

Test Report of FCC CFR 47 Part 15 Subpart B

On Behalf of

Graupner GmbH & Co. KG.

FCC ID: ZKZ-MC-16

Product Description: Computer System Graupner/SJ HoTT

Model No.: MC-16

Supplementary Model: MC-16

Prepared for: Graupner GmbH & Co. KG.

Henriettenstr. 94-96 D-73230 Kirchheim/Teck GERMANY

Prepared by: Bontek Compliance Testing Laboratory Ltd

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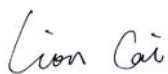
Fax: 86-755-86337028

Report No.: BCT12KR-2055E-1

Issue Date: December 9, 2012

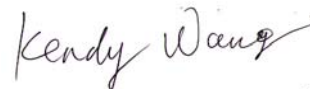
Test Date: November 9~December 9, 2012

Tested by:



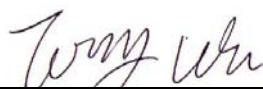
Lion Cai

Reviewed by:



Kendy Wang

Approved by:



Tony Wu

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: **Graupner GmbH & Co. KG**
Address of applicant: Henriettenstr. 94-96 D-73230 Kirchheim/Teck GERMANY
Manufacturer: **SJ TECHNOLOGY(SHENZHEN) CO.,LTD**
Address of manufacturer: F6, 1 BLDG, A AREA, YINTIANXIFA INDUSTRIAL AREA, XIXIANG TOWN, BAOAN DISTRICT SHENZHEN, GUANGDONG PROVINCE, CHINA

General Description of E.U.T

Items	Description
EUT Description:	Computer System Graupner/SJ HoTT
Model No.:	MC-16
Trade Name:	HoTT
Supplementary Model:	MC-16
Frequency Band:	2404.056 MHz ~ 2474.025 MHz
Channel Spacing:	1 MHz
Number of Channels:	70
Type of Modulation:	FHSS
Antenna Type:	Built-in Antenna
Rated Voltage:	Intput: 4.2VDC 800mA
Adapter description:	Model: N/A Input: N/A Output: N/A

Remark: * The test data gathered are from the production sample provided by the manufacturer.

1.2 Related Submittal(s) / Grant (s) and Test Methodology

The following Declaration of Conformity report of EUT is prepared in accordance with FCC Rules and Regulations Part 15 Subpart B 2006

The objective of the manufacturer is to demonstrate compliance with the described above standards.

1.3 Test Facility

All measurement required was performed at laboratory of Bontek Compliance Testing Laboratory Ltd at 1/F, Block East H-3, OCT Eastern Ind. Zone, Qiaocheng East Road, Nanshan, Shenzhen, China and Centre Testing International (ShenZhen) Corporation ,Location at Hongwei Industrial Zone, Baoan 70 District, Shenzhen, Guangdong.

The test facility is recognized, certified, or accredited by the following organizations:

FCC – Registration No.: 338263

BONTEK COMPLIANCE TESTING LABORATORY LTD. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 338263, March 03, 2011.

IC Registration No.: 7631A

The 3m alternate test site of BONTEK COMPLIANCE TESTING LABORATORY LTD. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 7631A on January 25, 2011.

CNAS - Registration No.: L3923

BONTEK COMPLIANCE TESTING LABORATORY LTD. to ISO/IEC 17025:25 General Requirements for the Competence of Testing and Calibration Laboratories(CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing. The acceptance letter from the CNAS is maintained in our files: Registration: L3923, March 22, 2012.

TUV - Registration No.: UA 50203122-0001

BONTEK COMPLIANCE TESTING LABORATORY LTD. An assessment of the laboratory was conducted according to the "Procedures and Conditions for EMC Test Laboratories" with reference to EN ISO/IEC 17025 by a TUV Rheinland auditor. Audit Report NO. 17010783-002.

2. SYSTEM TEST CONFIGURATION

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

The calibrated antennas used to sample the radiated field strength are mounted on a non-conductive, motorized antenna mast 3 or 10 meters from the leading edge of the turntable.

2.3 General Test Procedures

Conducted Emissions: The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 7.1 of ANSI C63.4-2003 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak detector mode.

Radiated Emissions: The EUT is placed on a turntable, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.4-2003.

2.4 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Parameter	Uncertainty
Power Line Conducted Emission	+/- 2.3 dB
Radiated Emission	+/- 3.4 dB

Uncertainty figures are valid to a confidence level of 95%.

2.5 Test Equipment List and Details

Test equipments list of Shenzhen Bontek Compliance Testing Laboratory Co., Ltd .

No.	Instrument no.	Equipment	Manufacturer	Model No.	S/N	Last Calculator	Due Calculator
1	BCT-EMC001	EMI Test Receiver	R&S	ESCI	100687	2012-4-17	2013-4-16
2	BCT-EMC002	EMI Test Receiver	R&S	ESPI	100097	2012-11-1	2013-10-31
3	BCT-EMC003	Amplifier	HP	8447D	1937A02492	2012-4-20	2013-4-19
4	BCT-EMC004	Single Power Conductor Module	R&S	NNBM 8124	242	2012-4-20	2013-4-19
5	BCT-EMC005	Single Power Conductor Module	R&S	NNBM 8124	243	2012-4-20	2013-4-19
6	BCT-EMC006	Power Clamp	SCHWARZBECK	MDS-21	3812	2012-11-5	2013-11-4
7	BCT-EMC007	Positioning Controller	C&C	CC-C-1F	MF7802113	N/A	N/A
8	BCT-EMC008	Electrostatic Discharge Simulator	TESEQ	NSG437	125	2012-11-2	2013-11-1
9	BCT-EMC009	Fast Transient Burst Generator	SCHAFFNER	MODULA6150	34572	2012-4-17	2013-4-16
10	BCT-EMC010	Fast Transient Noise Simulator	Noiseken	FNS-105AX	10501	2012-6-26	2013-6-25
11	BCT-EMC011	Color TV Pattern Generator	PHILIPS	PM5418	TM209947	N/A	N/A
12	BCT-EMC012	Power Frequency Magnetic Field Generator	EVERFINE	EMS61000-8K	608002	2012-4-17	2013-4-16
14	BCT-EMC014	Capacitive Coupling Clamp	TESEQ	CDN8014	25096	2012-4-17	2013-4-16
15	BCT-EMC015	High Field Biconical Antenna	ELECTRO-METRICS	EM-6913	166	2011-11-28	2013-11-27
16	BCT-EMC016	Log Periodic Antenna	ELECTRO-METRICS	EM-6950	811	2011-11-28	2013-11-27
17	BCT-EMC017	Remote Active Vertical Antenna	ELECTRO-METRICS	EM-6892	304	2011-11-28	2013-11-27
18	BCT-EMC018	TRILOG Broadband Test-Antenna	SCHWARZBECK	VULB9163	9163-324	2012-5-19	2014-5-18
19	BCT-EMC019	Horn Antenna	SCHWARZBECK	BBHA9120A	0499	2011-11-28	2013-11-27
20	BCT-EMC020	Teo Line Single Phase Module	SCHWARZBECK	NSLK8128	8128247	2012-11-1	2013-10-31
21	BCT-EMC021	Triple-Loop Antenna	EVERFINE	LLA-2	711002	2012-11-15	2013-11-14
22	BCT-EMC022	Electric bridge	Jhai	JK2812C	803024	N/A	N/A
23	BCT-EMC026	RF POWER AMPLIFIER	FRANKONIA	FLL-75	1020A1109	2012-4-17	2013-4-16
24	BCT-EMC027	CDN	FRANKONIA	CDN M2+M3	A3027019	2012-4-17	2013-4-16
25	BCT-EMC029	6DB Attenuator	FRANKONIA	N/A	1001698	2012-4-17	2013-4-16
26	BCT-EMC030	EM Injection clamp	FCC	F-2031-23mm	091536	2012-4-17	2013-4-16

