Senton GmbH
Aeussere Fruehlingstrasse 45
D-94315 Straubing

Straubing, September 4, 2008

T E S T - R E P O R T

No. 52305-080803 (Edition 2)

for

Wheelchair Wheel M15

Remote Controlled Wheelchair Wheel

Applicant:	Ulrich Alber GmbH
Test Specifications:	FCC Code of Federal Regulations, CFR 47, Part 15, Sections 15.107, 15.109, 15.205, 15.207, 15.215 and 15.249 Industry Canada Radio Standards Specifications RSS-Gen Issue 2, Sections 7.2.2, 7.2.3 and RSS-210 Issue 7, Sections 2.2, A2.9 (Category I Equipment)

Table of Contents

1 Description of the Equipment Under Test (EUT)

General data of EUT	
Type designation[1]:	Wheelchair Wheel M15
Parts[2]:	
Serial number(s):	EMV 1
Manufacturer:	Ulrich Alber GmbH
Type of equipment:	Remote Controlled Wheelchair Wheel
Version:	As received
FCC ID:	
Additional parts/accessories:	

Technical data of EUT		
Application frequency range:	2400.0 - 2483.5 MHz	
Frequency range:	2405 - 2465 MHz	
Operating frequency:	2405 MHz, 2425 MHz, 2445 MHz, 2465 MHz	
Type of modulation:	FSK	
Pulse train:	100 ms	
Pulse width:	23.5 ms	
Number of RF-channels:	4	
Channel spacing:	20 MHz	
Designation of emissions[3]:	880kF1D	
Type of antenna:	Integrated	
Size/length of antenna:		
Connection of antenna:	☐ detachable	☒ not detachable
Type of power supply:	Battery supply	
Specifications for power supply:	nominal voltage:	25.2 V

[1] Type designation of the system if EUT consists of more than one part.
[2] Type designations of the parts of the system, if applicable.
[3] Also known as "Class of Emission".

2 Administrative Data

Application details	
Applicant (full address):	Ulrich Alber GmbH Vor dem Weißen Stein 21 D-72461 Albstadt-Tailfingen
Contact person:	Mr. Jürgen Schneider
Contract identification:	Order 2808395-1
Receipt of EUT:	July 2, 2008
Date(s) of test:	July 2008 / September 2008
Note(s):	

Report details	
Report number:	52305-080803
Edition:	2
Issue date:	September 4, 2008

3 Identification of the Test Laboratory

Details of the Test Laboratory	
Company name:	Senton GmbH EMI/EMC Test Center
Address:	Aeussere Fruehlingstrasse 45 D-94315 Straubing Germany
Laboratory accreditation:	DAR-Registration No. DAT-P-171/94-02
FCC test site registration number	90926
Industry Canada test site registration:	3050A-1
Contact person:	Mr. Johann Roidt Phone: (+49) (0)9421 5522-0 Fax: (+49) (0)9421 5522-99

4 Summary

Summary of test results
The tested sample complies with the requirements set forth in the **Code of Federal Regulations CFR 47, Part 15, Sections 15.109, 15.205, 15.207, 15.215 and 15.249** of the Federal Communication Commission (FCC) and the **Radio Standards Specifications** **RSS-Gen Issue 2, Section 7.2.2, 7.2.3 and** **RSS-210 Issue 7, Sections 2.2, 2.6, A2.9 (Category I Equipment)** of Industry Canada (IC).

Personnel involved in this report	
Laboratory Manager:	Mr. Johann Roidt
Responsible for testing:	Mr. Martin Steindl
Responsible for test report:	Mr. Martin Steindl

5 Operation Mode and Configuration of EUT

Operation Mode
The EUT was configured with a test software to transmit continuously on the lowest (2405 MHz), a middle (2445 MHz) and the highest (2465 MHz) channel and to work in receiving / standby mode.

Configuration of EUT
The EUT was configured as wheel of a wheelchair. The second wheel was deactivated during testings.

List of ports and cables

Port	*Description*	*Classification*[4]	*Cable type*	*Cable length*

List of devices connected to EUT

Item	*Description*	*Type Designation*	*Serial no. or ID*	*Manufacturer*

List of support devices

Item	*Description*	*Type Designation*	*Serial no. or ID*	*Manufacturer*
1	Remote Control	M15 Remote Control		Ulrich Alber GmbH

[4] Ports shall be classified as ac power, dc power or signal/control port

6 Measurement Procedures

6.1 Bandwidth Measurements

Measurement Procedure:	
Rules and specifications:	CFR 47 Part 2, section 2.202(a) CFR 47 Part 15, section 15.215(c) IC RSS-Gen Issue 2, sections 4.6.1 and 4.6.2 IC RSS-210 Issue 7, section A1.1.3 ANSI C63.4, annex H.6
Guide:	ANSI C63.4 / IC RSS-Gen Issue 2, sections 4.6.1 and 4.6.2
Measurement setup:	☐ Conducted: See below ☒ Radiated: Radiated Emission in Fully or Semi Anechoic Room (6.5)
If antenna is detachable bandwidth measurements shall be performed at the antenna connector (conducted measurement) when the transmitter is adjusted in accordance with the tune-up procedure, if applicable. The RF output terminals are connected to a spectrum analyzer. If required, a resistive matching network equal to the impedance specified or employed for the antenna is used as well as dc block and appropriate attenuators (50 Ohms). The electrical characteristics of the radio frequency load attached to the output terminals shall be stated, if applicable. If radiated measurements are performed the same test setups and instruments are used as with radiated emission measurements for the appropriate frequency range. The analyzer settings are specified by the test description of the appropriate test record(s).	

6.2 Pulse Train Measurement

Measurement Procedure:	
Rules and specifications:	CFR 47 Part 15, section 15.35(c) IC RSS-Gen Issue 2, section 4.5
Guide:	ANSI C63.4
Measurement setup:	☐ Conducted: See below (direct connection or via test fixture) ☒ Radiated: Radiated Emission in Fully or Semi Anechoic Room (6.5)

If antenna is detachable pulse train measurements shall be performed at the antenna connector (conducted measurement). The RF output terminals are connected to a spectrum analyzer or to a diode detector in combination with an oscilloscope. If required, a resistive matching network equal to the impedance specified or employed for the antenna is used as well as dc block and appropriate attenuators (50 Ohms). The electrical characteristics of the radio frequency load attached to the output terminals shall be stated, if applicable.

If antenna is not detachable a test fixture may be used instead of direct connection to RF output terminals.

If radiated measurements are performed similar test setups and instruments are used as with radiated emission measurements for the appropriate frequency range. However, the spectrum analyzer may be replaced by a diode detector connected to an oscilloscope.

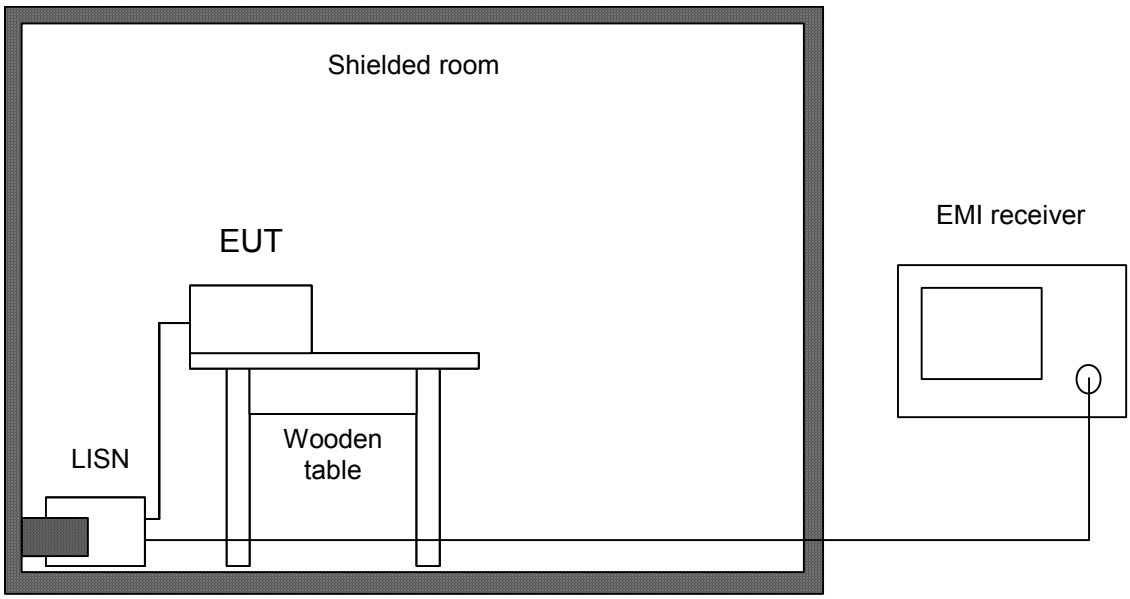
6.3 Conducted AC Powerline Emission

Measurement Procedure:	
Rules and specifications:	CFR 47 Part 15, sections 15.107 and 15.207 IC RSS-Gen Issue 2, section 7.2.2
Guide:	ANSI C63.4 (CISPR 22)

Conducted emission tests in the frequency range 150 kHz to 30 MHz are performed using Line Impedance Stabilization Networks (LISNs). To simplify testing with quasi-peak and average detector the following procedure is used:

First the whole spectrum of emission caused by the equipment under test (EUT) is recorded with detector set to peak using CISPR bandwidth of 10 kHz. After that all emission levels having less margin than 10 dB to or exceeding the average limit are retested with detector set to quasi-peak.
If average limit is kept with quasi-peak levels no additional scan with average detector is necessary. In cases of emission levels between quasi-peak and average limit an additional scan with detector set to average is performed.

According to ANSI C63.4, section 13.1.3.1, testing of intentional radiators with detachable antenna shall be performed using a suitable dummy load connected to the antenna output terminals. Otherwise, the tests shall be made with the antenna connected and, if adjustable, fully extended.
Testing with dummy load may be necessary to distinguish (unintentional) conducted emissions on the supply lines from (intentional) emissions radiated by the antenna and coupling directly to supply lines and/or LISN. Usage of dummy load has to be stated in the appropriate test record(s) and notes should be added to clarify the test setup.



Used	Type	Model	Serial No. or ID	Manufacturer
☒	EMI receiver	ESHS 10	860043/016	Rohde & Schwarz
☒	LISN	ESH3-Z5	862770/021	Rohde & Schwarz
☐	LISN	ESH3-Z5	830952/025	Rohde & Schwarz
☐	Artificial mains network	ESH 2-Z5	842966/004	Rohde & Schwarz
☐	Shielded room	No. 1	1451	Albatross Projects
☒	Shielded room	No. 4	3FD-100 544	Euroshield

6.4 Radiated Emission Measurement 9 kHz to 30 MHz

Measurement Procedure:	
Rules and specifications:	CFR 47 Part 15, sections 15.215(b) and 15.231(b)(3) IC RSS-210 Issue 7, section A1.1.2(b)
Guide:	ANSI C63.4

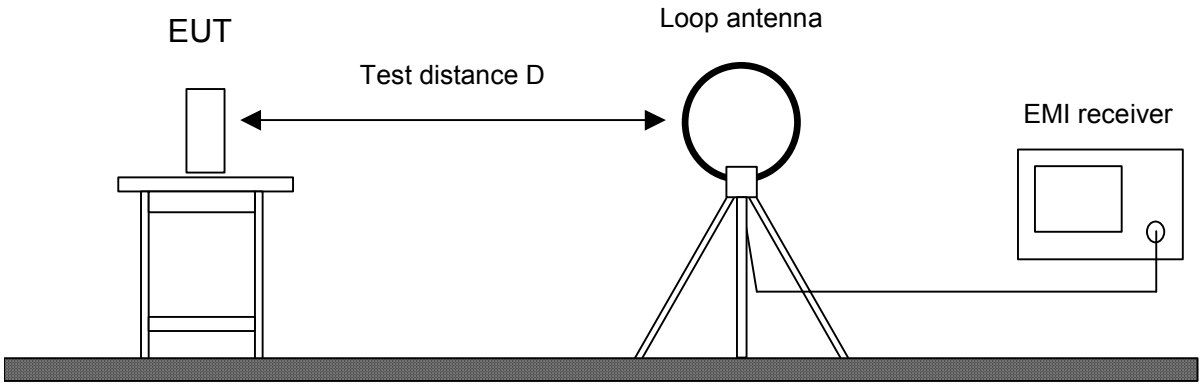
Radiated emission in the frequency range 9 kHz to 30 MHz is measured using an active loop antenna. First the whole spectrum of emission caused by the equipment is recorded at a distance of 3 meters in a fully or semi anechoic room with the detector of the spectrum analyzer or EMI receiver set to peak. This configuration is also used for recording the spectrum of intentional radiators.

Hand-held or body-worn devices are rotated through three orthogonal axes to determine which attitude and configuration produces the highest emission relative to the limit and therefore shall be used for final testing.

EUT is rotated all around to find the maximum levels of emissions. Equipment and cables are placed and moved within the range of position likely to find their maximum emissions.
If worst case emission of the EUT cannot be recorded with EUT in standard position and loop antenna in vertical polarization the EUT (or the radiating part of the EUT) is rotated by 90 degrees instead of changing the loop antenna to horizontal polarization. This procedure is selected to minimize the influence of the environment (e.g. effects caused by the floor especially with longer distances).

Final measurement is performed at a test distance D of 30 meters using an open field test site. In case the regulation requires testing at other distances, the result is extrapolated by either making measurements at an additional distance D of 10 meters to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). In cases of very low emissions measurements are performed at shorter distances and results are extrapolated to the required distance. The provisions of CFR 47 Part 15 sections 15.31(d) and (f)(2) apply. According to CFR 47 Part 15 section 15.209(d) final measurement is performed with detector function set to quasi-peak except for the frequency bands 9 to 90 kHz and 110 to 490 kHz where, for non-pulsed operation, average detector is employed.

If the radiated emission limits are expressed in terms of the average value of the emission there also is a peak limit corresponding to 20 dB above the maximum permitted average limit. Additionally, if pulsed operation is employed, the average field strength is determined by averaging over one complete pulse train, including blanking intervals, as specified in CFR 47 Part 15 section 15.35(c). If the pulse train exceeds 0.1 second that 0.1 second interval during which the value of the emission is at its maximum is selected for calculation. The pulse train correction is added to the peak value of the emission to get the average value.



Test instruments used:

Used	Type	Model	Serial No. or ID	Manufacturer
☒	Spectrum Analyzer	FSP 30	100063	Rohde & Schwarz
☒	EMI test receiver	ESMI	839379/013 839587/006	Rohde & Schwarz
☒	Test receiver	ESHS 10	860043/016	Rohde & Schwarz
☐	Preamplifier	CPA9231A	3393	Schaffner
☐	Loop antenna	HFH2-Z2	882964/1	Rohde & Schwarz
☒	Fully anechoic room	No. 2	1452	Albatross Projects
☐	Semi-anechoic room	No. 3	1453	Siemens
☒	Open field test site	EG 1	1450	Senton

6.5 Radiated Emission in Fully or Semi Anechoic Room

Measurement Procedure:	
Rules and specifications:	CFR 47 Part 15, sections 15.109, 15.215(b) and 15.249 IC RSS-Gen Issue 2, sections 6(a), 7.2.3.2 IC RSS-210 Issue 7, section A2.9
Guide:	ANSI C63.4

Radiated emission in fully or semi anechoic room is measured in the frequency range from 30 MHz to the maximum frequency as specified in CFR 47 Part 15 section 15.33.

Measurements are made in both the horizontal and vertical planes of polarization in a fully anechoic room using a spectrum analyzer with the detector function set to peak and resolution as well as video bandwidth set to 100 kHz (below 1 GHz) or 1 MHz (above 1 GHz).

Testing up to 1 GHz is performed with a linear polarized logarithmic periodic antenna combined with a 4:1 broadband dipole ("Trilog broadband antenna"). For testing above 1 GHz horn antennas are used.

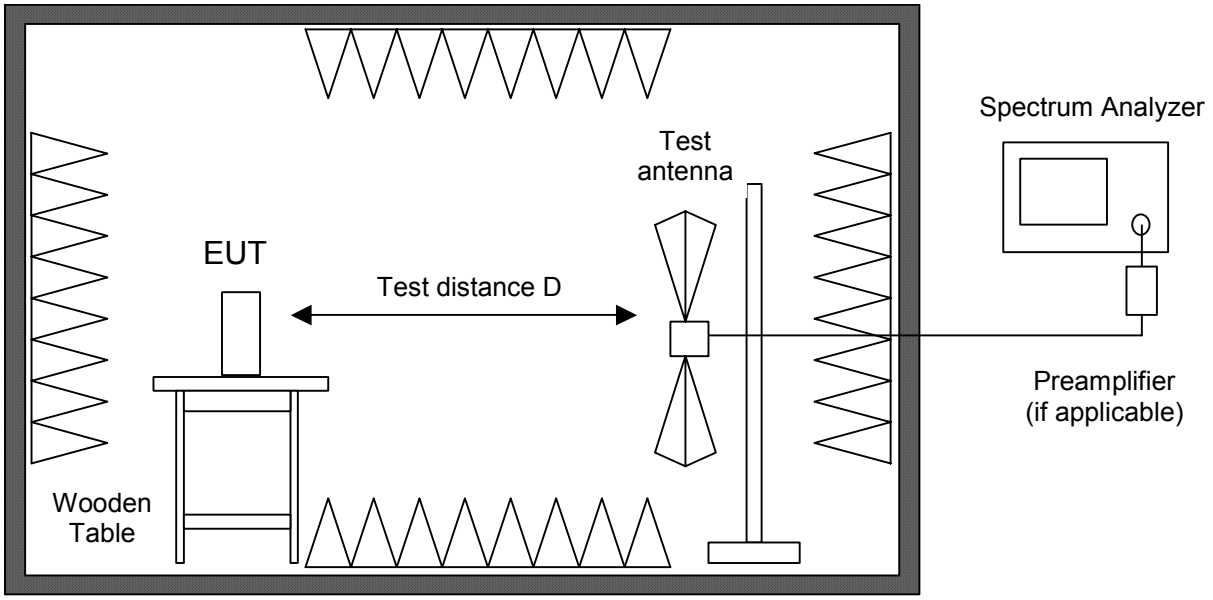
All tests below 18 GHz are performed at a test distance D of 3 meters. For higher frequencies the test distance is reduced (e.g. to 1 meter) due to the sensitivity of the measuring instrument(s) and the test results are calculated according to CFR 47 Part 15 section 15.31(f)(1) using an extrapolation factor of 20 dB/decade. If required, preamplifiers are used for the whole frequency range. Special care is taken to avoid overload, using appropriate attenuators and filters, if necessary.

If the radiated emission limits are expressed in terms of the average value of the emission there also is a peak limit corresponding to 20 dB above the maximum permitted average limit. Additionally, if pulsed operation is employed, the average field strength is determined by averaging over one complete pulse train, including blanking intervals, as specified in CFR 47 Part 15 section 15.35(c). If the pulse train exceeds 0.1 second that 0.1 second interval during which the value of the emission is at its maximum is selected for calculation. The pulse train correction is added to the peak value of the emission to get the average value.

Hand-held or body-worn devices are rotated through three orthogonal axes to determine which attitude and configuration produces the highest emission relative to the limit and therefore shall be used for final testing.

During testing the EUT is rotated all around to find the maximum levels of emissions. Equipment and cables are placed and moved within the range of position likely to find their maximum emissions.

For final testing below 1 GHz an open field test-site is used and the plots recorded in the fully or semi anechoic room are indicated as prescans.



Fully or semi anechoic room

Test instruments used:

Used	Type	Model	Serial No. or ID	Manufacturer
☒	Spectrum Analyzer	FSP 30	100063	Rohde & Schwarz
☐	EMI test receiver	ESPI7	101018	Rohde & Schwarz
☒	EMI test receiver	ESMI	839379/013 839587/006	Rohde & Schwarz
☒	Preamplifier	CPA9231A	3393	Schaffner
☐	Preamplifier	R14601		Advantest
☒	Preamplifier 1-8 GHz	AFS3-00100800-32-LN	847743	Miteq
☐	Preamplifier 0.5-8 GHz	AMF-4D-005080-25-13P	860149	Miteq
☒	Preamplifier 8-18 GHz	ACO/180-3530	32641	CTT
☐	External Mixer	WM782A	845881/005	Tektronix
☐	Harmonic Mixer Accessories	FS-Z30	843389/007	Rohde & Schwarz
☒	Trilog broadband antenna	VULB 9163	9163-188	Schwarzbeck
☒	Horn antenna	3115	9508-4553	EMCO
☐	Horn antenna	3160-03	9112-1003	EMCO
☐	Horn antenna	3160-04	9112-1001	EMCO
☒	Horn antenna	3160-05	9112-1001	EMCO
☒	Horn antenna	3160-06	9112-1001	EMCO
☒	Horn antenna	3160-07	9112-1008	EMCO
☒	Horn antenna	3160-08	9112-1002	EMCO
☒	Horn antenna	3160-09	9403-1025	EMCO
☐	Horn antenna	3160-10	399185	EMCO
☒	Fully anechoic room	No. 2	1452	Albatross Projects
☐	Semi-anechoic room	No. 3	1453	Siemens

6.6 Radiated Emission at Open Field Test Site

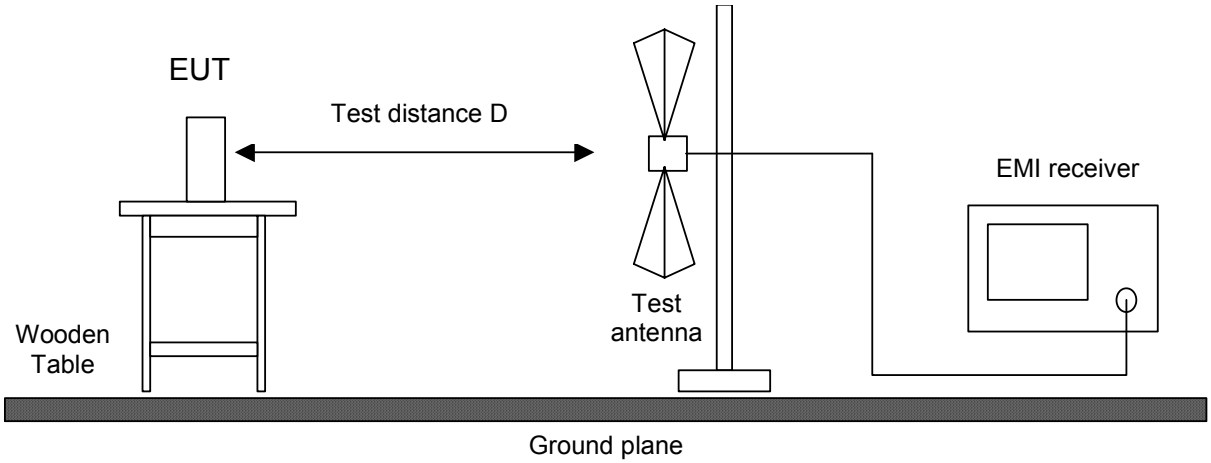
Measurement Procedure:	
Rules and specifications:	CFR 47 Part 15, sections 15.109, 15.215(b) and 15.249 IC RSS-Gen Issue 2, sections 6(a), 7.2.3.2 IC RSS-210 Issue 7, section A2.9
Guide:	ANSI C63.4

Radiated emission at open field test site is measured in the frequency range 30 MHz to 1 GHz using a biconical antenna up to 300 MHz and a logarithmic periodic antenna above. The measurement bandwidth of the test receiver is set to 120 kHz with quasi-peak detector selected.

If the radiated emission limits are expressed in terms of the average value of the emission there also is a peak limit corresponding to 20 dB above the maximum permitted average limit. Additionally, if pulsed operation is employed, the average field strength is determined by averaging over one complete pulse train, including blanking intervals, as specified in CFR 47 Part 15 section 15.35(c). If the pulse train exceeds 0.1 second that 0.1 second interval during which the value of the emission is at its maximum is selected for calculation. The pulse train correction is added to the peak value of the emission to get the average value.

Hand-held or body-worn devices are tested in the position producing the highest emission relative to the limit as verified by prescans in the fully anechoic room. EUT is rotated all around and receiving antenna is raised and lowered within 1 meter to 4 meters to find the maximum levels of emission. Equipment and cables are placed and moved within the range of position likely to find their maximum emissions.

For measuring emissions of intentional radiators and receivers a test distance D of 3 meters is selected. Testing of unintentional radiators is performed at a distance of 10 meters. If limits specified for 3 meters shall be used for measurements performed at 10 meters distance the limits are calculated according to CFR 47 Part 15 section 15.31(d) and (f)(1) using an inverse linear-distance extrapolation factor of 20 dB/decade.

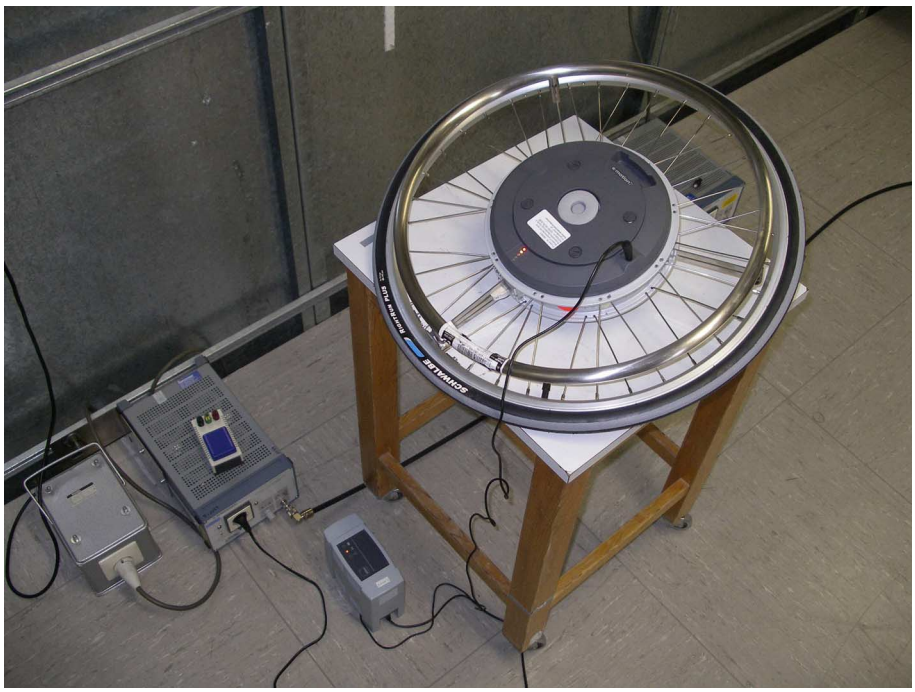


Test instruments used:

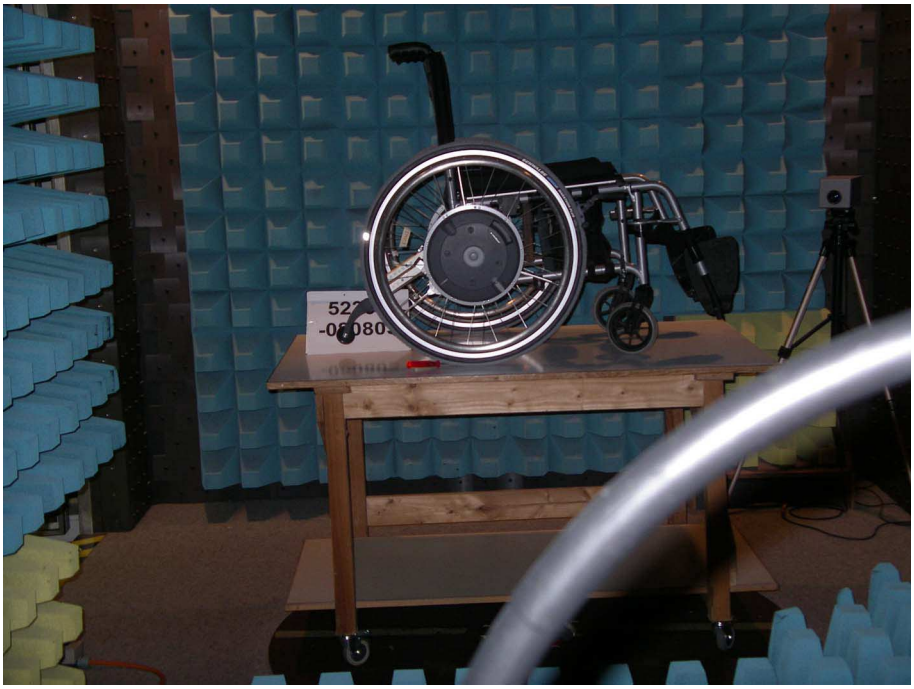
Used	Type		Model	Serial No. or ID	Manufacturer
☒	EMI receiver		ESVP	881120/024	Rohde & Schwarz
☒	Biconical antenna	EG 1	HK 116	842204/001	Rohde & Schwarz
☒	Log. per. antenna	EG 1	HL 223	841516/023	Rohde & Schwarz
☒	Open field test site		EG 1	1450	Senton

7 Photographs Taken During Testing

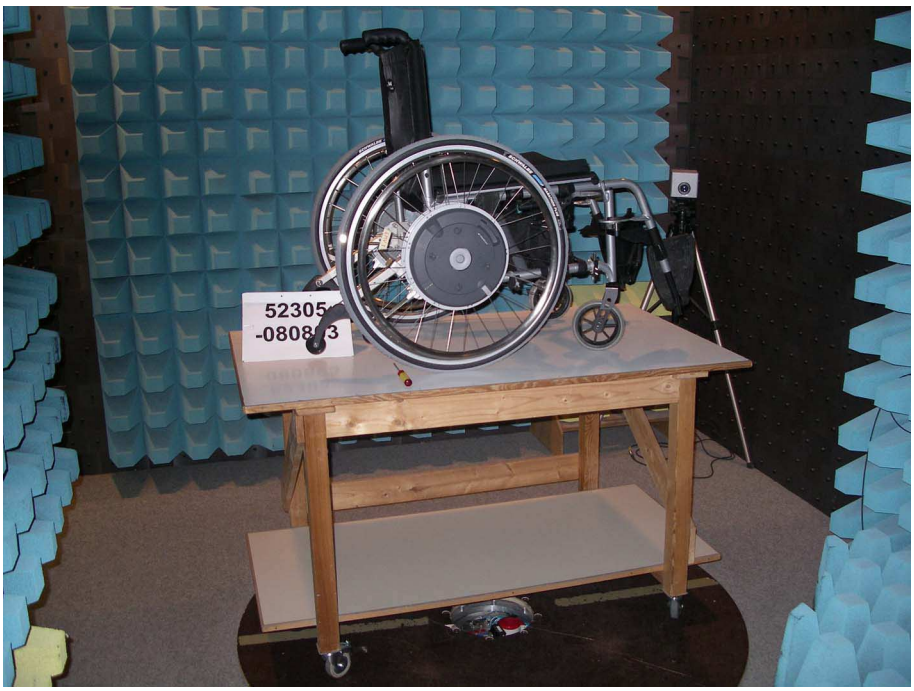
Test setup for conducted AC powerline emission measurement



Test setup for radiated emission measurement 9 kHz – 30 MHz



Test setup for radiated emission measurement (fully anechoic room)



Test setup for radiated emission measurement (open field test site)

Test setup for radiated emission measurement (open field test site) - continued -

Test setup for radiated emission measurement (open field test site) - continued -

8 Test Results for Transmitter

FCC CFR 47 Parts 2 and 15			
Section(s)	*Test*	*Page*	*Result*
2.1046(a)	Conducted output power	---	Not applicable
2.202(a)	Occupied bandwidth	26	Recorded
15.215(c)	Bandwidth of the emission	34	Test passed
2.201, 2.202	Class of emission	38	Calculated
15.35(c)	Pulse train measurement for pulsed operation	39	Recorded
15.205(a)	Restricted bands of operation	46	Test passed
15.207	Conducted AC powerline emission 150 kHz to 30 MHz	50	Test passed
15.205(b) 15.249	Radiated emission 9 kHz to 30 MHz	53	Test passed
15.205(b) 15.215(b) 15.249	Radiated emission 30 MHz to 25 GHz	54	Test passed

IC RSS-Gen Issue 2			
Section(s)	*Test*	*Page*	*Result*
4.8	Transmitter output power (conducted)	---	Not applicable
4.6.1	Occupied Bandwidth	26	Recorded
3.2(h), 8	Designation of emissions	38	Calculated
4.5	Pulsed operation	39	Recorded
7.2.2	Transmitter AC power lines conducted emissions 150 kHz to 30 MHz	50	Test passed
5.5	Exposure of Humans to RF Fields	58	Exempted from SAR and RF evaluation

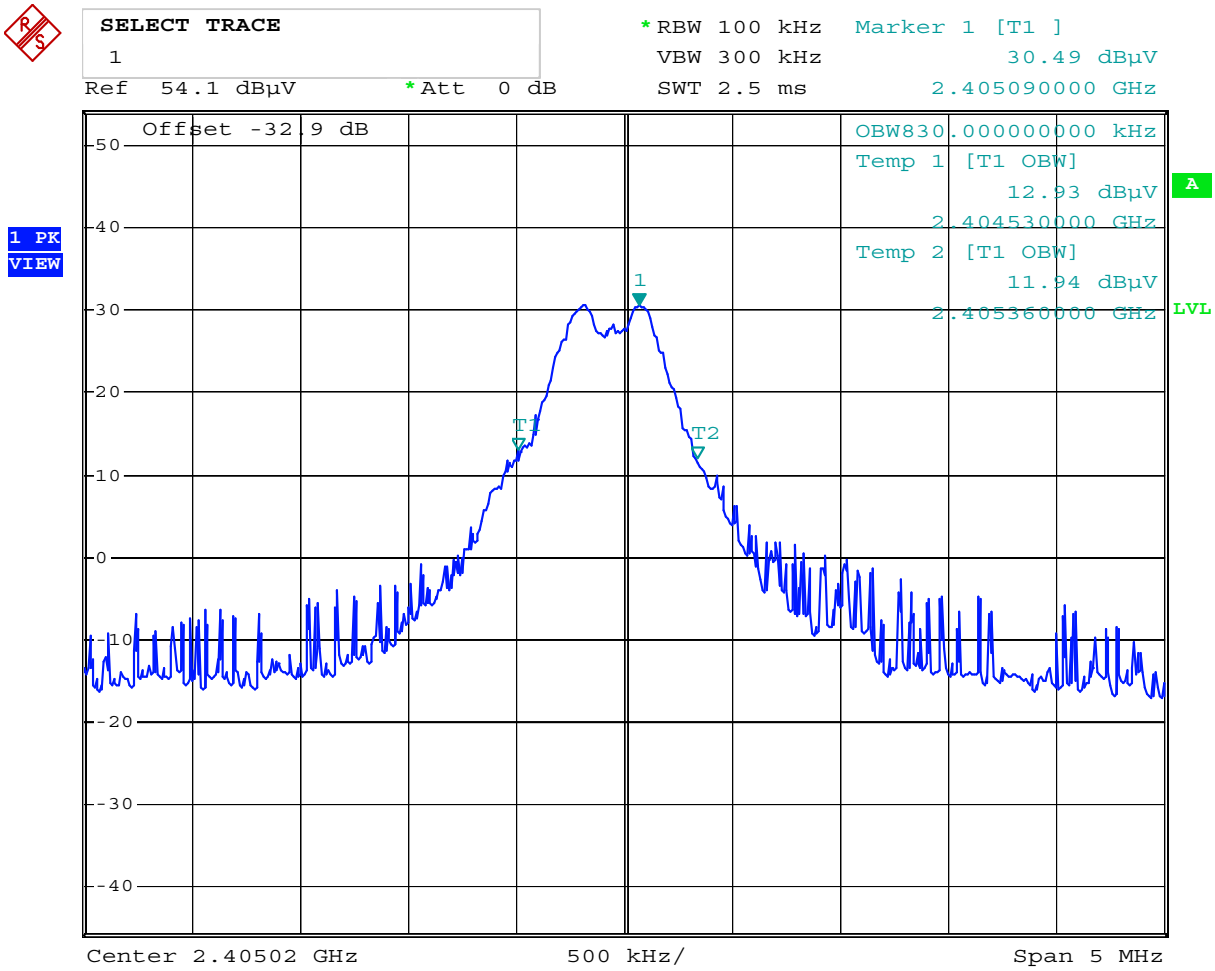
IC RSS-210 Issue 7			
Section(s)	*Test*	*Page*	*Result*
2.2(a)	Restricted bands and unwanted emission frequencies	46	Test passed
2.2(b)(c), 2.6 A2.9	Unwanted emissions 9 kHz to 30 MHz	53	Test passed
2.2(b)(c), 2.6 A2.9	Unwanted emissions 30 MHz to 25 GHz	54	Test passed

8.1 Occupied Bandwidth

Rules and specifications:	CFR 47 Part 2, section 2.202(a) ANSI C63.4, annex H.6	
Guide:	ANSI C63.4	
Description:	The occupied bandwidth according to CFR 47 Part 2, section 2.202(a), is measured as the 99% emission bandwidth, i.e. below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5% of the total mean power radiated by a given emission. The occupied bandwidth according to ANSI C63.4, annex H.6; is measured as the frequency range defined by the points that are 26 dB down relative to the maximum level of the modulated carrier. The resolution bandwidth of the spectrum analyzer shall be set to a value greater than 5.0% of the allowed bandwidth. If no bandwidth specifications are given, the following guidelines are used:	
	Fundamental frequency	Minimum resolution bandwidth
	9 kHz to 30 MHz	1 kHz
	30 MHz to 1000 MHz	10 kHz
	1000 MHz to 40 GHz	100 kHz
	The video bandwidth shall be at least three times greater than the resolution bandwidth.	
Measurement procedure:	Bandwidth Measurements (6.1)	

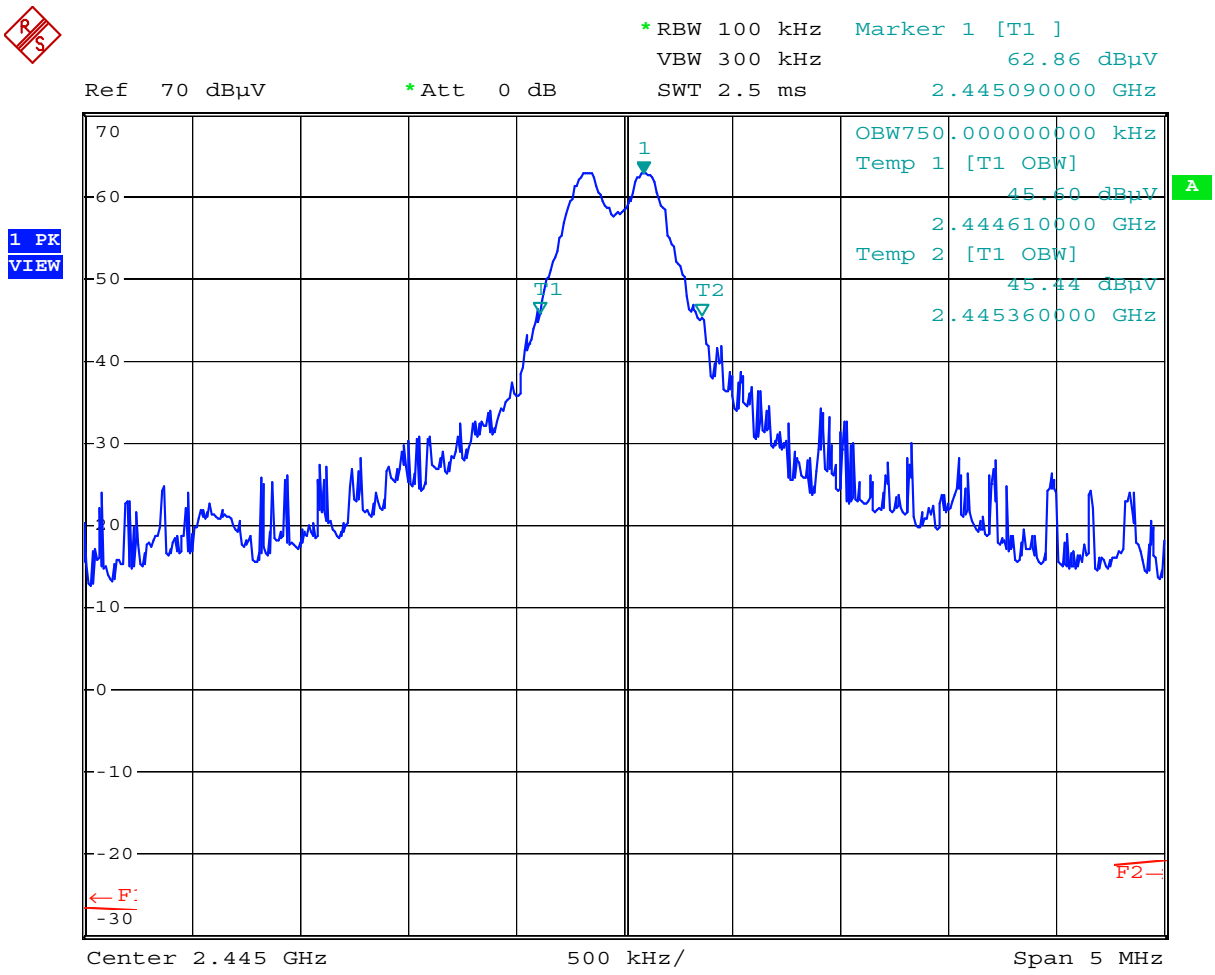
Comment:	
Date of test:	July 3, 2008
Test site:	Fully anechoic room, cabin no. 2

Occupied Bandwidth (99 %):



Occupied Bandwidth (99 %):	**830 kHz**

Occupied Bandwidth (99 %):



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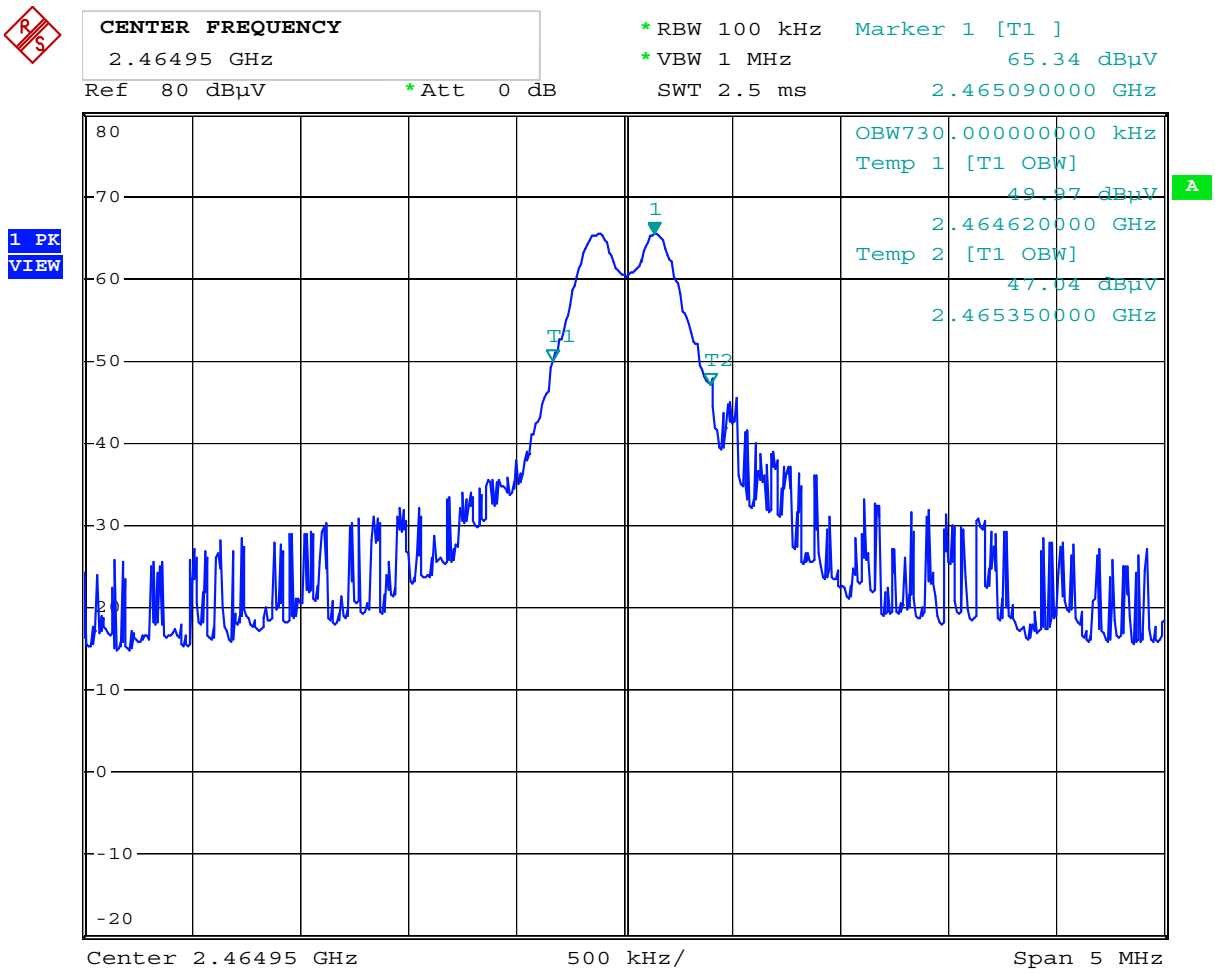
Occupied Bandwidth (99 %):	**750 kHz**

Occupied Bandwidth (99 %):



