

RAPPORTO DI PROVA / TEST REPORT

Rif./Ref.No. FCCTR_140505-2	Data / Date:20/02/2015	Pagine / Pages :45
Scopo delle prove / Test object :	Prove di tipo in accordo a / Type test according to 47 CFR Part 74	
Richiedente / Applicant :	AEB Industriale S.r.l. Via Brodolini, 8 – 40056 Crespellano (BO) – ITALY Tel. +39 051 969870	
Persona di riferimento / Applicant's referee :	Mr. Andrea Molinari (a.molinari@ssc-info.it)	
Marchio commerciale / Trademark :		
Fabbricante / Manufacturer :	AEB Industriale S.r.l.	
Prodotto / Product :	In-ear monitor	
Modello / Model :	EME one (VHF Band 1 – Band 2)	
Data ricevimento campioni / Date of test samples receipt :	07/05/2014	
Campioni verificati / No. of tested samples	2	
Data verifiche / Testing date :	17-30/05/2014 16/10/2014	
Sito di prova / Testing site :	Prima Ricerca & Sviluppo Via Campagna - 92 I-22020 FALOPPIO CO FCC test registration number: 421808	
Esito delle valutazioni / Assessment results :	CONFORME / COMPLIANT	
Verifiche effettuate da / Verifications carried out by :	Giacomo ARMELLINI Responsabile Laboratorio EMC e RADIO/ EMC and RADIO Laboratory Manager	
Approvato / Approved by :	Vincenzo LA FRAGOLA Direttore generale / Managing director	

I risultati delle prove riportati nel presente rapporto di prova si riferiscono solo ai campioni esaminati./

The test results reported in this test report shall refer only to the samples tested

Questo Report non può essere riprodotto in modo parziale, salvo espressa autorizzazione scritta da parte del Laboratorio /

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0 RELEASE CONTROL RECORD

TEST REPORT NUMBER	REASON OF CHANGE	DATE OF ISSUE
FCCTR_140505-0	Original release	30/06/2014
FCCTR_140505-1	Editorial change	16/10/2014
FCCTR_140505-2	Editorial change	20/02/2015

1 TECHNICAL INFORMATION OF EQUIPMENT UNDER TEST (EUT)

1.1 EUT Identification

DESCRIPTION	In-ear monitor
TYPE	EME one (VHF Band 1 – Band 2)
TRADEMARK	
S/N	Not present (prototype)
HW HARDWARE STATUS	Not available
SW SOFTWARE STATUS	Not available
FCC ID	2ADDV-EMEONE
IC NUMBER	12207A-EMEONE
MANUFACTURER	AEB Industriale Srl
COUNTRY OF MANUFACTURER	Italy
SINGLE UNIT OR SYSTEM	Single Unit

1.2 EUT technical information

FREQUENCY RANGE:	Frequency range = 174.025 Mhz to 203.975MHz divided in 2switch bands ; Band 1 , Band 2		
BAND FREQUENCY	BAND 1	BAND 2	
	CH1 = 174,025 MHz CH2 = 174,725 MHz CH3 = 176,025 MHz CH4 = 177,550 MHz CH5 = 178,625 MHz CH6 = 181,675 MHz CH7 = 183,450 MHz CH8 = 183,925 MHz	CH1 = 194,000 MHz CH2 = 194,775 MHz CH3 = 196,300 MHz CH4 = 199,125 MHz CH5 = 200,425 MHz CH6 = 200,900 MHz CH7 = 202,975 MHz CH8 = 203,975 MHz	
MODULATION:	Analog FM max 40 KHz deviation hard limiting controlled		
ANTENNA:	External dedicated		
POWER SUPPLY:	12Vdc powered by external AC/DC adapter		
TEMPERATURE RANGE:	-30°C to + 55°C		

1.3 Additional information

Test setup- and EUT-photos are included in test report:

TSupPhotos_140505-0

2 REFERENCE STANDARDS FOR PERFORMED TESTS

47 CFR Part 74	Title 47 of the Code of Federal Regulations; Chapter I part 74 – Experimental radio, auxiliary. Special broadcast and other program distribution services
ANSI/TIA-603-C-2004	Land Mobile FM or PM – Communications Equipment – Measurement and Performance Standards

3 EUT OPERATING CONDITIONS

In the following table there are the operating conditions adopted during tests identified by an indicator (#..) at which has been referred the item “Operating condition of the equipment under test”

<i>Operating condition</i>	<i>Description</i>
#1	Continuous Modulated Transmission (modulation type: Analog FM max 40 KHz deviation hard limiting controlled)
#2	Continuous Unmodulated Transmission

4 SUMMARY OF TEST RESULTS

TRANSMITTER PARAMETERS (TX)								
TEST SPECIFICATION CLAUSE	TEST	TEMPERATURE CONDITIONS	POWER SOURCE VOLTAGES	PASS	FAIL	NA	NP	RESULTS
FCC 47 CFR § 74.861 (e)(1)(i)	Output power	Nominal	Nominal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COMPLIANT
FCC 47 CFR § 74.861 (e)(4)	Frequency Stability	Nominal	Extreme	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COMPLIANT
		Extreme	Nominal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
FCC 47 CFR § 2.1049 § 74.861 (e)(5)	Occupied bandwidth	Nominal	Nominal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COMPLIANT
FCC 47 CFR § 74.861 (e)(6)(i)(ii)	Unwanted radiation (spectrum mask)	Nominal	Nominal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COMPLIANT
FCC 47 CFR § 74.861 (e)(3)	Modulation Characteristics	Nominal	Nominal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COMPLIANT
FCC 47 CFR § 74.861 (e)(6)(iii)	Field strength of spurious radiation Transmitter unwanted emissions	Nominal	Nominal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COMPLIANT

Note: NA = Not Applicable; NP = Not Performed

**TEST
1.**

TRANSMITTER OUTPUT POWER

REFERENCE
DOCUMENT

FCC 47 CFR§ 74.861 (e)(1)(i)

TEST SETUP	In according to ref std
TEST LOCATION	Radio test area
TEST METHOD	ANSI/TIA-603-C (2004) 2.2.1 FCC CFR 47 Part 2.1046
TYPE OF MEASUREMENT	CONDUCTED
TEST EQUIPMENT	Spectrum Analyzer Rohde&Schwarz mod. FSP40
TEST PERFORMED BY	Giacomo Armellini
TESTING DATE	20/05/14

TEST CONDITIONS:	MEASURED
Ambient temperature : 23°C±5°C	24°C
Ambient humidity : 25 - 75 %rH	45%
Pressure : 85 - 106 kPa (860 mbar - 1060 mbar)	960mbar
Voltage	115V 60Hz

OPERATING CONDITION	#2
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TEST RESULT	WITHIN THE LIMITS
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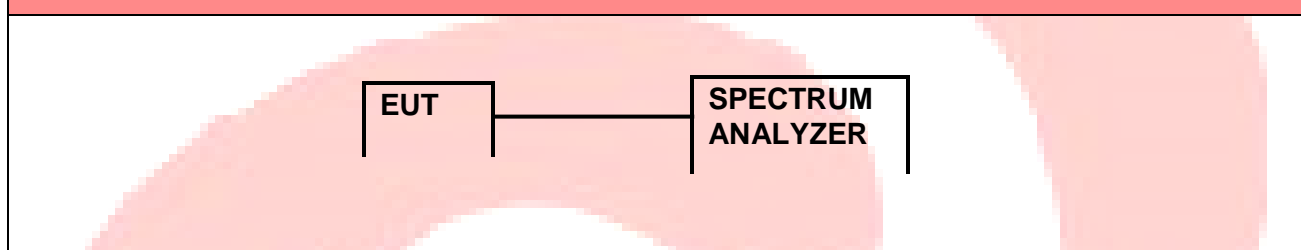
MEASUREMENT PARAMETER

Detector:	Peak
Sweep time:	Auto
Resolutionbandwidth:	100 kHz
Video bandwidth:	300 kHz
Span:	2 MHz
Trace-Mode:	Max. hold

LIMITS

47 CFR § 74.861 (e)(1)(i)
Maximum transmitterpower
174-184 MHz, 194-204 MHz bands - 50mW (17 dBm)

TEST SETUP BLOCK DIAGRAM



TEST RESULTS

Band I - 174-184MHz

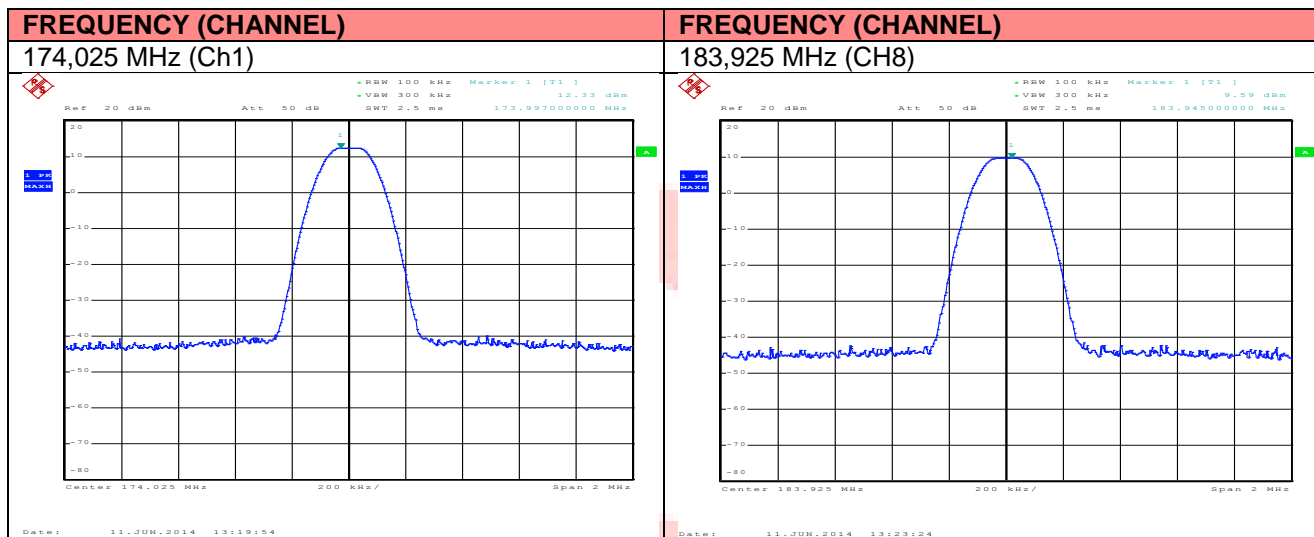
FREQUENCY (CHANNEL)	TRANSMITTER OUTPUT POWER	RESULT
174,025 MHz (Ch1)	12.33dBm	PASS
183,925 MHz (CH8)	9.59dBm	PASS

Band II - 194-204MHz

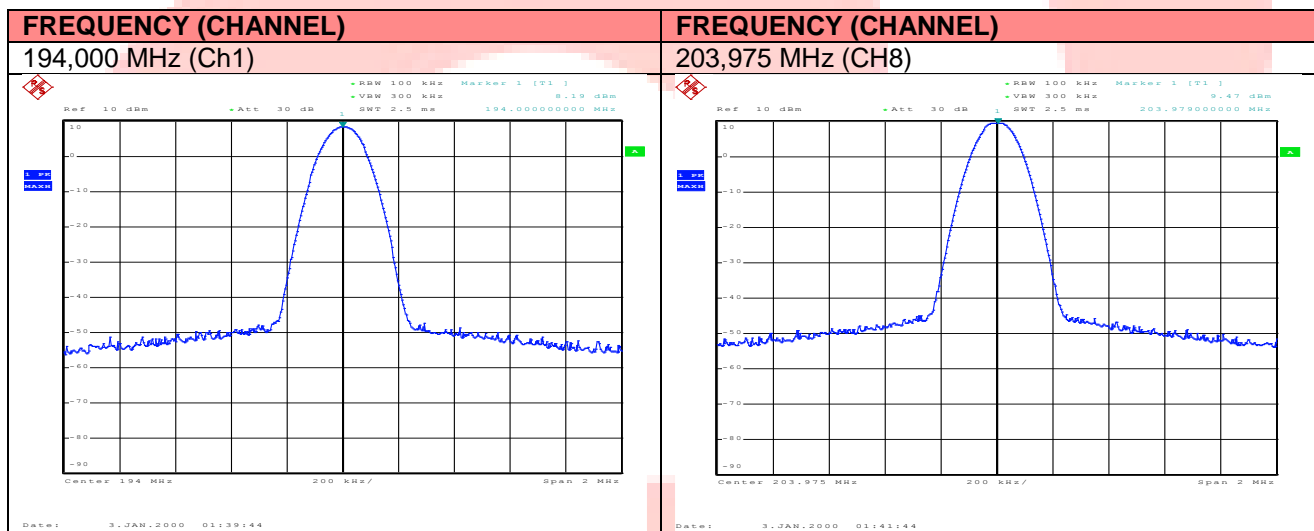
FREQUENCY (CHANNEL)	TRANSMITTER OUTPUT POWER	RESULT
194,000 MHz (Ch1)	8.19dBm	PASS
203,975 MHz (CH8)	9.47dBm	PASS

PLOTS OF THE MEASUREMENTS

Band I - 174-184MHz



Band II - 194-204MHz



**TEST
2.**

FREQUENCY STABILITY

**REFERENCE
DOCUMENT**

FCC 47 CFR§ 74.861 (e)(4)

TEST SETUP	In according to ref std
TEST LOCATION	Radio test area
TEST METHOD	ANSI/TIA-603-C (2004) 2.2.2 FCC CFR 47 Part 2.1055
TYPE OF MEASUREMENT	CONDUCTED
TEST EQUIPMENT	Spectrum Analyzer Rohde&Schwarz mod. FSP40 Climatic Chamber
TEST PERFORMED BY	Giacomo Armellini
TESTING DATE	20/05/14

