply during pretesting.

ANTENNA (*):

Band	Max Gain (dBi)	Type
LTE Cat-M1 26	-1.5	Internal

TEST FREQUENCIES:

LTE Cat-M1 Band 26. Sub-band 814-824 MHz. QPSK and 16QAM:

	Channel (Frequency, MHz)				
	BW=1.4 MHz	BW=3 MHz	BW=5 MHz	BW=10 MHz	BW=15 MHz
Low	26697 (814.7)	26705 (815.5)	26715 (816.5)	N/A	N/A
Middle	26740 (819)	26740 (819)	26740 (819)	26740 (819)	N/A
High	26783 (823.3)	26775 (822.5)	26765 (821.5)	N/A	N/A

LTE Cat-M1 Band 26. Cross-rule Channel (824 MHz). QPSK and 16QAM:

Channel (Frequency, MHz)				
BW=1.4 MHz	BW=3 MHz	BW=5 MHz	BW=10 MHz	BW=15 MHz
26790 (824)	26790 (824)	26790 (824)	26790 (824)	26790 (824)

RF Output Power

Limits

FCC §90.635 (b): The maximum output power of the transmitter for mobile stations is 100 Watts (20 dBW).

Method

The conducted RF output power measurements were made at the RF output terminals of the EUT using the power meter of the Universal Radio Communication tester R&S CMW500, selecting maximum transmission power of the EUT and different modes of modulation.

The maximum equivalent isotropically radiated power (e.i.r.p.) is calculated by adding the declared maximum antenna gain (dBi).

The maximum effective radiated power e.r.p. is calculated from the maximum equivalent isotropically radiated power (e.i.r.p.) by subtracting 2.15 dB:

$$\text{E.R.P.} = \text{E.I.R.P.} - 2.15 \text{ dB}$$

Test Setup



Results

CONDUCTED AVERAGE POWER:

Measurements required on one frequency near top channel and one frequency near bottom channel, according to ANSI C63.26.

LTE Cat-M1 Band 26. Sub-band 814-824 MHz:

The worst RF Power case measured on the device corresponds to the configuration with maximum RF Power measured on the integrated module: BW=3 MHz, Middle Channel, 16QAM, RB Size=5, RB Offset=0.

MAX POWER	COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG EIRP (dBm)	RAD. POWER AVG ERP (dBm)
LOW	19.31	-1.5	17.81	15.66
MIDDLE	20.21	-1.5	18.71	16.56
HIGH	20.34	-1.5	18.84	16.69
MAX:	20.34		18.84	16.69

Measurement uncertainty (dB) $\leq \pm 0.941$

LTE Cat-M1 Band 26. Cross-rule Channel 824 MHz:

The worst RF Power case BW=3 MHz, Middle Channel, 16QAM, RB Size=5, RB Offset=0

MAX POWER	COND. POWER AVG (dBm)	ANTENNA GAIN (dBi)	RAD. POWER AVG EIRP (dBm)	RAD. POWER AVG ERP (dBm)
MIDDLE	20.45	-1.5	18.95	16.8

Measurement uncertainty (dB) $\leq \pm 0.941$

Verdict

Pass

Radiated Emissions

Limits

FCC §90.691:

For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

Method

The measurement was performed with the EUT inside an anechoic chamber. The spectrum was scanned from 30 MHz to at least the 10th harmonic of the High frequency generated within the equipment.

The EUT was placed on a high non-conductive stand at a 3 meter distance from the measuring antenna. Detected emissions were maximized at each frequency by rotating the EUT and adjusting the height and polarization of the measuring antenna. The maximum meter reading was recorded.

MEASUREMENT LIMIT:

According to specification, the power of emissions shall be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log(P)$ dB, P in watts.

At P_o transmitting power, the specified minimum attenuation becomes $43 + 10 \log(P_o)$, and the level in dBm relative P_o becomes:

$$P_o \text{ (dBm)} - [43 + 10 \log(P_o \text{ in mwatts}) - 30] = -13 \text{ dBm}$$

