AT4 wireless, S.A.
Parque Tecnológico de Andalucía,
c/ Severo Ochoa nº 2
29590 Campanillas/ Málaga/ España
Tel. 952 61 91 00 - Fax 952 61 91 13
MÁLAGA, C.I.F. A29 507 456
Registro Mercantil de Málaga,Tomo 1169,
Libro 82, Folio 133, Hoja MA3729

ENAC ENSAYOS Nº 51/LE203

TEST REPORT

REFERENCE STANDARD:

FCC Rules and Regulations 47 CFR Chapter I Part 15 Subpart B (10-01-10 Edition)

FCC Rules and Regulations 47 CFR Chapter I Part 15 Subpart B:

Radio frequency devices Subpart B. Unintentional radiators

NIE ..... :	39342REM.002
Approved by (name / position & signature) ..... :	Juan Carlos Soler Lab Manager
Elaboration date ..... :	2013-07-05

Juan Carlos Soler Claros — Firmado digitalmente por Juan Carlos Soler Claros. Fecha: 2013.08.19 13:38:33 +02'00'

Identification of item tested ..... :	MICOACH SMART RUN
Trademark ..... :	adidas
Model and/or type reference ..... :	G76792
Other identification of the product ..... :	S/N : 010813060000087 HW Version: 7.0.0 SW Version: 1.6.2 FCC ID: ZLGSMARTRUN IC ID: 9722B-SMARTRUN
Features ..... :	BT 4.0, Wlan b/g/n, GPS
Description ..... :	Fitness Monitor

Applicant ..... :	ADIDAS AG
Address ..... :	World of Sports, Adi-Dassler-Strabe,1 D91074 Herzogenaurach. Germany.
CIF/NIF/Passport ..... :	DE132490588
Contact person ..... :	Simon Drabble
Telephone / Fax ..... :	+49 160 8 84 2687 / +49 9132 84 5773
e-mail ..... :	simon.drabble@adidas.com

Test samples supplier ..... :	ELEKTROBIT
Address ..... :	Turkijantie 8. Oulu 90570. Finland
CIF/NIF/Passport ..... :	1737565-0
Contact person ..... :	Pertti Harmaala
Telephone / Fax ..... :	+358 40 344 5781
e-mail ..... :	Pertti.harmaala@elektrobit.com
Manufacturer ..... :	ADIDAS AG
Address ..... :	World of Sports, Adi-Dassler-Strabe,1 D91074 Herzogenaurach. Germany.
CIF/NIF/Passport ..... :	DE132490588
Contact person ..... :	Simon Drabble
Telephone / Fax ..... :	+49 160 8 84 2687 / +49 9132 84 5773
e-mail ..... :	simon.drabble@adidas.com
Test method requested ..... :	
Standard ..... :	FCC Rules and Regulations 47 CFR Chapter I Part 15 Subpart B (10-01-10 Edition).
Test procedure ..... :	PEEM103
Report template No ..... :	FDT08_14

INDEX

Competences and guarantees

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 programme 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.

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 following AT4 wireless's internal documents:

1. PODT000: Procedure for the measure uncertainty calculation.

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
39342C/01	MICOACH SMART RUN. Fitness Monitor	G76792	010813060000087	2013-07-02

Auxiliary element used with the sample S/01:

Control Nº	Description	Model	Serial Nº	Date of reception
39342/02	Charger base	---	B01-0008	2013-07-02

Testing period

The performed test started on 2013-07-02 and finished on the 2013-07-03.

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

Summary

Considering the results of the performed test according to standard **FCC Rules and Regulations 47 CFR Chapter I Part 15 Subpart B (10-01-10 Edition),** the items under test are **IN COMPLIANCE** with the requested specifications specified in the standard.

NOTE: The results presented in this Test Report apply only to the particular item under test established in page 1 of this document, as presented for test on the date(s) shown in section, "USAGE OF SAMPLES, TESTING PERIOD AND ENVIRONMENTAL CONDITIONS".

Remarks and comments

The tests have been realized by the technical personnel: Antonio Jurado & Pedro Manuel Valenzuela Comino.

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 veredicts

Not applicable ..... : NA

Pass..... : P

Fail ..... : F

Not measured..... : NM

List of equipment used during the test

CONTROL NUMBER	DESCRIPTION	MANUFACTURER	MODEL	LAST CALIBRATION	NEXT CALIBRATION
1999	EMI Receptor	ROHDE & SCHWARZ	ESIB 26	2011-11-03	2013-11-03
2942	EMI Receptor	ROHDE & SCHWARZ	ESU 40	2012-03-05	2014-03-05
245	Horn Antenna	HEWLETT PACKARD	11966E	2011-03-18	2014-03-18
246	Horn Antenna	HEWLETT PACKARD	11966E	2013-03-06	2015-03-06
1658	RF Amplifier	SCHAFFNER	CPA9231A	2013-06-17	2015-06-17
3541	Bilog Hybrid antenna	SUNOL SCIENCES CORPORATION	JB6	2012-06-01	2015-06-01
3556	Thermohygrograph	T&D	TR-72W	2012-11-30	2013-11-30
3822	Horn Antenna	ROHDE & SCHWARZ	HF907	2010-11-03	2013-11-03

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 USB port. GPS ON.
OM#02	EUT ON. Equipment charging battery by USB port. WiFi in communication mode. GPS ON.
OM#03	EUT ON. Equipment charging battery by USB port. Bluetooth in communication mode. GPS ON.