27	BCT-EMC031	9kHz-2.4GHz signal generator 2024	MARCONI	10S/6625-99-457-8730	112260/042	2012-4-17	2013-4-16
28	BCT-EMC032	10dB attenuator	ELECTRO-METRICS	EM-7600	836	2012-4-17	2013-4-16
29	BCT-EMC033	ISN	TESEQ	ISN-T800	30301	2012-11-15	2013-11-14
30	BCT-EMC034	10KV surge generator	SANKI	SKS-0510M	048110003E321	2012-11-01	2013-10-31
31	BCT-EMC035	HRMONICS&FLICKRE ANALYSER	VOLTECH	PM6000	200006700433	2012-11-20	2013-11-19
32	BCT-EMC036	Spectrum Analyzer	R&S	FSP	100397	2012-11-1	2013-10-31
33	BCT-EMC037	Broadband preamplifier	SCHWARZBECK	BBV9718	9718-182	2012-4-20	2013-4-19

18~24.6GHz Radiation Test equipments list of Centre Testing International (ShenZhen)

10M Semi-anechoic Chamber - Radiated disturbance Test				
Equipment	Manufacturer	Model	Serial No.	Due Date
Receiver	R&S	ESCI	100435	07/06/2013
Spectrum Analyzer	R&S	FSP40	100416	07/06/2013
Biconilog Antenna	schwarzbeck	VULB9136	9136-401	07/06/2013
Horn Antenna	ETS-LINGREN	3117	00044562	07/06/2013
Microwave Preamplifier	Agilent	8449B	3008A02425	07/06/2013
Microwave Preamplifier	Agilent	11909A	186871	07/06/2013

3. SUMMARY OF TEST RESULTS

Standard	Test Items	Status
FCC Part 15 Subpart B	Conduction Emission, 0.15MHz to 30MHz	√
FCC Part 15 Subpart B	Radiation Emission, 30MHz to 1000MHz	√

4. TEST OF AC POWER LINE CONDUCTED EMISSION

4.1 Limit of AC Power Line Conducted Emission

Frequency Range (MHz)	Limits (dBuV)	
	Quasi-Peak	Average
0.150~0.500	66~56	56~46
0.500~5.000	56	46
5.000~30.00	60	50

4.2 EUT Setup

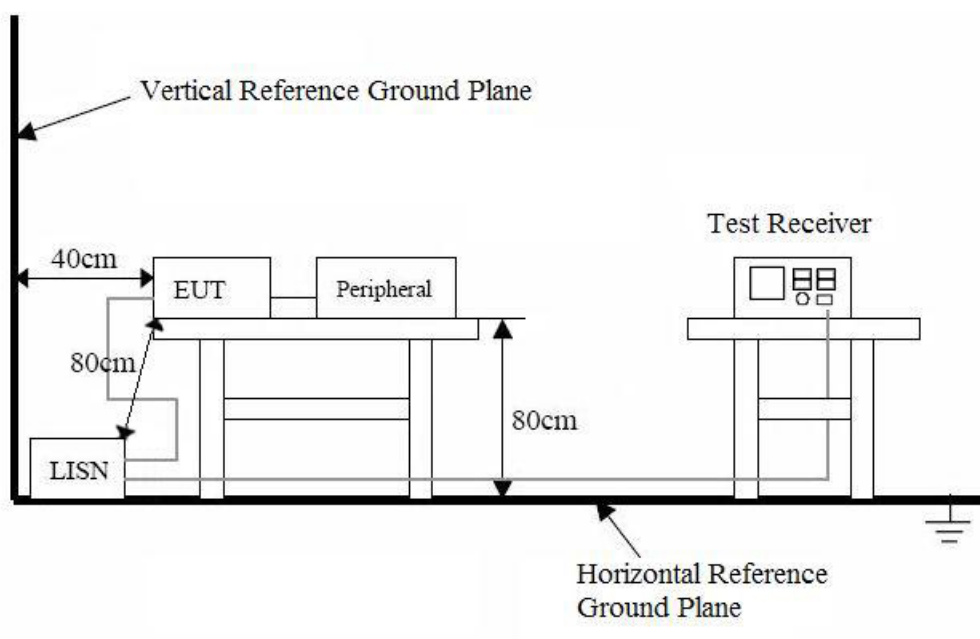
The setup of EUT is according with ANSI C63.4-2003 measurement procedure. The specification used was the FCC Rules and Regulations Part 15 Subpart B limits.

The EUT was placed center and the back edge of the test table.

The AV cables were draped along the test table and bundled to 30-40cm in the middle.

The spacing between the peripherals was 10 cm.