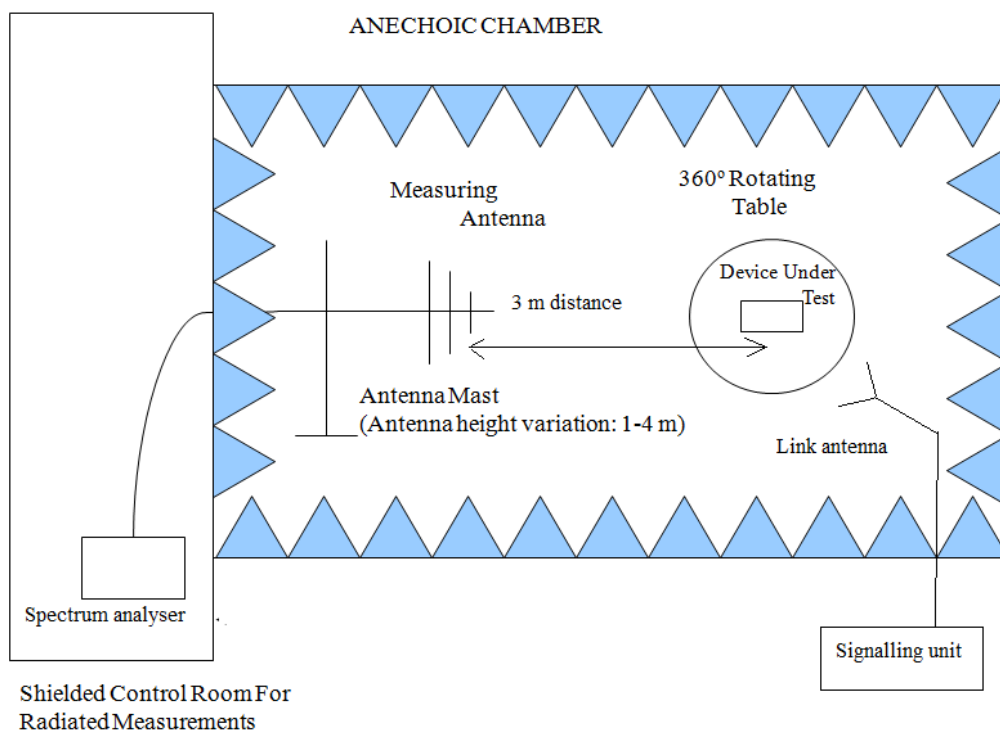
The maximum field strength (dBμV/m) of each detected emission at less than 20 dB respect to the limit is converted to an equivalent EIRP level (dBm) according to ANSI C63.26 with the formula:

$$\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20 \log(D) - 104.8; \text{ where } D \text{ is the measurement distance (in the far field region) in m. } D = 3 \text{ m}$$

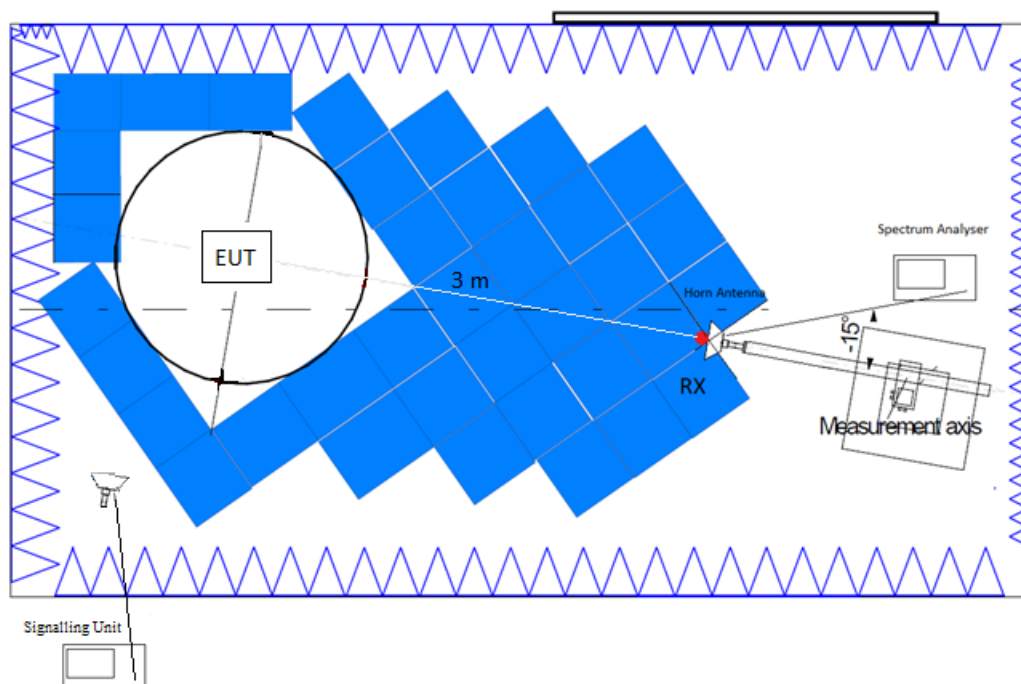
A resolution bandwidth / video bandwidth of 100 kHz / 300 kHz was used for frequencies below 1 GHz and 1 MHz / 3 MHz for frequencies above 1 GHz.

