EN IEC 55015:2019/A11:2020
EN IEC 61000-3-2:2019/A1:2021
EN 61000-3-3:2013/A2:2021
EN IEC 61547:2023

TEST REPORT

For

LED Stadium Light

MODEL NUMBER: See model list on page 8 for details

REPORT NUMBER: E01A24060704E00301

ISSUE DATE: November 15, 2024

Prepared for

DONGUAN SENSE LIGHTING TECHNOLOGY CO., LTD
No 6, Shengxing Street, ChangAn Town, DongGuan City, Guangdong,
PEOPLE'S REPUBLIC OF CHINA

Prepared by

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This report is based on a single evaluation of the submitted sample(s) of the above mentioned product, it does not imply an assessment of the production of the products. This report shall not be reproduced, except in full, without the written approval of Guangdong GTG Testing Technology Co., Ltd.

Revision History

Rev.	Issue Date	Revisions	Revised By
V0	November 15, 2024	Initial Issue	

Summary of Test Results

Emission			
Standard	**Test Item**	**Limit**	**Result**
EN IEC 55015:2019/A11:2020	Conducted emission (AC or DC electric power supply)	Clause 4.3	Pass
	Conducted emission (Wired network or Local wired ports)	Clause 4.3, 4.4	Pass
	Radiated Emission (30MHz to 1GHz)	Clause 4.5.3	Pass
	Radiated Emission (9 kHz to 30 MHz 2m loop)	Clause 4.5.2	Pass
EN IEC 61000-3-2:2019/A1:2021	Harmonic Current Emission	Clause 7	Pass
EN 61000-3-3:2013/A2:2021	Voltage fluctuations and flicker	Clause 5	Pass

Immunity				
Basic Standard	**Test Item**	**Test Specification**	**Criteria**	**Result**
IEC 61000-4-2:2008	Electrostatic Discharge	Contact +/- 4 kV; Air +/- 2 kV;+/- 4 kV;+/- 8 kV	B	Pass
IEC 61000-4-3:2006+A1:2007+A2:2010	Continuous RF electromagnetic field disturbances	3 V/m, 1 kHz, 80 % AM, 80 MHz-1000 MHz	A	Pass
IEC 61000-4-4:2004	Electrical fast transients burst (AC mains power ports)	+/- 1.0 kV 5/50 ns, 5 kHz	B	Pass
IEC 61000-4-4:2012	Electrical fast transients burst (Analogue/Digital data ports)	+/-0.5 kV 5/50 ns, 5 kHz	B	Pass
IEC 61000-4-5:2014+A1:2017	Surges (AC mains power ports)	refer to Clause 5.7 of the standard	C,B(emergency light)	Pass
IEC 61000-4-6:2013	Continuous induced RF disturbances (AC mains power ports)	150 kHz-80 MHz; 1 kHz 80 % AM, 3 V r.m.s.	A	Pass
	Continuous induced RF disturbances (Analogue/Digital data ports)	150 kHz-80 MHz; 1 kHz 80 % AM, 3 V r.m.s.	A	Pass
IEC 61000-4-11:2004+A1:2017	Voltage dips and interruptions (AC mains power ports)	Interruptions 0 %: 0.5 cycle; Dips 70 %: 10 cycles	B,B	Pass

*This test report is only published to and used by the applicant, and it is not for evidence purpose in China.
*The measurement result for the sample received is <Pass> according to <EN IEC 55015:2019/A11:2020, EN IEC 61000-3-2:2019/A1:2021, EN 61000-3-3:2013/A2:2021, EN IEC 61547:2023> when <Accuracy Method> decision rule is applied.

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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name:	DONGUAN SENSE LIGHTING TECHNOLOGY CO., LTD
Address:	No 6, Shengxing Street, ChangAn Town, DongGuan City, Guangdong, PEOPLE'S REPUBLIC OF CHINA

Manufacturer Information

Company Name:	Same as applicant
Address:	Same as applicant

Factory Information

Company Name:	Same as applicant
Address:	Same as applicant

EUT Information

Product Description:	LED Stadium Light
Model:	SWT-F01-300W, SWT-LH2-400W, SWT-MS2-600W, SWT-F01-900W, SWT-F01-1000W, SWT-F01-1600W
Series Model:	See model list on page 8 for details
Brand:	N/A
Sample Received Date:	August 29, 2024
Sample Status:	Normal
Sample ID:	A24060704 001, 002 003 004 005 006
Date of Tested:	September 5, 2024 to November 6, 2024

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
EN IEC 55015:2019/A11:2020	**Pass**
EN IEC 61000-3-2:2019/A1:2021	**Pass**
EN 61000-3-3:2013/A2:2021	**Pass**
EN IEC 61547:2023	**Pass**

Prepared By: Lucy Su

Lucy Su
Project Engineer

Checked By: Dyson Dai

Dyson Dai
Project Engineer

Approved By: Tiger Xu

Tiger Xu
Laboratory Supervisor

2. TEST METHODOLOGY

All tests were performed in accordance with the standard EN IEC 55015:2019/A11:2020, EN IEC 61000-3-2:2019/A1:2021, EN 61000-3-3:2013/A2:2021, EN IEC 61547:2023

3. FACILITIES AND ACCREDITATION

Test Location 1	Guangdong GTG Testing Technology Co., Ltd. 1-2/F., Building A, and 1/F., Building B, No.11, & Room 102, Unit 1, and Room 101 Unit 2, Building 1, No.9, Zongbu 2nd Road, Songshan Lake High-Tech Industrial Development Zone, Dongguan, Guangdong, China
Accreditation Certificate	A2LA (Certificate No.: 4422.01) Guangdong GTG Testing Technology Co., Ltd. has been assessed and proved to be in compliance with A2LA. FCC (FCC Designation No.: CN1230) Guangdong GTG Testing Technology Co., Ltd. has been recognized to perform compliance testing on equipment subject to Supplier's Declaration of Conformity (SDoC) and Certification rules ISED (Company No.: 22768) Guangdong GTG Testing Technology Co., Ltd. has been registered and fully described in a report filed with ISED. The Company Number is 22768 and the test lab Conformity Assessment Body Identifier (CABID) is CN0079.

Note: All tests measurement facilities use to collect the measurement data except Radiated Immunity & Conducted Immunity are located at 1-2/F., Building A, and 1/F., Building B, No.11, & Room 102, Unit 1, and Room 101 Unit 2, Building 1, No.9, Zongbu 2nd Road, Songshan Lake High-Tech Industrial Development Zone, Dongguan, Guangdong, China.

Test Location 2	Guangdong Global Testing Technology Co., Ltd. Room 101-105 & 203-210, Building 1, No. 2, Keji 8th Road, Songshan Lake Park, Dongguan, Guangdong, China
Accreditation Certificate	A2LA (Certificate No.: 6947.01) Guangdong Global Testing Technology Co., Ltd. has been assessed and proved to be in compliance with A2LA. FCC (FCC Designation No.: CN1343) Guangdong Global Testing Technology Co., Ltd. has been recognized to perform compliance testing on equipment subject to Supplier's Declaration of Conformity (SDoC) and Certification rules ISED (Company No.: 30714) Guangdong Global Testing Technology Co., Ltd. has been registered and fully described in a report filed with ISED. The Company Number is 30714 and the test lab Conformity Assessment Body Identifier (CABID) is CN0148.

Note: All tests measurement facilities use to collect Radiated Immunity & Conducted Immunity measurement data are located at Room 101-105 & 203-210, Building 1, No. 2, Keji 8th Road, Songshan Lake Park, Dongguan, Guangdong, China.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations and is traceable to recognized national standards.

4.2. MEASUREMENT UNCERTAINTY

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

Test Item	Measurement Frequency Range	K	U(dB)
Conducted emission (AC or DC electric power supply)	0.009 MHz - 30 MHz	2	3.35
Conducted emission (Wired network or Local wired ports)	0.15 MHz - 30 MHz (ANN)	2	3.2
	0.15 MHz - 30 MHz(Current Probe)	2	2.63
Radiated Emission (30MHz to 1GHz)	30 MHz -1 GHz	2	4.33
Radiated Emission (9 kHz to 30 MHz 2m loop)	0.009 MHz - 30 MHz	2	2.54
Note1: This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of k=2.			
Note 2: According to the standard CISPR 16-4-2, the MU for the Conducted emissions from the AC mains power ports using AMN should not exceed 3.8 in range of 9kHz to 150kHz and 3.4 in range of 150kHz to 30MHz. We have considered the test results containing the value of Ulab (in dB) for the measurement instrumentation actually used for the measurements.			

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT Name		LED Stadium Light
Model		SWT-F01-300W, SWT-LH2-400W, SWT-MS2-600W, SWT-F01-900W, SWT-F01-1000W, SWT-F01-1600W
Series Model		See Model list
Model Difference		That product has different rated power and LED drivers
Ratings		Input: AC 100-240V, 50/60Hz, ta: 45°C, IP66, Class I Power: See model list
Power Supply	AC	230V/50Hz

Model list

Model	Rated Power (W)	LED driver & quantity (pcs)	LED module quantity (pcs)	LED	Weight (kg)	Size (L*W*H mm)	Max. projected area(m^2)
Series 1							
SWT-F01-300W	300	EUM-320S250MG	1	1.LUXEON 5050 2.LUXEON HL2X	8.5	560*153*373	0.086
SWT-F01-400W	400	EUM-480S420MG	1				
SWT-F01-600W	600	EUM-680S560MG	2		20.3	601*468*438	0.281
SWT-F01-800W	800	EUM-880S700MG	2				
SWT-F01-900W	900	EUM-880S700MG	3		25.1	601*564*498	0.339
SWT-F01-1000W	1000	SUM-1K0S840MG	3				
SWT-F01-1200W	1200	SUM-1K5S12AMG	3				
SWT-F01-1500W	1500	SUM-1K5S12AMG	4		30	601*744*556	0.447
SWT-F01-1600W	1600						
Series 2							
SWT-MS2-500W	500	EUM-480S420MG	**2**	1.LUXEON 5050 2.LUXEON HL2X	18.6	630*380*432	0.272
SWT-MS2-600W	600	EUM-680S560MG					
SWT-MS2-750W	750	EUM-880S700MG	3		21	630*520*432	0.327
SWT-MS2-900W	900	EUM-880S700MG					

SWT-MS2-1000W	1000	SUM-1K0S840MG	4		23.7	630*660*432	0.415
SWT-MS2-1200W	1200	SUM-1K5S12A MG					
SWT-MS2-1250W	1250	SUM-1K5S12A MG	5		28.3	630*766*534	0.482
SWT-MS2-1500W	1500	SUM-1K5S12A MG	6		31	630*906*537	0.57
Series 3							
SWT-LH2-400W	400	EUM-480S420MG	1	LUXEON 5050	21	467*504*593	0.298
SWT-LH2-500W	500	EUM-480S420MG					
SWT-LH2-600W	600	EUM-680S560MG					
SWT-LH2-800W-S	800	EUM-880S700MG	2		32.26	728*510*593	0.431
SWT-LH2-1000W-S	1000	SUM-1K0S840MG					
SWT-LH2-1200W-S	1200	SUM-1K5S12AMG					
SWT-LH2-800W-H	800	EUM-880S700MG	2		32.26	975*466*844	0.822
SWT-LH2-1000W-H	1000	SUM-1K0S840MG					
SWT-LH2-1200W-H	1200	SUM-1K5S12AMG					
Series 4							
SWT-ME400W	400	EUM-480S420MG	1	LUXEON 5050	18.9	511.7*470.2*414.2	0.24
SWT-ME500W	500	EUM-480S420MG					
SWT-ME600W	600	EUM-680S560MG					

Model list for LED drivers:

Model No.	Rated input	Rated output	ta; tc	Remark	Certificate
EUM-320S250MG	100-240Vac; 50/60Hz; 3,7A	64-183Vdc; 2,5A; 320W; Uout:230Vdc		Independent; CC; Non-SELV; IP66&IP67	
Remark: Reinforced insulation was provided between input circuit and output circuit, input circuit and dimming circuit; output circuit and dimming circuit.					
EUM-480S420MG	100-277Vac; 50/60Hz; 5,0A	57-152Vdc; Max.4,2A; 480W; Uout:190Vdc		Independent; CC; Non-SELV; IP66&IP67	
Remark: Reinforced insulation was provided between input circuit and output circuit, input circuit and dimming circuit; output circuit and dimming circuit.					
EUM-680S560MG	100-277Vac; 50/60Hz; 6,9A	60,7-163Vdc; Max.5,6A; 680W; Uout:200Vdc		Independent; CC; Non-SELV; IP66&IP67	
Remark: Reinforced insulation was provided between input circuit and output circuit, input circuit and dimming circuit; output circuit and dimming circuit.					
EUM-880S700MG	100-277Vac; 50/60Hz; 7,6A	63-180Vdc; 7,0A; 880W; Uout:210Vdc		Independent; CC; Non-SELV; IP66&IP67	
Remark: Reinforced insulation was provided between input circuit and output circuit, input circuit and dimming circuit; output circuit and dimming circuit.					
SUM-1K0S840MG	100-277Vac; 50/60Hz; 7,5A	84-149Vdc; Max.8,4A; 1000W; Uout:170Vdc		Independent; CC; Non-SELV; IP66&IP67	
Remark: Reinforced insulation was provided between input circuit and output circuit, input circuit and dimming circuit; output circuit and dimming circuit.					
SUM-1K5S12AMG	100-240Vac; 50/60Hz; 9,3A	84-150Vdc; 12,5A; 1500W; Uout:170Vdc		Independent; CC; Non-SELV; IP66&IP67	
Remark: Reinforced insulation was provided between input circuit and output circuit, input circuit and dimming circuit; output circuit and dimming circuit.					

5.2. TEST MODE

Test Mode	Description
M01	Max Lighting (SWT-F01-300W, with Driver EUM-320S250MG)
M02	Min Lighting (SWT-F01-300W, with Driver EUM-320S250MG)
M03	Max Lighting (SWT-LH2-400W, with Driver EUM-480S420MG)
M04	Min Lighting (SWT-LH2-400W, with Driver EUM-480S420MG)
M05	Max Lighting (SWT-MS2-600W, with Driver EUM-680S560MG)
M06	Min Lighting (SWT-MS2-600W, with Driver EUM-680S560MG)
M07	Max Lighting (SWT-F01-900W, with Driver EUM-880S700MG)
M08	Min Lighting (SWT-F01-900W, with Driver EUM-880S700MG)
M09	Max Lighting (SWT-F01-1000W, with Driver SUM-1K0S840MG)
M10	Min Lighting (SWT-F01-1000W, with Driver SUM-1K0S840MG)
M11	Max Lighting (SWT-F01-1600W, with Driver SUM-1K5S12A MG)
M12	Min Lighting (SWT-F01-1600W, with Driver SUM-1K5S12A MG)
M13	Mid Lighting (For All test models)
M14	Handing Mode (For All test models)

5.3. MONITORING OF EUT FOR ALL IMMUNITY TEST

Image	Monitor the lighting status

5.4. SUPPORT UNITS FOR SYSTEM TEST

The EUT has been tested as an independent unit

6. MEASURING EQUIPMENT AND SOFTWARE USED

Conducted Emission Measurement (Shielded room A-1 8*4*3.3)

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
LISN	ROHDE&SCHWARZ	ENV216	101413	2024-05-09	2025-05-08
CURRENT PROBE	ROHDE&SCHWARZ	EZ-17	101602	2024-05-09	2025-05-08
EMI Test Receiver	ROHDE&SCHWARZ	ESCI	101358	2024-05-09	2025-05-08
Test Software	Farad	EZ-EMC 1.1.4.2	N/A	N/A	N/A

Test Equipment of Radiated Emission (9 kHz to 30 MHz)

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
3 Loop Antenna	CD	LASM-2	N/A	2024-08-14	2025-08-15
EMI Test Receiver	ROHDE&SCHWARZ	ESCI	101358	2024-05-07	2025-05-08
Shielded Room A-1	Chengyu	8m*4m*3.3m	N/A	2024-11-20	2025-11-21
Test Software	Farad	EZ-EMC 1.1.4.2	N/A	N/A	N/A

3m Radiated Emission Measurement 30M-1G (Chamber A-2)

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
EMI Test Receiver	Rohde & Schwarz	ESCI	100302	2024-05-09	2025-05-08
Pre-Amplifier	Anritsu	MH648A	M57886	2024-05-09	2025-05-08
Bilog Antenna	Schwarzbeck	VULB9163	VULB9163-1290	2021-11-11	2024-11-11
Test Software	Farad	EZ-EMC 1.1.4.2	N/A	N/A	N/A

Harmonics & Flickers

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
Harmonic and Flicker Analyzer	EMC PARTNER	Harmonics 1000-1P 230V	0241	2024-05-10	2025-05-10

EFT/Burst Immunity Testing

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
Electrical Intelligent Transient Generator	EVERFINE	EMS61000-4B	G114921CA1341115	2024-05-09	2025-05-08

ESD Immunity Testing

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
ESD Simulator	TESEQ	NSG437	336	2024-05-10	2025-05-10

Surge Immunity Testing

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
Immunity Teat System	EMC PARTNER	IMU3000 S-T	105684-2060	2024-05-09	2025-05-08
Signal line coupled decoupling network	EMC PARTNER	CDN-UTP8 ED3	1558	2024-05-09	2025-05-08

Voltage Interruption/Dips Immunity Testing

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
Voltage Dips and Interruptions Generator	EVERFINE	EMS61000-11K	G113317CA 8341117	2024-05-09	2025-05-08

Test Equipment of Continuous RF electromagnetic field disturbances Immunity Testing
(Test Location 2: Guangdong Global Testing Technology Co., Ltd.)

Test Equipment of Continuous RF electromagnetic field disturbances					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Due Date**
Stacked Log-Per-Broadband Antenna	Schwarzbeck	STLP 9129	170	N/A	N/A
Power amplifier	MiCOTOP	MPA-80-1000-500	MPA220933 6	9/13/2024	9/12/2025
Power amplifier	MiCOTOP	MPA-1000-6000-100	MPA220933 7	9/13/2024	9/12/2025
EPM Series Power Meter	Keysight	N1914A	MY53240003	9/14/2024	9/13/2025
Average Power Sensor	Keysight	E9304A	MY41498925	9/14/2024	9/13/2025
Average Power Sensor	Keysight	E9304A	MY41497454	9/14/2024	9/13/2025
EXG Analog Signal Generator	Keysight	N5171B	MY61252624	9/14/2024	9/13/2025
Field Probe	Narda	EP 601	811ZX11137	9/14/2024	9/13/2025
Microphone kit	Magasig	MPA 663	220803075	9/14/2024	9/13/2025
Test Software for RS	HzEMC	FASLAB-RS	V2.7.2.3	N/A	N/A

Test Equipment of Continuous induced RF disturbances Immunity Testing
(Test Location 2: Guangdong Global Testing Technology Co., Ltd.)

Test Equipment of Continuous induced RF disturbances (AC mains power ports)					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Due Date**
EXG Analog Signal Generator	KEYSIGHT	N5171B	MY61252670	9/14/2024	9/13/2025
EPM Series Power Meter	KEYSIGHT	N1914A	MY50000188	9/14/2024	9/13/2025
Power Sensor	KEYSIGHT	E9304A	MY51180004	9/14/2024	9/13/2025
Power Sensor	KEYSIGHT	E9304A	MY51120019	9/14/2024	9/13/2025
Power Amplifier	AR	AR/100A 400M	305558	9/14/2024	9/13/2025
Double directional coupler	XIANGHUA	DDT0-1-40	221008732	9/13/2024	9/12/2025
COUPLING AND DECOUPLING NETWORK	Schwarzbeck	CDN M2/M3PE 16A	148	9/14/2024	9/13/2025
COUPLING AND DECOUPLING NETWORK	Schwarzbeck	CDN T8	53	9/14/2024	9/13/2025
Electromagnetic injection pliers	3ctest	EM CL100	EM C22060625	9/14/2024	9/13/2025
6 db attenuator	Huaxiang	WDTS	220831156	9/13/2024	9/12/2025
Microphone kit	Magasig	MPA 663	220803075	9/14/2024	9/13/2025
Signal conditioner	Magasig	PM 0083	5000718022 0009	9/14/2024	9/13/2025
Test Software for CS	HzEMC	FASLAB-CS	V2.7.2.1	N/A	N/A

7. EMISSION TEST

7.1. CONDUCTED EMISSION (AC OR DC ELECTRIC POWER SUPPLY)

LIMITS

FREQUENCY (MHz)	Limits dB(μV)	
	Quasi-peak	Average
0.009-0.05	110	--
0.05-0.15	90-80	--
0.15 -0.5	66 - 56 *	56- 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.09 MHz
Stop Frequency	30 MHz
IF Bandwidth	200Hz (from 9kHz to 150kHz) and 9kHz (from 150kHz to 30MHz)

TEST PROCEDURE

a. The EUT was placed on the top of a rotating table 0.8 meters above the horizontal ground plane and being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

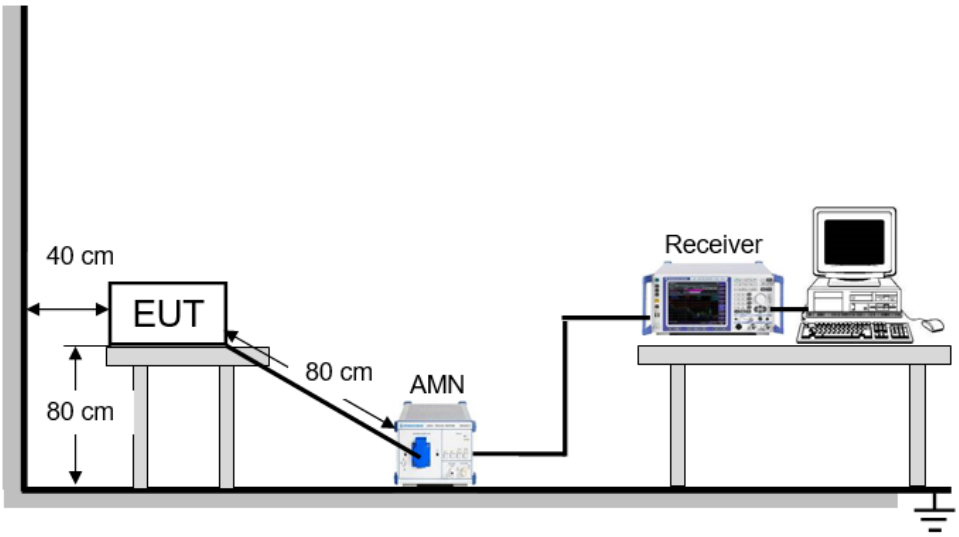
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

d. Cables of hand-operated devices, such as keyboards and mice, shall be placed as for normal used.

e. LISN at least 80 cm from nearest part of EUT chassis.

f. Conducted emissions from the EUT measured in the frequency range between 0.09 MHz and 30MHz using CISPR Quasi-Peak and average detector mode.

TEST SETUP



TEST ENVIRONMENT

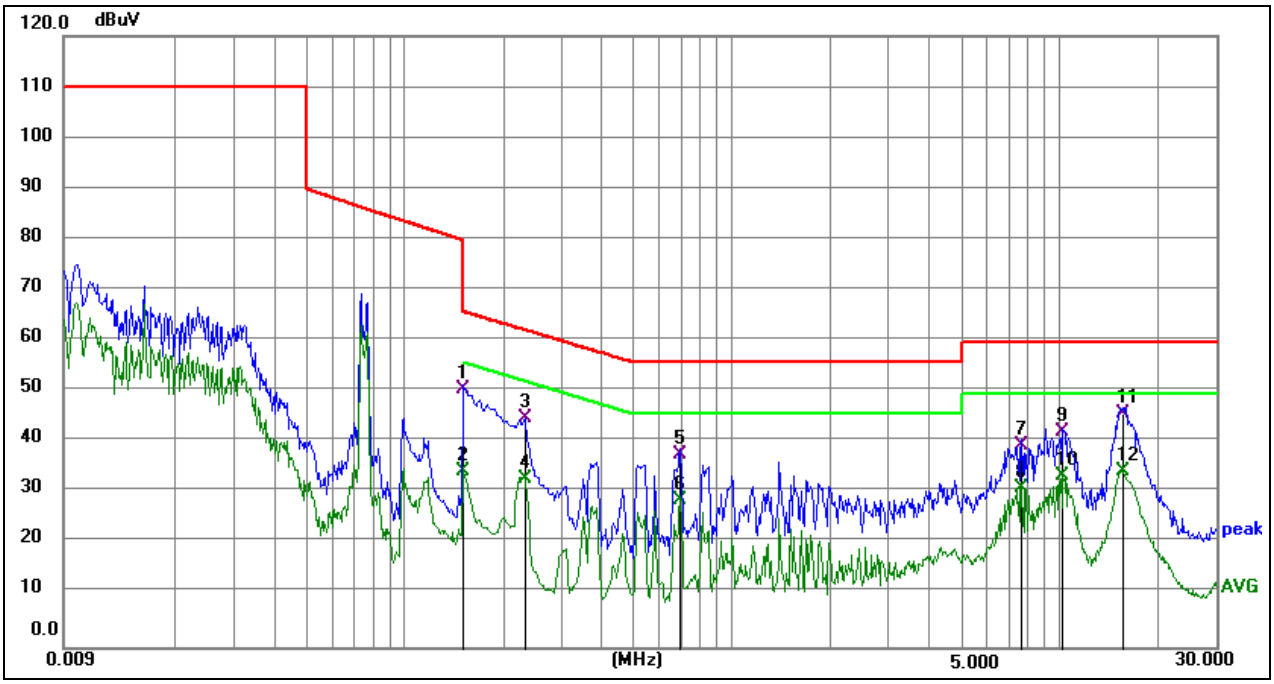
Temperature	22.9℃	Relative Humidity	53%
Atmosphere Pressure	101kPa		

TEST MODE

Pre-test Mode:	M01 ~ M12
Final Test Mode:	M01, M02, M03, M04, M05, M06, M07, M08, M09, M10, M11, M12

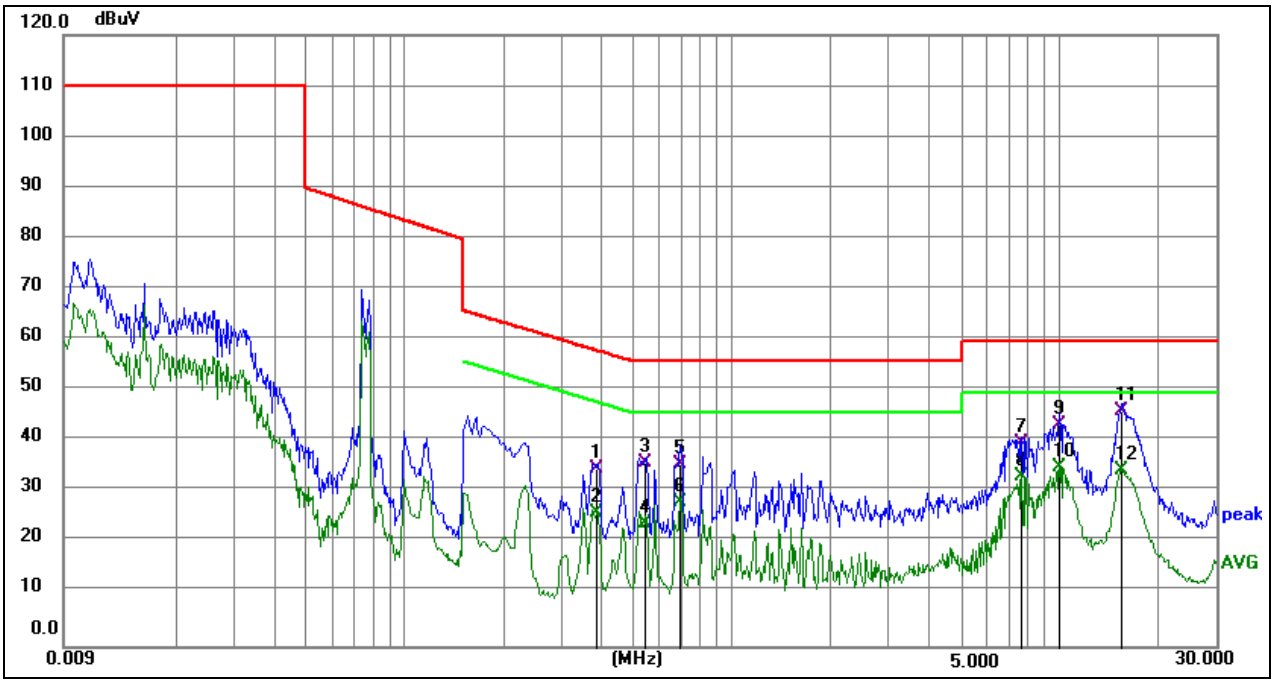
Note: All test modes had been tested, but only the worst data recorded in the report.

TEST RESULTS



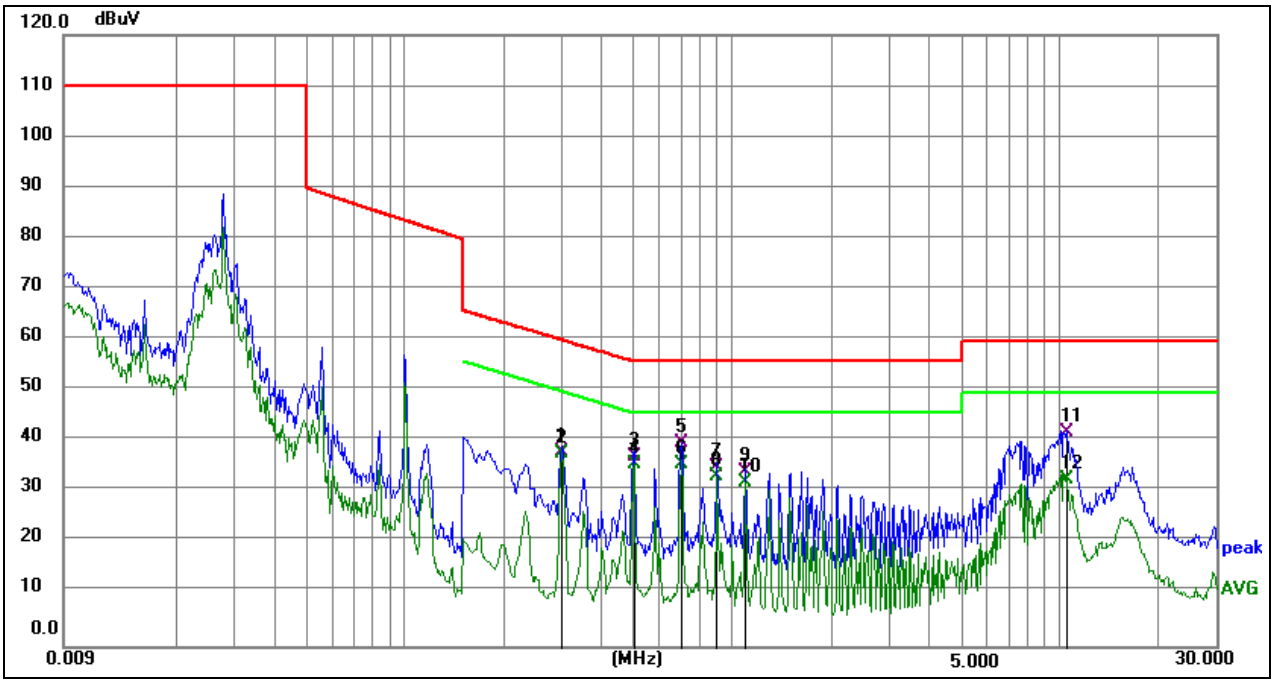
Phase: L1	Mode: M01

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1500	40.84	9.86	50.70	66.00	-15.30	QP
2	0.1500	24.85	9.86	34.71	56.00	-21.29	AVG
3	0.2310	35.17	9.83	45.00	62.41	-17.41	QP
4	0.2310	23.45	9.83	33.28	52.41	-19.13	AVG
5	0.6945	28.25	9.85	38.10	56.00	-17.90	QP
6	0.6945	19.30	9.85	29.15	46.00	-16.85	AVG
7	7.6560	30.13	9.77	39.90	60.00	-20.10	QP
8	7.6560	21.55	9.77	31.32	50.00	-18.68	AVG
9	10.2074	32.73	9.77	42.50	60.00	-17.50	QP
10	10.2074	24.13	9.77	33.90	50.00	-16.10	AVG
11	15.5534	36.05	10.05	46.10	60.00	-13.90	QP
12	15.5534	24.57	10.05	34.62	50.00	-15.38	AVG



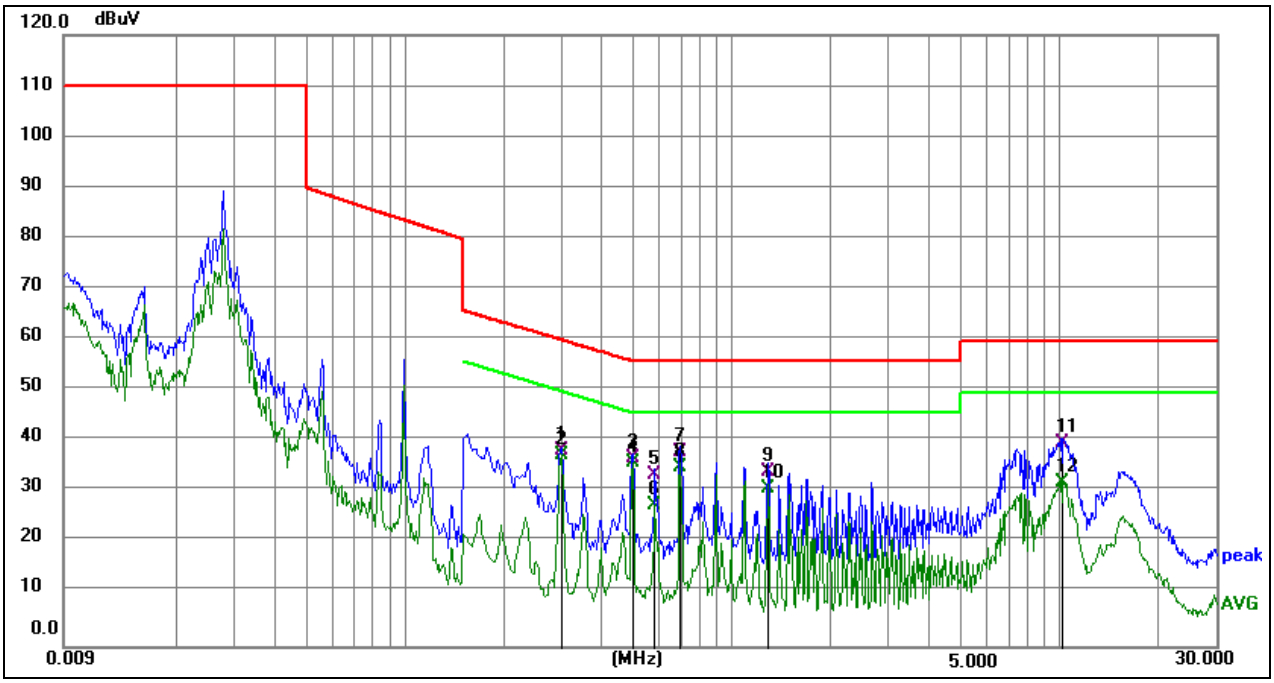
Phase: N	Mode: M01

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.3840	25.19	9.81	35.00	58.19	-23.19	QP
2	0.3840	16.58	9.81	26.39	48.19	-21.80	AVG
3	0.5370	26.25	9.85	36.10	56.00	-19.90	QP
4	0.5370	14.53	9.85	24.38	46.00	-21.62	AVG
5	0.6945	25.90	9.90	35.80	56.00	-20.20	QP
6	0.6945	18.67	9.90	28.57	46.00	-17.43	AVG
7	7.6604	29.64	10.46	40.10	60.00	-19.90	QP
8	7.6604	22.91	10.46	33.37	50.00	-16.63	AVG
9	9.9824	31.96	11.54	43.50	60.00	-16.50	QP
10	9.9824	23.65	11.54	35.19	50.00	-14.81	AVG
11	15.4725	34.62	11.68	46.30	60.00	-13.70	QP
12	15.4725	23.08	11.68	34.76	50.00	-15.24	AVG



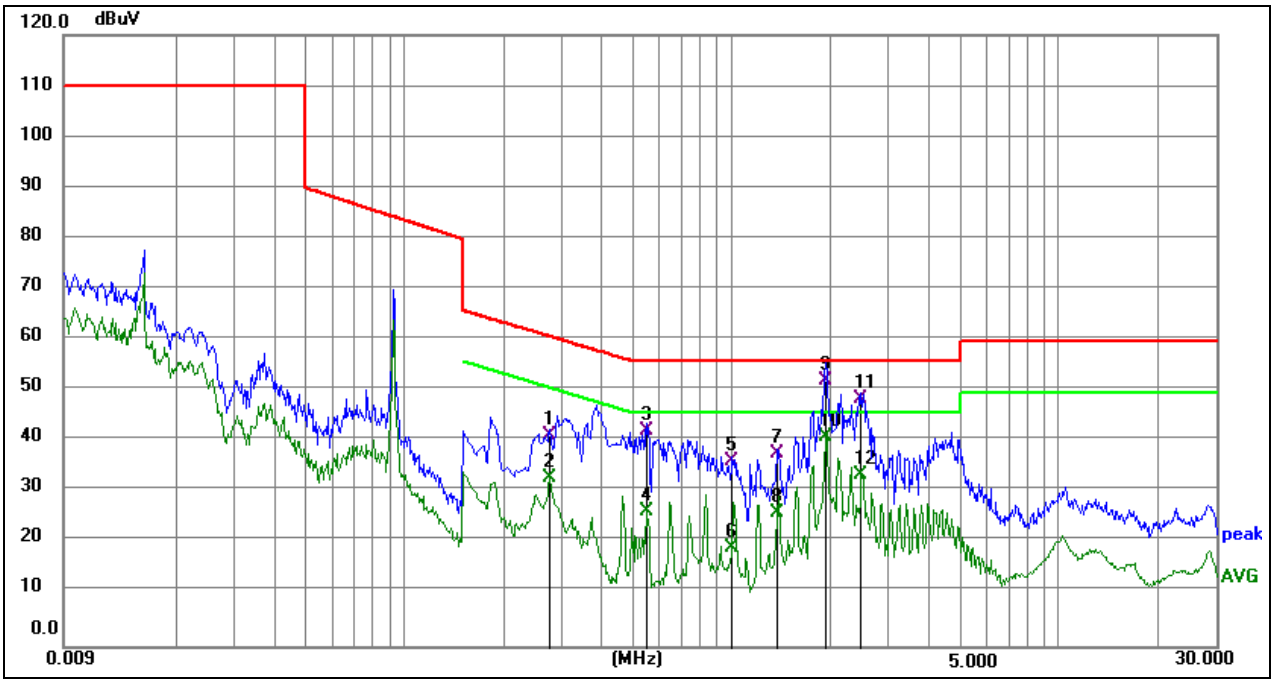
Phase: N	Mode: M02

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2983	28.53	9.87	38.40	60.29	-21.89	QP
2	0.2983	28.03	9.87	37.90	50.29	-12.39	AVG
3	0.5010	27.56	9.84	37.40	56.00	-18.60	QP
4	0.5010	26.10	9.84	35.94	46.00	-10.06	AVG
5	0.6990	30.20	9.90	40.10	56.00	-15.90	QP
6	0.6990	25.90	9.90	35.80	46.00	-10.20	AVG
7	0.8970	25.35	9.95	35.30	56.00	-20.70	QP
8	0.8970	23.51	9.95	33.46	46.00	-12.54	AVG
9	1.0994	24.36	9.94	34.30	56.00	-21.70	QP
10	1.0994	22.31	9.94	32.25	46.00	-13.75	AVG
11	10.4550	30.54	11.56	42.10	60.00	-17.90	QP
12	10.4550	21.43	11.56	32.99	50.00	-17.01	AVG



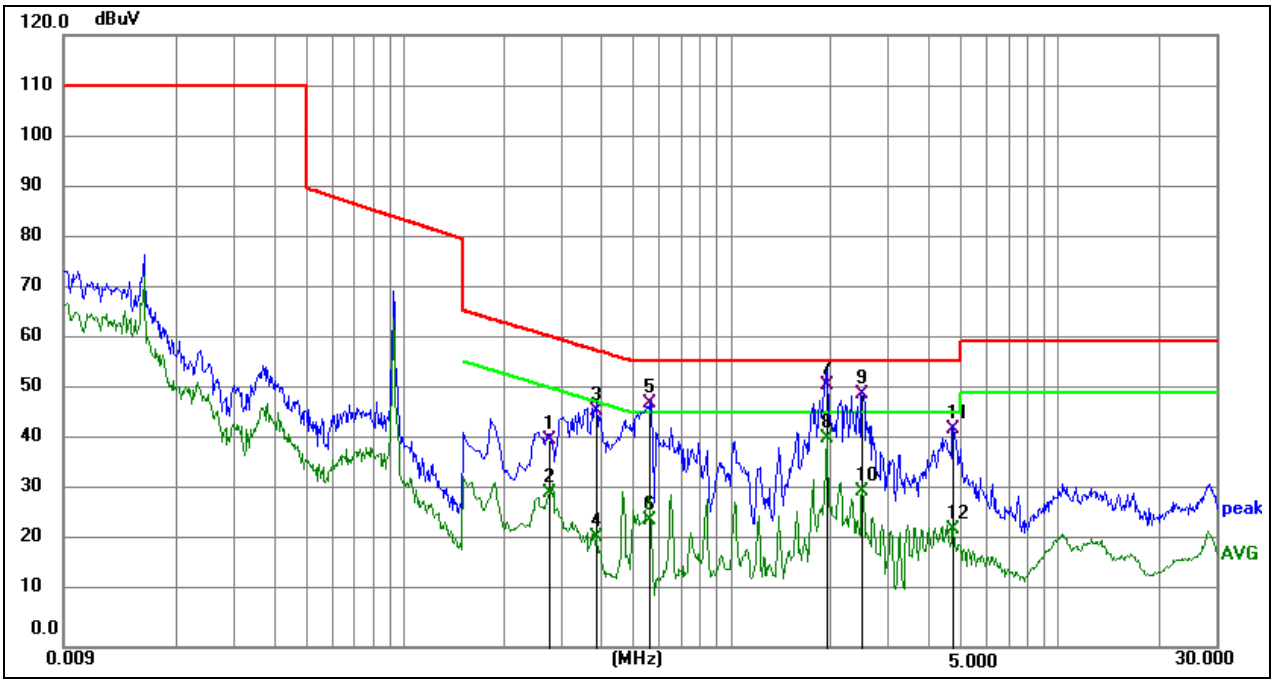
Phase: L1	Mode: M02

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2985	28.64	10.06	38.70	60.28	-21.58	QP
2	0.2985	27.64	10.06	37.70	50.28	-12.58	AVG
3	0.4965	27.26	9.84	37.10	56.06	-18.96	QP
4	0.4965	26.20	9.84	36.04	46.06	-10.02	AVG
5	0.5820	24.08	9.82	33.90	56.00	-22.10	QP
6	0.5820	17.92	9.82	27.74	46.00	-18.26	AVG
7	0.6945	28.35	9.85	38.20	56.00	-17.80	QP
8	0.6945	25.58	9.85	35.43	46.00	-10.57	AVG
9	1.2885	24.58	9.82	34.40	56.00	-21.60	QP
10	1.2885	21.15	9.82	30.97	46.00	-15.03	AVG
11	10.2165	30.33	9.77	40.10	60.00	-19.90	QP
12	10.2165	22.57	9.77	32.34	50.00	-17.66	AVG



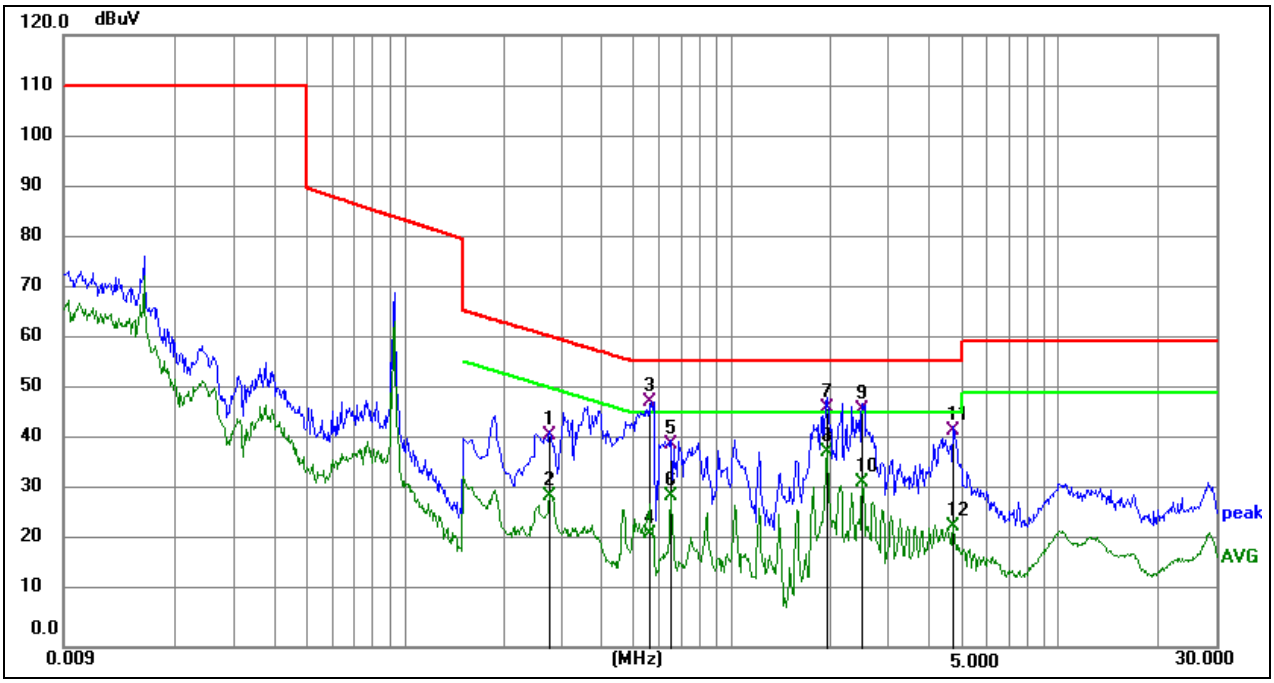
Phase: L1	Mode: M03

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2760	31.54	9.96	41.50	60.94	-19.44	QP
2	0.2760	23.19	9.96	33.15	50.94	-17.79	AVG
3	0.5460	32.47	9.83	42.30	56.00	-13.70	QP
4	0.5460	16.81	9.83	26.64	46.00	-19.36	AVG
5	1.0002	26.78	9.82	36.60	56.00	-19.40	QP
6	1.0002	9.74	9.82	19.56	46.00	-26.44	AVG
7	1.3740	28.18	9.82	38.00	56.00	-18.00	QP
8	1.3740	16.63	9.82	26.45	46.00	-19.55	AVG
9	1.9320	42.47	9.83	52.30	56.00	-3.70	QP
10	1.9320	31.52	9.83	41.35	46.00	-4.65	AVG
11	2.4810	38.88	9.82	48.70	56.00	-7.30	QP
12	2.4810	23.99	9.82	33.81	46.00	-12.19	AVG



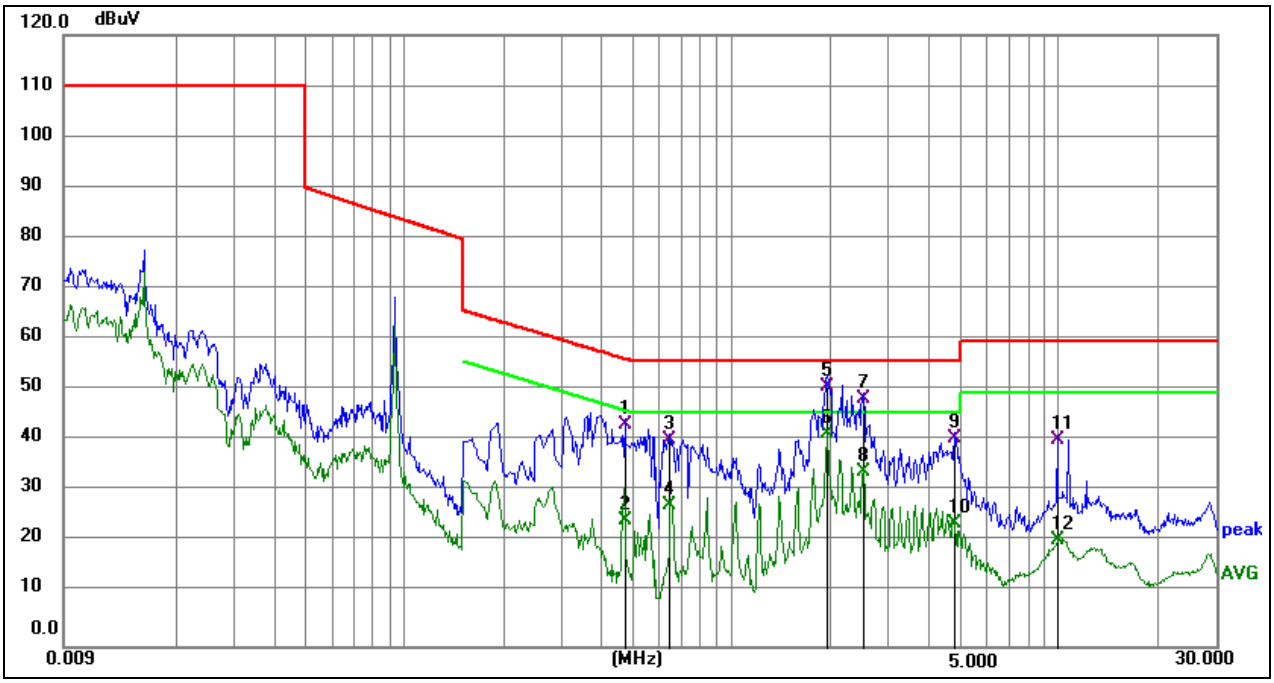
Phase: N	Mode: M03

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2760	30.64	9.86	40.50	60.94	-20.44	QP
2	0.2760	20.50	9.86	30.36	50.94	-20.58	AVG
3	0.3840	36.49	9.81	46.30	58.19	-11.89	QP
4	0.3840	11.74	9.81	21.55	48.19	-26.64	AVG
5	0.5639	37.85	9.85	47.70	56.00	-8.30	QP
6	0.5639	15.02	9.85	24.87	46.00	-21.13	AVG
7	1.9455	41.31	9.99	51.30	56.00	-4.70	QP
8	1.9455	30.98	9.99	40.97	46.00	-5.03	AVG
9	2.4990	39.61	9.99	49.60	56.00	-6.40	QP
10	2.4990	20.43	9.99	30.42	46.00	-15.58	AVG
11	4.7220	32.77	10.03	42.80	56.00	-13.20	QP
12	4.7220	13.19	10.03	23.22	46.00	-22.78	AVG



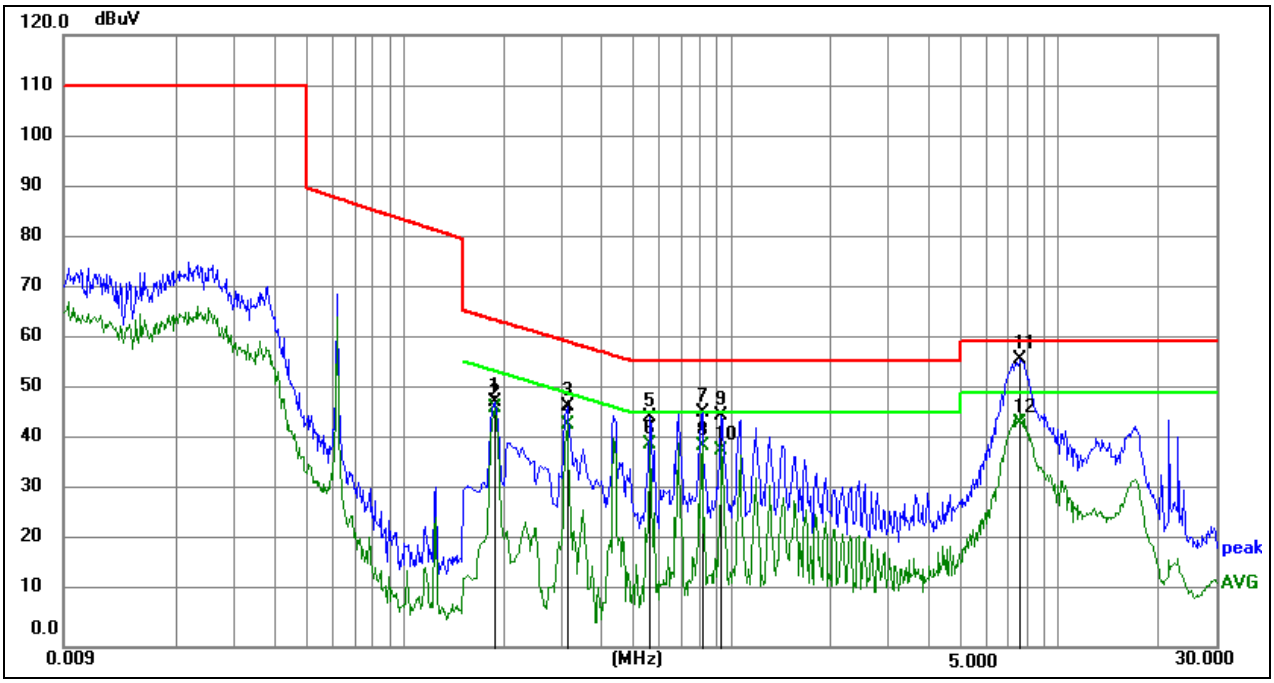
Phase: N	Mode: M04

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2760	31.64	9.86	41.50	60.94	-19.44	QP
2	0.2760	19.91	9.86	29.77	50.94	-21.17	AVG
3	0.5639	38.15	9.85	48.00	56.00	-8.00	QP
4	0.5639	12.26	9.85	22.11	46.00	-23.89	AVG
5	0.6493	30.02	9.88	39.90	56.00	-16.10	QP
6	0.6493	19.66	9.88	29.54	46.00	-16.46	AVG
7	1.9500	36.81	9.99	46.80	56.00	-9.20	QP
8	1.9500	28.15	9.99	38.14	46.00	-7.86	AVG
9	2.5034	36.51	9.99	46.50	56.00	-9.50	QP
10	2.5034	22.22	9.99	32.21	46.00	-13.79	AVG
11	4.7355	32.47	10.03	42.50	56.00	-13.50	QP
12	4.7355	13.61	10.03	23.64	46.00	-22.36	AVG



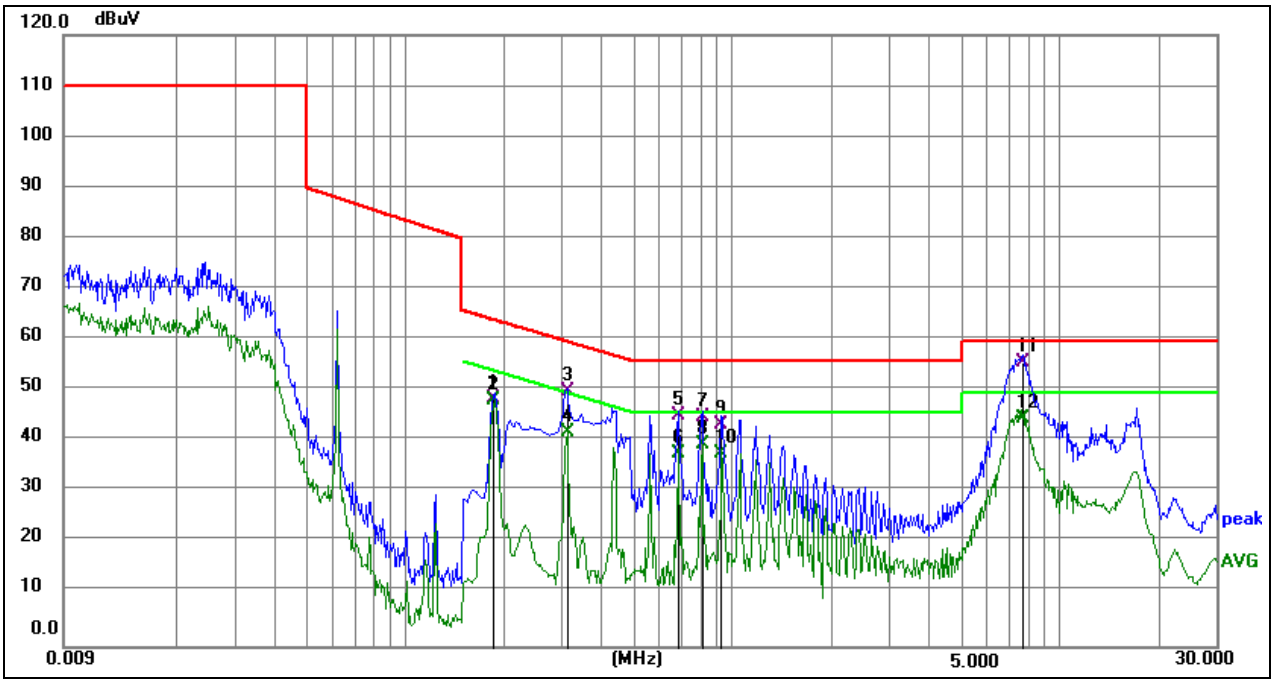
Phase: L1	Mode: M04

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.4695	33.68	9.82	43.50	56.52	-13.02	QP
2	0.4695	15.17	9.82	24.99	46.52	-21.53	AVG
3	0.6450	30.86	9.84	40.70	56.00	-15.30	QP
4	0.6450	17.99	9.84	27.83	46.00	-18.17	AVG
5	1.9500	41.27	9.83	51.10	56.00	-4.90	QP
6	1.9500	32.09	9.83	41.92	46.00	-4.08	AVG
7	2.5170	38.88	9.82	48.70	56.00	-7.30	QP
8	2.5170	24.43	9.82	34.25	46.00	-11.75	AVG
9	4.7715	31.20	9.80	41.00	56.00	-15.00	QP
10	4.7715	14.37	9.80	24.17	46.00	-21.83	AVG
11	9.8610	30.74	9.76	40.50	60.00	-19.50	QP
12	9.8610	11.21	9.76	20.97	50.00	-29.03	AVG



Phase: L1	Mode: M05

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1860	38.37	9.80	48.17	64.21	-16.04	QP
2	0.1860	37.00	9.80	46.80	54.21	-7.41	AVG
3	0.3120	37.16	10.00	47.16	59.92	-12.76	QP
4	0.3120	33.49	10.00	43.49	49.92	-6.43	AVG
5	0.5594	35.33	9.83	45.16	56.00	-10.84	QP
6	0.5594	30.04	9.83	39.87	46.00	-6.13	AVG
7	0.8070	36.23	9.81	46.04	56.00	-9.96	QP
8	0.8070	29.52	9.81	39.33	46.00	-6.67	AVG
9	0.9284	35.62	9.82	45.44	56.00	-10.56	QP
10	0.9284	28.61	9.82	38.43	46.00	-7.57	AVG
11	7.6064	46.60	9.77	56.37	60.00	-3.63	QP
12	7.6064	34.18	9.77	43.95	50.00	-6.05	AVG



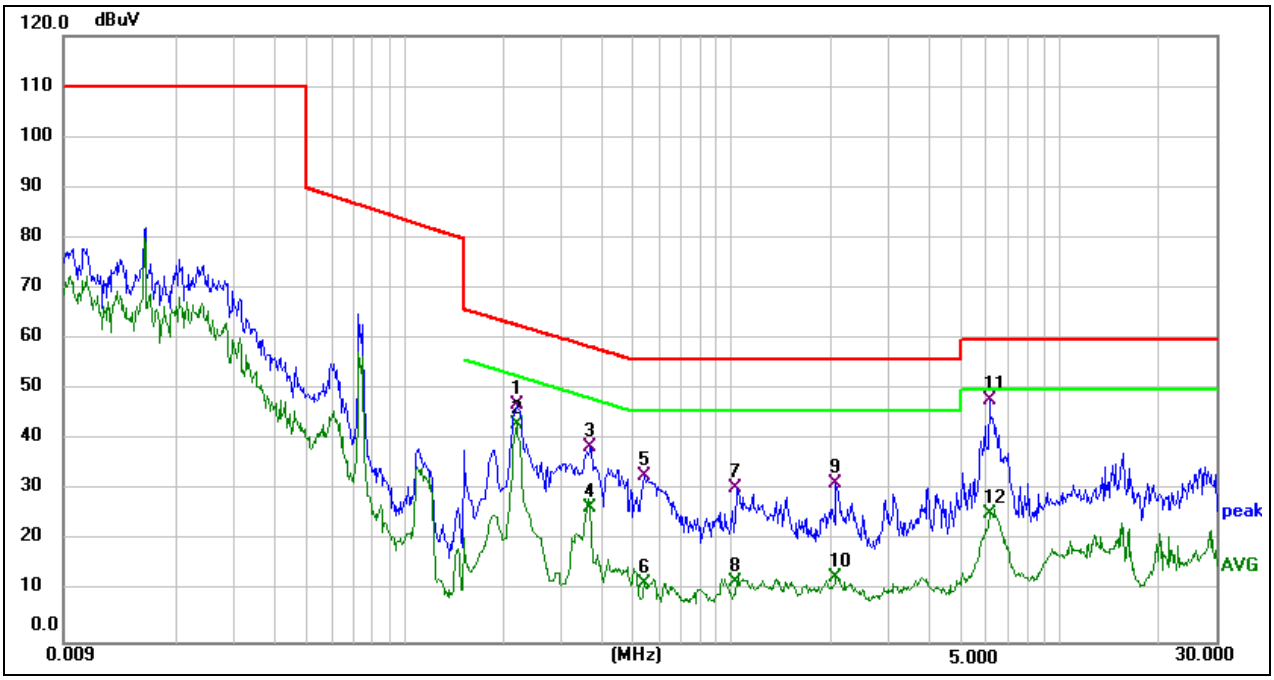
Phase: N	Mode: M05

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1860	38.82	9.88	48.70	64.21	-15.51	QP
2	0.1860	38.46	9.88	48.34	54.21	-5.87	AVG
3	0.3120	40.23	9.87	50.10	59.92	-9.82	QP
4	0.3120	32.29	9.87	42.16	49.92	-7.76	AVG
5	0.6809	35.41	9.89	45.30	56.00	-10.70	QP
6	0.6809	28.02	9.89	37.91	46.00	-8.09	AVG
7	0.8070	35.15	9.95	45.10	56.00	-10.90	QP
8	0.8070	29.76	9.95	39.71	46.00	-6.29	AVG
9	0.9284	33.65	9.95	43.60	56.00	-12.40	QP
10	0.9284	28.16	9.95	38.11	46.00	-7.89	AVG
11	7.6875	45.22	10.48	55.70	60.00	-4.30	QP
12	7.6875	34.45	10.48	44.93	50.00	-5.07	AVG



Phase: N	Mode: M06

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2220	36.61	10.01	46.62	62.74	-16.12	QP
2	0.2220	32.48	10.01	42.49	52.74	-10.25	AVG
3	0.3700	31.21	10.27	41.48	58.50	-17.02	QP
4	0.3700	18.15	10.27	28.42	48.50	-20.08	AVG
5	0.5580	22.97	10.62	33.59	56.00	-22.41	QP
6	0.5580	1.81	10.62	12.43	46.00	-33.57	AVG
7	1.0900	21.26	9.51	30.77	56.00	-25.23	QP
8	1.0900	3.87	9.51	13.38	46.00	-32.62	AVG
9	3.4940	23.06	9.54	32.60	56.00	-23.40	QP
10	3.4940	4.33	9.54	13.87	46.00	-32.13	AVG
11	6.3300	41.14	9.69	50.83	60.00	-9.17	QP
12	6.3300	19.46	9.69	29.15	50.00	-20.85	AVG