Maximum emission emitted from EUT was determined by manipulating the EUT, support equipment, interconnecting cables and varying the mode of operation and the levels in the final result of the test were recorded with the EUT running in the operating mode that maximum emission was emitted.



Remark: The EUT was connected to a 120VAC/ 60Hz power source.

4.3 Instrument Setup

The test receiver was set with the following configurations:

Test Receiver Setting:

Frequency Range.....150 KHz to 30 MHz
Detector.....Peak & Quasi-Peak & Average
Sweep Speed.....Auto
IF Band Width.....9 KHz

4.4 Test Procedure

During the conducted emission test, the EUT power cord was connected to the auxiliary outlet of the first Artificial Mains.

Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance using all installation combination.

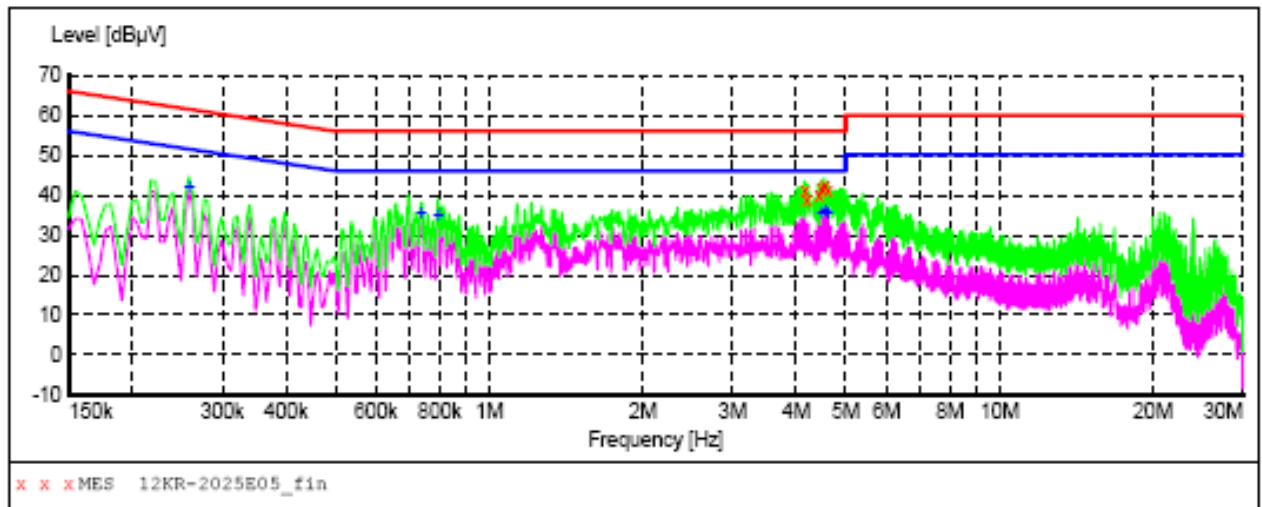
All data was recorded in the peak detection mode. Quasi-peak and Average readings were only performed when an emission was found to be marginal (within -10 dB μ V of specification limits). Quasi-peak readings are distinguished with a "**QP**". Average readings are distinguished with a "**AV**".

4.5 Test Result

Temperature (°C) : 23~25	EUT: Computer System Graupner/SJ HoTT
Humidity (%RH): 45~58	M/N: MC-16
Barometric Pressure (mbar): 950~1000	Operation Condition: Connect to PC

Conducted Emission Test Data

EUT: Computer System Graupner/SJ HoTT
M/N: MC-16
Operating Condition: Connect to PC
Test Site: Cheng
Operator: Yang
Test Specification: AC 120V/60Hz
Comment: N Line
Start of Test: 11/15/12/9:36 Tem:25°C Hum:50%



MEASUREMENT RESULT: "12KR-2025E05_fin"

11/15/2012 9:41AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
4.155000	41.30	10.3	56	14.7	QP	N	GND
4.195500	38.70	10.3	56	17.3	QP	N	GND
4.420500	39.70	10.3	56	16.3	QP	N	GND
4.483500	41.90	10.3	56	14.1	QP	N	GND
4.546500	42.60	10.3	56	13.4	QP	N	GND
4.609500	41.30	10.3	56	14.7	QP	N	GND

MEASUREMENT RESULT: "12KR-2025E05_fin2"

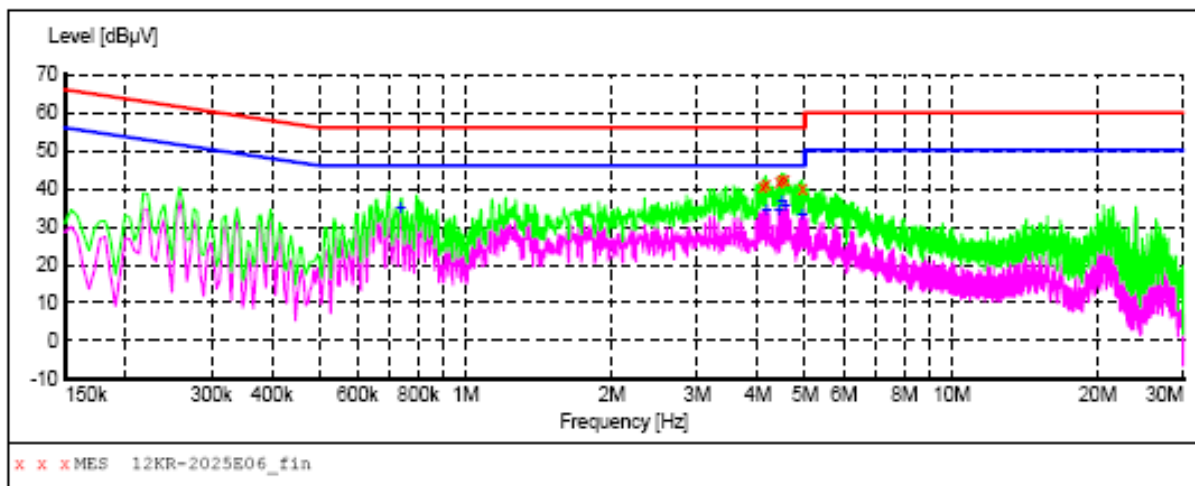
11/15/2012 9:41AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.258000	42.10	10.7	52	9.4	AV	N	GND
0.735000	35.80	10.2	46	10.2	AV	N	GND
0.793500	35.40	10.2	46	10.6	AV	N	GND
4.479000	36.00	10.3	46	10.0	AV	N	GND
4.546500	36.30	10.3	46	9.7	AV	N	GND
4.609500	35.60	10.3	46	10.4	AV	N	GND

