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LP-009

Test report

Number	**T251-0546/24 M1**	Project file:	C20241046
		Date:	2025-07-01
		Pages:	29

Product:	**Notecard**
Type reference:	**NOTE-WBNAN, NOTE-NBNAN, NOTE-NBGLN**
Ratings:	VIO - 1.8 V or 3.3 V; 150 mA VMODEM - 2.5 V to 5.5 V; 750 mA (powered directly from a development board and AC/DC power supply delivering 5 V d.c. to the board)
Trademark:	/
Applicant:	**Blues Inc.** **Harbor Street 50, 01944 Manchester, USA**
Manufacturer:	Blues Inc. Harbor Street 50, 01944 Manchester, USA
Place of manufacture:	/

Summary of testing

Testing method:	47 CFR Part 15, Subpart B, last amended 2025-06-12 in conjunction with ANSI C63.4:2014 ICES-003, issue 7 in conjunction with ICES-Gen, Issue 2 and ANSI C63.4:2014 amended as per ANSI C63.4a:2017
Testing location:	SIQ Ljubljana Mašera-Spasićeva ulica 10, SI-1000 Ljubljana, Slovenia FCC designation number: SI0001 ISED Conformity Assessment Body Identification Number: SI0001
Remarks:	Date of receipt of test items: 2024-05-07 Number of items tested: 3 Date of performance of tests: 2024-05-23 – 2024-06-11 The test results presented in this report relate only to the items tested. The test items were tested in the condition as received. The product complies with the requirements of the testing methods.

Tested by: Aljaž Bajec

Approved by: Marjan Mak

Contents Page

1. General

Abbreviations and markings:

Port	Physical interface through which electromagnetic energy enters or leaves the EUT
AE associated equipment	Equipment needed to exercise and/or monitor the operation of the EUT
EUT	Equipment Under Test
Highest internal frequency (*Fx*)	Highest fundamental frequency generated or used within the EUT or highest frequency at which it operates
RF	Radio Frequency

Possible test case verdicts:

Test does not apply to the tested sample:	N/A
Tested sample passed the requirements:	P (Pass)
Tested sample failed the requirements:	F (Fail)
Test was not performed:	N/P (Not performed)

Throughout this report a comma is used as the decimal separator. Numerical data taken from IEC standards are using a comma as the decimal separator.

History sheet:

Date:	**Report No.:**	**Change:**	**Revision:**
2024-06-21	T251-0546/24	Initial Test Report issued.	--
2025-07-01	T251-0546/24 M1	This test report substitutes previously issued test report T251-0546/24, dated 2024-06-21, due to modification of the test report. Changes made on page 1: product, place of manufacture and testing method changed. Whole test report was updated to the latest form.	1.0

2. Measurement uncertainty

The following measurement uncertainty levels have been calculated according to the SIQ internal document EN208, as specified in CISPR 16-4-2 and EN 55016-4-2. The uncertainties represent an expanded uncertainty expressed at 95% confidence level using a coverage factor k=2.

The following measurement uncertainty has been included in test results as specified in each of the basic referenced standards as applicable.

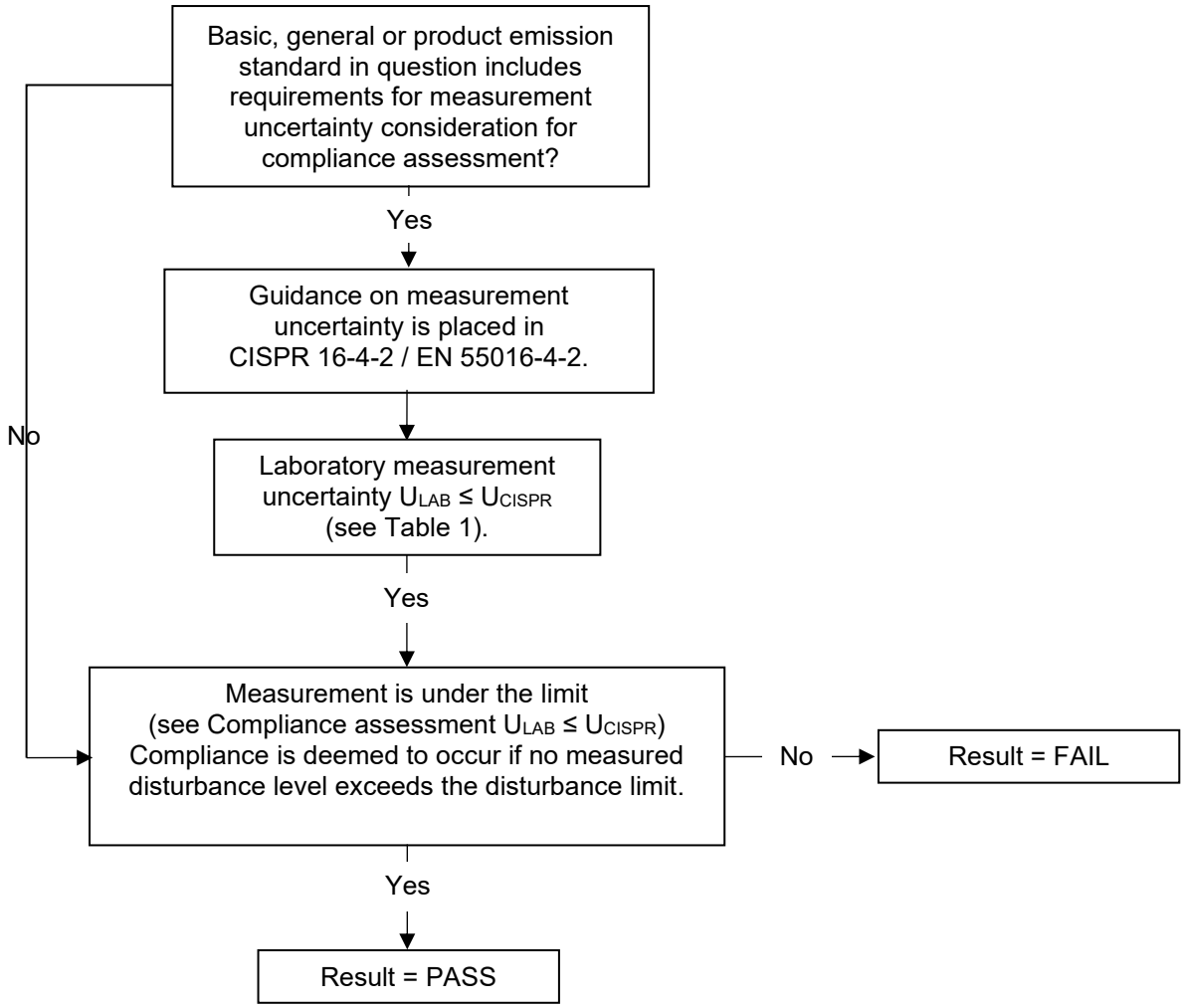
Measurement / test method	**U_{LAB}**	**U_{CISPR}**
Conducted emission measurement (150 kHz to 30 MHz)	2,7 dB	3,4 dB
Radiated emission measurement (electric field strength at an OATS or in a SAC) - (30 MHz to 1000 MHz)	5,3 dB	6,3 dB
Radiated disturbance (electric field strength in a FAR) – (1-6 GHz)	4.4	5.2
Radiated disturbance (electric field strength in a FAR) – (6-18 GHz)	5.2	5.5
Radiated disturbance (electric field strength in a FAR) – (18-26 GHz)	5.0	N/A
Radiated disturbance (electric field strength in a FAR) – (26-40 GHz)	5.7	N/A

3. Decision rule

Application of decision rule and statement of conformity is defined in document TN023 Decision rule and measurement uncertainty.

As a general rule Pass/Fail decisions are based on simple acceptance rule and acceptance limits chosen based on simple acceptance (w = 0, AL = TL) except if a decision rule is governed by particular standard or guidance document.

Decision rule applicable for emission:



4. Product specific data

General description of test item: Device is a notecard for various machines to be built-in with 3 different LTE modules.

