

TEST REPORT
of the accredited test laboratory

TÜV Nr.:M/EMV-02/283

about
the following EMC - test/- research

Division Medical
Technology/
Communication
Technology/ EMC

Testing Body for
Communication
Technology/ EMC

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Accredited Testing
Laboratory,
Inspection Body,
Certification Body,
Calibration Body

Notified Body 0408

Applicant: Corinex Global Corp.
308 1168 Hamilton Street
Vancouver, B.C., V6B 2S2; Canada

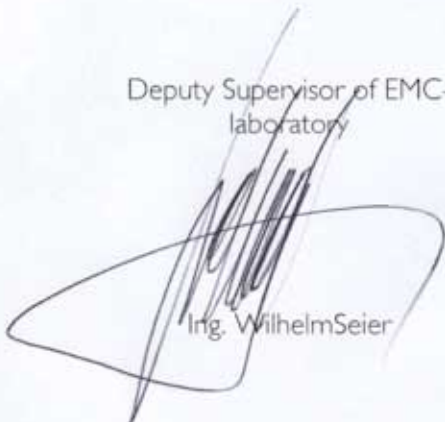
Product: Corinex Intelligent Powernet USB Adapter
FCC-ID: QIU POWERNET-USB

Serial Number: Preproduction model

Standard: EN 55022:1998+A1:2000; EN 55024:1998+A1:2001;
EN 61000-3-2:2000; EN 61000-3-3:1995+A1:2001;
CISPR 22:1997

TÜV Österreich
Test laboratory for EMC

Deputy Supervisor of EMC-
laboratory



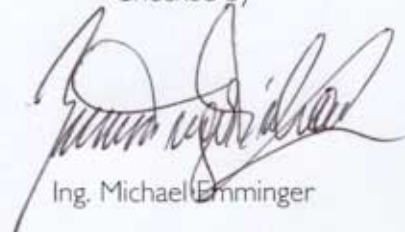
Ing. Wilhelm Seier



12.12.2002

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Ing. Michael Emminger

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The results of this test report only refer to the provided equipment.

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1. Applicant

Company Corinex Global Corp.
Department
Address # 308 1168 Hamilton Street; Vancouver, B.C., V6B 2S2; Canada
Contact person Mr. Pavel Simon

EUT received on 10. 12. 2002

Tests were performed on 10. + 11. 12. 2002

2. Description of EUT

EUT	Corinex Powernet USB
Serial Number	0050C214E54E
Manufacturer	Corinex Global Corp. # 308 1168 Hamilton Street; Vancouver, B.C., V6B 2S2; Canada
Description	Corinex Global Corp. provided the following configuration for the measurements: USB-Powernetadapter preproduction model Laptop: Fujitsu Siemens Computers LifeBook C Series Product No: FPC05041BP S/N – Rev:02391376N02 Not having FCC ID
Operating mode	The measurements were carried out at the following running states: transmit/receive data

3. Standards / Final result

Name	Title	Deviation	Result
EN 55022:1998 +A1:2000	Limits and methods of measurement of radio disturbance characteristics of information technology equipment	none	PASS
EN 55024:1998 +A1:2001	Information technology equipment - Immunity characteristics - Limits and methods of measurement	none	PASS
EN 61000-3-2:2000	Electromagnetic compatibility (EMC) Part 3: Limits Section 2: Limits for harmonic current emissions (equipment input current up to and including 16A per phase)	none	PASS
EN 61000-3-3:1995 +A1:2001	Electromagnetic compatibility (EMC) Part 3: Limits Section 2: Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current up to and including 16A	none	PASS
CISPR 22:1997	Limits and methods of measurement of radio disturbance characteristics of information technology equipment	none	PASS
<p>PASS EUT passed FAIL EUT failed</p>			

4. Test results

4.1. Conducted emission

Limits

Frequency range	Limit	
	Quasi Peak	Average
0,150 - 0,5 MHz	66 - 56 dB μ V decreasing with the logarithm of frequency	56 - 46 dB μ V decreasing with the logarithm of frequency
0,5 - 5 MHz	56 dB μ V	46 dB μ V
5 - 30 MHz	60 dB μ V	50 dB μ V
Remark: Quasi Peak and Average limits must be both met		

Measuring apparatus parameters:

Parameter	Preview measurement	Final measurement	Parameter	Preview measurement	Final measurement
Start frequency	150 kHz	150 kHz	Detector	MP/AV	QP/AV
Stop frequency	30 MHz	30 MHz	Measuring time	10 ms	1 s
Stepsize	5 kHz	5 kHz	RF-attenuation	0dB	0dB
IF- Bandwidth	9 kHz	9 kHz	Preamplifier	0 dB	0 dB

Operating mode	Measuring result
transmit/receive data	Measurement diagram 1

Test result:

4. 1.1.) Measurement with QP-Detector

Frequency MHz	Level dB μ V	Limit dB μ V	Margin dB	Exceed- Mark	Phase	PE
4,500	45,7	56,0	10,3		L1	FLO
4,690	46,9	56,0	9,1		L1	FLO
4,855	44,6	56,0	11,4		N	FLO
4,900	46,4	56,0	9,6		L1	FLO
11,525	47,7	60,0	12,3		N	FLO
12,710	49,0	60,0	11,0		N	FLO
16,210	48,4	60,0	11,6		N	FLO
17,200	47,1	60,0	12,9		N	FLO
19,735	48,6	60,0	11,4		N	FLO
20,115	47,8	60,0	12,2		L1	FLO

4. 1.2.) Measurement with AV-Detector

Frequency MHz	Level dB μ V	Limit dB μ V	Margin dB	Exceed- Mark	Phase	PE
0,185	49,6	54,2	4,6		L1	FLO
0,245	48,5	51,9	3,4		L1	FLO
0,305	45,5	50,1	4,6		L1	FLO
4,500	18,0	46,0	28,0		L1	FLO
4,675	19,4	46,0	26,6		L1	FLO
4,855	28,4	46,0	17,6		N	FLO
4,895	31,5	46,0	14,5		N	FLO
11,340	13,4	50,0	36,6		L1	FLO
11,525	32,3	50,0	17,7		N	FLO
17,605	29,9	50,0	20,1		N	FLO

