

ISED CABid: ES1909
Lab. Company Number: 4621A

Test Report No:
79045RRF.005A1

Partial Test Report

USA FCC Part 27

CANADA RSS-130, RSS-139

(*) Identification of item tested	Device to track Pet using LTE, BLE, WiFi and GNSS
(*) Trademark	DATAMARS, Kippy
(*) Model and /or type reference	PetLinkDOG US v1
(*) Derived model not tested	PetLinkDOG US a1
Other identification of the product	FCC ID: NDX-PLDOG1 IC: 8521A-PLDOG1
(*) Features	LTE CAT-M1, Bluetooth LE, GNSS, WIFI scan (RX ONLY) HW version: 6V2 US SW version: 10.4.64
Applicant	DATAMARS SA via Industria 16, Lamone, N/A 6814 Switzerland
Test method requested, standard	USA FCC Part 27 (10-1-23 Edition). CANADA RSS-130 Issue 2, February 2019. CANADA RSS-139 Issue 4 September 2022, Amendment October 2022. 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
Date of issue	2024-11-12
Report template No.	FDT08_25 (*) "Data provided by the client"

Index

Competences and guarantees3

General conditions3

Uncertainty3

Data provided by the client.....3

Usage of samples5

Test sample description6

Identification of the client.....7

Testing period and place.....7

Document history7

Environmental conditions7

Remarks and comments8

Testing verdicts.....8

Summary9

Appendix A: Test results for FCC 27 / RSS-130, RSS-139: LTE Cat-M1 Bands 4, 12.....10

Competences and guarantees

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

DEKRA Testing and Certification is an FCC-recognized accredited testing laboratory with appropriate scope of accreditation that include testing performed in this test 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.

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

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

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

The results presented in this Test Report apply only to the particular item under test established in this document. **IMPORTANT:** No parts of this report may be reproduced or quoted out of context, in any form or by any means, except in full, without the previous written permission of DEKRA Testing and Certification S.A.U.

General conditions

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

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 consists of a Pet tracker. Device to track Pet using LTE, BLE, WiFi and GNSS.
3. Declaration of Similarity/Family:

Declaration of Similarity – PetLinkDOG US a1 and PetLinkDOG US v1

Lamone, 19 Aug 2024

Datamars SA, with its registered office at Via Industria 16, 6814 Lamone, Switzerland, declares that the following products:

- PetLinkDOG US a1
- PetLinkDOG US v1

have exactly the same features, except that have a different SIM provider.

The models are identical from the RF point of view, and the difference described above do not lead to different RF performance or behaviour between the devices.

Datamars SA



Damien Pachoud
Chief Production and Technology Officer

DR003759



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 Reception	of	Application
S/01		79045B_23.1	Device to track Pet	PetLinkDOG US v1	-	2024-07-08		Element Under Test
		79045B_2.1	USB Charging cable	-	-	2024-04-22		Auxiliary Element
S/02		79045B_17.1	Device to track Pet	PetLinkDOG US v1	-	2024-06-17		Element Under Test
		79045B_1.1	USB Charging cable	-	-	2024-04-22		Auxiliary Element

Notes referenced to samples during the project:

Id		Type
S/01		Samples used for conducted tests.
S/02		Samples used for radiated tests.

Test sample description

Ports..... :	Port name and description		Cable				
			Specified max length [m]	Attached during test	Shielded	Coupled to patient ⁽³⁾	
	serial com on USB		1.5 m	[X]	[]	[]	
SMA cable		0.03 m	[X]	[]	[]		
Supplementary information to the ports..... :							
Rated power supply :	Voltage and Frequency		Reference poles				
			L1	L2	L3	N	PE
	[]	AC:	[]	[]	[]	[]	[]
[X]	DC: Li-ion polymer 4.4 max voltage, 650mAh, Feten Energy, FTN-P952525						
Rated Power..... :	3W						
Clock frequencies..... :	32 MHz, 32.768 kHz, 26 MHz						
Other parameters :							
Software version..... :	10.4.64						
Hardware version :	6V2 US						
Dimensions in cm (W x H x D) ... :	65x34x21mm3						
Mounting position :	[]	Table top equipment					
	[]	Wall/Ceiling mounted equipment					
	[]	Floor standing equipment					
	[]	Hand-held equipment					
	[X]	Other:					
Modules/parts..... :	Module/parts of test item			Type	Manufacturer		
	Modem LTE			ME310G1W W0	Telit		
	GNSS receiver			MIA-M10Q	UBLOX		
	BLE			nRF52832	Nordic Semi		
	WIFI scanner			ESP8684H2	Espressif Systems		
Accessories (not part of the test item) :	Description		Type	Manufacturer			
	USB charging cable EU		CMA-052022-0	CFE Electronic Co			
	USB charging cable US		CMA-052021-0	CFE Electronic Co			
Documents as provided by the applicant :	Description		File name	Issue date			
							

⁽³⁾ Only for Medical Equipment

Identification of the client

DATAMARS SA
via Industria 16, 6814 Lamone, Switzerland

Testing period and place

Test Location	DEKRA Testing and Certification S.A.U.
Date (start)	2024-06-18
Date (finish)	2024-07-08

Document history

Report number	Date	Description
79045RRF.005	2024-09-10	First release.
79045RRF.005A1	2024-11-12	Second release. It is modified to correct antenna gain value. This modification test report cancels and replaces the test report 79045RRF.005

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: Sergio Carrasco.

Used instrumentation:

Control No.	Equipment	Model	Manufacturer	Next Calibration
06791	SEMIANECHOIC ABSORBER LINED	FACT 3 200 STP	ETS LINDGREN	N/A
06792	SHIELDED ROOM	S101	ETS LINDGREN	N/A
06609	TEMPERATURE AND HUMIDITY PROBE	HWg-STE	HW GROUP	2025-04-22
06615	TEMPERATURE AND HUMIDITY PROBE	HWg-STE	HW GROUP	2025-04-04
06143	HYBRID BILOG ANTENNA 30MHz-6GHz	3142E	ETS LINDGREN	2027-01-22
06496	HORN ANTENNA 1-18 GHz	BBHA 9120 D	SCHWARZBECK	2026-12-01
03783	PRE-AMPLIFIER G>30 dB 1-18 GHz	BLMA 0118-3A	BONN ELEKTRONIK	2025-02-07
08866	EMI TEST RECEIVER 2 Hz-44 GHz	ESW44	ROHDE AND SCHWARZ	2026-06-12
08849	WIDEBAND RADIO COMMUNICATION TESTER	CMW500	ROHDE AND SCHWARZ	2025-10-11
04848	SOFTWARE FOR EMC/RF TESTING	EMC32	ROHDE AND SCHWARZ	N/A
06793	SHIELDED ROOM	S101	ETS LINDGREN	N/A
06611	TEMPERATURE AND HUMIDITY PROBE	HWg-STE	HW GROUP	2025-04-04
08849	WIDEBAND RADIO COMMUNICATION TESTER	CMW500	ROHDE AND SCHWARZ	2025-10-11
05850	DIGITAL MULTIMETER	179	FLUKE	2024-11-02

Testing verdicts

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

Summary

Appendix A: LTE Cat-M1 Bands 4, 12.

