

ISED CABid: ES1909
Lab. Company Number: 4621A

Test Report No:
80540RRF.003

Partial Test Report

USA FCC Part 27

CANADA RSS-130, RSS-139

(*) Identification of item tested	Cat1 bis data only module
(*) Trademark	u-blox
(*) Model and /or type reference	LEXI-R10401D
Other identification of the product	FCC ID: XPYUBX23AD01 IC: 8595A-UBX23AD01
(*) Features	LTE Cat1 bis, Wi-fi Scan / Locate HW version: UBX-437C01 SW version: 01.06.A01.00
Applicant	u-blox AG Zürcherstrasse 68, CH-8800 Thalwil, 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. CANADA RSS-Gen Issue 5, April 2018. 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	2025-01-14
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Competences and guarantees

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

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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 is LEXI-R10401D is a Cat1 bis data only module for industrial IoT applications.

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	80540_33.1	Cat1 bis data only module	LEXI-R10401D	-	2024-11-05		Element Under Test
S/01	80540_34.1	Antenna	-	-	2024-11-05		Auxiliary Element
S/01	80540_35.1	Antenna GPS	-	-	2024-11-05		Auxiliary Element
S/01	80540_36.1	AC/DC	-	-	2024-11-05		Auxiliary Element
S/01	80540_37.1	USB Cable	-	-	2024-11-05		Auxiliary Element
S/01	80540_49.1	USB Cable	-	-	2024-11-05		Auxiliary Element
S/02	80540_33.1	Cat1 bis data only module	LEXI-R10401D	-	2024-11-05		Element Under Test
S/02	80540_34.1	Antenna	-	-	2024-11-05		Auxiliary Element
S/02	80540_35.1	Antenna GPS	-	-	2024-11-05		Auxiliary Element
S/02	80540_37.1	USB Cable	-	-	2024-11-05		Auxiliary Element
S/02	80540_49.1	USB Cable	-	-	2024-11-05		Auxiliary Element

Notes referenced to samples during the project:

Id	Type
S/01	Radiated tests.
S/02	Conducted tests.

Test sample description

Ports..... :	Port name and description		Cable						
			Specified max length [m]		Attached during test		Shielded		
	USB		2		☒		☒		
	-				[]		[]		
Supplementary information to the ports..... :	-								
Rated power supply :	Voltage and Frequency				Reference poles				
					L1	L2	L3	N	PE
	[]	AC:			[]	[]	[]	[]	[]

	[X]	DC: Min: 3.3, Typical: 3.8, Max: 4.5		
Rated Power..... :	-			
Clock frequencies..... :	26 MHz			
Other parameters :	-			
Software version..... :	01.06.A01.00			
Hardware version :	UBX-437C01			
Dimensions in cm (W x H x D) ... :	1.6 x 0.2 x 1.6			
Mounting position :	☐	Table top equipment		
	☐	Wall/Ceiling mounted equipment		
	☐	Floor standing equipment		
	☐	Hand-held equipment		
	☒	Other: Industrial modem component		
Modules/parts..... :	Module/parts of test item		Type	Manufacturer
	-		-	-
Accessories (not part of the test item) :	Description		Type	Manufacturer
	Power supply unit		UUX324-1215	Unifive
	Antenna LTE		GSA.8835	Taoglass
Documents as provided by the applicant :	Description		File name	Issue date
	-		-	-

Identification of the client

u-blox AG
Zürcherstrasse 68, CH-8800 Thalwil, Switzerland

Testing period and place

Test Location	DEKRA Testing and Certification S.A.U.
Date (start)	2024-11-05
Date (finish)	2024-11-11

Document history

Report number	Date	Description
80540RRF.003	2025-01-14	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 %

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: Rafael Fernández, Carmen Vázquez.

Used instrumentation:

Control No.	Equipment	Model	Manufacturer	Next Calibration
6165	EMI TEST RECEIVER 9 kHz-7 GHz	ESR7	ROHDE AND SCHWARZ	2025-12-27
4578	HYBRID BILOG ANTENNA 30 MHz - 6 GHz	3142E	ETS LINDGREN	2026-06-01
7692	ATTENUATOR 3 dB, 2 W, DC, 18 GHz	TWTS2G	TECHNIWAVE	2025-01-29
4716	SIGNAL AND SPECTRUM ANALYZER 2 Hz - 50 GHz	FSW50	ROHDE AND SCHWARZ	2026-08-02
5705	PRE-AMPLIFIER G>40dB, 1-18 GHz	BLMA 0118-1M	BONN ELEKTRONIK	2025-07-18
4611	HORN ANTENNA 1-18 GHz	BBHA 9120 D	SCHWARZBECK MESS-ELEKTRONIK	2026-01-16
6157	SIGNAL AND SPECTRUM ANALYZER 10 Hz - 40 GHz	FSV40	ROHDE AND SCHWARZ	2025-01-18
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

Control No.	Equipment	Model	Manufacturer	Next Calibration
9555	TWO CHANNEL POWER SUPPLY, 32V, 10/5A, 188W	HMP2020	ROHDE AND SCHWARZ	N/A
7794	SIGNAL AND SPECTRUM ANALYZER 10 Hz - 40 GHz	FSV40	ROHDE AND SCHWARZ	2025-04-21
8912	WIDEBAND RADIO COMMUNICATION TESTER	CMW500	ROHDE AND SCHWARZ	2025-10-05
6791	SEMIANECHOIC ABSORBER LINED CHAMBER IV	FACT 3 200 STP	ETS LINDGREN	N/A
6792	SHIELDED ROOM	S101	ETS LINDGREN	N/A

Testing verdicts

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

Summary

LTE Cat 1bis Bands 12, 13, 66, 71.

FCC PART 27 / RSS-130, RSS-139, RSS-Gen PARAGRAPH		
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, RSS-Gen

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TEST CONDITIONS

(*): Declared by the Applicant.

POWER SUPPLY (*):

Vnominal: 3.8 Vdc
Vminimum: 3.23 Vdc
Vmaximum: 4.5 Vdc

Type of Power Supply: DC External (USB).