4.2. Conducted emission on the USB line

Limits

Frequency range	Limit	
	Quasi Peak	Average
0,150 - 0,5 MHz	40 - 30 dB μ A decreasing with the logarithm of frequency	30 - 20 dB μ A decreasing with the logarithm of frequency
0,5 - 30 MHz	30 dB μ A	20 dB μ A
Remark: Quasi Peak and Average limits must be both met		

Measuring apparatus parameters:

Parameter	Preview measurement	Final measurement	Parameter	Preview measurement	Final measurement
Start frequency	150 kHz	150 kHz	Detector	Max Peak	Quasi Peak
Stop frequency	30 MHz	30 MHz	Measuring time	10 ms	1 s
Stepsize	5 kHz	5 kHz	RF-attenuation	0dB	0dB
IF- Bandwidth	9 kHz	9 kHz	Preamplifier	10 dB	10 dB

Operating mode	Measuring result
transmit/receive data	Measurement diagram 2

Test result:

4. 2.1.) Measurement with QP-Detector

Due to the large margin of the results from the prescans to the limit, no final measurement was performed.

4. 2.2.) Measurement with AV-Detector

Due to the large margin of the results from the prescans to the limit, no final measurement was performed.

4. 3. Radiated emission

Limits :

Frequency range	Limit (quasi peak)
30 - 230 MHz	39,6 dB μ V/m
230 - 1000 MHz	46,6 dB μ V/m

Measuring apparatus parameters:

Parameter	Preview measurement	Final measurement	Parameter	Preview measurement	Final measurement
Start frequency	30 MHz	30 MHz	Detector	Max Peak	Quasi Peak
Stop frequency	1000 MHz	1000 MHz	Measuring time	10 ms	1 s
Stepsize	50 kHz	50 kHz	RF-attenuation	0dB	0dB
IF- Bandwidth	120 kHz	120 kHz	Preamplifier	20 dB	20 dB

Operating mode	Measuring result
transmit/receive data	Measurement diagram 3, 4

Test result:

4. 3.1.) Measurement with QP-Detector (30 MHz - 200 MHz)

Frequency MHz	Level dB μ V/m	Limit dB μ V/m	Margin dB	Exceed- Mark	Height cm	Azimuth deg	Polarization
34,25	14,4	39,6	25,2		240	316	VERTICAL
38,80	37,7	39,6	1,9		100	261	VERTICAL
44,25	37,6	39,6	2,0		124	0	VERTICAL
53,10	13,1	39,6	26,5		175	45	VERTICAL
93,55	10,4	39,6	29,2		206	339	VERTICAL
103,95	33,7	39,6	5,9		400	0	HORIZONTAL
107,55	15,5	39,6	24,1		212	317	VERTICAL
200,00	38,8	39,6	0,8		100	212	VERTICAL

4. 3.2.) Measurement with QP-Detector (200 MHz - 1000 MHz)

Frequency MHz	Level dB μ V/m	Limit dB μ V/m	Margin dB	Exceed- Mark	Height cm	Azimuth deg	Polarization
200,00	38,6	39,6	1,0		100	208	VERTICAL
400,00	35,3	46,6	11,3		100	353	HORIZONTAL
500,00	34,0	46,6	12,6		114	0	HORIZONTAL
600,00	32,4	46,6	14,2		174	135	HORIZONTAL
664,40	35,4	46,6	11,2		115	129	VERTICAL
797,45	32,6	46,6	14,0		108	353	VERTICAL

4. 4. Harmonic current emission:

Because of the low power consumption of this equipment (the AC mains port is only used as data port), no measurement was performed.

4. 5. Voltage fluctuations and flicker

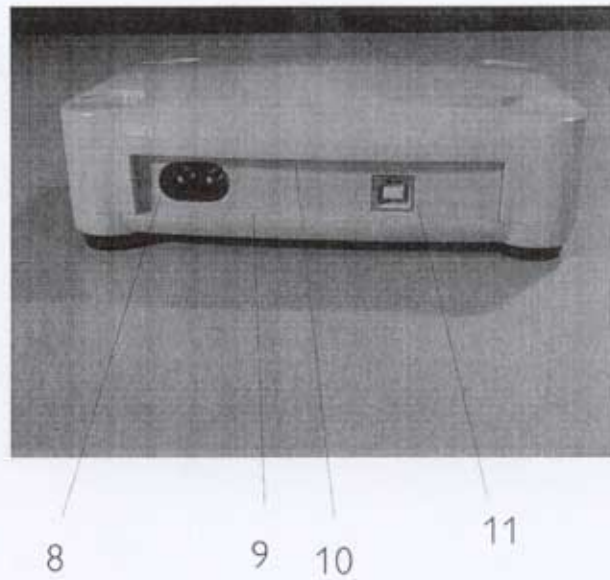
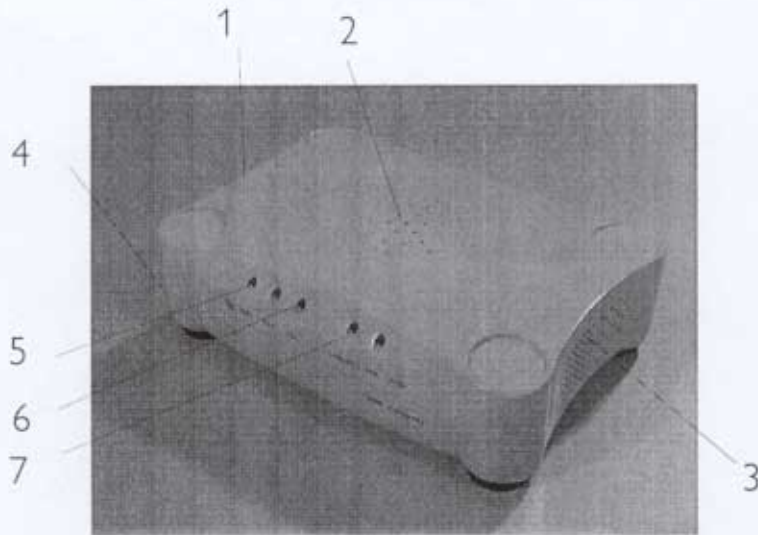
Because the equipment has a very low power consumption (the AC mains port is only used as data port), it is unlikely to produce significant voltage fluctuations or flicker and therefore no measurement was performed.

