



EUROFINS PRODUCT SERVICE GMBH



Testing Cert #1983.01

RADIO TEST- REPORT

Compliance Test Report

**FCC PART 15 SUBPART C
IC RSS 210 ISSUE 8**

**FCC ID: ZCQRCA
IC: 9570A-RCA**

Radio receiver for measuring probe

P03.6600 RC66

Wireless LAN Radio

TEST REPORT NUMBER: G0M21007-3433-P-15



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1 General Information

1.1 Notes

The results of this test report relate exclusively to the item tested as specified in chapter "Description of test item" and are not transferable to any other test items.

Eurofins Product Service GmbH is not responsible for any generalisations and conclusions drawn from this report. Any modification of the test item can lead to invalidity of test results and this test report may therefore be not applicable to the modified test item.

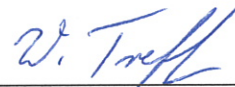
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Operator:

24.05.2011

W. Treffke



Date

Eurofins-Lab.

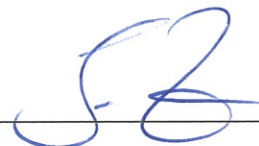
Name

Signature

Technical responsibility for area of testing:

24.05.2011

J. Zimmermann



Date

Eurofins

Name

Signature

1.2 Testing laboratory

EUROFINS PRODUCT SERVICE GMBH
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Germany
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DAR ACCREDITED TESTING LABORATORY
DAR-REGISTRATION NUMBER: DAT-P-268/08

RECOGNIZED NOTIFIED BODY EMC
REGISTRATION NUMBER: BNetzA-bS EMV-07/61

RECOGNIZED NOTIFIED BODY R&TTE
REGISTRATION NUMBER: BNetzA-bS-02/51-53

FCC FILED TEST LABORATORY
REG.-No. 96970

A2LA ACCREDITED TESTING LABORATORY
CERTIFICATE No. 1983.01

BLUETOOTH QUALIFICATION TEST FACILITY (BQTF)
ACCREDITED BY BLUETOOTH QUALIFICATION REVIEW BOARD

INDUSTRY CANADA FILED TEST LABORATORY
REG. NO. IC 3470

Test location, where different:

Name	: ./.
Street	: ./.
Town	: ./.
Country	: ./.
Telephone	: ./.
Fax	: ./.

1.3 Details of approval holder

Name : Blum-Novotest GmbH
Street : Gewerbegebiet Gullen Kaufstrasse 14
Town : 88287 Grünkraut
Country : Germany
Telephone : +49 751 6008 136
Fax : +49 751 6008 6136

Contact : Herr Stefan Häfele
Telephone : +49 751 6008 136

1.4 Application details

Date of receipt of application : 29.09.2010
Date of receipt of test item : 29.09.2010
Date of test : 30.09.2010. – 11.03.2011

1.5 Test item

Description of test item : Radio receiver for measuring probe
Type identification : P03.6600 RC66
Brand Name : Unspecified
Serial number : S.No.201009858
Hardware version : 810.100a 01/02; 815.100b 01/03
Software version : V1.11
Equipment type : End consumer product

Technical data

Frequency range : 2400 - 2483.5MHz
Number of channels : 3
Channels : 2401 - 2423MHz, 1 chirp channel
2426 - 2448MHz, 1 chirp channel
2451 - 2473MHz, 1 chirp channel
Antenna type : internal
Antenna model : inverted F antenna
Number of antennas : 1
Antenna gain : -0.75dBi (Determined by conducted and radiated measurements)
Power supply : 12VDC
Duty cycle : 98%
Operating mode : semi duplex

Spreading technique : CCS (Chirp spread spectrum)
 Modulations : None
 Device classification : Fixed Device

Manufacturer:
 (if applicable)

Name : Blum-Novotest GmbH
 Street : Gewerbegebiet Gullen Kaufstrasse 14
 Town : 88287 Grünkraut
 Country : Germany

1.6 Test standards

Technical standard : **FCC PART 15 SUBPART C**
 IC RSS 210 ISSUE 8

1.7 Additional information

The EUT RC66 contains two identical transceiver chips. Both chips are active during normal use and are connected to the same antenna. The RF paths to the antenna of both chips are almost identical. Although both chips are concurrently active only one chips receives or transmit at the same time. That means that time multiplexing is used between both transceivers.

Due to the symmetry of both transceivers full testing was only performed for the transceiver with the maximum conducted output power (Transceiver 2). Only band-edge compliance and conducted power measurements were performed for both transceivers.

Spurious emissions were measured with on transceiver connected to the antenna and the second transceiver powered on but not receiving or transmitting (use case identical to normal use).

1.8 Acronyms and abbreviations

EUT : Equipment under Test
 TX : Transmission
 RX : Reception
 RBW : Measurement Resolution Bandwidth
 Pol : Measurement Polarization
 e.i.r.p. : Equivalent isotropic radiated power
 FHSS : Frequency hopping spread spectrum
 DSSS : Direct Sequence Spread Spectrum
 OFDM : Orthogonal frequency division multiplexing
 CCK : Complementary code keying
 GFSK : Gaussian frequency shift keying
 T_{nom} : Nominal Temperature
 V_{nom} : Nominal Supply Voltage
 V_{min} : Minimum Supply Voltage
 V_{max} : Maximum Supply Voltage
 VDC : DC voltage
 N/A : Not applicable
 IC : Industry Canada

2 Technical test

2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed.

or

The deviations as specified in 2.4 were ascertained in the course of the tests performed.

2.2 Test environment

Temperature : 22 ... 26°C

Relative humidity content : 20 ... 75%

Air pressure : 86 ... 103kPa

Extreme conditions parameters:

V_{nom} : 12VDC

$V_{min} (V_{nom}-15\%)$: N/A

$V_{max} (V_{nom}+15\%)$: N/A

T_{nom} : 25°C

Other parameter: None

2.3 Test equipment utilized

Measurement Equipment List					
No.	Measurement device:	Type:	Manufacturer:	Last Cal.	Next Cal.
ETS 0086	Semi-anechoic chamber	AC1	Frankonia	12.03.2010	12.03.2011
ETS 0271	Spectrum Analyzer	FSEK30	Rohde & Schwarz	19.03.2009	19.03.2011
ETS 0012	Biconical Antenna	HK 116	Rohde & Schwarz	29.01.2010	29.01.2013
ETS 0336	LPD Antenna	HL 223	Rohde & Schwarz	28.01.2010	28.01.2013
ETS 0018	Horn Antenna	BBHA 9120D	Schwarzbeck	26.08.2010	26.08.2011
ETS 0432	Amplifier-Matrix			02.06.2010	02.06.2012
ETS 0259	Power Meter	NRVD	Rohde & Schwarz	26.03.2010	26.03.2011
ETS 0278	Power Sensor	NRV-Z31	Rohde & Schwarz	25.11.2010	25.11.2012
ETS 0496	Spectrum Analyzer	FSP30	Rohde & Schwarz	26.08.2010	26.08.2011
ETS 0086	Semi-anechoic chamber	AC1	Frankonia	12.03.2010	12.03.2011

2.4 Sample emission level calculation

The following is a description of terms and a sample calculation, as appears in the radiated emissions data table. The numbers used in the calculation are for example only. There is no direct correlation to the specific data taken for the product described in this document:

Reading:

This is the reading obtained on the spectrum analyzer in dB μ V. Any external preamplifiers used are taken into account through internal analyzer settings.

A.F.:

This is the antenna factor for the receiving antenna. It is a conversion factor, which converts electric fields strengths to voltages, which can be measured directly on the spectrum analyzer. It is treated as a loss in dB. Cable losses have been included with the A.F. to simplify the calculations. The antenna factor is used in calculations as follows:

$$\text{Reading on Analyzer (dB}\mu\text{V)} + \text{A.F. (dB)} = \text{Net field strength (dB}\mu\text{V/m)}$$

Net:

This is the net field strength measurement (as shown above).

Limit:

This is the FCC Class B radiated emission limit (in units of dB μ V/m). The FCC limits are given in units of μ V/m. The following formula is used to convert the units of μ V/m to dB μ V/m:

$$\text{Limit (dB}\mu\text{V/m)} = 20 \cdot \log(\mu\text{V/m})$$

Margin:

This is the margin of compliance below the FCC limit. The units are given in dB. A negative margin indicates the emission was below the limit. A positive margin indicates that the emission exceeds the limit.

Example only:

$$\begin{array}{rclcl} \text{Reading} & + & \text{AF} & = & \text{Net Reading} & : & \text{Net reading} - \text{FCC limit} = \text{Margin} \\ 21.5 \text{ dB}\mu\text{V} & + & 26 \text{ dB} & = & 47.5 \text{ dB}\mu\text{V/m} & : & 47.5 \text{ dB}\mu\text{V/m} - 57.0 \text{ dB}\mu\text{V/m} = -9.5 \text{ dB} \end{array}$$

2.5 Test results

Test case	Clause	Required	Result	Remarks
INFORMATIONAL TRANSMITTER PARAMETERS				
Occupied Bandwidth	IC RSS-Gen. 4.6.1	<input checked="" type="checkbox"/>		
TRANSMITTER PARAMETERS				
6dB Bandwidth	FCC § 15.247(a)(2) IC RSS-210 § A8.2	<input checked="" type="checkbox"/>	PASS	
Spectral Density	FCC § 15.247(e) IC RSS-210 § A8.2	<input checked="" type="checkbox"/>	PASS	
Maximum peak conducted output power	FCC § 15.247(b) IC RSS-210 § A8.4	<input checked="" type="checkbox"/>	PASS	
Band-edge Compliance	FCC § 15.247(d) IC RSS-210 § A8.5	<input checked="" type="checkbox"/>	PASS	
Conducted spurious emissions	FCC § 15.247(d) IC RSS-210 § A8.5	<input checked="" type="checkbox"/>	PASS	
Radiated spurious emissions	FCC § 15.209 IC RSS-210 § A8.5 IC RSS-Gen § 7.2.2	<input checked="" type="checkbox"/>	PASS	
RECEIVER PARAMETERS				
Radiated spurious emissions	FCC § 15.109 IC RSS-Gen § 4.10 IC RSS-Gen § 6.1	<input checked="" type="checkbox"/>	PASS	
POWER LINE PARAMETERS				
AC power line conducted emissions	FCC § 15.207 IC RSS-Gen. 7.2.4	<input checked="" type="checkbox"/>	PASS	

3 Informational Transmitter parameters

3.1 Transmitter Modes for conformance testing

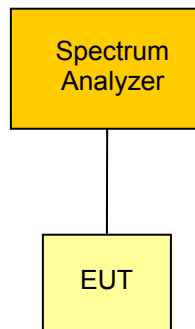
The following transmission modes are elected for compliance testing.

TEST MODE CSS	
Conditions	
Spread Spectrum :	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Spreading Technique :	CSS
Modulation :	NONE
Bandwidth :	22MHz
Data rate :	250kbps
Duty Cycle :	98%
Power level :	Maximum

3.2 Occupied Bandwidth

According FCC rules 47 CFR 2.1049 and RSS-Gen Section 4.6.1 the 99% emission bandwidth occupied by the digital modulated transmitted signal has to be reported.

3.2.1 Measurement procedure



The eut is connected to a spectrum analyzer and set to transmission mode with maximum power under normal test conditions. The span of the analyzer is set wide enough to capture all significant emissions of the modulation spectrum. The resolutions bandwidth is set as close as possible to 1% of the selected span without being below 1%. The occupied bandwidth is than measured evaluated by an internal measurement procedure of the analyzer.

3.2.2 Results

Transmitter occupied bandwidth			
Measurement Conditions			
Power occupation :		99%	
Channel [MHz]	Lower edge frequency [MHz]	Upper edge frequency [MHz]	Occupied Bandwidth [MHz]
Test mode CSS – Transceiver 2			
2412	2403.7	2420.2	16.5
2442	2433.7	2450.1	16.4
2462	2453.7	2470.1	16.4
See attached diagram in Annex			
Verdict			PASS

4 Transmitter parameters

4.1 6dB Bandwidth

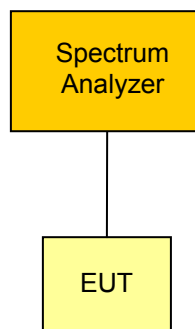
According FCC rules 47 CFR 15.247(a)(2) and RSS-210 Section A8.2 the minimum 6dB Bandwidth has to be validated.

4.1.1 Limits

According FCC and IC rules the minimum 6 dB bandwidth shall be at least 500 kHz.

6dB bandwidth limit
$\geq 500\text{kHz}$

4.1.2 Measurement procedure



The eut is connected to a spectrum analyzer and set to transmission mode with maximum power under normal test conditions. The resolution bandwidth is set to 100kHz (VBW \geq RBW). The center frequency is set to the channel center frequency. The span of the analyzer is set to 2 -3 times the 6dB bandwidth. The bandwidth is determined using markers with peak detector and max hold.

4.1.3 Results

Transmitter 6dB bandwidth	
Channel [MHz]	6dB Bandwidth [MHz]
Test mode CSS – Transceiver 2	
2412	14.4
2442	14.6
2462	14.6
See attached diagram in Annex	
Verdict	PASS

4.2 Power spectral density

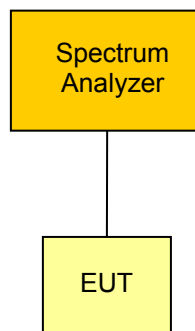
According FCC rules 47 CFR 15.247(e) and RSS-210 Section A8.2 the maximum pwer density in any 3kHz bandwidth is limited and has to be validated.

4.2.1 Limits

According FCC and IC rules the transmitter power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission or over 1.0 second if the transmission exceeds 1.0-second duration.

Spectral density limit
≤ 8dBm/3kHz

4.2.2 Measurement procedure



The eut is connected to a spectrum analyzer and set to transmission mode with maximum power under normal test conditions. The resolution bandwidth is set to 3kHz (VBW≥RBW). The center frequency is set to the channel center frequency. The span of the analyzer is set to 1.5MHz. The sweep time is set to SPAN/RBW. The spectral density is determined using peak detector and max hold.

According to 47 CFR 15.31 battery power equipment is measured using new batteries and equipment using external power supply is measured with 85%, 100% and 115% of the nominal rated supply voltage.

4.2.3 Results

Power spectral density		
Channel [MHz]	Max. emission frequency [MHz]	Spectral density [dBm/3kHz]
Test mode CSS – Transceiver 2		
2412	2413.44	-21.1
2442	2448.53	-22.1
2462	2467.68	-22.1
See attached diagram in Annex		
Verdict		PASS

4.3 Maximum peak conducted output power

According FCC rules 47 CFR 15.247(b)(3) and RSS-210 Section A8.4 the maximum peak conducted output power is limited and has been verified.

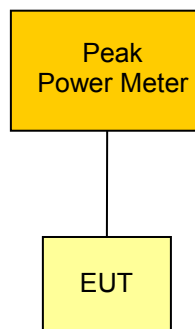
4.3.1 Limits

For systems employing digital modulation techniques operating in the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz, the maximum peak conducted output power shall not exceed 1 W.

Maximum peak conducted power limit
1W / 30dBm

*) The conducted output power limit specified above is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in the table, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

4.3.2 Measurement procedure



The eut is connected to a peak power sensor of a power meter and activated with the maximum power level. The peak power is measured and recorded.

According to 47 CFR 15.31(e) battery power equipment is measured using new batteries and equipment using external power supply is measured with 85%, 100% and 115% of the nominal rated supply voltage.

4.3.3 Results

Maximum peak conducted output power		
Measurement Conditions		
Antenna gain :	-0.75Bi	
Power correction :	0dB	
Channel [MHz]	Conducted output power [dBm]	Power Limit [dBm]
Test mode CSS – Transceiver 1		
2412	-2.2	30
2442	-1.5	30
2462	-1.2	30
Test mode CSS – Transceiver 2		
2412	-1.5	30
2442	-1.0	30
2462	-1.0	30
See attached diagrams in Annex		
Measurement uncertainty		4.22dB
Verdict		PASS

4.4 Transmitter band-edge compliance

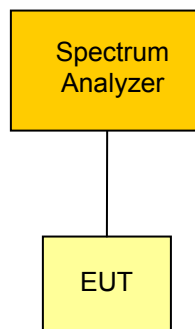
According FCC rules 47 CFR 15.209, 15.247(d) and RSS-210 Section A8.5 the emission level of out-of-band emissions are limited and has to be validated.

4.4.1 Limits

The emission limit of out of band emission in any 100kHz bandwidth outside the frequency band in which the spread spectrum device is operating, the radio frequency power that is produced 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, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general limits (see "Transmitter spurious emissions"-measurement) is not required.

Transmitter band-edge emission limits	
TX-Power Detector	Out of band attenuation
Peak	-20dBc/100kHz
RMS	-30dBc/100kHz

4.4.2 Measurement procedure



The eut is connected to a spectrum analyzer and set to transmission mode without hopping with maximum power under normal test conditions. The span of the analyzer is set large enough to capture the maximum emission within the emission band as well as any modulation product which fall outside the authorized band of operation. The resolution bandwidth is set to 1% of the span ($VBW \geq RBW$). The

A marker is set on the emission at the bandedge, or on the highest modulation product outside of the band, if this level is greater than that at the bandedge. Using the delta-marker function the highest peak of of the in-band emission is measured.

4.4.3 Results

Transmitter band-edge emissions		
Measurement Conditions		
Power mode :	Peak	
Test mode	Lower edge emission [dBc]	Upper edge emission [dBc]
CSS – Transceiver 1	-34.10	-37.35
CSS – Transceiver 2	-30.47	-36.23
See attached diagram in Annex		
Verdict	PASS	

4.5 Transmitter conducted spurious emissions

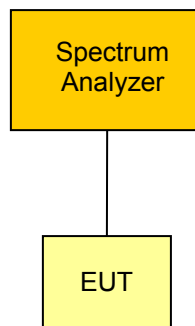
According FCC rules 47 CFR 15.247(d) and RSS-210 Section A8.5 unwanted emissions in the spurious domain are power limited and has to be validated.

4.5.1 Limits

The emission limit of out of band emission in any 100kHz bandwidth outside the frequency band in which the spread spectrum device is operating, the radio frequency power that is produced 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, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general limits (see "Transmitter radiated spurious emissions"-measurement) is not required.

Transmitter conducted spurious emission limits	
TX-Power Detector	Out of band attenuation
Peak	-20dBc/100kHz
RMS	-30dBc/100kHz

4.5.2 Measurement procedure



The eut is connected to a spectrum analyzer and set to transmission mode with maximum power under normal test conditions. The span of the analyzer is set large enough to capture the maximum emission within the emission band as well as any spurious emission outside the authorized band of operation. The resolution bandwidth is set to 100kHz (VBW≥RBW). The emissions are measured using peak detector and max hold.

The measurement is performed over the frequency range of 30MHz up to the tenth harmonic.

4.5.3 Results

Transmitter conducted spurious emissions				
Measurement Conditions				
Power detector :		Peak		
Modulated :		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Channel Frequency [MHz]	Emission Frequency [MHz]	Measured Field Strength * [dBm]	Limit [dBm]	Margin [dB]
Test mode CSS – Transceiver 1 (check at worst case emission frequency found for transceiver 2)				
2412	4820	-61.72	-41.5	-20.22
2442	4880	-62.09	-40.8	-21.29
2462	4920	-62.69	-40.3	-22.39
Test mode CSS – Transceiver 2 (full test)				
2412	4820	-53.59	-40.6	-12.99
2442	4880	-53.63	-39.0	-14.63
2462	4920	-55.24	-40.2	-15.04
See attached diagrams in Annex				
Verdict			PASS	

4.6 Transmitter radiated spurious emissions

According FCC rules 47 CFR 15.209 unwanted emissions in the spurious domain are power limited and has to be validated.

4.6.1 Limits

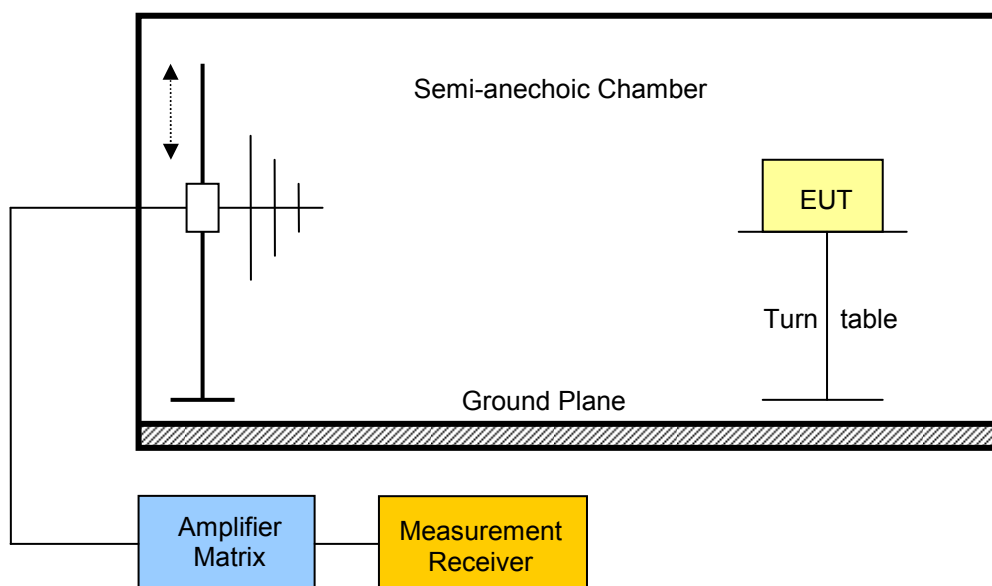
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Tranmitter restricted band spurious emission limits				
Frequency range [MHz]	Detector	Limit [$\mu\text{V}/\text{m}$]	Calculated Limit 3m [dB $\mu\text{V}/\text{m}$]	Measurement Distance [m]
30 – 88	Quasi-Peak	100	40	3
88 – 216	Quasi-Peak	150	43.5	3
216 – 960	Quasi-Peak	200	46	3
960 – 1000	Quasi-Peak	500	54	3
> 1000	Average	500	54	3

When average radiated emission measurements are specified, including average emission measurements below 1000 MHz, there also is a limit on the peak level of the radio frequency emissions. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test.

4.6.2 Measurement procedure

The spurious emission measurement is performed on 3m a semi-anechoic test site.



The eut is placed on a non-metallic table. Any emission is received by the measurement antenna and measured via a measurement receiver connected to the antenna. To obtain the maximum emission the eut is rotated through 360°.

Due to practical reasons the spurious emission level check is first performed with a peak detector and the quasi-peak and average limits.

If any emission is detected that gets close to the emission limit the detector is changed and the quasi-peak or average detector is used. Which detector is used is determined by the emission frequency. If pulsed transmission is used, averaging over the pulse train is used.

The measurement values are also corrected to obtain the field strength values at the defined measurement distances of the emission limits.

The measurement is performed over the frequency range of 30MHz up to the tenth harmonic.

4.6.3 Results

Transmitter radiated spurious emissions						
Measurement Conditions						
Test mode :		CSS / transceiver 2 transmitting, transceiver 1 idle				
Measurement distance :		3m				
Modulated :		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Channel Frequency [MHz]	Emission Frequency [MHz]	Polarization	Measured Field Strength * [dBµV/m]	Limit@3m [dBµV/m]	Detector	Margin [dB]
2412	4817	v	45.2	74	peak	-28.8
2412	4826	h	52.7	74	peak	-21.3
2442	4873	v	45.0	74	peak	-29.0
2442	4882	h	51.2	74	peak	-22.8
2462	4921	v	46.7	74	peak	-27.3
2462	4921	h	48.0	74	peak	-26.0
See attached diagrams in Annex						
Verdict					PASS	

* **Note** : If necessary the measured field strength values are corrected to reflect the field strength values at the measurement distance stated in the table. Correction acc. $20 \cdot \log_{10}(\text{measurement distance}/\text{limit distance})$.

5 Receiver parameters

5.1 Receiver spurious emissions

According FCC rules 47 CFR 15.109 and RSS-Gen Section 4.9 the emission of unintentional radiators have to comply with limits stated in the rules.

5.1.1 Limits

According § 15.109 of the FCC rules, the field strength of radiated emissions from a Class A digital device (*a digital device that is marketed for use in a commercial, industrial or business environment, exclusive of a device which is marketed for use by the general public or is intended to be used in the home.*), as determined at a distance of 10 meters, shall not exceed the following:

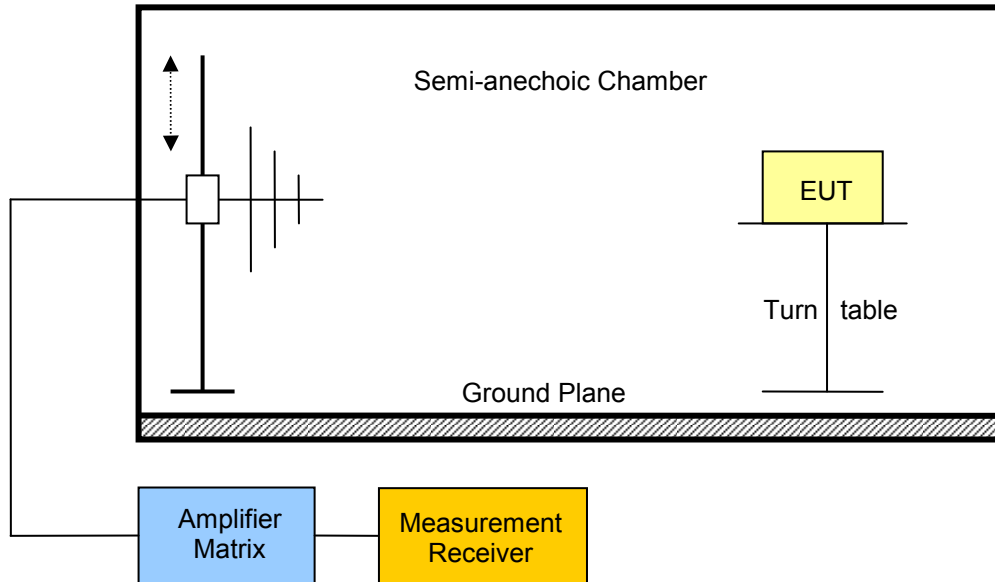
Class A receiver spurious emission limits @ 10m				
Frequency range [MHz]	Detector	Limit [$\mu\text{V}/\text{m}$]	Calculated Limit [$\text{dB}\mu\text{V}/\text{m}$]	Measurement Distance [m]
30 – 88	Quasi-Peak	90	39.1	10
88 – 216	Quasi-Peak	150	43.5	10
216 – 960	Quasi-Peak	210	46.4	10
960 – 1000	Quasi-Peak	300	49.5	10
> 1000	Average	300	49.5	10

Except for Class A digital devices (*Class B, a digital device that is marketed for use in a residential environment notwithstanding use in commercial, business and industrial environments. Examples of such devices include, but are not limited to, personal computers, calculators, and similar electronic devices that are marketed for use by the general public.*), the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Class B receiver spurious emission limits @ 3m				
Frequency range [MHz]	Detector	Limit [$\mu\text{V}/\text{m}$]	Calculated Limit [$\text{dB}\mu\text{V}/\text{m}$]	Measurement Distance [m]
30 – 88	Quasi-Peak	100	40	3
88 – 216	Quasi-Peak	150	43.5	3
216 – 960	Quasi-Peak	200	46	3
960 – 1000	Quasi-Peak	500	54	3
> 1000	Average	500	54	3

5.1.2 Measurement procedure

The spurious emission measurement is performed on a 10m open area test site.



The eut is placed on a non-metallic table. Any emission is received by a loop antenna and measured via a measurement receiver connected to the loop antenna. To obtain the maximum emission the eut is rotated through 360°.

Due to practical reasons the spurious emission level check is first performed with a peak detector and the quasi-peak and average limits.

If any emission is detected that gets close to the emission limit the detector is changed and the quasi-peak or average detector is used. Which detector is used is determined by the emission frequency. If pulsed transmission is used, averaging over the pulse train is used.

The measurement values are also corrected to obtain the field strength values at the defined measurement distances of the emission limits.

The measurement is performed over the frequency range of 30MHz up to the fifth harmonic.

5.1.3 Results

Receiver spurious emissions						
Measurement Conditions						
Test mode :		CSS				
Measurement distance :		3m				
Device class :		B				
Channel Frequency [MHz]	Emission Frequency [MHz]	Polarization	Measured Field Strength * [$\mu\text{V}/\text{m}$]	Limit@3m [$\mu\text{V}/\text{m}$]	Detector	Margin [$\mu\text{V}/\text{m}$]
2442	43.9	vertical	71.61	100.00	peak	-28.39
See attached diagrams in Annex						
Verdict					PASS	

* **Note** : If necessary the measured field strength values are corrected to reflect the field strength values at the measurement distance stated in the table. Correction acc. $20 \cdot \log_{10}(\text{measurement distance}/\text{limit distance})$.

6 Power Line parameters

6.1 AC power line conducted emissions

According FCC rules 47 CFR 15.207 and RSS-Gen Section 7.2.2 for any intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits given below.

6.1.1 Limits

AC power line emission limits		
Frequency [MHz]	Conducted Limit [dB μ V]	
	Quasi-Peak	Average
0.15 – 0.5	66 to 56	56 to 46
0.5 - 5	56	46
5 - 30	60	50

6.1.2 Measurement procedure

The ac power line emissions are measured using a 50 μ H / 50 Ω line impedance stabilization network (LINS). The radio frequency voltage between each power line and ground at the power terminal is measured.

