

FCC TEST REPORT

of

Color LCD Monitor

Brand name : Soly Greatwall

Model No. : L7XXX, NV7XXXX

Serial No. : N/A

Report No. : FCC05-8007

Date : June 13, 2005

Prepared for

CHINA GREAT-WALL COMPUTER SHENZHEN CO., LTD.

Greatwall Computer Industry Park, Baoshi East Rd. Shiyan County, Baoan,
Shenzhen, China

Prepared by

ShenZhen Electronic Product Quality Testing Center

Electronic Testing Building, Shahe Road, Xili, Nanshan District, Shenzhen,
518055, P. R. China. Tel: 86 755 26627338 Fax: 86 755 26627238

This test report consists of **81** pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product endorsement by SET. The test results in the report only apply to the tested sample. The Test Report shall be invalid without all the signatures of testing engineers, reviewer and approver.

Table of Contents

1	General Description of EUT	3
2	Summary of Test Results.....	5
3	Test Report Certification.....	5
4	Conducted Emission Test	6
	4.1 Limits of Conducted Emission.....	6
	4.2 Test Instruments	6
	4.3 Test Procedure	6
	4.4 Test Setup	7
	4.5 EUT Operating Conditions	7
	4.6 Test Results.....	7
5	Radiated Emission Test	38
	5.1 Limits of Radiated Emission.....	38
	5.2 Test Instruments	38
	5.3 Test Procedure	38
	5.4 Test Setup	39
	5.5 EUT Operating Conditions	39
	5.6 Test Results.....	40
	Appendix I : Photographs of the EUT.....	70
	Appendix II : Photographs of Test Configuration.....	81

1 General Description of EUT

Product: Color LCD Monitor

Brand name: Soly Greatwall

Model No.: L7XXX, NV7XXXX

Power Supply: d.c. 16V, 4A

Accessories: Adaptor 1#:Model: WDS050120

Input: 100-240V, 50-60Hz, 1.2A

Output: DC16V, 4.16A

Adaptor 2#:Model: UP05071120

Input: 100-240V, 50-60Hz, 1.2A

Output: DC16V, 4.16A

I/O Signal Ports: VGA

Applicant: CHINA GREAT-WALL COMPUTER SHENZHEN CO., LTD.

Applicant Address: Greatwall Computer Industry Park, Baoshi East Rd. Shiyan County, Baoan, Shenzhen

Manufacturer: CHINA GREAT-WALL COMPUTER SHENZHEN CO., LTD.

Manufacturer Address: Greatwall Computer Industry Park, Baoshi East Rd. Shiyan County, Baoan, Shenzhen

NOTE:

1. The EUT is 17inch LCD Monitor--class B information technology equipment according to FCC Part 15. For a more detailed features description about the EUT, please refer to User's Manual.
2. The models L7XXX and NV7XXX are a series of color LCD monitor, X can be A to Z or 0 to 9 or none, stands for different customers.
3. This series of color LCD monitor have different on the panel and main-board.

All panels and main-boards are listed below:

Panel	No	Manufacture	Model	Main-board	No	Model
	1	Chung Hwa	CLAA170EA07		1	RTD2023
	2	CHIMEI	M170E5-L05		2	ST3800
	3	SHARP	LQ170ELG11		3	GEN5621
	4	SAMSUNG	LTM170EU-L21		4	TSU56AK
	5	HSD	HSD170ME13		5	GEN2120

4. The EMC tests were performed on the samples listed below:

Sample No.	Panel	Main-board
1	Chung Hwa CLAA170EA07	RTD2023
2	CHIMEI M170E5-L05	RTD2023
3	SHARP LQ170ELG11	RTD2023
4	SAMSUNG LTM170EU-L2	RTD2023
5	HSD HSD170ME13	RTD2023
6	Chung Hwa CLAA170EA07	ST3800
7	CHIMEI M170E5-L05	ST3800
8	SHARP LQ170ELG11	ST3800
9	SAMSUNG LTM170EU-L2	ST3800
10	HSD HSD170ME13	ST3800
11	Chung Hwa CLAA170EA07	GEN5621
12	CHIMEI M170E5-L05	GEN5621
13	SHARP LQ170ELG11	GEN5621
14	SAMSUNG LTM170EU-L2	GEN5621
15	HSD HSD170ME13	GEN5621
16	Chung Hwa CLAA170EA07	TSU56AK
17	CHIMEI M170E5-L05	TSU56AK
18	SHARP LQ170ELG11	TSU56AK
19	SAMSUNG LTM170EU-L2	TSU56AK
20	HSD HSD170ME13	TSU56AK
21	Chung Hwa CLAA170EA07	GEN2120
22	CHIMEI M170E5-L05	GEN2120
23	SHARP LQ170ELG11	GEN2120
24	SAMSUNG LTM170EU-L2	GEN2120
25	HSD HSD170ME13	GEN2120

2 Summary of Test Results

The EUT has been tested according to FCC part 15, Class B. The test procedure is according to ANSI C63.4: 2001. The test results are as following:

EMISSION		
Standard	Test Type	Result
FCC Part15 Class B	Radiated Emission	☒ PASS ☐ Fail ☐ Inapplicable
	Conducted Emission	☒ PASS ☐ Fail ☐ Inapplicable

3 Test Report Certification

We, ShenZhen Electronic Product Quality Testing Center, hereby certify that the Equipment Under Test (EUT) described above has been tested in our facility. The test record, data evaluation and EUT configuration represented herein are true and accurate accounts of measurements of the sample's EMC characteristics under the conditions herein specified.

Tested by: _____, Date: _____
Zhu Qi

Checked by: _____, Date: _____
Smart Li

Approved by: _____, Date: _____
Wang Keqin

4 Conducted Emission Test

4.1 Limits of Conducted Emission

The radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30Mhz shall not exceed the limits in the following table, as measured

Frequency range (MHz)	Conducted Limit (dBmV), Class B digital device	
	Quasi-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

NOTE:

1. The lower limit shall apply at the band edges.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

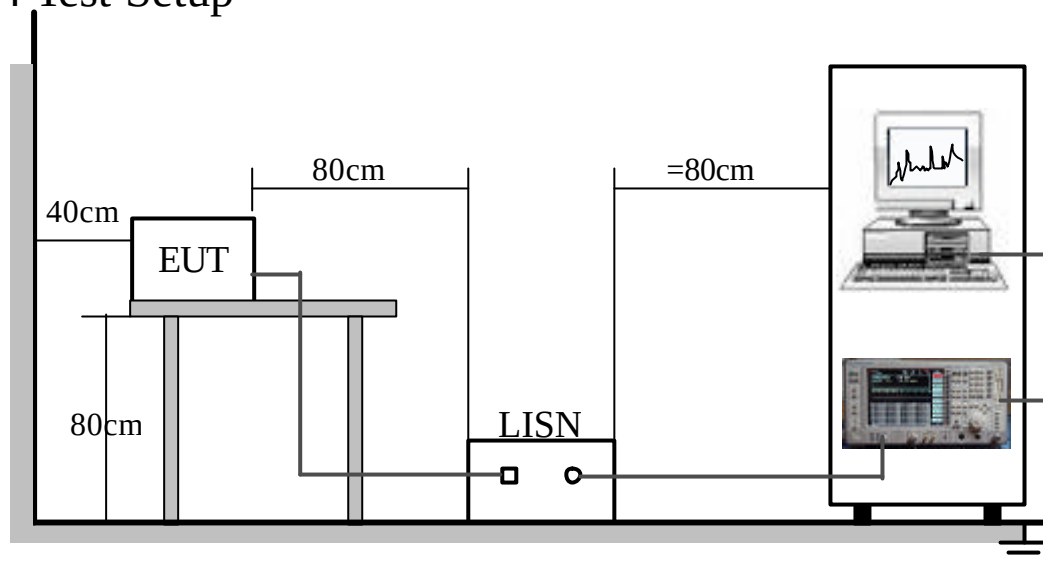
4.2 Test Instruments

Description	Manufacturer	Model No.	Serial No.	Calibration Date
Test Receiver	Schwarzbeck	FCKL1528	1528-158	Apr.1, 2004
LISN	Schwarzbeck	NSLK8127	8127-396	Apr.11, 2004
Shield Room	Nanbo Tech	Site 3	RF-1023	Mar. 18, 2004

4.3 Test Procedure

- a. The EUT was placed 0.4 meters from the conducting wall of shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). The LISN provide 50 Ω /50 μ H of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150 kHz to 30MHz was searched. Emission levels over 10dB under the prescribed limits are not reported.

