SENTON

■ EMV-Prüfzentrum ■ EMI/EMC-Testcenter ■

Straubing, 09 May 2005

T E S T - R E P O R T

No. 56408-30611-1

for

DMT-300 HD

Wireless Microphone Transmitter

Applicant:	SEIKAKU Technical Group Ltd.
Purpose of testing:	To show compliance with
	FCC Code of Federal Regulations, Part 74 Subpart H, section 74.861

Table of Contents

1. Administrative Data

Test item (EUT)	
Type designation	DMT-300 HD
Serial number(s):	001
Type of equipment:	Wireless Microphone Transmitter
Parts/accessories:	
FCC-ID:	H38DMT-300HD
Technical data	
Frequency range	174-216 MHz
Operational frequencies	175.000 MHz, 199.820 MHz, 214.820 MHz
Type of modulation	96K0F3E
Pulse frequency	N/A
Pulse width	N/A
Antenna	Integrated
Power supply	1.5 V Alkaline Battery
Applicant: (full address)	SEIKAKU Technical Group Limited Unit 1107 Blk. A2 Yau Tong Industrial City No. 17, Ko Fai Road
Contract identification:	---
Contact person:	Joan Wu
Manufacturer:	SEIKAKU Technical Group Limited
Application details	
Receipt of EUT:	17 September 2003
Date of test:	January 2004, May 2005
Note:	---
Responsible for testing:	Johann Roidt
Responsible for test report:	Johann Roidt

2. Identification of Test Laboratory

DETAILS OF THE TEST LABORATORY	
COMPANY NAME:	Senton GmbH EMI/EMC Test Center
ADDRESS:	Aeussere Fruehlingsstrasse 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	IC 3050
NAME FOR CONTACT PURPOSES:	Mr. Johann Roidt
TELEPHONE: (+49) (0)9421 5522-0	FAX: (+49) (0)9421 5522-99

PERSONNEL INVOLVED IN THIS TEST REPORT	
TECHNICAL DIRECTOR:	 Mr. Johann Roidt
RESPONSIBLE FOR TESTING:	Mr. Johann Roidt
RESPONSIBLE FOR TEST REPORT:	Mr. Johann Roidt

SUMMARY OF TEST RESULTS
The tested sample complies with the requirements set forth in the **Code of Regulations Part 74 Subpart H, Section § 74.861 of the Federal Communication Commission (FCC).**

3. Operation Mode of EUT

Transmitter operating continuously,
full tests were performed on lowest, middle and highest RF channel.

With battery supply 2 x1.5 V DC

4. Configuration

Configuration of the EUT
Not applicable

Cables connected to the EUT
Not applicable

Peripheral devices connected to the EUT
Not applicable

5. Measuring Methods

5.1. Maximum Transmitter Power (§ 2.1046 (a), 74.861 (e))

5.1.1. Conducted Maximum Transmitter Power

Rules and Specifications:	Sections 2.1046 (a)
Guide:	ANSI/TIA/EIA-603-1992, Paragraph 2.2.11

Measurement Procedure:
A spectrum analyzer / EMI test receiver is connected to the output of the transmitter power amplifier (conducted measurement) via dummy load while EUT was operating in transmit mode using the assigned frequency. The trace mode of the spectrum analyzer was set to max hold with: RBW = 100 kHz, VBW = 100 kHz, span = 1 MHz, sweep = 20 ms (auto mode)

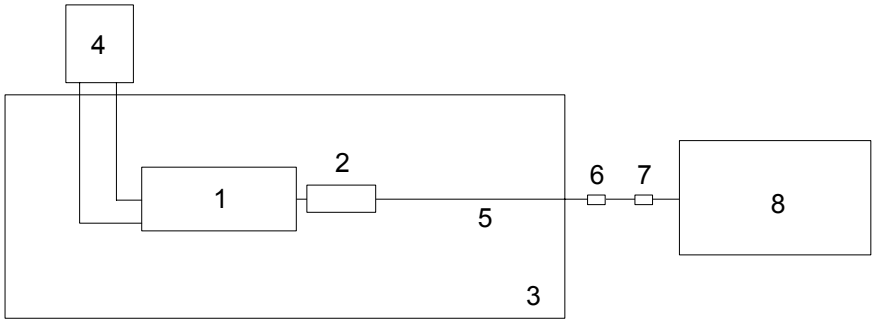


Figure 1: Measurement setup for testing on antenna connector

Test instruments used:

No.	Type	Model	Serial Number	Manufacturer
01	Spectrum Analyzer	FSP 30	100063	Rohde & Schwarz
08	Power Meter	NRVS	836856/015	Rohde & Schwarz
09	Power Sensor	NRV-Z52	837901/030	Rohde & Schwarz
18	Attenuator 20 dB	4776-20	9503	Narda
19	Attenuator 10 dB	4776-10	9412	Narda

5.1.2. Radiated Maximum Transmitter Power

Radiated Maximum Transmitter Power was measured with detector-function of the spectrum analyzer set to positive peak and trace mode max hold:
RBW = 100 kHz, VBW = 100 kHz, span = 1 MHz, sweep = 15 s

For measurement setup and procedure see section 5.2

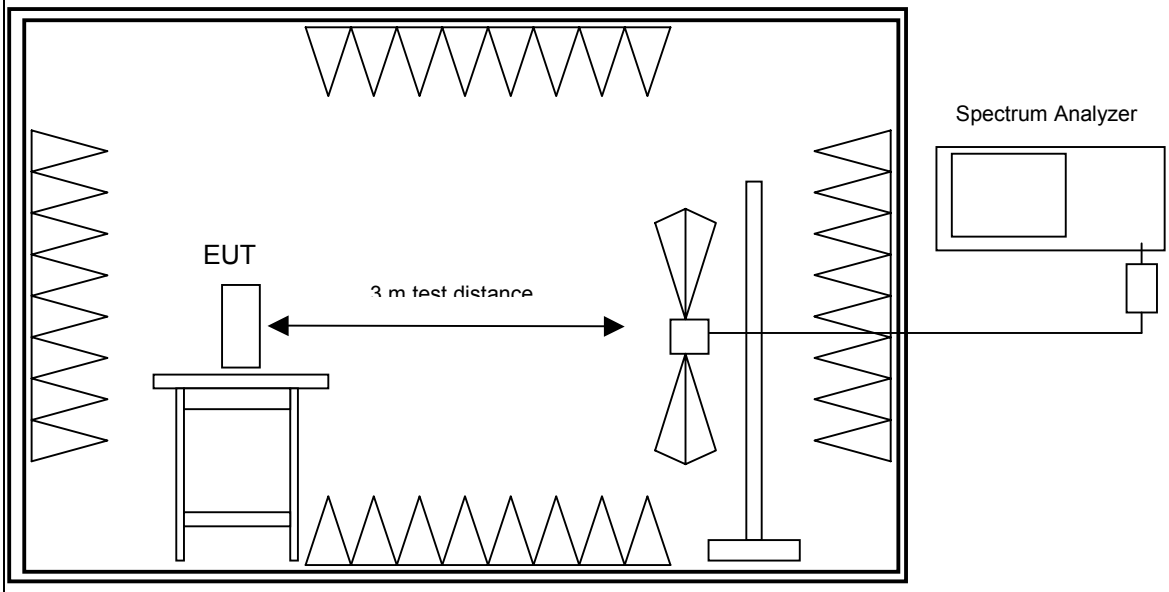
5.2. Mean power of emissions 30 MHz – 1 GHz (§ 74.861.e.6.iii)

Rules and Specifications:	Sections 2.1053
Guide:	ANSI/TIA/EIA-603-1992, Paragraph 2.2.11

Measurement Procedure:

Radiated emissions were measured over the frequency range from 30 MHz to 1 GHz. For final testing the detector-function of the spectrum analyzer was set to positive peak and trace mode max hold: RBW = 3 kHz, VBW = 10 kHz, span = 20 kHz, sweep = 10 s
Measurements were 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 bandwidth set to 100 kHz. All tests were performed at a test-distance of 3 meters. 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. For final testing an open-area test-site was used. During the tests the EUT was rotated all around and the receiving-antenna was raised and lowered from 1 meter to 4 meters to find the maximum levels of emissions. The cables and equipment were placed and moved within the range of position likely to find their maximum emissions.

Final testing was performed referring to substitution method as described in TIA/EIA-603, section 2.2.12 ("Radiated Spurious Emissions").



Fully anechoic chamber

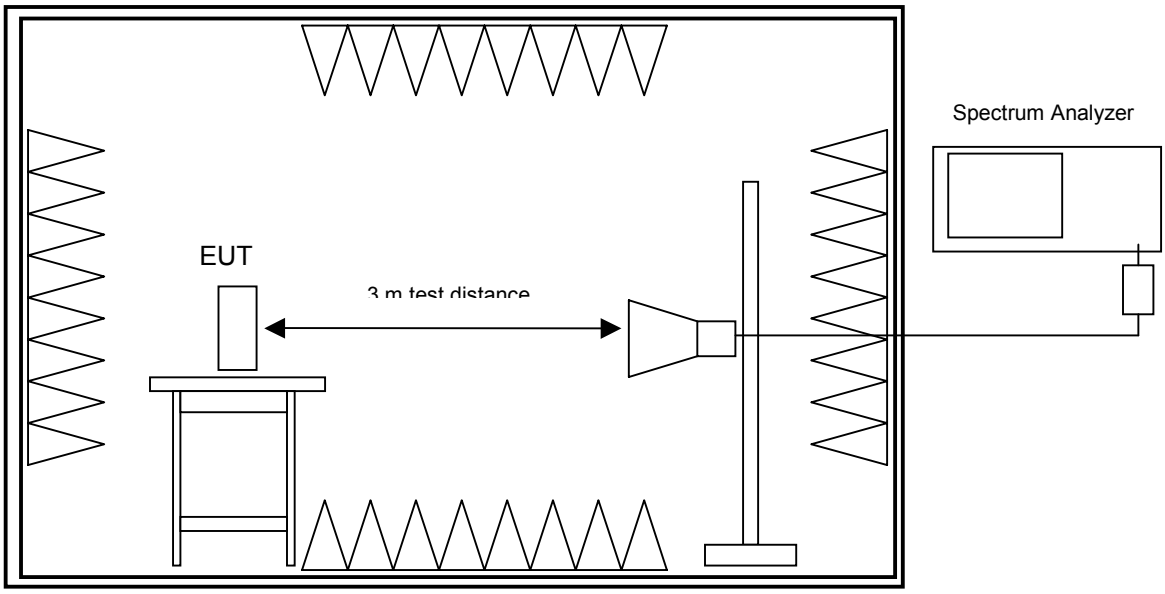
Test instruments used:

No.	Type	Model	Serial Number	Manufacturer
01	Spectrum Analyzer	FSP 30	100063	Rohde & Schwarz
113	Preamplifier	CPA9231A	3393	Schaffner
141	Biconical antenna	HK 116	829708/006	Rohde & Schwarz
143	Log. periodic antenna	3147	9112-1054	EMCO
003	Fully anechoic room	No. 2	1452	Albatross Projects

5.3. Radiated Emission > 1 GHz (§ 74.861.e.6.iii)

Rules and Specifications:	Sections 2.1053
Guide:	ANSI/TIA/EIA-603-1992, Paragraph 2.2.11

Measurement Procedure:
Radiated emissions are measured in the frequency range 1 GHz to 8 GHz. Resolution and video bandwidth of the spectrum analyzer are set to 1 MHz. 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. Additional measurements are performed at critical frequencies with reduced span. EUT is rotated all around and receiving antenna is raised and lowered to find the maximum levels of emission. The cables and equipment are placed and moved within the range of position likely to find their maximum emissions. All tests are performed in a fully-anechoic chamber with a test-distance of 3 meters. If required preamplifiers are used for the whole frequency range. Special care is taken to avoid overload in transmit mode (using appropriate attenuators and filters if necessary).



Fully anechoic chamber

Test instruments used:

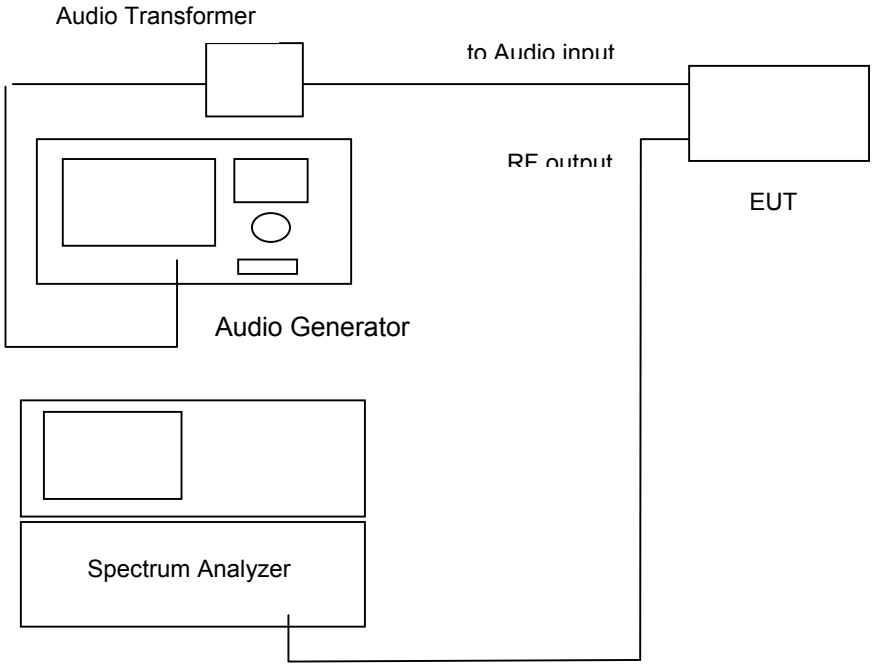
No.	Type	Model	Serial Number	Manufacturer
01	Spectrum Analyzer	FSP 30	100063	Rohde & Schwarz
143	Log. periodic antenna	3147	9112-1054	EMCO
145	Horn antenna	3115	9508-4553	EMCO
146	Horn antenna set	3160-03/-09	9112-1003	EMCO
114	Preamplifier 1-8 GHz	AFS3-00100800-32-LN	847743	Miteq
115	Preamplifier 8-18 GHz	ACO/180-3530	32641	CTT
003	Fully anechoic room	No. 2	1452	Albatross Projects

5.4. Emission Masks (Occupied Bandwidth) § 2.1049 (c) (1)

Rules and Specifications:	Sections 2.1049 (c) (1),
Guide:	ANSI/TIA/EIA-603-1992, Paragraph 2.2.11
Test Conditions:	As indicated below

Measurement Procedure:	1. The EUT and equipment were set up as shown below 2. The audio signal was adjusted for 16 dB above 50 % of nominal modulation at the frequency of maximum response. 3. The occupied bandwidth was measured with the Spectrum Analyzer set as shown on the test charts.

Test Setup



Test instruments used:

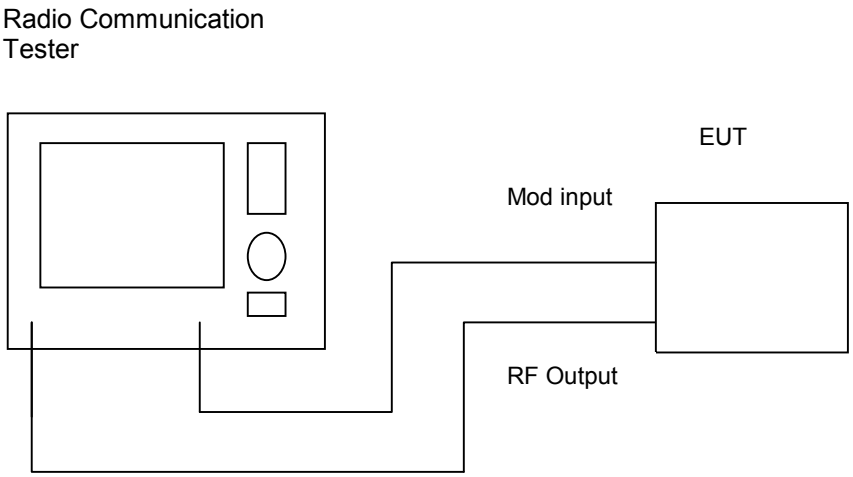
No.	Type	Model	Serial Number	Manufacturer
108	Radio communication service monitor	CMS 54	838384/030	Rohde & Schwarz
102	Spectrum analyzer	FSP30	100036	Rohde & Schwarz
121	Attenuator	4776-10	9412	Narda
122	Attenuator	4776-20	9503	Narda
107	Audio analyzer	UPA	862954	Rohde & Schwarz

5.5. Audio Frequency Response, 2.1047 (a)

Rules and Specifications:	Sections 2.1047 (b),
Guide:	ANSI/TIA/EIA-603-1992, Paragraph 2.2.3
Test Conditions:	As indicated below

Measurement Procedure:	1. The audio signal was coupled to the microphone via a temporary audio input connector replacing a microphone. 2. The audio signal was adjusted for 20 % nominal modulation at 1 kHz. this was taken as 0 dB reference. 3. With input levels held constant, the audiosignal was varied from 100 Hz to 30 kHz 4. The response was measured and recorded with a CMS 54 Radiocommunication Tester

Test Setup



Test instruments used:

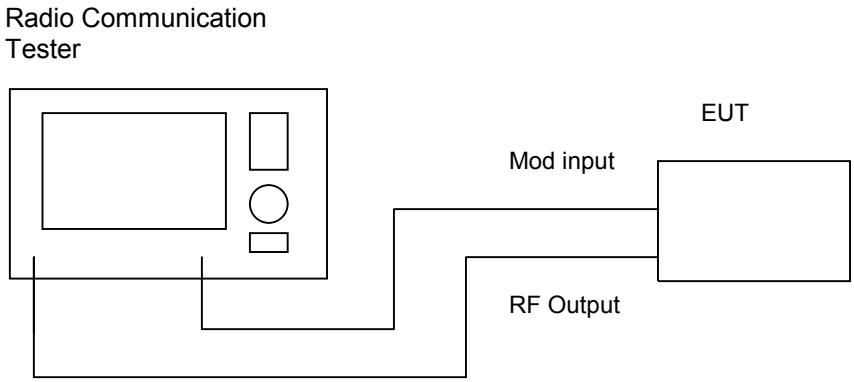
No.	Type	Model	Serial Number	Manufacturer
108	Radio communication service monitor	CMS 54	838384/030	Rohde & Schwarz
102	Spectrum analyzer	FSP30	100036	Rohde & Schwarz
121 122	Attenuator Attenuator	4776-10 4776-20	9412 9503	Narda Narda
107	Audio analyzer	UPA	862954	Rohde & Schwarz

5.6. Modulation Limiting, § 2.1047 (b)

Rules and Specifications:	Sections 2.1047 (b),
Guide:	ANSI/TIA/EIA-603-1992, Paragraph 2.2.3
Test Conditions:	As indicated below

Measurement Procedure:	1. The audio signal was coupled to the microphone via a temporary audio input connector replacing the microphone. 2. The modulation response was measured for three frequencies including the frequency with maximum response found during “Audio Frequency Response Test”. 3. The input level was varied from 30 % modulation to 20 dB higher than the saturation point. The resulting deviation was measured with a CMS 54 Radiocommunication Tester. 4. Measurements were performed for positive and negative deviation.

Test Setup



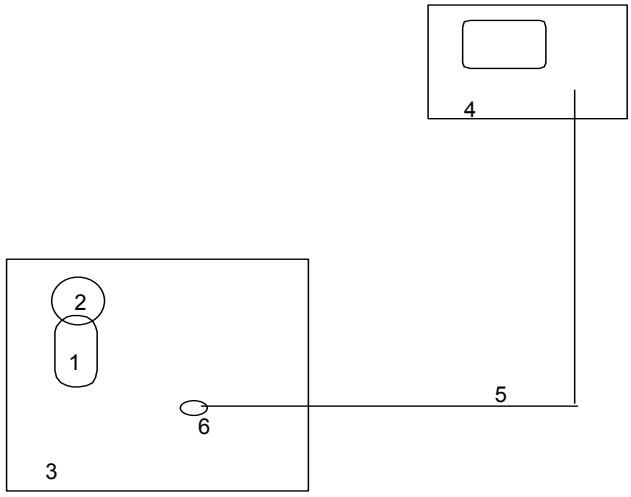
Test instruments used:

No.	Type	Model	Serial Number	Manufacturer
108	Radio communication service monitor	CMS 54	838384/030	Rohde & Schwarz
102	Spectrum analyzer	FSP30	100036	Rohde & Schwarz
121	Attenuator	4776-10	9412	Narda
122	Attenuator	4776-20	9503	Narda
107	Audio analyzer	UPA	862954	Rohde & Schwarz

5.7. Frequency Stability (Temperature Variation), § 2.1055 (a) (1)

Rules and Specifications:	Sections 2.1055 (a) (1), 74.861 (e) (4)
Guide:	ANSI/TIA/EIA-603-1992, Paragraph 2.2.2
Test Conditions:	As indicated below

Measurement Procedure:	The EUT and test equipment were set up as shown below 1. With all power removed, the temperatuere was decreased to –30 °C and permitted to stabilize for three hours. Power was applied and the maximum change in frequency was noted within one minute. 2. With power OFF, the temperature was raised in 10 °C steps. The sample was permitted to stabilize at each step for at least half of an hour. Power was applied and the maximum frequency change was noted within one minute. 3. The temperature test were performed for worst case conditions.



1 Base unit (EUT)
2 RF-antenna (EUT)
3 Temperature test chamber
4 Spectrum analyzer
5 RF cable
6 Test probe

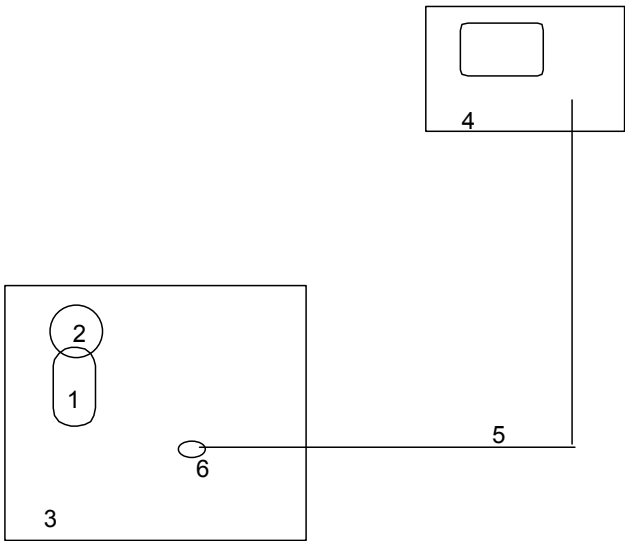
Test instruments used:

No.	Type	Model	Serial Number	Manufacturer
102	Spectrum analyzer	FSP30	100036	Rohde & Schwarz
121	Attenuator	4776-10	9412	Narda
122	Attenuator	4776-20	9503	Narda
017	DC power supply	NGSM 32/10	203	Rohde & Schwarz
007	Temperature test chamber	HT4010	07065550	Heraeus

5.8. Frequency Stability (Voltage Variation), § 2.1055 (b) (1)

Rules and Specifications:	Sections 2.1055 (b) (1), 74.861 (e) (4)
Guide:	ANSI/TIA/EIA-603-1992, Paragraph 2.2.2

Measurement Procedure:	The EUT and test equipment were set up as shown below 1. The temperature was set to 20 °C 2. The supply voltage was varied from 85% to 115% of the nominal voltage measuured at the input of the EUT. 3. The variation in frequency was measured for worst case conditions.



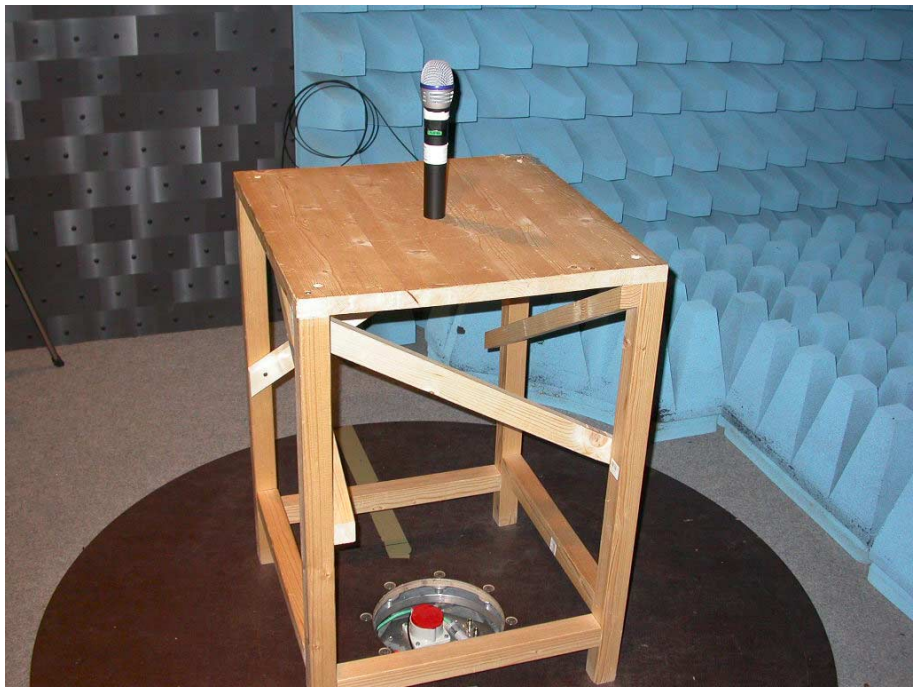
1 Base unit (EUT)
2 RF-antenna (EUT)
3 Temperature test chamber
4 Spectrum analyzer
5 RF cable
6 Test probe

Test instruments used:

No.	Type	Model	Serial Number	Manufacturer
102	Spectrum analyzer	FSP30	100036	Rohde & Schwarz
121	Attenuator	4776-10	9412	Narda
122	Attenuator	4776-20	9503	Narda
017	DC power supply	NGSM 32/10	203	Rohde & Schwarz
020	Variable transformer	RT 5A	10387	Grundig

6. Photographs Taken During Testing

Test setup for radiated emission measurement 30 MHz – 2.5 GHz (fully anechoic room)



7. List of Measurements

FCC Part 74 Subpart H			
Section(s):	**Test**	**Page(s)**	**Result**
	Transmitter:		
74.861.e.1	Measured unmodulated carrier power	20	Pass
74.861.e.6	Mean power of emissions 30 MHz – 2.5 GHz	21	Pass
74.861.e.5	Operating bandwidth	25	Pass
74.861.e.4	Frequency tolerance	30	Pass
	Receiver		
15.107	AC Powerline Emissions	---	Not applicable
15.109	Radiated Spurious emissions	---	Not applicable

Carrier Power Measurement

Rules and Specifications:	74.861 (e) (1) (i), 2.1046 (a)
Guide:	ANSI/TIA/EIA-603-1992, § 2.2.1
Limit:	The power of the measured unmodulated carrier power at the output of the transmitter power amplifier may not exceed 50 mW.

Test Site:	Radio Lab.
Distance:	Conducted Measurement
Date of Test:	10 January 2004

Frequency (MHz)	Detector	Antenna Polarization	Analyzer Reading (dBm)	Correction Factor (dB)	Mean Power (dBm)	Limit (dBm)	Margin (dB)
175.000	AV	N/A	-17.8	0.0	-17.8	17.0	34.8
199.825	AV	N/A	-14.0	0.0	-14.0	17.0	31.0
214.820	AV	N/A	-14.8	0.0	-14.8	17.0	31.8

Sample calculation of erp values:

Mean Power (dBm) = Analyzer Reading (dBm) + Correction Factor (dB)

Test Results:	Pass

Spurious Radiation Measurement

Rules and Specifications:	74.861 (e) (6) (iii), 2.1053 (a),
Guide:	ANSI/TIA/EIA-603-1992, § 2.2.12
Limit:	The attenuation for any frequency removed from the operating frequency by more than 50% up to 100% of the authorized bandwidth must be at least 25 dB by more than 100% up to 250% of the authorized bandwidth must be at least 35 dB by more than 250% of the authorized bandwidth must be at least 43+10log(mean output power in watts)

Tested Frequency:	175.000 MHz
Test Site:	Fully anechoic chamber
Distance:	3 Meter

Frequency (MHz)	Antenna Polarization	Detector	Receiver Reading (dBm)	Correction Factor (dB)	Final Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
350.100	vertical	Peak	-92.8	29.3	-63.5	-23.0	**40.5**

Sample calculation of erp values:

Mean Power (dBm) = Analyzer Reading (dBm) + Correction Factor (dB)

Test Results:	Pass

Spurious Radiation Measurement

Rules and Specifications:	74.861 (e) (6) (iii), 2.1053 (a),
Guide:	ANSI/TIA/EIA-603-1992, § 2.2.12
Limit:	The attenuation for any frequency removed from the operating frequency by more than 50% up to 100% of the authorized bandwidth must be at least 25 dB by more than 100% up to 250% of the authorized bandwidth must be at least 35 dB by more than 250% of the authorized bandwidth must be at least 43+10log(mean output power in watts)

Tested Frequency:	199.820 MHz
Test Site:	Fully anechoic chamber
Distance:	3 Meter

No measurements above noise level detected

Sample calculation of erp values:

Mean Power (dBm) = Analyzer Reading (dBm) + Correction Factor (dB)

Test Results:	Pass

Spurious Radiation Measurement

Rules and Specifications:	74.861 (e) (6) (iii), 2.1053 (a),
Guide:	ANSI/TIA/EIA-603-1992, § 2.2.12
Limit:	The attenuation for any frequency removed from the operating frequency by more than 50% up to 100% of the authorized bandwidth must be at least 25 dB by more than 100% up to 250% of the authorized bandwidth must be at least 35 dB by more than 250% of the authorized bandwidth must be at least 43+10log(mean output power in watts)

Tested Frequency:	214.820 MHz
Test Site:	Fully anechoic chamber
Distance:	3 Meter

No measurement above noise level detected

Sample calculation of erp values:

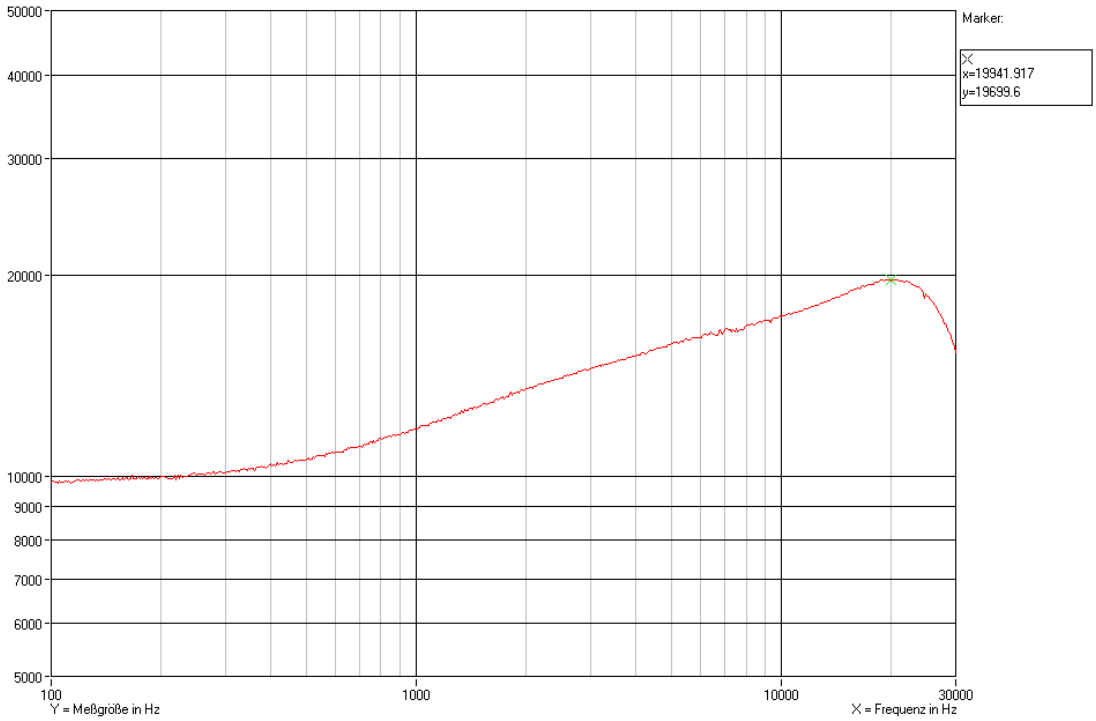
Mean Power (dBm) = Analyzer Reading (dBm) + Correction Factor (dB)

Test Results:	Pass

Measurement of Audio Frequency Response

Rules and Specifications:	Sections 74.861 (5) and 2.1049 (c) (1)
Limits and Requirements:	---
Nominal Frequency of EUT:	199.82 MHz

Test Procedure:	According to TIA/EIA.603-1992, § 2.2.6
	Note: The audio signal was coupled to the microphone inputof the transmitter via an audio isolation transformer with sufficient bandwidth



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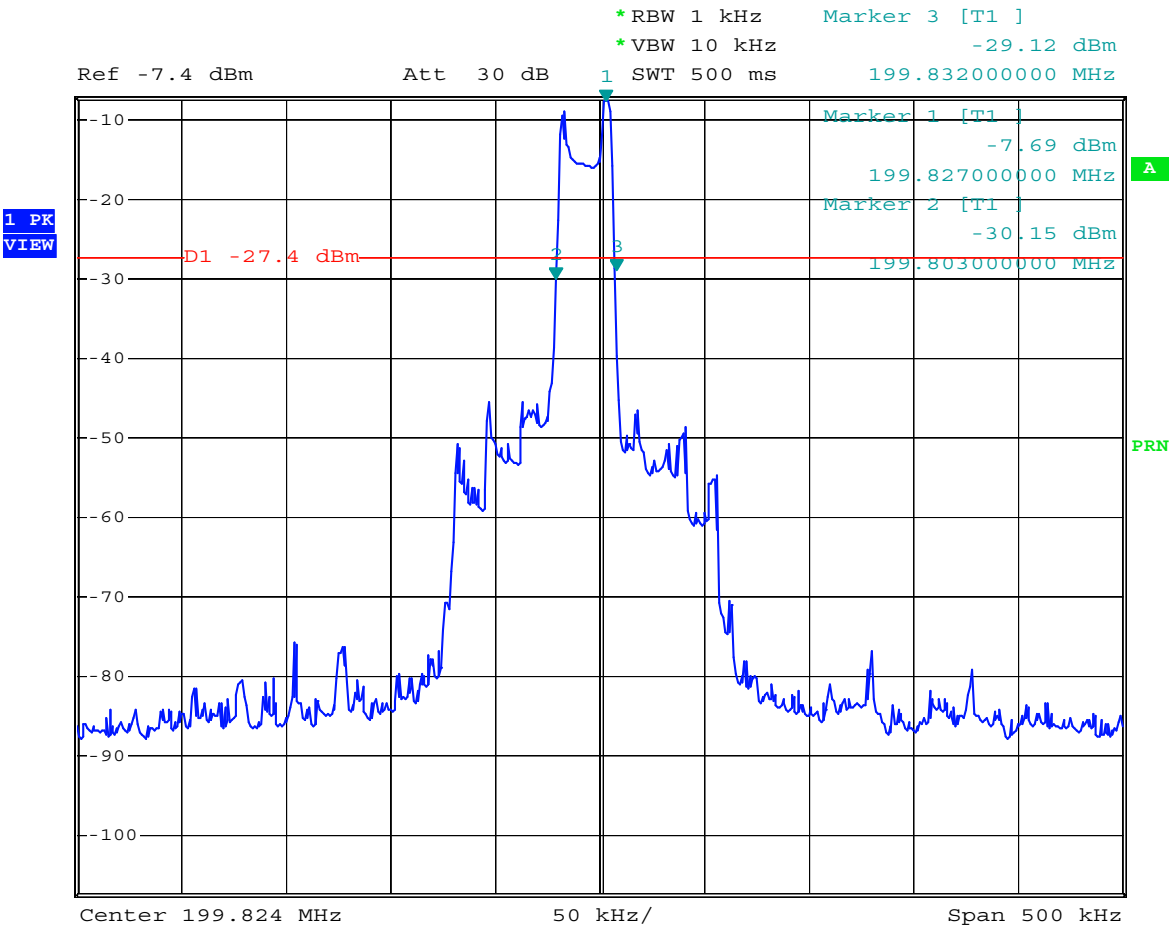
Test Results:	See graph above

Measurement of Emission Masks (Occupied Bandwidth)

Rules and Specifications:	Sections 74.861 (5) and 2.1049 (c) (1)
Limits and Requirements:	The operating bandwidth shall not exceed 200 kHz
Nominal Frequency of EUT:	199.82 MHz

Test Procedure:	According to TIA/EIA.603-1992, § 2.2.11



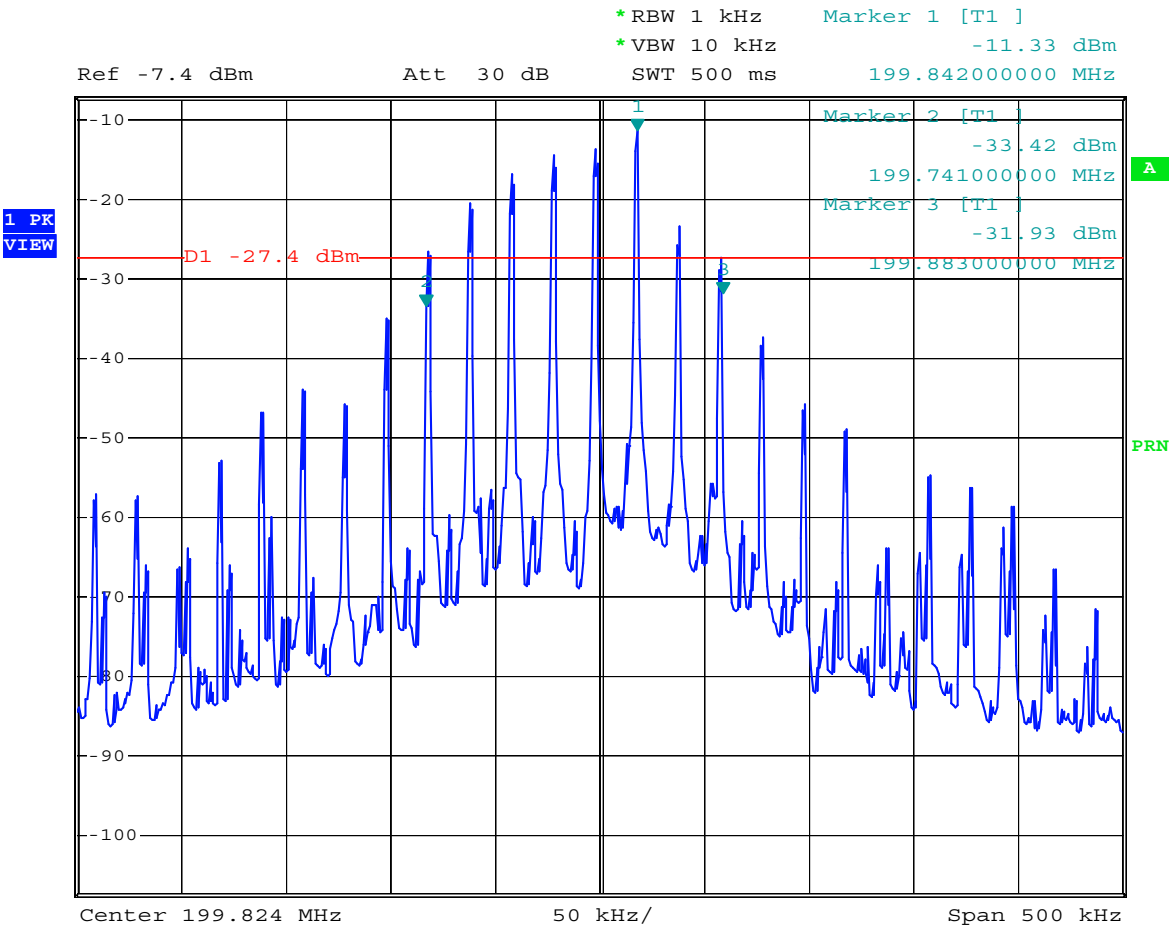
Comment: UNI39611: Occupied Bandwidth - 100 Hz
Date: 9.MAY.2005 16:42:34

Test Results:	29 kHz	Pass

Measurement of Emission Masks (Occupied Bandwidth

Rules and Specifications:	Sections 74.861 (5) and 2.1049 (c) (1)
Limits and Requirements:	The operating bandwidth shall not exceed 200 kHz
Nominal Frequency of EUT:	199.820 MHz

Test Procedure:	According to TIA/EIA.603-1992, § 2.2.11



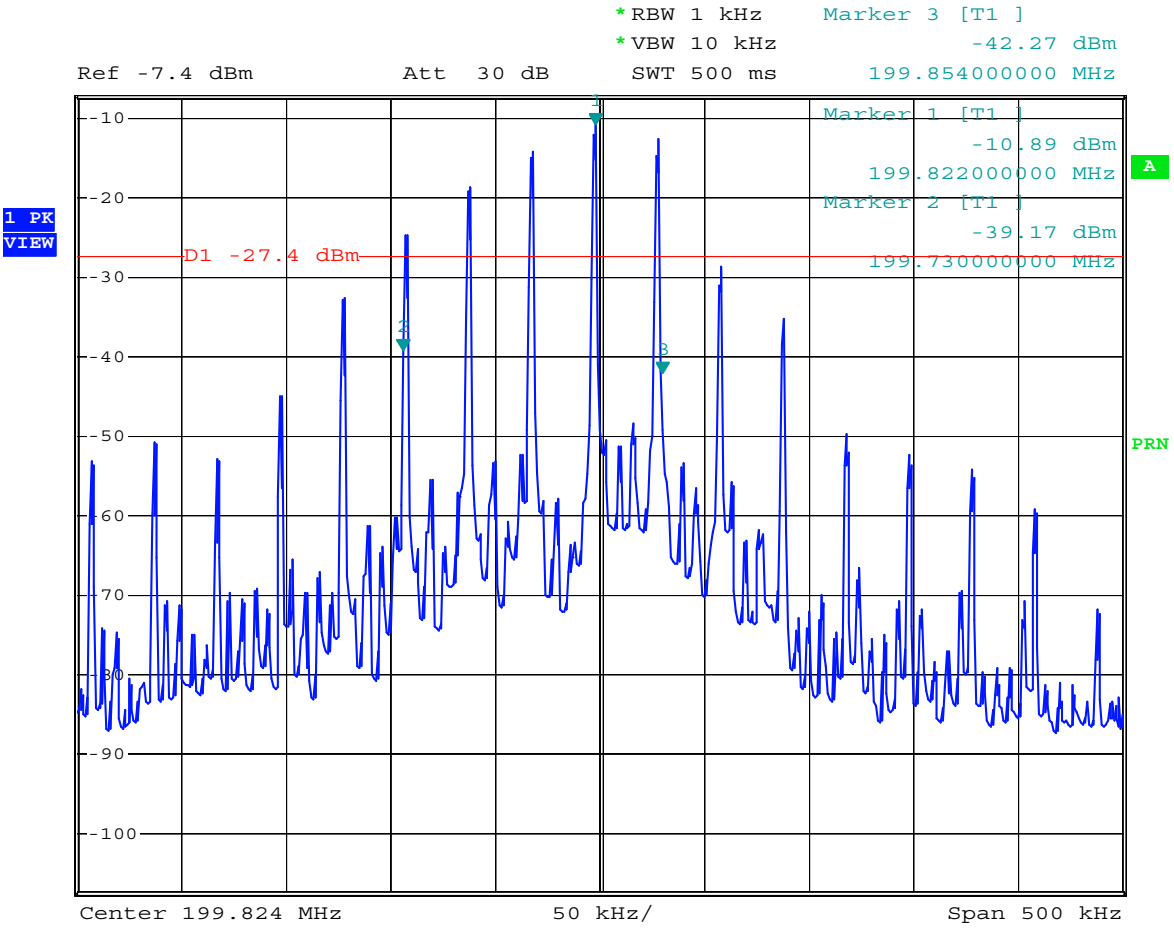
Comment: UNI39611: Occupied Bandwidth - 19.9 kHz
Date: 9.MAY.2005 16:43:56

Test Results:	142 kHz	Pass

Measurement of Emission Masks (Occupied Bandwidth

Rules and Specifications:	Sections 74.861 (5) and 2.1049 (c) (1)
Limits and Requirements:	The operating bandwidth shall not exceed 200 kHz
Nominal Frequency of EUT:	199.820 MHz

Test Procedure:	According to TIA/EIA.603-1992, § 2.2.11



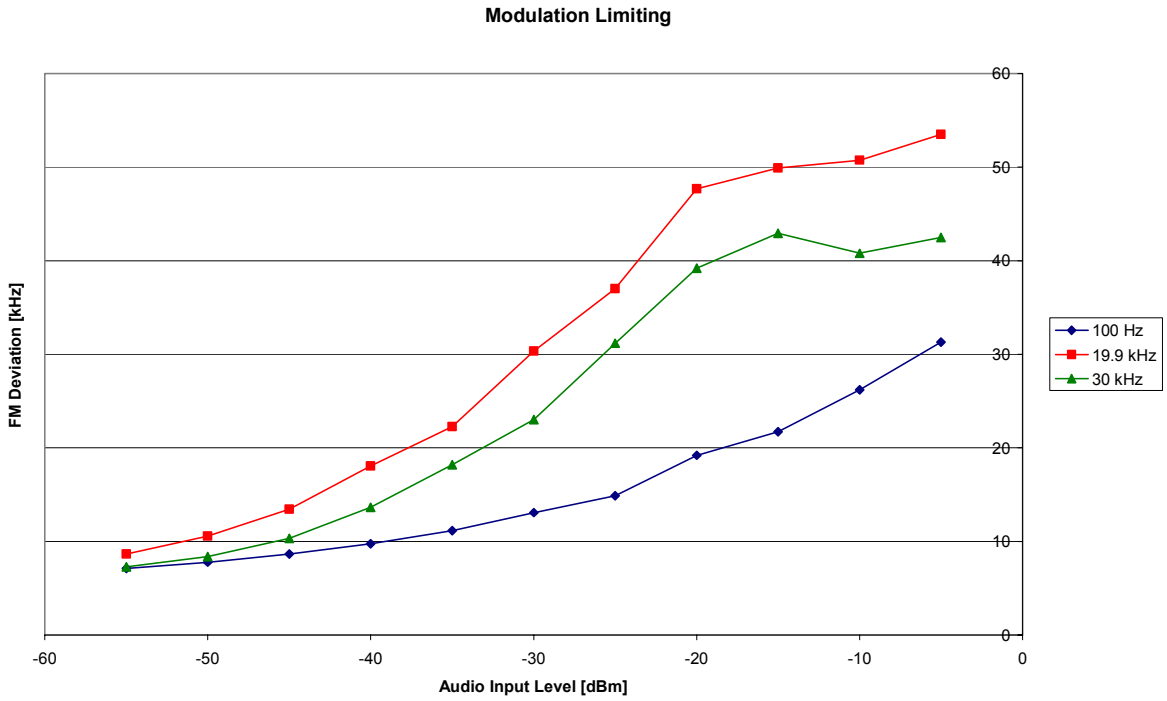
Comment: UNI39611: Occupied Bandwidth - 30 kHz
Date: 9.MAY.2005 16:44:56

Test Results:	124 kHz	Pass

Measurement of Modulation Limiting

Rules and Specifications:	Sections 2.1047 (b) and 74.861
Limits and Requirements:	The frequency deviation shall be < 75 kHz
Nominal Frequency of EUT:	199.820 MHz

Test Procedure:	According to TIA/EIA.603-1992, § 2.2.3
	Note: The audio signal was coupled to the microphone input of the transmitter via a direct connection



Test Results:		Pass

Type of Emission

Rules and Specifications:	Sections 74.861 (5) and 2.1049 (c) (1)
Limits and Requirements:	ANSI TIA/EIA-603-1992
Nominal Frequency of EUT:	199.820 MHz

	Bn = 2M + 2DK
	M =15 kHz
	D =33 kHz
	K =1
	Bn = 2(15 kHz) + 2(33 kHz) = 30 + 66 = 96 kHz

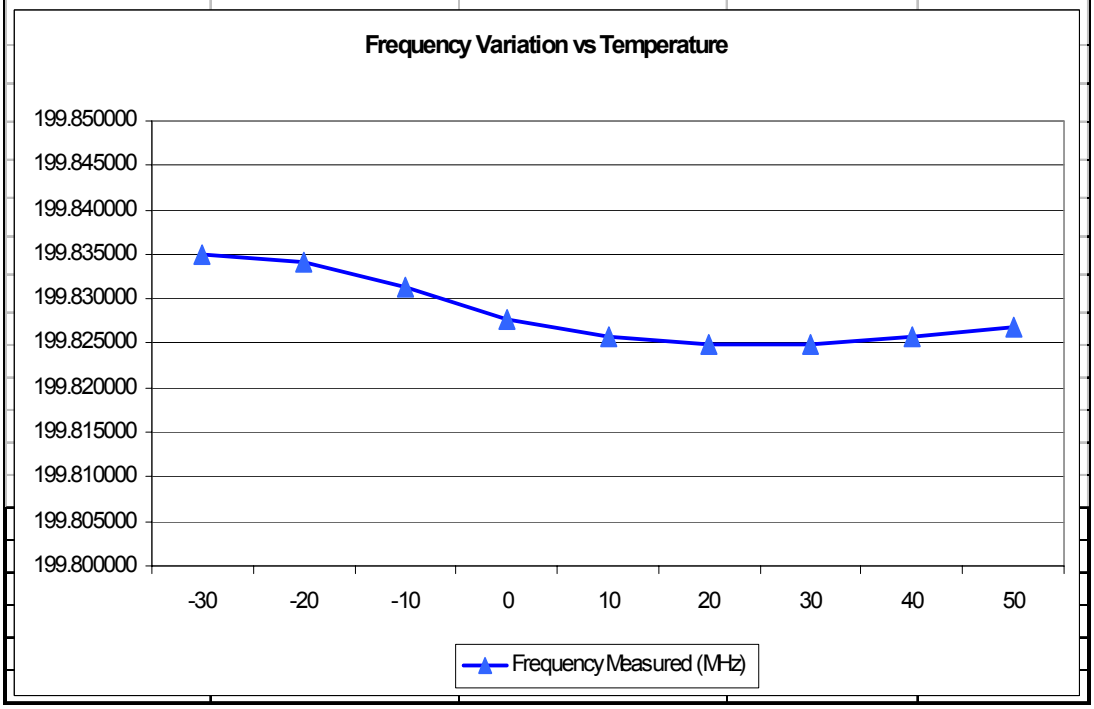
Type of Emission = 96K0F3E

Measurement of Frequency Stability vs Temperature

Rules and Specifications:	Section 74.861 (e) (4), 2.1055
Limits and Requirements:	The frequency tolerance of the transmitter shall be 0.005 %
Nominal Frequency of EUT:	199.820 MHz

Temperature Variation Table

Temperature (°C)	Nominal Frequency (MHz)	Frequency Measured (MHz)	Frequency Tolerance (ppm)	Limit (ppm)
-30	199.825000	199.834920	49.64	50
-20	199.825000	199.834220	46.14	50
-10	199.825000	199.831400	32.03	50
0	199.825000	199.827660	13.31	50
10	199.825000	199.825800	4.00	50
20	199.825000	199.824840	-0.80	50
30	199.825000	199.824880	-0.60	50
40	199.825000	199.825770	3.85	50
50	199.825000	199.826890	9.46	50



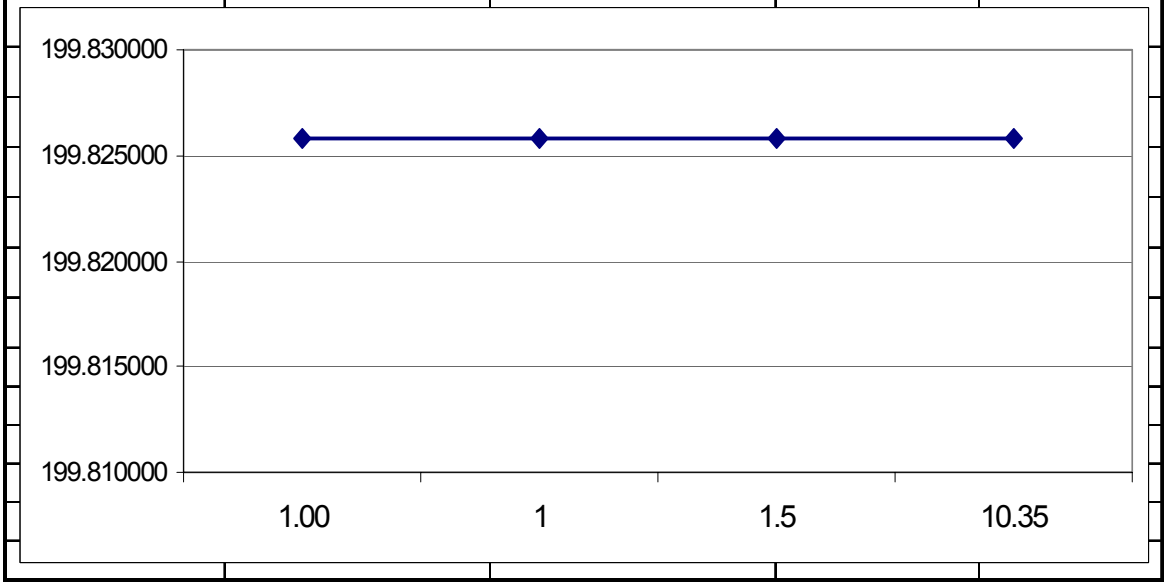
Test Results:		Pass

Measurement of Frequency Stability vs Supply Voltage

Rules and Specifications:	Sections 74.861 (e) (4), 2.1055 (d)
Limits and Requirements:	The frequency tolerance of the transmitter shall be 0.005 %
Nominal Frequency of EUT:	199.820 MHz
Battery end-point:	4.80 V

Voltage Variation Table

Supply Voltage (V)	Nominal Frequency (MHz)	Frequency Measured (MHz)	Frequency Tolerance (ppm)	Limit (ppm)
1.00	199.820000	199.825800	29.03	50
1	199.820000	199.825800	29.03	50
1.5	199.820000	199.825800	29.03	50
10.35	199.820000	199.825800	29.03	50



Test Results:		Pass

8. Referenced Regulations

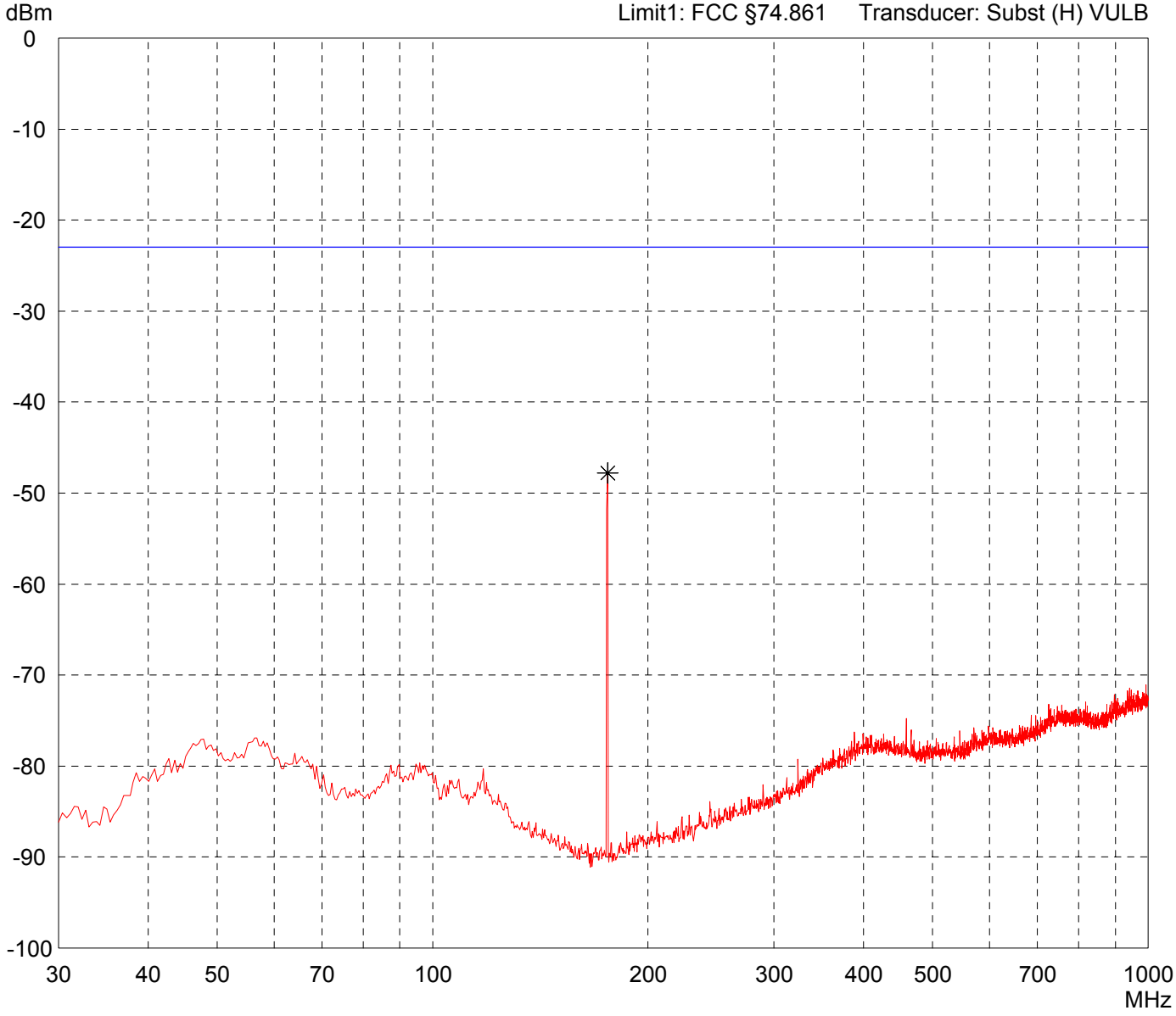
All tests were performed with reference to the following regulations and standards:

☒	FCC Part 2	Code of Federal Regulations Part 2 Frequency allocation and radio treaty matters; General rules and regulations	October 01, 2001
☐	FCC Part 15 Subpart A	Code of Regulations Part 15 (Radio Frequency Devices), Subpart A (General) of the Federal Communication Commission (FCC)	July 12, 2004
☐	FCC Part 15 Subpart B	Code of Regulations Part 15 (Radio Frequency Devices), Subpart B (Unintentional Radiators) of the Federal Communication Commission (FCC)	July 12, 2004
☐	FCC Part 15 Subpart C	Code of Regulations Part 15 (Radio Frequency Devices), Subpart C (Intentional Radiators) of the Federal Communication Commission (FCC)	July 12, 2004
☒	FCC Part 74 Subpart H	Code of Regulations Part 15 (Radio Frequency Devices), Subpart H (Low Power Auxiliary Stations) of the Federal Communication Commission (FCC)	July 12, 2004
☐	CFR 47 Part 95 Subpart C/E	Code of Federal Regulations Part 95 (Personal Radio Services), Subpart C/E (Radio Control(R/C) Radio Service) of the Federal Communication Commission (FCC)	October 1, 1998
☐	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 January 30, 2004)
☐	RSS-210	Radio Standards Specification RSS-210 Issue 5 for Low Power Licence-Exempt Radiocommunication Devices (All Frequency Bands) of Industry Canada	November 2001
☐	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
☒	TIA/EIA-603	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards	February 1993
☒	TIA/EIA-603-1	Addendum to TIA/EIA-603	March 4, 1998

Charts taken during testing

Radiated Power Test 30 MHz - 1 GHz
acc. to FCC Part 74 Subpart H

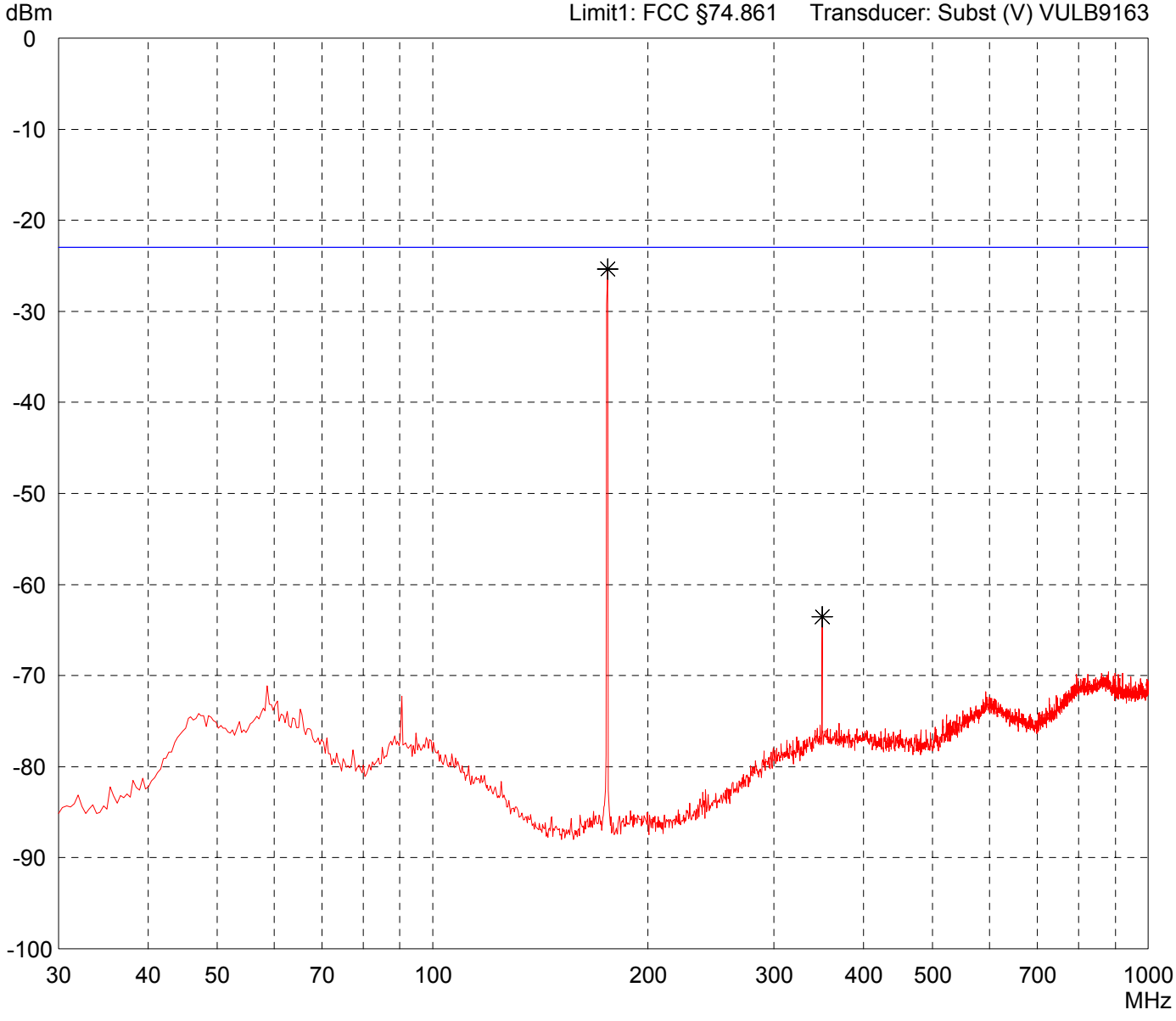
Model: DMT-300 HD	Comment: EUT in upright position (P1)
Serial no.: 175 MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 meters Horizontal Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	
Detector: Peak	List of values: Selected by hand



Result: Limit kept	Project file: 56408-30611 Page of Pages

Radiated Power Test 30 MHz - 1 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT in upright position (P1)
Serial no.: 175 MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 meters Vertical Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	
Detector: Peak	List of values: Selected by hand

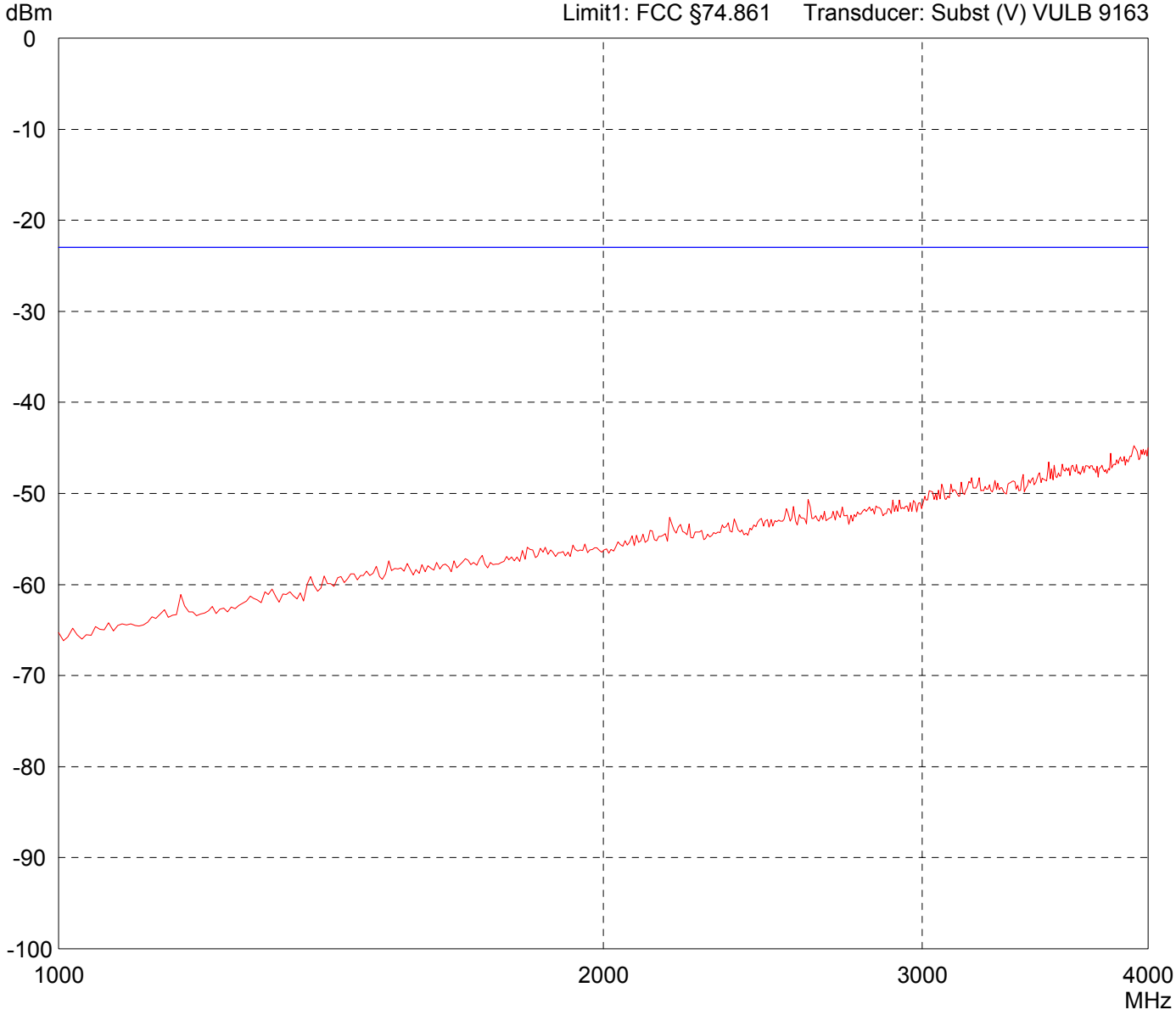


Result: Limit kept	Project file: 56408-30611 Page of Pages

Radiated Power Test 1 GHz - 4 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT in upright position (P1)
Serial no.: 175 MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Vertical Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

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

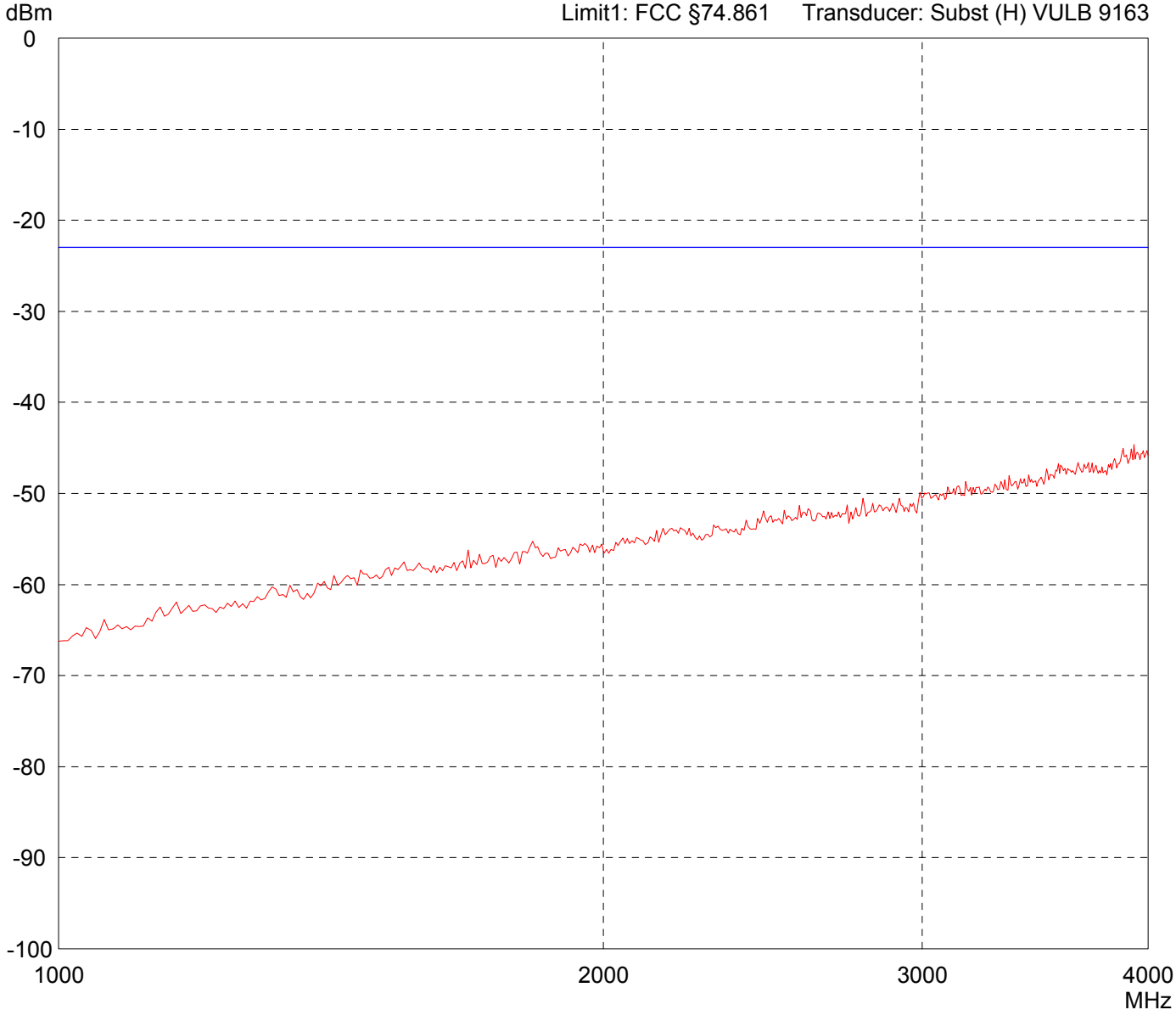


Result: Limit kept	Project file: 56408-30611 — Page of Pages

Radiated Power Test 1 GHz - 4 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT in upright position (P1)
Serial no.: 175 MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

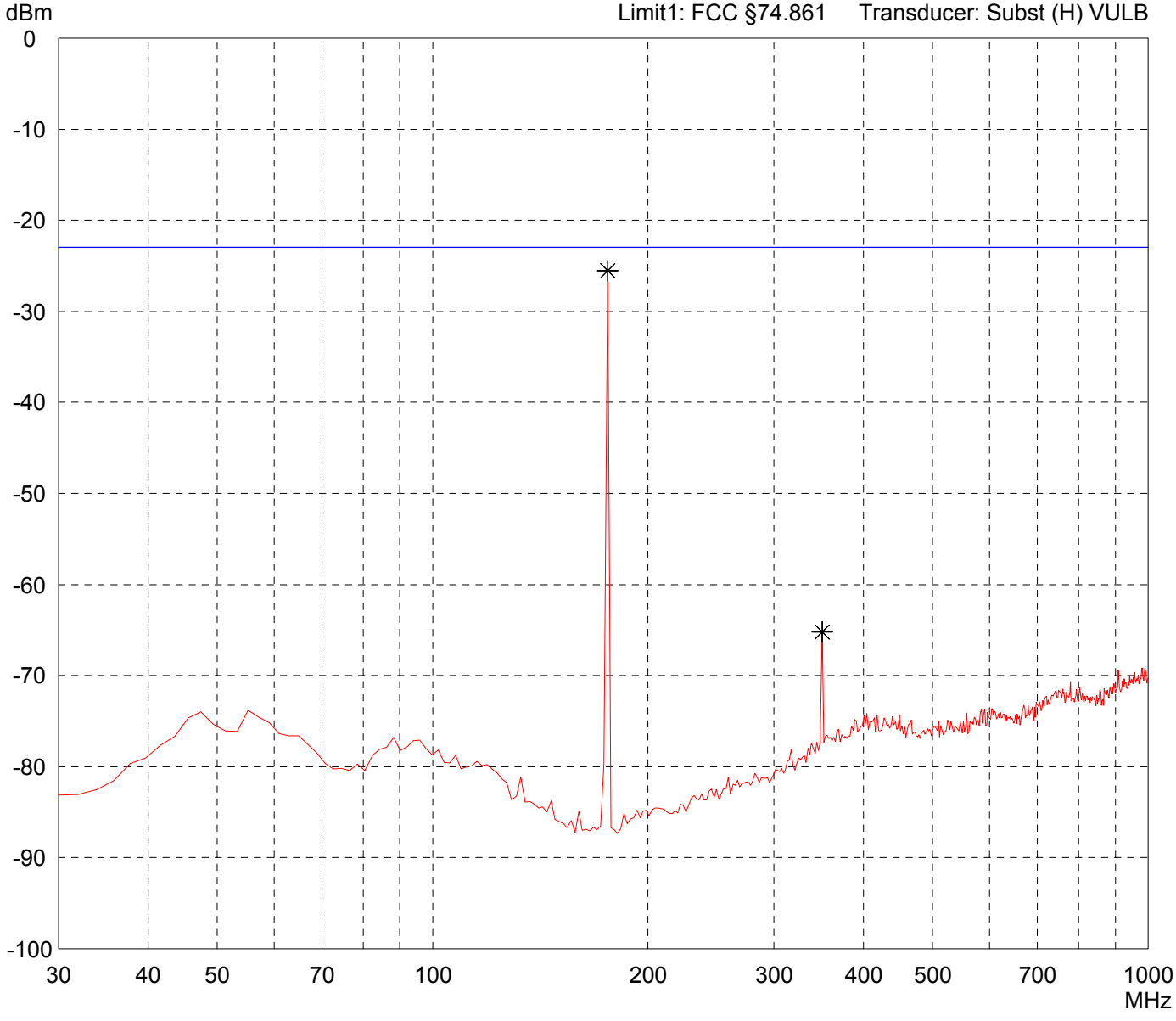
Detector: Peak	List of values: 10 dB Margin — 50 Subranges