Product key:
NOTE-WBNAN contains Quectel EG91-NAXD wireless module;
NOTE-NBNAN contains Quectel BG95-M1 wireless module;
NOTE-NBGLN contains Quectel BG95-M3 wireless module;

Power supply type:	Powered with AC/DC power supply and 5 V d.c. from the development board			
Hardware version:	2.1			
Firmware/software version:	7			
Mounting position:	☒	Table-top equipment:		
	☐	Floor-standing equipment:		
	☐	Wall/ceiling mounted equipment:		
	☐	Hand-held equipment:		
	☐	Other:		
Highest Internal Operating Frequencies:	Name:		LTE module:	Frequency:
	Maximum clock transmission frequency that of the LTE module		EG91-NAXD	1910 MHz
			BG95-M1	1980 MHz
			BG95-M3	1980 MHz

Port(s):

Port No.	Name	Type	Cable Length / m	Cable Shielded
0	Enclosure	N/E	/	/
1	AC power supply	AC	/	/
0	Enclosure	N/E	/	/
Note:	AC = AC mains power port DC = DC power port of the EUT I/O = Signal/control port WNP = wired network port GND = grounding N/E = Non-Electrical			

Information to the user acc. to 47 CFR Part 15, Subpart B:

Clause	Requirement	Result - Remark	Verdict
§ 15.105	**Information to the user**		
15.105 (a)	For a Class A digital device or peripheral, the instructions furnished the user shall include the statement specified in 15.105 (a), placed in a prominent location in the text of the manual.	Not Class A digital device.	N/A
15.105 (b)	For a Class B digital device or peripheral, the instructions furnished the user shall include the statement specified in 15.105 (b), placed in a prominent location in the text of the manual.	Class B digital device. The product is not an end device and is only supplied with the final product it is intended to charge.	P

The Class A statement cautions that operation of the device in a residential area is likely to cause harmful interference.

The Class B statement offers several suggestions for minimizing interference to radio or TV receivers. including reorienting the receiving antenna and moving the Class B device farther away from the receiver.

Labelling and user manual requirements acc. to ICES-003 issue 7:

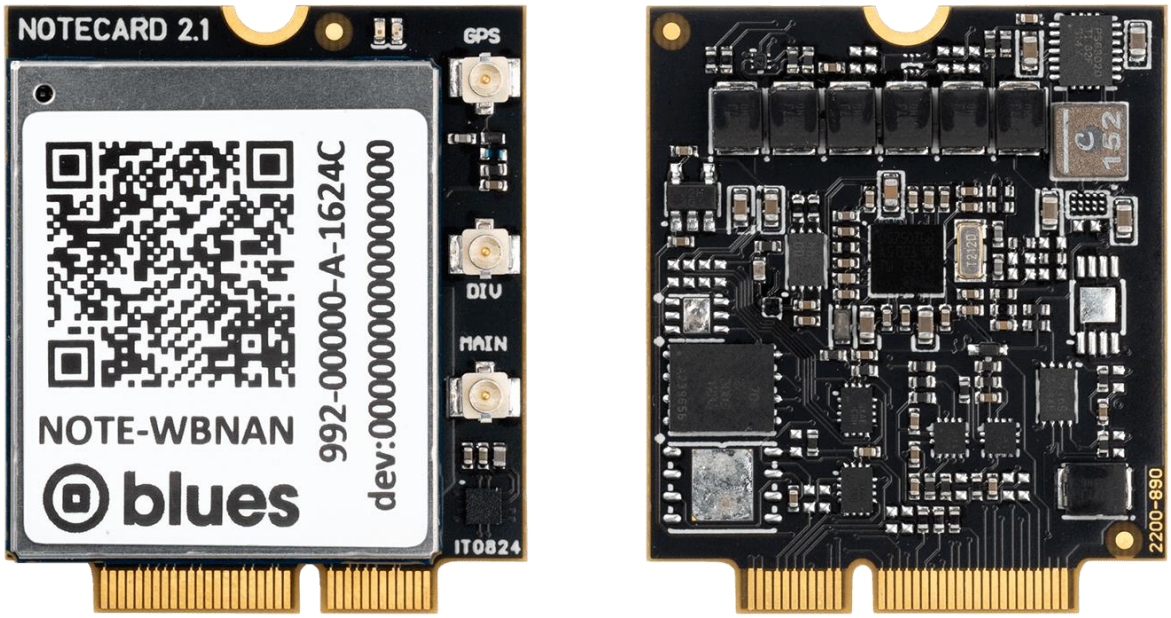
Clause	Requirement	Result - Remark	Verdict
4.2	**Labelling and user manual requirements**		
	ISED compliance label specified below shall be placed on the marking plate or manual: CAN ICES-003(*) / NMB-003(*) * Insert either “A” or “B”, but not both, to identify the applicable Class of the device used for compliance verification.	Acc. to clause 1.2.2 external power supplies marketed together with end ITE equipment need not be labelled as specified in 4.2. The labelling requirement is normative for the ITE or digital apparatus itself, but optional for the external power supply/converter that is marketed together with that ITE or digital apparatus	N/A

NOTE: The information in this section has been provided by the applicant.

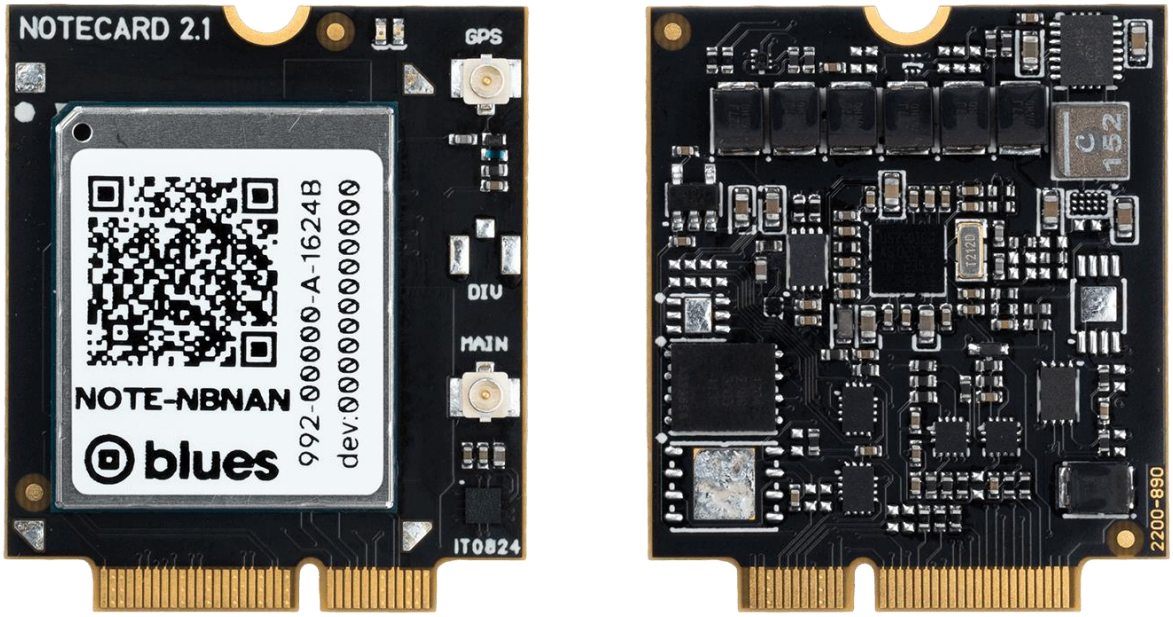
5. Equipment under test (EUT)

Product Type	Device	Manufacturer	Model No.	Comments
EUT	Notecard	Blues Inc.	NOTE-NBGLN	/
EUT	Notecard	Blues Inc.	NOTE-NBNAN	/
EUT	Notecard	Blues Inc.	NOTE-WBNAN	/
AE	Development board	/	NOTECARRIER – D V1.6	/
AE	Power supply	Rigol	DP832	/
Note:	EUT = Equipment Under Test AE = Associated Equipment			

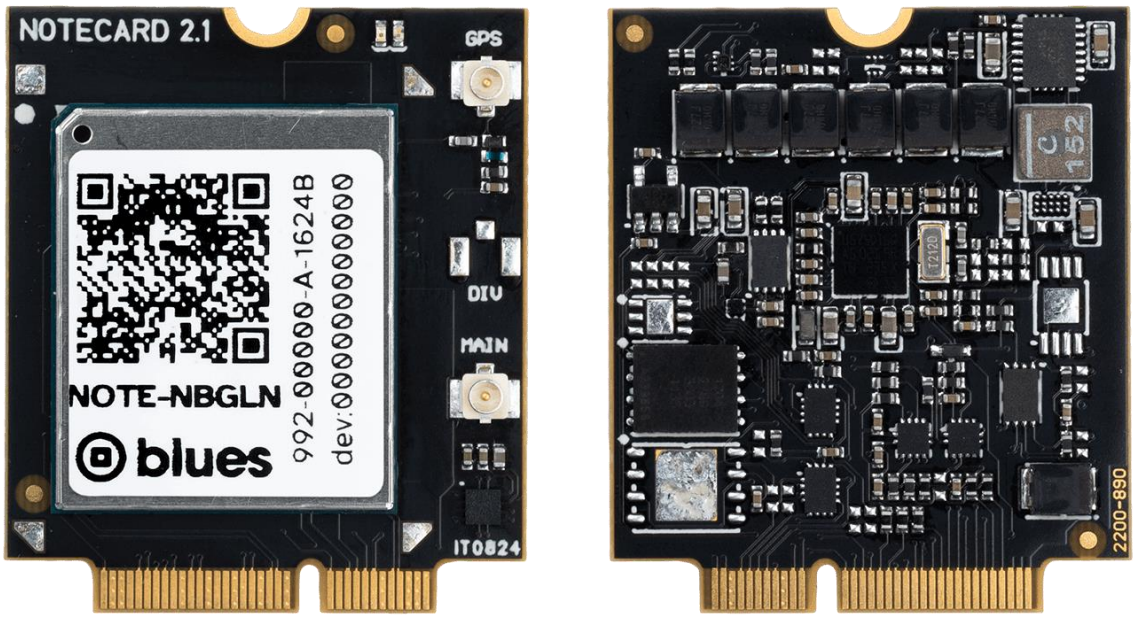
Pictures of EUT:



NOTE-WBNAN



NOTE-NBNAN



NOTE-NBGLN

Pictures of associated equipment:
See pictures of test setups

Operating conditions:

Clause	Test	Connection type	Operating conditions
9.1	Conducted emission measurement	Single phase	120 V; 60 Hz supplied to AC/DC power supply with 5 V d.c. to the development board
9.2	Radiated emission measurement	Single phase	120 V; 60 Hz supplied to AC/DC power supply with 5 V d.c. to the development board

Operating modes:

No.	Operating mode
1	Command mode modem-test. Transmission from the LTE module is not enabled. Notecard is working as intended with LTE module turned on in standby.

Tested sample:

Sample number	Used for measurement
S202404231	Both measurements
S202404232	Both measurements
S202404233	Both measurements

6. Testing summary section

STANDARDS (details on first page)	PERFORMED[1)]	CONCLUSION[1)]
47 CFR Part 15, Subpart B	YES	P
ICES-003	YES	P
[1)] See details in table(s) below		

Referenced standard:	47 CFR Part 15, Subpart B (Clause 15.107) in conjunction with ANSI C63.4:2014			
Test (emission)	**Clause within standard**	**Clause within the report**	**Class**	**Conclusion**
Conducted emission measurement	Clause 15.107 of 47 CFR Part 15	9.1	B	P
Radiated emission measurement	Clause 15.109 of 47 CFR Part 15	9.2	B	P

Referenced standard:	ICES-003, issue 7 in conjunction with ICES-Gen, Issue 2 and ANSI C63.4:2014 amended as per ANSI C63.4a-2017			
Test (emission)	**Clause within standard**	**Clause within the report**	**Class**	**Conclusion**
Conducted emission measurement	Clause 3.2.1 of ICES-003	9.1	B	P
Radiated emission measurement	Clause 3.2.2 of ICES-003	9.2	B	P

NOTE: no non-standard test method used

7. Environmental conditions

The climatic conditions during the tests were within the following limits:

Ambient temperature: 15 °C to 35 °C
Relative humidity: 15 % to 75 %
Atmospheric pressure: 860 mbar to 1060 mbar

8. LIMITS

8.1 Conducted emission limits

8.1.1 Limits according to 47 CFR Part 15.107 and ICES-003

CLASS B limits:

Frequency Range (MHz)	Limits (dBµV)	
	Quasi-peak	Average
0.15 to 0.5	66 – 56*	56 – 46*
0.5 to 5.0	56	46
5.0 to 30.0	60	50

* Decreases with the logarithm of the frequency.

CLASS A limits:

Frequency Range (MHz)	Limits (dBµV)	
	Quasi-peak	Average
0.15 to 0.5	79	66
0.5 to 30.0	73	60

8.2 Radiated emission limits

8.2.1 Required highest measurement frequency for radiated emissions:

Highest internal frequency (F_X)	Highest measurements frequency (F_M)
$F_X \leq$ 108 MHz	1 GHz
108 MHz < $F_X \leq$ 500 MHz	2 GHz
500 MHz < $F_X \leq$ 1 GHz	5 GHz
$F_X >$ 1 GHz	5 x F_X up to a maximum of 40 GHz

8.2.2 Limits according to 47 CFR Part 15.107

CLASS B limits:

Frequency Range (MHz)	Limits (dBµV/m) 3 m distance	
30 to 88	40	Quasi Peak
88 to 216	43.5	
216 to 960	46	
960 to 1000	54	
above 1000	54	Average
above 1000	74	Peak

CLASS A limits:

Frequency Range (MHz)	Limits (dBµV/m) 10 m distance	
30 to 88	39.1	Quasi Peak
88 to 216	43.5	
216 to 960	46.4	
960 to 1000	49.5	
above 1000	49.5	Average
above 1000	69.5	Peak

8.2.3 Limits according to ICES-003

Frequency range 30 MHz – 1 GHz:

Frequency Range (MHz)	Class A		Class B	
	3 m distance Quasi-peak (dBµV/m)	10 m distance Quasi-peak (dBµV/m)	3 m distance Quasi-peak (dBµV/m)	10 m distance Quasi-peak (dBµV/m)
30 - 88	50.0	40.0	40.0	30.0
88 - 216	54.0	43.5	43.5	33.1
216 - 230	56.9	46.4	46.0	35.6
230 - 960	57.0	47.0	47.0	37.0
960 - 1000	60.0	49.5	54.0	43.5

Frequency range at and above 1 GHz; 3 m distance:

Frequency range (GHz)	Class A		Class B	
	Average dB(µV/m)	Peak dB(µV/m)	Average dB(µV/m)	Peak dB(µV/m)
1 - F_M	60	80	54	74

9. Test results

9.1 Conducted emission measurement

9.1.1 Test procedure

- **For equipment tested as table-top:**
  The EUT is placed on a non-conductive 0.8 meters high table, 0.4 meters from the vertical conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). LISN provide 50 Ohm / 50 μH + 5 Ohm of coupling impedance for the measuring instrument.

- **For equipment tested as floor-standing:**
  The EUT is placed on a non-conductive 0.1 meters high support, 0.4 meters from the vertical conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). LISN provide 50 Ohm / 50 μH + 5 Ohm of coupling impedance for the measuring instrument.

- Sufficient time for the EUT, support equipment, and test equipment was allowed, for them to warm up to their normal operating condition.

- If device is a DC powered device with no dedicated AC/DC power converter, a random converter is provided to the test set-up.

- AC power lines of EUT are checked for maximum conducted interference.

- The frequency range from 150 kHz to 30 MHz is searched using PEAK, QUASI-PEAK and AVERAGE function of the receiver.

- If applicable functions are changed (data transfer speed, clock speed….) it should be noted in the test report.

9.1.2 Test results according to 47 CFR Part 15.107 and ICES-003

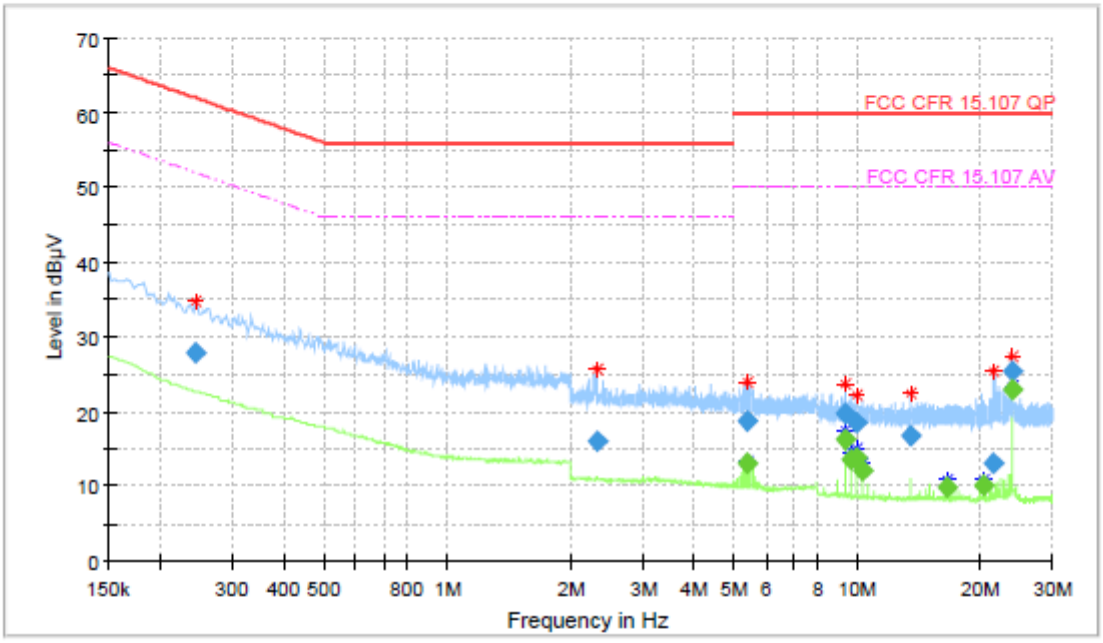
Operating mode(s):	1

NOTE-NBNAN (Quectel BG95-M1):