Conducted Emission Test Data

EUT: Computer System Graupner/SJ HoTT
M/N: MC-16
Operating Condition: Connect to PC
Test Site: Cheng
Operator: Yang
Test Specification: AC 120V/60Hz
Comment: L Line
Start of Test: 11/15/12/22:36 Tem:25°C Hum:50%

SCAN TABLE: "Voltage (9K-30M)FIN"
Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "12KR-2025E06_fin"

11/15/2012 9:44AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
4.092000	40.60	10.3	56	15.4	QP	L1	GND
4.155000	41.20	10.3	56	14.8	QP	L1	GND
4.416000	41.60	10.3	56	14.4	QP	L1	GND
4.479000	42.40	10.3	56	13.6	QP	L1	GND
4.546500	42.40	10.3	56	13.6	QP	L1	GND
4.933500	40.00	10.4	56	16.0	QP	L1	GND

MEASUREMENT RESULT: "12KR-2025E06_fin2"

11/15/2012 9:44AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.735000	35.20	10.2	46	10.8	AV	L1	GND
4.155000	34.90	10.3	46	11.1	AV	L1	GND
4.416000	34.90	10.3	46	11.1	AV	L1	GND
4.479000	37.10	10.3	46	8.9	AV	L1	GND
4.546500	35.80	10.3	46	10.2	AV	L1	GND
4.933500	33.60	10.4	46	12.4	AV	L1	GND

5 - RADIATED DISTURBANCES

5.1 Limit of Radiated Disturbances

Frequency (MHz)	Distance (Meters)	Field Strengths Limits (dB μ V/m)
30 ~ 88	3	40
88~216	3	43.5
216 ~ 960	3	46
960 ~ 1000	3	54

Note: (1) The tighter limit shall apply at the edge between two frequency bands.
(2) Distance refers to the distance in meters between the test instrument antenna and the closest point of any part of the E.U.T.

5.2 EUT Setup

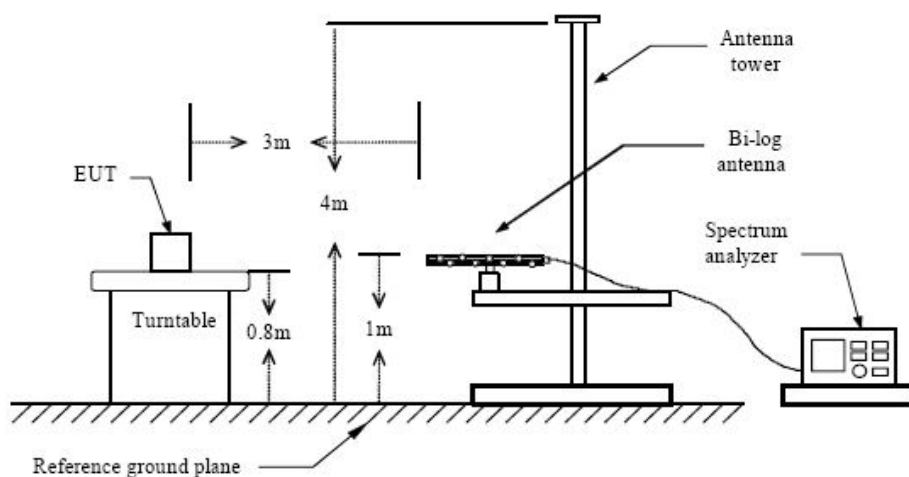
The radiated emission tests were performed in the in the 3-meter anechoic chamber, using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC Part 15 Subpart B limits.

The EUT was placed on the center of the test table.

Maximum emission emitted from EUT was determined by manipulating the EUT, support equipment, interconnecting cables and varying the mode of operation and the levels in the final result of the test were recorded with the EUT running in the operating mode that maximum emission was emitted.

Block diagram of test setup (In chamber)

Below 1 GHz



5.3 Test Receiver Setup

According to FCC Part 15 rule, the frequency was investigated from 30 to 1000 MHz. During the radiated emission test, the test receiver was set with the following configurations:

Test Receiver Setting:

Detector.....Peak & Quasi-Peak
IF Band Width.....120KHz
Frequency Range.....30MHz to 1000MHz
Turntable Rotated.....0 to 360 degrees

Antenna Position:

Height.....1m to 4m
Polarity.....Horizontal and Vertical

5.4 Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All data was recorded in the peak detection mode. Quasi-peak readings performed only when an emission was found to be marginal (within -10 dB μ V of specification limits), and are distinguished with a "QP" in the data table.

5.5 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Amplifier Gain}$$

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB μ V means the emission is 7dB μ V below the maximum limit for Subpart B. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corr. Ampl.}$$