4. 6. Electrostatic discharge requirements (ESD)

Type of test	charging voltage	Basic standard	Test set-up	Comment	Performance criteria
Electrostatic discharge Air discharge	8 kV charging voltage	EN 61000-4-2:1995	EN 61000-4-2:1995		B
Electrostatic discharge Contact discharge	4 kV charging voltage	EN 61000-4-2:1995	EN 61000-4-2:1995		B

Operating mode	Test positions	Criteria of compliance
transmit/receive data	The 11 test positions are shown in the following graphic	During the test the communications link shall be maintained. However short interruptions are allowed. After the test the equipment shall operate normally without user-interaction.

Test positions for ESD



Test result:

Test position	Charging voltage	Type of discharge	Positive discharge	Negative discharge
1	8 kV	Air	PASS	PASS
2	8 kV	Air	PASS	PASS
3	8 kV	Air	PASS	PASS
4	8 kV	Air	PASS	PASS
5	8 kV	Air	PASS	PASS
6	8 kV	Air	PASS	PASS
7	8 kV	Air	PASS	PASS
8	8 kV	Air	PASS	PASS
9	8 kV	Air	PASS	PASS
10	8 kV	Air	PASS	PASS
11	8 kV	Air	PASS	PASS
PASS FAIL	EUT passed EUT failed			

4.7. Radiated electromagnetic field requirements

Type of test	Test parameters	Basic standards	Test set-up	Comment	Performance criteria
Radiated electromagnetic field	80 MHz - 1000 MHz Feldstärke: 3 V/m Modulation 80%/1 kHz AM Polarisation H/V Stepsize 1%	EN 61000-4-3:1996	EN 61000-4-3:1996		A

Operating mode	Criteria of compliance
transmit/receive data	During the test the communications link must be maintained. However the datarate may decrease. After the test the equipment must operate normally.

Test result:

Type of test	Test parameters	Performance criteria	Result
Radiated electromagnetic field	80 MHz - 1000 MHz Feldstärke: 3 V/m Modulation 80%/1 kHz AM Polarisation H/V Stepsize 1%	A	PASS
PASS FAIL	EUT passed EUT failed		

4. 8. Induced RF-field requirements

Type of test	Test parameters	Basic standards	Test set-up	Comment	Performance criteria
RF-current common mode	0,15 MHz - 80 MHz 3 Vrms (unmoduliert) Modulation 80%/1 kHz AM Stepsize $1,5 \cdot 10^{-3}$ Dec/s Source impedance 150 Ohm	EN 61000-4-6:1996	EN 61000-4-6:1996		A

The USB-Line is shorter then 3 m and therefore the test isn't applicable.

Operating mode	Criteria of compliance
transmit/receive data	During the test the communications link must be maintained. However the datarate may decrease. After the test the equipment must operate normally.

Test result:

Measured line	Type of coupling	Performance criteria	Result
AC-mains supply (1-phase)	M5	A	PASS
PASS FAIL	EUT passed EUT failed		

4. 9. Electrical fast transients/burst requirements

Type of test	Test parameters	Basic standards	Test set-up	Comment	Performance criteria
Electrical fast transients common mode	5/50 ns t_r/t_f 5kHz Burst frequency 15 ms Burst time 3 Hz Repetition frequency Polarity: positive/negative	EN 61000-4-4:1995	EN 61000-4-4:1995		B
The USB-Line is shorter then 3 m and therefore the test isn't applicable.					

Operating mode	Criteria of compliance
transmit/receive data	During the test the communications link shall be maintained. However short interruptions are allowed. After the test the equipment shall operate normally without user-interaction.

Test result:

4. 9. 1.) Measurement on the mains supply line (direct injection)

Combination	Test voltage	Performance criteria	Positive pulse	Negative pulse
Coupling path L1	1 kV	B	PASS	PASS
Coupling path N	1 kV	B	PASS	PASS
Coupling path PE	1 kV	B	PASS	PASS
Coupling path L1/N	1 kV	B	PASS	PASS
Coupling path L1/PE	1 kV	B	PASS	PASS
Coupling path N/PE	1 kV	B	PASS	PASS
Coupling path L1/N/PE	1 kV	B	PASS	PASS
PASS FAIL	EUT passed EUT failed			

4. 10. Surge requirements

Type of test	Test parameters	Basic standards	Test set-up	Comment	Performance criteria
Surge, differential mode	1 kV Test level 1,2/50 μ s t_r/t_f Polarity: positive/negative	EN 61000-4-5:1995	EN 61000-4-5:1995		B
Surge, common mode	2 kV Test level 1,2/50 μ s t_r/t_f Polarity: positive/negative	EN 61000-4-5:1995	EN 61000-4-5:1995		B

The USB-Line will not be connected with lines outside from buildings and therefore the test isn't applicable.

Operating mode	Criteria of compliance
transmit/receive data	During the test the communications link shall be maintained. However short interruptions are allowed. After the test the equipment shall operate normally without user-interaction.

Test result:

4. 10.1.) Measurement on the mains supply - differential mode

Combination	Test voltage	Performance criteria	Positive pulse	Negative pulse
L1/N	1 kV	B	PASS	PASS
PASS FAIL	EUT passed EUT failed			

4. 10.2.) Measurement on the mains supply - common mode

Combination	Test voltage	Performance criteria	Positive pulse	Negative pulse
N/PE	2 kV	B	PASS	PASS
L1/PE	2 kV	B	PASS	PASS
PASS FAIL	EUT passed EUT failed			

4. 11. Voltage dips and interrupts

Type of test	Test parameters	Basic standards	Test set-up	Comment	Performance criteria
Voltage - Dips	>95% Reduction for 10 ms	EN 61000-4-11	EN 61000-4-11	1)	B
Voltage - Dips	30% Reduction for 500 ms	EN 61000-4-11	EN 61000-4-11	2)	C
Voltage - Interruption	>95% Reduction for 5000 ms	EN 61000-4-11	EN 61000-4-11	2)	C

Operating mode	Criteria of compliance
transmit/receive data	<ol style="list-style-type: none"> 1) During the test the communications link shall be maintained. However short interruptions are allowed. After the test the equipment shall operate normally without user-interaction. 2) During the test the communications link may be lost. After the test the equipment shall operate normally maybe after user-interaction.

