AT4 wireless, S.A.
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www.at4wireless.com · C.I.F. A29 507 456

ENAC ENSAYOS Nº 51/LE147

Informe de ensayo nº:
Test report No:

NIE: 40260REM.002

Test report

Radio frequency devices Subpart B. Unintentional radiators ; ICESS-003 ISSUE 5 & American National standard for Testing Unlicensed Wireless Devices

Identificación del objeto ensayado.....: Identification of item tested	MICOACH FIT SMART
Marca .....: Trade	adidas
Modelo y/o referencia tipo .....: Model and /or type reference	IOL90
Other identification of the product .....:	S/N: D10914170000330; FCC ID: ZLGFS
Final HW version .....:	B2.0
Final SW version .....:	0.10.2
Características .....: Features	Bluetooth Low Energy
Peticionario .....: Applicant	ADIDAS AG World of Sports, Adi-Dassler-Strasse 1. D-91074 Herzogenaurach, Germany. DE132490588 Simon Drabble +49 160 8 84 2687 / +49 9132 84 5773 simon.drabble@adidas.com
Método de ensayo solicitado, norma.....: Test method requested, standard	FCC Rules and Regulations 47 CFR Chapter I Part 15 Subpart B (10-01-12 Edition); ICESS-003 ISSUE 5 & ANSI C63.10-2009: American National standard for Testing Unlicensed Wireless Devices.
Resultado.....: Summary	IN COMPLIANCE
Aprobado por (nombre / cargo y firma) .....: Approved by (name / position & signature)	Rafael López EMC LAB Manager  Firmado digitalmente por Rafael López Martín Fecha: 2014.05.23 11:13:17 +02'00'
Fecha de realización .....: Date of issue	2014-05-22
Formato de informe No. .....: Report template No	FDT08_15

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Competences and guarantees

AT4 wireless 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.

This certificate of conformity was issued in accordance with the decision Nº 3/2000 of the Joint Committee established under the Agreement on Mutual Recognition between the European Community and the United States of America. By this decision, AT4 wireless can act as Conformity Assessment Body (CAB) on Electromagnetic Compatibility. This Certificate applies to the samples listed at technical reports.

This laboratory is designed by the Federal Communications Commission (ES0004)

AT4 wireless is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, AT4 wireless has a calibration and maintenance program for its measurement equipment.

AT4 wireless 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 AT4 wireless at the time of performance of the test.

AT4 wireless 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.

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General conditions

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of AT4 wireless.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of AT4 wireless and the Accreditation Bodies.

Uncertainty

Uncertainty (factor k=2) was calculated according to the AT4 wireless 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 Nº	Date of reception
40260B/01	Fitness Monitor MICOACH FIT SMART	IOL90	D10914170000330	2014-05-14
40260B/12	FIT SMART Charge	---	D11214170001086	2014-05-14

Auxiliary element used with the sample S/01 elements:

Control Nº	Description	Model	Serial Nº	Date of reception
---	Laptop	Toshiba Satellite	A100-21	N/A

Test sample description

The test sample consists of a fitness monitor.

Test samples supplier

ELEKTROBIT

Tutkijantie, 8

VAT: 1737565-0

Tuomo Väinämö

+358 40 344 3416

tuomo.vainamo@elektrobit.com

Testing period

The performed test started on 2014-05-14 and finished on 2014-05-15.

The tests have been performed at AT4 wireless.

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. = 20 % Max. = 80 %
Shielding effectiveness	> 100 dB
Electric insulation	> 10 kΩ
Reference resistance to earth	< 0,5 Ω

In the semianechoic chamber (21 meters x 11 meters x 8 meters), the following limits were not exceeded during the test.

Temperature	Min. = 15 ºC Max. = 30 ºC
Relative humidity	Min. = 45 % Max. = 60 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar
Shielding effectiveness	> 100 dB
Electric insulation	> 10 kΩ
Reference resistance to earth	< 0,5 Ω
Normal site attenuation (NSA)	< ±4 dB at 10 m distance between item under test and receiver antenna, (30 MHz to 1000 MHz)
Field homogeneity	More than 75% of illuminated surface is between 0 and 6 dB (26 MHz to 1000 MHz).

In the chamber for conducted measurements, the following limits were not exceeded during the test:

Temperature	Min. = 15 ºC Max. = 30 ºC
Relative humidity	Min. = 45 % Max. = 60 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar
Shielding effectiveness	> 100 dB
Electric insulation	> 10 kΩ
Reference resistance to earth	< 0,5 Ω

Remarks and comments

The tests have been realized by the technical personnel: Pedro Manuel Valenzuela, Domingo Gálvez, Alberto Parada, Antonio Jurado & José Manuel Gómez.

The total uncertainty of the measurement system for the measured radio disturbance characteristics of EUT from 150 kHz to 30 MHz is I = ± 3,60 dB for quasi-peak measurements, I = ± 3,48 dB for peak measurements (k = 2).

The total uncertainty of the measurement system for the measured radio disturbance characteristics of EUT from 30 MHz to 1 GHz is I = ± 4,57 dB for quasi-peak measurements, I = ± 4,48 dB for peak measurements (k = 2) and from 1 to 12,75 GHz is I = ± 3,43 dB for average and peak measurements.

The total uncertainty of the measurement system for the measured radio disturbance characteristics of EUT from 12,75 GHz to 26 GHz is I = ± 4,09 dB for average and peak measurements.

Testing verdicts

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**
1999	EMI Receptor	ROHDE & SCHWARZ	ESIB 26	2013-05-30	2015-05-30
1935	EMI Receptor	ROHDE & SCHWARZ	ESPI 3	2013-12-11	2015-12-11
2932	Bilog Hybrid Antenna	SUNOL	JB6	2014-05-11	2017-05-11
0245	Horn Antenna	HP	11966E	2011-05-20	2014-05-20
1920	Horn Antenna	AGILENT	11966J	2011-09-27	2014-09-27
1658	RF Amplifier	SCHAFFNER	CPA9231A	2013-06-11	2015-06-11
1975	RF Amplifier	MITEQ	JS4	2014-05-22	2016-05-22
3783	RF Amplifier	BONN ELEKTRONIK	BLMA 0118-3A	2013-04-23	2015-05-19
0258	Transient Limiter	HP	119471A	2012-09-19	2014-09-19
1650	Artificial Network	SCHWARZBECK	NNLK - 8121	2013-06-25	2015-06-25
3545	Temperature & Humidity probe	PICO TECHNOLOGY	HUMIDIPROBE	2014-01-21	2015-01-21
3548	Temperature & Humidity probe	PICO TECHNOLOGY	HUMIDIPROBE	2014-01-21	2015-01-21
3556	Temperature & Humidity probe	T & D	TR-72W	2014-01-21	2015-01-21

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.

In the following table appears the operation modes used by the samples tested to that it refers the present test report.

OPERATION MODE	DESCRIPTION
OM#01	EUT ON. Equipment charging battery by means of an AC/DC adapter, Bluetooth switched OFF. Power supply: 115Vac.
OM#02	EUT ON. Equipment charging battery by means of an auxiliary laptop, Bluetooth switched OFF. Power supply: 5Vdc. (USB).
OM#03	EUT ON. Equipment charging battery by means of an AC/DC adapter, Bluetooth in transmission mode. Power supply: 115Vac.
OM#04	EUT ON. Equipment charging battery by means of an auxiliary laptop, Bluetooth in transmission mode. Power supply: 5Vdc. (USB).

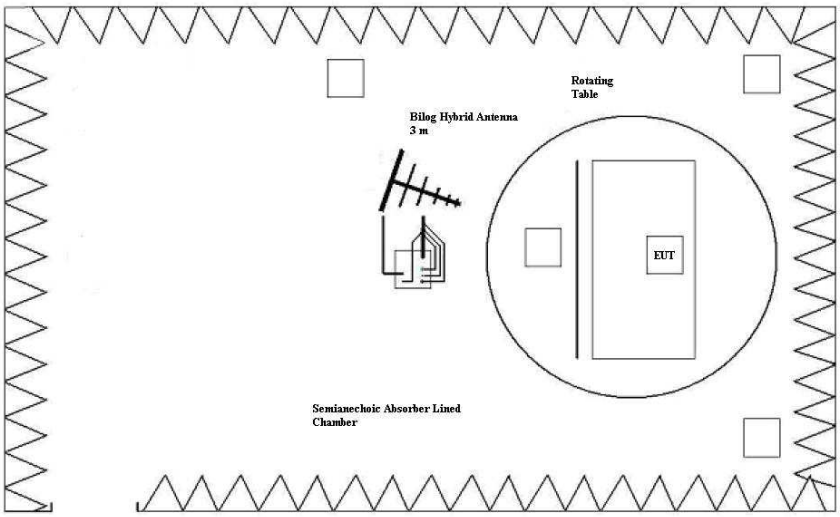
RADIATED EMISSION. ELECTROMAGNETIC FIELD MEASURE.

