

TEST REPORT

Applicant: Sundopt Led Lighting Co., Ltd.

Address of Applicant: 8-6 Building, Tongfuyu Industrial Park, Aiqun Road, Shangwu Community, Shiyan Street, 518108 Shenzhen, PEOPLE'S REPUBLIC OF CHINA

Manufacturer/Factory: Sundopt Led Lighting Co., Ltd.

Address of Manufacturer/Factory: 8-6 Building, Tongfuyu Industrial Park, Aiqun Road, Shangwu Community, Shiyan Street, 518108 Shenzhen, PEOPLE'S REPUBLIC OF CHINA

Equipment Under Test (EUT)

Product Name: LED Linear Lights

Model No.: See Section 5.1

Trade Mark: 

Applicable standards: EN 55015:2013+A1:2015
EN 61547:2009
EN 61000-3-2:2014
EN 61000-3-3:2013

Date of sample receipt: September 23, 2019

Date of Test: September 23- October 08, 2019

Date of report issued: October 10, 2019

Test Result : PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Robinson Luo

Laboratory Manager

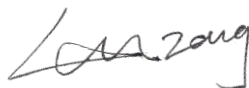
This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.



2 Version

Version No.	Date	Description
00	October 10, 2019	Original

Prepared By:

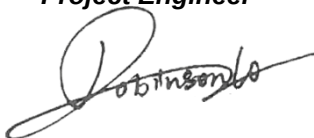


Date:

October 10, 2019

Project Engineer

Reviewed By:



Date:

October 10, 2019

Reviewer

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4 Test Summary

Test item	Test Requirement	Test Method	Class / Severity	Result
Radiated electromagnetic disturbances (9kHz-30MHz)	EN 55015	EN 55015	Table 3a	Pass
Radiated electromagnetic disturbances	EN 55015	EN 55015	Table 3b	Pass
Disturbance voltages	EN 55015	EN 55015	Table 2a	Pass
Harmonic Emission	EN 61000-3-2	EN 61000-3-2	Class C	Pass
Flicker Emission	EN 61000-3-3	EN 61000-3-3	Clause 5 of EN61000-3-3	Pass
Electrostatic discharges	EN 61547	EN 61000-4-2	Contact ± 4 kV Air ± 8 kV	Pass
Radio-frequency electromagnetic fields	EN 61547	EN 61000-4-3	3V/m 80%, 1kHz, AM	Pass
Fast Transients	EN 61547	EN 61000-4-4	AC ± 1.0 kV	Pass
Surges	EN 61547	EN 61000-4-5	Table 10	Pass
Injected currents	EN 61547	EN 61000-4-6	3Vrms (emf), 80%, 1kHz Amp. Mod.	Pass
Voltage dips and short interruptions	EN 61547	EN 61000-4-11	0 % UT* for 0.5per 70 % UT* for 10per	Pass

Remark:

UT* is the nominal supply voltage.

N/A: Not applicable.

5 General Information

5.1 General Description of EUT

Product Name:		LED Linear Lights			
Model No.	Rated Power (W)	LED Driver type	Length(m)	LED Qty.	Weight (g)
For series 1					
PLF1-D120-032A-XX	27	LC 38W 500-700mA flexC Ip ADV	1,2	272	3080
PLF1-D120-032B-XX		LCA 35W 150-700mA one4all Ip PRE			3070
PLF1-D120-032C-XX		BK-BHL040-0500BD			3100
PLF1-D120-032D-XX		LCA 50W 350-1050mA DT8 Ip PRE			3120
PLF1-D120-024A-XX	19	LC 19W 250-350mA flexC Ip ADV			3060
PLF1-D120-024B-XX		LCA 35W 150-700mA one4all Ip PRE			3070
PLF1-D120-024C-XX		BK-BHL040-0350BD			3080
PLF1-D120-024D-XX		LCA 50W 350-1050mA DT8 Ip PRE			3120
PLF1-D150-040A-XX	34	LC 38W 500-700mA flexC Ip ADV	1,5	340	4150
PLF1-D150-040B-XX		LCA 35W 150-700mA one4all Ip PRE			4130
PLF1-D150-040C-XX		BK-BHL040-0650BD			4150
PLF1-D150-040D-XX		LCA 50W 350-1050mA DT8 Ip PRE			4170
PLF1-D150-030A-XX	27	LC 38W 500-700mA flexC Ip ADV			4150
PLF1-D150-030B-XX		LCA 35W 150-700mA one4all Ip PRE			4130
PLF1-D150-030C-XX		BK-BHL040-0500BD			4140
PLF1-D150-030D-XX		LCA 50W 350-1050mA DT8 Ip PRE			4170
PLF1-D300-080A-XX	68	LC 81W 1200-1750mA flexC Ip ADV	3,0	680	7180
PLF1-D300-080B-XX		LCA 75W 900-1800mA one4all Ip PRE			7190
PLF1-D300-080C-XX		BK-BHL070-1400BD			7220
PLF1-D300-060A-XX	48	LC 57W 800-1050mA flexC Ip ADV			7190

PLF1-D300-060B-XX		LCA 50W 350-1050mA one4all Ip PRE			7190
PLF1-D300-060C-XX		BK-BHL060-0950BD			7220
PLF1-I120-040A-XX	32	LC 38W 500-700mA flexC Ip ADV	1,2	459	3520
PLF1-I120-040B-XX		LCA 35W 150-700mA one4all Ip PRE			3530
PLF1-I120-040C-XX		BK-BHL040-0600BD			3530
PLF1-I120-040D-XX		LCA 50W 350-1050mA DT8 Ip PRE			3550
PLF1-I150-050A-XX	42	LC 57W 800-1050mA flexC Ip ADV	1,5	578	4290
PLF1-I150-050B-XX		LCA 50W 350-1050mA one4all Ip PRE			4300
PLF1-I150-050C-XX		BK-BHL050-0800BD			4290
PLF1-I150-050D-XX		LCA 50W 350-1050mA DT8 Ip PRE			4320
PLF1-I300-100A-XX	80	LC 81W 1200-1750mA flexC Ip ADV	3,0	1156	7610
PLF1-I300-100B-XX		LCA 75W 900-1800mA one4all Ip PRE			7590
PLF1-I300-100C-XX		BK-BHL070-1500BD			7610
For series 2					
VLF1-D120-032A-XX	30	LC 38W 500-700mA flexC Ip ADV	1,2	80	3520
VLF1-D120-032B-XX		LCA 35W 150-700mA one4all Ip PRE			3500
VLF1-D120-032C-XX		BK-BHL040-0600BD			3520
VLF1-D120-032D-XX		LCA 50W 350-1050mA DT8 Ip PRE			3530
VLF1-D120-028A-XX	25	LC 38W 500-700mA flexC Ip ADV			3520
VLF1-D120-028B-XX		LCA 35W 150-700mA one4all Ip PRE			3500
VLF1-D120-028C-XX		BK-BHL040-0500BD			3520
VLF1-D120-028D-XX		LCA 50W 350-1050mA DT8 Ip PRE			3530
VLF1-D150-040A-XX	39	LC 57W 800-1050mA flexC Ip ADV	1,5	100	4090
VLF1-D150-040B-XX		LCA 50W 350-1050mA one4all Ip PRE			4100
VLF1-D150-040C-XX		BK-BHL050-0850BD			4100

VLF1-D150-040D-XX		LCA 50W 350-1050mA DT8 Ip PRE			4120
VLF1-D150-034A-XX	27	LC 38W 500-700mA flexC Ip ADV			4080
VLF1-D150-034B-XX		LCA 35W 150-700mA one4all Ip PRE			4100
VLF1-D150-034C-XX		BK-BHL040-0550BD			4100
VLF1-D150-034D-XX		LCA 50W 350-1050mA DT8 Ip PRE			4110
VLF1-D300-080A-XX	76	LC 81W 1200-1750mA flexC Ip ADV	3,0	200	7920
VLF1-D300-080B-XX		LCA 75W 900-1800mA one4all Ip PRE			7930
VLF1-D300-080C-XX		BK-BHL070-1500BD			7920
VLF1-D300-068A-XX	52	LC 57W 800-1050mA flexC Ip ADV			7920
VLF1-D300-068B-XX		LCA 50W 350-1050mA one4all Ip PRE			7940
VLF1-D300-068C-XX		BK-BHL060-1200BD			7920
VLF1-I120-040A-XX	34	LC 38W 500-700mA flexC Ip ADV	1,2	130	3460
VLF1-I120-040B-XX		LCA 35W 150-700mA one4all Ip PRE			3480
VLF1-I120-040C-XX		BK-BHL040-0700BD			3470
VLF1-I120-040D-XX		LCA 50W 350-1050mA DT8 Ip PRE			3470
VLF1-I150-050A-XX	42	LC 57W 800-1050mA flexC Ip ADV	1,5	160	4480
VLF1-I150-050B-XX		LCA 50W 350-1050mA one4all Ip PRE			4510
VLF1-I150-050C-XX		BK-BHL050-0800BD			4500
VLF1-I150-050D-XX		LCA 50W 350-1050mA DT8 Ip PRE			4480
VLF1-I300-100A-XX	84	LC 81W 1200-1750mA flexC Ip ADV	3,0	325	8420
VLF1-I300-100B-XX		LCA 75W 900-1800mA one4all Ip PRE			8410

For LED driver parameter see below:

Model No.	LED driver ratings		
LC 19W 250-350mA flexC Ip ADV	Input: 220-240VAC; 50/60Hz;	Output: 250-350mA, 19W, Uout: 60Vdc	ta: 50°C; tc: 65°C; SELV; CC; Built- in, without DALI dimming

LC 38W 500-700mA flexC Ip ADV	Input: 220-240VAC; 50/60Hz;	Output: 500-700mA, 38W, Uout: 60Vdc	ta: 50°C; tc: 70°C; SELV; CC; Built-in, without DALI dimming
LC 57W 800-1050mA flexC Ip ADV	Input: 220-240VAC; 50/60Hz;	Output: 800-1050mA, 57W, Uout: 60Vdc	ta: 55°C; tc: 85°C SELV; CC; Built-in, without DALI dimming
LC 81W 1200-1750mA flexC Ip AD	Input: 220-240VAC; 50/60Hz;	Output: 1200-1750mA, 80.5W, Uout: 60Vdc	ta: 50°C; tc: 80°C SELV; CC; Built-in, without DALI dimming
LCA 35W 150-700mA one4all Ip PRE	Input: 220-240VAC; 50/60Hz;	Output: 150-700mA, 35W, Uout: 60Vdc	ta: 60°C; tc: 75°C SELV; CC; Built-in, with DALI dimming
LCA 50W 350-1050mA one4all Ip PRE	Input: 220-240VAC; 50/60Hz;	Output: 350-1050mA, 50W, Uout: 60Vdc	ta: 65°C; tc: 80°C SELV; CC; Built-in, with DALI dimming
LCA 50W 350-1050mA DT8 Ip PRE	Input: 220-240VAC; 50/60Hz;	Output: 350-1050mA, 50W, Uout: 60Vdc	ta: 50°C; tc: 75°C SELV; CC; Built-in, with DALI dimming
LCA 75W 900-1800mA one4all Ip PRE	Input: 220-240VAC; 50/60Hz;	Output: 900-1800mA, 75W, Uout: 60Vdc	ta: 55°C; tc: 85°C SELV; CC; Built-in, with DALI dimming
BK-BHL040-0350BD	Input: 220-240VAC; 50/60Hz; Max. 0,3A	Output: 3-54Vdc, 350mA, 18,9W, Uout: 63Vdc	ta: 60°C; tc: 90°C; SELV; CC; Built-in, with DALI dimming
BK-BHL040-0500BD		Output: 3-54Vdc, 500mA, 27W, Uout: 63Vdc	
BK-BHL040-0550BD		Output: 3-54Vdc, 550mA, 29,7W, Uout: 63Vdc	
BK-BHL040-0600BD		Output: 3-54Vdc, 600mA, 32,4W., Uout: 63Vdc	

BK-BHL040-0650BD		Output: 3-54Vdc, 650mA, 35,1W, Uout: 63Vdc	
BK-BHL040-0700BD		Output: 3-54Vdc, 700mA, 37,8W, Uout: 63Vdc	
BK-BHL050-0800BD	Input: 220- 240VAC;	Output: 3-54Vdc, 800mA, 43,2W, Uout: 63Vdc	ta: 60°C; tc: 90°C; SELV; CC; Built-in, with DALI dimming
BK-BHL050-0850BD	50/60Hz; Max. 0,35A	Output: 3-54Vdc, 850mA, 45,9W, Uout: 63Vdc	
BK-BHL060-0950BD	Input: 220- 240VAC;	Output: 3-54Vdc, 950mA, 51,3W, Uout: 63Vdc	ta: 60°C; tc: 90°C; SELV; CC; Built-in, with DALI dimming
BK-BHL060-1200BD	50/60Hz; Max. 0,4A	Output: 3-50Vdc, 1200mA, 60W, Uout: 63Vdc	
BK-BHL070-1400BD	Input: 220- 240VAC;	Output: 3-50Vdc, 1400mA, 70W, Uout: 63Vdc	ta: 60°C; tc: 90°C; SELV; CC; Built-in, with DALI dimming
BK-BHL070-1500BD	50/60Hz; Max. 0,5A	Output: 3-46Vdc, 1500mA, 69W, Uout: 63Vdc	

For models with dimmable LED drivers,

- Reinforced insulation was maintained between LV circuit and output circuit;
- Supplementary insulation was maintained between output circuit and DALI circuits (FELV).
- Basic insulation was maintained between LV circuit and DALI circuits (FELV).

Unless otherwise specified, the model VLF1-I300-100B-I0 was chosen as representative model to perform

Test Model No:	PLF1-I150-050D-XX, PLF1-I300-100B-XX, PLF1-I300-100C-XX, VLF1-I120-040A-XX, VLF1-I120-040B-XX, VLF1-I120-040C-XX, VLF1-I150-050A-XX, VLF1-I150-050B-XX, VLF1-I150-050C-XX, VLF1-I150-050D-XX, VLF1-I300-100A-XX, VLF1-I300-100B-XX
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5.2 Test mode and voltage

Test mode:	
On mode	Keep the EUT lighting
Test voltage:	
AC 230V/50Hz	

5.3 Description of Support Units

None.

5.4 Monitoring of EUT for All Immunity Test

Visual:	Monitor the luminous intensity
Audio:	N/A

5.5 Deviation from Standards

None.

5.6 Abnormalities from Standard Conditions

None.

5.7 Test Facility

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

- **FCC —Registration No.: 381383**

Global United Technology Services Co., Ltd., Shenzhen 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 files. Registration 381383.

- **IC —Registration No.: 9079A**

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A.

- **NVLAP (LAB CODE:600179-0)**

Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). LAB CODE:600179-0.

5.8 Test Location

RI test was performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen
Address: No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China 518057
Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

All other test items were performed at:

Global United Technology Services Co., Ltd.
Address: No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102
Tel: 0755-27798480; Fax: 0755-27798960

6 Test Instruments List

Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	July. 03 2015	July. 02 2020
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	June. 26 2019	June. 25 2020
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	June. 26 2019	June. 25 2020
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	June. 26 2019	June. 25 2020
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	June. 26 2019	June. 25 2020
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
8	Coaxial Cable	GTS	N/A	GTS213	June. 26 2019	June. 25 2020
9	Coaxial Cable	GTS	N/A	GTS211	June. 26 2019	June. 25 2020
10	Coaxial cable	GTS	N/A	GTS210	June. 26 2019	June. 25 2020
11	Coaxial Cable	GTS	N/A	GTS212	June. 26 2019	June. 25 2020
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	June. 26 2019	June. 25 2020
13	Amplifier(2GHz-20GHz)	HP	84722A	GTS206	June. 26 2019	June. 25 2020
14	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June. 26 2019	June. 25 2020
15	Band filter	Amindeon	82346	GTS219	June. 26 2019	June. 25 2020
16	Power Meter	Anritsu	ML2495A	GTS540	June. 26 2019	June. 25 2020
17	Power Sensor	Anritsu	MA2411B	GTS541	June. 26 2019	June. 25 2020
18	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	June. 26 2019	June. 25 2020
19	Splitter	Agilent	11636B	GTS237	June. 26 2019	June. 25 2020
20	Loop Antenna	ZHINAN	ZN30900A	GTS534	June. 26 2019	June. 25 2020
21	Breitband hornantenne	SCHWARZBECK	BBHA 9170	GTS579	Oct. 20 2018	Oct. 19 2019
22	Amplifier	TDK	PA-02-02	GTS574	Oct. 20 2018	Oct. 19 2019
23	Amplifier	TDK	PA-02-03	GTS576	Oct. 20 2018	Oct. 19 2019
24	PSA Series Spectrum Analyzer	Rohde & Schwarz	FSP	GTS578	June. 26 2019	June. 25 2020

Conducted Emission						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Shielding Room	ZhongYu Electron	7.3(L)x3.1(W)x2.9(H)	GTS252	May.15 2019	May.14 2022
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 26 2019	June. 25 2020
3	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	June. 26 2019	June. 25 2020
4	Artificial Mains Network	SCHWARZBECK MESS	NSLK8127	GTS226	June. 26 2019	June. 25 2020
5	Coaxial Cable	GTS	N/A	GTS227	N/A	N/A
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
7	Thermo meter	KTJ	TA328	GTS233	June. 26 2019	June. 25 2020
8	Absorbing clamp	Elektronik- Feinmechanik	MDS21	GTS229	June. 26 2019	June. 25 2020

ESD						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	ESD Simulator	KIKUSUI	KES4021A	GTS242	June. 26 2019	June. 25 2020
2	Thermo meter	KTJ	TA328	GTS243	June. 26 2019	June. 25 2020

Loop						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Shielding Room	ZhongYu Electron	7.3(L)x3.1(W)x2.9(H)	GTS252	May.15 2019	May.14 2022
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 26 2019	June. 25 2020
3	TIPIPLE-LOOP ANTENNA	EVERFINE	LLA-2	GTS539	June. 26 2019	June. 25 2020

Conducted Immunity						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Signal Generator	ROHDE & SCHWARZ	SMB 100A	GTS553	June. 26 2019	June. 25 2020
2	CDN	LionCEL	CDN-M3-16	GTS554	June. 26 2019	June. 25 2020
3	CDN	CYBERTEK	EM 5070	GTS559	June. 26 2019	June. 25 2020
4	Power amplifier	rflight	NTWPA-00010475	GTS555	June. 26 2019	June. 25 2020
5	ATT	SUNWAVE	SJ-50-06DB	GTS556	June. 26 2019	June. 25 2020
6	Clamp	SCHAFFNER	KEMZ 801	GTS558	June. 26 2019	June. 25 2020

Harmonic/ Flicker						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Power Analyzer H/F	EMTEST	DPA500	GTS235	June. 26 2019	June. 25 2020
2	AC POWER SUPPLY	EMTEST	ACS500	GTS236	June. 26 2019	June. 25 2020
3	Thermo meter	KTJ	TA328	GTS256	June. 26 2019	June. 25 2020

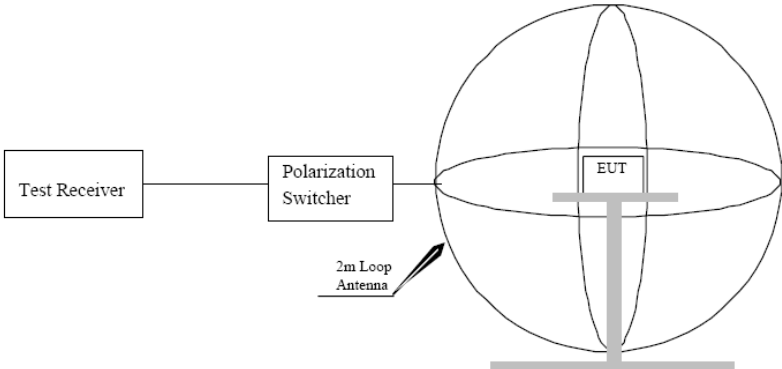
EFT, Surge, Voltage dips and Interruption						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	EMTEST system	EMTEST	UCS500N	GTS239	June. 26 2019	June. 25 2020
2	Clamp	EMTEST	HFK	GTS557	June. 26 2019	June. 25 2020
3	Thermo meter	KTJ	TA328	GTS238	June. 26 2019	June. 25 2020

Radiated Immunity						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Fully-Anechoic Chamber 2	Chang Zhou Zhong Shuo	854	SEM001-05	2017-05-10	2020-05-09
2	Power Sensor	Rohde & Schwarz	NRP-Z91	SEM009-09	2019-04-01	2020-03-31
3	Stacked Log.-Per.- Broadband Antenna (70MHz-10GHz)	Schwarzbeck	STLP 9129	SEM003-25	N/A	N/A
4	Signal Generator (9kHz-6GHz)	Rohde & Schwarz	SMB100A	SEM006-11	2019-04-01	2020-03-31
5	Broadband Amplifier (80MHz-1GHz)	Rohde & Schwarz	BBA150-BC250	SEM005-12	2019-09-24	2020-09-23
6	Broadband Amplifier(800MHz- 3GHz)	Rohde & Schwarz	BBA150-D110	SEM005-13	2019-04-01	2020-03-31
7	Broadband Amplifier(2.5GHz- 6GHz)	Rohde & Schwarz	BBA150-E60	SEM005-16	2019-04-12	2020-04-11
8	Measurement Software	Rohde & Schwarz	EMC32 V9.25.00	N/A	N/A	N/A

General used equipment:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Humidity/ Temperature Indicator	KTJ	TA328	GTS243	June. 26 2019	June. 25 2020
2	Barometer	ChangChun	DYM3	GTS255	June. 26 2019	June. 25 2020

7 Emission Test Results

7.1 Radiated Electromagnetic Disturbance(9kHz-30MHz)

Test Requirement:	EN 55015															
Test Method:	EN55015															
Test Frequency Range:	9kHz to 30MHz															
Receiver set:	Frequency	Detector	RBW	VBW	Value											
	9KHz~150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak											
	150KHz~30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak											
Limit:	<table><tr><th>Frequency range (MHz)</th><th>Limits for loop diameter dBuA @2m</th></tr><tr><td>0.009-0.070</td><td>88</td></tr><tr><td>0.070-0.150</td><td>88 to 58*</td></tr><tr><td>0.15-3.0</td><td>58 to22*</td></tr><tr><td>3.0-30</td><td>22</td></tr></table> *Decreasing linearly with the logarithm of the frequency. For electrodeless lamps and luminaires, the limit in the frequency range of 2,2 MHz to 3,0 MHz is 58 dB(μA) for 2 m, 51dB(μA) for 3 m and 45 dB(μA) for 4 m loop diameter.						Frequency range (MHz)	Limits for loop diameter dBuA @2m	0.009-0.070	88	0.070-0.150	88 to 58*	0.15-3.0	58 to22*	3.0-30	22
Frequency range (MHz)	Limits for loop diameter dBuA @2m															
0.009-0.070	88															
0.070-0.150	88 to 58*															
0.15-3.0	58 to22*															
3.0-30	22															
Test Setup:																
Test procedure	1. An initial pre-scan was performed in the 2m loop antenna using the spectrum analyser in peak detection mode. 2. The EUT was measured for X(A), Y(B), Z(C) polarities. 3. No further quasi-peak measurements were performed since no peak emissions from the EUT were detected within 6dB of the limit for 2m diameter loop antenna.															
Test Instruments:	Temp.:	25 °C	Humid.:	50%	Press.:	1 012mbar										
Measurement Record:	Uncertainty: ± 3.26dB															
Test Instruments:	Refer to section 6 for details															
Test mode:	Refer to section 5.2for details															
Test results:	Pass															

Measurement Data

PLF1-I150-050D-XX

X:

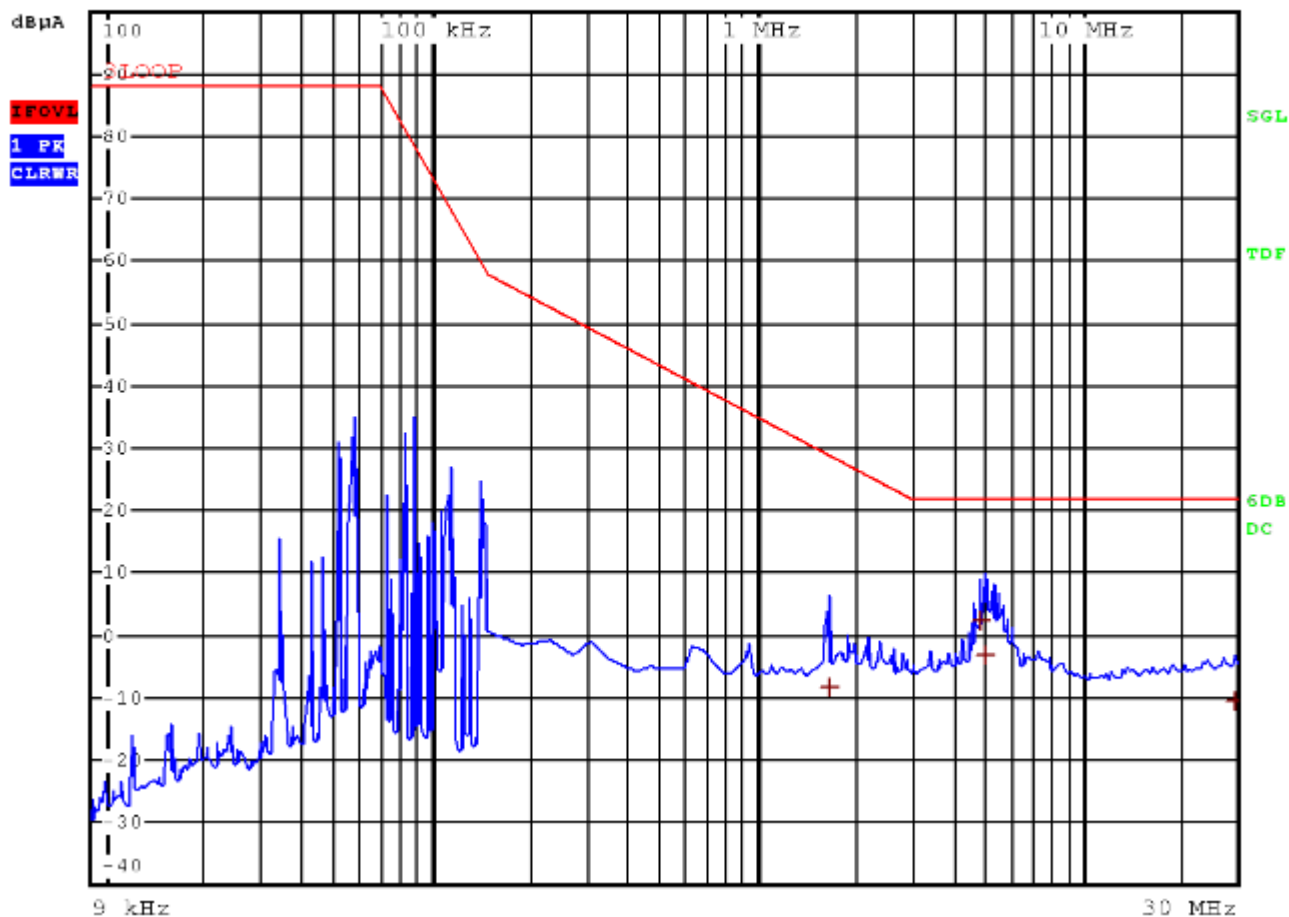


RBW 9 kHz

MT 1 s

PREAMP OFF

Att 10 dB



Trace1:	3LOOP		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	1.67 MHz	-8.05	-37.09
1 Quasi Peak	4.67 MHz	2.32	-19.67
1 Quasi Peak	5.03 MHz	-3.12	-25.12
1 Quasi Peak	29.39 MHz	-10.30	-32.30

Y:

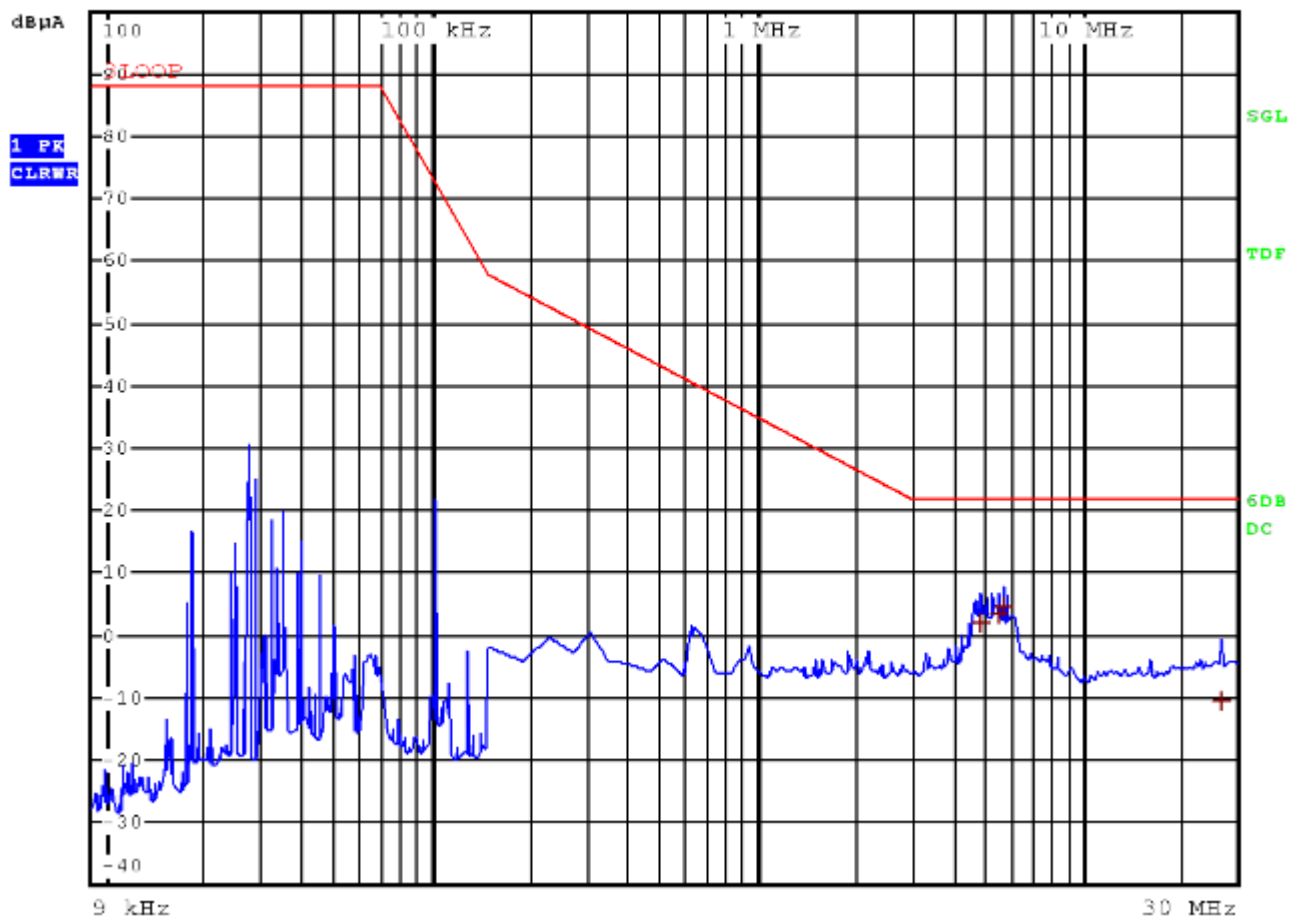


RBW 9 kHz

MT 1 s

PREAMP OFF

Att 10 dB



Trace1:	3LOOP		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	4.87 MHz	2.12	-19.87
1 Quasi Peak	5.51 MHz	3.64	-18.35
1 Quasi Peak	5.71 MHz	4.69	-17.30
1 Quasi Peak	26.75 MHz	-10.53	-32.53

Z:

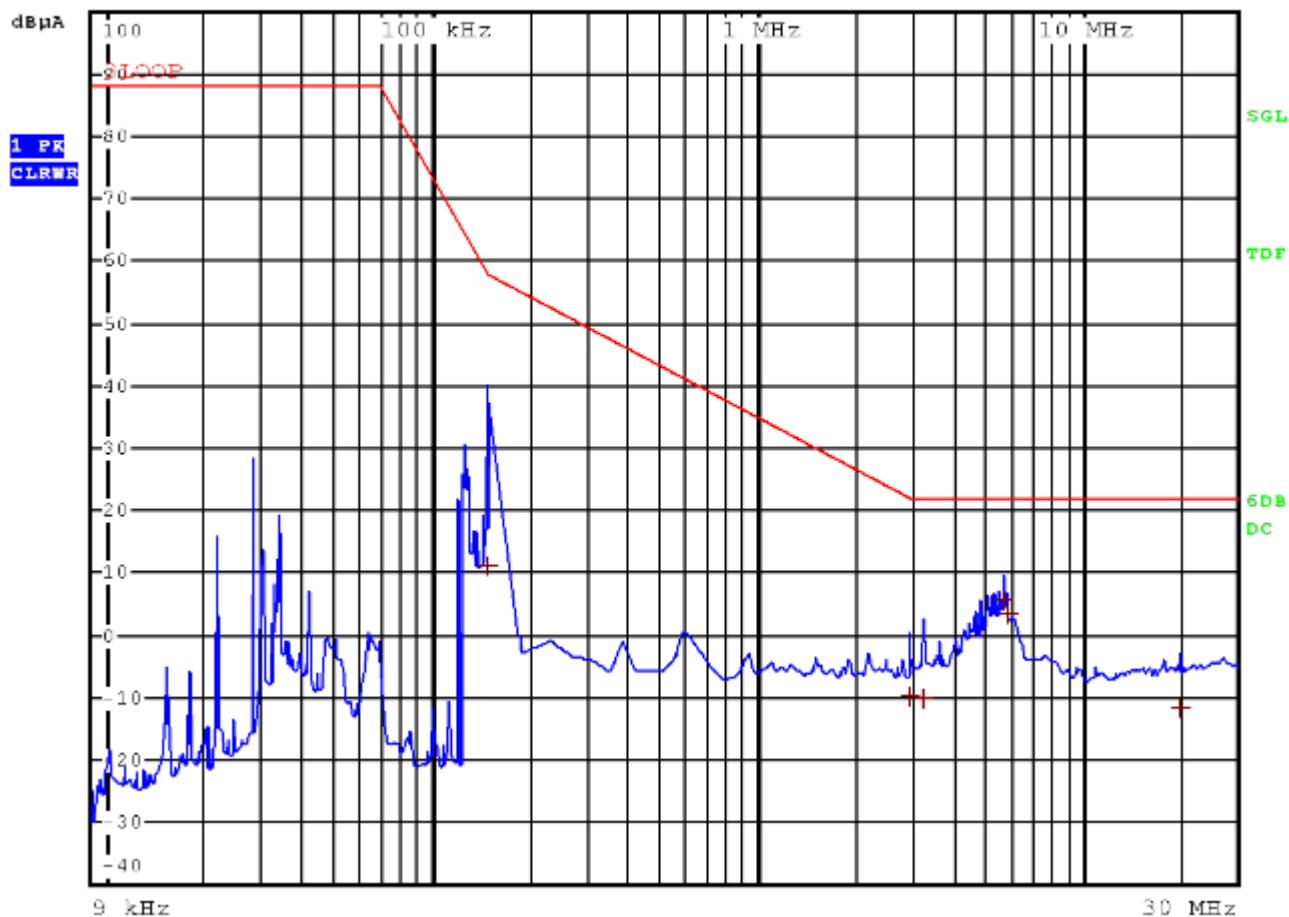


RBW 9 kHz

MT 1 s

PREAMP OFF

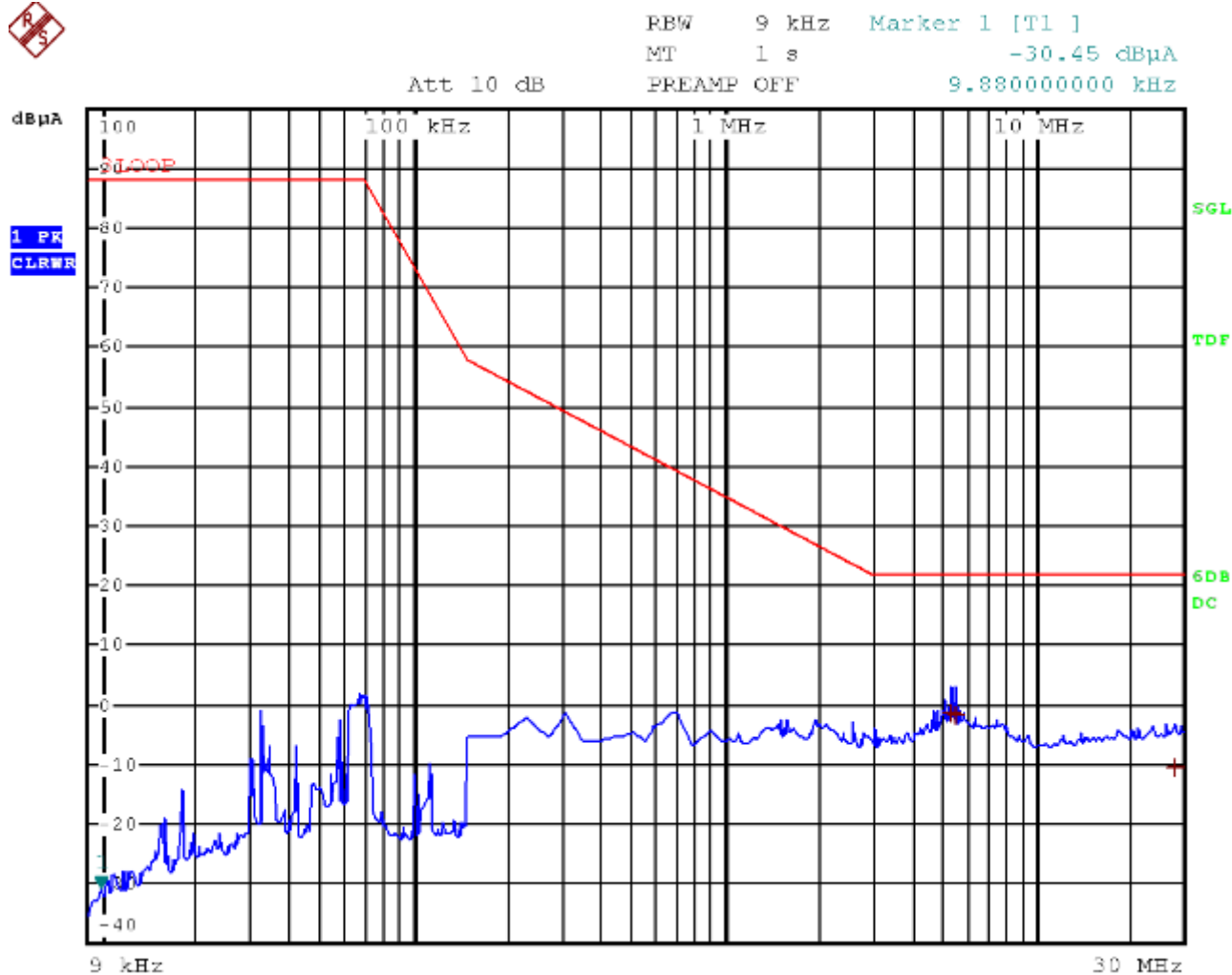
Att 10 dB



Trace1:	3LOOP		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	150 kHz	11.17	-46.82
1 Quasi Peak	2.91 MHz	-9.73	-32.10
1 Quasi Peak	3.23 MHz	-10.11	-32.11
1 Quasi Peak	5.71 MHz	5.74	-16.25
1 Quasi Peak	5.91 MHz	3.62	-18.37
1 Quasi Peak	19.83 MHz	-11.37	-33.37

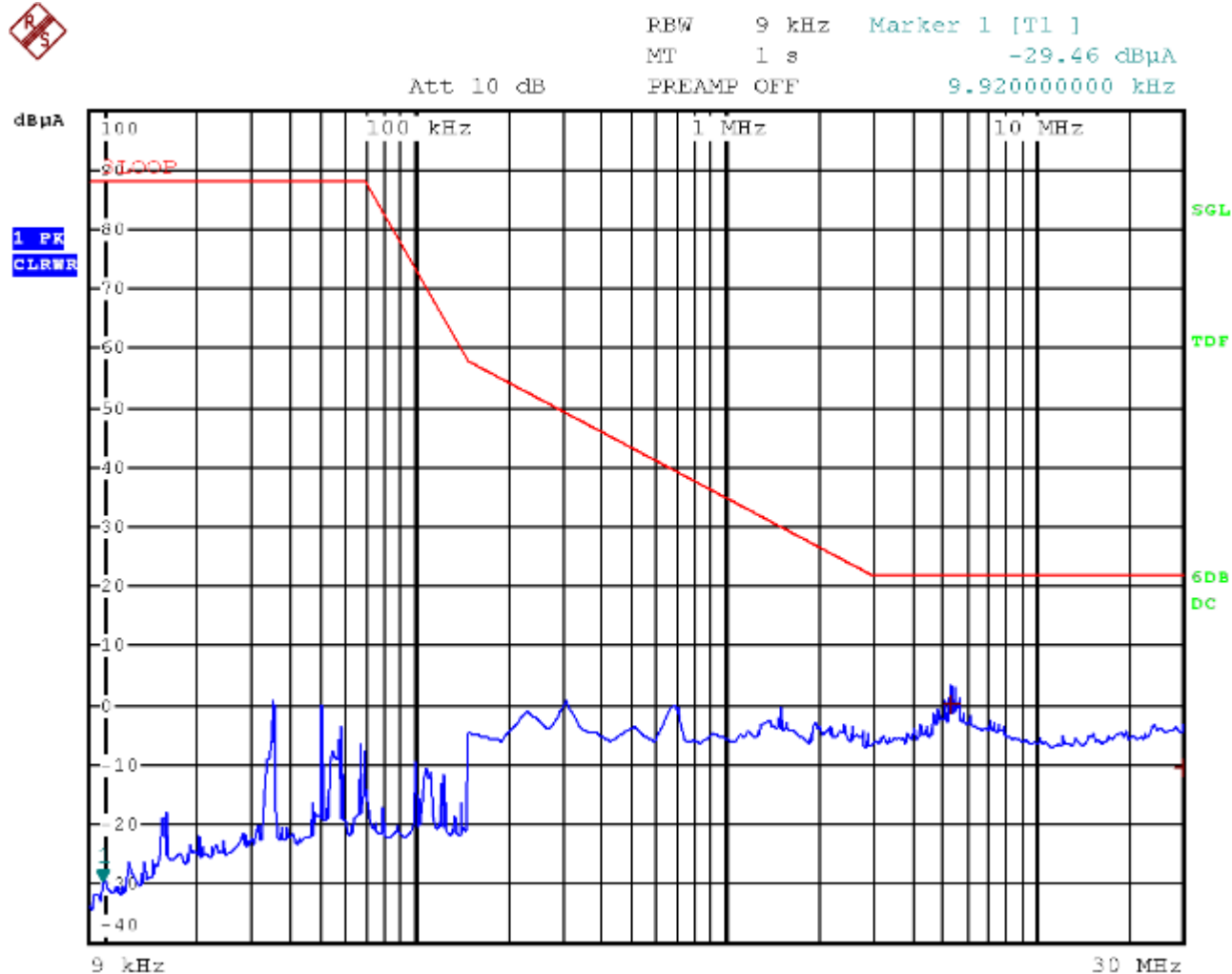
PLF1-I300-100B-XX

X:



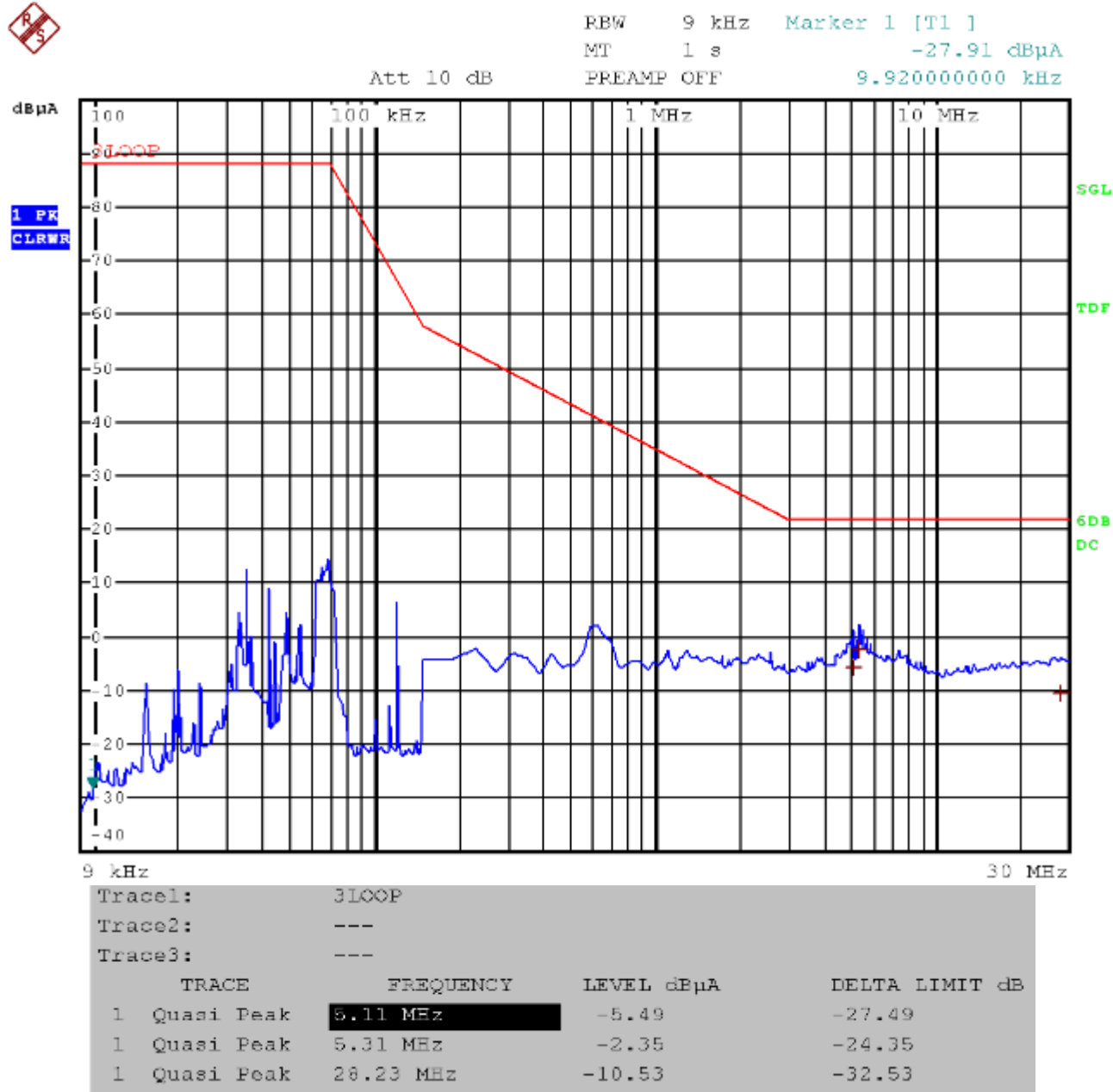
Trace1:	3100P		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	5.31 MHz	-1.15	-23.16
1 Quasi Peak	5.51 MHz	-1.53	-23.53
1 Quasi Peak	27.91 MHz	-10.38	-32.38

Y:



Trace1:	3100P		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	9.31 MHz	0.14	-21.85
1 Quasi Peak	29.95 MHz	-10.23	-32.23

Z:

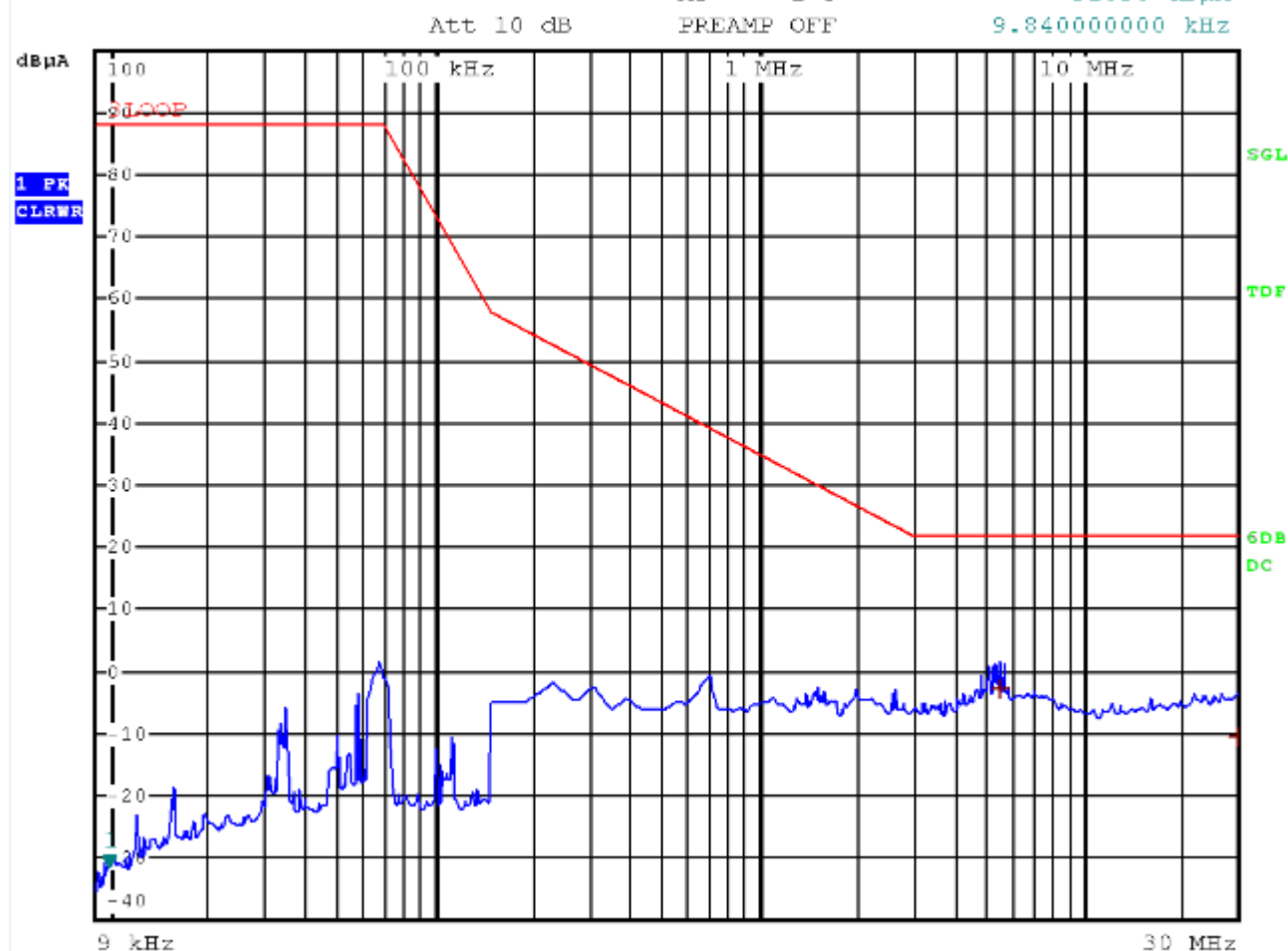


PLF1-I300-100C-XX

X:

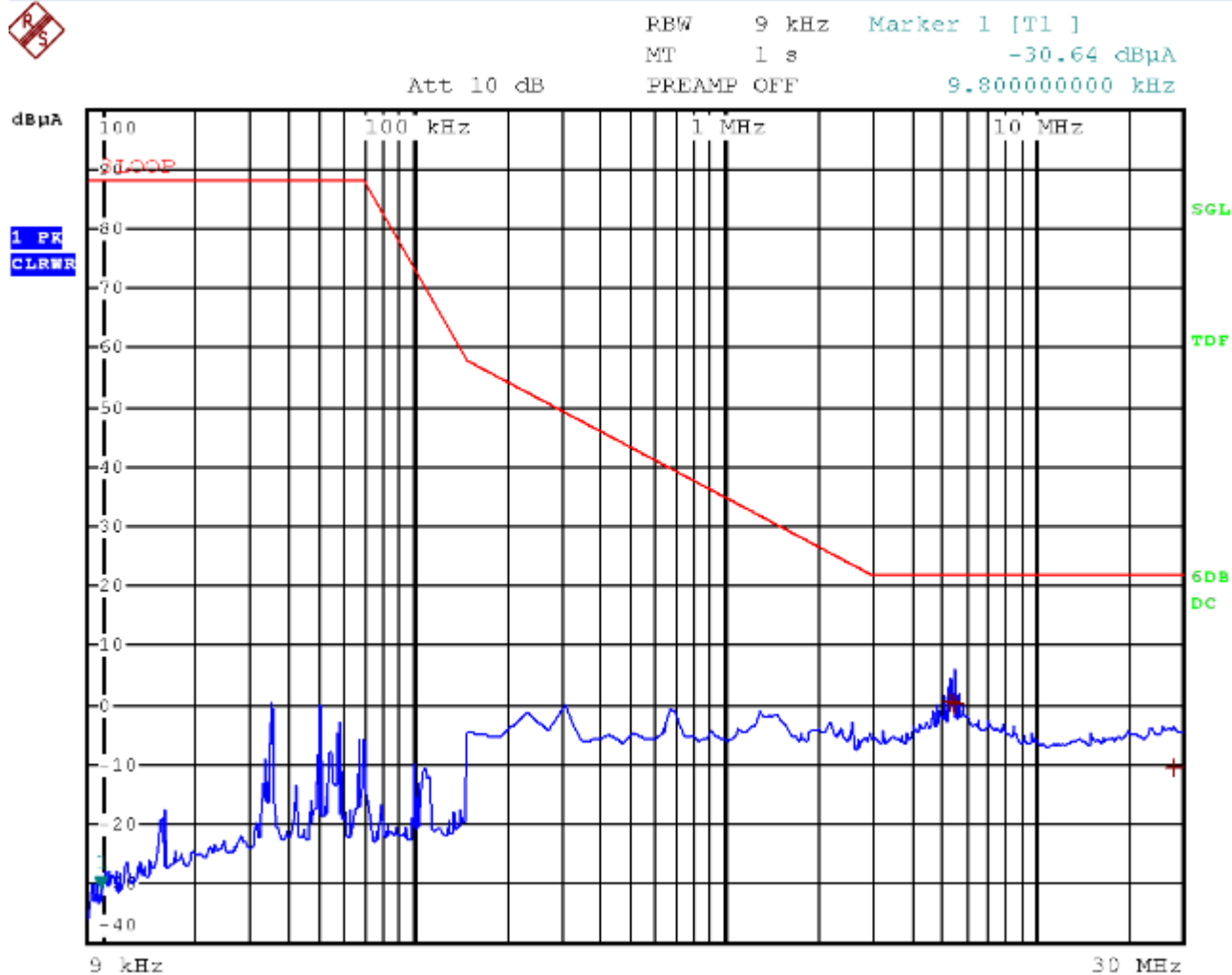


RBW 9 kHz Marker 1 [T1]
MT 1 s -31.30 dBμA
PREAMP OFF 9.840000000 kHz



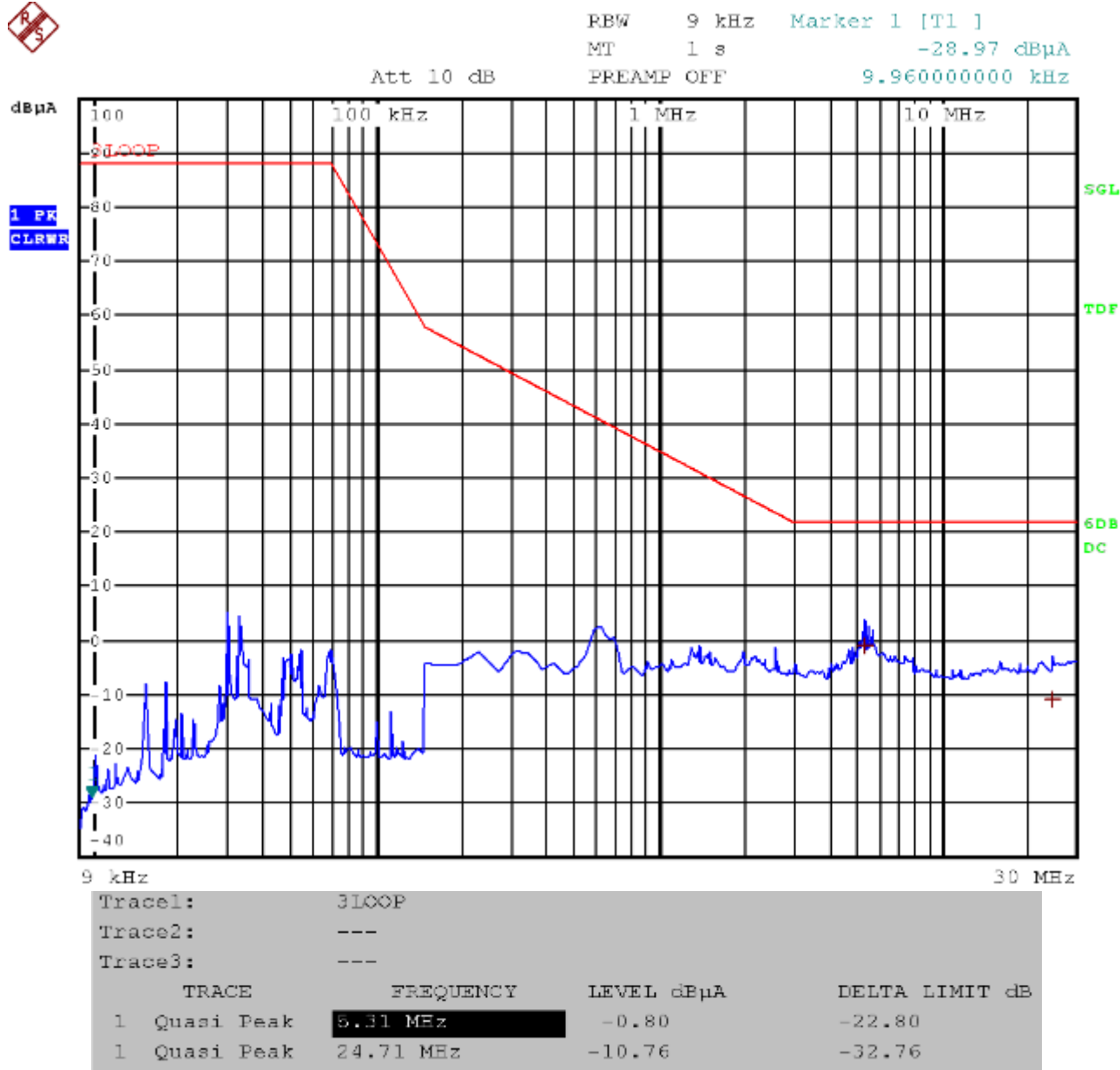
Trace1:	3LOOP		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	5.51 MHz	-2.67	-24.67
1 Quasi Peak	29.67 MHz	-10.29	-32.29

Y:



Trace1:	3100P		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	9.31 MHz	0.61	-21.38
1 Quasi Peak	5.51 MHz	0.35	-21.64
1 Quasi Peak	26.11 MHz	-10.49	-32.49

Z:



VLF1-I120-040A-XX

X:

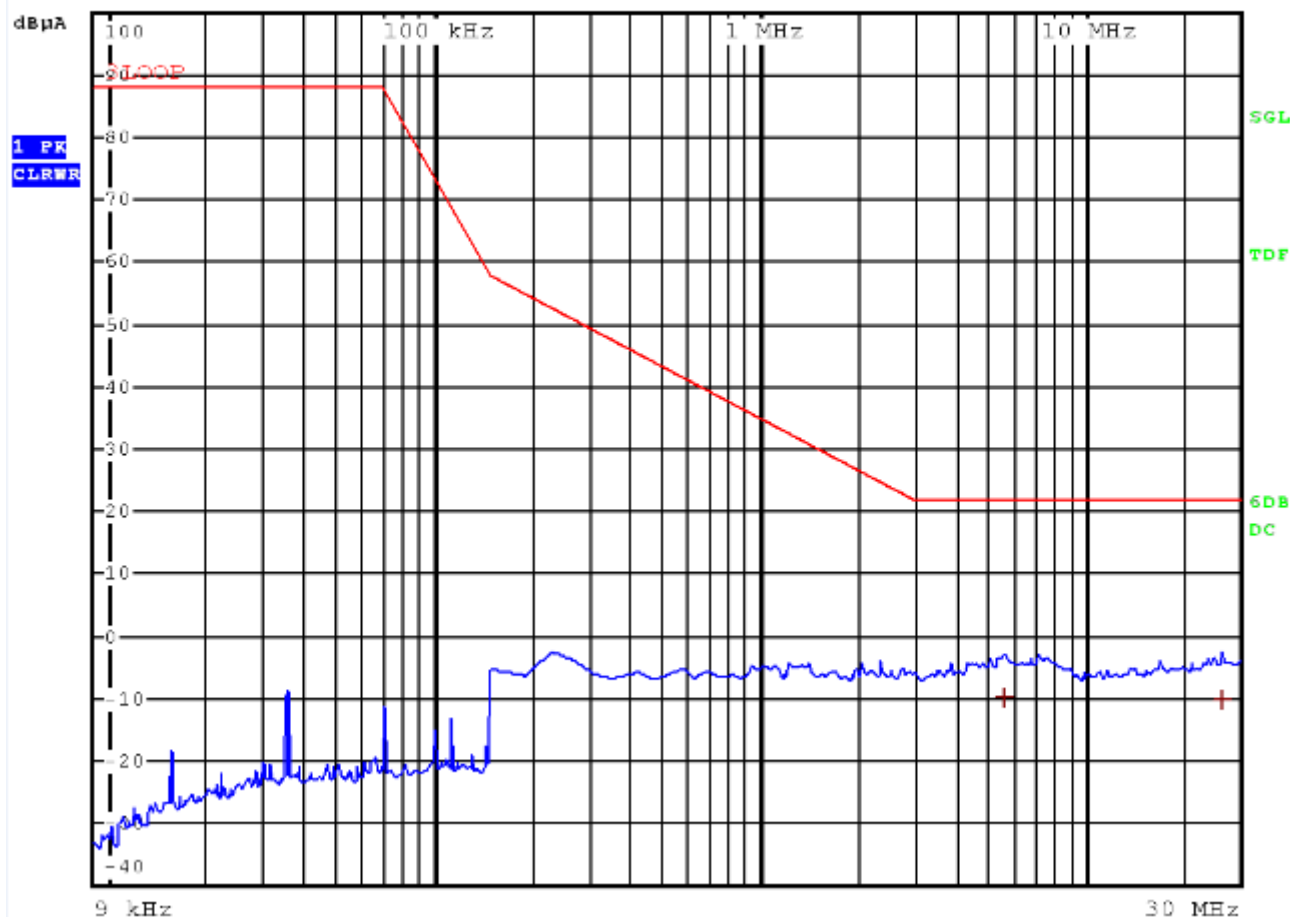


RBW 9 kHz

MT 1 s

PREAMP OFF

Att 10 dB



Trace1:	3LOOP		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	5.63 MHz	-9.55	-31.55
1 Quasi Peak	26.15 MHz	-10.18	-32.18

Y:

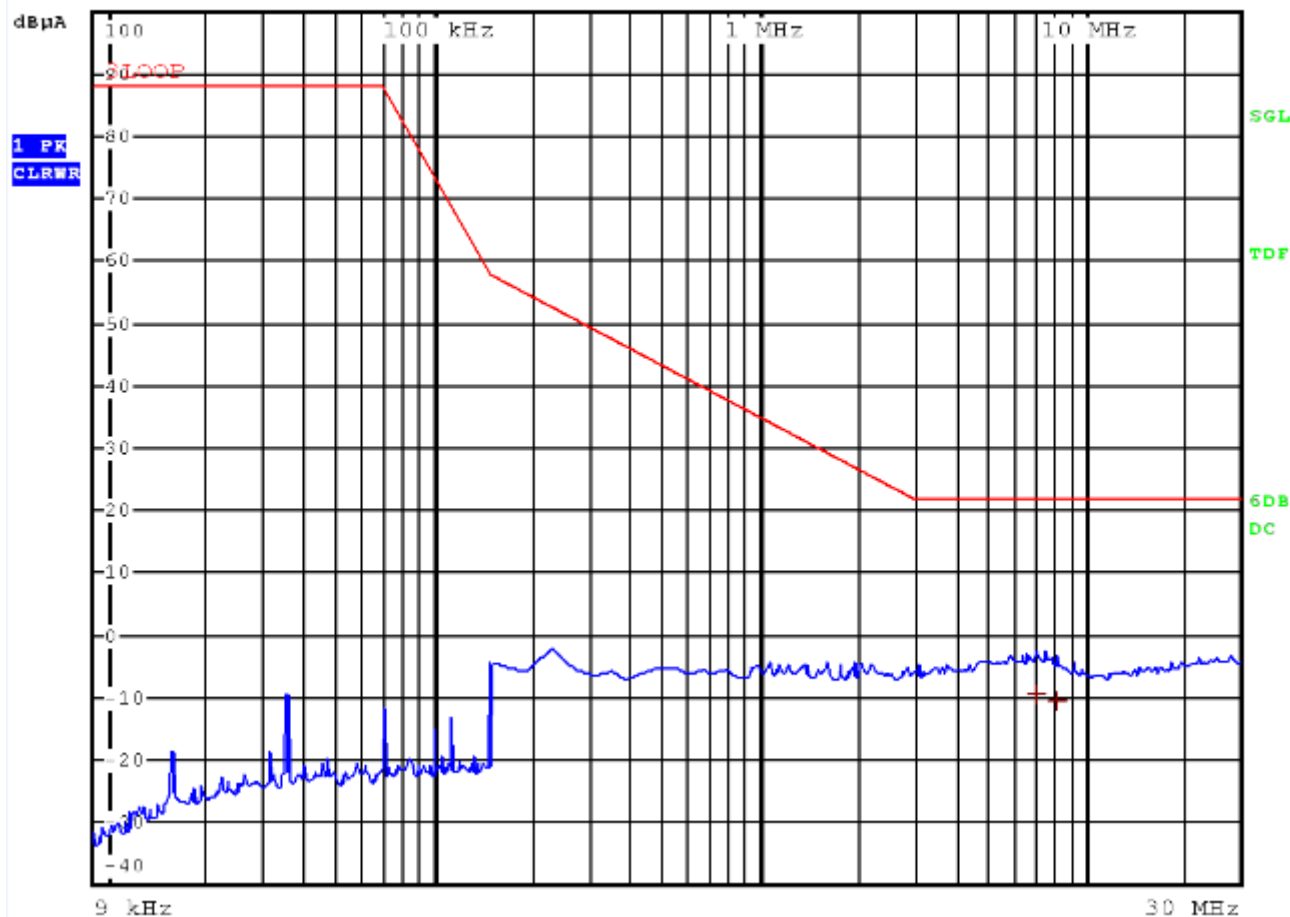


RBW 9 kHz

MT 1 s

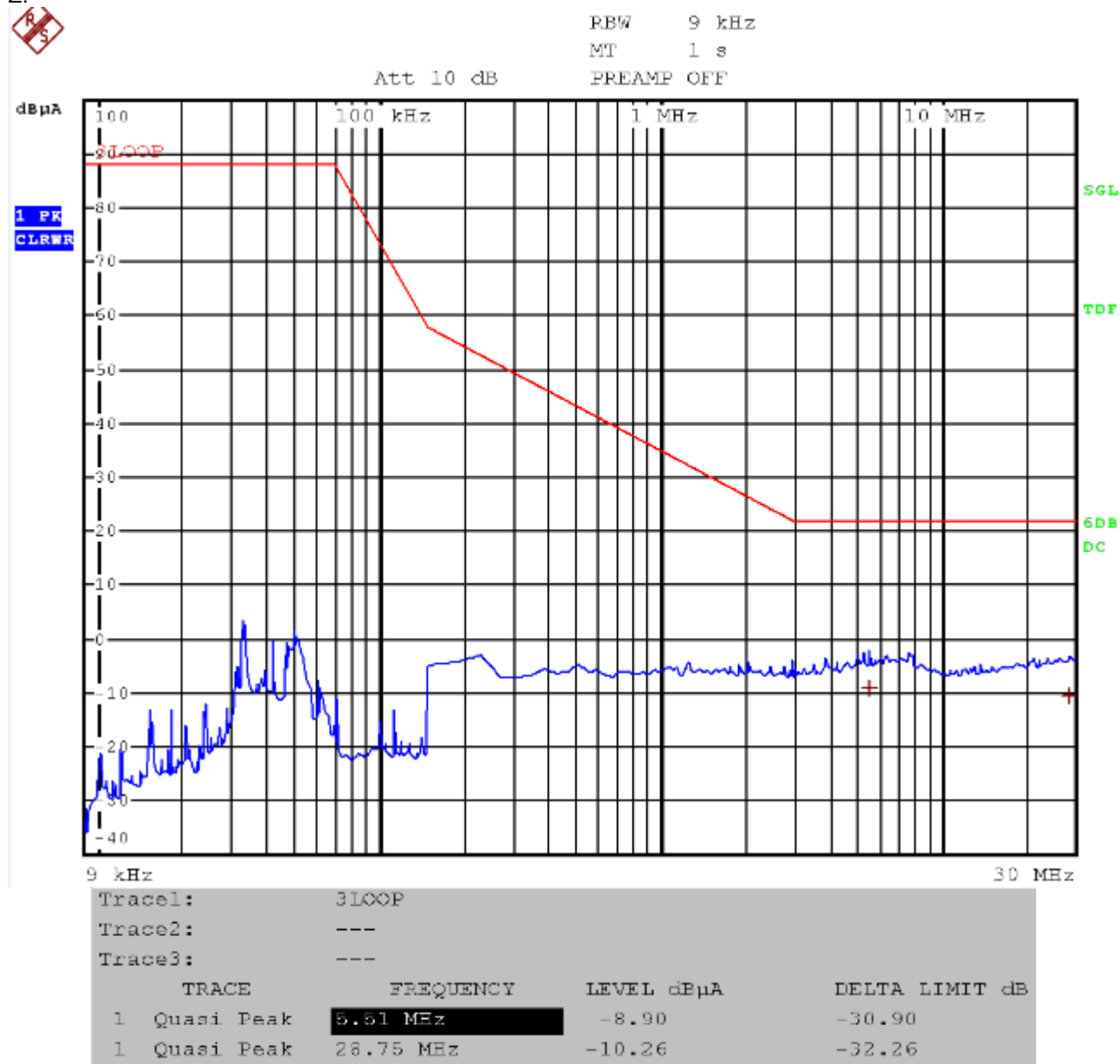
PREAMP OFF

Att 10 dB



Trace1:	3100P		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	7.03 MHz	-9.35	-31.35
1 Quasi Peak	8.19 MHz	-10.54	-32.54