Test result:

Type of test	Test parameters	Performance criteria	Result
Voltage - Dips	>95% Reduction for 10 ms	B	PASS
Voltage - Dips	30% Reduction for 500 ms	C	PASS
Voltage - Interruption	>95% Reduction for 5000 ms	C	PASS
PASS FAIL	EUT passed EUT failed		

Appendix 1

Test equipment used

<input checked="" type="checkbox"/>	Anechoic Chamber with 3m measurement distance	NT-100	<input type="checkbox"/>	ESPC - Test receiver 9 kHz - 2,5 GHz	NT-203
<input checked="" type="checkbox"/>	MA 240 - Antenna mast 1 - 4 m height	NT-110	<input checked="" type="checkbox"/>	ESI26 - Test receiver 20 Hz - 26,5 GHz	NT-207
<input checked="" type="checkbox"/>	DS 412 - Turntable 0 - 400 ° Azimuth	NT-111	<input type="checkbox"/>	Digital Radio Tester CTS55	NT-208
<input checked="" type="checkbox"/>	HD 100 Controller Mast+Turntable	NT-112	<input type="checkbox"/>	Noise-gen., ITU-R 559-2 20 Hz - 20 kHz	NT-209
<input type="checkbox"/>	HUF-Z2 - Bicon. Antenna 20 - 300 MHz	NT-120	<input type="checkbox"/>	CMTA - Radiocommunication analyzer ; 0,1 - 1000 MHz	NT-210
<input type="checkbox"/>	HUF-Z3 - Log. Per. Antenna 200 - 1000 MHz	NT-121	<input type="checkbox"/>	3271 - Spectrum analyzer 100 Hz - 26,5 GHz	NT-211
<input type="checkbox"/>	HFH-Z2 - Loop Antenna. 9 kHz - 30 MHz	NT-122	<input type="checkbox"/>	Radiocommunicationanalyzer Marconi 2945A	NT-212
<input type="checkbox"/>	HFH-Z6 - Rod Antenna 9 kHz - 30 MHz	NT-123	<input type="checkbox"/>	28555 - Communication analyzer	NT-213
<input type="checkbox"/>	3121C - Dipole Antenna 28 - 1000 MHz	NT-124	<input type="checkbox"/>	Mixer M28HW 26,5 GHz - 40 GHz	NT-214
<input type="checkbox"/>	3115 - Horn Antenna 1 - 18 GHz	NT-125	<input type="checkbox"/>	Diode Detector 0,01 GHz - 26,5 GHz	NT-215
<input type="checkbox"/>	3116 - Horn Antenna 18 - 40 GHz	NT-126	<input type="checkbox"/>	3160-10 Horn Antenna 26,5 GHz - 40 GHz	NT-216
<input type="checkbox"/>	SAS-200/543 - Bicon. Ant. 20 MHz - 300 MHz	NT-127	<input type="checkbox"/>	Radiocommunicationanalyzer SWR 1180 MD	NT-217
<input checked="" type="checkbox"/>	AT-1080 - Log. Per. Ant. 80 - 1000 MHz	NT-128	<input type="checkbox"/>	Mixer M19HWD 40 GHz - 60 GHz	NT-218
<input checked="" type="checkbox"/>	HK-116 - bicon. Ant. 20 MHz - 300 MHz	NT-129	<input type="checkbox"/>	Mixer M12HWD 60 GHz - 90 GHz	NT-219
<input type="checkbox"/>	HK-116 - bicon. Ant. 20 MHz - 300 MHz	NT-130	<input type="checkbox"/>	TDS - 540 DSO Digital scope	NT-220
<input checked="" type="checkbox"/>	3146 - Log. Per. Ant. 200 - 1000MHz	NT-131	<input type="checkbox"/>	PM97 Scopemeter	NT-221
<input type="checkbox"/>	Loop Antenna H-Field	NT-132	<input type="checkbox"/>	B9-DSP-IS Digital Analyzer for voltage fluctuations	NT-230
<input checked="" type="checkbox"/>	Horn Antenna 500 MHz - 2900 MHz	NT-133	<input type="checkbox"/>	DFT 555 - Power and harmonics analyzer	NT-231
<input type="checkbox"/>	Log. per. Antenna 800 MHz - 2500 MHz	NT-134	<input type="checkbox"/>	EFA-3 H-field- / E-field probe	NT-243
<input type="checkbox"/>	Log. per. Antenna 800 MHz - 2500 MHz	NT-135	<input type="checkbox"/>	E-field measuring instrument EMR-200; 100 kHz - 3 GHz	NT-244
<input type="checkbox"/>	BiConiLog Antenna 26 MHz - 2000 MHz	NT-137	<input type="checkbox"/>	E-field probe 100 kHz - 3 GHz	NT-245
<input type="checkbox"/>	Conical Dipol Antenna PCD8250	NT-138	<input type="checkbox"/>	Magneticfield-Sensor 300 kHz - 30 MHz	NT-246
<input type="checkbox"/>	HZ-1 Antenna tripod	NT-150	<input type="checkbox"/>	E-field probe 10 MHz - 18 GHz	NT-247
<input type="checkbox"/>	BN 1500 Antenna tripod	NT-151	<input type="checkbox"/>	H-field probe 10 MHz - 1 GHz	NT-248
<input type="checkbox"/>	ESVP - Test receiver 20 - 1000 MHz	NT-201	<input type="checkbox"/>	MDS 21 - Absorbing clamp 30 - 1000 MHz	NT-250
<input type="checkbox"/>	Switchbox	NT-202	<input checked="" type="checkbox"/>	FCC-2031 EM Injection clamp	NT-251

Medizintechnik/
Nachrichtentechnik/EMV

Department: EMV

Test report number:
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Date: 12. 12. 2002

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Appendix 1 (continued)