Test Setup

Radiated measurements below 1 GHz:



Radiated measurements above 1 GHz:



Results

Measurements required on one frequency near top channel and one frequency near bottom channel, according to FCC § 15.31 (m).

LTE Cat-M1 Band 26. Sub-band 814-824 MHz:

The worst case measured on the device corresponds to the configuration with maximum RF Power measured on the integrated module: BW=3 MHz, Middle Channel, 16QAM, RB Size=5, RB Offset=0.

Frequency range 30 MHz - 1 GHz:

- LOW CHANNEL:

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

- MIDDLE CHANNEL:

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

- HIGH CHANNEL:

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

Frequency range 1 - 8.5 GHz:

- LOW CHANNEL:

Not tested.

- MIDDLE CHANNEL:

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

- HIGH CHANNEL:

Not tested.

Measurement uncertainty (dB): < ± 5.35 for $f \geq 30$ MHz up to 1 GHz
< ± 4.32 for $f \geq 1$ GHz up to 8.5 GHz

Verdict

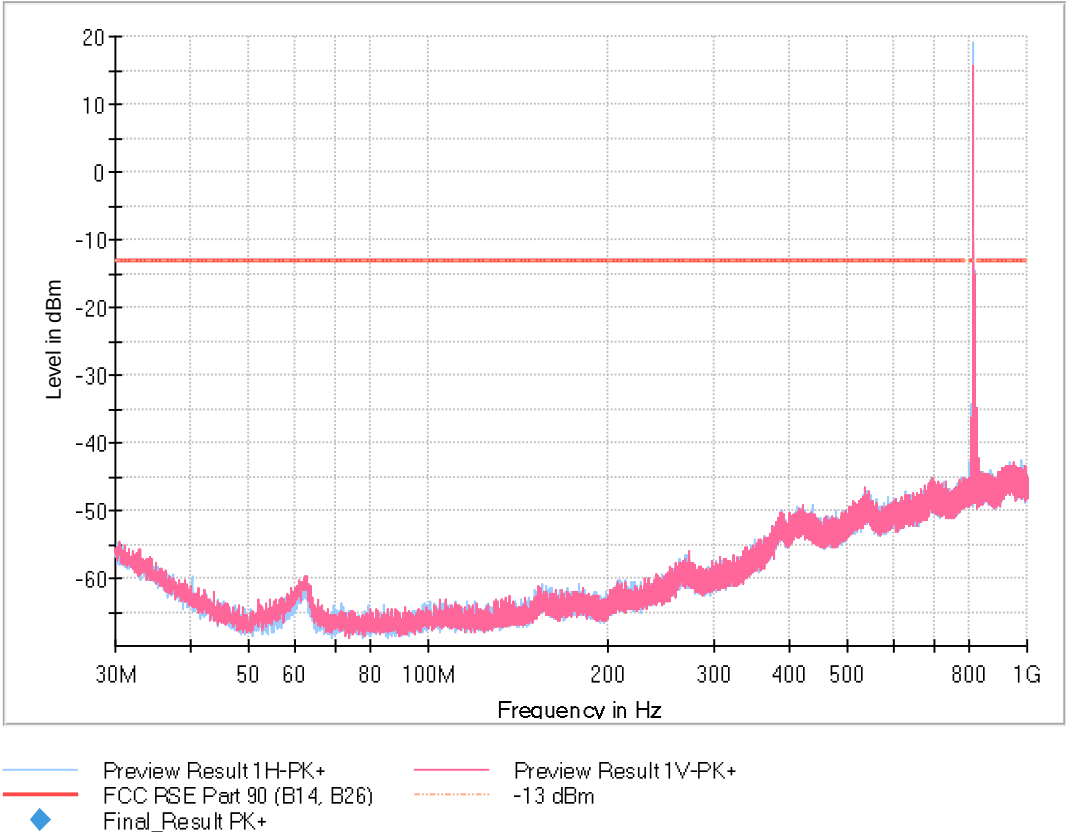
Pass

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	30.312 kHz	PK+	100 kHz	Coupled	0 dB
1 GHz - 8.5 GHz	234.375 kHz	PK+	1 MHz	1 s	0 dB