Z:



VLF1-I120-040B-XX

X:

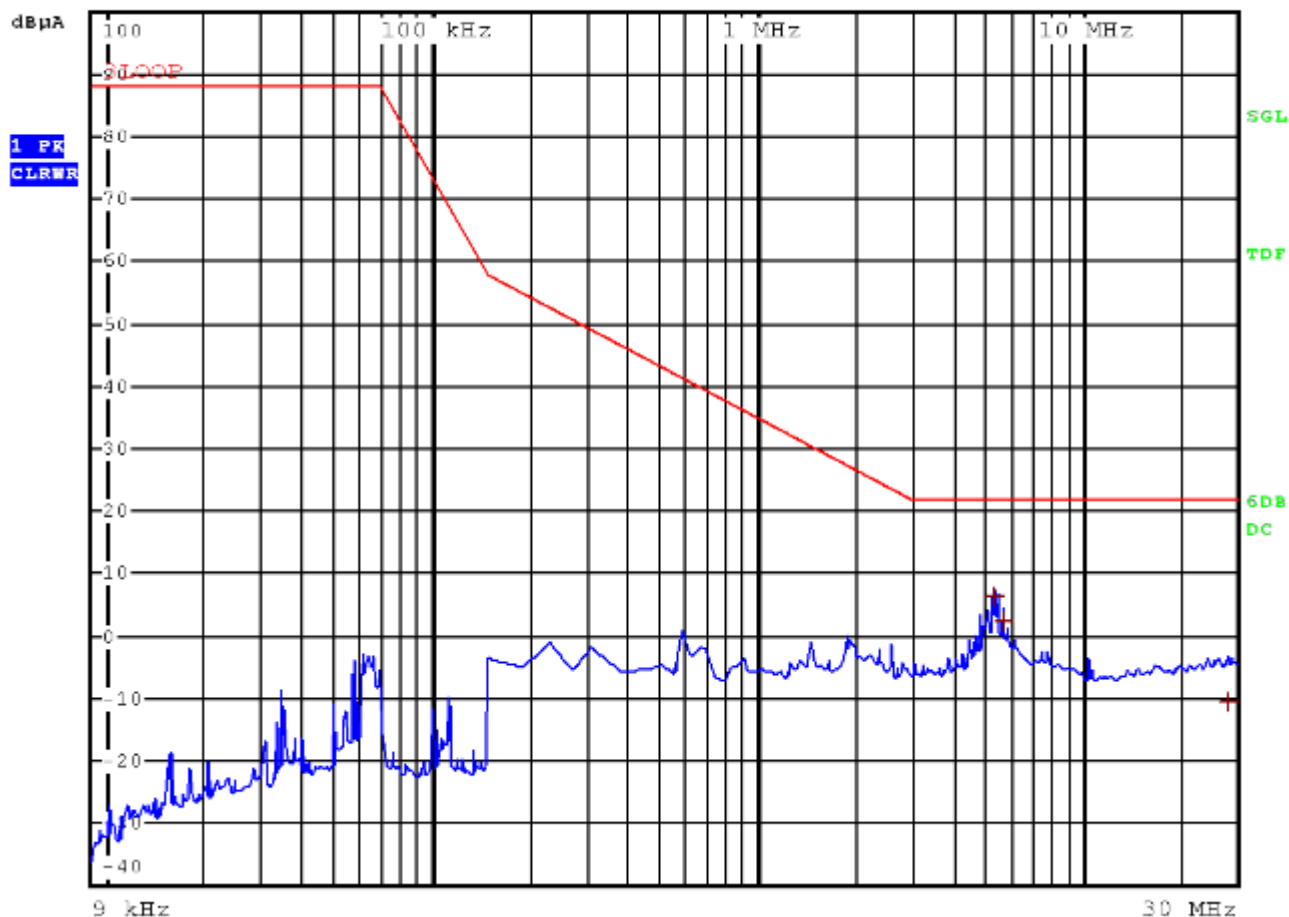


RBW 9 kHz

MT 1 s

PREAMP OFF

Att 10 dB



Trace1:	3100P		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	5.31 MHz	6.36	-15.63
1 Quasi Peak	5.71 MHz	2.39	-19.60
1 Quasi Peak	27.91 MHz	-10.31	-32.31

Y:

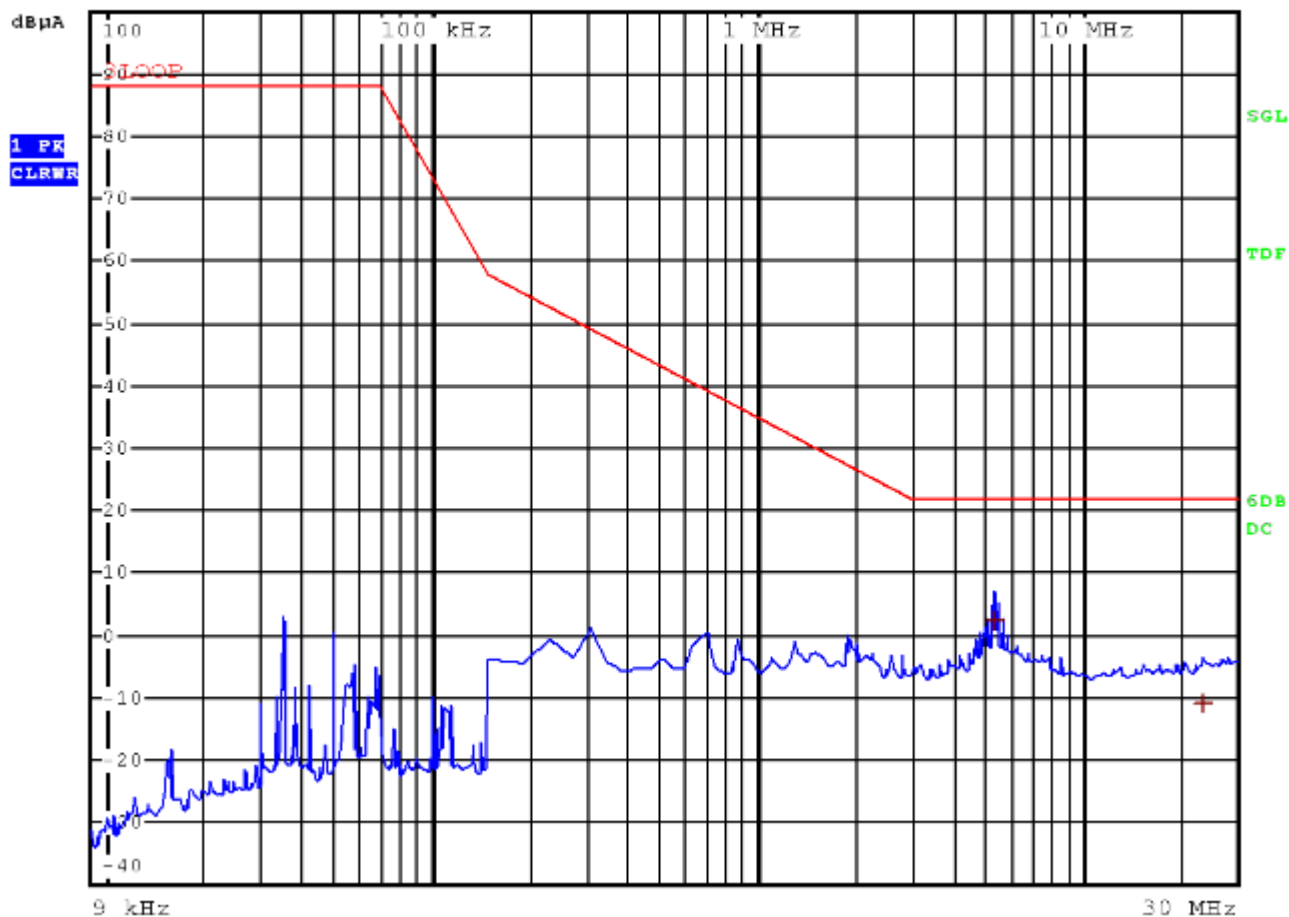


RBW 9 kHz

MT 1 s

Att 10 dB

PREAMP OFF



Trace1:	3100P		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	5.31 MHz	2.38	-19.61
1 Quasi Peak	23.39 MHz	-10.83	-32.83

Z:

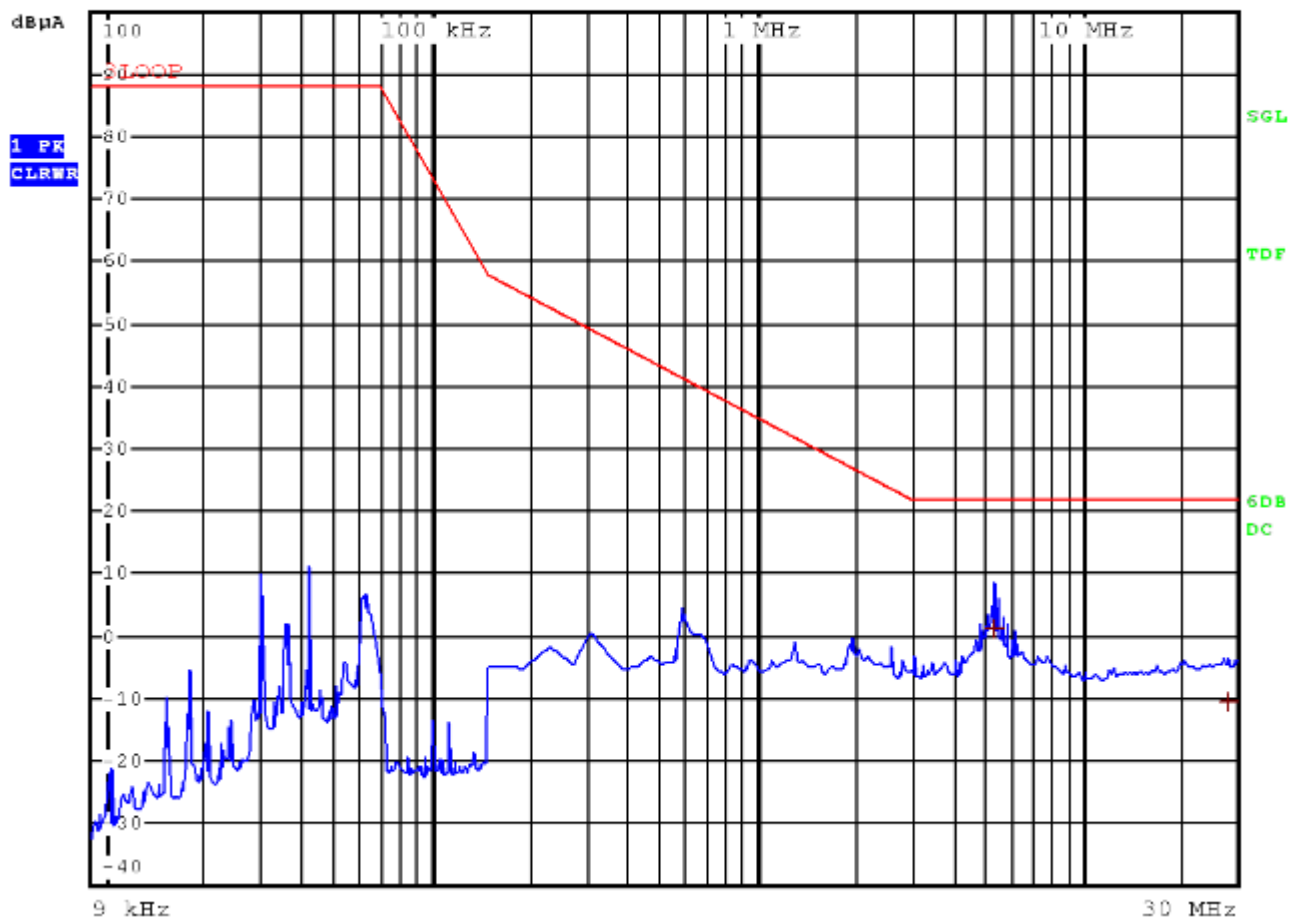


RBW 9 kHz

MT 1 s

PREAMP OFF

Att 10 dB



Trace1:	3100P		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	5.31 MHz	1.29	-20.70
1 Quasi Peak	28.19 MHz	-10.46	-32.46

VLF1-I120-040C-XX

X:

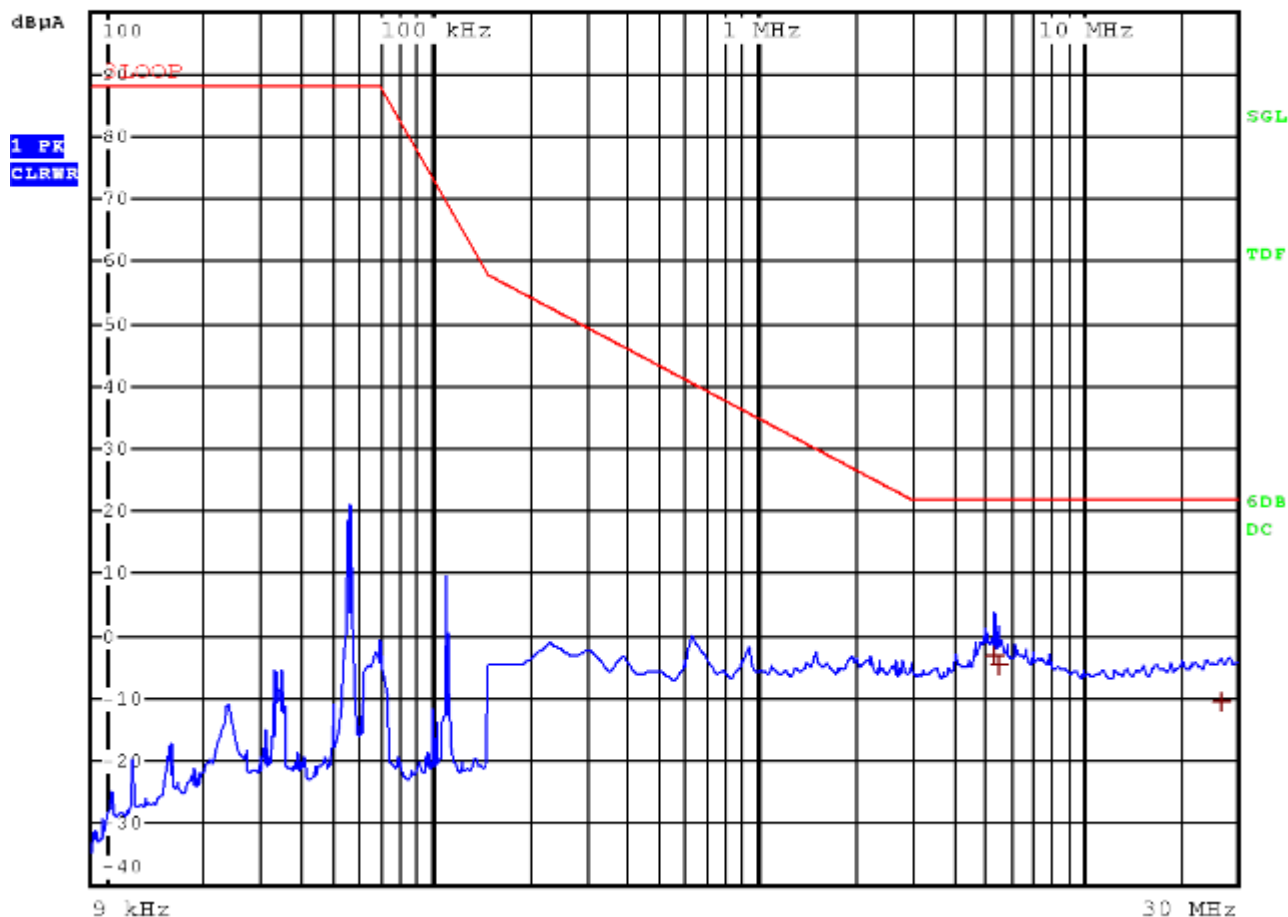


RBW 9 kHz

MT 1 s

PREAMP OFF

Att 10 dB



Trace1:	3100P		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	5.31 MHz	-3.20	-25.20
1 Quasi Peak	5.51 MHz	-4.59	-26.59
1 Quasi Peak	26.75 MHz	-10.38	-32.38

Y:

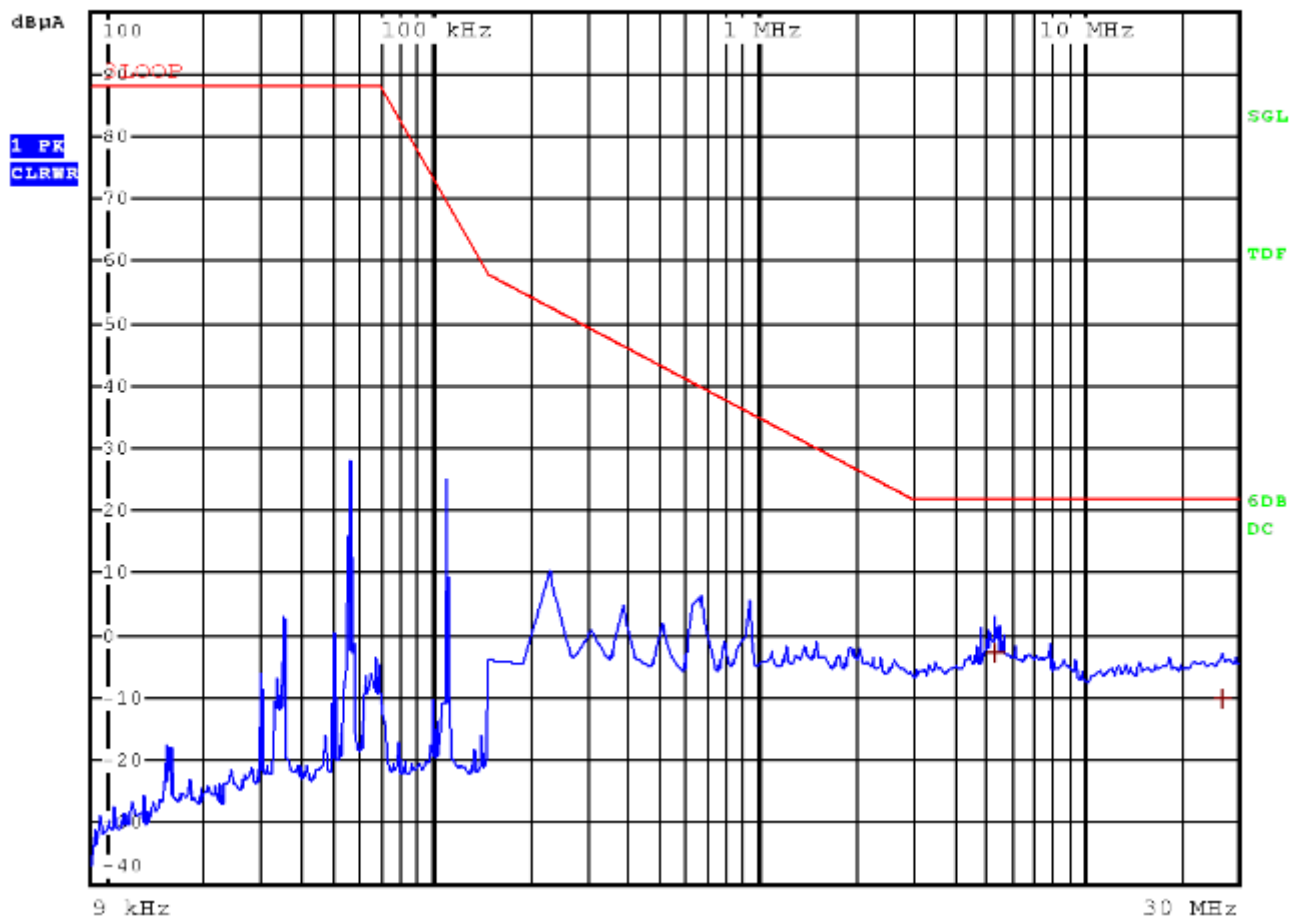


RBW 9 kHz

MT 1 s

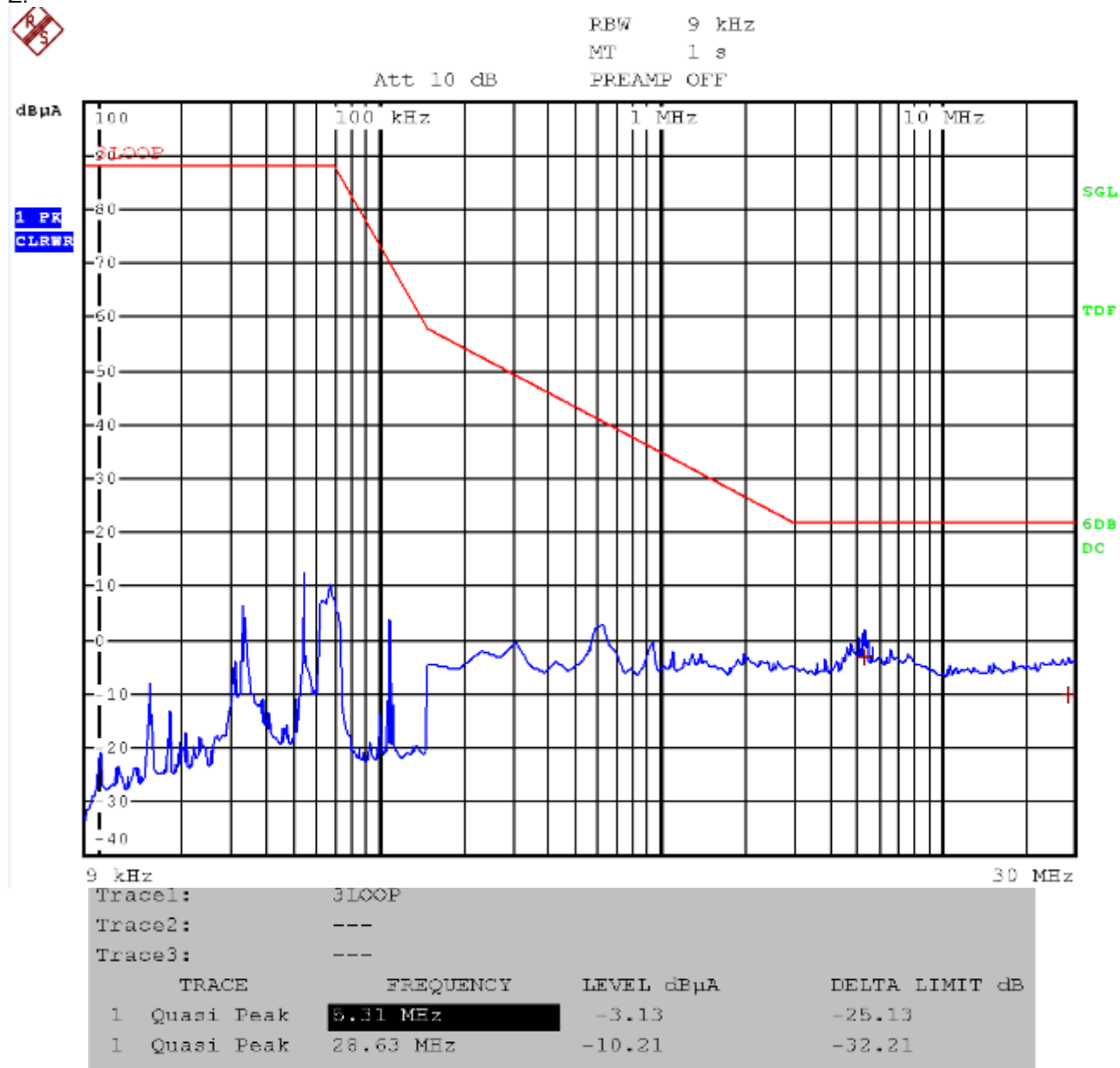
Att 10 dB

PREAMP OFF



Trace1:	3LOOP		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	5.31 MHz	-2.61	-24.62
1 Quasi Peak	26.67 MHz	-10.22	-32.22

Z:



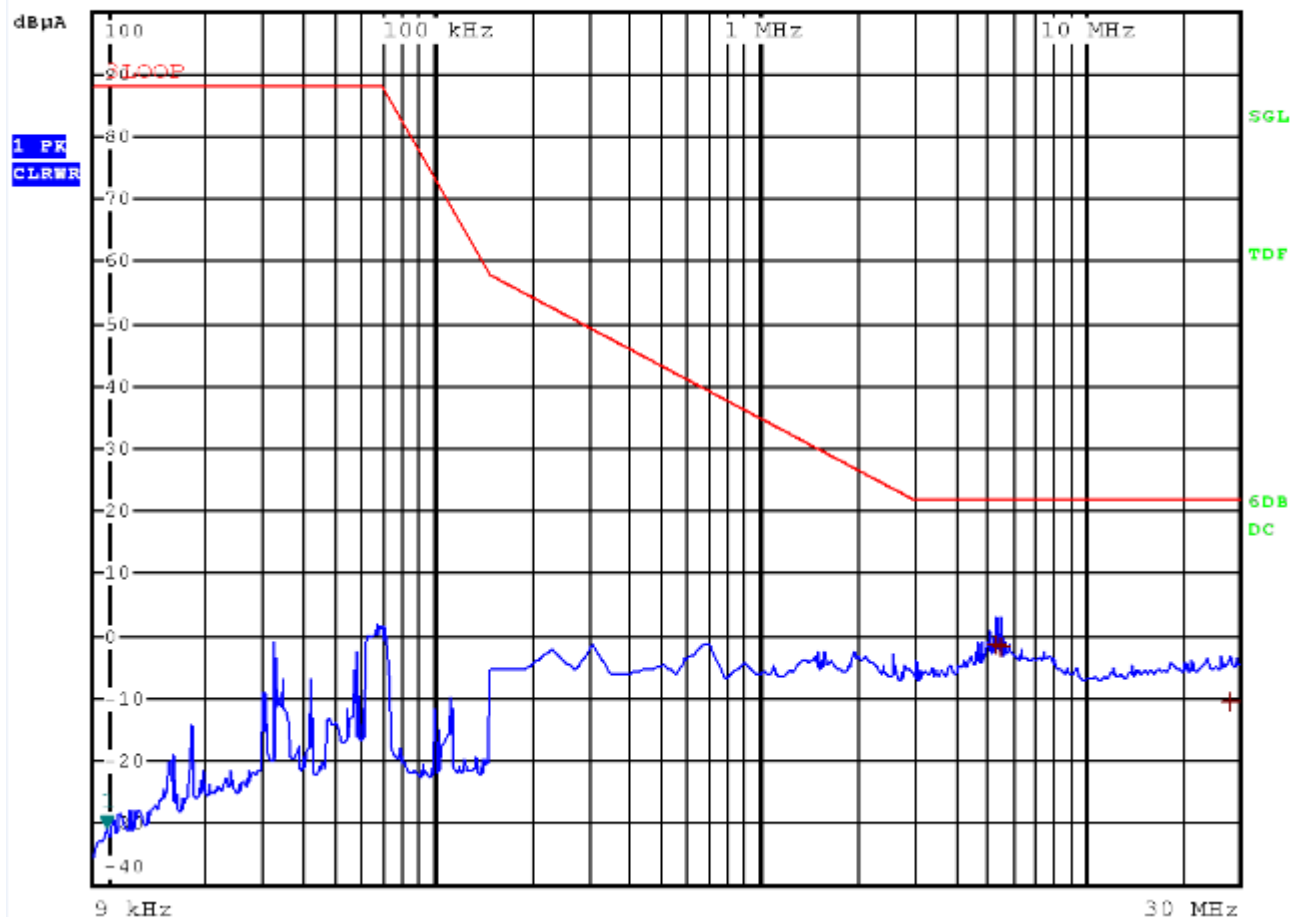
VLF1-I150-050A-XX

X:



RBW 9 kHz Marker 1 [T1]
MT 1 s -30.45 dBμA
PREAMP OFF 9.880000000 kHz

Att 10 dB



9 kHz 30 MHz

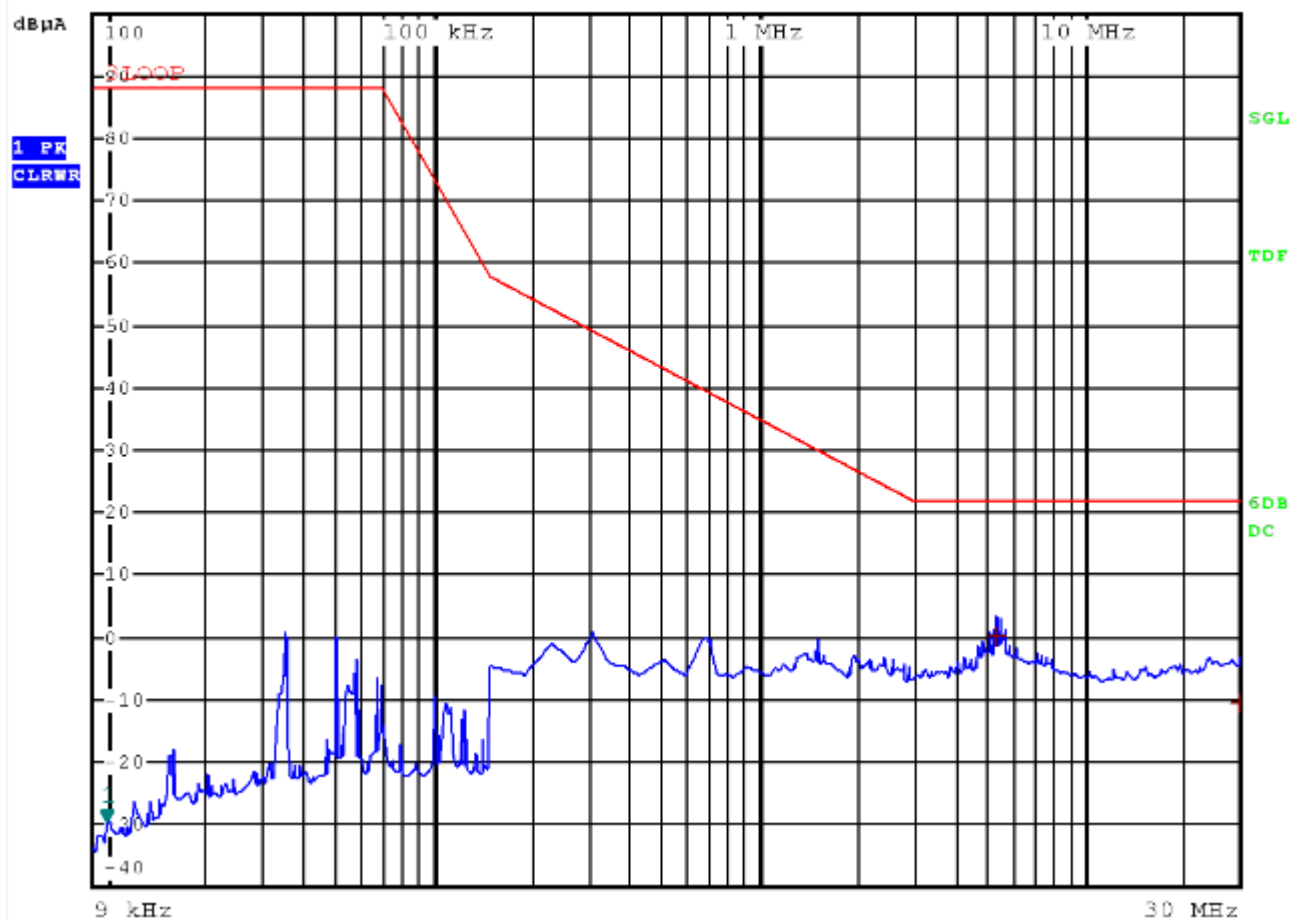
Trace1:	3LOOP		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	5.31 MHz	-1.15	-23.16
1 Quasi Peak	5.51 MHz	-1.53	-23.53
1 Quasi Peak	27.91 MHz	-10.38	-32.38

Y:

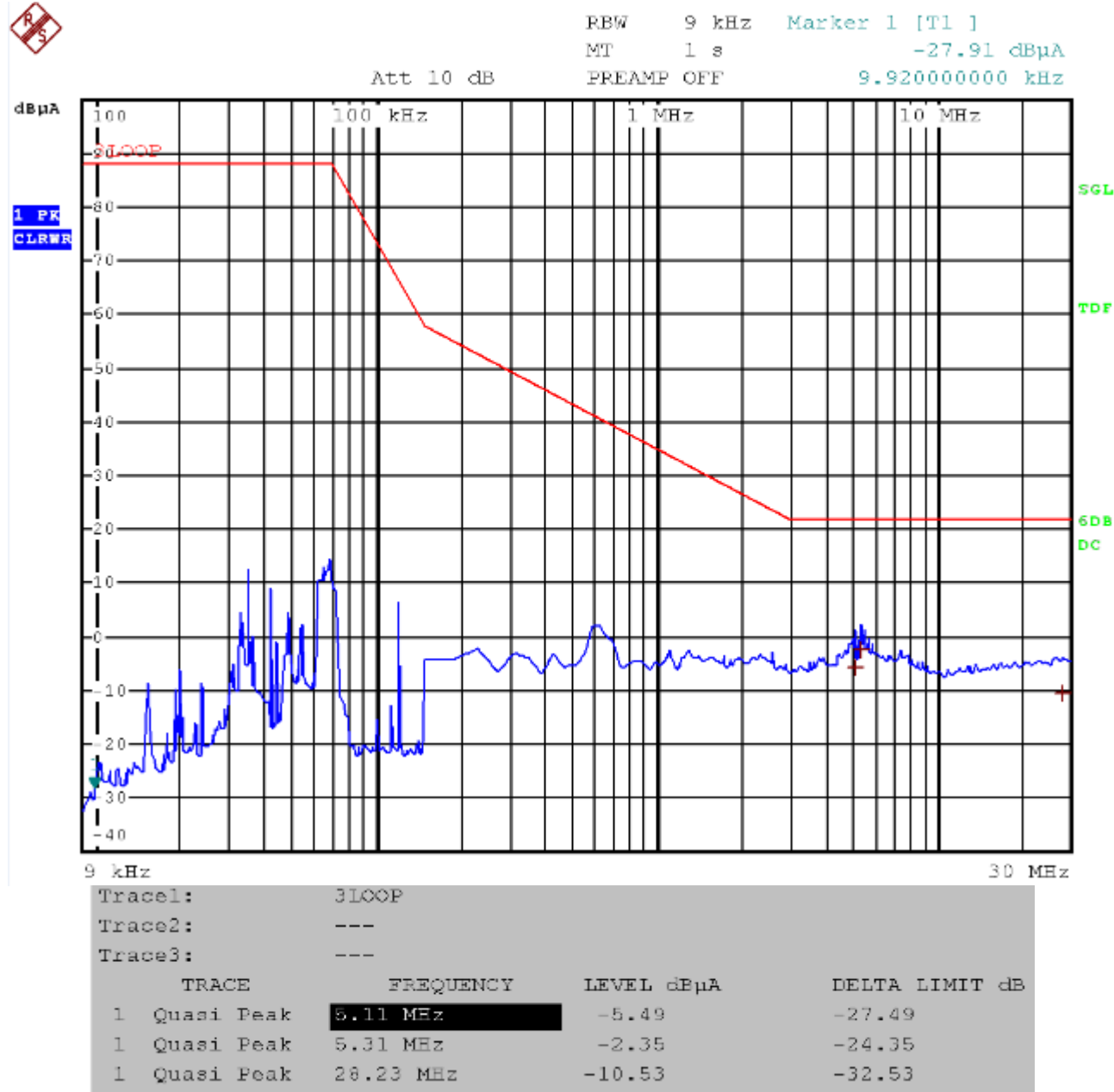


RBW 9 kHz Marker 1 [T1]
MT 1 s -29.46 dBμA
PREAMP OFF 9.920000000 kHz

Att 10 dB



Z:



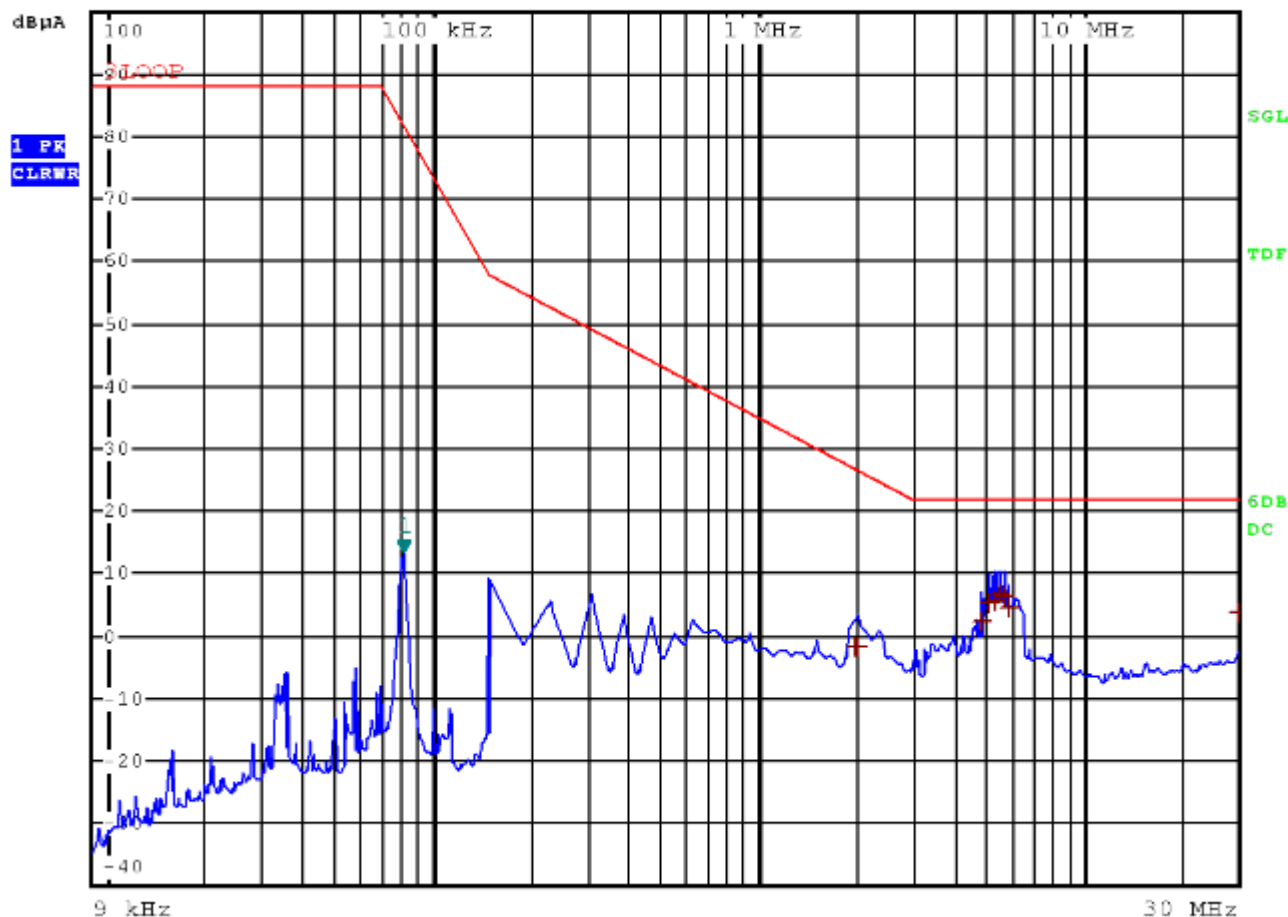
VLF1-I150-050B-XX

X:



RBW 120 kHz Marker 1 [T1]
MT 1 s 13.36 dBμA
PREAMP OFF 81.320000000 kHz

Att 10 dB

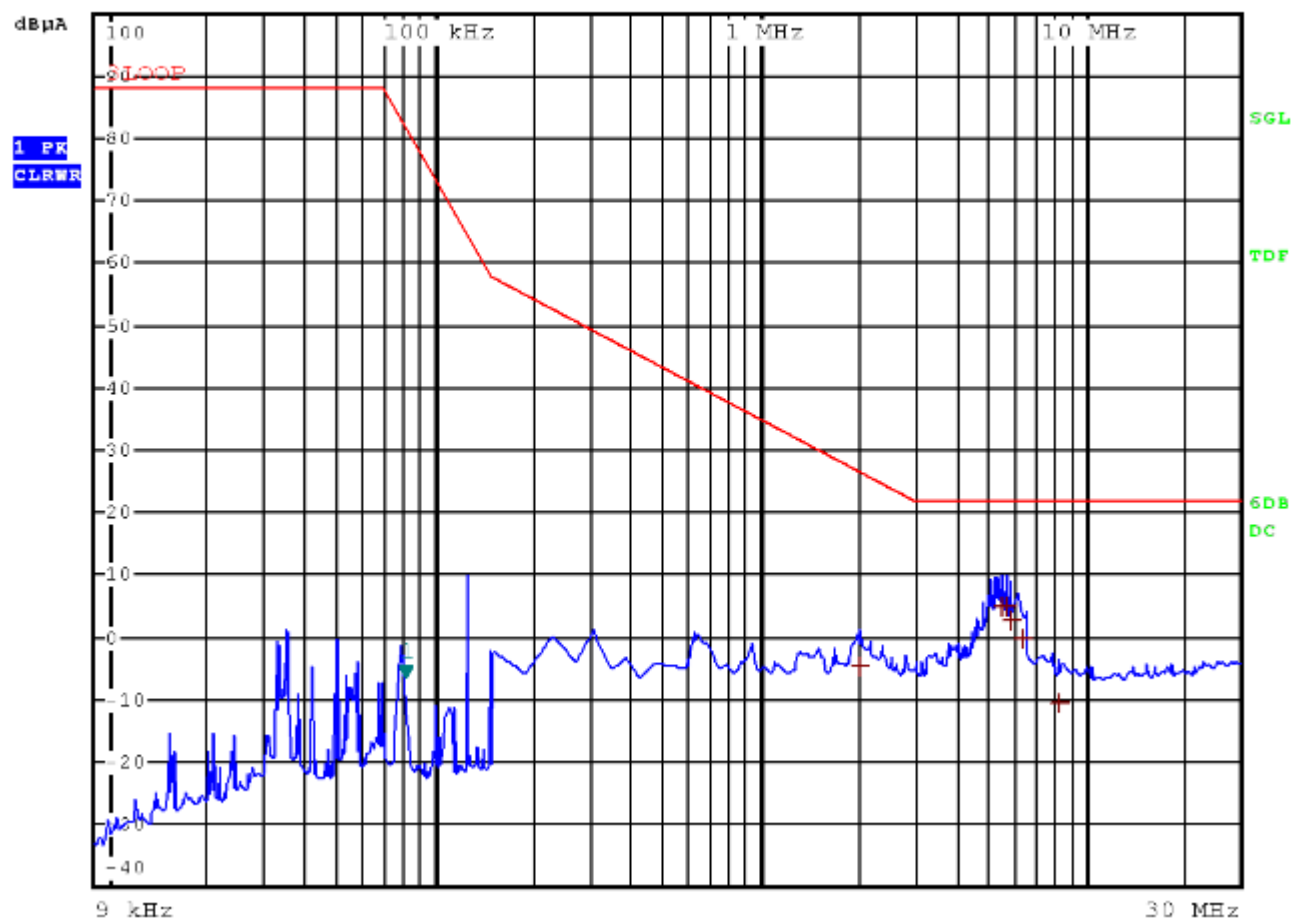


Trace1:	3LOOP			
Trace2:	---			
Trace3:	---			
	TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1	Quasi Peak	1.99 MHz	-1.43	-28.36
1	Quasi Peak	2.03 MHz	-1.45	-28.15
1	Quasi Peak	4.67 MHz	2.39	-19.60
1	Quasi Peak	5.07 MHz	5.49	-16.50
1	Quasi Peak	5.31 MHz	5.69	-16.30
1	Quasi Peak	5.51 MHz	6.69	-15.31
1	Quasi Peak	5.71 MHz	6.33	-15.66
1	Quasi Peak	5.91 MHz	4.59	-17.40
1	Quasi Peak	30 MHz	3.74	-18.25

Y:

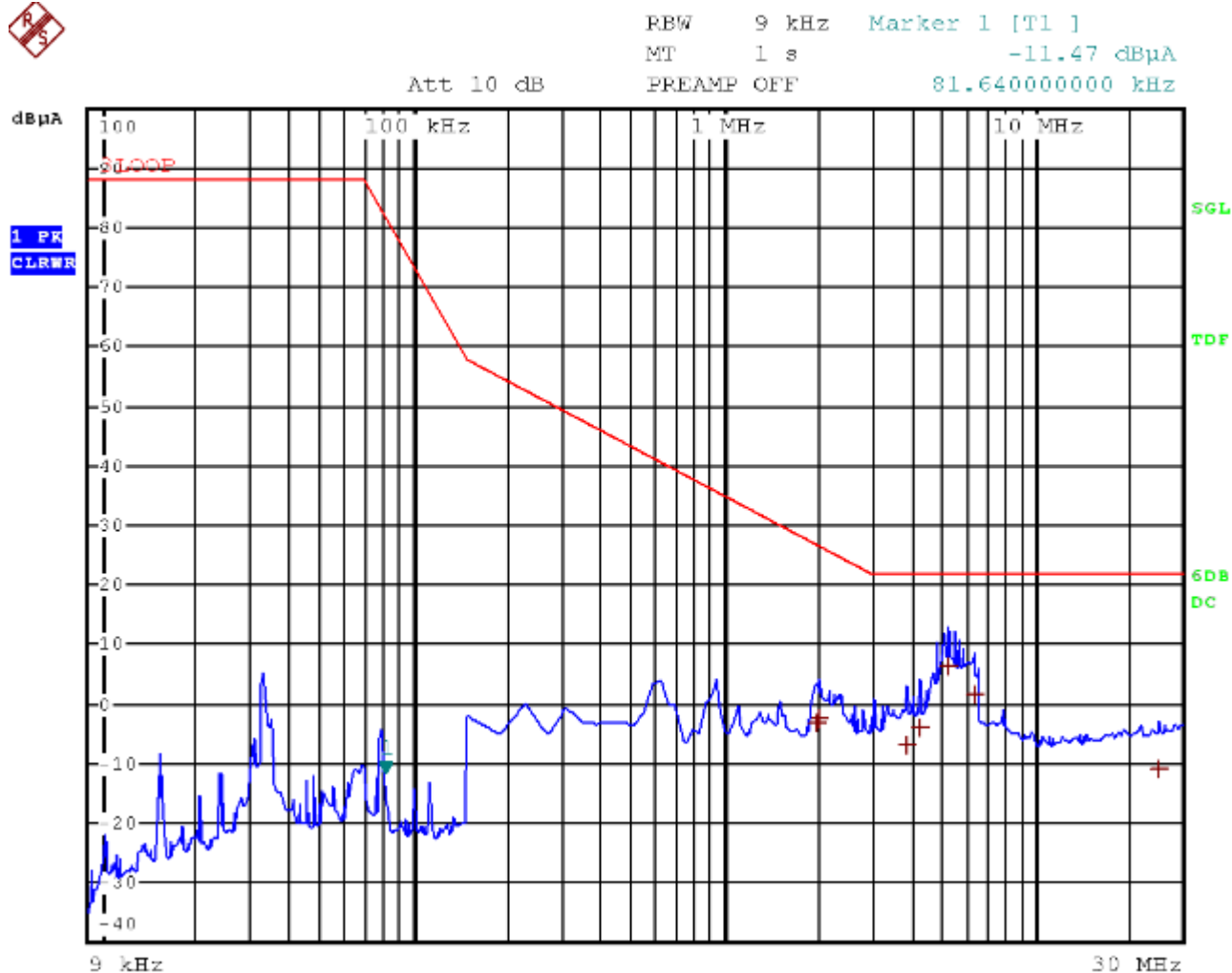

RBW 9 kHz Marker 1 [T1] -6.39 dBμA
MT 1 s
PREAMP OFF 81.080000000 kHz

Att 10 dB



Trace1:	3LOOP		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	2.03 MHz	-4.61	-31.31
1 Quasi Peak	5.51 MHz	4.89	-17.10
1 Quasi Peak	5.71 MHz	5.07	-16.93
1 Quasi Peak	5.91 MHz	2.92	-19.07
1 Quasi Peak	6.35 MHz	-0.15	-22.15
1 Quasi Peak	8.27 MHz	-10.41	-32.41

Z:



Trace1:	3100P		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµA	DELTA LIMIT dB
1 Quasi Peak	1.99 MHz	-2.77	-29.70
1 Quasi Peak	2.03 MHz	-2.72	-29.42
1 Quasi Peak	3.83 MHz	-6.51	-28.51
1 Quasi Peak	4.23 MHz	-3.86	-25.86
1 Quasi Peak	5.27 MHz	6.58	-15.41
1 Quasi Peak	6.35 MHz	1.49	-20.50
1 Quasi Peak	25.07 MHz	-10.66	-32.66

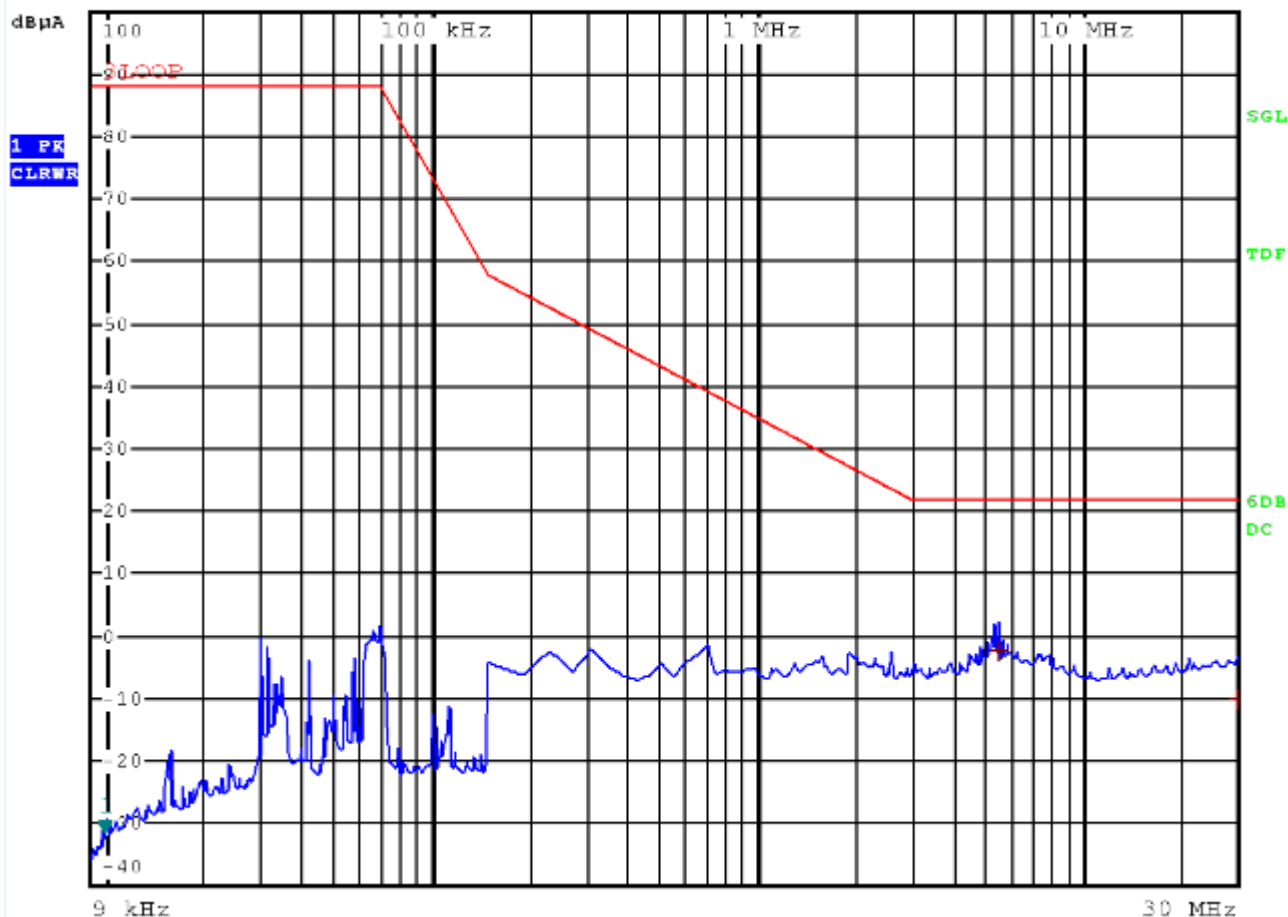
VLF1-I150-050C-XX

X:



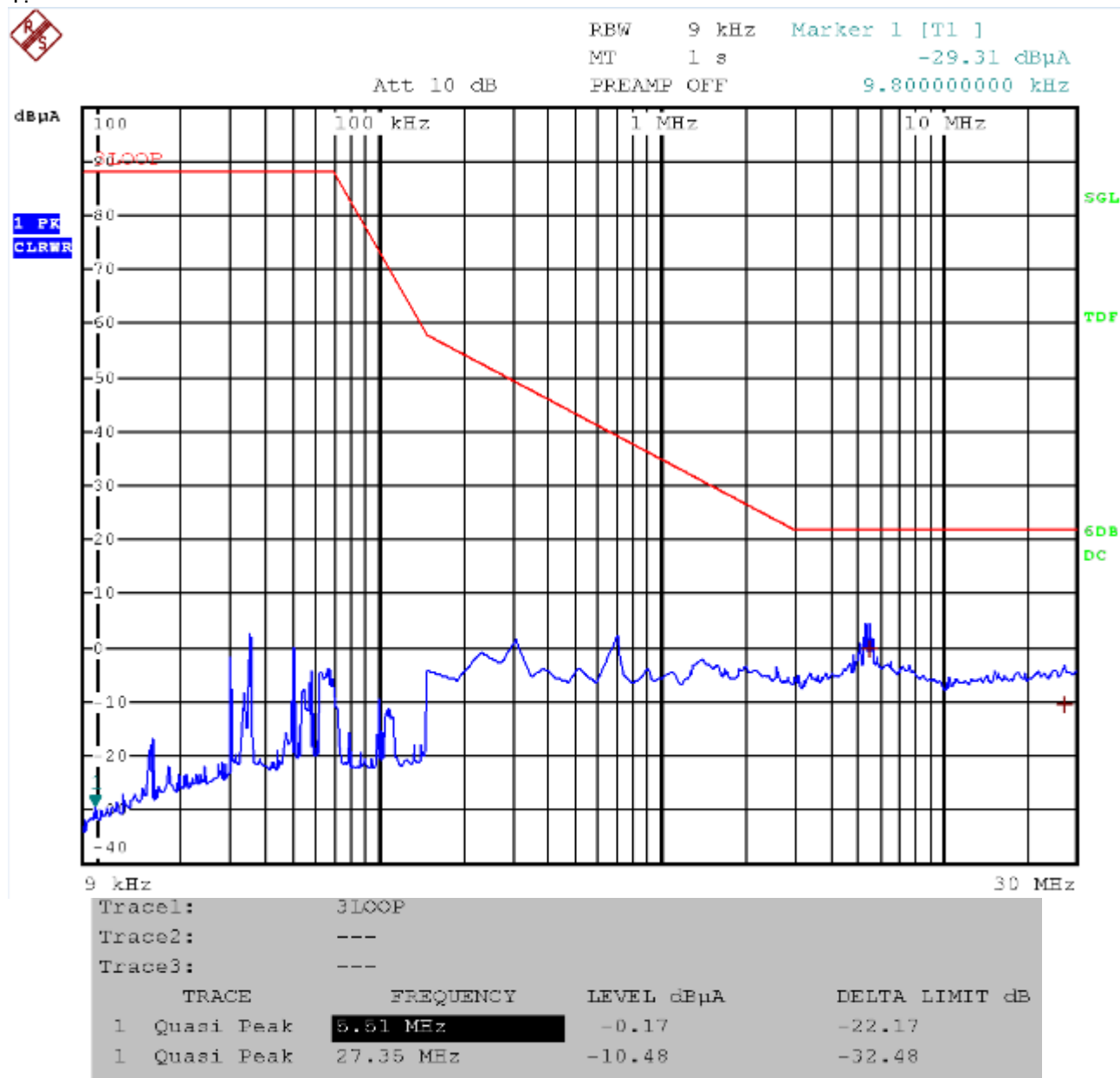
RBW 9 kHz Marker 1 [T1]
MT 1 s -31.53 dBμA
PREAMP OFF 9.880000000 kHz

Att 10 dB

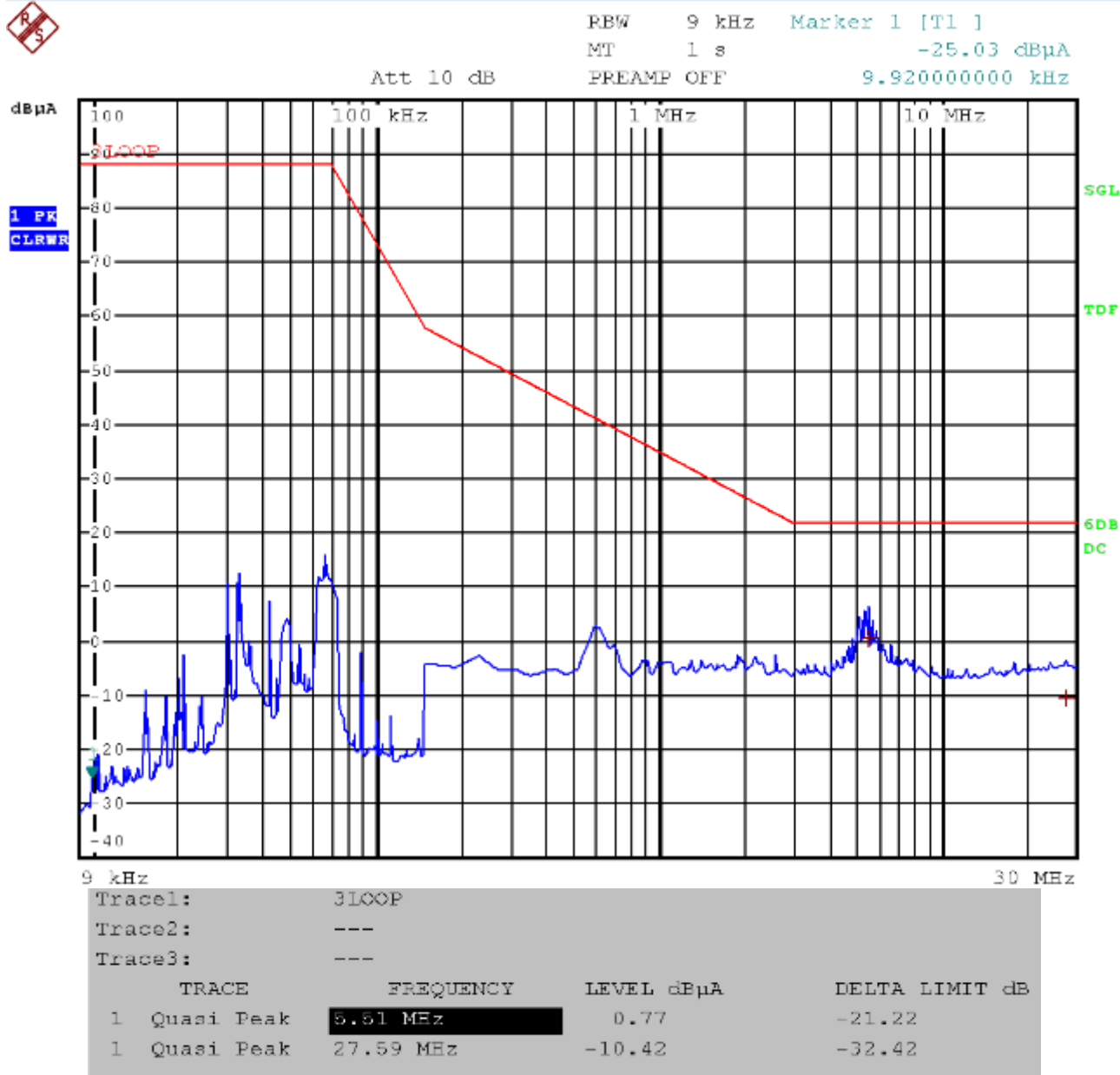


Trace1:	3100P		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	5.51 MHz	-2.30	-24.30
1 Quasi Peak	29.99 MHz	-10.03	-32.03

Y:



Z:



VLF1-I150-050D-XX

X:

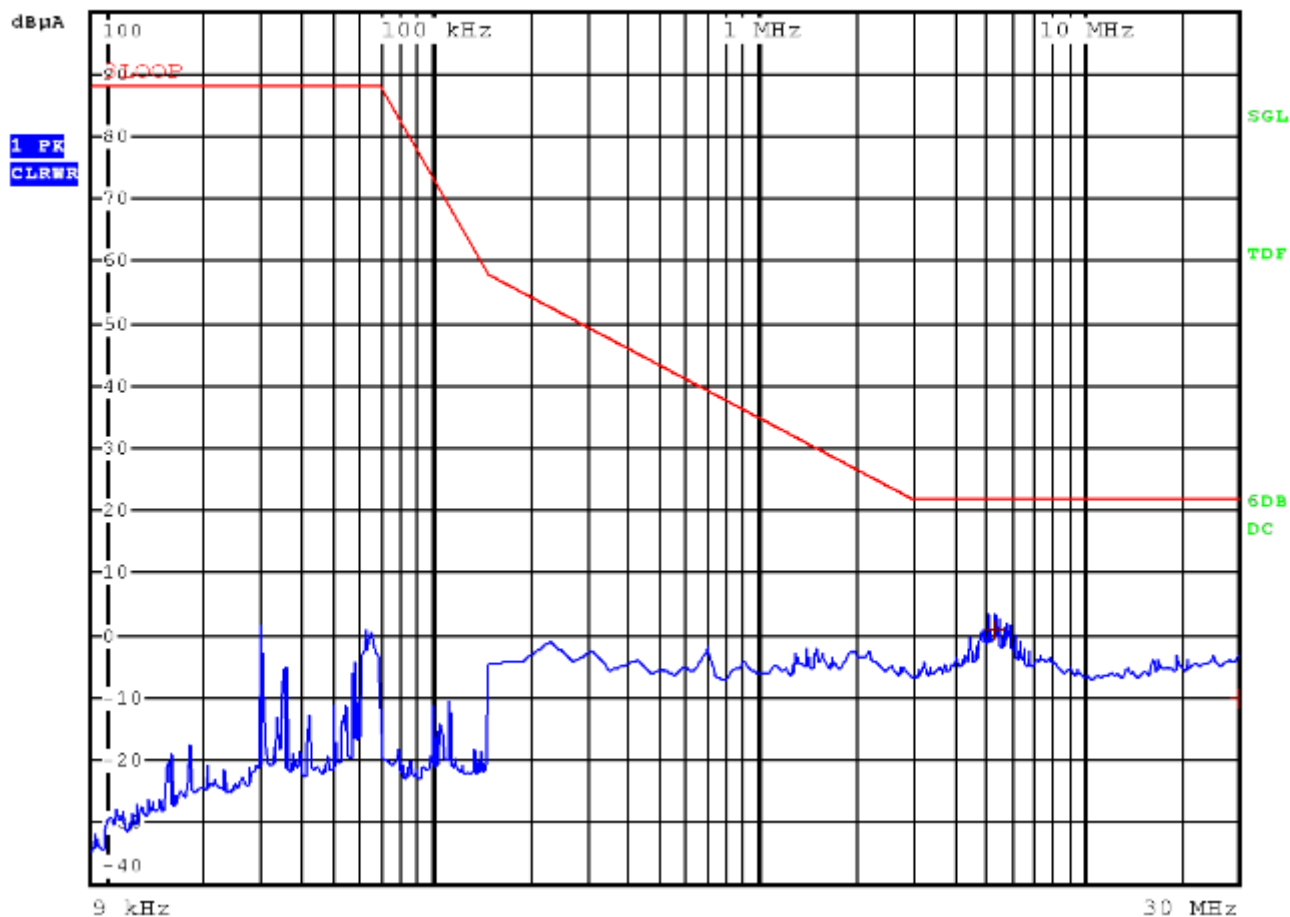


RBW 9 kHz

MT 1 s

PREAMP OFF

Att 10 dB



Trace1:	3LOOP		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	5.31 MHz	1.12	-20.88
1 Quasi Peak	29.75 MHz	-10.22	-32.22

