



Test report No:

NIE: 51746REM.003

Test report

**FCC Rules and Regulations CFR 47, Part 15, Subpart B (10-1-15 Edition),
Secs. 15.107, 15.109 and Subpart C (10-1-15 Edition) Secs. 15.207
& ICES-003 ISSUE 6 (2016)**

Identification of item tested	Satellite Smartphone
Trademark	Bittium
Model and/or type reference.....	Mx Rugged B
Other identification of the product	S/N: Prototype
Final HW version.....	2201
Final SW version	1.8.31
FCC ID	V27SSD-52
IC	N/A
Features.....	<p>SATELLITE</p> <ul style="list-style-type: none"> • L-band 1525 – 1660.5 MHz • GMR-1 3G 45.005; Radio Transmission and Reception DL 186kbps, UL 30kbps • GMR-1 3G with internal antenna DL 21kbps, UL 2.6kbps • GMR-1 3G AMBE2+ voice call <p>Other Radios</p> <ul style="list-style-type: none"> • Bluetooth 4.0
Manufacturer.....	<p>BITTIUM WIRELESS LTD.</p> <p>Tutkijantie 8 90590 Oulu, Finland</p>
Test method requested, standard	FCC CFR 47, Part 15, Subpart B (10-1-15 Edition), Secs. 15.107, 15.109 and Subpart C (10-1-15 Edition) Secs. 15.207 & ICES-003 Issue 6 (2016)
Summary	IN COMPLIANCE
Approved by (name / position & signature).....	<p>Rafael López</p> <p>EMC Lab Manager</p>
Date of issue	2017-02-15
Report template No.	FDT08_19

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Competences and guarantees

Dekra Testing and Certification 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.

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Dekra Testing and Certification 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 at the time of performance of the test.

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The results presented in this Test Report apply only to the particular item under test established in this document.

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2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
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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 and the Accreditation Bodies.

Uncertainty

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

Usage of samples

Samples under test have been selected by: the Client.

Sample S/01 is composed of the following elements:

Control N°	Description	Model	Serial number	Reception date
51746/033	Satellite Smartphone	Mx Rugged B	Prototype	2017-01-16
51746/037	AC/DC Adapter	KSA29B0500210D5	---	2017-01-16
51746/040	Antenna (D)	---	---	2017-01-16
51746/043	USB Cable	---	---	2017-01-16

Sample S/02 is composed of the following elements:

Control N°	Description	Model	Serial number	Reception date
51746/033	Satellite Smartphone	Mx Rugged B	Prototype	2017-01-16
51746/040	Antenna (D)	---	---	2017-01-16
51746/043	USB Cable	---	---	2017-01-16

Test sample description

The Rugged B is a satellite and terrestrial phone targeted for professional Public Safety use.

Identification of the client

BITTIUM WIRELESS LTD.
Tutkijantie, 8. 90590. Oulu, Finland.

Testing period

The performed test started on 2017-01-18 and finished on 2017-01-24.

The tests have been performed at Dekra Testing and Certification.

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. = 30 % Max. = 75 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar

In the semianechoic chamber, the following limits were not exceeded during the test.

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 30 % Max. = 75 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar

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. = 30 % Max. = 60 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar

Remarks and comments

The tests have been performed by the technical personnel: Daniel López, Antonio Ruiz & Pedro Manuel Valenzuela.

The total uncertainty of the measurement system for the measured conducted disturbance characteristics of EUT from 150 kHz to 30 MHz is $I = \pm 3,9$ dB for quasi-peak measurements, $I = \pm 3,2$ dB for average measurements ($k = 2$)

The total uncertainty of the measurement system for the measured radio disturbance characteristics of EUT from 30 MHz to 1000 MHz is $I = \pm 4,9$ dB for quasi-peak measurements, $I = \pm 4,6$ dB for peak measurements ($k = 2$)

The total uncertainty of the measurement system for the measured radio disturbance characteristics of EUT from 1000 MHz to 26GHz is $I = \pm 2,6$ dB for peaks and average measurements ($k = 2$)

Testing verdicts (Legend)

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

List of equipment used during the test

CONTROL NUMBER	DESCRIPTION	MANUFACTURER	MODEL	LAST CALIBRATION	NEXT CALIBRATION
2942	EMI TEST Receiver	ROHDE & SCHWARZ	ESU40	2016-06-14	2017-10-09
4578	Bilog Antenna	ETS LINDGREN	3142E	2014-03-17	2017-03-17
4658	Preamplifier	SCHWARZBECK	BBV9743	2016-04-28	2017-04-28
4612	Horn Antenna	SCHWARZBECK	BBHA 9120 D	2016-12-19	2019-12-19
3783	Preamplifier	BONN ELEKTRONIK	BLMA 0118-3A	2016-05-03	2017-05-03
4656	Horn Antenna	SCHWARZBECK	BBHA 9170	2014-03-28	2017-03-28
1975	Preamplifier	MITEQ	JS4-12002600-30-5A	2015-10-06	2017-10-06
4570	Thermohigrometer	HW GROUP	HWg-STE	2016-04-28	2017-04-28
4567	Thermohigrometer	HW GROUP	HWg-STE	2016-04-28	2017-04-28

Appendix A – Test result

APPENDIX A CONTENT

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DESCRIPTION OF THE OPERATION MODES

The operation modes described in this paragraph constitute a functionality of the sample under test for itself. Every operation mode takes a failure criteria for the immunity test that they were applying to it and a monitoring to guarantee performance of the same ones.

The operation modes used by the samples to which the present report refers, are shown in the following table:

OPERATION MODE	DESCRIPTION
OM#01	EUT ON. Satellite IDLE. Bluetooth OFF. Charging batteries. Power supply: 115Vac (AC/DC Adaptor).
OM#02	EUT ON. Satellite IDLE. Bluetooth OFF. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port.
OM#03	EUT ON. Satellite IDLE. Bluetooth ON. Charging batteries. Power supply: 115Vac (AC/DC Adaptor).
OM#04	EUT ON. Satellite IDLE. Bluetooth ON. Charging batteries. Transferring data with the PC by USB. Power supply: USB port.
OM#05	EUT ON. Satellite TCH. Bluetooth ON. Charging batteries. Power supply: 115Vac (AC/DC Adaptor).
OM#06	EUT ON. Satellite TCH. Bluetooth ON. Charging batteries. Transferring data with the PC by USB. Power supply: USB port.

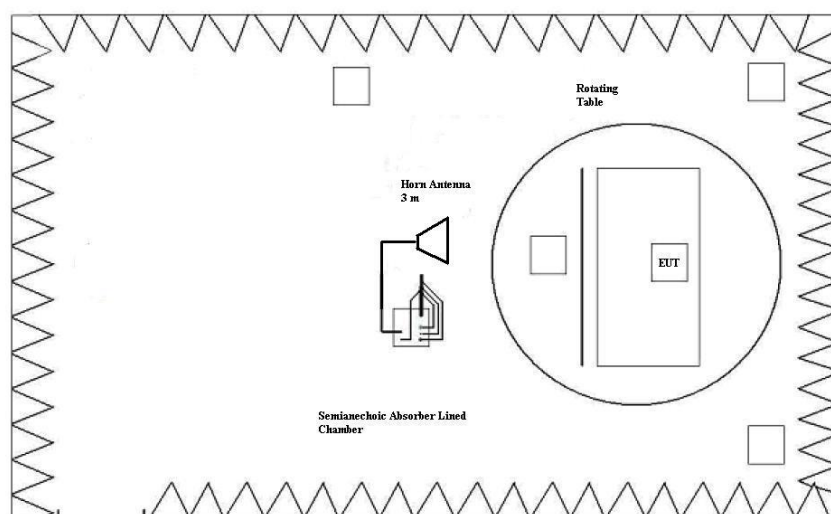
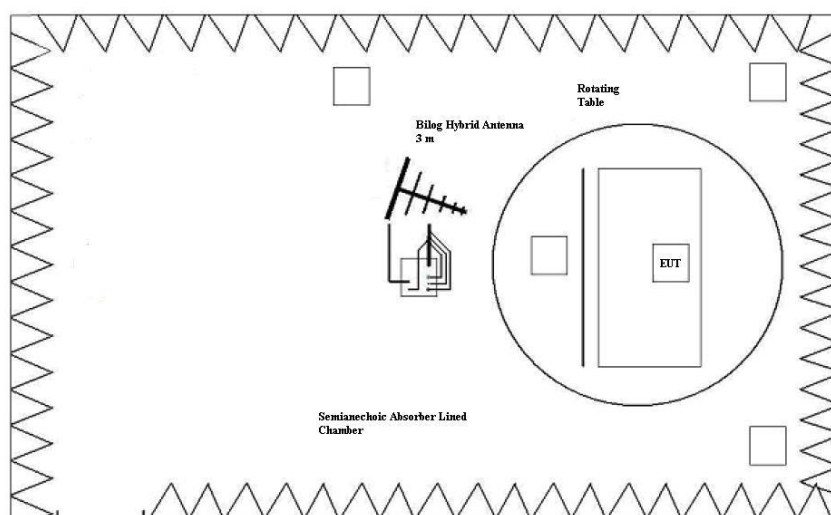
RADIATED EMISSION. ELECTROMAGNETIC FIELD MEASURE

LIMITS:	Product standard:	FCC CFR 47, Part 15, Subpart B (10-1-15 Edition), Secs. 15.107, 15.109 and Subpart C (10-1-15 Edition) Secs. 15.207 & ICES-003 Issue 6 (2016)
	Test standard:	FCC CFR 47, Part 15, Subpart B (10-1-15 Edition), Secs. 15.107, 15.109 and Subpart C (10-1-15 Edition) Secs. 15.207 & ICES-003 Issue 6 (2016)

Limits of interference Class B

The applied limit for radiated emissions, 3 m distance, according with the requirements of FCC Rules and Regulations 47 CFR Part 15, Subpart B (10-01-15 Edition), Secs. 15.107, 15.109 and Subpart C (10-1-15 Edition) Secs. 15.207 & ICES-003 Issue 6 (2016) in the frequency range 30 MHz to 26 GHz for class B equipments.