TEST CONDITIONS:	MEASURED
Ambient temperature : 23°C±5°C	24°C
Ambient humidity : 25 - 75 %rH	45%
Pressure : 85 - 106 kPa (860 mbar - 1060 mbar)	960mbar
Voltage	115V 60Hz

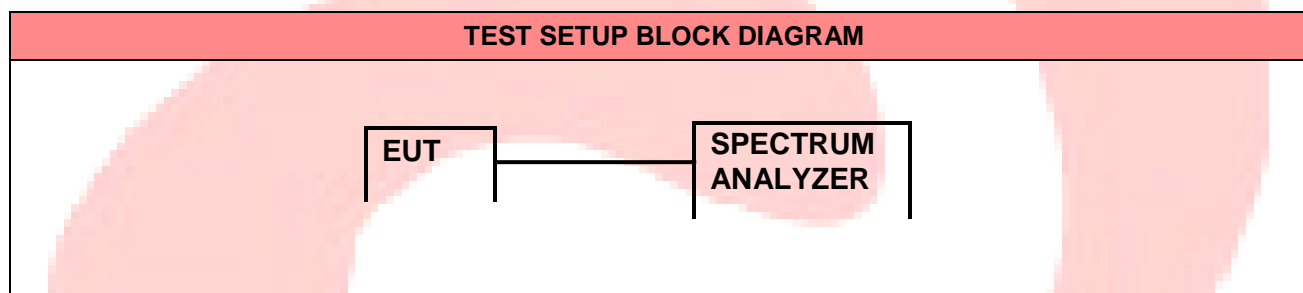
OPERATING CONDITION	#2
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TEST RESULT	WITHIN THE LIMITS
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FREQUENCY ERROR VS TEMPERATURE

MEASUREMENT PARAMETER	
Detector:	Peak
Sweep time:	Auto
Resolutionbandwidth:	100 Hz
Video bandwidth:	100 Hz
Span:	1 kHz
Trace-Mode:	Max. hold
Voltage (nominal)	115V~ 60Hz

LIMITS
FCC 47 CFR§ 74.861 (e)(4)
The frequency tolerance of the transmitter shall be 0.005 percent (50ppm)



TEST RESULTS

Band I - Ch1 174,025MHz

TEMPERATURE	FREQUENCY	DEVIATION (kHz)	DEVIATION (ppm)	RESULT
-30°C	174.025990	0.990	5.688837	PASS
-20°C	174.026005	1.005	5.775032	PASS
-10°C	174.026022	1.022	5.872719	PASS
0°C	174.026150	1.15	6.608246	PASS
10°C	174.025998	0.998	5.734808	PASS
20°C	174.025652	0.652	3.746588	PASS
30°C	174.025286	0.286	1.643442	PASS
40°C	174.025066	0.066	0.379256	PASS
50°C	174.024856	-0.144	-0.82747	PASS

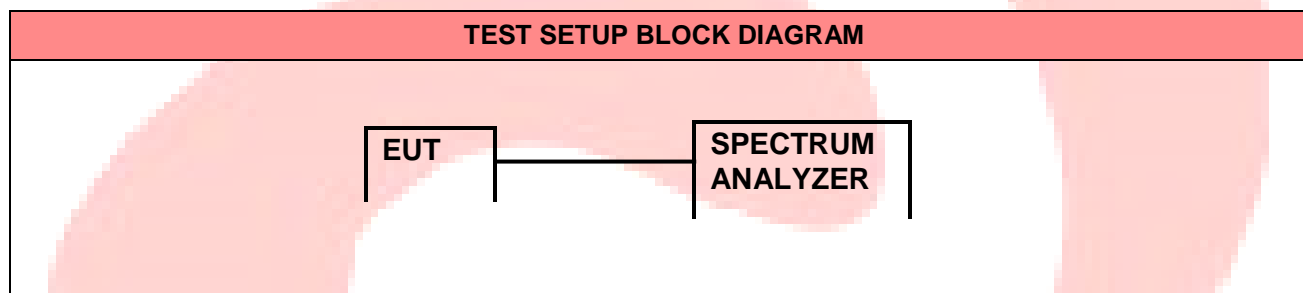
Band II - Ch8 203,975MHz

TEMPERATURE	FREQUENCY	DEVIATION (kHz)	DEVIATION (ppm)	RESULT
-30°C	203.975624	0.624	3.059198	PASS
-20°C	203.975702	0.702	3.441598	PASS
-10°C	203.975712	0.712	3.490624	PASS
0°C	203.975848	0.848	4.157372	PASS
10°C	203.975634	0.634	3.108224	PASS
20°C	203.975186	0.186	0.911876	PASS
30°C	203.974582	-0.418	-2.04927	PASS
40°C	203.973988	-1.012	-4.96139	PASS
50°C	203.973500	-1.500	-7.35384	PASS

FREQUENCY ERROR VS VOLTAGE

MEASUREMENT PARAMETER	
Detector:	Peak
Sweep time:	Auto
Resolution bandwidth:	100 Hz
Video bandwidth:	100 Hz
Span:	1 kHz
Trace-Mode:	Max. hold
Temperature	22°C

LIMITS
FCC 47 CFR§ 74.861 (e)(4)
The frequency tolerance of the transmitter shall be 0.005 percent (50ppm)



Band I - Ch1 174,025MHz

VOLTAGE	FREQUENCY	DEVIATION (kHz)	DEVIATION (ppm)	RESULT
100	174.024868	-0.132	-0.75851	PASS
240	174.026120	1.120	6.435857	PASS

Band II - Ch8 203,975MHz

VOLTAGE	FREQUENCY	DEVIATION (kHz)	DEVIATION (ppm)	RESULT
100	203.974792	-0.208	-1.01973	PASS
240	203.974754	-0.246	-1.20603	PASS

**TEST
3.**

OCCUPIED BANDWIDTH

REFERENCE
DOCUMENT

FCC 47 CFR§2.1049 §74.861 (e)(5)

TEST SETUP	In according to ref std
TEST LOCATION	Radio test area
TEST METHOD	FCC CFR 47 Part 2.1049
TYPE OF MEASUREMENT	CONDUCTED
TEST EQUIPMENT	Spectrum AnalyzerRohde&Schwarz mod. FSP40
TEST PERFORMED BY	Giacomo Armellini
TESTING DATE	20/05/14

TEST CONDITIONS:	MEASURED
Ambient temperature : 23°C±5°C	24 °C
Ambient humidity : 25 - 75 %rH	45%
Pressure : 85 - 106 kPa (860 mbar - 1060 mbar)	960 mbar
Voltage :	115V 60Hz

OPERATING CONDITION (Rif. Section 3) :#1 (modulation type: Analog FM max 40 KHz deviation)

TEST RESULTS: COMPLIANT

MEASUREMENT PARAMETER

Detector:	Peak
Sweep time:	Auto
Resolution bandwidth:	3kHz
Video bandwidth:	3kHz
Span:	see plots
Trace-Mode:	Max. hold

LIMITS

Occupied bandwidth 99%. Other than single sideband or independent sideband transmitters – when modulated by a 2500 Hz tone at an input level 16 dB greater than that necessary to produce 50 percent modulation. The input level shall be established at the frequency of maximum response of the audiomodulating circuit.

The operating bandwidth shall not exceed 200 kHz

TEST SETUP BLOCK DIAGRAM



Band I - 174-184MHz

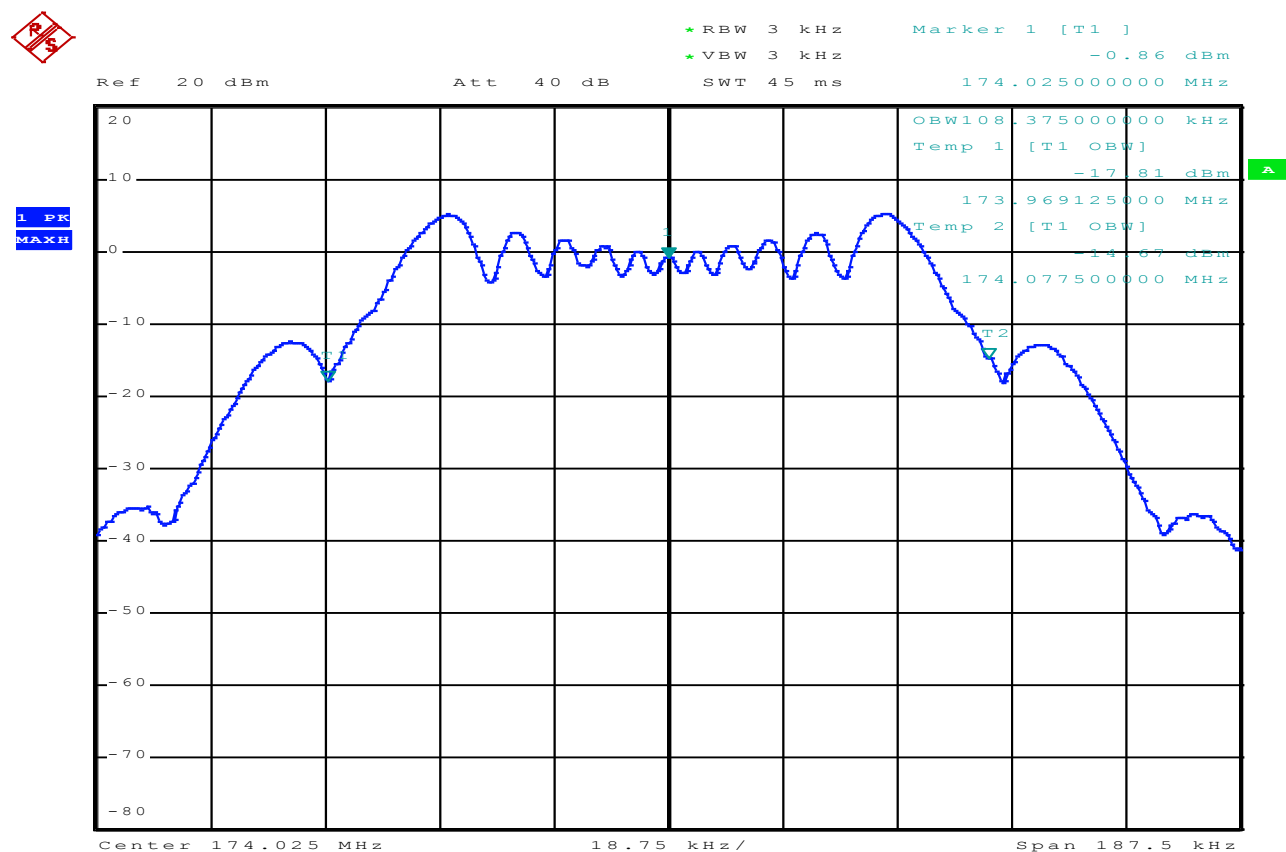
FREQUENCY (CHANNEL)	99% dB bandwidth (kHz)	RESULT
174.025 MHz (Ch1)	108.375	PASS
183.925 MHz (CH8)	129.000	PASS

Band II - 194-204MHz

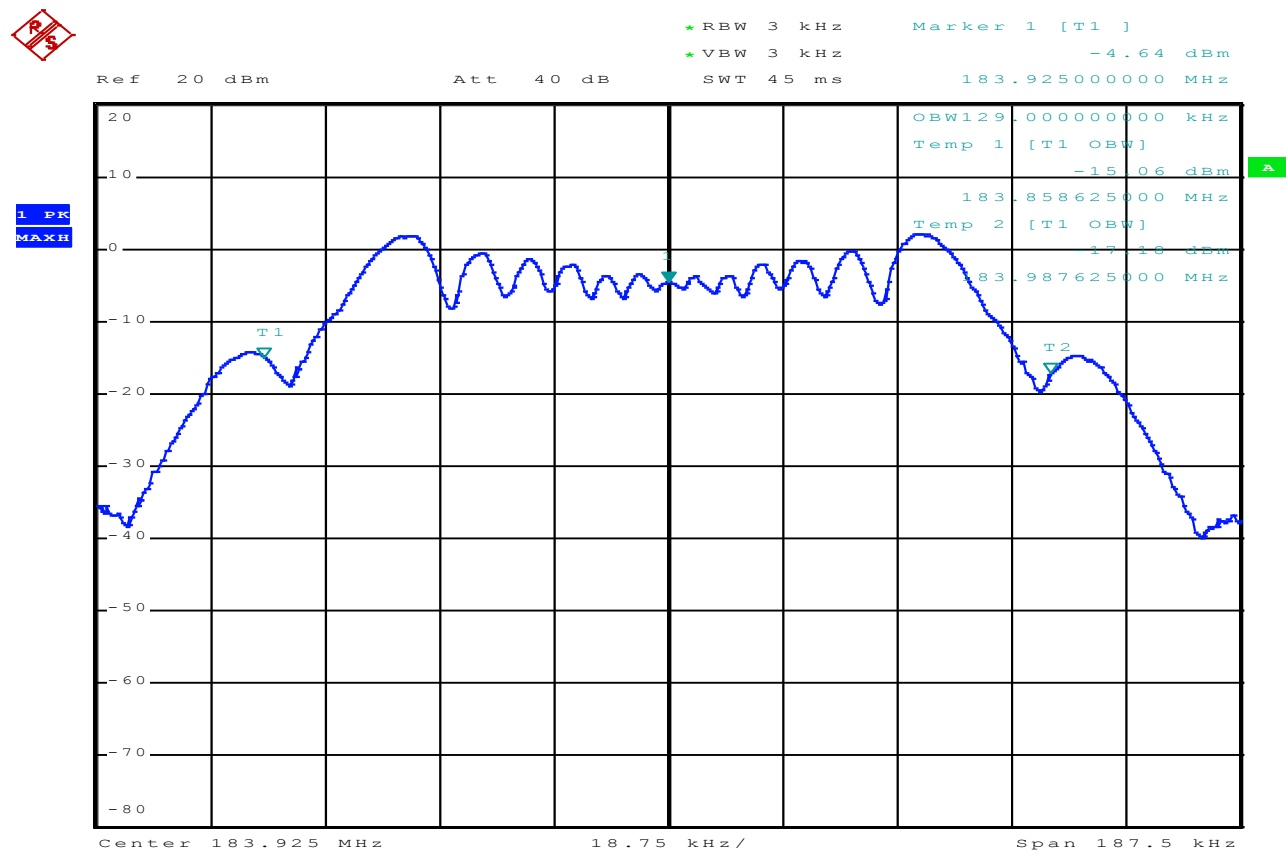
FREQUENCY (CHANNEL)	99% dB bandwidth (kHz)	RESULT
194.000 MHz (Ch1)	91.125	PASS
203.975 MHz (CH8)	104.625	PASS