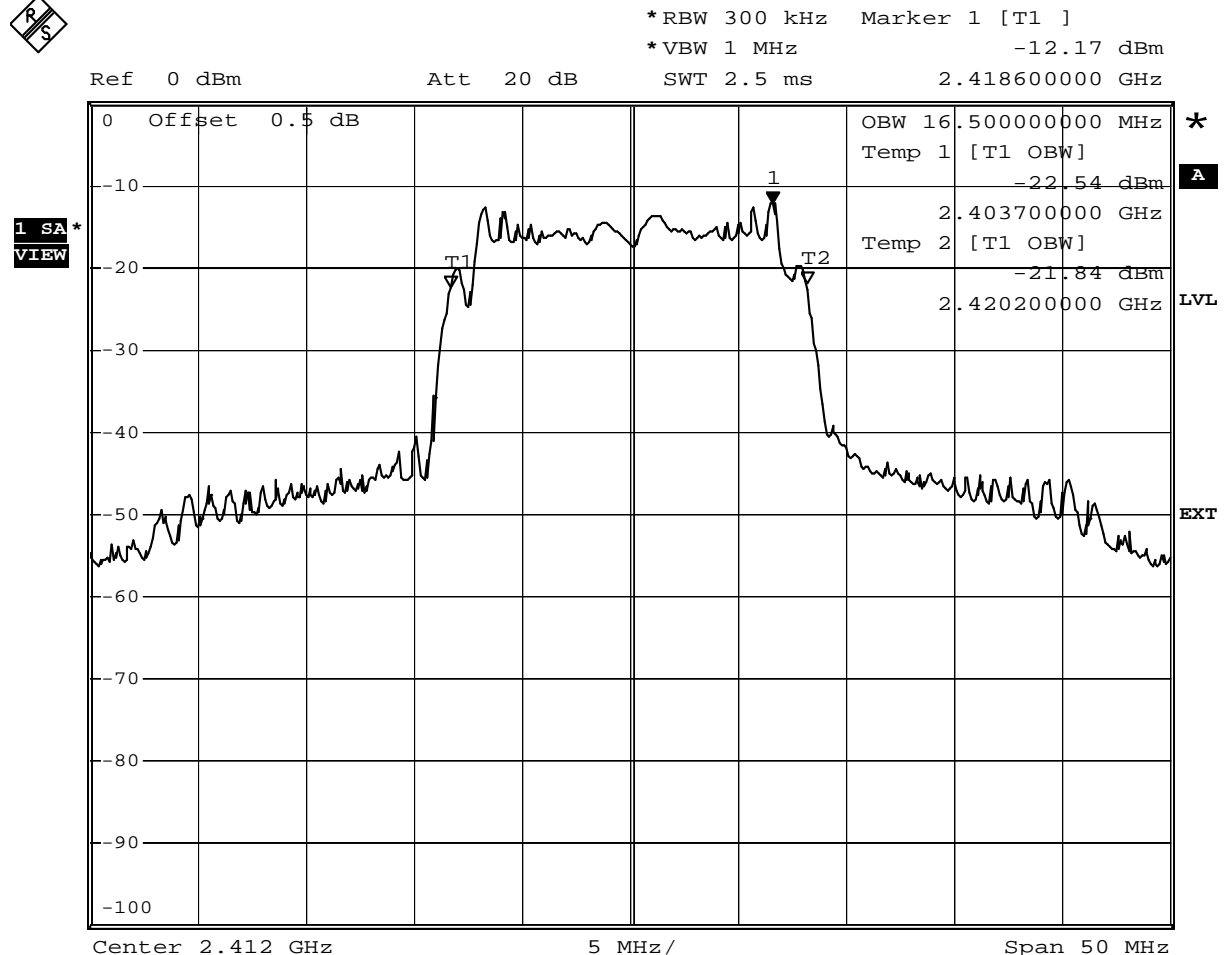
6.1.3 Results

AC power line emissions	
Conducted emission level	
See attached Diagram	
Verdict	PASS

Annex B Transmitter Occupied Bandwidth

RSS Gen Occupied Bandwidth

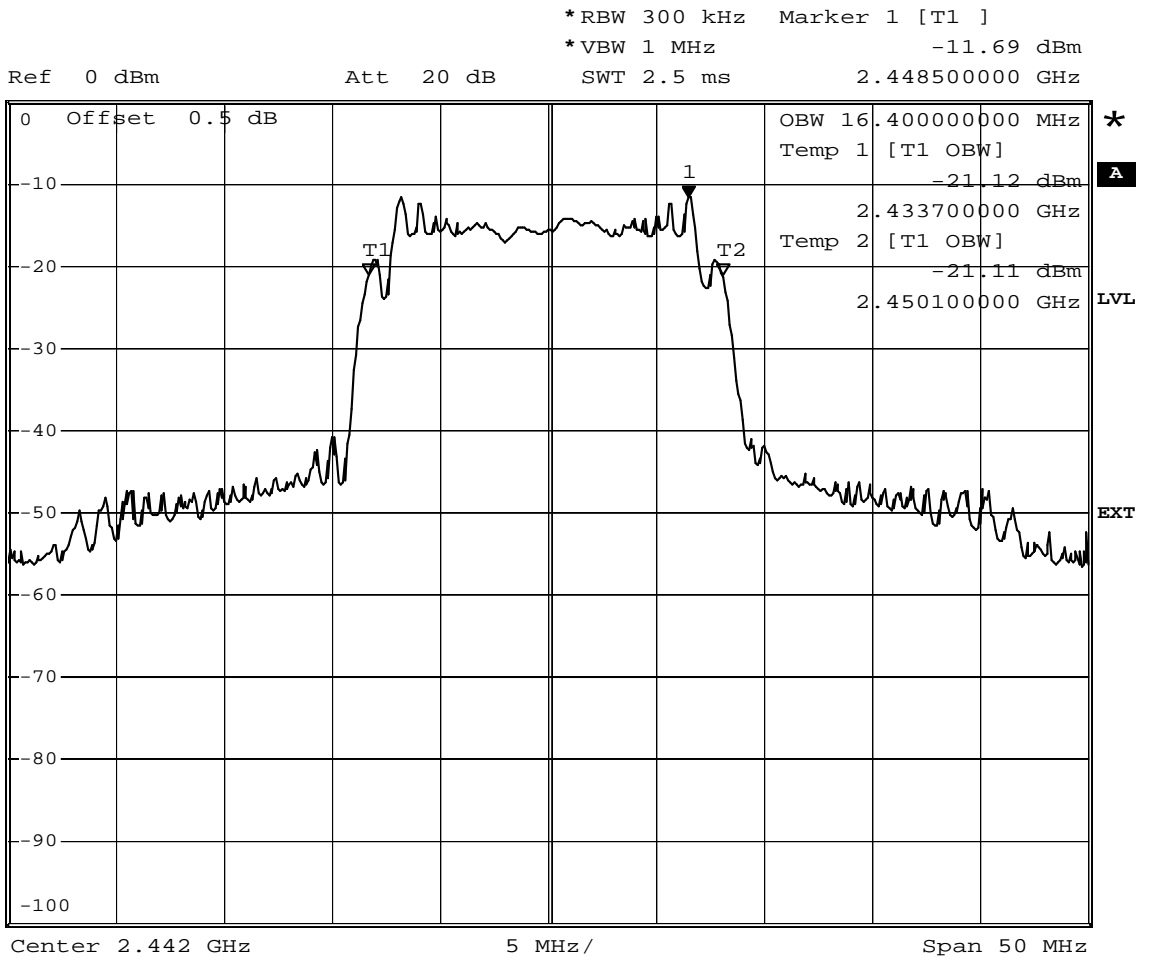
EUT	Measuring Probe
Model	P03.6600 RC66
Approval Holder	BLUM Novotest / Ord.: G0M21007-3433
Temperature / Voltage	25°C, Vnom
Test Site / Operator	Eurofins Product Service GmbH, Mr. Treffke
Test Specification	4.4.1 Occupied Bandwidth
Comment 1	Channel.: 2412 MHz
Comment 2	A spectrum analyzer with an integrated 99% power bandwidth function is used
Comment 3	CSS, power level max, 250 kbit/s



Comment: Occupied bandwidth: 16500 KHz
 Date: 3.MAR.2011 10:39:45

RSS Gen
Occupied Bandwidth

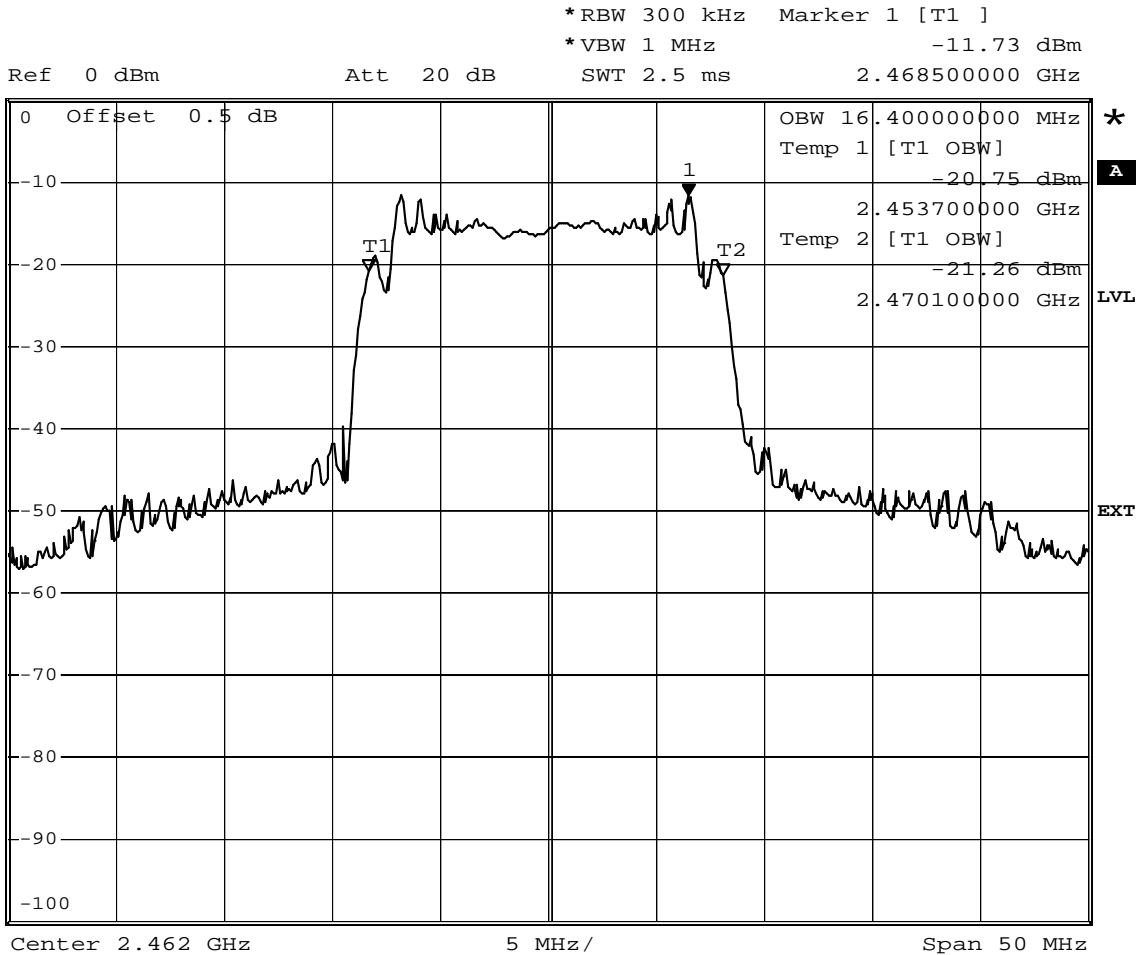
EUT Measuring Probe
 Model P03.6600 RC66
 Approval Holder BLUM Novotest / Ord.: G0M21007-3433
 Temperature / Voltage 25°C, Vnom
 Test Site / Operator Eurofins Product Service GmbH, Mr. Treffke
 Test Specification 4.4.1 Occupied Bandwidth
 Comment 1 Channel.: 2442 MHz
 Comment 2 A spectrum analyzer with an integrated 99% power bandwidth function is used
 Comment 3 CSS, power level max, 250 kbit/s



Comment: Occupied bandwidth: 16400 KHz
 Date: 3.MAR.2011 10:41:19

RSS Gen
Occupied Bandwidth

EUT Measuring Probe
Model P03.6600 RC66
Approval Holder BLUM Novotest / Ord.: G0M21007-3433
Temperature / Voltage 25°C, Vnom
Test Site / Operator Eurofins Product Service GmbH, Mr. Treffke
Test Specification 4.4.1 Occupied Bandwidth
Comment 1 Channel.: 2462 MHz
Comment 2 A spectrum analyzer with an integrated 99% power bandwidth function is used
Comment 3 CSS, power level max, 250 kbit/s

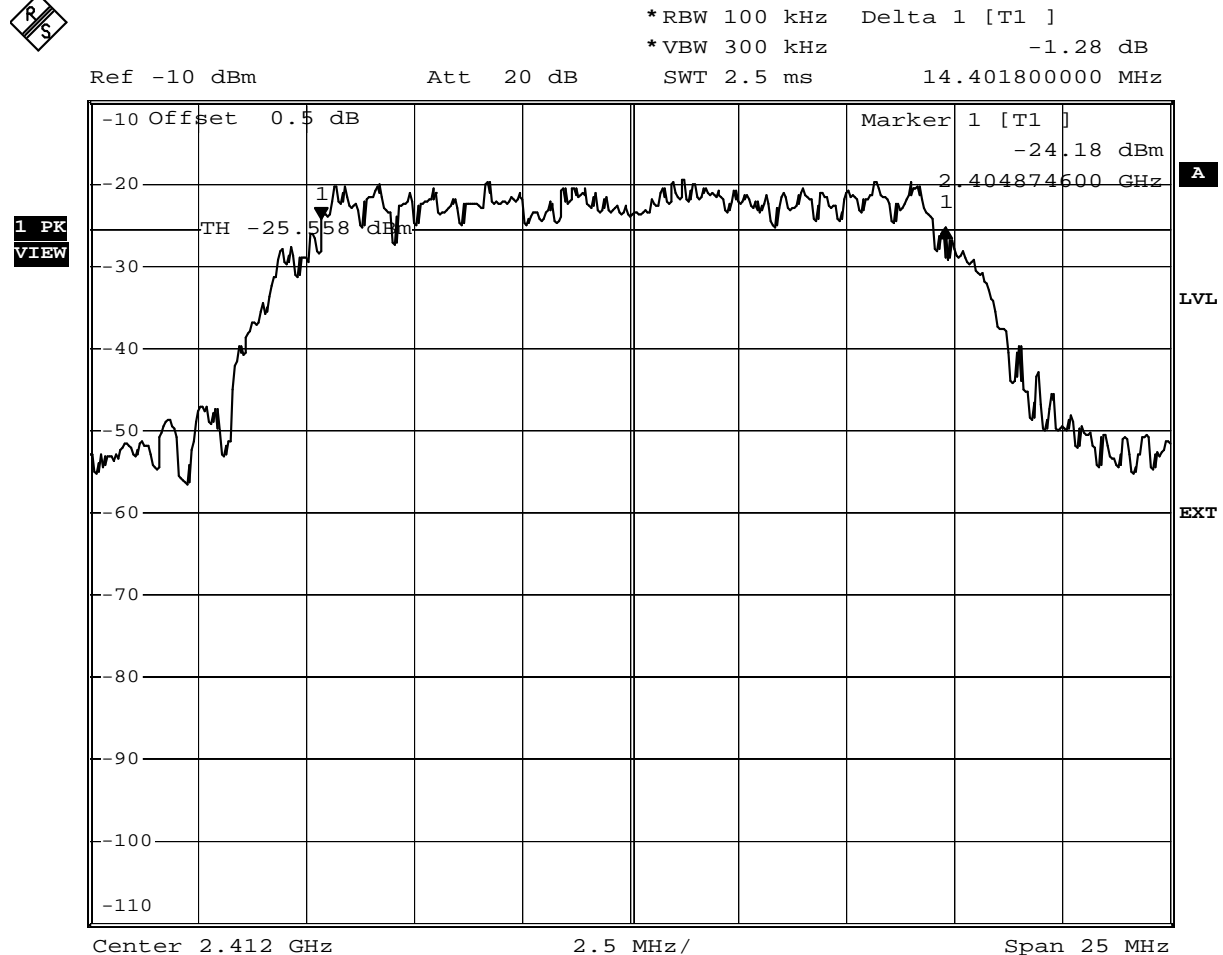


Comment: Occupied bandwidth: 16400 KHz
Date: 3.MAR.2011 10:43:01

Annex C Transmitter 6dB bandwidth

FCC part 15.247 (a)2 Minimum 6 dB Bandwidth

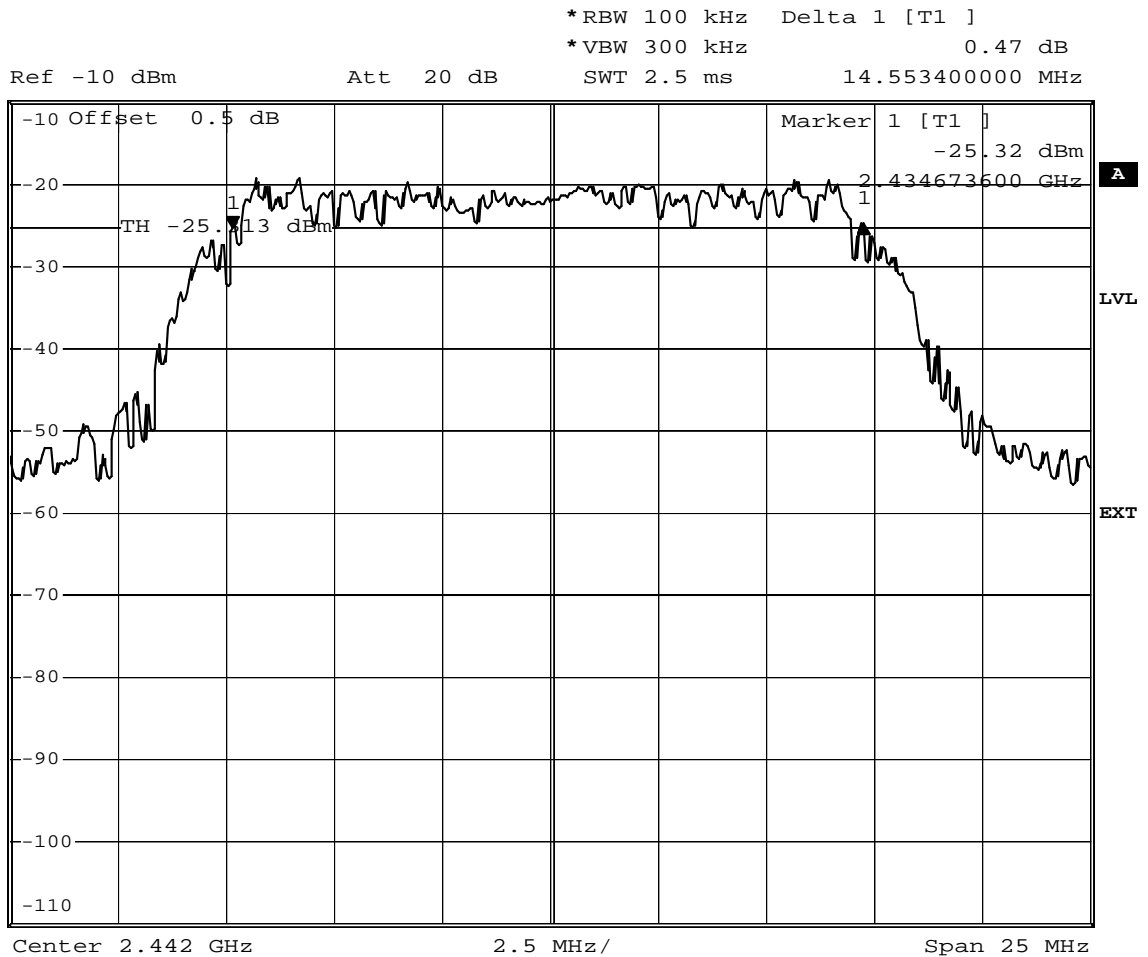
EUT	Measuring Probe
Model	P03.6600 RC66
Approval Holder	BLUM Novotest / Ord.: G0M21007-3433
Temperature / Voltage	25°C, Vnom
Test Site / Operator	Eurofins Product Service GmbH, Mr. Treffke
Test Specification	FCC part 15.247 (a)2
Comment 1	Minimum 6 dB Bandwidth
Comment 2	Channel : 2412 MHz
Comment 3	DSSS, power level 18, 1 Mbit/s



Comment: 6 dB bandwidth: 14401.8 KHz > 500 KHz; verdict: PASS
 Date: 3.MAR.2011 10:20:08

**FCC part 15.247 (a)2
Minimum 6 dB Bandwidth**

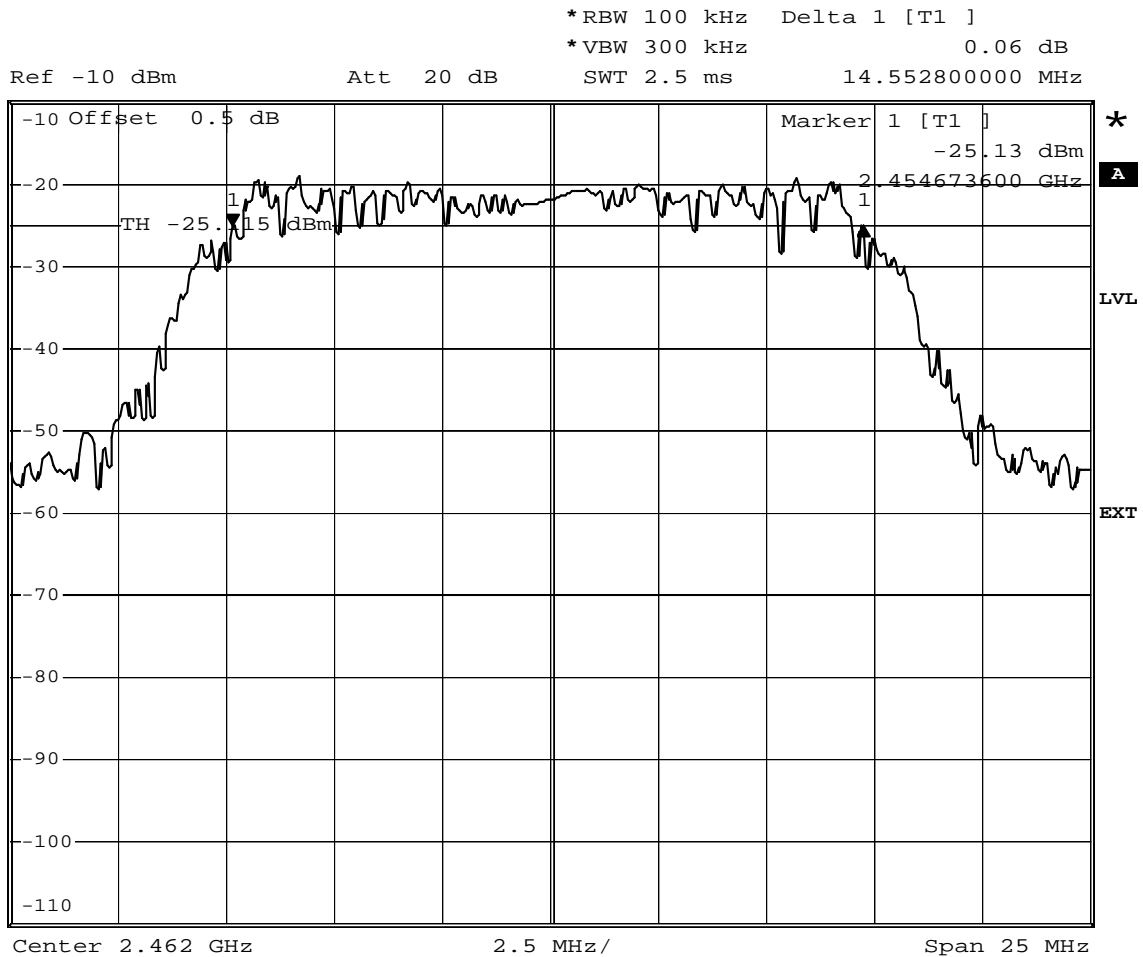
EUT	Measuring Probe
Model	P03.6600 RC66
Approval Holder	BLUM Novotest / Ord.: G0M21007-3433
Temperature / Voltage	25°C, Vnom
Test Site / Operator	Eurofins Product Service GmbH, Mr. Treffke
Test Specification	FCC part 15.247 (a)2
Comment 1	Minimum 6 dB Bandwidth
Comment 2	Channel : 2442 MHz
Comment 3	CSS, power level max, 250 kbit/s



Comment: 6 dB bandwidth: 14553.4 KHz > 500 KHz; verdict: PASS
Date: 3.MAR.2011 10:24:38

**FCC part 15.247 (a)2
Minimum 6 dB Bandwidth**

EUT	Measuring Probe
Model	P03.6600 RC66
Approval Holder	BLUM Novotest / Ord.: G0M21007-3433
Temperature / Voltage	25°C, Vnom
Test Site / Operator	Eurofins Product Service GmbH, Mr. Treffke
Test Specification	FCC part 15.247 (a)2
Comment 1	Minimum 6 dB Bandwidth
Comment 2	Channel : 2462 MHz
Comment 3	CSS, power level max, 250 kbit/s



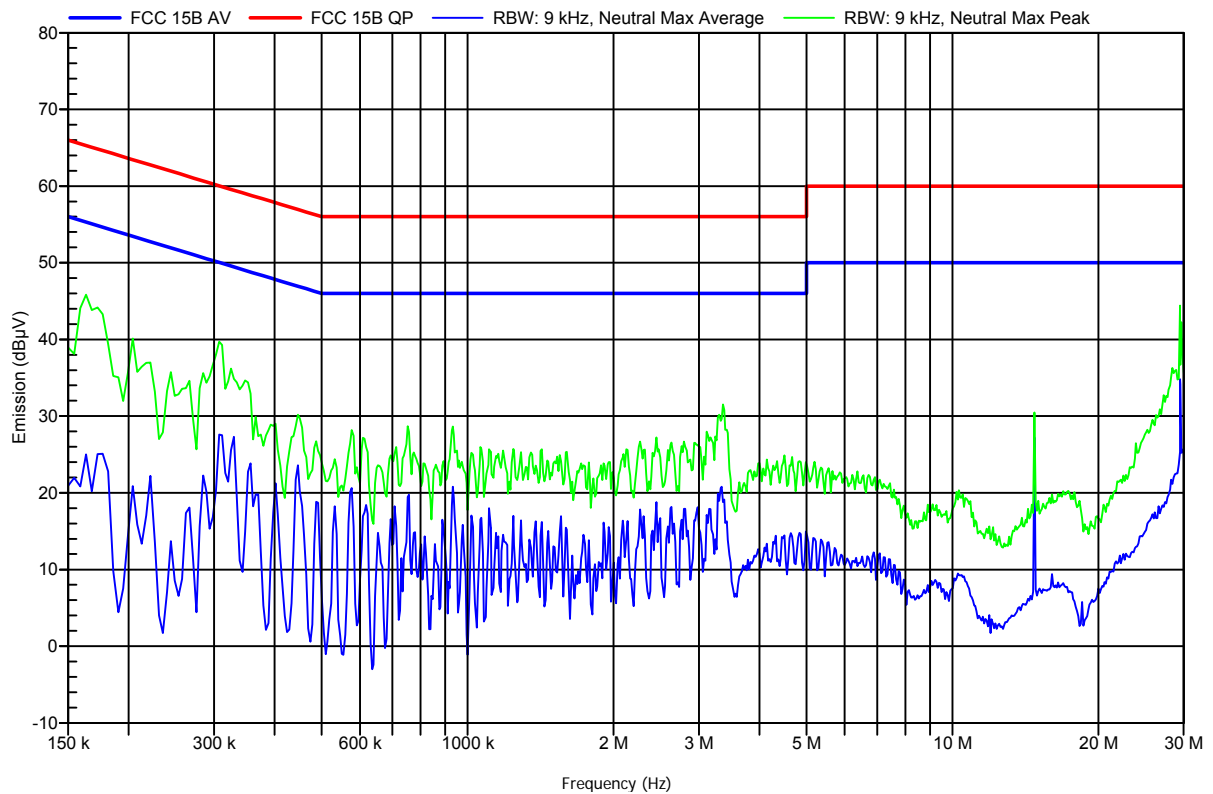
Comment: 6 dB bandwidth: 14602.8 KHz > 500 KHz; verdict: PASS
Date: 3.MAR.2011 10:36:14