RADIATED EMISSION. ELECTROMAGNETIC FIELD MEASURE.

LIMITS:	Product standard:	FCC RULES AND REGULATIONS 47 CFR PART 15, SUBPART B
	Test standard:	FCC RULES AND REGULATIONS 47 CFR PART 15, SUBPART B

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 & IC RSS-Gen Issue 2, June 2007 in the frequency range 30 MHz to 25 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

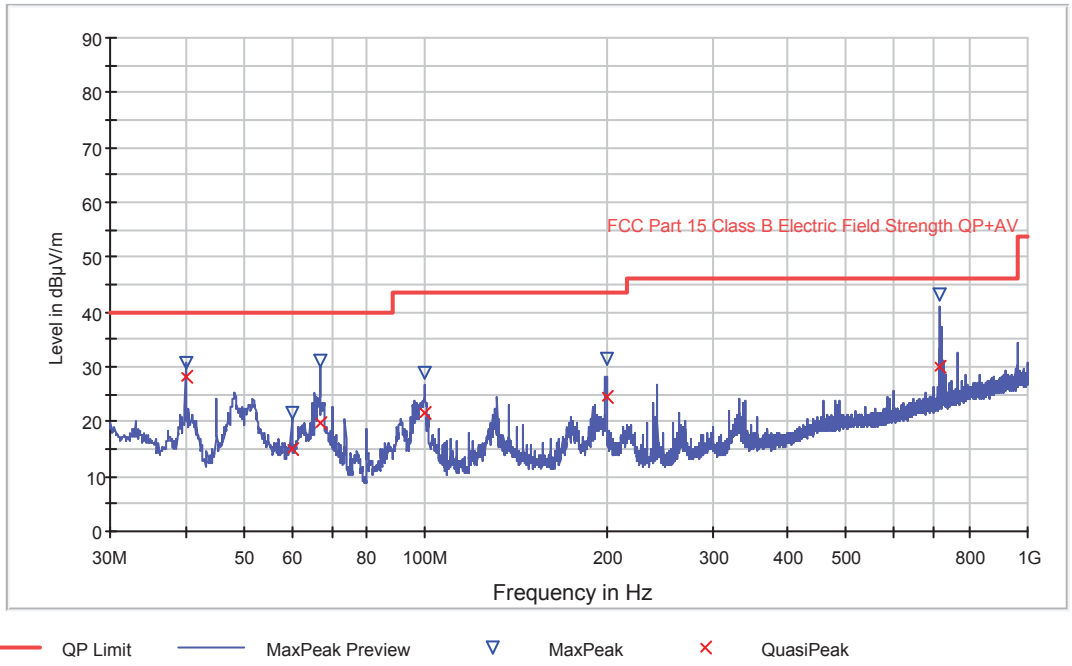
TESTED SAMPLES:	S/01
TESTED OPERATION MODES:	OM#01
TEST RESULTS :	**CR**mmnn: CR, Radiation Condition; mm: Sample number; nn: Operation mode, xx: Polarisation.

CRmmnn	Description	Result
CR0101	EUT ON. Idle Bluetooth. Range 30MHz-1 GHz.	P
CR0101_RA1_PH	EUT ON. Idle Bluetooth. Range 1-18 GHz. Horizontal Pol.	P
CR0101_RA1_PV	EUT ON. Idle Bluetooth. Range 1-18 GHz. Vertical Pol.	P
CR0101_RA2_PH	EUT ON. Idle Bluetooth. Range 18-26 GHz. Horizontal Pol.	P
CR0101_RA2_PV	EUT ON. Idle Bluetooth. Range 18-26 GHz. Vertical Pol.	P

Radiated Emission: CR0101 (30MHz to 1GHz)

Project:	39342REM.002
Company:	ELEKTROBIT
Sample:	S/01
Operation mode:	OM#01
Mode:	EUT ON. Equipment charging battery by USB. GPS ON.

