Dekra Testing and Certification, S.A.U.
Parque Tecnológico de Andalucía,
c/ Severo Ochoa nº 2 · 29590 Campanillas · Málaga · España

ENAC ENSAYOS Nº 51/LE147

Test report No:

NIE: 51746REM.001

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 Smart
Other identification of the product	S/N: Prototype
Final HW version	0201
Final SW version	1.8.31
FCC ID	V27SSD-51
IC	N/A
Features	SATELLITE • 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 LTE • 3GPP rel10 (LTE Advanced) • FDD Cat4, DL 150 Mbit/s, UL 50 Mbit/s • Band configuration: B4 (1700), B28 (700) UMTS/HSPA • 3GPP R99 384/384kbps • 3GPP rel8, HSPA+, 42 Mbps / 5.76 Mbps • Band configuration: B2 (1900), B4 (1700), B5 (850) GSM/GPRS/EDGE • 850/900/1800/1900 MHz Other Radios • Wi-Fi 802.11 b/g/n • Bluetooth 4.0
Manufacturer	BITTIUM WIRELESS LTD. Tutkijantie 8 90590 Oulu, Finland
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)	Rafael López EMC Lab Manager Firmado digitalmente por RAFAEL LÓPEZ MARTÍN Fecha: 2017.04.18 16:18:11 +02'00'
Date of issue	2017-04-18
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.

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

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.

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

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

General conditions

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
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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 Nº	Description	Model	Serial number	Reception date
51746/025	Satellite Smartphone	Mx Smart	Prototype	2017-01-16
51746/037	AC/DC Adapter	KSA29B0500210D5	---	2017-01-16
51746/043	USB Cable	---	---	2017-01-16

Sample S/02 is composed of the following elements:

Control Nº	Description	Model	Serial number	Reception date
51746/025	Satellite Smartphone	Mx Smart	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/03 is composed of the following elements:

Control Nº	Description	Model	Serial number	Reception date
51746/025	Satellite Smartphone	Mx Smart	Prototype	2017-01-16
51746/043	USB Cable	---	---	2017-01-16

Sample S/04 is composed of the following elements:

Control Nº	Description	Model	Serial number	Reception date
51746/025	Satellite Smartphone	Mx Smart	Prototype	2017-01-16
51746/040	Antenna (D)	---	---	2017-01-16
51746/043	USB Cable	---	---	2017-01-16

Auxiliary laptop used with samples S/03 & 04:

Control Nº	Description	Model	Serial number	Reception date
3122	Laptop PC	---	---	N/A

Test sample description

The Mx Smart 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 ºC Max. = 35 ºC
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 ºC Max. = 35 ºC
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 ºC Max. = 35 ºC
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 = ± 3,9 dB for quasi-peak measurements, I = ± 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 = ± 4,9 dB for quasi-peak measurements, I = ± 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 = ± 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

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. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. Internal Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor).
OM#02	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. External Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor).
OM#03	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. Internal Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port.
OM#04	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. External Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port.
OM#05	EUT ON. Satellite IDLE. TCH GSM 900. WIFI ON. Bluetooth ON. Internal Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor).
OM#06	EUT ON. Satellite IDLE. TCH GSM 900. WIFI ON. Bluetooth ON. External Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor).
OM#07	EUT ON. Satellite IDLE. TCH GSM 900. WIFI ON. Bluetooth ON. Intenal Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port.
OM#08	EUT ON. Satellite IDLE. TCH GSM 900. WIFI ON. Bluetooth ON. External Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port.
OM#09	EUT ON. Satellite TCH. GSM IDLE. WIFI ON. Bluetooth ON. Internal Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor).
OM#10	EUT ON. Satellite TCH. GSM IDLE. WIFI ON. Bluetooth ON. External Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor).
OM#11	EUT ON. Satellite TCH. GSM IDLE. WIFI ON. Bluetooth ON. Internal Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port.
OM#12	EUT ON. Satellite TCH. GSM IDLE. WIFI ON. Bluetooth ON. External Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port.

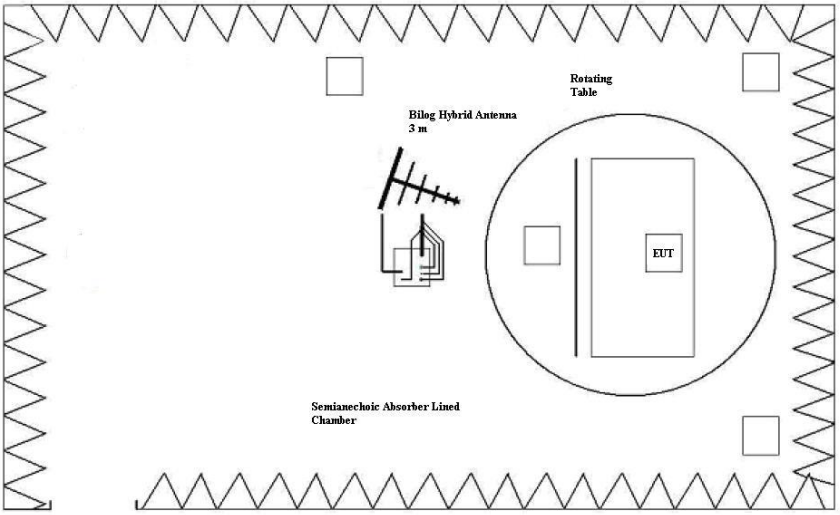
RADIATED EMISSION. ELECTROMAGNETIC FIELD MEASURE

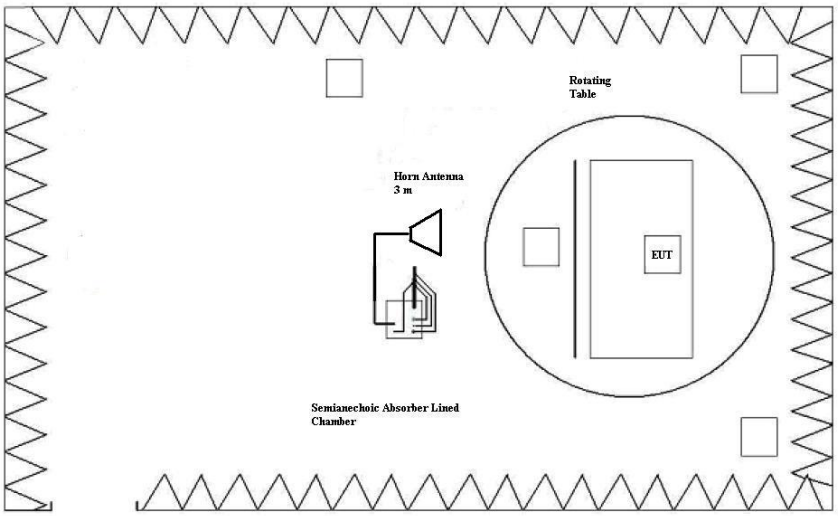
LIMITS:	Product standard:	FCC CFR 47, Part 15, Subpart B (10-1-15 Edition), Secs. 15.107, 15.109 and Subpart C (10-1-15 Edition) Secs. 15.207 & ICES-003 Issue 6 (2016)
	Test standard:	FCC CFR 47, Part 15, Subpart B (10-1-15 Edition), Secs. 15.107, 15.109 and Subpart C (10-1-15 Edition) Secs. 15.207 & 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 (μV/m)	QP Limit for 10 m (dBμV/m)
30 to 88	100	40
88 to 216	150	43.5
216 to 960	200	46
Above 960	500	54





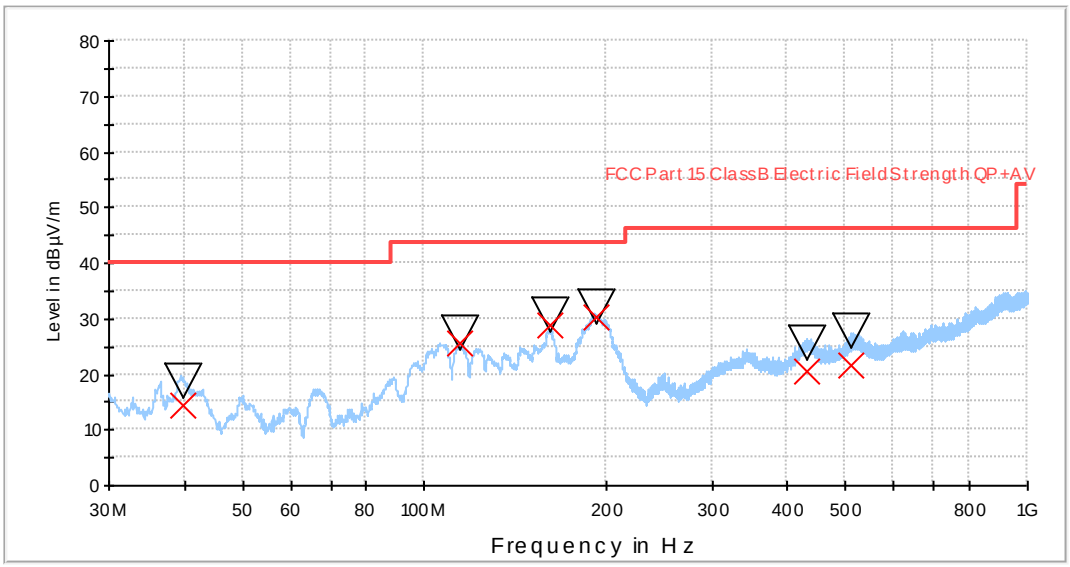
TESTED SAMPLES:	S/01; S/02; S/03 & S/04
TESTED OPERATION MODES:	OM#01; OM#02; OM#03 & OM#04
TEST RESULTS:	CRmmnnRRPP: CR, Radiation Condition; mm: Sample number; nn: Operation mode; RR: Range; PP: Polarization.

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
CR0303LR	Range: 30 MHz - 1000 MHz.	P
CR0303HR1_PH	Range: 1 GHz - 18 GHz. Horizontal Polarization.	P
CR0303HR1_PV	Range: 1 GHz - 18 GHz. Vertical Polarization.	P
CR0303HR2_PH	Range: 18 GHz - 26 GHz. Horizontal Polarization.	P
CR0303HR2_PV	Range: 18 GHz - 26 GHz. Vertical Polarization.	P
CR0404LR	Range: 30 MHz - 1000 MHz.	P
CR0404HR1_PH	Range: 1 GHz - 18 GHz. Horizontal Polarization.	P
CR0404HR1_PV	Range: 1 GHz - 18 GHz. Vertical Polarization.	P
CR0404HR2_PH	Range: 18 GHz - 26 GHz. Horizontal Polarization.	P
CR0404HR2_PV	Range: 18 GHz - 26 GHz. Vertical Polarization.	P

Radiated Emission. CR0101LR

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/01
Operation mode:	OM#01
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. Internal Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor).

FCC class B



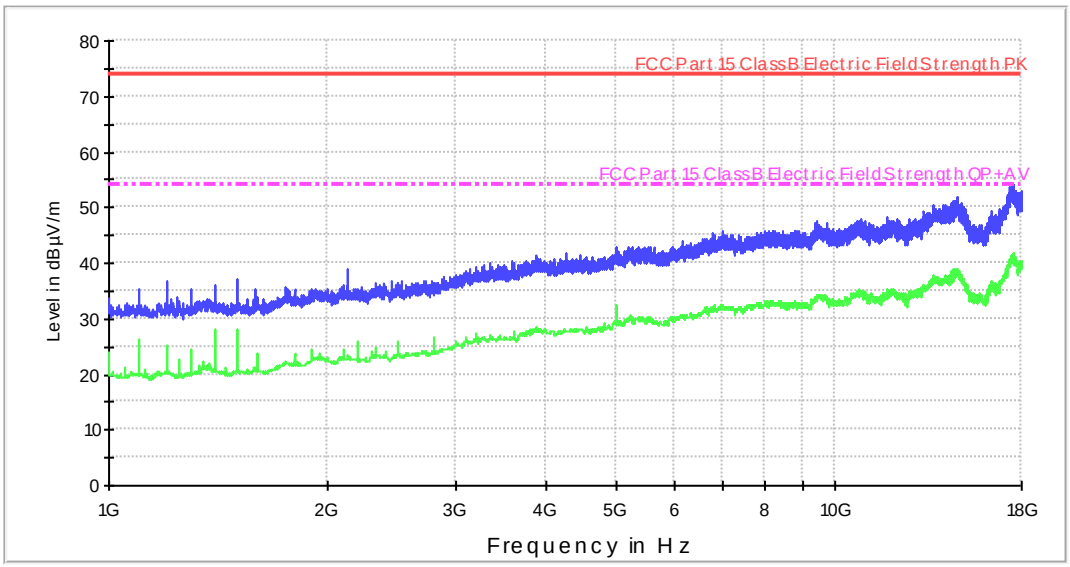
Maximizations

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)
39.807816	18.7	14.3	98.0	V	198.0
114.762725	27.3	25.6	168.0	H	181.0
161.607816	30.5	28.7	98.0	V	284.0
192.163327	32.2	30.3	98.0	H	252.0
431.703006	25.7	20.6	144.0	V	100.0
510.903607	27.6	21.6	139.0	H	152.0

Radiated Emission. CR0101HR1_PH

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/01
Operation mode:	OM#01
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. Internal Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). Horizontal Polarization.

FCC 1-18GHz class B



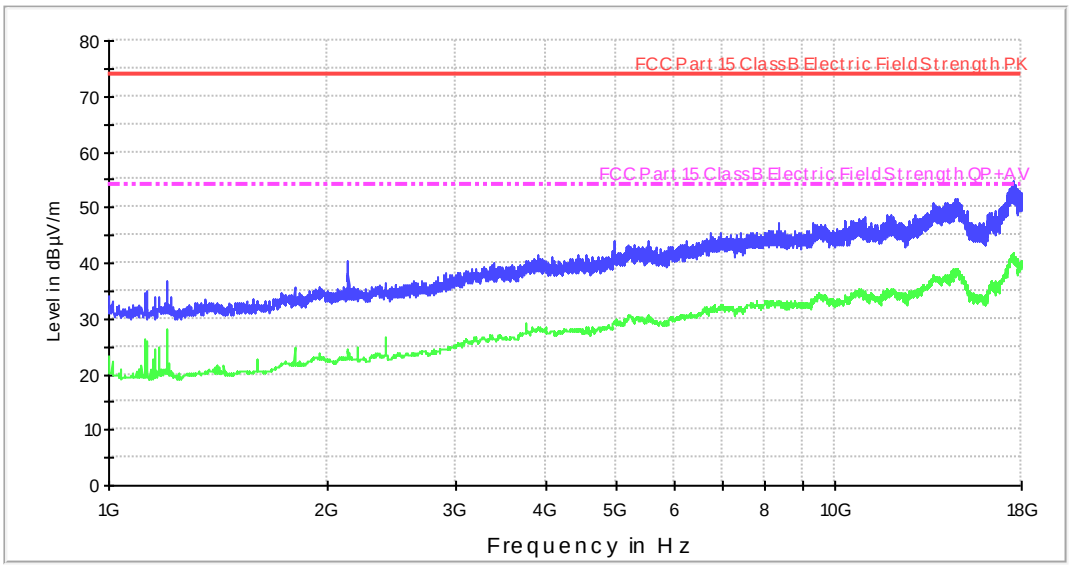
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
1500.000000	37.0	28.0
2128.000000	38.9	23.2
3881.000000	41.6	28.3
6764.000000	45.2	31.5
10809.000000	47.9	34.7
17549.000000	54.1	41.7

Radiated Emission. CR0101HR1_PV

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/01
Operation mode:	OM#01
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. Internal Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). Vertical Polarization.