ANTENNA (*):

LOW BANDS	GAIN (dBi)	TYPE OF ANTENNA
LTE Cat 1bis Band 12	2.44	External (Taoglass GSA_8835 (standard reference antenna provided with EVK))
LTE Cat 1bis Band 13	2.44	External (Taoglass GSA_8835 (standard reference antenna provided with EVK))
LTE Cat 1bis Band 71	0.95	External (Taoglass GSA_8835 (standard reference antenna provided with EVK))
LTE Cat 1bis Band 4	4.12	External (Taoglass GSA_8835 (standard reference antenna provided with EVK))
LTE Cat 1bis Band 66	4.12	External (Taoglass GSA_8835 (standard reference antenna provided with EVK))

TEST FREQUENCIES:

LTE Cat 1bis Band 12. QPSK and 16QAM:

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)

LTE Cat 1bis Band 13. QPSK and 16QAM:

Channel (Frequency, MHz)		
	BW = 5 MHz	BW = 10 MHz
Low	23205 (779.5)	
Middle	23230 (782.0)	23230 (782.0)
High	23255 (784.5)	

LTE Cat 1bis Band 66. QPSK and 16QAM:

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	131979 (1710.7)	131987 (1711.5)	131997 (1712.5)	132022 (1715.0)	132047 (1717.5)	132072 (1720.0)
Middle	132322 (1745)	132322 (1745)	132322 (1745)	132322 (1745)	132322 (1745)	132322 (1745)
High	132665 (1779.3)	132657 (1778.5)	132647 (1777.5)	132622 (1775)	132597 (1772.5)	132572 (1770)

LTE Cat 1bis Band 71. QPSK and 16QAM:

Channel (Frequency)				
	BW = 5 MHz	BW = 10 MHz	BW = 15 MHz	BW = 20 MHz
Low	133147 (665.50 MHz)	133172 (668.00 MHz)	133197 (670.50 MHz)	133222 (673.00 MHz)
Middle	133297 (680.50 MHz)	133297 (680.50 MHz)	133297 (680.50 MHz)	133297 (680.50 MHz)
High	133447 (695.50 MHz)	133422 (693.00 MHz)	133397 (690.50 MHz)	133372 (688.00 MHz)

RF Output Power

Limits

1. LTE Cat 1bis Band 12. FCC §27.50 (c) (10) / RSS-130 Clause 4.6.

FCC §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:

4.6.1 General

The transmitter output power shall be measured in terms of average power. In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the High PAPR during periods of continuous transmission.

4.6.3 Frequency bands 698-756 MHz and 777-787 MHz

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.

2. LTE Cat 1bis Band 13. FCC §27.50 (b) (10) / RSS-130 Clause 4.6.

FCC §27.50 (b) (10):

Portable stations (hand-held devices) transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts ERP.

RSS-130 Clause 4.6:

4.6.1 General

The transmitter output power shall be measured in terms of average power. In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the High PAPR during periods of continuous transmission.

4.6.3 Frequency bands 698-756 MHz and 777-787 MHz

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.

3. LTE Cat 1bis Bands 66. FCC §27.50 (d) / RSS-139 5.5.

FCC §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.

(5) In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

RSS-139 5.5:

The maximum output power of the equipment shall comply with the limits specified below. In the tables, maximum power refers to the equivalent isotropically radiated power (e.i.r.p.) or total radiated power (TRP), measured in terms of average values.

The limits in this RSS are specified for the purpose of certification and may not apply to all deployment scenarios. Consult SRSP-513 and SRSP-519 for more details on the bands 2110-2180 MHz and 2180-2200 MHz respectively.

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

In addition, the peak to average power ratio (PAPR) of the equipment shall not exceed 13 dB for more than 0.1% of the time, using a signal that corresponds to the highest PAPR during periods of continuous transmission.

4. LTE Cat-M1 Band 71. FCC §27.50 (c) (10) / RSS-130 Clause 4.6.

FCC §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:

4.6.1 General

The transmitter output power shall be measured in terms of average power. In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the High PAPR during periods of continuous transmission.

4.6.2 Frequency bands 617-652 MHz and 663-698 MHz

The e.r.p. shall not exceed 3 watts for mobile equipment, fixed subscriber equipment and portable equipment.

For base and fixed equipment other than fixed subscriber equipment, refer to SRSP-518 for the equivalent isotropically radiated power (e.i.r.p.) limits.

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 peak-to-average power ratio (PAPR) is measured using an attenuator, power splitter and spectrum analyser with a Complementary Cumulative Distribution Function implemented.

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

- 1. CONDUCTED AVERAGE POWER:



Results

LTE Band 12:

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
1.4	Low 23017	699.7	QPSK	1	0	22.98
1.4			QPSK	1	2	23.06
1.4			QPSK	1	5	23.16
1.4			QPSK	3	0	22.94
1.4			QPSK	3	1	22.96
1.4			QPSK	3	2	23.11
1.4			QPSK	6	0	22.03
1.4			16-QAM	1	0	22.21
1.4			16-QAM	1	2	22.32
1.4			16-QAM	1	5	22.34
1.4			16-QAM	3	0	22.04
1.4			16-QAM	3	1	22.07
1.4			16-QAM	3	2	22.09
1.4			16-QAM	6	0	21.14
1.4	Middle 23095	707.5	QPSK	1	0	22.52
1.4			QPSK	1	2	22.63
1.4			QPSK	1	5	22.64
1.4			QPSK	3	0	22.67
1.4			QPSK	3	1	22.66
1.4			QPSK	3	2	22.64
1.4			QPSK	6	0	21.85
1.4			16-QAM	1	0	21.63
1.4			16-QAM	1	2	21.62
1.4			16-QAM	1	5	21.64
1.4			16-QAM	3	0	21.85
1.4			16-QAM	3	1	21.85
1.4			16-QAM	3	2	21.84
1.4			16-QAM	6	0	20.97
1.4	High 23173	715.3	QPSK	1	0	22.84
1.4			QPSK	1	2	22.81
1.4			QPSK	1	5	22.84
1.4			QPSK	3	0	22.76
1.4			QPSK	3	1	22.76
1.4			QPSK	3	2	22.78
1.4			QPSK	6	0	21.94
1.4			16-QAM	1	0	21.94
1.4			16-QAM	1	2	21.9
1.4			16-QAM	1	5	21.97
1.4			16-QAM	3	0	22.47
1.4			16-QAM	3	1	22.01
1.4			16-QAM	3	2	21.95
1.4			16-QAM	6	0	20.94

