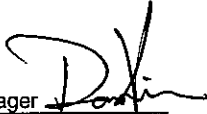
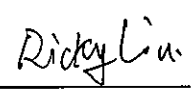


<b>Prüfbericht - Nr.:</b> <i>Test Report No.:</i>		<b>16012780 001</b>		Seite 1 von 23 <i>Page 1 of 23</i>	
<b>Auftraggeber:</b> <i>Client:</i>		Seikaku Technical Group Limited. Offshore Chambers, P.O. Box. 217 Apia, Samoa			
<b>Gegenstand der Prüfung:</b> <i>Test item:</i>		Wireless Microphone Receiver			
<b>Bezeichnung:</b> <i>Identification:</i>		MOD-16PRO FREEBASS_RX	FCC ID: <i>FCC ID</i>	H38MOD-16PRO	
<b>Wareneingangs-Nr.:</b> <i>Receipt No.:</i>		173037200	<b>Eingangsdatum:</b> 07.05.2008 <i>Date of receipt:</i>		
<b>Prüfort:</b> <i>Testing location:</i>		TÜV Rheinland (Guangdong) Ltd. EMC Laboratory  Guangzhou Auto Market, Yuan Gang Section of Guangshan Road, Guangzhou 510650,  P. R. China		Listed test laboratory according to FCC rules section 2.948 for measuring devices under Parts 15	
<b>Prüfgrundlage:</b> <i>Test specification:</i>		ANSI C63.4:2003 FCC Part 15: 20, Sep. 2007 Subpart B section 15.107, 15.109 and 15.121			
<b>Prüfergebnis:</b> <i>Test Result:</i>		Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n). <i>The test item passed the test specification(s).</i>			
<b>Prüflaboratorium:</b> <i>Testing Laboratory:</i>		TÜV Rheinland (Guangdong) Ltd.			
<b>geprüft/ tested by:</b>			<b>kontrolliert/ reviewed by:</b>		
12. Jul. 2008	Liangdong Xie/Project Manager		17 July 2008	Ricky Liu/Project Manager	
<i>Datum</i> Date	<i>Name/Stellung</i> Name/Position	<i>Unterschrift</i> Signature	<i>Datum</i> Date	<i>Name/Stellung</i> Name/Position	<i>Unterschrift</i> Signature
<b>Sonstiges/ Other Aspects:</b>					
<b>Abkürzungen:</b>		P(ass) = entspricht Prüfgrundlage F(ail) = entspricht nicht Prüfgrundlage N/A = nicht anwendbar N/T = nicht getestet		<b>Abbreviations:</b>	
				P(ass) = passed F(ail) = failed N/A = not applicable N/T = not tested	
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.</i>					

**Prüfbericht - Nr.:**

**16012780 001**

**Seite 2 von 23**

*Test Report No.:*

*Page 2 of 23*

## TEST SUMMARY

**5.1 CONDUCTED EMISSION FOR FCC PART 15 PER SECTION 15.107(A)**

*RESULT: Pass*

**5.2 RADIATED EMISSION FOR FCC PART 15 PER SECTION 15.109(A)**

*RESULT: Pass*

**5.3 38 dB REJECTION SIGNAL FROM CELLULAR FREQUENCY BAND 15.121(B)**

*RESULT: Pass*

## Contents

<b>1</b>	<b>GENERAL REMARKS.....</b>	<b>4</b>
<b>1.1</b>	<b>COMPLEMENTARY MATERIALS .....</b>	<b>4</b>
<b>2</b>	<b>TEST SITES.....</b>	<b>4</b>
<b>2.1</b>	<b>TEST FACILITIES .....</b>	<b>4</b>
<b>2.2</b>	<b>LIST OF TEST AND MEASUREMENT INSTRUMENTS .....</b>	<b>5</b>
<b>2.3</b>	<b>TRACE ABILITY .....</b>	<b>5</b>
<b>2.4</b>	<b>CALIBRATION .....</b>	<b>6</b>
<b>2.5</b>	<b>MEASUREMENT UNCERTAINTY .....</b>	<b>6</b>
<b>2.6</b>	<b>LOCATION OF ORIGINAL DATA.....</b>	<b>6</b>
<b>2.7</b>	<b>STATUS OF FACILITY USED FOR TESTING.....</b>	<b>6</b>
<b>3</b>	<b>GENERAL PRODUCT INFORMATION.....</b>	<b>6</b>
<b>3.1</b>	<b>PRODUCT FUNCTION AND INTENDED USE .....</b>	<b>6</b>
<b>3.2</b>	<b>RATINGS AND SYSTEM DETAILS .....</b>	<b>6</b>
<b>3.3</b>	<b>INDEPENDENT OPERATION MODES .....</b>	<b>6</b>
<b>3.4</b>	<b>SUBMITTED DOCUMENTS .....</b>	<b>6</b>
<b>4</b>	<b>TEST SET-UP AND OPERATION MODE .....</b>	<b>6</b>
<b>4.1</b>	<b>PRINCIPLE OF CONFIGURATION SELECTION.....</b>	<b>6</b>
<b>4.2</b>	<b>TEST OPERATION AND TEST SOFTWARE.....</b>	<b>6</b>
<b>4.3</b>	<b>SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT .....</b>	<b>6</b>
<b>4.4</b>	<b>COUNTERMEASURES TO ACHIEVE EMC COMPLIANCE .....</b>	<b>6</b>
<b>4.5</b>	<b>TEST SET-UP.....</b>	<b>6</b>
<b>5</b>	<b>TEST RESULTS EMISSION .....</b>	<b>6</b>
<b>5.1</b>	<b>CONDUCTED EMISSION FOR FCC PART 15 PER SECTION 15.107(A) .....</b>	<b>6</b>
<b>5.2</b>	<b>RADIATED EMISSION FOR FCC PART 15 PER SECTION 15.109(A).....</b>	<b>6</b>
<b>5.3</b>	<b>38 dB REJECTION SIGNAL FROM CELLULAR FREQUENCY BAND .....</b>	<b>6</b>
<b>6</b>	<b>PHOTOGRAPHS OF THE TEST SET-UP .....</b>	<b>6</b>
<b>7</b>	<b>LIST OF TABLES.....</b>	<b>6</b>
<b>8</b>	<b>LIST OF PHOTOGRAPHS.....</b>	<b>6</b>

**Prüfbericht - Nr.:**  
*Test Report No.:*

**16012780 001**

**Seite 4 von 23**  
*Page 4 of 23*

## **1 General Remarks**

### **1.1 Complementary Materials**

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix 1: Test result

## **2 Test Sites**

### **2.1 Test Facilities**

**TÜV Rheinland (Guangdong) Ltd. EMC Laboratory**

Guangzhou Auto Market, Yuan Gang Section of Guangshan Road  
Guangzhou 510650

P. R. China

**Prüfbericht - Nr.:**  
*Test Report No.:*

**16012780 001**

**Seite 5 von 23**  
*Page 5 of 23*

## 2.2 List of Test and Measurement Instruments

**Table 1: List of Test and Measurement Equipment**

Kind of Equipment	Type	Manufacturer	S/N	Calibrated until	Calibrated Interval
EMI Test Receiver	ESCI-3	Rohde & Schwarz	100216	26.Nov.2008	1 year
Spectrum Analyzer	FSP30	Rohde & Schwarz	100286	24.Aug.2008	1 year
Trilog-Broadband Antenna	VULB9168	SCHWARZBECK MESS-ELEKTRONIK	210	08.May.2009	2 year
Double-Ridged Waveguide Horn Antenna	HF906	Rohde & Schwarz	100385	18.Jul.2009	2 year
Double-Ridged Waveguide Horn Antenna	HF906	Rohde & Schwarz	100407	08.May.2009	2 year
Pre-amplifier	AFS42- 00101800- 25-S-42	MITEQ	1101599	31.Jul.2009	2 year
Band Reject Filter	BRM50702	Micro-Tronics	023	15.Feb.2010	2 year
Standard Gain Horn Antenna	3160-09	EMCO	21642	N/A	2 year
Standard Gain Horn Antenna	3160-09	EMCO	21645	N/A	2 year
Pre-amplifier	AFS33- 18002650- 30-8P-44	MITEQ	1108282	31.Jul.2009	2 year
3m Anechoic Chamber	N/A	Albatross Project GmbH	N/A	16.Apr.2010	2 year
EMI Test Receiver	ESCS30	Rohde & Schwarz	100316	27.Mar.2009	1 year
Two-Line V-Network	ESH3-Z5	Rohde & Schwarz	100308	27.Mar.2009	1 year
Pulse Limiter	ESH3-Z2	Rohde & Schwarz	100701	01.Mar.2009	1 year

## 2.3 Trace ability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations

**Prüfbericht - Nr.:**  
*Test Report No.:*

**16012780 001**

**Seite 6 von 23**  
*Page 6 of 23*

## **2.4 Calibration**

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

## **2.5 Measurement Uncertainty**

Uncertainty for conducted emissions measurements is  $\pm 2.51$ dB.

Uncertainty for radiated emissions measurements is  $\pm 4.9$ dB (30MHz-1GHz),  $\pm 4.84$ dB (>1GHz).

The reported expanded uncertainty is based on a standard uncertainty multiply by a coverage factor  $k=2$ , providing a level of confidence of approximately 95%.

## **2.6 Location of original data**

The original copies of all test data taken during actual testing were attached at Appendix 1 of this report and delivered to the applicant. A copy has been retained in the TUV Rheinland (Guangzhou) file for certification follow-up purposes.

## **2.7 Status of facility used for testing**

TÜV Rheinland (Guangdong) Ltd. EMC Laboratory; Guangzhou Auto Market, Yuan Gang Section of Guangshan Road, Guangzhou 510650, P. R. China is listed on the US Federal Communications Commission list of facilities approved to perform measurements, the register no. 833845

**Prüfbericht - Nr.:**  
*Test Report No.:*

**16012780 001**

**Seite 7 von 23**  
*Page 7 of 23*

### 3 General Product Information

The submitted sample MOD-16PRO is wireless microphones receiver operating within the frequency range of 740 MHz to 769 MHz. The receiving frequency can be selected manually or auto-tuned at one frequency point as the table “Frequency Range and Channel List” showed. They are powered by AC/DC adaptor.

Model FREEBASS-RX is identical to MOD-16PRO except audio signal display panel, a mechanical indicator is used to display the volume in FREEBASS\_RX, MOD-16PRO is LED indicating. The power circuit and RF circuit is same.

Based on above mentioned information, all necessary tests are performed on **MOD-16PRO** and **FREEBASS\_RX**.

#### 3.1 Product Function and Intended Use

For details, refer to User Manual.

#### 3.2 Ratings and System Details

Frequency range	:	740 – 769 MHz
Nominal Operating frequencies	:	Refer to the Frequency List below
Type of antenna	:	Dedicate antenna with specified interface
FCC ID:		H38MOD-16PRO
Power supply	:	DC 15V, 500mA from AC/DC adaptor;
Ports	:	DC power input
Protection Class	:	III

**Frequency Range and Channel List**

	Group1	Group2	Group3	Group4	Group5	Group6	Group7	Group8	Group9	Group10	Group11	Group12
<b>1</b>	740.125	740.325	740.525	740.725	740.925	741.125	741.325	741.525	741.725	741.925	742.125	742.325
<b>2</b>	742.525	742.725	742.925	743.125	743.325	743.525	743.725	743.925	744.125	744.325	744.525	744.725
<b>3</b>	744.925	745.125	745.325	745.525	745.725	745.925	746.125	746.325	746.525	746.725	746.925	747.125
<b>4</b>	747.325	747.525	747.725	747.925	748.125	748.325	748.525	748.725	748.925	749.125	749.325	749.525
<b>5</b>	749.725	749.925	750.125	750.325	750.525	750.725	750.925	751.125	751.325	751.525	751.725	751.925
<b>6</b>	752.125	752.325	752.525	752.725	752.925	753.125	753.325	753.525	753.725	753.925	754.125	754.325
<b>7</b>	754.525	754.725	754.925	755.125	755.325	755.525	755.725	755.925	756.125	756.325	756.525	756.725
<b>8</b>	756.925	757.125	757.325	757.525	757.725	757.925	758.125	758.325	758.525	758.725	758.925	759.125
<b>9</b>	759.325	759.525	759.725	759.925	760.125	760.325	760.525	760.725	760.925	761.125	761.325	761.525
<b>10</b>	761.725	761.925	762.125	762.325	762.525	762.725	762.925	763.125	763.325	763.525	763.725	763.925
<b>11</b>	764.125	764.325	764.525	764.725	764.925	765.125	765.325	765.525	765.725	765.925	766.125	766.325
<b>12</b>	766.525	766.725	766.925	767.125	767.325	767.525	767.725	767.925	768.125	768.325	768.525	768.725

Refer to the technical document and user manual for further information.

### 3.3 Independent Operation Modes

The basic operation modes are:

- Receiving with freq. adjustable manually
- Receiving with auto scanning frequency

For further information refer to User Manual

### 3.4 Submitted Documents

- Block Diagram
- Circuit Diagram
- PCB Layout
- FCC Label
- User Manual
- Photo Document



**Prüfbericht - Nr.:**  
*Test Report No.:*

**16012780 001**

**Seite 9 von 23**  
*Page 9 of 23*

## **4 Test Set-up and Operation Mode**

### **4.1 Principle of Configuration Selection**

**Emission:** The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

### **4.2 Test Operation and Test Software**

Refer to Test set-up in chapter 5.

### **4.3 Special Accessories and Auxiliary Equipment**

The product has been tested together with the following linear AC/DC adaptor:

Adaptor:

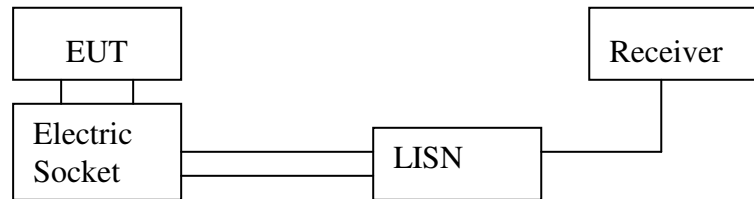
Input : AC 120V, 60Hz  
Output : DC 15V / 500mA  
Protection class : II

### **4.4 Countermeasures to achieve EMC Compliance**

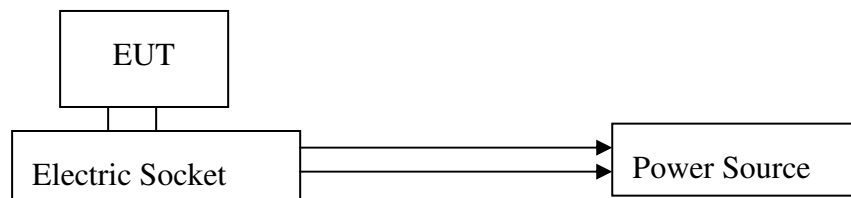
The test sample, which has been tested, contained the noise suppression parts as described in the Constructional Data Form or the Technical document. No additional measures were employed to achieve compliance.