FCC 1-18GHz class B



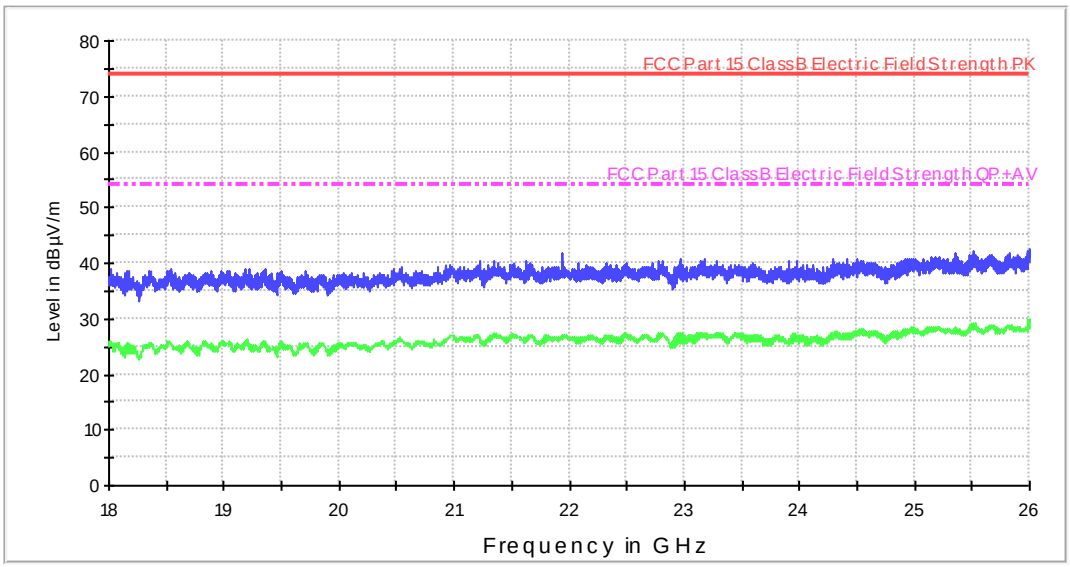
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
1200.000000	36.7	28.2
1732.000000	34.7	21.8
2133.000000	40.2	24.6
3165.000000	39.0	25.9
3891.000000	41.5	28.3
4950.000000	43.9	29.3

Radiated Emission. CR0101HR2_PH

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/01
Operation mode:	OM#01
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. Internal Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). Horizontal Polarization.

FCC 18-26GHz class B



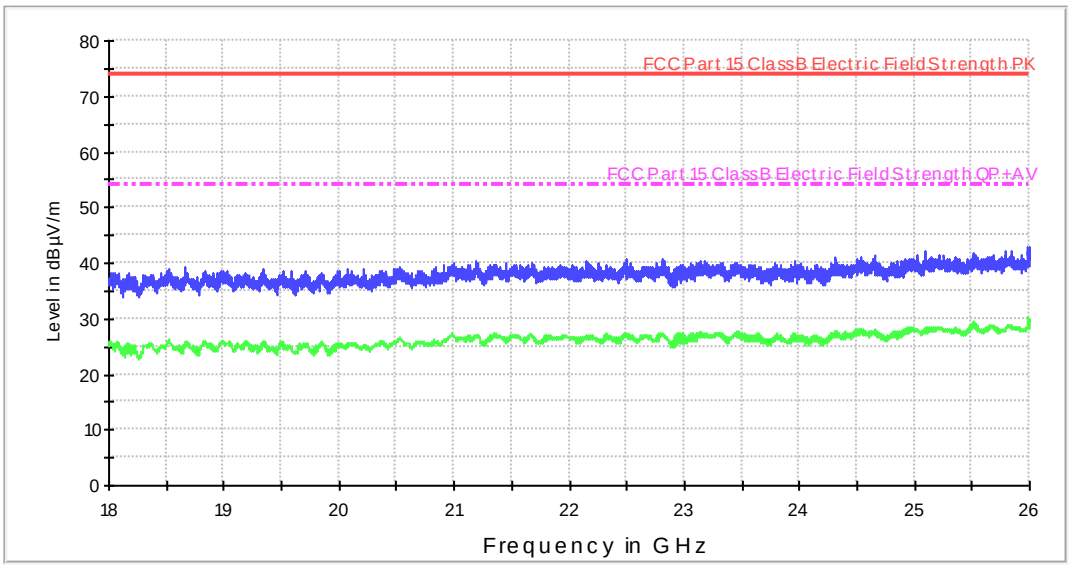
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
18542.000000	39.0	25.7
19180.000000	39.0	25.9
19496.000000	38.5	25.8
20542.000000	39.4	26.2
21225.000000	40.3	26.1
21942.000000	41.8	26.6
22970.000000	40.6	27.3
23914.000000	40.4	26.1
25014.000000	40.9	27.9
25997.000000	42.6	29.9

Radiated Emission. CR0101HR2_PV

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/01
Operation mode:	OM#01
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. Internal Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). Vertical Polarization.

FCC 18-26GHz class B



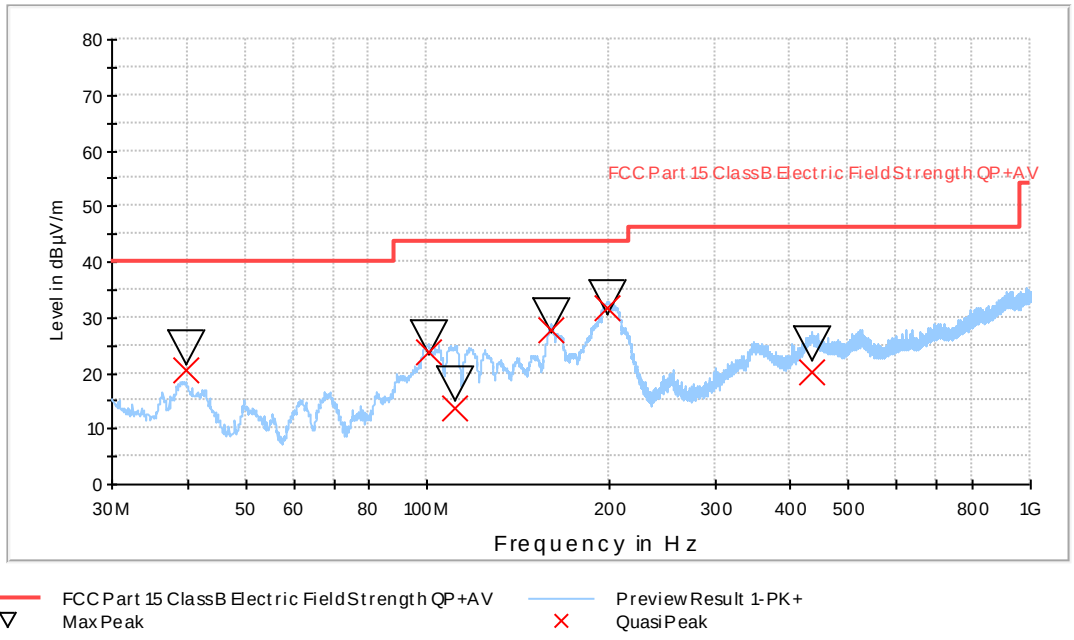
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)	Height (cm)	Polarization
18667.000000	39.3	25.5	0.0	H
19346.000000	38.8	25.6	0.0	H
20079.000000	38.8	25.4	0.0	H
20532.000000	39.4	26.2	0.0	H
21195.000000	40.5	27.2	0.0	H
22150.000000	40.5	26.8	0.0	H
22495.000000	40.7	27.2	0.0	H
23964.000000	40.3	27.3	0.0	H
24650.000000	41.5	27.8	0.0	H
25999.000000	42.8	30.1	0.0	H

Radiated Emission. CR0202LR

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/02
Operation mode:	OM#02
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. External Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor).

FCC class B



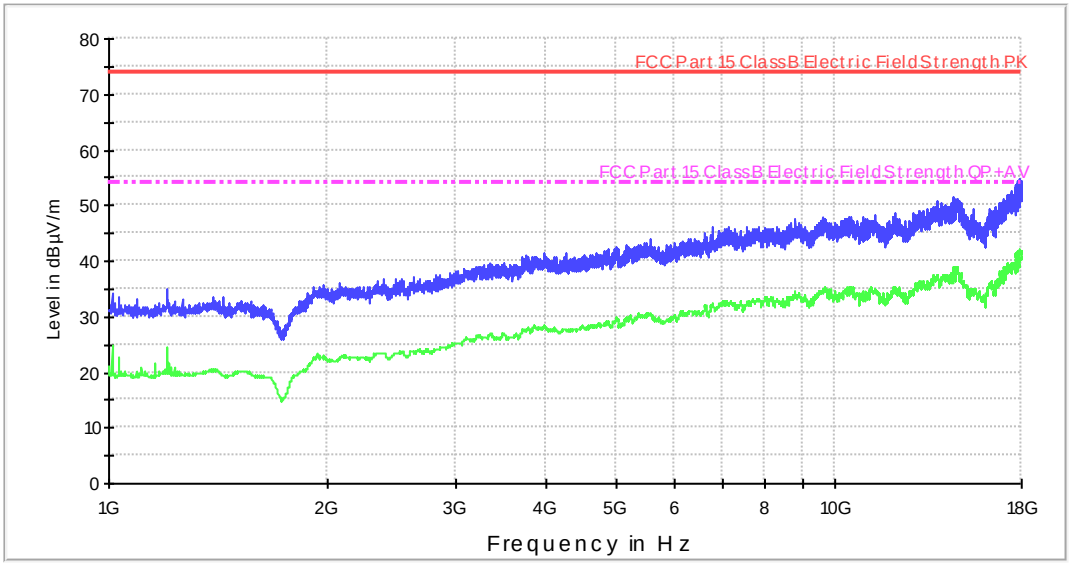
Maximizations

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)
39.865932	24.6	20.7	105.0	V	102.0
100.851904	26.5	23.9	185.0	H	184.0
111.170140	18.0	13.8	183.0	H	349.0
160.288778	30.3	27.8	98.0	V	219.0
199.357515	33.6	31.7	138.0	H	264.0
432.570741	25.0	20.2	191.0	V	60.0

Radiated Emission. CR0202HR1_PH

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/02
Operation mode:	OM#02
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. External Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). Horizontal polarization.

FCC 1-18GHz class B



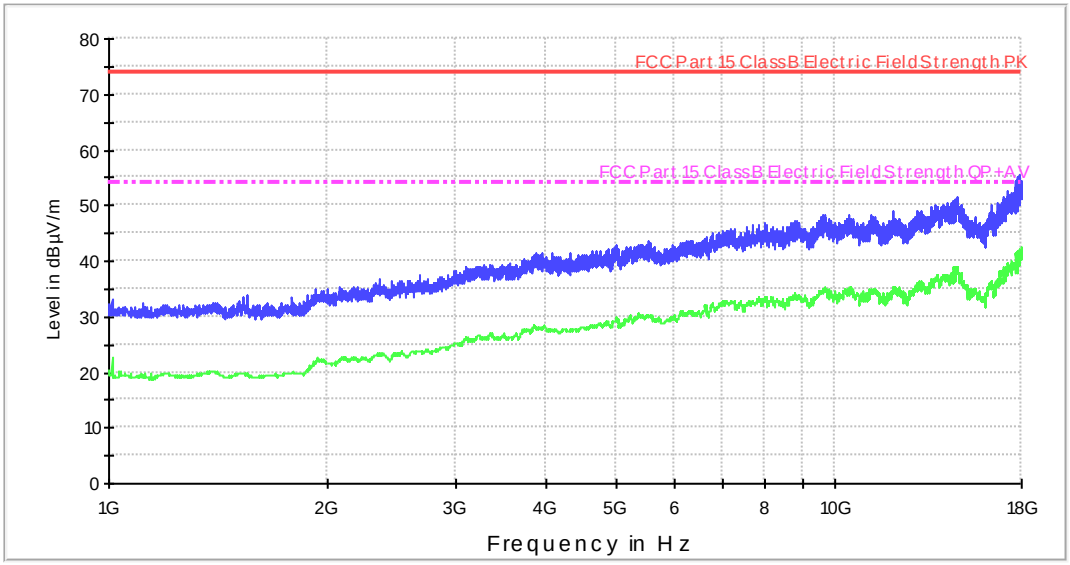
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
1200.000000	34.9	24.4
1433.000000	33.4	19.5
2344.000000	36.4	23.4
3151.000000	38.6	25.9
3977.000000	41.3	28.3
5557.000000	43.8	30.4
6777.000000	46.1	32.2
9567.000000	47.9	34.5
13335.000000	49.3	36.4
17889.000000	54.8	42.1

Radiated Emission. CR0202HR1_PV

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/02
Operation mode:	OM#02
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. External Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). Vertical polarization.

FCC 1-18GHz class B



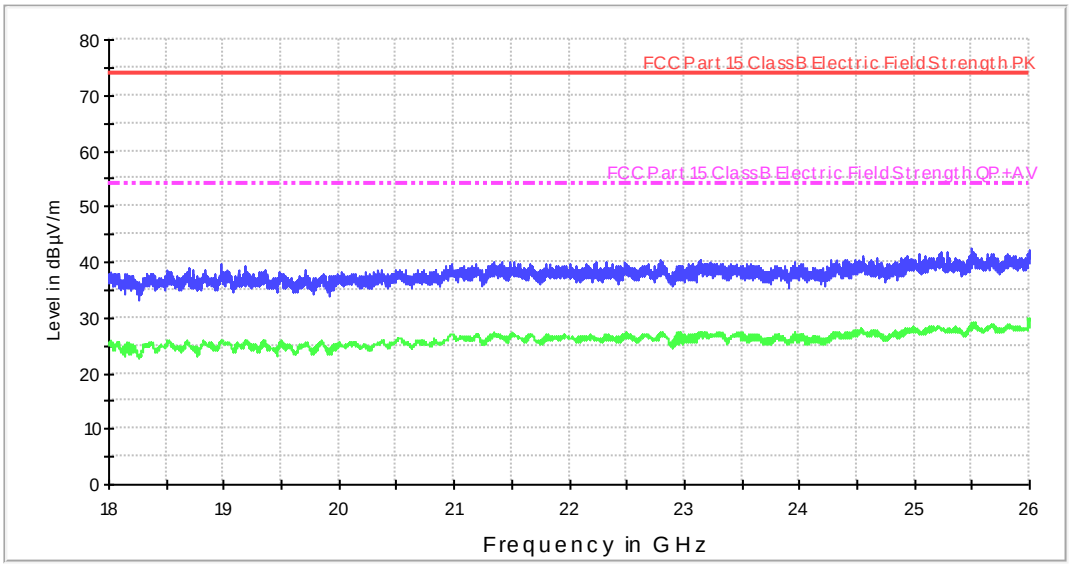
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
1010.000000	33.2	22.6
1554.000000	33.9	19.4
2353.000000	36.7	23.1
3097.000000	39.1	26.0
3939.000000	41.5	27.8
5509.000000	43.5	30.4
7558.000000	46.1	32.6
9659.000000	48.2	35.1
12900.000000	49.1	35.9
17896.000000	55.4	42.2

Radiated Emission. CR0202HR2_PH

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/02
Operation mode:	OM#02
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. External Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). Horizontal Polarization.