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
3	Low 23025	700.5	QPSK	1	0	22.73
3			QPSK	1	7	22.97
3			QPSK	1	14	22.54
3			QPSK	8	0	21.91
3			QPSK	8	4	21.78
3			QPSK	8	7	21.69
3			QPSK	15	0	21.81
3			16-QAM	1	0	21.75
3			16-QAM	1	7	21.83
3			16-QAM	1	14	21.52
3			16-QAM	8	0	21.04
3			16-QAM	8	4	20.93
3			16-QAM	8	7	20.85
3			16-QAM	15	0	20.72
3	Middle 23095	707.5	QPSK	1	0	22.34
3			QPSK	1	7	22.55
3			QPSK	1	14	22.2
3			QPSK	8	0	21.6
3			QPSK	8	4	21.63
3			QPSK	8	7	21.59
3			QPSK	15	0	21.54
3			16-QAM	1	0	21.27
3			16-QAM	1	7	21.51
3			16-QAM	1	14	21.18
3			16-QAM	8	0	20.82
3			16-QAM	8	4	20.88
3			16-QAM	8	7	20.82
3			16-QAM	15	0	20.69
3	High 23165	714.5	QPSK	1	0	23.26
3			QPSK	1	7	23.25
3			QPSK	1	14	23.05
3			QPSK	8	0	22.38
3			QPSK	8	4	22.37
3			QPSK	8	7	22.3
3			QPSK	15	0	22.39
3			16-QAM	1	0	22.42
3			16-QAM	1	7	22.44
3			16-QAM	1	14	22.26
3			16-QAM	8	0	21.53
3			16-QAM	8	4	21.4
3			16-QAM	8	7	21.33
3			16-QAM	15	0	21.36

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
5	Low 23035	701.5	QPSK	1	0	23.27
5			QPSK	1	12	23.04
5			QPSK	1	24	22.89
5			QPSK	12	0	22.34
5			QPSK	12	6	22.18
5			QPSK	12	11	22.07
5			QPSK	25	0	22.14
5			16-QAM	1	0	22.66
5			16-QAM	1	12	22.34
5			16-QAM	1	24	22.2
5			16-QAM	12	0	21.35
5			16-QAM	12	6	21.21
5			16-QAM	12	11	21.15
5			16-QAM	25	0	21.21
5	Middle 23095	707.5	QPSK	1	0	22.79
5			QPSK	1	12	22.68
5			QPSK	1	24	22.8
5			QPSK	12	0	21.8
5			QPSK	12	6	21.82
5			QPSK	12	11	21.77
5			QPSK	25	0	21.78
5			16-QAM	1	0	21.9
5			16-QAM	1	12	21.84
5			16-QAM	1	24	21.97
5			16-QAM	12	0	21.04
5			16-QAM	12	6	21.07
5			16-QAM	12	11	21.01
5			16-QAM	25	0	20.97
5	High 23155	713.5	QPSK	1	0	23.26
5			QPSK	1	12	23.3
5			QPSK	1	24	23.21
5			QPSK	12	0	22.29
5			QPSK	12	6	22.41
5			QPSK	12	11	22.4
5			QPSK	25	0	22.41
5			16-QAM	1	0	22.42
5			16-QAM	1	12	22.36
5			16-QAM	1	24	22.4
5			16-QAM	12	0	21.36
5			16-QAM	12	6	21.4
5			16-QAM	12	11	21.36
5			16-QAM	25	0	21.34

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
10	Low 23060	704	QPSK	1	0	23.36
10			QPSK	1	24	22.94
10			QPSK	1	49	22.94
10			QPSK	25	0	22.02
10			QPSK	25	12	22.09
10			QPSK	25	24	22.05
10			QPSK	50	0	22.08
10			16-QAM	1	0	22.2
10			16-QAM	1	24	21.89
10			16-QAM	1	49	21.98
10			16-QAM	25	0	21.3
10			16-QAM	25	12	21.25
10			16-QAM	25	24	21.36
10			16-QAM	50	0	N/A
10	Middle 23095	707.5	QPSK	1	0	22.69
10			QPSK	1	24	22.84
10			QPSK	1	49	22.94
10			QPSK	25	0	22.01
10			QPSK	25	12	21.96
10			QPSK	25	24	22.1
10			QPSK	50	0	22.04
10			16-QAM	1	0	21.63
10			16-QAM	1	24	21.82
10			16-QAM	1	49	21.92
10			16-QAM	25	0	21.19
10			16-QAM	25	12	21.15
10			16-QAM	25	24	21.28
10			16-QAM	50	0	N/A
10	High 23130	711	QPSK	1	0	23.05
10			QPSK	1	24	23.29
10			QPSK	1	49	23.17
10			QPSK	25	0	22.16
10			QPSK	25	12	22.27
10			QPSK	25	24	22.44
10			QPSK	50	0	22.34
10			16-QAM	1	0	22.15
10			16-QAM	1	24	22.39
10			16-QAM	1	49	22.33
10			16-QAM	25	0	21.3
10			16-QAM	25	12	21.38
10			16-QAM	25	24	21.53
10			16-QAM	50	0	N/A

LTE Band 13:

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
5	Low 23205	779.5	QPSK	1	0	23.08
5			QPSK	1	12	22.73
5			QPSK	1	24	22.88
5			QPSK	12	0	22.12
5			QPSK	12	6	22
5			QPSK	12	11	21.98
5			QPSK	25	0	22.14
5			16-QAM	1	0	22.41
5			16-QAM	1	12	22.09
5			16-QAM	1	24	22.28
5			16-QAM	12	0	21.29
5			16-QAM	12	6	21.07
5			16-QAM	12	11	21.08
5			16-QAM	25	0	21.2
5	Middle 23230	782	QPSK	1	0	N/A
5			QPSK	1	12	N/A
5			QPSK	1	24	N/A
5			QPSK	12	0	N/A
5			QPSK	12	6	N/A
5			QPSK	12	11	N/A
5			QPSK	25	0	N/A
5			16-QAM	1	0	N/A
5			16-QAM	1	12	N/A
5			16-QAM	1	24	N/A
5			16-QAM	12	0	N/A
5			16-QAM	12	6	N/A
5			16-QAM	12	11	N/A
5			16-QAM	25	0	N/A
5	High 23255	784.5	QPSK	1	0	22.9
5			QPSK	1	12	22.91
5			QPSK	1	24	22.92
5			QPSK	12	0	21.89
5			QPSK	12	6	21.88
5			QPSK	12	11	21.84
5			QPSK	25	0	21.85
5			16-QAM	1	0	21.88
5			16-QAM	1	12	21.85
5			16-QAM	1	24	21.9
5			16-QAM	12	0	21.15
5			16-QAM	12	6	21.15
5			16-QAM	12	11	21.13
5			16-QAM	25	0	21.07