Test equipment used

<input type="checkbox"/>	FCC-203I-DCN Ferrite decoupling network	NT-252	<input checked="" type="checkbox"/>	500W1000M7 - RF-Amplifier 80 - 1000 MHz / 500 W	NT-332
<input type="checkbox"/>	PR50 Current Probe	NT-253	<input checked="" type="checkbox"/>	AS0102-65R - RF-Amplifier 1 GHz - 2 GHz	NT-333
<input type="checkbox"/>	Model 2000 Digital Multimeter	NT-261	<input type="checkbox"/>	APA01 - RF-Amplifier 0,5 GHz - 2,5 GHz	NT-334
<input type="checkbox"/>	Fluke 97 Digital Multimeter	NT-262	<input type="checkbox"/>	Preamplifier 1 GHz - 4 GHz	NT-335
<input type="checkbox"/>	Fluke 97 Digital Multimeter	NT-263	<input type="checkbox"/>	2-97201 Electronic load	NT-341
<input checked="" type="checkbox"/>	ESH2-Z5 Artificial mains network 4x25A	NT-300	<input type="checkbox"/>	TSX3510P - Power supply 0-30 V / 0 - 10 A	NT-344
<input type="checkbox"/>	ESH3-Z5 Artificial mains network 2x10A	NT-301	<input type="checkbox"/>	TSX3510P - Power supply 0-30 V / 0 - 10 A	NT-345
<input type="checkbox"/>	ESH3-Z6 Artificial mains network 1x100A	NT-302	<input type="checkbox"/>	VDS 200 Mobil-impuls-generator	NT-350
<input type="checkbox"/>	ESH3-Z4 T-Artificial network	NT-303	<input type="checkbox"/>	LD 200 Mobil-impuls-generator	NT-351
<input checked="" type="checkbox"/>	PHE 4500/B Power amplifier	NT-304	<input type="checkbox"/>	MPG 200 Mobil-Impuls-Generators	NT-352
<input type="checkbox"/>	EZ10 T-Artificial network	NT-305	<input type="checkbox"/>	EFT 200 Mobil-impuls-generator	NT-353
<input type="checkbox"/>	MidiStar Telephone exchange	NT-306	<input type="checkbox"/>	FP 16/3-1 3 ph. Coupling filter (Burst)	NT-400
<input checked="" type="checkbox"/>	SMG - Signal generator 0,1 - 1000 MHz	NT-310	<input checked="" type="checkbox"/>	PHE 4500 - Mains impedance network	NT-401
<input type="checkbox"/>	PM 5518 TXVPS Video generator	NT-311	<input type="checkbox"/>	FP-SURGE 32.1 3 ph. Coupling filter (Surge)	NT-402
<input type="checkbox"/>	RefRad Reference generator	NT-312	<input type="checkbox"/>	IP 6.2 Coupling filter for data lines (Surge)	NT-403
<input type="checkbox"/>	SMP 02 Signal generator 10 MHz - 20 GHz	NT-313	<input type="checkbox"/>	ESH2-Z3 - Probe 9 kHz - 30 MHz	NT-410
<input type="checkbox"/>	40 MHz Arbitrary Generator T1241	NT-315	<input checked="" type="checkbox"/>	IP 4 - Capacitive clamp (Burst)	NT-411
<input checked="" type="checkbox"/>	PEFT - Burst generator up to 4 kV	NT-320	<input type="checkbox"/>	HV-Attenuator 54,5 dB (Burst)	NT-420
<input checked="" type="checkbox"/>	PSD - ESD generator up to 25 kV	NT-321	<input type="checkbox"/>	RF-Attenuator 20 dB 0,1 - 1000 MHz / 25 W	NT-421
<input checked="" type="checkbox"/>	ESD-Pistol	NT-322	<input type="checkbox"/>	RF-Attenuator 10 dB 0,1 - 1000 MHz / 20 W	NT-422
<input type="checkbox"/>	Vacuum-Relais up to 8 kV	NT-323	<input type="checkbox"/>	RF-Attenuator 30 dB 0,1 - 1000 MHz / 1 W	NT-423
<input checked="" type="checkbox"/>	PSURGE 4.1 Surge generator	NT-324	<input type="checkbox"/>	RF-Attenuator 30 dB	NT-424
<input checked="" type="checkbox"/>	TRANSIENT 1000 Immunity test system	NT-325	<input type="checkbox"/>	RF-Attenuator 6 dB 0,1 - 1000 MHz / 1 W	NT-425
<input type="checkbox"/>	VCS 500-M6 Surge-Generator	NT-326	<input type="checkbox"/>	RF-Attenuator 6 dB 0,1 - 1000 MHz / 1 W	NT-426
<input checked="" type="checkbox"/>	BTA-250 - RF-Amplifier 9 kHz - 220 MHz / 250 W	NT-330	<input type="checkbox"/>	Voltage-divider 1:100	NT-427

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Nachrichtentechnik/EMV

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Appendix 1 (continued)