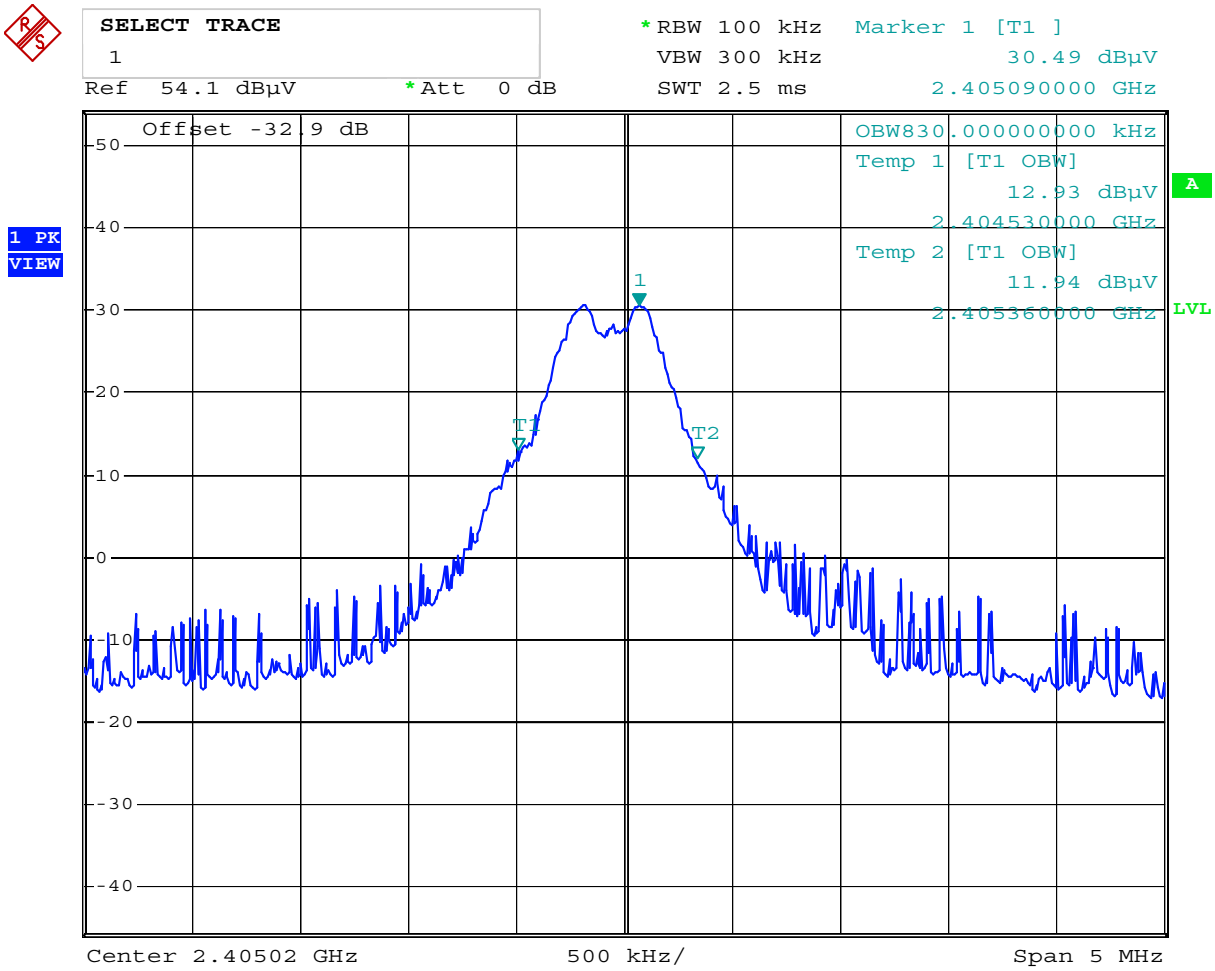
Occupied Bandwidth (99 %):	**730 kHz**

Occupied Bandwidth (continued)

Rules and specifications:	IC RSS-Gen Issue 2, section 4.6.1
Guide:	IC RSS-Gen Issue 2, section 4.6.1
Description:	If not specified in the applicable RSS the occupied bandwidth is measuredas the 99% emission bandwidth. The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts. The resolution bandwidth shall be set to as close to 1% of the selected span as is possible without being below 1%. The video bandwidth shall be set to 3 times the resolution bandwidth. The trace data points are recovered and are directly summed in linear terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached and that frequency recorded. The process is repeated for the highest frequency data points. This frequency is also recorded. The span between the two recorded frequencies is the occupied bandwidth.
Measurement procedure:	Bandwidth Measurements (6.1)

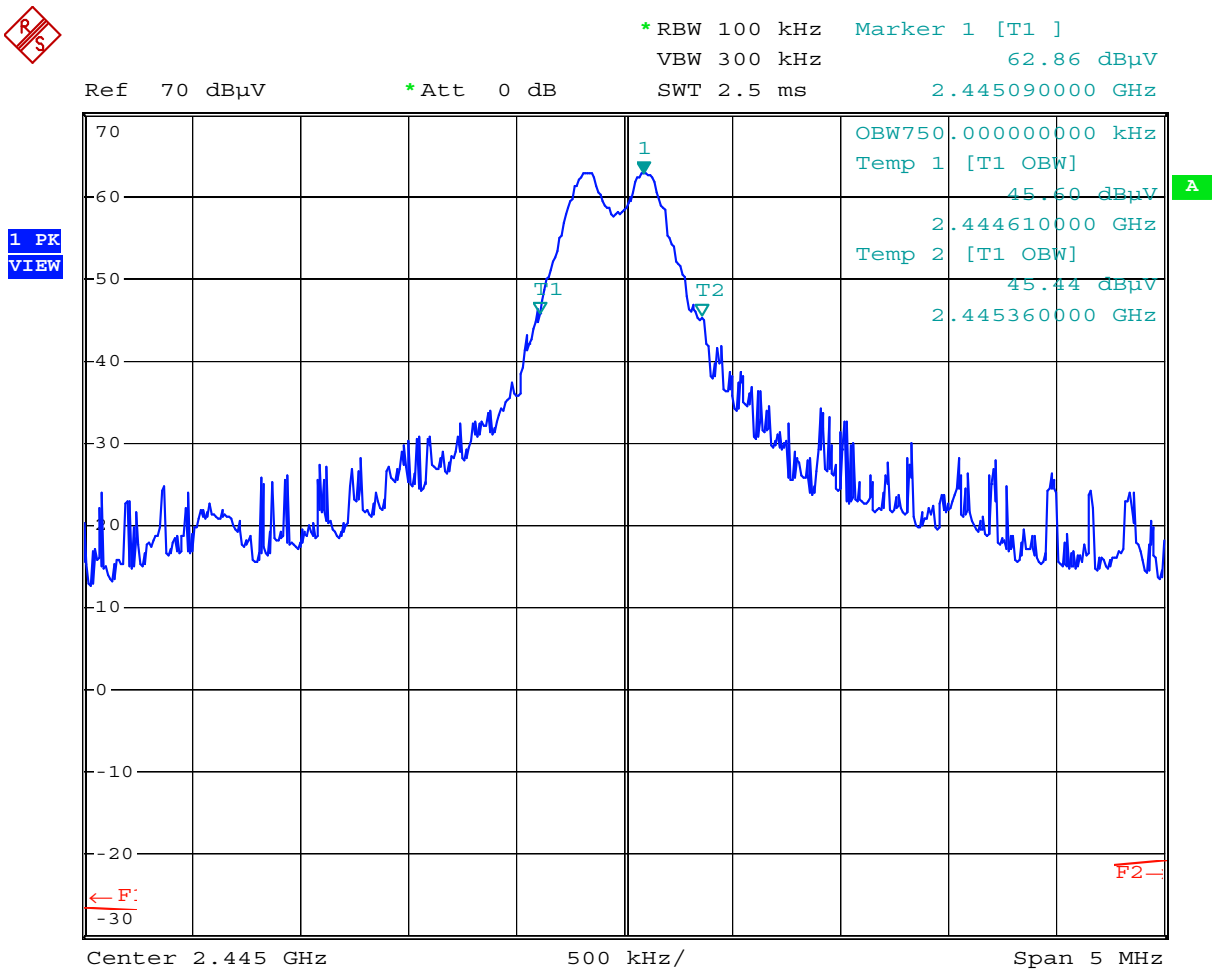
Comment:	
Date of test:	July 2, 2008
Test site:	Fully anechoic room, cabin no. 2

Occupied Bandwidth (99 %):



Occupied Bandwidth (99 %):	**830 kHz**

Occupied Bandwidth (99 %):



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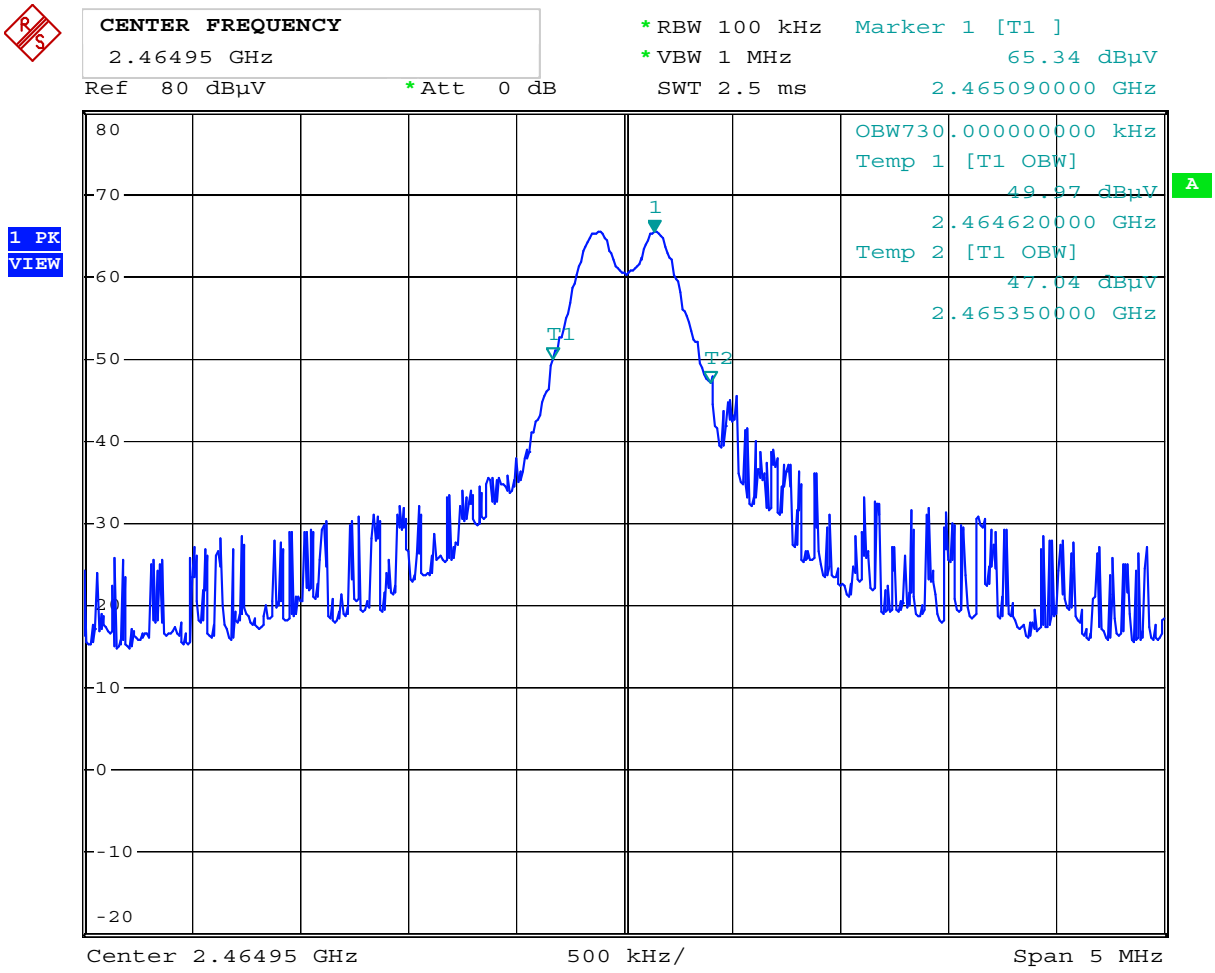
Occupied Bandwidth (99 %):	**750 kHz**

Occupied Bandwidth (99 %):



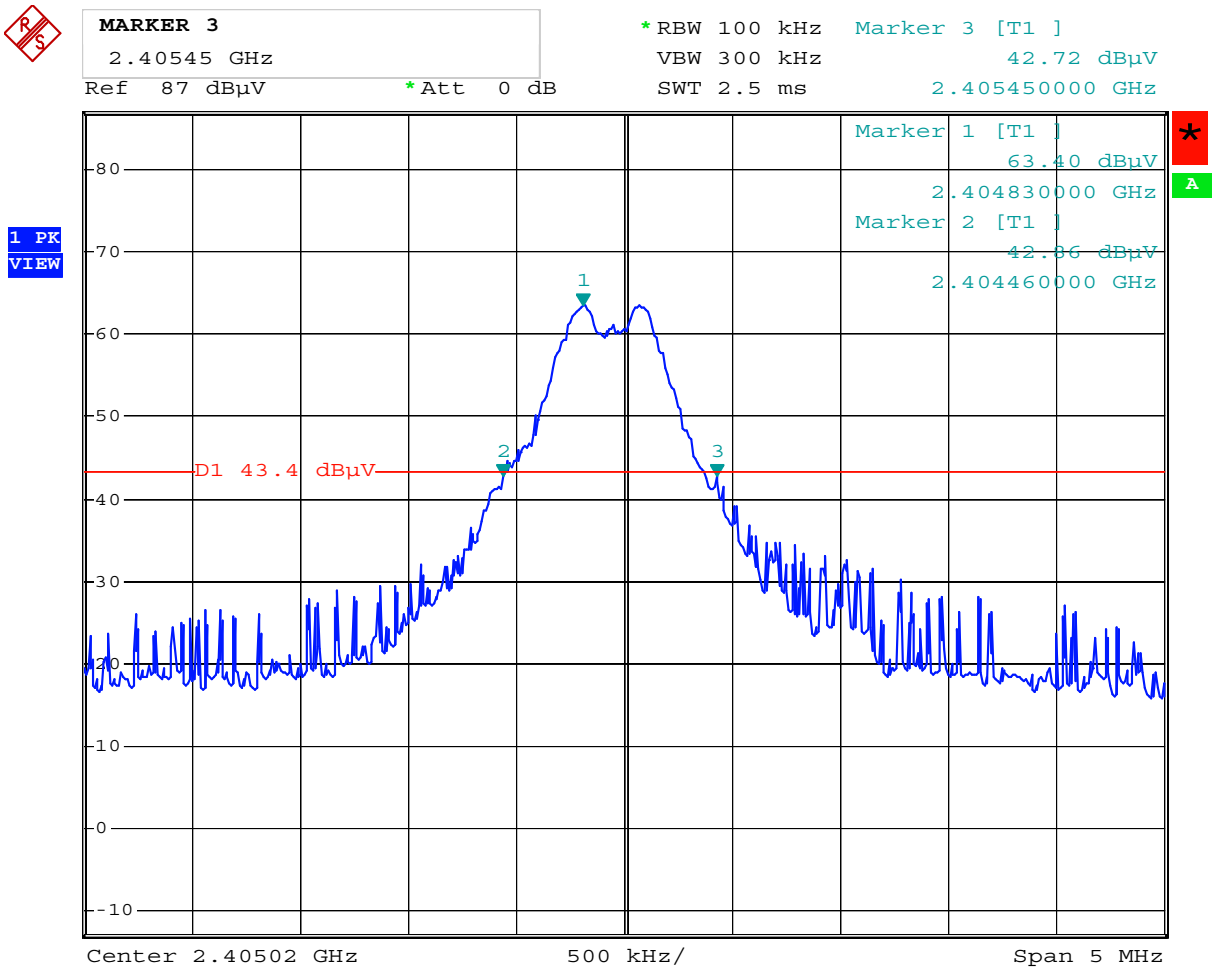
Occupied Bandwidth (99 %):	**730 kHz**

8.2 Bandwidth of the Emission

Rules and specifications:	CFR 47 Part 15, section 15.215(c)
Guide:	ANSI C63.4
Description:	The 20 dB bandwidth of the emission is measured as the frequency range defined by the points that are 20 dB down relative to the maximum level of the modulated carrier. For intentional radiators operating under the alternative provisions to the general emission limits the requirement to contain the 20 dB bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation. The resolution bandwidth of the spectrum analyzer shall be set to a value greater than 5.0% of the allowed bandwidth. If no bandwidth specifications are given, the following guidelines are used:
	Fundamental frequency: Minimum resolution bandwidth
	9 kHz to 30 MHz: 1 kHz
	30 MHz to 1000 MHz: 10 kHz
	1000 MHz to 40 GHz: 100 kHz
	The video bandwidth shall be at least three times greater than the resolution bandwidth.
Measurement procedure:	Bandwidth Measurements (6.1)

Test Result:	Test passed

Comment:	
Date of test:	July 3, 2008
Test site:	Fully anechoic room, cabin no. 2

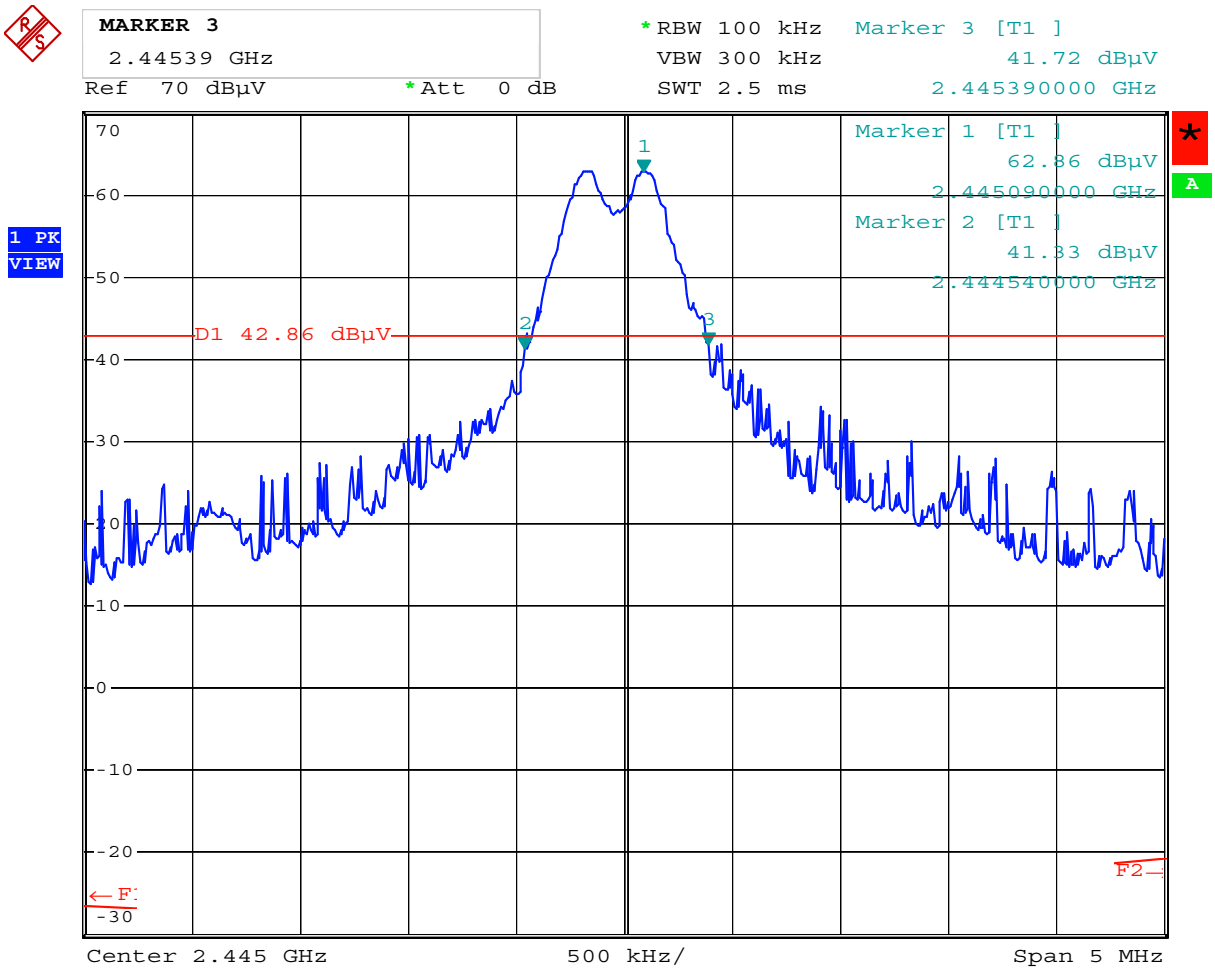


Date: 3.JUL.2008 09:49:43

Permitted frequency band:	**2400.0 - 2483.5 MHz**	
20 dB bandwidth:	**990 kHz**	
Carrier frequency stability: Maximum frequency tolerances:	☐ **specified**	☒ **not specified**
Bandwidth of the emission:	**990 kHz**	**within permitted frequency band[5]:** ☒ **yes** ☐ **no**

[5] If a frequency stability is not specified, it is recommended that the fundamental emission is kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.

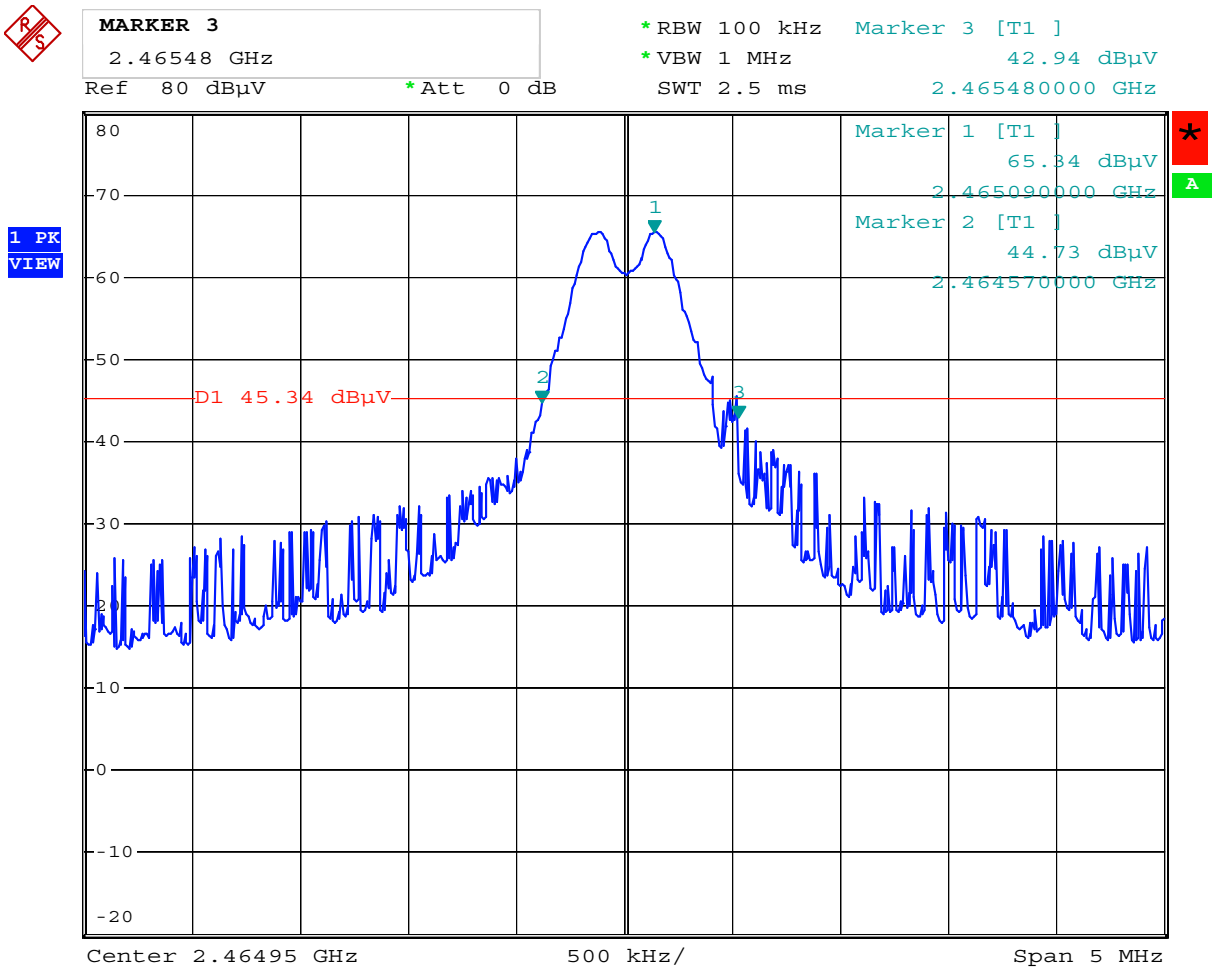
Comment:	
Date of test:	July 3, 2008
Test site:	Fully anechoic room, cabin no. 2



Permitted frequency band:	**2400.0 - 2483.5 MHz**	
20 dB bandwidth:	**850 kHz**	
Carrier frequency stability: Maximum frequency tolerances:	☐ **specified**	☒ **not specified**
Bandwidth of the emission:	**850 kHz**	**within permitted frequency band[6]:** ☒ **yes** ☐ **no**

[6] If a frequency stability is not specified, it is recommended that the fundamental emission is kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.

Comment:	
Date of test:	July 3, 2008
Test site:	Fully anechoic room, cabin no. 2



Date: 3.JUL.2008 10:22:55

Permitted frequency band:	**2400.0 - 2483.5 MHz**	
20 dB bandwidth:	**910 kHz**	
Carrier frequency stability: Maximum frequency tolerances:	☐ **specified**	☒ **not specified**
Bandwidth of the emission:	**910 kHz**	**within permitted frequency band[7]:** ☒ **yes** ☐ **no**

[7] If a frequency stability is not specified, it is recommended that the fundamental emission is kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.

8.3 Designation of Emissions

Rules and specifications:	CFR 47 Part 2, sections 2.201 and 2.202 IC RSS-Gen Issue 2, sections 3.2(h) and 8
Guide:	ANSI C63.4 / TRC-43

Type of modulation:	Frequency Shift Keying (FSK)

B_n = Necessary Bandwidth	$B_n = 2DK + B$
D = Peak deviation	D = 210 kHz
K = Overall numerical factor	K = 1
B = Modulation rate	B = 230 kHz
Calculation:	$B_n = 2 \cdot (230\ kHz) \cdot 1 + 2 \cdot (210\ kHz) = 880\ kHz$

Designation of Emissions:	**880kF1D**

8.4 Pulse Train Measurement

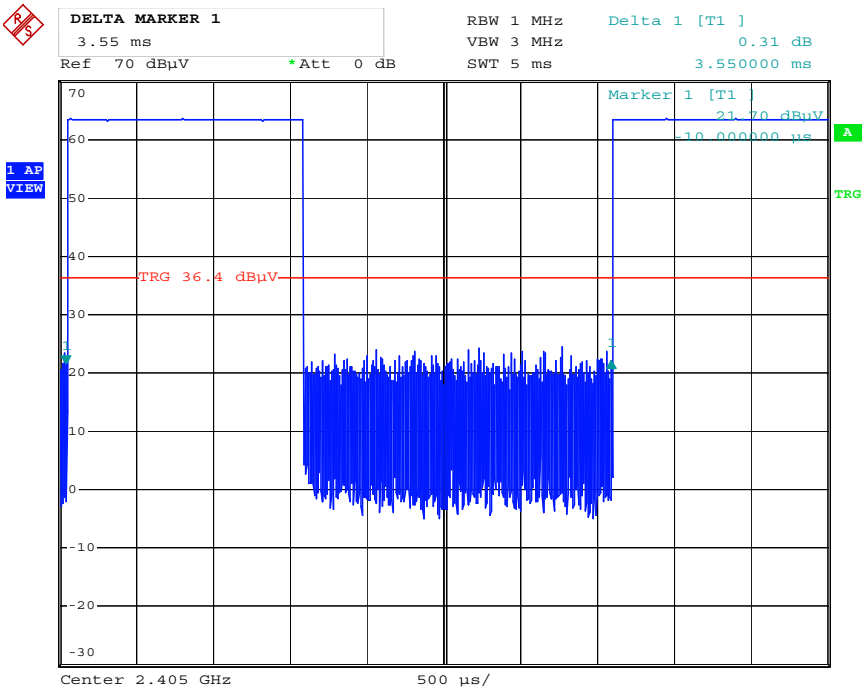
Rules and specifications:	CFR 47 Part 15, section 15.35(c) IC RSS-Gen Issue 2, section 4.5
Guide:	ANSI C63.4
Measurement procedure:	Pulse Train Measurement (6.2)

Comment:	
Date of test:	July 3, 2008
Test site:	Fully anechoic room, cabin no. 2

Calculation of pulse train correction:

TX-On-Time (worst case):	T_{on}	=	1.56 ms
Pulse Train Time:	T_{pt}	=	3.55 ms
Period Time:	T_{period}	=	3.55 ms
Pulse Train Correction:	C_{pt}	=	$20 \cdot \mathrm{Log}(T_{on} / T_{period})$ dB
		=	**-7.14 dB**

Total Pulse Train:



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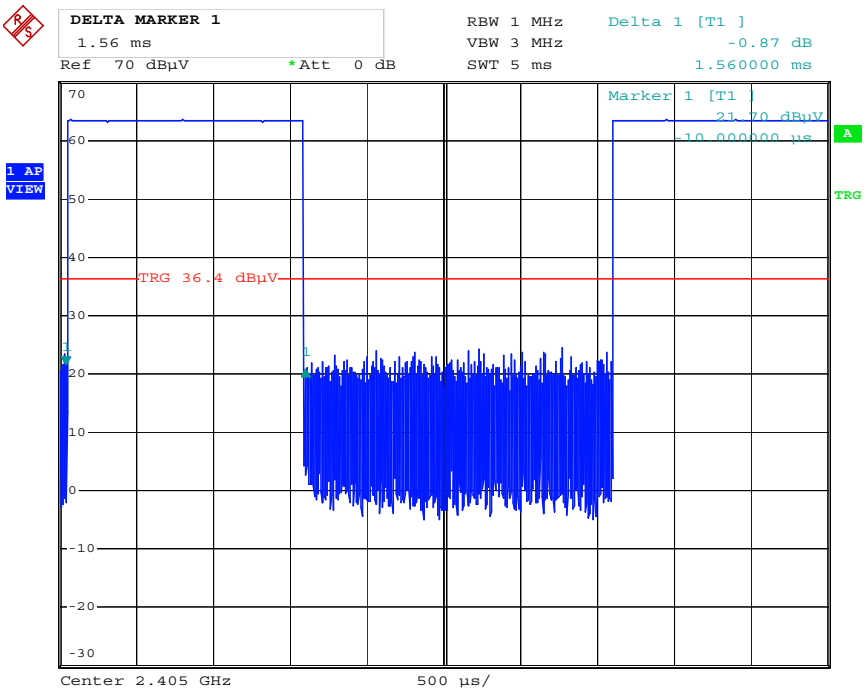


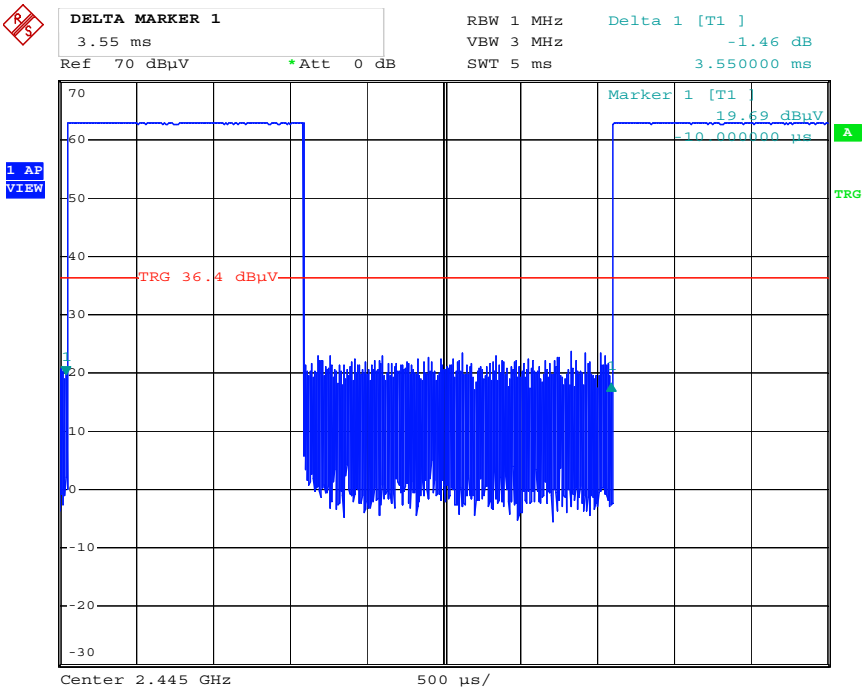
Date: 3.JUL.2008 09:54:21

Comment:	
Date of test:	July 3, 2008
Test site:	Fully anechoic room, cabin no. 2

Calculation of pulse train correction:

TX-On-Time (worst case):	T_{on}	=	1.67 ms
Pulse Train Time:	T_{pt}	=	3.55 ms
Period Time:	T_{period}	=	3.55 ms
Pulse Train Correction:	C_{pt}	=	$20 \cdot \mathrm{Log}(T_{on} / T_{period})$ dB
		=	**-6.55 dB**

Total Pulse Train:



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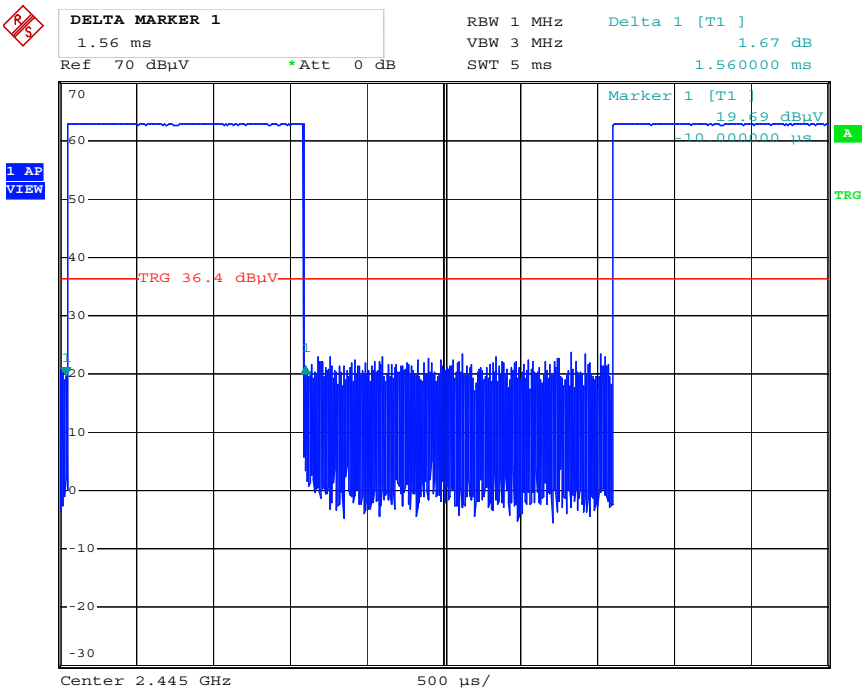


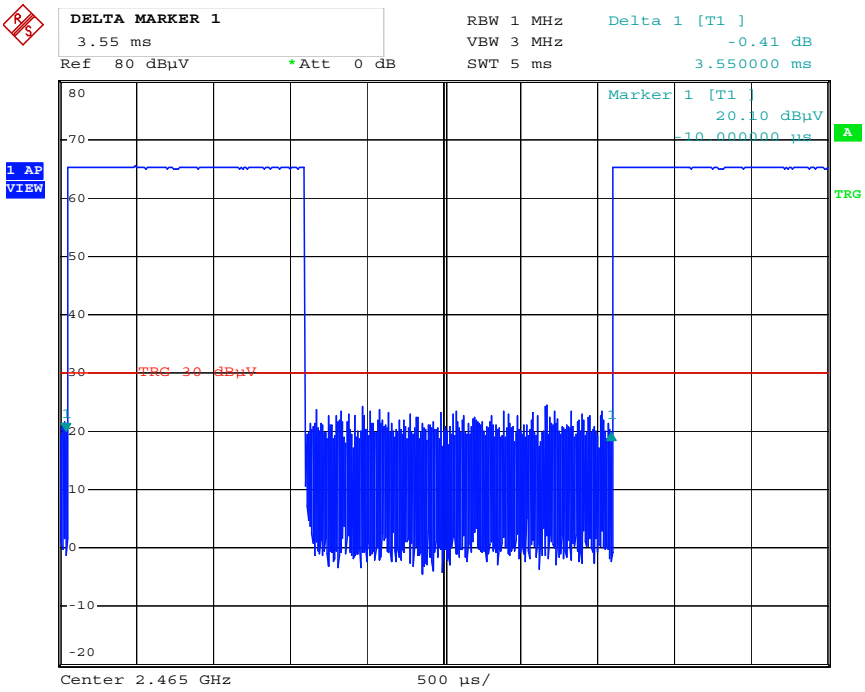
Date: 3.JUL.2008 09:56:31

Comment:	
Date of test:	July 3, 2008
Test site:	Fully anechoic room, cabin no. 2

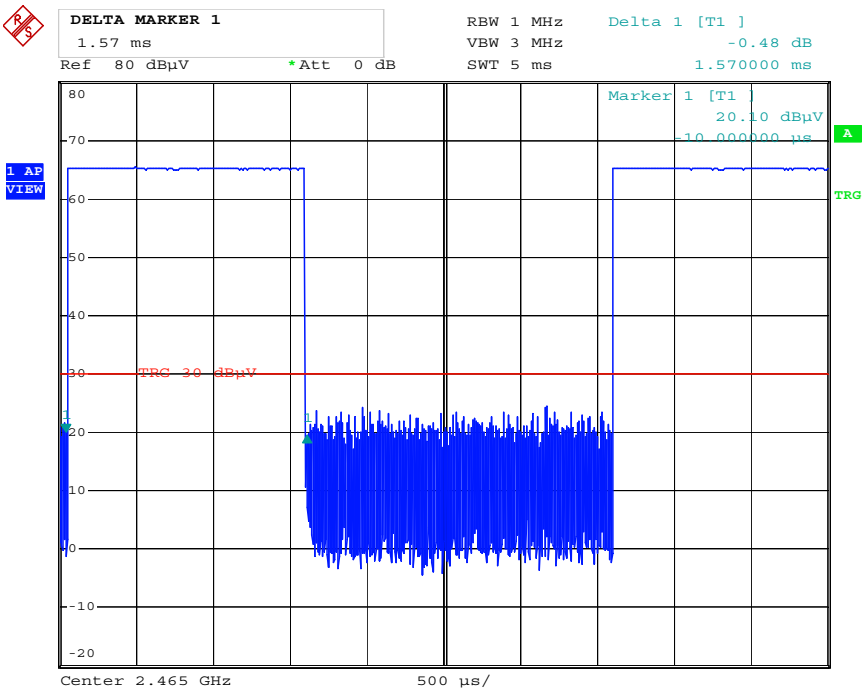
Calculation of pulse train correction:

TX-On-Time (worst case):	T_{on}	=	1.57 ms
Pulse Train Time:	T_{pt}	=	3.55 ms
Period Time:	T_{period}	=	3.55 ms
Pulse Train Correction:	C_{pt}	=	$20 \cdot \mathrm{Log}(T_{on} / T_{period})$ dB
		=	**-7.09 dB**

Total Pulse Train:



Date: 3.JUL.2008 10:27:31



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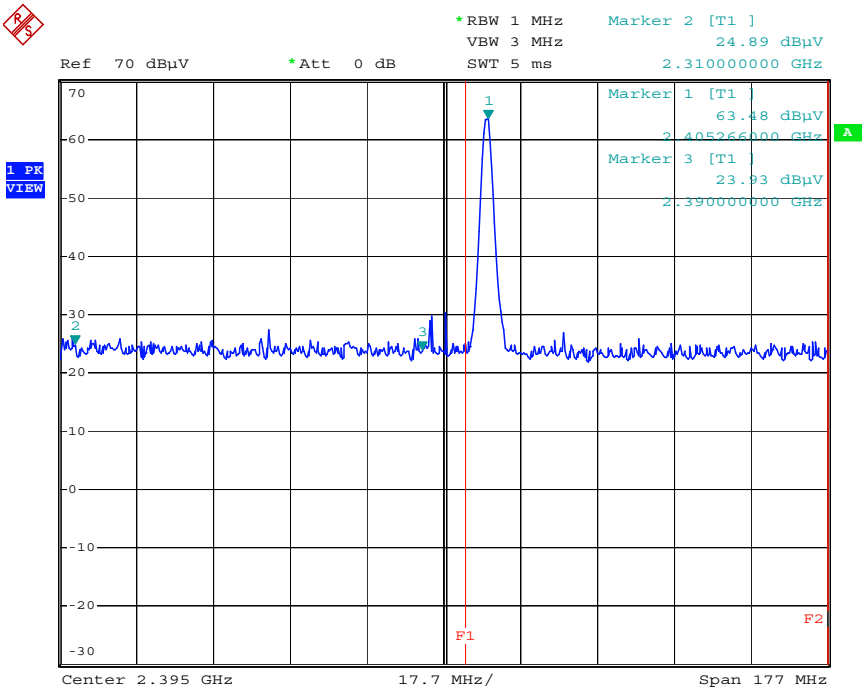
8.5 Restricted Bands of Operation

Rules and specifications:	CFR 47 Part 15, section 15.205(a) IC RSS-210 Issue 7, section 2.2(a)
Guide:	ANSI C63.4
Limit:	Only spurious emissions are permitted in any of the frequency bands listed in CFR 47 Part 15, section 15.205(a) or IC RSS-210 Issue 7, section 2.2(a).
Measurement procedure:	Radiated Emission in Fully or Semi Anechoic Room (6.5)

Comment:	
Date of test:	July 3, 2008
Test site:	Fully anechoic room, cabin no. 2
Test distance:	3 meters

Test Result:	Test passed



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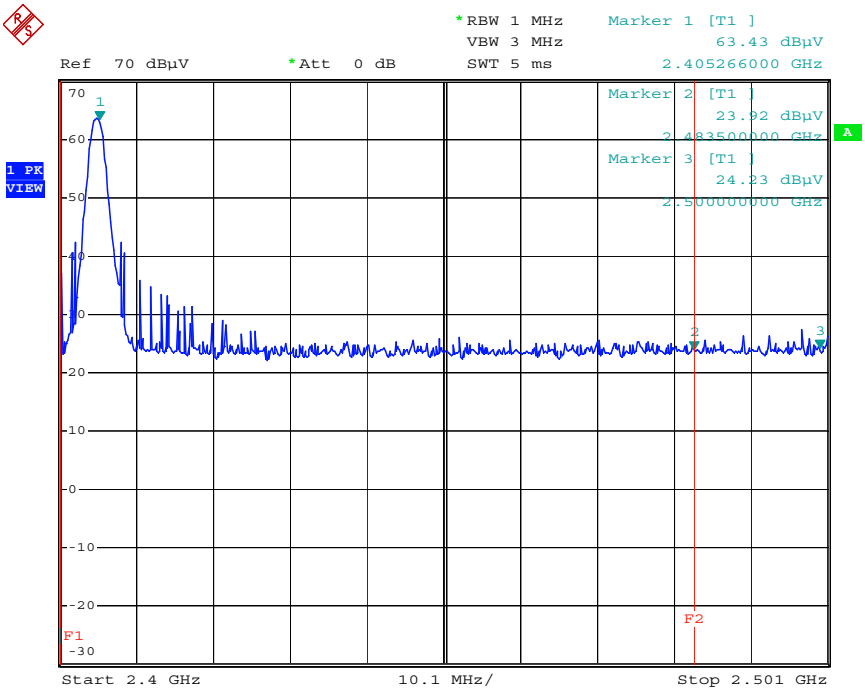

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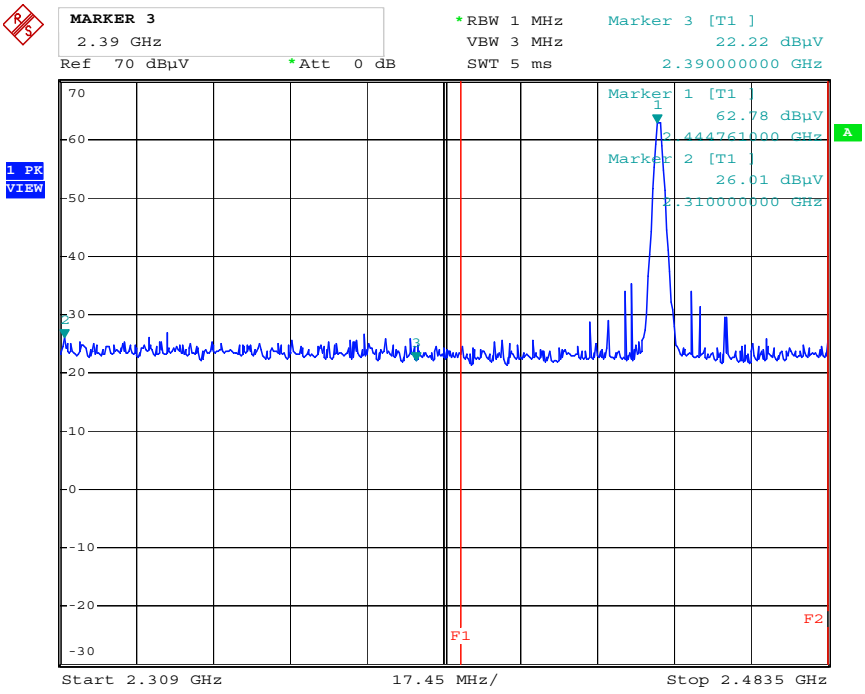
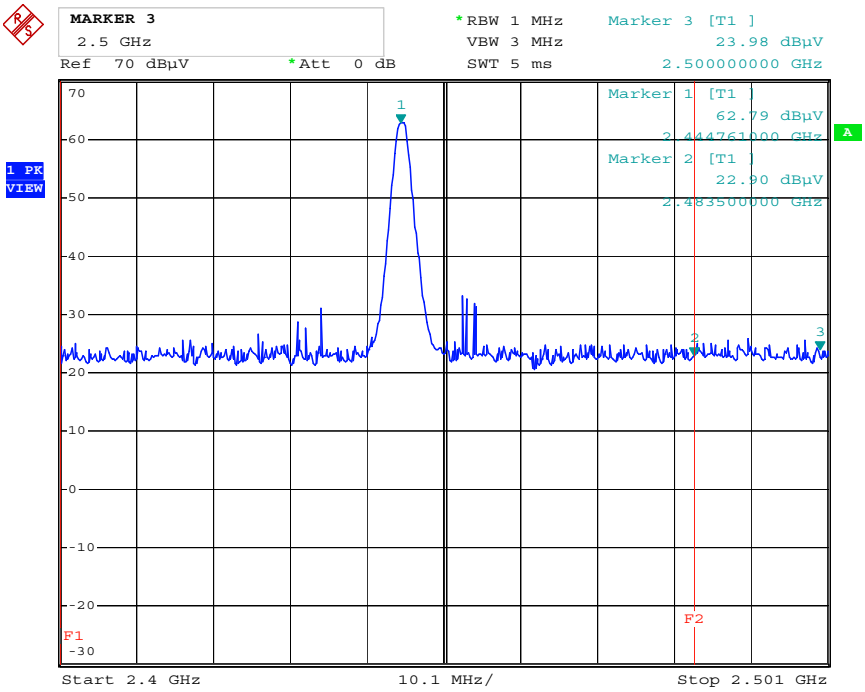


Date: 3.JUL.2008 09:57:27



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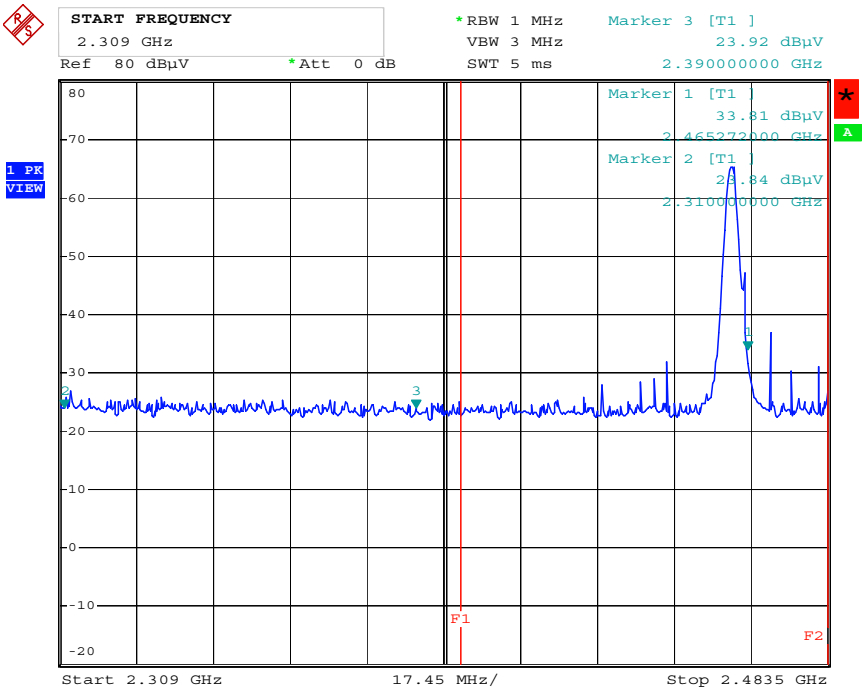
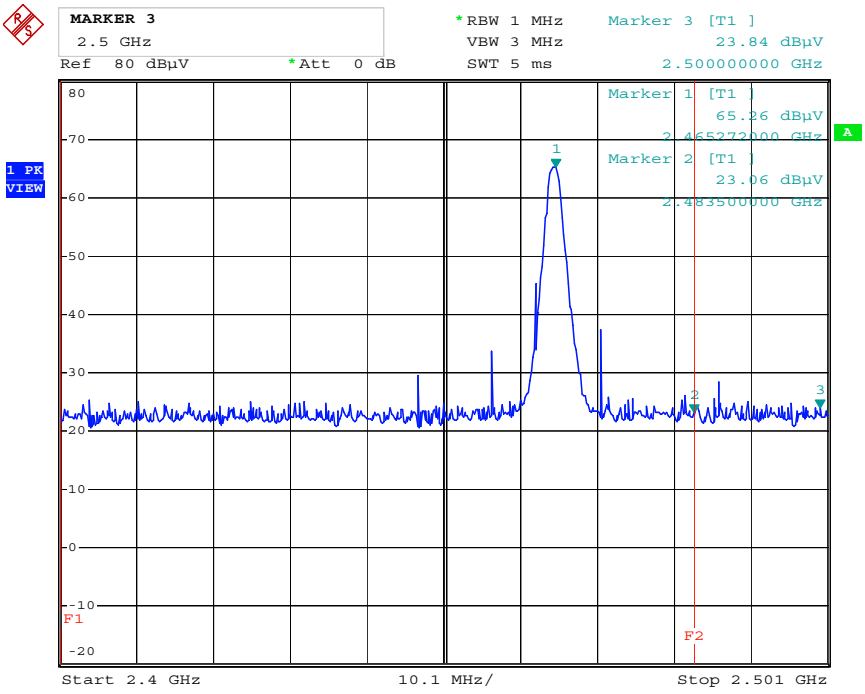


Date: 3.JUL.2008 10:25:29



Date: 3.JUL.2008 10:25:57

8.6 Conducted Powerline Emission Measurement 150 kHz to 30 MHz

Rules and specifications:	CFR 47 Part 15, section 15.207 IC RSS-Gen Issue 2, section 7.2.2		
Guide:	ANSI C63.4 / CISPR 22		
Limit:	Frequency of Emission (MHz)	Conducted Limit (dBµV)	
		Quasi-peak	Average
	0.15 - 0.5 0.5 - 5 5 - 30	66 to 56 56 60	56 to 46 46 50
Measurement procedure:	Conducted AC Powerline Emission (6.3)		

Comment:	
Date of test:	September 4, 2008
Test site:	Shielded room, cabin no. 4

Test Result:	Test passed

Tested on:	Linecord Live Wire

Frequency (MHz)	Detector	Reading Value (dBµV)	Correction Factor (dB)	Final Value (dBµV)	Limit (dBµV)	Margin (dB)
0.170	Quasi-Peak	49.5	0.0	49.5	65.0	15.5
0.225	Quasi-Peak	41.5	0.0	41.5	62.6	21.1
0.340	Quasi-Peak	42.4	0.0	42.4	59.2	16.8
0.400	Quasi-Peak	38.2	0.0	38.2	57.9	19.7
0.455	Quasi-Peak	42.9	0.0	42.9	56.8	13.9
0.570	Quasi-Peak	43.4	0.0	43.4	56.0	12.6
0.685	Quasi-Peak	41.9	0.0	41.9	56.0	14.1
0.855	Quasi-Peak	39.0	0.0	39.0	56.0	17.0
1.140	Quasi-Peak	36.2	0.0	36.2	56.0	19.8
1.370	Quasi-Peak	38.0	0.0	38.0	56.0	18.0
1.655	Quasi-Peak	36.8	0.0	36.8	56.0	19.2
2.055	Quasi-Peak	37.6	0.0	37.6	56.0	18.4
2.735	Quasi-Peak	32.3	0.0	32.3	56.0	23.7
3.420	Quasi-Peak	32.0	0.0	32.0	56.0	24.0
4.450	Quasi-Peak	37.6	0.0	37.6	56.0	18.4
5.020	Quasi-Peak	38.9	0.0	38.9	60.0	21.1
5.700	Quasi-Peak	28.8	0.0	28.8	60.0	31.2
7.985	Quasi-Peak	33.4	0.0	33.4	60.0	26.6
9.355	Quasi-Peak	33.1	0.0	33.1	60.0	26.9
12.550	Quasi-Peak	32.1	0.0	32.1	60.0	27.9
15.860	Quasi-Peak	32.2	0.0	32.2	60.0	27.8
16.660	Quasi-Peak	35.6	0.0	35.6	60.0	24.4
24.025	Quasi-Peak	37.0	0.0	37.0	60.0	23.0
25.625	Quasi-Peak	48.8	0.0	48.8	60.0	**11.2**

Tested on:	Linecord Neutral Wire

Frequency (MHz)	Detector	Reading Value (dBµV)	Correction Factor (dB)	Final Value (dBµV)	Limit (dBµV)	Margin (dB)
0.170	Quasi-Peak	46.9	0.0	46.9	65.0	18.1
0.345	Quasi-Peak	42.4	0.0	42.4	59.1	16.7
0.455	Quasi-Peak	42.3	0.0	42.3	56.8	14.5
0.570	Quasi-Peak	41.3	0.0	41.3	56.0	14.7
0.685	Quasi-Peak	38.7	0.0	38.7	56.0	17.3
0.855	Quasi-Peak	36.9	0.0	36.9	56.0	19.1
1.485	Quasi-Peak	37.5	0.0	37.5	56.0	18.5
1.600	Quasi-Peak	36.3	0.0	36.3	56.0	19.7
2.285	Quasi-Peak	38.7	0.0	38.7	56.0	17.3
2.400	Quasi-Peak	38.5	0.0	38.5	56.0	17.5
2.970	Quasi-Peak	37.0	0.0	37.0	56.0	19.0
4.000	Quasi-Peak	40.3	0.0	40.3	56.0	15.7
5.485	Quasi-Peak	41.2	0.0	41.2	60.0	18.8
5.715	Quasi-Peak	43.4	0.0	43.4	60.0	16.6
8.400	Quasi-Peak	44.8	0.0	44.8	60.0	15.2
8.800	Quasi-Peak	45.1	0.0	45.1	60.0	14.9
12.285	Quasi-Peak	41.0	0.0	41.0	60.0	19.0
13.085	Quasi-Peak	40.2	0.0	40.2	60.0	19.8
17.830	Quasi-Peak	43.1	0.0	43.1	60.0	16.9
24.120	Quasi-Peak	47.3	0.0	47.3	60.0	**12.7**
26.405	Quasi-Peak	47.1	0.0	47.1	60.0	12.9

Sample calculation of final values:

Final Value (dBµV) = Reading Value (dBµV) + Correction Factor (dB)

8.7 Radiated Emission Measurement 9 kHz to 30 MHz

Rules and specifications:	CFR 47 Part 15, sections 15.215(b) and 15.231(b)(3) IC RSS-210 Issue 7, section A1.1.2(b)			
Guide:	ANSI C63.4			
Limit:	Frequency of Emission (MHz)	Field Strength (µV/m)	Field Strength (dBµV/m)	Measurement Distance d (meters)
	0.009 - 0.490	2400/F(kHz)	67.6 - 20 · log(F(kHz))	300
	0.490 - 1.705	24000/F(kHz)	87.6 - 20 · log(F(kHz))	30
	1.705 - 30.000	30	29.5	30
	Additionally, the level of any unwanted emissions shall not exceed the level of the fundamental emission.			
Measurement procedure:	Radiated Emission Measurement 9 kHz to 30 MHz (6.4)			

Comment:	
Date of test:	July 3, 2008
Test site:	Open field test site

Test Result:	Test passed

No emissions above noise level detected

8.8 Radiated Emission Measurement 30 MHz to 25 GHz

Rules and specifications:	CFR 47 Part 15, sections 15.215(b) and 15.249 IC RSS-210 Issue 7, section A2.9		
Guide:	ANSI C63.4		
Limit:	Frequency of Emission (MHz)	Field Strength (µV/m)	Field Strength (dBµV/m)
	30 - 88	100	40.0
	88 - 216	150	43.5
	216 - 960	200	46.0
	Above 960	500	54.0
	Additionally, the level of any unwanted emissions shall not exceed the level of the fundamental emission.		
Measurement procedures:	Radiated Emission in Fully or Semi Anechoic Room (6.5) Radiated Emission at Open Field Test Site (6.6)		

Test Result:	Test passed

Comment:	Transmitting on lowest channel
Date of test:	July 2, 2008, July 3, 2008 July 4, 2008
Test site:	Frequencies ≤ 1 GHz: Open field test site Frequencies > 1 GHz: Fully anechoic room, cabin no. 2
Test distance:	Frequencies ≤ 1 GHz: 3 meters Frequencies > 1 GHz and ≤ 18 GHz: 1 meters [8] Frequencies > 18 GHz: 0.5 meters [8]

Test Result:	Test passed

Frequency (MHz)	Antenna Polarization	Detector	Receiver Reading (dBµV)	Correction Factor (dB/m)	Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2405.000	horizontal	Peak	64.4	33.4	-7.1	90.6	94.0	3.4
4808.800	horizontal	Peak	23.8	34.3	-7.1	50.9	54.0	**3.1**
7213.000	horizontal	Peak	10.2	39.0	-7.1	42.0	54.0	12.0
9619.600	vertical	Peak	13.6	44.1	-7.1	50.6	63.5	12.9

Sample calculation of final values:

Final Value (dBµV/m) = Reading Value (dBµV) + Correction Factor (dB/m) + Pulse Train Correction (dB)

[8] Limit corrected with 20 dB/decade.

Comment:	Transmitting on middle channel
Date of test:	July 2, 2008, July 3, 2008 July 4, 2008
Test site:	Frequencies ≤ 1 GHz: Open field test site Frequencies > 1 GHz: Fully anechoic room, cabin no. 2
Test distance:	Frequencies ≤ 1 GHz: 3 meters Frequencies > 1 GHz and ≤ 18 GHz: 1 meters [9] Frequencies > 18 GHz: 0.5 meters [9]

Test Result:	Test passed

Frequency (MHz)	Antenna Polarization	Detector	Receiver Reading (dBµV)	Correction Factor (dB/m)	Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2445.000	horizontal	Peak	65.4	33.5	-6.6	92.3	94.0	**1.7**
4888.600	horizontal	Peak	22.1	34.3	-6.6	49.9	54.0	4.1
7335.200	horizontal	Peak	10.5	39.1	-6.6	43.0	54.0	11.0
9779.200	horizontal	Peak	14.6	44.2	-6.6	52.3	63.5	11.2

Sample calculation of final values:

Final Value (dBµV/m) = Reading Value (dBµV) + Correction Factor (dB/m) + Pulse Train Correction (dB)

[9] Limit corrected with 20 dB/decade.

Comment:	Transmitting on highest channel
Date of test:	July 2, 2008, July 3, 2008 July 4, 2008
Test site:	Frequencies ≤ 1 GHz: Open field test site Frequencies > 1 GHz: Fully anechoic room, cabin no. 2
Test distance:	Frequencies ≤ 1 GHz: 3 meters Frequencies > 1 GHz and ≤ 18 GHz: 1 meters [10] Frequencies > 18 GHz: 0.5 meters [10]

Test Result:	Test passed

Frequency (MHz)	Antenna Polarization	Detector	Receiver Reading (dBµV)	Correction Factor (dB/m)	Pulse Train Correction (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2465.000	horizontal	Peak	66.0	33.5	-7.1	92.4	94.0	**1.6**
4930.400	horizontal	Peak	21.5	34.4	-7.1	48.8	54.0	5.2
7396.300	vertical	Peak	11.0	39.2	-7.1	43.0	54.0	11.0
9859.000	horizontal	Peak	14.5	44.3	-7.1	51.7	63.5	11.8

Sample calculation of final values:

Final Value (dBµV/m) = Reading Value (dBµV) + Correction Factor (dB/m) + Pulse Train Correction (dB)

[10] Limit corrected with 20 dB/decade.

8.9 Exposure of Humans to RF Fields

Rules and specifications:	IC RSS-Gen Issue 2, section 5.5
Guide:	IC RSS-102 Issue 2, section 2.5

Exposure of Humans to RF Fields	Applicable	Declared by applicant	Measured	Exemption
The antenna is				
☐ detachable				
The conducted output power (CP in watts) is measured at the antenna connector: $CP =$			☐	
The effective isotropic radiated power (EIRP in watts) is calculated using				
☐ the numerical antenna gain: G $EIRP = G \cdot CP \Rightarrow EIRP$		☐		
☐ the field strength[11] in V/m: FS $EIRP = \frac{(FS \cdot D)^2}{30} \Rightarrow EIRP$			☐	
with: Distance between the antennas in m: D			☐	
☒ not detachable				
A field strength measurement is used to determine the effective isotropic radiated power (EIRP in watts) given by[11]: $EIRP = \frac{(FS \cdot D)^2}{30} \Rightarrow EIRP$ = **521 · 10^{-6} W**				
with: Field strength in V/m: FS = **92.4 dBµV/m** = **41.7 · 10^{-3} V/m**			☒	
Distance between the two antennas in m: D = **3 m**			☒	
Selection of output power				
The output power TP is the higher of the conducted or effective isotropic radiated power (e.i.r.p.): TP = **521 · 10^{-6} W**				

[11] The conversion formula is valid only for properly matched antennas. In other cases the transmitter output power may have to be measured by a terminated measurement when applying the exemption clauses.
If an open area test site is used for field strength measurement, the effect due to the metal ground reflecting plane should be subtracted from the maximum field strength value in order to reference it to free space, before calculating TP.

Exposure of Humans to RF Fields (continued)	Applicable	Declared by applicant	Measured	Exemption
Separation distance between the user and the transmitting device is				
☒ less than or equal to 20 cm ☐ greater than 20 cm		☒		
Transmitting device is				
☐ in the vicinity of the human head ☐ body-worn		☒		
SAR evaluation				
SAR evaluation is required if the separation distance between the user and the device is less than or equal to 20 cm.				
☐ The device operates from 3 kHz up to 1 GHz inclusively and its source-based time-averaged output power is less than, or equal to 200 mW for General Public Use and 1000 mW for Controlled Use.				☐
☐ The device operates above 1 GHz up to 2.2 GHz inclusively and its source-based time-averaged output power is less than, or equal to 100 mW for General Public Use and 500 mW for Controlled Use.				☐
☒ The device operates above 2.2 GHz up to 3 GHz inclusively and its source-based time-averaged output power is less than, or equal to 20 mW for General Public Use and 100 mW for Controlled Use.				☒
☐ The device operates above 3 GHz up to 6 GHz inclusively and its source-based time-averaged output power) is less than, or equal to 10 mW for General Public Use and 50 mW for Controlled Use.				☐
☐ SAR evaluation is documented in test report no.				
RF exposure evaluation				
RF exposure evaluation is required if the separation distance between the user and the device is greater than 20 cm.				
☐ The device operates below 1.5 GHz and its e.i.r.p. is equal to or less than 2.5 W.				☐
☐ The device operates at or above 1.5 GHz and the e.i.r.p. of the device is equal to or less than 5 W.				☐
☐ RF exposure evaluation is documented in test report no.				

9 Test Results for Receiver

FCC CFR 47 Part 15			
Section(s)	*Test*	*Page*	*Result*
15.107	Conducted AC powerline emission 150 kHz to 30 MHz	---	Not applicable
15.109	Radiated emission 30 MHz to 12.5 GHz	61	Test passed
15.111(a)	Antenna power conduction emission of receivers 9 kHz to 12.5 GHz	---	Not applicable

IC RSS-Gen Issue 2			
Section(s)	*Test*	*Page*	*Result*
7.2.2	Transmitter AC power lines conducted emissions 150 kHz to 30 MHz	---	Not applicable
6(a), 7.2.3.2	Receiver spurious emissions (radiated) 30 MHz to 12.5 GHz	61	Test passed
6(b), 7.2.3.1	Receiver spurious emissions (antenna conducted) 9 kHz to 12.5 GHz	---	Not applicable

9.1 Radiated Emission Measurement 30 MHz to 12.5 GHz

Rules and specifications:	CFR 47 Part 15, section 15.109 (Class B) IC RSS-Gen Issue 2, sections 6(a) and 7.2.3.2		
Guide:	ANSI C63.4		
Limit:	Frequency of Emission (MHz)	Field Strength (µV/m)	Field Strength (dBµV/m)
	30 - 88	100	40.0
	88 - 216	150	43.5
	216 - 960	200	46.0
	Above 960	500	54.0
Measurement procedures:	Radiated Emission in Fully or Semi Anechoic Room (6.5) Radiated Emission at Open Field Test Site (6.6)		

Comment:	
Date of test:	July 2, 2007, July 3, 2007,
Test site:	Frequencies ≤ 1 GHz: Open field test site Frequencies > 1 GHz: Fully anechoic room, cabin no. 2
Test distance:	Frequencies ≤ 8.2 GHz: 3 meters Frequencies > 1 GHz: 1 meters [12]

Test Result:	Test passed

No emissions above noise level detected

[12] Limit corrected with 20 dB/decade.

10 Referenced Regulations

All tests were performed with reference to the following regulations and standards:

☒	CFR 47 Part 2	Code of Federal Regulations Part 2 (Frequency allocation and radio treaty matters; General rules and regulations) of the Federal Communication Commission (FCC)	October 1, 2007
☒	CFR 47 Part 15	Code of Federal Regulations Part 15 (Radio Frequency Devices) of the Federal Communication Commission (FCC)	September 20, 2007
☒	ANSI C63.4	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	December 11, 2003 (published on January 30, 2004)
☒	RSS-Gen	Radio Standards Specification RSS-Gen Issue 2 containing General Requirements and Information for the Certification of Radiocommunication Equimpment, published by Industry Canada	June 2007
☒	RSS-210	Radio Standards Specification RSS-210 Issue 7 for Low Power Licence-Exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment, published by Industry Canada	June 2007
☐	RSS-310	Radio Standards Specification RSS-310 Issue 1 for Low Power Licence-Ecempt Radiocommunicaton Devices (All Frequency Bands): Category II Equipment, published by Industry Canada	September 2005
☒	RSS-102	Radio Standards Specification RSS-102 Issue 2: Radio Frequency Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)	November 2005
☐	ICES-003	Interference-Causing Equipment Standard ICES-003 Issue 4 for Digital Apparatus, published by Industry Canada	February 7, 2004
☒	CISPR 22	Third Edition of the International Special Committee on Radio Interference (CISPR), Pub. 22, “Information Technology Equipment – Radio Disturbance Characteristics – Limits and Methods of Measurement”	1997
☐	CAN/CSA-CEI/IEC CISPR 22	Limits and Methods of Measurement of Radio Disturbance Characteristics of Information Technology Equipment	2002
☒	TRC-43	Notes Regarding Designation of Emission (Including Necessary Bandwidth and Classification), Class of Station and Nature of Service, published by Industry Canada	October 9, 1982

11 Revision History

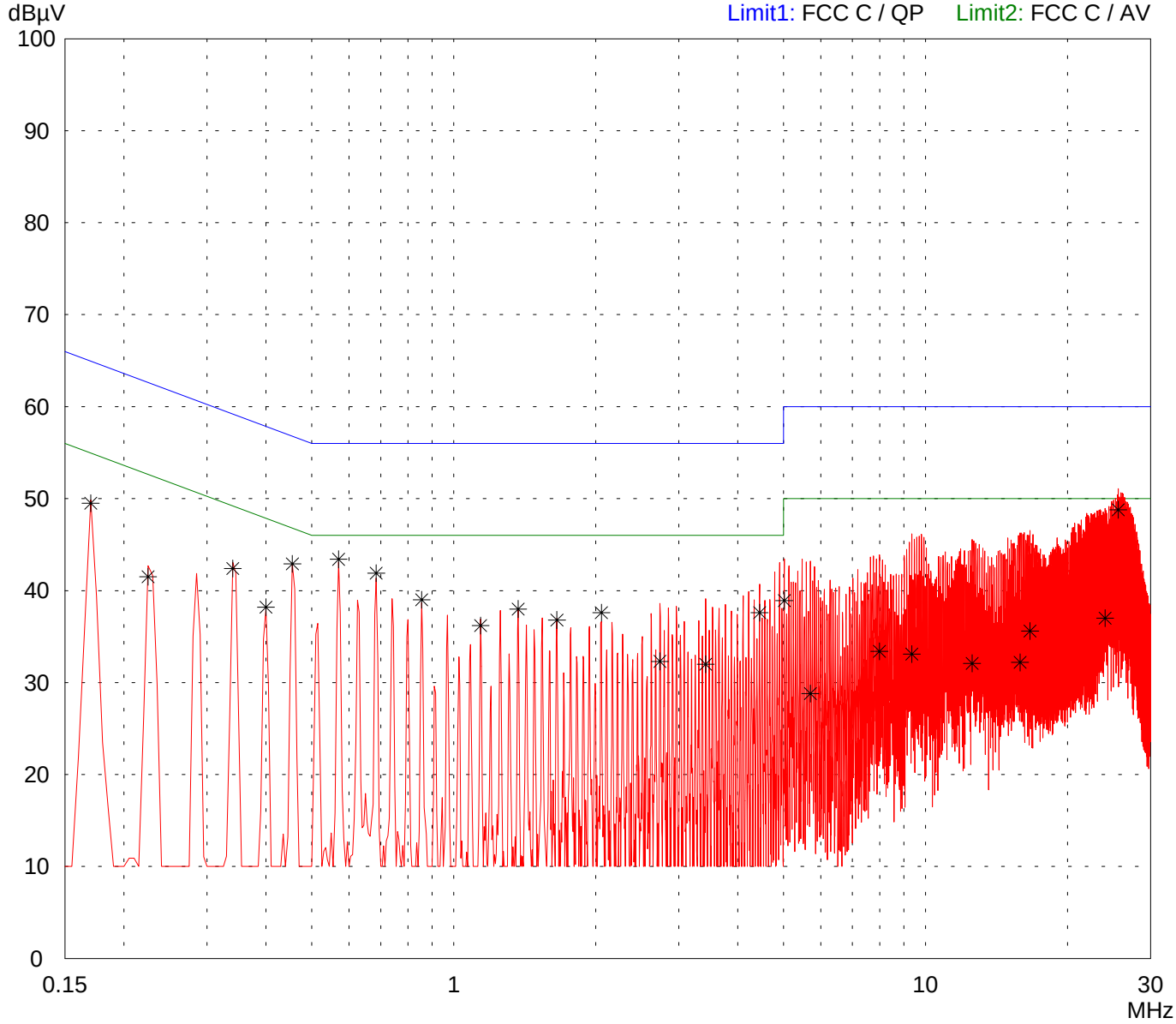
Revision History			
Edition	*Date*	*Issued by*	*Modifications*
1	July 7, 2008	Martin Steindl (cj)	First Edition
2	September 4, 2008	Johann Roidt (cj)	Edition 2 Required for FCC Certification: Conducted Emission Test attached

12 Charts taken during testing

Conducted Emission Test 150 kHz - 30 MHz
according to FCC Part 15 Subpart C

Model: M15 Remote Control for Wheel Chairs	Mode: Charging Mode 115 V AC
Serial no.: ---	
Applicant: Ulrich Alber GmbH	
Test site: Shielded room, cabin no. 4	
Tested on: Linecord Live Wire	
Date of test: 09/04/2008 — Operator: J. Roidt	
Test performed: automatically — File name:	

Detector: Peak / Final Results: QP	Final results: 20 dB Margin — 25 Subranges

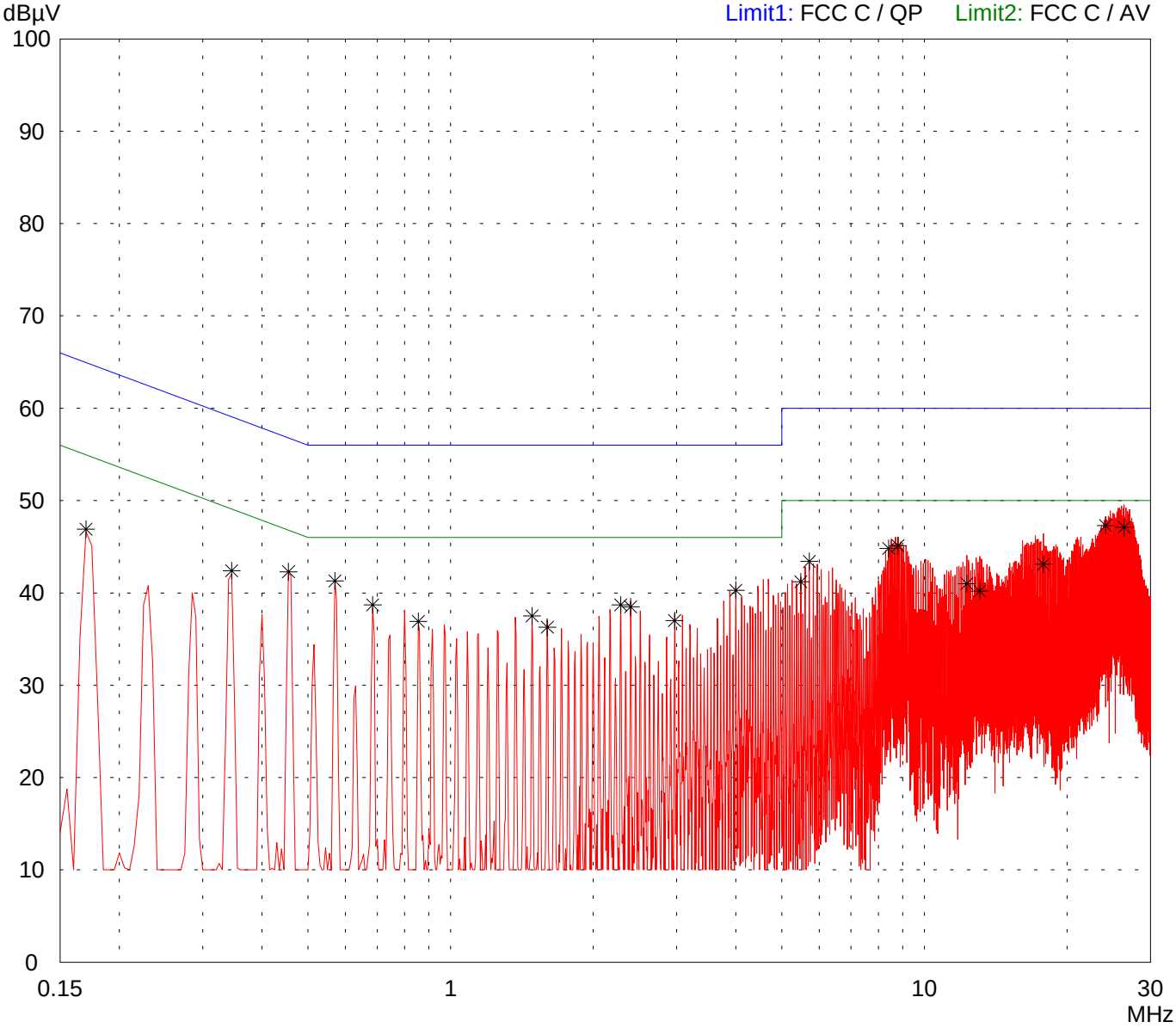


Result: Test Pass	Project file: 52305-080803

Conducted Emission Test 150 kHz - 30 MHz
according to FCC Part 15 Subpart C

Model: M15 Remote Control for Wheel Chairs	Mode: Charging Mode 115 V AC
Serial no.: ---	
Applicant: Ulrich Alber GmbH	
Test site: Shielded room, cabin no. 4	
Tested on: Linecord Neutral Wire	
Date of test: 09/04/2008 — Operator: J. Roidt	
Test performed: automatically — File name:	

Detector: Peak / Final Results: QP	Final results: 20 dB Margin — 25 Subranges

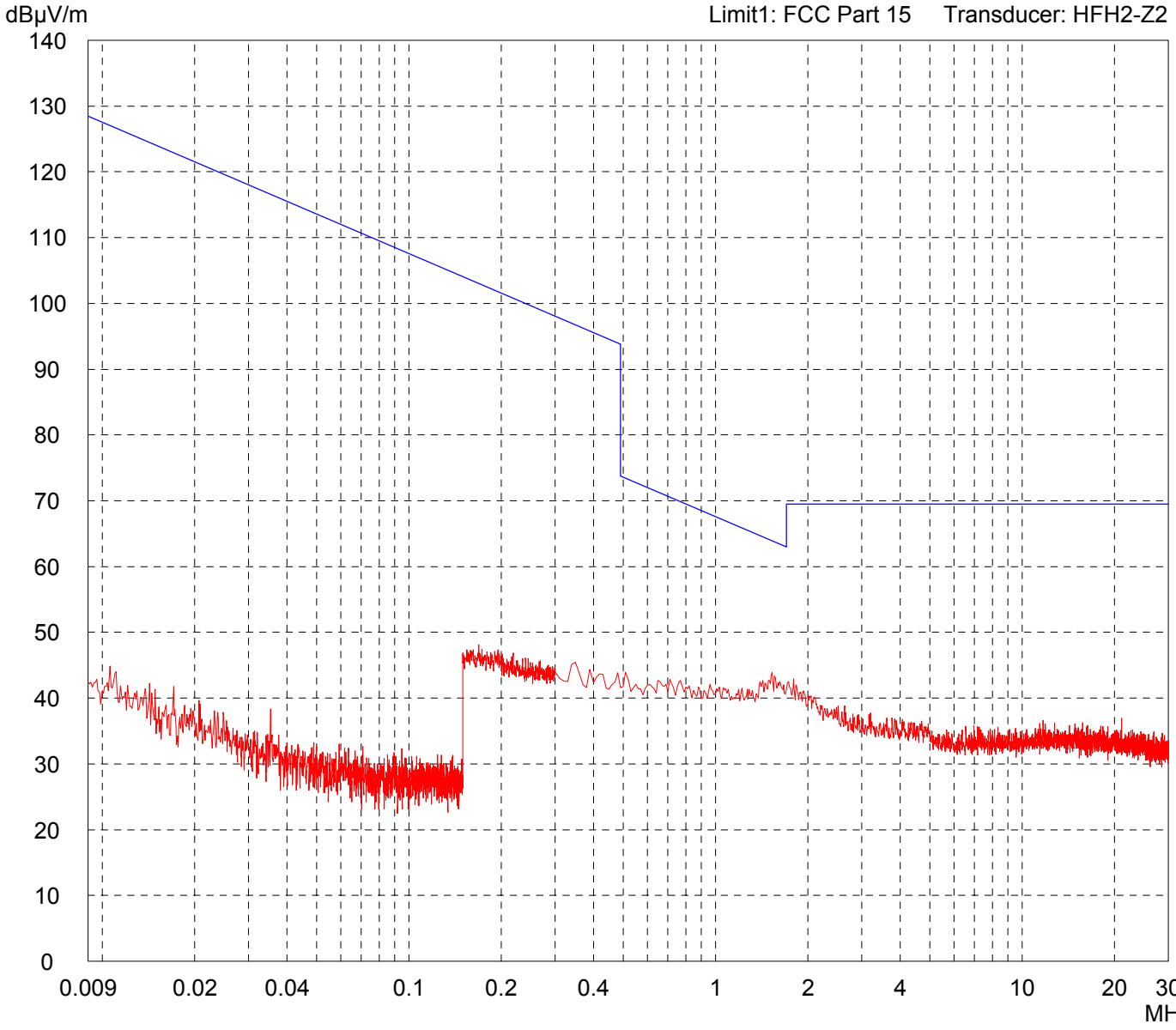


Result: Test Pass	Project file: 52305-080803

Radiated Emission Test 9 kHz - 30 MHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Lowest frequency: 2405 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres	
Date of test: 07/01/2008 / Operator: M. Steindl	
Test performed: by hand / File name: default.emi	

Detector: Peak	List of values: 10 dB Margin / 50 Subranges

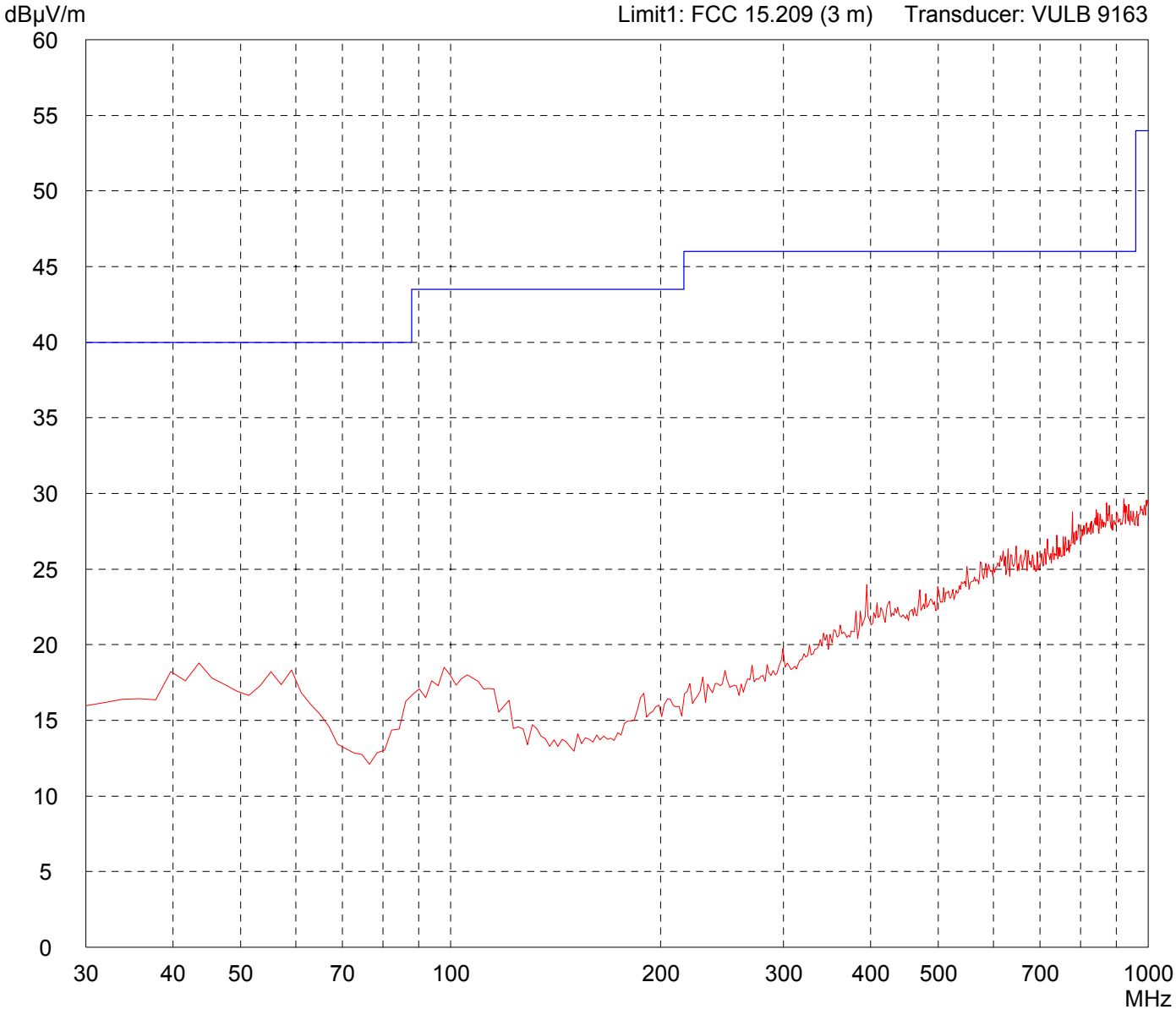


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 30 MHz - 1 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Lowest frequency: 2405 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 07/01/2008 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

Detector: Peak	List of values: 10 dB Margin — 50 Subranges

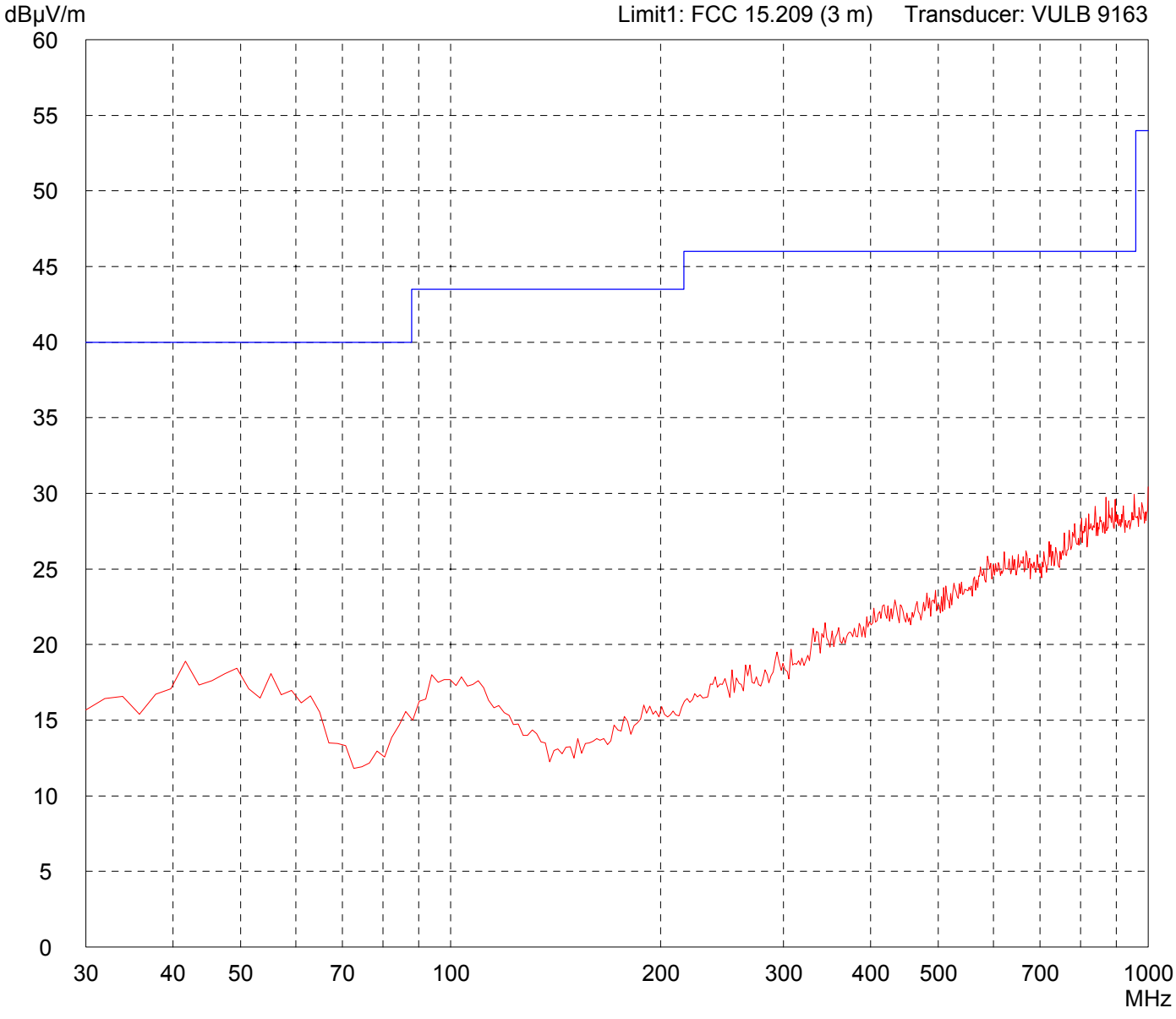


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 30 MHz - 1 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Lowest frequency: 2405 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Vertical Polarization	
Date of test: 07/01/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

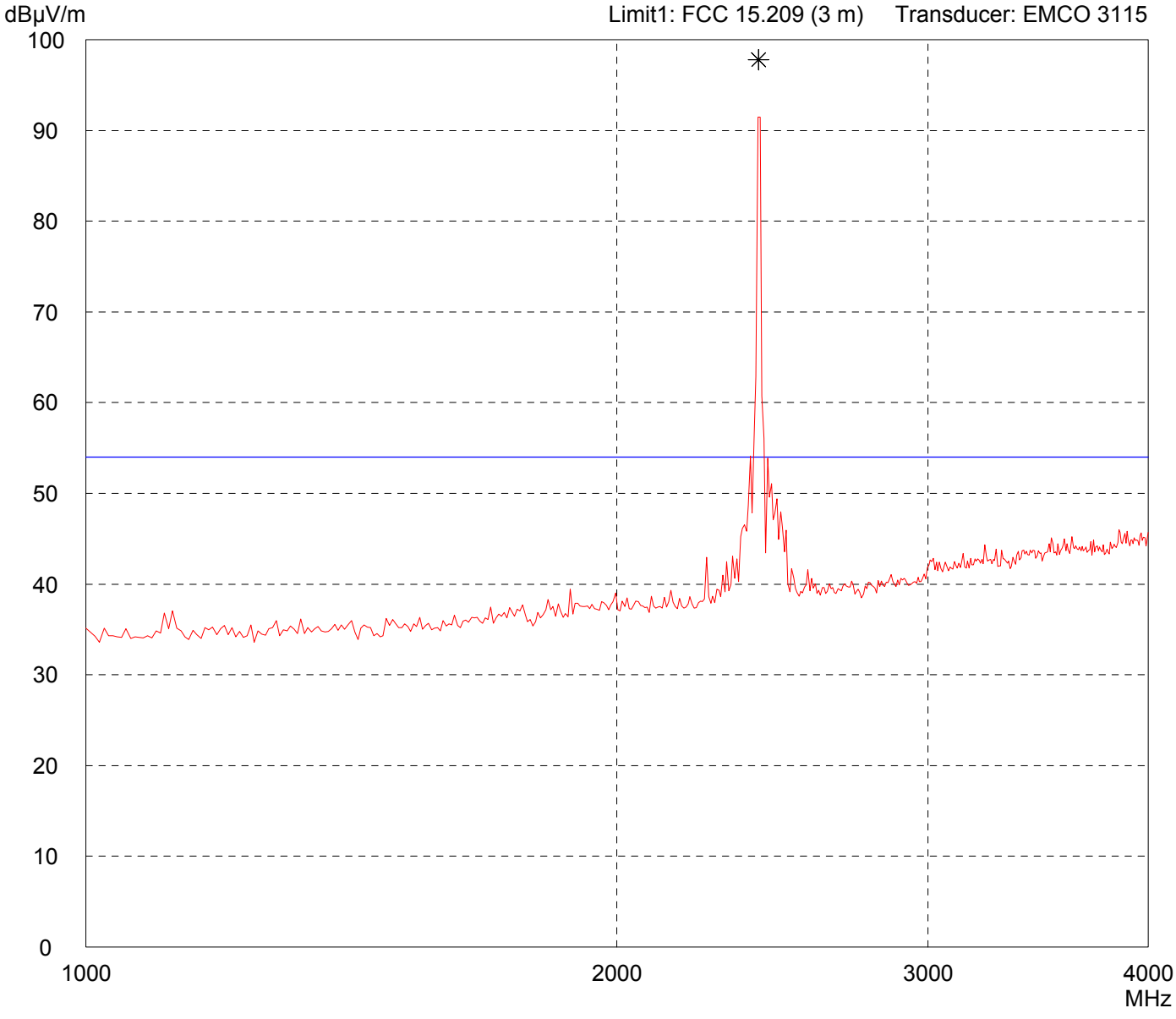
Detector: Peak	List of values: 10 dB Margin / 50 Subranges



Result: Prescan	Project file: 52305-80803

Radiated Emission Test 1 GHz - 4 GHz
acc. to FCC Part 15 Subpart C (FAR)

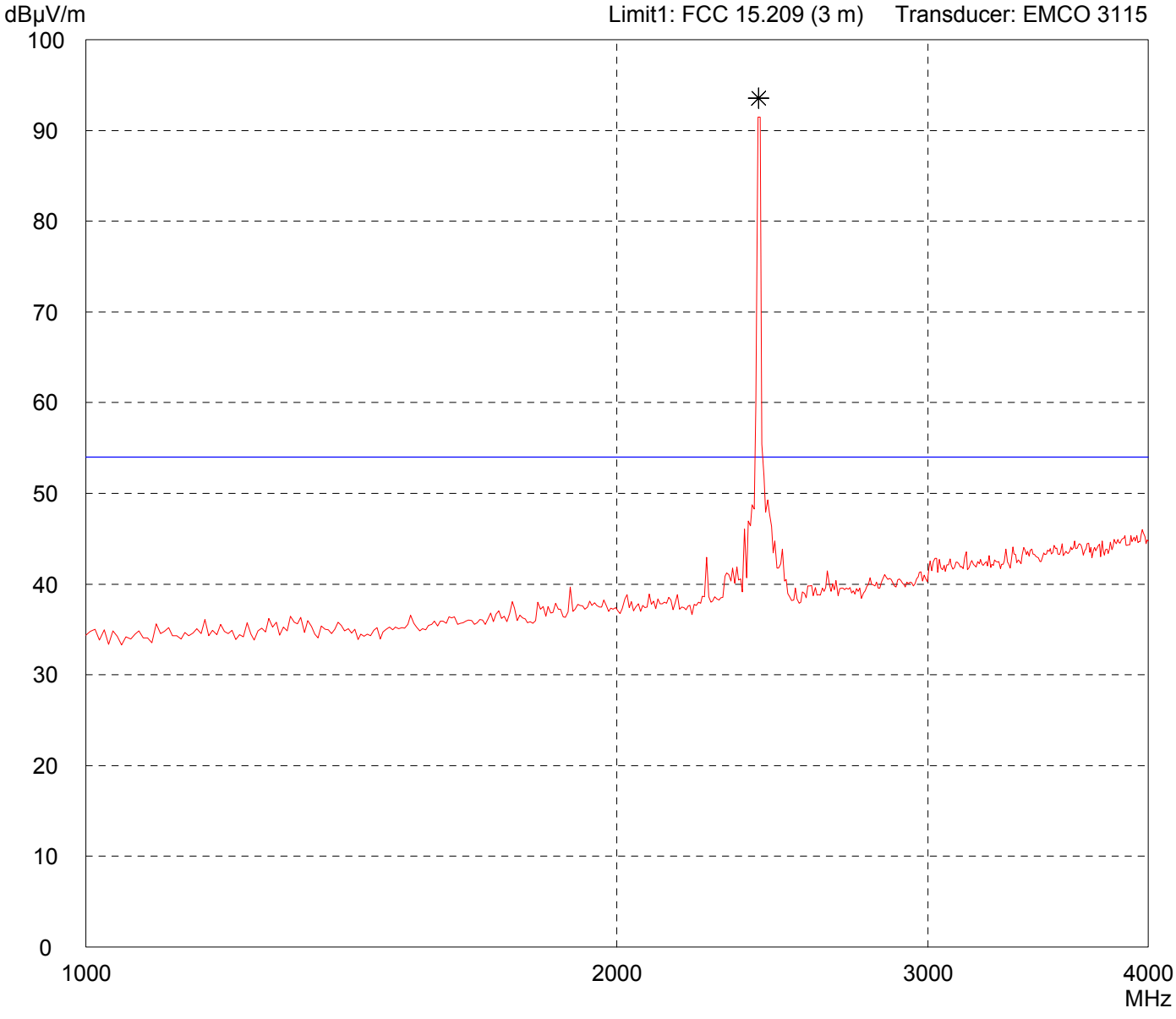
Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Lowest frequency: 2405 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	
Detector: Peak	List of values: Selected by hand



Result: Prescan	Project file: 52305-80803

Radiated Emission Test 1 GHz - 4 GHz
acc. to FCC Part 15 Subpart C (FAR)

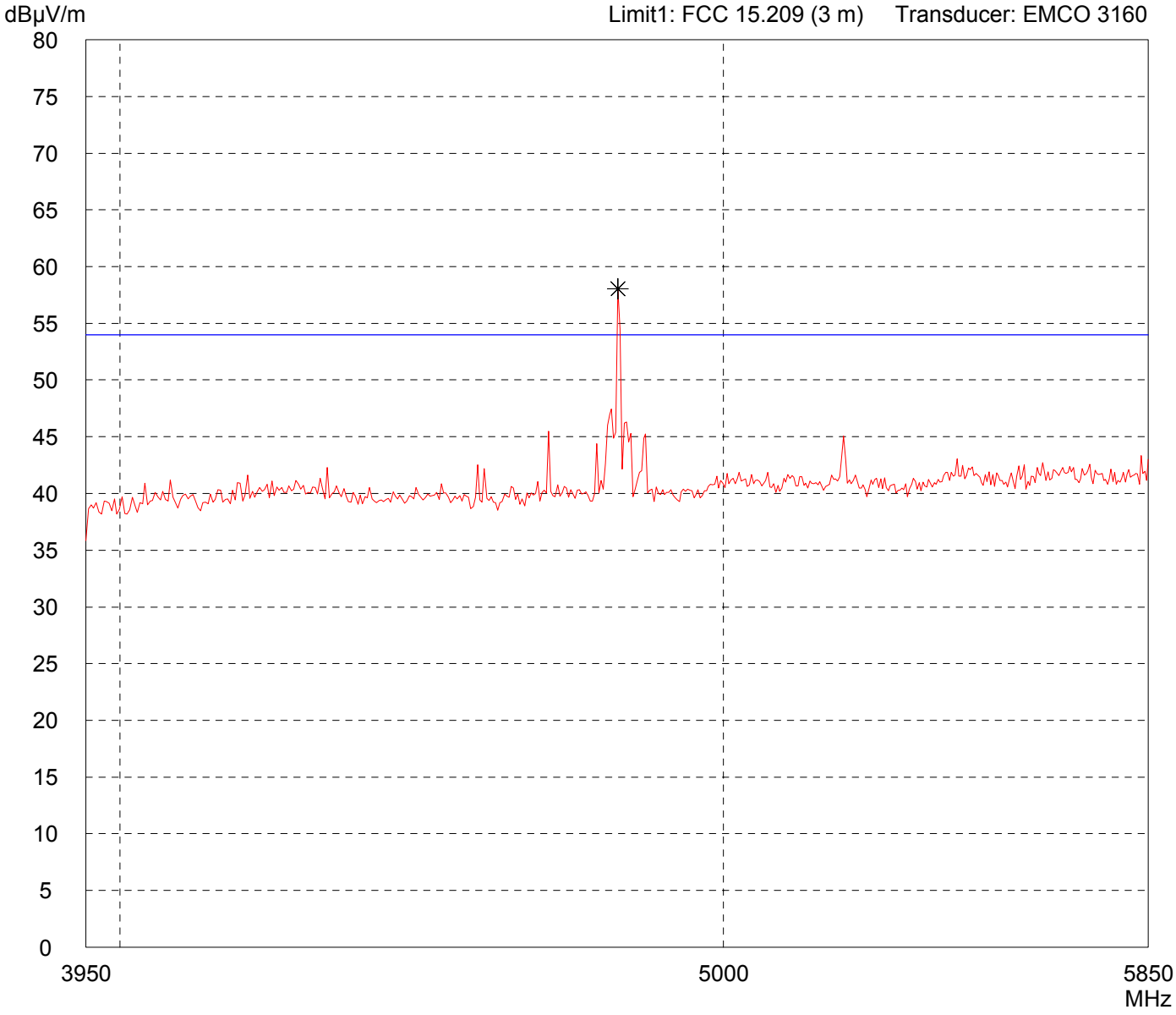
Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Lowest frequency: 2405 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	
Detector: Peak	List of values: Selected by hand



Result: Prescan	Project file: 52305-80803

Radiated Emission Test 3.95 GHz - 5.85 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Lowest frequency: 2405 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	
Detector: Peak	List of values: Selected by hand



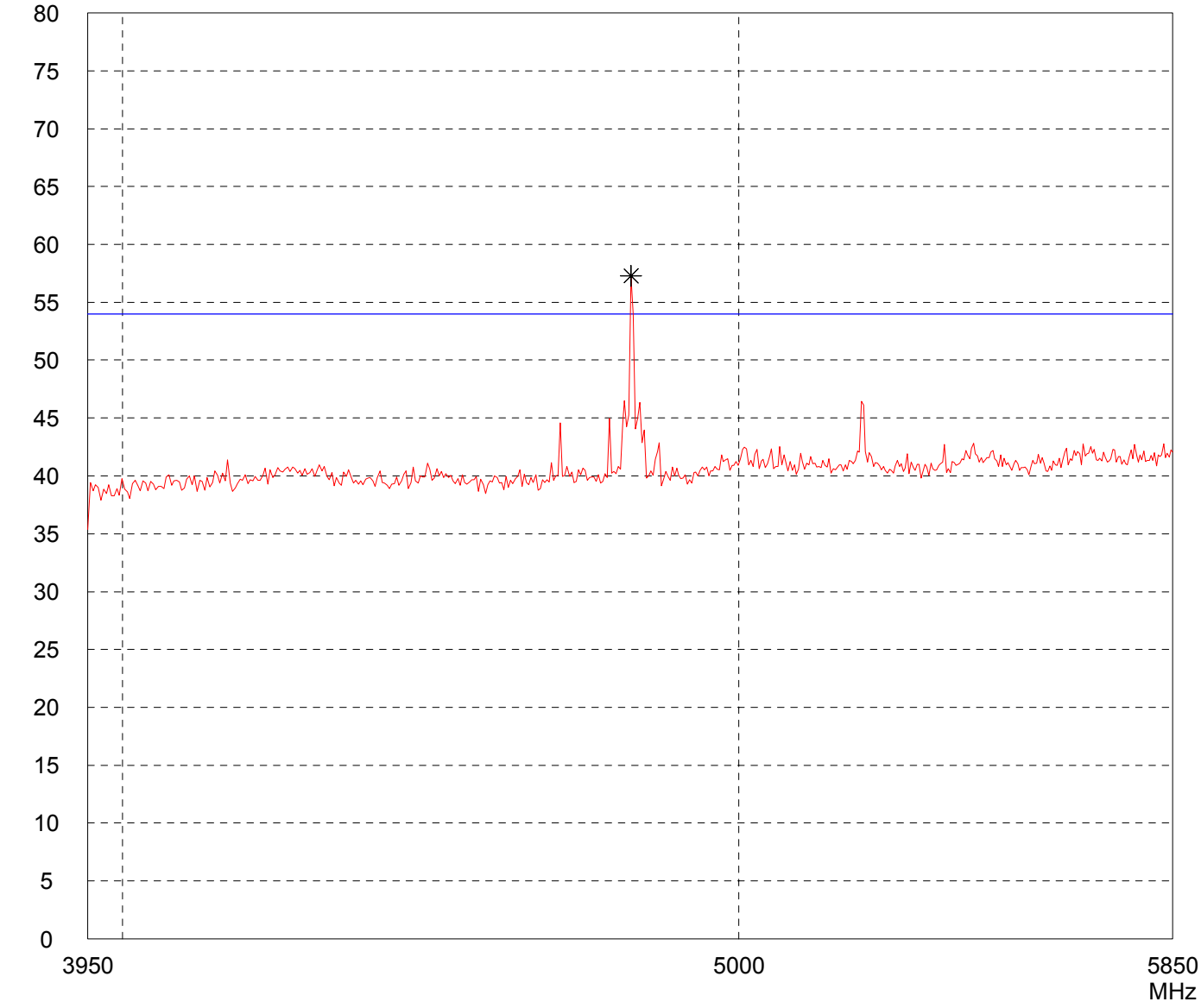
Result: Prescan	Project file: 52305-80803

Radiated Emission Test 3.95 GHz - 5.85 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Lowest frequency: 2405 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	
Detector: Peak	List of values: Selected by hand

dBµV/m

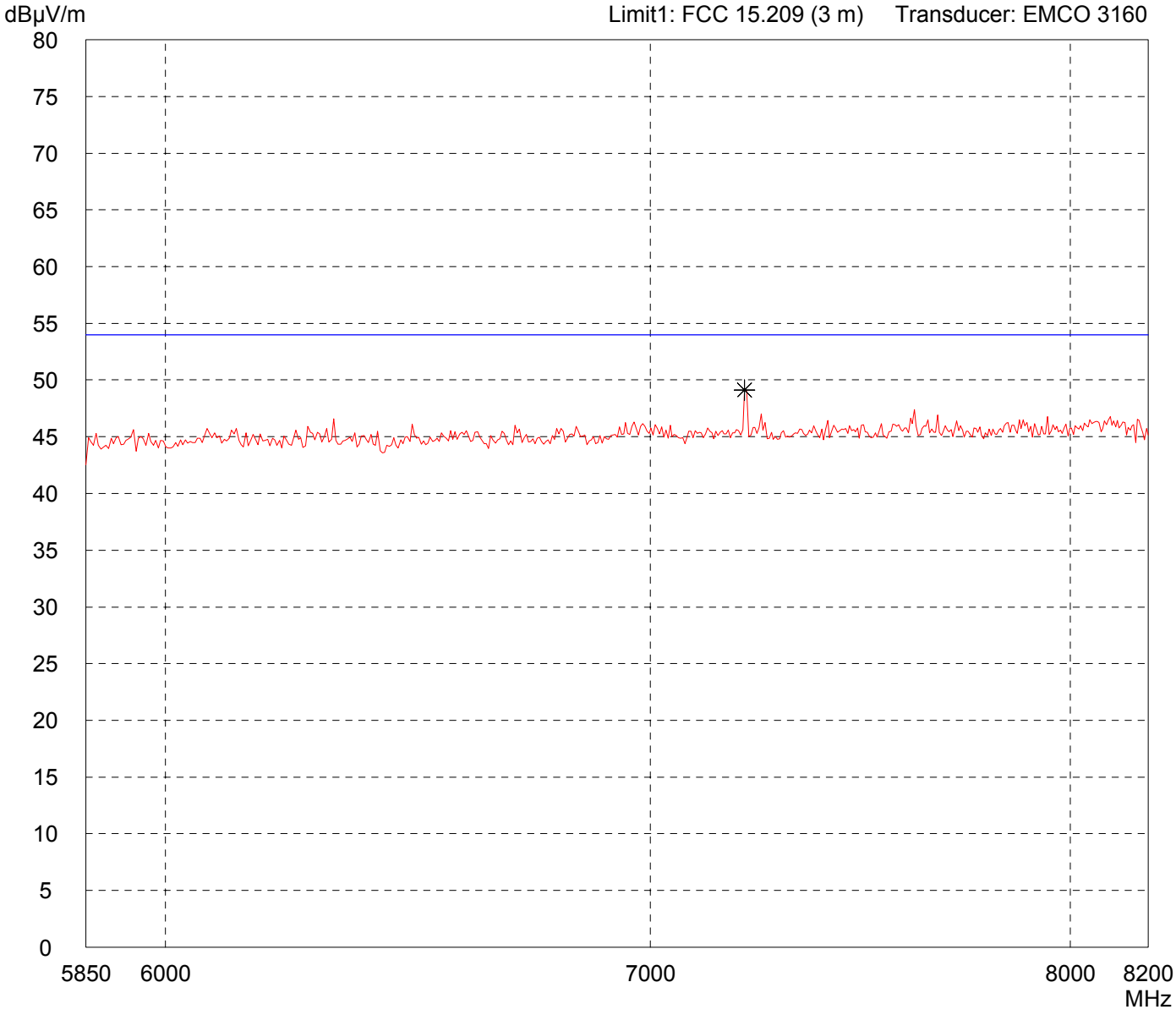
Limit1: FCC 15.209 (3 m) Transducer: EMCO 3160



Result: Prescan	Project file: 52305-80803

Radiated Emission Test 5.85 GHz - 8.2 GHz
acc. to FCC Part 15 Subpart C (FAR)

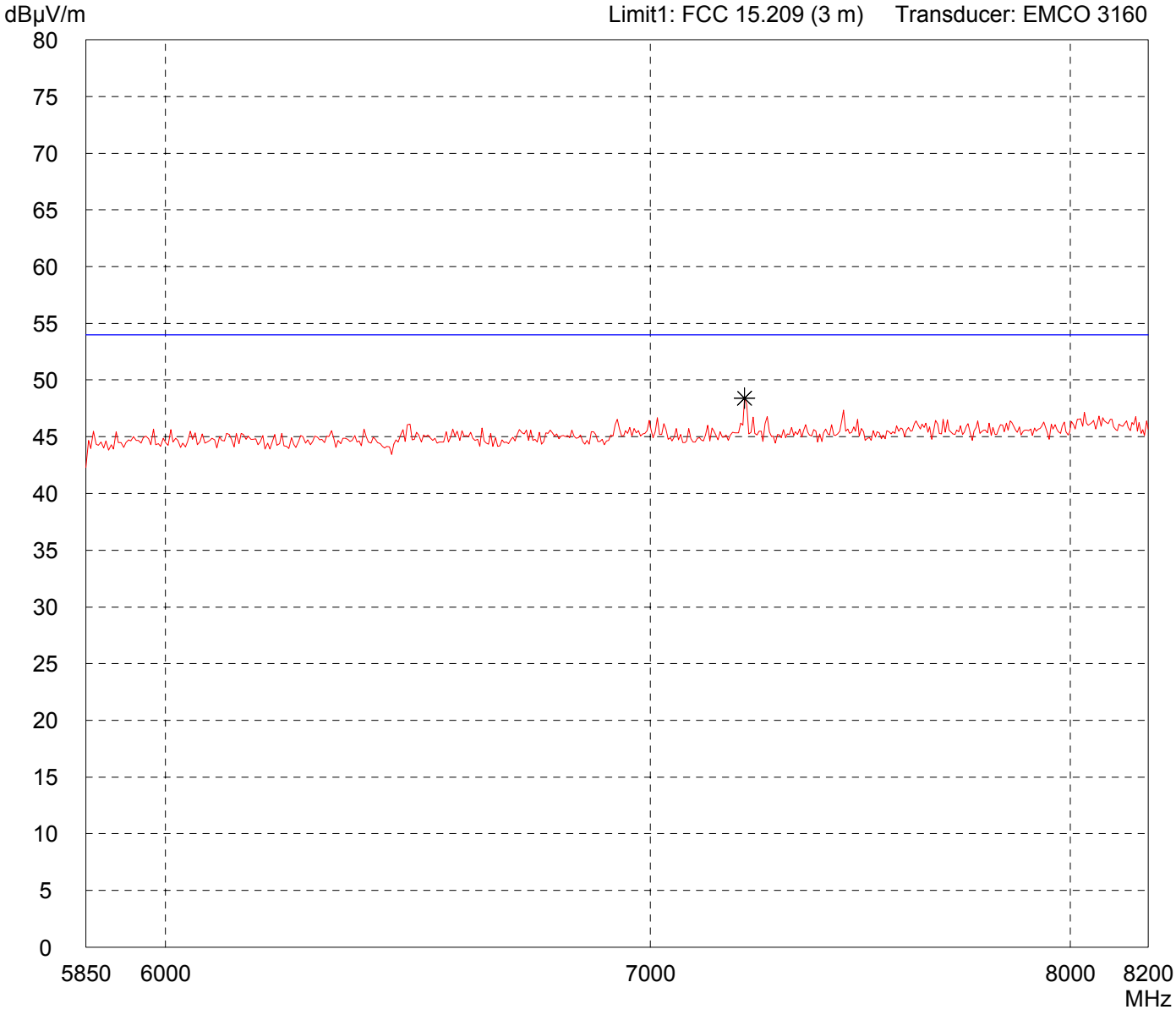
Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Lowest frequency: 2405 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	
Detector: Peak	List of values: Selected by hand



Result: Prescan	Project file: 52305-80803

Radiated Emission Test 5.85 GHz - 8.2 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Lowest frequency: 2405 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	
Detector: Peak	List of values: Selected by hand

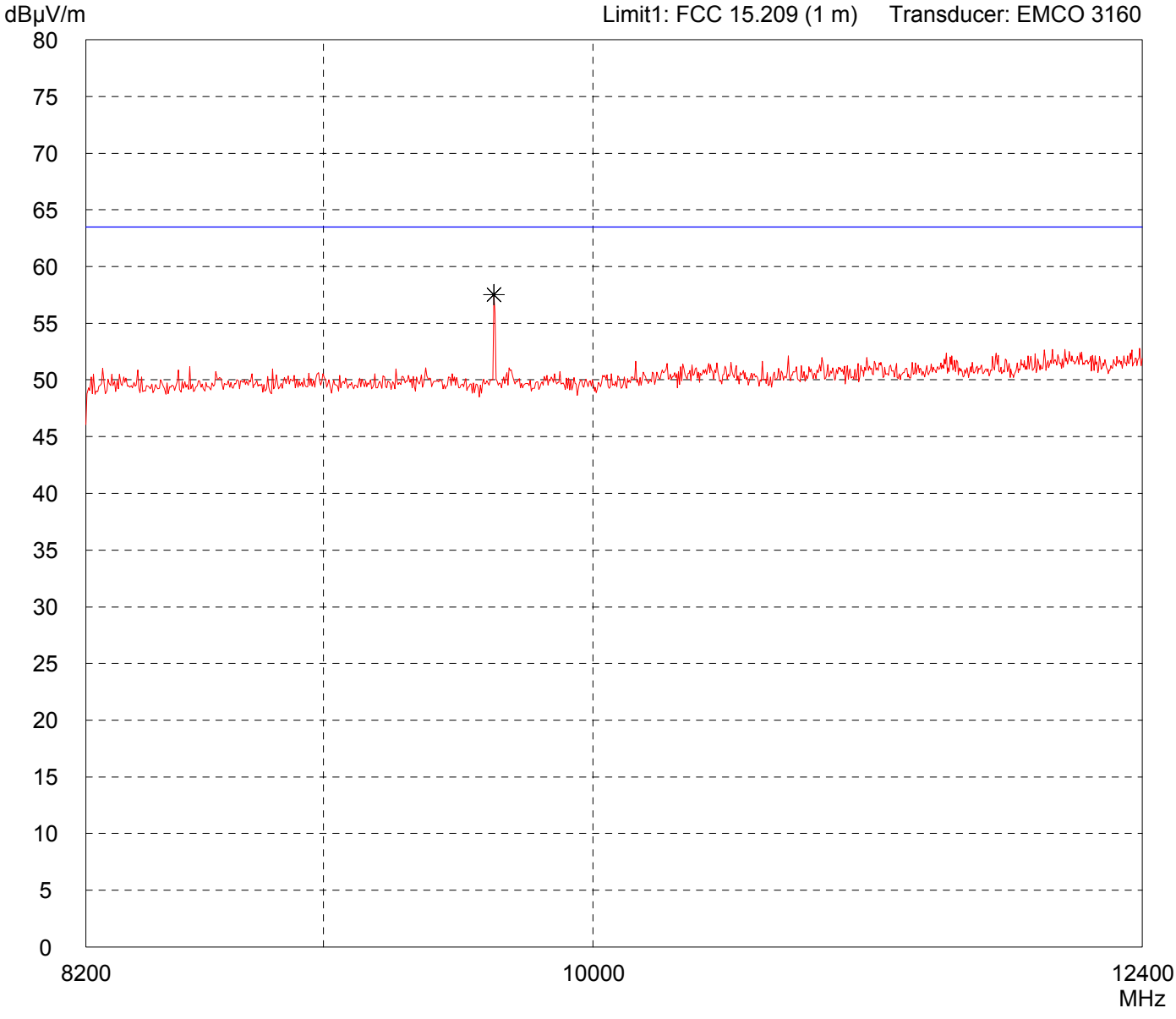


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 8.2 GHz - 12.4 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Lowest frequency: 2405 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: 10 dB Margin / 50 Subranges

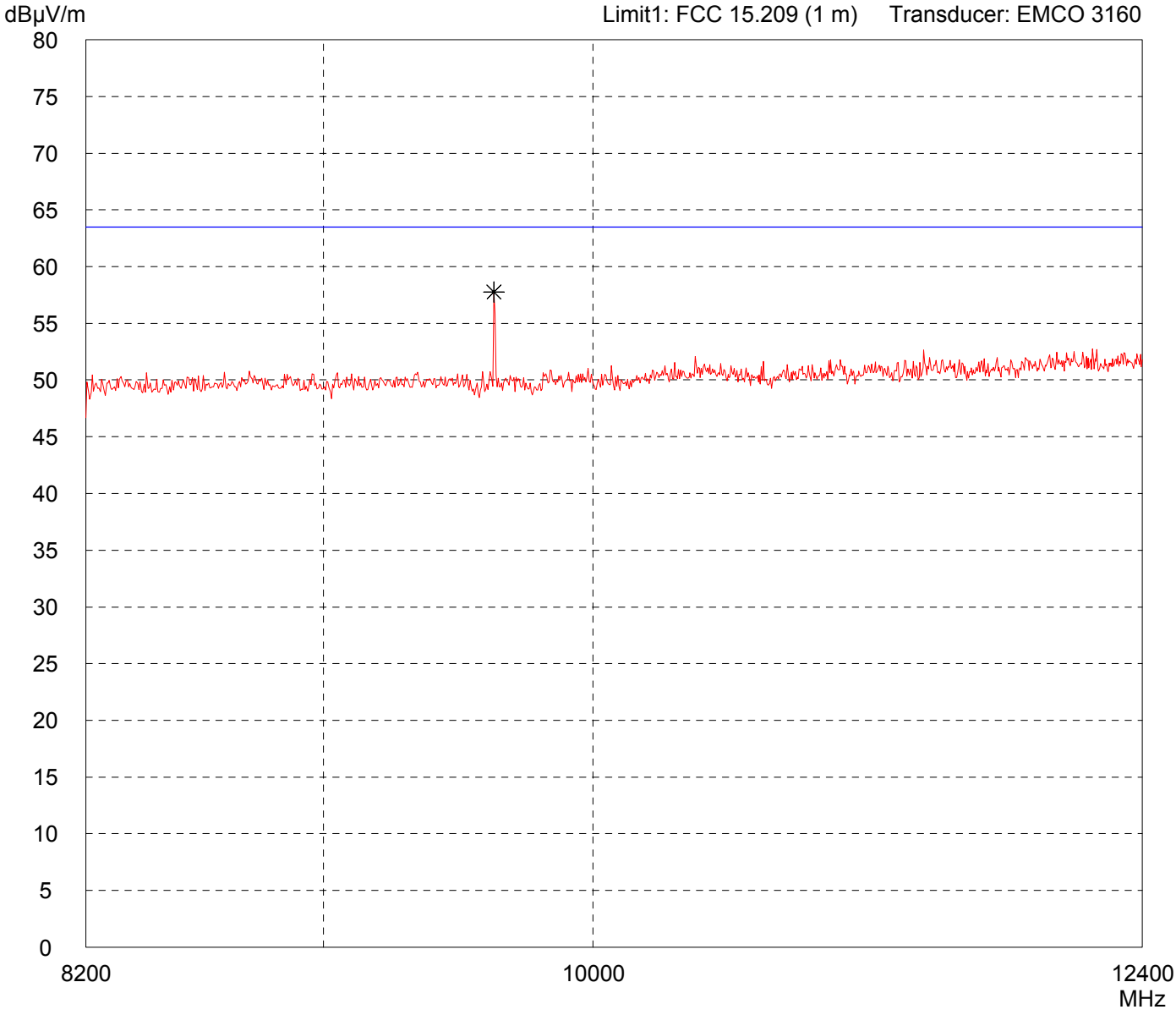


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 8.2 GHz - 12.4 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Lowest frequency: 2405 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: 10 dB Margin / 50 Subranges

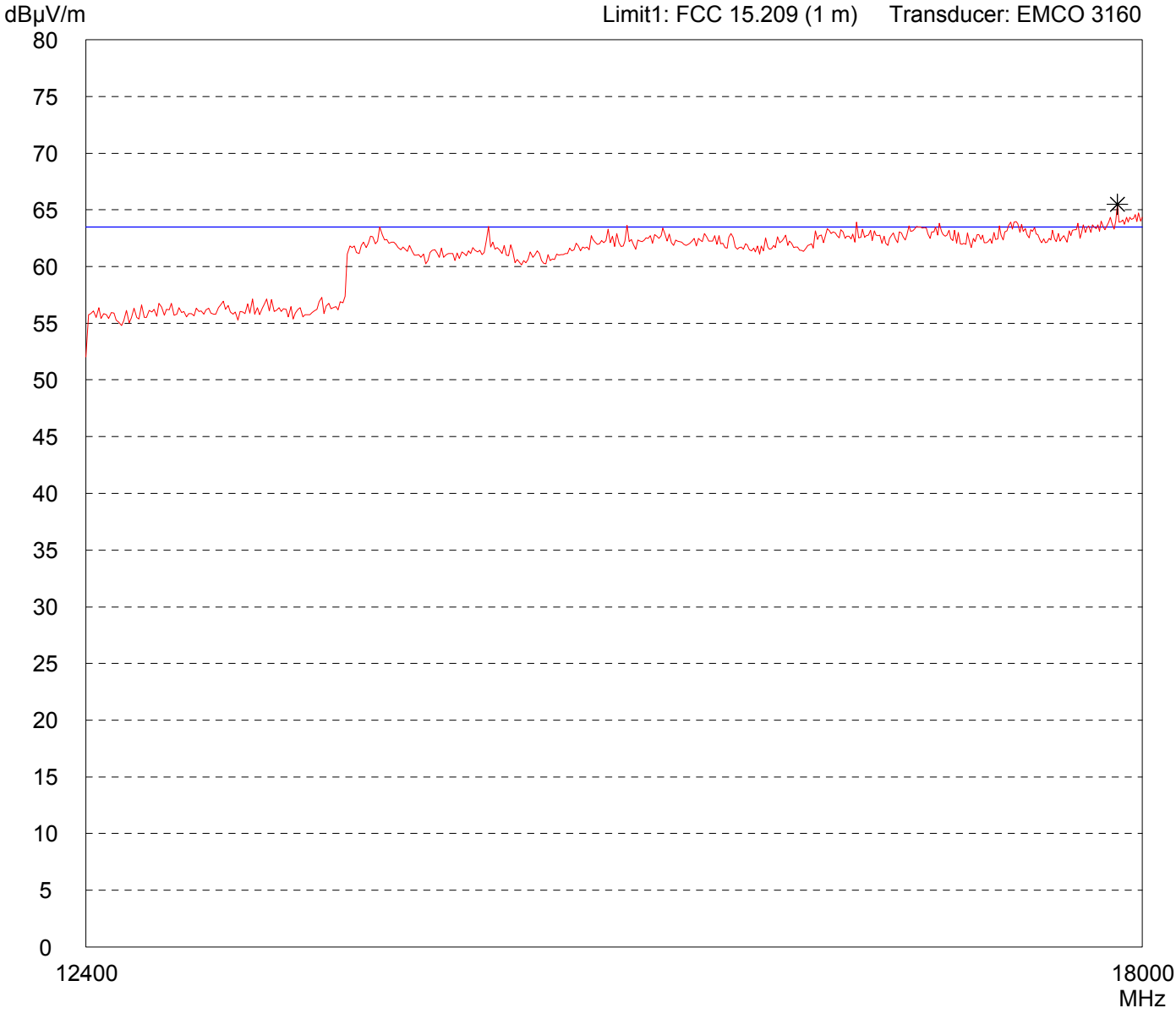


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 12.4 GHz - 18 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Lowest frequency: 2405 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: Selected by hand

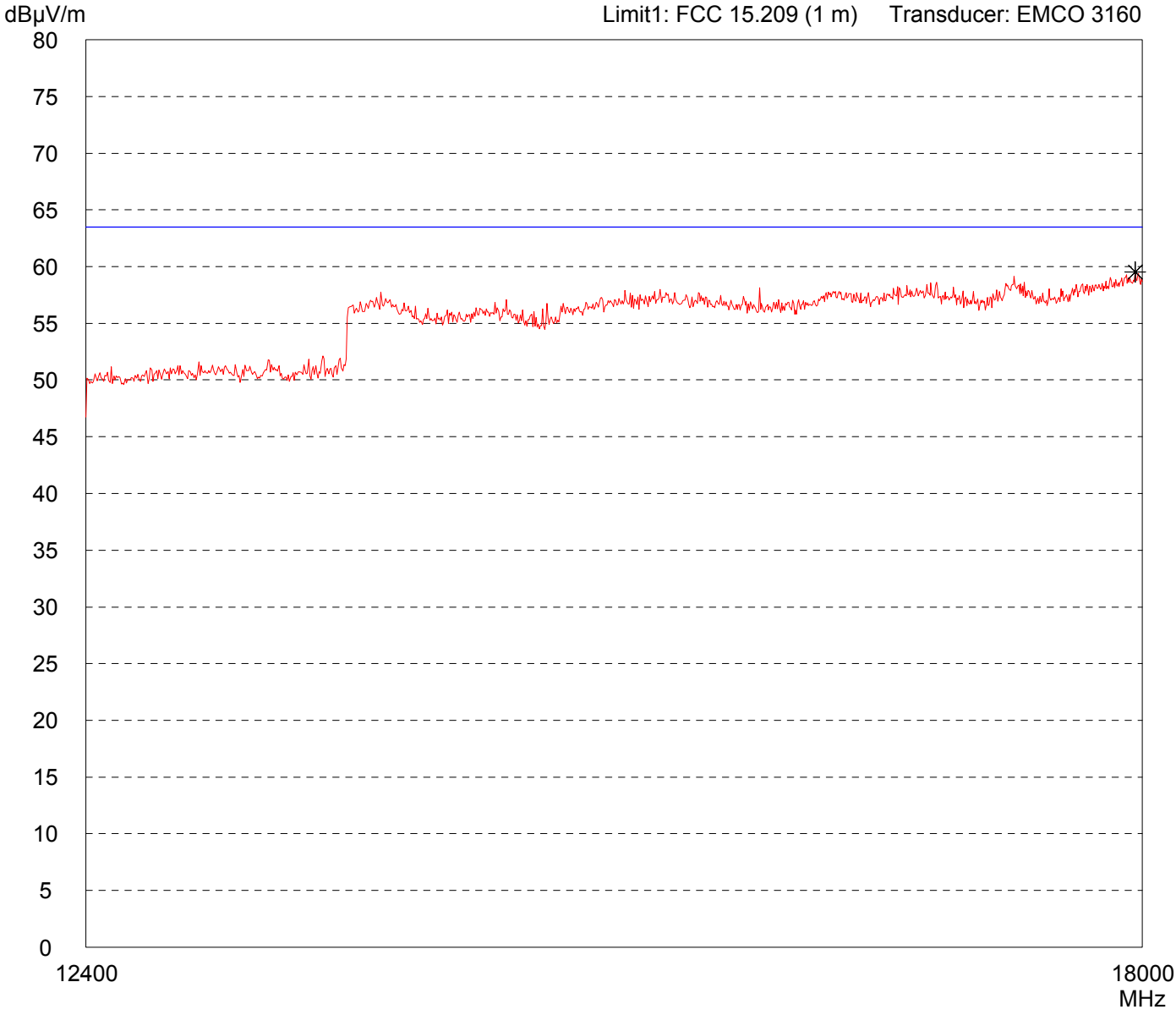


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 12.4 GHz - 18 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Lowest frequency: 2405 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: Selected by hand

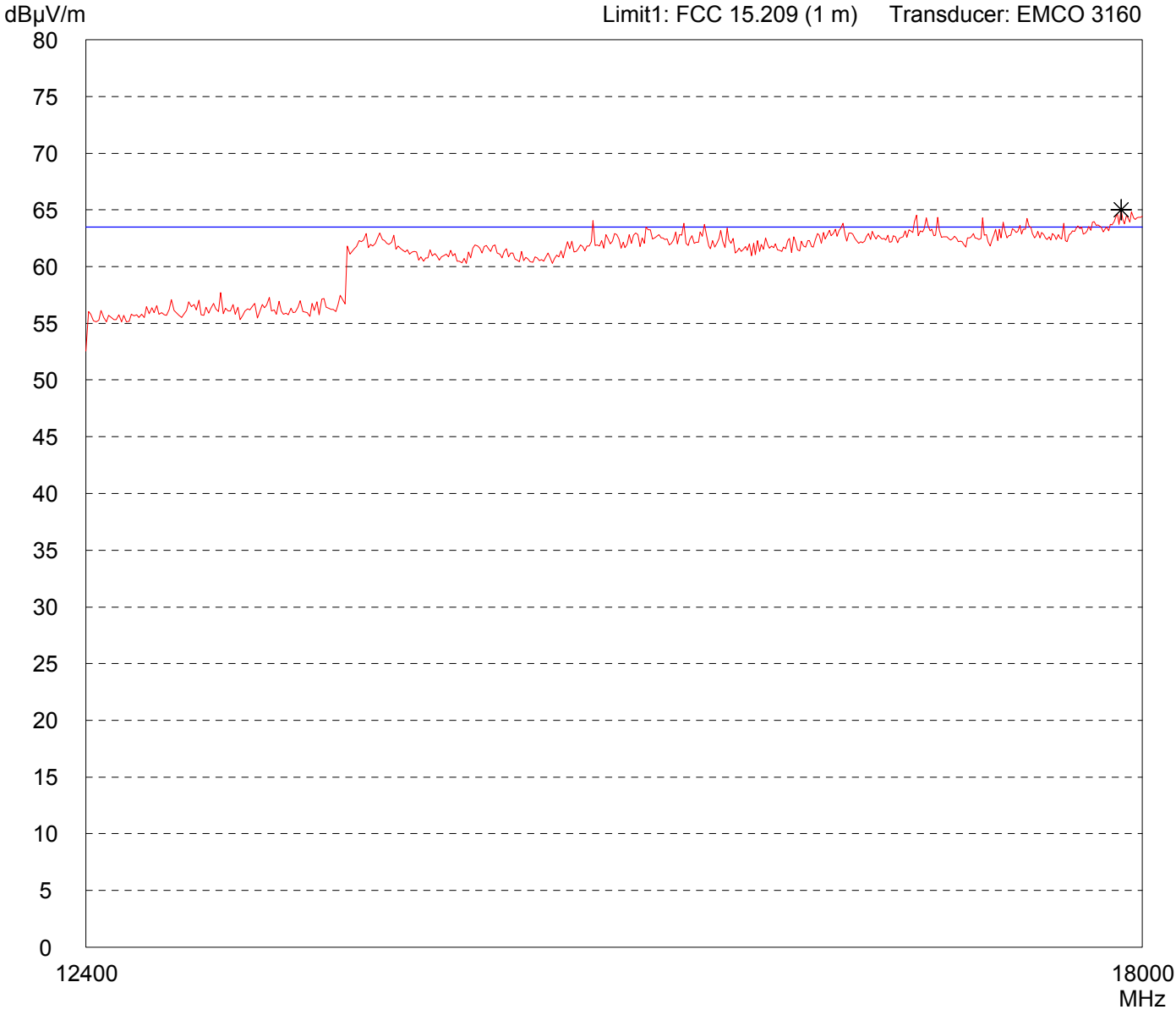


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 12.4 GHz - 18 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Lowest frequency: 2405 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: Selected by hand



Result: Prescan	Project file: 52305-80803

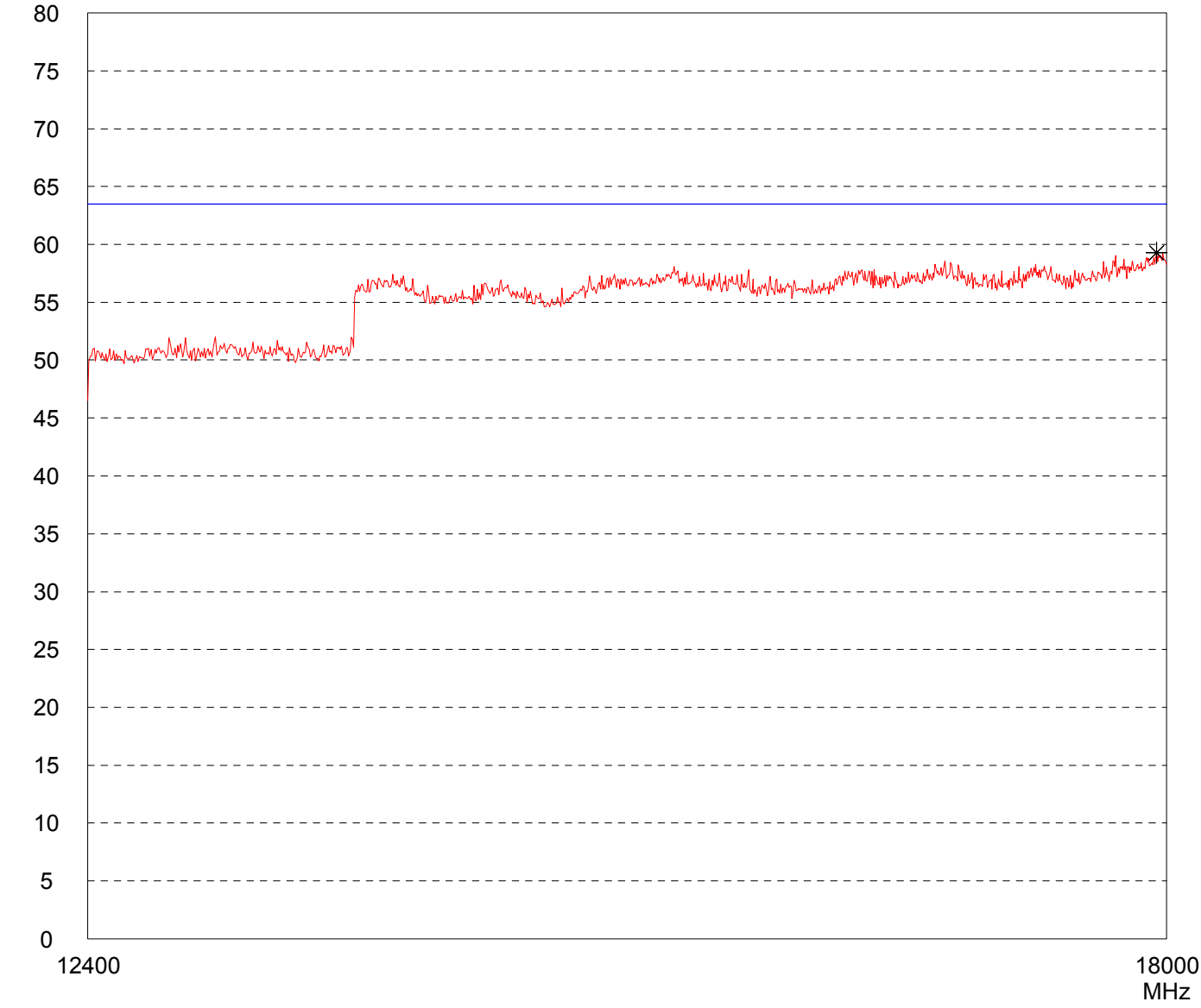
Radiated Emission Test 12.4 GHz - 18 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Lowest frequency: 2405 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: Selected by hand

dBµV/m

Limit1: FCC 15.209 (1 m) Transducer: EMCO 3160

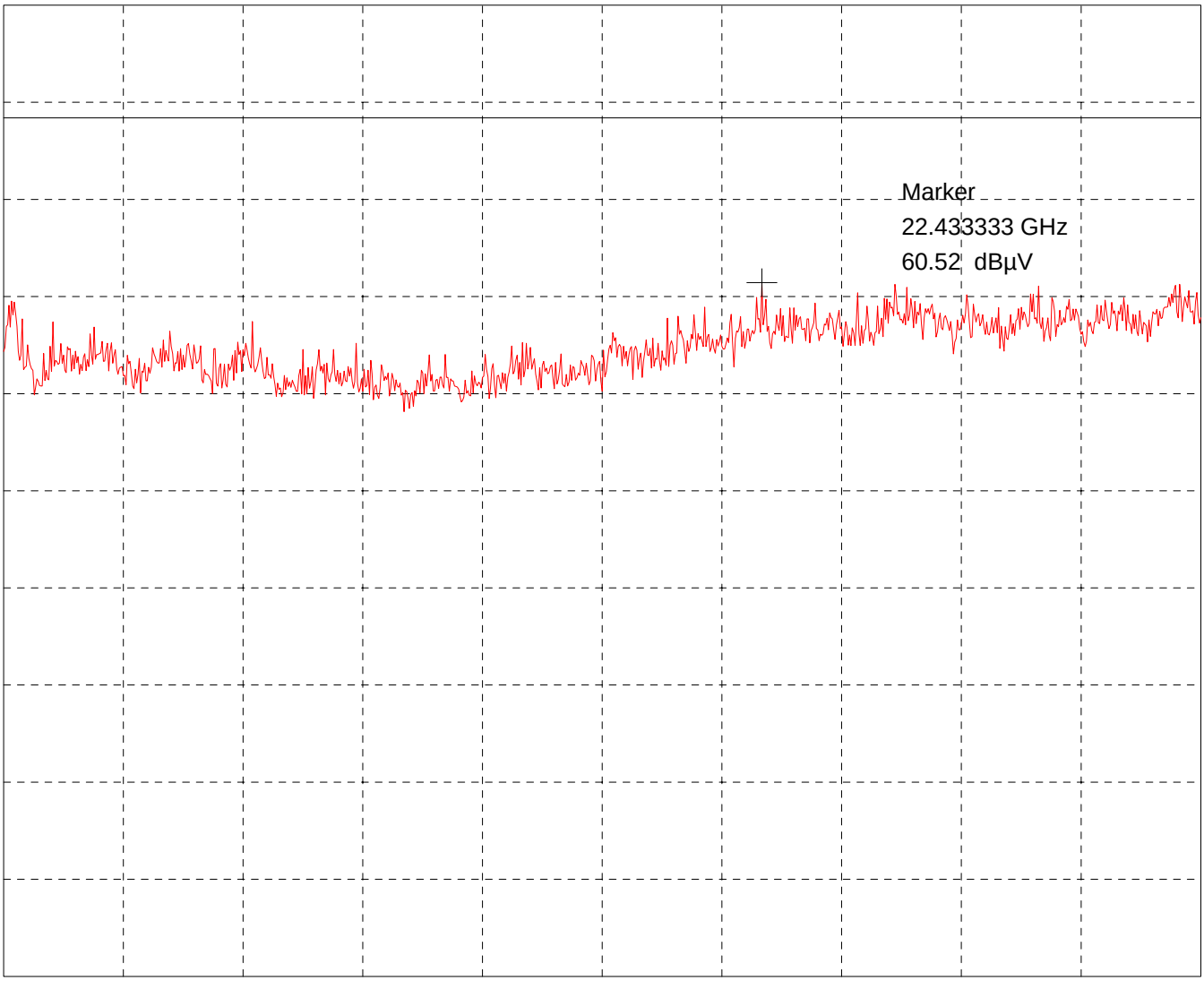


Result: Prescan	Project file: 52305-80803

Radiated Emission Test acc. to FCC Part 15 Subpart C

Model: Wheelchair M15	Mode: - Battery supply - Transmitting continously with modulation - Lowest frequency: 2405 MHz - Polarisation: horizontal - Distance: 0.5 m
Serial No.:	
Applicant: Ulrich Alber GmbH	

Ref.Level 74.8 dBµV ATT 0 dB Ref. Offset 42.8 dB
5 dB/Div.



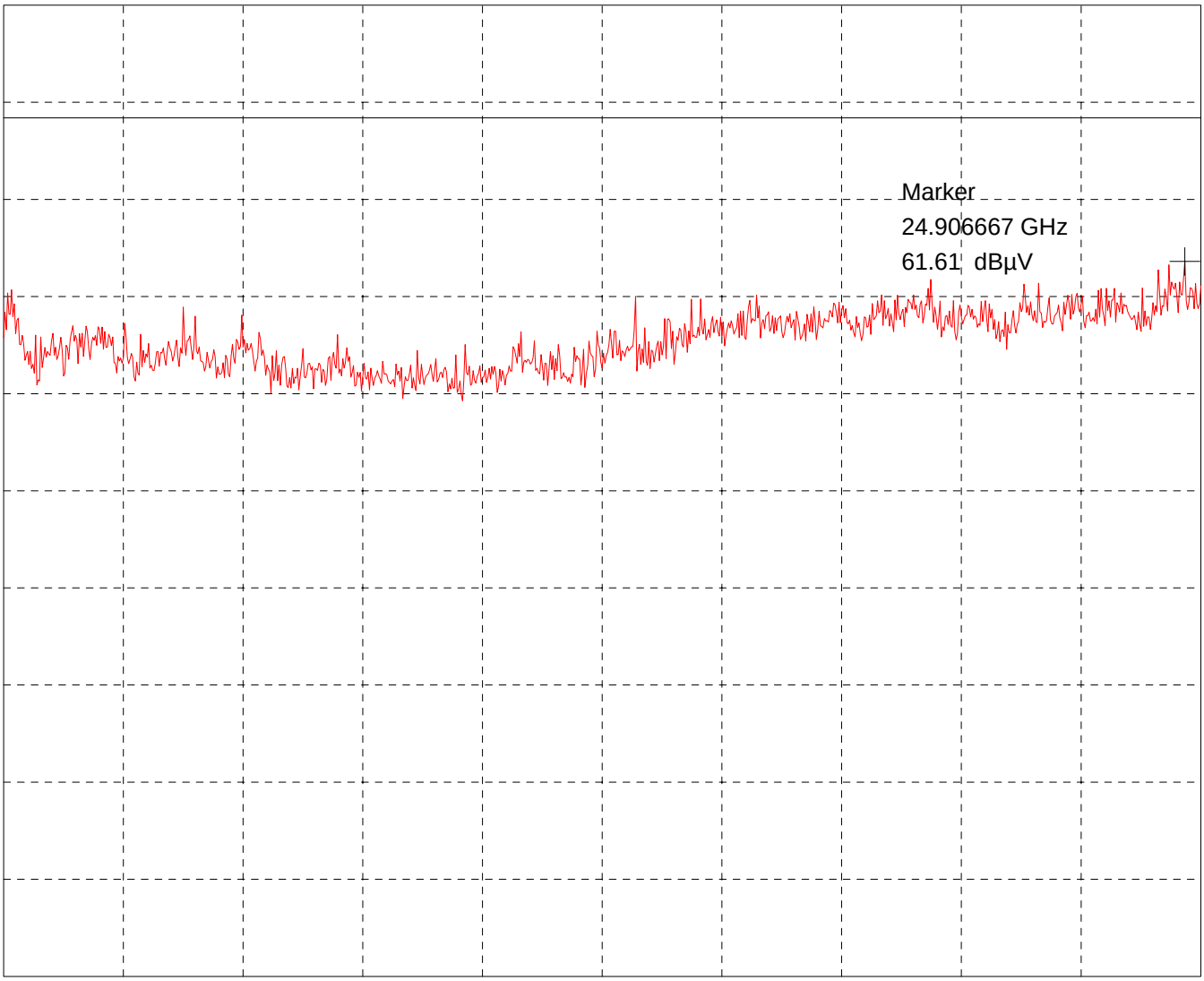
Start 18.000 GHz Stop 25.000 GHz
RBW 1 MHz VBW 1 MHz SWP 40 ms

Tested by: M. Steindl	Project-No.: 52305-080803
Date: 2008-07-04	

Radiated Emission Test acc. to FCC Part 15 Subpart C

Model: Wheelchair M15	Mode: - Battery supply - Transmitting continously with modulation - Lowest frequency: 2405 MHz - Polarisation: vertical - Distance: 0.5 m
Serial No.:	
Applicant: Ulrich Alber GmbH	

Ref.Level 74.8 dBµV ATT 0 dB Ref. Offset 42.8 dB
5 dB/Div.



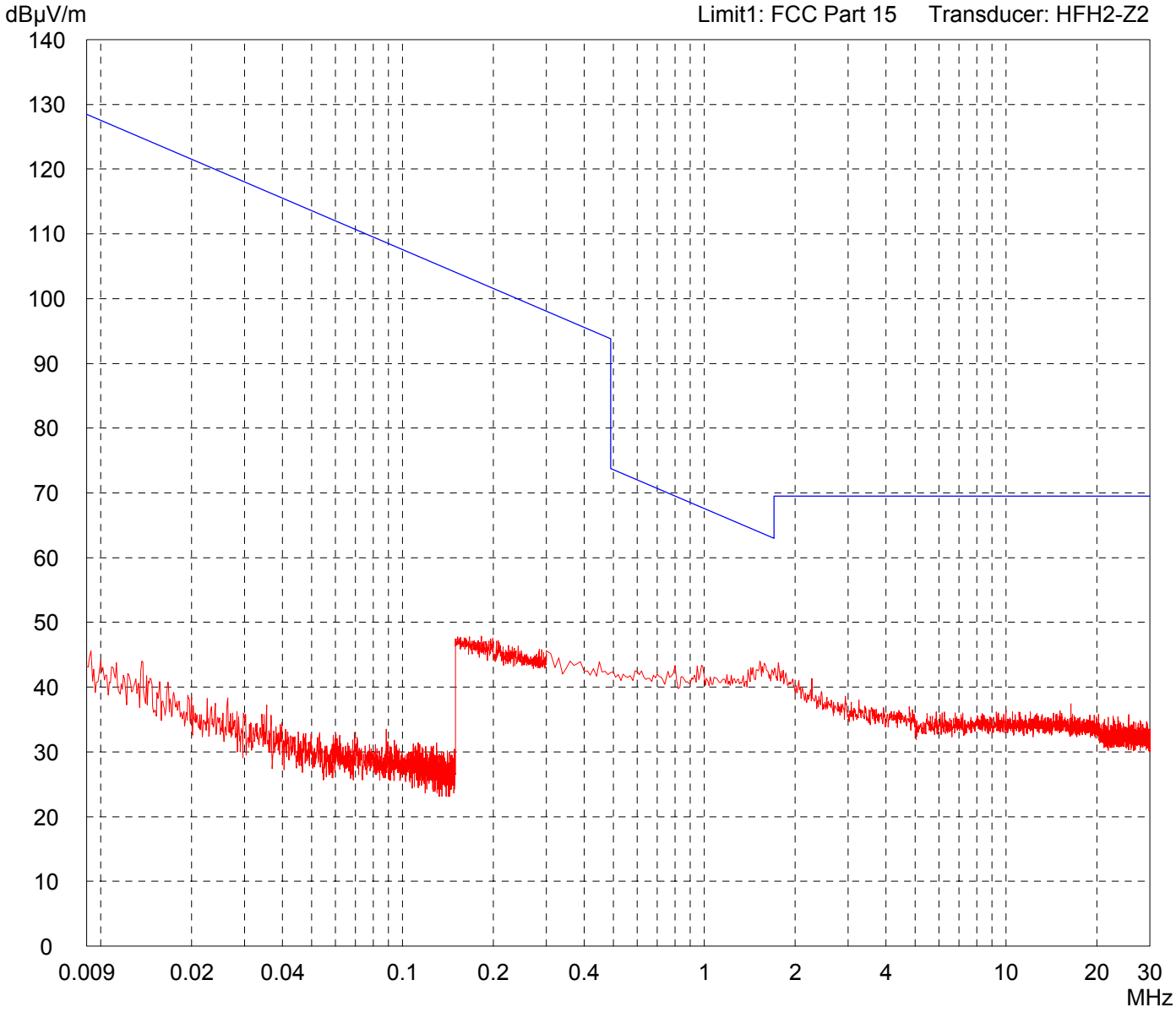
Start 18.000 GHz Stop 25.000 GHz
RBW 1 MHz VBW 1 MHz SWP 40 ms

Tested by: M. Steindl	Project-No.: 52305-080803
Date: 2008-07-04	

Radiated Emission Test 9 kHz - 30 MHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Middle frequency: 2445 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres	
Date of test: 07/01/2008 / Operator: M. Steindl	
Test performed: by hand / File name: default.emi	

Detector: Peak	List of values: 10 dB Margin / 50 Subranges



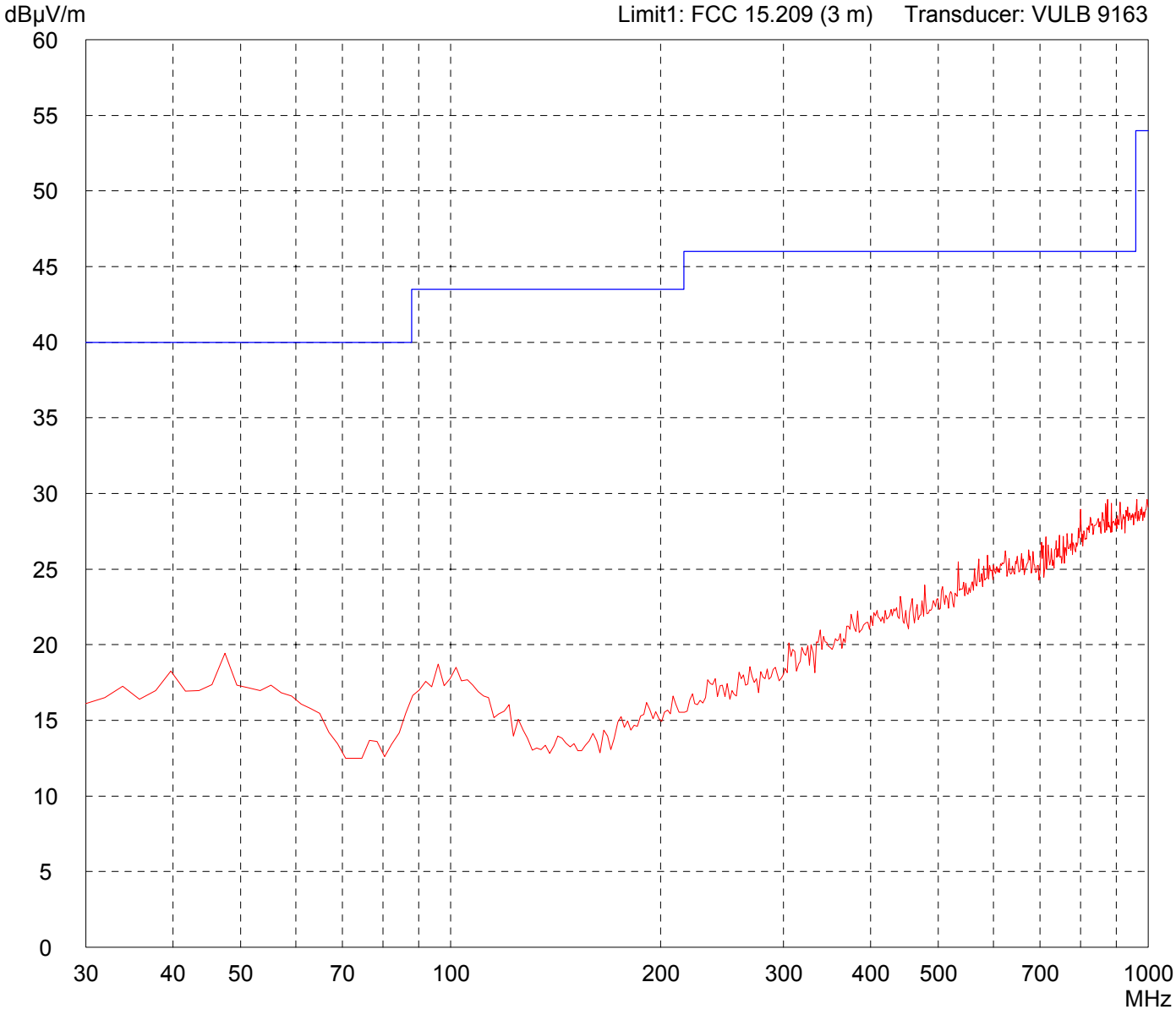
Result: Prescan	Project file: 52305-80803

Senton GmbH / Aeussere Fruehlingstrasse 45 / D-94315 Straubing / Germany / Tel. +49 (0)9421 5522-0 / Fax +49 (0)9421 5522-99

Radiated Emission Test 30 MHz - 1 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Middle frequency: 2445 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 07/01/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: 10 dB Margin / 50 Subranges

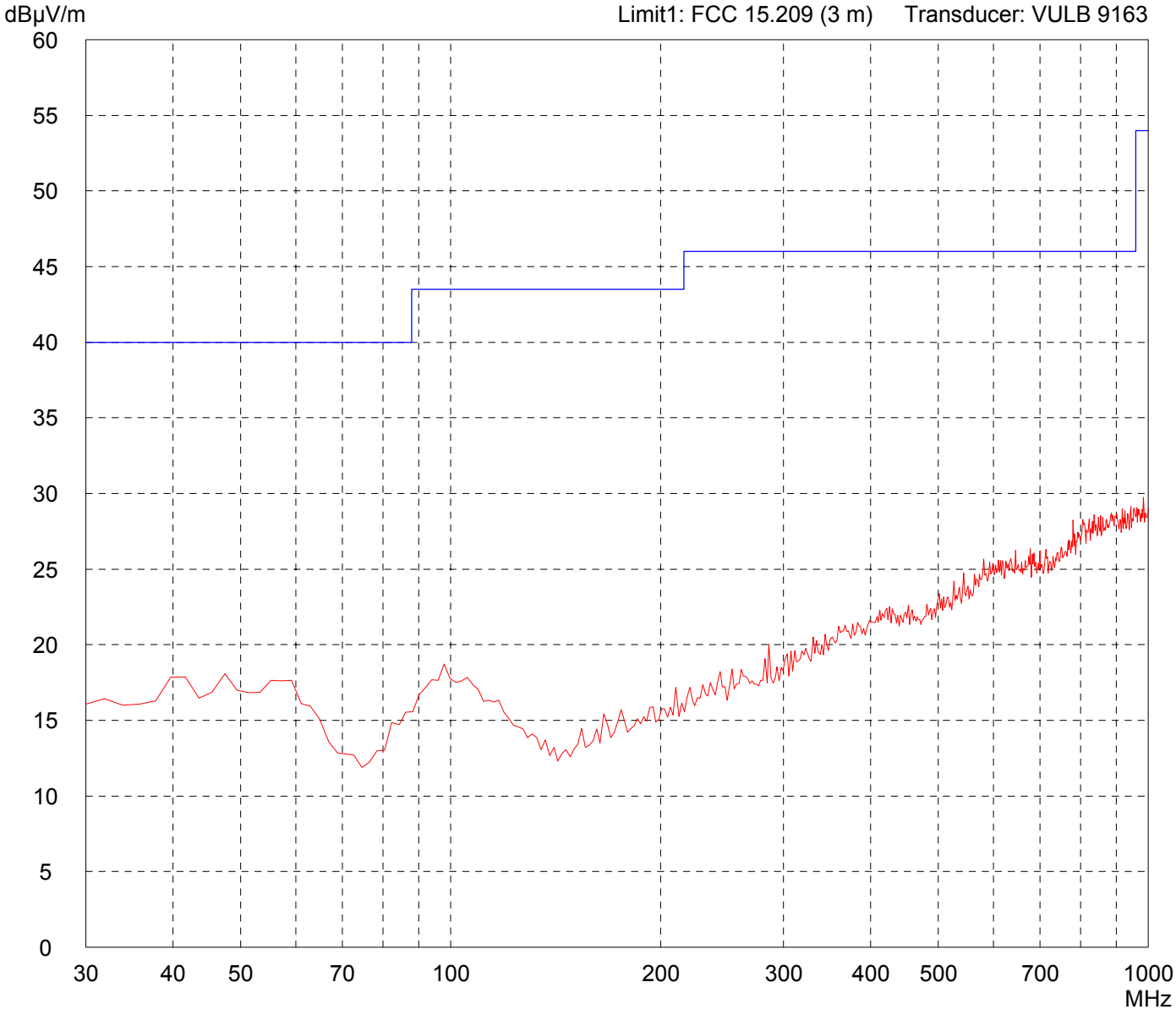


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 30 MHz - 1 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Middle frequency: 2445 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Vertical Polarization	
Date of test: 07/01/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

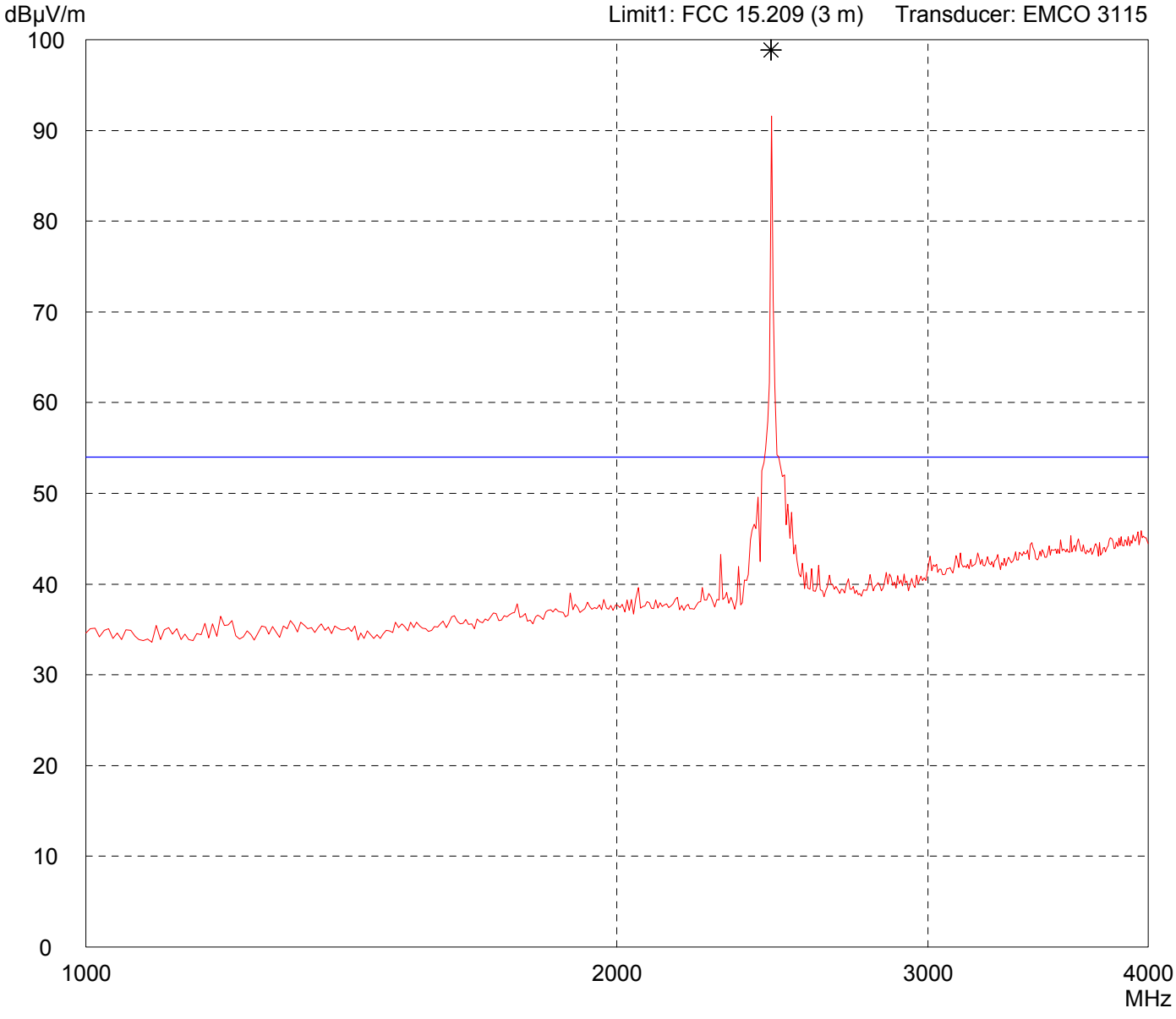
Detector: Peak	List of values: 10 dB Margin / 50 Subranges



Result: Prescan	Project file: 52305-80803

Radiated Emission Test 1 GHz - 4 GHz
acc. to FCC Part 15 Subpart C (FAR)

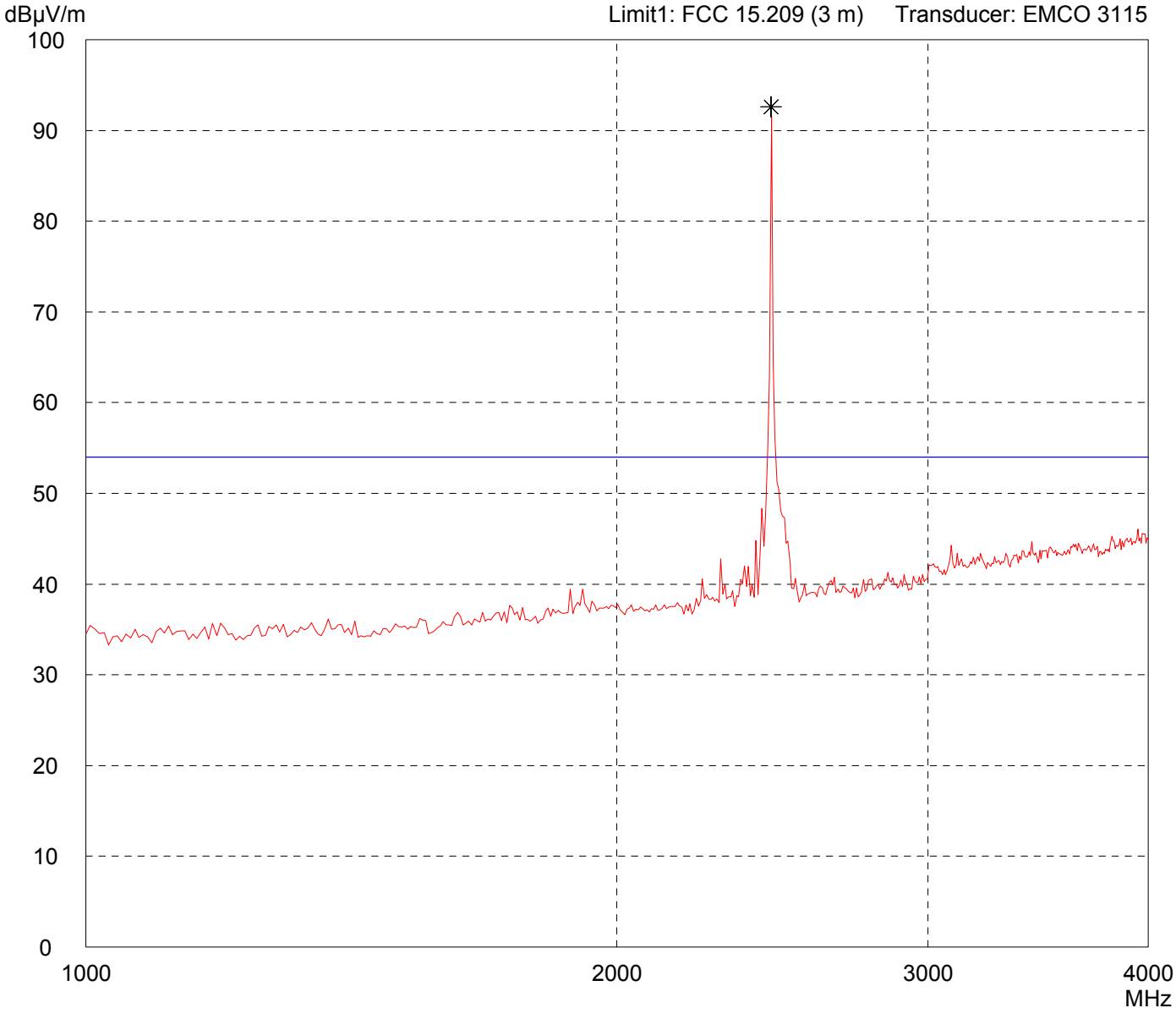
Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Middle frequency: 2445 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	
Detector: Peak	List of values: Selected by hand



Result: Prescan	Project file: 52305-80803

Radiated Emission Test 1 GHz - 4 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Middle frequency: 2445 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	
Detector: Peak	List of values: Selected by hand

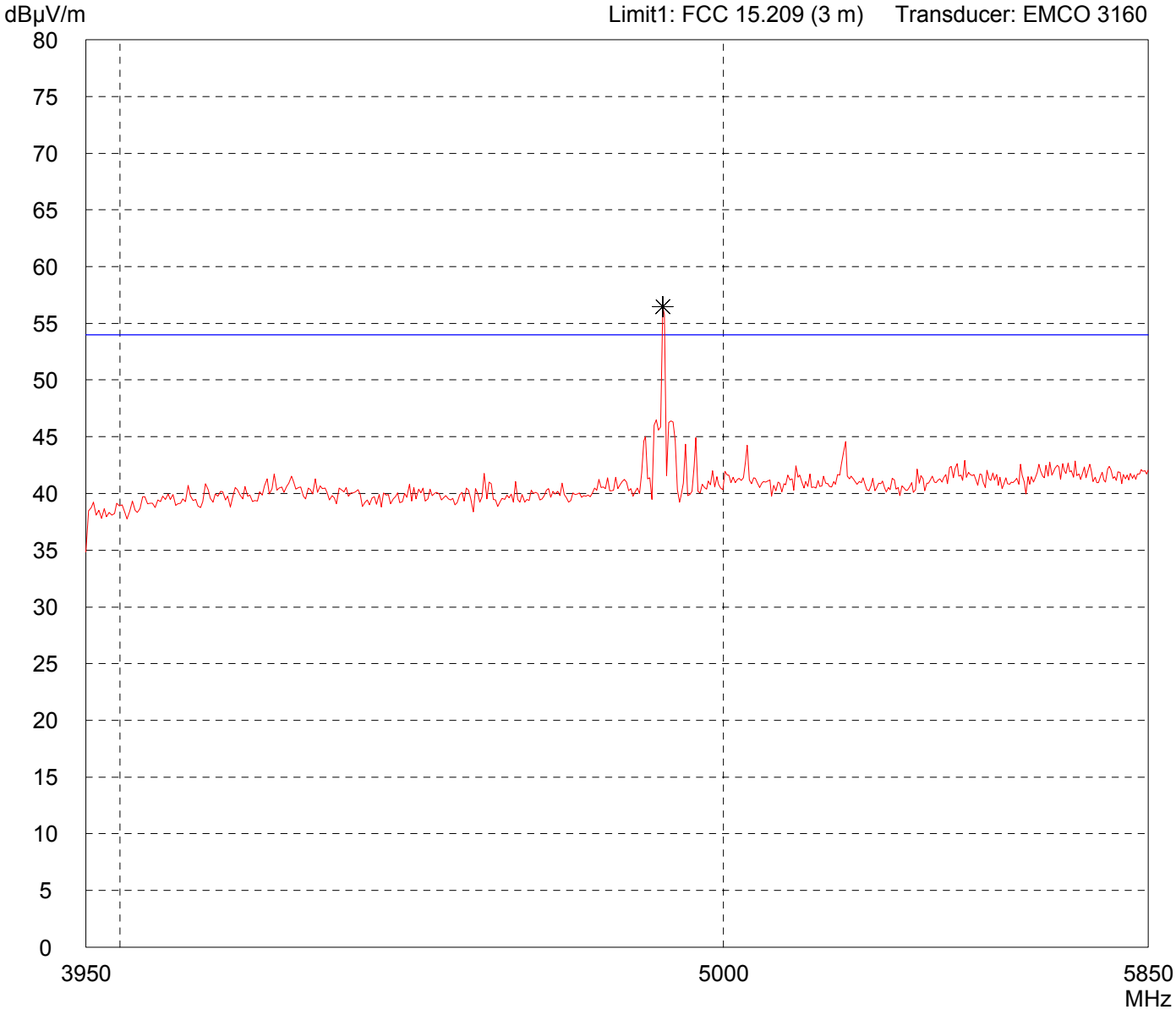


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 3.95 GHz - 5.85 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Middle frequency: 2445 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: Selected by hand

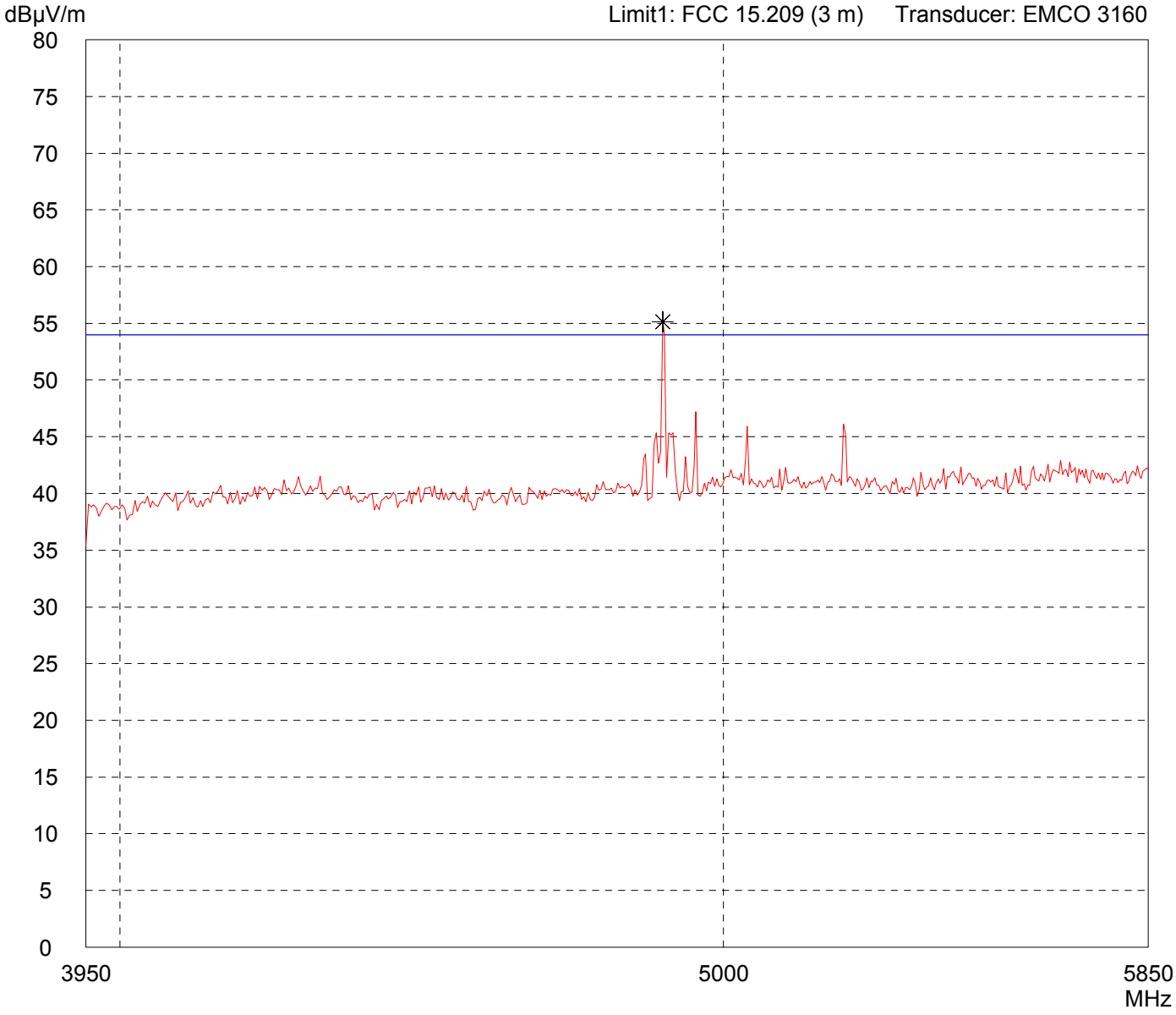


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 3.95 GHz - 5.85 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Middle frequency: 2445 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

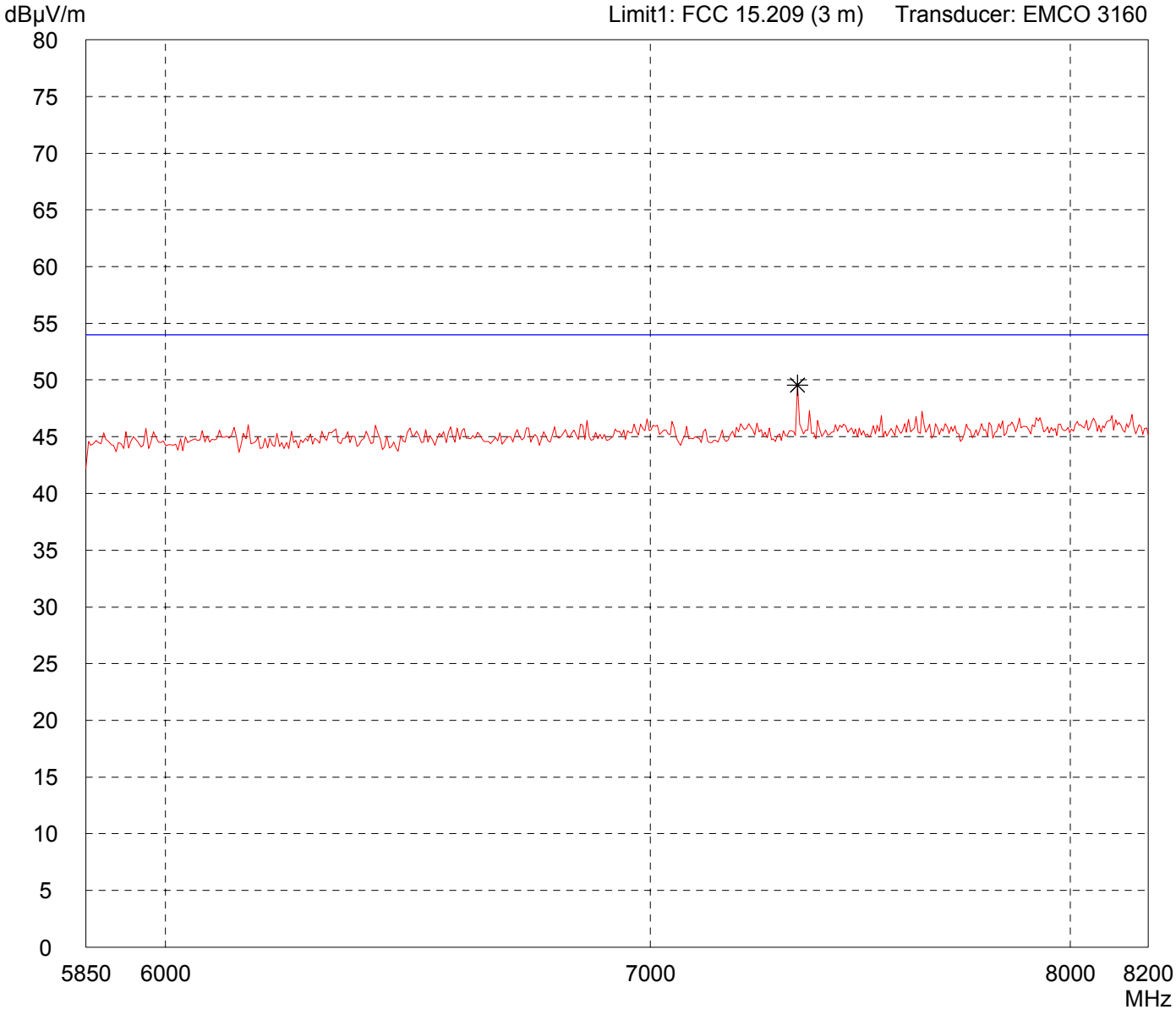
Detector: Peak	List of values: Selected by hand



Result: Prescan	Project file: 52305-80803

Radiated Emission Test 5.85 GHz - 8.2 GHz
acc. to FCC Part 15 Subpart C (FAR)

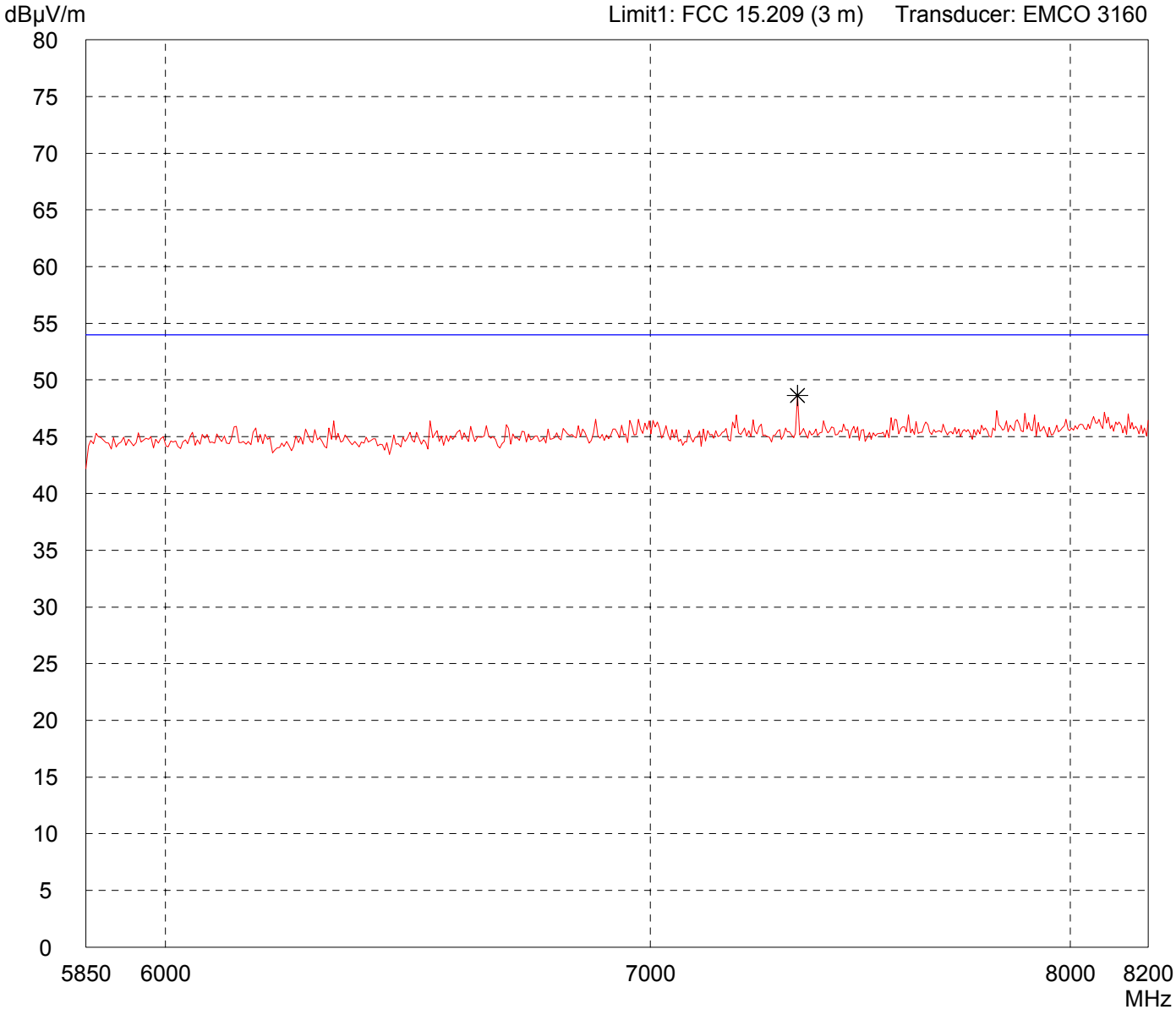
Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Middle frequency: 2445 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	
Detector: Peak	List of values: Selected by hand



Result: Prescan	Project file: 52305-80803

Radiated Emission Test 5.85 GHz - 8.2 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Middle frequency: 2445 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	
Detector: Peak	List of values: Selected by hand

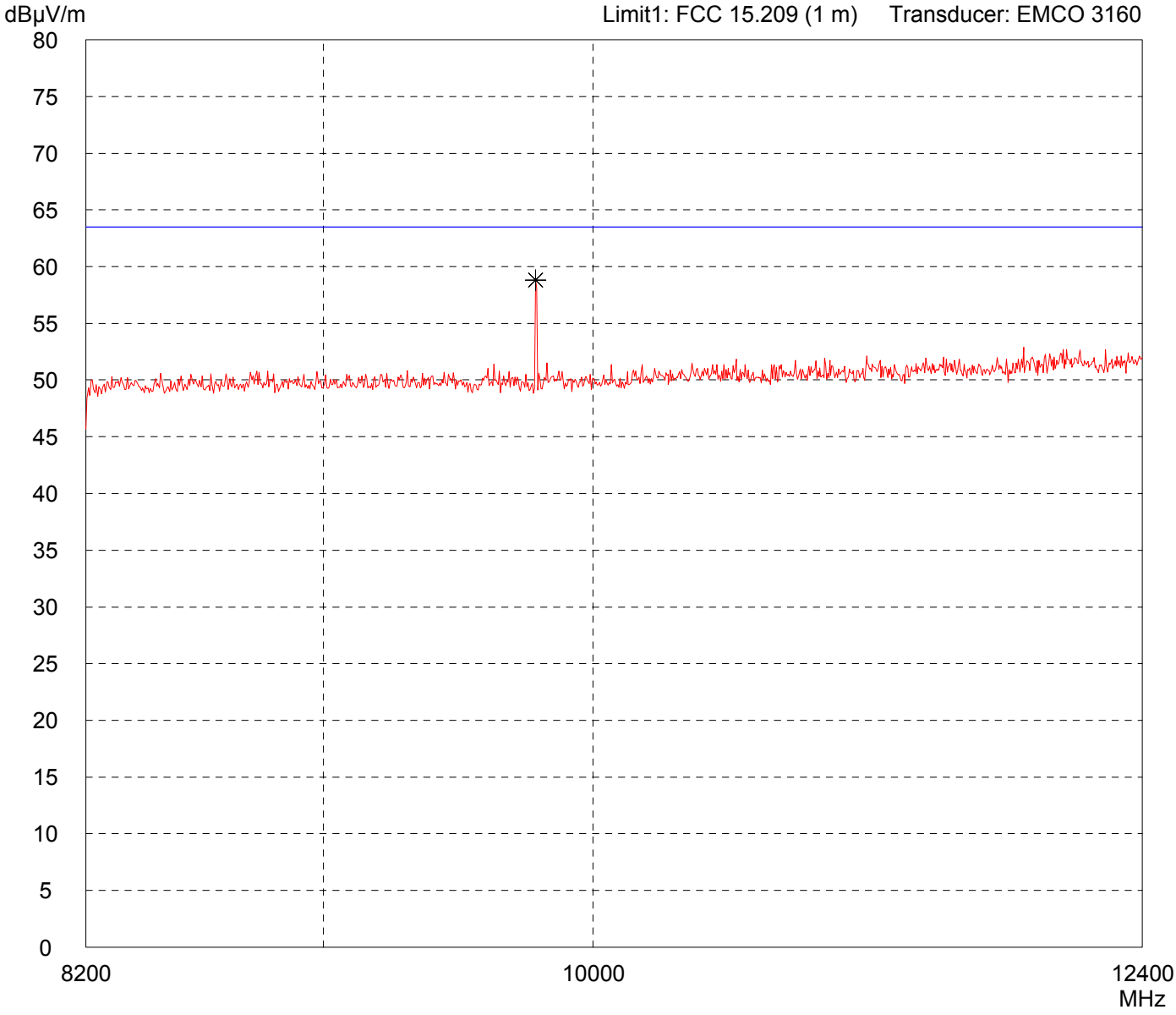


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 8.2 GHz - 12.4 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Middle frequency: 2445 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: 10 dB Margin / 50 Subranges

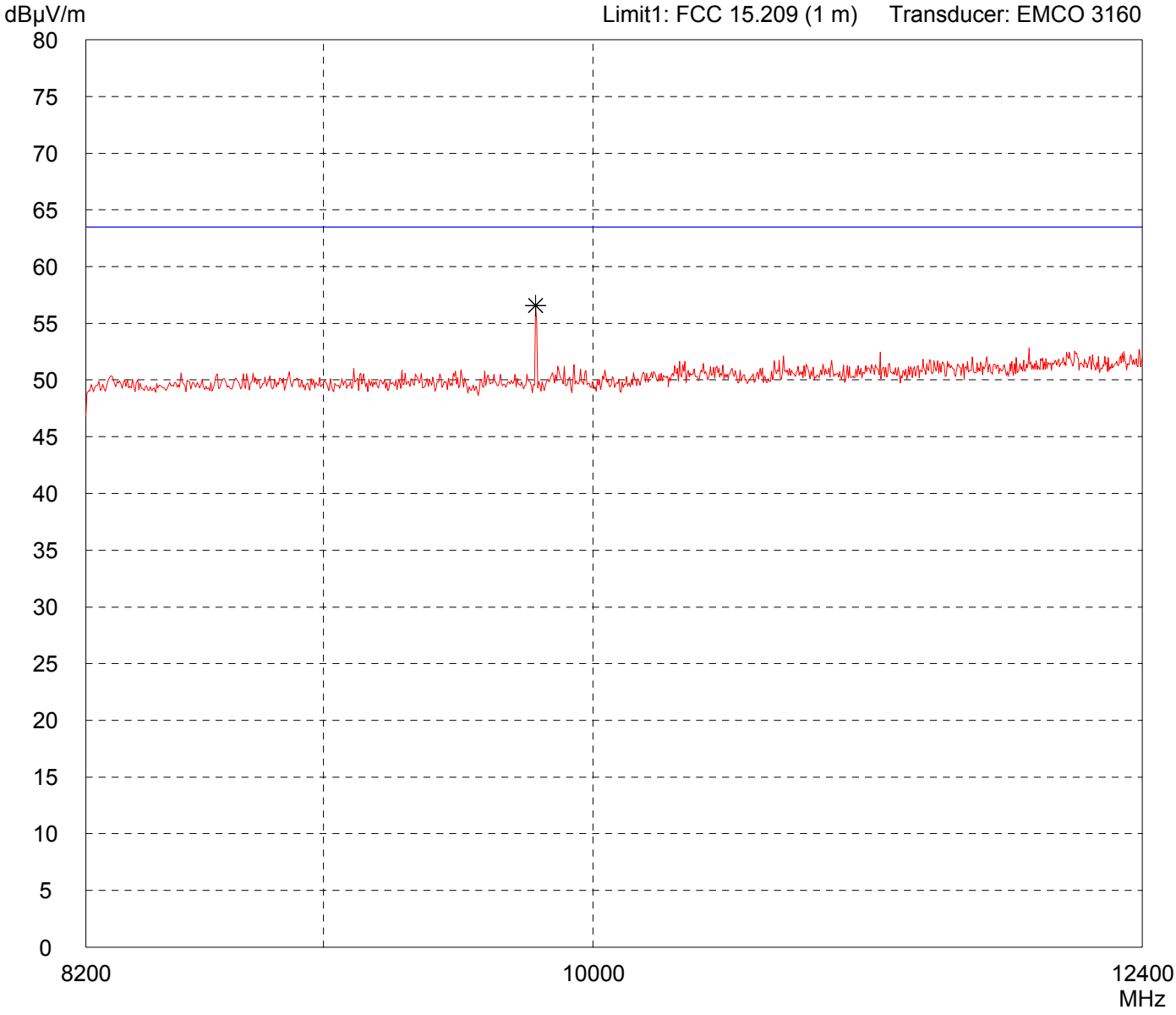


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 8.2 GHz - 12.4 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Middle frequency: 2445 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

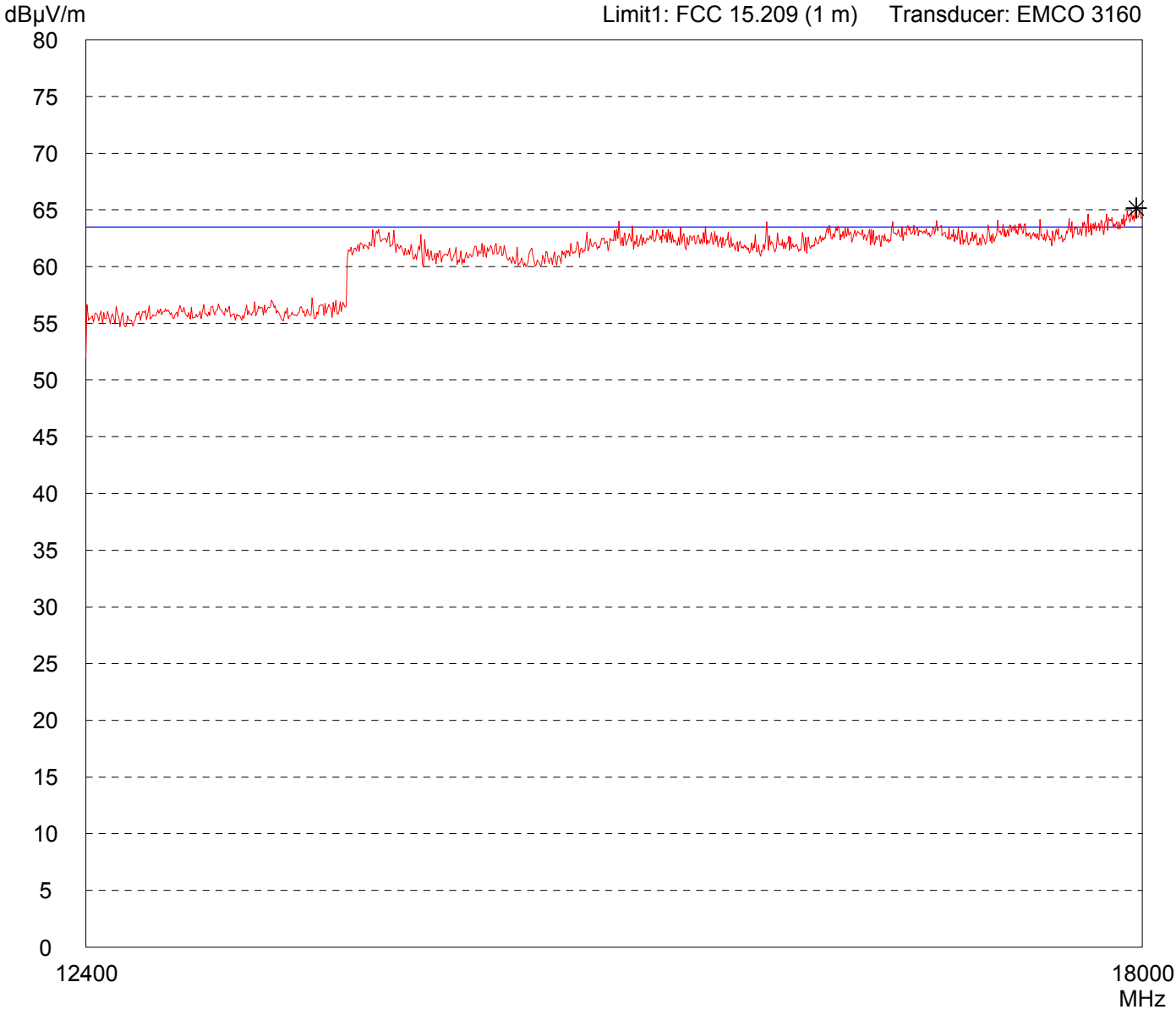
Detector: Peak	List of values: 10 dB Margin / 50 Subranges



Result: Prescan	Project file: 52305-80803

Radiated Emission Test 12.4 GHz - 18 GHz
acc. to FCC Part 15 Subpart C (FAR)

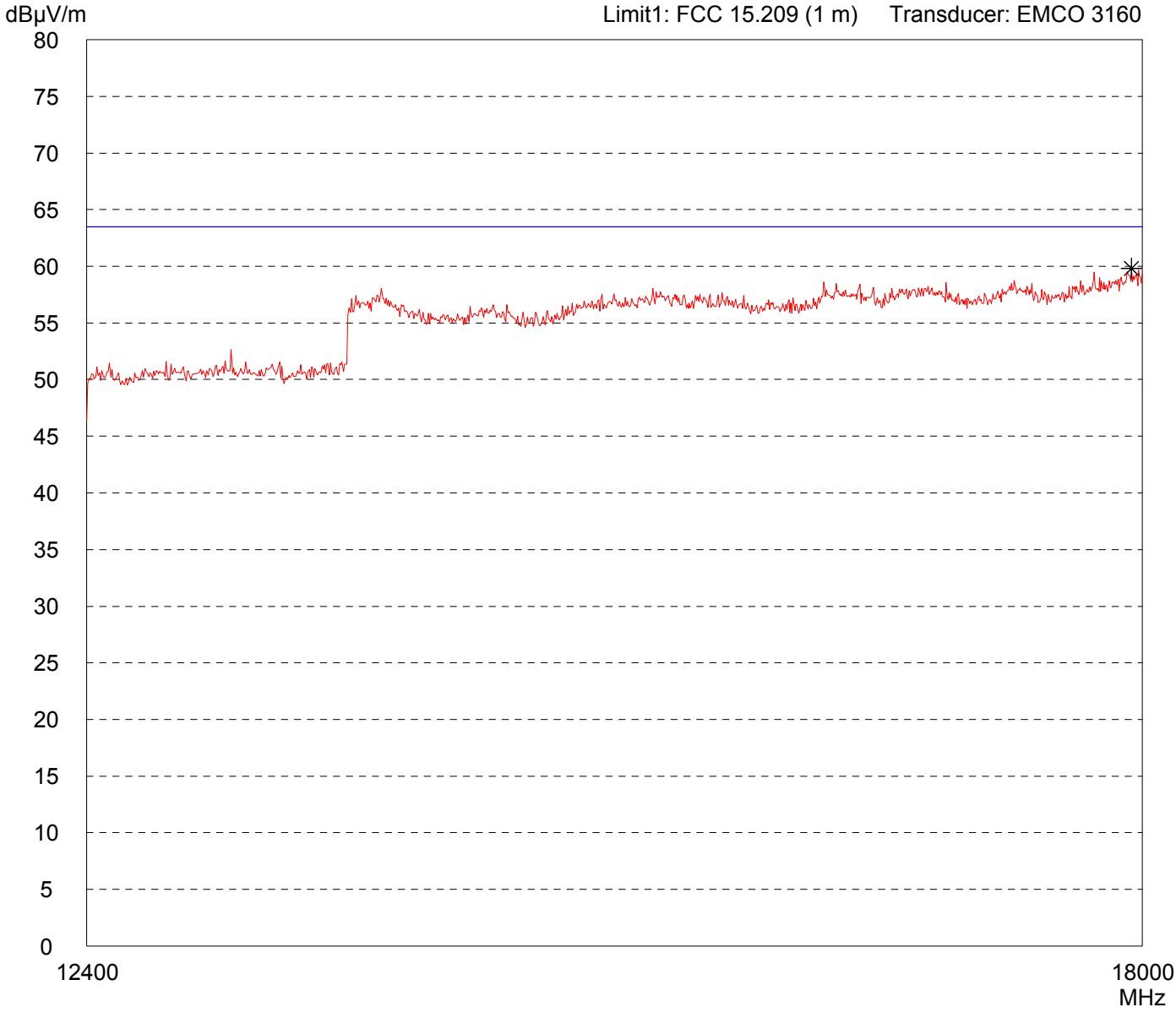
Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Middle frequency: 2445 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	
Detector: Peak	List of values: Selected by hand



Result: Prescan	Project file: 52305-80803

Radiated Emission Test 12.4 GHz - 18 GHz
acc. to FCC Part 15 Subpart C (FAR)

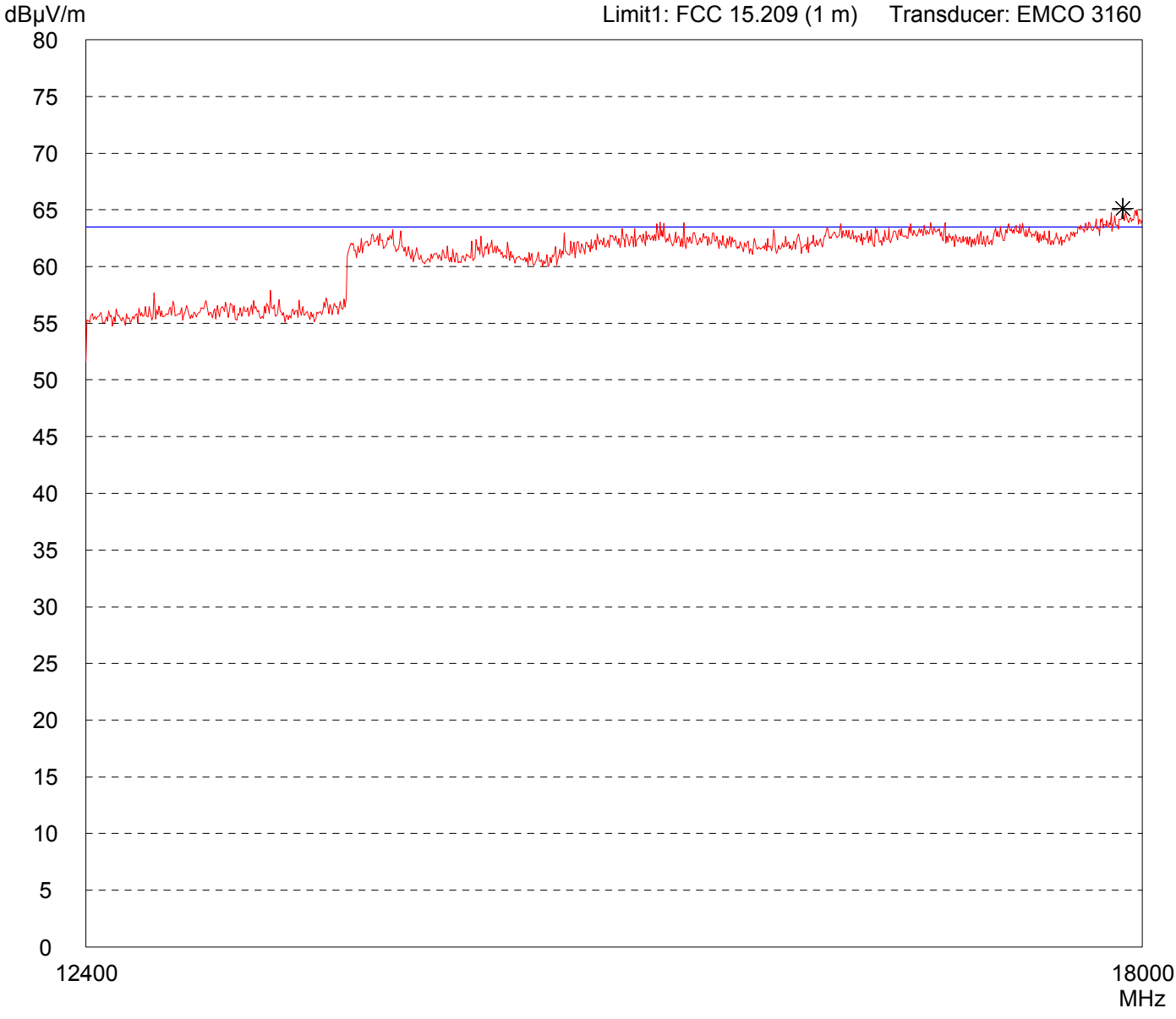
Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Middle frequency: 2445 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	
Detector: Peak	List of values: Selected by hand



Result: Prescan - VBW = 100 kHz	Project file: 52305-80803

Radiated Emission Test 12.4 GHz - 18 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Middle frequency: 2445 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	
Detector: Peak	List of values: Selected by hand



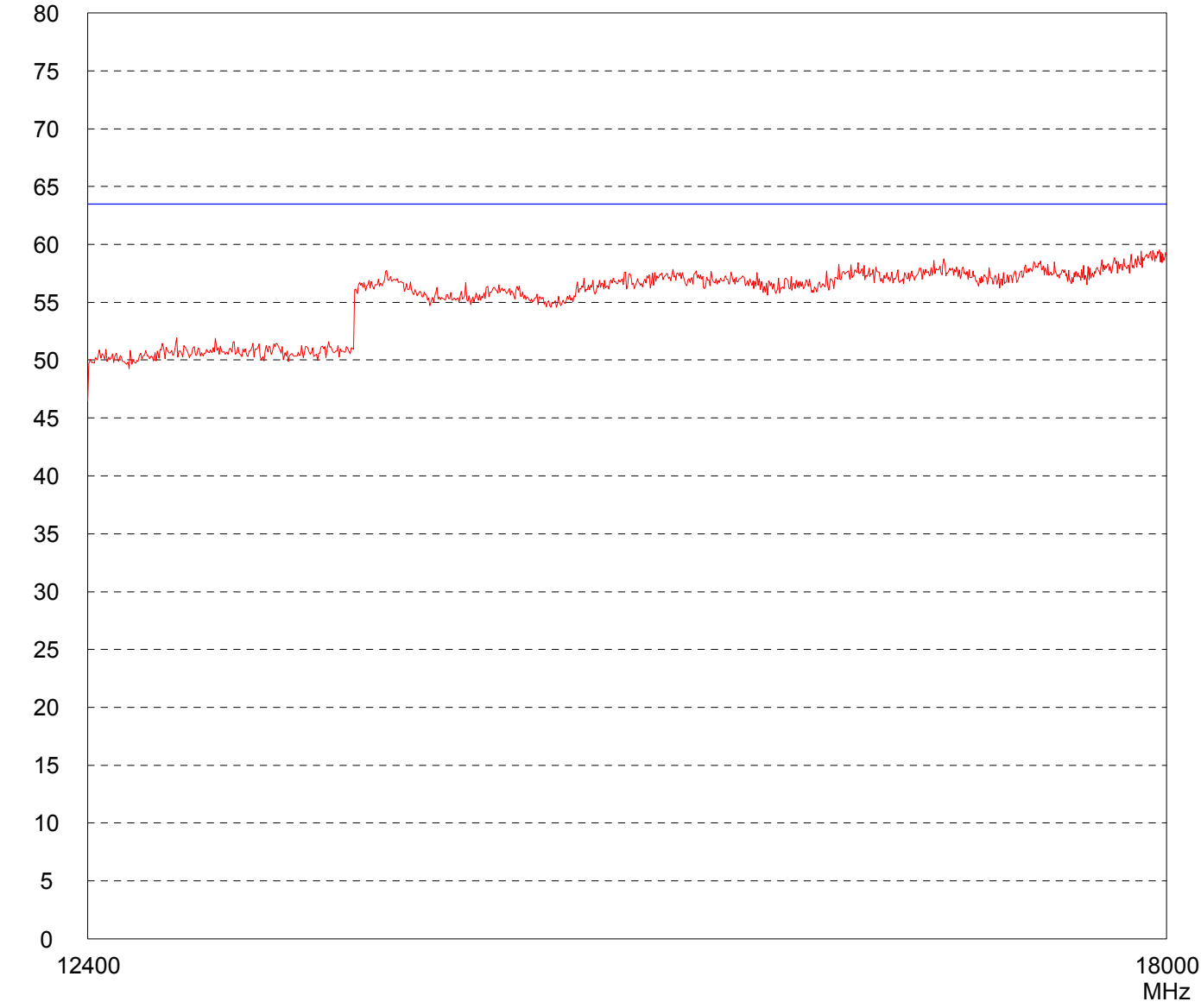
Result: Prescan	Project file: 52305-80803

Radiated Emission Test 12.4 GHz - 18 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Middle frequency: 2445 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: Selected by hand

dBµV/m Limit1: FCC 15.209 (1 m) Transducer: EMCO 3160

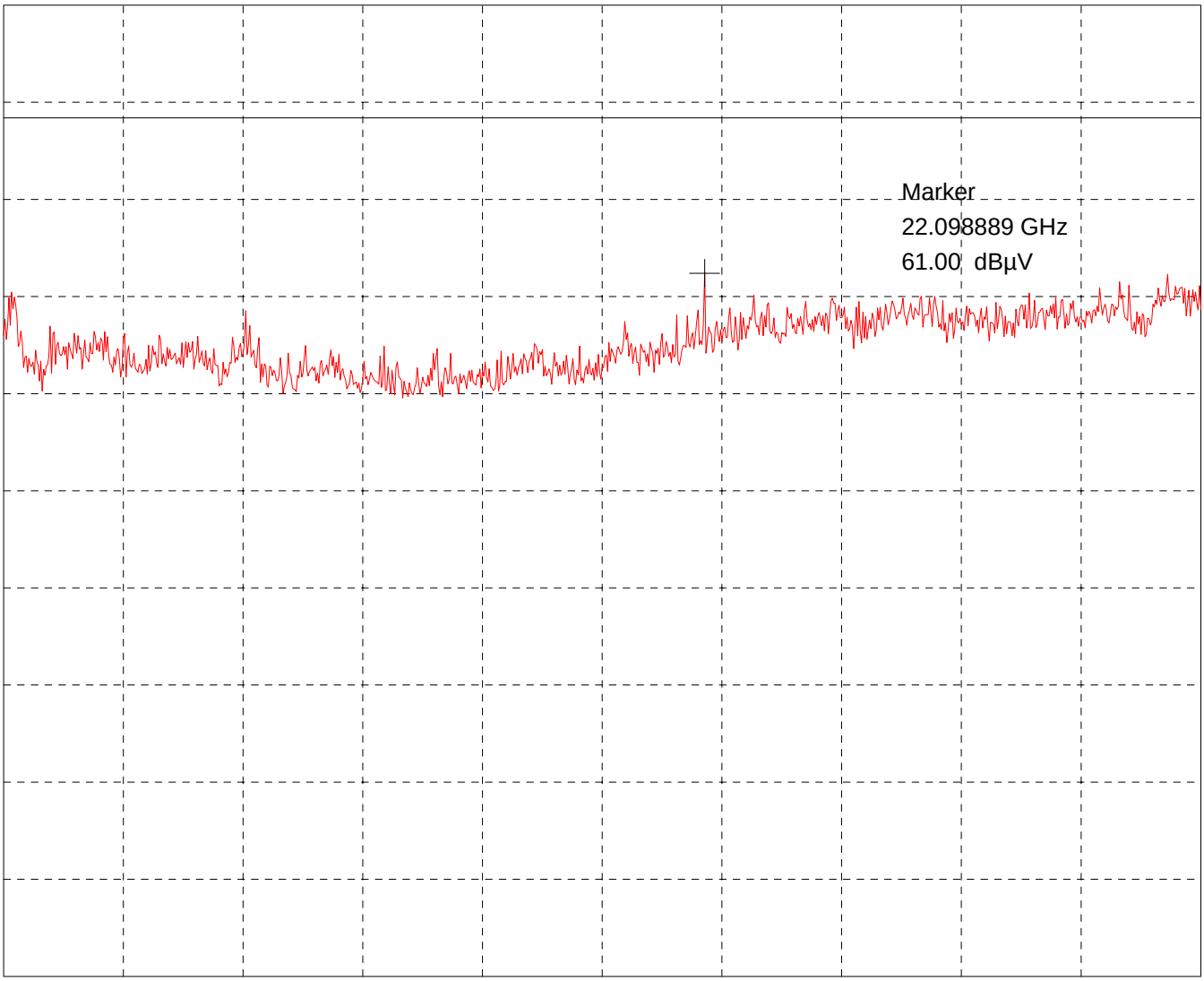


Result: Prescan - VBW = 100 kHz	Project file: 52305-80803

Radiated Emission Test acc. to FCC Part 15 Subpart C

Model: Wheelchair M15	Mode: - Battery supply - Transmitting continously with modulation - Middle frequency: 2445 MHz - Polarisation: horizontal - Distance: 0.5 m
Serial No.:	
Applicant: Ulrich Alber GmbH	

Ref.Level 74.8 dBµV ATT 0 dB Ref. Offset 42.8 dB
5 dB/Div.



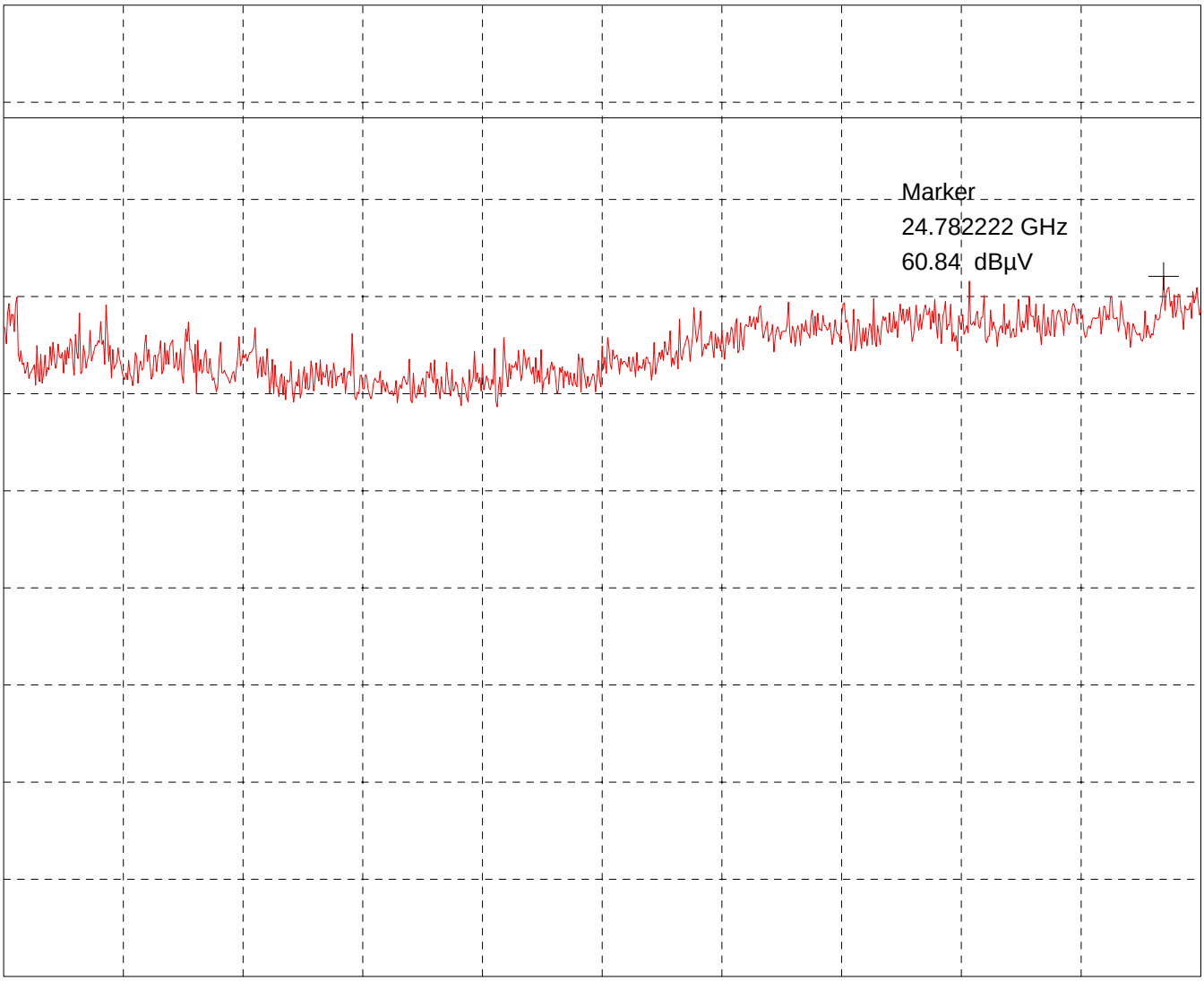
Start 18.000 GHz Stop 25.000 GHz
RBW 1 MHz VBW 1 MHz SWP 40 ms

Tested by: M. Steindl	Project-No.: 52305-080803
Date: 2008-07-04	

Radiated Emission Test acc. to FCC Part 15 Subpart C

Model: Wheelchair M15	Mode: - Battery supply - Transmitting continously with modulation - Middle frequency: 2445 MHz - Polarisation: vertical - Distance: 0.5 m
Serial No.:	
Applicant: Ulrich Alber GmbH	

Ref.Level 74.8 dBµV ATT 0 dB Ref. Offset 42.8 dB
5 dB/Div.



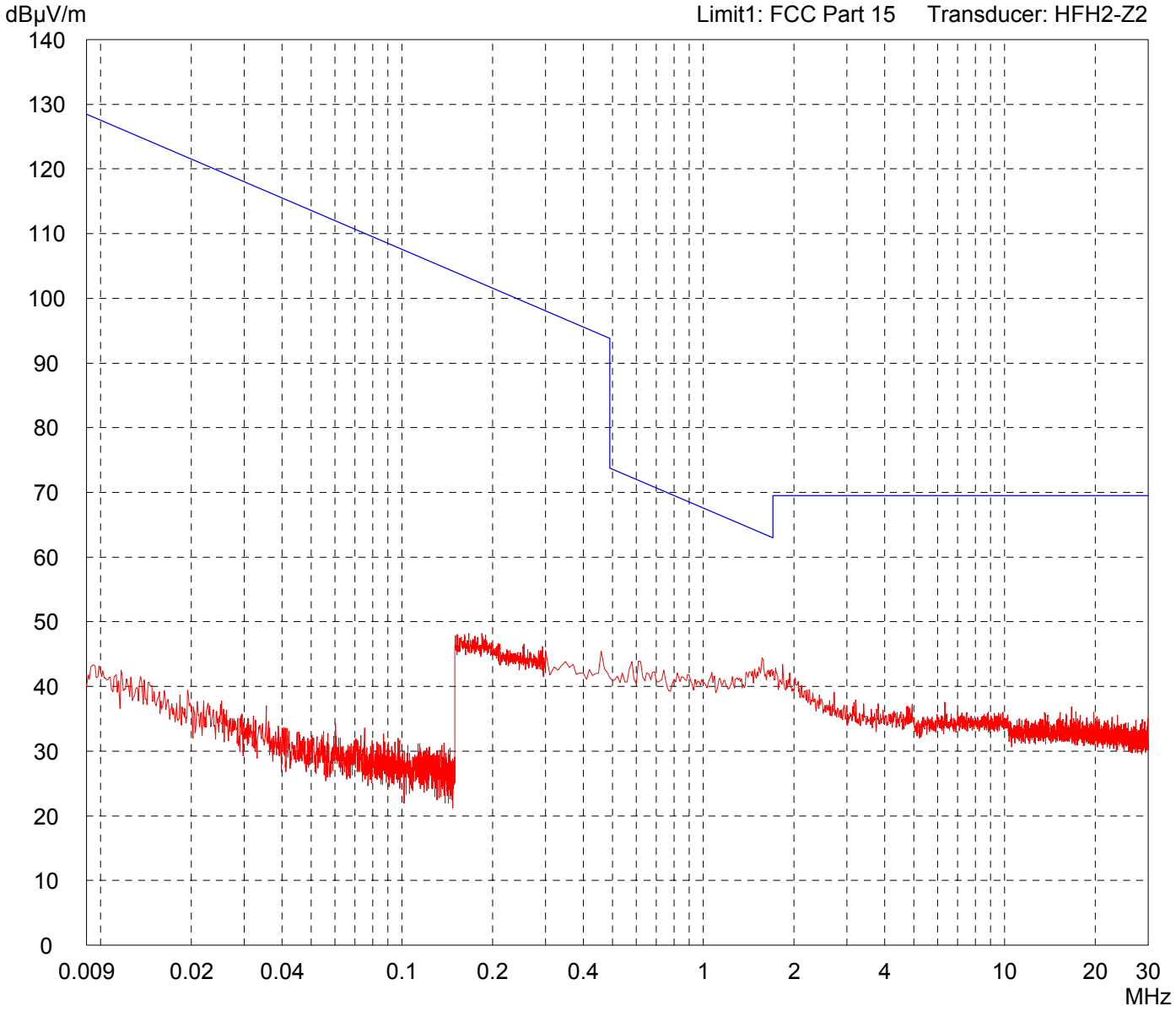
Start 18.000 GHz Stop 25.000 GHz
RBW 1 MHz VBW 1 MHz SWP 40 ms

Tested by: M. Steindl	Project-No.: 52305-080803
Date: 2008-07-04	

Radiated Emission Test 9 kHz - 30 MHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Highest frequency: 2465 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres	
Date of test: 07/01/2008 / Operator: M. Steindl	
Test performed: by hand / File name: default.emi	

Detector: Peak	List of values: 10 dB Margin / 50 Subranges



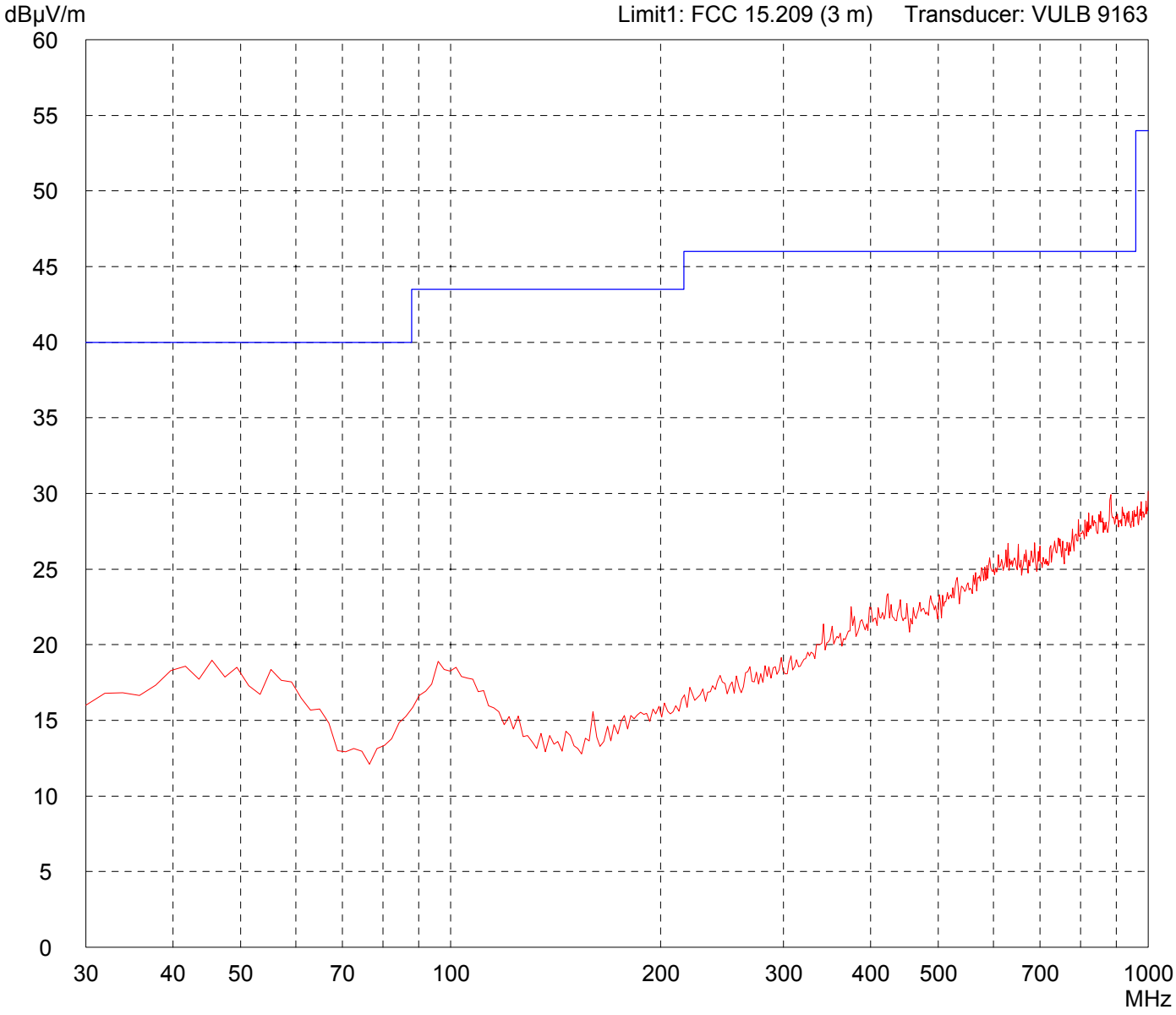
Result: Prescan	Project file: 52305-80803

Senton GmbH / Aeussere Fruehlingstrasse 45 / D-94315 Straubing / Germany / Tel. +49 (0)9421 5522-0 / Fax +49 (0)9421 5522-99

Radiated Emission Test 30 MHz - 1 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Highest frequency: 2465 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 07/01/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: 10 dB Margin / 50 Subranges

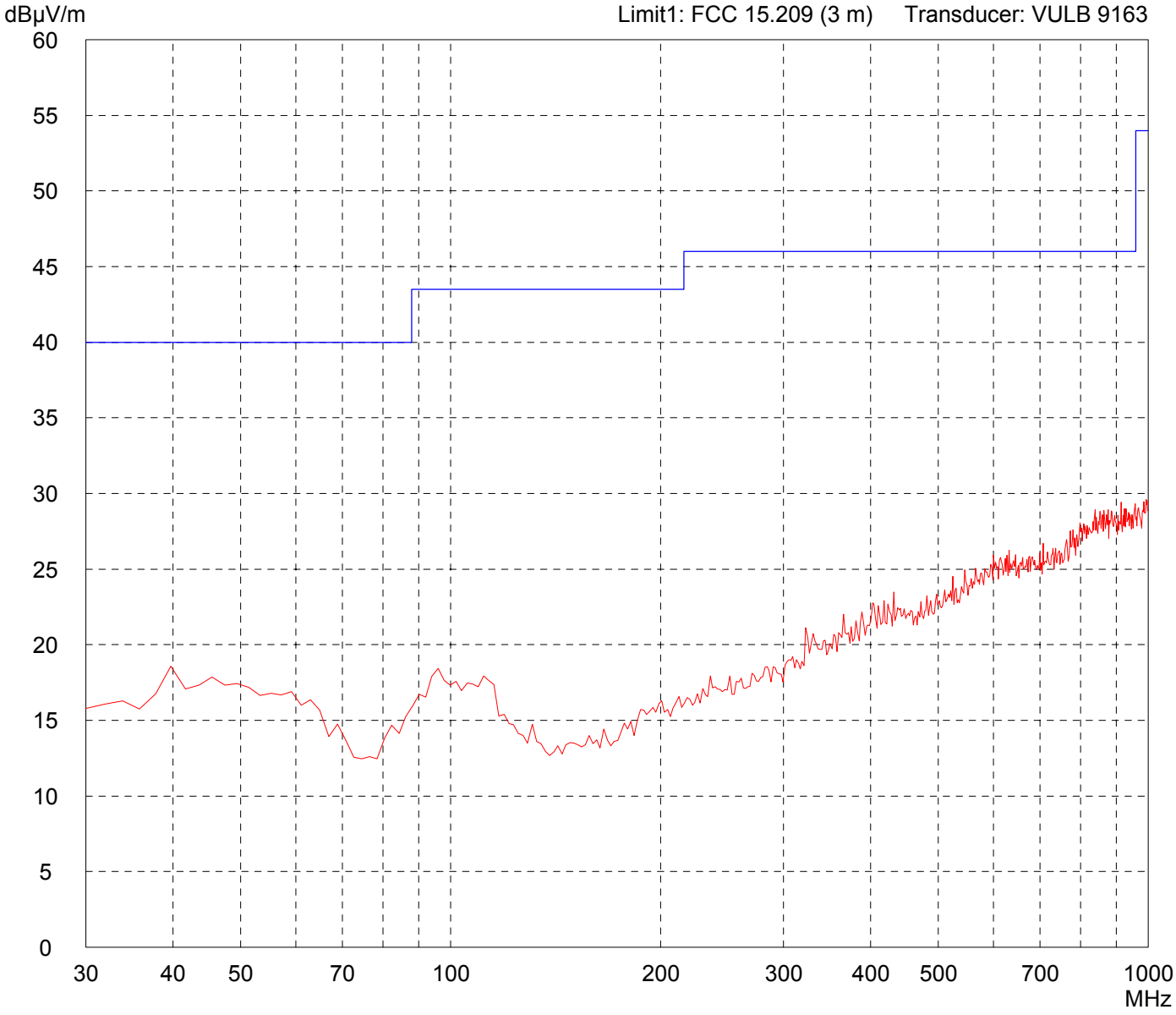


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 30 MHz - 1 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Highest frequency: 2465 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Vertical Polarization	
Date of test: 07/01/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

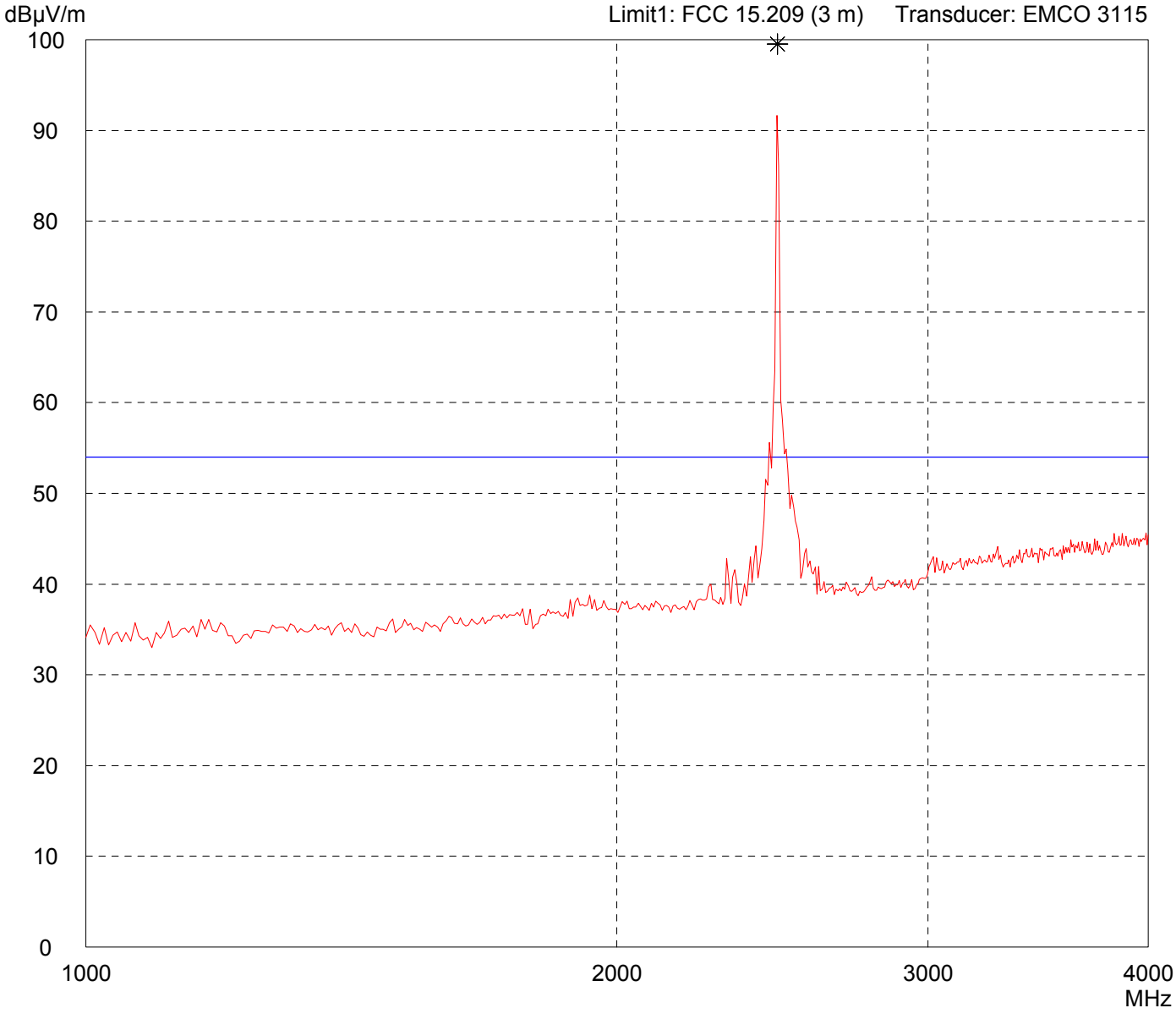
Detector: Peak	List of values: 10 dB Margin / 50 Subranges



Result: Prescan	Project file: 52305-80803

Radiated Emission Test 1 GHz - 4 GHz
acc. to FCC Part 15 Subpart C (FAR)