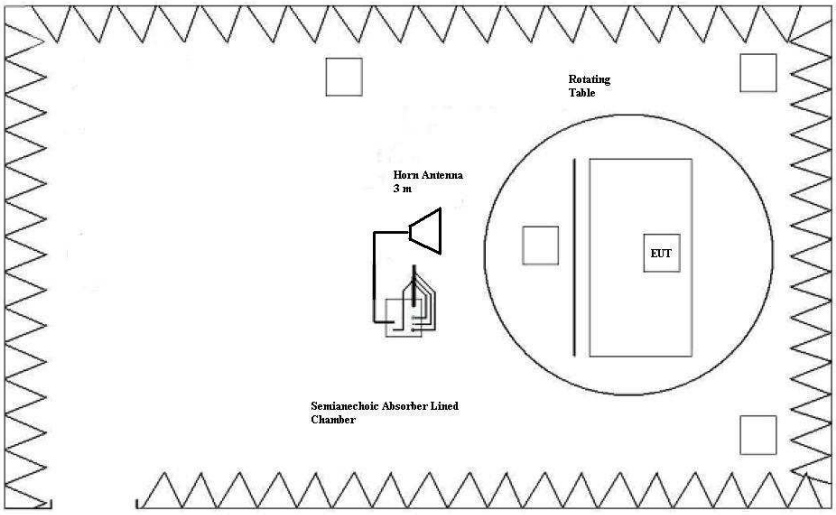
LIMITS:	Product standard:	FCC RULES AND REGULATIONS 47 CFR PART 15, SUBPART B (10-01-12 Edition); ICESS-003 ISSUE 5 & ANSI C63.10-2009
	Test standard:	FCC RULES AND REGULATIONS 47 CFR PART 15, SUBPART B (10-01-12 Edition); ICESS-003 ISSUE 5 & ANSI C63.10-2009

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 15.109, Subpart B (10-01-12 Edition); ICESS-003 ISSUE 5 & ANSI C63.10-2009 in the frequency range 30 MHz to 26 GHz, for Class B equipment, which is a transmitter in a band over 500 MHz, was:

Frequency range (MHz)	Limit for 3 m (µV/m)	Limit for 3 m (dBµV/m)
30 to 88	100	40
88 to 216	150	43,52
216 to 960	200	46,02
Above 960	500	53,98





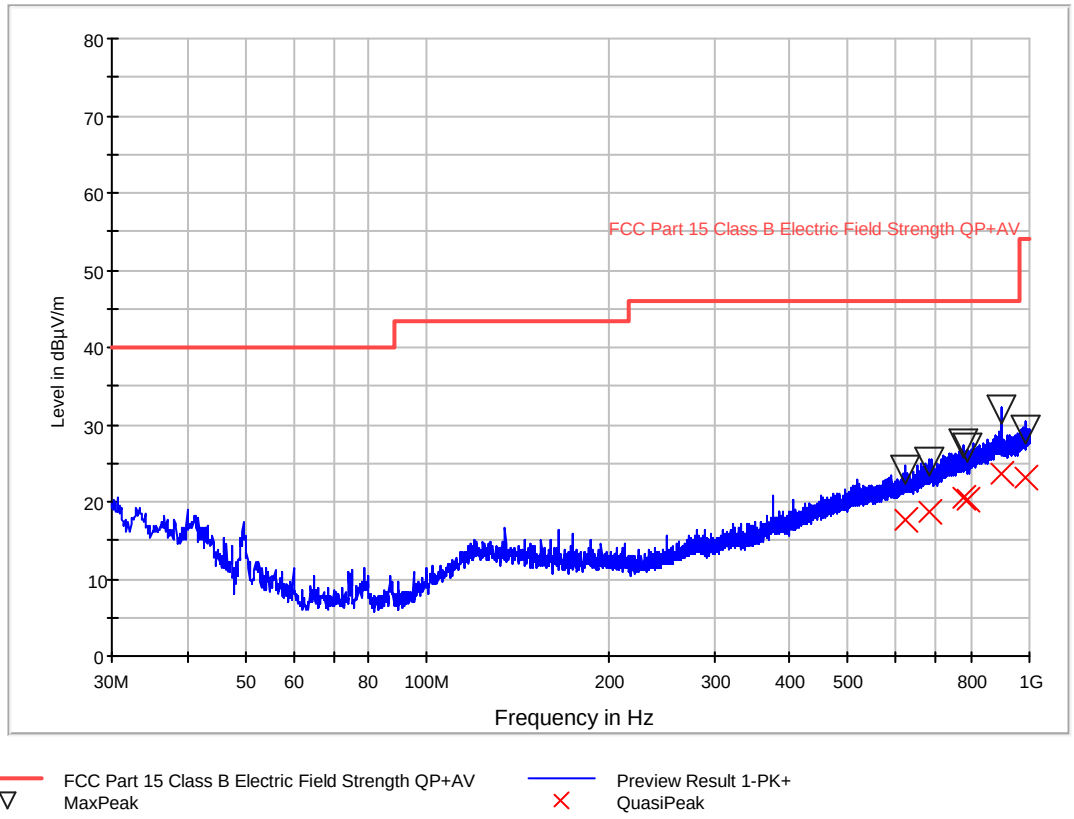
TESTED SAMPLES:	S/01
TESTED OPERATION MODES:	OM#01 & 02
TEST RESULTS :	CRmmnn: CR, Radiation Condition; mm: Sample number; nn: Operation mode, xx: Polarisation.

CRmmnn	Description	Result
CR0101	EUT ON. Equipment charging battery by means of an AC/DC adapter, Bluetooth switched OFF. Power supply: 115Vac. Range 30-1000 MHz.	P
CR0101_RA1_PH	EUT ON. Equipment charging battery by means of an AC/DC adapter, Bluetooth switched OFF. Power supply: 115Vac. Range 1-18 GHz. Horizontal pol.	P
CR0101_RA1_PV	EUT ON. Equipment charging battery by means of an AC/DC adapter, Bluetooth switched OFF. Power supply: 115Vac. Range 1-18 GHz. Vertical pol.	P
CR0101_RA2_PH	EUT ON. Equipment charging battery by means of an AC/DC adapter, Bluetooth switched OFF. Power supply: 115Vac. Range 18-26 GHz. Horizontal pol.	P
CR0101_RA2_PV	EUT ON. Equipment charging battery by means of an AC/DC adapter, Bluetooth switched OFF. Power supply: 115Vac. Range 18-26 GHz. Vertical pol.	P
CR0102	EUT ON. Equipment charging battery by means of an auxiliary laptop, Bluetooth switched OFF. Power supply: 5Vdc. (USB). Range 30-1000 MHz.	P
CR0102_RA1_PH	EUT ON. Equipment charging battery by means of an auxiliary laptop, Bluetooth switched OFF. Power supply: 5Vdc. (USB). Range 1-18 GHz. Horizontal pol.	P
CR0102_RA1_PV	EUT ON. Equipment charging battery by means of an auxiliary laptop, Bluetooth switched OFF. Power supply: 5Vdc. (USB). Range 1-18 GHz. Vertical pol.	P
CR0102_RA2_PH	EUT ON. Equipment charging battery by means of an auxiliary laptop, Bluetooth switched OFF. Power supply: 5Vdc. (USB). Range 18-26 GHz. Horizontal pol.	P
CR0102_RA2_PV	EUT ON. Equipment charging battery by means of an auxiliary laptop, Bluetooth switched OFF. Power supply: 5Vdc. (USB). Range 18-26 GHz. Vertical pol.	P

Radiated Emission: CR0101 (30MHz to 1GHz)

Project:	40260REM.002
Company:	ELEKTROBIT
Sample:	S/01
Operation mode:	OM#01
Description:	EUT ON. Bluetooth in Idle mode. Charging Battery. Power Supply: 5VDC (USB)