PLOTS OF THE MEASUREMENTS

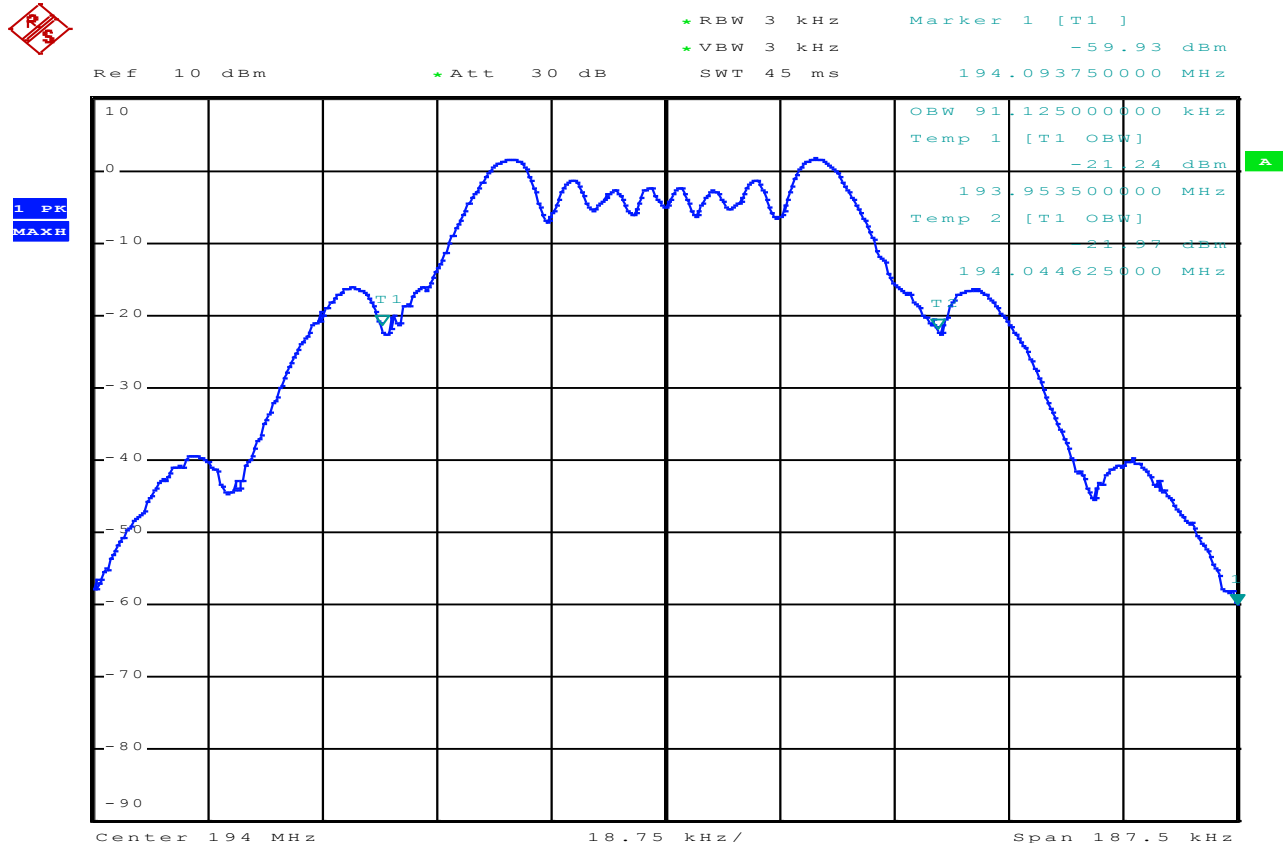
Band I - 174-184MHz – Ch1: 174.025MHz



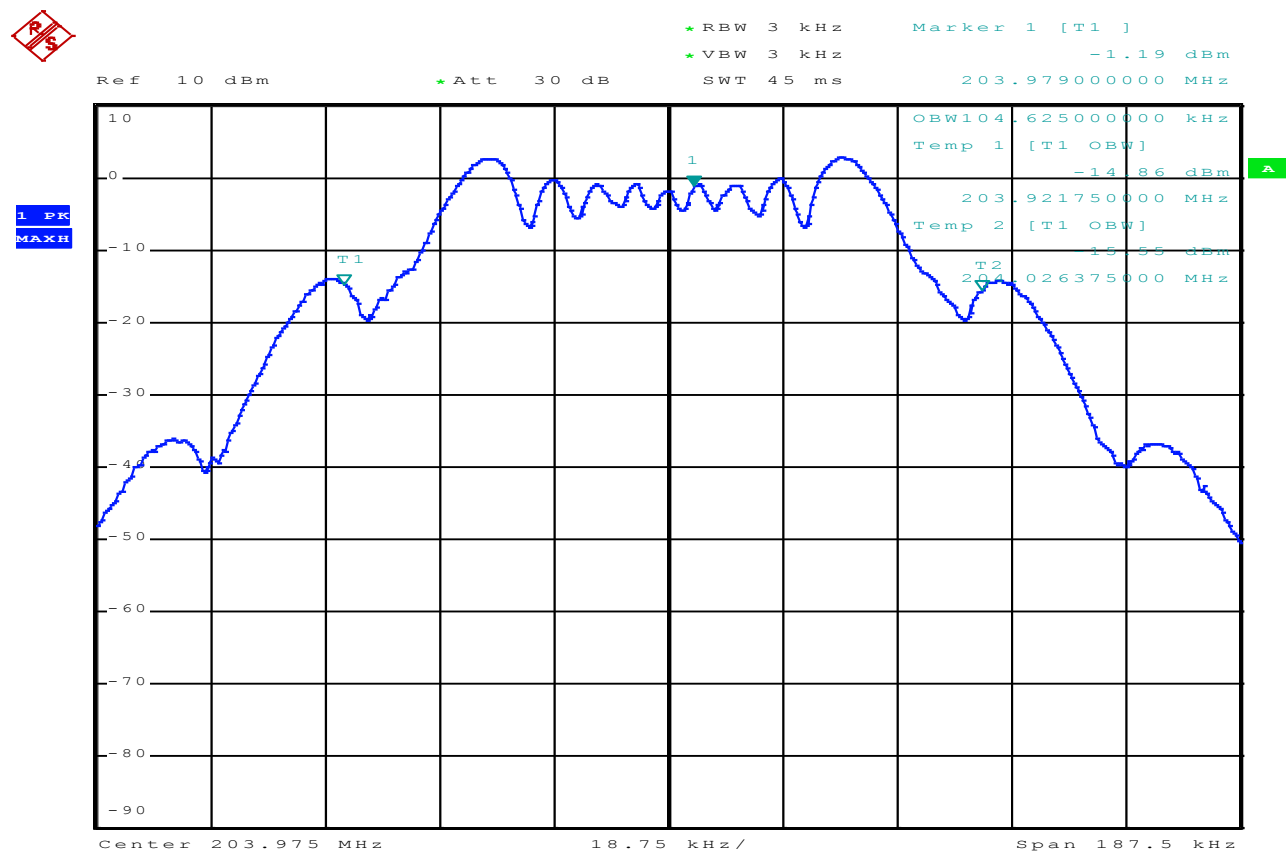
Band I - 174-184MHz – Ch8: 183.925MHz



Band II - 194-204MHz – Ch1: 194MHz



Band II - 194-204MHz – Ch8: 203.975MHz



**TEST
4.**

UNWANTED RADIATION (SPECTRUM MASK)

REFERENCE
DOCUMENT

FCC 47 CFR§ 74.861 (e)(6)(i)(ii)

TEST SETUP	In according to ref std
TEST LOCATION	Radio test area
TEST METHOD	ANSI/TIA-603-C (2004) 2.2.11 FCC CFR 47 Part 2.1051
TYPE OF MEASUREMENT	CONDUCTED
TEST EQUIPMENT	Spectrum Analyzer Rohde&Schwarz mod. FSP40
TEST PERFORMED BY	Giacomo Armellini
TESTING DATE	20/05/14

TEST CONDITIONS:	MEASURED
Ambient temperature : 23°C±5°C	24 °C
Ambient humidity : 25 - 75 %rH	45%
Pressure : 85 - 106 kPa (860 mbar - 1060 mbar)	960 mbar
Voltage :	115V 60Hz

OPERATING CONDITION (Rif. Section 3) : #1 (modulation type: Analog FM max 40 KHz deviation)

TEST RESULTS: COMPLIANT

MEASUREMENT PARAMETER

Detector:	Peak
Sweep time:	Auto
Resolution bandwidth:	3kHz
Video bandwidth:	3kHz
Span:	see plots
Trace-Mode:	Max. hold

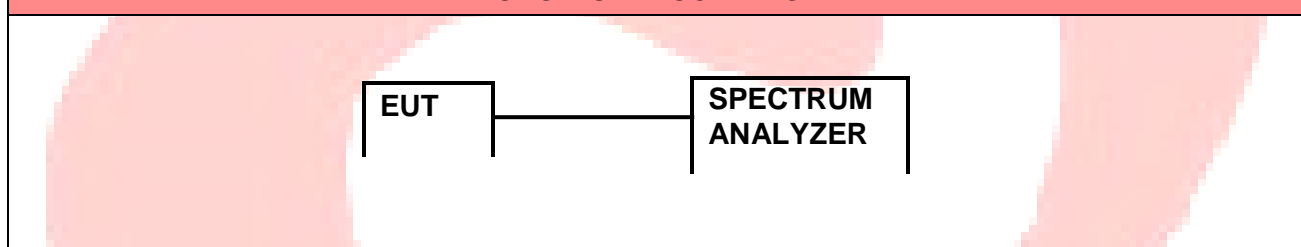
LIMITS

47 CFR § 74.861

The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the following schedule:

- (i) On any frequency removed from the operating frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: at least 25 dB;
- (ii) On any frequency removed from the operating frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: at least 35 dB;
- (iii) On any frequency removed from the operating frequency by more than 250 percent of the authorized bandwidth: at least $43+10\log_{10}$ (mean output power in watts) dB.

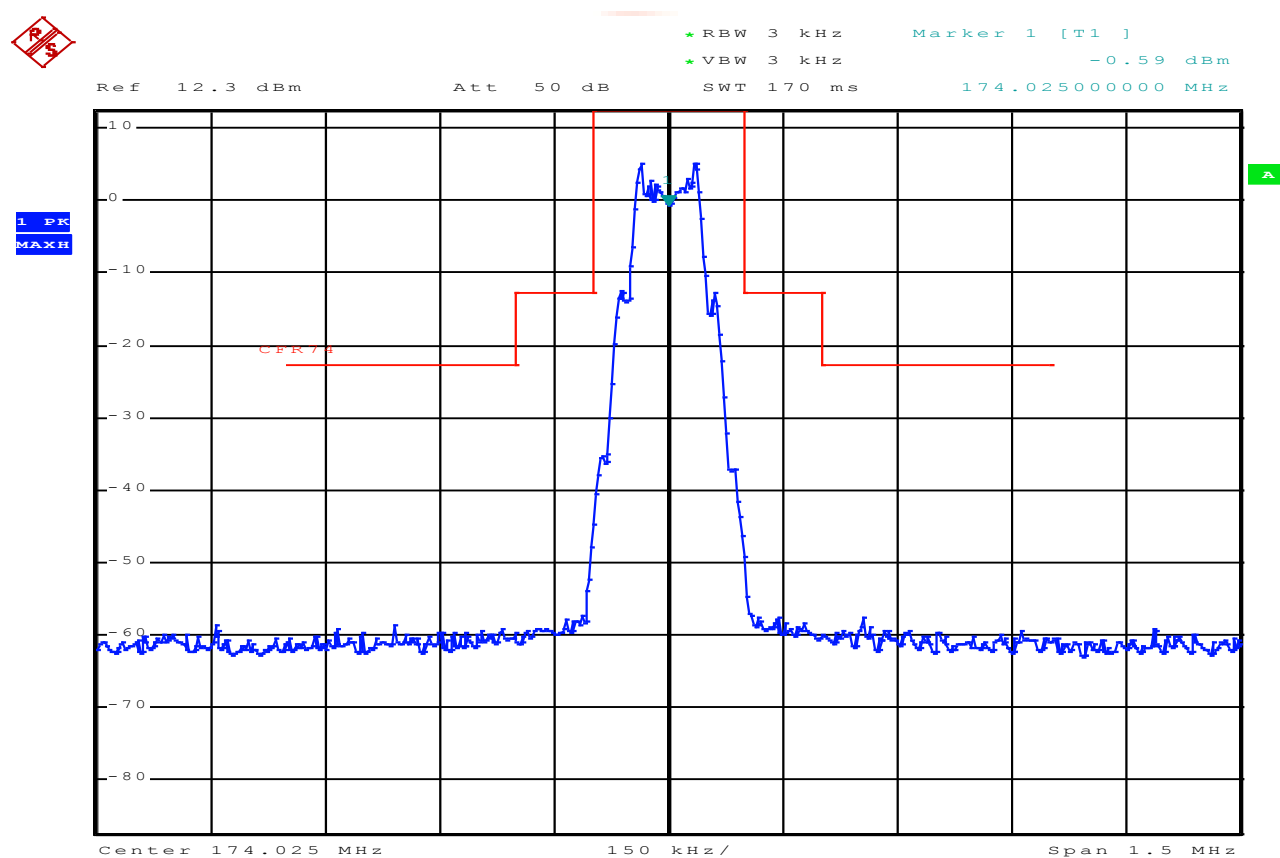
TEST SETUP BLOCK DIAGRAM



PLOTS OF THE MEASUREMENTS

Note: conducted output power measurement has been performed in order to set the properly reference level