Frequency range (MHz)	QP Limit for 3 m ($\mu\text{V/m}$)	QP Limit for 10 m ($\text{dB}\mu\text{V/m}$)
30 to 88	100	40
88 to 216	150	43.5
216 to 960	200	46
Above 960	500	54



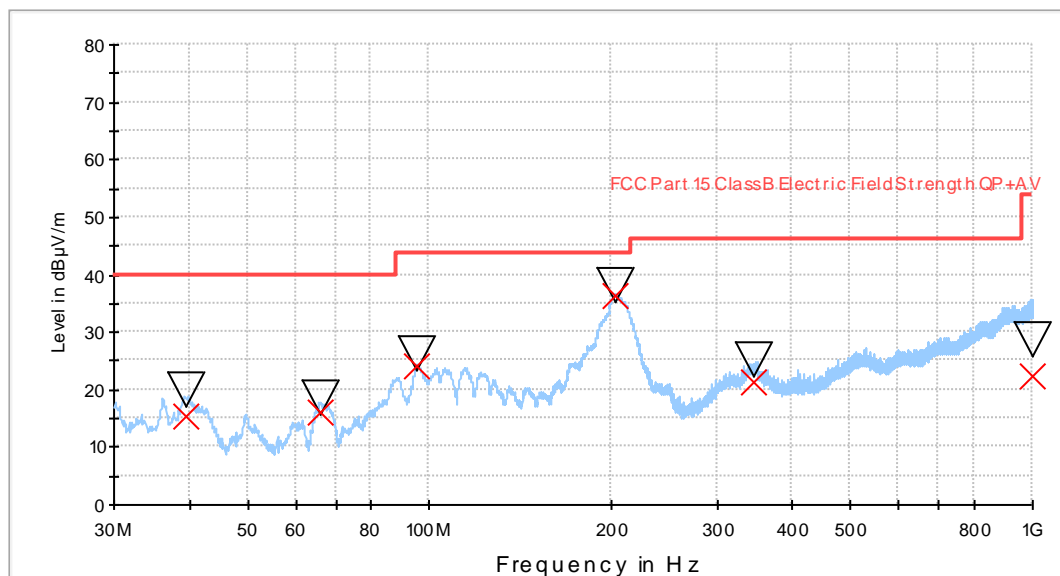
TESTED SAMPLES:	S/01 & S/02
TESTED OPERATION MODES:	OM#01 & OM#02
TEST RESULTS:	CRmmnnRRPP: CR, Radiation Condition; mm: Sample number; nn: Operation mode; RR: Range; PP: Polarization.

CRmmnnRRPP	Description	Result
CR0101LR	Range: 30 MHz - 1000 MHz.	P
CR0101HR1_PH	Range: 1 GHz - 18 GHz. Horizontal Polarization.	P
CR0101HR1_PV	Range: 1 GHz - 18 GHz. Vertical Polarization.	P
CR0101HR2_PH	Range: 18 GHz - 26 GHz. Horizontal Polarization.	P
CR0101HR2_PV	Range: 18 GHz - 26 GHz. Vertical Polarization.	P
CR0202LR	Range: 30 MHz - 1000 MHz.	P
CR0202HR1_PH	Range: 1 GHz - 18 GHz. Horizontal Polarization.	P
CR0202HR1_PV	Range: 1 GHz - 18 GHz. Vertical Polarization.	P
CR0202HR2_PH	Range: 18 GHz - 26 GHz. Horizontal Polarization.	P
CR0202HR2_PV	Range: 18 GHz - 26 GHz. Vertical Polarization.	P

Radiated Emission. CR0101LR

Project: 51746REM.003
Company: BITTIUM WIRELESS OY
Sample: S/01
Operation mode: OM#01
Description: EUT ON. Satellite IDLE. Bluetooth OFF. Charging batteries. Power supply: 115Vac (AC/DC Adaptor).

FCC class B



— FCC Part 15 Class B Electric Field Strength QP+AV
▽ Max Peak
— Preview Result 1-PK+
× Quasi Peak

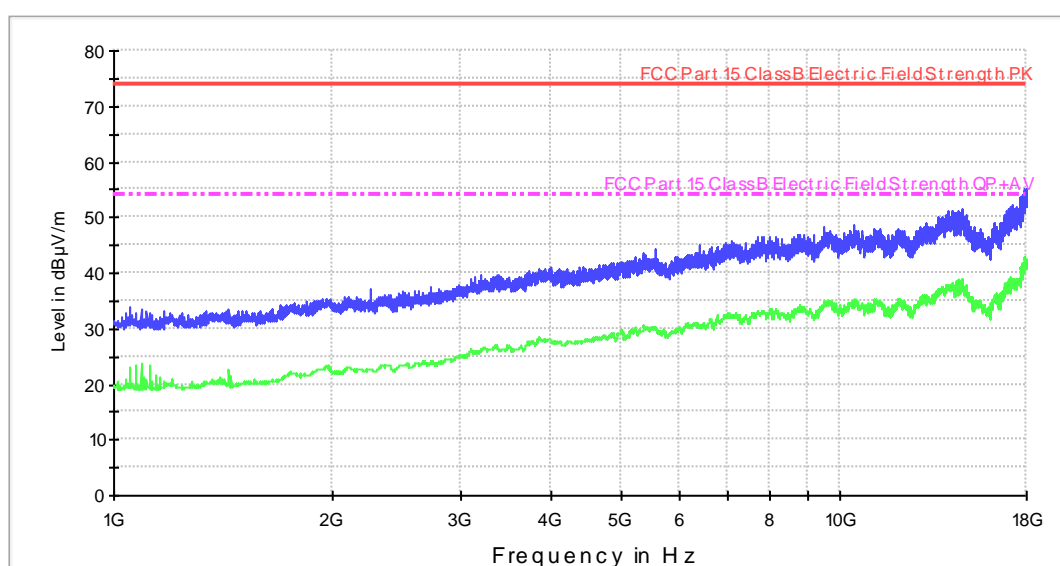
Maximizations

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)
39.567535	19.8	15.2	122.0	V	175.0
65.816232	18.7	15.9	98.0	V	347.0
95.168136	26.2	24.2	208.0	H	169.0
202.984770	38.2	36.4	145.0	H	255.0
346.304609	25.1	21.5	144.0	V	34.0
998.819038	28.6	22.3	342.0	V	231.0

Radiated Emission. CR0101RA1_PH

Project: 51746REM.003
Company: BITTIUM WIRELESS OY
Sample: S/01
Operation mode: OM#01
Description: EUT ON. Satellite IDLE. Bluetooth OFF. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). Horizontal Polarization.

FCC 1-18GHz class B



— Peak Scan
— FCC Part 15 ClassB Electric FieldStrength PK
— Average Scan
- - - FCC Part 15 ClassB Electric FieldStrength QP+AV

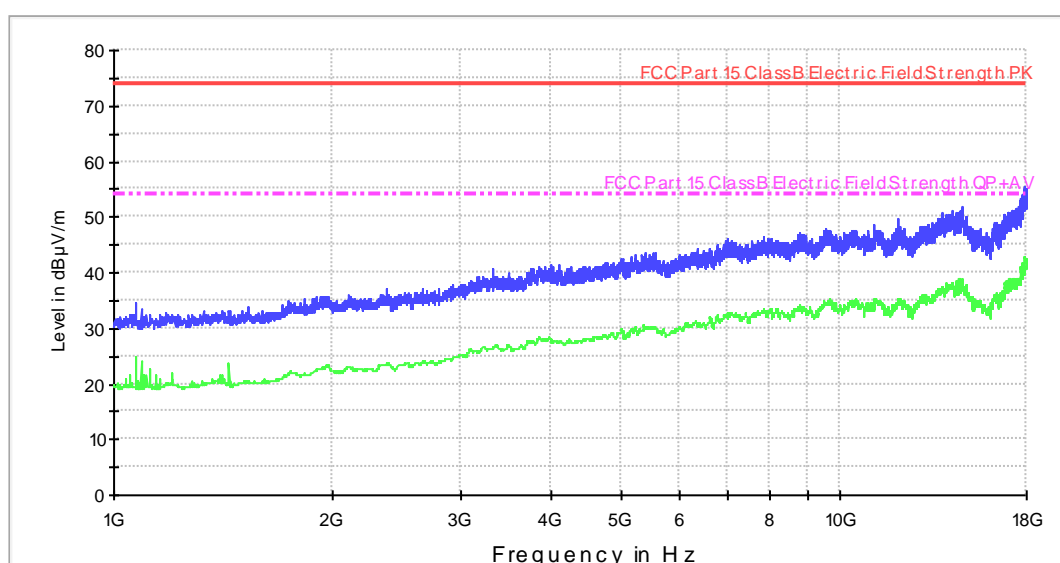
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
1050.000000	33.8	22.9
1774.000000	34.6	21.9
2254.000000	37.0	22.7
3144.000000	39.2	25.9
3982.000000	41.1	28.1
5557.000000	44.2	30.3
7074.000000	45.6	32.5
9493.000000	48.1	34.7
13062.000000	49.2	36.0
17955.000000	55.3	42.6

Radiated Emission. CR0101RA1_PV

Project: 51746REM.003
Company: BITTIUM WIRELESS OY
Sample: S/01
Operation mode: OM#01
Description: EUT ON. Satellite IDLE. Bluetooth OFF. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). Vertical polarization.