Annex D AC Powerline Conducted Emissions

EMI voltage test in the ac-mains according to FCC part 15B

Order number: G0M21007-3433

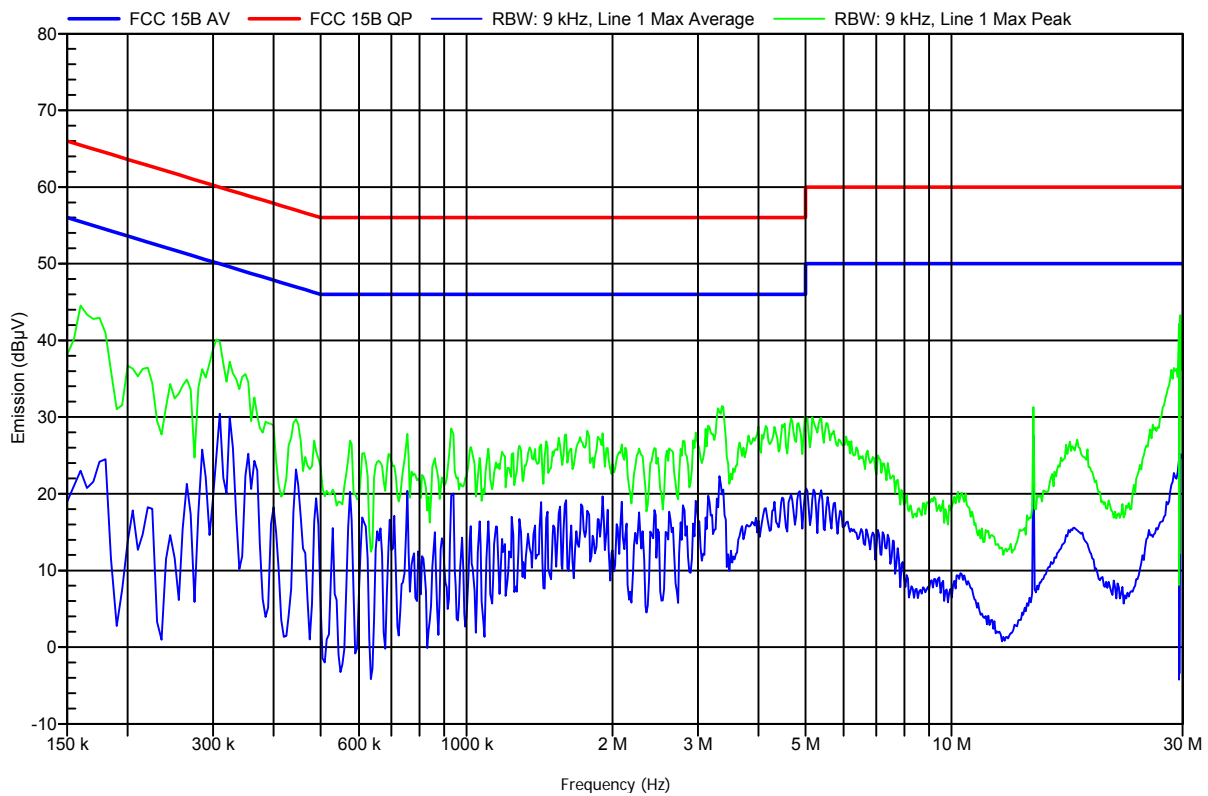
Manufacturer: Blum-Novotest GmbH
 EUT Name: Funk-Fronted
 Model: RC66
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Marquardt
 Test Conditions: Tnom: 23°C, Unom: 120 VAC
 LISN: ESH2-Z5 N
 Mode: with IF59+TC60 TX-mode
 Test Date: 19.11.2010
 Note:



EMI voltage test in the ac-mains according to FCC part 15B

Order number: G0M21007-3433

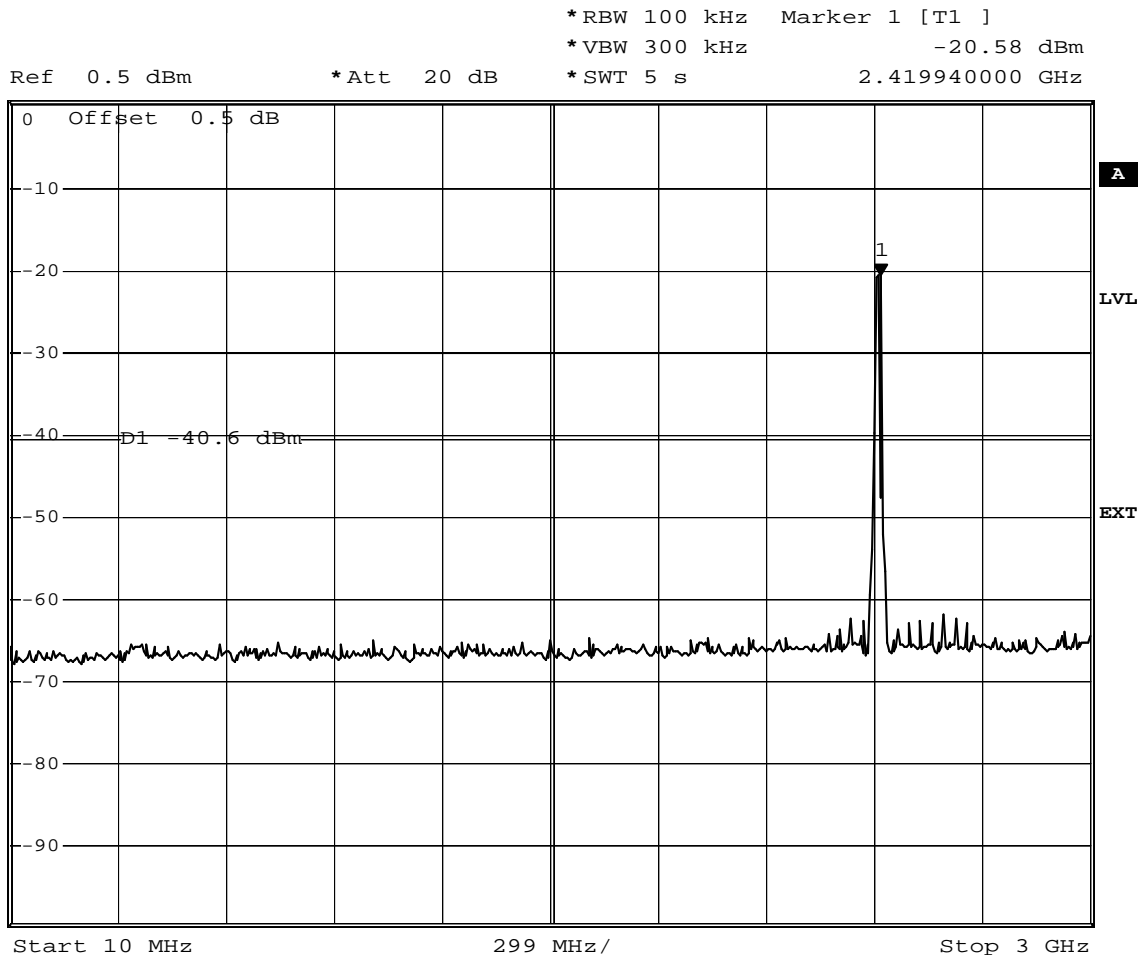
Manufacturer:	Blum-Novotest GmbH
EUT Name:	Funk-Fronted
Model:	RC66
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Marquardt
Test Conditions:	Tnom: 23°C, Unom: 120 VAC
LISN:	ESH2-Z5 L
Mode:	with IF59+TC60 TX-mode
Test Date:	19.11.2010
Note:	



Annex E Transmitter conducted spurious emissions

FCC part 15.247 (d) Spurious Emissions

EUT	Measuring Probe
Model	P03.6600 RC66
Approval Holder	BLUM Novotest / Ord.: G0M21007-3433
Temperature / Voltage	25°C, Vnom
Test Site / Operator	Eurofins Product Service GmbH, Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2412 MHz
Comment 3	CSS, power level max, 250 kbit/s



Date: 3.MAR.2011 11:08:08

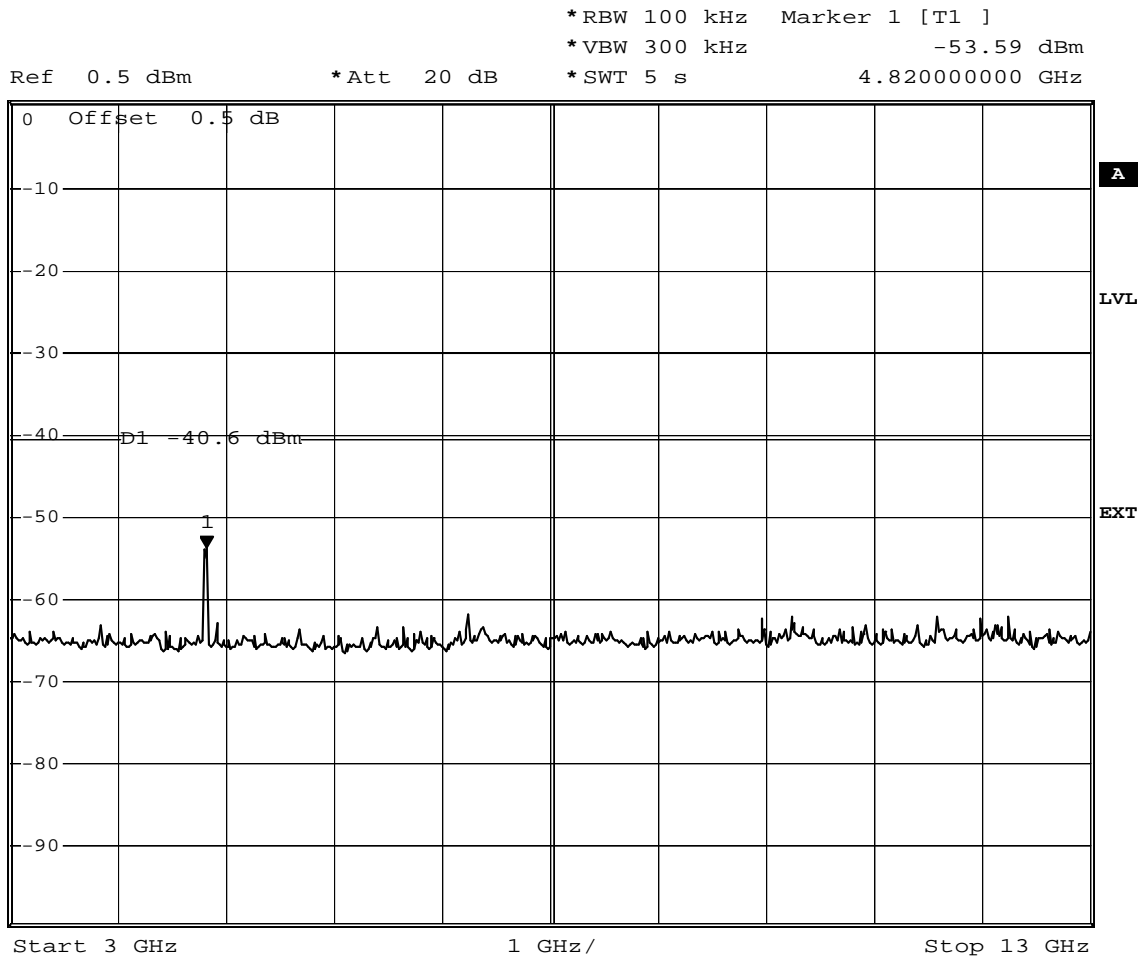
Test Report No.: G0M21007-3433-P-15

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

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**FCC part 15.247 (d)
Spurious Emissions**

EUT	Measuring Probe
Model	P03.6600 RC66
Approval Holder	BLUM Novotest / Ord.: G0M21007-3433
Temperature / Voltage	25°C, Vnom
Test Site / Operator	Eurofins Product Service GmbH, Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2412 MHz
Comment 3	CSS, power level max, 250 kbit/s



Date: 3.MAR.2011 11:09:15

**FCC part 15.247 (d)
Spurious Emissions**

EUT	Measuring Probe
Model	P03.6600 RC66
Approval Holder	BLUM Novotest / Ord.: G0M21007-3433
Temperature / Voltage	25°C, Vnom
Test Site / Operator	Eurofins Product Service GmbH, Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2412 MHz
Comment 3	CSS, power level max, 250 kbit/s



*RBW 100 kHz

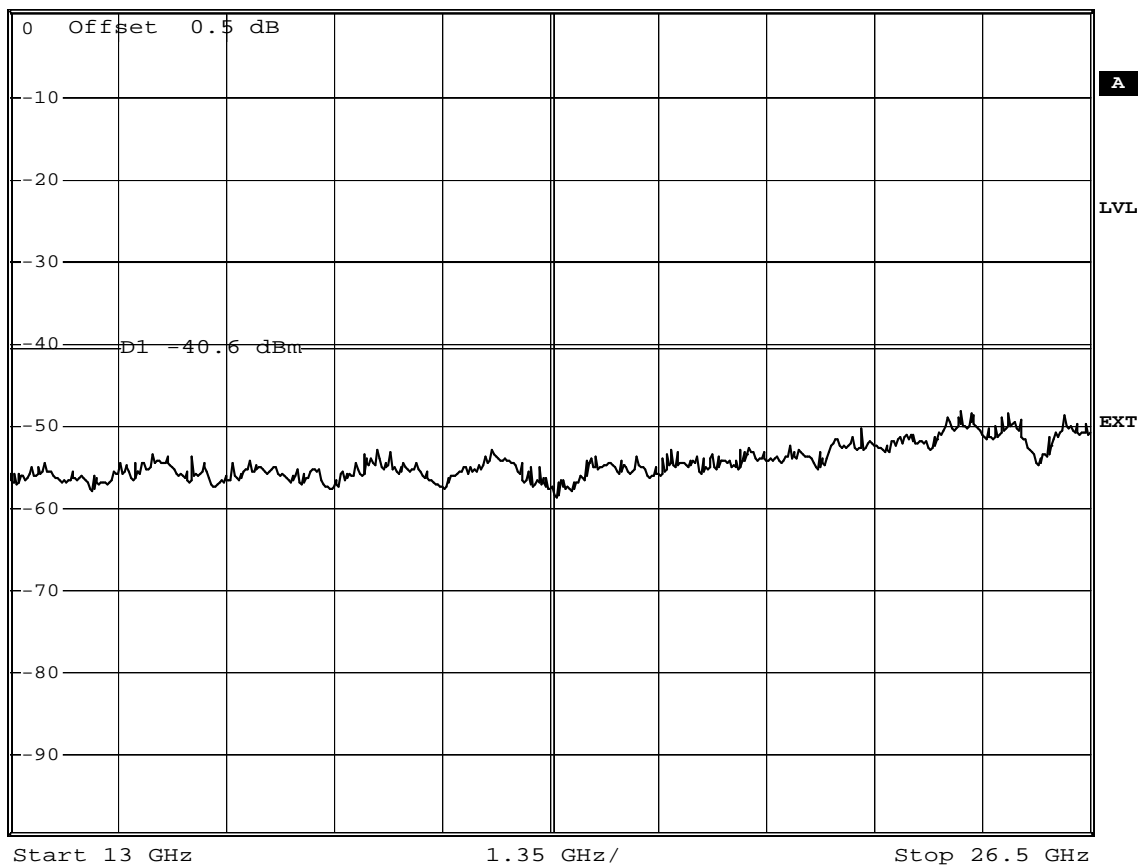
*VBW 300 kHz

*SWT 5 s

Ref 0.5 dBm

*Att 20 dB

1 PK
VIEW



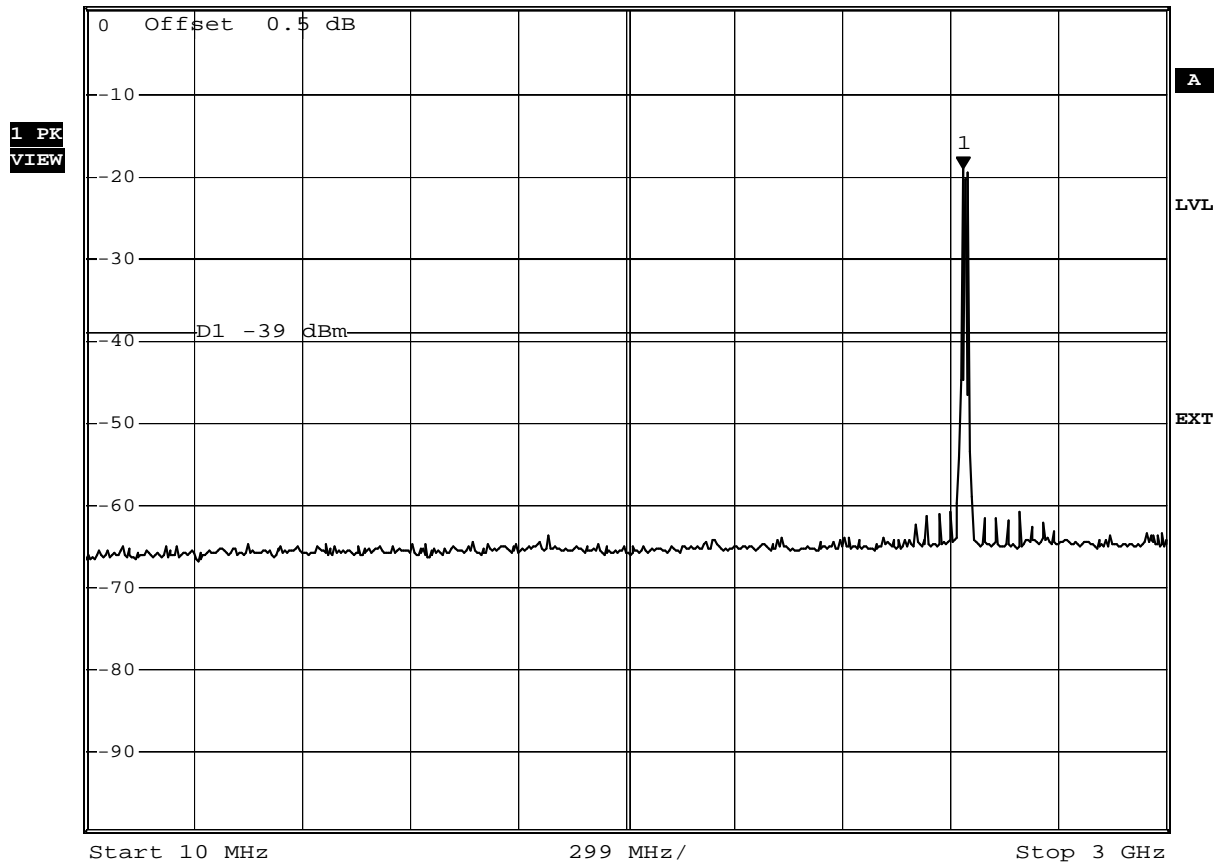
Date: 3.MAR.2011 11:10:21

**FCC part 15.247 (d)
Spurious Emissions**

EUT	Measuring Probe
Model	P03.6600 RC66
Approval Holder	BLUM Novotest / Ord.: G0M21007-3433
Temperature / Voltage	25°C, Vnom
Test Site / Operator	Eurofins Product Service GmbH, Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2442 MHz
Comment 3	CSS, power level max, 250 kbit/s



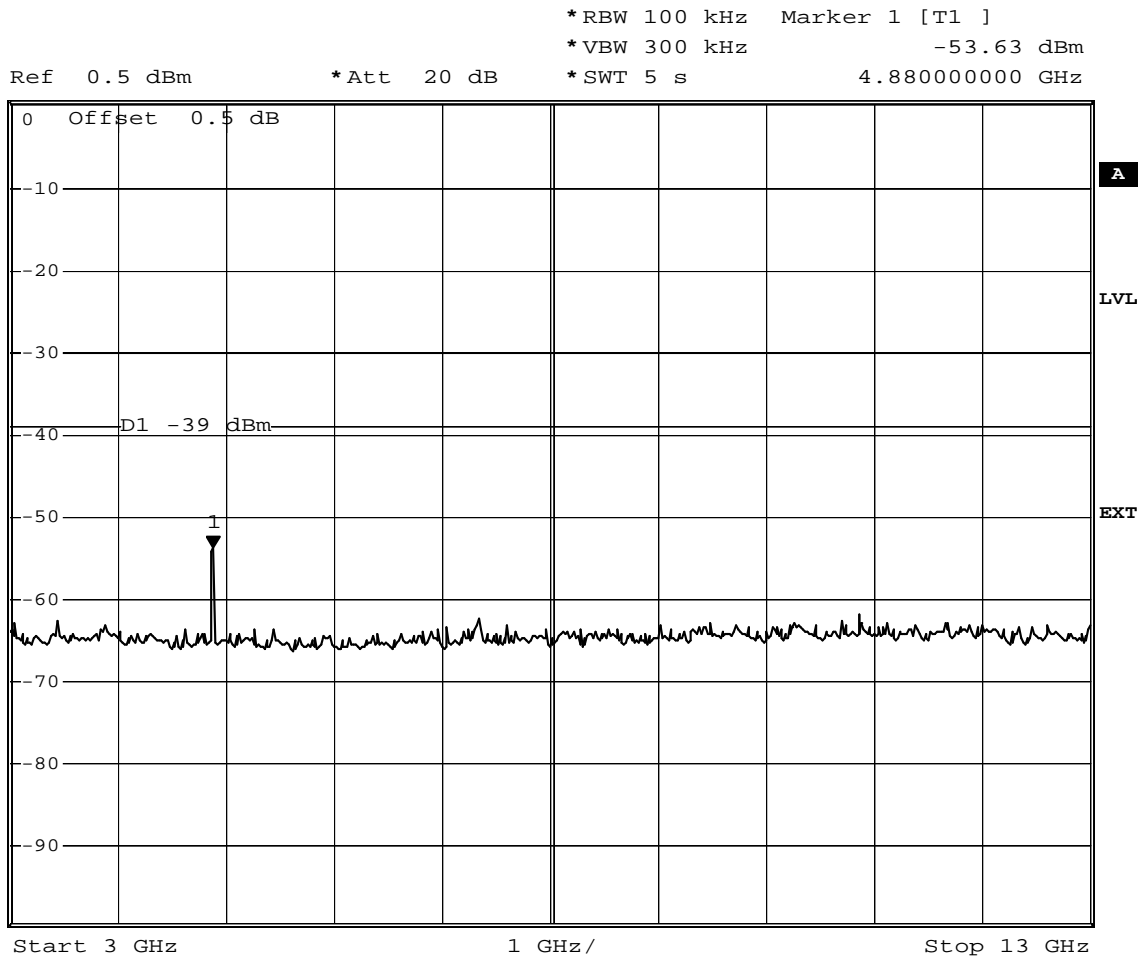
Ref 0.5 dBm *Att 20 dB *RBW 100 kHz Marker 1 [T1]
 *VBW 300 kHz -19.02 dBm
 *SWT 5 s 2.437880000 GHz



Date: 3.MAR.2011 11:18:19

**FCC part 15.247 (d)
Spurious Emissions**

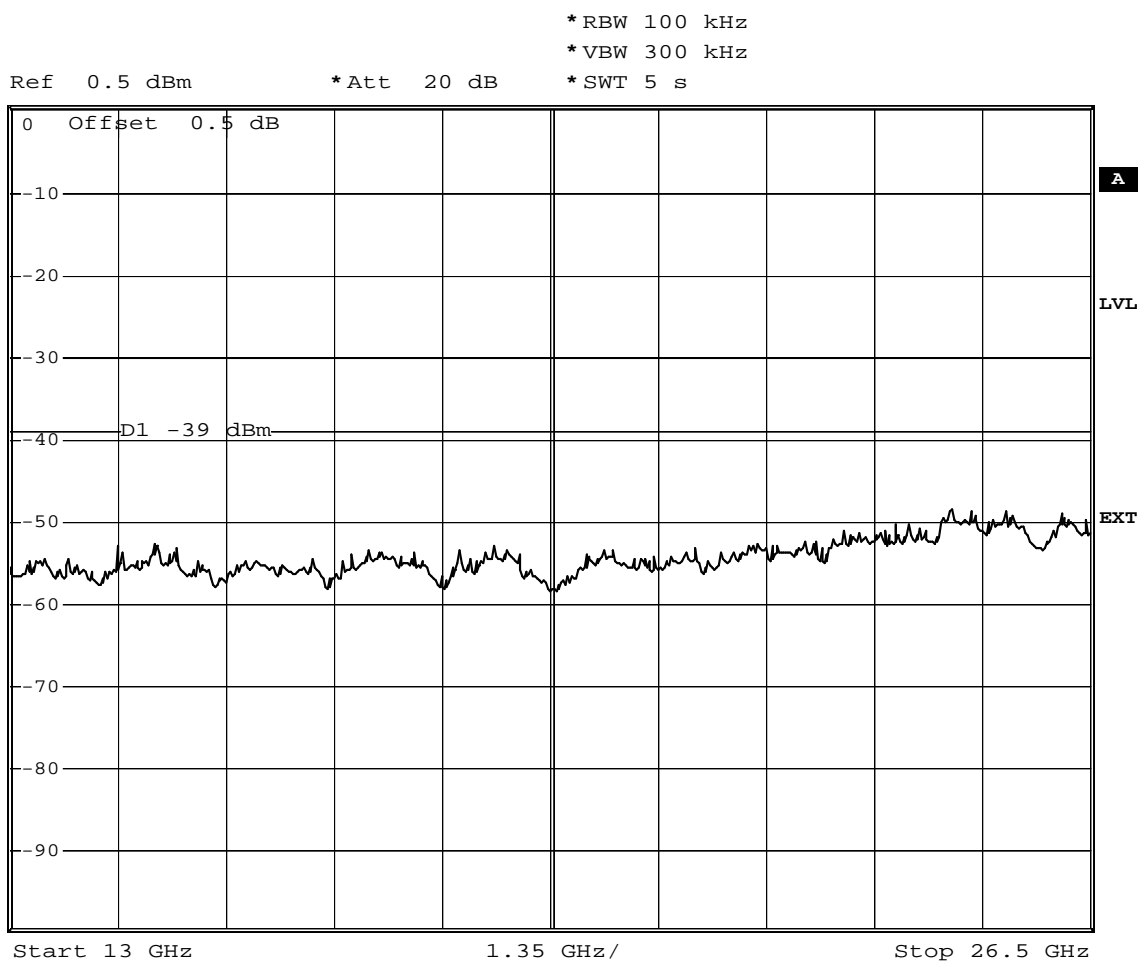
EUT	Measuring Probe
Model	P03.6600 RC66
Approval Holder	BLUM Novotest / Ord.: G0M21007-3433
Temperature / Voltage	25°C, Vnom
Test Site / Operator	Eurofins Product Service GmbH, Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2442 MHz
Comment 3	CSS, power level max, 250 kbit/s



Date: 3.MAR.2011 11:19:48

**FCC part 15.247 (d)
Spurious Emissions**

EUT	Measuring Probe
Model	P03.6600 RC66
Approval Holder	BLUM Novotest / Ord.: G0M21007-3433
Temperature / Voltage	25°C, Vnom
Test Site / Operator	Eurofins Product Service GmbH, Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2442 MHz
Comment 3	CSS, power level max, 250 kbit/s



Date: 3.MAR.2011 11:20:56

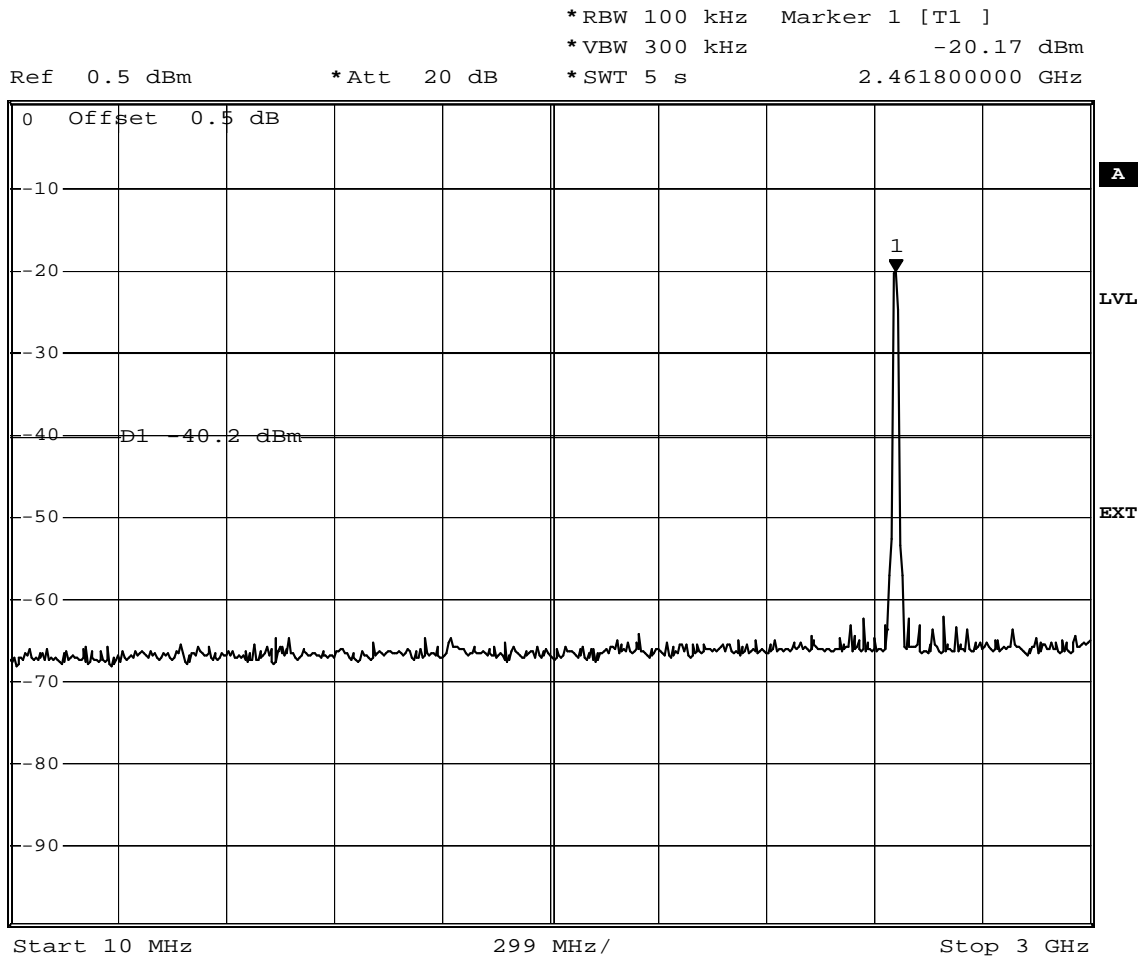
Test Report No.: G0M21007-3433-P-15

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

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**FCC part 15.247 (d)
Spurious Emissions**

EUT	Measuring Probe
Model	P03.6600 RC66
Approval Holder	BLUM Novotest / Ord.: G0M21007-3433
Temperature / Voltage	25°C, Vnom
Test Site / Operator	Eurofins Product Service GmbH, Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2462 MHz
Comment 3	CSS, power level max, 250 kbit/s