**Diagram 3 of Equipment Configuration for Testing Conducted Emission**



**Diagram 4 of Equipment Configuration for Testing Radiated Emission**



**Prüfbericht - Nr.:**  
*Test Report No.:*

**16012780 001**

**Seite 12 von 23**  
*Page 12 of 23*

## 5 Test Results EMISSION

### 5.1 Conducted Emission for FCC Part 15 Per Section 15.107(a)

**RESULT:**

**Pass**

Date of testing	:	17-18.04.2008 / 25.06.2008
Test specification	:	FCC Part 15 Per Section 15.107(a)
Limits	:	FCC Part 15 Per Section 15.107(a)
Test procedure	:	Procedure specified in ANSI C63.4 were followed
Deviations from Standard Test procedures	:	None
Kind of test site	:	Shielded room
Operation mode	:	Receiving (powered by linear AC/DC adaptor)
Temperature	:	22°C
Humidity	:	50%

**Test procedure:**

1. Place the EUT as specified in ANSI C63.4 Clause 7.2.1
2. Plug the LISN to a correct power source (pay attention to: AC/DC, voltage, frequency).
4. Connect the EUT to LISN and choose N or L1 on the LISN.
5. Connect ESCS30 and LISN via a 50-ohm coaxial cable and a pulse limiter then begin exploratory measurement as specified in ANSI C63.4 Clause 7.2.3
6. Make final measurement as specified in ANSI C63.4 Clause 7.2.4
7. Switch to the other line on the LISN and repeat step 4 to 6.

If the result of the measurement with the Quasi Peak detector is below the Average limit, the measurement with Average Detector may be omitted.

The spectral diagrams in Appendix 1 display the exploratory measurement of un-weighted peak values and average values.

\* ) Disturbances other than those mentioned below are small or not detectable.

**Prüfbericht - Nr.:**  
Test Report No.:

**16012780 001**

Seite 13 von 23  
Page 13 of 23

**Table 2: Disturbance Voltage on AC Mains of MOD-16PRO (L line)**

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	Meas. Time (ms)	Bandwidth (kHz)	Line
0.185000	41.8	1000.000	9.000	L1
0.295000	38.0	1000.000	9.000	L1
0.585000	30.0	1000.000	9.000	L1
11.545000	15.0	1000.000	9.000	L1
11.740000	14.7	1000.000	9.000	L1
11.765000	14.7	1000.000	9.000	L1
11.790000	15.0	1000.000	9.000	L1
11.920000	14.8	1000.000	9.000	L1

(continuation of the "Final Measurement Detector 1" table from column 6 ...)

Frequency (MHz)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)	Comment
0.185000	10.1	22.4	64.3	
0.295000	10.1	22.3	60.4	
0.585000	10.1	26.0	56.0	
11.545000	10.9	45.0	60.0	
11.740000	10.9	45.3	60.0	
11.765000	10.9	45.3	60.0	
11.790000	10.9	45.0	60.0	
11.920000	10.9	45.2	60.0	

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB $\mu$ V)	Meas. Time (ms)	Bandwidth (kHz)	Line
0.290000	21.7	1000.000	9.000	L1
0.450000	13.1	1000.000	9.000	L1
0.620000	12.7	1000.000	9.000	L1
1.340000	10.6	1000.000	9.000	L1
3.960000	10.7	1000.000	9.000	L1
4.935000	11.0	1000.000	9.000	L1
11.605000	12.0	1000.000	9.000	L1
24.715000	13.4	1000.000	9.000	L1

(continuation of the "Final Measurement Detector 1" table from column 6 ...)

Frequency (MHz)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)	Comment
0.290000	10.1	28.9	50.5	
0.450000	10.2	33.8	46.9	
0.620000	10.1	33.3	46.0	
1.340000	10.3	35.4	46.0	
3.960000	10.4	35.3	46.0	
4.935000	10.5	35.0	46.0	
11.605000	10.9	38.0	50.0	
24.715000	11.8	36.6	50.0	

**Prüfbericht - Nr.:**

**16012780 001**

**Seite 14 von 23**

*Test Report No.:*

*Page 14 of 23*

**Table 3: Disturbance Voltage on AC Mains of MOD-16PRO (N line)**

**Final Measurement Detector 1**

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	Meas. Time (ms)	Bandwidth (kHz)	Line
0.275000	39.4	1000.000	9.000	N
0.300000	38.8	1000.000	9.000	N
0.790000	30.6	1000.000	9.000	N
22.955000	29.1	1000.000	9.000	N
23.025000	31.0	1000.000	9.000	N
23.100000	30.1	1000.000	9.000	N
23.190000	29.2	1000.000	9.000	N
25.635000	30.9	1000.000	9.000	N

(continuation of the "Final Measurement Detector 1" table from column 6 ...)

Frequency (MHz)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)	Comment
0.275000	10.1	21.6	61.0	
0.300000	10.1	21.5	60.2	
0.790000	10.1	25.4	56.0	
22.955000	11.4	30.9	60.0	
23.025000	11.4	29.0	60.0	
23.100000	11.5	29.9	60.0	
23.190000	11.5	30.8	60.0	
25.635000	11.5	29.1	60.0	

**Final Measurement Detector 2**

Frequency (MHz)	Average (dB $\mu$ V)	Meas. Time (ms)	Bandwidth (kHz)	Line
0.290000	21.8	1000.000	9.000	N
0.500000	12.8	1000.000	9.000	N
0.775000	12.7	1000.000	9.000	N
1.345000	10.5	1000.000	9.000	N
3.970000	10.6	1000.000	9.000	N
4.970000	10.9	1000.000	9.000	N
12.960000	12.9	1000.000	9.000	N
26.080000	13.5	1000.000	9.000	N

(continuation of the "Final Measurement Detector 2" table from column 6 ...)

Frequency (MHz)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)	Comment
0.290000	10.1	28.7	50.5	
0.500000	10.1	33.2	46.0	
0.775000	10.1	33.3	46.0	
1.345000	10.2	35.5	46.0	
3.970000	10.2	35.4	46.0	
4.970000	10.3	35.1	46.0	
12.960000	10.9	37.1	50.0	
26.080000	11.5	36.5	50.0	

**Prüfbericht - Nr.:**  
Test Report No.:

**16012780 001**

**Seite 15 von 23**  
Page 15 of 23

**Table 4: Disturbance Voltage on AC Mains of FREEBASS\_RX (L line)**

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	Meas. Time (ms)	Bandwidth (kHz)	Line
0.357000	43.2	1000.000	9.000	L
0.402000	42.6	1000.000	9.000	L
1.230000	25.4	1000.000	9.000	L
2.805000	14.1	1000.000	9.000	L
7.746000	15.6	1000.000	9.000	L
24.508500	16.8	1000.000	9.000	L

(continuation of the "Final Measurement Detector 1" table from column 6 ...)

Frequency (MHz)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)	Comment
0.357000	10.1	15.6	58.8	
0.402000	10.1	15.2	57.8	
1.230000	10.2	30.6	56.0	
2.805000	10.2	41.9	56.0	
7.746000	10.5	44.4	60.0	
24.508500	11.5	43.2	60.0	

**Table 5: Disturbance Voltage on AC Mains of FREEBASS\_RX (N line)**

Frequency (MHz)	Average (dB $\mu$ V)	Meas. Time (ms)	Bandwidth (kHz)	Line
0.357000	24.3	1000.000	9.000	L
0.456000	23.4	1000.000	9.000	L
1.135500	12.8	1000.000	9.000	L
4.974000	12.3	1000.000	9.000	L
8.011500	13.4	1000.000	9.000	L
24.742500	14.4	1000.000	9.000	L

(continuation of the "Final Measurement Detector 1" table from column 6 ...)

Frequency (MHz)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)	Comment
0.357000	10.1	24.5	48.8	
0.456000	10.1	23.4	46.8	
1.135500	10.1	33.2	46.0	
4.974000	10.3	33.7	46.0	
8.011500	10.5	36.6	50.0	
24.742500	11.5	35.6	50.0	

**Prüfbericht - Nr.:**

**16012780 001**

**Seite 16 von 23**

*Test Report No.:*

*Page 16 of 23*

## **5.2 Radiated Emission for FCC Part 15 Per Section 15.109(a)**

**RESULT:**

**Pass**

Date of testing	:	17.04.2008 / 17-18.06.2008
Test specification	:	FCC Part 15 Per Section 15.109(a)
Limits	:	FCC Part 15 Per Section 15.109(a)
Test procedure	:	Procedure specified in ANSI C63.4 were followed
Deviations from Standard Test procedures	:	None
Kind of test site	:	3m Semi-anechoic chamber
Operation mode	:	Receiving at high, mid and low channel Scanning mode
Temperature	:	22°C
Humidity	:	50%

**Test procedure:**

1. The EUT was turned on and placed on the top of a rotatable table 0.8 meters above the ground with 3-orthogonal XYZ direction and be kept close enough to the measurement receiving antenna (especially for the measurement frequency range above 1 GHz). The table was then rotated 360 degrees to detect the suspected emission frequency points. The position of the worst radiation case with both horizontal and vertical receiving antenna polarization was then recorded together with the suspected emission frequency points above-mentioned.
2. The EUT was then set 3 meters away from the receiving antenna, which was mounted on a variable-height antenna tower.
3. For each suspected emission frequency point recorded in step 1, the EUT was arranged to its worst case that the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to read the maximum emission.
- 4.



**Prüfbericht - Nr.:**  
*Test Report No.:*

**16012780 001**

**Seite 17 von 23**  
*Page 17 of 23*

**Table 6: Radiated Emission**

Frequency	QP	AV	PK	Corr. Factor	Polarity	Limit		
						QP	AV	PK
[MHz]	[dB $\mu$ V/m]			(dB)	(H/V)	[dB $\mu$ V/m]		
*)---								

\*) Disturbances are far below the limit. Please refer to the Appendix 1 for the noise floor measured maximum among high, mid and low receiving channel.

The final measurement for frequencies below 1000MHz is performed with Quasi Peak detector; the final measurement for frequencies above 1000MHz is performed with Average and Peak detector.

The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test.

The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz at frequency below 1GHz.

The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz at frequency above 1GHz.

**Prüfbericht - Nr.:**  
*Test Report No.:*

**16012780 001**

**Seite 18 von 23**  
*Page 18 of 23*

### 5.3 38 dB rejection signal from Cellular Frequency band

**RESULT:**

**Pass**

Date of testing : 18.04.2008 / 25.06.2008  
 Test specification : FCC Part 15 Per Section 15.121(b)  
 Limit : FCC Part 15 Per Section 15.121(b)  
 Operation mode: Receiving with auto scanning activated  
 Kind of test site : Shielded room  
 Test signal : RF signal FM at 1kHz audio

**Test procedure:**

1. Set the wanted signal to establish reference sensitivity (12dB SINAD), the level of wanted signal input was recorded as reference level.
2. Inject unwanted cellular signal into the EUT and increase the unwanted signal level until the SINAD is reached 12dB or its level is 41dB (add 3dB margin with the 38dB rejection) higher than the reference level recorded in step 1.
3. Record the level of the unwanted mobile signal relative to the reference in step 1. The result is the rejection level in dB.
4. Repeat test steps 2-3 for other cellular frequencies.

**Table 7: 38 dB Rejection**

Injection frequency(Cellular) in MHz	Rejection in dB	Limit in dB
824.04	>41	38
836.00	>41	38
848.97	>41	38
869.04	>41	38
881.00	>41	38
893.97	>41	38