FCC class B Bilog Hybrid



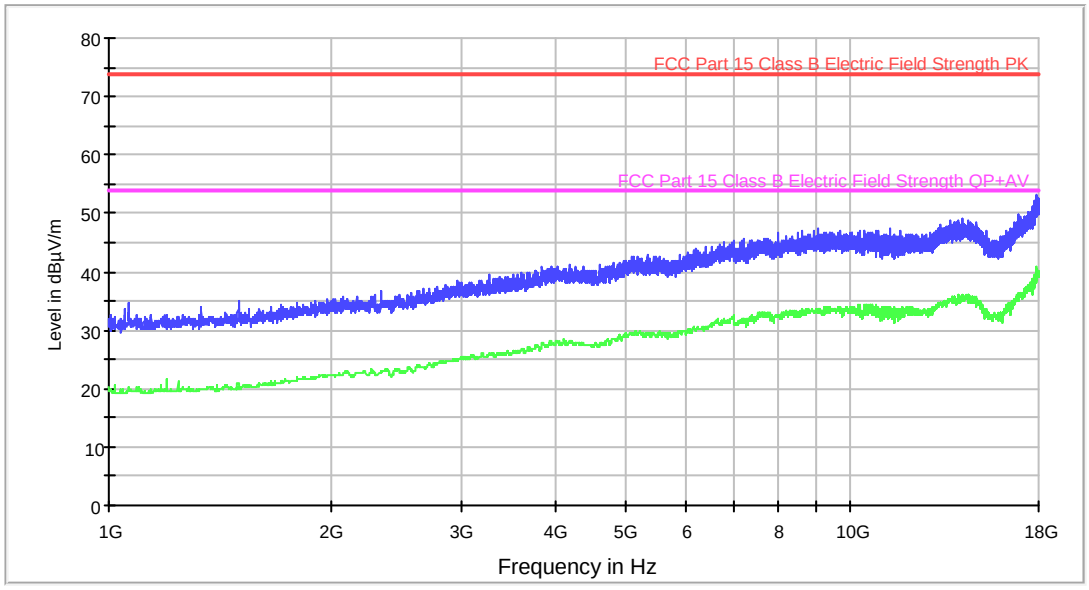
Maximizations

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)
622.358517	24.0	17.6	104.0	H	355.0
682.739880	25.2	18.8	349.0	V	105.0
776.739479	27.5	20.6	186.0	V	208.0
788.784369	26.9	20.3	310.0	V	355.0
895.412024	31.8	23.5	400.0	V	289.0
985.314429	29.3	23.0	270.0	H	277.0

Radiated Emission: CR0101_RA1_PH (1 – 18 GHz)

Project:	40260REM.002
Company:	ELEKTROBIT
Sample:	S/01
Operation mode:	OM#01
Description:	EUT ON. Idle bluetooth mode. Charging battery. Power Supply: 5 VDC (USB)

FCC 1-18GHz class B ESIB Horn0245 AMP3783



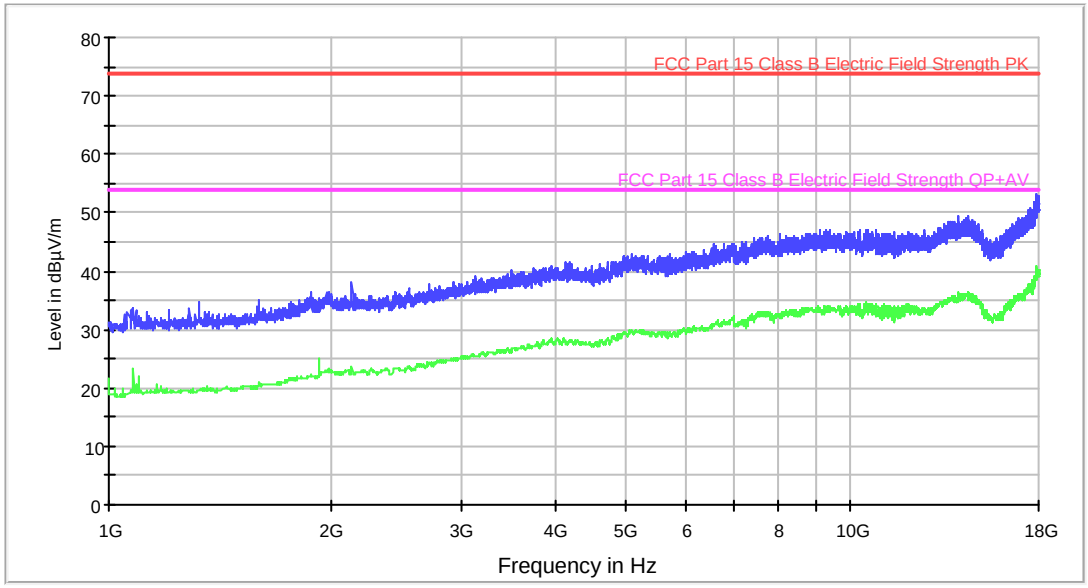
Max PK-AVG

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
1063.000000	34.6	20.1
1496.000000	35.1	21.0
2335.000000	36.7	22.7
3164.000000	38.3	25.3
4201.000000	41.0	28.1
5356.000000	42.8	29.5
7203.000000	45.8	31.7
9077.000000	47.2	33.6
13225.000000	48.0	34.6
17944.000000	53.2	40.3

Radiated Emission: CR0101_RA1_PV (1 – 18 GHz)

Project:	40260REM.002
Company:	ELEKTROBIT
Sample:	S/01
Operation mode:	OM#01
Description:	EUT ON. Idle bluetooth mode. Charging battery. Power Supply: 5 VDC (USB)

FCC 1-18GHz class B ESIB Horn0245 AMP3783



MaxPeak-ClearWrite-PK+
FCC Part 15 Class B Electric Field Strength PK
Average-ClearWrite-AVG
FCC Part 15 Class B Electric Field Strength QP+AV

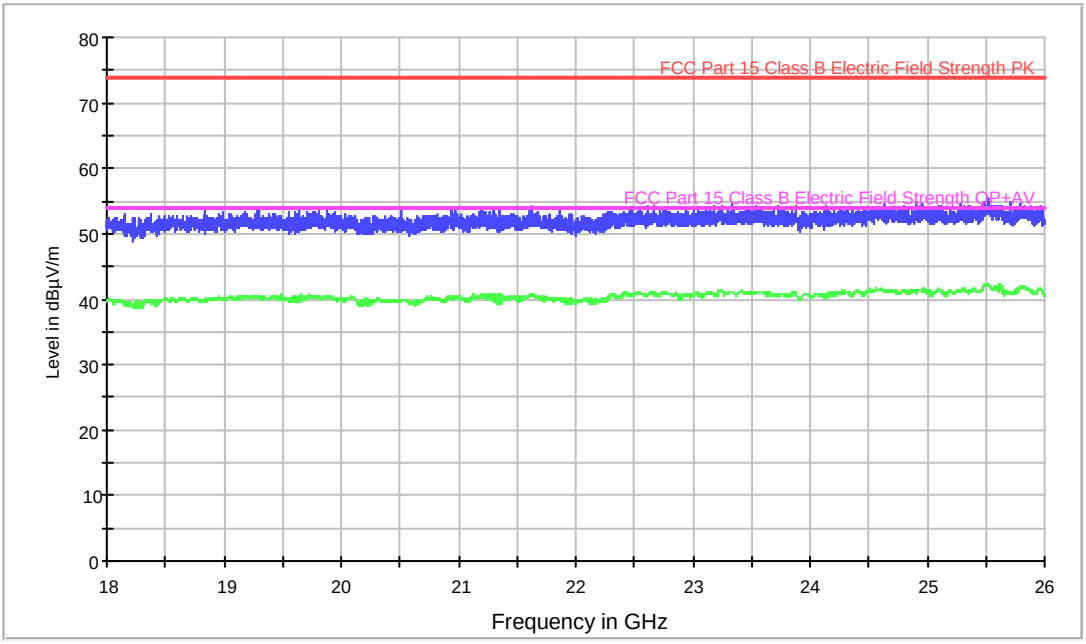
Max PK-AVG

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
1322.000000	34.8	19.5
1596.000000	35.1	20.9
2123.000000	38.2	23.7
3130.000000	39.1	25.4
4184.000000	41.6	28.0
5090.000000	42.8	29.5
7442.000000	45.6	32.0
9283.000000	47.1	33.6
13461.000000	48.2	34.7
17915.000000	53.3	39.9

Radiated Emission: CR0101_RA2_PH (18 – 26 GHz)

Project:	40260REM.002
Company:	ELEKTROBIT
Sample:	S/01
Operation mode:	OM#01
Description:	EUT ON. Idle bluetooth mode. Charging battery. Power Supply: 5 VDC (USB)