5.6 Radiated Emissions Test Result

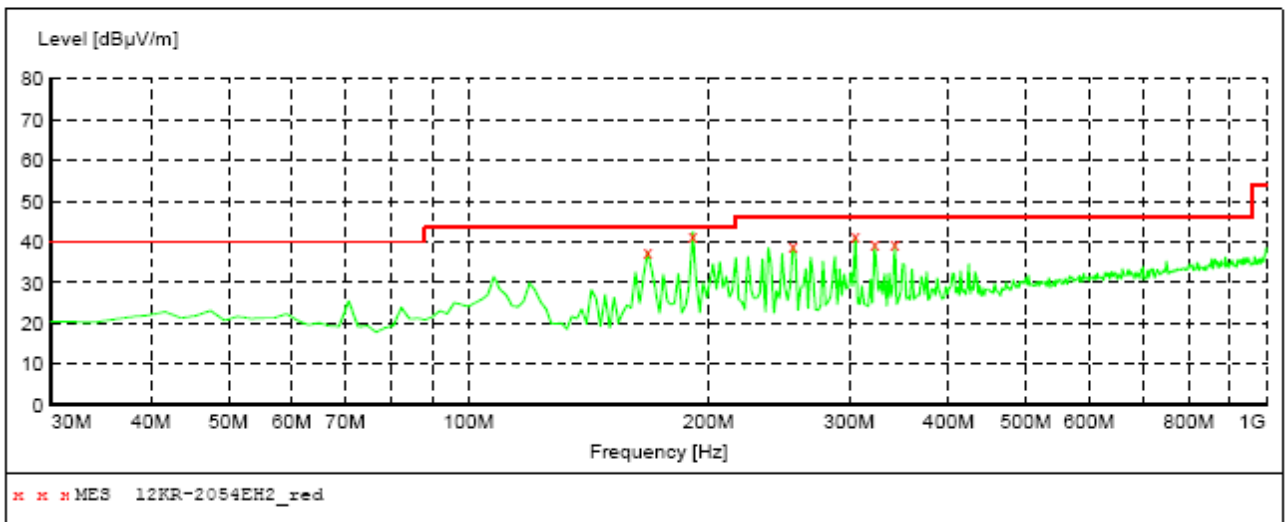
Temperature (°C) : 23~25	EUT: Computer System Graupner/SJ HoTT
Humidity (%RH) : 45~58	M/N: MC-16
Barometric Pressure (mbar) : 950~1000	Operation Condition: Connect to PC

Radiated Emission Test Data Below 1G:

EUT: Computer System Graupner/SJ HoTT
M/N: MC-16
Operating Condition: Connect to PC
Test Site: 3m CHAMBER
Operator: Chen
Test Specification: AC 120V/60Hz
Comment: Polarization: Horizontal
Start of Test: 11/16/12/07:20 Tem:25°C Hum:50%

SWEEP TABLE: "test (30M-1G)"

Short Description:		Field Strength			
Start	Stop	Detector	Meas. Time	IF Bandw.	Transducer
Frequency	Frequency				
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	VULB9163 NEW



MEASUREMENT RESULT: "12KR-2054EH2_red"

11/16/2012 9:56PM

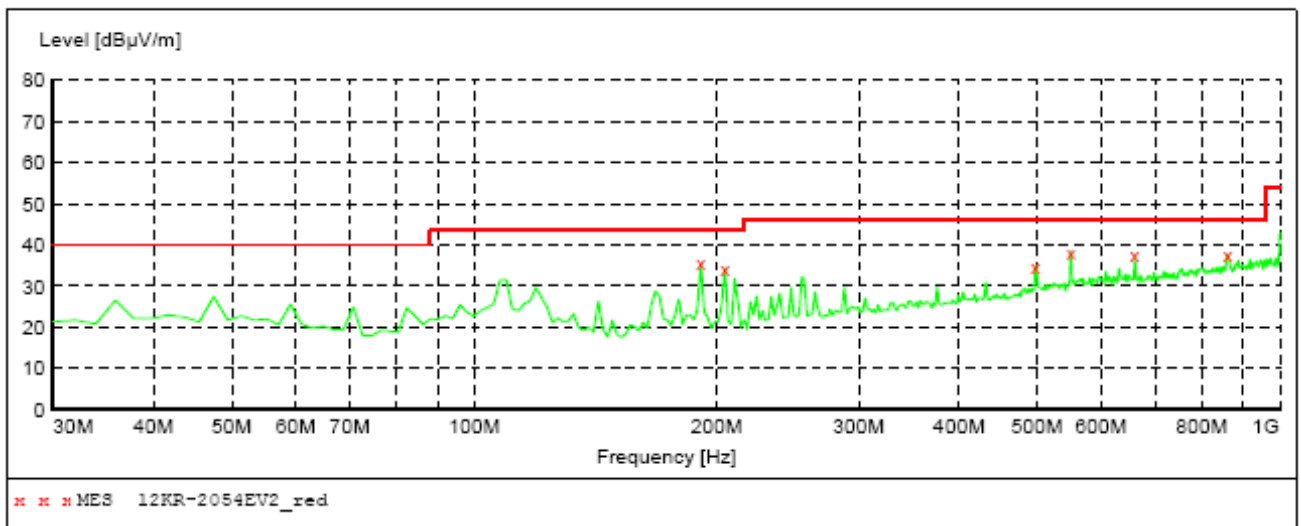
Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
167.740000	37.70	13.0	43.5	5.8	QP	300.0	0.00	HORIZONTAL
191.020000	41.50	14.8	43.5	2.0	QP	100.0	0.00	HORIZONTAL
255.040000	38.90	17.3	46.0	7.1	QP	100.0	0.00	HORIZONTAL
305.480000	41.30	18.9	46.0	4.7	QP	300.0	0.00	HORIZONTAL
322.940000	39.40	19.3	46.0	6.6	QP	100.0	0.00	HORIZONTAL
342.340000	39.50	20.2	46.0	6.5	QP	100.0	0.00	HORIZONTAL

Radiated Emission Test Data Below 1G:

EUT: Computer System Graupner/SJ HoTT
M/N: MC-16
Operating Condition: Connect to PC
Test Site: 3m CHAMBER
Operator: Chen
Test Specification: AC 120V/60Hz
Comment: Polarization: Vertical
Start of Test: 11/16/12/23:46 Tem:25°C Hum:50%

SWEEP TABLE: "test (30M-1G)"

Short Description:		Field Strength			
Start	Stop	Detector	Meas. Time	IF Bandw.	Transducer
Frequency	Frequency				
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	VULB9163 NEW



MEASUREMENT RESULT: "12KR-2054EV2_red"