FCC 18-26GHz class B



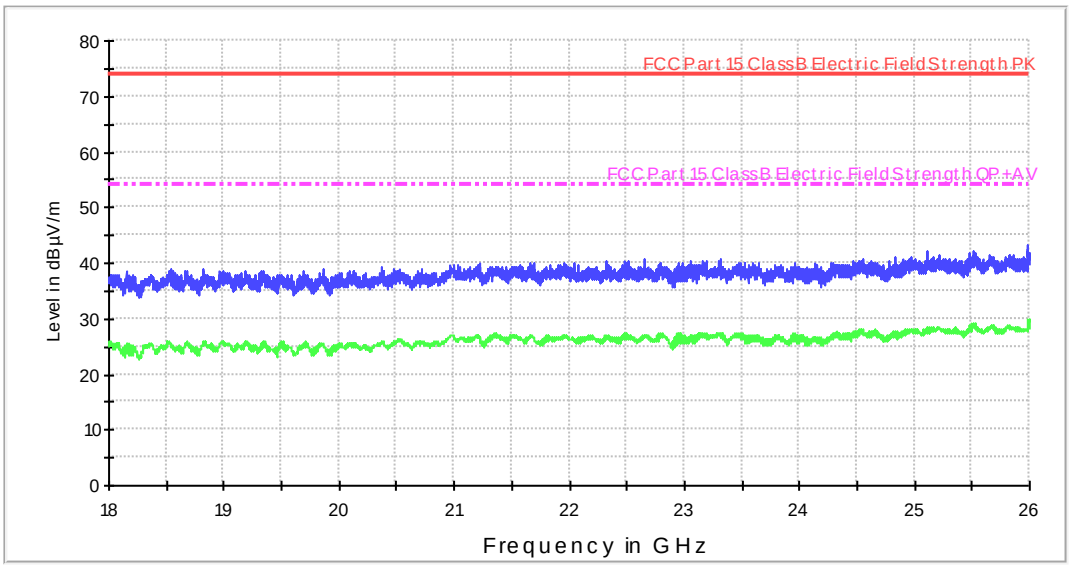
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
18514.000000	38.7	25.6
18979.000000	39.6	25.8
19708.000000	38.4	25.6
20586.000000	38.7	25.6
21411.000000	40.0	26.7
22319.000000	39.9	27.0
23148.000000	40.4	27.4
23967.000000	40.2	27.2
25034.000000	41.5	27.7
25503.000000	42.4	29.0

Radiated Emission. CR0202HR2_PV

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/02
Operation mode:	OM#02
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. External Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). Vertical polarization.

FCC 18-26GHz class B



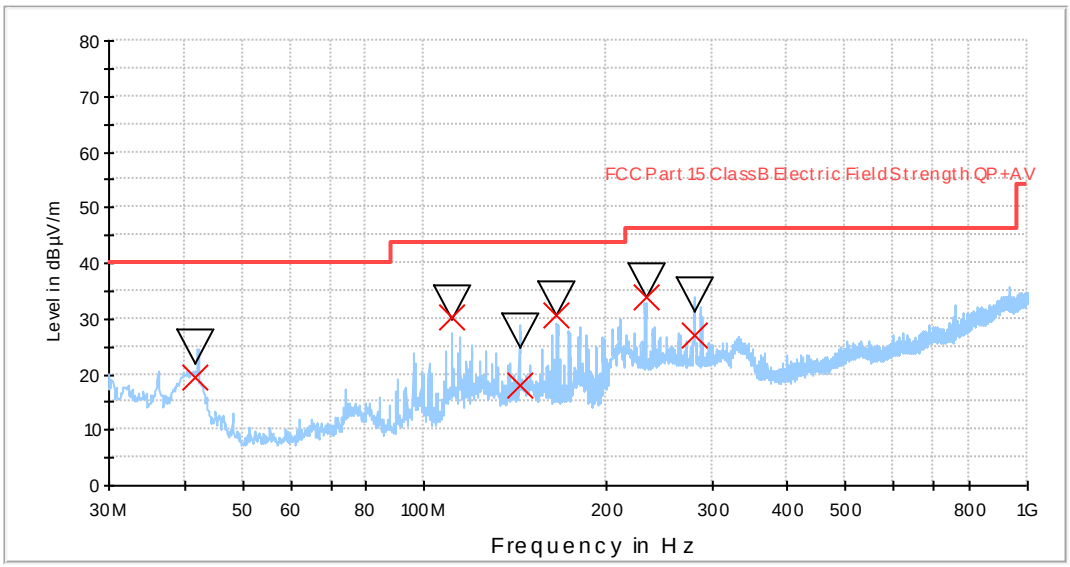
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
18536.000000	38.8	25.6
18825.000000	38.8	25.7
19870.000000	39.0	25.1
20367.000000	39.3	25.9
21216.000000	40.1	26.5
22316.000000	40.5	27.1
22650.000000	40.7	27.0
23309.000000	40.8	27.5
24829.000000	41.2	27.5
25984.000000	43.3	29.9

Radiated Emission. CR0303LR

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/03
Operation mode:	OM#03
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. Internal Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port.

FCC class B



FCC Part 15 ClassB Electric Field Strength QP+AV
Max Peak
Preview Result 1-PK+
QuasiPeak

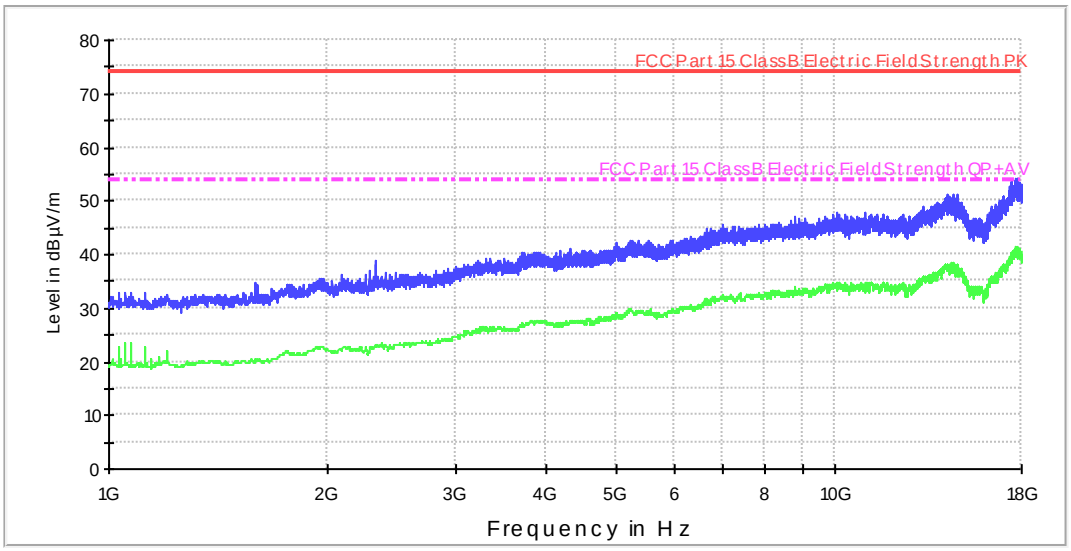
Maximizations

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)
41.814429	25.0	19.3	104.0	V	147.0
110.978958	32.9	30.4	243.0	H	233.0
143.911423	27.7	17.9	230.0	H	230.0
165.960922	33.4	30.6	132.0	H	44.0
233.186974	36.6	34.0	125.0	H	49.0
280.792385	34.1	27.0	183.0	V	14.0

Radiated Emission. CR0303HR1_PH

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/03
Operation mode:	OM#03
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. Internal Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port. Horizontal polarization.

FCC 1-18GHz class B



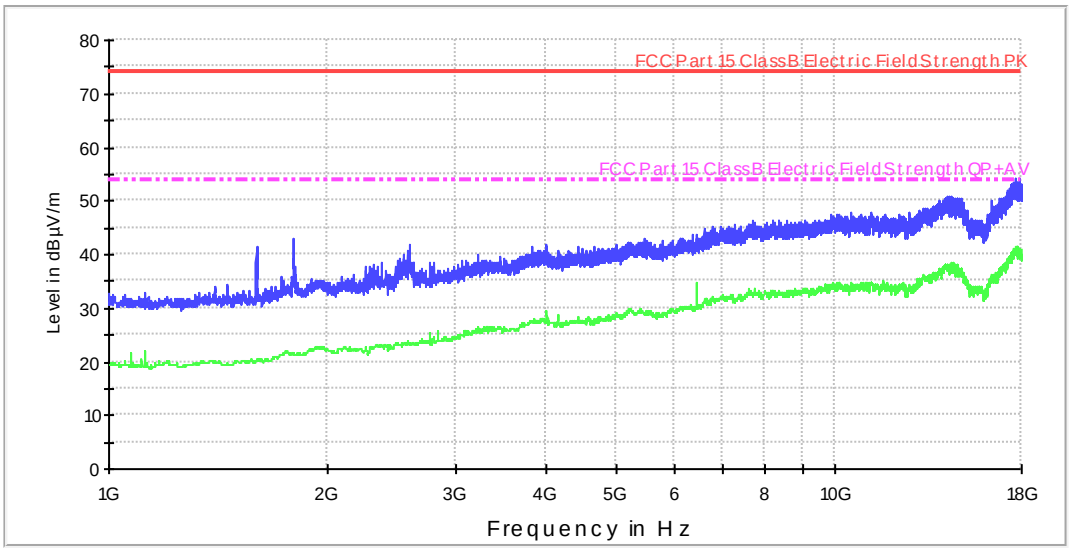
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
1593.000000	34.7	20.3
2324.000000	38.9	23.0
4185.000000	40.9	27.1
6739.000000	44.7	31.6
10994.000000	47.8	34.1
17725.000000	54.2	41.2

Radiated Emission. CR0303HR1_PV

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/03
Operation mode:	OM#03
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. Internal Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port. Vertical polarization.

FCC 1-18GHz class B



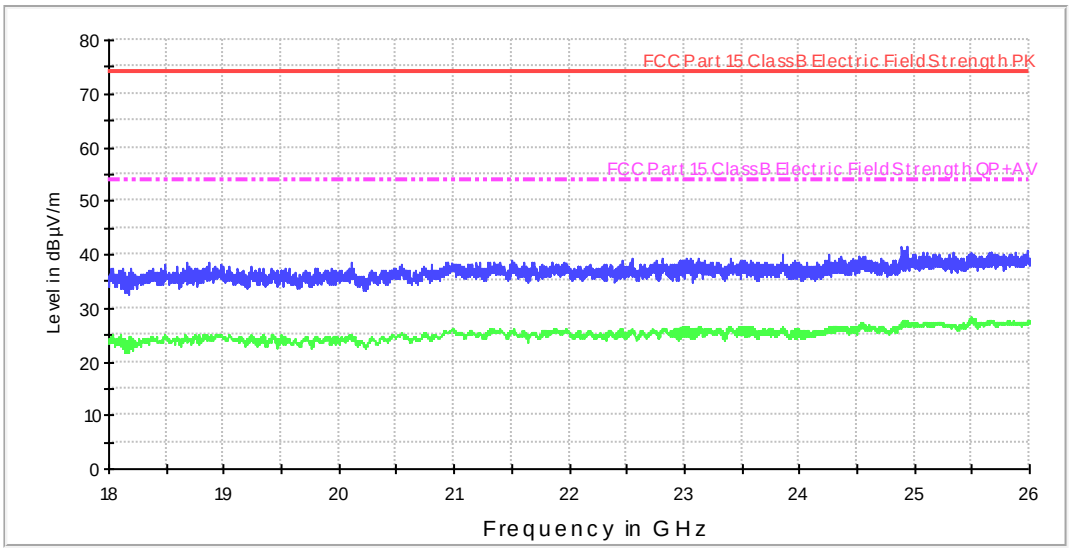
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
1599.000000	41.4	20.2
1795.000000	42.8	21.7
4001.000000	42.0	29.5
6769.000000	45.2	32.2
10487.000000	47.8	33.9
17642.000000	54.2	40.5

Radiated Emission. CR0303HR2_PH

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/03
Operation mode:	OM#03
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. Internal Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port. Horizontal polarization.

FCC 18-26GHz class B



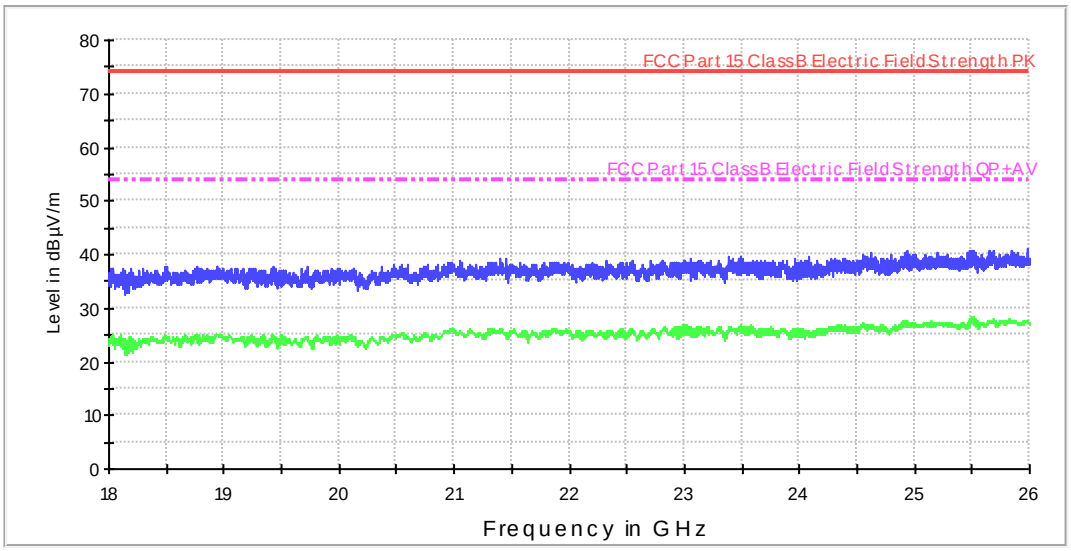
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
18678.000000	38.6	24.8
20102.000000	38.3	24.9
21509.000000	38.7	25.8
22808.000000	39.4	26.1
24254.000000	40.0	26.2
24936.000000	41.5	27.2

Radiated Emission. CR0303HR2_PV

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/03
Operation mode:	OM#03
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. Internal Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port. Vertical polarization.