FCC 18-26GHz class B ESIB Horn1920 AMP1975



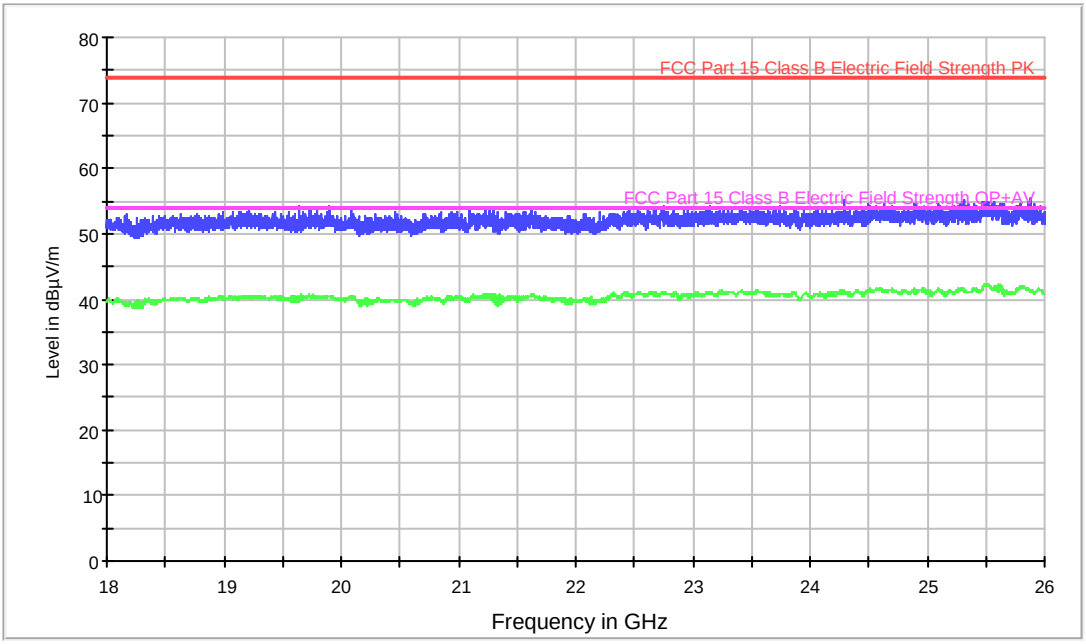
Max PK-AVG

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
18148.000000	53.1	39.7
18830.000000	53.8	40.0
19880.000000	53.7	40.2
20516.000000	53.7	39.8
21622.000000	54.3	40.8
21861.000000	53.5	40.0
22662.000000	54.2	40.9
23339.000000	54.5	41.0
24900.000000	55.0	41.5
25515.000000	55.5	42.2

Radiated Emission: CR0101_RA2_PV (18 -26 GHz)

Project:	40260REM.002
Company:	ELEKTROBIT
Sample:	S/01
Operation mode:	OM#01
Description:	EUT ON. Idle bluetooth mode. Charging battery. Power Supply: 5 VDC (USB)

FCC 18-26GHz class B ESIB Horn1920 AMP1975



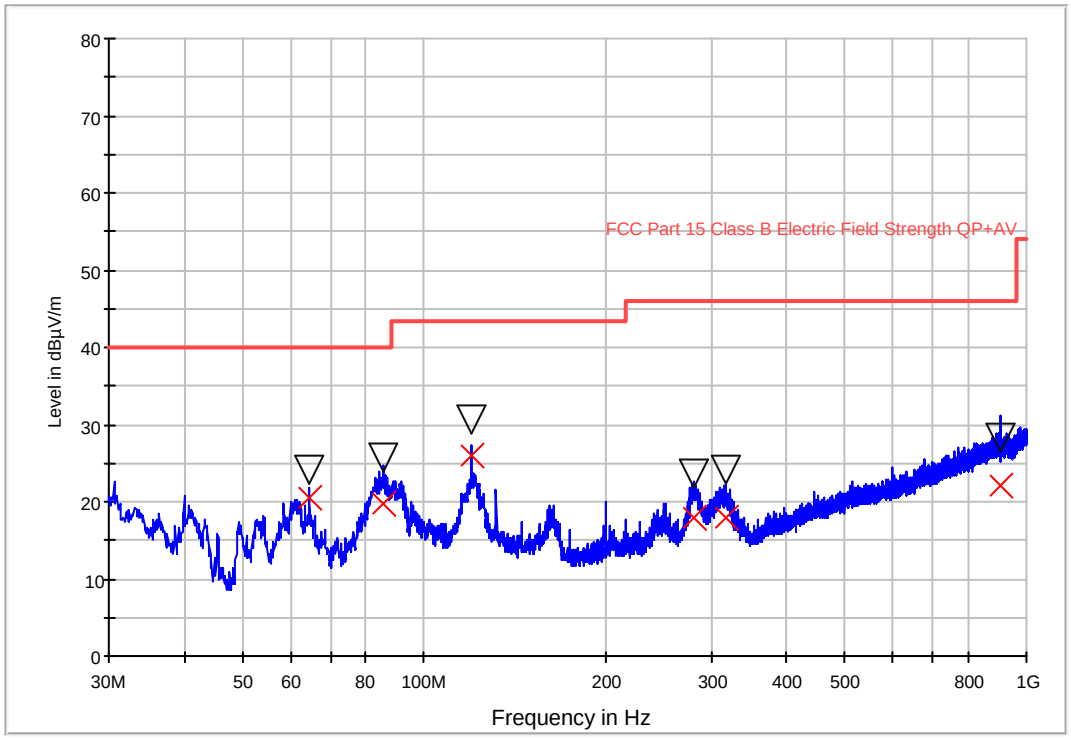
Max PK-AVG

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
18177.000000	52.9	39.4
19222.000000	53.7	40.3
19900.000000	54.3	40.6
20466.000000	53.4	39.8
21270.000000	53.9	40.7
22405.000000	53.4	40.8
22756.000000	54.4	40.8
23741.000000	54.2	40.7
24291.000000	55.3	41.3
25885.000000	55.3	41.2

Radiated Emission: CR0102 (30MHz to 1GHz)

Project:	40260REM.002
Company:	ELEKTROBIT
Sample:	S/01
Operation mode:	OM#02
Description:	EUT ON. Bluetooth in Idle mode. Charging Battery. Conected to the laptop. Power supply 5Vdc (USB)

FCC class B Bilog Hybrid



FCC Part 15 Class B Electric Field Strength QP+AV
MaxPeak
Peak Preview
QuasiPeak

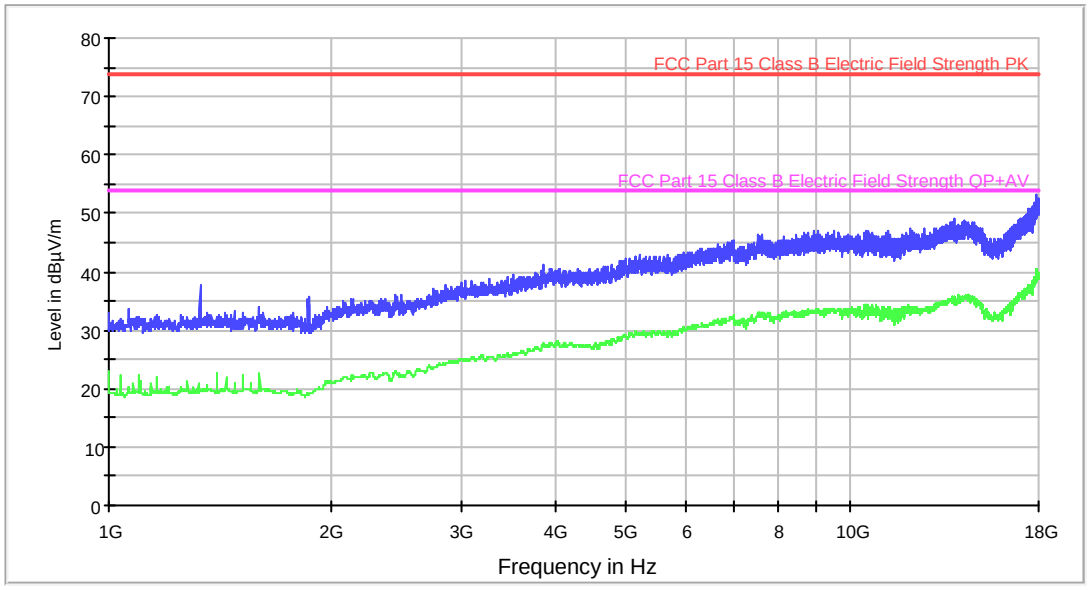
Maximizations

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)
64.590982	24.2	20.5	114.0	V	223.0
85.354309	25.6	19.8	131.0	V	52.0
119.925050	30.6	26.1	98.0	V	-3.0
279.952505	23.7	17.8	162.0	V	12.0
317.638076	24.2	17.8	134.0	V	30.0
905.014629	28.3	22.1	98.0	H	0.0

Radiated Emission: CR0102_RA1_PH (1 – 18 GHz)

Project:	40260REM.002
Company:	ELEKTROBIT
Sample:	S/01
Operation mode:	OM#02
Description:	EUT ON. Bluetooth in Idle mode. Charging Battery. Conected to the laptop. Power supply 5Vdc (USB). Horizontal Polarization.