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
10	Middle 23230	782	QPSK	1	0	23.44
10			QPSK	1	24	23.16
10			QPSK	1	49	23.14
10			QPSK	25	0	22.16
10			QPSK	25	12	22.14
10			QPSK	25	24	22.16
10			QPSK	50	0	22.17
10			16-QAM	1	0	22.26
10			16-QAM	1	24	22.06
10			16-QAM	1	49	22.04
10			16-QAM	25	0	21.34
10			16-QAM	25	12	21.3
10			16-QAM	25	24	21.29
10			16-QAM	50	0	N/A

LTE Band 66:

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
1.4	Low 131979	1710.7	QPSK	1	0	23.46
1.4			QPSK	1	2	23.58
1.4			QPSK	1	5	23.56
1.4			QPSK	3	0	23.38
1.4			QPSK	3	1	23.51
1.4			QPSK	3	2	23.54
1.4			QPSK	6	0	22.48
1.4			16-QAM	1	0	22.62
1.4			16-QAM	1	2	22.71
1.4			16-QAM	1	5	22.73
1.4			16-QAM	3	0	22.48
1.4			16-QAM	3	1	22.49
1.4			16-QAM	3	2	22.51
1.4			16-QAM	6	0	21.63
1.4	Middle 132322	1745	QPSK	1	0	22.71
1.4			QPSK	1	2	22.89
1.4			QPSK	1	5	22.82
1.4			QPSK	3	0	22.79
1.4			QPSK	3	1	22.79
1.4			QPSK	3	2	22.78
1.4			QPSK	6	0	21.94
1.4			16-QAM	1	0	21.73
1.4			16-QAM	1	2	21.75
1.4			16-QAM	1	5	21.77
1.4			16-QAM	3	0	21.94
1.4			16-QAM	3	1	21.94
1.4			16-QAM	3	2	21.93
1.4			16-QAM	6	0	21.08
1.4	High 132665	1779.3	QPSK	1	0	22.8
1.4			QPSK	1	2	22.86
1.4			QPSK	1	5	22.95
1.4			QPSK	3	0	22.87
1.4			QPSK	3	1	22.87
1.4			QPSK	3	2	22.88
1.4			QPSK	6	0	21.99
1.4			16-QAM	1	0	21.88
1.4			16-QAM	1	2	21.94
1.4			16-QAM	1	5	21.97
1.4			16-QAM	3	0	21.99
1.4			16-QAM	3	1	21.98
1.4			16-QAM	3	2	21.99
1.4			16-QAM	6	0	21.1

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
3	Low 131987	1711,5	QPSK	1	0	23,37
3			QPSK	1	7	23,59
3			QPSK	1	14	23,44
3			QPSK	8	0	22,6
3			QPSK	8	4	22,71
3			QPSK	8	7	22,69
3			QPSK	15	0	22,64
3			16-QAM	1	0	22,4
3			16-QAM	1	7	22,68
3			16-QAM	1	14	22,56
3			16-QAM	8	0	21,82
3			16-QAM	8	4	21,93
3			16-QAM	8	7	21,92
3			16-QAM	15	0	21,65
3	Middle 132322	1745	QPSK	1	0	22,57
3			QPSK	1	7	22,83
3			QPSK	1	14	22,73
3			QPSK	8	0	21,91
3			QPSK	8	4	21,96
3			QPSK	8	7	21,93
3			QPSK	15	0	21,88
3			16-QAM	1	0	21,6
3			16-QAM	1	7	21,81
3			16-QAM	1	14	21,66
3			16-QAM	8	0	21,15
3			16-QAM	8	4	21,09
3			16-QAM	8	7	21,06
3			16-QAM	15	0	20,92
3	High 132657	1778,5	QPSK	1	0	22,71
3			QPSK	1	7	22,87
3			QPSK	1	14	22,82
3			QPSK	8	0	21,91
3			QPSK	8	4	21,99
3			QPSK	8	7	21,99
3			QPSK	15	0	21,95
3			16-QAM	1	0	21,79
3			16-QAM	1	7	21,93
3			16-QAM	1	14	21,93
3			16-QAM	8	0	20,98
3			16-QAM	8	4	21,04
3			16-QAM	8	7	21,04
3			16-QAM	15	0	20,96

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
5	Low 131997	1712.5	QPSK	1	0	23.66
5			QPSK	1	12	23.64
5			QPSK	1	24	23.65
5			QPSK	12	0	22.66
5			QPSK	12	6	22.73
5			QPSK	12	11	22.75
5			QPSK	25	0	22.76
5			16-QAM	1	0	22.85
5			16-QAM	1	12	22.93
5			16-QAM	1	24	23
5			16-QAM	12	0	21.86
5			16-QAM	12	6	21.91
5			16-QAM	12	11	21.82
5			16-QAM	25	0	21.8
5	Middle 132322	1745	QPSK	1	0	22.8
5			QPSK	1	12	22.86
5			QPSK	1	24	23.04
5			QPSK	12	0	21.97
5			QPSK	12	6	21.98
5			QPSK	12	11	22.01
5			QPSK	25	0	21.97
5			16-QAM	1	0	21.98
5			16-QAM	1	12	21.97
5			16-QAM	1	24	22.13
5			16-QAM	12	0	21.18
5			16-QAM	12	6	21.2
5			16-QAM	12	11	21.23
5			16-QAM	25	0	21.14
5	High 132647	1777.5	QPSK	1	0	22.85
5			QPSK	1	12	22.78
5			QPSK	1	24	23.03
5			QPSK	12	0	21.91
5			QPSK	12	6	21.94
5			QPSK	12	11	21.97
5			QPSK	25	0	21.94
5			16-QAM	1	0	22
5			16-QAM	1	12	21.96
5			16-QAM	1	24	22.19
5			16-QAM	12	0	21.07
5			16-QAM	12	6	21
5			16-QAM	12	11	21.01
5			16-QAM	25	0	20.99