FCC 18-26GHz class B



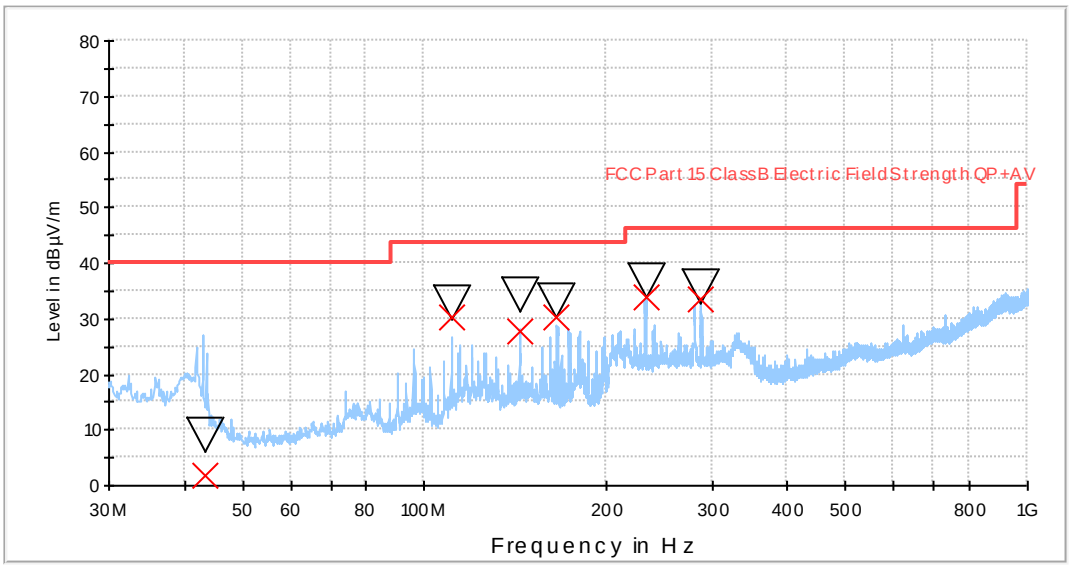
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
18935.000000	37.7	25.1
19428.000000	37.8	24.7
21400.000000	39.2	26.1
22328.000000	39.1	25.6
24090.000000	39.7	25.6
25988.000000	41.1	27.4

Radiated Emission. CR0404LR

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/04
Operation mode:	OM#04
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. External Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port.

FCC class B



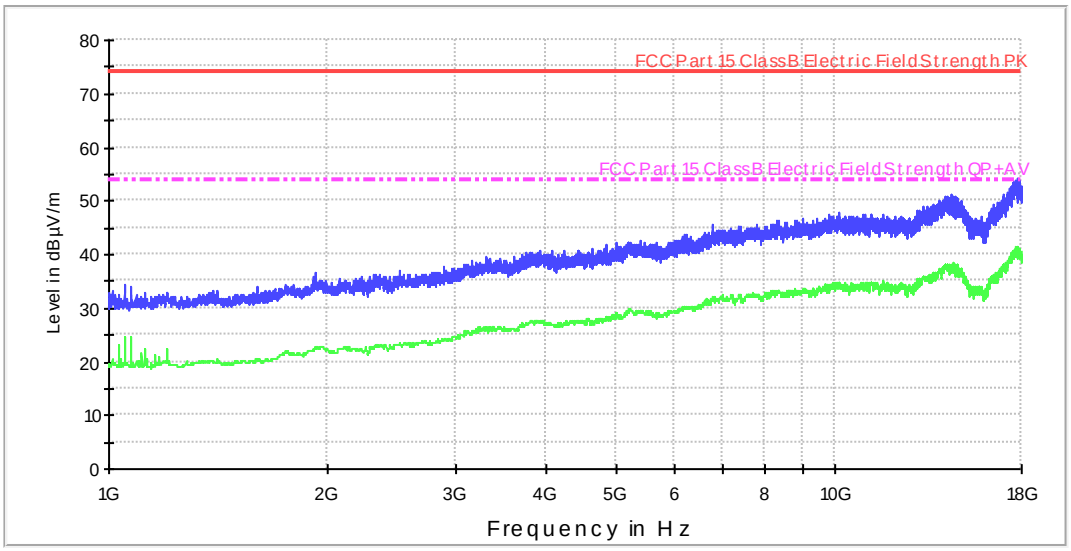
Maximizations

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)
43.267535	8.9	1.9	349.0	H	234.0
110.978958	32.7	30.3	246.0	H	253.0
144.064930	34.3	27.8	183.0	H	36.0
165.946894	33.3	30.4	129.0	H	50.0
233.192986	36.7	34.0	128.0	H	58.0
288.043086	35.6	33.4	98.0	H	1.0

Radiated Emission. CR0404HR1_PH

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/04
Operation mode:	OM#04
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. External Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port. Horizontal Polarization.

FCC 1-18GHz class B



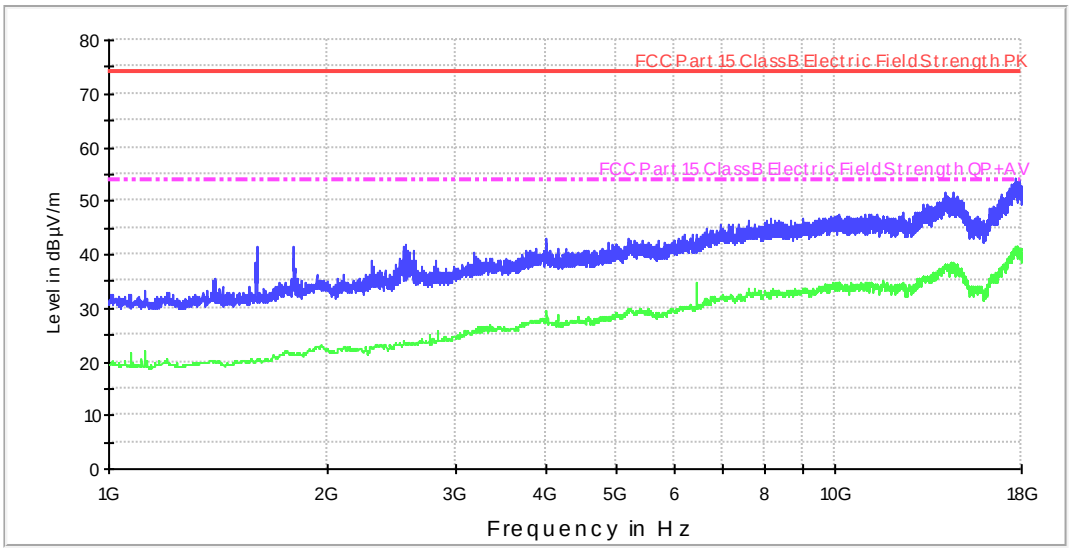
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
1050.000000	34.3	24.6
2516.000000	37.2	23.3
3912.000000	40.7	27.3
6747.000000	45.5	31.5
10112.000000	48.0	34.6
17724.000000	54.0	41.2

Radiated Emission. CR0404HR1_PV

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/04
Operation mode:	OM#04
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. External Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port. Vertical polarization.

FCC 1-18GHz class B



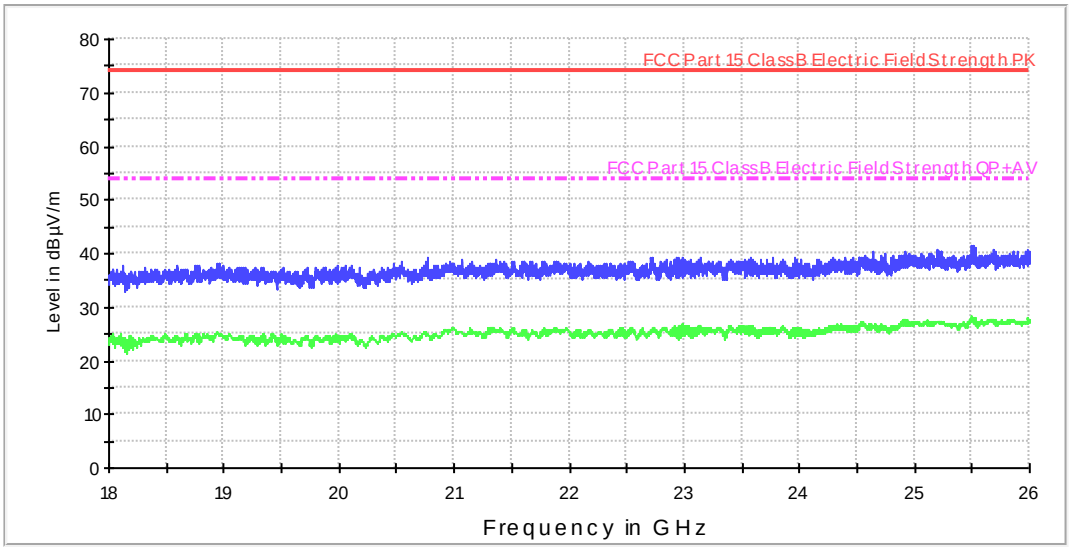
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
1597.000000	41.7	20.2
2562.000000	41.9	23.2
3990.000000	42.9	27.7
6620.000000	44.8	31.7
10077.000000	47.5	34.4
17679.000000	54.3	41.1

Radiated Emission. CR0404HR2_PH

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/04
Operation mode:	OM#04
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. External Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port. Horizontal polarization.

FCC 18-26GHz class B



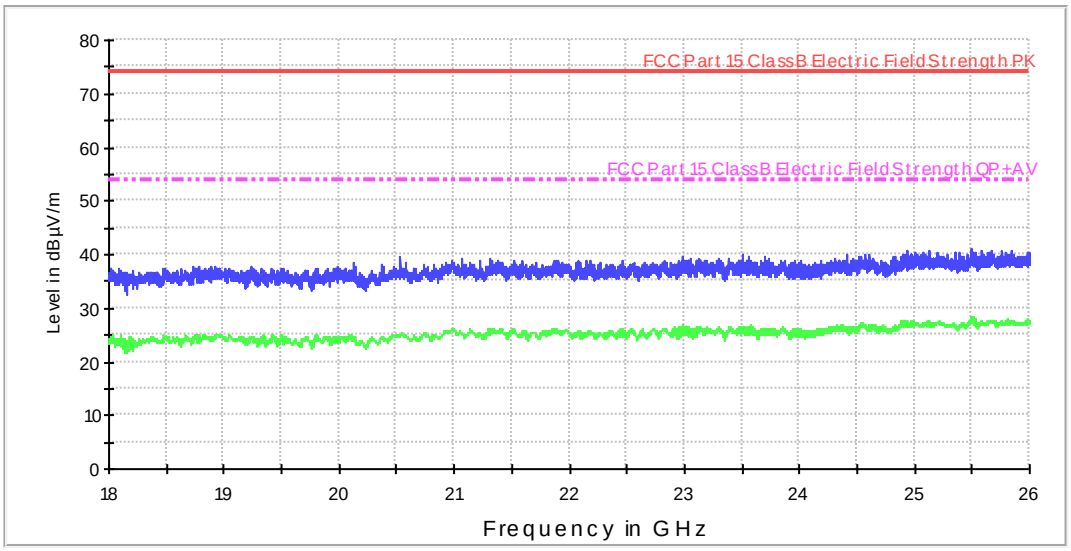
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
18952.000000	38.1	24.8
20053.000000	37.8	24.5
20765.000000	39.2	25.0
22714.000000	39.4	25.8
23144.000000	39.3	26.1
25501.000000	41.5	28.2

Radiated Emission. CR0404HR2_PV

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/04
Operation mode:	OM#04
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. External Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port. Vertical polarization.

FCC 18-26GHz class B



Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
18732.000000	37.7	24.6
20124.000000	38.6	24.8
20535.000000	39.7	25.2
22988.000000	39.6	26.8
23511.000000	40.1	26.2
25498.000000	40.9	28.0

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

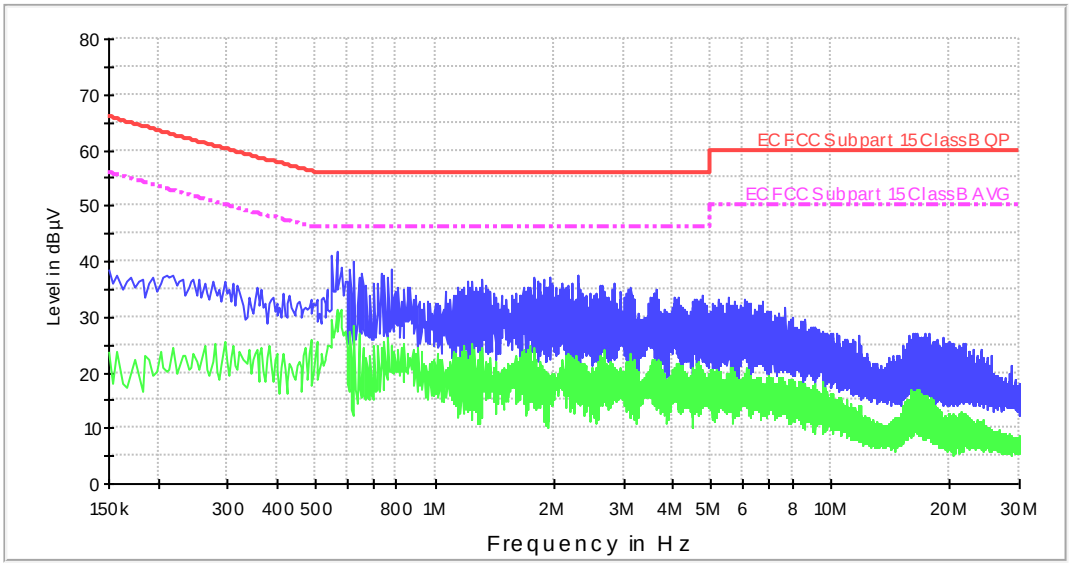
TESTED SAMPLES:	S/01; S/02; S/03 & S/04
TESTED OPERATION MODES:	OM#05 to OM#12
TEST RESULTS:	CCmmnnhh: CC, Conducted Condition; mm: Sample number; nn: Operation mode; hh: wire

CCmmnnhh	**Description**	**Result**
CC01010N	Neutral wire noise.	P
CC0101L1	Phase wire noise.	P
CC02020N	Neutral wire noise.	P
CC0202L1	Phase wire noise.	P
CC01050N	Neutral wire noise.	P
CC0105L1	Phase wire noise.	P
CC02060N	Neutral wire noise.	P
CC0206L1	Phase wire noise.	P
CC01090N	Neutral wire noise.	P
CC0109L1	Phase wire noise.	P
CC02100N	Neutral wire noise.	P
CC0210L1	Phase wire noise.	P
CC03030N	Neutral wire noise.	P
CC0303L1	Phase wire noise.	P
CC04040N	Neutral wire noise.	P
CC0404L1	Phase wire noise.	P
CC03070N	Neutral wire noise.	P
CC0307L1	Phase wire noise.	P
CC04080N	Neutral wire noise.	P
CC0408L1	Phase wire noise.	P
CC03110N	Neutral wire noise.	P
CC0311L1	Phase wire noise.	P
CC04120N	Neutral wire noise.	P
CC0412L1	Phase wire noise.	P

Conducted Emission. CC01010N

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/01
Operation mode:	OM#01
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. Internal Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). Neutral wire noise.