**Prüfbericht - Nr.:**  
*Test Report No.:*

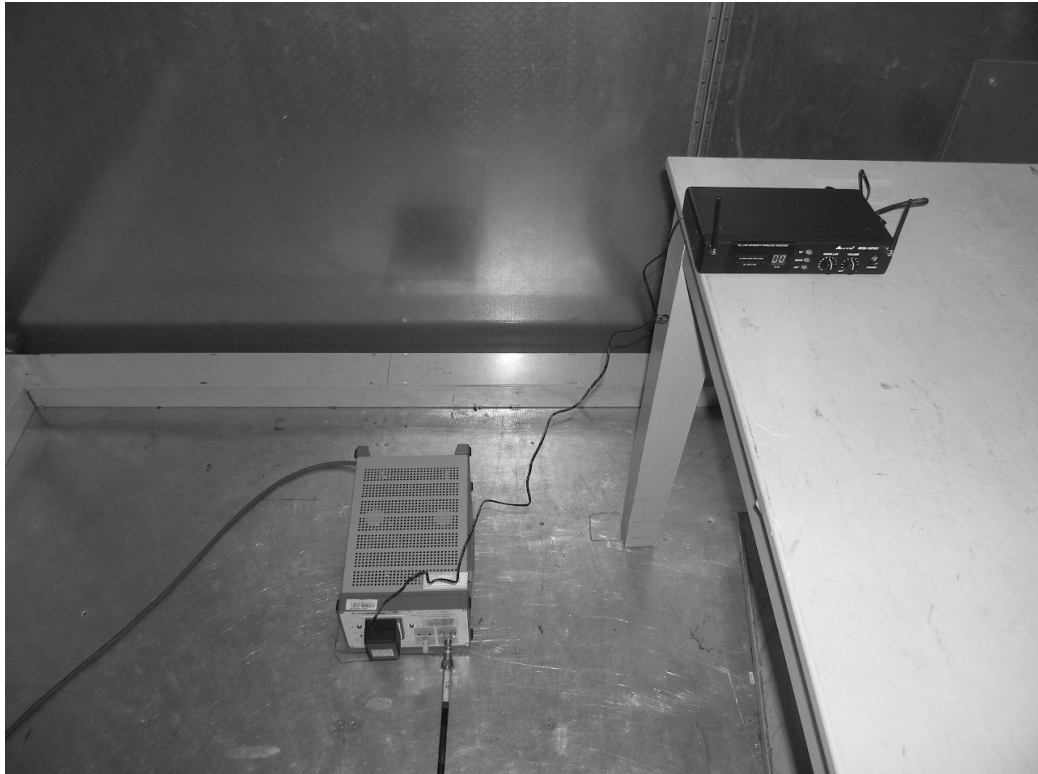
**16012780 001**

**Seite 19 von 23**  
*Page 19 of 23*

## 6 Photographs of the Test Set-Up

**Photograph 1: Set up for Conducted Emission on AC Mains**

MOD-16PRO



**Prüfbericht - Nr.:**  
*Test Report No.:*

**16012780 001**

**Seite 20 von 23**  
*Page 20 of 23*

FREEBASS\_RX

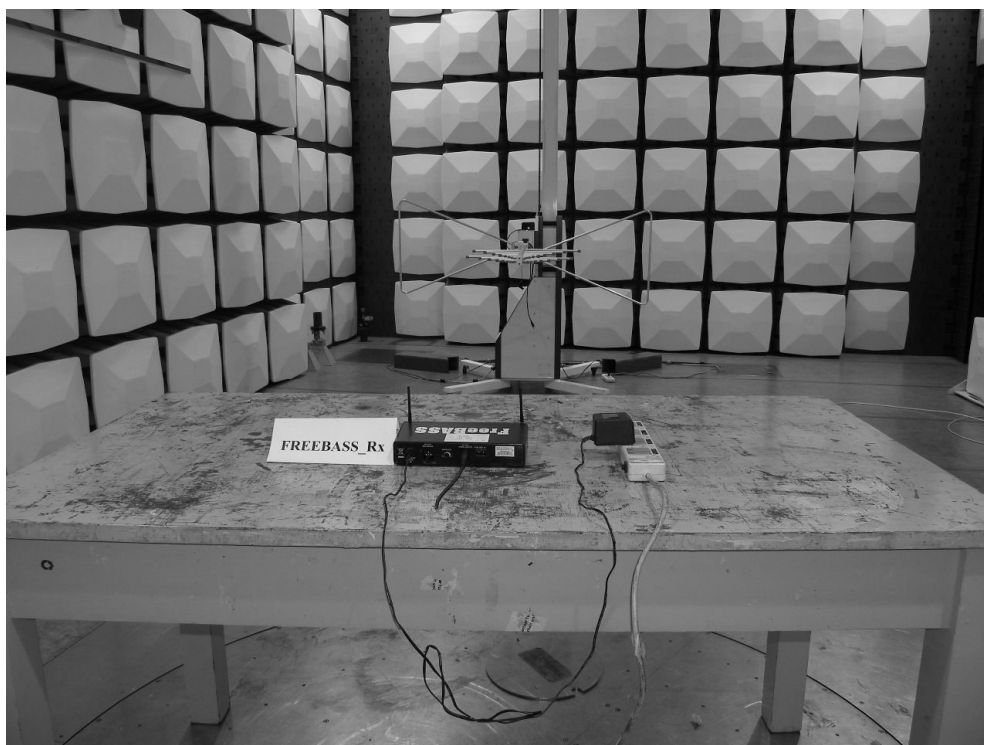
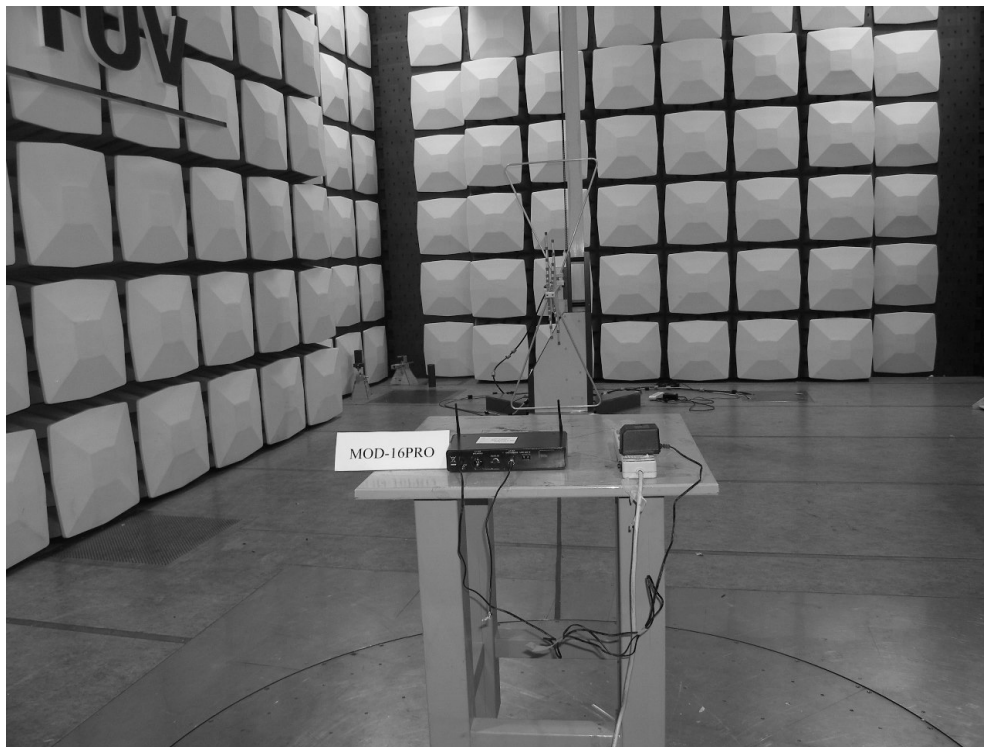


**Prüfbericht - Nr.:**  
*Test Report No.:*

**16012780 001**

**Seite 21 von 23**  
*Page 21 of 23*

**Photograph 2: Set-up for Radiation Measurement Below 1GHz**

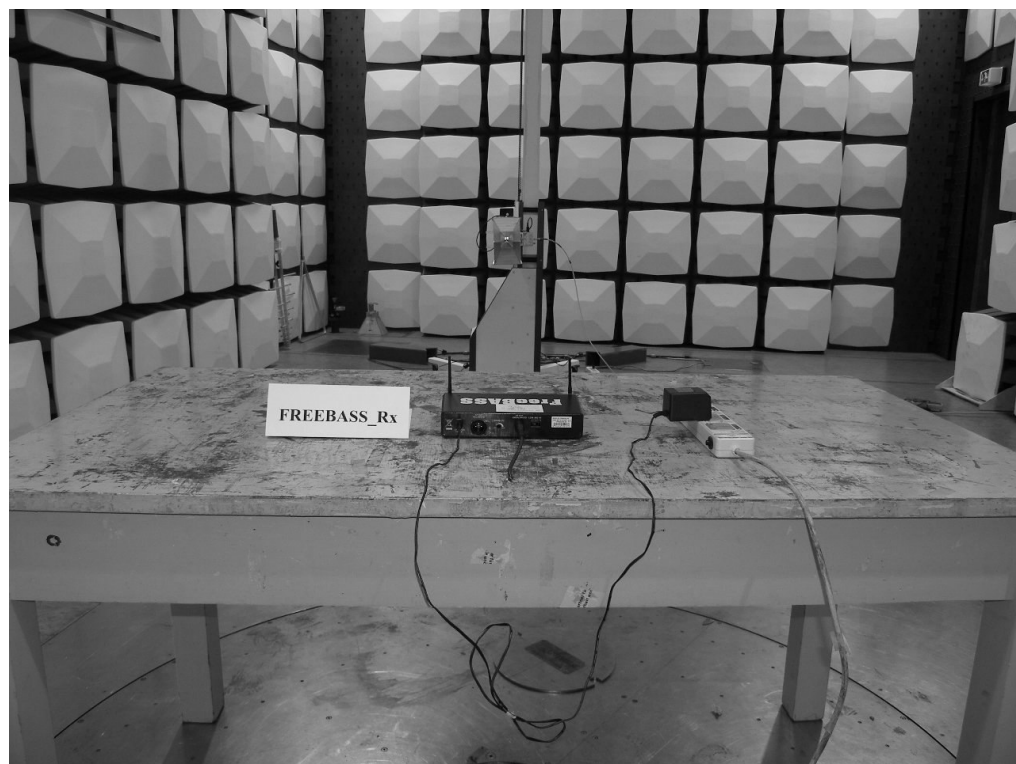


**Prüfbericht - Nr.:**  
*Test Report No.:*

**16012780 001**

**Seite 22 von 23**  
*Page 22 of 23*

**Photograph 3: Set-up for Radiation Measurement Above 1GHz**



## 7 List of Tables

Table 1: List of Test and Measurement Equipment .....	5
Table 2: Disturbance Voltage on AC Mains of MOD-16PRO (L line) .....	6
Table 3: Disturbance Voltage on AC Mains of MOD-16PRO (L line) .....	6
Table 4: Disturbance Voltage on AC Mains of FREEBASS_RX (L line).....	6
Table 5: Disturbance Voltage on AC Mains of FREEBASS_RX (N line) .....	6
Table 6: Radiated Emission .....	6
Table 7: 38 dB Rejection .....	6

## 8 List of Photographs

Photograph 1: Set up for Conducted Emission on AC Mains .....	6
Photograph 2: Set-up for Radiation Measurement Below 1GHz .....	6
Photograph 3: Set-up for Radiation Measurement Above 1GHz.....	6

**Prüfbericht - Nr.:**  
Test Report No.

**16012780 001**

Seite 1 von 36  
Page 1 of 36

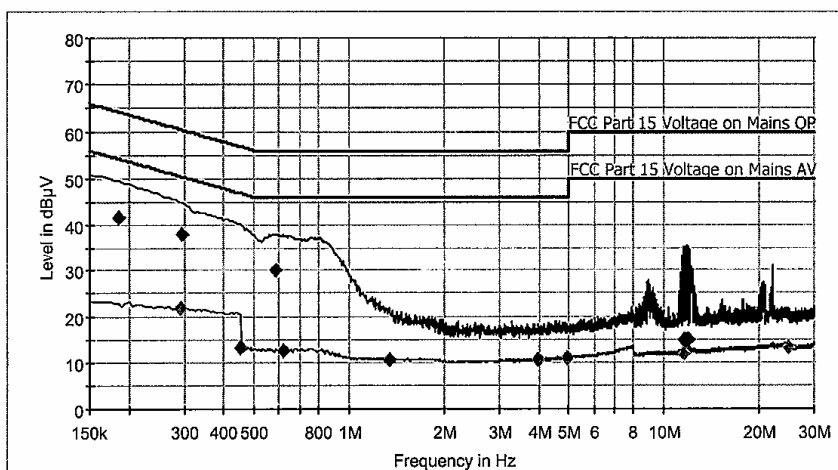
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
Model/Type: MOD-16PRO  
Operating Conditions: RX  
Comment: AC 120V, 60Hz; L1

Hardware Setup: 1phase LISN ESH3-Z5 to ESCS30  
Level Unit: dB  $\mu$  V

Subrange	Detectors	IF Bandwidth	Step Size	Meas. Time	Receiver
150kHz - 30MHz	Peak; Average	9kHz	4.5kHz	10ms	ESCS 30





**Prüfbericht - Nr.:**  
*Test Report No.*

**16012780 001**

**Seite 2 von 36**  
*Page 2 of 36*

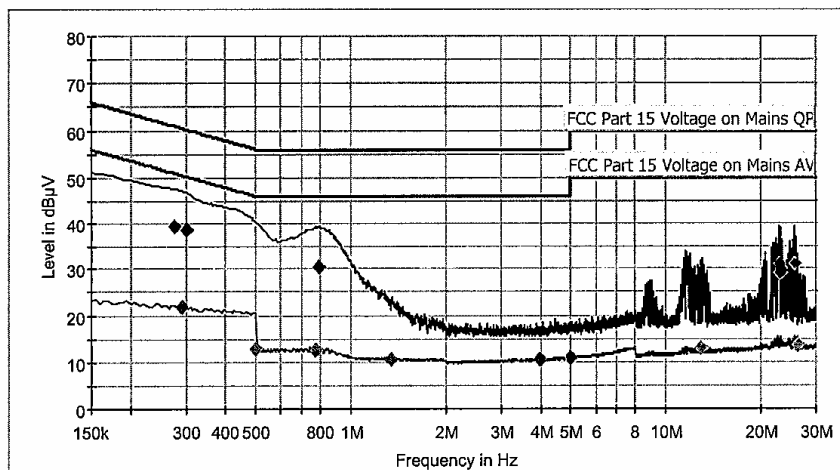
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
Model/Type: MOD-16PRO  
Operating Conditions: RX  
Comment: AC 120V, 60Hz; N

Hardware Setup: 1phase LISN ESH3-Z5 to ESCS30  
Level Unit: dB  $\mu$  V

Subrange	Detectors	IF Bandwidth	Step Size	Meas. Time	Receiver
150kHz - 30MHz	Peak; Average	9kHz	4.5kHz	10ms	ESCS 30



**Prüfbericht - Nr.:**  
Test Report No.

**16012780 001**

**Seite 3 von 36**  
Page 3 of 36

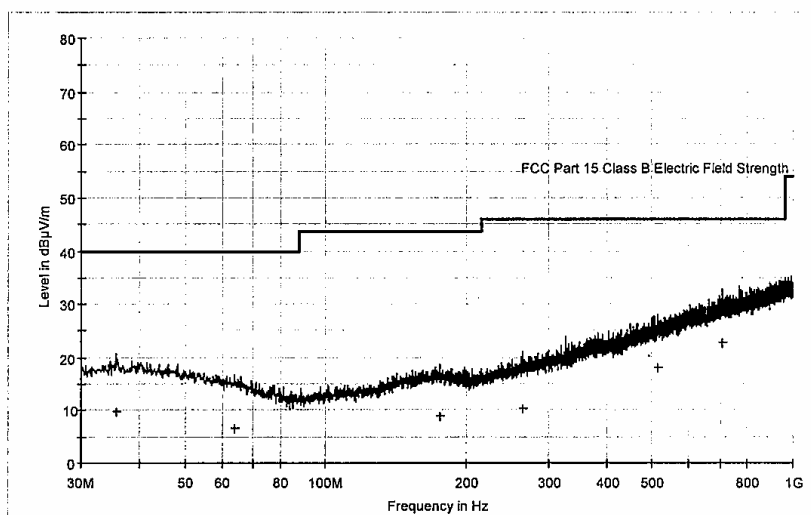
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
Model Number: MOD-16PRO  
Operating Conditions: RX Low Channel  
Comment: AC 120V 60Hz

#### Subrange 1

Frequency Range: 30MHz - 1GHz  
Receiver: TUV ESCI 3  
Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



### Limit and Margin

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
35.600000	10.0	14.2	30.0	40.0	V
63.950000	6.6	11.1	33.4	40.0	V
175.500000	9.0	13.5	34.5	43.5	V
264.250000	10.4	15.1	35.6	46.0	V
515.500000	18.2	22.1	27.8	46.0	V
705.750000	22.8	25.8	23.2	46.0	V

**Prüfbericht - Nr.:**

**16012780 001**

Seite 4 von 36

Test Report No.