11/16/2012 9:46PM

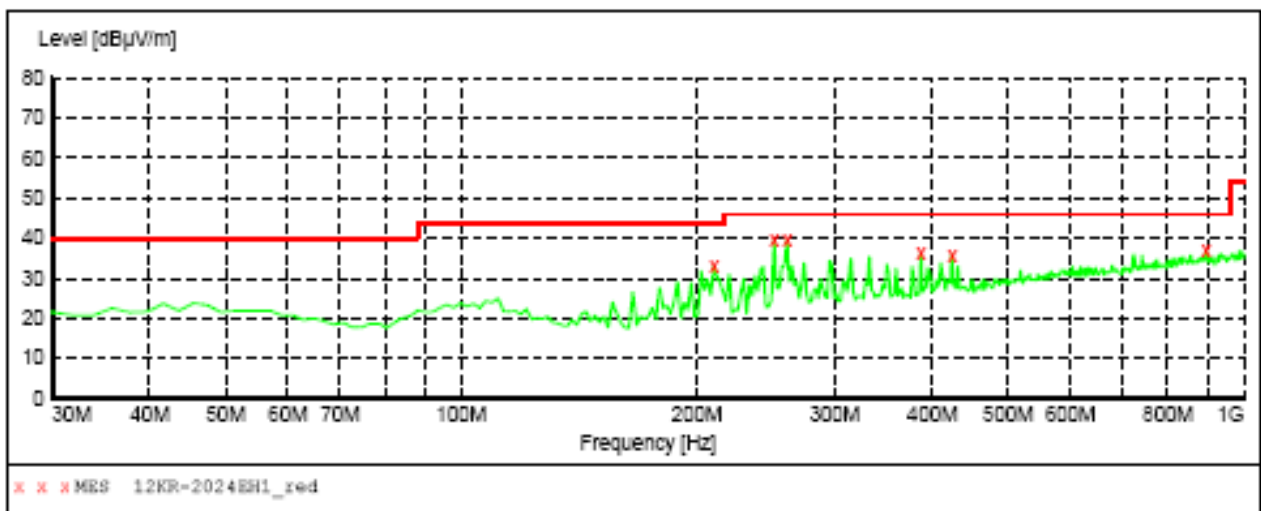
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
191.020000	35.50	14.8	43.5	8.0	QP	100.0	0.00	VERTICAL
204.600000	34.40	15.0	43.5	9.1	QP	100.0	0.00	VERTICAL
497.540000	34.90	23.8	46.0	11.1	QP	100.0	0.00	VERTICAL
549.920000	38.30	25.0	46.0	7.7	QP	100.0	0.00	VERTICAL
660.500000	37.50	26.3	46.0	8.5	QP	100.0	0.00	VERTICAL
862.260000	37.70	28.8	46.0	8.3	QP	100.0	0.00	VERTICAL

Radiated Emission Test Data Below 1G:

EUT: Computer System Graupner/SJ HoTT
M/N: MC-16
Operating Condition: Normal Operation
Test Site: 3m CHAMBER
Operator: Chen
Test Specification: AC 120V/60Hz
Comment: Polarization: Horizontal
Start of Test: 11/16/12/07:20 Tem:25°C Hum:50%

SWEEP TABLE: "test (30M-1G)"

Short Description:		Field Strength			
Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	VULB9163 NEW



MEASUREMENT RESULT: "12KR-2024EH1_red"

11/16/2012 9:12PM

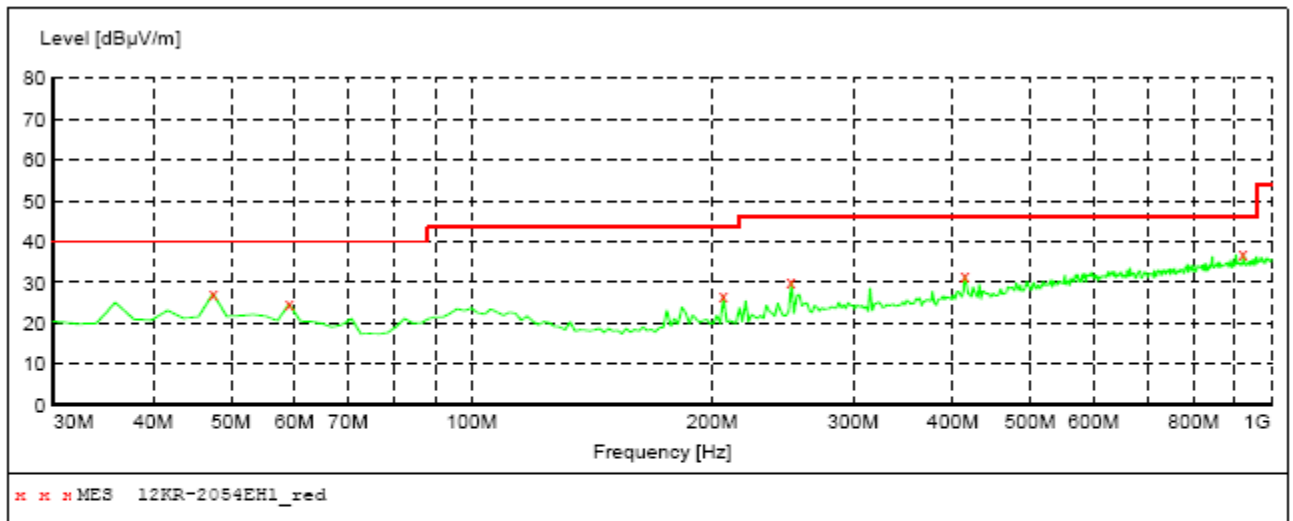
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
210.420000	33.00	15.1	43.5	10.5	QP	100.0	0.00	HORIZONTAL
251.160000	39.30	17.3	46.0	6.7	QP	100.0	0.00	HORIZONTAL
260.860000	39.60	17.4	46.0	6.4	QP	100.0	0.00	HORIZONTAL
386.960000	36.00	21.1	46.0	10.0	QP	100.0	0.00	HORIZONTAL
423.820000	35.90	22.0	46.0	10.1	QP	100.0	0.00	HORIZONTAL
895.240000	37.00	29.1	46.0	9.0	QP	100.0	0.00	HORIZONTAL

Radiated Emission Test Data Below 1G:

EUT: Computer System Graupner/SJ HoTT
M/N: MC-16
Operating Condition: Connect to PC
Test Site: 3m CHAMBER
Operator: Chen
Test Specification: AC 120V/60Hz
Comment: Polarization: Vertical
Start of Test: 11/16/12/23:46 Tem:25°C Hum:50%

SWEEP TABLE: "test (30M-1G)"

Short Description:		Field Strength			
Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	VULB9163 NEW