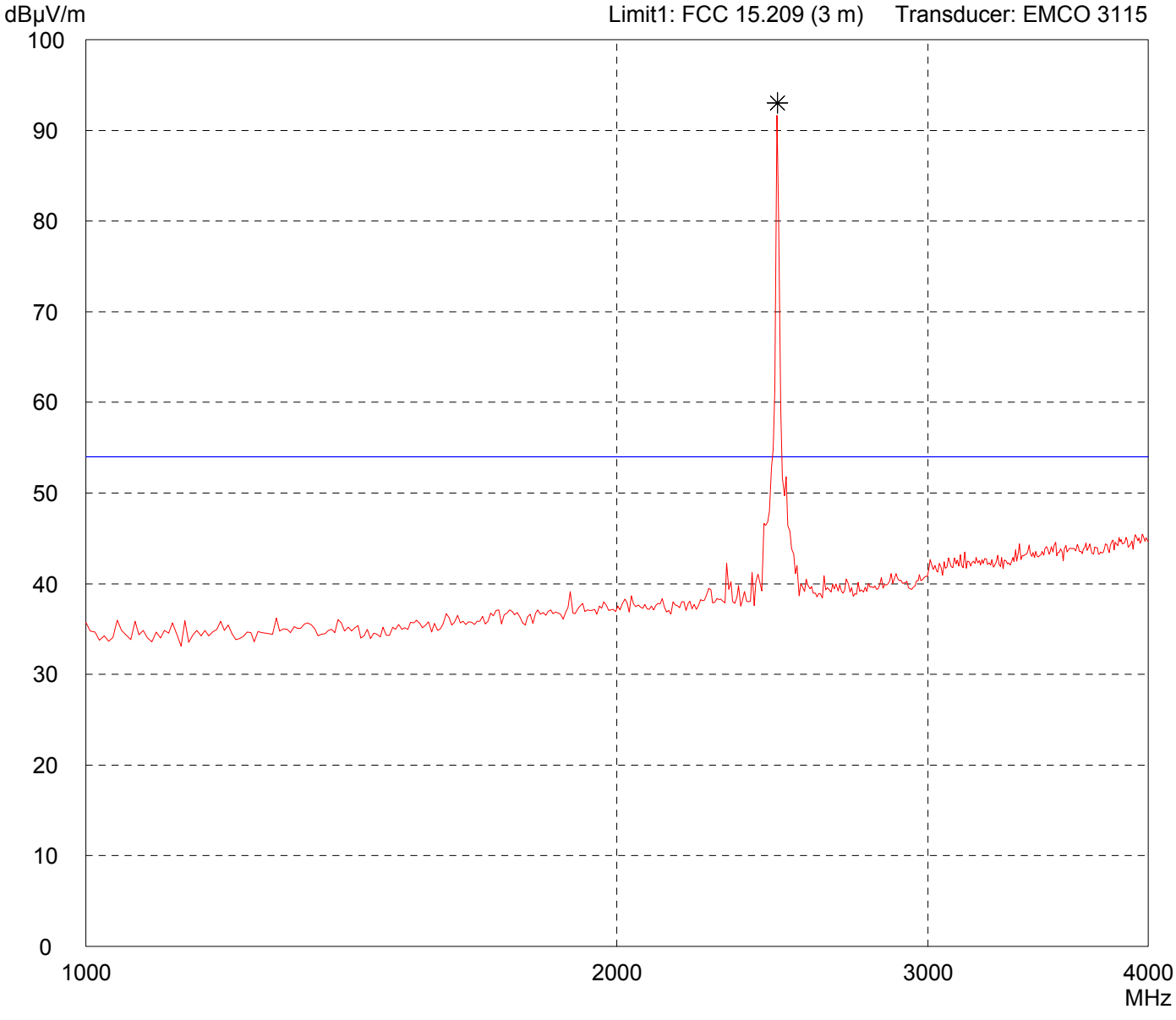
Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Highest frequency: 2465 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	
Detector: Peak	List of values: Selected by hand



Result: Prescan	Project file: 52305-80803

Radiated Emission Test 1 GHz - 4 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Highest frequency: 2465 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	
Detector: Peak	List of values: Selected by hand

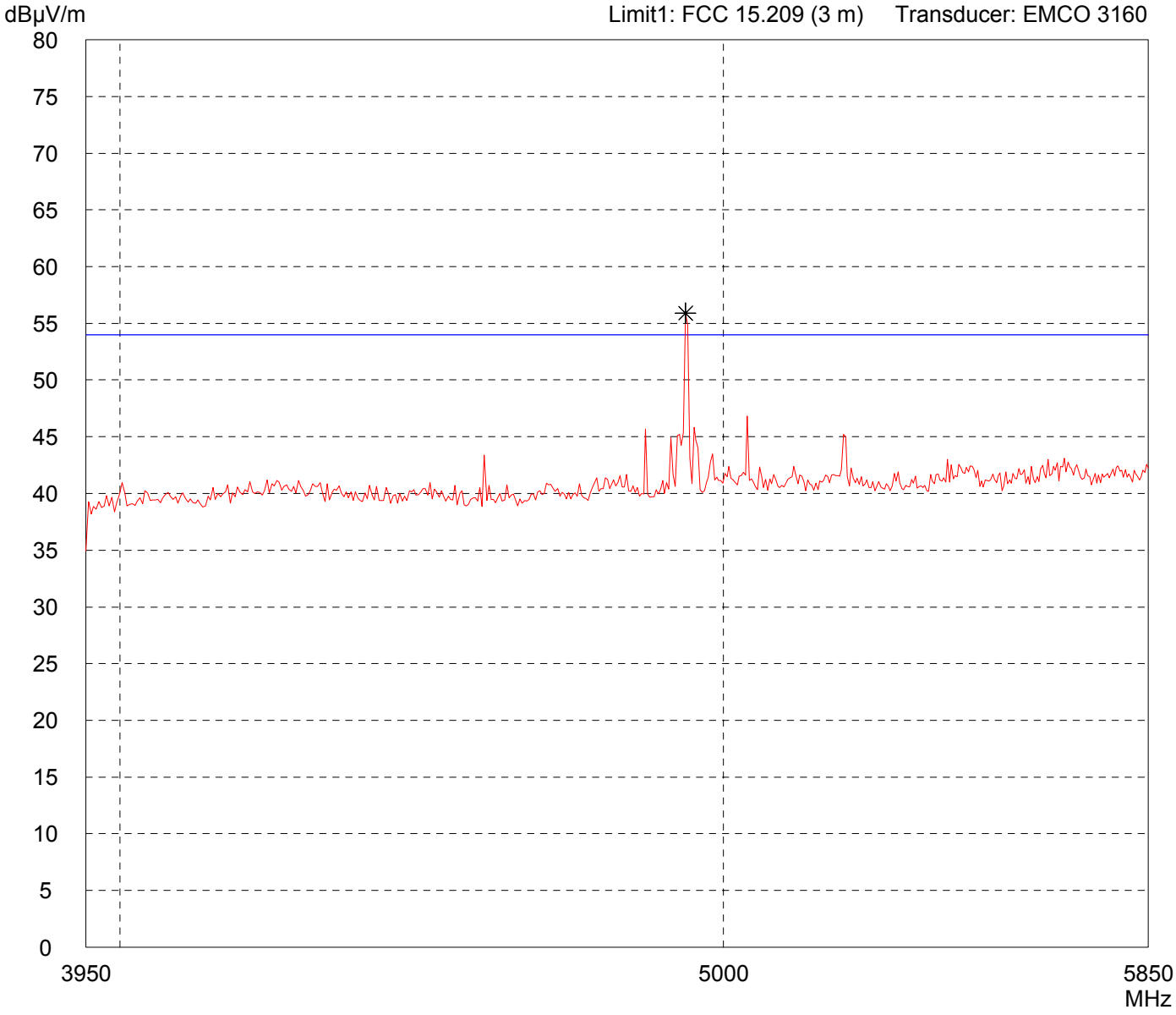


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 3.95 GHz - 5.85 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Highest frequency: 2465 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: Selected by hand

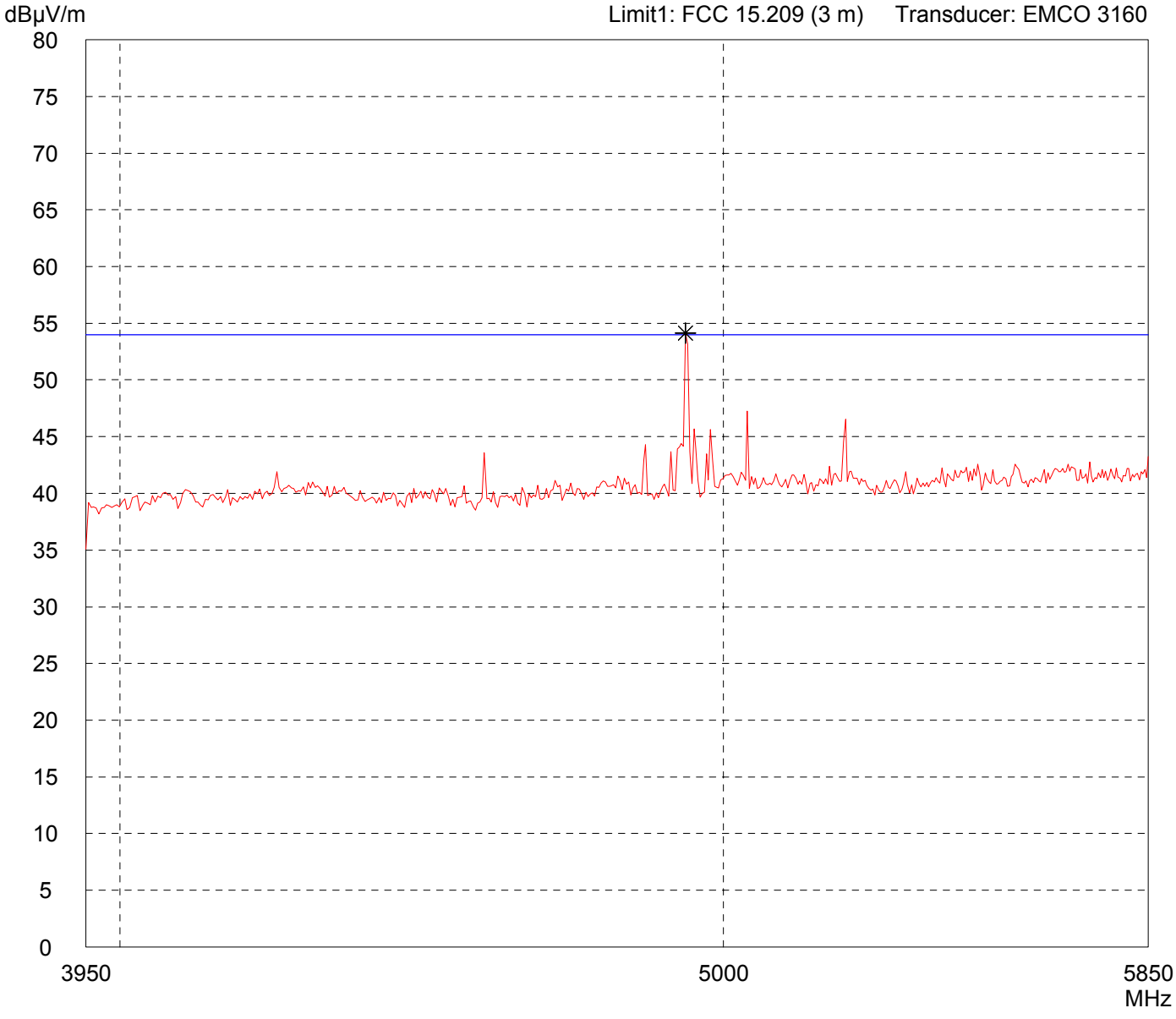


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 3.95 GHz - 5.85 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Highest frequency: 2465 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

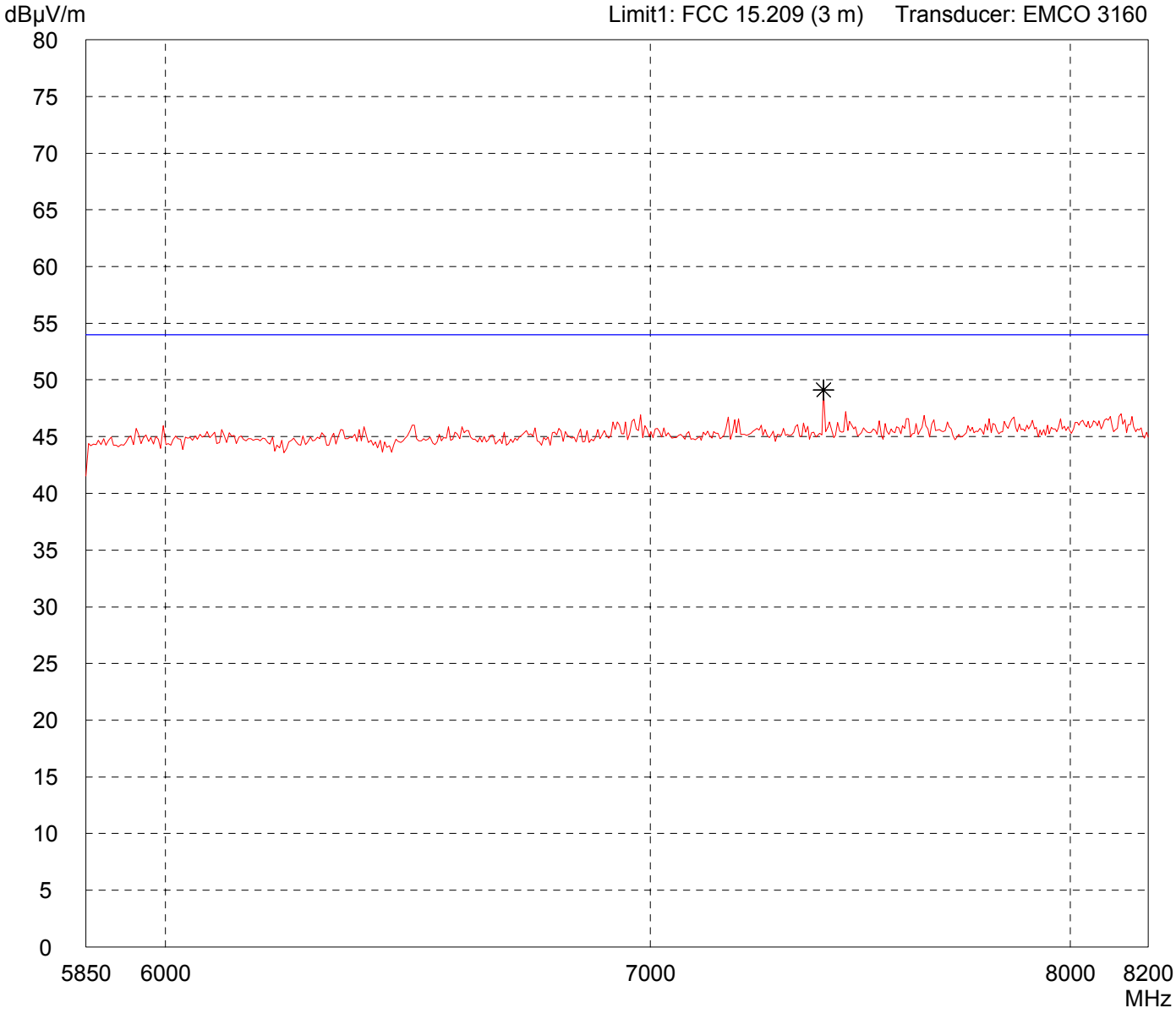
Detector: Peak	List of values: Selected by hand



Result: Prescan	Project file: 52305-80803

Radiated Emission Test 5.85 GHz - 8.2 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Highest frequency: 2465 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	
Detector: Peak	List of values: Selected by hand

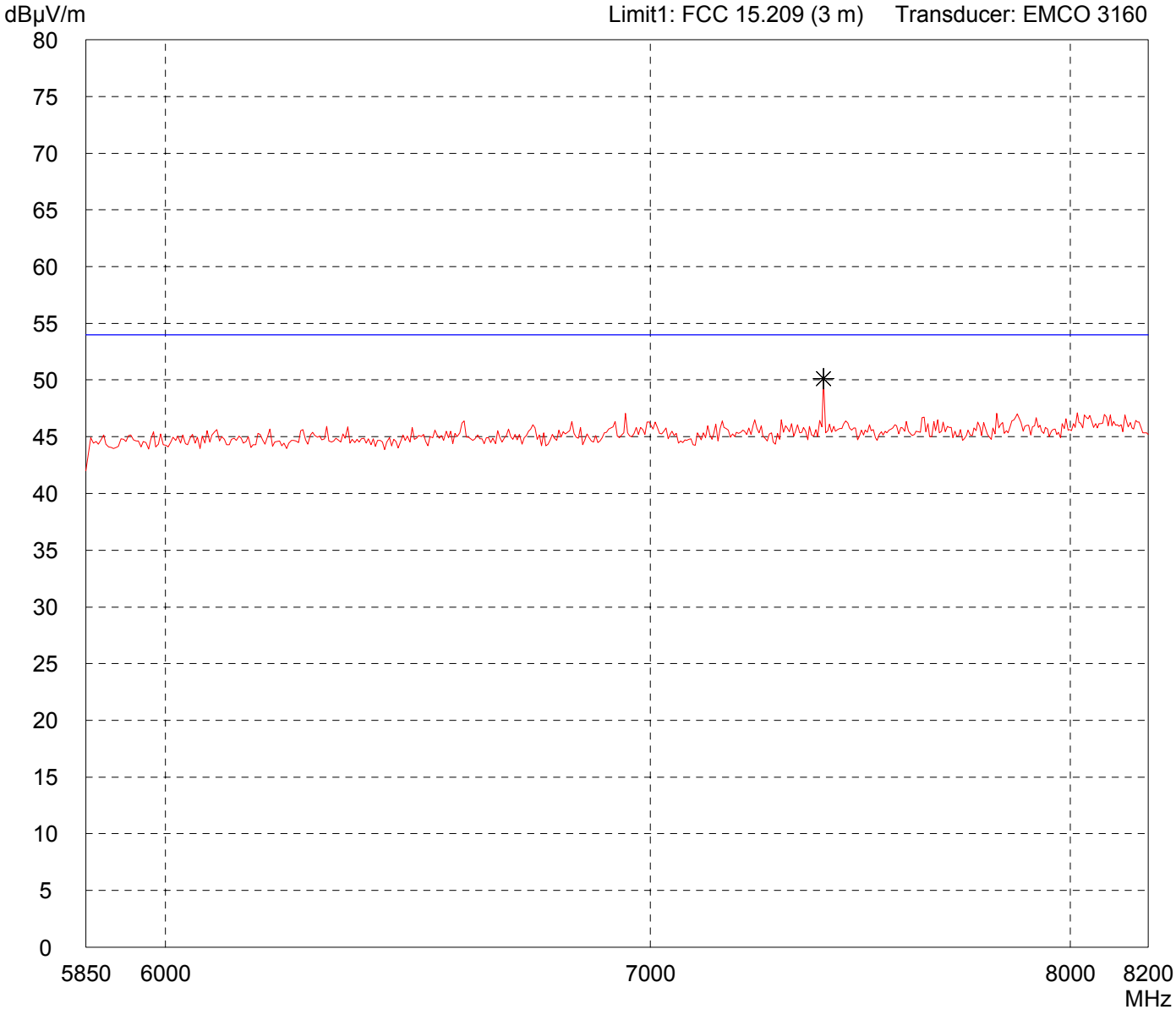


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 5.85 GHz - 8.2 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Highest frequency: 2465 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: Selected by hand

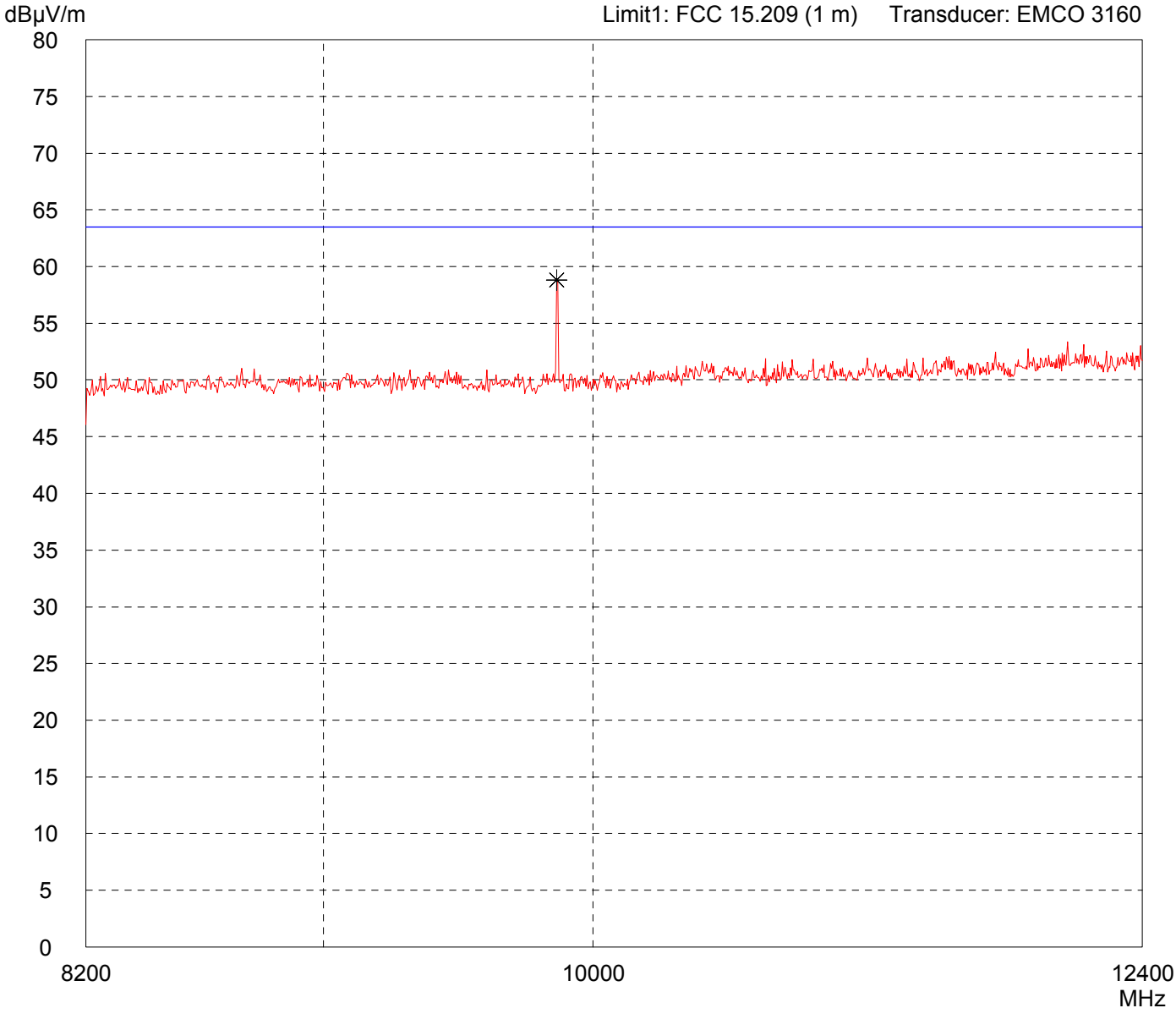


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 8.2 GHz - 12.4 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Highest frequency: 2465 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: 10 dB Margin / 50 Subranges

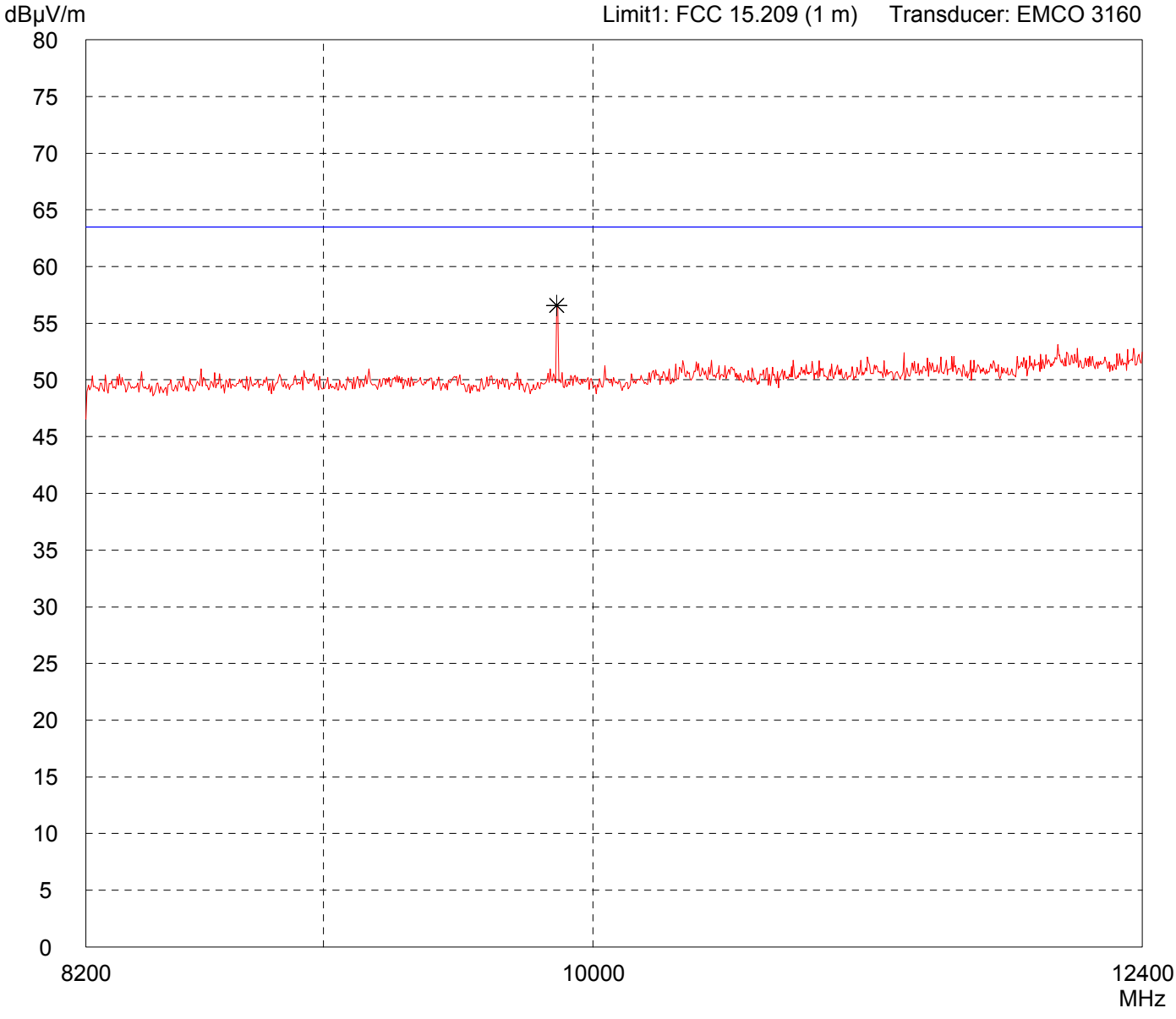


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 8.2 GHz - 12.4 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Highest frequency: 2465 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

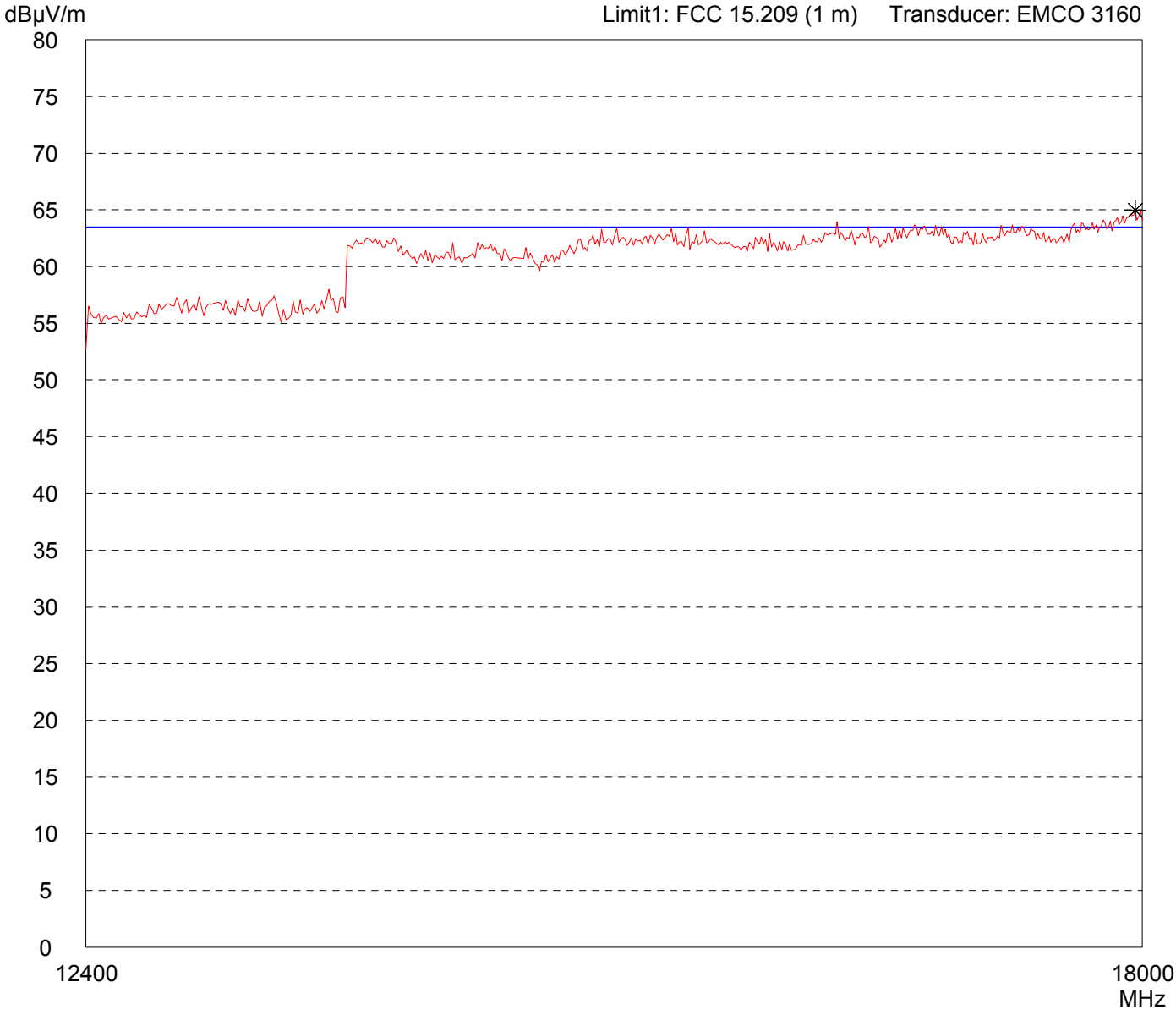
Detector: Peak	List of values: 10 dB Margin / 50 Subranges



Result: Prescan	Project file: 52305-80803

Radiated Emission Test 12.4 GHz - 18 GHz
acc. to FCC Part 15 Subpart C (FAR)

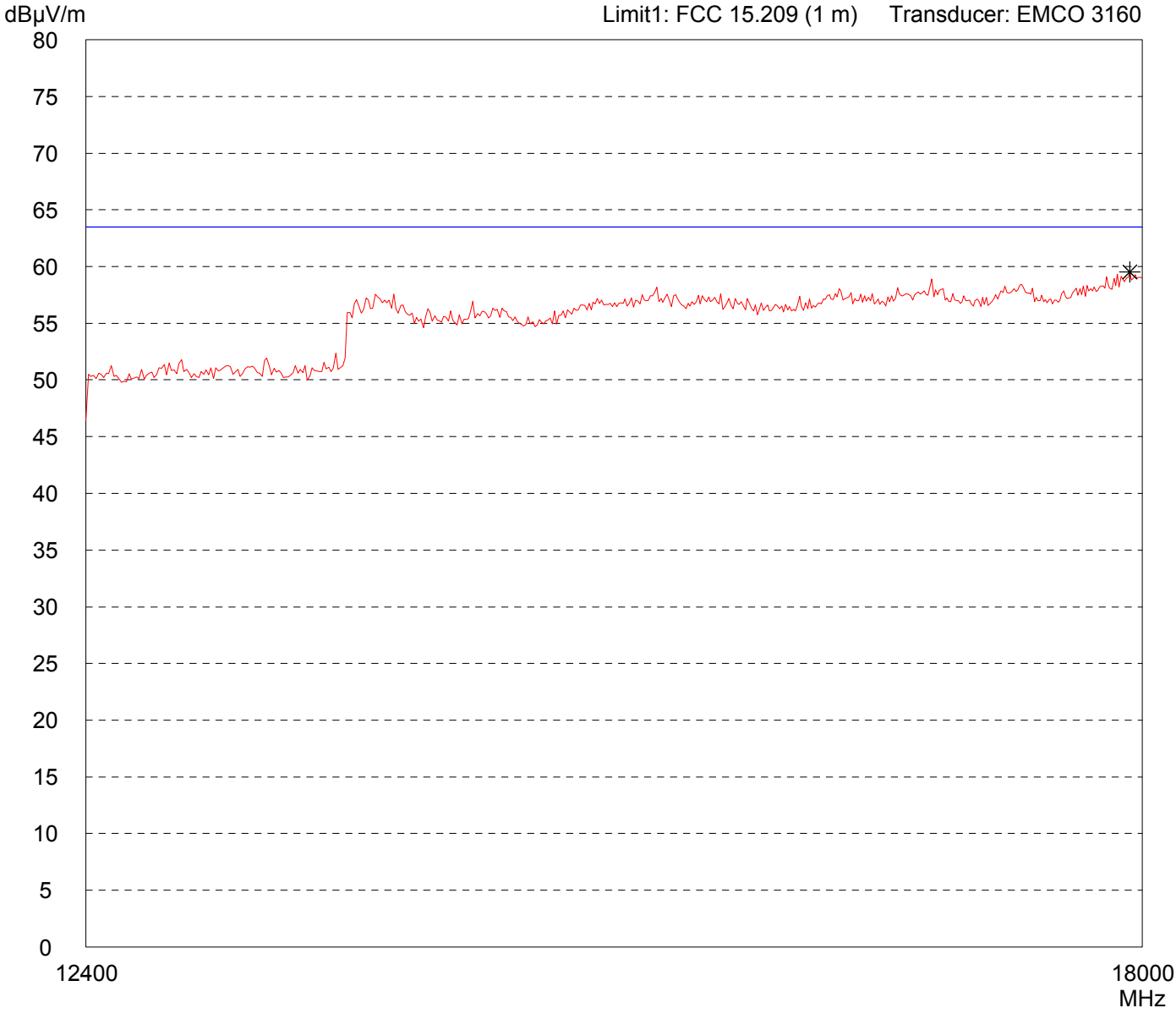
Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Highest frequency: 2465 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	
Detector: Peak	List of values: Selected by hand



Result: Prescan	Project file: 52305-80803

Radiated Emission Test 12.4 GHz - 18 GHz
acc. to FCC Part 15 Subpart C (FAR)

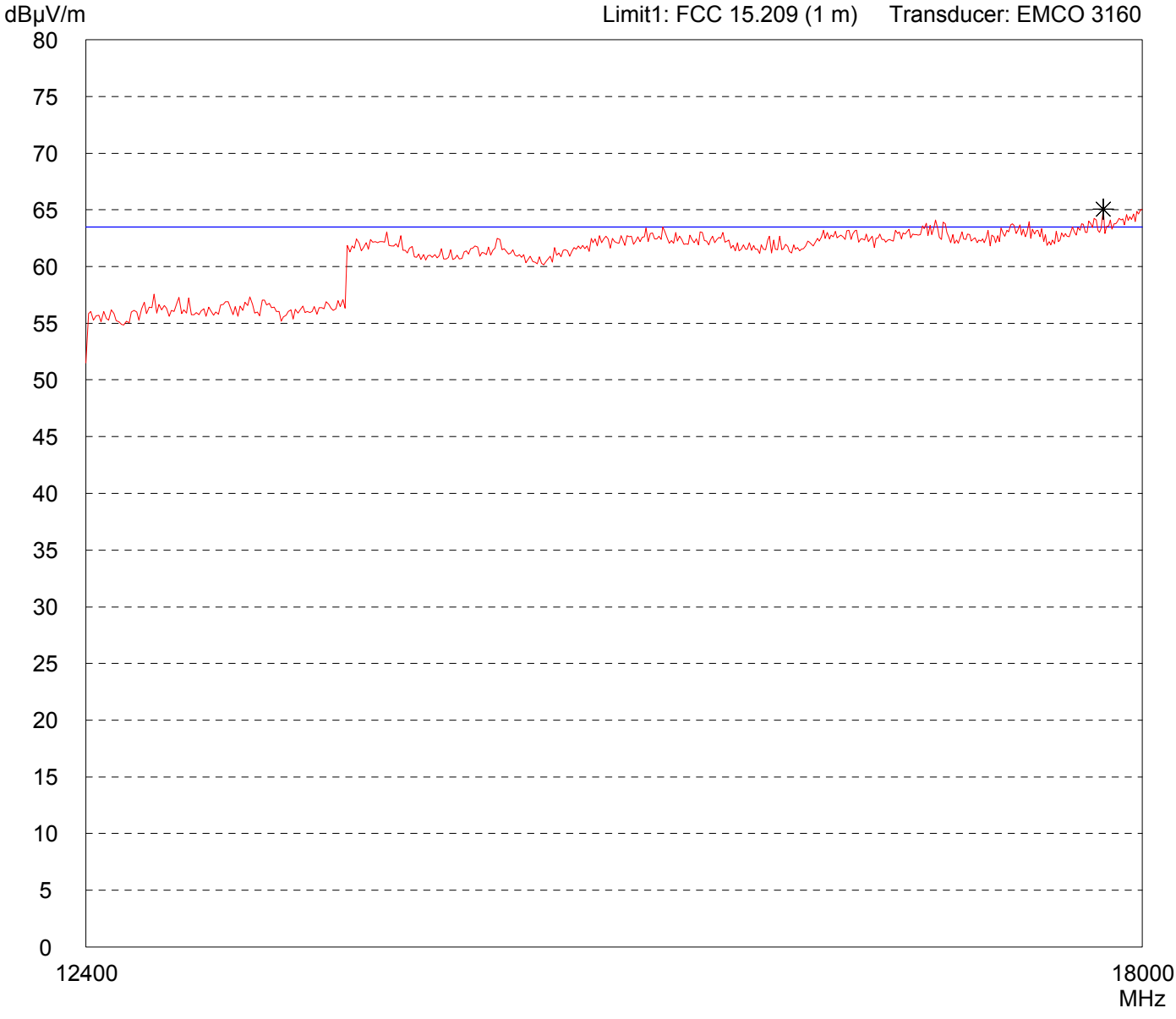
Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Highest frequency: 2465 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	
Detector: Peak	List of values: Selected by hand



Result: Prescan - VBW = 100 kHz	Project file: 52305-80803

Radiated Emission Test 12.4 GHz - 18 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Highest frequency: 2465 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	
Detector: Peak	List of values: Selected by hand



Result: Prescan	Project file: 52305-80803

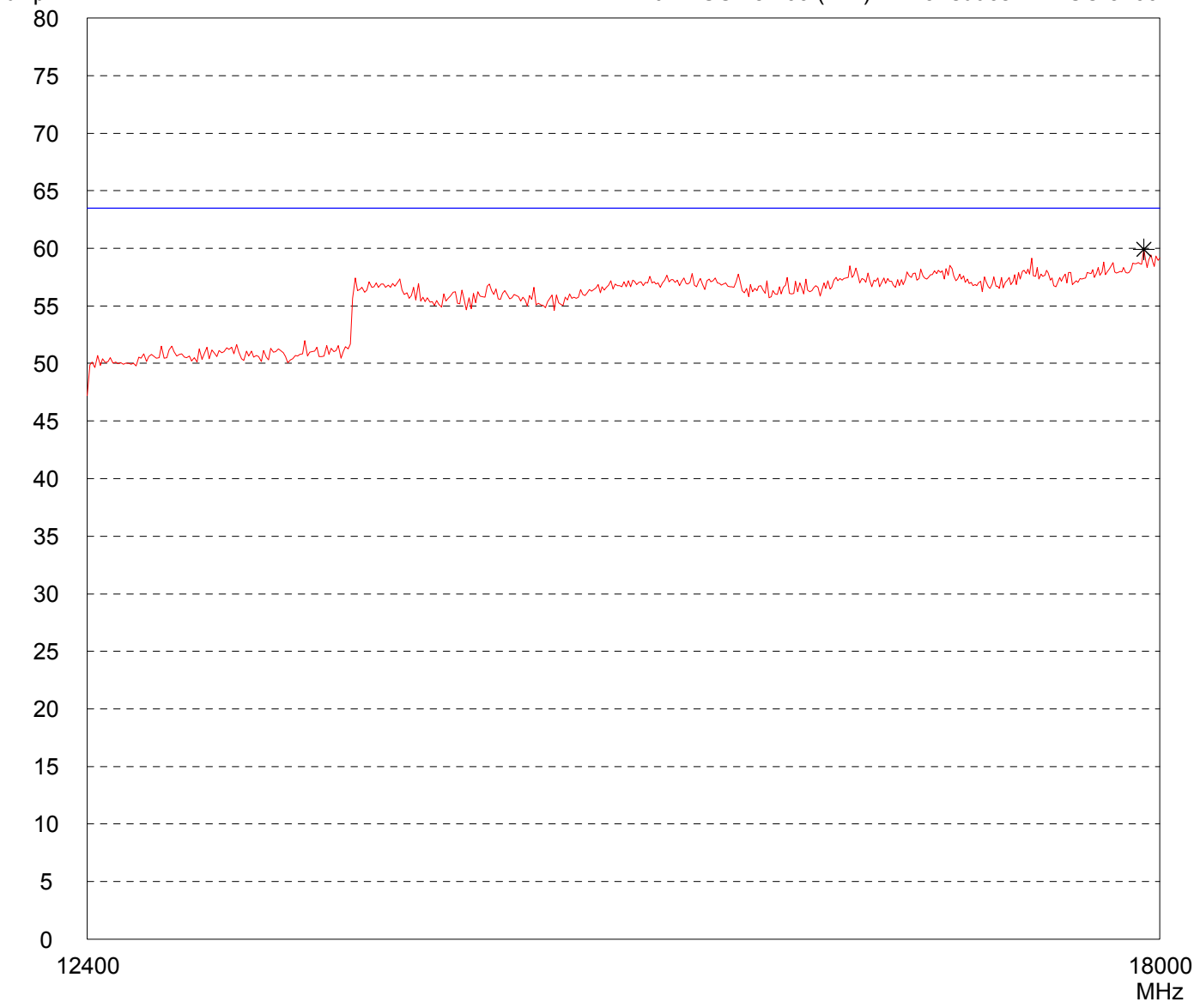
Radiated Emission Test 12.4 GHz - 18 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Transmitting continously with modulation - Highest frequency: 2465 MHz
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: Selected by hand

dBµV/m

Limit1: FCC 15.209 (1 m) Transducer: EMCO 3160

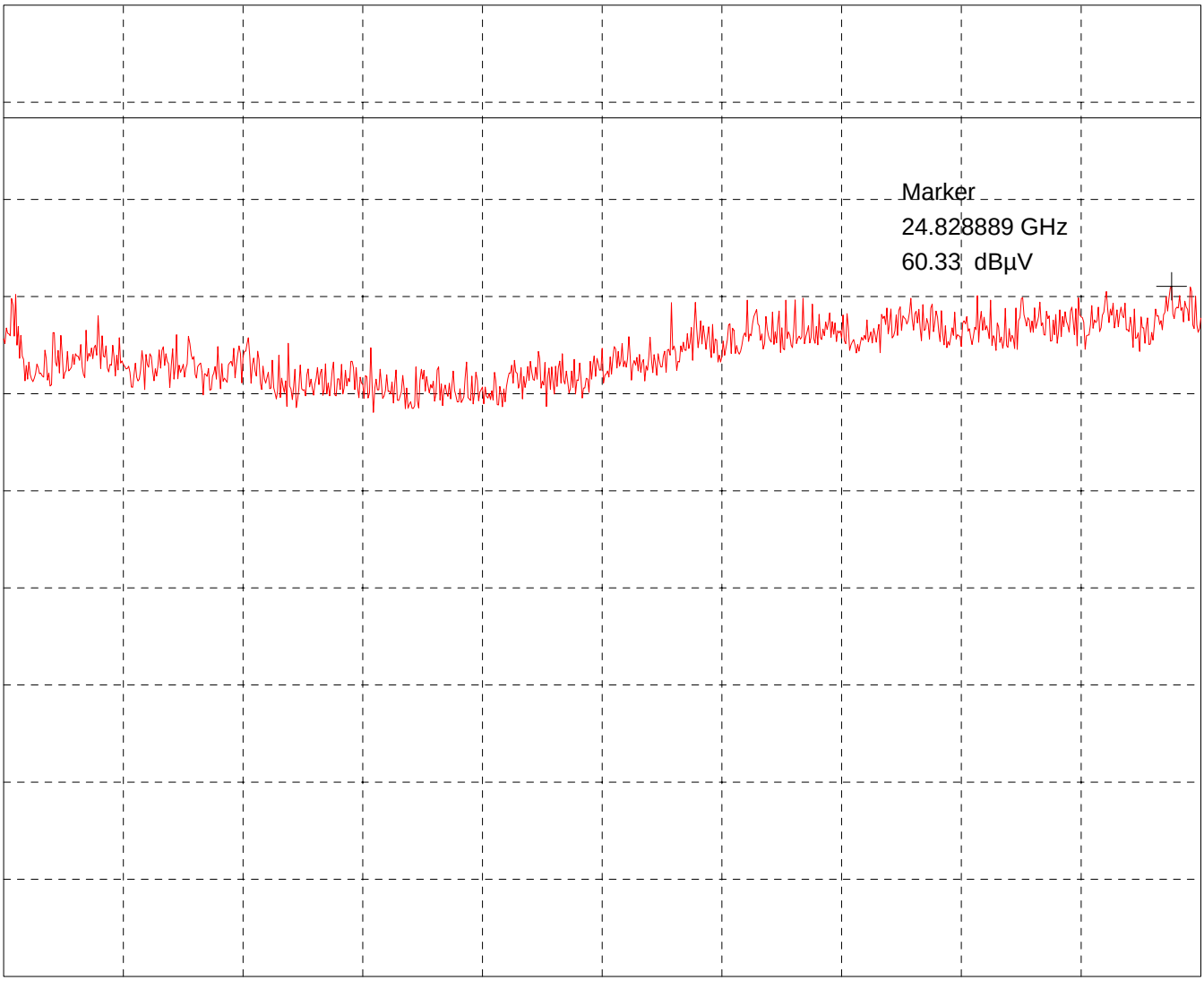


Result: Prescan - VBW = 100 kHz	Project file: 52305-80803

Radiated Emission Test acc. to FCC Part 15 Subpart C

Model: Wheelchair M15	Mode: - Battery supply - Transmitting continously with modulation - Highest frequency: 2465 MHz - Polarisation: horizontal - Distance: 0.5 m
Serial No.:	
Applicant: Ulrich Alber GmbH	

Ref.Level 74.8 dBµV ATT 0 dB Ref. Offset 42.8 dB
5 dB/Div.