FCC 1-18GHz class B



— Peak Scan
— FCC Part 15 Class B Electric Field Strength PK
— Average Scan
- - - FCC Part 15 Class B Electric Field Strength QP+AV

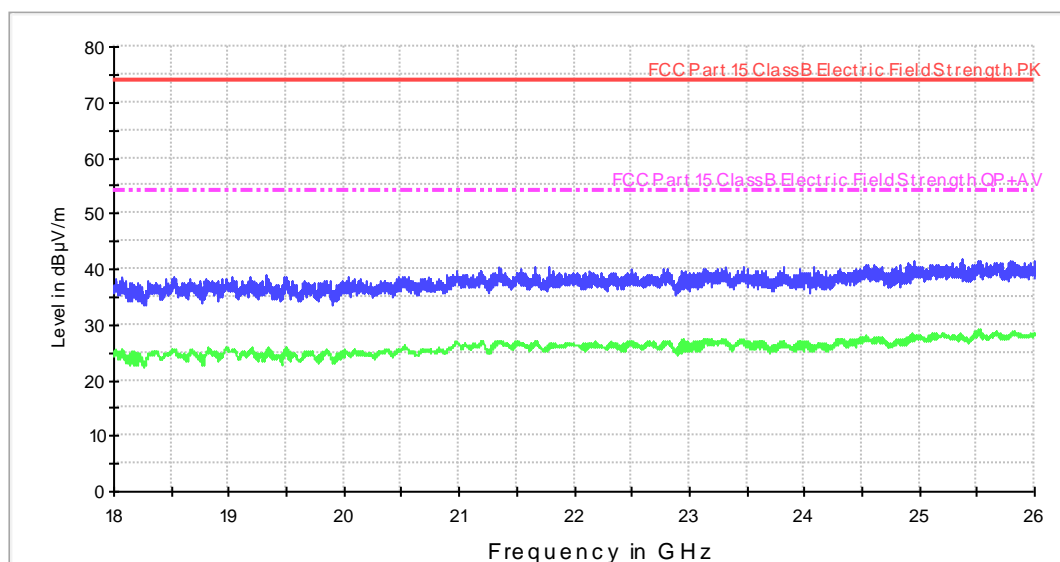
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
1070.000000	34.5	24.8
1739.000000	34.9	21.7
2371.000000	37.2	23.4
3169.000000	39.4	25.8
4089.000000	41.4	27.7
5372.000000	43.6	30.2
6983.000000	46.0	32.6
9521.000000	47.8	34.5
12004.000000	49.6	35.1
17895.000000	55.4	42.7

Radiated Emission. CR0101RA2_PH

Project: 51746REM.003
Company: BITTIUM WIRELESS OY
Sample: S/01
Operation mode: OM#01
Description: EUT ON. Satellite IDLE. Bluetooth OFF. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). Horizontal Polarization.

FCC 18-26GHz class B



— Peak Scan
— FCC Part 15 ClassB Electric FieldStrength PK
— Average Scan
- - - FCC Part 15 ClassB Electric FieldStrength QP+AV

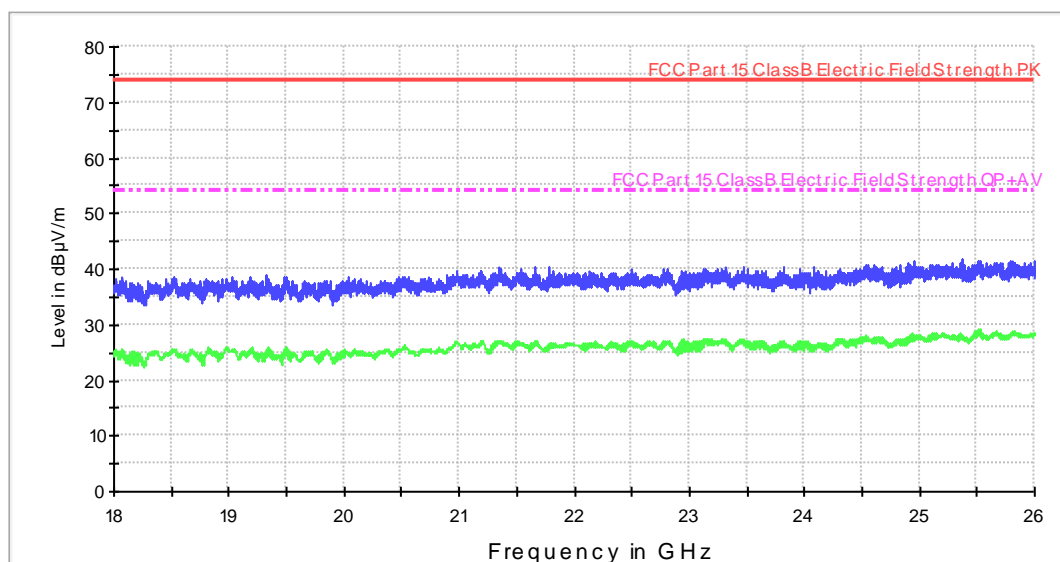
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
18516.000000	38.7	25.6
19327.000000	38.8	25.3
19483.000000	38.7	25.4
20728.000000	38.6	25.4
21355.000000	40.2	27.1
21784.000000	40.4	26.3
22505.000000	40.2	27.0
24088.000000	40.5	26.3
24954.000000	41.5	28.2
25378.000000	41.8	27.6

Radiated Emission. CR0101RA2_PV

Project: 51746REM.001
Company: BITTIUM WIRELESS OY
Sample: S/01
Operation mode: OM#01
Description: EUT ON. Satellite IDLE. Bluetooth OFF. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). Vertical polarization.

FCC 18-26GHz class B



— Peak Scan
— FCC Part 15 ClassB Electric FieldStrength PK
— Average Scan
- - - FCC Part 15 ClassB Electric FieldStrength QP+AV

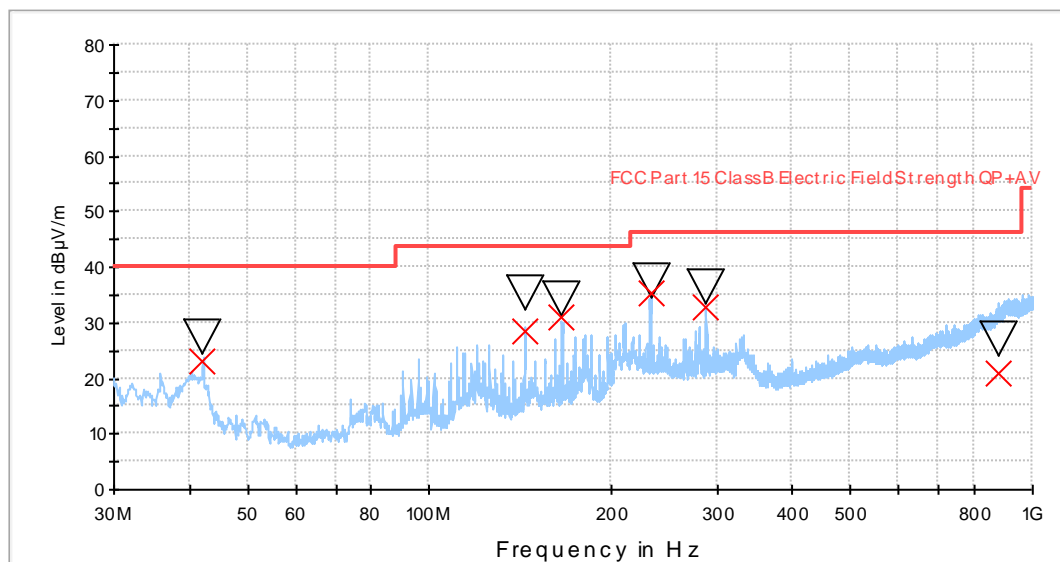
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
18516.000000	38.7	25.6
19327.000000	38.8	25.3
19483.000000	38.7	25.4
20728.000000	38.6	25.4
21355.000000	40.2	27.1
21784.000000	40.4	26.3
22505.000000	40.2	27.0
24088.000000	40.5	26.3
24954.000000	41.5	28.2
25378.000000	41.8	27.6

Radiated Emission. CR0202LR

Project: 51746REM.003
Company: BITTIUM WIRELESS OY
Sample: S/02
Operation mode: OM#02
Description: EUT ON. Satellite IDLE. Bluetooth OFF. Charging batteries.
Transferring data with the PC by USB. Power supply: USB Port.