EMI EC FCC Subpart 15 Class B CC



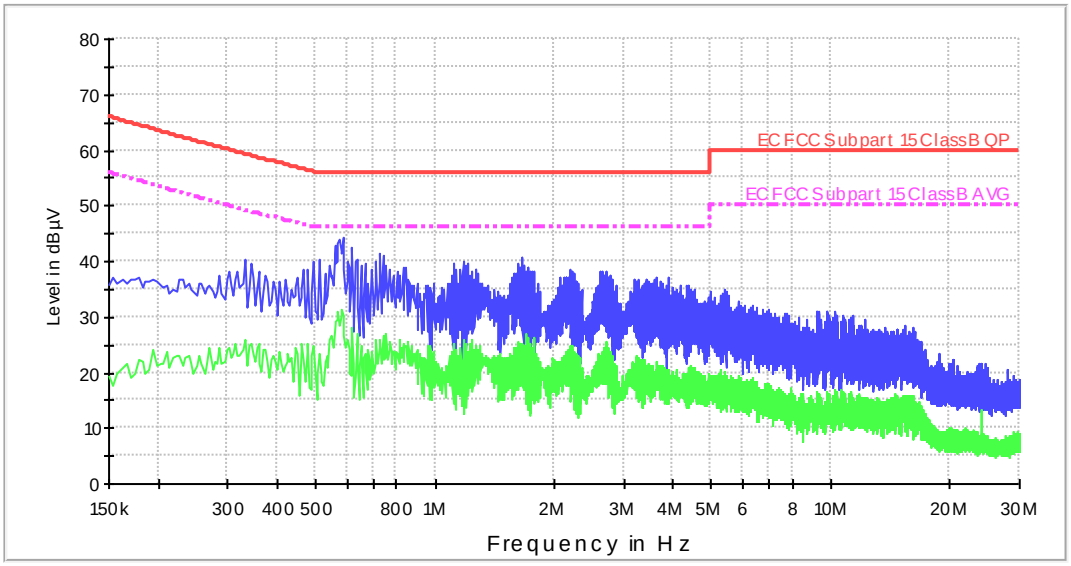
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.150000	38.4	23.7
0.294000	36.5	25.6
0.566000	41.8	31.2
0.778000	38.5	24.8
1.954000	37.1	18.7
2.294000	37.3	21.8
3.622000	35.0	21.7
6.130000	33.0	19.4
16.130000	27.1	16.5
17.730000	27.0	14.1

Conducted Emission. CC0101L1

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/01
Operation mode:	OM#01
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. Internal Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). L1 wire noise.

EMI EC FCC Subpart 15 Class B CC



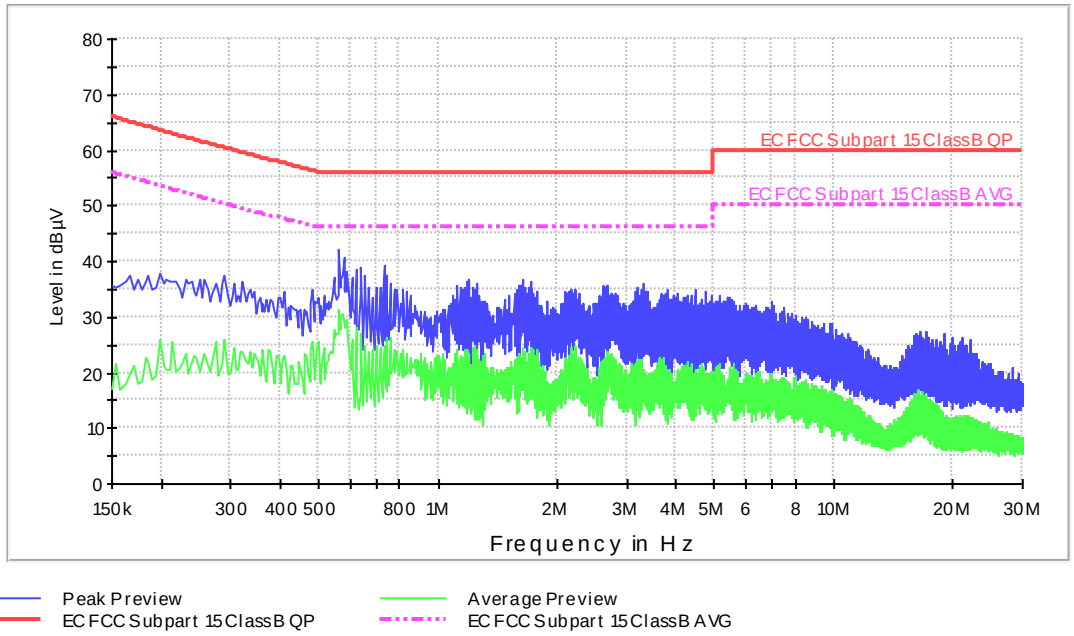
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.178000	37.1	22.3
0.330000	40.3	25.8
0.586000	44.4	30.1
0.738000	41.2	26.8
1.662000	40.5	25.3
2.186000	38.7	24.8
3.626000	37.0	22.0
6.330000	32.0	17.7
11.346000	30.3	14.5
18.770000	23.3	8.7

Conducted Emission. CC02020N

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/02
Operation mode:	OM#02
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. External Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). Neutral wire noise.

EMI EC FCC Subpart 15 Class B CC



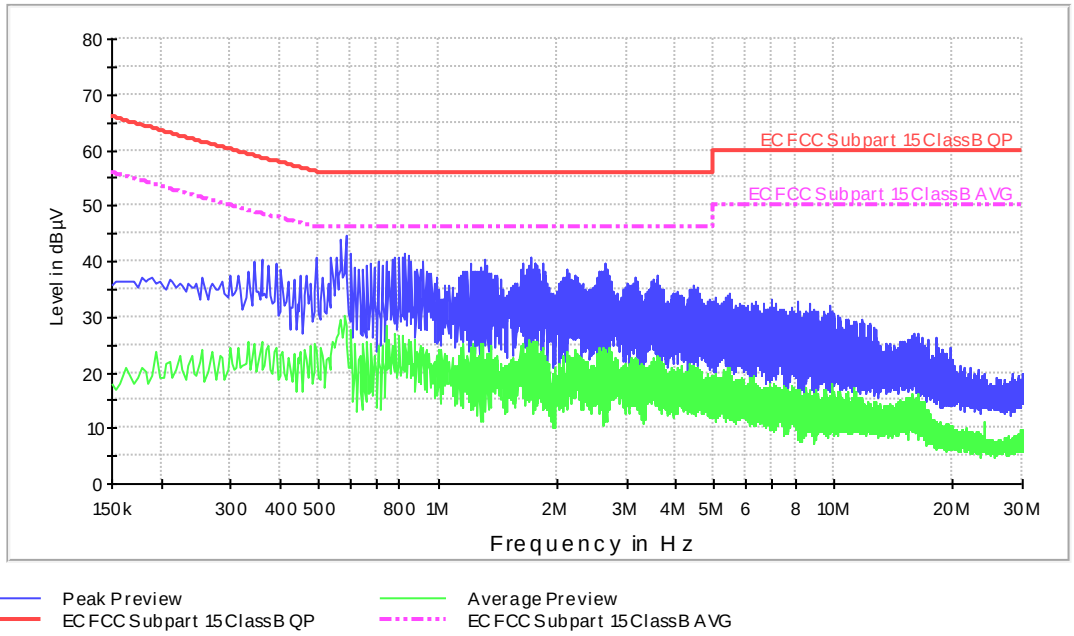
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.198000	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.001
Company:	BITTIUM WIRELESS OY
Sample:	S/02
Operation mode:	OM#02
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. External Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). L1 wire noise.

EMI EC FCC Subpart 15 Class B CC



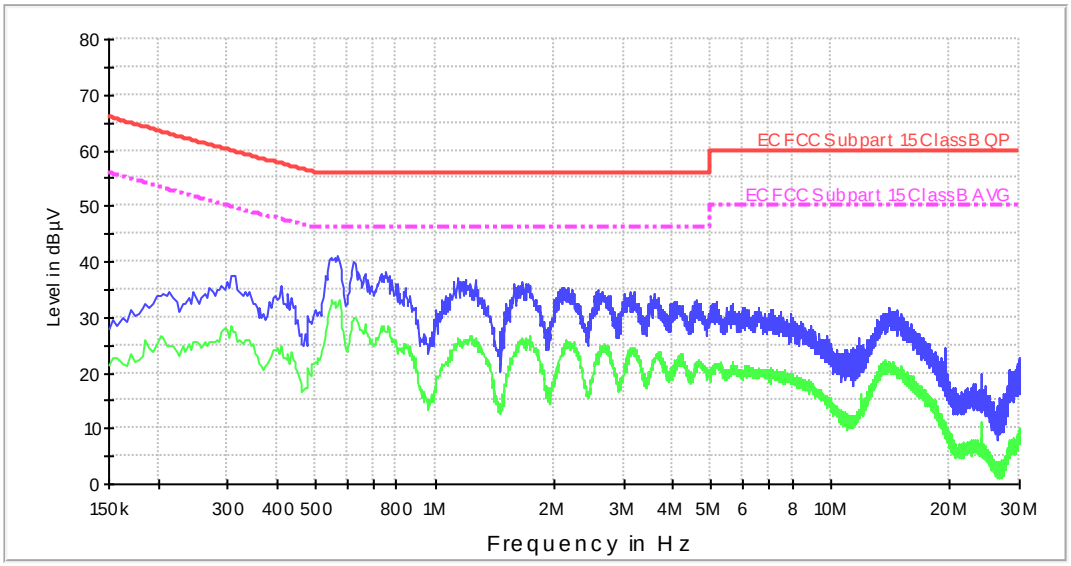
Subrange Maxima

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. CC01050N

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/01
Operation mode:	OM#05
Description:	EUT ON. Satellite IDLE. TCH GSM 900. WIFI ON. Bluetooth ON. Internal Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). Neutral wire noise.

EMI EC FCC Subpart 15 Class B CC



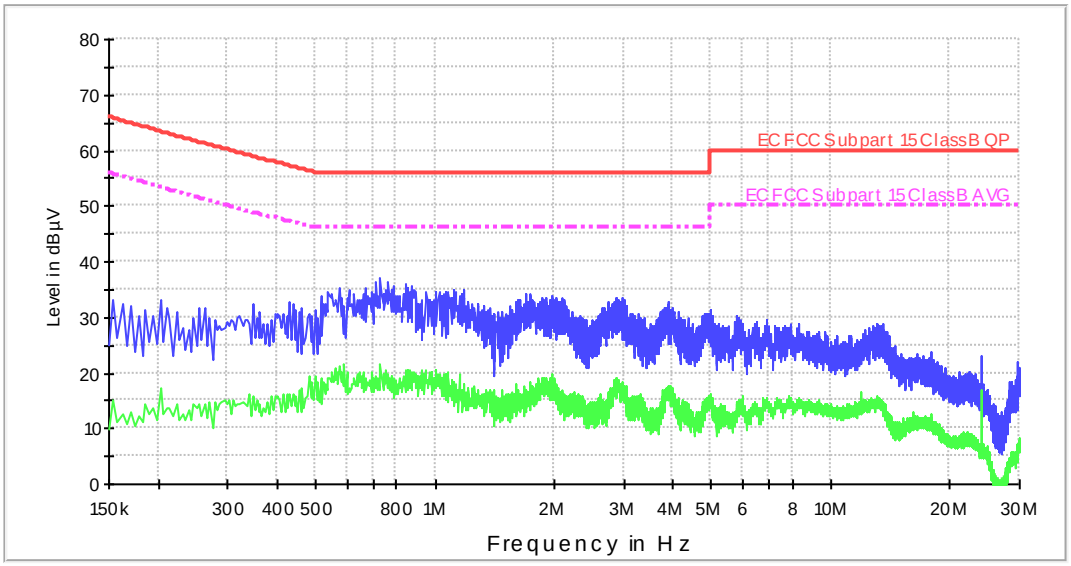
Subrange Maxima

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.001
Company:	BITTIUM WIRELESS OY
Sample:	S/01
Operation mode:	OM#05
Description:	EUT ON. Satellite IDLE. TCH GSM 900. WIFI ON. Bluetooth ON. Internal Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). L1 wire noise.

EMI EC FCC Subpart 15 Class B CC



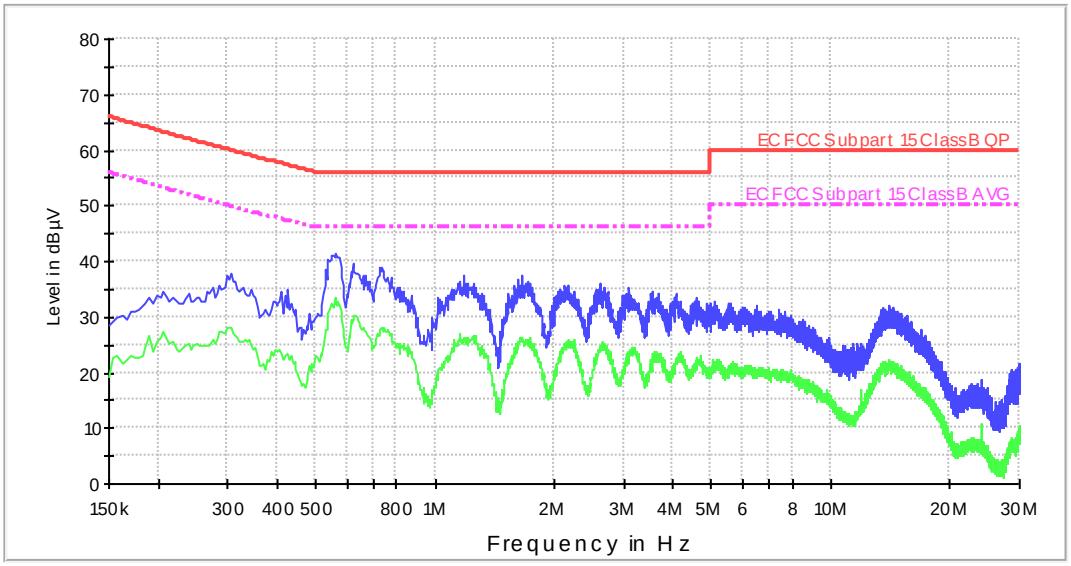
Subrange Maxima

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. CC02060N

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/02
Operation mode:	OM#06
Description:	EUT ON. Satellite IDLE. TCH GSM 900. WIFI ON. Bluetooth ON. External Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor).Neutral wire noise.