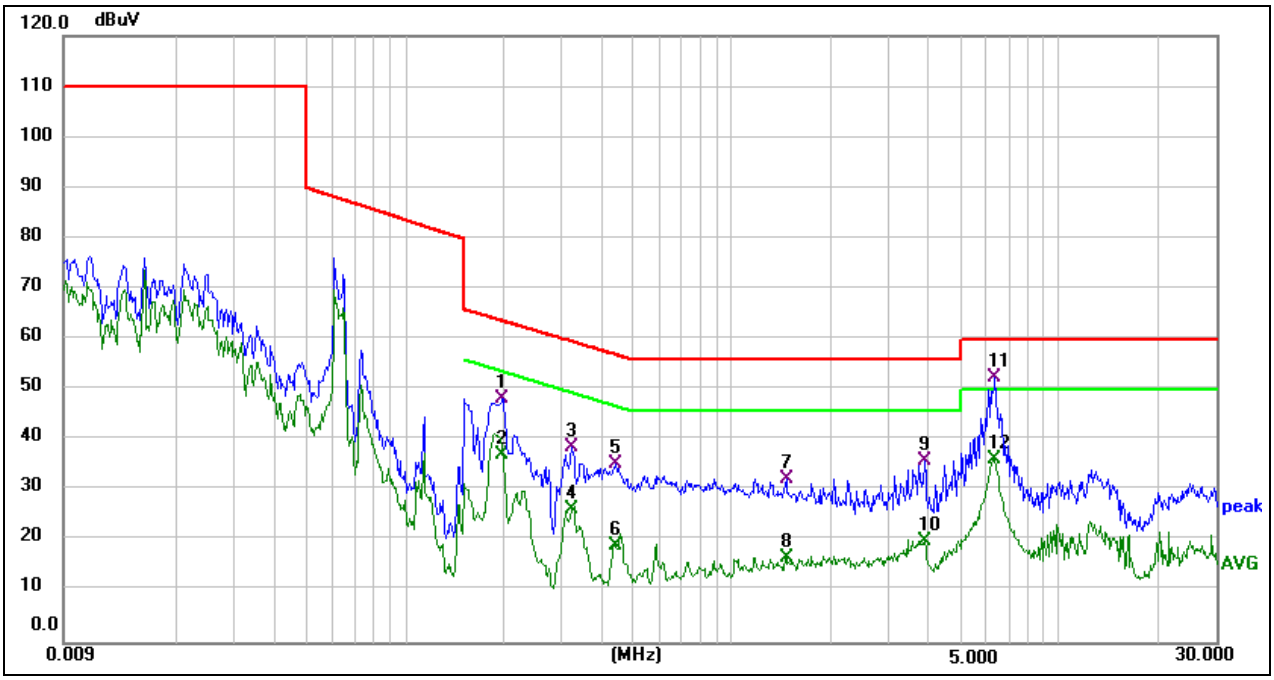
Phase: L1	Mode: M06

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2180	36.98	10.02	47.00	62.89	-15.89	QP
2	0.2180	33.11	10.02	43.13	52.89	-9.76	AVG
3	0.3660	28.52	10.33	38.85	58.59	-19.74	QP
4	0.3660	16.47	10.33	26.80	48.59	-21.79	AVG
5	0.5380	22.46	10.68	33.14	56.00	-22.86	QP
6	0.5380	1.13	10.68	11.81	46.00	-34.19	AVG
7	1.0339	21.10	9.61	30.71	56.00	-25.29	QP
8	1.0339	2.63	9.61	12.24	46.00	-33.76	AVG
9	2.0780	21.89	9.62	31.51	56.00	-24.49	QP
10	2.0780	3.43	9.62	13.05	46.00	-32.95	AVG
11	6.1140	38.28	9.70	47.98	60.00	-12.02	QP
12	6.1140	15.83	9.70	25.53	50.00	-24.47	AVG



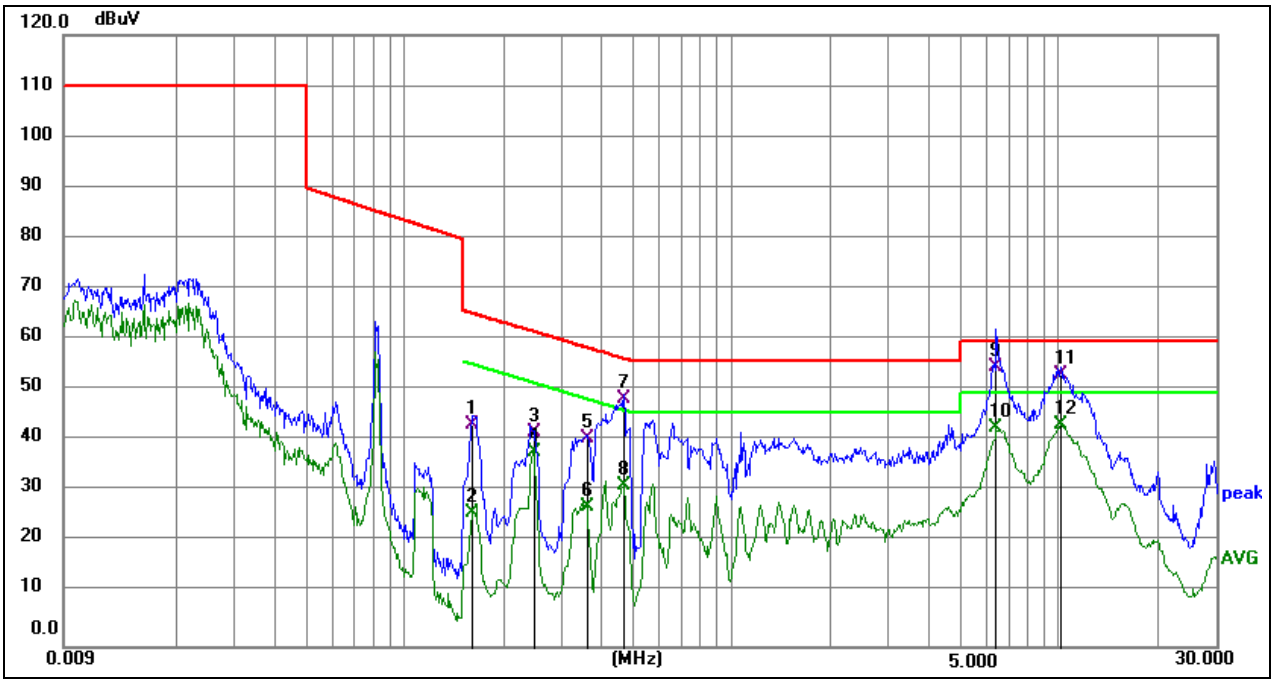
Phase: L1	Mode: M07

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1819	39.57	9.94	49.51	64.40	-14.89	QP
2	0.1819	31.57	9.94	41.51	54.40	-12.89	AVG
3	0.3060	28.72	10.21	38.93	60.08	-21.15	QP
4	0.3060	17.78	10.21	27.99	50.08	-22.09	AVG
5	0.4340	24.09	10.46	34.55	57.18	-22.63	QP
6	0.4340	8.43	10.46	18.89	47.18	-28.29	AVG
7	2.2500	21.72	9.63	31.35	56.00	-24.65	QP
8	2.2500	6.92	9.63	16.55	46.00	-29.45	AVG
9	6.2940	43.25	9.71	52.96	60.00	-7.04	QP
10	6.2940	27.20	9.71	36.91	50.00	-13.09	AVG
11	13.6780	28.13	9.99	38.12	60.00	-21.88	QP
12	13.6780	8.05	9.99	18.04	50.00	-31.96	AVG



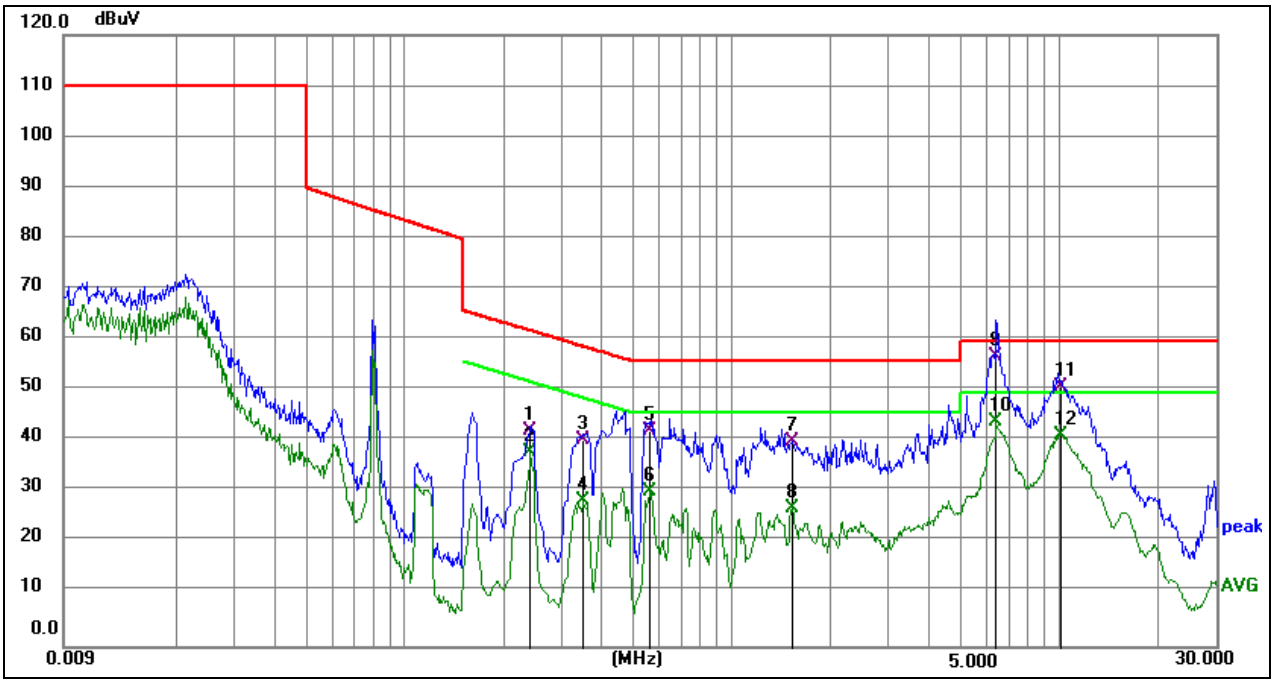
Phase: N	Mode: M07

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1980	38.27	9.98	48.25	63.69	-15.44	QP
2	0.1980	27.18	9.98	37.16	53.69	-16.53	AVG
3	0.3220	28.47	10.19	38.66	59.66	-21.00	QP
4	0.3220	16.42	10.19	26.61	49.66	-23.05	AVG
5	0.4380	25.06	10.40	35.46	57.10	-21.64	QP
6	0.4380	9.02	10.40	19.42	47.10	-27.68	AVG
7	1.4580	23.02	9.52	32.54	56.00	-23.46	QP
8	1.4580	7.35	9.52	16.87	46.00	-29.13	AVG
9	3.8580	26.39	9.55	35.94	56.00	-20.06	QP
10	3.8580	10.72	9.55	20.27	46.00	-25.73	AVG
11	6.3420	42.94	9.69	52.63	60.00	-7.37	QP
12	6.3420	26.77	9.69	36.46	50.00	-13.54	AVG



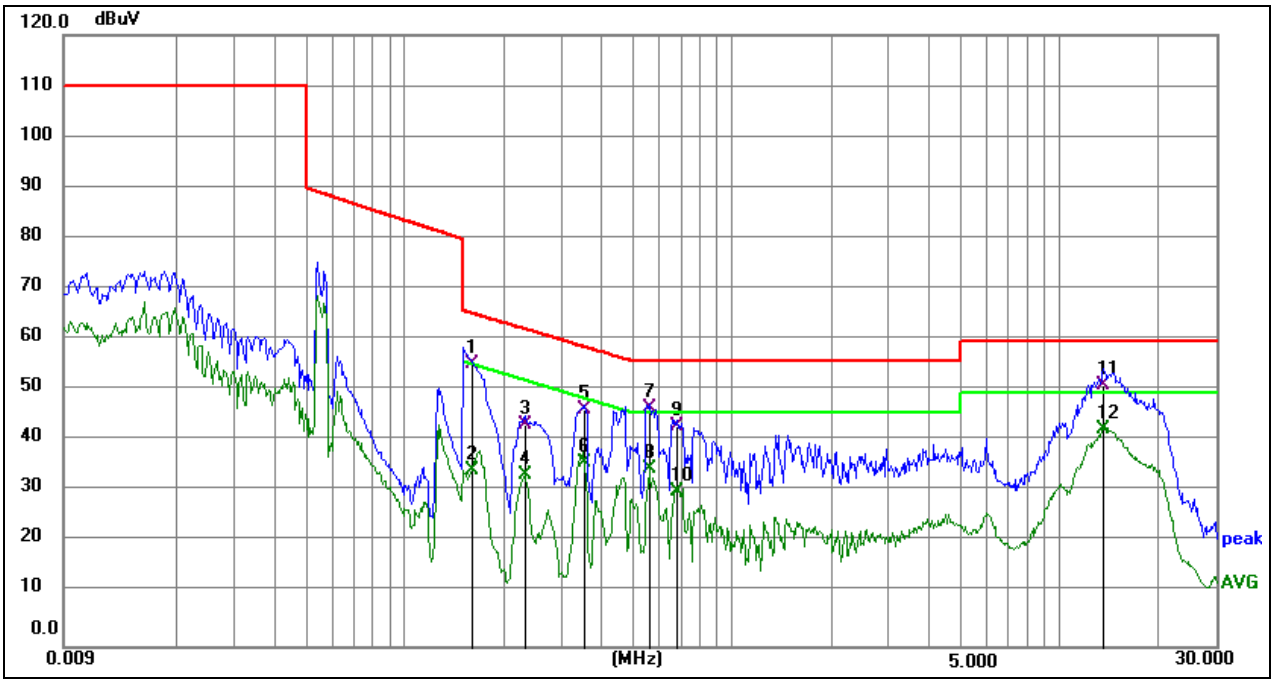
Phase: N	Mode: M08

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1590	33.60	9.90	43.50	65.52	-22.02	QP
2	0.1590	16.38	9.90	26.28	55.52	-29.24	AVG
3	0.2445	32.25	9.85	42.10	61.94	-19.84	QP
4	0.2445	28.46	9.85	38.31	51.94	-13.63	AVG
5	0.3570	31.08	9.82	40.90	58.80	-17.90	QP
6	0.3570	17.84	9.82	27.66	48.80	-21.14	AVG
7	0.4650	38.87	9.83	48.70	56.60	-7.90	QP
8	0.4650	21.84	9.83	31.67	46.60	-14.93	AVG
9	6.4140	44.78	10.12	54.90	60.00	-5.10	QP
10	6.4140	32.80	10.12	42.92	50.00	-7.08	AVG
11	10.0680	41.95	11.55	53.50	60.00	-6.50	QP
12	10.0680	32.05	11.55	43.60	50.00	-6.40	AVG



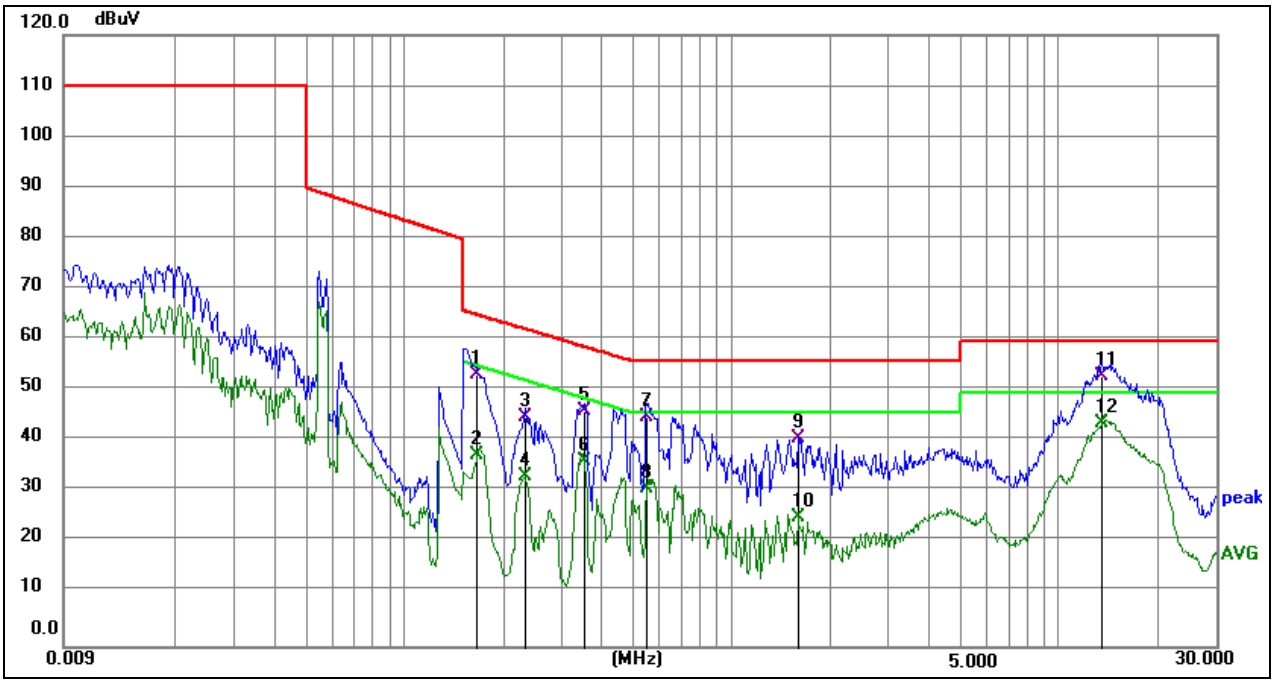
Phase: L1	Mode: M08

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2400	32.46	9.84	42.30	62.10	-19.80	QP
2	0.2400	28.47	9.84	38.31	52.10	-13.79	AVG
3	0.3480	30.72	9.78	40.50	59.01	-18.51	QP
4	0.3480	19.01	9.78	28.79	49.01	-20.22	AVG
5	0.5639	32.47	9.83	42.30	56.00	-13.70	QP
6	0.5639	20.72	9.83	30.55	46.00	-15.45	AVG
7	1.5225	30.57	9.83	40.40	56.00	-15.60	QP
8	1.5225	17.43	9.83	27.26	46.00	-18.74	AVG
9	6.4185	47.12	9.78	56.90	60.00	-3.10	QP
10	6.4185	34.51	9.78	44.29	50.00	-5.71	AVG
11	10.0545	41.44	9.76	51.20	60.00	-8.80	QP
12	10.0545	31.75	9.76	41.51	50.00	-8.49	AVG



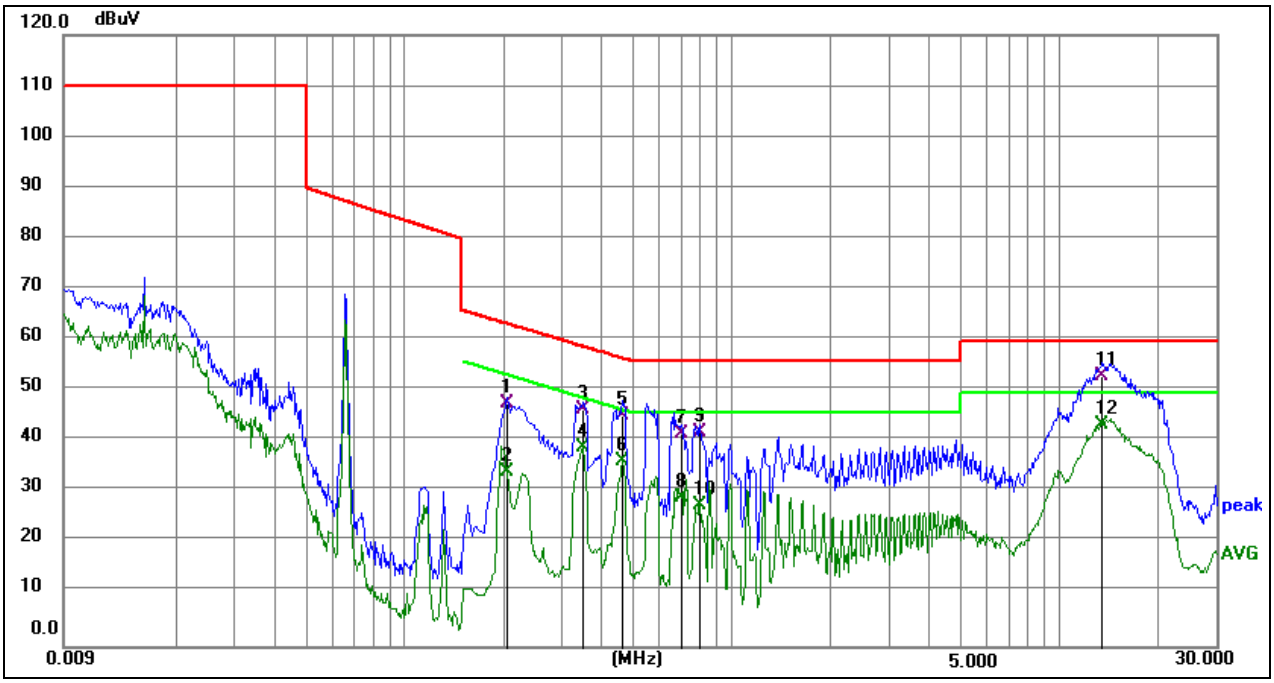
Phase: L1	Mode: M09

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1590	45.56	9.84	55.40	65.52	-10.12	QP
2	0.1590	24.83	9.84	34.67	55.52	-20.85	AVG
3	0.2310	33.67	9.83	43.50	62.41	-18.91	QP
4	0.2310	23.93	9.83	33.76	52.41	-18.65	AVG
5	0.3524	36.83	9.77	46.60	58.91	-12.31	QP
6	0.3524	26.28	9.77	36.05	48.91	-12.86	AVG
7	0.5550	36.97	9.83	46.80	56.00	-9.20	QP
8	0.5550	25.12	9.83	34.95	46.00	-11.05	AVG
9	0.6764	33.35	9.85	43.20	56.00	-12.80	QP
10	0.6764	20.69	9.85	30.54	46.00	-15.46	AVG
11	13.6410	41.35	9.95	51.30	60.00	-8.70	QP
12	13.6410	32.91	9.95	42.86	50.00	-7.14	AVG



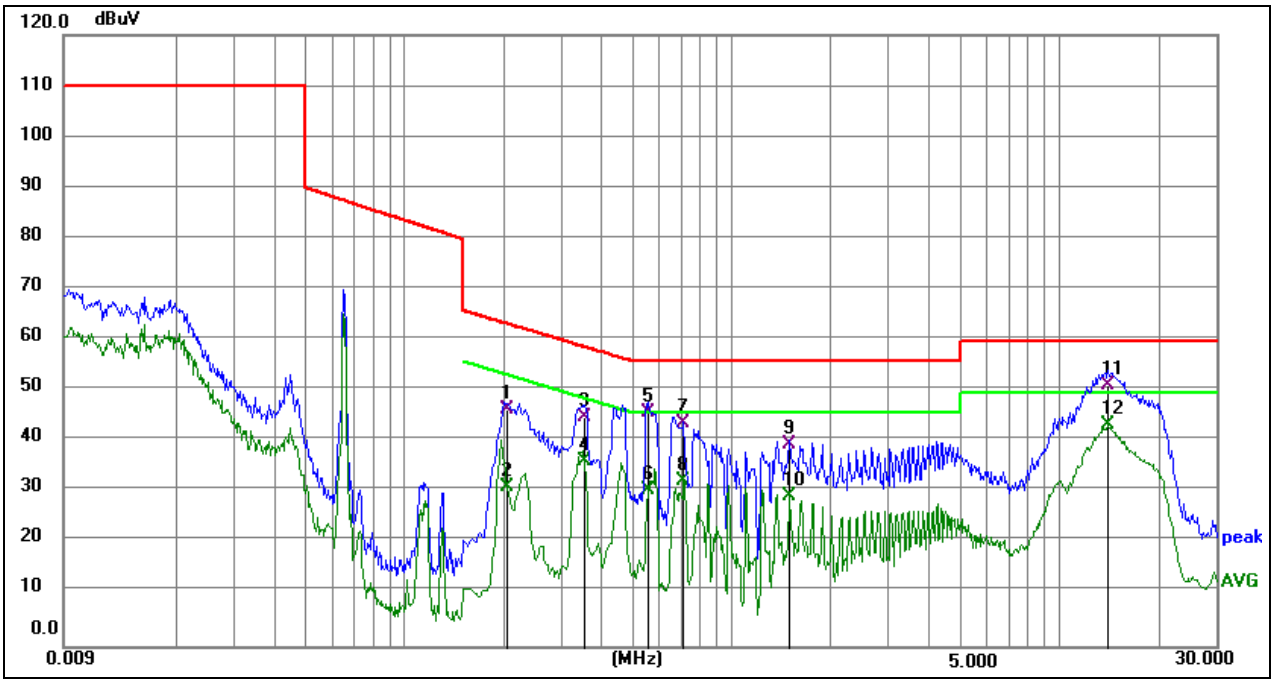
Phase: N	Mode: M09

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1655	43.61	9.89	53.50	65.18	-11.68	QP
2	0.1655	27.70	9.89	37.59	55.18	-17.59	AVG
3	0.2310	35.24	9.86	45.10	62.41	-17.31	QP
4	0.2310	23.67	9.86	33.53	52.41	-18.88	AVG
5	0.3524	36.48	9.82	46.30	58.91	-12.61	QP
6	0.3524	26.75	9.82	36.57	48.91	-12.34	AVG
7	0.5460	35.35	9.85	45.20	56.00	-10.80	QP
8	0.5460	21.26	9.85	31.11	46.00	-14.89	AVG
9	1.5854	30.93	9.97	40.90	56.00	-15.10	QP
10	1.5854	15.35	9.97	25.32	46.00	-20.68	AVG
11	13.4024	41.67	11.63	53.30	60.00	-6.70	QP
12	13.4024	32.24	11.63	43.87	50.00	-6.13	AVG



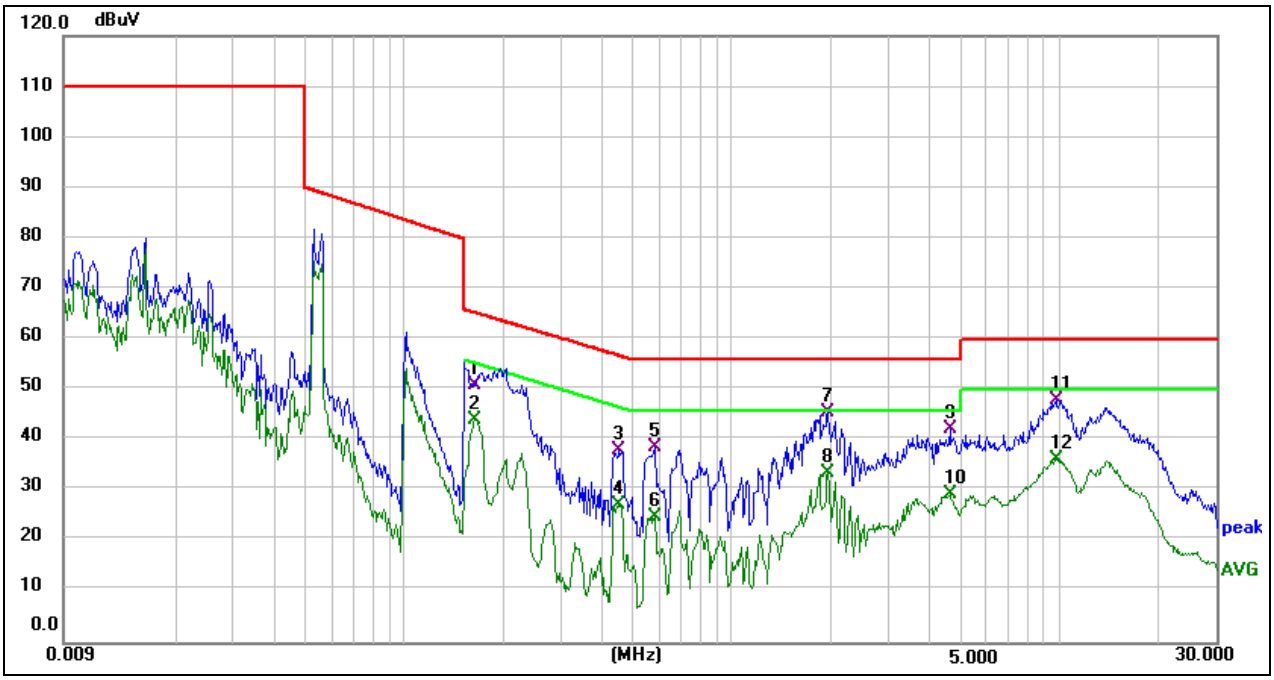
Phase: N	Mode: M10

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2040	37.82	9.88	47.70	63.45	-15.75	QP
2	0.2040	24.39	9.88	34.27	53.45	-19.18	AVG
3	0.3480	36.78	9.82	46.60	59.01	-12.41	QP
4	0.3480	29.40	9.82	39.22	49.01	-9.79	AVG
5	0.4605	35.68	9.82	45.50	56.68	-11.18	QP
6	0.4605	26.60	9.82	36.42	46.68	-10.26	AVG
7	0.6990	32.00	9.90	41.90	56.00	-14.10	QP
8	0.6990	19.39	9.90	29.29	46.00	-16.71	AVG
9	0.7934	32.15	9.95	42.10	56.00	-13.90	QP
10	0.7934	18.01	9.95	27.96	46.00	-18.04	AVG
11	13.4520	41.47	11.63	53.10	60.00	-6.90	QP
12	13.4520	31.97	11.63	43.60	50.00	-6.40	AVG



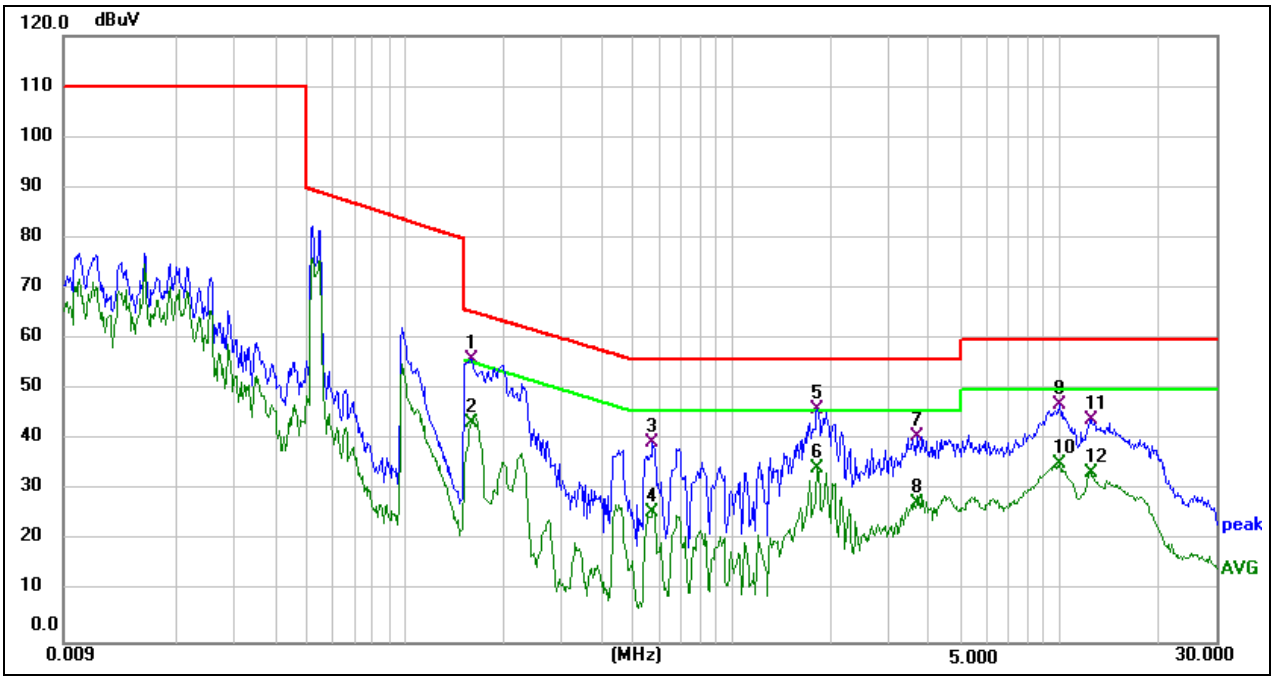
Phase: L1	Mode: M10

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2040	36.71	9.79	46.50	63.45	-16.95	QP
2	0.2040	21.70	9.79	31.49	53.45	-21.96	AVG
3	0.3525	35.33	9.77	45.10	58.90	-13.80	QP
4	0.3525	26.85	9.77	36.62	48.90	-12.28	AVG
5	0.5505	36.17	9.83	46.00	56.00	-10.00	QP
6	0.5505	21.02	9.83	30.85	46.00	-15.15	AVG
7	0.7125	33.96	9.84	43.80	56.00	-12.20	QP
8	0.7125	22.69	9.84	32.53	46.00	-13.47	AVG
9	1.4955	30.08	9.82	39.90	56.00	-16.10	QP
10	1.4955	19.66	9.82	29.48	46.00	-16.52	AVG
11	14.0910	41.43	9.97	51.40	60.00	-8.60	QP
12	14.0910	33.55	9.97	43.52	50.00	-6.48	AVG



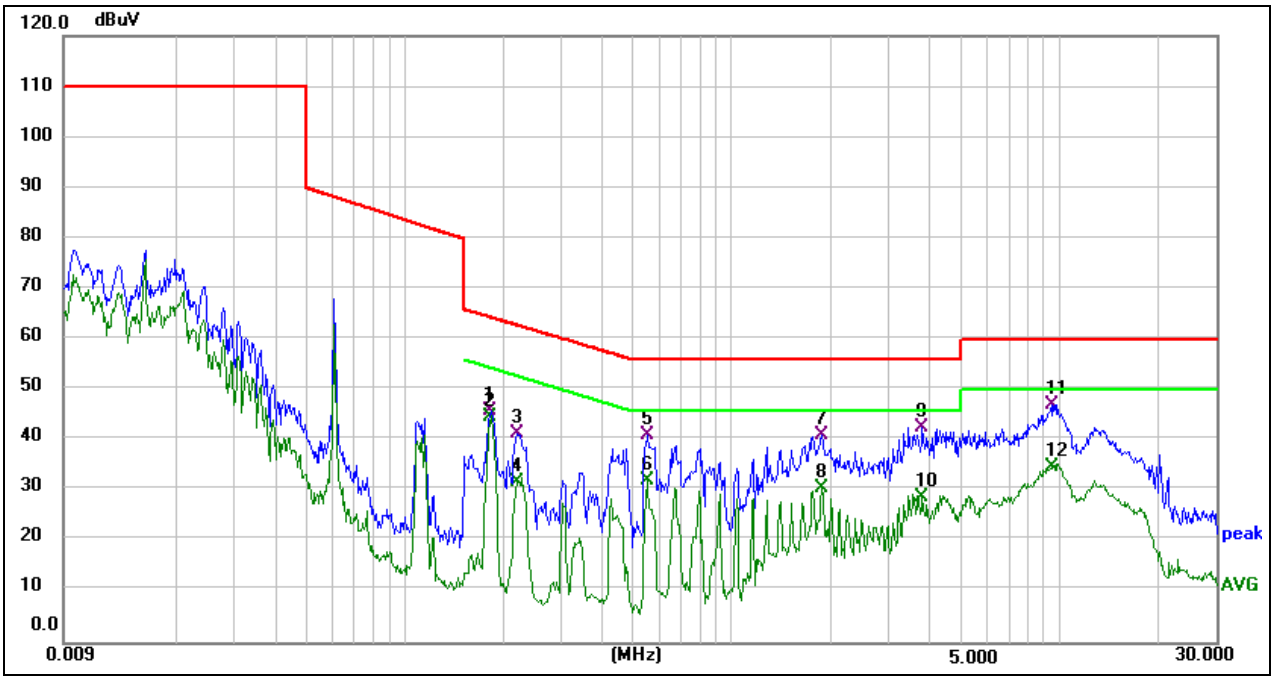
Phase: L1	Mode: M11

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1620	41.15	9.89	51.04	65.36	-14.32	QP
2	0.1620	34.30	9.89	44.19	55.36	-11.17	AVG
3	0.4500	27.64	10.50	38.14	56.88	-18.74	QP
4	0.4500	16.83	10.50	27.33	46.88	-19.55	AVG
5	0.5780	27.97	10.76	38.73	56.00	-17.27	QP
6	0.5780	14.12	10.76	24.88	46.00	-21.12	AVG
7	1.9500	35.89	9.62	45.51	56.00	-10.49	QP
8	1.9500	23.92	9.62	33.54	46.00	-12.46	AVG
9	4.6220	32.71	9.66	42.37	56.00	-13.63	QP
10	4.6220	19.69	9.66	29.35	46.00	-16.65	AVG
11	9.7540	38.30	9.85	48.15	60.00	-11.85	QP
12	9.7540	26.41	9.85	36.26	50.00	-13.74	AVG



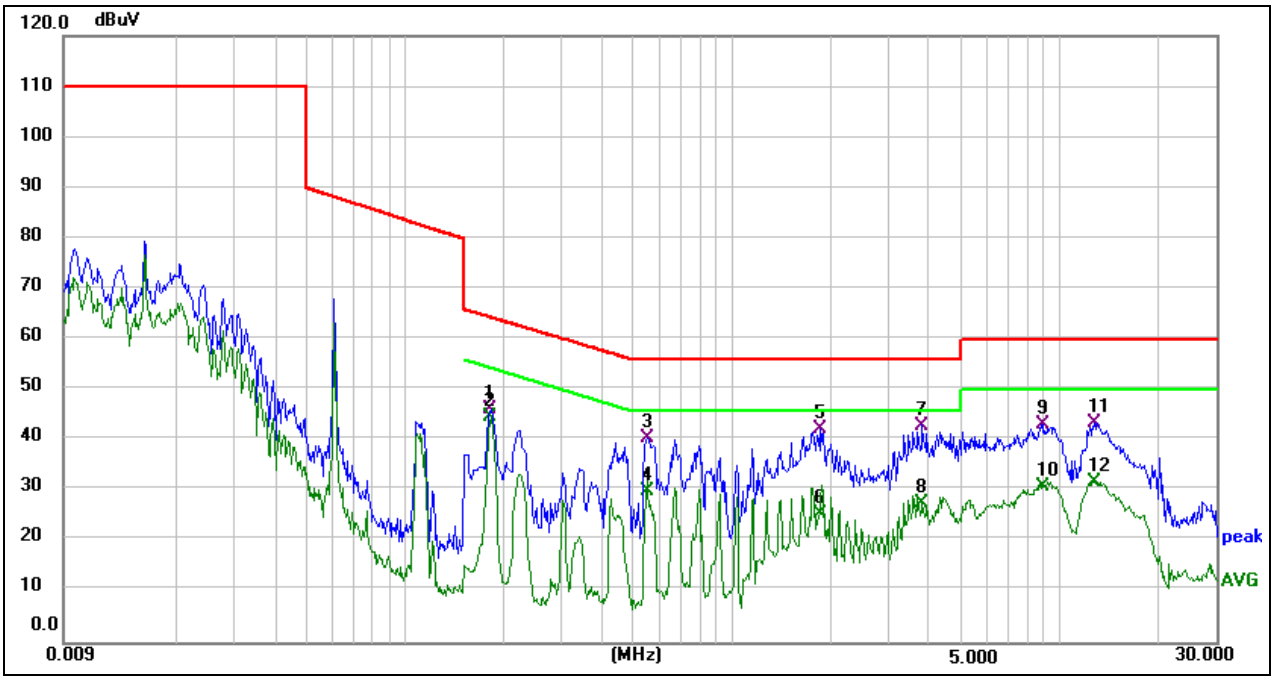
Phase: N	Mode: M11

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1580	46.26	9.89	56.15	65.57	-9.42	QP
2	0.1580	33.72	9.89	43.61	55.57	-11.96	AVG
3	0.5700	29.13	10.64	39.77	56.00	-16.23	QP
4	0.5700	15.14	10.64	25.78	46.00	-20.22	AVG
5	1.8260	36.66	9.52	46.18	56.00	-9.82	QP
6	1.8260	24.98	9.52	34.50	46.00	-11.50	AVG
7	3.6660	31.22	9.54	40.76	56.00	-15.24	QP
8	3.6660	18.29	9.54	27.83	46.00	-18.17	AVG
9	9.9860	37.27	9.86	47.13	60.00	-12.87	QP
10	9.9860	25.66	9.86	35.52	50.00	-14.48	AVG
11	12.4220	34.31	9.95	44.26	60.00	-15.74	QP
12	12.4220	23.62	9.95	33.57	50.00	-16.43	AVG



Phase: N	Mode: M12

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1819	36.06	9.94	46.00	64.40	-18.40	QP
2	0.1819	34.69	9.94	44.63	54.40	-9.77	AVG
3	0.2180	31.36	10.01	41.37	62.89	-21.52	QP
4	0.2180	21.96	10.01	31.97	52.89	-20.92	AVG
5	0.5460	30.56	10.60	41.16	56.00	-14.84	QP
6	0.5460	21.67	10.60	32.27	46.00	-13.73	AVG
7	1.8860	31.66	9.52	41.18	56.00	-14.82	QP
8	1.8860	21.19	9.52	30.71	46.00	-15.29	AVG
9	3.8060	33.08	9.55	42.63	56.00	-13.37	QP
10	3.8060	19.29	9.55	28.84	46.00	-17.16	AVG
11	9.4780	37.38	9.84	47.22	60.00	-12.78	QP
12	9.4780	25.12	9.84	34.96	50.00	-15.04	AVG



Phase: L1	Mode: M12

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1819	36.23	9.94	46.17	64.40	-18.23	QP
2	0.1819	34.71	9.94	44.65	54.40	-9.75	AVG
3	0.5500	29.99	10.70	40.69	56.00	-15.31	QP
4	0.5500	19.33	10.70	30.03	46.00	-15.97	AVG
5	1.8420	32.75	9.62	42.37	56.00	-13.63	QP
6	1.8420	15.98	9.62	25.60	46.00	-20.40	AVG
7	3.8100	33.44	9.65	43.09	56.00	-12.91	QP
8	3.8100	18.07	9.65	27.72	46.00	-18.28	AVG
9	8.9340	33.51	9.82	43.33	60.00	-16.67	QP
10	8.9340	21.19	9.82	31.01	50.00	-18.99	AVG
11	12.7580	33.73	9.96	43.69	60.00	-16.31	QP
12	12.7580	21.98	9.96	31.94	50.00	-18.06	AVG

Remark:
Result = Reading +Correct
Margin = Result - Limit

7.2. CONDUCTED EMISSION (WIRED NETWORK OR LOCAL WIRED PORTS)

LIMITS

Disturbance voltage limits at the wired network interfaces		
FREQUENCY (MHz)	Limits dB(μV)	
	Quasi-peak	Average
0.15 to 0.50	84 to 74	74 to 64
0.50 to 30	74	64
Disturbance current limits at the wired network interfaces		
FREQUENCY (MHz)	Limits dB(μA)	
	Quasi-peak	Average
0.15 to 0.50	40 to 30	30 to 20
0.50 to 30	30	20

Disturbance voltage limits at the local wired ports		
FREQUENCY (MHz)	Limits dB(μV)	
	Quasi-peak	Average
0.15 to 0.50	80	70
0.50 to 30	74	64
Disturbance current limits at the local wired ports		
FREQUENCY (MHz)	Limits dB(μA)	
	Quasi-peak	Average
0.15 to 0.50	40 to 30	30 to 20
0.50 to 30	30	20

Note:
(1) The tighter limit applies at the band edges.
(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

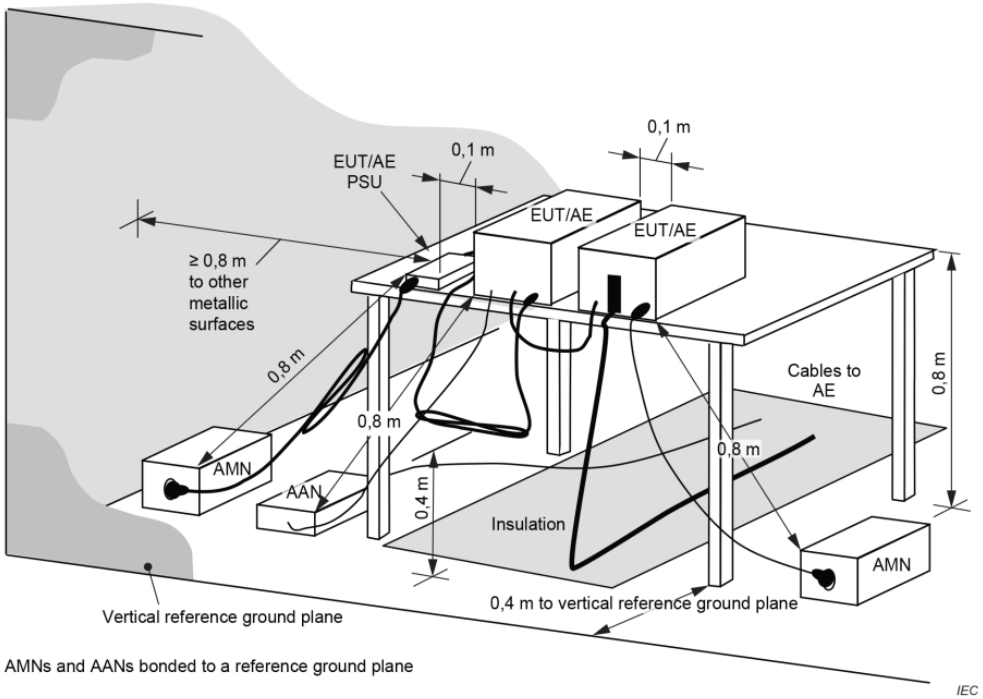
Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

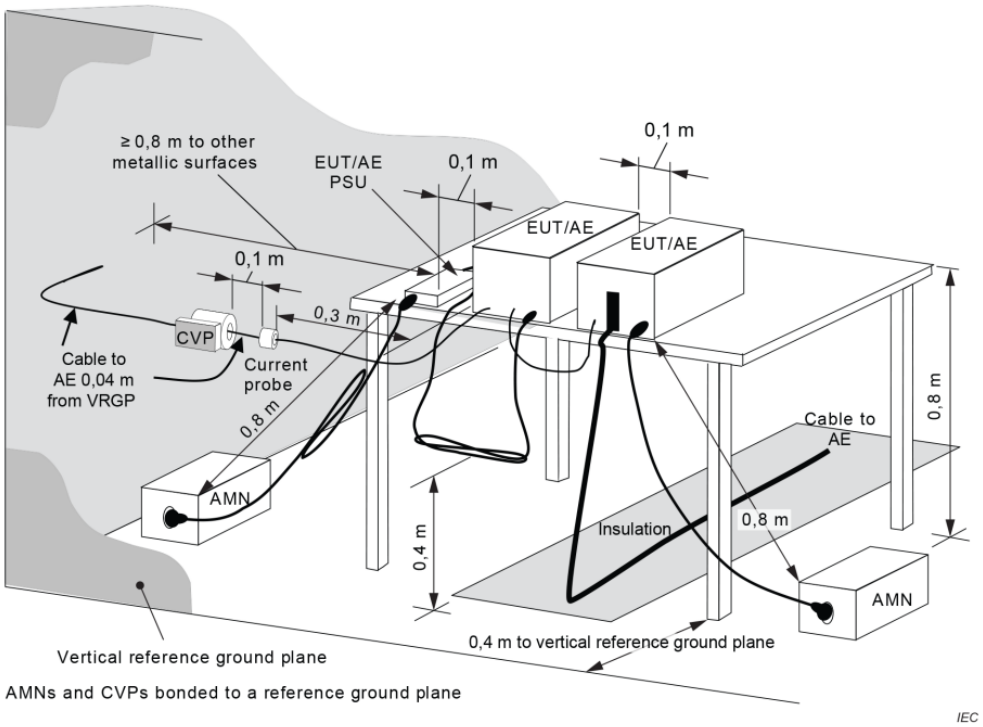
TEST PROCEDURE

a. The EUT was placed on a non-conductive table 0.8 m above a reference ground plane.

b. All power was connected to the EUT through an Artificial Mains Network (AMN).
c. Conducted common mode disturbance voltage measurements on signal ports were made at the output of the Impedance Stabilization Network (ISN) in accordance with Annex C 4.1.6.2. The ISN was placed 0.8m from the boundary of the EUT and bonded to a reference ground plane.
d. Conducted common mode disturbance current measurements on signal ports were made with a current probe and externally fitted 150 Ω resistor in accordance with Annex C 4.1.6.3.
e. Conducted common mode disturbance current measurements on signal ports were made with using a combination of a current probe and capacitive voltage probe in accordance with Annex C 4.1.6.4.

TEST SETUP





TEST ENVIRONMENT

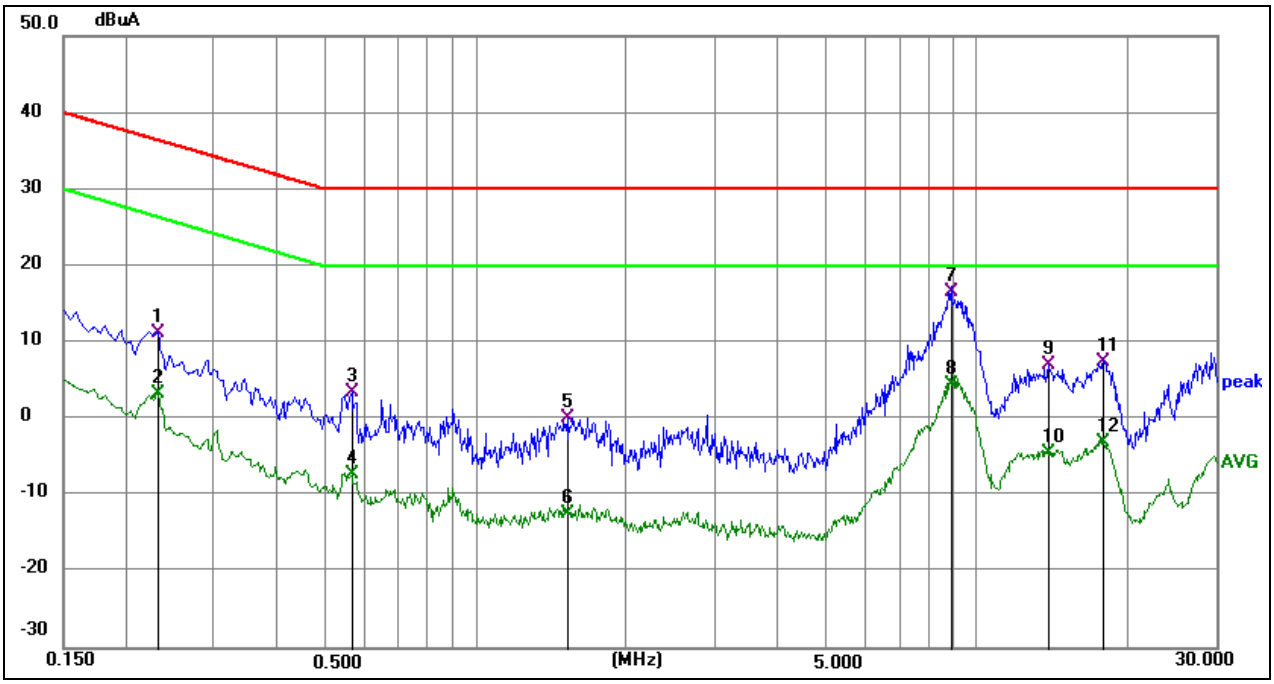
Temperature	23.1℃	Relative Humidity	53%
Atmosphere Pressure	101kPa		

TEST MODE

Pre-test Mode:	M01 ~ M12
Final Test Mode:	M01, M02, M03, M04, M05, M06, M07, M08, M09, M10, M11, M12

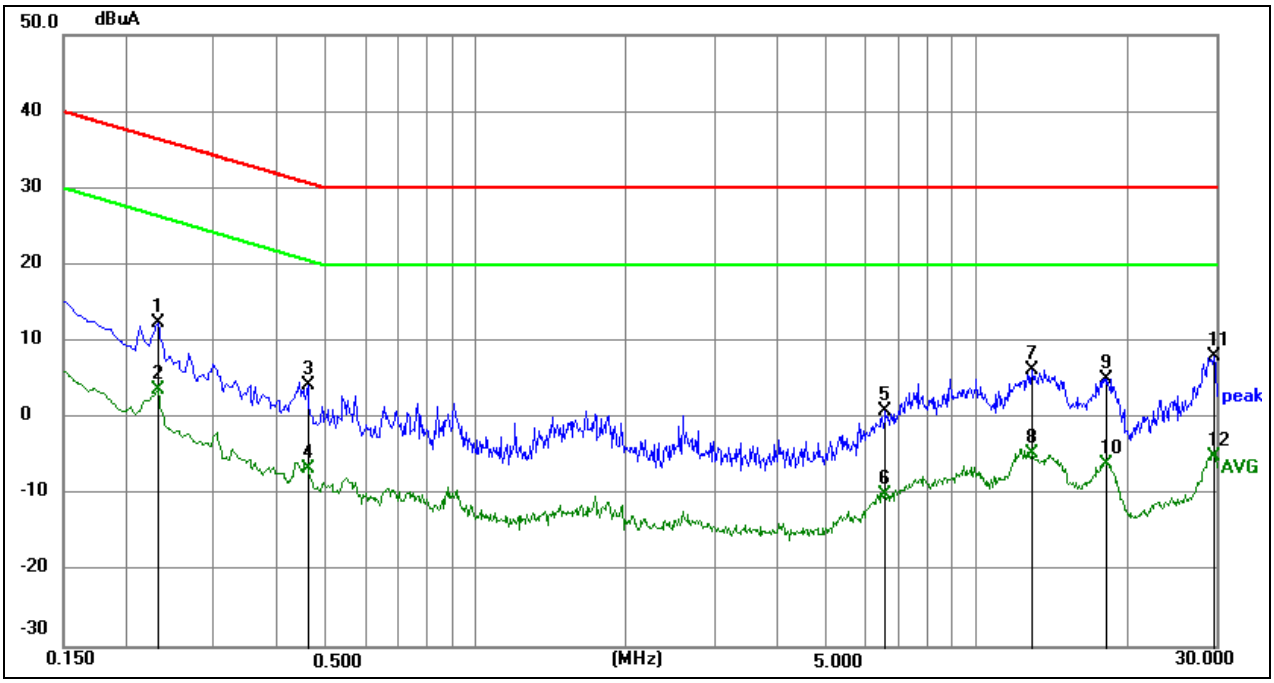
Note: All test modes had been tested, but only the worst data recorded in the report.

TEST RESULTS



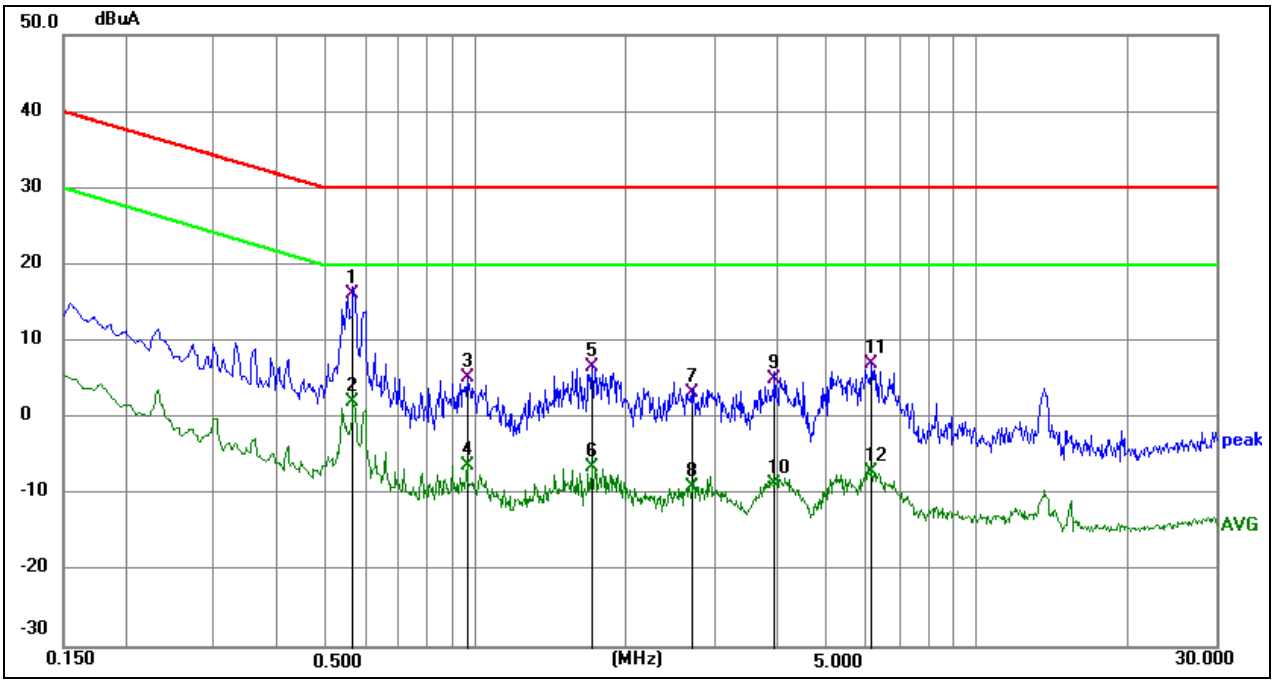
Phase:	Mode: M12

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2316	9.44	1.66	11.10	36.39	-25.29	QP
2	0.2316	1.65	1.66	3.31	26.39	-23.08	AVG
3	0.5641	8.29	-4.79	3.50	30.00	-26.50	QP
4	0.5641	-2.52	-4.79	-7.31	20.00	-27.31	AVG
5	1.5193	8.60	-8.44	0.16	30.00	-29.84	QP
6	1.5193	-3.94	-8.44	-12.38	20.00	-32.38	AVG
7	8.8692	26.38	-9.88	16.50	30.00	-13.50	QP
8	8.8692	14.34	-9.88	4.46	20.00	-15.54	AVG
9	13.8411	16.83	-9.83	7.00	30.00	-23.00	QP
10	13.8411	5.33	-9.83	-4.50	20.00	-24.50	AVG
11	17.8493	17.24	-9.74	7.50	30.00	-22.50	QP
12	17.8493	6.57	-9.74	-3.17	20.00	-23.17	AVG



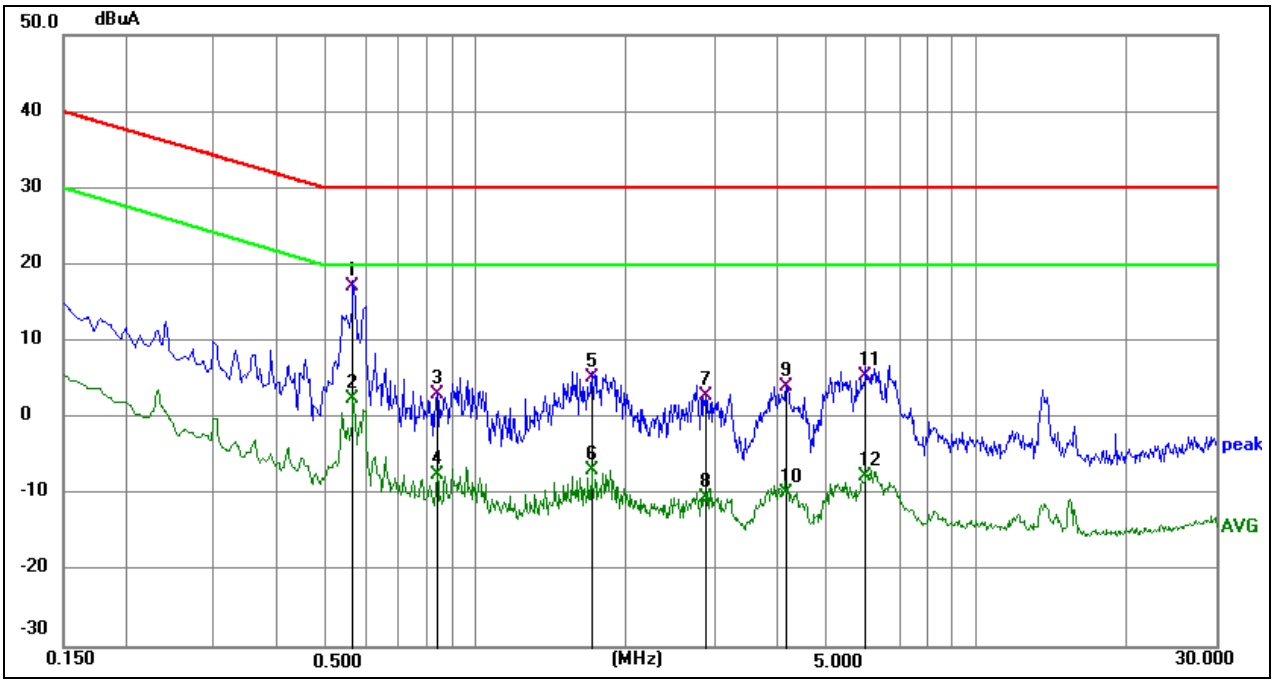
Phase:	Mode: M11

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2310	10.73	1.68	12.41	36.41	-24.00	peak
2	0.2310	1.93	1.68	3.61	26.41	-22.80	AVG
3	0.4605	7.58	-3.43	4.15	30.68	-26.53	peak
4	0.4605	-3.28	-3.43	-6.71	20.68	-27.39	AVG
5	6.5804	10.76	-9.83	0.93	30.00	-29.07	peak
6	6.5804	-0.13	-9.83	-9.96	20.00	-29.96	AVG
7	12.8714	16.14	-9.85	6.29	30.00	-23.71	peak
8	12.8714	5.15	-9.85	-4.70	20.00	-24.70	AVG
9	18.1860	14.87	-9.74	5.13	30.00	-24.87	peak
10	18.1860	3.70	-9.74	-6.04	20.00	-26.04	AVG
11	29.7104	17.64	-9.60	8.04	30.00	-21.96	peak
12	29.7104	4.52	-9.60	-5.08	20.00	-25.08	AVG



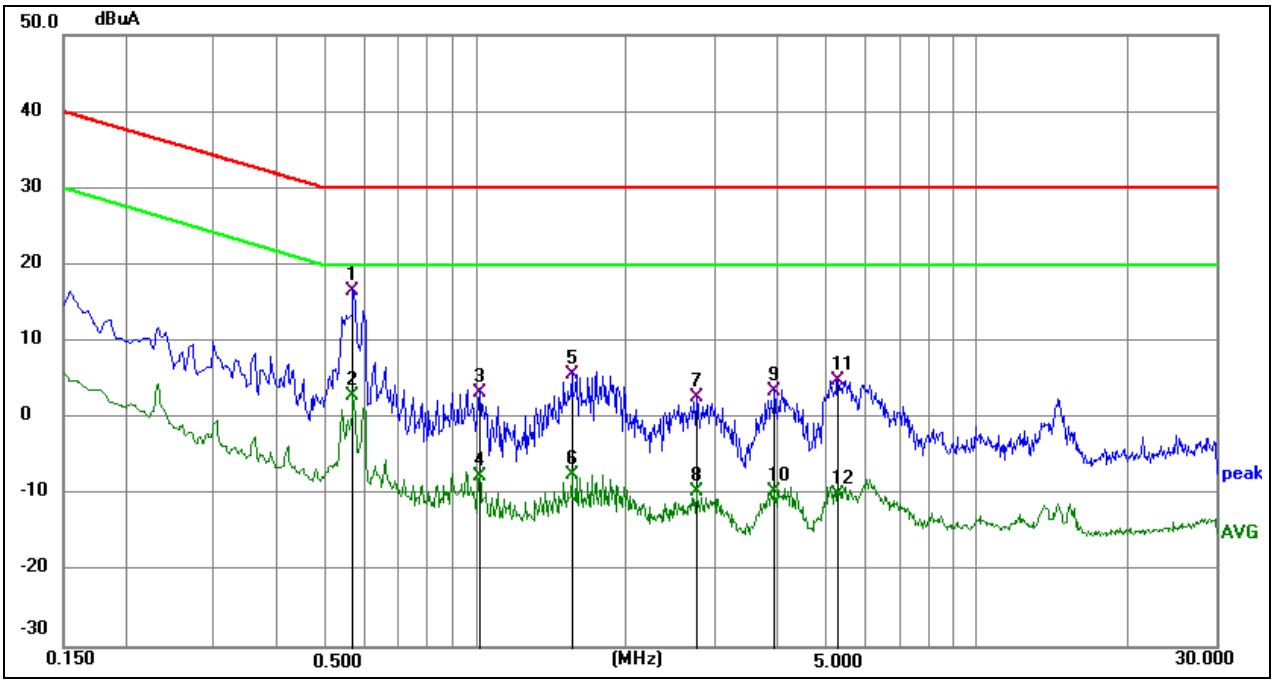
Phase:	Mode: M10

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.5685	21.03	-4.83	16.20	30.00	-13.80	QP
2	0.5685	6.95	-4.83	2.12	20.00	-17.88	AVG
3	0.9600	12.56	-7.36	5.20	30.00	-24.80	QP
4	0.9600	1.09	-7.36	-6.27	20.00	-26.27	AVG
5	1.7115	15.37	-8.77	6.60	30.00	-23.40	QP
6	1.7115	2.30	-8.77	-6.47	20.00	-26.47	AVG
7	2.6924	12.74	-9.54	3.20	30.00	-26.80	QP
8	2.6924	0.55	-9.54	-8.99	20.00	-28.99	AVG
9	3.9525	14.85	-9.75	5.10	30.00	-24.90	QP
10	3.9525	1.02	-9.75	-8.73	20.00	-28.73	AVG
11	6.1665	16.83	-9.83	7.00	30.00	-23.00	QP
12	6.1665	2.81	-9.83	-7.02	20.00	-27.02	AVG