CONDUCTED EMISSION

EUT Information

EUT: BG95-M1
Operating mode: Uin: 120 V 60 Hz
Line: L and N



Final Result

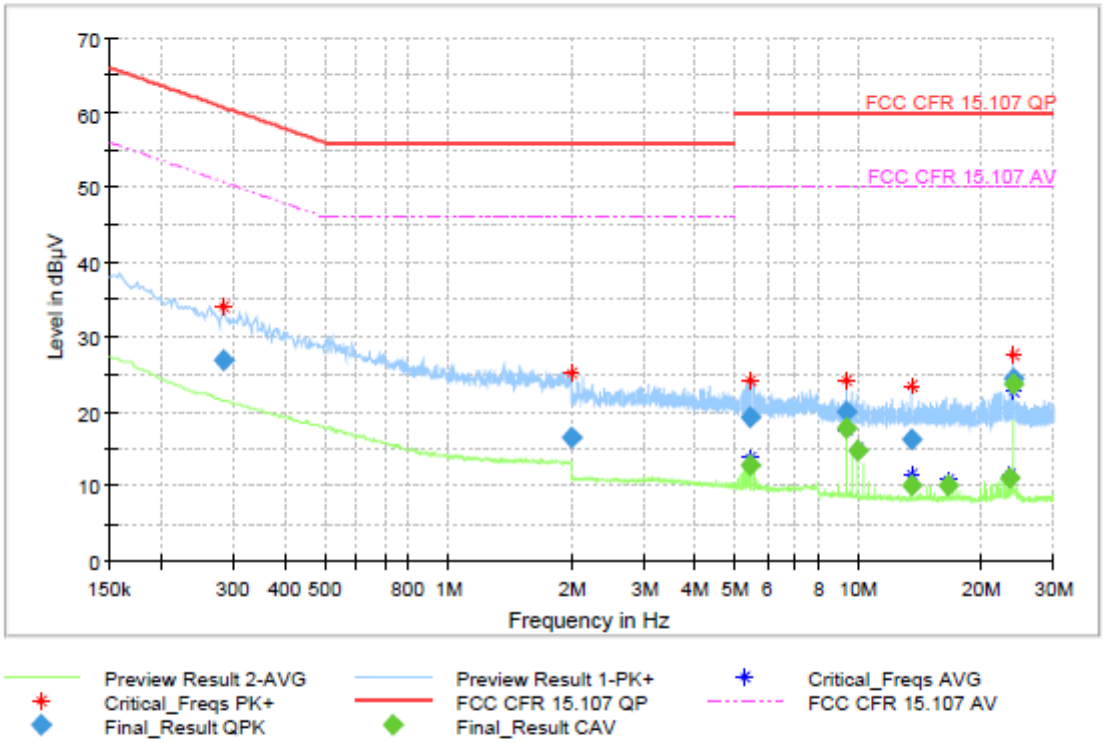
Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
24.000000	---	22.99	50.00	27.01	1000.0	9.000	L1	ON	10.0
9.325500	---	16.15	50.00	33.85	1000.0	9.000	L1	ON	9.7
0.244500	27.90	---	61.94	34.04	1000.0	9.000	N	ON	9.9
24.000000	25.27	---	60.00	34.73	1000.0	9.000	L1	ON	10.0
9.991500	---	13.78	50.00	36.22	1000.0	9.000	L1	ON	9.7
9.658500	---	13.67	50.00	36.33	1000.0	9.000	L1	ON	9.7
5.424000	---	12.95	50.00	37.05	1000.0	9.000	L1	ON	9.8
10.324500	---	12.11	50.00	37.89	1000.0	9.000	L1	ON	9.8
2.319000	16.05	---	56.00	39.95	1000.0	9.000	N	ON	9.8
20.314500	---	10.02	50.00	39.98	1000.0	9.000	L1	ON	9.9
16.651500	---	9.93	50.00	40.07	1000.0	9.000	L1	ON	9.9
9.325500	19.80	---	60.00	40.20	1000.0	9.000	N	ON	9.7
5.424000	18.85	---	60.00	41.15	1000.0	9.000	L1	ON	9.8
9.989250	18.41	---	60.00	41.59	1000.0	9.000	L1	ON	9.7
13.560000	16.76	---	60.00	43.24	1000.0	9.000	N	ON	9.8
21.513750	13.18	---	60.00	46.82	1000.0	9.000	N	ON	10.0

NOTE-NBGLN (Quectel BG95-M3):

CONDUCTED EMISSION

EUT Information

EUT:	BG95-M3
Operating mode:	Uin: 120 V 60 Hz
Line:	L and N



Final Result

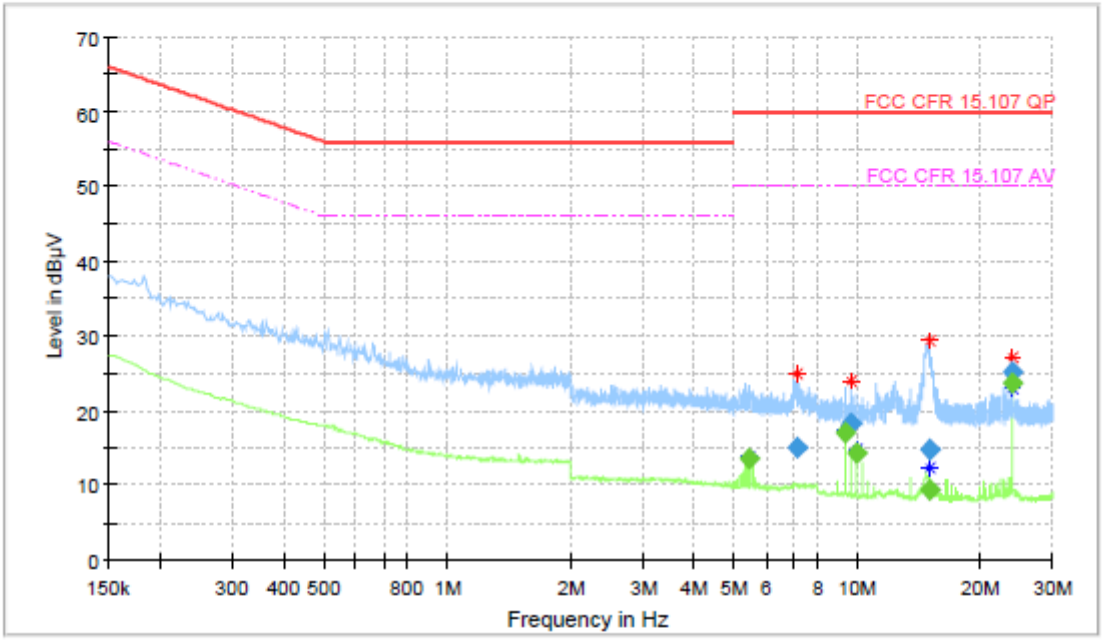
Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
24.000000	---	23.70	50.00	26.30	1000.0	9.000	L1	ON	10.0
9.323250	---	17.69	50.00	32.31	1000.0	9.000	L1	ON	9.7
0.285000	26.80	---	60.67	33.86	1000.0	9.000	L1	ON	9.9
9.989250	---	14.69	50.00	35.31	1000.0	9.000	L1	ON	9.7
24.000000	24.38	---	60.00	35.62	1000.0	9.000	L1	ON	10.0
5.426250	---	12.76	50.00	37.24	1000.0	9.000	L1	ON	9.8
23.311500	---	11.03	50.00	38.97	1000.0	9.000	L1	ON	10.0
1.992750	16.61	---	56.00	39.39	1000.0	9.000	L1	ON	9.8
13.560000	---	10.15	50.00	39.85	1000.0	9.000	N	ON	9.8
16.649250	---	10.08	50.00	39.92	1000.0	9.000	L1	ON	9.9
9.325500	19.90	---	60.00	40.10	1000.0	9.000	L1	ON	9.7
5.426250	19.18	---	60.00	40.82	1000.0	9.000	L1	ON	9.8
13.560000	16.29	---	60.00	43.71	1000.0	9.000	N	ON	9.8

NOTE-WBNAN (Quectel EG91-NAXD):