EMI EC FCC Subpart 15 Class B CC



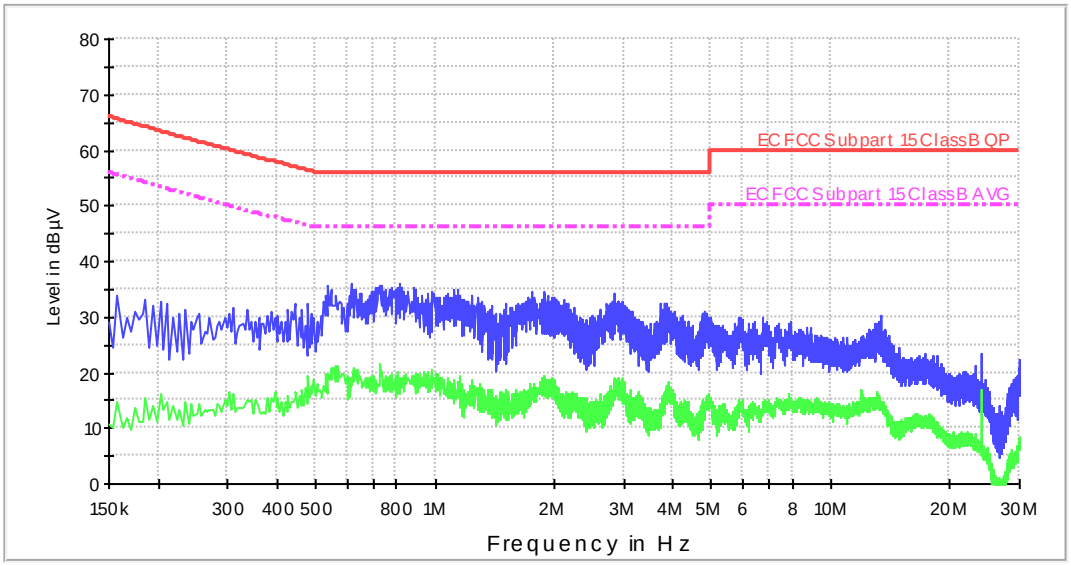
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.306000	38.0	28.2
0.562000	41.3	32.5
1.182000	37.6	26.0
2.618000	36.1	24.9
5.566000	32.6	21.5
14.106000	32.1	22.0

Conducted Emission. CC0206L1

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/02
Operation mode:	OM#06
Description:	EUT ON. Satellite IDLE. TCH GSM 900. WIFI ON. Bluetooth ON. External Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). L1 wire noise.

EMI EC FCC Subpart 15 Class B CC



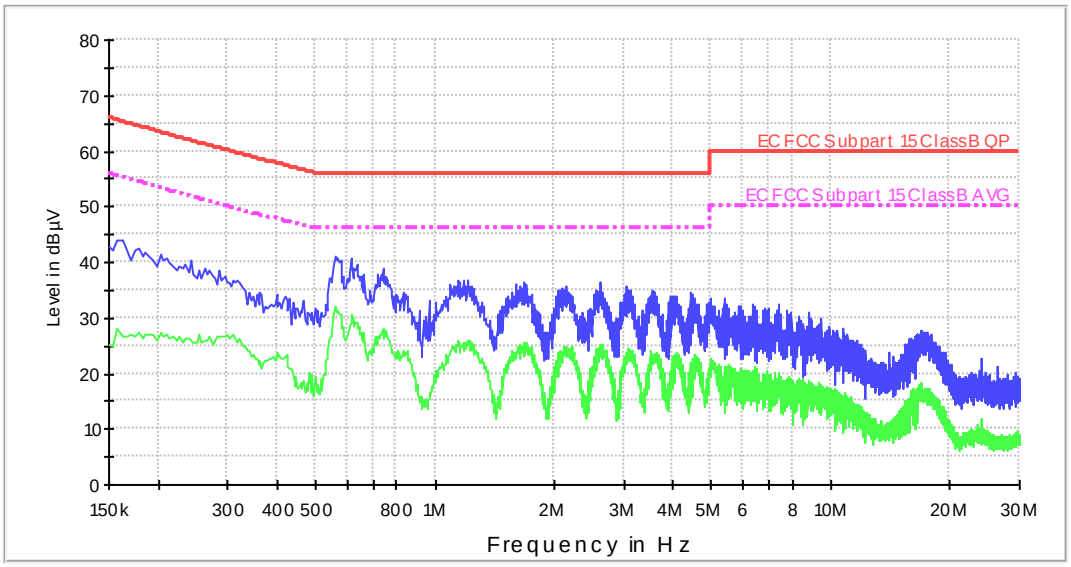
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.158000	33.9	14.7
0.614000	35.9	19.0
0.886000	35.2	19.6
2.830000	34.1	18.6
5.838000	30.1	14.6
13.362000	30.2	14.6

Conducted Emission. CC01090N

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/01
Operation mode:	OM#09
Description:	EUT ON. Satellite TCH. GSM IDLE. WIFI ON. Bluetooth ON. Internal Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). 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

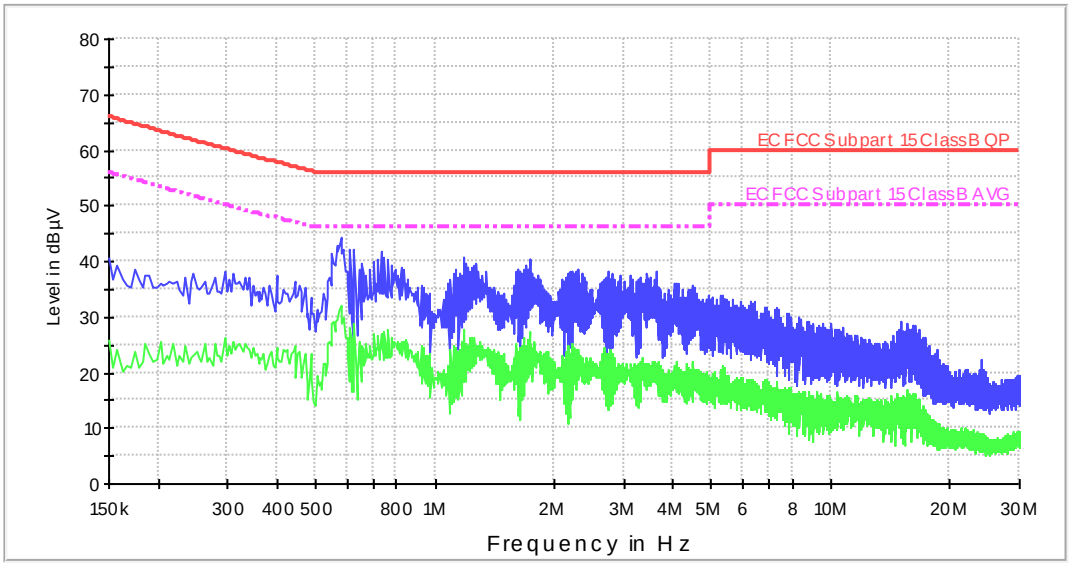
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.162000	44.0	26.8
0.262000	38.7	26.1
0.562000	41.2	31.5
0.738000	39.0	28.2
1.674000	36.2	25.5
2.610000	36.4	25.2
4.450000	34.7	22.0
6.342000	32.6	20.0
10.770000	28.0	14.4
17.922000	26.8	15.6

Conducted Emission. CC0109L1

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/01
Operation mode:	OM#09
Description:	EUT ON. Satellite TCH. GSM IDLE. WIFI ON. Bluetooth ON. Internal Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). L1 wire noise.

EMI EC FCC Subpart 15 Class B CC



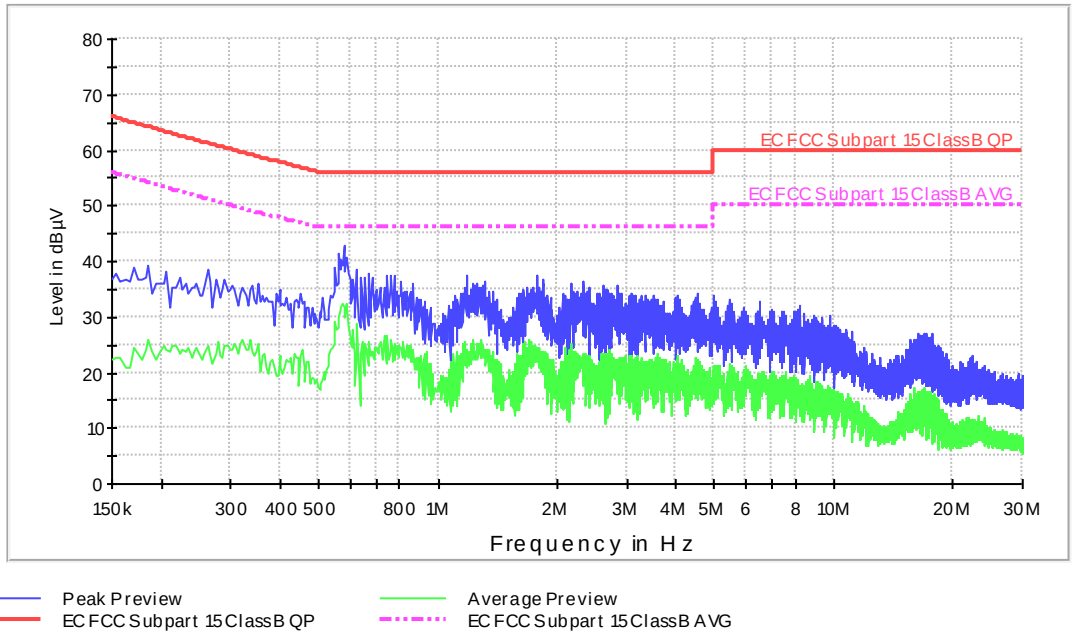
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.150000	40.8	26.0
0.294000	38.2	26.2
0.578000	44.3	31.9
1.186000	40.7	27.7
1.730000	40.3	27.4
2.294000	38.6	23.5
3.634000	38.0	21.7
6.294000	32.6	17.5
15.150000	29.4	15.4
17.698000	24.9	12.1

Conducted Emission. CC02100N

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/02
Operation mode:	OM#10
Description:	EUT ON. Satellite TCH. GSM IDLE. WIFI ON. Bluetooth ON. External Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor).. Neutral wire noise.

EMI EC FCC Subpart 15 Class B CC



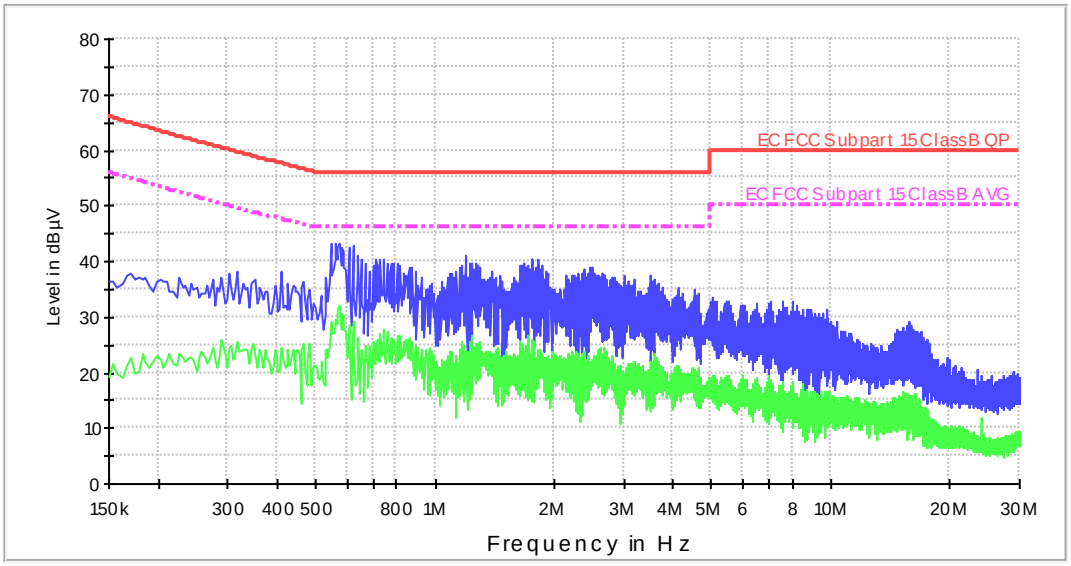
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.186000	39.1	26.1
0.262000	38.4	25.0
0.578000	42.8	31.6
1.182000	37.7	23.1
1.786000	37.5	24.1
2.338000	36.4	22.7
4.530000	34.1	22.4
6.482000	32.9	19.7
10.750000	27.7	15.1
17.710000	26.9	14.8

Conducted Emission. CC0210L1

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/02
Operation mode:	OM#10
Description:	EUT ON. Satellite TCH. GSM IDLE. WIFI ON. Bluetooth ON. External Antenna. Charging batteries. Power supply: 115Vac (AC/DC Adaptor). L1 wire noise.

EMI EC FCC Subpart 15 Class B CC



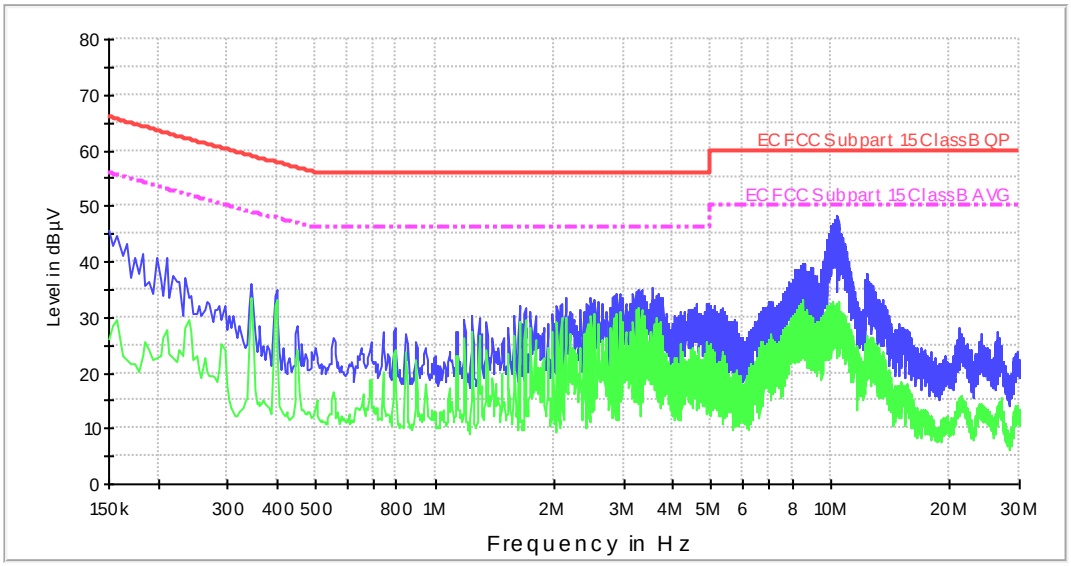
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.170000	37.7	22.9
0.410000	38.3	24.7
0.562000	43.3	29.6
1.194000	40.9	22.7
1.770000	40.5	26.0
2.498000	38.8	22.4
3.658000	36.1	21.3
7.598000	32.8	17.2
15.838000	29.2	16.0
17.890000	23.5	11.5

Conducted Emission. CC03030N

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/03
Operation mode:	OM#03
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. Internal Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port. Neutral wire noise.