Y:

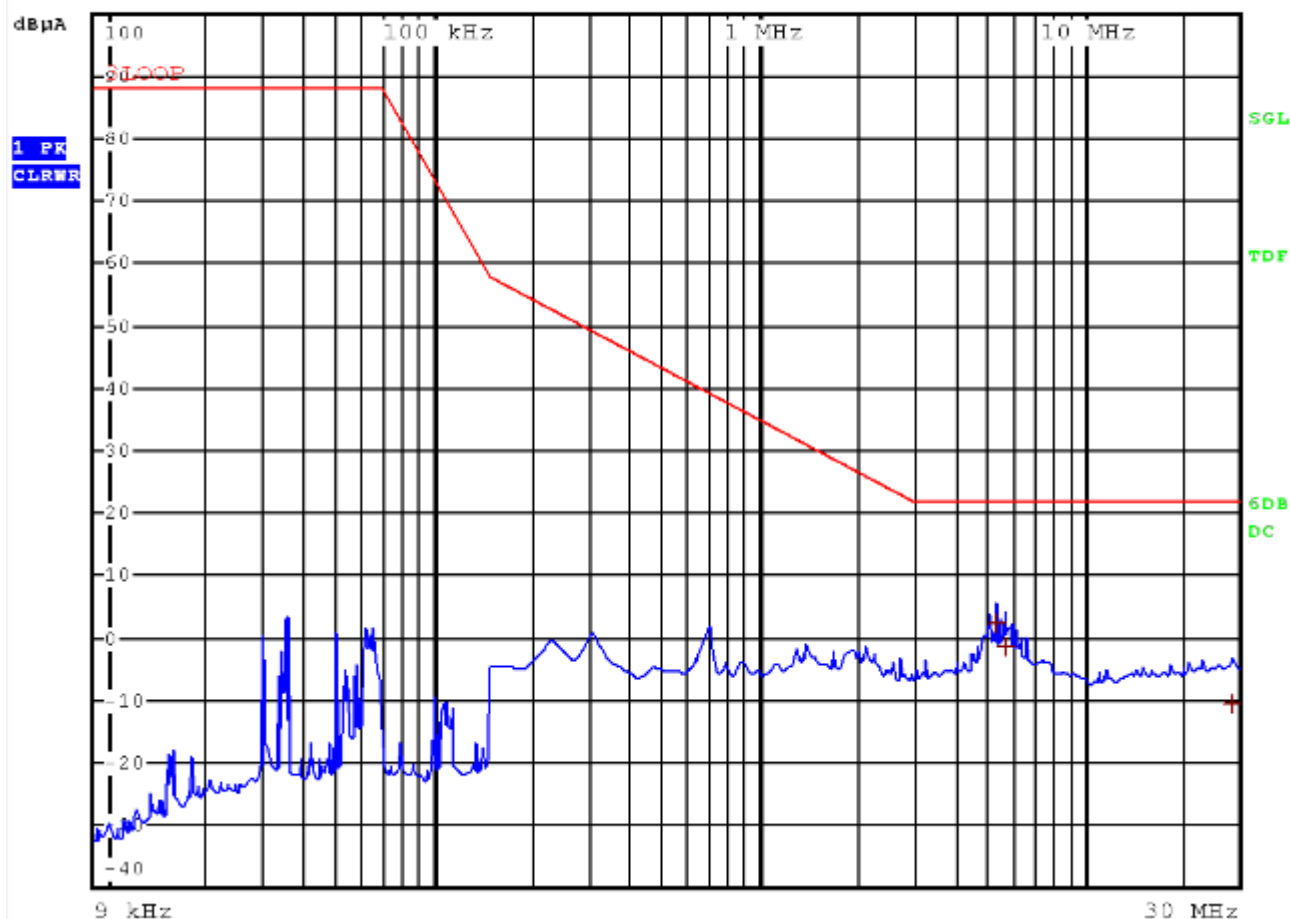


RBW 9 kHz

MT 1 s

PREAMP OFF

Att 10 dB



Trace1: 3LOOP

Trace2: ---

Trace3: ---

TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	5.31 MHz	2.30	-19.69
1 Quasi Peak	5.71 MHz	-1.11	-23.12
1 Quasi Peak	28.35 MHz	-10.36	-32.36

Z:

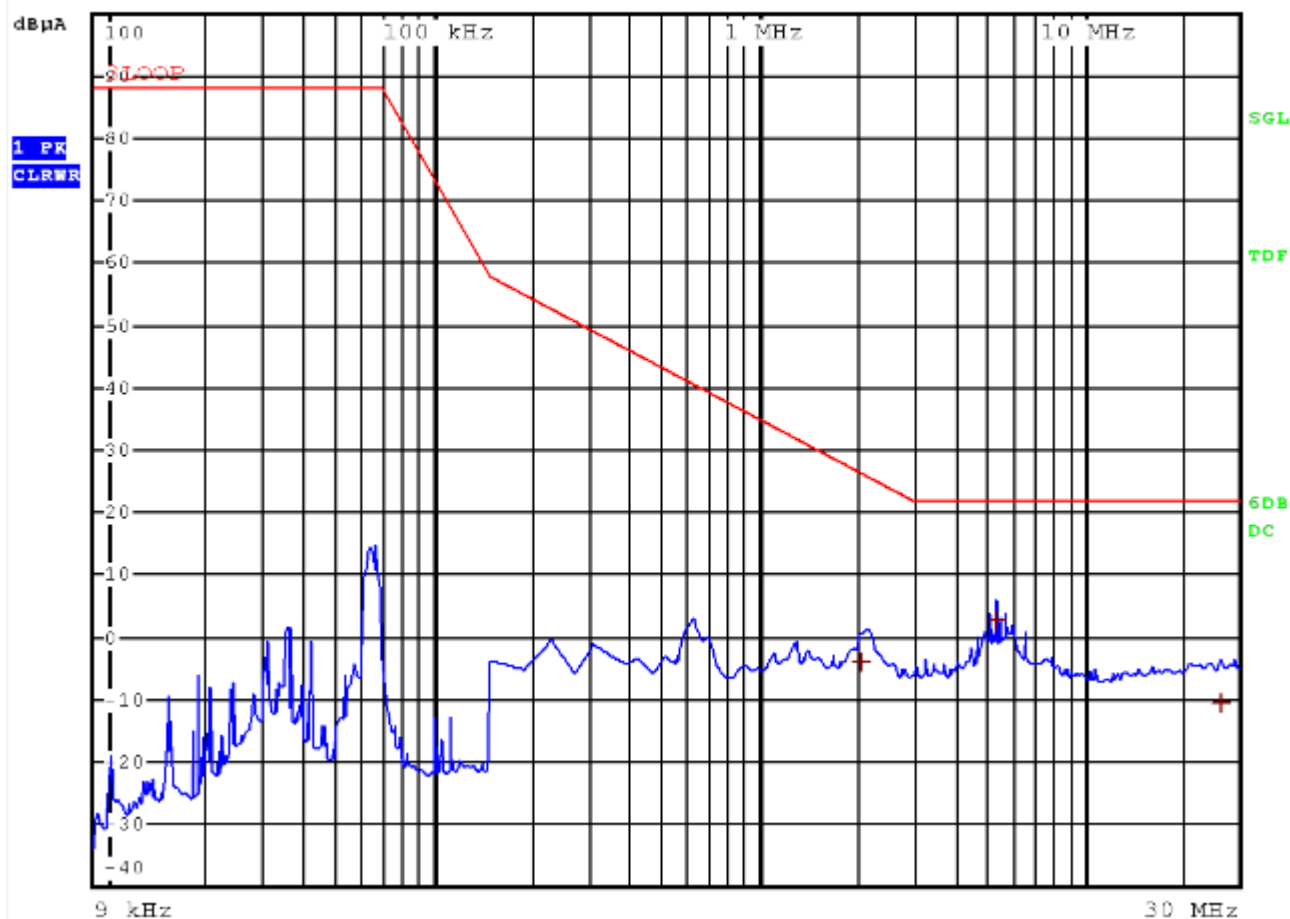


RBW 9 kHz

MT 1 s

PREAMP OFF

Att 10 dB



Trace1:	3LOOP		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	2.11 MHz	-3.97	-30.20
1 Quasi Peak	5.31 MHz	2.92	-19.07
1 Quasi Peak	26.47 MHz	-10.47	-32.47

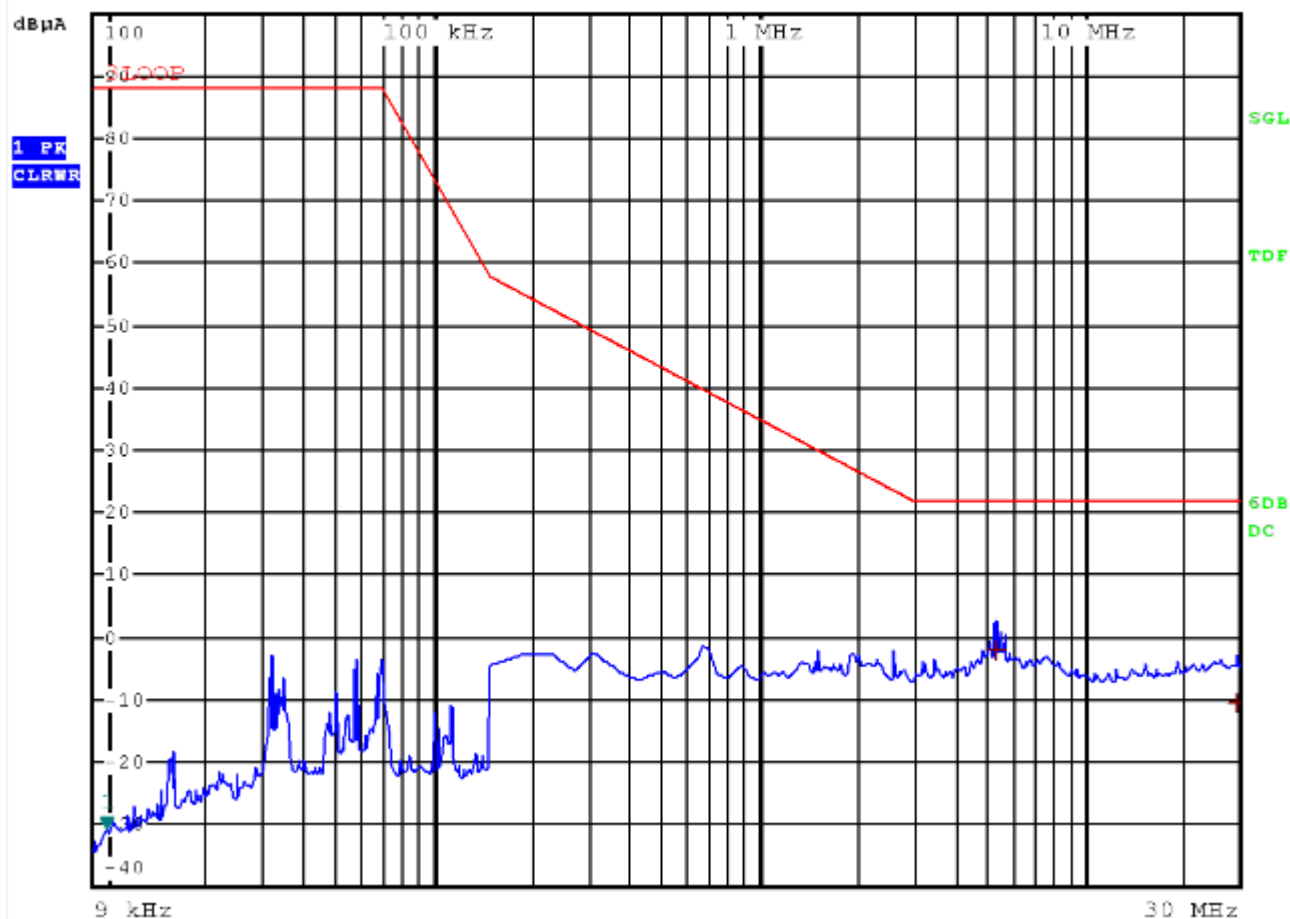
VLF1-I300-100A-XX

X:



RBW 9 kHz Marker 1 [T1]
MT 1 s -30.66 dBμA
PREAMP OFF 9.960000000 kHz

Att 10 dB

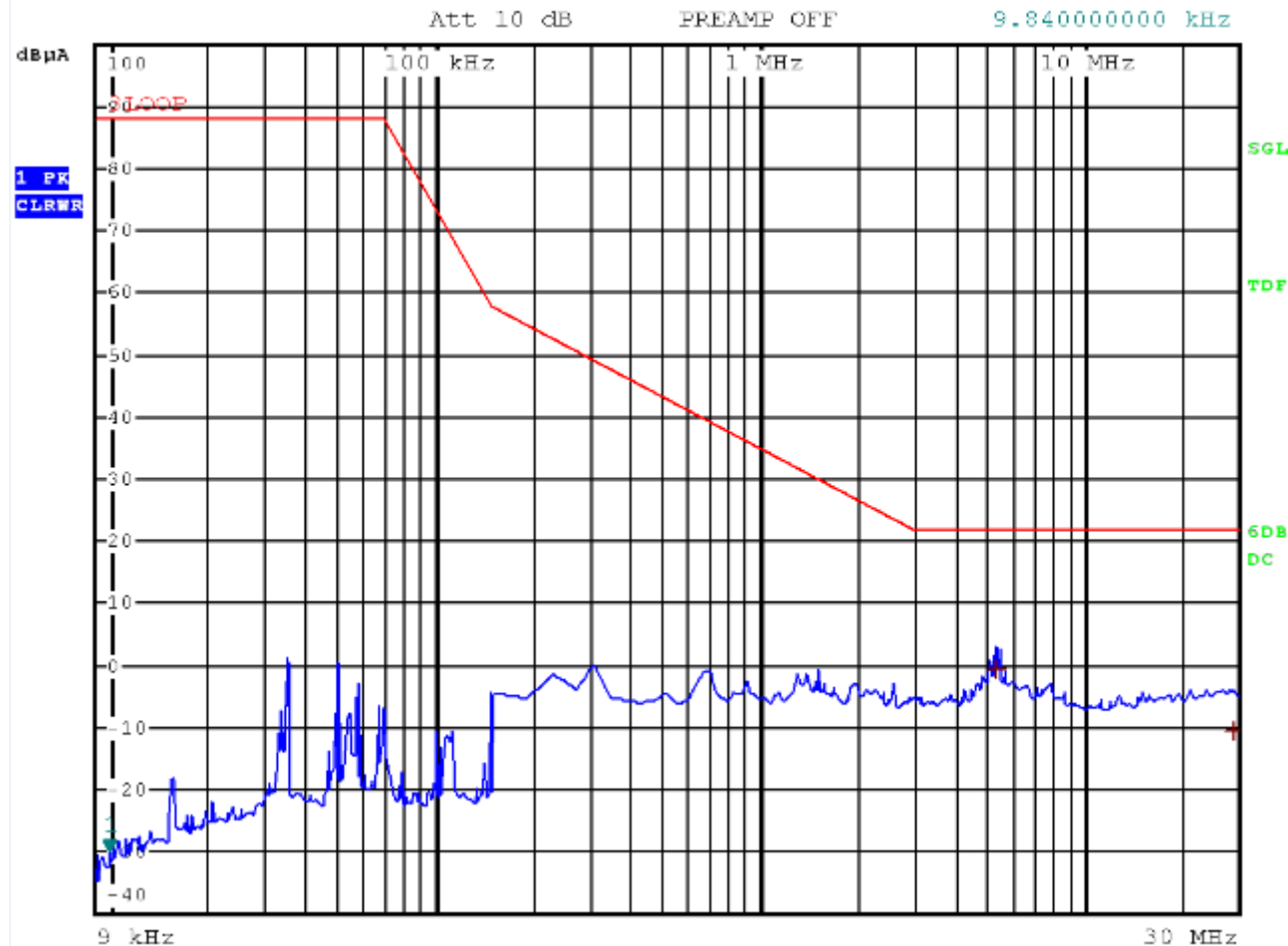


Trace1:	3LOOP		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	5.31 MHz	-1.95	-23.95
1 Quasi Peak	29.59 MHz	-10.39	-32.39

Y:

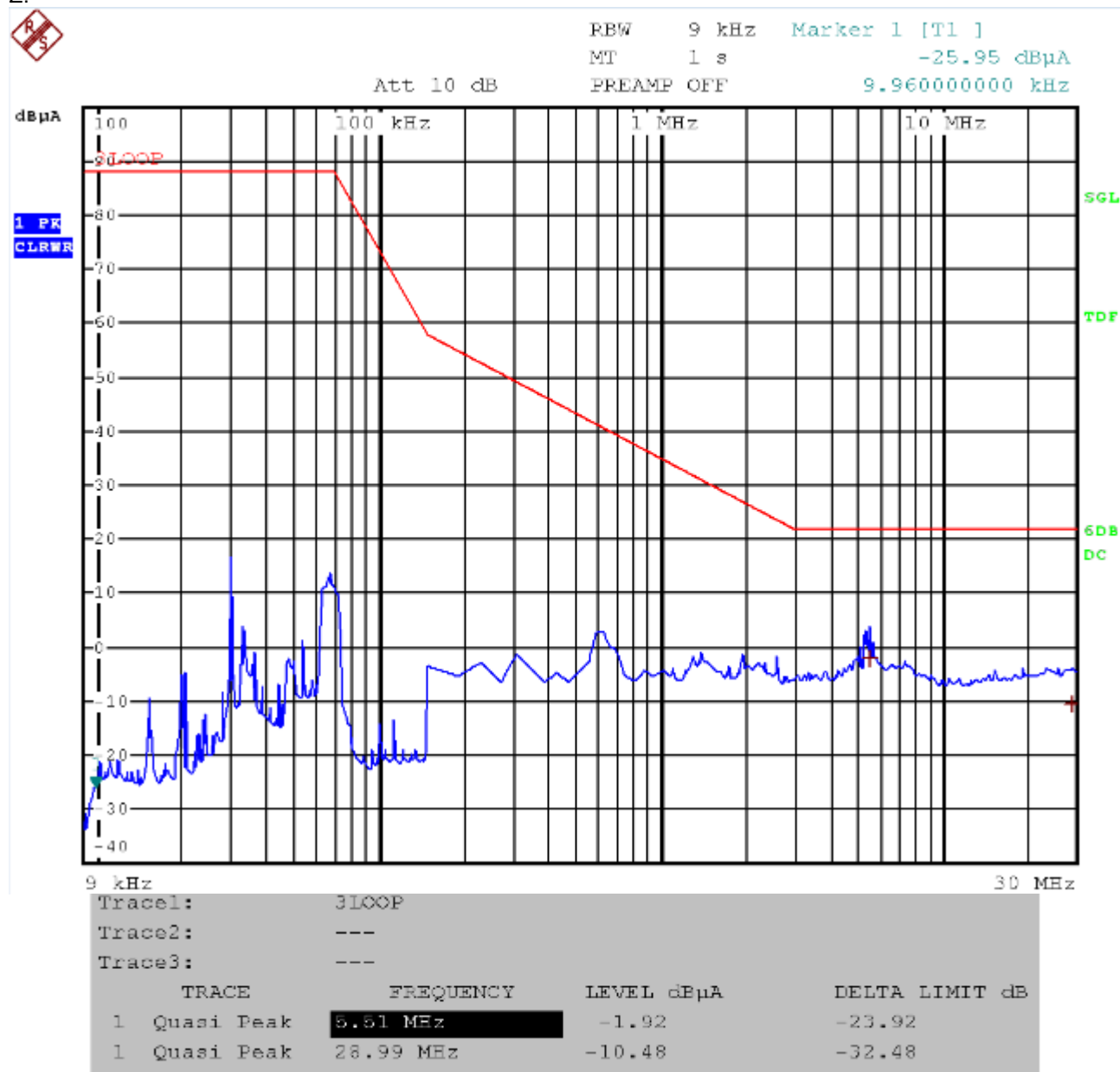


RBW 9 kHz Marker 1 [T1]
MT 1 s -29.88 dBμA
PREAMP OFF 9.840000000 kHz



Trace1:	3100P		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	5.31 MHz	-0.35	-22.35
1 Quasi Peak	29.03 MHz	-10.52	-32.52

Z:



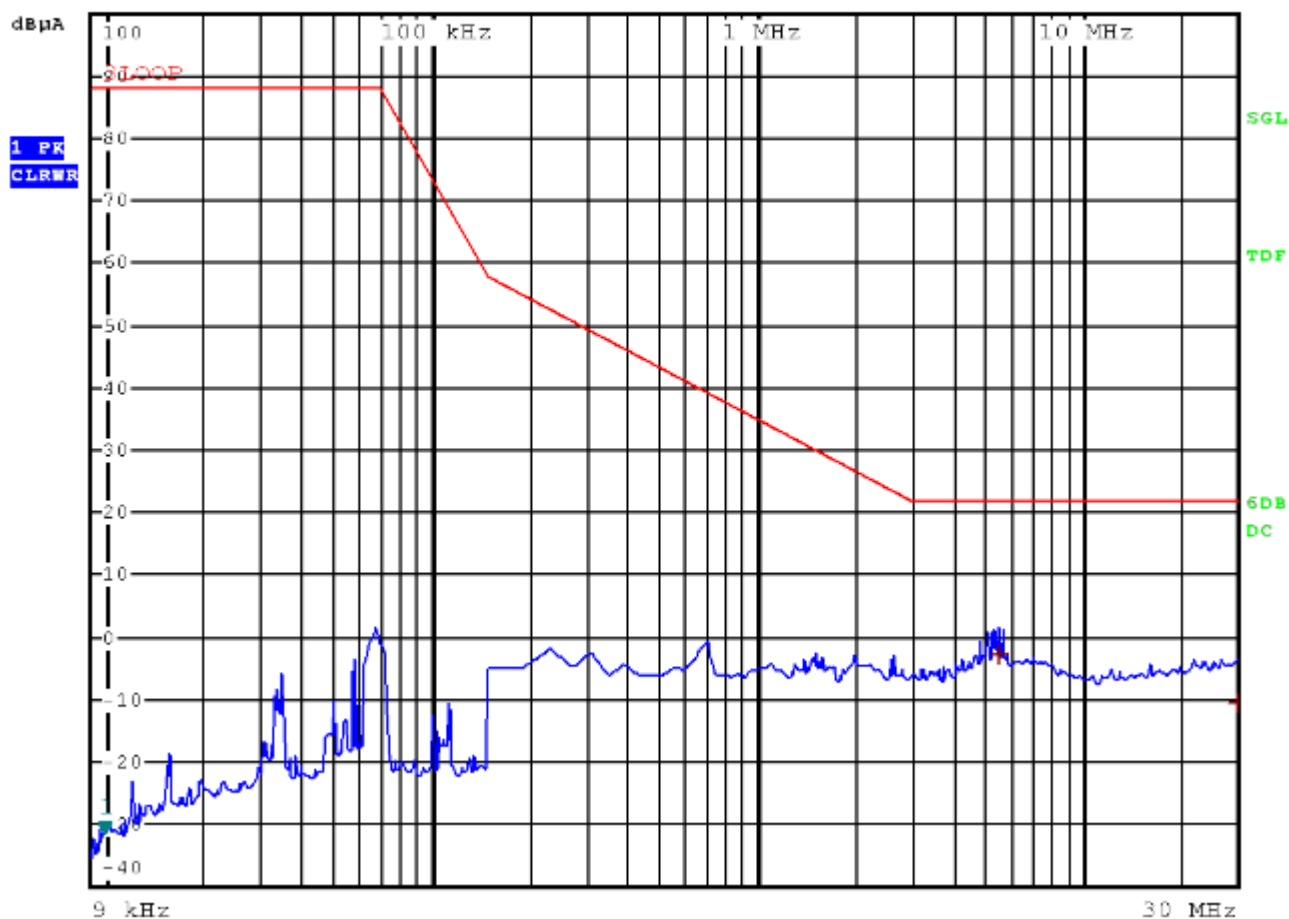
VLF1-I300-100B-XX

X:



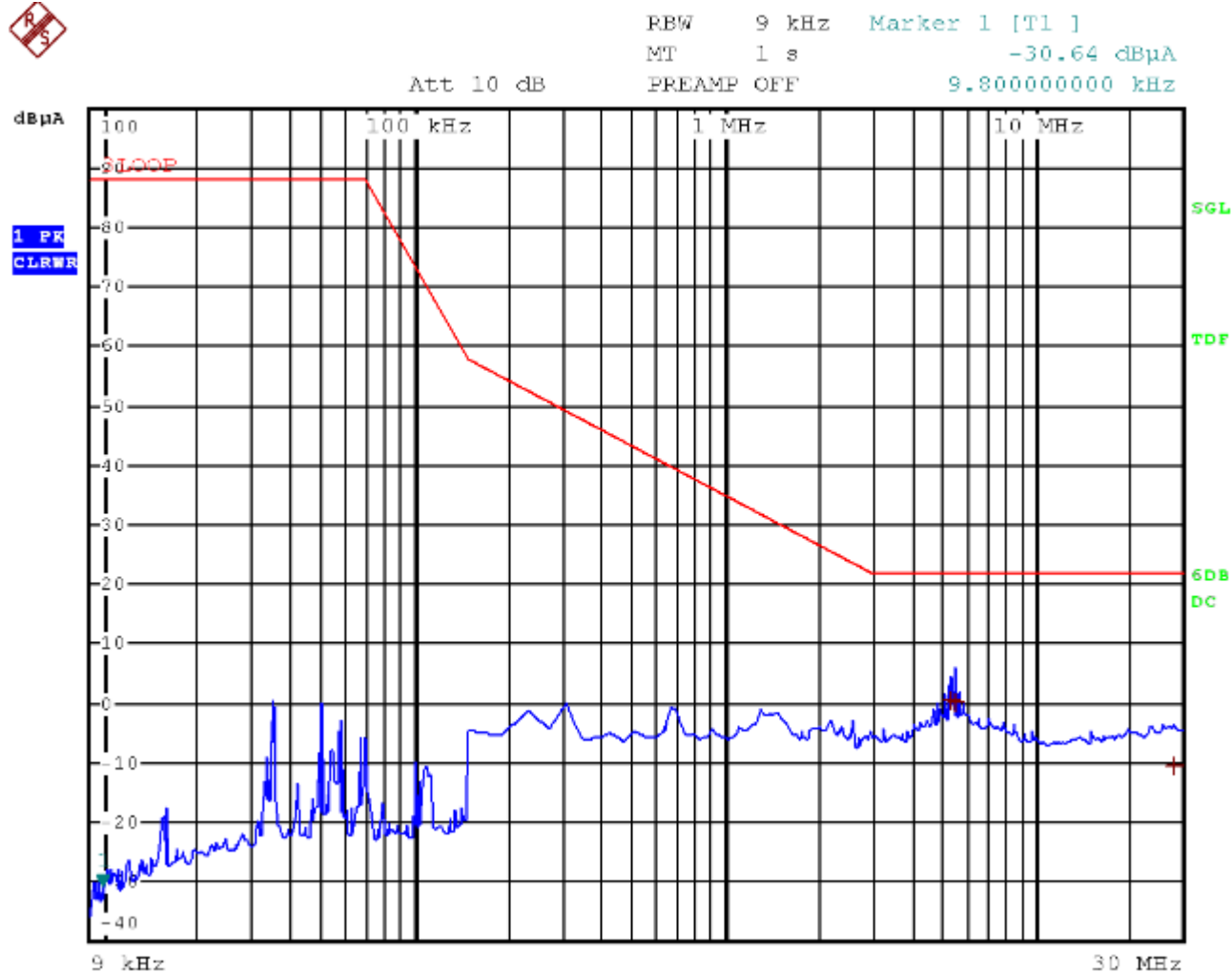
RBW 9 kHz Marker 1 [T1]
MT 1 s -31.30 dBμA
PREAMP OFF 9.840000000 kHz

Att 10 dB



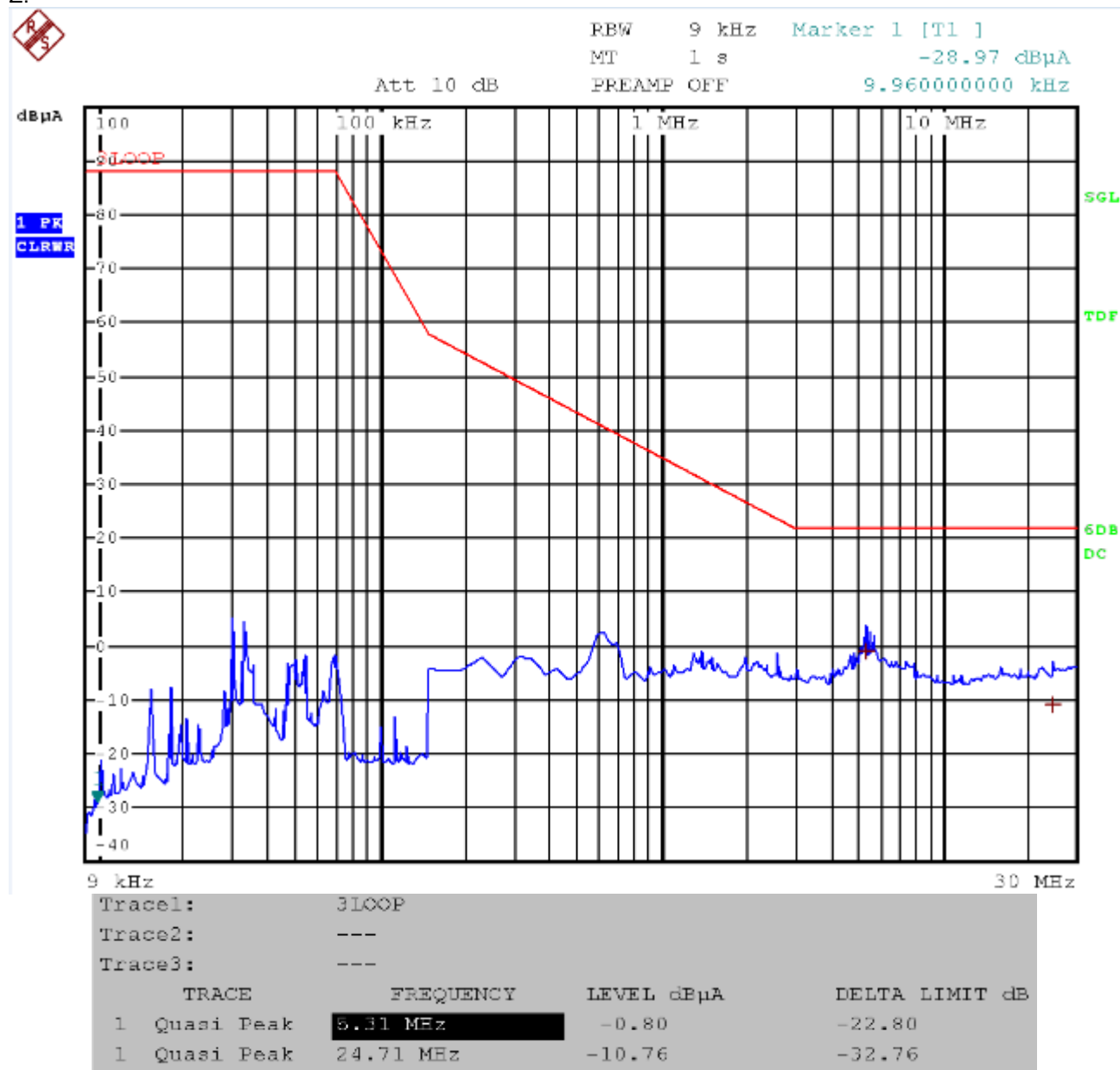
Trace1:	3LOOP		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	5.51 MHz	-2.67	-24.67
1 Quasi Peak	29.67 MHz	-10.29	-32.29

Y:

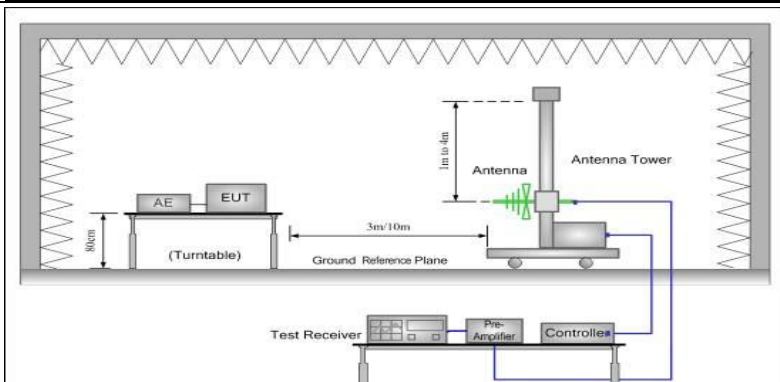


Trace1:	3LOOP		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμA	DELTA LIMIT dB
1 Quasi Peak	5.31 MHz	0.61	-21.38
1 Quasi Peak	5.51 MHz	0.35	-21.64
1 Quasi Peak	28.11 MHz	-10.49	-32.49

Z:



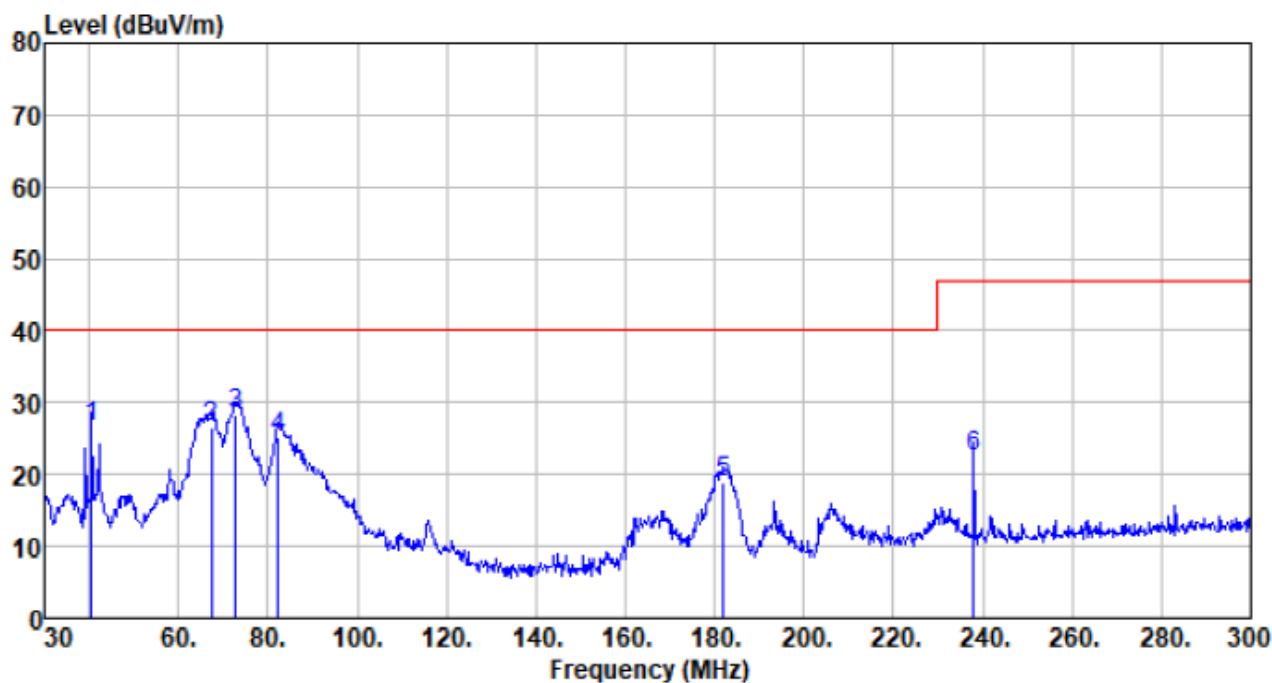
7.2 Radiated electromagnetic disturbances(30MHz-300MHz)

Test Requirement:	EN 55015					
Test Method:	EN 55015					
Test Frequency Range:	30MHz to 300MHz					
Test site:	Measurement Distance: 3m					
Limit:	Frequency range(MHz)			Limit @3m (dBuV)		
	30 to 230			40.00		
	230 to 300			47.00		
	* At the transition frequency, the lower limit applies.					
Test setup:						
Test procedure	1. The radiated emissions test was conducted in a semi-anechoic chamber. 2. The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation. 3. Before final measurements of radiated emissions, a pre-scan was performed in the spectrum mode with the peak detector to find out the maximum emissions spectrum plots of the EUT. 4. The frequencies of maximum emission were determined in the final radiated emissions measurement. At each frequency, the EUT was rotated 360°, and the antenna was raised and lowered from 1 to 4 meters in order to determine the maximum disturbance. Measurements were performed for both horizontal and vertical antenna polarization.					
Test Instruments:	Temp.:	25 °C	Humid.:	50%	Press.:	1 012mbar
Measurement Record:	Uncertainty: ±3.9679dB					
Test Instruments:	Refer to section 6 for details					
Test mode:	Refer to section 5.2 for details					
Test results:	Pass					

Measurement Data

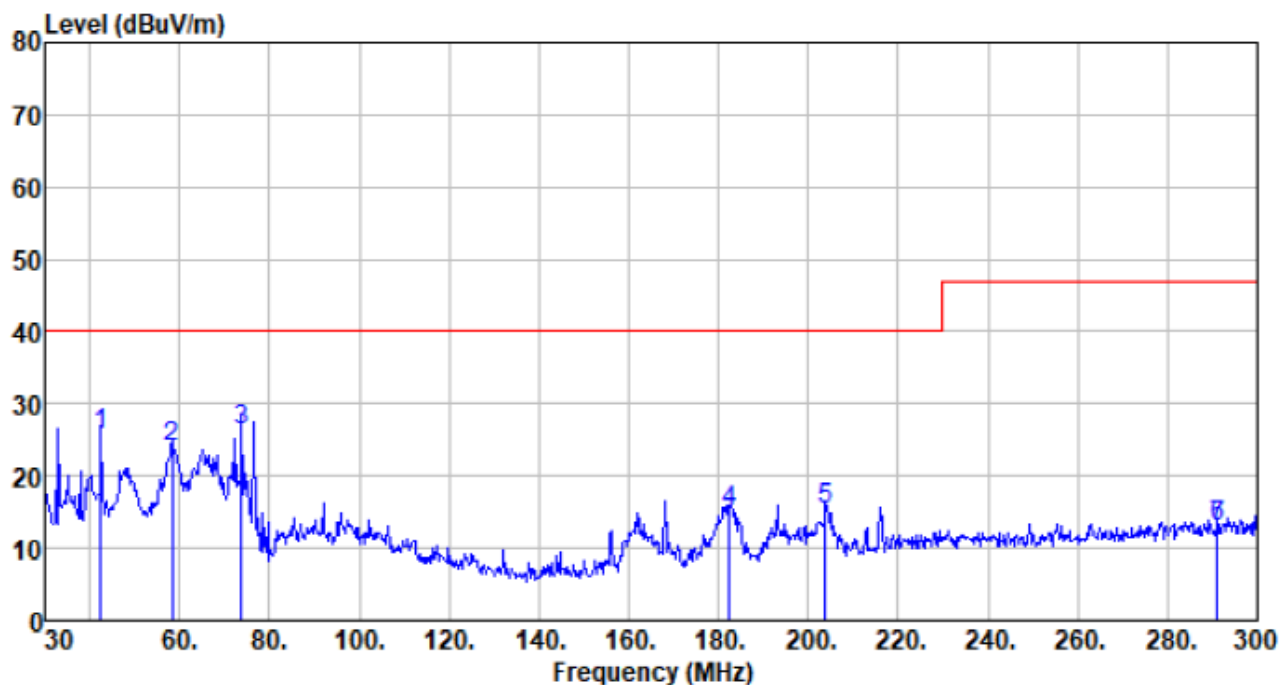
PLF1-I150-050D-XX

Test mode:	On mode	Antenna Polarity:	Horizontal
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
40.530	49.46	12.21	0.67	35.69	26.65	40.00	-13.35	QP
67.260	53.55	8.54	0.92	36.41	26.60	40.00	-13.40	QP
72.930	56.30	7.47	0.96	36.47	28.26	40.00	-11.74	QP
82.380	52.51	8.16	1.05	36.57	25.15	40.00	-14.85	QP
182.010	45.31	9.07	1.75	37.25	18.88	40.00	-21.12	QP
237.900	45.94	11.78	2.06	37.37	22.41	47.00	-24.59	QP

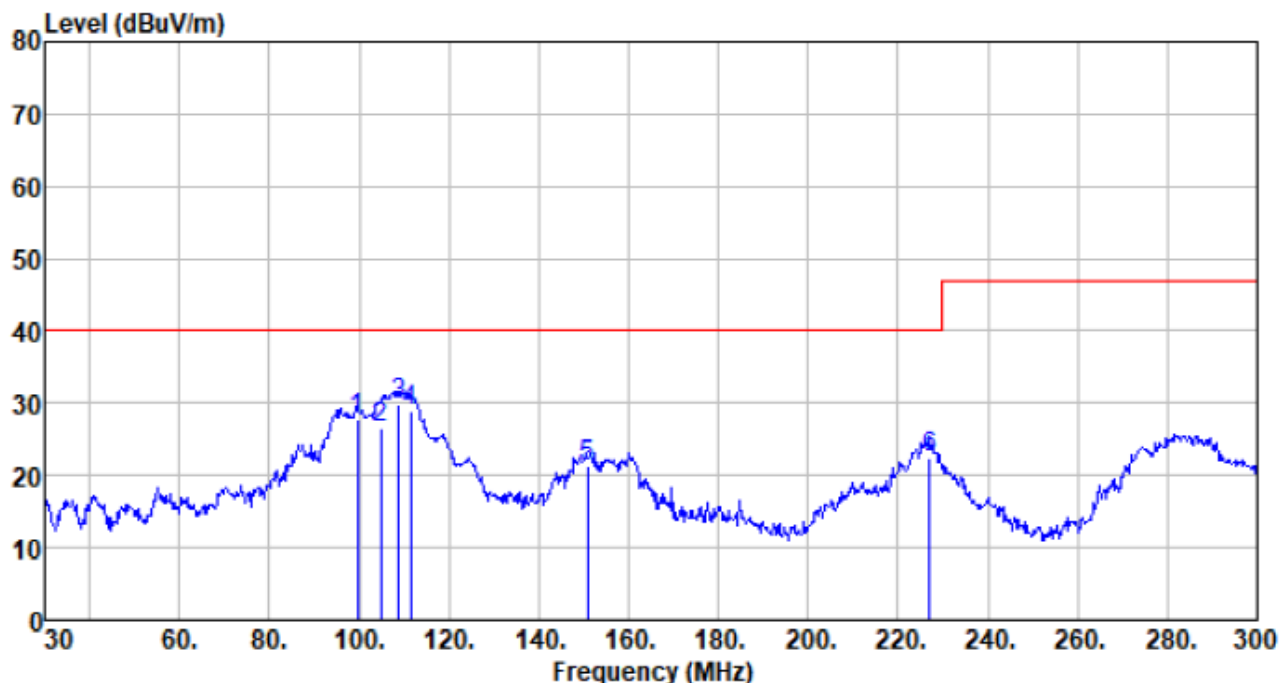
Test mode:	On mode	Antenna Polarity:	Vertical
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
42.420	48.66	12.23	0.69	35.80	25.78	40.00	-14.22	QP
58.350	47.94	11.48	0.85	36.30	23.97	40.00	-16.03	QP
73.740	54.40	7.46	0.97	36.48	26.35	40.00	-13.65	QP
182.550	41.37	9.15	1.75	37.25	15.02	40.00	-24.98	QP
203.880	40.35	10.55	1.86	37.33	15.43	40.00	-24.57	QP
291.090	34.85	13.35	2.32	37.41	13.11	47.00	-33.89	QP
291.090	34.85	13.35	2.32	37.41	13.11	47.00	-33.89	QP

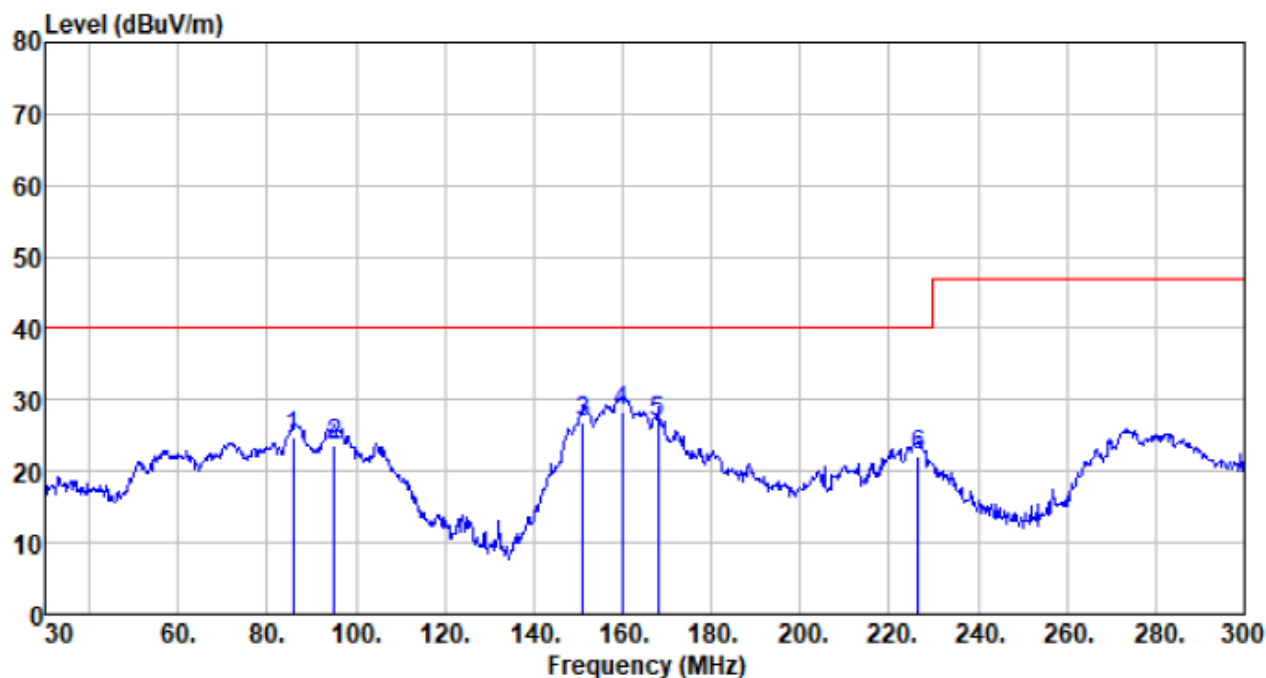
PLF1-I300-100B-XX

Test mode:	On mode	Antenna Polarity:	Horizontal
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
99.660	51.08	12.20	1.19	36.72	27.75	40.00	-12.25	QP
104.790	50.40	11.62	1.23	36.76	26.49	40.00	-13.51	QP
108.840	54.00	11.20	1.27	36.79	29.68	40.00	-10.32	QP
111.540	53.61	10.85	1.29	36.82	28.93	40.00	-11.07	QP
150.960	49.04	7.70	1.57	37.08	21.23	40.00	-18.77	QP
227.100	46.30	11.42	2.00	37.36	22.36	40.00	-17.64	QP

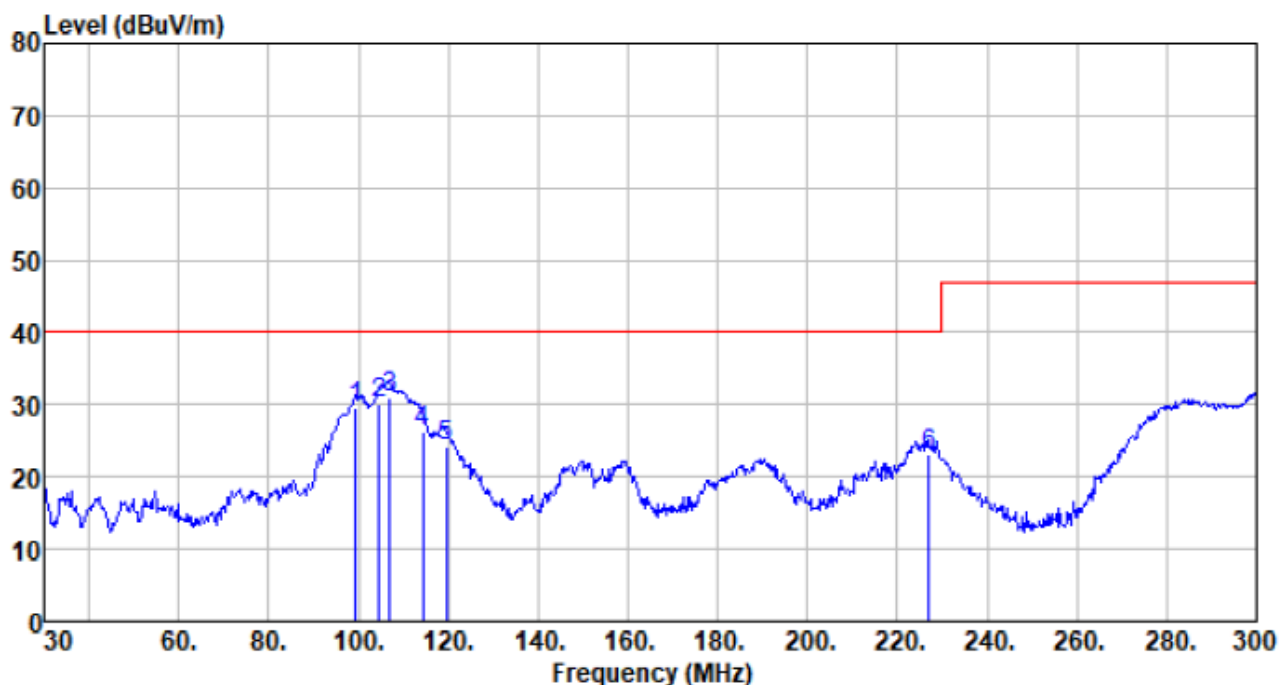
Test mode:	On mode	Antenna Polarity:	Vertical
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
85.890	50.99	9.30	1.08	36.60	24.77	40.00	-15.23	QP
95.070	47.74	11.45	1.15	36.68	23.66	40.00	-16.34	QP
151.230	54.76	7.70	1.58	37.08	26.96	40.00	-13.04	QP
159.870	55.67	8.30	1.63	37.13	28.47	40.00	-11.53	QP
167.970	53.92	8.46	1.68	37.18	26.88	40.00	-13.12	QP
226.560	46.19	11.38	2.00	37.36	22.21	47.00	-24.79	QP

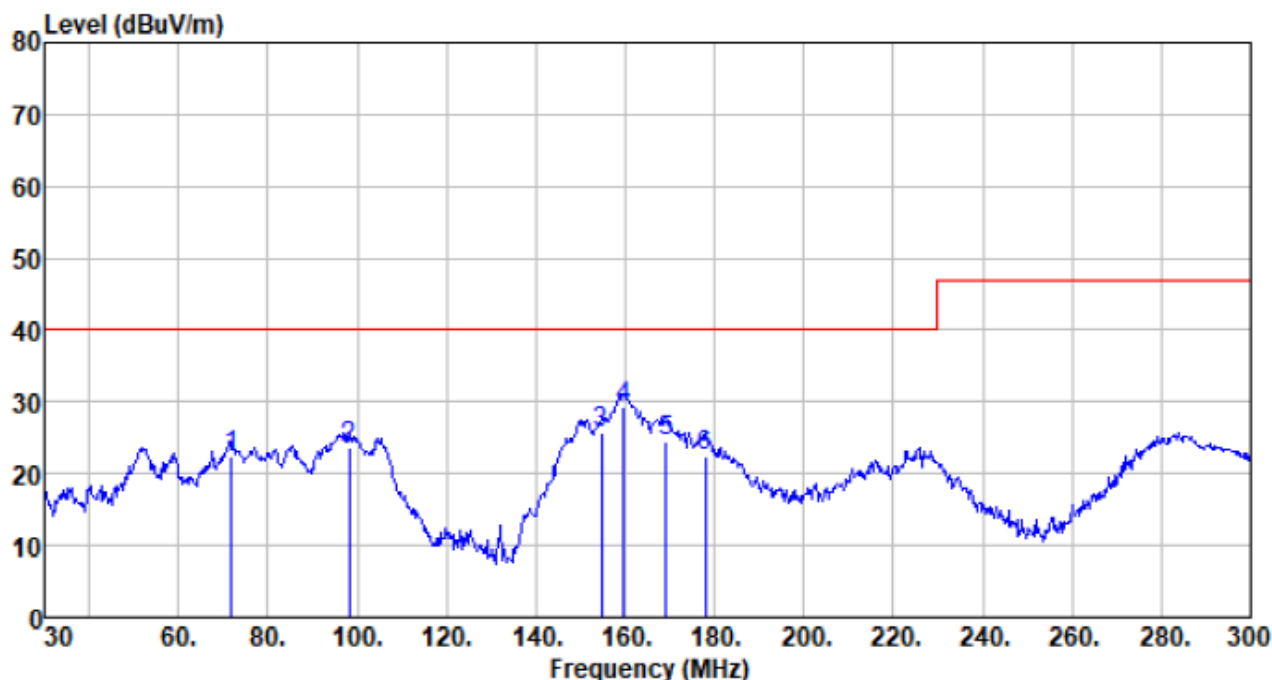
PLF1-I300-100C-XX

Test mode:	On mode	Antenna Polarity:	Horizontal
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
99.390	52.83	12.13	1.19	36.72	29.43	40.00	-10.57	QP
104.520	53.99	11.68	1.23	36.76	30.14	40.00	-9.86	QP
106.950	55.08	11.41	1.25	36.78	30.96	40.00	-9.04	QP
114.240	51.49	10.43	1.31	36.84	26.39	40.00	-13.61	QP
119.640	50.22	9.58	1.36	36.88	24.28	40.00	-15.72	QP
227.100	47.03	11.42	2.00	37.36	23.09	40.00	-16.91	QP

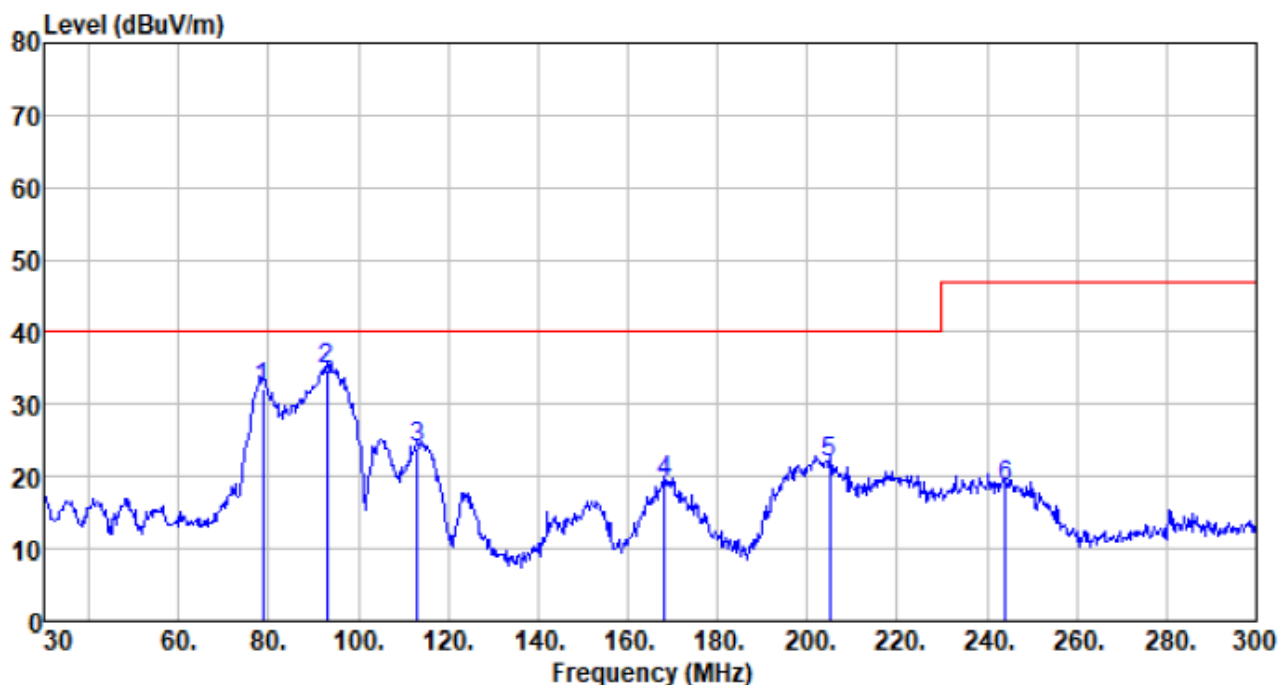
Test mode:	On mode	Antenna Polarity:	Vertical
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
71.850	50.51	7.48	0.96	36.46	22.49	40.00	-17.51	QP
98.310	47.26	12.00	1.18	36.71	23.73	40.00	-16.27	QP
154.740	53.20	7.95	1.60	37.10	25.65	40.00	-14.35	QP
159.600	56.33	8.30	1.63	37.13	29.13	40.00	-10.87	QP
169.050	51.68	8.47	1.68	37.18	24.65	40.00	-15.35	QP
177.960	49.25	8.83	1.73	37.23	22.58	40.00	-17.42	QP

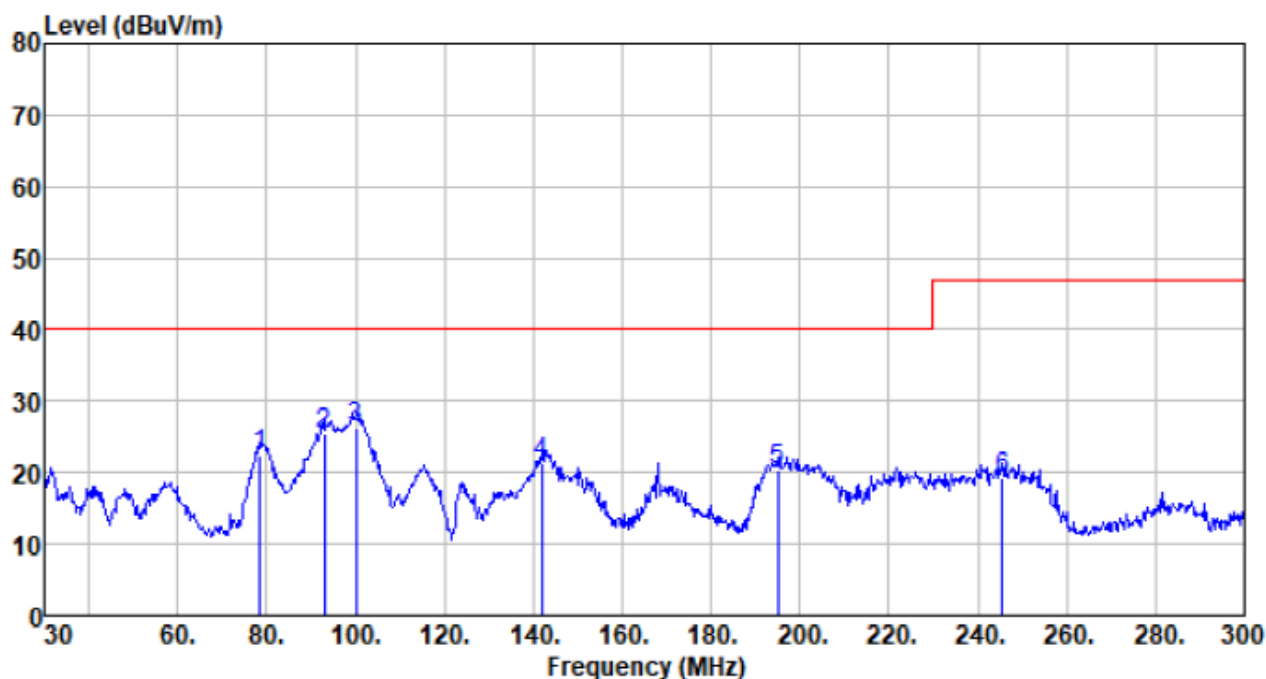
VLF1-I120-040A-XX

Test mode:	On mode	Antenna Polarity:	Horizontal
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
78.870	60.17	7.41	1.02	36.54	32.06	40.00	-7.94	QP
92.910	59.14	11.11	1.13	36.66	34.72	40.00	-5.28	QP
113.160	48.70	10.59	1.31	36.83	23.77	40.00	-16.23	QP
168.240	46.14	8.46	1.68	37.18	19.10	40.00	-20.90	QP
204.960	46.82	10.58	1.87	37.34	21.93	40.00	-18.07	QP
244.110	41.89	11.96	2.09	37.37	18.57	47.00	-28.43	QP

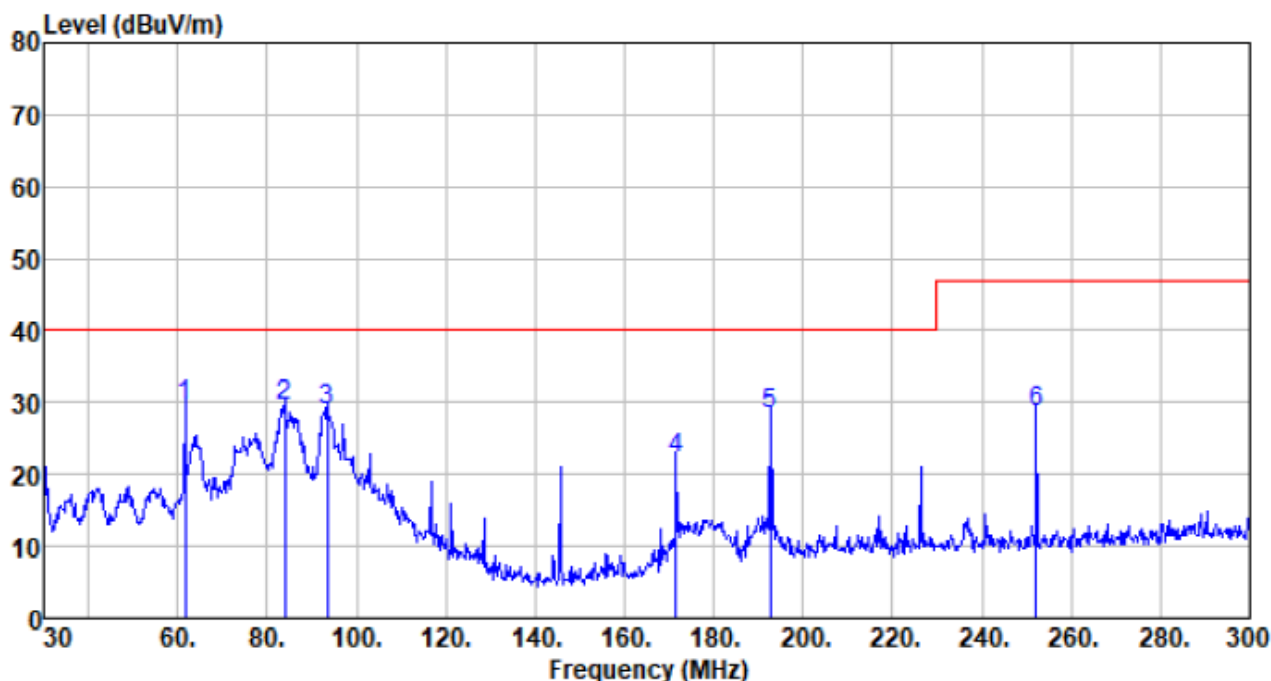
Test mode:	On mode	Antenna Polarity:	Vertical
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
78.600	50.41	7.41	1.02	36.53	22.31	40.00	-17.69	QP
92.910	49.87	11.11	1.13	36.66	25.45	40.00	-14.55	QP
100.200	49.70	12.15	1.19	36.72	26.32	40.00	-13.68	QP
141.780	49.40	7.43	1.52	37.03	21.32	40.00	-18.68	QP
194.970	45.63	10.13	1.81	37.31	20.26	40.00	-19.74	QP
245.460	42.42	12.00	2.10	37.38	19.14	47.00	-27.86	QP

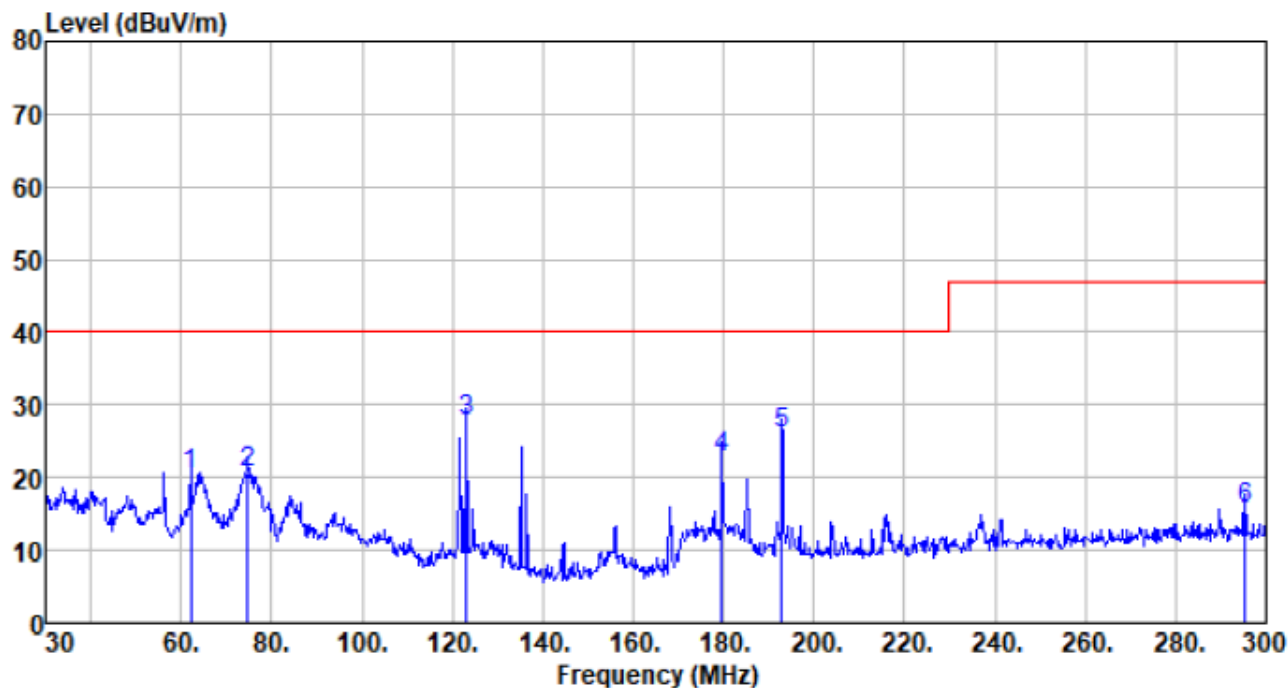
VLF1-I120-040B-XX

Test mode:	On mode	Antenna Polarity:	Horizontal
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
61.590	54.41	10.72	0.87	36.34	29.66	40.00	-10.34	QP
84.000	56.18	8.80	1.06	36.58	29.46	40.00	-10.54	QP
93.450	53.26	11.25	1.14	36.67	28.98	40.00	-11.02	QP
171.480	49.08	8.57	1.69	37.19	22.15	40.00	-17.85	QP
192.540	53.90	10.04	1.80	37.30	28.44	40.00	-11.56	QP
252.210	51.53	12.22	2.14	37.38	28.51	47.00	-18.49	QP