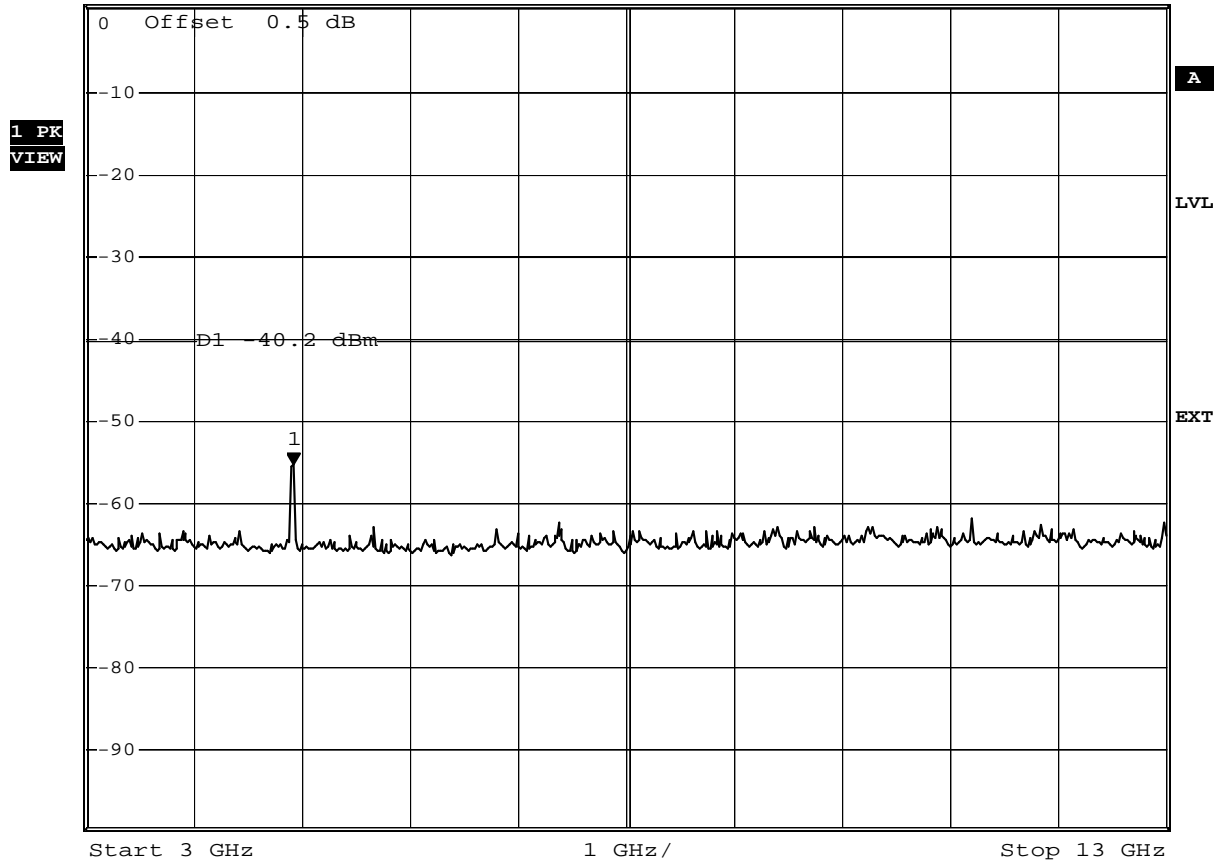
Date: 3.MAR.2011 11:22:05

**FCC part 15.247 (d)
Spurious Emissions**

EUT	Measuring Probe
Model	P03.6600 RC66
Approval Holder	BLUM Novotest / Ord.: G0M21007-3433
Temperature / Voltage	25°C, Vnom
Test Site / Operator	Eurofins Product Service GmbH, Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2462 MHz
Comment 3	CSS, power level max, 250 kbit/s



Ref	0.5 dBm	*Att	20 dB	*RBW	100 kHz	Marker 1 [T1]	
				*VBW	300 kHz		-55.24 dBm
				*SWT	5 s		4.920000000 GHz



Date: 3.MAR.2011 11:23:10

**FCC part 15.247 (d)
Spurious Emissions**

EUT	Measuring Probe
Model	P03.6600 RC66
Approval Holder	BLUM Novotest / Ord.: G0M21007-3433
Temperature / Voltage	25°C, Vnom
Test Site / Operator	Eurofins Product Service GmbH, Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2462 MHz
Comment 3	CSS, power level max, 250 kbit/s



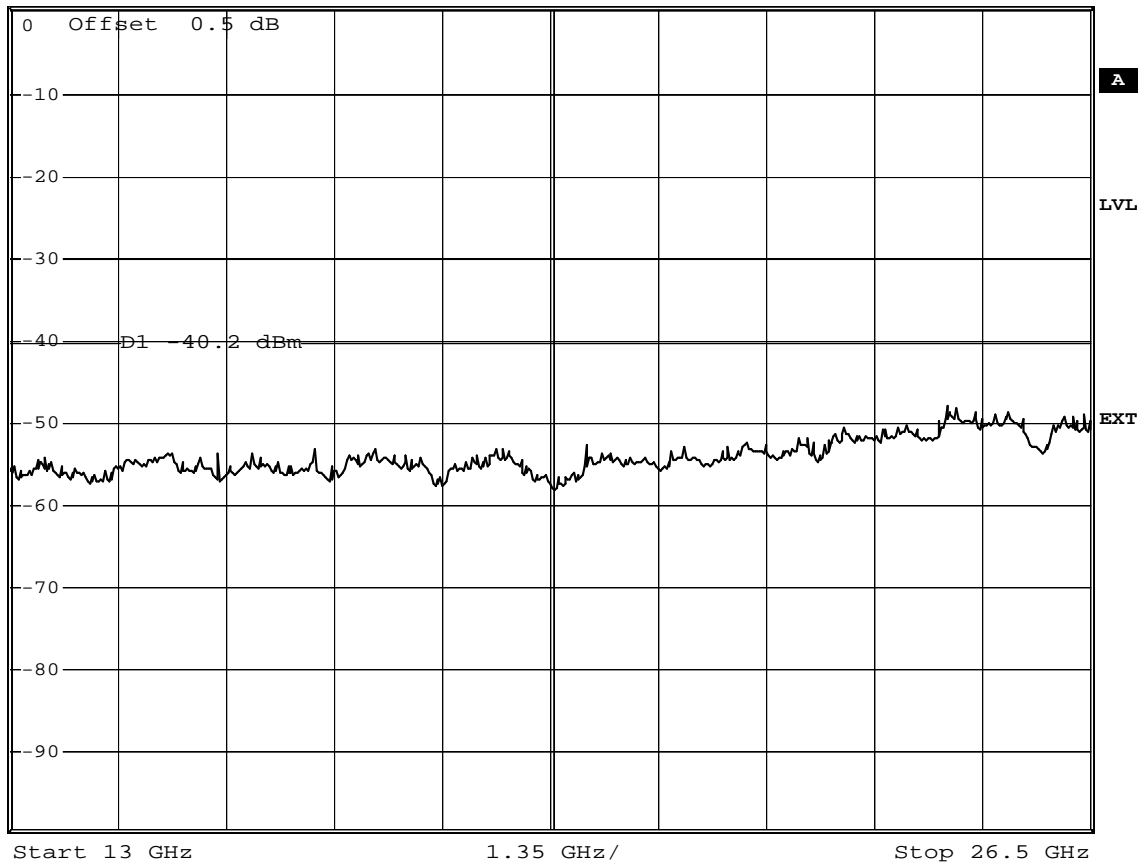
*RBW 100 kHz

*VBW 300 kHz

*SWT 5 s

Ref 0.5 dBm

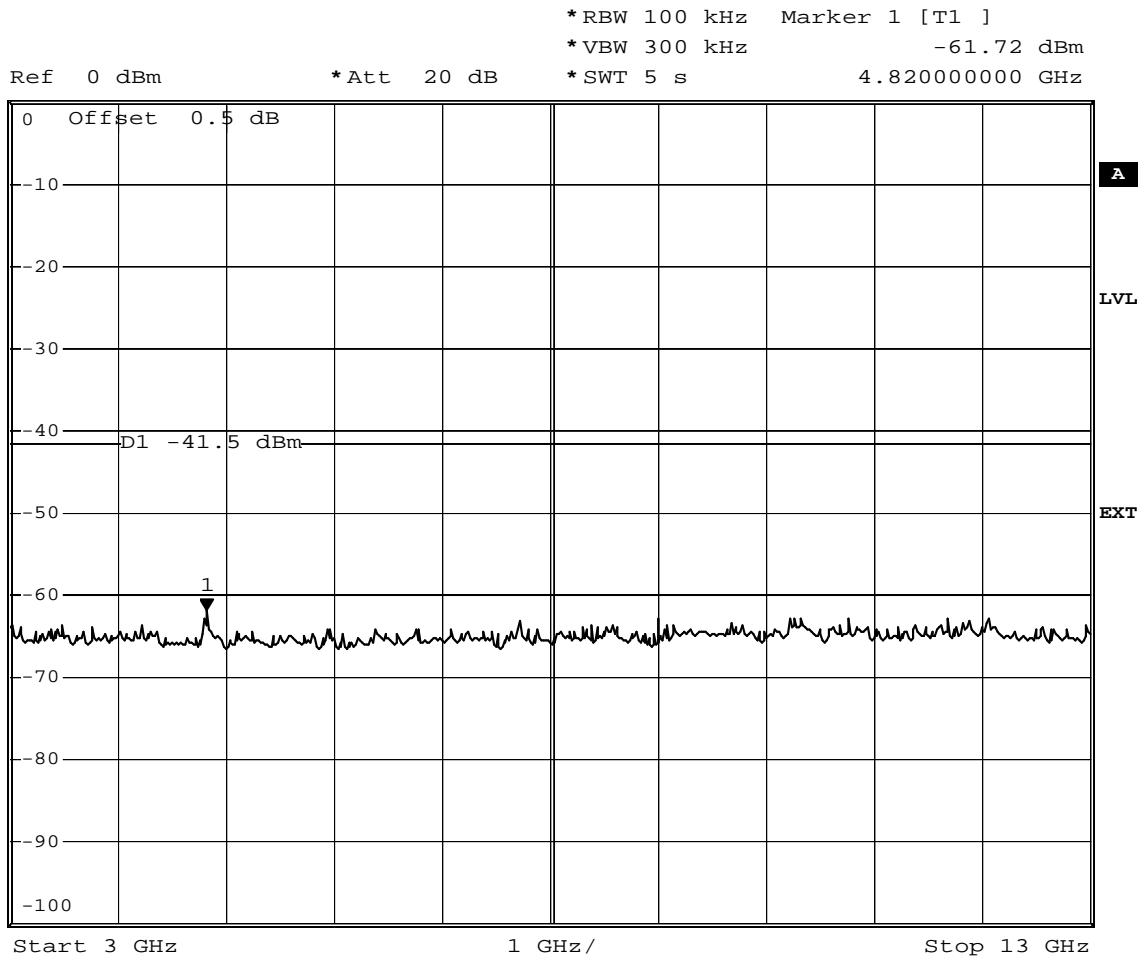
*Att 20 dB

**1 PK
VIEW**


Date: 3.MAR.2011 11:24:14

**FCC part 15.247 (d)
Spurious Emissions**

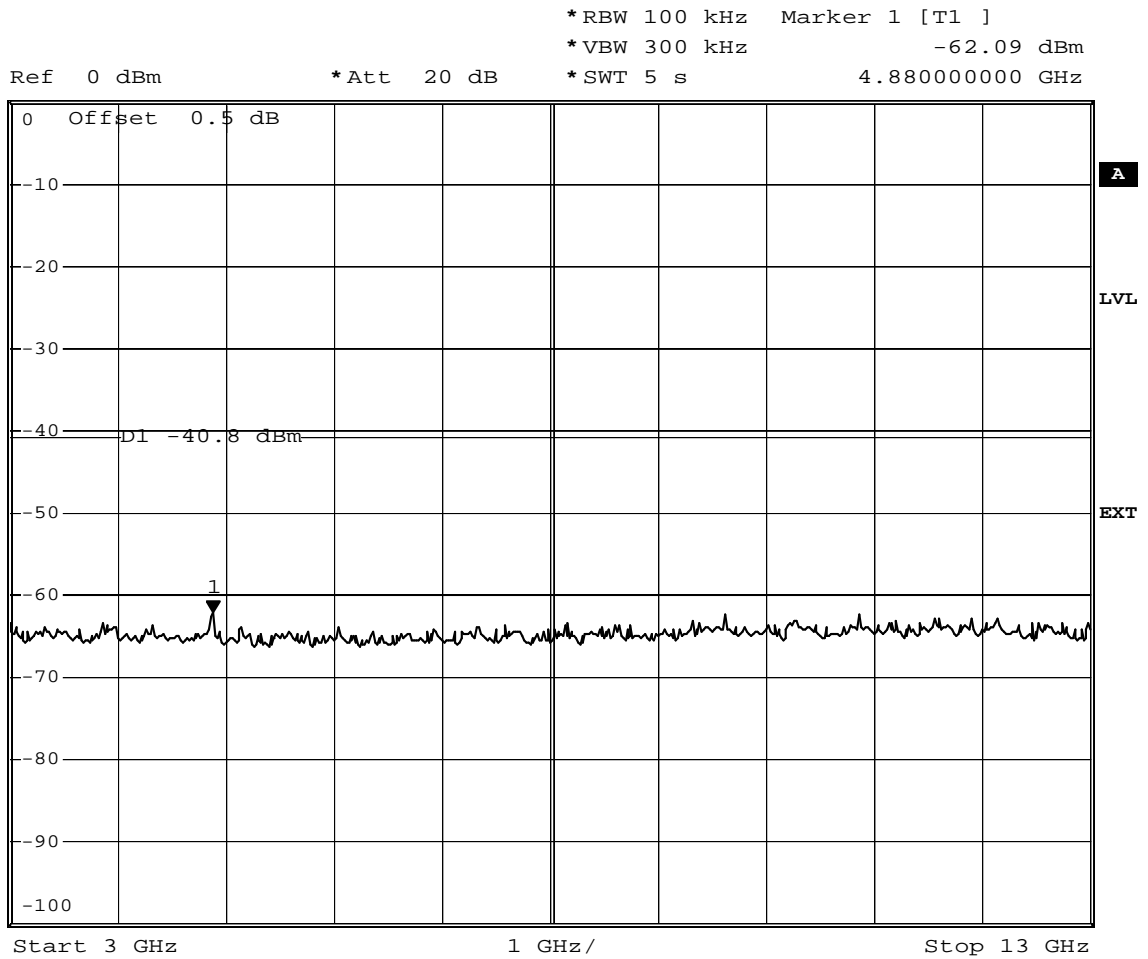
EUT	Measuring Probe
Model	P03.6600 RC66
Approval Holder	BLUM Novotest / Ord.: G0M21007-3433
Temperature / Voltage	25°C, Vnom
Test Site / Operator	Eurofins Product Service GmbH, Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2412 MHz, Chip 1
Comment 3	CSS, power level max, 250 kbit/s



Date: 3.MAR.2011 11:35:02

**FCC part 15.247 (d)
Spurious Emissions**

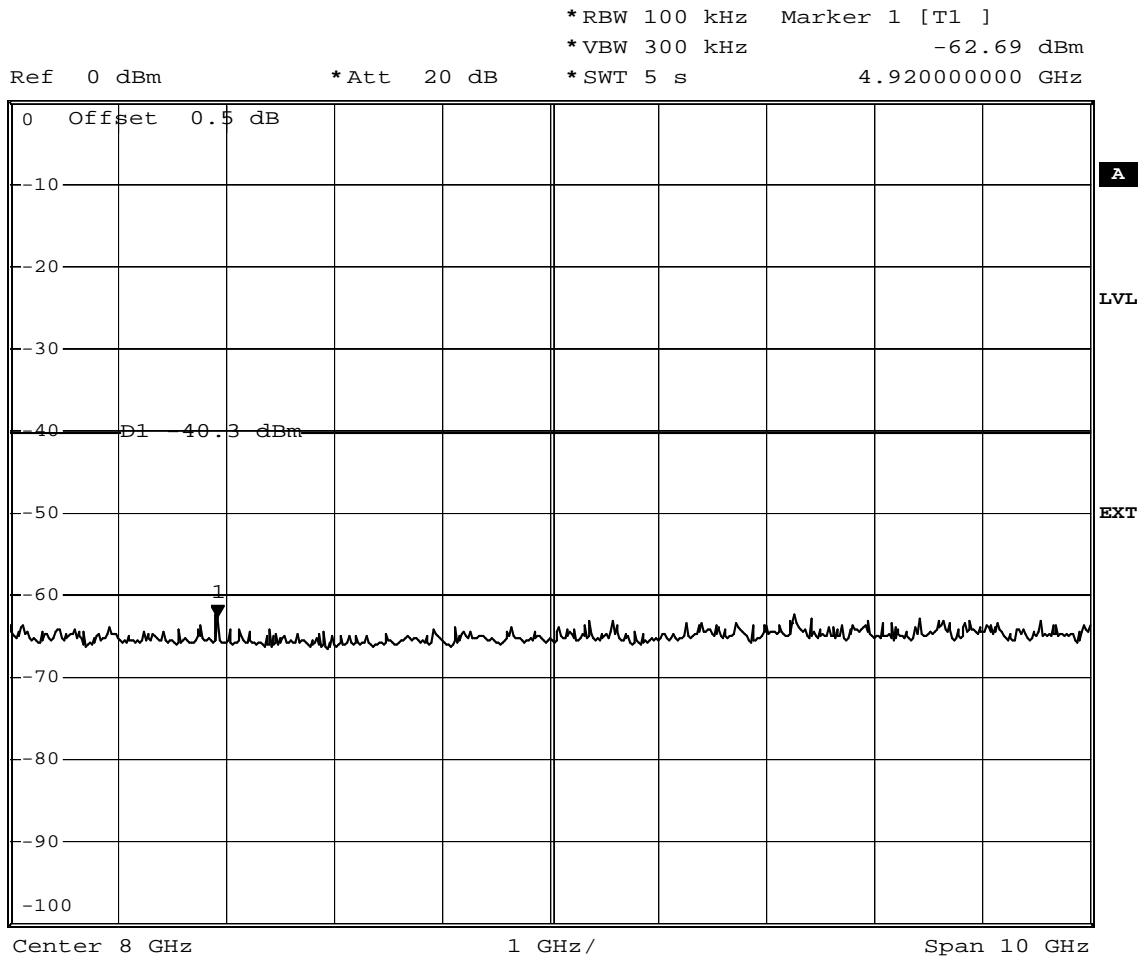
EUT	Measuring Probe
Model	P03.6600 RC66
Approval Holder	BLUM Novotest / Ord.: G0M21007-3433
Temperature / Voltage	25°C, Vnom
Test Site / Operator	Eurofins Product Service GmbH, Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2442 MHz, Chip 1
Comment 3	CSS, power level max, 250 kbit/s



Date: 3.MAR.2011 11:37:53

**FCC part 15.247 (d)
Spurious Emissions**

EUT	Measuring Probe
Model	P03.6600 RC66
Approval Holder	BLUM Novotest / Ord.: G0M21007-3433
Temperature / Voltage	25°C, Vnom
Test Site / Operator	Eurofins Product Service GmbH, Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2462 MHz, Chip 1
Comment 3	CSS, power level max, 250 kbit/s



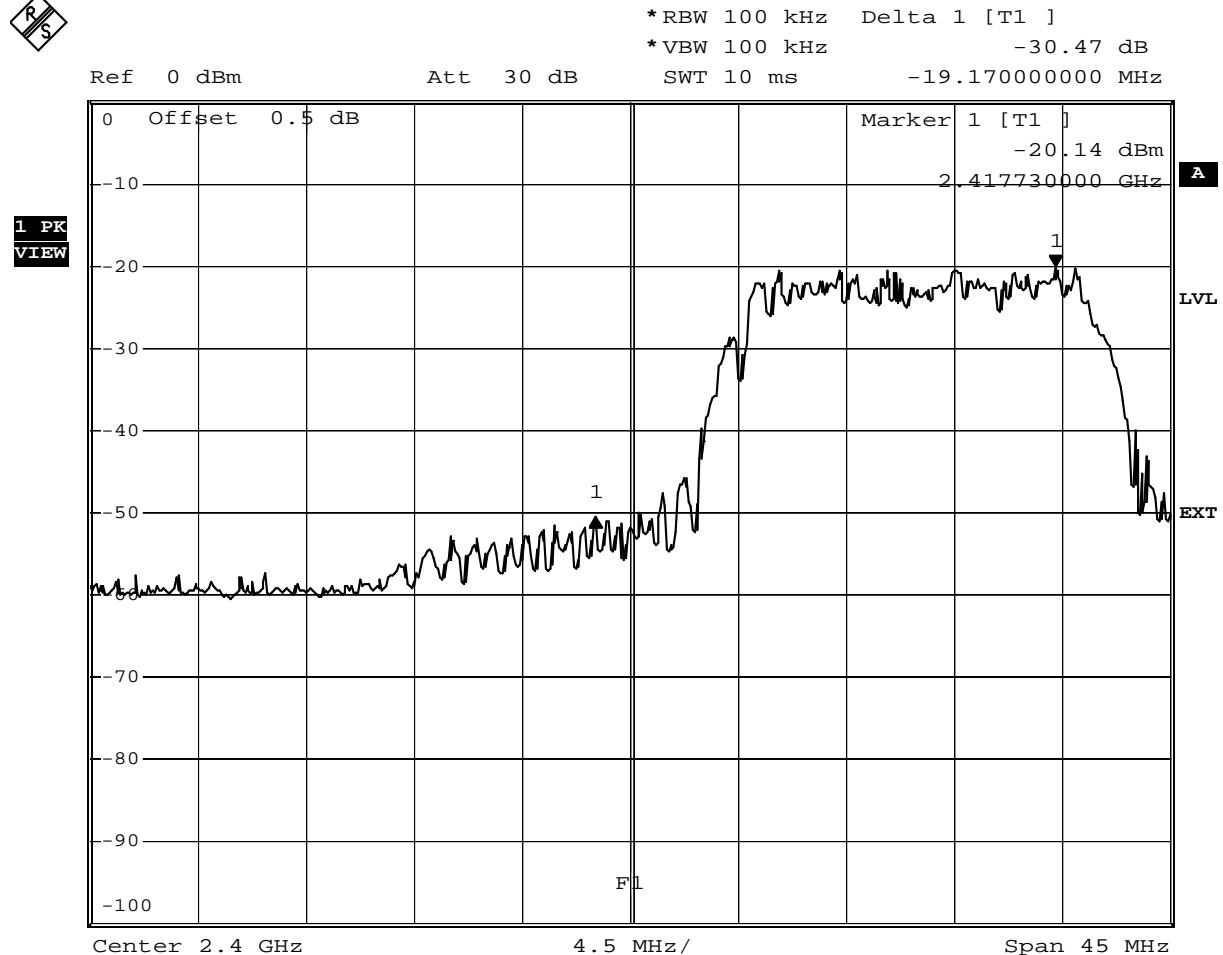
Date: 3.MAR.2011 11:40:47

Annex F Band edge compliance

FCC part 15.247

Band-edge compliance of RF conducted emissions

EUT	Measuring Probe
Model	P03.6600 RC66
Approval Holder	BLUM Novotest / Ord.: G0M21007-3433
Temperature / Voltage	25°C, Vnom
Test Site / Operator	Eurofins Product Service GmbH, Mr. Treffke
Test Specification	FCC part 15 section 247(c)
Comment 1	Band-edge compliance
Comment 2	Channel.: 2412 MHz
Comment 3	CSS, power level max, 250 kbit/s

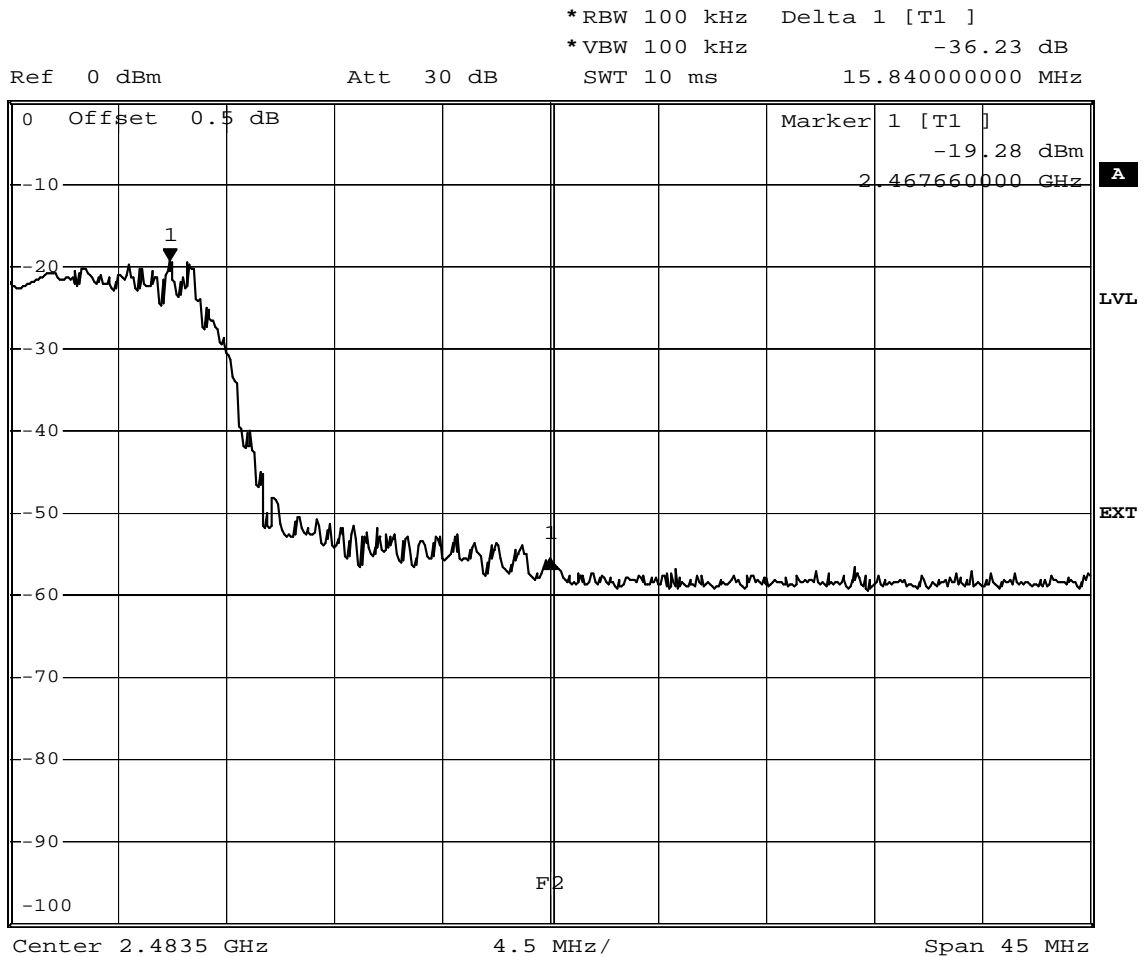


Comment: Limit: Marker Delta value >20 dB; Result: PASS

Date: 3.MAR.2011 10:49:59

**FCC part 15.247
Band-edge compliance of RF conducted emissions**

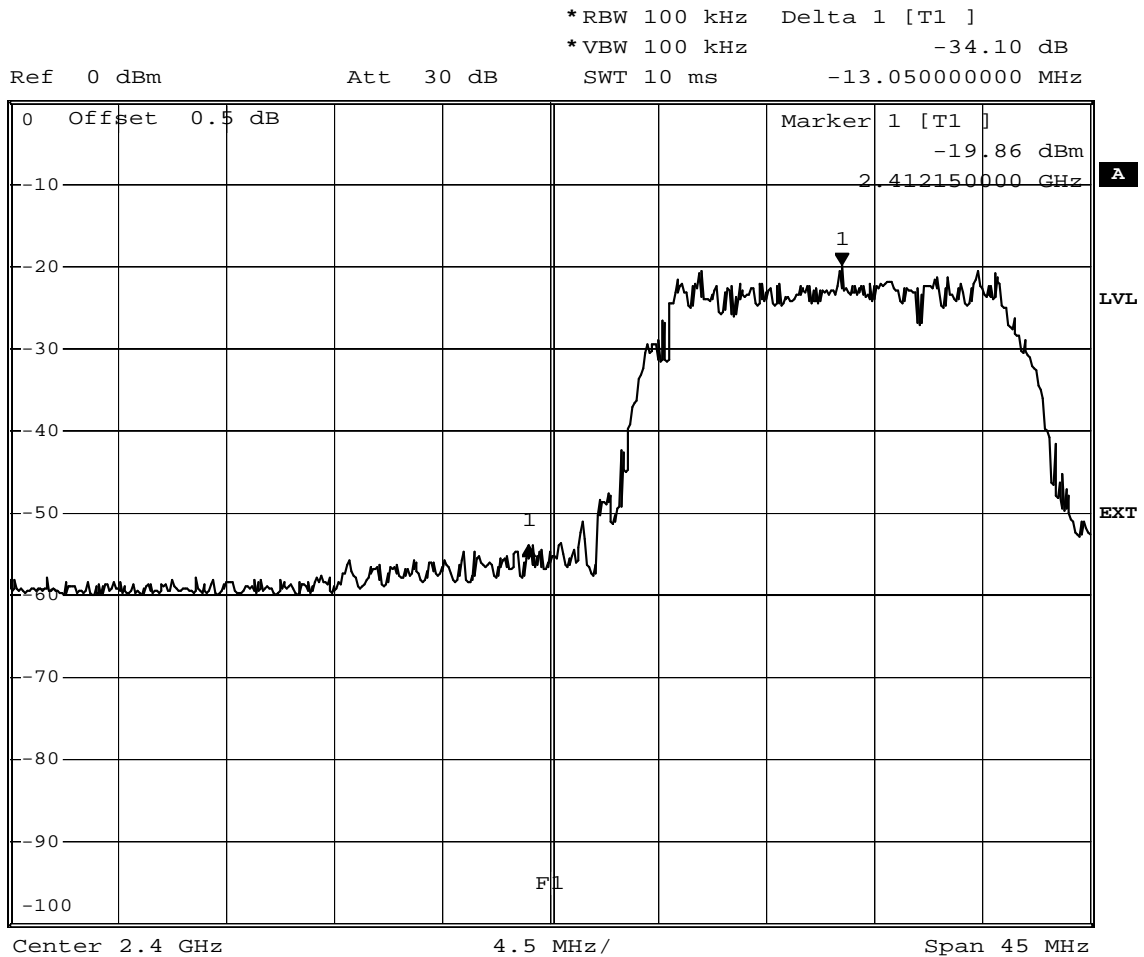
EUT	Measuring Probe
Model	P03.6600 RC66
Approval Holder	BLUM Novotest / Ord.: G0M21007-3433
Temperature / Voltage	25°C, Vnom
Test Site / Operator	Eurofins Product Service GmbH, Mr. Treffke
Test Specification	FCC part 15 section 247(c)
Comment 1	Band-edge compliance
Comment 2	Channel.: 2462 MHz
Comment 3	CSS, power level max, 250 kbit/s



Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 3.MAR.2011 10:58:00

**FCC part 15.247
Band-edge compliance of RF conducted emissions**

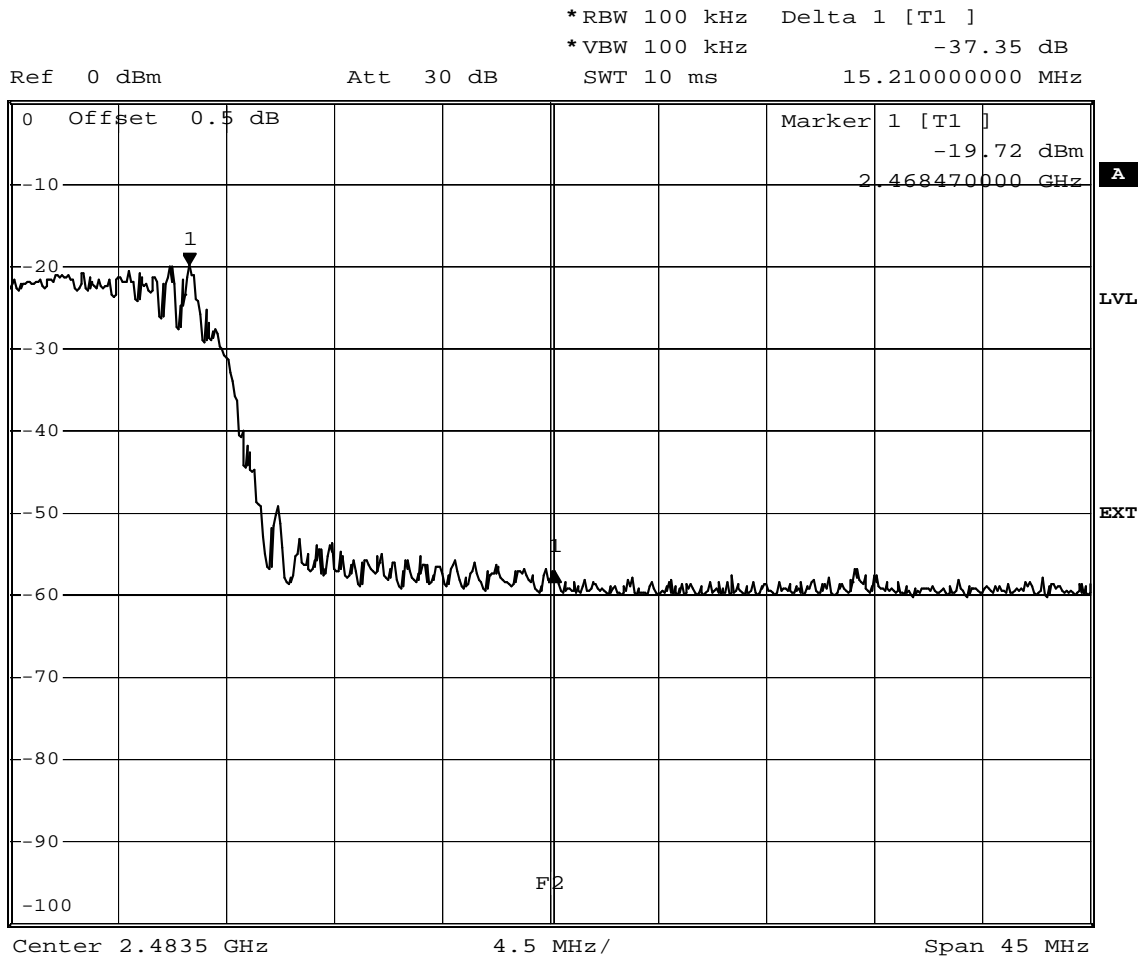
EUT	Measuring Probe
Model	P03.6600 RC66
Approval Holder	BLUM Novotest / Ord.: G0M21007-3433
Temperature / Voltage	25°C, Vnom
Test Site / Operator	Eurofins Product Service GmbH, Mr. Treffke
Test Specification	FCC part 15 section 247(c)
Comment 1	Band-edge compliance
Comment 2	Channel.: 2412 MHz, Chip 1
Comment 3	CSS, power level max, 250 kbit/s



Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 3.MAR.2011 11:46:42

**FCC part 15.247
Band-edge compliance of RF conducted emissions**

EUT	Measuring Probe
Model	P03.6600 RC66
Approval Holder	BLUM Novotest / Ord.: G0M21007-3433
Temperature / Voltage	25°C, Vnom
Test Site / Operator	Eurofins Product Service GmbH, Mr. Treffke
Test Specification	FCC part 15 section 247(c)
Comment 1	Band-edge compliance
Comment 2	Channel.: 2462 MHz, Chip 1
Comment 3	CSS, power level max, 250 kbit/s



Date: 3.MAR.2011 11:44:23

Test Report No.: G0M21007-3433-P-15

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

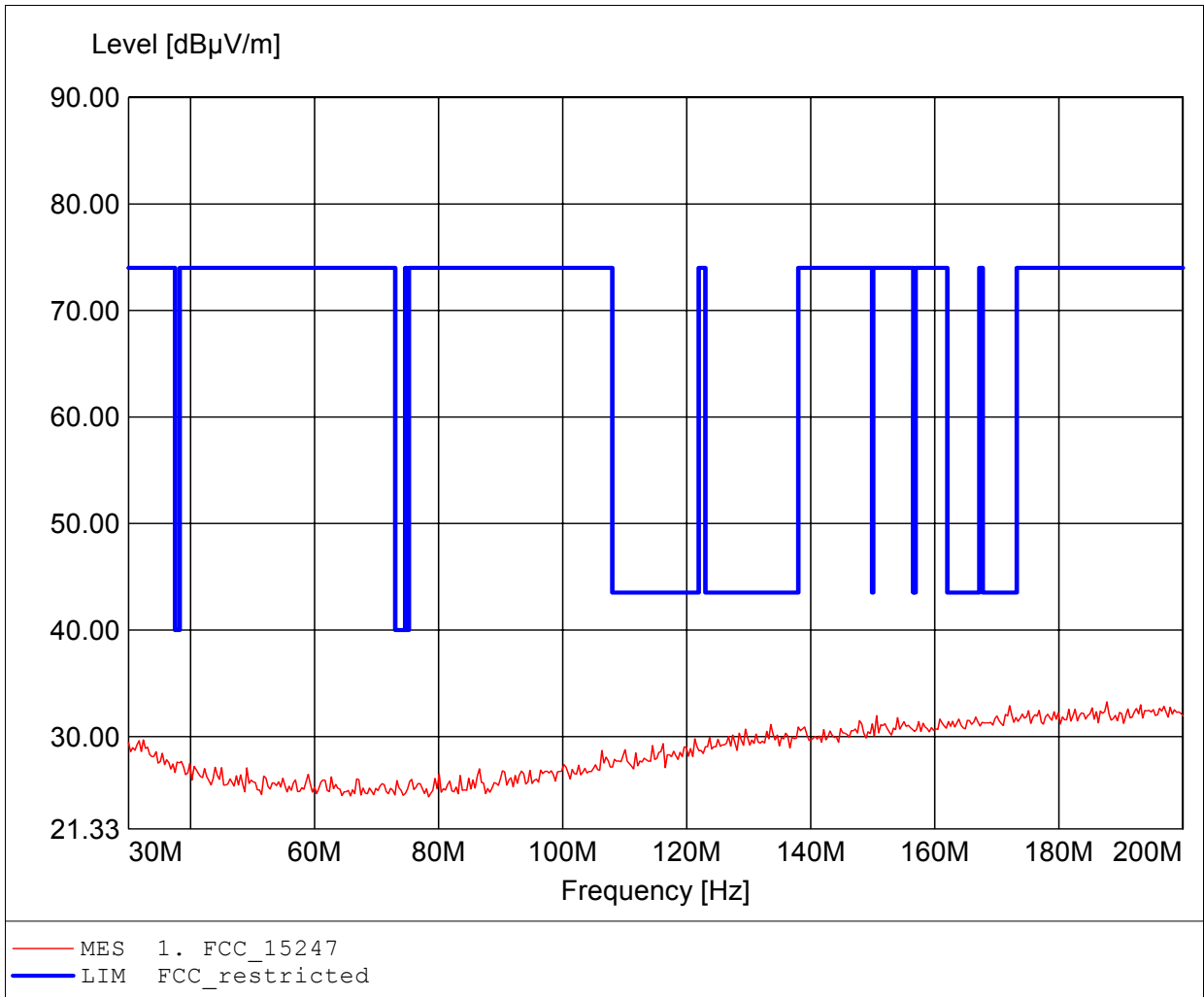
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Annex G Transmitter radiated spurious emissions

Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

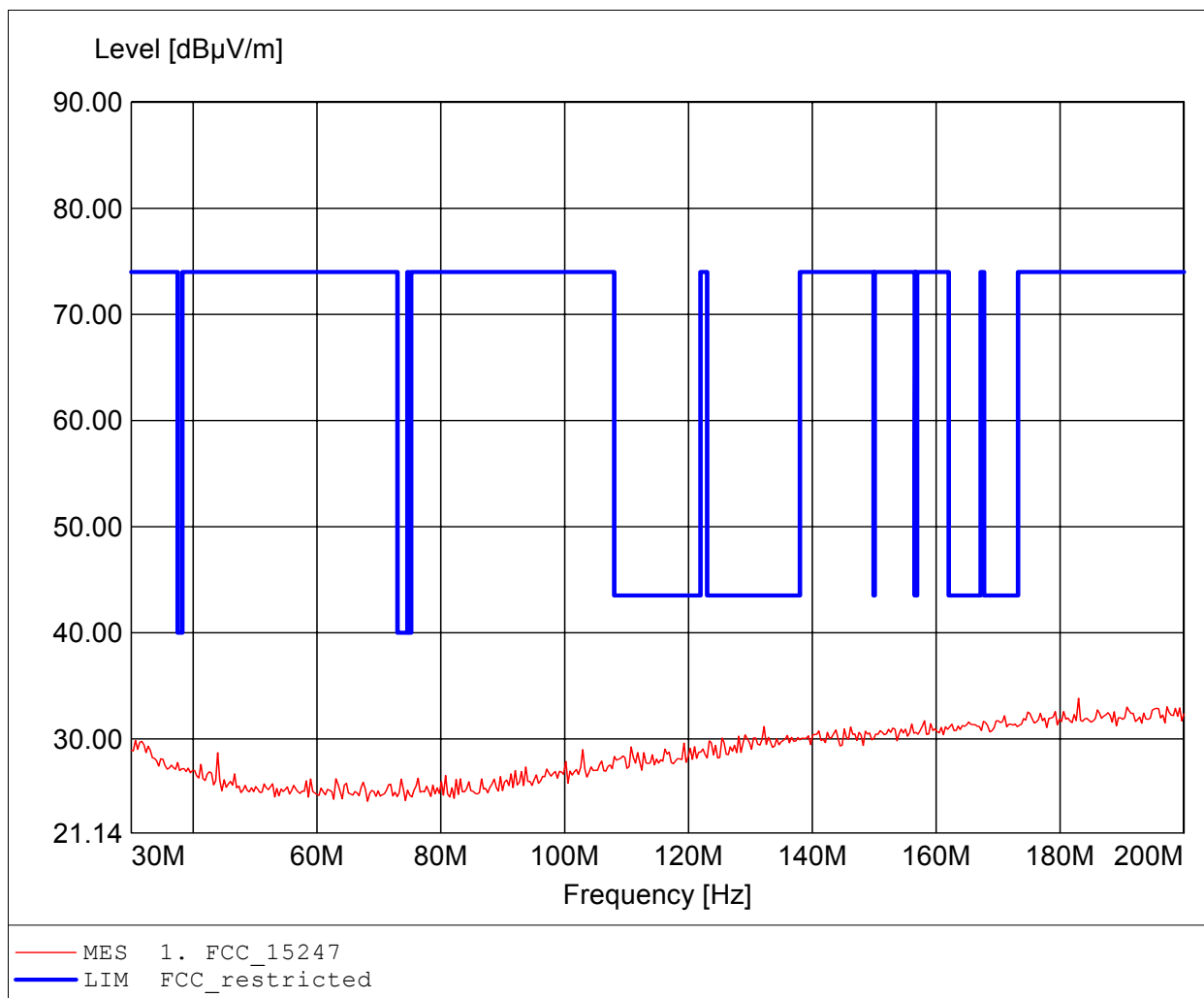
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC60 / CSS / 2412 MHz worst case
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HK 116
Comment 2: Freq: 187.735MHz, Emax: 33.25dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

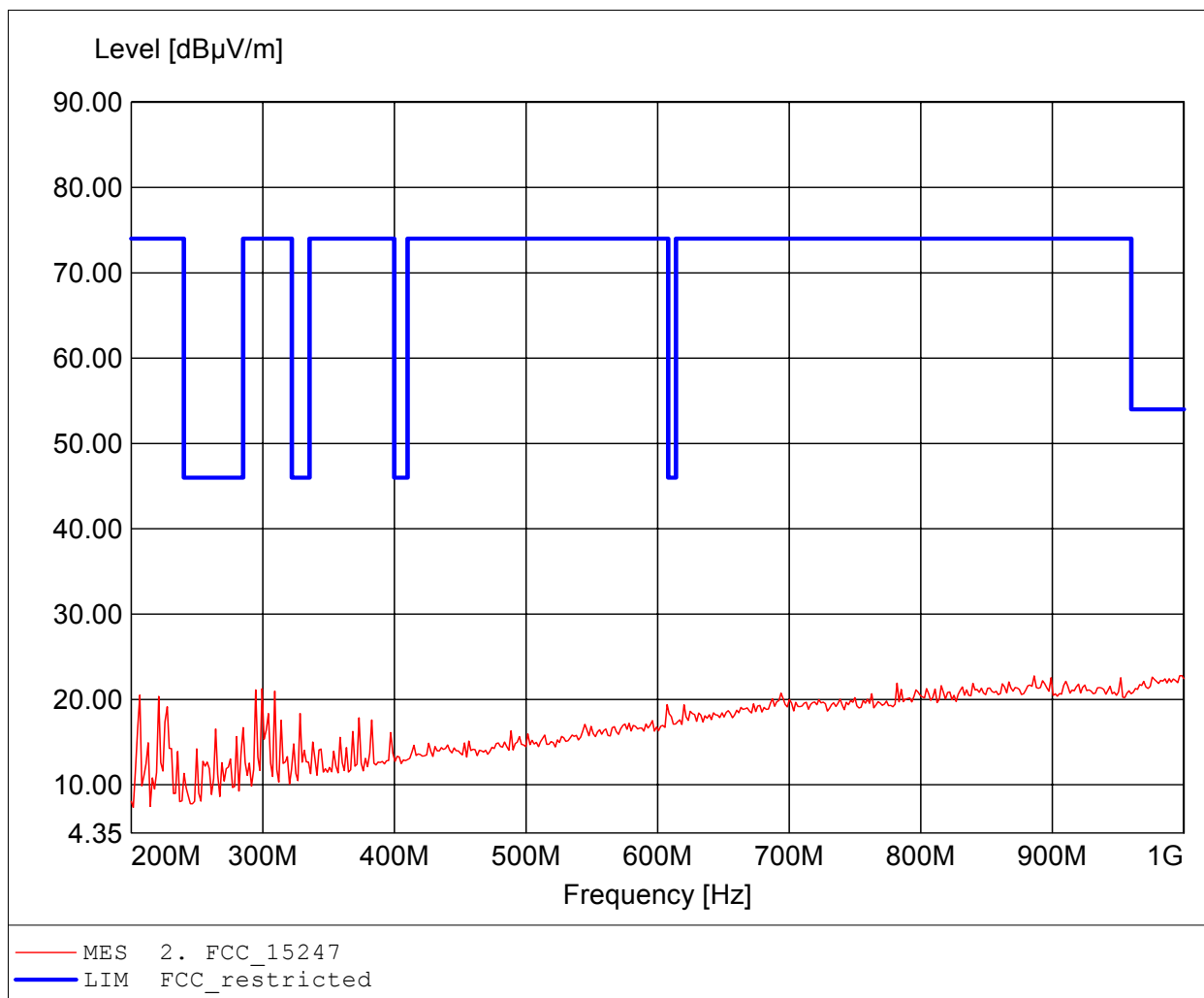
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC60 / CSS / 2412 MHz worst case
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HK 116
Comment 2: Freq: 182.966MHz, Emax: 33.84dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

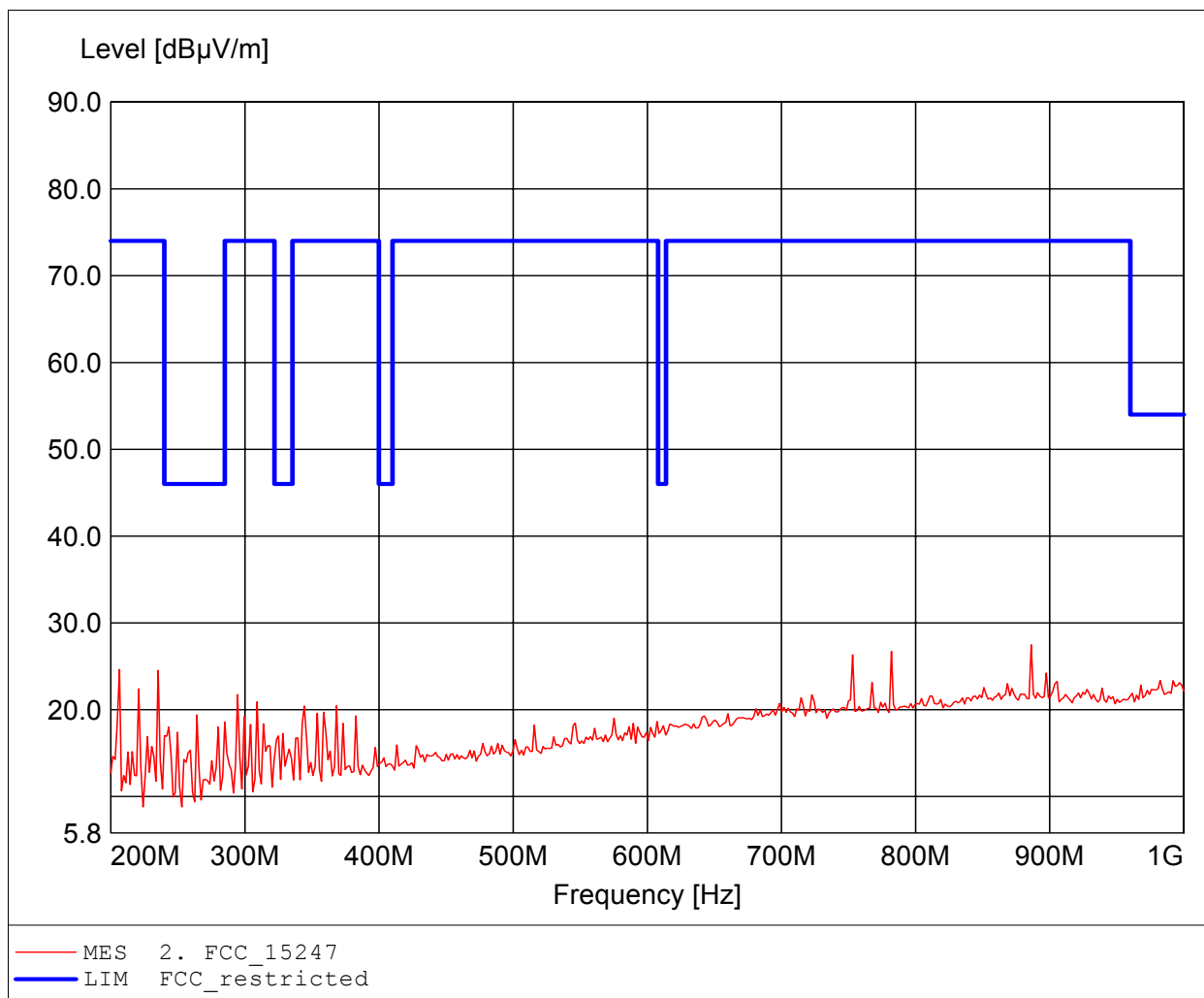
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC60 / CSS / 2412 MHz worst case
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.
Comment 2: Freq: 998.397MHz, Emax: 22.80dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

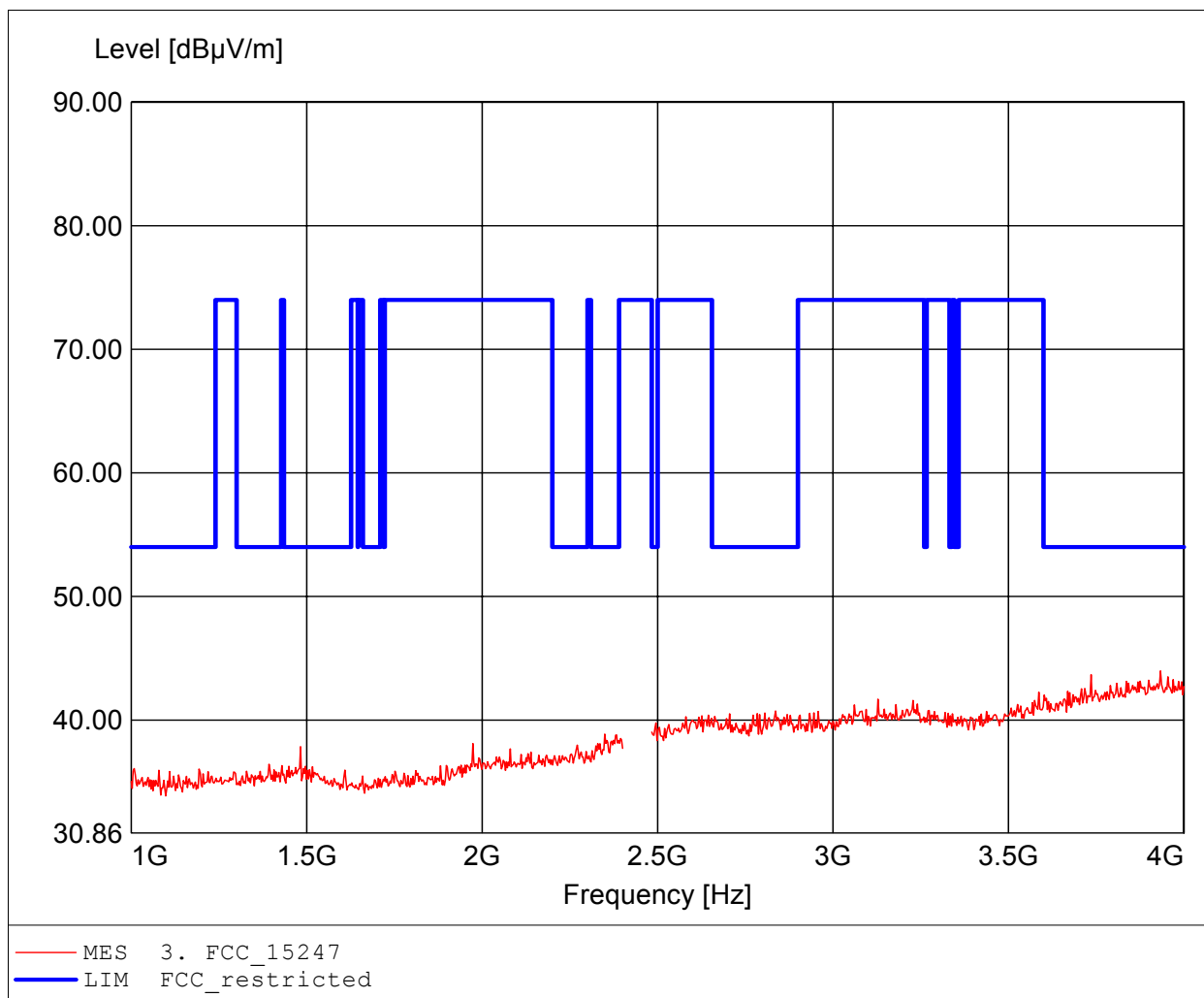
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC60 / CSS / 2412 MHz worst case
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.
Comment 2: Freq: 886.172MHz, Emax: 27.48dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

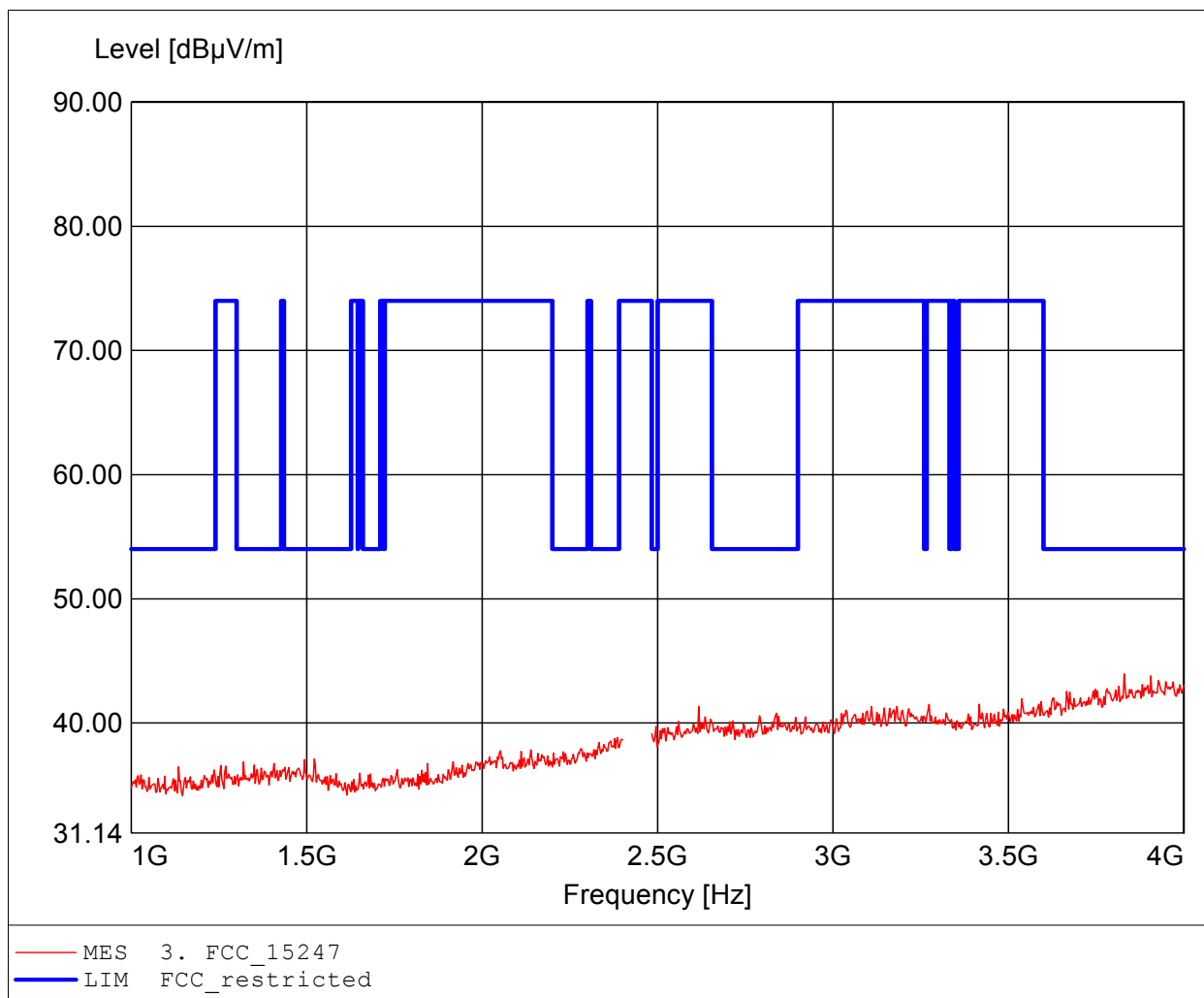
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / 2462 MHz
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2: Freq: 3.933GHz, Emax: 43.98dBuV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