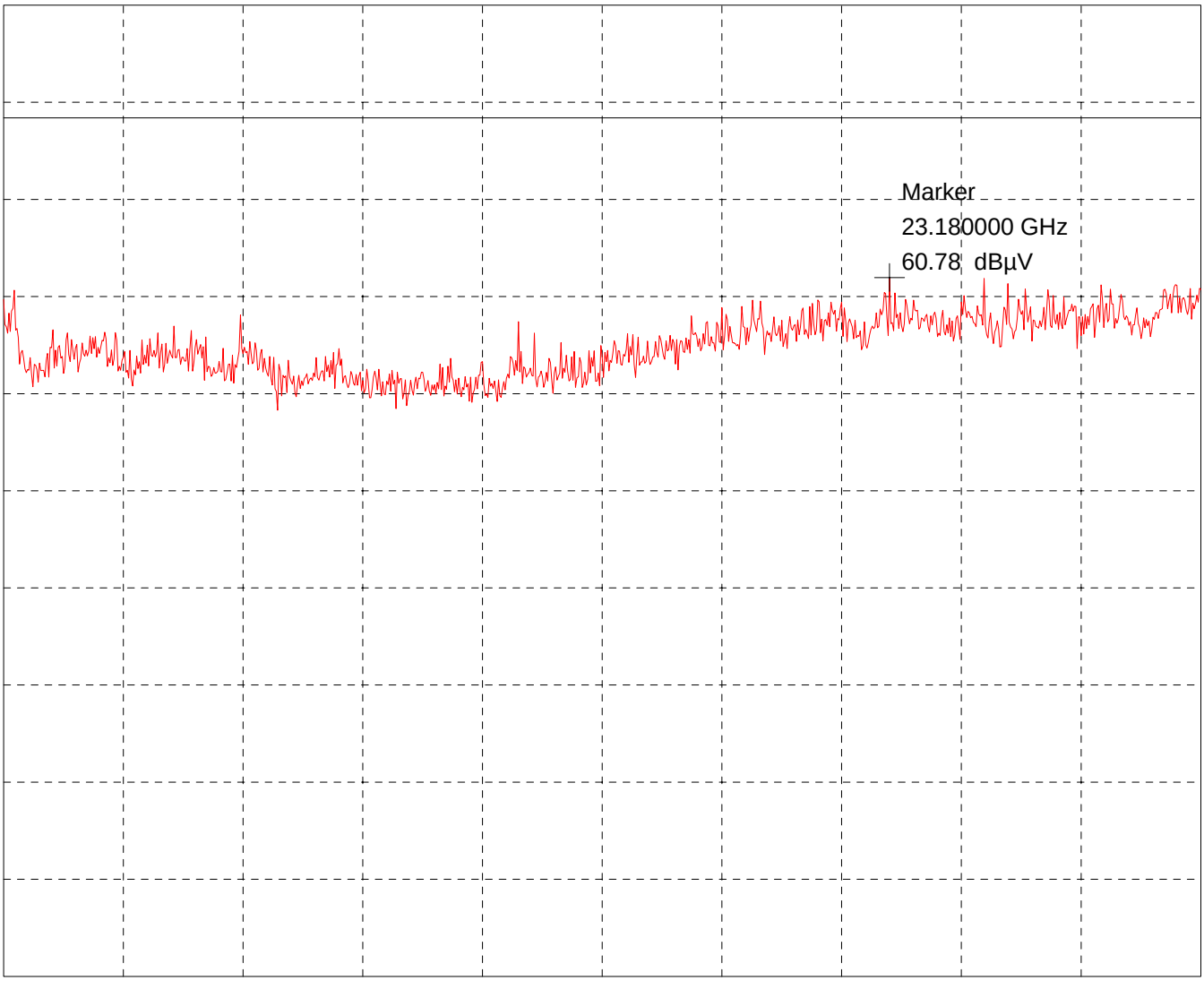
Start 18.000 GHz Stop 25.000 GHz
RBW 1 MHz VBW 1 MHz SWP 40 ms

Tested by: M. Steindl	Project-No.: 52305-080803
Date: 2008-07-04	

Radiated Emission Test acc. to FCC Part 15 Subpart C

Model: Wheelchair M15	Mode: - Battery supply - Transmitting continously with modulation - Highest frequency: 2465 MHz - Polarisation: vertical - Distance: 0.5 m
Serial No.:	
Applicant: Ulrich Alber GmbH	

Ref.Level 74.8 dBµV ATT 0 dB Ref. Offset 42.8 dB
5 dB/Div.



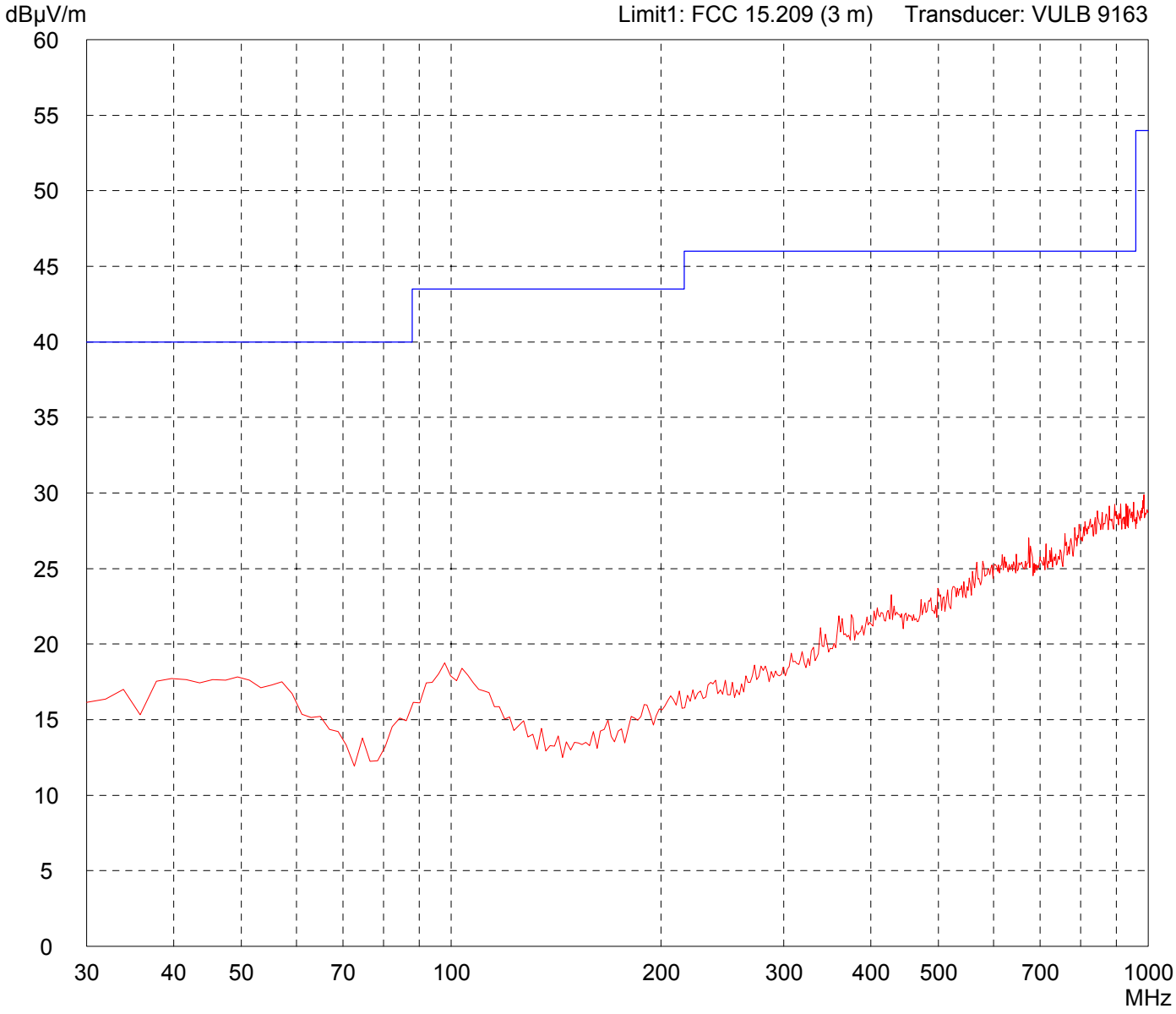
Start 18.000 GHz Stop 25.000 GHz
RBW 1 MHz VBW 1 MHz SWP 40 ms

Tested by: M. Steindl	Project-No.: 52305-080803
Date: 2008-07-04	

Radiated Emission Test 30 MHz - 1 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Normal operation mode Receiving
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 07/01/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: 10 dB Margin / 50 Subranges

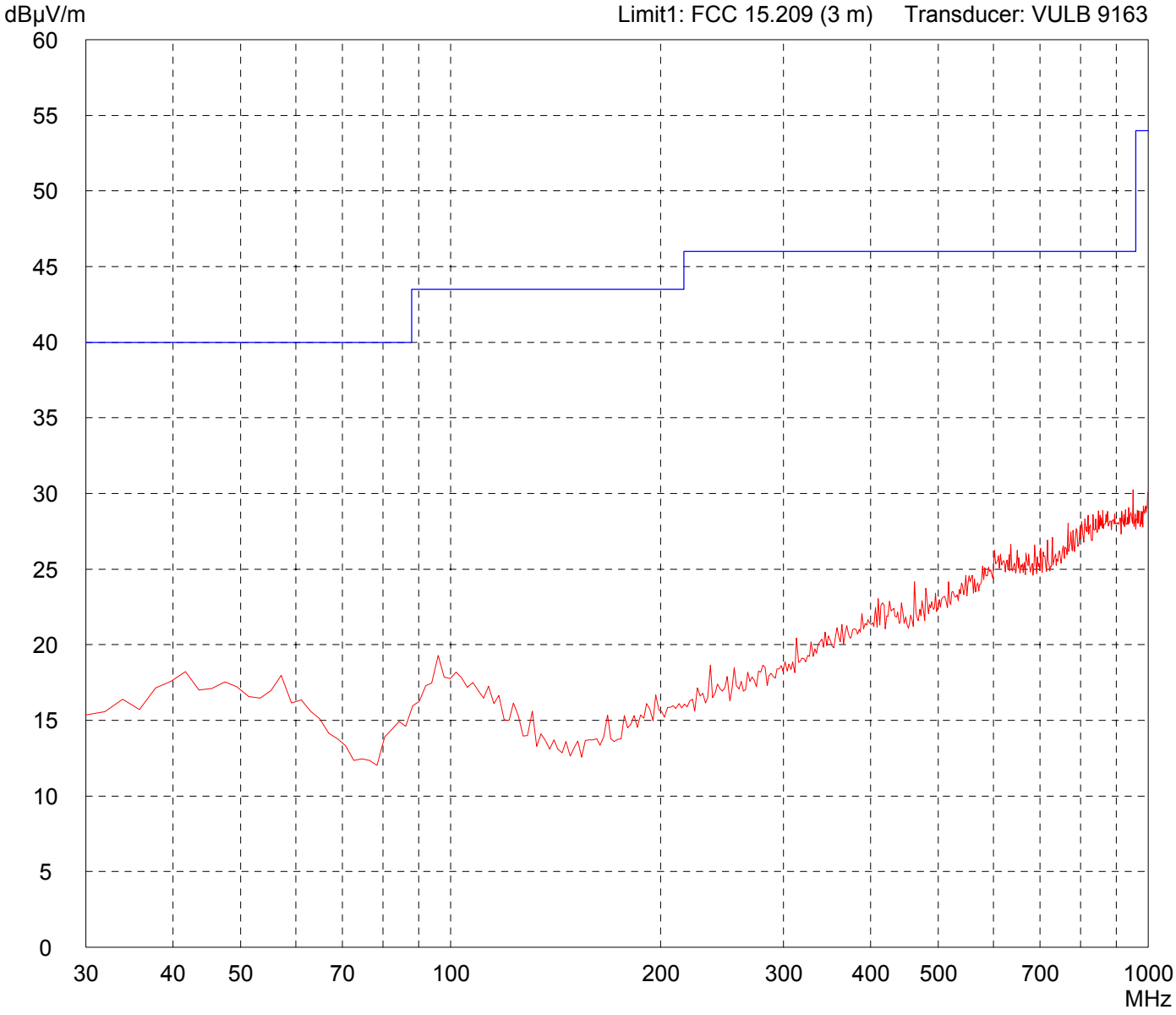


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 30 MHz - 1 GHz
acc. to FCC Part 15 Subpart C (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Normal operation mode Receiving
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Vertical Polarization	
Date of test: 07/01/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: 10 dB Margin / 50 Subranges

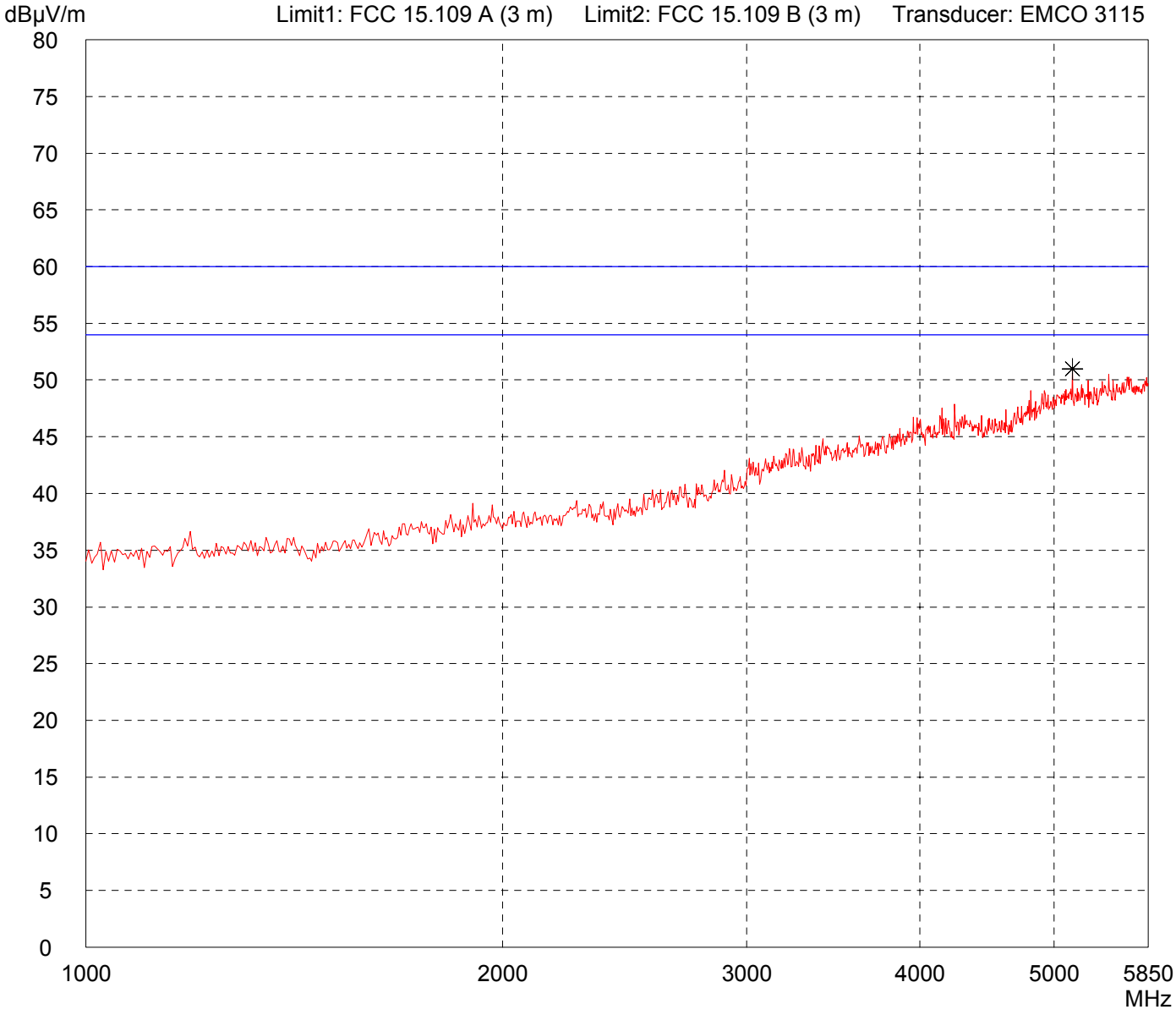


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 1 GHz - 5.85 GHz
acc. to FCC Part 15 Subpart B (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Normal operation mode Receiving
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: Selected by hand

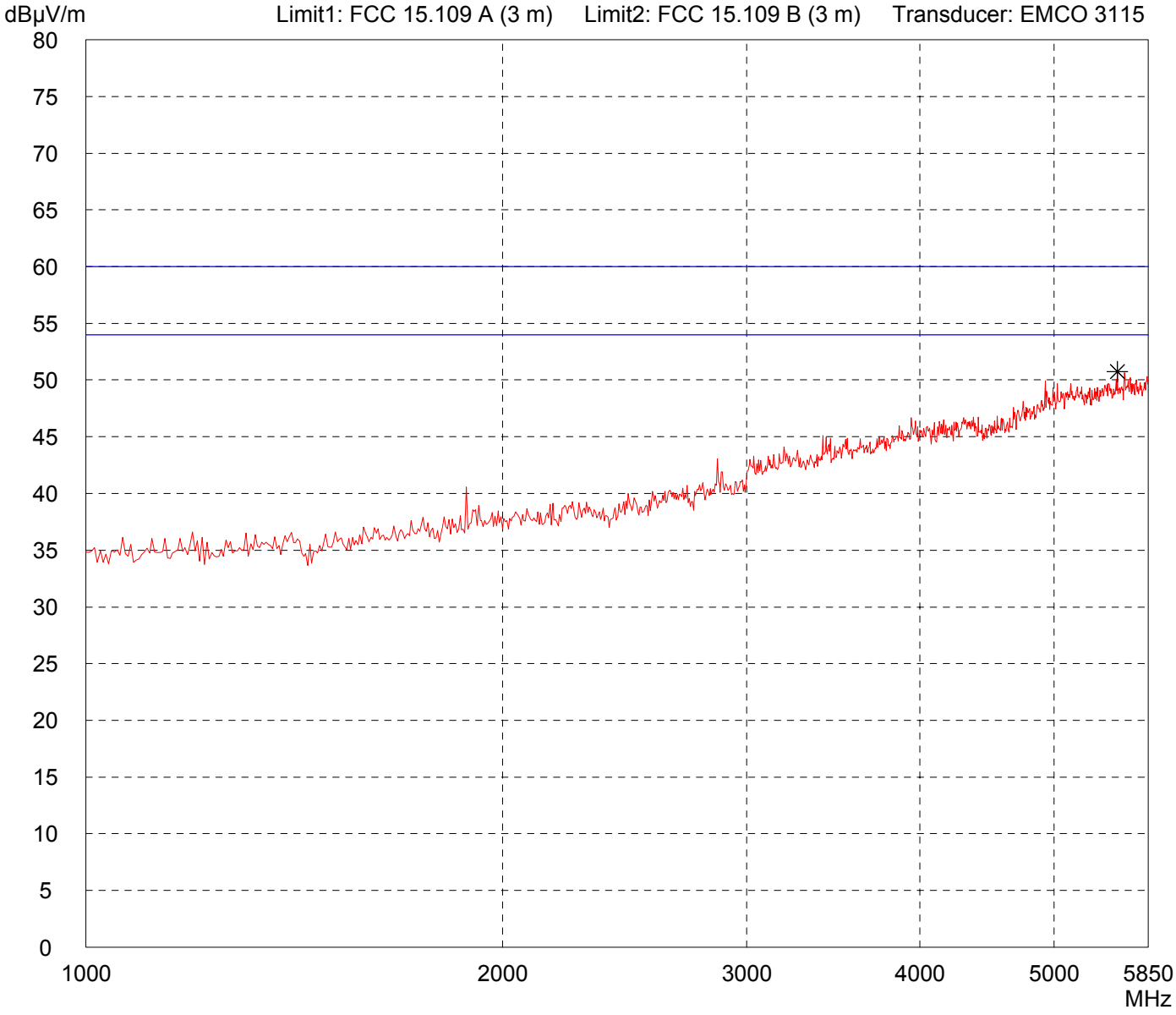


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 1 GHz - 5.85 GHz
acc. to FCC Part 15 Subpart B (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Normal operation mode Receiving
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: Selected by hand



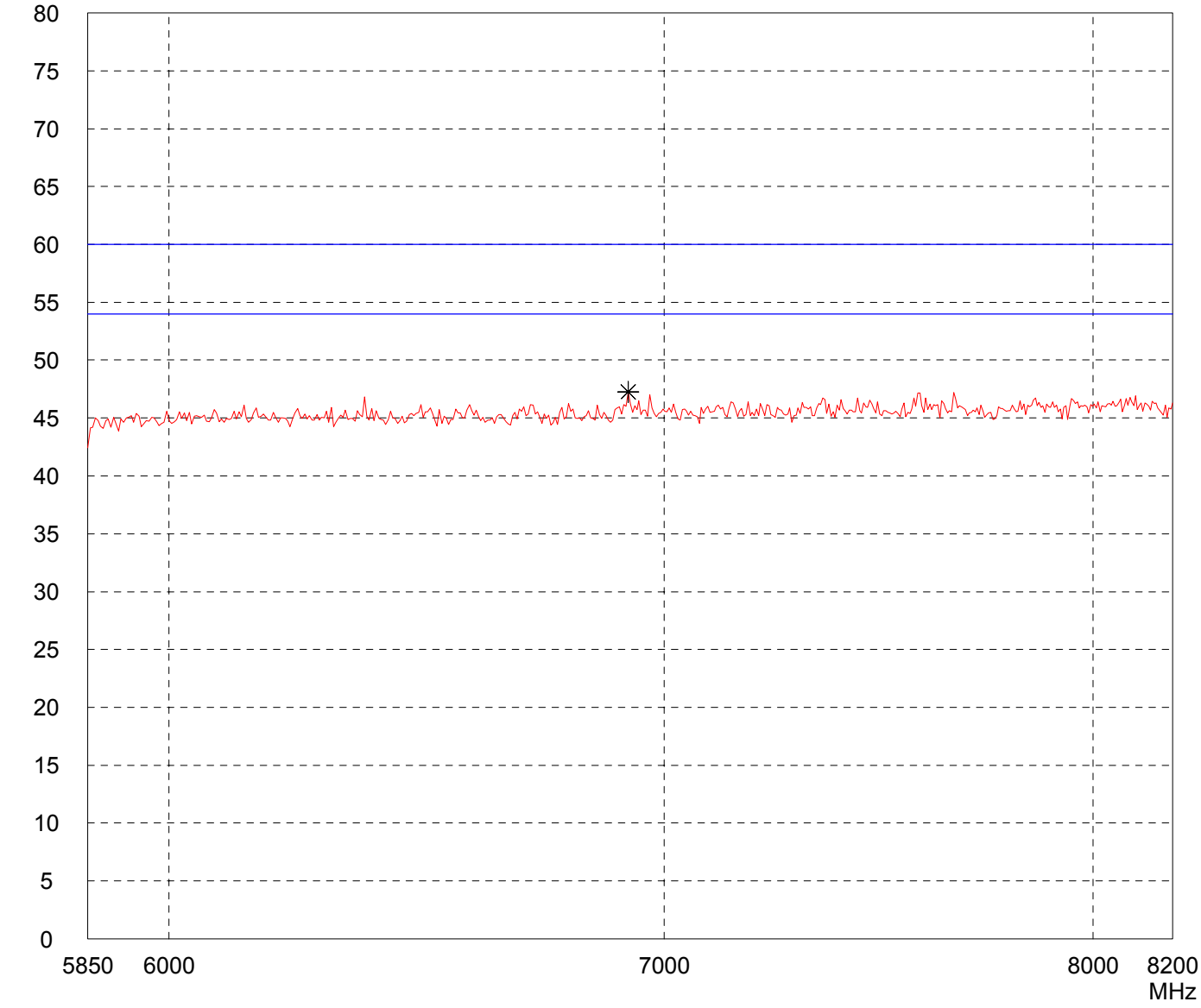
Result: Prescan	Project file: 52305-80803

Radiated Emission Test 5.85 GHz - 8.2 GHz
acc. to FCC Part 15 Subpart B (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Normal operation mode Receiving
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: Selected by hand

dBµV/m Limit1: FCC 15.109 A (3 m) Limit2: FCC 15.109 B (3 m) Transducer: EMCO 3160

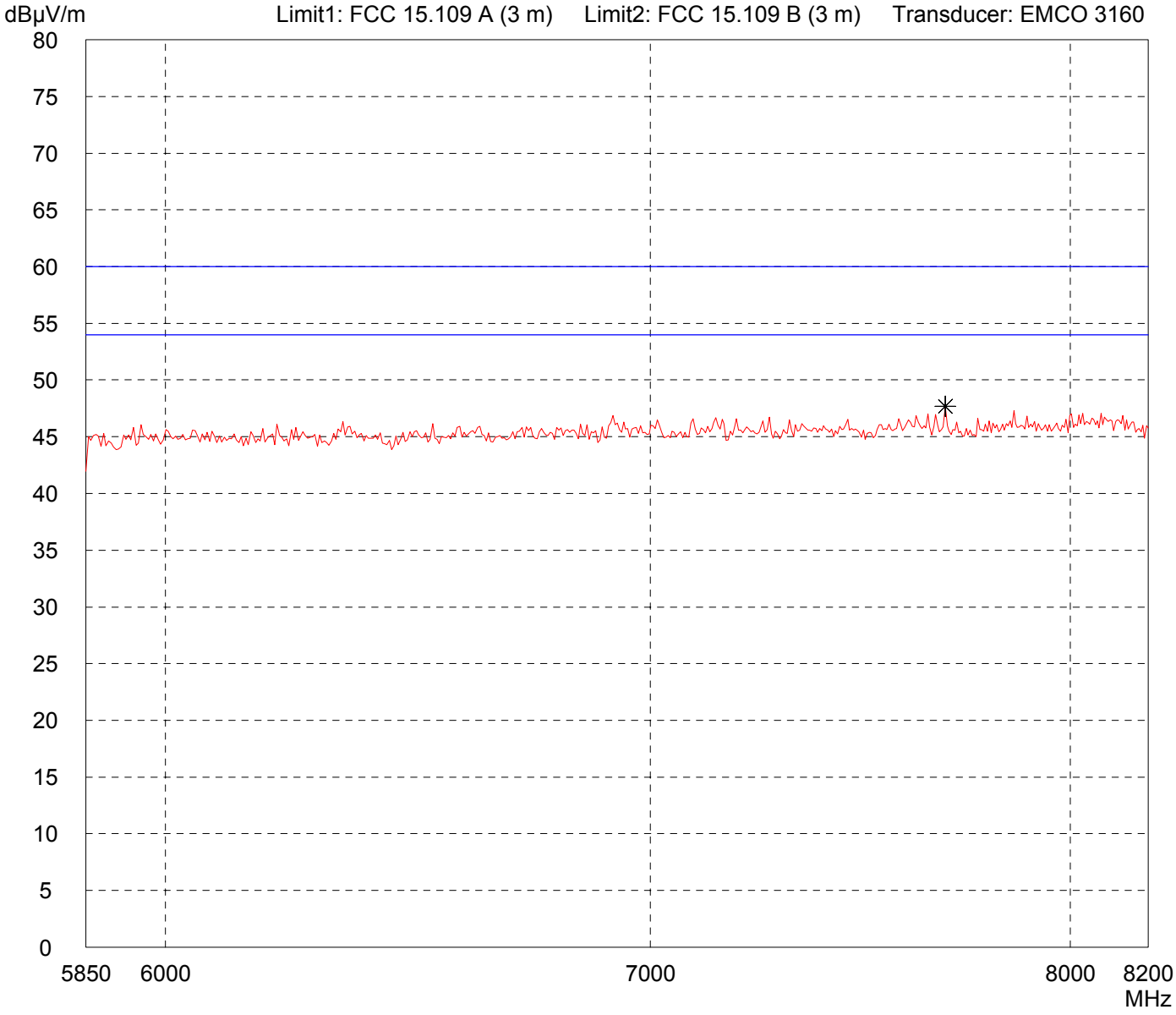


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 5.85 GHz - 8.2 GHz
acc. to FCC Part 15 Subpart B (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Normal operation mode Receiving
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: Selected by hand

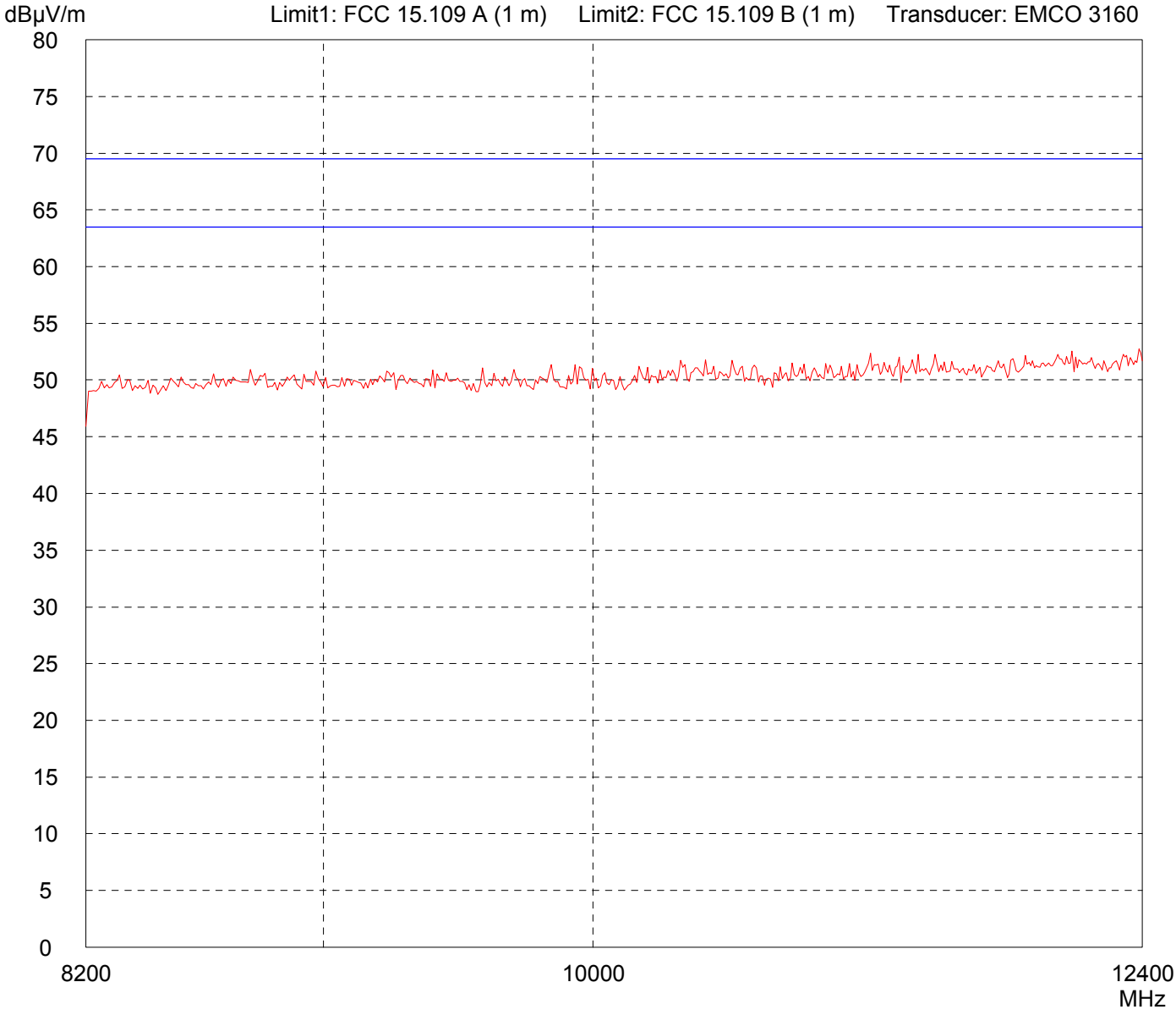


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 8.2 GHz - 12.4 GHz
acc. to FCC Part 15 Subpart B (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Normal operation mode Receiving
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: 10 dB Margin / 50 Subranges

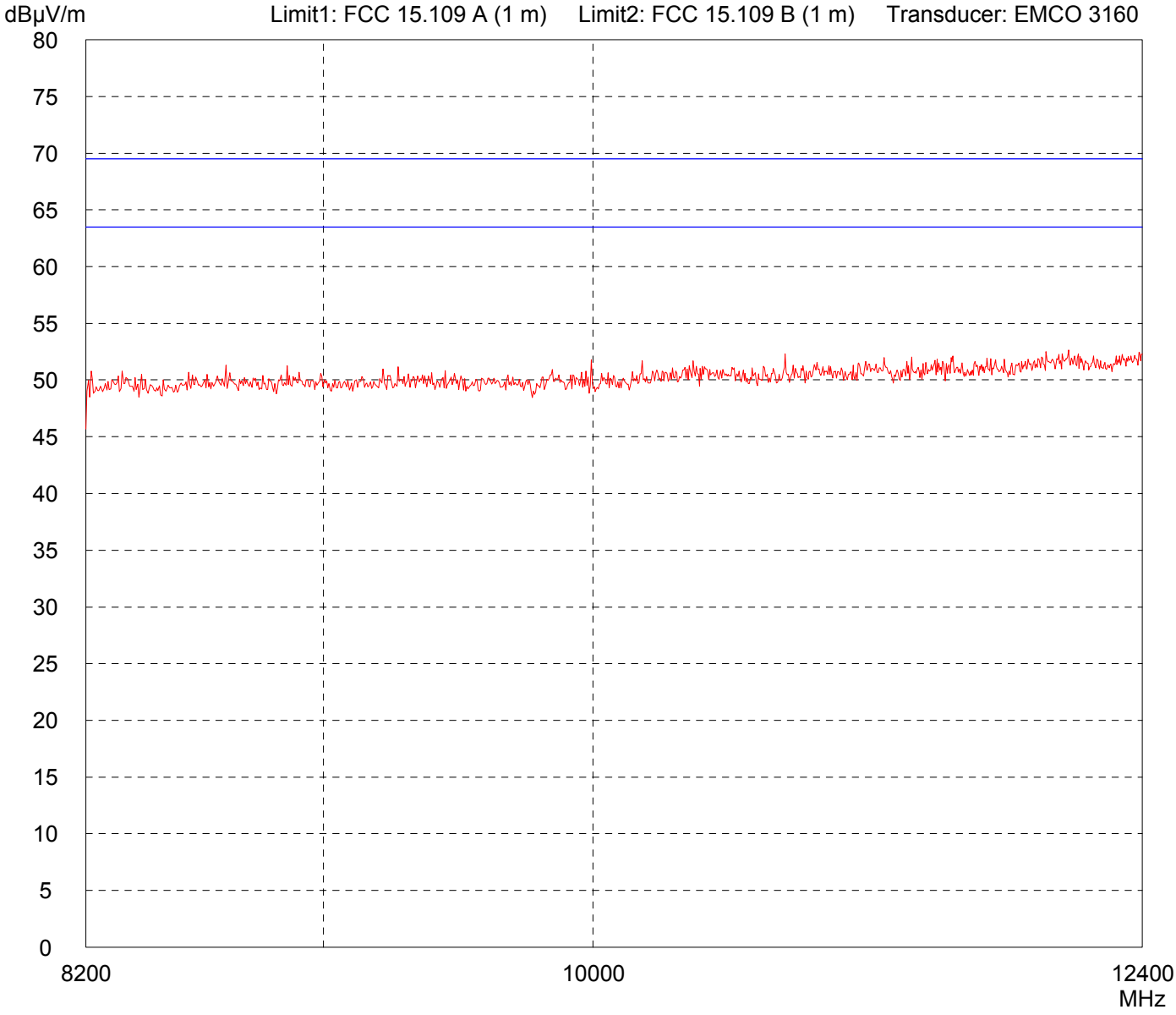


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 8.2 GHz - 12.4 GHz
acc. to FCC Part 15 Subpart B (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Normal operation mode Receiving
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: 10 dB Margin / 50 Subranges



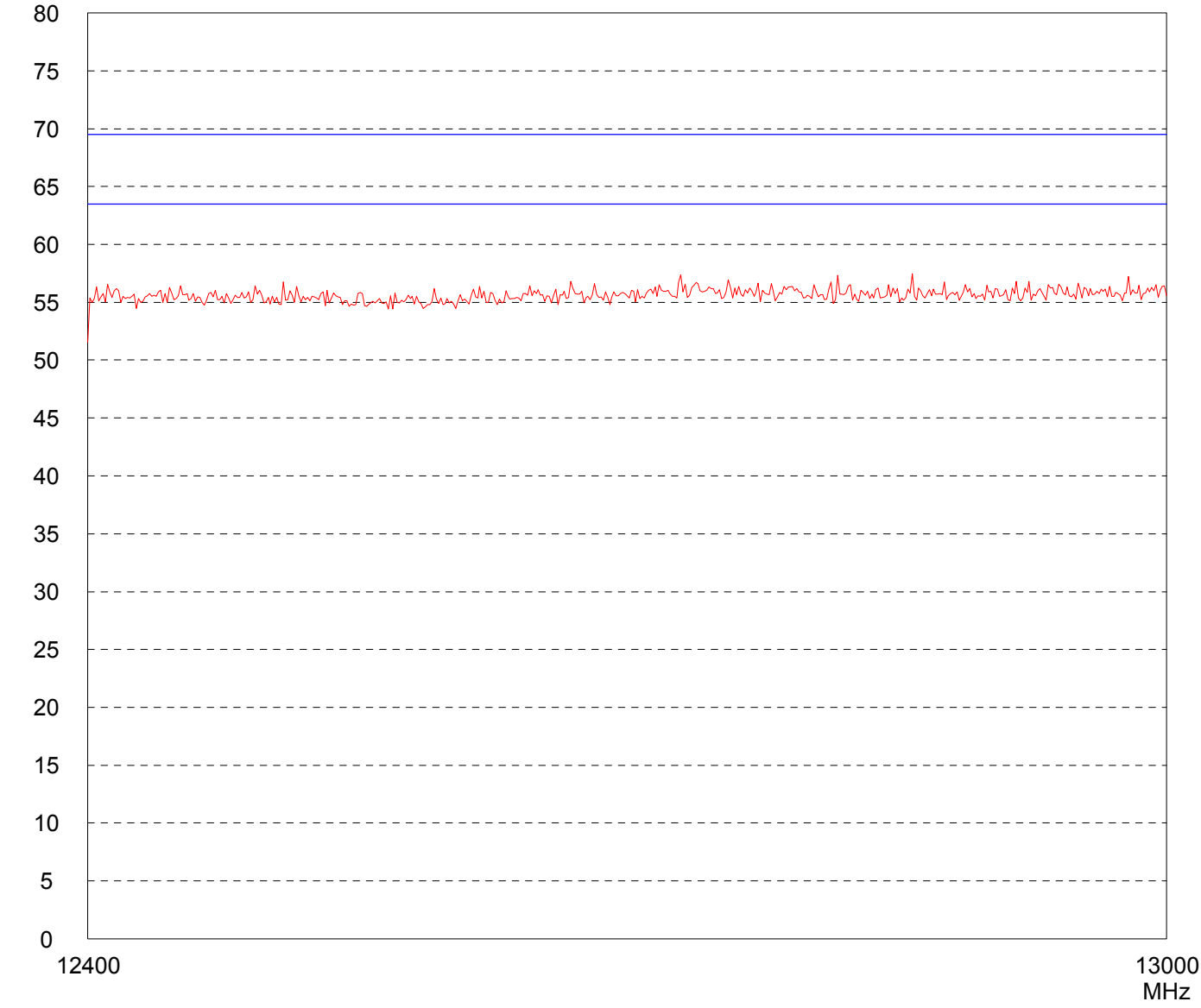
Result: Prescan	Project file: 52305-80803

Radiated Emission Test 12.4 GHz - 13 GHz
acc. to FCC Part 15 Subpart B (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Normal operation mode Receiving
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Horizontal Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: Selected by hand

dBµV/m Limit1: FCC 15.109 A (1 m) Limit2: FCC 15.109 B (1 m) Transducer: EMCO 3160

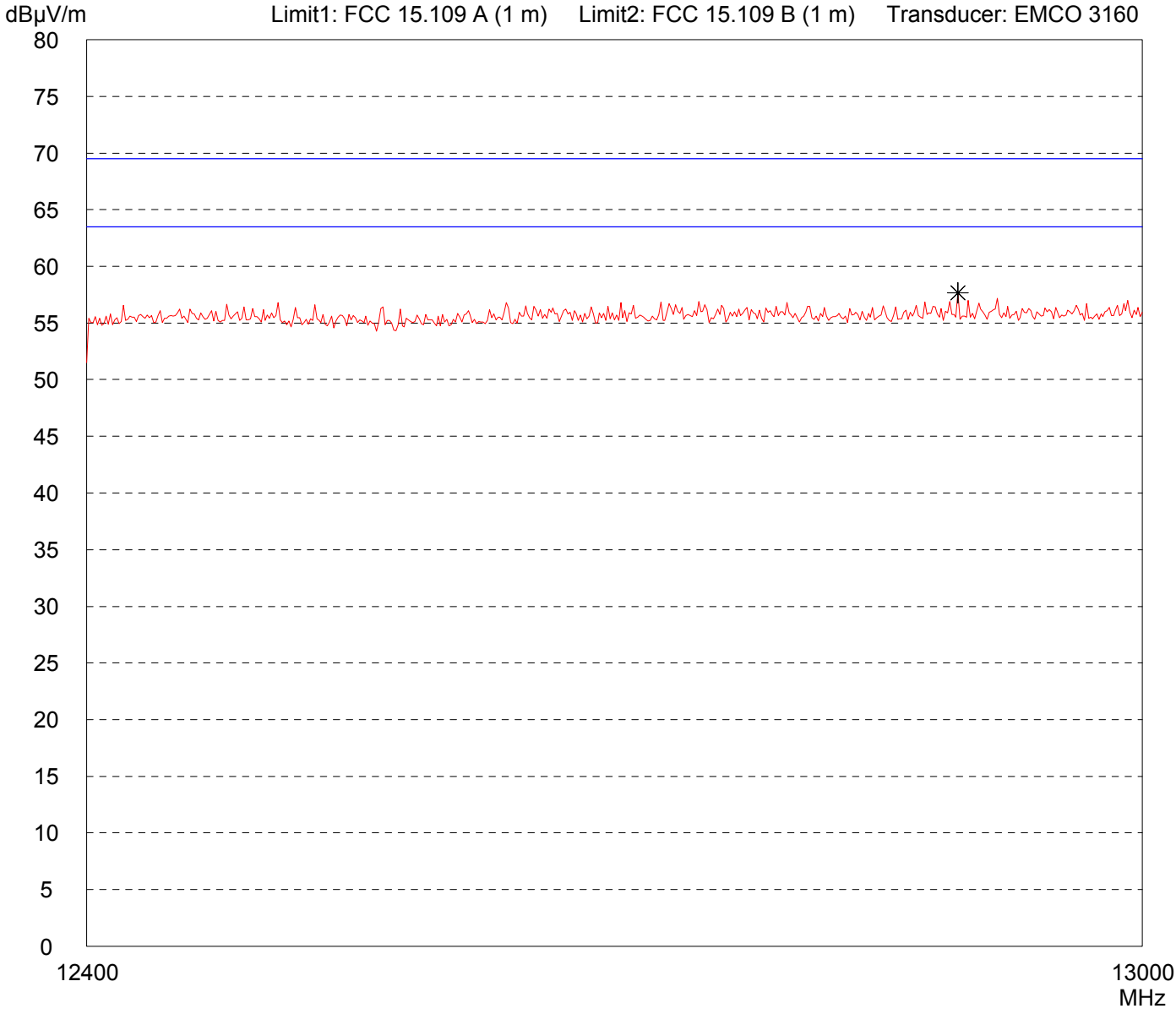


Result: Prescan	Project file: 52305-80803

Radiated Emission Test 12.4 GHz - 13 GHz
acc. to FCC Part 15 Subpart B (FAR)

Model: Wheelchair M15	Comment: - Battery supply - Normal operation mode Receiving
Serial no.:	
Applicant: Ulrich Alber GmbH	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 1 meter Vertical Polarization	
Date of test: 07/03/2008 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: Selected by hand



Result: Prescan	Project file: 52305-80803