Test equipment used

<input type="checkbox"/>	RF-Attenuator 6 dB	NT-428	<input type="checkbox"/>	BSR-V1 - Video transmission system (optical fiber link)	NT-512
<input type="checkbox"/>	RF-Attenuator 0 dB - 81 dB	NT-429	<input checked="" type="checkbox"/>	ES-K1 Test software	NT-520
<input type="checkbox"/>	WRU 27 - Band blocking 27 MHz	NT-430	<input type="checkbox"/>	ESPC-K1 Test software	NT-521
<input type="checkbox"/>	WHJ450C9 AA - High pass 450 MHz	NT-431	<input type="checkbox"/>	SPS_PHE - Test software voltage fluctuations/harmonics	NT-525
<input type="checkbox"/>	WHJ250C9 AA - High pass 250 MHz	NT-432	<input type="checkbox"/>	SPS_EM - Test software for PHE 4500/B	NT-527
<input type="checkbox"/>	RF-Load 150 W	NT-433	<input type="checkbox"/>	Noise power test apparatus according to EN 55014	NT-530
<input type="checkbox"/>	Impedance transducer 50 Ohm - 800 Ohm	NT-435	<input type="checkbox"/>	Vertical coupling plane (ESD)	NT-531
<input type="checkbox"/>	I+P 7780 Directional coupler 100 - 2000 MHz	NT-440	<input type="checkbox"/>	Equipment for ESD-pulse verification.	NT-532
<input checked="" type="checkbox"/>	ESH3-Z2 - Pulse limiter 9 kHz - 30 MHz	NT-441	<input type="checkbox"/>	TEM-Zelle	NT-533
<input type="checkbox"/>	Power Divider 6 dB/1 W/50 Ohm	NT-443	<input type="checkbox"/>	ESV-24 Plotter adapter	NT-540
<input type="checkbox"/>	Directional coupler 0,1 MHz - 70 MHz	NT-444	<input checked="" type="checkbox"/>	Test cables	NT-550
<input type="checkbox"/>	Directional coupler 0,1 MHz - 70 MHz	NT-445	<input checked="" type="checkbox"/>	Test cable #4 for EN 61000-4-6	NT-553
<input type="checkbox"/>	Tube imitations according to EN 55015	NT-450	<input type="checkbox"/>	Test cable #3 for conducted emission	NT-554
<input checked="" type="checkbox"/>	FCC-801-M5-25 Coupling decoupling network	NT-460	<input type="checkbox"/>	Test cable #5 ESD-cable (2x470k)	NT-555
<input type="checkbox"/>	FCC-801-AF10 Coupling decoupling network	NT-461	<input type="checkbox"/>	Test cable #6 ESD-cable (2x470k)	NT-556
<input type="checkbox"/>	FCC-801-S25 Coupling decoupling network	NT-462	<input type="checkbox"/>	Serial data - fiber optic link	NT-557
<input type="checkbox"/>	FCC-801-T4 Coupling decoupling network	NT-463	<input type="checkbox"/>	Test cable #8 Sucoflex 104EA	NT-559
<input type="checkbox"/>	FCC-801-C1 Coupling decoupling network	NT-464	<input type="checkbox"/>	Test cable #9 (for outdoor measurements)	NT-580
<input type="checkbox"/>	F-16A - Current probe 1kHz - 70MHz	NT-465	<input type="checkbox"/>	Test cable #10 (for outdoor measurements)	NT-581
<input checked="" type="checkbox"/>	PC P450 - Test computer	NT-500	<input type="checkbox"/>	Test cable #13 PBA-33PBC-10	NT-584
<input type="checkbox"/>	SE 284 GPIB - Plotter	NT-502	<input type="checkbox"/>	Shield chamber	NT-600
<input type="checkbox"/>	PC P133 Test computer #2	NT-504	<input type="checkbox"/>	Climatic chamber -55°C to +180°C	M-512
<input type="checkbox"/>	PC P4 1700 MHz Notebook	NT-505	<input type="checkbox"/>	Control and simulation equipment for EUT	---
<input type="checkbox"/>	PC PIII 933 MHz Notebook	NT-506			
<input type="checkbox"/>	7110 - Controlling device for E-Field probe	NT-510			
<input type="checkbox"/>	Monitoring camera with Monitor	NT-511			