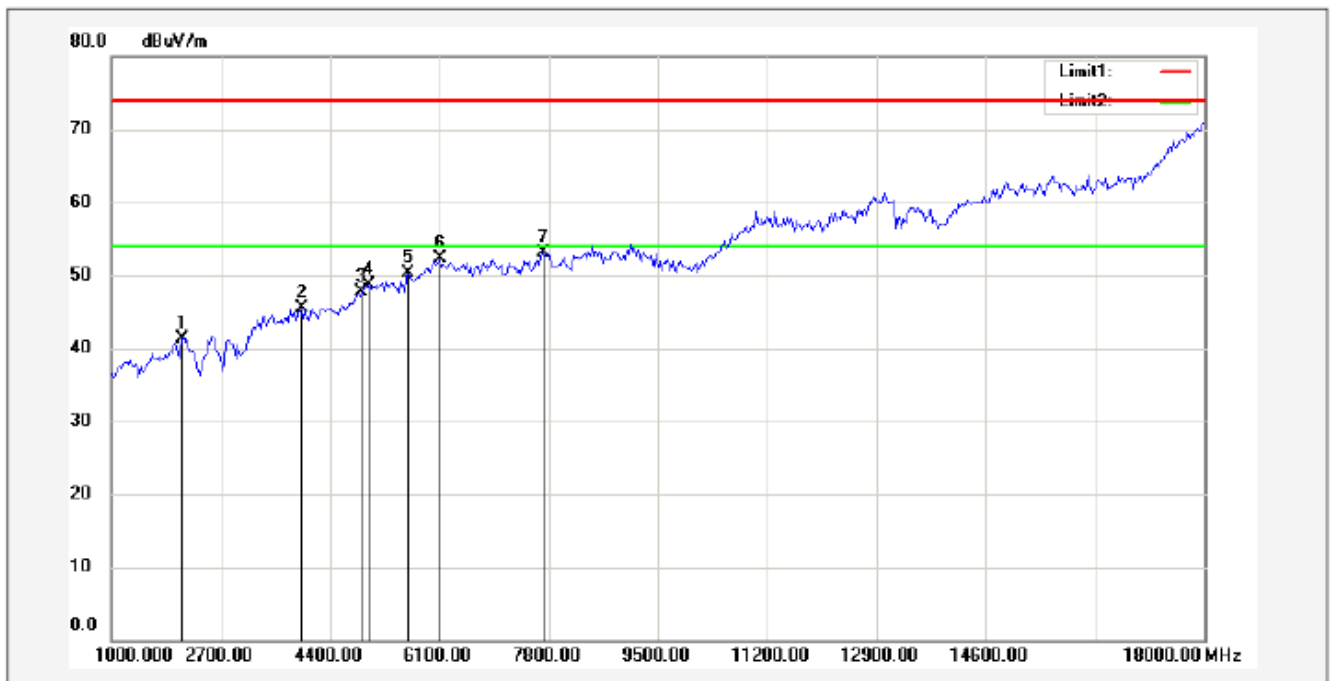
MEASUREMENT RESULT: "12KR-2054EH1_red"

11/16/2012 9:15PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
47.460000	27.30	15.8	40.0	12.7	QP	100.0	0.00	VERTICAL
59.100000	24.80	14.6	40.0	15.2	QP	100.0	0.00	VERTICAL
206.540000	26.70	15.0	43.5	16.8	QP	100.0	0.00	VERTICAL
251.160000	30.10	17.3	46.0	15.9	QP	100.0	0.00	VERTICAL
414.120000	31.70	21.8	46.0	14.3	QP	100.0	0.00	VERTICAL
922.400000	37.20	29.4	46.0	8.8	QP	100.0	0.00	VERTICAL

Radiated Emission Test Data Above 1G:

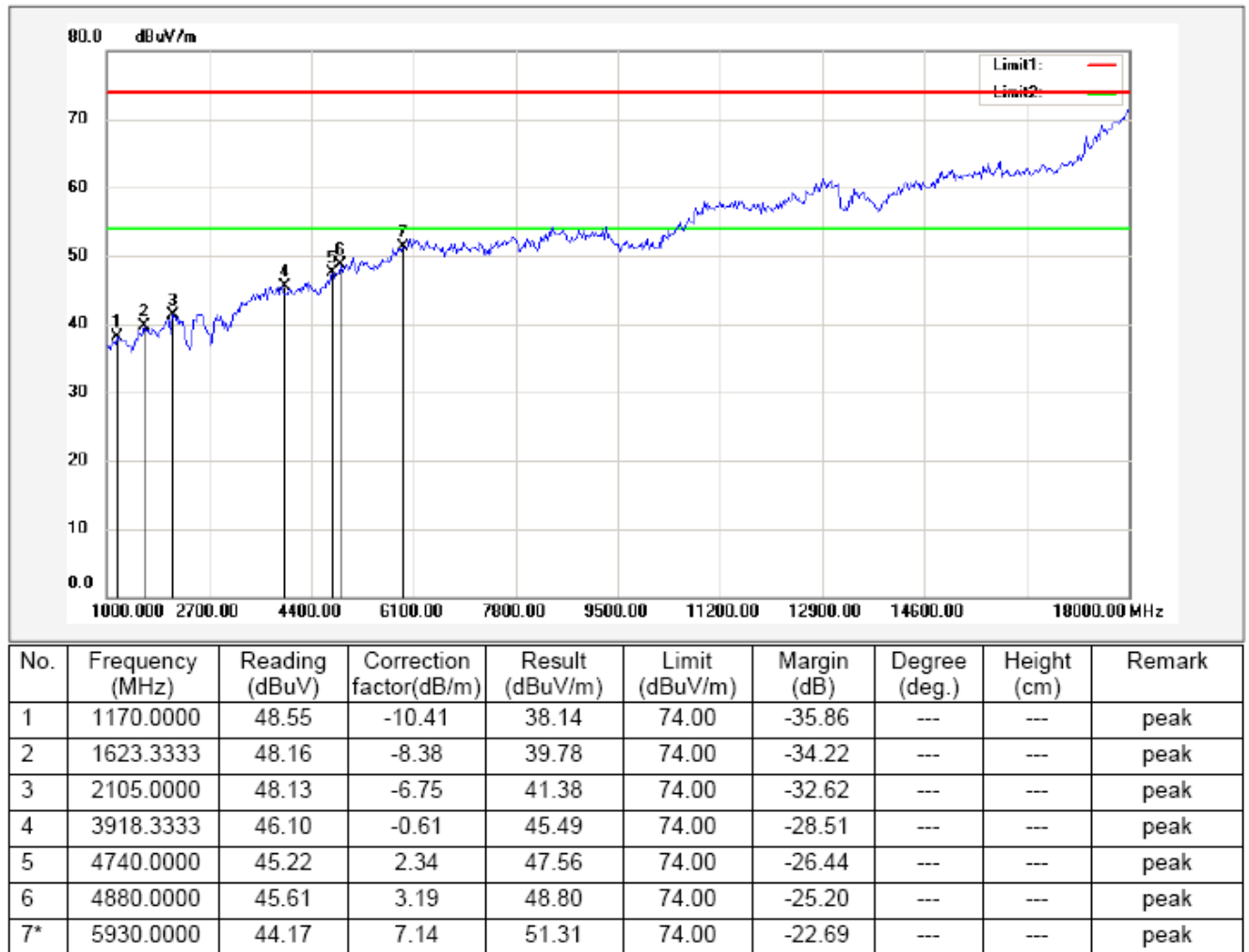
EUT: Computer System Graupner/SJ HoTT
M/N: MC-16
Operating Condition: Connect to PC
Test Site: 3m CHAMBER
Operator: Chen
Test Specification: AC 120V/60Hz
Comment: Polarization: Horizontal
Start of Test: 11/16/12/07:20 Tem:25°C Hum:50%