Band I - 174-184MHz – Ch1: 174.025MHz



Band I - 174-184MHz – Ch8: 183.925MHz



* RBW 3 kHz Marker 1 [T1]
* VBW 3 kHz -3.86 dBm
SWT 170 ms 183.925000000 MHz

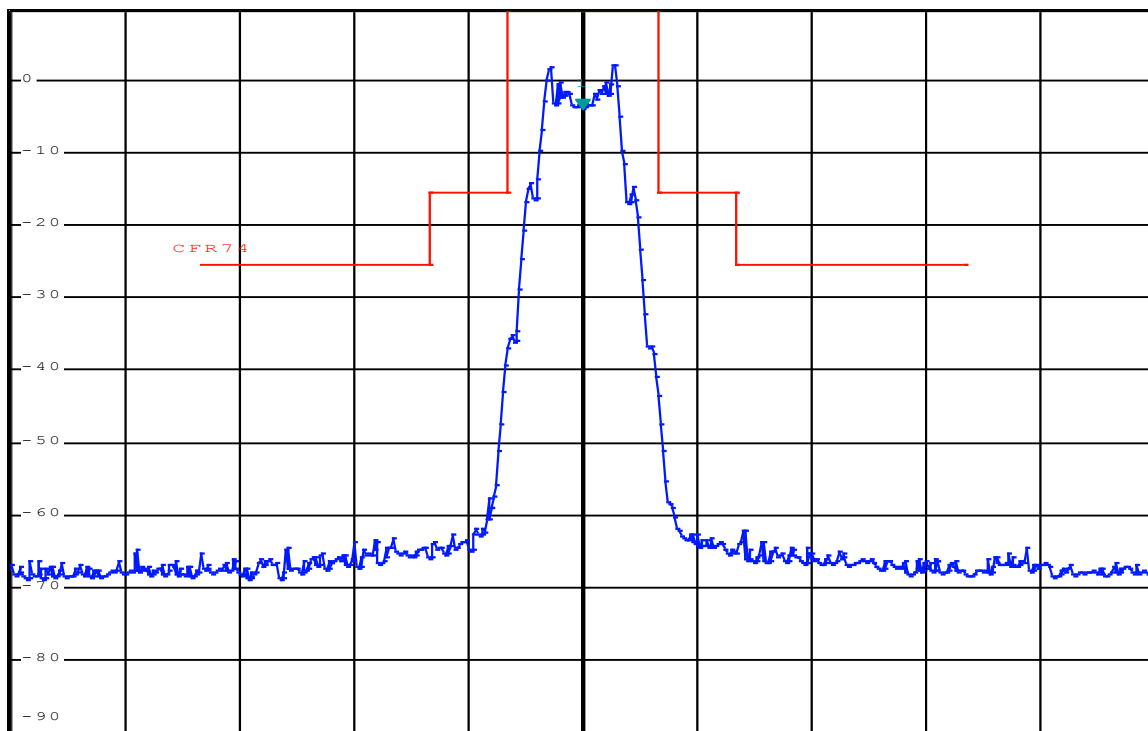
Ref 9.6 dBm

Att 40 dB

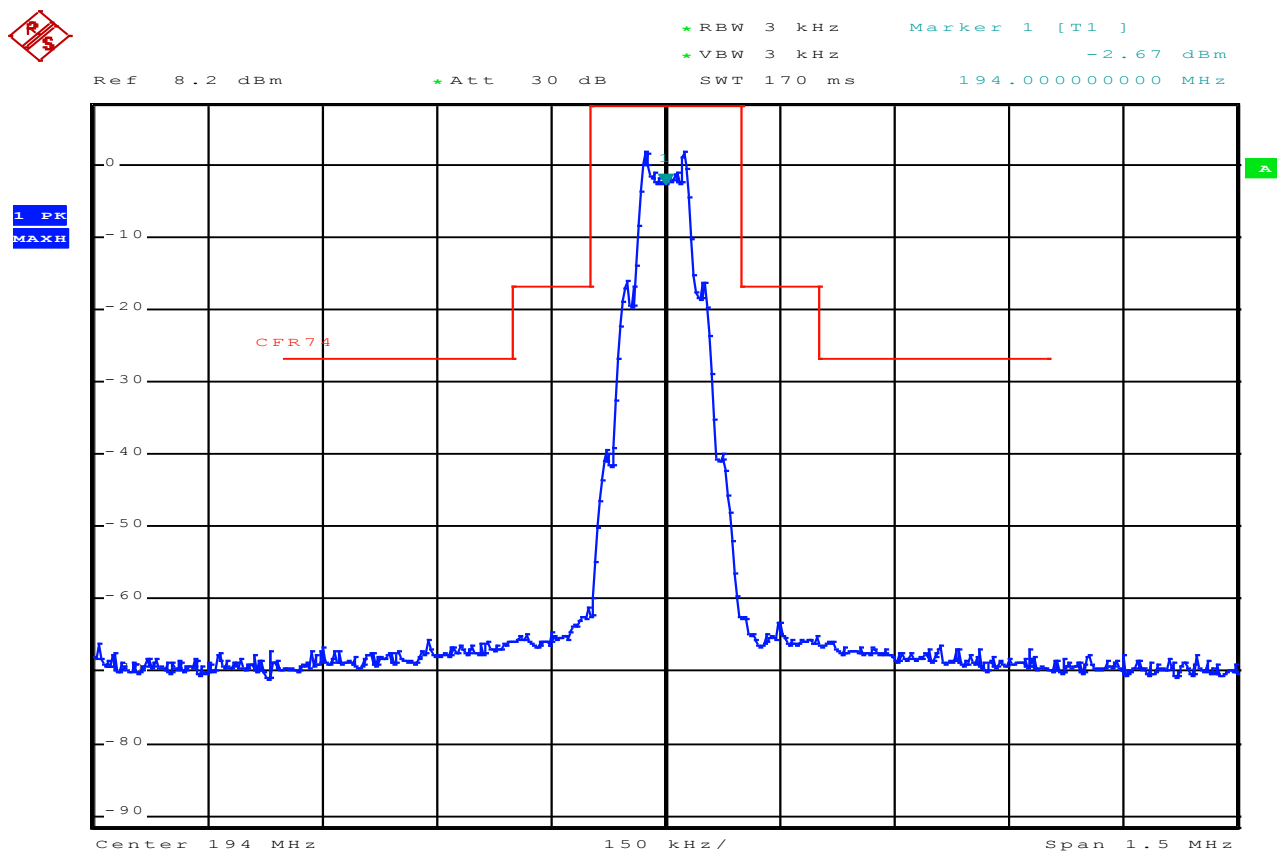
SWT 170 ms

183.925000000 MHz

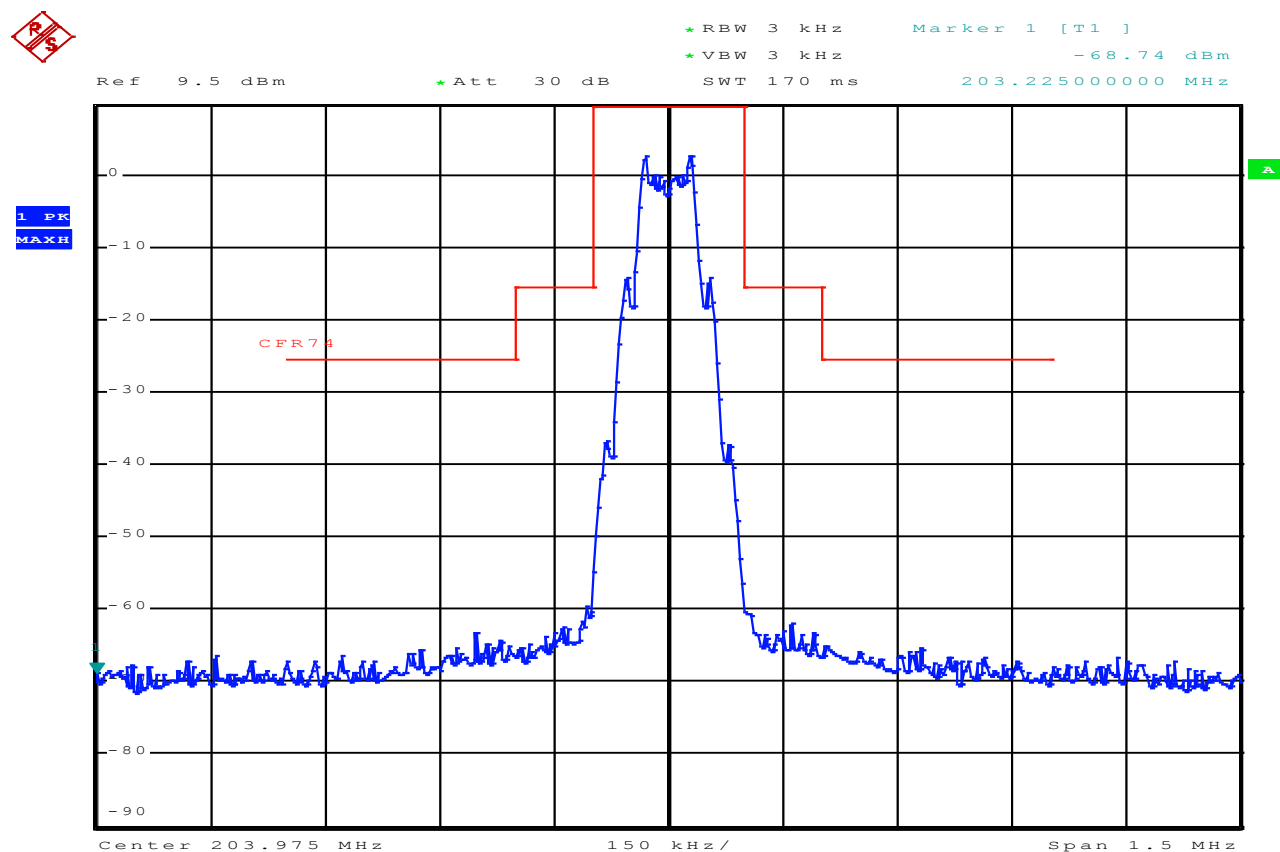
1 PK
MAXH



Band II - 194-204MHz – Ch1: 194MHz



Band II - 194-204MHz – Ch8: 203.975MHz



**TEST
5.**

MODULATION CHARACTERISTICS

REFERENCE DOCUMENT FCC 47 CFR§ 74.861 (e)(3)

TEST SETUP	In according to ref std
TEST LOCATION	Radio test area
TEST METHOD	FCC CFR 47 Part 2.1047
TYPE OF MEASUREMENT	CONDUCTED
TEST EQUIPMENT	Audio Analyzer Rohde&Schwarz mod. UPD
TEST PERFORMED BY	Giacomo Armellini
TESTING DATE	16/10/2014

TEST CONDITIONS:	MEASURED
Ambient temperature : 23°C±5°C	24 °C
Ambient humidity : 25 - 75 %rH	45%
Pressure : 85 - 106 kPa (860 mbar - 1060 mbar)	960 mbar
Voltage :	115V 60Hz

OPERATING CONDITION (Rif. Section 3) :#1(modulation type: Analog FM max 40 KHz deviation)

TEST RESULTS: COMPLIANT

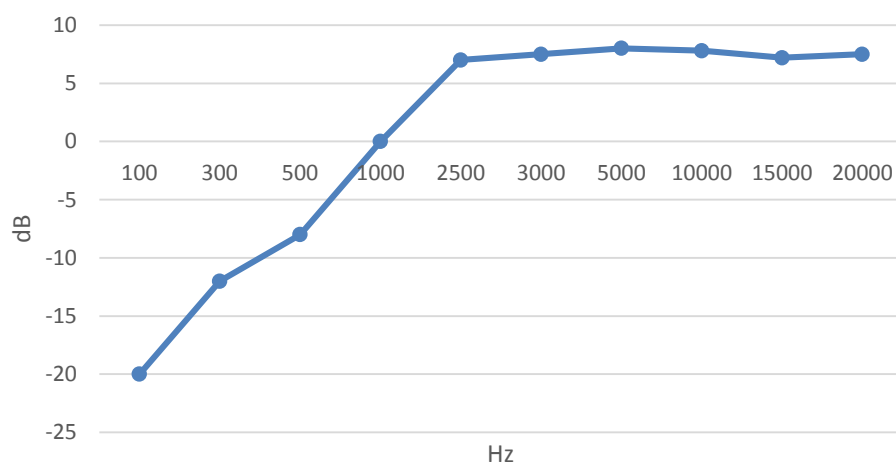
LIMITS

47 CFR § 74.861

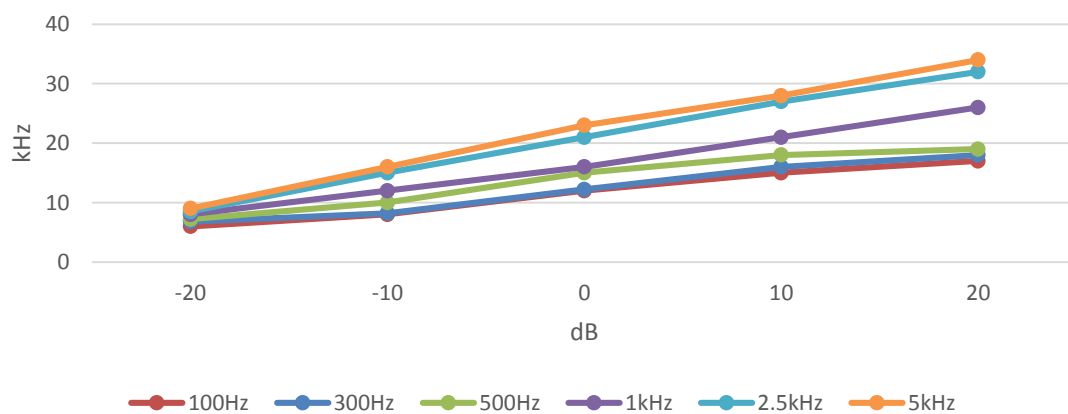
TEST SETUP BLOCK DIAGRAM



Audio Freq Response



Positive Peak deviation



RESULT: PASS

**TEST
6.**

RADIATED SPURIOUS EMISSIONS

REFERENCE DOCUMENT FCC 47 CFR§ 74.861 (e)(6)(iii)