LTE Cat-M1 Band 26. Sub-band 814-824 MHz:

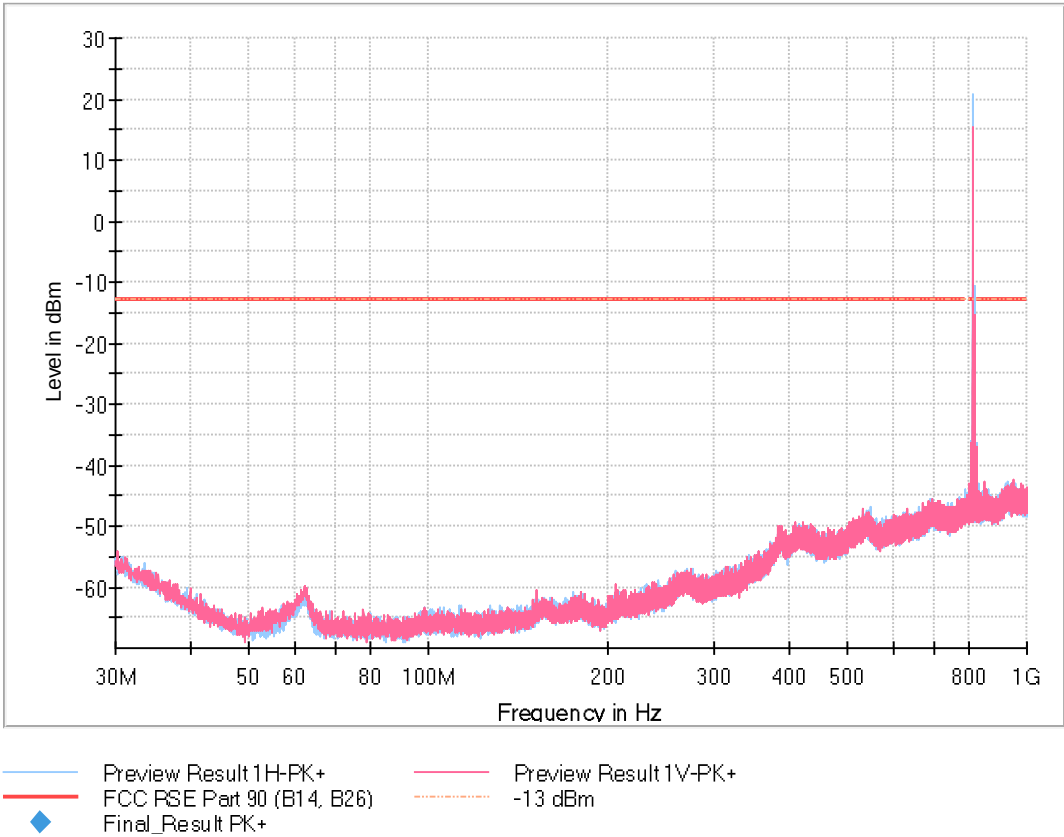
FREQUENCY RANGE 30 MHz - 1 GHz:

- LOW CHANNEL:



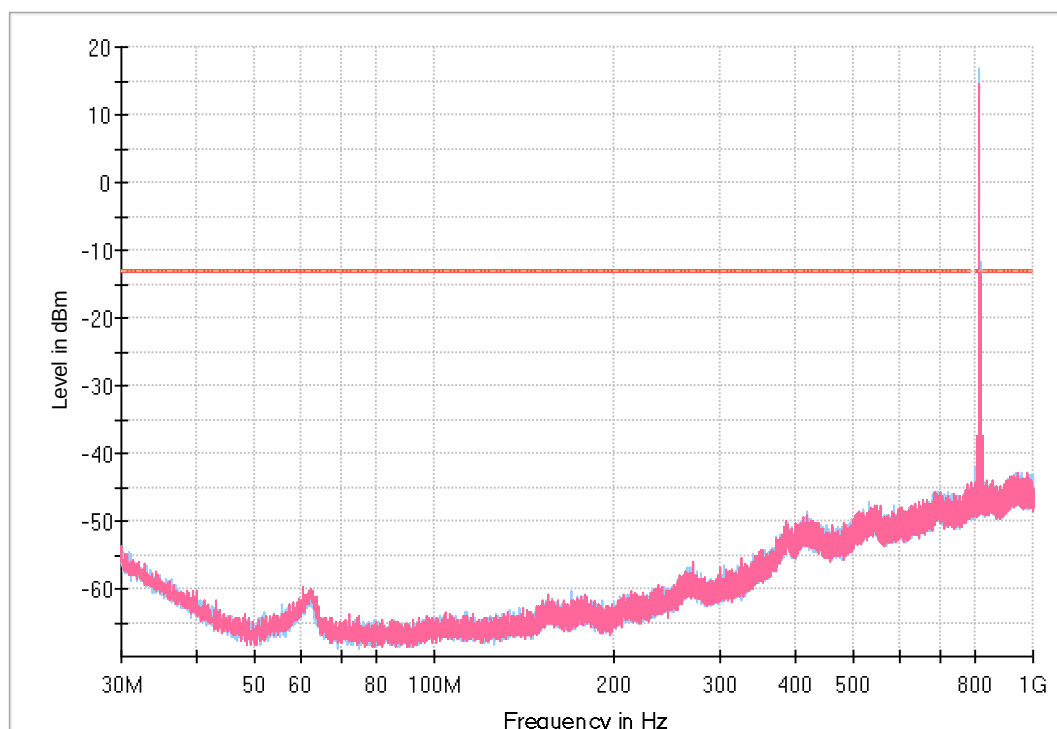
The peak above the limit is the carrier frequency:
LTE Cat-M1 Band 26, 819 MHz