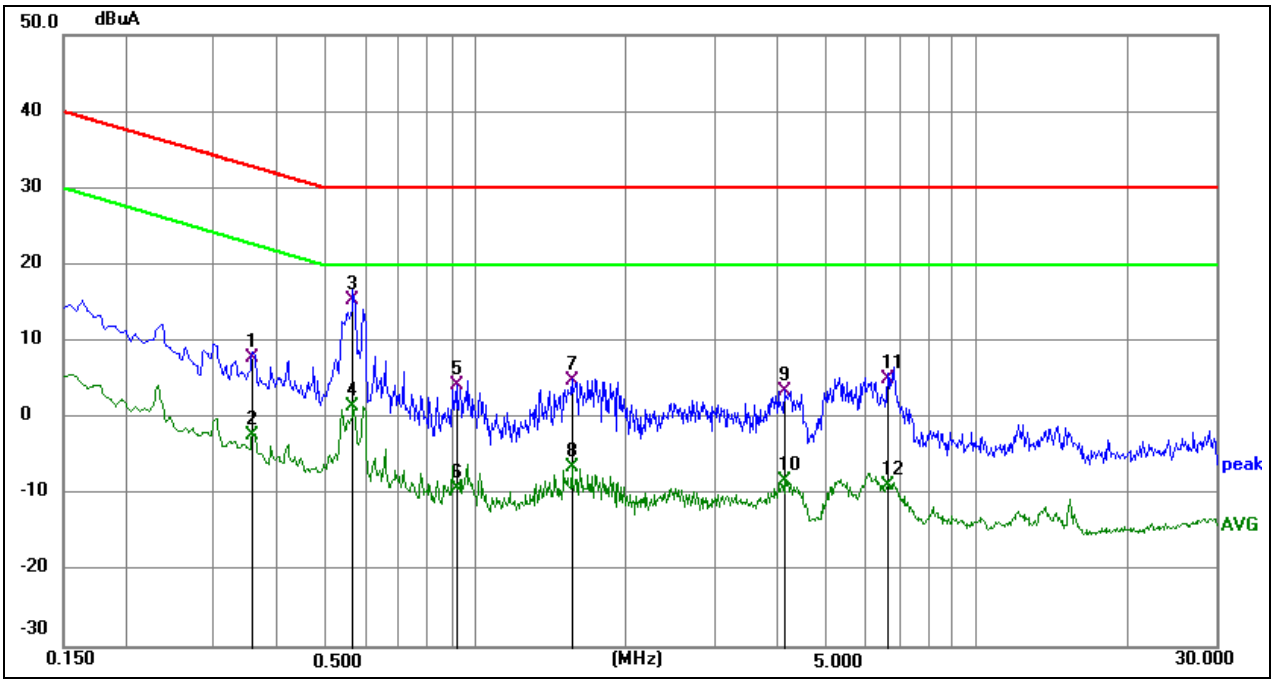
Phase:	Mode: M09

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.5685	22.03	-4.83	17.20	30.00	-12.80	QP
2	0.5685	7.27	-4.83	2.44	20.00	-17.56	AVG
3	0.8385	9.76	-6.76	3.00	30.00	-27.00	QP
4	0.8385	-0.72	-6.76	-7.48	20.00	-27.48	AVG
5	1.7070	13.96	-8.76	5.20	30.00	-24.80	QP
6	1.7070	1.84	-8.76	-6.92	20.00	-26.92	AVG
7	2.8725	12.40	-9.60	2.80	30.00	-27.20	QP
8	2.8725	-0.92	-9.60	-10.52	20.00	-30.52	AVG
9	4.1595	13.77	-9.77	4.00	30.00	-26.00	QP
10	4.1595	-0.11	-9.77	-9.88	20.00	-29.88	AVG
11	5.9955	15.23	-9.83	5.40	30.00	-24.60	QP
12	5.9955	2.09	-9.83	-7.74	20.00	-27.74	AVG



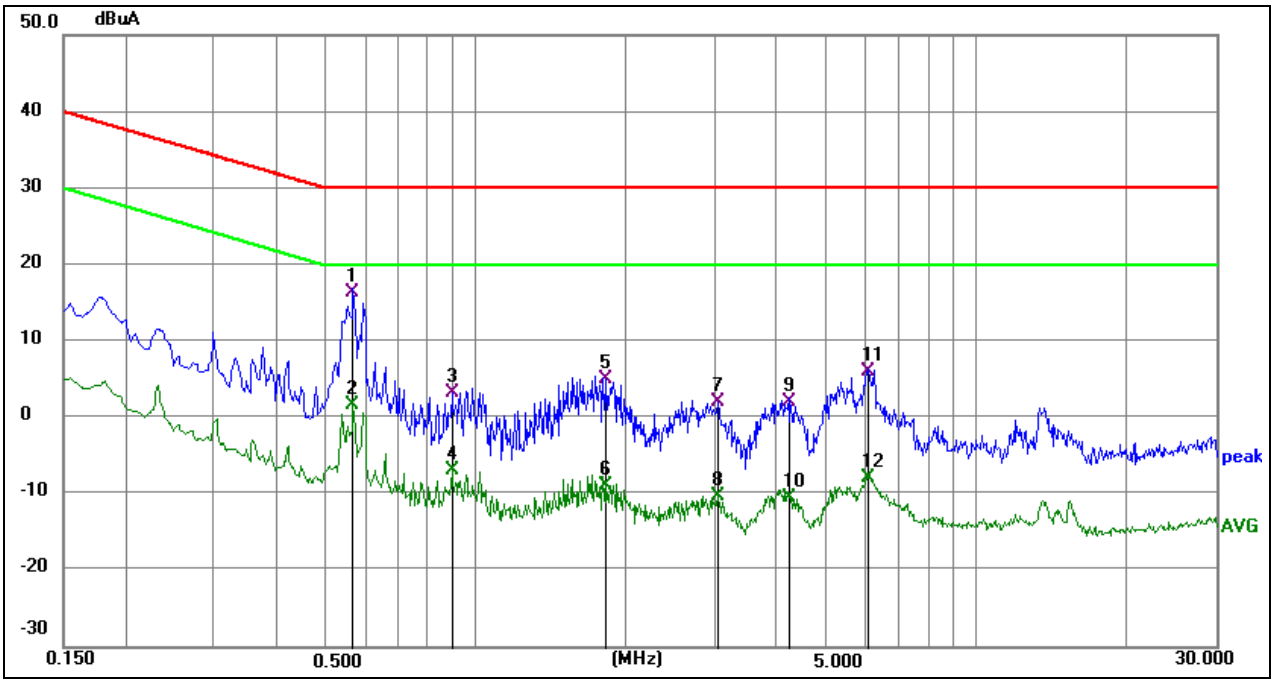
Phase:	Mode: M08

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.5685	21.33	-4.83	16.50	30.00	-13.50	QP
2	0.5685	7.66	-4.83	2.83	20.00	-17.17	AVG
3	1.0184	10.79	-7.59	3.20	30.00	-26.80	QP
4	1.0184	-0.13	-7.59	-7.72	20.00	-27.72	AVG
5	1.5540	14.20	-8.50	5.70	30.00	-24.30	QP
6	1.5540	1.13	-8.50	-7.37	20.00	-27.37	AVG
7	2.7510	12.16	-9.56	2.60	30.00	-27.40	QP
8	2.7510	-0.15	-9.56	-9.71	20.00	-29.71	AVG
9	3.9570	13.25	-9.75	3.50	30.00	-26.50	QP
10	3.9570	0.00	-9.75	-9.75	20.00	-29.75	AVG
11	5.2800	14.74	-9.84	4.90	30.00	-25.10	QP
12	5.2800	-0.23	-9.84	-10.07	20.00	-30.07	AVG



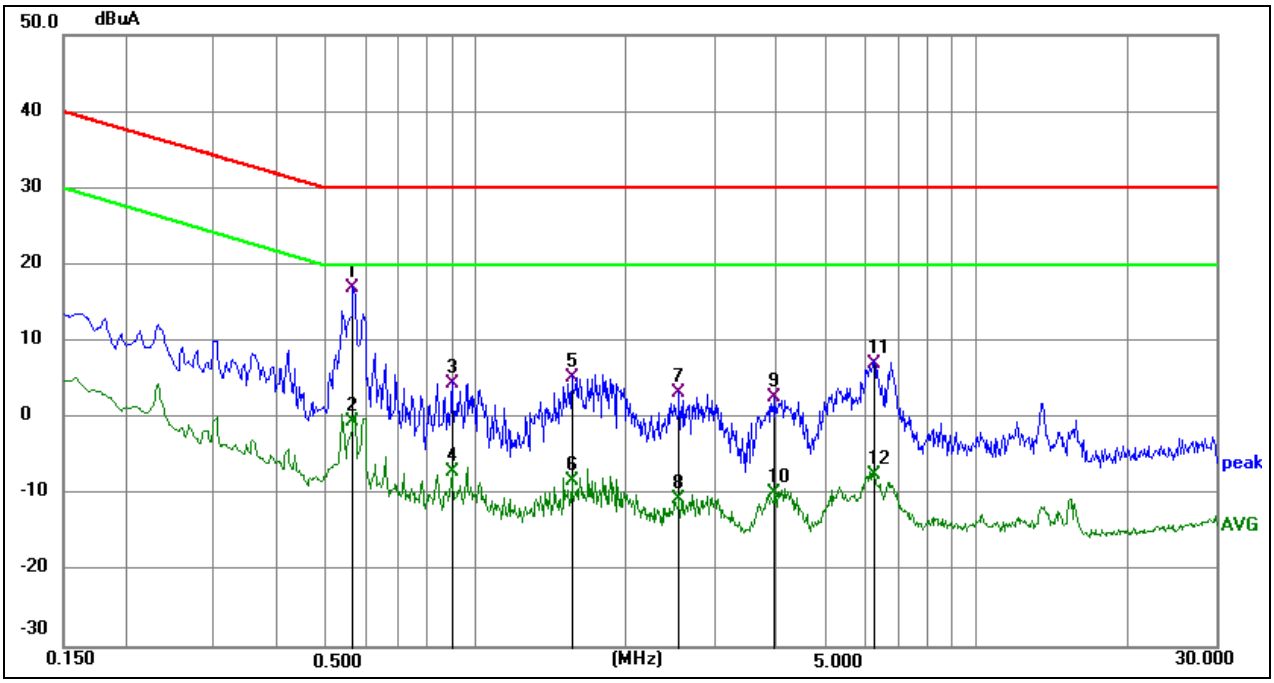
Phase:	Mode: M07

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.3570	9.27	-1.47	7.80	32.80	-25.00	QP
2	0.3570	-0.81	-1.47	-2.28	22.80	-25.08	AVG
3	0.5685	20.23	-4.83	15.40	30.00	-14.60	QP
4	0.5685	6.33	-4.83	1.50	20.00	-18.50	AVG
5	0.9150	11.44	-7.14	4.30	30.00	-25.70	QP
6	0.9150	-2.17	-7.14	-9.31	20.00	-29.31	AVG
7	1.5540	13.30	-8.50	4.80	30.00	-25.20	QP
8	1.5540	2.00	-8.50	-6.50	20.00	-26.50	AVG
9	4.1325	13.26	-9.76	3.50	30.00	-26.50	QP
10	4.1325	1.57	-9.76	-8.19	20.00	-28.19	AVG
11	6.6525	14.93	-9.83	5.10	30.00	-24.90	QP
12	6.6525	0.99	-9.83	-8.84	20.00	-28.84	AVG



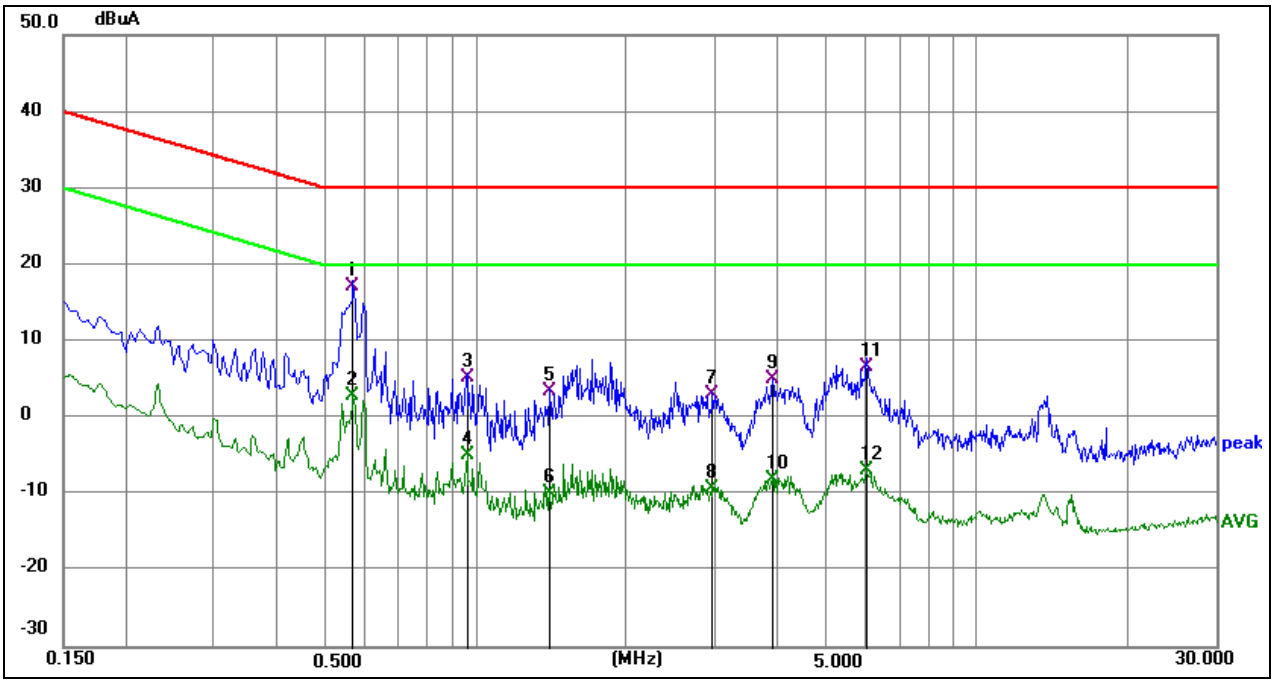
Phase:	Mode: M06

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.5685	21.13	-4.83	16.30	30.00	-13.70	QP
2	0.5685	6.48	-4.83	1.65	20.00	-18.35	AVG
3	0.8970	10.25	-7.05	3.20	30.00	-26.80	QP
4	0.8970	0.27	-7.05	-6.78	20.00	-26.78	AVG
5	1.8240	14.06	-8.96	5.10	30.00	-24.90	QP
6	1.8240	0.05	-8.96	-8.91	20.00	-28.91	AVG
7	3.0480	11.65	-9.65	2.00	30.00	-28.00	QP
8	3.0480	-0.65	-9.65	-10.30	20.00	-30.30	AVG
9	4.2180	11.87	-9.77	2.10	30.00	-27.90	QP
10	4.2180	-0.59	-9.77	-10.36	20.00	-30.36	AVG
11	6.0720	15.93	-9.83	6.10	30.00	-23.90	QP
12	6.0720	1.87	-9.83	-7.96	20.00	-27.96	AVG



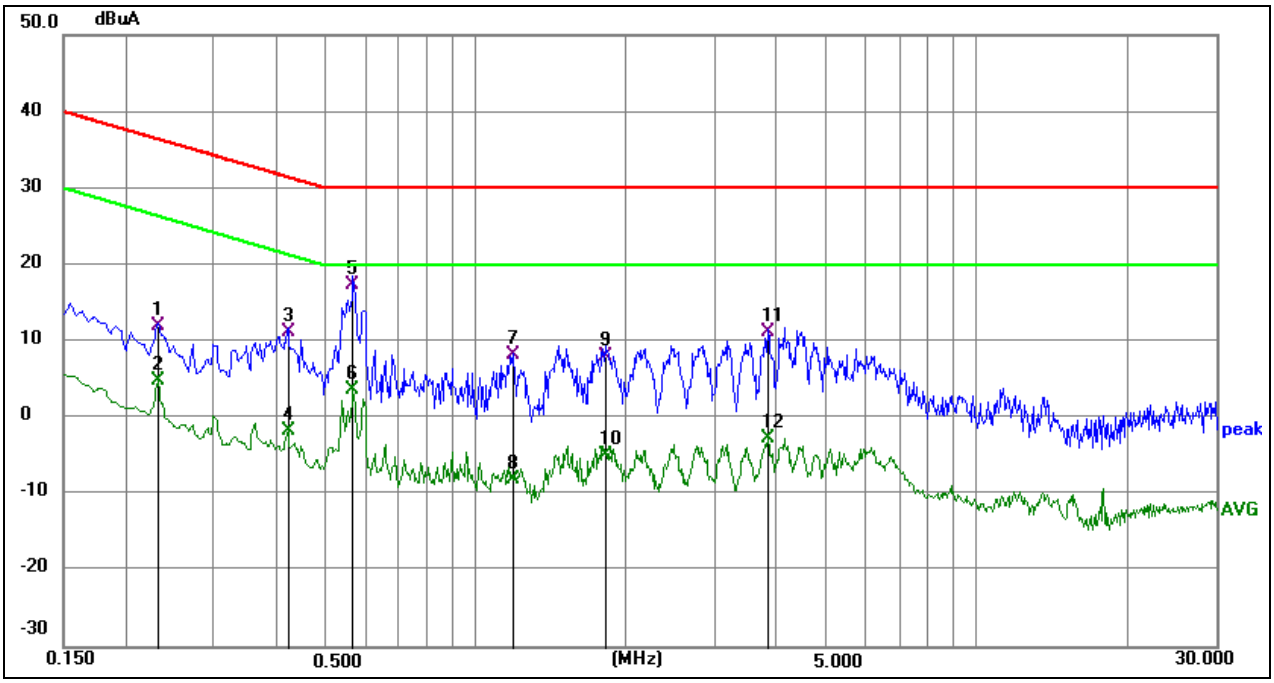
Phase:	Mode: M05

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.5685	21.83	-4.83	17.00	30.00	-13.00	QP
2	0.5685	4.40	-4.83	-0.43	20.00	-20.43	AVG
3	0.8970	11.55	-7.05	4.50	30.00	-25.50	QP
4	0.8970	-0.11	-7.05	-7.16	20.00	-27.16	AVG
5	1.5540	13.80	-8.50	5.30	30.00	-24.70	QP
6	1.5540	0.31	-8.50	-8.19	20.00	-28.19	AVG
7	2.5440	12.68	-9.48	3.20	30.00	-26.80	QP
8	2.5440	-1.14	-9.48	-10.62	20.00	-30.62	AVG
9	3.9525	12.45	-9.75	2.70	30.00	-27.30	QP
10	3.9525	-0.16	-9.75	-9.91	20.00	-29.91	AVG
11	6.2340	16.93	-9.83	7.10	30.00	-22.90	QP
12	6.2340	2.29	-9.83	-7.54	20.00	-27.54	AVG



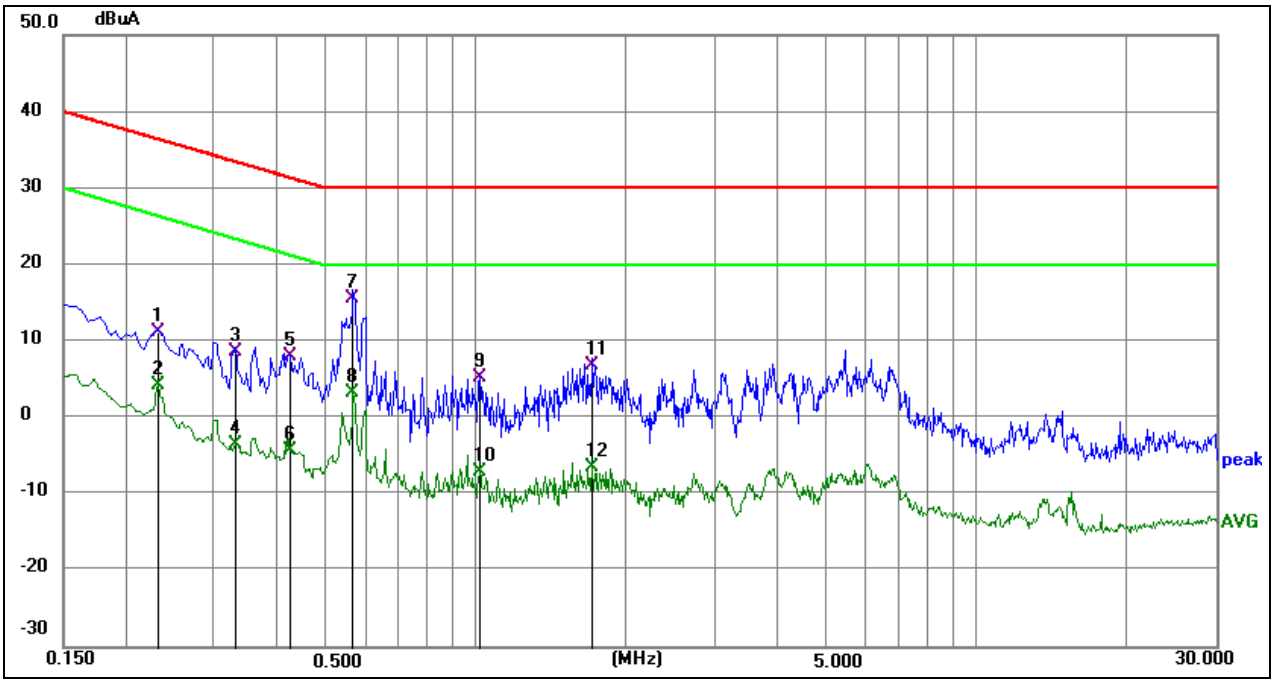
Phase:	Mode: M04

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.5685	22.03	-4.83	17.20	30.00	-12.80	QP
2	0.5685	7.74	-4.83	2.91	20.00	-17.09	AVG
3	0.9600	12.66	-7.36	5.30	30.00	-24.70	QP
4	0.9600	2.46	-7.36	-4.90	20.00	-24.90	AVG
5	1.4053	11.65	-8.25	3.40	30.00	-26.60	QP
6	1.4053	-1.56	-8.25	-9.81	20.00	-29.81	AVG
7	2.9670	12.74	-9.64	3.10	30.00	-26.90	QP
8	2.9670	0.35	-9.64	-9.29	20.00	-29.29	AVG
9	3.9165	14.74	-9.74	5.00	30.00	-25.00	QP
10	3.9165	1.62	-9.74	-8.12	20.00	-28.12	AVG
11	6.0450	16.53	-9.83	6.70	30.00	-23.30	QP
12	6.0450	2.99	-9.83	-6.84	20.00	-26.84	AVG



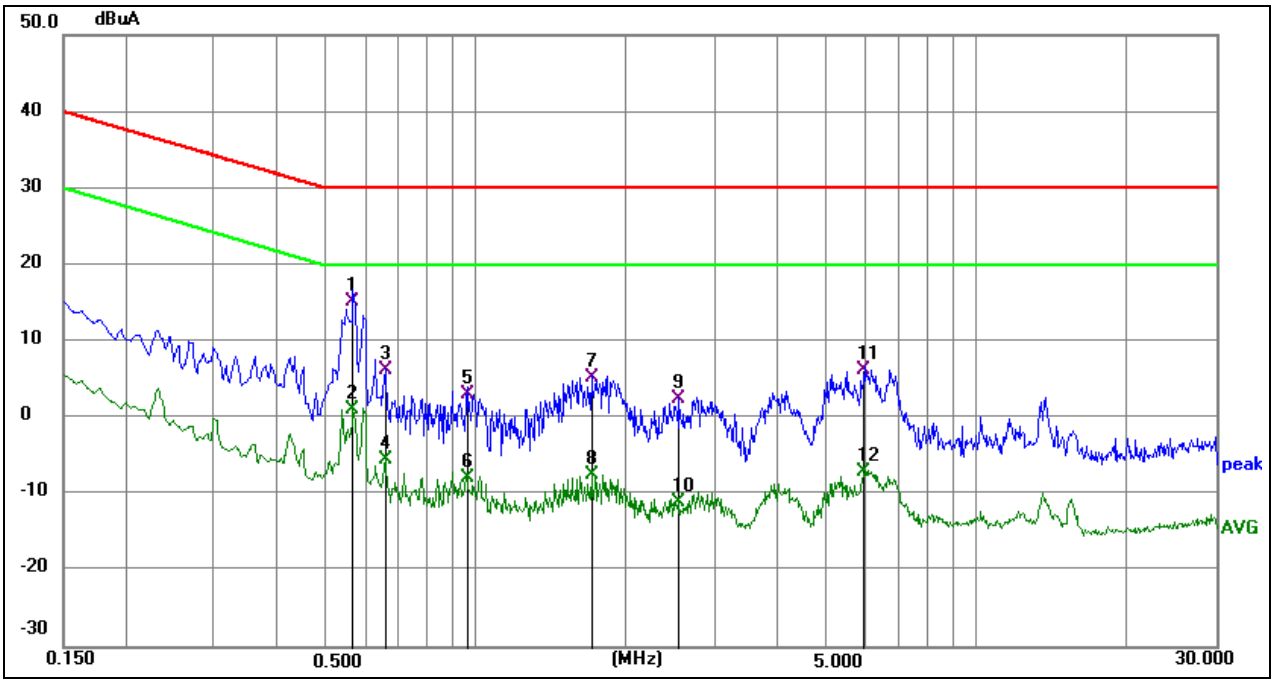
Phase:	Mode: M03

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2310	10.32	1.68	12.00	36.41	-24.41	QP
2	0.2310	3.07	1.68	4.75	26.41	-21.66	AVG
3	0.4200	13.86	-2.66	11.20	31.45	-20.25	QP
4	0.4200	0.86	-2.66	-1.80	21.45	-23.25	AVG
5	0.5685	22.13	-4.83	17.30	30.00	-12.70	QP
6	0.5685	8.56	-4.83	3.73	20.00	-16.27	AVG
7	1.1895	16.08	-7.88	8.20	30.00	-21.80	QP
8	1.1895	-0.09	-7.88	-7.97	20.00	-27.97	AVG
9	1.8105	17.04	-8.94	8.10	30.00	-21.90	QP
10	1.8105	4.14	-8.94	-4.80	20.00	-24.80	AVG
11	3.8355	20.93	-9.73	11.20	30.00	-18.80	QP
12	3.8355	7.09	-9.73	-2.64	20.00	-22.64	AVG



Phase:	Mode: M02

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2310	9.52	1.68	11.20	36.41	-25.21	QP
2	0.2310	2.52	1.68	4.20	26.41	-22.21	AVG
3	0.3300	9.65	-0.95	8.70	33.45	-24.75	QP
4	0.3300	-2.50	-0.95	-3.45	23.45	-26.90	AVG
5	0.4244	10.75	-2.75	8.00	31.36	-23.36	QP
6	0.4244	-1.50	-2.75	-4.25	21.36	-25.61	AVG
7	0.5685	20.43	-4.83	15.60	30.00	-14.40	QP
8	0.5685	8.12	-4.83	3.29	20.00	-16.71	AVG
9	1.0184	12.89	-7.59	5.30	30.00	-24.70	QP
10	1.0184	0.46	-7.59	-7.13	20.00	-27.13	AVG
11	1.7115	15.57	-8.77	6.80	30.00	-23.20	QP
12	1.7115	2.25	-8.77	-6.52	20.00	-26.52	AVG



Phase:	Mode: M01

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.5685	20.03	-4.83	15.20	30.00	-14.80	QP
2	0.5685	5.88	-4.83	1.05	20.00	-18.95	AVG
3	0.6585	11.88	-5.68	6.20	30.00	-23.80	QP
4	0.6585	0.23	-5.68	-5.45	20.00	-25.45	AVG
5	0.9600	10.46	-7.36	3.10	30.00	-26.90	QP
6	0.9600	-0.53	-7.36	-7.89	20.00	-27.89	AVG
7	1.7070	13.96	-8.76	5.20	30.00	-24.80	QP
8	1.7070	1.31	-8.76	-7.45	20.00	-27.45	AVG
9	2.5440	11.88	-9.48	2.40	30.00	-27.60	QP
10	2.5440	-1.48	-9.48	-10.96	20.00	-30.96	AVG
11	5.9909	16.03	-9.83	6.20	30.00	-23.80	QP
12	5.9909	2.79	-9.83	-7.04	20.00	-27.04	AVG

Remark:
Result = Reading +Correct
Margin = Result - Limit

7.3. RADIATED EMISSION (30MHZ TO 1GHZ)

LIMITS

FREQUENCY (MHz)	At 10 m	At 3 m
	dB(μV/m)	dB(μV/m)
30 – 230	30	40
230 – 1000	37	47

Note:
(1) The limit for radiated test was performed according to EN IEC 55015
(2) The tighter limit applies at the band edges.
(3) Emission level (dBμV/m)=20log Emission level (μV/m).

TEST PROCEDURE

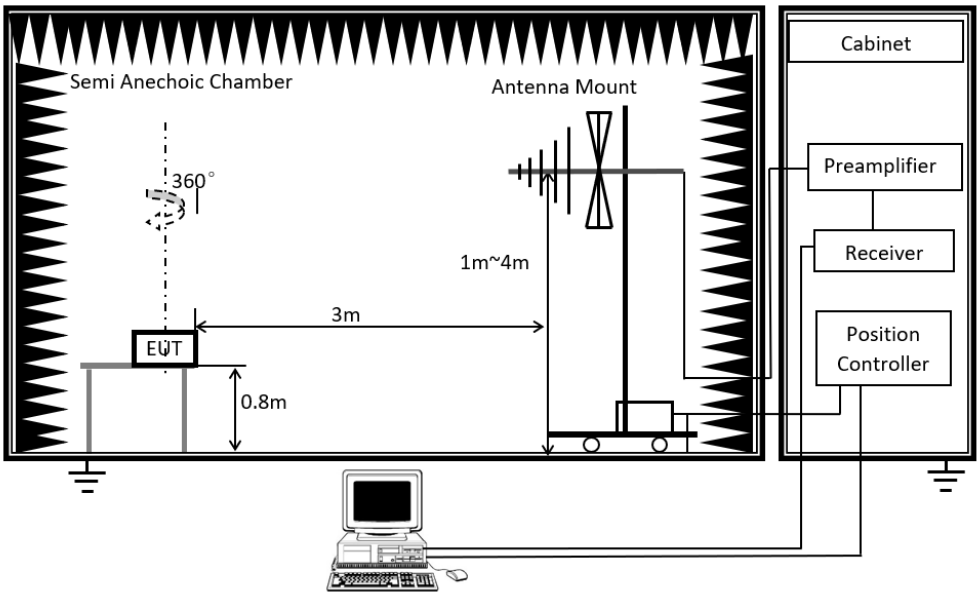
Below 1 GHz and above 30 MHz

The setting of the spectrum analyzer

RBW	120 kHz
VBW	300 kHz
Sweep	Auto
Detector	Peak and QP
Trace	Max hold

a. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp was used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
b. The EUT was placed on a turntable with 80 cm above ground.
c. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
d. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
e. Cables of hand-operated devices, such as keyboards and mice, shall be placed as for normal used.
f. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
g. For measurement below 1 GHz, the initial step in collecting Radiated emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.

TEST SETUP



TEST ENVIRONMENT

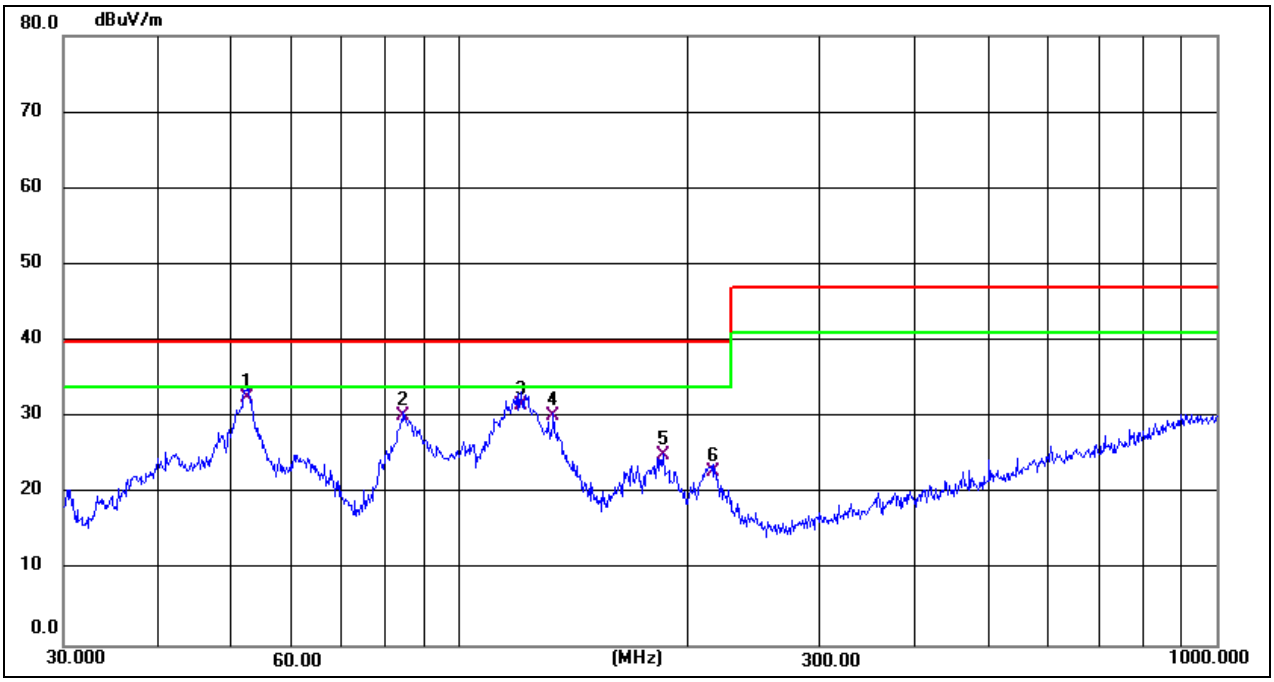
Temperature	23.5℃	Relative Humidity	54%
Atmosphere Pressure	101kPa		

TEST MODE

Pre-test Mode:	M01 ~ M12
Final Test Mode:	M01, M02, M03, M04, M05, M06, M07, M08, M09, M10, M11, M12

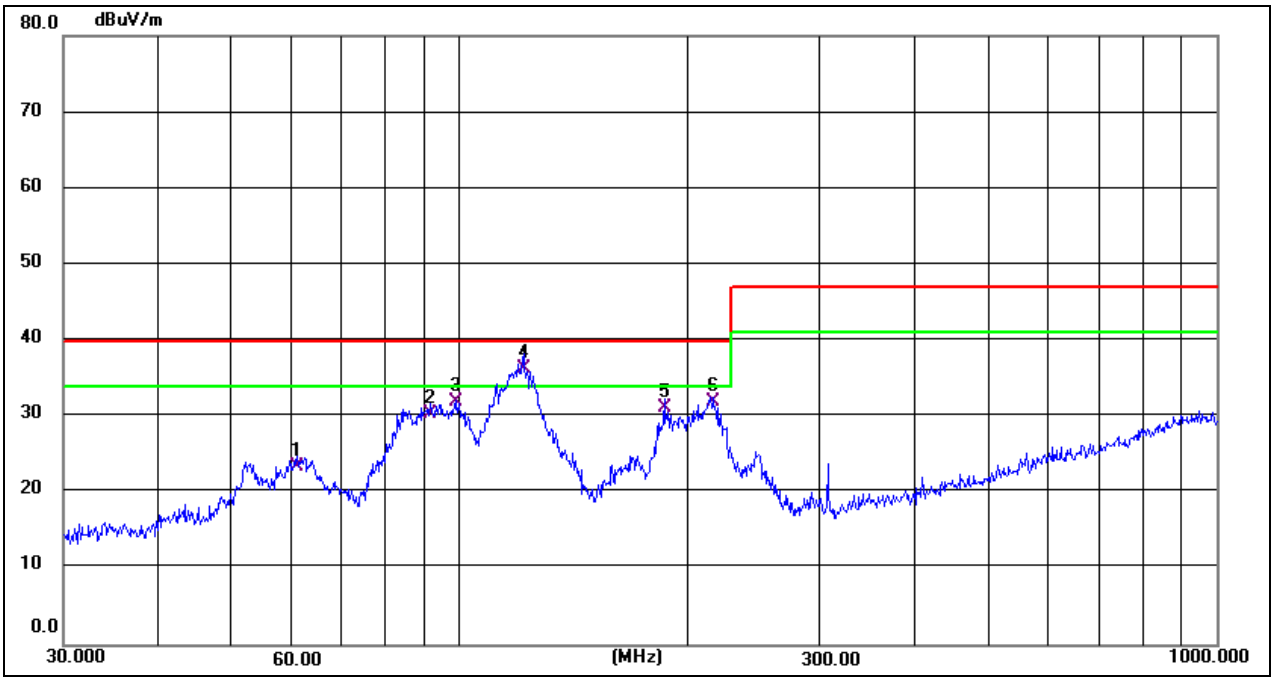
Note: All test modes had been tested, but only the worst data recorded in the report.

TEST RESULTS



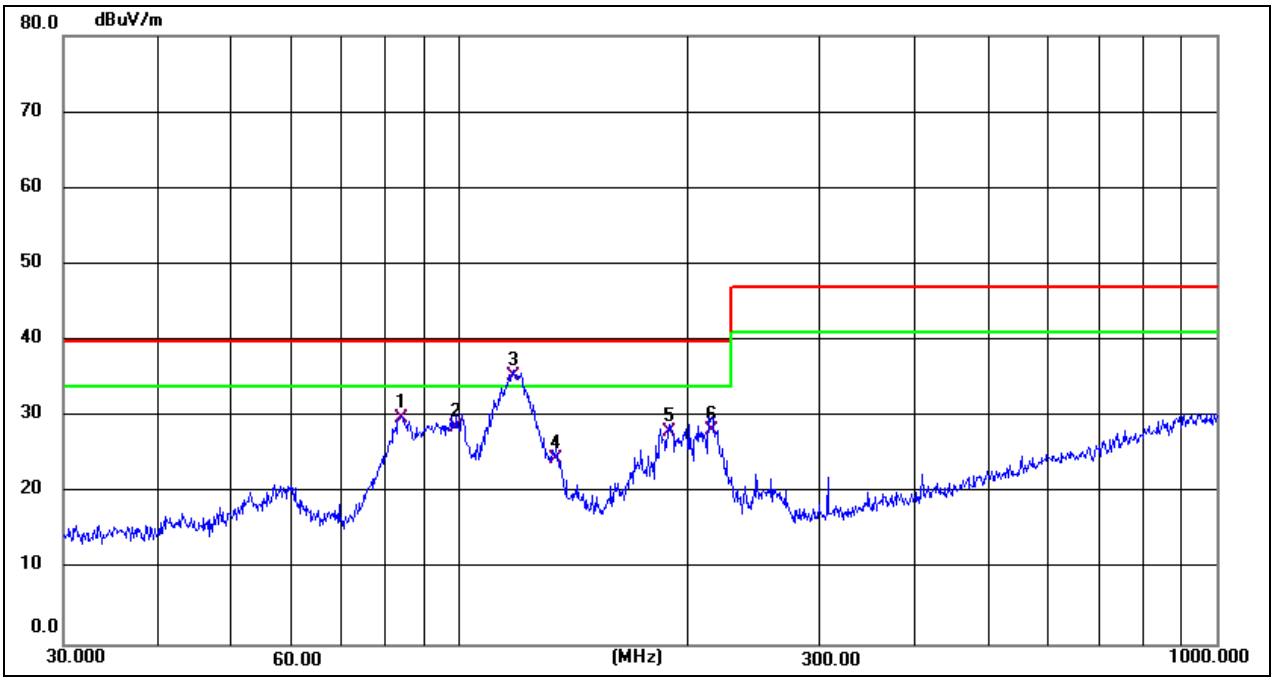
Antenna::Vertical	Mode: M01

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	52.5753	45.01	-12.51	32.50	40.00	-7.50	QP	
2	84.4054	46.29	-16.19	30.10	40.00	-9.90	QP	
3	120.6991	44.80	-13.30	31.50	40.00	-8.50	QP	
4	133.1511	42.46	-12.26	30.20	40.00	-9.80	QP	
5	185.7882	39.78	-14.68	25.10	40.00	-14.90	QP	
6	216.7828	37.93	-15.03	22.90	40.00	-17.10	QP	



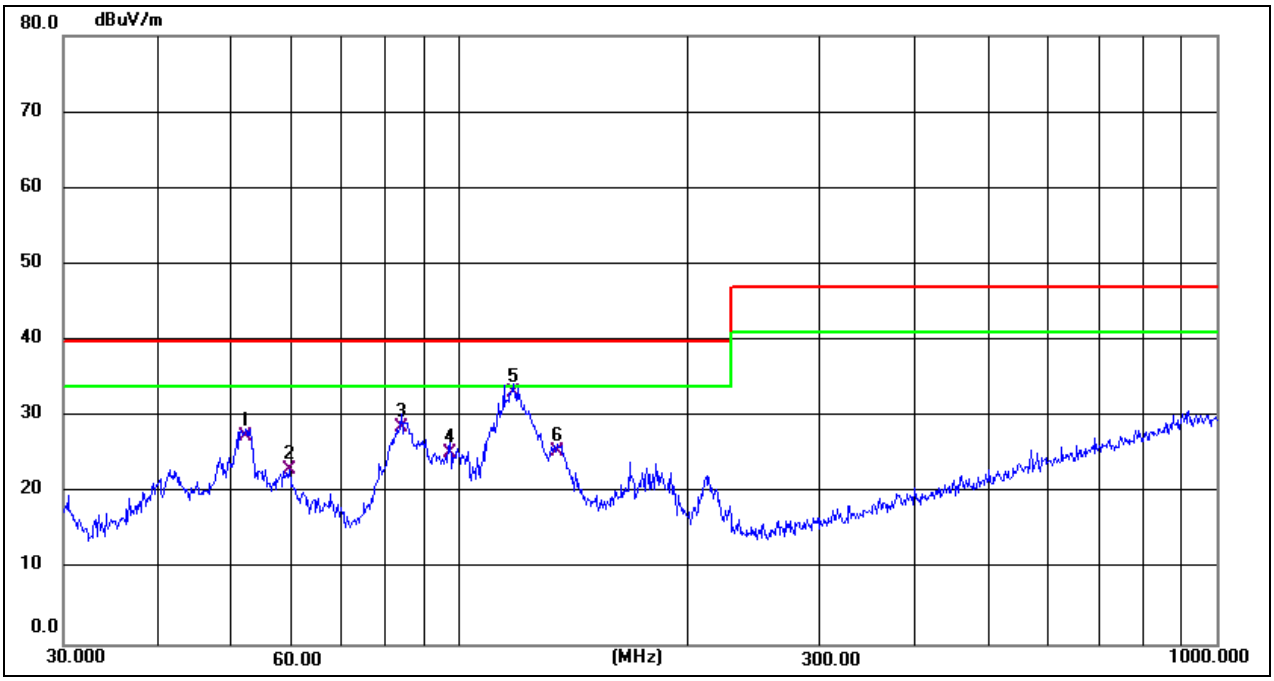
Antenna::Horizontal	Mode: M01

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	61.1316	37.41	-13.91	23.50	40.00	-16.50	QP	
2	91.4949	46.50	-16.10	30.40	40.00	-9.60	QP	
3	98.8326	47.72	-15.72	32.00	40.00	-8.00	QP	
4	121.5486	49.55	-13.25	36.30	40.00	-3.70	QP	
5	186.4409	45.90	-14.70	31.20	40.00	-8.80	QP	
6	216.0240	47.05	-15.05	32.00	40.00	-8.00	QP	



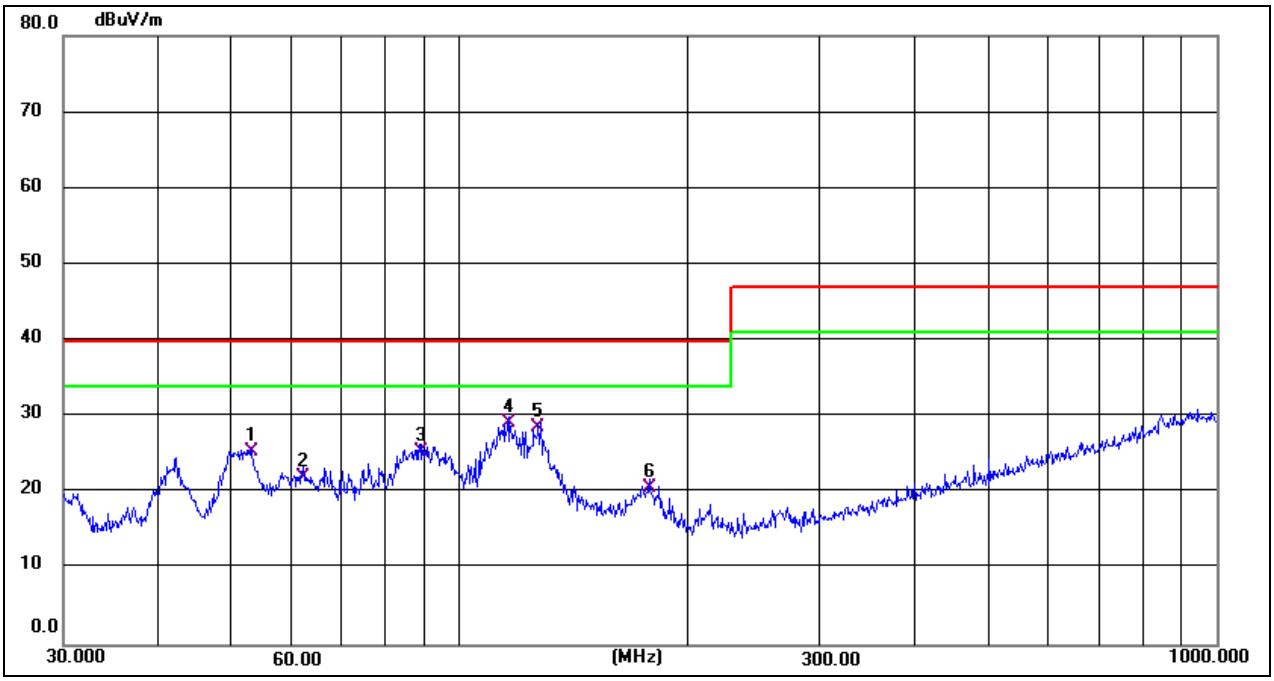
Antenna::Horizontal	Mode: M02

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	83.8156	46.00	-16.20	29.80	40.00	-10.20	QP	
2	99.1797	44.39	-15.69	28.70	40.00	-11.30	QP	
3	118.1862	48.82	-13.52	35.30	40.00	-4.70	QP	
4	134.0882	36.67	-12.17	24.50	40.00	-15.50	QP	
5	189.0743	42.91	-14.81	28.10	40.00	-11.90	QP	
6	215.2678	43.38	-15.08	28.30	40.00	-11.70	QP	



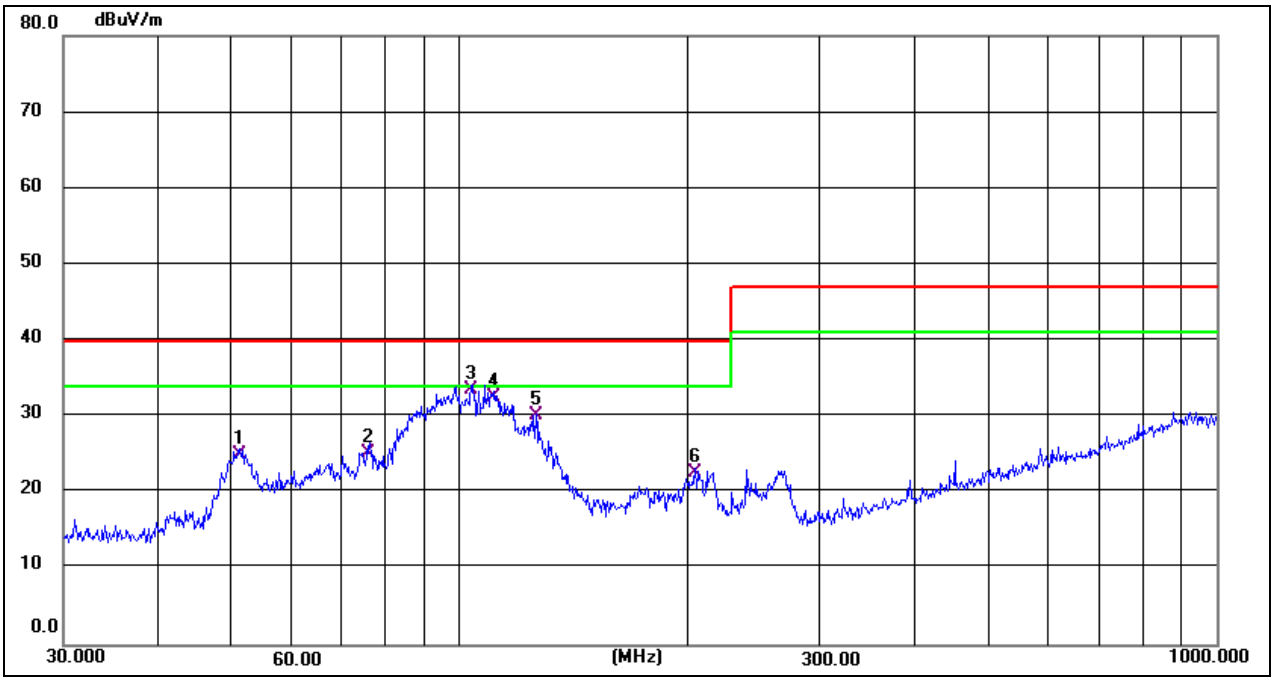
Antenna::Vertical	Mode: M02

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	52.2079	39.94	-12.44	27.50	40.00	-12.50	QP	
2	59.6493	36.69	-13.69	23.00	40.00	-17.00	QP	
3	83.8156	44.90	-16.20	28.70	40.00	-11.30	QP	
4	97.1148	41.10	-15.80	25.30	40.00	-14.70	QP	
5	117.7725	46.67	-13.57	33.10	40.00	-6.90	QP	
6	134.5592	37.51	-12.11	25.40	40.00	-14.60	QP	



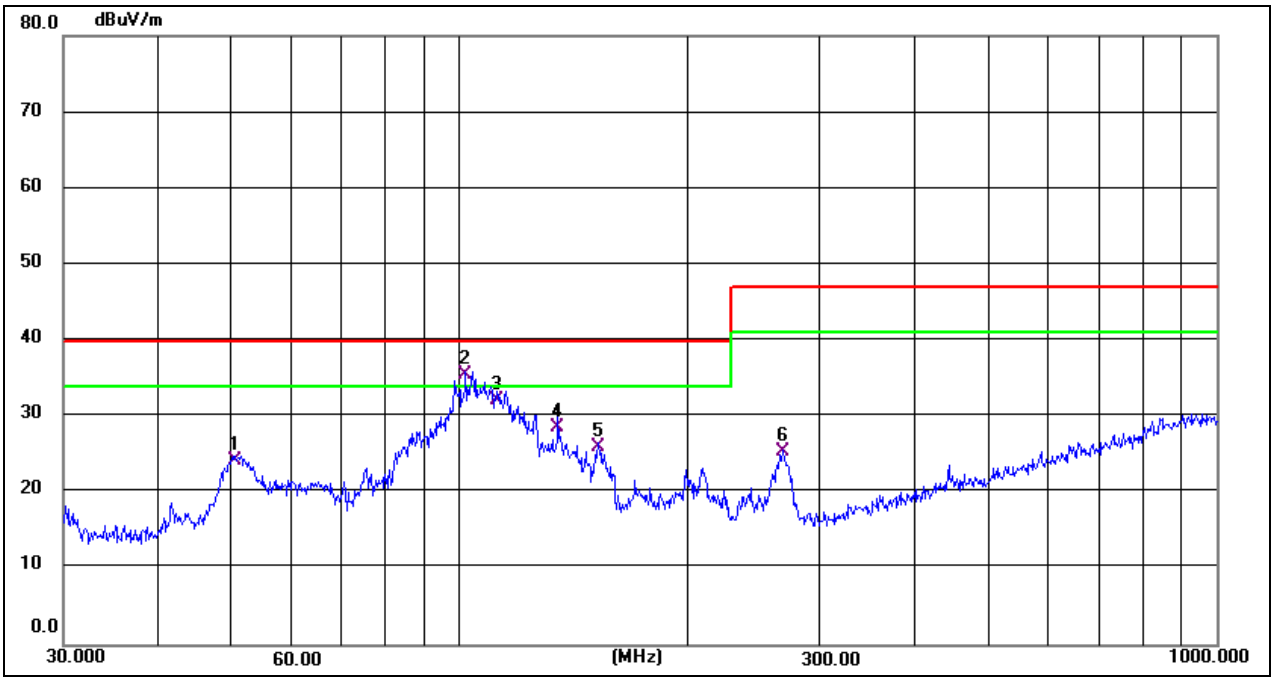
Antenna::Vertical	Mode: M03

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	53.1313	38.00	-12.60	25.40	40.00	-14.60	QP	
2	62.2128	36.18	-14.08	22.10	40.00	-17.90	QP	
3	89.2762	41.69	-16.19	25.50	40.00	-14.50	QP	
4	116.1321	43.01	-13.71	29.30	40.00	-10.70	QP	
5	127.2176	41.50	-12.80	28.70	40.00	-11.30	QP	
6	178.1326	34.82	-14.12	20.70	40.00	-19.30	QP	



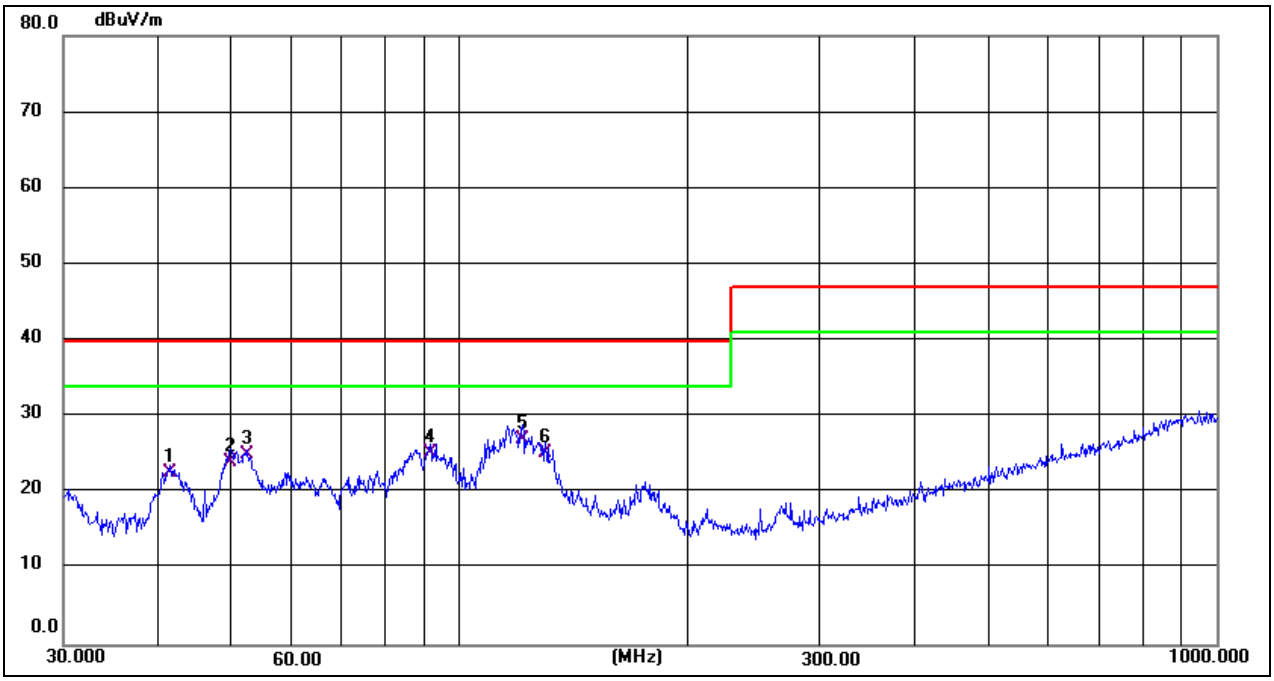
Antenna::Horizontal	Mode: M03

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	51.3005	37.39	-12.29	25.10	40.00	-14.90	QP	
2	75.7113	41.11	-15.81	25.30	40.00	-14.70	QP	
3	103.8054	48.62	-15.12	33.50	40.00	-6.50	QP	
4	111.3468	46.64	-14.14	32.50	40.00	-7.50	QP	
5	126.3285	42.96	-12.86	30.10	40.00	-9.90	QP	
6	204.9551	38.06	-15.36	22.70	40.00	-17.30	QP	



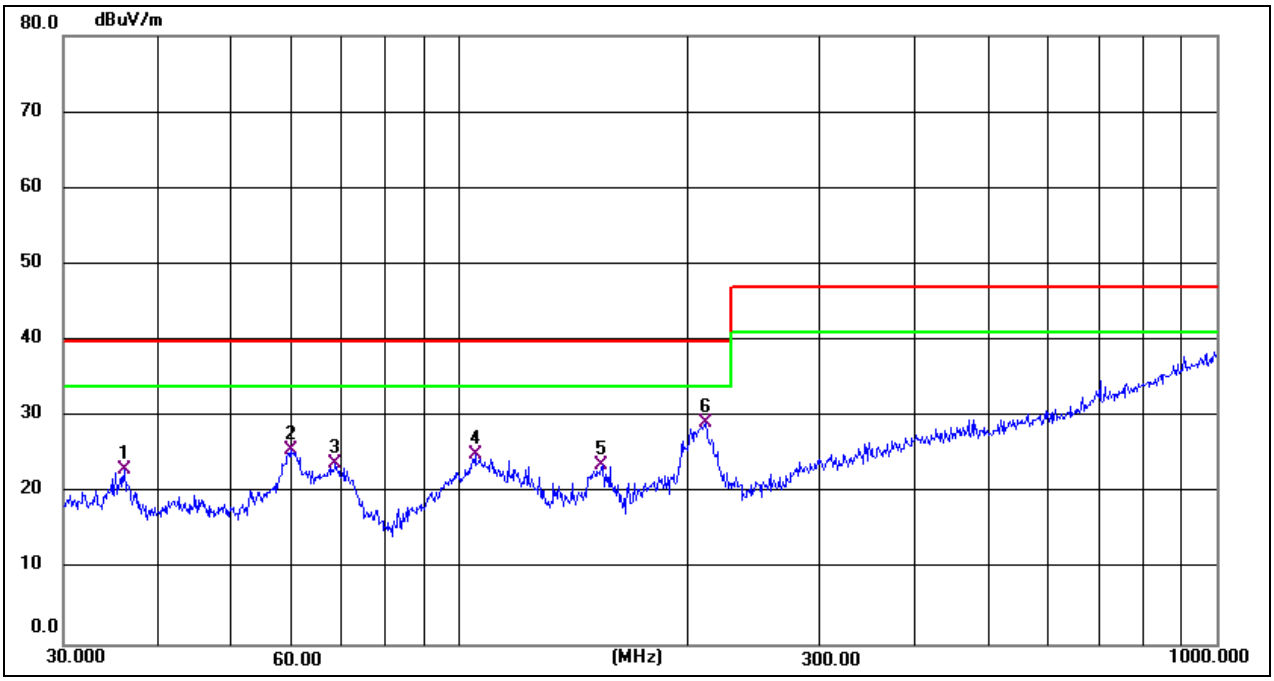
Antenna::Horizontal	Mode: M04

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	50.5860	36.38	-12.18	24.20	40.00	-15.80	QP	
2	102.0013	50.87	-15.37	35.50	40.00	-4.50	QP	
3	112.1303	46.17	-14.07	32.10	40.00	-7.90	QP	
4	135.0318	40.78	-12.08	28.70	40.00	-11.30	QP	
5	152.6640	37.57	-11.57	26.00	40.00	-14.00	QP	
6	267.5453	38.98	-13.58	25.40	47.00	-21.60	QP	



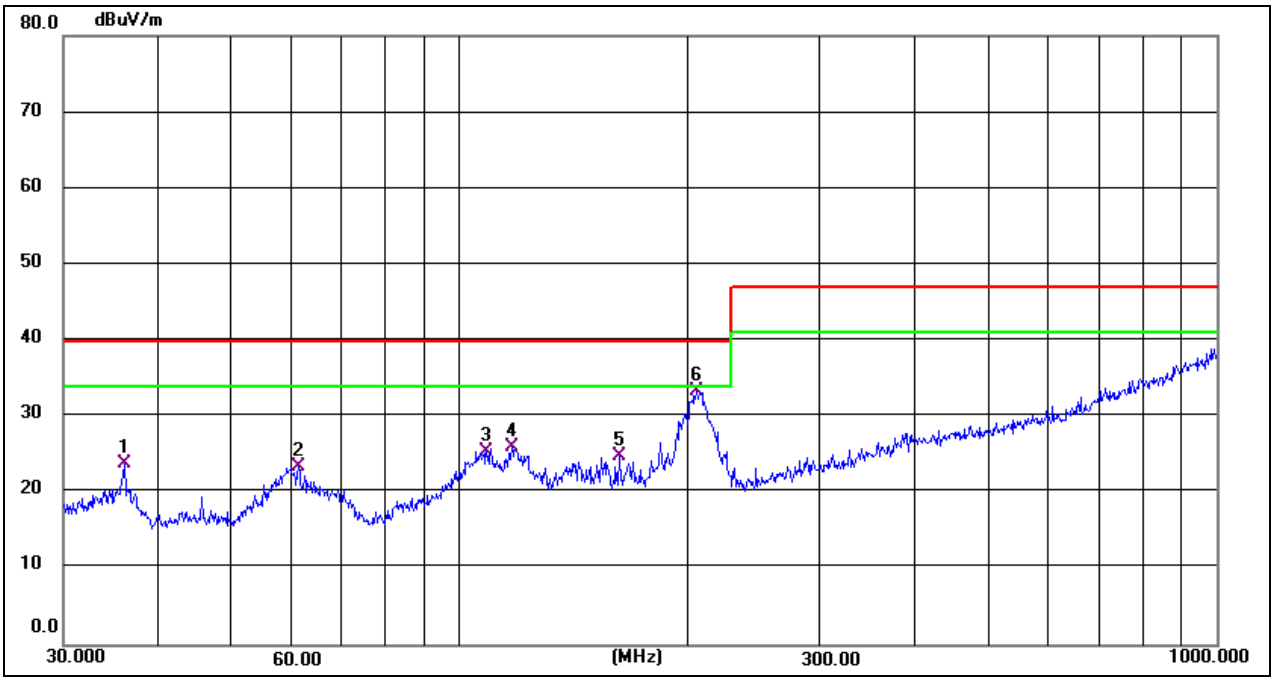
Antenna::Vertical	Mode: M04

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	41.5670	35.61	-12.91	22.70	40.00	-17.30	QP	
2	49.8814	36.19	-12.09	24.10	40.00	-15.90	QP	
3	52.3912	37.47	-12.47	25.00	40.00	-15.00	QP	
4	91.4949	41.40	-16.10	25.30	40.00	-14.70	QP	
5	121.1231	40.38	-13.28	27.10	40.00	-12.90	QP	
6	129.9226	37.88	-12.58	25.30	40.00	-14.70	QP	



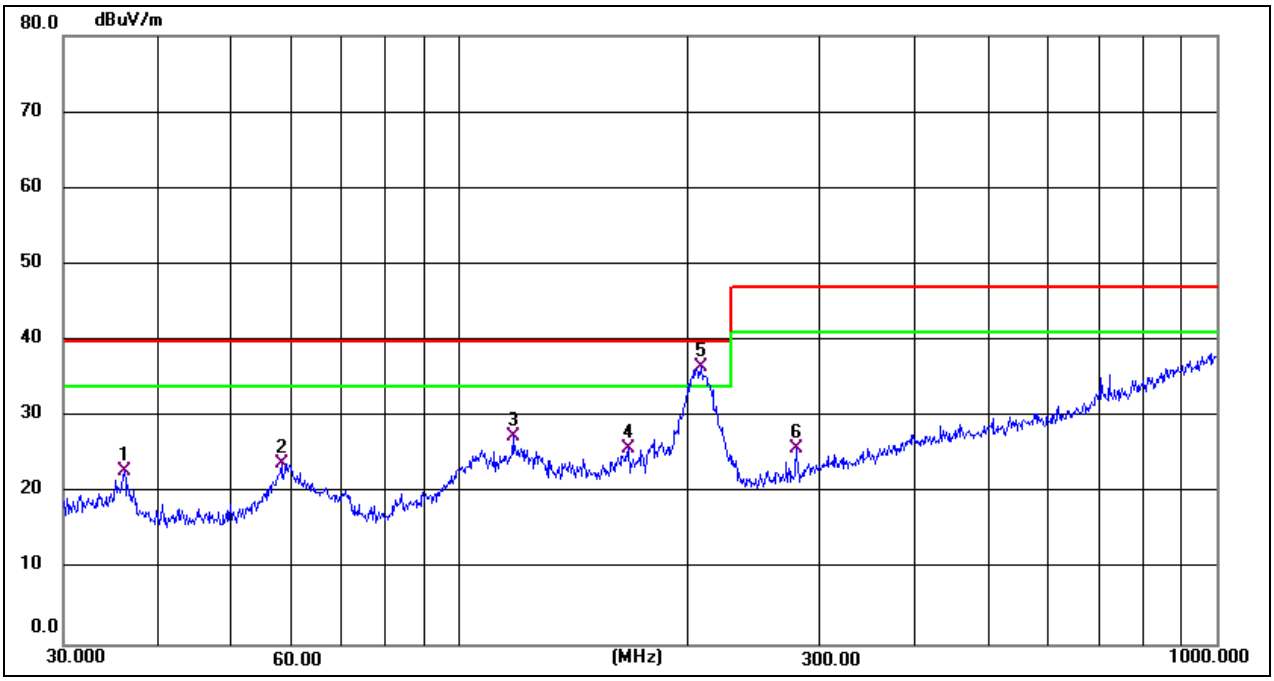
Antenna::Vertical	Mode: M05

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	36.1271	30.65	-7.53	23.12	40.00	-16.88	QP	
2	59.8588	30.52	-4.80	25.72	40.00	-14.28	QP	
3	68.6310	31.92	-8.14	23.78	40.00	-16.22	QP	
4	104.9033	29.61	-4.65	24.96	40.00	-15.04	QP	
5	154.8204	33.81	-10.09	23.72	40.00	-16.28	QP	
6	211.5265	33.98	-4.77	29.21	40.00	-10.79	QP	