TEST SETUP	In according to ref std
TEST LOCATION	Anechoic chamber with a conductive ground plane. Distance 3m
TEST METHOD	ANSI/TIA-603-C (2004) 2.2.12 FCC CFR 47 Part 2.1053
TYPE OF MEASUREMENT	RADIATED
TEST EQUIPMENT	EMI Receiver Rohde&Schwarz mod. ESU40 Bi-log antenna CHASE mod. CBL6111C Log-periodica Broadband Antenna R&S mod. HL050 Loop Antenna R&S mod. HFH2-Z2
TEST PERFORMED BY	Giacomo Armellini
TESTING DATE	17/05/2014

TEST CONDITIONS:	MEASURED
Ambient temperature : 23°C±5°C	24 °C
Ambient humidity : 25 - 75 %rH	45%
Pressure : 85 - 106 kPa (860 mbar - 1060 mbar)	960 mbar
Voltage :	115V 60Hz

OPERATING CONDITION (Rif. Section 3) :#1

TEST RESULTS: COMPLIANT

MEASUREMENT PARAMETER

Detector:	Peak / Quasi Peak
Resolution bandwidth:	9kHz ($f < 150\text{kHz}$) 100kHz ($150\text{kHz} < f < 30\text{MHz}$) 100kHz ($30\text{MHz} < f < 1\text{GHz}$) 1MHz ($f > 1\text{GHz}$)
Video bandwidth:	200Hz ($f < 150\text{kHz}$) 9kHz ($150\text{kHz} < f < 30\text{MHz}$) 100kHz ($30\text{MHz} < f < 1\text{GHz}$) 1MHz ($f > 1\text{GHz}$)
Span:	see plots
Trace-Mode:	Max. hold

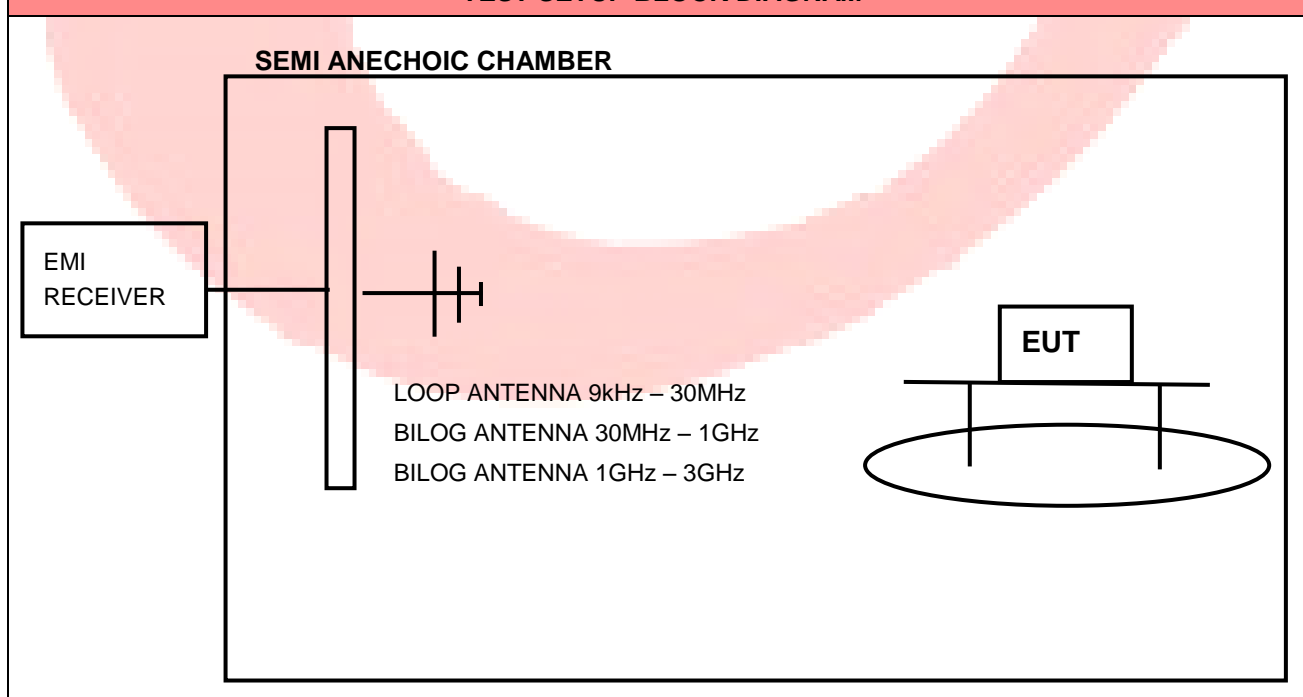
LIMITS

47 CFR § 74.861 (e)(6)(iii)

The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the following schedule:

- (i) On any frequency removed from the operating frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: at least 25 dB;
- (ii) On any frequency removed from the operating frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: at least 35 dB;
- (iii) On any frequency removed from the operating frequency by more than 250 percent of the authorized bandwidth: at least $43 + 10\log_{10}$ (mean output power in watts) dB.

TEST SETUP BLOCK DIAGRAM



FREQUENCY RANGE 9kHz - 30MHz BAND I - CH1

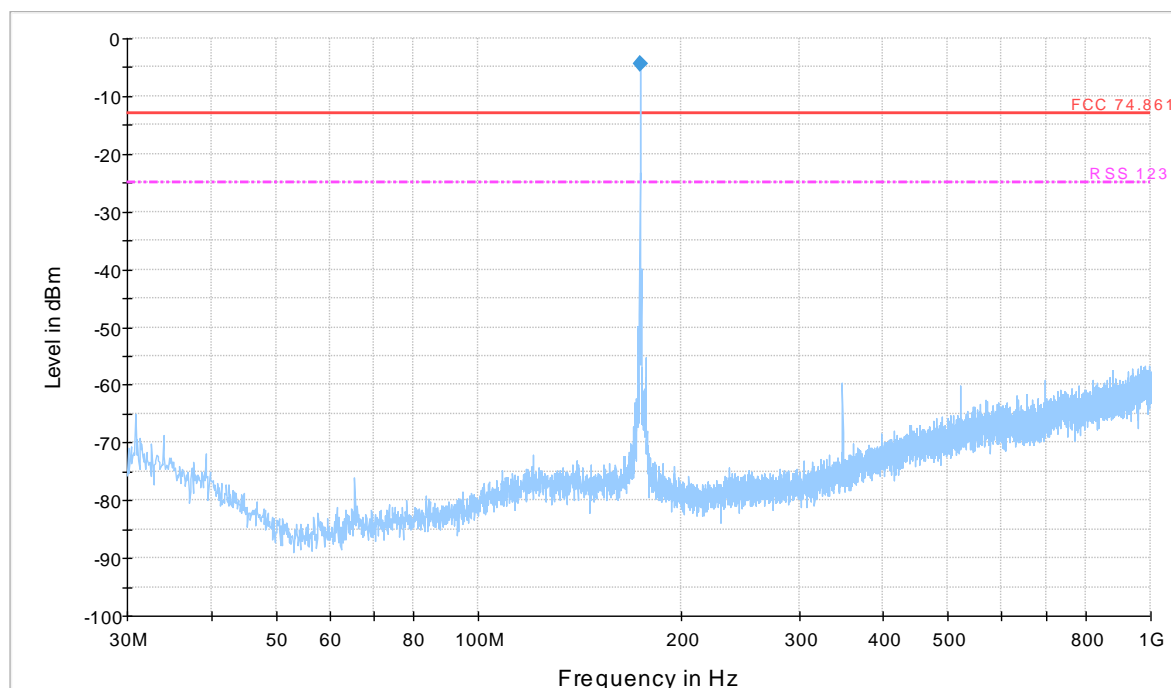
VERTICAL POLARIZATION

The amplitude of spurious emissions are attenuated more than 20 dB so the permissible value need not be reported

FREQUENCY RANGE 30MHz – 1GHz BAND I - CH1

VERTICAL POLARIZATION

FCC_74_861_RADIATED_EMISSIONS_VERTICAL



Blue trace Peak detector, Blue Marker Peak detector

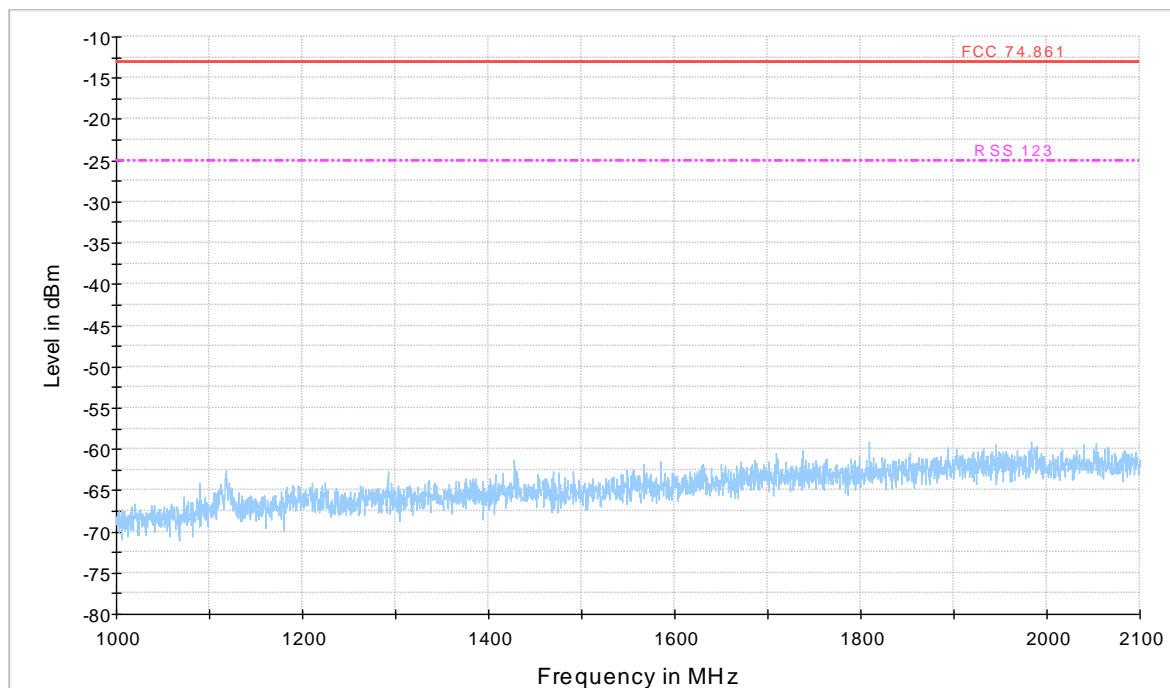
Final Result Peak

Frequency (MHz)	Peak (dBm)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Limit (dBm)	Margin (dB)	Note
174.045000	-4.3	250.0	V	90.0	11.1	-25	-20.7	Carrier

FREQUENCY RANGE 1GHz – 2.1GHz BAND I - CH1

VERTICAL POLARIZATION

FCC_74_861_RADIATED_EMISSIONS_HORIZONTAL



Blue trace Peak detector

FREQUENCY RANGE 9kHz - 30MHzBAND I - CH1

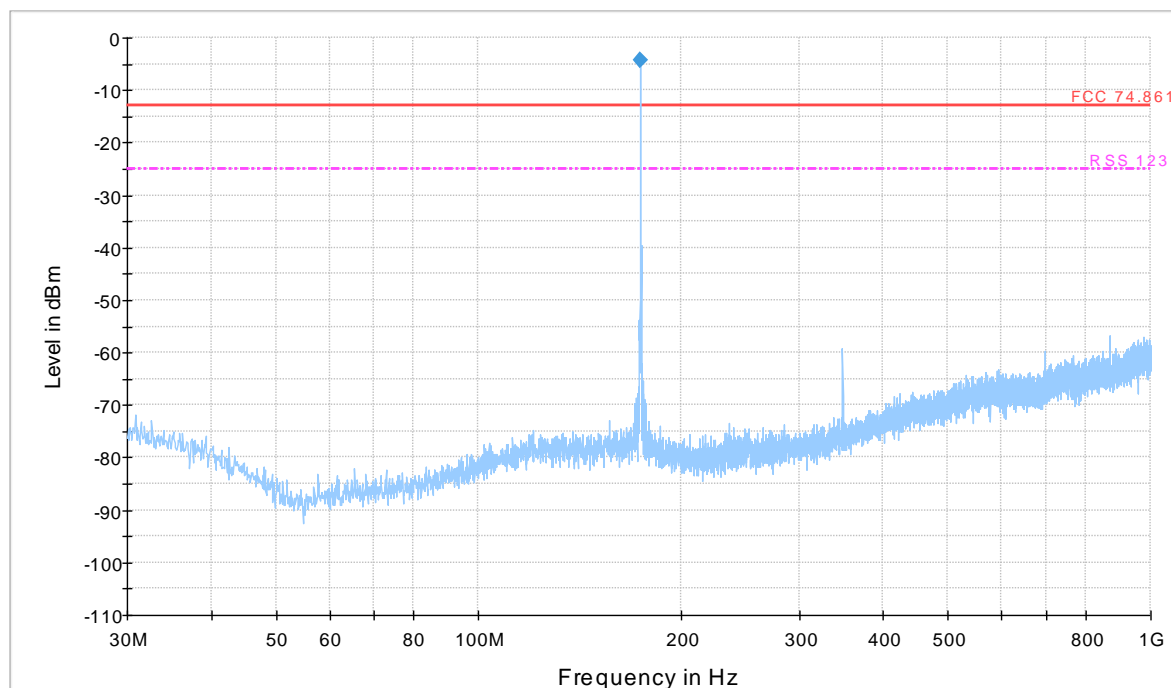
HORIZONTAL POLARIZATION

The amplitude of spurious emissions are attenuated more than 20 dB so the permissible value need not be reported