FCC PART 27 / RSS-130, RSS-139		
Requirement – Test case	Verdict	Remark
FCC 27.50 / RSS-130 4.6, RSS-139 5.5: RF Output Power	P	
FCC 2.1047 / RSS-130 4.2, RSS-139 5.3: Modulation Characteristics	N/M	(1)
FCC 27.54 / RSS-130 4.5, RSS-139 5.4: Frequency Stability	N/M	(1)
FCC 2.1049 / RSS-Gen 6.7: Occupied Bandwidth	N/M	(1)
FCC 27.53 / RSS-130 4.7, RSS-139 5.6: Spurious Emissions at Antenna Terminals	N/M	(1)
FCC 27.53 / RSS-130 4.7, RSS-139 5.6: Spurious Emissions at Antenna Terminals at Block Edges	N/M	(1)
FCC 27.53 / RSS-130 4.7, RSS-139 5.6: Radiated Emissions	P	
<u>Supplementary information and remarks:</u>		
(1) Test not requested.		

Appendix A: Test results for FCC 27 / RSS-130, RSS-139: LTE Cat-M1 Bands 4, 12

INDEX

TEST CONDITIONS12

RF Output Power13

Radiated Emissions16

TEST CONDITIONS

(*): Declared by the Applicant.

POWER SUPPLY (*):

Vnominal: 3.85 Vdc.
Type of Power Supply: Li-ion external battery.

ANTENNA (*):

Technologies	Antenna Gain (dBi)	Type of Antenna
LTE Cat-M1 Band 4	-2.15	Monopole on Flex PCB
LTE Cat-M1 Band 12	-9.49	Monopole on Flex PCB

TEST FREQUENCIES:

LTE Cat-M1 Band 4. QPSK and 16QAM modulations:

	Channel per BW=(Frequency, MHz)					
	BW = 1.4 MHz	BW = 3 MHz	BW = 5 MHz	BW = 10 MHz	BW = 15 MHz	BW = 20 MHz
Low	19957 (1710.7)	19965 (1711.5)	19975 (1712.5)	20000 (1715.0)	20025 (1717.5)	20050 (1720.0)
Middle	20175 (1732.5)	20175 (1732.5)	20175 (1732.5)	20175 (1732.5)	20175 (1732.5)	20175 (1732.5)
High	20393 (1754.3)	20385 (1753.5)	20375 (1752.5)	20350 (1750.0)	20325 (1747.5)	20300 (1745.0)

LTE Cat-M1 Band 12. QPSK and 16QAM modulations:

	Channel (Frequency, MHz)			
	BW = 1.4 MHz	BW = 3 MHz	BW = 5 MHz	BW = 10 MHz
Low	23017 (699.7)	23025 (700.5)	23035 (701.5)	23060 (704.0)
Middle	23095 (707.5)	23095 (707.5)	23095 (707.5)	23095 (707.5)
High	23173 (715.3)	23165 (714.5)	23155 (713.5)	23130 (711.0)

RF Output Power

Limits

1. LTE Cat-M1 Band 4

* FCC §2.1046 & §27.50 (d) (4):
Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP. Fixed stations operating in the 1710-1755 MHz band are limited to a maximum antenna height of 10 meters above ground. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

* RSS-139 Clause 5.5. Transmitter output power
The maximum output power of the equipment shall comply with the limits specified below.

Table 3: Maximum power of equipment in the band 1710-1780 MHz

Equipment type	Maximum power
Fixed station and base station	30 dBm e.i.r.p./channel bandwidth
Subscriber equipment	30 dBm e.i.r.p./channel bandwidth

2. LTE Cat-M1 Band 12.

* FCC §2.1046 & §27.50 (c) (10):
Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

* RSS-130 Clause 4.6. Transmitter output power and effective radiated power (e.r.p.)
The e.r.p. shall not exceed 30 watts for mobile equipment and outdoor fixed subscriber equipment. The e.r.p. shall not exceed 3 watts for portable equipment and indoor fixed subscriber equipment.

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 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:

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

Test Setup

CONDUCTED AVERAGE POWER:



Results

CONDUCTED AVERAGE POWER:

LTE Cat-M1 Band 4:

A preliminary scan determined the BW=1.4 MHz, Middle Channel, QPSK, RB Size=1, RB Offset=0, Narrowband=0 as the worst-case.

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
1.4	Low 19957	1710.7	QPSK	1	0	23.34
				1	5	23.10
				3	3	22.24
				6	0	21.34
			16-QAM	1	0	22.60
				1	5	22.40
				3	3	21.31
				5	0	21.29
	Middle 20175	1732.5	QPSK	1	0	23.57
				1	5	23.37
				3	3	22.52
				6	0	21.49
			16-QAM	1	0	22.66
				1	5	22.39
				3	3	21.81
				5	0	21.58
	High 20393	1754.3	QPSK	1	0	21.80
				1	5	21.68
				3	3	22.62
				6	0	21.72
			16-QAM	1	0	21.69
				1	5	21.50
				3	3	21.65
				5	0	21.71

Measurement uncertainty (dB) <±0.941

Verdict

Pass

LTE Cat-M1 Band 12:

A preliminary scan determined the BW=5 MHz, Low Channel, 16QAM, RB Size=1, RB Offset=0, Narrowband=3 as the worst-case.

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
5	Low 23035	701.5	QPSK	1	0	23.13
				1	5	22.87
				3	3	22.10
				6	0	21.98
			16-QAM	1	0	23.62
				1	5	22.88
				3	3	21.81
				5	0	21.74
	Middle 23095	707.5	QPSK	1	0	23.15
				1	5	22.90
				3	3	21.53
				6	0	21.65
			16-QAM	1	0	22.62
				1	5	22.54
				3	3	21.48
				5	0	21.70
	High 23155	713.5	QPSK	1	0	22.87
				1	5	22.63
				3	3	21.67
				6	0	21.74
			16-QAM	1	0	23.22
				1	5	23.00
				3	3	21.76
				5	0	21.76

Measurement uncertainty (dB) <±0.941

Verdict

Pass

Radiated Emissions

Limits

1. LTE Cat-M1 Band 4. FCC §2.1053 & §27.53 (h) (1) / RSS-139 5.6.

FCC §27.53 (h) (1):

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 5.6:

Unwanted emissions shall be measured in terms of average values.

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 table 6:

Table 6: Unwanted emission limits	
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

* OB is the occupied bandwidth.

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

FCC §27.53 (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 $43 + 10 \log_{10}(P)$ 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:

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.

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 non-conductive stand at 3-meter distance from the measuring antenna for measurements up to 17 GHz. Measurements above 17 GHz require the distance to be reduced to 1.5 meters.