Page 4 of 36

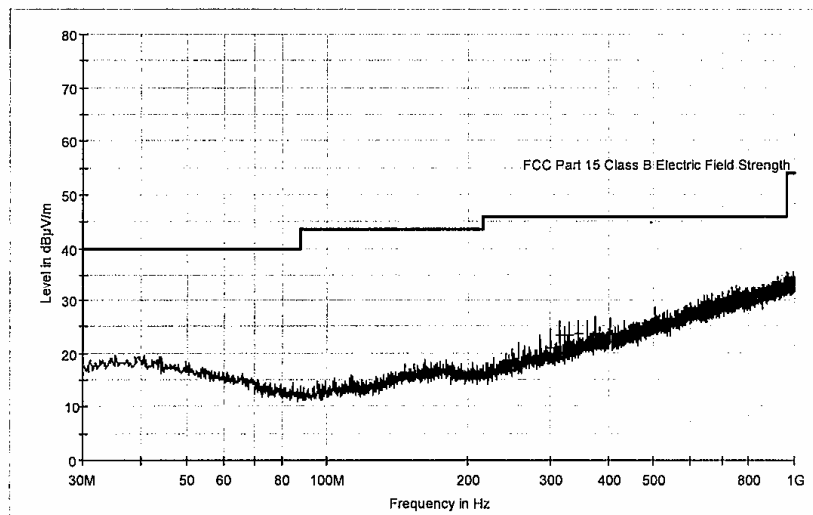
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: MOD-16PRO  
 Operating Conditions: RX Low Channel  
 Comment: AC 120V 60Hz

#### Subrange 1

Frequency Range: 30MHz - 1GHz  
 Receiver: TUV ESCI 3  
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



### Limit and Margin

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
256.800000	16.9	14.7	29.1	46.0	H
300.850000	21.1	16.3	24.9	46.0	H
315.600000	23.3	17.0	22.7	46.0	H
330.100000	23.5	17.2	22.5	46.0	H
344.800000	23.7	17.7	22.3	46.0	H
374.250000	23.6	18.8	22.4	46.0	H

**Prüfbericht - Nr.:**

**16012780 001**

Seite 5 von 36

Test Report No.

Page 5 of 36

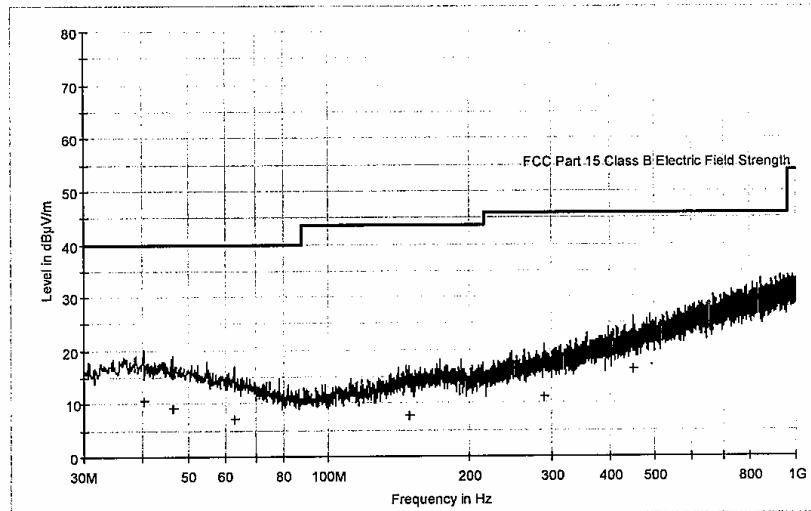
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: MOD-16PRO  
 Operating Conditions: RX Middle Channel  
 Comment: AC 120V 60Hz

#### Subrange 1

Frequency Range: 30MHz - 1GHz  
 Receiver: TUV ESCI 3  
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



### Limit and Margin

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
40.200000	10.6	14.4	29.4	40.0	V
46.500000	9.2	13.4	30.8	40.0	V
62.750000	7.3	11.2	32.7	40.0	V
148.950000	7.8	12.3	35.7	43.5	V
289.100000	11.4	15.7	34.6	46.0	V
448.450000	16.5	20.6	29.5	46.0	V

**Prüfbericht - Nr.:**

**16012780 001**

Seite 6 von 36

Test Report No.

Page 6 of 36

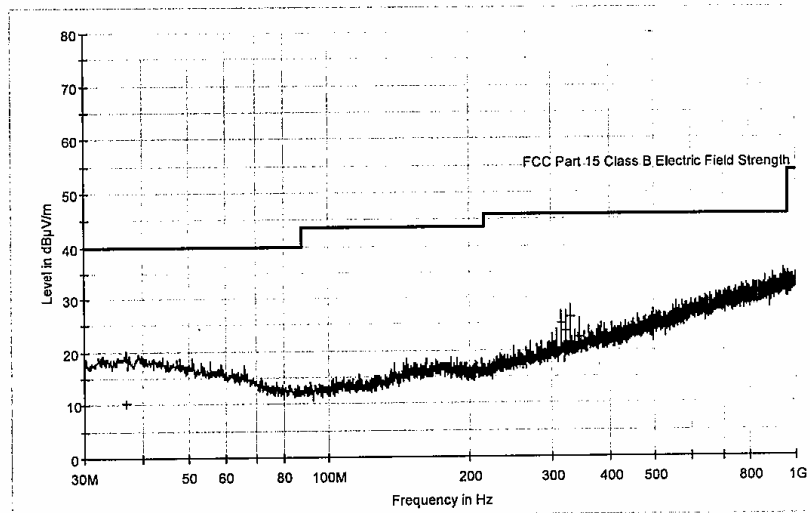
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: MOD-16PRO  
 Operating Conditions: RX Middle Channel  
 Comment: AC 120V 60Hz

#### Subrange 1

Frequency Range: 30MHz - 1GHz  
 Receiver: TUV ESCI 3  
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



### Limit and Margin

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
36.900000	10.3	14.3	29.7	40.0	H
308.000000	20.5	16.6	25.5	46.0	H
315.350000	25.1	16.9	20.9	46.0	H
322.650000	23.6	17.2	22.4	46.0	H
330.000000	26.3	17.2	19.7	46.0	H
344.650000	22.4	17.7	23.6	46.0	H

2008-04-17

1:54:09 PM

**Prüfbericht - Nr.:**

**16012780 001**

Seite 7 von 36

Test Report No.

Page 7 of 36

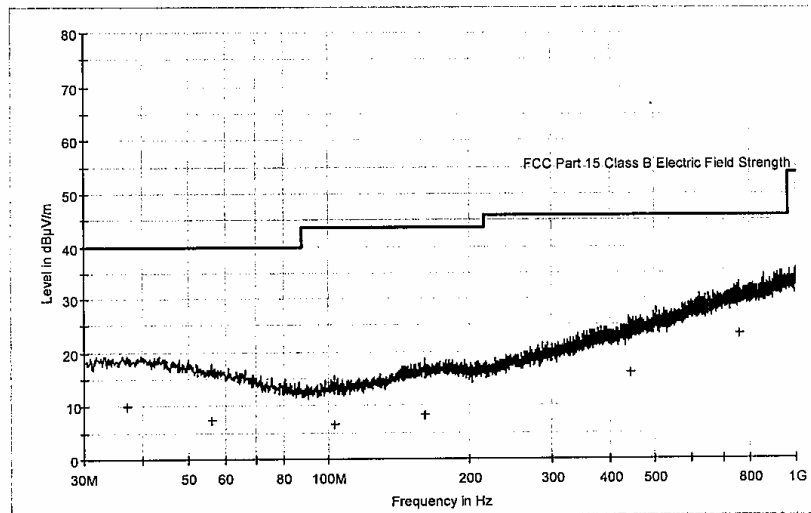
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: MOD-16PRO  
 Operating Conditions: RX High Channel  
 Comment: AC 120V 60Hz

#### Subrange 1

Frequency Range: 30MHz - 1GHz  
 Receiver: TUV ESCI 3  
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



### Limit and Margin

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
37.050000	10.2	14.3	29.8	40.0	V
56.050000	7.4	11.9	32.6	40.0	V
102.650000	6.6	9.5	36.9	43.5	V
160.850000	8.3	12.3	35.2	43.5	V
440.450000	16.3	20.2	29.7	46.0	V
758.250000	23.4	26.4	22.6	46.0	V

**Prüfbericht - Nr.:**

**16012780 001**

Seite 8 von 36

Test Report No.

Page 8 of 36

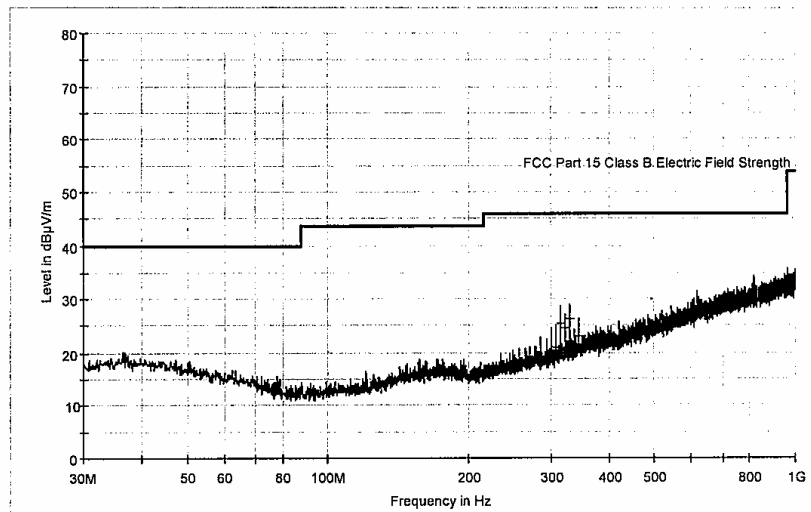
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: MOD-16PRO  
 Operating Conditions: RX High Channel  
 Comment: AC 120V 60Hz

#### Subrange 1

Frequency Range: 30MHz - 1GHz  
 Receiver: TUV ESCI 3  
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



### Limit and Margin

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
286.050000	18.4	15.6	27.6	46.0	H
308.000000	20.9	16.6	25.1	46.0	H
315.350000	25.5	16.9	20.5	46.0	H
322.700000	24.6	17.2	21.4	46.0	H
329.950000	26.4	17.2	19.6	46.0	H
344.500000	23.0	17.7	23.0	46.0	H

**Prüfbericht - Nr.:**

**16012780 001**

Seite 9 von 36

Test Report No.

Page 9 of 36

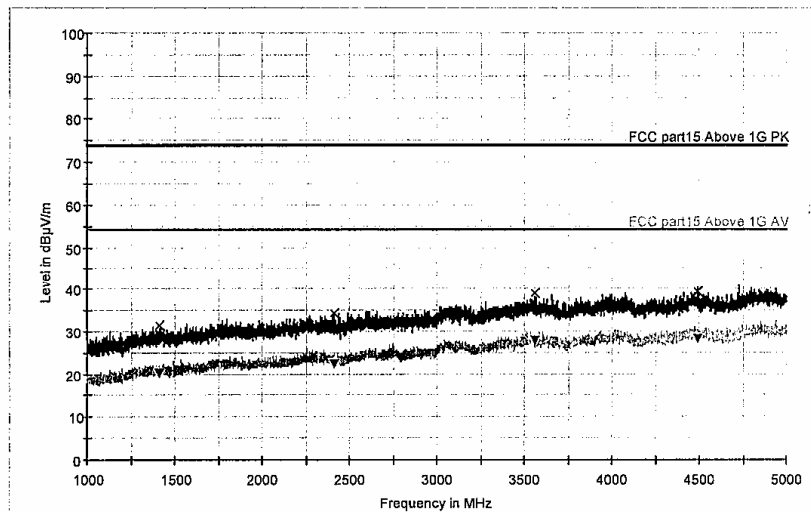
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: MOD-16PRO  
 Operating Conditions: RX Low Channel  
 Comment: AC 120V 60Hz

#### Subrange 1

Frequency Range: 1GHz - 5GHz  
 Receiver: TUV FSP 30  
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



### Limit and Margin

Frequency (MHz)	MaxPeak (dB µ V/m)	PK Margin (dB)	PK Limit (dB µ V/m)	Average (dB µ V/m)	AV Margin (dB)	AV Limit (dB µ V/m)	Polarity	Corr. (dB)
1411.0000	31.4	42.6	74.0	20.2	33.8	54.0	V	-15.9
2416.5000	34.2	39.8	74.0	22.3	31.7	54.0	V	-12.3
3558.0000	39.0	35.0	74.0	27.7	16.3	54.0	V	-8.3
4492.5000	39.2	34.8	74.0	28.3	15.7	54.0	V	-6.9

2008-04-17

3:09:12 PM



**Prüfbericht - Nr.:**

**16012780 001**

Seite 10 von 36

Test Report No.