ER FCC Class B Bilog Hybrid



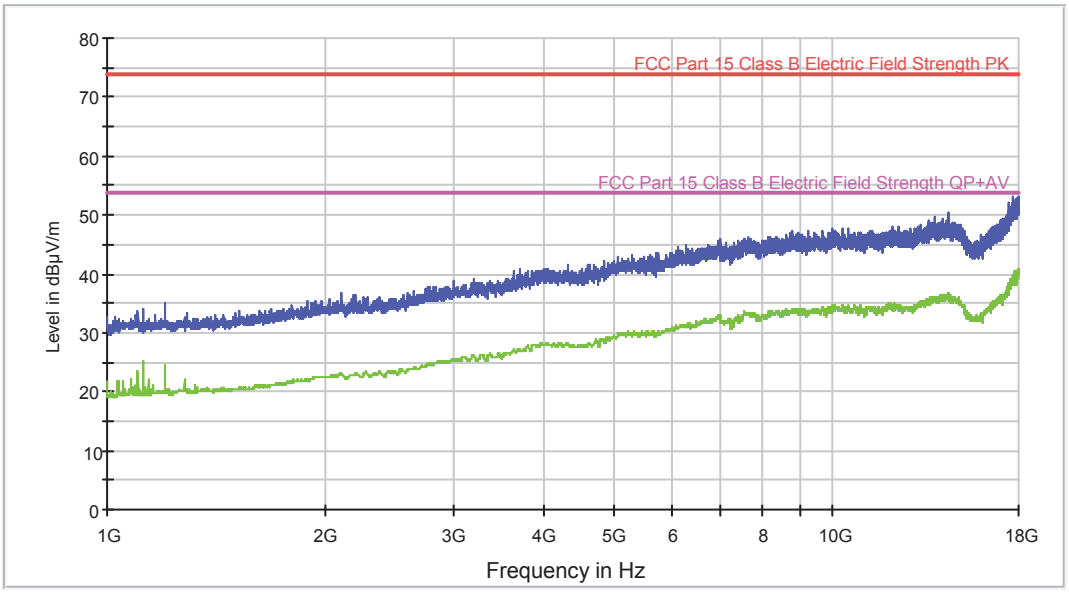
Maximizations

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)
40.000000	30.7	28.3	315.0	V	15.0
60.000000	21.7	14.9	189.0	V	230.0
66.900000	31.0	19.6	210.0	V	-3.0
99.600000	29.1	21.7	120.0	V	88.0
200.000000	31.3	24.5	155.0	H	180.0
715.400000	43.1	30.0	340.0	H	192.0

Radiated Emission: CR0101_RA1_PH (1 – 18 GHz)

Project:	39342REM.002
Company:	ELEKTROBIT
Sample:	S/01
Operation mode:	OM#01
Mode:	EUT ON. Equipment charging battery by USB. GPS ON. Horizontal polarization.

FCC 1-18GHz class B ESIB Horn0245 AMP3783



MaxPeak
FCC Part 15 Class B Electric Field Strength PK

Average
FCC Part 15 Class B Electric Field Strength QP+AV

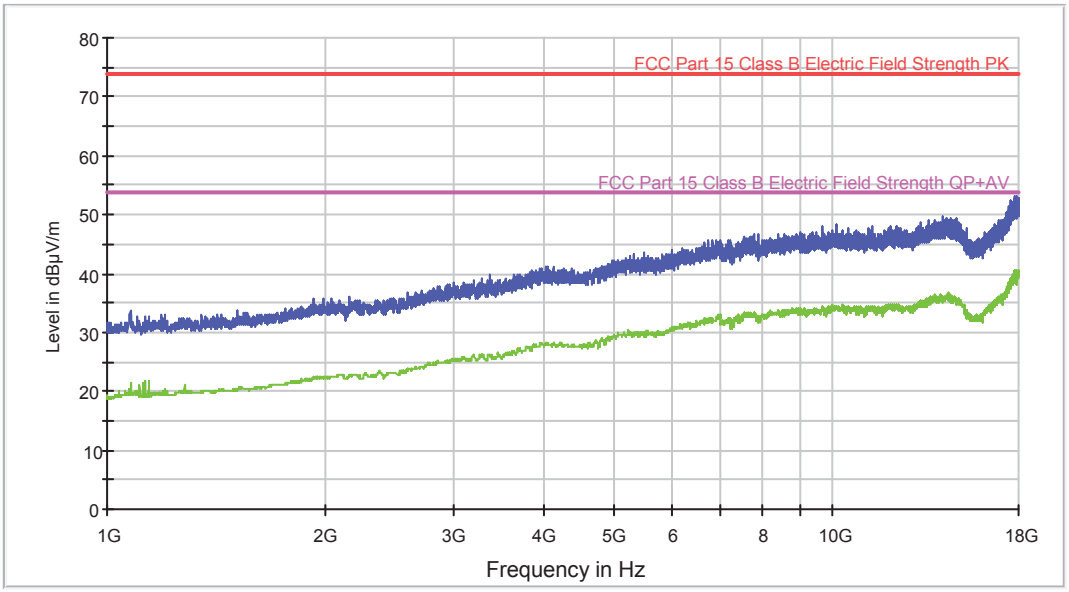
Max PK&AVG

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
1200.000000	35.1	24.6
1745.000000	34.1	21.3
2108.000000	36.8	22.9
2994.000000	38.8	25.4
3691.000000	41.0	27.4
5271.000000	43.2	29.7
7543.000000	46.0	33.3
9965.000000	47.5	34.2
13216.000000	48.4	35.2
17697.000000	53.2	39.8