FCC 1-18GHz class B ESIB Horn0245 AMP3783



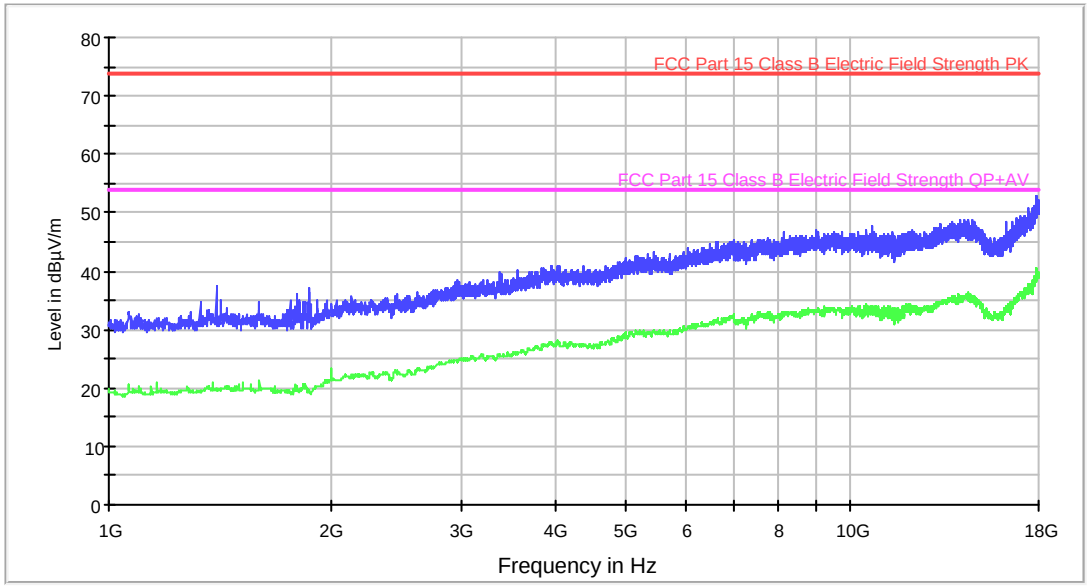
Max PK-AVG

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
1328.000000	37.7	20.0
1596.000000	34.0	20.1
1860.000000	35.8	19.1
3023.000000	38.5	24.9
3854.000000	41.1	27.5
5201.000000	42.8	29.5
7538.000000	46.3	33.0
9085.000000	46.9	33.6
13418.000000	47.7	35.2
17917.000000	53.1	40.3

Radiated Emission: CR0102_RA1_PV (1 – 18 GHz)

Project:	40260REM.002
Company:	ELEKTROBIT
Sample:	S/01
Operation mode:	OM#02
Description:	EUT ON. Bluetooth in Idle mode. Charging Battery. Conected to the laptop. Power supply 5Vdc (USB). Vertical Polarization.

FCC 1-18GHz class B ESIB Horn0245 AMP3783



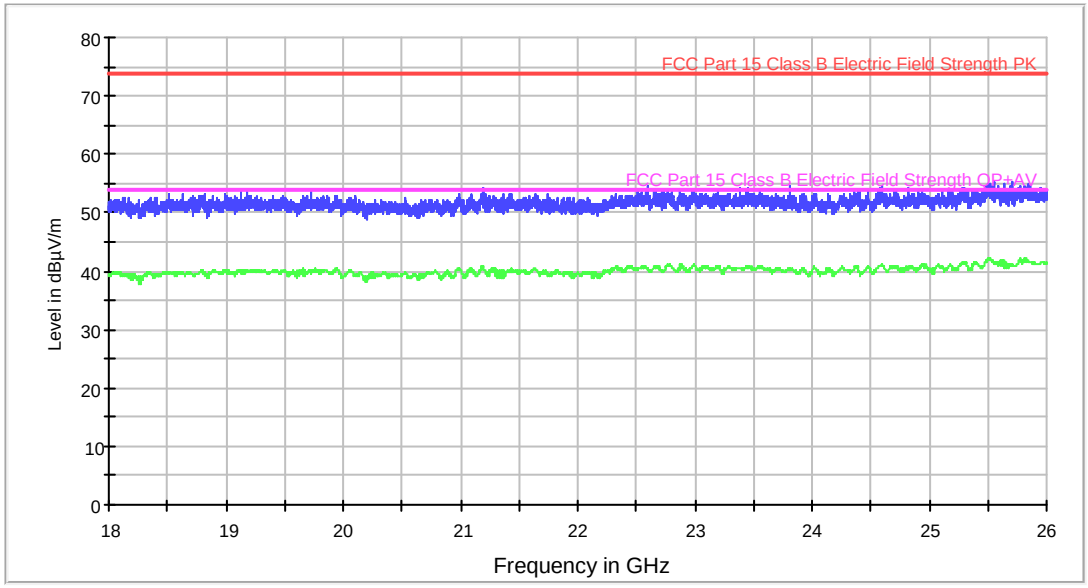
Max PK-AVG

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
1330.000000	34.5	19.5
1399.000000	37.3	19.9
1865.000000	36.9	19.5
2951.000000	38.3	24.6
4027.000000	41.0	28.0
5435.000000	43.4	29.6
6978.000000	45.4	32.5
9037.000000	47.0	33.1
13265.000000	48.1	34.6
17924.000000	53.0	40.3

Radiated Emission: CR0102_RA2_PH (18 – 26 GHz)

Project:	40260REM.002
Company:	ELEKTROBIT
Sample:	S/01
Operation mode:	OM#02
Description:	EUT ON. Bluetooth in Idle mode. Charging Battery. Conected to the laptop. Power supply 5Vdc (USB). Horizontal Polarization.

FCC 18-26GHz class B ESIB Horn1920 AMP1975



MaxPeak-ClearWrite-PK+
FCC Part 15 Class B Electric Field Strength PK
Average-ClearWrite-AVG
FCC Part 15 Class B Electric Field Strength QP+AV

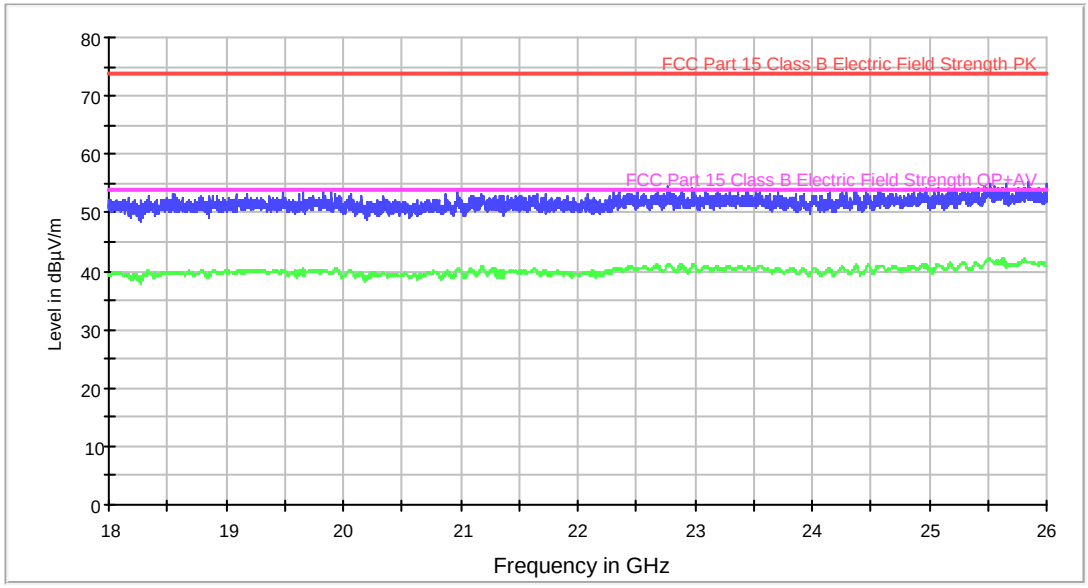
Max PK-AVG

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
18640.000000	53.3	39.4
19130.000000	53.6	39.9
19727.000000	53.4	40.3
20109.000000	52.4	39.1
21192.000000	54.4	40.7
21635.000000	53.2	40.6
22600.000000	54.6	40.3
23814.000000	54.7	40.4
24605.000000	54.4	40.9
25704.000000	55.4	40.9

Radiated Emission: CR0102_RA2_PV (18 -26 GHz)

Project:	40260REM.002
Company:	ELEKTROBIT
Sample:	S/01
Operation mode:	OM#02
Description:	EUT ON. Bluetooth in Idle mode. Charging Battery. Conected to the laptop. Power supply 5Vdc (USB). Vertical Polarization.