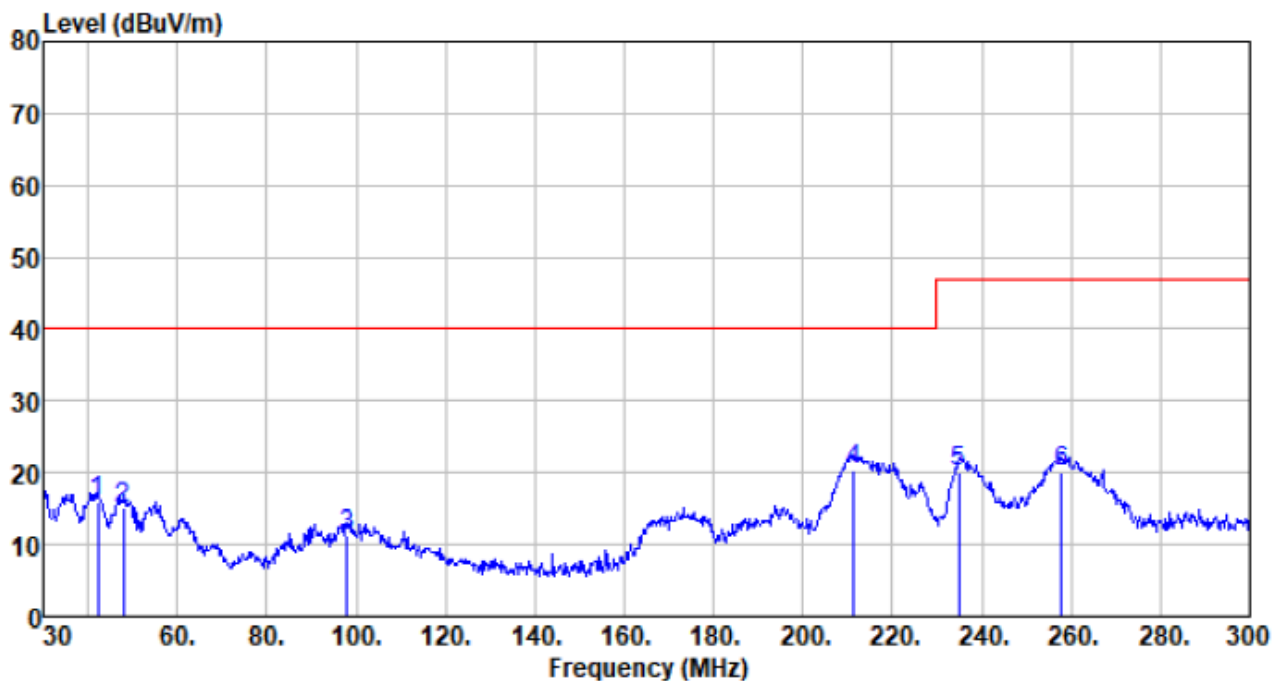
Test mode:	On mode	Antenna Polarity:	Vertical
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
62.130	45.34	10.49	0.88	36.35	20.36	40.00	-19.64	QP
74.820	48.79	7.45	0.98	36.49	20.73	40.00	-19.27	QP
123.150	54.14	9.04	1.38	36.90	27.66	40.00	-12.34	QP
179.580	49.35	8.90	1.74	37.24	22.75	40.00	-17.25	QP
192.810	51.47	10.04	1.81	37.30	26.02	40.00	-13.98	QP
295.410	37.38	13.49	2.34	37.42	15.79	47.00	-31.21	QP

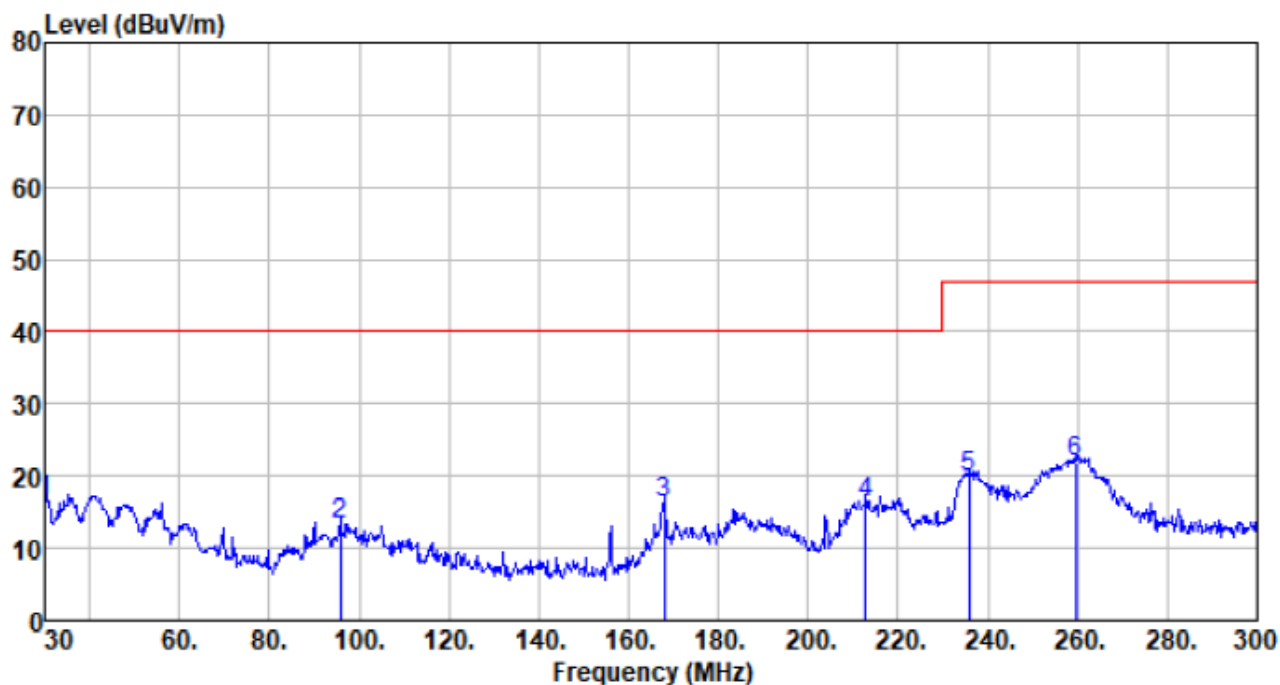
VLF1-I120-040C-XX

Test mode:	On mode	Antenna Polarity:	Horizontal
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
42.150	38.70	12.22	0.69	35.79	15.82	40.00	-24.18	QP
47.820	38.02	12.28	0.75	36.08	14.97	40.00	-25.03	QP
98.040	34.70	11.93	1.18	36.70	11.11	40.00	-28.89	QP
211.440	44.93	10.84	1.91	37.34	20.34	40.00	-19.66	QP
234.930	43.81	11.67	2.04	37.37	20.15	47.00	-26.85	QP
257.880	43.04	12.40	2.16	37.39	20.21	47.00	-26.79	QP

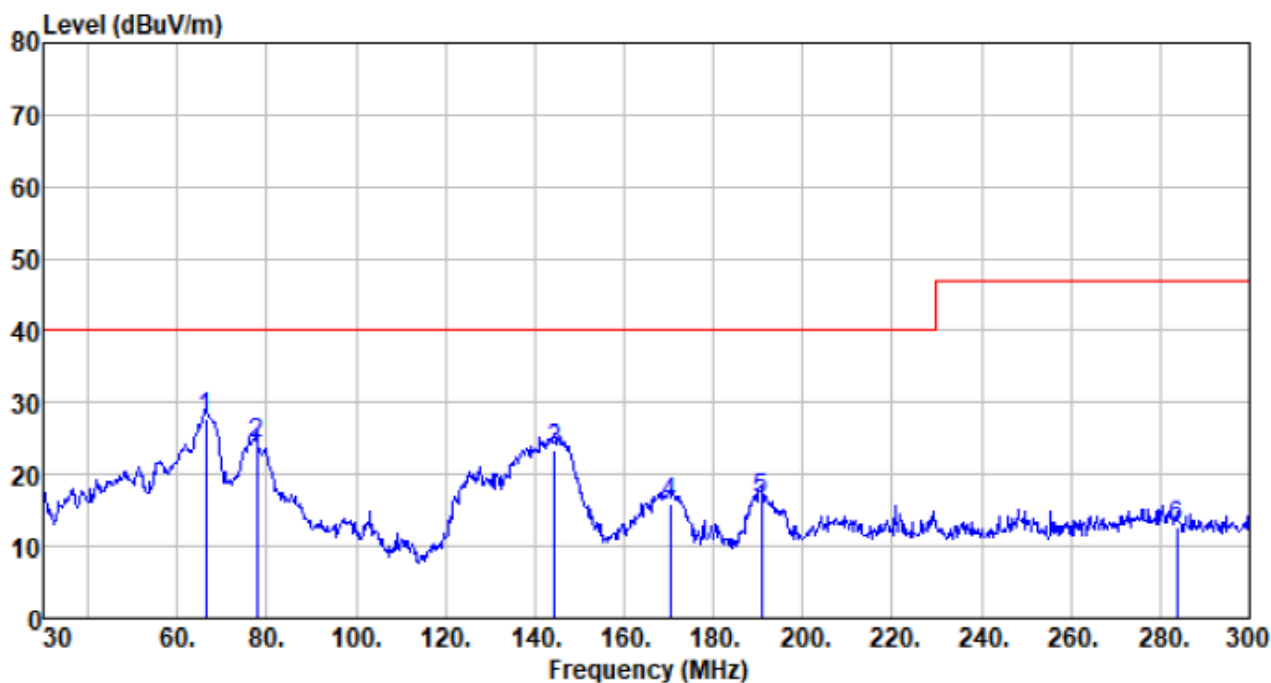
Test mode:	On mode	Antenna Polarity:	Vertical
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
30.000	39.75	11.20	0.55	35.00	16.50	40.00	-23.50	QP
95.880	37.21	11.59	1.16	36.69	13.27	40.00	-26.73	QP
167.970	43.27	8.46	1.68	37.18	16.23	40.00	-23.77	QP
212.790	40.89	10.87	1.92	37.34	16.34	40.00	-23.66	QP
235.740	43.52	11.71	2.05	37.37	19.91	47.00	-27.09	QP
259.500	44.48	12.47	2.17	37.39	21.73	47.00	-25.27	QP

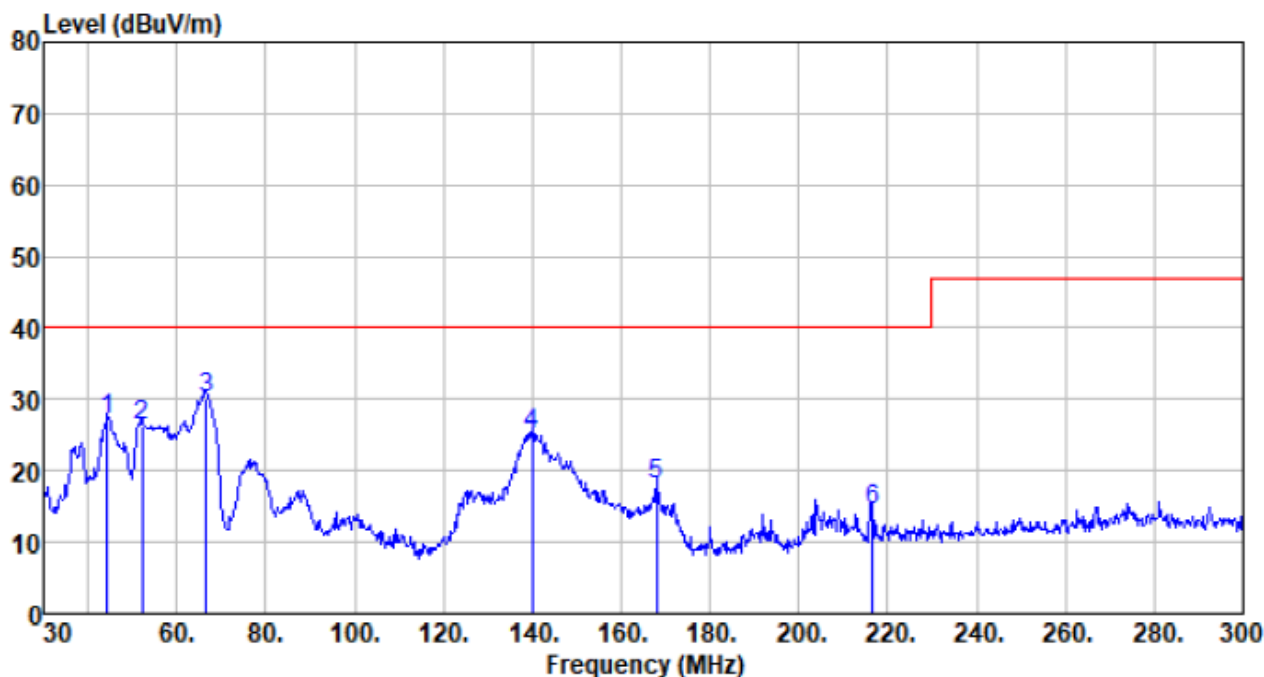
VLF1-I150-050A-XX

Test mode:	On mode	Antenna Polarity:	Horizontal
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
66.450	54.51	8.77	0.91	36.40	27.79	40.00	-12.21	QP
77.790	52.24	7.42	1.01	36.52	24.15	40.00	-15.85	QP
144.480	51.46	7.49	1.53	37.04	23.44	40.00	-16.56	QP
170.400	43.03	8.50	1.69	37.19	16.03	40.00	-23.97	QP
190.650	42.05	9.95	1.79	37.29	16.50	40.00	-23.50	QP
283.800	34.71	13.16	2.29	37.41	12.75	47.00	-34.25	QP

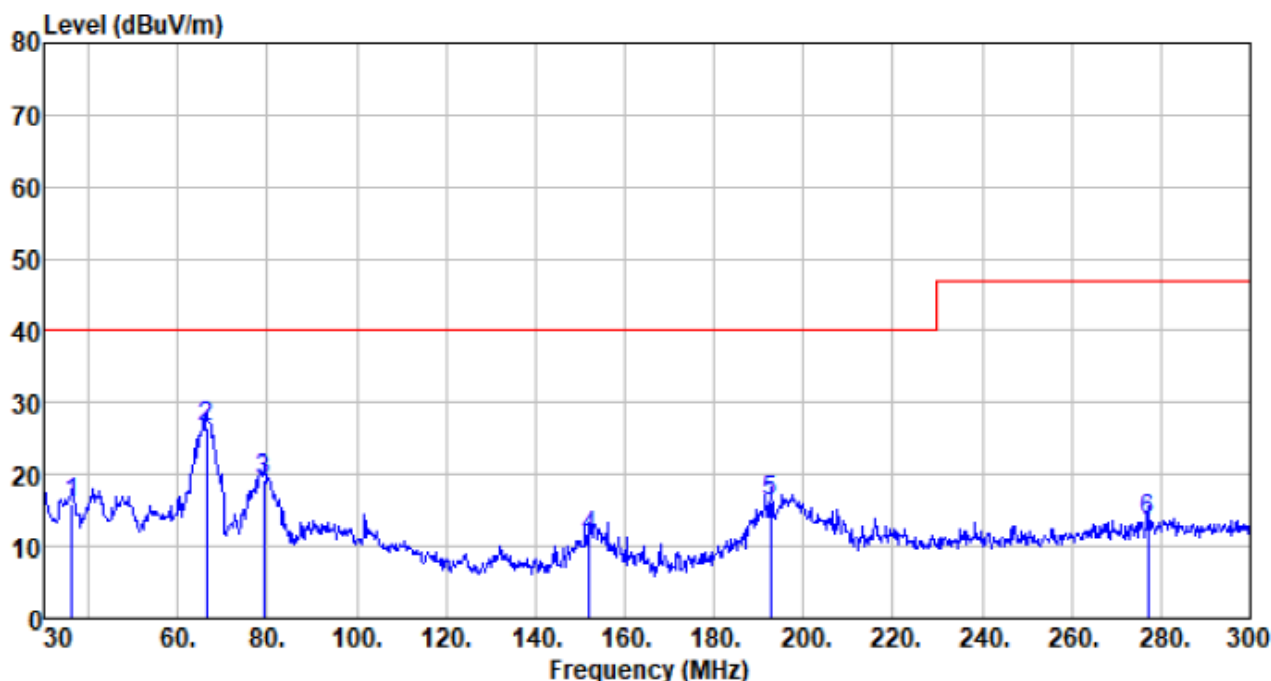
Test mode:	On mode	Antenna Polarity:	Vertical
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
44.310	50.04	12.25	0.71	35.90	27.10	40.00	-12.90	QP
52.140	49.70	12.07	0.79	36.21	26.35	40.00	-13.65	QP
66.720	56.88	8.65	0.91	36.40	30.04	40.00	-9.96	QP
139.890	53.08	7.45	1.50	37.02	25.01	40.00	-14.99	QP
167.970	44.90	8.46	1.68	37.18	17.86	40.00	-22.14	QP
216.570	38.98	11.02	1.94	37.35	14.59	40.00	-25.41	QP

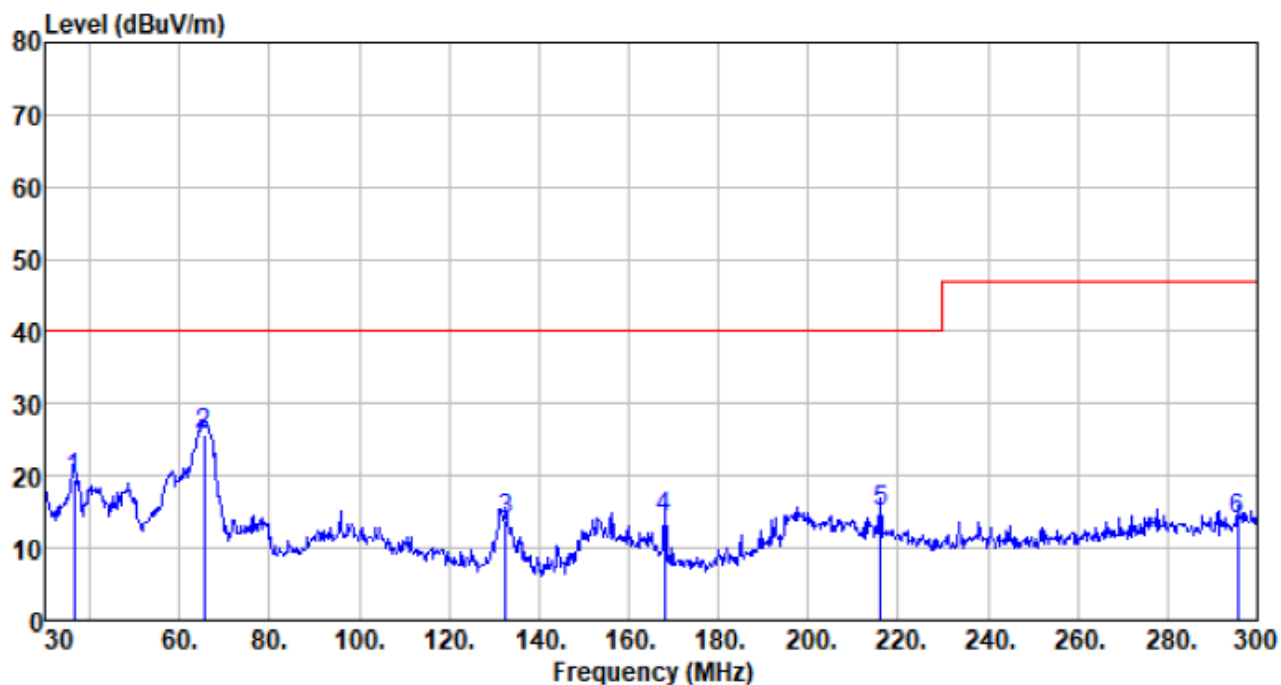
VLF1-I150-050B-XX

Test mode:	On mode	Antenna Polarity:	Horizontal
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
36.210	39.30	11.55	0.62	35.43	16.04	40.00	-23.96	QP
66.450	53.35	8.77	0.91	36.40	26.63	40.00	-13.37	QP
79.140	47.33	7.41	1.02	36.54	19.22	40.00	-20.78	QP
152.040	39.00	7.75	1.58	37.09	11.24	40.00	-28.76	QP
192.540	41.83	10.04	1.80	37.30	16.37	40.00	-23.63	QP
277.050	35.82	12.98	2.25	37.40	13.65	47.00	-33.35	QP

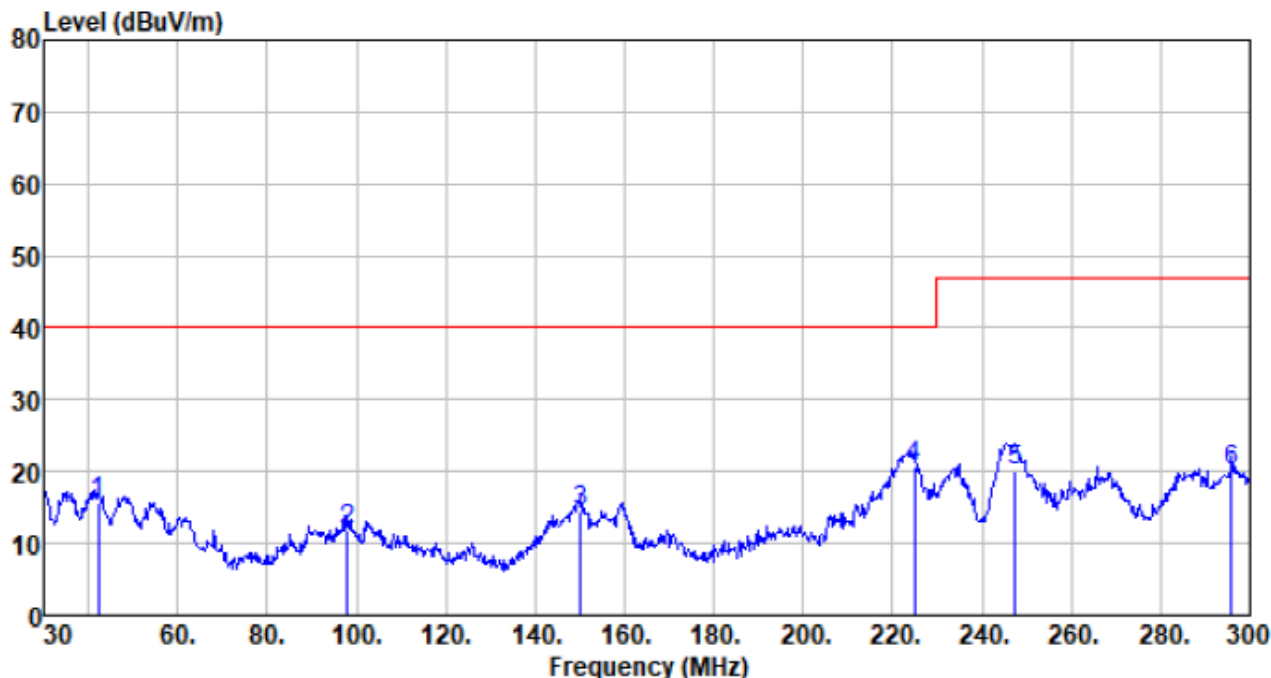
Test mode:	On mode	Antenna Polarity:	Vertical
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
36.480	42.81	11.58	0.62	35.45	19.56	40.00	-20.44	QP
65.370	52.07	9.23	0.90	36.39	25.81	40.00	-14.19	QP
132.600	41.29	7.96	1.45	36.97	13.73	40.00	-26.27	QP
167.970	41.33	8.46	1.68	37.18	14.29	40.00	-25.71	QP
216.030	39.35	11.02	1.93	37.35	14.95	40.00	-25.05	QP
295.680	35.42	13.49	2.34	37.42	13.83	47.00	-33.17	QP

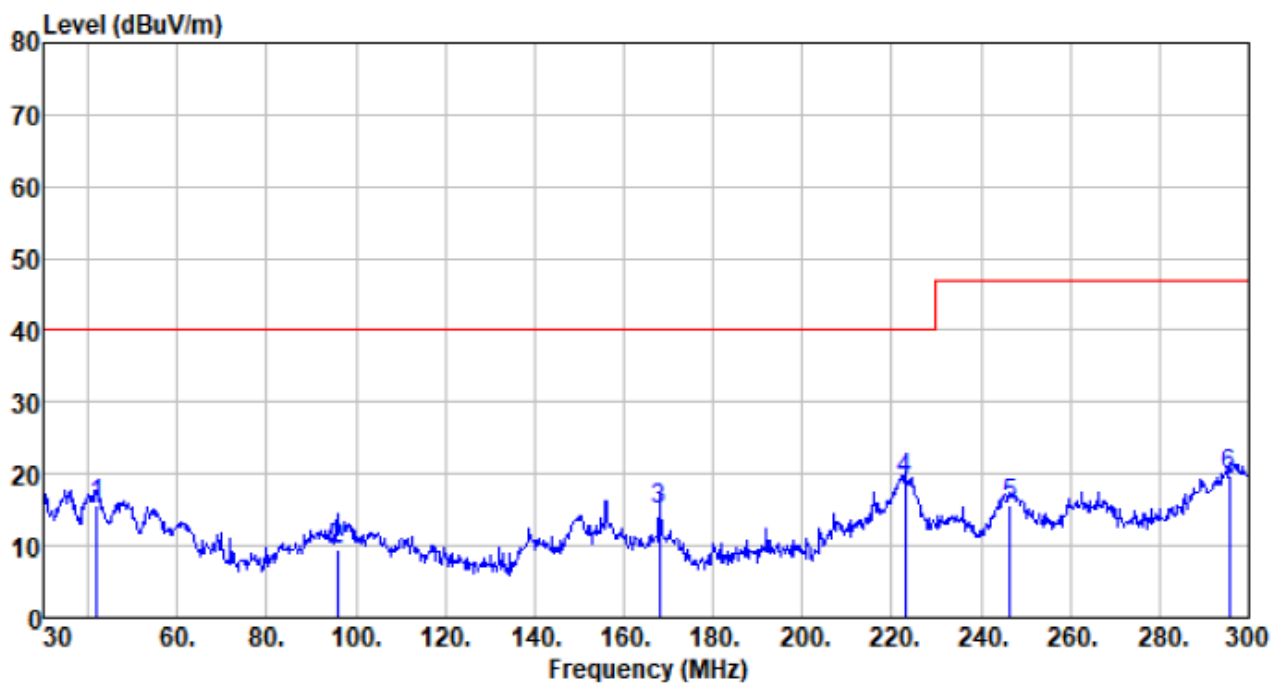
VLF1-I150-050C-XX

Test mode:	On mode	Antenna Polarity:	Horizontal
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
42.150	38.59	12.22	0.69	35.79	15.71	40.00	-24.29	QP
98.040	35.52	11.93	1.18	36.70	11.93	40.00	-28.07	QP
150.150	42.39	7.65	1.57	37.08	14.53	40.00	-25.47	QP
224.940	44.79	11.31	1.99	37.36	20.73	40.00	-19.27	QP
247.350	43.19	12.07	2.11	37.38	19.99	47.00	-27.01	QP
295.950	41.62	13.49	2.34	37.42	20.03	47.00	-26.97	QP

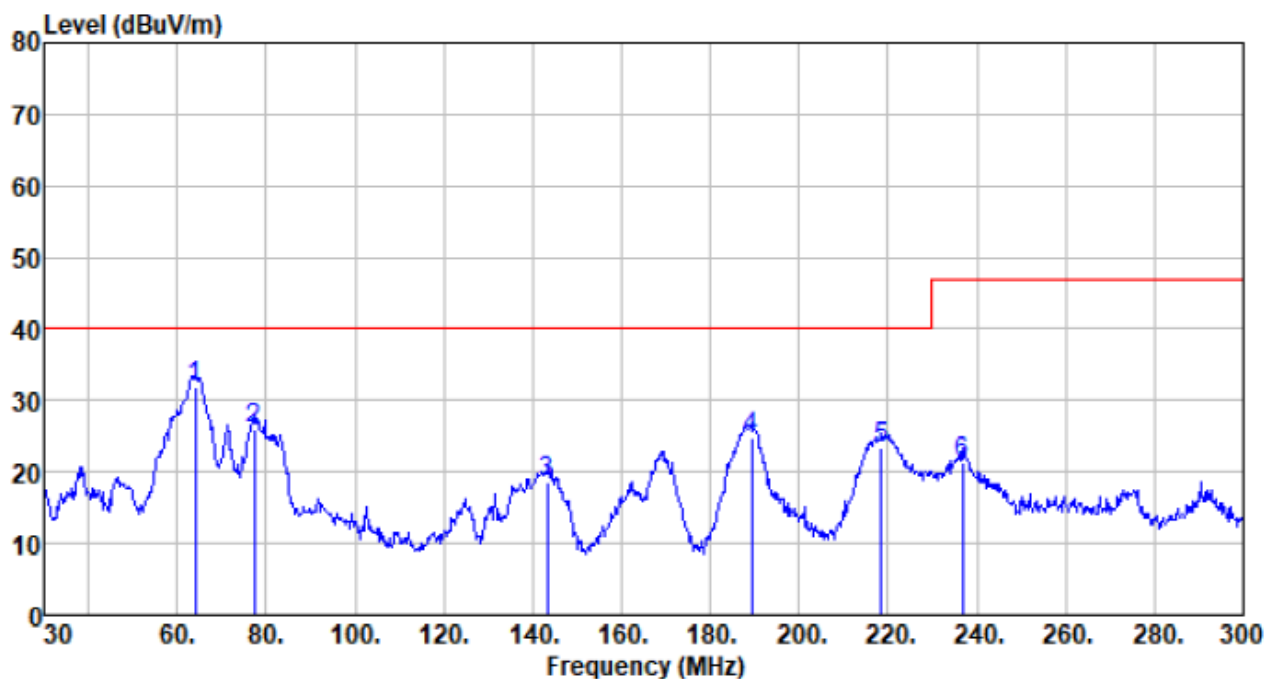
Test mode:	On mode	Antenna Polarity:	Vertical
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
41.880	38.60	12.22	0.68	35.77	15.73	40.00	-24.27	QP
95.880	33.53	11.59	1.16	36.69	9.59	40.00	-30.41	QP
167.970	42.06	8.46	1.68	37.18	15.02	40.00	-24.98	QP
223.050	43.39	11.27	1.98	37.35	19.29	40.00	-20.71	QP
246.540	38.75	12.04	2.11	37.38	15.52	47.00	-31.48	QP
295.680	41.27	13.49	2.34	37.42	19.68	47.00	-27.32	QP

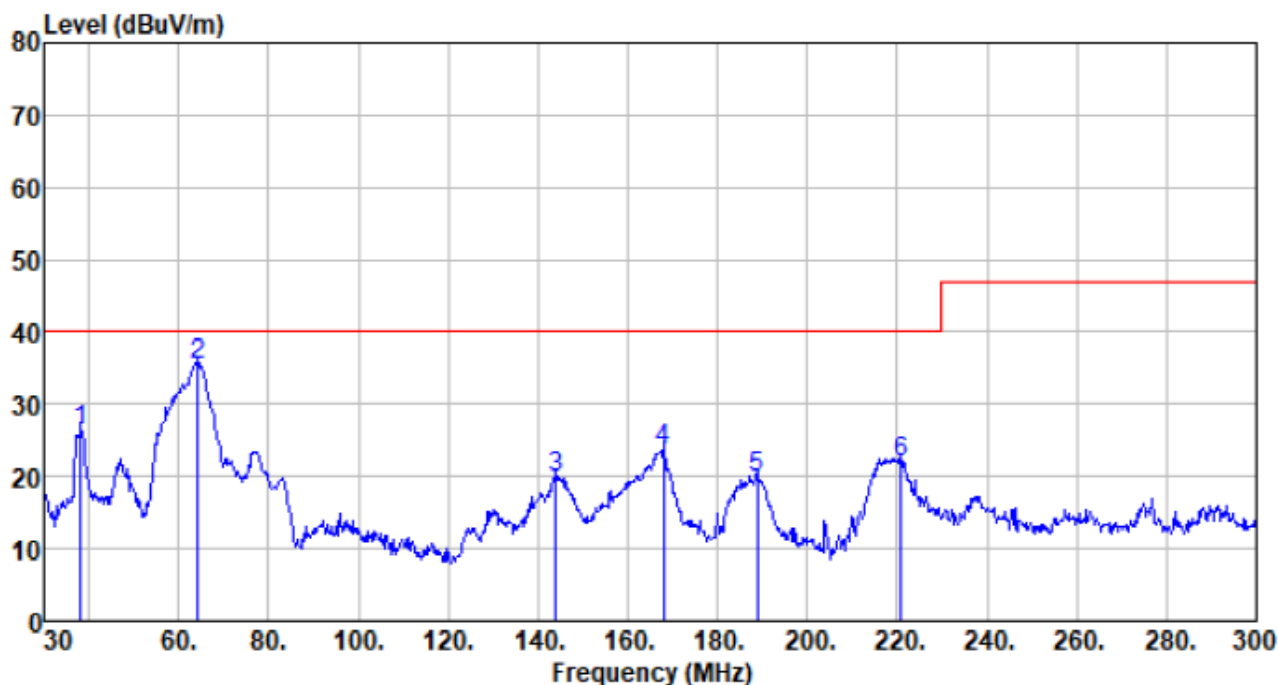
VLF1-I150-050D-XX

Test mode:	On mode	Antenna Polarity:	Horizontal
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
64.020	57.57	9.69	0.89	36.37	31.78	40.00	-8.22	QP
77.250	54.06	7.43	1.01	36.52	25.98	40.00	-14.02	QP
143.400	46.63	7.47	1.53	37.04	18.59	40.00	-21.41	QP
189.300	50.56	9.82	1.79	37.28	24.89	40.00	-15.11	QP
218.460	47.66	11.09	1.95	37.35	23.35	40.00	-16.65	QP
236.820	44.78	11.75	2.05	37.37	21.21	47.00	-25.79	QP

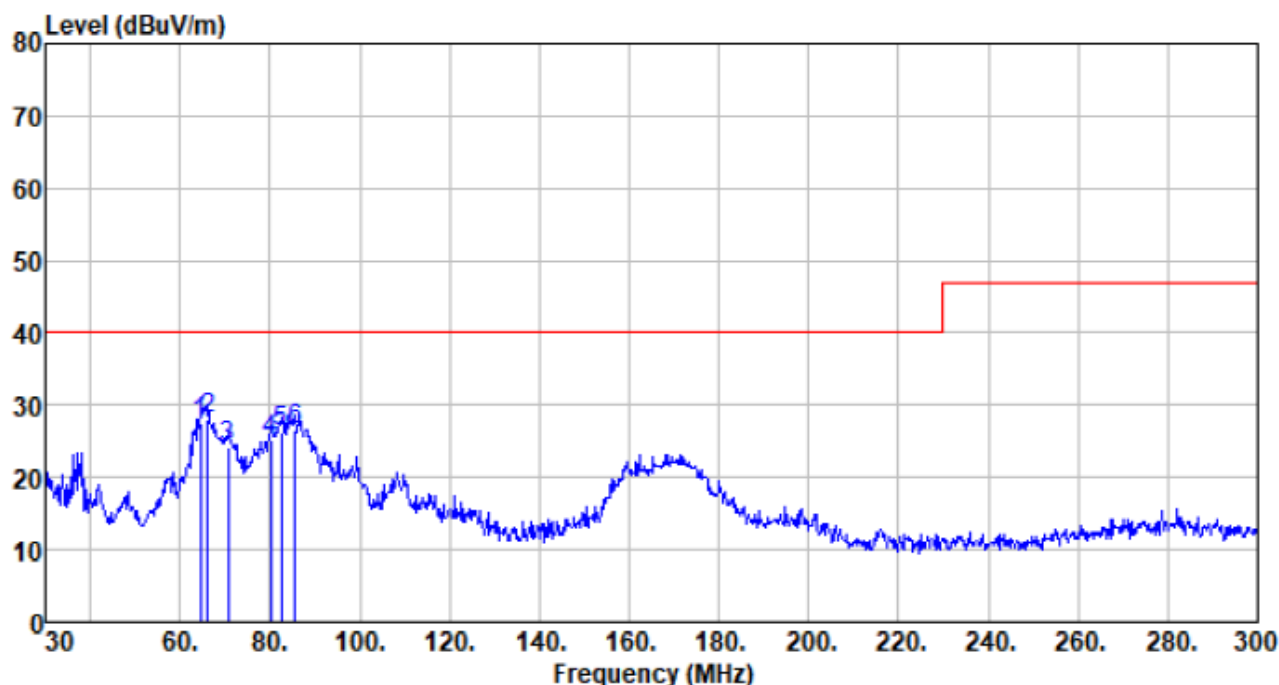
Test mode:	On mode	Antenna Polarity:	Vertical
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
38.100	49.41	11.89	0.64	35.55	26.39	40.00	-13.61	QP
64.290	61.31	9.57	0.90	36.38	35.40	40.00	-4.60	QP
143.940	47.72	7.49	1.53	37.04	19.70	40.00	-20.30	QP
167.970	50.73	8.46	1.68	37.18	23.69	40.00	-16.31	QP
188.760	45.58	9.73	1.78	37.28	19.81	40.00	-20.19	QP
220.890	46.11	11.20	1.96	37.35	21.92	40.00	-18.08	QP

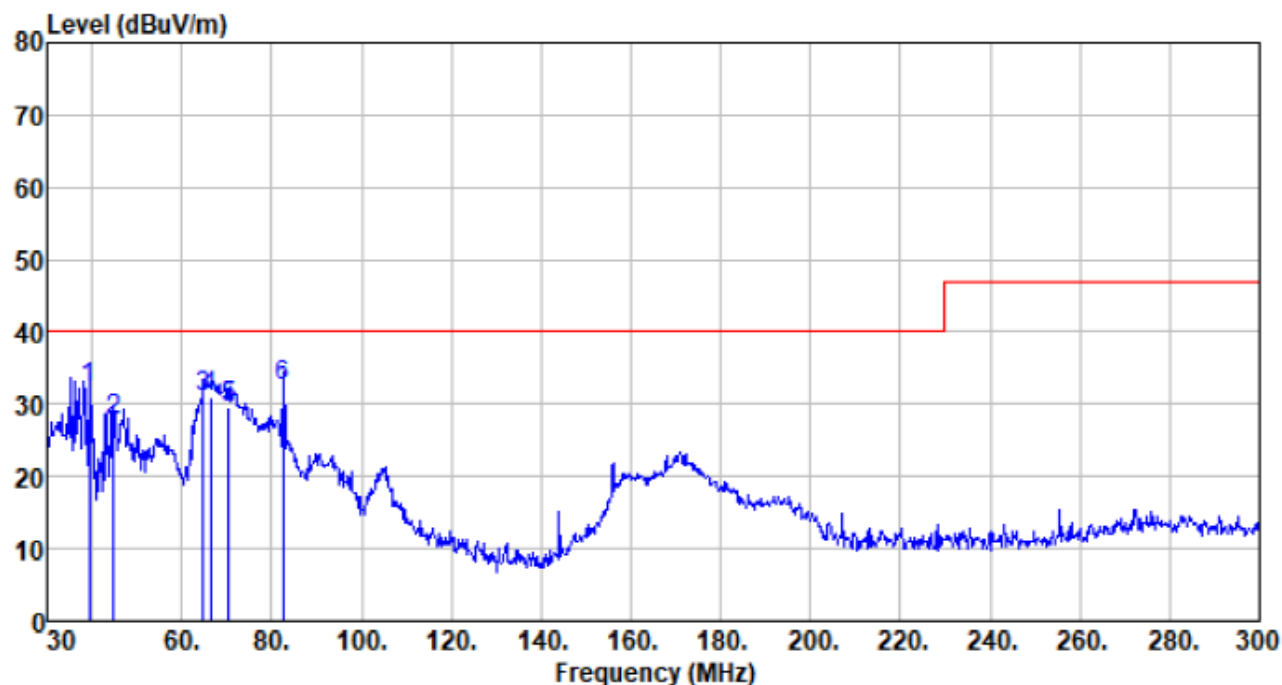
VLF1-I300-100A-XX

Test mode:	On mode	Antenna Polarity:	Horizontal
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
64.560	53.30	9.57	0.90	36.38	27.39	40.00	-12.61	QP
66.180	54.77	8.88	0.91	36.40	28.16	40.00	-11.84	QP
70.770	52.14	7.49	0.95	36.45	24.13	40.00	-15.87	QP
80.220	53.22	7.53	1.03	36.55	25.23	40.00	-14.77	QP
82.650	53.49	8.29	1.05	36.57	26.26	40.00	-13.74	QP
85.620	52.93	9.30	1.07	36.60	26.70	40.00	-13.30	QP

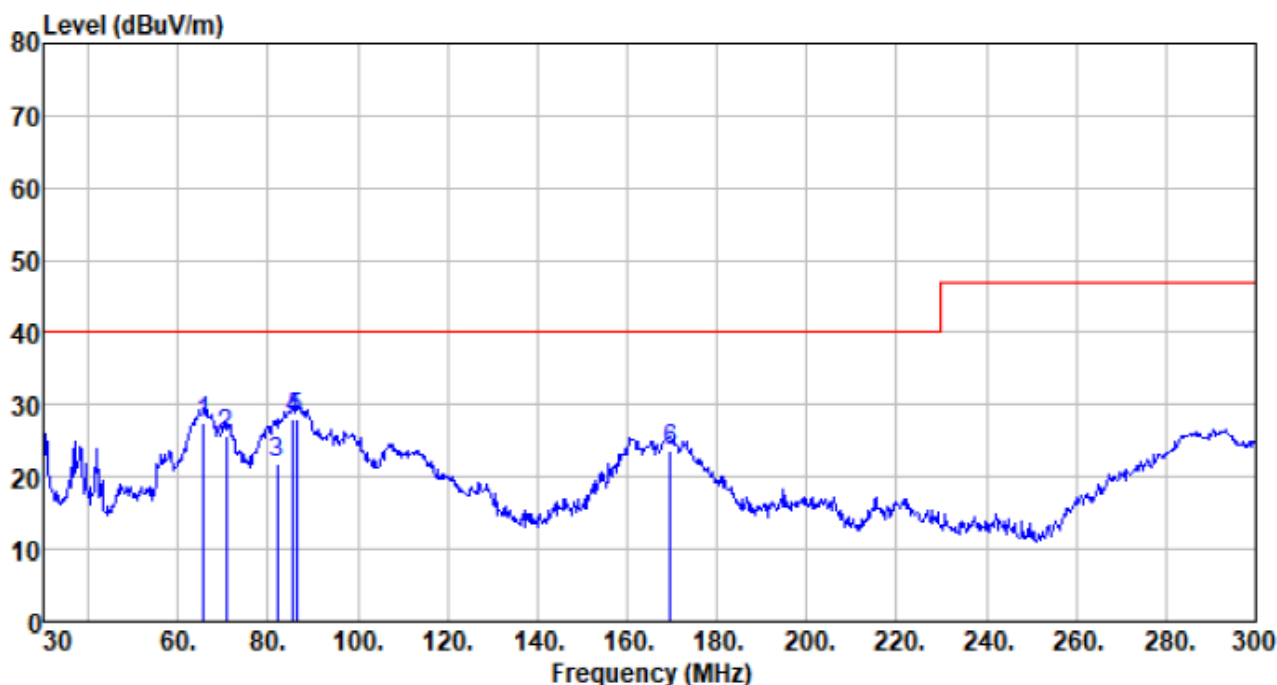
Test mode:	On mode	Antenna Polarity:	Vertical
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Freq MHz	Reading level dBUV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBUV	Limit level dBUV/m	Over limit dB	Remark
39.450	54.99	12.11	0.65	35.63	32.12	40.00	-7.88	QP
44.850	50.86	12.25	0.72	35.93	27.90	40.00	-12.10	QP
64.830	57.04	9.46	0.90	36.38	31.02	40.00	-8.98	QP
66.450	57.84	8.77	0.91	36.40	31.12	40.00	-8.88	QP
70.500	57.42	7.49	0.94	36.45	29.40	40.00	-10.60	QP
82.650	59.77	8.29	1.05	36.57	32.54	40.00	-7.46	QP

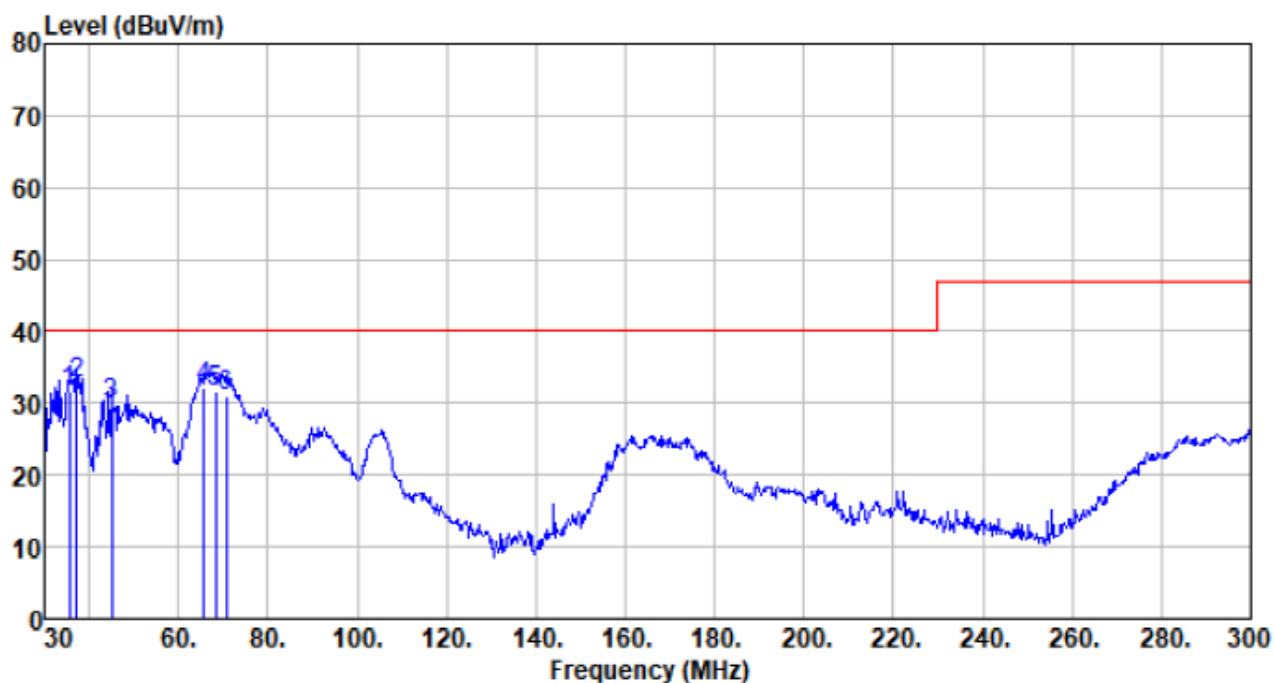
VLF1-I300-100B-XX

Test mode:	On mode	Antenna Polarity:	Horizontal
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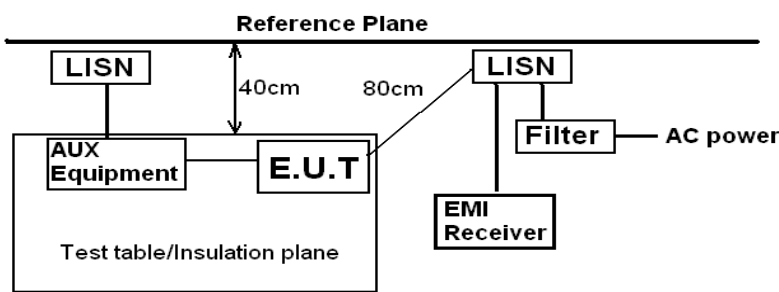
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
65.640	53.97	9.11	0.91	36.39	27.60	40.00	-12.40	QP
70.770	53.55	7.49	0.95	36.45	25.54	40.00	-14.46	QP
82.110	49.33	8.16	1.05	36.57	21.97	40.00	-18.03	QP
85.620	54.17	9.30	1.07	36.60	27.94	40.00	-12.06	QP
86.430	53.89	9.56	1.08	36.61	27.92	40.00	-12.08	QP
169.590	50.68	8.49	1.69	37.18	23.68	40.00	-16.32	QP

Test mode:	On mode	Antenna Polarity:	Vertical
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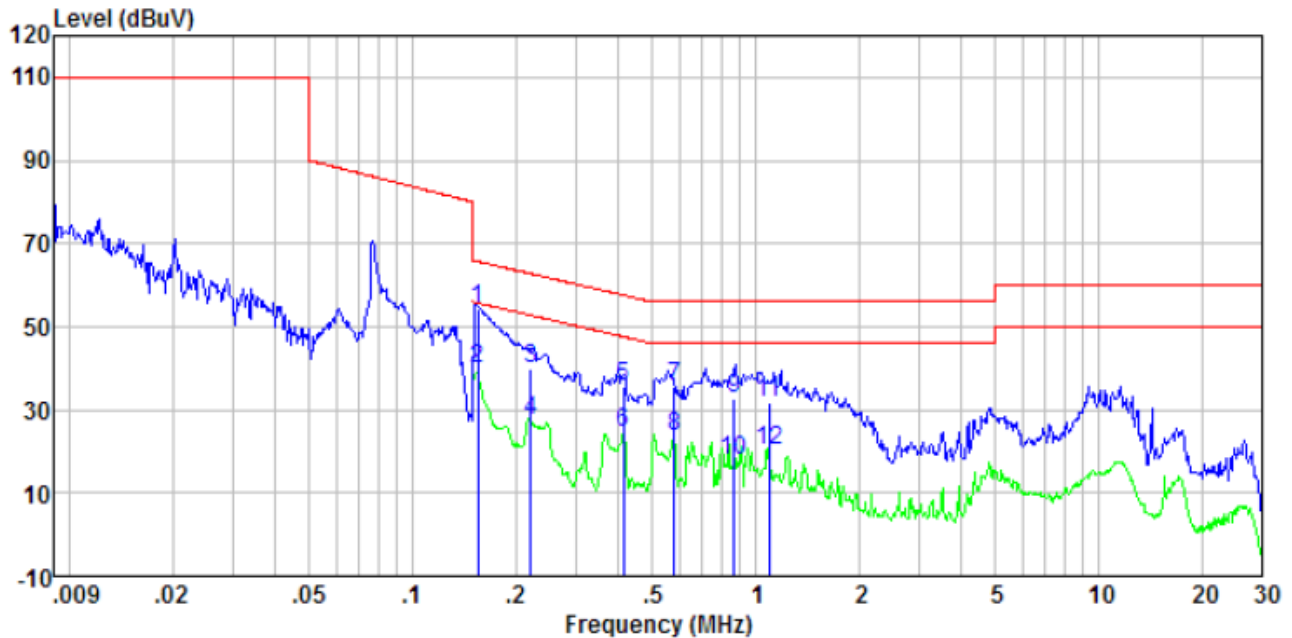
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamplifier factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
35.670	54.95	11.46	0.62	35.40	31.63	40.00	-8.37	QP
37.290	56.01	11.73	0.63	35.50	32.87	40.00	-7.13	QP
45.120	52.90	12.26	0.72	35.94	29.94	40.00	-10.06	QP
65.640	58.69	9.11	0.91	36.39	32.32	40.00	-7.68	QP
68.340	58.96	8.08	0.93	36.42	31.55	40.00	-8.45	QP
70.770	59.07	7.49	0.95	36.45	31.06	40.00	-8.94	QP

7.3 Disturbance voltages

Test Requirement:	EN 55015		
Test Method:	EN 55015		
Test Frequency Range:	9kHz to 30MHz		
Receiver setup:	Frequency range	RBW	VBW
	9KHz~150KHz	200Hz	600Hz
	150KHz~30MHz	9KHz	30KHz
Limit:	Frequency range (MHz)	Limit (dBuV)	
		Quasi-peak	Average
	0.009-0.05	110	-
	0.05-0.15	90-80*	-
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50
* Decreases with the logarithm of the frequency.			
Test setup:	 Remark: E.U.T.: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m		
Test procedure	1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). The provide a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to EN55022 Class B on conducted measurement.		
Test Instruments:	Temp.: 25 °C	Humid.: 50%	Press.: 1 012mbar
Measurement Record:	Uncertainty: ± 3.44dB		
Test Instruments:	Refer to section 6 for details		
Test mode:	Refer to section 5.2 for details		
Test results:	Pass		

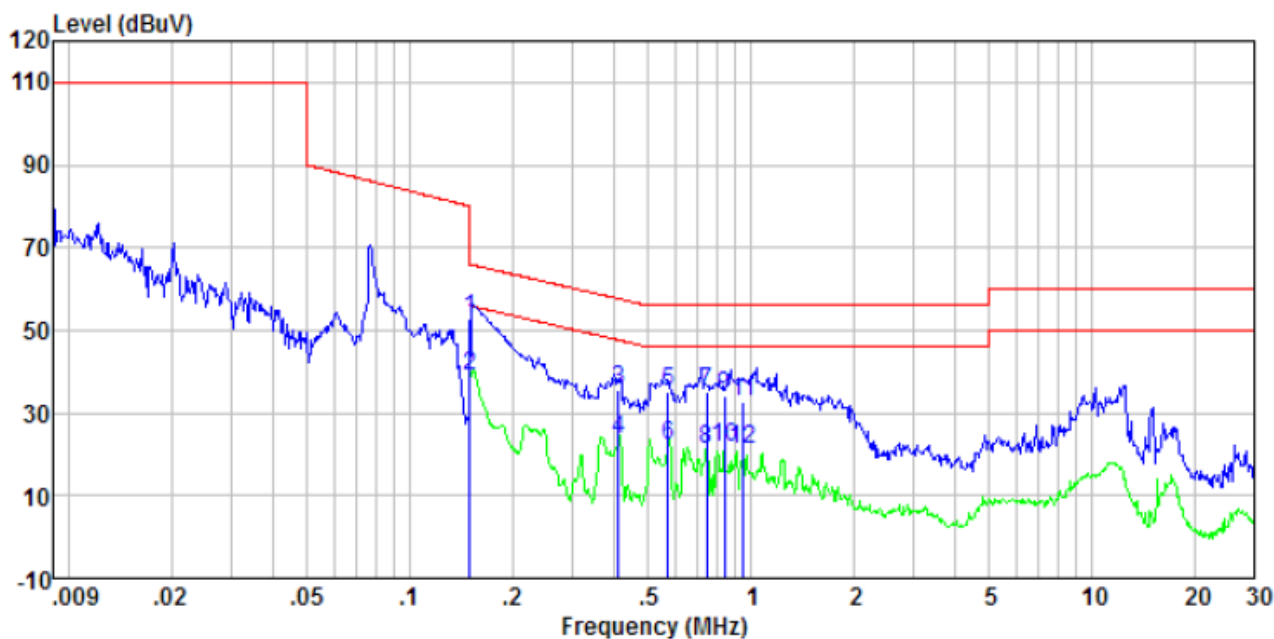
Measurement Data PLF1-I150-050D-XX

Test mode:	On mode	Antenna Polarity:	Line
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.15	53.78	0.40	0.07	54.25	65.74	-11.49	QP
0.15	39.25	0.40	0.07	39.72	55.74	-16.02	Average
0.22	39.46	0.40	0.11	39.97	62.79	-22.82	QP
0.22	27.06	0.40	0.11	27.57	52.79	-25.22	Average
0.41	35.00	0.35	0.11	35.46	57.59	-22.13	QP
0.41	23.92	0.35	0.11	24.38	47.59	-23.21	Average
0.58	35.06	0.29	0.12	35.47	56.00	-20.53	QP
0.58	23.21	0.29	0.12	23.62	46.00	-22.38	Average
0.87	32.11	0.22	0.14	32.47	56.00	-23.53	QP
0.87	17.48	0.22	0.14	17.84	46.00	-28.16	Average
1.09	31.17	0.20	0.15	31.52	56.00	-24.48	QP
1.09	20.00	0.20	0.15	20.35	46.00	-25.65	Average

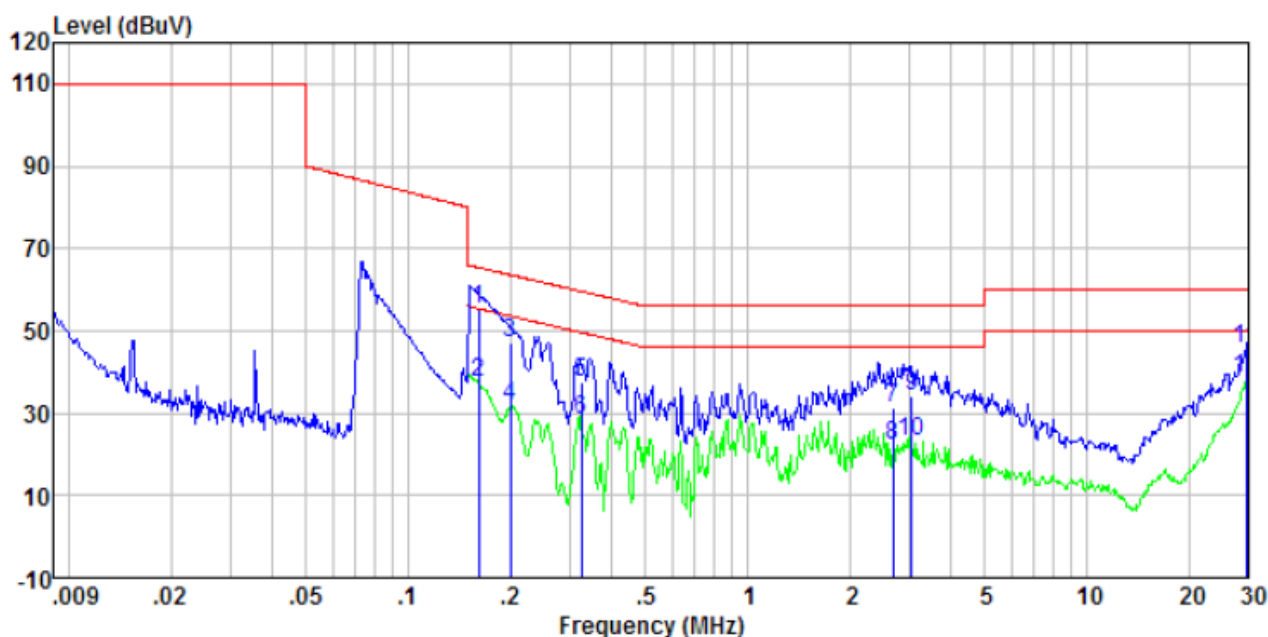
Test mode:	On mode	Antenna Polarity:	Neutral
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.15	52.53	0.40	0.07	53.00	66.00	-13.00	QP
0.15	38.42	0.40	0.07	38.89	56.00	-17.11	Average
0.41	35.17	0.35	0.11	35.63	57.64	-22.01	QP
0.41	23.29	0.35	0.11	23.75	47.64	-23.89	Average
0.57	34.89	0.29	0.12	35.30	56.00	-20.70	QP
0.57	21.81	0.29	0.12	22.22	46.00	-23.78	Average
0.74	34.56	0.25	0.13	34.94	56.00	-21.06	QP
0.74	20.91	0.25	0.13	21.29	46.00	-24.71	Average
0.84	33.91	0.23	0.14	34.28	56.00	-21.72	QP
0.84	21.29	0.23	0.14	21.66	46.00	-24.34	Average
0.95	32.42	0.21	0.15	32.78	56.00	-23.22	QP
0.95	20.68	0.21	0.15	21.04	46.00	-24.96	Average

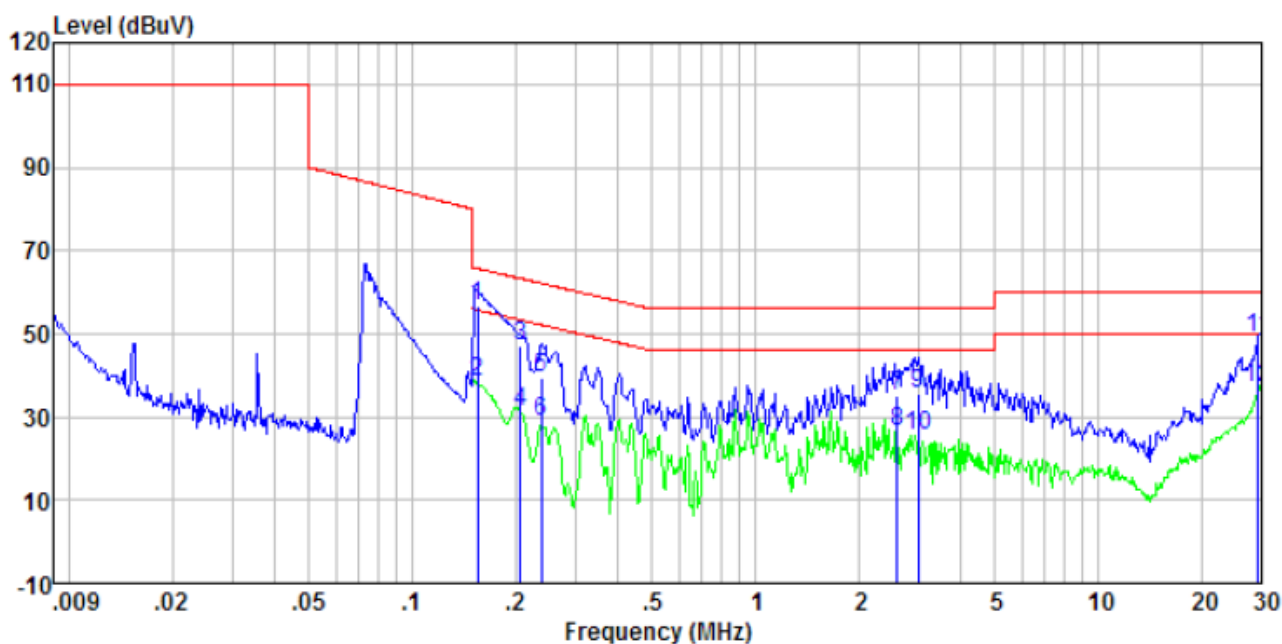
PLF1-I300-100B-XX

Test mode:	On mode	Antenna Polarity:	Line
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.16	54.82	0.40	0.08	55.30	65.38	-10.08	QP
0.16	36.91	0.40	0.08	37.39	55.38	-17.99	Average
0.20	46.39	0.40	0.11	46.90	63.62	-16.72	QP
0.20	31.42	0.40	0.11	31.93	53.62	-21.69	Average
0.32	36.90	0.39	0.10	37.39	59.62	-22.23	QP
0.32	27.95	0.39	0.10	28.44	49.62	-21.18	Average
2.68	31.02	0.20	0.19	31.41	56.00	-24.59	QP
2.68	21.87	0.20	0.19	22.26	46.00	-23.74	Average
3.04	33.61	0.20	0.19	34.00	56.00	-22.00	QP
3.04	22.64	0.20	0.19	23.03	46.00	-22.97	Average
29.53	45.10	0.40	0.23	45.73	60.00	-14.27	QP
29.53	37.85	0.40	0.23	38.48	50.00	-11.52	Average

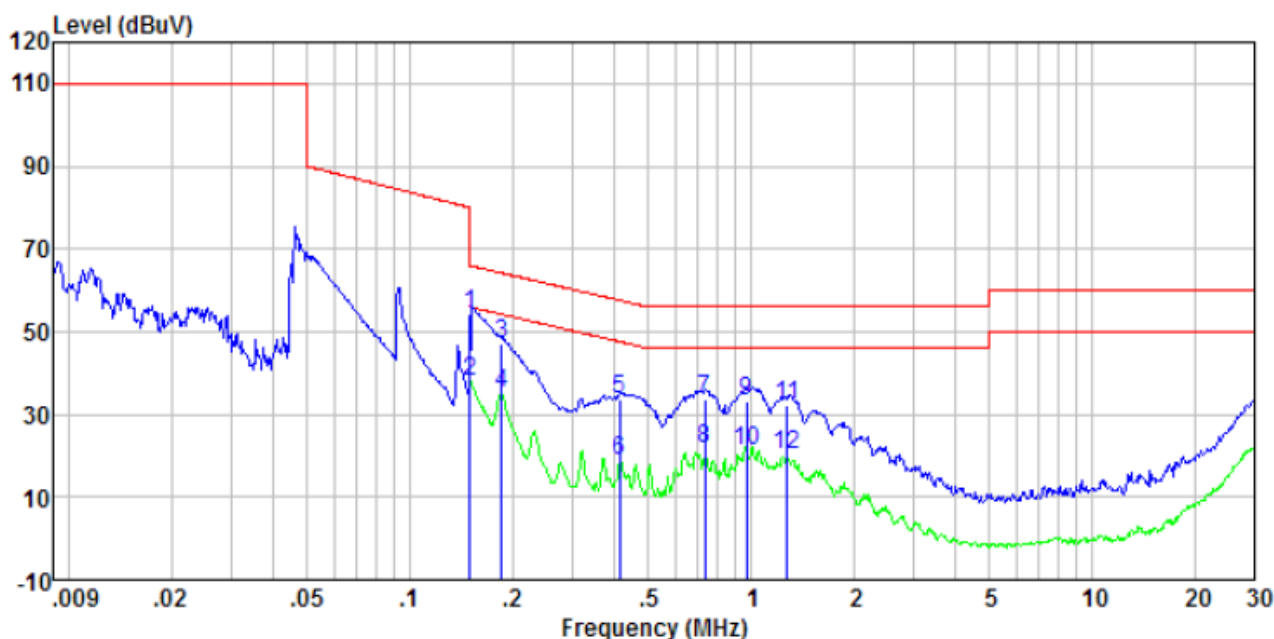
Test mode:	On mode	Antenna Polarity:	Neutral
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.15	56.39	0.40	0.07	56.86	65.74	-8.88	QP
0.15	37.75	0.40	0.07	38.22	55.74	-17.52	Average
0.21	46.42	0.40	0.11	46.93	63.32	-16.39	QP
0.21	30.53	0.40	0.11	31.04	53.32	-22.28	Average
0.24	38.72	0.40	0.11	39.23	62.17	-22.94	QP
0.24	28.17	0.40	0.11	28.68	52.17	-23.49	Average
2.59	34.70	0.20	0.18	35.08	56.00	-20.92	QP
2.59	26.00	0.20	0.18	26.38	46.00	-19.62	Average
2.99	35.05	0.20	0.19	35.44	56.00	-20.56	QP
2.99	25.25	0.20	0.19	25.64	46.00	-20.36	Average
29.37	48.41	0.39	0.23	49.03	60.00	-10.97	QP
29.37	36.33	0.39	0.23	36.95	50.00	-13.05	Average

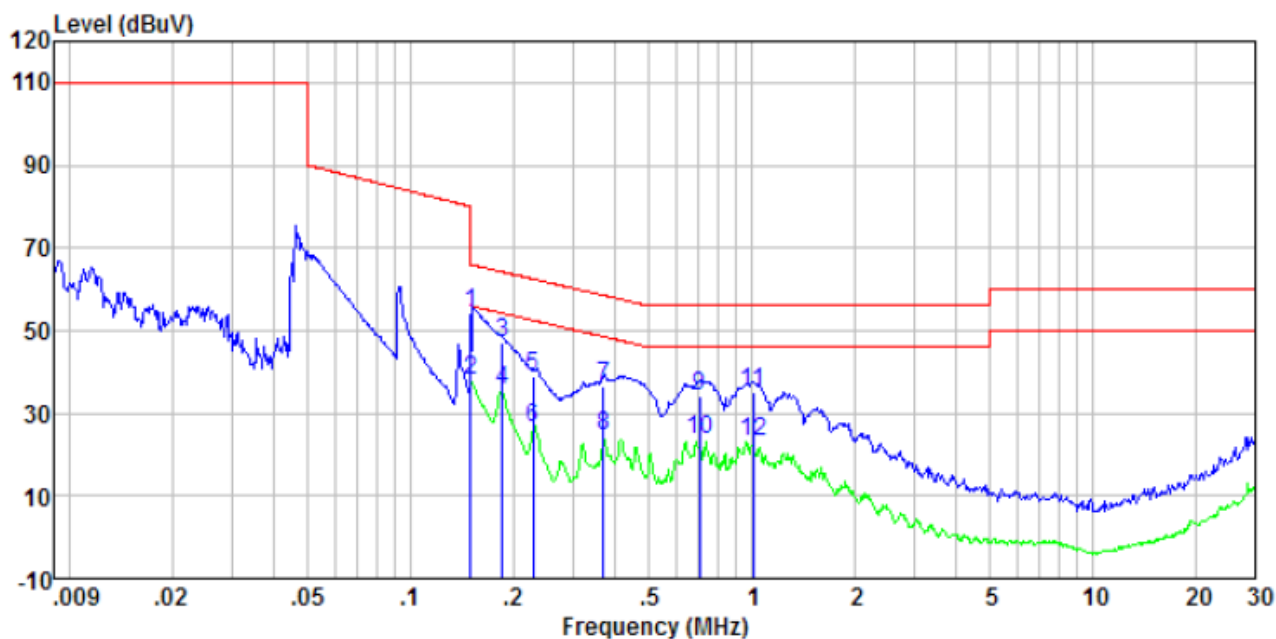
PLF1-I300-100C-XX

Test mode:	On mode	Antenna Polarity:	Line
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.15	53.65	0.40	0.07	54.12	66.00	-11.88	QP
0.15	37.63	0.40	0.07	38.10	56.00	-17.90	Average
0.19	46.72	0.40	0.10	47.22	64.24	-17.02	QP
0.19	34.80	0.40	0.10	35.30	54.24	-18.94	Average
0.41	33.03	0.35	0.11	33.49	57.59	-24.10	QP
0.41	18.32	0.35	0.11	18.78	47.59	-28.81	Average
0.74	33.21	0.25	0.13	33.59	56.00	-22.41	QP
0.74	21.13	0.25	0.13	21.51	46.00	-24.49	Average
0.97	32.75	0.21	0.15	33.11	56.00	-22.89	QP
0.97	20.95	0.21	0.15	21.31	46.00	-24.69	Average
1.28	31.93	0.20	0.16	32.29	56.00	-23.71	QP
1.28	20.06	0.20	0.16	20.42	46.00	-25.58	Average

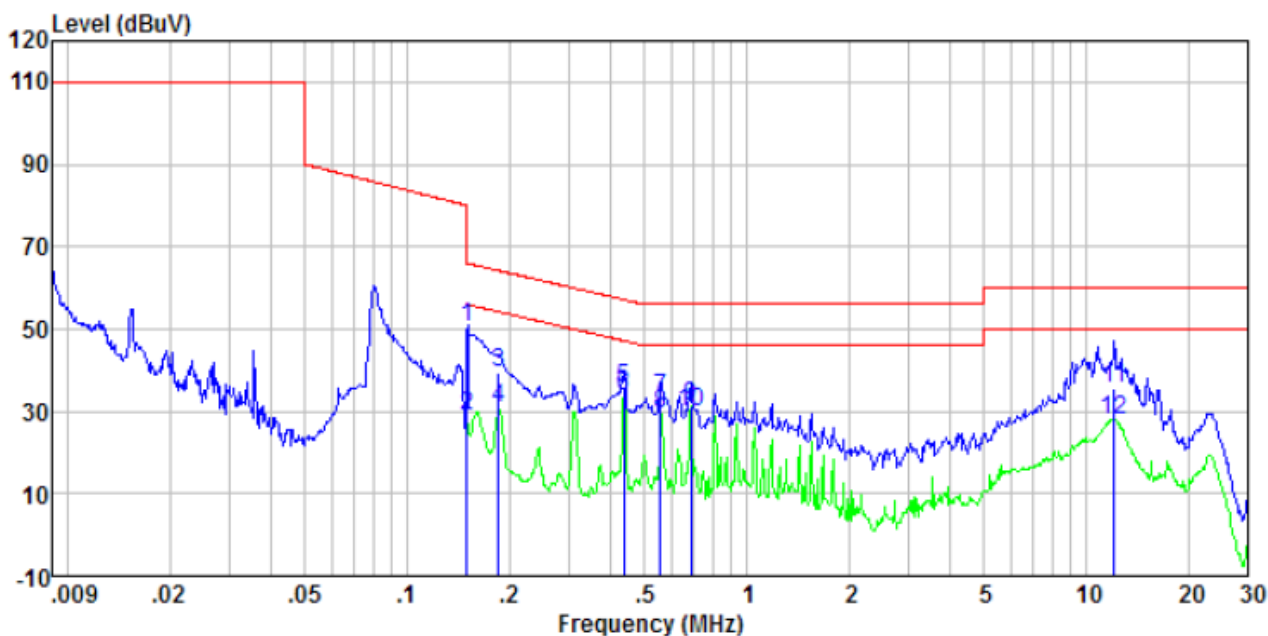
Test mode:	On mode	Antenna Polarity:	Neutral
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Freq MHz	Reading level dBUV	LISN/ISN factor dB/m	Cable loss dB	Level dBUV	Limit level dBUV	Over limit dB	Remark
0.15	53.63	0.40	0.07	54.10	66.00	-11.90	QP
0.15	37.58	0.40	0.07	38.05	56.00	-17.95	Average
0.19	46.53	0.40	0.10	47.03	64.24	-17.21	QP
0.19	35.15	0.40	0.10	35.65	54.24	-18.59	Average
0.23	38.52	0.40	0.11	39.03	62.48	-23.45	QP
0.23	26.16	0.40	0.11	26.67	52.48	-25.81	Average
0.37	36.03	0.37	0.10	36.50	58.52	-22.02	QP
0.37	23.96	0.37	0.10	24.43	48.52	-24.09	Average
0.70	33.82	0.26	0.13	34.21	56.00	-21.79	QP
0.70	23.00	0.26	0.13	23.39	46.00	-22.61	Average
1.01	34.62	0.20	0.15	34.97	56.00	-21.03	QP
1.01	22.68	0.20	0.15	23.03	46.00	-22.97	Average

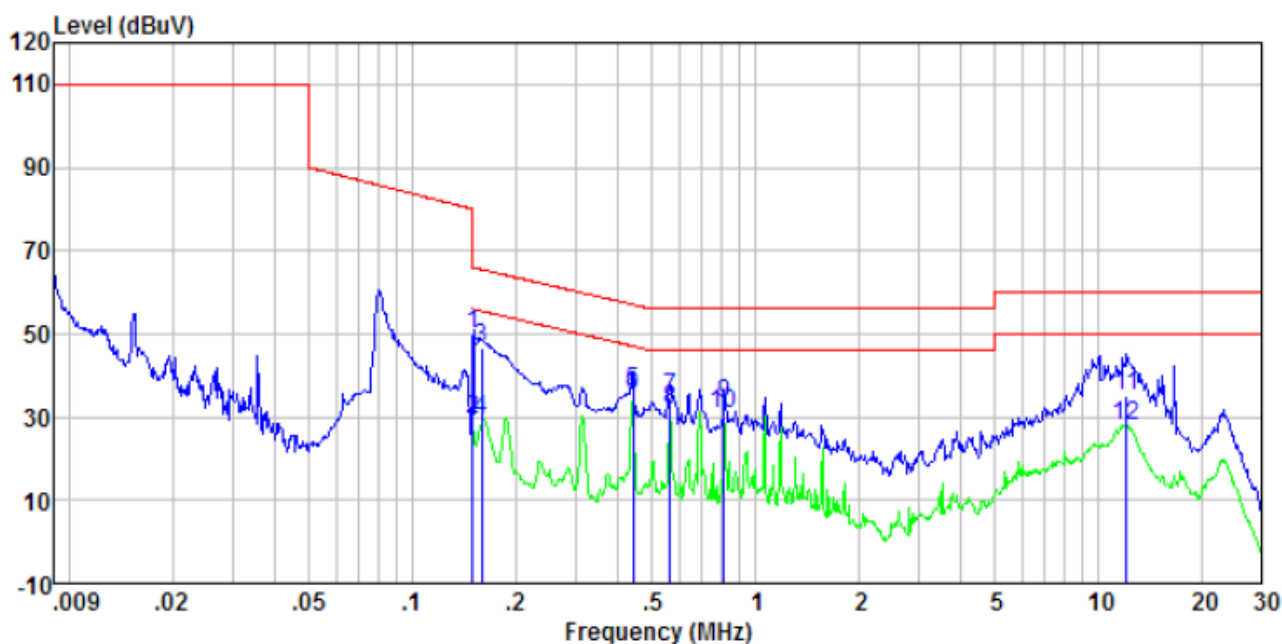
VLF1-I120-040A-XX

Test mode:	On mode	Antenna Polarity:	Line
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.15	49.78	0.40	0.07	50.25	66.00	-15.75	QP
0.15	28.61	0.40	0.07	29.08	56.00	-26.92	Average
0.19	38.94	0.40	0.10	39.44	64.20	-24.76	QP
0.19	30.14	0.40	0.10	30.64	54.20	-23.56	Average
0.44	35.01	0.34	0.11	35.46	57.15	-21.69	QP
0.44	33.00	0.34	0.11	33.45	47.15	-13.70	Average
0.56	32.87	0.30	0.12	33.29	56.00	-22.71	QP
0.56	29.03	0.30	0.12	29.45	46.00	-16.55	Average
0.69	31.05	0.26	0.13	31.44	56.00	-24.56	QP
0.69	29.39	0.26	0.13	29.78	46.00	-16.22	Average
12.12	35.13	0.20	0.20	35.53	60.00	-24.47	QP
12.12	27.52	0.20	0.20	27.92	50.00	-22.08	Average

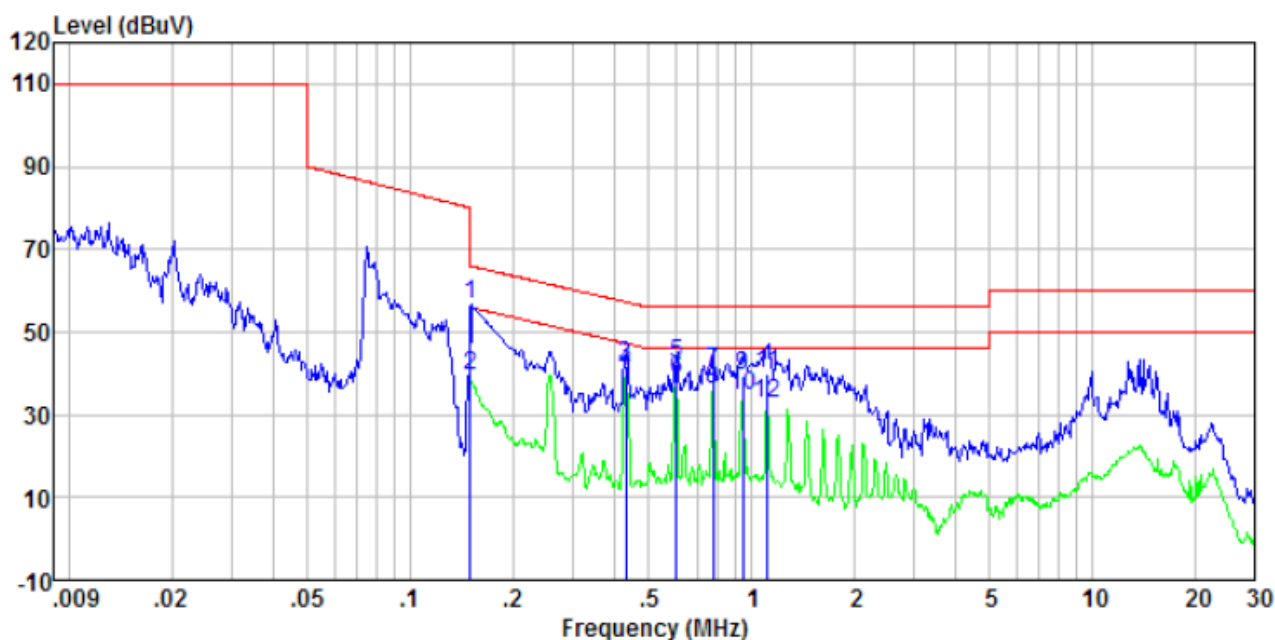
Test mode:	On mode	Antenna Polarity:	Neutral
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.15	49.42	0.40	0.07	49.89	66.00	-16.11	QP
0.15	28.65	0.40	0.07	29.12	56.00	-26.88	Average
0.16	46.13	0.40	0.08	46.61	65.47	-18.86	QP
0.16	28.66	0.40	0.08	29.14	55.47	-26.33	Average
0.44	35.81	0.34	0.11	36.26	57.07	-20.81	QP
0.44	34.80	0.34	0.11	35.25	47.07	-11.82	Average
0.56	33.97	0.30	0.12	34.39	56.00	-21.61	QP
0.56	31.43	0.30	0.12	31.85	46.00	-14.15	Average
0.81	32.60	0.23	0.14	32.97	56.00	-23.03	QP
0.81	30.55	0.23	0.14	30.92	46.00	-15.08	Average
12.12	34.93	0.20	0.20	35.33	60.00	-24.67	QP
12.12	27.55	0.20	0.20	27.95	50.00	-22.05	Average

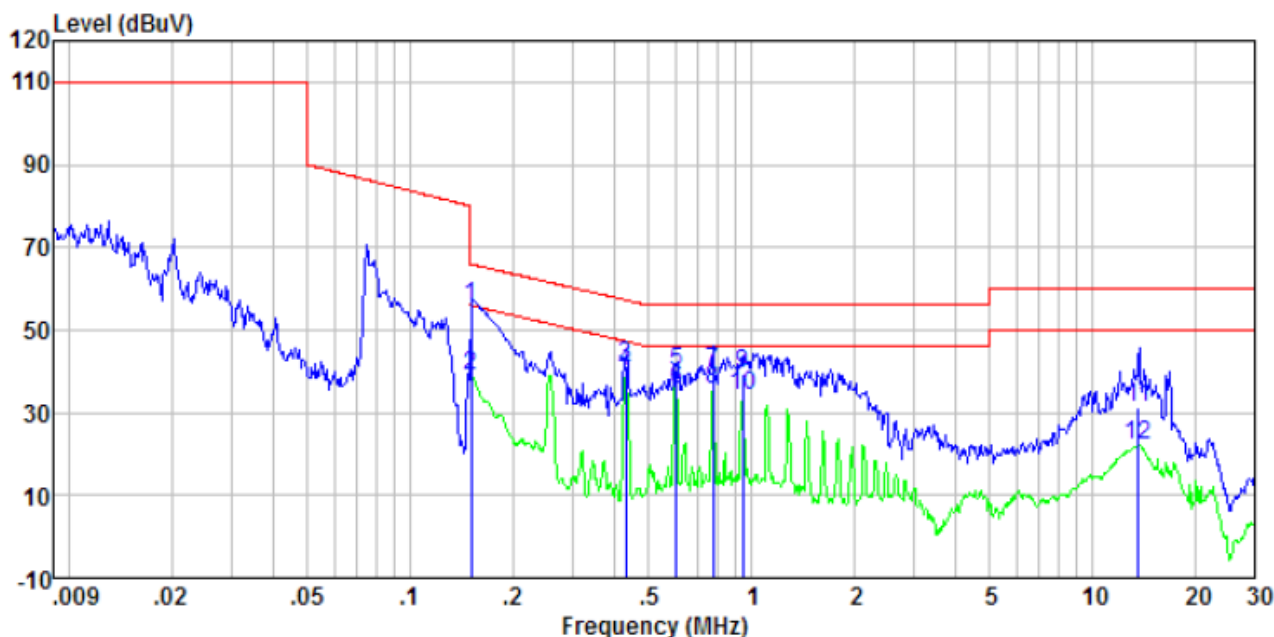
VLF1-I120-040B-XX

Test mode:	On mode	Antenna Polarity:	Line
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.15	56.17	0.40	0.07	56.64	66.00	-9.36	QP
0.15	38.70	0.40	0.07	39.17	56.00	-16.83	Average
0.43	41.33	0.34	0.11	41.78	57.24	-15.46	QP
0.43	39.84	0.34	0.11	40.29	47.24	-6.95	Average
0.60	41.81	0.28	0.12	42.21	56.00	-13.79	QP
0.60	37.88	0.28	0.12	38.28	46.00	-7.72	Average
0.78	40.11	0.24	0.14	40.49	56.00	-15.51	QP
0.78	35.78	0.24	0.14	36.16	46.00	-9.84	Average
0.94	39.29	0.21	0.15	39.65	56.00	-16.35	QP
0.94	34.38	0.21	0.15	34.74	46.00	-11.26	Average
1.12	39.48	0.20	0.15	39.83	56.00	-16.17	QP
1.12	32.50	0.20	0.15	32.85	46.00	-13.15	Average

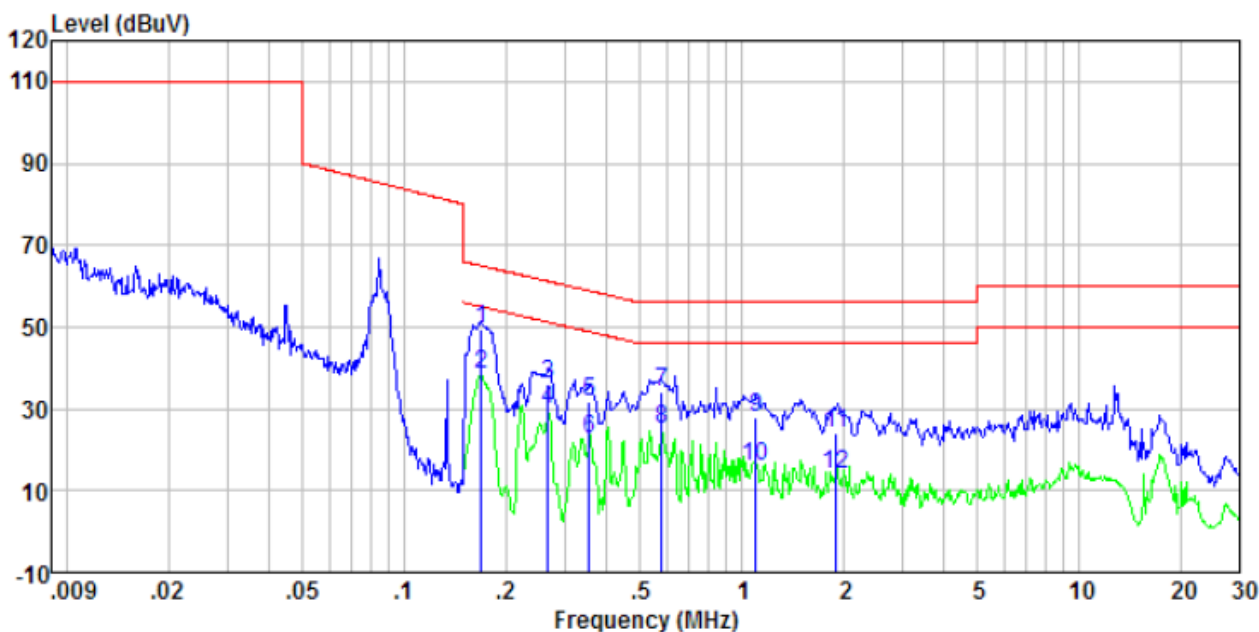
Test mode:	On mode	Antenna Polarity:	Neutral
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.15	55.24	0.40	0.07	55.71	65.91	-10.20	QP
0.15	38.45	0.40	0.07	38.92	55.91	-16.99	Average
0.43	40.93	0.34	0.11	41.38	57.24	-15.86	QP
0.43	39.47	0.34	0.11	39.92	47.24	-7.32	Average
0.60	39.48	0.28	0.12	39.88	56.00	-16.12	QP
0.60	35.39	0.28	0.12	35.79	46.00	-10.21	Average
0.78	39.64	0.24	0.14	40.02	56.00	-15.98	QP
0.78	35.27	0.24	0.14	35.65	46.00	-10.35	Average
0.94	38.92	0.21	0.15	39.28	56.00	-16.72	QP
0.94	33.80	0.21	0.15	34.16	46.00	-11.84	Average
13.70	30.91	0.20	0.21	31.32	60.00	-28.68	QP
13.70	21.70	0.20	0.21	22.11	50.00	-27.89	Average

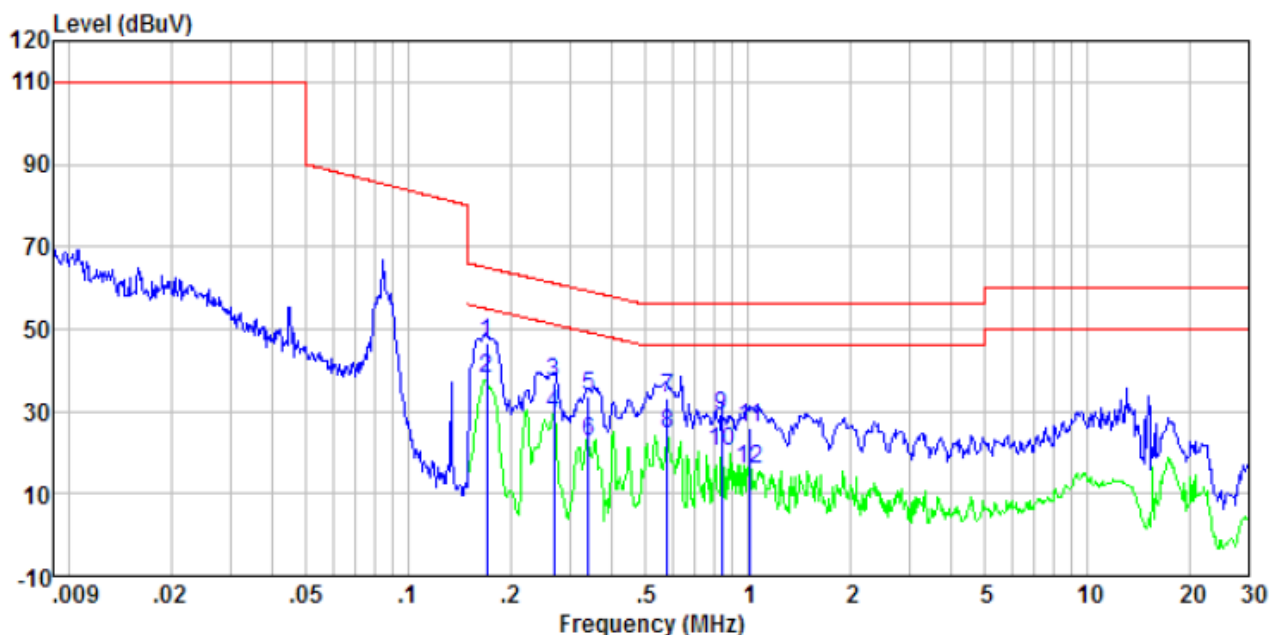
VLF1-I120-040C-XX

Test mode:	On mode	Antenna Polarity:	Line
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.17	48.88	0.40	0.09	49.37	64.99	-15.62	QP
0.17	37.90	0.40	0.09	38.39	54.99	-16.60	Average
0.27	35.71	0.40	0.10	36.21	61.20	-24.99	QP
0.27	29.11	0.40	0.10	29.61	51.20	-21.59	Average
0.35	31.45	0.37	0.10	31.92	58.87	-26.95	QP
0.35	22.18	0.37	0.10	22.65	48.87	-26.22	Average
0.58	33.58	0.29	0.12	33.99	56.00	-22.01	QP
0.58	24.72	0.29	0.12	25.13	46.00	-20.87	Average
1.11	27.65	0.20	0.15	28.00	56.00	-28.00	QP
1.11	15.59	0.20	0.15	15.94	46.00	-30.06	Average
1.91	23.74	0.20	0.17	24.11	56.00	-31.89	QP
1.91	13.71	0.20	0.17	14.08	46.00	-31.92	Average

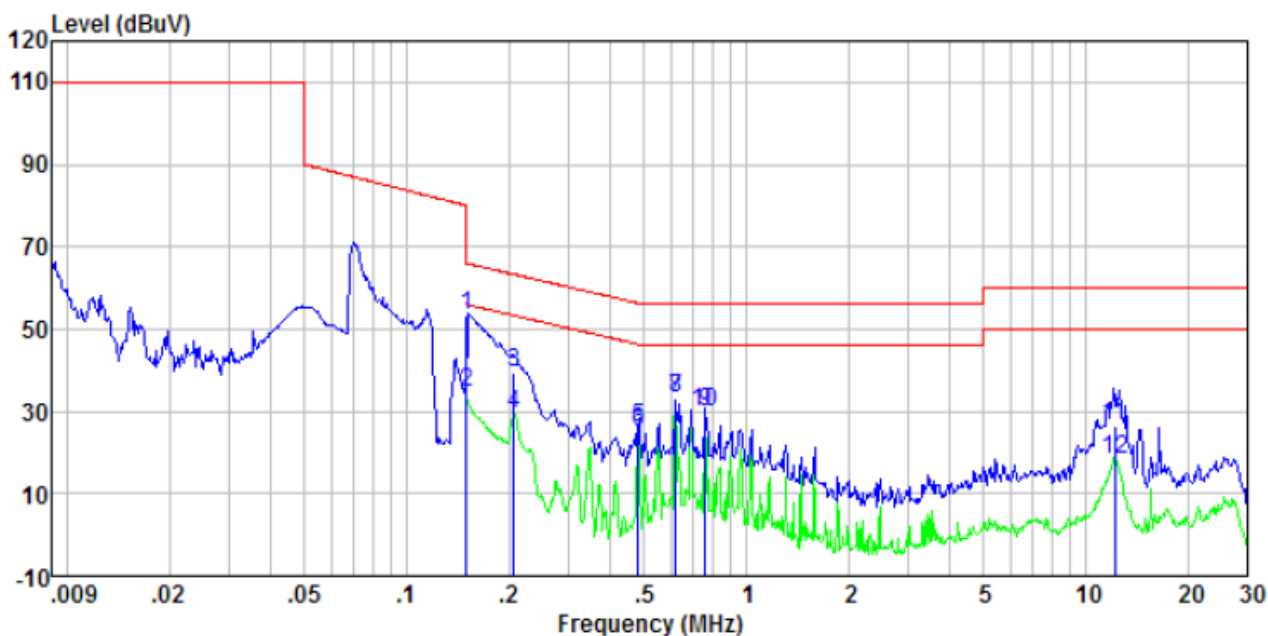
Test mode:	On mode	Antenna Polarity:	Neutral
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.17	46.32	0.40	0.09	46.81	64.94	-18.13	QP
0.17	37.24	0.40	0.09	37.73	54.94	-17.21	Average
0.27	36.60	0.40	0.10	37.10	61.16	-24.06	QP
0.27	28.95	0.40	0.10	29.45	51.16	-21.71	Average
0.34	33.30	0.38	0.10	33.78	59.22	-25.44	QP
0.34	22.02	0.38	0.10	22.50	49.22	-26.72	Average
0.58	32.63	0.29	0.12	33.04	56.00	-22.96	QP
0.58	24.11	0.29	0.12	24.52	46.00	-21.48	Average
0.84	28.43	0.23	0.14	28.80	56.00	-27.20	QP
0.84	20.08	0.23	0.14	20.45	46.00	-25.55	Average
1.02	25.87	0.20	0.15	26.22	56.00	-29.78	QP
1.02	15.52	0.20	0.15	15.87	46.00	-30.13	Average

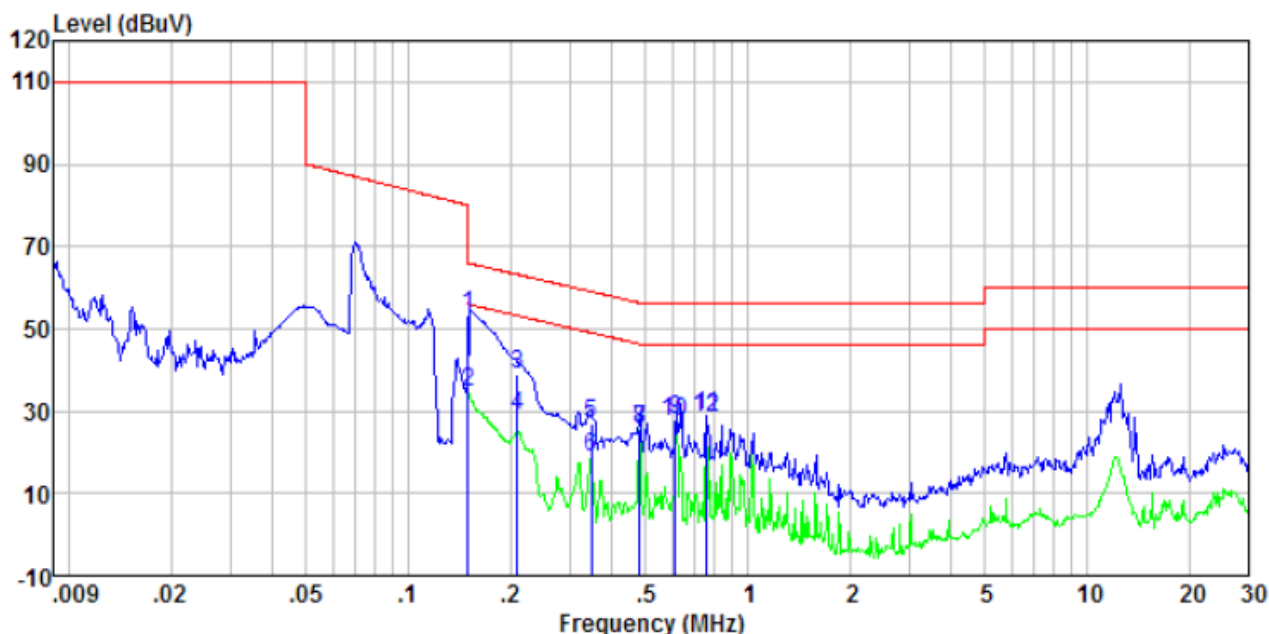
VLF1-I150-050A-XX

Test mode:	On mode	Antenna Polarity:	Line
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.15	52.70	0.40	0.07	53.17	66.00	-12.83	QP
0.15	33.99	0.40	0.07	34.46	56.00	-21.54	Average
0.21	38.93	0.40	0.11	39.44	63.32	-23.88	QP
0.21	28.97	0.40	0.11	29.48	53.32	-23.84	Average
0.48	25.35	0.32	0.11	25.78	56.32	-30.54	QP
0.48	24.81	0.32	0.11	25.24	46.32	-21.08	Average
0.62	32.85	0.28	0.12	33.25	56.00	-22.75	QP
0.62	32.93	0.28	0.12	33.33	46.00	-12.67	Average
0.76	29.66	0.25	0.13	30.04	56.00	-25.96	QP
0.76	29.62	0.25	0.13	30.00	46.00	-16.00	Average
12.19	26.18	0.20	0.20	26.58	60.00	-33.42	QP
12.19	18.05	0.20	0.20	18.45	50.00	-31.55	Average

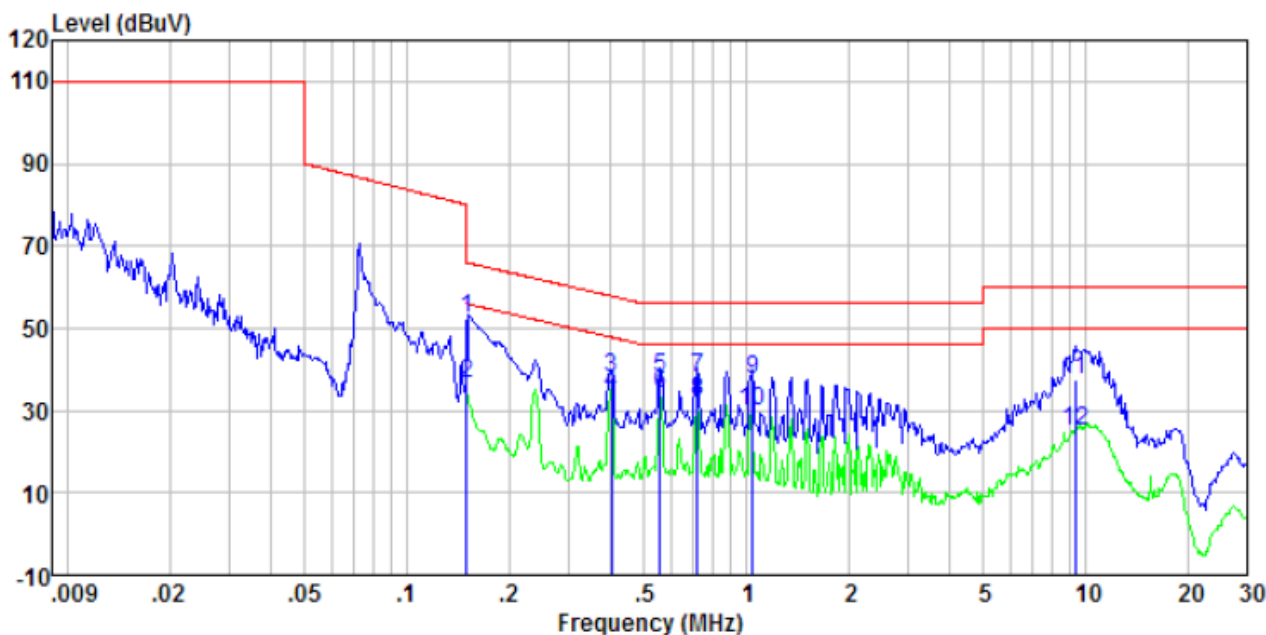
Test mode:	On mode	Antenna Polarity:	Neutral
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.15	52.74	0.40	0.07	53.21	66.00	-12.79	QP
0.15	34.11	0.40	0.07	34.58	56.00	-21.42	Average
0.21	38.28	0.40	0.11	38.79	63.23	-24.44	QP
0.21	28.17	0.40	0.11	28.68	53.23	-24.55	Average
0.35	26.55	0.38	0.10	27.03	59.05	-32.02	QP
0.35	18.13	0.38	0.10	18.61	49.05	-30.44	Average
0.48	25.11	0.32	0.11	25.54	56.32	-30.78	QP
0.48	25.03	0.32	0.11	25.46	46.32	-20.86	Average
0.61	27.35	0.28	0.12	27.75	56.00	-28.25	QP
0.61	26.99	0.28	0.12	27.39	46.00	-18.61	Average
0.76	28.32	0.25	0.13	28.70	56.00	-27.30	QP
0.76	28.20	0.25	0.13	28.58	46.00	-17.42	Average

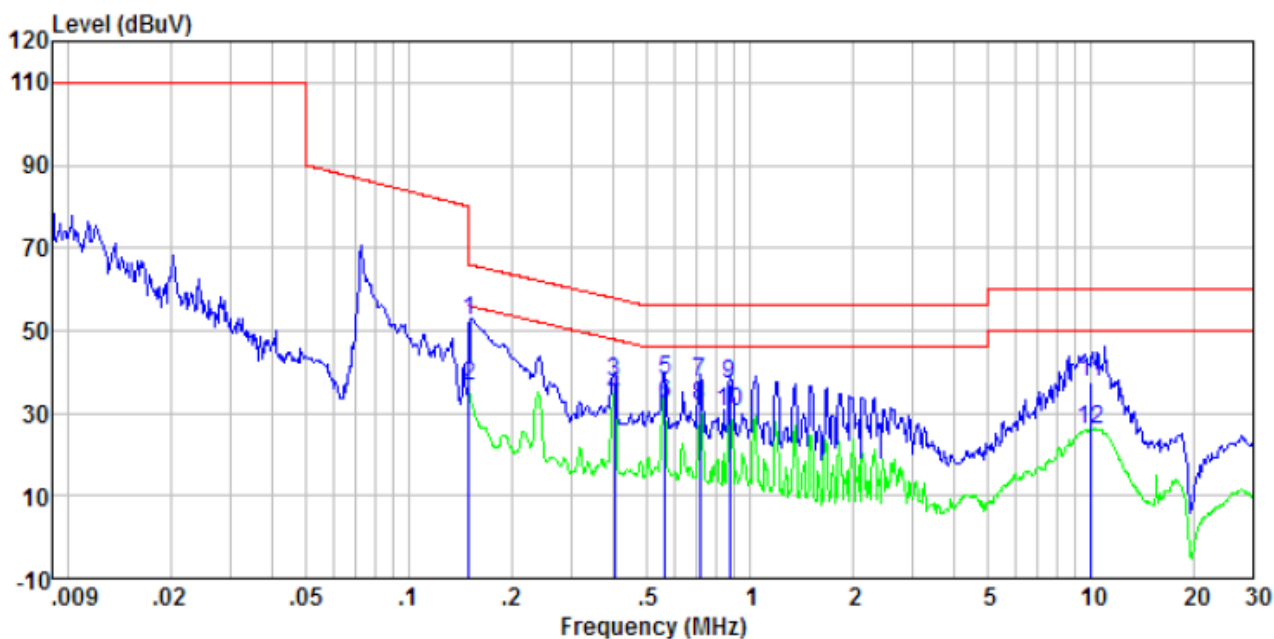
VLF1-I150-050B-XX

Test mode:	On mode	Antenna Polarity:	Line
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.15	51.81	0.40	0.07	52.28	66.00	-13.72	QP
0.15	36.08	0.40	0.07	36.55	56.00	-19.45	Average
0.40	37.29	0.35	0.11	37.75	57.81	-20.06	QP
0.40	33.91	0.35	0.11	34.37	47.81	-13.44	Average
0.56	37.42	0.30	0.12	37.84	56.00	-18.16	QP
0.56	33.51	0.30	0.12	33.93	46.00	-12.07	Average
0.72	37.48	0.26	0.13	37.87	56.00	-18.13	QP
0.72	31.93	0.26	0.13	32.32	46.00	-13.68	Average
1.04	36.96	0.20	0.15	37.31	56.00	-18.69	QP
1.04	29.63	0.20	0.15	29.98	46.00	-16.02	Average
9.35	37.19	0.20	0.20	37.59	60.00	-22.41	QP
9.35	24.71	0.20	0.20	25.11	50.00	-24.89	Average

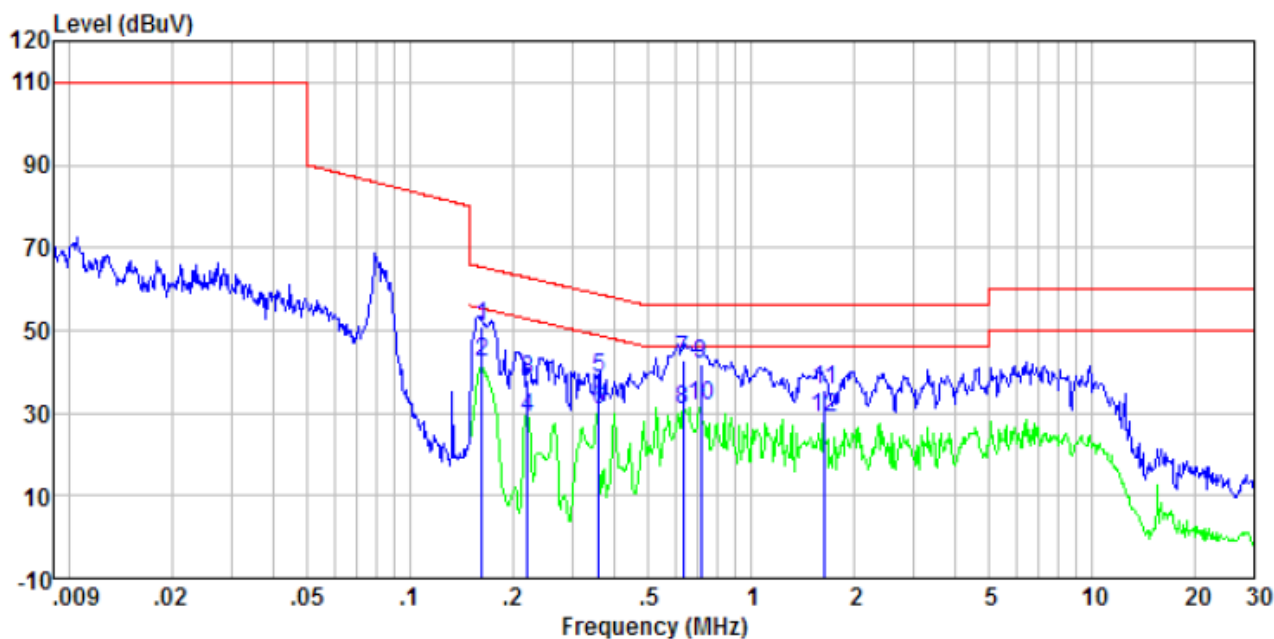
Test mode:	On mode	Antenna Polarity:	Neutral
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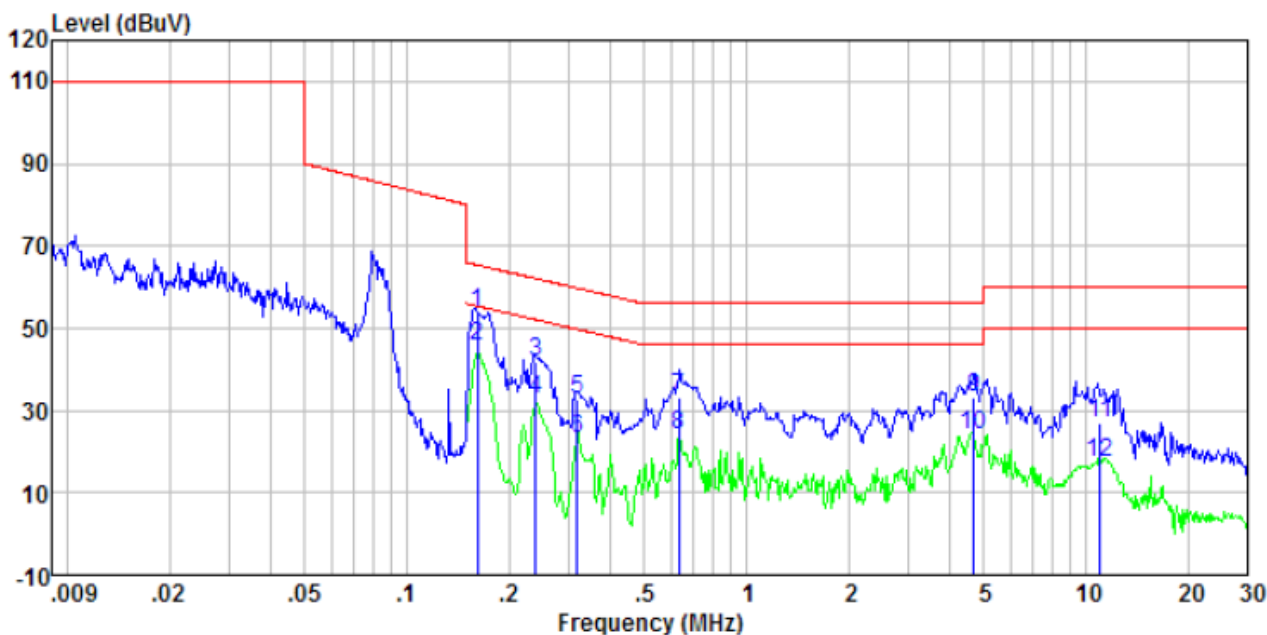
Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.15	51.81	0.40	0.07	52.28	66.00	-13.72	QP
0.15	36.26	0.40	0.07	36.73	56.00	-19.27	Average
0.40	37.06	0.35	0.11	37.52	57.81	-20.29	QP
0.40	33.78	0.35	0.11	34.24	47.81	-13.57	Average
0.56	37.54	0.30	0.12	37.96	56.00	-18.04	QP
0.56	31.91	0.30	0.12	32.33	46.00	-13.67	Average
0.72	36.97	0.26	0.13	37.36	56.00	-18.64	QP
0.72	31.34	0.26	0.13	31.73	46.00	-14.27	Average
0.87	36.76	0.22	0.14	37.12	56.00	-18.88	QP
0.87	29.77	0.22	0.14	30.13	46.00	-15.87	Average
10.07	37.26	0.20	0.20	37.66	60.00	-22.34	QP
10.07	25.71	0.20	0.20	26.11	50.00	-23.89	Average

VLF1-I150-050C-XX

Test mode:	On mode	Antenna Polarity:	Line
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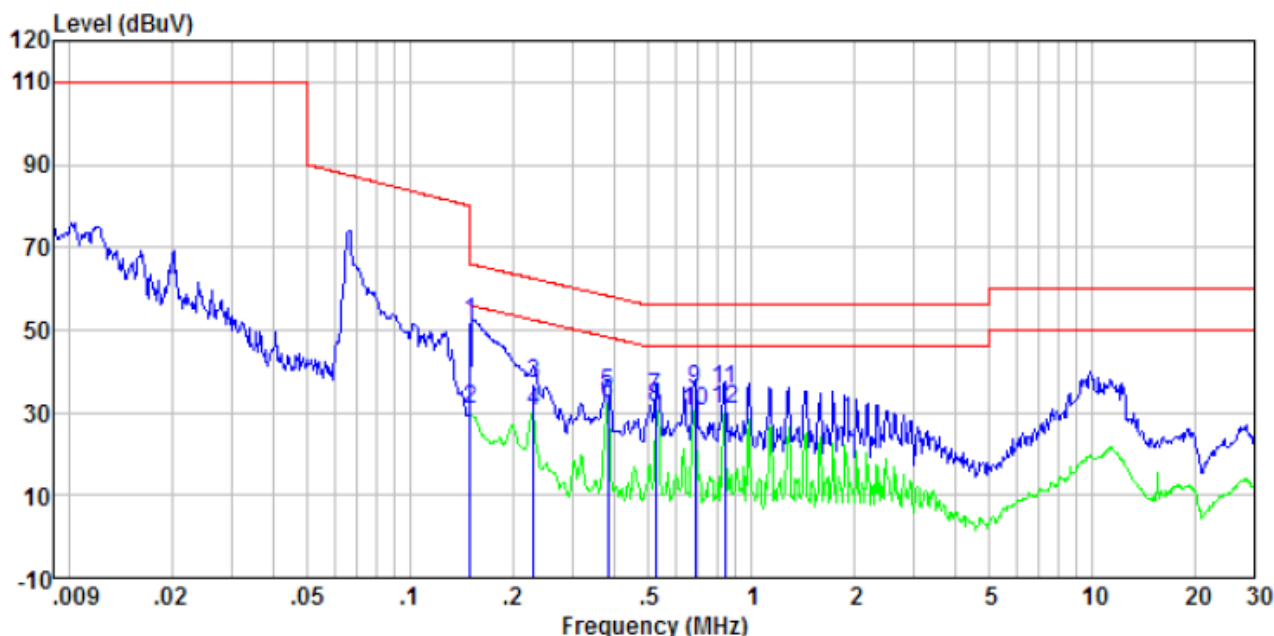
Test mode:	On mode	Antenna Polarity:	Neutral
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.16	53.38	0.40	0.08	53.86	65.38	-11.52	QP
0.16	45.27	0.40	0.08	45.75	55.38	-9.63	Average
0.24	41.22	0.40	0.11	41.73	62.08	-20.35	QP
0.24	32.24	0.40	0.11	32.75	52.08	-19.33	Average
0.32	32.04	0.39	0.10	32.53	59.75	-27.22	QP
0.32	22.79	0.39	0.10	23.28	49.75	-26.47	Average
0.63	32.88	0.28	0.12	33.28	56.00	-22.72	QP
0.63	23.72	0.28	0.12	24.12	46.00	-21.88	Average
4.70	32.67	0.20	0.17	33.04	56.00	-22.96	QP
4.70	23.50	0.20	0.17	23.87	46.00	-22.13	Average
11.02	26.31	0.20	0.20	26.71	60.00	-33.29	QP
11.02	17.00	0.20	0.20	17.40	50.00	-32.60	Average

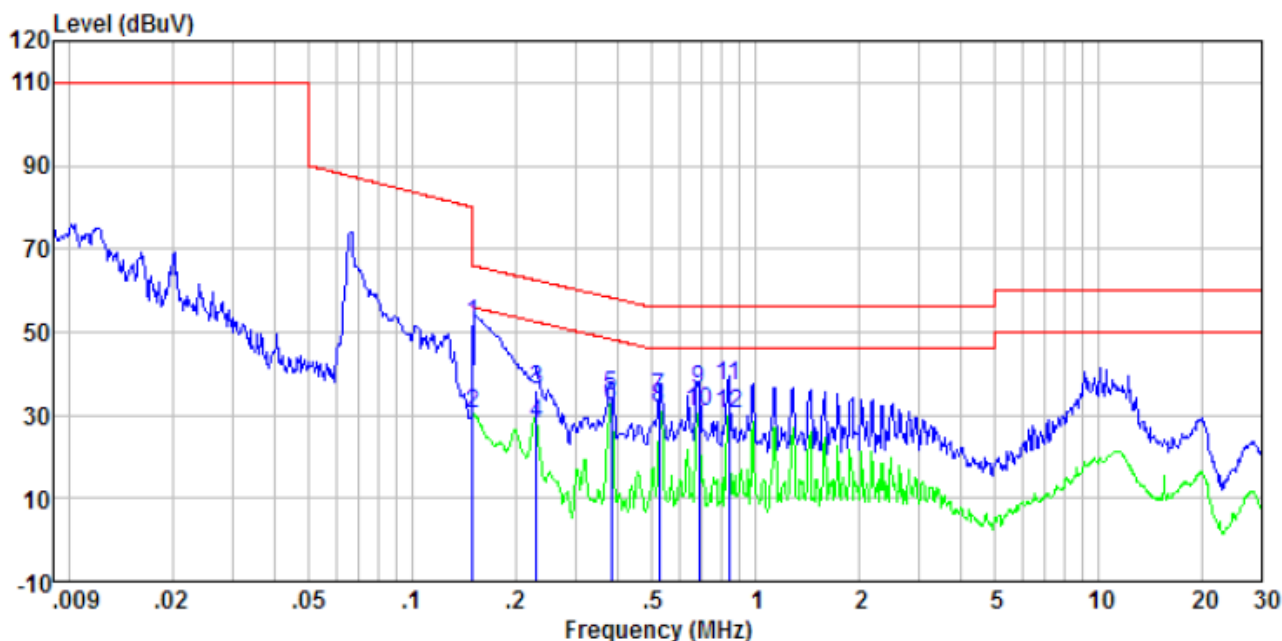
VLF1-I150-050D-XX

Test mode:	On mode	Antenna Polarity:	Line
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.15	51.46	0.40	0.07	51.93	66.00	-14.07	QP
0.15	30.35	0.40	0.07	30.82	56.00	-25.18	Average
0.23	36.43	0.40	0.11	36.94	62.44	-25.50	QP
0.23	29.95	0.40	0.11	30.46	52.44	-21.98	Average
0.38	34.06	0.36	0.10	34.52	58.25	-23.73	QP
0.38	31.70	0.36	0.10	32.16	48.25	-16.09	Average
0.52	33.42	0.31	0.11	33.84	56.00	-22.16	QP
0.52	30.76	0.31	0.11	31.18	46.00	-14.82	Average
0.69	35.08	0.26	0.13	35.47	56.00	-20.53	QP
0.69	30.09	0.26	0.13	30.48	46.00	-15.52	Average
0.84	35.00	0.23	0.14	35.37	56.00	-20.63	QP
0.84	30.28	0.23	0.14	30.65	46.00	-15.35	Average

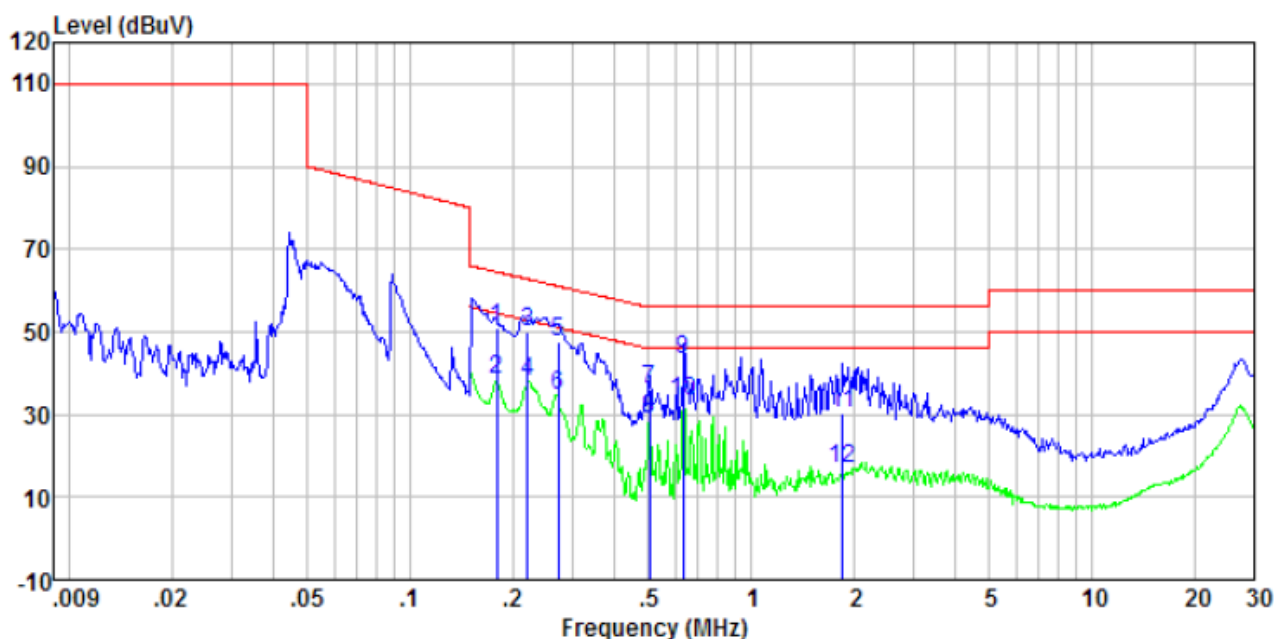
Test mode:	On mode	Antenna Polarity:	Neutral
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.15	51.48	0.40	0.07	51.95	66.00	-14.05	QP
0.15	30.04	0.40	0.07	30.51	56.00	-25.49	Average
0.23	35.32	0.40	0.11	35.83	62.44	-26.61	QP
0.23	27.54	0.40	0.11	28.05	52.44	-24.39	Average
0.38	34.17	0.36	0.10	34.63	58.25	-23.62	QP
0.38	31.70	0.36	0.10	32.16	48.25	-16.09	Average
0.52	33.91	0.31	0.11	34.33	56.00	-21.67	QP
0.52	31.46	0.31	0.11	31.88	46.00	-14.12	Average
0.69	35.50	0.26	0.13	35.89	56.00	-20.11	QP
0.69	30.39	0.26	0.13	30.78	46.00	-15.22	Average
0.84	36.73	0.23	0.14	37.10	56.00	-18.90	QP
0.84	29.71	0.23	0.14	30.08	46.00	-15.92	Average

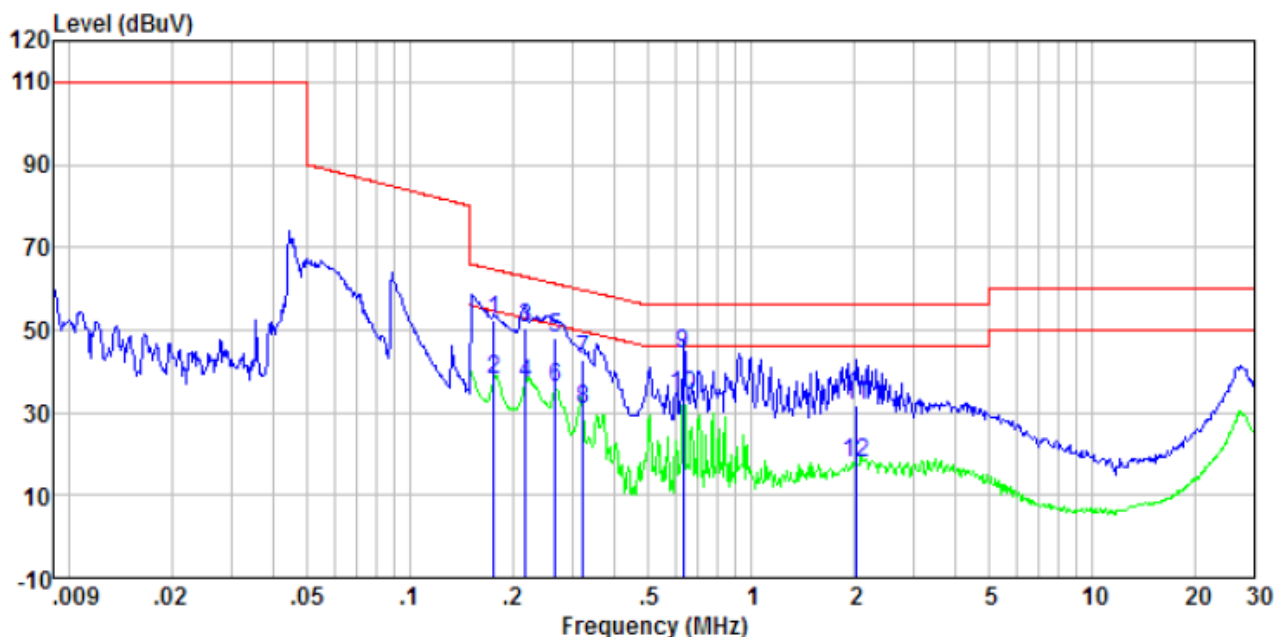
VLF1-I300-100A-XX

Test mode:	On mode	Antenna Polarity:	Line
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.18	50.27	0.40	0.10	50.77	64.50	-13.73	QP
0.18	38.00	0.40	0.10	38.50	54.50	-16.00	Average
0.22	49.45	0.40	0.11	49.96	62.79	-12.83	QP
0.22	37.31	0.40	0.11	37.82	52.79	-14.97	Average
0.27	47.00	0.40	0.10	47.50	61.07	-13.57	QP
0.27	34.01	0.40	0.10	34.51	51.07	-16.56	Average
0.50	35.64	0.31	0.11	36.06	56.00	-19.94	QP
0.50	28.41	0.31	0.11	28.83	46.00	-17.17	Average
0.63	42.95	0.28	0.12	43.35	56.00	-12.65	QP
0.63	32.93	0.28	0.12	33.33	46.00	-12.67	Average
1.86	29.98	0.20	0.17	30.35	56.00	-25.65	QP
1.86	16.55	0.20	0.17	16.92	46.00	-29.08	Average

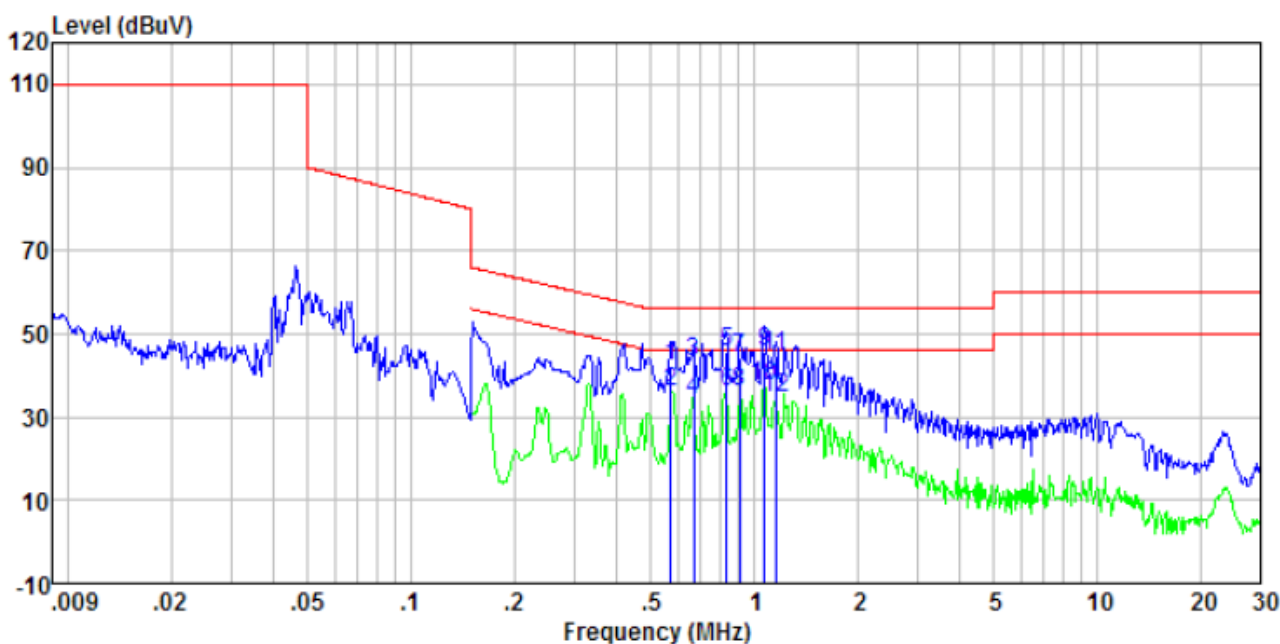
Test mode:	On mode	Antenna Polarity:	Neutral
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.18	51.66	0.40	0.09	52.15	64.68	-12.53	QP
0.18	37.70	0.40	0.09	38.19	54.68	-16.49	Average
0.22	49.87	0.40	0.11	50.38	62.88	-12.50	QP
0.22	36.41	0.40	0.11	36.92	52.88	-15.96	Average
0.27	47.73	0.40	0.10	48.23	61.20	-12.97	QP
0.27	35.58	0.40	0.10	36.08	51.20	-15.12	Average
0.32	42.05	0.39	0.10	42.54	59.66	-17.12	QP
0.32	30.12	0.39	0.10	30.61	49.66	-19.05	Average
0.63	43.73	0.28	0.12	44.13	56.00	-11.87	QP
0.63	33.69	0.28	0.12	34.09	46.00	-11.91	Average
2.04	31.39	0.20	0.18	31.77	56.00	-24.23	QP
2.04	17.32	0.20	0.18	17.70	46.00	-28.30	Average

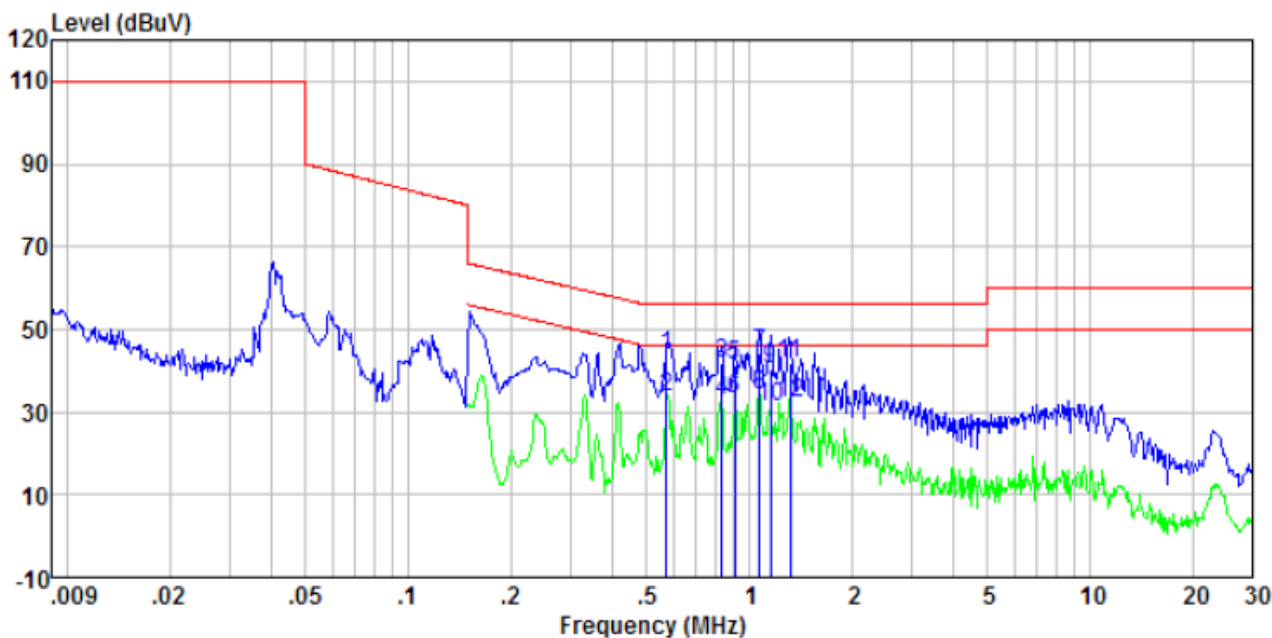
VLF1-I300-100B-XX

Test mode:	On mode	Antenna Polarity:	Line
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.57	41.99	0.29	0.12	42.40	56.00	-13.60	QP
0.57	35.41	0.29	0.12	35.82	46.00	-10.18	Average
0.67	42.90	0.27	0.13	43.30	56.00	-12.70	QP
0.67	33.68	0.27	0.13	34.08	46.00	-11.92	Average
0.83	45.16	0.23	0.14	45.53	56.00	-10.47	QP
0.83	35.54	0.23	0.14	35.91	46.00	-10.09	Average
0.91	43.98	0.22	0.14	44.34	56.00	-11.66	QP
0.91	35.65	0.22	0.14	36.01	46.00	-9.99	Average
1.08	45.21	0.20	0.15	45.56	56.00	-10.44	QP
1.08	36.93	0.20	0.15	37.28	46.00	-8.72	Average
1.16	44.21	0.20	0.16	44.57	56.00	-11.43	QP
1.16	34.24	0.20	0.16	34.60	46.00	-11.40	Average