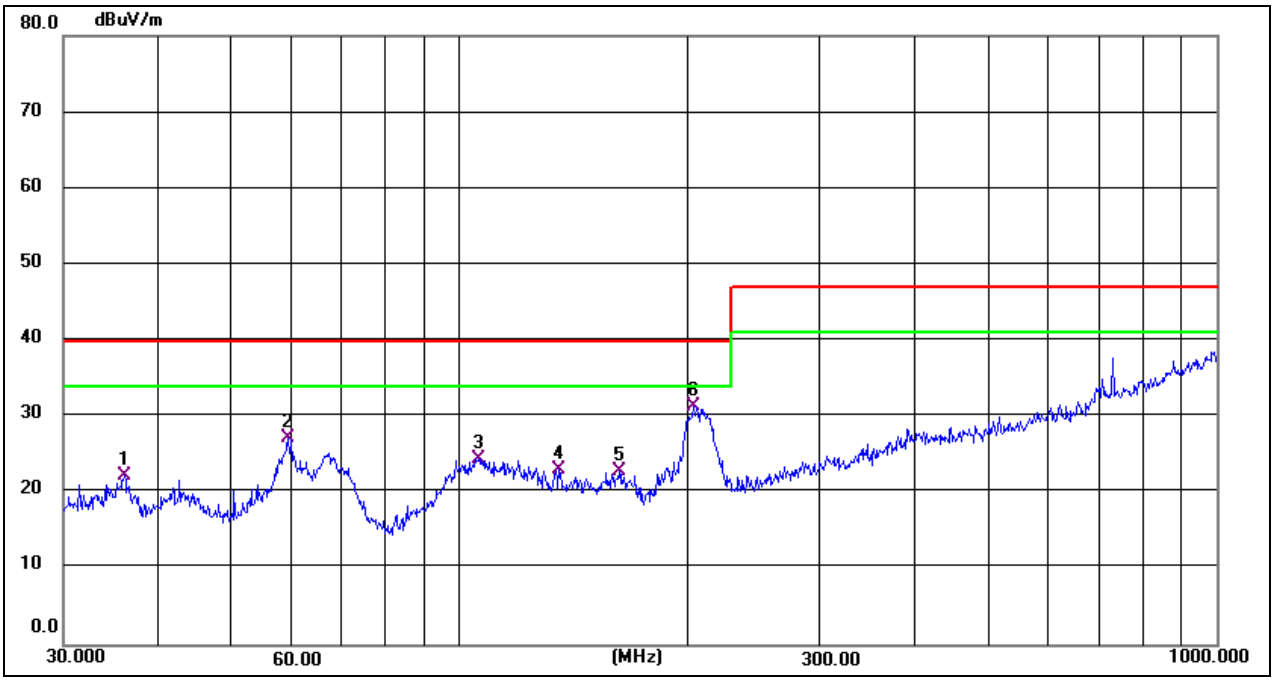
Antenna::Horizontal	Mode: M05

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	36.1271	31.34	-7.53	23.81	40.00	-16.19	QP	
2	61.3463	28.78	-5.27	23.51	40.00	-16.49	QP	
3	108.6470	29.95	-4.50	25.45	40.00	-14.55	QP	
4	117.3603	31.32	-5.23	26.09	40.00	-13.91	QP	
5	162.6105	34.38	-9.47	24.91	40.00	-15.09	QP	
6	205.6751	38.17	-4.84	33.33	40.00	-6.67	QP	



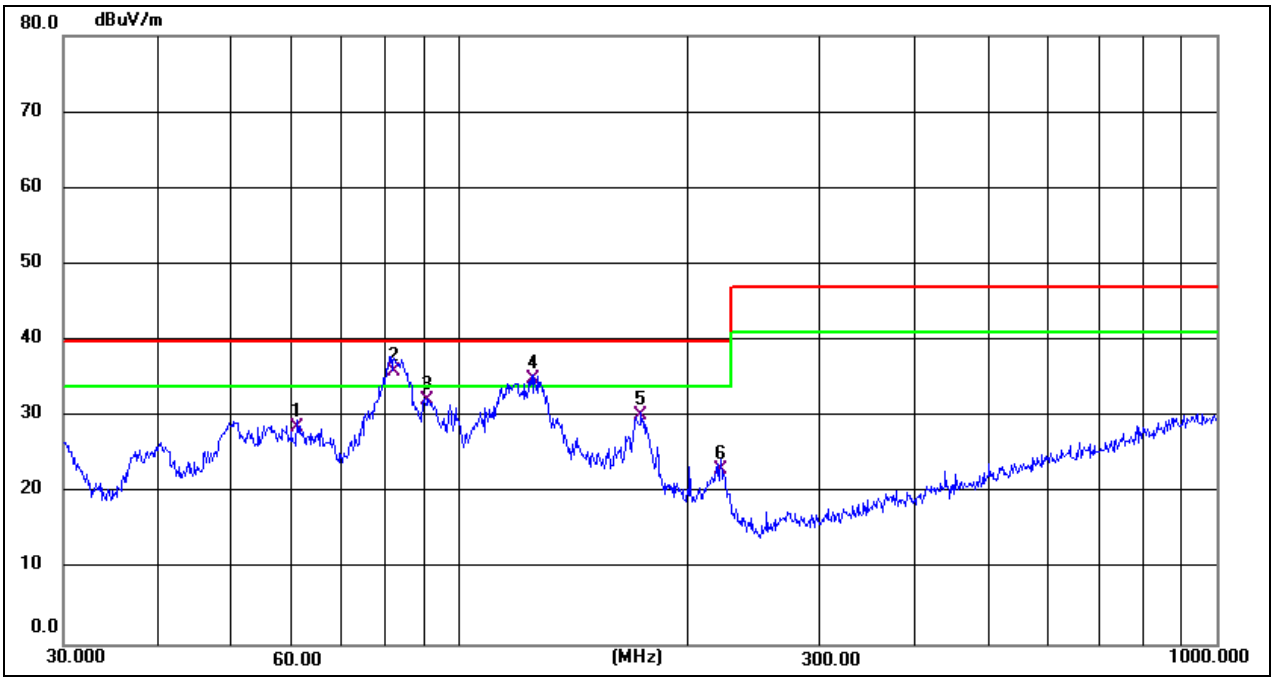
Antenna::Horizontal	Mode: M06

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	36.1272	30.34	-7.53	22.81	40.00	-17.19	QP	
2	58.2030	29.37	-5.53	23.84	40.00	-16.16	QP	
3	117.7725	32.65	-5.29	27.36	40.00	-12.64	QP	
4	167.2368	34.67	-8.88	25.79	40.00	-14.21	QP	
5	208.5803	41.38	-4.81	36.57	40.00	-3.43	QP	
6	279.0436	28.49	-2.69	25.80	47.00	-21.20	QP	



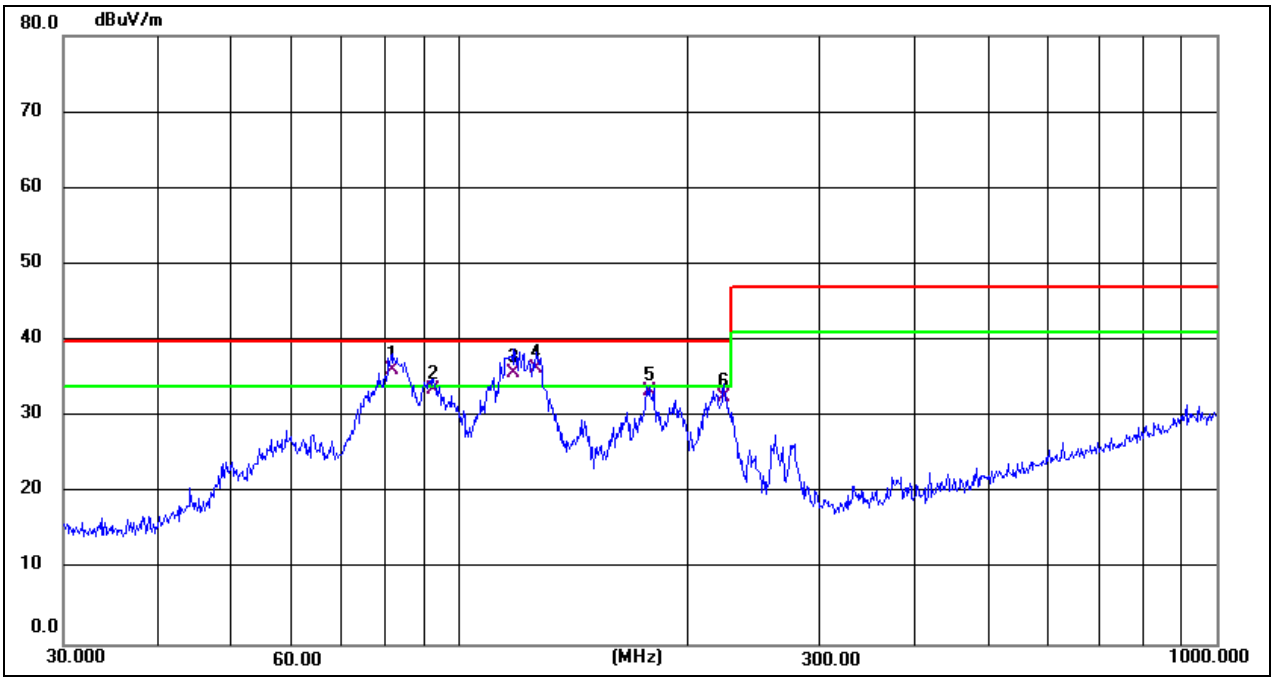
Antenna::Vertical	Mode: M06

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	36.1271	29.72	-7.53	22.19	40.00	-17.81	QP	
2	59.4405	32.25	-5.00	27.25	40.00	-12.75	QP	
3	106.0126	29.11	-4.61	24.50	40.00	-15.50	QP	
4	135.5061	31.11	-8.08	23.03	40.00	-16.97	QP	
5	162.6105	32.39	-9.47	22.92	40.00	-17.08	QP	
6	203.5228	36.26	-4.88	31.38	40.00	-8.62	QP	



Antenna::Vertical	Mode: M07

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	61.1316	42.61	-13.91	28.70	40.00	-11.30	QP	
2	82.0706	52.19	-16.19	36.00	40.00	-4.00	QP	
3	90.8554	48.23	-16.13	32.10	40.00	-7.90	QP	
4 !	125.4457	47.93	-12.93	35.00	40.00	-5.00	QP	
5	173.8135	43.43	-13.33	30.10	40.00	-9.90	QP	
6	221.3921	38.00	-14.90	23.10	40.00	-16.90	QP	



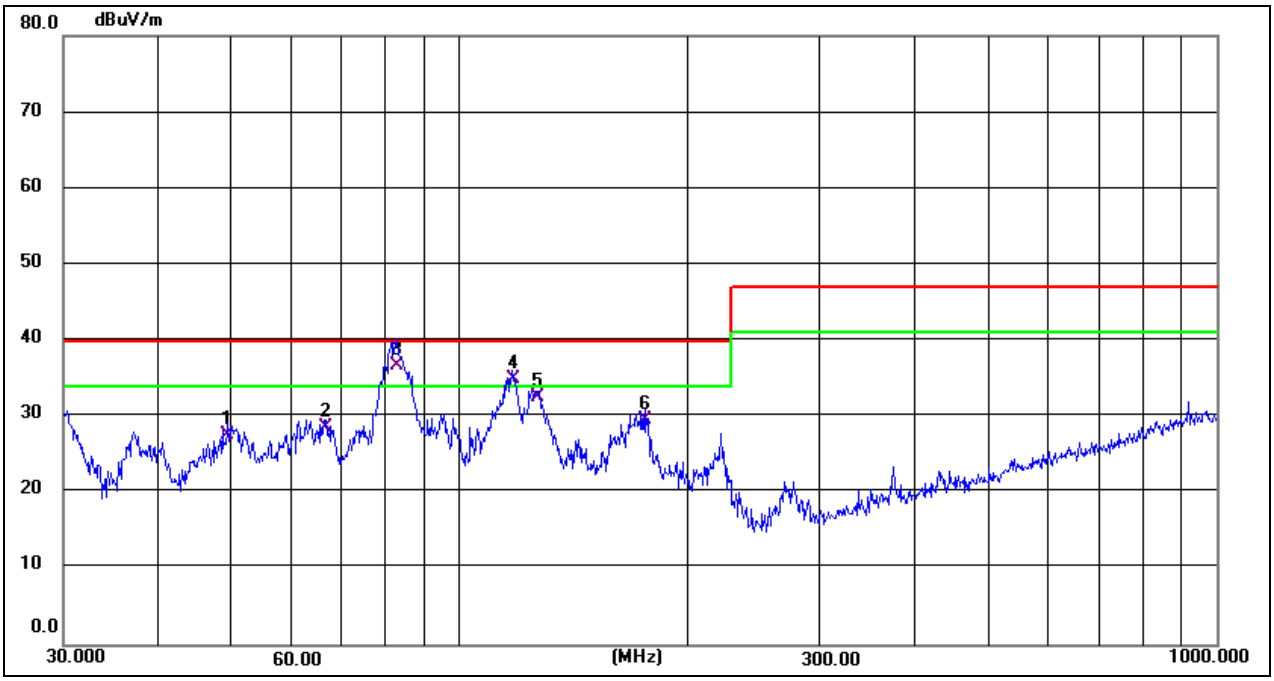
Antenna::Horizontal	Mode: M07

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1 !	81.4970	52.29	-16.19	36.10	40.00	-3.90	QP	
2	92.4624	49.55	-16.05	33.50	40.00	-6.50	QP	
3 !	118.1862	49.32	-13.52	35.80	40.00	-4.20	QP	
4	126.3286	49.16	-12.86	36.30	40.00	-3.70	QP	
5	178.1327	47.52	-14.12	33.40	40.00	-6.60	QP	
6	223.7334	47.34	-14.84	32.50	40.00	-7.50	QP	



Antenna::Horizontal	Mode: M08

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	81.4970	53.09	-16.19	36.90	40.00	-3.10	QP	
2 !	117.7725	50.27	-13.57	36.70	40.00	-3.30	QP	
3 !	175.6516	48.67	-13.67	35.00	40.00	-5.00	QP	
4	184.4898	48.53	-14.63	33.90	40.00	-6.10	QP	
5 !	217.5443	49.11	-15.01	34.10	40.00	-5.90	QP	
6	227.6906	48.23	-14.73	33.50	40.00	-6.50	QP	



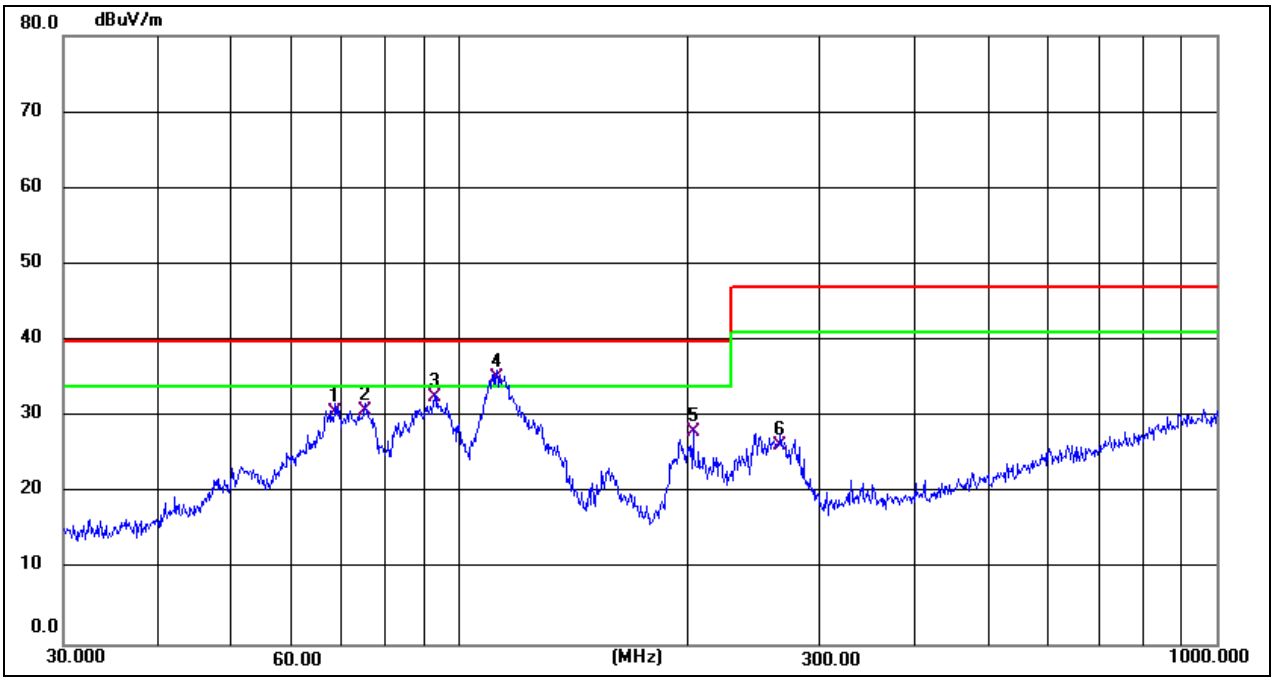
Antenna::Vertical	Mode: M08

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	49.5328	39.73	-12.13	27.60	40.00	-12.40	QP	
2	66.7325	43.48	-14.78	28.70	40.00	-11.30	QP	
3	82.9385	53.00	-16.20	36.80	40.00	-3.20	QP	
4 !	117.7725	48.57	-13.57	35.00	40.00	-5.00	QP	
5	126.7723	45.33	-12.83	32.50	40.00	-7.50	QP	
6	175.6516	43.37	-13.67	29.70	40.00	-10.30	QP	



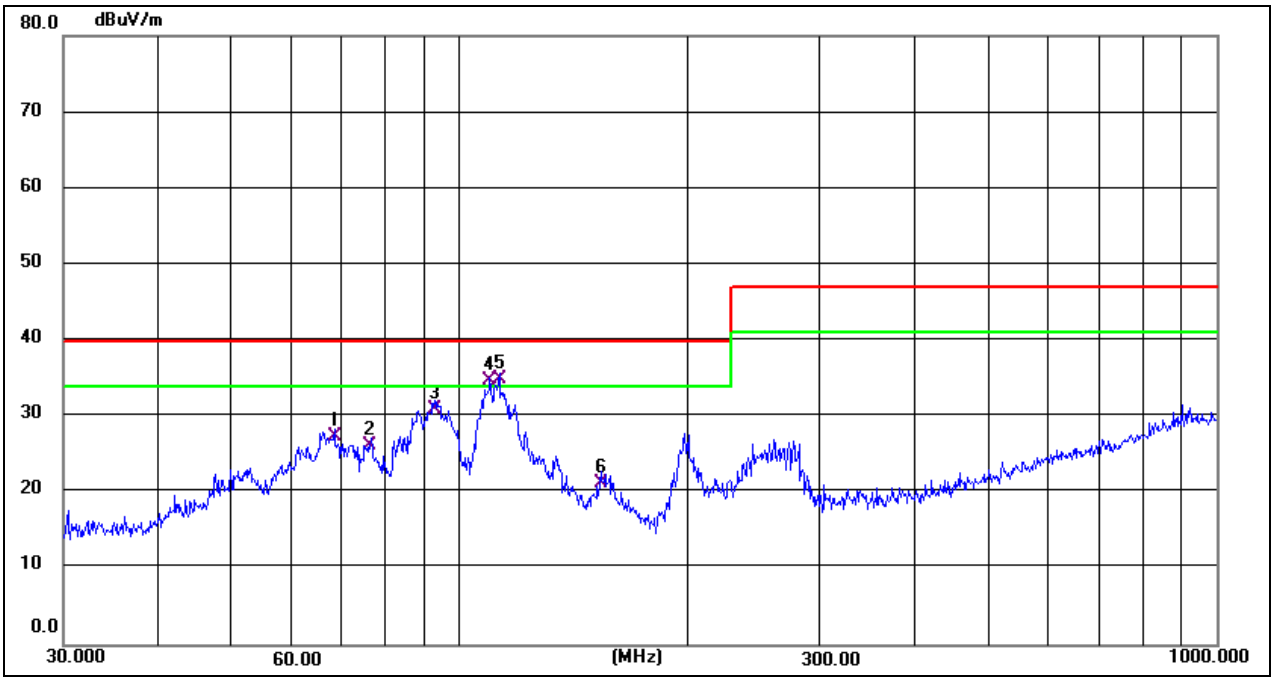
Antenna::Vertical	Mode: M09

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	48.6719	42.22	-12.22	30.00	40.00	-10.00	QP	
2	51.6616	41.85	-12.35	29.50	40.00	-10.50	QP	
3	67.9129	46.17	-14.97	31.20	40.00	-8.80	QP	
4	71.5806	47.93	-15.43	32.50	40.00	-7.50	QP	
5	74.3955	46.69	-15.69	31.00	40.00	-9.00	QP	
6	112.9196	46.00	-14.00	32.00	40.00	-8.00	QP	



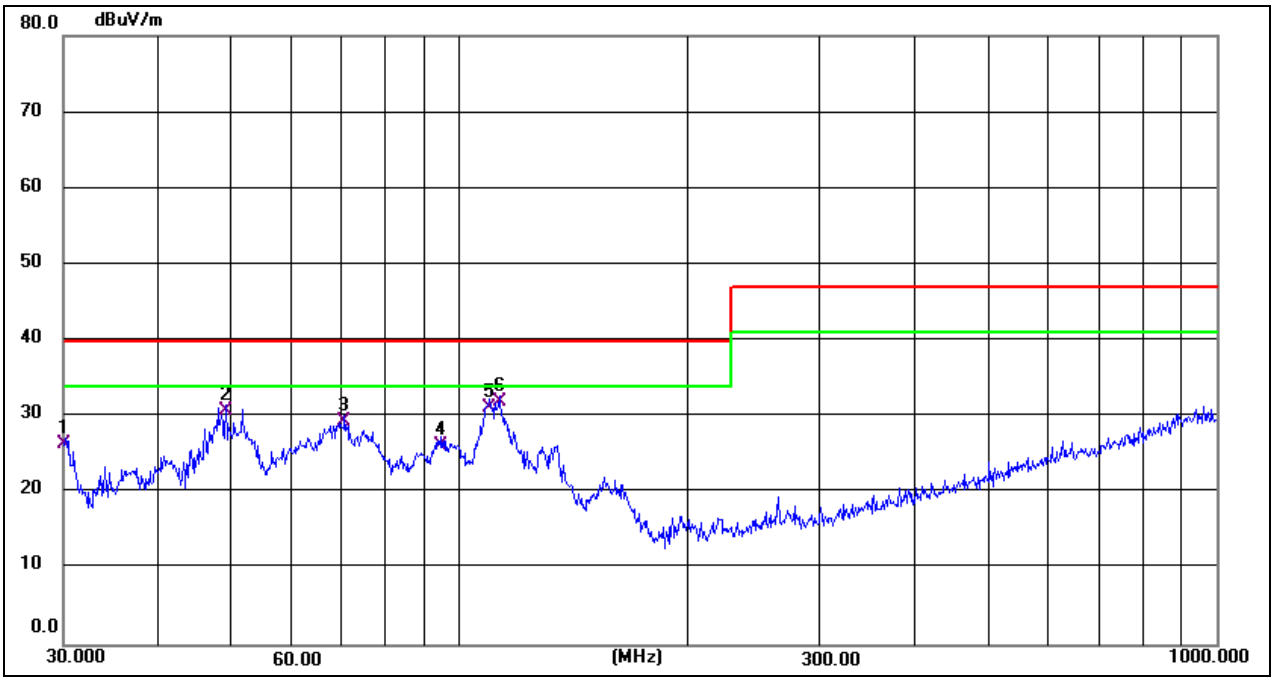
Antenna::Horizontal	Mode: M09

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	68.6310	45.58	-15.08	30.50	40.00	-9.50	QP	
2	75.1822	46.46	-15.76	30.70	40.00	-9.30	QP	
3	92.7871	48.54	-16.04	32.50	40.00	-7.50	QP	
4	112.1305	49.17	-14.07	35.10	40.00	-4.90	QP	
5	203.5228	43.40	-15.40	28.00	40.00	-12.00	QP	
6	265.6757	39.93	-13.63	26.30	47.00	-20.70	QP	



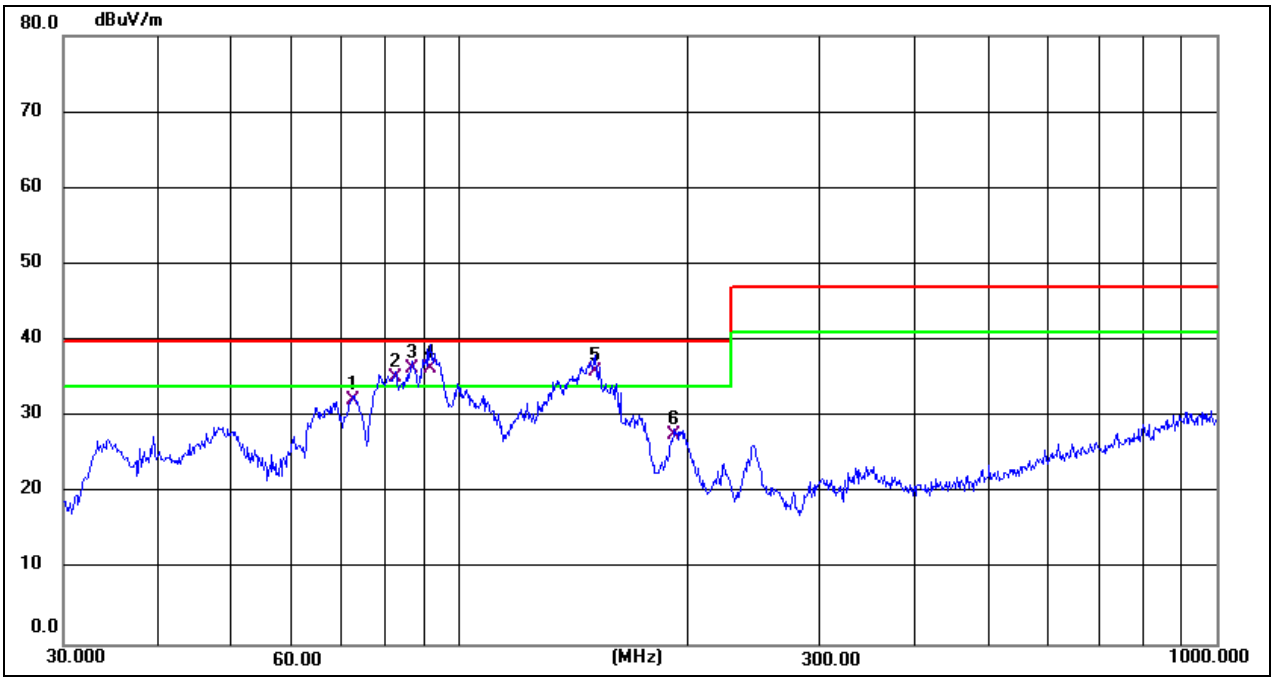
Antenna::Horizontal	Mode: M10

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	68.3908	42.55	-15.05	27.50	40.00	-12.50	QP	
2	76.5119	42.18	-15.88	26.30	40.00	-13.70	QP	
3	92.7871	47.04	-16.04	31.00	40.00	-9.00	QP	
4 !	109.7960	48.99	-14.29	34.70	40.00	-5.30	QP	
5	112.9196	49.00	-14.00	35.00	40.00	-5.00	QP	
6	153.7385	32.87	-11.57	21.30	40.00	-18.70	QP	



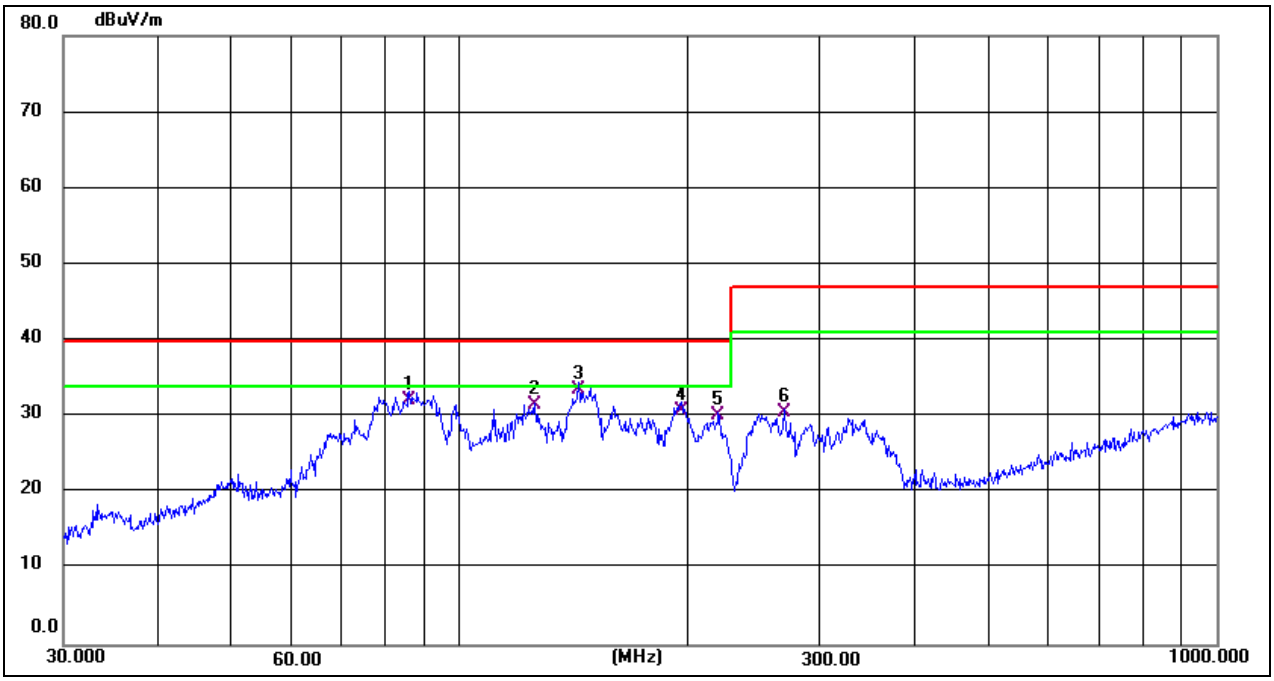
Antenna::Vertical	Mode: M10

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	30.0000	40.35	-13.85	26.50	40.00	-13.50	QP	
2	49.1865	42.86	-12.16	30.70	40.00	-9.30	QP	
3	70.5836	44.84	-15.34	29.50	40.00	-10.50	QP	
4	94.7601	42.13	-15.93	26.20	40.00	-13.80	QP	
5	109.7960	45.39	-14.29	31.10	40.00	-8.90	QP	
6	112.9196	46.00	-14.00	32.00	40.00	-8.00	QP	



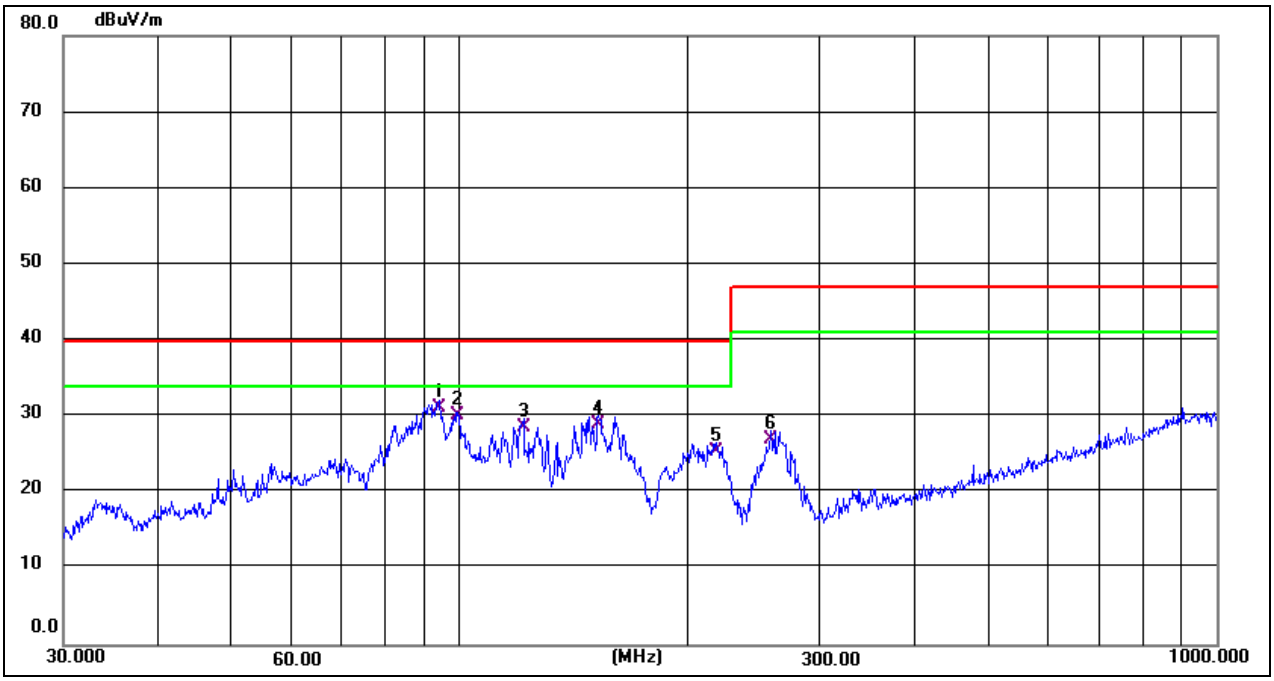
Antenna::Vertical	Mode: M11

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	72.3376	47.70	-15.50	32.20	40.00	-7.80	QP	
2 !	82.3588	51.29	-16.19	35.10	40.00	-4.90	QP	
3 !	86.5029	52.48	-16.18	36.30	40.00	-3.70	QP	
4	91.4949	52.50	-16.10	36.40	40.00	-3.60	QP	
5 !	151.0666	47.59	-11.59	36.00	40.00	-4.00	QP	
6	192.4186	42.70	-15.00	27.70	40.00	-12.30	QP	



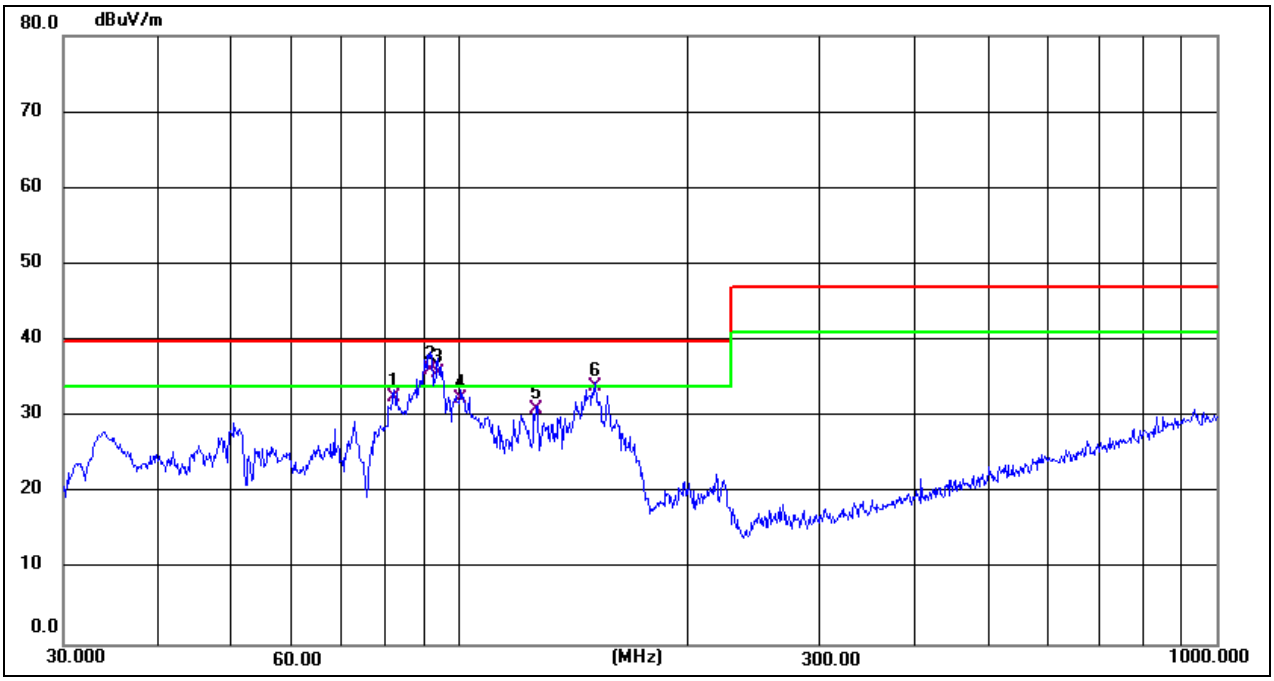
Antenna::Horizontal	Mode: M11

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	85.8984	48.39	-16.19	32.20	40.00	-7.80	QP	
2	125.8864	44.40	-12.90	31.50	40.00	-8.50	QP	
3	143.8295	45.09	-11.59	33.50	40.00	-6.50	QP	
4	196.5098	45.97	-15.27	30.70	40.00	-9.30	QP	
5	219.8449	45.05	-14.95	30.10	40.00	-9.90	QP	
6	268.4853	44.05	-13.55	30.50	47.00	-16.50	QP	



Antenna::Horizontal	Mode: M12

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	94.0979	47.17	-15.97	31.20	40.00	-8.80	QP	
2	99.5281	45.87	-15.67	30.20	40.00	-9.80	QP	
3	121.5486	41.95	-13.25	28.70	40.00	-11.30	QP	
4	152.6641	40.67	-11.57	29.10	40.00	-10.90	QP	
5	218.3085	40.39	-14.99	25.40	40.00	-14.60	QP	
6	258.3264	40.96	-13.86	27.10	47.00	-19.90	QP	



Antenna::Vertical	Mode: M12

No.	Frequency (MHz)	Reading Level(dBuV)	Correct Factor(dB/m)	Measure-ment(dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
1	82.0706	48.74	-16.19	32.55	40.00	-7.45	QP	
2	91.4949	52.20	-16.10	36.10	40.00	-3.90	QP	
3 !	93.7685	51.79	-15.99	35.80	40.00	-4.20	QP	
4	100.5806	47.87	-15.57	32.30	40.00	-7.70	QP	
5	126.3286	43.86	-12.86	31.00	40.00	-9.00	QP	
6	151.0666	45.49	-11.59	33.90	40.00	-6.10	QP	

Note: 1. Measure-Ment = Reading +Correct
2. Margin = Measure-Ment - Limit

7.4. RADIATED EMISSION (9 KHZ TO 30 MHZ 2M LOOP)

LIMITS

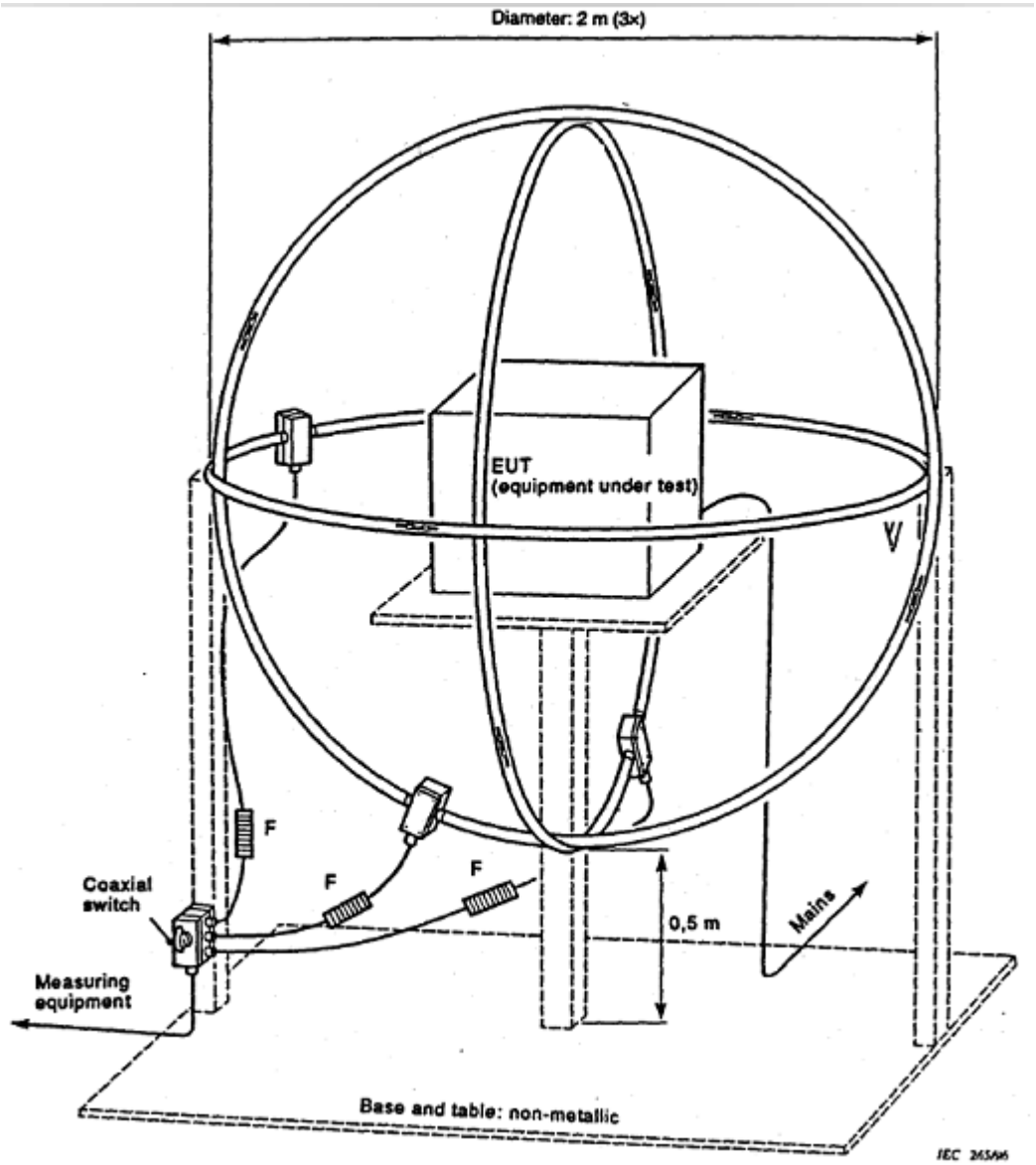
Frequency Range	Quasi-peak limits for three loop diameters dB(μA)
	2m
9 kHz - 70 kHz	88
70 kHz - 150 kHz	88-58*
150 kHz - 3.0 MHz	58-22*
3.0 MHz - 30 MHz	22

Note:
(1) The tighter limit applies at the band edges.
(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

TEST PROCEDURE

a. The quasi-peak limits of the magnetic component of the radiated electromagnetic disturbance field strength in the frequency range 9 kHz to 30 MHz measured as a current in 2 m, loop antennas around the lighting equipment.
b. The measurement range of radiated emission, which is from 9 kHz to 30 MHz, was investigated. All readings are quasi-peak values with a proper resolution Bandwidth. The initial step in collecting radiated emission data is a spectrum analyzer peak scans of the measurement range for all the test modes and then use test receiver for final measurement.

TEST SETUP



TEST ENVIRONMENT

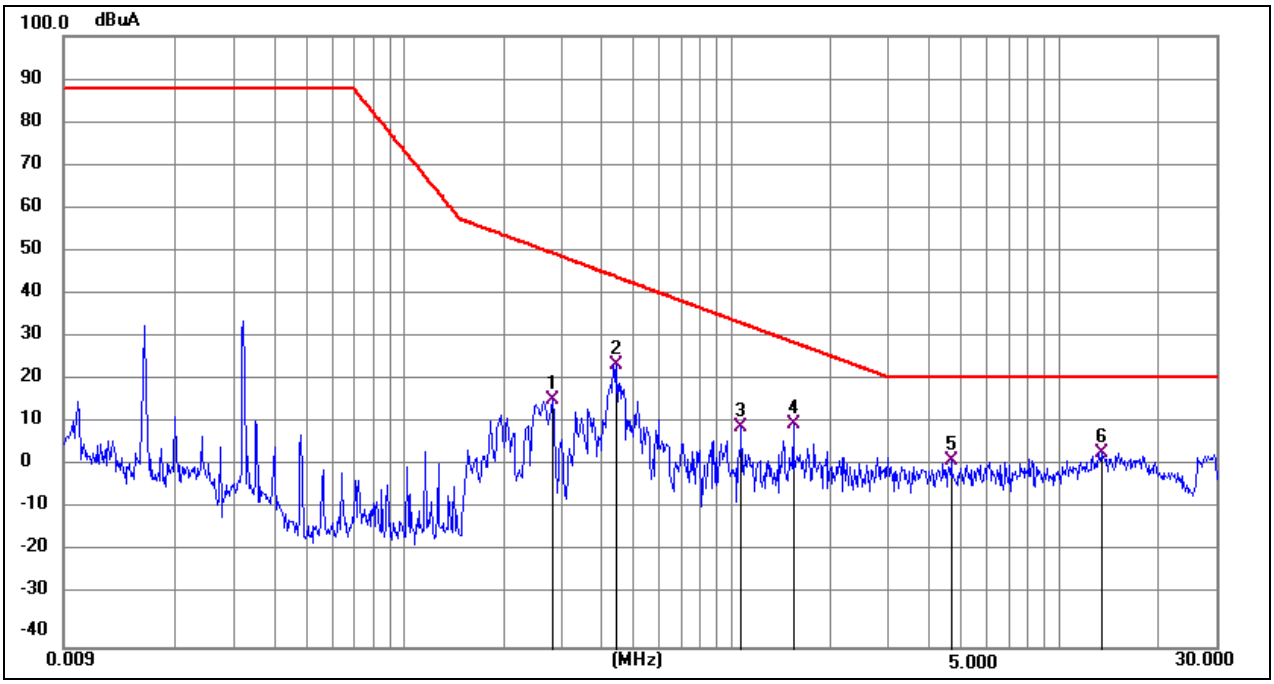
Temperature	23.2℃	Relative Humidity	54%
Atmosphere Pressure	101kPa		

TEST MODE

Pre-test Mode:	M01 ~ M12
Final Test Mode:	M01, M02, M03, M04, M05, M06, M07, M08, M09, M10, M11, M12

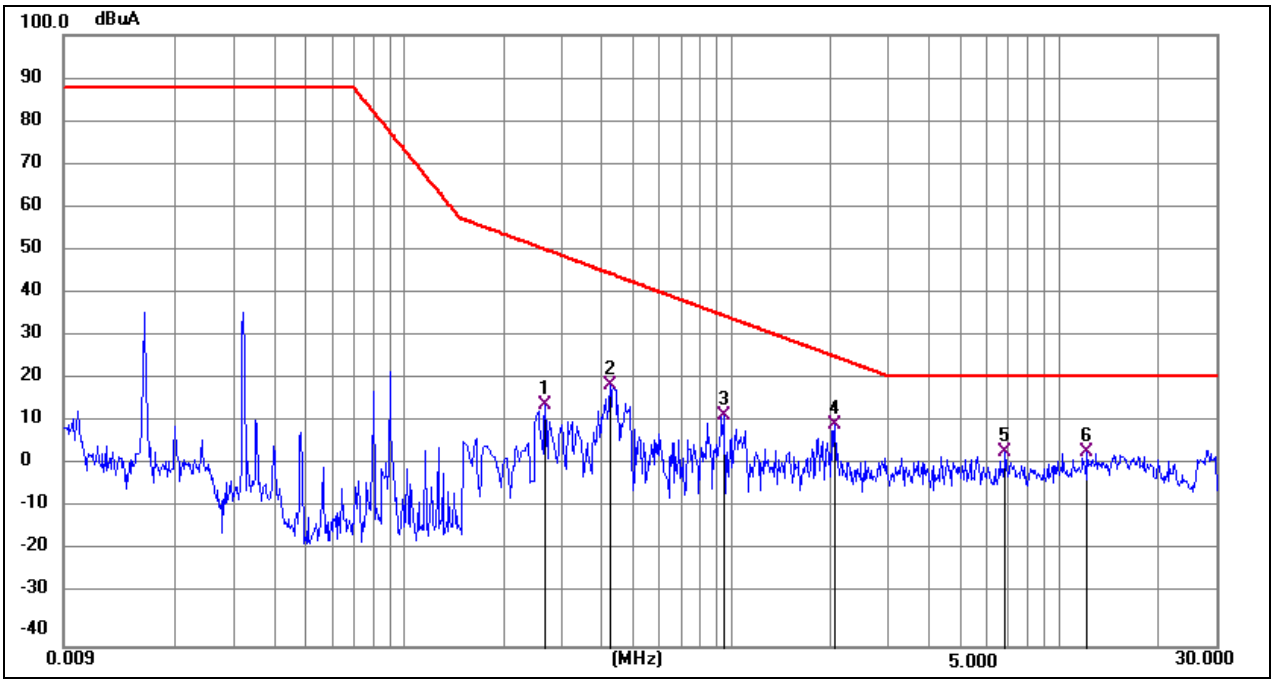
Note: All test modes had been tested, but only the worst data recorded in the report.

TEST RESULTS



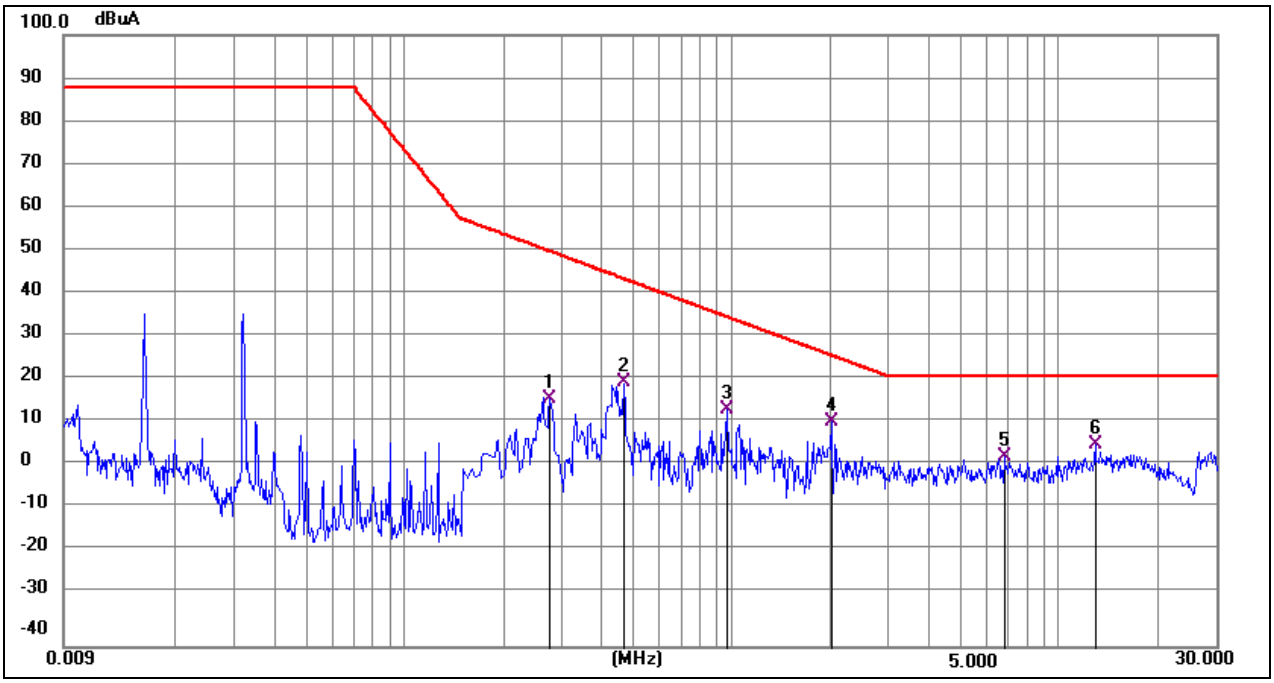
Phase: Y	Mode: M01

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2805	18.25	-1.42	16.83	50.38	-33.55	QP
2	0.4425	25.98	-1.14	24.84	44.92	-20.08	QP
3	1.0680	10.06	0.32	10.38	34.37	-23.99	QP
4	1.5403	10.93	0.18	11.11	29.98	-18.87	QP
5	4.6680	3.22	-0.37	2.85	22.00	-19.15	QP
6	13.3393	3.77	1.00	4.77	22.00	-17.23	QP



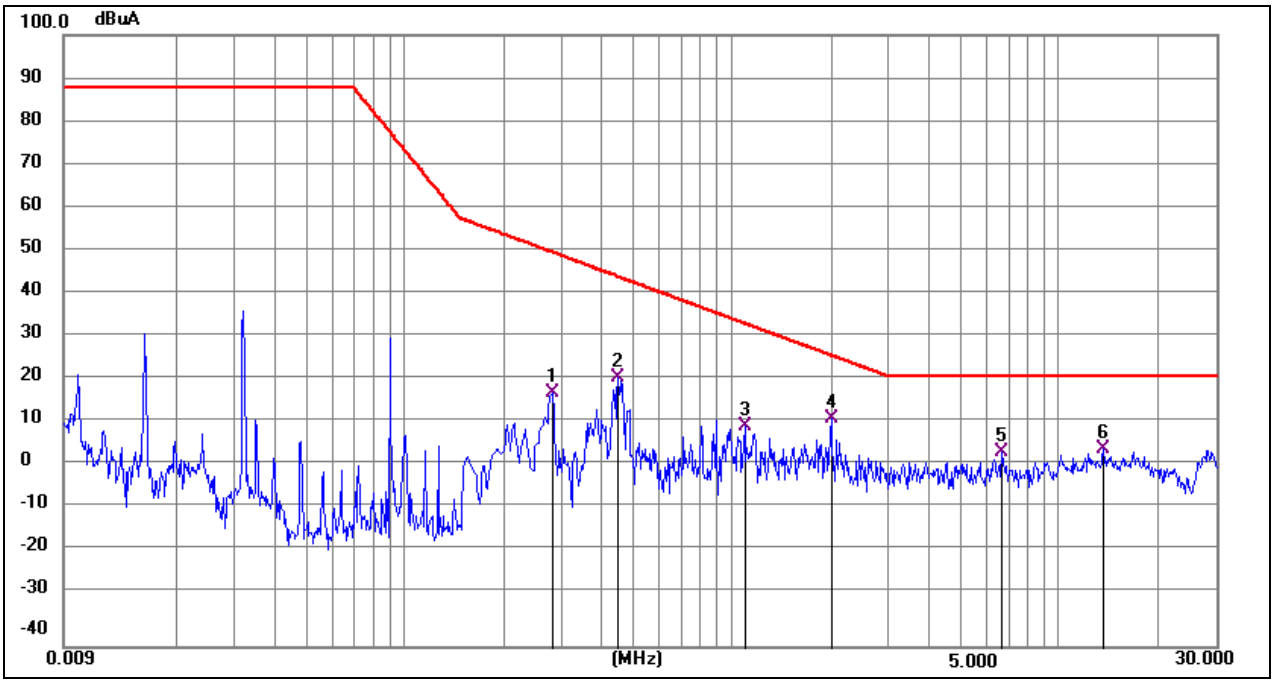
Phase: X	Mode: M01

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2670	16.70	-1.45	15.25	50.97	-35.72	QP
2	0.4200	21.05	-1.16	19.89	45.54	-25.65	QP
3	0.9420	12.62	0.25	12.87	35.87	-23.00	QP
4	2.0490	10.86	0.04	10.90	26.57	-15.67	QP
5	6.8324	5.66	-0.96	4.70	22.00	-17.30	QP
6	12.1020	3.94	0.73	4.67	22.00	-17.33	QP



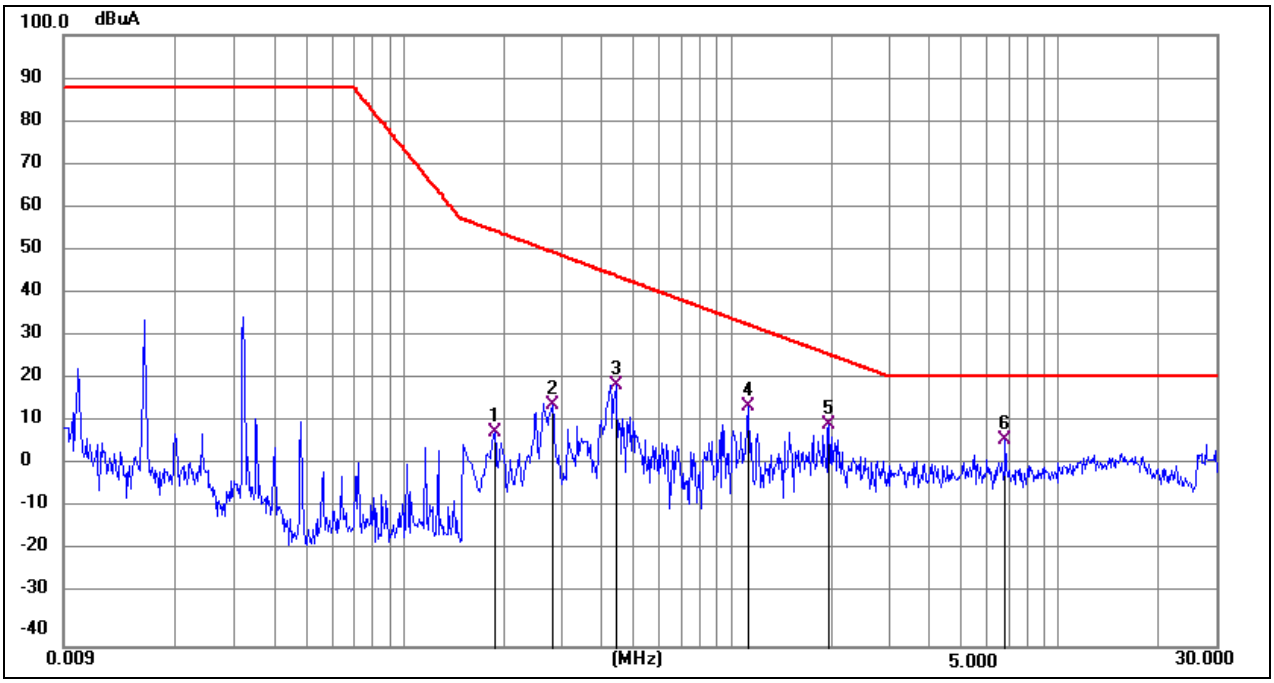
Phase: Z	Mode: M01

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2760	18.09	-1.43	16.66	50.57	-33.91	QP
2	0.4650	21.56	-1.11	20.45	44.32	-23.87	QP
3	0.9600	14.23	0.28	14.51	35.64	-21.13	QP
4	2.0130	11.59	0.05	11.64	26.78	-15.14	QP
5	6.7515	4.45	-0.93	3.52	22.00	-18.48	QP
6	12.8535	5.38	0.89	6.27	22.00	-15.73	QP



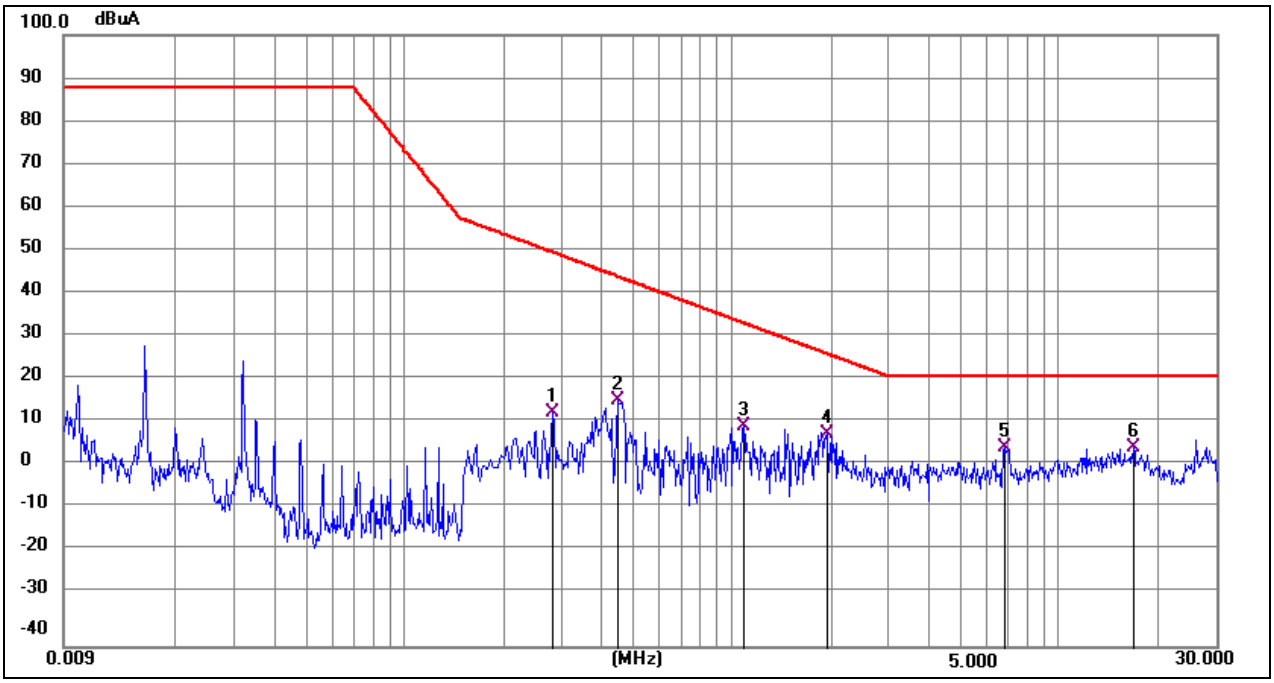
Phase: Z	Mode: M02

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2805	19.66	-1.42	18.24	50.38	-32.14	QP
2	0.4470	22.71	-1.13	21.58	44.80	-23.22	QP
3	1.0905	10.21	0.31	10.52	34.12	-23.60	QP
4	1.9995	12.13	0.04	12.17	26.86	-14.69	QP
5	6.6570	5.65	-0.89	4.76	22.00	-17.24	QP
6	13.5780	4.40	1.05	5.45	22.00	-16.55	QP



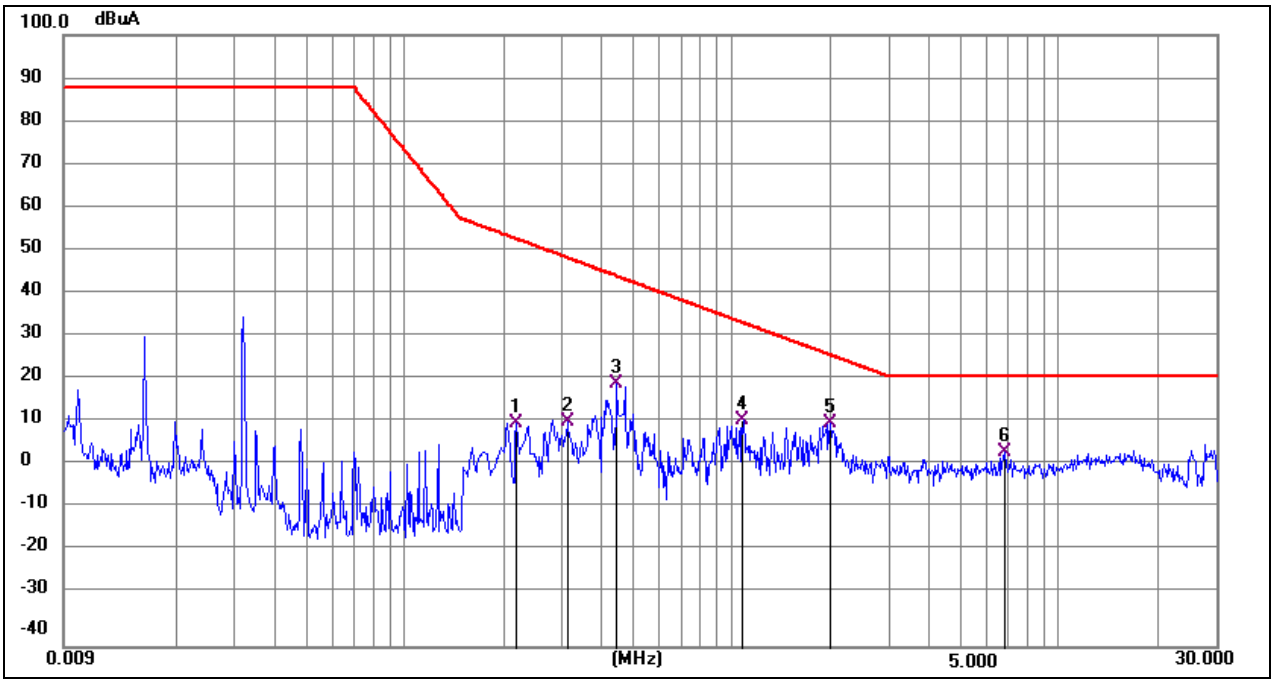
Phase: Y	Mode: M02

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.1860	10.76	-1.45	9.31	55.30	-45.99	QP
2	0.2805	16.94	-1.42	15.52	50.38	-34.86	QP
3	0.4380	20.96	-1.14	19.82	45.04	-25.22	QP
4	1.1174	14.60	0.30	14.90	33.83	-18.93	QP
5	1.9680	11.01	0.05	11.06	27.05	-15.99	QP
6	6.8370	8.46	-0.96	7.50	22.00	-14.50	QP