Page 10 of 36

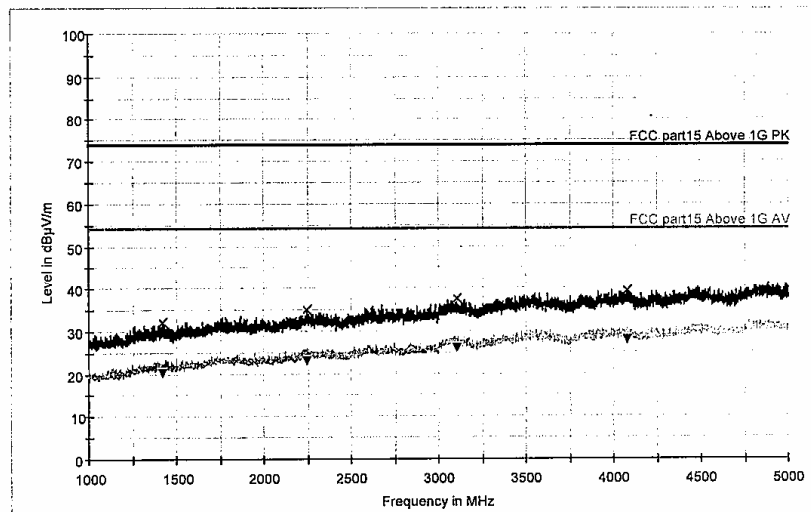
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: MOD-16PRO  
 Operating Conditions: RX Low Channel  
 Comment: AC 120V 60Hz

#### Subrange 1

Frequency Range: 1GHz - 5GHz  
 Receiver: TUV FSP 30  
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



### Limit and Margin PK

Frequency (MHz)	MaxPeak (dB µ V/m)	PK Margin (dB)	PK Limit (dB µ V/m)	Average (dB µ V/m)	AV Margin (dB)	AV Limit (dB µ V/m)	Polarity	Corr. (dB)
1419.0000	32.0	42.0	74.0	20.1	33.9	54.0	H	-15.9
2244.5000	34.9	39.1	74.0	23.2	30.8	54.0	H	-12.1
3108.0000	37.5	36.5	74.0	25.9	28.1	54.0	H	-10.4
4076.0000	39.4	34.6	74.0	27.7	26.3	54.0	H	-7.7

**Prüfbericht - Nr.:**

**16012780 001**

Seite 11 von 36

Test Report No.

Page 11 of 36

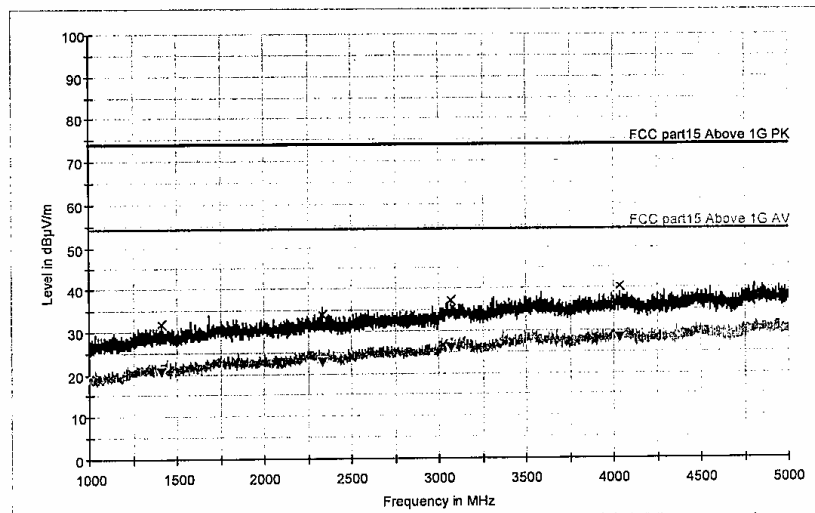
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: MOD-16PRO  
 Operating Conditions: RX Middle Channel  
 Comment: AC 120V 60Hz

#### Subrange 1

Frequency Range: 1GHz - 5GHz  
 Receiver: TUV FSP 30  
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



### Limit and Margin

Frequency (MHz)	MaxPeak (dB µ V/m)	Pk Margin (dB)	PK Limit (dB µ V/m)	Average (dB µ V/m)	AV Margin (dB)	AV Limit (dB µ V/m)	Polarity	Corr. (dB)
1410.0000	31.9	42.1	74.0	20.7	33.3	54.0	V	-15.9
2335.0000	33.8	40.2	74.0	22.8	31.2	54.0	V	-12.3
3069.0000	37.2	36.8	74.0	25.9	28.1	54.0	V	-10.4
4036.5000	40.3	33.7	74.0	28.0	26.0	54.0	V	-7.8

**Prüfbericht - Nr.:**

**16012780 001**

Seite 12 von 36

Test Report No.

Page 12 of 36

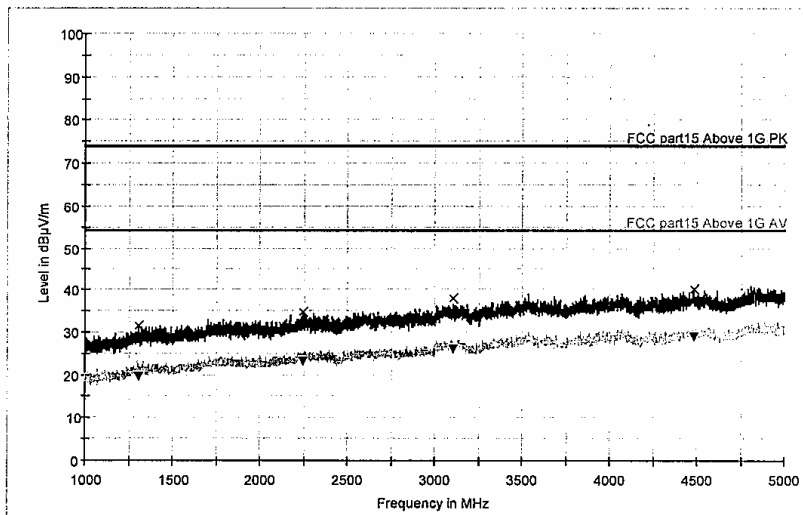
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: MOD-16PRO  
 Operating Conditions: RX Middle Channel  
 Comment: AC 120V 60Hz

#### Subrange 1

Frequency Range: 1GHz - 5GHz  
 Receiver: TUV FSP 30  
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



### Limit and Margin

Frequency (MHz)	MaxPeak (dB µ V/m)	PK Margin (dB)	PK Limit (dB µ V/m)	Average (dB µ V/m)	AV Margin (dB)	AV Limit (dB µ V/m)	Polarity	Corr. (dB)
1304.0000	31.5	42.5	74.0	19.6	34.4	54.0	H	-16.3
2245.5000	34.6	39.4	74.0	23.2	30.8	54.0	H	-12.1
3107.5000	37.8	36.2	74.0	25.8	28.2	54.0	H	-10.4
4479.0000	40.2	33.8	74.0	29.0	25.0	54.0	H	-6.9

**Prüfbericht - Nr.:**

**16012780 001**

Seite 13 von 36

Test Report No.

Page 13 of 36

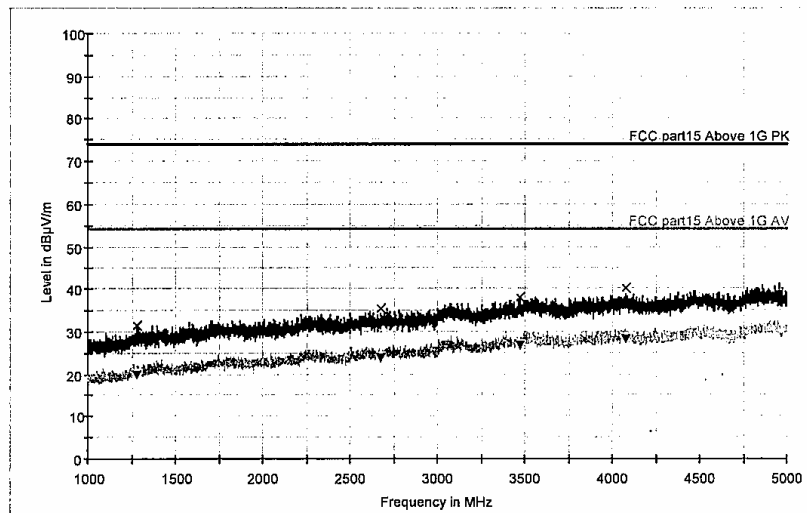
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: MOD-16PRO  
 Operating Conditions: RX High Channel  
 Comment: AC 120V 60Hz

#### Subrange 1

Frequency Range: 1GHz - 5GHz  
 Receiver: TUV FSP 30  
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



### Limit and Margin PK

Frequency (MHz)	MaxPeak (dB µ V/m)	PK Margin (dB)	PK Limit (dB µ V/m)	Average (dB µ V/m)	AV Margin (dB)	AV Limit (dB µ V/m)	Corr. (dB)	Polarity
1281.5000	31.4	42.6	74.0	19.8	34.2	54.0	-16.4	V
2677.0000	35.5	38.5	74.0	23.8	30.2	54.0	-11.8	V
3471.5000	37.8	36.2	74.0	26.6	27.4	54.0	-9.1	V
4075.0000	40.1	33.9	74.0	28.0	26.0	54.0	-7.7	V

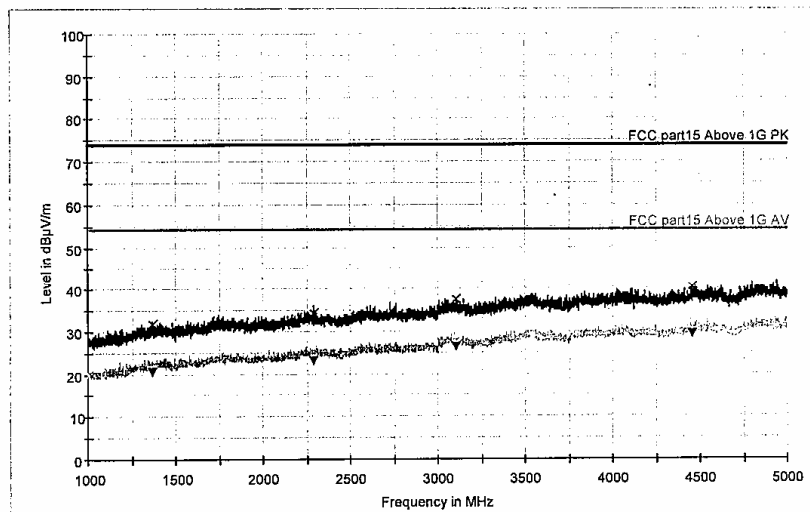
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: MOD-16PRO  
 Operating Conditions: RX High Channel  
 Comment: AC 120V 60Hz

#### Subrange 1

Frequency Range: 1GHz - 5GHz  
 Receiver: TUV FSP 30  
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



### Limit and Margin

Frequency (MHz)	MaxPeak (dB µ V/m)	PK Margin (dB)	PK Limit (dB µ V/m)	Average (dB µ V/m)	AV Margin (dB)	AV Limit (dB µ V/m)	Polarity	Corr. (dB)
1365.5000	31.9	42.1	74.0	20.4	33.6	54.0	H	-16.2
2293.5000	34.4	39.6	74.0	23.0	31.0	54.0	H	-12.2
3106.0000	37.7	36.3	74.0	26.2	27.8	54.0	H	-10.4
4455.5000	40.5	33.5	74.0	29.4	24.6	54.0	H	-7.0

**Prüfbericht - Nr.:**  
Test Report No.

**16012780 001**

Seite 15 von 36  
Page 15 of 36

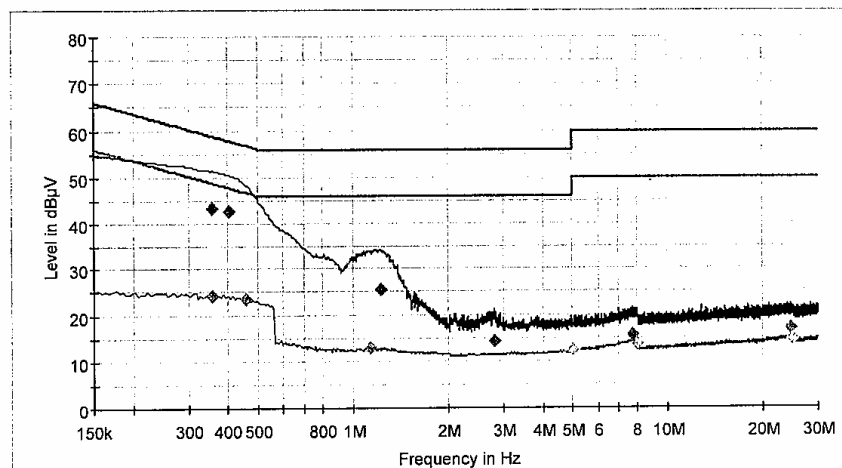
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
Model Number: FREEBASS\_RX  
Operating Conditions: RX Middle Channel  
Comment: AC 120V 60Hz; L

Hardware Setup: 1phase LISN ESH3-Z5 to ESCS30  
Level Unit: dB  $\mu$  V

Subrange	Detectors	IF Bandwidth	Step Size	Meas. Time	Receiver
150kHz - 30MHz	Peak; Average	9kHz	4.5kHz	10ms	ESCS 30



**Prüfbericht - Nr.:**  
*Test Report No.*

**16012780 001**

**Seite 16 von 36**  
*Page 16 of 36*

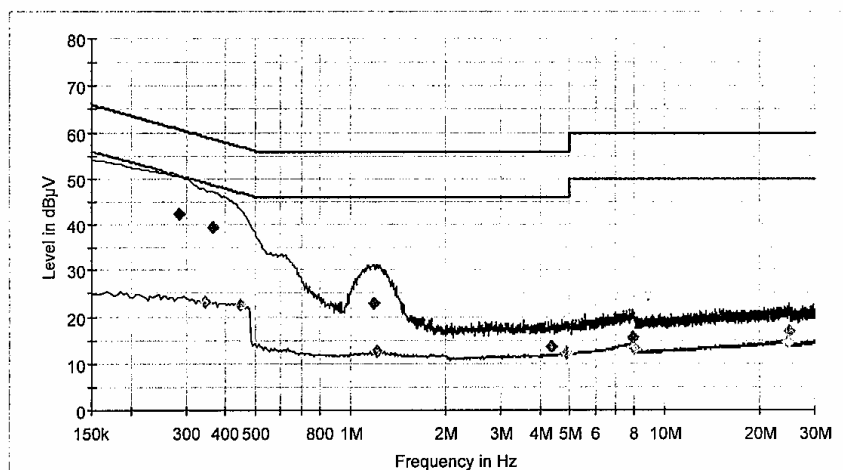
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
Model Number: FREEBASS\_RX  
Operating Conditions: RX Middle Channel  
Comment: AC 120V 60Hz; N

Hardware Setup: 1phase LISN ESH3-Z5 to ESCS30  
Level Unit: dB  $\mu$  V

Subrange	Detectors	IF Bandwidth	Step Size	Meas. Time	Receiver
150kHz - 30MHz	Peak; Average	9kHz	4.5kHz	10ms	ESCS 30



**Prüfbericht - Nr.:**

**16012780 001**

Seite 17 von 36

Test Report No.