CONDUCTED EMISSION

EUT Information

EUT:	EG91-NAXD
Operating mode:	Uin: 120 V 60 Hz
Line:	L and N



Final Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
24.000000	---	23.75	50.00	26.25	1000.0	9.000	L1	ON	10.0
9.325500	---	17.09	50.00	32.91	1000.0	9.000	L1	ON	9.7
24.000000	25.16	---	60.00	34.84	1000.0	9.000	L1	ON	10.0
9.991500	---	14.39	50.00	35.61	1000.0	9.000	L1	ON	9.7
5.426250	---	13.67	50.00	36.33	1000.0	9.000	L1	ON	9.8
14.986500	---	9.45	50.00	40.55	1000.0	9.000	L1	ON	9.9
9.658500	18.19	---	60.00	41.81	1000.0	9.000	L1	ON	9.7
7.161000	14.94	---	60.00	45.06	1000.0	9.000	L1	ON	9.7
14.984250	14.91	---	60.00	45.09	1000.0	9.000	L1	ON	9.9

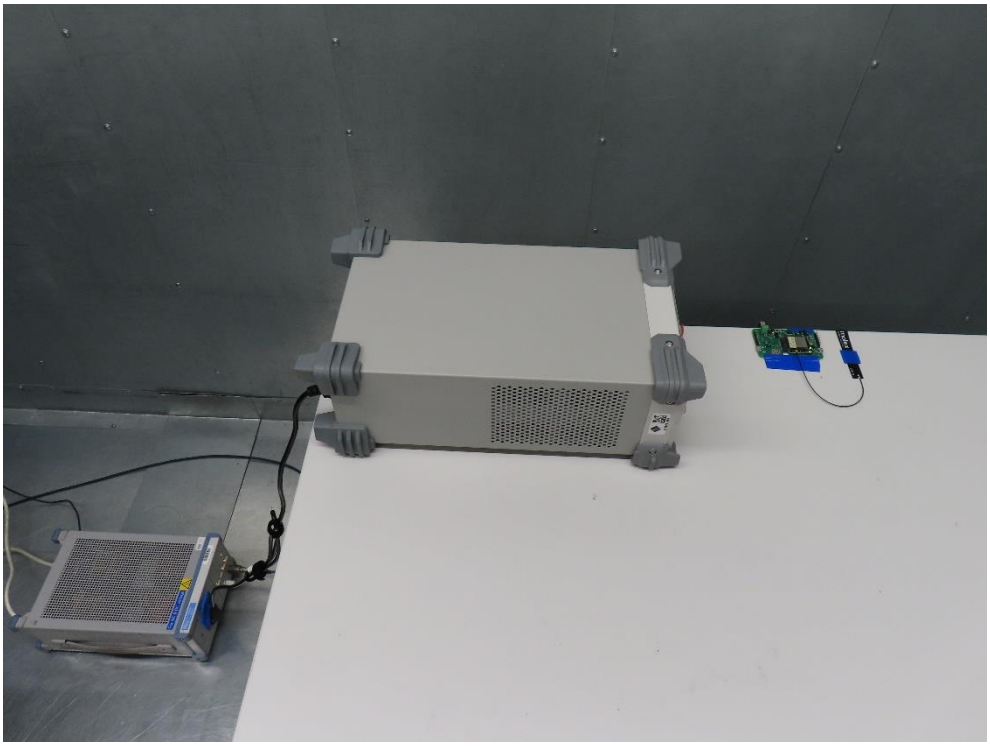


Figure 1: Test setup for conducted emission measurement

9.2 Radiated emission measurement

9.2.1 Test procedure

- **For equipment tested as table-top:**
  The EUT is placed on a non-conductive 0.8 meters high table with EUT being directly or via AC/DC power supply connected to the power mains.

- **For equipment tested as floor-standing:**
  The EUT is placed on a non-conductive 0.1 meters high table with EUT being directly or via AC/DC power supply connected to the power mains.

- The EUT is set 3 m away from the interference-receiving antenna, which was mounted on the top of variable-height antenna tower.

- The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

- For each suspected emission, the EUT is arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the turn table is turned from 0 degrees to 360 degrees to find the maximum reading.

- The test-receiver system is set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

- The highest points are to be re-tested one by one using the quasi-peak method.

- In case of a Class A device in frequency range of up to 1 GHz, a calculation of highest 5 points is made from 3m to a 10 m distance. For points over 10 dB under the limit, the calculation is not performed.

- CMAD has not been applied in test setup.

9.2.2 Test results according to 47 CFR Part 15.109

Operating mode(s):	1

NOTE-NBNAN (Quectel BG95-M1):

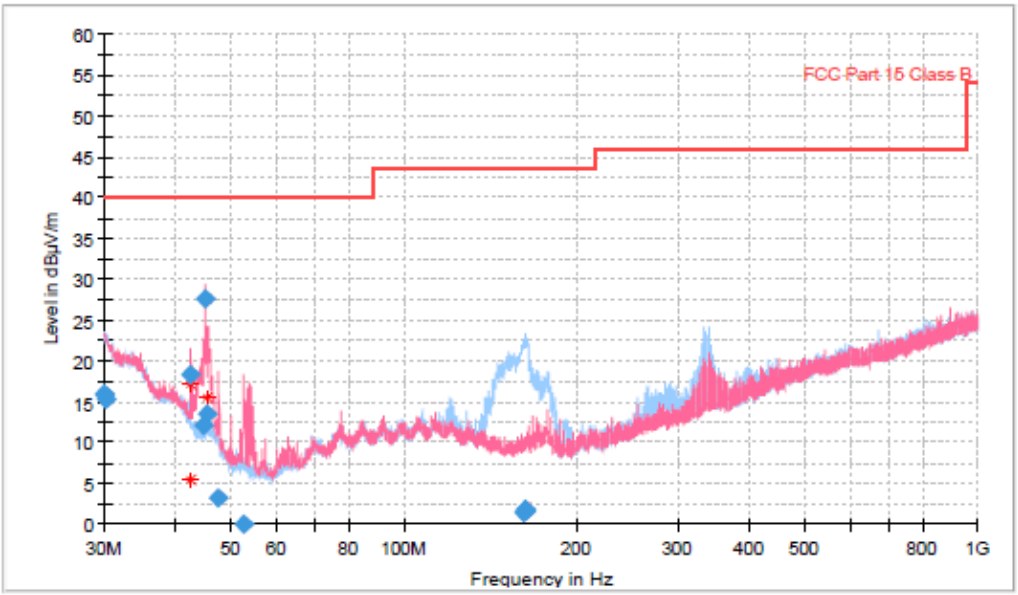
1 / 1

Radiated emission

EUT Information

EUT: BG95-M1
Operating condition: 5 V d.c.

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
45.030000	27.58	40.00	12.42	1000.0	120.000	100.0	V	211.0	10.5
42.540000	18.36	40.00	21.64	1000.0	120.000	100.0	V	191.0	12.1
30.060000	15.88	40.00	24.12	1000.0	120.000	100.0	V	137.0	19.7
30.270000	15.33	40.00	24.67	1000.0	120.000	104.0	H	87.0	19.6
45.510000	13.46	40.00	26.54	1000.0	120.000	100.0	V	200.0	10.2
44.850000	12.15	40.00	27.85	1000.0	120.000	104.0	V	326.0	10.6
47.520000	3.16	40.00	36.84	1000.0	120.000	104.0	V	97.0	8.9
52.530000	0.02	40.00	39.98	1000.0	120.000	188.0	V	326.0	6.4
162.600000	1.75	43.50	41.75	1000.0	120.000	104.0	H	133.0	9.0
162.210000	1.65	43.50	41.85	1000.0	120.000	104.0	H	133.0	9.0
162.330000	1.65	43.50	41.85	1000.0	120.000	100.0	H	133.0	9.0
161.070000	1.42	43.50	42.08	1000.0	120.000	100.0	H	133.0	9.0
30.000000	15.94	69.50	53.56	1000.0	120.000	138.0	H	183.0	19.7

NOTE-NBGLN (Quectel BG95-M3):