4.4 Test Setup



For the actual test configuration, please refer to the related item - Photographs of the Test Configuration.

4.5 EUT Operating Conditions

The EUT was powered by 120V AC Mains.

The brightness and contrast was set to maximum, and the resolution was set to 1024*768@60Hz.

4.6 Test Results

Sample 1:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1590	65.5	55.5	55.33	--
2	0.2130	63.1	53.1	52.18	--
3	0.2670	61.2	51.2	44.18	--
4	0.3300	59.5	49.5	33.48	--
5	0.3750	58.4	48.4	34.35	--

Sample 2:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1590	65.5	55.5	54.25	--
2	0.2130	63.1	53.1	52.25	--
3	0.2670	61.2	51.2	46.13	--
4	0.3300	59.5	49.5	35.21	--
5	0.3750	58.4	48.4	33.35	--

Sample 3:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1590	65.5	55.5	54.91	--
2	0.2130	63.1	53.1	52.18	--
3	0.2670	61.2	51.2	44.26	--
4	0.3300	59.5	49.5	33.58	--
5	0.3750	58.4	48.4	33.25	--

Sample 4:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1590	65.5	55.5	54.25	--
2	0.2130	63.1	53.1	52.25	--
3	0.2670	61.2	51.2	46.13	--
4	0.3300	59.5	49.5	35.21	--
5	0.3750	58.4	48.4	33.35	--

Sample 5:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1590	65.5	55.5	53.25	--
2	0.2130	63.1	53.1	52.82	--
3	0.2670	61.2	51.2	45.10	--
4	0.3300	59.5	49.5	33.25	--
5	0.3750	58.4	48.4	33.55	--

Sample 6:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1590	65.5	55.5	54.22	--
2	0.2130	63.1	53.1	52.30	--
3	0.2670	61.2	51.2	45.08	--
4	0.3300	59.5	49.5	32.91	--
5	0.3750	58.4	48.4	31.89	--

Sample 7:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1590	65.5	55.5	54.80	--
2	0.2130	63.1	53.1	52.20	--
3	0.2670	61.2	51.2	44.32	--

4	0.3300	59.5	49.5	33.66	--
5	0.3750	58.4	48.4	33.21	--

Sample 8:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1590	65.5	55.5	53.46	--
2	0.2130	63.1	53.1	52.47	--
3	0.2670	61.2	51.2	46.07	--
4	0.3300	59.5	49.5	33.18	--
5	0.3750	58.4	48.4	32.48	--

Sample 9:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1590	65.5	55.5	53.48	--
2	0.2130	63.1	53.1	52.25	--
3	0.2670	61.2	51.2	45.78	--
4	0.3300	59.5	49.5	32.48	--
5	0.3750	58.4	48.4	32.06	--

Sample 10:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1590	65.5	55.5	53.83	--
2	0.2130	63.1	53.1	52.30	--
3	0.2670	61.2	51.2	44.92	--
4	0.3300	59.5	49.5	32.85	--
5	0.3750	58.4	48.4	33.21	--

Sample 11:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1500	66.0	56.0	54.72	--
2	0.2085	63.3	53.3	50.97	--
3	0.2130	63.1	53.1	52.67	--
4	0.2625	61.4	51.4	47.32	--

Sample 12:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1500	66.0	56.0	54.66	--
2	0.2085	63.3	53.3	51.20	--

3	0.2130	63.1	53.1	52.42	--
4	0.2625	61.4	51.4	45.97	--

Sample 13:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1500	66.0	56.0	54.58	--
2	0.2085	63.3	53.3	51.46	--
3	0.2130	63.1	53.1	52.29	--
4	0.2625	61.4	51.4	44.25	--

Sample 14:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1500	66.0	56.0	55.05	--
2	0.2085	63.3	53.3	52.14	--
3	0.2130	63.1	53.1	52.21	--
4	0.2625	61.4	51.4	44.28	--

Sample 15:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1500	66.0	56.0	54.86	--
2	0.2085	63.3	53.3	52.01	--
3	0.2130	63.1	53.1	52.14	--
4	0.2625	61.4	51.4	44.19	--

Sample 16:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1500	66.0	56.0	54.86	--
2	0.2085	63.3	53.3	52.01	--
3	0.2130	63.1	53.1	52.14	--
4	0.2625	61.4	51.4	44.19	--

Sample 17:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1500	66.0	56.0	54.72	--
2	0.2085	63.3	53.3	50.97	--
3	0.2130	63.1	53.1	52.67	--
4	0.2625	61.4	51.4	47.32	--

Sample 18:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1500	66.0	56.0	54.66	--
2	0.2085	63.3	53.3	51.20	--
3	0.2130	63.1	53.1	52.42	--
4	0.2625	61.4	51.4	45.97	--

Sample 19:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1500	66.0	56.0	54.58	--
2	0.2085	63.3	53.3	51.46	--
3	0.2130	63.1	53.1	52.29	--
4	0.2625	61.4	51.4	44.25	--

Sample 20:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1500	66.0	56.0	55.05	--
2	0.2085	63.3	53.3	52.14	--
3	0.2130	63.1	53.1	52.21	--
4	0.2625	61.4	51.4	44.28	--

Sample 21:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1590	65.5	55.5	54.80	--
2	0.2130	63.1	53.1	49.20	--
3	0.2670	61.2	51.2	44.32	--
4	0.3300	59.5	49.5	33.66	--
5	0.3750	58.4	48.4	33.21	--

Sample 22:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1500	66.0	56.0	54.58	--
2	0.2085	63.3	53.3	51.69	--
3	0.2130	63.1	53.1	52.89	--
4	0.2625	61.4	51.4	46.51	--

Sample 23:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1500	66.0	56.0	54.47	--
2	0.2085	63.3	53.3	50.98	--
3	0.2130	63.1	53.1	52.67	--
4	0.2625	61.4	51.4	47.45	--

Sample 24:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1500	66.0	56.0	54.47	--
2	0.2085	63.3	53.3	50.98	--
3	0.2130	63.1	53.1	52.67	--
4	0.2625	61.4	51.4	47.45	--