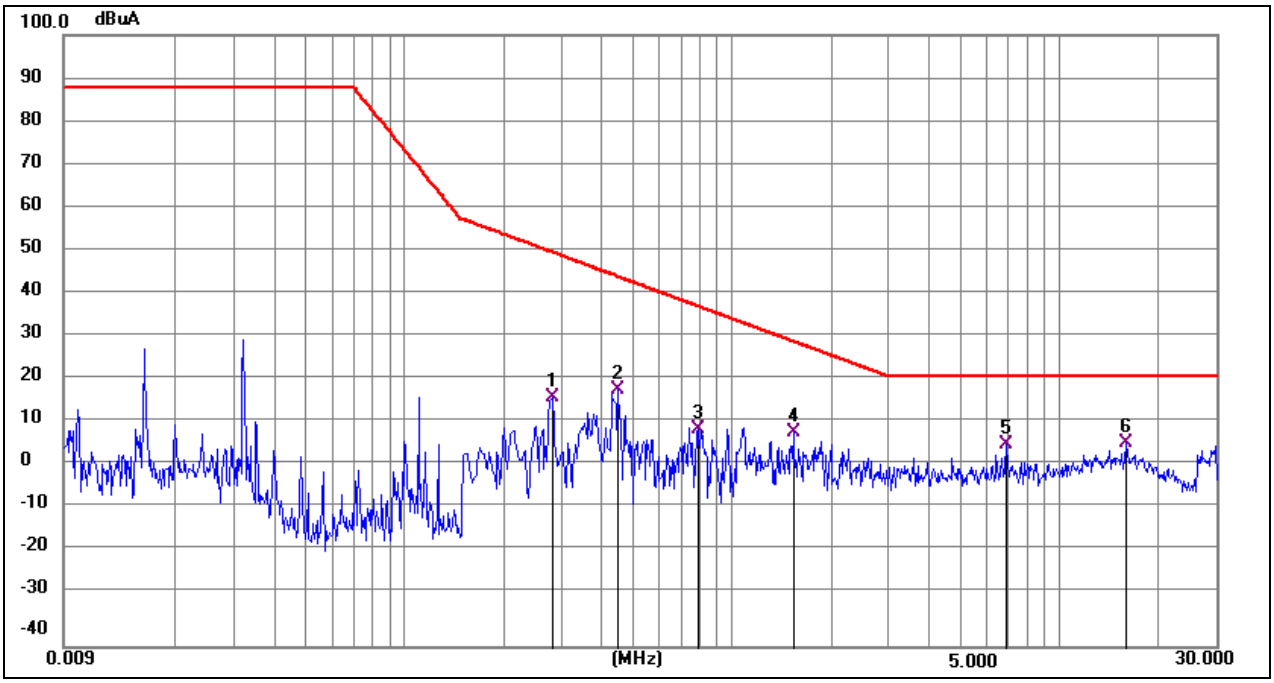
Phase: X	Mode: M02

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2805	15.06	-1.42	13.64	50.38	-36.74	QP
2	0.4470	17.52	-1.13	16.39	44.80	-28.41	QP
3	1.0813	10.31	0.32	10.63	34.22	-23.59	QP
4	1.9635	8.74	0.05	8.79	27.08	-18.29	QP
5	6.8144	6.75	-0.96	5.79	22.00	-16.21	QP
6	16.7592	4.46	1.17	5.63	22.00	-16.37	QP



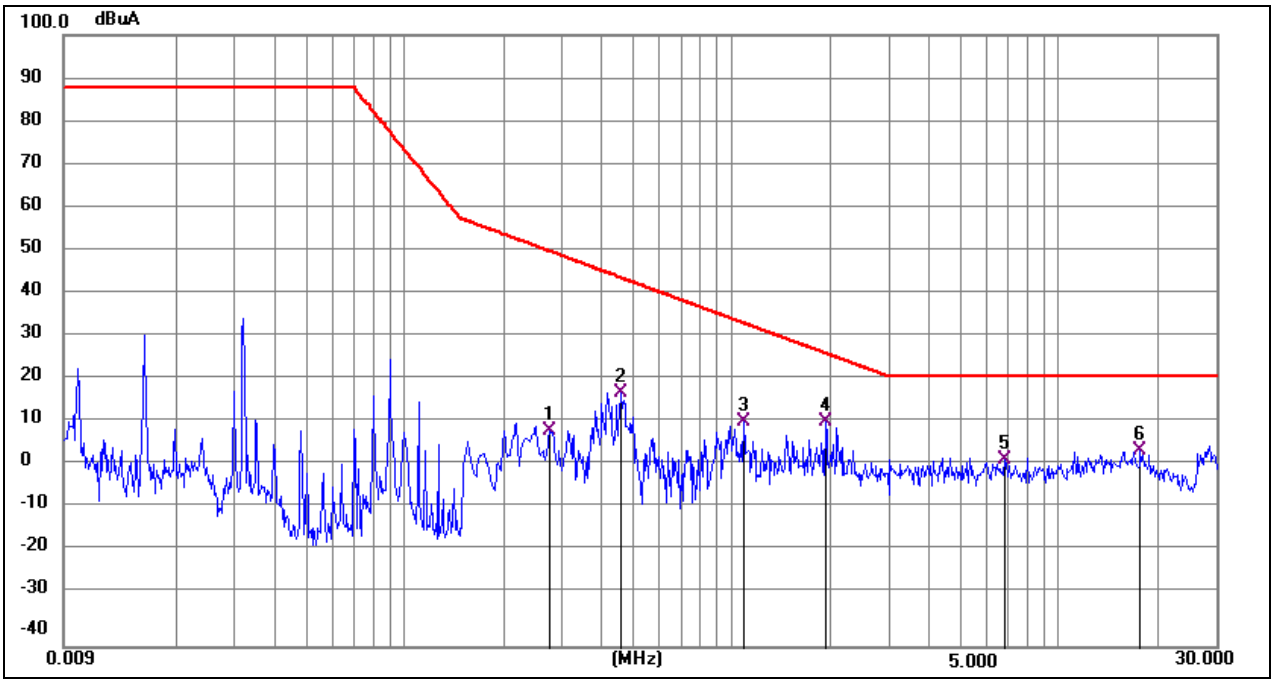
Phase: X	Mode: M03

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2174	12.73	-1.55	11.18	53.43	-42.25	QP
2	0.3120	12.96	-1.36	11.60	49.10	-37.50	QP
3	0.4425	21.30	-1.14	20.16	44.92	-24.76	QP
4	1.0859	11.73	0.31	12.04	34.17	-22.13	QP
5	1.9950	11.08	0.04	11.12	26.89	-15.77	QP
6	6.7650	5.67	-0.94	4.73	22.00	-17.27	QP



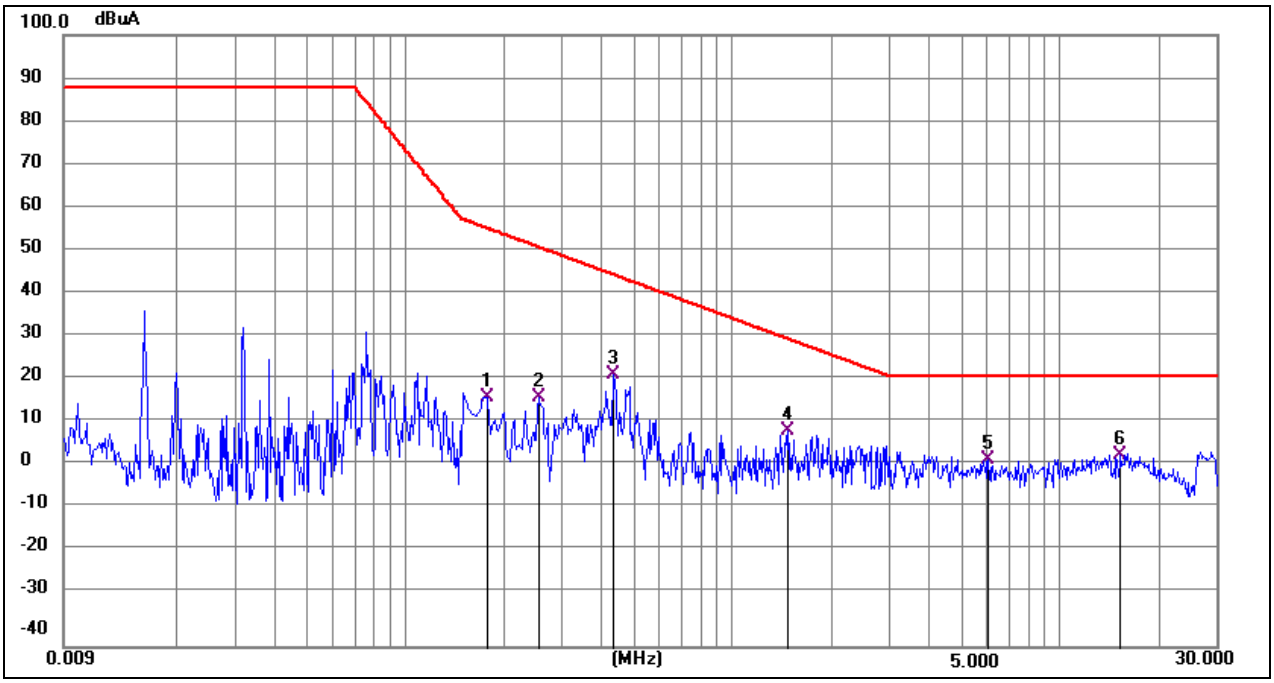
Phase: Y	Mode: M03

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2805	18.55	-1.42	17.13	50.38	-33.25	QP
2	0.4470	20.02	-1.13	18.89	44.80	-25.91	QP
3	0.7890	9.98	-0.02	9.96	37.99	-28.03	QP
4	1.5360	8.82	0.18	9.00	30.02	-21.02	QP
5	6.8550	7.23	-0.97	6.26	22.00	-15.74	QP
6	15.9450	4.96	1.65	6.61	22.00	-15.39	QP



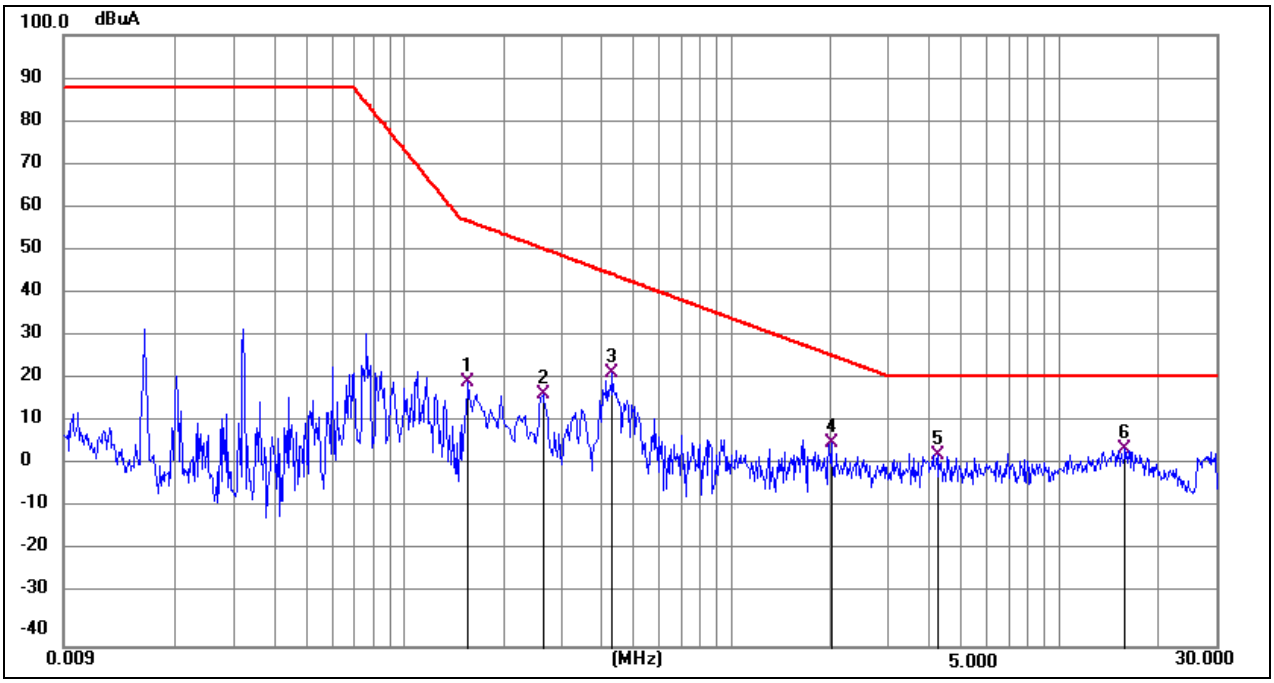
Phase: Z	Mode: M03

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2760	10.79	-1.43	9.36	50.57	-41.21	QP
2	0.4560	19.41	-1.12	18.29	44.56	-26.27	QP
3	1.0814	11.42	0.32	11.74	34.22	-22.48	QP
4	1.9274	11.44	0.06	11.50	27.30	-15.80	QP
5	6.7650	3.81	-0.94	2.87	22.00	-19.13	QP
6	17.6279	4.27	0.61	4.88	22.00	-17.12	QP



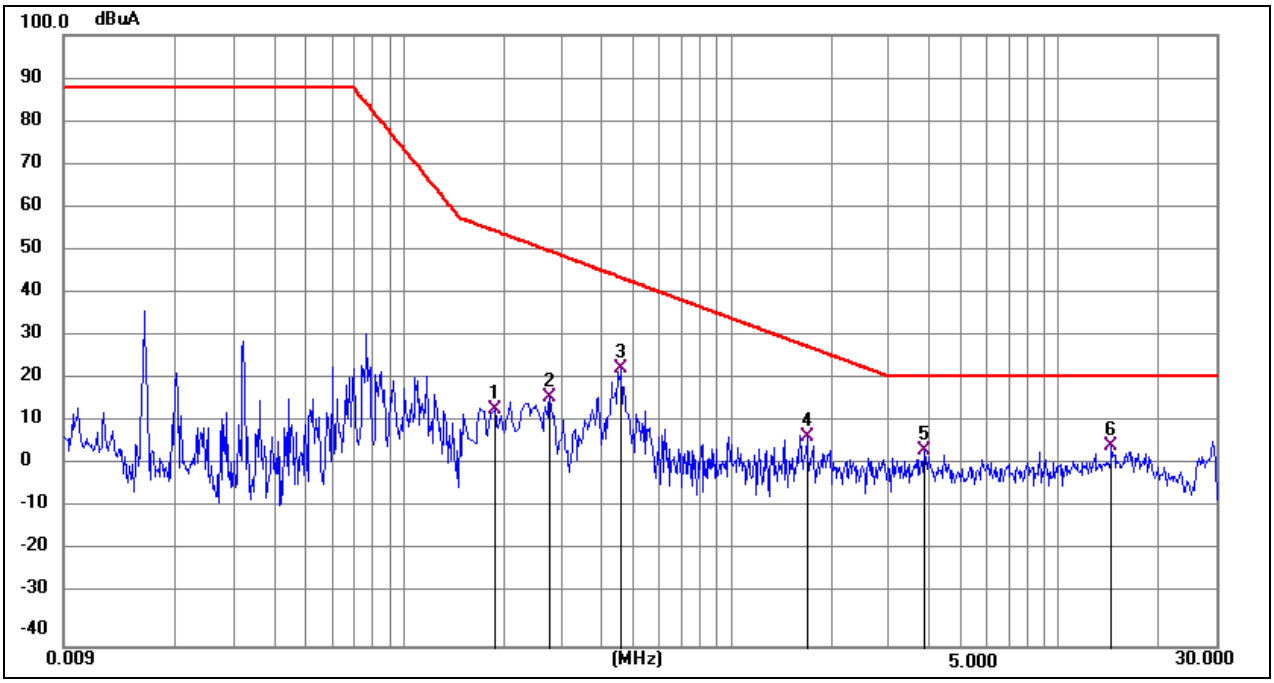
Phase: Z	Mode: M04

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.1780	18.54	-1.38	17.16	55.82	-38.66	QP
2	0.2544	18.45	-1.47	16.98	51.55	-34.57	QP
3	0.4311	23.60	-1.15	22.45	45.23	-22.78	QP
4	1.4676	9.18	0.20	9.38	30.56	-21.18	QP
5	6.0200	3.58	-0.64	2.94	22.00	-19.06	QP
6	15.3010	2.43	1.48	3.91	22.00	-18.09	QP



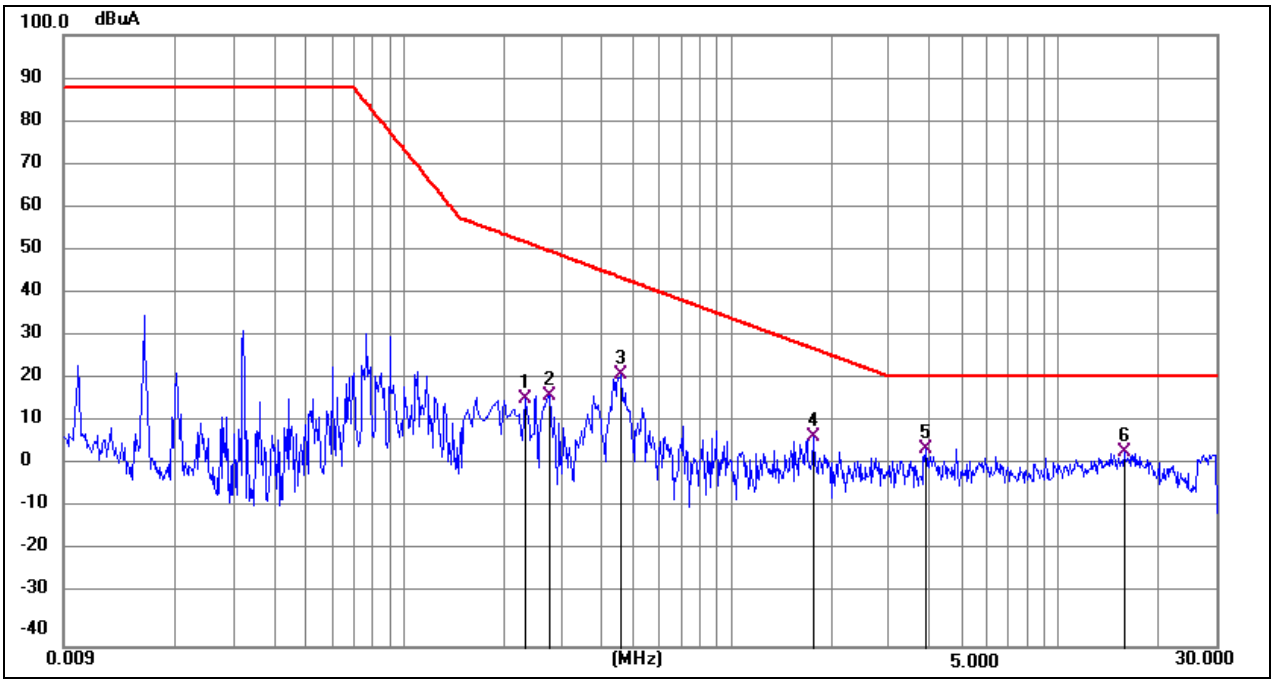
Phase: Y	Mode: M04

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.1544	21.78	-1.17	20.61	57.53	-36.92	QP
2	0.2625	19.40	-1.45	17.95	51.17	-33.22	QP
3	0.4290	23.70	-1.15	22.55	45.29	-22.74	QP
4	2.0040	6.79	0.04	6.83	26.83	-20.00	QP
5	4.2225	4.21	-0.28	3.93	22.00	-18.07	QP
6	15.8910	3.78	1.62	5.40	22.00	-16.60	QP



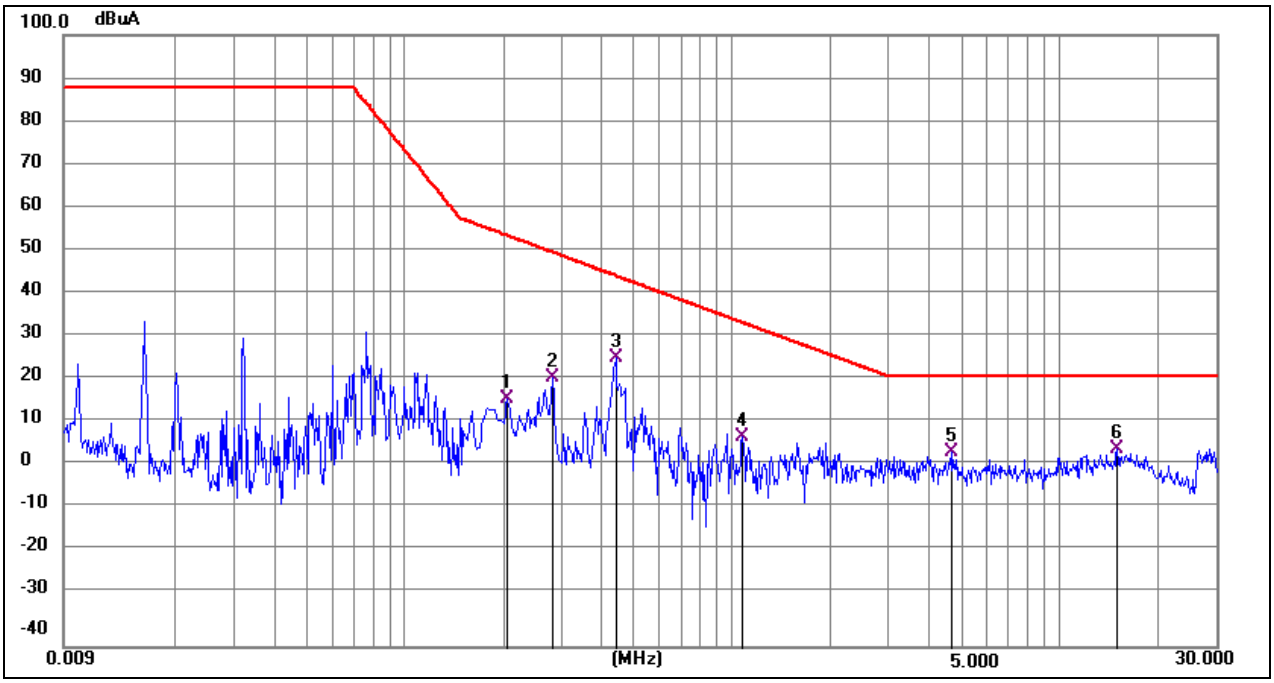
Phase: X	Mode: M04

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.1860	15.73	-1.45	14.28	55.30	-41.02	QP
2	0.2760	18.67	-1.43	17.24	50.57	-33.33	QP
3	0.4560	24.78	-1.12	23.66	44.56	-20.90	QP
4	1.6935	7.91	0.13	8.04	28.85	-20.81	QP
5	3.8760	5.11	-0.23	4.88	22.00	-17.12	QP
6	14.4060	4.69	1.24	5.93	22.00	-16.07	QP



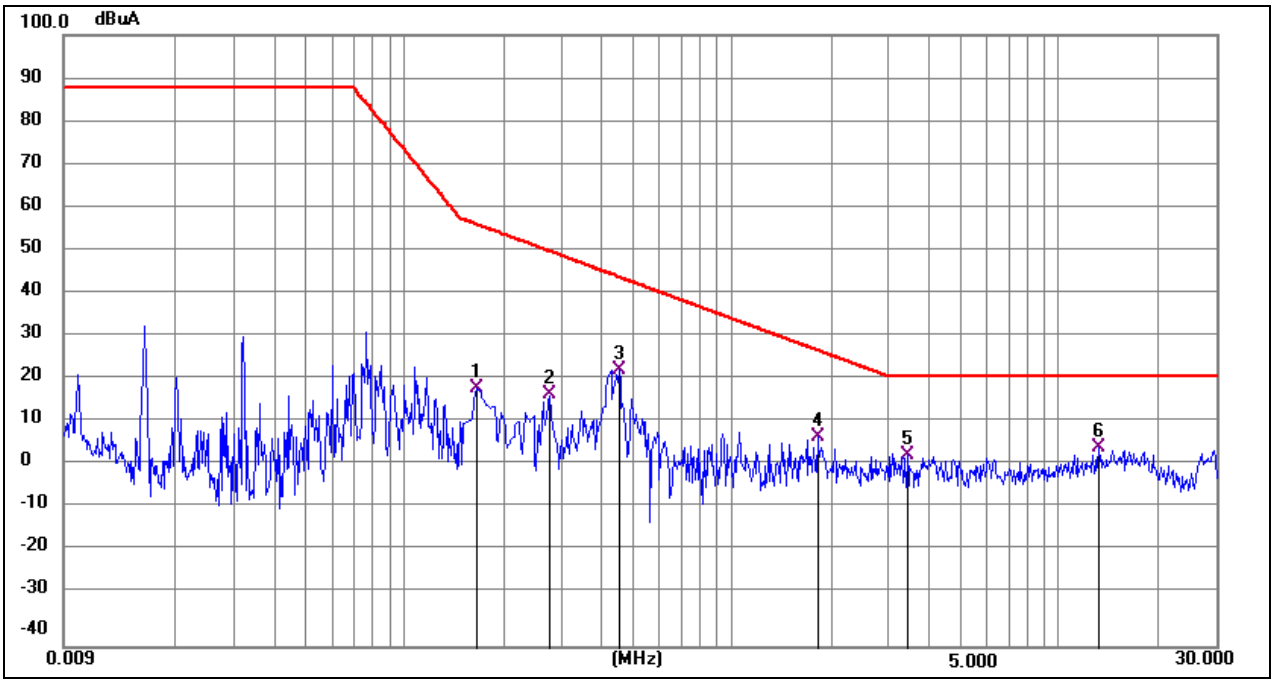
Phase: X	Mode: M05

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2310	18.27	-1.52	16.75	52.70	-35.95	QP
2	0.2760	19.04	-1.43	17.61	50.57	-32.96	QP
3	0.4560	23.62	-1.12	22.50	44.56	-22.06	QP
4	1.7655	7.90	0.11	8.01	28.35	-20.34	QP
5	3.9030	5.43	-0.24	5.19	22.00	-16.81	QP
6	15.8055	3.13	1.60	4.73	22.00	-17.27	QP



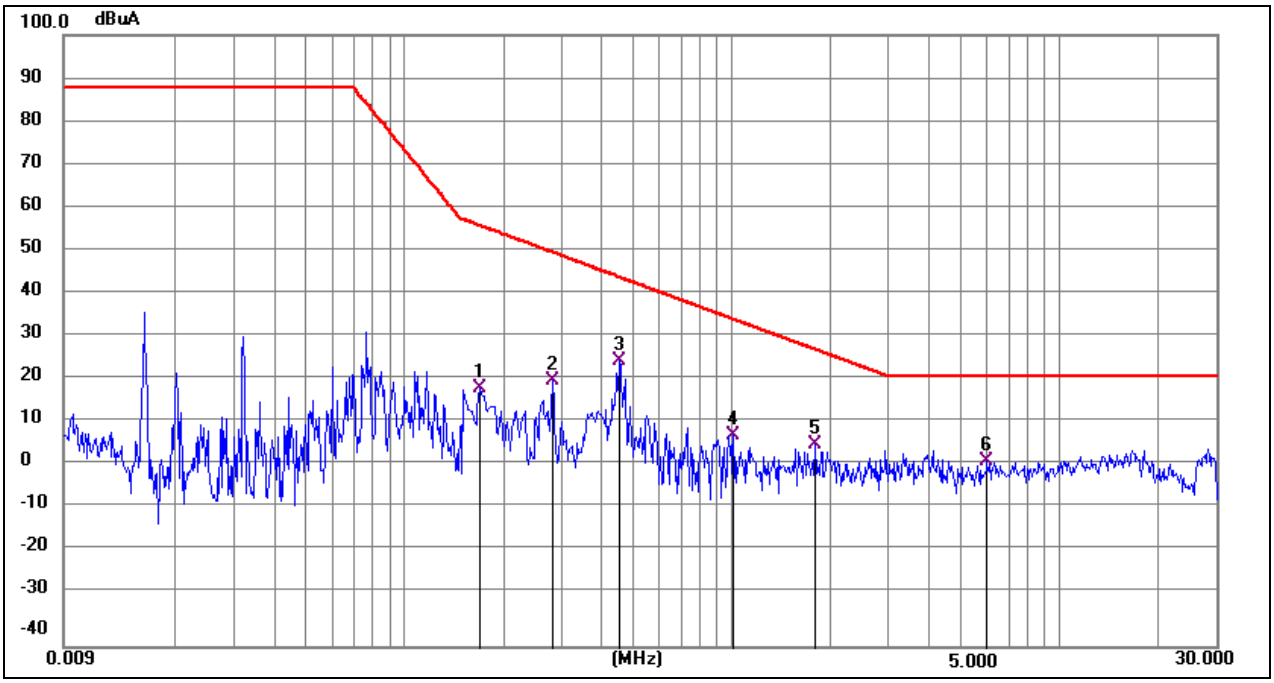
Phase: Y	Mode: M05

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2040	18.43	-1.57	16.86	54.19	-37.33	QP
2	0.2805	23.04	-1.42	21.62	50.38	-28.76	QP
3	0.4380	27.16	-1.14	26.02	45.04	-19.02	QP
4	1.0725	7.94	0.32	8.26	34.32	-26.06	QP
5	4.7084	5.12	-0.38	4.74	22.00	-17.26	QP
6	15.0404	4.02	1.41	5.43	22.00	-16.57	QP



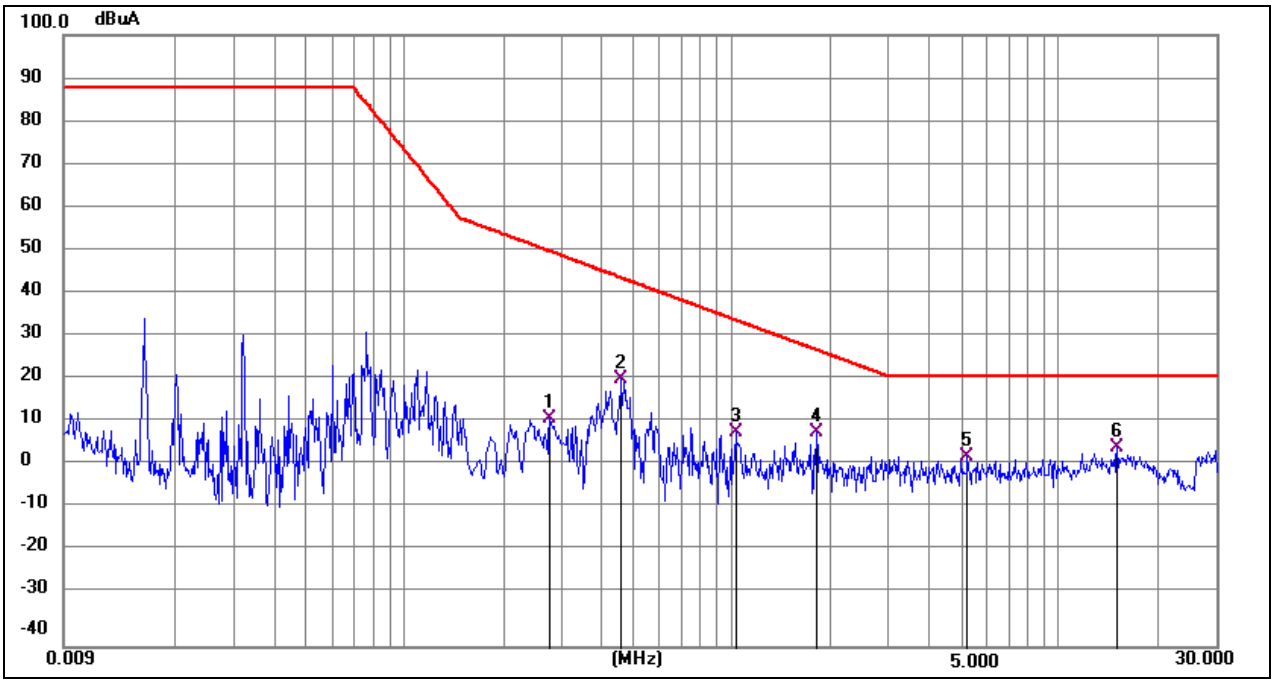
Phase: Z	Mode: M05

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.1635	20.41	-1.25	19.16	56.84	-37.68	QP
2	0.2760	19.10	-1.43	17.67	50.57	-32.90	QP
3	0.4515	24.47	-1.13	23.34	44.68	-21.34	QP
4	1.8240	7.94	0.09	8.03	27.96	-19.93	QP
5	3.4395	4.15	-0.17	3.98	22.00	-18.02	QP
6	13.2090	4.78	0.97	5.75	22.00	-16.25	QP



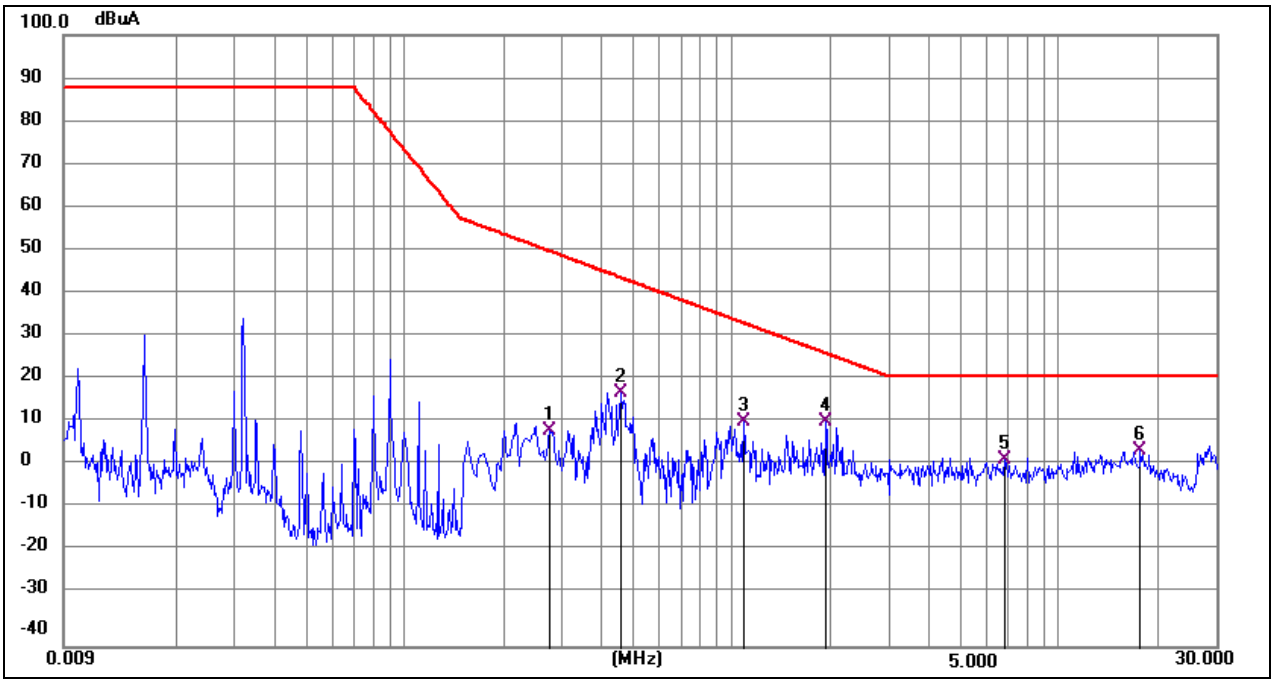
Phase: Z	Mode: M06

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.1680	20.53	-1.29	19.24	56.51	-37.27	QP
2	0.2805	22.26	-1.42	20.84	50.38	-29.54	QP
3	0.4515	26.47	-1.13	25.34	44.68	-19.34	QP
4	1.0095	8.23	0.34	8.57	35.04	-26.47	QP
5	1.7970	6.11	0.10	6.21	28.14	-21.93	QP
6	5.9775	3.16	-0.63	2.53	22.00	-19.47	QP



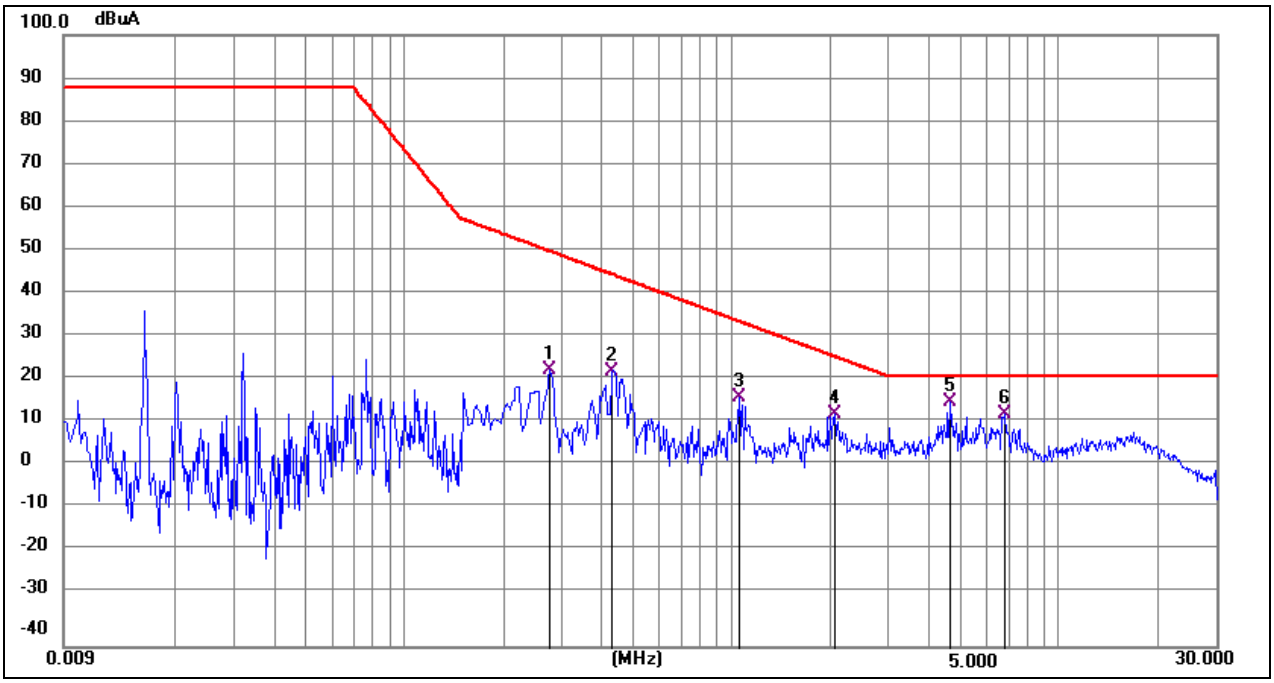
Phase: Y	Mode: M06

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2760	13.77	-1.43	12.34	50.57	-38.23	QP
2	0.4560	22.55	-1.12	21.43	44.56	-23.13	QP
3	1.0230	8.71	0.33	9.04	34.88	-25.84	QP
4	1.8060	9.10	0.10	9.20	28.08	-18.88	QP
5	5.2125	3.94	-0.48	3.46	22.00	-18.54	QP
6	14.9864	4.26	1.39	5.65	22.00	-16.35	QP



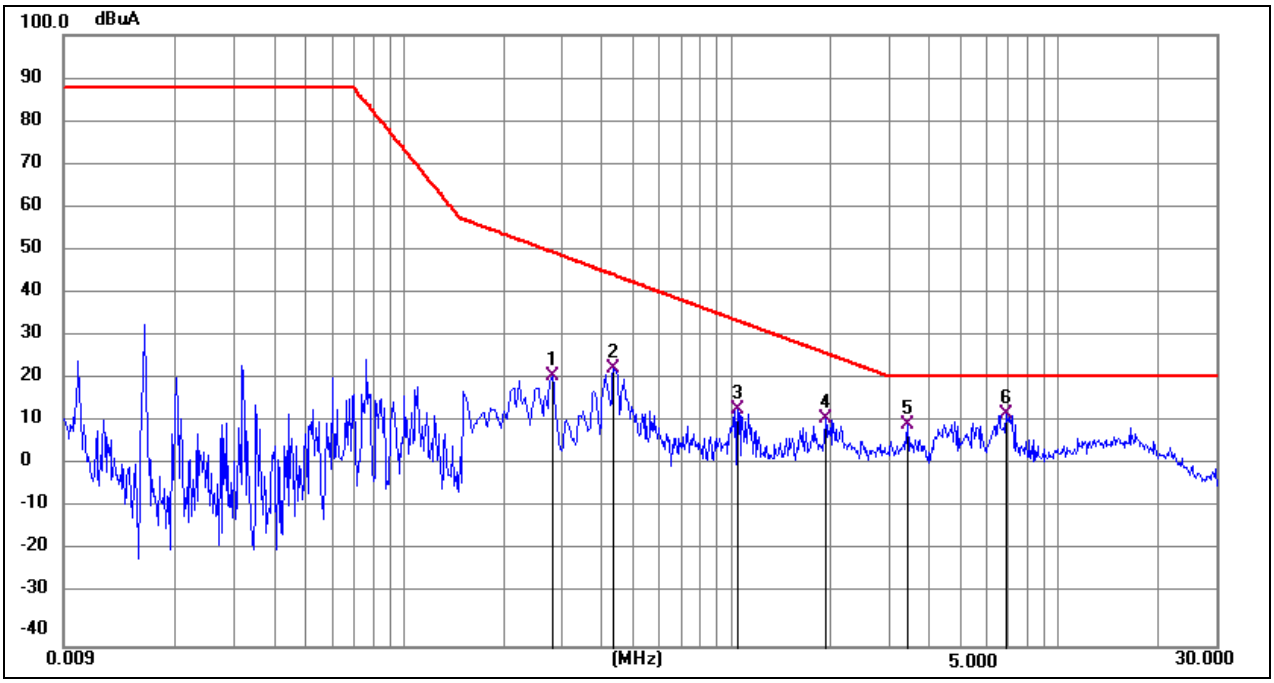
Phase: X	Mode: M06

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2760	10.79	-1.43	9.36	50.57	-41.21	QP
2	0.4560	19.41	-1.12	18.29	44.56	-26.27	QP
3	1.0814	11.42	0.32	11.74	34.22	-22.48	QP
4	1.9274	11.44	0.06	11.50	27.30	-15.80	QP
5	6.7650	3.81	-0.94	2.87	22.00	-19.13	QP
6	17.6279	4.27	0.61	4.88	22.00	-17.12	QP



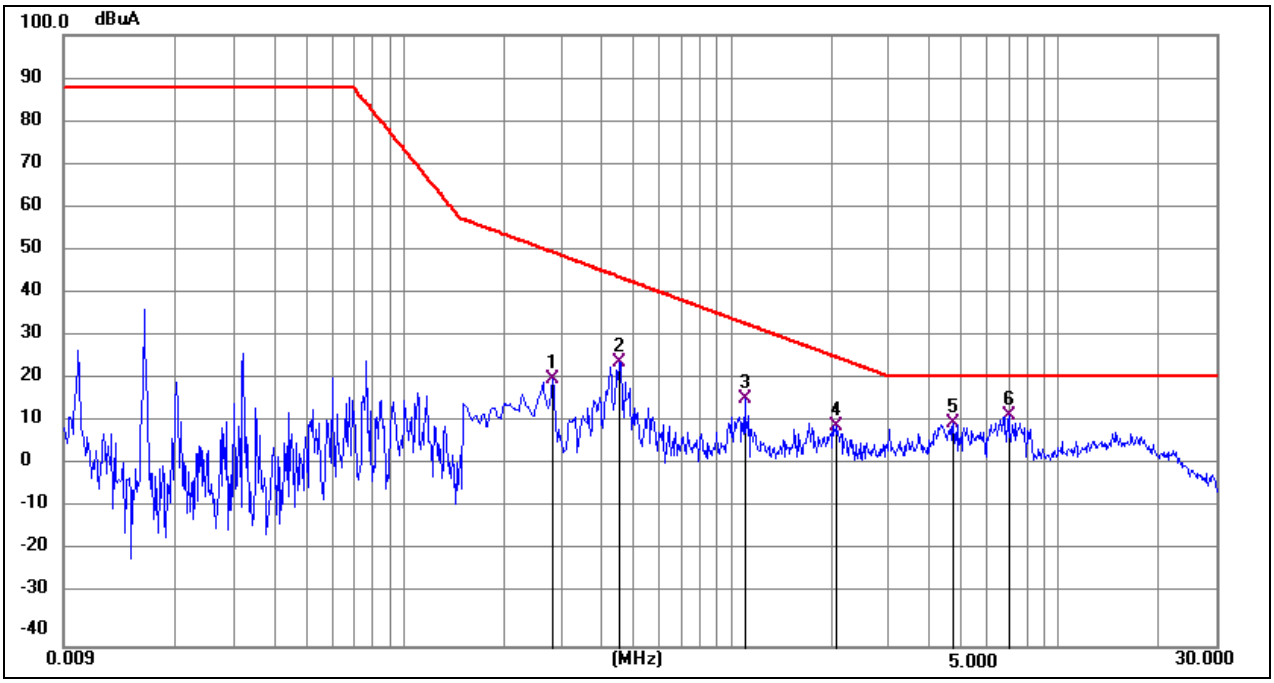
Phase: X	Mode: M07

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2760	23.14	0.16	23.30	50.57	-27.27	QP
2	0.4290	22.45	0.44	22.89	45.29	-22.40	QP
3	1.0455	15.42	1.82	17.24	34.62	-17.38	QP
4	2.0535	11.47	1.81	13.28	26.54	-13.26	QP
5	4.6320	14.69	1.49	16.18	22.00	-5.82	QP
6	6.8100	12.34	1.09	13.43	22.00	-8.57	QP



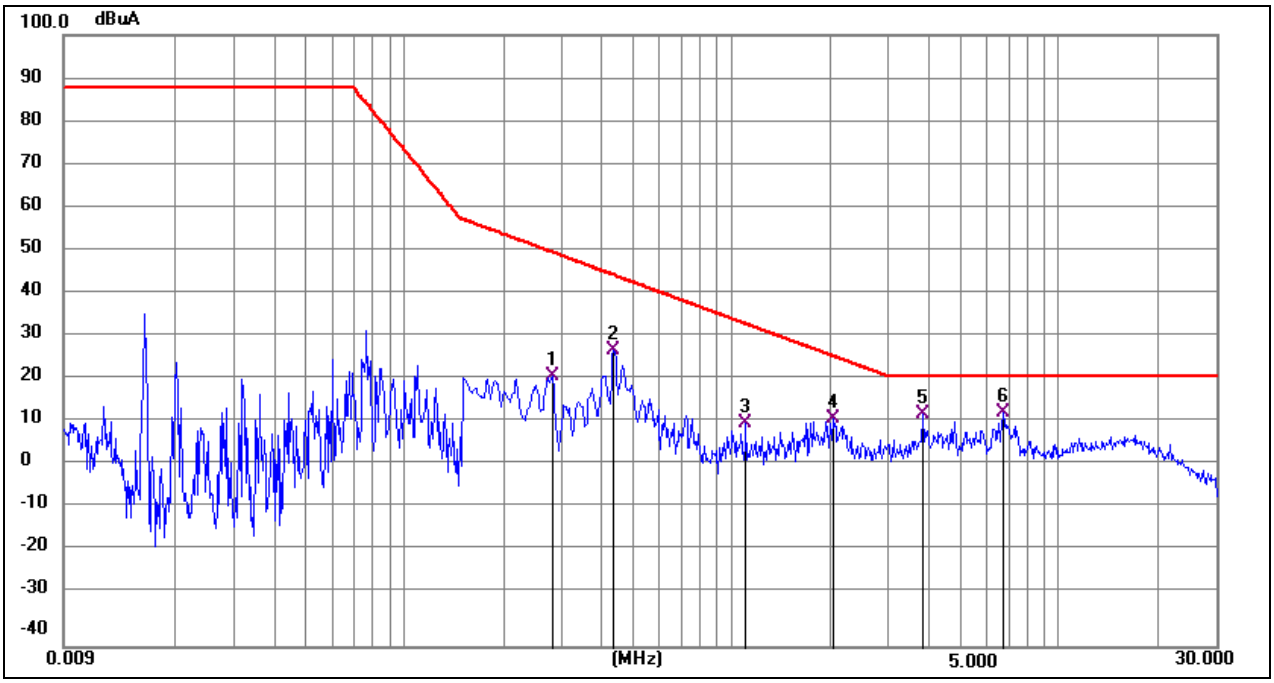
Phase: Y	Mode: M07

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2805	21.74	0.17	21.91	50.38	-28.47	QP
2	0.4335	23.25	0.44	23.69	45.16	-21.47	QP
3	1.0410	12.63	1.82	14.45	34.67	-20.22	QP
4	1.9275	10.63	1.82	12.45	27.30	-14.85	QP
5	3.4215	9.17	1.61	10.78	22.00	-11.22	QP
6	6.8865	12.16	1.06	13.22	22.00	-8.78	QP



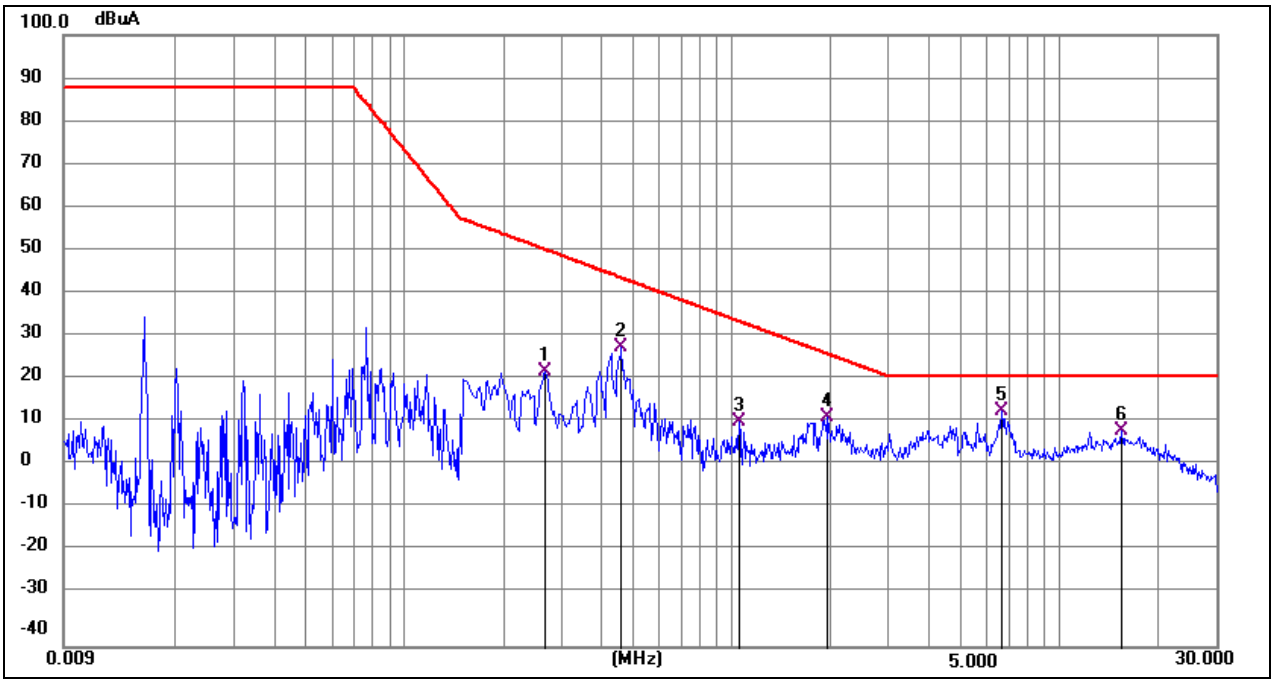
Phase: Z	Mode: M07

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2805	21.20	0.17	21.37	50.38	-29.01	QP
2	0.4515	24.84	0.46	25.30	44.68	-19.38	QP
3	1.0905	15.03	1.82	16.85	34.12	-17.27	QP
4	2.0670	8.86	1.81	10.67	26.46	-15.79	QP
5	4.7265	9.88	1.49	11.37	22.00	-10.63	QP
6	6.9720	12.14	1.01	13.15	22.00	-8.85	QP



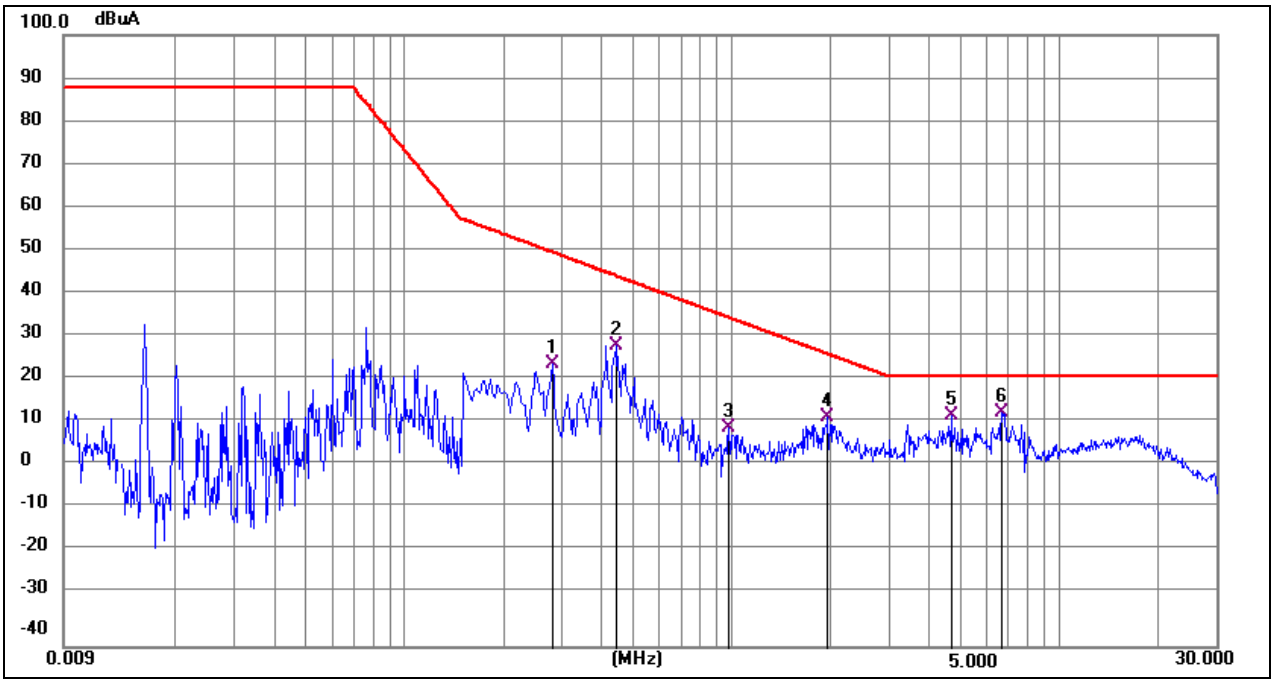
Phase: Z	Mode: M08

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2805	22.01	0.17	22.18	50.38	-28.20	QP
2	0.4335	27.49	0.44	27.93	45.16	-17.23	QP
3	1.0995	9.58	1.82	11.40	34.02	-22.62	QP
4	2.0310	10.56	1.82	12.38	26.67	-14.29	QP
5	3.8265	11.70	1.55	13.25	22.00	-8.75	QP
6	6.7065	12.37	1.13	13.50	22.00	-8.50	QP



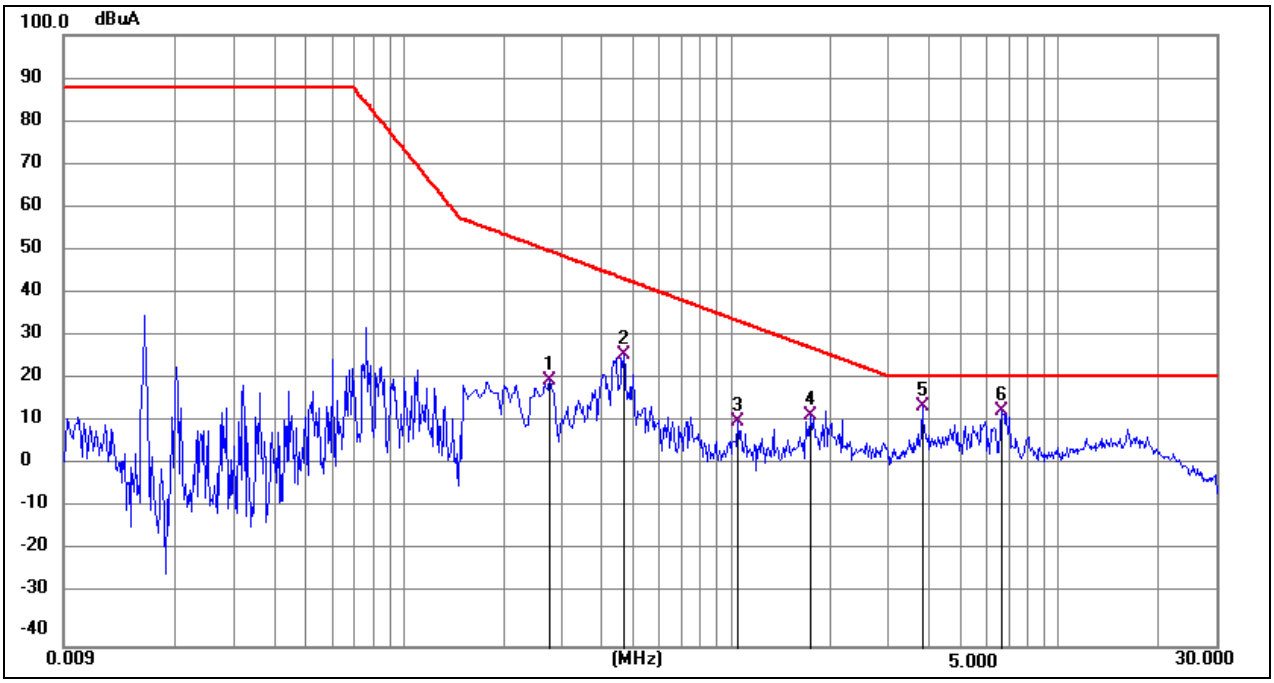
Phase: Y	Mode: M08

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2670	22.97	0.14	23.11	50.97	-27.86	QP
2	0.4560	28.29	0.47	28.76	44.56	-15.80	QP
3	1.0500	9.72	1.82	11.54	34.57	-23.03	QP
4	1.9410	10.78	1.82	12.60	27.21	-14.61	QP
5	6.6480	12.81	1.16	13.97	22.00	-8.03	QP
6	15.5355	5.45	4.19	9.64	22.00	-12.36	QP



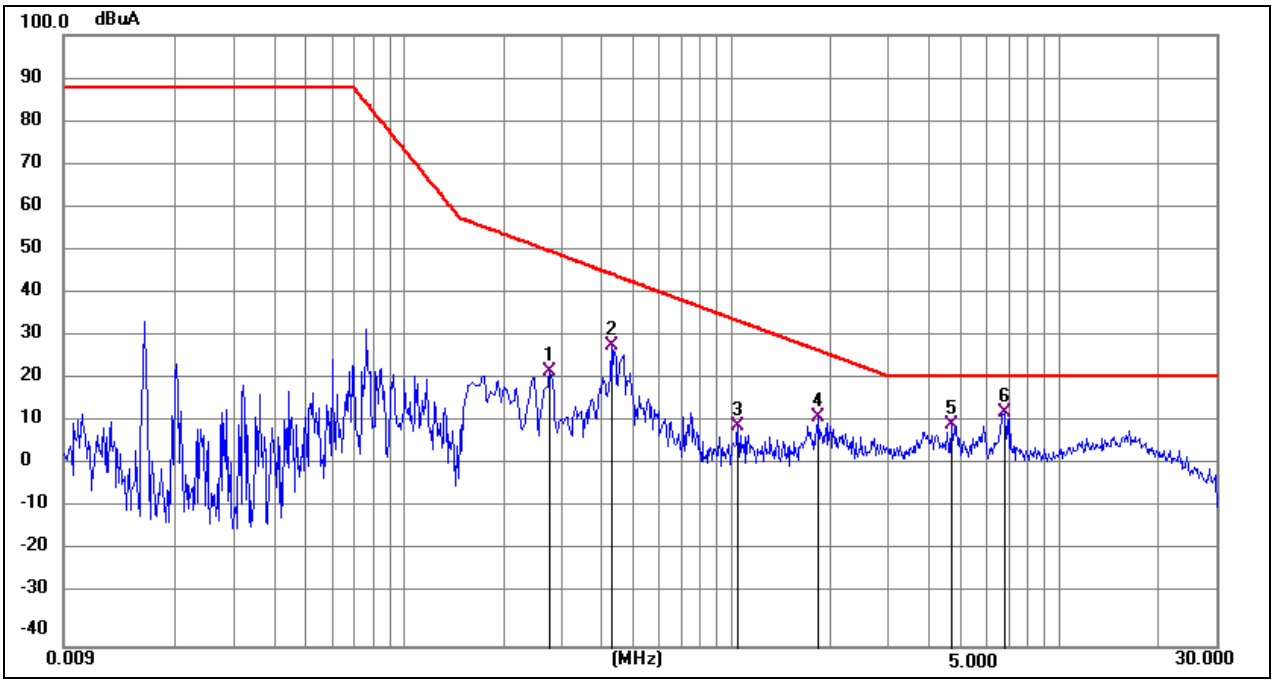
Phase: X	Mode: M08

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2805	24.68	0.17	24.85	50.38	-25.53	QP
2	0.4380	28.36	0.45	28.81	45.04	-16.23	QP
3	0.9780	8.25	1.79	10.04	35.42	-25.38	QP
4	1.9590	10.78	1.82	12.60	27.10	-14.50	QP
5	4.6455	11.49	1.50	12.99	22.00	-9.01	QP
6	6.6885	12.64	1.14	13.78	22.00	-8.22	QP



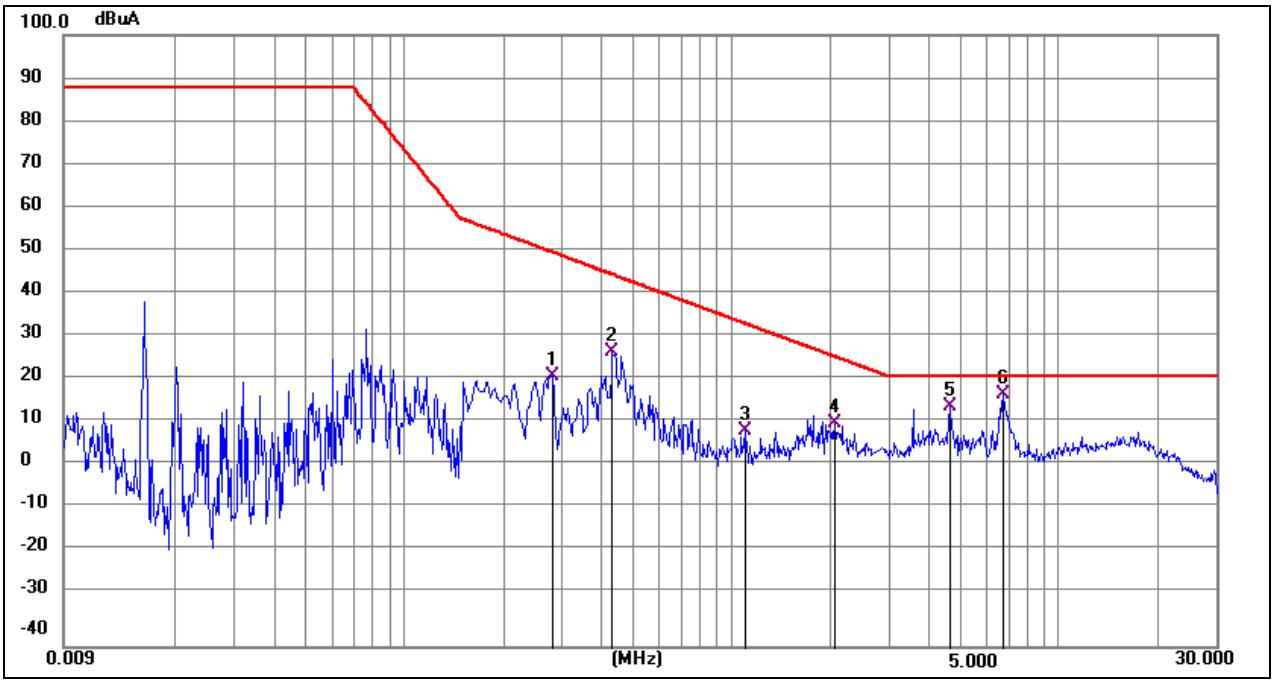
Phase: X	Mode: M09

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2760	20.97	0.16	21.13	50.57	-29.44	QP
2	0.4650	26.27	0.48	26.75	44.32	-17.57	QP
3	1.0365	9.60	1.82	11.42	34.73	-23.31	QP
4	1.7340	11.09	1.82	12.91	28.56	-15.65	QP
5	3.8220	13.58	1.55	15.13	22.00	-6.87	QP
6	6.6570	12.87	1.16	14.03	22.00	-7.97	QP