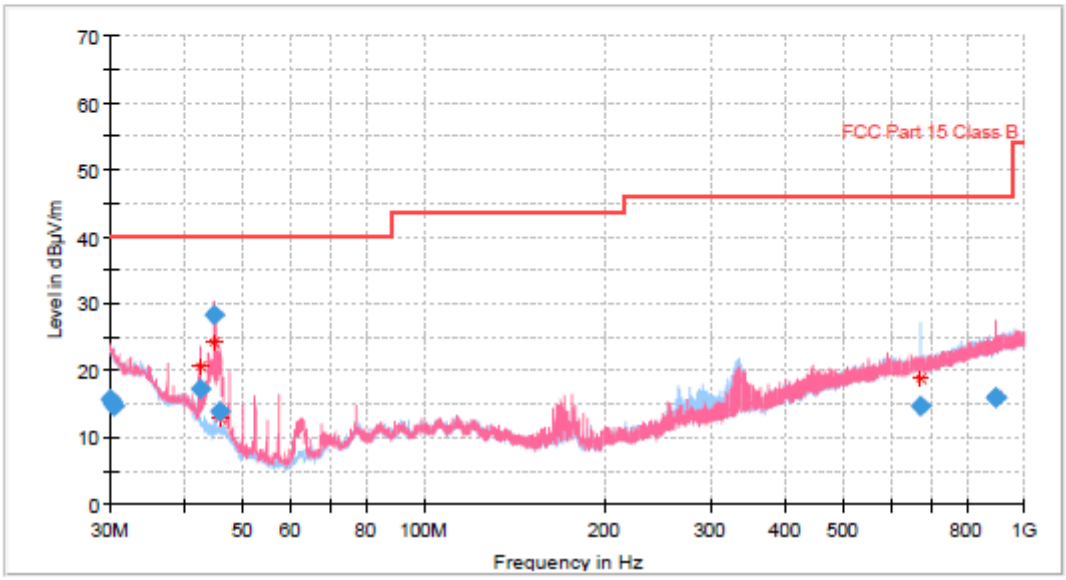
1 / 1

Radiated emission

EUT Information

EUT:	BG95-M3
Operating condition:	5 V d.c.

Full Spectrum



Comment

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
30.090000	15.68	40.00	24.32	1000.0	120.000	212.0	H	24.0	19.7
30.270000	15.30	40.00	24.70	1000.0	120.000	104.0	H	323.0	19.6
30.480000	14.74	40.00	25.26	1000.0	120.000	212.0	V	35.0	19.4
42.360000	17.26	40.00	22.74	1000.0	120.000	100.0	V	5.0	12.2
44.850000	28.23	40.00	11.77	1000.0	120.000	100.0	V	5.0	10.6
45.810000	13.92	40.00	26.08	1000.0	120.000	100.0	V	190.0	10.0
672.000000	14.66	46.00	31.34	1000.0	120.000	138.0	H	231.0	20.0
895.350000	15.93	46.00	30.07	1000.0	120.000	188.0	V	225.0	22.5
895.440000	15.86	46.00	30.14	1000.0	120.000	188.0	V	225.0	22.5

NOTE-WBNAN (Quectel EG91-NAXD):

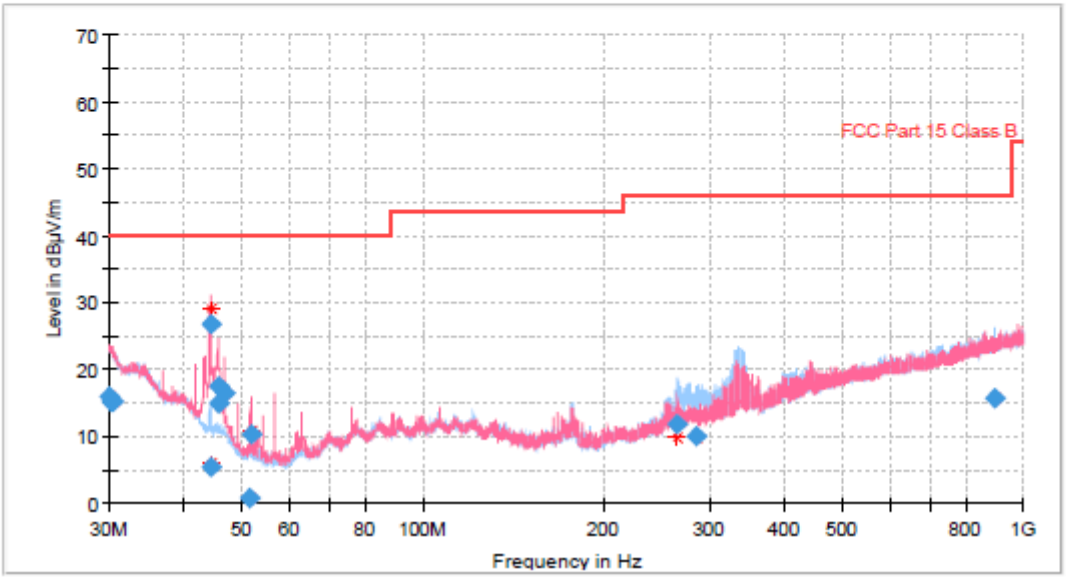
1 / 1

Radiated emission

EUT Information

EUT:	EG91-NAXD
Operating condition:	5 V d.c.

Full Spectrum



Comment

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
44.250000	26.80	40.00	13.20	1000.0	120.000	100.0	V	277.0	11.0
45.630000	17.44	40.00	22.56	1000.0	120.000	100.0	V	148.0	10.1
46.740000	16.40	40.00	23.60	1000.0	120.000	100.0	V	214.0	9.4
30.030000	15.91	40.00	24.09	1000.0	120.000	104.0	V	181.0	19.7
30.270000	15.30	40.00	24.70	1000.0	120.000	160.0	H	0.0	19.6
30.360000	15.11	40.00	24.89	1000.0	120.000	103.0	V	171.0	19.5
45.720000	14.81	40.00	25.19	1000.0	120.000	100.0	V	254.0	10.1
51.660000	10.26	40.00	29.74	1000.0	120.000	100.0	V	310.0	6.7
895.380000	15.76	46.00	30.24	1000.0	120.000	188.0	H	55.0	22.5
265.740000	11.78	46.00	34.22	1000.0	120.000	104.0	H	42.0	11.4
44.310000	5.43	40.00	34.57	1000.0	120.000	100.0	H	65.0	10.9
284.820000	9.99	46.00	36.01	1000.0	120.000	103.0	H	68.0	12.0
51.420000	0.73	40.00	39.27	1000.0	120.000	100.0	V	324.0	6.8

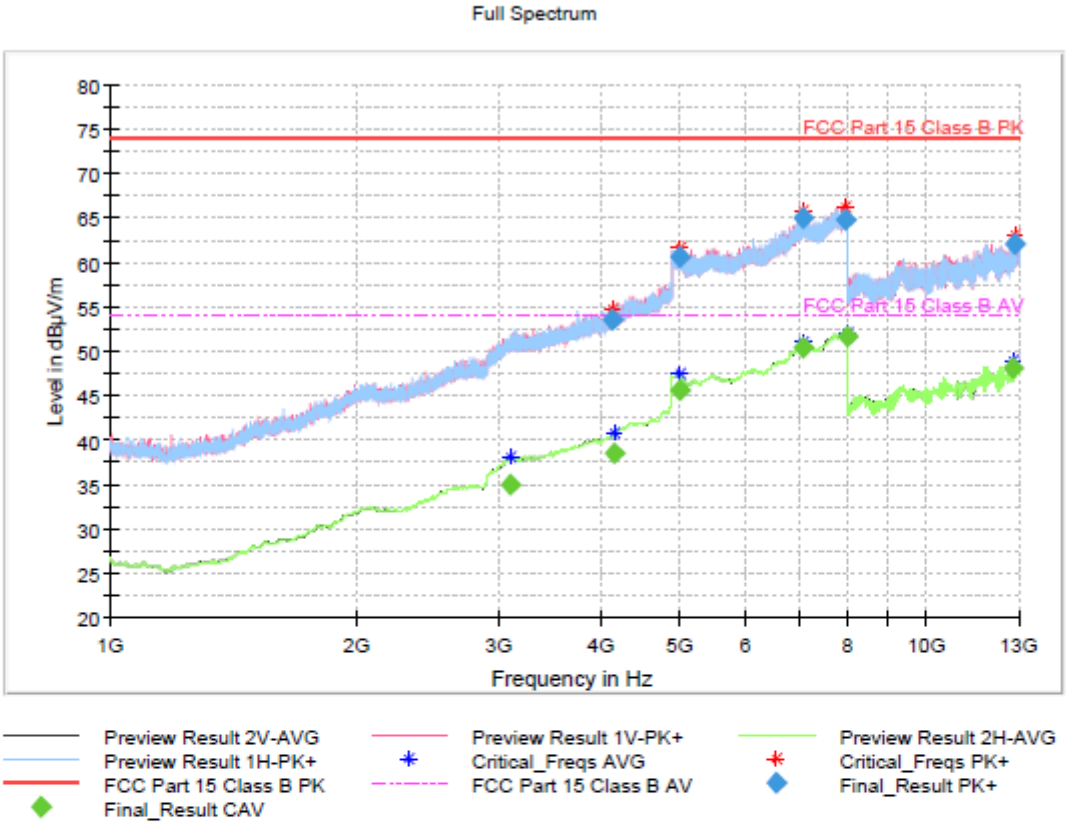
9.2.3 Test results according to 47 CFR Part 15.109 and ICES-003