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 Limits:

At P_o transmitting power, the specified minimum attenuation $43 + 10 \log_{10} p$ (watts) becomes:

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

The maximum field strength (dB μ V/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:

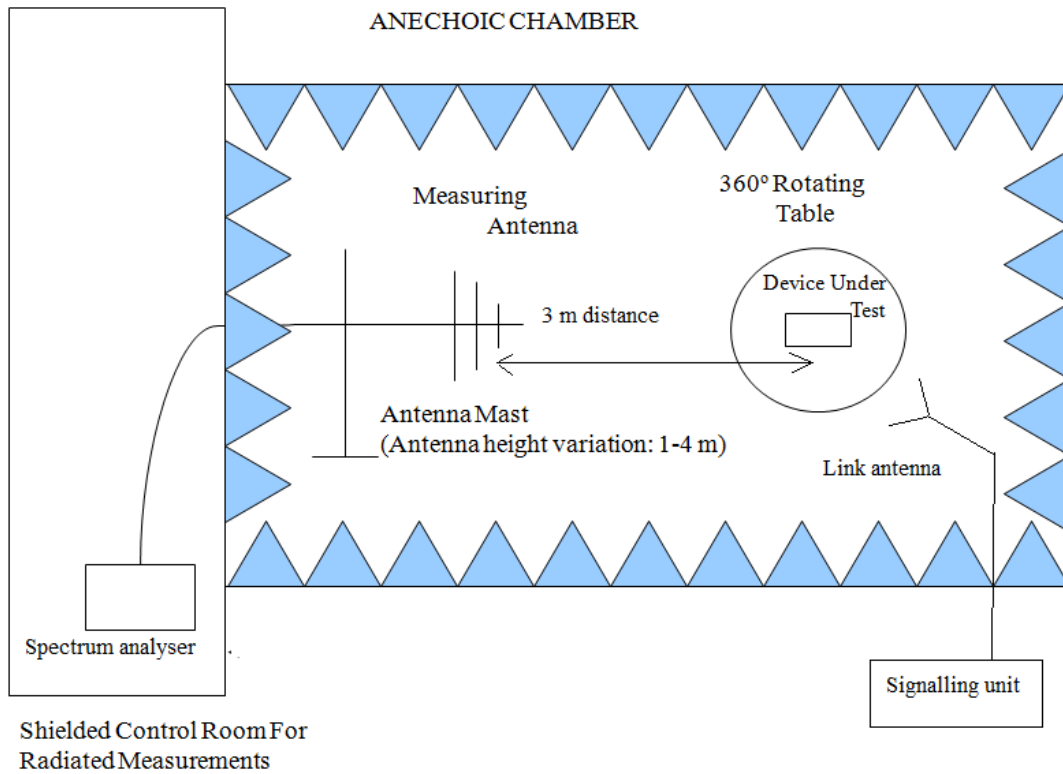
$$\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20 \log(D) - 104.8;$$

where D is the measurement distance (in the far field region) in m. $D = 3$ m.

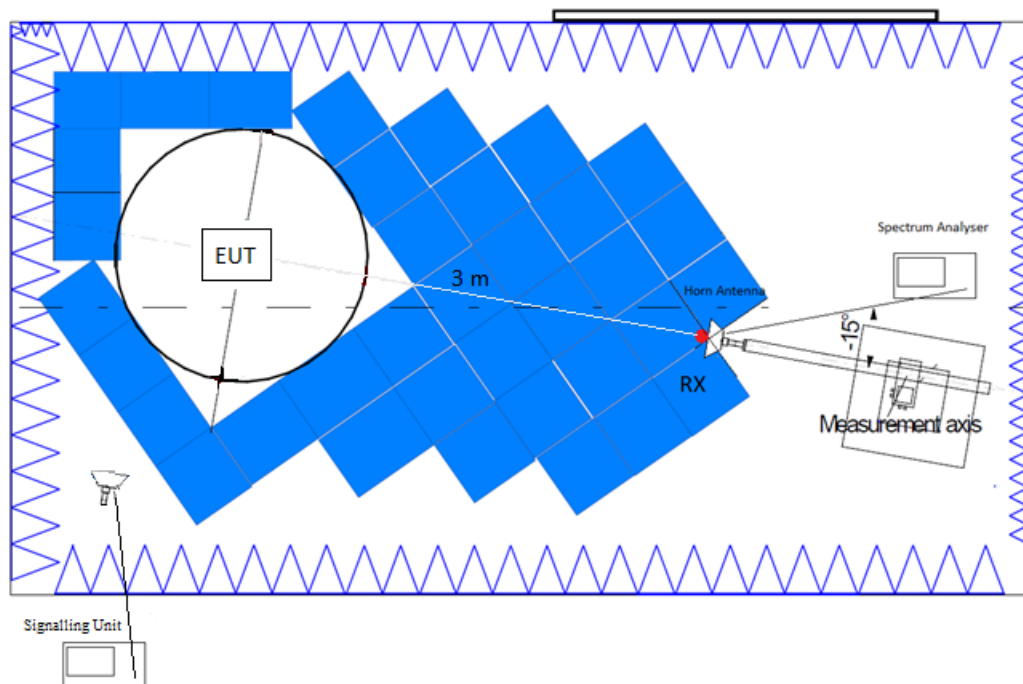
A resolution bandwidth / video bandwidth of 100 kHz / 300 kHz was used for frequencies below 1 GHz and 1 MHz / 3 MHz for frequencies above 1 GHz.

Test Setup

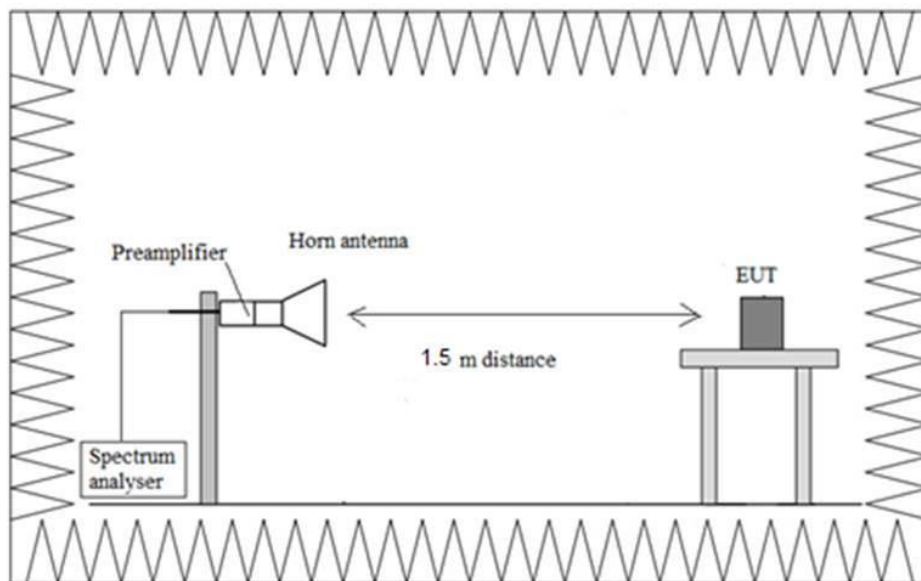
Radiated measurements setup from 30 MHz to 1 GHz:



Radiated measurements setup from 1 GHz to 17 GHz:



Radiated measurements above 17 GHz:



Results

LTE Cat-M1 Band 4:

A preliminary scan determined the 16QAM. BW=15 MHz. RB=1. RB Offset=0. Narrowband=0 as the worst-case. The next results are for this worst-case configuration.