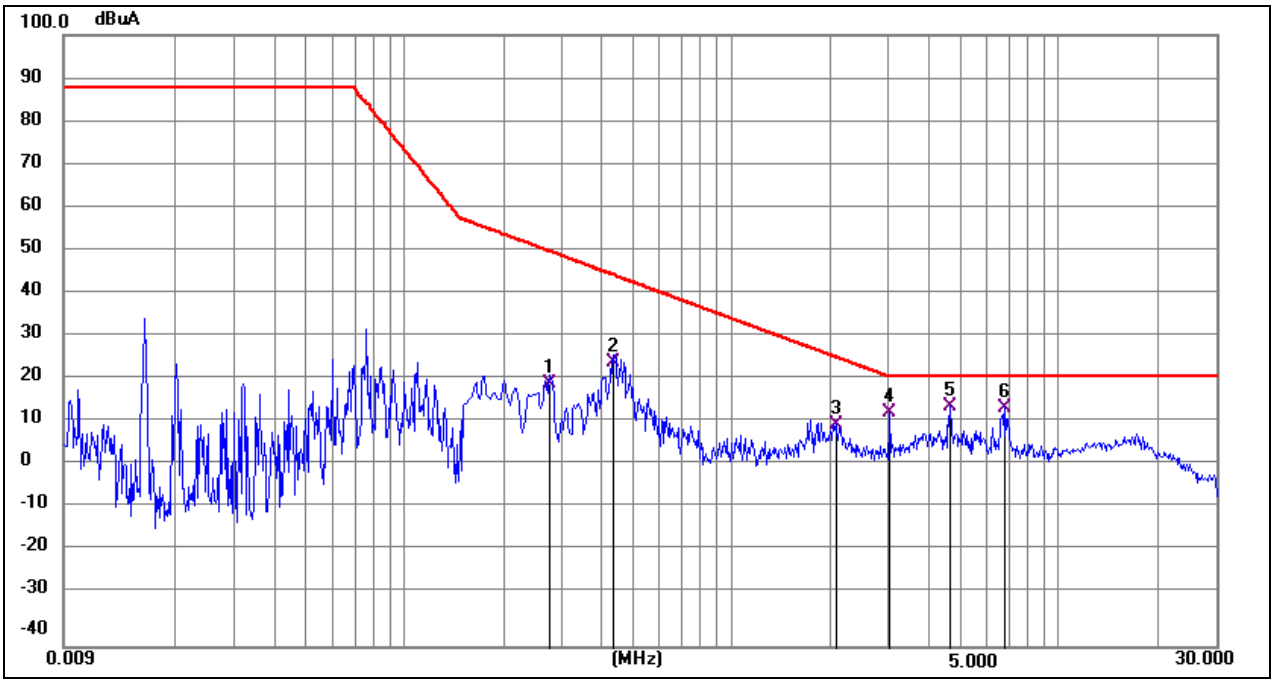
Phase: Y	Mode: M09

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2760	22.84	0.16	23.00	50.57	-27.57	QP
2	0.4244	28.68	0.43	29.11	45.42	-16.31	QP
3	1.0363	8.78	1.82	10.60	34.73	-24.13	QP
4	1.8330	10.94	1.82	12.76	27.90	-15.14	QP
5	4.6455	9.48	1.50	10.98	22.00	-11.02	QP
6	6.8370	12.45	1.08	13.53	22.00	-8.47	QP



Phase: Z	Mode: M09

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2805	21.89	0.17	22.06	50.38	-28.32	QP
2	0.4290	26.98	0.44	27.42	45.29	-17.87	QP
3	1.0905	7.73	1.82	9.55	34.12	-24.57	QP
4	2.0625	9.51	1.81	11.32	26.49	-15.17	QP
5	4.6320	13.50	1.49	14.99	22.00	-7.01	QP
6	6.7335	16.86	1.12	17.98	22.00	-4.02	QP



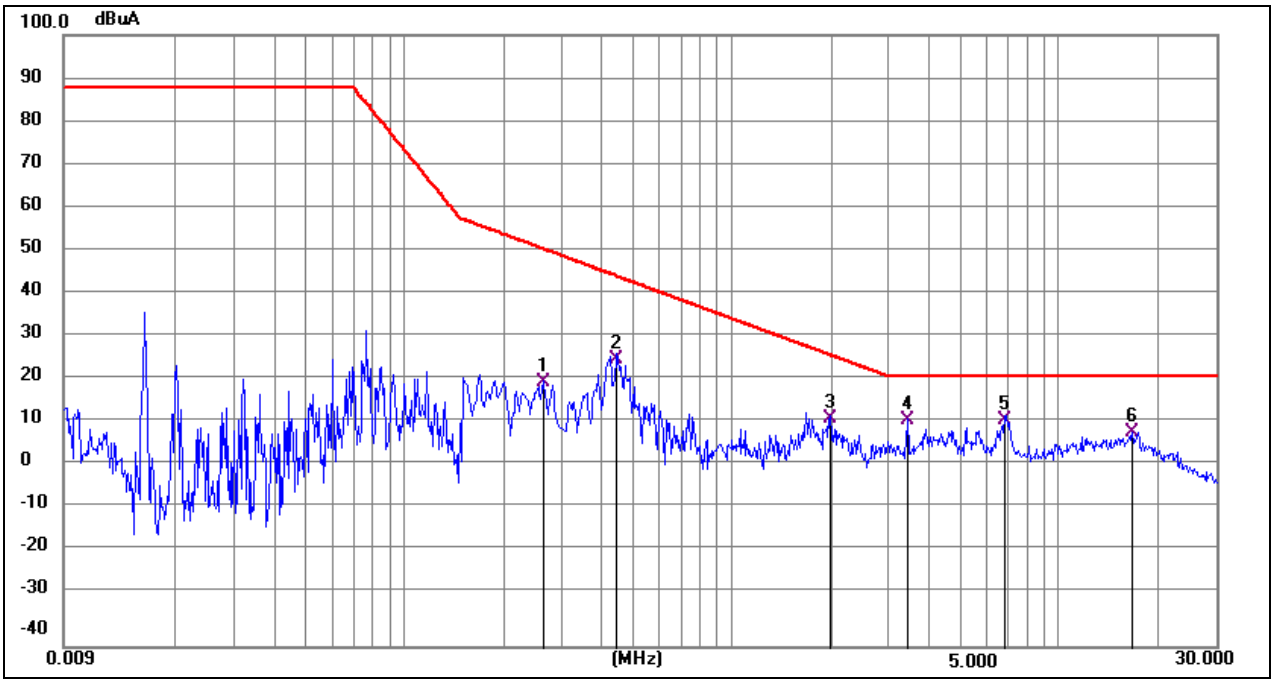
Phase: Z	Mode: M10

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2760	20.24	0.16	20.40	50.57	-30.17	QP
2	0.4335	24.66	0.44	25.10	45.16	-20.06	QP
3	2.0760	9.19	1.81	11.00	26.41	-15.41	QP
4	3.0210	11.83	1.67	13.50	22.00	-8.50	QP
5	4.6275	13.61	1.49	15.10	22.00	-6.90	QP
6	6.8145	13.62	1.08	14.70	22.00	-7.30	QP



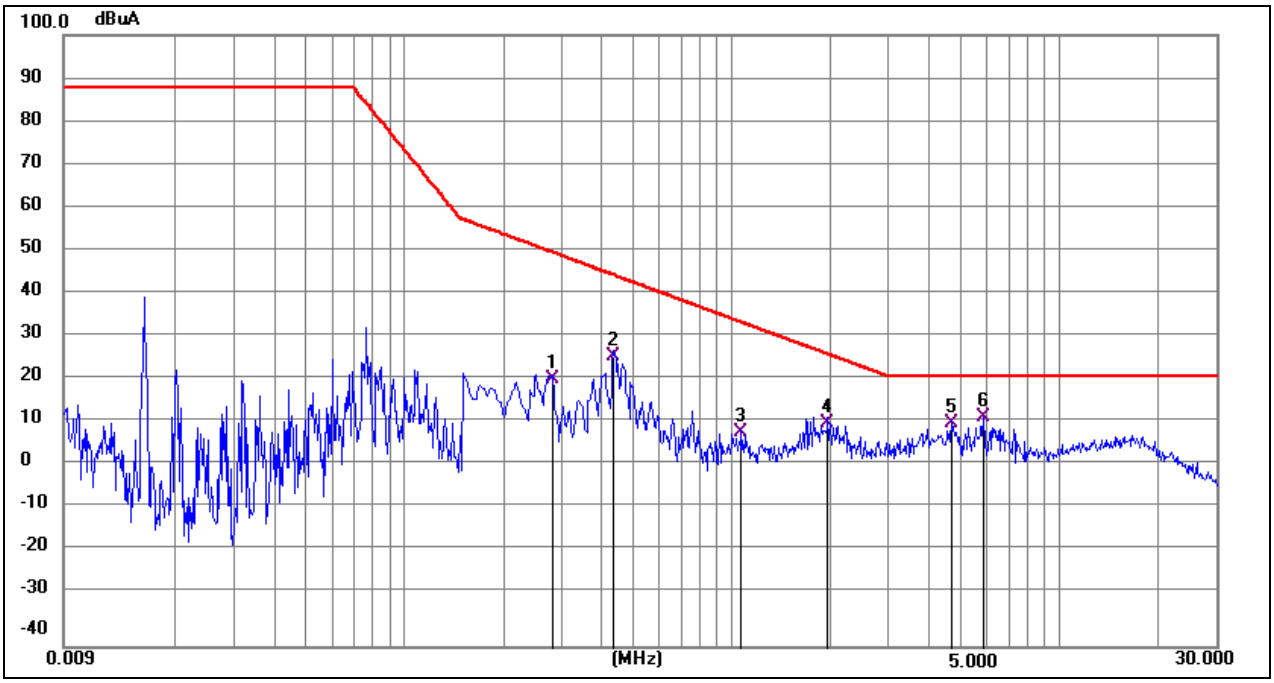
Phase: Y	Mode: M10

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2760	21.24	0.16	21.40	50.57	-29.17	QP
2	0.4335	25.86	0.44	26.30	45.16	-18.86	QP
3	1.0905	7.38	1.82	9.20	34.12	-24.92	QP
4	1.7430	10.98	1.82	12.80	28.50	-15.70	QP
5	3.3540	10.78	1.62	12.40	22.00	-9.60	QP
6	6.7560	11.79	1.11	12.90	22.00	-9.10	QP



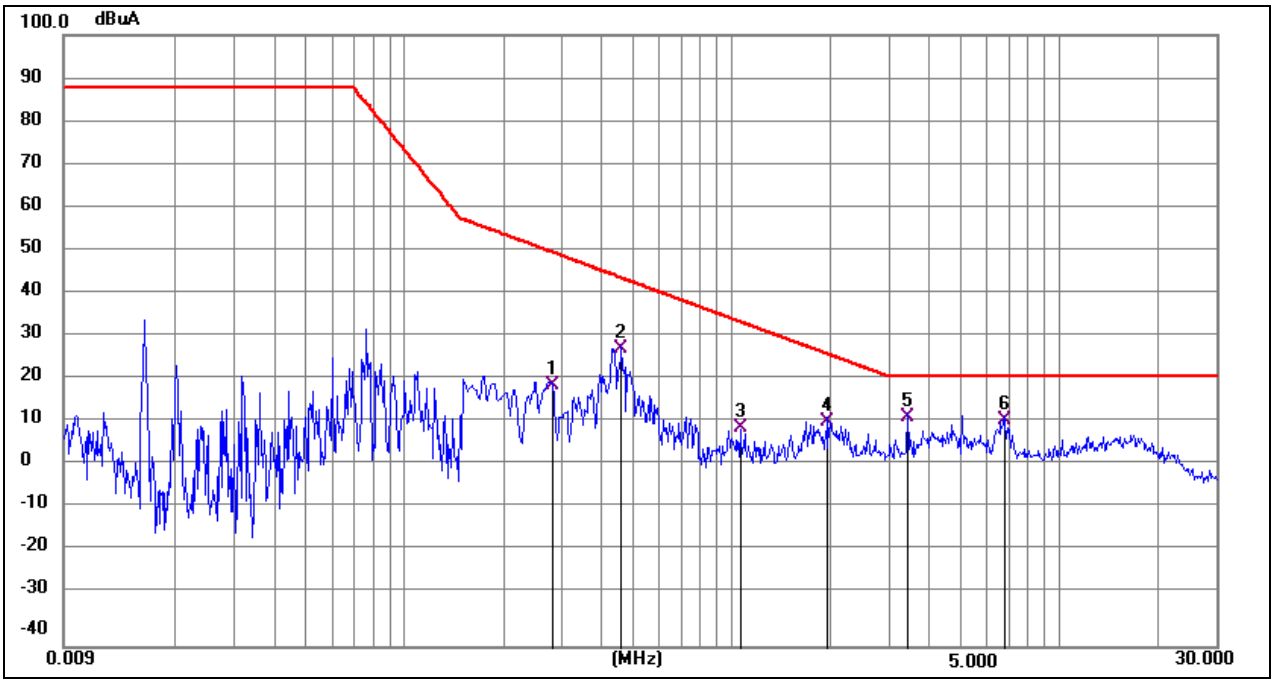
Phase: X	Mode: M10

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2625	20.36	0.14	20.50	51.17	-30.67	QP
2	0.4425	25.25	0.45	25.70	44.92	-19.22	QP
3	1.9950	10.58	1.82	12.40	26.89	-14.49	QP
4	3.4215	10.49	1.61	12.10	22.00	-9.90	QP
5	6.7785	10.80	1.10	11.90	22.00	-10.10	QP
6	16.6110	4.98	4.02	9.00	22.00	-13.00	QP



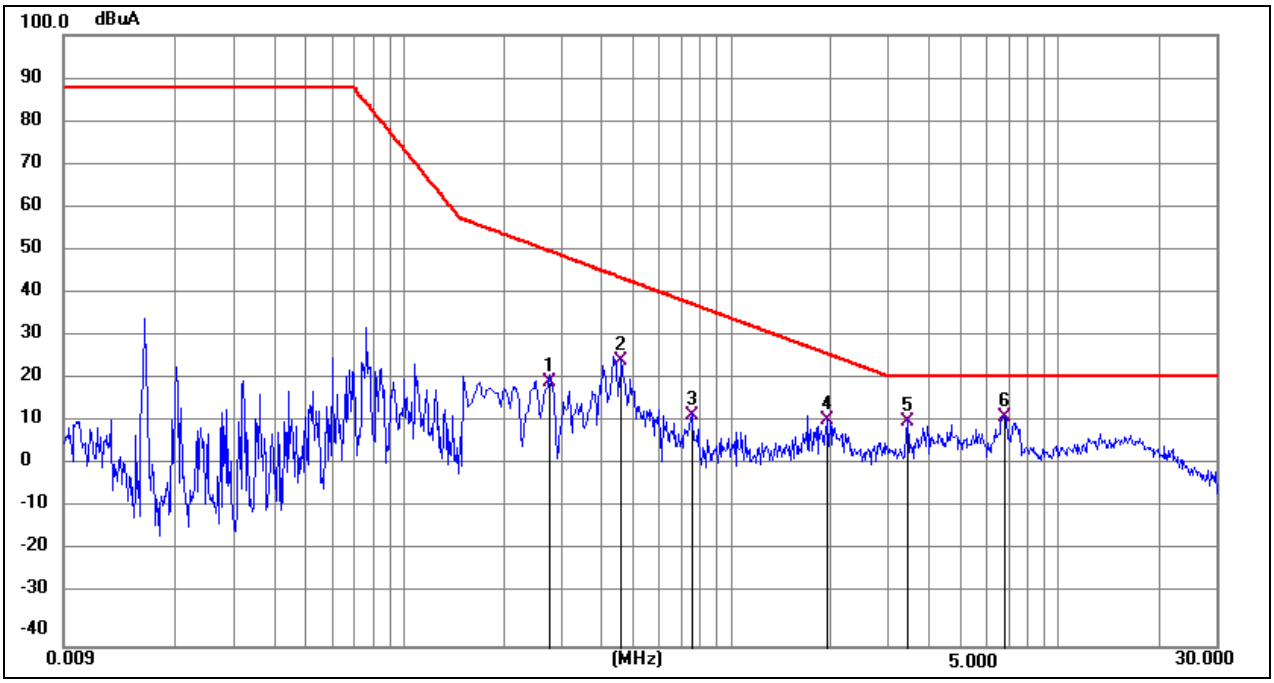
Phase: X	Mode: M11

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2805	21.03	0.17	21.20	50.38	-29.18	QP
2	0.4335	26.06	0.44	26.50	45.16	-18.66	QP
3	1.0635	7.18	1.82	9.00	34.42	-25.42	QP
4	1.9590	9.58	1.82	11.40	27.10	-15.70	QP
5	4.6680	9.70	1.50	11.20	22.00	-10.80	QP
6	5.8335	11.05	1.45	12.50	22.00	-9.50	QP



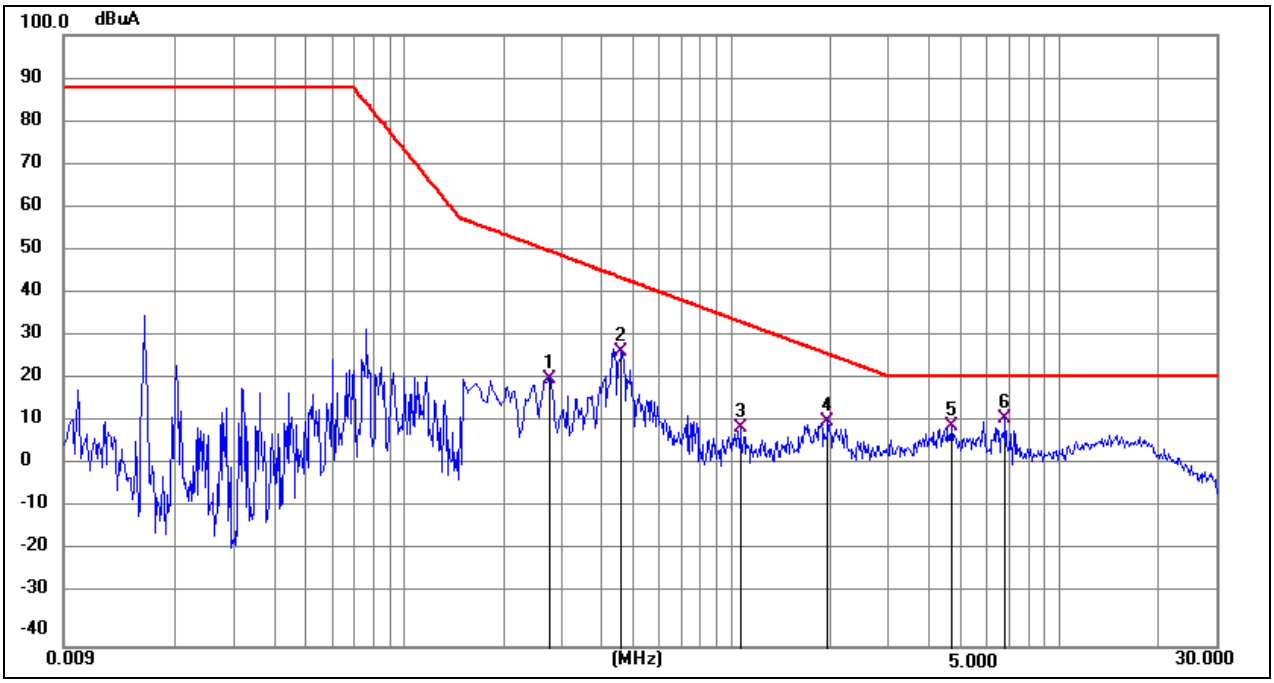
Phase: Y	Mode: M11

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2805	19.63	0.17	19.80	50.38	-30.58	QP
2	0.4560	27.63	0.47	28.10	44.56	-16.46	QP
3	1.0590	8.28	1.82	10.10	34.47	-24.37	QP
4	1.9544	9.88	1.82	11.70	27.13	-15.43	QP
5	3.4214	10.89	1.61	12.50	22.00	-9.50	QP
6	6.7830	10.80	1.10	11.90	22.00	-10.10	QP



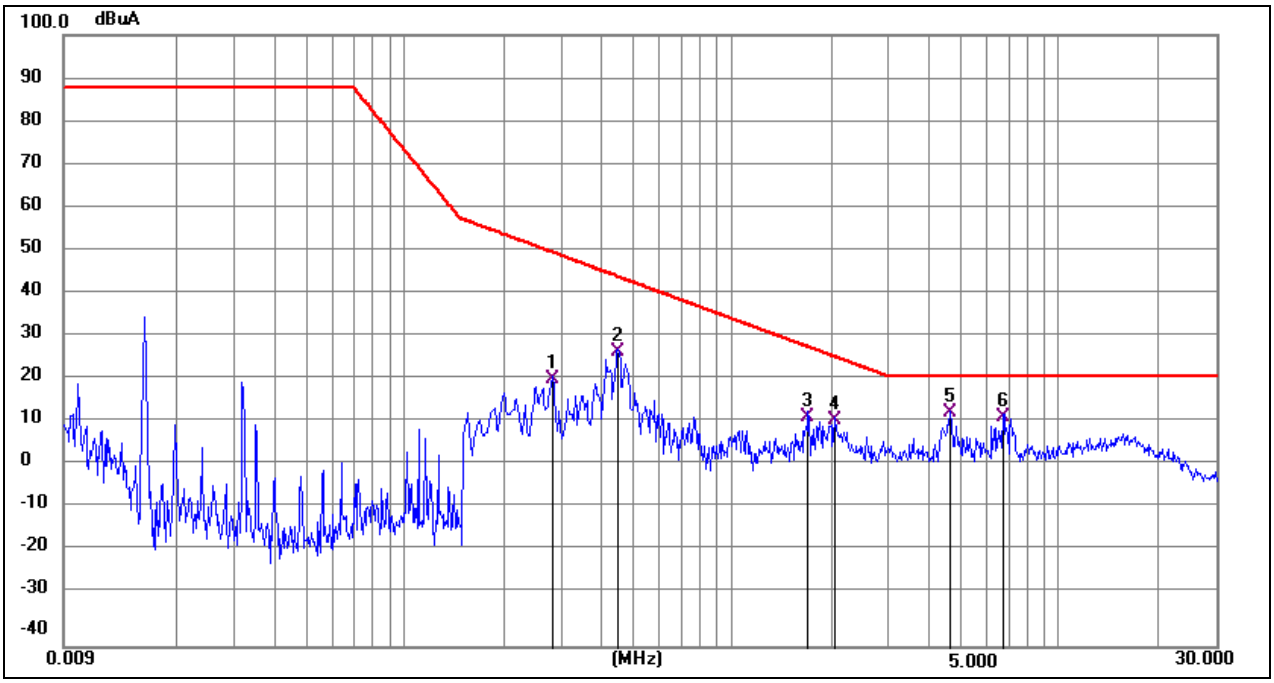
Phase: Z	Mode: M11

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2760	20.54	0.16	20.70	50.57	-29.87	QP
2	0.4560	24.93	0.47	25.40	44.56	-19.16	QP
3	0.7530	11.60	1.30	12.90	38.55	-25.65	QP
4	1.9590	10.18	1.82	12.00	27.10	-15.10	QP
5	3.4215	10.09	1.61	11.70	22.00	-10.30	QP
6	6.7560	11.39	1.11	12.50	22.00	-9.50	QP



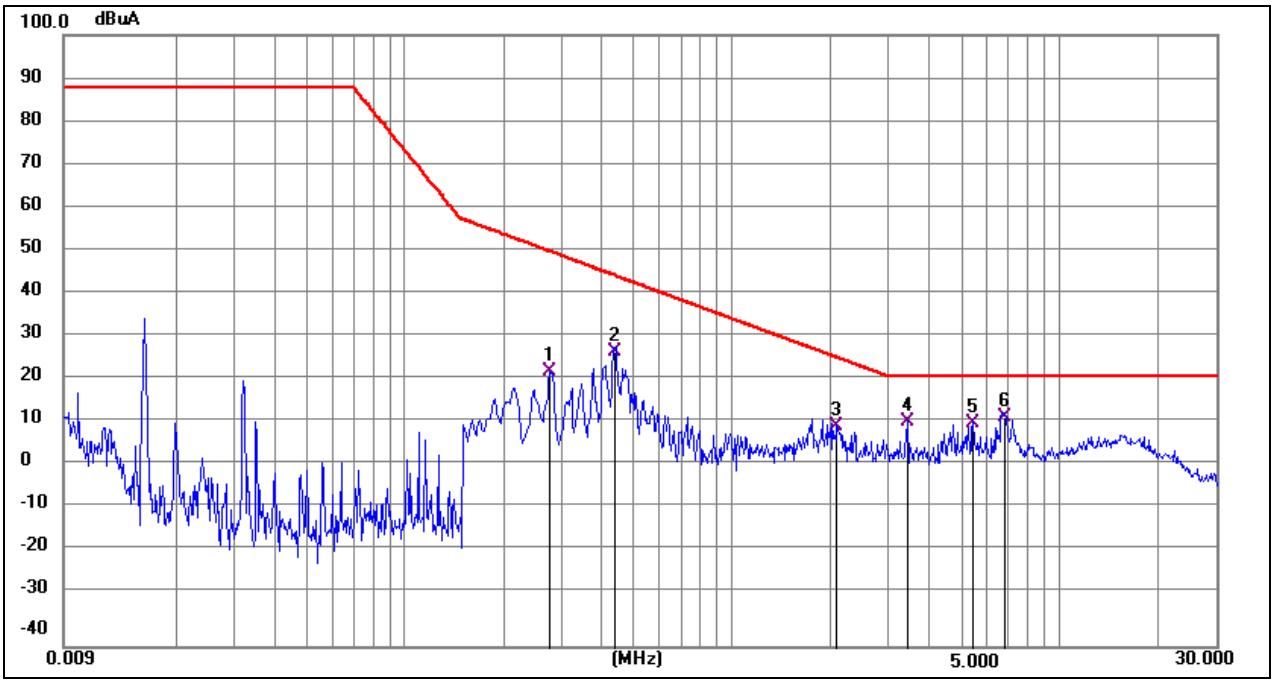
Phase: Z	Mode: M12

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2760	21.14	0.16	21.30	50.57	-29.27	QP
2	0.4560	26.93	0.47	27.40	44.56	-17.16	QP
3	1.0545	8.28	1.82	10.10	34.52	-24.42	QP
4	1.9590	9.88	1.82	11.70	27.10	-15.40	QP
5	4.6860	9.01	1.49	10.50	22.00	-11.50	QP
6	6.8145	11.22	1.08	12.30	22.00	-9.70	QP



Phase: Y	Mode: M12

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2805	21.03	0.17	21.20	50.38	-29.18	QP
2	0.4470	26.94	0.46	27.40	44.80	-17.40	QP
3	1.7115	10.68	1.82	12.50	28.72	-16.22	QP
4	2.0625	10.19	1.81	12.00	26.49	-14.49	QP
5	4.6320	12.01	1.49	13.50	22.00	-8.50	QP
6	6.7425	11.59	1.11	12.70	22.00	-9.30	QP



Phase: X	Mode: M12

No.	Frequency (MHz)	Reading (dBuA)	Correct (dB)	Result (dBuA)	Limit (dBuA)	Margin (dB)	Remark
1	0.2760	22.84	0.16	23.00	50.57	-27.57	QP
2	0.4347	27.25	0.45	27.70	45.13	-17.43	QP
3	2.0895	8.69	1.81	10.50	26.33	-15.83	QP
4	3.4170	9.89	1.61	11.50	22.00	-10.50	QP
5	5.4375	9.93	1.47	11.40	22.00	-10.60	QP
6	6.7605	11.39	1.11	12.50	22.00	-9.50	QP

Remark:
Result = Reading +Correct
Margin = Result - Limit

7.5. HARMONIC CURRENT EMISSION

LIMITS

a) Active input power > 25 W

For luminaires with incandescent lamps and built-in phase control dimming having a rated power greater than 25 W, the harmonics of the input current shall not exceed the limits given in Table 1.

For any other lighting equipment having a rated power greater than 25 W, the harmonics of the input current shall not exceed the relative limits given in Table 2. For those types that include means for control (e.g. dimming, colour), the harmonics of the input current shall not exceed the harmonic current values derived from the percentage limits given in Table 2 for the maximum active input power (P max) condition when tested in both following conditions:

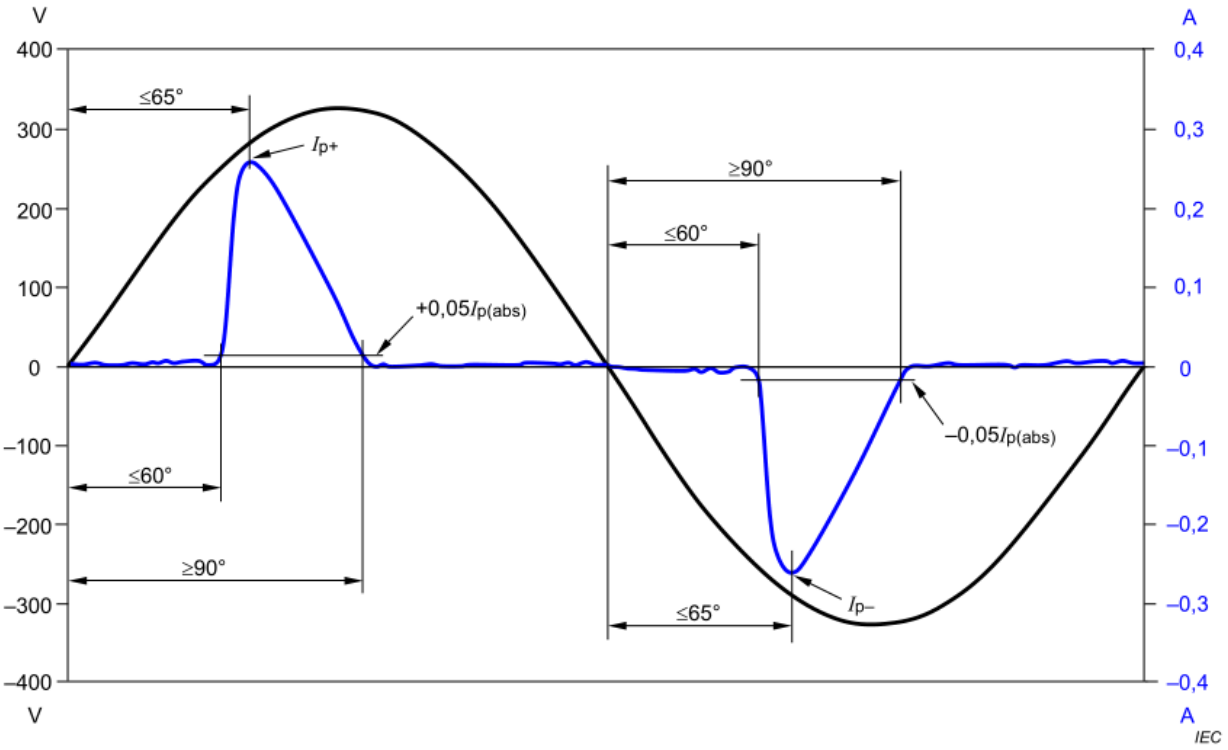
- with the means for control set to obtain P max ;
- with the means for control set to the position expected to produce the maximum total harmonic current (THC) within the active input power range [P min , P max], where

• P min = 5 W, if P max ≤ 50 W;
• P min = 10 % of P max, if 50 W < P max ≤ 250 W;
• P min = 25 W, if P max > 250 W.

b) Rated power ≥ 5 W and ≤ 25 W

Lighting equipment having a rated power greater than or equal to 5 W and less than or equal to 25 W shall comply with one of the following three sets of requirements:

- the harmonic currents shall not exceed the power-related limits of Table 3, column 2;
- the third harmonic current, expressed as a percentage of the fundamental current, shall not exceed 86 % and the fifth harmonic current shall not exceed 61 %. In addition, the waveform of the input current shall be such that it reaches the 5 % current threshold before or at 60°, has its peak value before or at 65° and does not fall below the 5 % current threshold before 90°, referenced to any zero crossing of the fundamental supply voltage. The current threshold is 5 % of the highest absolute peak value that occurs in the measurement window, and the phase angle measurements are made on the cycle that includes this absolute peak value (see Figure 2). Components of current with frequencies above 9 kHz shall not influence this evaluation (a filter similar to the one described in 5.3 of IEC 61000-4-7:2002 and IEC 61000-4-7:2002/AMD1:2008 may be used);
- the THD shall not exceed 70 %. The third order harmonic current, expressed as a percentage of the fundamental current, shall not exceed 35 %, the fifth order current shall not exceed 25 %, the seventh order current shall not exceed 30 %, the ninth and eleventh order currents shall not exceed 20 % and the second order current shall not exceed 5 %.



NOTE $I_{p(abs)}$ is the higher absolute value of I_{p+} and I_{p-}.

Table 1 – Limits for Class A equipment

Limits for class A Equipment	
Harmonic order h	Maximum permissible harmonic current A
Odd harmonics	
3	2.30
5	1.14
7	0.77
9	0.40
11	0.33
13	0.21
15≤ h≤ 39	0.15(15/h)
Even harmonics	
2	1.08
4	0.43
6	0.30
8≤ h ≤40	0.23(8/h)

Table 2 – Limits for Class C equipment

Limits for class C Equipment active input power > 25W	
Harmonic order h	Maximum permissible harmonic current expressed as a percentage of the input current at the fundamental frequency %
2	2
3	27
5	10
7	7
9	5
11≤ h≤ 39 (odd harmonic only)	3
[a] λ is the circuit power factor.	

Table 3 – Limits for Class D equipment

Harmonic order h	**Maximum permissible harmonic current per watt** mA/W	**Maximum permissible harmonic current** A
3	3,4	2,30
5	1,9	1,14
7	1,0	0,77
9	0,5	0,40
11	0,35	0,33
$13 \leq h \leq 39$ (odd harmonics only)	$\frac{3,85}{h}$	See Table 1

TEST PROCEDURE

a. The EUT was placed on the top of a wooden table 0.8 meters above the ground and operated to produce the maximum harmonic components under normal operating Condition.

b. The classification of EUT is according to EN 61000-3-2. The EUT is classified as follows:

Class A:

Balanced three-phase equipment, Household appliances excluding equipment as Class D, Tools excluding portable tools, Dimmers for incandescent lamps, audio equipment, equipment not specified in one of the three other classes.

Class C:

Lighting equipment.

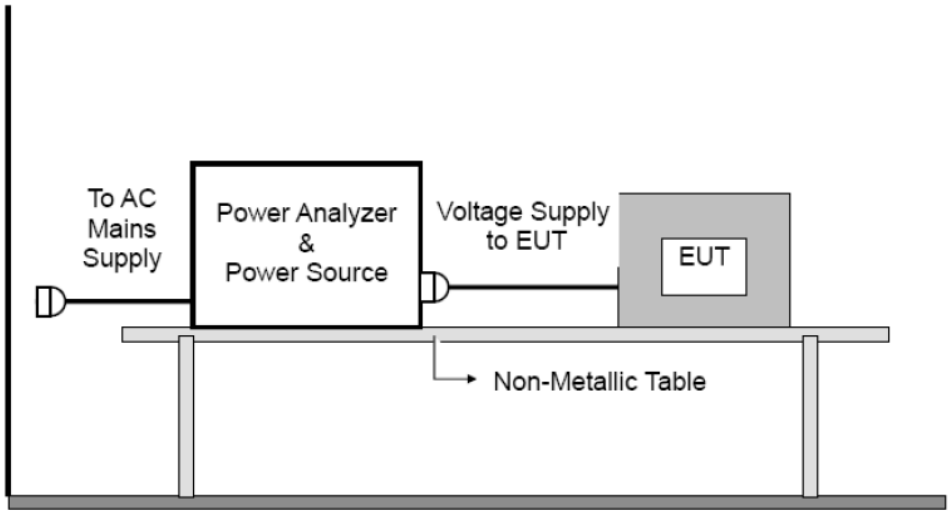
Class D:

Equipment having a specified power less than or equal to 600W of the following types: Personal computers and personal computer monitors and television receivers.

c. The correspondent test program of test instrument to measure the current harmonics emanated

from EUT is chosen. The measure time shall be not less than the time necessary for the EUT to be exercised.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.3℃	Relative Humidity	50%
Atmosphere Pressure	101kPa		

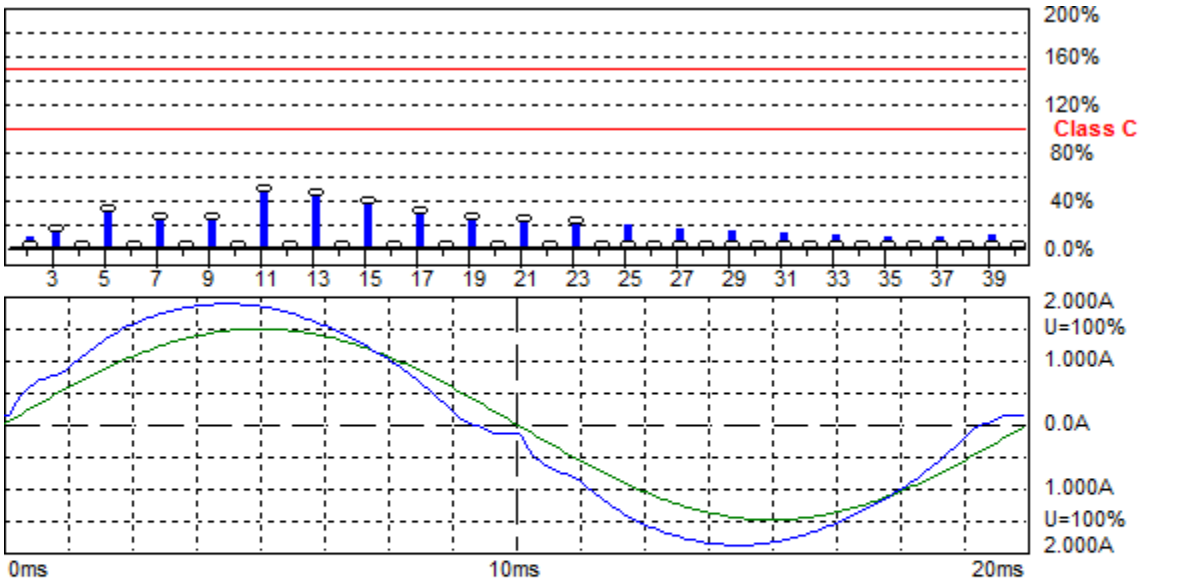
TEST MODE

Pre-test Mode:	M01 ~ M12
Final Test Mode:	M01, M03, M05, M07, M09, M11

Note: All test modes had been tested, but only the worst data recorded in the report.

TEST RESULTS

For model: SWT-F01-300W



Harmonic Emission - IEC 61000-3-2 , EN 61000-3-2 , (EN60555-2) 2024/9/6 22:59:04

Urms =	230.3	V	P =	294.7	W	THC =	0.078	A	Range: 2 A
Irms =	1.306	A	pf =	0.980		H1max =	1.304	A	V-nom: 230 V
									TestTime: 3 min (100%)

Test completed, Result: PASSED

HAR-1000 EMC-Partner

Urms = 230.3V Freq = 50.000 Range: 2 A
Irms = 1.306A Ipk = 1.889A cf = 1.447
P = 294.7W S = 300.7VA pf = 0.980
THDi = 6.01 % THDu = 0.10 % Class C

Test - Time : 3min (100 %)

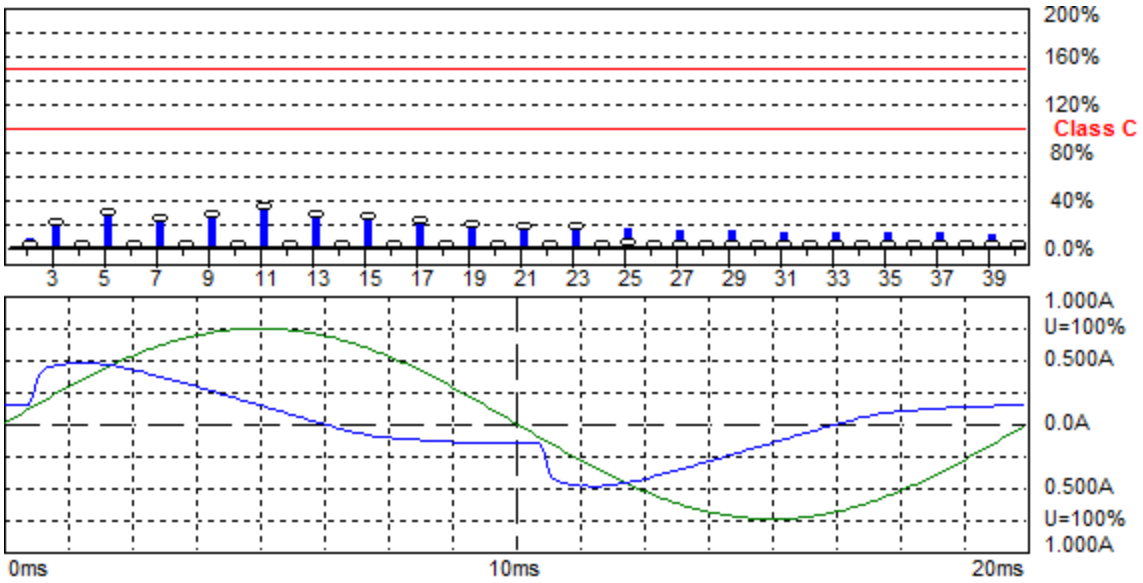
Limit Reference: H1(max)= 1.3044A pf(max)= 0.995

Test completed, Result: PASSED

Order	Freq. [Hz]	Iavg [A]	Irms [A]	Irms% [%]	Irms%L [%]	Imax [A]	Limit [A]	Status	Vrms [V]
1	50	1.2990	1.3036	99.841		1.3044			230.26
2	100	0.0000	0.0012	0.0935	4.6790	0.0016	0.0261		0.1473
3	150	0.0492	0.0497	3.8052	14.106	0.0497	0.3522		0.0491
4	200	0.0000	0.0004	0.0280		0.0005			0.0245
5	250	0.0388	0.0388	2.9731	29.759	0.0388	0.1304		0.0245
6	300	0.0000	0.0001	0.0093		0.0002			0.0245
7	350	0.0215	0.0215	1.6455	23.529	0.0216	0.0913		0.0245
8	400	0.0000	0.0001	0.0093		0.0001			0.0245
9	450	0.0157	0.0159	1.2154	24.331	0.0159	0.0652		0.0245

10	500	0.0000	0.0001	0.0093		0.0001		0.0000
11	550	0.0187	0.0188	1.4398	48.038	0.0188	0.0391	0.0245
12	600	0.0000	0.0002	0.0187		0.0002		0.0000
13	650	0.0173	0.0173	1.3276	44.295	0.0173	0.0391	0.0000
14	700	0.0000	0.0002	0.0187		0.0002		0.0000
15	750	0.0142	0.0143	1.0939	36.496	0.0143	0.0391	0.0245
16	800	0.0000	0.0001	0.0093		0.0002		0.0000
17	850	0.0112	0.0112	0.8601	28.698	0.0112	0.0391	0.0000
18	900	0.0000	0.0001	0.0093		0.0002		0.0000
19	950	0.0092	0.0093	0.7105	23.707	0.0093	0.0391	0.0000
20	1000	0.0000	0.0001	0.0093		0.0002		0.0000
21	1050	0.0084	0.0085	0.6545	21.835	0.0085	0.0391	0.0000
22	1100	0.0000	0.0001	0.0093		0.0001		0.0000
23	1150	0.0078	0.0079	0.6077	20.276	0.0079	0.0391	0.0000
24	1200	0.0000	0.0002	0.0187		0.0002		0.0000
25	1250	0.0000	0.0066	0.5049	16.844	0.0067	0.0391	0.0000
26	1300	0.0000	0.0001	0.0093		0.0002		0.0000
27	1350	0.0000	0.0052	0.4020	13.413	0.0054	0.0391	0.0000
28	1400	0.0000	0.0001	0.0093		0.0001		0.0000
29	1450	0.0000	0.0045	0.3459	11.542	0.0046	0.0391	0.0000
30	1500	0.0000	0.0001	0.0093		0.0002		0.0000
31	1550	0.0000	0.0040	0.3085	10.294	0.0042	0.0391	0.0000
32	1600	0.0000	0.0001	0.0093		0.0002		0.0000
33	1650	0.0000	0.0032	0.2431	8.1103	0.0033	0.0391	0.0000
34	1700	0.0000	0.0002	0.0187		0.0002		0.0000
35	1750	0.0000	0.0026	0.1963	6.5506	0.0027	0.0391	0.0000
36	1800	0.0000	0.0001	0.0093		0.0002		0.0000
37	1850	0.0000	0.0024	0.1870	6.2387	0.0026	0.0391	0.0000
38	1900	0.0000	0.0002	0.0187		0.0002		0.0000
39	1950	0.0000	0.0031	0.2337	7.7984	0.0032	0.0391	0.0000
40	2000	0.0000	0.0002	0.0187		0.0002		0.0000

For model: SWT-F01-300W



Harmonic Emission - IEC 61000-3-2 , EN 61000-3-2 , (EN60555-2) 2024/9/6 23:04:08

Urms =	230.1	V	P =	31.39	W	THC =	0.083	A	Range: 1 A
Irms =	0.265	A	pf =	0.514		H1max =	0.000	A	V-nom: 230 V
									TestTime: 3 min (100%)

Test completed, Result: PASSED

HAR-1000 EMC-Partner

Urms = 230.1V Freq = 50.000 Range: 1 A
Irms = 0.265A Ipk = 0.490A cf = 1.847
P = 31.39W S = 61.01VA pf = 0.514
THDi = 33.1 % THDu = 0.10 % Class C

Test - Time : 3min (100 %)

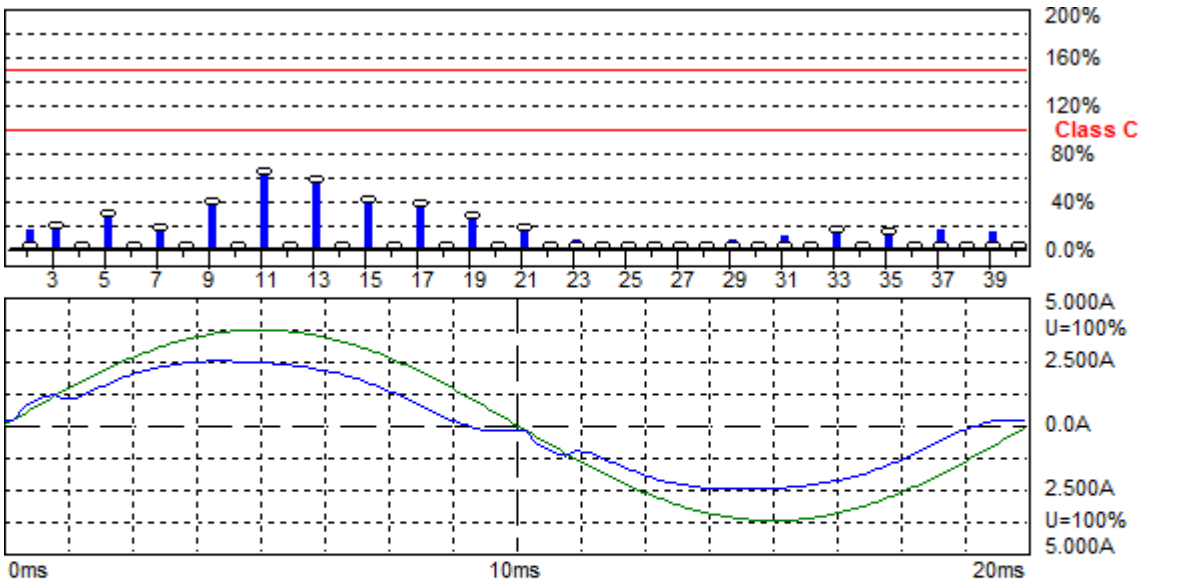
Limit Reference: H1(max)= 1.3060A pf(max)= 0.995

Test completed, Result: PASSED

Order	Freq. [Hz]	Iavg [A]	Irms [A]	Irms% [%]	Irms%L [%]	Imax [A]	Limit [A]	Status	Vrms [V]
1	50	0.2515	0.2522	95.120		0.2523			230.18
2	100	0.0000	0.0010	0.3913	3.9724	0.0011	0.0261		0.1718
3	150	0.0669	0.0668	25.207	18.953	0.0669	0.3526		0.0491
4	200	0.0000	0.0007	0.2762		0.0008			0.0245
5	250	0.0350	0.0350	13.214	26.826	0.0350	0.1306		0.0245
6	300	0.0000	0.0006	0.2302		0.0006			0.0245
7	350	0.0197	0.0197	7.4355	21.565	0.0198	0.0914		0.0245
8	400	0.0000	0.0004	0.1381		0.0004			0.0000
9	450	0.0159	0.0159	6.0083	24.395	0.0160	0.0653		0.0000

10	500	0.0000	0.0007	0.2532		0.0007		0.0000
11	550	0.0122	0.0121	4.5810	31.001	0.0123	0.0392	0.0000
12	600	0.0000	0.0004	0.1381		0.0004		0.0000
13	650	0.0096	0.0096	3.6142	24.458	0.0096	0.0392	0.0000
14	700	0.0000	0.0003	0.1151		0.0003		0.0000
15	750	0.0090	0.0089	3.3610	22.744	0.0090	0.0392	0.0000
16	800	0.0000	0.0002	0.0921		0.0003		0.0000
17	850	0.0076	0.0076	2.8545	19.317	0.0076	0.0392	0.0000
18	900	0.0000	0.0002	0.0691		0.0003		0.0000
19	950	0.0065	0.0065	2.4632	16.669	0.0066	0.0392	0.0000
20	1000	0.0000	0.0004	0.1381		0.0004		0.0000
21	1050	0.0062	0.0061	2.3020	15.578	0.0062	0.0392	0.0000
22	1100	0.0000	0.0004	0.1611		0.0005		0.0000
23	1150	0.0056	0.0056	2.0948	14.176	0.0057	0.0392	0.0000
24	1200	0.0000	0.0003	0.1151		0.0004		0.0000
25	1250	0.0008	0.0049	1.8646	12.618	0.0050	0.0392	0.0000
26	1300	0.0000	0.0002	0.0691		0.0002		0.0000
27	1350	0.0000	0.0047	1.7726	11.995	0.0048	0.0392	0.0000
28	1400	0.0000	0.0004	0.1381		0.0004		0.0000
29	1450	0.0000	0.0043	1.6114	10.905	0.0044	0.0392	0.0000
30	1500	0.0000	0.0004	0.1381		0.0005		0.0000
31	1550	0.0000	0.0038	1.4503	9.8142	0.0040	0.0392	0.0000
32	1600	0.0000	0.0004	0.1381		0.0004		0.0000
33	1650	0.0000	0.0037	1.4042	9.5027	0.0039	0.0392	0.0000
34	1700	0.0000	0.0004	0.1611		0.0004		0.0000
35	1750	0.0000	0.0037	1.3812	9.3469	0.0038	0.0392	0.0000
36	1800	0.0000	0.0004	0.1381		0.0004		0.0000
37	1850	0.0000	0.0034	1.2891	8.7238	0.0037	0.0392	0.0000
38	1900	0.0000	0.0002	0.0921		0.0003		0.0000
39	1950	0.0000	0.0033	1.2431	8.4122	0.0035	0.0392	0.0000
40	2000	0.0000	0.0003	0.1151		0.0004		0.0000

For model: SWT-LH2-400W



Harmonic Emission - IEC 61000-3-2 , EN 61000-3-2 , (EN60555-2) 2024/9/6 22:51:46

Urms =	231.1	V	P =	390.3	W	THC =	0.168	A	Range:	5 A
Irms =	1.726	A	pf =	0.979		H1max =	0.000	A	V-nom:	231 V
									TestTime:	3 min (100%)

Test completed, Result: PASSED

HAR-1000 EMC-Partner

Urms = 231.1V Freq = 50.013 Range: 5 A
Irms = 1.726A Ipk = 2.512A cf = 1.455
P = 390.3W S = 398.9VA pf = 0.979
THDi = 9.85 % THDu = 0.10 % Class C

Test - Time : 3min (100 %)

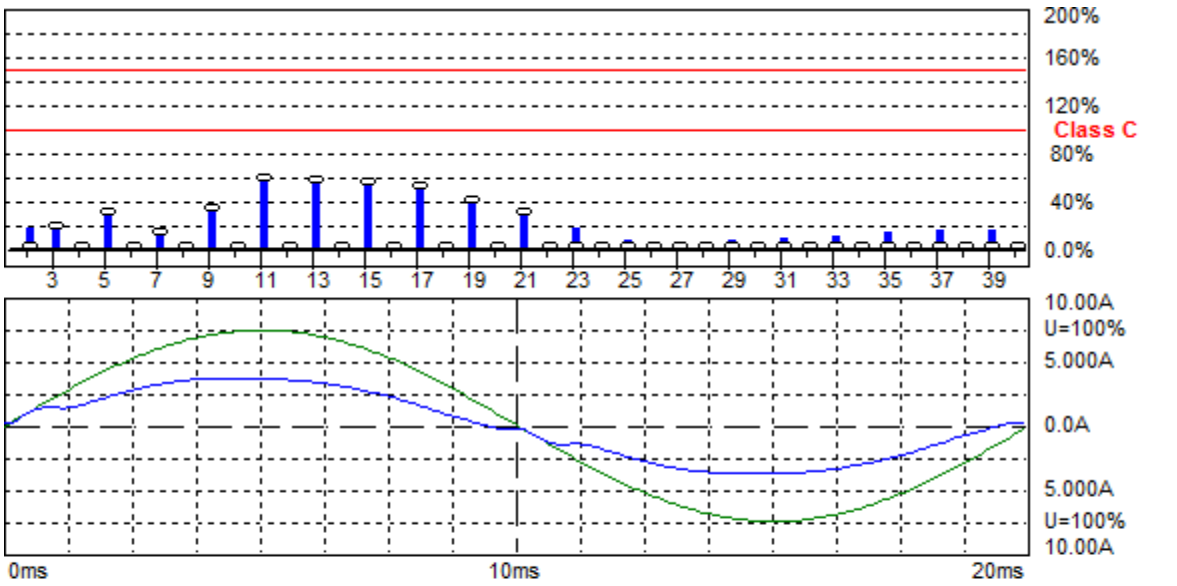
Limit Reference: H1(max)= 2.5880A pf(max)= 0.995

Test completed, Result: PASSED

Order	Freq. [Hz]	Iavg [A]	Irms [A]	Irms% [%]	Irms%L [%]	Imax [A]	Limit [A]	Status	Vrms [V]
1	50	1.7070	1.7178	99.523		1.7178			231.14
2	100	0.0000	0.0070	0.4066	13.561	0.0073	0.0518		0.1718
3	150	0.1179	0.1178	6.8246	16.858	0.1184	0.6988		0.0491
4	200	0.0000	0.0009	0.0530		0.0009			0.0245
5	250	0.0678	0.0677	3.9250	26.178	0.0681	0.2588		0.0245
6	300	0.0000	0.0006	0.0354		0.0009			0.0245
7	350	0.0278	0.0278	1.6089	15.330	0.0278	0.1812		0.0245
8	400	0.0000	0.0003	0.0177		0.0006			0.0000
9	450	0.0468	0.0470	2.7228	36.319	0.0470	0.1294		0.0245

10	500	0.0000	0.0003	0.0177		0.0003		0.0000
11	550	0.0479	0.0479	2.7758	61.711	0.0479	0.0776	0.0245
12	600	0.0000	0.0006	0.0354		0.0006		0.0000
13	650	0.0427	0.0427	2.4752	55.029	0.0430	0.0776	0.0245
14	700	0.0000	0.0006	0.0354		0.0006		0.0000
15	750	0.0293	0.0293	1.6973	37.734	0.0293	0.0776	0.0245
16	800	0.0000	0.0006	0.0354		0.0006		0.0000
17	850	0.0272	0.0272	1.5736	34.983	0.0272	0.0776	0.0245
18	900	0.0000	0.0003	0.0177		0.0006		0.0000
19	950	0.0188	0.0189	1.0962	24.370	0.0189	0.0776	0.0000
20	1000	0.0000	0.0003	0.0177		0.0003		0.0000
21	1050	0.0119	0.0119	0.6895	15.330	0.0122	0.0776	0.0000
22	1100	0.0000	0.0003	0.0177		0.0003		0.0000
23	1150	0.0000	0.0040	0.2298	5.1098	0.0043	0.0776	0.0000
24	1200	0.0000	0.0003	0.0177		0.0003		0.0000
25	1250	0.0000	0.0003	0.0177	0.3931	0.0006	0.0776	0.0000
26	1300	0.0000	0.0003	0.0177		0.0003		0.0000
27	1350	0.0000	0.0021	0.1238	2.7515	0.0021	0.0776	0.0000
28	1400	0.0000	0.0003	0.0177		0.0003		0.0000
29	1450	0.0000	0.0037	0.2122	4.7168	0.0040	0.0776	0.0000
30	1500	0.0000	0.0003	0.0177		0.0003		0.0000
31	1550	0.0000	0.0067	0.3890	8.6474	0.0067	0.0776	0.0000
32	1600	0.0000	0.0003	0.0177		0.0003		0.0000
33	1650	0.0105	0.0107	0.6188	13.757	0.0107	0.0776	0.0000
34	1700	0.0000	0.0003	0.0177		0.0006		0.0000
35	1750	0.0095	0.0104	0.6011	13.364	0.0107	0.0776	0.0000
36	1800	0.0000	0.0006	0.0354		0.0006		0.0000
37	1850	0.0000	0.0098	0.5658	12.578	0.0104	0.0776	0.0000
38	1900	0.0000	0.0006	0.0354		0.0006		0.0000
39	1950	0.0000	0.0092	0.5304	11.792	0.0095	0.0776	0.0000
40	2000	0.0000	0.0006	0.0354		0.0006		0.0000

For model: SWT-MS2-600W



Harmonic Emission - IEC 61000-3-2 , EN 61000-3-2 , (EN60555-2) 2024/9/6 22:46:13

Urms =	231.1	V	P =	594.4	W	THC =	0.173	A	Range:	10 A
Irms =	2.593	A	pf =	0.992		H1max =	2.589	A	V-nom:	231 V
									TestTime:	3 min (100%)

Test completed, Result: PASSED

HAR-1000 EMC-Partner

Urms = 231.1V Freq = 50.013 Range: 10 A
Irms = 2.593A Ipk = 3.730A cf = 1.439
P = 594.4W S = 599.2VA pf = 0.992
THDi = 6.72 % THDu = 0.10 % Class C

Test - Time : 3min (100 %)

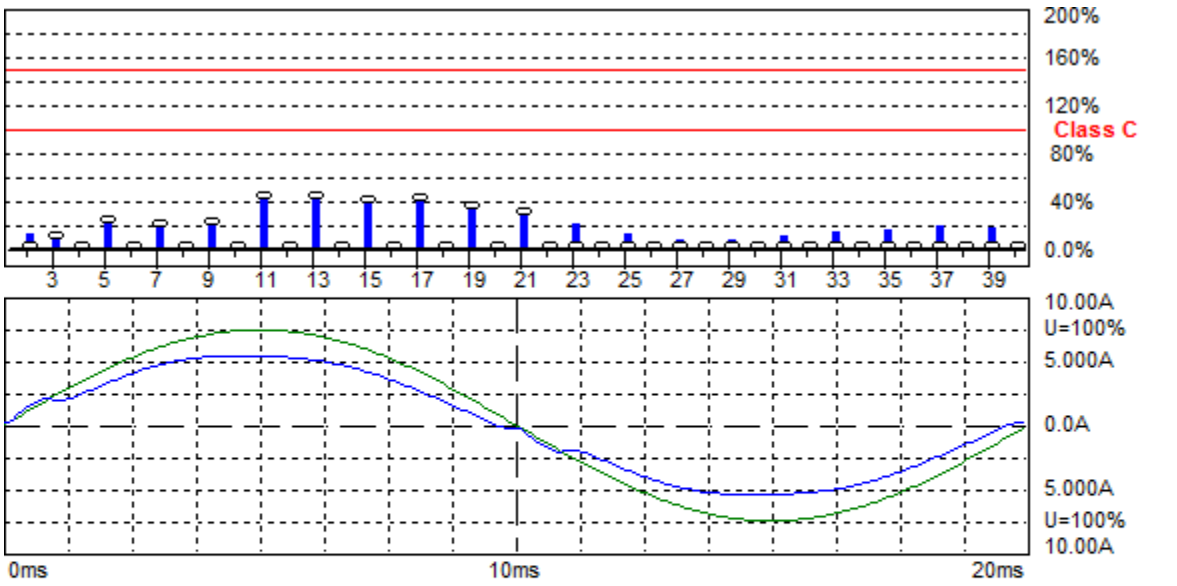
Limit Reference: H1(max)= 2.5885A pf(max)= 0.995

Test completed, Result: PASSED

Order	Freq. [Hz]	Iavg [A]	Irms [A]	Irms% [%]	Irms%L [%]	Imax [A]	Limit [A]	Status	Vrms [V]
1	50	2.5836	2.5885	99.835		2.5885			231.14
2	100	0.0000	0.0073	0.2825	14.148	0.0079	0.0518		0.1718
3	150	0.1161	0.1160	4.4727	16.593	0.1166	0.6989		0.0491
4	200	0.0000	0.0006	0.0235		0.0006			0.0245
5	250	0.0728	0.0726	2.8013	28.059	0.0732	0.2589		0.0245
6	300	0.0000	0.0006	0.0235		0.0012			0.0245
7	350	0.0215	0.0214	0.8239	11.790	0.0220	0.1812		0.0245
8	400	0.0000	0.0000	0.0000		0.0006			0.0000
9	450	0.0415	0.0415	1.6008	32.068	0.0415	0.1294		0.0000

10	500	0.0000	0.0000	0.0000		0.0006		0.0000
11	550	0.0445	0.0446	1.7185	57.376	0.0446	0.0777	0.0245
12	600	0.0000	0.0006	0.0235		0.0006		0.0000
13	650	0.0427	0.0427	1.6478	55.018	0.0433	0.0777	0.0245
14	700	0.0000	0.0006	0.0235		0.0006		0.0000
15	750	0.0408	0.0409	1.5772	52.661	0.0409	0.0777	0.0245
16	800	0.0000	0.0006	0.0235		0.0006		0.0000
17	850	0.0385	0.0385	1.4831	49.517	0.0385	0.0777	0.0245
18	900	0.0000	0.0006	0.0235		0.0006		0.0000
19	950	0.0293	0.0293	1.1299	37.727	0.0299	0.0777	0.0245
20	1000	0.0000	0.0006	0.0235		0.0006		0.0000
21	1050	0.0220	0.0220	0.8475	28.295	0.0220	0.0777	0.0245
22	1100	0.0000	0.0000	0.0000		0.0006		0.0000
23	1150	0.0000	0.0116	0.4473	14.934	0.0122	0.0777	0.0245
24	1200	0.0000	0.0000	0.0000		0.0006		0.0000
25	1250	0.0000	0.0043	0.1648	5.5018	0.0043	0.0777	0.0000
26	1300	0.0000	0.0000	0.0000		0.0000		0.0000
27	1350	0.0000	0.0018	0.0706	2.3579	0.0024	0.0777	0.0000
28	1400	0.0000	0.0000	0.0000		0.0000		0.0000
29	1450	0.0000	0.0037	0.1412	4.7159	0.0037	0.0777	0.0000
30	1500	0.0000	0.0000	0.0000		0.0000		0.0000
31	1550	0.0000	0.0055	0.2119	7.0738	0.0055	0.0777	0.0000
32	1600	0.0000	0.0000	0.0000		0.0000		0.0000
33	1650	0.0000	0.0061	0.2354	7.8598	0.0067	0.0777	0.0000
34	1700	0.0000	0.0000	0.0000		0.0006		0.0000
35	1750	0.0000	0.0079	0.3060	10.218	0.0085	0.0777	0.0000
36	1800	0.0000	0.0006	0.0235		0.0006		0.0000
37	1850	0.0000	0.0104	0.4002	13.362	0.0110	0.0777	0.0000
38	1900	0.0000	0.0006	0.0235		0.0006		0.0000
39	1950	0.0000	0.0104	0.4002	13.362	0.0110	0.0777	0.0245
40	2000	0.0000	0.0006	0.0235		0.0006		0.0000

For model: SWT-F01-900W



Harmonic Emission - IEC 61000-3-2 , EN 61000-3-2 , (EN60555-2) 2024/9/13 16:31:17

Urms =	230.3	V	P =	880.1	W	THC =	0.179	A	Range: 10 A
Irms =	3.838	A	pf =	0.996			3.859		V-nom: 230 V
									TestTime: 3 min (100%)

Test completed, Result: PASSED

HAR-1000 EMC-Partner

Urms = 230.3V Freq = 49.987 Range: 10 A
Irms = 3.838A Ipk = 5.410A cf = 1.410
P = 880.1W S = 883.9VA pf = 0.996
THDi = 4.71 % THDu = 0.10 % Class C

Test - Time : 3min (100 %)

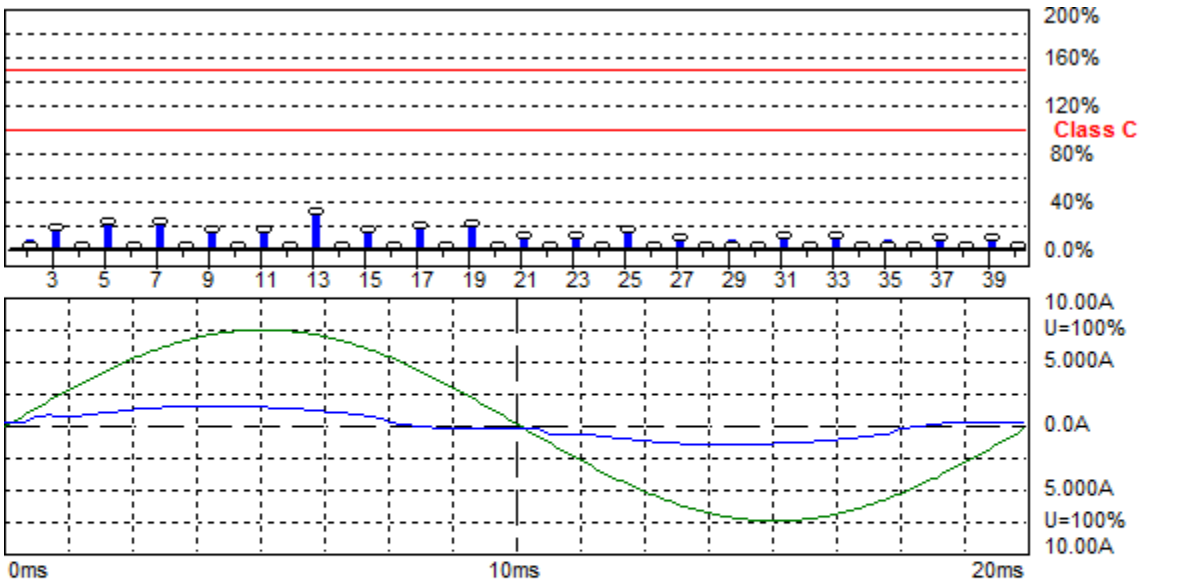
Limit Reference: H1(max)= 3.8590A pf(max)= 0.997

Test completed, Result: PASSED

Order	Freq. [Hz]	Iavg [A]	Irms [A]	Imax [A]	Limit [A]	Status
1	50	3.8379	3.8330	3.8593		
2	100	0.0000	0.0067	0.0073	0.0772	
3	150	0.0869	0.0879	0.0879	1.0419	
4	200	0.0000	0.0012	0.0018		
5	250	0.0849	0.0854	0.0854	0.3859	
6	300	0.0000	0.0006	0.0006		
7	350	0.0513	0.0507	0.0519	0.2701	
8	400	0.0000	0.0006	0.0012		
9	450	0.0390	0.0385	0.0403	0.1930	

10	500	0.0000	0.0006	0.0006	
11	550	0.0491	0.0488	0.0494	0.1158
12	600	0.0000	0.0006	0.0006	
13	650	0.0479	0.0476	0.0482	0.1158
14	700	0.0000	0.0006	0.0012	
15	750	0.0438	0.0433	0.0439	0.1158
16	800	0.0000	0.0006	0.0006	
17	850	0.0458	0.0458	0.0458	0.1158
18	900	0.0000	0.0006	0.0006	
19	950	0.0397	0.0397	0.0403	0.1158
20	1000	0.0000	0.0006	0.0006	
21	1050	0.0336	0.0336	0.0342	0.1158
22	1100	0.0000	0.0006	0.0006	
23	1150	0.0000	0.0214	0.0214	0.1158
24	1200	0.0000	0.0006	0.0006	
25	1250	0.0000	0.0116	0.0122	0.1158
26	1300	0.0000	0.0000	0.0000	
27	1350	0.0000	0.0043	0.0049	0.1158
28	1400	0.0000	0.0000	0.0000	
29	1450	0.0000	0.0055	0.0061	0.1158
30	1500	0.0000	0.0000	0.0006	
31	1550	0.0000	0.0092	0.0098	0.1158
32	1600	0.0000	0.0000	0.0006	
33	1650	0.0000	0.0134	0.0140	0.1158
34	1700	0.0000	0.0006	0.0006	
35	1750	0.0000	0.0159	0.0165	0.1158
36	1800	0.0000	0.0006	0.0006	
37	1850	0.0000	0.0177	0.0189	0.1158
38	1900	0.0000	0.0006	0.0006	
39	1950	0.0000	0.0171	0.0177	0.1158
40	2000	0.0000	0.0006	0.0012	

For model: SWT-F01-900W



Harmonic Emission - IEC 61000-3-2 , EN 61000-3-2 , (EN60555-2) 2024/9/13 16:41:14

Urms =	230.3	V	P =	210.1	W	THC =	0.192	A	Range: 10 A
Irms =	0.986	A	pf =	0.925		H1max =	0.966	A	V-nom: 230 V
									TestTime: 3 min (100%)

Test completed, Result: PASSED

HAR-1000 EMC-Partner

Urms = 230.3V Freq = 50.013 Range: 10 A
Irms = 0.986A Ipk = 1.519A cf = 1.540
P = 210.1W S = 227.2VA pf = 0.925
THDi = 20.0 % THDu = 0.10 % Class C

Test - Time : 3min (100 %)

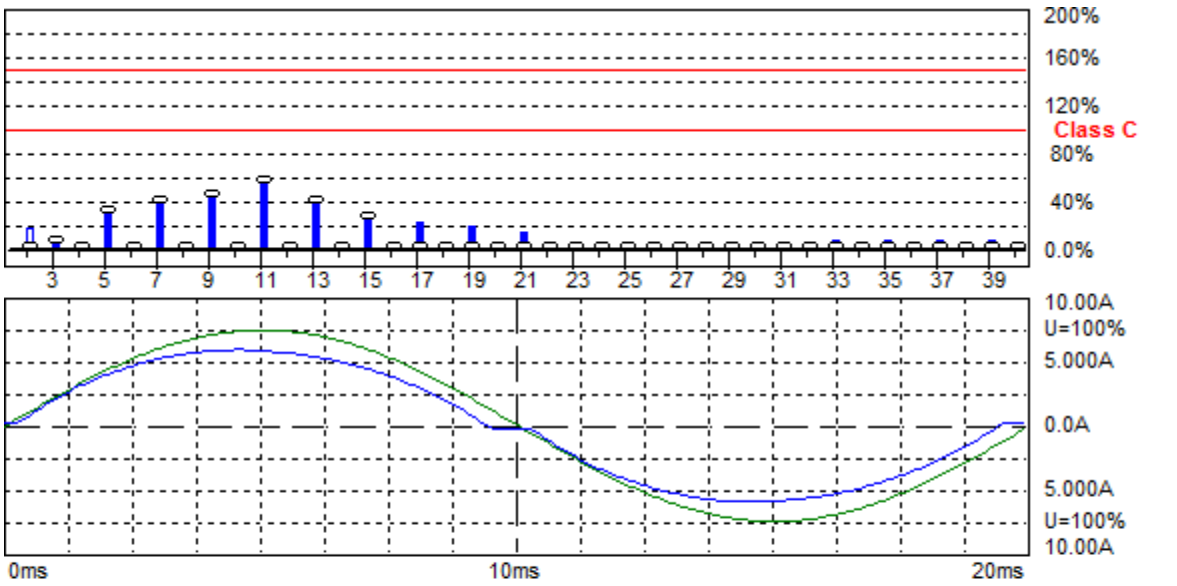
Limit Reference: H1(max)= 3.8310A pf(max)= 0.925

Test completed, Result: PASSED

Order	Freq. [Hz]	Iavg [A]	Irms [A]	Imax [A]	Limit [A]	Status
1	50	0.9467	0.9662	0.9692		
2	100	0.0000	0.0043	0.0043	0.0766	
3	150	0.1569	0.1563	0.1575	1.0344	
4	200	0.0000	0.0012	0.0012		
5	250	0.0740	0.0745	0.0745	0.3831	
6	300	0.0000	0.0006	0.0006		
7	350	0.0531	0.0543	0.0543	0.2682	
8	400	0.0000	0.0012	0.0012		
9	450	0.0251	0.0275	0.0281	0.1916	

10	500	0.0000	0.0006	0.0006	
11	550	0.0160	0.0146	0.0177	0.1149
12	600	0.0000	0.0000	0.0000	
13	650	0.0329	0.0336	0.0336	0.1149
14	700	0.0000	0.0006	0.0006	
15	750	0.0161	0.0177	0.0177	0.1149
16	800	0.0000	0.0006	0.0006	
17	850	0.0186	0.0177	0.0195	0.1149
18	900	0.0000	0.0000	0.0006	
19	950	0.0206	0.0214	0.0214	0.1149
20	1000	0.0000	0.0006	0.0006	
21	1050	0.0094	0.0104	0.0110	0.1149
22	1100	0.0000	0.0006	0.0006	
23	1150	0.0100	0.0085	0.0122	0.1149
24	1200	0.0000	0.0006	0.0006	
25	1250	0.0153	0.0153	0.0159	0.1149
26	1300	0.0000	0.0006	0.0006	
27	1350	0.0087	0.0104	0.0110	0.1149
28	1400	0.0000	0.0006	0.0006	
29	1450	0.0003	0.0024	0.0061	0.1149
30	1500	0.0000	0.0006	0.0006	
31	1550	0.0099	0.0092	0.0110	0.1149
32	1600	0.0000	0.0006	0.0006	
33	1650	0.0094	0.0098	0.0098	0.1149
34	1700	0.0000	0.0006	0.0006	
35	1750	0.0000	0.0037	0.0049	0.1149
36	1800	0.0000	0.0006	0.0006	
37	1850	0.0086	0.0073	0.0104	0.1149
38	1900	0.0000	0.0006	0.0006	
39	1950	0.0075	0.0085	0.0085	0.1149
40	2000	0.0000	0.0006	0.0006	

For model: SWT-F01-1000W



Harmonic Emission - IEC 61000-3-2 , EN 61000-3-2 , (EN60555-2) 2024/9/6 21:39:25

Urms =	232.3	V	P =	970.4	W	THC =	0.226	A	Range: 10 A
Irms =	4.204	A	pf =	0.994		H1max =	4.217	A	V-nom: 232 V
									TestTime: 3 min (100%)

Test completed, Result: PASSED

HAR-1000 EMC-Partner

Urms = 232.3V Freq = 50.000 Range: 10 A
Irms = 4.204A Ipk = 5.947A cf = 1.415
P = 970.4W S = 976.5VA pf = 0.994
THDi = 5.41 % THDu = 0.10 % Class C

Test - Time : 3min (100 %)

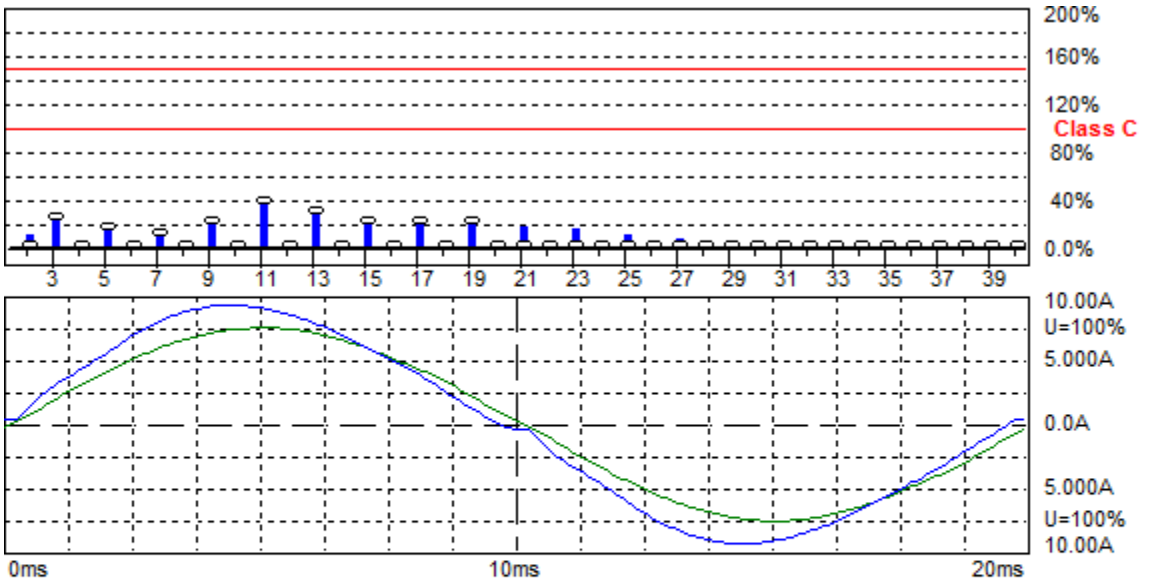
Limit Reference: H1(max)= 4.2166A pf(max)= 0.995

Test completed, Result: PASSED

Order	Freq. [Hz]	Iavg [A]	Irms [A]	Irms% [%]	Irms%L [%]	Imax [A]	Limit [A]	Status	Vrms [V]
1	50	4.2037	4.1968	99.826		4.2175			232.24
2	100	0.0000	0.0031	0.0726	3.6187	0.0128	0.0843		0.1963
3	150	0.0557	0.0562	1.3357	4.9322	0.0568	1.1385		0.0982
4	200	0.0000	0.0012	0.0290		0.0110			0.0491
5	250	0.1282	0.1288	3.0633	30.542	0.1300	0.4217		0.0491
6	300	0.0000	0.0012	0.0290		0.0085			0.0245
7	350	0.1123	0.1129	2.6858	38.255	0.1129	0.2952		0.0245
8	400	0.0000	0.0012	0.0290		0.0055			0.0245
9	450	0.0935	0.0922	2.1922	43.714	0.0964	0.2108		0.0245

10	500	0.0000	0.0000	0.0000		0.0024		0.0245
11	550	0.0705	0.0708	1.6841	55.969	0.0714	0.1265	0.0245
12	600	0.0000	0.0006	0.0145		0.0018		0.0000
13	650	0.0495	0.0488	1.1614	38.600	0.0500	0.1265	0.0245
14	700	0.0000	0.0006	0.0145		0.0012		0.0000
15	750	0.0323	0.0323	0.7695	25.572	0.0330	0.1265	0.0245
16	800	0.0000	0.0006	0.0145		0.0012		0.0000
17	850	0.0000	0.0232	0.5517	18.335	0.0244	0.1265	0.0245
18	900	0.0000	0.0000	0.0000		0.0006		0.0000
19	950	0.0000	0.0208	0.4936	16.405	0.0208	0.1265	0.0245
20	1000	0.0000	0.0006	0.0145		0.0006		0.0000
21	1050	0.0000	0.0134	0.3194	10.615	0.0140	0.1265	0.0245
22	1100	0.0000	0.0000	0.0000		0.0006		0.0000
23	1150	0.0000	0.0049	0.1161	3.8600	0.0049	0.1265	0.0245
24	1200	0.0000	0.0000	0.0000		0.0006		0.0000
25	1250	0.0000	0.0012	0.0290	0.9650	0.0018	0.1265	0.0000
26	1300	0.0000	0.0000	0.0000		0.0006		0.0000
27	1350	0.0000	0.0031	0.0726	2.4125	0.0031	0.1265	0.0000
28	1400	0.0000	0.0006	0.0145		0.0006		0.0000
29	1450	0.0000	0.0037	0.0871	2.8950	0.0037	0.1265	0.0000
30	1500	0.0000	0.0006	0.0145		0.0006		0.0000
31	1550	0.0000	0.0037	0.0871	2.8950	0.0037	0.1265	0.0000
32	1600	0.0000	0.0006	0.0145		0.0006		0.0000
33	1650	0.0000	0.0061	0.1452	4.8249	0.0061	0.1265	0.0245
34	1700	0.0000	0.0006	0.0145		0.0012		0.0000
35	1750	0.0000	0.0073	0.1742	5.7899	0.0073	0.1265	0.0245
36	1800	0.0000	0.0006	0.0145		0.0012		0.0000
37	1850	0.0000	0.0073	0.1742	5.7899	0.0073	0.1265	0.0245
38	1900	0.0000	0.0006	0.0145		0.0012		0.0000
39	1950	0.0000	0.0055	0.1307	4.3425	0.0055	0.1265	0.0245
40	2000	0.0000	0.0006	0.0145		0.0012		0.0000

For model: SWT-F01-1600W



Harmonic Emission - IEC 61000-3-2 , EN 61000-3-2 , (EN60555-2) 2024/9/6 20:59:19

Urms =	230.5	V	P =	1423	W	THC =	0.451	A	Range: 10 A
Irms =	6.250	A	pf =	0.988			6.288		V-nom: 231 V
									TestTime: 3 min (100%)

Test completed, Result: PASSED

HAR-1000 EMC-Partner

Urms = 230.5V Freq = 50.000 Range: 10 A
Irms = 6.250A Ipk = 9.307A cf = 1.489
P = 1423W S = 1441VA pf = 0.988
THDi = 7.22 % THDu = 1.90 % Class C

Test - Time : 3min (100 %)

Limit Reference: H1(max)= 6.2883A pf(max)= 0.988

Test completed, Result: PASSED

Order	Freq. [Hz]	Iavg [A]	Irms [A]	Imax [A]	Limit [A]	Status
1	50	6.2376	6.2360	6.2878		
2	100	0.0000	0.0079	0.0104	0.1258	
3	150	0.4085	0.4163	0.4199	1.6978	
4	200	0.0000	0.0037	0.0043		
5	250	0.0962	0.0922	0.1007	0.6288	
6	300	0.0000	0.0006	0.0012		
7	350	0.0440	0.0446	0.0458	0.4402	
8	400	0.0000	0.0018	0.0024		
9	450	0.0609	0.0623	0.0623	0.3144	

10	500	0.0000	0.0037	0.0037	
11	550	0.0695	0.0702	0.0708	0.1886
12	600	0.0000	0.0037	0.0043	
13	650	0.0548	0.0537	0.0555	0.1886
14	700	0.0000	0.0018	0.0024	
15	750	0.0384	0.0378	0.0397	0.1886
16	800	0.0000	0.0006	0.0006	
17	850	0.0392	0.0391	0.0397	0.1886
18	900	0.0000	0.0000	0.0006	
19	950	0.0393	0.0397	0.0403	0.1886
20	1000	0.0000	0.0006	0.0006	
21	1050	0.0000	0.0281	0.0287	0.1886
22	1100	0.0000	0.0012	0.0012	
23	1150	0.0000	0.0238	0.0244	0.1886
24	1200	0.0000	0.0006	0.0012	
25	1250	0.0000	0.0153	0.0159	0.1886
26	1300	0.0000	0.0012	0.0012	
27	1350	0.0000	0.0092	0.0098	0.1886
28	1400	0.0000	0.0012	0.0012	
29	1450	0.0000	0.0067	0.0073	0.1886
30	1500	0.0000	0.0012	0.0018	
31	1550	0.0000	0.0061	0.0067	0.1886
32	1600	0.0000	0.0012	0.0012	
33	1650	0.0000	0.0073	0.0073	0.1886
34	1700	0.0000	0.0006	0.0006	
35	1750	0.0000	0.0043	0.0049	0.1886
36	1800	0.0000	0.0012	0.0012	
37	1850	0.0000	0.0055	0.0055	0.1886
38	1900	0.0000	0.0012	0.0012	
39	1950	0.0000	0.0055	0.0055	0.1886
40	2000	0.0000	0.0006	0.0012	

7.6. VOLTAGE FLUCTUATIONS AND FLICKER

LIMITS

Test items	Limits (EN 61000-3-3)	Descriptions
P_{st}	≤1.0, T_p=10 min	short-term flicker indicator
P_{lt}	≤0.65, T_p=2 h	long-term flicker indicator
d_c	≤3.3 %	relative steady-state voltage change
d_{max}	≤4 %(or 6 %Note(1), 7 % Note(2))	maximum relative voltage change:
$d_{(t)}$	≤3.3 %, more than 500 ms	relative voltage change characteristic

Note:

(1)6 % for equipment which is:

a. switched manually, or

b. switched automatically more frequently than twice per day, and also has either a delayed restart (the delay being not less than a few tens of seconds), or manual restart, after a power supply interruption.

(2)7 % for equipment which is

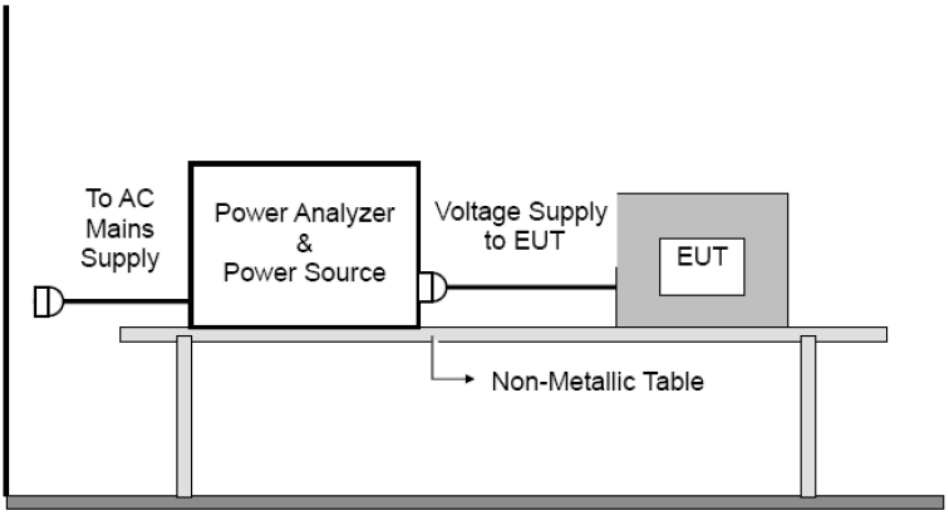
a. attended whilst in use (for example: hair dryers, vacuum cleaners, kitchen equipment such as mixers, garden equipment such as lawn mowers, portable tools such as electric drills), or

b. switched on automatically, or is intended to be switched on manually, no more than twice per day, and also has either a delayed restart (the delay being not less than a few tens of seconds) or manual restart, after a power supply interruption.

TEST PROCEDURE

a. The EUT was placed on the top of a wooden table 0.8 meters above the ground and operated to produce the most unfavorable sequence of voltage changes under normal Condition
b. During the flick measurement, the measure time shall include that part of whole operation changes. The observation period for short-term flicker indicator is 10 minutes and the observation period for long-term flicker indicator is 2 hours.
c. Tests was performed according to the Test Condition/Assessment of Voltage Fluctuations specified in Clause 6.0/4.0 of IEC/EN 61000-3-3 depend on which standard adopted for compliance measurement.
d. All types of harmonic current and/or voltage fluctuation in this report are assessed by direct measurement using flicker-meter.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.3℃	Relative Humidity	50%
Atmosphere Pressure	101kPa		

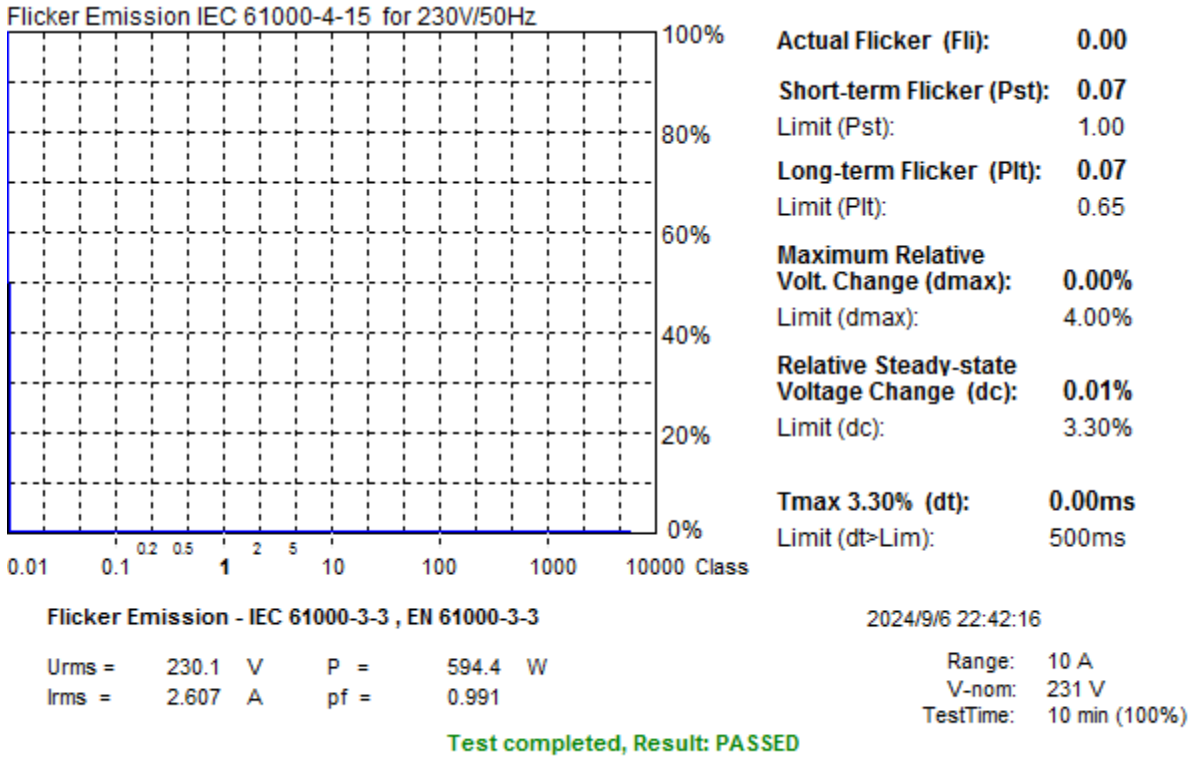
TEST MODE

Pre-test Mode:	M05 ~ M12
Final Test Mode:	M05, M07, M09, M11

Note: All test modes had been tested, but only the worst data recorded in the report.

TEST RESULTS

Test Mode: M05



Urms = 230.1V Freq = 50.000 Range: 10 A
Irms = 2.607A Ipk = 3.735A cf = 1.433
P = 594.4W S = 600.0VA pf = 0.991

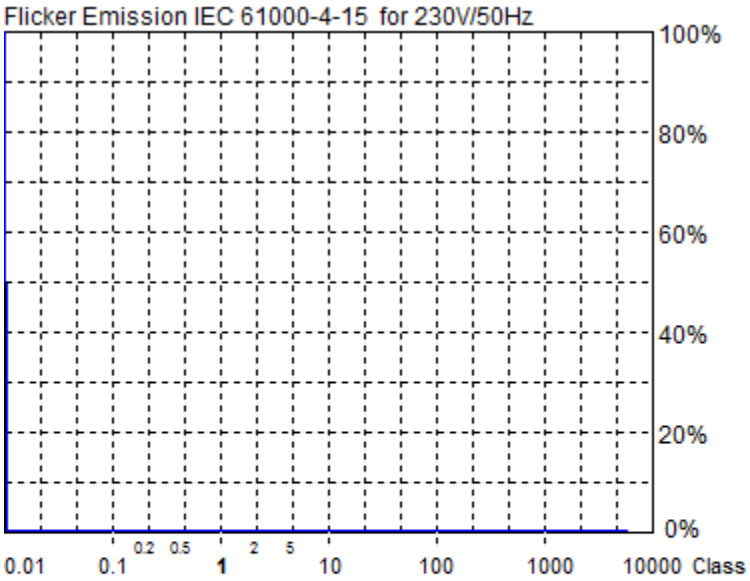
Test - Time : 1 x 10min = 10min (100 %)

LIN (Line Impedance Network) : L: 0.24ohm +j0.15ohm N: 0.16ohm +j0.10ohm

Limits : Plt : 0.65 Pst : 1.00
dmax : 4.00 % dc : 3.30 %
dtLim: 3.30 % dt>Lim: 500ms

Test completed, Result: PASSED

Test Mode: M07



Urms = 230.7V Freq = 50.000 Range: 10 A
Irms = 3.496A Ipk = 4.971A cf = 1.422
P = 803.0W S = 806.5VA pf = 0.996

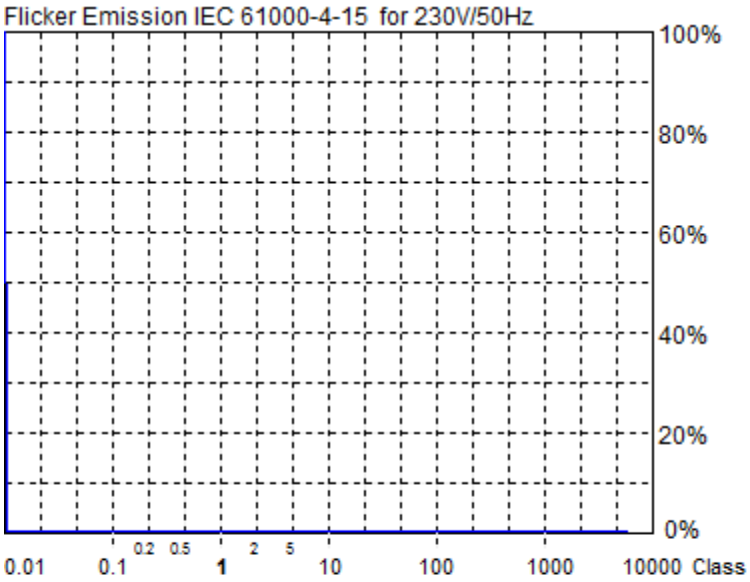
Test - Time : 1 x 10min = 10min (100 %)

LIN (Line Impedance Network) : L: 0.24ohm +j0.15ohm N: 0.16ohm +j0.10ohm

Limits : Plt : 0.65 Pst : 1.00
dmax : 4.00 % dc : 3.30 %
dtLim: 3.30 % dt>Lim: 500ms

Test completed, Result: PASSED

Test Mode: M09



Actual Flicker (Fli):	**0.00**
Short-term Flicker (Pst):	**0.07**
Limit (Pst):	1.00
Long-term Flicker (Plt):	**0.07**
Limit (Plt):	0.65
Maximum Relative Volt. Change (dmax):	**0.00%**
Limit (dmax):	4.00%
Relative Steady-state Voltage Change (dc):	**0.01%**
Limit (dc):	3.30%
Tmax 3.30% (dt):	**0.00ms**
Limit (dt>Lim):	500ms

Flicker Emission - IEC 61000-3-3 , EN 61000-3-3

2024/9/6 21:35:06

Urms =	230.5	V	P =	973.6	W
Irms =	4.248	A	pf =	0.994	

Range:	10 A
V-nom:	232 V
TestTime:	10 min (100%)

Test completed, Result: PASSED

HAR-1000 EMC-Partner

Urms = 230.5V Freq = 50.000 Range: 10 A
Irms = 4.248A Ipk = 6.021A cf = 1.417
P = 973.6W S = 979.2VA pf = 0.994

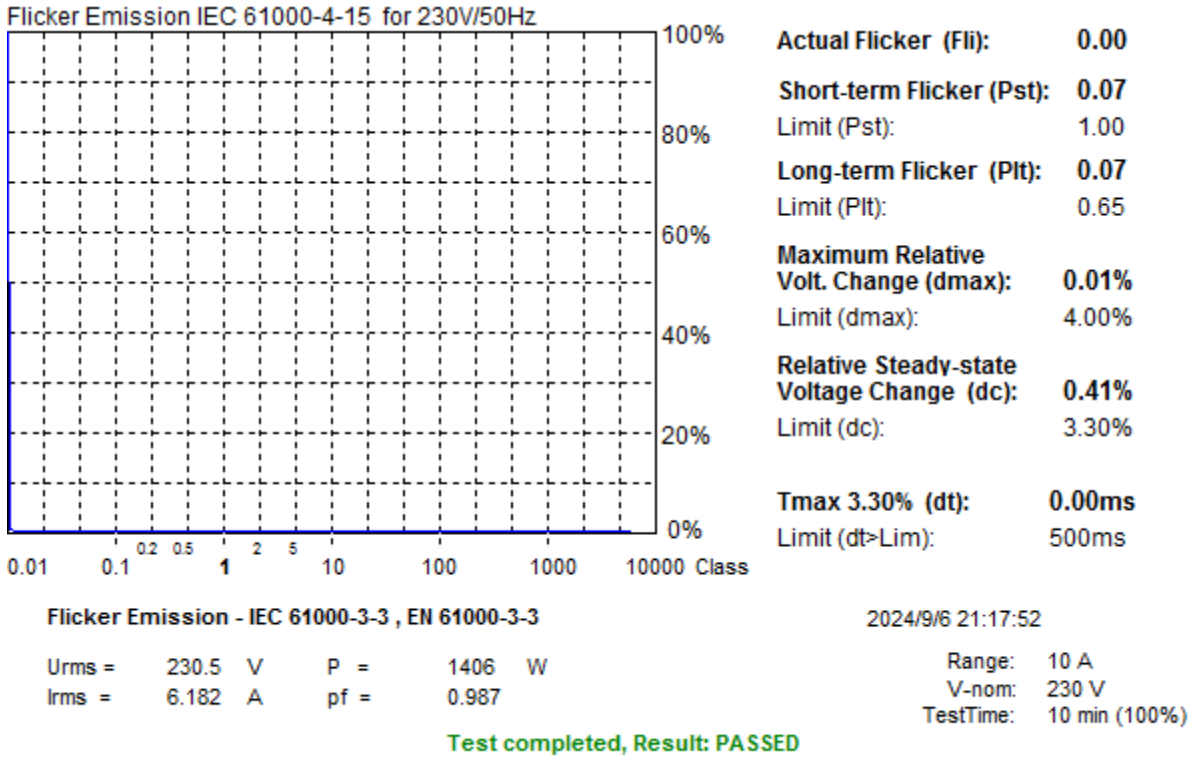
Test - Time : 1 x 10min = 10min (100 %)

LIN (Line Impedance Network) : L: 0.24ohm +j0.15ohm N: 0.16ohm +j0.10ohm

Limits : Plt : 0.65 Pst : 1.00
dmax : 4.00 % dc : 3.30 %
dtLim: 3.30 % dt>Lim: 500ms

Test completed, Result: PASSED

Test Mode: M11



Urms = 230.5V Freq = 50.000 Range: 10 A
Irms = 6.182A Ipk = 9.194A cf = 1.487
P = 1406W S = 1425VA pf = 0.987

Test - Time : 1 x 10min = 10min (100 %)

LIN (Line Impedance Network) : No LIN

Limits : Plt : 0.65 Pst : 1.00
dmax : 4.00 % dc : 3.30 %
dtLim: 3.30 % dt>Lim: 500ms

Test completed, Result: PASSED

8. IMMUNITY TEST

8.1. PERFORMANCE CRITERIA

EN IEC 61547:2023

GENERAL PERFORMANCE CRITERIA

According to EN 61547 standard, the general performance criteria as following:

Criteria 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.
Criteria 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 1min.Regulating controls need not unaction 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.
Criteria 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 SPECIFICATION

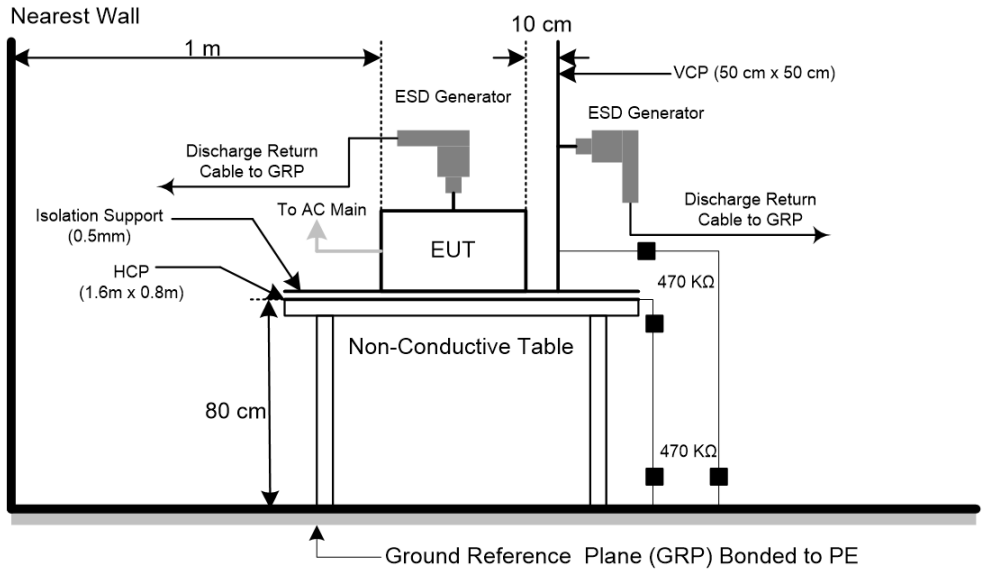
Standard:	EN IEC 61547:2023 IEC 61000-4-2:2008
Test Level:	Air Discharge: 2 kV, 4 kV, 8 kV (Direct); Contact Discharge: 4 kV (Direct/Indirect)
Criterion Required:	Performance criteria B
Discharge Impedance:	330 Ω / 150 pF
Polarity:	Positive & Negative
Number of Discharge:	Minimum 10 times at each test point
Discharge Mode:	Single Discharge
Discharge Period:	1 second minimum

TEST PROCEDURE

The test generator necessary to perform direct and indirect application of discharges to the EUT in the following manner:

a. Contact discharge was applied to conductive surfaces and coupling planes of the EUT. During the test, it was performed with single discharges. For the single discharge time between successive single discharges was at least 1 second.
   Vertical Coupling Plane (VCP):
   The coupling plane, of dimensions 0.5 m x 0.5 m, is placed parallel to, and positioned at a distance 0.1 m from, the EUT, with the Discharge Electrode touching the coupling plane. The four faces of the EUT will be performed with electrostatic discharge.
   Horizontal Coupling Plane (HCP):
   The coupling plane is placed under to the EUT. The generator shall be positioned vertically at a distance of 0.1 m from the EUT, with the Discharge Electrode touching the coupling plane. The four faces of the EUT will be performed with electrostatic discharge.
b. Air discharges at insulation surfaces of the EUT.
   It was at least ten single discharges with positive and negative at the same selected point.
c. The test shall be performed with single discharges. On each pre-selected point at least 10 single discharges (in the most sensitive polarity) shall be applied.
d. For air discharge testing, the test shall be applied at all test levels 4 kV and 8 kV.
e. The ESD test should be executed for both normal operation and handling cases.
f. For the actual test configuration, please refer to the related Item: EUT Test Photos.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.3℃	Relative Humidity	50%
Atmosphere Pressure	101kPa	Test Voltage	

TEST MODE

Test Mode:	M13, M14

TEST RESULTS

Mode	Level(kV)	Polarity	Test Point	Criteria	Result	Judgement
Air Discharge	8	+	All Slot	B	A	Pass
Air Discharge	8	-	All Slot	B	A	Pass
Contact Discharge	4	+	All Metal	B	A	Pass
Contact Discharge	4	-	All Metal	B	A	Pass
Horizontal Coupling	4	+	Front,rear,left,right	B	A	Pass
Horizontal Coupling	4	-	Front,rear,left,right	B	A	Pass
Vertical Coupling	4	+	Front,rear,left,right	B	A	Pass
Vertical Coupling	4	-	Front,rear,left,right	B	A	Pass
Air Discharge	15	+	All Slot	B	A	Pass
Air Discharge	15	-	All Slot	B	A	Pass
Contact Discharge	8	+	All Metal	B	A	Pass
Contact Discharge	8	-	All Metal	B	A	Pass

Observation:
A: No observable change.
Conclusion: The EUT met the requirements of the standard

8.3. CONTINUOUS RF ELECTROMAGNETIC FIELD DISTURBANCES

TEST SPECIFICATION

Standard:	EN IEC 61547:2023 IEC 61000-4-3:2006+A1:2007+A2:2010
Criterion Required:	Performance criteria A
Frequency range:	80 MHz to 1 000 MHz
Test level:	3 V/m (unmodulated)
Modulation:	1 kHz, 80 % AM, sine wave
Frequency Step:	1 % increment
Antenna Polarization:	Horizontal and vertical
Antenna Height:	1.5 meters
Test Distance:	3 meters
Dwell time:	2 seconds

TEST PROCEDURE

The test procedure was in accordance with IEC 61000-4-3.

a. The testing was performed in a fully anechoic chamber. The transmit antenna was located at a distance of 3 meters from the EUT.

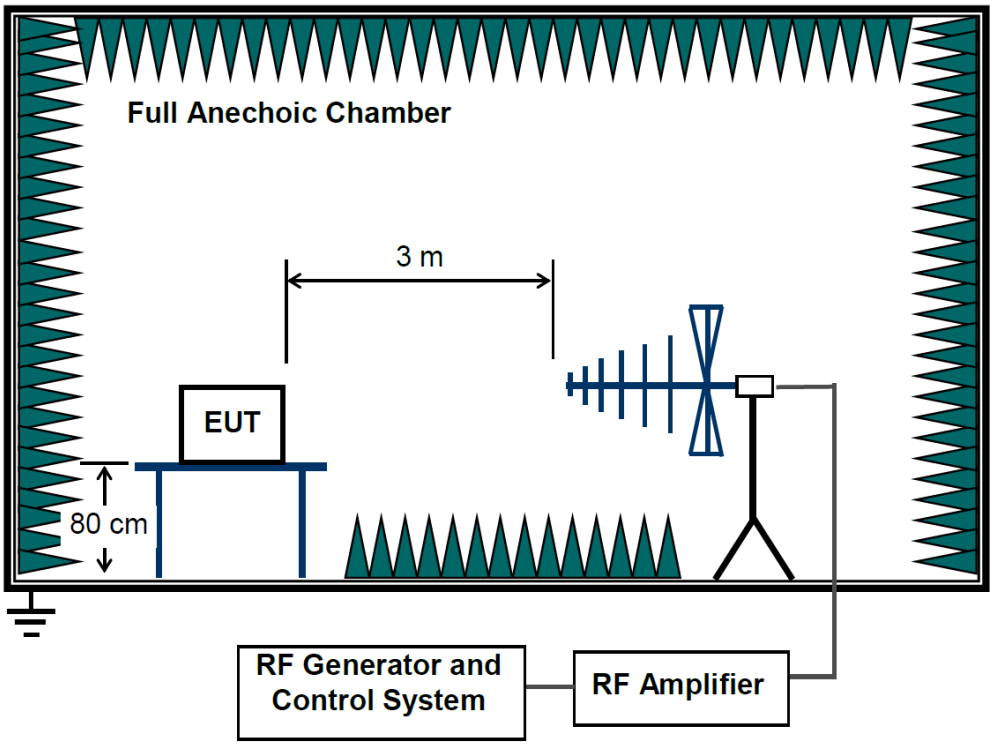
b. The disturbance test signal shall be 80 % amplitude modulated by a sine wave, preferably having a frequency of 1 kHz. A frequency other than 1 kHz may be used where permitted within EN 61547.

c. 1 % step size is preferred, the frequency range can be swept incrementally with a step size not exceeding 4 % of the previous frequency with a test level of twice the value of the specified test level.

d. The dwell time at each frequency shall not be less than the time necessary for the EUT to be exercised and to be able to respond. However, the dwell time should not exceed 5 s at each of the frequencies during the scan.

e. The test was performed with the EUT exposed to both vertically and horizontally polarized fields.

TEST SETUP



TEST ENVIRONMENT

Temperature	22.9℃	Relative Humidity	52%
Atmosphere Pressure	101kPa	Test Voltage	

TEST MODE

Test Mode:	M13

TEST RESULTS

Freq.Range (MHz)	Position (Face)	Polarity (H or V)	Field Strength (V/m) (unmodulated,r.m.s)	Criterion	Result	Judgment
80-1000	0°	H&V	3 V/m	A	A	Pass
80-1000	90°	H&V	3 V/m	A	A	Pass
80-1000	180°	H&V	3 V/m	A	A	Pass
80-1000	270°	H&V	3 V/m	A	A	Pass

Observation:
A: No observable change.
Conclusion: The EUT met the requirements of the standard

8.4. ELECTRICAL FAST TRANSIENTS BURST (AC MAINS POWER PORTS)

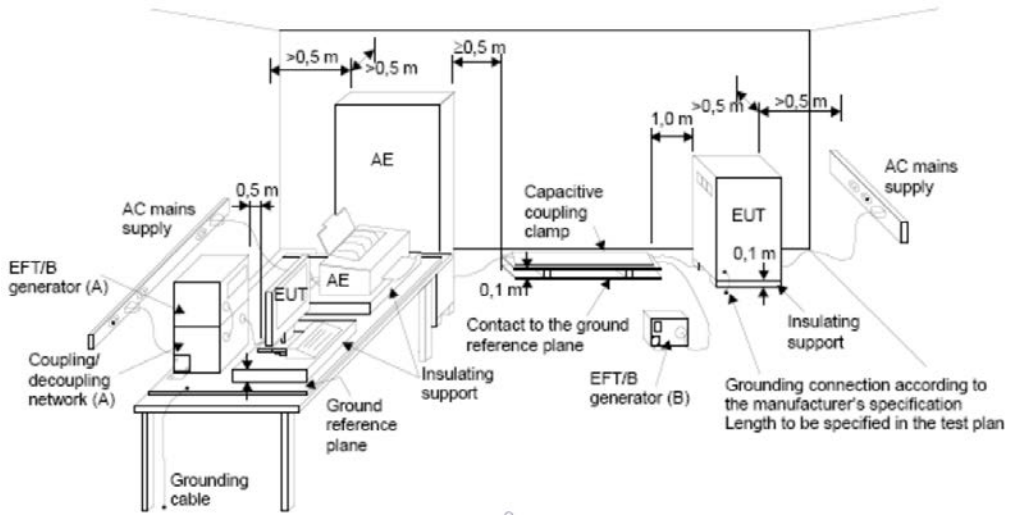
TEST SPECIFICATION

Standard:	EN IEC 61547:2023 IEC 61000-4-4:2004
Criterion Required:	Performance criteria B
Polarity:	Positive & Negative
Test Level:	± 1 kV (peak)
Repetition frequency	5 kHz
Impulse Wave shape:	5/50 ns
Burst Duration:	15 ms
Burst Period:	300 ms
Test Duration:	2 minute per level & polarity

TEST PROCEDURE

a. Both positive and negative polarity discharges were applied.
b. 2 min with a positive polarity and for 2 min with a negative polarity
c. The transient/burst waveform was in accordance with IEC 61000-4-4, 5/50ns.
d. Multi conductor cables shall be tested as a single cable. Cables shall not be split or divided into groups of conductors for this test.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.3℃	Relative Humidity	50%
Atmosphere Pressure	101kPa	Test Voltage	

TEST MODE

Test Mode:	M13

TEST RESULTS

Coupling Line	Test Levels(kV)	Polarity	Criteria	Results	Judgement
L, N, PE	1	+	B	A	Pass
L, N, PE	1	-	B	A	Pass
Analogue/Digital data ports	0.5	+	B	/	/
Analogue/Digital data ports	0.5	-	B	/	/
DC network power ports	0.5	+	B	/	/
DC network power ports	0.5	-	B	/	/

Observation:
A: No observable change.
Conclusion: The EUT met the requirements of the standard

8.5. ELECTRICAL FAST TRANSIENTS BURST (ANALOGUE/DIGITAL DATA PORTS)

TEST SPECIFICATION

Standard:	EN IEC 61547:2023 IEC 61000-4-4:2012
Criterion Required:	Performance criteria B
Polarity:	Positive & Negative
Test Level:	± 0.5 kV (peak)
Repetition frequency	5 kHz
Impulse Wave shape:	5/50 ns
Burst Duration:	15 ms
Burst Period:	300 ms
Test Duration:	2 minute per level & polarity

TEST PROCEDURE

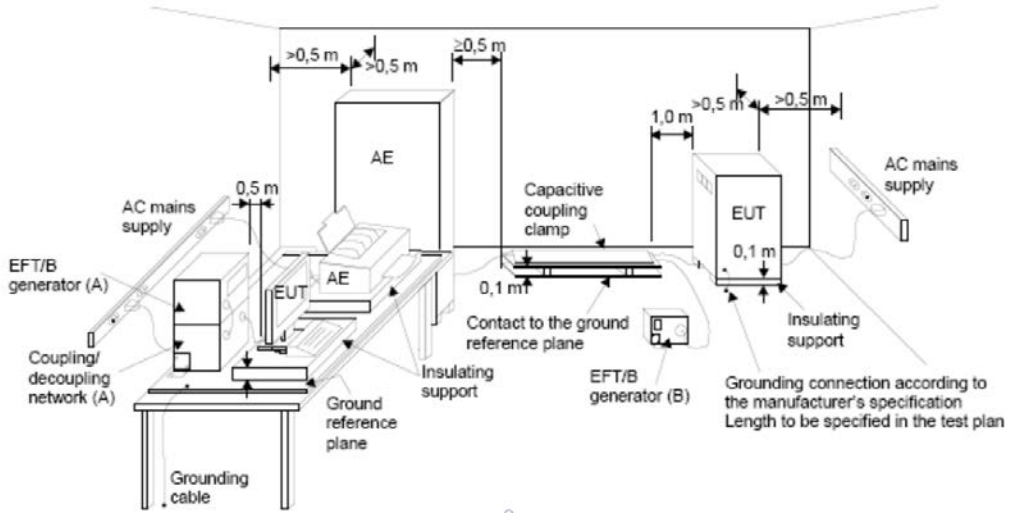
e. Both positive and negative polarity discharges were applied.

f. The duration time of each test sequential was 1 minute.

g. The transient/burst waveform was in accordance with IEC 61000-4-4, 5/50ns.

h. Multi conductor cables shall be tested as a single cable. Cables shall not be split or divided into groups of conductors for this test.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.3℃	Relative Humidity	50%
Atmosphere Pressure	101kPa	Test Voltage	

TEST MODE

Test Mode:	M13

TEST RESULTS

Coupling Line	Test Levels(kV)	Polarity	Criteria	Results	Judgement
Analogue/Digital data ports	0.5	+	B	A	Pass
Analogue/Digital data ports	0.5	-	B	A	Pass
DC network power ports	0.5	+	B	/	/
DC network power ports	0.5	-	B	/	/

Observation:
A: No observable change.
Conclusion: The EUT met the requirements of the standard

8.6. SURGES (AC MAINS POWER PORTS)

TEST SPECIFICATION

Standard:	EN IEC 61547:2023 IEC 61000-4-5:2014+A1:2017
Criterion Required:	Performance criteria C
Wave Shape:	1.2/50 (8/20) μs
Test Level:	Self-ballasted lamps ⩽ 25 W: ± 0.5 kV at line-to-line; Lighting equipment (except selfballasted lamps ⩽ 25 W): ± 1 kV at line-to-line, ± 2 kV at line-to-earth; Road and street lighting equipment : ± 2 kV at line-to-line, ± 4 kV at line-to-earth; 1.2/50 us
Polarity:	Positive & Negative
Interval:	1 per minute
Phase Angle:	5 positive at 90°and 5 negative at 270

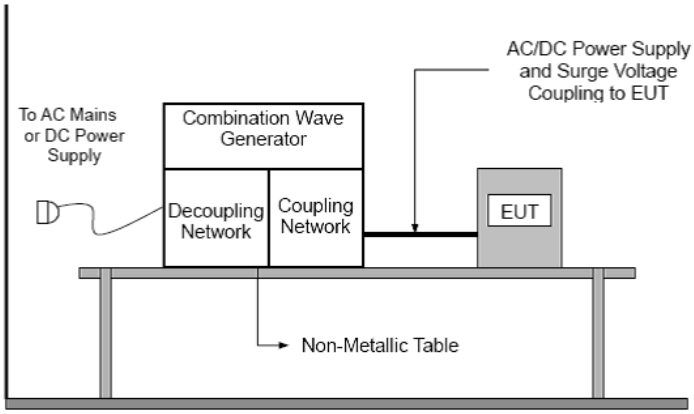
TEST PROCEDURE

a. The EUT and the auxiliary equipment were placed on a table of 0.8m heights above a metal ground reference plane. The size of ground plane is greater than 1m×1m and project beyond the EUT by at least 0.1m on all sides. The ground plane is connected to the protective earth. The length of power cord between the coupling device and the EUT was less than 2 meters (provided by the manufacturer).

b. The EUT was connected to the power mains through a coupling device that directly couples the surge interference signal. The surge noise was applied synchronized to the voltage phase at the zero crossing and the peak value of the AC voltage wave (positive and negative).

c. The surges were applied line to line and line(s) to earth. When testing line to earth the test voltage was applied successively between each of the lines and earth. Steps up to the test level specified increased the test voltage. All lower levels including the selected test level were tested. The polarity of each surge level included positive and negative test pulses.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.2℃	Relative Humidity	50%
Atmosphere Pressure	101kPa	Test Voltage	

TEST MODE

Test Mode:	M13

TEST RESULTS

Coupling Line	Self-ballasted lamps ⩽ 25 W	Road and street lighting	Other Lighting	Polarity	Phase	Criteria	Result	Judgement
L-N	0.5	2	1	+	90°	C,B(emergency light)	A	Pass
L-N	0.5	2	1	-	90°	C,B(emergency light)	A	Pass
L-N	0.5	2	1	+	270°	C,B(emergency light)	A	Pass
L-N	0.5	2	1	-	270°	C,B(emergency light)	A	Pass
L-PE	N/A	4	2	+	90°	C,B(emergency light)	A	Pass
L-PE	N/A	4	2	-	90°	C,B(emergency light)	A	Pass
L-PE	N/A	4	2	+	270°	C,B(emergency light)	A	Pass
L-PE	N/A	4	2	-	270°	C,B(emergency light)	A	Pass
N-PE	N/A	4	2	+	90°	C,B(emergency light)	A	Pass
N-PE	N/A	4	2	-	90°	C,B(emergency light)	A	Pass
N-PE	N/A	4	2	+	270°	C,B(emergency light)	A	Pass
N-PE	N/A	4	2	-	270°	C,B(emergency light)	A	Pass

Observation:
A: No observable change.
Conclusion: The EUT met the requirements of the standard

8.7. CONTINUOUS INDUCED RF DISTURBANCES (AC MAINS POWER PORTS)

TEST SPECIFICATION

Standard:	EN IEC 61547:2023 IEC 61000-4-6:2013
Criterion Required:	Performance criteria A
Frequency range:	0.15 MHz to 80 MHz
Test Level:	3 V r.m.s. (unmodulated)
Modulation:	1 kHz, 80 % AM, sine wave
Step Size:	1% increment
Dwell Time:	1 seconds

TEST PROCEDURE

a. The EUT shall be tested within its intended operating and climatic conditions.

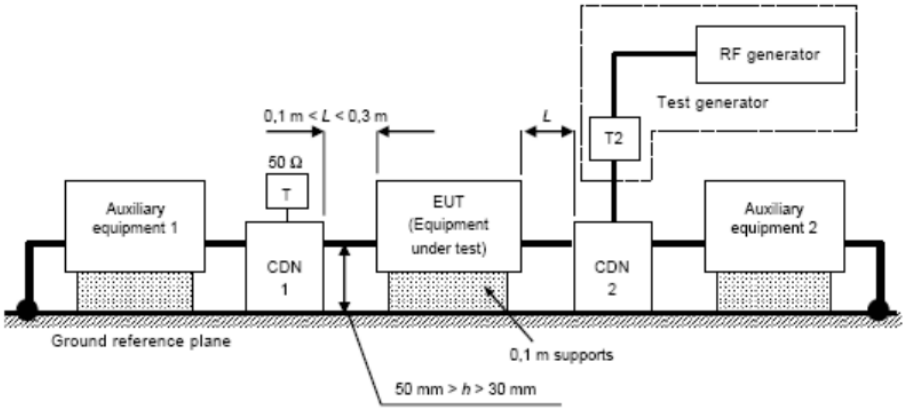
b. The test shall be performed with the test generator connected to each of the coupling and decoupling devices in turn, while the other non-excited RF input ports of the coupling devices are terminated by a 50-ohm load resistor.

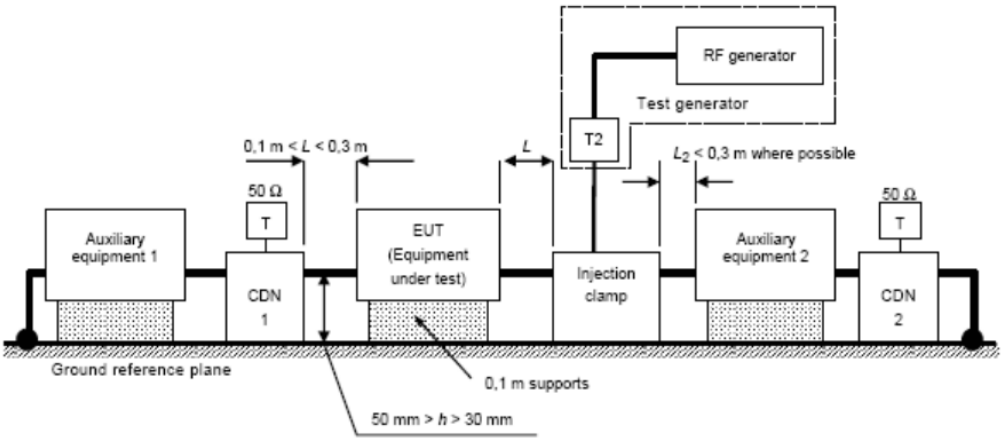
c. The frequency range is swept from 150 kHz to 80 MHz, using the signal level established during the setting process and with a disturbance signal of 80 % amplitude. The signal is modulated with a 1 kHz sine wave, pausing to adjust the RF signal level or the switch coupling devices as necessary. The sweep rate shall not exceed 1.5×10^{-3} decades/s. The step size shall not exceed 1 % of the start and thereafter 1 % of the preceding frequency value where the frequency is swept incrementally.

d. The dwell time at each frequency shall not be less than the time necessary for the EUT to be exercised, and able to respond. Sensitive frequencies such as clock frequencies and harmonics or frequencies of dominant interest, shall be analyzed separately.

e. Attempts should be made to fully exercise the EUT during test, and to fully interrogate all exercise modes selected for susceptibility.

TEST SETUP





TEST ENVIRONMENT

Temperature	23.2℃	Relative Humidity	50%
Atmosphere Pressure	101kPa	Test Voltage	

TEST MODE

Test Mode:	M13

TEST RESULTS

Test Ports (Mode)	Freq.Range (MHz)	Field Strength (unmodulated,r.m.s)	Criteria	Results	Judgment
AC mains power ports	0.15---80	3 V	A	A	Pass
DC network power ports	0.15---80	3 V	A	/	/
Analogue/digital data ports	0.15---80	3 V	A	/	/
Observation: A: No observable change. **Conclusion:** The EUT met the requirements of the standard					

8.8. CONTINUOUS INDUCED RF DISTURBANCES (ANALOGUE/DIGITAL DATA PORTS)

TEST SPECIFICATION

Standard:	EN IEC 61547:2023 IEC 61000-4-6:2013

TEST PROCEDURE

f. The EUT shall be tested within its intended operating and climatic conditions.

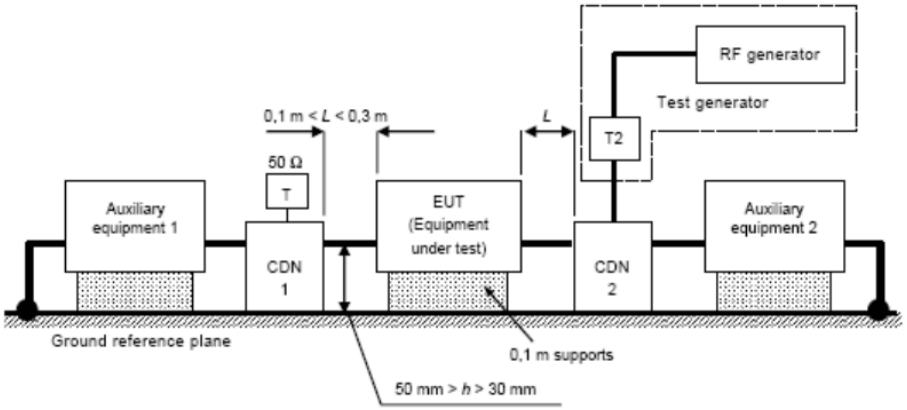
g. The test shall be performed with the test generator connected to each of the coupling and decoupling devices in turn, while the other non-excited RF input ports of the coupling devices are terminated by a 50-ohm load resistor.

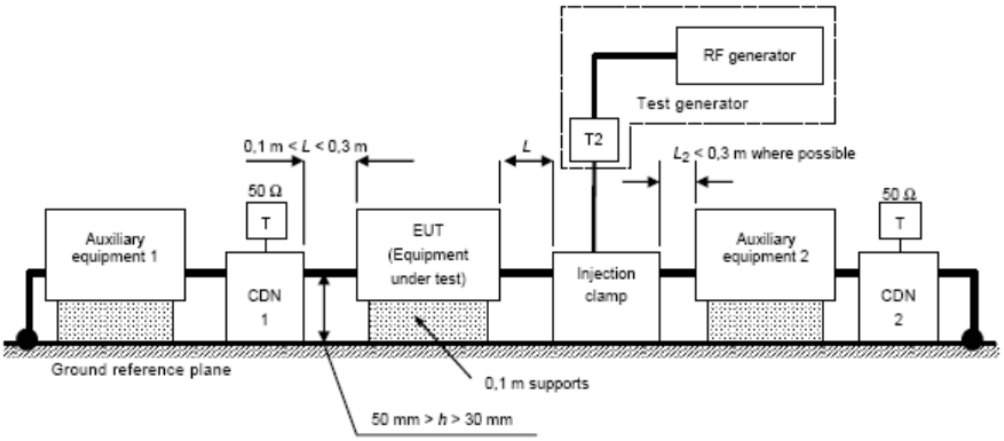
h. The frequency range is swept from 150 kHz to 80 MHz, using the signal level established during the setting process and with a disturbance signal of 80 % amplitude. The signal is modulated with a 1 kHz sine wave, pausing to adjust the RF signal level or the switch coupling devices as necessary. The sweep rate shall not exceed 1.5×10^{-3} decades/s. The step size shall not exceed 1 % of the start and thereafter 1 % of the preceding frequency value where the frequency is swept incrementally.

i. The dwell time at each frequency shall not be less than the time necessary for the EUT to be exercised, and able to respond. Sensitive frequencies such as clock frequencies and harmonics or frequencies of dominant interest, shall be analyzed separately.

j. Attempts should be made to fully exercise the EUT during test, and to fully interrogate all exercise modes selected for susceptibility.