Medizintechnik/
Nachrichtentechnik/EMV

Department: EMV

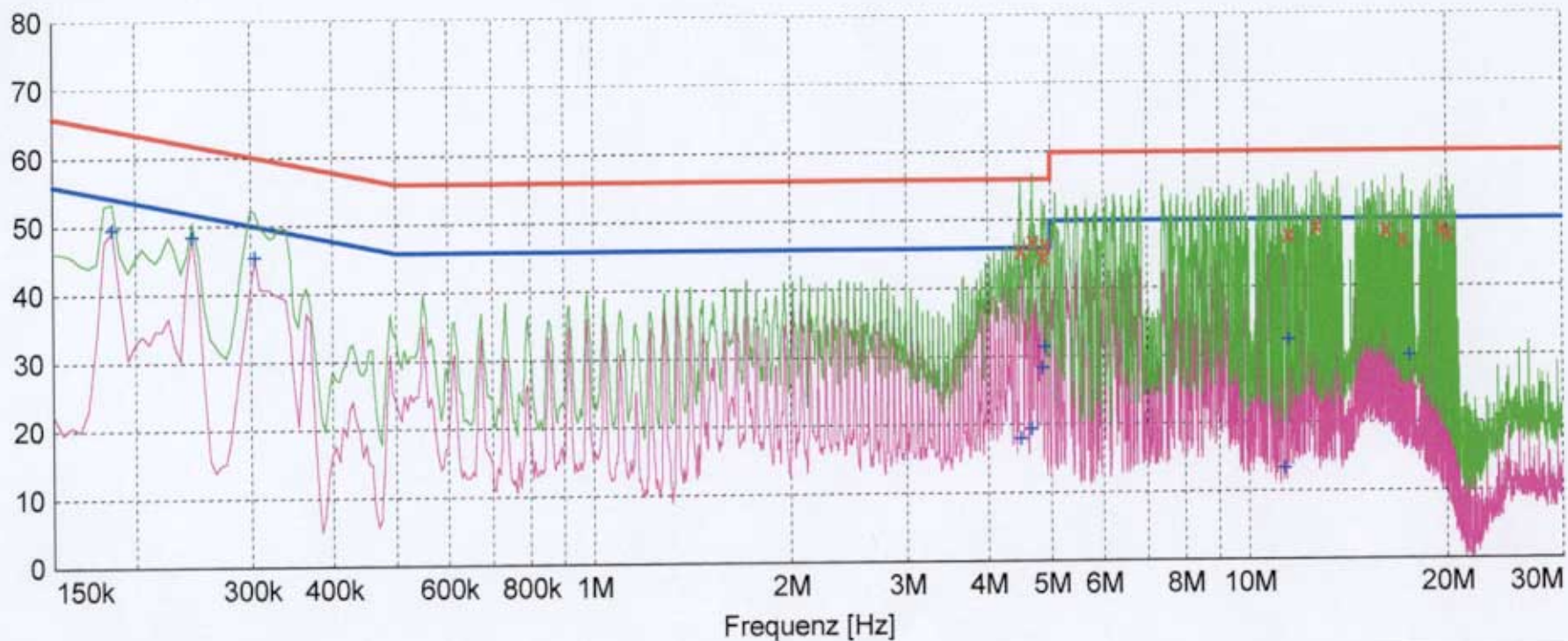
Test report number:
M/EMV-02/283

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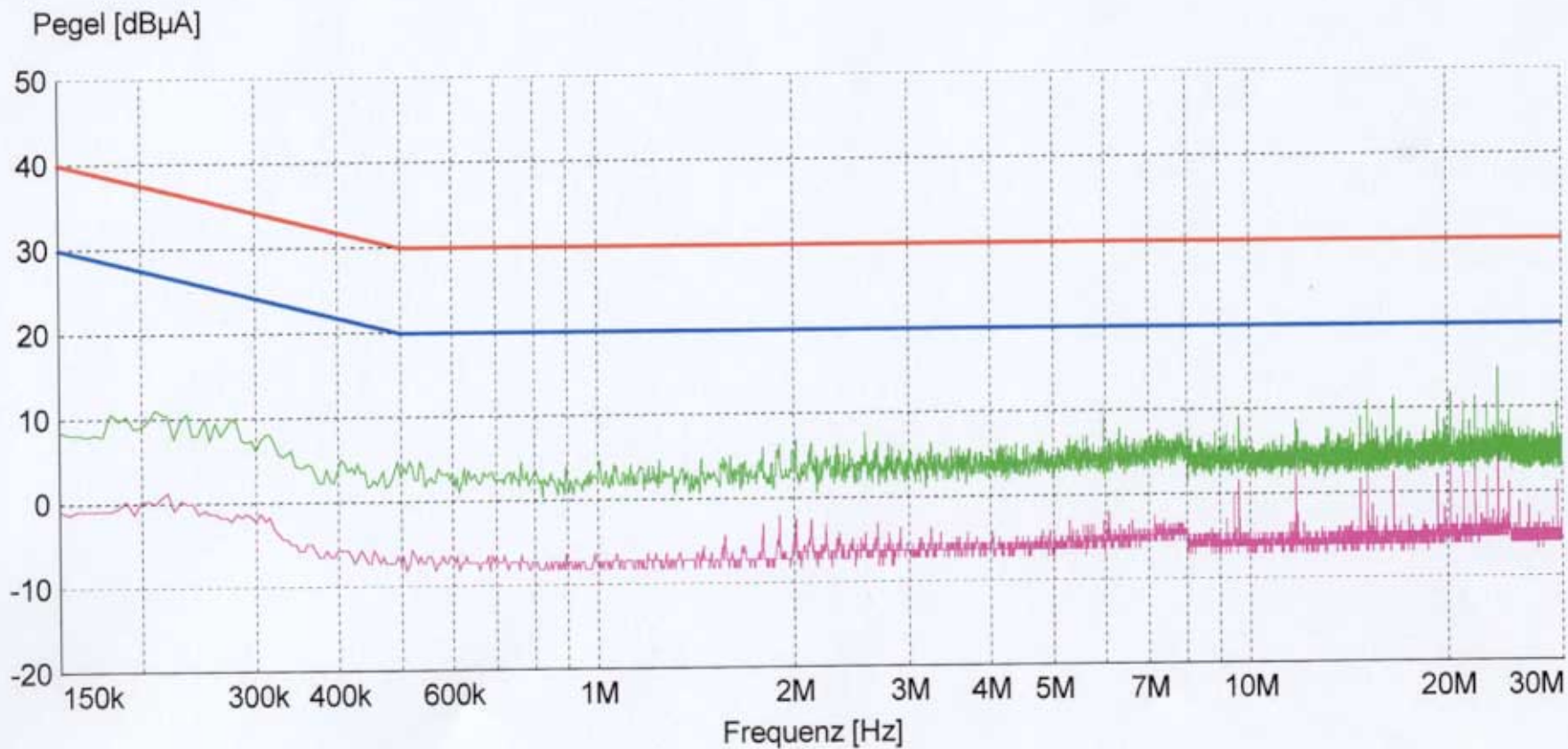
Date: 12. 12. 2002

Checked by: 

Pegel [dB μ V]