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 - 18 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.

Measurement Uncertainty (dB) $\leq \pm 5.35$ for $f < 1$ GHz
 $\leq \pm 4.32$ for $f \geq 1$ GHz up to 18 GHz

Verdict

Pass

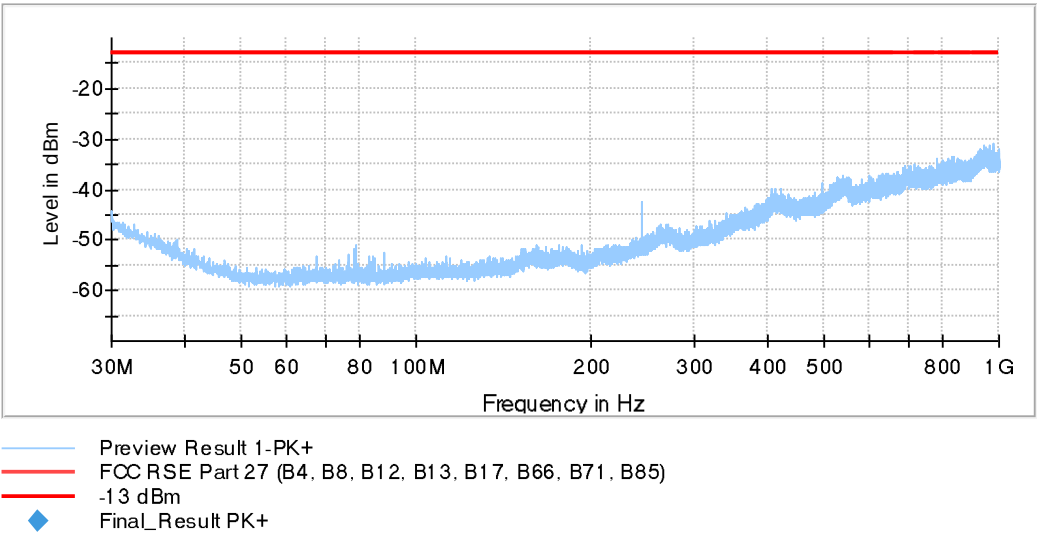
Spectrum analyzer parameters:

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	30.312 kHz	PK+	1 MHz	Coupled	0 dB
1 GHz - 3 GHz	62.5 kHz	PK+	1 MHz	1 s	0 dB
3 GHz - 17 GHz	437.5 kHz	PK+	1 MHz	1 s	0 dB
17 GHz - 18 GHz	31.25 kHz	PK+	1 MHz	1 s	0 dB

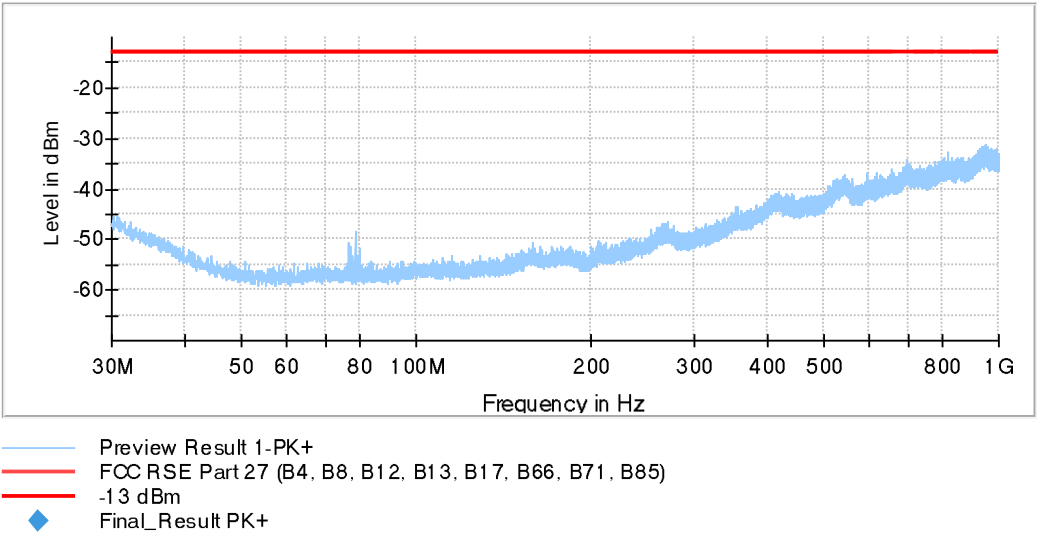
LTE Cat-M1 Band 4:

FREQUENCY RANGE 30 MHz - 1 GHz:

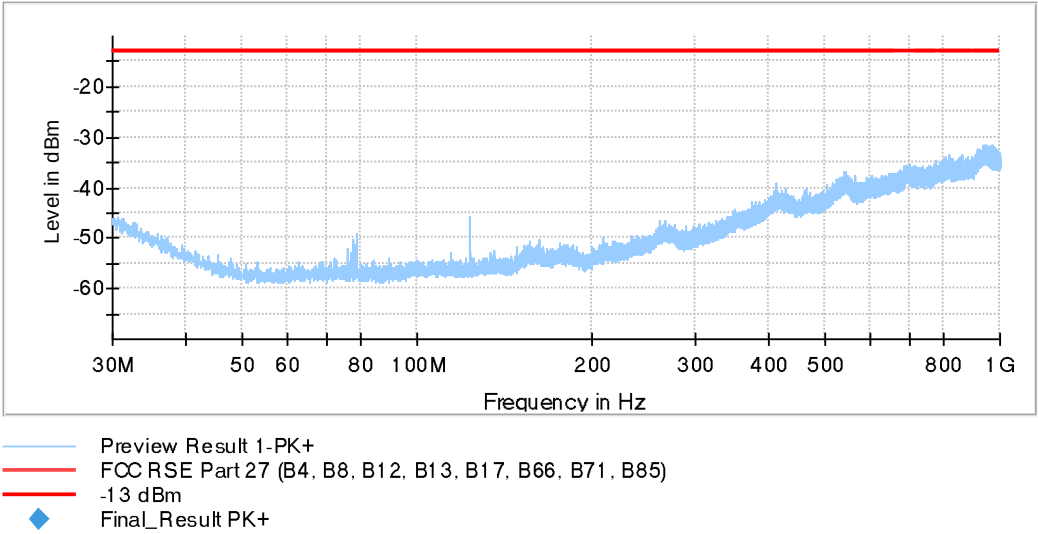
- LOW CHANNEL:



- MIDDLE CHANNEL:

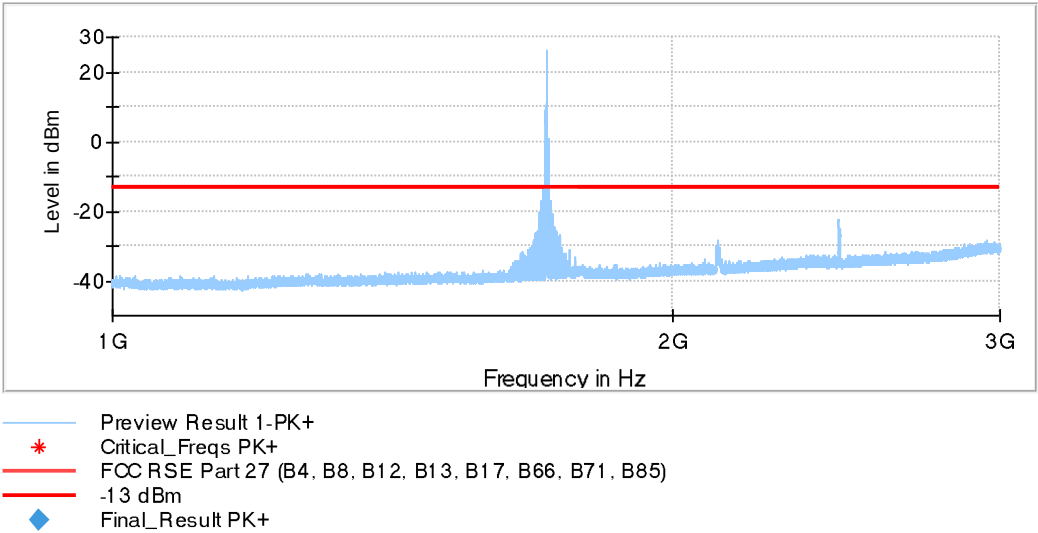


- HIGH CHANNEL:



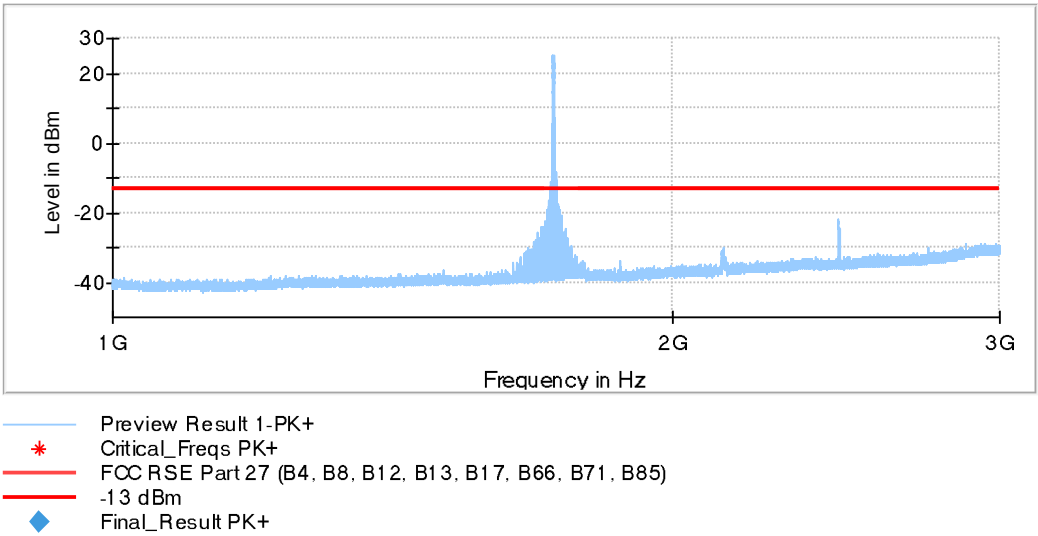
FREQUENCY RANGE 1 - 3 GHz:

- LOW CHANNEL:



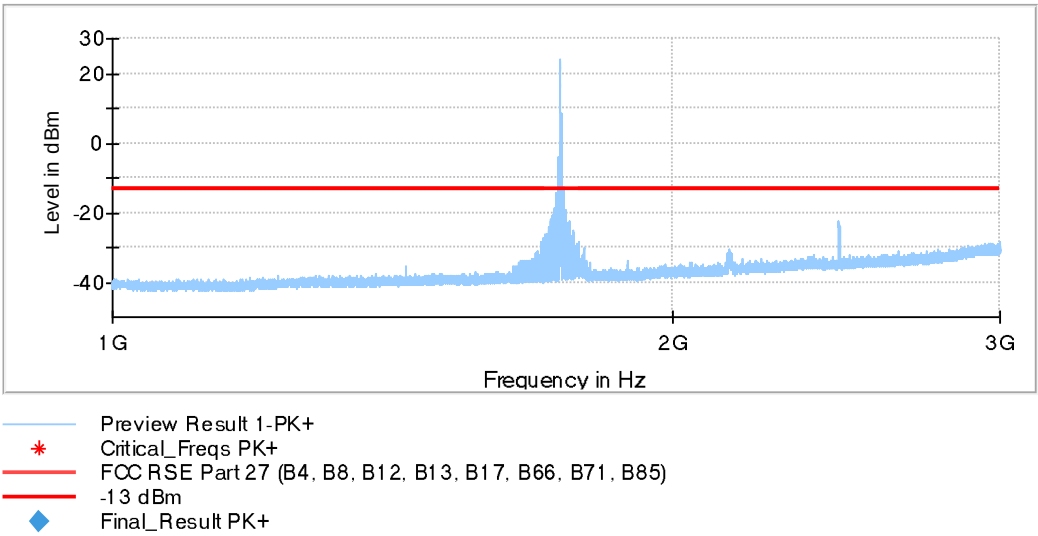
The peak above the limit is the LTE Cat-M1 Band 4 carrier frequency.

- MIDDLE CHANNEL:



The peak above the limit is the LTE Cat-M1 Band 4 carrier frequency.

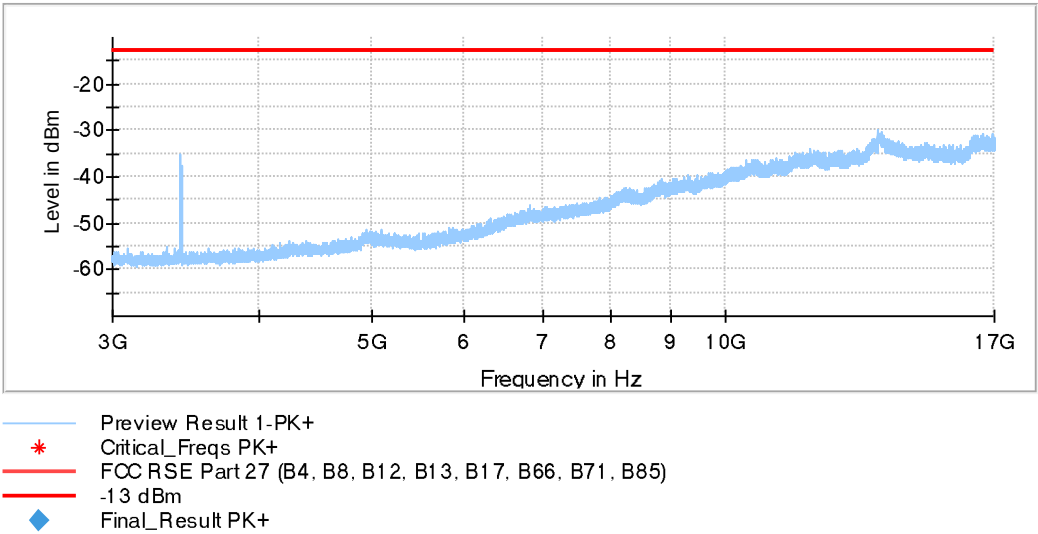
- HIGH CHANNEL:



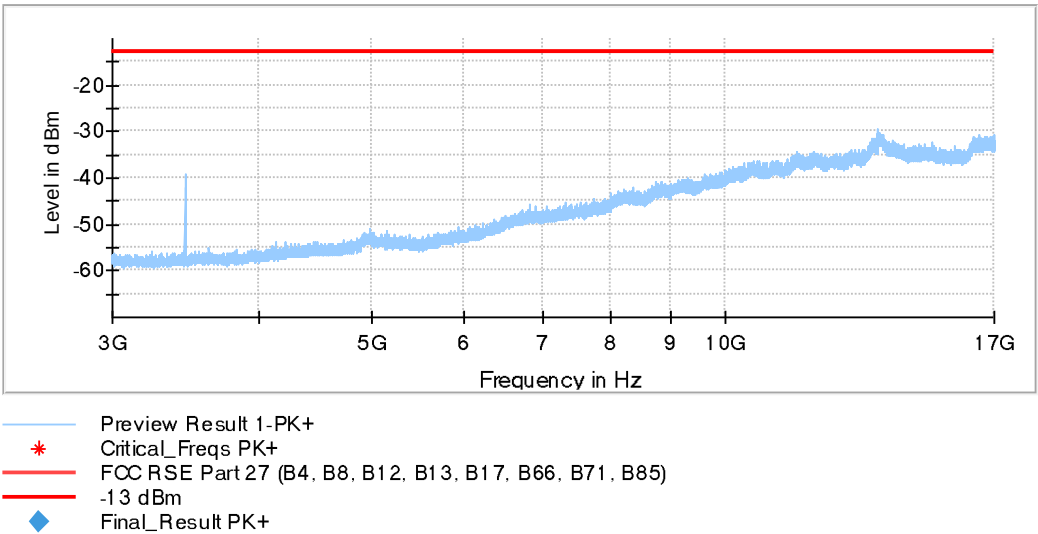
The peak above the limit is the LTE Cat-M1 Band 4 carrier frequency.

FREQUENCY RANGE 3 - 17 GHz:

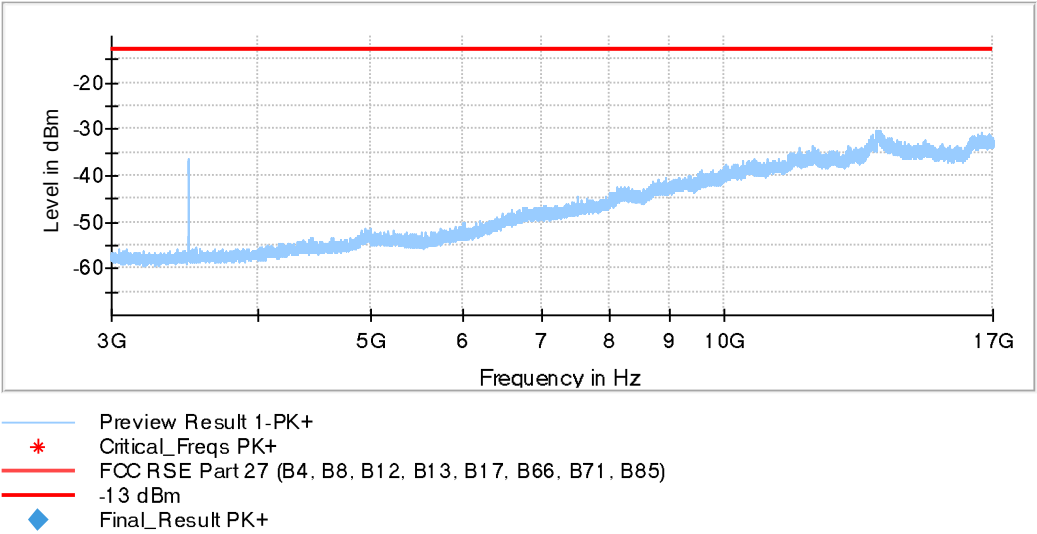
- LOW CHANNEL:



- MIDDLE CHANNEL:

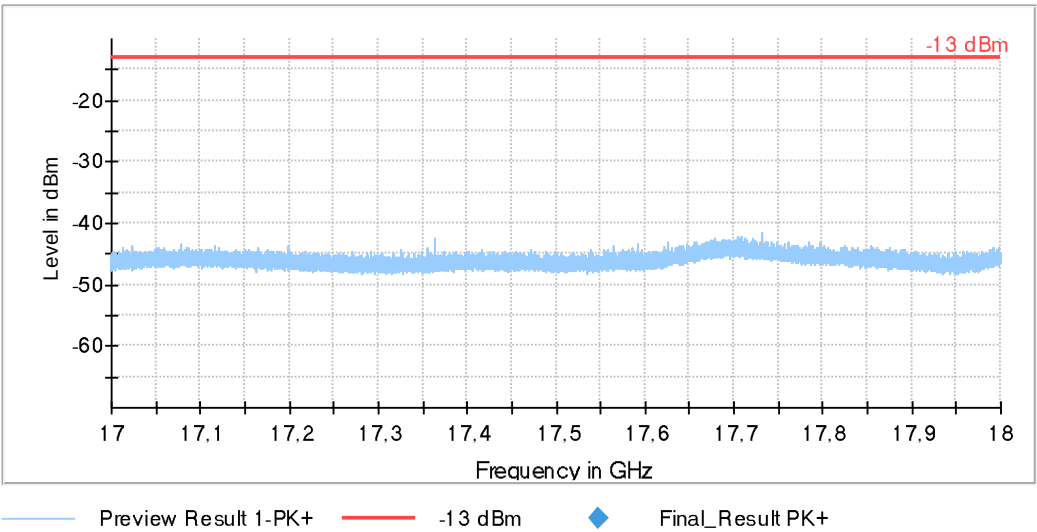


- HIGH CHANNEL:

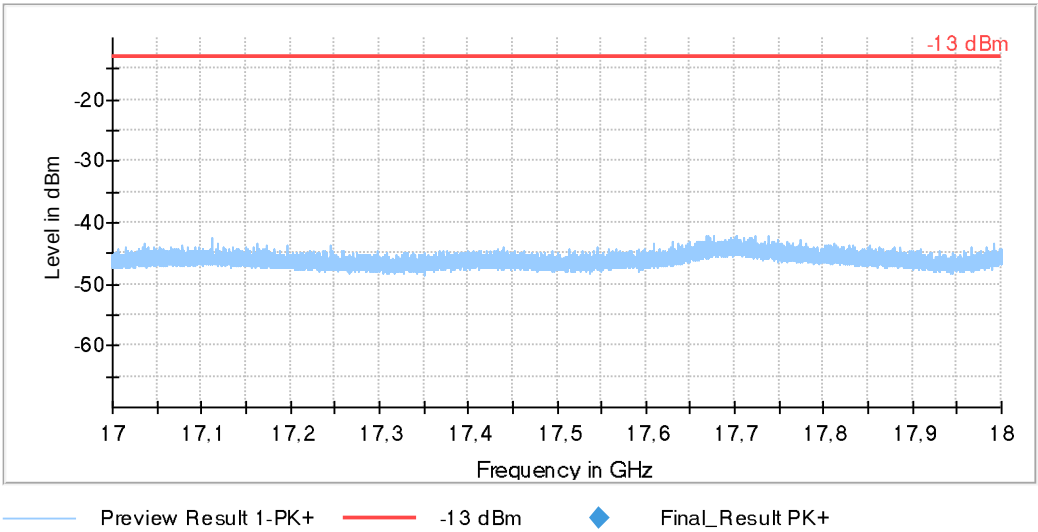


FREQUENCY RANGE 17 - 18 GHz:

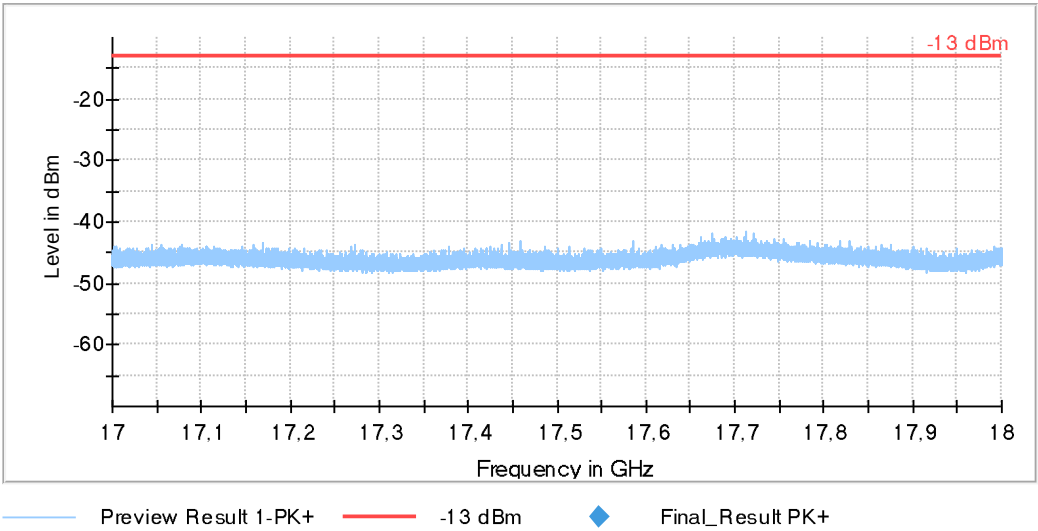
- LOW CHANNEL:



- MIDDLE CHANNEL:



- HIGH CHANNEL:



LTE Cat-M1 Band 12:

A preliminary scan determined the 16QAM. BW=5 MHz. RB Size=1. RB Offset=0. Narrowband=0 as the worst case. The next results are for this worst-case configuration.

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 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.

Measurement uncertainty (dB) $< \pm 5.35$ for $f < 1$ GHz
 $< \pm 4.32$ for $f \geq 1$ GHz up to 8 GHz

Verdict

Pass

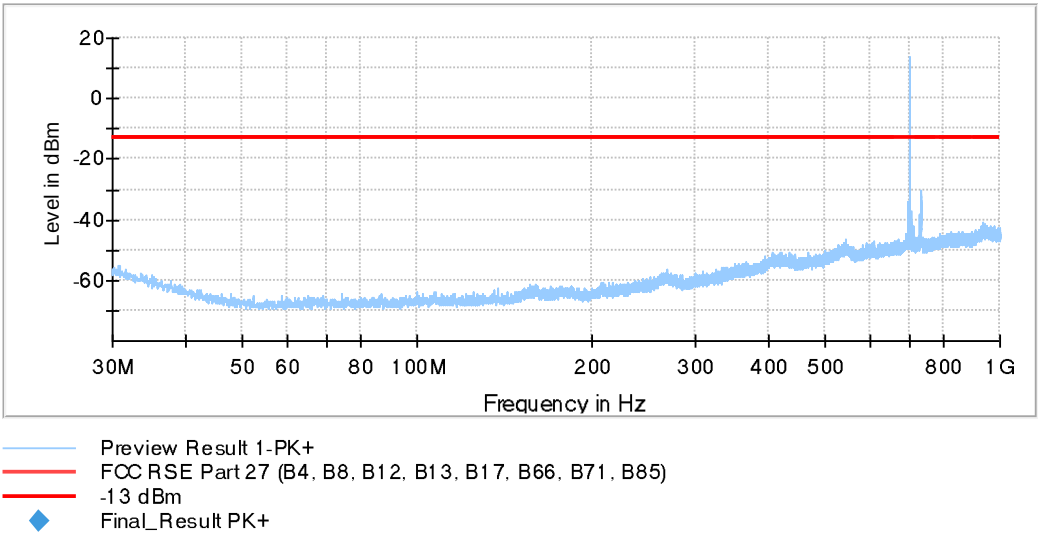
Spectrum analyzer parameters:

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	30.312 kHz	PK+	100 kHz	Coupled	0 dB
1 - 8 GHz	234.375 kHz	PK+	100 kHz	1 s	0 dB

LTE Cat-M1 Band 12:

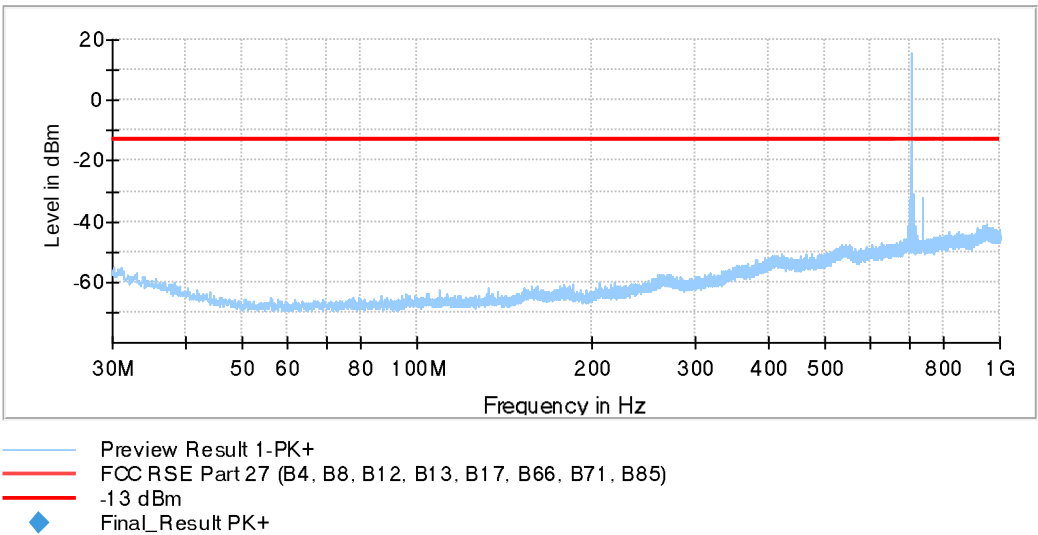
FREQUENCY RANGE 30 MHz - 1 GHz:

- LOW CHANNEL:



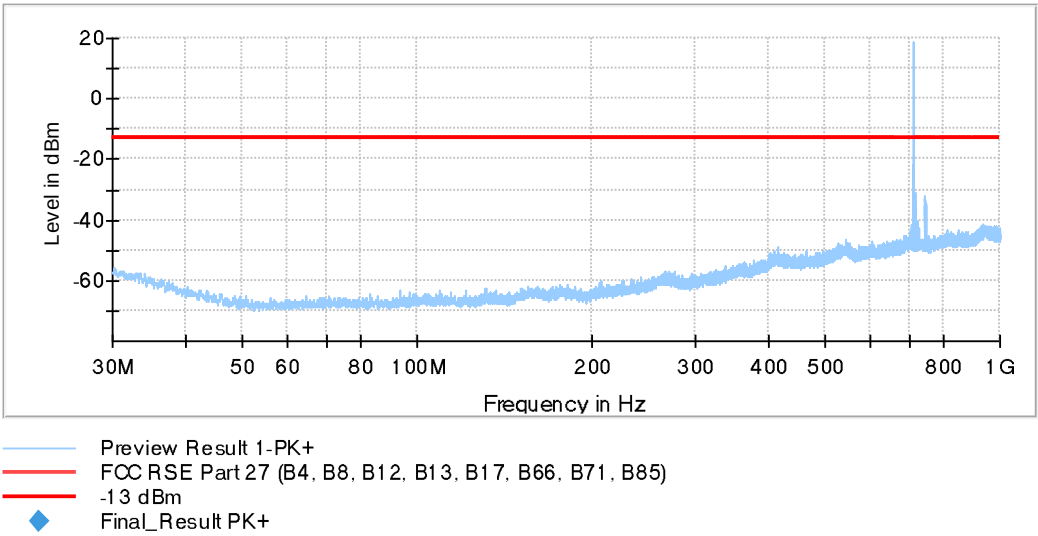
The peak above the limit is the LTE Cat-M1 Band 12 carrier frequency.

- MIDDLE CHANNEL:



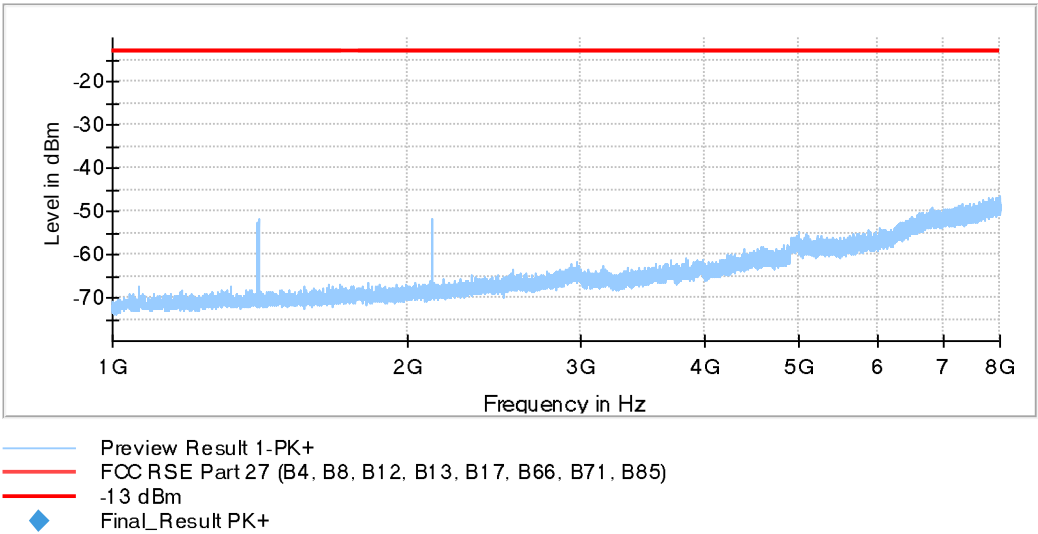
The peak above the limit is the LTE Cat-M1 Band 12 carrier frequency.

- HIGH CHANNEL:

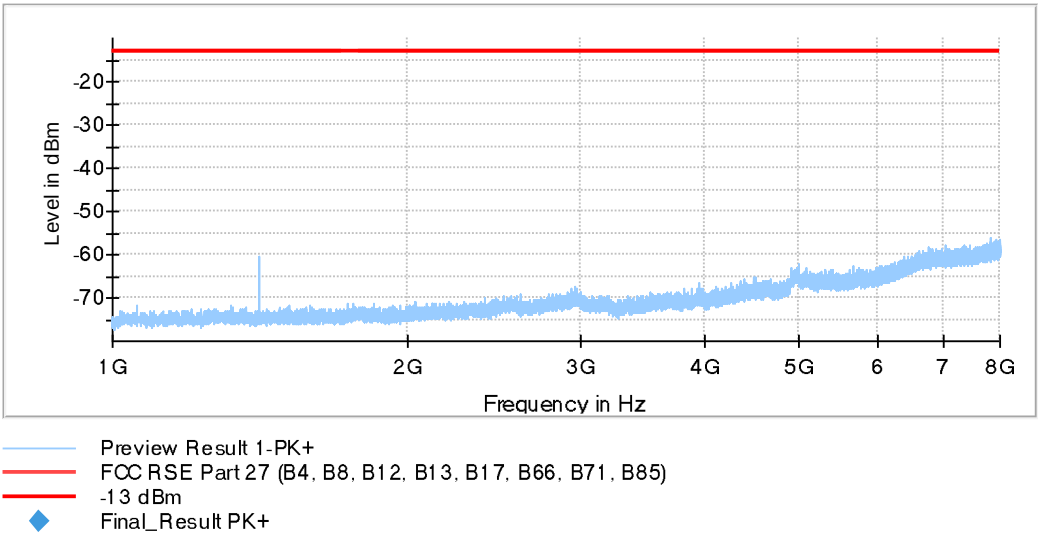


FREQUENCY RANGE 1 - 8 GHz

- LOW CHANNEL:



- MIDDLE CHANNEL:



- HIGH CHANNEL:

