

Straubing, 19 October 2004

## TEST-REPORT

No. 56408-30609-1

for

**WT-226 CT** 

**Wireless Microphone Transmitter** 

Applicant: SEIKAKU TECHNICAL GROUP LIMITED

Purpose of testing: To show compliance with

FCC Code of Federal Regulations, Part 74 Subpart H, section 74.861

#### Note:

The test data of this report relate only to the individual item which has been tested. This report shall not be reproduced except in full extent without the written approval of the testing laboratory.



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#### 1. Administrative Data

Test item (EUT) WT-226 CT Type designation Serial number(s): 001 Type of equipment: Wireless Microphone Transmitter Parts/accessories: FCC-ID: H38WT-226CT **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: SEIKAKU TECHNICAL GROUP LIMITED Unit 1107, BLK A2, Yau Tong Industrial City, No. 17, Ko Fai (full address) Road, Kowloon, Hong Kong Contract identification: Contact person: Joan Wu Manufacturer: SEIKAKU TECHNICAL GROUP LIMITED **Application details** Receipt of EUT: 17 September 2003

FCC-ID:

Date of test:

Responsible for testing:

Responsible for test report:

Note:

January 2004

Johann Roidt

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. TTI-P-G 062/94-40

FCC TEST SITE LISTING

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 1.5 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)

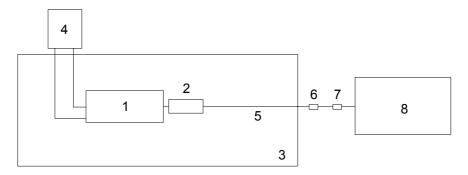


Figure 1: Measurement setup for testing on antenna connector

#### Test instruments used:

No.	Туре	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

FCC-ID:



#### 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)

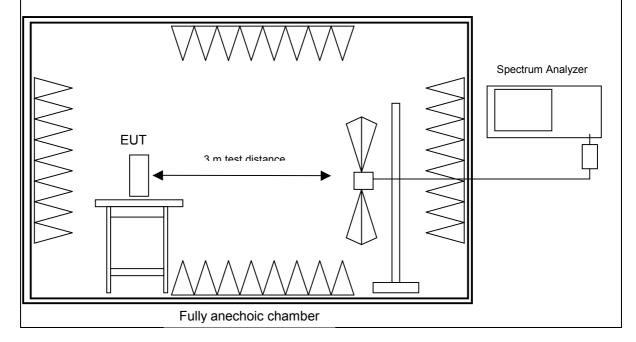
Rules and Specifications:	Sections 2.1053
Guide:	ANSI/TIA/EIA-603-1992, Paragraph 2.2.11

#### 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").



No.	Туре	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	

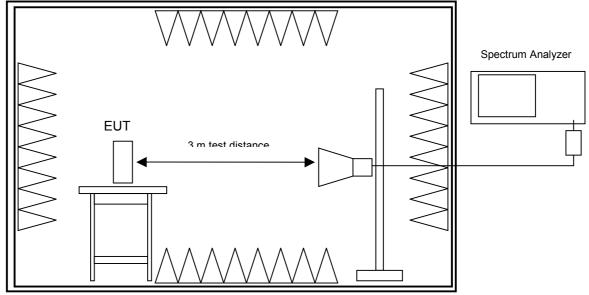
#### Measurement Procedure:

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.	Туре	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

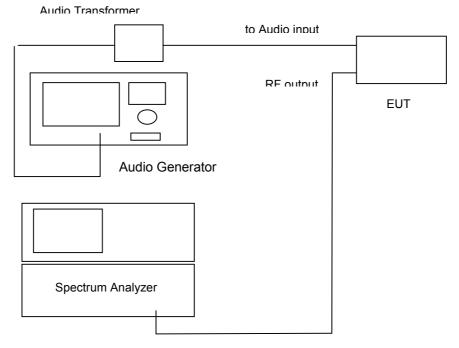
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## 5.4. Emission Masks (Occupied Bandwidth) § 2.1049 (c) (1)

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:	The EUT and equipment were set up as shown below		
	<ol><li>The audio signal was adjusted for 16 dB above 50 % of nominal modulation at the frequency of maximum response.</li></ol>		
	The occupied bandwidth was measured with the Spectrum Analyzer set as shown on the test charts.		

#### **Test Setup**



No.	Туре	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

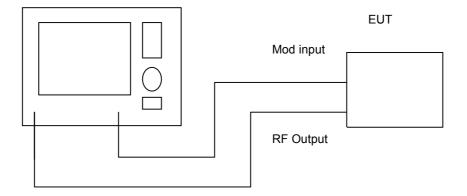


## 5.5. Audio Frequency Response, 2.1047 (a)

Rules and Specifications:	Sections 2.1047 (b),		
Guide:	ANSI/TIA/EIA-603-1992, Paragraph 2.2.3		
Test Conditions:	As indicated below		
Measurement Procedure:	4. The audio signal was coupled to the microphone via a temporary audio input connector replacing a microphone.		
	<ol><li>The audio signal was adjusted for 20 % nominal modulation at 1 kHz. this was taken as 0 dB reference.</li></ol>		
	6. With input levels held constant, the audiosignal was varied from 100 Hz to 30 kHz		
	The response was measured and recorded with a CMS 54     Radiocommunication Tester		

#### **Test Setup**

## Radio Communication Tester



No.	Туре	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

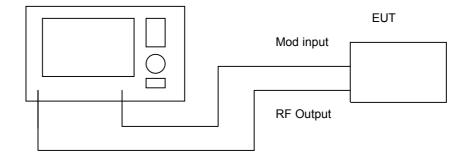


## 5.6. Modulation Limiting, § 2.1047 (b)

Rules and Specifications:	Sections 2.1047 (b),
Guide:	ANSI/TIA/EIA-603-1992, Paragraph 2.2.3
Test Conditions:	As indicated below
Measurement Procedure:	8. The audio signal was coupled to the microphone via a temporary audio input connector replacing the microphone.
	<ol> <li>The modulation response was measured for three frequencies including the frequency with maximum response found during "Audio Frequency Response Test".</li> </ol>
	10. 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.
	11. Measurements were performed for positive and negative deviation.

#### **Test Setup**

Radio Communication Tester



No.	Туре	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

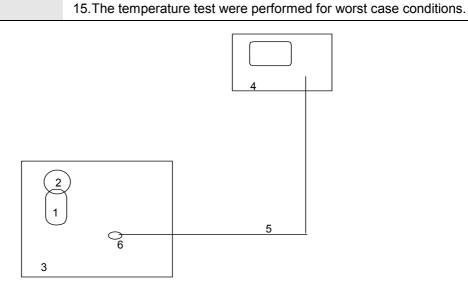


### 5.7. Frequency Stability (Temperature Variation), § 2.1055 (a) (1)

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:	12. The EUT and test equipment were set up as shown below	
	13. 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.	
	14. 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	

was noted within one minute.

an hour. Power was applied and the maximum frequency change



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

#### Test instruments used:

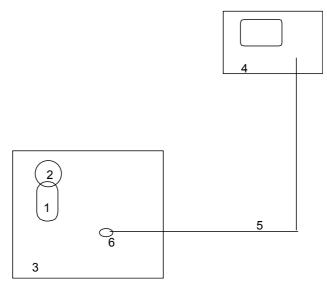
No.	Туре	Model	Serial Number	Manufacturer
102	Spectrum analyzer	FSP30	100036	Rohde & Schwarz
121	Attenuator	4776-10	9412	Narda
122	Attenuator	4776-20	9503	Narda
017	DC power supply	NGSM 32/10	203	Rohde & Schwarz
007	Temperature test chamber	HT4010	07065550	Heraeus

FCC-ID:



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



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

#### Test instruments used:

No.	Туре	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

FCC-ID:

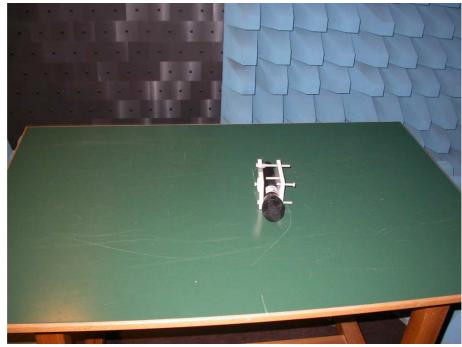


6.	Photographs Taken During Testing
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## Test setup for radiated emission measurement 30 MHz – 2.5 GHz (fully anechoic room)











### 7. List of Measurements

FCC Part 74 Su	ubpart 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 - 1 GHz	21-22	Pass
74.861.e.6	Mean power of emissions 1 GHz – 2.5 GHz	21-22	Pass
74.861.e.5	Operating bandwidth	24-29	Pass
74.861.e.4	Frequency tolerance	30-31	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: 26 March 2003

Frequency (MHz)	Detector	Antenna Polarization	Analyzer Reading (dBm)	Correction Factor (dB)	Mean Power (dBm)	Limit (dBm)	Margin (dB)
175.000	AV	N/A	-19.6	0	-19.6	17.0	36.6
199.82	AV	N/A	-21.8	0	-21.8	17.0	38.8
214.820	AV	N/A	-20.8	0	-20.8	17.0	37.8

<sup>\*\*\* =</sup> No emissions above noise floor 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:	175,000 MHz, 199,820 MHz, 214,820 MHz	
Test Site:	Fully anechoic chamber	
Distance:	3 Meter	

Frequency (MHz)	Detector	Antenna Polarization	Analyzer Reading (dBm)	Correction Factor (dB)	Mean Power (dBm)	Limit (dBm)	Margin (dB)
232,800	AV	Ver	-100,71	33,14	-67,57	-13,00	54,6
429,600	AV	Ver	-103,7	40,66	-63,04	-13,00	50,0
466,000	AV	Ver	-103,32	40,58	-62,74	-13,00	49,7

<sup>\*\*\* =</sup> All emissions showed more than 20 dB margin to the limit

#### Sample calculation of erp values:

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

Test Results:	Pass	

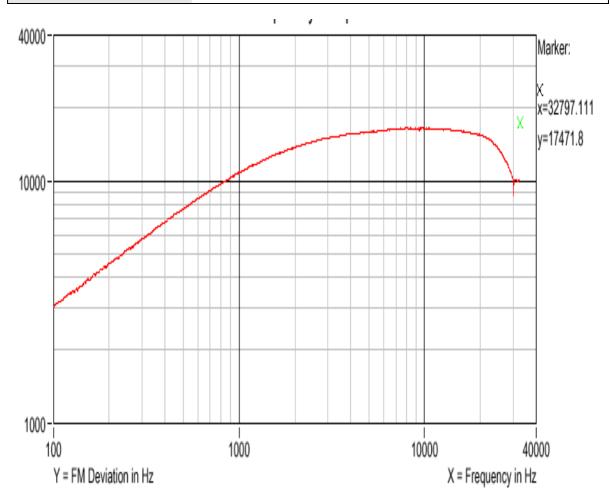
FCC-ID:



## **Measurement of Audio Frequency Response**

Rules and Specifications:	Sections 74.861 (5) and 2.1049 (c) (1)	
Limits and Requirements:		
Nominal Frequency of EUT:	799.600 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		



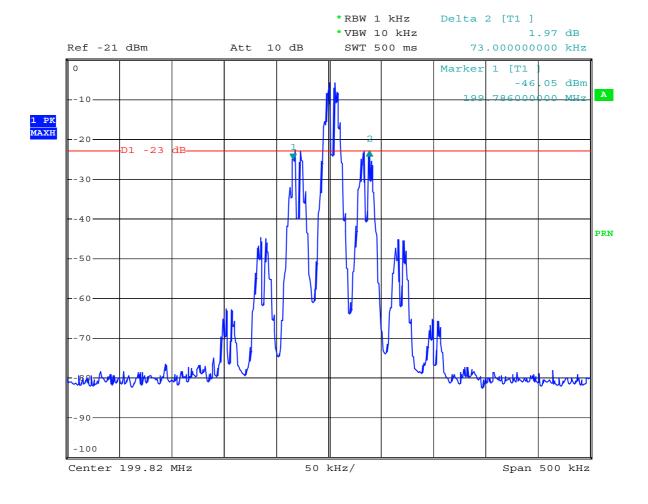
Test Results:	See graph above
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## **Measurement of Emission Masks (Occupied Bandwidth**

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:	799.600 MHz	

Test Procedure:	According to TIA/EIA.603-1992, § 2.2.11
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Comment A: UNI30609 Occupied Bandwidth - 2.5 kHz Date: 31.JAN.2004 13:45:36

Test Results:	See graph above
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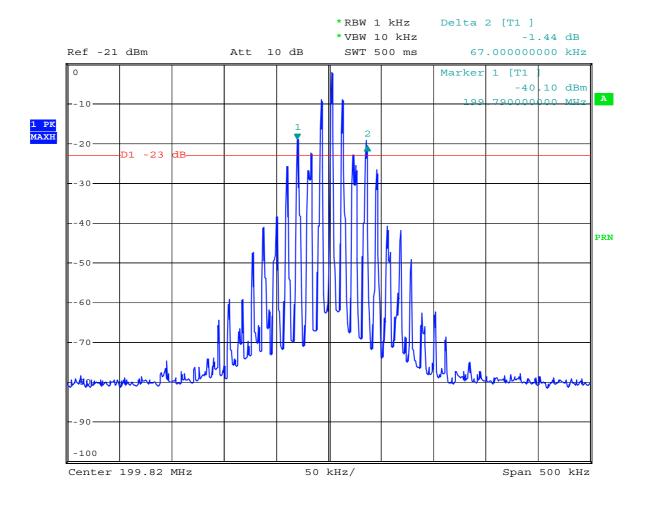
#### Measurement of Emission Masks (Occupied Bandwidth

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: 199.600 MHz

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



Comment A: UNI30609 Occupied Bandwidth - 10 kHz Date: 31.JAN.2004 13:48:26

Test Results: See graph above



#### Measurement of Emission Masks (Occupied Bandwidth

Rules and Specifications:

Limits and Requirements:

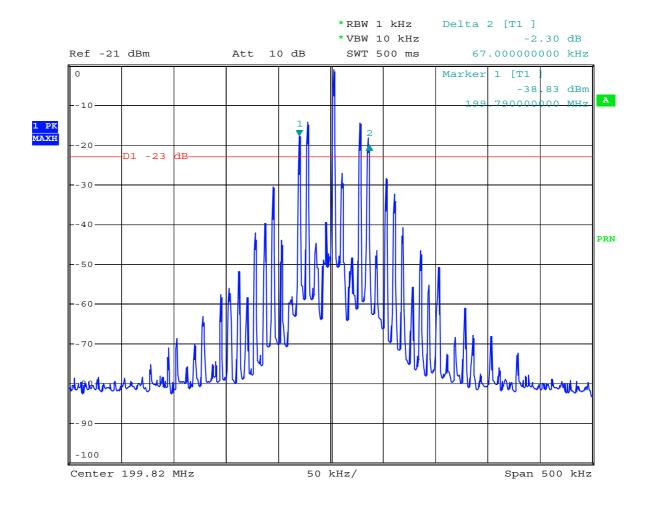
Nominal Frequency of EUT:

Sections 74.861 (5) and 2.1049 (c) (1)

The operating bandwidth shall not exceed 200 kHz

199.600 MHz

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



Comment A: UNI30609 Occupied Bandwidth - 25 kHz Date: 31.JAN.2004 13:49:30

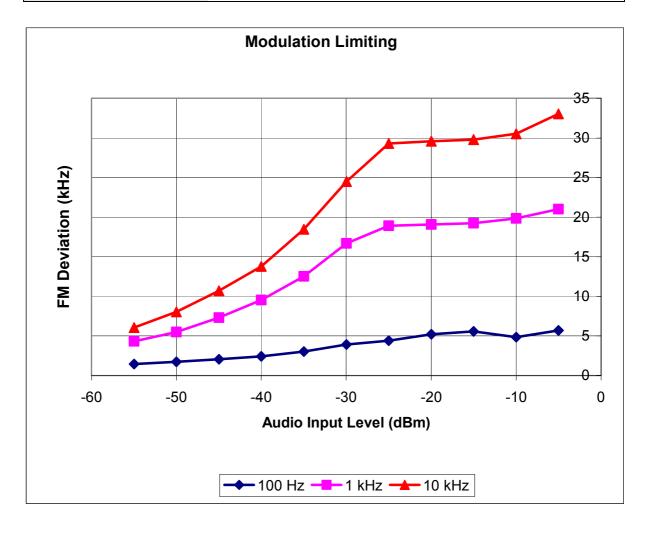
Test Results: See graph above



## **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:	199,600 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	
1000110001101		



## 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**

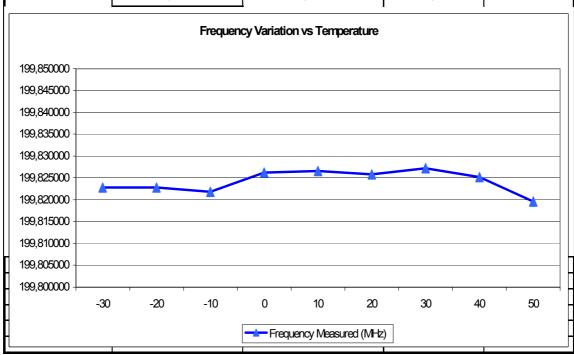
Rules and Specifications: Section 74.861 (e) (4), 2.1055

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	199,820000	199,822800	14,01	50
-20	199,820000	199,822800	14,01	50
-10	199,820000	199,821800	9,01	50
0	199,820000	199,826200	31,03	50
10	199,820000	199,826600	33,03	50
20	199,820000	199,825800	29,03	50
30	199,820000	199,827200	36,03	50
40	199,820000	199,825200	26,02	50
50	199,820000	199,819600	-2,00	50



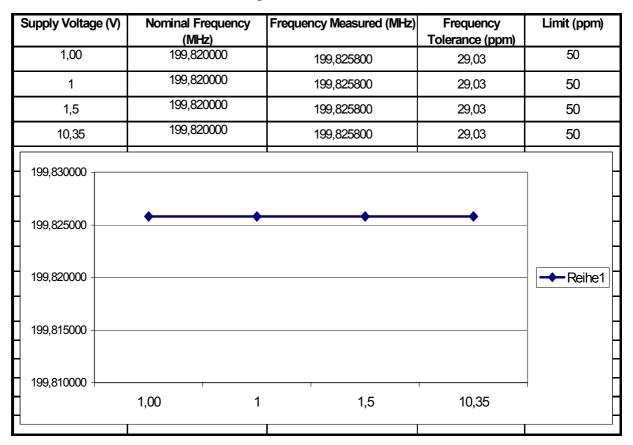
t Results: Pass
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### **Measurement of Frequency Stability vs Supply Voltage**

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**



Test Results:	Pass	
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## 8. Referenced Regulations

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

$\boxtimes$	FCC 47 Part 2	Code of Federal Regulations Part 2	October 01, 2001
		Frequency allocationand radio treaty matters;	
		General rules and regulations	
	FCC Part 15	Code of Regulations Part 15 (Radio Frequency	March 13, 2003
	Subpart A	Devices), Subpart A (General) of the Federal	
		Communication Commission (FCC)	
Ш	FCC Part 15	Code of Regulations Part 15 (Radio Frequency	March 13, 2003
	Subpart B	Devices), Subpart B (Unintentional Radiators) of	
_		the Federal Communication Commission (FCC)	
Ш	FCC Part 15	Code of Regulations Part 15 (Radio Frequency	March 13, 2003
	Subpart C	Devices), Subpart C (Intentional Radiators) of the	
	F00 D 74	Federal Communication Commission (FCC)	M
$\boxtimes$	FCC Part 74	Code of Regulations Part 15 (Radio Frequency	March 13, 2003
	Subpart H	Devices), Subpart H (Low Power Auxiliary	
		Stations) of the Federal Communication	
$\square$	ANCI CG2 4	Commission (FCC)	2002
$\boxtimes$	ANSI C63.4	American National Standard for Methods of Measurement of Radio-Noise Emissions from	2003
		Low-Voltage Electrical and Electronic Equipment	
		in the Range of 9 kHz - 40 GHz	
П	RSS-210	Radio Standards Specification RSS-210 Issue 5	November, 2001
ш	1100 210	for Low Power Licence-Exempt	November, 2001
		Radiocommuniction Devices of Industry Canada	
		Zarrada y dariada	



Charts taken during testing	

## Radiated Power Test 25 MHz - 200 MHz acc. to FCC Part 74 Subpart H

Model: Sekaku WT-226 CT Serial no.: 175 MHz sample Applicant: Universal Technology Co. Ltd. Test site: Fully anechoic room, cabin no. 2 Tested on: Test distance 3 meters Horizontal Polarization Date of test: Operator: 10/06/2003 M. Steindl Test performed: File name: automatically default.emi

Limit kept

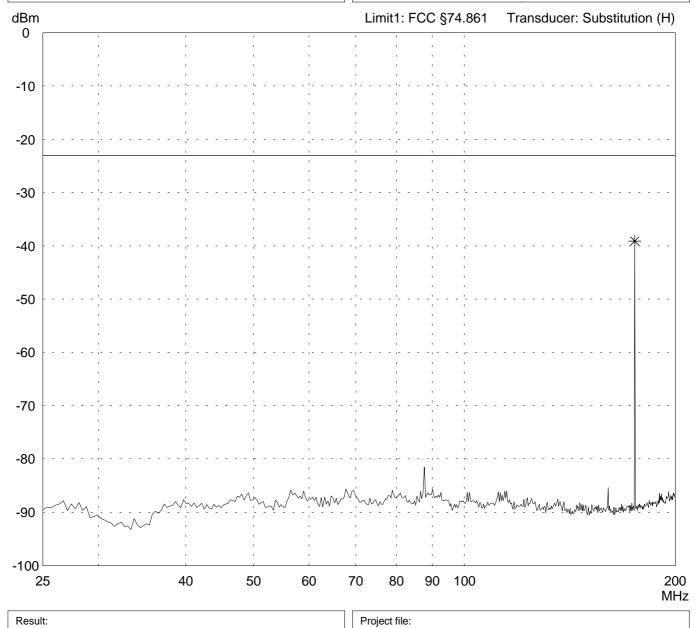
Comment:

- 1.5 V battery supply
- EUT in vertical position
- sending with pilote-tone
- sending continiously

Detector:

Peak

List of values:
Selected by hand



56408-30609-1

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## Radiated Power Test 25 MHz - 200 MHz acc. to FCC Part 74 Subpart H

Model: Sekaku WT-226 CT Serial no.: 175 MHz sample Applicant: Universal Technology Co. Ltd. Test site: Fully anechoic room, cabin no. 2 Tested on: Test distance 3 meters Vertical Polarization Date of test: Operator: 10/06/2003 M. Steindl Test performed: File name: automatically default.emi

Comment:

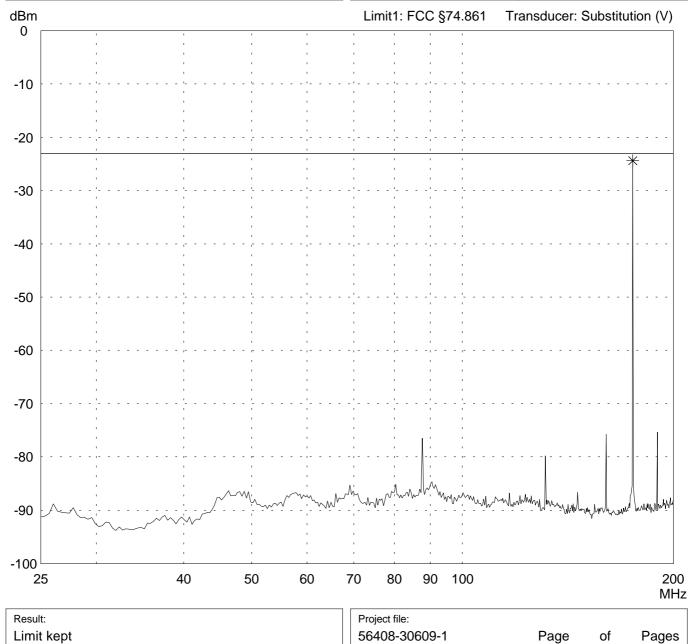
- 1.5 V battery supply
- EUT in vertical position
- sending with pilote-tone
- sending continiously

Detector:

Peak

List of values:
10 dB Margin

50 Subranges



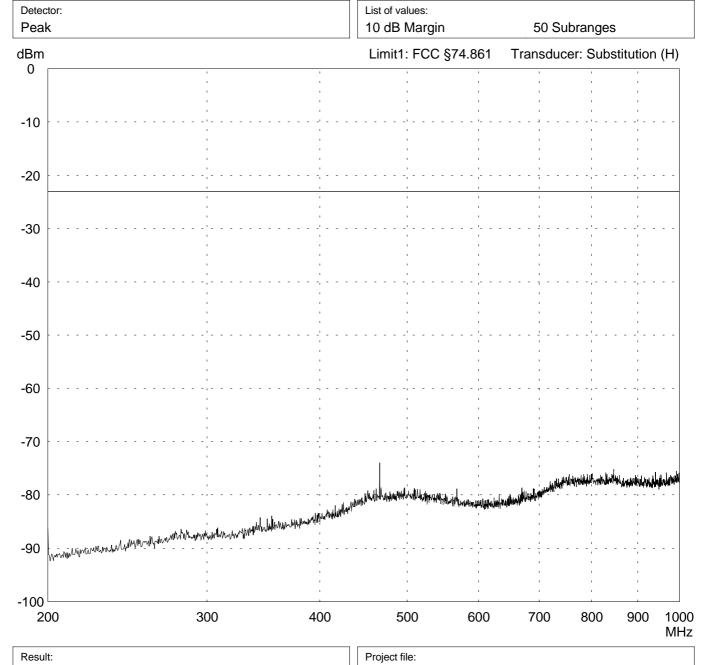
# Radiated Power Test 200 MHz - 1 GHz acc. to FCC Part 74 Subpart H

Model:		
Sekaku WT-226 CT		
Serial no.:		
175 MHz sample		
Applicant:		
Universal Technology Co. I	Ltd.	
Test site:		
Fully anechoic room, cabin no. 2		
Tested on:		
Test distance 3 meters Horizontal Polarization		
Date of test:	Operator:	
10/06/2003	M. Steindl	
Test performed:	File name:	
automatically	default.emi	

Limit kept

Comment:

- 1.5 V battery supply
- EUT in vertical position
- sending with pilote-tone
- sending continiously
- note: with WHKS200-10SS high pass filter



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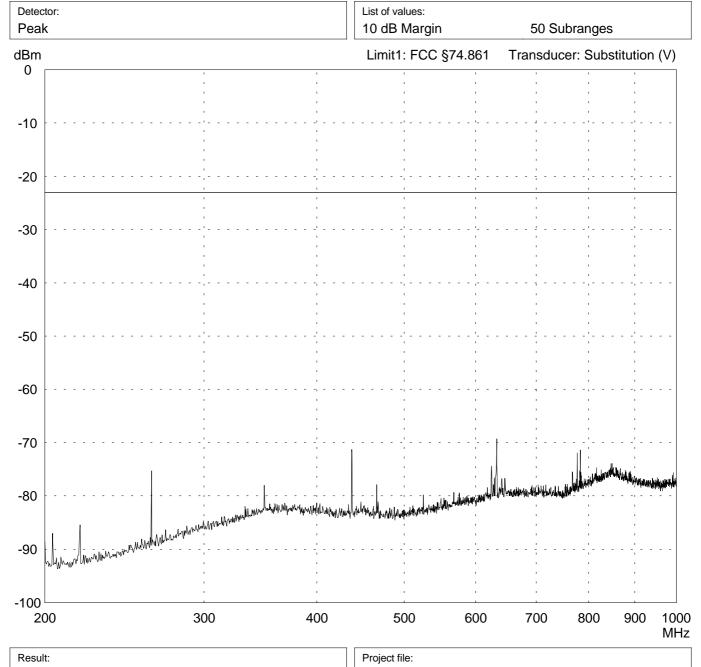
# Radiated Power Test 200 MHz - 1 GHz acc. to FCC Part 74 Subpart H

Model:		
Sekaku WT-226 CT		
Serial no.:		
175 MHz sample		
Applicant:		
Universal Technology Co.	. Ltd.	
Test site:		
Fully anechoic room, cabin no. 2		
Tested on:		
Test distance 3 meters Vertical Polarization		
Date of test:	Operator:	
10/06/2003	M. Steindl	
Test performed:	File name:	
automatically	default.emi	

Limit kept

Comment:

- 1.5 V battery supply
- EUT in vertical position
- sending with pilote-tone
- sending continiously
- note: with WHKS200-10SS high pass filter



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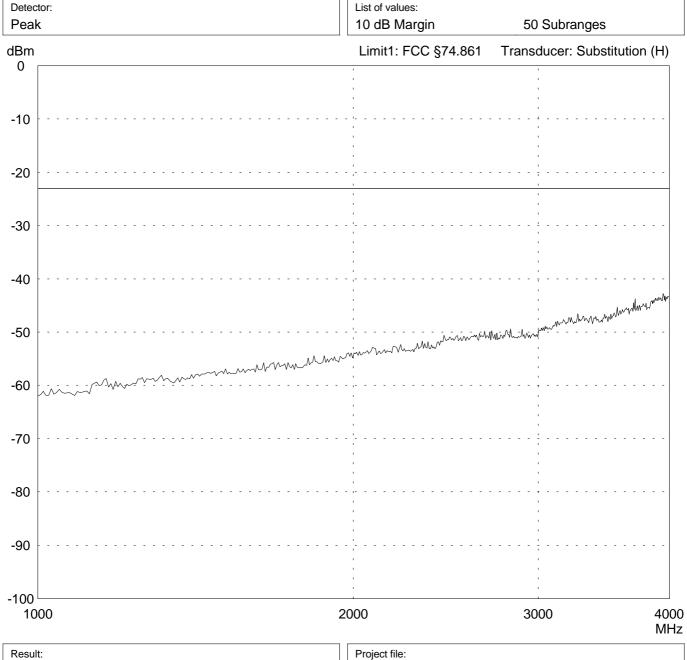
# Radiated Power Test 1 GHz - 4 GHz acc. to FCC Part 74 Subpart H

Model: Sekaku WT-226 CT Serial no.: 175 MHz sample Applicant: Universal Technology Co. Ltd. Test site: Fully anechoic room, cabin no. 2 Tested on: Test distance 3 metres Horizontal Polarization Date of test: Operator: 10/06/2003 M. Steindl Test performed: File name: automatically default.emi

Limit kept

Comment:

- 1.5 V battery supply
- EUT in vertical position
- sending with pilote-tone
- sending continiously
- note: with WHKS1000-10SS high pass filter



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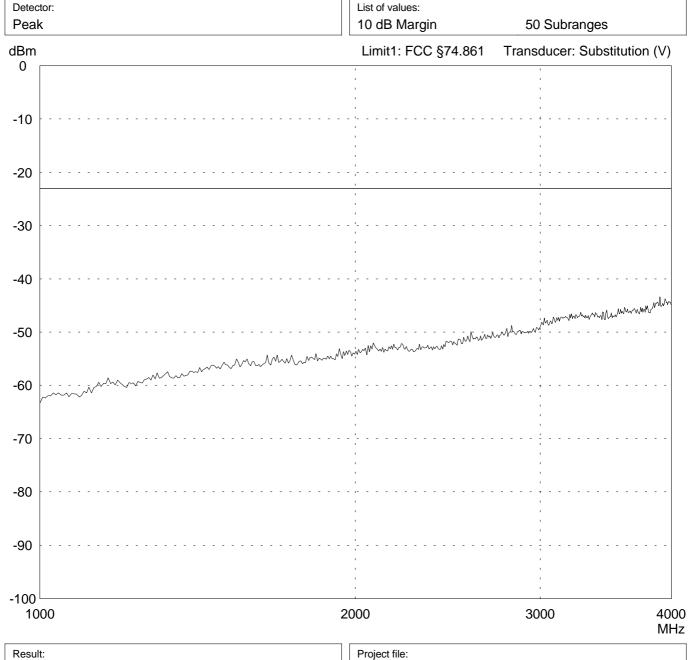
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Model: Sekaku WT-226 CT Serial no.: 175 MHz sample Applicant: Universal Technology Co. Ltd. Test site: Fully anechoic room, cabin no. 2 Tested on: Test distance 3 metres Vertical Polarization Date of test: Operator: 10/06/2003 M. Steindl Test performed: File name: automatically default.emi

Limit kept

Comment:

- 1.5 V battery supply
- EUT in vertical position
- sending with pilote-tone
- sending continiously
- note: with WHKS1000-10SS high pass filter



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Model: Sekaku WT-226 CT Serial no.: 199 MHz sample Applicant: Universal Technology Co. Ltd. Test site: Fully anechoic room, cabin no. 2 Tested on: Test distance 3 meters Horizontal Polarization Date of test: Operator: 10/06/2003 M. Steindl Test performed: File name: automatically default.emi

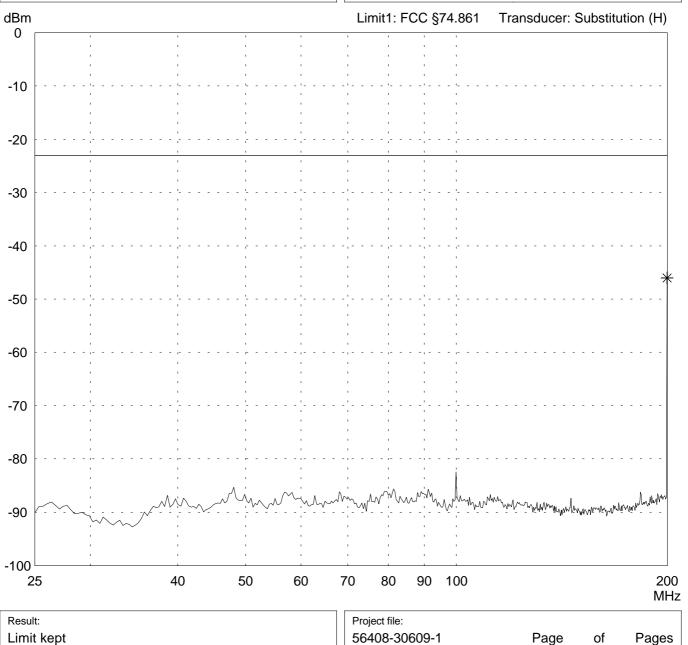
Comment:

- 1.5 V battery supply
- EUT in vertical position
- sending with pilote-tone
- sending continiously

Detector:

Peak

List of values:
Selected by hand



Model: Sekaku WT-226 CT Serial no.: 199 MHz sample Applicant: Universal Technology Co. Ltd. Test site: Fully anechoic room, cabin no. 2 Tested on: Test distance 3 meters Vertical Polarization Date of test: Operator: 10/06/2003 M. Steindl Test performed: File name: automatically default.emi

Limit kept

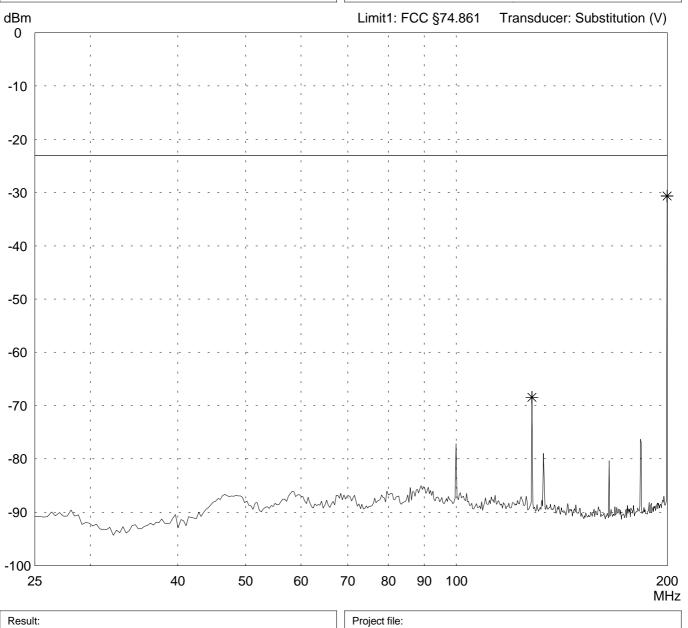
Comment:

- 1.5 V battery supply
- EUT in vertical position
- sending with pilote-tone
- sending continiously

Detector:

Peak

List of values:
Selected by hand



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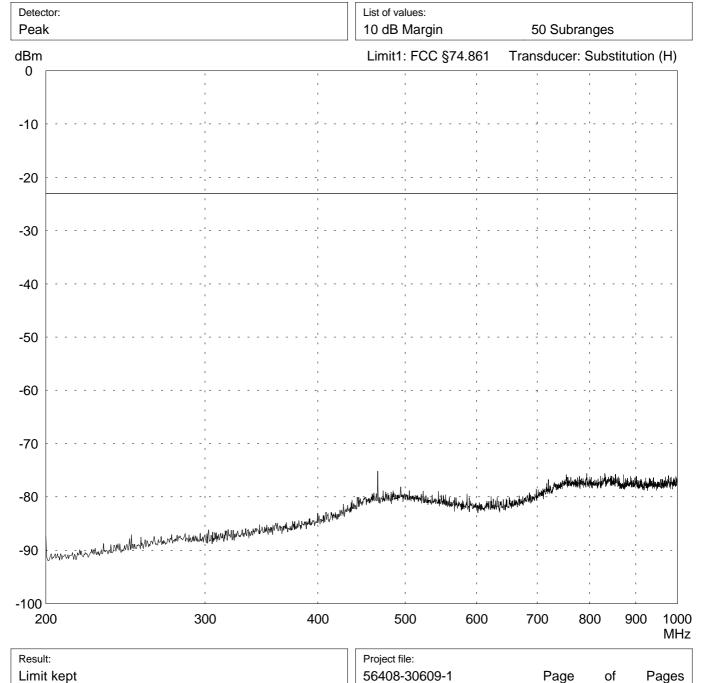
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Model:		
Sekaku WT-226 CT		
Serial no.:		
199 MHz sample		
Applicant:		
Universal Technology Co. Ltd.		
Test site:		
Fully anechoic room, cabin no. 2		
Tested on:		
Test distance 3 meters		
Horizontal Polarization		
Date of test:	Operator:	
10/06/2003	M. Steindl	
Test performed:	File name:	
automatically	default.emi	

Comment:

- 1.5 V battery supply
- EUT in vertical position
- sending with pilote-tone
- sending continiously
- note: with WHKS200-10SS high pass filter



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Model:		
Sekaku WT-226 CT		
Serial no.:		
199 MHz sample		
Applicant:		
Universal Technology Co. Ltd.		
Test site:		
Fully anechoic room, cabin no. 2		
Tested on:		
Test distance 3 meters Vertical Polarization		
Date of test:	Operator:	
10/06/2003	M. Steindl	
Test performed:	File name:	
automatically	default.emi	

Limit kept

Comment:

- 1.5 V battery supply
- EUT in vertical position
- sending with pilote-tone
- sending continiously
- note: with WHKS200-10SS high pass filter

Detector: List of values: Peak 10 dB Margin 50 Subranges Limit1: FCC §74.861 Transducer: Substitution (V) dBm 0 -10 -20 -30 -40 -50 -60 -70 -80 -90 -100 200 300 400 500 600 700 800 900 1000 MHz Project file: Result:

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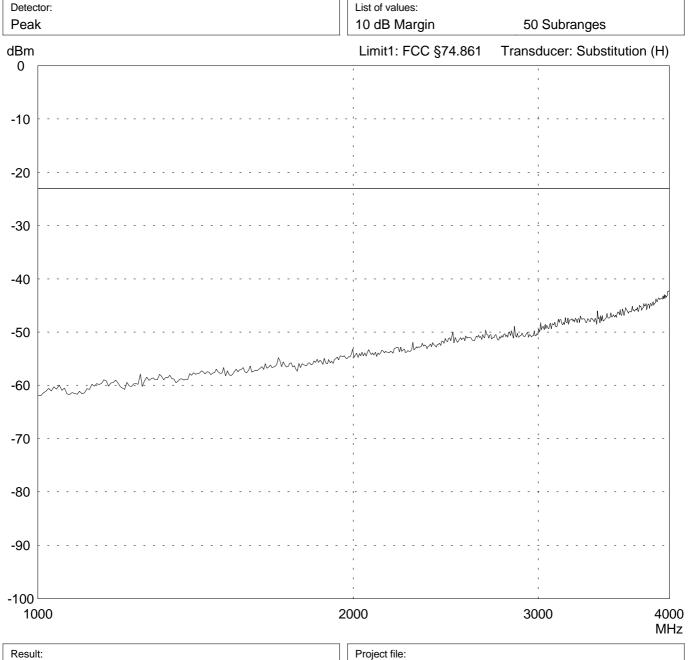
of

Model: Sekaku WT-226 CT Serial no.: 199 MHz sample Applicant: Universal Technology Co. Ltd. Test site: Fully anechoic room, cabin no. 2 Tested on: Test distance 3 metres Horizontal Polarization Date of test: Operator: 10/06/2003 M. Steindl Test performed: File name: automatically default.emi Detector:

Limit kept

Comment:

- 1.5 V battery supply
- EUT in vertical position
- sending with pilote-tone
- sending continiously
- note: with WHKS1000-10SS high pass filter



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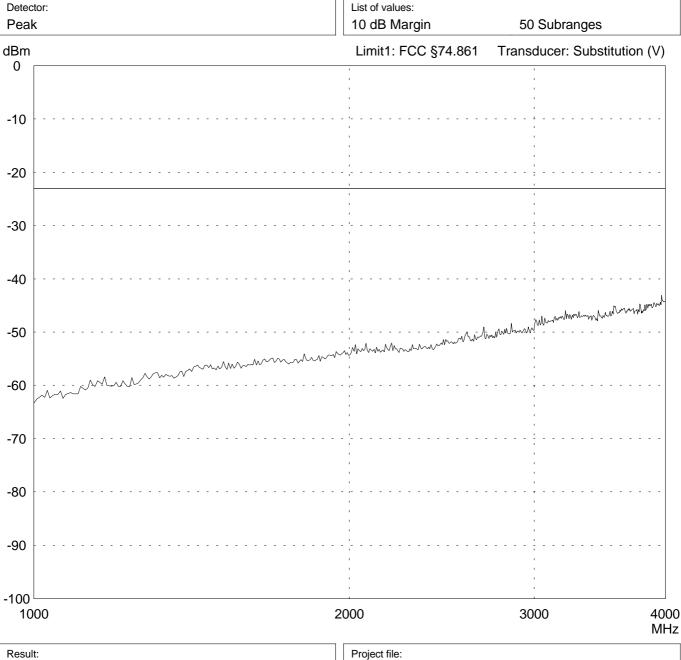
of