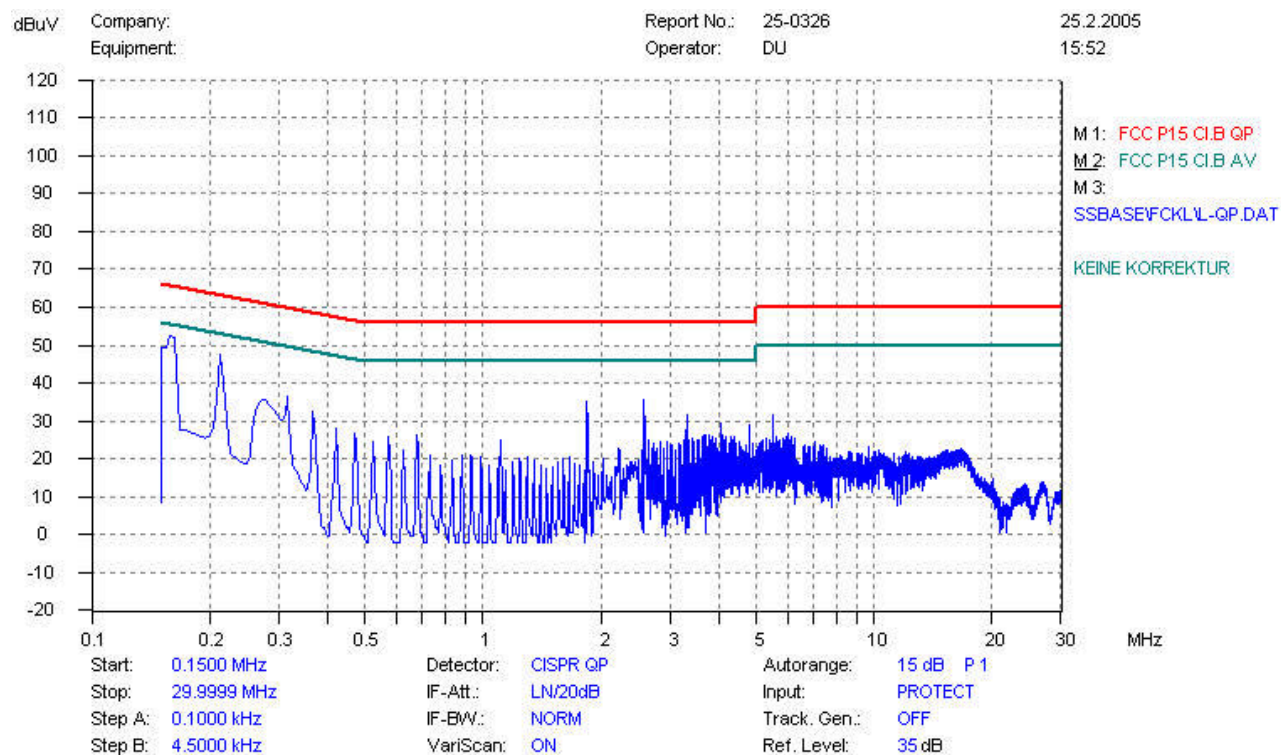
Sample 25:

No.	Freq. (MHz)	Limit Value (dBmV)		Emission Level (dBmV)	
		QP	AV	QP	AV
1	0.1500	66.0	56.0	54.72	--
2	0.2085	63.3	53.3	50.97	--
3	0.2130	63.1	53.1	52.67	--
4	0.2625	61.4	51.4	47.32	--

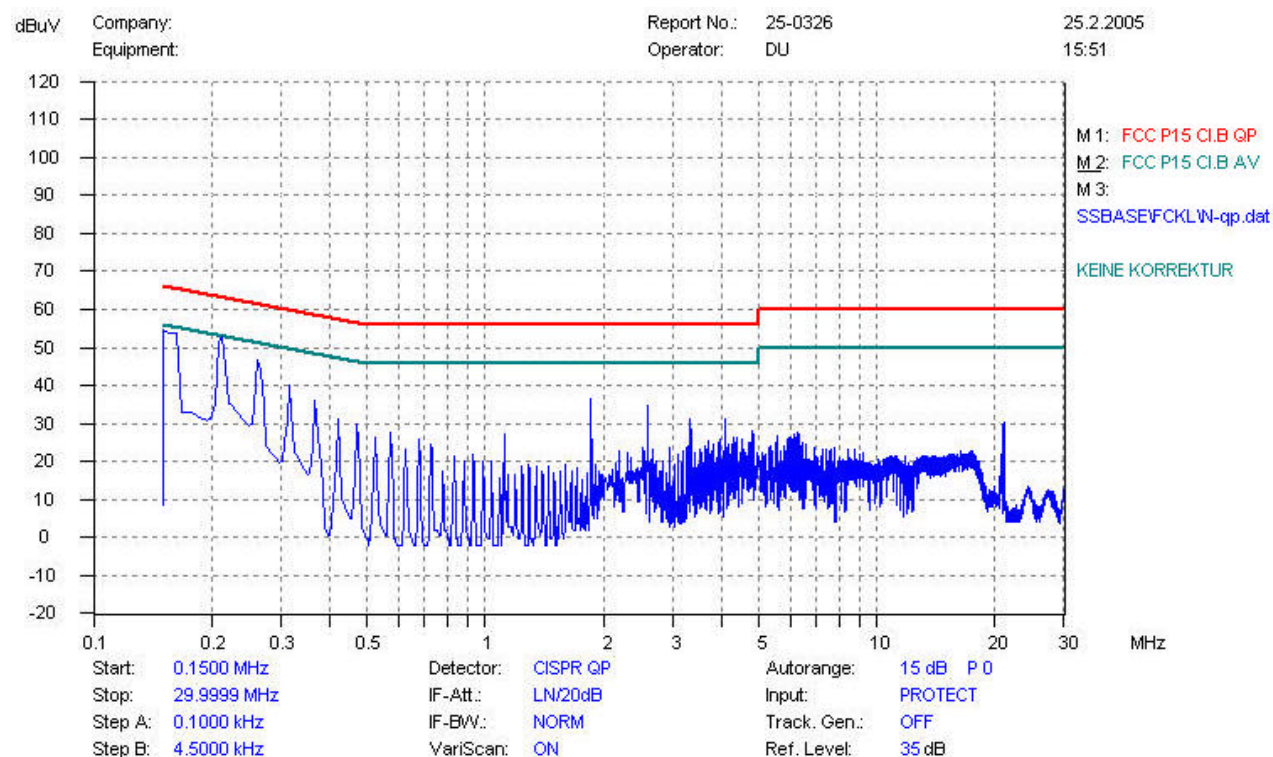
NOTE:

1. QP and AV are abbreviations of the quasi-peak and average individually.
2. If the emission levels measured with QP detector are lower than AV limits, there is unnecessary to measure with AV detector.
3. The emission levels recorded above is the larger ones of both L phase and N phase.

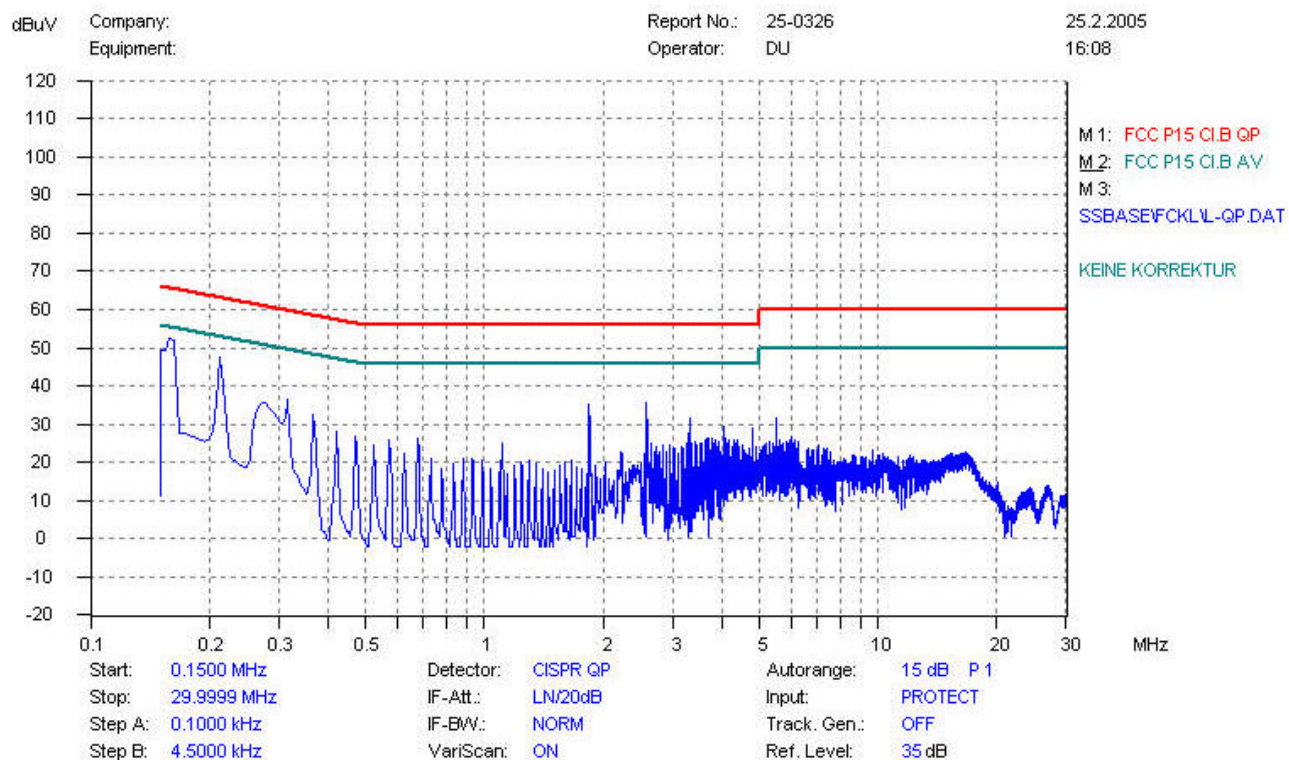
1. Mains terminal disturbance voltage, QP detector, L phase, Sample 1



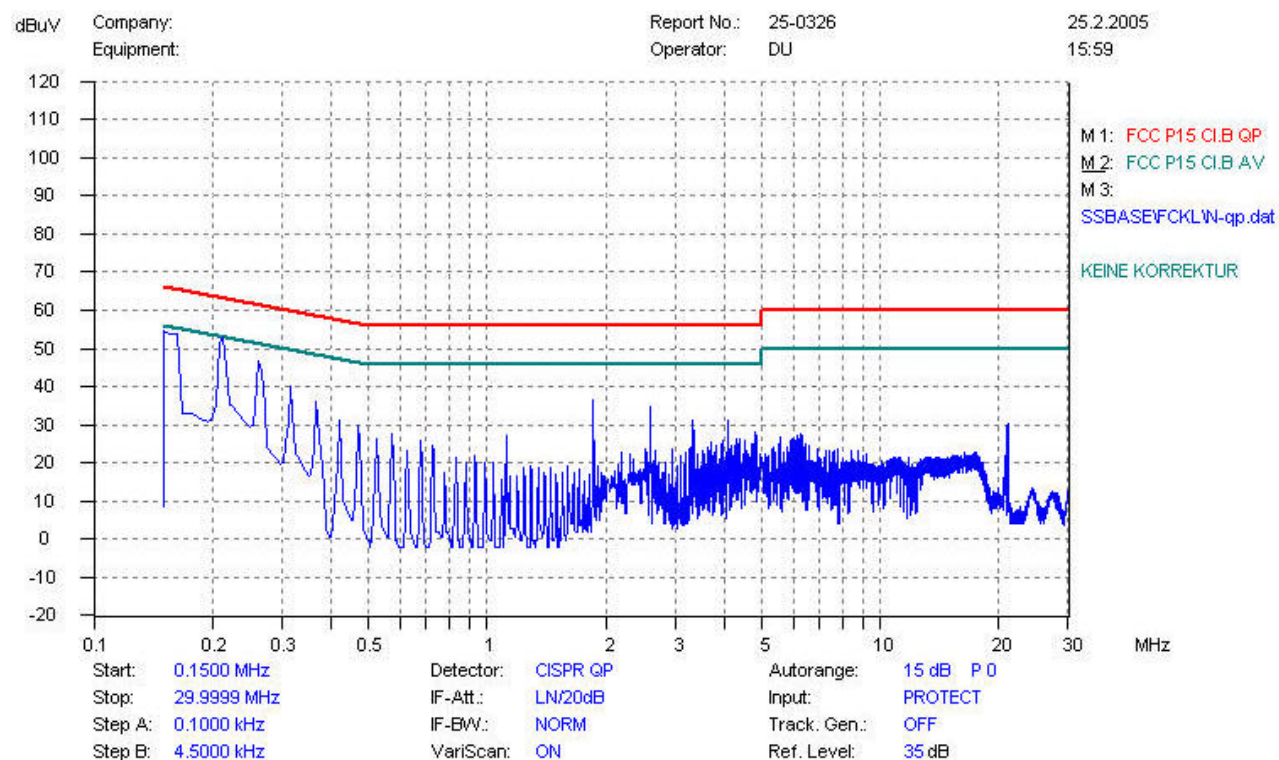
2. Mains terminal disturbance voltage, QP detector, N phase, Sample 1



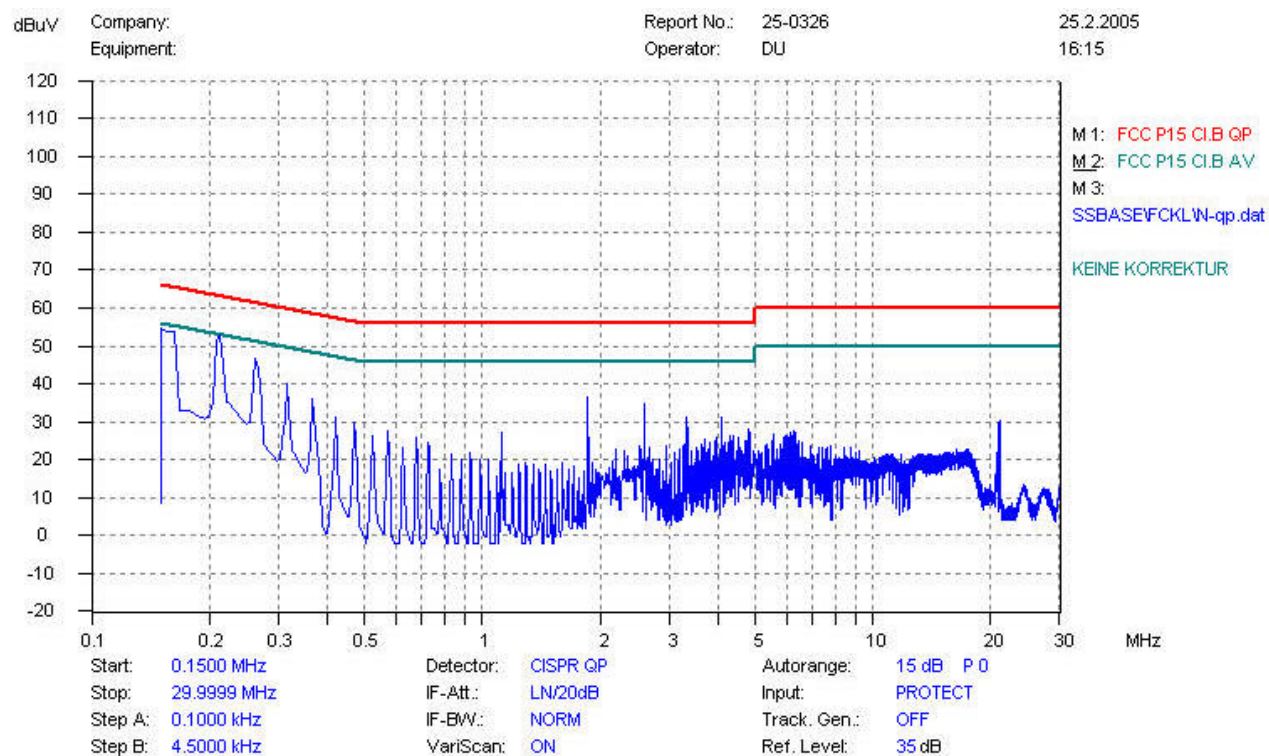
3. Mains terminal disturbance voltage, QP detector, L phase, Sample 2



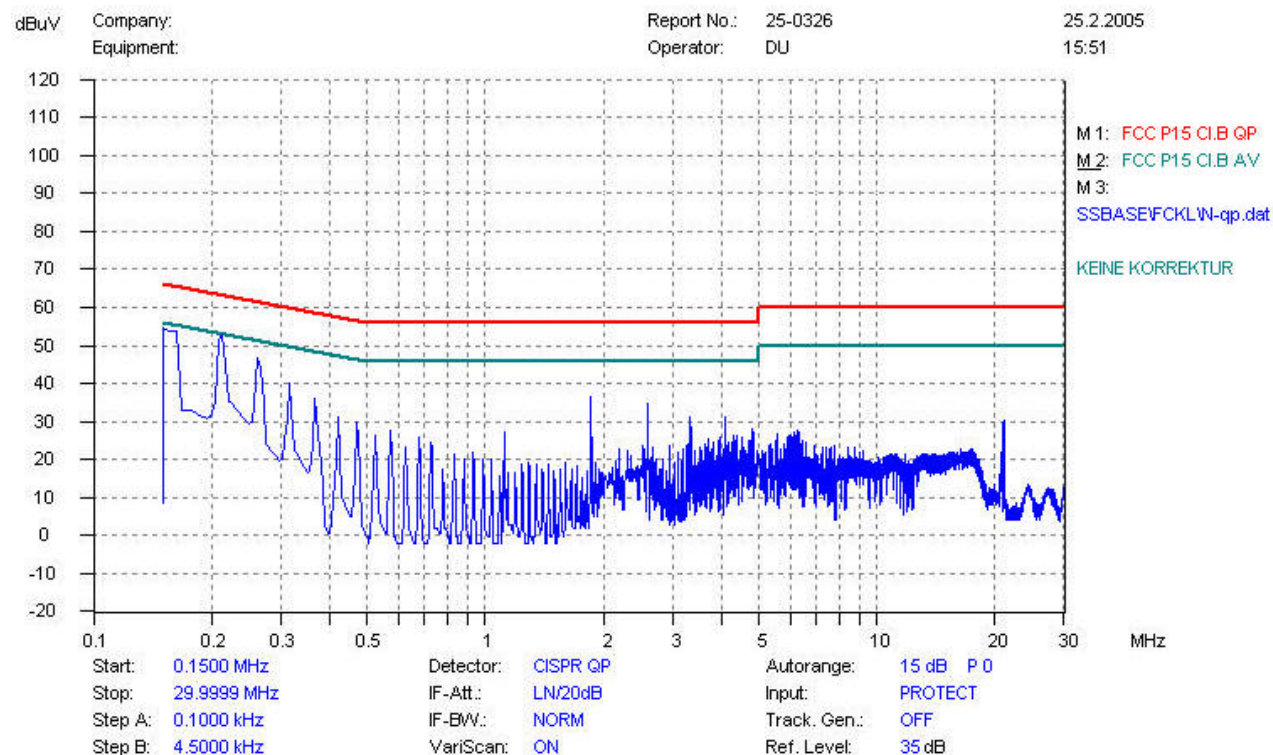
4. Mains terminal disturbance voltage, QP detector, N phase, Sample 2



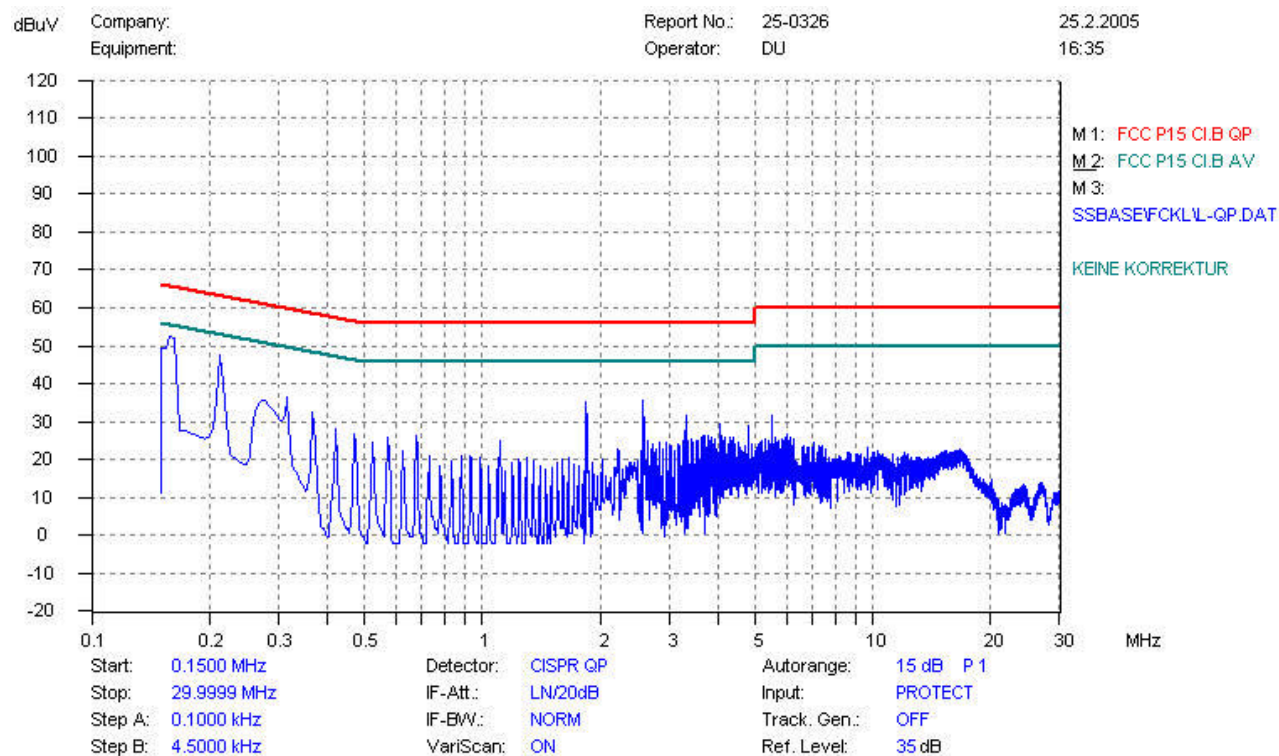
5. Mains terminal disturbance voltage, QP detector, L phase, Sample 3



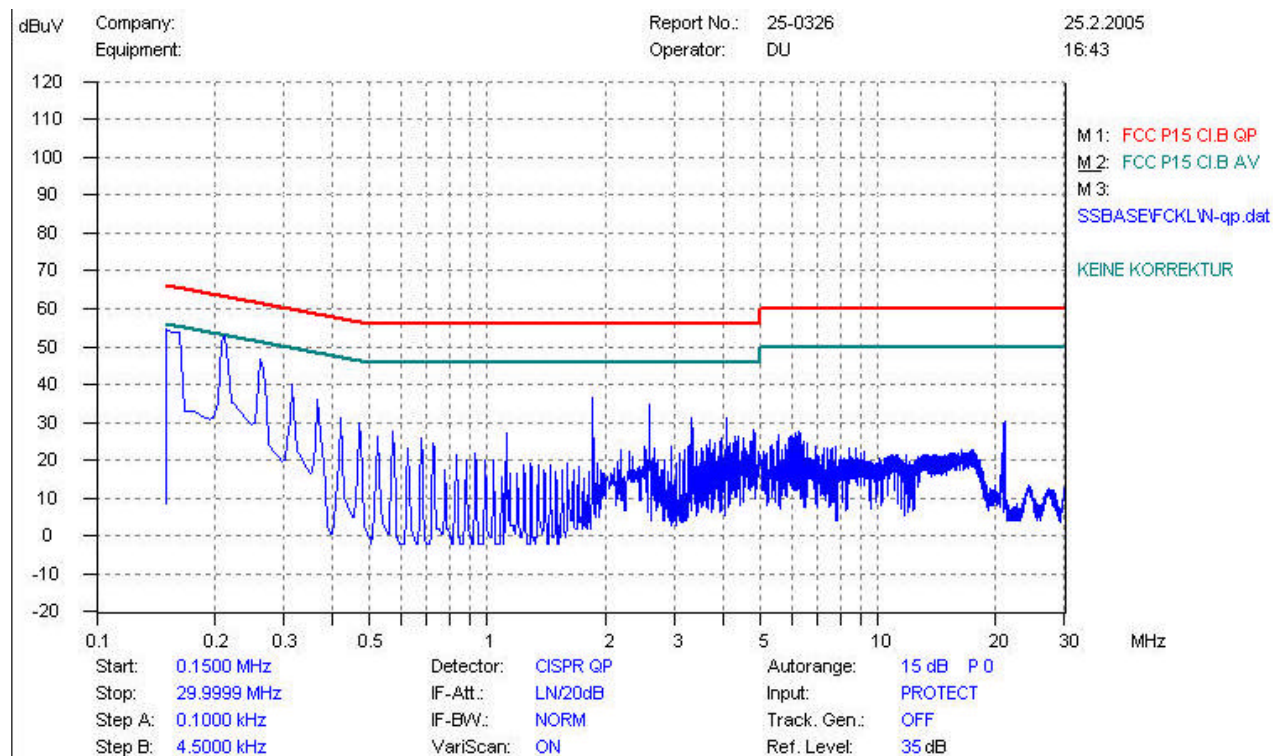
6. Mains terminal disturbance voltage, QP detector, N phase, Sample 3



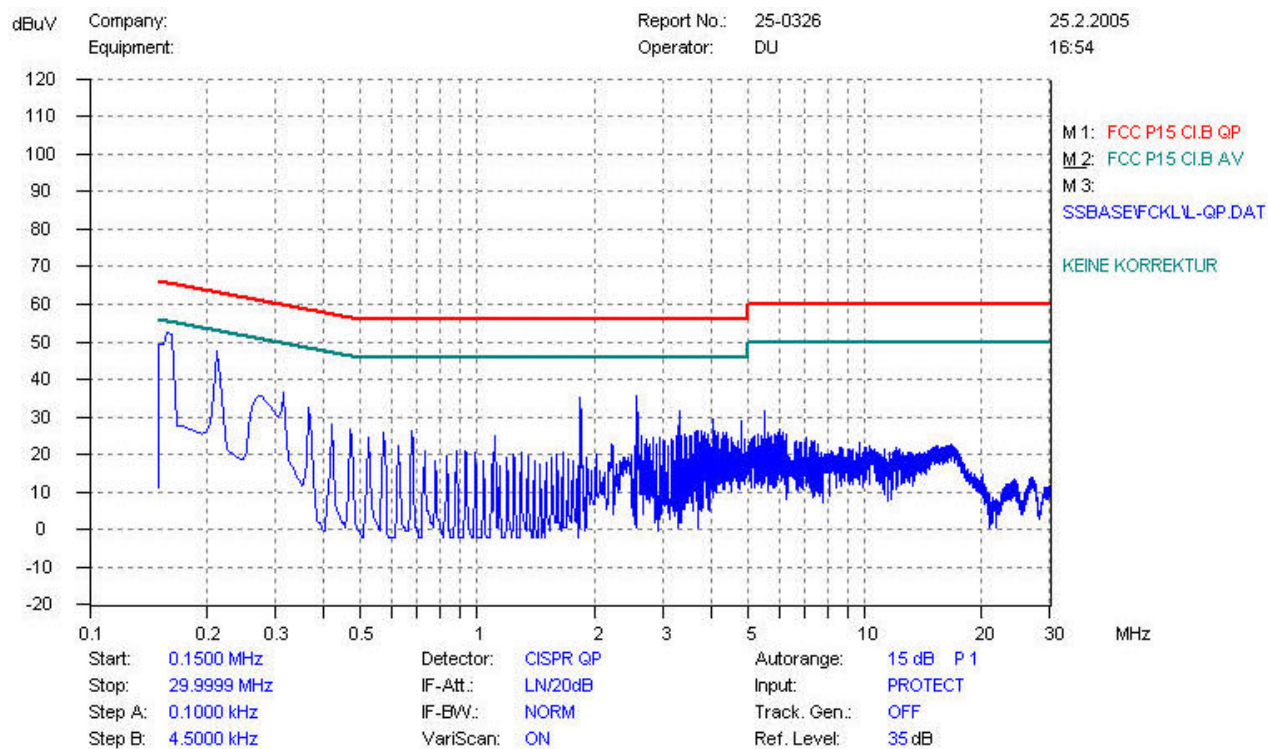
7. Mains terminal disturbance voltage, QP detector, L phase, Sample 4



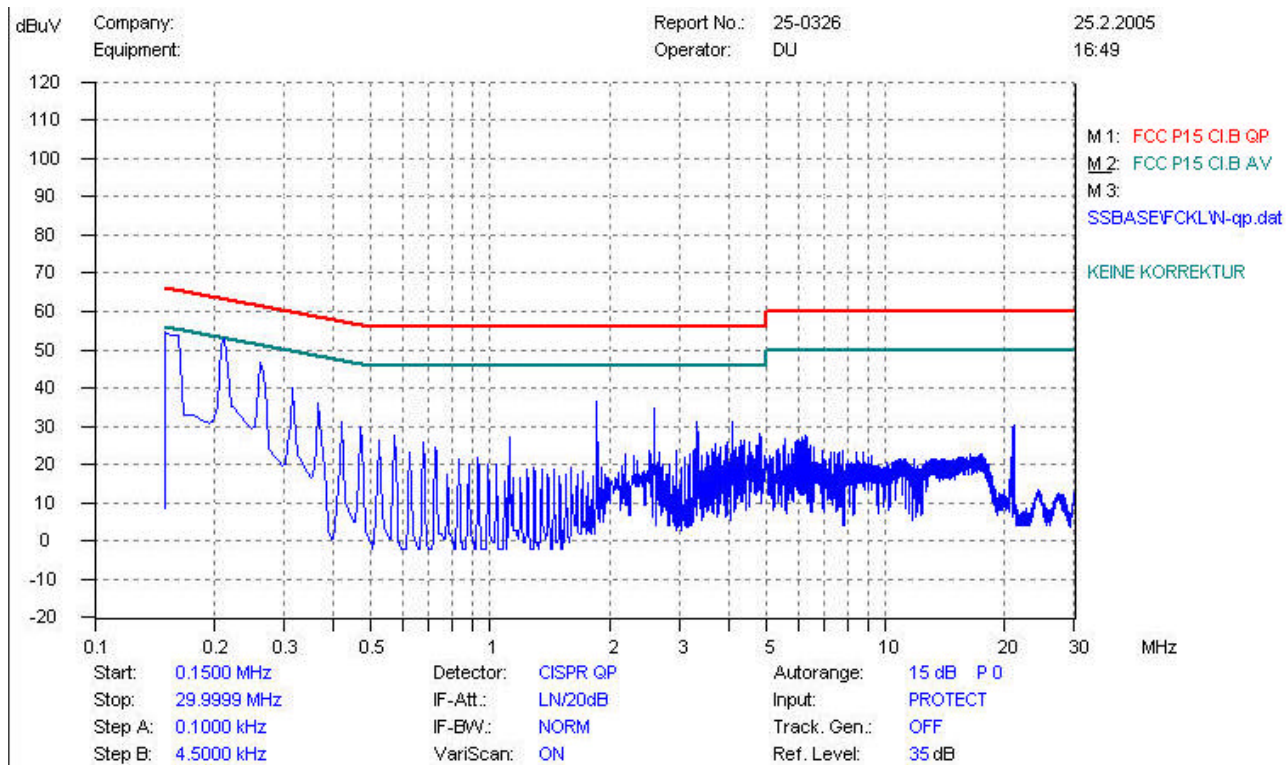
8. Mains terminal disturbance voltage, QP detector, N phase, Sample 4



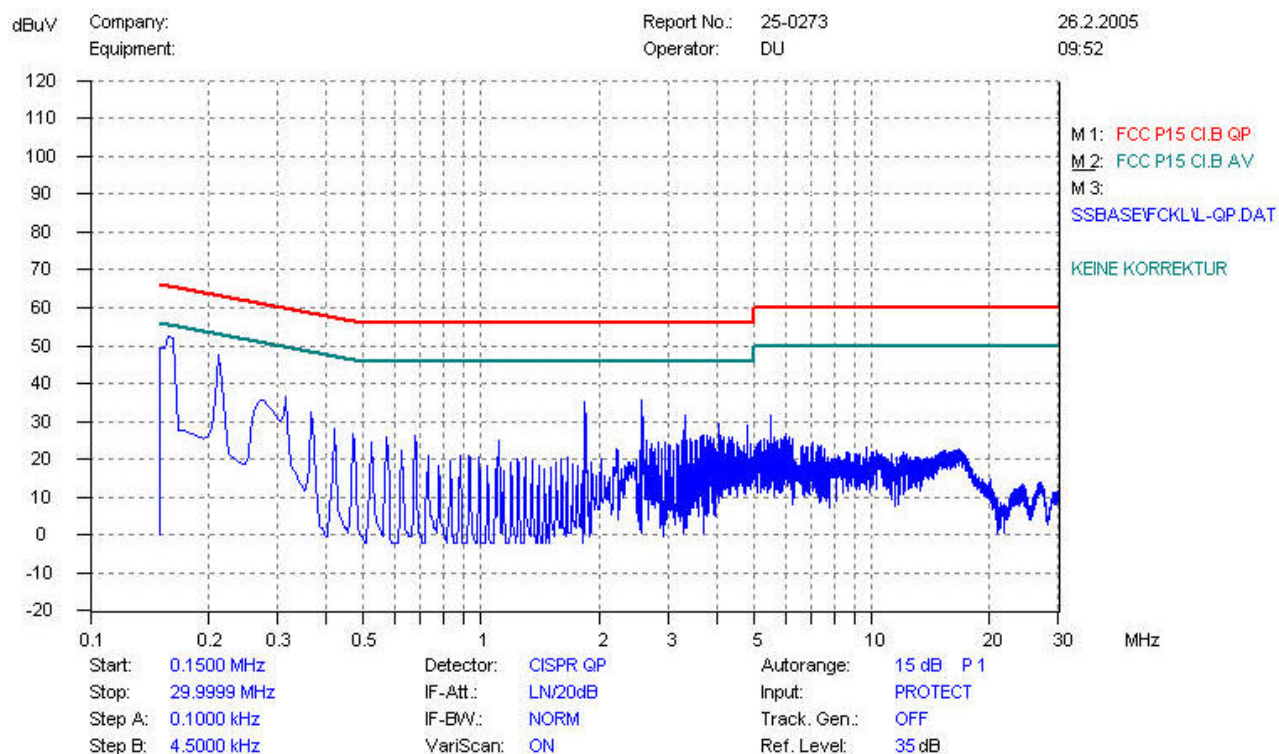
9. Mains terminal disturbance voltage, QP detector, L phase, Sample 5



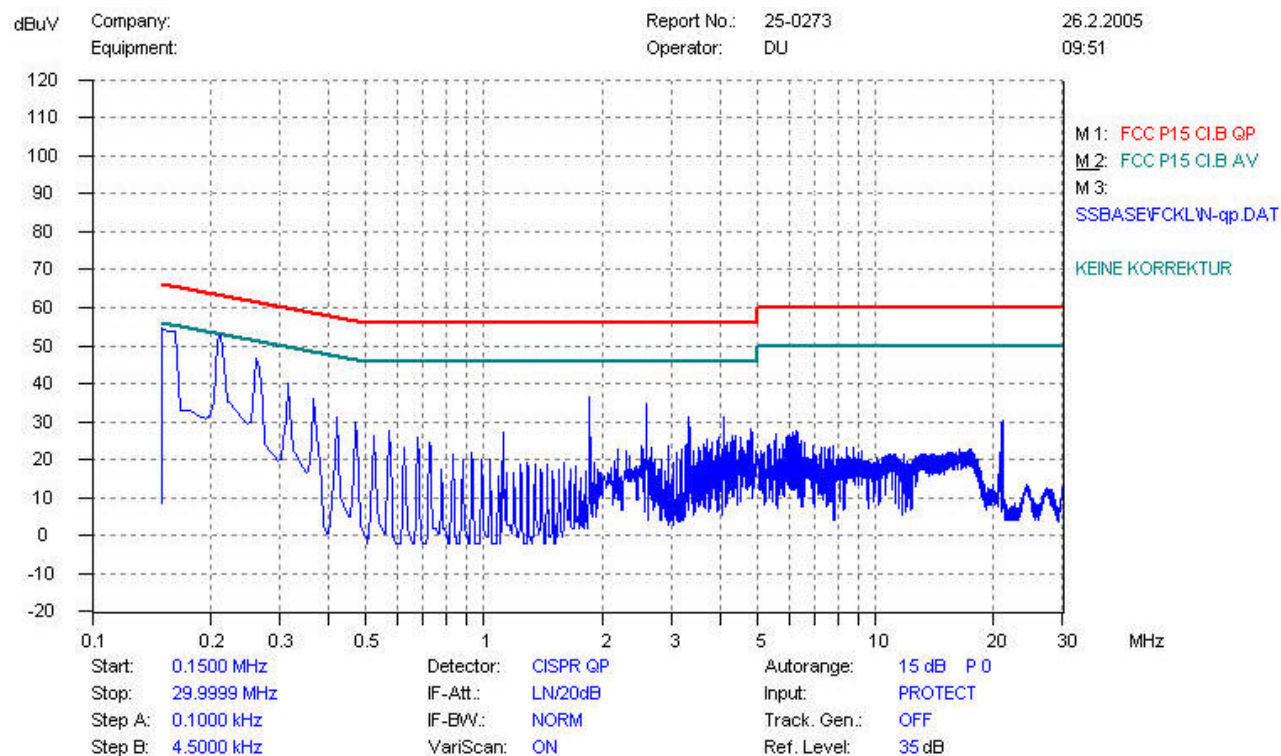
10. Mains terminal disturbance voltage, QP detector, N phase, Sample 5



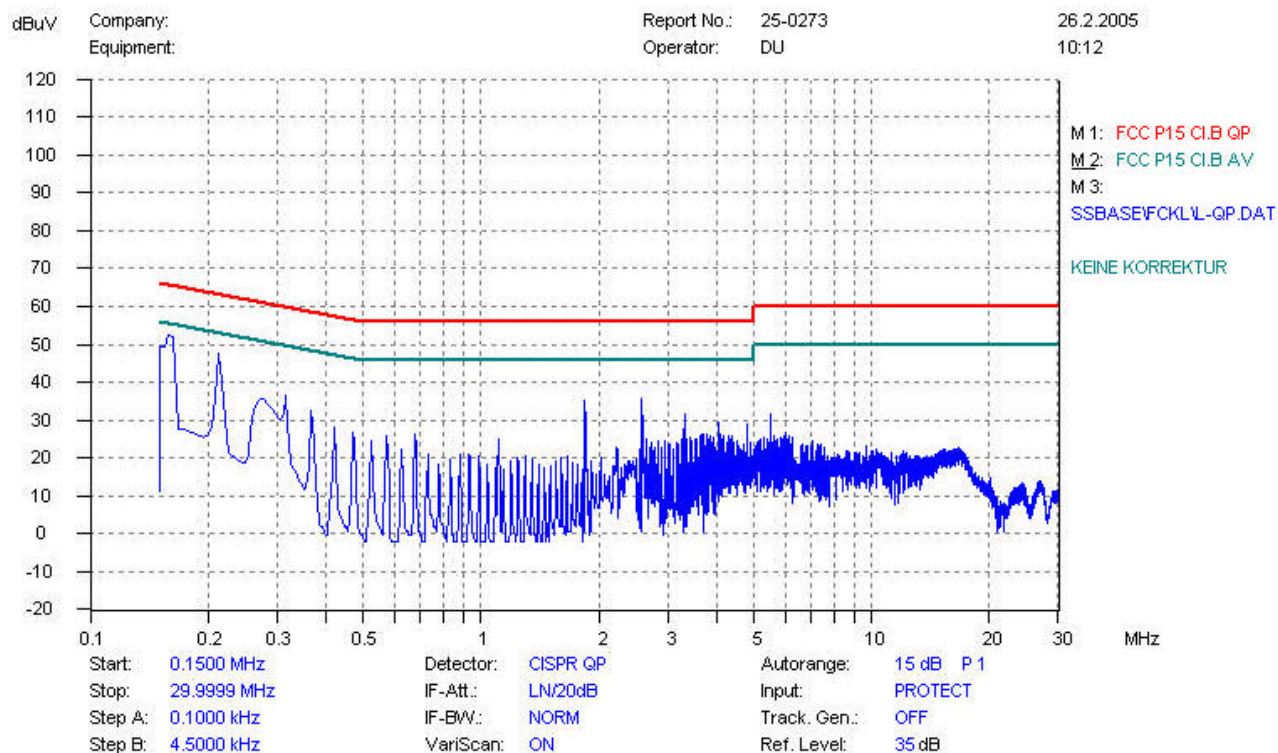
11. Mains terminal disturbance voltage, QP detector, L phase, Sample 6