FCC class B



▽ FCC Part 15 Class B Electric Field Strength QP+AV Max Peak
× Preview Result 1-PK+ Quasi Peak

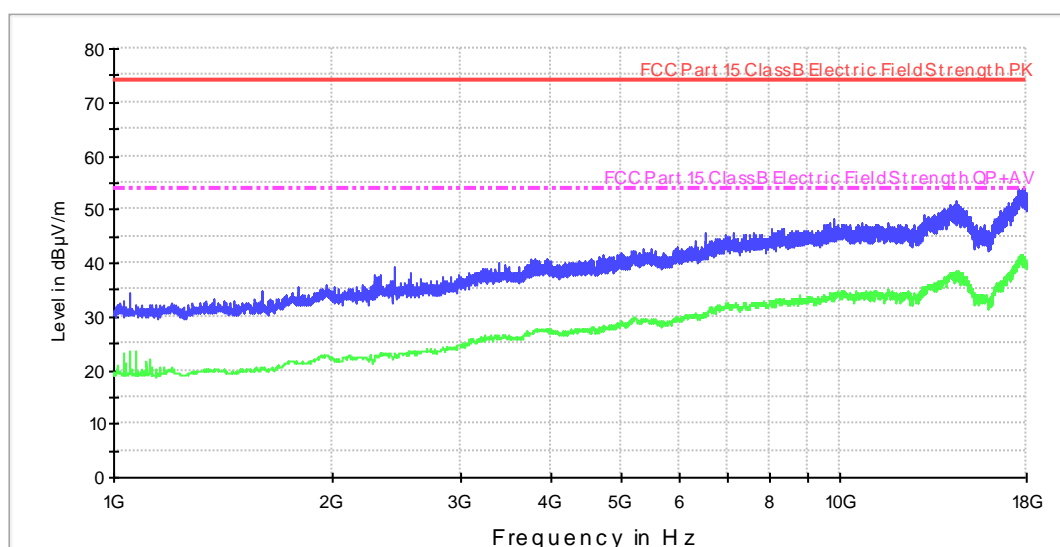
Maximizations

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)
41.968537	27.5	22.9	98.0	V	141.0
143.718437	35.5	28.5	154.0	H	249.0
165.946894	34.2	31.1	115.0	H	39.0
233.221042	37.6	35.1	127.0	H	67.0
288.023046	36.3	33.0	119.0	H	-1.0
881.107214	27.2	21.0	193.0	H	342.0

Radiated Emission. CR0202RA1_PH

Project: 51746REM.003
Company: BITTIUM WIRELESS OY
Sample: S/02
Operation mode: OM#02
Description: EUT ON. Satellite IDLE. Bluetooth OFF. Charging batteries.
Transferring data with the PC by USB. Power supply: USB Port.
Horizontal polarization.

FCC 1-18GHz class B



— MaxPeak-ClearWrite-PK+ — Average-ClearWrite-AVG
— FCC Part 15 ClassB Electric Field Strength PK - - - - - FCC Part 15 ClassB Electric Field Strength QP+AV

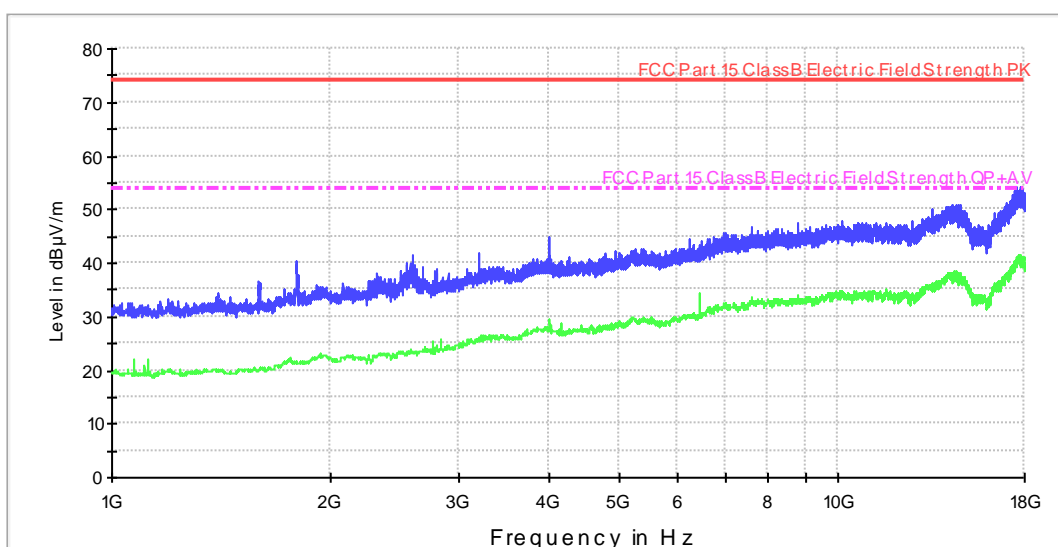
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
1600.000000	34.7	20.4
2438.000000	39.3	23.1
3936.000000	40.8	27.7
6496.000000	45.6	30.6
9780.000000	48.1	34.1
17740.000000	53.8	41.1

Radiated Emission. CR0202RA1_PV

Project: 51746REM.003
Company: BITTIUM WIRELESS OY
Sample: S/02
Operation mode: OM#02
Description: EUT ON. Satellite IDLE. Bluetooth OFF. Charging batteries.
Transferring data with the PC by USB. Power supply: USB Port.
Vertical polarization.

FCC 1-18GHz class B



— MaxPeak-ClearWrite-PK+ — Average-ClearWrite-AVG
— FCC Part 15 ClassB Electric Field Strength PK - - - - - FCC Part 15 ClassB Electric Field Strength QP+AV

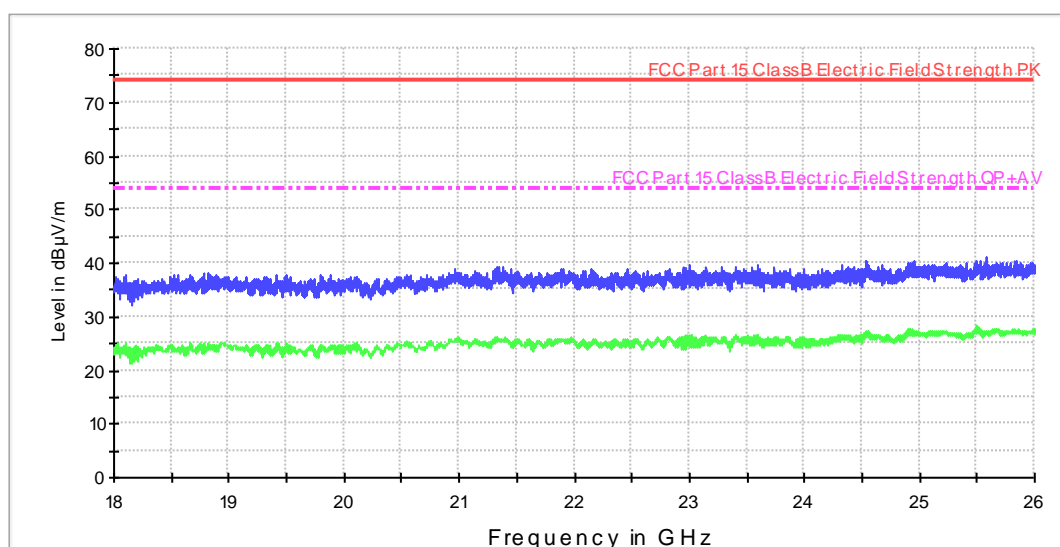
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
1595.000000	36.6	20.1
2591.000000	41.6	23.6
3995.000000	45.0	28.0
6740.000000	44.9	31.7
10092.000000	47.8	34.7
17746.000000	54.1	41.2

Radiated Emission. CR0202RA2_PH

Project: 51746REM.003
Company: BITTIUM WIRELESS OY
Sample: S/02
Operation mode: OM#02
Description: EUT ON. Satellite IDLE. Bluetooth OFF. Charging batteries.
Transferring data with the PC by USB. Power supply: USB Port.
Horizontal polarization.