- MIDDLE CHANNEL:



The peak above the limit is the carrier frequency:
LTE Cat-M1 Band 26, 819 MHz

- HIGH CHANNEL:

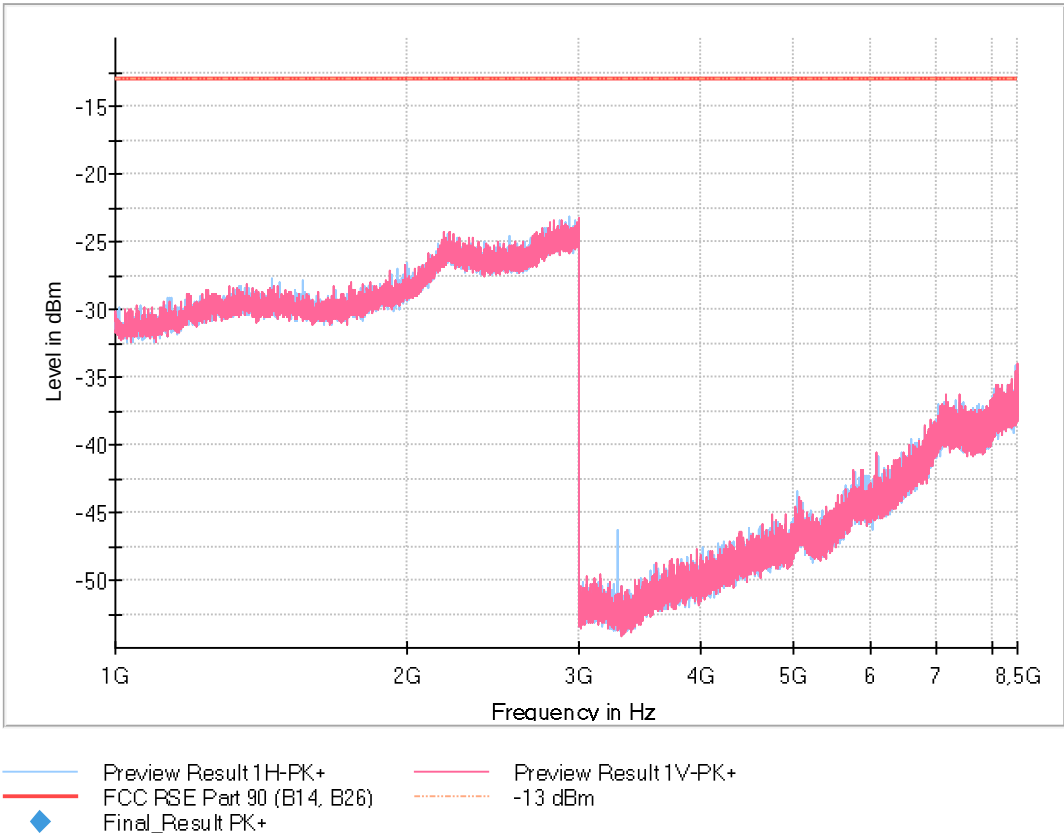


— Preview Result 1H-PK+ — Preview Result 1V-PK+
— FCC RSE Part 90 (B14, B26) - - - -13 dBm
◆ Final_Result PK+

The peak above the limit is the carrier frequency:
 LTE Cat-M1 Band 26, 819 MHz

FREQUENCY RANGE 1 - 8.5 GHz:

- MIDDLE CHANNEL:



LTE Cat-M1 Band 26. Cross-rule Channel 824 MHz:

The worst case measured BW=3 MHz, Middle Channel, 16QAM, RB Size=5, RB Offset=0.