Page 17 of 36

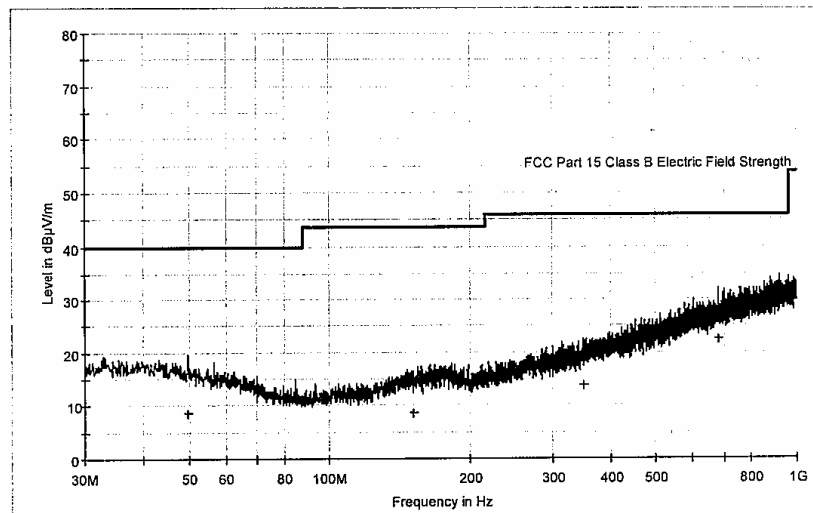
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: FREEBASS\_RX  
 Operating Conditions: RX Low Channel  
 Comment:

#### Subrange 1

Frequency Range: 30MHz - 1GHz  
 Receiver: TUV ESCI 3  
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



### Limit and Margin

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
49.900000	8.6	13.0	31.4	40.0	V
151.000000	8.6	12.4	34.9	43.5	V
348.500000	13.9	17.9	32.1	46.0	V
681.350000	22.4	25.5	23.6	46.0	V



**Prüfbericht - Nr.:**

**16012780 001**

Seite 18 von 36

Test Report No.

Page 18 of 36

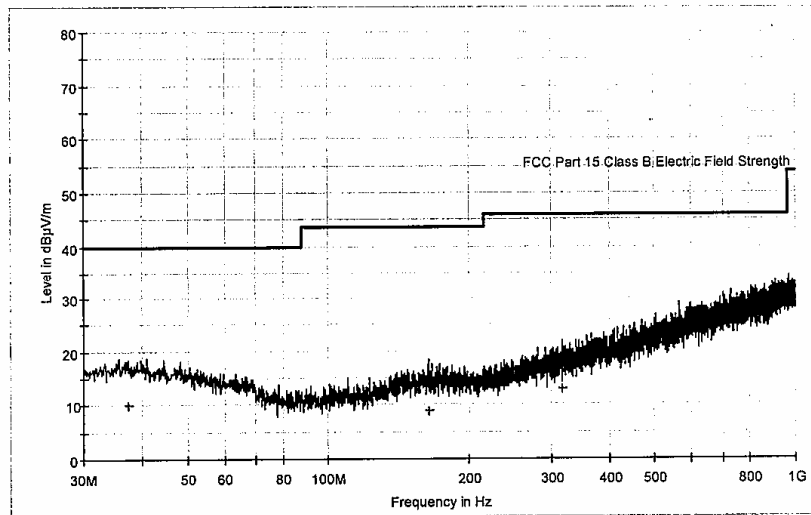
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: FREEBASS\_RX  
 Operating Conditions: RX Low Channel  
 Comment:

#### Subrange 1

Frequency Range: 30MHz - 1GHz  
 Receiver: TUV ESCI 3  
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



### Limit and Margin

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
37.250000	10.1	14.3	29.9	40.0	H
163.750000	8.9	12.9	34.6	43.5	H
317.950000	13.0	17.1	33.0	46.0	H

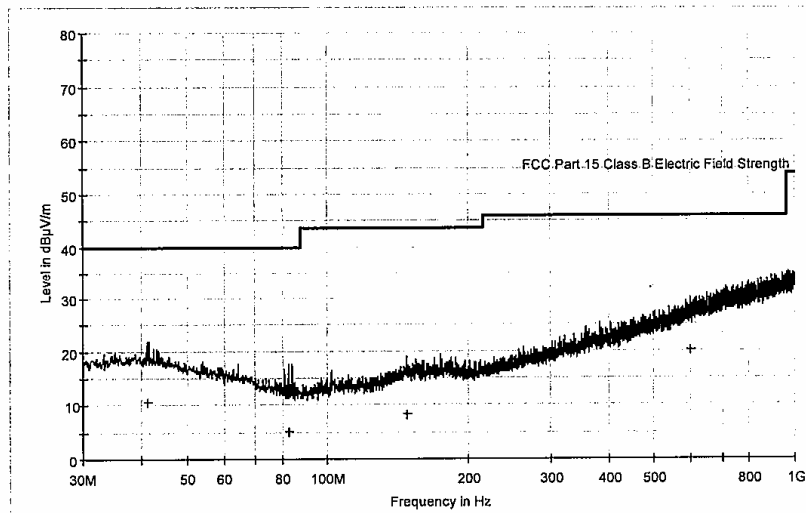
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: FREEBASS\_RX  
 Operating Conditions: RX Middle Channel  
 Comment:

#### Subrange 1

Frequency Range: 30MHz - 1GHz  
 Receiver: TUV ESCI 3  
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



### Limit and Margin

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
41.150000	10.6	14.3	29.4	40.0	V
82.400000	5.3	8.9	34.7	40.0	V
147.350000	8.4	12.1	35.1	43.5	V
597.350000	20.3	23.9	25.7	46.0	V

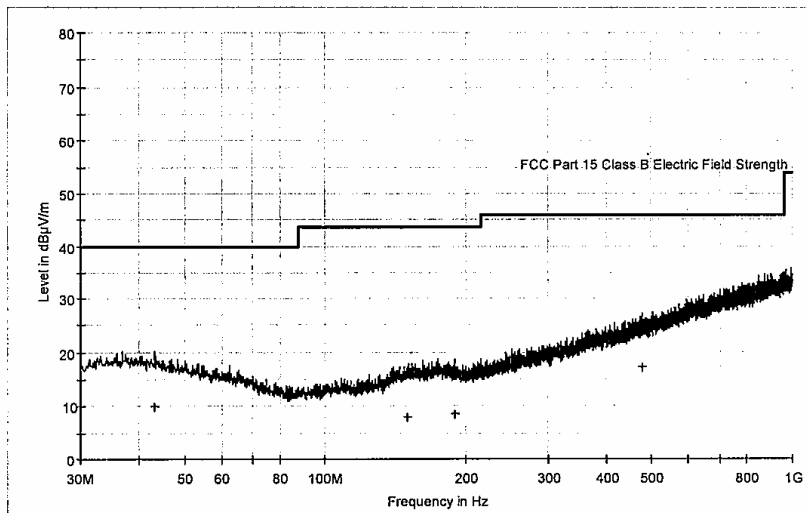
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: FREEBASS\_RX  
 Operating Conditions: RX Middle Channel  
 Comment:

#### Subrange 1

Frequency Range: 30MHz - 1GHz  
 Receiver: TUV ESCI 3  
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



### Limit and Margin

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
43.200000	10.1	13.9	29.9	40.0	H
149.550000	8.2	12.3	35.3	43.5	H
189.450000	8.7	13.0	34.8	43.5	H
477.150000	17.4	21.4	28.6	46.0	H

**Prüfbericht - Nr.:**

**16012780 001**

Seite 21 von 36

Test Report No.

Page 21 of 36

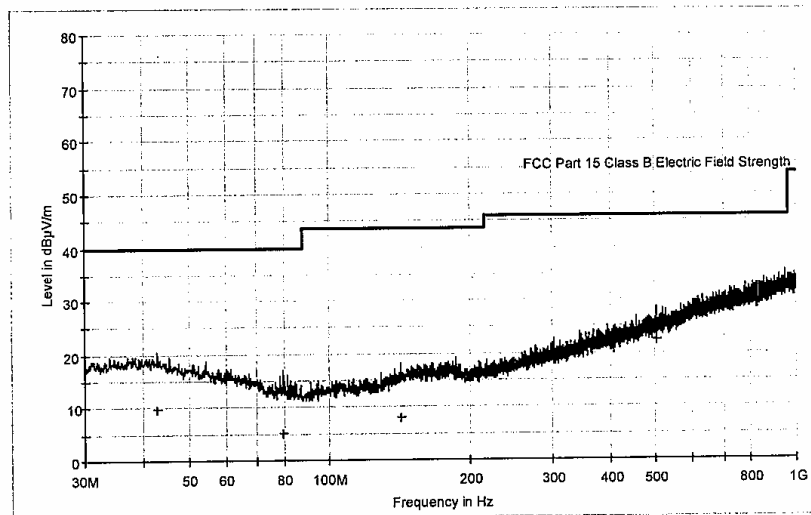
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: FREEBASS\_RX  
 Operating Conditions: RX High Channel  
 Comment:

#### Subrange 1

Frequency Range: 30MHz - 1GHz  
 Receiver: TUV ESCI 3  
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



### Limit and Margin

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
42.850000	9.8	14.0	30.2	40.0	V
79.700000	5.2	9.1	34.8	40.0	V
142.650000	8.1	11.7	35.4	43.5	V
501.050000	22.5	21.7	23.5	46.0	V

2008-06-18

10:53:45 AM

**Prüfbericht - Nr.:**

**16012780 001**

Seite 22 von 36

Test Report No.

Page 22 of 36

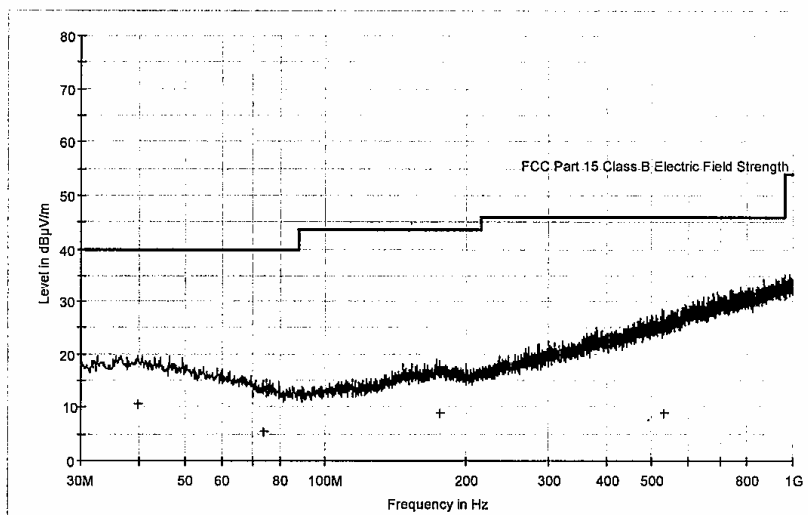
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: FREEBASS\_RX  
 Operating Conditions: RX High Channel  
 Comment:

#### Subrange 1

Frequency Range: 30MHz - 1GHz  
 Receiver: TUV ESCI 3  
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



### Limit and Margin

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
39.600000	10.7	14.4	29.3	40.0	H
73.650000	5.5	9.7	34.5	40.0	H
175.850000	9.0	13.5	34.5	43.5	H
529.900000	9.0	13.5	37.0	46.0	H

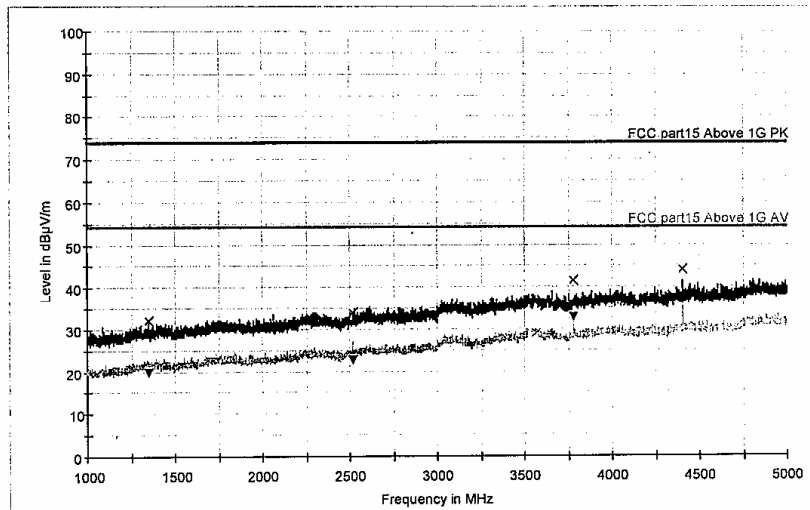
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: FREEBASS\_RX  
 Operating Conditions: RX Low Channel  
 Comment:

#### Subrange 1

Frequency Range: 1GHz - 5GHz  
 Receiver: TUV FSP 30  
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



### Limit and Margin PK

Frequency (MHz)	MaxPeak (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
1354.500000	32.0	42.0	74.0	V	-15.8
2518.000000	34.0	40.0	74.0	V	-11.9
3777.500000	41.5	32.5	74.0	V	-7.7
4407.000000	44.0	30.0	74.0	V	-6.5

### Limit and Margin AV

Frequency (MHz)	Average (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
1354.500000	19.9	34.1	54.0	V	-15.8
2518.000000	22.7	31.3	54.0	V	-11.9
3777.500000	32.8	21.2	54.0	V	-7.7
4407.000000	36.8	17.2	54.0	V	-6.5

Prüfbericht - Nr.:

16012780 001

Seite 24 von 36

Test Report No.