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
10	Low 132022	1715	QPSK	1	0	23,62
10			QPSK	1	24	23,63
10			QPSK	1	49	23,54
10			QPSK	25	0	22,67
10			QPSK	25	12	22,62
10			QPSK	25	24	22,55
10			QPSK	50	0	22,6
10			16-QAM	1	0	22,49
10			16-QAM	1	24	22,6
10			16-QAM	1	49	22,52
10			16-QAM	25	0	21,82
10			16-QAM	25	12	21,8
10			16-QAM	25	24	21,6
10			16-QAM	50	0	N/A
10	Middle 132322	1745	QPSK	1	0	22,68
10			QPSK	1	24	22,9
10			QPSK	1	49	23,18
10			QPSK	25	0	21,96
10			QPSK	25	12	22,04
10			QPSK	25	24	22,16
10			QPSK	50	0	22,04
10			16-QAM	1	0	21,62
10			16-QAM	1	24	21,84
10			16-QAM	1	49	22,08
10			16-QAM	25	0	21,14
10			16-QAM	25	12	21,23
10			16-QAM	25	24	21,34
10			16-QAM	50	0	N/A
10	High 132622	1775	QPSK	1	0	23,2
10			QPSK	1	24	22,89
10			QPSK	1	49	23,12
10			QPSK	25	0	22,18
10			QPSK	25	12	22,11
10			QPSK	25	24	22,12
10			QPSK	50	0	22,16
10			16-QAM	1	0	22,25
10			16-QAM	1	24	21,99
10			16-QAM	1	49	22,2
10			16-QAM	25	0	21,38
10			16-QAM	25	12	21,33
10			16-QAM	25	24	21,33
10			16-QAM	50	0	N/A

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
15	Low 132047	1717.5	QPSK	1	0	23.68
15			QPSK	1	37	23.56
15			QPSK	1	74	23.44
15			QPSK	36	0	22.67
15			QPSK	36	18	22.66
15			QPSK	36	37	22.65
15			QPSK	75	0	22.67
15			16-QAM	1	0	22.59
15			16-QAM	1	37	22.55
15			16-QAM	1	74	22.49
15			16-QAM	25	0	21.87
15			16-QAM	25	12	21.71
15			16-QAM	25	24	21.76
15			16-QAM	75	0	N/A
15	Middle 132322	1745	QPSK	1	0	22.69
15			QPSK	1	37	22.91
15			QPSK	1	74	23.39
15			QPSK	36	0	21.94
15			QPSK	36	18	22.06
15			QPSK	36	37	22.25
15			QPSK	75	0	22.09
15			16-QAM	1	0	21.61
15			16-QAM	1	37	21.88
15			16-QAM	1	74	22.29
15			16-QAM	25	0	21.05
15			16-QAM	25	12	21.25
15			16-QAM	25	24	21.47
15			16-QAM	75	0	N/A
15	High 132597	1772.5	QPSK	1	0	23.47
15			QPSK	1	37	23.06
15			QPSK	1	74	23.09
15			QPSK	36	0	22.48
15			QPSK	36	18	22.33
15			QPSK	36	37	22.23
15			QPSK	75	0	22.38
15			16-QAM	1	0	22.77
15			16-QAM	1	37	22.46
15			16-QAM	1	74	22.52
15			16-QAM	25	0	21.55
15			16-QAM	25	12	21.3
15			16-QAM	25	24	21.21
15			16-QAM	75	0	N/A

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
20	Low 132072	1720	QPSK	1	0	23.79
20			QPSK	1	49	23.62
20			QPSK	1	99	23.21
20			QPSK	50	0	22.66
20			QPSK	50	24	22.61
20			QPSK	50	49	22.46
20			QPSK	100	0	22.54
20			16-QAM	1	0	22.72
20			16-QAM	1	49	22.7
20			16-QAM	1	99	22.3
20			16-QAM	25	0	21.86
20			16-QAM	25	12	21.63
20			16-QAM	25	24	21.54
20			16-QAM	100	0	N/A
20	Middle 132322	1745	QPSK	1	0	22.71
20			QPSK	1	49	22.88
20			QPSK	1	99	23.53
20			QPSK	50	0	21.88
20			QPSK	50	24	22.06
20			QPSK	50	49	22.35
20			QPSK	100	0	22.16
20			16-QAM	1	0	21.71
20			16-QAM	1	49	21.88
20			16-QAM	1	99	22.48
20			16-QAM	25	0	21.03
20			16-QAM	25	12	21.24
20			16-QAM	25	24	21.62
20			16-QAM	100	0	N/A
20	High 132572	1770	QPSK	1	0	23.47
20			QPSK	1	49	23.35
20			QPSK	1	99	23.25
20			QPSK	50	0	22.57
20			QPSK	50	24	22.48
20			QPSK	50	49	22.35
20			QPSK	100	0	22.49
20			16-QAM	1	0	22.74
20			16-QAM	1	49	22.62
20			16-QAM	1	99	22.48
20			16-QAM	25	0	21.63
20			16-QAM	25	12	21.64
20			16-QAM	25	24	21.44
20			16-QAM	100	0	N/A

LTE Band 71:

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
5	Low 133147	665.5	QPSK	1	0	22.39
5			QPSK	1	12	22.97
5			QPSK	1	24	22.8
5			QPSK	12	0	22.17
5			QPSK	12	6	22.12
5			QPSK	12	11	21.98
5			QPSK	25	0	22.12
5			16-QAM	1	0	21.78
5			16-QAM	1	12	22.38
5			16-QAM	1	24	22.14
5			16-QAM	12	0	21.19
5			16-QAM	12	6	21.17
5			16-QAM	12	11	21.05
5			16-QAM	25	0	21.07
5	Middle 133297	680.5	QPSK	1	0	23.41
5			QPSK	1	12	23.1
5			QPSK	1	24	23.19
5			QPSK	12	0	22.29
5			QPSK	12	6	22.2
5			QPSK	12	11	22.16
5			QPSK	25	0	22.22
5			16-QAM	1	0	22.48
5			16-QAM	1	12	22.16
5			16-QAM	1	24	22.24
5			16-QAM	12	0	21.51
5			16-QAM	12	6	21.41
5			16-QAM	12	11	21.38
5			16-QAM	25	0	21.38
5	High 133447	695.5	QPSK	1	0	23.07
5			QPSK	1	12	23.18
5			QPSK	1	24	23.17
5			QPSK	12	0	22.1
5			QPSK	12	6	22.16
5			QPSK	12	11	22.09
5			QPSK	25	0	22.08
5			16-QAM	1	0	22.09
5			16-QAM	1	12	22.16
5			16-QAM	1	24	22.14
5			16-QAM	12	0	21.25
5			16-QAM	12	6	21.31
5			16-QAM	12	11	21.27
5			16-QAM	25	0	21.23

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
10	Low 133172	668	QPSK	1	0	22.85
10			QPSK	1	24	22.74
10			QPSK	1	49	22.83
10			QPSK	25	0	22.06
10			QPSK	25	12	21.81
10			QPSK	25	24	21.72
10			QPSK	50	0	21.97
10			16-QAM	1	0	21.81
10			16-QAM	1	24	21.78
10			16-QAM	1	49	21.83
10			16-QAM	25	0	21.2
10			16-QAM	25	12	20.97
10			16-QAM	25	24	20.91
10			16-QAM	50	0	N/A
10	Middle 133297	680.5	QPSK	1	0	23.02
10			QPSK	1	24	23.09
10			QPSK	1	49	23.26
10			QPSK	25	0	22.29
10			QPSK	25	12	22.28
10			QPSK	25	24	22.28
10			QPSK	50	0	22.3
10			16-QAM	1	0	21.82
10			16-QAM	1	24	22.01
10			16-QAM	1	49	22.19
10			16-QAM	25	0	21.37
10			16-QAM	25	12	21.33
10			16-QAM	25	24	21.35
10			16-QAM	50	0	N/A
10	High 133422	693	QPSK	1	0	23.15
10			QPSK	1	24	23.13
10			QPSK	1	49	23.24
10			QPSK	25	0	22.2
10			QPSK	25	12	22.21
10			QPSK	25	24	22.27
10			QPSK	50	0	22.28
10			16-QAM	1	0	22.14
10			16-QAM	1	24	22.17
10			16-QAM	1	49	22.3
10			16-QAM	25	0	21.34
10			16-QAM	25	12	21.37
10			16-QAM	25	24	21.41
10			16-QAM	50	0	N/A

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
15	Low 133197	670,5	QPSK	1	0	22,81
15			QPSK	1	37	22,39
15			QPSK	1	74	22,93
15			QPSK	36	0	21,73
15			QPSK	36	18	21,58
15			QPSK	36	37	21,66
15			QPSK	75	0	21,72
15			16-QAM	1	0	21,72
15			16-QAM	1	37	21,36
15			16-QAM	1	74	21,97
15			16-QAM	25	0	21,02
15			16-QAM	25	12	20,81
15			16-QAM	25	24	20,99
15			16-QAM	75	0	N/A
15	Middle 133297	680,5	QPSK	1	0	22,82
15			QPSK	1	37	23,19
15			QPSK	1	74	23,07
15			QPSK	36	0	22,31
15			QPSK	36	18	22,33
15			QPSK	36	37	22,35
15			QPSK	75	0	22,3
15			16-QAM	1	0	21,75
15			16-QAM	1	37	22,05
15			16-QAM	1	74	21,89
15			16-QAM	25	0	21,15
15			16-QAM	25	12	21,4
15			16-QAM	25	24	21,43
15			16-QAM	75	0	N/A
15	High 133397	690,5	QPSK	1	0	22,91
15			QPSK	1	37	23,2
15			QPSK	1	74	22,94
15			QPSK	36	0	21,87
15			QPSK	36	18	21,93
15			QPSK	36	37	22,03
15			QPSK	75	0	21,96
15			16-QAM	1	0	22,2
15			16-QAM	1	37	22,46
15			16-QAM	1	74	21,21
15			16-QAM	25	0	20,96
15			16-QAM	25	12	21,11
15			16-QAM	25	24	21,09
15			16-QAM	75	0	N/A

BANDWIDTH (MHz)	CHANNEL	FREQUENCY (MHz)	MODULATION	RB SIZE	RB OFFSET	AVERAGE POWER (dBm)
20	Low 133222	673	QPSK	1	0	23.03
20			QPSK	1	49	22.53
20			QPSK	1	99	22.85
20			QPSK	50	0	21.6
20			QPSK	50	24	21.74
20			QPSK	50	49	21.99
20			QPSK	100	0	21.95
20			16-QAM	1	0	22.03
20			16-QAM	1	49	21.67
20			16-QAM	1	99	21.9
20			16-QAM	25	0	21.08
20			16-QAM	25	12	20.85
20			16-QAM	25	24	21.27
20			16-QAM	100	0	N/A
20	Middle 133297	680.5	QPSK	1	0	22.6
20			QPSK	1	49	23.1
20			QPSK	1	99	23.22
20			QPSK	50	0	22.23
20			QPSK	50	24	22.31
20			QPSK	50	49	22.28
20			QPSK	100	0	22.29
20			16-QAM	1	0	21.6
20			16-QAM	1	49	22.02
20			16-QAM	1	99	22.12
20			16-QAM	25	0	20.87
20			16-QAM	25	12	21.35
20			16-QAM	25	24	21.28
20			16-QAM	100	0	N/A
20	High 133372	688	QPSK	1	0	22.92
20			QPSK	1	49	22.75
20			QPSK	1	99	22.77
20			QPSK	50	0	21.89
20			QPSK	50	24	21.95
20			QPSK	50	49	22.01
20			QPSK	100	0	21.93
20			16-QAM	1	0	22.04
20			16-QAM	1	49	21.85
20			16-QAM	1	99	21.94
20			16-QAM	25	0	20.9
20			16-QAM	25	12	21.04
20			16-QAM	25	24	21.06
20			16-QAM	100	0	N/A

Verdict

Pass

Radiated Emissions

Limits

1. LTE Cat 1bis Band 66.

* FCC §27.53 (h):

AWS emission limits:

(1) General protection levels. Except as otherwise specified below, 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.