- SINGLE CHANNEL (Cross-rule Channel 824 MHz):

Frequency range 30 MHz - 1 GHz:

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

Frequency range 1 - 8.5 GHz:

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

Measurement uncertainty (dB): < ± 5.35 for $f \geq 30$ MHz up to 1 GHz
< ± 4.32 for $f \geq 1$ GHz up to 8.5 GHz

Verdict

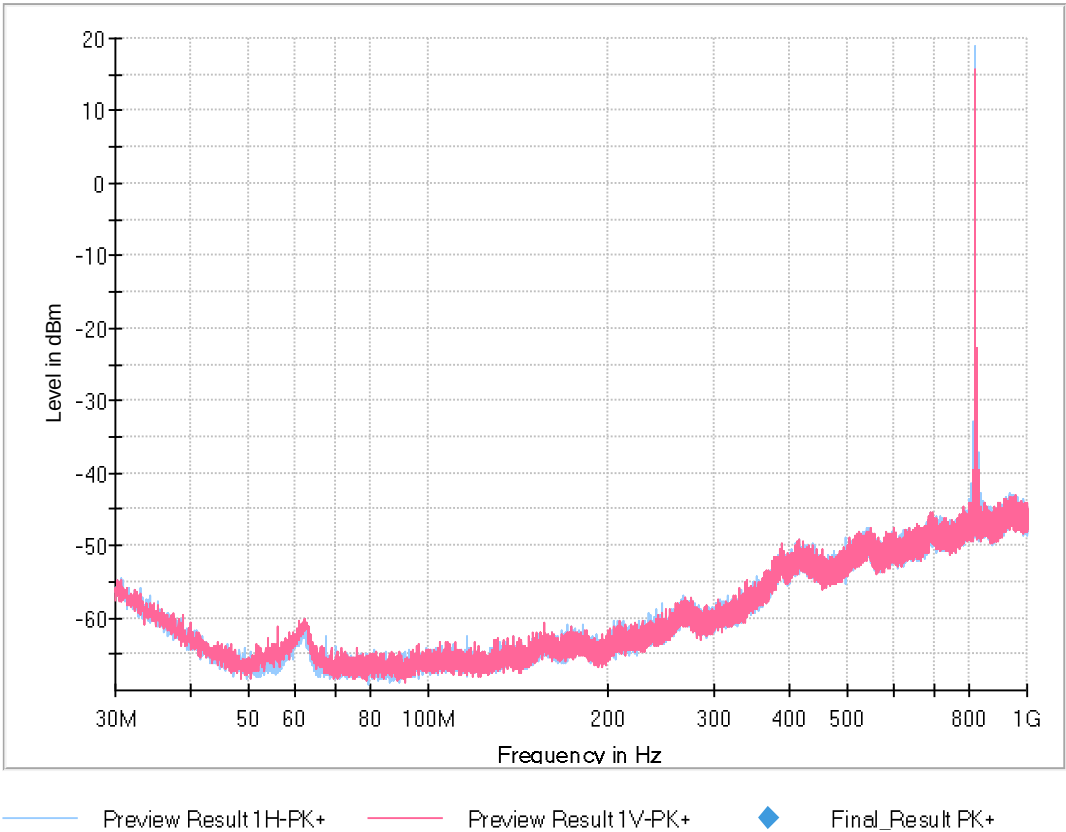
Pass

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	30.312 kHz	PK+	100 kHz	Coupled	0 dB
1 GHz - 8.5 GHz	234.375 kHz	PK+	1 MHz	1 s	0 dB

LTE Cat-M1 Band 26. Cross-rule Channel 824 MHz:

FREQUENCY RANGE 30 MHz - 1 GHz:

- SINGLE CHANNEL (Cross-rule Channel 824 MHz):



The peak above the limit is the carrier frequency:
LTE Cat-M1 Band 26, 824 MHz

FREQUENCY RANGE 1 - 8.5 GHz:

- SINGLE CHANNEL (Cross-rule Channel 824 MHz):