Model: Sekaku WT-226 CT Serial no.: 199 MHz sample Applicant: Universal Technology Co. Ltd. Test site: Fully anechoic room, cabin no. 2 Tested on: Test distance 3 metres Vertical Polarization Date of test: Operator: 10/06/2003 M. Steindl Test performed: File name: automatically default.emi Detector:

Limit kept

Comment:

- 1.5 V battery supply
- EUT in vertical position
- sending with pilote-tone
- sending continiously
- note: with WHKS1000-10SS high pass filter



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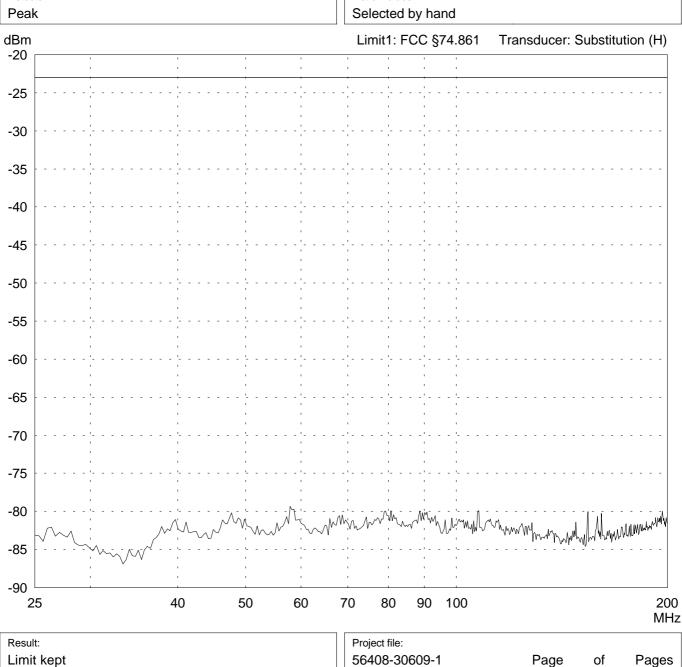
Model: Sekaku WT-226 CT Serial no.: 224.82 MHz sample Applicant: Universal Technology Co. Ltd. Test site: Fully anechoic room, cabin no. 2 Tested on: Test distance 3.5 metres Horizontal Polarization Date of test: Operator: 10/06/2003 M. Steindl Test performed: File name: automatically default.emi

Comment:

- 1.5 V battery supply
- EUT in vertical position
- sending with pilote tone
- sending continiously

Detector:

List of values:
Selected by hand



Model: Sekaku WT-226 CT Serial no.: 224.82 MHz sample Applicant: Universal Technology Co. Ltd. Test site: Fully anechoic room, cabin no. 2 Tested on: Test distance 3.5 metres Vertical Polarization Date of test: Operator: 10/06/2003 M. Steindl Test performed: File name: automatically default.emi

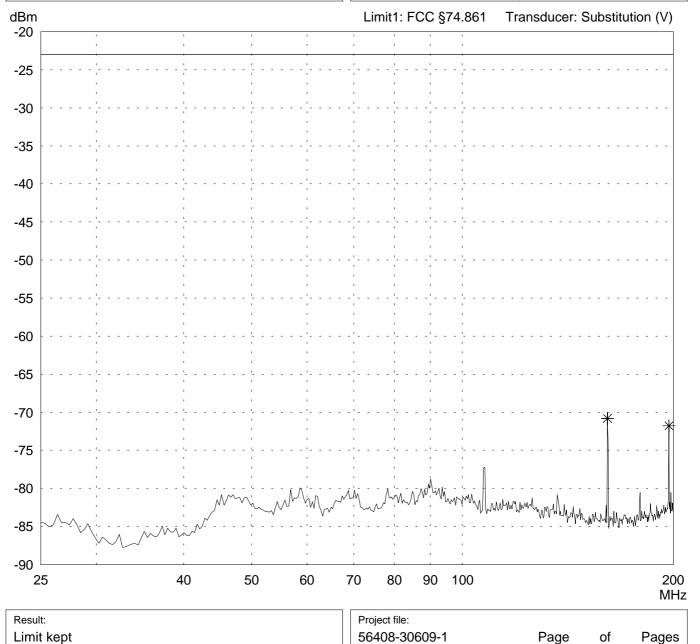
Comment:

- 1.5 V battery supply
- EUT in vertical position
- sending with pilote tone
- sending continiously

Detector:

Peak

List of values:
Selected by hand



Model: Sekaku WT-226 CT Serial no.: 224.82 MHz sample Applicant: Universal Technology Co. Ltd. Test site: Fully anechoic room, cabin no. 2 Tested on: Test distance 3.5 metres Horizontal Polarization Date of test: Operator: 10/06/2003 M. Steindl Test performed: File name: automatically default.emi

Limit kept

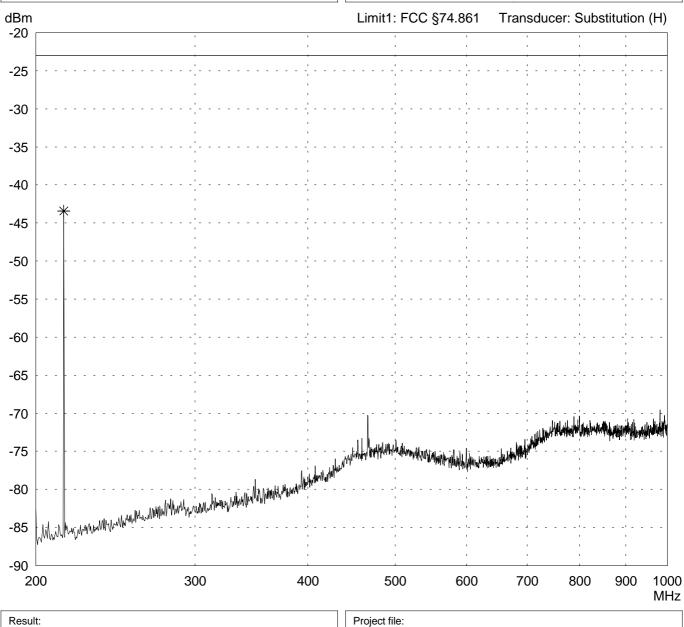
Comment:

- 1.5 V battery supply
- EUT in vertical position
- sending with pilote tone
- sending continiously

Detector:

Peak

List of values:
Selected by hand



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Model: Sekaku WT-226 CT Serial no.: 224.82 MHz sample Applicant: Universal Technology Co. Ltd. Test site: Fully anechoic room, cabin no. 2 Tested on: Test distance 3.5 metres Vertical Polarization Date of test: Operator: 10/06/2003 M. Steindl Test performed: File name: automatically default.emi

Limit kept (carrier excluded)