Page 24 of 36

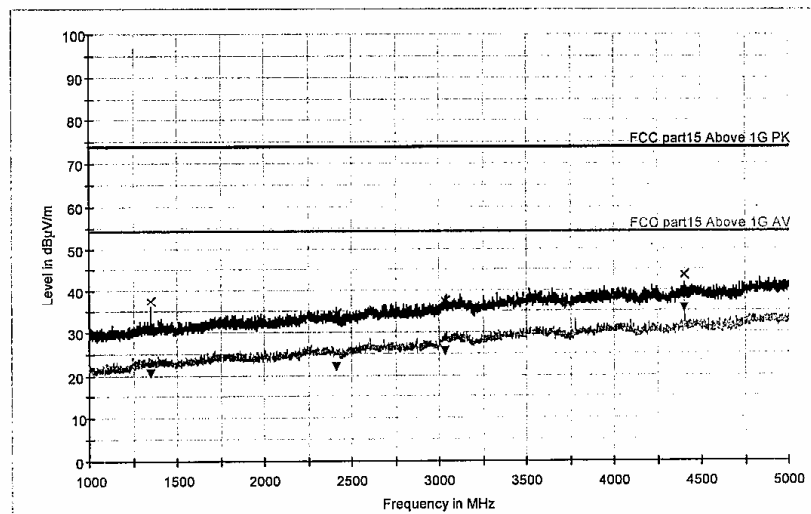
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: FREEBASS\_RX  
 Operating Conditions: RX Low Channel  
 Comment:

#### Subrange 1

Frequency Range: 1GHz - 5GHz  
 Receiver: TUV FSP 30  
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



### Limit and Margin PK

Frequency (MHz)	Average (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
1352.000000	20.4	36.4	74.0	H	-15.8
2409.000000	22.1	39.9	74.0	H	-12.1
3032.000000	25.5	36.6	74.0	H	-10.2
4406.500000	35.9	30.4	74.0	H	-6.5

### Limit and Margin AV

Frequency (MHz)	Average (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
1352.000000	20.4	33.6	54.0	H	-15.8
2409.000000	22.1	31.9	54.0	H	-12.1
3032.000000	25.5	28.5	54.0	H	-10.2
4406.500000	35.9	18.1	54.0	H	-6.5

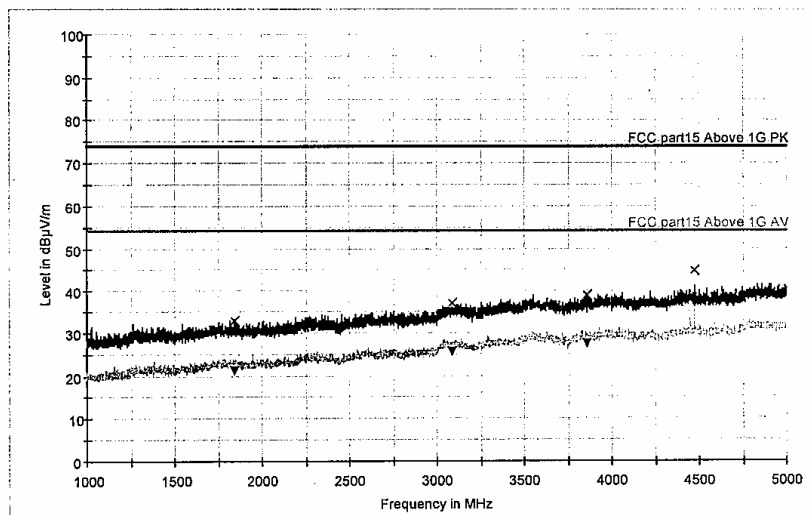
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: FREEBASS\_RX  
 Operating Conditions: RX Middle Channel  
 Comment:

#### Subrange 1

Frequency Range: 1GHz - 5GHz  
 Receiver: TUV FSP 30  
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



### Limit and Margin PK

Frequency (MHz)	MaxPeak (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
1840.500000	32.9	41.1	74.0	V	-13.9
3087.500000	37.1	36.9	74.0	V	-10.0
3857.500000	39.1	34.9	74.0	V	-7.4
4475.500000	44.7	29.3	74.0	V	-6.2

### Limit and Margin AV

Frequency (MHz)	Average (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
1840.500000	21.4	32.6	54.0	V	-13.9
3087.500000	25.5	28.5	54.0	V	-10.0
3857.500000	27.5	26.5	54.0	V	-7.4
4475.500000	37.3	16.7	54.0	V	-6.2



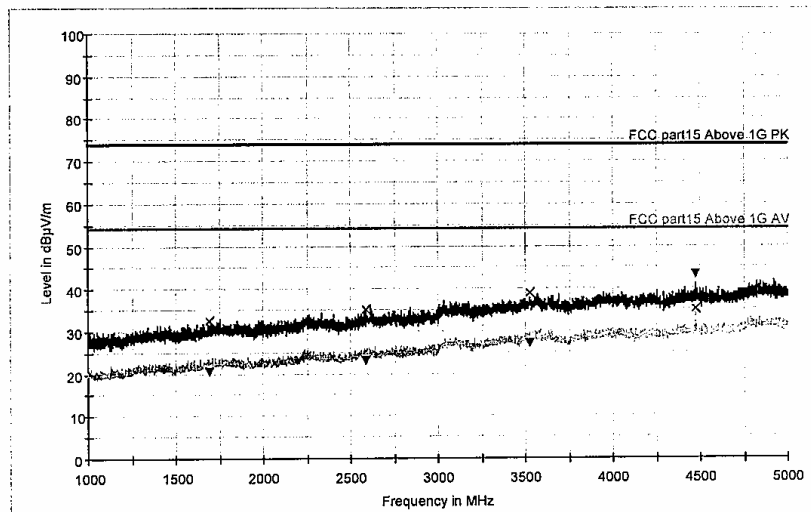
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: FREEBASS\_RX  
 Operating Conditions: RX Middle Channel  
 Comment:

#### Subrange 1

Frequency Range: 1GHz - 5GHz  
 Receiver: TUV FSP 30  
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



### Limit and Margin PK

Frequency (MHz)	MaxPeak (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
1691.500000	32.5	41.5	74.0	H	-14.6
2590.000000	35.0	39.0	74.0	H	-11.4
3522.500000	39.0	35.0	74.0	H	-8.0
4475.500000	45.1	28.9	74.0	H	-6.2

### Limit and Margin AV

Frequency (MHz)	Average (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
1691.500000	20.5	33.5	54.0	H	-14.6
2590.000000	23.2	30.8	54.0	H	-11.4
3522.500000	27.1	26.9	54.0	H	-8.0
4475.500000	43.4	10.6	54.0	H	-6.2

**Prüfbericht - Nr.:**

**16012780 001**

Seite 27 von 36

Test Report No.

Page 27 of 36

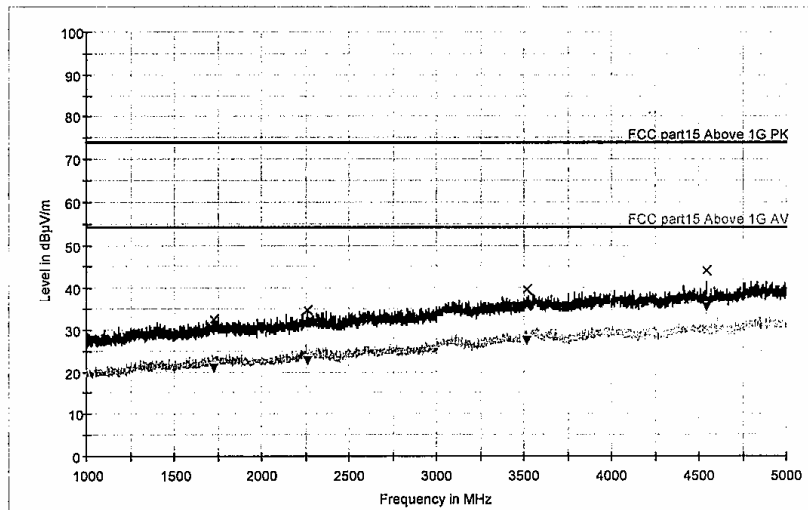
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: FREEBASS\_RX  
 Operating Conditions: RX High Channel  
 Comment:

#### Subrange 1

Frequency Range: 1GHz - 5GHz  
 Receiver: TUV FSP 30  
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



### Limit and Margin PK

Frequency (MHz)	MaxPeak (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
1731.000000	32.6	41.4	74.0	V	-14.2
2259.000000	34.6	39.4	74.0	V	-11.9
3517.500000	39.6	34.4	74.0	V	-8.0
4545.500000	44.0	30.0	74.0	V	-6.0

### Limit and Margin AV

Frequency (MHz)	Average (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
1731.000000	21.0	33.0	54.0	V	-14.2
2259.000000	22.7	31.3	54.0	V	-11.9
3517.500000	27.5	26.5	54.0	V	-8.0
4545.500000	35.5	18.5	54.0	V	-6.0

**Prüfbericht - Nr.:**

**16012780 001**

Seite 28 von 36

Test Report No.

Page 28 of 36

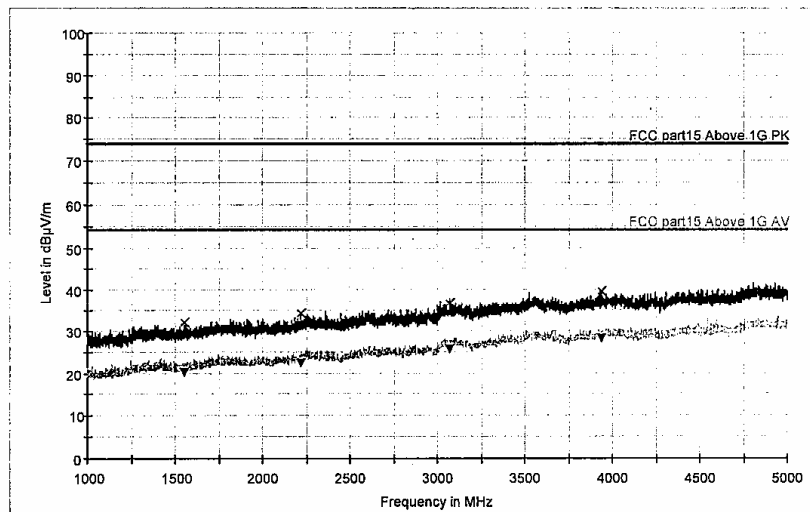
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: FREEBASS\_RX  
 Operating Conditions: RX High Channel  
 Comment:

#### Subrange 1

Frequency Range: 1GHz - 5GHz  
 Receiver: TUV FSP 30  
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



### Limit and Margin AV

Frequency (MHz)	Average (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
1553.500000	20.3	33.7	54.0	H	-15.2
2218.500000	22.4	31.6	54.0	H	-12.5
3072.500000	25.5	28.5	54.0	H	-10.0
3941.500000	28.1	25.9	54.0	H	-7.0

### Limit and Margin PK

Frequency (MHz)	MaxPeak (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
1553.500000	32.3	41.7	74.0	H	-15.2
2218.500000	34.4	39.6	74.0	H	-12.5
3072.500000	37.0	37.0	74.0	H	-10.0
3941.500000	39.8	34.2	74.0	H	-7.0

**Prüfbericht - Nr.:**

**16012780 001**

Seite 29 von 36

Test Report No.

Page 29 of 36

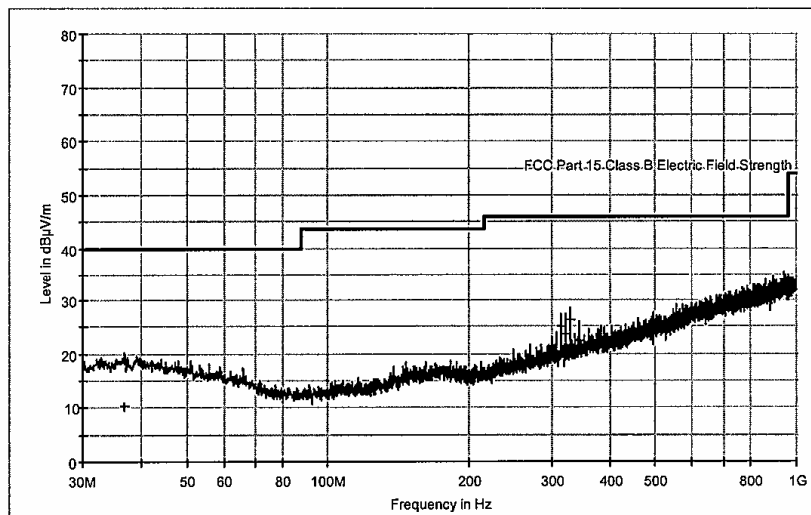
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: MOD-16PRO  
 Operating Conditions: Scanning mode  
 Comment: AC 120V 60Hz

#### Subrange 1

Frequency Range: 30MHz - 1GHz  
 Receiver: TUV ESCI 3  
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



### Limit and Margin

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
36.900000	10.3	14.3	29.7	40.0	H
308.000000	20.5	16.6	25.5	46.0	H
315.350000	25.1	16.9	20.9	46.0	H
322.650000	23.6	17.2	22.4	46.0	H
330.000000	26.3	17.2	19.7	46.0	H
344.650000	22.4	17.7	23.6	46.0	H

**Prüfbericht - Nr.:**  
Test Report No.

**16012780 001**

Seite 30 von 36  
Page 30 of 36

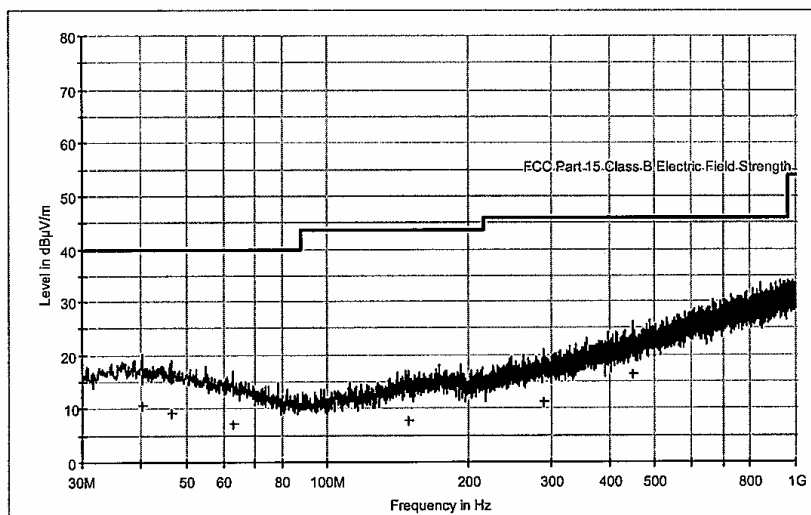
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
Model Number: MOD-16PRO  
Operating Conditions: Scanning mode  
Comment: AC 120V 60Hz

#### Subrange 1

Frequency Range: 30MHz - 1GHz  
Receiver: TUV ESCI 3  
Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



### Limit and Margin

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
40.200000	10.6	14.4	29.4	40.0	V
46.500000	9.2	13.4	30.8	40.0	V
62.750000	7.3	11.2	32.7	40.0	V
148.950000	7.8	12.3	35.7	43.5	V
289.100000	11.4	15.7	34.6	46.0	V
448.450000	16.5	20.6	29.5	46.0	V

**Prüfbericht - Nr.:**

**16012780 001**

Seite 31 von 36

Test Report No.