FCC 18-26GHz class B



— MaxPeak-ClearWrite-PK+ — Average-ClearWrite-AVG
— FCC Part 15 ClassB Electric FieldStrength PK - - - - - FCC Part 15 ClassB Electric FieldStrength QP+AV

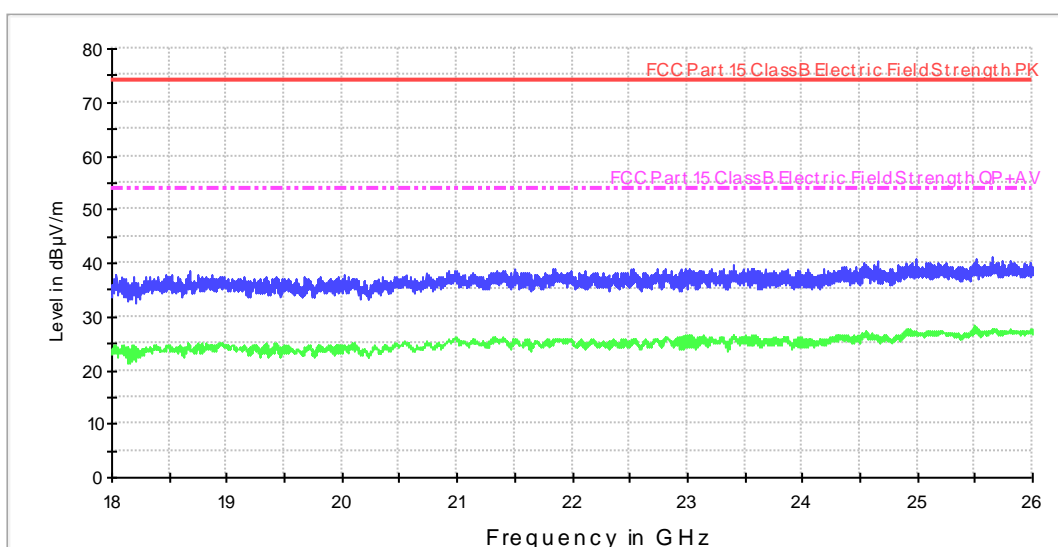
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
18776.000000	38.3	24.8
19498.000000	37.8	24.7
21322.000000	39.3	26.0
22942.000000	39.2	26.2
23005.000000	39.6	26.6
25581.000000	41.3	27.3

Radiated Emission. CR0202RA2_PV

Project: 51746REM.003
Company: BITTIUM WIRELESS OY
Sample: S/02
Operation mode: OM#02
Description: EUT ON. Satellite IDLE. Bluetooth OFF. Charging batteries.
Transferring data with the PC by USB. Power supply: USB Port.
Vertical polarization.

FCC 18-26GHz class B



— MaxPeak-ClearWrite-PK+ — Average-ClearWrite-AVG
— FCC Part 15 ClassB Electric FieldStrength PK - - - - - FCC Part 15 ClassB Electric FieldStrength QP+AV

Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
18677.000000	38.5	24.7
20024.000000	37.8	24.6
21495.000000	39.0	25.5
21855.000000	39.0	25.8
23401.000000	39.5	26.4
25645.000000	41.0	27.5

CONTINUOUS CONDUCTED EMISSION

LIMITS:	Product standard :	FCC CFR 47, Part 15, Subpart B (10-1-15 Edition), Secs. 15.107, 15.109 and Subpart C (10-1-15 Edition) Secs. 15.207 & ICES-003 Issue 6 (2016)
	Test standard :	FCC CFR 47, Part 15, Subpart B (10-1-15 Edition), Secs. 15.107, 15.109 and Subpart C (10-1-15 Edition) Secs. 15.207 & ICES-003 Issue 6 (2016)

CLASS B

The applied limit for continuous conducted emissions in power leads, according with the requirements of FCC Rules and Regulations 47 CFR Part 15, Subpart B (10-01-15 Edition), Secs. 15.107, 15.109 and Subpart C (10-1-15 Edition) Secs. 15.207 & ICES-003 Issue 6 (2016), in the frequency range 0,15 to 30 MHz, for Class B equipment was:

Frequency range (MHz)	Limit (dBµV)	
	Quasi-peak	Average
0,15 to 0,5	66-56	56-46
0,5 to 5	56	46
5 to 30	60	50

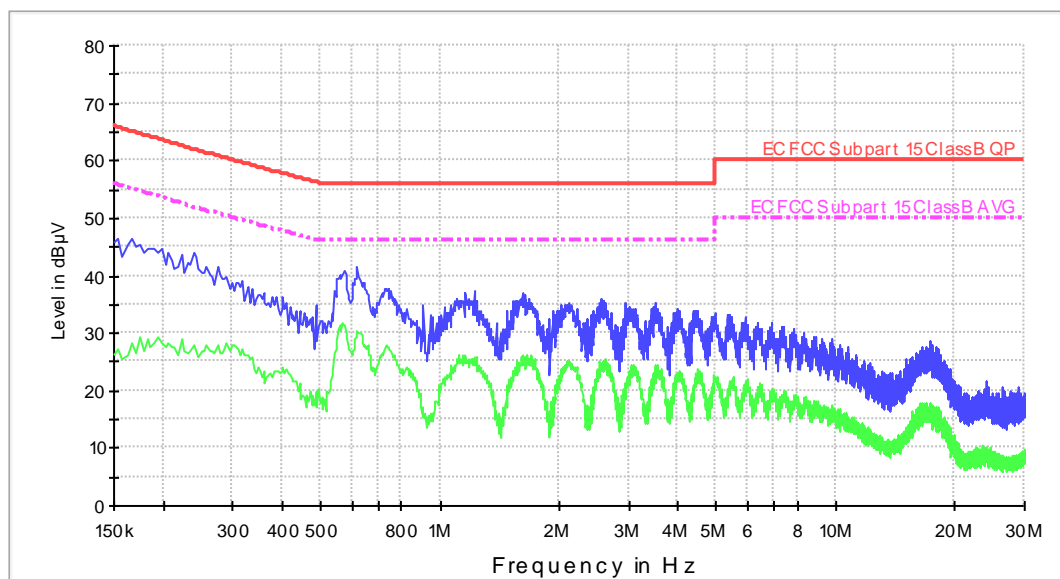
TESTED SAMPLES:	S/01
TESTED OPERATION MODES:	OM#03 & OM#04
TEST RESULTS:	CCmmnnhh: CC, Conducted Condition; mm: Sample number; nn: Operation mode; hh: wire

CCmmnnhh	Description	Result
CC01010N	Neutral wire noise.	P
CC0101L1	Phase wire noise.	P
CC01030N	Neutral wire noise.	P
CC0103L1	Phase wire noise.	P
CC01050N	Neutral wire noise.	P
CC0105L1	Phase wire noise.	P
CC02020N	Neutral wire noise.	P
CC0202L1	Phase wire noise.	P
CC02040N	Neutral wire noise.	P
CC0204L1	Phase wire noise.	P
CC02060N	Neutral wire noise.	P
CC0206L1	Phase wire noise.	P

Conducted Emission. CC01010N

Project: 51746REM.003
Company: BITTIUM WIRELESS OY
Sample: S/01
Operation mode: OM#01
Description: EUT ON. Satellite IDLE. Bluetooth OFF. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). Neutral wire noise.

EMI EC FCC Subpart 15 Class B CC



— Peak Preview
— Average Preview
— EC FCC Subpart 15 Class B QP
- - - EC FCC Subpart 15 Class B AVG

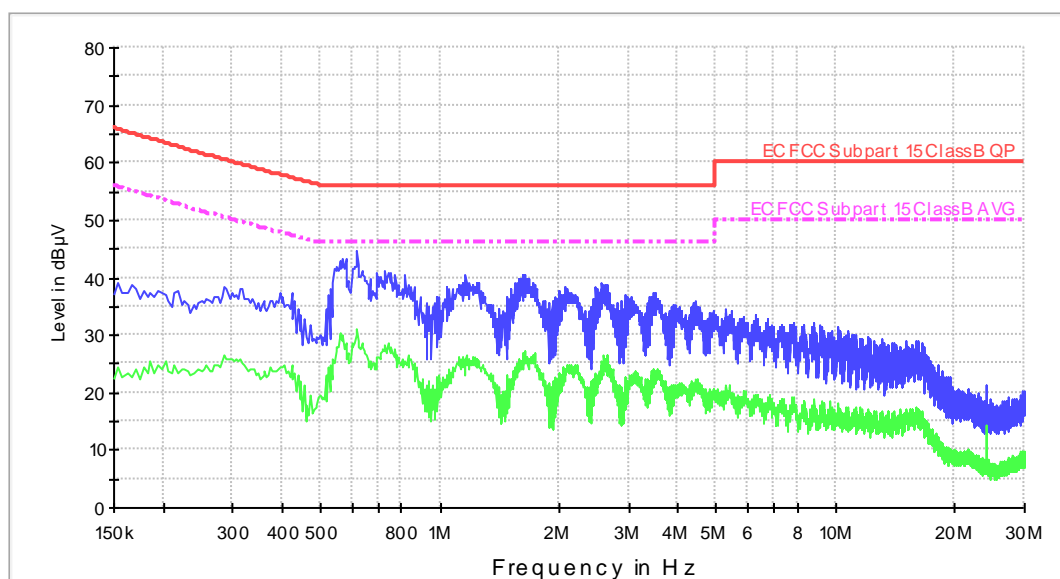
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.166000	46.4	28.5
0.274000	41.5	28.0
0.618000	41.7	30.3
0.742000	37.7	27.1
1.614000	37.1	26.2
2.566000	36.0	24.6
3.966000	34.2	22.1
6.930000	31.7	20.0
17.270000	28.5	18.0
18.006000	27.7	15.5

Conducted Emission. CC0101L1

Project: 51746REM.003
Company: BITTIUM WIRELESS OY
Sample: S/01
Operation mode: OM#01
Description: EUT ON. Satellite IDLE. Bluetooth OFF. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). Neutral wire noise.