FCC 18-26GHz class B ESIB Horn1920 AMP1975



MaxPeak-ClearWrite-PK+
FCC Part 15 Class B Electric Field Strength PK
Average-ClearWrite-AVG
FCC Part 15 Class B Electric Field Strength QP+AV

Max PK-AVG

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
18545.000000	53.3	39.5
19086.000000	53.1	39.9
19493.000000	54.0	40.2
20159.000000	52.8	39.8
20973.000000	53.4	40.2
22315.000000	53.6	40.6
22777.000000	54.5	41.0
23703.000000	53.6	40.5
24966.000000	54.3	41.0
25853.000000	55.3	41.7

CONTINUOUS CONDUCTED EMISSION ON POWER LEADS

LIMITS:	Product standard :	FCC RULES AND REGULATIONS 47 CFR PART 15, SUBPART B (10-01-12 Edition); ICESS-003 ISSUE 5 & ANSI C63.10-2009
	Test standard :	FCC RULES AND REGULATIONS 47 CFR PART 15, SUBPART B (10-01-12 Edition); ICESS-003 ISSUE 5 & ANSI C63.10-2009

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 (10-01-12 Edition); ICESS-003 ISSUE 5 & ANSI C63.10-2009, 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

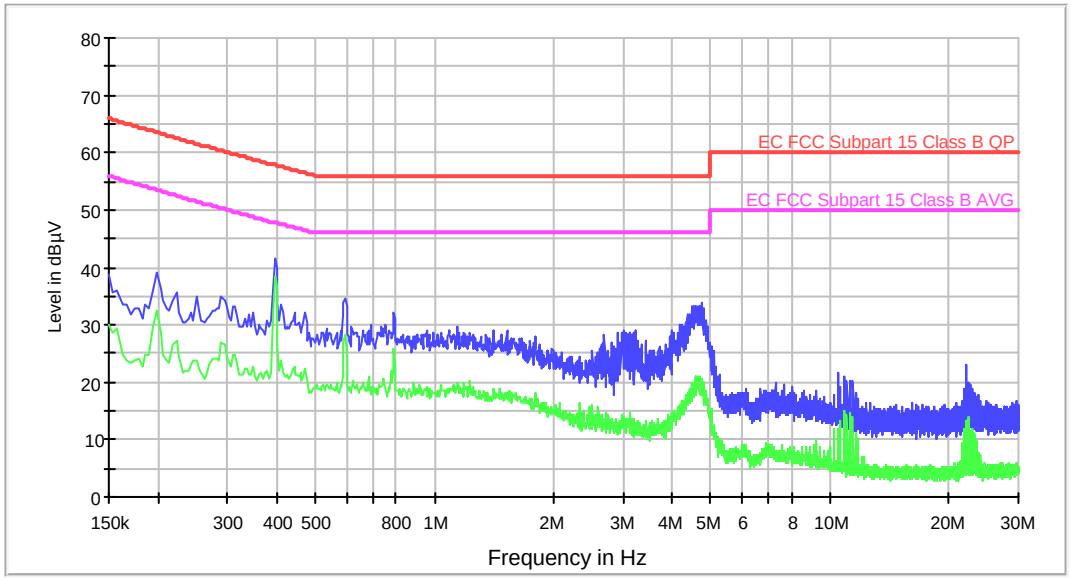
TESTED SAMPLES:	S/01
TESTED OPERATION MODES:	OM#01; 02; 03 & 04
TEST RESULTS :	CCmmnnhh: CC, Conducted Condition; mm: Sample number; nn: Operation mode; hh: wire

CCmmnnhh	**Description**	**Result**
CC01010N	Neutral wire noise	P
CC0101L1	Phase wire noise	P
CC01020N	Neutral wire noise	P
CC0102L1	Phase wire noise	P
CC01030N	Neutral wire noise	P
CC0103L1	Phase wire noise	P
CC01040N	Neutral wire noise	P
CC0104L1	Phase wire noise	P

Continuous Conducted emission : CC01010N	**Detector : Peak / Average / Cuasi-peak**

Project:	40260REM.002
Company:	ELEKTROBIT
Sample:	S/01
Operation mode:	OM#01
Description:	EUT ON. Bluetooth in Idle mode. Charging battery with AC/DC adapter. Power supply 115VAC. Neutral noise

EMI EC FCC Subpart 15 Class B ESPI CC



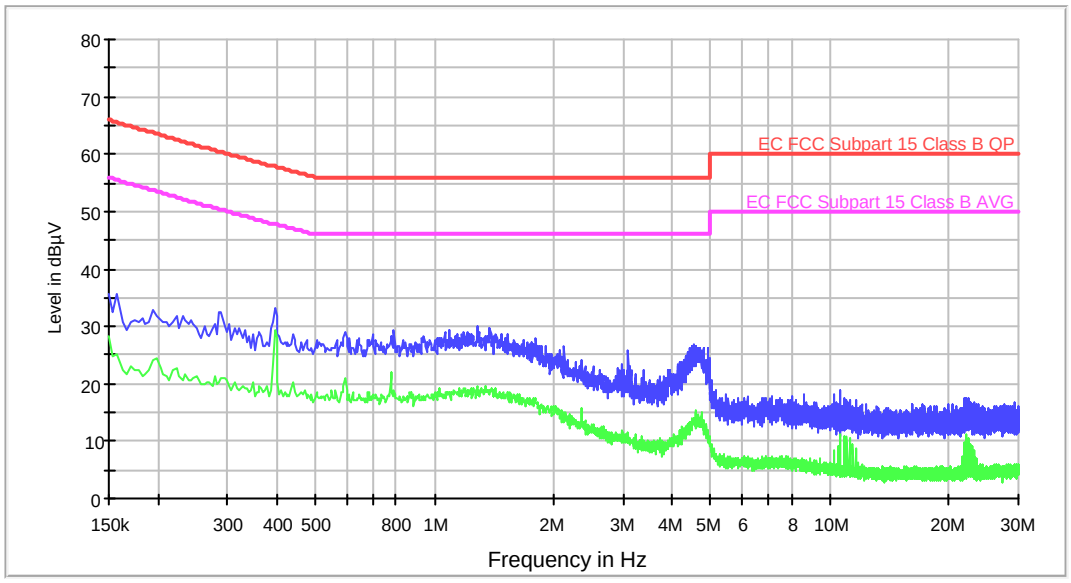
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.198000	39.2	32.6
0.394000	41.7	38.5
0.594000	34.5	28.4
0.790000	32.3	26.0
1.522000	28.9	17.5
3.026000	29.1	13.6
4.722000	34.0	19.3
7.270000	19.8	7.8
10.462000	21.6	12.0
22.114000	23.0	13.0

Continuous Conducted emission : CC0101L1	**Detector : Peak / Average / Cuasi-peak**

Project: 40260REM.002
Company: ELEKTROBIT
Sample: S/01
Operation mode: OM#01
Description: EUT ON. Bluetooth in Idle mode. Charging battery with AC/DC adapter. Power supply 115VAC. Phase noise

EMI EC FCC Subpart 15 Class B ESPI CC



MaxPeak-ClearWrite-PK+
EC FCC Subpart 15 Class B QP
Average-ClearWrite-AVG
EC FCC Subpart 15 Class B AVG