Page 31 of 36

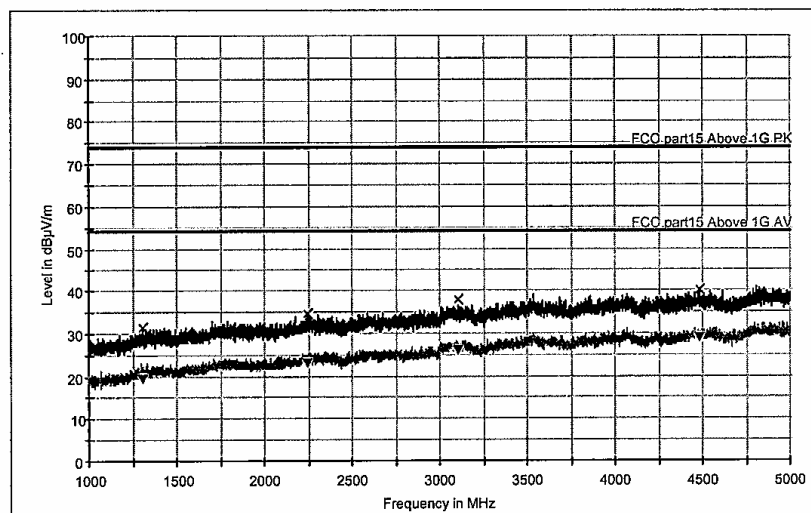
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: MOD-16PRO  
 Operating Conditions: Scanning mode  
 Comment: AC 120V 60Hz

#### Subrange 1

Frequency Range: 1GHz - 5GHz  
 Receiver: TUV FSP 30  
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



### Limit and Margin

Frequency (MHz)	MaxPeak (dB µV/m)	PK Margin (dB)	PK Limit (dB µV/m)	Average (dB µV/m)	AV Margin (dB)	AV Limit (dB µV/m)	Polarity	Corr. (dB)
1304.0000	31.5	42.5	74.0	19.6	34.4	54.0	H	-16.3
2245.5000	34.6	39.4	74.0	23.2	30.8	54.0	H	-12.1
3107.5000	37.8	36.2	74.0	25.8	28.2	54.0	H	-10.4
4479.0000	40.2	33.8	74.0	29.0	25.0	54.0	H	-6.9

**Prüfbericht - Nr.:**

**16012780 001**

Seite 32 von 36

Test Report No.

Page 32 of 36

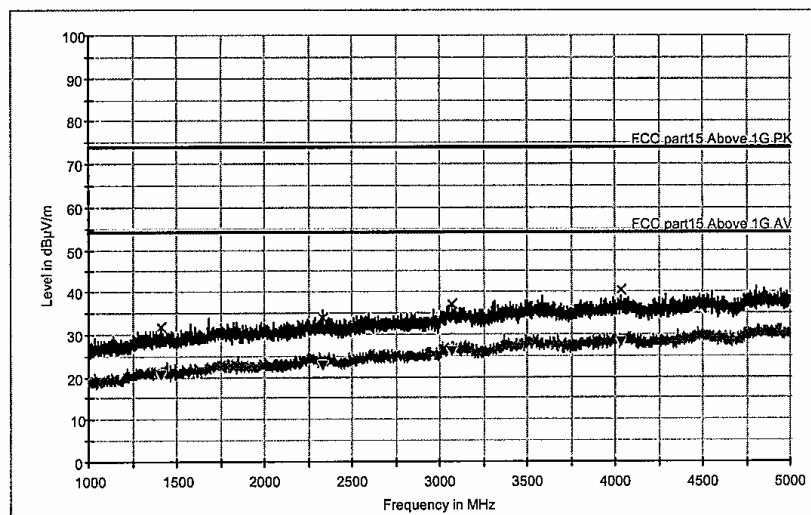
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: MOD-16PRO  
 Operating Conditions: Scanning mode  
 Comment: AC 120V 60Hz

#### Subrange 1

Frequency Range: 1GHz - 5GHz  
 Receiver: TUV FSP 30  
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



### Limit and Margin

Frequency (MHz)	MaxPeak (dB µ V/m)	Pk Margin (dB)	PK Limit (dB µ V/m)	Average (dB µ V/m)	AV Margin (dB)	AV Limit (dB µ V/m)	Polarity	Corr. (dB)
1410.0000	31.9	42.1	74.0	20.7	33.3	54.0	V	-15.9
2335.0000	33.8	40.2	74.0	22.8	31.2	54.0	V	-12.3
3069.0000	37.2	36.8	74.0	25.9	28.1	54.0	V	-10.4
4036.5000	40.3	33.7	74.0	28.0	26.0	54.0	V	-7.8

**Prüfbericht - Nr.:**

**16012780 001**

Seite 33 von 36

Test Report No.

Page 33 of 36

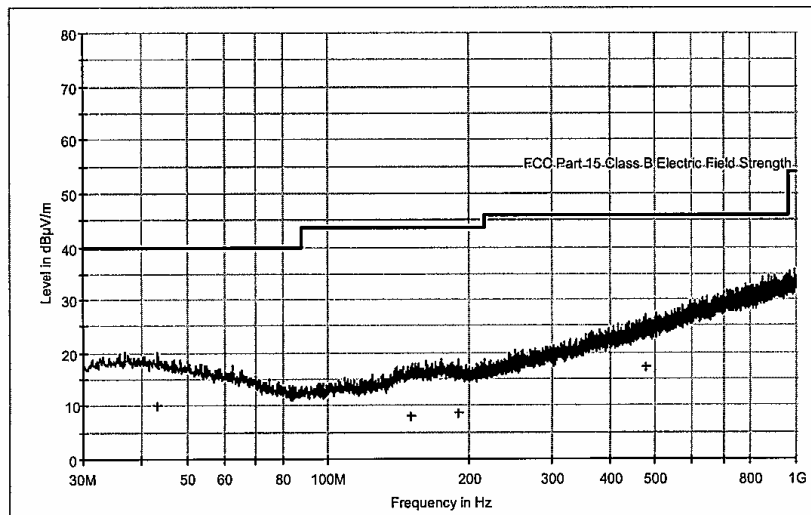
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: FREEBASS\_RX  
 Operating Conditions: Scanning mode  
 Comment:

#### Subrange 1

Frequency Range: 30MHz - 1GHz  
 Receiver: TUV ESCI 3  
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



### Limit and Margin

Frequency (MHz)	QuasiPeak (dB µV/m)	Corr. (dB)	Margin (dB)	Limit (dB µV/m)	Polarity
43.200000	10.1	13.9	29.9	40.0	H
149.550000	8.2	12.3	35.3	43.5	H
189.450000	8.7	13.0	34.8	43.5	H
477.150000	17.4	21.4	28.6	46.0	H



**Prüfbericht - Nr.:**

**16012780 001**

Seite 34 von 36

Test Report No.

Page 34 of 36

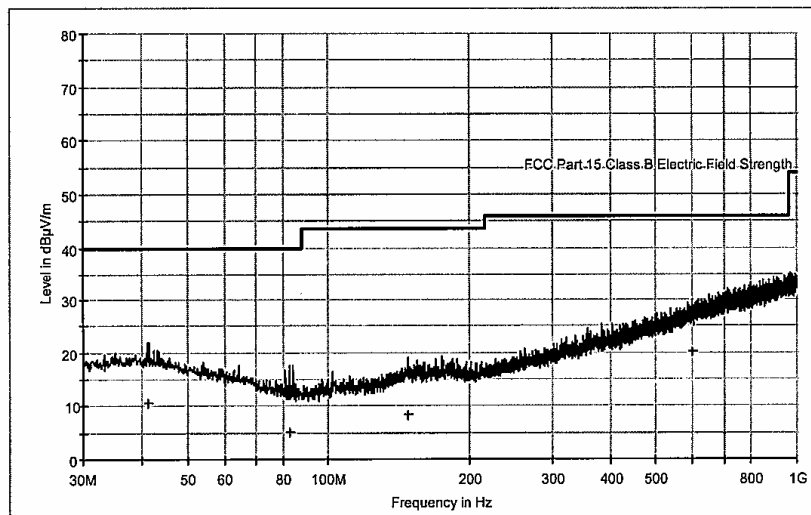
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: FREEBASS\_RX  
 Operating Conditions: Scanning mode  
 Comment:

#### Subrange 1

Frequency Range: 30MHz - 1GHz  
 Receiver: TUV ESCI 3  
 Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



### Limit and Margin

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
41.150000	10.6	14.3	29.4	40.0	V
82.400000	5.3	8.9	34.7	40.0	V
147.350000	8.4	12.1	35.1	43.5	V
597.350000	20.3	23.9	25.7	46.0	V

**Prüfbericht - Nr.:**

**16012780 001**

Seite 35 von 36

Test Report No.

Page 35 of 36

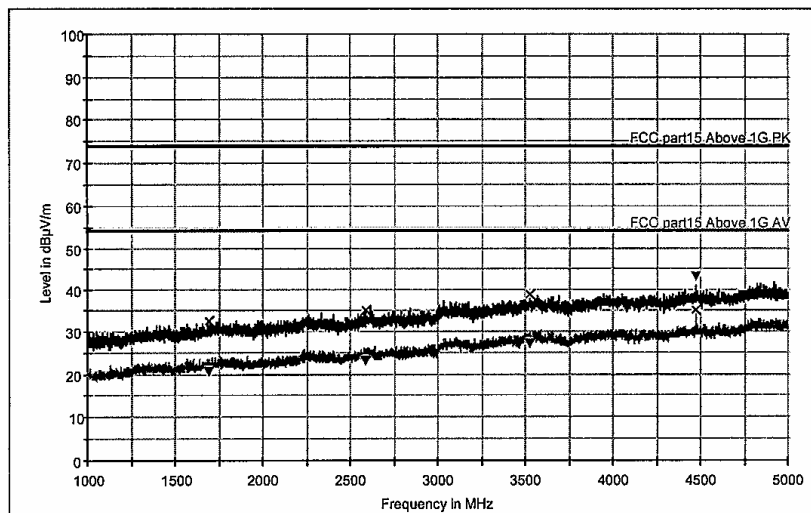
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: FREEBASS\_RX  
 Operating Conditions: Scanning mode  
 Comment:

#### Subrange 1

Frequency Range: 1GHz - 5GHz  
 Receiver: TUV FSP 30  
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



### Limit and Margin PK

Frequency (MHz)	MaxPeak (dB µV/m)	Margin (dB)	Limit (dB µV/m)	Polarity	Corr. (dB)
1691.500000	32.5	41.5	74.0	H	-14.6
2590.000000	35.0	39.0	74.0	H	-11.4
3522.500000	39.0	35.0	74.0	H	-8.0
4475.500000	45.1	28.9	74.0	H	-6.2

### Limit and Margin AV

Frequency (MHz)	Average (dB µV/m)	Margin (dB)	Limit (dB µV/m)	Polarity	Corr. (dB)
1691.500000	20.5	33.5	54.0	H	-14.6
2590.000000	23.2	30.8	54.0	H	-11.4
3522.500000	27.1	26.9	54.0	H	-8.0
4475.500000	43.4	10.6	54.0	H	-6.2

**Prüfbericht - Nr.:**

**16012780 001**

Seite 36 von 36

Test Report No.

Page 36 of 36

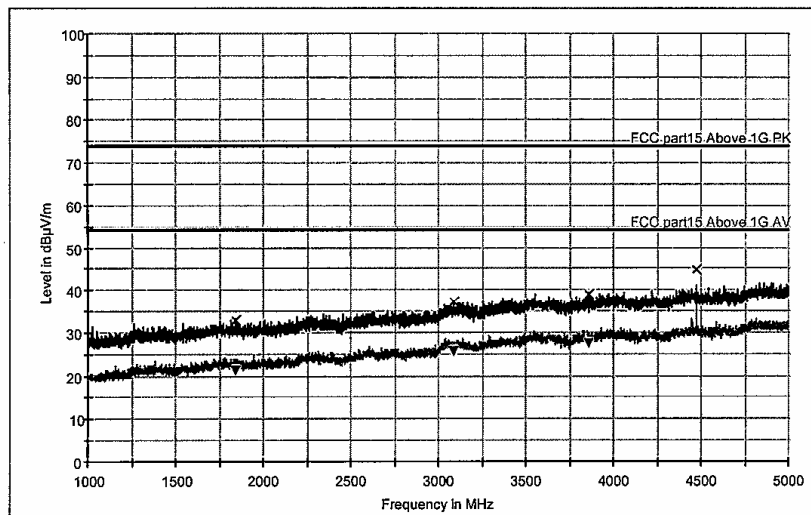
## EMC32 Report

### Test Information

Manufacturer Name: Sekaku  
 Model Number: FREEBASS\_RX  
 Operating Conditions: Scanning mode  
 Comment:

#### Subrange 1

Frequency Range: 1GHz - 5GHz  
 Receiver: TUV FSP 30  
 Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



### Limit and Margin PK

Frequency (MHz)	MaxPeak (dB µV/m)	Margin (dB)	Limit (dB µV/m)	Polarity	Corr. (dB)
1840.500000	32.9	41.1	74.0	V	-13.9
3087.500000	37.1	36.9	74.0	V	-10.0
3857.500000	39.1	34.9	74.0	V	-7.4
4475.500000	44.7	29.3	74.0	V	-6.2

### Limit and Margin AV

Frequency (MHz)	Average (dB µV/m)	Margin (dB)	Limit (dB µV/m)	Polarity	Corr. (dB)
1840.500000	21.4	32.6	54.0	V	-13.9
3087.500000	25.5	28.5	54.0	V	-10.0
3857.500000	27.5	26.5	54.0	V	-7.4
4475.500000	37.3	16.7	54.0	V	-6.2