EMI EC FCC Subpart 15 Class B CC



— Peak Preview
— Average Preview
— EC FCC Subpart 15 Class B QP
- - - EC FCC Subpart 15 Class B AVG

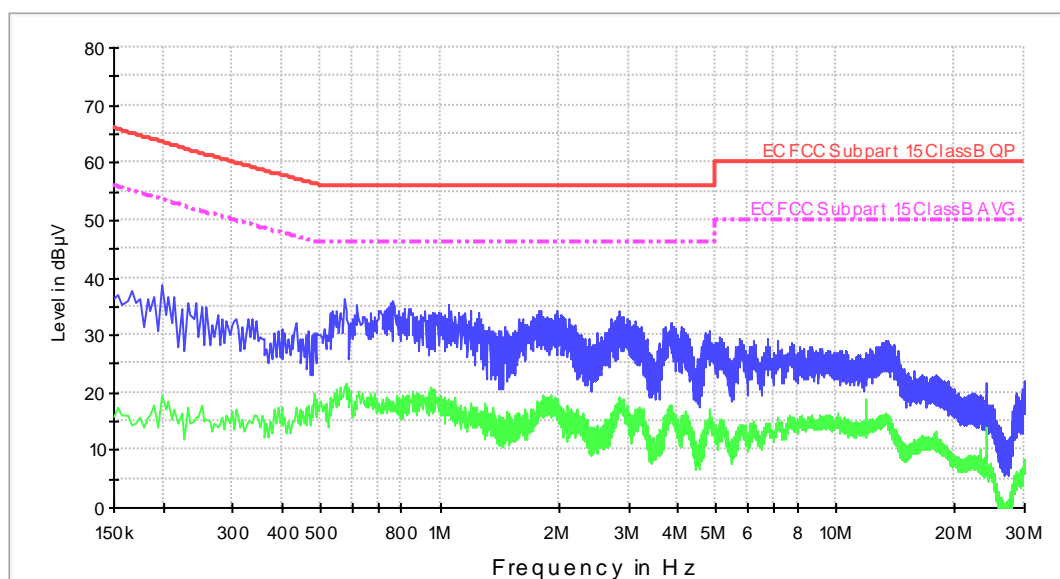
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.154000	39.1	24.5
0.286000	38.5	26.6
0.618000	44.7	31.0
0.754000	41.0	27.9
1.618000	40.6	27.0
2.570000	39.3	25.4
4.450000	35.9	22.3
6.270000	33.5	19.5
10.686000	30.7	17.3
18.066000	24.8	12.0

Conducted Emission. CC01030N

Project: 51746REM.003
Company: BITTIUM WIRELESS OY
Sample: S/01
Operation mode: OM#03
Description: EUT ON. Satellite IDLE. Bluetooth ON. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). Neutral wire noise.

EMI EC FCC Subpart 15 Class B CC



— Peak Preview
— Average Preview
— EC FCC Subpart 15 Class B QP
- - - EC FCC Subpart 15 Class B AVG

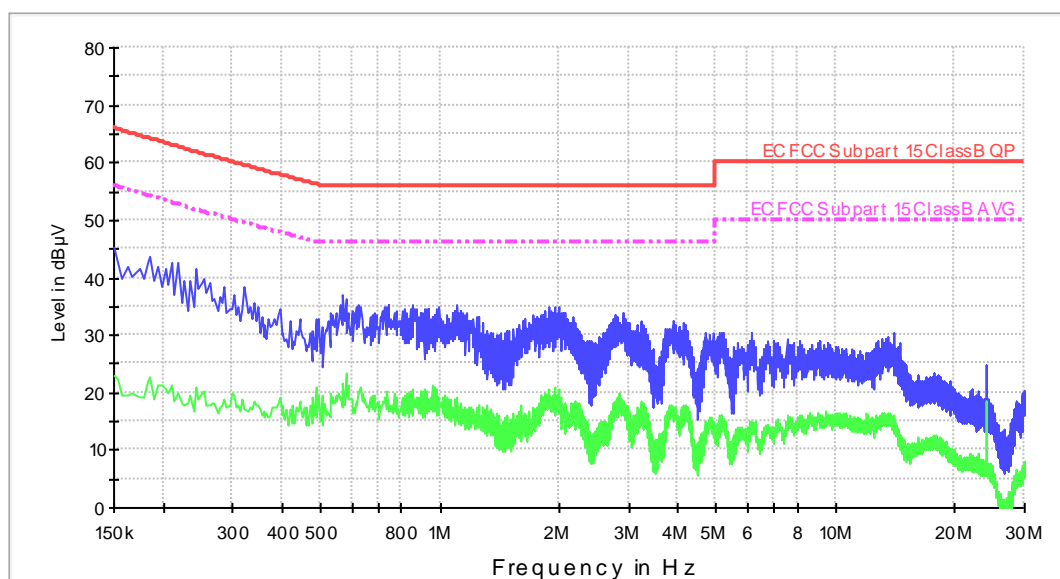
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.198000	38.7	19.7
0.574000	36.4	20.9
1.054000	35.3	18.7
2.854000	34.1	18.9
6.742000	29.4	13.2
13.418000	29.1	15.9

Conducted Emission. CC0103L1

Project: 51746REM.003
Company: BITTIUM WIRELESS OY
Sample: S/03
Operation mode: OM#01
Description: EUT ON. Satellite IDLE. Bluetooth ON. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). L1 wire noise.

EMI EC FCC Subpart 15 Class B CC



— Peak Preview — Average Preview
— EC FCC Subpart 15 Class B QP - - - EC FCC Subpart 15 Class B AVG

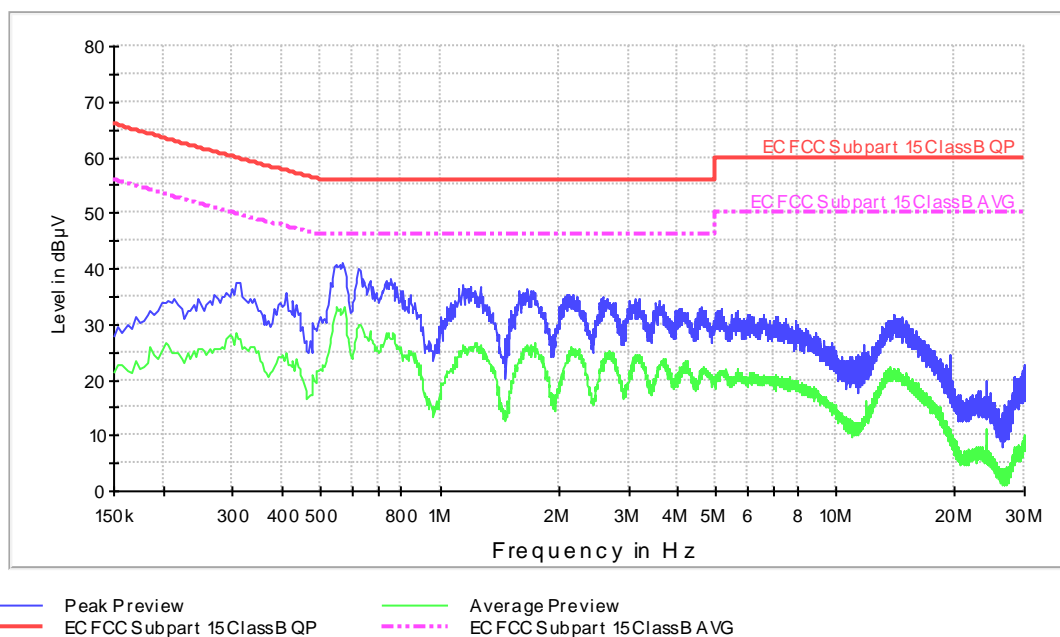
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.150000	45.5	23.2
0.570000	36.9	21.5
1.106000	35.5	18.6
2.898000	34.0	18.6
6.130000	30.5	14.9
14.118000	30.2	15.9

Conducted Emission. CC01050N

Project: 51746REM.003
Company: BITTIUM WIRELESS OY
Sample: S/01
Operation mode: OM#05
Description: EUT ON. Satellite TCH. Bluetooth ON. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). Neutral wire noise.