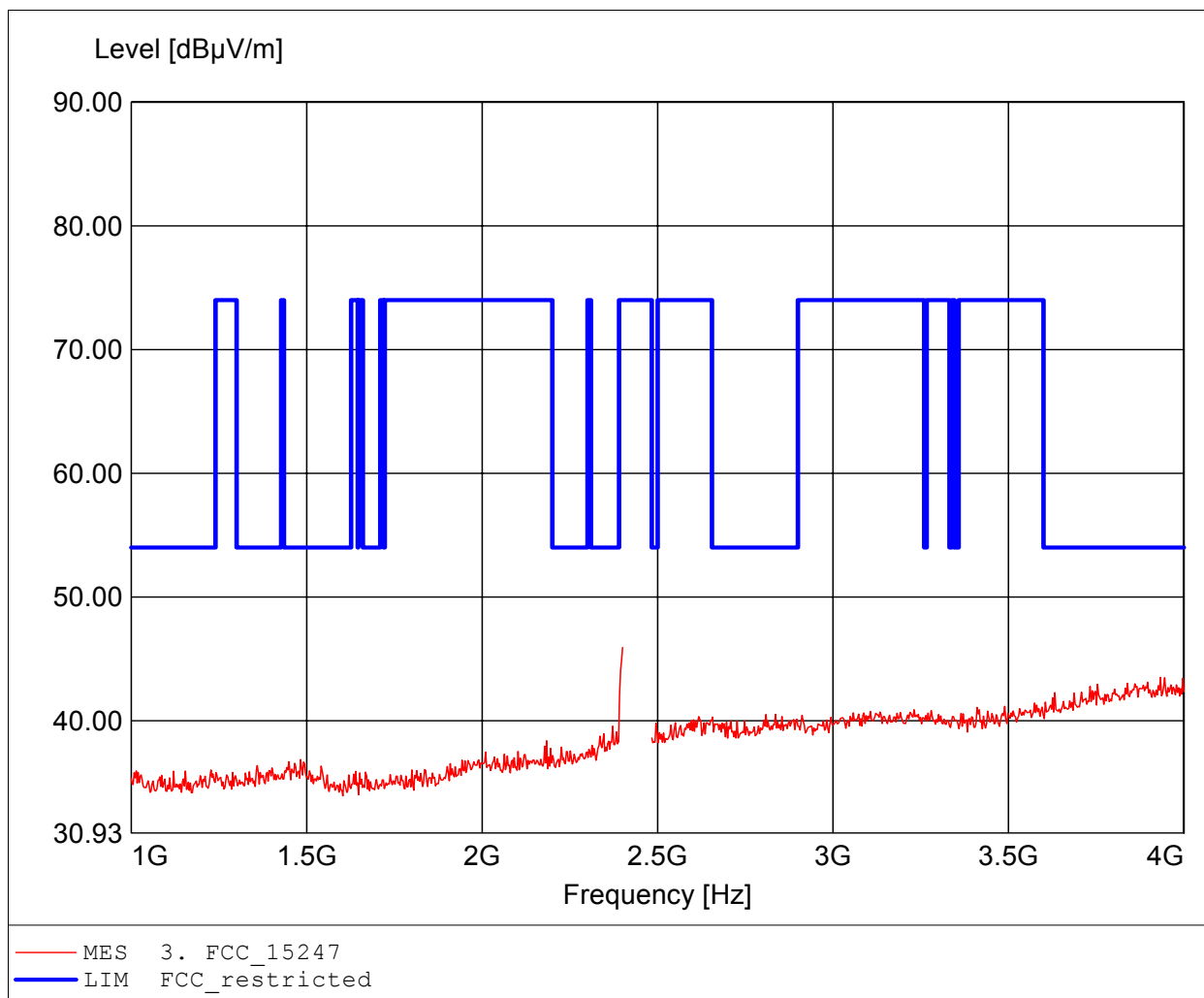
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / 2462 MHz
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2: Freq: 3.830GHz, Emax: 43.96dBuV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

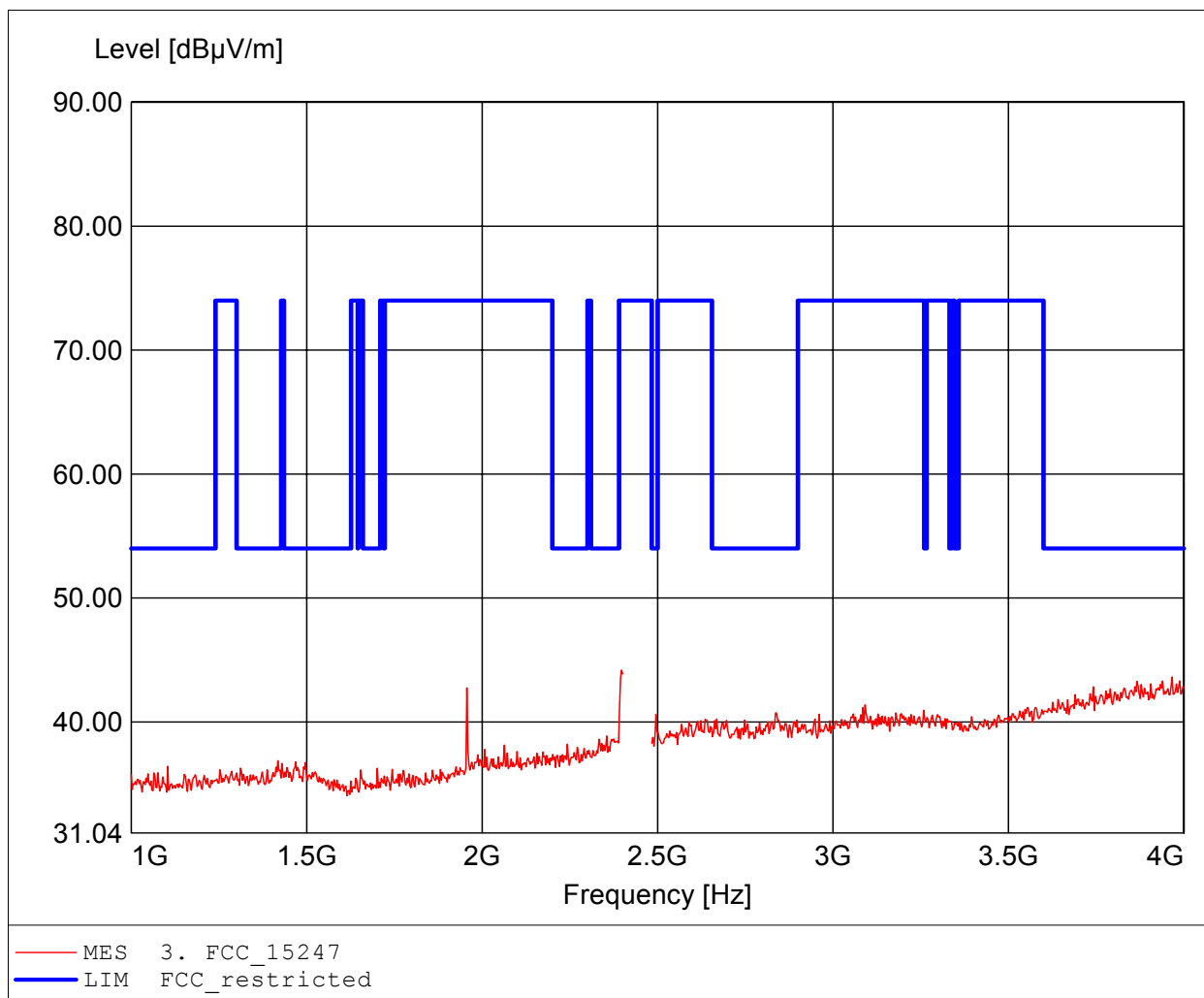
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / 2412 MHz
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2: Freq: 2.400GHz, Emax: 45.93dBuV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

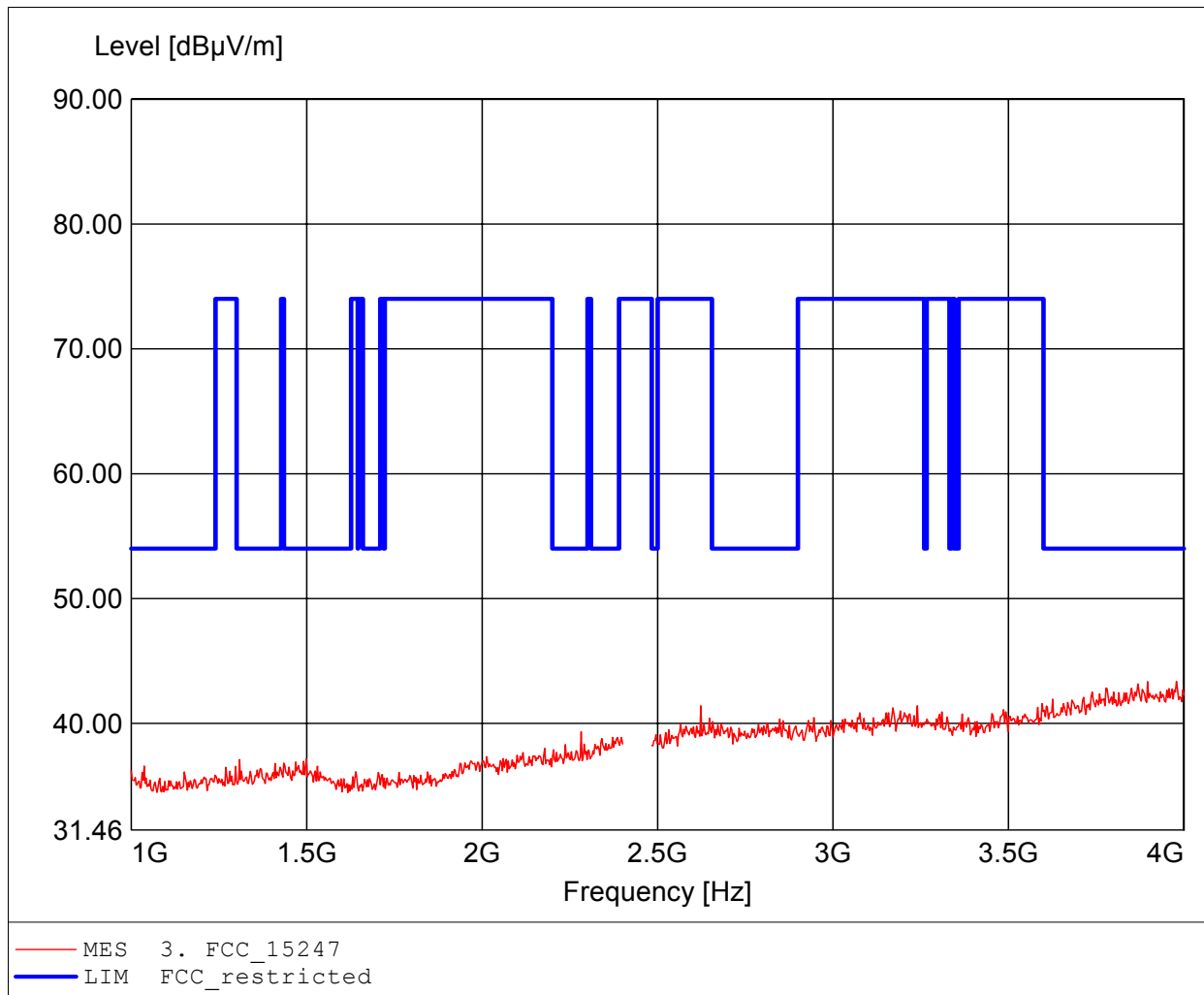
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC60 / CSS / 2412 MHz
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2: Freq: 2.397GHz, Emax: 44.18dBuV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

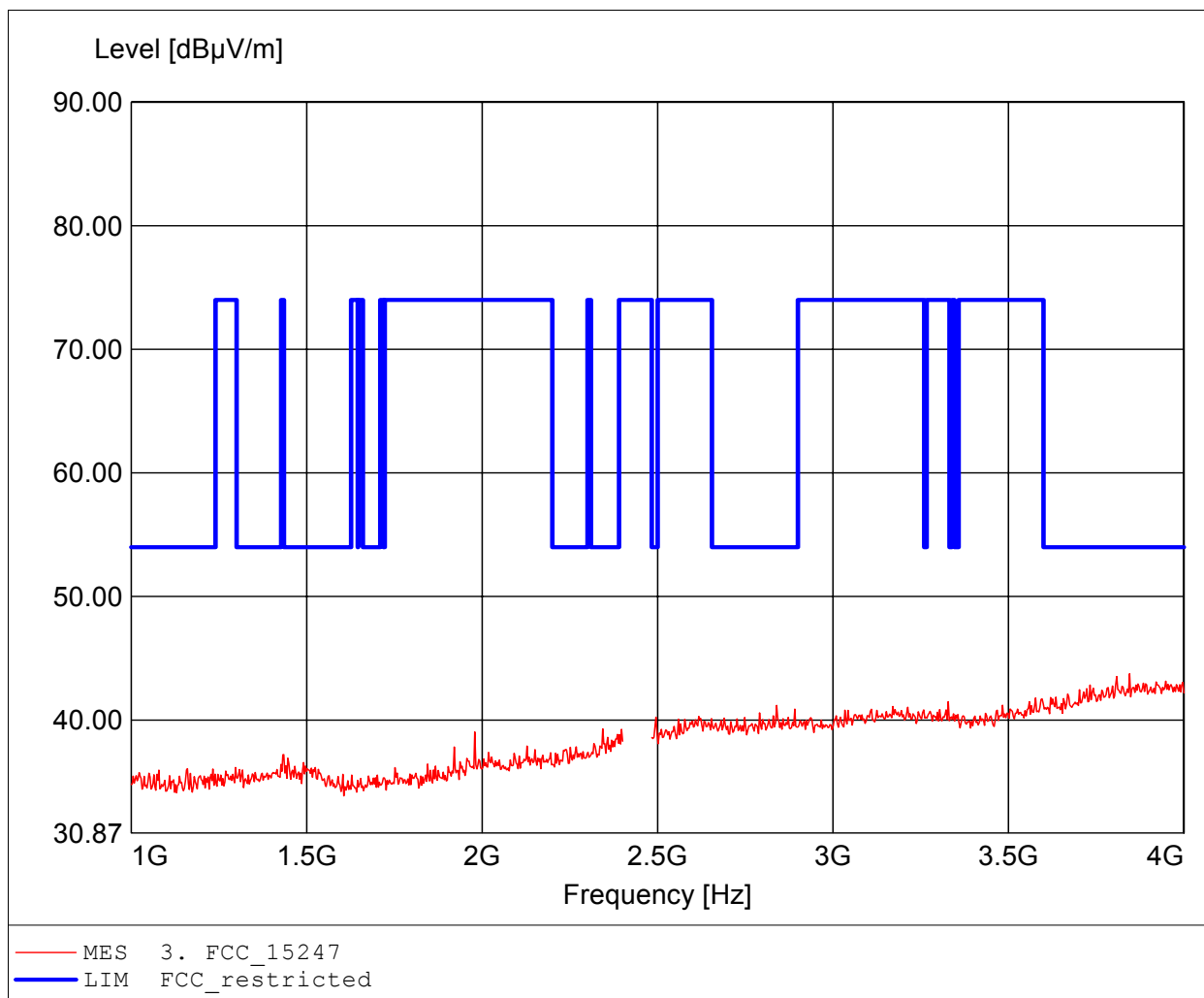
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / 2442 MHz
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2: Freq: 3.979GHz, Emax: 43.36dBuV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

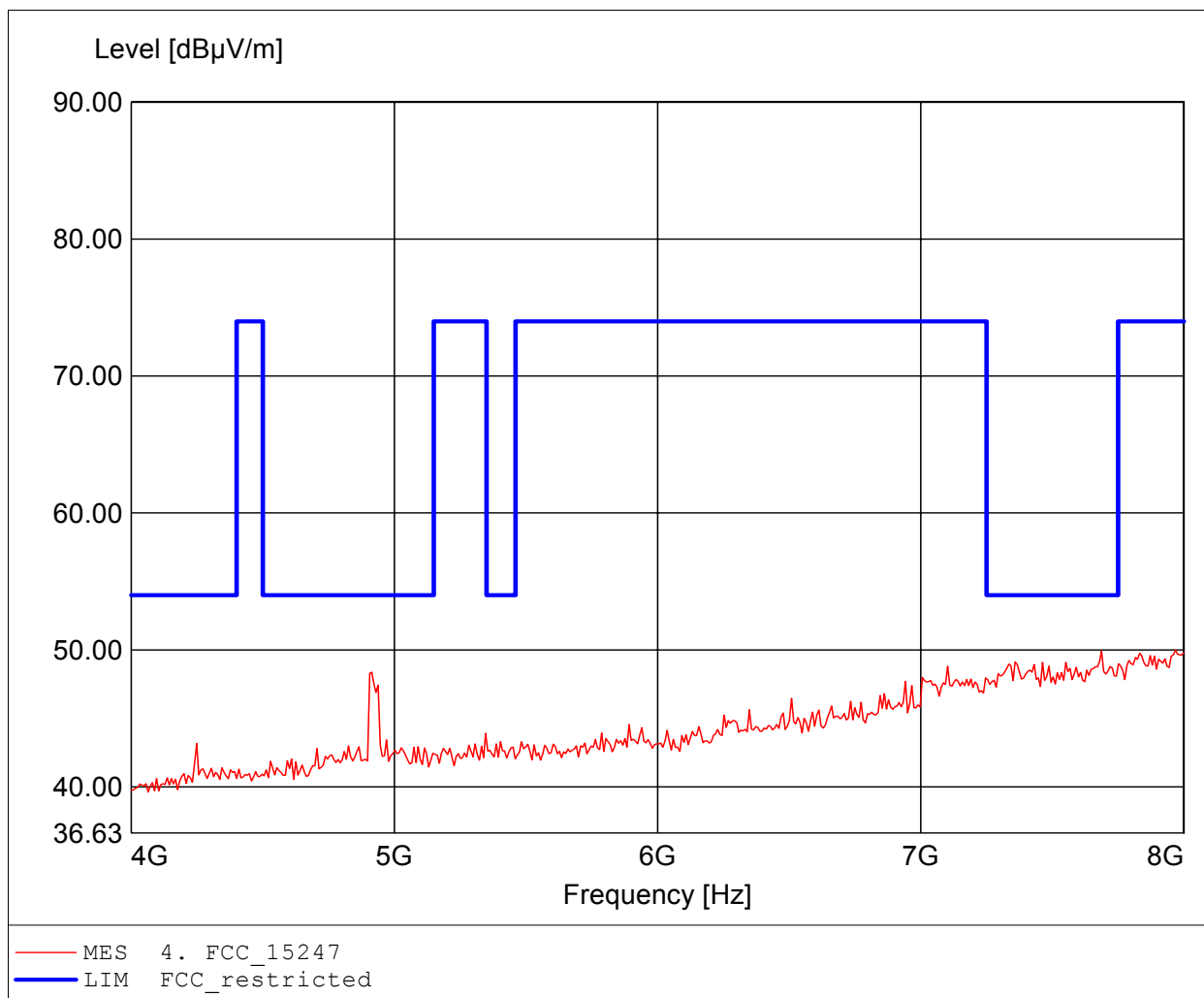
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC60 / CSS / 2442 MHz
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2: Freq: 3.845GHz, Emax: 43.76dBuV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

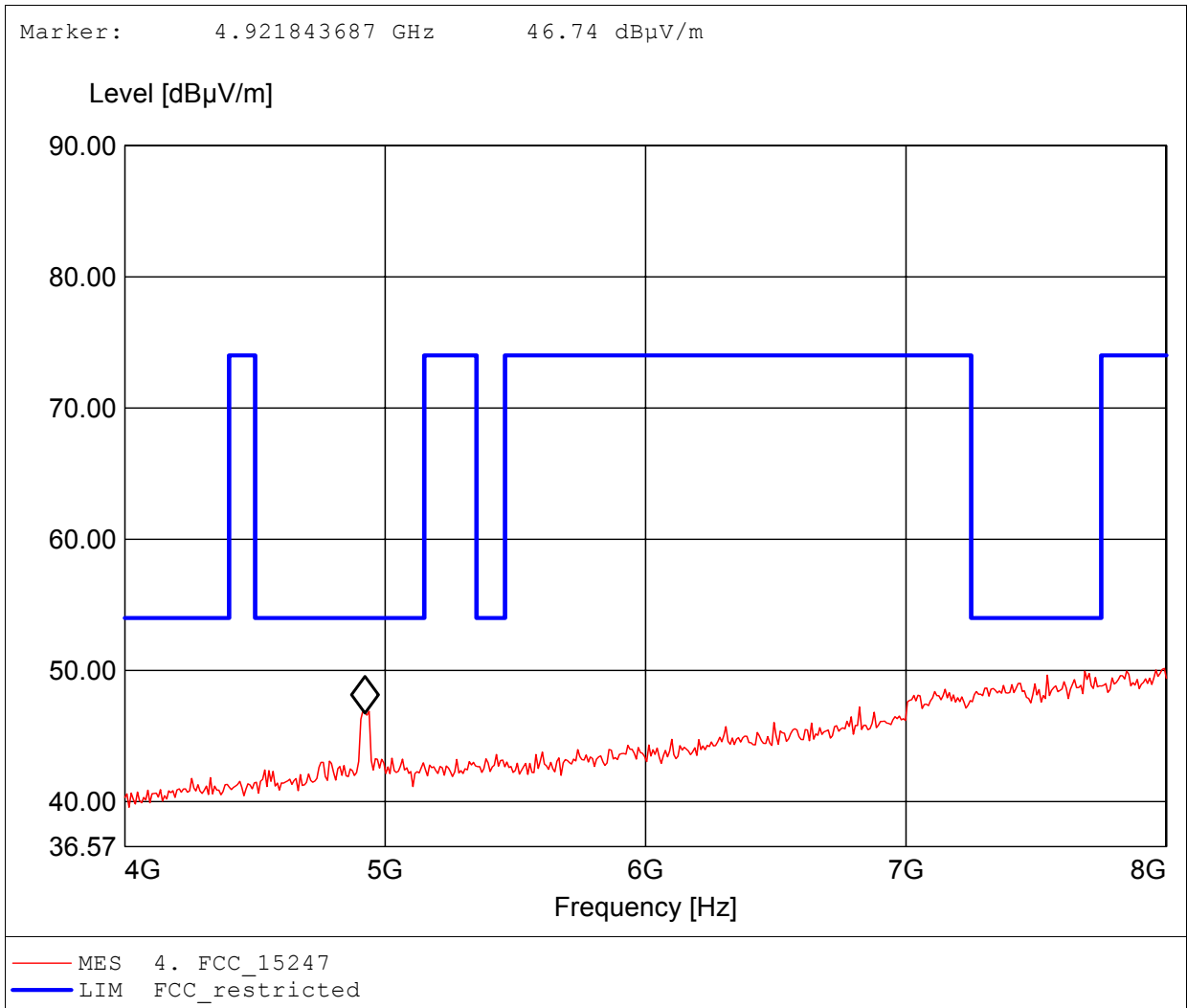
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / 2462 MHz
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2: Freq: 7.968GHz, Emax: 49.99dBuV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

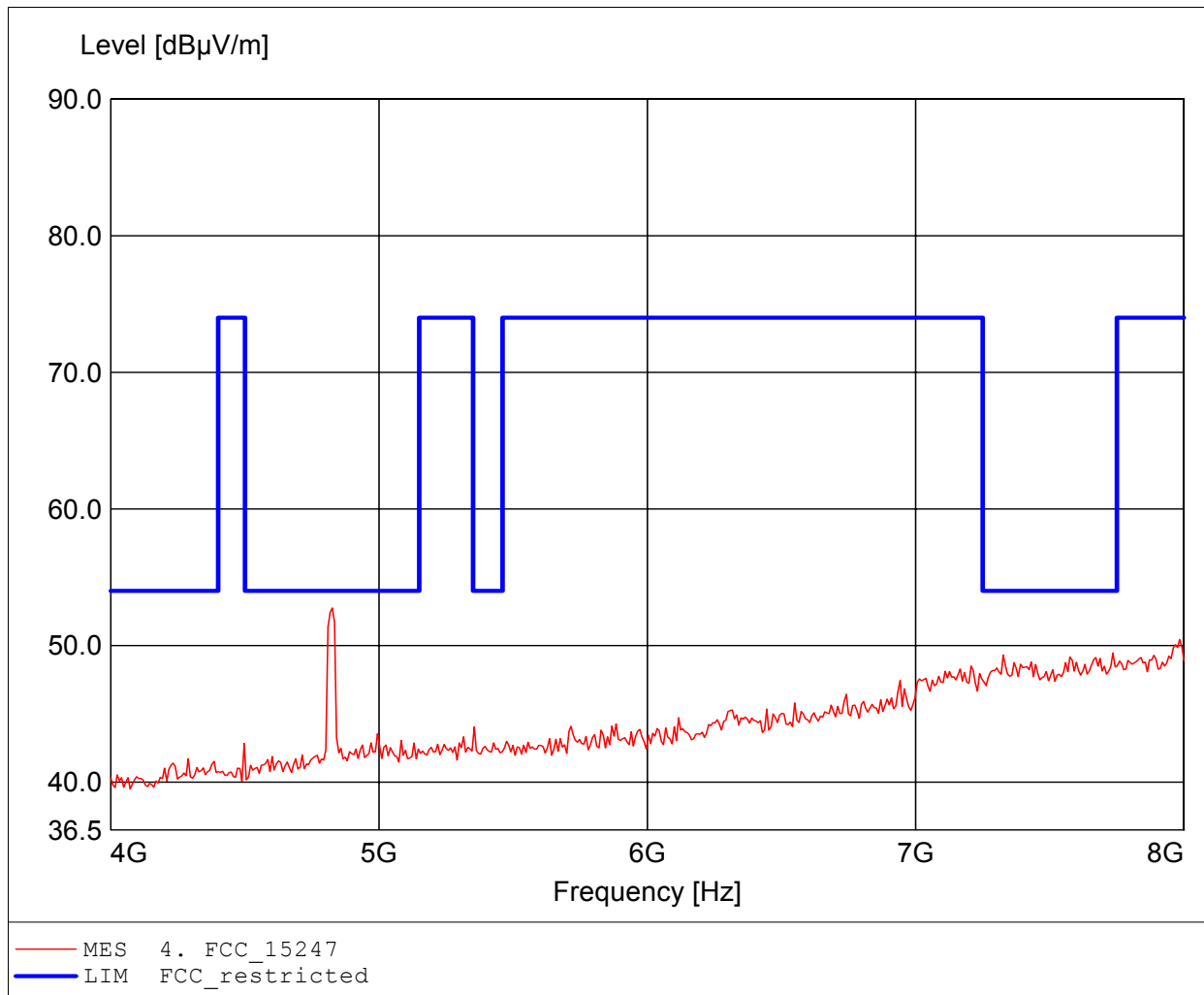
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / 2462 MHz
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2: Freq: 7.992GHz, Emax: 50.15dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

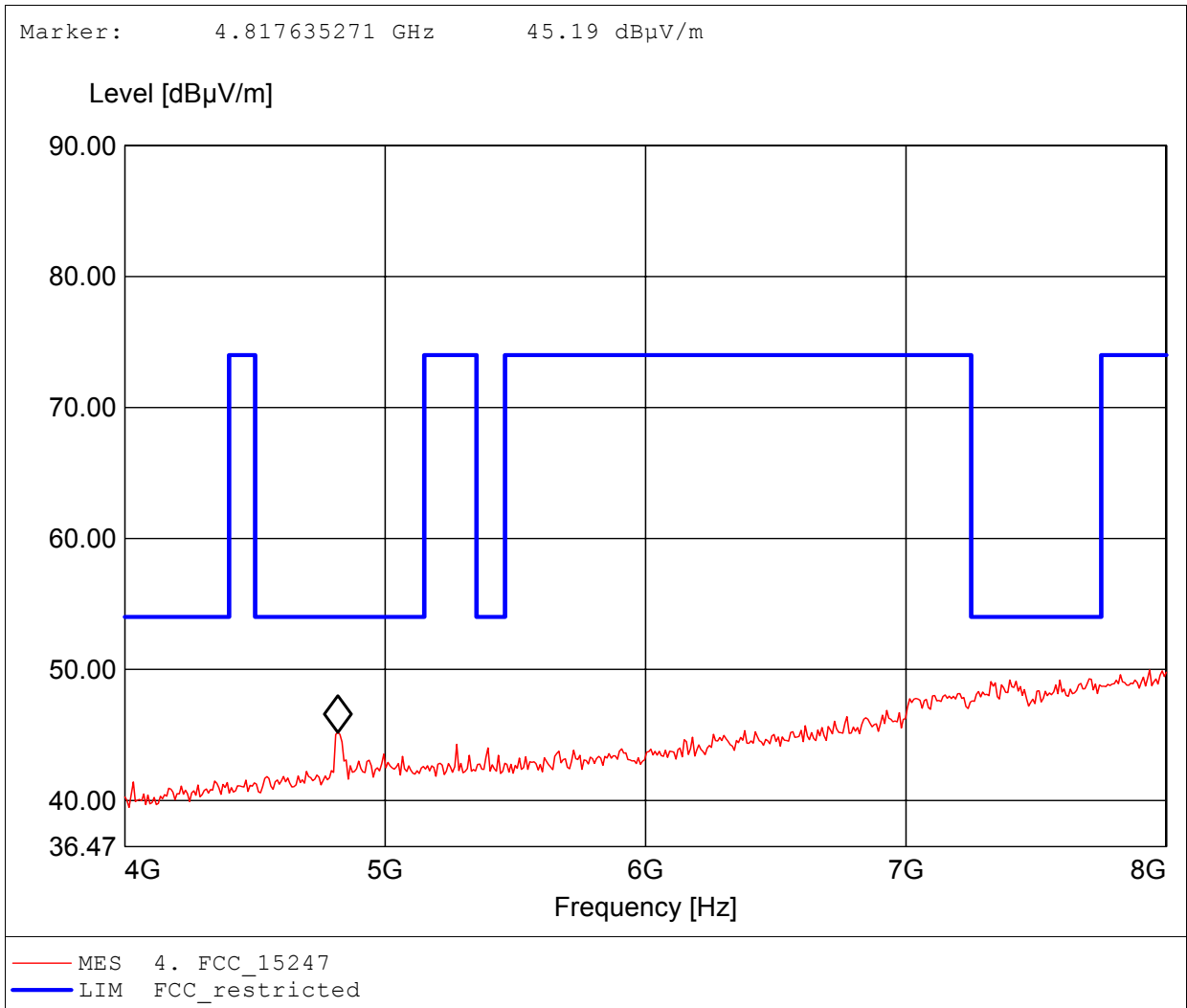
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / 2412 MHz
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2: Freq: 4.826GHz, Emax: 52.75dBuV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