Radiated Emission: CR0101_RA1_PV (1 – 18 GHz)

Project:	39342REM.002
Company:	ELEKTROBIT
Sample:	S/01
Operation mode:	OM#01
Mode:	EUT ON. Equipment charging battery by USB. GPS ON. Vertical

FCC 1-18GHz class B ESIB Horn0245 AMP3783



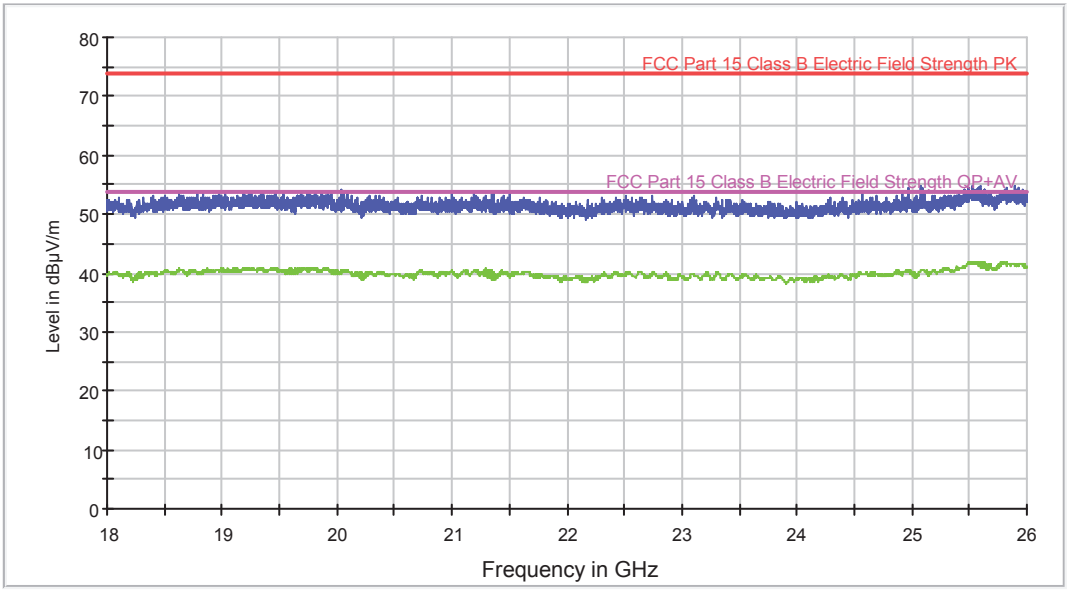
Max PK&AVG

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
1076.000000	33.7	19.6
1762.000000	34.1	21.3
2159.000000	36.2	22.7
2995.000000	38.5	25.4
4040.000000	41.4	28.0
5482.000000	43.7	29.8
7516.000000	46.2	33.0
9667.000000	48.0	34.1
13202.000000	48.8	35.0
17881.000000	53.3	40.4

Radiated Emission: CR0101_RA2_PH (18 – 26 GHz)

Project:	39342REM.002
Company:	ELEKTROBIT
Sample:	S/01
Operation mode:	OM#01
Mode:	EUT ON. Equipment charging battery by USB. GPS ON. Horizontal polarization.