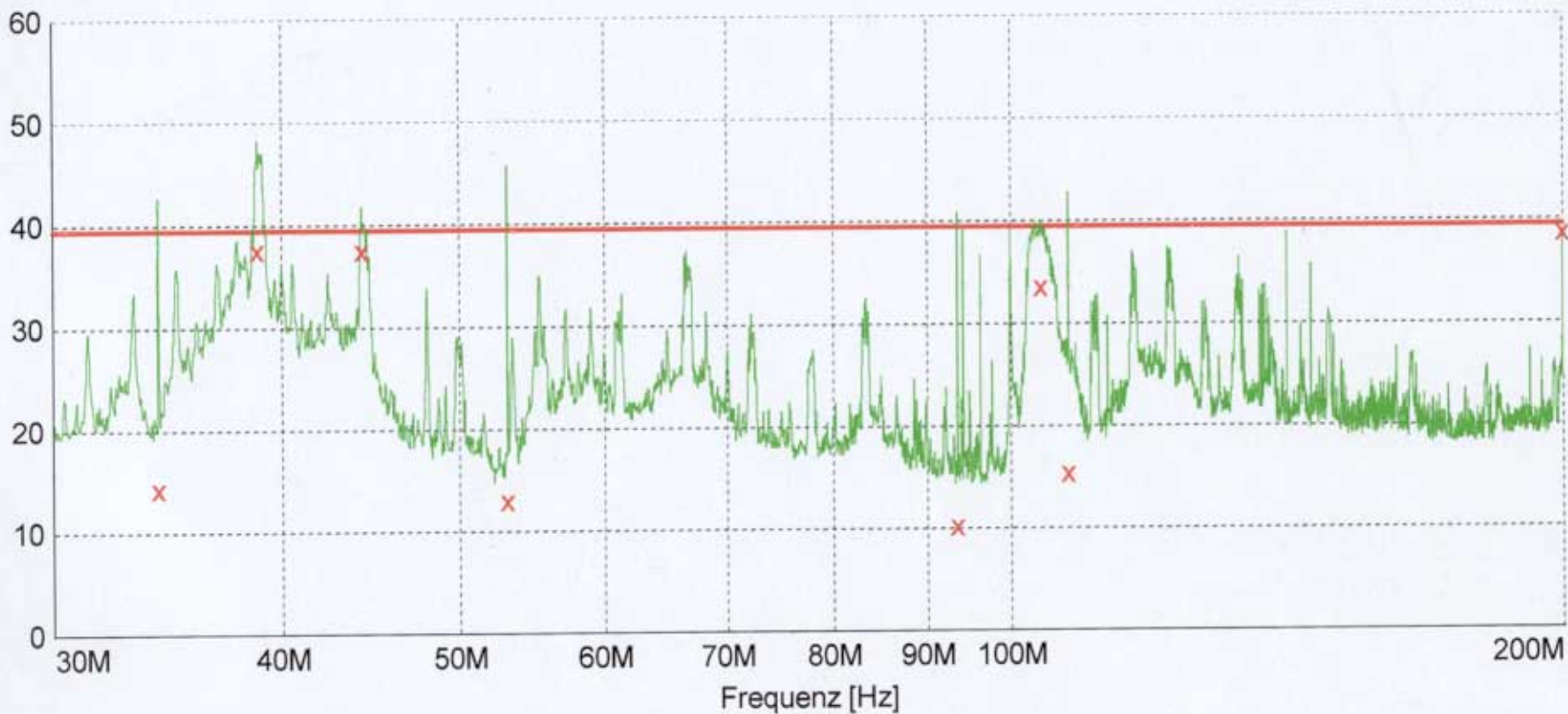


x x	MES	Cor_USB2_V1_fin	QP	
+ +	-MES	Cor_USB2_V1_fin	AV	
—	MES	Cor_USB2_V1_pre	PK	
—	MES	Cor_USB2_V1_pre	AV	
—	LIM	EN 55022 V	QP	EN 55022 V QP
—	LIM	EN 55022 V	AV	EN 55022 V AV



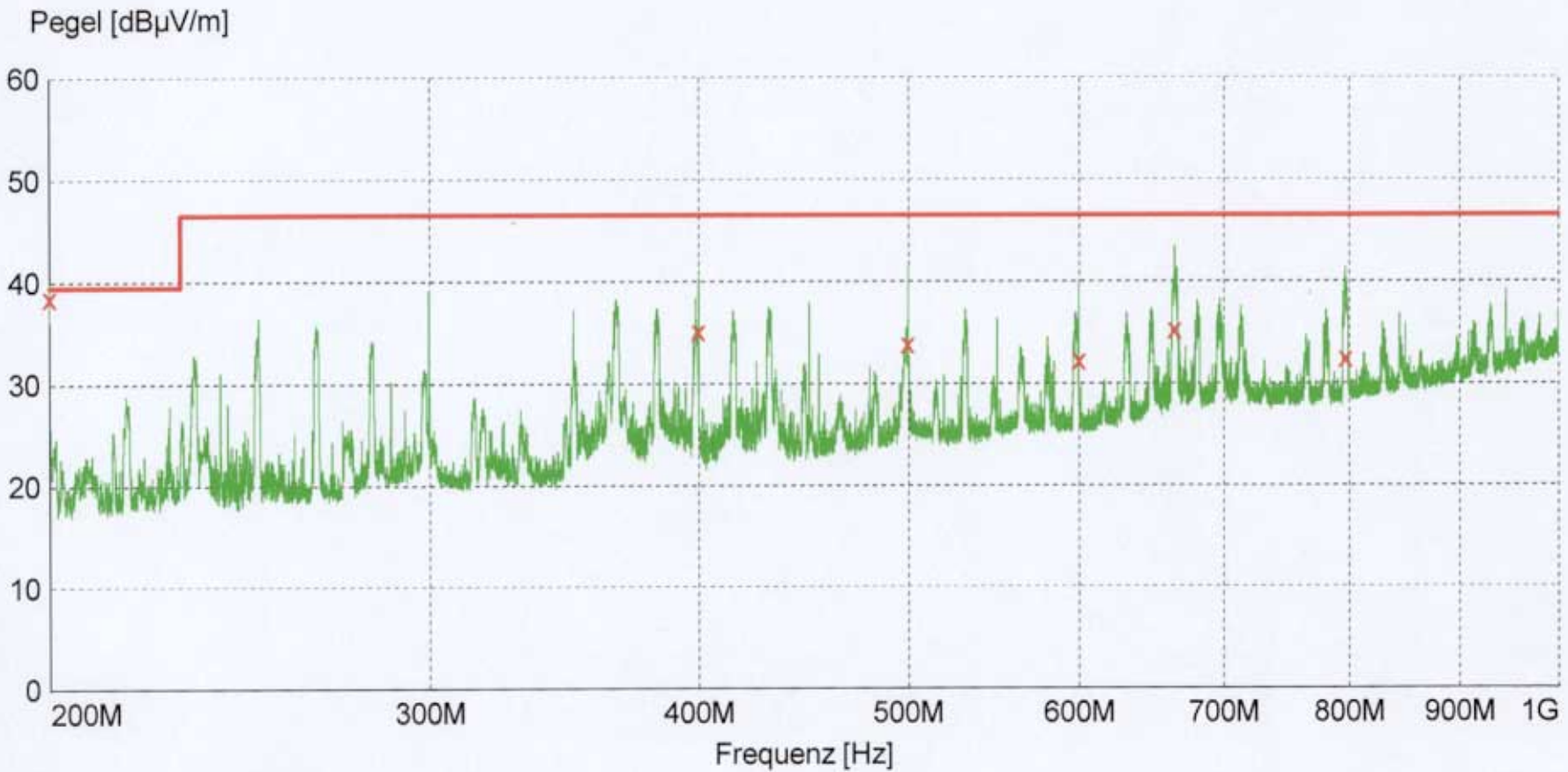
- MES Cor_USB2_C1_pre PK
- MES Cor_USB2_C1_pre AV
- LIM EN 55022 C QP
- LIM EN 55022 C AV

Pegel [dB μ V/m]



x x :MES Cor_USB2_F1_fin QP
— MES Cor_USB2_F1_pre PK
— LIM EN 55022 F QP

EN 55022 F QP



x x : MES Cor_USB2_F2_fin QP
 — MES Cor_USB2_F2_pre PK
 — LIM EN 55022 F QP

EN 55022 F QP