Test mode:	On mode	Antenna Polarity:	Neutral
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.57	43.41	0.29	0.12	43.82	56.00	-12.18	QP
0.57	33.39	0.29	0.12	33.80	46.00	-12.20	Average
0.83	41.54	0.23	0.14	41.91	56.00	-14.09	QP
0.83	32.22	0.23	0.14	32.59	46.00	-13.41	Average
0.91	41.12	0.22	0.14	41.48	56.00	-14.52	QP
0.91	32.95	0.22	0.14	33.31	46.00	-12.69	Average
1.08	43.74	0.20	0.15	44.09	56.00	-11.91	QP
1.08	33.86	0.20	0.15	34.21	46.00	-11.79	Average
1.16	40.02	0.20	0.16	40.38	56.00	-15.62	QP
1.16	31.12	0.20	0.16	31.48	46.00	-14.52	Average
1.32	41.33	0.20	0.16	41.69	56.00	-14.31	QP
1.32	31.94	0.20	0.16	32.30	46.00	-13.70	Average

7.4 Harmonics Test Results

Test Requirement:	EN 61000-3-2					
Test Method:	EN 61000-3-2					
Frequency range:	100Hz to 2kHz					
Measurement Time:	2.5 min					
Class/Severity:	Class C					
Detector:	As per EN 61000-3-2					
Test environment:	Temp.:	24 °C	Humid.:	51%	Press.:	1 010mbar
Test Instruments:	Refer to section 6 for details					
Test mode:	Refer to section 5.2 for details					
Test results:	Pass					

Measurement Data

PLF1-I150-050D-XX

Power and THD results

True power P:	44.04W	Apparent power :	45.89VA
Reactiv power Q:	12.9var	Power factor:	0.960
THD (U):	0.002	THD (I):	0.076
Crest Factor (U):	1.415	Crest Factor (I):	1.414

Average harmonic current results

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	181.386E-3	99.592		
2	575.466E-6	0.316	2.00	PASS
3	14.974E-3	8.222	28.69	PASS
4	3.700E-3	2.031		PASS
5	4.005E-3	2.199	10.00	PASS
6	857.681E-6	0.471		PASS
7	3.160E-3	1.735	7.00	PASS
8	822.772E-6	0.452		PASS
9	2.602E-3	1.429	5.00	PASS
10	841.577E-6	0.462		PASS
11	1.550E-3	0.851	3.00	PASS
12	768.489E-6	0.422		PASS
13	2.279E-3	1.251	3.00	PASS
14	916.050E-6	0.503		PASS
15	2.132E-3	1.171	3.00	PASS
16	749.894E-6	0.412		PASS
17	1.810E-3	0.994	3.00	PASS
18	1.807E-3	0.992		PASS
19	1.304E-3	0.716	3.00	PASS
20	770.740E-6	0.423		PASS
21	1.834E-3	1.007	4.50	PASS
22	1.648E-3	0.905		PASS
23	1.414E-3	0.777	4.50	PASS
24	805.378E-6	0.442		PASS
25	946.267E-6	0.520	4.50	PASS
26	776.232E-6	0.426		PASS
27	1.893E-3	1.039	4.50	PASS
28	779.782E-6	0.428		PASS
29	1.026E-3	0.563	4.50	PASS
30	785.133E-6	0.431		PASS
31	1.773E-3	0.973	4.50	PASS
32	841.917E-6	0.462		PASS
33	1.248E-3	0.685	4.50	PASS
34	807.190E-6	0.443		PASS
35	922.556E-6	0.507	4.50	PASS
36	1.370E-3	0.752		PASS
37	1.563E-3	0.858	4.50	PASS
38	820.789E-6	0.451		PASS
39	1.121E-3	0.615	4.50	PASS
40	1.288E-3	0.707		PASS

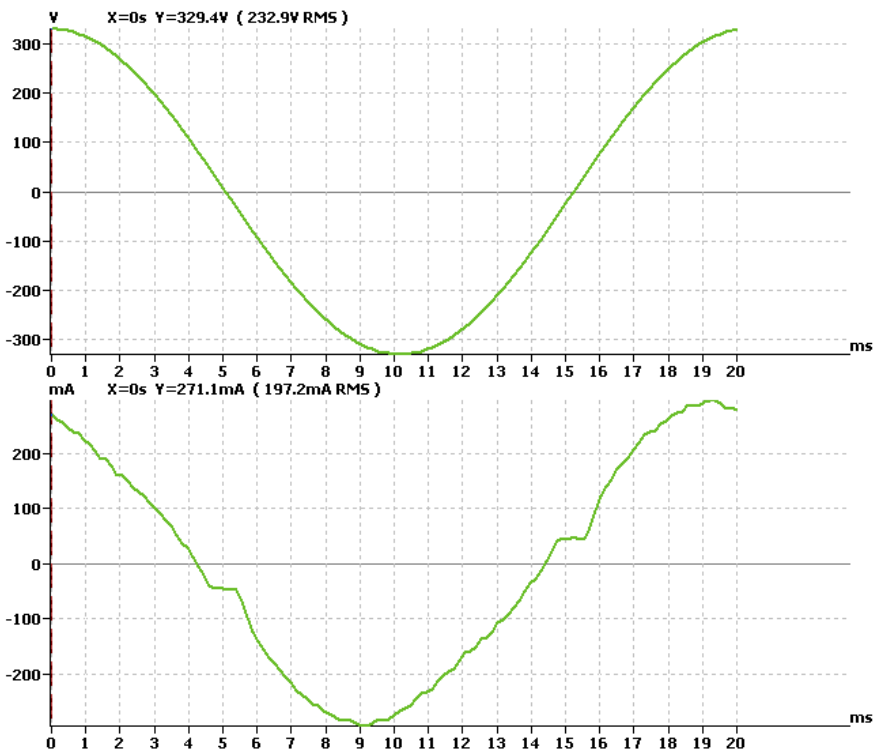
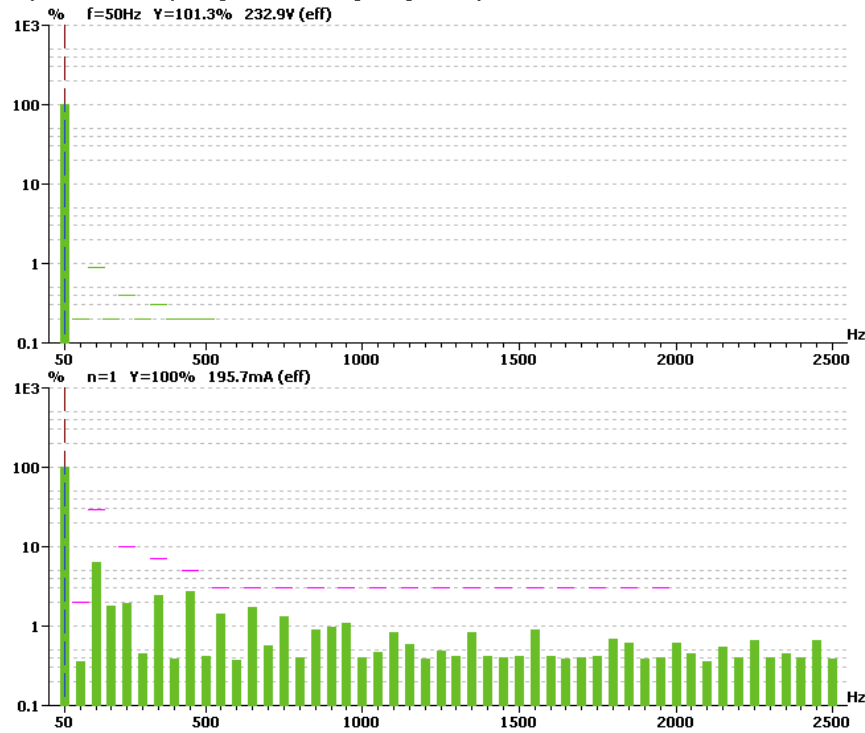
Maximum harmonic current results

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	182.129E-3	100.000		
2	651.758E-6	0.358	3.00	PASS
3	15.359E-3	8.433	43.03	PASS
4	3.888E-3	2.135		PASS
5	4.272E-3	2.346	15.00	PASS
6	928.693E-6	0.510		PASS
7	3.255E-3	1.787	10.50	PASS
8	909.389E-6	0.499		PASS
9	2.846E-3	1.562	7.50	PASS
10	931.890E-6	0.512		PASS
11	1.636E-3	0.898	4.50	PASS
12	859.585E-6	0.472		PASS
13	2.434E-3	1.336	4.50	PASS
14	1.111E-3	0.610		PASS
15	2.245E-3	1.233	4.50	PASS
16	873.222E-6	0.479		PASS
17	1.959E-3	1.076	4.50	PASS
18	1.919E-3	1.053		PASS
19	1.458E-3	0.800	4.50	PASS
20	854.260E-6	0.469		PASS
21	1.964E-3	1.079	4.50	PASS
22	1.770E-3	0.972		PASS
23	1.544E-3	0.848	4.50	PASS
24	890.308E-6	0.489		PASS
25	1.050E-3	0.577	4.50	PASS
26	873.698E-6	0.480		PASS
27	2.049E-3	1.125	4.50	PASS
28	861.024E-6	0.473		PASS
29	1.118E-3	0.614	4.50	PASS
30	876.709E-6	0.481		PASS
31	1.899E-3	1.043	4.50	PASS
32	956.519E-6	0.525		PASS
33	1.348E-3	0.740	4.50	PASS
34	893.062E-6	0.490		PASS
35	1.021E-3	0.560	4.50	PASS
36	1.503E-3	0.825		PASS
37	1.684E-3	0.924	4.50	PASS
38	940.022E-6	0.516		PASS
39	1.209E-3	0.664	4.50	PASS
40	1.399E-3	0.768		PASS

Maximum harmonic voltage results

Hn	Ueff [V]	Ueff [%]	Limit [%]	Result
1	232.97	101.290		
2	43.21E-3	0.019	0.2	PASS
3	86.01E-3	0.037	0.9	PASS
4	21.45E-3	0.009	0.2	PASS
5	62.41E-3	0.027	0.4	PASS
6	18.08E-3	0.008	0.2	PASS
7	32.76E-3	0.014	0.3	PASS
8	14.68E-3	0.006	0.2	PASS
9	33.89E-3	0.015	0.2	PASS
10	20.54E-3	0.009	0.2	PASS
11	69.44E-3	0.030	0.1	PASS
12	23.33E-3	0.010	0.1	PASS
13	74.26E-3	0.032	0.1	PASS
14	14.85E-3	0.006	0.1	PASS
15	34.22E-3	0.015	0.1	PASS
16	13.85E-3	0.006	0.1	PASS
17	35.69E-3	0.016	0.1	PASS
18	14.45E-3	0.006	0.1	PASS
19	76.25E-3	0.033	0.1	PASS
20	15.58E-3	0.007	0.1	PASS
21	69.37E-3	0.030	0.1	PASS
22	14.17E-3	0.006	0.1	PASS
23	32.54E-3	0.014	0.1	PASS
24	16.34E-3	0.007	0.1	PASS
25	36.18E-3	0.016	0.1	PASS
26	14.43E-3	0.006	0.1	PASS
27	66.73E-3	0.029	0.1	PASS
28	12.58E-3	0.005	0.1	PASS
29	64.61E-3	0.028	0.1	PASS
30	12.15E-3	0.005	0.1	PASS
31	31.10E-3	0.014	0.1	PASS
32	13.96E-3	0.006	0.1	PASS
33	32.51E-3	0.014	0.1	PASS
34	13.71E-3	0.006	0.1	PASS
35	49.30E-3	0.021	0.1	PASS
36	11.22E-3	0.005	0.1	PASS
37	42.81E-3	0.019	0.1	PASS
38	12.33E-3	0.005	0.1	PASS
39	18.99E-3	0.008	0.1	PASS
40	11.91E-3	0.005	0.1	PASS

No partial calculation (average odd harmonics [21..39] < 100%)



PLF1-I300-100B-XX

Power and THD results

True power P:	79.28W	Apparent power :	86.98VA
Reactiv power Q:	22.74var	Power factor:	0.919
THD (U):	0.002	THD (I):	0.185
Crest Factor (U):	1.415	Crest Factor (I):	1.486

Average harmonic current results

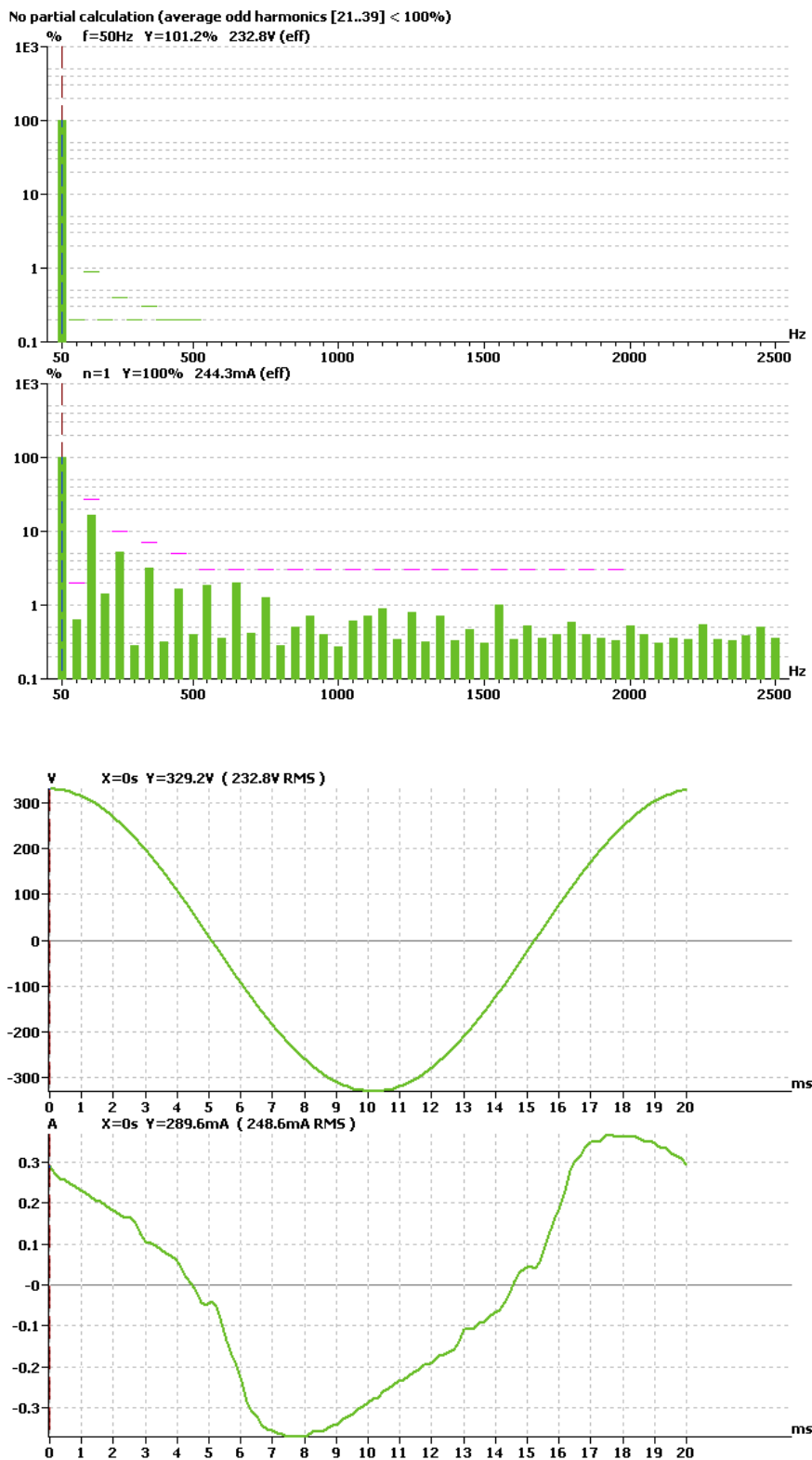
Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	244.020E-3	99.758		
2	1.437E-3	0.587	2.00	PASS
3	41.033E-3	16.775	27.61	PASS
4	3.555E-3	1.453		PASS
5	12.989E-3	5.310	10.00	PASS
6	756.797E-6	0.309		PASS
7	7.792E-3	3.185	7.00	PASS
8	794.534E-6	0.325		PASS
9	3.956E-3	1.617	5.00	PASS
10	910.734E-6	0.372		PASS
11	4.654E-3	1.903	3.00	PASS
12	884.961E-6	0.362		PASS
13	4.869E-3	1.990	3.00	PASS
14	1.019E-3	0.417		PASS
15	3.030E-3	1.239	3.00	PASS
16	724.596E-6	0.296		PASS
17	1.240E-3	0.507	3.00	PASS
18	1.751E-3	0.716		PASS
19	970.639E-6	0.397	3.00	PASS
20	711.617E-6	0.291		PASS
21	1.575E-3	0.644	4.50	PASS
22	1.698E-3	0.694		PASS
23	2.257E-3	0.923	4.50	PASS
24	816.278E-6	0.334		PASS
25	1.925E-3	0.787	4.50	PASS
26	768.631E-6	0.314		PASS
27	1.800E-3	0.736	4.50	PASS
28	744.037E-6	0.304		PASS
29	1.218E-3	0.498	4.50	PASS
30	759.051E-6	0.310		PASS
31	2.427E-3	0.992	4.50	PASS
32	845.052E-6	0.345		PASS
33	1.289E-3	0.527	4.50	PASS
34	867.208E-6	0.355		PASS
35	1.017E-3	0.416	4.50	PASS
36	1.395E-3	0.570		PASS
37	990.427E-6	0.405	4.50	PASS
38	880.173E-6	0.360		PASS
39	849.383E-6	0.347	4.50	PASS
40	1.245E-3	0.509		PASS

Maximum harmonic current results

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	244.612E-3	100.000		
2	1.562E-3	0.639	3.00	PASS
3	41.336E-3	16.898	41.41	PASS
4	3.876E-3	1.585		PASS
5	13.203E-3	5.397	15.00	PASS
6	862.510E-6	0.353		PASS
7	7.911E-3	3.234	10.50	PASS
8	874.313E-6	0.357		PASS
9	4.439E-3	1.815	7.50	PASS
10	1.008E-3	0.412		PASS
11	4.767E-3	1.949	4.50	PASS
12	962.102E-6	0.393		PASS
13	4.954E-3	2.025	4.50	PASS
14	1.210E-3	0.495		PASS
15	3.110E-3	1.272	4.50	PASS
16	799.583E-6	0.327		PASS
17	1.359E-3	0.556	4.50	PASS
18	1.861E-3	0.761		PASS
19	1.076E-3	0.440	4.50	PASS
20	794.924E-6	0.325		PASS
21	1.720E-3	0.703	4.50	PASS
22	1.826E-3	0.746		PASS
23	2.371E-3	0.969	4.50	PASS
24	909.633E-6	0.372		PASS
25	2.029E-3	0.829	4.50	PASS
26	859.398E-6	0.351		PASS
27	1.897E-3	0.776	4.50	PASS
28	854.191E-6	0.349		PASS
29	1.329E-3	0.543	4.50	PASS
30	818.676E-6	0.335		PASS
31	2.558E-3	1.046	4.50	PASS
32	945.981E-6	0.387		PASS
33	1.409E-3	0.576	4.50	PASS
34	951.131E-6	0.389		PASS
35	1.138E-3	0.465	4.50	PASS
36	1.516E-3	0.620		PASS
37	1.102E-3	0.451	4.50	PASS
38	978.640E-6	0.400		PASS
39	934.478E-6	0.382	4.50	PASS
40	1.345E-3	0.550		PASS

Maximum harmonic voltage results

Hn	Ueff [V]	Ueff [%]	Limit [%]	Result
1	232.80	101.219		
2	42.44E-3	0.018	0.2	PASS
3	71.39E-3	0.031	0.9	PASS
4	18.84E-3	0.008	0.2	PASS
5	59.31E-3	0.026	0.4	PASS
6	18.49E-3	0.008	0.2	PASS
7	20.29E-3	0.009	0.3	PASS
8	16.38E-3	0.007	0.2	PASS
9	56.02E-3	0.024	0.2	PASS
10	22.68E-3	0.010	0.2	PASS
11	73.30E-3	0.032	0.1	PASS
12	21.95E-3	0.010	0.1	PASS
13	54.32E-3	0.024	0.1	PASS
14	15.41E-3	0.007	0.1	PASS
15	18.33E-3	0.008	0.1	PASS
16	13.41E-3	0.006	0.1	PASS
17	71.55E-3	0.031	0.1	PASS
18	11.02E-3	0.005	0.1	PASS
19	79.45E-3	0.035	0.1	PASS
20	15.53E-3	0.007	0.1	PASS
21	43.14E-3	0.019	0.1	PASS
22	11.88E-3	0.005	0.1	PASS
23	36.95E-3	0.016	0.1	PASS
24	15.43E-3	0.007	0.1	PASS
25	60.64E-3	0.026	0.1	PASS
26	12.62E-3	0.005	0.1	PASS
27	54.85E-3	0.024	0.1	PASS
28	12.38E-3	0.005	0.1	PASS
29	21.71E-3	0.009	0.1	PASS
30	11.28E-3	0.005	0.1	PASS
31	47.35E-3	0.021	0.1	PASS
32	11.45E-3	0.005	0.1	PASS
33	58.77E-3	0.026	0.1	PASS
34	10.52E-3	0.005	0.1	PASS
35	37.08E-3	0.016	0.1	PASS
36	11.89E-3	0.005	0.1	PASS
37	25.49E-3	0.011	0.1	PASS
38	9.63E-3	0.004	0.1	PASS
39	42.22E-3	0.018	0.1	PASS
40	12.70E-3	0.006	0.1	PASS



PLF1-I300-100C-XX,

Power and THD results

True power P:	78.97W	Apparent power :	87.03VA
Reactiv power Q:	24.61var	Power factor:	0.932
THD (U):	0.002	THD (I):	0.192
Crest Factor (U):	1.415	Crest Factor (I):	1.463

Average harmonic current results

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	283.737E-3	98.869		
2	1.308E-3	0.456	2.00	PASS
3	51.728E-3	18.025	27.97	PASS
4	3.672E-3	1.280		PASS
5	11.656E-3	4.062	10.00	PASS
6	835.318E-6	0.291		PASS
7	6.467E-3	2.253	7.00	PASS
8	768.472E-6	0.268		PASS
9	6.343E-3	2.210	5.00	PASS
10	735.996E-6	0.256		PASS
11	4.727E-3	1.647	3.00	PASS
12	734.259E-6	0.256		PASS
13	2.970E-3	1.035	3.00	PASS
14	961.066E-6	0.335		PASS
15	2.289E-3	0.798	3.00	PASS
16	696.223E-6	0.243		PASS
17	2.089E-3	0.728	3.00	PASS
18	1.779E-3	0.620		PASS
19	2.272E-3	0.792	3.00	PASS
20	744.769E-6	0.260		PASS
21	1.253E-3	0.436	4.50	PASS
22	1.633E-3	0.569		PASS
23	1.061E-3	0.370	4.50	PASS
24	741.078E-6	0.258		PASS
25	1.631E-3	0.568	4.50	PASS
26	745.656E-6	0.260		PASS
27	2.084E-3	0.726	4.50	PASS
28	788.710E-6	0.275		PASS
29	1.274E-3	0.444	4.50	PASS
30	737.533E-6	0.257		PASS
31	1.471E-3	0.512	4.50	PASS
32	857.516E-6	0.299		PASS
33	1.153E-3	0.402	4.50	PASS
34	715.020E-6	0.249		PASS
35	1.760E-3	0.613	4.50	PASS
36	1.362E-3	0.475		PASS
37	2.142E-3	0.746	4.50	PASS
38	749.515E-6	0.261		PASS
39	1.924E-3	0.670	4.50	PASS
40	1.260E-3	0.439		PASS

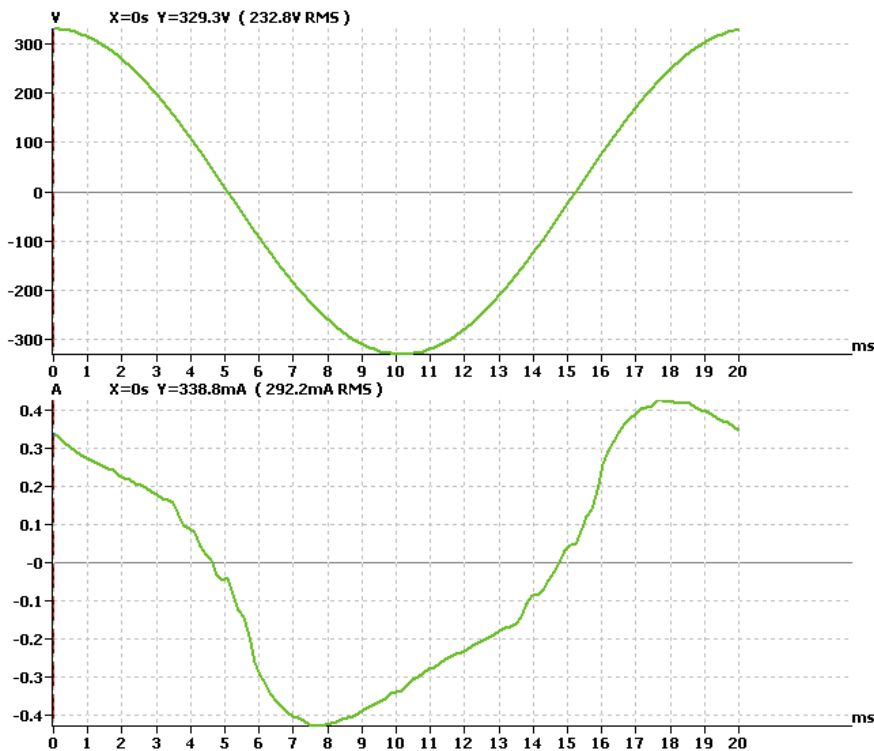
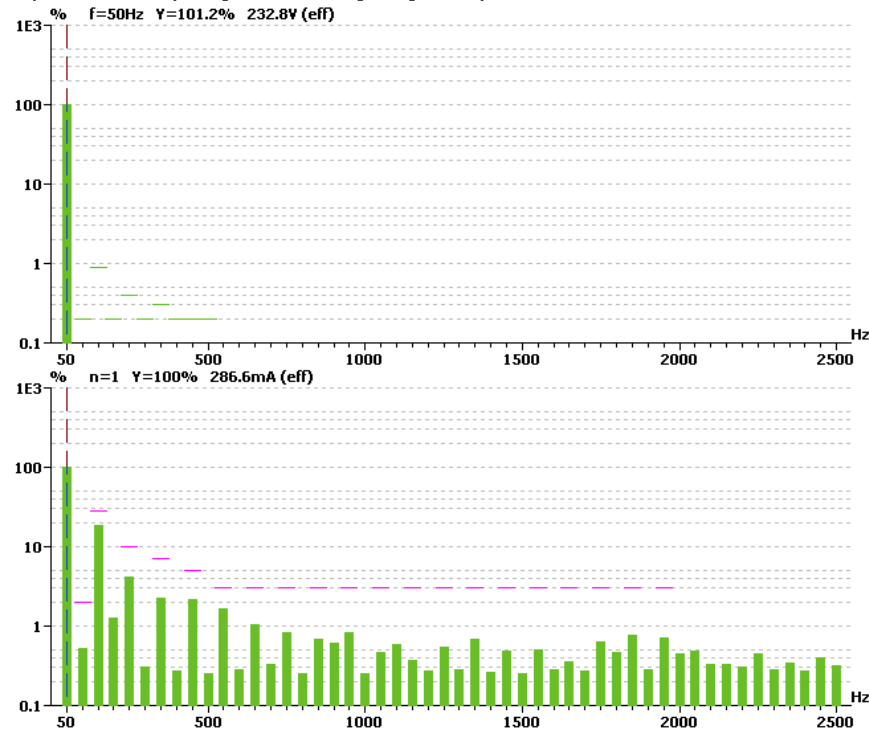
Maximum harmonic current results

Hn	leff [A]	leff [%]	Limit [%]	Result
1	286.984E-3	100.000		
2	1.532E-3	0.534	3.00	PASS
3	52.806E-3	18.400	41.96	PASS
4	4.106E-3	1.431		PASS
5	11.966E-3	4.170	15.00	PASS
6	922.965E-6	0.322		PASS
7	6.708E-3	2.337	10.50	PASS
8	846.842E-6	0.295		PASS
9	6.801E-3	2.370	7.50	PASS
10	802.170E-6	0.280		PASS
11	4.940E-3	1.721	4.50	PASS
12	834.937E-6	0.291		PASS
13	3.094E-3	1.078	4.50	PASS
14	1.195E-3	0.416		PASS
15	2.426E-3	0.845	4.50	PASS
16	784.744E-6	0.273		PASS
17	2.264E-3	0.789	4.50	PASS
18	1.920E-3	0.669		PASS
19	2.366E-3	0.824	4.50	PASS
20	875.678E-6	0.305		PASS
21	1.437E-3	0.501	4.50	PASS
22	1.738E-3	0.606		PASS
23	1.146E-3	0.399	4.50	PASS
24	829.532E-6	0.289		PASS
25	1.752E-3	0.610	4.50	PASS
26	867.033E-6	0.302		PASS
27	2.243E-3	0.782	4.50	PASS
28	891.190E-6	0.311		PASS
29	1.440E-3	0.502	4.50	PASS
30	805.180E-6	0.281		PASS
31	1.598E-3	0.557	4.50	PASS
32	951.261E-6	0.331		PASS
33	1.327E-3	0.462	4.50	PASS
34	845.581E-6	0.295		PASS
35	1.859E-3	0.648	4.50	PASS
36	1.465E-3	0.510		PASS
37	2.336E-3	0.814	4.50	PASS
38	862.973E-6	0.301		PASS
39	2.108E-3	0.735	4.50	PASS
40	1.355E-3	0.472		PASS

Maximum harmonic voltage results

Hn	Ueff [V]	Ueff [%]	Limit [%]	Result
1	232.80	101.218		
2	41.96E-3	0.018	0.2	PASS
3	64.64E-3	0.028	0.9	PASS
4	21.61E-3	0.009	0.2	PASS
5	52.28E-3	0.023	0.4	PASS
6	18.17E-3	0.008	0.2	PASS
7	17.78E-3	0.008	0.3	PASS
8	16.77E-3	0.007	0.2	PASS
9	61.94E-3	0.027	0.2	PASS
10	22.68E-3	0.010	0.2	PASS
11	74.68E-3	0.032	0.1	PASS
12	22.96E-3	0.010	0.1	PASS
13	44.66E-3	0.019	0.1	PASS
14	15.56E-3	0.007	0.1	PASS
15	30.59E-3	0.013	0.1	PASS
16	12.72E-3	0.006	0.1	PASS
17	75.29E-3	0.033	0.1	PASS
18	13.55E-3	0.006	0.1	PASS
19	71.66E-3	0.031	0.1	PASS
20	15.40E-3	0.007	0.1	PASS
21	26.40E-3	0.011	0.1	PASS
22	10.28E-3	0.004	0.1	PASS
23	52.55E-3	0.023	0.1	PASS
24	16.82E-3	0.007	0.1	PASS
25	67.64E-3	0.029	0.1	PASS
26	10.93E-3	0.005	0.1	PASS
27	38.56E-3	0.017	0.1	PASS
28	14.83E-3	0.006	0.1	PASS
29	27.87E-3	0.012	0.1	PASS
30	11.77E-3	0.005	0.1	PASS
31	57.71E-3	0.025	0.1	PASS
32	14.08E-3	0.006	0.1	PASS
33	55.35E-3	0.024	0.1	PASS
34	9.03E-3	0.004	0.1	PASS
35	21.19E-3	0.009	0.1	PASS
36	12.02E-3	0.005	0.1	PASS
37	42.17E-3	0.018	0.1	PASS
38	10.14E-3	0.004	0.1	PASS
39	45.57E-3	0.020	0.1	PASS
40	11.55E-3	0.005	0.1	PASS

No partial calculation (average odd harmonics [21..39] < 100%)



VLF1-I120-040A-XX

Power and THD results

True power P:	34.24W	Apparent power :	36.71VA
Reactiv power Q:	13.25var	Power factor:	0.933
THD (U):	0.002	THD (I):	0.063
Crest Factor (U):	1.415	Crest Factor (I):	1.481

Average harmonic current results

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	156.512E-3	99.371		
2	914.625E-6	0.581	2.00	PASS
3	7.506E-3	4.766	27.98	PASS
4	3.646E-3	2.315		PASS
5	3.529E-3	2.240	10.00	PASS
6	850.218E-6	0.540		PASS
7	3.486E-3	2.213	7.00	PASS
8	824.395E-6	0.523		PASS
9	3.638E-3	2.310	5.00	PASS
10	791.000E-6	0.502		PASS
11	2.390E-3	1.518	3.00	PASS
12	809.275E-6	0.514		PASS
13	2.635E-3	1.673	3.00	PASS
14	921.972E-6	0.585		PASS
15	1.670E-3	1.060	3.00	PASS
16	767.965E-6	0.488		PASS
17	1.140E-3	0.724	3.00	PASS
18	1.810E-3	1.149		PASS
19	960.685E-6	0.610	3.00	PASS
20	757.869E-6	0.481		PASS
21	888.418E-6	0.564	4.50	PASS
22	1.624E-3	1.031		PASS
23	939.470E-6	0.596	4.50	PASS
24	773.372E-6	0.491		PASS
25	845.584E-6	0.537	4.50	PASS
26	815.305E-6	0.518		PASS
27	1.667E-3	1.058	4.50	PASS
28	792.801E-6	0.503		PASS
29	1.009E-3	0.641	4.50	PASS
30	821.990E-6	0.522		PASS
31	1.493E-3	0.948	4.50	PASS
32	823.451E-6	0.523		PASS
33	800.245E-6	0.508	4.50	PASS
34	775.970E-6	0.493		PASS
35	843.920E-6	0.536	4.50	PASS
36	1.370E-3	0.870		PASS
37	787.707E-6	0.500	4.50	PASS
38	778.419E-6	0.494		PASS
39	823.966E-6	0.523	4.50	PASS
40	1.286E-3	0.816		PASS

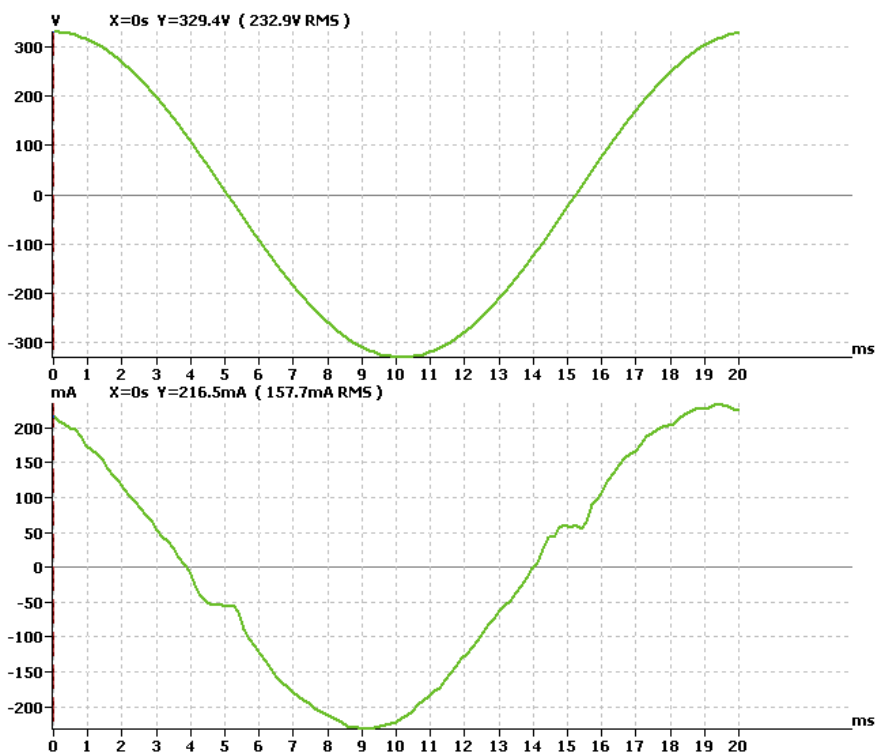
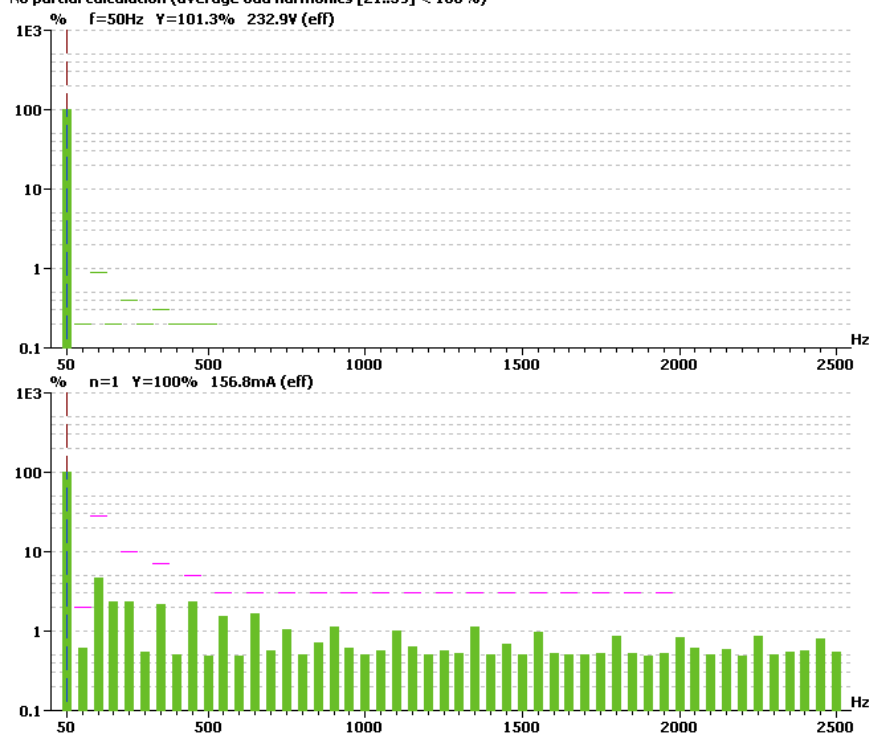
Maximum harmonic current results

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	157.503E-3	100.000		
2	1.211E-3	0.769	3.00	PASS
3	7.941E-3	5.042	41.96	PASS
4	3.853E-3	2.447		PASS
5	3.785E-3	2.403	15.00	PASS
6	937.923E-6	0.595		PASS
7	3.669E-3	2.329	10.50	PASS
8	949.299E-6	0.603		PASS
9	3.807E-3	2.417	7.50	PASS
10	870.735E-6	0.553		PASS
11	2.508E-3	1.592	4.50	PASS
12	902.992E-6	0.573		PASS
13	2.732E-3	1.735	4.50	PASS
14	1.094E-3	0.694		PASS
15	1.811E-3	1.150	4.50	PASS
16	857.511E-6	0.544		PASS
17	1.229E-3	0.781	4.50	PASS
18	1.894E-3	1.202		PASS
19	1.072E-3	0.681	4.50	PASS
20	842.455E-6	0.535		PASS
21	991.012E-6	0.629	4.50	PASS
22	1.766E-3	1.121		PASS
23	1.072E-3	0.681	4.50	PASS
24	835.751E-6	0.531		PASS
25	935.906E-6	0.594	4.50	PASS
26	896.966E-6	0.569		PASS
27	1.767E-3	1.122	4.50	PASS
28	876.522E-6	0.557		PASS
29	1.120E-3	0.711	4.50	PASS
30	913.930E-6	0.580		PASS
31	1.584E-3	1.005	4.50	PASS
32	917.735E-6	0.583		PASS
33	873.833E-6	0.555	4.50	PASS
34	862.510E-6	0.548		PASS
35	935.372E-6	0.594	4.50	PASS
36	1.475E-3	0.936		PASS
37	908.635E-6	0.577	4.50	PASS
38	891.082E-6	0.566		PASS
39	900.399E-6	0.572	4.50	PASS
40	1.388E-3	0.881		PASS

Maximum harmonic voltage results

Hn	Ueff [V]	Ueff [%]	Limit [%]	Result
1	232.93	101.275		
2	42.67E-3	0.019	0.2	PASS
3	85.49E-3	0.037	0.9	PASS
4	19.10E-3	0.008	0.2	PASS
5	65.84E-3	0.029	0.4	PASS
6	19.22E-3	0.008	0.2	PASS
7	35.70E-3	0.016	0.3	PASS
8	12.53E-3	0.005	0.2	PASS
9	36.08E-3	0.016	0.2	PASS
10	24.32E-3	0.011	0.2	PASS
11	67.62E-3	0.029	0.1	PASS
12	21.01E-3	0.009	0.1	PASS
13	73.09E-3	0.032	0.1	PASS
14	15.33E-3	0.007	0.1	PASS
15	35.63E-3	0.015	0.1	PASS
16	14.84E-3	0.006	0.1	PASS
17	40.89E-3	0.018	0.1	PASS
18	11.63E-3	0.005	0.1	PASS
19	74.55E-3	0.032	0.1	PASS
20	15.33E-3	0.007	0.1	PASS
21	66.13E-3	0.029	0.1	PASS
22	15.45E-3	0.007	0.1	PASS
23	32.15E-3	0.014	0.1	PASS
24	17.11E-3	0.007	0.1	PASS
25	38.31E-3	0.017	0.1	PASS
26	11.83E-3	0.005	0.1	PASS
27	66.76E-3	0.029	0.1	PASS
28	12.43E-3	0.005	0.1	PASS
29	63.03E-3	0.027	0.1	PASS
30	14.59E-3	0.006	0.1	PASS
31	27.63E-3	0.012	0.1	PASS
32	15.00E-3	0.007	0.1	PASS
33	34.04E-3	0.015	0.1	PASS
34	14.14E-3	0.006	0.1	PASS
35	53.22E-3	0.023	0.1	PASS
36	10.59E-3	0.005	0.1	PASS
37	42.80E-3	0.019	0.1	PASS
38	12.42E-3	0.005	0.1	PASS
39	19.32E-3	0.008	0.1	PASS
40	13.25E-3	0.006	0.1	PASS

No partial calculation (average odd harmonics [21..39] < 100%)



VLF1-I120-040B-XX

Power and THD results

True power P:	33.19W	Apparent power :	34.49VA
Reactiv power Q:	9.354var	Power factor:	0.963
THD (U):	0.002	THD (I):	0.076
Crest Factor (U):	1.415	Crest Factor (I):	1.502

Average harmonic current results

Hn	Ieff [A]	Ieff [%]	Limit [%]	Result
1	146.923E-3	99.634		
2	665.299E-6	0.451	2.00	PASS
3	8.476E-3	5.748	28.90	PASS
4	3.730E-3	2.529		PASS
5	4.519E-3	3.065	10.00	PASS
6	862.866E-6	0.585		PASS
7	5.148E-3	3.491	7.00	PASS
8	889.847E-6	0.603		PASS
9	2.615E-3	1.773	5.00	PASS
10	876.488E-6	0.594		PASS
11	1.297E-3	0.879	3.00	PASS
12	832.533E-6	0.565		PASS
13	2.010E-3	1.363	3.00	PASS
14	972.703E-6	0.660		PASS
15	1.539E-3	1.044	3.00	PASS
16	826.013E-6	0.560		PASS
17	2.216E-3	1.503	3.00	PASS
18	1.850E-3	1.255		PASS
19	865.337E-6	0.587	3.00	PASS
20	859.274E-6	0.583		PASS
21	1.630E-3	1.105	4.50	PASS
22	1.689E-3	1.145		PASS
23	1.149E-3	0.779	4.50	PASS
24	791.217E-6	0.537		PASS
25	1.119E-3	0.759	4.50	PASS
26	821.240E-6	0.557		PASS
27	1.726E-3	1.170	4.50	PASS
28	785.966E-6	0.533		PASS
29	923.383E-6	0.626	4.50	PASS
30	815.583E-6	0.553		PASS
31	1.512E-3	1.025	4.50	PASS
32	839.318E-6	0.569		PASS
33	834.661E-6	0.566	4.50	PASS
34	802.516E-6	0.544		PASS
35	1.210E-3	0.821	4.50	PASS
36	1.368E-3	0.928		PASS
37	1.011E-3	0.685	4.50	PASS
38	803.563E-6	0.545		PASS
39	826.017E-6	0.560	4.50	PASS
40	1.263E-3	0.856		PASS

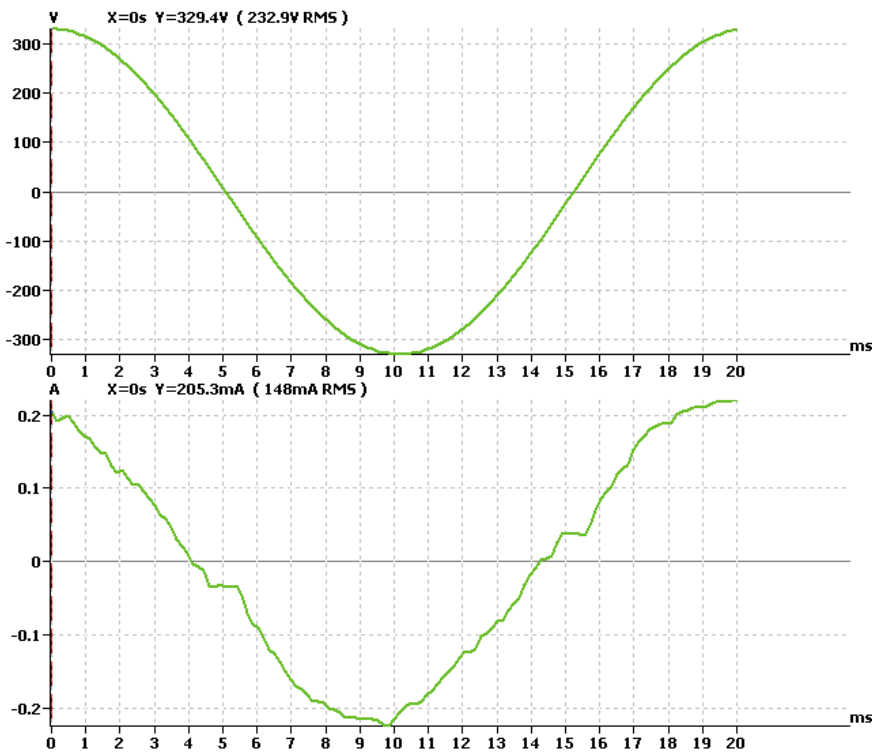
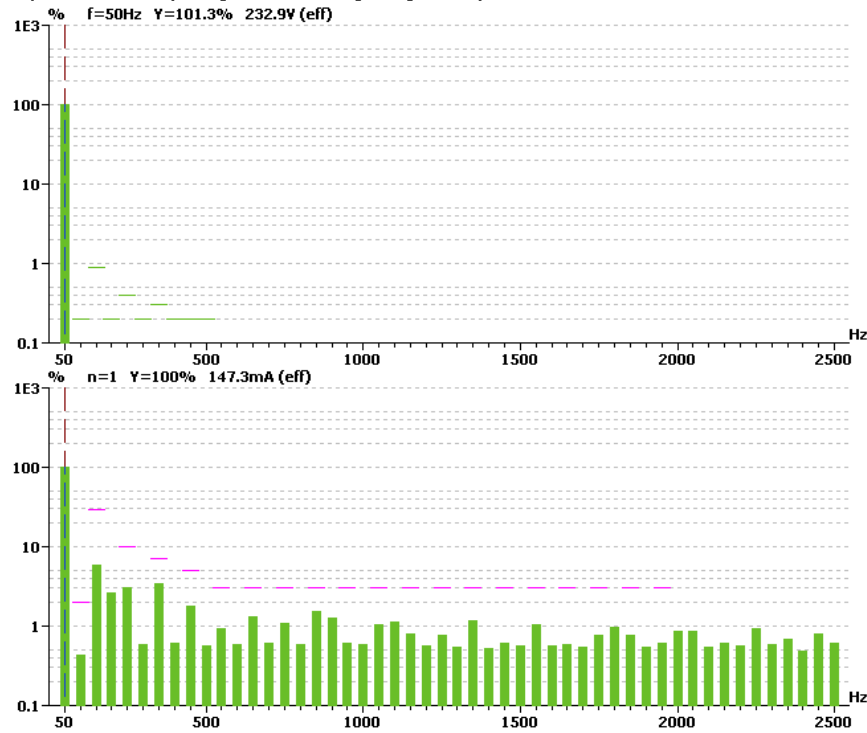
Maximum harmonic current results

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	147.463E-3	100.000		
2	773.456E-6	0.525	3.00	PASS
3	8.765E-3	5.944	43.35	PASS
4	3.917E-3	2.656		PASS
5	4.663E-3	3.162	15.00	PASS
6	946.224E-6	0.642		PASS
7	5.251E-3	3.561	10.50	PASS
8	985.441E-6	0.668		PASS
9	2.748E-3	1.864	7.50	PASS
10	951.045E-6	0.645		PASS
11	1.419E-3	0.962	4.50	PASS
12	916.570E-6	0.622		PASS
13	2.121E-3	1.438	4.50	PASS
14	1.109E-3	0.752		PASS
15	1.660E-3	1.126	4.50	PASS
16	930.486E-6	0.631		PASS
17	2.345E-3	1.590	4.50	PASS
18	1.979E-3	1.342		PASS
19	984.819E-6	0.668	4.50	PASS
20	969.160E-6	0.657		PASS
21	1.727E-3	1.171	4.50	PASS
22	1.840E-3	1.248		PASS
23	1.279E-3	0.867	4.50	PASS
24	874.275E-6	0.593		PASS
25	1.214E-3	0.823	4.50	PASS
26	894.529E-6	0.607		PASS
27	1.870E-3	1.268	4.50	PASS
28	876.849E-6	0.595		PASS
29	1.010E-3	0.685	4.50	PASS
30	904.406E-6	0.613		PASS
31	1.621E-3	1.099	4.50	PASS
32	934.926E-6	0.634		PASS
33	938.319E-6	0.636	4.50	PASS
34	882.601E-6	0.599		PASS
35	1.337E-3	0.906	4.50	PASS
36	1.482E-3	1.005		PASS
37	1.129E-3	0.766	4.50	PASS
38	931.322E-6	0.632		PASS
39	896.515E-6	0.608	4.50	PASS
40	1.367E-3	0.927		PASS

Maximum harmonic voltage results

Hn	Ueff [V]	Ueff [%]	Limit [%]	Result
1	232.93	101.274		
2	45.38E-3	0.020	0.2	PASS
3	83.36E-3	0.036	0.9	PASS
4	19.34E-3	0.008	0.2	PASS
5	64.75E-3	0.028	0.4	PASS
6	18.49E-3	0.008	0.2	PASS
7	37.07E-3	0.016	0.3	PASS
8	13.08E-3	0.006	0.2	PASS
9	30.39E-3	0.013	0.2	PASS
10	21.73E-3	0.009	0.2	PASS
11	64.02E-3	0.028	0.1	PASS
12	20.97E-3	0.009	0.1	PASS
13	72.08E-3	0.031	0.1	PASS
14	14.47E-3	0.006	0.1	PASS
15	40.29E-3	0.018	0.1	PASS
16	11.55E-3	0.005	0.1	PASS
17	32.54E-3	0.014	0.1	PASS
18	12.33E-3	0.005	0.1	PASS
19	71.33E-3	0.031	0.1	PASS
20	14.53E-3	0.006	0.1	PASS
21	70.03E-3	0.030	0.1	PASS
22	15.30E-3	0.007	0.1	PASS
23	39.47E-3	0.017	0.1	PASS
24	15.72E-3	0.007	0.1	PASS
25	31.55E-3	0.014	0.1	PASS
26	11.86E-3	0.005	0.1	PASS
27	63.39E-3	0.028	0.1	PASS
28	12.71E-3	0.006	0.1	PASS
29	67.42E-3	0.029	0.1	PASS
30	11.53E-3	0.005	0.1	PASS
31	34.80E-3	0.015	0.1	PASS
32	12.67E-3	0.006	0.1	PASS
33	23.76E-3	0.010	0.1	PASS
34	11.41E-3	0.005	0.1	PASS
35	51.13E-3	0.022	0.1	PASS
36	11.76E-3	0.005	0.1	PASS
37	47.45E-3	0.021	0.1	PASS
38	10.99E-3	0.005	0.1	PASS
39	22.50E-3	0.010	0.1	PASS
40	11.92E-3	0.005	0.1	PASS

No partial calculation (average odd harmonics [21..39] < 100%)



VLF1-I120-040C-XX,

Power and THD results

True power P:	44.04W	Apparent power :	45.89VA
Reactiv power Q:	12.9var	Power factor:	0.960
THD (U):	0.002	THD (I):	0.076
Crest Factor (U):	1.415	Crest Factor (I):	1.495

Average harmonic current results

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	137.188E-3	99.650		
2	580.575E-6	0.422	2.00	PASS
3	5.496E-3	3.992	29.06	PASS
4	3.479E-3	2.527		PASS
5	4.676E-3	3.397	10.00	PASS
6	877.062E-6	0.637		PASS
7	2.756E-3	2.002	7.00	PASS
8	893.839E-6	0.649		PASS
9	4.201E-3	3.051	5.00	PASS
10	825.908E-6	0.600		PASS
11	2.572E-3	1.868	3.00	PASS
12	877.393E-6	0.637		PASS
13	2.569E-3	1.866	3.00	PASS
14	962.396E-6	0.699		PASS
15	3.476E-3	2.525	3.00	PASS
16	778.435E-6	0.565		PASS
17	1.926E-3	1.399	3.00	PASS
18	1.883E-3	1.368		PASS
19	1.578E-3	1.146	3.00	PASS
20	794.110E-6	0.577		PASS
21	1.458E-3	1.059	4.50	PASS
22	1.612E-3	1.171		PASS
23	1.828E-3	1.328	4.50	PASS
24	807.317E-6	0.586		PASS
25	1.047E-3	0.760	4.50	PASS
26	786.823E-6	0.572		PASS
27	1.899E-3	1.380	4.50	PASS
28	814.015E-6	0.591		PASS
29	954.834E-6	0.694	4.50	PASS
30	792.312E-6	0.576		PASS
31	1.674E-3	1.216	4.50	PASS
32	900.086E-6	0.654		PASS
33	1.217E-3	0.884	4.50	PASS
34	856.938E-6	0.622		PASS
35	1.400E-3	1.017	4.50	PASS
36	1.430E-3	1.039		PASS
37	902.885E-6	0.656	4.50	PASS
38	765.096E-6	0.556		PASS
39	908.028E-6	0.660	4.50	PASS
40	1.247E-3	0.906		PASS

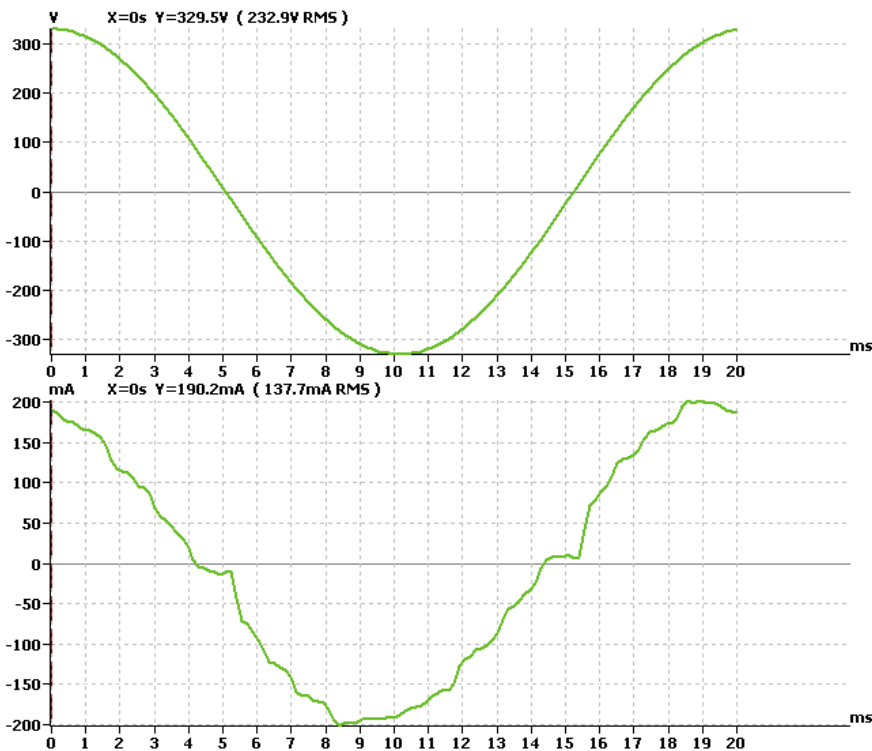
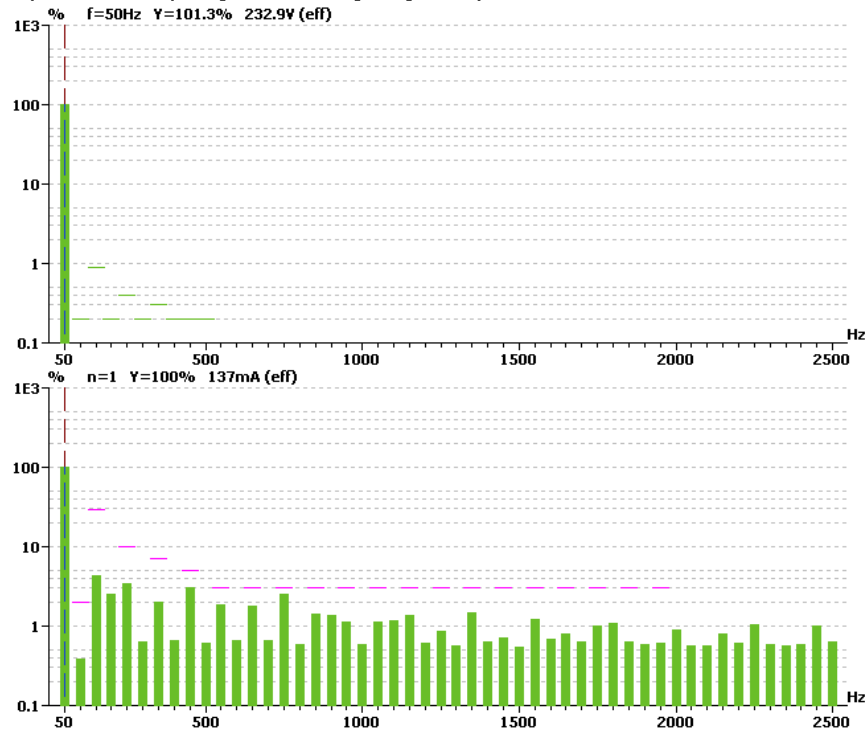
Maximum harmonic current results

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	137.670E-3	100.000		
2	658.258E-6	0.478	3.00	PASS
3	5.840E-3	4.242	43.59	PASS
4	3.605E-3	2.619		PASS
5	4.886E-3	3.549	15.00	PASS
6	951.169E-6	0.691		PASS
7	2.902E-3	2.108	10.50	PASS
8	987.917E-6	0.718		PASS
9	4.377E-3	3.179	7.50	PASS
10	930.573E-6	0.676		PASS
11	2.690E-3	1.954	4.50	PASS
12	973.888E-6	0.707		PASS
13	2.702E-3	1.963	4.50	PASS
14	1.105E-3	0.803		PASS
15	3.617E-3	2.627	4.50	PASS
16	869.937E-6	0.632		PASS
17	2.065E-3	1.500	4.50	PASS
18	2.002E-3	1.454		PASS
19	1.713E-3	1.245	4.50	PASS
20	861.850E-6	0.626		PASS
21	1.596E-3	1.160	4.50	PASS
22	1.730E-3	1.257		PASS
23	1.924E-3	1.398	4.50	PASS
24	916.675E-6	0.666		PASS
25	1.237E-3	0.898	4.50	PASS
26	863.140E-6	0.627		PASS
27	2.123E-3	1.542	4.50	PASS
28	897.633E-6	0.652		PASS
29	1.031E-3	0.749	4.50	PASS
30	888.334E-6	0.645		PASS
31	1.823E-3	1.324	4.50	PASS
32	1.029E-3	0.747		PASS
33	1.335E-3	0.970	4.50	PASS
34	941.451E-6	0.684		PASS
35	1.497E-3	1.087	4.50	PASS
36	1.523E-3	1.106		PASS
37	1.024E-3	0.744	4.50	PASS
38	833.816E-6	0.606		PASS
39	1.051E-3	0.764	4.50	PASS
40	1.396E-3	1.014		PASS

Maximum harmonic voltage results

Hn	Ueff [V]	Ueff [%]	Limit [%]	Result
1	232.93	101.276		
2	42.54E-3	0.018	0.2	PASS
3	82.43E-3	0.036	0.9	PASS
4	18.82E-3	0.008	0.2	PASS
5	64.33E-3	0.028	0.4	PASS
6	18.53E-3	0.008	0.2	PASS
7	36.40E-3	0.016	0.3	PASS
8	12.85E-3	0.006	0.2	PASS
9	31.13E-3	0.014	0.2	PASS
10	24.14E-3	0.010	0.2	PASS
11	67.24E-3	0.029	0.1	PASS
12	22.98E-3	0.010	0.1	PASS
13	75.65E-3	0.033	0.1	PASS
14	16.76E-3	0.007	0.1	PASS
15	44.76E-3	0.019	0.1	PASS
16	11.57E-3	0.005	0.1	PASS
17	29.59E-3	0.013	0.1	PASS
18	14.39E-3	0.006	0.1	PASS
19	72.20E-3	0.031	0.1	PASS
20	15.72E-3	0.007	0.1	PASS
21	70.50E-3	0.031	0.1	PASS
22	14.85E-3	0.006	0.1	PASS
23	44.92E-3	0.020	0.1	PASS
24	16.59E-3	0.007	0.1	PASS
25	26.21E-3	0.011	0.1	PASS
26	12.39E-3	0.005	0.1	PASS
27	62.64E-3	0.027	0.1	PASS
28	15.37E-3	0.007	0.1	PASS
29	67.05E-3	0.029	0.1	PASS
30	12.26E-3	0.005	0.1	PASS
31	41.33E-3	0.018	0.1	PASS
32	15.93E-3	0.007	0.1	PASS
33	23.04E-3	0.010	0.1	PASS
34	11.14E-3	0.005	0.1	PASS
35	47.95E-3	0.021	0.1	PASS
36	13.25E-3	0.006	0.1	PASS
37	48.07E-3	0.021	0.1	PASS
38	13.08E-3	0.006	0.1	PASS
39	25.98E-3	0.011	0.1	PASS
40	14.96E-3	0.007	0.1	PASS

No partial calculation (average odd harmonics [21..39] < 100%)



VLF1-I150-050A-XX

Power and THD results

True power P:	39.37W	Apparent power :	42.18VA
Reactiv power Q:	15.14var	Power factor:	0.933
THD (U):	0.002	THD (I):	0.045
Crest Factor (U):	1.415	Crest Factor (I):	1.447

Average harmonic current results

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	187.349E-3	99.809		
2	558.962E-6	0.298	2.00	PASS
3	12.472E-3	6.644	28.55	PASS
4	3.467E-3	1.847		PASS
5	9.935E-3	5.293	10.00	PASS
6	861.256E-6	0.459		PASS
7	9.620E-3	5.125	7.00	PASS
8	886.671E-6	0.472		PASS
9	7.198E-3	3.835	5.00	PASS
10	881.369E-6	0.470		PASS
11	5.371E-3	2.862	3.00	PASS
12	792.553E-6	0.422		PASS
13	2.988E-3	1.592	3.00	PASS
14	1.605E-3	0.855		PASS
15	2.216E-3	1.181	3.00	PASS
16	714.787E-6	0.381		PASS
17	2.517E-3	1.341	3.00	PASS
18	1.766E-3	0.941		PASS
19	2.790E-3	1.486	3.00	PASS
20	782.303E-6	0.417		PASS
21	2.782E-3	1.482	4.50	PASS
22	882.802E-6	0.470		PASS
23	2.931E-3	1.561	4.50	PASS
24	725.772E-6	0.387		PASS
25	2.206E-3	1.175	4.50	PASS
26	759.669E-6	0.405		PASS
27	2.401E-3	1.279	4.50	PASS
28	794.621E-6	0.423		PASS
29	1.951E-3	1.039	4.50	PASS
30	753.458E-6	0.401		PASS
31	2.210E-3	1.178	4.50	PASS
32	1.425E-3	0.759		PASS
33	2.304E-3	1.227	4.50	PASS
34	729.882E-6	0.389		PASS
35	2.158E-3	1.150	4.50	PASS
36	1.401E-3	0.746		PASS
37	1.836E-3	0.978	4.50	PASS
38	752.892E-6	0.401		PASS
39	1.524E-3	0.812	4.50	PASS
40	828.226E-6	0.441		PASS

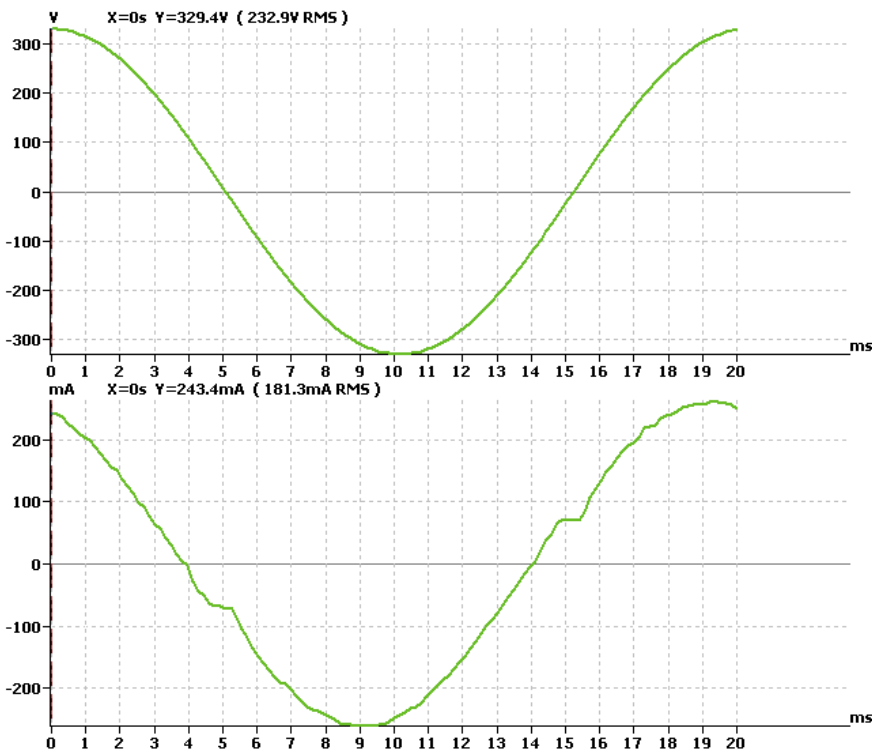
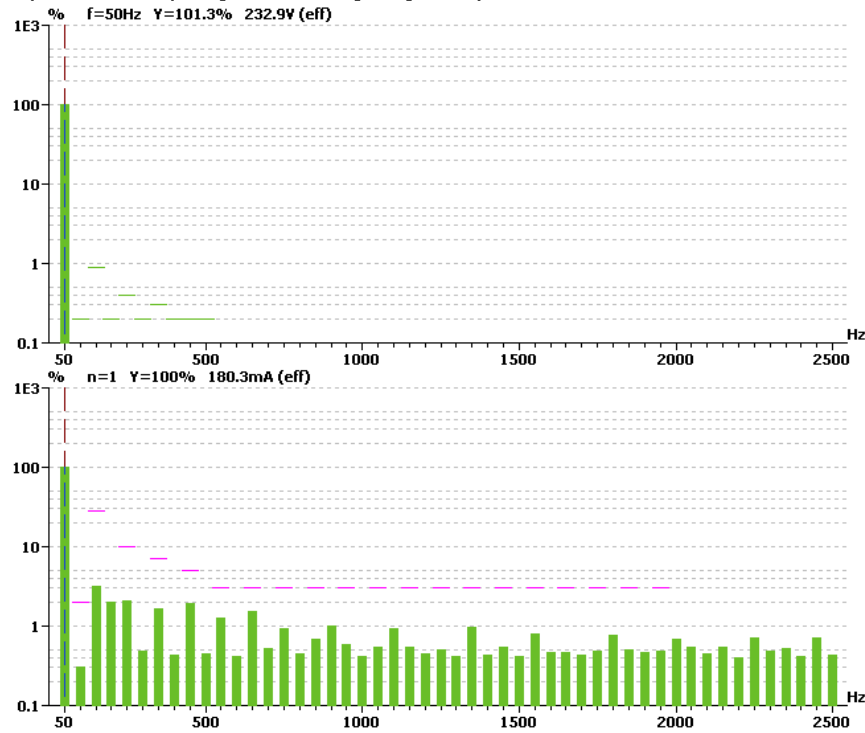
Maximum harmonic current results