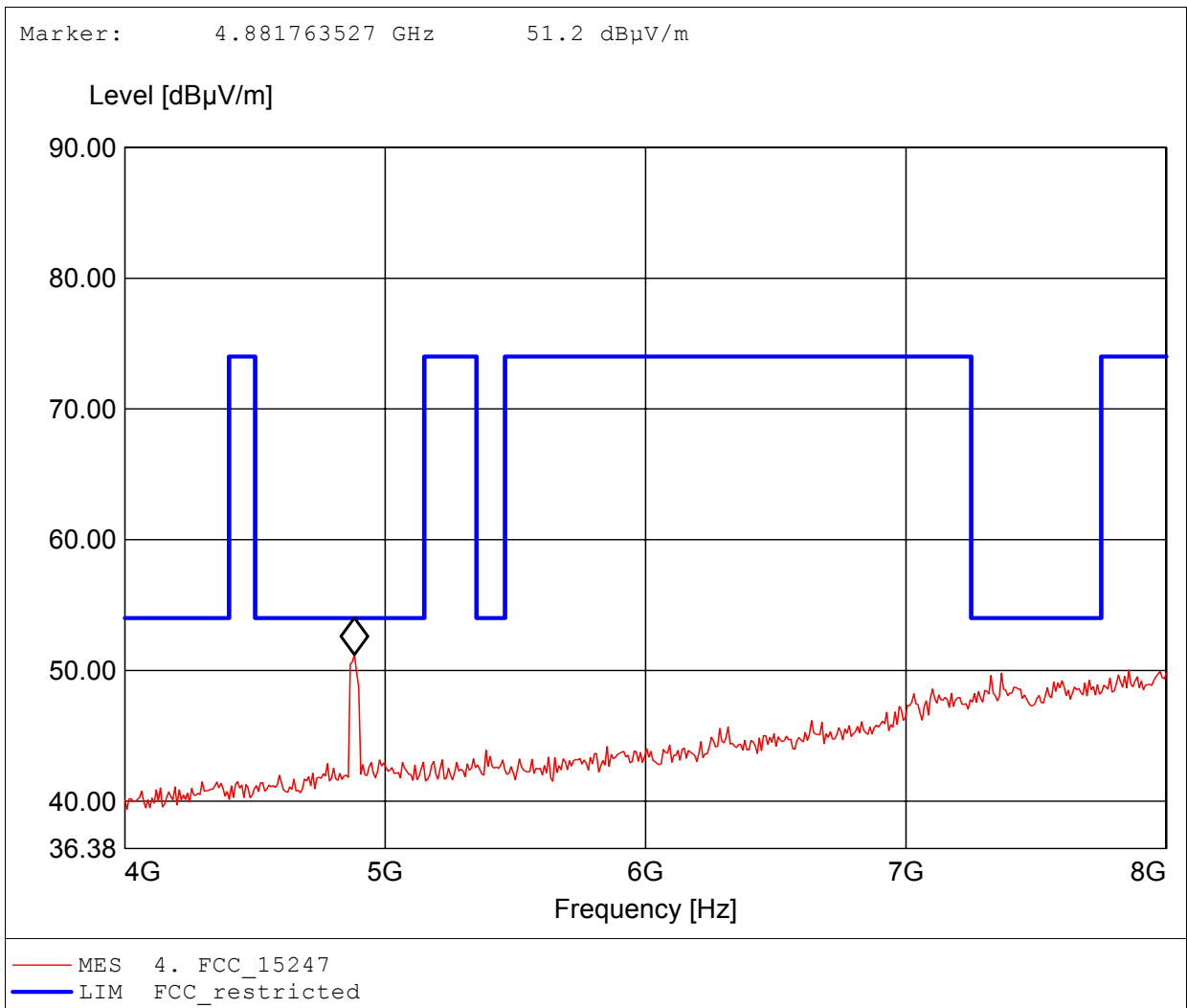
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / 2412 MHz
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2: Freq: 7.936GHz, Emax: 49.96dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

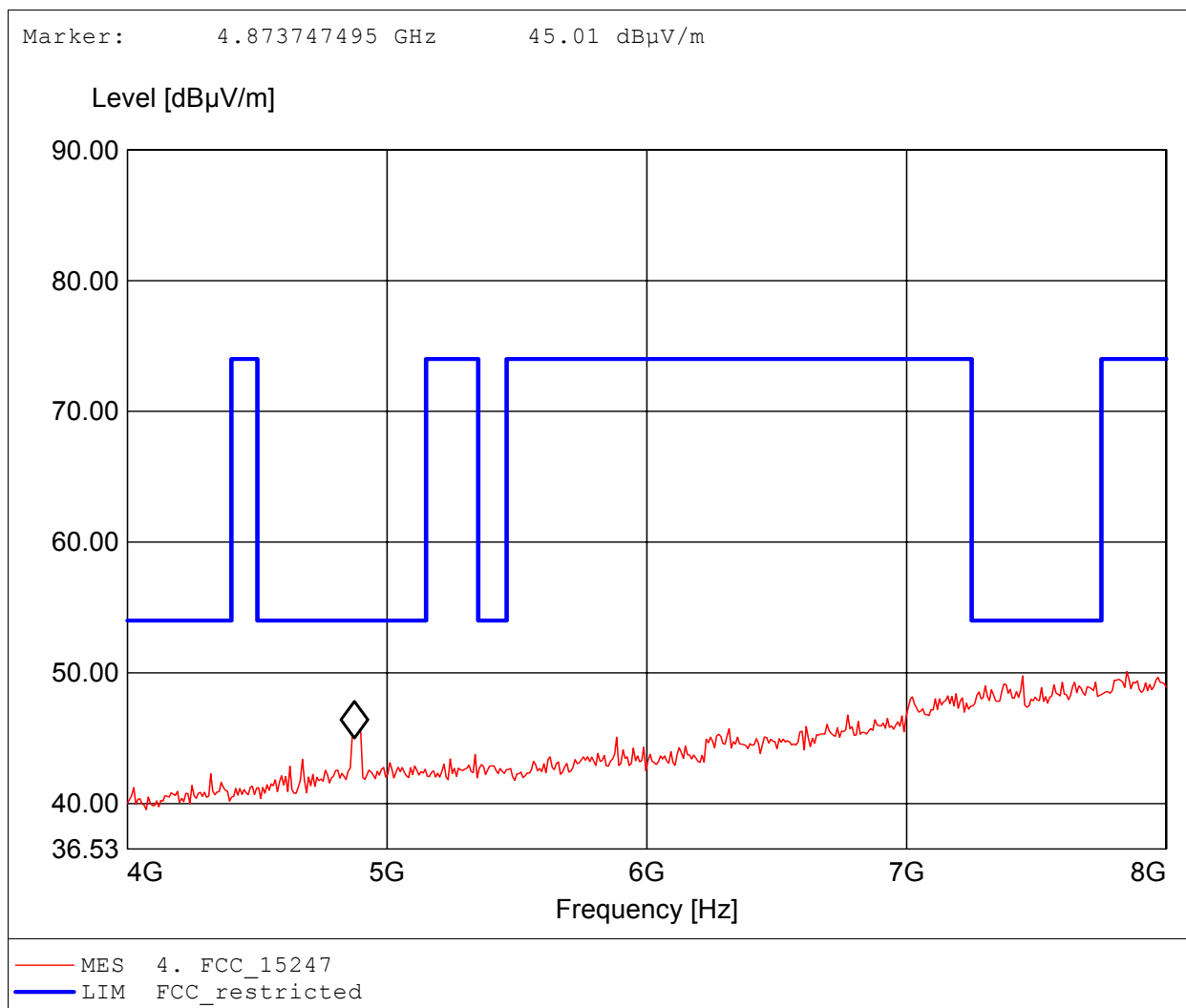
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / 2442 MHz
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2: Freq: 4.882GHz, Emax: 51.20dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

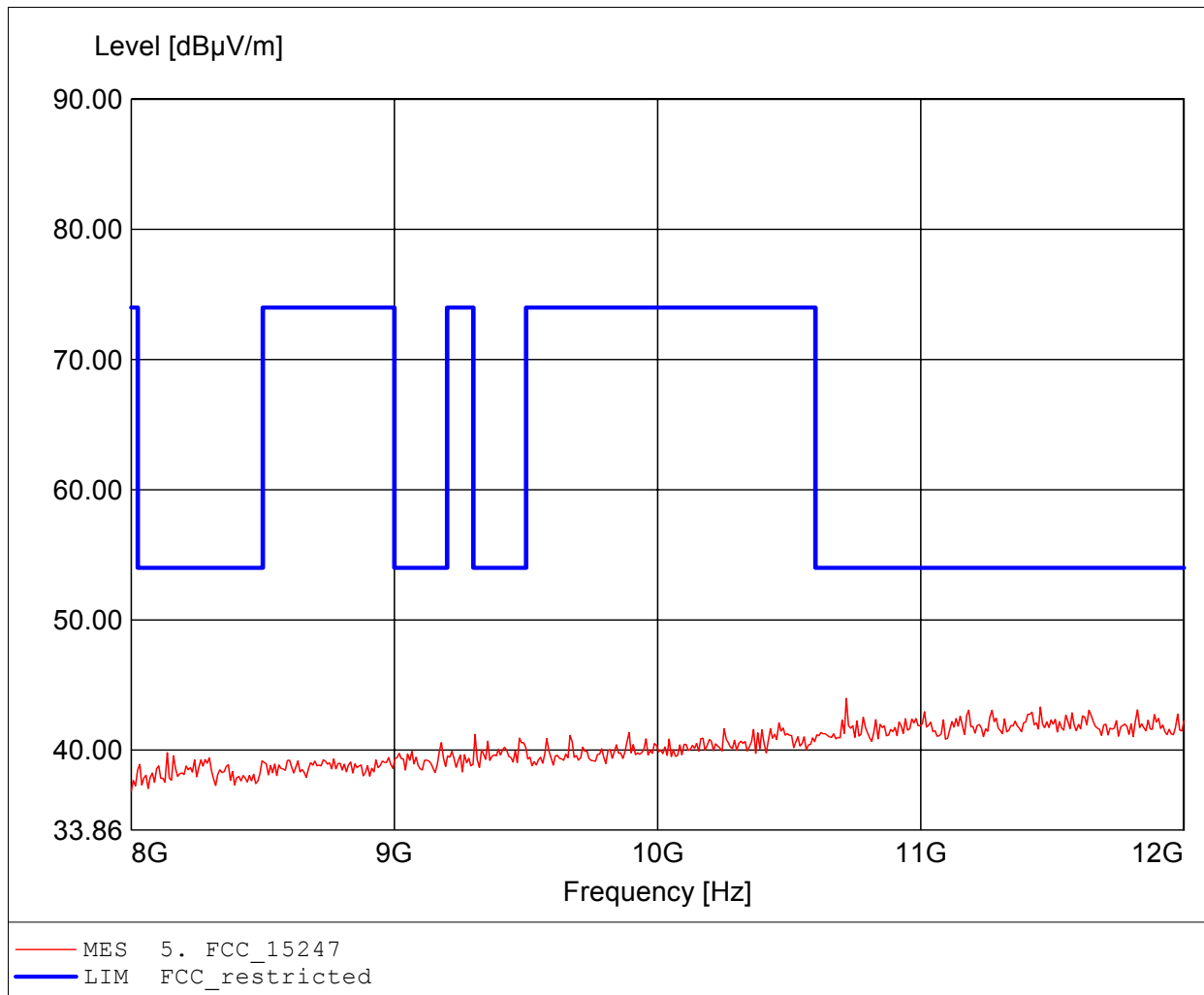
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / 2442 MHz
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2: Freq: 7.848GHz, Emax: 50.10dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

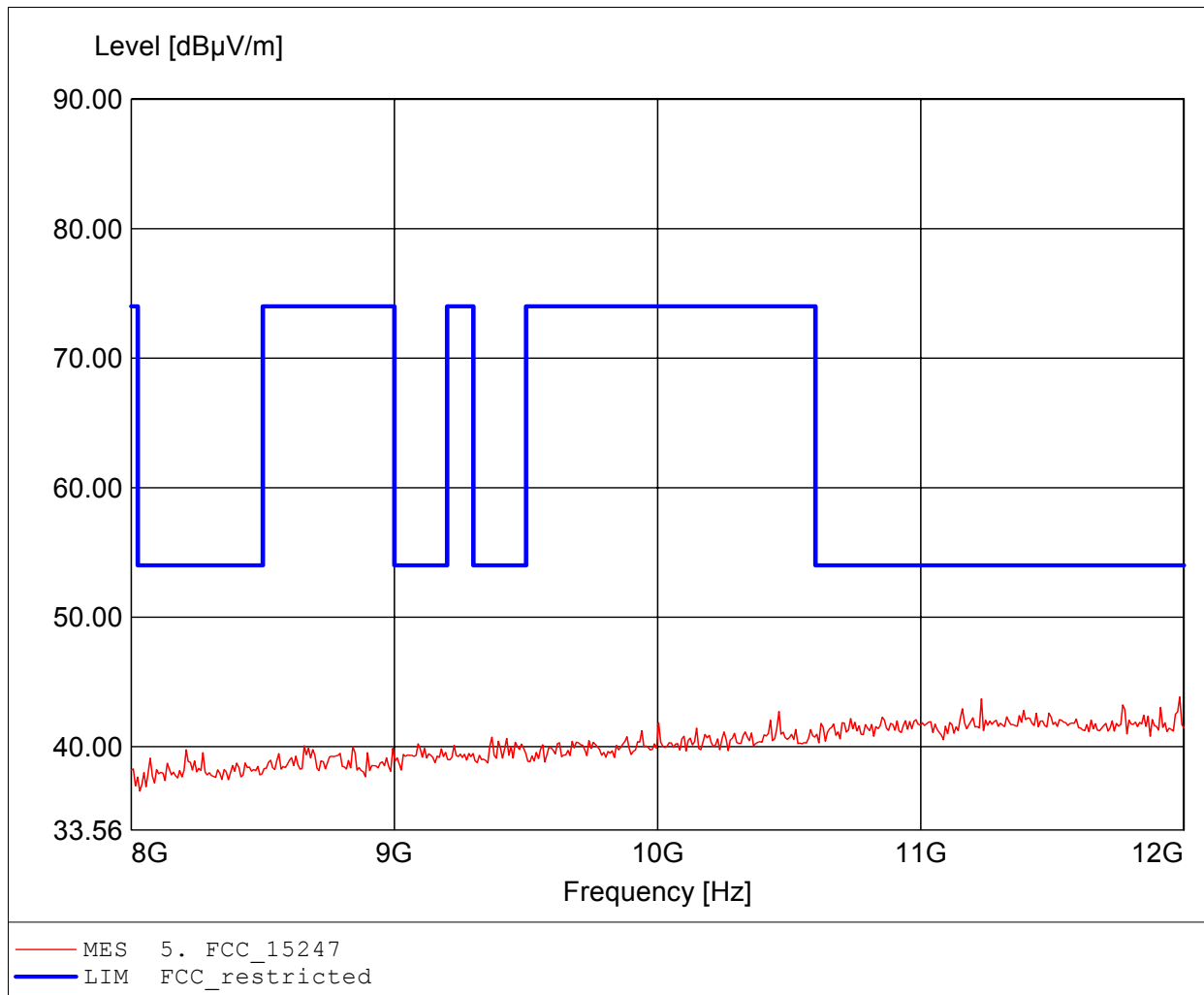
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / 2462 MHz
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2: Freq: 10.717GHz, Emax: 43.98dBuV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

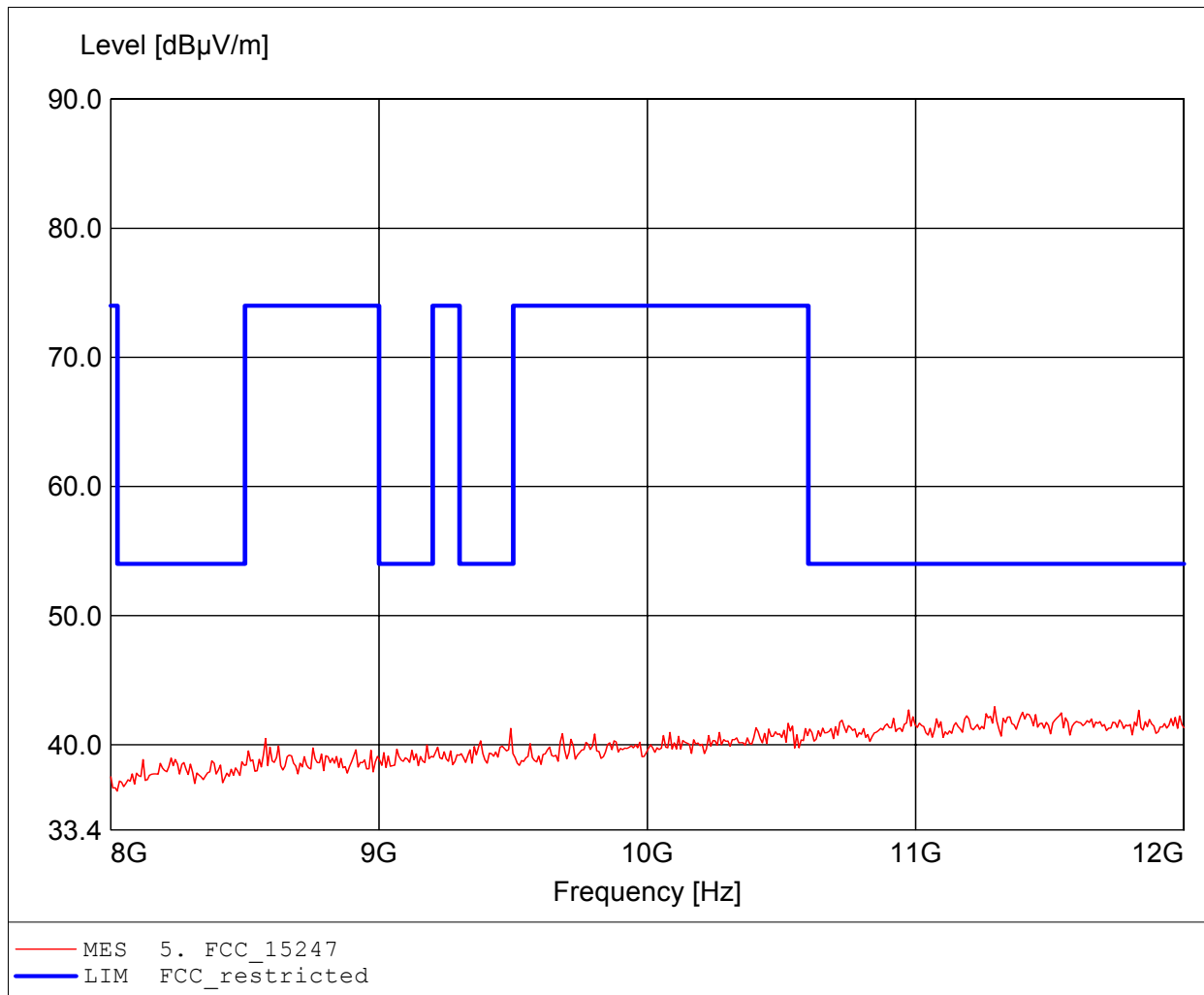
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / 2462 MHz
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2: Freq: 11.984GHz, Emax: 43.83dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

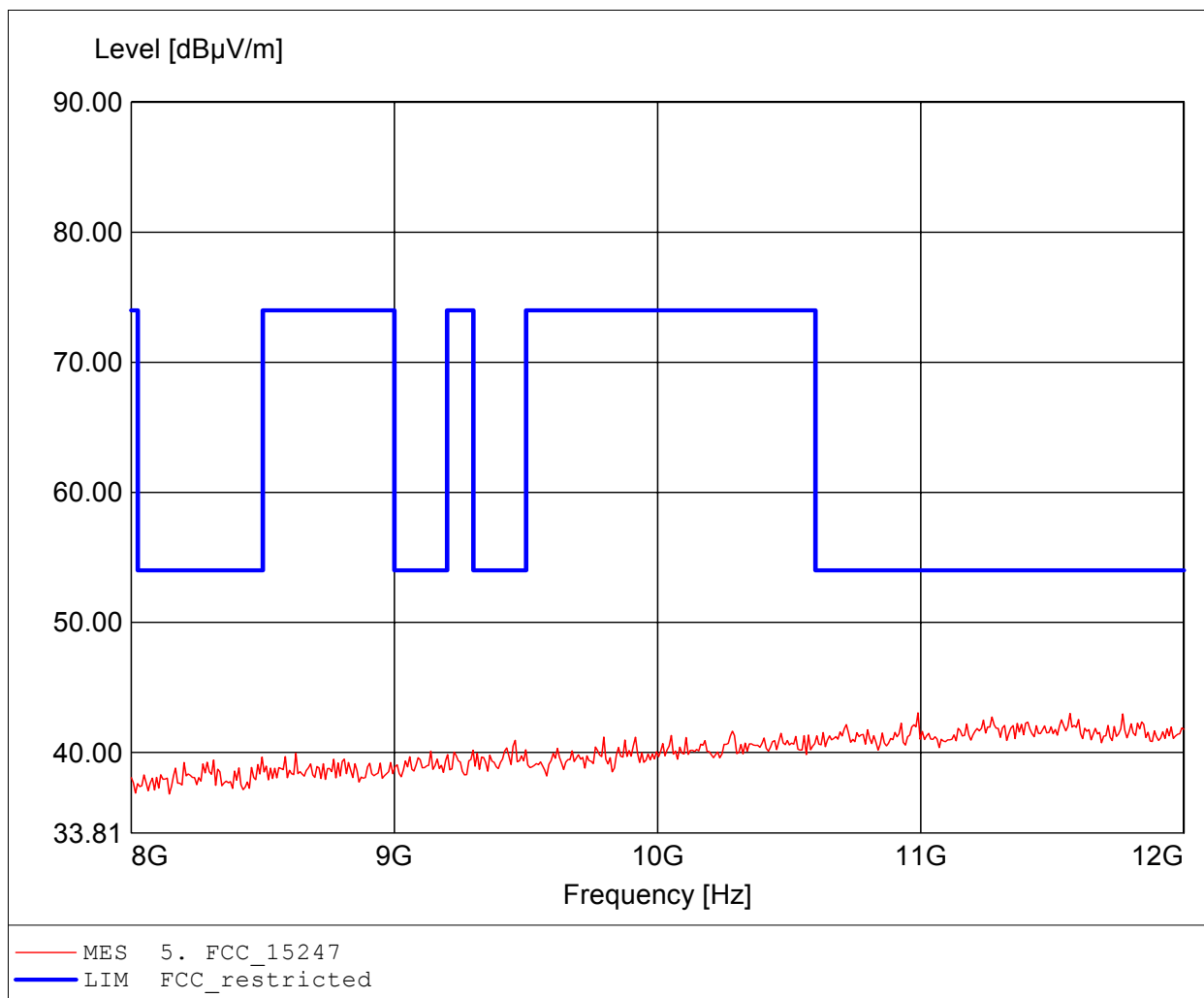
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / 2412 MHz
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2: Freq: 11.295GHz, Emax: 42.96dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

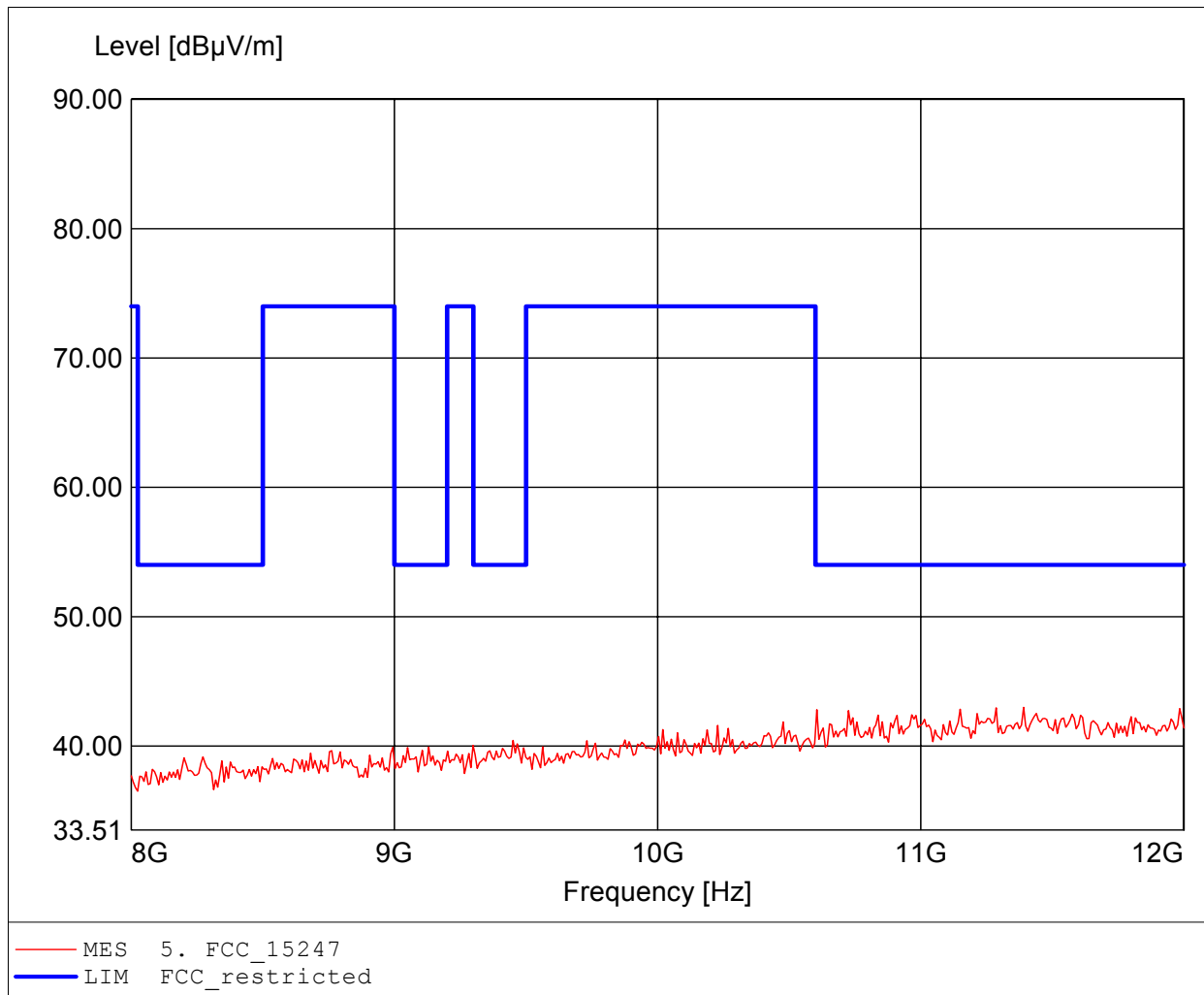
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / 2412 MHz
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2: Freq: 10.990GHz, Emax: 43.04dBuV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

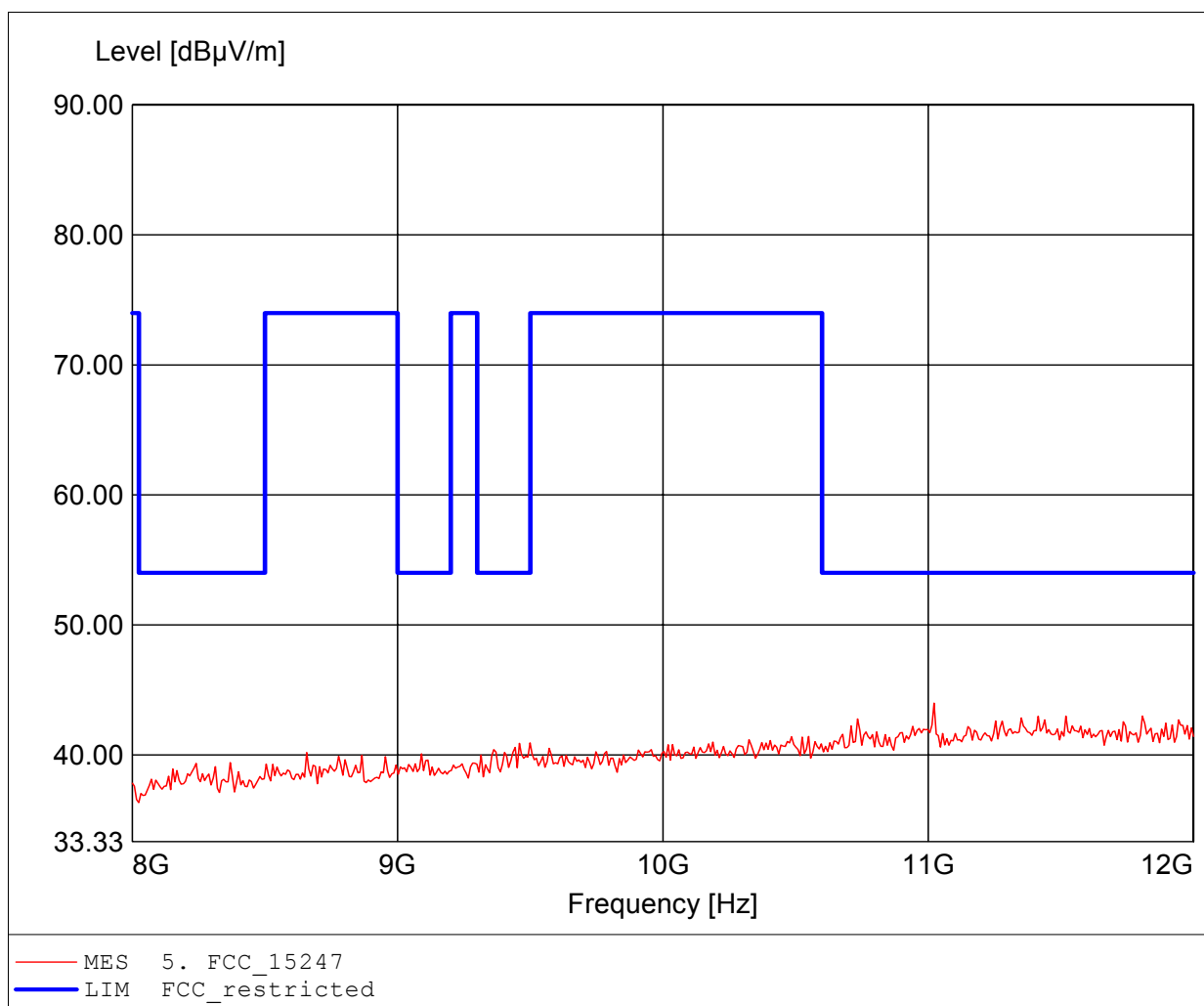
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / 2442 MHz
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2: Freq: 11.391GHz, Emax: 42.99dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / 2442 MHz
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: according to §15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2: Freq: 11.022GHz, Emax: 43.98dBµV/m, RBW: 1MHz