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (deg.)	Height (cm)	Remark
1	2105.0000	48.10	-6.75	41.35	74.00	-32.65	---	---	peak
2	3918.3333	46.21	-0.61	45.60	74.00	-28.40	---	---	peak
3	4880.0000	44.57	3.19	47.76	74.00	-26.24	---	---	peak
4	4966.6667	45.06	3.72	48.78	74.00	-25.22	---	---	peak
5	5618.3333	45.11	5.13	50.24	74.00	-23.76	---	---	peak
6	6100.0000	44.84	7.54	52.38	74.00	-21.62	---	---	peak
7*	7686.6667	45.56	7.57	53.13	74.00	-20.87	---	---	peak

Radiated Emission Test Data Above 1G:

EUT: Computer System Graupner/SJ HoTT
M/N: MC-16
Operating Condition: Connect to PC
Test Site: 3m CHAMBER
Operator: Chen
Test Specification: AC 120V/60Hz
Comment: Polarization: Vertical
Start of Test: 11/16/12/23:46 Tem:25℃ Hum:50%

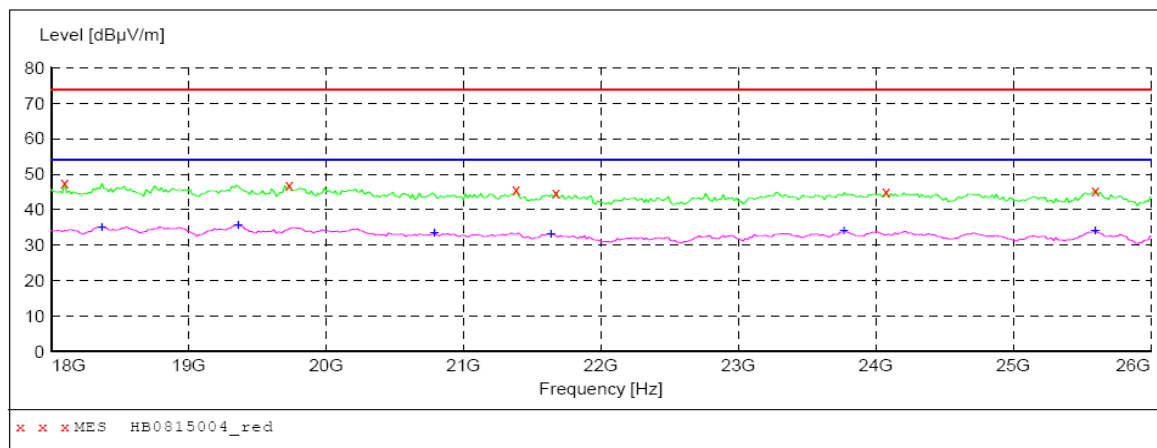


Radiated Emission Test Data Above 1G:

EUT: Computer System Graupner/SJ HoTT
M/N: MC-16
Operating Condition: Connect to PC
Test Site: 3m CHAMBER
Operator: Chen
Test Specification: AC 120V/60Hz
Comment: Polarization: Vertical and Horizontal
Start of Test: 11/19/12/23:46 Tem:25°C Hum:50%

SWEEP TABLE: "test (18G-40G) P"

Short Description:		Field Strength			
Start	Stop	Detector	Meas.	IF	Transducer
Frequency	Frequency		Time	Bandw.	
18.0 GHz	40.0 GHz	MaxPeak	Coupled	1 MHz	SAS-574
		Average			



MEASUREMENT RESULT: "HB0815004_red"

8/15/2012 5:43PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
18096.192385	47.60	-19.3	74.0	26.4	---	150.0	240.00	VERTICAL
19731.462926	46.90	-25.4	74.0	27.1	---	150.0	314.00	VERTICAL
21382.765531	45.60	-26.4	74.0	28.4	---	150.0	178.00	VERTICAL
21671.342685	44.80	-26.0	74.0	29.2	---	150.0	215.00	HORIZONTAL
24076.152305	45.00	-22.5	74.0	29.0	---	150.0	115.00	VERTICAL
25599.198397	45.50	-22.7	74.0	28.5	---	150.0	80.00	HORIZONTAL

MEASUREMENT RESULT: "HB0815004_red2"

8/15/2012 5:43PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
18368.737475	35.20	-20.7	54.0	18.8	---	150.0	292.00	VERTICAL
19362.725451	35.60	-24.6	54.0	18.4	---	150.0	233.00	VERTICAL
20789.579158	33.40	-26.9	54.0	20.6	---	150.0	15.00	HORIZONTAL
21639.278557	33.20	-26.0	54.0	20.8	---	150.0	174.00	VERTICAL
23771.543086	34.00	-22.9	54.0	20.0	---	150.0	351.00	VERTICAL
25599.198397	34.00	-22.7	54.0	20.0	---	150.0	201.00	HORIZONTAL