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	187.707E-3	100.000		
2	723.224E-6	0.385	3.00	PASS
3	12.748E-3	6.792	42.83	PASS
4	3.597E-3	1.917		PASS
5	10.121E-3	5.392	15.00	PASS
6	956.906E-6	0.510		PASS
7	9.698E-3	5.166	10.50	PASS
8	985.196E-6	0.525		PASS
9	7.584E-3	4.040	7.50	PASS
10	987.392E-6	0.526		PASS
11	5.465E-3	2.911	4.50	PASS
12	872.983E-6	0.465		PASS
13	3.113E-3	1.658	4.50	PASS
14	1.782E-3	0.949		PASS
15	2.329E-3	1.241	4.50	PASS
16	819.679E-6	0.437		PASS
17	2.660E-3	1.417	4.50	PASS
18	1.857E-3	0.989		PASS
19	2.905E-3	1.548	4.50	PASS
20	879.204E-6	0.468		PASS
21	2.880E-3	1.534	4.50	PASS
22	1.019E-3	0.543		PASS
23	3.049E-3	1.624	4.50	PASS
24	809.360E-6	0.431		PASS
25	2.379E-3	1.268	4.50	PASS
26	855.990E-6	0.456		PASS
27	2.527E-3	1.346	4.50	PASS
28	891.914E-6	0.475		PASS
29	2.042E-3	1.088	4.50	PASS
30	828.590E-6	0.441		PASS
31	2.337E-3	1.245	4.50	PASS
32	1.518E-3	0.809		PASS
33	2.408E-3	1.283	4.50	PASS
34	812.963E-6	0.433		PASS
35	2.343E-3	1.248	4.50	PASS
36	1.480E-3	0.789		PASS
37	1.957E-3	1.042	4.50	PASS
38	837.408E-6	0.446		PASS
39	1.628E-3	0.867	4.50	PASS
40	944.534E-6	0.503		PASS

Maximum harmonic voltage results

Hn	Ueff [V]	Ueff [%]	Limit [%]	Result
1	232.93	101.275		
2	41.99E-3	0.018	0.2	PASS
3	84.10E-3	0.037	0.9	PASS
4	17.30E-3	0.008	0.2	PASS
5	56.15E-3	0.024	0.4	PASS
6	19.39E-3	0.008	0.2	PASS
7	23.07E-3	0.010	0.3	PASS
8	12.69E-3	0.006	0.2	PASS
9	44.49E-3	0.019	0.2	PASS
10	26.29E-3	0.011	0.2	PASS
11	66.58E-3	0.029	0.1	PASS
12	24.18E-3	0.011	0.1	PASS
13	56.85E-3	0.025	0.1	PASS
14	16.52E-3	0.007	0.1	PASS
15	9.60E-3	0.004	0.1	PASS
16	11.32E-3	0.005	0.1	PASS
17	63.85E-3	0.028	0.1	PASS
18	15.13E-3	0.007	0.1	PASS
19	80.38E-3	0.035	0.1	PASS
20	13.29E-3	0.006	0.1	PASS
21	49.87E-3	0.022	0.1	PASS
22	12.58E-3	0.005	0.1	PASS
23	18.29E-3	0.008	0.1	PASS
24	13.59E-3	0.006	0.1	PASS
25	60.97E-3	0.027	0.1	PASS
26	10.52E-3	0.005	0.1	PASS
27	60.25E-3	0.026	0.1	PASS
28	11.75E-3	0.005	0.1	PASS
29	30.52E-3	0.013	0.1	PASS
30	10.76E-3	0.005	0.1	PASS
31	33.05E-3	0.014	0.1	PASS
32	13.32E-3	0.006	0.1	PASS
33	56.09E-3	0.024	0.1	PASS
34	9.36E-3	0.004	0.1	PASS
35	44.24E-3	0.019	0.1	PASS
36	11.42E-3	0.005	0.1	PASS
37	16.55E-3	0.007	0.1	PASS
38	11.47E-3	0.005	0.1	PASS
39	37.86E-3	0.016	0.1	PASS
40	10.32E-3	0.004	0.1	PASS

No partial calculation (average odd harmonics [21..39] < 100%)



VLF1-I150-050B-XX

Power and THD results

True power P:	39.48W	Apparent power :	41.43VA
Reactiv power Q:	12.58var	Power factor:	0.953
THD (U):	0.002	THD (I):	0.076
Crest Factor (U):	1.415	Crest Factor (I):	1.498

Average harmonic current results

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	177.185E-3	99.662		
2	512.135E-6	0.288	2.00	PASS
3	10.842E-3	6.098	28.61	PASS
4	3.380E-3	1.901		PASS
5	4.400E-3	2.475	10.00	PASS
6	943.739E-6	0.531		PASS
7	4.751E-3	2.672	7.00	PASS
8	818.470E-6	0.460		PASS
9	4.993E-3	2.808	5.00	PASS
10	861.414E-6	0.485		PASS
11	2.646E-3	1.488	3.00	PASS
12	811.294E-6	0.456		PASS
13	2.880E-3	1.620	3.00	PASS
14	1.041E-3	0.585		PASS
15	2.278E-3	1.281	3.00	PASS
16	768.427E-6	0.432		PASS
17	1.320E-3	0.743	3.00	PASS
18	1.836E-3	1.033		PASS
19	1.635E-3	0.920	3.00	PASS
20	746.627E-6	0.420		PASS
21	904.711E-6	0.509	4.50	PASS
22	1.596E-3	0.898		PASS
23	1.072E-3	0.603	4.50	PASS
24	782.431E-6	0.440		PASS
25	812.014E-6	0.457	4.50	PASS
26	774.984E-6	0.436		PASS
27	1.711E-3	0.963	4.50	PASS
28	792.814E-6	0.446		PASS
29	831.272E-6	0.468	4.50	PASS
30	808.179E-6	0.455		PASS
31	1.856E-3	1.044	4.50	PASS
32	877.368E-6	0.493		PASS
33	719.886E-6	0.405	4.50	PASS
34	823.623E-6	0.463		PASS
35	929.015E-6	0.523	4.50	PASS
36	1.382E-3	0.777		PASS
37	1.012E-3	0.569	4.50	PASS
38	740.471E-6	0.416		PASS
39	762.772E-6	0.429	4.50	PASS
40	1.279E-3	0.720		PASS

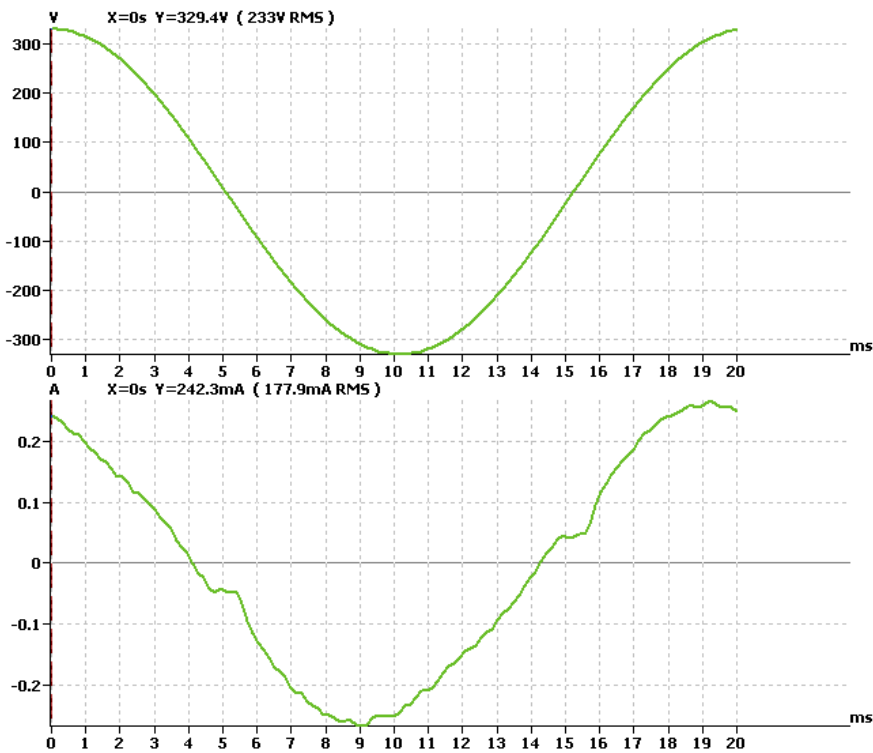
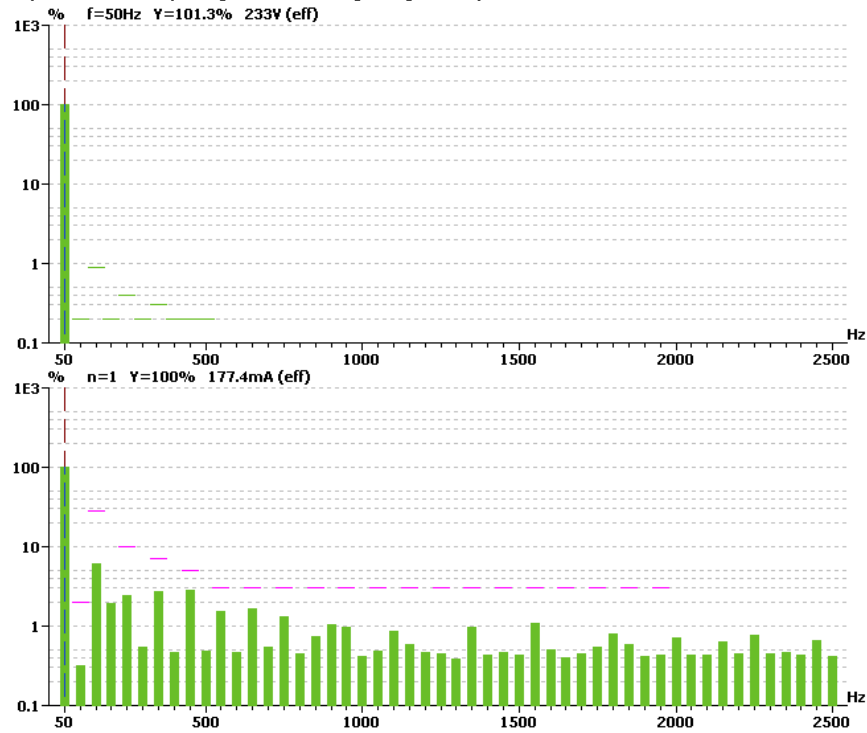
Maximum harmonic current results

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	177.786E-3	100.000		
2	583.924E-6	0.328	3.00	PASS
3	11.167E-3	6.281	42.91	PASS
4	3.487E-3	1.961		PASS
5	4.569E-3	2.570	15.00	PASS
6	1.051E-3	0.591		PASS
7	4.883E-3	2.747	10.50	PASS
8	911.255E-6	0.513		PASS
9	5.290E-3	2.975	7.50	PASS
10	940.859E-6	0.529		PASS
11	2.749E-3	1.546	4.50	PASS
12	905.438E-6	0.509		PASS
13	3.013E-3	1.695	4.50	PASS
14	1.280E-3	0.720		PASS
15	2.426E-3	1.365	4.50	PASS
16	851.474E-6	0.479		PASS
17	1.421E-3	0.799	4.50	PASS
18	1.927E-3	1.084		PASS
19	1.792E-3	1.008	4.50	PASS
20	828.272E-6	0.466		PASS
21	983.925E-6	0.553	4.50	PASS
22	1.700E-3	0.956		PASS
23	1.190E-3	0.670	4.50	PASS
24	879.828E-6	0.495		PASS
25	915.072E-6	0.515	4.50	PASS
26	869.647E-6	0.489		PASS
27	1.808E-3	1.017	4.50	PASS
28	896.404E-6	0.504		PASS
29	906.256E-6	0.510	4.50	PASS
30	910.527E-6	0.512		PASS
31	1.997E-3	1.123	4.50	PASS
32	953.784E-6	0.536		PASS
33	790.619E-6	0.445	4.50	PASS
34	901.672E-6	0.507		PASS
35	1.012E-3	0.569	4.50	PASS
36	1.480E-3	0.832		PASS
37	1.127E-3	0.634	4.50	PASS
38	827.724E-6	0.466		PASS
39	837.943E-6	0.471	4.50	PASS
40	1.376E-3	0.774		PASS

Maximum harmonic voltage results

Hn	Ueff [V]	Ueff [%]	Limit [%]	Result
1	232.98	101.294		
2	44.18E-3	0.019	0.2	PASS
3	86.01E-3	0.037	0.9	PASS
4	23.77E-3	0.010	0.2	PASS
5	65.36E-3	0.028	0.4	PASS
6	19.30E-3	0.008	0.2	PASS
7	34.65E-3	0.015	0.3	PASS
8	14.72E-3	0.006	0.2	PASS
9	34.64E-3	0.015	0.2	PASS
10	20.93E-3	0.009	0.2	PASS
11	68.94E-3	0.030	0.1	PASS
12	23.84E-3	0.010	0.1	PASS
13	71.79E-3	0.031	0.1	PASS
14	14.66E-3	0.006	0.1	PASS
15	33.49E-3	0.015	0.1	PASS
16	15.67E-3	0.007	0.1	PASS
17	38.17E-3	0.017	0.1	PASS
18	12.54E-3	0.005	0.1	PASS
19	77.44E-3	0.034	0.1	PASS
20	14.45E-3	0.006	0.1	PASS
21	69.31E-3	0.030	0.1	PASS
22	11.91E-3	0.005	0.1	PASS
23	28.91E-3	0.013	0.1	PASS
24	14.01E-3	0.006	0.1	PASS
25	37.79E-3	0.016	0.1	PASS
26	12.29E-3	0.005	0.1	PASS
27	66.02E-3	0.029	0.1	PASS
28	11.89E-3	0.005	0.1	PASS
29	60.53E-3	0.026	0.1	PASS
30	13.53E-3	0.006	0.1	PASS
31	28.05E-3	0.012	0.1	PASS
32	13.47E-3	0.006	0.1	PASS
33	35.36E-3	0.015	0.1	PASS
34	10.80E-3	0.005	0.1	PASS
35	53.31E-3	0.023	0.1	PASS
36	11.83E-3	0.005	0.1	PASS
37	44.02E-3	0.019	0.1	PASS
38	11.59E-3	0.005	0.1	PASS
39	23.04E-3	0.010	0.1	PASS
40	11.08E-3	0.005	0.1	PASS

No partial calculation (average odd harmonics [21..39] < 100%)



VLF1-I150-050C-XX

Power and THD results

True power P:	37.26W	Apparent power :	38.55VA
Reactiv power Q:	9.879var	Power factor:	0.967
THD (U):	0.002	THD (I):	0.065
Crest Factor (U):	1.415	Crest Factor (I):	1.477

Average harmonic current results

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	165.101E-3	99.701		
2	640.869E-6	0.387	2.00	PASS
3	6.515E-3	3.934	29.02	PASS
4	3.572E-3	2.157		PASS
5	4.209E-3	2.542	10.00	PASS
6	847.873E-6	0.512		PASS
7	3.727E-3	2.250	7.00	PASS
8	835.582E-6	0.505		PASS
9	2.617E-3	1.580	5.00	PASS
10	785.812E-6	0.475		PASS
11	4.224E-3	2.551	3.00	PASS
12	781.527E-6	0.472		PASS
13	2.251E-3	1.360	3.00	PASS
14	925.211E-6	0.559		PASS
15	2.643E-3	1.596	3.00	PASS
16	763.615E-6	0.461		PASS
17	2.336E-3	1.411	3.00	PASS
18	1.818E-3	1.098		PASS
19	1.404E-3	0.848	3.00	PASS
20	799.848E-6	0.483		PASS
21	1.504E-3	0.908	4.50	PASS
22	1.581E-3	0.955		PASS
23	2.441E-3	1.474	4.50	PASS
24	759.475E-6	0.459		PASS
25	1.559E-3	0.941	4.50	PASS
26	854.492E-6	0.516		PASS
27	1.619E-3	0.978	4.50	PASS
28	802.859E-6	0.485		PASS
29	1.072E-3	0.648	4.50	PASS
30	836.165E-6	0.505		PASS
31	2.014E-3	1.216	4.50	PASS
32	909.119E-6	0.549		PASS
33	1.114E-3	0.673	4.50	PASS
34	906.495E-6	0.547		PASS
35	1.719E-3	1.038	4.50	PASS
36	1.419E-3	0.857		PASS
37	1.339E-3	0.809	4.50	PASS
38	821.357E-6	0.496		PASS
39	1.077E-3	0.651	4.50	PASS
40	1.293E-3	0.781		PASS

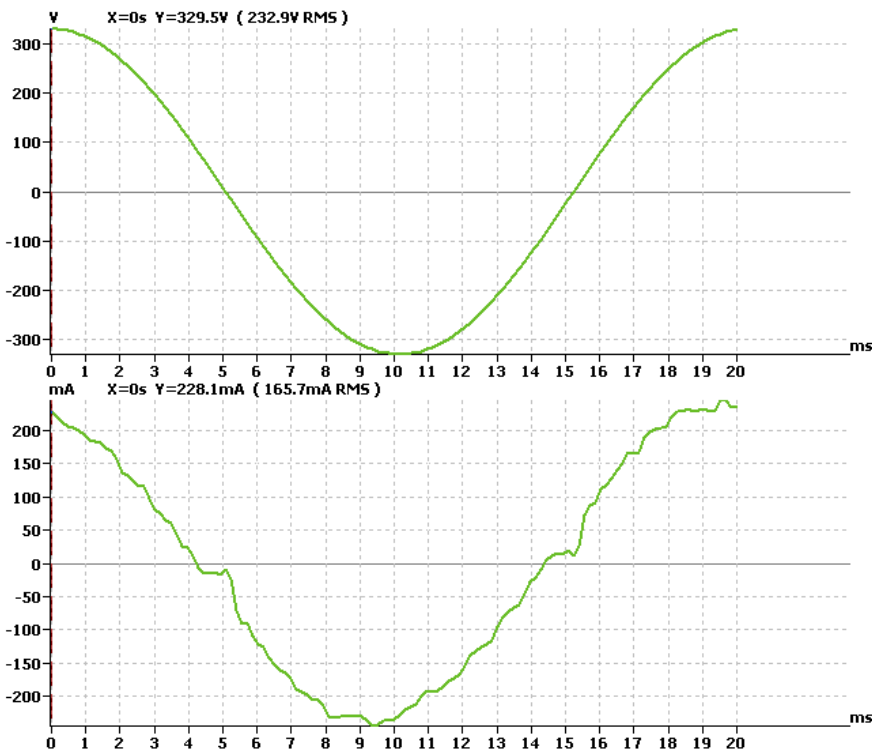
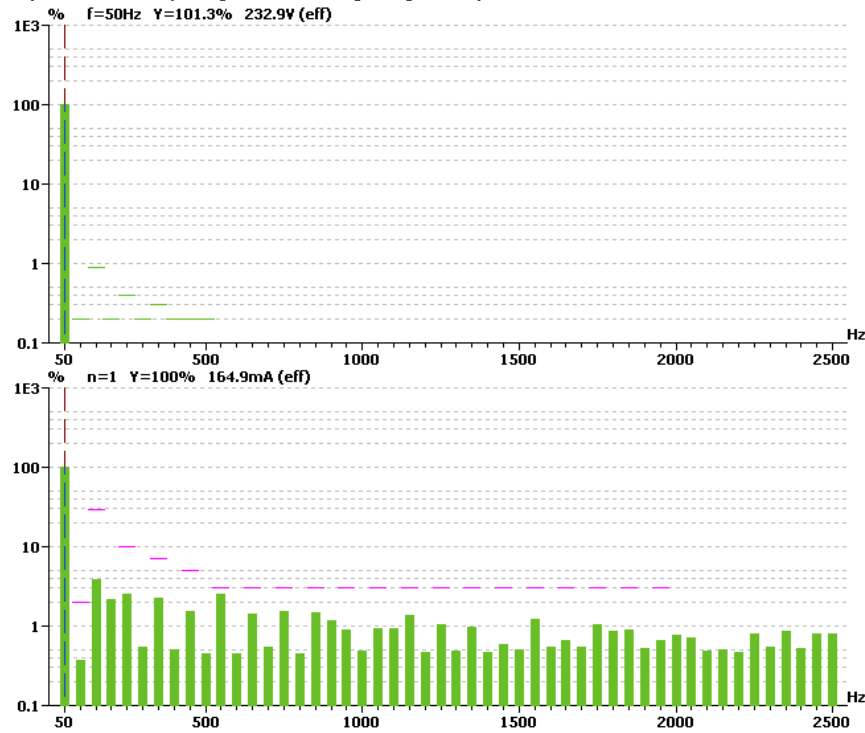
Maximum harmonic current results

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	165.597E-3	100.000		
2	759.145E-6	0.458	3.00	PASS
3	6.860E-3	4.143	43.52	PASS
4	3.757E-3	2.269		PASS
5	4.406E-3	2.661	15.00	PASS
6	934.822E-6	0.565		PASS
7	3.839E-3	2.318	10.50	PASS
8	919.516E-6	0.555		PASS
9	2.818E-3	1.702	7.50	PASS
10	874.919E-6	0.528		PASS
11	4.374E-3	2.642	4.50	PASS
12	864.167E-6	0.522		PASS
13	2.388E-3	1.442	4.50	PASS
14	1.042E-3	0.629		PASS
15	2.807E-3	1.695	4.50	PASS
16	853.235E-6	0.515		PASS
17	2.485E-3	1.501	4.50	PASS
18	1.926E-3	1.163		PASS
19	1.585E-3	0.957	4.50	PASS
20	879.754E-6	0.531		PASS
21	1.622E-3	0.979	4.50	PASS
22	1.693E-3	1.022		PASS
23	2.654E-3	1.603	4.50	PASS
24	827.000E-6	0.499		PASS
25	1.731E-3	1.046	4.50	PASS
26	945.605E-6	0.571		PASS
27	1.740E-3	1.051	4.50	PASS
28	889.374E-6	0.537		PASS
29	1.175E-3	0.709	4.50	PASS
30	928.142E-6	0.560		PASS
31	2.116E-3	1.278	4.50	PASS
32	1.042E-3	0.629		PASS
33	1.219E-3	0.736	4.50	PASS
34	994.682E-6	0.601		PASS
35	1.873E-3	1.131	4.50	PASS
36	1.519E-3	0.917		PASS
37	1.526E-3	0.921	4.50	PASS
38	886.330E-6	0.535		PASS
39	1.188E-3	0.718	4.50	PASS
40	1.390E-3	0.839		PASS

Maximum harmonic voltage results

Hn	Ueff [V]	Ueff [%]	Limit [%]	Result
1	232.95	101.283		
2	42.19E-3	0.018	0.2	PASS
3	84.47E-3	0.037	0.9	PASS
4	21.38E-3	0.009	0.2	PASS
5	64.31E-3	0.028	0.4	PASS
6	18.10E-3	0.008	0.2	PASS
7	33.42E-3	0.015	0.3	PASS
8	13.85E-3	0.006	0.2	PASS
9	31.97E-3	0.014	0.2	PASS
10	20.87E-3	0.009	0.2	PASS
11	68.00E-3	0.030	0.1	PASS
12	21.80E-3	0.009	0.1	PASS
13	72.94E-3	0.032	0.1	PASS
14	15.07E-3	0.007	0.1	PASS
15	40.98E-3	0.018	0.1	PASS
16	13.13E-3	0.006	0.1	PASS
17	29.92E-3	0.013	0.1	PASS
18	13.80E-3	0.006	0.1	PASS
19	71.93E-3	0.031	0.1	PASS
20	14.28E-3	0.006	0.1	PASS
21	71.09E-3	0.031	0.1	PASS
22	11.89E-3	0.005	0.1	PASS
23	35.53E-3	0.015	0.1	PASS
24	20.33E-3	0.009	0.1	PASS
25	26.57E-3	0.012	0.1	PASS
26	14.41E-3	0.006	0.1	PASS
27	59.73E-3	0.026	0.1	PASS
28	12.45E-3	0.005	0.1	PASS
29	61.90E-3	0.027	0.1	PASS
30	11.61E-3	0.005	0.1	PASS
31	36.61E-3	0.016	0.1	PASS
32	14.55E-3	0.006	0.1	PASS
33	25.05E-3	0.011	0.1	PASS
34	10.99E-3	0.005	0.1	PASS
35	49.13E-3	0.021	0.1	PASS
36	11.57E-3	0.005	0.1	PASS
37	47.27E-3	0.021	0.1	PASS
38	11.87E-3	0.005	0.1	PASS
39	22.98E-3	0.010	0.1	PASS
40	13.55E-3	0.006	0.1	PASS

No partial calculation (average odd harmonics [21..39] < 100%)



VLF1-I150-050D-XX

Power and THD results

True power P:	44.04W	Apparent power :	45.89VA
Reactiv power Q:	12.9var	Power factor:	0.960
THD (U):	0.002	THD (I):	0.076
Crest Factor (U):	1.415	Crest Factor (I):	1.495

Average harmonic current results

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	195.653E-3	99.710		
2	722.004E-6	0.368	2.00	PASS
3	12.009E-3	6.120	28.81	PASS
4	3.418E-3	1.742		PASS
5	3.859E-3	1.966	10.00	PASS
6	876.504E-6	0.447		PASS
7	4.715E-3	2.403	7.00	PASS
8	814.909E-6	0.415		PASS
9	5.172E-3	2.636	5.00	PASS
10	767.955E-6	0.391		PASS
11	2.733E-3	1.393	3.00	PASS
12	759.867E-6	0.387		PASS
13	3.260E-3	1.662	3.00	PASS
14	1.016E-3	0.518		PASS
15	2.557E-3	1.303	3.00	PASS
16	764.095E-6	0.389		PASS
17	1.811E-3	0.923	3.00	PASS
18	1.877E-3	0.957		PASS
19	2.087E-3	1.063	3.00	PASS
20	751.219E-6	0.383		PASS
21	912.089E-6	0.465	4.50	PASS
22	1.609E-3	0.820		PASS
23	1.101E-3	0.561	4.50	PASS
24	743.044E-6	0.379		PASS
25	895.524E-6	0.456	4.50	PASS
26	773.402E-6	0.394		PASS
27	1.696E-3	0.864	4.50	PASS
28	772.679E-6	0.394		PASS
29	812.776E-6	0.414	4.50	PASS
30	789.504E-6	0.402		PASS
31	1.824E-3	0.929	4.50	PASS
32	909.054E-6	0.463		PASS
33	738.282E-6	0.376	4.50	PASS
34	752.668E-6	0.384		PASS
35	892.227E-6	0.455	4.50	PASS
36	1.384E-3	0.705		PASS
37	1.160E-3	0.591	4.50	PASS
38	780.541E-6	0.398		PASS
39	767.395E-6	0.391	4.50	PASS
40	1.246E-3	0.635		PASS

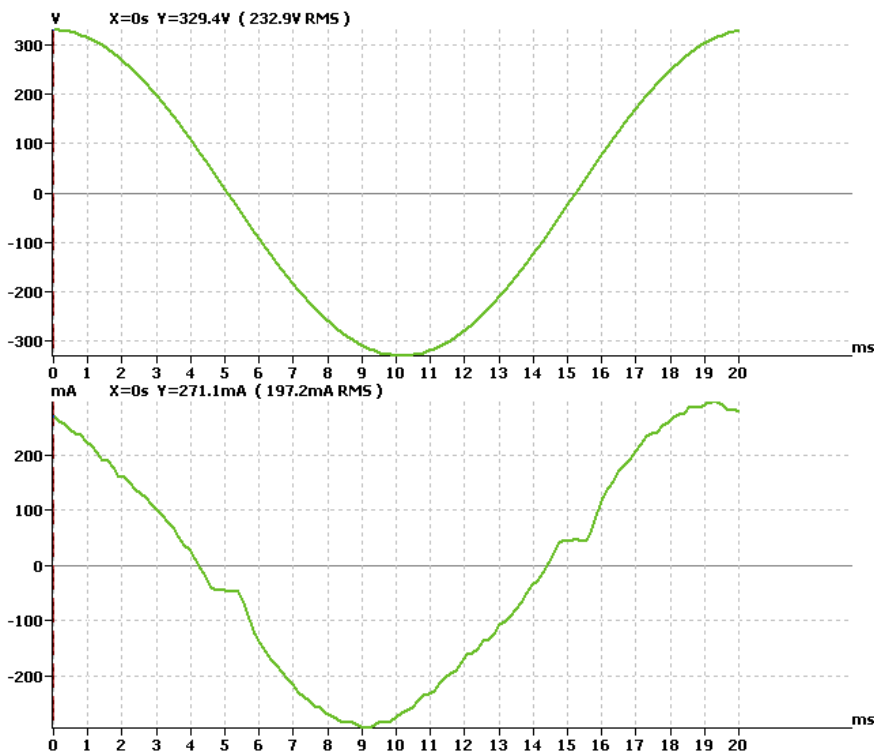
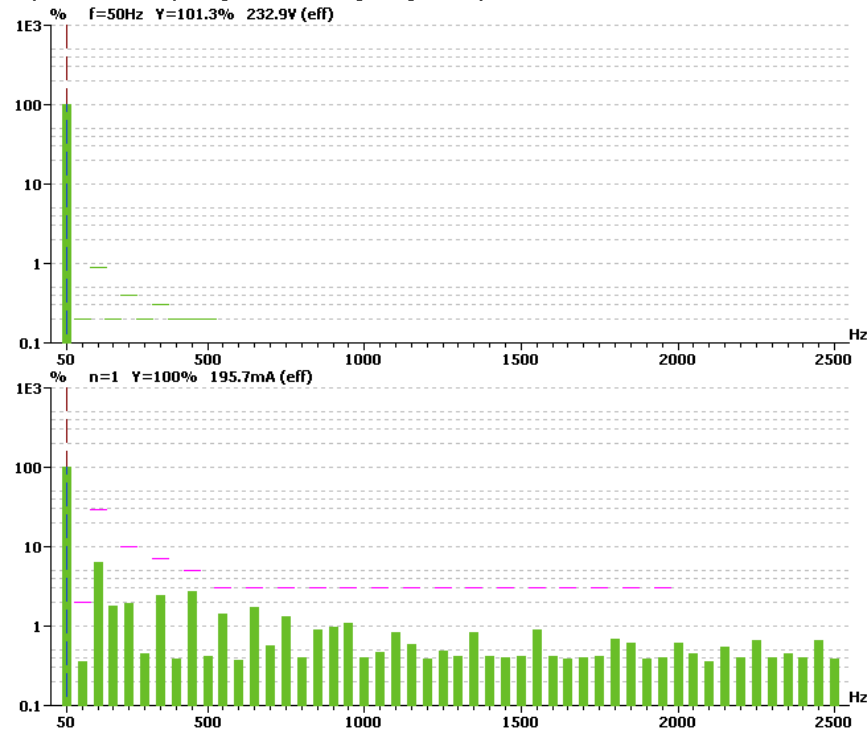
Maximum harmonic current results

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	196.223E-3	100.000		
2	842.064E-6	0.429	3.00	PASS
3	12.391E-3	6.315	43.21	PASS
4	3.643E-3	1.857		PASS
5	4.065E-3	2.072	15.00	PASS
6	963.751E-6	0.491		PASS
7	4.896E-3	2.495	10.50	PASS
8	887.880E-6	0.452		PASS
9	5.342E-3	2.722	7.50	PASS
10	870.059E-6	0.443		PASS
11	2.851E-3	1.453	4.50	PASS
12	858.370E-6	0.437		PASS
13	3.400E-3	1.733	4.50	PASS
14	1.183E-3	0.603		PASS
15	2.706E-3	1.379	4.50	PASS
16	855.655E-6	0.436		PASS
17	1.916E-3	0.976	4.50	PASS
18	1.980E-3	1.009		PASS
19	2.216E-3	1.130	4.50	PASS
20	851.989E-6	0.434		PASS
21	1.001E-3	0.510	4.50	PASS
22	1.718E-3	0.876		PASS
23	1.194E-3	0.609	4.50	PASS
24	809.811E-6	0.413		PASS
25	997.644E-6	0.508	4.50	PASS
26	856.890E-6	0.437		PASS
27	1.823E-3	0.929	4.50	PASS
28	844.190E-6	0.430		PASS
29	887.953E-6	0.453	4.50	PASS
30	893.626E-6	0.455		PASS
31	1.925E-3	0.981	4.50	PASS
32	1.003E-3	0.511		PASS
33	835.812E-6	0.426	4.50	PASS
34	825.980E-6	0.421		PASS
35	965.079E-6	0.492	4.50	PASS
36	1.491E-3	0.760		PASS
37	1.274E-3	0.649	4.50	PASS
38	863.031E-6	0.440		PASS
39	840.504E-6	0.428	4.50	PASS
40	1.349E-3	0.687		PASS

Maximum harmonic voltage results

Hn	Ueff [V]	Ueff [%]	Limit [%]	Result
1	232.93	101.273		
2	45.17E-3	0.020	0.2	PASS
3	82.05E-3	0.036	0.9	PASS
4	19.21E-3	0.008	0.2	PASS
5	61.56E-3	0.027	0.4	PASS
6	18.07E-3	0.008	0.2	PASS
7	30.21E-3	0.013	0.3	PASS
8	12.37E-3	0.005	0.2	PASS
9	35.87E-3	0.016	0.2	PASS
10	22.28E-3	0.010	0.2	PASS
11	66.27E-3	0.029	0.1	PASS
12	20.38E-3	0.009	0.1	PASS
13	67.06E-3	0.029	0.1	PASS
14	16.80E-3	0.007	0.1	PASS
15	29.45E-3	0.013	0.1	PASS
16	13.32E-3	0.006	0.1	PASS
17	47.26E-3	0.021	0.1	PASS
18	10.57E-3	0.005	0.1	PASS
19	73.93E-3	0.032	0.1	PASS
20	13.68E-3	0.006	0.1	PASS
21	66.52E-3	0.029	0.1	PASS
22	15.71E-3	0.007	0.1	PASS
23	24.73E-3	0.011	0.1	PASS
24	18.72E-3	0.008	0.1	PASS
25	42.23E-3	0.018	0.1	PASS
26	9.97E-3	0.004	0.1	PASS
27	68.45E-3	0.030	0.1	PASS
28	12.54E-3	0.005	0.1	PASS
29	58.48E-3	0.025	0.1	PASS
30	13.01E-3	0.006	0.1	PASS
31	21.64E-3	0.009	0.1	PASS
32	13.79E-3	0.006	0.1	PASS
33	38.12E-3	0.017	0.1	PASS
34	13.92E-3	0.006	0.1	PASS
35	54.62E-3	0.024	0.1	PASS
36	14.23E-3	0.006	0.1	PASS
37	39.17E-3	0.017	0.1	PASS
38	10.18E-3	0.004	0.1	PASS
39	20.10E-3	0.009	0.1	PASS
40	12.02E-3	0.005	0.1	PASS

No partial calculation (average odd harmonics [21..39] < 100%)



VLF1-I300-100A-XX

Power and THD results

True power P:	83.94W	Apparent power :	87.56VA
Reactiv power Q:	21.55var	Power factor:	0.901
THD (U):	0.002	THD (I):	0.176
Crest Factor (U):	1.415	Crest Factor (I):	1.53

Average harmonic current results

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	209.619E-3	99.738		
2	1.176E-3	0.559	2.00	PASS
3	33.018E-3	15.710	27.03	PASS
4	3.659E-3	1.741		PASS
5	12.737E-3	6.060	10.00	PASS
6	761.498E-6	0.362		PASS
7	5.697E-3	2.711	7.00	PASS
8	796.371E-6	0.379		PASS
9	6.748E-3	3.211	5.00	PASS
10	813.901E-6	0.387		PASS
11	3.968E-3	1.888	3.00	PASS
12	706.800E-6	0.336		PASS
13	1.755E-3	0.835	3.00	PASS
14	986.609E-6	0.469		PASS
15	1.434E-3	0.682	3.00	PASS
16	682.132E-6	0.325		PASS
17	2.324E-3	1.106	3.00	PASS
18	1.814E-3	0.863		PASS
19	1.731E-3	0.824	3.00	PASS
20	785.011E-6	0.374		PASS
21	2.393E-3	1.138	4.50	PASS
22	1.643E-3	0.782		PASS
23	2.517E-3	1.198	4.50	PASS
24	928.392E-6	0.442		PASS
25	723.673E-6	0.344	4.50	PASS
26	723.784E-6	0.344		PASS
27	1.683E-3	0.801	4.50	PASS
28	809.040E-6	0.385		PASS
29	846.980E-6	0.403	4.50	PASS
30	779.850E-6	0.371		PASS
31	1.399E-3	0.666	4.50	PASS
32	947.120E-6	0.451		PASS
33	948.623E-6	0.451	4.50	PASS
34	809.675E-6	0.385		PASS
35	1.698E-3	0.808	4.50	PASS
36	1.382E-3	0.658		PASS
37	1.138E-3	0.541	4.50	PASS
38	817.676E-6	0.389		PASS
39	1.035E-3	0.492	4.50	PASS
40	1.309E-3	0.623		PASS

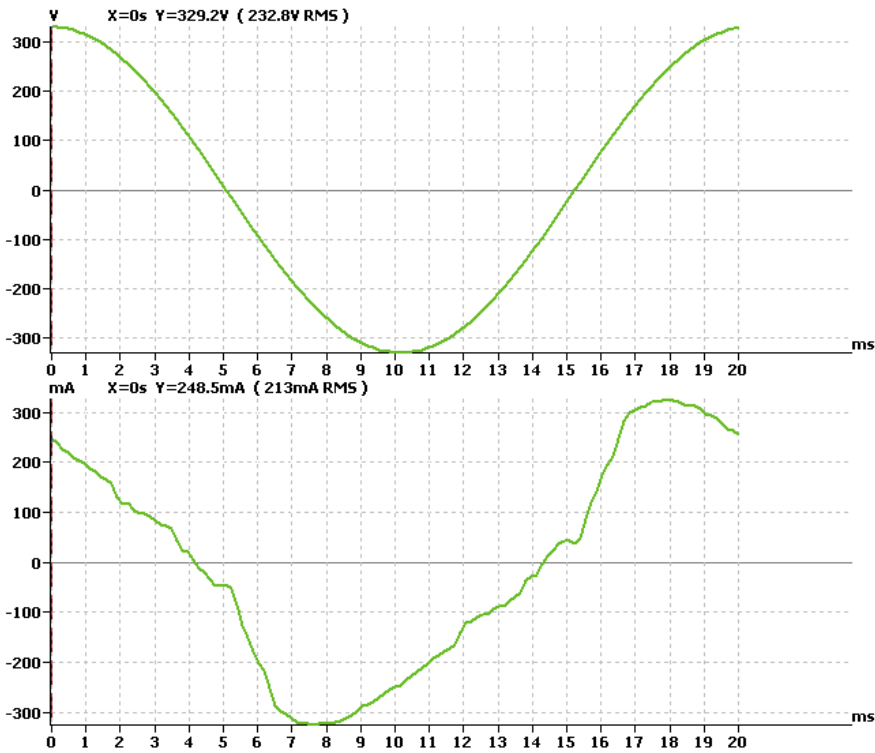
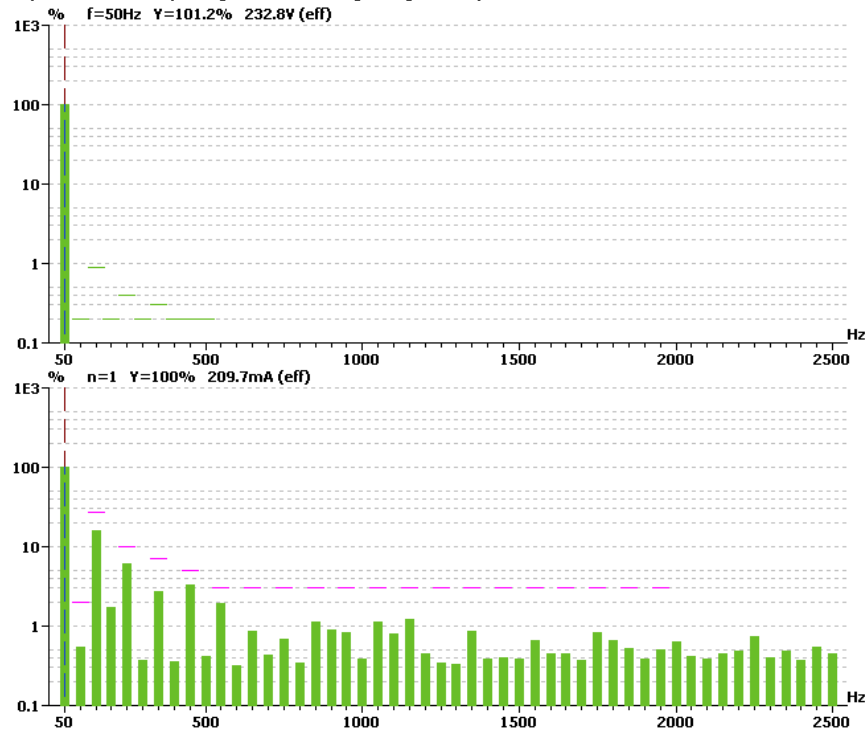
Maximum harmonic current results

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	210.169E-3	100.000		
2	1.291E-3	0.614	3.00	PASS
3	33.428E-3	15.905	40.54	PASS
4	4.021E-3	1.913		PASS
5	12.922E-3	6.148	15.00	PASS
6	869.698E-6	0.414		PASS
7	5.899E-3	2.807	10.50	PASS
8	901.199E-6	0.429		PASS
9	7.002E-3	3.332	7.50	PASS
10	891.540E-6	0.424		PASS
11	4.080E-3	1.941	4.50	PASS
12	795.013E-6	0.378		PASS
13	1.909E-3	0.908	4.50	PASS
14	1.216E-3	0.579		PASS
15	1.646E-3	0.783	4.50	PASS
16	747.698E-6	0.356		PASS
17	2.422E-3	1.152	4.50	PASS
18	1.924E-3	0.915		PASS
19	1.844E-3	0.877	4.50	PASS
20	853.484E-6	0.406		PASS
21	2.487E-3	1.183	4.50	PASS
22	1.734E-3	0.825		PASS
23	2.636E-3	1.254	4.50	PASS
24	1.021E-3	0.486		PASS
25	831.159E-6	0.395	4.50	PASS
26	818.314E-6	0.389		PASS
27	1.785E-3	0.849	4.50	PASS
28	913.518E-6	0.435		PASS
29	1.002E-3	0.477	4.50	PASS
30	866.778E-6	0.412		PASS
31	1.510E-3	0.719	4.50	PASS
32	1.048E-3	0.499		PASS
33	1.314E-3	0.625	4.50	PASS
34	906.642E-6	0.431		PASS
35	1.854E-3	0.882	4.50	PASS
36	1.484E-3	0.706		PASS
37	1.294E-3	0.616	4.50	PASS
38	905.032E-6	0.431		PASS
39	1.113E-3	0.529	4.50	PASS
40	1.401E-3	0.667		PASS

Maximum harmonic voltage results

Hn	Ueff [V]	Ueff [%]	Limit [%]	Result
1	232.81	101.220		
2	41.86E-3	0.018	0.2	PASS
3	74.86E-3	0.033	0.9	PASS
4	20.77E-3	0.009	0.2	PASS
5	60.64E-3	0.026	0.4	PASS
6	19.89E-3	0.009	0.2	PASS
7	25.36E-3	0.011	0.3	PASS
8	16.11E-3	0.007	0.2	PASS
9	53.35E-3	0.023	0.2	PASS
10	23.82E-3	0.010	0.2	PASS
11	77.62E-3	0.034	0.1	PASS
12	20.57E-3	0.009	0.1	PASS
13	54.28E-3	0.024	0.1	PASS
14	17.51E-3	0.008	0.1	PASS
15	13.18E-3	0.006	0.1	PASS
16	13.85E-3	0.006	0.1	PASS
17	66.52E-3	0.029	0.1	PASS
18	14.06E-3	0.006	0.1	PASS
19	81.67E-3	0.036	0.1	PASS
20	13.77E-3	0.006	0.1	PASS
21	46.22E-3	0.020	0.1	PASS
22	11.84E-3	0.005	0.1	PASS
23	31.69E-3	0.014	0.1	PASS
24	14.98E-3	0.007	0.1	PASS
25	61.53E-3	0.027	0.1	PASS
26	11.15E-3	0.005	0.1	PASS
27	62.08E-3	0.027	0.1	PASS
28	12.06E-3	0.005	0.1	PASS
29	24.58E-3	0.011	0.1	PASS
30	12.58E-3	0.005	0.1	PASS
31	37.30E-3	0.016	0.1	PASS
32	12.31E-3	0.005	0.1	PASS
33	56.70E-3	0.025	0.1	PASS
34	10.96E-3	0.005	0.1	PASS
35	45.06E-3	0.020	0.1	PASS
36	13.42E-3	0.006	0.1	PASS
37	18.58E-3	0.008	0.1	PASS
38	10.68E-3	0.005	0.1	PASS
39	43.53E-3	0.019	0.1	PASS
40	13.29E-3	0.006	0.1	PASS

No partial calculation (average odd harmonics [21..39] < 100%)



VLF1-I300-100B-XX

Power and THD results

True power P:	83.98W	Apparent power :	88.19VA
Reactiv power Q:	20.06var	Power factor:	0.872
THD (U):	0.002	THD (I):	0.189
Crest Factor (U):	1.415	Crest Factor (I):	1.614

Average harmonic current results

Hn	Ieff [A]	Ieff [%]	Limit [%]	Result
1	173.919E-3	99.661		
2	1.186E-3	0.679	2.00	PASS
3	29.977E-3	17.178	26.22	PASS
4	3.251E-3	1.863		PASS
5	8.857E-3	5.075	10.00	PASS
6	777.694E-6	0.446		PASS
7	6.773E-3	3.881	7.00	PASS
8	874.660E-6	0.501		PASS
9	2.118E-3	1.214	5.00	PASS
10	804.817E-6	0.461		PASS
11	2.651E-3	1.519	3.00	PASS
12	770.615E-6	0.442		PASS
13	3.510E-3	2.011	3.00	PASS
14	953.762E-6	0.547		PASS
15	2.589E-3	1.484	3.00	PASS
16	780.479E-6	0.447		PASS
17	1.600E-3	0.917	3.00	PASS
18	1.881E-3	1.078		PASS
19	868.599E-6	0.498	3.00	PASS
20	796.368E-6	0.456		PASS
21	1.544E-3	0.885	4.50	PASS
22	1.588E-3	0.910		PASS
23	1.924E-3	1.102	4.50	PASS
24	704.737E-6	0.404		PASS
25	1.868E-3	1.070	4.50	PASS
26	809.162E-6	0.464		PASS
27	1.783E-3	1.022	4.50	PASS
28	755.372E-6	0.433		PASS
29	1.708E-3	0.979	4.50	PASS
30	708.560E-6	0.406		PASS
31	1.501E-3	0.860	4.50	PASS
32	918.934E-6	0.527		PASS
33	797.503E-6	0.457	4.50	PASS
34	848.033E-6	0.486		PASS
35	951.909E-6	0.545	4.50	PASS
36	1.351E-3	0.774		PASS
37	955.164E-6	0.547	4.50	PASS
38	874.268E-6	0.501		PASS
39	1.131E-3	0.648	4.50	PASS
40	1.231E-3	0.706		PASS

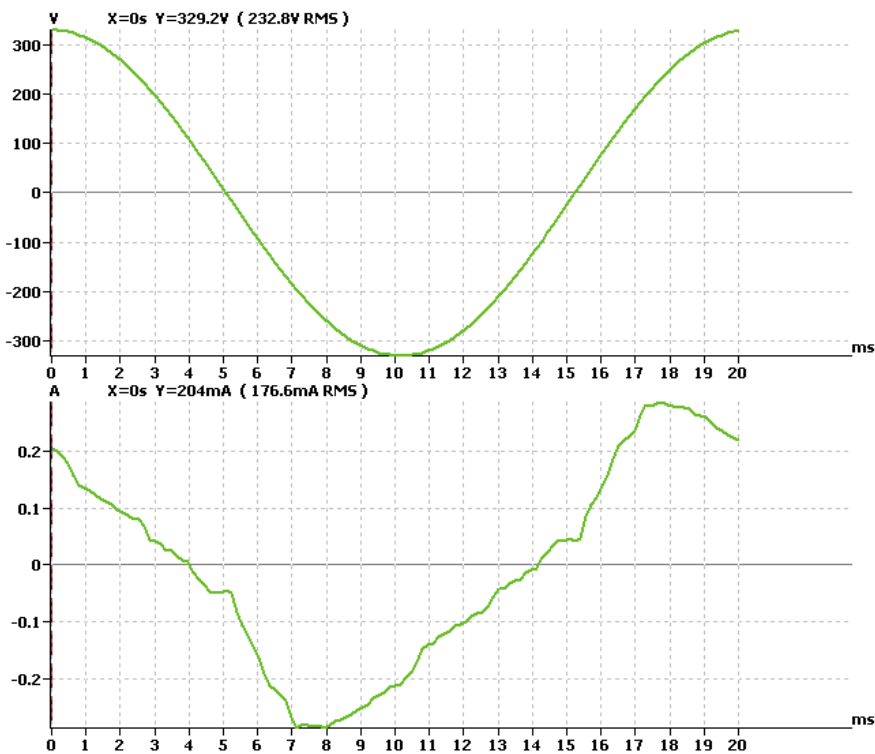
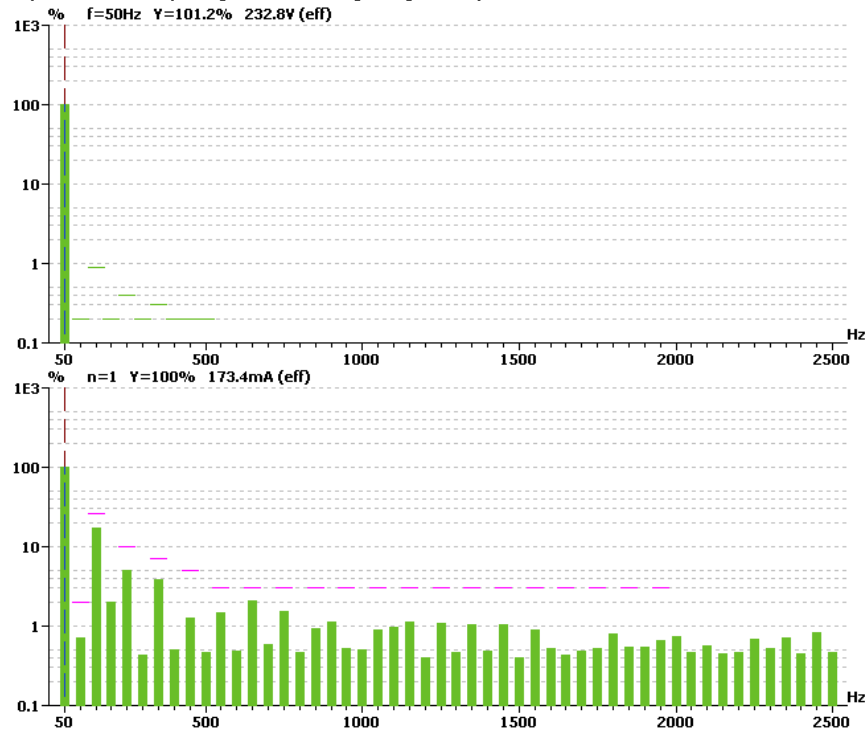
Maximum harmonic current results

Hn	I _{eff} [A]	I _{eff} [%]	Limit [%]	Result
1	174.511E-3	100.000		
2	1.283E-3	0.735	3.00	PASS
3	30.329E-3	17.379	39.33	PASS
4	3.649E-3	2.091		PASS
5	9.029E-3	5.174	15.00	PASS
6	849.860E-6	0.487		PASS
7	6.868E-3	3.936	10.50	PASS
8	962.347E-6	0.551		PASS
9	2.235E-3	1.281	7.50	PASS
10	889.045E-6	0.509		PASS
11	2.779E-3	1.593	4.50	PASS
12	864.985E-6	0.496		PASS
13	3.640E-3	2.086	4.50	PASS
14	1.341E-3	0.768		PASS
15	2.701E-3	1.548	4.50	PASS
16	863.737E-6	0.495		PASS
17	1.703E-3	0.976	4.50	PASS
18	1.974E-3	1.131		PASS
19	948.019E-6	0.543	4.50	PASS
20	871.797E-6	0.500		PASS
21	1.664E-3	0.954	4.50	PASS
22	1.712E-3	0.981		PASS
23	2.033E-3	1.165	4.50	PASS
24	761.639E-6	0.436		PASS
25	1.967E-3	1.127	4.50	PASS
26	883.961E-6	0.507		PASS
27	1.883E-3	1.079	4.50	PASS
28	863.813E-6	0.495		PASS
29	1.795E-3	1.028	4.50	PASS
30	780.536E-6	0.447		PASS
31	1.605E-3	0.920	4.50	PASS
32	1.008E-3	0.578		PASS
33	880.905E-6	0.505	4.50	PASS
34	948.298E-6	0.543		PASS
35	1.056E-3	0.605	4.50	PASS
36	1.455E-3	0.834		PASS
37	1.068E-3	0.612	4.50	PASS
38	996.206E-6	0.571		PASS
39	1.244E-3	0.713	4.50	PASS
40	1.386E-3	0.794		PASS

Maximum harmonic voltage results

Hn	Ueff [V]	Ueff [%]	Limit [%]	Result
1	232.81	101.220		
2	43.19E-3	0.019	0.2	PASS
3	76.16E-3	0.033	0.9	PASS
4	20.00E-3	0.009	0.2	PASS
5	66.57E-3	0.029	0.4	PASS
6	19.80E-3	0.009	0.2	PASS
7	31.73E-3	0.014	0.3	PASS
8	14.90E-3	0.006	0.2	PASS
9	43.12E-3	0.019	0.2	PASS
10	22.01E-3	0.010	0.2	PASS
11	68.45E-3	0.030	0.1	PASS
12	21.55E-3	0.009	0.1	PASS
13	68.31E-3	0.030	0.1	PASS
14	15.98E-3	0.007	0.1	PASS
15	23.14E-3	0.010	0.1	PASS
16	14.45E-3	0.006	0.1	PASS
17	51.25E-3	0.022	0.1	PASS
18	14.67E-3	0.006	0.1	PASS
19	81.08E-3	0.035	0.1	PASS
20	13.48E-3	0.006	0.1	PASS
21	63.63E-3	0.028	0.1	PASS
22	11.45E-3	0.005	0.1	PASS
23	18.54E-3	0.008	0.1	PASS
24	13.09E-3	0.006	0.1	PASS
25	52.23E-3	0.023	0.1	PASS
26	11.14E-3	0.005	0.1	PASS
27	70.66E-3	0.031	0.1	PASS
28	14.56E-3	0.006	0.1	PASS
29	51.83E-3	0.023	0.1	PASS
30	12.29E-3	0.005	0.1	PASS
31	16.58E-3	0.007	0.1	PASS
32	11.48E-3	0.005	0.1	PASS
33	47.16E-3	0.021	0.1	PASS
34	12.36E-3	0.005	0.1	PASS
35	52.77E-3	0.023	0.1	PASS
36	10.97E-3	0.005	0.1	PASS
37	33.58E-3	0.015	0.1	PASS
38	9.94E-3	0.004	0.1	PASS
39	26.92E-3	0.012	0.1	PASS
40	14.05E-3	0.006	0.1	PASS

No partial calculation (average odd harmonics [21..39] < 100%)



7.5 Flicker Test Result

Test Requirement:	EN 61000-3-3					
Test Method:	EN 61000-3-3					
Class/Severity:	Clause 5 of EN 61000-3-3					
Measurement Time:	10 min					
Detector:	As per EN 61000-3-3					
Test environment:	Temp.:	24 °C	Humid.:	51%	Press.:	1 012mbar
Test Instruments:	Refer to section 6 for details					
Test mode:	Refer to section 5.2 for details					
Test results:	Pass					

Measurement Data

PLF1-I150-050D-XX

	EUT values	Limit	Result
Pst	0.028	1.00	PASS
Plt	0.028	0.65	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.057	4.00	PASS
dt [s]	0.000	0.50	PASS

PLF1-I300-100B-XX

	EUT values	Limit	Result
Pst	0.028	1.00	PASS
Plt	0.028	0.65	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.058	4.00	PASS
dt [s]	0.000	0.50	PASS

PLF1-I300-100C-XX

	EUT values	Limit	Result
Pst	0.028	1.00	PASS
Plt	0.028	0.65	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.059	4.00	PASS
dt [s]	0.000	0.50	PASS

VLF1-I120-040A-XX

	EUT values	Limit	Result
Pst	0.028	1.00	PASS
Plt	0.028	0.65	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.058	4.00	PASS
dt [s]	0.000	0.50	PASS

VLF1-I120-040B-XX

	EUT values	Limit	Result
Pst	0.028	1.00	PASS
Plt	0.028	0.65	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.057	4.00	PASS
dt [s]	0.000	0.50	PASS

VLF1-I120-040C-XX

	EUT values	Limit	Result
Pst	0.028	1.00	PASS
Plt	0.028	0.65	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.059	4.00	PASS
dt [s]	0.000	0.50	PASS

VLF1-I150-050A-XX

	EUT values	Limit	Result
Pst	0.028	1.00	PASS
Plt	0.028	0.65	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.056	4.00	PASS
dt [s]	0.000	0.50	PASS

VLF1-I150-050B-XX

	EUT values	Limit	Result
Pst	0.028	1.00	PASS
Plt	0.028	0.65	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.059	4.00	PASS
dt [s]	0.000	0.50	PASS

VLF1-I150-050C-XX

	EUT values	Limit	Result
Pst	0.028	1.00	PASS
Plt	0.028	0.65	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.056	4.00	PASS
dt [s]	0.000	0.50	PASS

VLF1-I150-050D-XX

	EUT values	Limit	Result
Pst	0.028	1.00	PASS
Plt	0.028	0.65	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.061	4.00	PASS
dt [s]	0.000	0.50	PASS

VLF1-I300-100A-XX

	EUT values	Limit	Result
Pst	0.028	1.00	PASS
Plt	0.028	0.65	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.059	4.00	PASS
dt [s]	0.000	0.50	PASS

VLF1-I300-100B-XX

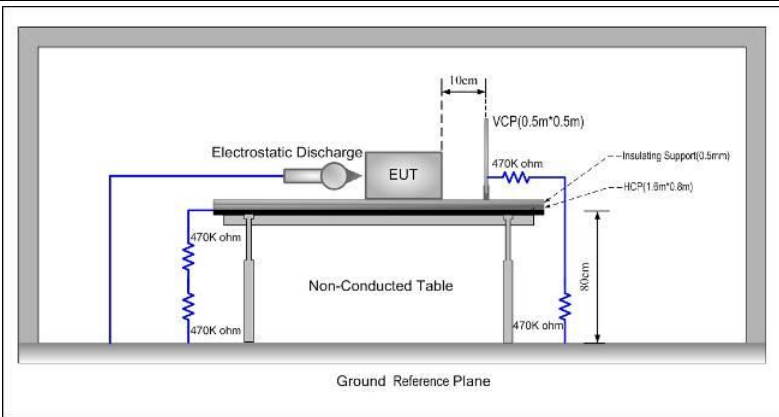
	EUT values	Limit	Result
Pst	0.028	1.00	PASS
Plt	0.028	0.65	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.057	4.00	PASS
dt [s]	0.000	0.50	PASS

8 Immunity Test Results

8.1 Performance Criteria Description in Clause 4.2 of EN 61547

Criterion A:	During the test no change of the luminous intensity shall be observed and the regulating control, if any, shall operate during the test as intended.
Criterion B:	During the test the luminous intensity may change to any value. After the test the luminous intensity shall be restored to its initial value within 1 min. Regulating controls need not function during the test, but after the test the mode of the control shall be the same as before the test provided that during the test no mode changing commands were given.
Criterion C:	During and after the test any change of the luminous intensity is allowed and the lamp(s) may be extinguished. After the test, within 30 min, all functions shall return to normal if necessary by temporary interruption of the mains supply and/or operating the regulating control. Additional requirement for lighting equipment incorporating a starting device: After the test, the lighting equipment is switched off. After half an hour, it is switched on again. The lighting equipment shall start and operate as intended.

8.2 Electrostatic Discharge

Test Requirement:	EN 61547
Test Method:	EN 61000-4-2
Discharge Voltage:	Contact Discharge: $\pm 4\text{kV}$ Air Discharge: $\pm 8\text{kV}$ HCP/VCP: $\pm 4\text{kV}$
Polarity:	Positive & Negative
Number of Discharge:	Minimum 10 times at each test point.
Discharge Mode:	Single Discharge
Discharge Period:	1 second minimum
Limit:	Criteria B
Test setup:	
Test Procedure:	1. Air discharge: The test was applied on non-conductive surfaces of EUT. The round discharge tip of the discharge electrode was approached as fast as possible to touch the EUT. After each discharge, the discharge electrode was removed from the EUT. The generator was re-triggered for a new single discharge and repeated 10 times for each pre-selected test point. This procedure was repeated until all the air discharge completed 2. Contact Discharge: The test was applied on conductive surfaces of EUT. the generator was re-triggered for a new single discharge and repeated 10 times for each pre-selected test point. the tip of the discharge electrode was touch the EUT before the discharge switch was operated. 3. Indirect discharge for horizontal coupling plane At least 10 single discharges shall be applied at the front edge of each HCP opposite the centre point of each unit of the EUT and 0.1m from the front of the EUT. The long axis of the discharge electrode shall be in the plane of the HCP and perpendicular to its front edge during the discharge. Consideration should be given to exposing all sides of the EUT. 4. Indirect discharge for vertical coupling plane At least 10 single discharges were applied to the center of one vertical edge of the coupling plane. The coupling plane, of dimensions 0.5m X

	0.5m, was placed parallel to, and positioned at a distance of 0.1m from the EUT. Discharges were applied to the coupling plane, with this plane in sufficient different positions that the four faces of the EUT are completely illuminated.
Test environment:	Temp.: 24 °C Humid.: 51% Press.: 1 012mbar
Test Instruments:	Refer to section 6 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Measurement Record:

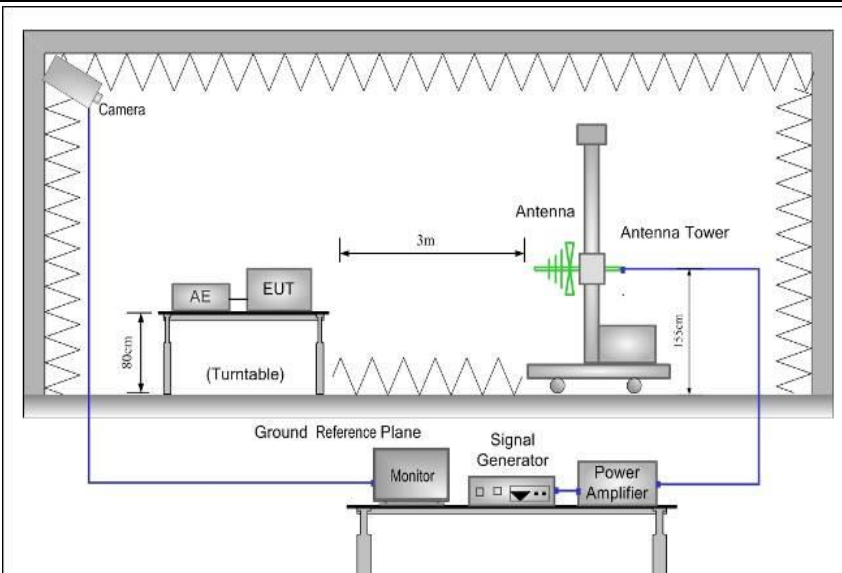
Test points:	I: Metal interface			
	II: All plastic parts			
Direct discharge				
Discharge Voltage (KV)	Type of discharge	Test points	Observations (Performance Criterion)	Result
± 4	Contact	I	B	Pass
± 8	Air	II	B	Pass
Indirect discharge				
Discharge Voltage (KV)	Type of discharge	Test points	Observation Performance	Result
± 4	HCP-Bottom/Top/ Front/Back/Left/Right	Edge of the HCP	A	Pass
± 4	VCP-Front/Back /Left/Right	Center of the VCP	A	Pass

Remark:

Performance Criteria: A, B, C: Refer to section 8.1 for details

N/A: Not applicable

8.3 Radio-frequency electromagnetic fields

Test Requirement:	EN 61547
Test Method:	EN 61000-4-3
Frequency range:	80MHz to 1GHz
Test Level:	3V/m
Modulation:	80%, 1kHz Amplitude Modulation
Performance Criterion:	Criteria A
Test setup:	
Test Procedure:	1. For table-top equipment, the EUT was placed in the chamber on a non-conductive table 0.8m high. For arrangement of floor-standing equipment, the EUT was mounted on a non-conductive support 0.1m above the supporting plane. For human body-mounted equipment, the EUT may be tested in the same manner as table top items. 2. If possible, a minimum of 1 m of cable is exposed to the electromagnetic field. Excess length of cables interconnecting units of the EUT shall be bundled low-inductively in the approximate center of the cable to form a bundle 30 cm to 40 cm in length. 3. The EUT was initially placed with one face coincident with the calibration plane. The EUT face being illuminated was contained within the UFA (Uniform Field Area). 4. The frequency ranges to be considered were swept with the signal modulated and pausing to adjust the RF signal level or to switch oscillators and antennas as necessary. Where the frequency range was swept incrementally, the step size was not exceed 1 % of the preceding frequency value. 5. The dwell time of the amplitude modulated carrier at each frequency was not be less than the time necessary for the EUT to be exercised and to respond, and was not less than 0,5 s. 6. The test normally was performed with the generating antenna facing each side of the EUT.

	7. The polarization of the field generated by each antenna necessitates testing each selected side twice, once with the antenna positioned vertically and again with the antenna positioned horizontally. 8. The EUT was performed in a configuration to actual installation conditions, a video camera and/or a audio monitor were used to monitor the performance of the EUT.
Test environment:	Temp.: 25 °C Humid.: 52% Press.: 1 012mbar
Test Instruments:	Refer to section 6 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

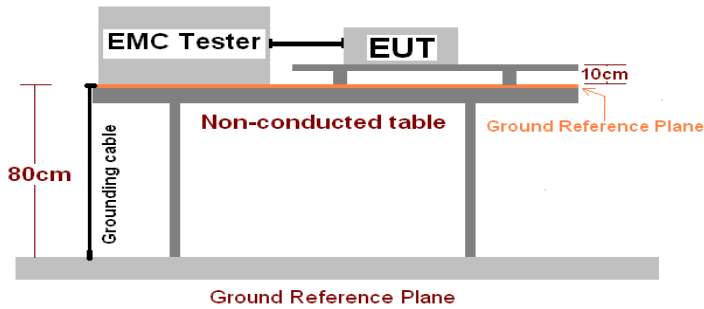
Measurement Record:

Frequency	Level	Modulation	Antenna Polarization	EUT Face	Observations (Performance Criterion)
80 MHz-1 GHz	3 V/m	1 kHz, 80 % Amp. Mod, 1 % increment, dwell time=3seconds	V	Front	A
			H		A
			V	Rear	A
			H		A
			V	Left	A
			H		A
			V	Right	A
			H		A
			V	Top	A
			H		A
			V	Bottom	A
			H		A

Remark:

Performance Criteria: A, B, C: Refer to section 8.1 for details

8.4 Fast Transients

Test Requirement:	EN 61547
Test Method:	EN 61000-4-4
Test Level:	1.0kV on AC port
Polarity:	Positive & Negative
Repetition Frequency:	5kHz
Burst Duration:	15ms
Burst Period:	300ms
Test Duration:	2 minute per level & polarity
Performance Criterion:	B
Test setup:	 The diagram illustrates the test setup. An EMC Tester and an EUT (Under Test) are positioned on a non-conducted table. The table is supported by a wood support that is 0.1m + 0.01m thick. The table's height is 80cm. The EUT is 10cm high. A Ground Reference Plane is located below the table. A Grounding cable is connected to the EMC Tester.
Test Procedure:	1. The EUT and its simulators were placed on the ground reference plane and were insulated from it by a wood support 0.1m + 0.01m thick. 2. The ground reference plane was 1m*1m metallic sheet with 0.65mm minimum thickness. 3. This reference ground plane was project beyond the EUT by at least 0.1m on all sides and the minimum distance between EUT and all other conductive structure, except the ground plane was more than 0.5m. All cables to the EUT was placed on the wood support, cables not subject to EFT/B was routed as far as possible from the cable under test to minimize the coupling between the cables. 4. The EUT is connected to the power mains through a coupling device that directly couples the EFT/B interference signal. 5. Each of the Line and Neutral conductors is impressed with burst noise for 2 minutes. 6. The length of the signal and power lines between the coupling device and the EUT is 0.5m
Test environment:	Temp.: 26 °C Humid.: 54% Press.: 1 012mbar
Test Instruments:	Refer to section 6 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

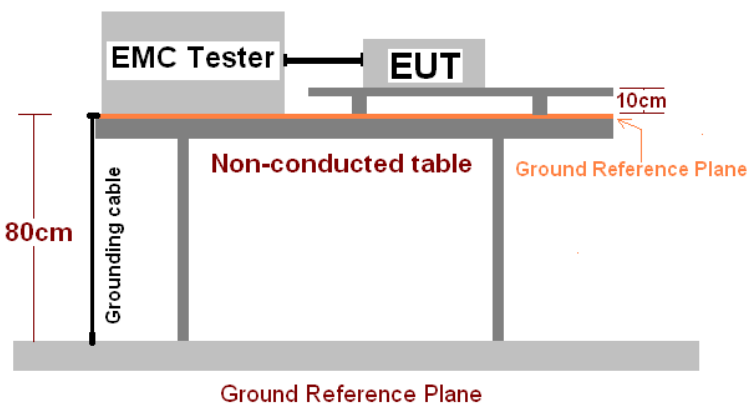
Measurement Record:

Lead under Test	Level ($\pm$ kV)	Coupling Direct/Clamp	Observations (Performance Criterion)	Result
L	± 1.0	Direct	A	Pass
N	± 1.0	Direct	A	Pass
L-N	± 1.0	Direct	A	Pass
PE	± 1.0	Direct	A	Pass
L-PE	± 1.0	Direct	A	Pass
N-PE	± 1.0	Direct	A	Pass
L-N-PE	± 1.0	Direct	A	Pass

Remark:

Performance Criteria: A, B, C: Refer to section 8.1 for details

8.5 Surges

Test Requirement:	EN 61547				
Test Method:	EN 61000-4-5				
Test Level:	Characteristics	Test Levels			
		Self-ballasted lamps and semi-luminaires	Luminaires and independent auxiliaries		
			≤25W	>25W	
	Line to line	±0.5kV	±0.5kV	±1.0kV	
	Line to ground	±1.0kV	±1.0kV	±2.0kV	
NOTE In addition to the specified test level, all lower test levels as detailed in IEC 61000-4-5 should also be satisfied.					
Polarity:	Positive & Negative				
Generator source impedance:	2Ω (line-line coupling)				
No. of surges:	5 positive at 90°, 5 negative at 270°				
Performance Criterion:	Criterion C				
Test setup:					
Test procedure	- For line-to-line coupling mode, provide a 1.2/50us voltage surge (at open-circuit condition) and 8/20us current surge to EUT selected points, and for active line / neutral lines to ground. - At least 5 positive and 5 negative (polarity) tests with a maximum 1/min repetition rate are applied during test. - Different phase angles are done individually. - Record the EUT operating situation during compliance test and decide the EUT immunity criterion for above each test.				
Test environment:	Temp.:	26 °C	Humid.:	53%	Press.: 1 012mbar
Test Instruments:	Refer to section 6 for details				
Test mode:	Refer to section 5.2 for details				
Test results:	Pass				

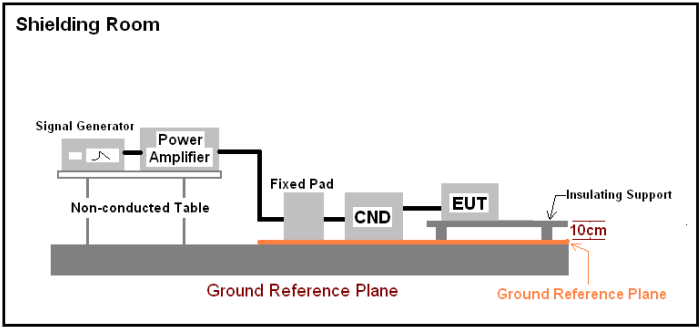
Measurement Record:

Location	Level(kV)	Pulse No	Surge Interval	Phase(deg)	Observations (Performance Criterion)	Result
L-N	+1.0	5	60s	90°	A	Pass
	-1.0			270°		
L-N-PE	+2.0	5	60s	90°	A	Pass
	-2.0			270°		

Remark:

Performance Criteria: A, B, C: Refer to section 8.1 for details

8.6 Injected Currents

Test Requirement:	EN 61547
Test Method:	EN 61000-4-6
Frequency range:	0.15MHz to 80MHz
Test Level:	3V rms on AC Ports (unmodulated emf into 150 Ω)
Modulation:	80%, 1kHz Amplitude Modulation
Performance Criterion:	Criteria A
Test setup:	
Test Procedure:	- The EUT are placed on an insulating support 0.1m high above a ground reference plane. CDN (coupling and decoupling device) is placed on the ground plane about 0.3m from EUT. Cables between CDN and EUT are as short as possible, and their height above the ground reference plane shall be between 30 and 50 mm (where possible). - The disturbance signal described below is injected to EUT through CDN. - The EUT operates within its operational mode(s) under intended climatic conditions after power on. - Recording the EUT operating situation during compliance testing and decide the EUT immunity criterion.
Test environment:	Temp.: 24 °C Humid.: 51% Press.: 1 012mbar
Test Instruments:	Refer to section 6 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

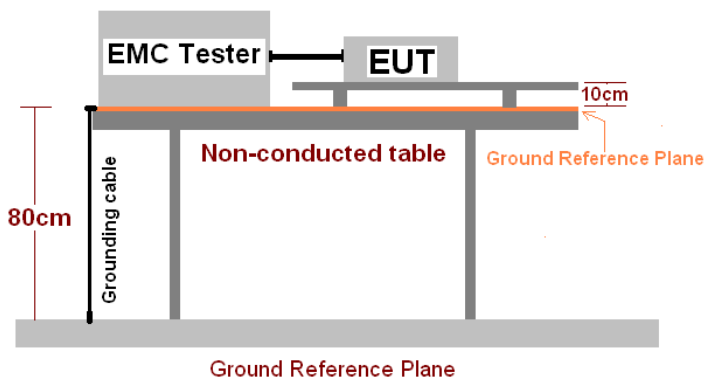
Measurement Record:

Frequency	Injected Position	Level	Modulation	Observations (Performance Criterion)	Result
150kHz to 80MHz	AC Mains	3Vrms	1 kHz, 80 % Amp. Mod, 1 % increment, dwell time=2seconds	A	Pass

Remark:

Performance Criteria: A, B, C: Refer to section 8.1 for details

8.7 Voltage Dips and Voltage Interruptions

Test Requirement:	EN 61547
Test Method:	EN 61000-4-11
Test Level:	0% of U_T (Supply Voltage) for 0.5 Periods 70 % of U_T (Supply Voltage) for 10 Periods
No. of Dips / Interruptions:	3 per Level
Performance Criterion:	100% VD ----Performance criterion: B 30% VD ----Performance criterion: C
Test setup:	
Test Procedure:	- The EUT and test generator were setup as shown on above setup photo. - The interruptions are introduced at selected phase angles with specified duration. - Record any degradation of performance.
Test environment:	Temp.: 26 °C Humid.: 53% Press.: 1 012mbar
Test Instruments:	Refer to section 6 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Measurement Record:

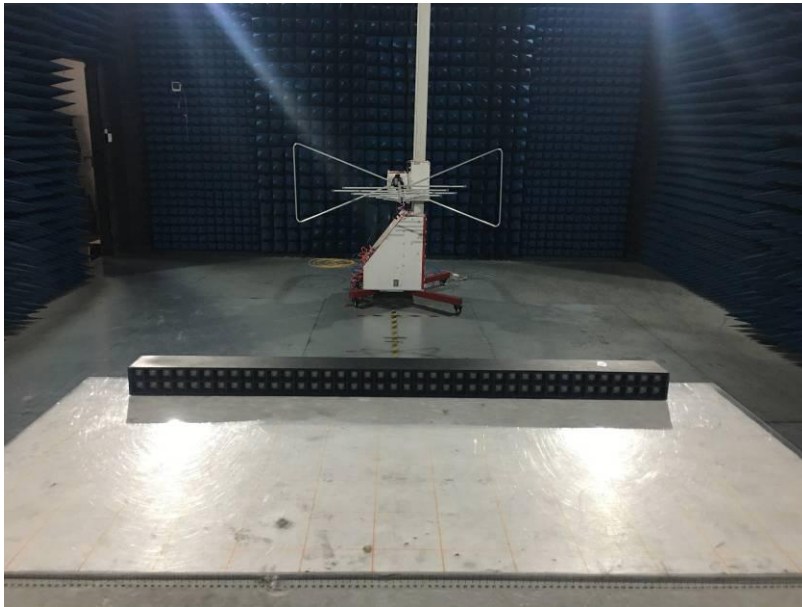
Test Level % U_T	Duration (Periods)	Phase angle	No. of drop out	Time between dropout	Observations (Performance Criterion)	Result
0	0.5	0°,180°	3	10s	A	Pass
70	10	0°,180°	3	10s	B	Pass

Remark:

Performance Criteria: A, B, C: Refer to section 8.1 for details

9 Test Setup Photo

Radiated Emission



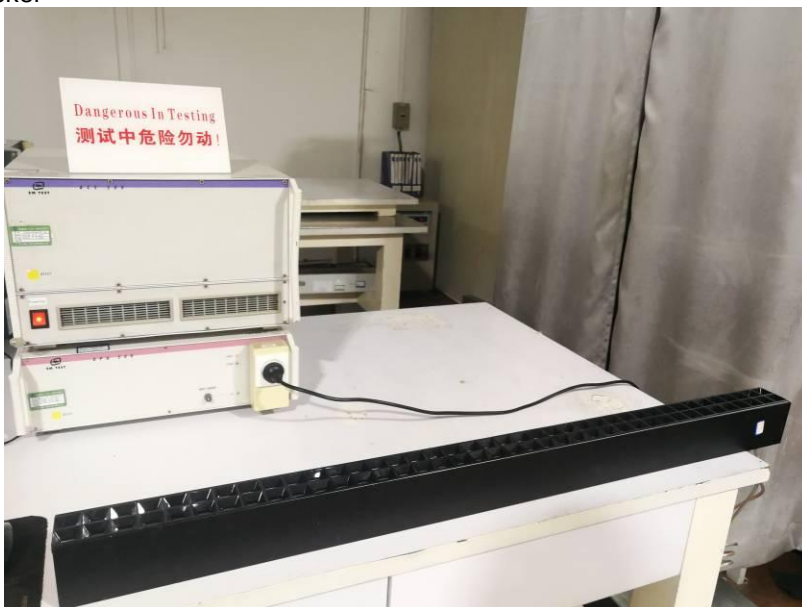
Disturbance voltages



Radiated Electromagnetic Disturbance



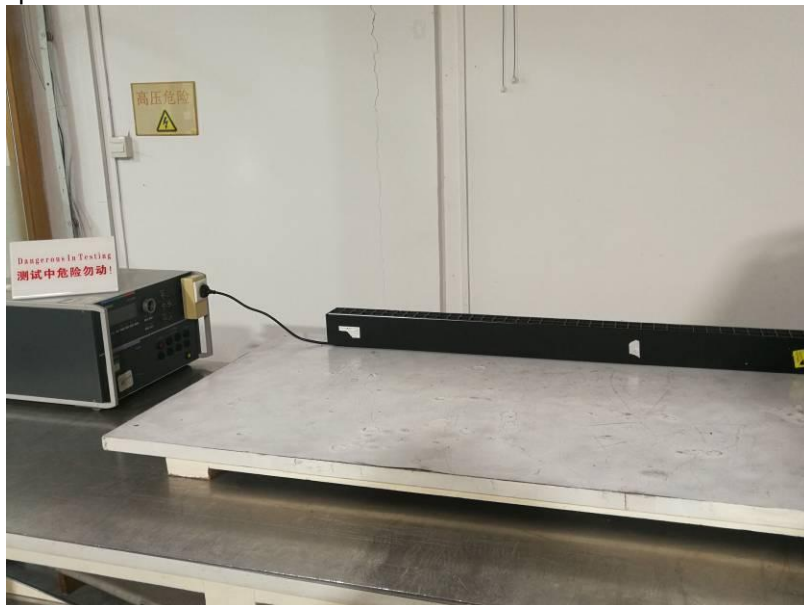
Harmonics/Flicker



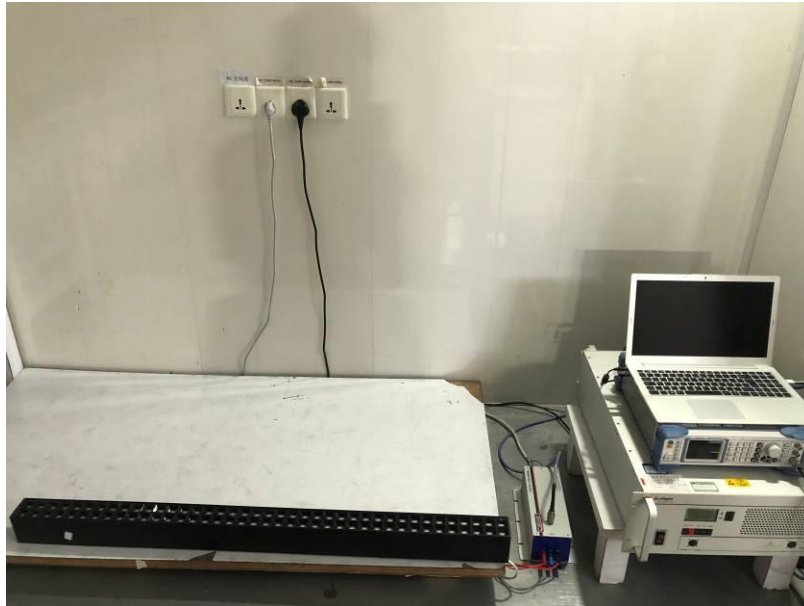
Electrostatic discharge



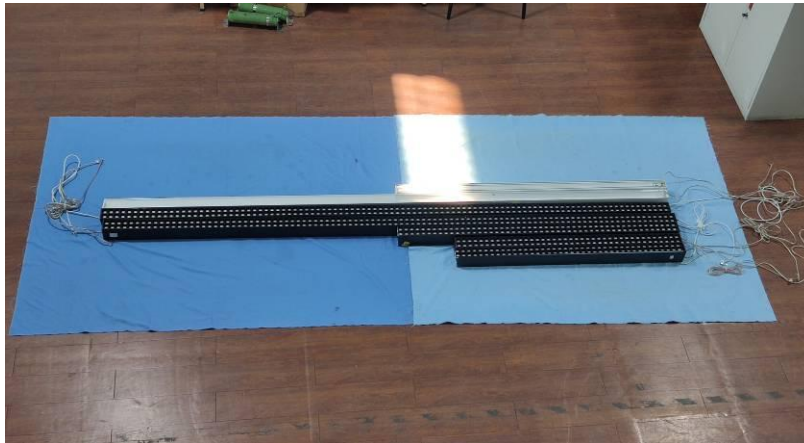
EFT/Surge/V-Dips

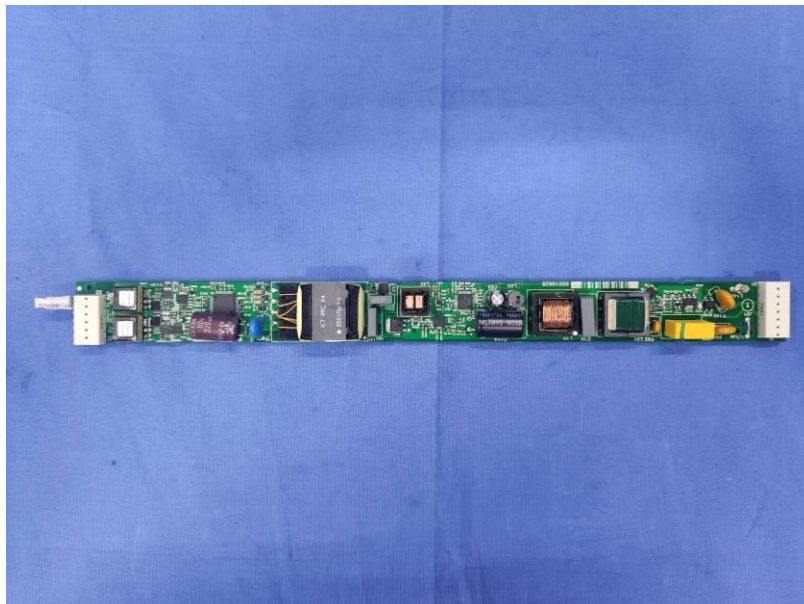


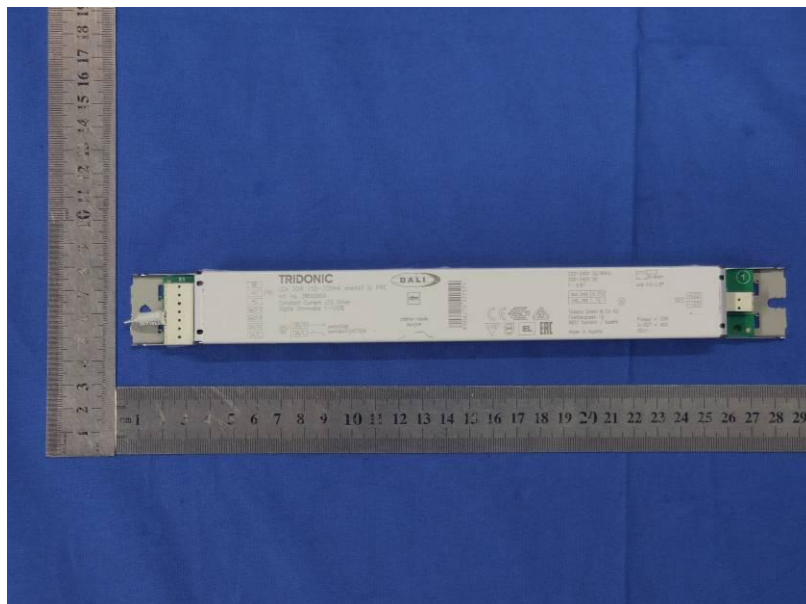
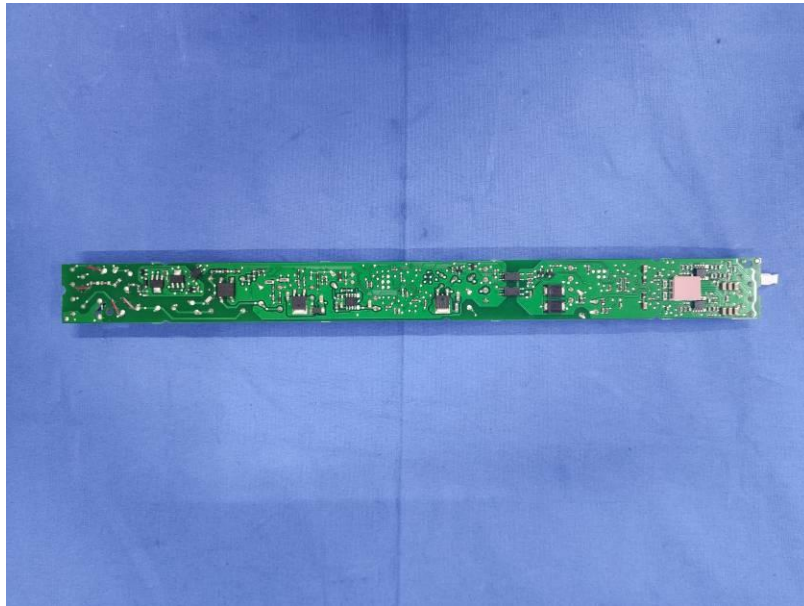
CS

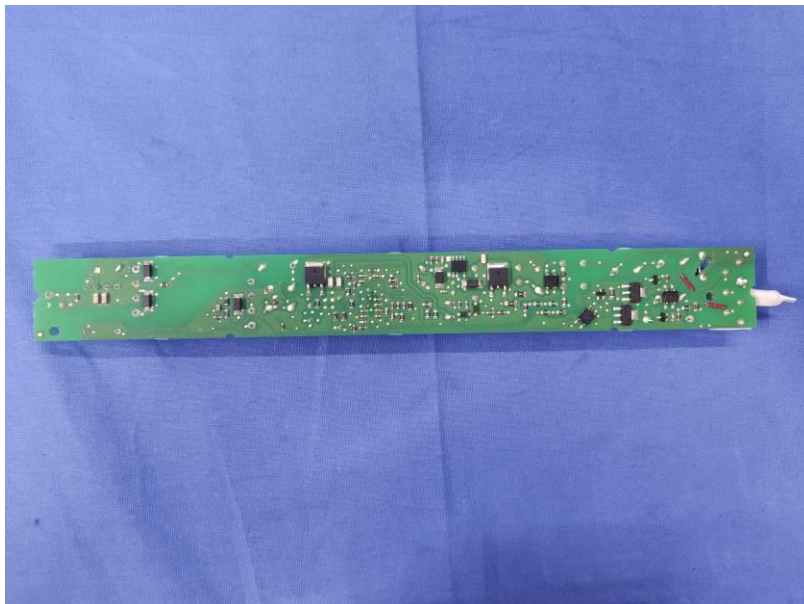
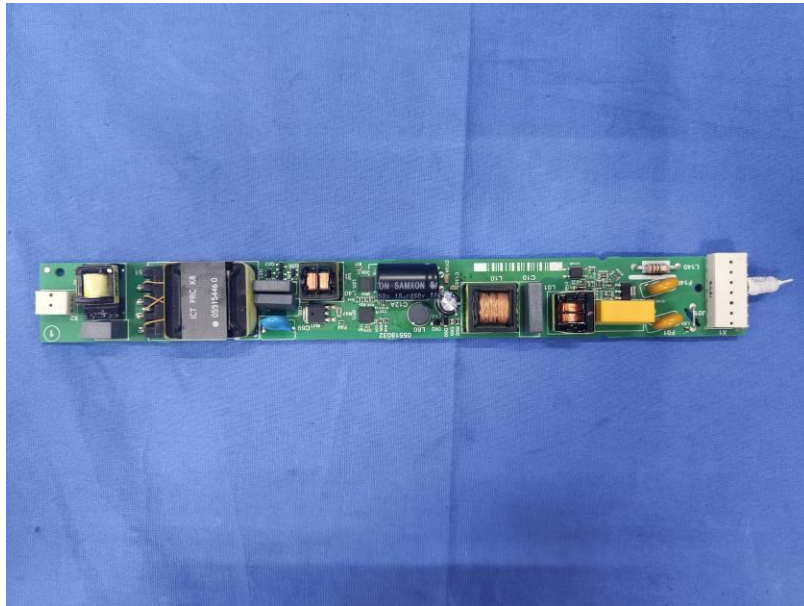


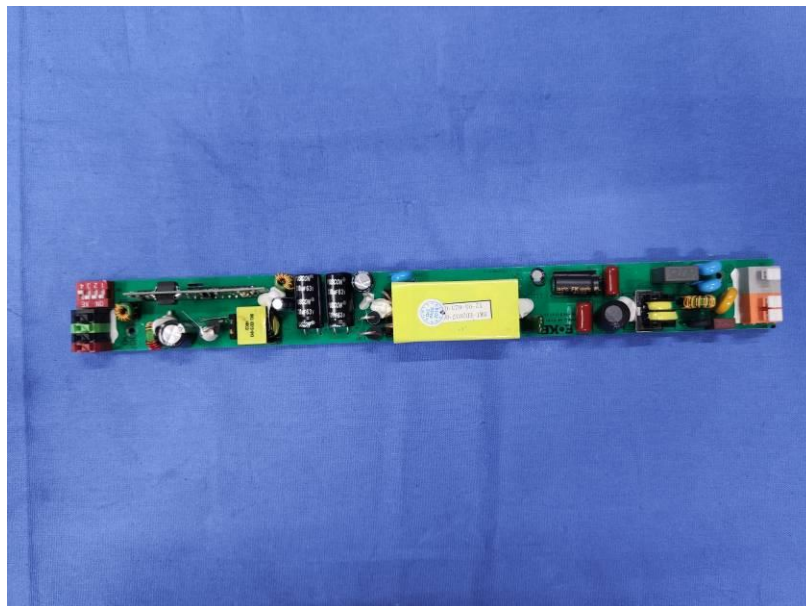
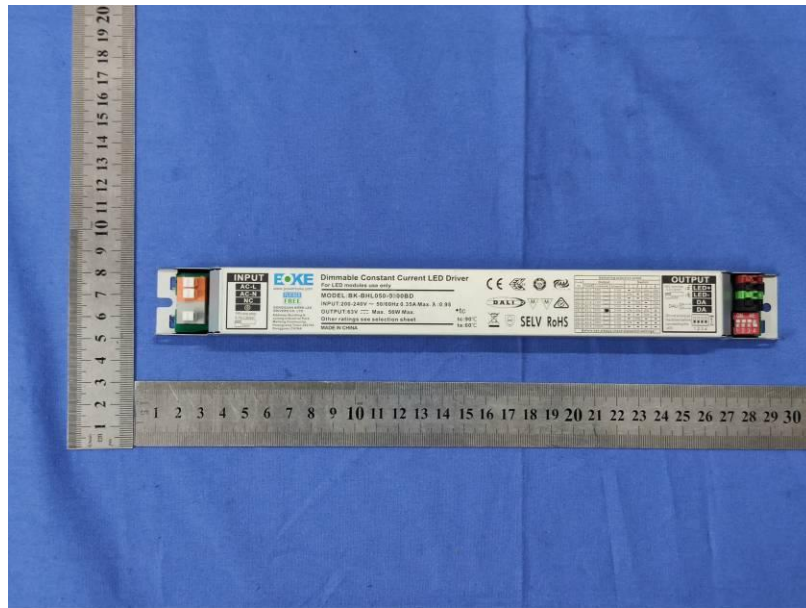
10 EUT Constructional Details

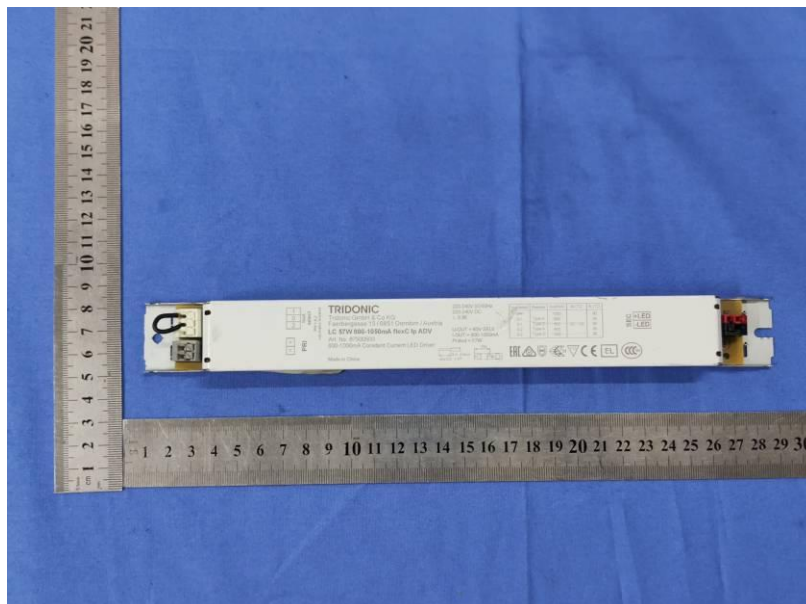
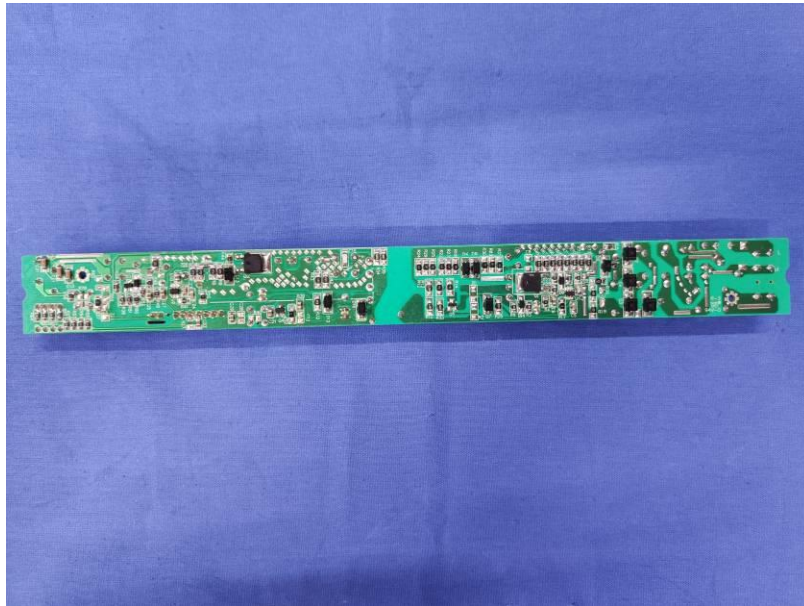


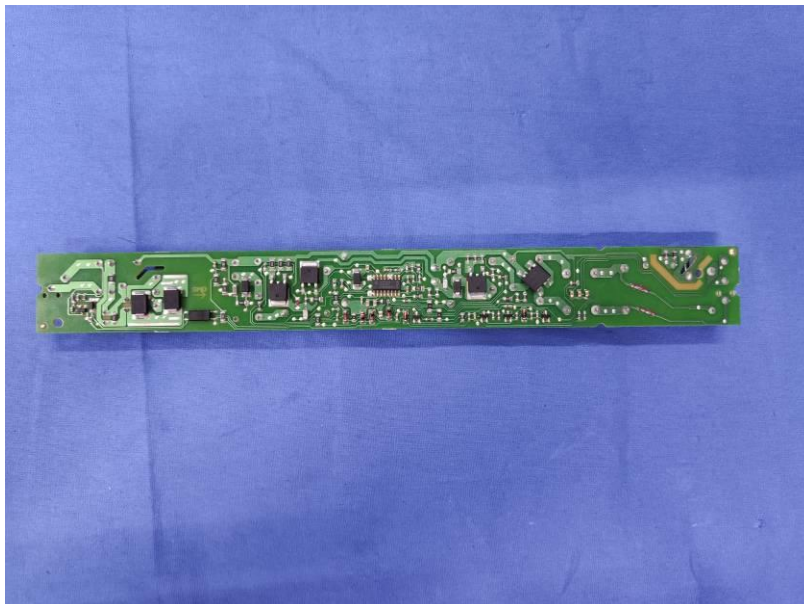
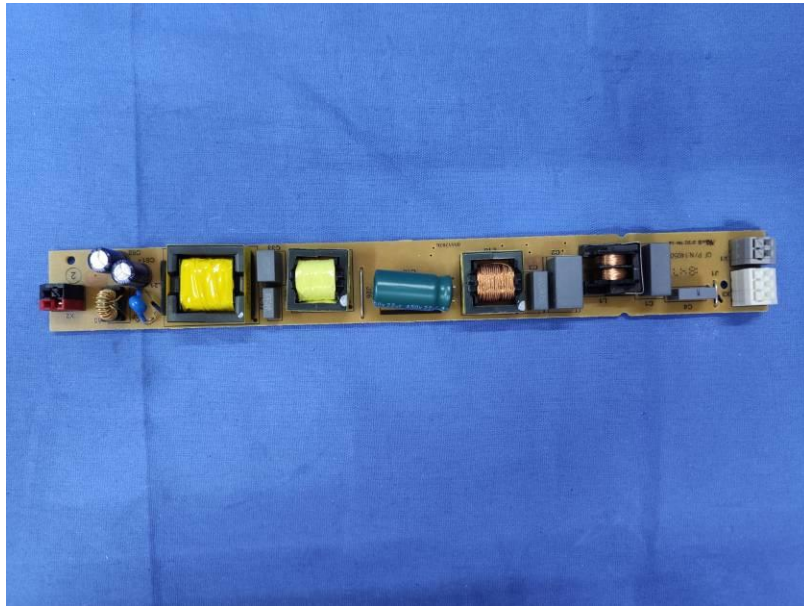


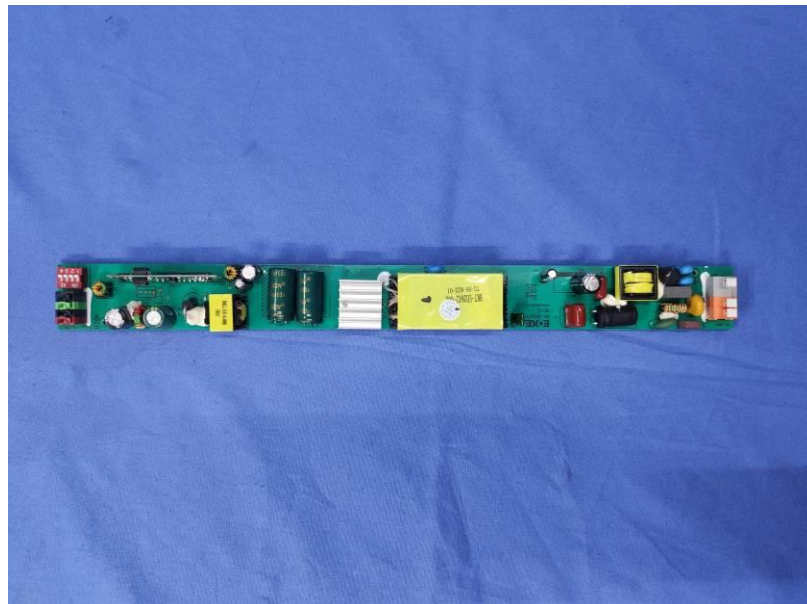


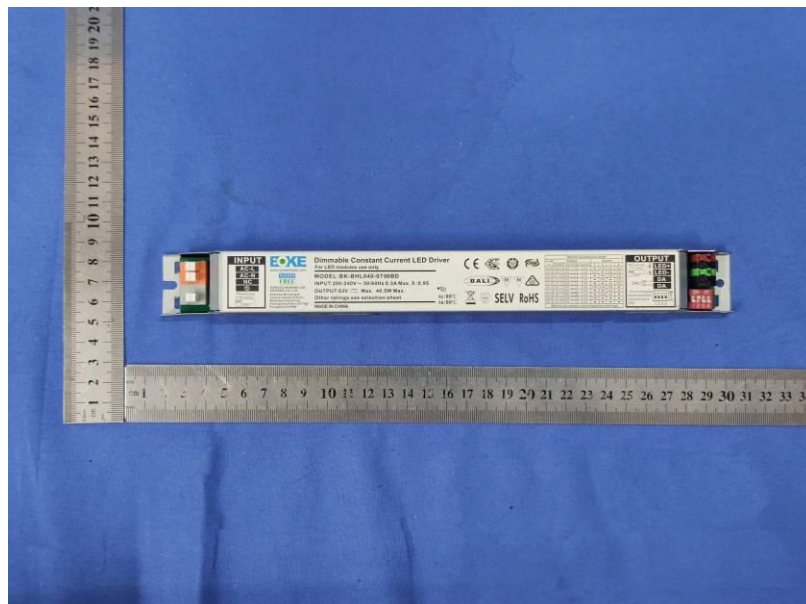
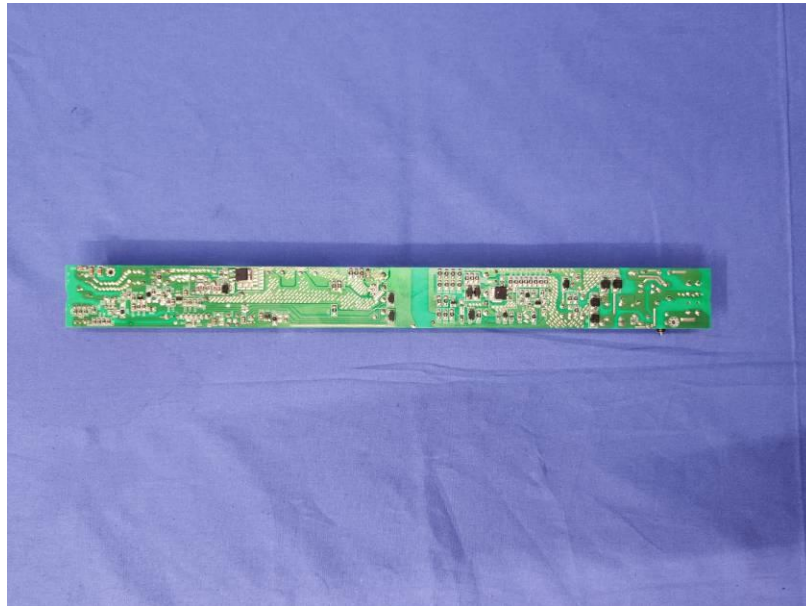


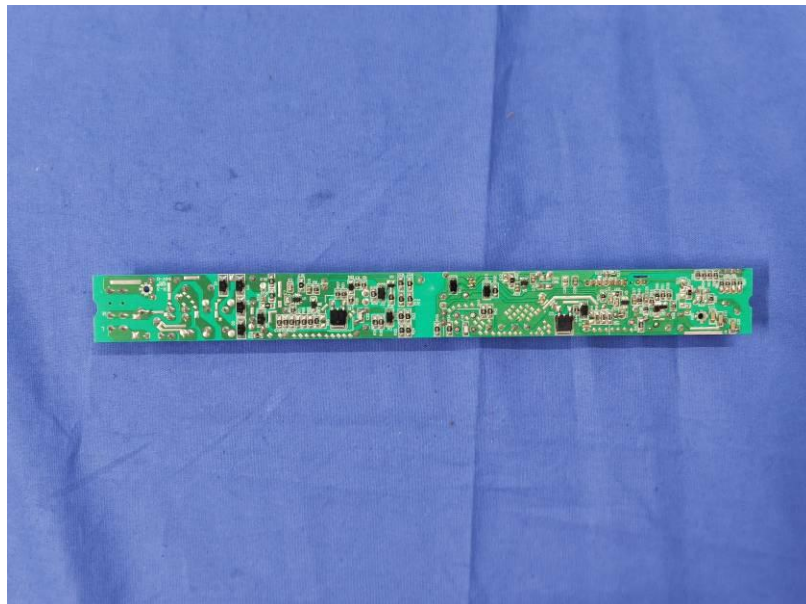
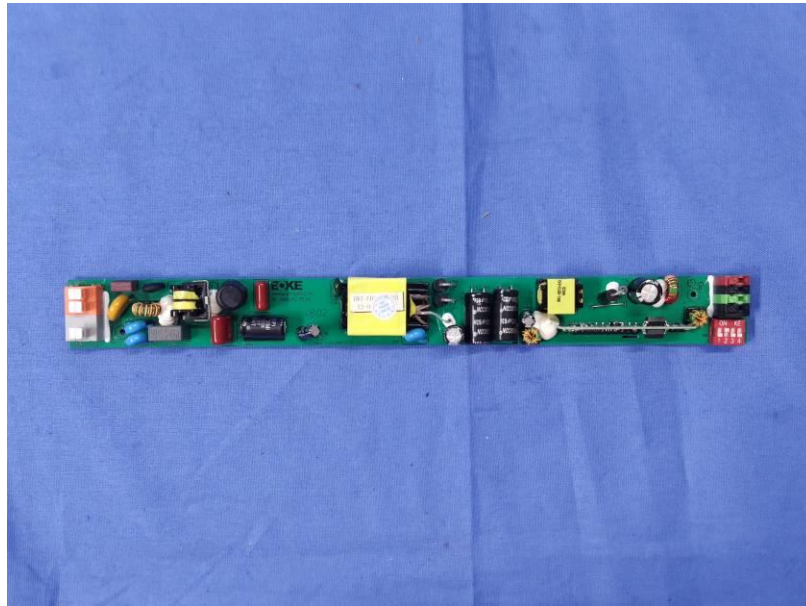


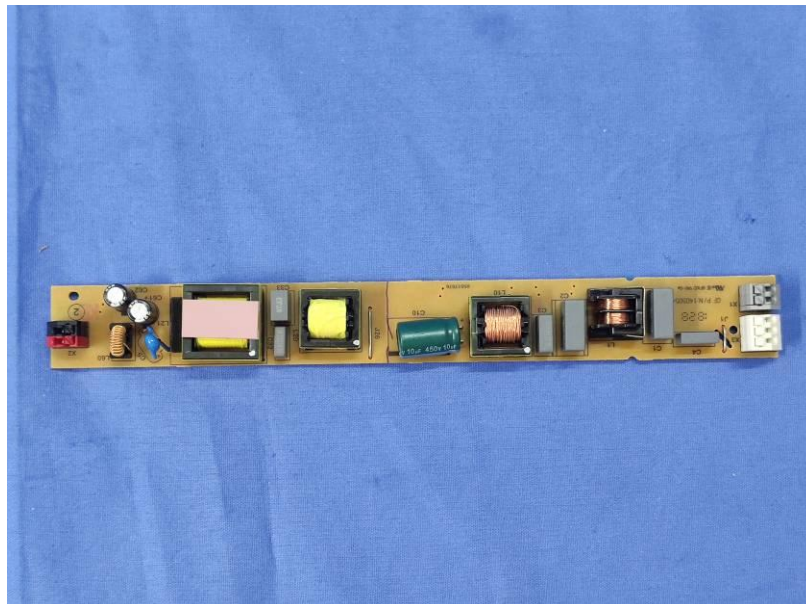


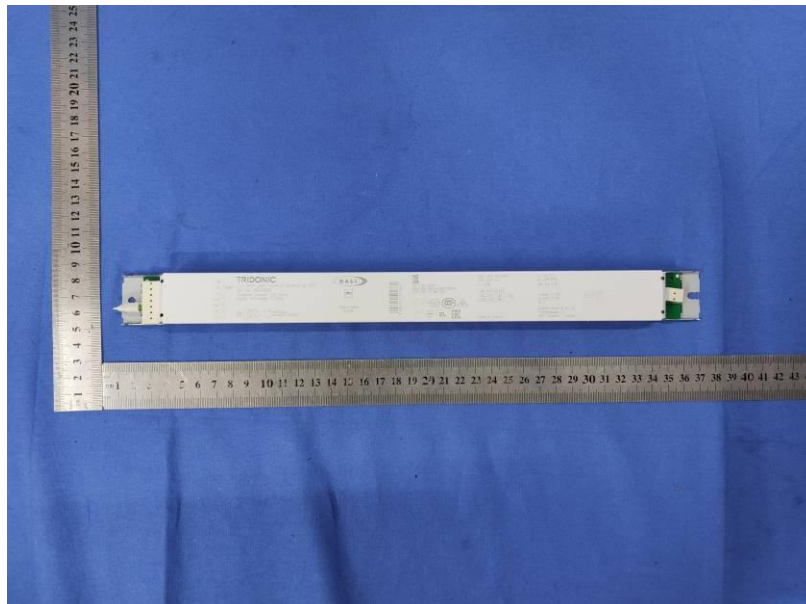
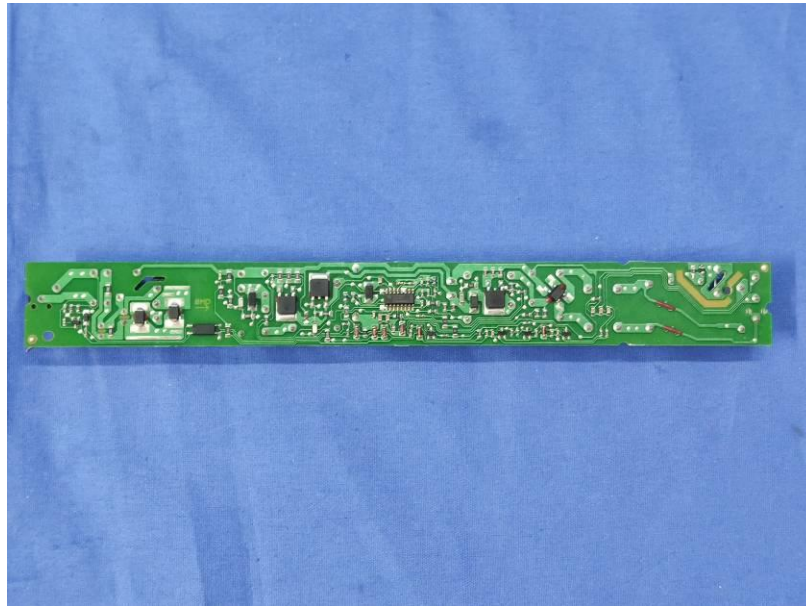


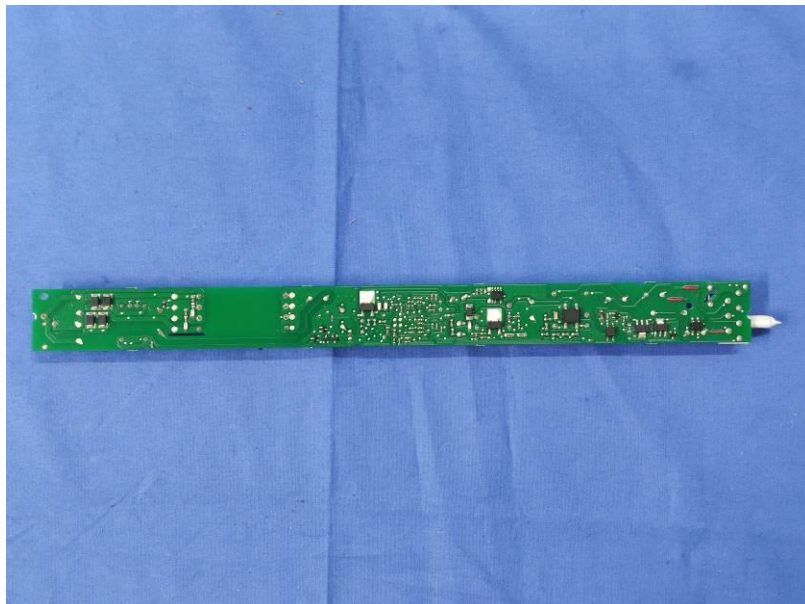
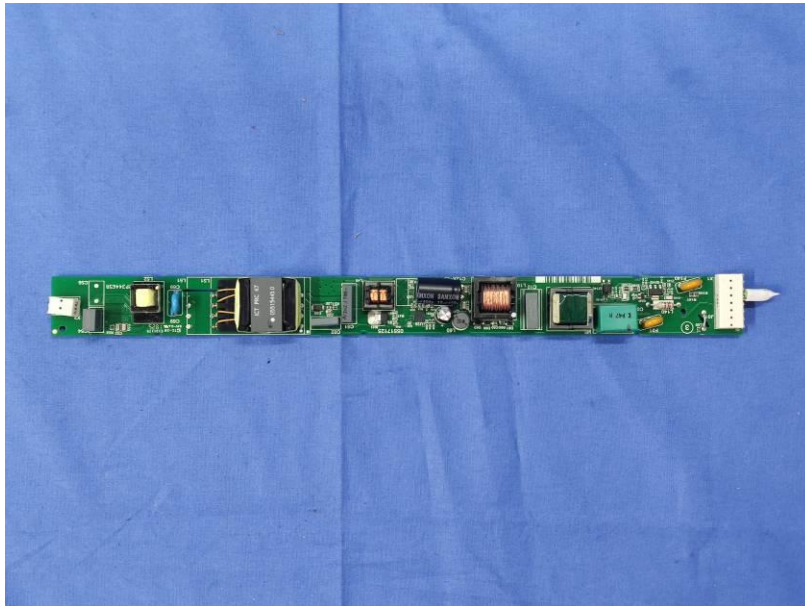


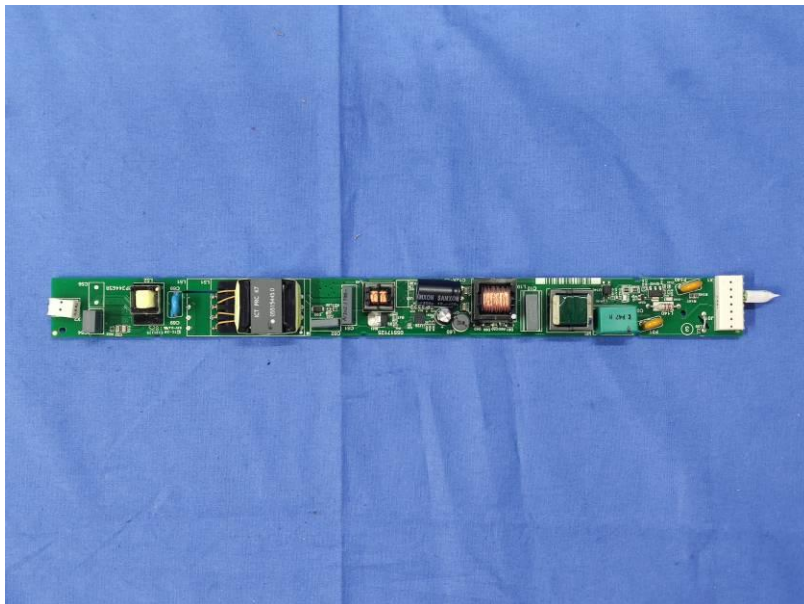
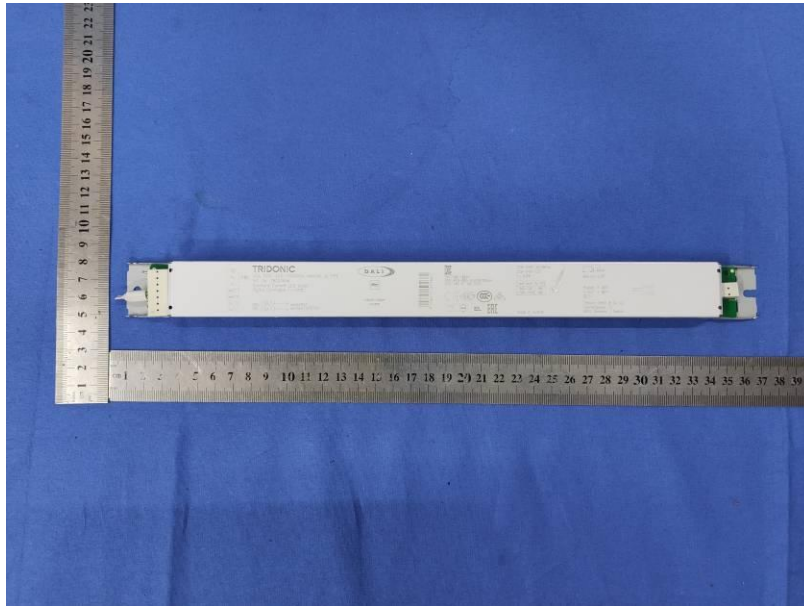


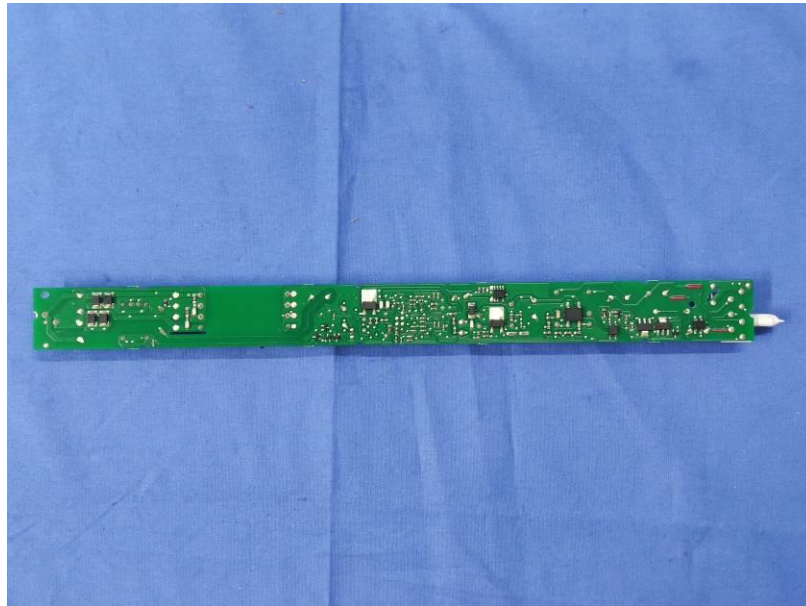


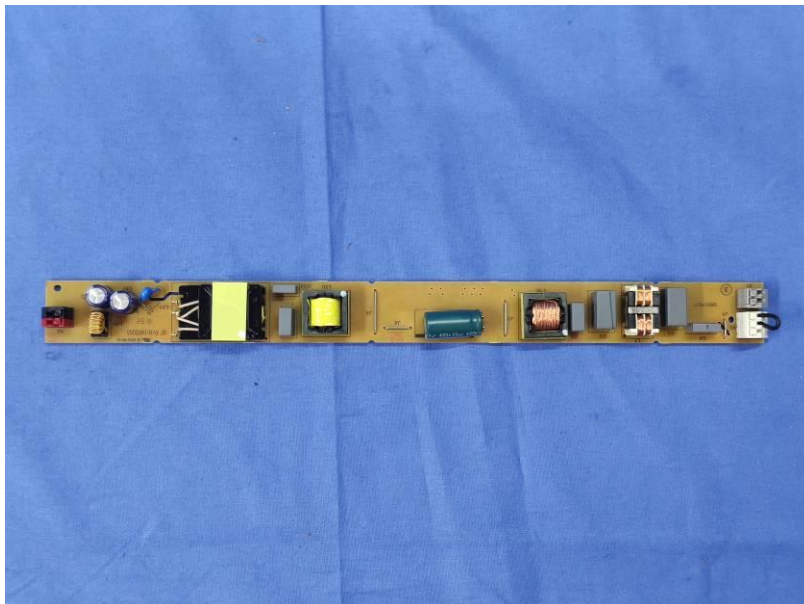
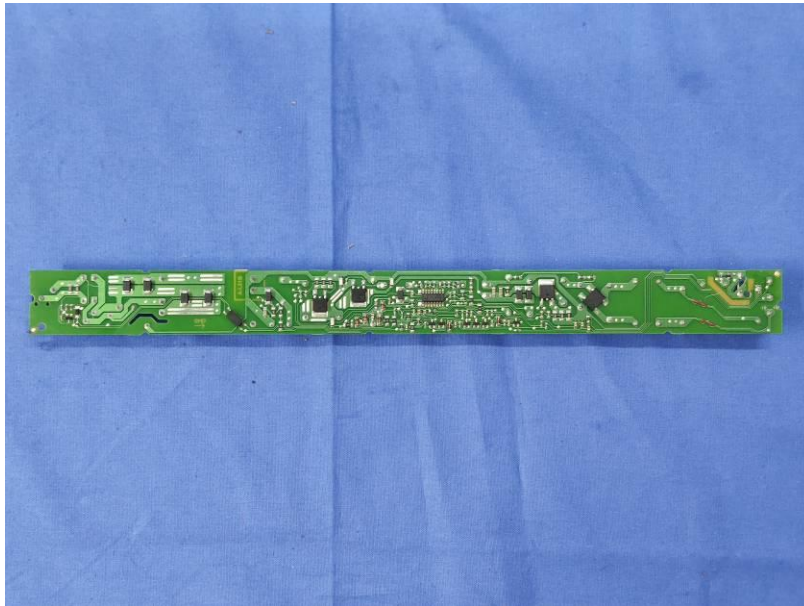


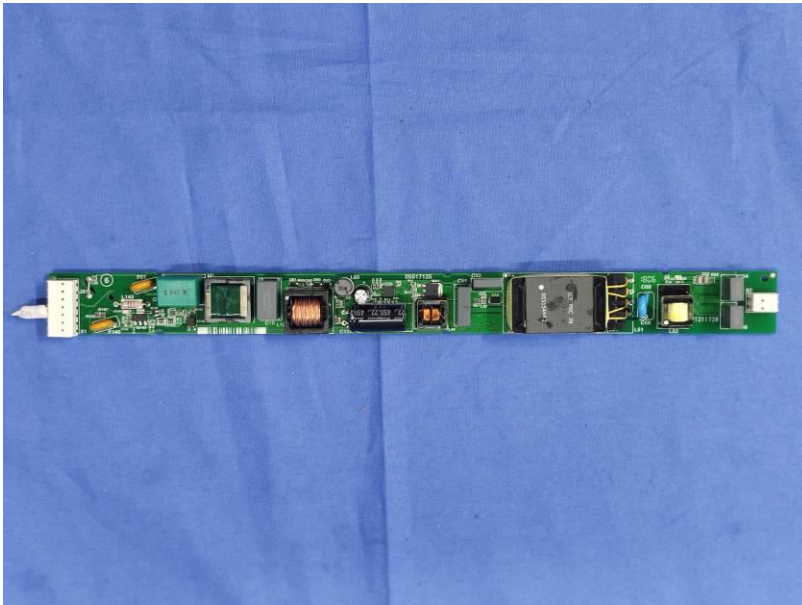
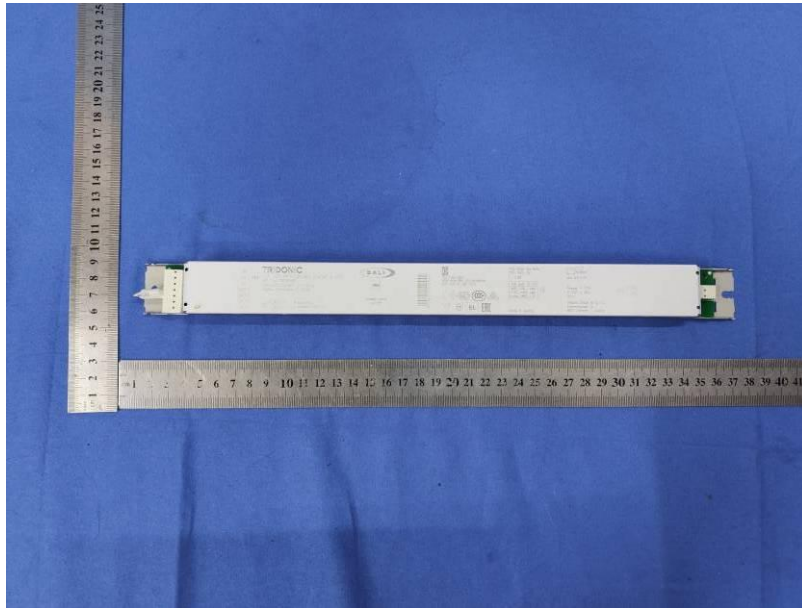


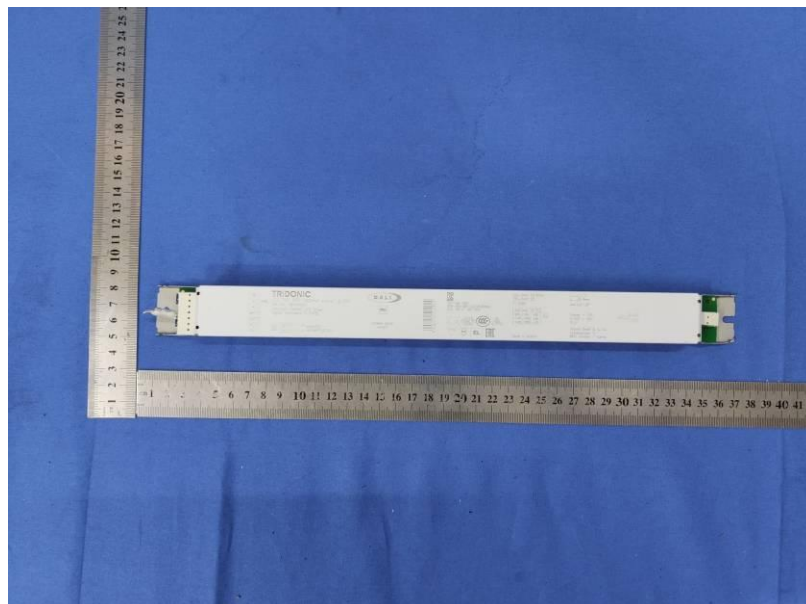
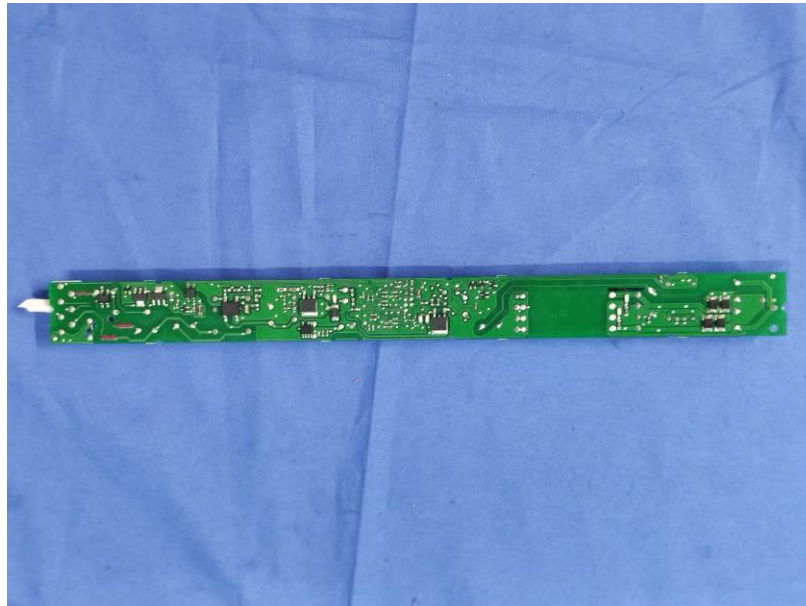


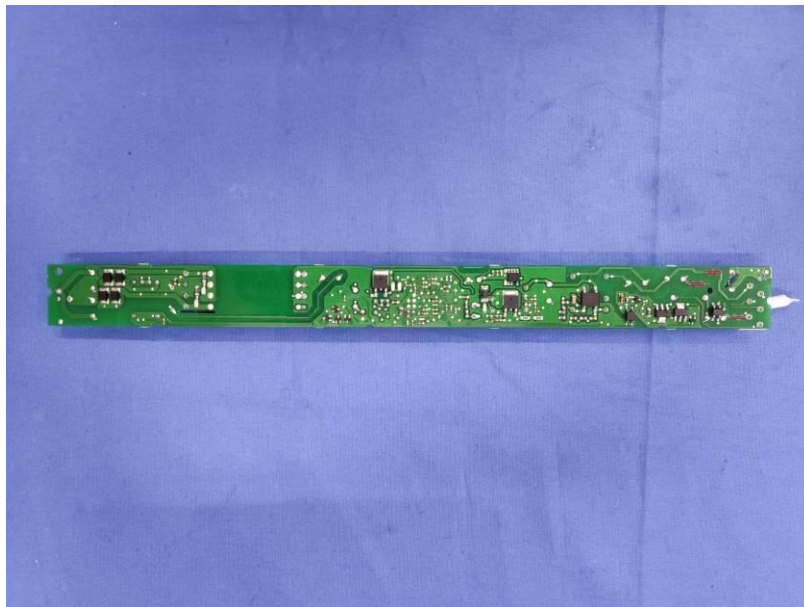
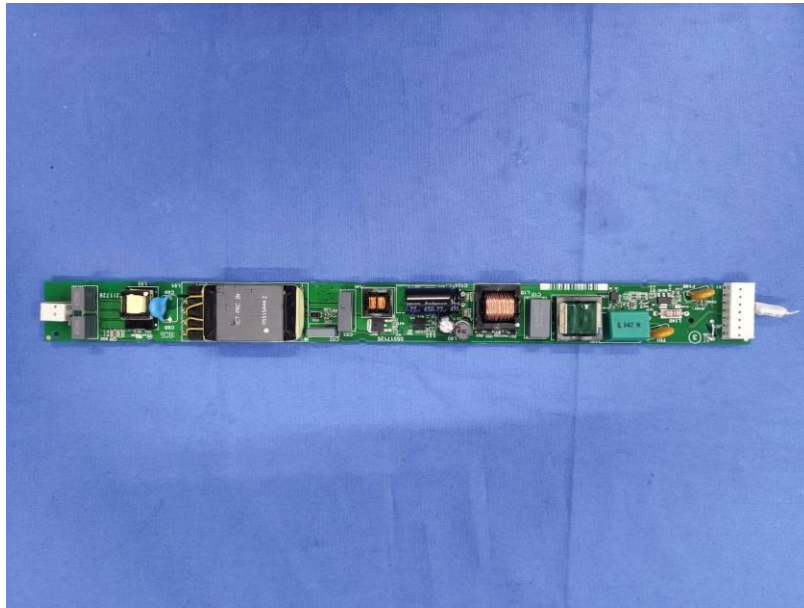












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