NOTE-NBNAN (Quectel BG95-M1):

Test 1 / 1

EUT Information

EUT: BG95-M1
Operating mode : 5 Vdc



Final Result

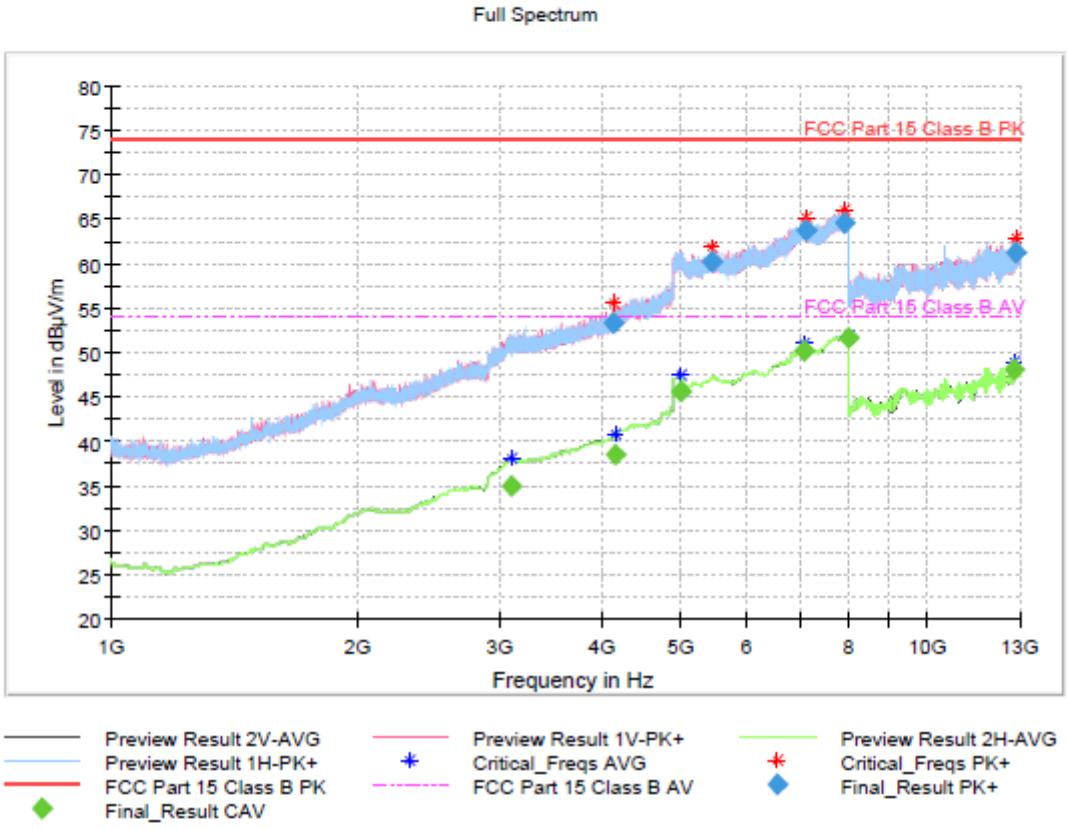
Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
7998.250000	---	51.76	54.00	2.24	3000.0	1000.000	150.0	V	78.0
7062.500000	---	50.34	54.00	3.66	3000.0	1000.000	150.0	V	78.0
12780.000000	---	48.06	54.00	5.94	3000.0	1000.000	150.0	V	78.0
4996.250000	---	45.72	54.00	8.28	3000.0	1000.000	150.0	V	0.0
7081.250000	65.03	---	74.00	8.97	3000.0	1000.000	100.0	V	0.0
7978.500000	64.81	---	74.00	9.19	3000.0	1000.000	100.0	H	0.0
12837.750000	62.04	---	74.00	11.96	3000.0	1000.000	150.0	V	0.0
4983.750000	60.65	---	74.00	13.35	3000.0	1000.000	150.0	V	172.0
4148.000000	---	38.63	54.00	15.37	3000.0	1000.000	100.0	H	172.0
3102.000000	---	35.08	54.00	18.92	3000.0	1000.000	100.0	V	0.0
4127.000000	53.59	---	74.00	20.41	3000.0	1000.000	100.0	V	282.0

NOTE-NBGLN (Quectel BG95-M3):

Test 1 / 1

EUT Information

EUT: BG95-M3 I
Operating mode : 5 Vdc



Final Result

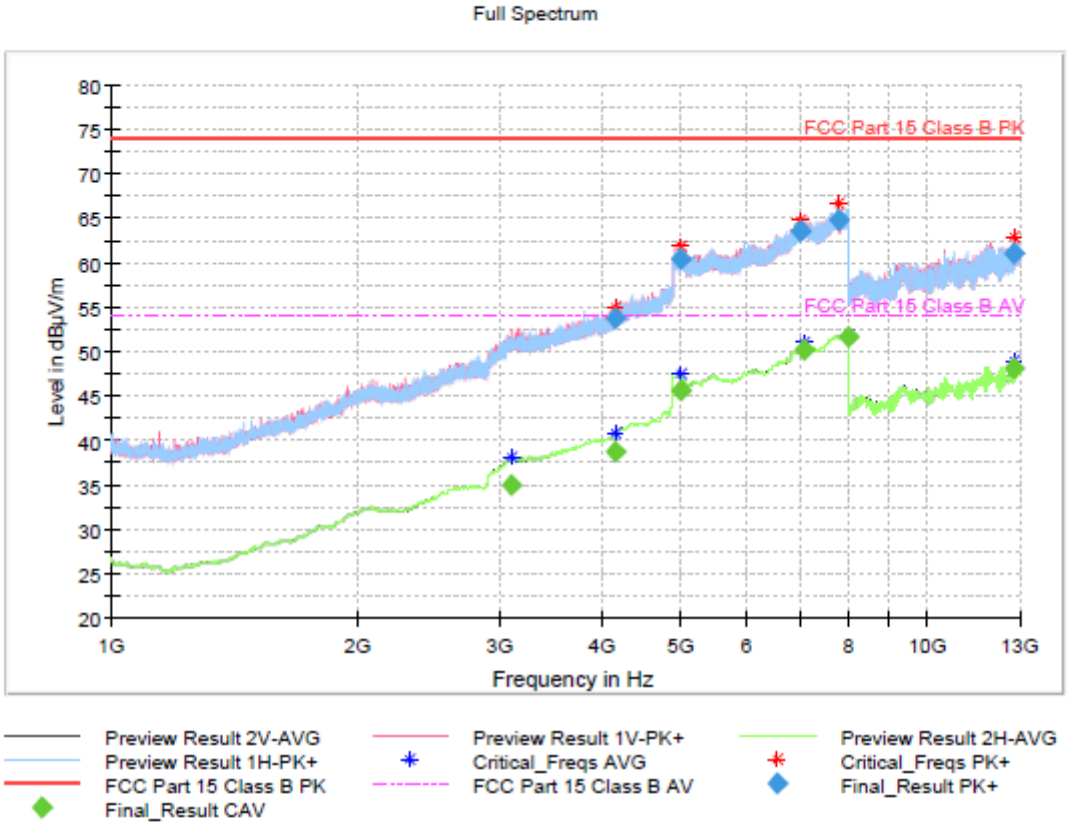
Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
7998.750000	---	51.75	54.00	2.25	3000.0	1000.000	150.0	V	282.0
7063.000000	---	50.29	54.00	3.71	3000.0	1000.000	150.0	V	0.0
12780.000000	---	48.02	54.00	5.98	3000.0	1000.000	150.0	H	78.0
4995.250000	---	45.70	54.00	8.30	3000.0	1000.000	100.0	H	282.0
7909.250000	64.68	---	74.00	9.32	3000.0	1000.000	150.0	H	0.0
7101.000000	63.70	---	74.00	10.30	3000.0	1000.000	100.0	H	188.0
12838.500000	61.18	---	74.00	12.82	3000.0	1000.000	150.0	V	188.0
5460.500000	60.11	---	74.00	13.89	3000.0	1000.000	100.0	V	358.0
4157.000000	---	38.63	54.00	15.37	3000.0	1000.000	150.0	V	93.0
3102.250000	---	35.06	54.00	18.94	3000.0	1000.000	150.0	V	0.0
4128.500000	53.38	---	74.00	20.62	3000.0	1000.000	150.0	H	267.0

NOTE-WBNAN (Quectel EG91-NAXD):