(3) Measurement procedure.

(i) Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(ii) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the licensee's frequency block edges, both upper and lower, as the design permits.

(iii) The measurements of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power.

* RSS-139, 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 an anechoic chamber.

The spectrum was scanned from 30 MHz to at least the 10th harmonic of the highest frequency generated within the equipment.

The EUT was placed on a non-conductive stand at 3-meter distance from the measuring antenna for the frequency range 30 MHz to 17 GHz, and at 1.5-meter distance from 17 GHz.

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:

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

At P_o transmitting power, the specified minimum attenuation $65 + 10 \log_{10} p$ (watts) becomes:

$$P_o \text{ (dBm)} - [65 + 10 \log (P_o \text{ in mwatts}) - 30] = -35 \text{ dBm}$$

For operation in LTE Cat-4 Band 13, the e.i.r.p. in the band 1559-1610 MHz shall not exceed -70 dBW (-40 dBm) per MHz for wideband signals, and -80 dBW (-50 dBm) for discrete emissions of less than 700 Hz bandwidth.

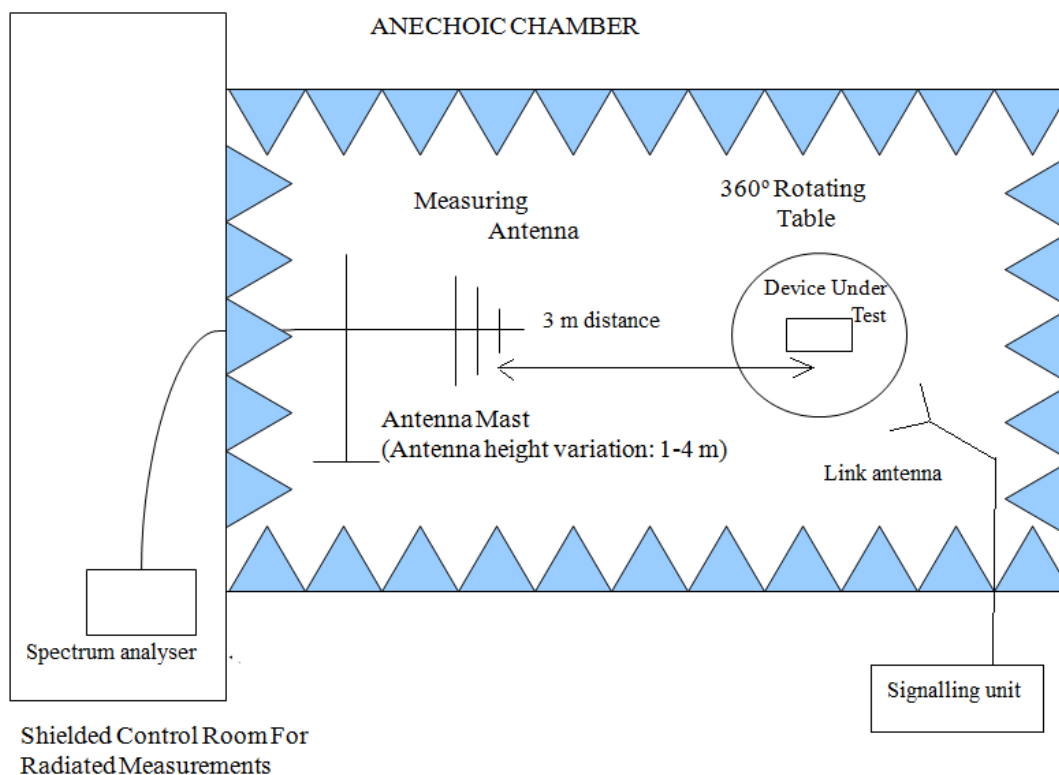
The maximum field strength (dB μ V/m) of each detected emission at less than 20 dB respect to the limit is converted to an equivalent EIRP level (dBm) according to ANSI C63.26 with the formula:

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

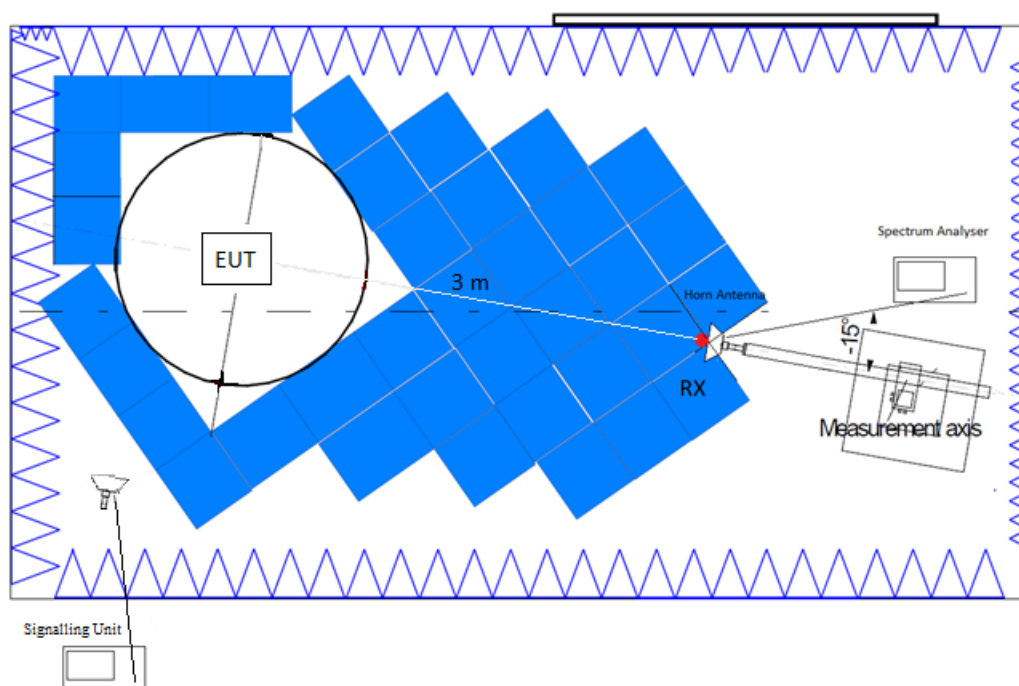
where D is the measurement distance (in the far field region) in m. $D = 3\text{m}$.