EMI EC FCC Subpart 15 Class B CC



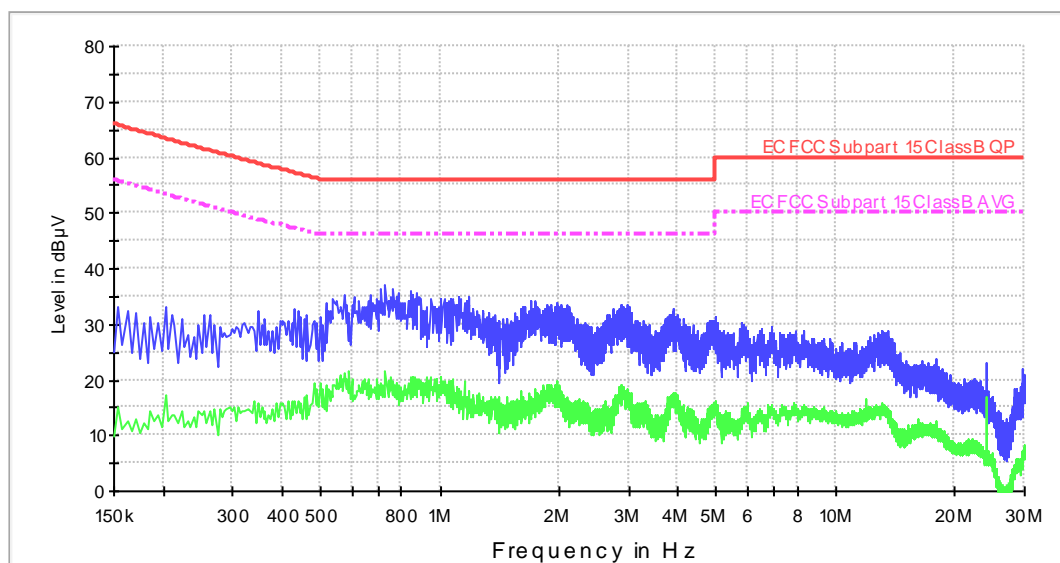
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.306000	37.6	28.5
0.570000	41.0	32.0
1.146000	37.0	26.5
2.122000	35.5	25.3
5.626000	32.5	19.9
14.110000	31.8	20.4

Conducted Emission. CC0105L1

Project: 51746REM.003
Company: BITTIUM WIRELESS OY
Sample: S/01
Operation mode: OM#05
Description: EUT ON. Satellite TCH. Bluetooth ON. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). L1 wire noise.

EMI EC FCC Subpart 15 Class B CC



— Peak Preview — Average Preview
— EC FCC Subpart 15 Class B QP - - - EC FCC Subpart 15 Class B AVG

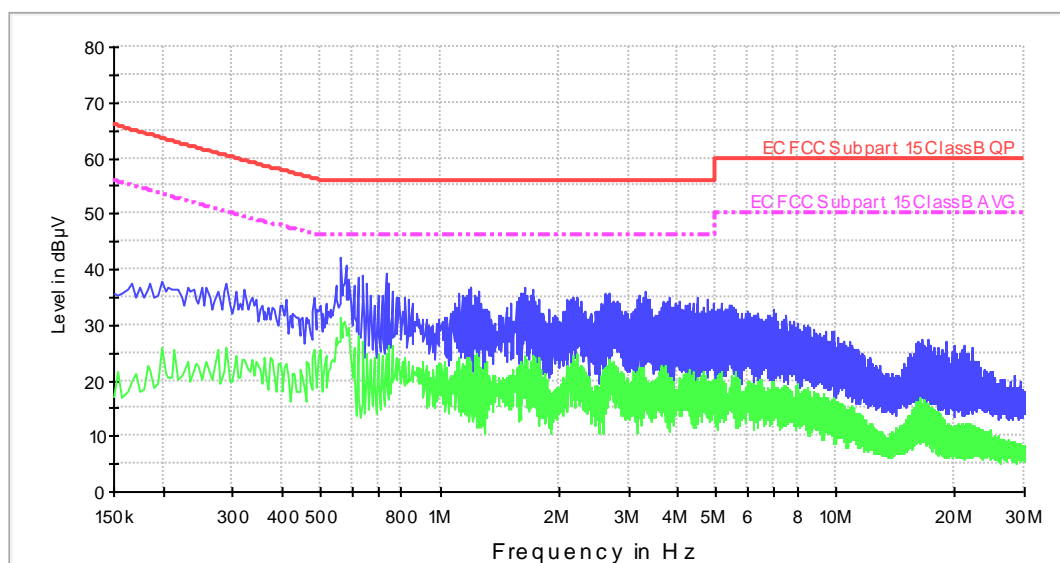
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.154000	33.0	15.1
0.726000	37.0	21.6
1.118000	35.0	18.3
2.878000	33.7	19.0
5.790000	30.4	14.6
13.114000	29.0	15.1

Conducted Emission. CC02020N

Project: 51746REM.003
Company: BITTIUM WIRELESS OY
Sample: S/02
Operation mode: OM#02
Description: EUT ON. Satellite IDLE. Bluetooth OFF. Charging batteries.
Transferring data with the PC by USB. Power supply: USB Port.
Neutral wire noise.

EMI EC FCC Subpart 15 Class B CC



— Peak Preview
— EC FCC Subpart 15 Class B QP
— Average Preview
- - - EC FCC Subpart 15 Class B AVG

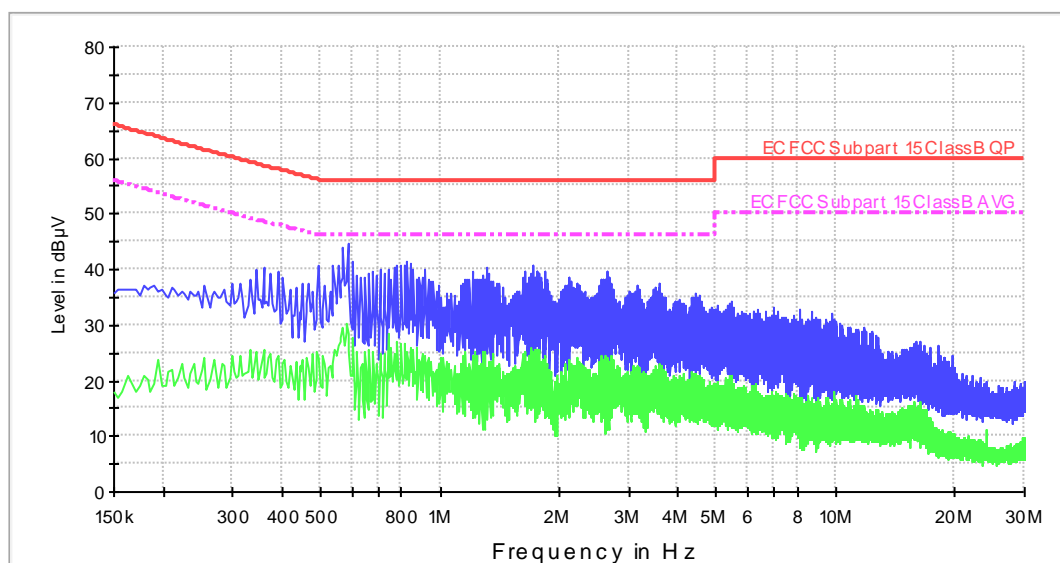
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.198000	38.0	25.8
0.290000	37.3	25.8
0.562000	42.3	31.4
0.742000	37.6	26.2
1.634000	36.7	24.5
3.322000	35.9	20.7
4.454000	35.1	20.2
6.950000	32.7	19.5
16.610000	27.5	15.2
19.138000	26.9	10.4

Conducted Emission. CC0202L1

Project: 51746REM.003
Company: BITTIUM WIRELESS OY
Sample: S/02
Operation mode: OM#02
Description: EUT ON. Satellite IDLE. Bluetooth OFF. Charging batteries.
Transferring data with the PC by USB. Power supply: USB Port. L1 wire noise

EMI EC FCC Subpart 15 Class B CC



— Peak Preview
— EC FCC Subpart 15 Class B QP
— Average Preview
- - - EC FCC Subpart 15 Class B AVG

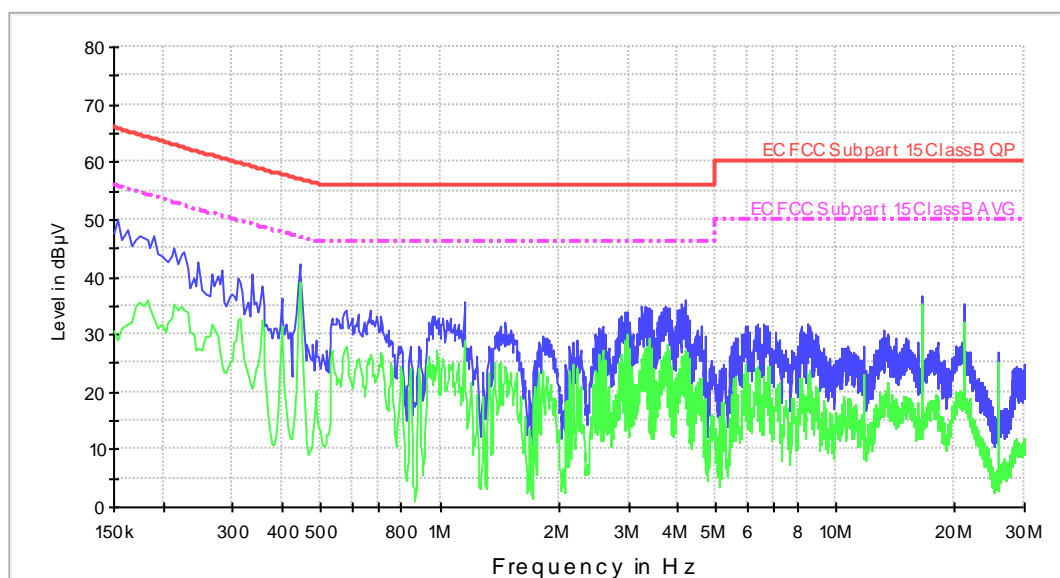
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.190000	37.1	19.4
0.358000	40.5	25.8
0.586000	44.5	28.5
0.826000	41.3	25.2
1.722000	40.7	25.3
2.654000	39.6	24.0
3.626000	35.8	22.8
6.958000	33.2	16.2
11.802000	29.7	15.2
18.154000	26.3	10.3

Conducted Emission. CC02040N

Project: 51746REM.003
Company: BITTIUM WIRELESS OY
Sample: S/02
Operation mode: OM#04
Description: EUT ON. Satellite IDLE. Bluetooth ON. Charging batteries.
Transferring data with the PC by USB. Power supply: USB port.
Neutral wire noise.