EMI EC FCC Subpart 15 Class B CC



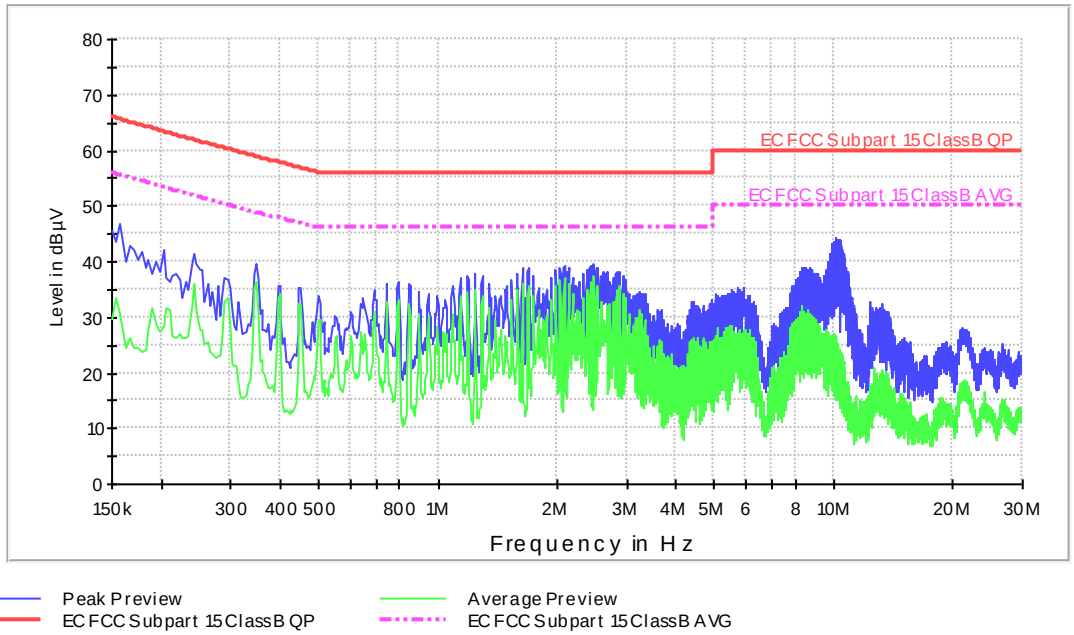
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.150000	45.7	26.0
0.342000	35.9	33.4
0.450000	28.5	24.2
1.242000	30.2	27.5
2.086000	32.4	30.0
3.538000	35.2	23.3
3.670000	34.3	28.8
10.326000	48.4	32.1
10.430000	48.3	30.9
21.158000	28.1	15.6

Conducted Emission. CC0303L1

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/03
Operation mode:	OM#03
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. Internal Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port. L1 wire noise.

EMI EC FCC Subpart 15 Class B CC



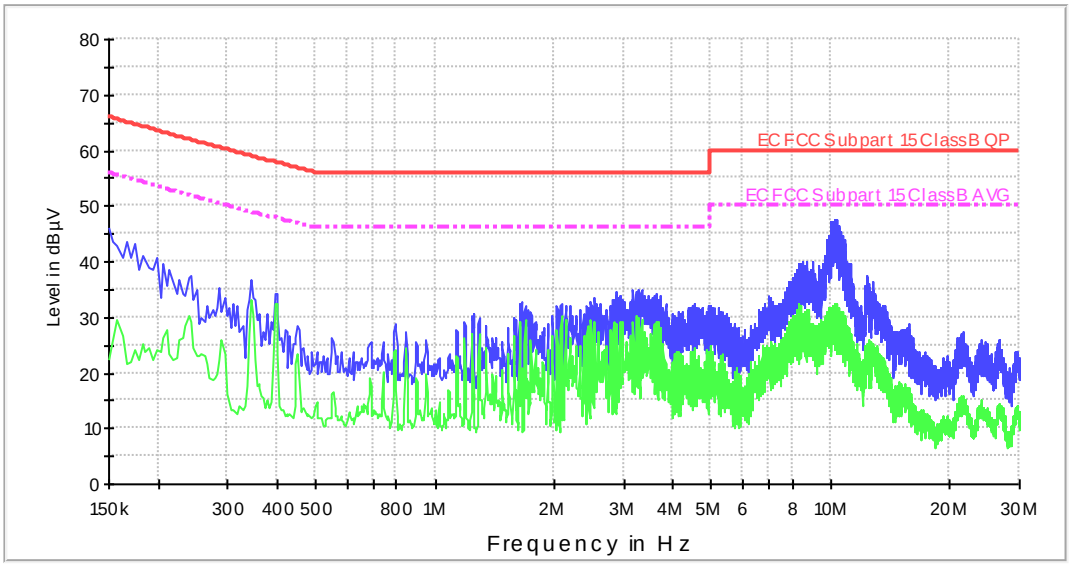
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.158000	46.9	30.7
0.346000	39.6	36.5
0.446000	35.5	32.5
1.242000	37.9	34.9
2.086000	39.3	37.0
2.482000	39.7	37.4
5.926000	35.5	22.8
10.118000	44.2	25.1
10.430000	43.8	23.7
21.178000	28.1	17.8

Conducted Emission. CC04040N

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/04
Operation mode:	OM#04
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. External Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port. Neutral wire noise.

EMI EC FCC Subpart 15 Class B CC



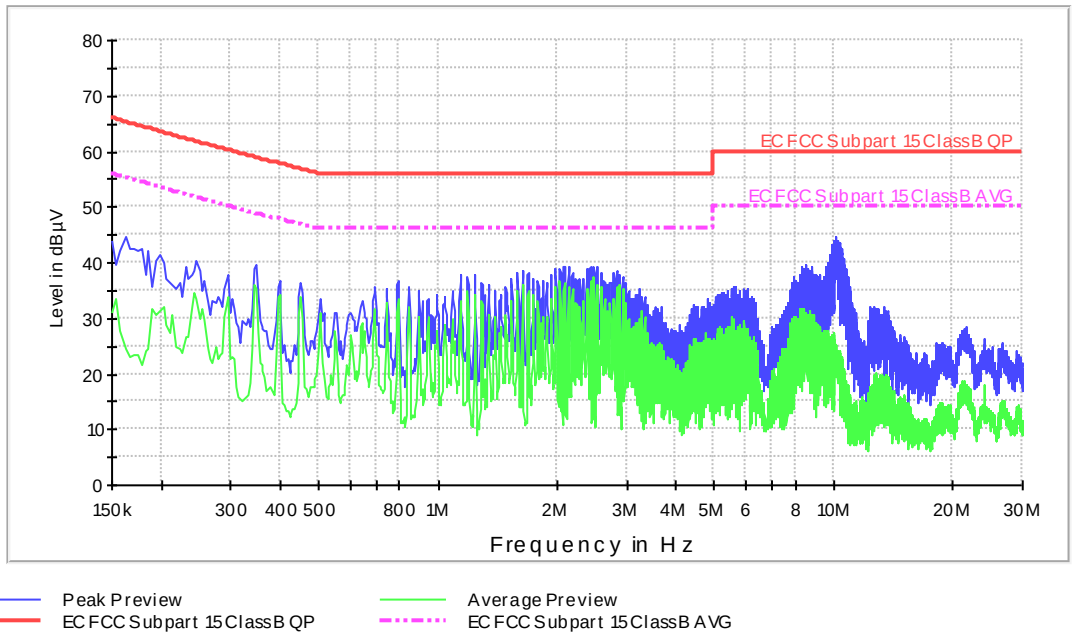
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.150000	46.3	22.2
0.342000	36.7	33.2
0.450000	28.4	23.6
1.246000	30.2	23.5
1.654000	32.8	21.0
3.278000	35.0	29.7
3.614000	34.1	26.2
10.266000	47.5	31.9
10.426000	47.5	31.6
21.694000	27.4	13.7

Conducted Emission. CC0404L1

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/04
Operation mode:	OM#04
Description:	EUT ON. Satellite IDLE. GSM 900 IDLE. WIFI OFF. Bluetooth OFF. External Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port. Neutral wire noise.

EMI EC FCC Subpart 15 Class B CC



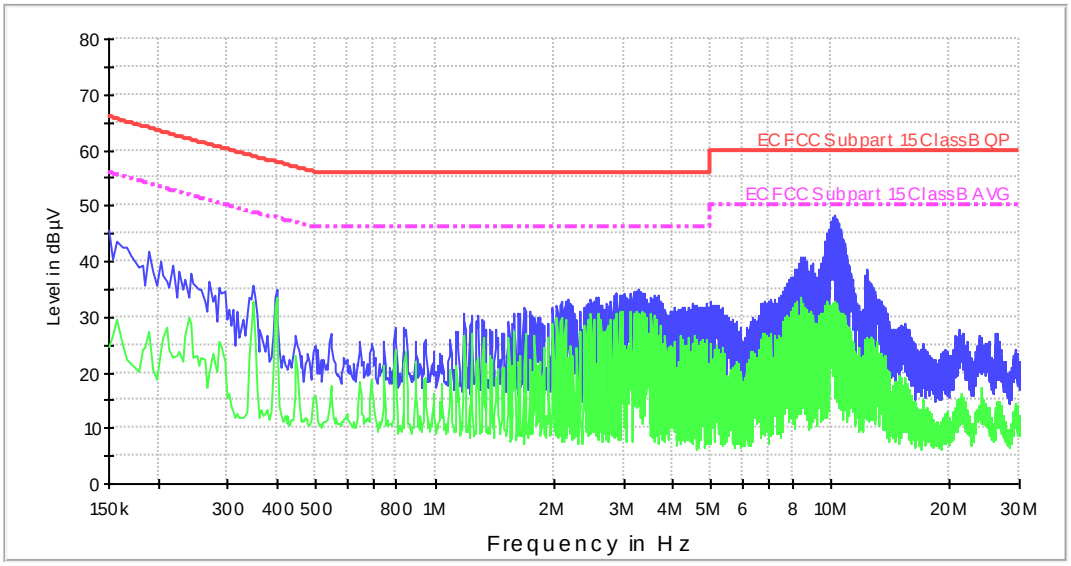
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.162000	44.7	24.5
0.346000	39.5	35.1
0.450000	36.4	33.8
1.142000	38.0	32.5
2.086000	39.2	36.5
2.482000	39.4	37.5
5.610000	35.7	29.0
10.146000	44.8	21.5
10.430000	43.0	22.7
21.558000	28.3	17.3

Conducted Emission. CC03070N

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/03
Operation mode:	OM#07
Description:	EUT ON. Satellite IDLE. TCH GSM 900. WIFI ON. Bluetooth ON. Internal Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port. Neutral wire noise.

EMI EC FCC Subpart 15 Class B CC



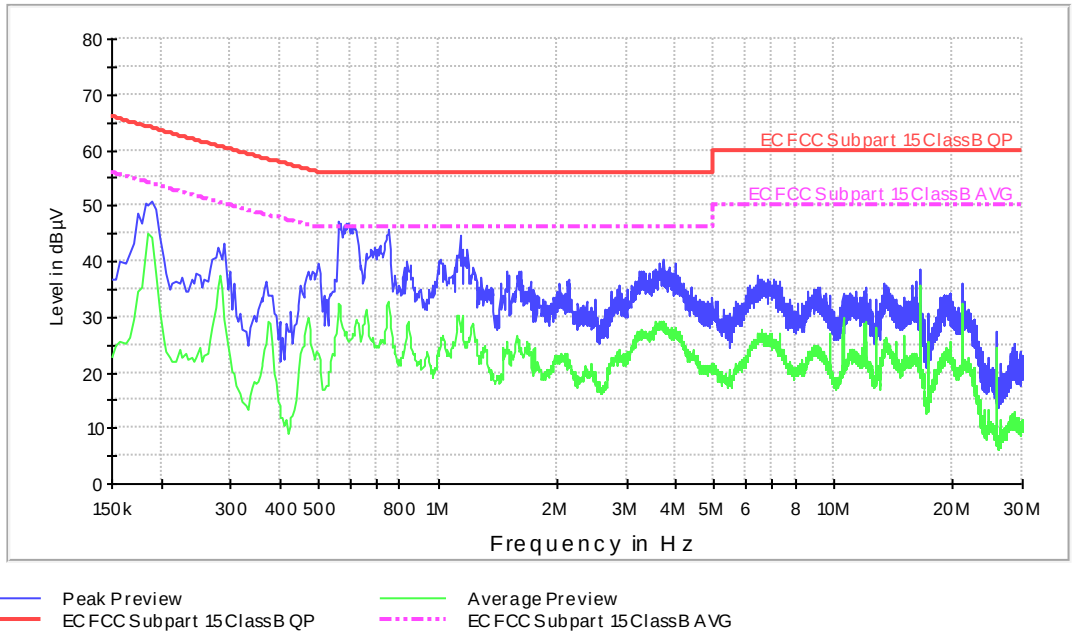
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.150000	45.6	24.3
0.270000	36.4	20.0
0.546000	27.1	17.6
1.182000	30.5	24.5
2.086000	32.9	30.0
3.278000	35.0	29.9
3.674000	33.8	26.7
10.274000	48.3	32.8
10.426000	47.6	31.1
21.154000	27.7	13.1

Conducted Emission. CC0307L1

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/03
Operation mode:	OM#07
Description:	EUT ON. Satellite IDLE. TCH GSM 900. WIFI ON. Bluetooth ON. Internal Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port. L1 wire noise.