Test Setup

Radiated measurements setup from 30 MHz to 1 GHz:



Radiated measurements setup from 1 GHz to 18 GHz:



Results

Test was performed on worst-case channel in terms of radiated spurious emissions, determined by a preliminary scan for each band.

LTE Cat 1bis Band 66:

A preliminary scan determined the QPSK, BW=20 MHz, RB=1, RB Offset=0 as the worst-case. The next results are for this worst-case configuration.

- HIGH CHANNEL:

Frequency range 30 MHz - 1 GHz:

Spurious frequencies at less than 20 dB below the limit:

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Polarization
49.581875	-37.55	-13.00	24.55	V
89.018438	-42.98	-13.00	29.98	V
650.830313	-33.16	-13.00	20.16	V
754.044375	-33.21	-13.00	20.21	V
895.179375	-31.09	-13.00	18.09	H

Frequency range 1 - 8.5 GHz:

Spurious frequencies at less than 20 dB below the limit:

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Polarization
14692.240000	-10.63	-13.00	-2.37	H

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

Verdict

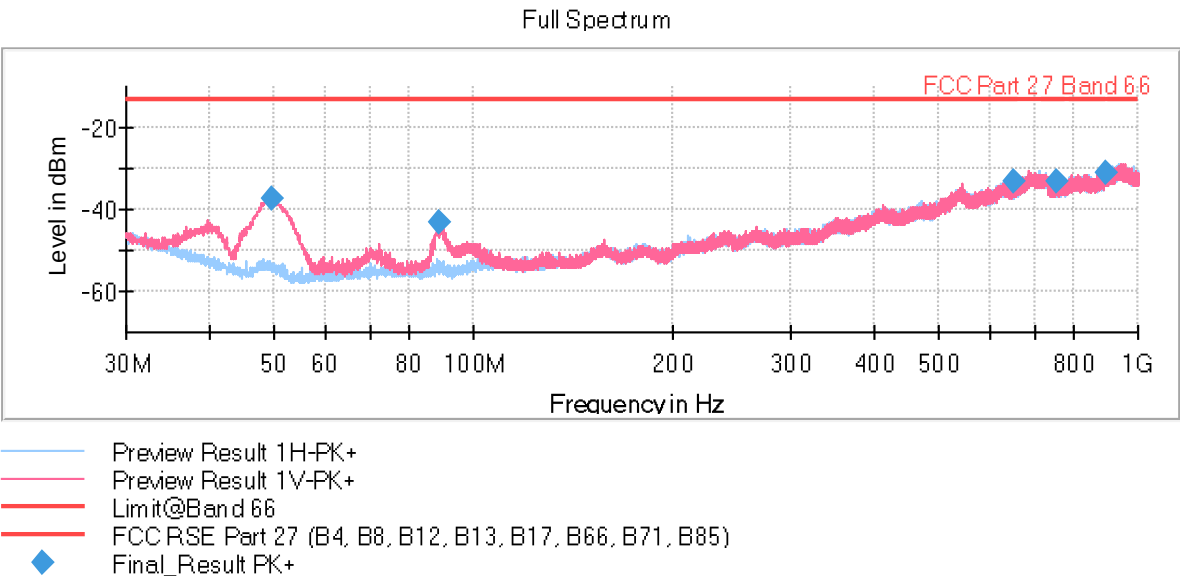
Pass

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	30.312 kHz	PK+	100 kHz	Coupled	0 dB
1 GHz - 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	93.75 kHz	PK+	1 MHz	1 s	0 dB

LTE Cat 1bis Band 66:

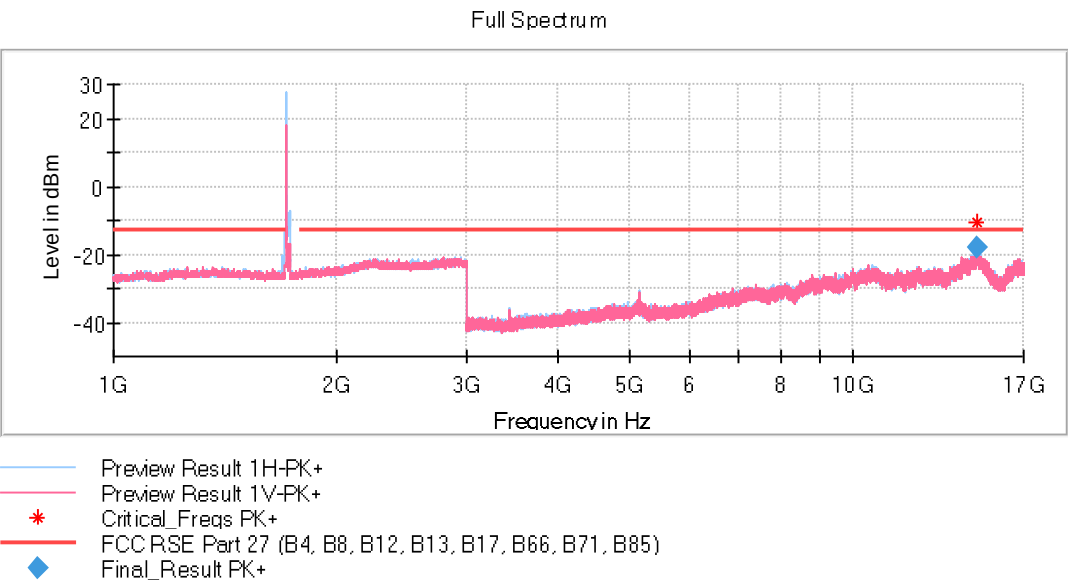
FREQUENCY RANGE 30 MHz - 1 GHz:

- HIGH CHANNEL:



FREQUENCY RANGE 1 - 17 GHz:

- HIGH CHANNEL:



The higher peak is the carrier frequency.

FREQUENCY RANGE 17 - 18 GHz:

- HIGH CHANNEL:

