



CE-Mesures

Rapport d'essais / Test Report

N°: 20020-FCC-1

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SMEE

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FCC Registration Number: 0020356952 (FRN) Test Firm Registration Number: 171131

IC Company Number: 9545A

Matériel testé :
Equipment under test: **TXUSB-NB1**

Constructeur:
Manufacturer: **ZEPHYR AUDIO**
58, rue Pottier
78510 Le Chesnay - France

Rapport délivré à :
Issued to: **ZEPHYR AUDIO (M. Adrien Stachowicz)**
58, rue Pottier
78510 Le Chesnay - France

Référence de la proposition :
Proposal number: 102011-20020


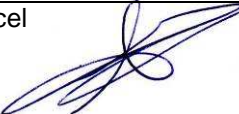
Date de l'essai :
Date of test: November 21st to 22nd, 2011

Objectif des essais :
Test purpose: Qualification FCC suivant les normes :
FCC qualification according to standards:
CFR 47, Part 15 B / C

Lieu du test:
Test location: SMEE CE-Mesures
38 VOIRON - France

Test réalisé par :
Test realized by: Laurent CHAPUS

Conclusion :
Conclusion: L'équipement satisfait aux prescriptions des normes citées en référence.
The appliance complies with requirements of above mentioned standards.

Ed.	Date	Modifications Pages	Written by: Visa	Approved by: Visa
1	December 21 st , 2011	Initial Edition	Laurent CHAPUS	Régis Ancel
2	January 10 th , 2012	P6 & P16 (Correction & added information)	 Digitally signed	 Digitally signed

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1. Test program

• References

FCC CFR 47, PART 15, Subpart B and C

ANSI C63.4 (2009). American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.

ANSI C63.10 (2009) American National Standard for Testing Unlicensed Wireless Devices.

Requirements for intentional radiator.

Chapter 15.247 of Subpart C (Operation within the band 2400-2483.5 MHz). Digitally modulated radiators.

FCC Guidance "Measurement of Digital Transmission Systems operating under Section 15.247".

• Test Results

TEST	Paragraph number (FCC Part 15.247)	Spec. (FCC Part 15.247)	RESULTS (comments)
Power line conducted emissions	15.107 / 15.207 (a)	Table 15.207 (a)	PASS
Unintentional radiations	15.109/ 15.209	Measure at 3m 30MHz-88MHz : 40 dBμV/m 88MHz-216MHz : 43.5 dBμV/m 216MHz-960MHz : 46.0 dBμV/m Above 960MHz : 54.0 dBμV/m	PASS
Minimum 6dB bandwidth	15.247 (a)(2)	Shall be at least 500kHz	PASS
Peak Output Power	15.247 (b) (3)	1W max.	PASS
Spurious emissions	15.247 (d)	Table 15.209 (a) for restricted bands	PASS
Peak Power Spectral Density	15.247 (e)	Shall not be greater than 8dBm in any 3 kHz band	PASS

PASS: EUT complies with standard's requirement

FAIL: EUT does not comply with standard's requirement

NA: Not Applicable

NP: Test Not Performed

• General conclusion:

Measures and tests performed on the sample of the product TXUSB-NB1, in configuration and description presented in this test report, show compliance with standards FCC CFR 47, PART 15, Subpart B and C.



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2. Equipment Under Test (EUT)

**Nom /
Identification**

TXUSB-NB1

Ref N°: #1
FCC ID: A3BTXUSB-NB1

**Alimentation /
Power supply**

USB 5V

**Auxiliaires /
Auxiliaries**

Eee PC 900 ASUS (Windows XP)

Sn: 870AAQ295034

**Entrées-Sorties /
Input / Output**

	Câbles pour essai / Cables for test	Blindé / Shielded	Prévu pour >3m / Intended for >3m
USB (Ext. cord)	1.2m	Yes	No

(Used for radiated meas.)

**Version programme /
Firmware version**

N.C

**Mode de fonctionnement /
Running mode**

The tested samples can be set in following mode:

- Continuous transmit mode, unmodulated or modulated on channel 0 to 15
- Continuous receive mode, unmodulated or modulated on channel 0 to 15
- Normal operation of the equipment (Transmission of MP3 audio file)

**Programme de test /
Test program**

KDT 1.11.3 for channel and operational mode programming

**Information sur l'équipement /
Equipment information**

- The equipment is fitted with the Kleer KLR3012 system-on-chip solution
- Frequency band: 2400 to 2483.5 MHz (Transmit and receive)
 - Rated power (conducted): +1.5dBm
 - Number of channel: 16 (2403MHz to 2478MHz, separation 5MHz)
 - Modulation: MSK, not frequency hopping
 - Data rate: 2.37Mb/s
 - Local oscillator: 22.5792MHz (Receiver)
 - Antenna type: PCB, ALA131C3 (AMOTECH), 2.8dBi peak antenna gain
 - Equipment designed for continuous operation
 - Rated Occupied Bandwidth: 2.63MHz (-20dB occupied bandwidth)

Special accessories

None

3. Test conditions

Relative Humidity : 55%
Temperature : 20°C

Power supply voltage:

Equipment under test: 5Vdc from USB port

Mains : 110V/60Hz

4. Modifications of the equipment under test

No modification applied to the tested equipment during tests.



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5. Conducted Emission Measurement

TEST: Limits for conducted disturbance 150kHz – 30MHz (Clause 15.207 (a))				Verdict
<u>Method:</u> The LISN is placed 0,8 m from the boundary of the unit under test and bonded to a ground reference plane. This distance was between the closest points of the AMN and the EUT. All other units of the EUT and associated equipment were at least 0,8 m from the AMN. All power was connected to the system through Artificial Mains Network (AMN). Conducted voltage measurements on lines were made at the output of the LISN. The LISN (measure) is 50Ω / 50μH. The EUT is 80cm above the ground reference plane and 40cm from the vertical ground plane. The AC power cable is 1m length.				Pass
Laboratory Parameters:		Required prior to the test		During the test
Ambient Temperature		10 to 40 °C		20°C
Relative Humidity		10 to 90 %		55%
Fully configured sample scanned over the following frequency range	Frequency range on each side of line		Measurement Point	
	150kHz to 30MHz		AC input port (110V)	
Running mode		Wireless transmission		
Limits for AC power port				
Frequency (MHz)	Limit dB (μV)			
	Quasi-Peak	Result	Average	Result
0.15 – 0.50	66 à 56	Pass	56 à 46	Pass
0.50 – 5	56	Pass	46	Pass
5 – 30	60	Pass	50	Pass
Supplementary information: Test location: SMEE – CE Mesures / Test date: November 22 nd , 2011 Power supply voltage: 110V / 60Hz				

Test Equipment Used					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Attenuator / limiter / filter	SMEE	ATT#1	ATT-101-004	2011/3	2012/3
Cable RF	Div	2m / BNC	CAB-101-005	2011/3	2012/3
LISN (50Ω / 50μH)	AFJ	LS16C	RSI-101-001	2011/2	2012/2
LISN (50Ω / 50μH)	AFJ	LS16C	RSI-101-002	2011/2	2012/2
Reference comb gen.	SMEE	EMC-250K	REF-111-001	-	-
Measuring receiver	Rohde & Schwarz	ESL3	REC-101-001	2010/3	2012/3

Photo of test setup for Mains Terminal Disturbance Voltage

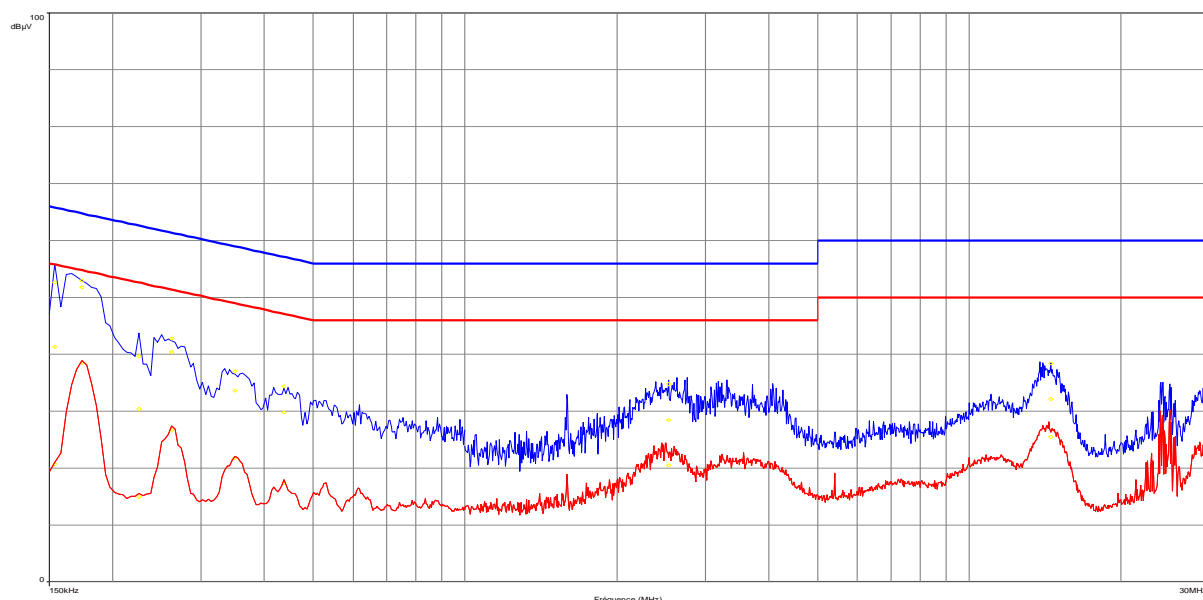


Measurement on AC mains

Tabulated Results for Mains Terminal Disturbance Voltage on AC port

FREQ (MHz)	Meas. PK (dBμV)	Mes. QP (dBμV)	LIMIT QP (dBμV)	Margin QP (dB)	Mes. AV (dBμV)	LIMIT AV (dBμV)	Margin AV (dB)	Line
0.154	52.6	41.3	65.8	-24.4	20.7	55.8	-35.1	L1
0.174	53.0	51.7	64.8	-13.1	38.5	54.8	-16.3	L1
0.226	39.6	30.4	62.6	-32.2	15.0	52.6	-37.6	L1
0.262	42.7	40.4	61.4	-20.9	26.6	51.4	-24.8	L1
0.350	37.0	33.6	59.0	-25.3	21.8	49.0	-27.2	L1
0.438	34.4	29.8	57.1	-27.3	17.4	47.1	-29.7	L1
2.536	34.8	28.4	56.0	-27.6	20.5	46.0	-25.5	L1
14.528	38.4	32.1	60.0	-27.9	25.5	50.0	-24.5	L1
0.170	53.7	52.0	65.0	-13.0	37.9	55.0	-17.0	Neutral
0.258	42.8	40.2	61.5	-21.3	26.0	51.5	-25.5	Neutral
0.354	36.9	33.3	58.9	-25.6	23.0	48.9	-25.9	Neutral
0.438	35.4	31.8	57.1	-25.3	21.4	47.1	-25.7	Neutral
14.304	36.9	31.2	60.0	-28.9	25.1	50.0	-25.0	Neutral
Frequency band investigated:			150kHz-30MHz					
RBW:			9kHz					
Voltage:			110V / 60Hz					
Limit:			15.207 a)					
Final measurement detector:			Quasi-Peak and Average					
Wide Measurement Uncertainty:			± 5dB (k=2)					

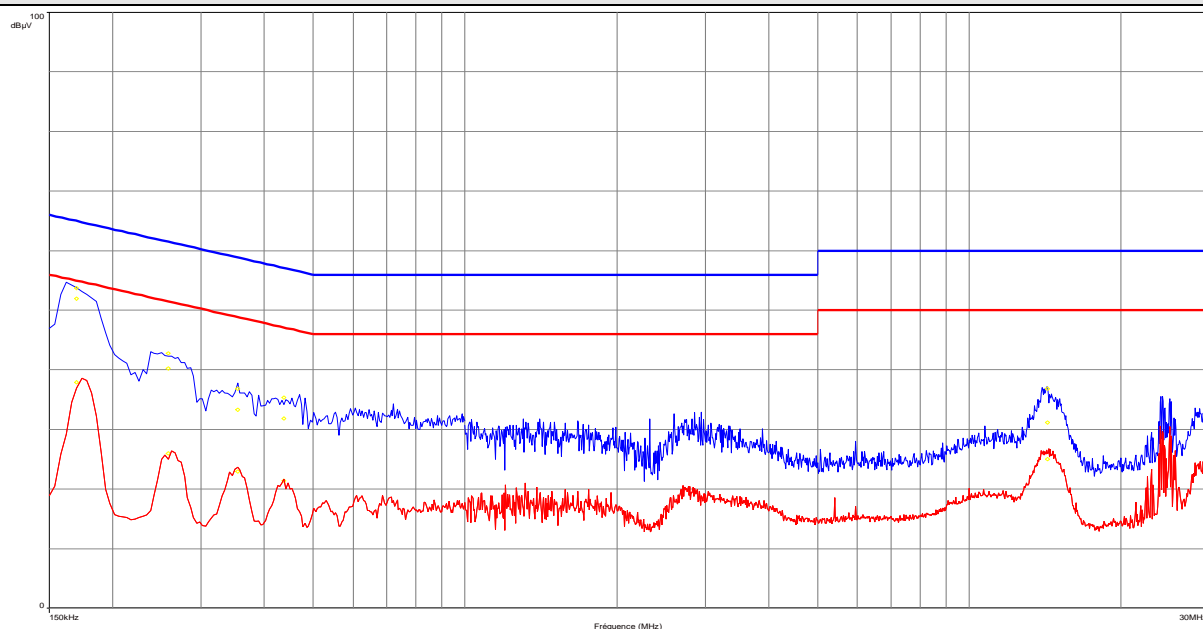
Graphical representation of Conducted Disturbance Measurement (Peak and Average detection) AC port, Line L1



----: Peak

----: Average

Graphical representation of Conducted Disturbance Measurement (Peak and Average detection) AC port, Neutral



----: Peak

----: Average

6. Radiated Emission Measurement (Unintentional Radiation)

TEST: Limits for radiated disturbance 30MHz – 1GHz			Verdict
<p><u>Method:</u> Measurements were made in a 3-meter Open Area Test Site (OATS) that complies to CISPR 16. Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 3 meter. The EUT was rotated 360° about its azimuth with the receive antenna located at various heights in horizontal and vertical polarities. Final measurements (Peak, Quasi-peak) were then performed by rotating the EUT 360° and adjusting the receive antenna height from 1 to 4 m. All frequencies were investigated in both horizontal and vertical antenna polarity, where applicable.</p> <p>A pre-scan frequency identification of the EUT has been performed in a GTEM cell. The measured radiated field of the EUT is correlated to a measurement distance of 3m. (3-axis algorithm)</p> <p>The pre-characterization graphs are obtained in PEAK detection.</p>			Pass
Laboratory Parameters:	Required prior to the test	During the test	
Ambient Temperature	10 to 40 °C	21°C	
Relative Humidity	10 to 90 %	55%	
Fully configured sample scanned over the following frequency range	Frequency range on each side of line	Measurement Point	
	30MHz – 1GHz	3 m measurement distance	
Running mode	EUT connected to PC (No intentional emission)		
Limits – FCC Part 15.109 / 209			
Frequency (MHz)	Limit (dBµV/m)		
	Level (Detector)	Results	
30 to 88	40.0 (QP)	Pass	
88 to 216	43.5 (QP)	Pass	
216 to 960	46.0 (QP)	Pass	
Above 960	54.0 (QP)	Pass	
Supplementary information: Test location: SMEE – CE Mesures / Test date: November 21 st , 2011 Power supply voltage: 230V / 50Hz (PC laptop)			

Test Equipment Used					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Log-periodic antenna	TDK	PLP3003	ANT-101-001	2011/8	2012/8
Biconnic antenna	COM-POWER	AB- 900	ANT-101-003	2011/8	2012/8
RF cable	Div	2m	CAB-101-011	2011/3	2012/3
RF cable	Div	OATS/25m	CAB-101-017	2011/3	2012/3
GTEM cell	TESEQ	750	GTE-101-001	2011/3	2012/3
OATS	Div	3 / 10m	SIT-101-001	2011/8	2012/8
Antenna mast	Innco- Systems	MA4000EP	MAT-101-001	-	-
Turntable	Innco- Systems	DS1200S	PLA-101-001	-	-
Measuring Rec	Rohde&Schwarz	ESL3	REC-101-001	2010/3	2012/3

Photo of test setup for Radiated Disturbance



Tabulated Results for Radiated Disturbance (3m measurement on Open Area Test Site)
30MHz-1GHz

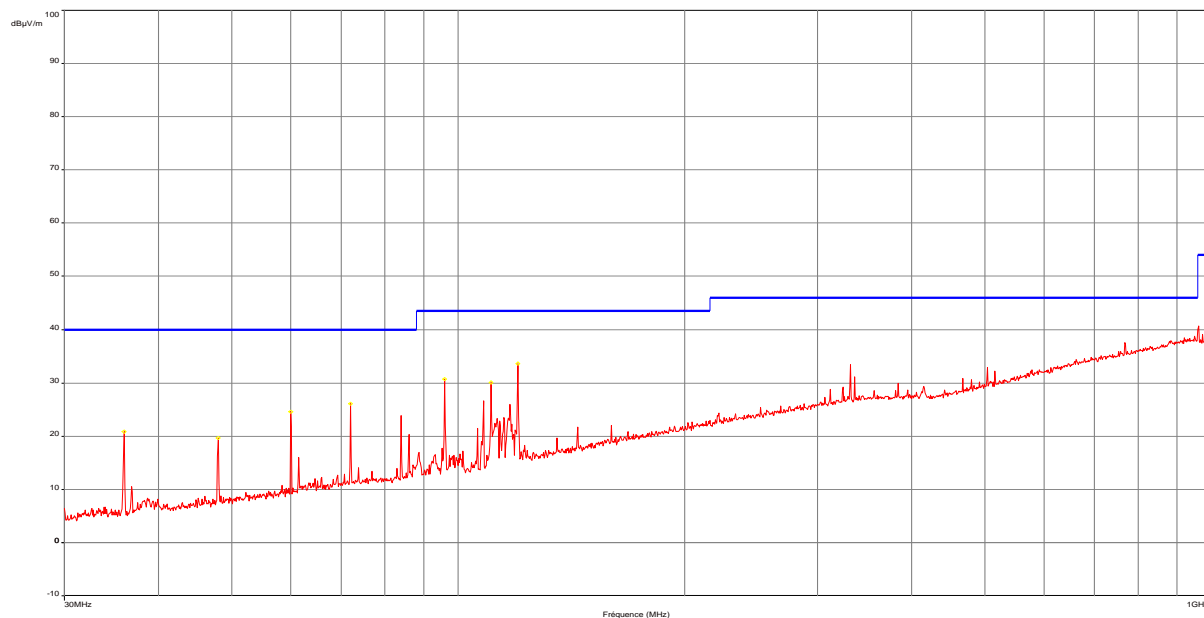
Test Frequency (MHz)	Meter Reading dB(μV)	Detector (Pk/QP/Av)	Polarity (V/H)	Azimuth (Degrees)	Antenna Height (cm)	Total Factor(dB)	Level dB(μV/m)	Limit dB(μV/m)	Margin (dB)
120.0	20.0	QP	V	270	100	14.8	34.8	43.5	8.7

Supplementary information:

Frequency list measured on the Open Area Test Site has been created with pre-scan results.

Frequency band investigated:	30MHz-1GHz
RBW:	120kHz
Measurement distance:	3m
Limit:	15.109
Final measurement detector:	Quasi-Peak
Wide Measurement Uncertainty:	± 5.2dB (k=2)
Field Strength Calculation:	<p>The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follow:</p> $FS = RA + AF + CF - AG$ <p>Where FS = Field Strength RA = Receiver Amplitude AF = Antenna Factor CF = Cable Factor AG = Amplifier Gain</p>

Graphical representation of Radiated Disturbance Measurement (Peak detection, GTEM pre-scan)



----- : Peak measure

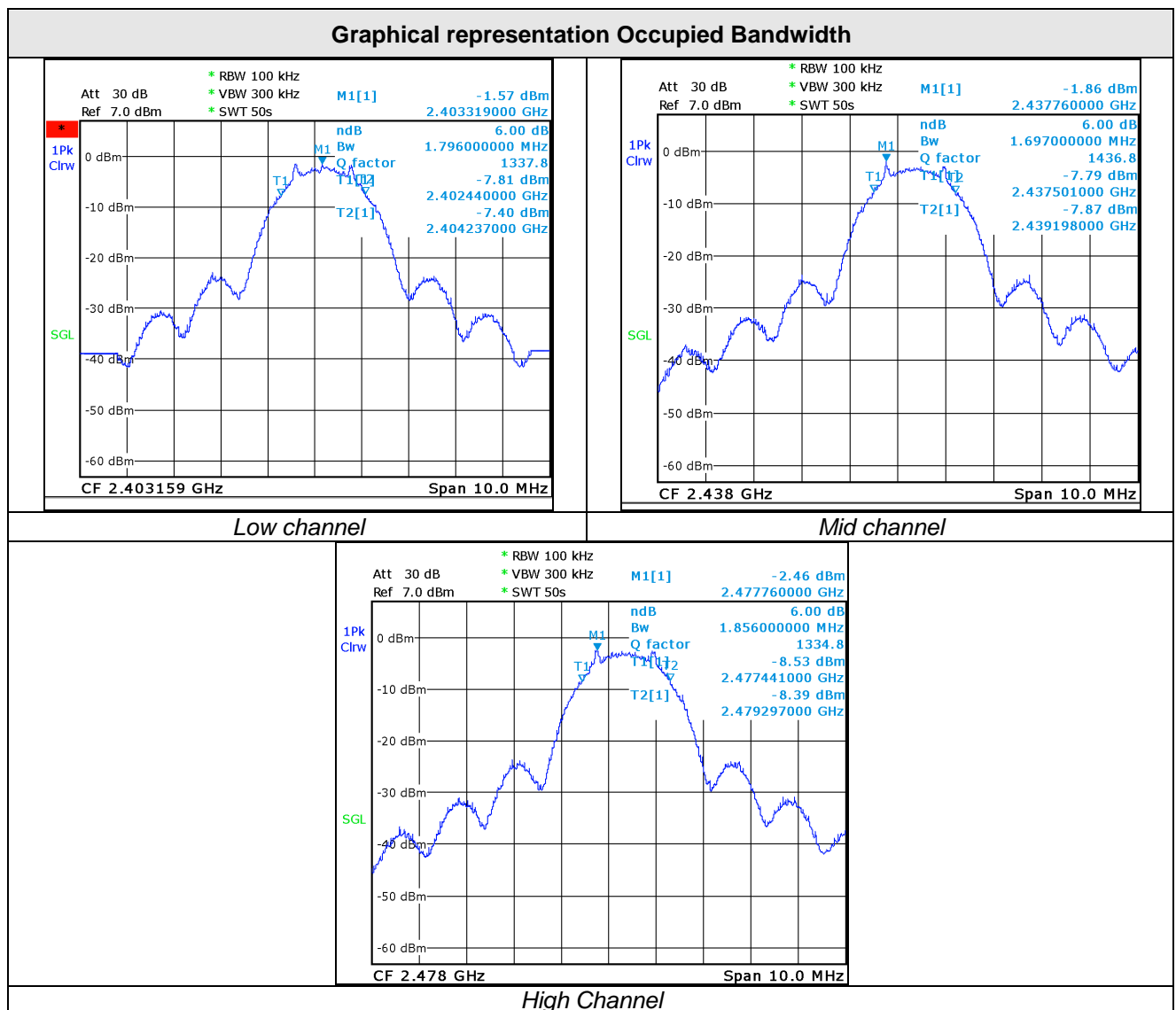
Frequency (MHz)	Level (dBμV/m)
36.00	20.8
48.00	19.6
60.00	24.6
72.00	26.0
96.00	30.7
120.00	33.6

Note: Pre-scan graph only for identification purpose.

7. Occupied bandwidth

TEST: Minimum 6dB bandwidth for system using Digital Modulation Techniques (Clause 15.247 (a) (2))	Verdict
<p>Method: Measurements were performed with peak detector using a 100kHz RBW. The VBW is set to 300kHz. The spectrum analyzer is connected via suitable means to the RF output of the tested equipment. The tested equipment is set to transmit operation with nominal modulation on lowest, middle and highest channel.</p> <p>Limits: The minimum 6 dB bandwidth shall be at least 500 kHz.</p> <p>Supplementary information: Test location: SMEE – CE Mesures / Test date: November 22st, 2011 Power supply voltage: 5V from USB port</p>	Pass

Test Equipment Used					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Measuring Rec.	Rohde&Schwarz	ESL3	REC-101-001	2010/3	2012/3





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Tabulated Results for Occupied Bandwidth

FREQ	6dB bandwidth	Limit	Result
(MHz)	(MHz)		
2403	1.796	Shall be > 0.5MHz	PASS
2438	1.697	Shall be > 0.5MHz	PASS
2478	1.856	Shall be > 0.5MHz	PASS



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8. Maximum Peak Conducted Output power

TEST: Maximum peak conducted output power (Clause 15.247 (b) (2))	Verdict
<p><u>Method:</u> Measurements were performed with peak detector using a 10MHz RBW. The VBW is set to 10MHz. The spectrum analyzer is connected via suitable means to the RF output of the tested equipment. (Conducted measurement). For field strength, the measure is performed on a 3m Open Area Test Site. The tested equipment is set to transmit operation with nominal modulation on lowest, middle and highest channel.</p> <p><u>Limits:</u> 1W or 30dBm (conducted) / 36dBm with antenna gain.</p>	Pass
<p>Supplementary information: Test location: SMEE – CE Mesures / Test date: November 22st, 2011 Power supply voltage: 5V from USB port</p>	

Test Equipment Used					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Measuring Rec.	Rohde&Schwarz	ESL3	REC-101-001	2010/3	2012/3
Log-periodic antenna	TDK	PLP3003	ANT-101-001	2011/8	2012/8
RF cable	Div	OATS/10m	CAB-101-020	2011/3	2012/3
OATS	Div	3 / 10m	SIT-101-001	2011/8	2012/8
Antenna mast	Innco- Systems	MA4000EP	MAT-101-001	-	-
Turntable	Innco- Systems	DS1200S	PLA-101-001	-	-
Reference comb gen.	SMEE	EMR-10M	REF-111-002	-	-

Tabulated Results for Maximum peak output power (Conducted measurement)			
FREQ (MHz)	Peak Power conducted (dBm)	Limit (dBm)	Result
2403	1.3	30.0	PASS
2438	1.7	30.0	PASS
2478	1.9	30.0	PASS

Tabulated Results for Maximum peak output power (Radiated measurement)				
FREQ (MHz)	Field Strength 3m (dBμV/m)	Calculated EIRP (dBm)	Limit (dBm)	Result
2403	100.4	5.0	36.0	PASS
2438	102.3	6.9	36.0	PASS
2478	100.9	5.5	36.0	PASS

Note: Field strength is measured on the Open Area Test Site at a distance of 3m. Three orthogonal axis measurement is performed for both horizontal and vertical antenna (measure) polarization in order to obtain the maximum peak field strength.

The power (EIRP) was calculated using the following equation:

$$\text{EIRP} = (E \times d)^2 / 30$$

Where D is the distance in meters from which the field strength was measured

E is the maximum field strength in V/m



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9. Spurious Emissions

TEST: Spurious Emissions			Verdict
<p>Method: Measurements were made in a 3-meter Open Area Test Site (OATS) that complies to CISPR 16 and ANSI C63.4 requirements. Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 3 meter. The EUT was rotated 360° about its azimuth with the receive antenna located at various heights in horizontal and vertical polarities. Final measurements (quasi-peak) were then performed by rotating the EUT 360° and adjusting the receive antenna height from 1 to 4 m. All frequencies were investigated in both horizontal and vertical antenna polarity, where applicable. EUT is placed 80cm above the ground reference plane.</p> <p>A pre-scan frequency identification of the EUT has been performed in a GTEM cell. The measured radiated field of the EUT is correlated to the corresponding measurement distance.</p> <p>The algorithm used for calculation is 3 axes measurement.</p> <p>The pre-characterization graphs are obtained in PEAK detection. For frequency above 1GHz, a manual scan is performed.</p>			Pass
Laboratory Parameters:	Required prior to the test	During the test	
Ambient Temperature	10 to 40 °C	21°C	
Relative Humidity	10 to 90 %	55%	
Fully configured sample scanned over the following frequency range	Frequency range on each side of line	Measurement Point	
	9kHz – 25GHz	3m distance	
Limits – Part 15C, clause 15.247 (d)			
<p>In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radiofrequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a).</p>			
<p>Supplementary information: Test location: SMEE – CE Mesures / Test date: November 22st, 2011 Power supply voltage: 5V from USB port</p>			

Test Equipment Used					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Log-periodic antenna	TDK	PLP3003	ANT-101-001	2011/8	2012/8
Biconnic antenna	COM-POWER	AB- 900	ANT-101-003	2011/8	2012/8
Horn antenna	COM-POWER	AH-118	ANT-101-004	2010/3	2013/3
RF cable	Div	2m	CAB-101-011	2011/3	2012/3
RF cable	Div	OATS/25m	CAB-101-019	2011/3	2012/3
RF cable	Div	OATS/10m	CAB-101-020	2011/3	2012/3
GTEM cell	TESEQ	750	GTE-101-001	2011/3	2012/3
OATS	Div	3 / 10m	SIT-101-001	2011/8	2012/8
Antenna mast	Innco- Systems	MA4000EP	MAT-101-001	-	-
Turntable	Innco- Systems	DS1200S	PLA-101-001	-	-
Measuring Rec	Rohde&Schwarz	ESL3	REC-101-001	2010/3	2012/3
Spectrum Analyzer	HP / Agilent	8563E	ASP-111-003	2010/9	2012/9
Pre-amplifier	PE	PE1524	PRE-101-002	2010/3	2012/3
Reference comb gen.	SMEE	EMR-10M	REF-111-002	-	-

Tabulated Results for Spurious Emissions – EUT emitting on low channel (2403MHz)

No	Frequency (MHz)	Measured field (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Peak / Average	Comments
1	2403	98.9	-	-	PK	Fundamental (100kHz)
2	4806	67.5	74.0	6.5	PK	Restricted band
	4806	52.5	54.0	1.5	AV	Restricted band
3	7209	35.6	78.9	43.3	PK	
4	9612	41.3	78.9	37.6	PK	

Tabulated Results for Spurious Emissions – EUT emitting on mid channel (2438MHz)

No	Frequency (MHz)	Measured field (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Peak / Average	Comments
1	2438	100.8	-	-	PK	Fundamental (100kHz)
2	4876	66.9	74.0	7.1	PK	Restricted band
	4876	51.9	54.0	2.1	AV	Restricted band
3	7314	35.6	74.0	38.4	PK	Restricted band
4	9752	41.3	80.8	39.5	PK	



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Tabulated Results for Spurious Emissions – EUT emitting on high channel (2478MHz)

No	Frequency (MHz)	Measured field (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Peak / Average	Comments
1	2478	99.4	-	-	PK	Fundamental (100kHz)
2	4956	66.0	74.0	8.0	PK	Restricted band
	4956	51.0	54.0	3.0	AV	Restricted band
3	7434	35.6	74.0	38.4	PK	Restricted band
4	9912	41.3	79.4	38.1	PK	

Note 1: Peak measurement with 100 kHz RBW and VBW when frequency outside restricted bands.

Peak measurement with 1MHz RBW and VBW when frequency in restricted bands.

Note 2: Average measurement with 1MHz RBW and 10Hz VBW when frequency in restricted bands.

(The average emissions were further correcting for the duty cycle of the EUT: -5.7dB)

Note 3: All other frequencies are not traceable

Note 4: Worst case measurement for three orthogonal axis of EUT, with or without USB extension cable.

Note 5: The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follow:

FS = RA + AF + CF – AG

Where FS = Field Strength

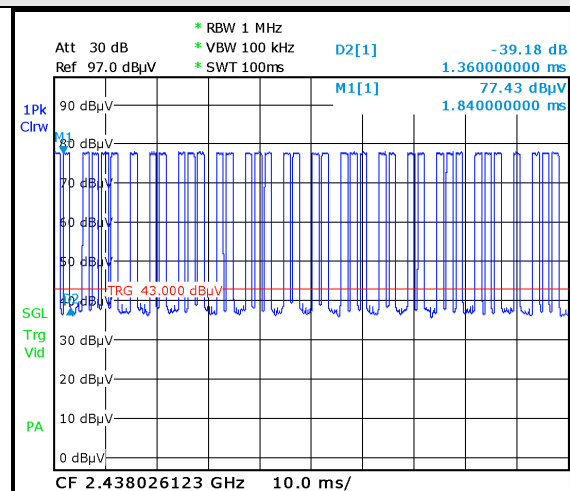
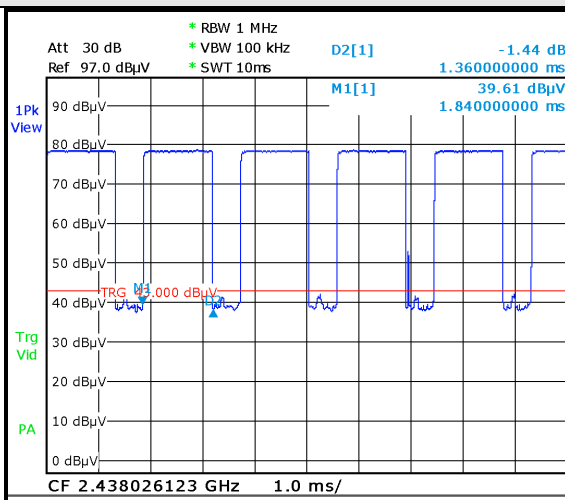
RA = Receiver Amplitude

AF = Antenna Factor

CF = Cable Factor

AG = Amplifier Gain

Graphical representation for Duty Cycle corrector factor

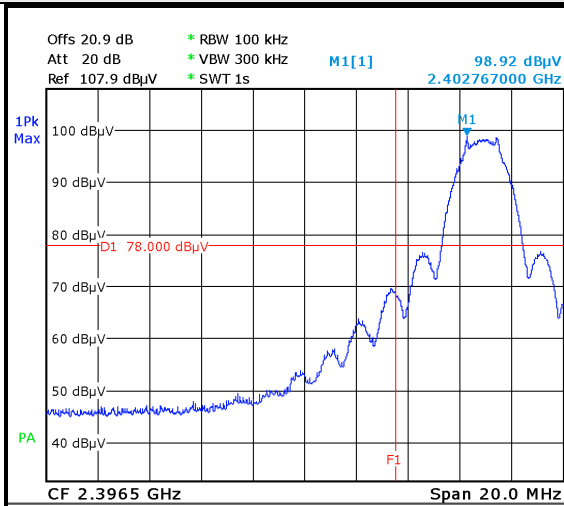


Pulse width : 1.36ms

Number of pulse within 100ms: 38

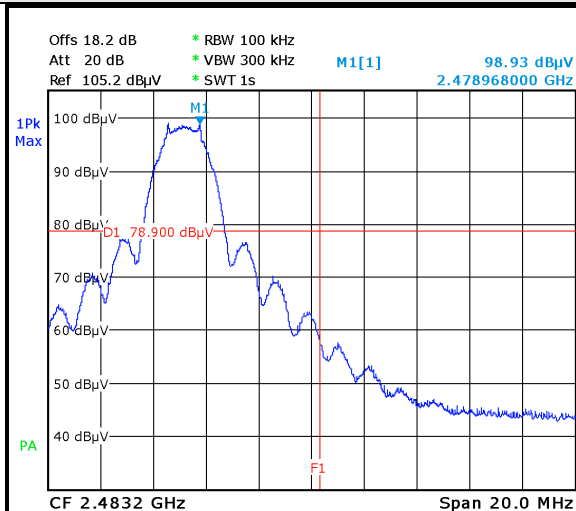
Duty cycle average factor = $20\log(1.36 \times 38 / 100) = -5.7\text{dB}$

Graphical representation of Bandedge compliance



Low bandedge compliance

F1: 2400MHz
Peak level at 2400MHz is below 70dBμV/m (limit is 78.9dBμV/m)
RESULT: PASS



High bandedge compliance

F1: 2483.5MHz
Peak level at 2483.5MHz is 59.0 dBμV/m
Peak Marker delta is -39.9dB
Radiated Peak level is 61.0dBμV/m (limit 74dBμV/m)
Radiated Average level is 45.3dBμV/m (limit 54dBμV/m)
(Measure include duty cycle factor of -5.7dB)
RESULT: PASS



Rapport d'essais / Test Report

N°: 20020-FCC-1

10. Peak Power Spectral Density

TEST: Peak Power Spectral Density (15.247 (e))	Verdict
<p>Method: The peak power density was measured in accordance with the FCC publication "Guidance on Measurements for Digital Transmission Systems".</p> <p>The emission peak within the passband was located and zoomed in. The spectrum analyzer RBW was 3kHz and VBW was 10kHz. A peak detector using the max hold function was utilized.</p> <p>Limits: Shall not be greater than 8dBm in any 3 kHz band</p>	Pass
<p>Supplementary information: Test location: SMEE – CE Mesures / Test date: November 22st, 2011 Power supply voltage: 5V from USB port</p>	

Test Equipment Used					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Measuring Rec.	Rohde&Schwarz	ESL3	REC-101-001	2010/3	2012/3

Tabulated Results for peak power spectral density			
FREQ (MHz)	Peak PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
2403	-14.2	8.0	PASS
2438	-15.4	8.0	PASS
2478	-15.1	8.0	PASS