EMI EC FCC Subpart 15 Class B CC



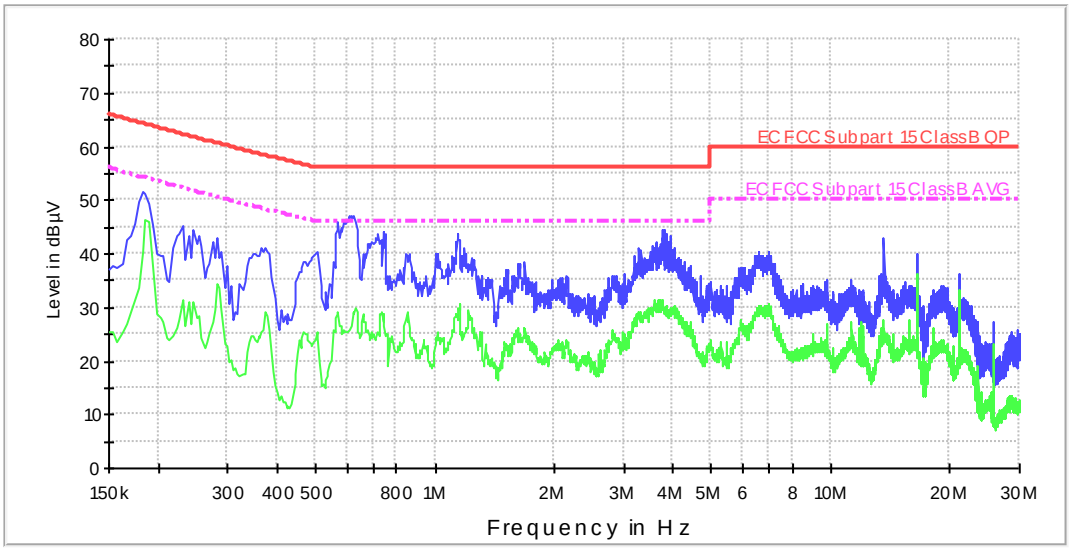
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.190000	50.7	44.5
0.562000	47.1	32.5
1.138000	44.8	28.2
3.734000	40.3	29.0
6.430000	37.6	27.2
16.462000	38.7	35.6

Conducted Emission. CC04080N

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/04
Operation mode:	OM#08
Description:	EUT ON. Satellite IDLE. TCH GSM 900. WIFI ON. Bluetooth ON. External Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port. Neutral wire noise.

EMI EC FCC Subpart 15 Class B CC



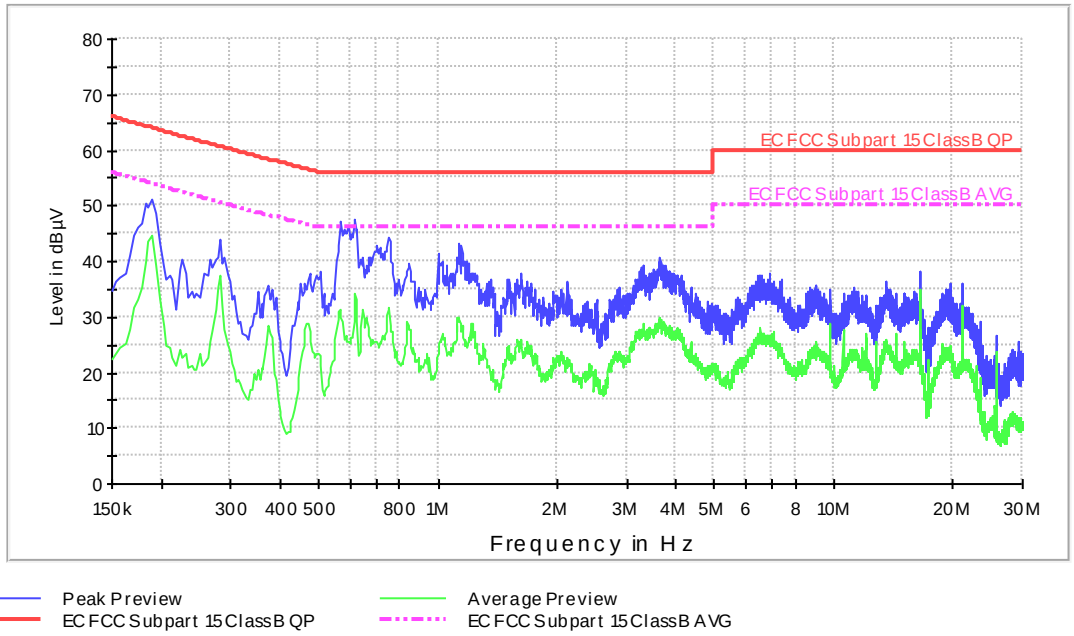
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.182000	51.7	40.5
0.626000	47.3	29.0
1.142000	43.7	27.5
3.814000	44.5	28.6
6.954000	40.4	30.7
13.646000	43.0	26.3

Conducted Emission. CC0408L1

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/04
Operation mode:	OM#08
Description:	EUT ON. Satellite IDLE. TCH GSM 900. WIFI ON. Bluetooth ON. External Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port. L1 wire noise.

EMI EC FCC Subpart 15 Class B CC



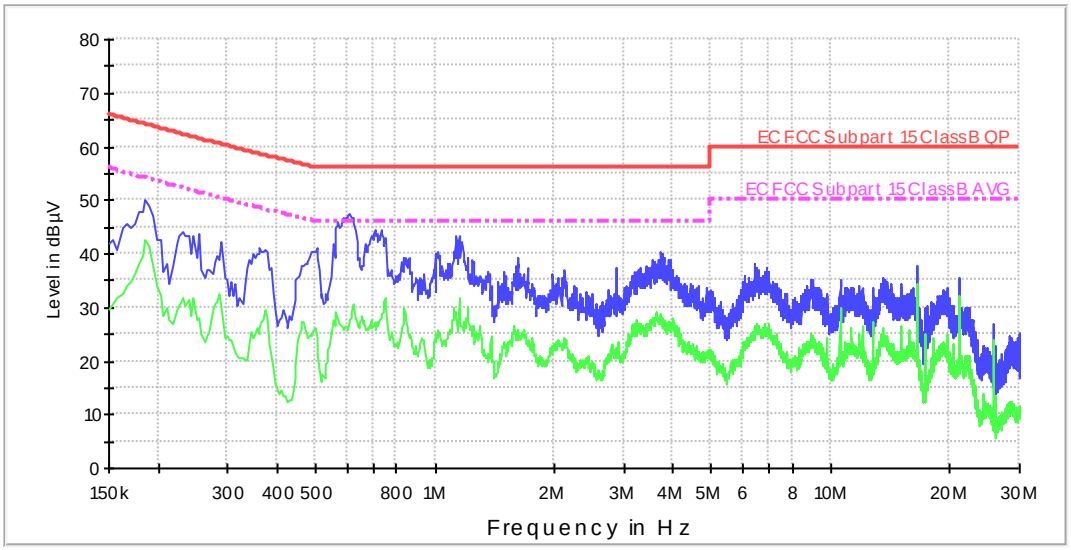
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.190000	51.2	44.8
0.618000	47.5	34.1
1.134000	43.1	29.6
3.646000	40.7	29.1
6.870000	37.8	26.1
16.462000	38.1	34.8

Conducted Emission. CC03110N

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/03
Operation mode:	OM#11
Description:	EUT ON. Satellite TCH. GSM IDLE. WIFI ON. Bluetooth ON. Internal Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port. Neutral wire noise.

EMI EC FCC Subpart 15 Class B CC



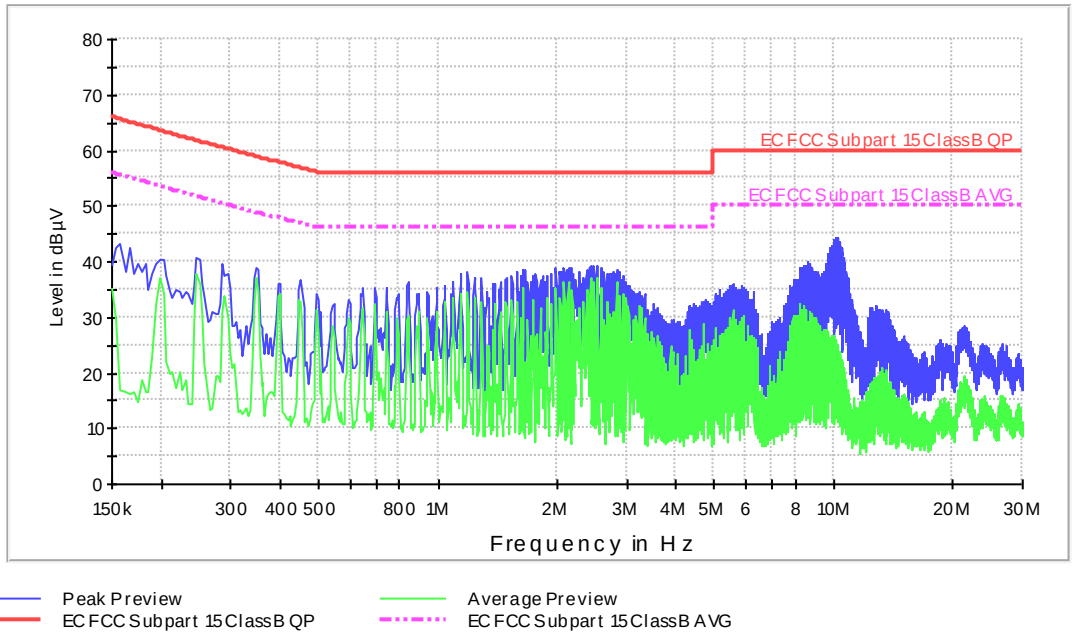
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.186000	50.3	42.5
0.606000	47.6	27.2
1.134000	43.5	28.1
3.734000	40.5	27.3
6.430000	38.1	26.0
16.462000	37.7	34.6

Conducted Emission. CC0311L1

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/03
Operation mode:	OM#11
Description:	EUT ON. Satellite TCH. GSM IDLE. WIFI ON. Bluetooth ON. Internal Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port. L1 wire noise.

EMI EC FCC Subpart 15 Class B CC



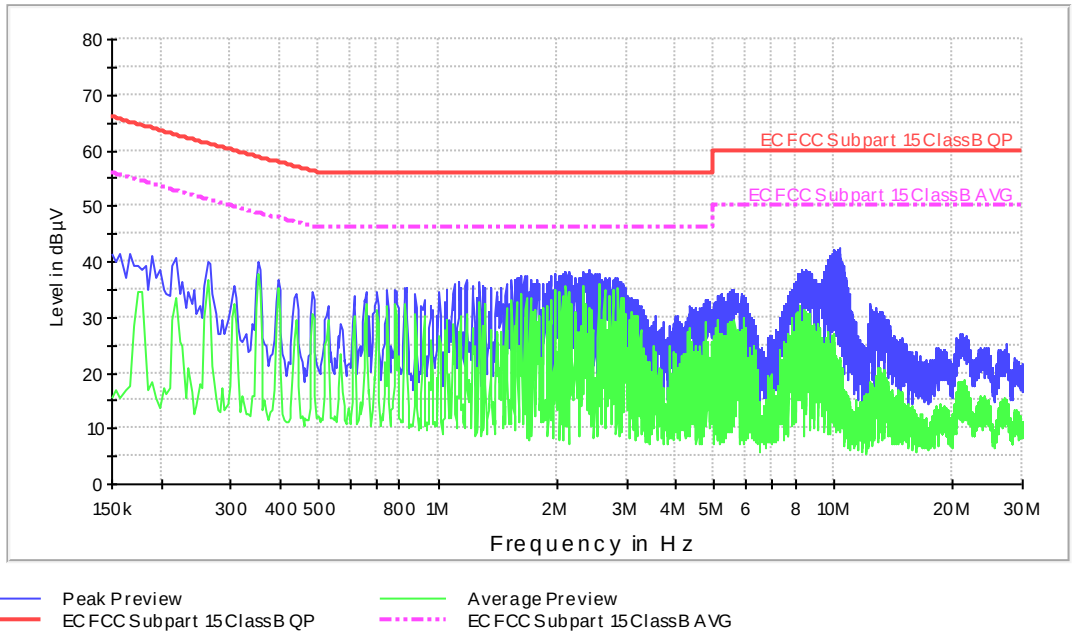
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.158000	43.1	17.0
0.286000	39.7	30.9
0.450000	36.8	32.7
1.190000	38.1	34.7
2.082000	38.9	36.6
2.482000	39.4	36.5
5.558000	36.1	31.2
10.166000	44.3	24.8
10.422000	42.8	23.2
21.354000	28.5	15.9

Conducted Emission. CC04120N

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/04
Operation mode:	OM#12
Description:	EUT ON. Satellite TCH. GSM IDLE. WIFI ON. Bluetooth ON. External Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port. USB port. Neutral wire noise.

EMI EC FCC Subpart 15 Class B CC



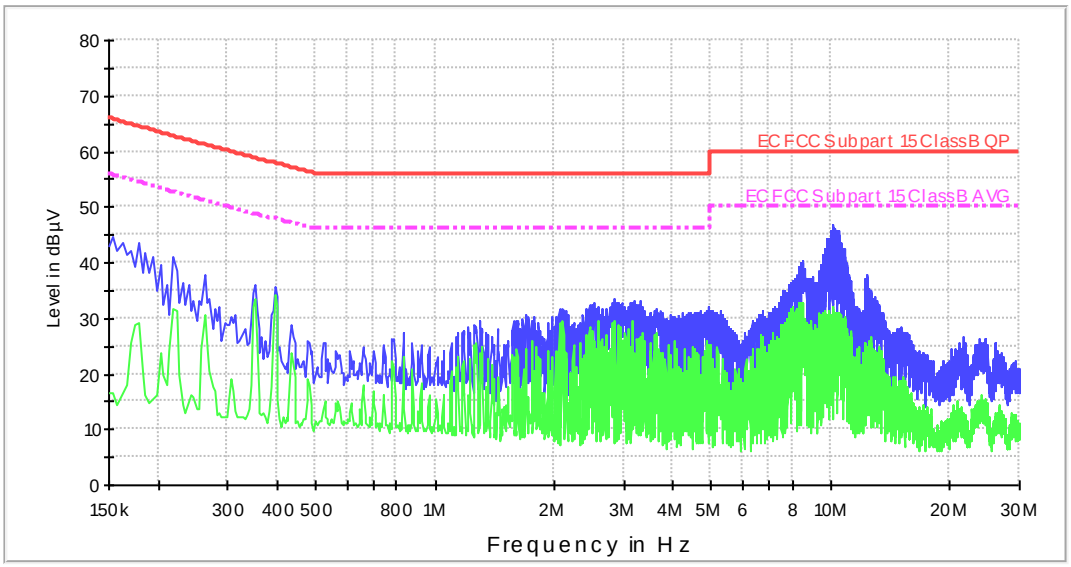
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.150000	41.4	15.6
0.350000	40.1	37.9
0.658000	34.7	32.3
1.178000	36.7	30.6
2.106000	38.2	35.8
2.414000	38.6	31.6
5.578000	35.0	28.2
10.314000	42.4	21.8
10.406000	40.8	19.7
21.170000	27.1	17.5

Conducted Emission. CC0412L1

Project:	51746REM.001
Company:	BITTIUM WIRELESS OY
Sample:	S/04
Operation mode:	OM#12
Description:	EUT ON. Satellite TCH. GSM IDLE. WIFI ON. Bluetooth ON. External Antenna. Charging batteries. Transferring data with the PC by USB. Power supply: USB Port. USB port. L1. wire noise.

EMI EC FCC Subpart 15 Class B CC



Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.154000	44.5	16.7
0.262000	37.9	30.6
0.434000	28.8	23.8
1.218000	28.6	16.1
2.062000	31.8	29.2
2.850000	33.6	29.5
4.918000	32.1	25.2
10.182000	46.7	30.0
10.454000	45.9	28.4
21.558000	26.5	12.5