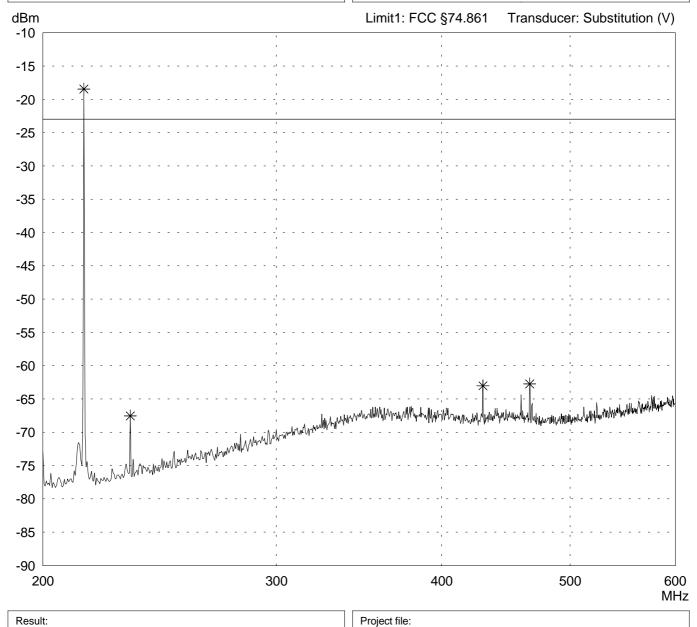
Comment:

- 1.5 V battery supply
- EUT in vertical position
- sending with pilote tone
- sending continiously

Detector:

Peak

List of values:
Selected by hand



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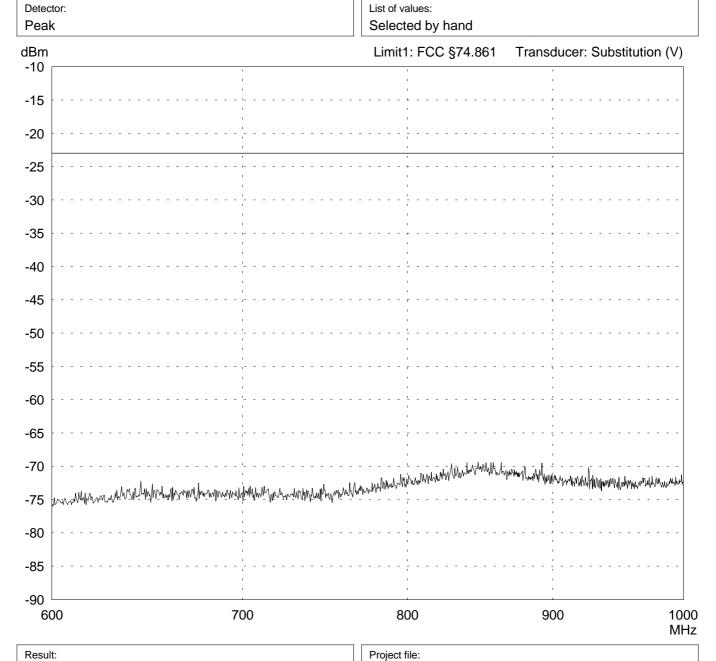
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Model: Sekaku WT-226 CT Serial no.: 224.82 MHz sample Applicant: Universal Technology Co. Ltd. Test site: Fully anechoic room, cabin no. 2 Tested on: Test distance 3.5 metres Vertical Polarization Date of test: Operator: 10/06/2003 M. Steindl Test performed: File name: automatically default.emi

Limit kept

Comment:

- 1.5 V battery supply
- EUT in vertical position
- sending with pilote tone
- sending continiously
- note: with WHKS500-10SS high pass filter



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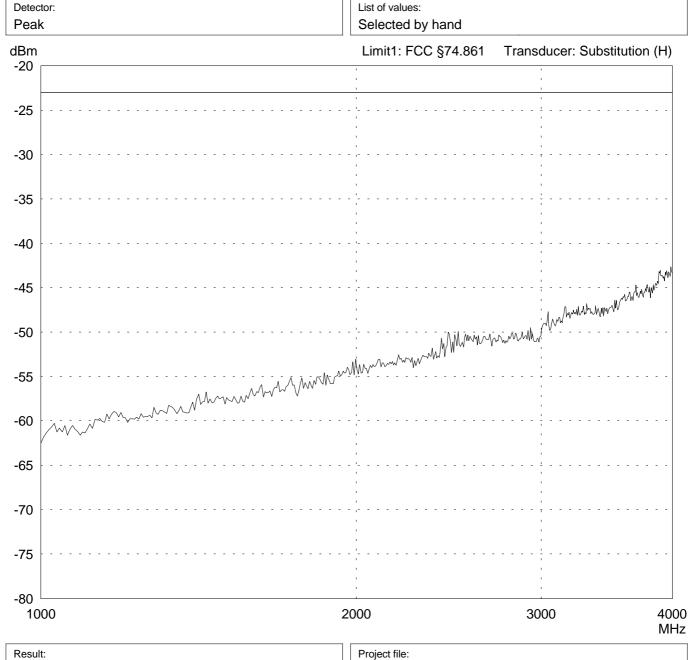
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Model: Sekaku WT-226 CT Serial no.: 224.82 MHz sample Applicant: Universal Technology Co. Ltd. Test site: Fully anechoic room, cabin no. 2 Tested on: Test distance 3.5 metres Horizontal Polarization Date of test: Operator: 10/06/2003 M. Steindl Test performed: File name: automatically default.emi Detector:

Limit kept

Comment:

- 1.5 V battery supply
- EUT in vertical position
- sending with pilote tone
- sending continiously
- note: with WHKS1000-10SS high pass filter



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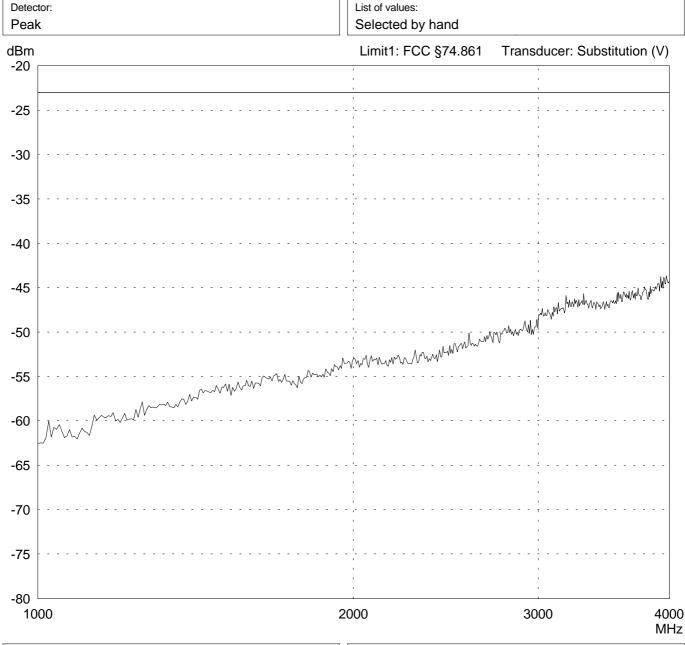
Model: Sekaku WT-226 CT Serial no.: 224.82 MHz sample Applicant: Universal Technology Co. Ltd. Test site: Fully anechoic room, cabin no. 2 Tested on: Test distance 3.5 metres Vertical Polarization Date of test: Operator: 10/06/2003 M. Steindl Test performed: File name: automatically default.emi

Result:

Limit kept

Comment:

- 1.5 V battery supply
- EUT in vertical position
- sending with pilote tone
- sending continiously
- note: with WHKS1000-10SS high pass filter



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