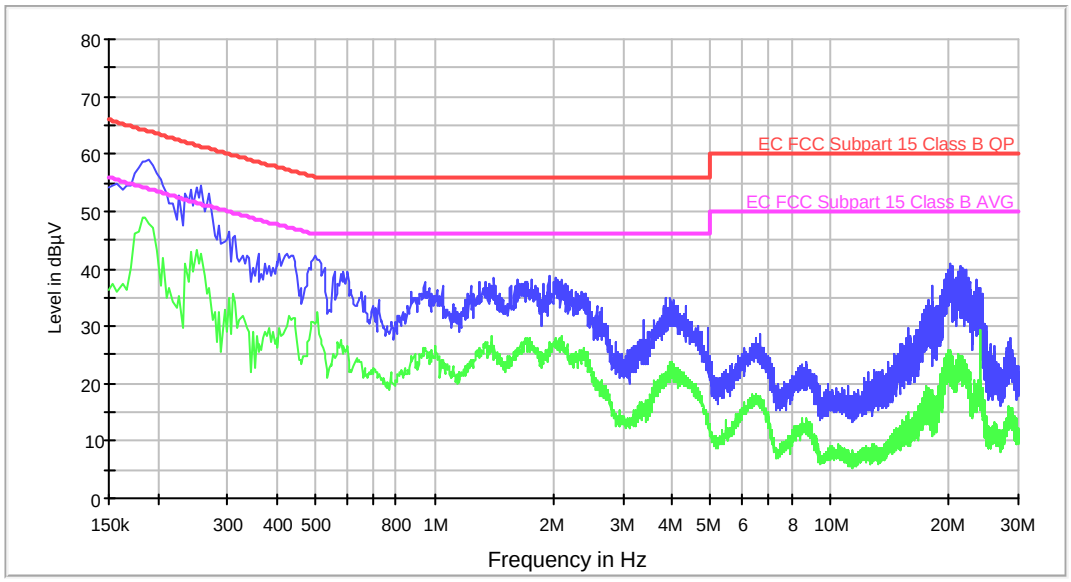
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.158000	35.6	25.0
0.394000	33.3	29.3
0.594000	28.8	20.9
0.790000	29.4	19.0
1.282000	29.9	18.3
2.130000	26.4	15.0
4.554000	26.9	13.8
8.586000	18.3	5.7
10.662000	18.7	11.2
22.222000	17.6	4.2

Continuous Conducted emission : CC01020N	**Detector : Peak / Average / Cuasi-peak**

Project: 40260REM.002
Company: ELEKTROBIT
Sample: S/01
Operation mode: OM#02
Description: EUT ON. Bluetooth in Idle mode. Charging battery. Connected to the laptop. Power supply 5Vdc (USB). Neutral noise

EMI EC FCC Subpart 15 Class B ESPI CC



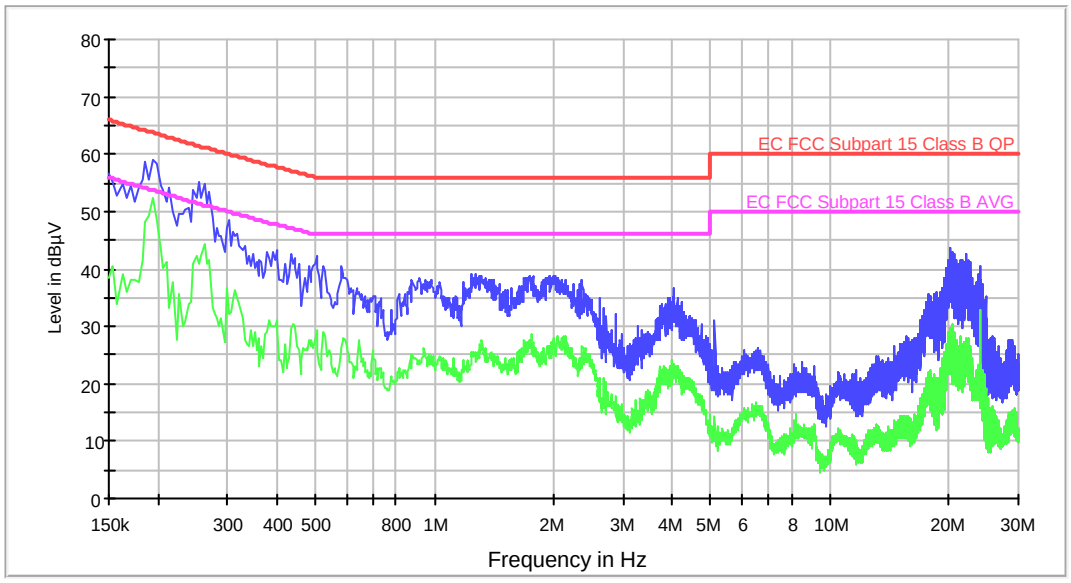
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.190000	58.9	47.9
0.258000	54.3	42.6
0.438000	42.3	31.3
0.946000	37.8	26.2
1.958000	38.6	25.6
2.146000	37.2	25.9
3.958000	35.0	22.7
6.658000	28.5	17.5
17.606000	33.5	19.4
20.126000	40.8	21.8

Continuous Conducted emission : CC0102L1	**Detector : Peak / Average / Cuasi-peak**

Project: 40260REM.002
Company: ELEKTROBIT
Sample: S/01
Operation mode: OM#02
Description: EUT ON. Bluetooth in Idle mode. Charging battery. Connected to the laptop. Power supply 5Vdc (USB). Phase noise

EMI EC FCC Subpart 15 Class B ESPI CC



MaxPeak-ClearWrite-PK+
EC FCC Subpart 15 Class B QP
Average-ClearWrite-AVG
EC FCC Subpart 15 Class B AVG

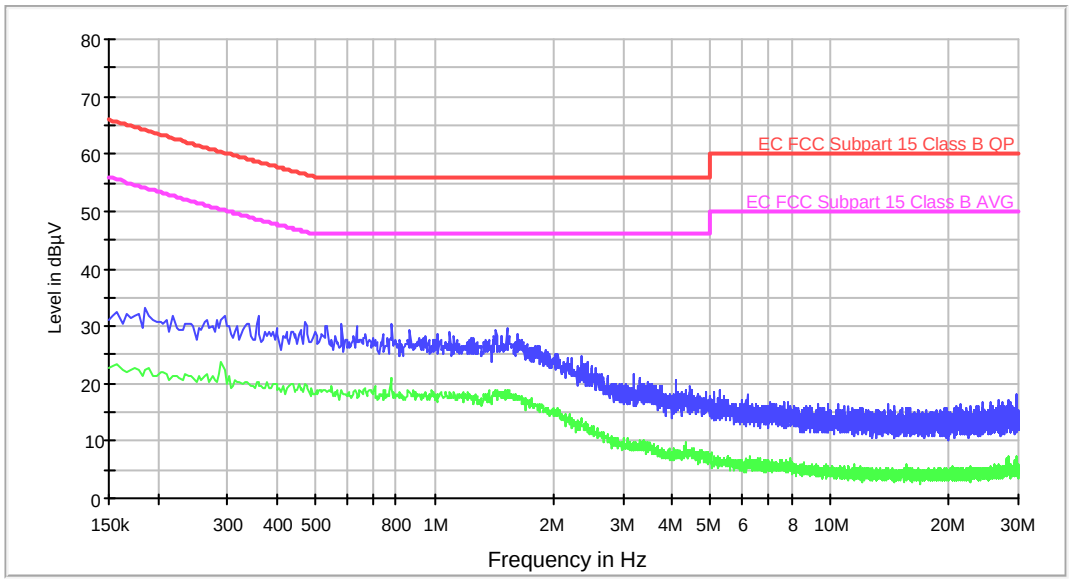
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.194000	59.2	52.6
0.262000	54.8	44.5
0.434000	42.8	29.7
1.238000	39.3	25.4
1.270000	39.1	25.6
2.146000	38.2	28.1
4.030000	36.5	22.9
6.614000	26.1	16.2
17.598000	34.3	21.0
20.206000	43.7	29.1

Continuous Conducted emission : CC01030N	**Detector : Peak / Average / Cuasi-peak**

Project: 40260REM.002
Company: ELEKTROBIT
Sample: S/01
Operation mode: OM#03
Description: EUT ON. Bluetooth in transmission mode. Charging battery with AC/DC adapter. Power supply 115VAC. Neutral noise