EMI EC FCC Subpart 15 Class B CC



— Peak Preview
— EC FCC Subpart 15 Class B QP
— Average Preview
- - - EC FCC Subpart 15 Class B AVG

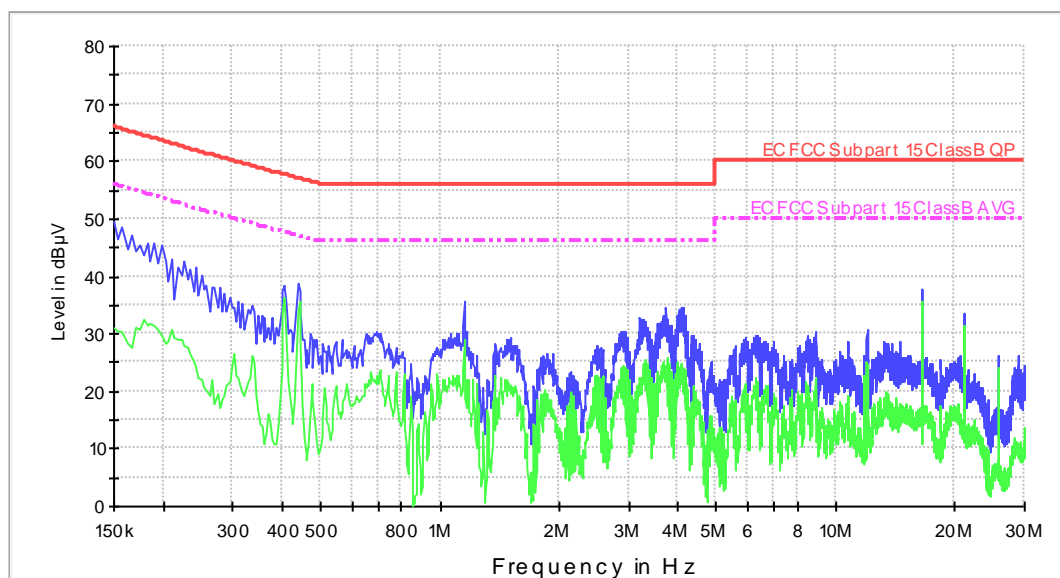
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.154000	50.1	28.9
0.442000	42.1	39.3
1.154000	35.7	28.8
4.158000	35.9	21.3
8.550000	31.9	18.9
16.462000	36.5	35.2

Conducted Emission. CC0204L1

Project: 51746REM.003
Company: BITTIUM WIRELESS OY
Sample: S/02
Operation mode: OM#04
Description: EUT ON. Satellite IDLE. Bluetooth ON. Charging batteries.
Transferring data with the PC by USB. Power supply: USB port. L1 wire noise.

EMI EC FCC Subpart 15 Class B CC



— Peak Preview
— EC FCC Subpart 15 Class B QP
— Average Preview
- - - EC FCC Subpart 15 Class B AVG

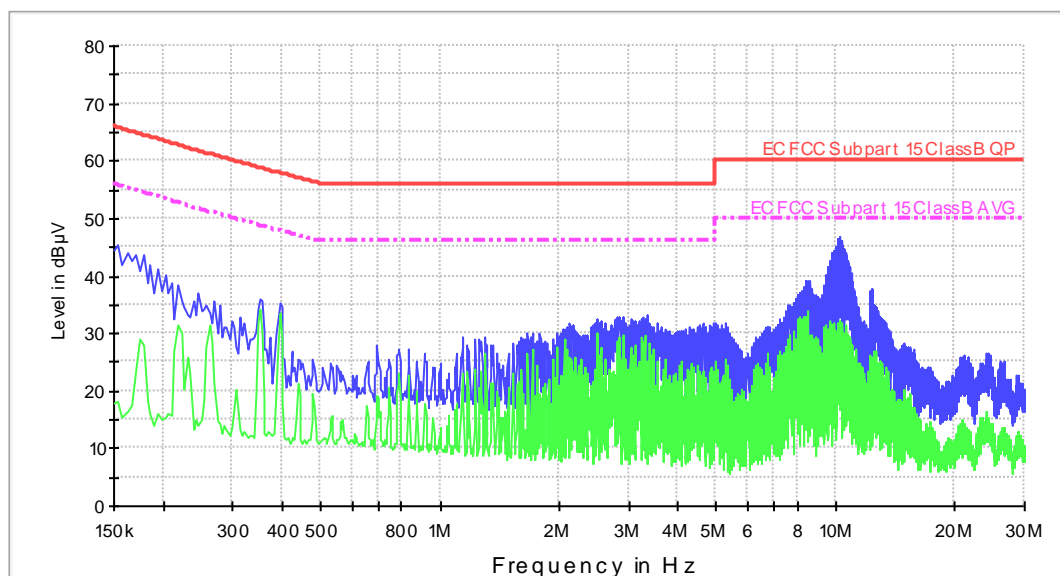
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.150000	49.8	31.0
0.438000	38.8	34.3
1.150000	35.5	29.1
4.058000	34.7	24.7
12.006000	30.7	24.4
16.462000	37.6	35.7

Conducted Emission. CC02060N

Project: 51746REM.003
Company: BITTIUM WIRELESS OY
Sample: S/02
Operation mode: OM#06
Description: EUT ON. Satellite TCH. Bluetooth ON. Charging batteries.
Transferring data with the PC by USB. Power supply: USB port.
Neutral wire noise.

EMI EC FCC Subpart 15 Class B CC



— Peak Preview
— EC FCC Subpart 15 Class B QP
— Average Preview
- - - EC FCC Subpart 15 Class B AVG

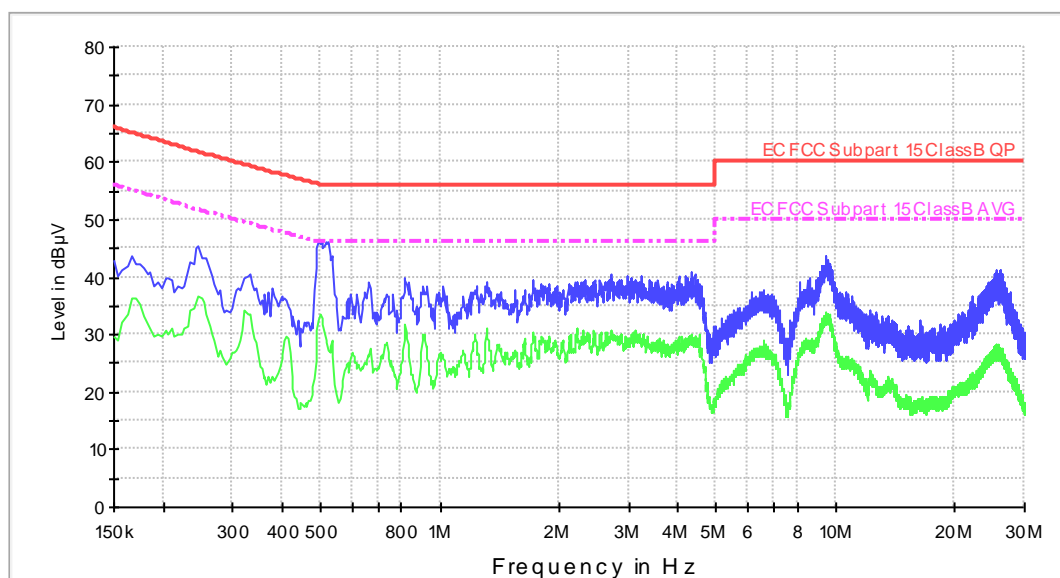
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.154000	45.5	18.0
0.350000	36.0	34.4
0.694000	27.8	19.3
1.142000	29.4	23.0
2.106000	31.1	20.8
3.338000	33.3	20.0
5.270000	31.9	23.8
10.274000	46.9	32.0
10.410000	46.2	28.9
23.982000	26.6	14.7

Conducted Emission. CC0206L1

Project: 51746REM.003
Company: BITTIUM WIRELESS OY
Sample: S/02
Operation mode: OM#06
Description: EUT ON. Satellite TCH. Bluetooth ON. Charging batteries.
Transferring data with the PC by USB. Power supply: USB port. L1 wire noise.

EMI EC FCC Subpart 15 Class B CC



— Peak Preview — Average Preview
— EC FCC Subpart 15 Class B QP - - - EC FCC Subpart 15 Class B AVG

Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.246000	45.5	36.5
0.258000	43.3	33.5
0.522000	46.1	27.2
0.814000	39.7	30.9
1.718000	39.6	30.3
2.698000	40.7	29.5
4.338000	40.9	28.6
9.494000	43.5	33.2
10.646000	37.5	25.8
25.966000	41.4	27.3