Result: Limit kept	Project file: 56408-30611 — Page of Pages

Radiated Power Test 30 MHz - 1 GHz
acc. to FCC Part 74 Subpart H

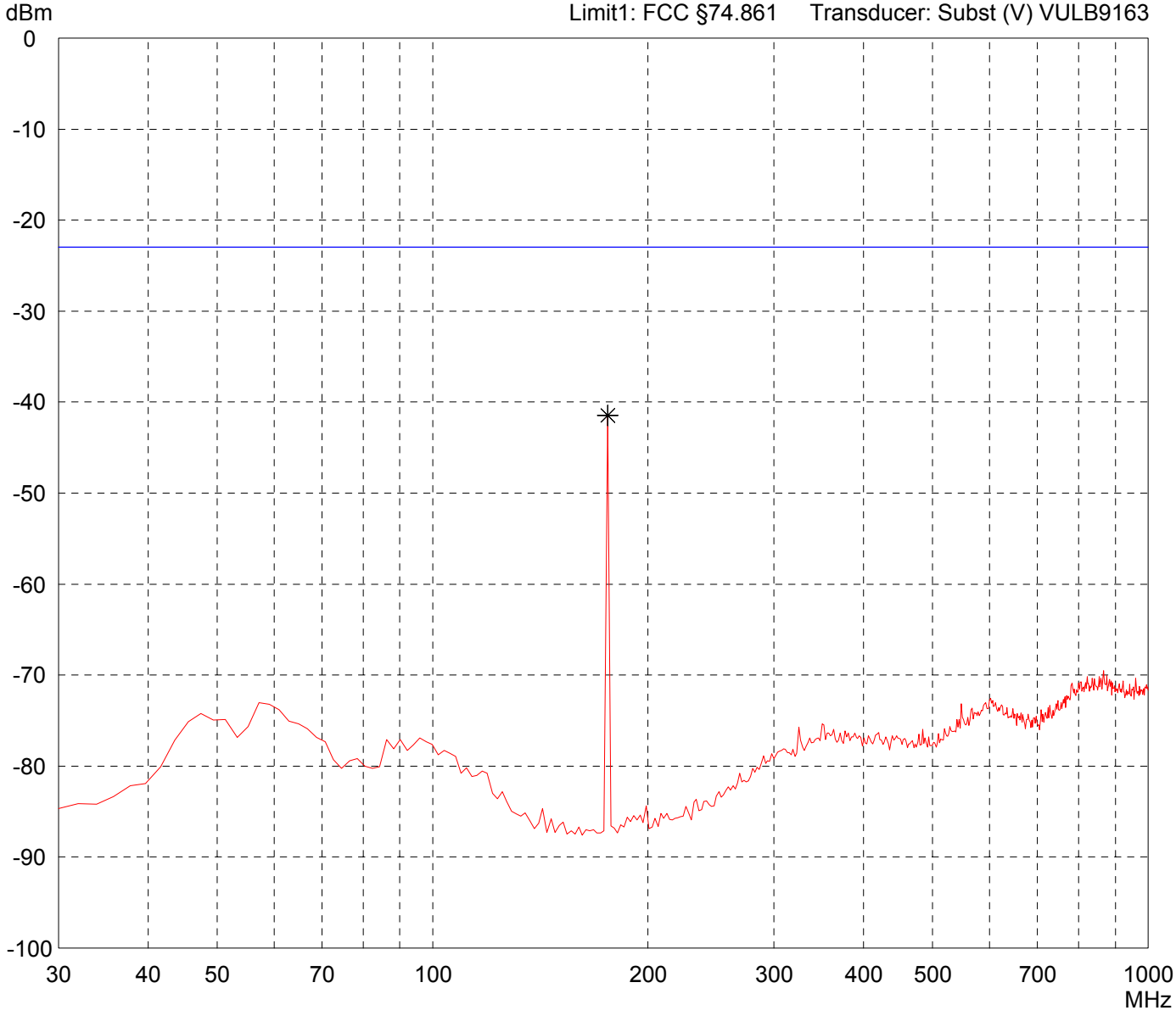
Model: DMT-300 HD	Comment: EUT flat on table (P2)
Serial no.: 175 MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 meters Horizontal Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	
Detector: Peak	List of values: Selected by hand



Result: Limit kept	Project file: 56408-30611 Page of Pages

Radiated Power Test 30 MHz - 1 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT flat on table (P2)
Serial no.: 175 MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 meters Vertical Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	
Detector: Peak	List of values: Selected by hand

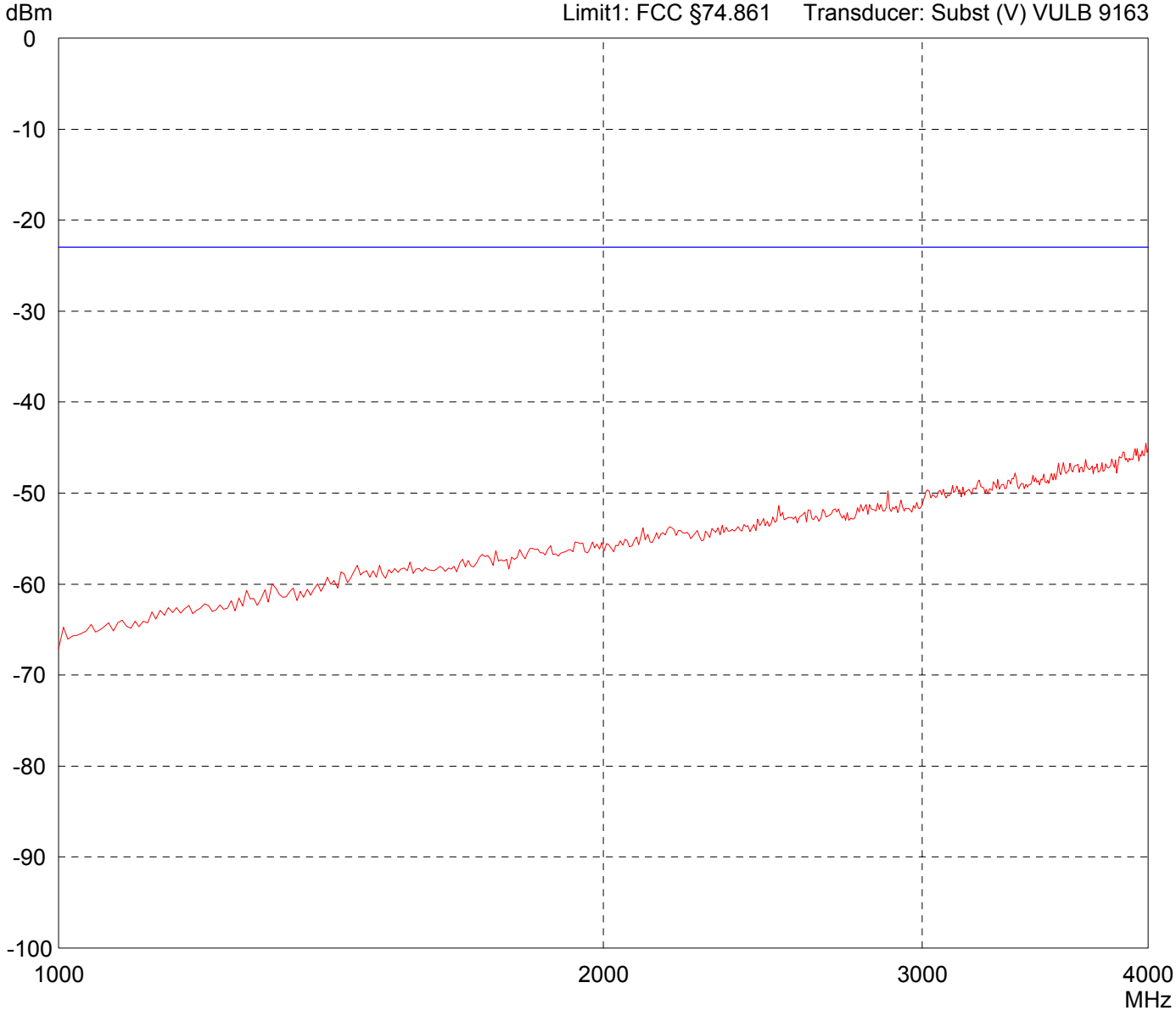


Result: Limit kept	Project file: 56408-30611 Page of Pages

Radiated Power Test 1 GHz - 4 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT flat on table (P2)
Serial no.: 175 MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Vertical Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

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

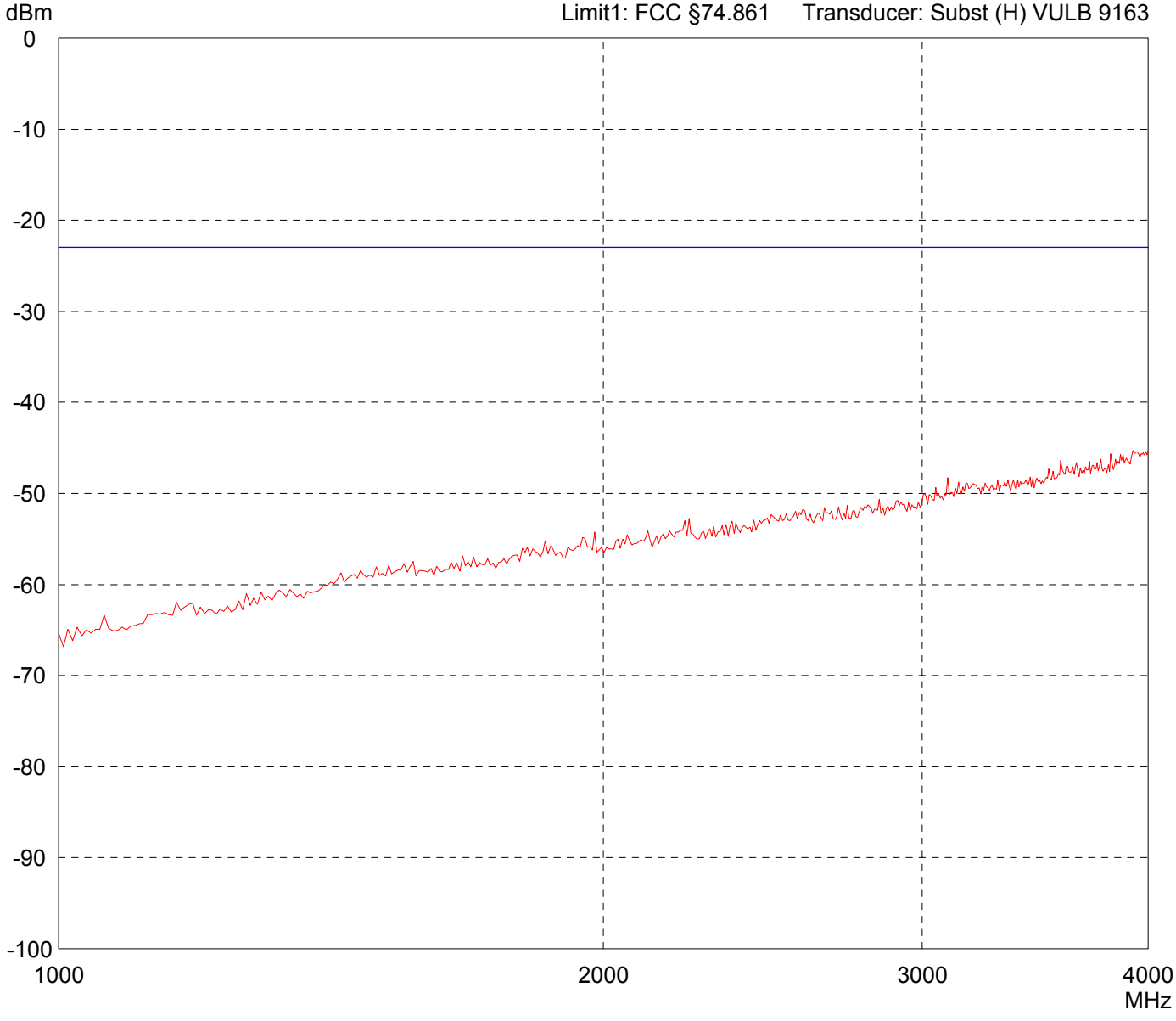


Result: Limit kept	Project file: 56408-30611 — Page of Pages

Radiated Power Test 1 GHz - 4 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT flat on table (P2)
Serial no.: 175 MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

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

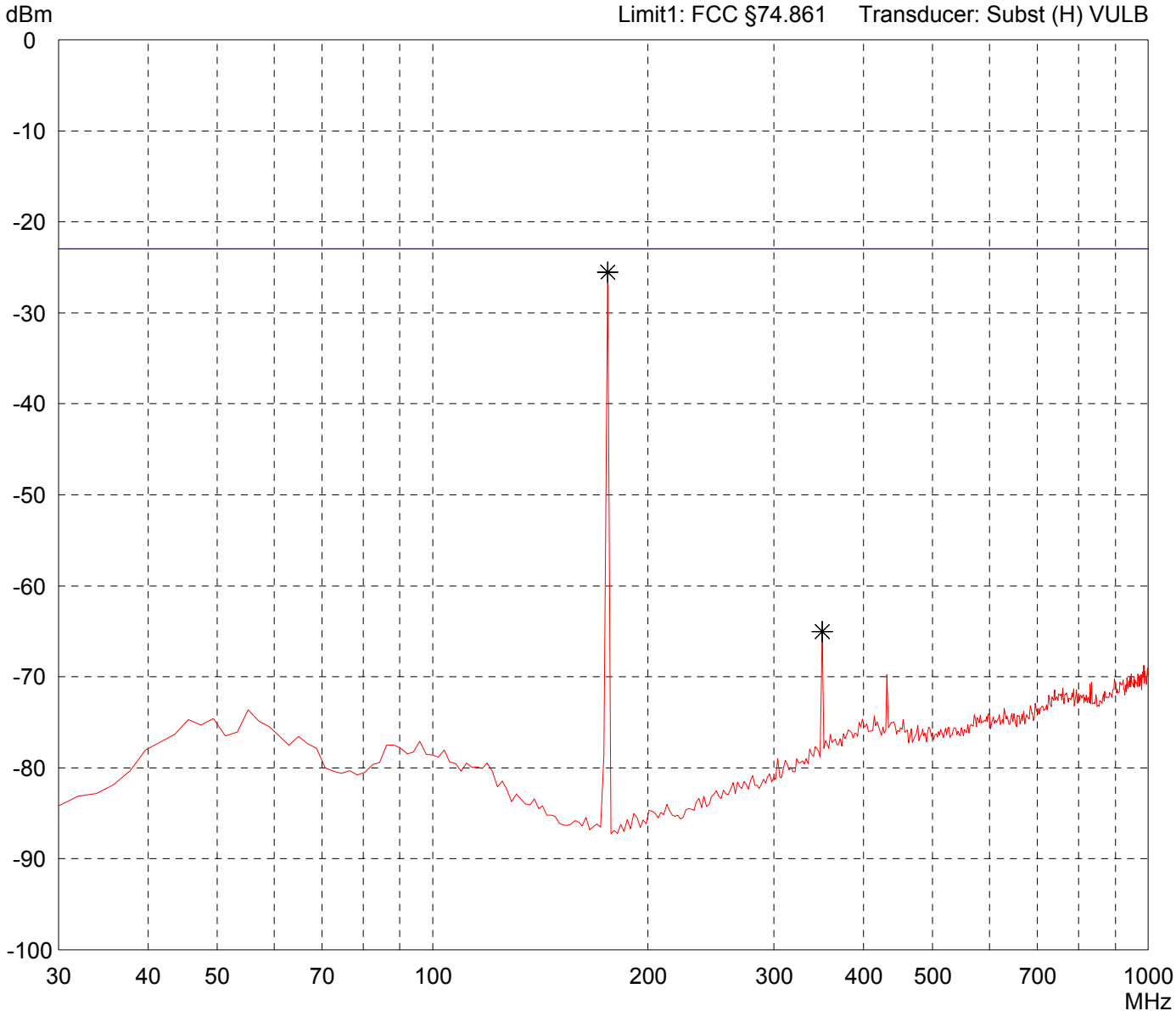


Result: Limit kept	Project file: 56408-30611 — Page of Pages

Radiated Power Test 30 MHz - 1 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT flat on table (P3)
Serial no.: 175 MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 meters Horizontal Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

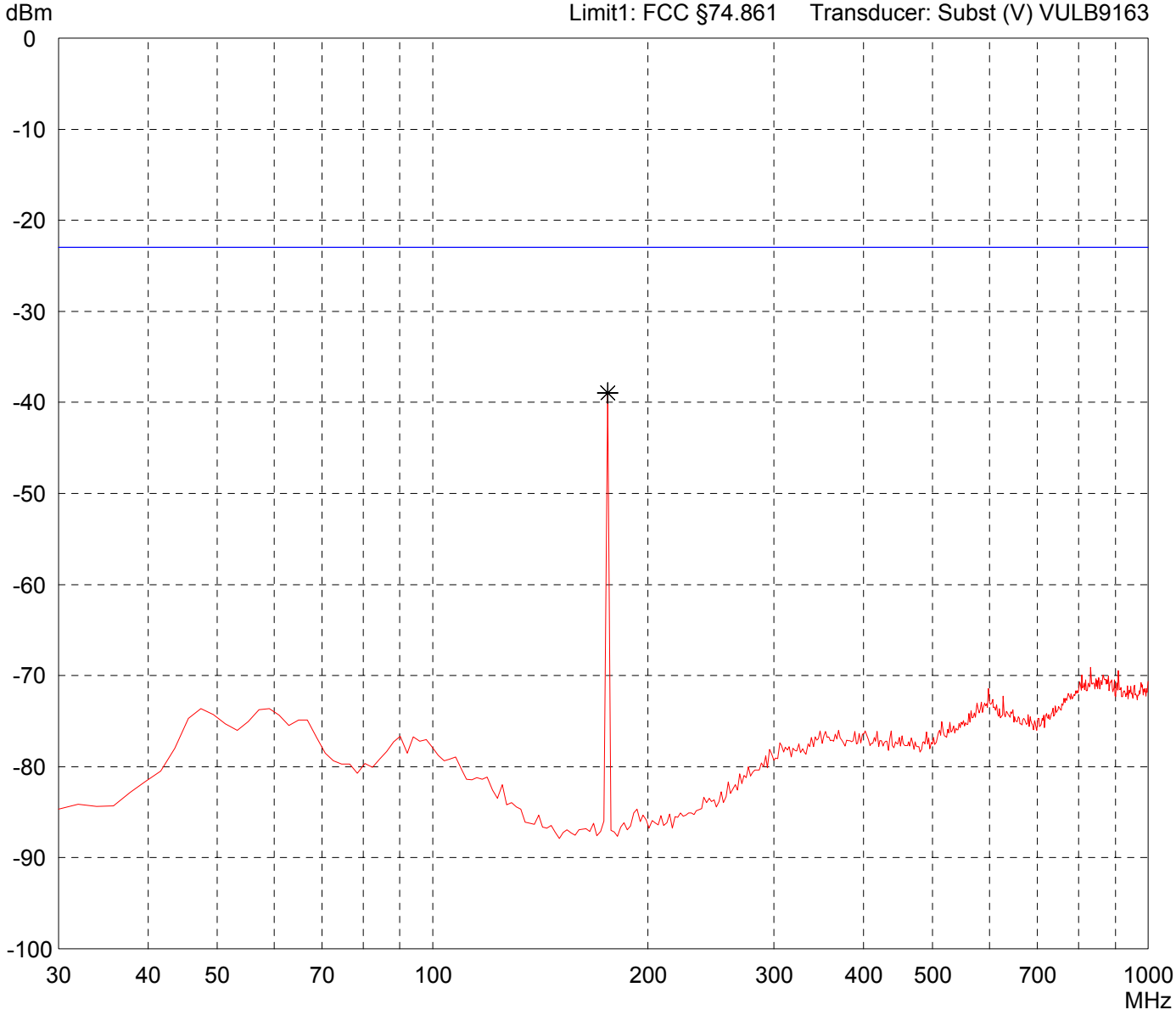
Detector: Peak	List of values: Selected by hand



Result: Limit kept	Project file: 56408-30611 Page of Pages

Radiated Power Test 30 MHz - 1 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT flat on table (P3)
Serial no.: 175 MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 meters Vertical Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	
Detector: Peak	List of values: Selected by hand

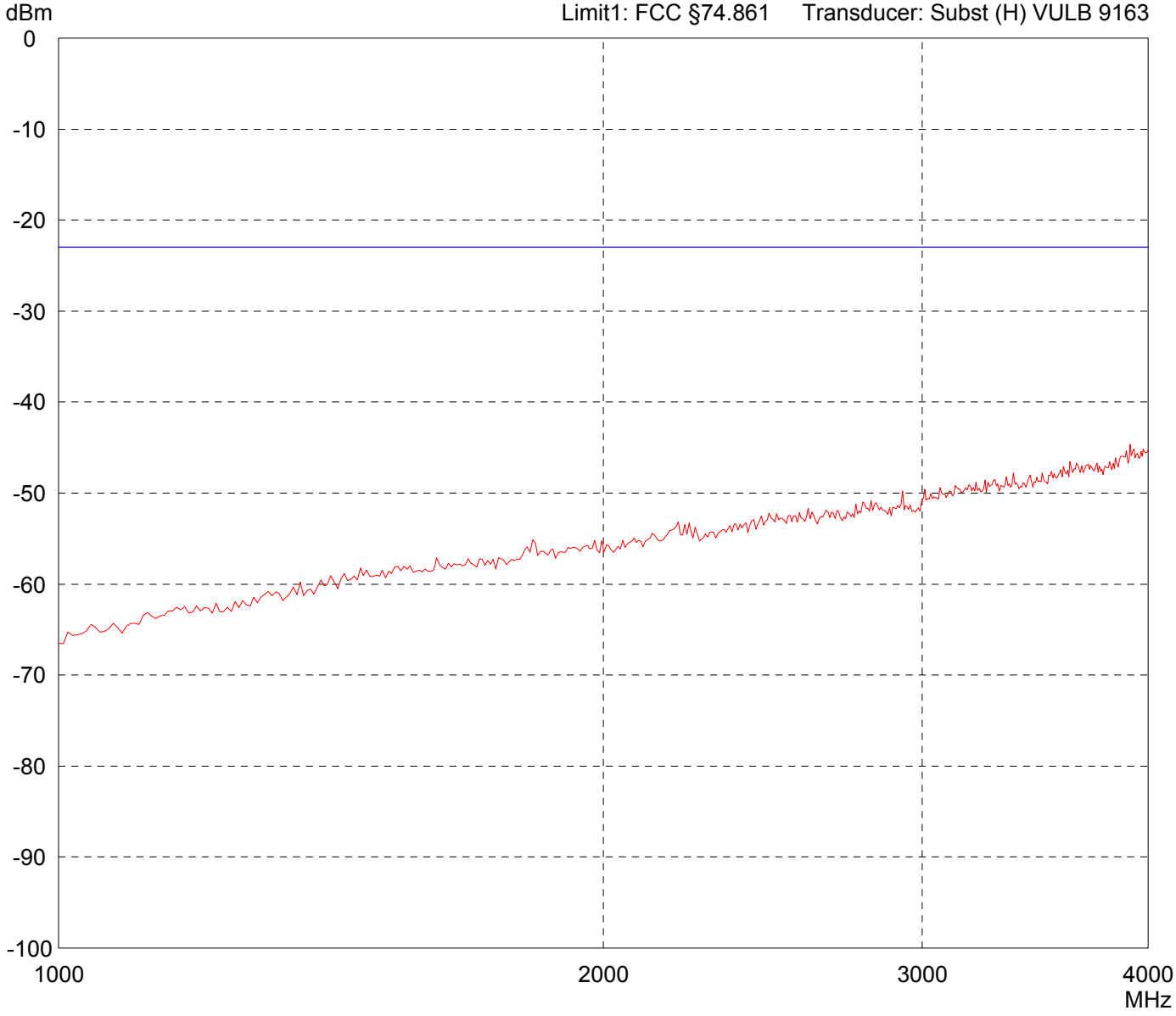


Result: Limit kept	Project file: 56408-30611 Page of Pages

Radiated Power Test 1 GHz - 4 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT flat on table (P3)
Serial no.: 175 MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

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

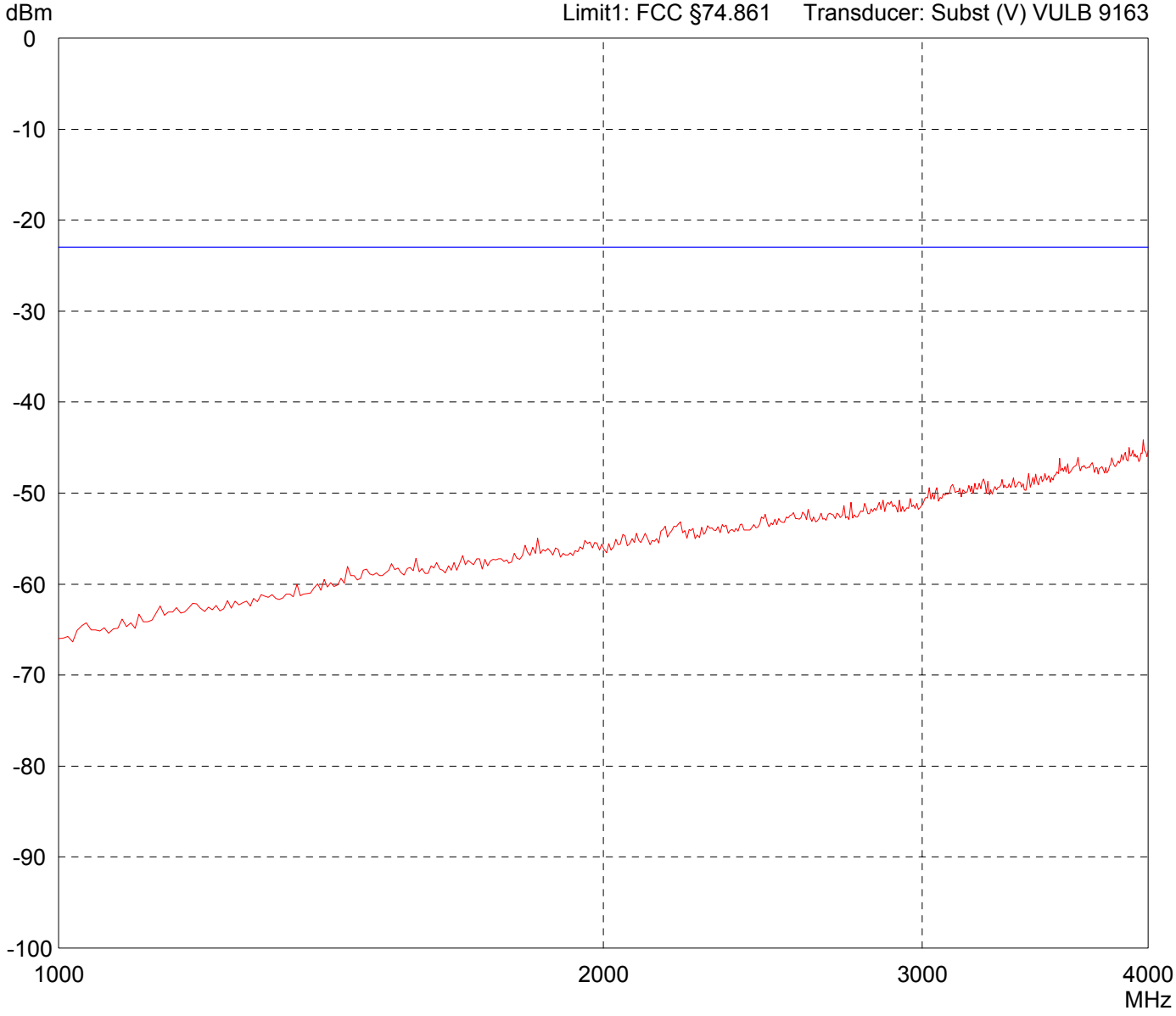


Result: Limit kept	Project file: 56408-30611 — Page of Pages

Radiated Power Test 1 GHz - 4 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT flat on table (P3)
Serial no.: 175 MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Vertical Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

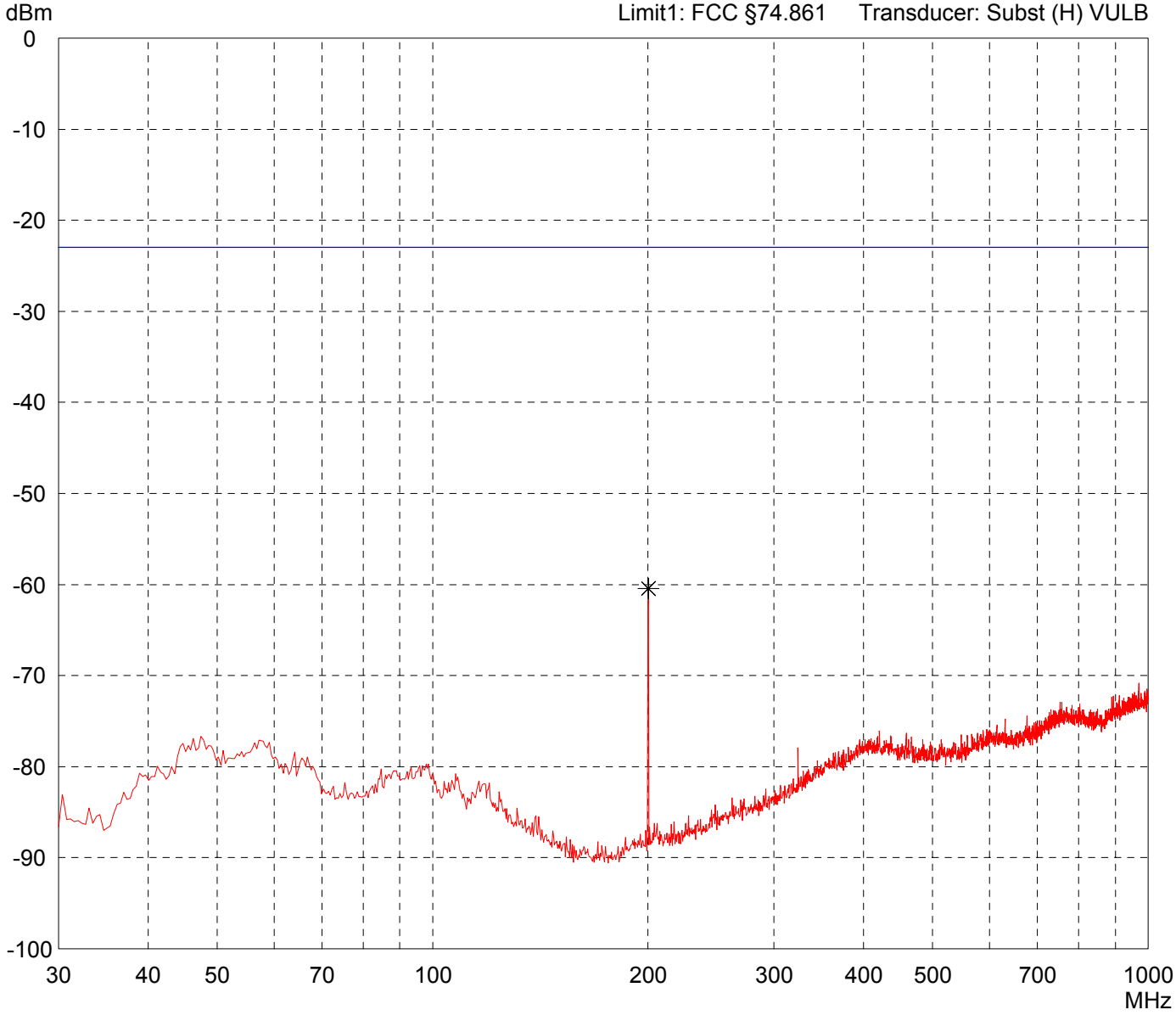
Detector: Peak	List of values: 10 dB Margin — 50 Subranges



Result: Limit kept	Project file: 56408-30611 — Page of Pages

Radiated Power Test 30 MHz - 1 GHz
acc. to FCC Part 74 Subpart H

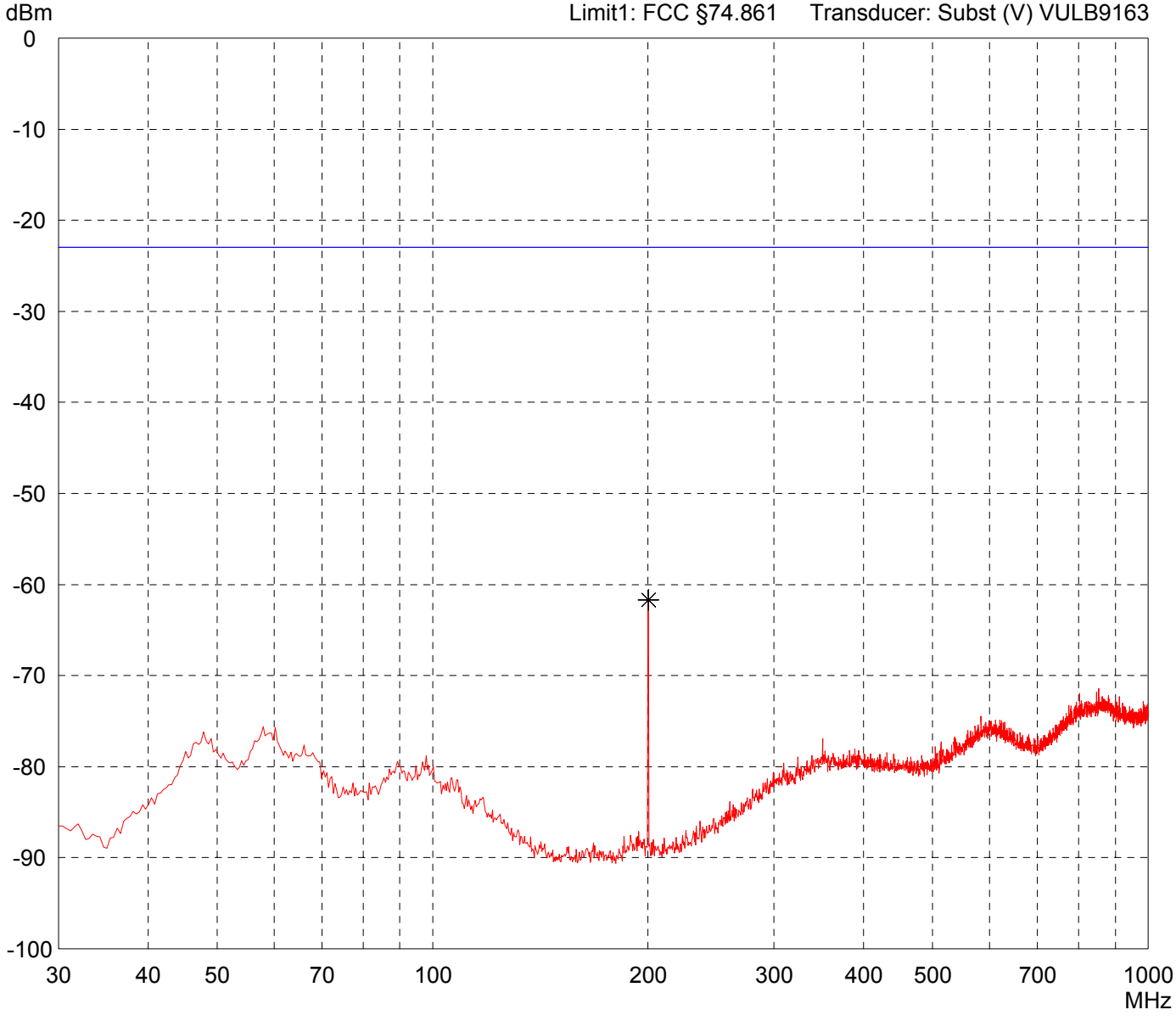
Model: DMT-300 HD	Comment: EUT in upright position (P1)
Serial no.: 199.82MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 meters Horizontal Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	
Detector: Peak	List of values: Selected by hand



Result: Limit kept	Project file: 56408-30611 Page of Pages

Radiated Power Test 30 MHz - 1 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT in upright position (P1)
Serial no.: 199.82MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 meters Vertical Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	
Detector: Peak	List of values: Selected by hand

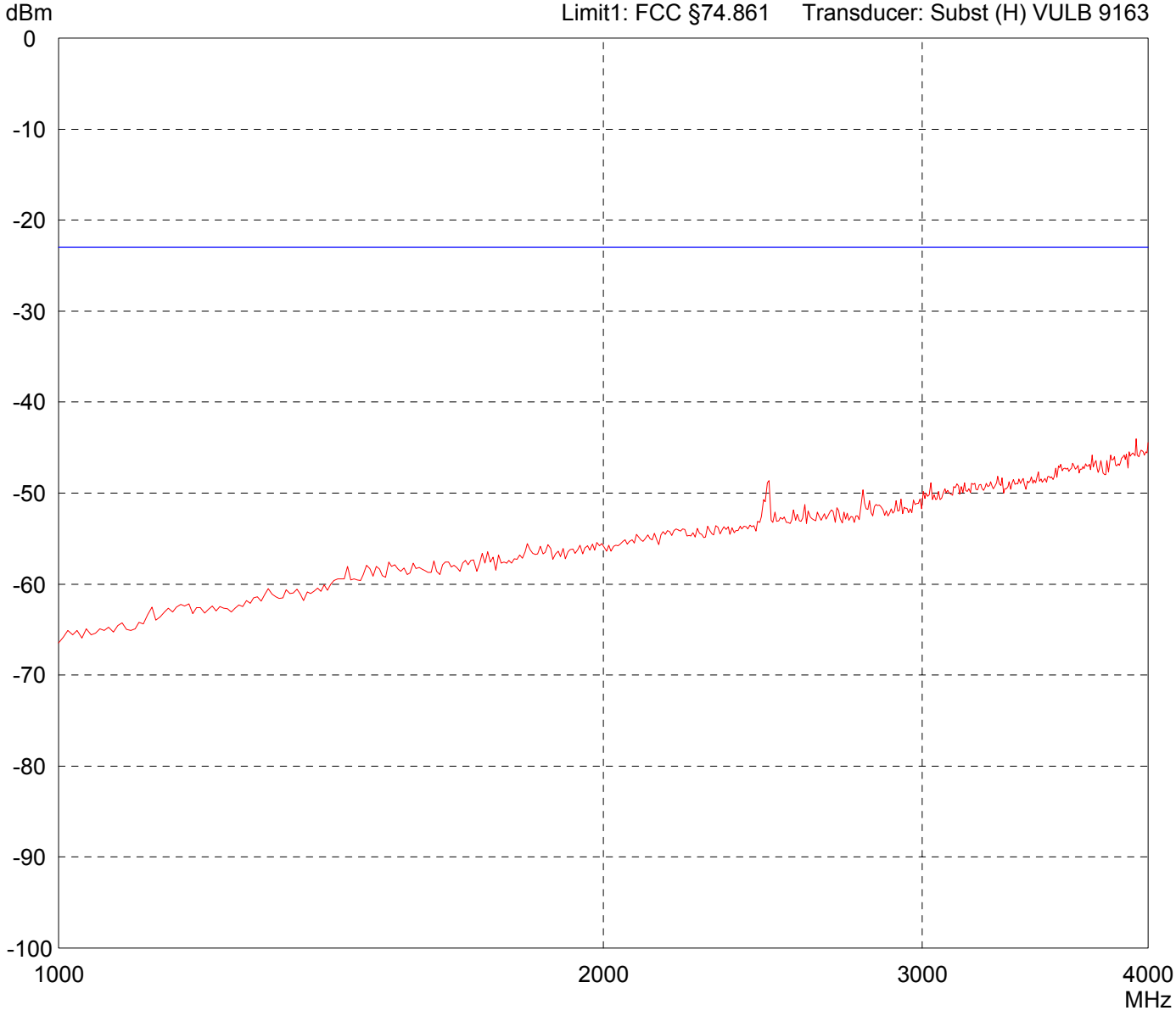


Result: Limit kept	Project file: 56408-30611 Page of Pages

Radiated Power Test 1 GHz - 4 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT in upright position (P1)
Serial no.: 199.82MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

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



Result: Limit kept	Project file: 56408-30611 — Page of Pages

Radiated Power Test 1 GHz - 4 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT in upright position (P1)
Serial no.: 199.82MHz	
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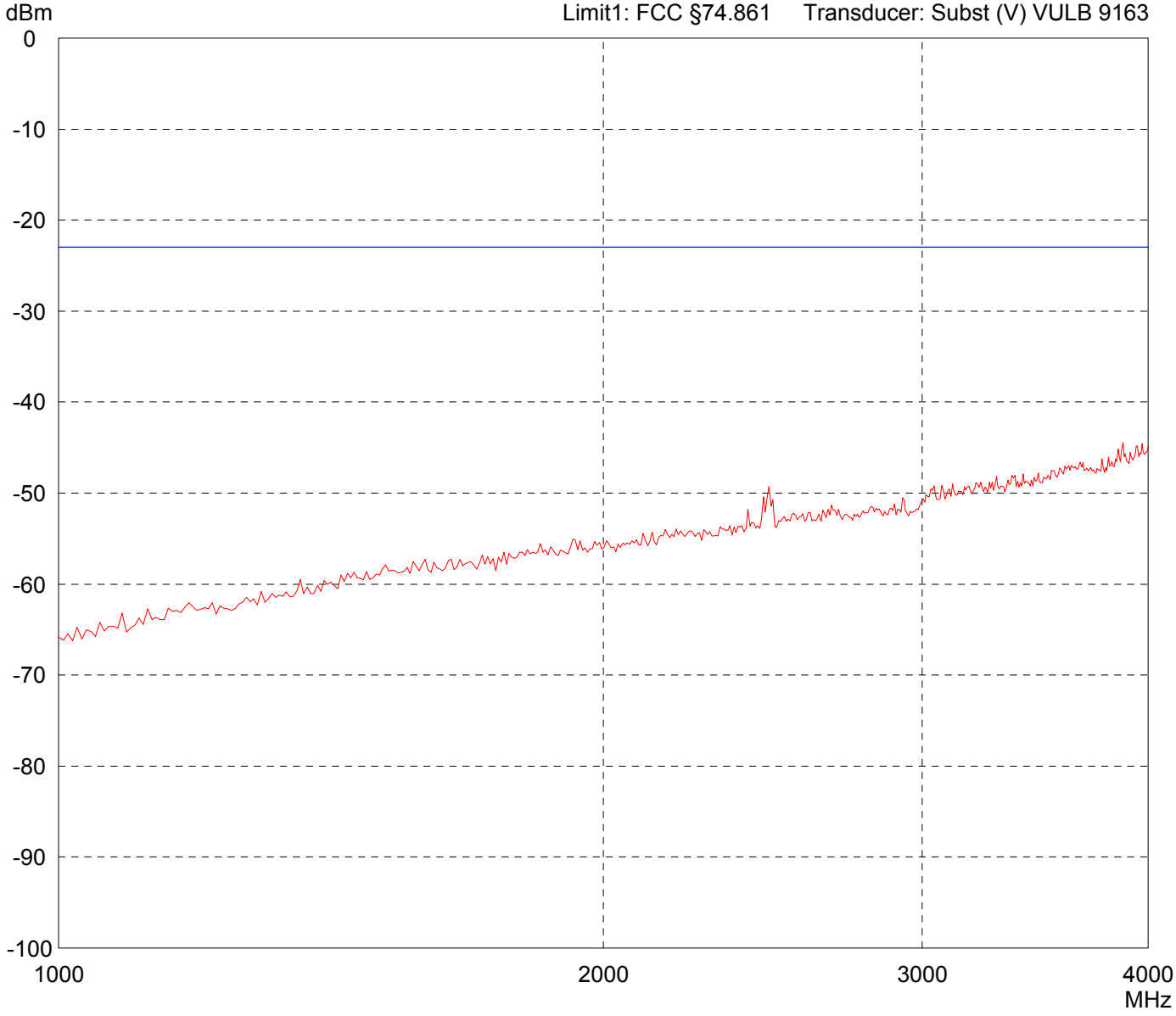
Tested on: Test distance 3 metres Vertical Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

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

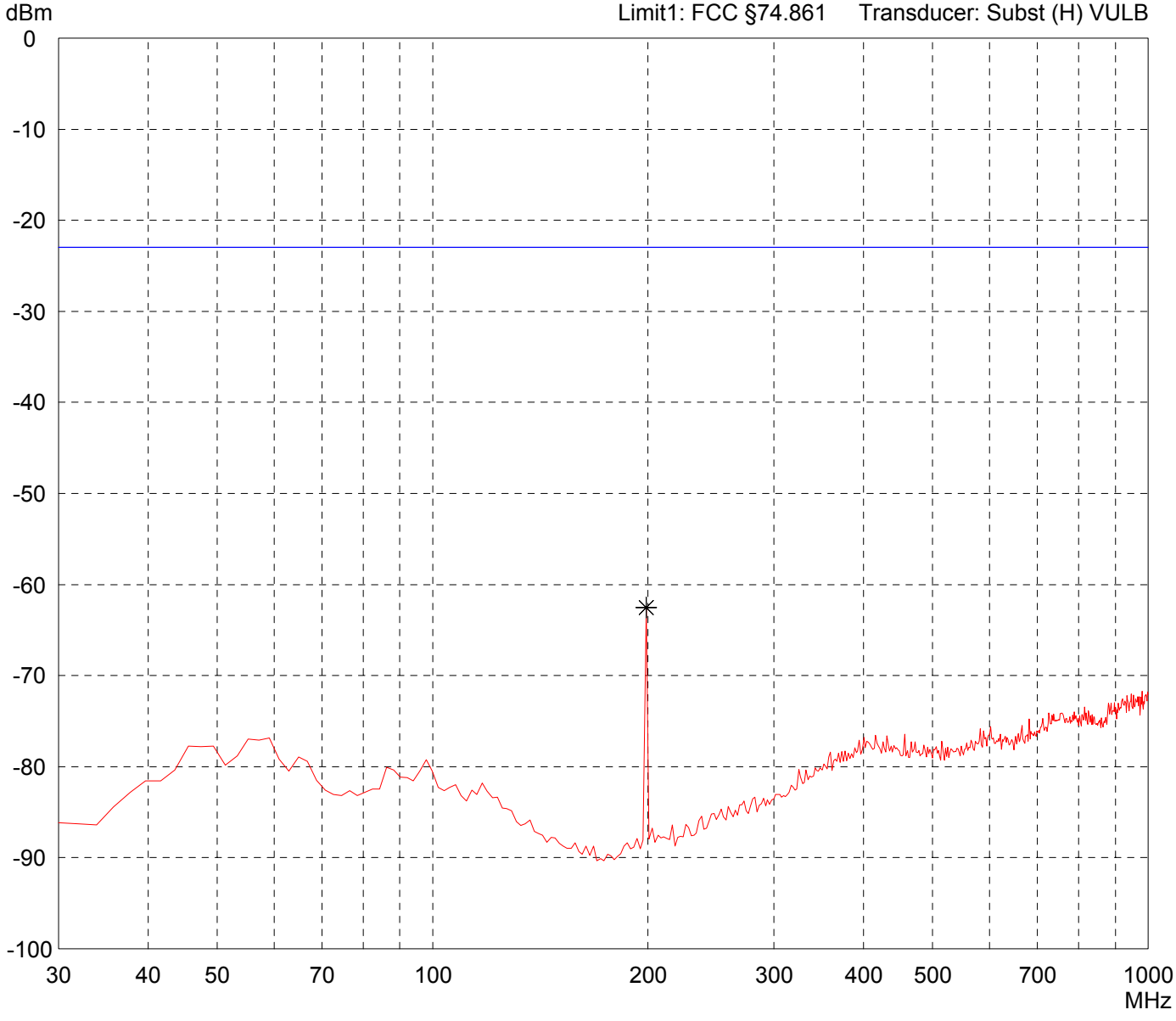


Result: Limit kept	Project file: 56408-30611 — Page of Pages

Radiated Power Test 30 MHz - 1 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT flat on table (P2)
Serial no.: 199.82MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 meters Horizontal Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

Detector: Peak	List of values: Selected by hand



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Radiated Power Test 30 MHz - 1 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT flat on table (P2)
Serial no.: 199.82MHz	
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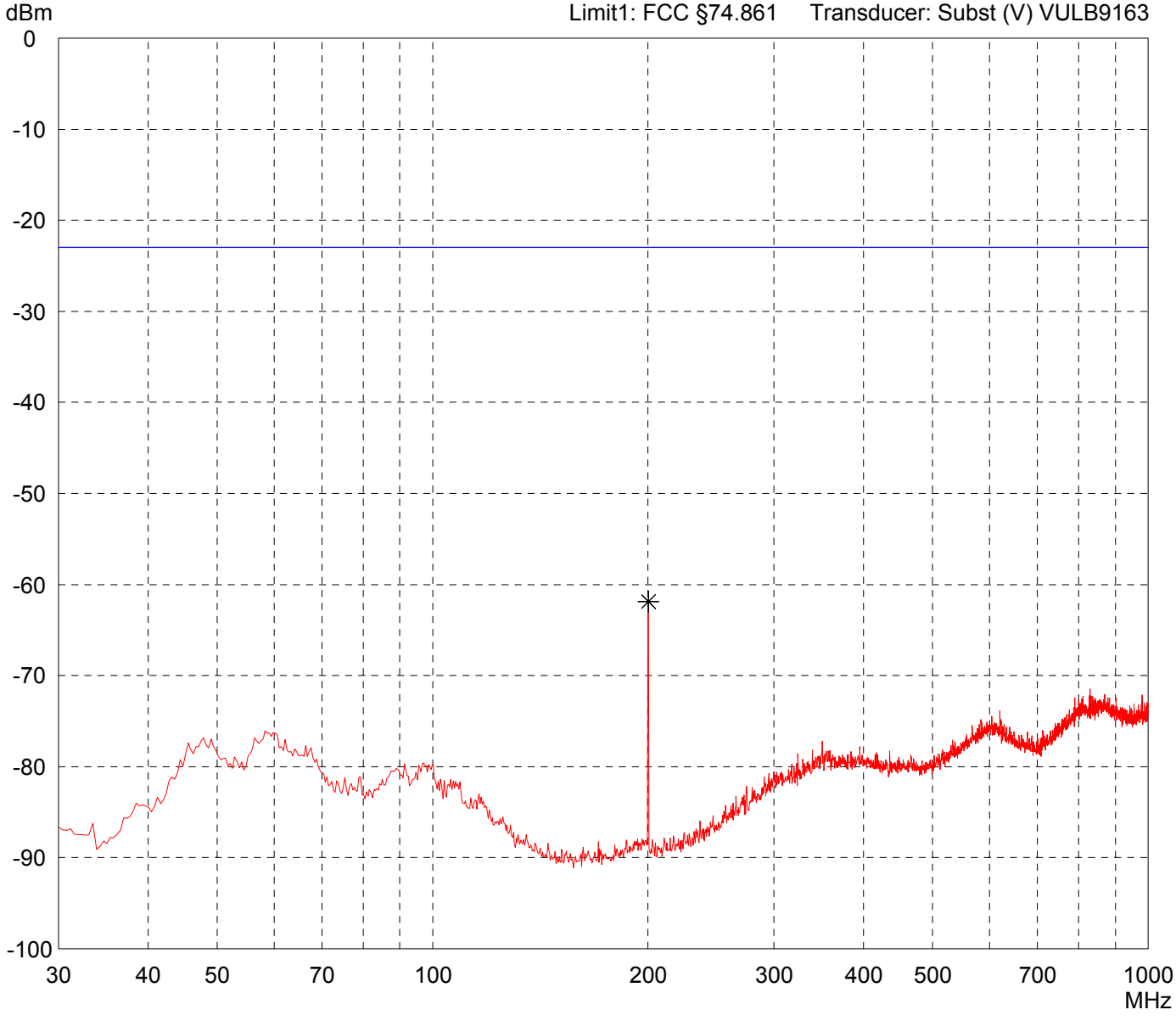
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

Detector: Peak	List of values: Selected by hand



Result: Limit kept	Project file: 56408-30611 Page of Pages

Radiated Power Test 1 GHz - 4 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT flat on table (P2)
Serial no.: 199.82MHz	
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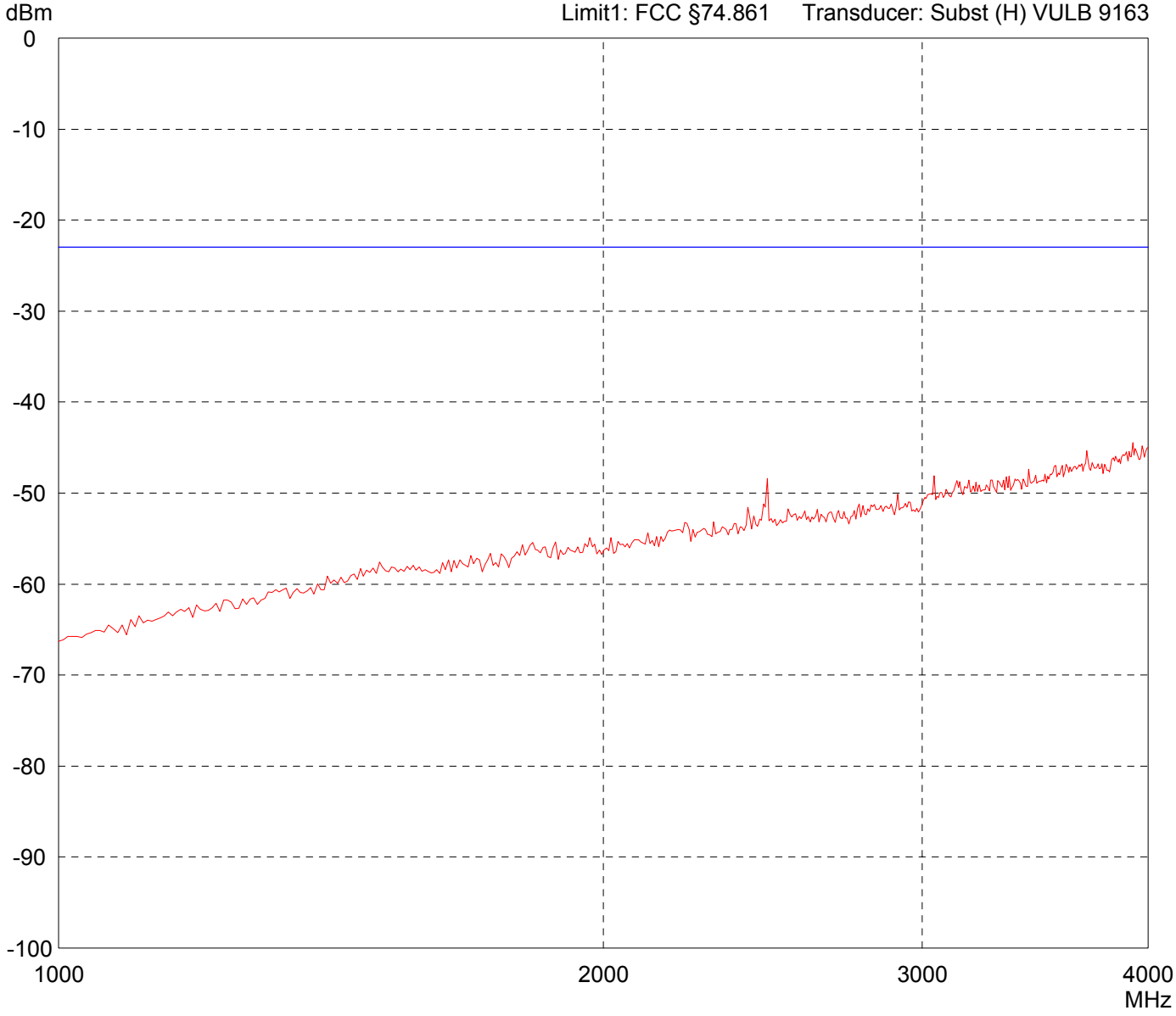
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

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



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Radiated Power Test 1 GHz - 4 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT flat on table (P2)
Serial no.: 199.82MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
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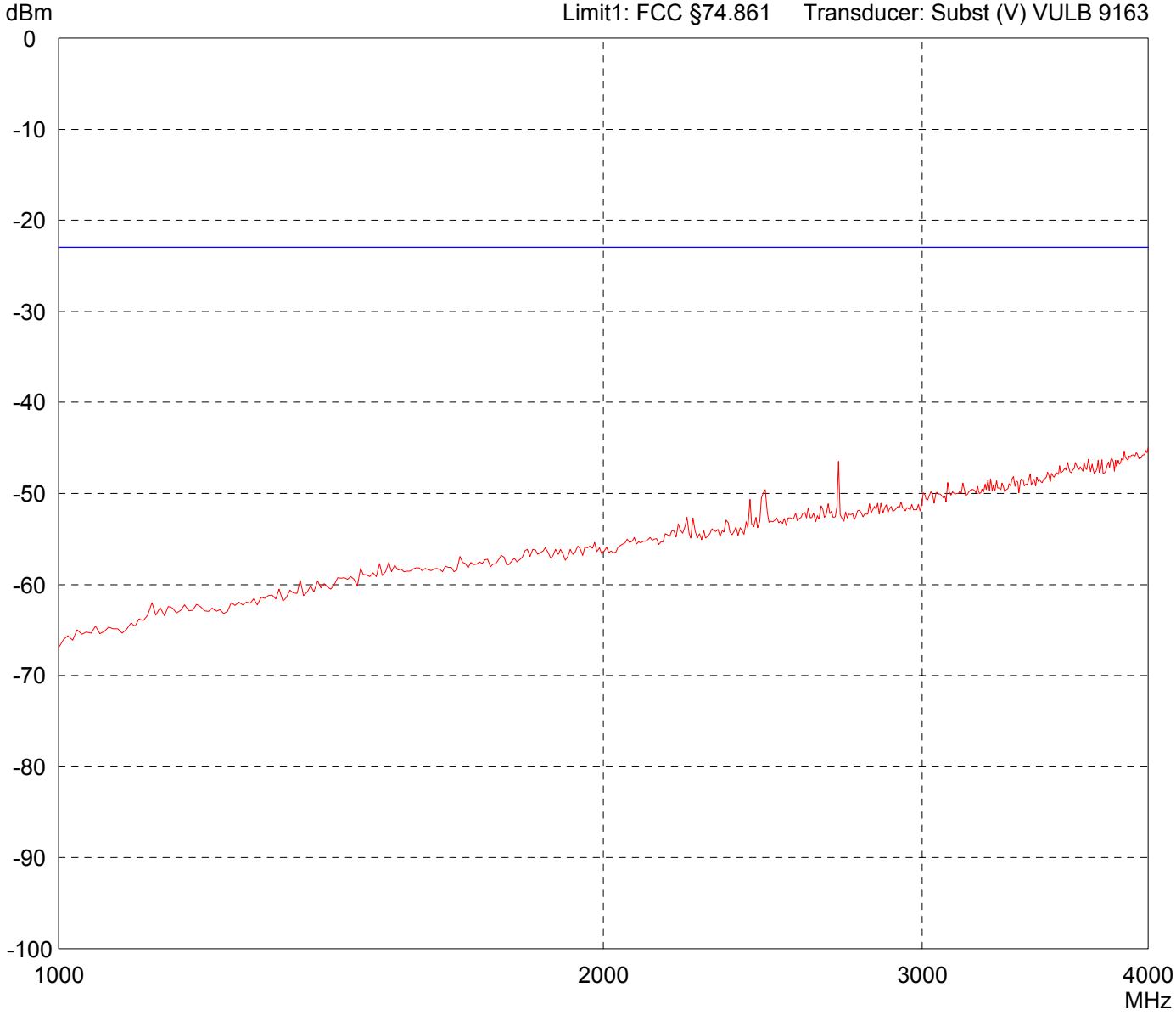
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

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

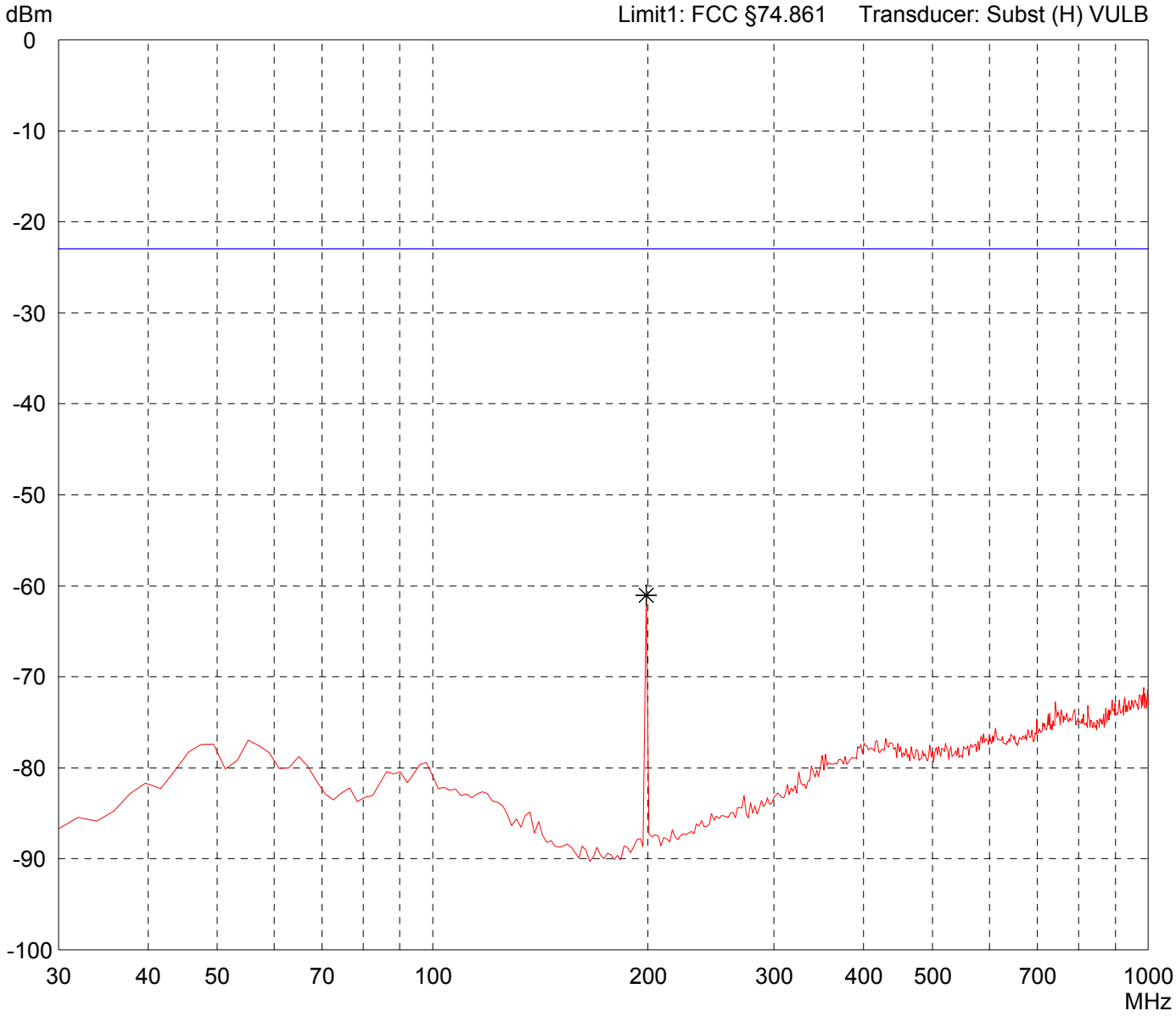


Result: Limit kept	Project file: 56408-30611 — Page of Pages

Radiated Power Test 30 MHz - 1 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT flat on table (P3)
Serial no.: 199.82MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 meters Horizontal Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

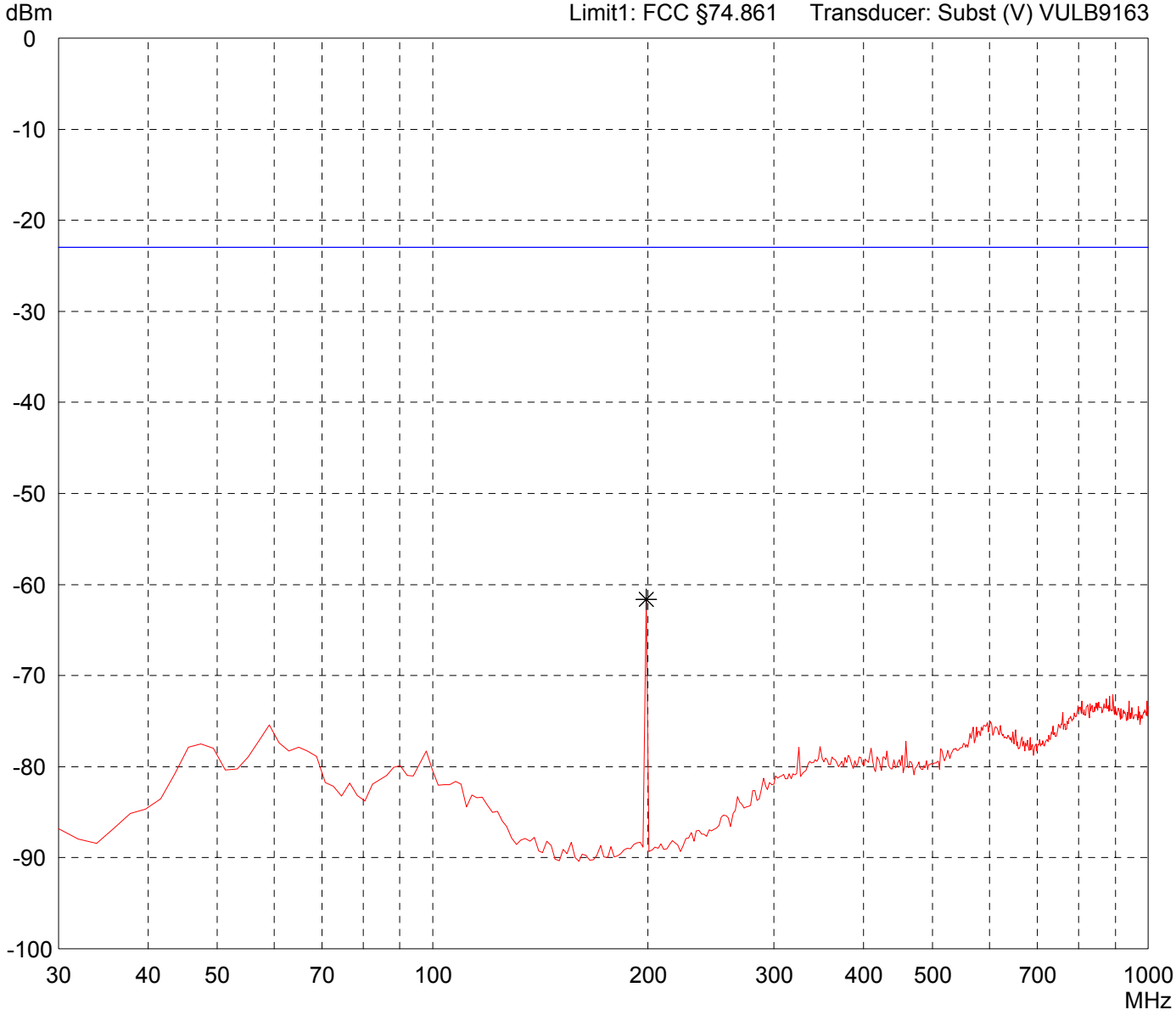
Detector: Peak	List of values: Selected by hand



Result: Limit kept	Project file: 56408-30611 Page of Pages

Radiated Power Test 30 MHz - 1 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT flat on table (P3)
Serial no.: 199.82MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 meters Vertical Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	
Detector: Peak	List of values: Selected by hand

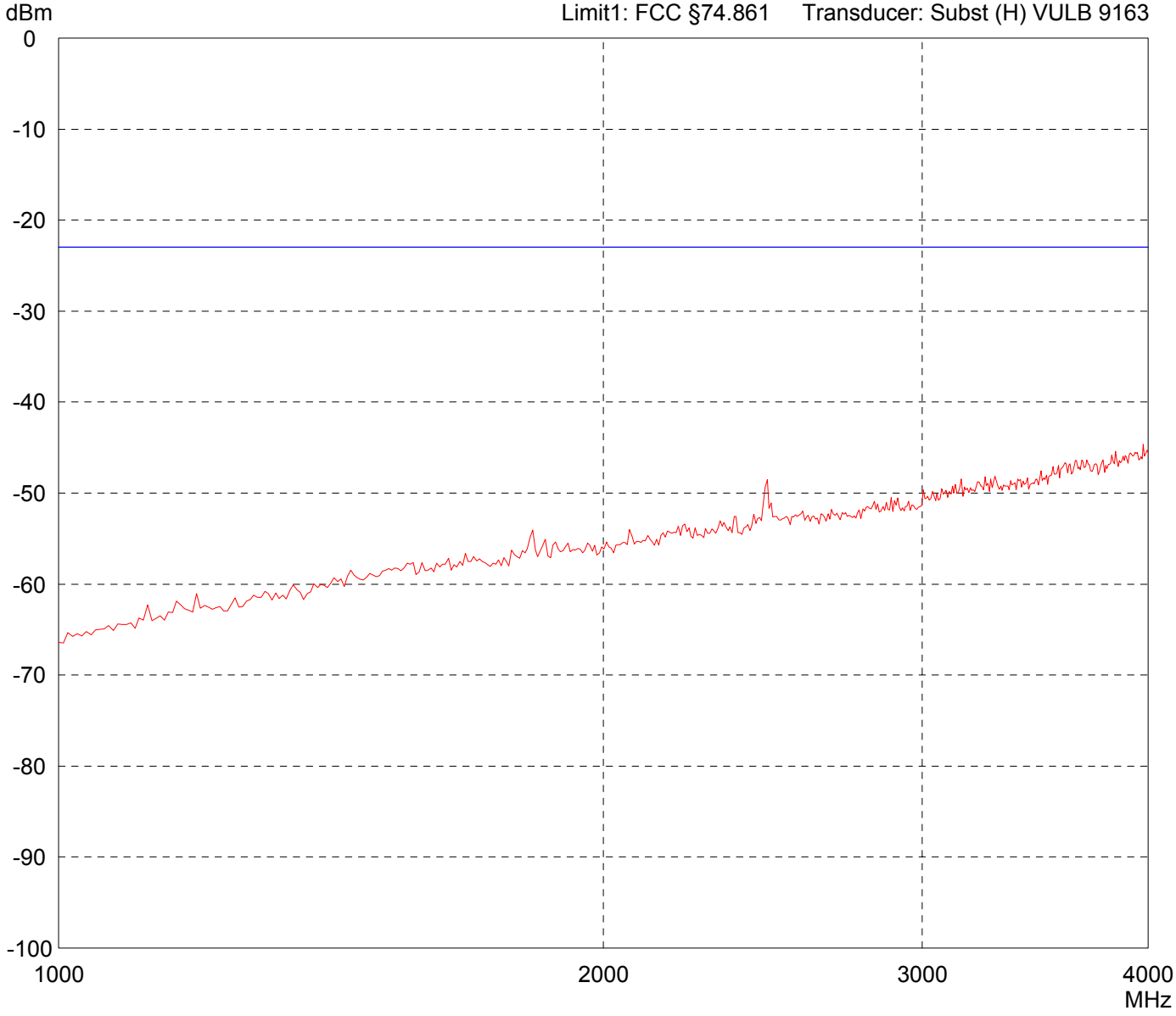


Result: Limit kept	Project file: 56408-30611 Page of Pages

Radiated Power Test 1 GHz - 4 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT flat on table (P3)
Serial no.: 199.82MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

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

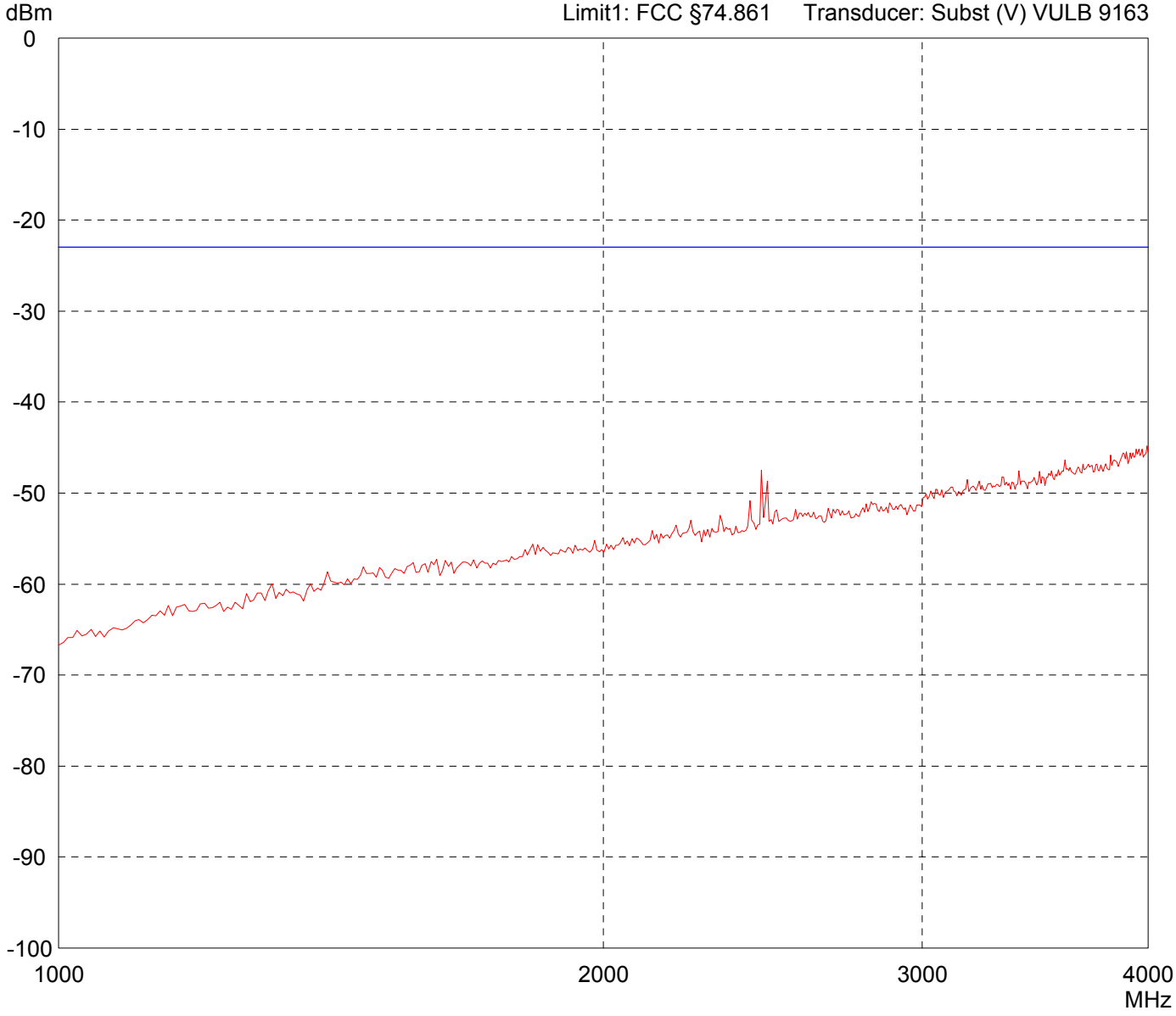


Result: Limit kept	Project file: 56408-30611 — Page of Pages

Radiated Power Test 1 GHz - 4 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT flat on table (P3)
Serial no.: 199.82MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Vertical Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

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

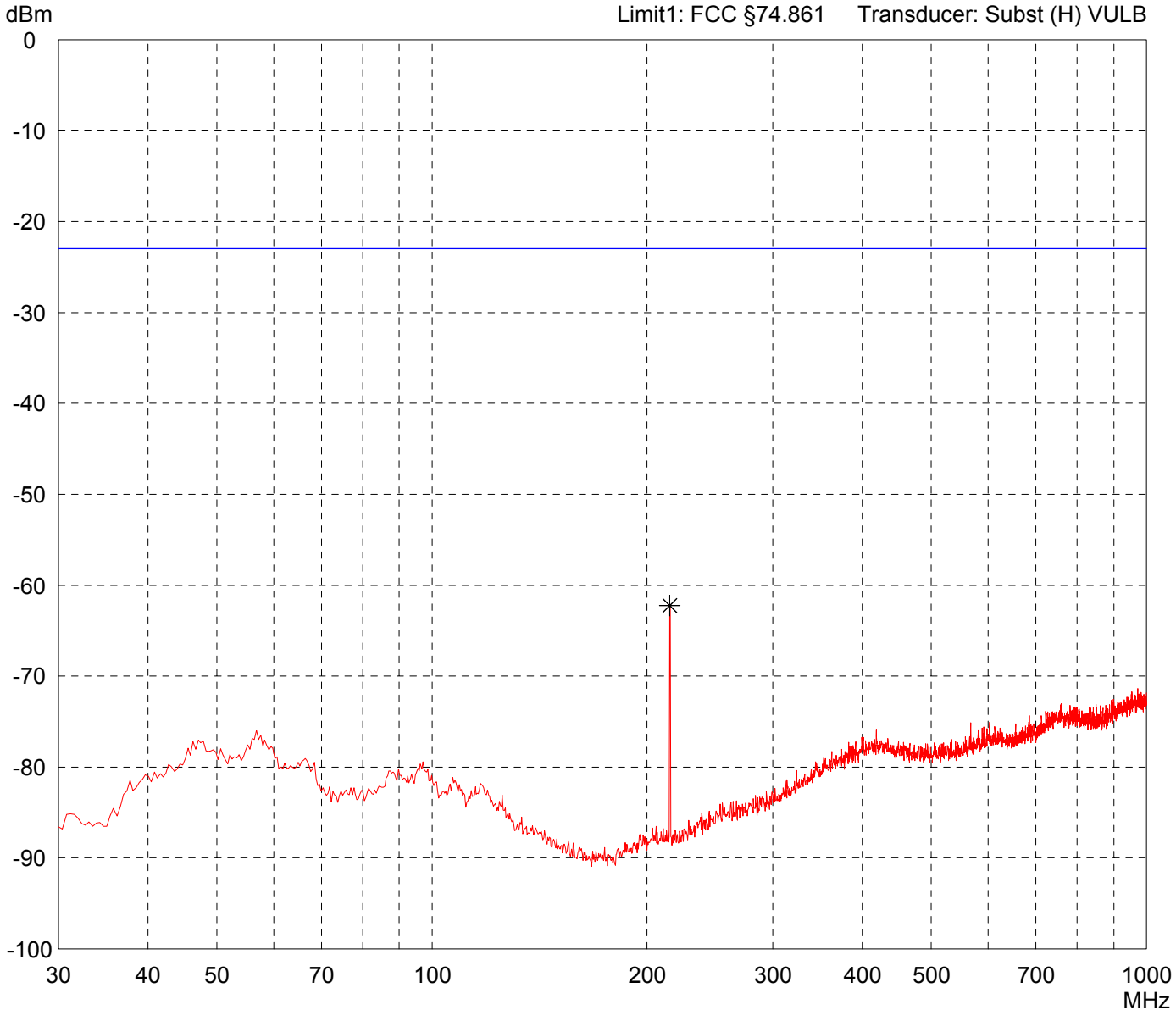


Result: Limit kept	Project file: 56408-30611 — Page of Pages

Radiated Power Test 30 MHz - 1 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT in upright position (P1)
Serial no.: 214.82 MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 meters Horizontal Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

Detector: Peak	List of values: Selected by hand

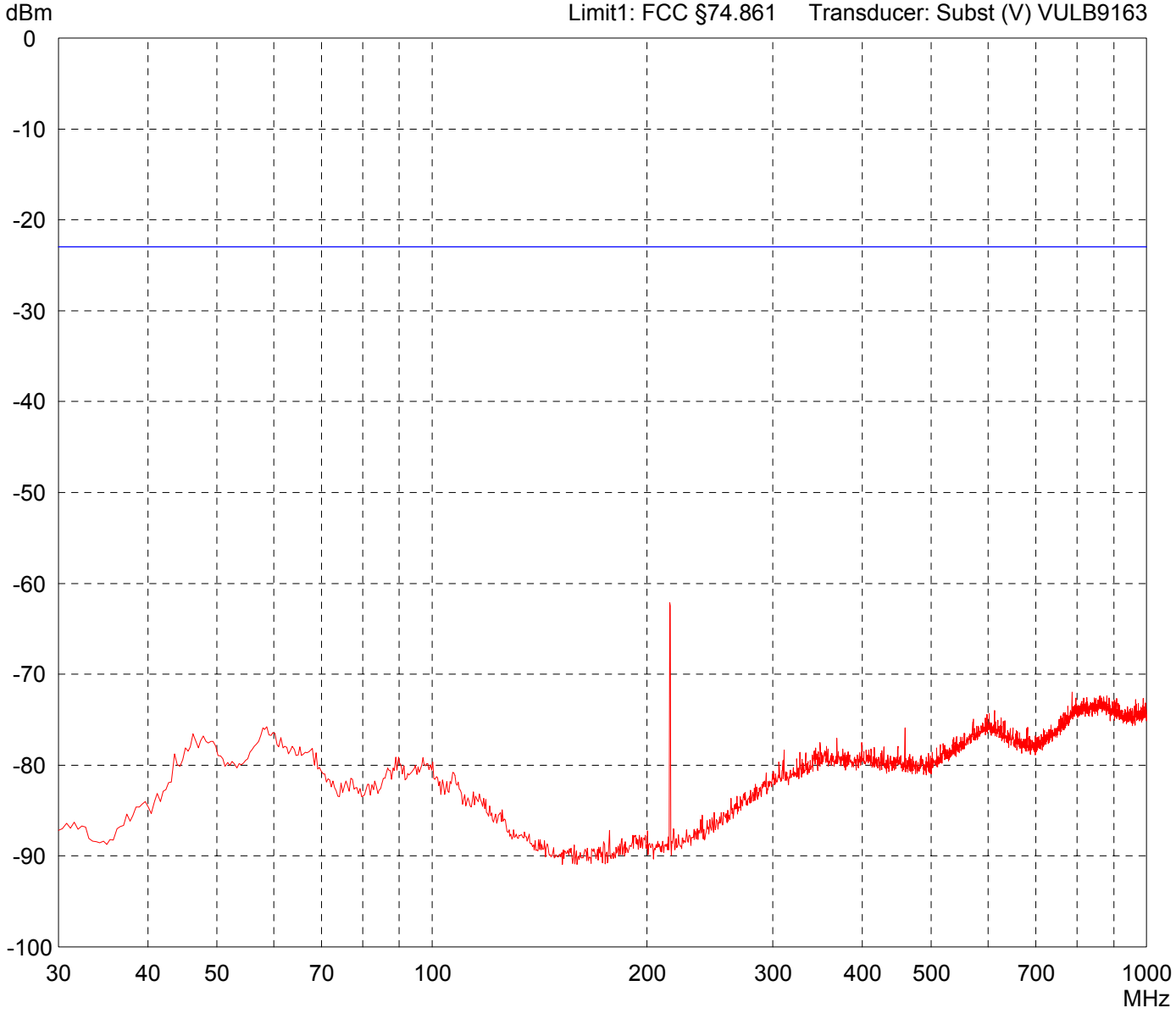


Result: Limit kept	Project file: 56408-30611 Page of Pages

Radiated Power Test 30 MHz - 1 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT in upright position (P1)
Serial no.: 214.82 MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 meters Vertical Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

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

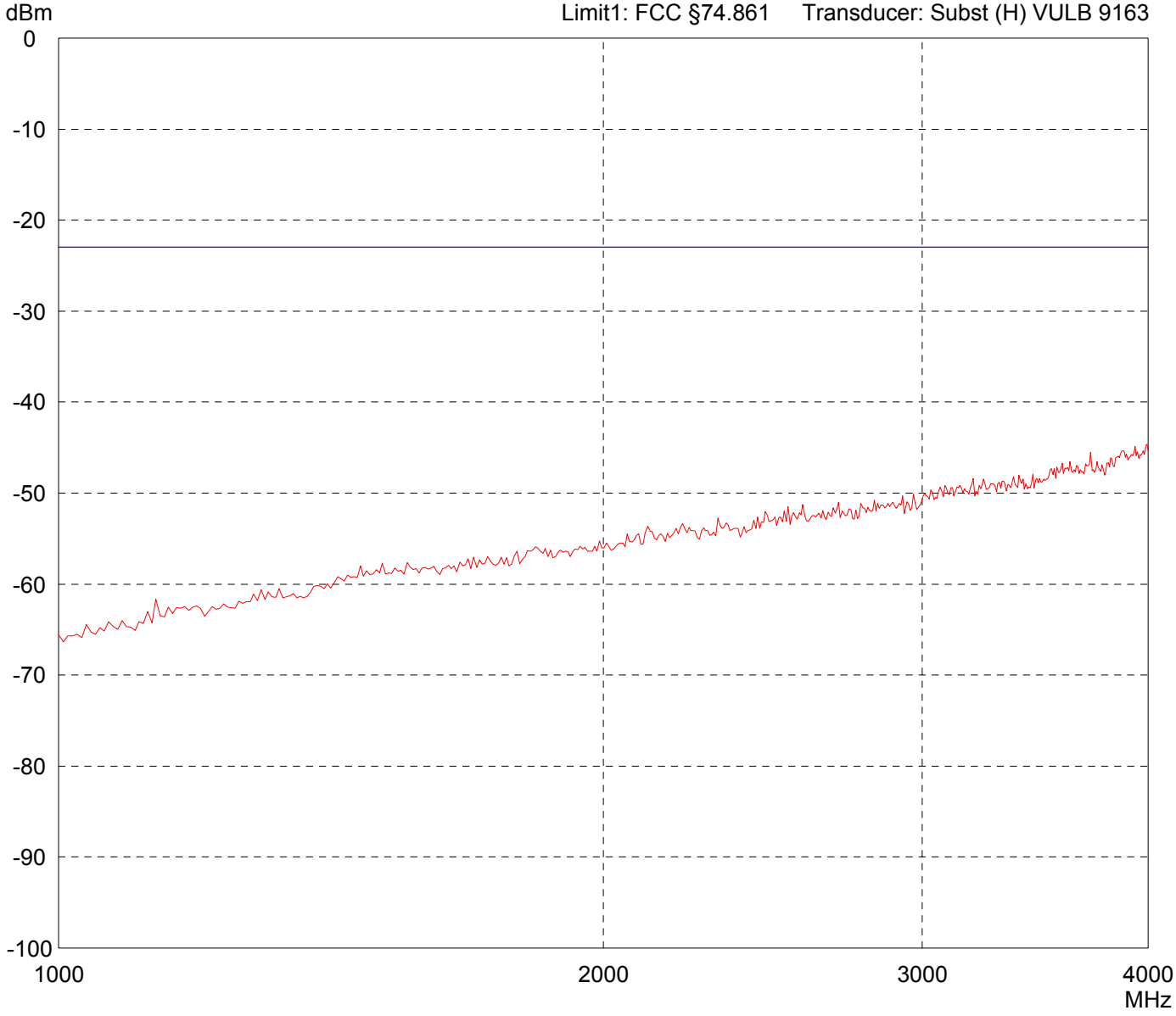


Result: Limit kept	Project file: 56408-30611 — Page of Pages

Radiated Power Test 1 GHz - 4 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT in upright position (P1)
Serial no.: 214.82 MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Horizontal Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

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

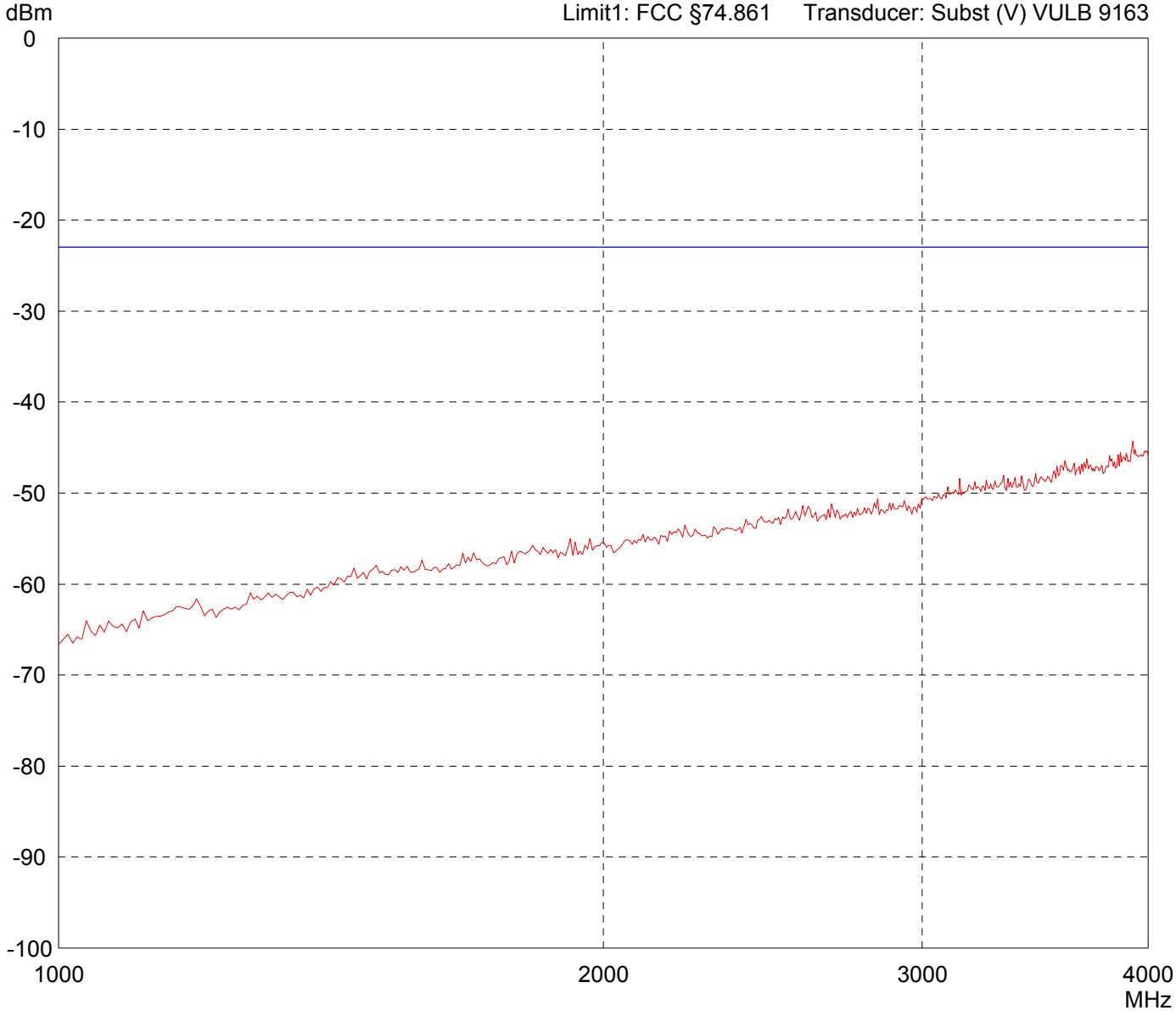


Result: Limit kept	Project file: 56408-30611 — Page of Pages

Radiated Power Test 1 GHz - 4 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT in upright position (P1)
Serial no.: 214.82 MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 metres Vertical Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

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



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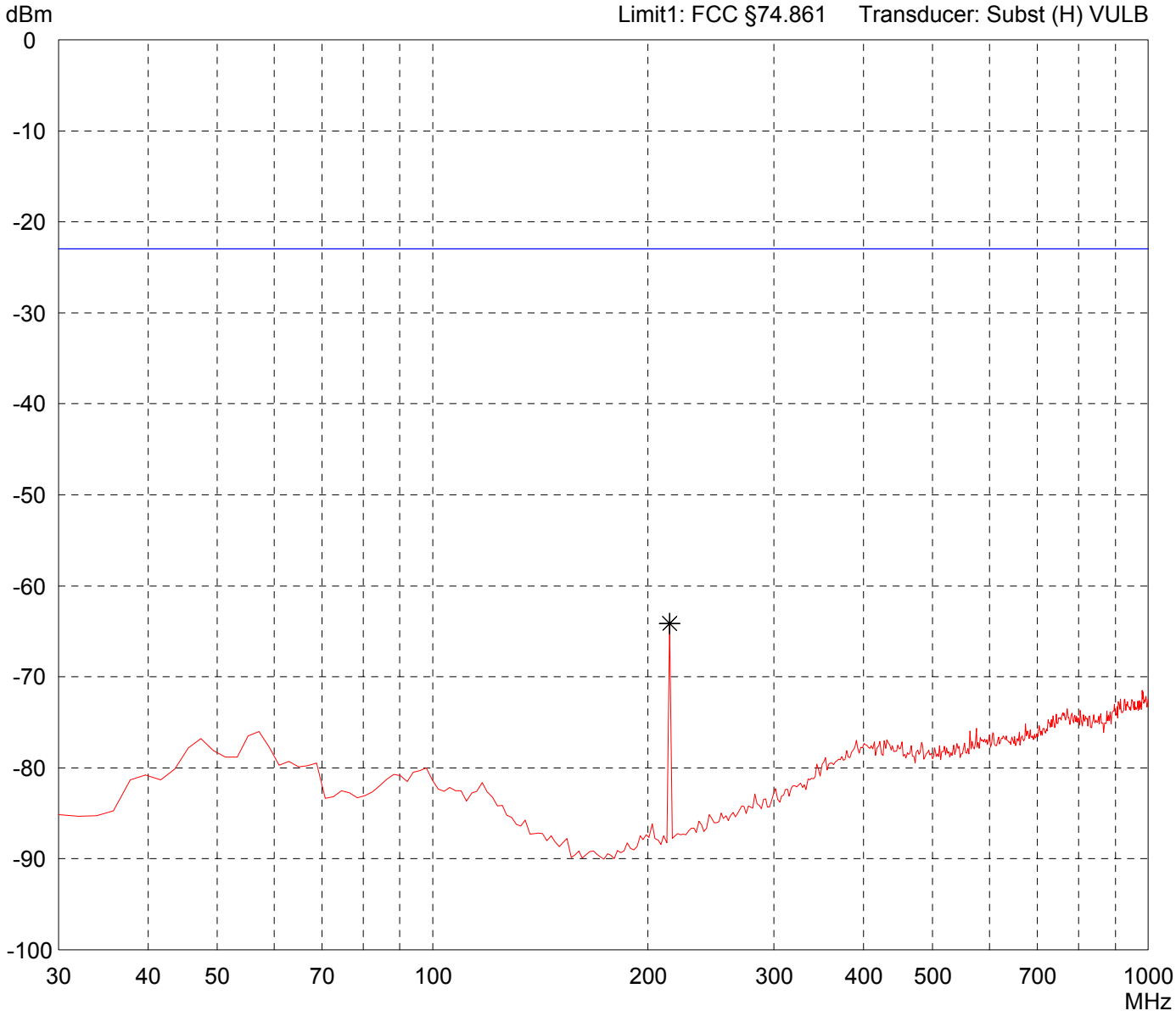
Radiated Power Test 30 MHz - 1 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT flat on table (P2)
Serial no.: 214.82 MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 meters Horizontal Polarization	
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

Detector: Peak	List of values: Selected by hand



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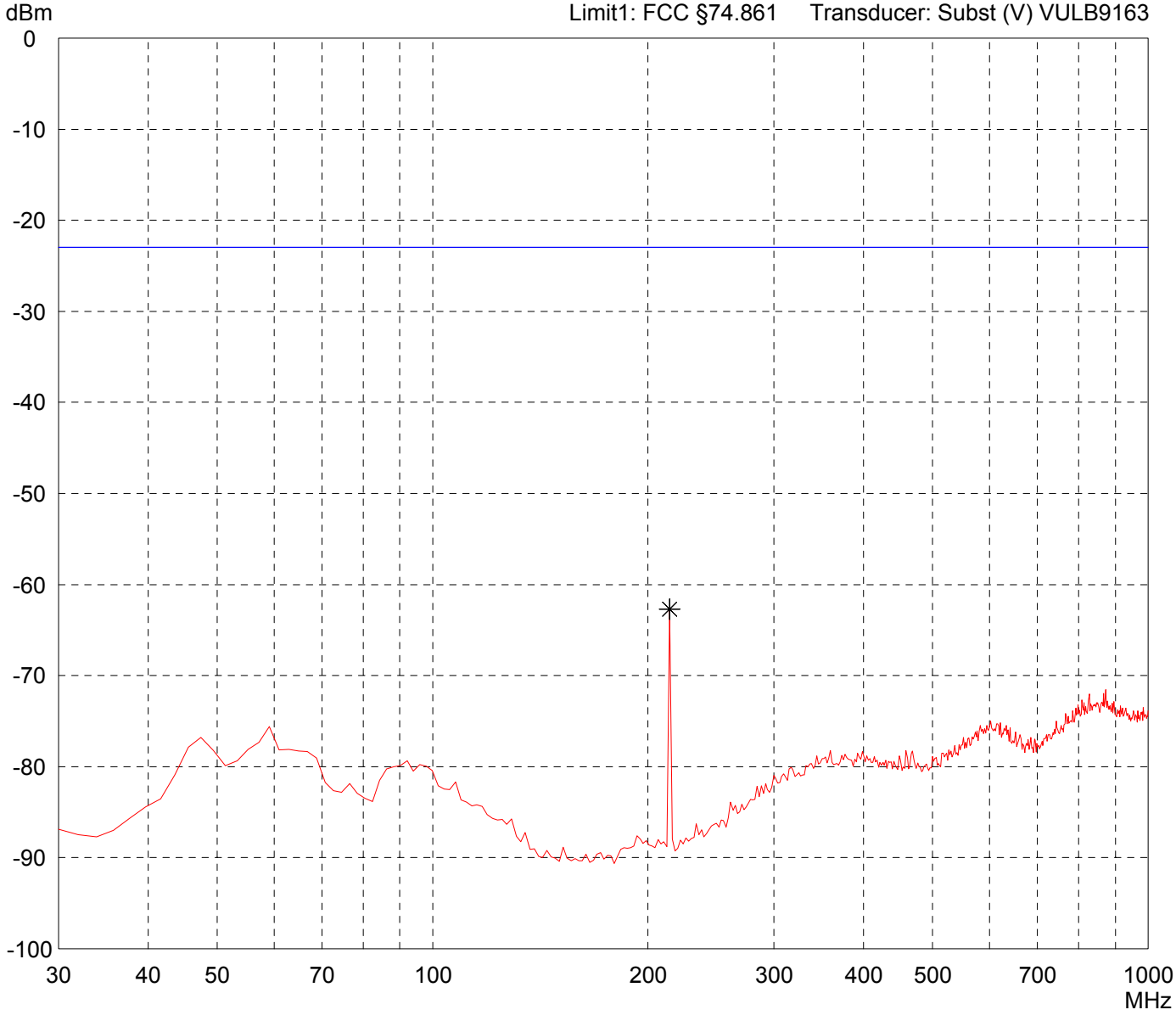
Radiated Power Test 30 MHz - 1 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT flat on table (P2)
Serial no.: 214.82 MHz	
Applicant: Universal Technologies Co. Ltd.	
Test site: Fully anechoic room, cabin no. 2	
Tested on: Test distance 3 meters Vertical Polarization	
Date of test: 05/03/2005 / Operator: M. Steindl	
Test performed: automatically / File name: default.emi	