FREQUENCY RANGE 30MHz – 1GHzBAND I - CH1

HORIZONTAL POLARIZATION

FCC_74_861_RADIATED_EMISSIONS_HORIZONTAL



Blue trace Peak detector, Blue Marker Peak detector

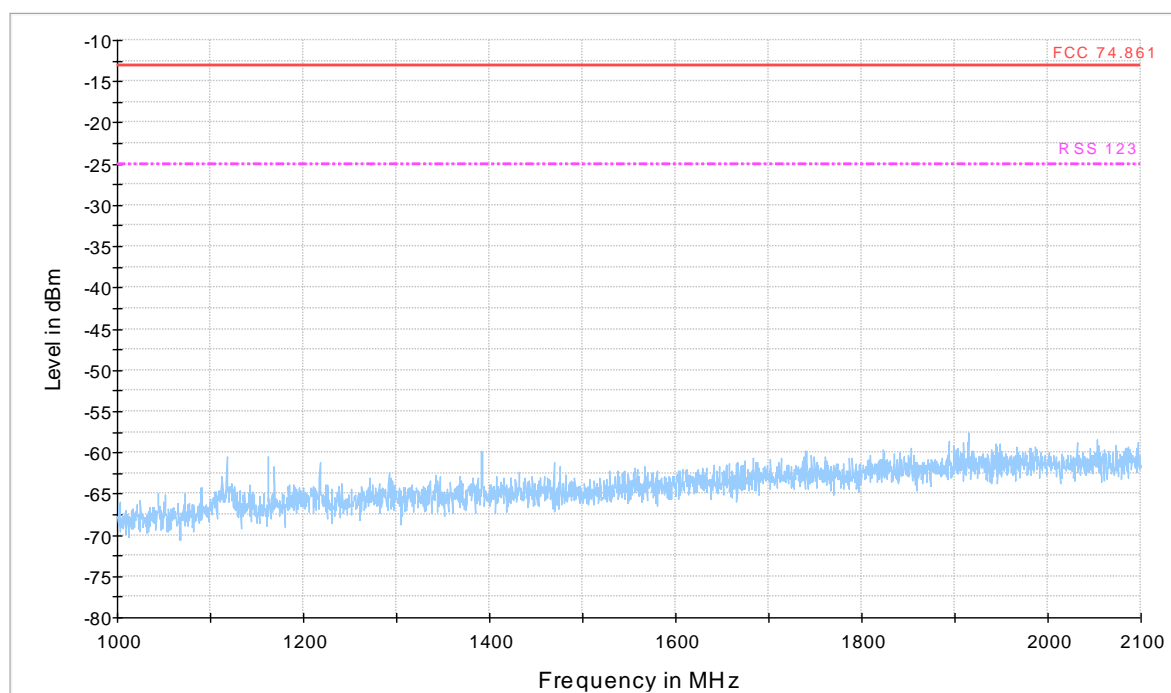
Final Result Peak

Frequency (MHz)	Peak (dBm)	Height (cm)	Polarization	Azimuth (deg)	Limit (dBm)	Margin (dB)	Note
174.045000	-4.4	100.0	H	90.0	-25	-20.6	Carrier

FREQUENCY RANGE 1GHz – 2.1GHz BAND I - CH1

HORIZONTAL POLARIZATION

FCC_74_861_RADIATED_EMISSIONS_HORIZONTAL



Blue trace Peak detector

FREQUENCY RANGE 9kHz - 30MHz BAND I – CH8

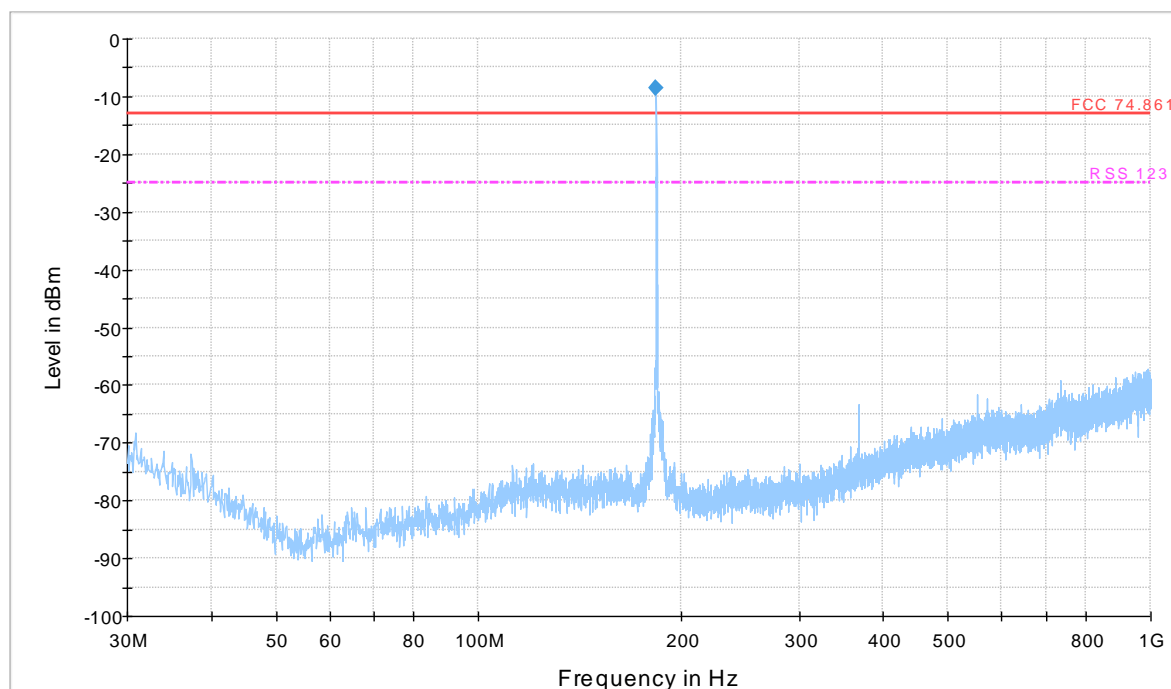
VERTICAL POLARIZATION

The amplitude of spurious emissions are attenuated more than 20 dB so the permissible value need not be reported

FREQUENCY RANGE 30MHz – 1GHz BAND I – CH8

VERTICAL POLARIZATION

FCC_74_861_RADIATED_EMISSIONS_VERTICAL



Blue trace Peak detector, Blue Marker Peak detector

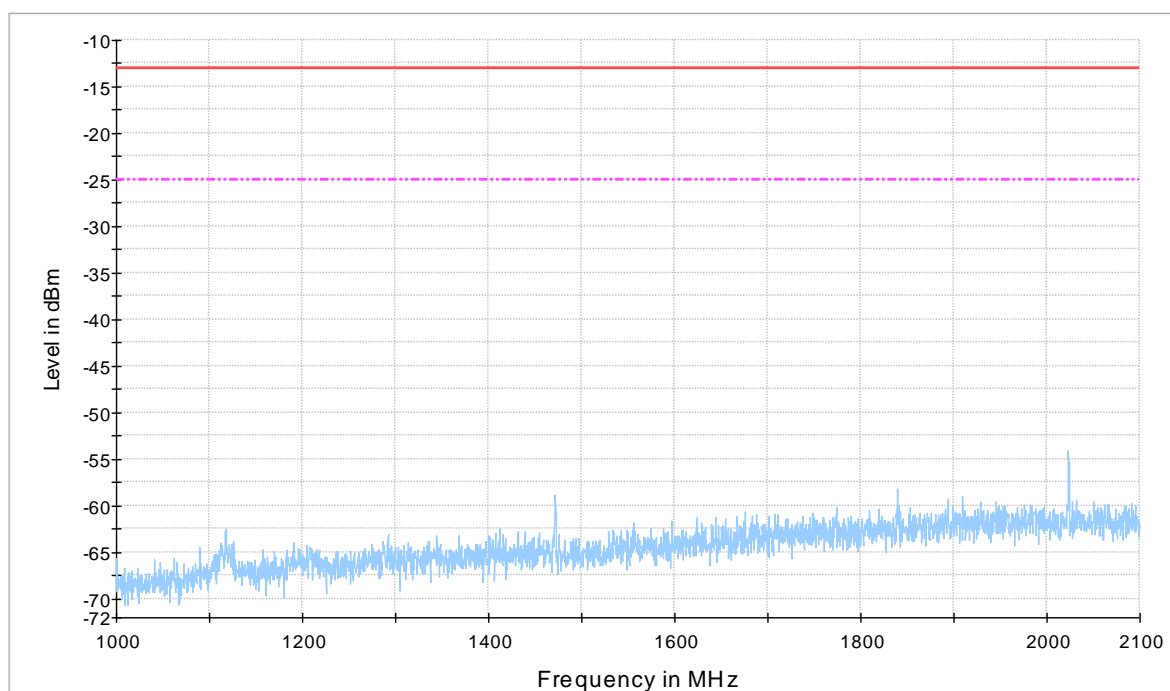
Final Result Peak

Frequency (MHz)	QuasiPeak (dBm)	Height (cm)	Polarization	Azimuth (deg)	Limit (dBm)	Margin (dB)	Note
183.939000	-8.6	100.0	V	180.0	-25	-16.4	Carrier

FREQUENCY RANGE 1GHz – 2.1GHz BAND I – CH8

VERTICAL POLARIZATION

FCC_74_861_RADIATED_EMISSIONS_HORIZONTAL



Blue trace Peak detector

FREQUENCY RANGE 9kHz - 30MHz BAND I – CH8

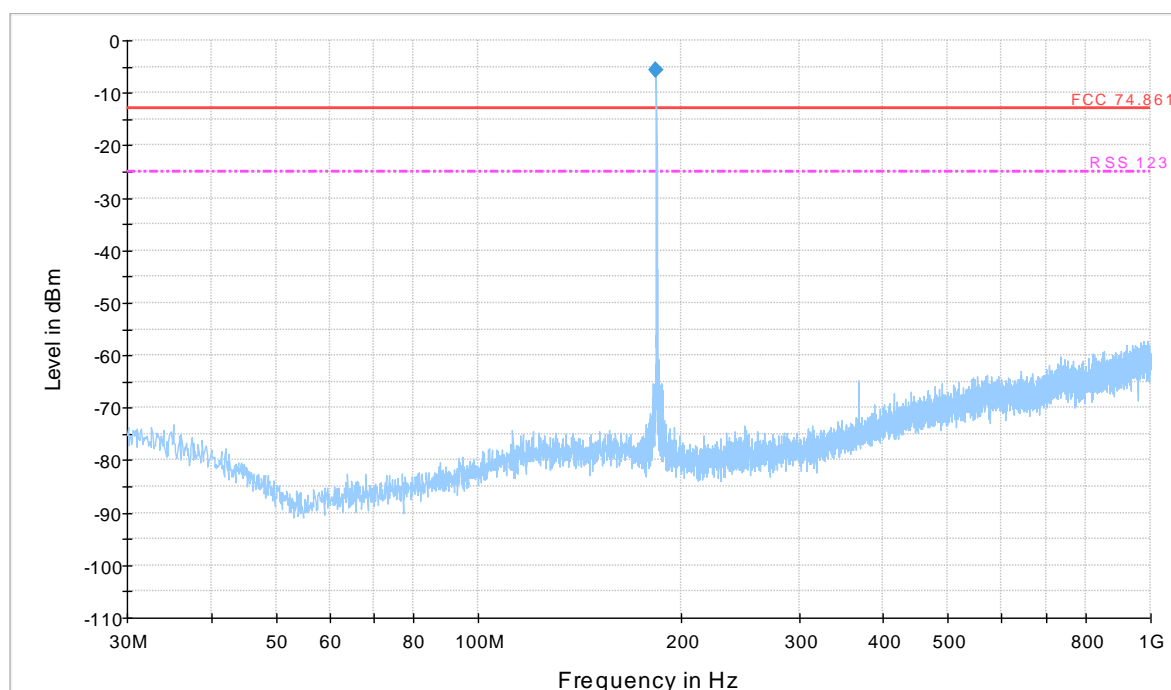
HORIZONTAL POLARIZATION

The amplitude of spurious emissions are attenuated more than 20 dB so the permissible value need not be reported