TEST SETUP





TEST ENVIRONMENT

Temperature	23.2℃	Relative Humidity	50%
Atmosphere Pressure	101kPa	Test Voltage	

TEST MODE

Test Mode:	M13

TEST RESULTS

Test Ports (Mode)	Freq.Range (MHz)	Field Strength (unmodulated,r.m.s)	Criteria	Results	Judgment
DC network power ports	0.15---80	3 V	A	/	/
Analogue/digital data ports	0.15---80	3 V	A	A	Pass
Observation: A: No observable change. **Conclusion:** The EUT met the requirements of the standard					

8.9. VOLTAGE DIPS AND INTERRUPTIONS (AC MAINS POWER PORTS)

TEST SPECIFICATION

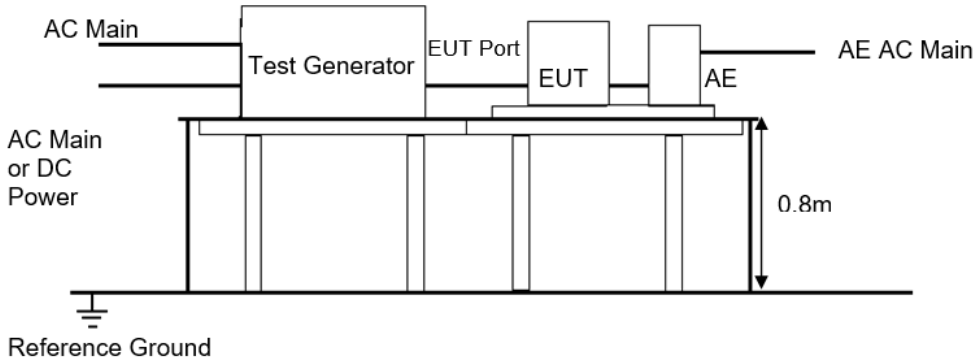
Standard:	EN IEC 61547:2023 IEC 61000-4-11:2004+A1:2017
Criterion Required:	Voltage dips: B; Voltage short interruptions: B
Test Level:	Voltage dips: 70%, 10 Cycles, Voltage short interruptions: 0%, 0.5 Cycles
No. of Dips / Interruptions:	3 per Level
Interval between Event:	Minimum 10 seconds
Phase Angle:	0°/45°/90°/135°/180°/225°/270°/315°

TEST PROCEDURE

a. The power cord was used as supplied by the manufacturer. The EUT was connected to the line output of the Voltage Dips and Interruption Generator.

b. Voltage reductions occur at 0 degree crossover point of the voltage waveform. The performance of the EUT was checked after the voltage dip or interruption.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.3℃	Relative Humidity	50%
Atmosphere Pressure	101kPa	Test Voltage	

TEST MODE

Test Mode:	M13

TEST RESULTS

Voltage（AC)	Interruption & Dips	Durations(T)	Volatge Reduction	Perform Criteria	Results	Judgment
230V 50Hz	Voltage dips 70%	10 Cycles	30%	B	A	Pass
230V 50Hz	Voltage short interruptions 0%	0.5 Cycles	100%	B	A	Pass

Observation:
A: No observable change.
Conclusion: The EUT met the requirements of the standard

APPENDIX: PHOTOGRAPHS OF TEST CONFIGURATION

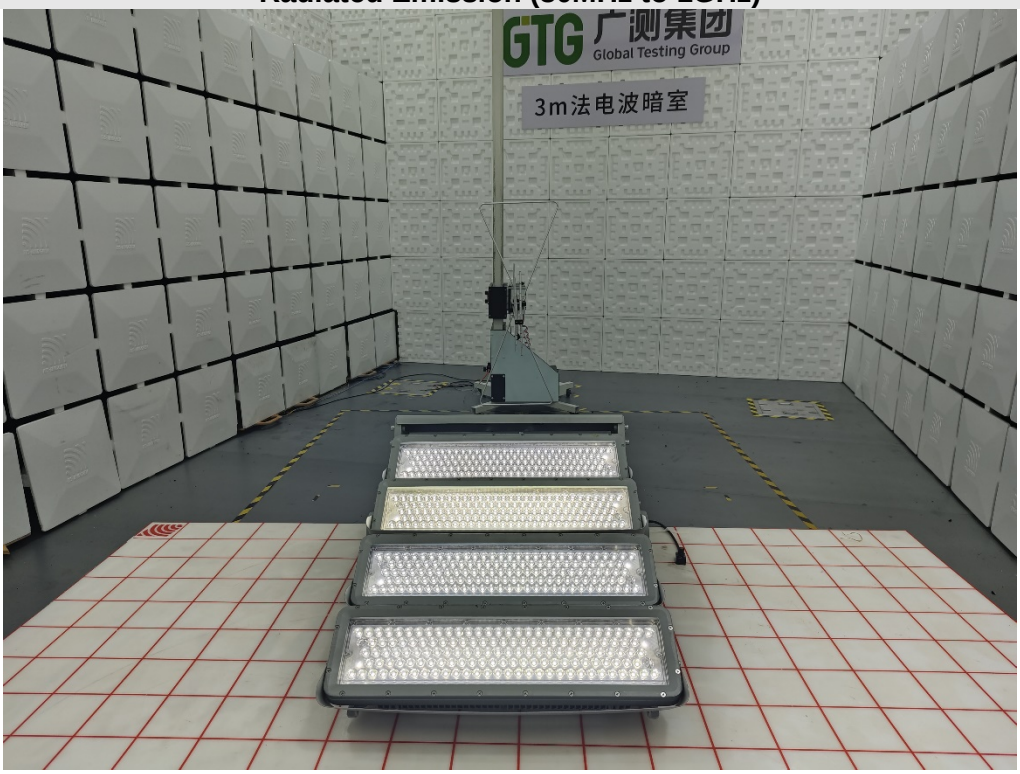
Conducted emission (AC or DC electric power supply)



Conducted emission (Analogue/Digital data ports)



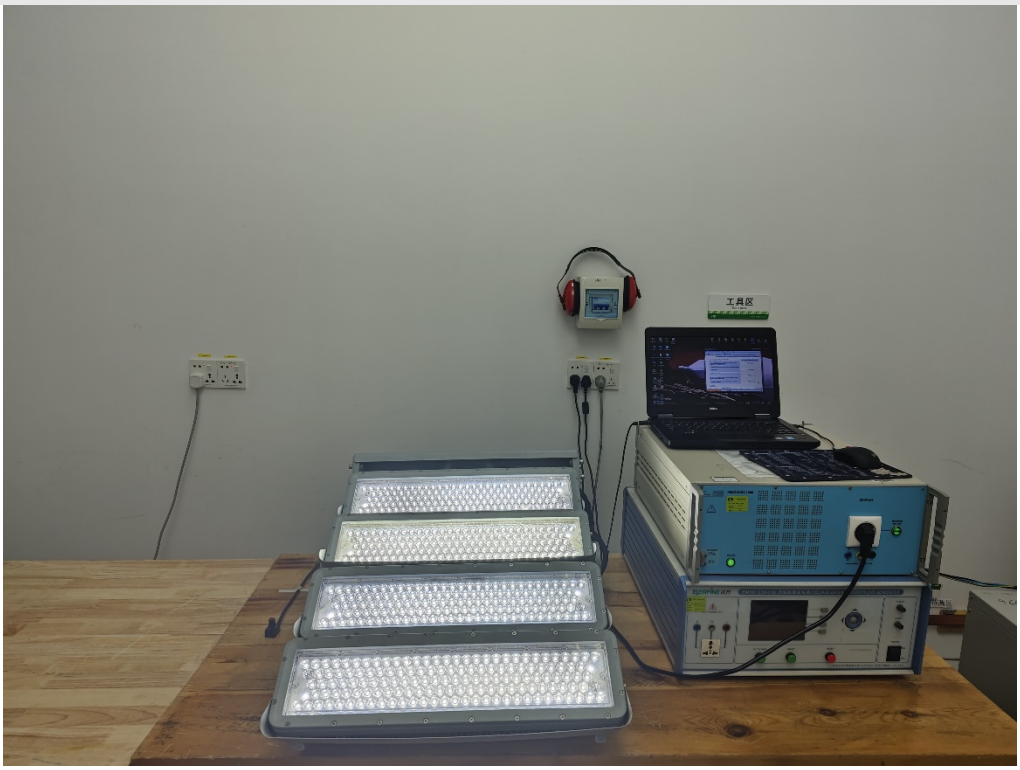
Radiated Emission (30MHz to 1GHz)



Radiated Emission (9 kHz to 30 MHz 2m loop)



Harmonic Current Emission



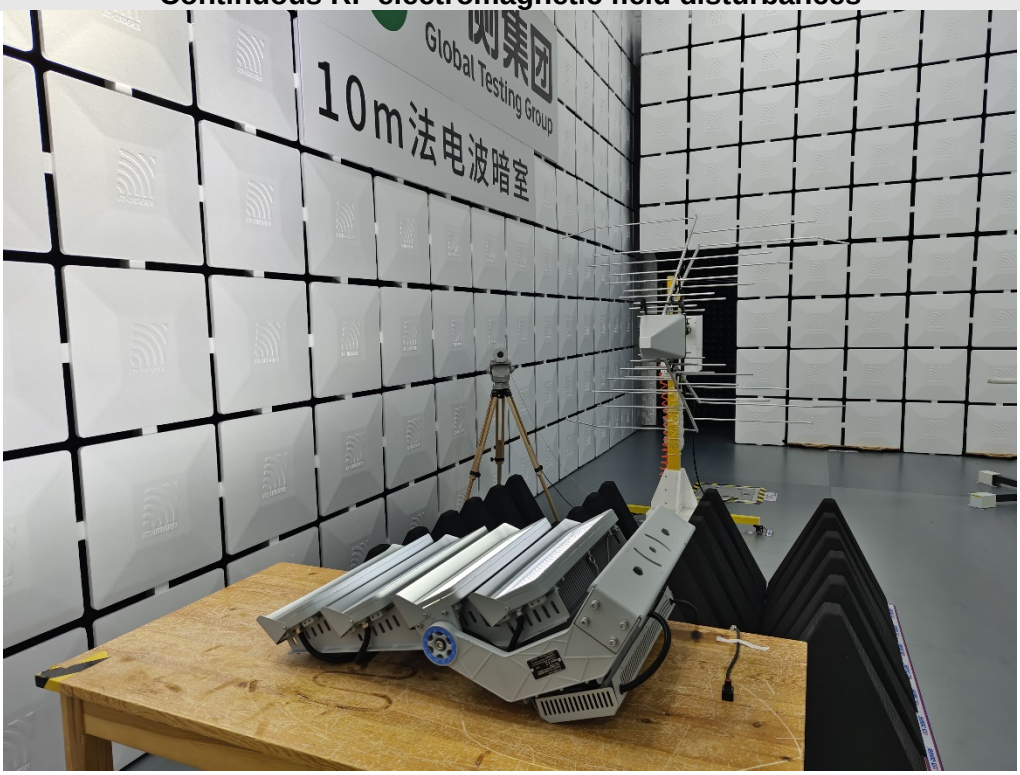
Voltage fluctuations and flicker



Electrostatic Discharge



Continuous RF electromagnetic field disturbances



Electrical fast transients burst (AC mains power ports)



Electrical fast transients burst (Analogue/Digital data ports)



Surges (AC mains power ports)



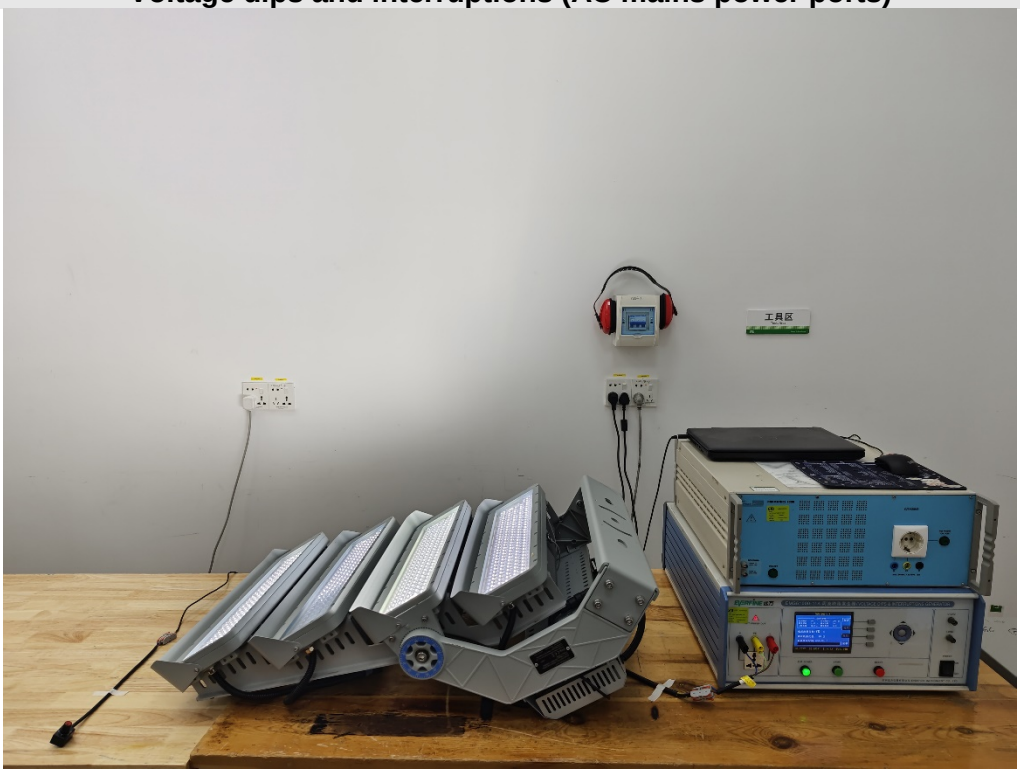
Continuous induced RF disturbances (AC mains power ports)



Continuous induced RF disturbances (Analogue/Digital data ports)



Voltage dips and interruptions (AC mains power ports)

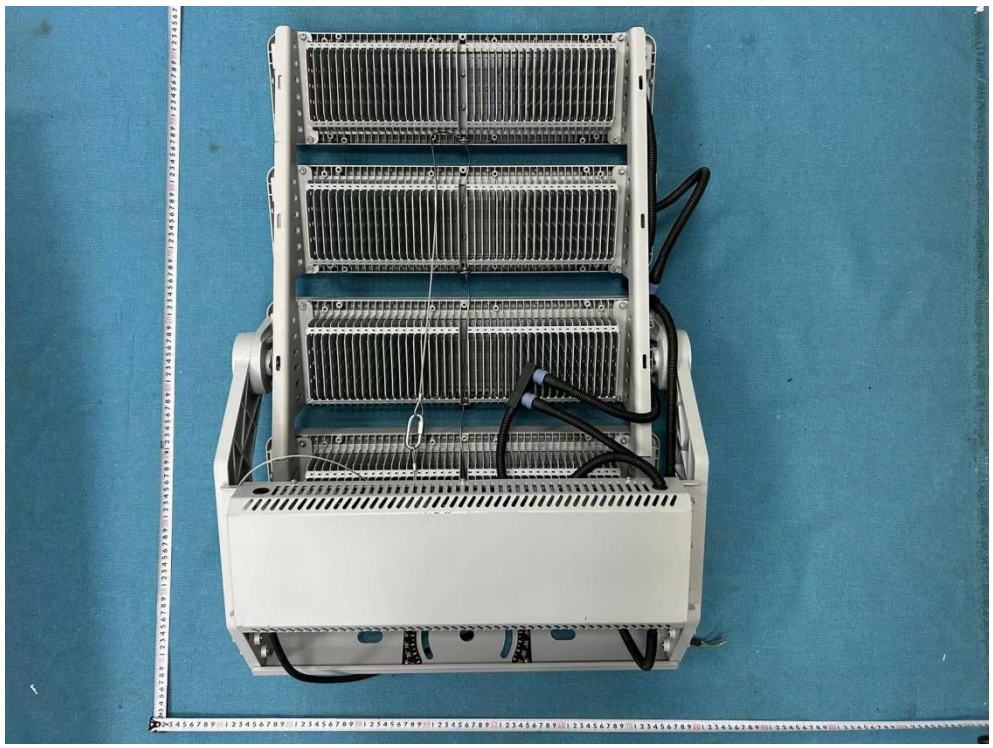


APPENDIX: PHOTOGRAPHS OF THE EUT

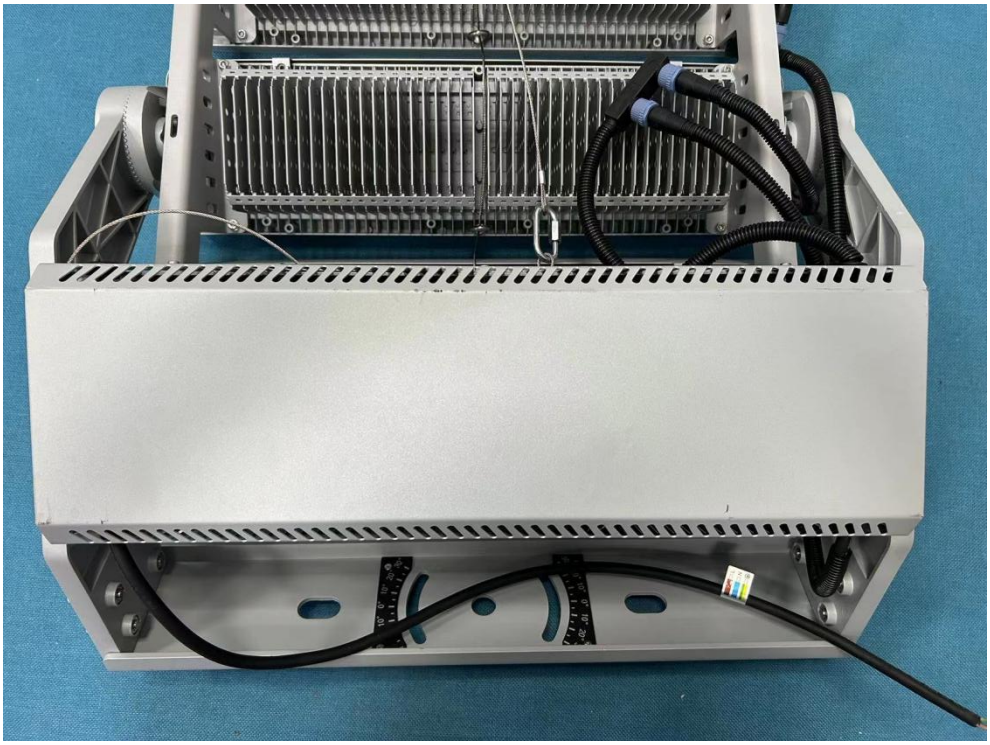
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Remark: Representative model: SWT-F01-1600W



Details of: Outlook view for series 1 models
Remark: Representative model: SWT-F01-1600W



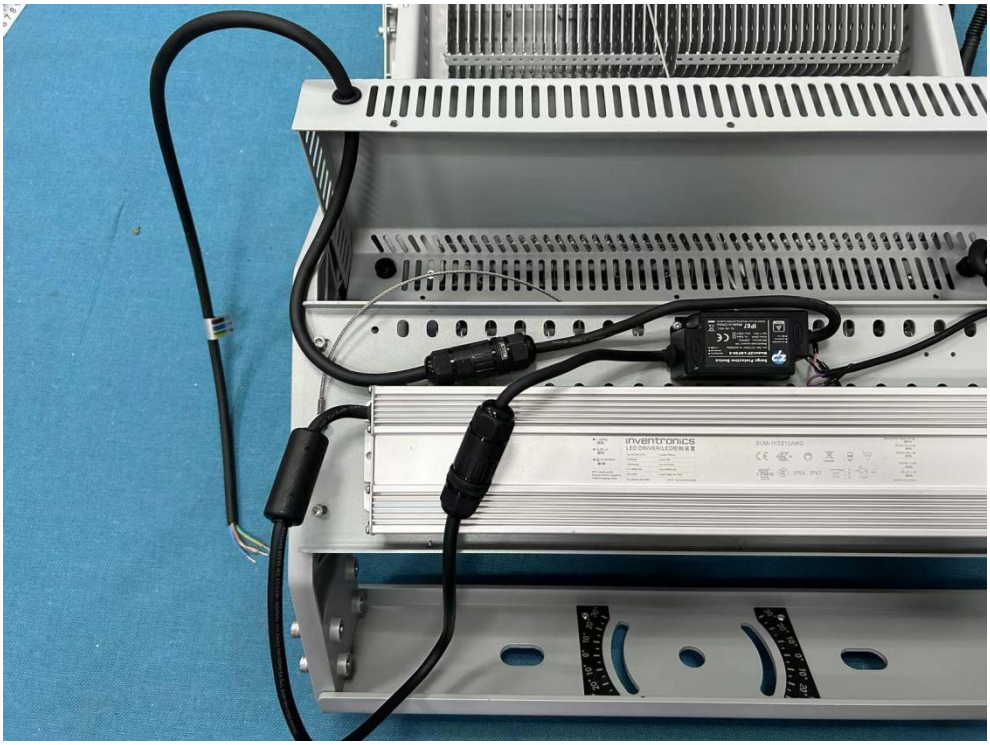
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Remark: Representative model: SWT-F01-1600W



Details of: Internal view for series 1 models
Remark: Representative model: SWT-F01-1600W



Details of: Internal view for series 1 models
Remark: Representative model: SWT-F01-1600W



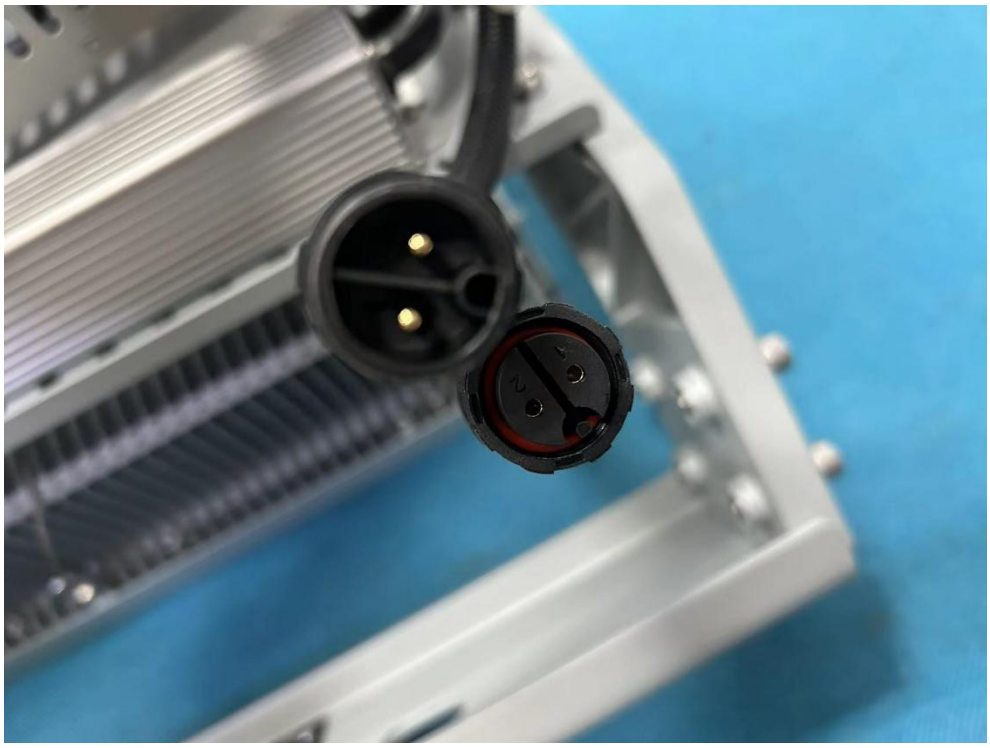
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Details of: Internal view for series 1 models
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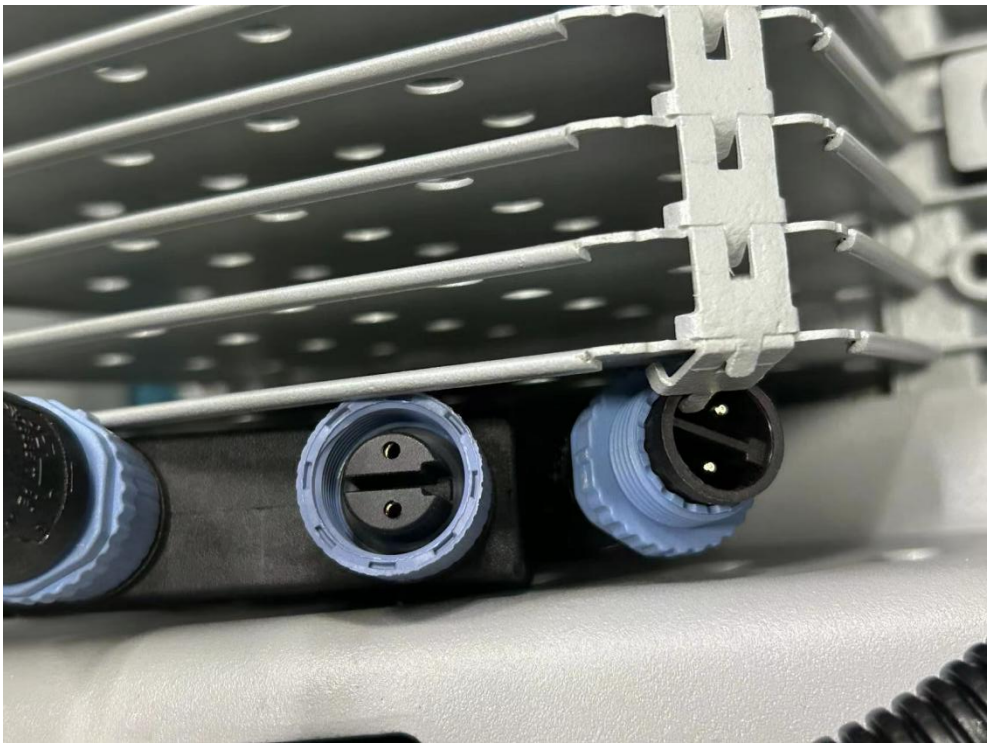
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Details of: Internal view for series 1 models
Remark: Representative model: SWT-F01-1600W



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Remark: Representative model: SWT-F01-1600W



Details of: Internal view for series 1 models
Remark: Representative model: SWT-F01-1600W

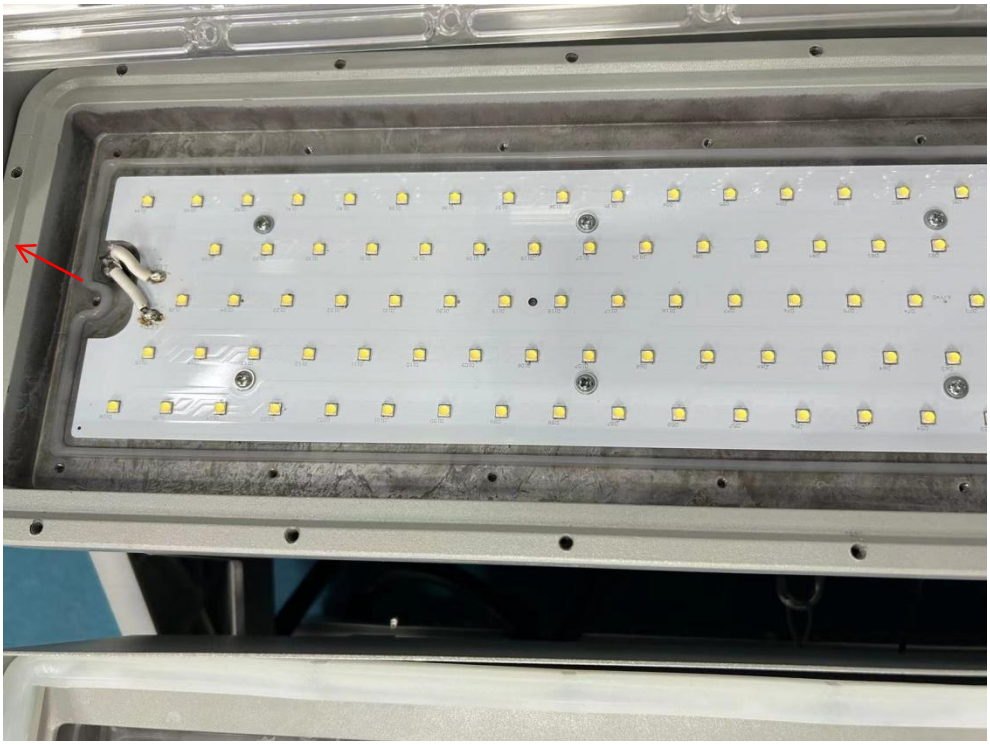


Details of: Internal view for series 1 models
Remark: Representative model: SWT-F01-1600W



Details of: LED module view for series 1 models
Remark: Representative model: SWT-F01-1600W

Waterpro of washer



Details of: Outlook view for series 2 models
Remark: Representative model: SWT-MS2-1500W



Details of: Outlook view for series 2 models
Remark: Representative model: SWT-MS2-1500W



Details of: Internal view for series 2 models
Remark: Representative model: SWT-MS2-1500W



Details of: Internal view for series 2 models
Remark: Representative model: SWT-MS2-1500W



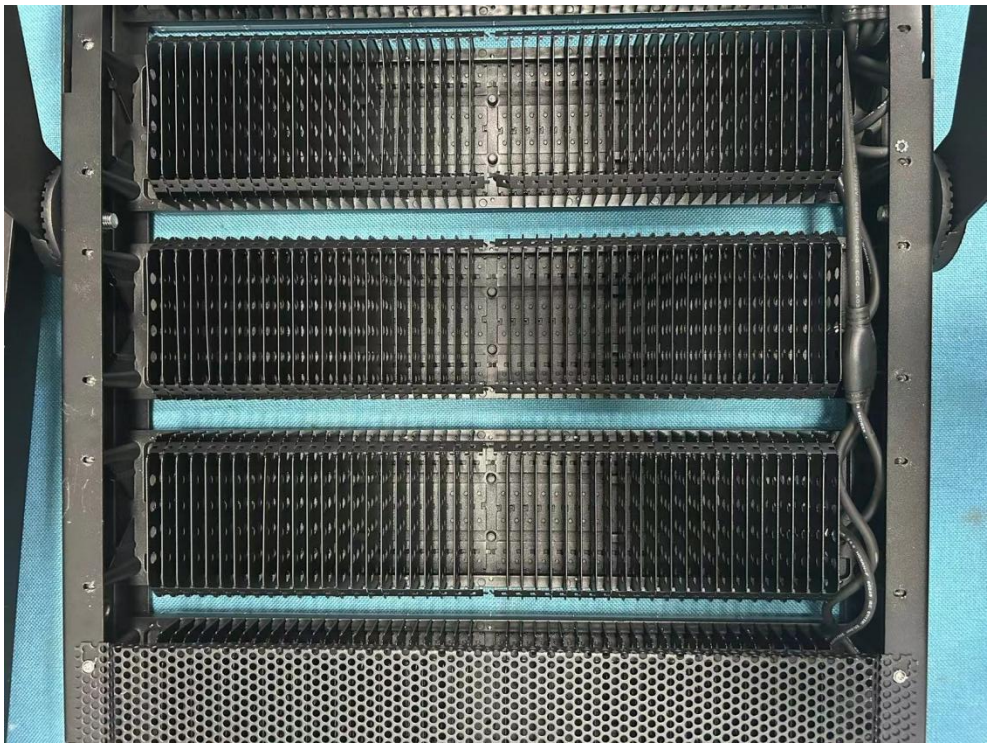
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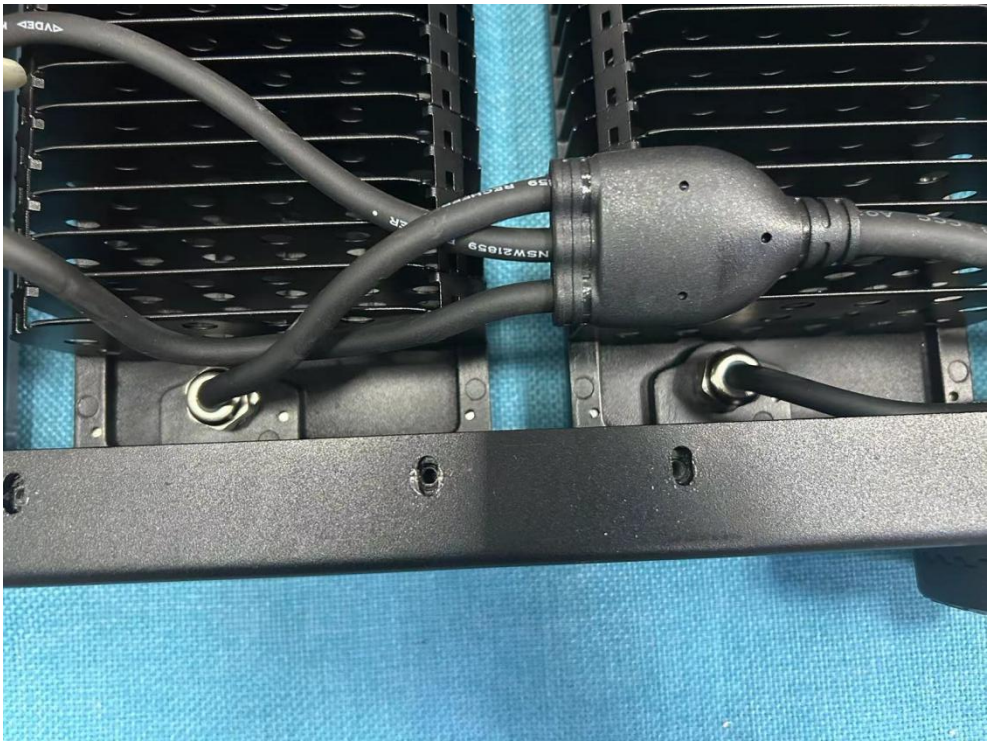
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Details of: Internal view for series 2 models
Remark: Representative model: SWT-MS2-1500W



Details of: Internal view for series 2 models
Remark: Representative model: SWT-MS2-1500W



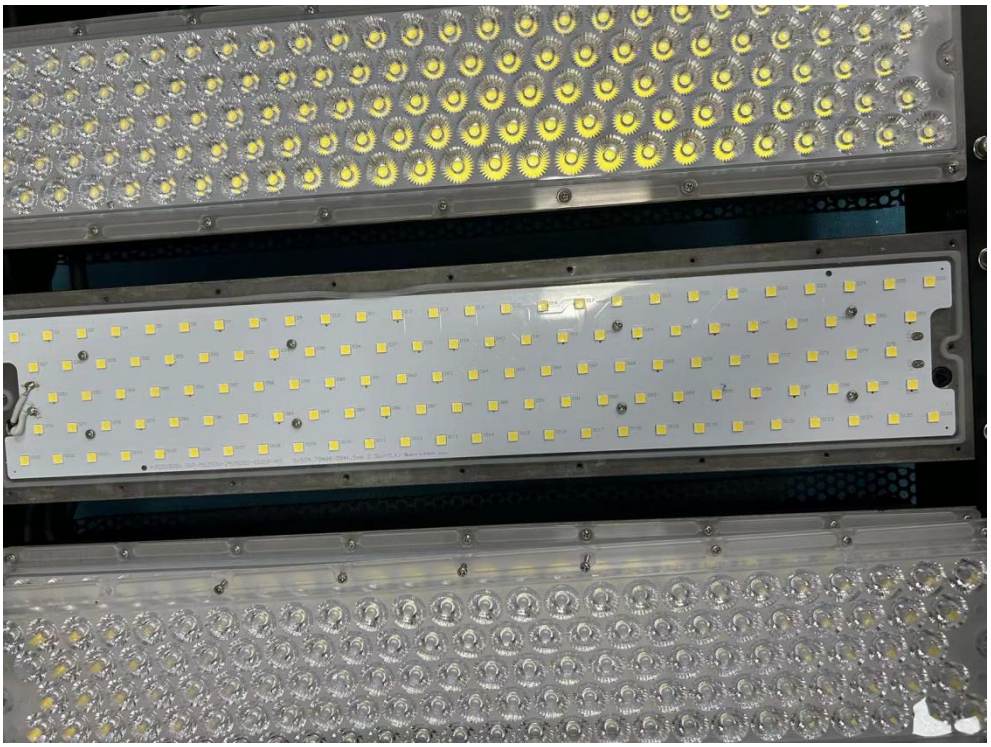
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Details of: Internal view for series 2 models
Remark: Representative model: SWT-MS2-1500W



Details of: LED module view for series 2 models
Remark: Representative model: SWT-MS2-1500W



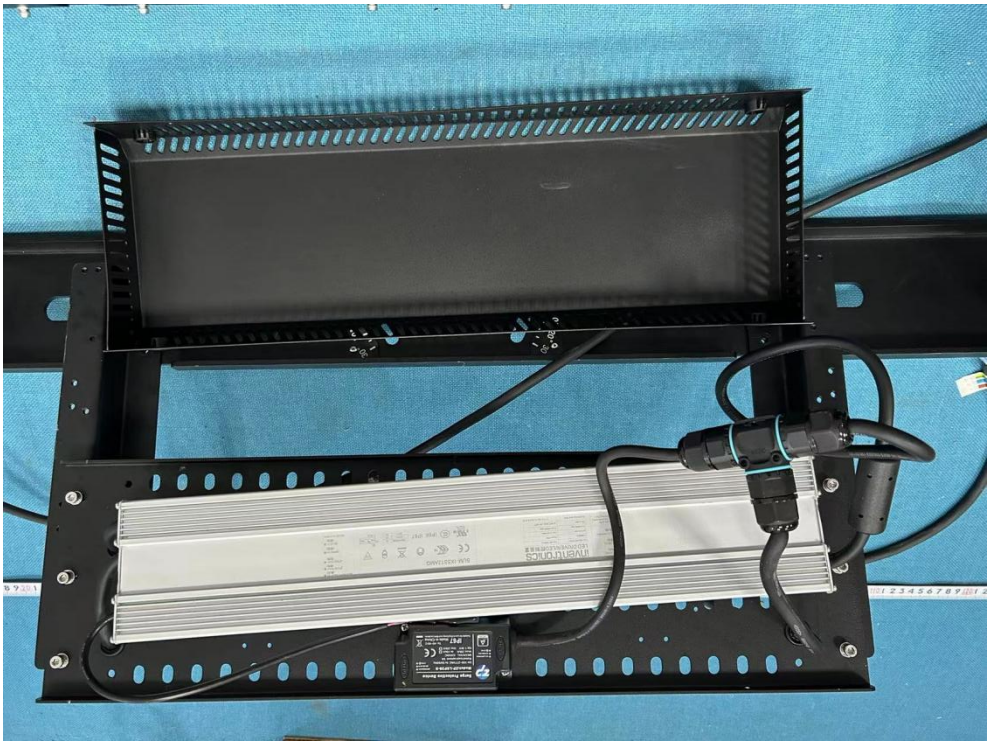
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Remark: Representative model: SWT-LH2-1200W-H



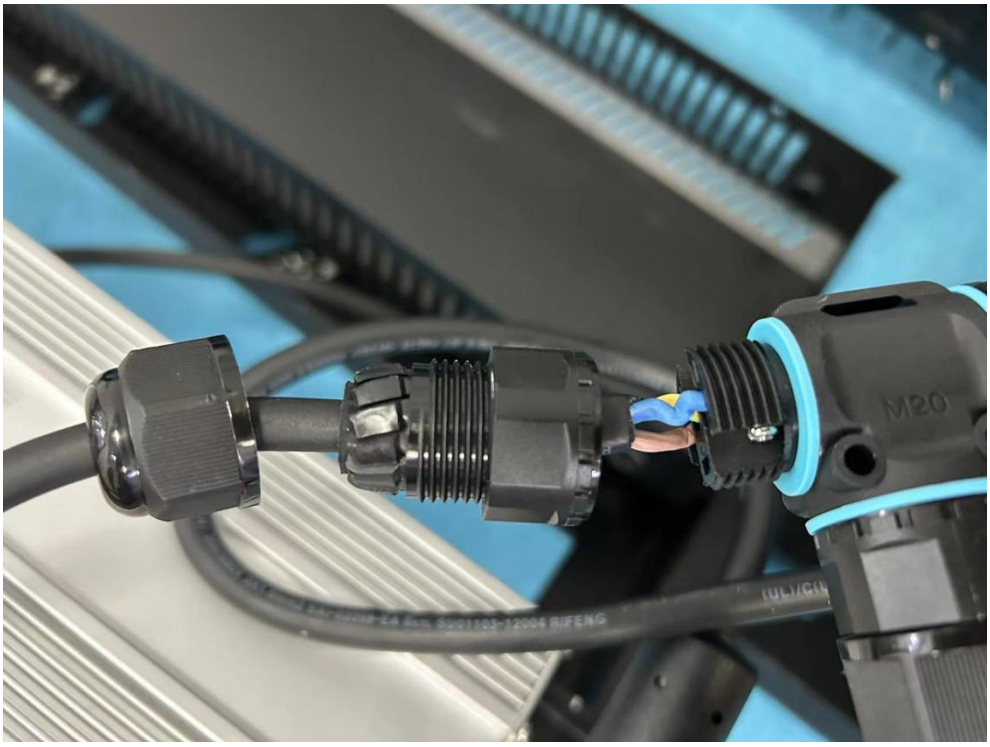
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Remark: Representative model: SWT-LH2-1200W-H



Details of: Internal view for series 3 models
Remark: Representative model: SWT-LH2-1200W-H



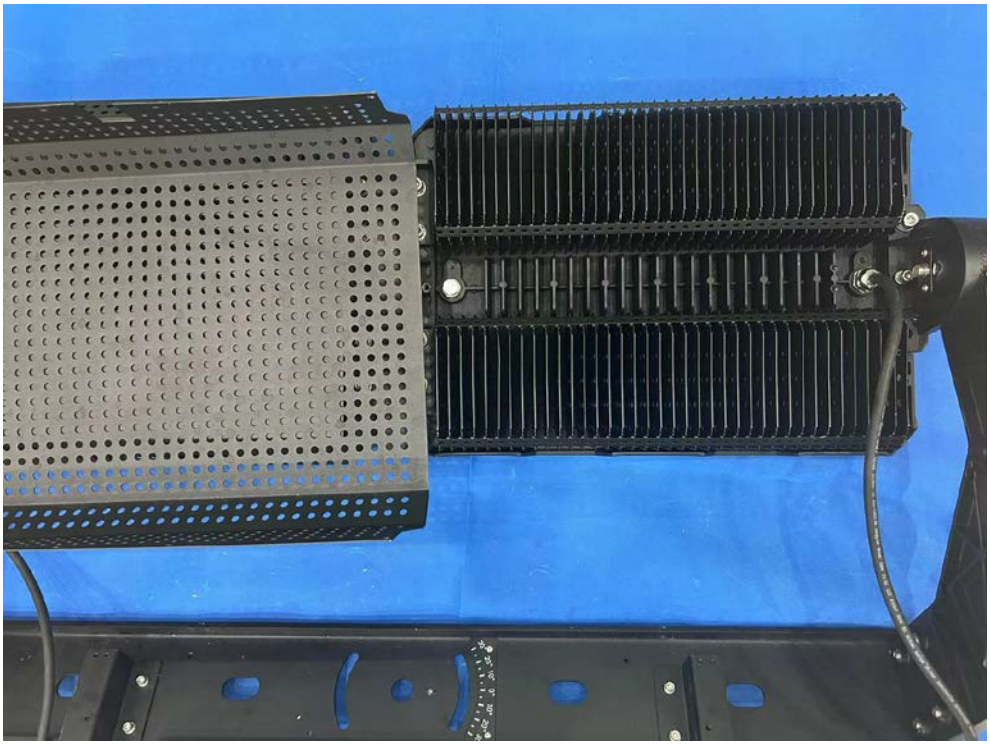
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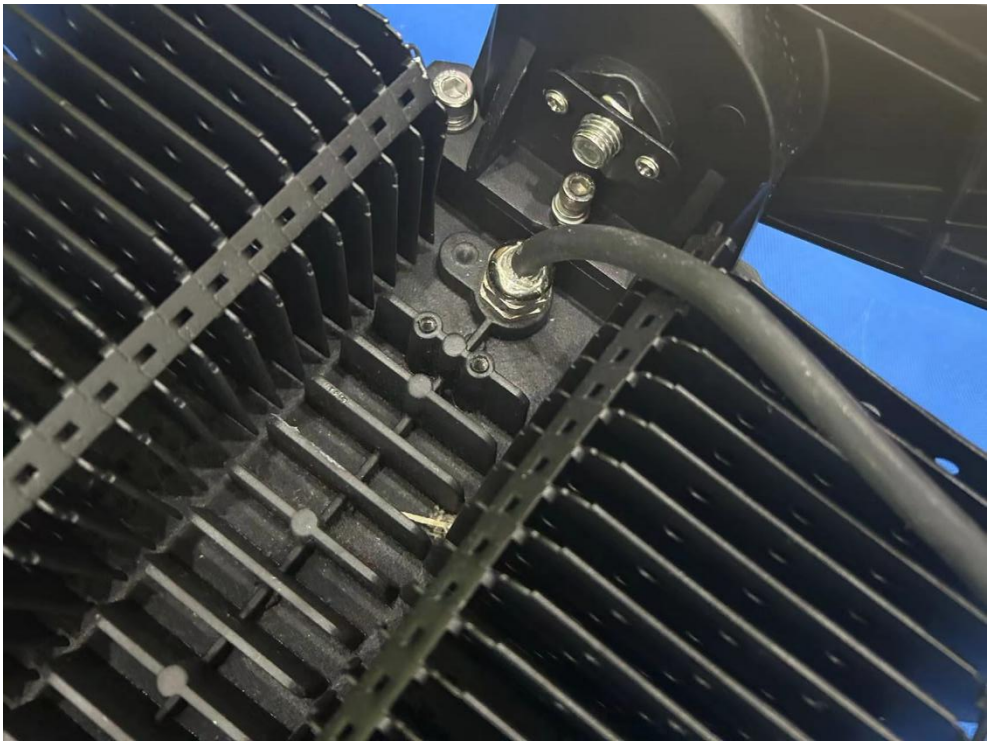
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Remark: Representative model: SWT-LH2-1200W-H



Details of: Internal view for series 3 models
Remark: Representative model: SWT-LH2-1200W-H



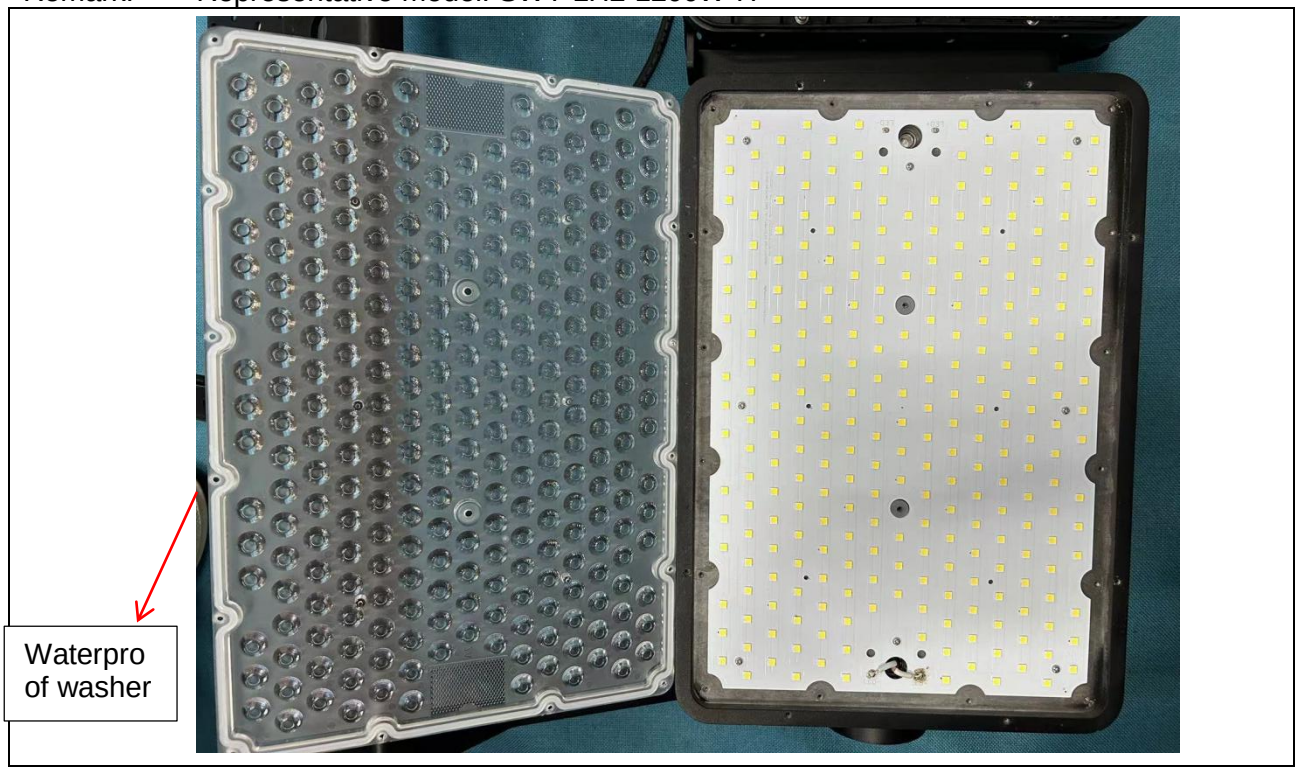
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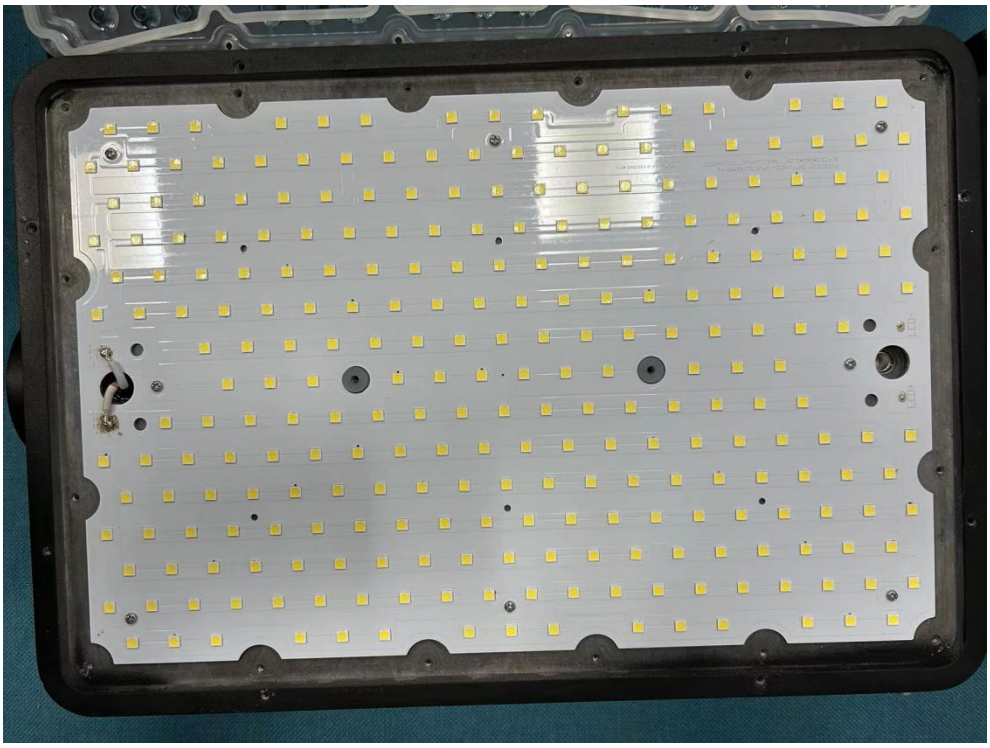
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Remark: Representative model: SWT-LH2-1200W-H



Details of: Internal view for series 3 models
Remark: Representative model: SWT-LH2-1200W-H



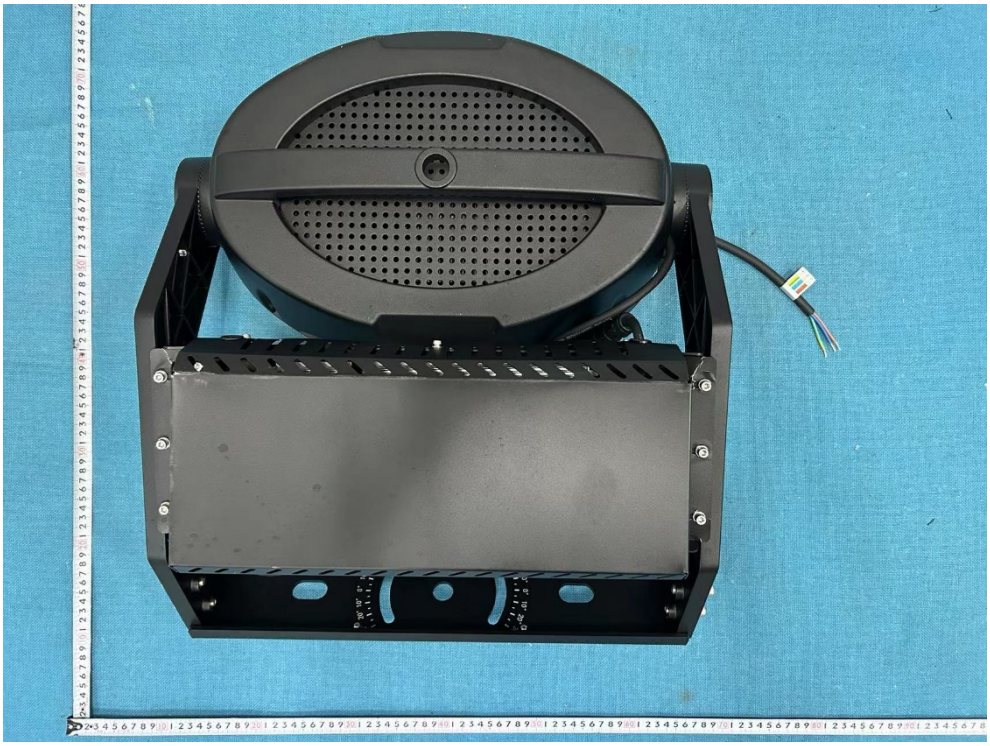
Details of: LED module view for series 3 models
Remark: Representative model: SWT-LH2-1200W-H



Details of: Outlook view for series 4 models
Remark: Representative model: SWT-ME600W



Details of: Outlook view for series 4 models
Remark: Representative model: SWT-ME600W



Details of: Internal view for series 4 models
Remark: Representative model: SWT-ME600W



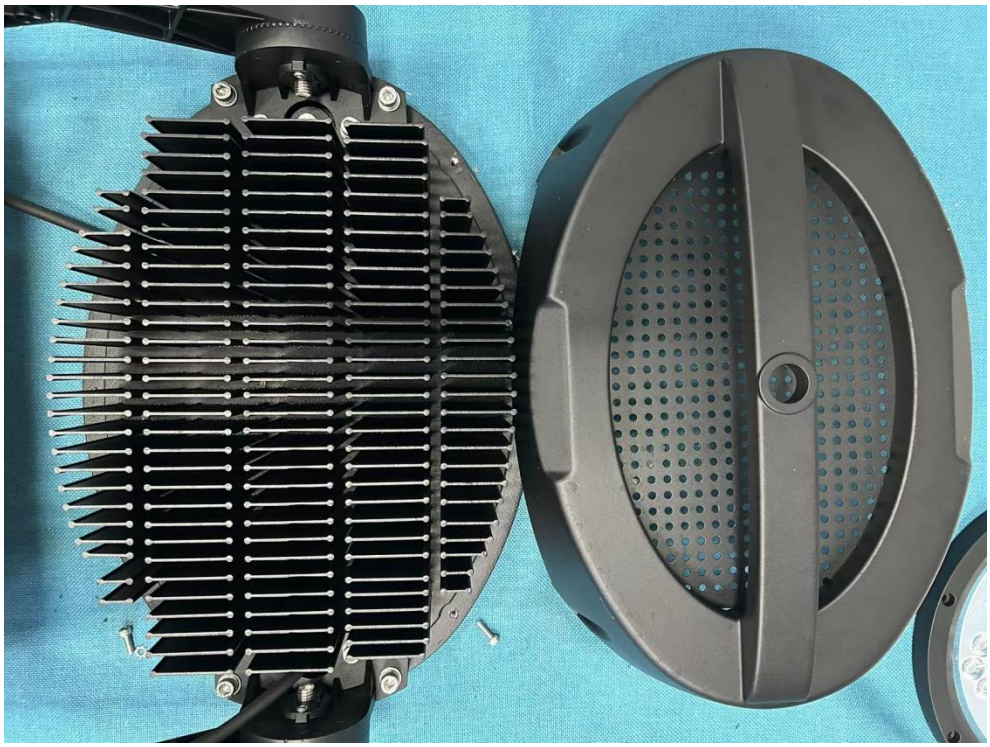
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Remark: Representative model: SWT-ME600W



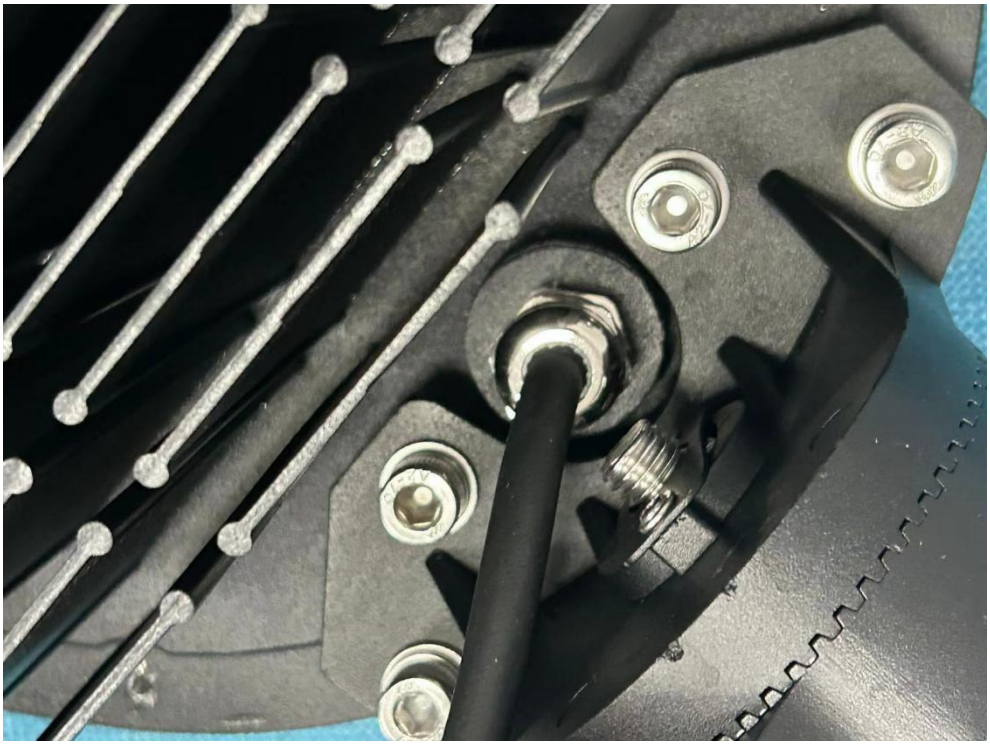
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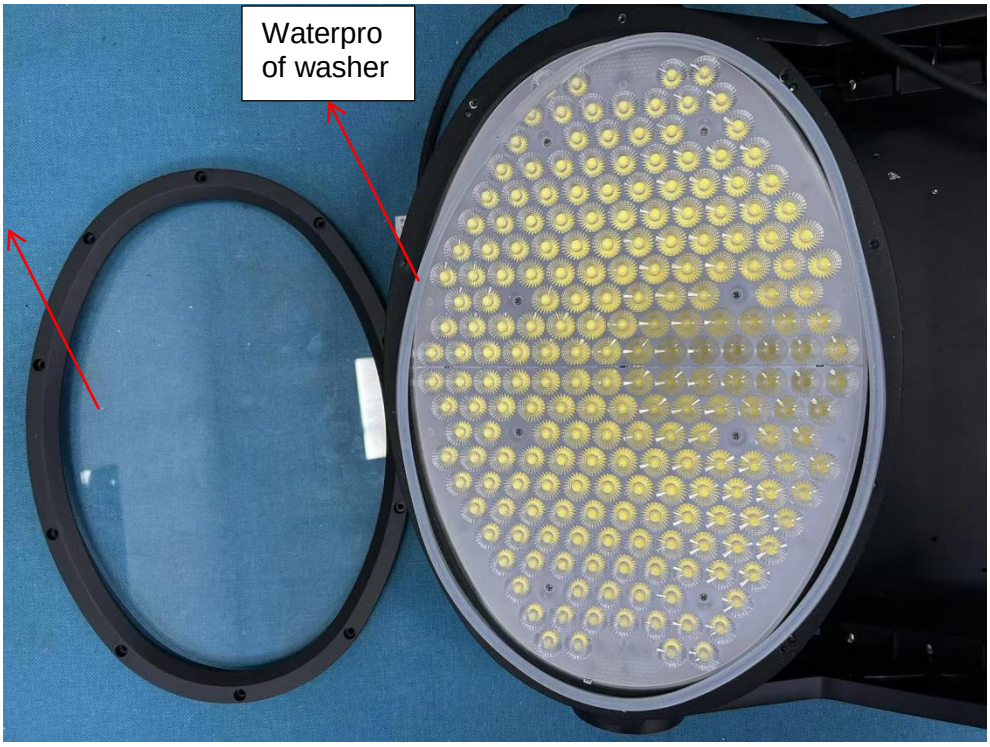
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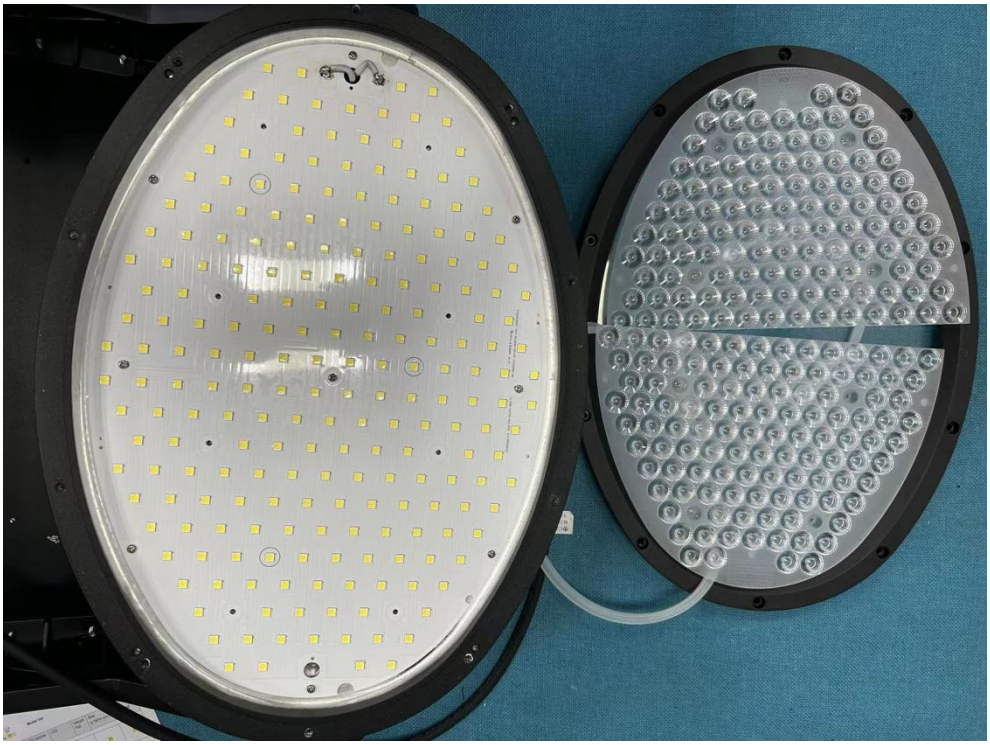
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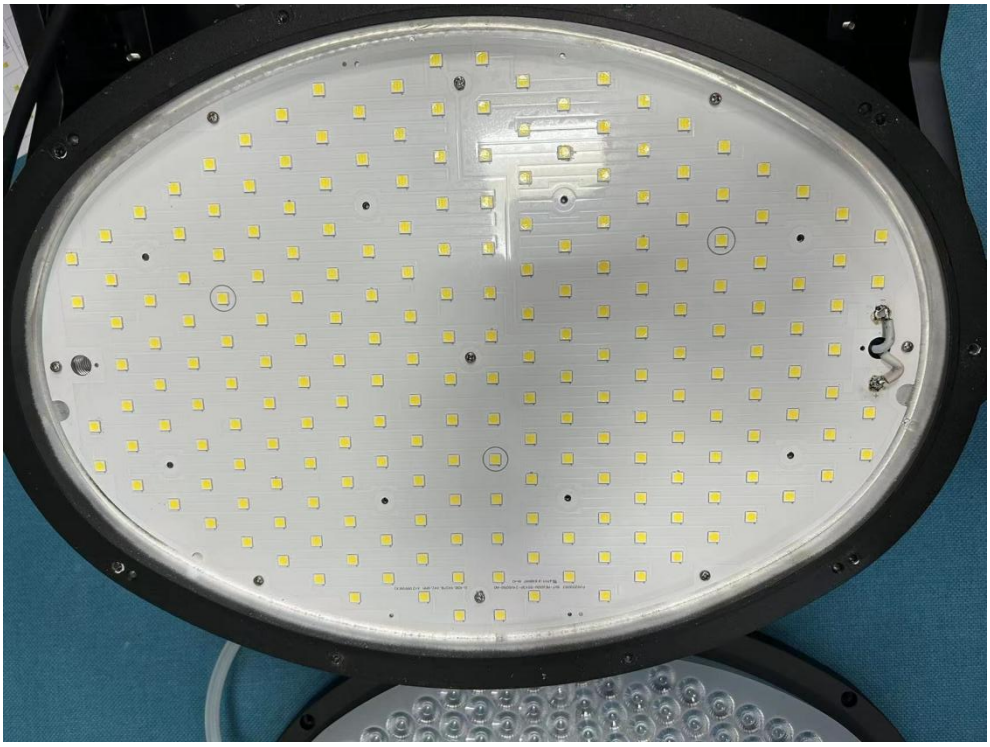
Details of: Internal view for series 4 models
Remark: Representative model: SWT-ME600W



Details of: Internal view for series 4 models
Remark: Representative model: SWT-ME600W



Details of: LED module view for series 4 models
Remark: Representative model: SWT-ME600W



Details of: LED driver view
Remark: Representative model: SUM-1K5S12AMG



Details of: LED driver view
Remark: Representative model: SUM-1K0S840MG



Details of: LED driver view
Remark: Representative model: EUM-880S700MG



Details of: LED driver view
Remark: Representative model: EUM-680S560MG



Details of: LED driver view
Remark: Representative model: EUM-480S420MG



Details of: LED driver view
Remark: Representative model: EUM-320S250MG



END OF REPORT