EMI EC FCC Subpart 15 Class B ESPI CC



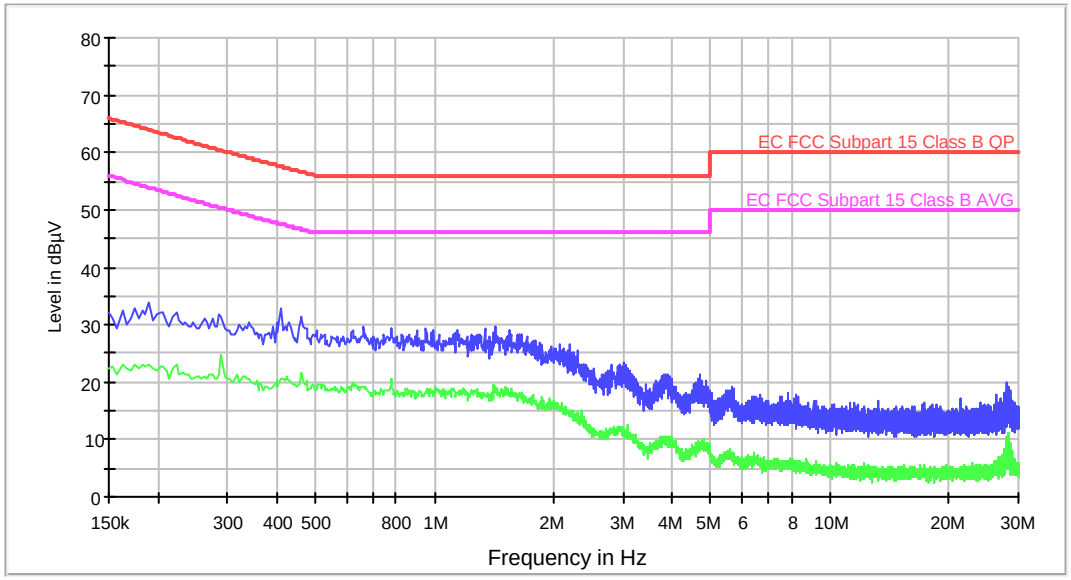
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.186000	33.0	22.4
0.294000	31.9	22.3
0.470000	30.6	20.0
0.782000	30.5	19.2
1.522000	29.7	18.0
2.350000	24.7	14.1
4.074000	20.8	8.3
6.174000	18.3	6.2
13.982000	16.5	4.7
29.634000	18.0	5.4

Continuous Conducted emission : CC0103L1	**Detector : Peak / Average / Cuasi-peak**

Project: 40260REM.002
Company: ELEKTROBIT
Sample: S/01
Operation mode: OM#03
Description: EUT ON. Bluetooth in transmission mode. Charging battery with AC/DC adapter. Power supply 115VAC. Phase noise.

EMI EC FCC Subpart 15 Class B ESPI CC



MaxPeak-ClearWrite-PK+
EC FCC Subpart 15 Class B QP
Average-ClearWrite-AVG
EC FCC Subpart 15 Class B AVG

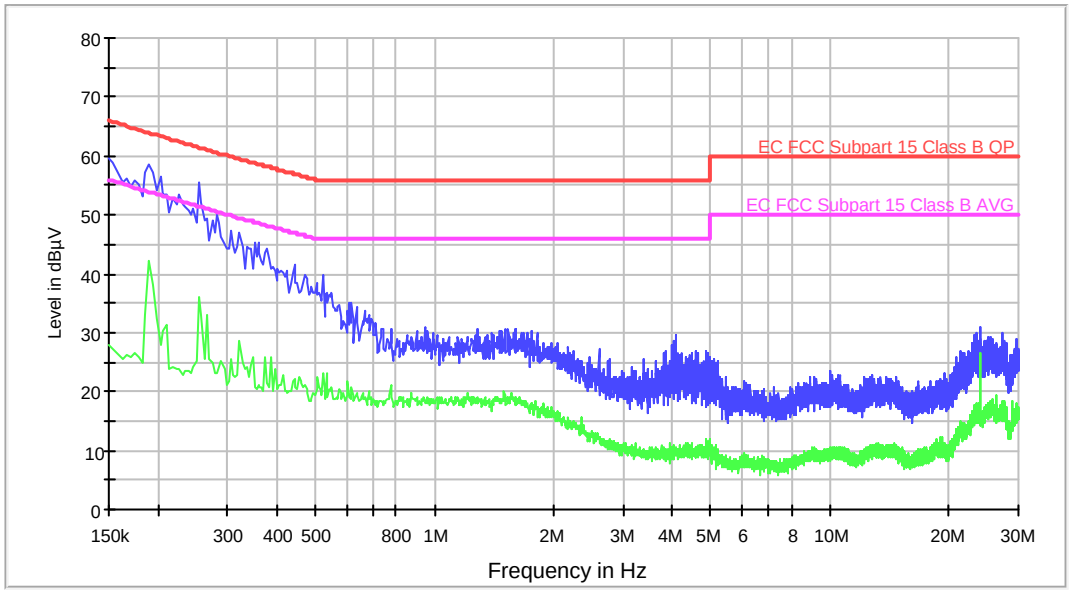
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.190000	33.8	23.2
0.410000	32.9	20.8
0.462000	31.4	21.6
0.950000	29.4	18.2
1.426000	29.8	19.0
2.198000	26.4	14.5
4.706000	21.5	9.2
7.810000	18.0	6.0
13.294000	16.9	4.5
28.042000	19.7	10.5

Continuous Conducted emission : CC01040N	**Detector : Peak / Average / Cuasi-peak**

Project: 40260REM.002
Company: ELEKTROBIT
Sample: S/01
Operation mode: OM#04
Description: EUT ON. Bluetooth in transmission mode. Charging battery. Connected to the laptop Power supply 5Vdc (USB). Neutral noise

EMI EC FCC Subpart 15 Class B ESPI CC



MaxPeak-ClearWrite-PK+
EC FCC Subpart 15 Class B QP
Average-ClearWrite-AVG
EC FCC Subpart 15 Class B AVG

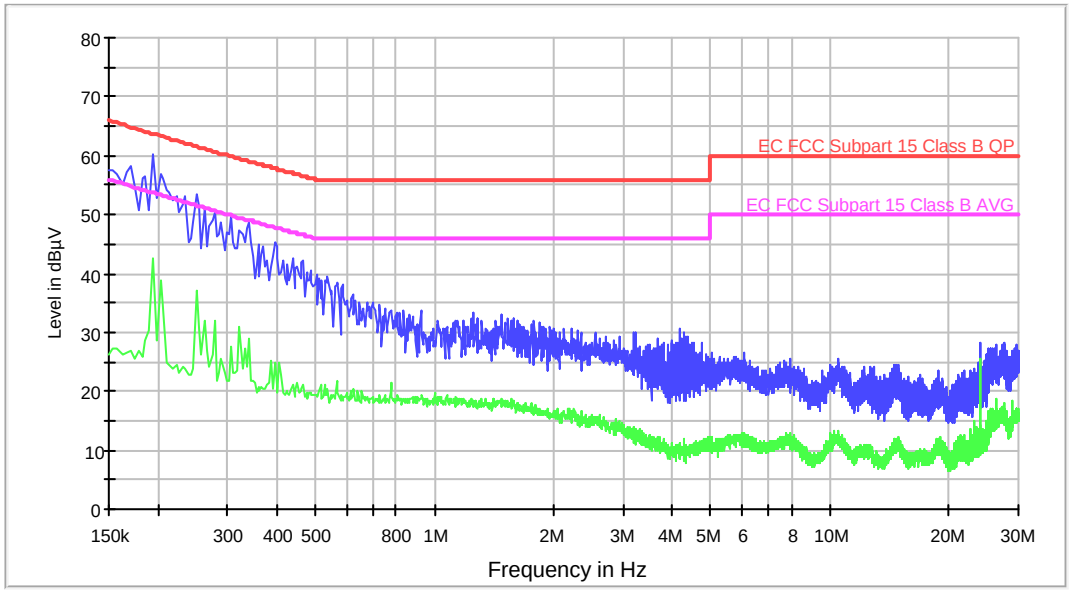
Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.150000	59.5	27.9
0.258000	52.1	33.0
0.442000	41.5	22.0
0.946000	30.9	18.5
1.506000	30.8	19.4
2.182000	27.4	15.6
4.066000	29.5	10.0
9.998000	23.5	9.4
10.558000	22.9	10.1
23.998000	30.8	25.7

Continuous Conducted emission : CC0104L1	**Detector : Peak / Average / Cuasi-peak**

Project: 40260REM.002
Company: ELEKTROBIT
Sample: S/01
Operation mode: OM#04
Description: EUT ON. Bluetooth in transmission mode. Charging battery. Connected to the laptop. Power supply 5Vdc (USB). Phase noise

EMI EC FCC Subpart 15 Class B ESPI CC



MaxPeak-ClearWrite-PK+
EC FCC Subpart 15 Class B QP
Average-ClearWrite-AVG
EC FCC Subpart 15 Class B AVG

Subrange Maxima

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.194000	60.4	42.4
0.262000	51.1	32.0
0.438000	42.4	21.2
0.750000	34.0	19.5
1.254000	33.2	18.3
2.230000	30.7	16.8
4.170000	30.7	11.2
7.894000	25.7	13.0
10.494000	25.5	12.2
27.698000	28.4	15.8

Appendix B - Photographs