FREQUENCY RANGE 30MHz – 1GHz BAND I – CH8

HORIZONTAL POLARIZATION

FCC_74_861_RADIATED_EMISSIONS_HORIZONTAL



Blue trace Peak detector, Blue Marker Peak detector

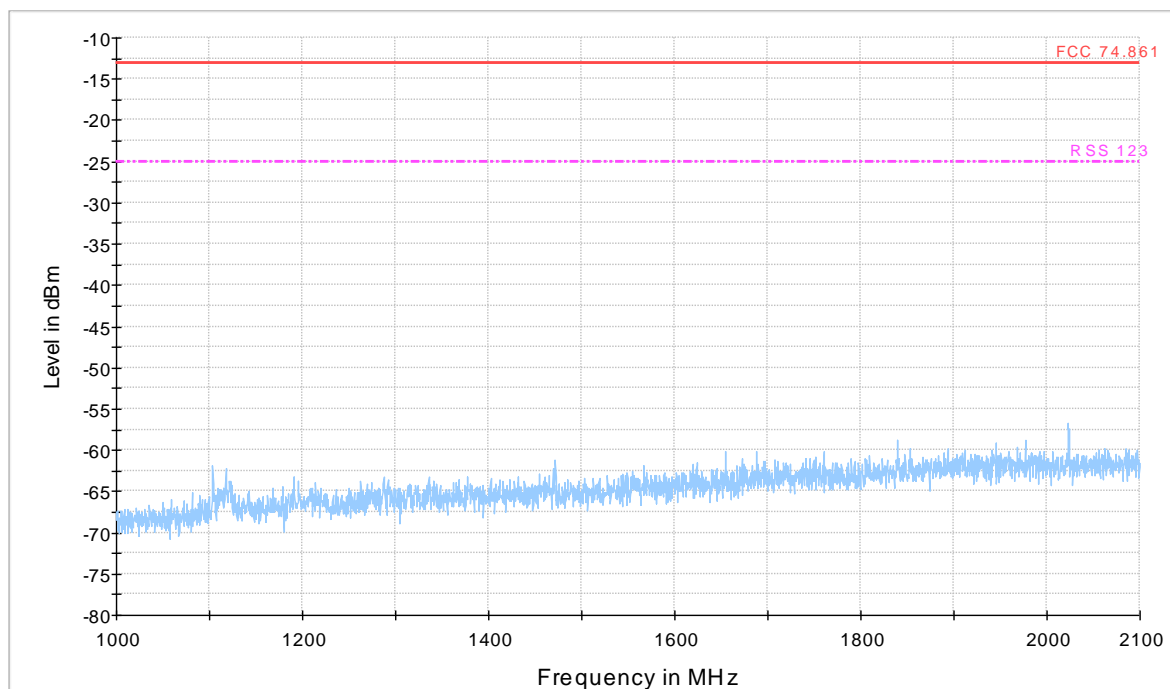
Final Result Peak

Frequency (MHz)	Peak (dBm)	Height (cm)	Polarization	Azimuth (deg)	Limit (dBm)	Margin (dB)	Note
183.939000	-5.7	100.0	H	270.0	-25	-19.3	Carrier

FREQUENCY RANGE 1GHz – 2.1GHz BAND I – CH8

HORIZONTAL POLARIZATION

FCC_74_861_RADIATED_EMISSIONS_HORIZONTAL



Blue trace Peak detector

FREQUENCY RANGE 9kHz - 30MHz BAND II - CH1

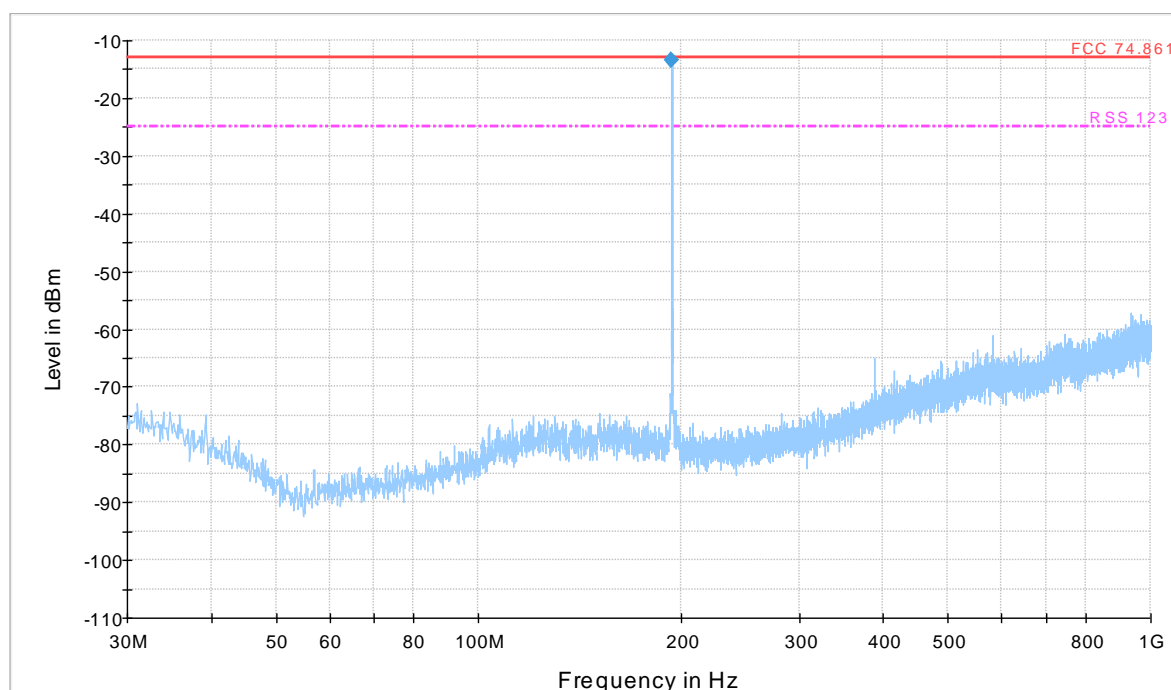
VERTICAL POLARIZATION

The amplitude of spurious emissions are attenuated more than 20 dB so the permissible value need not be reported

FREQUENCY RANGE 30MHz – 1GHz BAND II - CH1

VERTICAL POLARIZATION

FCC_74_861_RADIATED_EMISSIONS_VERTICAL



Blue trace Peak detector, Blue Marker Peak detector

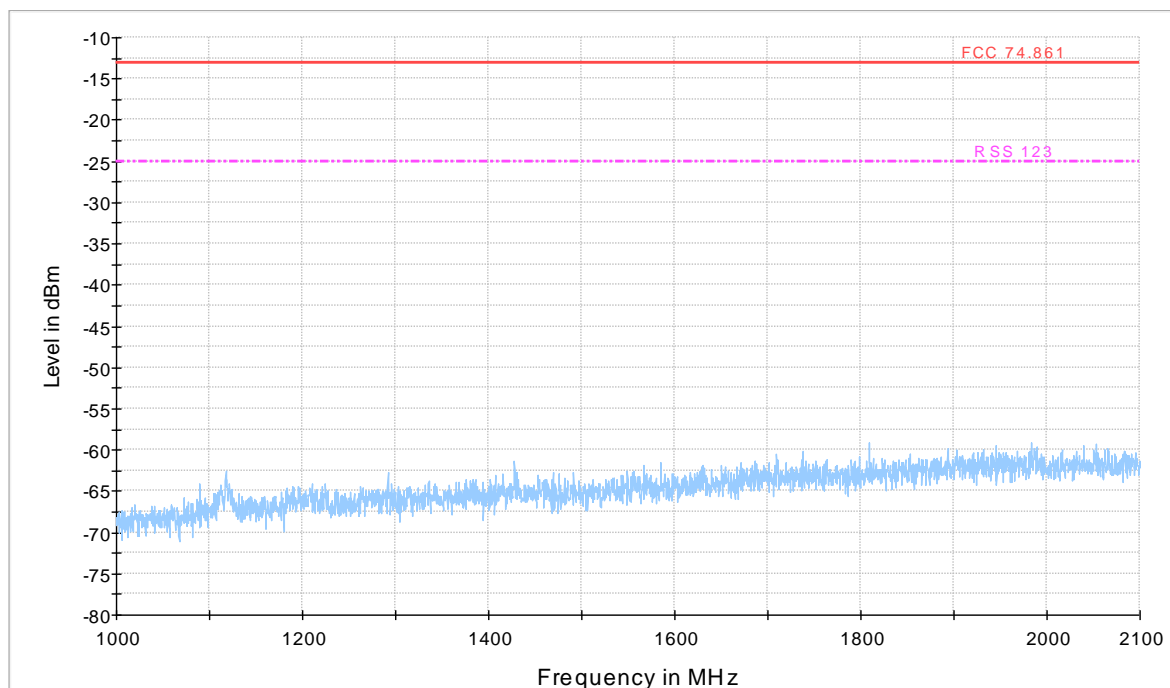
Final Result – Peak

Frequency (MHz)	Peak (dBm)	Height (cm)	Polarization	Azimuth (deg)	Limit (dBm)	Margin (dB)	Note
193.930000	-13.5	160.0	V	-1.0	-25	-11.5	Carrier

FREQUENCY RANGE 1GHz – 2.1GHz BAND II – CH1

VERTICAL POLARIZATION

FCC_74_861_RADIATED_EMISSIONS_HORIZONTAL



Blue trace Peak detector

FREQUENCY RANGE 9kHz - 30MHz BAND II - CH1

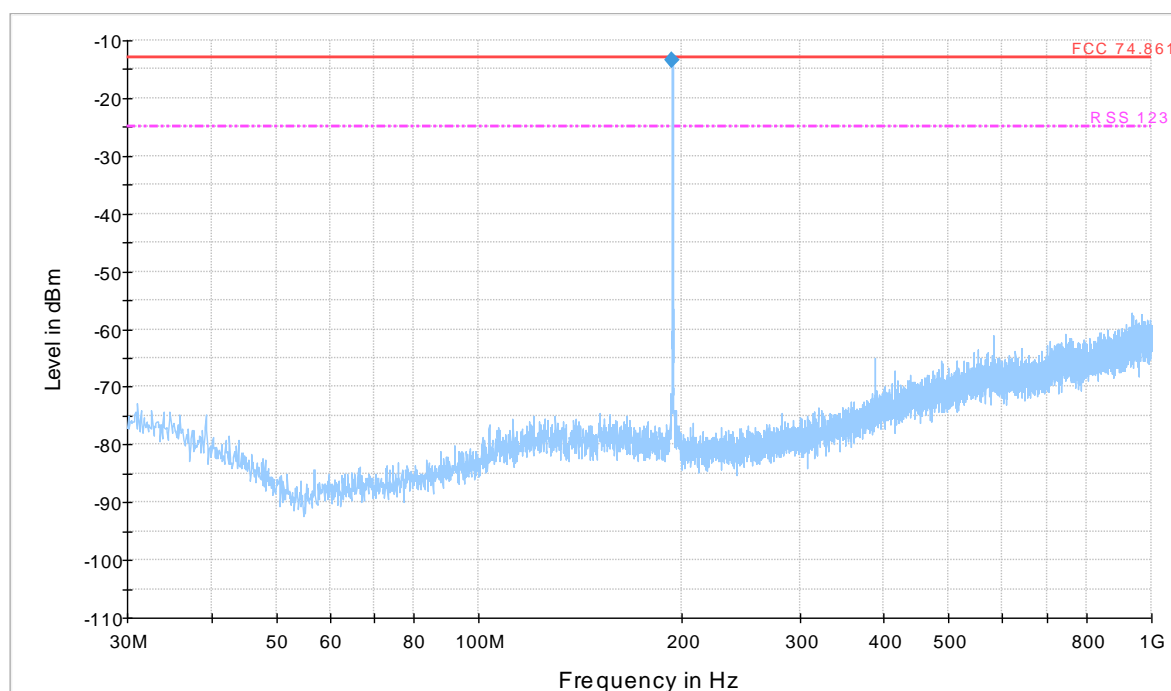
HORIZONTAL POLARIZATION

The amplitude of spurious emissions are attenuated more than 20 dB so the permissible value need not be reported

FREQUENCY RANGE 30MHz – 1GHz BAND II - CH1

HORIZONTAL POLARIZATION

Blue trace Peak detector, Blue Marker Quasi-Peak detector; Green trace average detector, Green Marker average detector



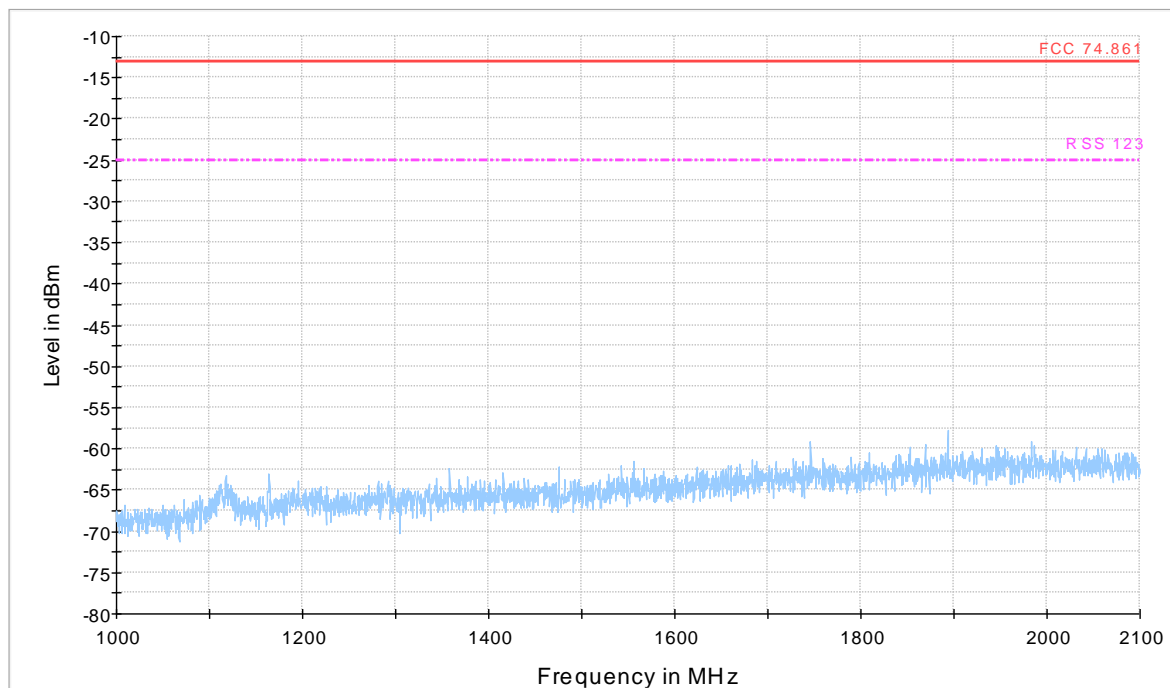
Final Result – Peak

Frequency (MHz)	Peak (dBm)	Height (cm)	Polarization	Azimuth (deg)	Limit (dBm)	Margin (dB)	Note
193.930000	-13.4	100.0	H	0.0	-25	-11.60	Carrier