FCC 18-26GHz class B ESIB Horn1920 AMP1975



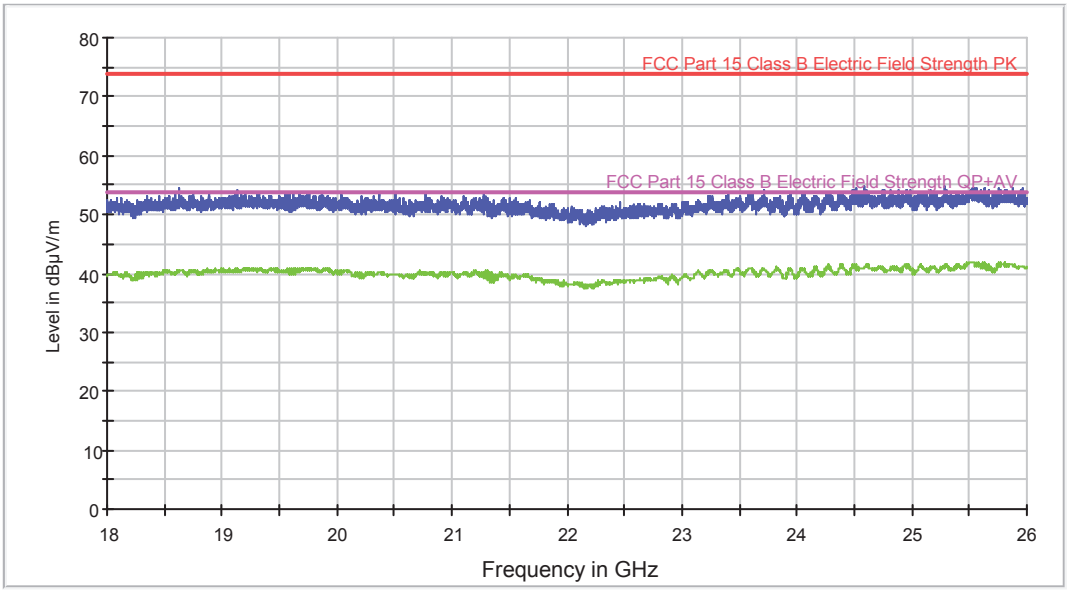
Max PK&AVG

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
18624.000000	53.5	40.4
19364.000000	53.6	40.5
20046.000000	54.1	40.4
20338.000000	53.1	39.6
21194.000000	53.7	40.4
22312.000000	52.7	39.9
22745.000000	53.2	39.9
23297.000000	52.6	39.7
24978.000000	54.4	40.5
25898.000000	54.9	41.5

Radiated Emission: CR0101_RA2_PV (18 – 26 GHz)

Project:	39342REM.002
Company:	ELEKTROBIT
Sample:	S/01
Operation mode:	OM#01
Mode:	EUT ON. Equipment charging battery by USB. GPS ON. Vertical

FCC 18-26GHz class B ESIB Horn1920 AMP1975



Max PK&AVG

Frequency (MHz)	MaxPeak-ClearWrite (dBµV/m)	Average-ClearWrite (dBµV/m)
18633.000000	54.4	40.6
19126.000000	54.2	40.5
19671.000000	53.7	40.6
20767.000000	53.7	39.7
21282.000000	53.3	40.1
21678.000000	52.4	39.6
23236.000000	53.0	40.4
23715.000000	54.0	40.9
24593.000000	54.8	41.1
25283.000000	54.8	41.1

CONTINUOUS CONDUCTED EMISSION ON POWER LEADS

LIMITS:	Product standard :	FCC RULES AND REGULATIONS 47 CFR PART 15, SUBPART B (10-01-12 ED)
	Test standard :	FCC RULES AND REGULATIONS 47 CFR PART 15, SUBPART B (10-01-12 ED)

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 & IC RSS-Gen Issue 2, June 2007 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

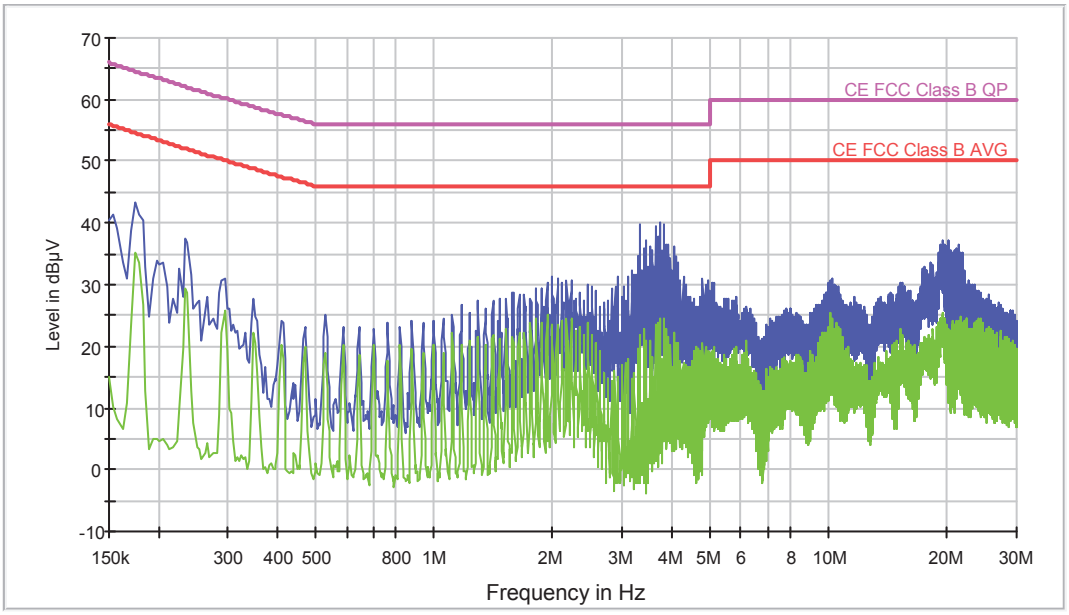
TESTED SAMPLES:	S/01
TESTED OPERATION MODES:	OM#01
TEST RESULTS :	CCmmnnhh: CC, Conducted Condition; mm: Sample number; nn: Operation mode; hh: wire

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

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

Project: 39342REM.002
Company: ELEKTROBIT
Sample: S/01
Operation mode: OM#01
Description: EUT ON. Equipment charging battery by USB port. GPS ON. Neutral Noise

EC FCC Class B ESPI CC



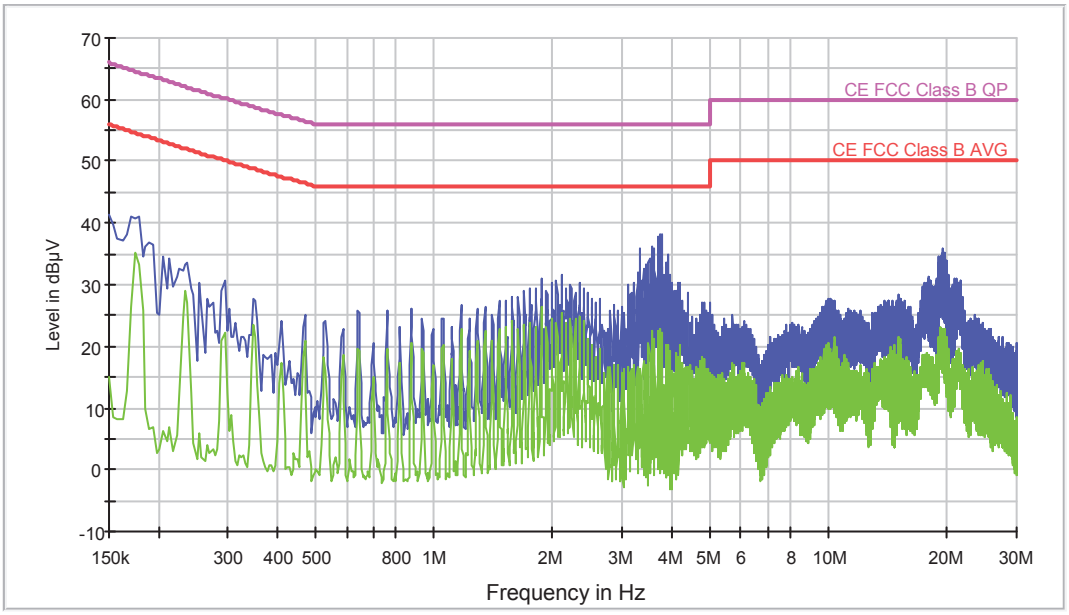
Max Peak

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.174000	43.4	35.1
3.754000	40.1	24.3
6.158000	26.4	20.8
10.202000	30.9	24.3
14.302000	28.5	18.3
17.606000	32.9	18.8
19.430000	37.1	22.7
21.322000	36.5	21.4
24.058000	28.9	14.2
27.126000	27.0	19.6

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

Project: 39342REM.002
Company: ELEKTROBIT
Sample: S/01
Operation mode: OM#01
Description: EUT ON. Equipment charging battery by USB port. GPS ON. Phase Noise

EC FCC Class B ESPI CC



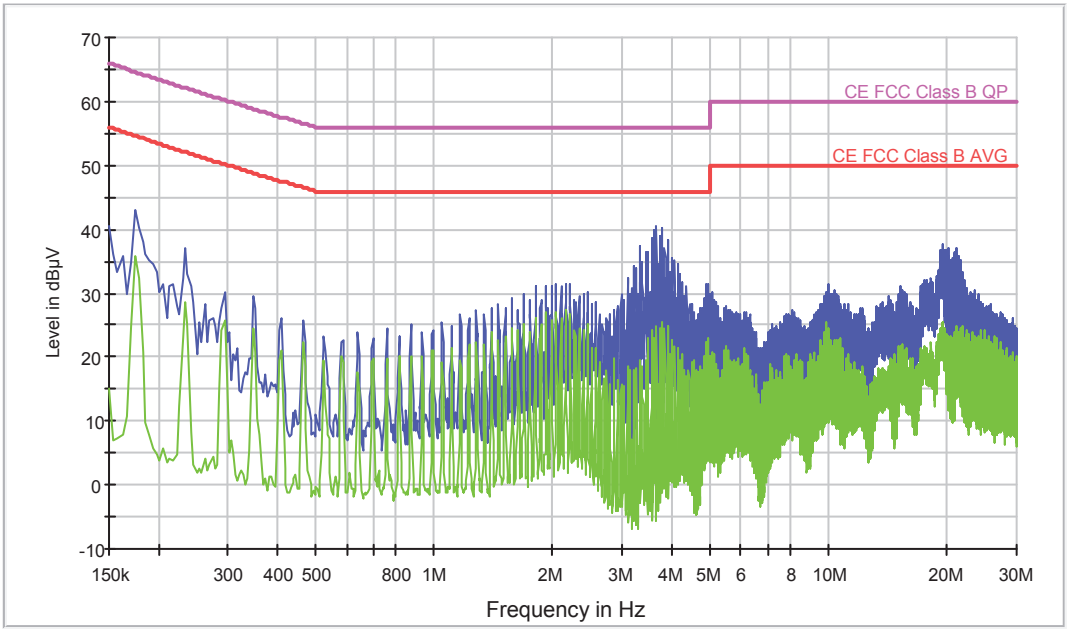
Max Peak

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.150000	41.5	15.0
3.802000	38.0	22.3
8.066000	23.7	15.1
10.114000	27.8	18.0
13.794000	27.5	18.3
17.842000	31.3	18.7
19.398000	35.9	19.9
21.150000	31.0	18.2
24.586000	23.9	13.9
27.734000	21.7	7.2

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

Project: 39342REM.002
Company: ELEKTROBIT
Sample: S/01
Operation mode: OM#02
Description: EUT ON. Equipment charging battery by USB port. WiFi in communication mode. GPS ON. Neutral Noise

EC FCC Class B ESPI CC



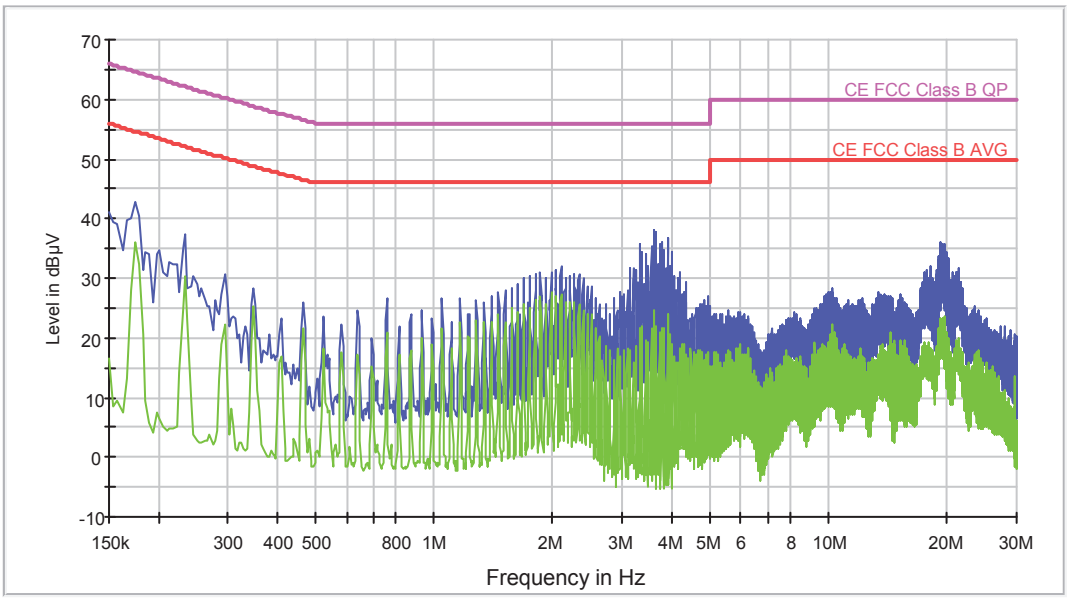
Max Peak

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.174000	43.0	35.9
3.674000	40.6	25.0
8.106000	27.3	17.6
10.030000	31.4	24.6
14.230000	29.6	18.1
17.786000	32.1	21.4
19.458000	37.7	23.8
21.086000	37.1	23.7
24.058000	29.4	15.5
27.334000	27.0	20.6

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

Project: 39342REM.002
Company: ELEKTROBIT
Sample: S/01
Operation mode: OM#02
Description: EUT ON. Equipment charging battery by USB port. WiFi in communication mode. GPS ON. Phase Noise

EC FCC Class B ESPI CC



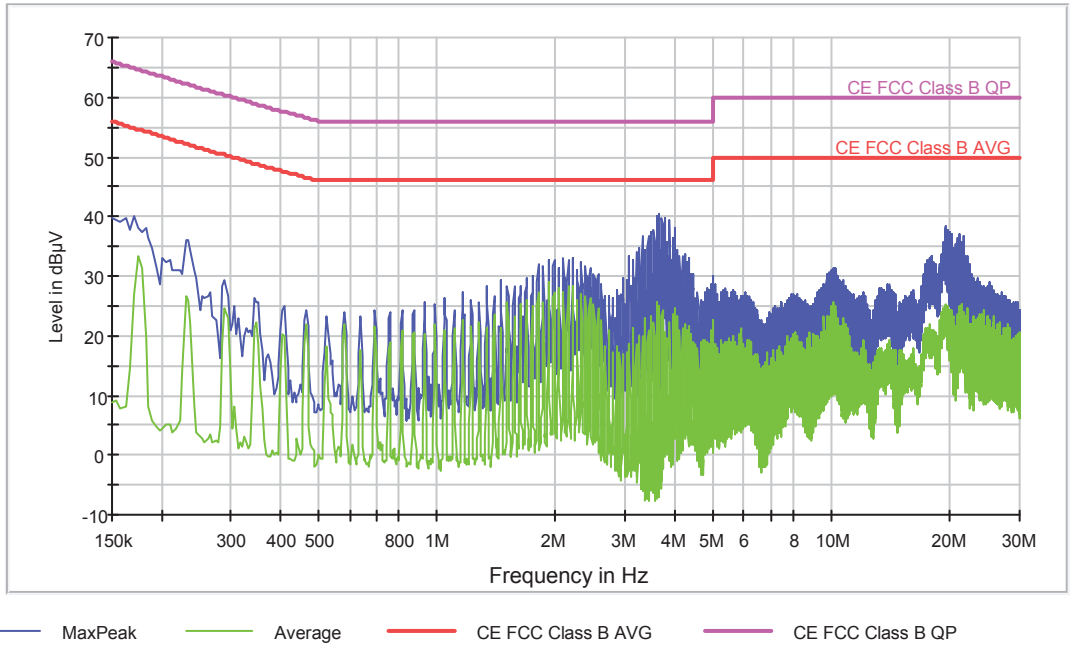
Max Peak

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.174000	42.6	36.0
3.610000	38.0	24.5
8.154000	24.2	15.8
10.190000	28.4	22.4
13.334000	27.6	16.6
17.746000	31.4	17.4
19.270000	36.0	22.1
21.302000	31.7	20.1
24.094000	23.9	14.3
27.294000	21.9	10.2

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

Project: 39342REM.002
Company: ELEKTROBIT
Sample: S/01
Operation mode: OM#03
Description: EUT ON. Equipment charging battery by USB port. Bluetooth in communication mode. GPS ON. Neutral Noise

EC FCC Class B ESPI CC



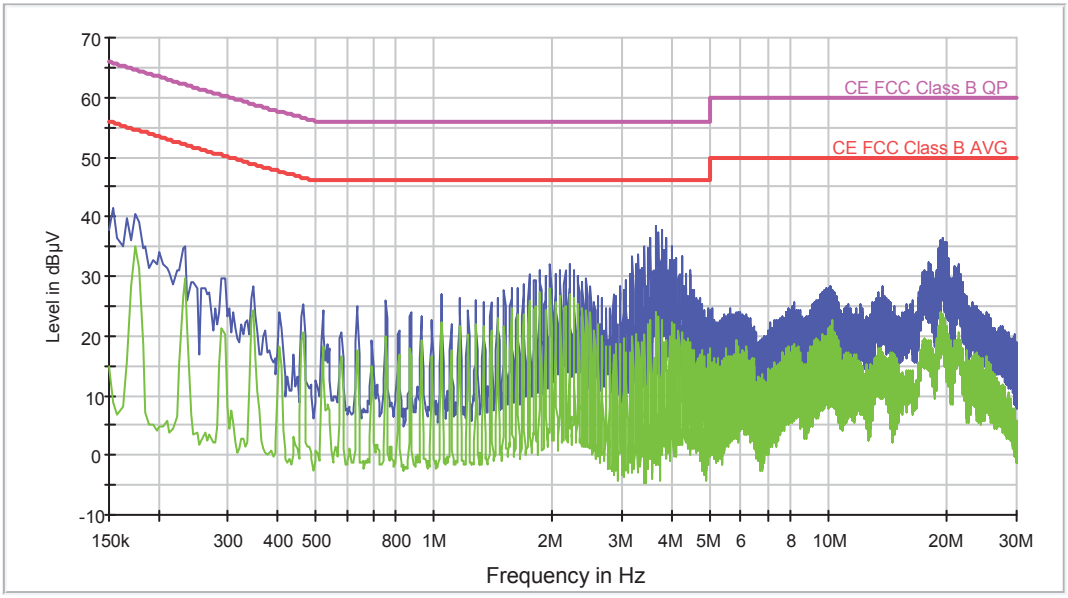
Max Peak

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.170000	40.0	27.0
3.662000	40.5	25.1
7.962000	27.0	20.1
10.054000	31.4	25.0
13.890000	28.6	16.9
18.010000	33.3	20.2
19.398000	38.3	24.6
21.074000	36.9	23.2
25.210000	29.1	22.7
27.214000	26.7	13.4

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

Project: 39342REM.002
Company: ELEKTROBIT
Sample: S/01
Operation mode: OM#03
Description: EUT ON. Equipment charging battery by USB port. Bluetooth in communication mode. GPS ON. Phase Noise

EC FCC Class B ESPI CC



Max Peak

Frequency (MHz)	MaxPeak-ClearWrite (dBµV)	Average-ClearWrite (dBµV)
0.154000	41.4	8.8
3.658000	38.5	24.1
8.190000	25.5	18.1
10.162000	28.4	21.6
13.646000	28.4	15.2
17.878000	32.5	18.8
19.506000	36.3	23.5
21.254000	32.1	18.1
24.366000	24.1	9.9
27.662000	21.6	8.4