Detector: Peak	List of values: Selected by hand



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Radiated Power Test 1 GHz - 4 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT flat on table (P2)
Serial no.: 214.82 MHz	
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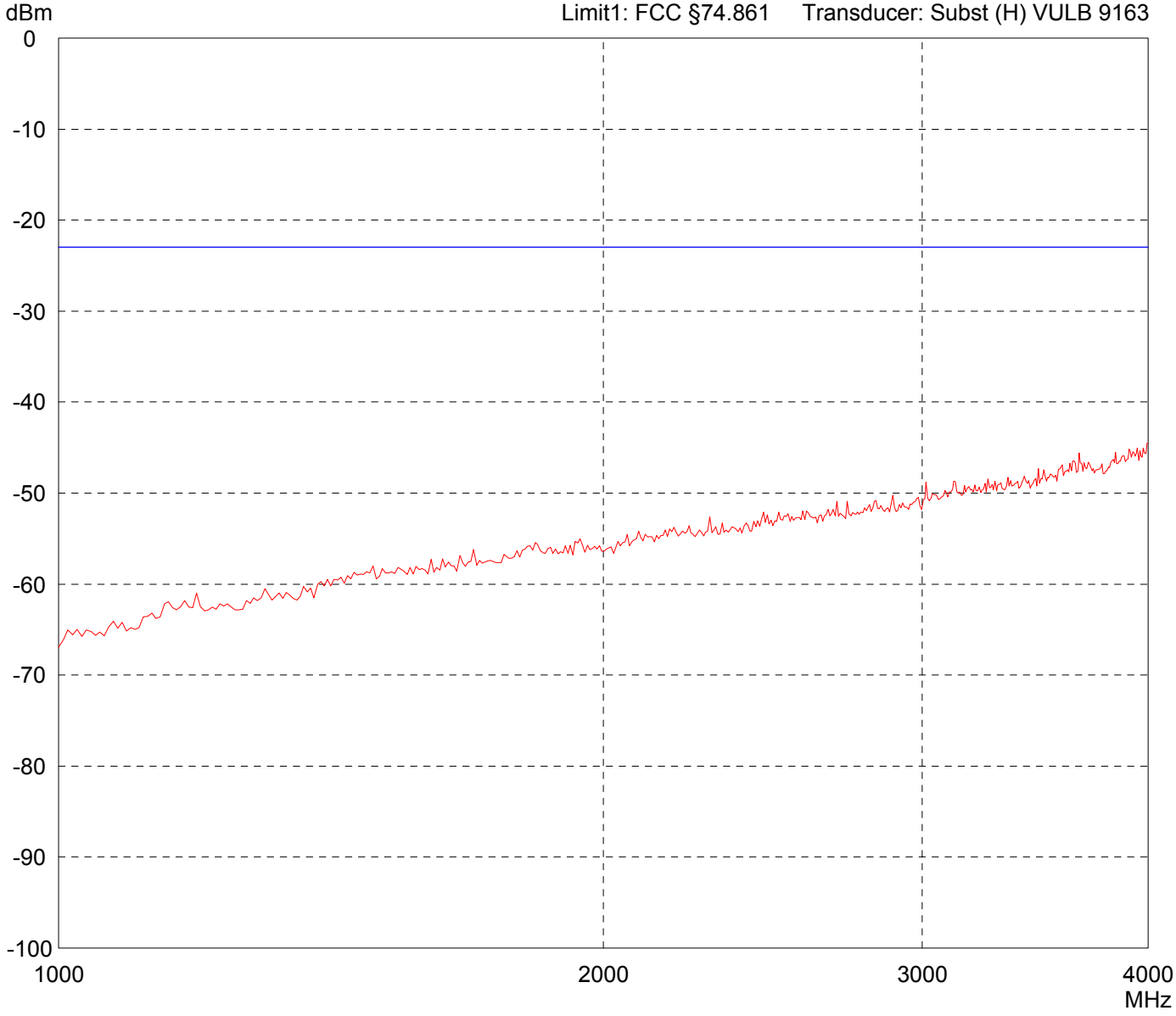
Date of test: 05/03/2005 — Operator: M. Steindl	
Test performed: automatically — File name: default.emi	

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



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Radiated Power Test 1 GHz - 4 GHz
acc. to FCC Part 74 Subpart H

Model: DMT-300 HD	Comment: EUT flat on table (P2)
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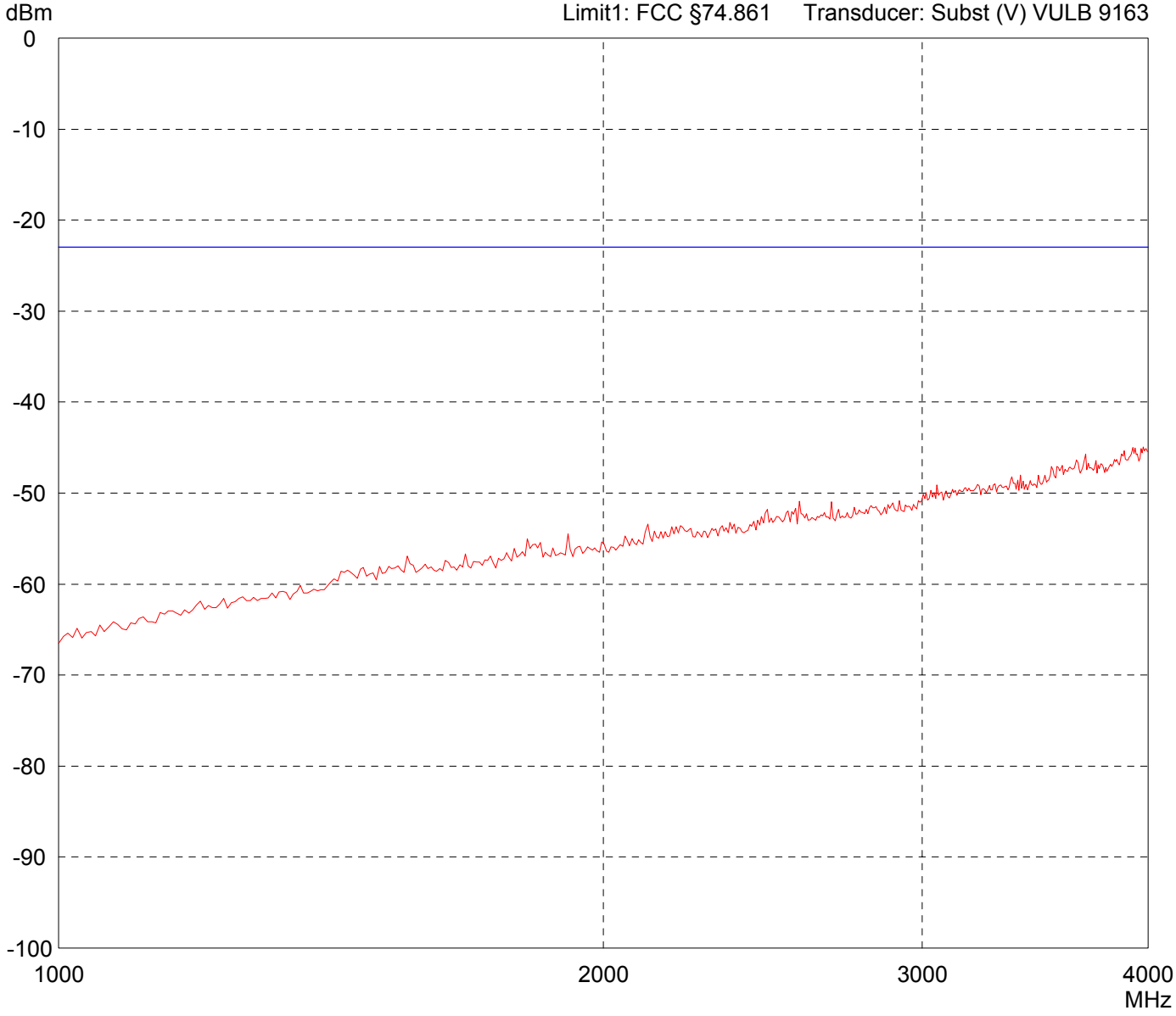

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Radiated Power Test 30 MHz - 1 GHz
acc. to FCC Part 74 Subpart H

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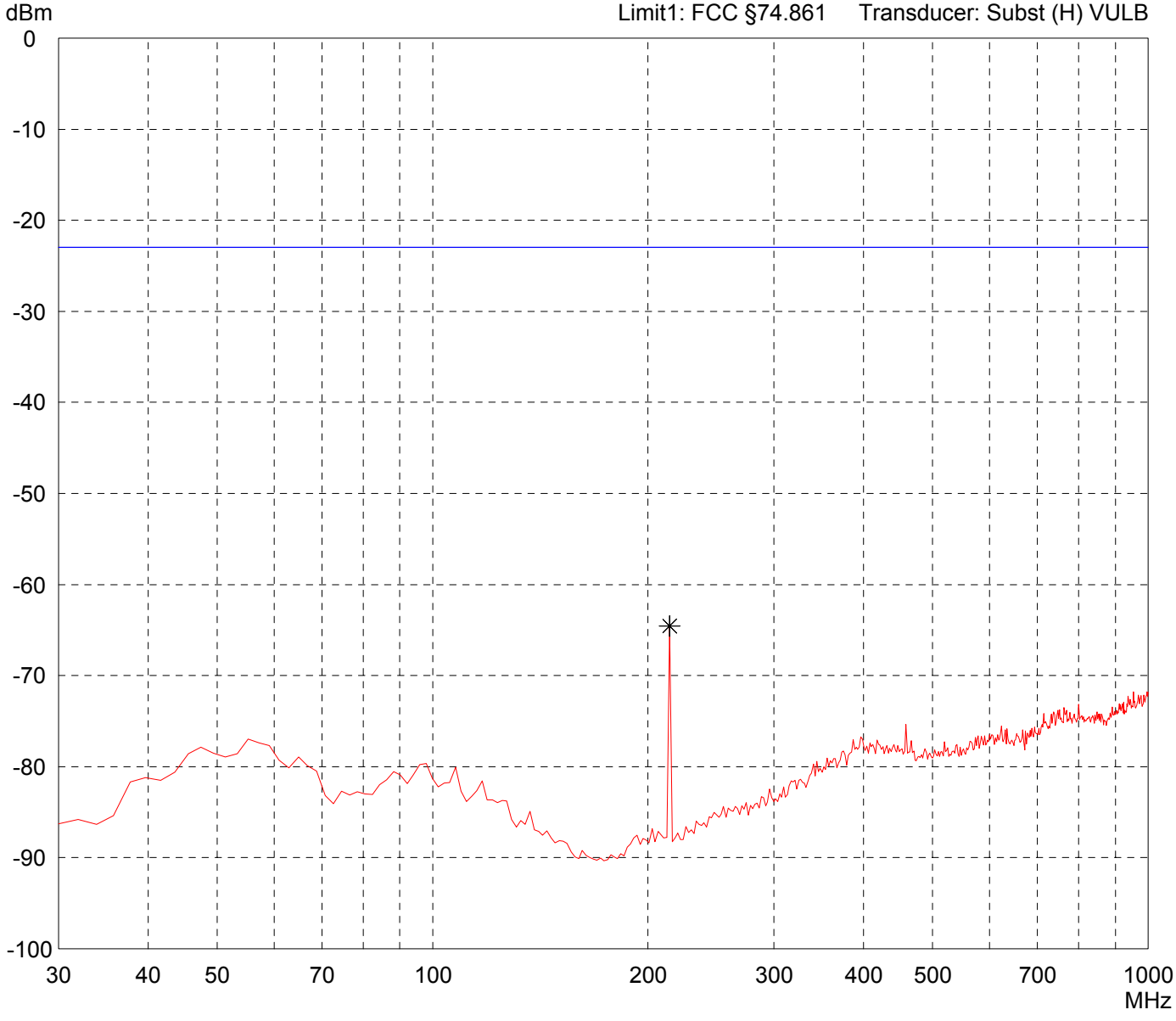

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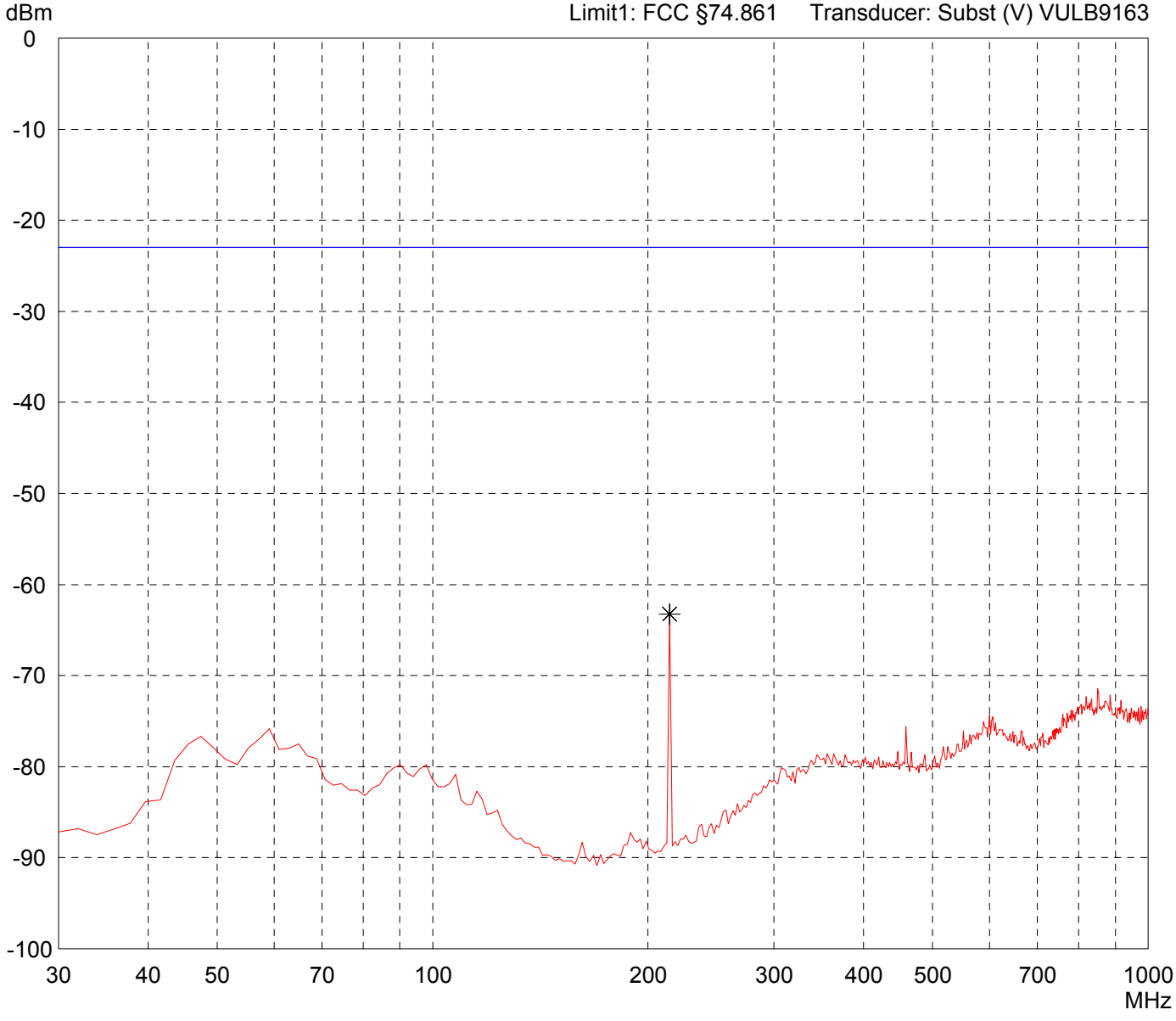

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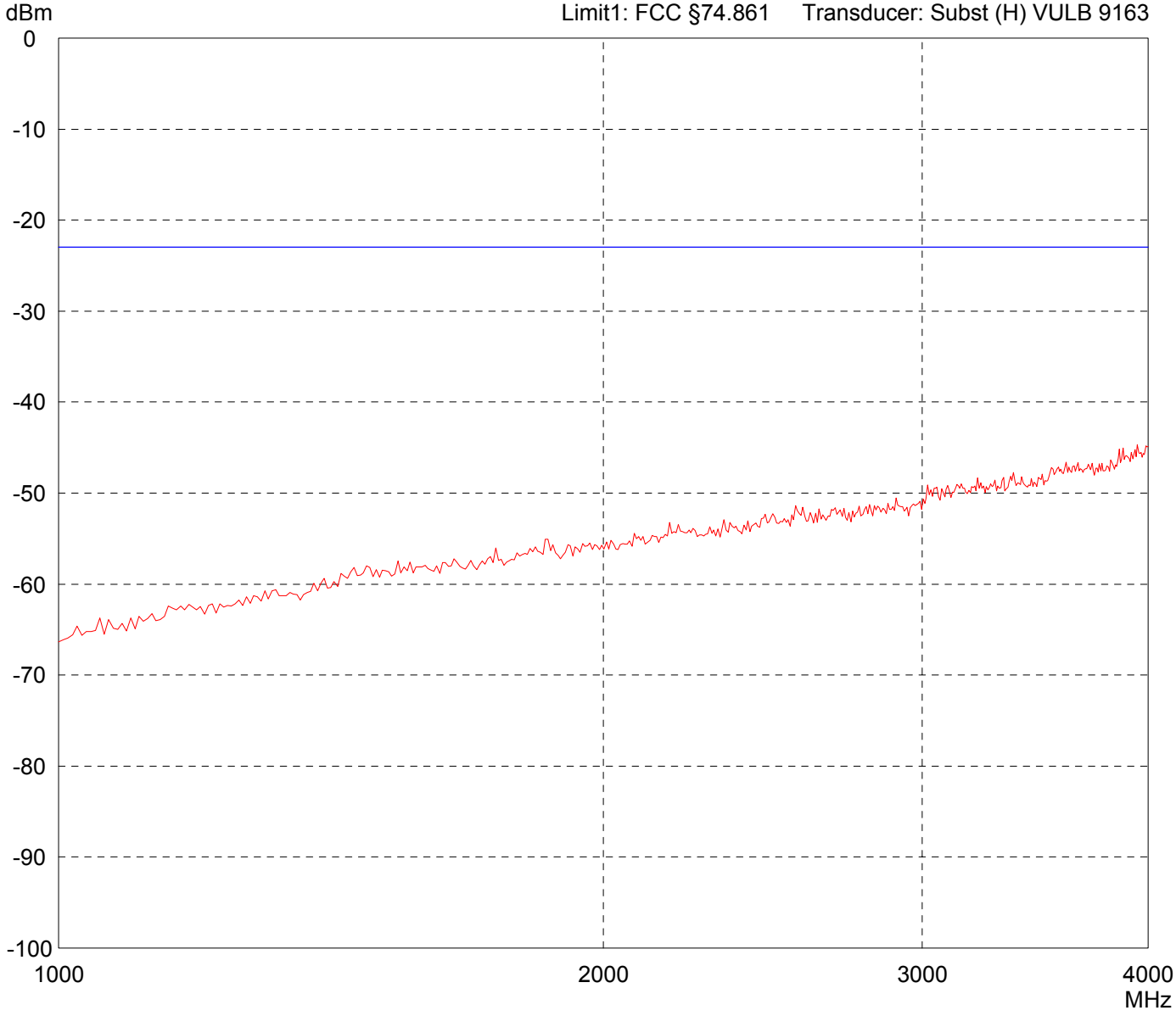

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Radiated Power Test 1 GHz - 4 GHz
acc. to FCC Part 74 Subpart H

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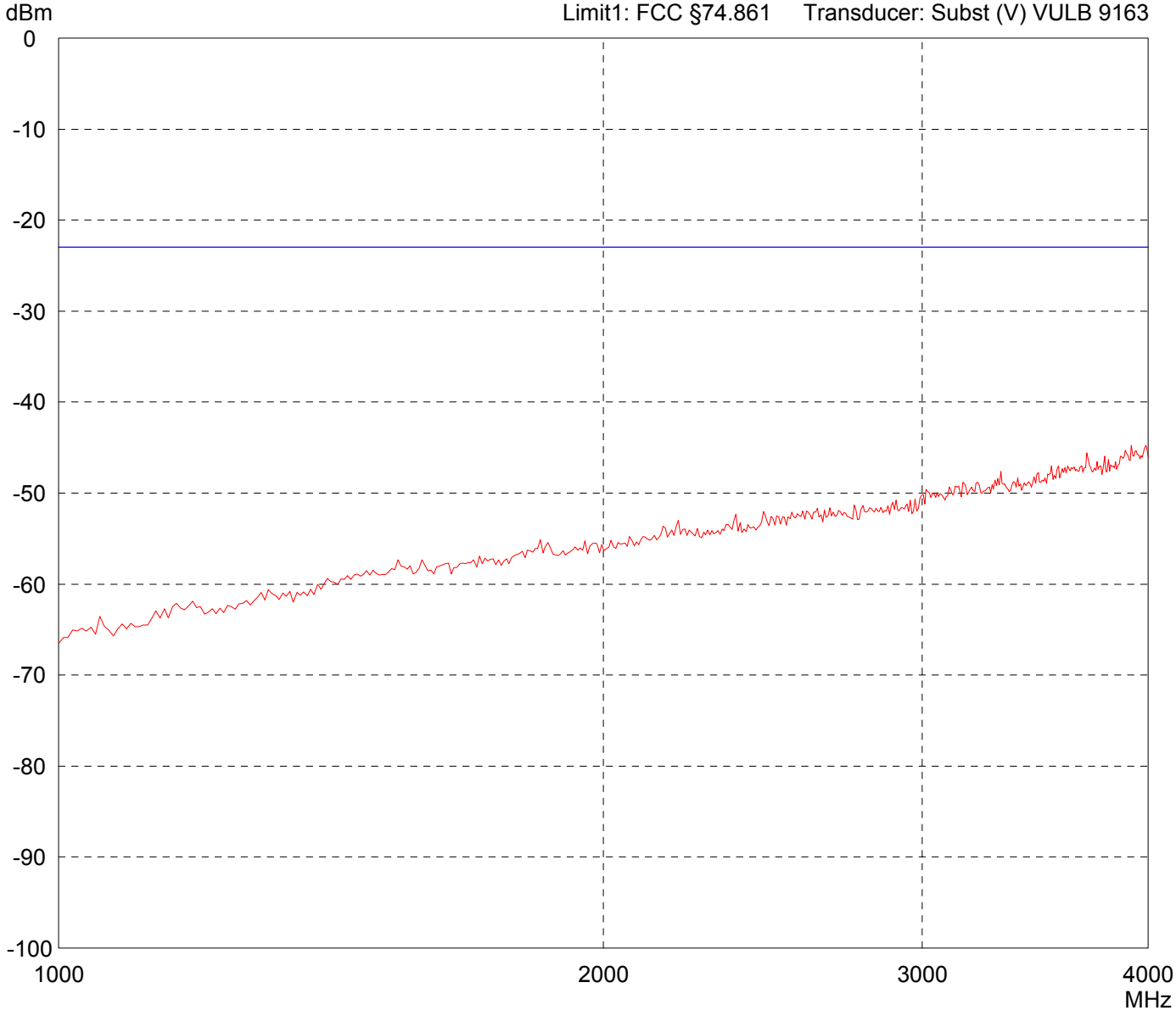

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