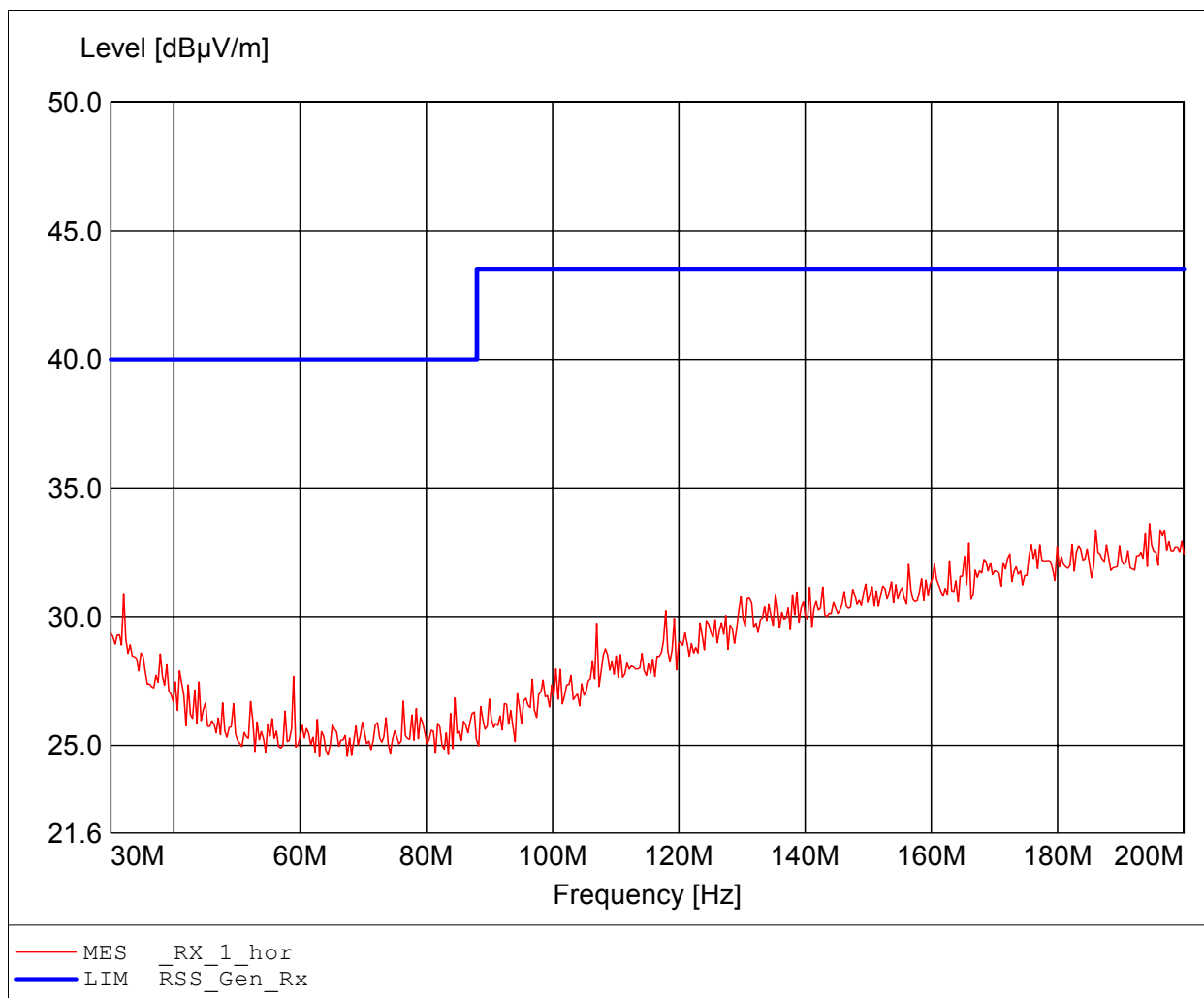


Annex H Receiver radiated spurious emissions

Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

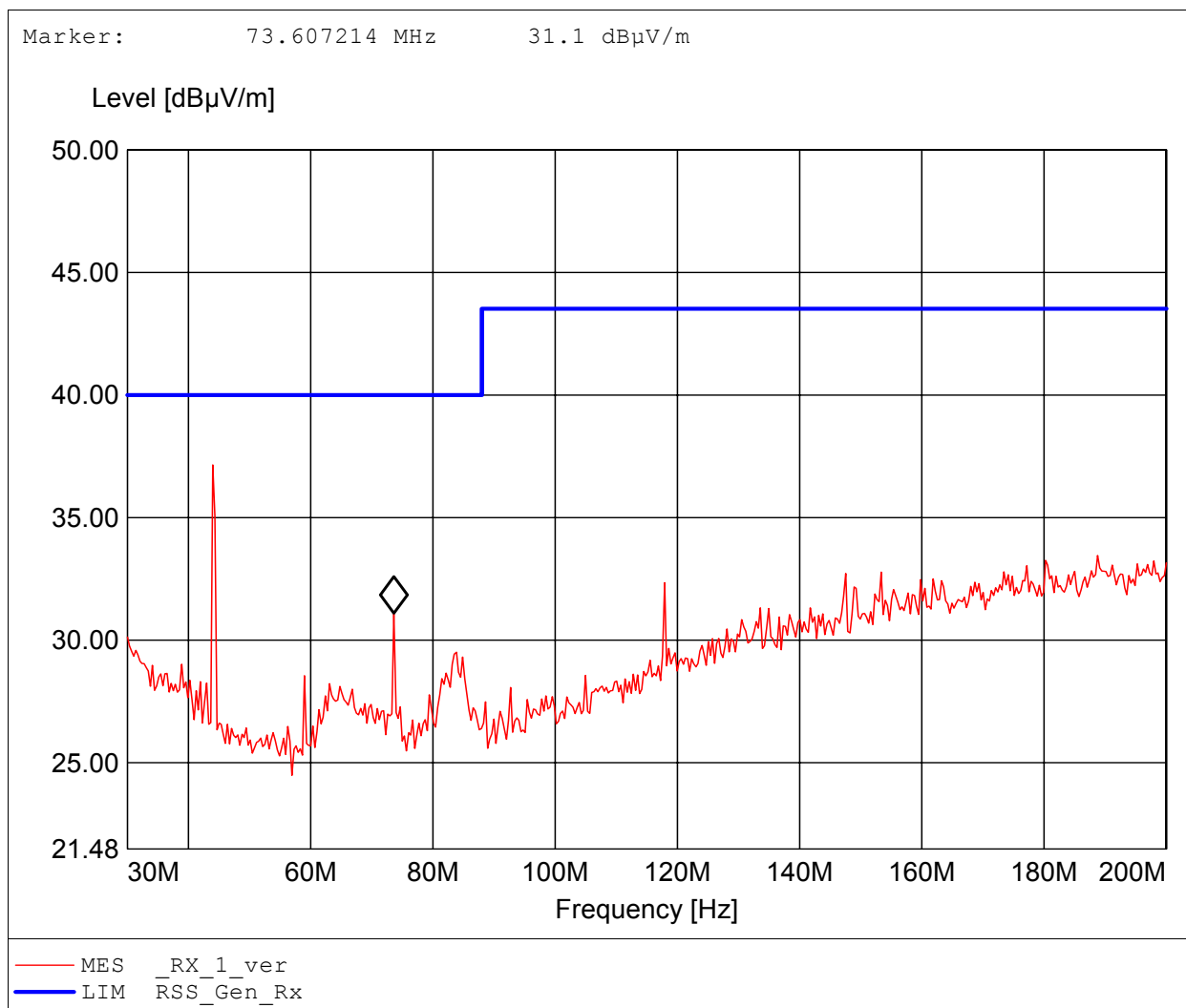
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / Rx mode
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: Freq. / CH:
Comment 1: Dist.: 3m, Ant.: HK 116
Comment 2: Freq:194.549MHz Emax:33.62dBµV/m RBW: 100 kHz



Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

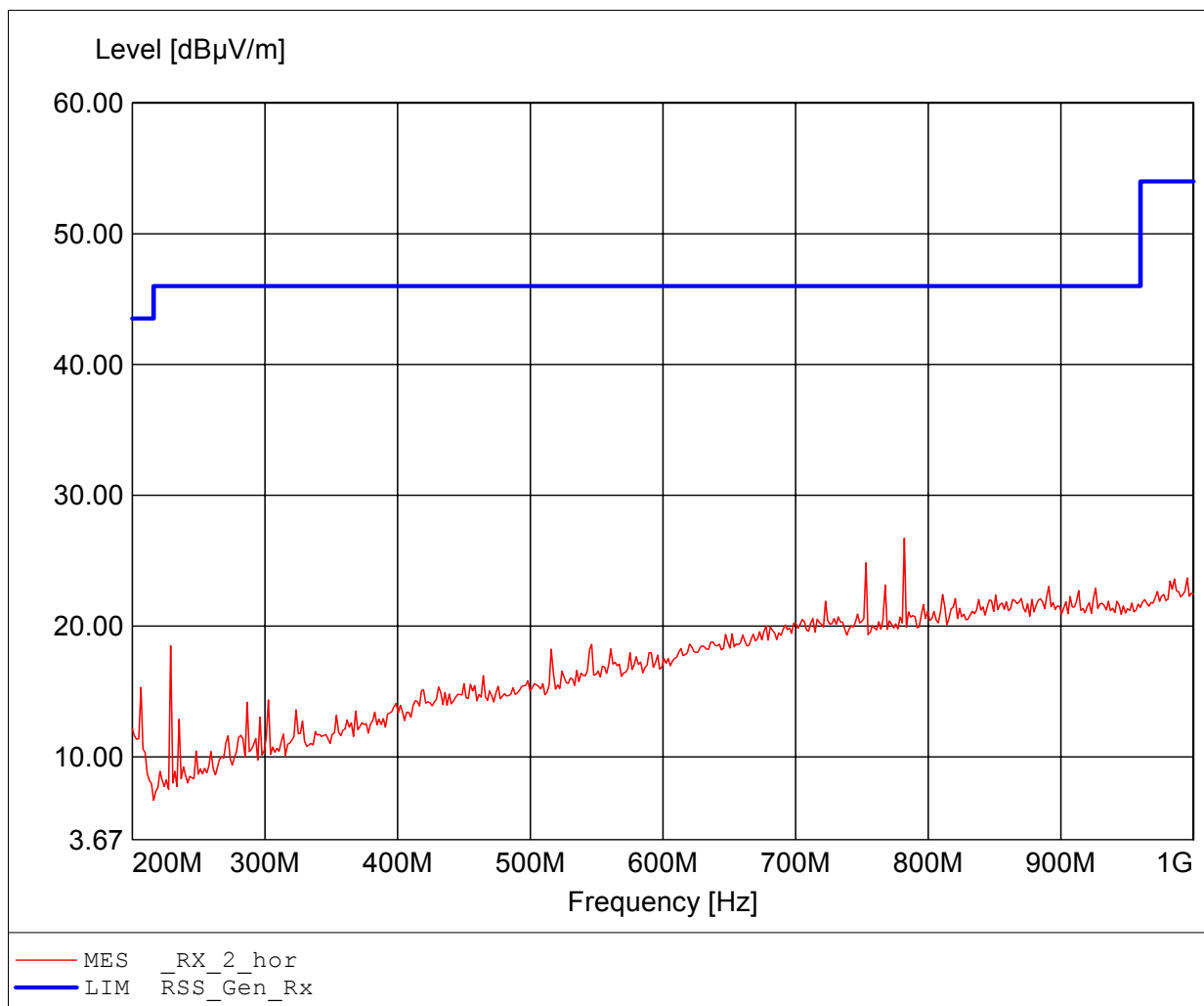
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / Rx mode
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: Freq. / CH:
Comment 1: Dist.: 3m, Ant.: HK 116
Comment 2: Freq:43.968MHz Emax:37.15dBµV/m RBW: 100 kHz



Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

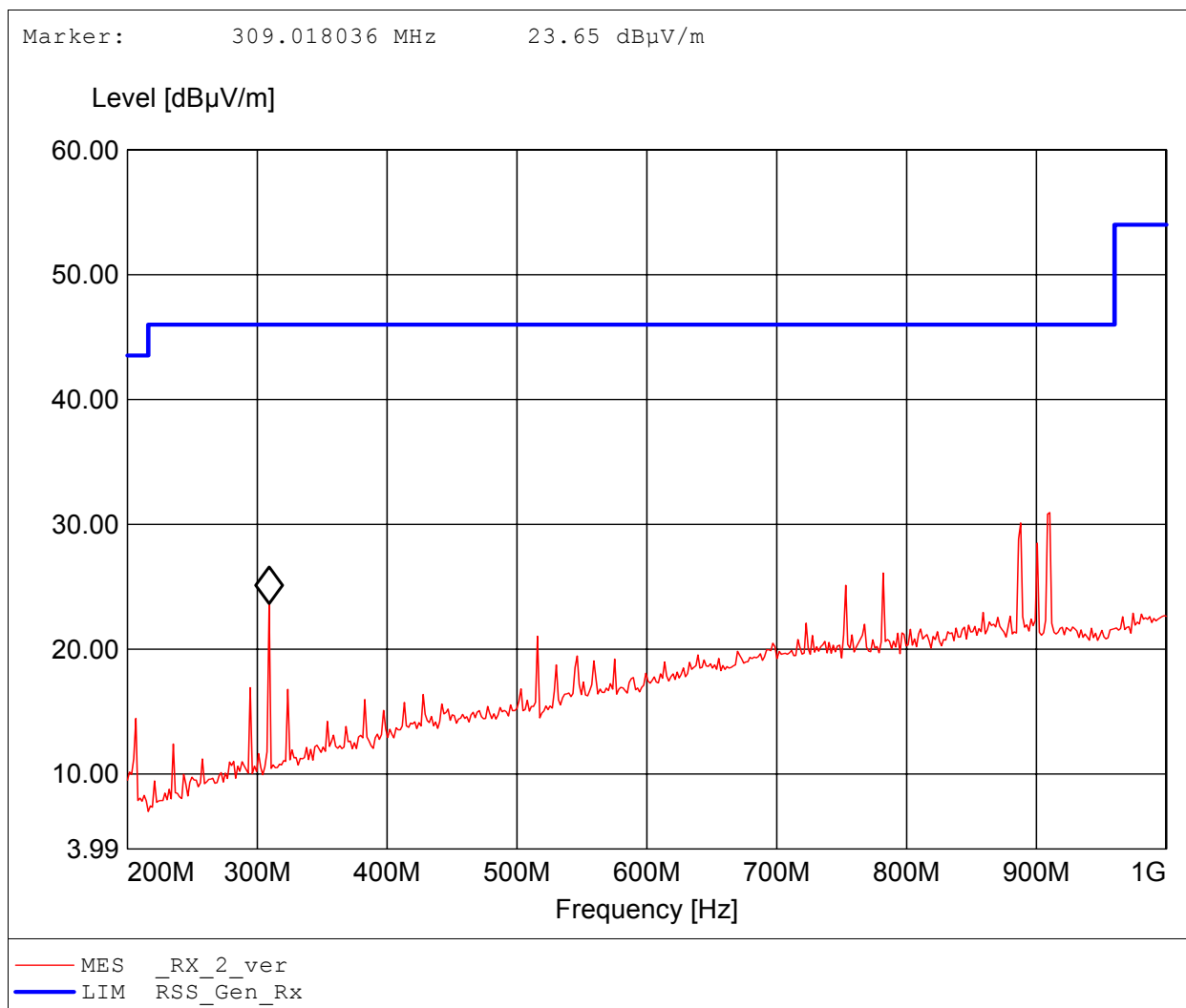
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / Rx mode
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: Freq. / CH:
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.
Comment 2: Freq:781.964MHz Emax:26.72dBµV/m RBW: 100 kHz



Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

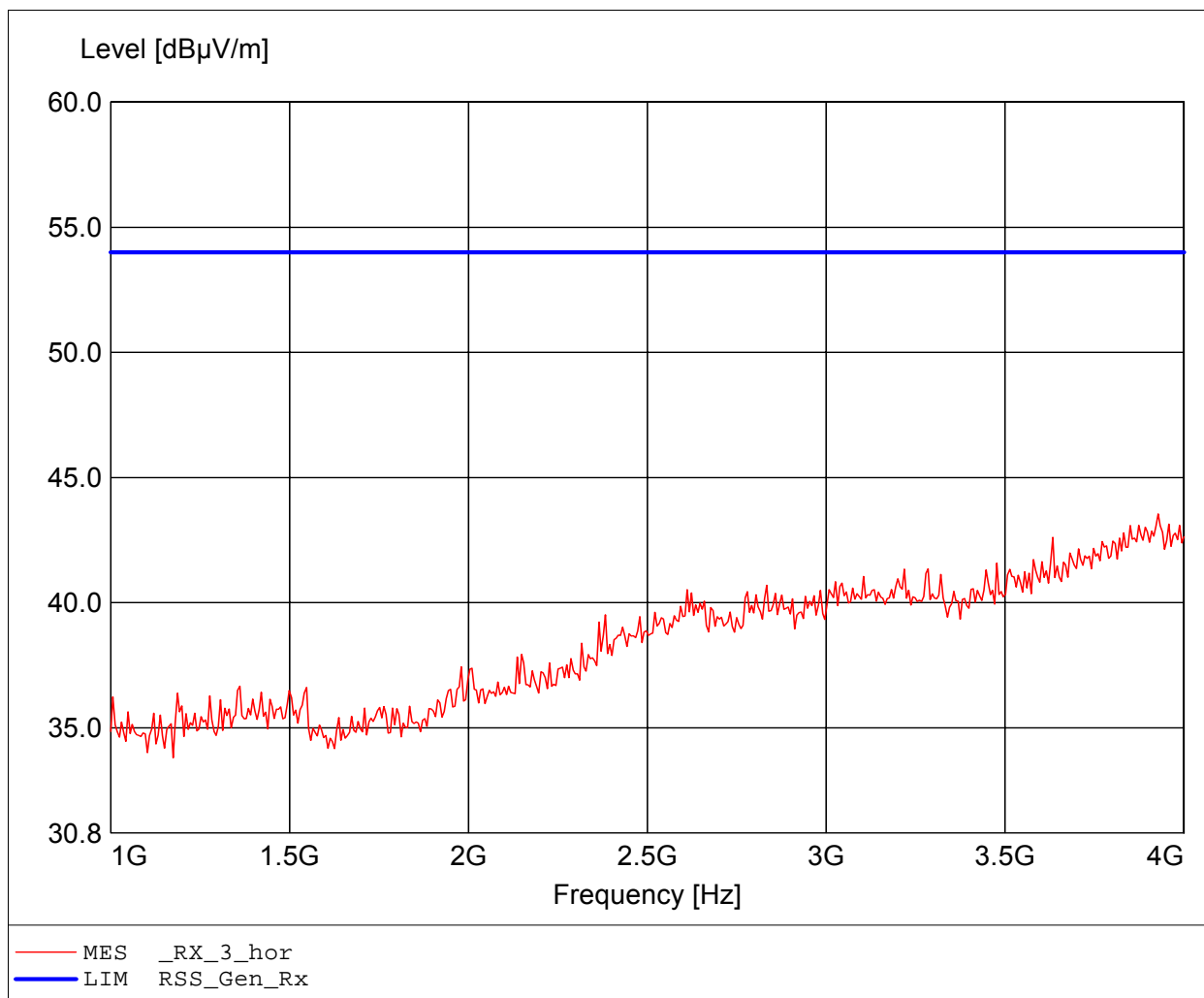
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / Rx mode
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: Freq. / CH:
Comment 1: Dist.: 3m, Ant.: HL 223, ampl.
Comment 2: Freq:910.220MHz Emax:30.94dBµV/m RBW: 100 kHz



Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

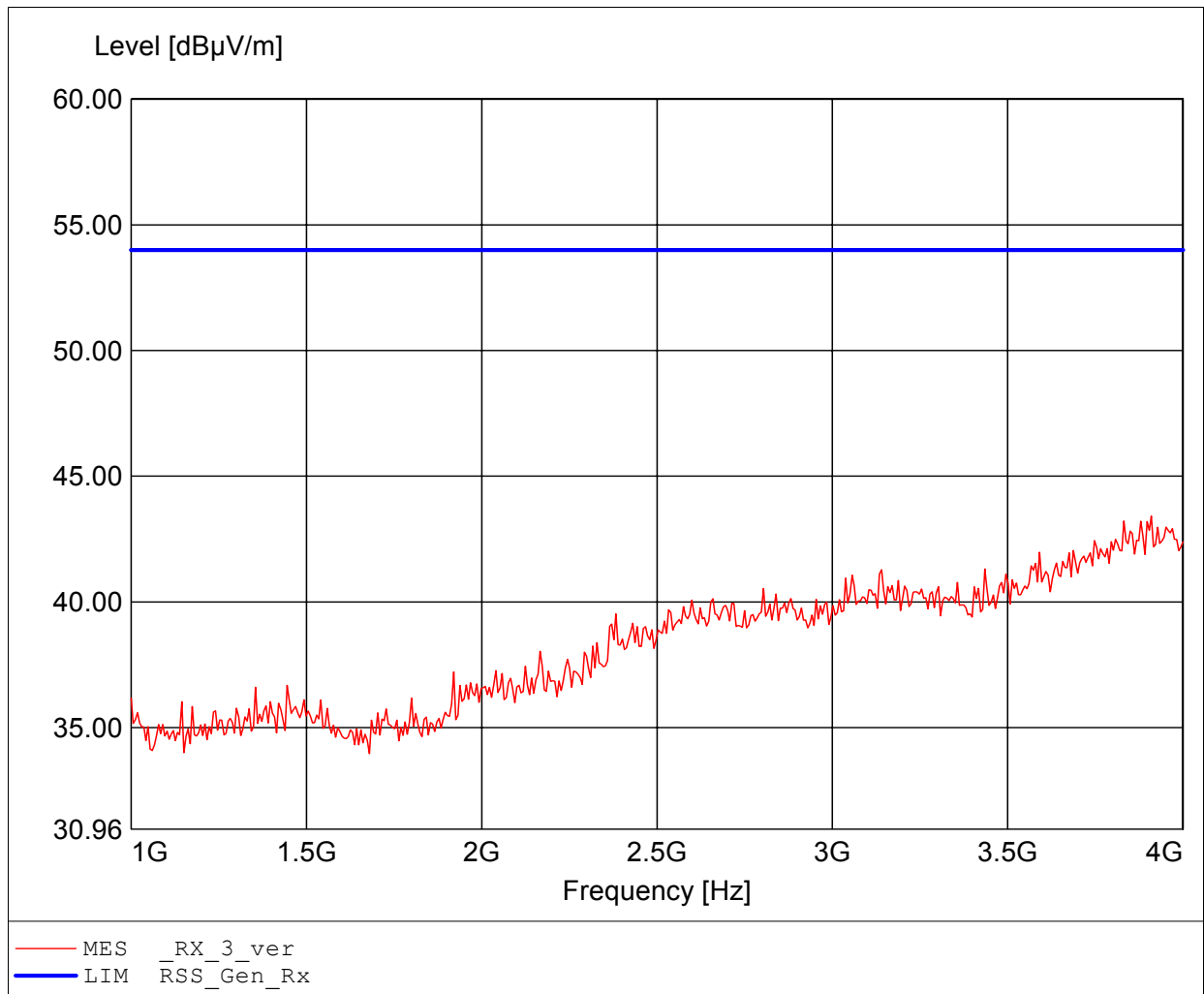
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / Rx mode
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: Freq. / CH:
Comment 1: Dist.: 3m, Ant.: HL025, ampl.
Comment 2: Freq:3.928GHz Emax:43.55dBµV/m RBW: 1 MHz



Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

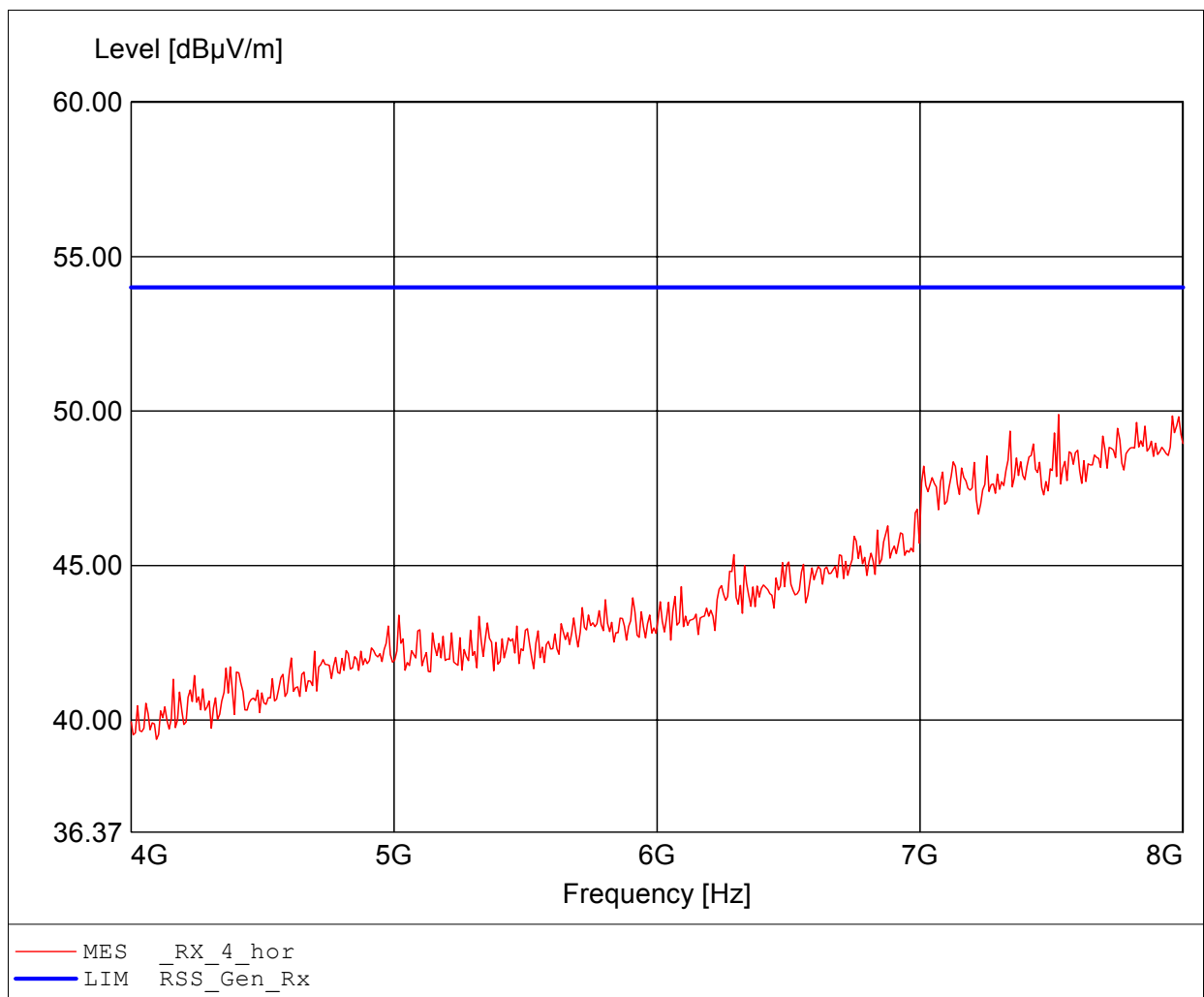
Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / Rx mode
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: Freq. / CH:
Comment 1: Dist.: 3m, Ant.: HL025, ampl.
Comment 2: Freq:3.910GHz Emax:43.41dBµV/m RBW: 1 MHz



Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / Rx mode
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: Freq. / CH:
Comment 1: Dist.: 3m, Ant.: HL025, ampl.
Comment 2: Freq:7.527GHz Emax:49.89dBµV/m RBW: 1 MHz



Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

Approval Holder: BLUM Novotest GmbH / Ord.: G0M21007-3433
EUT: Measuring Probe
Model: P03.6600 RC66 / CSS / Rx mode
Test Site / Operator: Eurofins Product Service GmbH / Mr. Treffke
Test Condition: Tnom: 24°C / Unom.: 24.0V DC
Test Specification: Freq. / CH:
Comment 1: Dist.: 3m, Ant.: HL025, ampl.
Comment 2: Freq:7.984GHz Emax:49.49dBµV/m RBW: 1 MHz