FREQUENCY RANGE 1GHz – 2.1GHz BAND II – CH1

HORIZONTAL POLARIZATION

FCC_74_861_RADIATED_EMISSIONS_HORIZONTAL



Blue trace Peak detector

FREQUENCY RANGE 9kHz - 30MHz BAND II – CH8

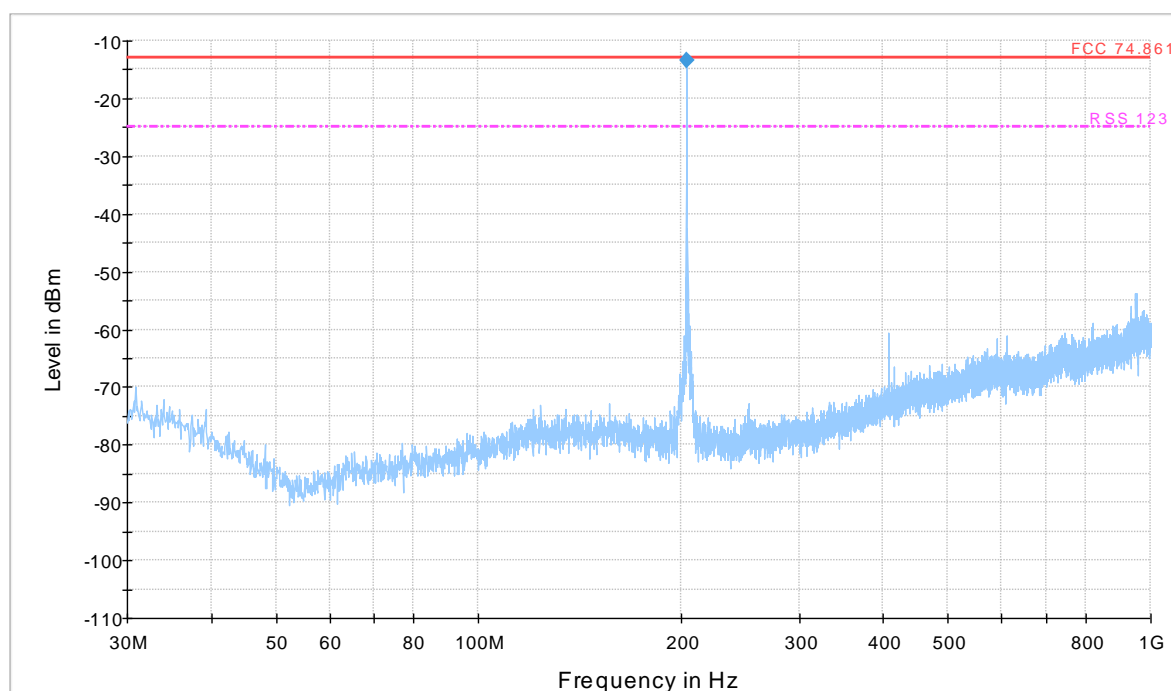
VERTICAL POLARIZATION

The amplitude of spurious emissions are attenuated more than 20 dB so the permissible value need not be reported

FREQUENCY RANGE 30MHz – 1GHz BAND II – CH8

VERTICAL POLARIZATION

FCC_74_861_RADIATED_EMISSIONS_VERTICAL



Blue trace Peak detector, Blue Marker Peak detector

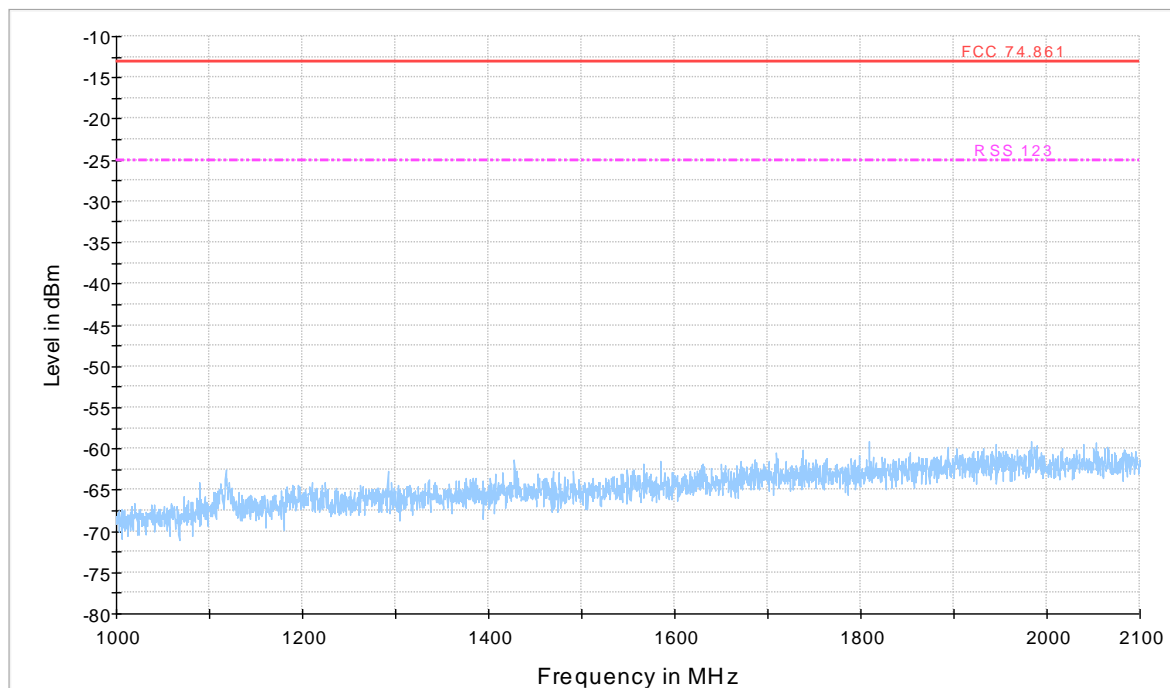
Final Result – Peak

Frequency (MHz)	Peak (dBm)	Height (cm)	Polarization	Azimuth (deg)	Limit (dBm)	Margin (dB)	Note
203.921000	-13.5	100.0	V	0.0	-25	-11.5	Carrier

FREQUENCY RANGE 1GHz – 2.1GHz BAND II – CH8

VERTICAL POLARIZATION

FCC_74_861_RADIATED_EMISSIONS_HORIZONTAL



Blue trace Peak

FREQUENCY RANGE 9kHz - 30MHz BAND II – CH8

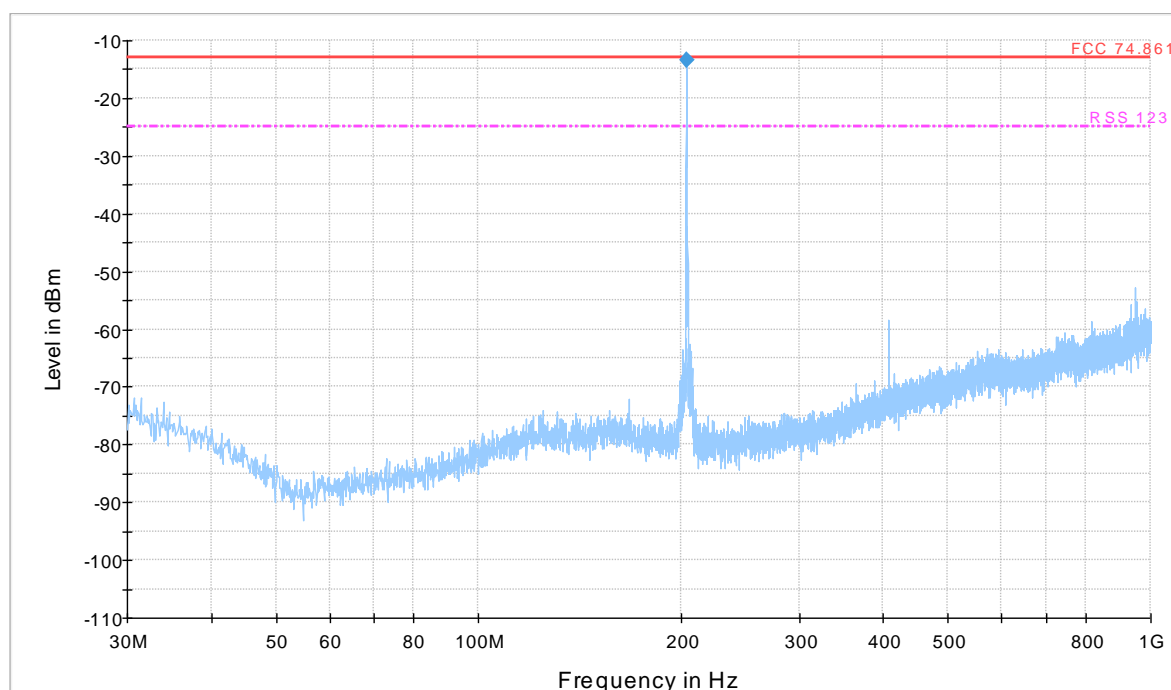
HORIZONTAL POLARIZATION

The amplitude of spurious emissions are attenuated more than 20 dB so the permissible value need not be reported

FREQUENCY RANGE 30MHz – 1GHz BAND II – CH8

HORIZONTAL POLARIZATION

FCC_74_861_RADIATED_EMISSIONS_HORIZONTAL



Blue trace Peak detector, Blue Marker Peak detector

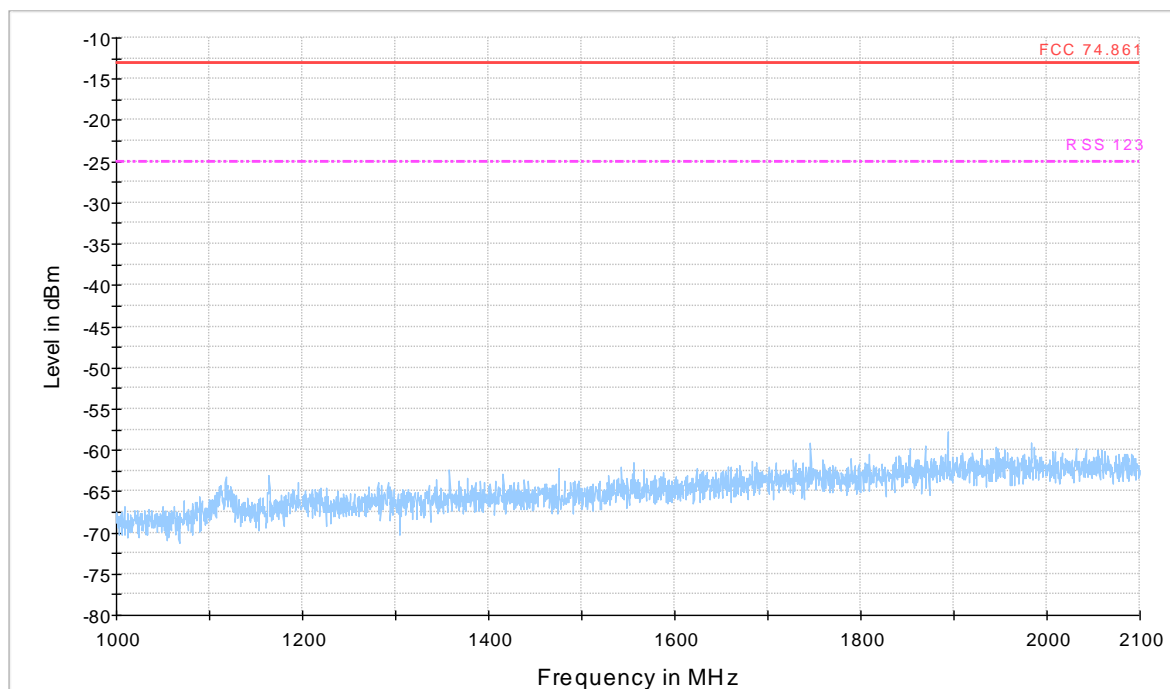
Final Result – Peak

Frequency (MHz)	QuasiPeak (dBμV/m)	Height (cm)	Polarization	Azimuth (deg)	Limit (dBm)	Margin (dB)	Note
203.921000	-13.4	100.0	H	0.0	-25	-11.6	Carrier

FREQUENCY RANGE 1GHz – 2.1GHz BAND II – CH8

HORIZONTAL POLARIZATION

FCC_74_861_RADIATED_EMISSIONS_HORIZONTAL



Blue trace Peak detector

5 LIST OF EQUIPMENT USED

EQUIPMENT	IDENTIFICATION NUMBER	CAL. DUE	CAL. INTERVAL
EMI TEST RECEIVER 20HZ 40GHZ	EMC.359	AUG.2015 (see note 1 below)	1 YEAR
RF SEMI-ANECHOIC CHAMBER (CSSA)	EMC.191	AUG 2015 (see note 1 below)	1 YEAR
AUDIO ANALYZER	TLC.006	FEB 2015	1 YEAR
BILOG ANTENNA	EMC.023	JUN 2015	3 YEAR
LOG PERIODICA ANTENNA	EMC.391	DEC 2015	3 YEAR
SPECTRUM ANALYZER	EMC.332	APR.2015	1 YEAR
CLIMATIC CHAMBER	EMC.110	APR 2015	1 YEAR

NOTE:

- 1) This equipment was in calibration for all testing performed in May 2014 and was recalibrated in August 2014