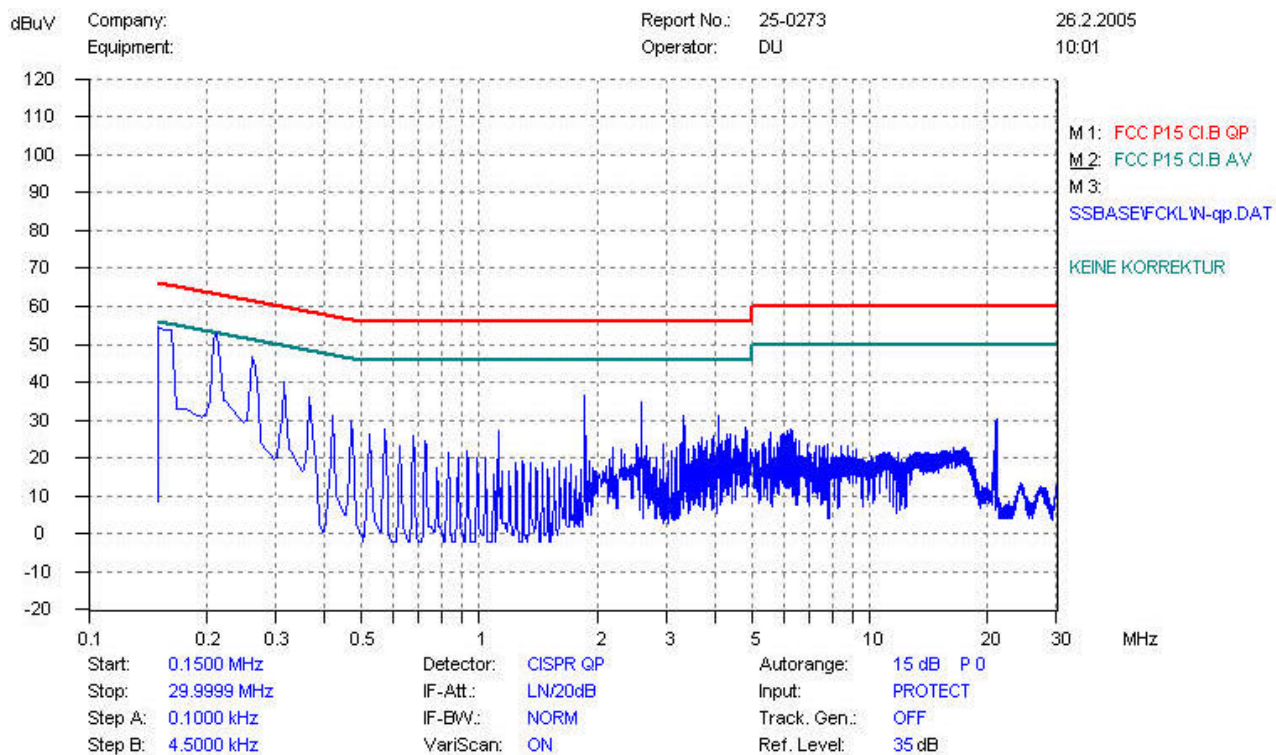
12. Mains terminal disturbance voltage, QP detector, N phase, Sample 6



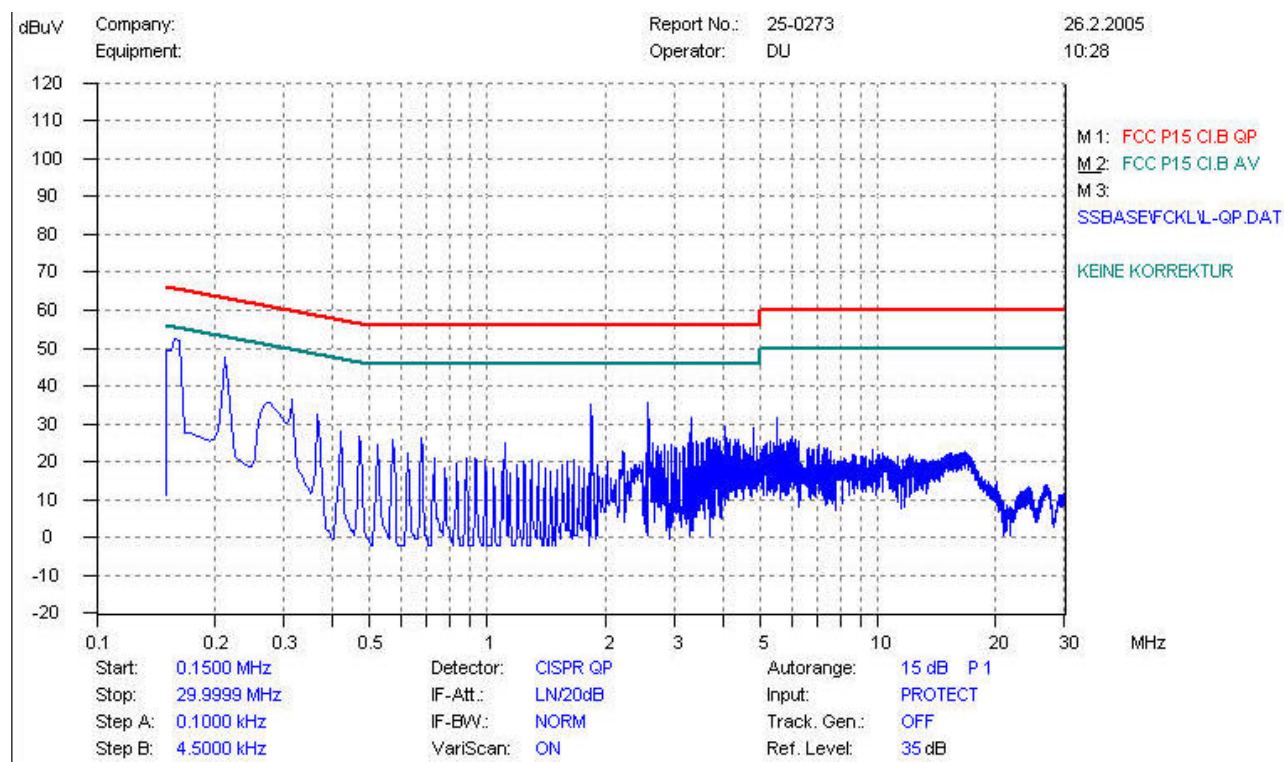
13. Mains terminal disturbance voltage, QP detector, L phase, Sample 7



14. Mains terminal disturbance voltage, QP detector, N phase, Sample 7



15. Mains terminal disturbance voltage, QP detector, L phase, Sample 8



16. Mains terminal disturbance voltage, QP detector, N phase, Sample 8