Test 1 / 1

EUT Information

EUT: EG91-NAXD
Operating mode : 5 Vdc



Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
7999.500000	---	51.74	54.00	2.26	3000.0	1000.000	150.0	V	188.0
7059.500000	---	50.30	54.00	3.70	3000.0	1000.000	150.0	V	188.0
12780.000000	---	48.05	54.00	5.95	3000.0	1000.000	150.0	H	0.0
4995.750000	---	45.73	54.00	8.27	3000.0	1000.000	150.0	H	172.0
7785.750000	64.88	---	74.00	9.12	3000.0	1000.000	100.0	H	0.0
7013.500000	63.49	---	74.00	10.51	3000.0	1000.000	150.0	V	282.0
12819.000000	61.00	---	74.00	13.00	3000.0	1000.000	150.0	V	282.0
4995.000000	60.45	---	74.00	13.55	3000.0	1000.000	150.0	H	0.0
4157.500000	---	38.67	54.00	15.33	3000.0	1000.000	150.0	V	93.0
3102.250000	---	35.10	54.00	18.90	3000.0	1000.000	100.0	V	172.0
4157.500000	53.75	---	74.00	20.25	3000.0	1000.000	150.0	V	93.0

9.2.4 Test results according to ICES-003

Operating mode(s):	1

NOTE-NBNAN (Quectel BG95-M1):

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
45.030000	27.58	40.00	12.42	1000.0	120.000	100.0	V	211.0	10.5
42.540000	18.36	40.00	21.64	1000.0	120.000	100.0	V	191.0	12.1
30.000000	15.94	40.00	24,06	1000.0	120.000	138.0	H	183.0	19.7
30.060000	15.88	40.00	24.12	1000.0	120.000	100.0	V	137.0	19.7
30.270000	15.33	40.00	24.67	1000.0	120.000	104.0	H	87.0	19.6
45.510000	13.46	40.00	26.54	1000.0	120.000	100.0	V	200.0	10.2
44.850000	12.15	40.00	27.85	1000.0	120.000	104.0	V	326.0	10.6
47.520000	3.16	40.00	36.84	1000.0	120.000	104.0	V	97.0	8.9
52.530000	0.02	40.00	39.98	1000.0	120.000	188.0	V	326.0	6.4
162.600000	1.75	43.50	41.75	1000.0	120.000	104.0	H	133.0	9.0
162.210000	1.65	43.50	41.85	1000.0	120.000	104.0	H	133.0	9.0
162.330000	1.65	43.50	41.85	1000.0	120.000	100.0	H	133.0	9.0
161.070000	1.42	43.50	42.08	1000.0	120.000	100.0	H	133.0	9.0

NOTE-NBGLN (Quectel BG95-M3):

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
30.090000	15.68	40.00	24.32	1000.0	120.000	212.0	H	24.0	19.7
30.270000	15.30	40.00	24.70	1000.0	120.000	104.0	H	323.0	19.6
30.480000	14.74	40.00	25.26	1000.0	120.000	212.0	V	35.0	19.4
42.360000	17.26	40.00	22.74	1000.0	120.000	100.0	V	5.0	12.2
44.850000	28.23	40.00	11.77	1000.0	120.000	100.0	V	5.0	10.6
45.810000	13.92	40.00	26.08	1000.0	120.000	100.0	V	190.0	10.0
672.000000	14.66	47.00	32.34	1000.0	120.000	138.0	H	231.0	20.0
895.350000	15.93	47.00	31.07	1000.0	120.000	188.0	V	225.0	22.5
895.440000	15.86	47.00	31.14	1000.0	120.000	188.0	V	225.0	22.5

NOTE-WBNAN (Quectel EG91-NAXD):

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
44.250000	26.80	40.00	13.20	1000.0	120.000	100.0	V	277.0	11.0
45.630000	17.44	40.00	22.56	1000.0	120.000	100.0	V	148.0	10.1
46.740000	16.40	40.00	23.60	1000.0	120.000	100.0	V	214.0	9.4
30.030000	15.91	40.00	24.09	1000.0	120.000	104.0	V	181.0	19.7
30.270000	15.30	40.00	24.70	1000.0	120.000	160.0	H	0.0	19.6
30.360000	15.11	40.00	24.89	1000.0	120.000	103.0	V	171.0	19.5
45.720000	14.81	40.00	25.19	1000.0	120.000	100.0	V	254.0	10.1
51.660000	10.26	40.00	29.74	1000.0	120.000	100.0	V	310.0	6.7
895.380000	15.76	47.00	31.24	1000.0	120.000	188.0	H	55.0	22.5
265.740000	11.78	47.00	35.22	1000.0	120.000	104.0	H	42.0	11.4
44.310000	5.43	40.00	34.57	1000.0	120.000	100.0	H	65.0	10.9
284.820000	9.99	47.00	37.01	1000.0	120.000	103.0	H	68.0	12.0
51.420000	0.73	40.00	39.27	1000.0	120.000	100.0	V	324.0	6.8

Figure 2: Radiated emission measurement – up to 1 GHz (sample picture for all models)

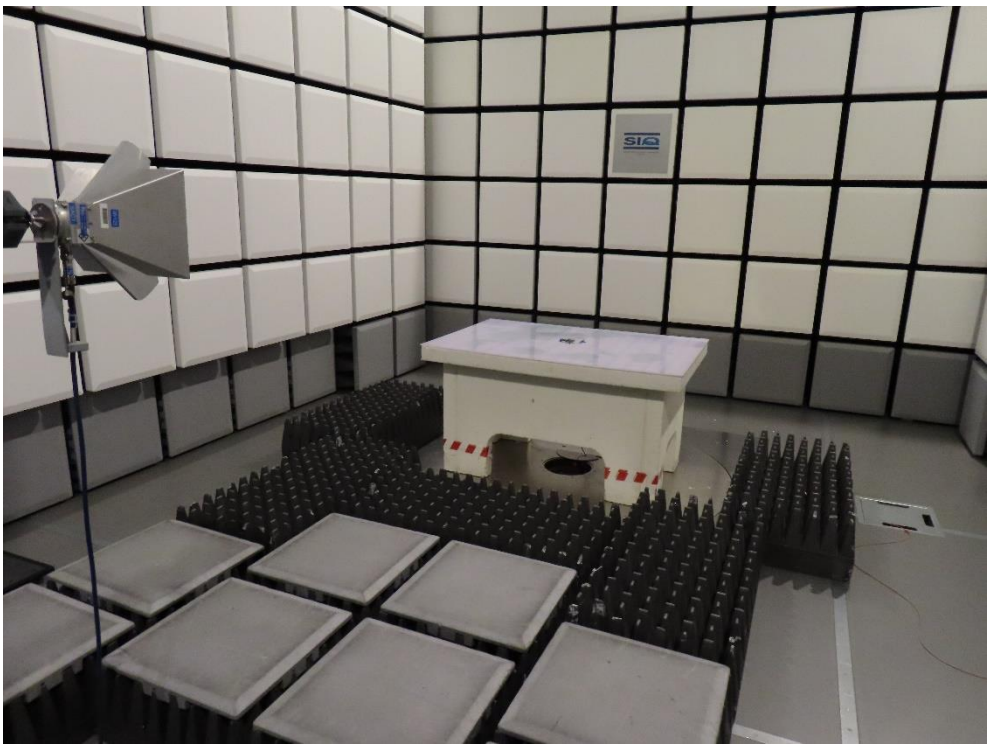


Figure 3: Radiated emission measurement – over 1 GHz (sample picture for all models)

10. Used test equipment

9.1 Conducted emission measurement

ID EM	Equipment	Type	SIQ Number	Manufacturer	Last calibration date	Last due date
291	EMI test receiver	ESW44	/	R&S	2024-09-26	2026-03-26
9	Artificial main network	ENV216	106765	R&S	2025-02-04	2026-08-04

9.2 Radiated emission measurement

ID EM	Equipment	Type	SIQ Number	Manufacturer	Last calibration date	Last due date
291	EMI test receiver	ESW44	/	R&S	2024-09-26	2026-03-26
145	SAC 1	SAC 3m	109070	Comtest Engineering	2025-03-27	2028-03-27
140	Ultra Broadband Antrenna (SAC1)	HL562E	109063	R&S	2023-07-05	2025-07-05
141	Horn Antenna (SAC1)	HF907	109064	R&S	2023-06-27	2025-06-27
179	Horn antenna	EMCO 3116	/	EMCO	2024-11-07	2027-11-07
/	Bore-sight antenna mast	BAM-4.0-P	/	Maturo	/	/
/	Multi-channel positioning equipment	Maturo NCD	/	Maturo	/	/
/	Turn table (2 m diameter)	TT 2.0 SI	/	Maturo	/	/

----------END OF TEST REPORT----------